

SX-100™

SX-200™

# SUPERSWITCH

VOLUME II  
(GENERIC 217)



**SX-200**

**WARNING**

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference, in which case the user, at his own expense, will be required to take whatever measures may be required to correct the interference.

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**SX-100\*/SX-200\***  
**SUPERSWITCH\***  
**VOLUME II DOCUMENT LIST**

| SECTION                  | TITLE                                | LOCATOR |
|--------------------------|--------------------------------------|---------|
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| MITL9105/9110-096-200-NA | Shipping, Receiving and Installation |         |
| MITL9105/9110-096-210-NA | System Programming                   |         |
| MITL9105/9110-096-215-NA | Installation Test Procedures         |         |
| MITL9105/9110-096-320-NA | Extension Test Procedures            |         |





**SX-100\*/SX-200\***  
**SUPERSWITCH\***  
**ELECTRONIC PRIVATE AUTOMATIC BRANCH EXCHANGES**  
**DOCUMENTATION INDEX**

**1. GENERAL**

**1.01** This Section lists MITEL Standard Practices which have been issued pertaining to the SX-100 and SX-200 Private Automatic Branch Exchanges.

**1.02** For information on the SUPERSET 4 see Section MITL9174-518-100-NA.

**2. DOCUMENTATION INDEX**

**2.01** The complete set of Practices are contained in two volumes as listed in Table 2-1. Volume I basically covers the description and operation of the PABX's. Volume II is concerned with the installation aspects of the systems. All installation forms are located in Volume III. All troubleshooting information is contained in Volume IV.

**2.02** Sections commencing with MITL9105- and MITL9110- contain information specific to the SX-100 and SX-200 PABX respectively, while those commencing with MITL9105/9110- embrace both types of PABX.

**TABLE 2-1**  
**PRACTICE INDEX**

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|---------------------------|---|
| Section No.               | Title   |
| MITL9105/9110-096-000-NA  | Documentation Index                           |
| MITL9105-096-100-NA       | General Description                           |
| MITL9110-096-100-NA       | General Description                           |
| MITL9105/9110-096-105-NA  | Feature and Service Description               |
| MITL9105/9110-096-150-NA  | Physical Description and Ordering Information |
| MITL9105/9110-096-180-NA  | Engineering Information                       |
| MITL9105/9110-096-212-NA  | Multi-Digit Toll Control                      |
| MITL9105/9110-096-213-NA  | Automatic Route Selection                     |
| MITL9105/9110-096-220-NA  | Speed Call                                    |
| MITL9105/9110-096-315-NA  | Attendant Console Description                 |
| MITL9105/9110-096-450-NA  | Traffic Measurement                           |
| MITL9105/9110-096-451-NA  | Station Message Detail Recording              |
| <b>VOLUME II</b>          |   |
| Section No.               | Title   |
| MITL9105/9110-096-000-NA  | Documentation Index                           |
| MITL9105/9110-096-200-NA  | Shipping, Receiving and Installation          |
| MITL9105/9110-096-210-NA  | System Programming                            |
| MITL9105/9110-096-215-NA  | Installation Test Procedures                  |
| MITL9105/9110-096-320-NA  | Extension Test Procedures                     |
| MITL9105/9110-096-350-NA  | Troubleshooting                               |
| <b>VOLUME III</b>         |   |
| <b>INSTALLATION FORMS</b> |   |
| <b>VOLUME IV</b>          |   |
| Section No.               | Title   |
| MITL9105/9110-096-350-NA  | Troubleshooting                               |



**SX-100\* AND SX-200\***  
**SUPERSWITCH\***  
**ELECTRONIC PRIVATE AUTOMATIC BRANCH EXCHANGE**  
**SHIPPING, RECEIVING AND INSTALLATION INFORMATION**  
**GENERIC 217**

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## 1. INTRODUCTION

### General

1.01 This Section provides general identification, installation, shipping, receiving and cabling information for the SX-100 and SX-200 Electronic Private Automatic Branch Exchanges (PABX's). The systems consist of two major components: the equipment cabinet, containing the switching equipment and power supply; and the attendant console(s).

### Reason for Issue

1.02 This Section has been issued to provide information concerning Generic 217.

### Documentation

1.03 Table 1-1 lists all MITEL practices, associated with the Electronic PABX.

## SUPERSET 4

1.04 For general information on the SUPERSET 4 see Section MITL9174-518-100-NA.

## 2. IDENTIFICATION

### General

2.01 The SX-100 and SX-200 are electronic switching systems providing the following capacities:

- **SX-100:** Capacity of 160 ports with 112 ports available for lines, trunks and additional receivers.
- **SX-200:** Capacity of 256 ports with 208 ports available for lines, trunks and additional receivers.



**TABLE 1-1  
DOCUMENTATION**

| Document No.             | Title   | Applicable to |        |
|--------------------------|---|---------------|--------|
|                          |   | SX-100        | SX-200 |
| MITL9105/9110-096-100-NA | General Description                           | *             | *      |
| MITL9105/9110-096-105-NA | Features Description                          | *             | *      |
| MITL9105/9110-096-150-NA | Physical Description and Ordering Information | *             | *      |
| MITL9105/9110-096-180-NA | Engineering Information                       | *             | *      |
| MITL9105/9110-096-200-NA | Shipping, Receiving and Installation          | *             | *      |
| MITL9105/9110-096-210-NA | System Programming                            | *             | *      |
| MITL9105/9110-096-212-NA | Multi-Digit Toll Control                      | *             | *      |
| MITL9105/9110-096-213-NA | Automatic Route Selection                     | *             | *      |
| MITL9105/9110-096-215-NA | System Test Procedures (Installation)         | *             | *      |
| MITL9105/9110-096-220-NA | Speed Call                                    | *             | *      |
| MITL9105/9110-096-315-NA | Attendant Console Description                 | *             | *      |
| MITL9105/9110-096-320-NA | Station Test Procedures                       | *             | *      |
| MITL9105/9110-096-350-NA | Troubleshooting Instructions                  | *             | *      |
| MITL9105/9110-096-450-NA | Traffic Measurement                           | *             | *      |
| MITL9105/9110-096-451-NA | Station Message Detail Recording              | *             | *      |
| MITL9105/9110-096-500-NA | General Maintenance Information               | *             | *      |

2.02 The systems are electrically compatible with most existing station, key telephone, Private Branch Exchange (PBX) and Central Office (CO) equipment. The PABX's provide:

- The use of a flexible numbering plan.
- The simultaneous use of DTMF and rotary dial stations.
- Optional use of attendant consoles - two maximum.
- Extensive selection of standard and optional features.
- A data port facility for traffic analysis and other requirements.
- Freedom from scheduled maintenance.
- Automatic diagnostics.
- Six power fail transfer trunks (SX-100).
- Twelve power fail transfer trunks (SX-200).
- Optional reserve power supply.
- SUPERSET 4.

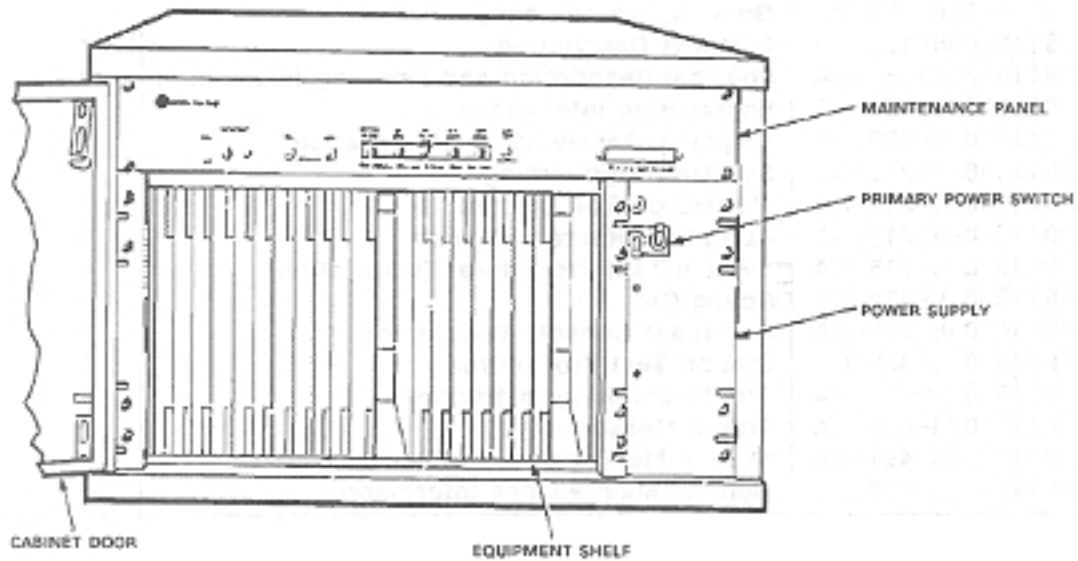
#### **Equipment Cabinet, SX-100**

2.03 The SX-100 equipment cabinet (Fig. 2-1) consists of a metal frame enclosed by back and top panels. Access to the equipment shelf is provided by the front door of the cabinet. The rear panel allows access to the line and trunk cable plugs.

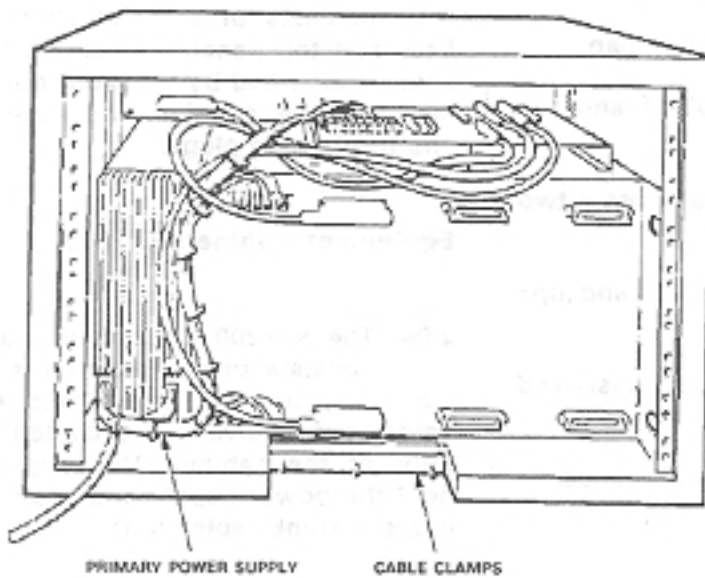
#### **Equipment Cabinet, SX-200**

2.04 The SX-200 equipment cabinet (Fig. 2-2) consists of a metal frame which is enclosed by side and top panels. Access to the equipment shelves is provided by the front door of the cabinet. The hinged rear panels hold the power supply and allow access to the line and trunk cable plugs.

2.05 Reserve power for the SX-200 system, if required, may be supplied from the optional battery pack shelf located at the bottom of the equipment cabinet. In the case of the SX-100 reserve power supply, it forms a separate base unit upon which the SX-100 can be installed.



FRONT VIEW



REAR VIEW

| WEIGHT             | HEIGHT                | WIDTH                | DEPTH                |
|--------------------|-----------------------|----------------------|----------------------|
| 70 lb<br>(31.8 kg) | 16.62 in.<br>(422 mm) | 25.0 in.<br>(635 mm) | 18.5 in.<br>(470 mm) |

X5611

Fig. 2-1 SX-100 Equipment Cabinet

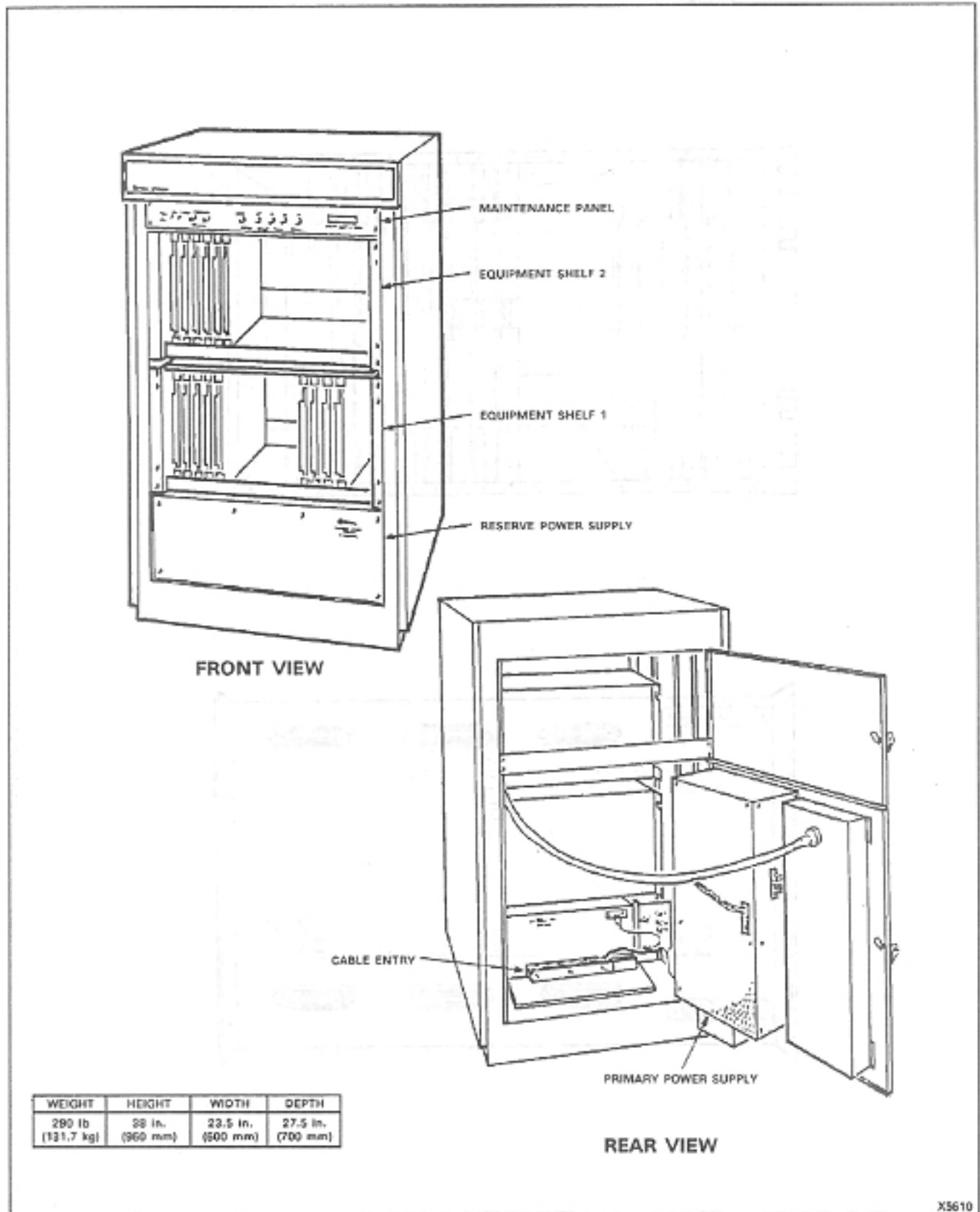
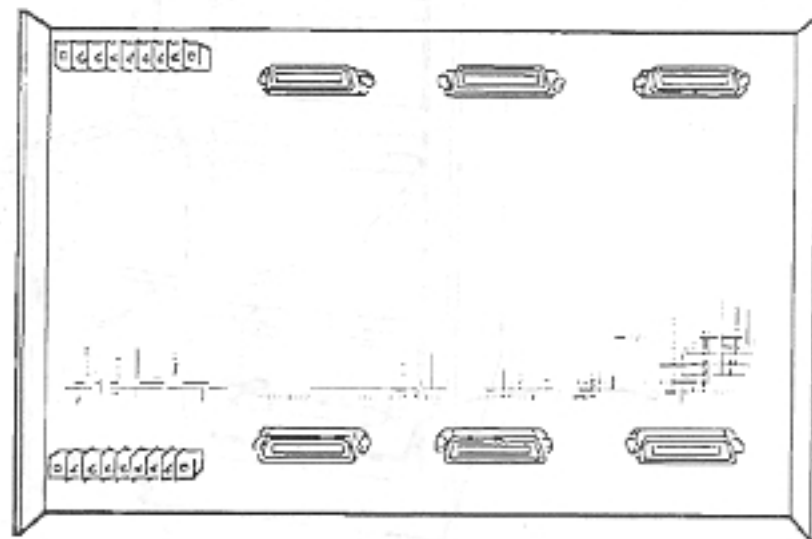
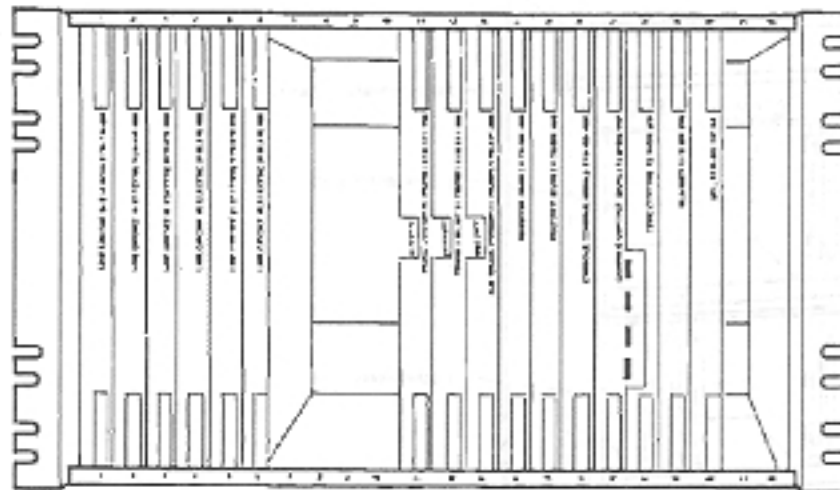


Fig. 2-2 SX-200 Equipment Cabinet



X5612

Fig. 2-3 Equipment Shelf

TABLE 2-1  
PHYSICAL CHARACTERISTICS

| Shelf Type        | SX-100 Part Number | SX-200 Part Number               | Weight |      | Maximum No. Circuit Cards |
|-------------------|--------------------|----------------------------------|--------|------|---------------------------|
|                   |                    |                                  | lb     | kg   |                           |
| Maintenance Panel | 9105-025-000       | 9110-125-000-NA                  | 2      | 0.9  | -                         |
| Equipment Shelf   | 9110-012-000-NA    | 9110-012-000-NA                  | 38     | 17   | 21                        |
| Reserve Power     | 9105-014-000-NA    | 9110-014-000-NA                  | 125    | 57   | -                         |
| Primary Power     | 9105-008-000       | 9110-008-000-NA<br>or 108-000-NA | 16/70  | 7/32 | -                         |

TABLE 2-2  
EQUIPMENT CODING

| Type                                | Part Number                    | Card Extractor Color Code |
|-------------------------------------|--------------------------------|---------------------------|
| Equipment Shelf (Note 1)            | 9110-012-000-NA                | -                         |
| IPC Card                            | 9110-203-217-NA                | Red                       |
| Scanner Card                        | 9110-104-000-NA                | Orange                    |
| Tone Control Card                   | 9110-005-000-NA                | Yellow                    |
| Console Control Card                | 9110-006-000-NA                | Green                     |
| Remote Control - PABX Card (Note 2) | 9110-017-000-NA                | Green                     |
| Receiver Card (Dual or Quad)        | 9110-109-000-NA or -016-000-NA | Blue                      |
| CO Trunk Card (4 trunk)             | 9110-011-000-NA or -211-000-NA | Black                     |
| E&M Trunk Card (2 trunk)            | 9110-013-000-NA                | Black                     |
| DID/Tie Trunk Card (2 trunk)        | 9110-031-000-NA                | Black                     |
| Line Card (8 station)               | 9110-110-000-NA                | Black                     |

**Note:** 1. All equipment shelves are identical.

2. The RCP is supplied only if required that the PABX be accessed by RMAT facilities (see Section MITL9105/9110-098-101-NA, Remote Maintenance Administration and Test System).

### Equipment Shelves

**2.06** The SX-100 is equipped with one shelf, but the SX-200 may be equipped with one or two equipment shelves depending on the number of lines and trunks required. Each equipment shelf (Fig. 2-3) is 10.75 in. (273 mm) high, 19 in. (485 mm) wide and 16.375 in. (415 mm) deep. The shelves are mounted in the equipment cabinet with the backplane assembly towards the rear of the cabinet. The shelves are held in position by mounting screws which locate the shelves in the main frame.

**2.07** The physical characteristics and part numbers of the shelves, power supplies and maintenance panel are given in Table 2-1. The weight for each shelf is for a shelf containing a full complement of circuit cards.

**2.08** The equipment shelves used in the SX-100 and the SX-200 are identical. Fig. 2-3 shows two views of an equipment shelf.

**2.09** The equipment shelves hold up to 20 circuit cards. Each card plugs into a connector mounted on the shelf backplane. A locking bar assembly which passes through the sides of the shelf ensures that the circuit packs are seated correctly in the backplane connectors.

2.10 A number of card positions within each shelf are reserved for control cards. These card positions are identified by color-coded identification strips along the top and bottom edges of the shelf. Only cards with locking clips of the same color as the identification strip should be plugged into that card position. Circuit card and/or system damage may otherwise occur.

2.11 Card positions 14, 13, and 12 on equipment shelf 1, may be used for line, trunk or receiver cards. These positions are marked with a blue and black identification strip, indicating that any card coded with either of the identification color codes may be used in these positions.

2.12 Line or trunk cards can be placed in any position identified with black color-coded strips. It is recommended that line cards be placed in the lowest numbered card posi-

tions and trunk cards in the highest card positions for the following reasons:

- The maintenance test line is permanently wired to card position 1, hardware position 001.
- Separation of line and trunk cards allow ease of identification of card type during installation and maintenance.
- Ease of system programming.

**Note:** If more than one receiver card is used the second receiver card **MUST** be placed in card position 14, the third in position 13, and the fourth in position 12. It is therefore recommended that these card positions be used for trunk cards only when all other card positions are in use.

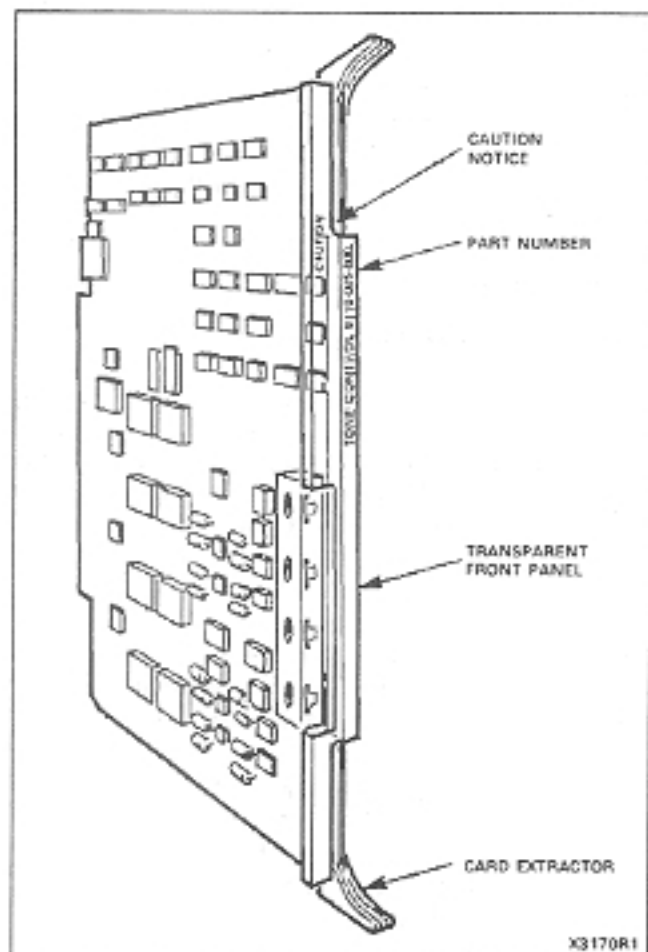


Fig. 2-4 Typical Circuit Card

### Circuit Cards

2.13 The circuit cards (Fig. 2-4) used in the equipment shelves measure 10 in. (254 mm) high, 13 in. (330 mm) deep, and are manufactured from fiberglass board. The light-emitting diodes (LED's) mounted at the front of each card indicate the operational status of the card. The transparent front panel protects the LED's while allowing their status to be observed.

2.14 On the front panel of each card, is the card part number and its type. Cards which must not be removed or inserted while the system power is on carry a Caution notice as shown in Fig. 2-4.

2.15 Each card is equipped with two card extractors which enable the card to be easily removed. In the locked position the card extractors, in conjunction with the locking bar, ensure that the circuit cards are held firmly in position.

### Equipment Shelf and Card Identification

2.16 Table 2-2 lists all shelf and card part numbers, and color codes.

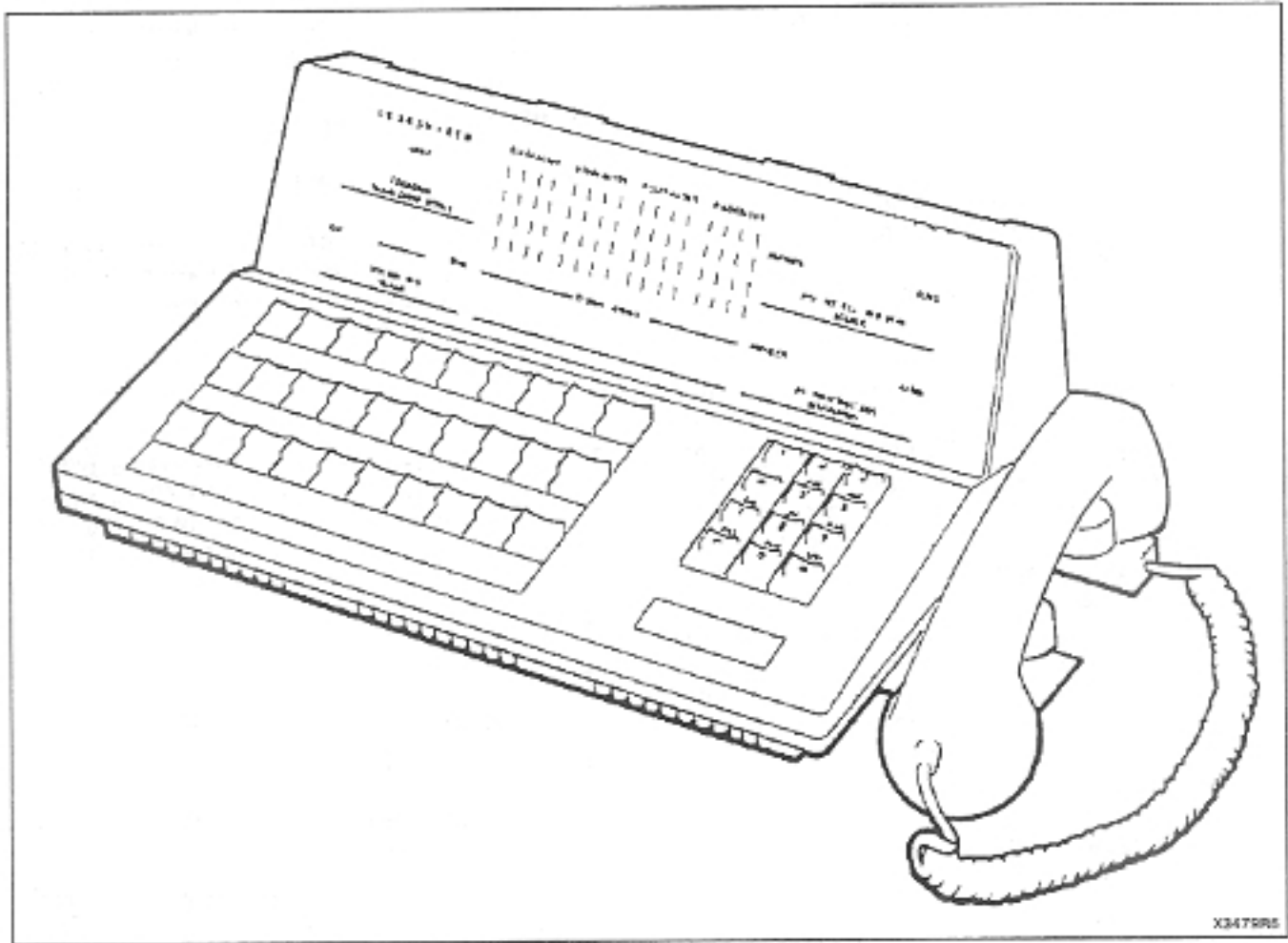


Fig. 2-5 Attendant Console

### Features and Services

2.17 The features and service codes are entered into the system memory through a console. No wiring or strapping is required when assigning features.

### Attendant Console

2.18 The attendant console (Fig. 2-5) is a self-contained unit, connected to the equipment cabinet by a plug-ended 25-pair cable.

2.19 The console is equipped with two sets of handset/headset jacks. These jacks will accept all standard handsets or headsets presently in general use.

### Connecting Cables

2.20 All connections to the attendant console and the equipment cabinet are made using plug- or connector-ended 25-pair cables.

### Power Fail Transfer

2.21 In the event of a major alarm condition, the power fail transfer relays located on the Power Fail Transfer card, will connect Central Office trunks to selected station lines (maximum 6 trunks for SX-100, 12 trunks for SX-200). Power fail transfer will take place under any of the following conditions:

- Commercial power failure (if no reserve power supply is used).
- Common control failure.

- Operating voltage out of accepted tolerance.
  - Manual transfer from a console or the equipment cabinet.
- (a) **Incoming Calls.** After a power fail transfer has occurred, ringing of extensions for incoming calls is applied directly to the selected extension line from the Central Office (CO).
- (b) **Outgoing Calls.** To place an outgoing call through a ground start CO trunk, with the system in the power fail transfer mode, the extension originating the call must be equipped with a ground key. When the ground key is momentarily pressed, a ground is applied to the Ring side of the line, energizing the CO equipment. One side of the ground key must be connected to a ground and the other to the Ring conductor of the station line. Call origination over loop start trunks does not require the use of a ground start key.

#### Power Fail Transfer Reset

2.22 The system may be returned to normal operation from power fail transfer in one of three ways:

- (a) **Major Alarm:** If the system was placed in the power fail transfer mode because of a major alarm condition, it will return to normal operation and turn off the major alarm lamp when the alarm condition is corrected.
- (b) **Manual Reset:** When the system has been placed in the power fail transfer mode by operation of the switch, the major alarm lamp will light, indicating that transfer has taken place. Setting the transfer switch to NORMAL will reset the system to normal operation and turn off the alarm lamp if the alarm condition has been corrected. If the alarm condition has not been corrected, the alarm lamp will remain lit, indicating that the system has remained in the power fail transfer mode.

- (c) **Reset from Commercial Power Failure:** The system will automatically return to normal operation when commercial power is restored.

**Note:** When the system returns to normal operation from the power fail transfer mode, all connections established through the power fail transfer circuits will be maintained until the completion of the calls.

#### Test Line

2.23 The test line, permanently assigned to hardware position 001, has the Tip and Ring connections wired to the two terminals on the face of the maintenance panel. The service can:

- seize individual trunks
- seize individual receivers
- seize individual speech paths
- initialize card slot
- busy out selected receivers, trunks or speech paths
- clear all alarms and raise associated busy-out conditions
- reset the system
- initiate a system dump
- control the printer.

#### Reserve Power Supply

2.24 The optional reserve power supply (in the form of batteries and charging system) is housed in the SX-200 equipment cabinet or in a package that forms a base for the SX-100 cabinet. The power supply is designed to maintain system operation for a minimum of two hours in the event of main power failure.

#### Paging, Dictation, and Music on Hold Equipment

2.25 All paging, dictation and music on hold equipment is located external to the PABX. This equipment should be located in an environment specified by the individual sup-



plier and connected to the PABX through the cross-connect field.

### Night Relays

**2.26** Four relays are provided for use during night service. One is operated permanently during night service, and the other three may be assigned to various trunks to ring night bells. Power, supplied from the supply and required to operate night bells, must be connected at the cross-connect field.

## 3. SHIPPING AND RECEIVING

### Introduction

**3.01** This Part describes the procedures to be used when shipping or receiving the Electronic PABX equipment.

### System Shipment

**3.02** The PABX cabinet is shipped in a single carton containing the equipment cabinet. The consoles and reserve power supply, if required, are packaged and shipped separately from the system equipment package.

## 4. PACKAGING

### System Package

**4.01** The equipment is shipped complete with one shelf and with some cards in position. The equipment cabinet is enclosed in a polyethylene sheet and positioned on the shock-absorbant shipping pallet. A styrofoam sheet is placed around and on top of the cabinet to protect it from damage, and the complete assembly encased in a triwall sleeve. Four transportation straps are then fastened to the pallet to prevent any movement of the cabinet package. The tri-wall cap is placed over the sleeve and the complete assembly secured to the shipping pallet by two metal retaining straps. Fig. 4-1 and 4-2 respectively show the packaging arrangements for the SX-100 and SX-200.

### Consoles

**4.02** Each console is wrapped in a polyethylene sheet and placed in a cardboard packing carton and protected with shock-absorbant foam inserts. The handset and cradle are placed in bags and inserted in the corners of the box at one end. The console manual is placed at the other end of the box, and the Extension Features Operation booklets are distributed in the box to fill the available space. The completed package is secured with fiberglass tape (Fig. 4-3).

### Equipment Shelves

**4.03** Equipment shelves, when shipped separately, are packaged in a similar manner. A shelf, with all cards removed, is enclosed in a cardboard protector to prevent damage to the shelf backplane. The protected shelf is then wrapped in a polyethylene sheet placed in a formed foam insert. The complete assembly is finally encased in a packing carton and secured by fiberglass tape (Fig. 4-4).

### Reserve Power Shelf

**4.04** The method of packaging the reserve power shelf is the same as for equipment shelves, except a heavy duty commercial packing carton is used in place of the regular packing cartons, due to the weight of the battery packs in the reserve power shelf.

### Printed Circuit Cards

**4.05** All printed circuit cards, if shipped separately, are packaged as shown in Fig. 4-5. If a larger number of circuit cards are to be shipped, they are individually packed and shipped in groups of ten per carton.

## 5. DELIVERY CHECK

**5.01** At the time of delivery at the installation site, all items delivered must be checked against the order form and packaging slip. Any discrepancies must be reported immediately.

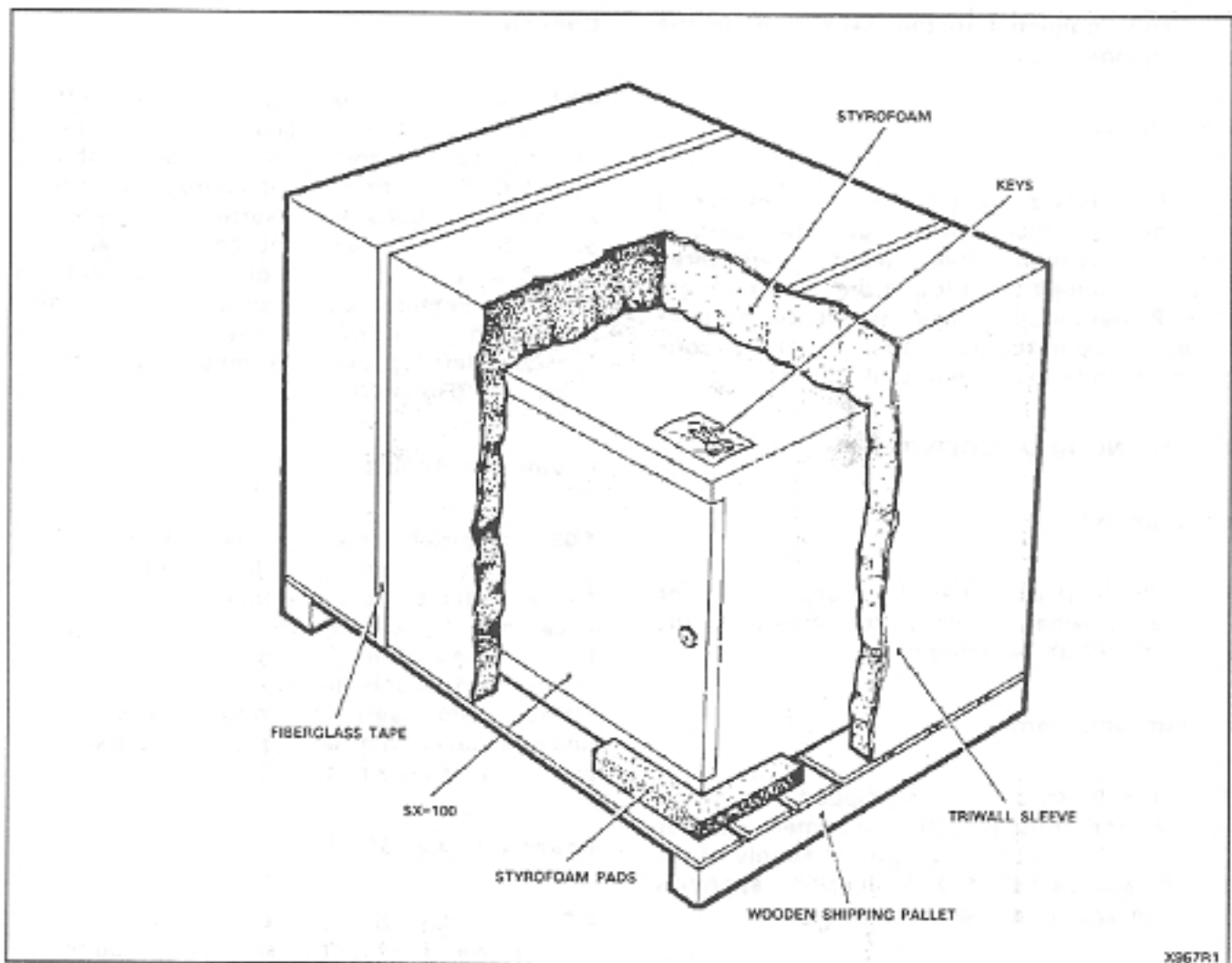


Fig. 4-1 SX-100 System Packaging

## 6. UNPACKING AND HANDLING

### Cabinet

6.01 The procedures to be used when handling and unpacking the equipment are detailed in Appendices 3 and 4.

### Shelves and Circuit Cards

6.02 Shelves and circuit cards shipped separately from the equipment cabinet should not be unpacked before they are required for use. When required, the shelf and cards are to be transported to the equipment location packaged in their original containers when possible.

## 7. INSPECTION

### Cabinet

7.01 After positioning and unpacking the equipment, a visual inspection should be performed prior to installation to ensure that:

- (a) The cabinet has not been dented or scratched during shipment.
- (b) The door on the front of the cabinet opens and closes easily.
- (c) The shelves are mounted firmly in the cabinet.
- (d) The shelves are not bent or otherwise damaged.

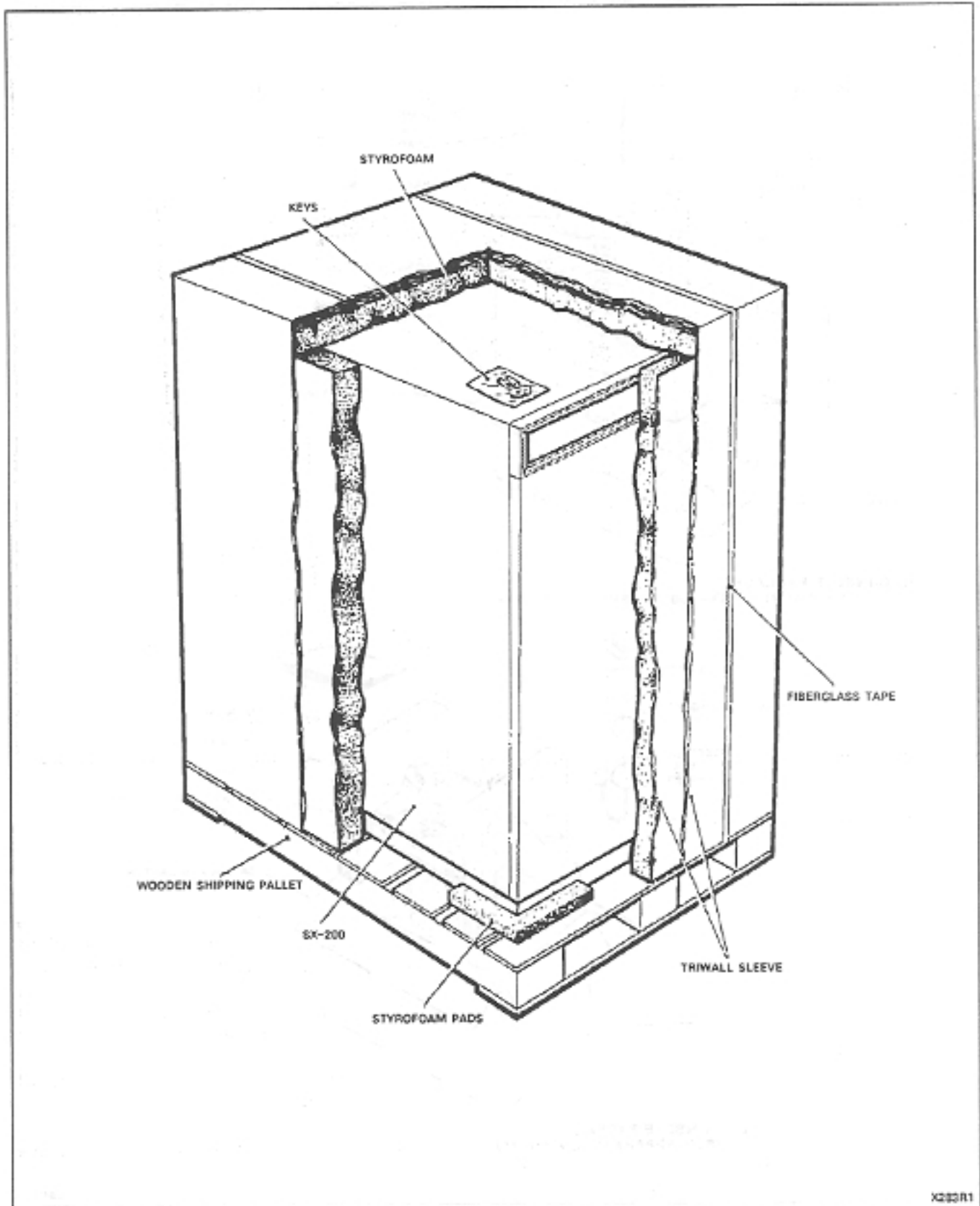
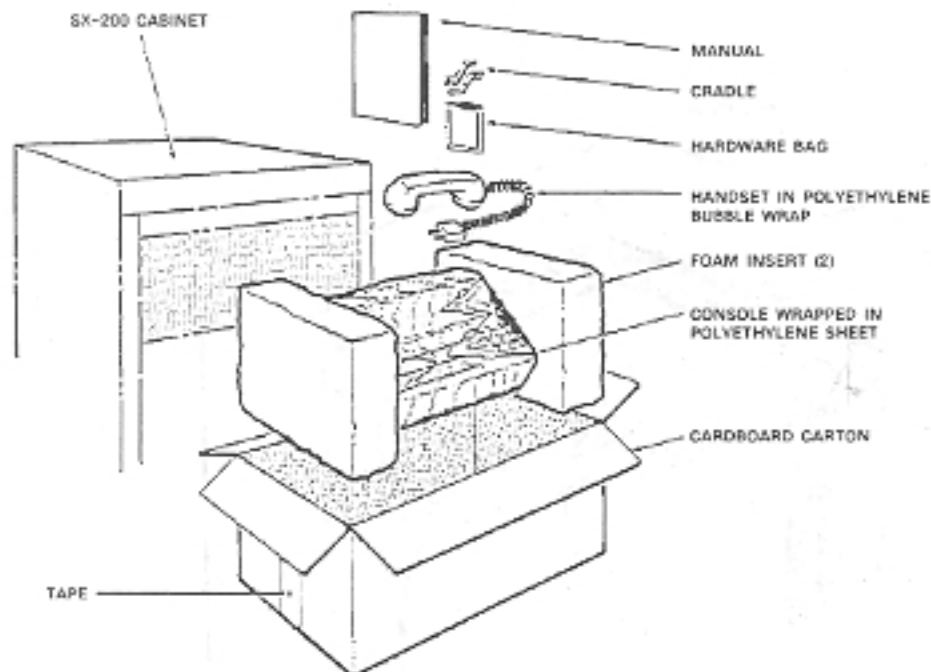
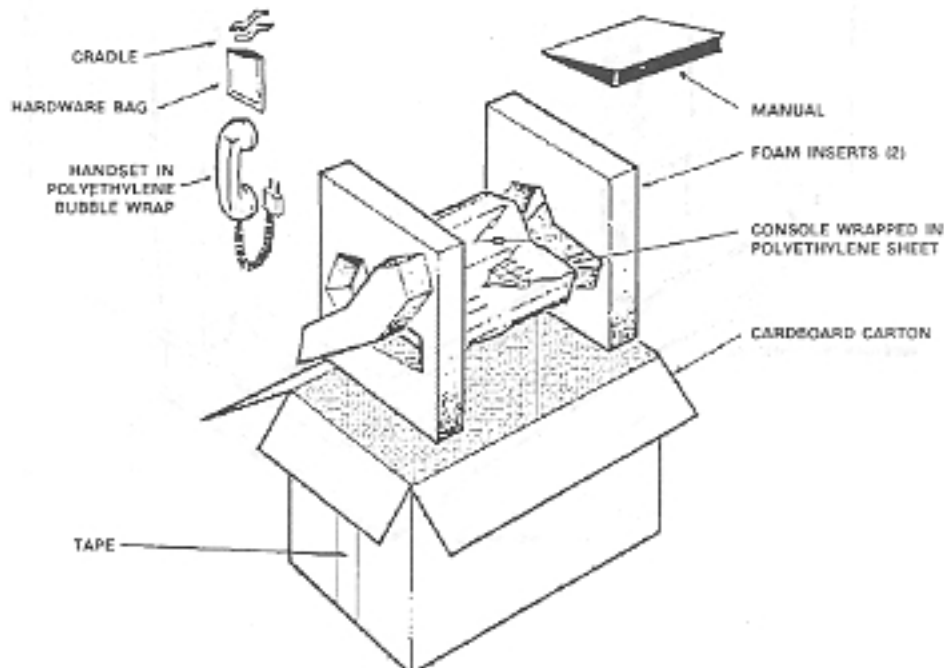


Fig. 4-2 SX-200 System Packaging



(a) CONSOLE PACKAGING -  
(FOR SHIPMENT IN SX-200 1 - SHELF CABINET)



(b) CONSOLE PACKAGING -  
(FOR SEPARATE SHIPMENT)

X234/R2

Fig. 4-3 Console Packaging

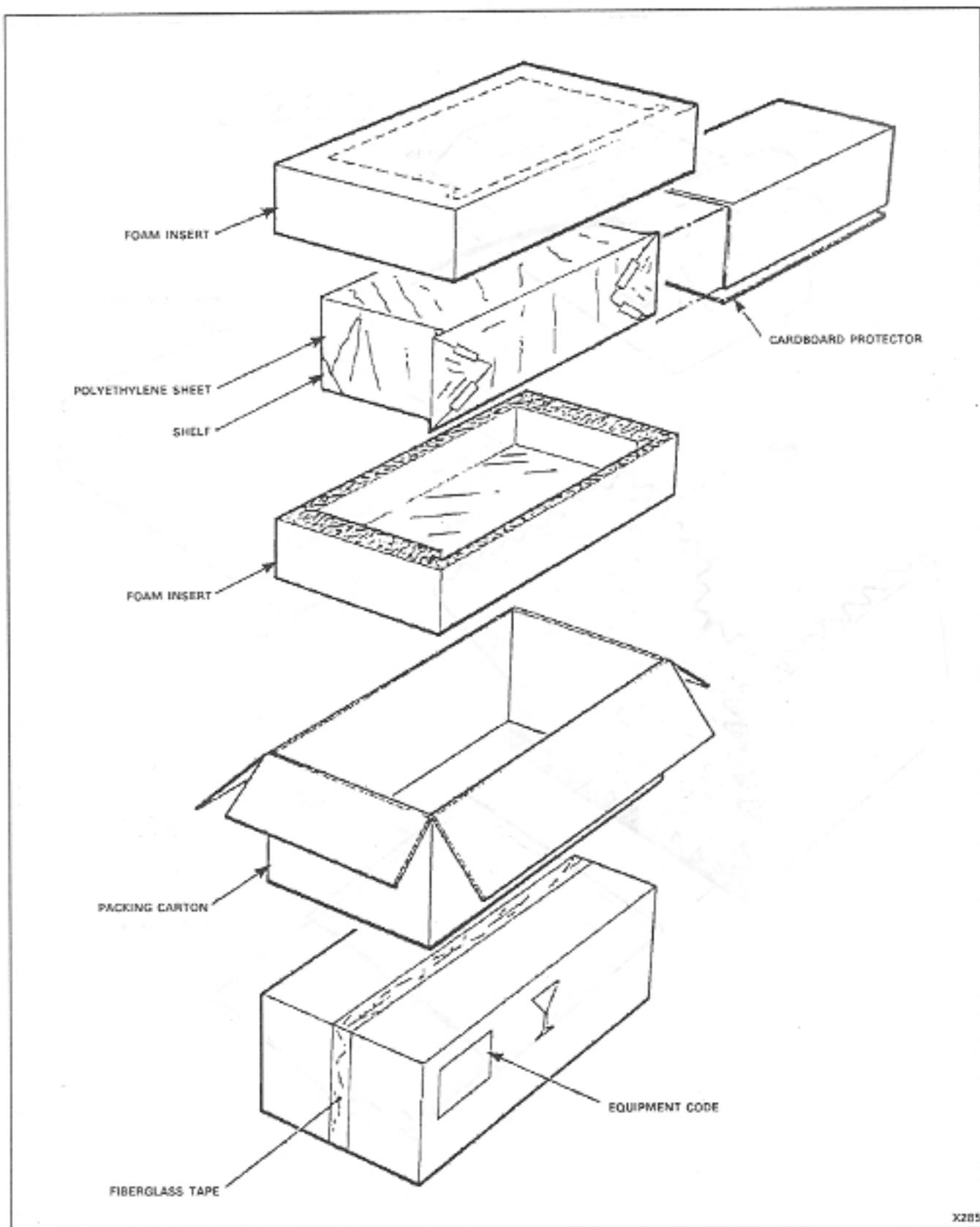


Fig. 4-4 Equipment Shelf Packaging

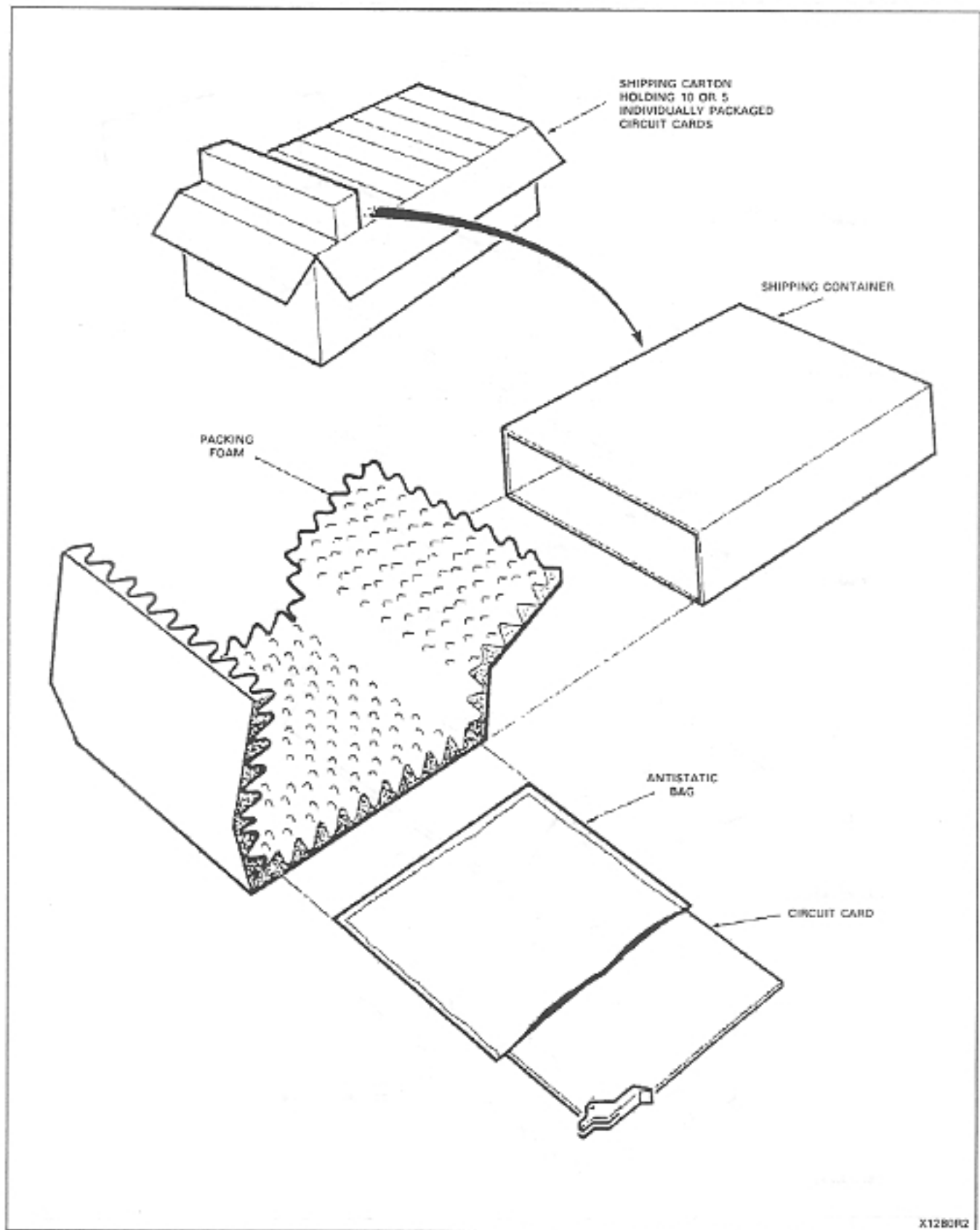


Fig. 4-5 Circuit Card Packaging

- (e) All cards are seated firmly in their connectors.
- (f) Rear doors open and close easily.
- (g) All components mounted in the rear panel power supply are secure.
- (h) All interconnecting cables and plugs are secure.
- (j) All connections to the power supply are tight.

### Shelves

**7.02** Inspect the shelf to ensure that:

- (a) Edge connector contacts are undamaged and do not contain any foreign matter.
- (b) No circuit card guides are broken.
- (c) No wires are broken.
- (d) The backplane is not cracked.
- (e) No connector pins are broken or bent.

### Cards

**Caution:** Handle Circuit Cards by their edges only. Handling the board faces or components may cause damage. At all times wear a static-preventing wrist strap.

**7.03** If printed circuit cards are shipped separately from the equipment, inspect each circuit card to ensure that:

- (a) The fiberboard is not cracked.
- (b) No loose leads or components are apparent.
- (c) The card front panel is not broken. Circuit cards shipped in the equipment do not require individual inspection unless equipment shelf damage has been found.

### Defective Items

**7.04** If any defective item is found, it should be tagged and returned to the supplier in accordance with accepted procedures (see Part 8).

## 8. REPACKING FOR SHIPMENT

**8.01** When the PABX equipment is shipped from one location to another, all items must be packaged to prevent damage. Figs. 4-1 through 4-5 show how the equipment was originally packaged. This method of packaging should be followed as closely as possible.

**8.02** If the original packaging material is no longer available, the returned parts should be wrapped in several layers of air-cushion type wrap, placed in a suitable container, and surrounded with paper to minimize movement of the items.

## 9. INSTALLATION REQUIREMENTS

### Environmental Requirements

**9.01** The PABX equipment cabinet may be installed in any location which fulfills the requirements of 9.02, and is within the following temperature and humidity limits:

- Temperature 0-40°C (32-104°F)
- Relative Humidity 10-90% (noncondensing)

### Floor Space

**9.02** The minimum floor space for installation and subsequent maintenance of the SX-100 and SX-200 Electronic PABX's is shown in Figs. 9-1 and 9-2 respectively.

### Equipment Cabinet Location

**9.03** The following requirement must be met when selecting a location for the PABX equipment. For cooling purposes the PABX cabinet equipments use natural air convection flow. For this reason the bottom areas of the cabinets must be allowed free air flow and must not be obstructed, for example, by rug pile blocking the air vent entries.

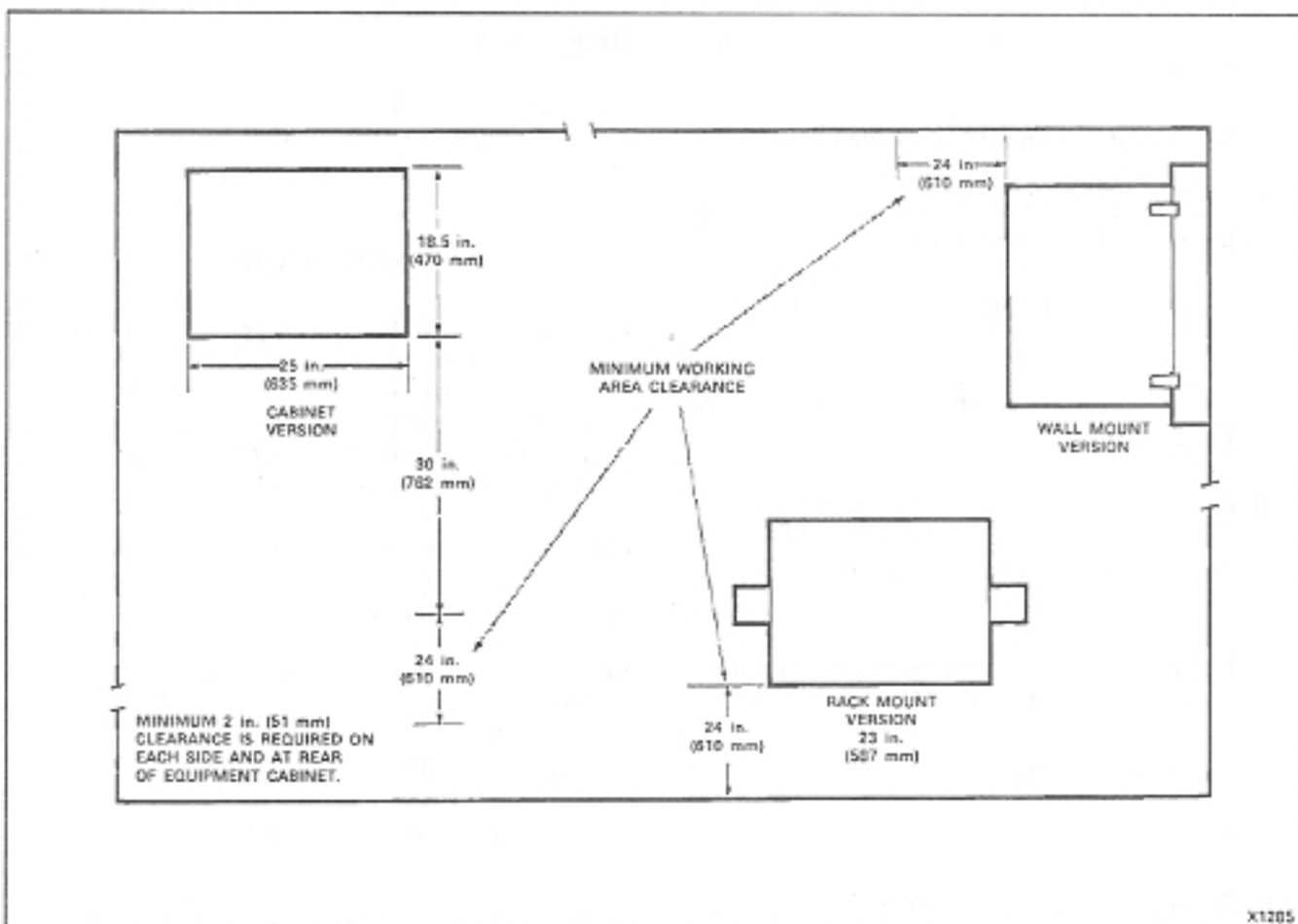


Fig. 9-1 SX-100 Minimum Equipment Cabinet Floor Space Requirements

**The location MUST BE:**

- Dry and clean
- Well ventilated
- Well lit
- Easily accessible.

**The location MUST NOT BE:**

- Near a sprinkler system, sweating pipes, steam pipes or steam vents
- In areas with extreme heat or cold
- In areas where corrosive fumes or exhaust from machinery is present
- In passageways used for moving equipment
- Next to a reproducing or copying machine. A minimum clearance of 10 feet (3 m) must be provided and the room

should be ventilated by an exhaust fan if the reproducing machine is not equipped with a filtering system.

**Power Supply Requirements**

9.04 The customer must provide a single phase power receptacle, with the following recommendations:

- 115 V, 60 Hz fused, and capable of delivering 4 A; or 250 V, 50 Hz fused, and capable of delivering 2 A.
- The power receptacle should be wired and fused independently from all other receptacles.
- A warning tag should be attached to circuit-breaker-type fuses to prevent unauthorized manual operation.



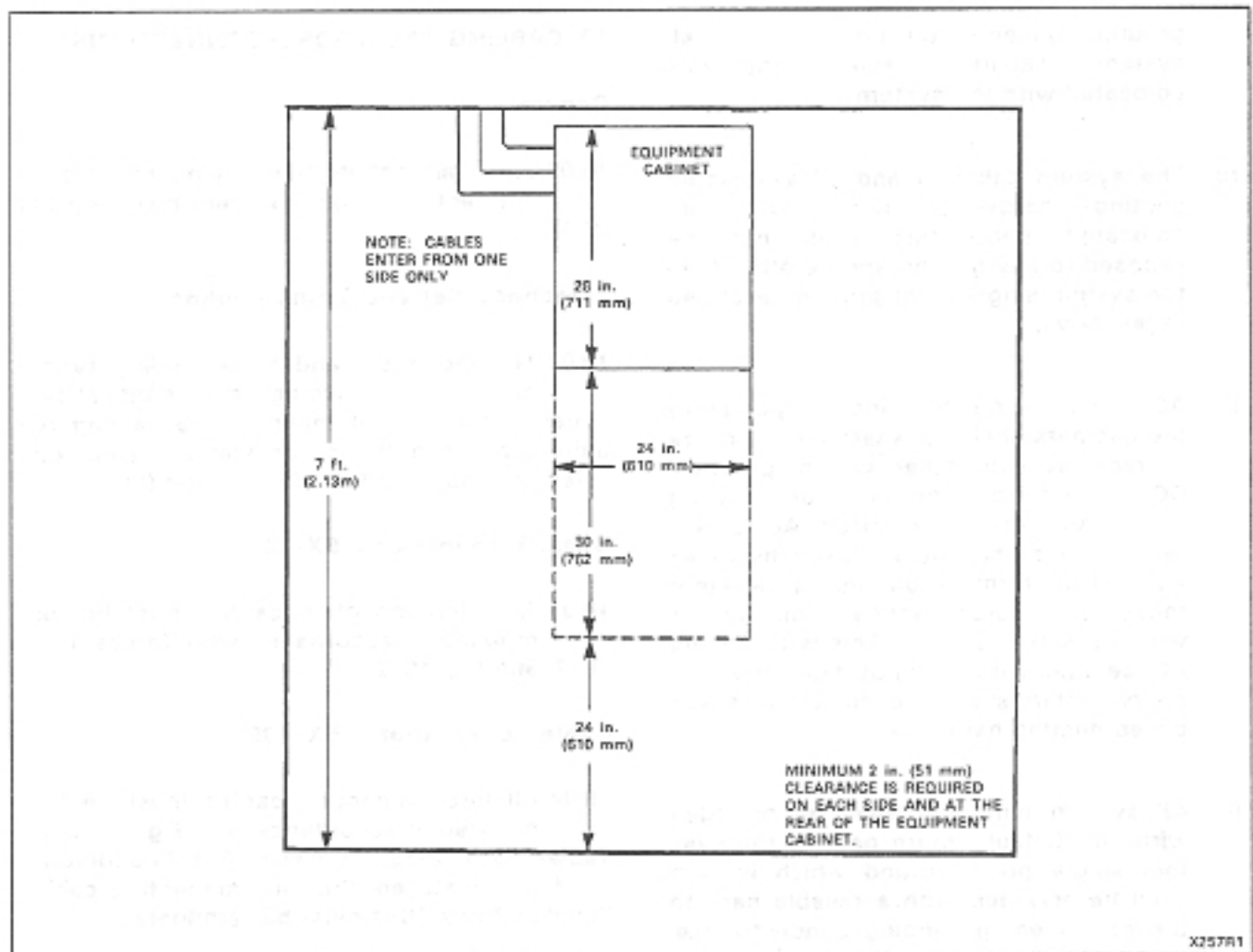


Fig. 9-2 SX-200 Minimum Equipment Cabinet Floor Space Requirements

- The power receptacle must not be controlled by a switch.
- The live and neutral conductors at the receptacle shall be wired to their proper respective connections.
- The power receptacle must be a 3-wire type, with the wire connected to the ground of the electrical system.
- The receptacle should be easily accessible for the removal of the plug for maintenance.
- The receptacle location should be selected to prevent accidental removal of the power cord.
- The power cord between the cabinet and the receptacle should not present a hazard to the subscriber.
- A warning tag should be attached to the plug-end of the power cord to prevent accidental removal of the cord by the subscriber.

#### Equipment Grounding

9.05 The following is a description of the required PBX equipment grounding practice:

- (a) All circuit commons within the cabinet shall derive ground from a single ground concentration point within the cabinet. Each cabinet's ground concentration point shall derive ground from a single

ground concentration point serving all system cabinets and peripherals collocated with the system.

- (b) The system cabinets and all associated ducting hardware along with all collocated peripherals shall not be exposed to any ground source other than the system single point ground described in (a) above.
- (c) AC service wires bringing AC power to the cabinets shall not share an enclosure or raceway with other system grounds, DC power distribution wires, or signaling wires. All nonconnectorized AC power terminations shall be enclosed by raceways and termination boxes whether these enclosures appear outside or within system cabinets. This is to ensure AC service wires cannot fault the circuitry within system cabinets or associated ducting hardware.
- (d) All system hardware shall be provided with an AC fault return path to the system single point ground which in turn shall be provided with a reliable path to the equipment grounding conductor (i.e. green wire ground or safety ground). The path from system equipment to system single point ground need not be a direct dedicated path but can be any reliable path to other system hardware which receives the above grounding path.
- (e) All sources of external ground (i.e. system signaling ground to the approved ground source, etc) shall connect only to the system single point ground. The intent of providing for a system point ground is to minimize ground loops and prevent lightning from finding a path through system components.
- (f) A separate grounding conductor (minimum size, 14 AWG) shall be separately run from the system single point ground to the communications ground system on the cross-connect field.

## 10. CABLING AND CROSS-CONNECTIONS

### General

**10.01** This Part details the cabling and cross-connections required when installing the PABX.

### Telephone Set and Trunk Cabling

**10.02** Telephone set and trunk cabling terminates on the building cross-connect terminal in the normal manner. The cabling requirements and limits for stations and consoles are shown in Fig. 10-1 (a) and (b).

### Cable Terminations, SX-100

**10.03** All interconnecting cables must be terminated in accordance with Tables 10-1, 10-2, and Fig. 10-2.

### Cable Terminations, SX-200

**10.04** All interconnecting cables must be terminated in accordance with Fig. 10-3 and Tables 10-1, 10-2, 10-3 and 10-5. In addition if shelf 2 is installed, the interconnecting cables listed in Table 10-4 must be terminated.

### Cross-Connections

**10.05** Jumpers should be run using Z-type 24 AWG cross-connecting cables.

**10.06** Connection between the equipment cabinet, cross-connect field, stations, trunks and consoles should be made using 26 AWG connector-ended cable in accordance with Tables 10-1 through 10-5.

**10.07** Cabling connections between shelf 1, the interconnect board, and cross-connect field are shown in Figs. 10-2 and 10-3.

**10.08** Figs. 10-4 and 10-5 illustrate typical block and wiring diagrams for a power fail transfer circuit. Fig. 10-6 illustrates typical night bell wiring connections and Fig. 10-7 shows the connections for music and PA requirements.

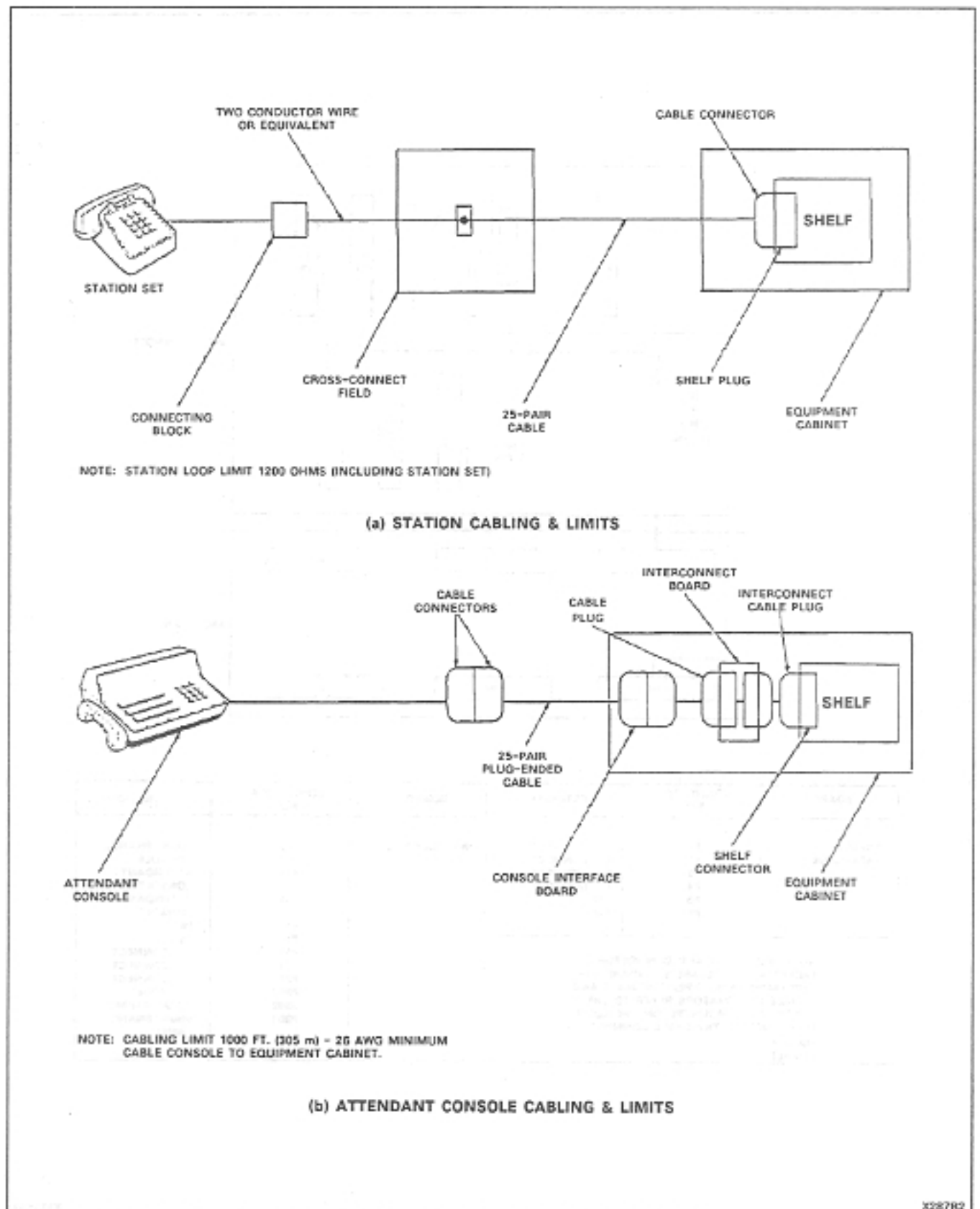
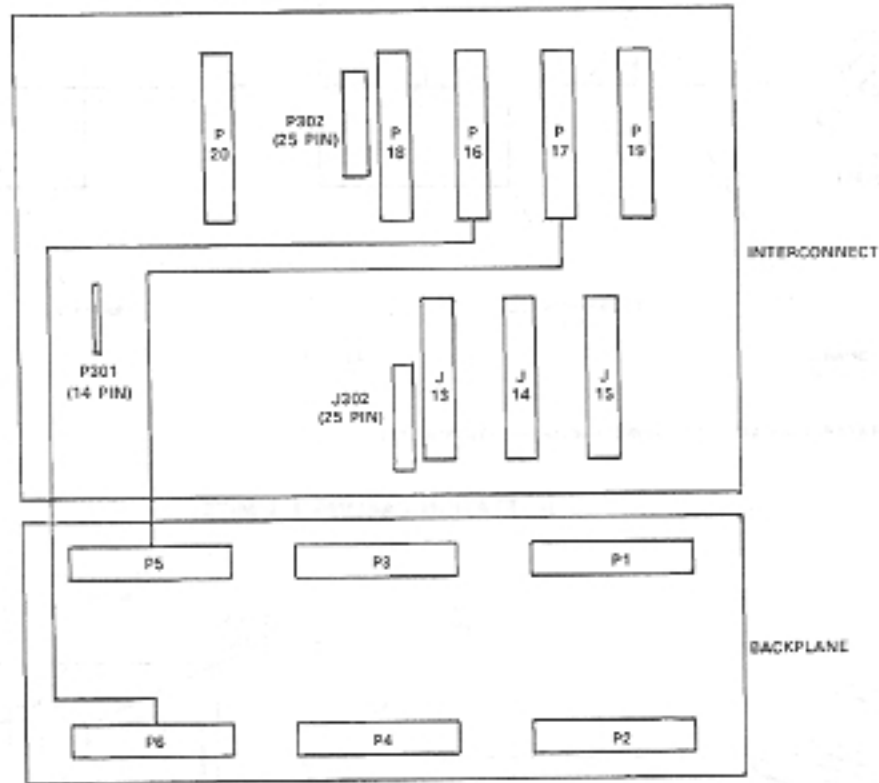


Fig. 10-1 Station and Console Cabling Requirements

X28712



| BOARD   | CONNECTOR NO. | DESTINATION | BOARD        | CONNECTOR NO. | DESTINATION            |
|---|---------------|-------------|--------------|---------------|------------------------|
| SHELF<br>BACKPLANE  | P1            | X - CONNECT | INTERCONNECT | J13           | MAINTENANCE<br>CONSOLE |
|   | P2            | X - CONNECT |              | J14           | ATTENDANT<br>CONSOLE 2 |
|   | P3            | X - CONNECT |              | J15           | ATTENDANT<br>CONSOLE 1 |
|   | P4            | X - CONNECT |              | P16           | P6                     |
|   | P5            | P17         |              | P17           | P5                     |
|   | P6            | P18         |              | P18           | X - CONNECT            |
| NOTE: ALL PLUGS AND CONNECTORS<br>EXCEPT AS NOTED ARE STANDARD 25-<br>PAIR (AMPHENOL TYPE). THE MALE AND<br>FEMALE DESIGNATORS REFER TO THE<br>CONNECTORS MOUNTED ON THE EQUIP-<br>MENT, NOT TO THE CABLE CONNECTORS.<br>MALE = P<br>FEMALE = J |               |             |              | P19           | X - CONNECT            |
|   |               |             |              | P20           | X - CONNECT            |
|   |               |             |              | P302          | TO MODEM               |
|   |               |             |              | J302          | LOCAL TERMINAL         |
|   |               |             |              | P301          | MAINTENANCE<br>PANEL   |
|   |               |             |              |               |                        |
|   |               |             |              |               |                        |

X1315R2

Fig. 10-2 SX-100 Connector Locations

**10.09** When backplane translator boards are used with the lines and trunk circuits, different terminal connections result. In this case the cabling arrangements must conform to the termination connections shown in Fig. 605-2, MAP200-605, Appendix 6.

#### FCC Cross-Connect Field Recommendations

**10.10** Trunk circuits must be connected to the telephone company interface jack sequentially. A cross-connect field is necessary to separate the lines and trunks which occur in the same cable that is connected to the shelf connector.

**10.11** All cables containing trunk circuit pairs must be connectorized; thus, the cross-connect field must also be connectorized. Refer to Appendix 2 for details.

### 11. DESIGNATIONS

#### General

**11.01** Designations are an integral part of the installation procedures. Correct identification of all cables and terminations improves service by reducing search time.

**TABLE 11-1**  
**TERMINATING PROCEDURE**

| STEP | ACTION   |
|------|--|
| 1    | Mount cross-connecting blocks                                    |
| 2    | Run and connect building cables                                  |
| 3    | Identify cables using identification tape                        |
| 4    | Attach designation strips if required to cross-connecting blocks |
| 5    | Run and connect equipment cables                                 |
| 6    | Run and connect required jumpers                                 |

**11.02** Modular cross-connecting fields are referenced to throughout this description. The procedure for terminating the cables and equipment are shown in Table 11-1 and Fig. 11-1.

### 12. INSTALLATION

#### General

**12.01** The SX-100 and SX-200 systems should be installed in accordance with the following steps:

- (a) Consult Appendix 1 for a review of MITEL Action Procedures (MAP's).
- (b) Consult Appendix 2 for certain FCC interconnection requirements.
- (c) For installation of SX-100 equipment proceed with the steps listed in Table A3-1, Appendix 3.
- (d) For installation of SX-200 equipment proceed with the steps listed in Table A4-1, Appendix 4.
- (e) Appendix 5 lists setting of trunk card switches which are required to be performed during the installation of the PABX equipment.
- (f) Appendix 6 lists miscellaneous installation procedures which may be required during the PABX installation or the installation of additional equipment.

#### Precautions

**12.02** When installing the system certain precautions must be observed, particularly when handling PCB cards, replacing modules thereon or using test equipment to measure voltages. These precautions are detailed below:

- (a) When replacing PCB cards ensure that power is first switched off (where this is possible), but maintain the ground connections to the equipment.
- (b) Handle PCB cards, as far as is practicable, only by the edges and avoiding contact with any exposed electrical connections. When removing a new card from its package, touch the ground bar first to equalize any static voltage build-up, prior to inserting it in the equipment. A wrist ground strap should be worn (Fig. 12-1), but failing availability, ensure that one hand is grounded to the system cabinet immediately prior to removing or inserting a PCB card.

- (c) Modules, when removed for testing, should have their pins inserted into conductive foam to equalize build up.
- (d) Conductive packages should be grounded prior to opening them to remove the contents, and similarly grounded prior to placing a card in the package. Suspected faulty cards should be placed in conductive packages to prevent further possible damage to the cards.

### 13. SUPERSET 4

#### General

13.01 The SUPERSET 4 is an advanced microprocessor-controlled electronic telephone set. Because of this, certain considerations must be taken into account when installing the SUPERSET 4.

- (a) The SUPERSET 4 requires no special cabling as it is a 2-wire telephone set with a maximum loop resistance of 200 ohms (typically 2500 ft (63.5 m) of 26 AWG).
- (b) The SUPERSET 4 requires a special line card. The SUPERSET line card is not compatible with standard telephone sets. When this line card is installed in a slot

only SUPERSET 4 telephone sets may be connected to the equipment numbers associated with that slot.

- (c) Only one SUPERSET 4 may be connected to each port.
- (d) When troubleshooting or testing a SUPERSET 4 equipment or line, a SUPERSET 4 must be used as a "butt-in". A standard telephone set will not work on a SUPERSET equipment number or line.
- (e) The SUPERSET 4 derives its power from the SX-100 or SX-200. For this reason, a SUPERSET 4 cannot be used as a Power Fail Transfer extension, as the SUPERSET will not be functional during power failures.
- (f) If the announce port on the SUPERSET 4 is to be used, an associated equipment number must be used other than the SUPERSET 4 equipment number.

#### Installation

13.02 For specific installation instructions for the SUPERSET 4, see Section MITL9174-518-200-NA and MITL9174-518-290-NA. For specific programming instructions see Section MITL9105/9110-096-210-NA.

TABLE 10-1 SHELF 1 EXTERNAL PLUG AND JACK CONNECTIONS

## PLUG P1 (Connects to Cross-Connect Field)

| Pin | Pair Color | Lead Designation Lines | Lead Designation, CO | Designation, DID/TIE | Trunks E&M† | Card Positions |
|-----|------------|------------------------|----------------------|----------------------|-------------|----------------|
| 26  | W-BL       | T1 reserved for        | T1                   | T1                   | T1          |                |
| 1   | BL-W       | R1 test line           | R1                   | R1                   | R1          |                |
| 27  | W-O        | T2                     | XT2                  |                      | TR1         | 1              |
| 2   | O-W        | R2                     | XT1                  |                      | RR1         |                |
| 28  | W-G        | T3                     | T2                   |                      | E1          |                |
| 3   | G-W        | R3                     | R2                   |                      | M1          |                |
| 29  | W-BR       | T4                     |                      |                      |             |                |
| 4   | BR-W       | R4                     |                      |                      |             |                |
| 30  | W-S        | T1                     | T1                   | T1                   | T1          |                |
| 5   | S-W        | R1                     | R1                   | R1                   | R1          |                |
| 31  | R-BL       | T2                     | XT2                  |                      | TR1         | 2              |
| 6   | BL-R       | R2                     | XT1                  |                      | RR1         |                |
| 32  | R-O        | T3                     | T2                   |                      | E1          |                |
| 7   | O-R        | R3                     | R2                   |                      | M1          |                |
| 33  | R-G        | T4                     |                      |                      |             |                |
| 8   | G-R        | R4                     |                      |                      |             |                |
| 34  | R-BR       | T1                     | T1                   | T1                   | T1          |                |
| 9   | BR-R       | R1                     | R1                   | R1                   | R1          |                |
| 35  | R-S        | T2                     | XT2                  |                      | TR1         | 3              |
| 10  | S-R        | R2                     | XT1                  |                      | RR1         |                |
| 36  | BK-BL      | T3                     | T2                   |                      | E1          |                |
| 11  | BL-BK      | R3                     | R2                   |                      | M1          |                |
| 37  | BK-O       | T4                     |                      |                      |             |                |
| 12  | O-BK       | R4                     |                      |                      |             |                |
| 38  | BK-G       | T1                     | T1                   | T1                   | T1          |                |
| 13  | G-BK       | R1                     | R1                   | R1                   | R1          |                |
| 39  | BK-BR      | T2                     | XT2                  |                      | TR1         | 4              |
| 14  | BR-BK      | R2                     | XT1                  |                      | RR1         |                |
| 40  | BK-S       | T3                     | T2                   |                      | E1          |                |
| 15  | S-BK       | R3                     | R2                   |                      | M1          |                |
| 41  | Y-BL       | T4                     |                      |                      |             |                |
| 16  | BL-Y       | R4                     |                      |                      |             |                |
| 42  | Y-O        | T1                     | T1                   | T1                   | T1          |                |
| 17  | O-Y        | R1                     | R1                   | R1                   | R1          |                |
| 43  | Y-G        | T2                     | XT2                  |                      | TR1         | 5              |
| 18  | G-Y        | R2                     | XT1                  |                      | RR1         |                |
| 44  | Y-BR       | T3                     | T2                   |                      | E1          |                |
| 19  | BR-Y       | R3                     | R2                   |                      | M1          |                |
| 45  | Y-S        | T4                     |                      |                      |             |                |
| 20  | S-Y        | R4                     |                      |                      |             |                |
| 46  | V-BL       | T1                     | T1                   | T1                   | T1          |                |
| 21  | BL-V       | R1                     | R1                   | R1                   | R1          |                |
| 47  | V-O        | T2                     | XT2                  |                      | TR1         | 6              |
| 22  | O-V        | R2                     | XT1                  |                      | RR1         |                |
| 48  | V-G        | T3                     | T2                   |                      | E1          |                |
| 23  | G-V        | R3                     | R2                   |                      | M1          |                |
| 49  | V-BR       | T4                     |                      |                      |             |                |
| 24  | BR-V       | R4                     |                      |                      |             |                |
| 50  | V-S        | SPARE                  | SPARE                |                      |             |                |
| 25  | S-V        | SPARE                  | SPARE                |                      |             |                |

†For 2-Wire E&amp;M Trunk operation DO NOT connect RR and TR leads

TABLE 10-1 SHELF 1 EXTERNAL PLUG AND JACK CONNECTIONS (CONT'D)

## PLUG P2 (Connects to Cross-Connect Field)

| Pin | Pair Color | Lead Designation Lines | Lead Designation, CO | Designation, DID/TIE | Trunks E&M† | Card Positions |
|-----|------------|------------------------|----------------------|----------------------|-------------|----------------|
| 26  | W-BL       | T5                     | T3                   | T2                   | T2          | 1              |
| 1   | BL-W       | R5                     | R3                   | R2                   | R2          |                |
| 27  | W-O        | T6                     | XT4                  |                      | TR2         |                |
| 2   | O-W        | R6                     | XT3                  |                      | RR2         |                |
| 28  | W-G        | T7                     | T4                   |                      | E2          |                |
| 3   | G-W        | R7                     | R4                   |                      | M2          |                |
| 29  | W-BR       | T8                     |                      |                      |             |                |
| 4   | BR-W       | R8                     |                      |                      |             |                |
| 30  | W-S        | T5                     | T3                   | T2                   | T2          | 2              |
| 5   | S-W        | R5                     | R3                   | R2                   | R2          |                |
| 31  | R-BL       | T6                     | XT4                  |                      | TR2         |                |
| 6   | BL-R       | R6                     | XT3                  |                      | RR2         |                |
| 32  | R-O        | T7                     | T4                   |                      | E2          |                |
| 7   | O-R        | R7                     | R4                   |                      | M2          |                |
| 33  | R-G        | T8                     |                      |                      |             |                |
| 8   | G-R        | R8                     |                      |                      |             |                |
| 34  | R-BR       | T5                     | T3                   | T2                   | T2          | 3              |
| 9   | BR-R       | R5                     | R3                   | R2                   | R2          |                |
| 35  | R-S        | T6                     | XT4                  |                      | TR2         |                |
| 10  | S-R        | R6                     | XT3                  |                      | RR2         |                |
| 36  | BK-BL      | T7                     | T4                   |                      | E2          |                |
| 11  | BL-BK      | R7                     | R4                   |                      | M2          |                |
| 37  | BK-O       | T8                     |                      |                      |             |                |
| 12  | O-BK       | R8                     |                      |                      |             |                |
| 38  | BK-G       | T5                     | T3                   | T2                   | T2          | 4              |
| 13  | G-BK       | R5                     | R3                   | R2                   | R2          |                |
| 39  | BK-BR      | T6                     | XT4                  |                      | TR2         |                |
| 14  | BR-BK      | R6                     | XT3                  |                      | RR2         |                |
| 40  | BK-S       | T7                     | T4                   |                      | E2          |                |
| 15  | S-BK       | R7                     | R4                   |                      | M2          |                |
| 41  | Y-BL       | T8                     |                      |                      |             |                |
| 16  | BL-Y       | R8                     |                      |                      |             |                |
| 42  | Y-O        | T5                     | T3                   | T2                   | T2          | 5              |
| 17  | O-Y        | R5                     | R3                   | R2                   | R2          |                |
| 43  | Y-G        | T6                     | XT4                  |                      | TR2         |                |
| 18  | G-Y        | R6                     | XT3                  |                      | RR2         |                |
| 44  | Y-BR       | T7                     | T4                   |                      | E2          |                |
| 19  | BR-Y       | R7                     | R4                   |                      | M2          |                |
| 45  | Y-S        | T8                     |                      |                      |             |                |
| 20  | S-Y        | R8                     |                      |                      |             |                |
| 46  | V-BL       | T5                     | T3                   | T2                   | T2          | 6              |
| 21  | BL-V       | R5                     | R3                   | R2                   | R2          |                |
| 47  | V-O        | T6                     | XT4                  |                      | TR2         |                |
| 22  | O-V        | R6                     | XT3                  |                      | RR2         |                |
| 48  | V-G        | T7                     | T4                   |                      | E2          |                |
| 23  | G-V        | R7                     | R4                   |                      | M2          |                |
| 49  | V-BR       | T8                     |                      |                      |             |                |
| 24  | BR-V       | R8                     |                      |                      |             |                |
| 50  | V-S        | SPARE                  | SPARE                |                      |             |                |
| 25  | S-V        | SPARE                  | SPARE                |                      |             |                |

†For 2-Wire E&amp;M Trunk operation DO NOT connect RR and TR leads



TABLE 10-1 SHELF 1 EXTERNAL PLUG AND JACK CONNECTIONS (CONT'D)

## PLUG P3 (Connects to Cross-Connect Field)

| Pin | Pair Color | Lead Designation Lines | Lead Designation, CO | Designation, DID/TIE | Trunks E&M† | Card Positions |
|-----|------------|------------------------|----------------------|----------------------|-------------|----------------|
| 26  | W-BL       | T1                     | T1                   | T1                   | T1          | 7              |
| 1   | BL-W       | R1                     | R1                   | R1                   | R1          |                |
| 27  | W-O        | T2                     | XT2                  |                      | TR1         |                |
| 2   | O-W        | R2                     | XT1                  |                      | RR1         |                |
| 28  | W-G        | T3                     | T2                   |                      | E1          | 8              |
| 3   | G-W        | R3                     | R2                   |                      | M1          |                |
| 29  | W-BR       | T4                     |                      |                      |             |                |
| 4   | BR-W       | R4                     |                      |                      |             |                |
| 30  | W-S        | T1                     | T1                   | T1                   | T1          | 9              |
| 5   | S-W        | R1                     | R1                   | R1                   | R1          |                |
| 31  | R-BL       | T2                     | XT2                  |                      | TR1         |                |
| 6   | BL-R       | R2                     | XT1                  |                      | RR1         |                |
| 32  | R-O        | T3                     | T2                   |                      | E1          | 10             |
| 7   | O-R        | R3                     | R2                   |                      | M1          |                |
| 33  | R-G        | T4                     |                      |                      |             |                |
| 8   | G-R        | R4                     |                      |                      |             |                |
| 34  | R-BR       | T1                     | T1                   | T1                   | T1          | 11             |
| 9   | BR-R       | R1                     | R1                   | R1                   | R1          |                |
| 35  | R-S        | T2                     | XT2                  |                      | TR1         |                |
| 10  | S-R        | R2                     | XT1                  |                      | RR1         |                |
| 36  | BK-BL      | T3                     | T2                   |                      | E1          | 12             |
| 11  | BL-BK      | R3                     | R2                   |                      | M1          |                |
| 37  | BK-O       | T4                     |                      |                      |             |                |
| 12  | O-BK       | R4                     |                      |                      |             |                |
| 38  | BK-G       | T1                     | T1                   | T1                   | T1          | See Note       |
| 13  | G-BK       | R1                     | R1                   | R1                   | R1          |                |
| 39  | BK-BR      | T2                     | XT2                  |                      | TR1         |                |
| 14  | BR-BK      | R2                     | XT1                  |                      | RR1         |                |
| 40  | BK-S       | T3                     | T2                   |                      | E1          | 10             |
| 15  | S-BK       | R3                     | R2                   |                      | M1          |                |
| 41  | Y-BL       | T4                     |                      |                      |             |                |
| 16  | BL-Y       | R4                     |                      |                      |             |                |
| 42  | Y-O        | T1                     | T1                   | T1                   | T1          | 11             |
| 17  | O-Y        | R1                     | R1                   | R1                   | R1          |                |
| 43  | Y-G        | T2                     | XT2                  |                      | TR1         |                |
| 18  | G-Y        | R2                     | XT1                  |                      | RR1         |                |
| 44  | Y-BR       | T3                     | T2                   |                      | E1          | 11             |
| 19  | BR-Y       | R3                     | R2                   |                      | M1          |                |
| 45  | Y-S        | T4                     |                      |                      |             |                |
| 20  | S-Y        | R4                     |                      |                      |             |                |
| 46  | V-BL       | T1                     | T1                   | T1                   | T1          | 12             |
| 21  | BL-V       | R1                     | R1                   | R1                   | R1          |                |
| 47  | V-O        | T2                     | XT2                  |                      | TR1         |                |
| 22  | O-V        | R2                     | XT1                  |                      | RR1         |                |
| 48  | V-G        | T3                     | T2                   |                      | E1          | 12             |
| 23  | G-V        | R3                     | R2                   |                      | M1          |                |
| 49  | V-BR       | T4                     |                      |                      |             |                |
| 24  | BR-V       | R4                     |                      |                      |             |                |
| 50  | V-S        | SPARE                  | SPARE                |                      |             | See Note       |
| 25  | S-V        | SPARE                  | SPARE                |                      |             |                |

Note: Position 12 can be used for lines, trunks, or receiver #4 card.

†For 2-Wire E&M Trunk operation DO NOT connect RR and TR leads

TABLE 10-1 SHELF 1 EXTERNAL PLUG AND JACK CONNECTIONS (CONT'D)

## PLUG P4 (Connects to Cross-Connect Field)

| Pin | Pair Color | Lead Designation Lines | Lead Designation, CO | Trunks E&M† | Card Positions |
|-----|------------|------------------------|----------------------|-------------|----------------|
| 26  | W-BL       | T5                     | T3                   | T2          |                |
| 1   | BL-W       | R5                     | R3                   | R2          |                |
| 27  | W-O        | T6                     | XT4                  | TR2         |                |
| 2   | O-W        | R6                     | XT3                  | RR2         | 7              |
| 28  | W-G        | T7                     | T4                   | E2          |                |
| 3   | G-W        | R7                     | R4                   | M2          |                |
| 29  | W-BR       | T8                     |                      |             |                |
| 4   | BR-W       | R8                     |                      |             |                |
| 30  | W-S        | T5                     | T3                   | T2          |                |
| 5   | S-W        | R5                     | R3                   | R2          |                |
| 31  | R-BL       | T6                     | XT4                  | TR2         |                |
| 6   | BL-R       | R6                     | XT3                  | RR2         | 8              |
| 32  | R-O        | T7                     | T4                   | E2          |                |
| 7   | O-R        | R7                     | R4                   | M2          |                |
| 33  | R-G        | T8                     |                      |             |                |
| 8   | G-R        | R8                     |                      |             |                |
| 34  | R-BR       | T5                     | T3                   | T2          |                |
| 9   | BR-R       | R5                     | R3                   | R2          |                |
| 35  | R-S        | T6                     | XT4                  | TR2         |                |
| 10  | S-R        | R6                     | XT3                  | RR2         |                |
| 36  | BK-BL      | T7                     | T4                   | E2          | 9              |
| 11  | BL-BK      | R7                     | R4                   | M2          |                |
| 37  | BK-O       | T8                     |                      |             |                |
| 12  | O-BK       | R8                     |                      |             |                |
| 38  | BK-G       | T5                     | T3                   | T2          |                |
| 13  | G-BK       | R5                     | R3                   | R2          |                |
| 39  | BK-BR      | T6                     | XT4                  | TR2         |                |
| 14  | BR-BK      | R6                     | XT3                  | RR2         |                |
| 40  | BK-S       | T7                     | T4                   | E2          | 10             |
| 15  | S-BK       | R7                     | R4                   | M2          |                |
| 41  | Y-BL       | T8                     |                      |             |                |
| 16  | BL-Y       | R8                     |                      |             |                |
| 42  | Y-O        | T5                     | T3                   | T2          |                |
| 17  | O-Y        | R5                     | R3                   | R2          |                |
| 43  | Y-G        | T6                     | XT4                  | TR2         |                |
| 18  | G-Y        | R6                     | XT3                  | RR2         |                |
| 44  | Y-BR       | T7                     | T4                   | E2          | 11             |
| 19  | BR-Y       | R7                     | R4                   | M2          |                |
| 45  | Y-S        | T8                     |                      |             |                |
| 20  | S-Y        | R8                     |                      |             |                |
| 46  | V-BL       | T5                     | T3                   | T2          |                |
| 21  | BL-V       | R5                     | R3                   | R2          |                |
| 47  | V-O        | T6                     | XT4                  | TR2         |                |
| 22  | O-V        | R6                     | XT3                  | RR2         |                |
| 48  | V-G        | T7                     | T4                   | E2          | 12             |
| 23  | G-V        | R7                     | R4                   | M2          | See Note       |
| 49  | V-BR       | T8                     |                      |             |                |
| 24  | BR-V       | R8                     |                      |             |                |
| 50  | V-S        | SPARE                  | SPARE                |             |                |
| 25  | S-V        | SPARE                  | SPARE                |             |                |

Note: Position 12 can be used for lines, trunks or receiver card #4.

†For 2-Wire E&M Trunk operation DO NOT connect RR and TR leads

TABLE 10-1 SHELF 1 EXTERNAL PLUG AND JACK CONNECTIONS (CONT'D)

## PLUG P5 (Connects to Plug P17)

| Pin | Pair Color | Lead Designation Lines | Lead Designation, CO | DID/TIE           | Trunks E&M† | Card Positions |
|-----|------------|------------------------|----------------------|-------------------|-------------|----------------|
| 26  | W-BL       | T1                     | T1                   | T1                |             |                |
| 1   | BL-W       | R1                     | R1                   | R1                | R1          |                |
| 27  | W-O        | T2                     | XT2                  |                   | TR1         |                |
| 2   | O-W        | R2                     | XT1                  |                   | RR1         |                |
| 28  | W-G        | T3                     | T2                   |                   | E1          | 13             |
| 3   | G-W        | R3                     | R2                   |                   | M1          | See Note       |
| 29  | W-BR       | T4                     |                      |                   |             |                |
| 4   | BR-W       | R4                     |                      |                   |             |                |
| 30  | W-S        | T1                     | T1                   | T1                | T1          |                |
| 5   | S-W        | R1                     | R1                   | R1                | R1          |                |
| 31  | R-BL       | T2                     | XT2                  |                   | TR1         |                |
| 6   | BL-R       | R2                     | XT1                  |                   | RR1         |                |
| 32  | R-O        | T3                     | T2                   |                   | E1          | 14             |
| 7   | O-R        | R3                     | R2                   |                   | M1          | See Note       |
| 33  | R-G        | T4                     |                      |                   |             |                |
| 8   | G-R        | R4                     |                      |                   |             |                |
| 34  | R-BR       |                        |                      |                   |             |                |
| 9   | BR-R       |                        |                      |                   |             |                |
| 35  | R-S        |                        |                      |                   |             |                |
| 10  | S-R        | RECEIVER No. 1         |                      |                   |             | 15             |
| 36  | BK-BL      |                        |                      |                   |             |                |
| 11  | BL-BK      |                        |                      |                   |             |                |
| 37  | BK-O       |                        |                      |                   |             |                |
| 12  | O-BK       |                        |                      |                   |             |                |
| 38  | BK-G       | T (A)                  |                      |                   |             |                |
| 13  | G-BK       | R (A)                  |                      |                   |             |                |
| 39  | BK-BR      | S DATA OUT T (A)       |                      | ATTENDANT CONSOLE |             |                |
| 14  | BR-BK      | S DATA OUT R (A)       |                      | No. 2             |             | 16             |
| 40  | BK-S       | S DATA IN T (A)        |                      |                   |             |                |
| 15  | S-BK       | S DATA IN R (A)        |                      |                   |             |                |
| 41  | Y-BL       | PA2 Control B          |                      |                   |             |                |
| 16  | BL-Y       | PA2 Control A          |                      |                   |             |                |
| 42  | Y-O        | T (A)                  |                      |                   |             |                |
| 17  | O-Y        | R (A)                  |                      |                   |             |                |
| 43  | Y-G        | S DATA OUT T (A)       |                      | ATTENDANT CONSOLE |             |                |
| 18  | G-Y        | S DATA OUT R (A)       |                      | No. 1             |             | 17             |
| 44  | Y-BR       | S DATA IN T (A)        |                      |                   |             |                |
| 19  | BR-Y       | S DATA IN R (A)        |                      |                   |             |                |
| 45  | Y-S        | PA1 Control B          |                      |                   |             |                |
| 20  | S-Y        | PA1 Control A          |                      |                   |             |                |
| 46  | V-BL       | MUSIC IN B             |                      |                   |             |                |
| 21  | BL-V       | MUSIC IN A             |                      |                   |             |                |
| 47  | V-O        | TEST LINE              |                      |                   |             |                |
| 22  | O-V        | TEST LINE              |                      |                   |             |                |
| 48  | V-G        | PA1 OUT B              |                      |                   |             |                |
| 23  | G-V        | PA1 OUT A              |                      |                   |             |                |
| 49  | V-BR       | PA2 OUT B              |                      |                   |             |                |
| 24  | BR-V       | PA2 OUT A              |                      |                   |             |                |
| 50  | V-S        | SPARE                  | SPARE                |                   |             |                |
| 25  | S-V        | SPARE                  | SPARE                |                   |             |                |

**Note:** Positions 14 and 13 can be used for lines or trunks, or for receiver cards #2 and #3 respectively.

†For 2-Wire E&M Trunk operation DO NOT connect RR and TR leads

TABLE 10-1 SHELF 1 EXTERNAL PLUG AND JACK CONNECTIONS (CONT'D)

## PLUG P6 (Connects to Plug P16)

| Pin | Pair Color | Lead Designation Lines | Lead Designation, CO DID/TIE | Trunks E&M† | Card Positions                   |
|-----|------------|------------------------|------------------------------|-------------|----------------------------------|
| 26  | W-BL       | T5                     | T1                           | T1          | 13<br>See Note                   |
| 1   | BL-W       | R5                     | R1                           | R1          |                                  |
| 27  | W-O        | T6                     | XT2                          | TR1         |                                  |
| 2   | O-W        | R6 Lines               | XT1                          | RR1         |                                  |
| 28  | W-G        | T7                     | T2                           | E1          |                                  |
| 3   | G-W        | R7                     | R2                           | M1          |                                  |
| 29  | W-BR       | T8                     |                              |             |                                  |
| 4   | BR-W       | R8                     |                              |             |                                  |
| 30  | W-S        | T5                     | T1                           | T1          | 14<br>See Note                   |
| 5   | S-W        | R5                     | R1                           | R1          |                                  |
| 31  | R-BL       | T6                     | XT2                          | TR1         |                                  |
| 6   | BL-R       | R6 Lines               | XT1                          | RR1         |                                  |
| 32  | R-O        | T7                     | T2                           | E1          |                                  |
| 7   | O-R        | R7                     | R2                           | M1          |                                  |
| 33  | R-G        | T8                     |                              |             |                                  |
| 8   | G-R        | R8                     |                              |             |                                  |
| 34  | R-BR       |                        |                              |             | 15                               |
| 9   | BR-R       |                        |                              |             |                                  |
| 35  | R-S        |                        |                              |             |                                  |
| 10  | S-R        | RECEIVER No. 1         |                              |             |                                  |
| 36  | BK-BL      |                        |                              |             |                                  |
| 11  | BL-BK      |                        |                              |             |                                  |
| 37  | BK-O       |                        |                              |             |                                  |
| 12  | O-BK       |                        |                              |             |                                  |
| 38  | BK-G       | T (A)                  |                              |             |                                  |
| 13  | G-BK       | R (A)                  |                              |             |                                  |
| 39  | BK-BR      | S DATA OUT T (B)       | ATTENDANT CONSOLE            |             | 16                               |
| 14  | BR-BK      | S DATA OUT R (B)       | SPARE                        |             |                                  |
| 40  | BK-S       | S DATA IN T (B)        |                              |             |                                  |
| 15  | S-BK       | S DATA IN R (B)        | NOT USED                     |             |                                  |
| 41  | Y-BL       | R (K1)                 |                              |             |                                  |
| 16  | BL-Y       | K1                     | NIGHT BELL 1                 |             |                                  |
| 42  | Y-O        | T (A)                  |                              |             |                                  |
| 17  | O-Y        | R (A)                  |                              |             |                                  |
| 43  | Y-G        | S DATA OUT T (B)       | MAINTENANCE                  |             |                                  |
| 18  | G-Y        | S DATA OUT R (B)       | CONSOLE                      |             |                                  |
| 44  | Y-BR       | S DATA IN T (B)        |                              |             | 17                               |
| 19  | BR-Y       | S DATA IN R (A)(B)     |                              |             |                                  |
| 45  | Y-S        | UART IN                |                              |             |                                  |
| 20  | S-Y        | UART OUT               |                              |             |                                  |
| 46  | V-BL       | R (K5)                 | SOFTWARE ALARM               |             |                                  |
| 21  | BL-V       | K5                     |                              |             |                                  |
| 47  | V-O        | R (K4)                 | NIGHT SERVICE                |             |                                  |
| 22  | O-V        | K4                     |                              |             |                                  |
| 48  | V-G        | R (K3)                 | NIGHT BELL 3                 |             |                                  |
| 23  | G-V        | K3                     |                              |             |                                  |
| 49  | V-BR       | R (K2)                 | NIGHT BELL 2                 |             | 18<br>(See Notes for<br>PLUG 18) |
| 24  | BR-V       | K2                     |                              |             |                                  |
| 50  | V-S        | SPARE                  | SPARE                        |             |                                  |
| 25  | S-V        | SPARE                  | SPARE                        |             |                                  |

**Note:** Positions 14 and 13 can be used for lines or trunks, or for receiver cards #2 and #3 respectively.

†For 2-Wire E&M Trunk operation DO NOT connect RR and TR leads

TABLE 10-2 INTERCONNECT BOARD PLUG AND JACK CONNECTIONS

CONNECTOR J13 MAINTENANCE CONSOLE  
(Connected To Maintenance Panel)

CONNECTOR J14 ATTENDANT CONSOLE  
NO. 2 (See Note For J15)

| Pin | Pair Color | Lead Designation     | Pin | Pair Color | Lead Designation     |
|-----|------------|----------------------|-----|------------|----------------------|
| 26  | W-BL       | ELECTROSTATIC GROUND | 26  | W-BL       | ELECTROSTATIC GROUND |
| 1   | BL-W       | ELECTROSTATIC GROUND | 1   | BL-W       | ELECTROSTATIC GROUND |
| 27  | W-O        | ELECTROSTATIC GROUND | 27  | W-O        | ELECTROSTATIC GROUND |
| 2   | O-W        | ELECTROSTATIC GROUND | 2   | O-W        | ELECTROSTATIC GROUND |
| 28  | W-G        | ELECTROSTATIC GROUND | 28  | W-G        | ELECTROSTATIC GROUND |
| 3   | G-W        | ELECTROSTATIC GROUND | 3   | G-W        | ELECTROSTATIC GROUND |
| 29  | W-BR       | ELECTROSTATIC GROUND | 29  | W-BR       | ELECTROSTATIC GROUND |
| 4   | BR-W       | ELECTROSTATIC GROUND | 4   | BR-W       | ELECTROSTATIC GROUND |
| 30  | W-S        | DATA IN COMMON       | 30  | W-S        | DATA IN COMMON       |
| 5   | S-W        | DATA IN              | 5   | S-W        | DATA IN              |
| 31  | R-BL       | ELECTROSTATIC GROUND | 31  | R-BL       | ELECTROSTATIC GROUND |
| 6   | BL-R       | ELECTROSTATIC GROUND | 6   | BL-R       | ELECTROSTATIC GROUND |
| 32  | R-O        | DATA OUT COMMON      | 32  | R-O        | DATA OUT COMMON      |
| 7   | R-O        | DATA OUT             | 7   | R-O        | DATA OUT             |
| 33  | R-G        | ELECTROSTATIC GROUND | 33  | R-G        | ELECTROSTATIC GROUND |
| 8   | G-R        | ELECTROSTATIC GROUND | 8   | G-R        | ELECTROSTATIC GROUND |
| 34  | R-BR       | ELECTROSTATIC GROUND | 34  | R-BR       | ELECTROSTATIC GROUND |
| 9   | BR-R       | ELECTROSTATIC GROUND | 9   | BR-R       | ELECTROSTATIC GROUND |
| 35  | R-S        | CUTOVER SWB          | 35  | R-S        | CUTOVER SWB          |
| 10  | S-R        | CUTOVER SWA          | 10  | S-R        | CUTOVER SWA          |
| 36  | BK-BL      | ELECTROSTATIC GROUND | 36  | BK-BL      | ELECTROSTATIC GROUND |
| 11  | BL-BK      | ELECTROSTATIC GROUND | 11  | BL-BK      | ELECTROSTATIC GROUND |
| 37  | BK-O       | MAJOR ALARM          | 37  | BK-O       | MAJOR ALARM          |
| 12  | O-BK       | MAJOR ALARM          | 12  | O-BK       | MAJOR ALARM          |
| 38  | BK-G       | TIP                  | 38  | BK-G       | TIP                  |
| 13  | G-BK       | RING                 | 13  | G-BK       | RING                 |
| 39  | BK-BR      | ELECTROSTATIC GROUND | 39  | BK-BR      | ELECTROSTATIC GROUND |
| 14  | BR-BK      | ELECTROSTATIC GROUND | 14  | BR-BK      | ELECTROSTATIC GROUND |
| 40  | BK-S       | ELECTROSTATIC GROUND | 40  | BK-S       | ELECTROSTATIC GROUND |
| 15  | S-BK       | ELECTROSTATIC GROUND | 15  | S-BK       | ELECTROSTATIC GROUND |
| 41  | Y-BL       | ELECTROSTATIC GROUND | 41  | Y-BL       | ELECTROSTATIC GROUND |
| 16  | BL-Y       | ELECTROSTATIC GROUND | 16  | BL-Y       | ELECTROSTATIC GROUND |
| 42  | Y-O        | ELECTROSTATIC GROUND | 42  | Y-O        | ELECTROSTATIC GROUND |
| 17  | O-Y        | ELECTROSTATIC GROUND | 17  | O-Y        | ELECTROSTATIC GROUND |
| 43  | Y-G        | 0V                   | 43  | Y-G        | 0V                   |
| 18  | G-Y        | -48V                 | 18  | G-Y        | -48V                 |
| 44  | Y-BR       | 0V                   | 44  | Y-BR       | 0V                   |
| 19  | BR-Y       | -48V                 | 19  | BR-Y       | -48V                 |
| 45  | Y-S        | 0V                   | 45  | Y-S        | 0V                   |
| 20  | S-Y        | -48V                 | 20  | S-Y        | -48V                 |
| 46  | V-BL       | 0V                   | 46  | V-BL       | 0V                   |
| 21  | BL-V       | -48V                 | 21  | BL-V       | -48V                 |
| 47  | V-O        | 0V                   | 47  | V-O        | 0V                   |
| 22  | O-V        | -48V                 | 22  | O-V        | -48V                 |
| 48  | V-G        | 0V                   | 48  | V-G        | 0V                   |
| 23  | G-V        | -48V                 | 23  | G-V        | -48V                 |
| 49  | V-BR       | 0V                   | 49  | V-BR       | 0V                   |
| 24  | BR-V       | -48V                 | 24  | BR-V       | -48V                 |
| 50  | V-S        | 0V                   | 50  | V-S        | 0V                   |
| 25  | S-V        | -48V                 | 25  | S-V        | -48V                 |

TABLE 10-2 INTERCONNECT BOARD PLUG AND JACK CONNECTIONS (CONT'D)

CONNECTOR J15 ATTENDANT CONSOLE NO.1  
(See Note)

| Pin | Pair Color | Lead Designation     |  |
|-----|------------|----------------------|--|
| 26  | W-BL       | ELECTROSTATIC GROUND | NOTE: Connector J15 connected either direct to Attendant Console 1 or via plug P23 and jack J22 to console. Connector J14 similarly connected either direct to attendant console 2 or via plug P25 and jack J24. |
| 1   | BL-W       | ELECTROSTATIC GROUND |  |
| 27  | W-O        | ELECTROSTATIC GROUND |  |
| 2   | O-W        | ELECTROSTATIC GROUND |  |
| 28  | W-G        | ELECTROSTATIC GROUND |  |
| 3   | G-W        | ELECTROSTATIC GROUND |  |
| 29  | W-BR       | ELECTROSTATIC GROUND |  |
| 4   | BR-W       | ELECTROSTATIC GROUND |  |
| 30  | W-S        | DATA IN COMMON       |  |
| 5   | S-W        | DATA IN              |  |
| 31  | R-BL       | ELECTROSTATIC GROUND |  |
| 6   | BL-R       | ELECTROSTATIC GROUND |  |
| 32  | R-O        | DATA OUT COMMON      |  |
| 7   | R-O        | DATA OUT             |  |
| 33  | R-G        | ELECTROSTATIC GROUND |  |
| 8   | G-R        | ELECTROSTATIC GROUND |  |
| 34  | R-BR       | ELECTROSTATIC GROUND |  |
| 9   | BR-R       | ELECTROSTATIC GROUND |  |
| 35  | R-S        | CUTOVER SWB          |  |
| 10  | S-R        | CUTOVER SWA          |  |
| 36  | BK-BL      | ELECTROSTATIC GROUND |  |
| 11  | BL-BK      | ELECTROSTATIC GROUND |  |
| 37  | BK-O       | MAJOR ALARM          |  |
| 12  | O-BK       | MAJOR ALARM          |  |
| 38  | BK-G       | TIP                  |  |
| 13  | G-BK       | RING                 |  |
| 39  | BK-BR      | ELECTROSTATIC GROUND |  |
| 14  | BR-BK      | ELECTROSTATIC GROUND |  |
| 40  | BK-S       | ELECTROSTATIC GROUND |  |
| 15  | S-BK       | ELECTROSTATIC GROUND |  |
| 41  | Y-BL       | ELECTROSTATIC GROUND |  |
| 16  | BL-Y       | ELECTROSTATIC GROUND |  |
| 42  | Y-O        | ELECTROSTATIC GROUND |  |
| 17  | O-Y        | ELECTROSTATIC GROUND |  |
| 43  | Y-G        | 0V                   |  |
| 18  | G-Y        | -48V                 |  |
| 44  | Y-BR       | 0V                   |  |
| 19  | BR-Y       | -48V                 |  |
| 45  | Y-S        | 0V                   |  |
| 20  | S-Y        | -48V                 |  |
| 46  | V-BL       | 0V                   |  |
| 21  | BL-V       | -48V                 |  |
| 47  | V-O        | 0V                   |  |
| 22  | O-V        | -48V                 |  |
| 48  | V-G        | 0V                   |  |
| 23  | G-V        | -48V                 |  |
| 49  | V-BR       | 0V                   |  |
| 24  | BR-V       | -48V                 |  |
| 50  | V-S        | 0V                   |  |
| 25  | S-V        | -48V                 |  |

TABLE 10-2 INTERCONNECT BOARD PLUG AND JACK CONNECTIONS (CONT'D)

## PLUG P16 (Interconnect Cable to P6)

| Pin | Pair Color | Lead Designation Lines | Lead Designation, CO | DID/TIE                | Trunks E&M† | Card Positions |
|-----|------------|------------------------|----------------------|------------------------|-------------|----------------|
| 26  | W-BL       | T5                     | T3                   | T2                     | T2          | 13             |
| 1   | BL-W       | R5                     | R3                   | R2                     | R2          |                |
| 27  | W-O        | T6                     | TX3                  |                        | TR2         |                |
| 2   | O-W        | R6                     | RX4                  |                        | RR2         |                |
| 28  | W-G        | T7                     | T4                   |                        | E2          |                |
| 3   | G-W        | R7                     | R4                   |                        | M2          |                |
| 29  | W-BR       | T8                     |                      |                        |             |                |
| 4   | BR-W       | R8                     |                      |                        |             |                |
| 30  | W-S        | T5                     | T3                   | T2                     | T2          | 14             |
| 5   | S-W        | R5                     | R3                   | R2                     | T2          |                |
| 31  | R-BL       | T6                     | TX3                  |                        | TR2         |                |
| 6   | BL-R       | R6                     | RX4                  |                        | RR2         |                |
| 32  | R-O        | T7                     | T4                   |                        | E2          |                |
| 7   | O-R        | R7                     | R4                   |                        | M2          |                |
| 33  | R-G        | T8                     |                      |                        |             |                |
| 8   | G-R        | R8                     |                      |                        |             |                |
| 34  | R-BR       |                        |                      |                        |             | 15             |
| 9   | BR-R       |                        |                      |                        |             |                |
| 35  | R-S        |                        |                      | RECEIVER 1             |             |                |
| 10  | S-R        |                        |                      |                        |             |                |
| 36  | BK-BL      |                        |                      |                        |             |                |
| 11  | BL-BK      |                        |                      |                        |             |                |
| 37  | BK-O       |                        |                      |                        |             |                |
| 12  | O-BK       |                        |                      |                        |             |                |
| 38  | BK-G       | SPARE                  |                      |                        |             | 16             |
| 13  | G-BK       | SPARE                  |                      |                        |             |                |
| 39  | BK-BR      | SPARE                  |                      |                        |             |                |
| 14  | BR-BK      | SPARE                  |                      |                        |             |                |
| 40  | BK-S       | SPARE                  |                      |                        |             |                |
| 15  | S-BK       | SPARE                  |                      |                        |             |                |
| 41  | Y-BL       | NIGHT BELL 1B          |                      | See Notes for Plug P18 |             |                |
| 16  | BL-Y       | NIGHT BELL 1A          |                      |                        |             |                |
| 42  | Y-O        | TIP                    |                      |                        |             | 17             |
| 17  | O-Y        | RING                   |                      |                        |             |                |
| 43  | Y-G        | DATA IN COMMON         |                      |                        |             |                |
| 18  | G-Y        | DATA IN                |                      | MAINTENANCE            |             |                |
| 44  | Y-BR       | DATA OUT COMMON        |                      | CONSOLE                |             |                |
| 19  | BR-Y       | DATA OUT               |                      |                        |             |                |
| 45  | Y-S        | UART B                 |                      |                        |             |                |
| 20  | S-Y        | UART A                 |                      |                        |             |                |
| 46  | V-BL       | ALARM B                |                      |                        |             | 18             |
| 21  | BL-V       | ALARM A                |                      |                        |             |                |
| 47  | V-O        | NIGHT SERVICE B        |                      |                        |             |                |
| 22  | O-V        | NIGHT SERVICE A        |                      |                        |             |                |
| 48  | V-G        | NIGHT BELL 3B          |                      | See Notes for Plug P18 |             |                |
| 23  | G-V        | NIGHT BELL 3A          |                      |                        |             |                |
| 49  | V-BR       | NIGHT BELL 2B          |                      |                        |             |                |
| 24  | BR-V       | NIGHT BELL 2A          |                      | See Notes for Plug P18 |             |                |
| 50  | V-S        | SPARE                  |                      |                        |             | 18             |
| 25  | S-V        | SPARE                  |                      |                        |             |                |

†For 2-Wire E&amp;M Trunk operation DO NOT connect RR and TR leads

TABLE 10-2 INTERCONNECT BOARD PLUG AND JACK CONNECTIONS (CONT'D)

## PLUG P17 (Interconnect Cable to P5)

| Pin | Pair Color | Lead Designation Lines | Lead Designation, CO DID/TIE | Trunks E&M† | Card Positions |    |
|-----|------------|------------------------|------------------------------|-------------|----------------|----|
| 26  | W-BL       | T1                     | T1                           | T1          | 13             |    |
| 1   | BL-W       | R1                     | R1                           | R1          |                |    |
| 27  | W-O        | T2                     | XT2                          | TR1         |                |    |
| 2   | O-W        | R2                     | XT1                          | RR1         |                |    |
| 28  | W-G        | T3                     | T2                           | E1          |                |    |
| 3   | G-W        | R3                     | R2                           | M1          |                |    |
| 29  | W-BR       | T4                     |                              |             |                |    |
| 4   | BR-W       | R4                     |                              |             |                |    |
| 30  | W-S        | T1                     | T1                           | T1          |                | 14 |
| 5   | S-W        | R1                     | R1                           | R1          |                |    |
| 31  | R-BL       | T2                     | XT2                          | TR1         |                |    |
| 6   | BL-R       | R2                     | XT1                          | RR1         |                |    |
| 32  | R-O        | T3                     | T2                           | E1          |                |    |
| 7   | O-R        | R3                     | R2                           | M1          |                |    |
| 33  | R-G        | T4                     |                              |             |                |    |
| 8   | G-R        | R4                     |                              |             |                |    |
| 34  | R-BR       |                        |                              |             | 15             |    |
| 9   | BR-R       |                        |                              |             |                |    |
| 35  | R-S        |                        |                              |             |                |    |
| 10  | S-R        |                        | RECEIVER 1                   |             |                |    |
| 36  | BK-BL      |                        |                              |             |                |    |
| 11  | BL-BK      |                        |                              |             |                |    |
| 37  | BK-O       |                        |                              |             |                |    |
| 12  | O-BK       |                        |                              |             |                |    |
| 38  | BK-G       | TIP (A)                |                              |             |                |    |
| 13  | G-BK       | RING (A)               | ATTENDANT CONSOLE No. 2      |             |                |    |
| 39  | BK-BR      | S DATA IN R (A)        |                              |             | 16             |    |
| 14  | BR-BK      | S DATA IN T (A)        |                              |             |                |    |
| 40  | BK-S       | S DATA OUT R (A)       |                              |             |                |    |
| 15  | S-BK       | S DATA OUT T (A)       |                              |             |                |    |
| 41  | Y-BL       | PA2 CONTROL B          |                              |             |                |    |
| 16  | BL-Y       | PA2 CONTROL A          |                              |             |                |    |
| 42  | Y-O        | TIP                    |                              |             |                |    |
| 17  | O-Y        | RING                   | ATTENDANT CONSOLE No. 1      |             |                |    |
| 43  | Y-G        | DATA IN COMMON         |                              |             |                |    |
| 18  | G-Y        | DATA IN                |                              |             |                |    |
| 44  | Y-BR       | DATA OUT COMMON        |                              |             | 17             |    |
| 19  | BR-Y       | DATA OUT               |                              |             |                |    |
| 45  | Y-S        | PA1 CONTROL B          |                              |             |                |    |
| 20  | S-Y        | PA1 CONTROL A          |                              |             |                |    |
| 46  | V-BL       | MUSIC IN B             |                              |             |                |    |
| 21  | BL-V       | MUSIC IN A             |                              |             |                |    |
| 47  | V-O        | MAINT TIP              |                              |             |                |    |
| 22  | O-V        | MAINT RING             |                              |             |                |    |
| 48  | V-G        | PA1 OUT B              |                              |             |                |    |
| 23  | G-V        | PA1 OUT A              |                              |             |                |    |
| 49  | V-BR       | PA2 OUT B              |                              |             | 18             |    |
| 24  | BR-V       | PA2 OUT A              |                              |             |                |    |
| 50  | V-S        | SPARE                  |                              |             |                |    |
| 25  | S-V        | SPARE                  | (See Notes For Plug P18)     |             |                |    |

†For 2-Wire E&amp;M Trunk operation DO NOT connect RR and TR leads



TABLE 10-2 INTERCONNECT BOARD PLUG AND JACK CONNECTIONS (CONT'D)

## PLUG P18 (Miscellaneous Connections to Cross-Connect Field)

| Pin      | Pair Color     | Lead Designation                        |   |
|----------|----------------|---|---|
| 26<br>1  | W-BL<br>BL-W   | RMATS CENTRAL TIP<br>RMATS CENTRAL RING | <p>Note:</p> <p>(1) Night service relay operates permanently when in night service.<br/>Night Bell continuous rating:<br/>Open circuit voltage 120 Vrms<br/>Closed circuit current 75mArms</p> <p>(2) Music in 100 mV<br/>Impedance 600 Ohms</p> <p>(3) PA Output Level 100 mV<br/>Impedance 600 Ohms</p> |
| 27<br>2  | W-O<br>O-W     | SPARE<br>SPARE                          |   |
| 28<br>3  | W-G<br>G-W     | SPARE<br>SPARE                          |   |
| 29<br>4  | W-BR<br>BR-W   | SPARE<br>SPARE                          |   |
| 30<br>5  | W-S<br>S-W     | SPARE<br>SPARE                          |   |
| 31<br>6  | R-BL<br>BL-R   | SPARE<br>SPARE                          |   |
| 32<br>7  | R-O<br>R-O     | SPARE<br>SPARE                          |   |
| 33<br>8  | R-G<br>G-R     | SPARE<br>SPARE                          |   |
| 34<br>9  | R-BR<br>BR-R   | SPARE<br>SPARE                          |   |
| 35<br>10 | R-S<br>S-R     | SPARE<br>SPARE                          |   |
| 36<br>11 | BK-BL<br>BL-BK | SPARE<br>SPARE                          |   |
| 37<br>12 | BK-O<br>O-BK   | SPARE<br>SPARE                          |   |
| 38<br>13 | BK-G<br>G-BK   | SPARE<br>SPARE                          |   |
| 39<br>14 | BK-BR<br>BR-BK | SPARE<br>SPARE                          |   |
| 40<br>15 | BK-S<br>S-BK   | SPARE<br>SPARE                          |   |
| 41<br>16 | Y-BL<br>BL-Y   | SPARE<br>SPARE                          |   |
| 42<br>17 | Y-O<br>O-Y     | MUSIC IN B<br>MUSIC IN A                |   |
| 43<br>18 | Y-G<br>G-Y     | PA2 OUT B<br>PA2 OUT A                  |   |
| 44<br>19 | Y-BR<br>BR-Y   | NIGHT BELL 2B<br>NIGHT BELL 2A          |   |
| 45<br>20 | Y-S<br>S-Y     | PA1 OUT B<br>PA1 OUT A                  |   |
| 46<br>21 | V-BL<br>BL-V   | NIGHT BELL 1B<br>NIGHT BELL 1A          |   |
| 47<br>22 | V-O<br>O-V     | PA1 CONTROL B<br>PA1 CONTROL A          |   |
| 48<br>23 | V-G<br>G-V     | PA2 CONTROL B<br>PA2 CONTROL A          |   |
| 49<br>24 | V-BR<br>BR-V   | NIGHT SERVICE B<br>NIGHT SERVICE A      |   |
| 50<br>25 | V-S<br>S-V     | NIGHT BELL 3B<br>NIGHT BELL 3A          |   |

TABLE 10-2 INTERCONNECT BOARD PLUG AND JACK CONNECTIONS (CONT'D)

**PLUG P19 ON INTERCONNECT CARD**  
 (Miscellaneous Connections to Cross-Connect Field)

| Pin | Pair Color | Lead Designation Line | Lead Designation, CO | Trunks E&M† | Card Positions |
|-----|------------|-----------------------|----------------------|-------------|----------------|
| 26  | W-BL       | SPARE                 |                      |             |                |
| 1   | BL-W       | SPARE                 |                      |             |                |
| 27  | W-O        |                       |                      |             |                |
| 2   | O-W        |                       |                      |             |                |
| 28  | W-G        |                       |                      |             |                |
| 3   | G-W        | RECEIVER 1            |                      |             | 15             |
| 29  | W-BR       |                       |                      |             |                |
| 4   | BR-W       |                       |                      |             |                |
| 30  | W-S        |                       |                      |             |                |
| 5   | S-W        |                       |                      |             |                |
| 31  | R-BL       | T8                    |                      |             |                |
| 6   | BL-R       | R8                    |                      |             |                |
| 32  | R-O        | T7                    | T4                   | E2          |                |
| 7   | O-R        | R7                    | R4                   | M2          | 14             |
| 33  | R-G        | T6                    | XT3                  | TR2         |                |
| 8   | G-R        | R6                    | XT4                  | RR2         |                |
| 34  | R-BR       | T5                    | T3                   | T2          |                |
| 9   | BR-R       | R5                    | R3                   | R2          |                |
| 35  | R-S        | T8                    |                      |             |                |
| 10  | S-R        | R8                    |                      |             |                |
| 36  | BK-BL      | T7                    | T4                   | E2          |                |
| 11  | BL-BK      | R7                    | R4                   | M2          | 13             |
| 37  | BK-O       | T6                    | XT3                  | TR2         |                |
| 12  | O-BK       | R6                    | XT4                  | RR2         |                |
| 38  | BK-G       | T5                    | T3                   | T2          |                |
| 13  | G-BK       | R5                    | R3                   | R2          |                |
| 39  | BK-BR      |                       |                      |             |                |
| 14  | BR-BK      |                       |                      |             |                |
| 40  | BK-S       |                       |                      |             |                |
| 15  | S-BK       | RECEIVER 1            |                      |             | 15             |
| 41  | Y-BL       |                       |                      |             |                |
| 16  | BL-Y       |                       |                      |             |                |
| 42  | Y-O        |                       |                      |             |                |
| 17  | O-Y        |                       |                      |             |                |
| 43  | Y-G        | T4                    |                      |             |                |
| 18  | G-Y        | R4                    |                      |             |                |
| 44  | Y-BR       | T3                    | T2                   | E1          |                |
| 19  | BR-Y       | R3                    | R2                   | M1          | 14             |
| 45  | Y-S        | T2                    | XT1                  | TR1         |                |
| 20  | S-Y        | R2                    | XT2                  | RR1         |                |
| 46  | V-BL       | T1                    | T1                   | T1          |                |
| 21  | BL-V       | R1                    | R1                   | R1          |                |
| 47  | V-O        | T4                    |                      |             |                |
| 22  | O-V        | R4                    |                      |             |                |
| 48  | V-G        | T3                    | T2                   | E1          |                |
| 23  | G-V        | R3                    | R2                   | M1          |                |
| 49  | V-BR       | T2                    | XT1                  | TR1         | 13             |
| 24  | BR-V       | R2                    | XT2                  | RR1         |                |
| 50  | V-S        | T1                    | T1                   | T1          |                |
| 25  | S-V        | R1                    | R1                   | R1          |                |

†For 2-Wire E&amp;M Trunk operation DO NOT connect RR and TR leads.

TABLE 10-2 INTERCONNECT BOARD PLUG AND JACK CONNECTIONS (CONT'D)

CONNECTOR J302  
DATA PORT (SEE NOTES)

CONNECTOR P302  
DATA PORT (SEE NOTES)

| Pin | Lead Designation                | Pin | Lead Designation                |
|-----|---------------------------------|-----|---------------------------------|
| 1   | 0V                              | 1   | 0V                              |
| 2   | TRANSMIT DATA                   | 2   | RECEIVE DATA                    |
| 3   | RECEIVE DATA                    | 3   | TRANSMIT DATA                   |
| 4   |                                 | 4   |                                 |
| 5   | CLEAR TO SEND                   | 5   | CLEAR TO SEND                   |
| 6   | DATA SET READY                  | 6   | DATA SET READY                  |
| 7   | SIGNAL GROUND                   | 7   | SIGNAL GROUND                   |
| 8   | CARRIER DETECT                  | 8   | CARRIER DETECT                  |
| 9   | (RESERVED FOR DATA SET TESTING) | 9   | (RESERVED FOR DATA SET TESTING) |
| 10  |                                 | 10  |                                 |
| 11  |                                 | 11  |                                 |
| 12  |                                 | 12  |                                 |
| 13  |                                 | 13  |                                 |
| 14  |                                 | 14  |                                 |
| 15  |                                 | 15  |                                 |
| 16  |                                 | 16  |                                 |
| 17  |                                 | 17  |                                 |
| 18  |                                 | 18  |                                 |
| 19  |                                 | 19  |                                 |
| 20  | DATA TERM READY                 | 20  | DATA TERM READY                 |
| 21  |                                 | 21  |                                 |
| 22  |                                 | 22  |                                 |
| 23  |                                 | 23  |                                 |
| 24  |                                 | 24  |                                 |
| 25  |                                 | 25  |                                 |

- Note**
1. Connectors P302 and J302 are provided on the SX-100 and SX-200 PABX's.
  2. Use Connector J302 when connected to terminal equipment e.g. magnetic tape recorder or printer.
  3. Use Connector P302 when connected to a modem.
  4. See Appendix 5, MAP200-504 for details of switch settings for data characteristics.
  5. See Section MITL9105/9110-096-450-NA, Traffic Measurement, for applications of the connectors.

TABLE 10-3 POWER FAIL TRANSFER BOARD PLUG AND JACK CONNECTIONS

## PLUG P20

(Power Fail Transfer Connections to Cross-Connect Field)

## PLUG P21

(Power Fail Transfer Connections to Cross-Connect Field)

| Pin | Pair Color | Lead Designation | Pin | Pair Color | Lead Designation |
|-----|------------|------------------|-----|------------|------------------|
| 26  | W-BL       | STATION T1       | 26  | W-BL       | STATION T7       |
| 1   | BL-W       | STATION R1       | 1   | BL-W       | STATION R7       |
| 27  | W-O        | LINE CARD T1     | 27  | W-O        | LINE CARD T7     |
| 2   | O-W        | LINE CARD R1     | 2   | O-W        | LINE CARD R7     |
| 28  | W-G        | TRUNK T1         | 28  | W-G        | TRUNK T7         |
| 3   | G-W        | TRUNK R1         | 3   | G-W        | TRUNK R7         |
| 29  | W-BR       | TRUNK CARD T1    | 29  | W-BR       | TRUNK CARD T7    |
| 4   | BR-W       | TRUNK CARD R1    | 4   | BR-W       | TRUNK CARD R7    |
| 30  | W-S        | STATION T2       | 30  | W-S        | STATION T8       |
| 5   | S-W        | STATION R2       | 5   | S-W        | STATION R8       |
| 31  | R-BL       | LINE CARD T2     | 31  | R-BL       | LINE CARD T8     |
| 6   | BL-R       | LINE CARD R2     | 6   | BL-R       | LINE CARD R8     |
| 32  | R-O        | TRUNK T2         | 32  | R-O        | TRUNK T8         |
| 7   | R-O        | TRUNK R2         | 7   | R-O        | TRUNK R8         |
| 33  | R-G        | TRUNK CARD T2    | 33  | R-G        | TRUNK CARD T8    |
| 8   | G-R        | TRUNK CARD R2    | 8   | G-R        | TRUNK CARD R8    |
| 34  | R-BR       | STATION T3       | 34  | R-BR       | STATION T9       |
| 9   | BR-R       | STATION R3       | 9   | BR-R       | STATION R9       |
| 35  | R-S        | LINE CARD T3     | 35  | R-S        | LINE CARD T9     |
| 10  | S-R        | LINE CARD R3     | 10  | S-R        | LINE CARD R9     |
| 36  | BK-BL      | TRUNK T3         | 36  | BK-BL      | TRUNK T9         |
| 11  | BL-BK      | TRUNK R3         | 11  | BL-BK      | TRUNK R9         |
| 37  | BK-O       | TRUNK CARD T3    | 37  | BK-O       | TRUNK CARD T9    |
| 12  | O-BK       | TRUNK CARD R3    | 12  | O-BK       | TRUNK CARD R9    |
| 38  | BK-G       | STATION T4       | 38  | BK-G       | STATION T10      |
| 13  | G-BK       | STATION R4       | 13  | G-BK       | STATION R10      |
| 39  | BK-BR      | LINE CARD T4     | 39  | BK-BR      | LINE CARD T10    |
| 14  | BR-BK      | LINE CARD R4     | 14  | BR-BK      | LINE CARD R10    |
| 40  | BK-S       | TRUNK T4         | 40  | BK-S       | TRUNK T10        |
| 15  | S-BK       | TRUNK R4         | 15  | S-BK       | TRUNK R10        |
| 41  | Y-BL       | TRUNK CARD T4    | 41  | Y-BL       | TRUNK CARD T10   |
| 16  | BL-Y       | TRUNK CARD R4    | 16  | BL-Y       | TRUNK CARD R10   |
| 42  | Y-O        | STATION T5       | 42  | Y-O        | STATION T11      |
| 17  | O-Y        | STATION R5       | 17  | O-Y        | STATION R11      |
| 43  | Y-G        | LINE CARD T5     | 43  | Y-G        | LINE CARD T11    |
| 18  | G-Y        | LINE CARD R5     | 18  | G-Y        | LINE CARD R11    |
| 44  | Y-BR       | TRUNK T5         | 44  | Y-BR       | TRUNK T11        |
| 19  | BR-Y       | TRUNK R5         | 19  | BR-Y       | TRUNK R11        |
| 45  | Y-S        | TRUNK CARD T5    | 45  | Y-S        | TRUNK CARD T11   |
| 20  | S-Y        | TRUNK CARD R5    | 45  | S-Y        | TRUNK CARD R11   |
| 46  | V-BL       | STATION T6       | 20  | S-Y        | TRUNK CARD R11   |
| 21  | BL-V       | STATION R6       | 46  | V-BL       | STATION T12      |
| 47  | V-O        | LINE CARD T6     | 21  | BL-V       | STATION R12      |
| 22  | O-V        | LINE CARD R6     | 47  | V-O        | LINE CARD T12    |
| 48  | V-G        | TRUNK T6         | 22  | O-V        | LINE CARD R12    |
| 23  | G-V        | TRUNK R6         | 48  | V-G        | TRUNK T12        |
| 49  | V-BR       | TRUNK CARD T6    | 23  | G-V        | TRUNK R12        |
| 24  | BR-V       | TRUNK CARD R6    | 49  | V-BR       | TRUNK CARD T12   |
| 50  | V-S        | SPARE            | 24  | BR-V       | TRUNK CARD R12   |
| 25  | S-V        | SPARE            | 50  | V-S        | SPARE            |
|     |            |                  | 25  | S-V        | SPARE            |

Note: Plug 21 is not installed on SX-100 equipment.

TABLE 10-4 SHELF 2 EXTERNAL PLUG AND JACK CONNECTIONS

## PLUG P7 (Connects to Cross-Connect Field)

| Pin | Pair Color | Lead Designation Lines | Lead CO | Designation, DID/TIE | Trunks E&M† | Card Positions |
|-----|------------|------------------------|---------|----------------------|-------------|----------------|
| 26  | W-BL       | T1 reserved for        | T1      | T1                   | T1          |                |
| 1   | BL-W       | R1 test line           | R1      | R1                   | R1          |                |
| 27  | W-O        | T2                     | XT2     |                      | TR1         | 1              |
| 2   | O-W        | R2                     | XT1     |                      | RR1         |                |
| 28  | W-G        | T3                     | T2      |                      | E1          |                |
| 3   | G-W        | R3                     | R2      |                      | M1          |                |
| 29  | W-BR       | T4                     |         |                      |             |                |
| 4   | BR-W       | R4                     |         |                      |             |                |
| 30  | W-S        | T1                     | T1      | T1                   | T1          |                |
| 5   | S-W        | R1                     | R1      | R1                   | R1          |                |
| 31  | R-BL       | T2                     | XT2     |                      | TR1         | 2              |
| 6   | BL-R       | R2                     | XT1     |                      | RR1         |                |
| 32  | R-O        | T3                     | T2      |                      | E1          |                |
| 7   | O-R        | R3                     | R2      |                      | M1          |                |
| 33  | R-G        | T4                     |         |                      |             |                |
| 8   | G-R        | R4                     |         |                      |             |                |
| 34  | R-BR       | T1                     | T1      | T1                   | T1          |                |
| 9   | BR-R       | R1                     | R1      | R1                   | R1          |                |
| 35  | R-S        | T2                     | XT2     |                      | TR1         | 3              |
| 10  | S-R        | R2                     | XT1     |                      | RR1         |                |
| 36  | BK-BL      | T3                     | T2      |                      | E1          |                |
| 11  | BL-BK      | R3                     | R2      |                      | M1          |                |
| 37  | BK-O       | T4                     |         |                      |             |                |
| 12  | O-BK       | R4                     |         |                      |             |                |
| 38  | BK-G       | T1                     | T1      | T1                   | T1          |                |
| 13  | G-BK       | R1                     | R1      | R1                   | R1          |                |
| 39  | BK-BR      | T2                     | XT2     |                      | TR1         | 4              |
| 14  | BR-BK      | R2                     | XT1     |                      | RR1         |                |
| 40  | BK-S       | T3                     | T2      |                      | E1          |                |
| 15  | S-BK       | R3                     | R2      |                      | M1          |                |
| 41  | Y-BL       | T4                     |         |                      |             |                |
| 16  | BL-Y       | R4                     |         |                      |             |                |
| 42  | Y-O        | T1                     | T1      | T1                   | T1          |                |
| 17  | O-Y        | R1                     | R1      | R1                   | R1          |                |
| 43  | Y-G        | T2                     | XT2     |                      | TR1         | 5              |
| 18  | G-Y        | R2                     | XT1     |                      | RR1         |                |
| 44  | Y-BR       | T3                     | T2      |                      | E1          |                |
| 19  | BR-Y       | R3                     | R2      |                      | M1          |                |
| 45  | Y-S        | T4                     |         |                      |             |                |
| 20  | S-Y        | R4                     |         |                      |             |                |
| 46  | V-BL       | T1                     | T1      | T1                   | T1          |                |
| 21  | BL-V       | R1                     | R1      | R1                   | R1          |                |
| 47  | V-O        | T2                     | XT2     |                      | TR1         | 6              |
| 22  | O-V        | R2                     | XT1     |                      | RR1         |                |
| 48  | V-G        | T3                     | T2      |                      | E1          |                |
| 23  | G-V        | R3                     | R2      |                      | M1          |                |
| 49  | V-BR       | T4                     |         |                      |             |                |
| 24  | BR-V       | R4                     |         |                      |             |                |
| 50  | V-S        | SPARE                  | SPARE   |                      |             |                |
| 25  | S-V        | SPARE                  | SPARE   |                      |             |                |

†For 2-Wire E&amp;M Trunk operation DO NOT connect RR and TR leads

TABLE 10-4 SHELF 2 EXTERNAL PLUG AND JACK CONNECTIONS (CONT'D)

## PLUG P8 (Connects to Cross-Connect Field)

| Pin | Pair Color | Lead Designation Lines | Lead Designation, CO | Designation, DID/TIE | Trunks E&M† | Card Positions |
|-----|------------|------------------------|----------------------|----------------------|-------------|----------------|
| 26  | W-BL       | T5                     | T3                   | T2                   | T2          | 1              |
| 1   | BL-W       | R5                     | R3                   | R2                   | R2          |                |
| 27  | W-O        | T6                     | XT4                  |                      | TR2         |                |
| 2   | O-W        | R6                     | XT3                  |                      | RR2         |                |
| 28  | W-G        | T7                     | T4                   |                      | E2          |                |
| 3   | G-W        | R7                     | R4                   |                      | M2          |                |
| 29  | W-BR       | T8                     |                      |                      |             |                |
| 4   | BR-W       | R8                     |                      |                      |             |                |
| 30  | W-S        | T5                     | T3                   | T2                   | T2          | 2              |
| 5   | S-W        | R5                     | R3                   | R2                   | R2          |                |
| 31  | R-BL       | T6                     | XT4                  |                      | TR2         |                |
| 6   | BL-R       | R6                     | XT3                  |                      | RR2         |                |
| 32  | R-O        | T7                     | T4                   |                      | E2          |                |
| 7   | O-R        | R7                     | R4                   |                      | M2          |                |
| 33  | R-G        | T8                     |                      |                      |             |                |
| 8   | G-R        | R8                     |                      |                      |             |                |
| 34  | R-BR       | T5                     | T3                   | T2                   | T2          | 3              |
| 9   | BR-R       | R5                     | R3                   | R2                   | R2          |                |
| 35  | R-S        | T6                     | XT4                  |                      | TR2         |                |
| 10  | S-R        | R6                     | XT3                  |                      | RR2         |                |
| 36  | BK-BL      | T7                     | T4                   |                      | E2          |                |
| 11  | BL-BK      | R7                     | R4                   |                      | M2          |                |
| 37  | BK-O       | T8                     |                      |                      |             |                |
| 12  | O-BK       | R8                     |                      |                      |             |                |
| 38  | BK-G       | T5                     | T3                   | T2                   | T2          | 4              |
| 13  | G-BK       | R5                     | R3                   | R2                   | R2          |                |
| 39  | BK-BR      | T6                     | XT4                  |                      | TR2         |                |
| 14  | BR-BK      | R6                     | XT3                  |                      | RR2         |                |
| 40  | BK-S       | T7                     | T4                   |                      | E2          |                |
| 15  | S-BK       | R7                     | R4                   |                      | M2          |                |
| 41  | Y-BL       | T8                     |                      |                      |             |                |
| 16  | BL-Y       | R8                     |                      |                      |             |                |
| 42  | Y-O        | T5                     | T3                   | T2                   | T2          | 5              |
| 17  | O-Y        | R5                     | R3                   | R2                   | R2          |                |
| 43  | Y-G        | T6                     | XT4                  |                      | TR2         |                |
| 18  | G-Y        | R6                     | XT3                  |                      | RR2         |                |
| 44  | Y-BR       | T7                     | T4                   |                      | E2          |                |
| 19  | BR-Y       | R7                     | R4                   |                      | M2          |                |
| 45  | Y-S        | T8                     |                      |                      |             |                |
| 20  | S-Y        | R8                     |                      |                      |             |                |
| 46  | V-BL       | T5                     | T3                   | T2                   | T2          | 6              |
| 21  | BL-V       | R5                     | R3                   | R2                   | R2          |                |
| 47  | V-O        | T6                     | XT4                  |                      | TR2         |                |
| 22  | O-V        | R6                     | XT3                  |                      | RR2         |                |
| 48  | V-G        | T7                     | T4                   |                      | E2          |                |
| 23  | G-V        | R7                     | R4                   |                      | M2          |                |
| 49  | V-BR       | T8                     |                      |                      |             |                |
| 24  | BR-V       | R8                     |                      |                      |             |                |
| 50  | V-S        | SPARE                  | SPARE                |                      |             |                |
| 25  | S-V        | SPARE                  | SPARE                |                      |             |                |

†For 2-Wire E&amp;M Trunk operation DO NOT connect RR and TR leads

TABLE 10-4 SHELF 2 EXTERNAL PLUG AND JACK CONNECTIONS (CONT'D)

## PLUG P9 (Connects to Cross-Connect Field)

| Pin | Pair Color | Lead Designation Lines | Lead Designation, CO | Designation, DID/TIE | Trunks E&M† | Card Positions |
|-----|------------|------------------------|----------------------|----------------------|-------------|----------------|
| 26  | W-BL       | T1                     | T1                   | T1                   | T1          | 7              |
| 1   | BL-W       | R1                     | R1                   | R1                   | R1          |                |
| 27  | W-O        | T2                     | XT2                  |                      | TR1         |                |
| 2   | O-W        | R2                     | XT1                  |                      | RR1         |                |
| 28  | W-G        | T3                     | T2                   |                      | E1          | 8              |
| 3   | G-W        | R3                     | R2                   |                      | M1          |                |
| 29  | W-BR       | T4                     |                      |                      |             |                |
| 4   | BR-W       | R4                     |                      |                      |             |                |
| 30  | W-S        | T1                     | T1                   | T1                   | T1          | 9              |
| 5   | S-W        | R1                     | R1                   | R1                   | R1          |                |
| 31  | R-BL       | T2                     | XT2                  |                      | TR1         |                |
| 6   | BL-R       | R2                     | XT1                  |                      | RR1         |                |
| 32  | R-O        | T3                     | T2                   |                      | E1          | 10             |
| 7   | O-R        | R3                     | R2                   |                      | M1          |                |
| 33  | R-G        | T4                     |                      |                      |             |                |
| 8   | G-R        | R4                     |                      |                      |             |                |
| 34  | R-BR       | T1                     | T1                   | T1                   | T1          | 11             |
| 9   | BR-R       | R1                     | R1                   | R1                   | R1          |                |
| 35  | R-S        | T2                     | XT2                  |                      | TR1         |                |
| 10  | S-R        | R2                     | XT1                  |                      | RR1         |                |
| 36  | BK-BL      | T3                     | T2                   |                      | E1          | 12             |
| 11  | BL-BK      | R3                     | R2                   |                      | M1          |                |
| 37  | BK-O       | T4                     |                      |                      |             |                |
| 12  | O-BK       | R4                     |                      |                      |             |                |
| 38  | BK-G       | T1                     | T1                   | T1                   | T1          | 10             |
| 13  | G-BK       | R1                     | R1                   | R1                   | R1          |                |
| 39  | BK-BR      | T2                     | XT2                  |                      | TR1         |                |
| 14  | BR-BK      | R2                     | XT1                  |                      | RR1         |                |
| 40  | BK-S       | T3                     | T2                   |                      | E1          | 11             |
| 15  | S-BK       | R3                     | R2                   |                      | M1          |                |
| 41  | Y-BL       | T4                     |                      |                      |             |                |
| 16  | BL-Y       | R4                     |                      |                      |             |                |
| 42  | Y-O        | T1                     | T1                   | T1                   | T1          | 12             |
| 17  | O-Y        | R1                     | R1                   | R1                   | R1          |                |
| 43  | Y-G        | T2                     | XT2                  |                      | TR1         |                |
| 18  | G-Y        | R2                     | XT1                  |                      | RR1         |                |
| 44  | Y-BR       | T3                     | T2                   |                      | E1          | 10             |
| 19  | BR-Y       | R3                     | R2                   |                      | M1          |                |
| 45  | Y-S        | T4                     |                      |                      |             |                |
| 20  | S-Y        | R4                     |                      |                      |             |                |
| 46  | V-BL       | T1                     | T1                   | T1                   | T1          | 11             |
| 21  | BL-V       | R1                     | R1                   | R1                   | R1          |                |
| 47  | V-O        | T2                     | XT2                  |                      | TR1         |                |
| 22  | O-V        | R2                     | XT1                  |                      | RR1         |                |
| 48  | V-G        | T3                     | T2                   |                      | E1          | 12             |
| 23  | G-V        | R3                     | R2                   |                      | M1          |                |
| 49  | V-BR       | T4                     |                      |                      |             |                |
| 24  | BR-V       | R4                     |                      |                      |             |                |
| 50  | V-S        | SPARE                  | SPARE                |                      |             |                |
| 25  | S-V        | SPARE                  | SPARE                |                      |             |                |

†For 2-Wire E&amp;M Trunk operation DO NOT connect RR and TR leads

TABLE 10-4 SHELF 2 EXTERNAL PLUG AND JACK CONNECTIONS (CONT'D)

## PLUG P10 (Connects to Cross-Connect Field)

| Pin | Pair Color | Lead Designation<br>Lines | Lead Designation,<br>CO | Designation,<br>DID/TIE | Trunks<br>E&M† | Card<br>Positions |
|-----|------------|---------------------------|-------------------------|-------------------------|----------------|-------------------|
| 26  | W-BL       | T5                        | T3                      | T2                      | T2             | 7                 |
| 1   | BL-W       | R5                        | R3                      | R2                      | R2             |                   |
| 27  | W-O        | T6                        | XT4                     |                         | TR2            |                   |
| 2   | O-W        | R6                        | XT3                     |                         | RR2            |                   |
| 28  | W-G        | T7                        | T4                      |                         | E2             | 8                 |
| 3   | G-W        | R7                        | R4                      |                         | M2             |                   |
| 28  | W-BR       | T8                        |                         |                         |                |                   |
| 4   | BR-W       | R8                        |                         |                         |                |                   |
| 30  | W-S        | T5                        | T3                      | T2                      | T2             | 9                 |
| 5   | S-W        | R5                        | R3                      | R2                      | R2             |                   |
| 31  | R-BL       | T6                        | XT4                     |                         | TR2            |                   |
| 6   | BL-R       | R6                        | XT3                     |                         | RR2            |                   |
| 32  | R-O        | T7                        | T4                      |                         | E2             | 10                |
| 7   | O-R        | R7                        | R4                      |                         | M2             |                   |
| 33  | R-G        | T8                        |                         |                         |                |                   |
| 8   | G-R        | R8                        |                         |                         |                |                   |
| 34  | R-BR       | T5                        | T3                      | T2                      | T2             | 11                |
| 9   | BR-R       | R5                        | R3                      | R2                      | R2             |                   |
| 35  | R-S        | T6                        | XT4                     |                         | TR2            |                   |
| 10  | S-R        | R6                        | XT3                     |                         | RR2            |                   |
| 36  | BK-BL      | T7                        | T4                      |                         | E2             | 12                |
| 11  | BL-BK      | R7                        | R4                      |                         | M2             |                   |
| 37  | BK-O       | T8                        |                         |                         |                |                   |
| 12  | O-BK       | R8                        |                         |                         |                |                   |
| 38  | BK-G       | T5                        | T3                      | T2                      | T2             | 10                |
| 13  | G-BK       | R5                        | R3                      | R2                      | R2             |                   |
| 39  | BK-BR      | T6                        | XT4                     |                         | TR2            |                   |
| 14  | BR-BK      | R6                        | XT3                     |                         | RR2            |                   |
| 40  | BK-S       | T7                        | T4                      |                         | E2             | 11                |
| 15  | S-BK       | R7                        | R4                      |                         | M2             |                   |
| 41  | Y-BL       | T8                        |                         |                         |                |                   |
| 16  | BL-Y       | R8                        |                         |                         |                |                   |
| 42  | Y-O        | T5                        | T3                      | T2                      | T2             | 12                |
| 17  | O-Y        | R5                        | R3                      | R2                      | R2             |                   |
| 43  | Y-G        | T6                        | XT4                     |                         | TR2            |                   |
| 18  | G-Y        | R6                        | XT3                     |                         | RR2            |                   |
| 44  | Y-BR       | T7                        | T4                      |                         | E2             | 11                |
| 19  | BR-Y       | R7                        | R4                      |                         | M2             |                   |
| 45  | Y-S        | T8                        |                         |                         |                |                   |
| 20  | S-Y        | R8                        |                         |                         |                |                   |
| 46  | V-BL       | T5                        | T3                      | T2                      | T2             | 12                |
| 21  | BL-V       | R5                        | R3                      | R2                      | R2             |                   |
| 47  | V-O        | T6                        | XT4                     |                         | TR2            |                   |
| 22  | O-V        | R6                        | XT3                     |                         | RR2            |                   |
| 48  | V-G        | T7                        | T4                      |                         | E2             | 12                |
| 23  | G-V        | R7                        | R4                      |                         | M2             |                   |
| 49  | V-BR       | T8                        |                         |                         |                |                   |
| 24  | BR-V       | R8                        |                         |                         |                |                   |
| 50  | V-S        | SPARE                     | SPARE                   |                         |                |                   |
| 25  | S-V        | SPARE                     | SPARE                   |                         |                |                   |

†For 2-Wire E&amp;M Trunk operation DO NOT connect RR and TR leads



TABLE 10-5 CONSOLE INTERFACE BOARD PLUG AND JACK CONNECTIONS (SX-200 ONLY)

## JACK J22

Connects to Attendant Console 1)

## PLUG P23

(Connects to Jack J15)

| Pin | Pair Color | Lead Designation     | Pin | Pair Color | Lead Designation     |
|-----|------------|----------------------|-----|------------|----------------------|
| 26  | W-BL       | ELECTROSTATIC GROUND | 26  | W-BL       | ELECTROSTATIC GROUND |
| 1   | BL-W       | ELECTROSTATIC GROUND | 1   | BL-W       | ELECTROSTATIC GROUND |
| 27  | W-O        | ELECTROSTATIC GROUND | 27  | W-O        | ELECTROSTATIC GROUND |
| 2   | O-W        | ELECTROSTATIC GROUND | 2   | O-W        | ELECTROSTATIC GROUND |
| 28  | W-G        | ELECTROSTATIC GROUND | 28  | W-G        | ELECTROSTATIC GROUND |
| 3   | G-W        | ELECTROSTATIC GROUND | 3   | G-W        | ELECTROSTATIC GROUND |
| 29  | W-BR       | ELECTROSTATIC GROUND | 29  | W-BR       | ELECTROSTATIC GROUND |
| 4   | BR-W       | ELECTROSTATIC GROUND | 4   | BR-W       | ELECTROSTATIC GROUND |
| 30  | W-S        | DATA IN COMMON       | 30  | W-S        | DATA IN COMMON       |
| 5   | S-W        | DATA IN              | 5   | S-W        | DATA IN              |
| 31  | R-BL       | ELECTROSTATIC GROUND | 31  | R-BL       | ELECTROSTATIC GROUND |
| 6   | BL-R       | ELECTROSTATIC GROUND | 6   | BL-R       | ELECTROSTATIC GROUND |
| 32  | R-O        | DATA OUT COMMON      | 32  | R-O        | DATA OUT COMMON      |
| 7   | R-O        | DATA OUT             | 7   | R-O        | DATA OUT             |
| 33  | R-G        | ELECTROSTATIC GROUND | 33  | R-G        | ELECTROSTATIC GROUND |
| 8   | G-R        | ELECTROSTATIC GROUND | 8   | G-R        | ELECTROSTATIC GROUND |
| 34  | R-BR       | ELECTROSTATIC GROUND | 34  | R-BR       | ELECTROSTATIC GROUND |
| 9   | BR-R       | ELECTROSTATIC GROUND | 9   | BR-R       | ELECTROSTATIC GROUND |
| 35  | R-S        | CUTOVER SWB          | 35  | R-S        | CUTOVER SWB          |
| 10  | S-R        | CUTOVER SWA          | 10  | S-R        | CUTOVER SWA          |
| 36  | BK-BL      | ELECTROSTATIC GROUND | 36  | BK-BL      | ELECTROSTATIC GROUND |
| 11  | BL-BK      | ELECTROSTATIC GROUND | 11  | BL-BK      | ELECTROSTATIC GROUND |
| 37  | BK-O       | MAJOR ALARM          | 37  | BK-O       | MAJOR ALARM          |
| 12  | O-BK       | MAJOR ALARM          | 12  | O-BK       | MAJOR ALARM          |
| 38  | BK-G       | TIP                  | 38  | BK-G       | TIP                  |
| 13  | G-BK       | RING                 | 13  | G-BK       | RING                 |
| 39  | BK-BR      | ELECTROSTATIC GROUND | 39  | BK-BR      | ELECTROSTATIC GROUND |
| 14  | BR-BK      | ELECTROSTATIC GROUND | 14  | BR-BK      | ELECTROSTATIC GROUND |
| 40  | BK-S       | ELECTROSTATIC GROUND | 40  | BK-S       | ELECTROSTATIC GROUND |
| 15  | S-BK       | ELECTROSTATIC GROUND | 15  | S-BK       | ELECTROSTATIC GROUND |
| 41  | Y-BL       | ELECTROSTATIC GROUND | 41  | Y-BL       | ELECTROSTATIC GROUND |
| 16  | BL-Y       | ELECTROSTATIC GROUND | 16  | BL-Y       | ELECTROSTATIC GROUND |
| 42  | Y-O        | ELECTROSTATIC GROUND | 42  | Y-O        | ELECTROSTATIC GROUND |
| 17  | O-Y        | ELECTROSTATIC GROUND | 17  | O-Y        | ELECTROSTATIC GROUND |
| 43  | Y-G        | 0 V                  | 43  | Y-G        | 0 V                  |
| 18  | G-Y        | -48 V                | 18  | G-Y        | -48 V                |
| 44  | Y-BR       | 0 V                  | 44  | Y-BR       | 0 V                  |
| 19  | BR-Y       | -48 V                | 19  | BR-Y       | -48 V                |
| 45  | Y-S        | 0 V                  | 45  | Y-S        | 0 V                  |
| 20  | S-Y        | -48 V                | 20  | S-Y        | -48 V                |
| 46  | V-BL       | 0 V                  | 46  | V-BL       | 0 V                  |
| 21  | BL-V       | -48 V                | 21  | BL-V       | -48 V                |
| 47  | V-O        | 0 V                  | 47  | V-O        | 0 V                  |
| 22  | O-V        | -48 V                | 22  | O-V        | -48 V                |
| 48  | V-G        | 0 V                  | 48  | V-G        | 0 V                  |
| 23  | G-V        | -48 V                | 23  | G-V        | -48 V                |
| 49  | V-BR       | 0 V                  | 49  | V-BR       | 0 V                  |
| 24  | BR-V       | -48 V                | 24  | BR-V       | -48 V                |
| 50  | V-S        | 0 V                  | 50  | V-S        | 0 V                  |
| 25  | S-V        | -48 V                | 25  | S-V        | -48 V                |

TABLE 10-5 CONSOLE INTERFACE BOARD PLUG AND JACK CONNECTIONS (SX-200 ONLY)

## JACK J24

(Connects to Attendant Console 2)

## PLUG P25

(Connects to Jack J14)

| Pin | Pair Color | Lead Designation     | Pin | Pair Color | Lead Designation     |
|-----|------------|----------------------|-----|------------|----------------------|
| 26  | W-BL       | ELECTROSTATIC GROUND | 26  | W-BL       | ELECTROSTATIC GROUND |
| 1   | BL-W       | ELECTROSTATIC GROUND | 1   | BL-W       | ELECTROSTATIC GROUND |
| 27  | W-O        | ELECTROSTATIC GROUND | 27  | W-O        | ELECTROSTATIC GROUND |
| 2   | O-W        | ELECTROSTATIC GROUND | 2   | O-W        | ELECTROSTATIC GROUND |
| 28  | W-G        | ELECTROSTATIC GROUND | 28  | W-G        | ELECTROSTATIC GROUND |
| 3   | G-W        | ELECTROSTATIC GROUND | 3   | G-W        | ELECTROSTATIC GROUND |
| 29  | W-BR       | ELECTROSTATIC GROUND | 29  | W-BR       | ELECTROSTATIC GROUND |
| 4   | BR-W       | ELECTROSTATIC GROUND | 4   | BR-W       | ELECTROSTATIC GROUND |
| 30  | W-S        | DATA IN COMMON       | 30  | W-S        | DATA IN COMMON       |
| 5   | S-W        | DATA IN              | 5   | S-W        | DATA IN              |
| 31  | R-BL       | ELECTROSTATIC GROUND | 31  | R-BL       | ELECTROSTATIC GROUND |
| 6   | BL-R       | ELECTROSTATIC GROUND | 6   | BL-R       | ELECTROSTATIC GROUND |
| 32  | R-O        | DATA OUT COMMON      | 32  | R-O        | DATA OUT COMMON      |
| 7   | R-O        | DATA OUT             | 7   | R-O        | DATA OUT             |
| 33  | R-G        | ELECTROSTATIC GROUND | 33  | R-G        | ELECTROSTATIC GROUND |
| 8   | G-R        | ELECTROSTATIC GROUND | 8   | G-R        | ELECTROSTATIC GROUND |
| 34  | R-BR       | ELECTROSTATIC GROUND | 34  | R-BR       | ELECTROSTATIC GROUND |
| 9   | BR-R       | ELECTROSTATIC GROUND | 9   | BR-R       | ELECTROSTATIC GROUND |
| 35  | R-S        | CUTOVER SWB          | 35  | R-S        | CUTOVER SWB          |
| 10  | S-R        | CUTOVER SWA          | 10  | S-R        | CUTOVER SWA          |
| 36  | BK-BL      | ELECTROSTATIC GROUND | 36  | BK-BL      | ELECTROSTATIC GROUND |
| 11  | BL-BK      | ELECTROSTATIC GROUND | 11  | BL-BK      | ELECTROSTATIC GROUND |
| 37  | BK-O       | MAJOR ALARM          | 37  | BK-O       | MAJOR ALARM          |
| 12  | O-BK       | MAJOR ALARM          | 12  | O-BK       | MAJOR ALARM          |
| 38  | BK-G       | TIP                  | 38  | BK-G       | TIP                  |
| 13  | G-BK       | RING                 | 13  | G-BK       | RING                 |
| 39  | BK-BR      | ELECTROSTATIC GROUND | 39  | BK-BR      | ELECTROSTATIC GROUND |
| 14  | BR-BK      | ELECTROSTATIC GROUND | 14  | BR-BK      | ELECTROSTATIC GROUND |
| 40  | BK-S       | ELECTROSTATIC GROUND | 40  | BK-S       | ELECTROSTATIC GROUND |
| 15  | S-BK       | ELECTROSTATIC GROUND | 15  | S-BK       | ELECTROSTATIC GROUND |
| 41  | Y-BL       | ELECTROSTATIC GROUND | 41  | Y-BL       | ELECTROSTATIC GROUND |
| 16  | BL-Y       | ELECTROSTATIC GROUND | 16  | BL-Y       | ELECTROSTATIC GROUND |
| 42  | Y-O        | ELECTROSTATIC GROUND | 42  | Y-O        | ELECTROSTATIC GROUND |
| 17  | O-Y        | ELECTROSTATIC GROUND | 17  | O-Y        | ELECTROSTATIC GROUND |
| 43  | Y-G        | 0 V                  | 43  | Y-G        | 0 V                  |
| 18  | G-Y        | -48 V                | 18  | G-Y        | -48 V                |
| 44  | Y-BR       | 0 V                  | 44  | Y-BR       | 0 V                  |
| 19  | BR-Y       | -48 V                | 19  | BR-Y       | -48 V                |
| 45  | Y-S        | 0 V                  | 45  | Y-S        | 0 V                  |
| 20  | S-Y        | -48 V                | 20  | S-Y        | -48 V                |
| 46  | V-BL       | 0 V                  | 46  | V-BL       | 0 V                  |
| 21  | BL-V       | -48 V                | 21  | BL-V       | -48 V                |
| 47  | V-O        | 0 V                  | 47  | V-O        | 0 V                  |
| 22  | O-V        | -48 V                | 22  | O-V        | -48 V                |
| 48  | V-G        | 0 V                  | 48  | V-G        | 0 V                  |
| 23  | G-V        | -48 V                | 23  | G-V        | -48 V                |
| 49  | V-BR       | 0 V                  | 49  | V-BR       | 0 V                  |
| 24  | BR-V       | -48 V                | 24  | BR-V       | -48 V                |
| 50  | V-S        | 0 V                  | 50  | V-S        | 0 V                  |
| 25  | S-V        | -48 V                | 25  | S-V        | -48 V                |

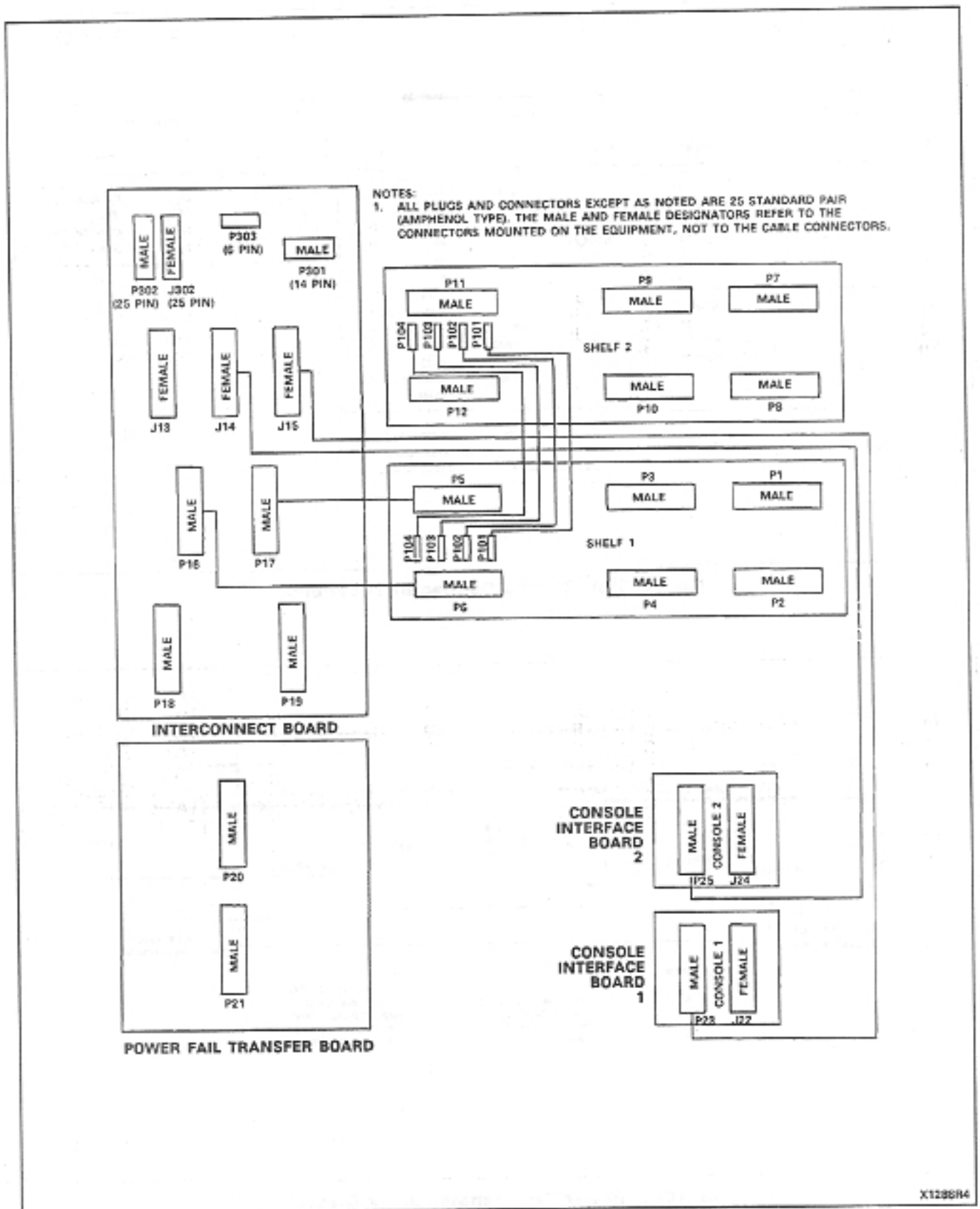


Fig. 10-3(a) SX-200 Connector Locations

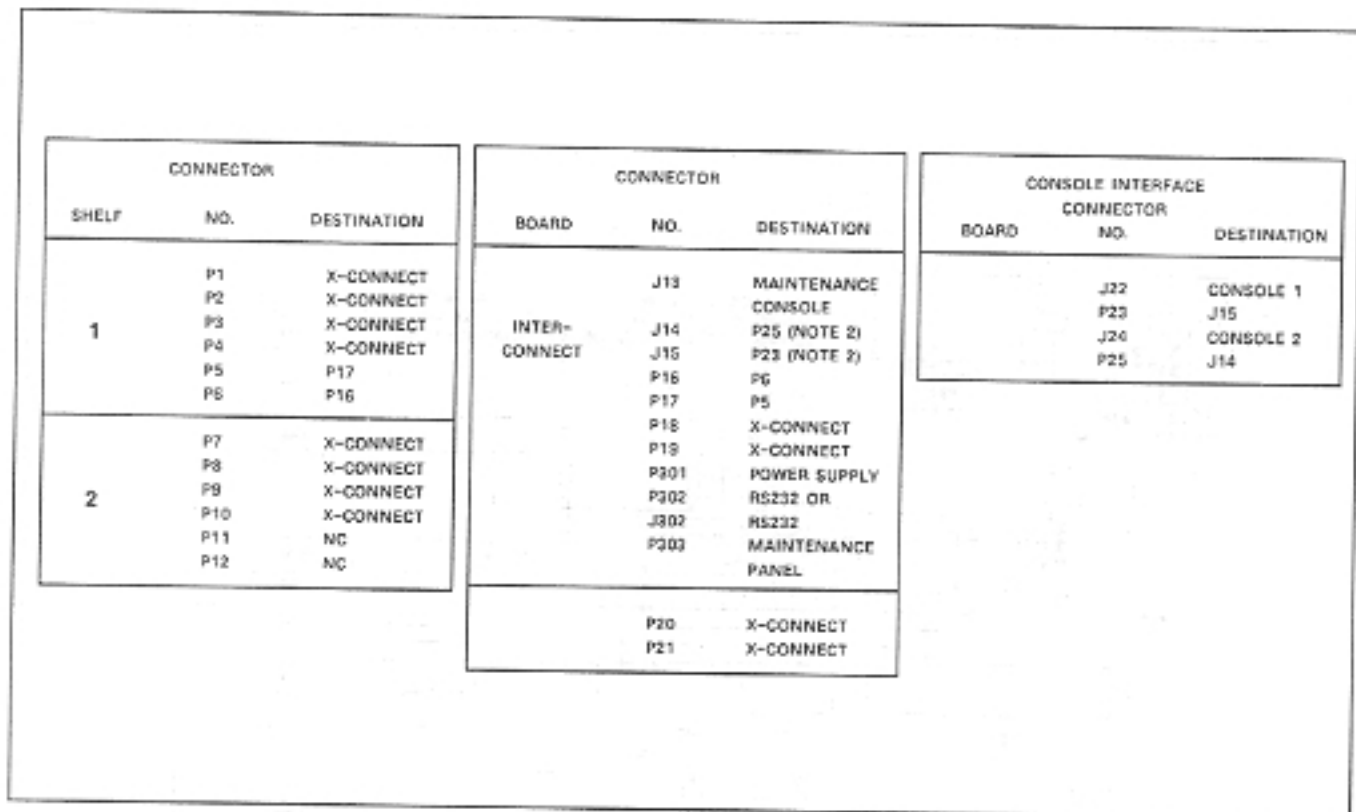


Fig. 10-3(b) SX-200 Connector Locations

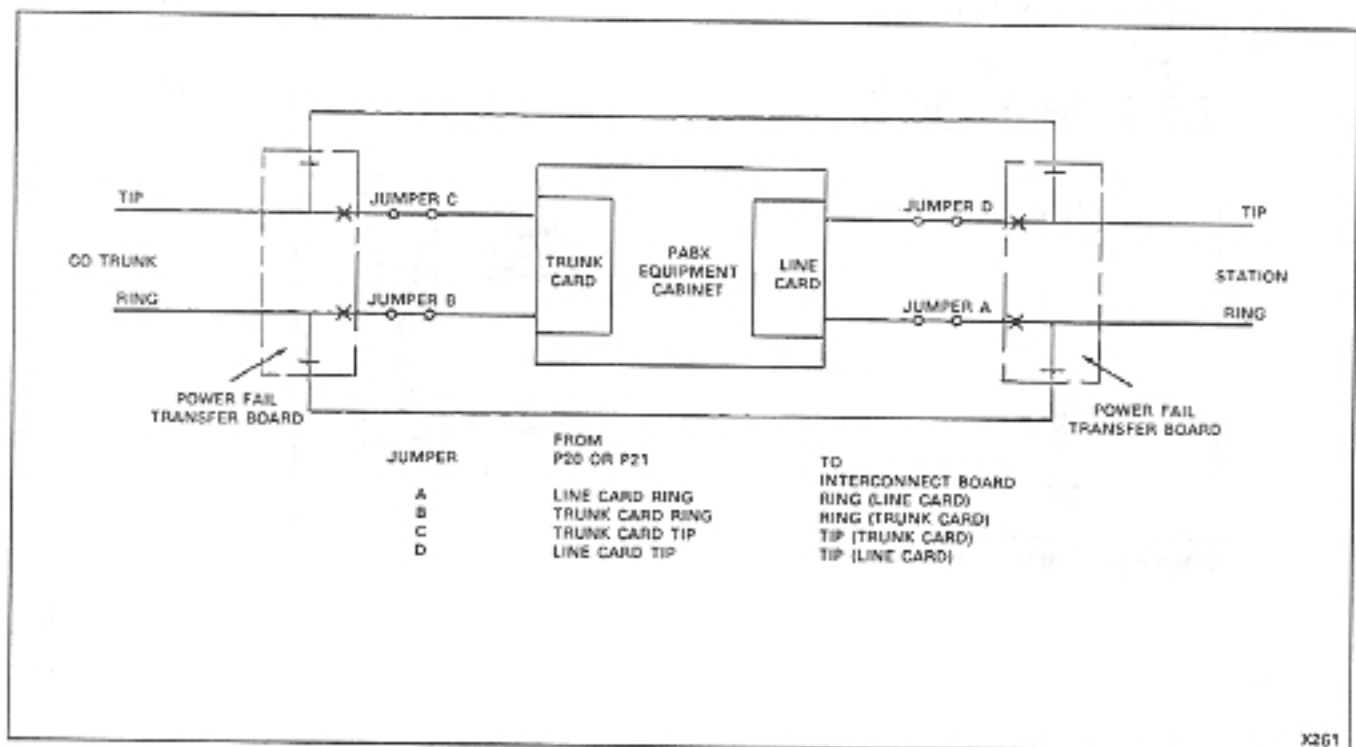


Fig. 10-4 Power Fail Transfer Block Diagram

X261

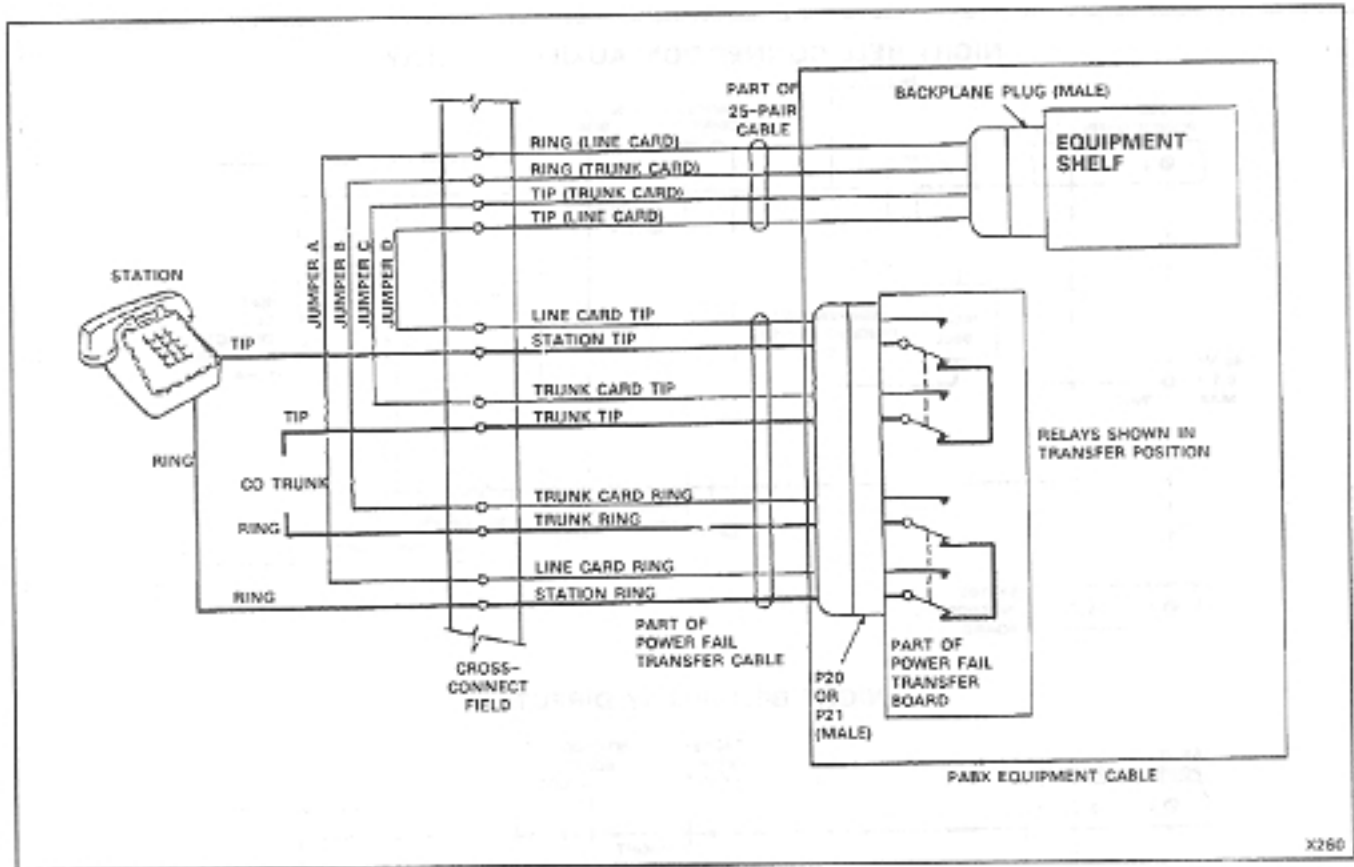
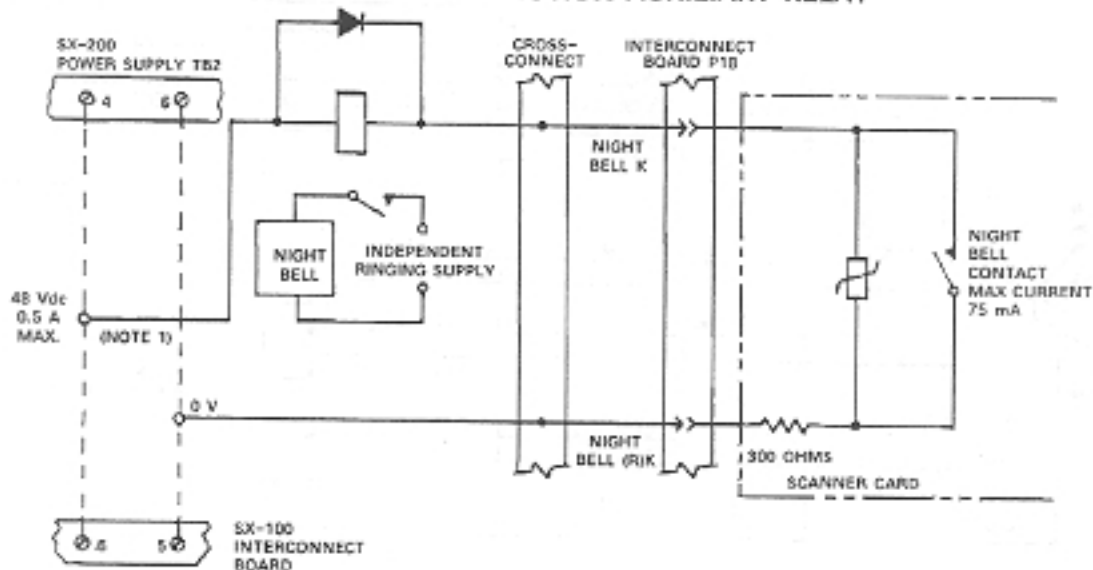
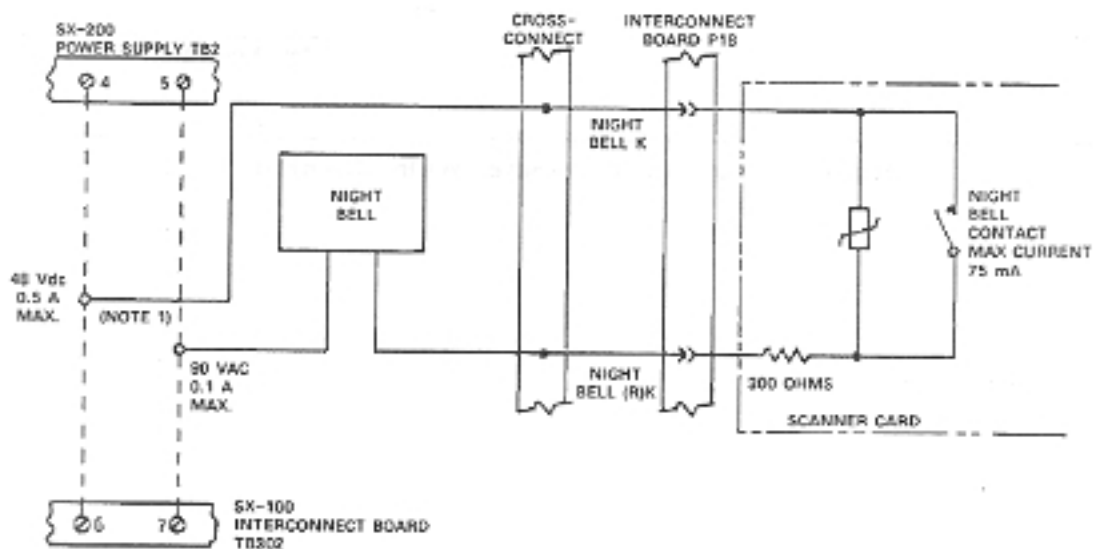


Fig. 10-5 Power Fail Transfer Wiring Diagram

## NIGHT BELL CONNECTION AUXILIARY RELAY



## NIGHT BELL RELAY DIRECT

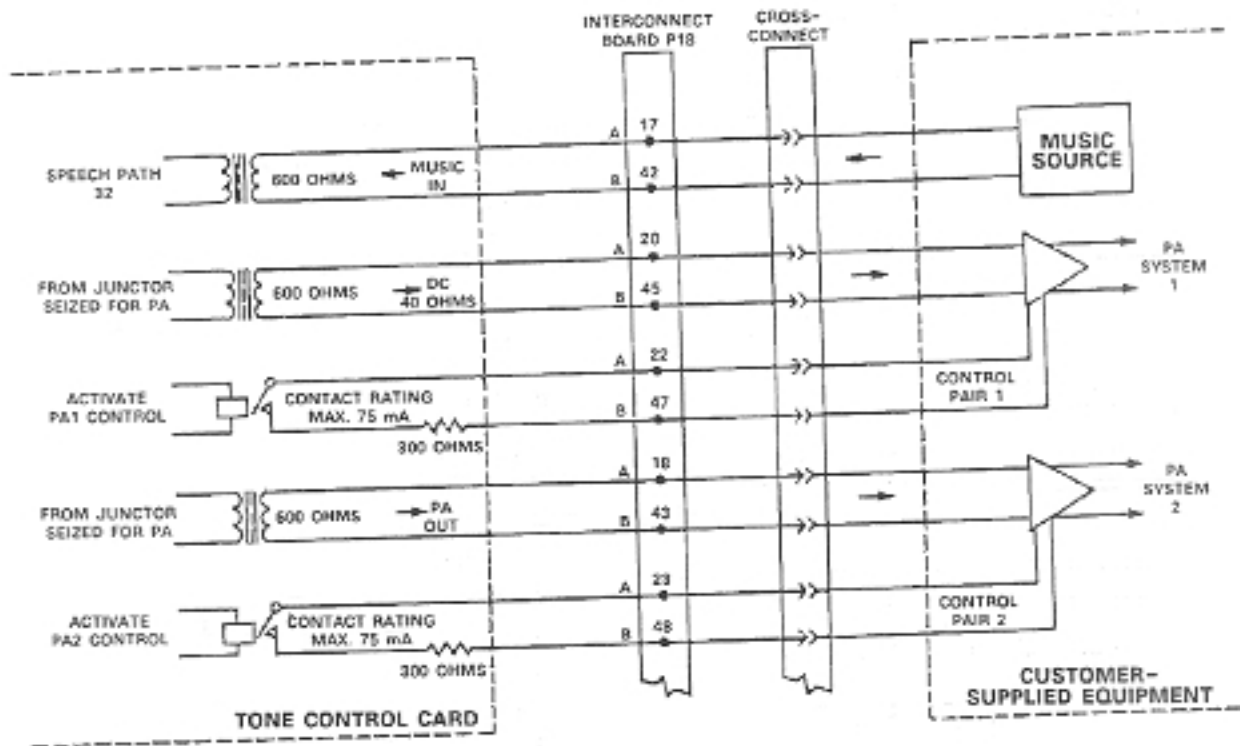


| INTERCONNECT BOARD PLUG P1B |                    |     |                    |     |                    |     |                     |
|-----------------------------|--------------------|-----|--------------------|-----|--------------------|-----|---------------------|
| PIN                         | DESTINATION        | PIN | DESTINATION        | PIN | DESTINATION        | PIN | DESTINATION         |
| 46                          | NIGHT BELL 1 K1    | 44  | NIGHT BELL 2 K2    | 50  | NIGHT BELL 3 K3    | 49  | NIGHT SERVICE A K4  |
| 21                          | NIGHT BELL 1 R(K1) | 19  | NIGHT BELL 2 R(K2) | 25  | NIGHT BELL 3 R(K3) | 24  | NIGHT SERVICE B(K4) |

- NOTE 1: THE FACILITY IS WIRED TO EITHER THE SX-100 OR THE SX-200 TERMINAL BLOCKS AS INDICATED BY THE DASHED LINES.
- 2: THE NIGHT SERVICE RELAY K4 CONTACTS ARE IDENTICAL TO THE NIGHT BELL CONTACT ARRANGEMENTS. IT MAY BE USED TO OPERATE A LAMP TO SHOW WHEN THE PABX IS IN NIGHT SERVICE, OR SIGNAL THE CD FOR THIS CONDITION.

X572R4

Fig. 10-6 Night Bell Connections



X5373

Fig. 10-7 Music and PA Connections

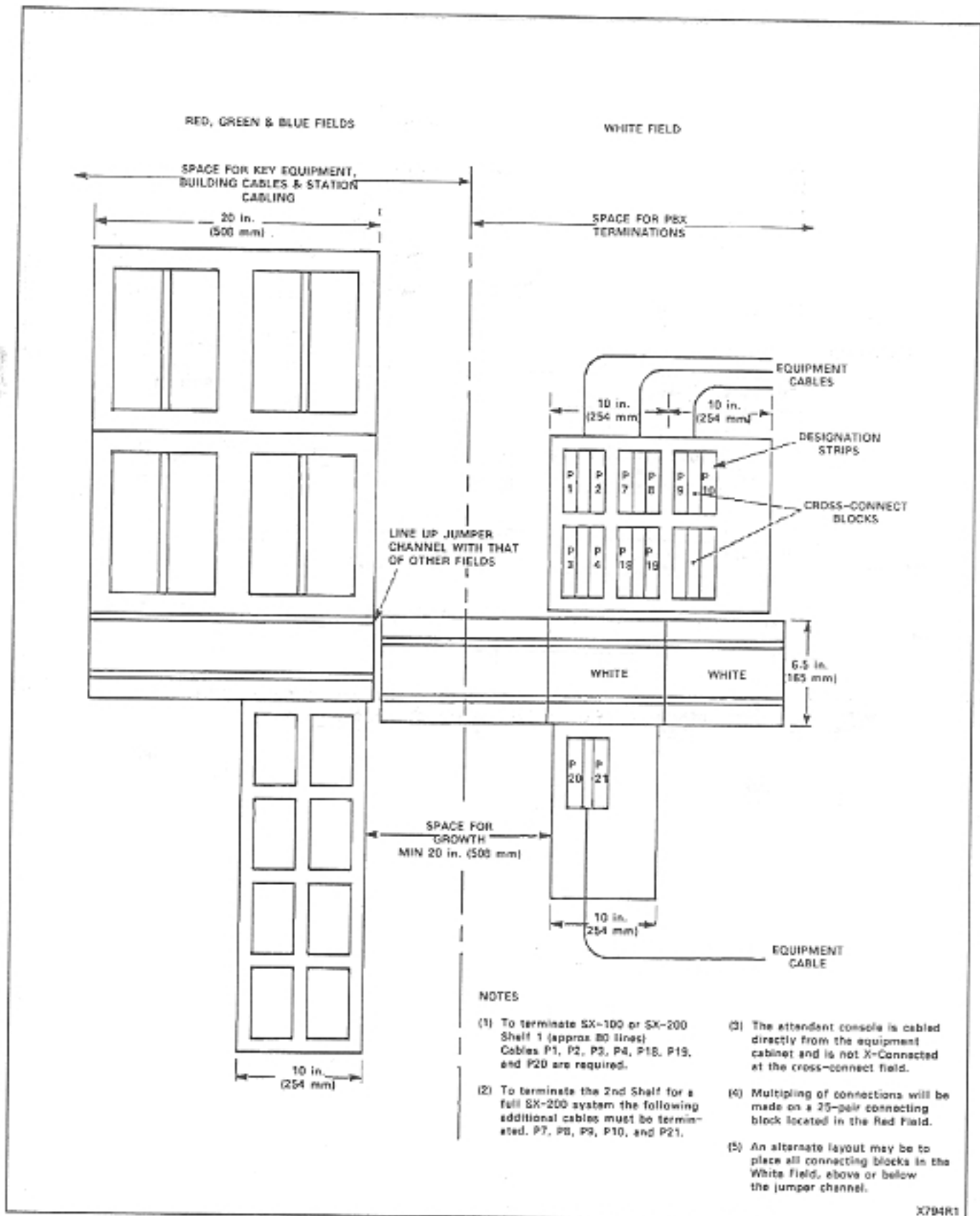


Fig. 11-1 Typical Terminal Layout



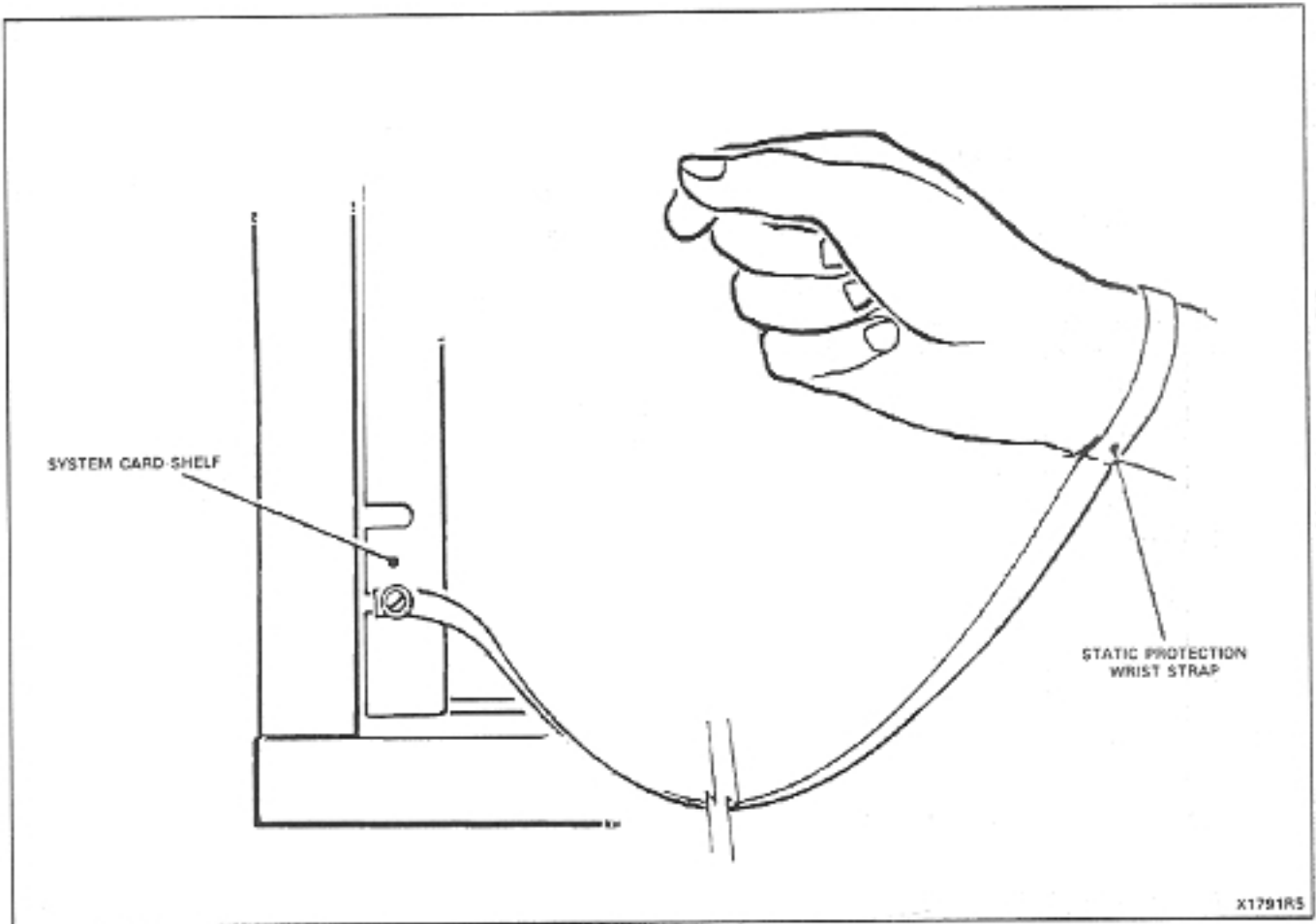


Fig. 12-1 Static Protection Ground Strap



## APPENDIX 1

### MITEL ACTION PROCEDURES

#### GENERAL

**A1.01** Task oriented functions in this Section are implemented using MITEL Action Procedures (MAP's).

**A1.02** A MAP is a step-by-step procedure using a flow chart principle, written and illustrated where necessary to a level of detail that allows both experienced and inexperienced personnel to carry out the tasks detailed. A MAP contains two levels of information as follows:

- (a) For experienced personnel, a series of steps (level one) each numbered (n) and annotated with minimal information.
- (b) For inexperienced personnel, each step referred to in (a) above is amplified by a connected series of numbered substeps (nA) (level two).

**A1.03** A typical example of a MAP is shown in Fig. A1-1, with the two levels detailed.

#### MAP SYMBOLS

**A1.04** There are four basic symbol shapes which may be used in a MAP, and are defined as follows.

**A1.05 AND Block:** Used to indicate a level one step that must be performed. Consists of a square with the word AND centered in the block.

**A1.06 OR Block:** Used to indicate a choice of level one steps, one of which must be performed. Consists of a rectangle, with the text centered in the block, and with the word OR appearing between the alternative operations.

**A1.07** The rectangle is also used to border instructions which imply that the operative must perform a task outside the scope of the MAP. The text is centered in the rectangle.

**A1.08 DECISION Block:** Used to indicate a decision within the level one steps which must be made. The symbol is based on a hexagon with the top and bottom sides extended. Decision text is centered in the symbol.

**A1.09 START/FINISH/JUMP TO Block:** Used to indicate the start and finish of a MAP. Also used to indicate "jump to" points within the MAP, for example "go to (n)" or "from (n)" or "return to (n)". The symbol is a rectangle with semicircular ends. Text is centered in the symbol.

#### THE OPERATOR'S USE OF MAP'S

##### Experienced Operator

**A1.10** For the experienced operator to complete a task using a MAP, reference to the sequential short form level one steps is usually all that is necessary. Using Fig. A1-1 as an example, the experienced operator would proceed as follows.

**A1.11** At (1) makes a decision based on the information within the block. If the answer is YES, the operator must proceed to a different MAP. If the answer is NO, the operator is faced with another decision at block (2).

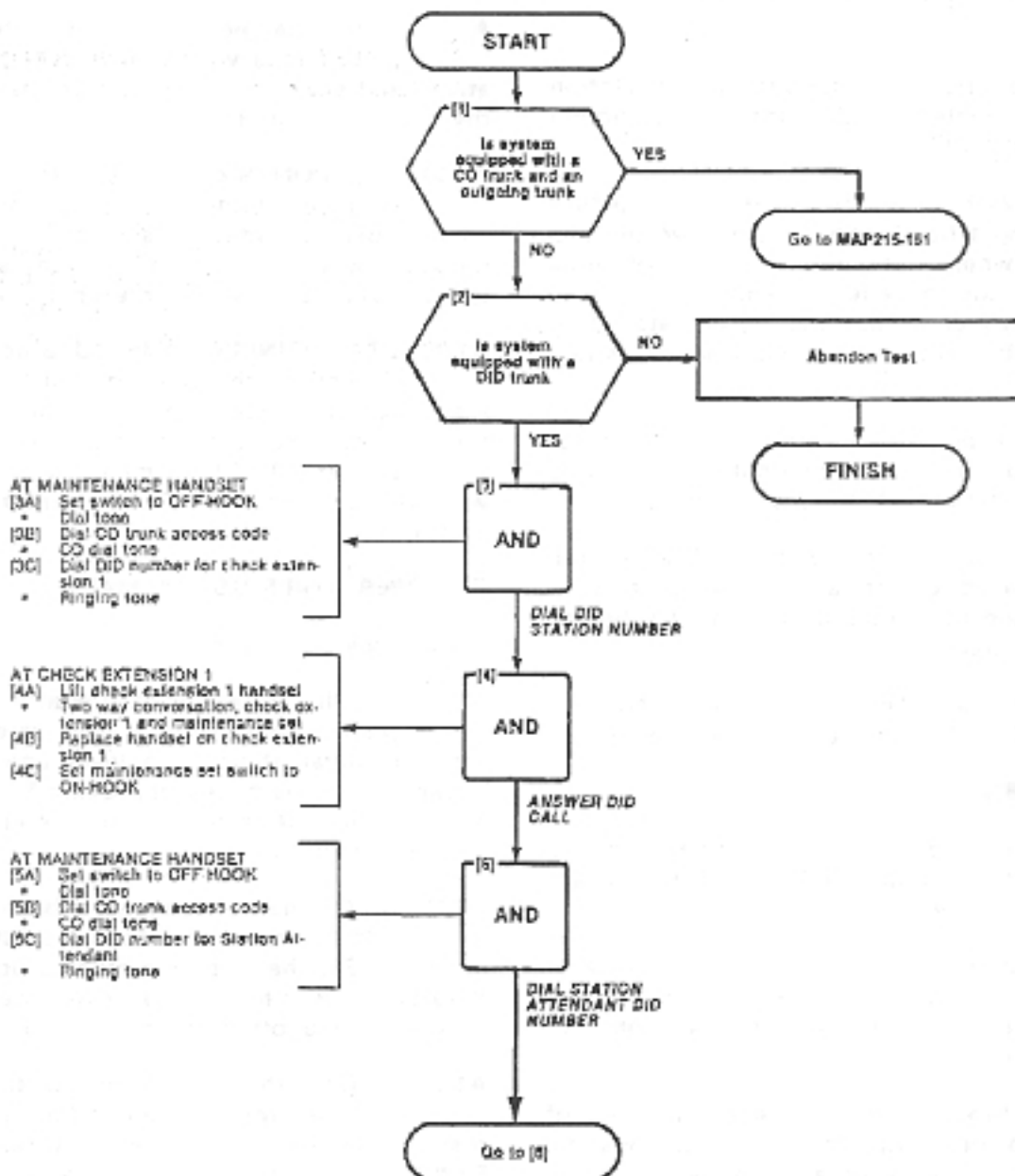
**A1.12** At (2) if the decision is NO, there is no requirement to proceed further and the test is abandoned. This naturally results in a FINISH block. If the decision is YES, the operator proceeds to (3) and (4) in succession (i.e. dials the DID station number and completes the call to the check extension).

ANSWER DID TRUNK CALL

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M110

Fig. A1-1 Typical MAP Page

**A1.13** The description of the instructions carried out in A1.05 and A1.06 have assumed that the level of competence of the operator is such that short form level one steps contain sufficient information, and therefore the operator reads only the center column of the MAP, top to bottom of the page.

#### **Inexperienced Operator**

**A1.14** If the operator's experience is such that the level one instructions do not contain sufficient information, the level two substeps should be referred to as follows.

**A1.15** Using Fig. A1-1 as an example, the path followed should be:

- (a) At (1) and (2) make the decisions called for at these steps as before.

- (b) At step (3) dial the DID station number by performing substeps (3A), (3B) and (3C).

In terms of steps and substeps, the operative follows a decision, decision then step and substep paths in the example shown.

#### **TOOLS, TEST EQUIPMENT AND SPECIAL INSTRUCTIONS**

**A1.16** Any tools, test equipment or special instructions that the operator requires or needs to know are stated on the first page of each MAP. If the MAP is long, and contains a number of subprocedures, these are listed in synopsis form on the first page.



## APPENDIX 2

### FCC INTERCONNECTION REQUIREMENTS

#### A. TELEPHONE COMPANY INTERCONNECTION

##### General

**A2.01** This equipment has been approved by the Federal Communications Commission (FCC) as not being harmful to the telephone network when connected directly to the telephone lines through the standard 50-pin blue ribbon prescribed by the FCC Rule. This section is applicable to telephone interconnection in the United States.

##### Notification

**A2.02** Prior to the interconnection of this equipment, the local telephone company is to be notified; inform the company that you have FCC-registered equipment which you wish to connect to their trunks. Give them the following information:

- The PABX being connected is a MITEL Incorporated Model SX-100 or a Model SX-200.
- The 14-digit FCC Registration Number for the SX-100 is BN285664724MFF.
- The 14-digit FCC Registration Number for the SX-200 is BN285664724MFF.
- The Ringer Equivalence number which is 2.1B.
- The jacks or connectors required are RJ2IX, RJ2EX or RJ2GX as shown in Table A2-1.

##### Connection Limitations

**A2.03** Due to the FCC Part 68 Rule, no connection can be made to party lines and to coin telephone service.

##### Network Changes

**A2.04** The telephone company may make changes to its communication service; such changes may include the change of trunk circuits, changes in the operational characteristics of its trunk, etc. Before doing this, however, the company shall provide official notification, so that the operation of the PABX service will not be interrupted.

##### Maintenance Limitations

**A2.05** This equipment has been registered with the FCC for direct connection to the telephone network. Under the FCC Program, the user is restricted from making any changes or repairs and from performing any maintenance operations other than those specifically included in this Standard Practice.

## SECTION MITL9105/9110-096-200-NA

**A2.06** Circuit cards may be removed by the user; however, replacement cards are to be supplied only by MITEL or its authorized agent. No field repair of circuit cards by the user is authorized.

**A2.07** No cabling or wiring changes within the console are permitted by the user. Plug-ended cables, as detailed in this Standard Practice, are to be used for all external connections between the console and the telephone company interface jack.

**A2.08** Power supply components and cabling is only to be changed or maintained by MITEL or by an authorized agent of MITEL.

### Trouble Corrections

**A2.09** Most troubles are diagnosed by the circuitry of the system, and the console readout indicates the circuit and card that is malfunctioning. Card replacement can be made by the user.

**A2.10** For more complex malfunctions, appropriate field service is provided by MITEL or its authorized agents.



TABLE A2-1  
USOC CONNECTOR PIN DESIGNATIONS

| Pair<br>Pin Color | Connector Type |       |       | Pair<br>Pin Color | Connector Type |       |       |
|-------------------|----------------|-------|-------|-------------------|----------------|-------|-------|
|                   | RJ2IX          | RJ2EX | RJ2GX |                   | RJ2IX          | RJ2EX | RJ2GX |
| 26 W-BL           | T              | T     | T     | 38 BK-G           | T              | T     | T     |
| 1 BL-W            | R              | R     | R     | 13 G-BK           | R              | R     | R     |
| 27 W-O            | T              | E     | T1    | 39 BK-BR          | T              | E     | T1    |
| 2 O-W             | R              | M     | R1    | 14 BR-BK          | R              | M     | R1    |
| 28 W-G            | T              | T     | E     | 40 BK-S           | T              | T     | E     |
| 3 G-W             | R              | R     | M     | 15 S-BK           | R              | R     | M     |
| 29 W-BR           | T              | E     | T     | 41 Y-BL           | T              | E     | T     |
| 4 BR-W            | R              | M     | R     | 16 BL-Y           | R              | M     | R     |
| 30 W-S            | T              | T     | T1    | 42 Y-O            | T              | T     | T1    |
| 5 S-W             | R              | R     | R1    | 17 O-Y            | R              | R     | R1    |
| 31 R-BL           | T              | E     | E     | 43 Y-G            | T              | E     | E     |
| 6 BL-R            | R              | M     | M     | 18 G-Y            | R              | M     | M     |
| 32 R-O            | T              | T     | T     | 44 Y-BR           | T              | T     | T     |
| 7 O-R             | R              | R     | R     | 19 BR-Y           | R              | R     | R     |
| 33 R-G            | T              | E     | T1    | 45 Y-S            | T              | E     | T1    |
| 8 G-R             | R              | M     | R1    | 20 S-Y            | R              | M     | R1    |
| 34 R-BR           | T              | T     | E     | 46 V-BL           | T              | T     | E     |
| 9 BR-R            | R              | R     | M     | 21 BL-V           | R              | R     | M     |
| 35 R-S            | T              | T     | E     | 47 V-O            | T              | E     | T     |
| 10 S-R            | R              | M     | R     | 22 O-V            | R              | M     | R     |
| 36 BK-BL          | T              | T     | T1    | 48 V-G            | T              | T     | T1    |
| 11 BL-BK          | R              | R     | R1    | 23 G-V            | R              | R     | R1    |
| 37 BK-O           | T              | E     | E     | 49 V-BR           | T              | E     | E     |
| 12 O-BK           | R              | M     | M     | 24 BR-V           | R              | M     | M     |
|                   |                |       |       | 50 V-S            | SPARE          |       |       |
|                   |                |       |       | 25 S-V            | SPARE          |       |       |

#### Remarks

The types of Universal Service Order Code (USOC) connectors shown have pin designations according to type of interface required by the Telephone Company. Use of these connectors are determined as follows:

RJ2IX: 2-wire loop, or ground start trunk  
 2-wire reverse battery (DID)  
 2-wire off-premises extension  
 (Class A through E)  
 2-wire Automatic Identified Outward  
 Dialing (AIOD)  
 2-wire message register

RJ2EX: 2-wire tie trunk with E and M Type I signaling

RJ2GX: 4-wire tie trunk with E and M Type I signaling



### APPENDIX 3

## SX-100 INSTALLATION PROCEDURES

#### 1. GENERAL

A3.01 The MAP's contained in this Appendix detail the procedures to be performed to complete the installation of an SX-100 PABX.

TABLE A3-1  
SX-100 INSTALLATION PROCEDURE

| Step | Procedure                              | Reference                        |
|------|--|----------------------------------|
| 1    | Unpack SX-100 Equipment                | MAP200-301                       |
| 2    | Unpack Console(s)                      | MAP200-302                       |
| 3    | Install Console Faceplate Designations | MAP200-303                       |
| 4    | Inspect Equipment                      | MAP200-304                       |
| 5    | Install and Connect Equipment          | MAP200-305                       |
| 6    | Set Card Switches (Appendix 5)         | MAP200-306                       |
| 7    | Power-Up System (See Note)             | MAP200-307                       |
| 8    | Program System                         | Section MITL9105/9110-096-210-NA |
| 9    | Perform System Tests                   | Section MITL9105/9110-096-215-NA |
| 10   | Perform Extension Test                 | Section MITL9105/9110-096-320-NA |

**Note:** Appendix 6 lists miscellaneous installation requirements which may be required prior to power-up of system. This appendix should be reviewed for applicability.

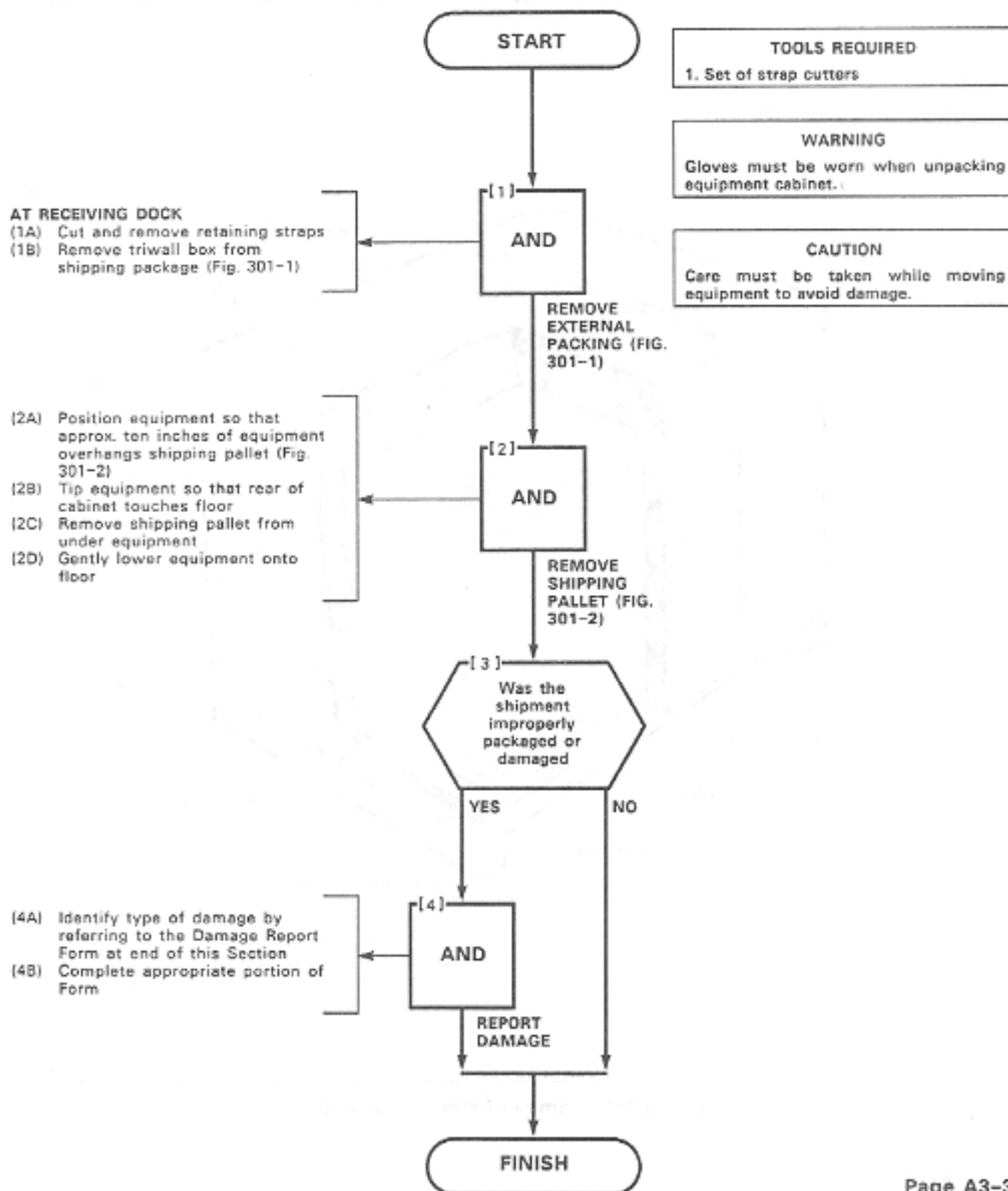
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UNPACK SX-100 EQUIPMENT

MAP200- 301

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| UNPACK SX-100 EQUIPMENT |
| MAP200- 301             |
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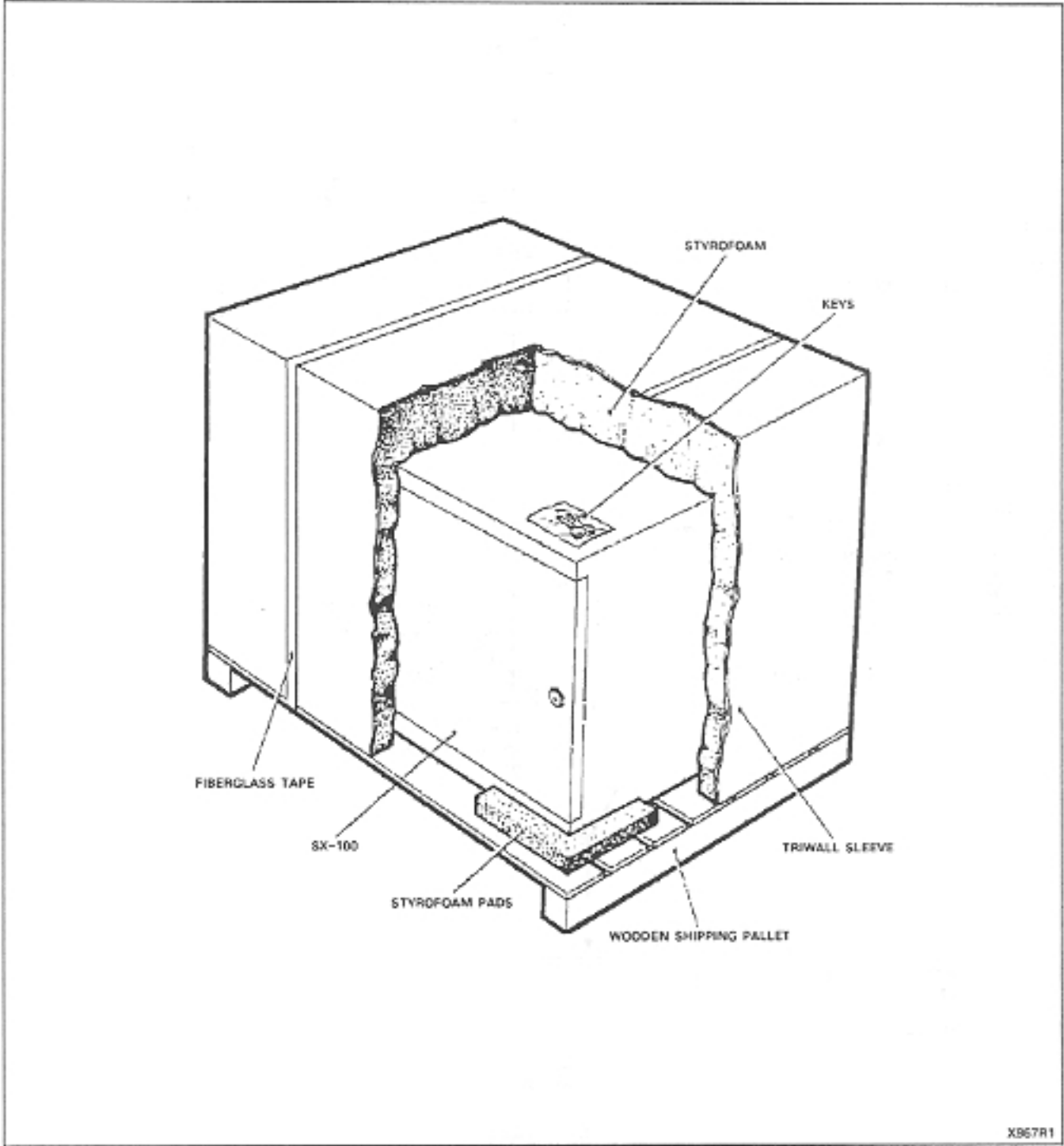
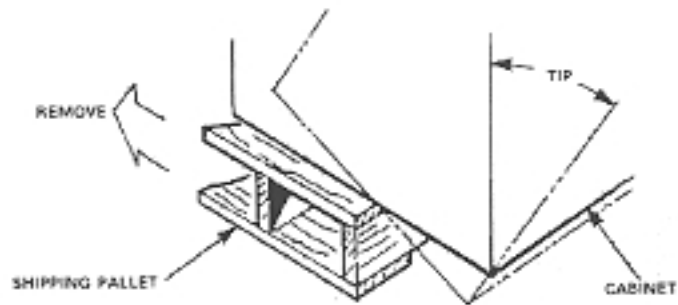


Fig. 301-1 Remove External Packing

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| UNPACK SX-100 EQUIPMENT |
| MAP200-301              |
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X264

Fig. 301-2 Remove Shipping Pallet

101.01(1) The purpose of this chapter is to provide for the orderly and efficient operation of the courts of this state.

101.01(2) The provisions of this chapter shall be construed to effectuate its purpose.

101.01(3) The provisions of this chapter shall not be construed to limit the power of the courts to exercise their inherent powers.

101.01(4) The provisions of this chapter shall not be construed to limit the power of the courts to exercise their jurisdiction.

101.01(5) The provisions of this chapter shall not be construed to limit the power of the courts to exercise their authority.

101.01(6) The provisions of this chapter shall not be construed to limit the power of the courts to exercise their discretion.

101.01(7) The provisions of this chapter shall not be construed to limit the power of the courts to exercise their judgment.

101.01(8) The provisions of this chapter shall not be construed to limit the power of the courts to exercise their wisdom.

101.01(9) The provisions of this chapter shall not be construed to limit the power of the courts to exercise their reason.

101.01(10) The provisions of this chapter shall not be construed to limit the power of the courts to exercise their conscience.

101.01(11) The provisions of this chapter shall not be construed to limit the power of the courts to exercise their integrity.

101.01(12) The provisions of this chapter shall not be construed to limit the power of the courts to exercise their honor.

101.01(13) The provisions of this chapter shall not be construed to limit the power of the courts to exercise their dignity.

101.01(14) The provisions of this chapter shall not be construed to limit the power of the courts to exercise their respect.

101.01(15) The provisions of this chapter shall not be construed to limit the power of the courts to exercise their reverence.



UNPACK CONSOLES

MAP200- 302

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## TOOLS REQUIRED

1 Screwdriver 0.25 inch blade

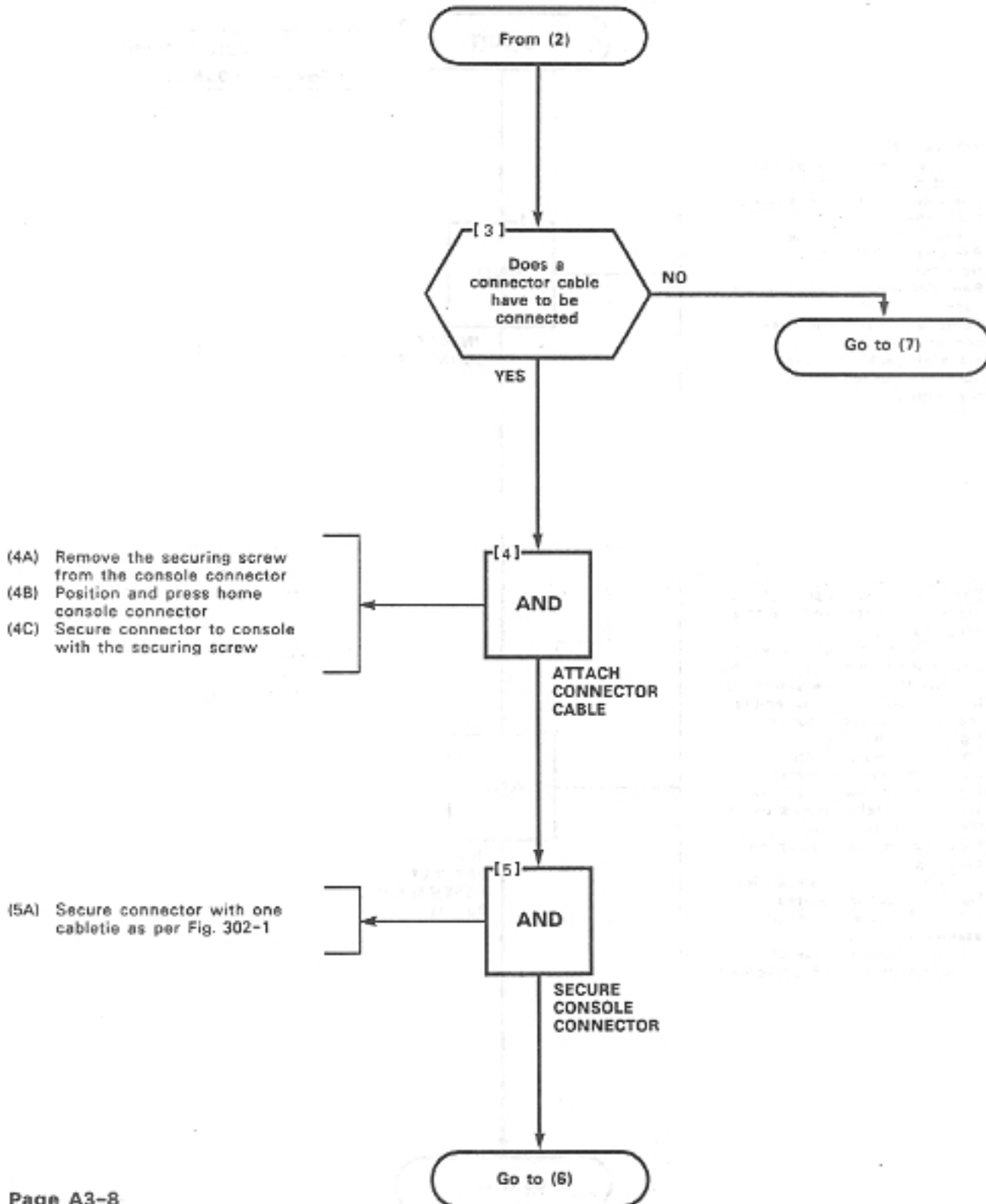
## AT CONSOLE LOCATION

- (1A) Remove fiberglass tape from top of packing case
- (1B) Open packing case and remove foam sheet
- (1C) Remove cardboard insert
- (1D) Remove console accessory bag from insert
- (1E) Remove console from packing case
- (1F) Remove polyethylene sheet from console
- (1G) Place all packing material in packing case for use in reshipment

- (2A) Remove the two pieces of the bracket assembly and the five securing screws (Fig. 302-1) from the accessory bag
- (2B) Determine to which side of the console the cradle assembly is to be mounted, and assemble the two brackets accordingly. Fig. 302-1 shows a right-mounted assembly
- (2C) Secure the two brackets together with two 8-32 hex screws and felt washers using the wrench supplied
- (2D) Place console face down on desk top
- (2E) Position bracket as shown in Fig. 302-1 (or the dotted outline if it is a left-mount assembly)
- (2F) Attach bracket to base of console with three 6-32 screws



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| UNPACK CONSOLES        |
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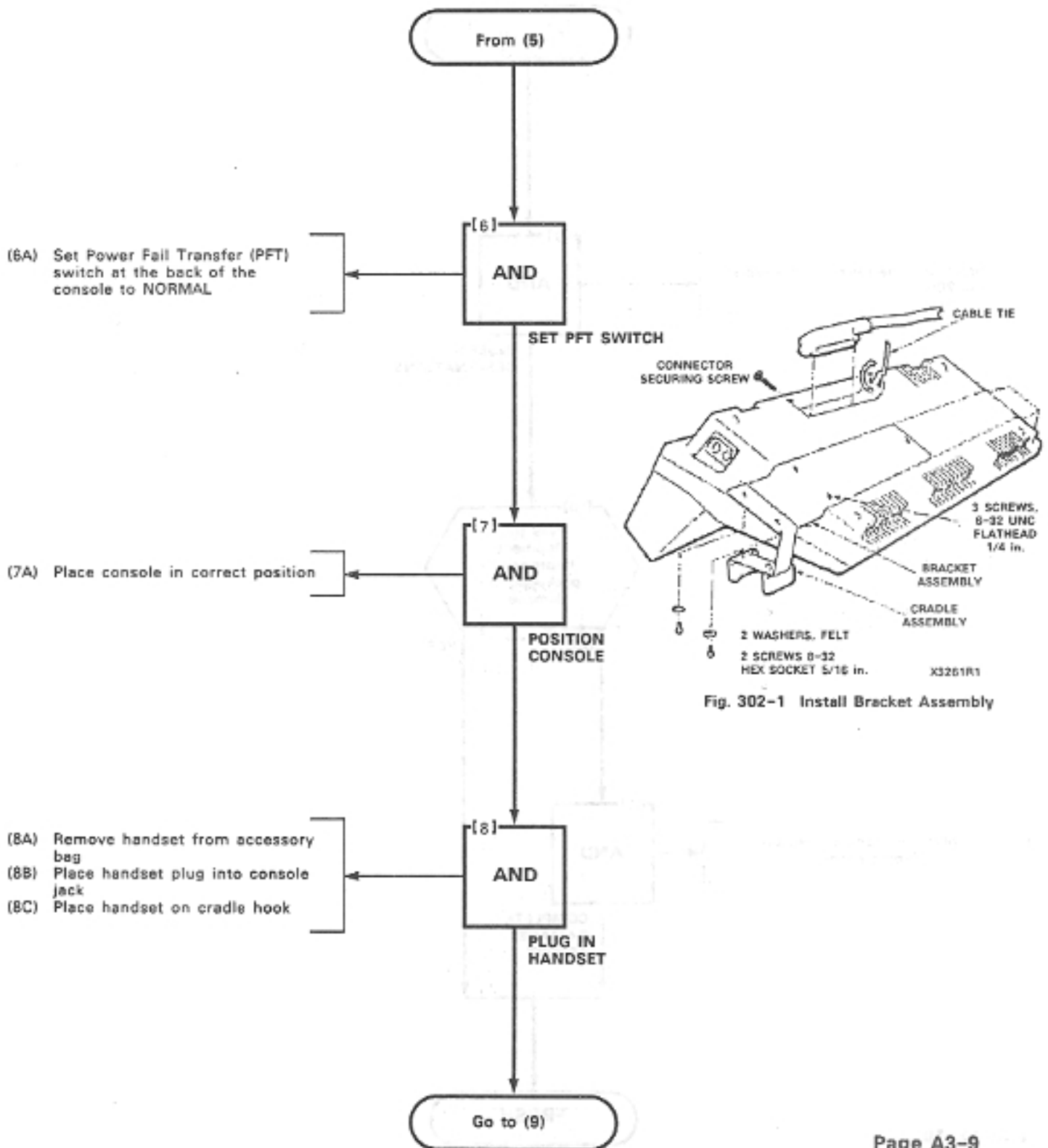


## UNPACK CONSOLES

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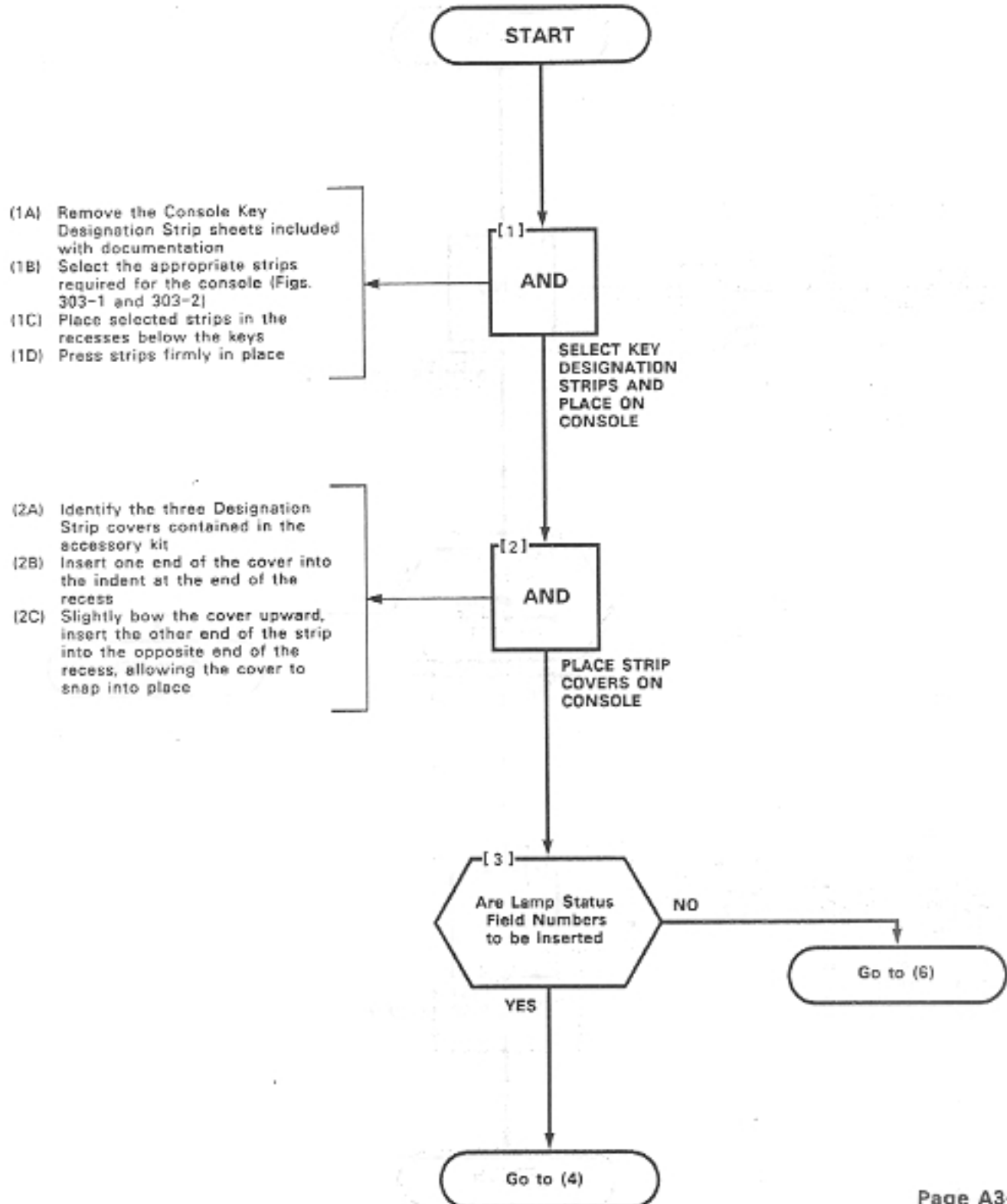


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| INSTALL CONSOLE FACEPLATE<br>DESIGNATIONS |
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| MAP200- 303 |
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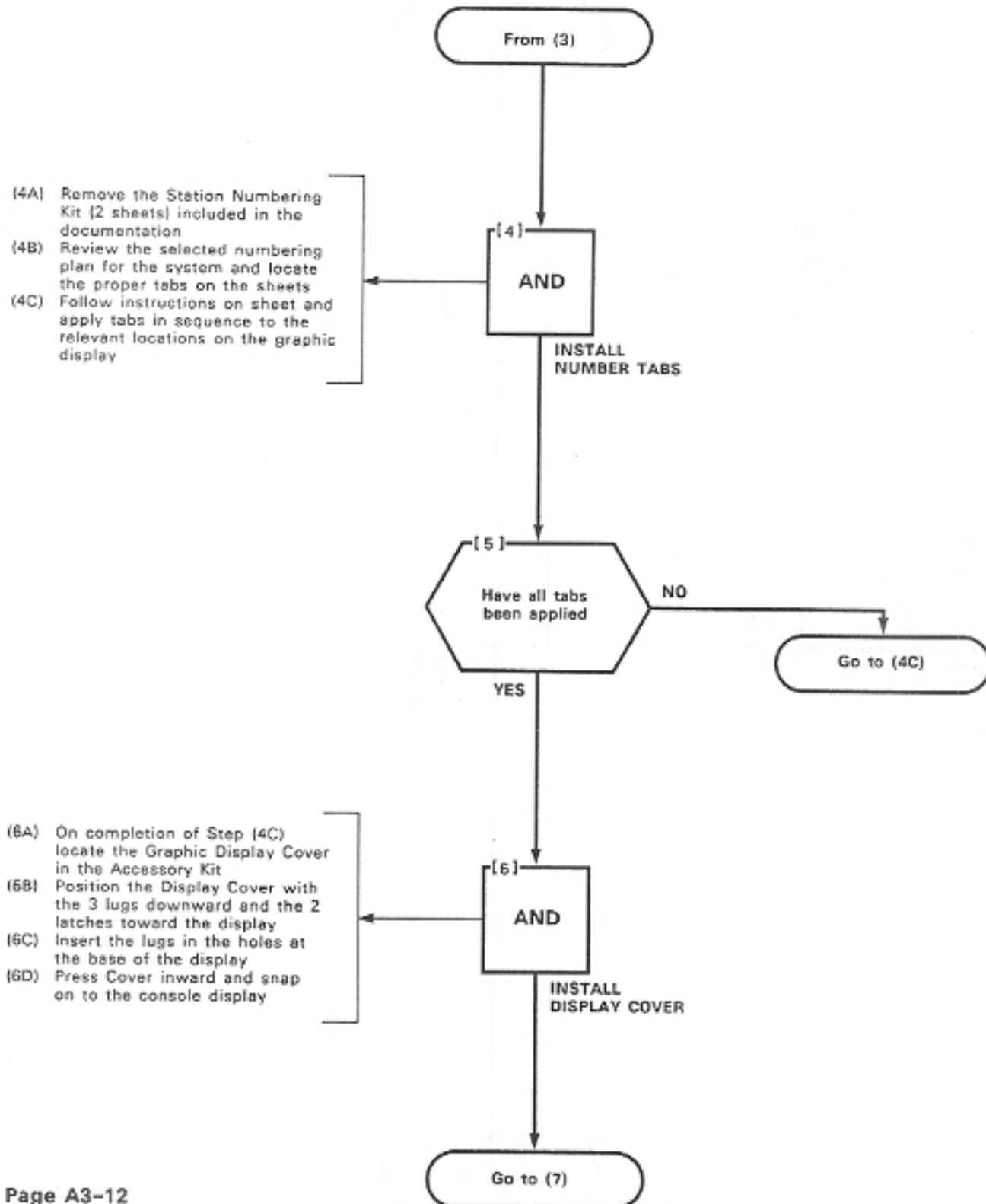


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| INSTALL CONSOLE FACEPLATE<br>DESIGNATIONS |
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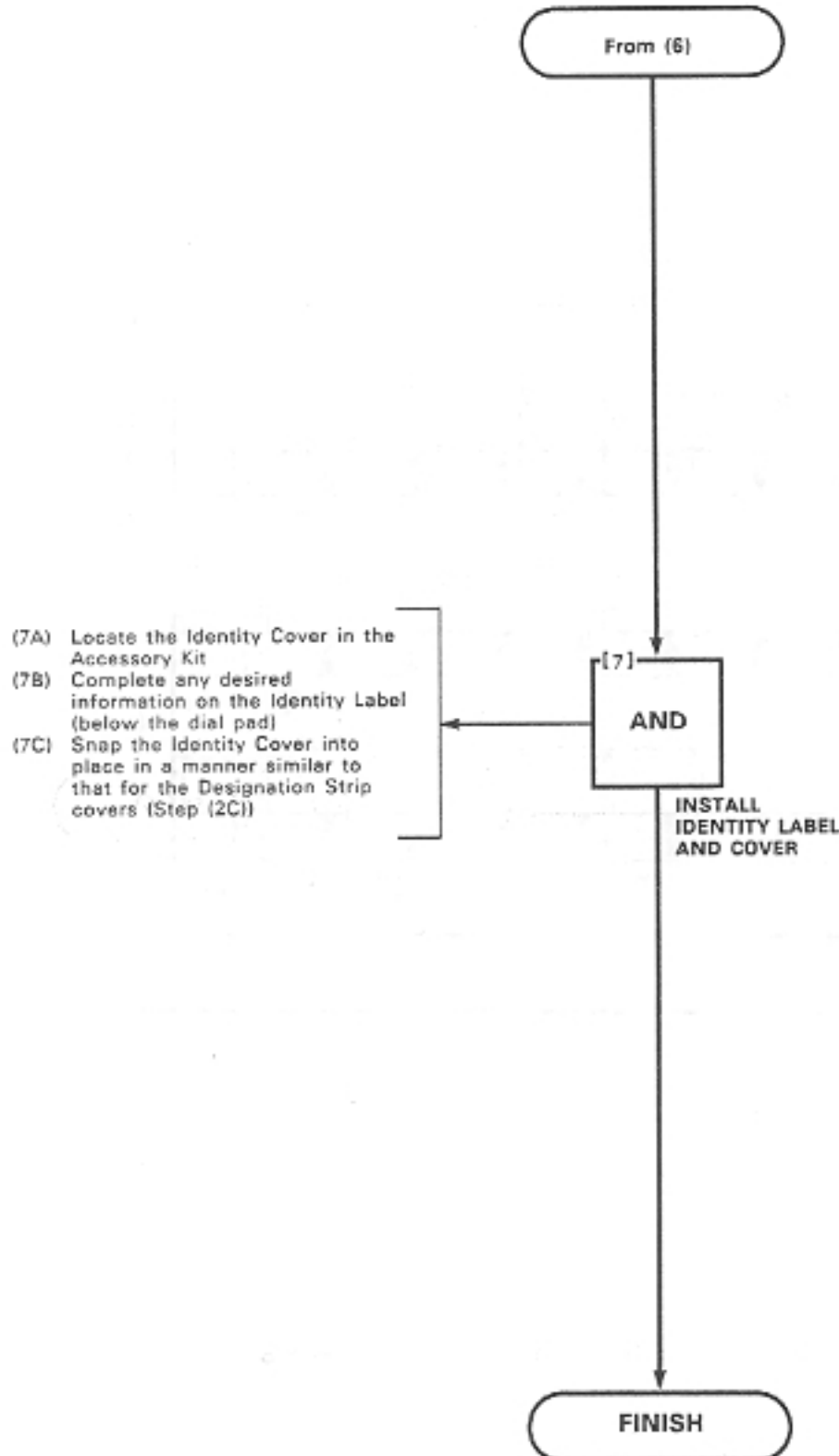


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| INSTALL CONSOLE FACEPLATE<br>DESIGNATIONS |
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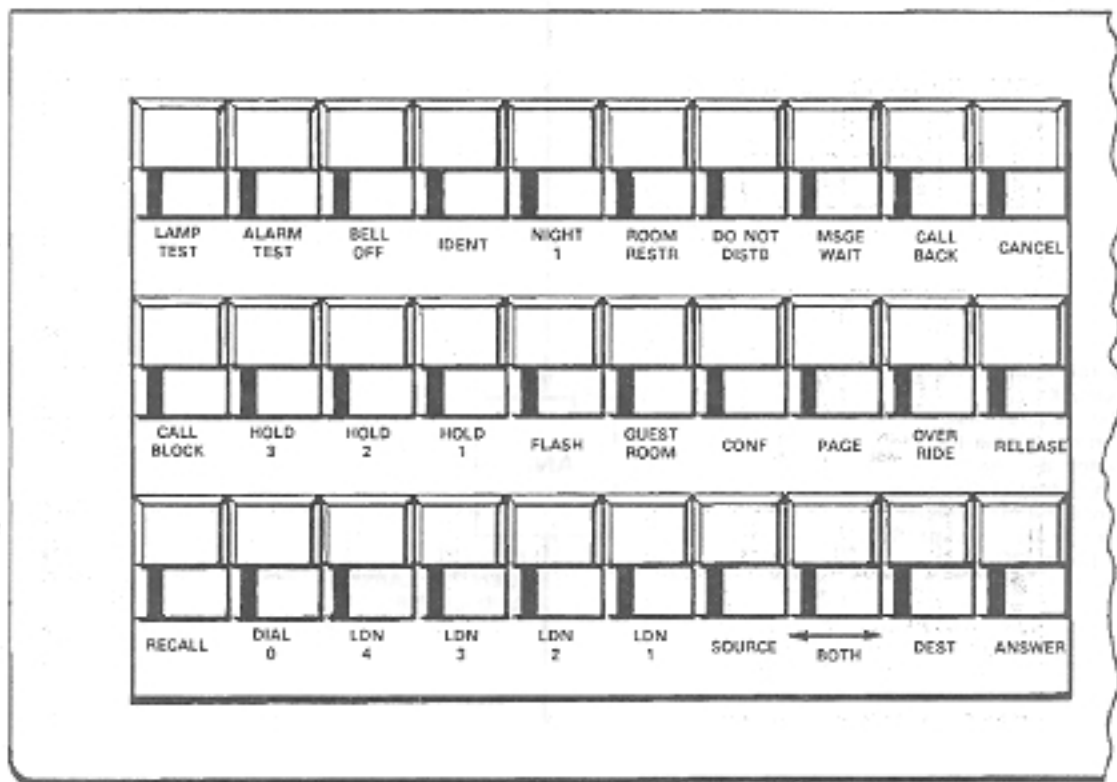
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| INSTALL CONSOLE FACEPLATE DESIGNATIONS |
| MAP200- 303                            |
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X3103

Fig. 303-1 Attendant - Console Key Designation, Hotel/Motel

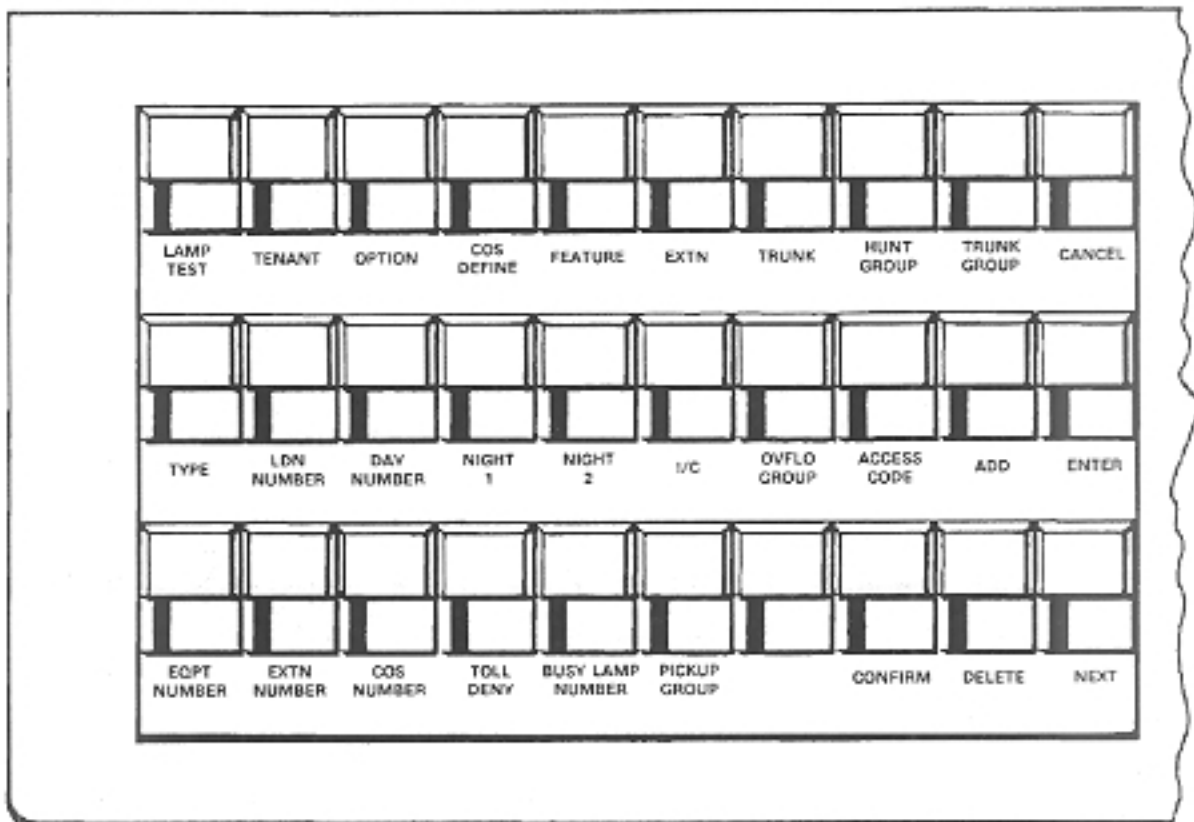


|   |
|---|
| INSTALL CONSOLE FACEPLATE<br>DESIGNATIONS |
|---|

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| MAP200-303 |
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X3102

Fig. 303-2 Attendant - Console Key Designation, Commercial



## INSPECT EQUIPMENT

MAP200-304

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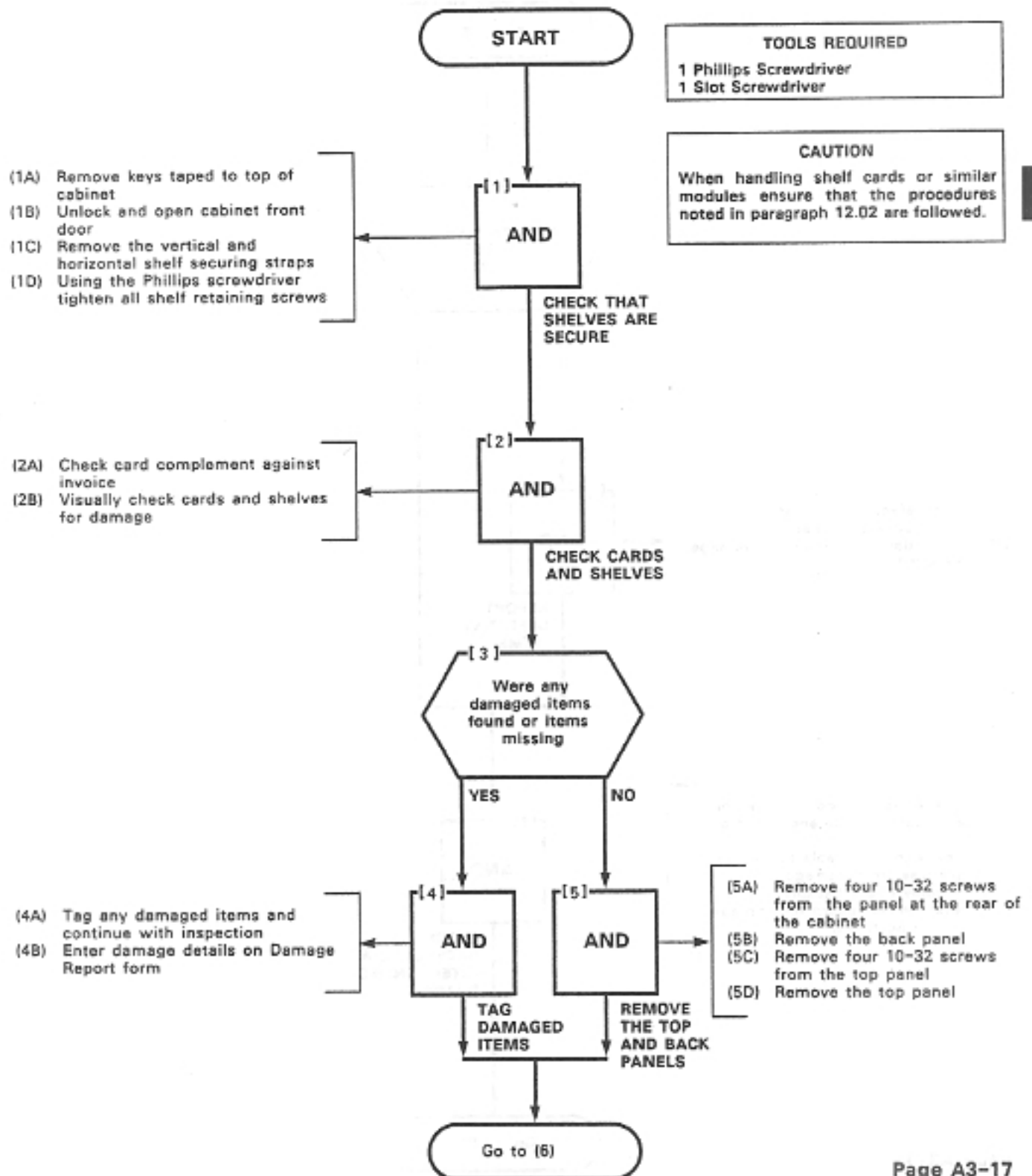
Sheet 1 of 4

## TOOLS REQUIRED

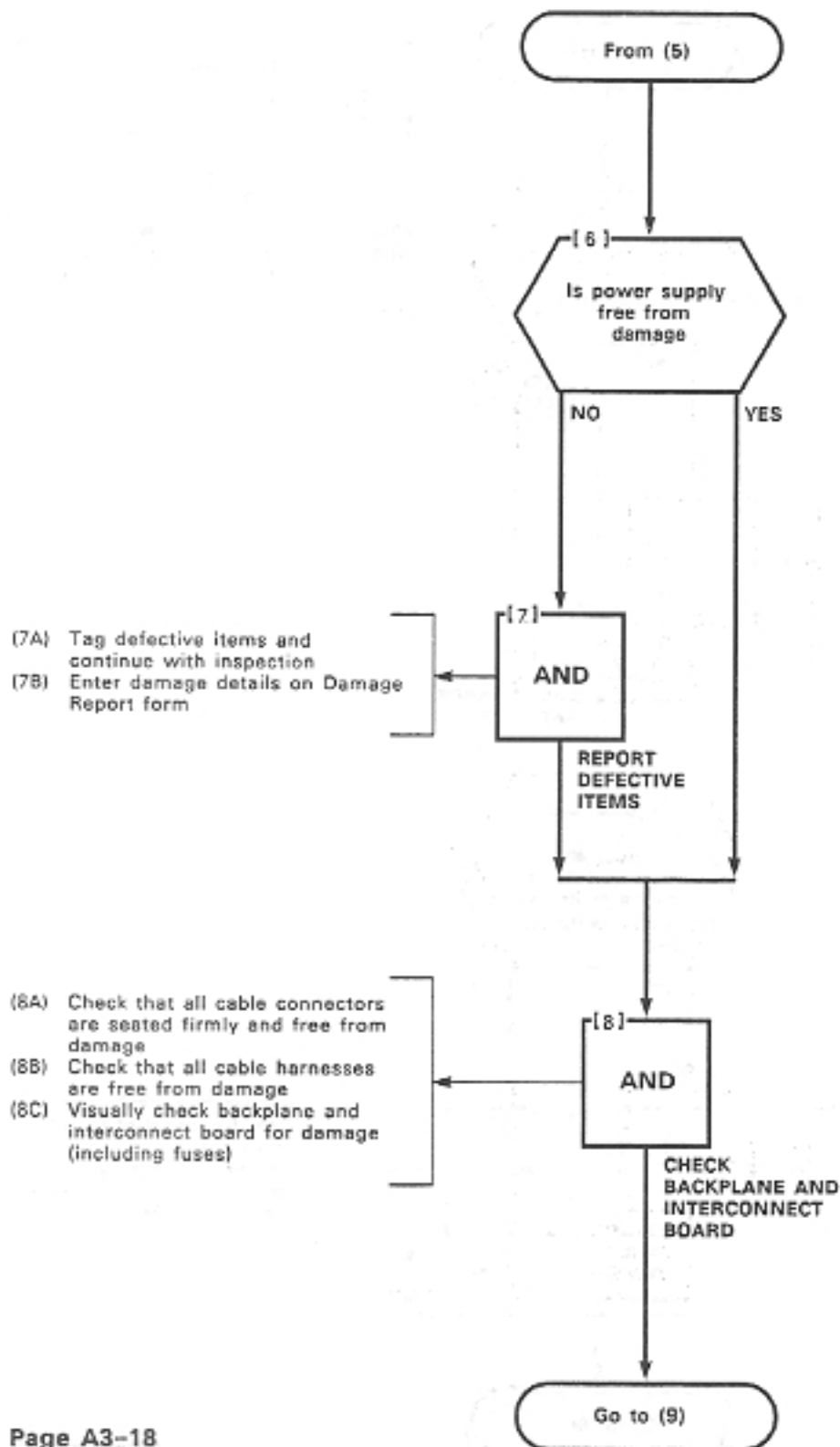
1 Phillips Screwdriver  
1 Slot Screwdriver

## CAUTION

When handling shelf cards or similar modules ensure that the procedures noted in paragraph 12.02 are followed.



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| INSPECT EQUIPMENT      |
| MAP200- 304            |
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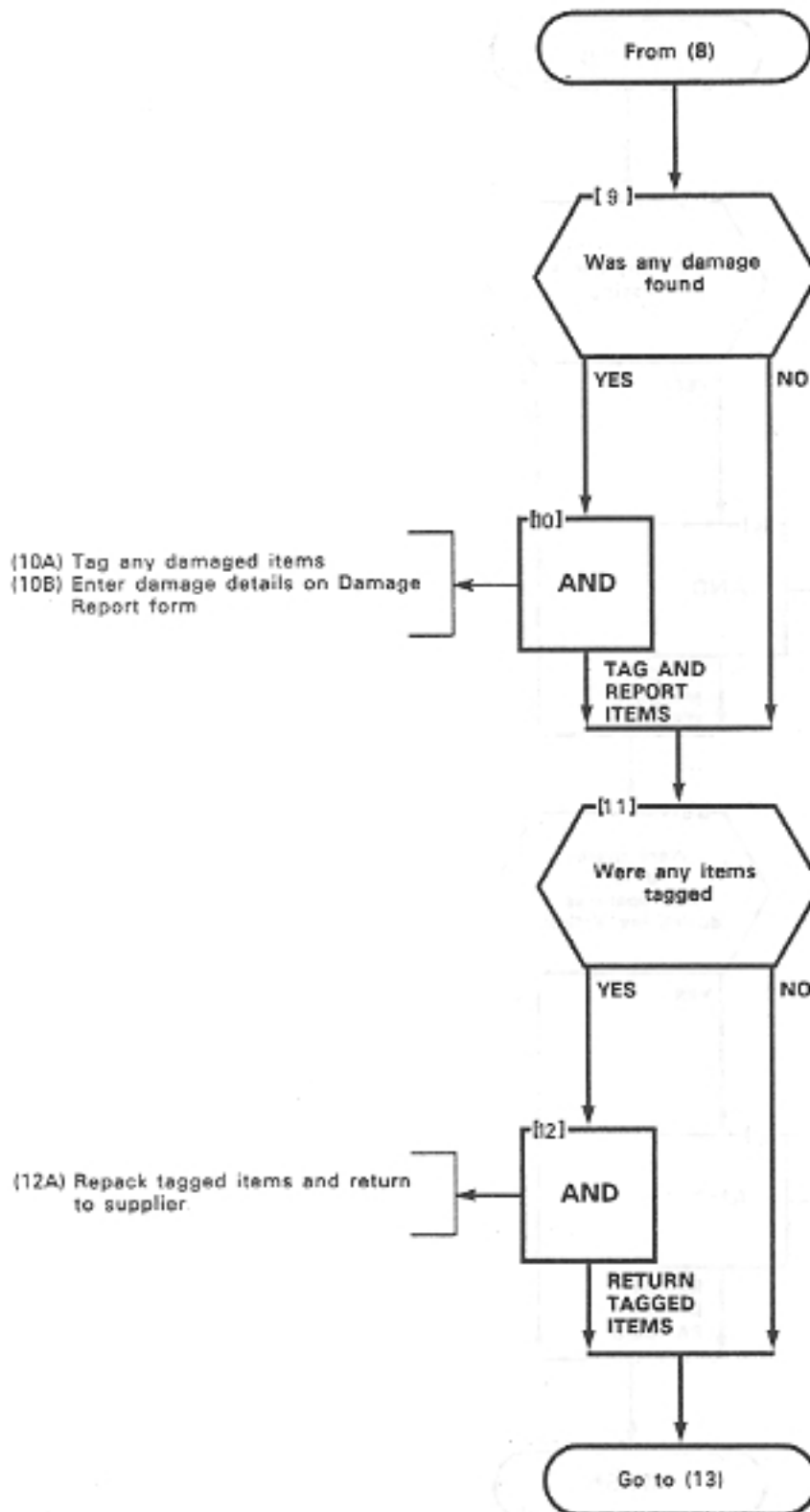


INSPECT EQUIPMENT

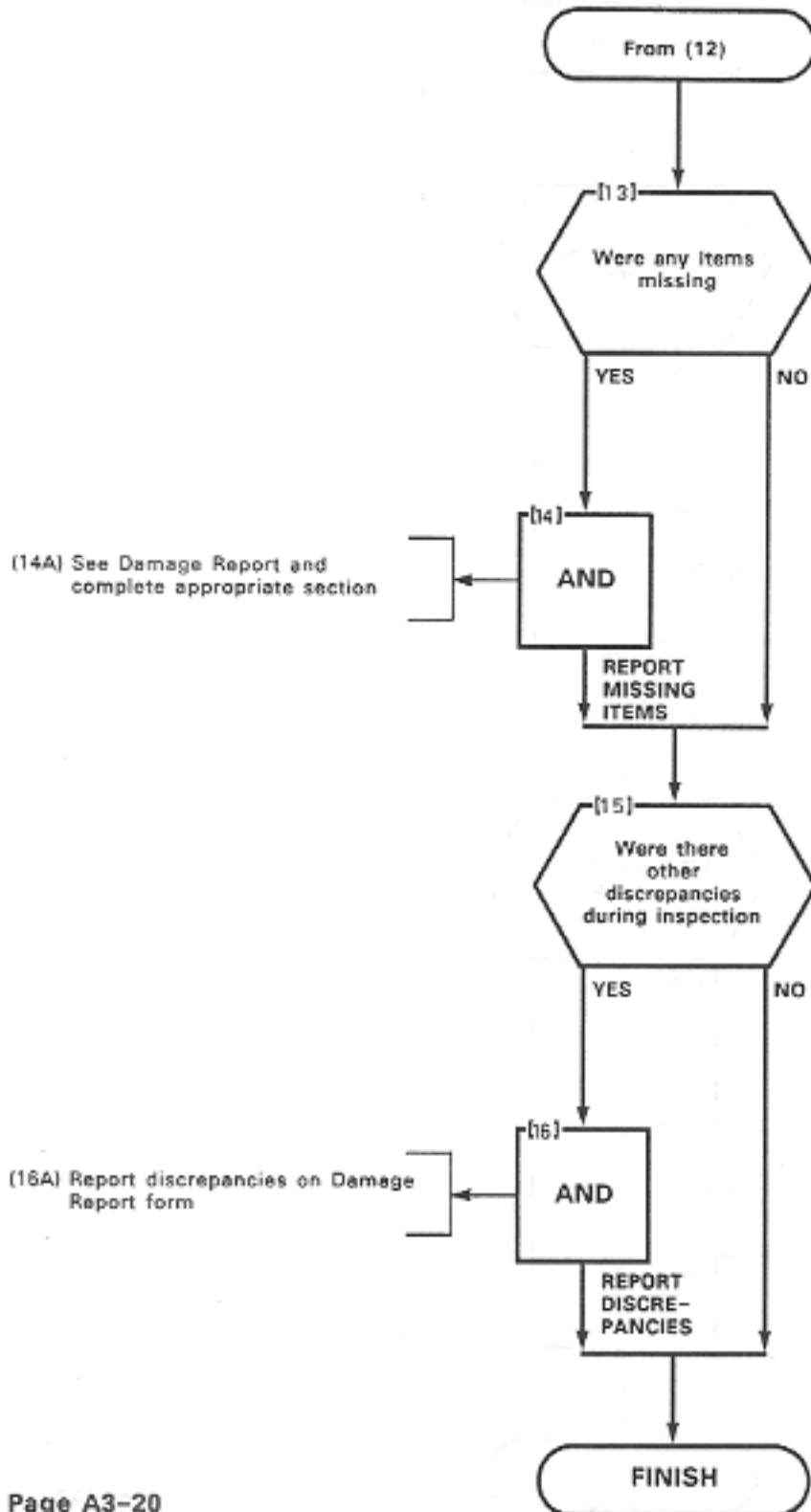
MAP200-304

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| INSPECT EQUIPMENT      |
| MAP200- 304            |
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## INSTALL EQUIPMENT

MAP200-305

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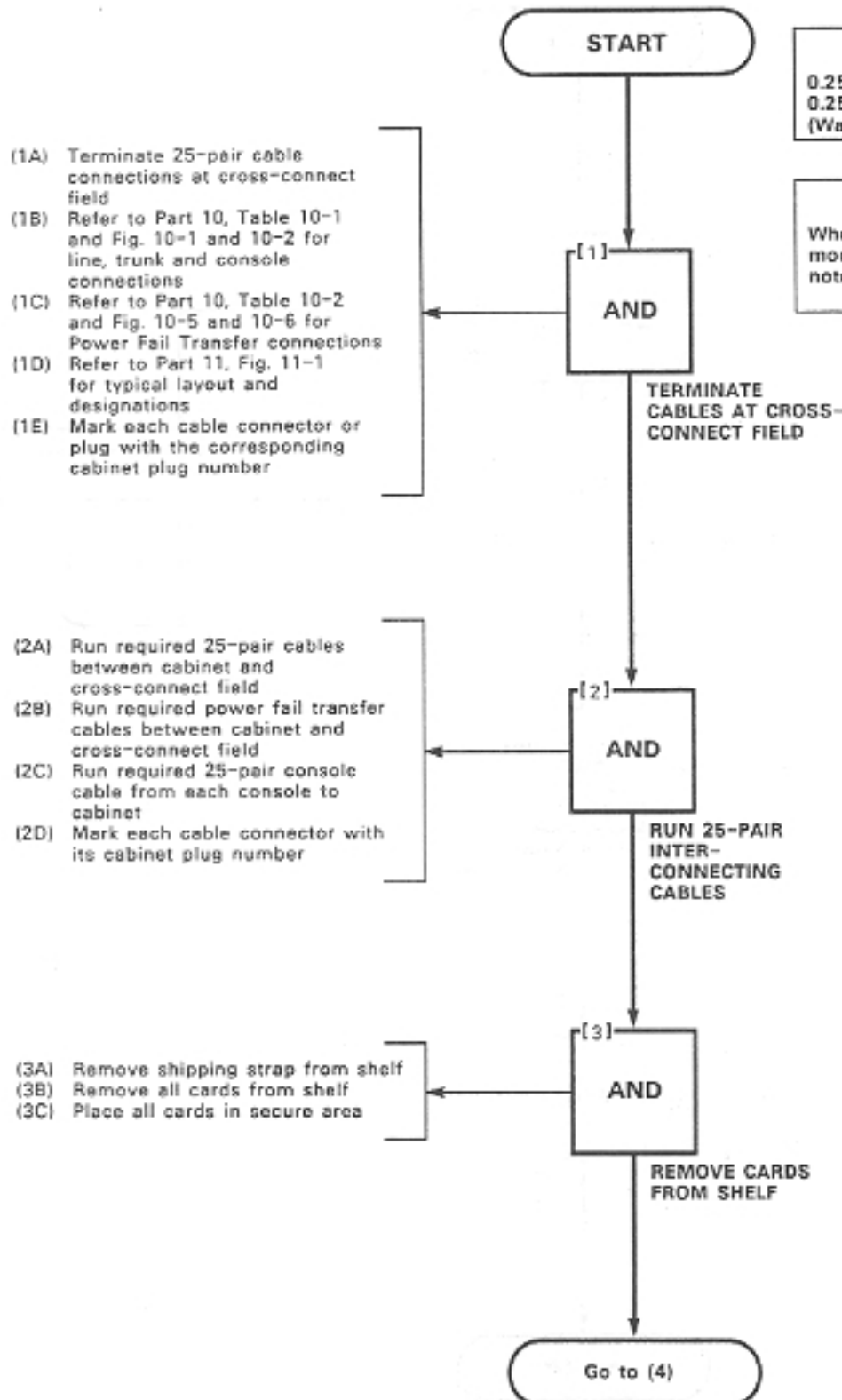
Sheet 1 of 8

## TOOLS REQUIRED

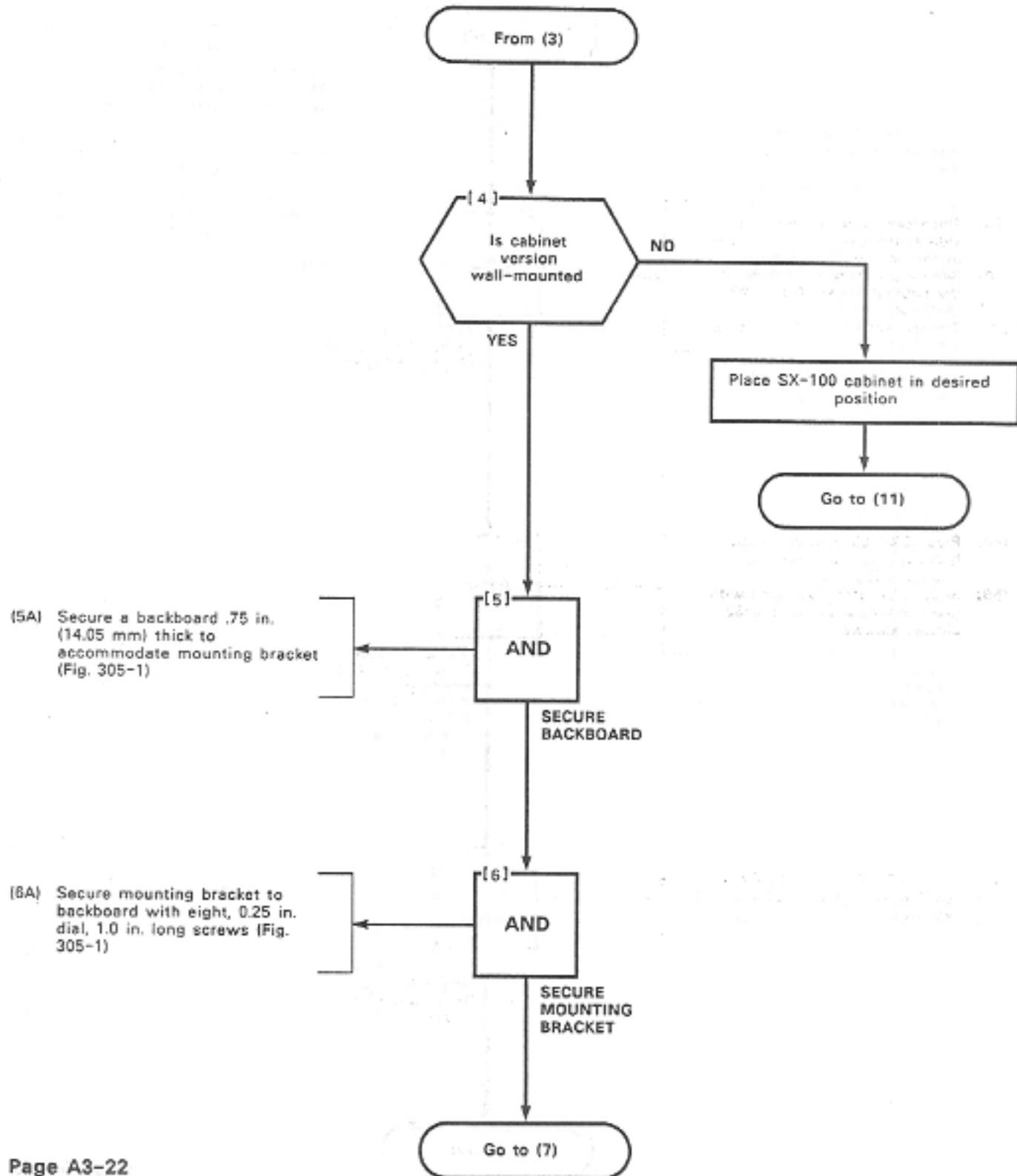
0.25 in. Slotted Screwdriver  
 0.25 in. thick wooden backboard  
 (Wall-mount installation only)

## CAUTION

When handling shelf cards or similar modules ensure that the procedures noted in paragraph 12.02 are followed.



|                        |
|------------------------|
| INSTALL EQUIPMENT      |
| MAP200- 305            |
| Issue 1, December 1982 |
| Sheet 2 of 8           |



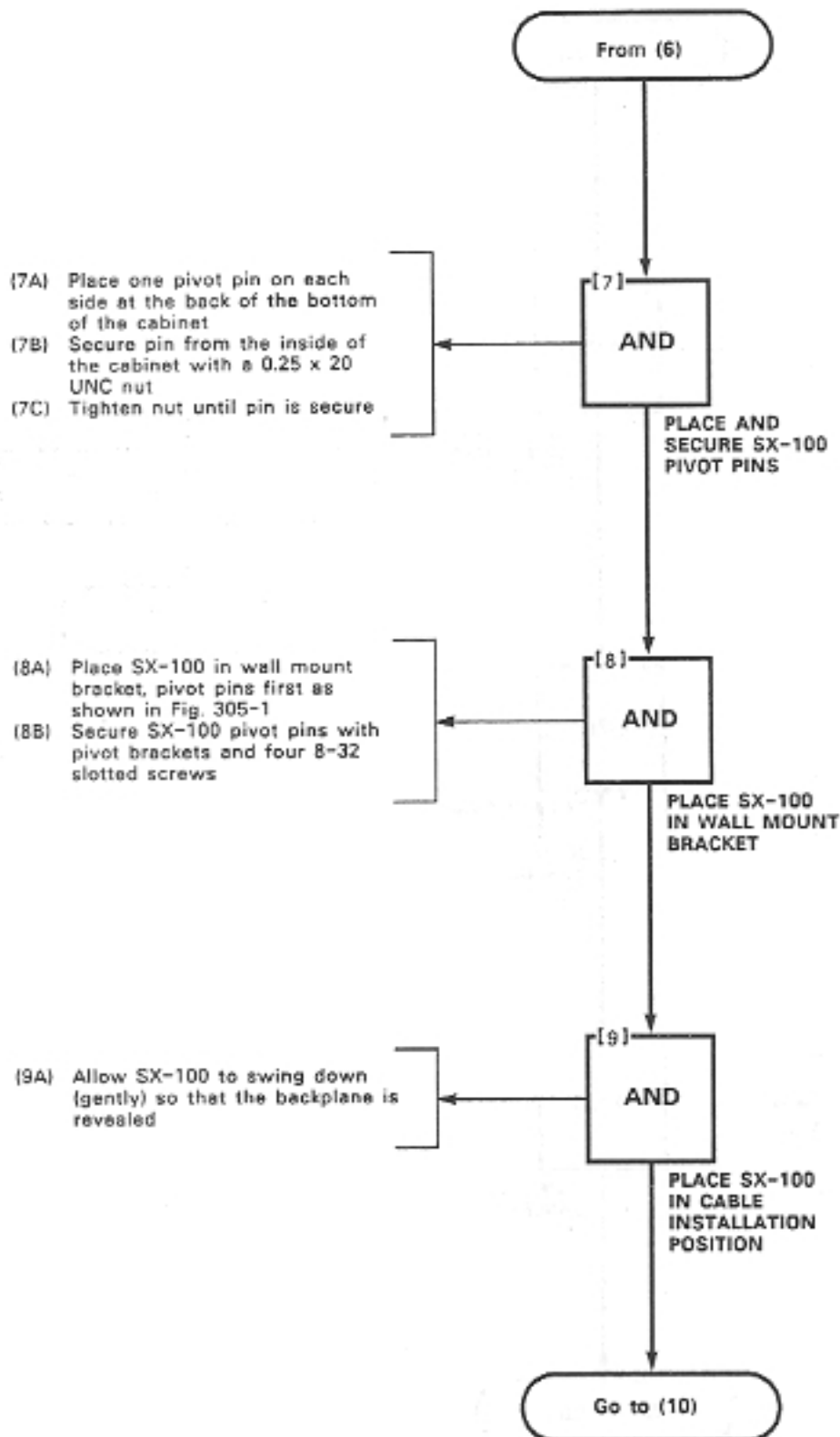


INSTALL EQUIPMENT

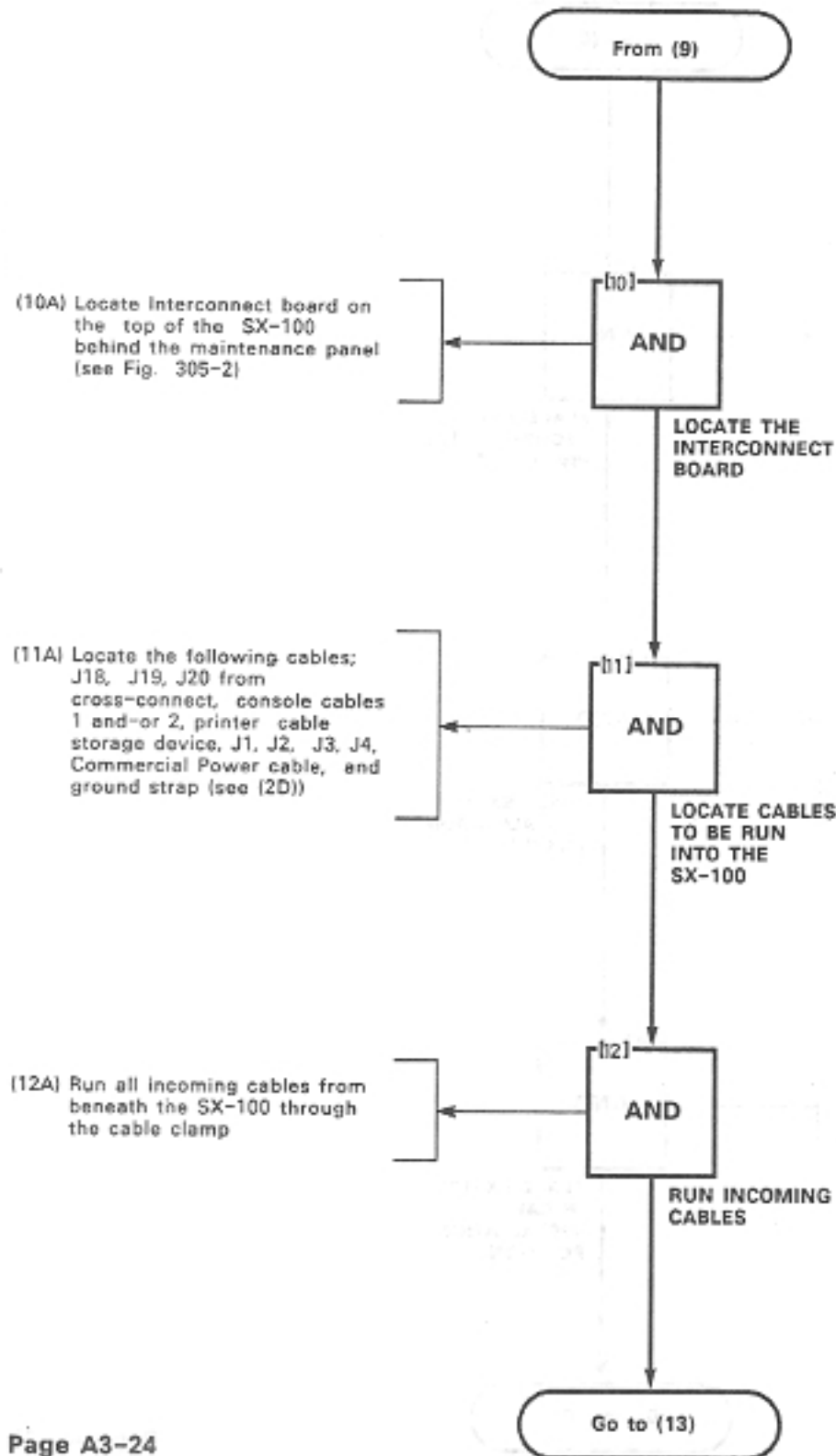
MAP200-305

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Sheet 3 of 8



|                        |
|------------------------|
| INSTALL EQUIPMENT      |
| MAP200- 305            |
| Issue 1, December 1982 |
| Sheet 4 of 8           |

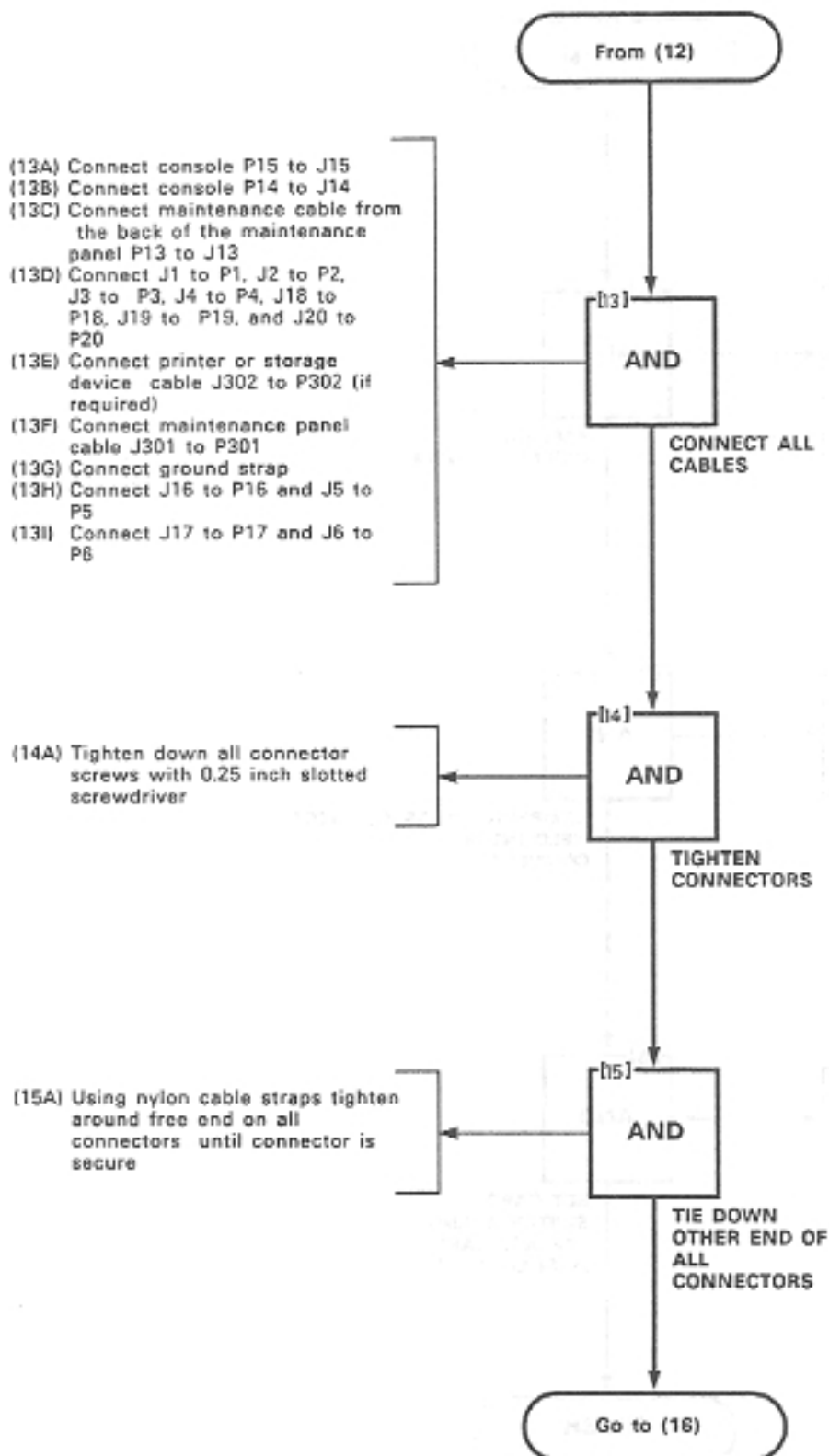


INSTALL EQUIPMENT

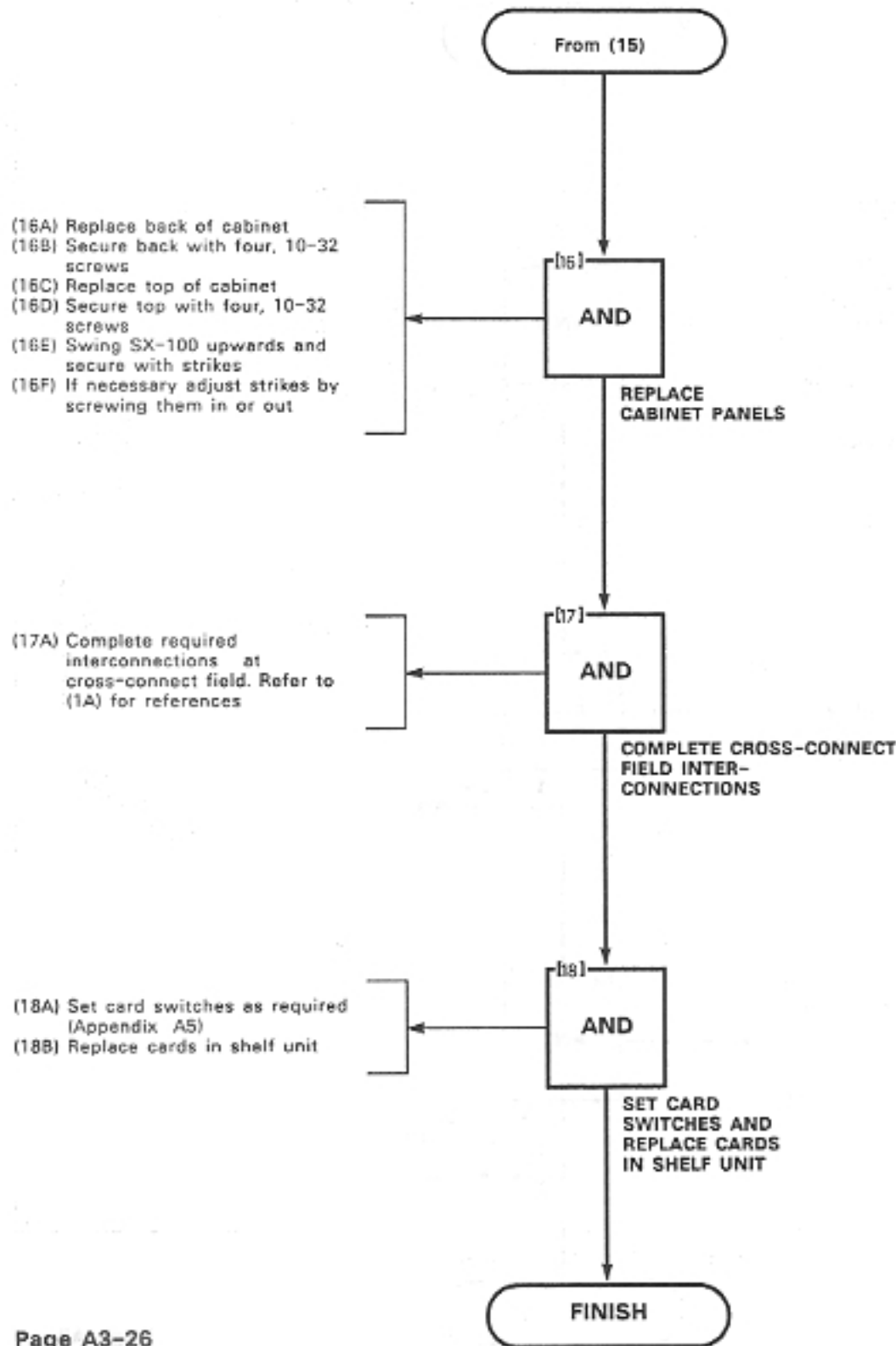
MAP200-305

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|                        |
|------------------------|
| INSTALL EQUIPMENT      |
| MAP200- 305            |
| Issue 1, December 1982 |
| Sheet 6 of 8           |



INSTALL EQUIPMENT

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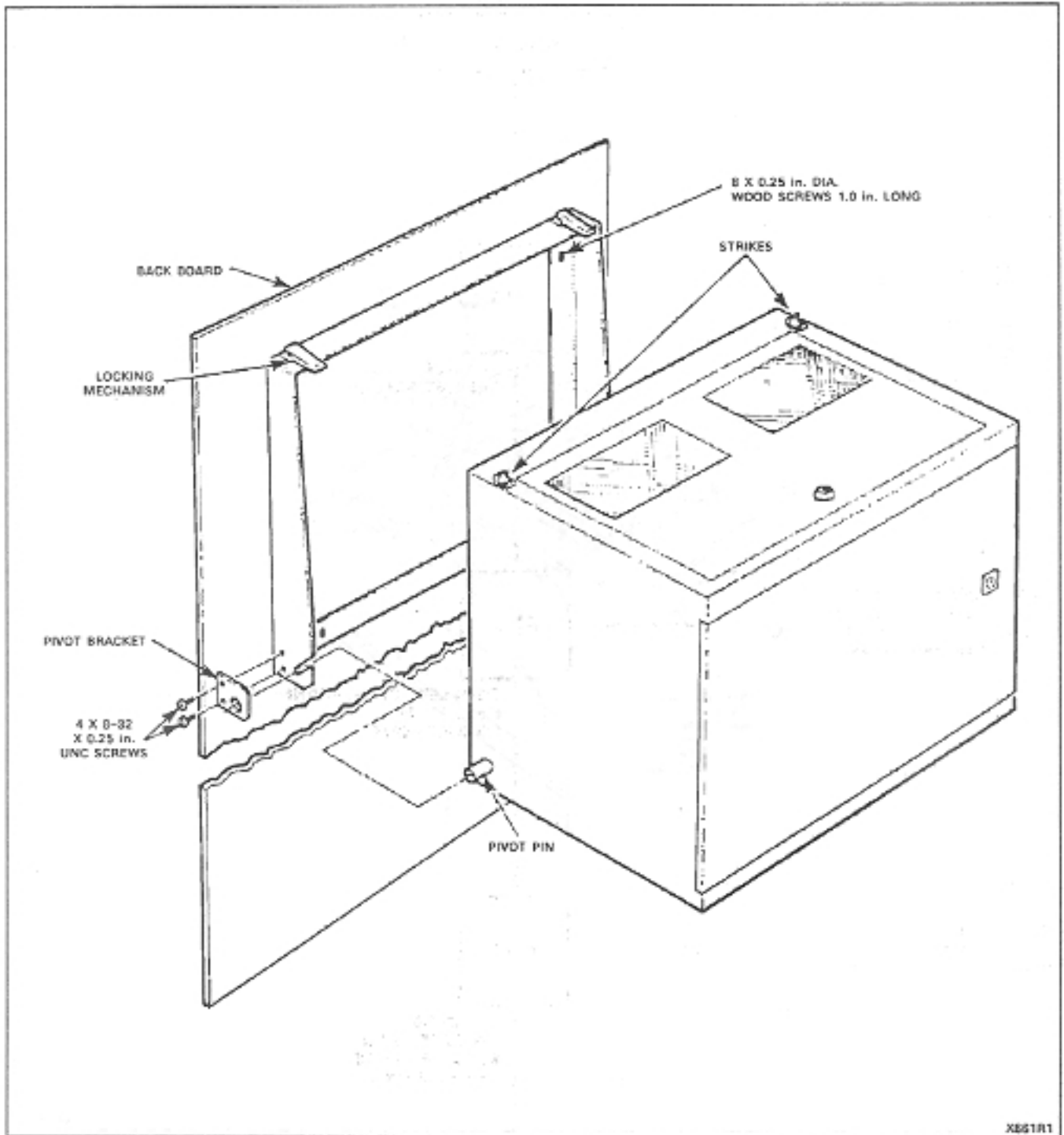


Fig. 305-1 Wall Mounting

|                        |
|------------------------|
| INSTALL EQUIPMENT      |
| MAP200- 305            |
| Issue 1, December 1982 |
| Sheet 8 of 8           |

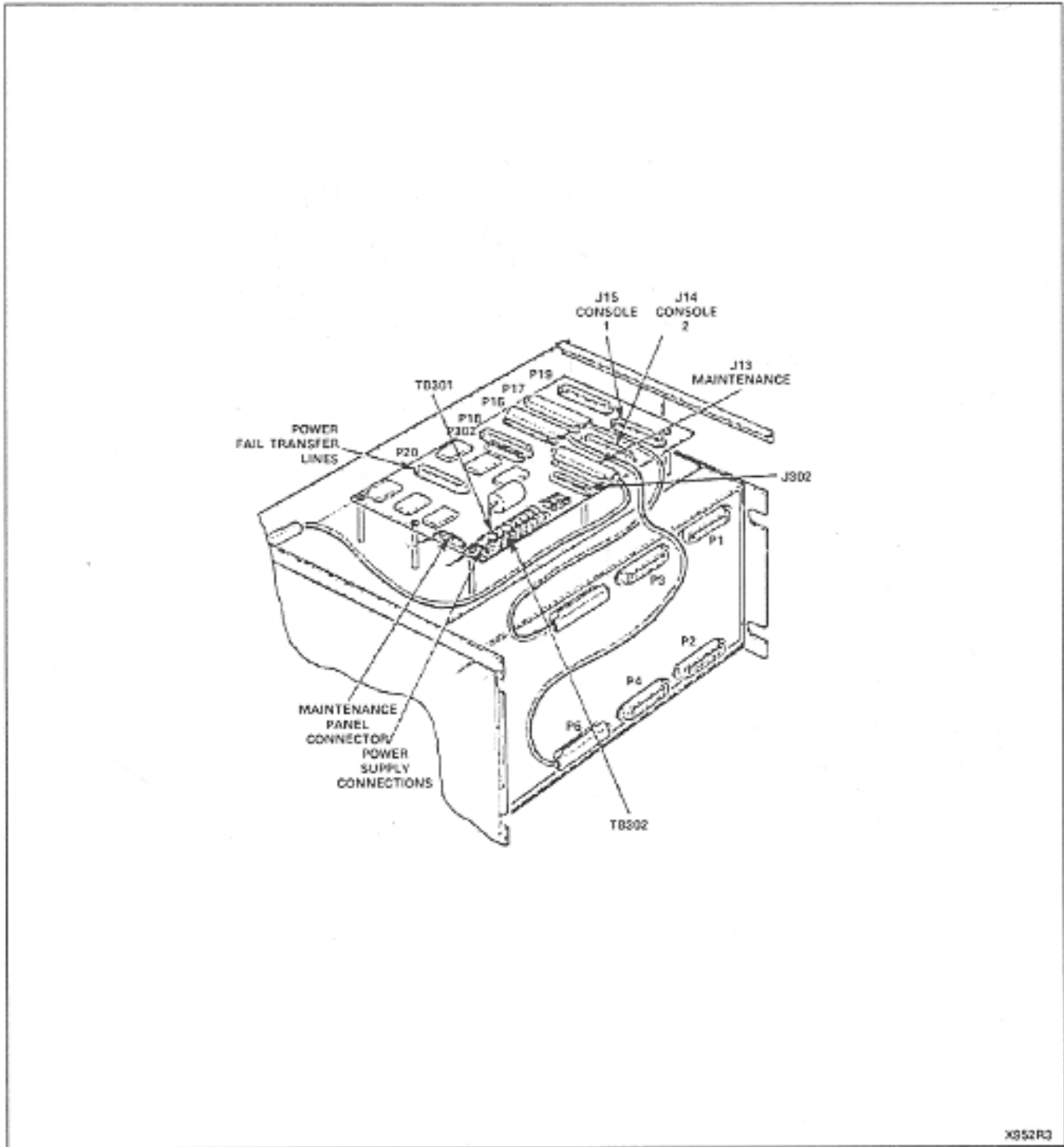


Fig. 305-2 Cable Connections

|                        |
|------------------------|
| SET CARD SWITCHES      |
| MAP200- 306            |
| Issue 1, December 1982 |
| Sheet 1 of 1           |

The setting of switches, to result in the required mode of operation on the Trunk Cards is detailed in the MAP's contained in Appendix A-5. The installer should ensure that these cards are properly switched for the correct mode of operation prior to performing "Power-Up" as detailed in MAP200-307.





## POWER-UP SYSTEM

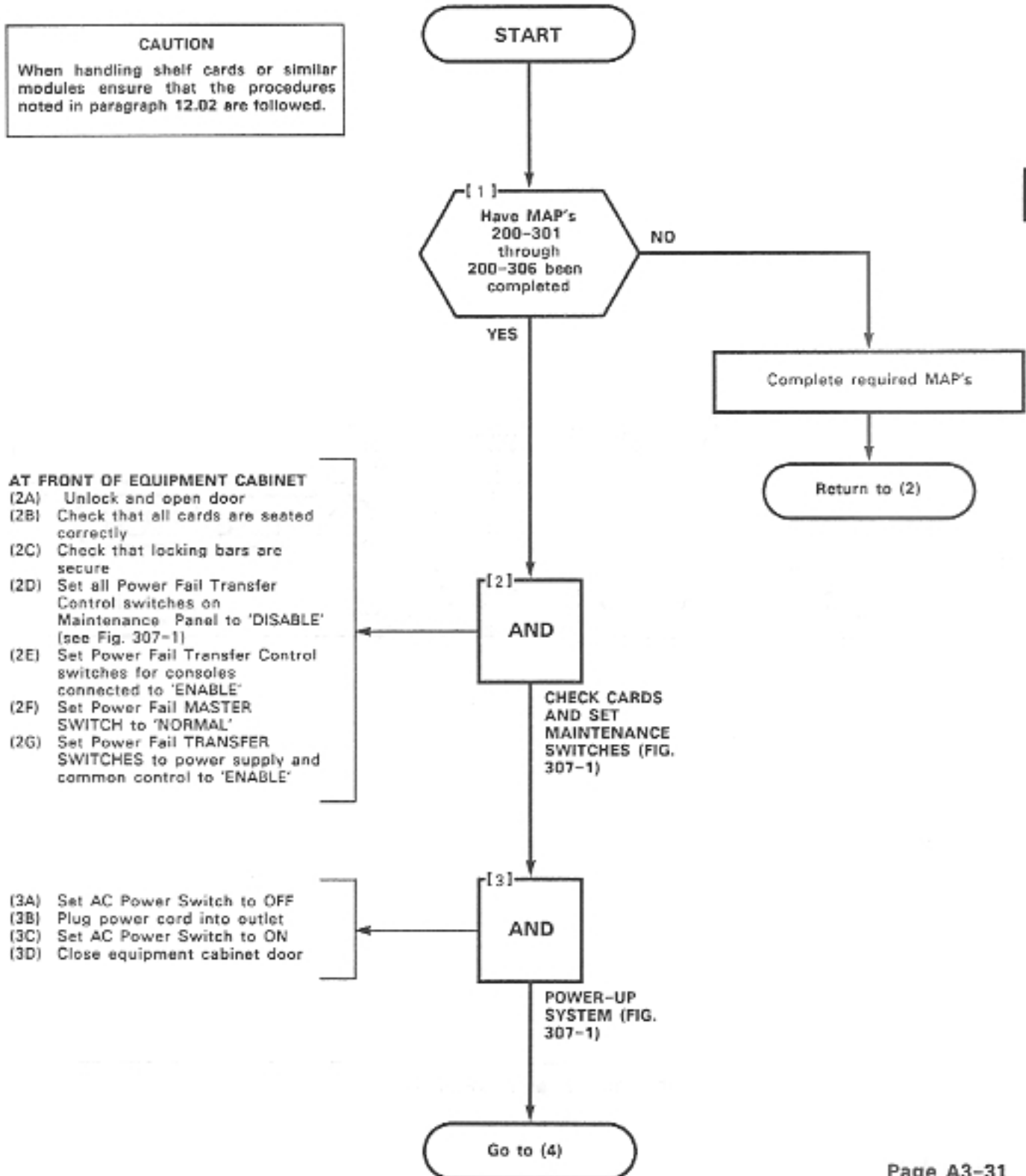
MAP200-307

Issue 1, December 1982

Sheet 1 of 3

**CAUTION**

When handling shelf cards or similar modules ensure that the procedures noted in paragraph 12.02 are followed.



|                        |
|------------------------|
| POWER-UP SYSTEM        |
| MAP200- 307            |
| Issue 1, December 1982 |
| Sheet 2 of 3           |

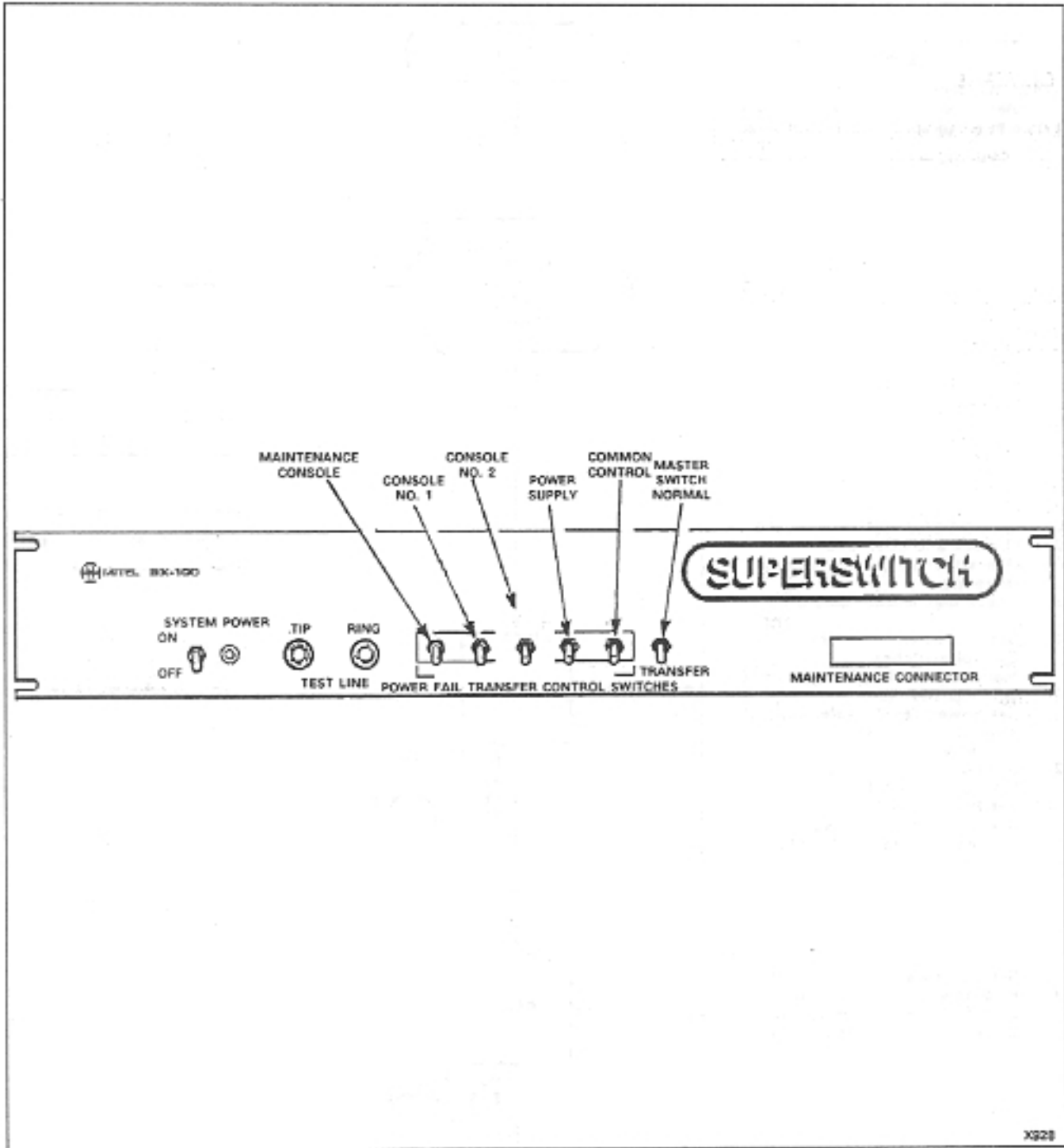


Fig. 307-1 Maintenance Panel

POWER-UP SYSTEM

MAP200- 307

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Sheet 3 of 3

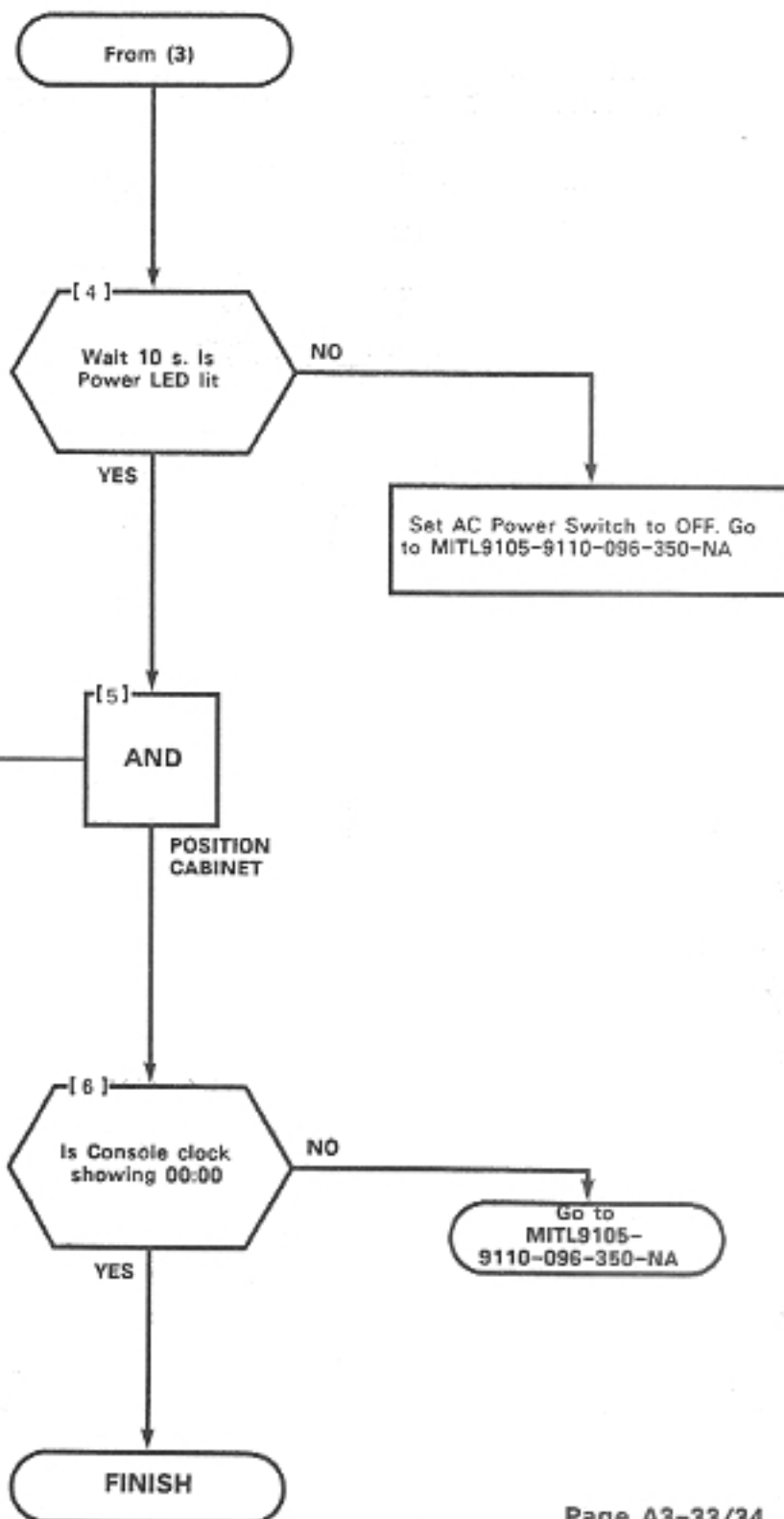
## NOTE

To program the system go to Section MITL9105/9110-096-210-NA.

## NOTE

Occasionally, when circuit cards are plugged into the PABX, the logic circuits on the card may not reset completely. In order to guarantee complete reset of all card logic, a slot initialization procedure must be performed. This procedure allows the service personnel to insert a card into a shelf and initialize the card slot. To initialize the card slot dial 555 + 5 + nn, where nn is the 2-digit card slot number (01-17 shelf 1, 31-42 shelf 2). Since inserting a card may cause diagnostic errors, this procedure is normally followed by dialing 555 + 1 to clear all system errors.

(5A) Place equipment cabinet in its final position if required





## APPENDIX 4

### SX-200 INSTALLATION PROCEDURES

#### 1. GENERAL

**A4.01** The following Table A4-1 details the procedures to be performed to complete the installation of an SX-200 PABX.

**A4.02** The SX-100 and SX-200 may utilize the same consoles. For this reason refer to MAP's 200-302, 200-303 and 200-304 of Appendix 3 when dealing with the console.

TABLE A4-1  
SX-200 INSTALLATION

| Step | Procedure                              | Reference                        |
|------|--|----------------------------------|
| 1    | Unpack Equipment Cabinet               | MAP200-401                       |
| 2    | Unpack Consoles                        | MAP200-302                       |
| 3    | Install Console Faceplate Designations | MAP200-303                       |
| 4    | Inspect Equipment                      | MAP200-404                       |
| 5    | Connect Cables                         | MAP200-405                       |
| 6    | Set Card Switches (Appendix 5)         | MAP200-406                       |
| 7    | Power-Up System (See Note)             | MAP200-407                       |
| 8    | Program System                         | Section MITL9105/9110-096-210-NA |
| 9    | Perform System Tests                   | Section MITL9105/9110-096-215-NA |
| 10   | Perform Extension Tests                | Section MITL9105/9110-096-320-NA |

**Note:** Appendix 6 lists miscellaneous installation requirements which may be required prior to power-up of system. This Appendix should be reviewed for applicability.



## UNPACK EQUIPMENT CABINET

MAP200-401

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## TOOLS REQUIRED

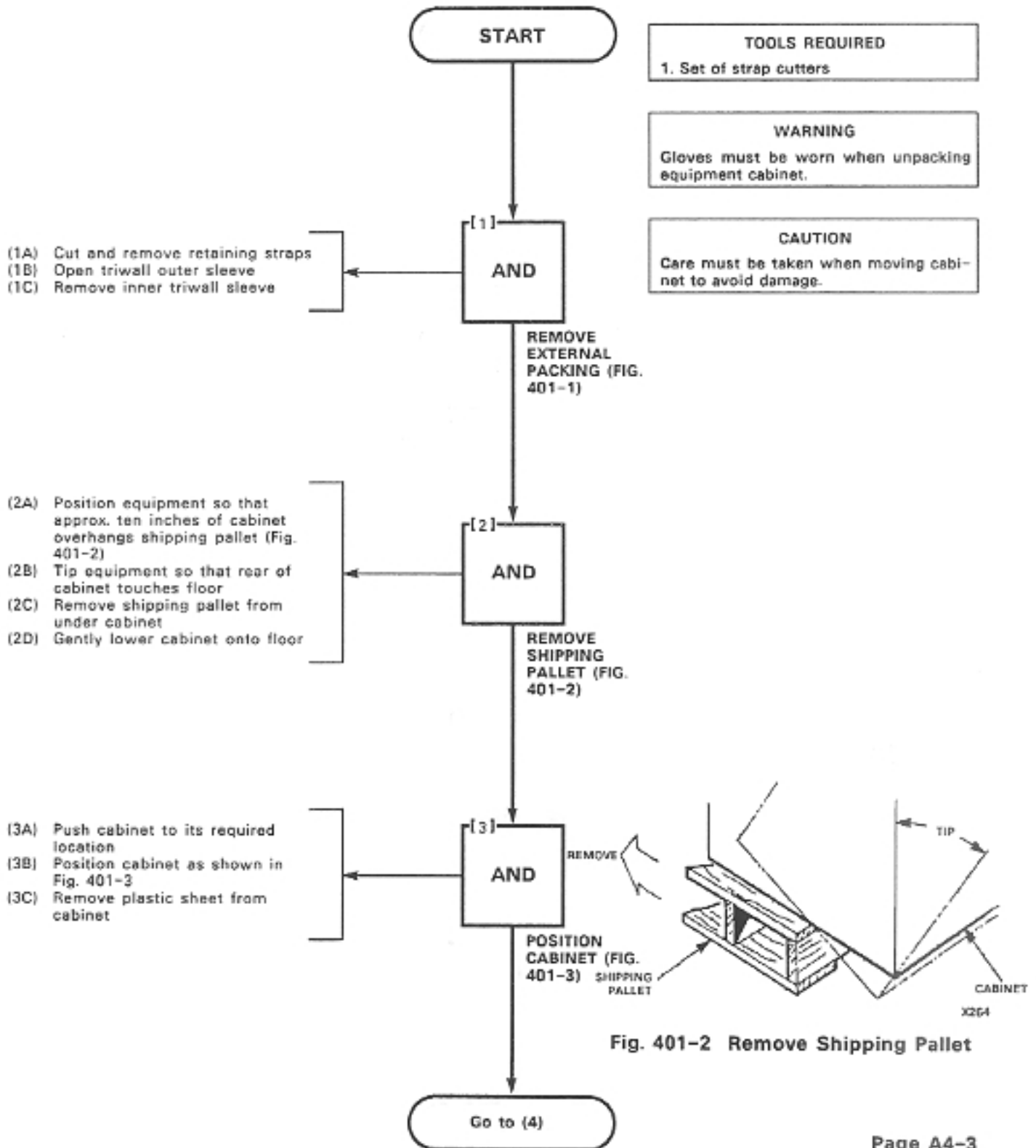
1. Set of strap cutters

## WARNING

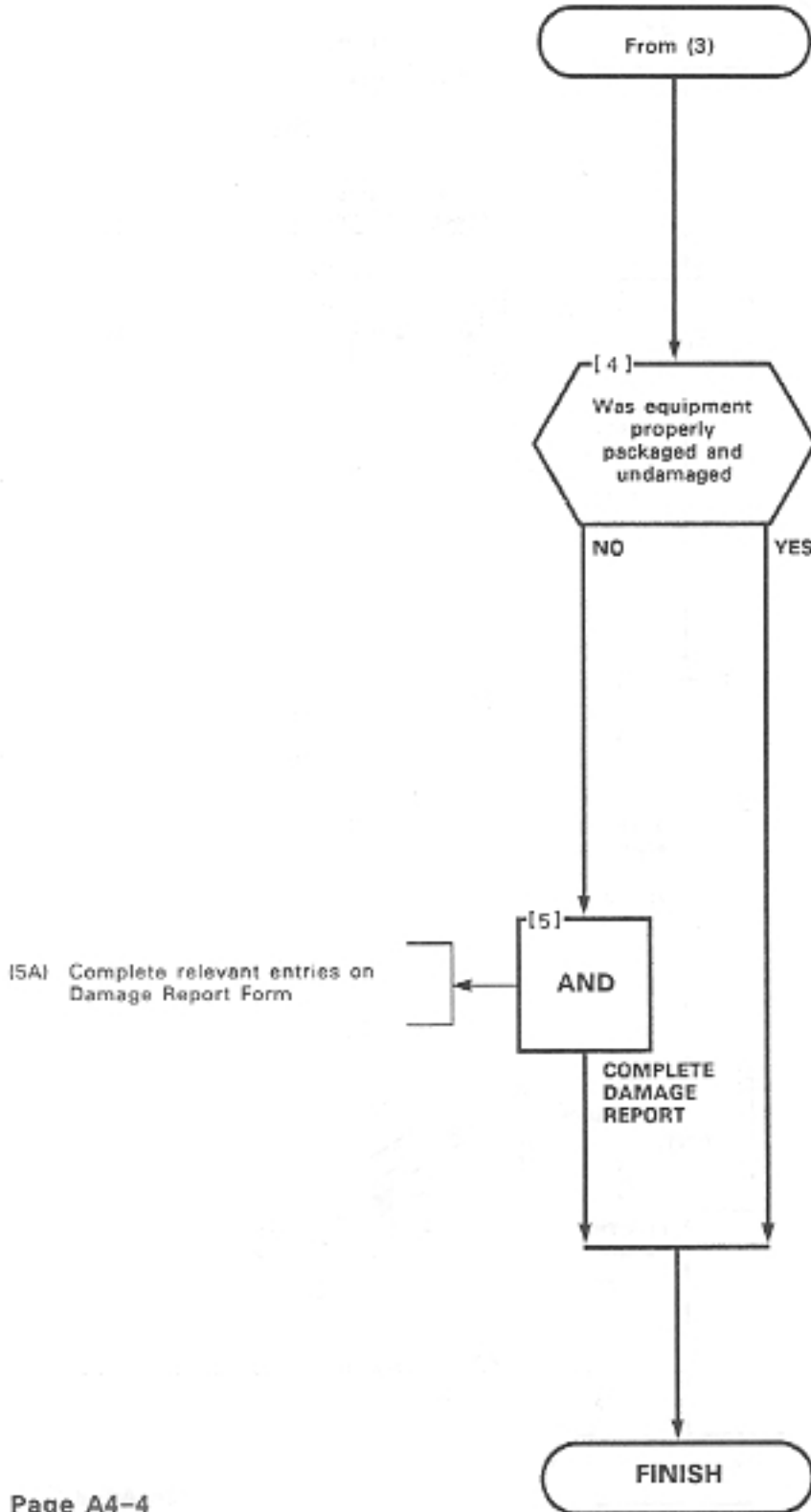
Gloves must be worn when unpacking equipment cabinet.

## CAUTION

Care must be taken when moving cabinet to avoid damage.



|                          |
|--------------------------|
| UNPACK EQUIPMENT CABINET |
| MAP200- 401              |
| Issue 1, December 1982   |
| Sheet 2 of 4             |





UNPACK EQUIPMENT CABINET

MAP200- 401

Issue 1, December 1982

Sheet 3 of 4

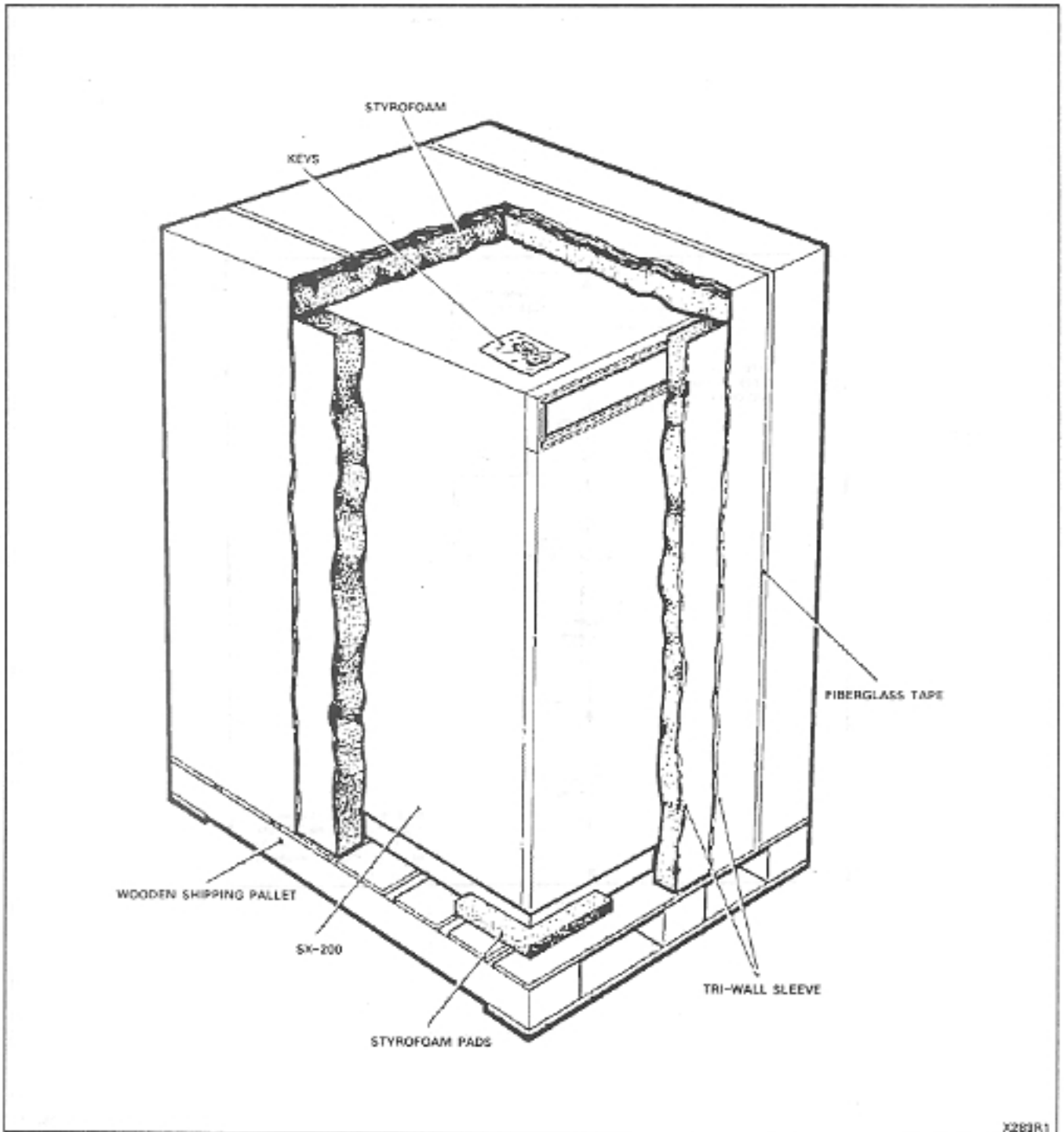
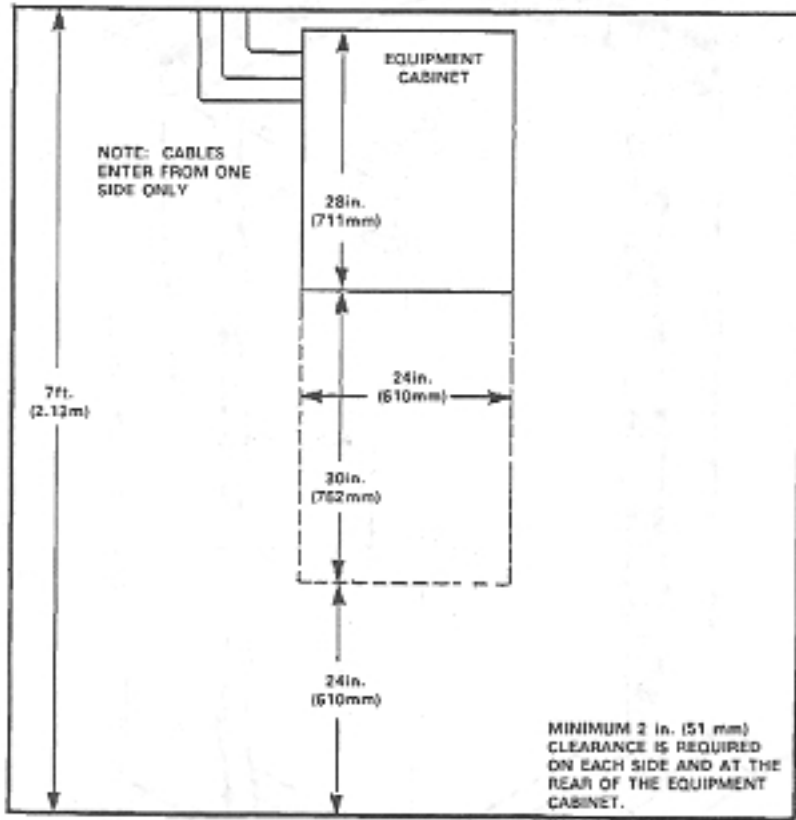


Fig. 401-1 Remove External Packing

|                          |
|--------------------------|
| UNPACK EQUIPMENT CABINET |
| MAP200- 401              |
| Issue 1, December 1982   |
| Sheet 4 of 4             |



X257R1

Fig. 401-3 Position Cabinet

## INSPECT EQUIPMENT

MAP200-404

Issue 1, December 1982

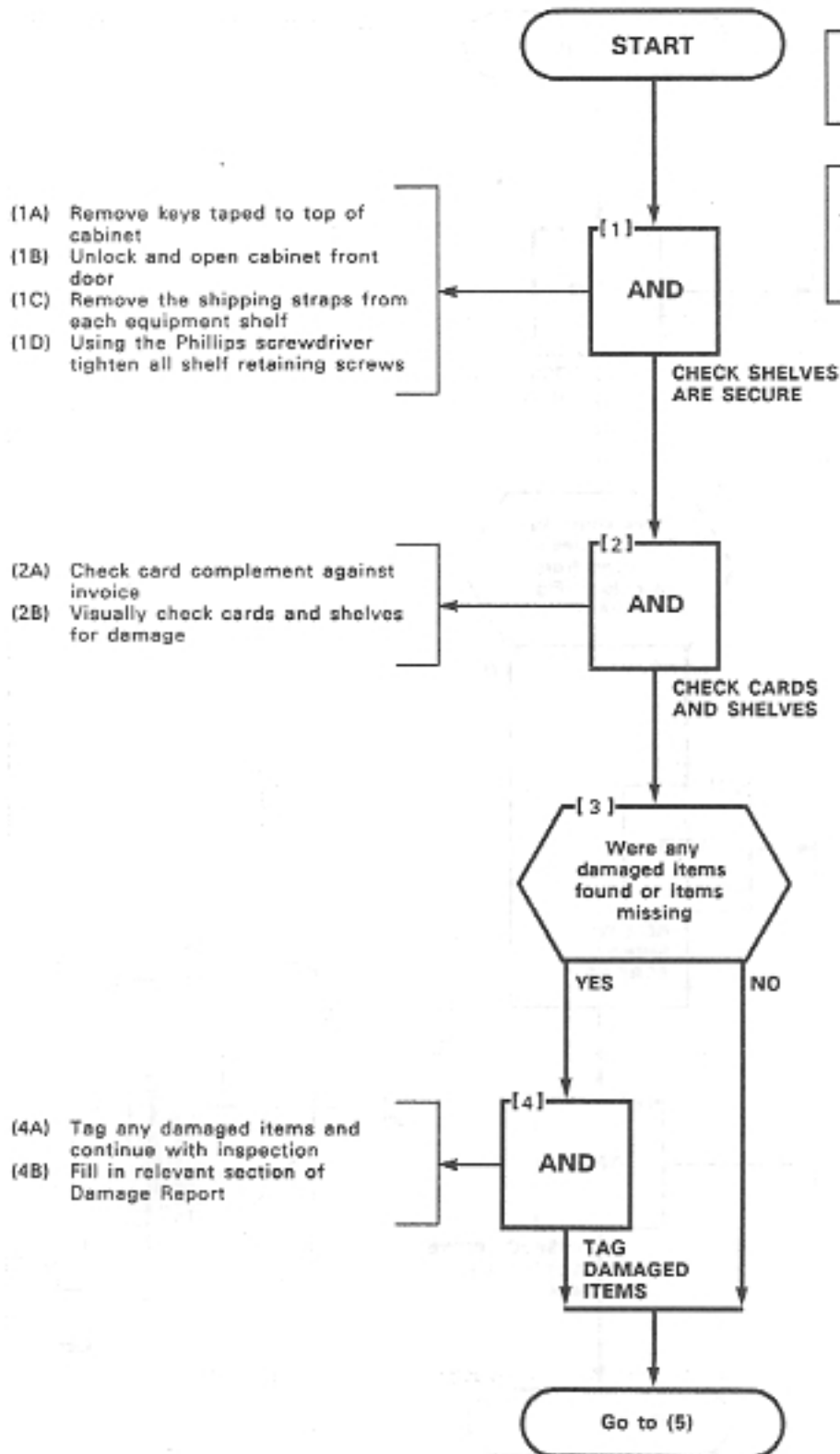
Sheet 1 of 4

## TOOLS REQUIRED

1 Phillips Screwdriver  
1 Slot Screwdriver - 1/4 in.

## CAUTION

When handling shelf cards or similar modules ensure that the procedures noted in paragraph 12.02 are followed.



|                        |
|------------------------|
| INSPECT EQUIPMENT      |
| MAP200- 404            |
| Issue 1, December 1982 |
| Sheet 2 of 4           |

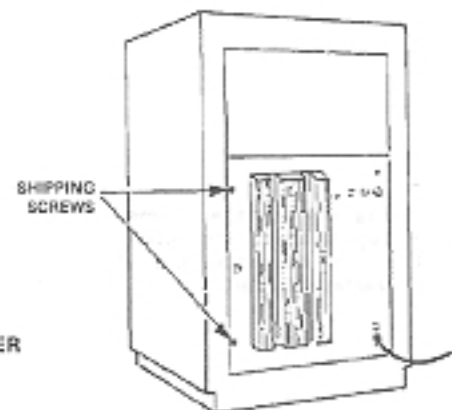
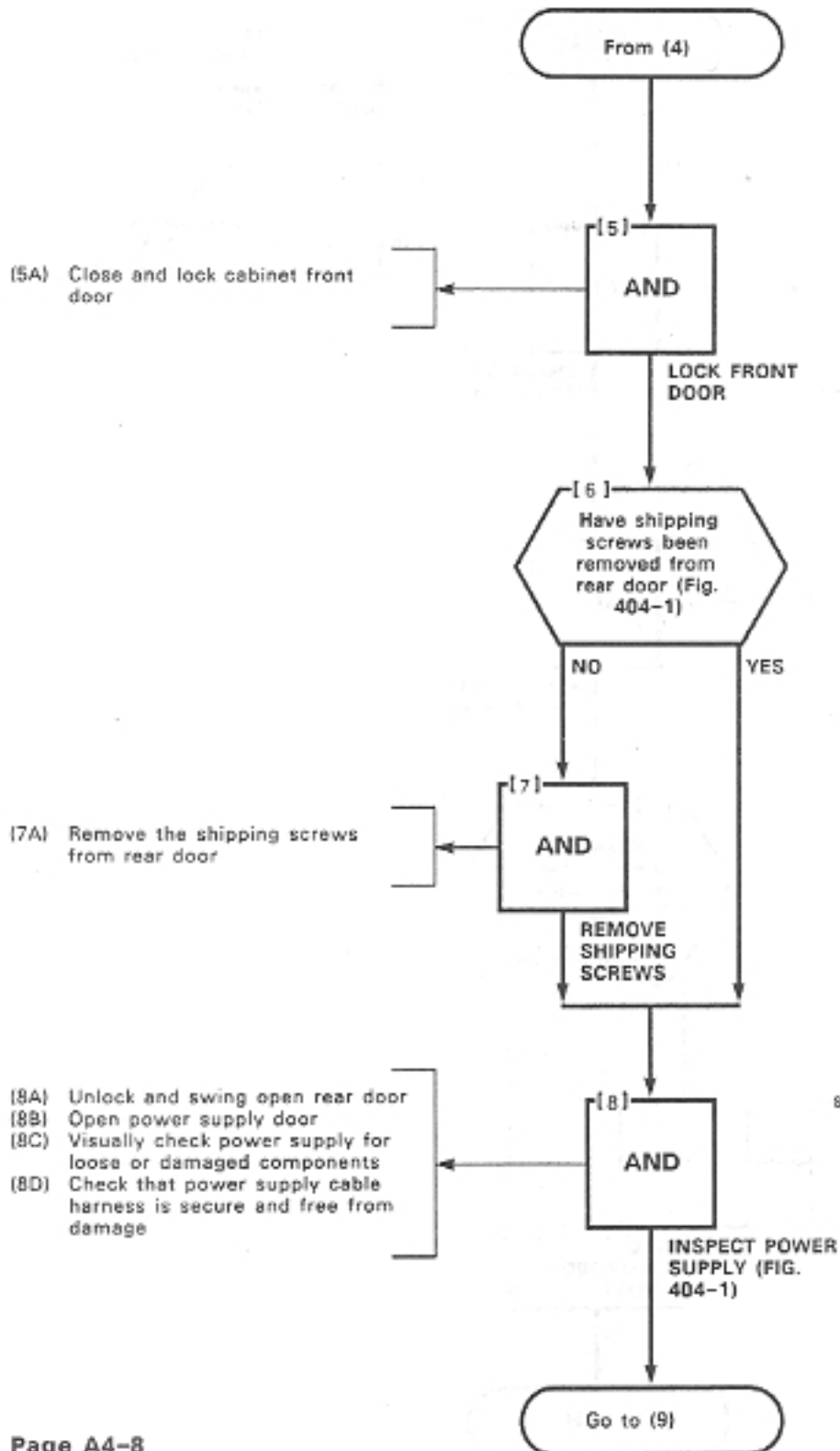


Fig. 404-1

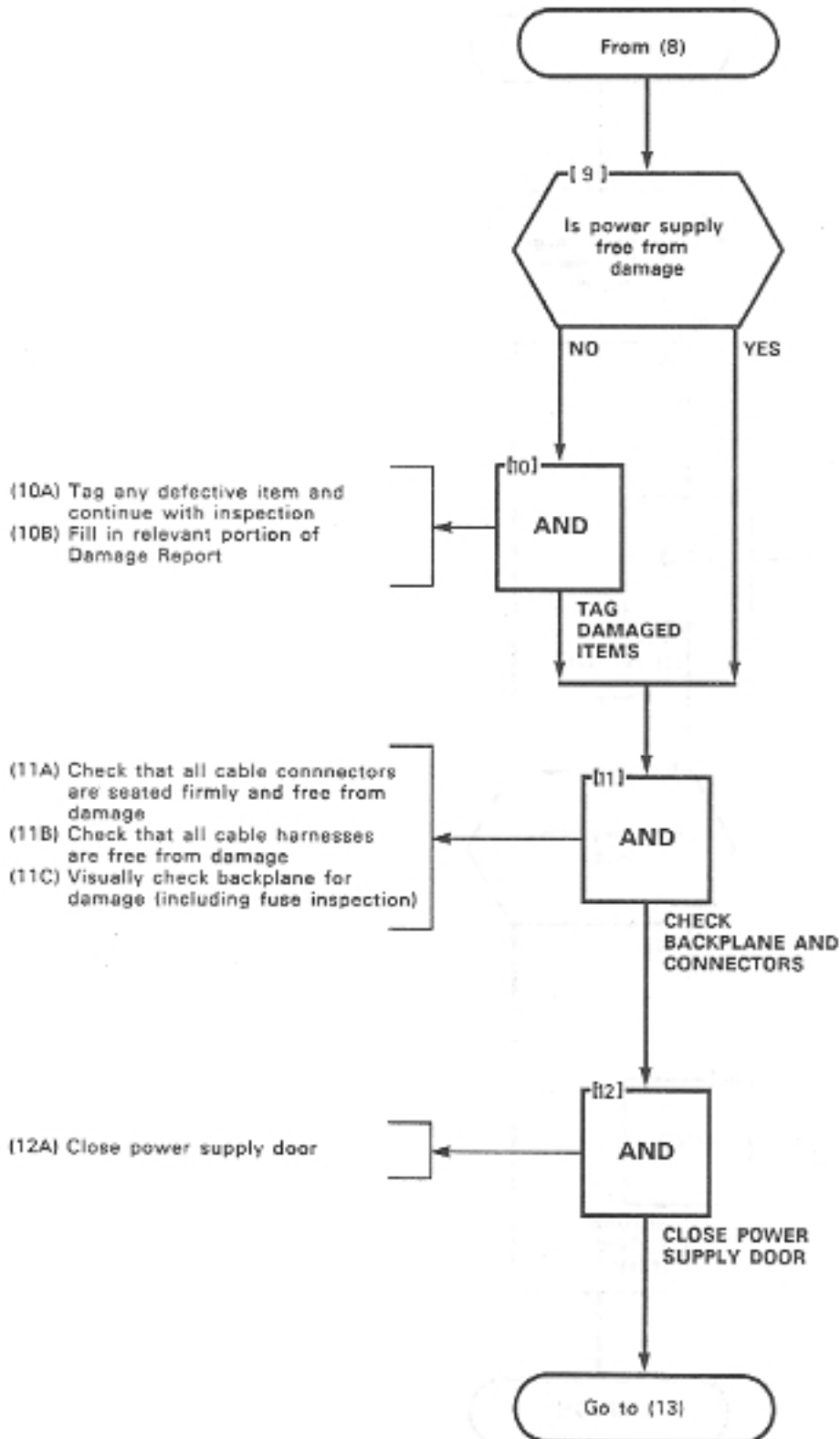
X262

INSPECT EQUIPMENT

MAP200-404

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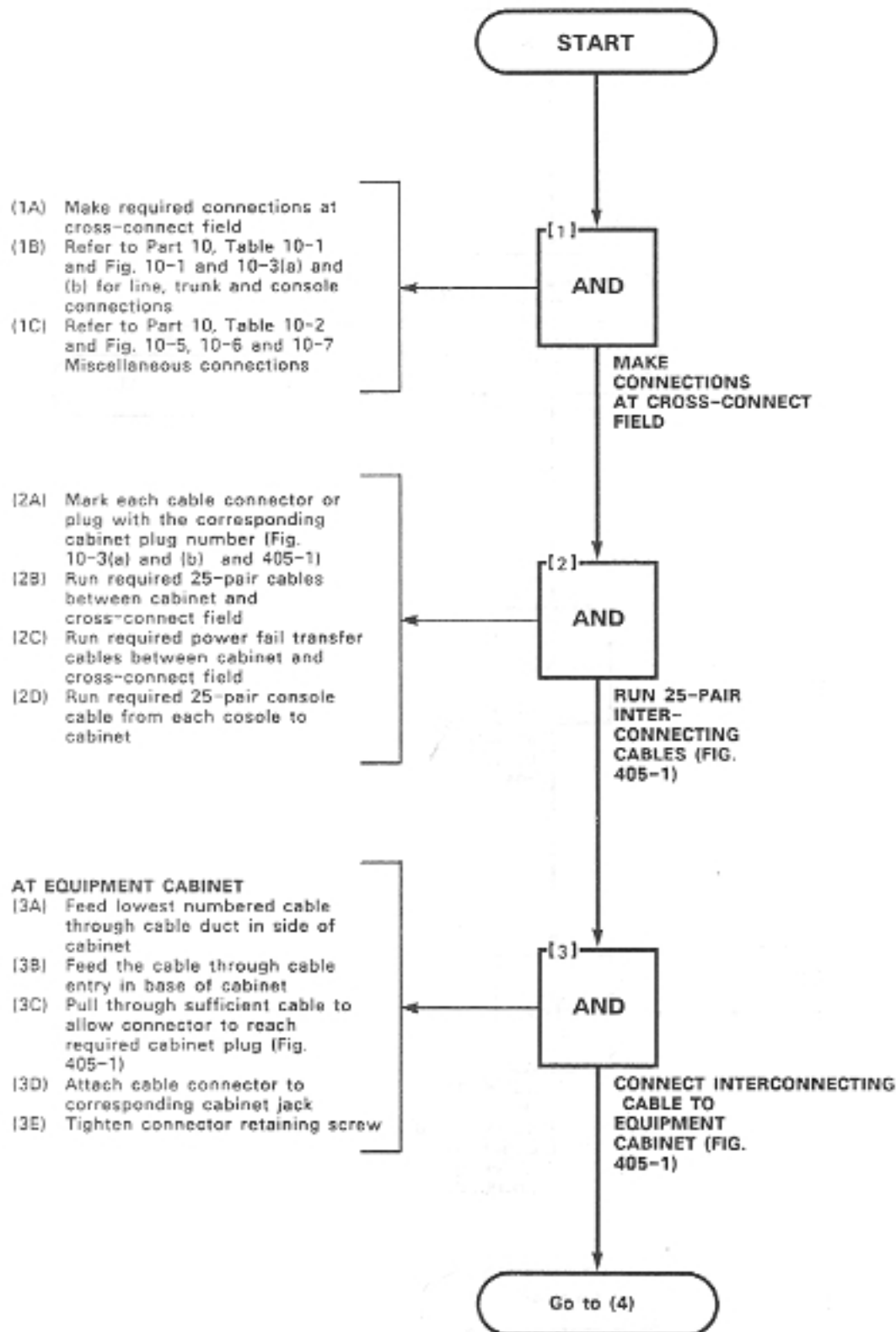


CONNECT CABLES

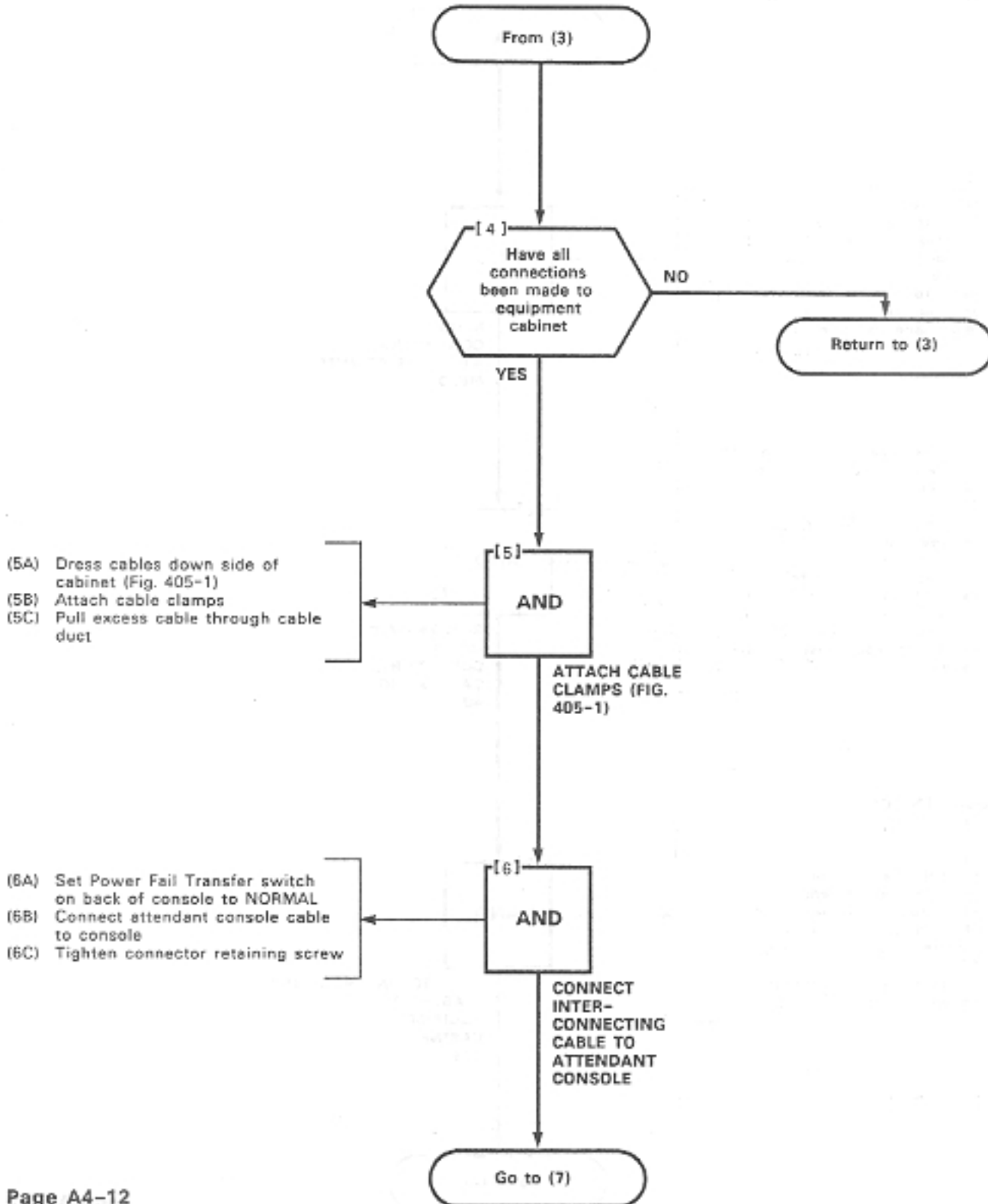
MAP200-405

Issue 1, December 1982

Sheet 1 of 4



|                        |
|------------------------|
| CONNECT CABLES         |
| MAP200- 405            |
| Issue 1, December 1982 |
| Sheet 2 of 4           |





CONNECT CABLES

MAP200-405

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Sheet 3 of 4

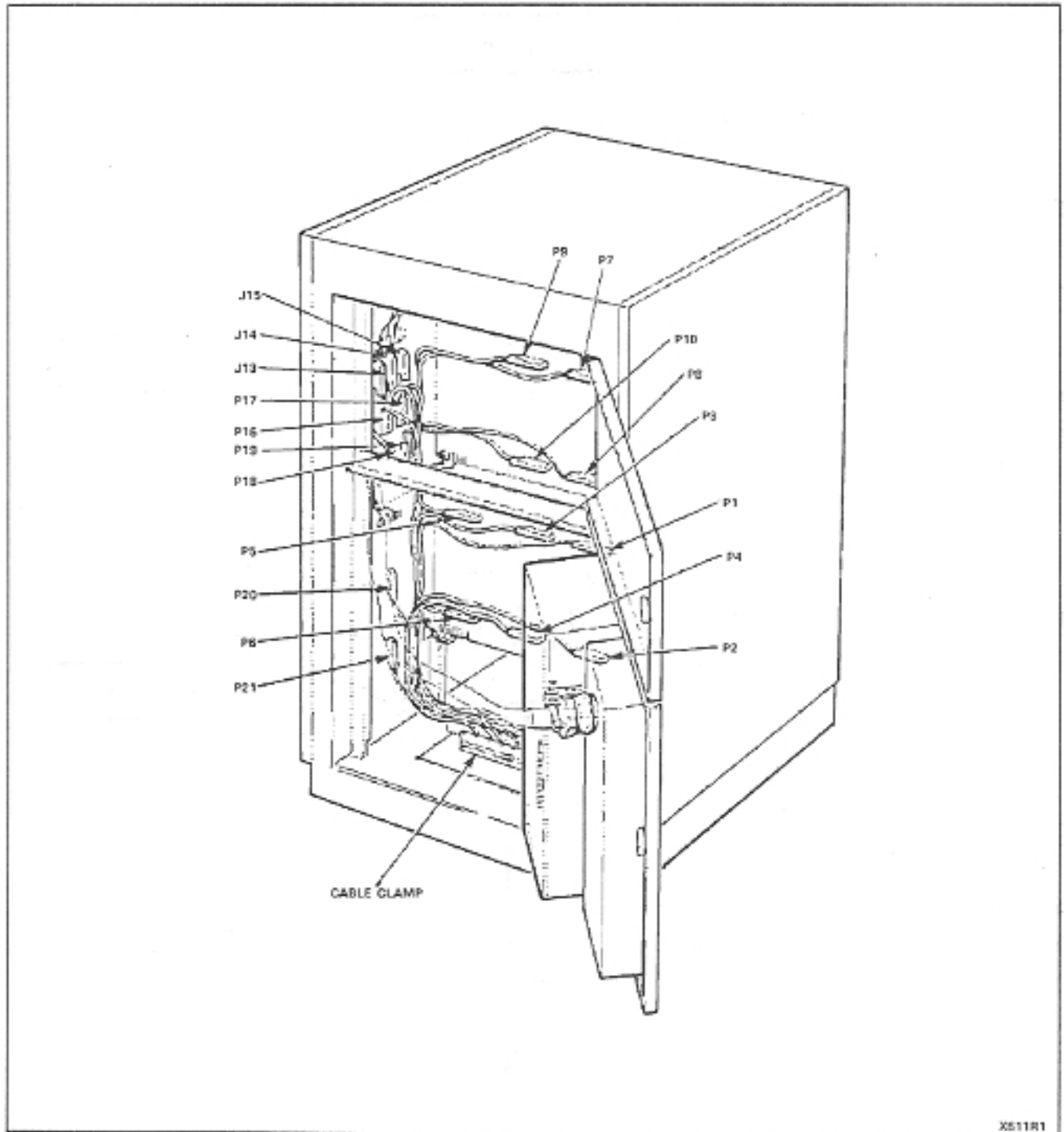
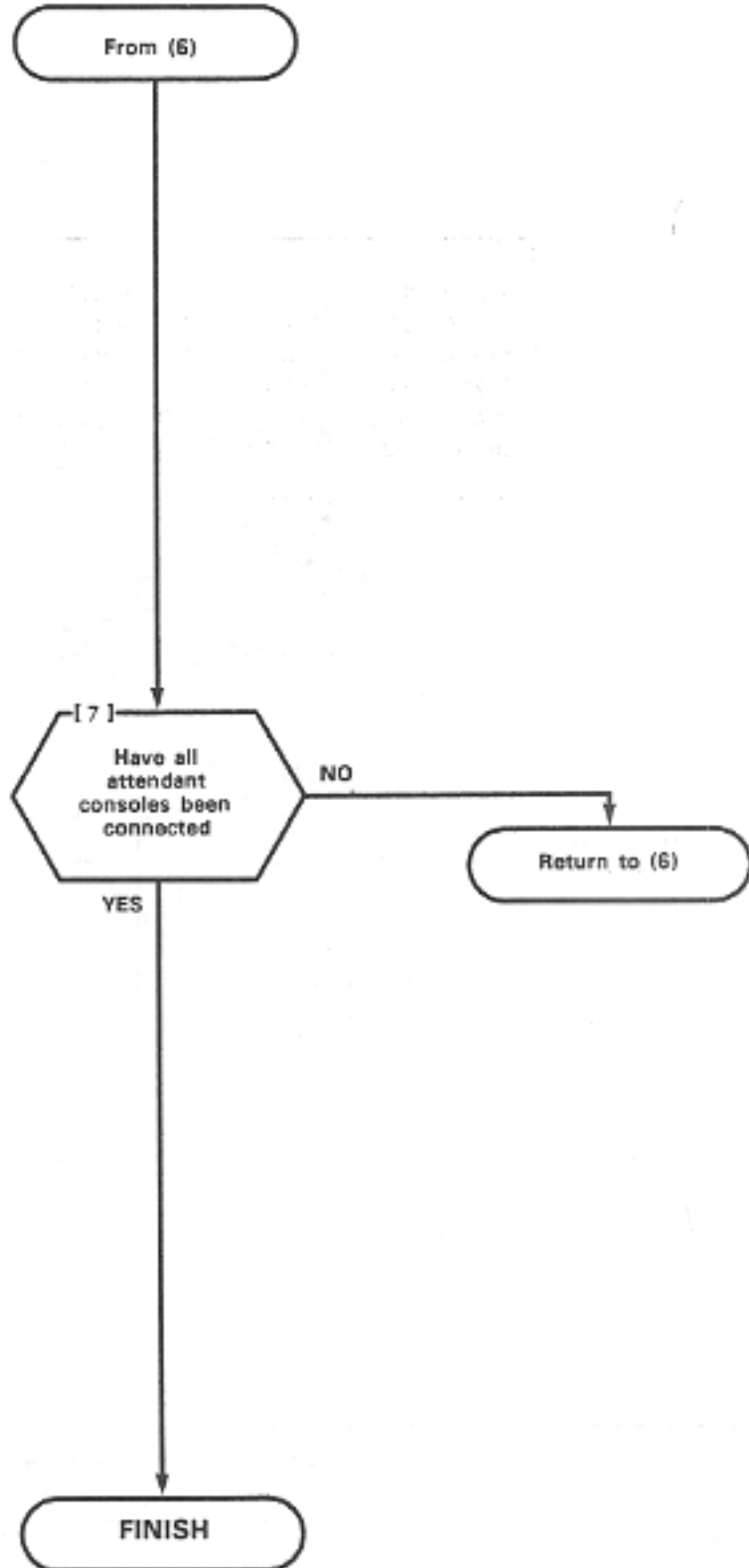


Fig. 405-1 SX-200 Rear View

|                        |
|------------------------|
| CONNECT CABLES         |
| MAP200- 405            |
| Issue 1, December 1982 |
| Sheet 4 of 4           |



|                        |
|------------------------|
| SET CARD SWITCHES      |
| MAP200-406             |
| Issue 1, December 1982 |
| Sheet 1 of 1           |

The setting of switches, to result in the required mode of operation on the Trunk Cards is detailed in the MAP's contained in Appendix A-5. The installer should ensure that these cards are properly switched for the correct mode of operation prior to performing "Power-Up" as detailed in MAP200-407.



POWER-UP SYSTEM

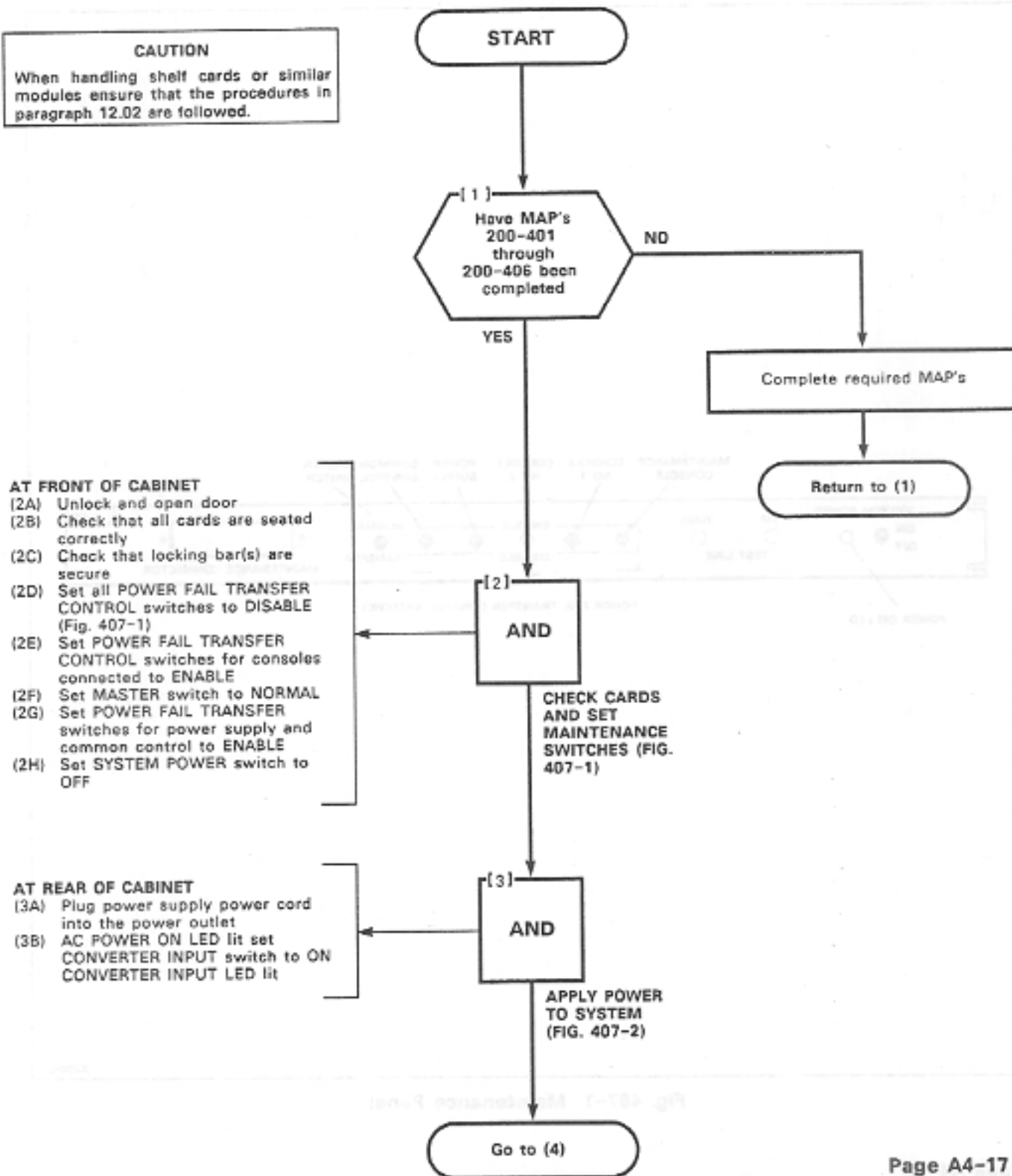
MAP200-407

Issue 1, December 1982

Sheet 1 of 5

**CAUTION**

When handling shelf cards or similar modules ensure that the procedures in paragraph 12.02 are followed.



|                        |
|------------------------|
| POWER-UP SYSTEM        |
| MAP200- 407            |
| Issue 1, December 1982 |
| Sheet 2 of 5           |

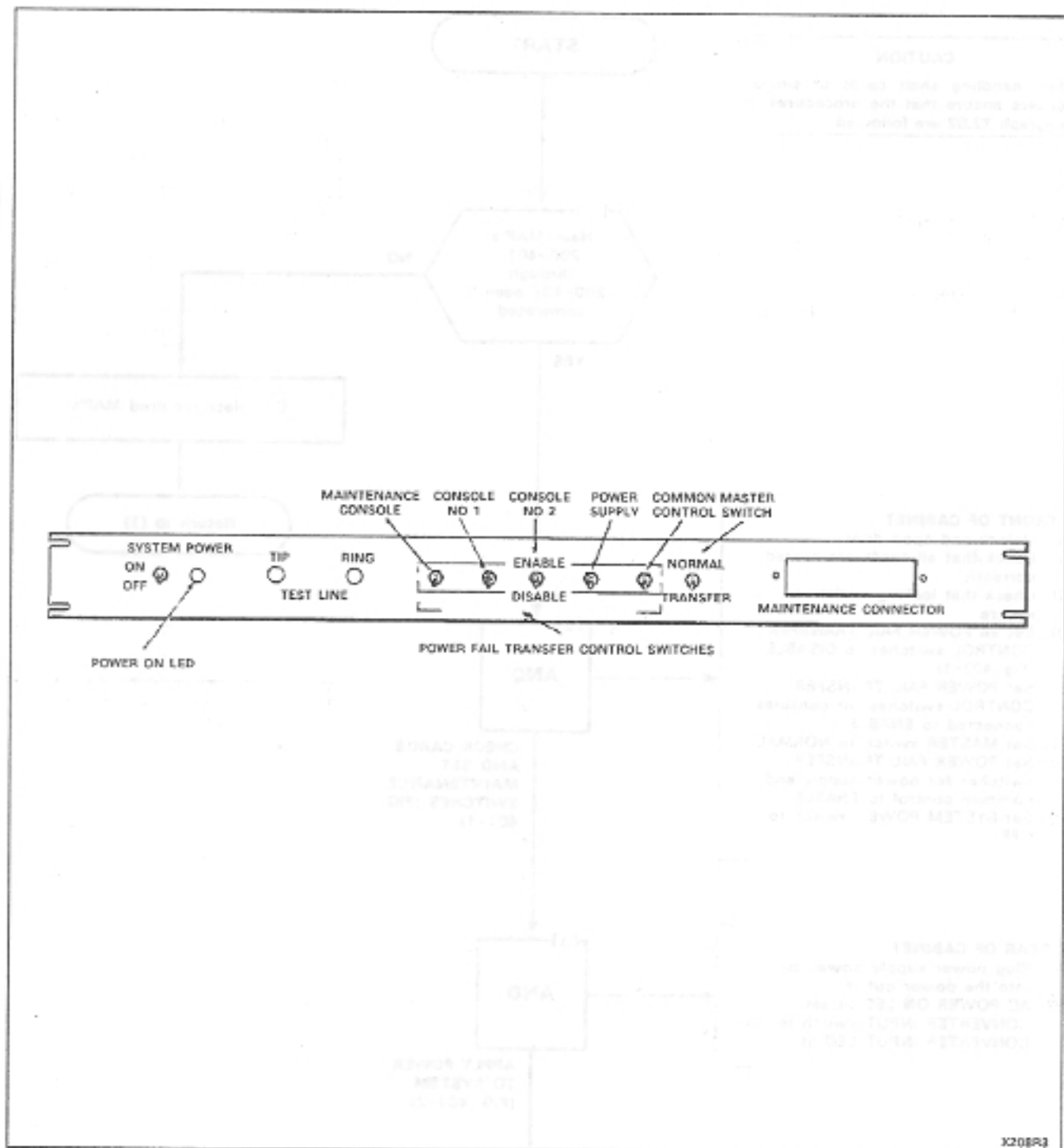


Fig. 407-1 Maintenance Panel

POWER-UP SYSTEM

MAP200-407

Issue 1, December 1982

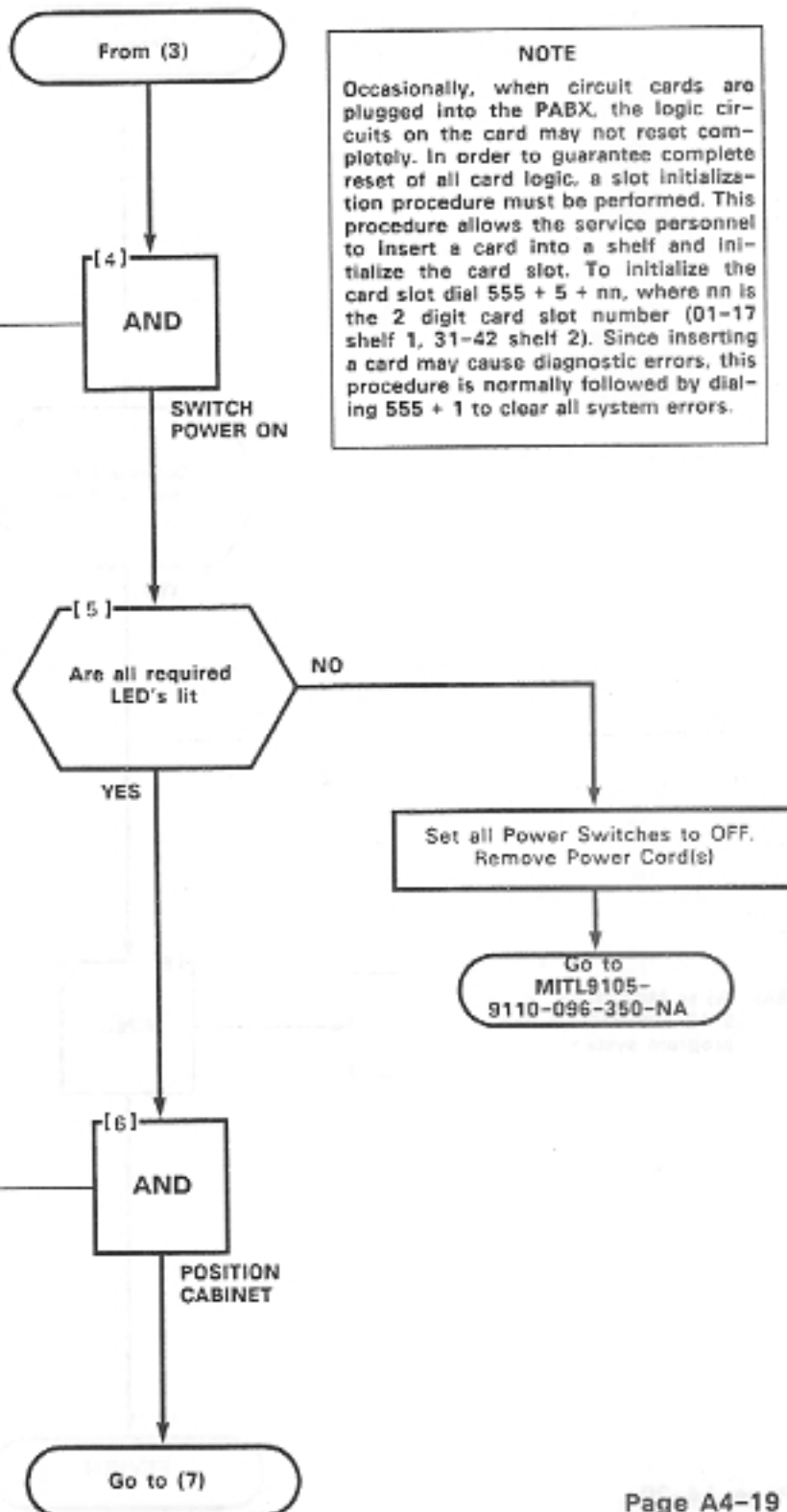
Sheet 3 of 5

## NOTE

Occasionally, when circuit cards are plugged into the PABX, the logic circuits on the card may not reset completely. In order to guarantee complete reset of all card logic, a slot initialization procedure must be performed. This procedure allows the service personnel to insert a card into a shelf and initialize the card slot. To initialize the card slot dial 555 + 5 + nn, where nn is the 2 digit card slot number (01-17 shelf 1, 31-42 shelf 2). Since inserting a card may cause diagnostic errors, this procedure is normally followed by dialing 555 + 1 to clear all system errors.

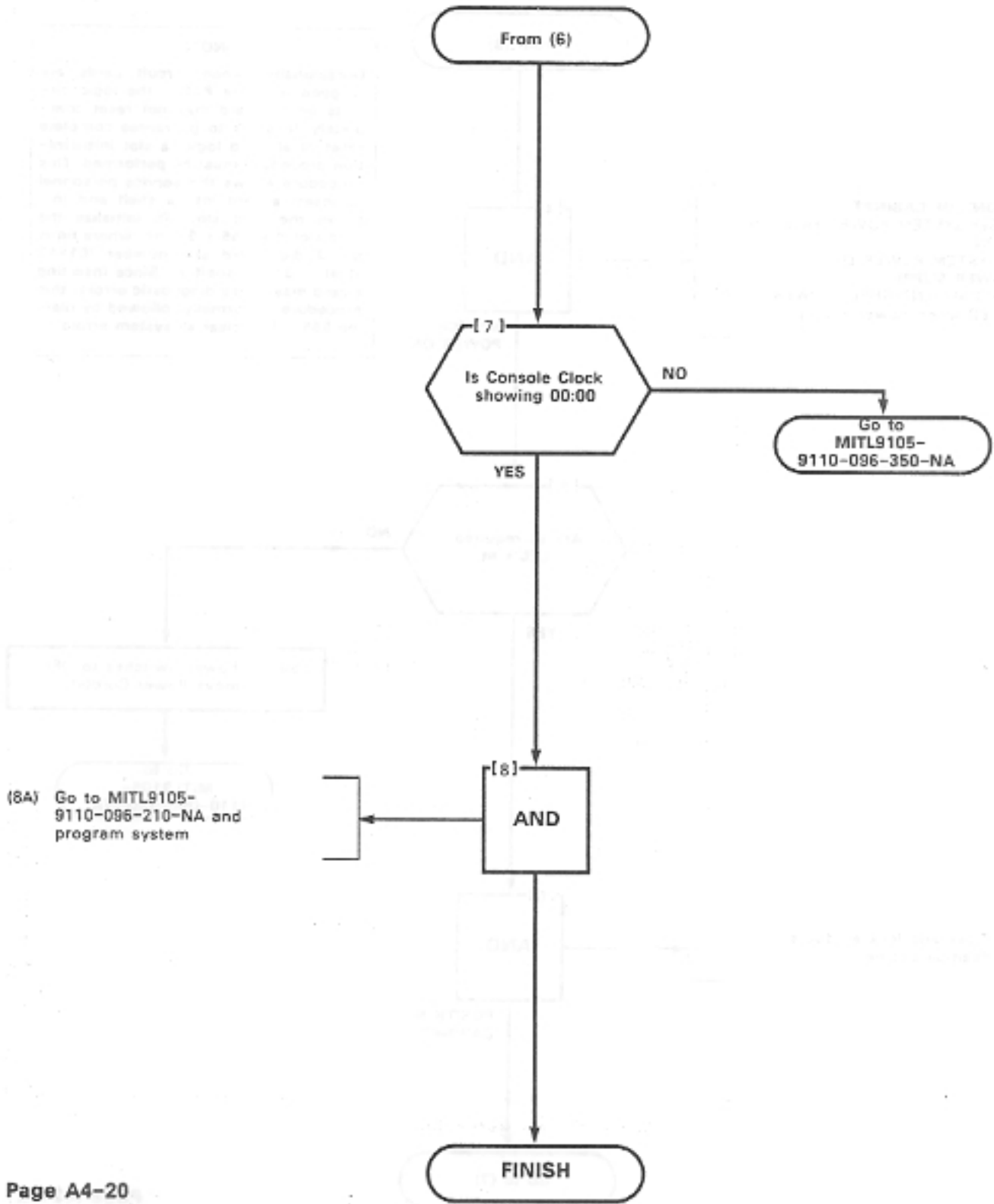
## AT FRONT OF CABINET

- (4A) Set SYSTEM POWER switch to ON  
 (4B) SYSTEM POWER LED lit  
 ON POWER SUPPLY  
 (4C) EQUIPMENT SHELF POWER ON LED lit on power supply



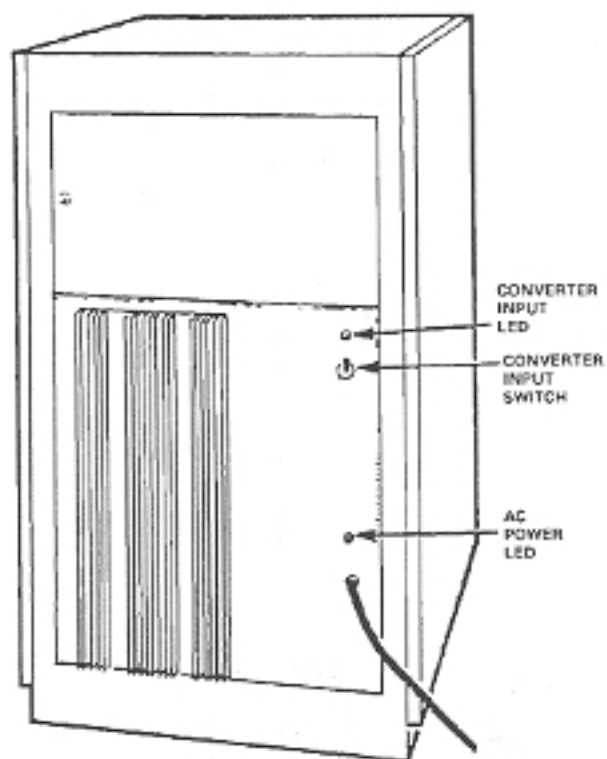
- (6A) Close and lock all doors  
 (6B) Position cabinet

|                        |
|------------------------|
| POWER-UP SYSTEM        |
| MAP200- 407            |
| Issue 1, December 1982 |
| Sheet 4 of 5           |





|                        |
|------------------------|
| POWER-UP SYSTEM        |
| MAP200- 407            |
| Issue 1, December 1982 |
| Sheet 5 of 5           |



X3274

Fig. 407-2 SX-200 Rear View

1. Name of Project  
 2. Date of Issue  
 3. Scale of Drawing  
 4. Drawing No.  
 5. Drawing Title



Fig. 1. Perspective View

## APPENDIX 5

### CARD SWITCH SETTINGS

#### 1. GENERAL

A5.01 The MAP's contained in this Appendix (see Table A5-1) detail the procedures to be performed to result in the correct settings of the Trunk Card switches (i.e. those required to meet the particular needs of the installation).

A5.02 These procedures are performed during the installation of the SX-100 or SX-200 PABX systems (referenced in Appendices 3 and 4).

TABLE A5-1  
SETTING TRUNK CARD SWITCHES

| Step | Procedure                                     | Reference  |
|------|---|------------|
| 1    | Set CO Trunk Switches (Types 011-000/111-000) | MAP200-501 |
| 2    | Set E&M/Tie Trunk Option Switches             | MAP200-502 |
| 3    | Set DID/Tie Trunk Option Switches             | MAP200-503 |
| 4    | Set Scanner Card Baud Rate Switch             | MAP200-504 |
| 5    | Set RAM/COS Switches                          | MAP200-505 |
| 6    | Set CO Trunk Switches (Types 211-000/311-000) | MAP200-506 |
| 7    | Set IPC Battery Switch                        | MAP200-507 |

# APPENDIX A CABLE SWITCH SETTINGS

The following table lists the cable switch settings for the various cable switches. The settings are listed in the order in which they appear in the cable switch settings menu. The settings are listed in the order in which they appear in the cable switch settings menu. The settings are listed in the order in which they appear in the cable switch settings menu.

## KEYBOARD SWITCH SETTINGS

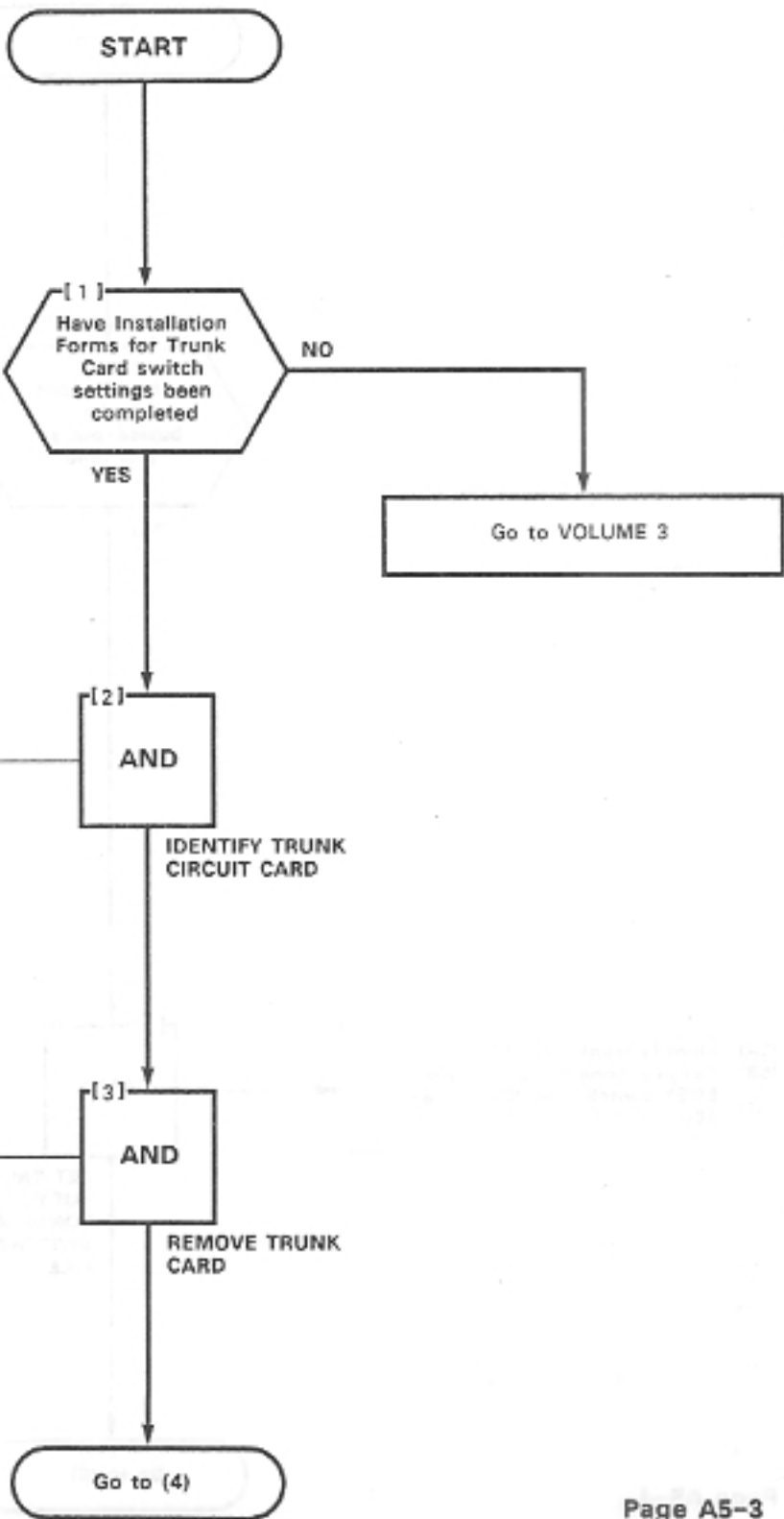
| Setting      | Default |
|--------------|---------|
| 1. Keyboard  | 1000    |
| 2. Keyboard  | 1000    |
| 3. Keyboard  | 1000    |
| 4. Keyboard  | 1000    |
| 5. Keyboard  | 1000    |
| 6. Keyboard  | 1000    |
| 7. Keyboard  | 1000    |
| 8. Keyboard  | 1000    |
| 9. Keyboard  | 1000    |
| 10. Keyboard | 1000    |

|   |
|---|
| SET CO TRUNK SWITCHES<br>(TYPES -011/111) |
| MAP200-501                                |
| Issue 1, December 1982                    |
| Sheet 1 of 7                              |

**CAUTION**  
When handling shelf cards or similar modules ensure that the procedures noted in paragraph 12.02 are followed.

**NOTE**  
Use MAP200-505 when setting switches on Trunk Card Types 9110-211-000 or -311-000.

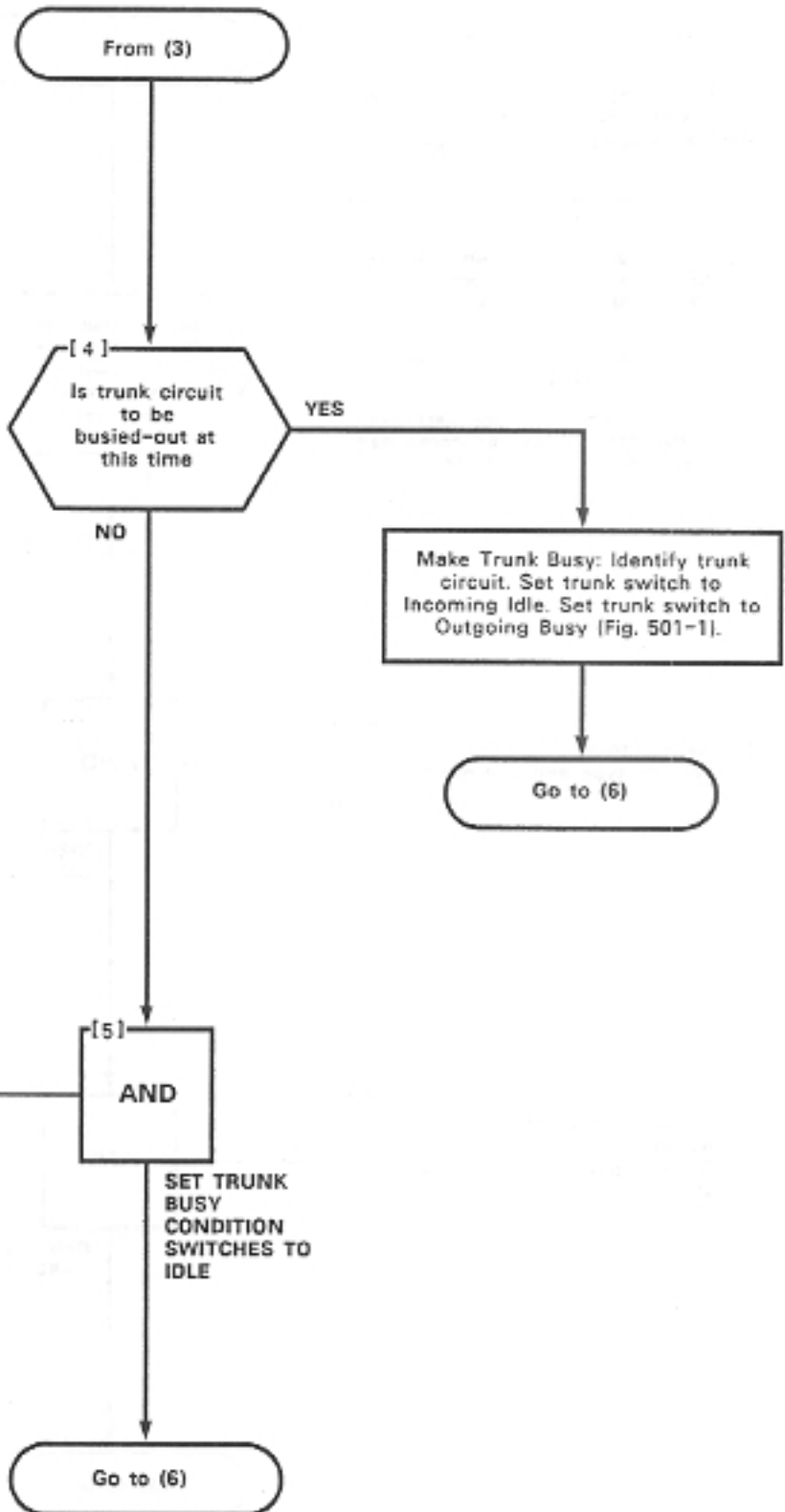
**NOTE**  
Installation Forms for trunk card settings, VOLUME 3 must be completed before proceeding with this MAP.



(2A) Identify trunk circuit by card position type and unit number

(3A) Lift card extractors at top and bottom of card  
(3B) Remove trunk card from the shelf

|   |
|---|
| SET CO TRUNK SWITCHES<br>(TYPES -011/111) |
| MAP200- 501                               |
| Issue 1, December 1982                    |
| Sheet 2 of 7                              |

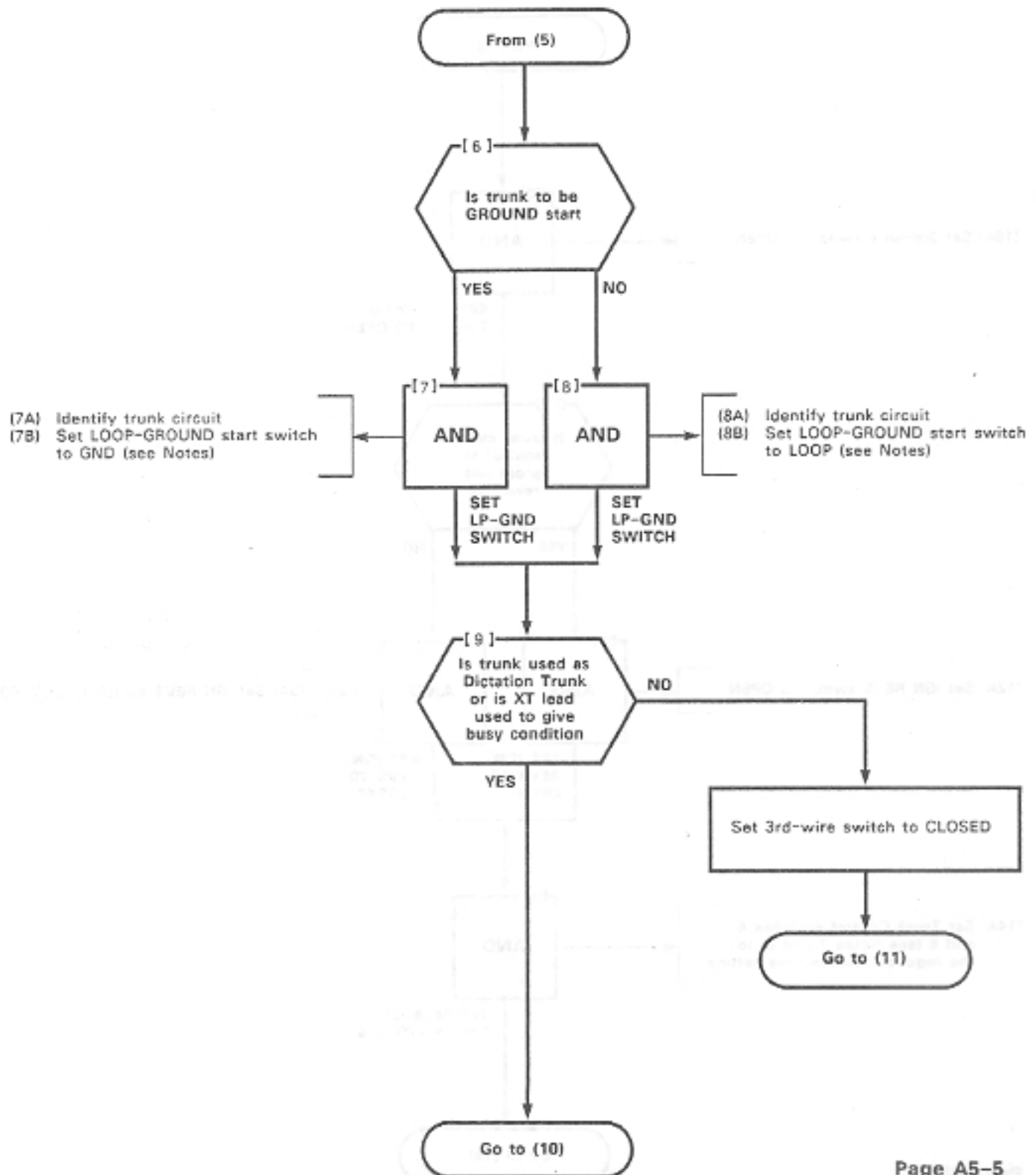


|   |
|---|
| SET CO TRUNK SWITCHES<br>(TYPES -011/111) |
|---|

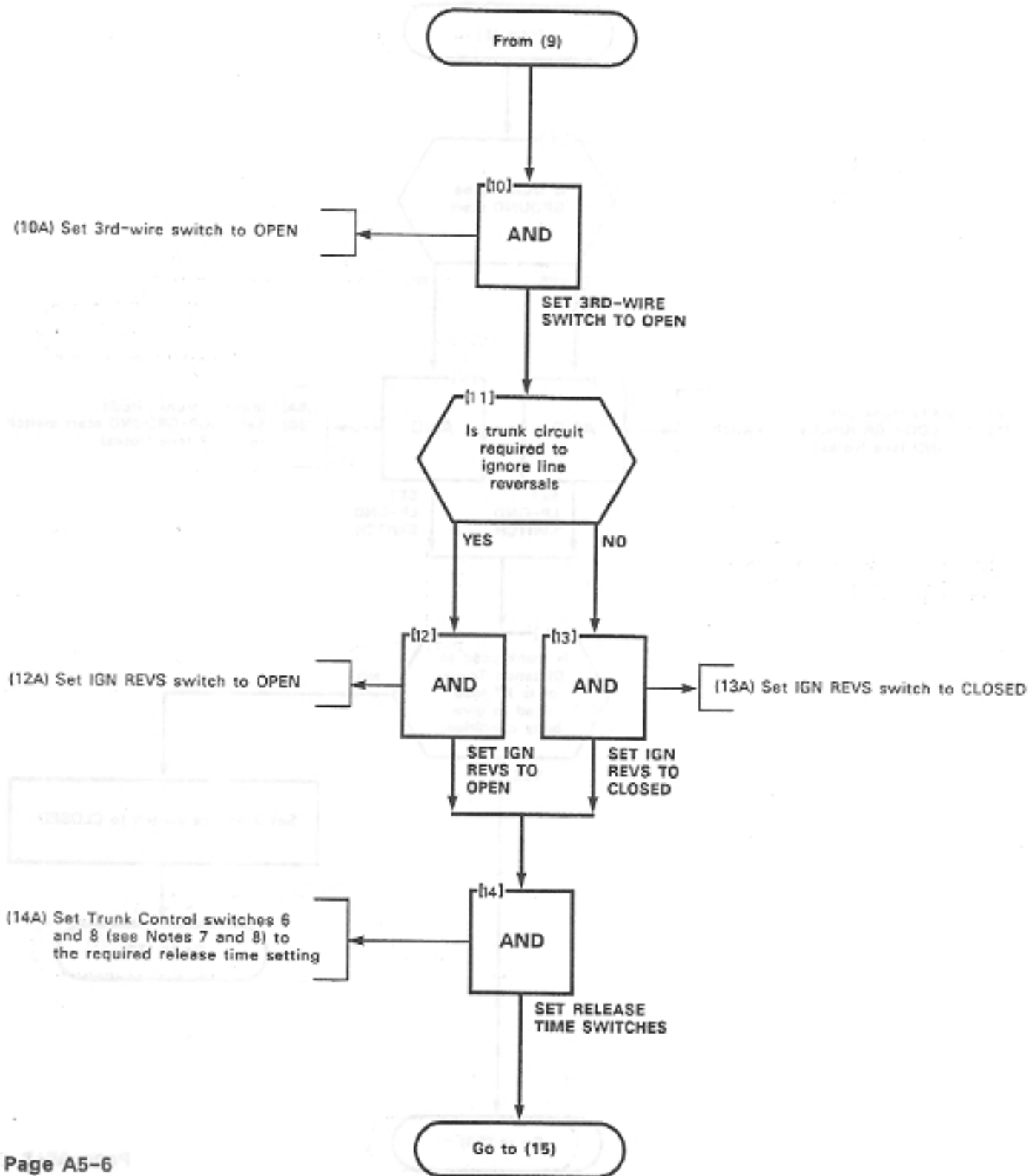
|            |
|------------|
| MAP200-501 |
|------------|

|                        |
|------------------------|
| Issue 1, December 1982 |
|------------------------|

|              |
|--------------|
| Sheet 3 of 7 |
|--------------|



|   |
|---|
| SET CO TRUNK SWITCHES<br>(TYPES -011/111) |
| MAP200- 501                               |
| Issue 1, December 1982                    |
| Sheet 4 of 7                              |







|   |
|---|
| SET CO TRUNK SWITCHES<br>(TYPES -011/111) |
| MAP200- 501                               |
| Issue 1, December 1982                    |
| Sheet 6 of 7                              |

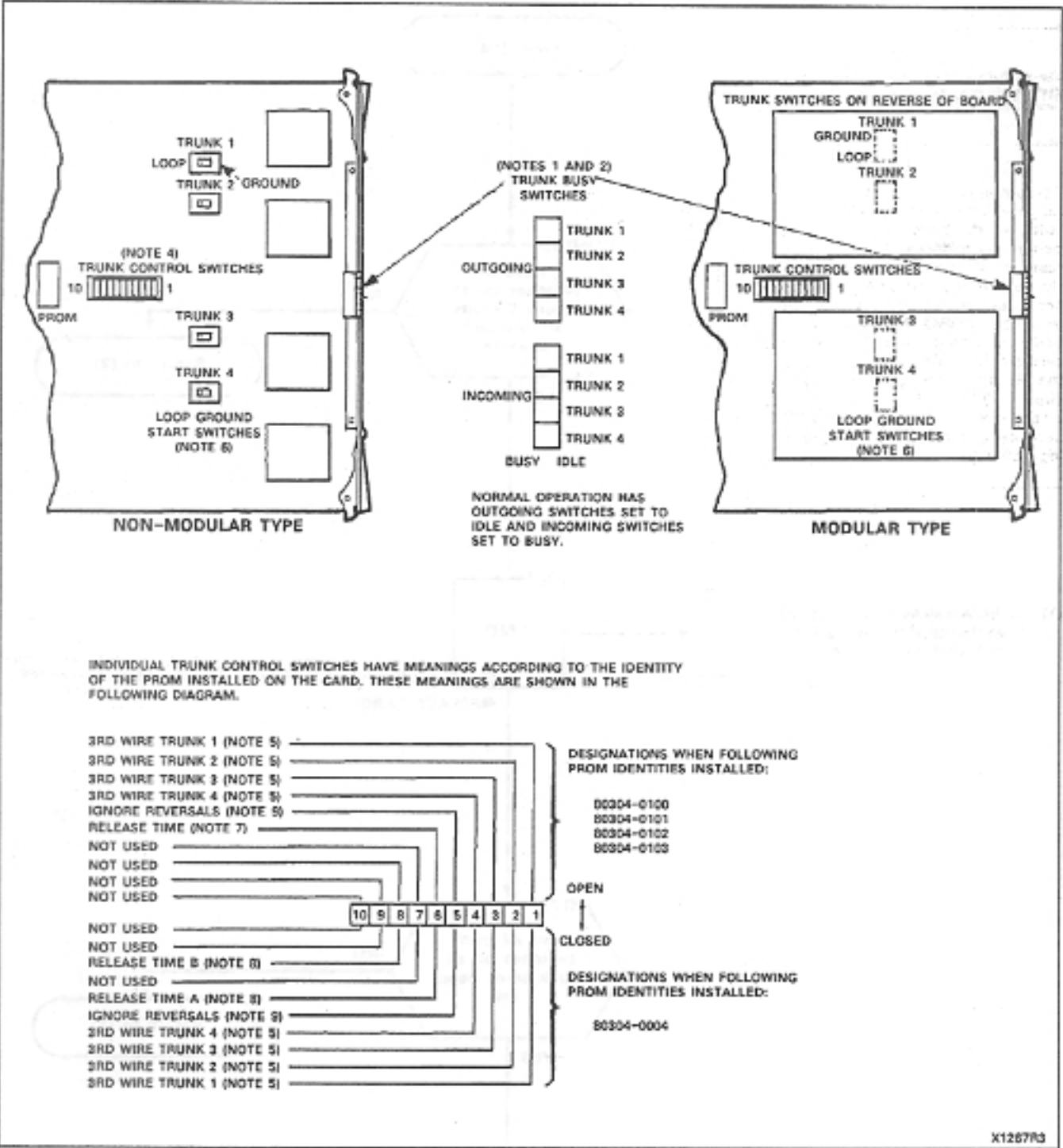


Fig. 501-1 Trunk Card Types 9110-011 and -111

X1267R3

|  |
|--|
| <b>SET CO TRUNK SWITCHES</b><br>(TYPES -011/111) |
|--|

|                   |
|-------------------|
| <b>MAP200-501</b> |
|-------------------|

|                               |
|-------------------------------|
| <b>Issue 1, December 1982</b> |
|-------------------------------|

|                     |
|---------------------|
| <b>Sheet 7 of 7</b> |
|---------------------|

## NOTES:

## TRUNK BUSY SWITCHES

- OUTGOING BUSY SWITCHES (1 PER TRUNK) CAN BE SET FOR EITHER:  
 IDLE - NORMAL TRUNK OPERATION  
 BUSY - TRUNK CANNOT BE SEIZED FOR OUTGOING CALL
- THE "OUTGOING BUSY" CONDITION MAY BE SET EITHER BY THE OUTGOING BUSY SWITCH (NOTE 1), OR BY THE CONSOLE "TRUNK BUSY OUT" FUNCTION. WHEN THIS CONDITION IS IN EFFECT THE INCOMING BUSY SWITCH AFFECTS THE TRUNK CONDITION AS FOLLOWS:  
 IDLE - NO ANSWER WILL BE GIVEN TO INCOMING CO CALLS  
 BUSY - A PERMANENT SEIZURE CONDITION IS GIVEN TOWARDS THE CO
- INCOMING BUSY HAS NO EFFECT WHILE OUTGOING BUSY IS NOT SET.

## TRUNK CONTROL SWITCHES

- ACTIVE TRUNK CONTROL SWITCHES ON NONMODULAR CARD ARE CONFINED TO SWITCHES 1, 2, 3 AND 4, CORRESPONDING TO TRUNK 1, 2, 3 AND 4, 3RD WIRE CONDITIONS RESPECTIVELY (NOTE 5).

## 3RD WIRE SWITCHES

- THE 3RD WIRE LEAD WHEN REQUIRED IS CONNECTED TO THE CO TO PROVIDE CERTAIN FACILITIES. THESE INCLUDE THE RECORDING OF METER PULSES (EXTENDED FROM THE CO); OR ANOTHER REQUIREMENT MAY BE A BUSY CONDITION WHEN DICTATION OR CODE CALLING EQUIPMENT AT THE CO HAS BEEN TAKEN INTO SERVICE BY OTHER TRUNKS. THE SWITCH SETTING IS EITHER:  
 OPEN - RECOGNIZED GROUND FROM THE CO AS A BUSY CONDITION  
 CLOSED - 3RD WIRE SWITCH IS INEFFECTIVE

## LOOP/GROUND START SWITCHES

- THE LOOP/GROUND START SWITCHES (1 PER TRUNK) CAN BE SET TO RESULT IN THE FOLLOWING CONDITIONS:  
 LOOP (1) SETTING - USED FOR LOOP-START TYPE TRUNKS  
 GROUND (2) SETTING - USED FOR GROUND-START TYPE TRUNKS

## RELEASE TIME SWITCHES

- VALID TRUNK RELEASE TIMES ARE RECOGNIZED BY THE FOLLOWING RELEASE TIME SETTINGS ON -0100 TO -0103 TYPE PROMS:  
 OPEN - GREATER THAN 50 ms OF NO LOOP CURRENT  
 CLOSED - GREATER THAN 500 ms OF NO LOOP CURRENT
- VALID TRUNK RELEASE TIMES ARE RECOGNIZED BY THE FOLLOWING RELEASE TIME SETTINGS FOR PROM TYPE -0004 WITH SWITCHES "A" AND "B":
 

| "A" SETTING | "B" SETTING | RELEASE TIME           |
|-------------|-------------|------------------------|
| OPEN        | CLOSED      | 50 ms                  |
| CLOSED      | CLOSED      | 500 ms                 |
| OPEN        | OPEN        | 2.5 s                  |
| CLOSED      | OPEN        | INFINITE (NON-RELEASE) |

## IGNORE REVERSALS

- IF LINE REVERSALS ON THE TRUNK CIRCUIT ARE REQUIRED TO HAVE NO EFFECT THE IGNORE REVERSALS SWITCH IS SET TO "OPEN". IF LINE REVERSALS ARE TO BE RECOGNIZED THE SWITCH IS SET TO CLOSED.

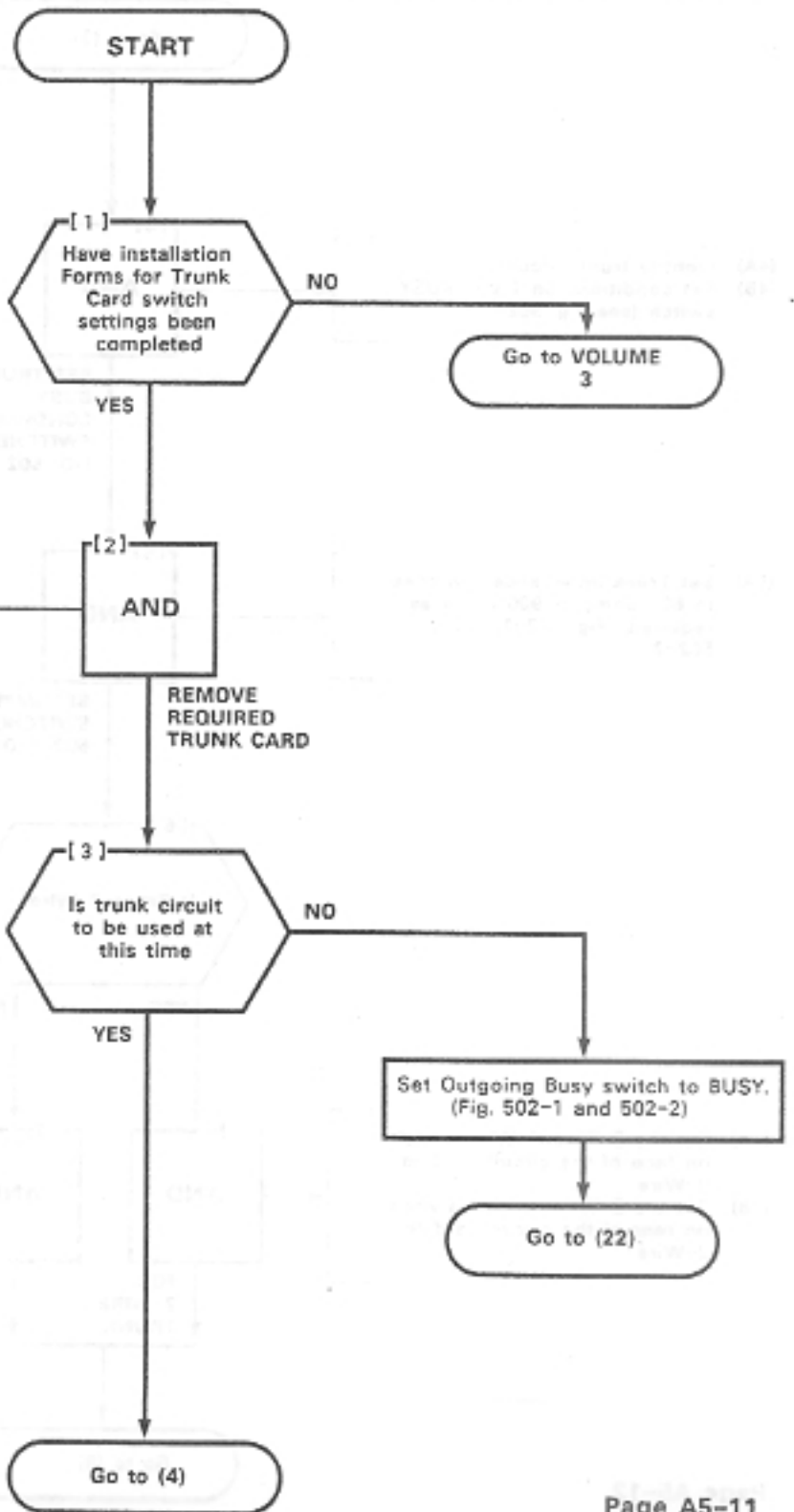


|                                      |
|--------------------------------------|
| SET E&M/TIE TRUNK<br>OPTION SWITCHES |
| MAP200-502                           |
| Issue 1, December 1982               |
| Sheet 1 of 8                         |

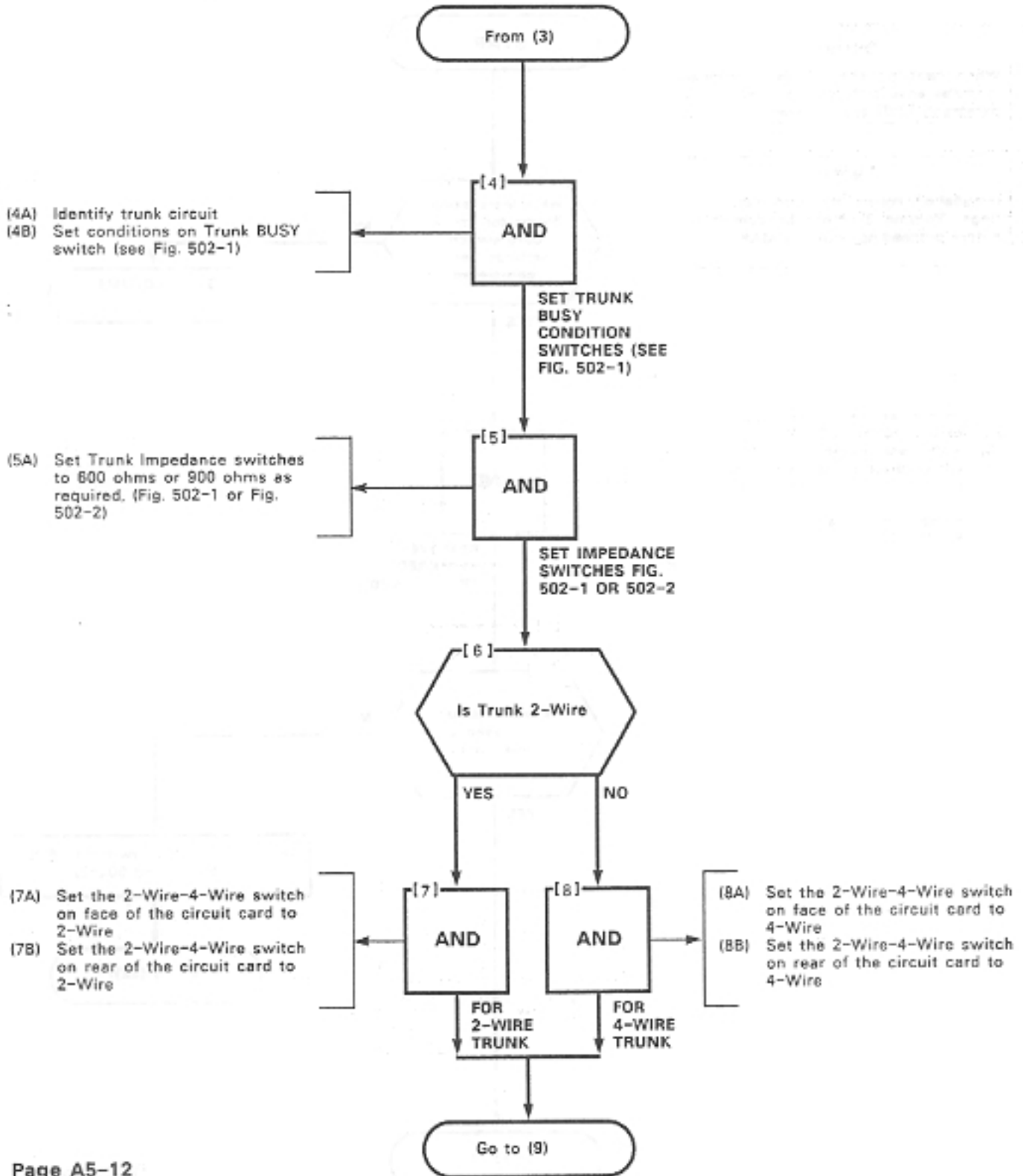
**CAUTION**  
When handling shelf cards or similar modules ensure that the procedures in paragraph 12.02 are followed.

**NOTE**  
Installation Forms for trunk card settings, Volume 3, must be completed before proceeding with this MAP.

- (2A) Locate required trunk circuit card 9110-013-000-NA
- (2B) Note card position
- (2C) Lift card locking clips located at the top and bottom of the card
- (2D) Remove trunk card 9110-013-000-NA



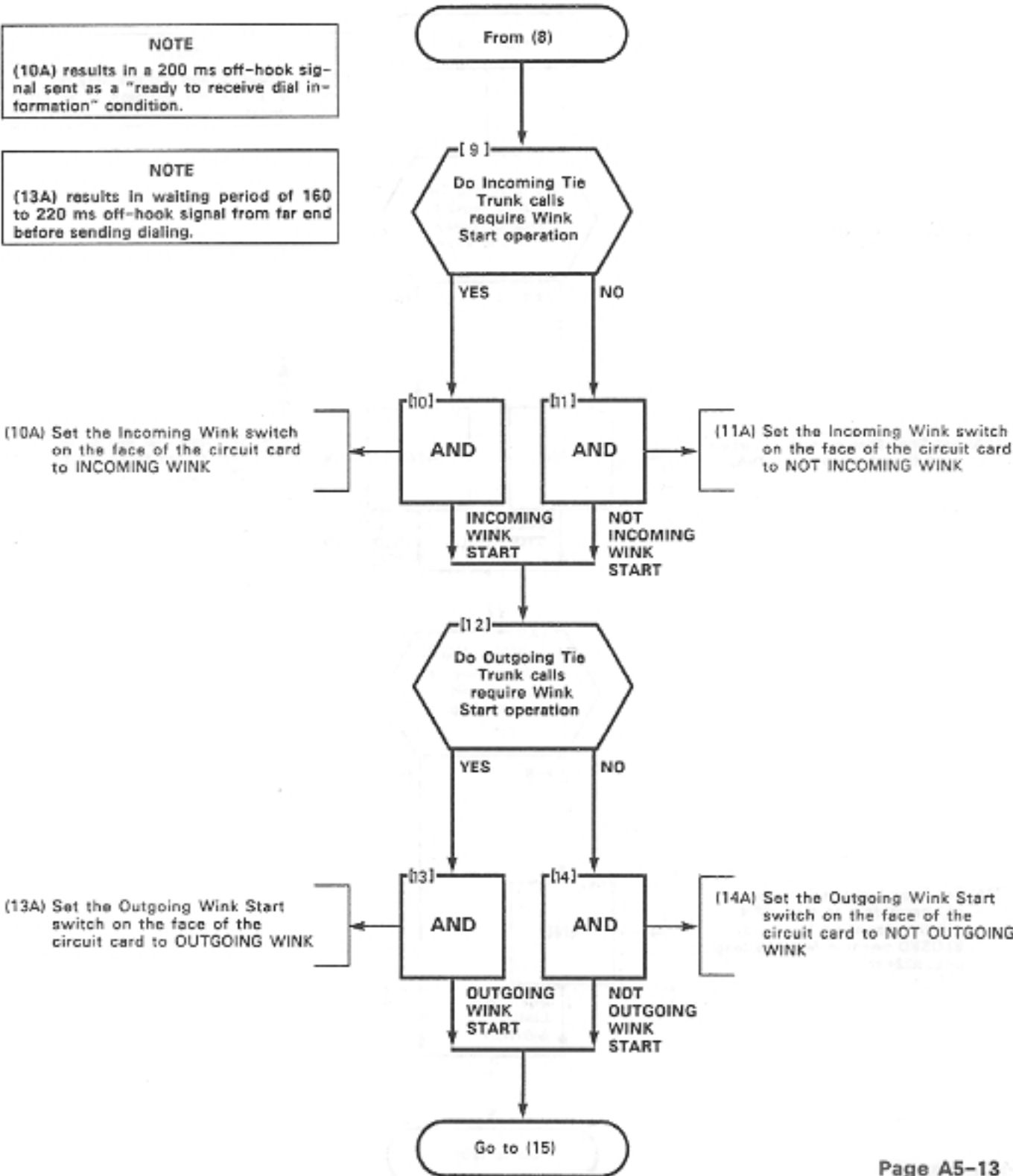
|                                      |
|--------------------------------------|
| SET E&M/TIE TRUNK<br>OPTION SWITCHES |
| MAP200- 502                          |
| Issue 1, December 1982               |
| Sheet 2 of 8                         |



|                                      |
|--------------------------------------|
| SET E&M/TIE TRUNK<br>OPTION SWITCHES |
| MAP200-502                           |
| Issue 1, December 1982               |
| Sheet 3 of 8                         |

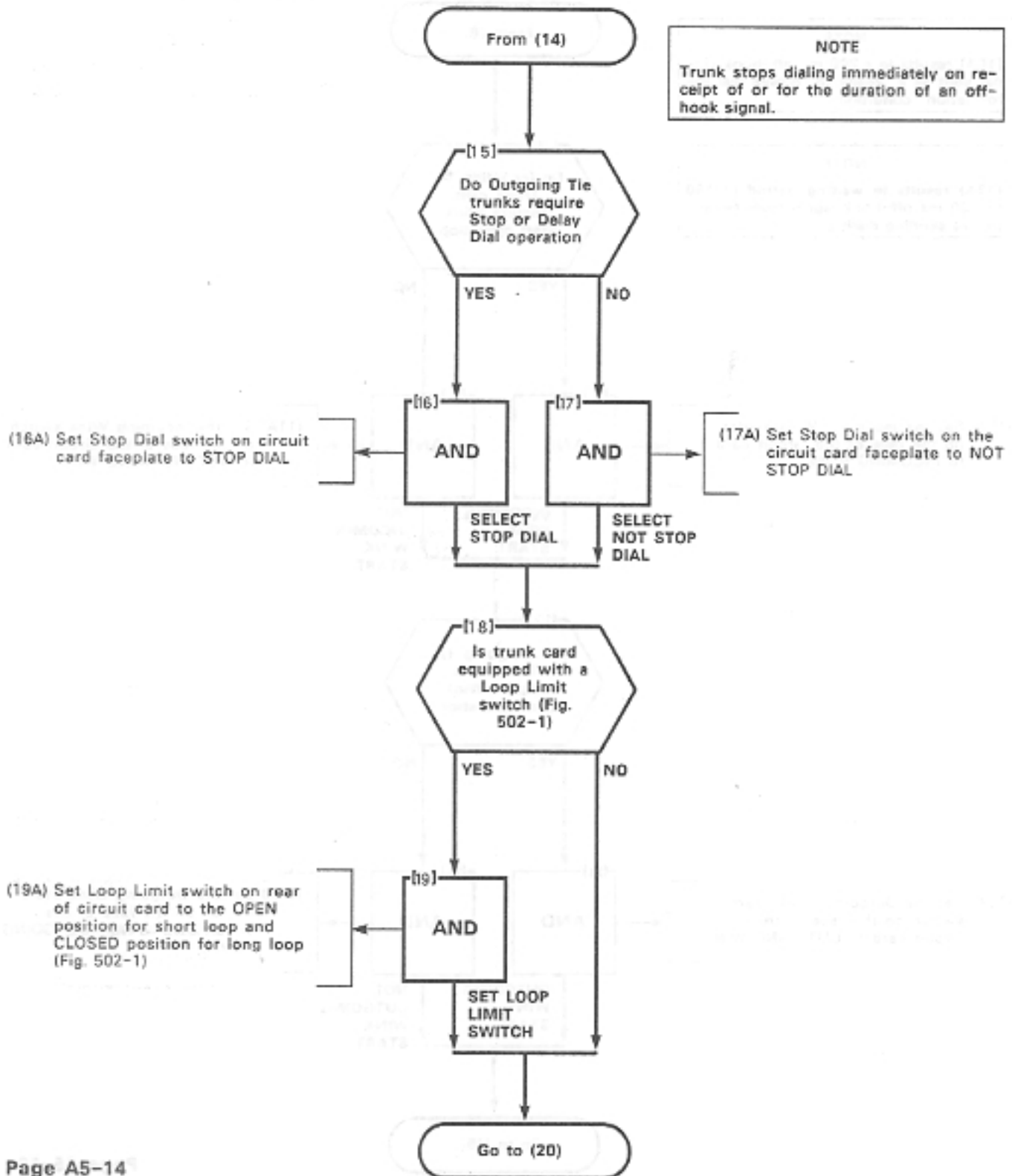
**NOTE**  
(10A) results in a 200 ms off-hook signal sent as a "ready to receive dial information" condition.

**NOTE**  
(13A) results in waiting period of 160 to 220 ms off-hook signal from far end before sending dialing.



|                                      |
|--------------------------------------|
| SET E&M/TIE TRUNK<br>OPTION SWITCHES |
| MAP200- 502                          |
| Issue 1, December 1982               |
| Sheet 4 of 8                         |

**NOTE**  
Trunk stops dialing immediately on receipt of or for the duration of an off-hook signal.





|                                      |               |
|--------------------------------------|---------------|
| SET E&M/TIE TRUNK<br>OPTION SWITCHES | SECTION 502-2 |
|--------------------------------------|---------------|

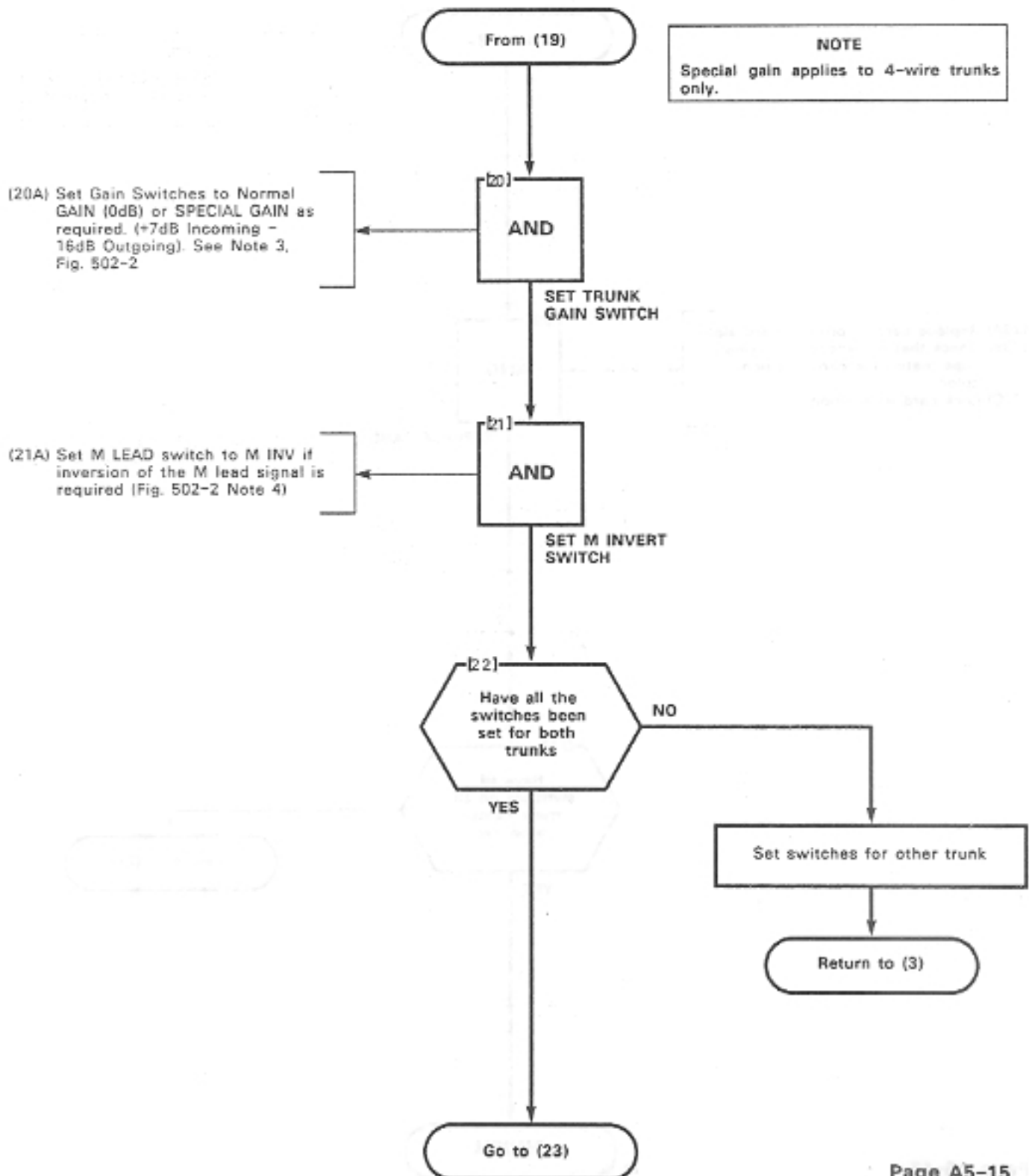
|             |            |
|-------------|------------|
| MAP200- 502 | FIG. 502-2 |
|-------------|------------|

|                        |            |
|------------------------|------------|
| Issue 1, December 1982 | FIG. 502-2 |
|------------------------|------------|

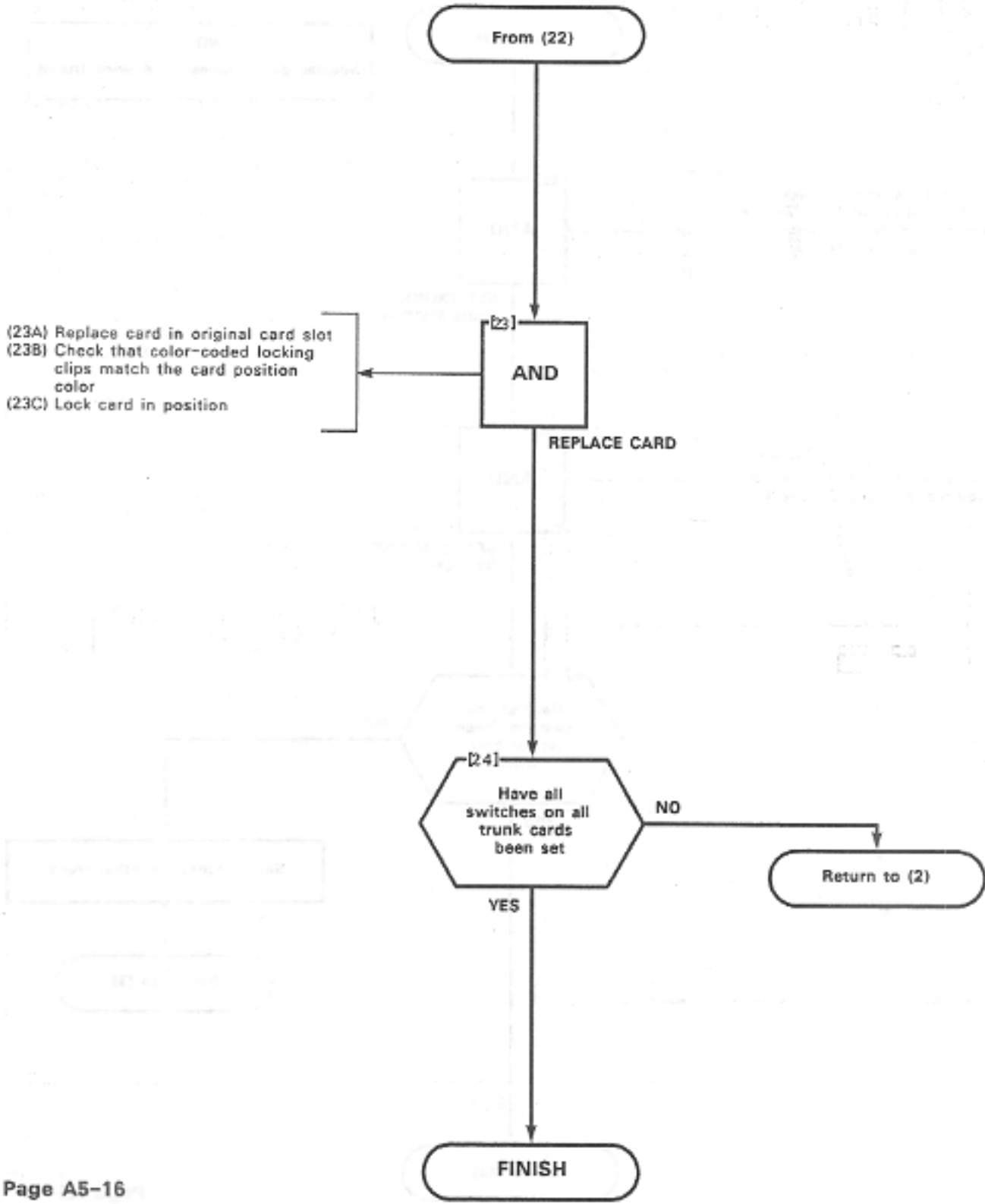
|              |            |
|--------------|------------|
| Sheet 5 of 8 | FIG. 502-2 |
|--------------|------------|

**NOTE**

Special gain applies to 4-wire trunks only.



|                                      |
|--------------------------------------|
| SET E&M/TIE TRUNK<br>OPTION SWITCHES |
| MAP200- 502                          |
| Issue 1, December 1982               |
| Sheet 6 of 8                         |



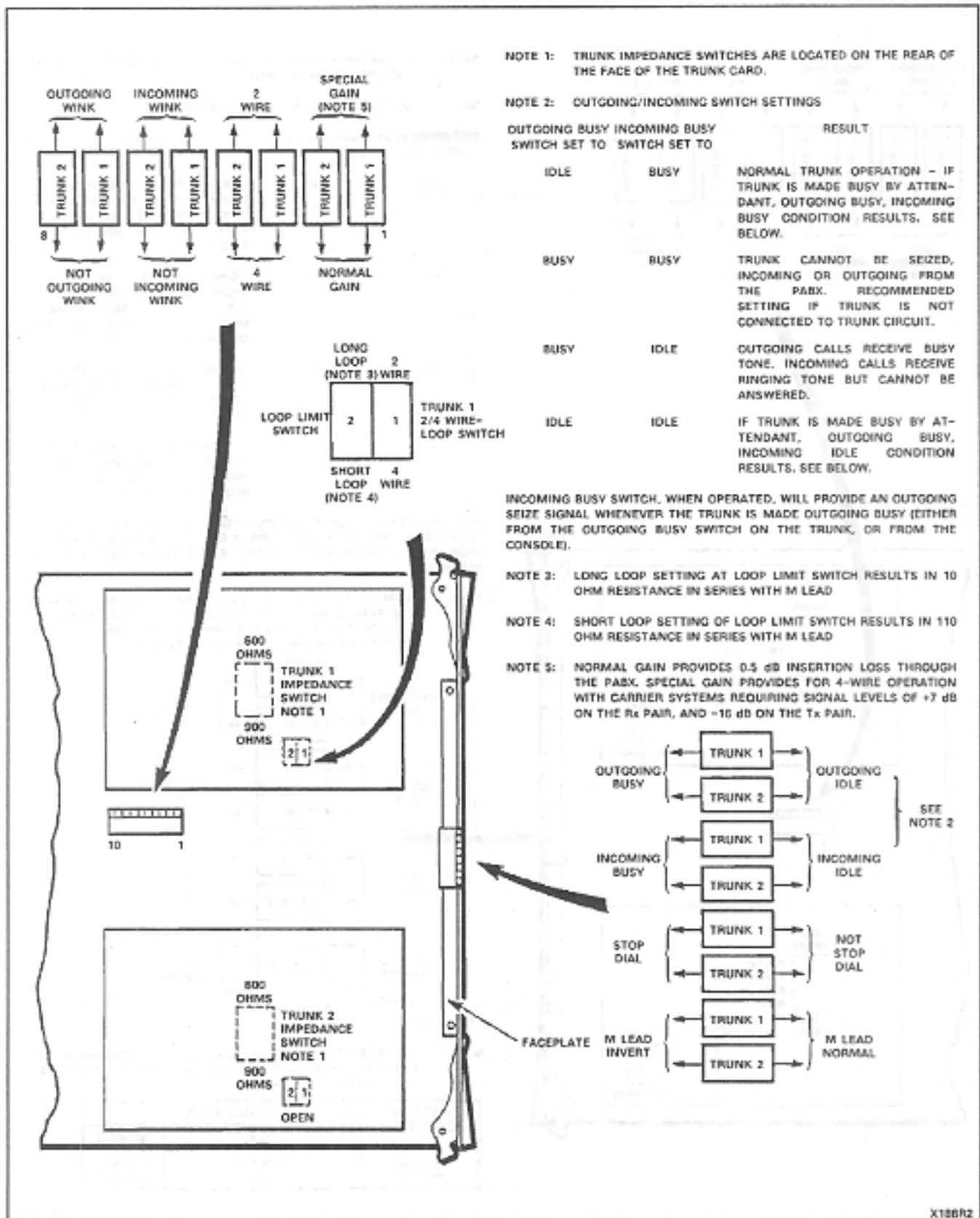


Fig. 502-1

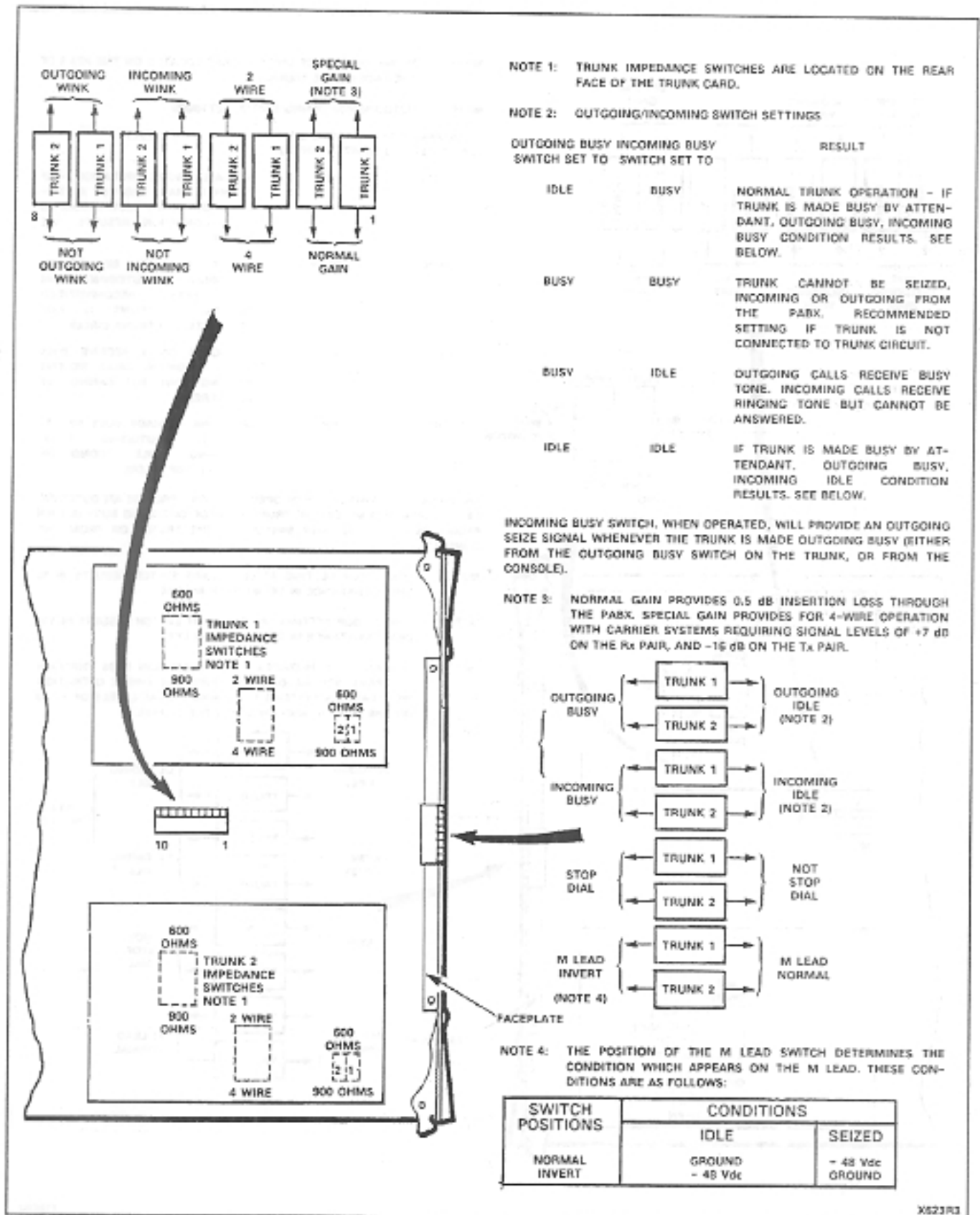


Fig. 502-2 E/M 9110-013-000

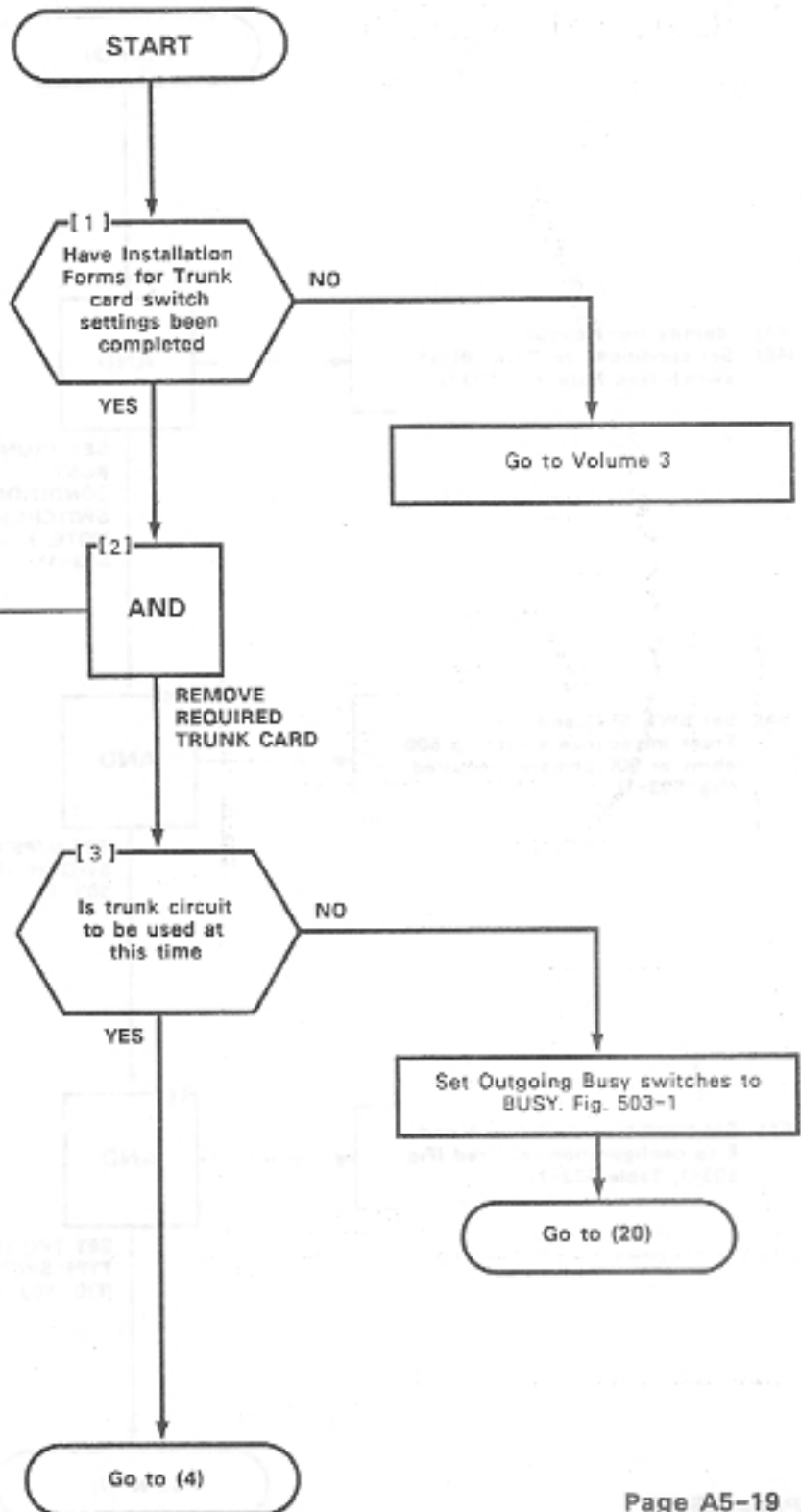
X52373

|                                      |
|--------------------------------------|
| SET DID/TIE TRUNK<br>OPTION SWITCHES |
| MAP200-503                           |
| Issue 1, December 1982               |
| Sheet 1 of 7                         |

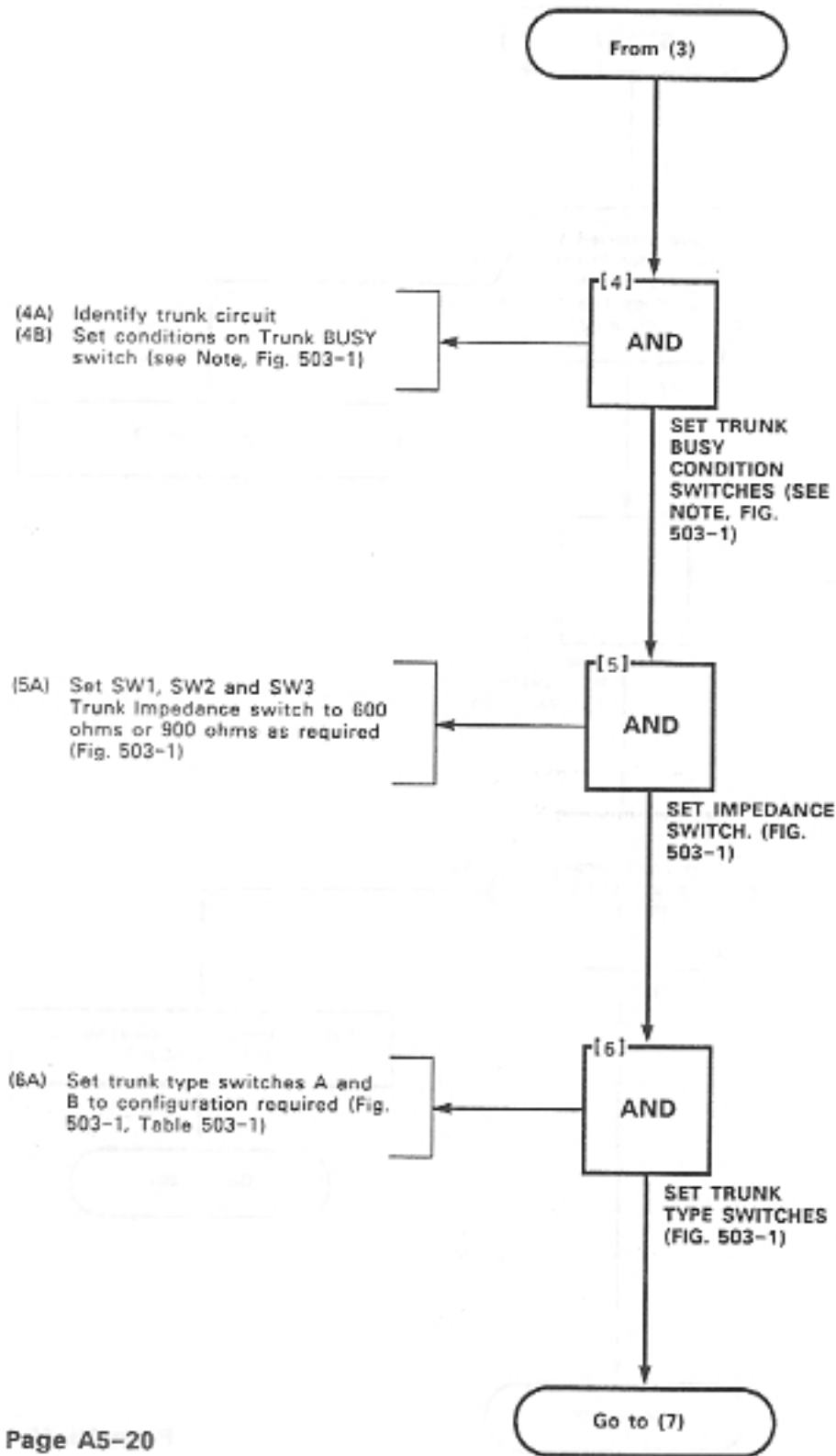
**CAUTION**  
When handling shelf cards or similar modules ensure that the procedures in paragraph 12.02 are followed.

**NOTE**  
Installation Forms for trunk card settings, Volume 3, must be completed before proceeding with this MAP.

- (2A) Locate required trunk circuit card 9110-031-000-NA
- (2B) Note card position
- (2C) Lift card locking clips located at the top and bottom of the card
- (2D) Remove trunk card 9110-031-000-NA



|                                      |
|--------------------------------------|
| SET DID/TIE TRUNK<br>OPTION SWITCHES |
| MAP200- 503                          |
| Issue 1, December 1982               |
| Sheet 2 of 7                         |



|                                      |
|--------------------------------------|
| SET DID/TIE TRUNK<br>OPTION SWITCHES |
|--------------------------------------|

|             |
|-------------|
| MAP200- 503 |
|-------------|

|                        |
|------------------------|
| Issue 1, December 1982 |
|------------------------|

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|--------------|
| Sheet 3 of 7 |
|--------------|

## NOTE

(8A) results in a 200 ms off-hook signal sent as a "ready to receive dial information" condition.

## NOTE

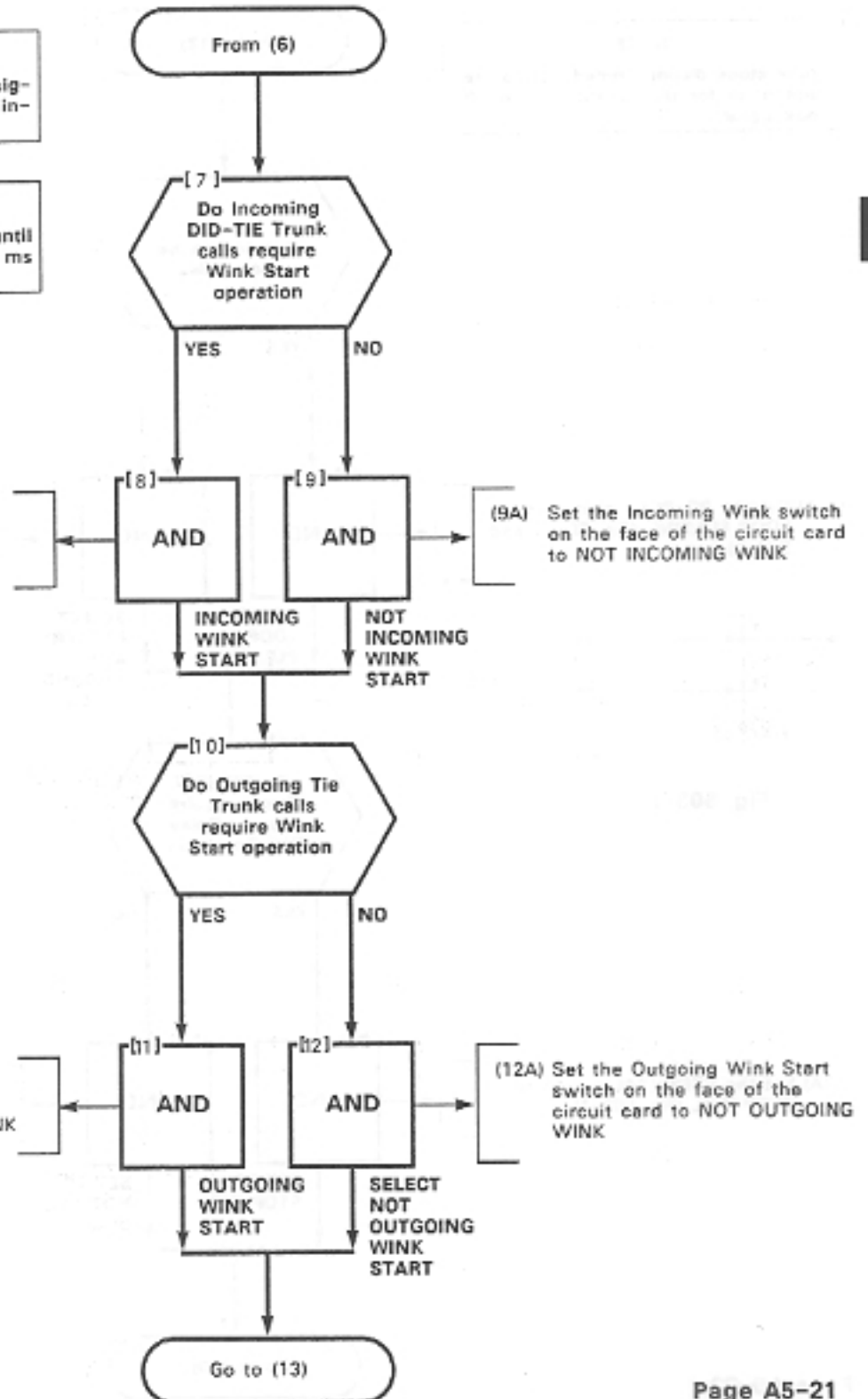
(11A) results in waiting period until off-hook signal of from 160 - 200 ms is received from far end.

(8A) Set the Incoming Wink switch on the face of the circuit card to INCOMING WINK

(9A) Set the Incoming Wink switch on the face of the circuit card to NOT INCOMING WINK

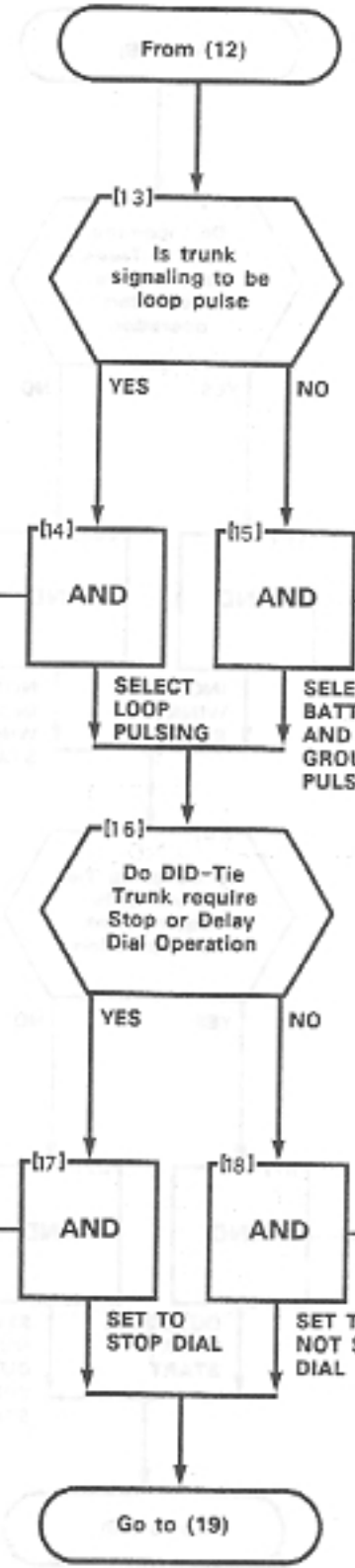
(11A) Set the Outgoing Wink Start switch on the face of the circuit card to OUTGOING WINK

(12A) Set the Outgoing Wink Start switch on the face of the circuit card to NOT OUTGOING WINK



|                                      |
|--------------------------------------|
| SET DID/TIE TRUNK<br>OPTION SWITCHES |
| MAP200- 503                          |
| Issue 1, December 1982               |
| Sheet 4 of 7                         |

**NOTE**  
Trunk stops dialing immediately on receipt of or for the duration of an off-hook signal.



(14A) Set the BG-PULS switch to LOOP PULSING (Fig. 503-1 and 503-2)

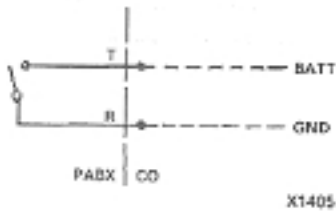


Fig. 503-2

(15A) Set the PG-PULS switch to BATTERY and GROUND PULSING (Fig. 503-1 and 503-3)

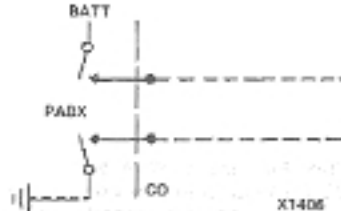
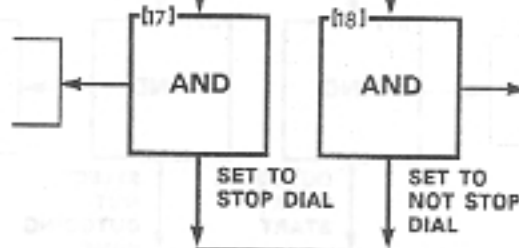


Fig. 503-3

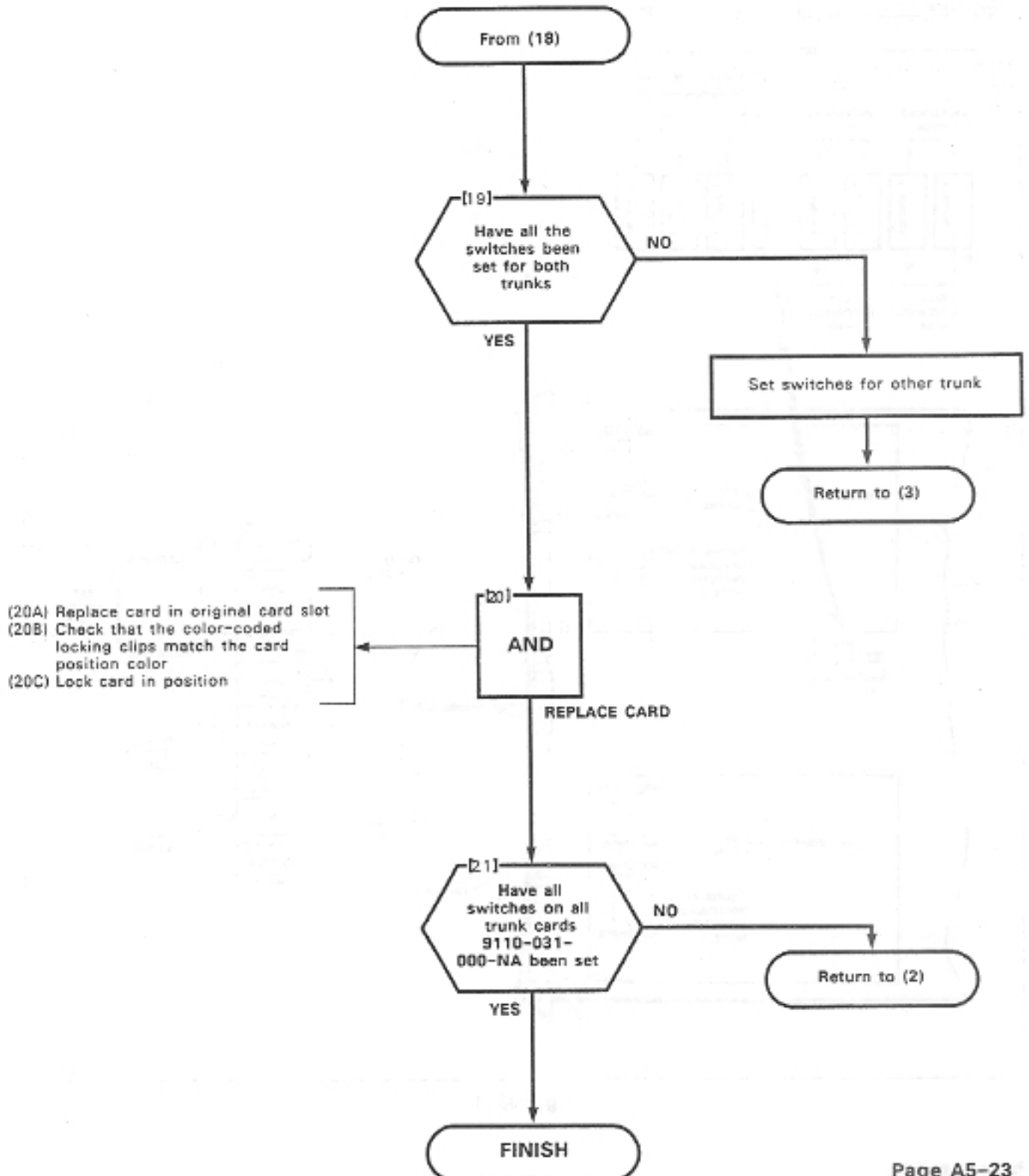
(17A) Set the STOP DIAL switch to STOP DIAL (Fig. 503-1)



(18A) Set the STOP DIAL switch to NOT STOP DIAL (Fig. 503-1)

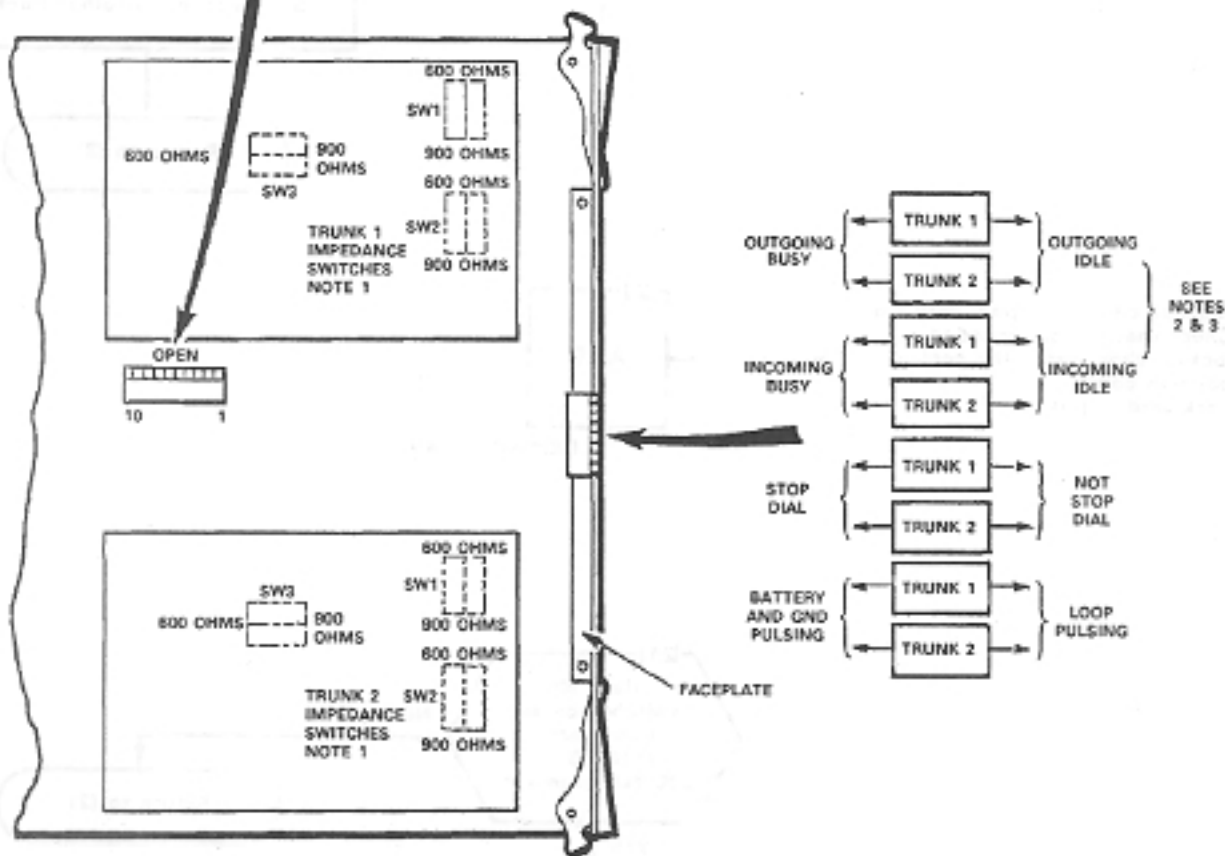
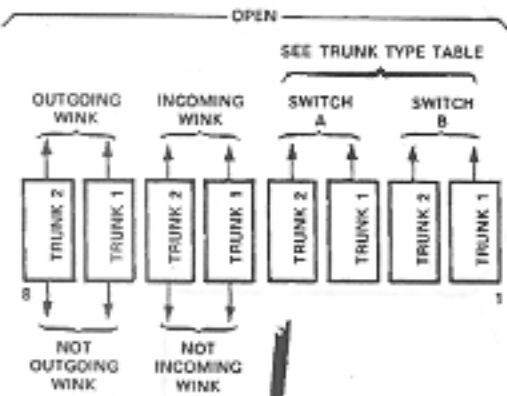


|                                      |
|--------------------------------------|
| SET DID/TIE TRUNK<br>OPTION SWITCHES |
| MAP200- 503                          |
| Issue 1, December 1982               |
| Sheet 5 of 7                         |



TRUNK TYPE TABLE

| TRUNK TYPE                       | SWITCH A | SWITCH B |
|----------------------------------|----------|----------|
| DID TRUNK                        | CLOSED   | CLOSED   |
| LOOP TIE TRUNK                   | CLOSED   | OPEN     |
| INCOMING DIAL -<br>OUTGOING AUTO | OPEN     | CLOSED   |
| NOT USED                         | OPEN     | OPEN     |



X578R2

Fig. 503-1

|                                      |
|--------------------------------------|
| SET DID/TIE TRUNK<br>OPTION SWITCHES |
| MAP200- 503                          |
| Issue 1, December 1982               |
| Sheet 7 of 7                         |

## NOTES

1. TRUNK IMPEDANCE SWITCHES ARE LOCATED ON THE REAR FACE OF THE TRUNK CARD.

## TRUNK BUSY SWITCHES

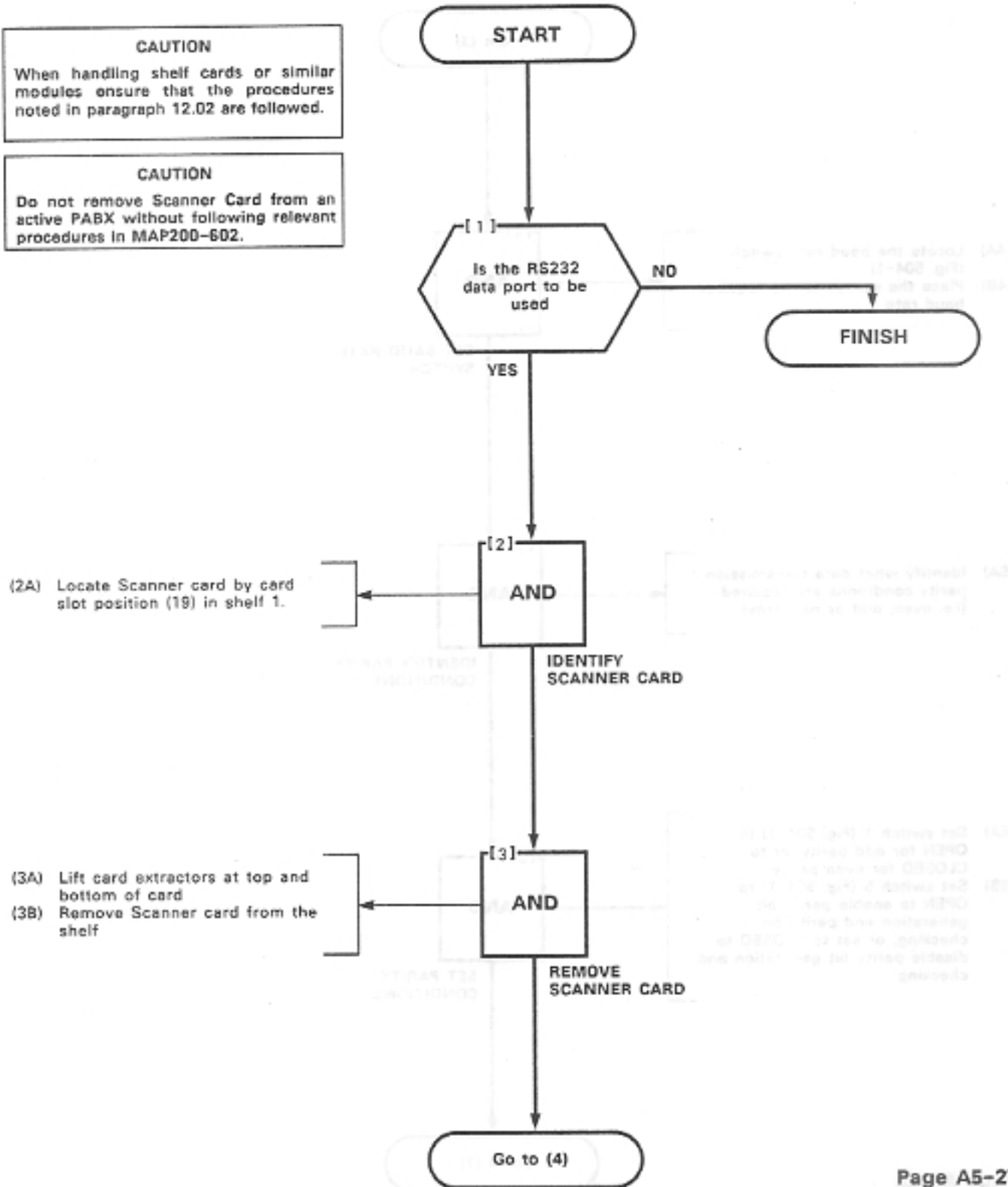
2. OUTGOING BUSY SWITCHES (1 PER TRUNK) CAN BE SET FOR EITHER OF THE FOLLOWING CONDITIONS:  
IDLE SETTING - NORMAL TRUNK OPERATION  
BUSY SETTING - TRUNK CANNOT BE SEIZED FOR OUTGOING CALL
3. THE "OUTGOING BUSY" CONDITION MAY BE SET EITHER BY THE OUTGOING BUSY SWITCH (NOTE 2), OR BY THE CONSOLE "TRUNK BUSY OUT" FUNCTION. WHEN THIS CONDITION IS IN EFFECT THE INCOMING BUSY SWITCH AFFECTS THE TRUNK CONDITION AS FOLLOWS:  
IDLE SETTING - NO ANSWER WILL BE GIVEN TO INCOMING TRUNK CALLS  
BUSY SETTING - A PERMANENT SEIZURE CONDITION IS GIVEN TOWARDS THE TRUNK.



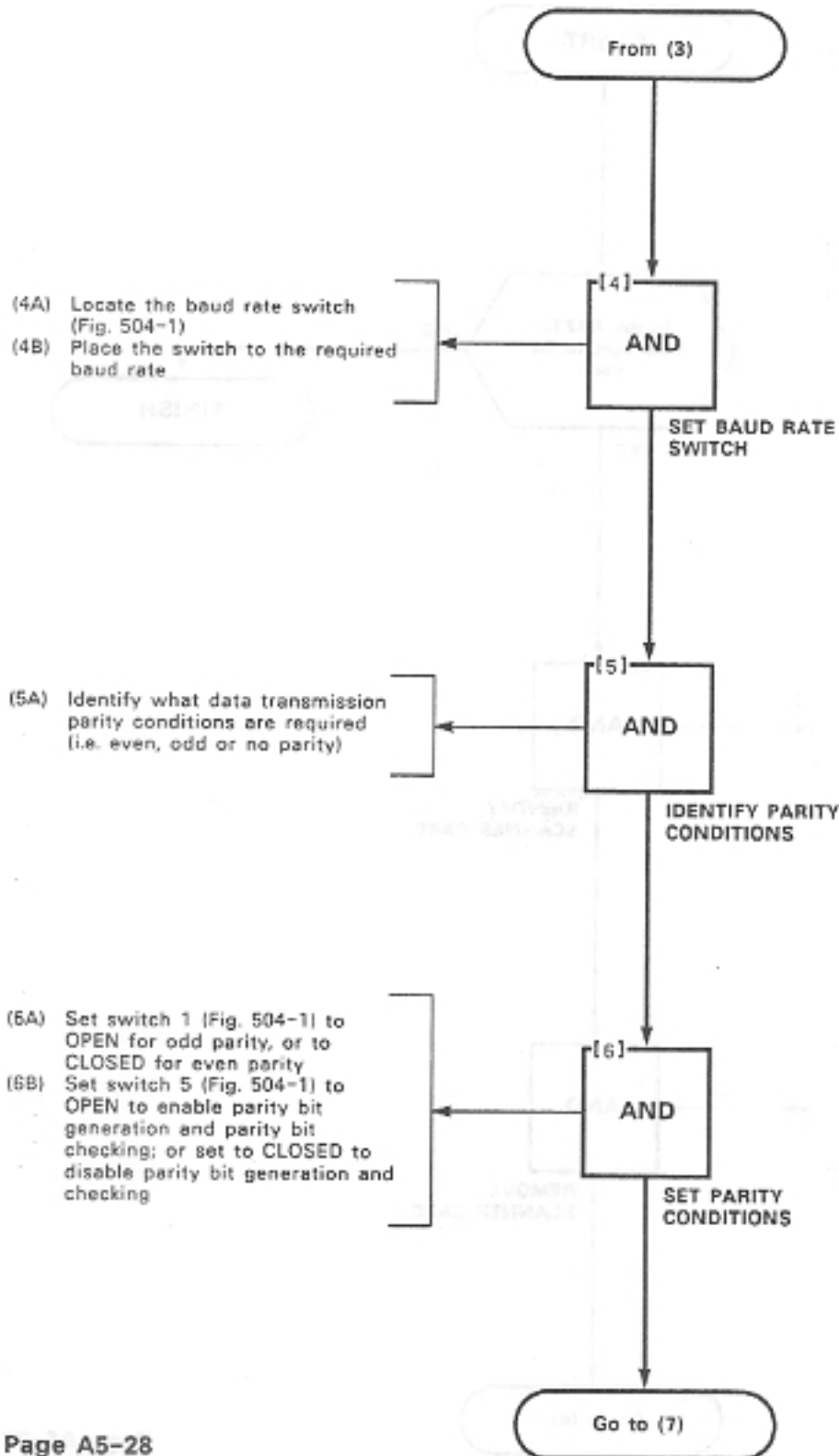
|                           |              |
|---------------------------|--------------|
| SET SCANNER CARD SWITCHES | 738          |
| MAP200-504                | 800-0001100  |
| Issue 1, December 1982    | 0000 2 0000  |
| Sheet 1 of 5              | 2 to 1 10000 |

**CAUTION**  
When handling shelf cards or similar modules ensure that the procedures noted in paragraph 12.02 are followed.

**CAUTION**  
Do not remove Scanner Card from an active PABX without following relevant procedures in MAP200-602.



|                           |               |
|---------------------------|---------------|
| SET SCANNER CARD SWITCHES | 7-4           |
| MAP200- 504               | 101-0021AM    |
| Issue 1, December 1982    | 1002 1/2 0000 |
| Sheet 2 of 5              | 70 7 0000     |

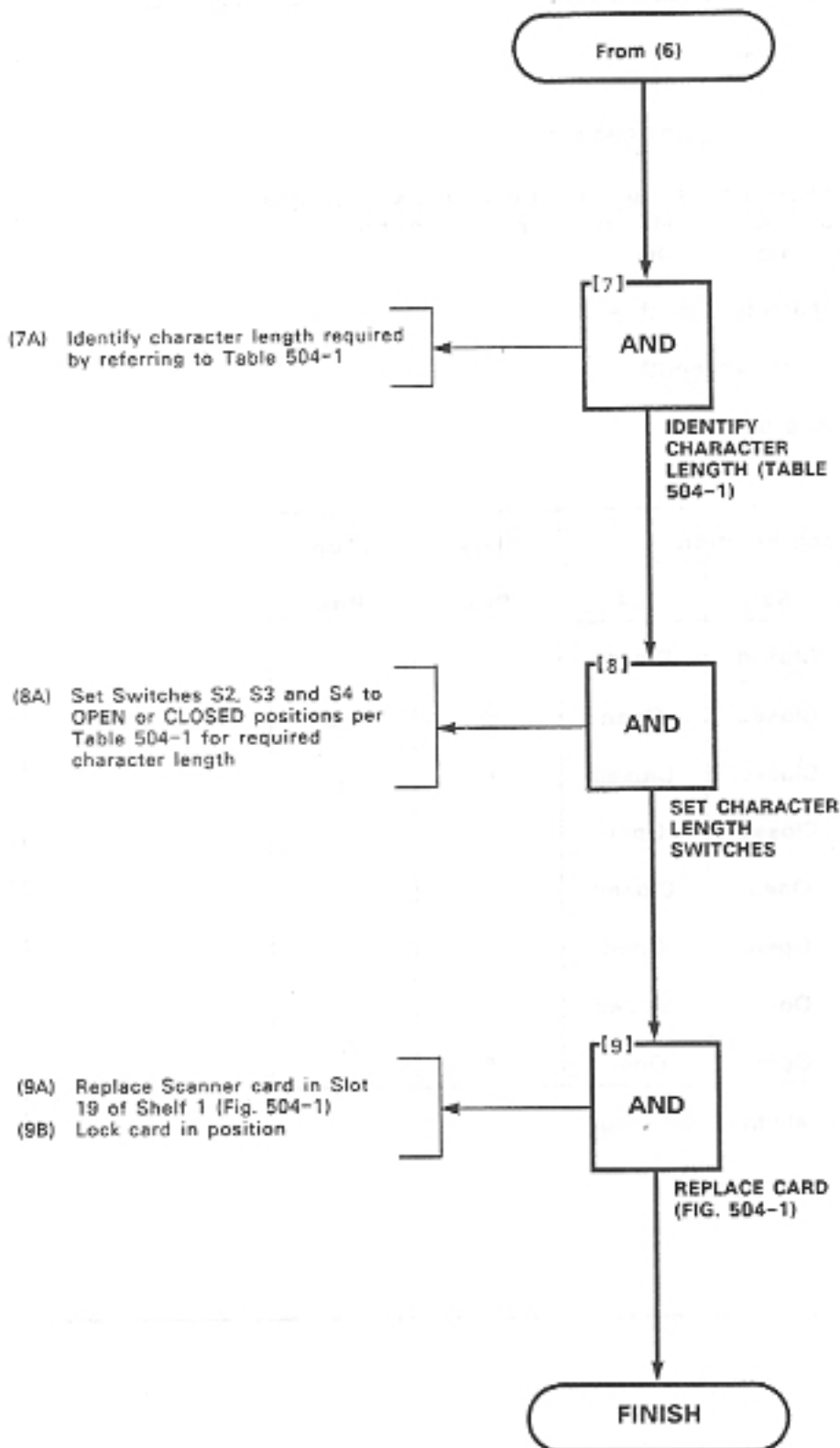


SET SCANNER CARD SWITCHES

MAP200-504

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Sheet 3 of 5



## SET SCANNER CARD SWITCHES

MAP200- 504

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Sheet 4 of 5

TABLE 504-1

Data Character Length (i.e. number of data and stop bits) is determined by switch settings as shown in the Table. These switches are as follows:

S2 - Character length A

S3 - Character length B

S4 - Stop bits

| Switch Position |        |        | Data Bits | Stop Bits |
|-----------------|--------|--------|-----------|-----------|
| S2              | S3     | S4     |           |           |
| Closed          | Closed | Closed | 5         | 1         |
| Closed          | Closed | Open   | 5         | 1.5       |
| Open            | Closed | Closed | 6         | 1         |
| Open            | Closed | Open   | 6         | 2         |
| Closed          | Open   | Closed | 7         | 1         |
| Closed          | Open   | Open   | 7         | 2         |
| Open            | Open   | Closed | 8         | 1         |
| Open            | Open   | Open   | 8         | 2         |

The Start Bit is always 1 bit long.

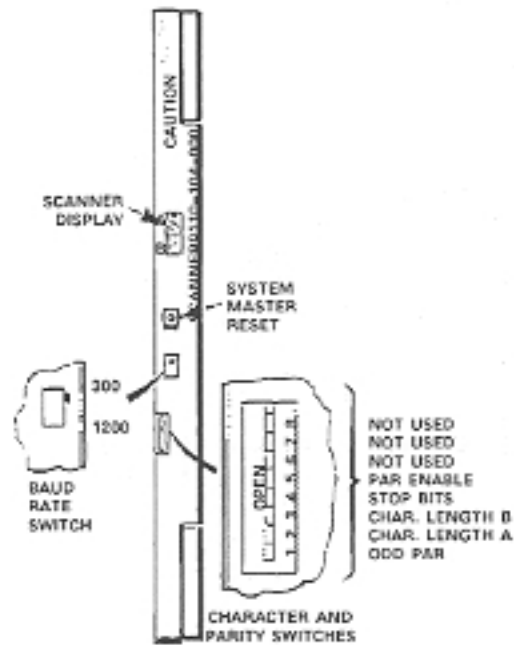


## SET SCANNER CARD SWITCHES

MAP200- 504

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Sheet 5 of 5



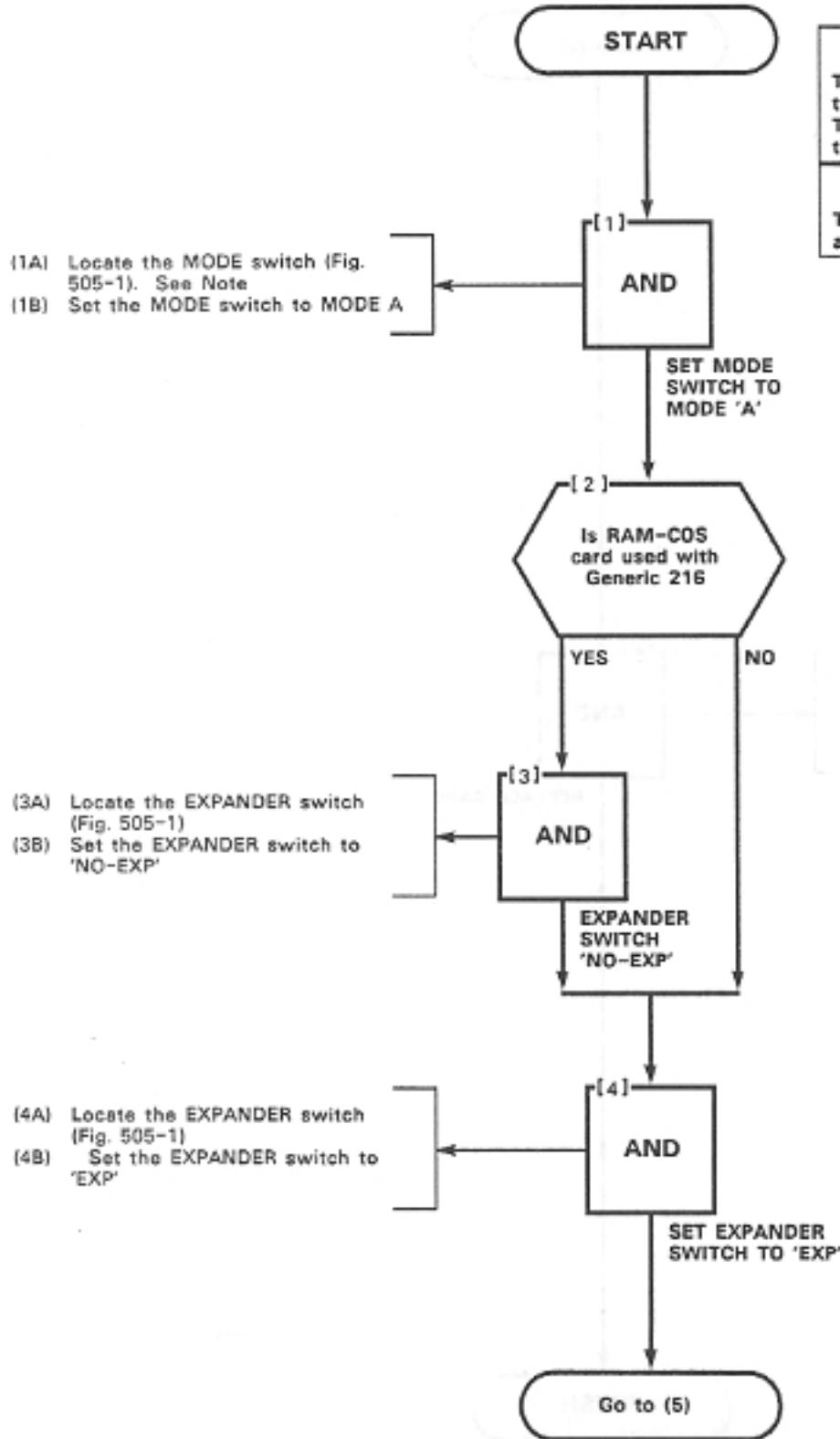
X3272R2

Fig. 504-1 Scanner Card Type -104-000



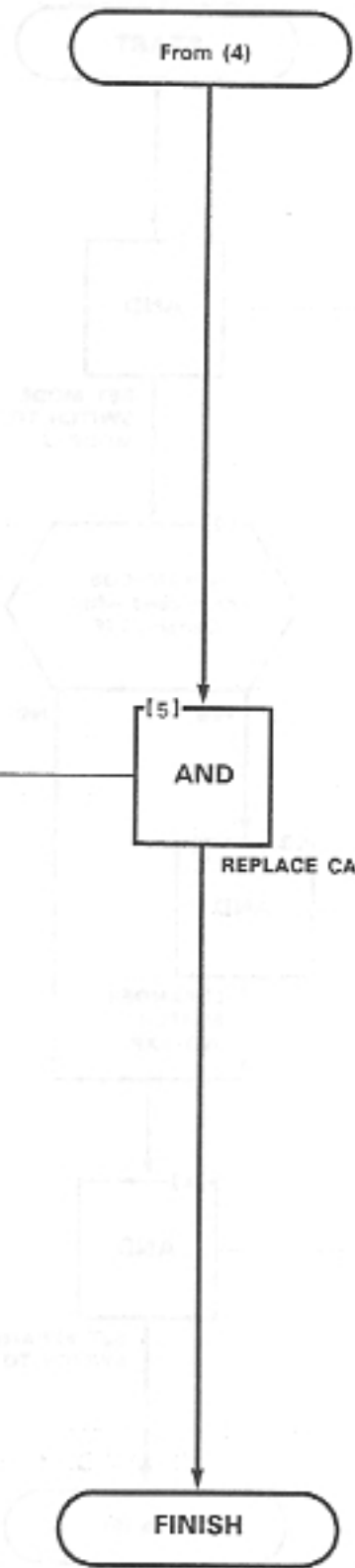
|                        |
|------------------------|
| SET RAM/COS SWITCHES   |
| MAP200-505             |
| Issue 1, December 1982 |
| Sheet 1 of 3           |

|   |
|---|
| <b>NOTE</b>   |
| This MAP concerns RAM/COS card type 9110-102-000 switch settings. Type 9110-002-000 does not have these switches. |
| <b>NOTE</b>   |
| This MAP applies to Generics 204, 205 and 216.  |



|                        |         |
|------------------------|---------|
| SET RAM/COS SWITCHES   | MAP 200 |
| MAP200- 505            |         |
| Issue 1, December 1982 |         |
| Sheet 2 of 3           |         |

JTDW  
 0100 4001000000 000000 0000 0000  
 000000 000000 000-000-0118 0000  
 0000 000 0000 000-000-0118 0000  
 00000000000000000000000000000000  
 JTDW  
 000 000 000000 00 000 00 0000 0000

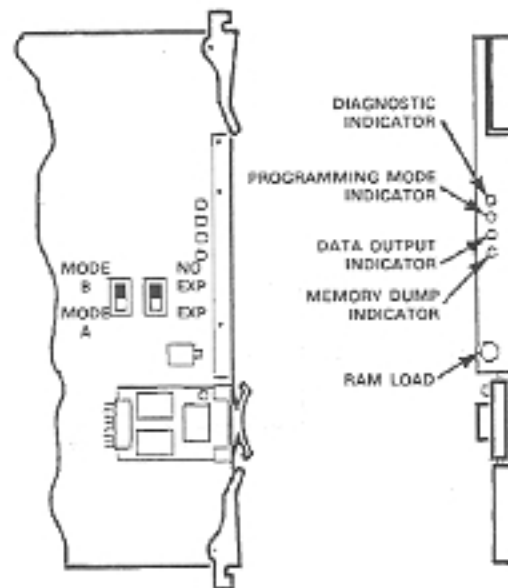


## SET RAM/COS SWITCHES

MAP200- 505

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X3165

Fig. 505-1 RAM COS Card

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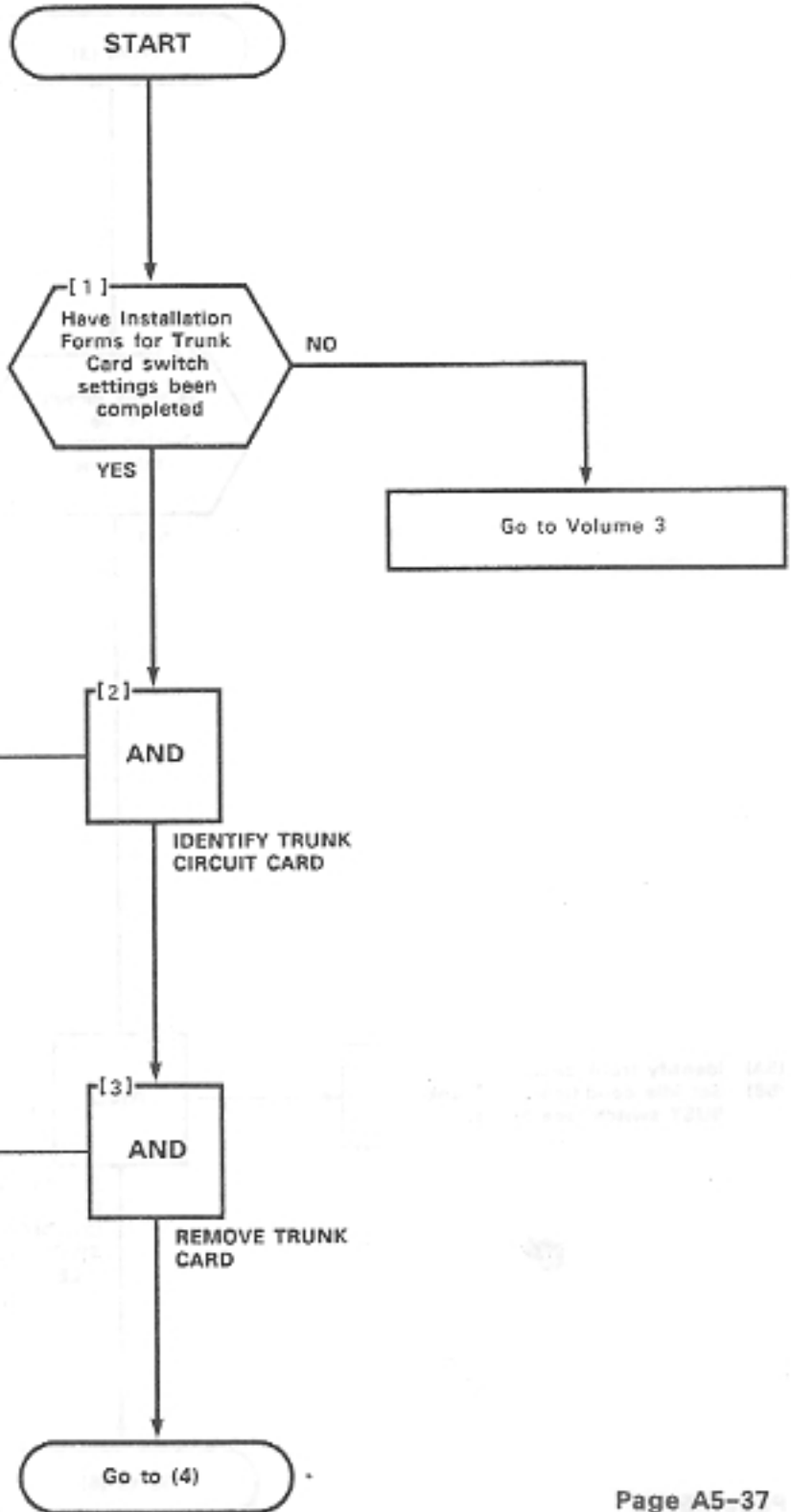


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|---|
| SET CO TRUNK SWITCHES<br>(TYPES -211/311) |
| MAP200- 506                               |
| Issue 1, December 1982                    |
| Sheet 1 of 8                              |

**CAUTION**  
When handling shelf cards or similar modules ensure that the procedures noted in paragraph 12.02 are followed.

**NOTE**  
Use MAP200-501 when setting switches on Trunk Card Types 9110-011-000 or -111-000.

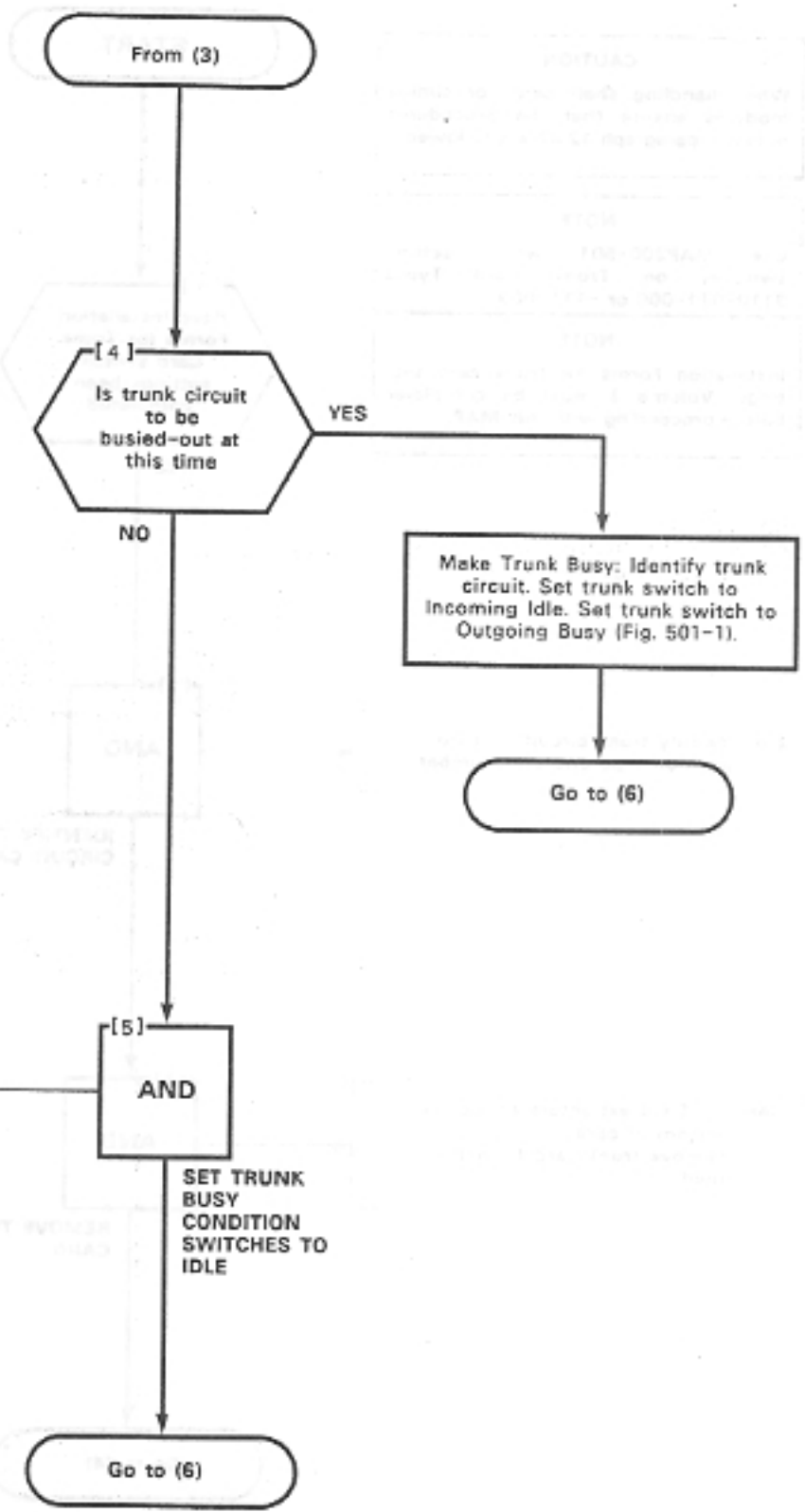
**NOTE**  
Installation Forms for trunk card settings, Volume 3 must be completed before proceeding with this MAP.



(2A) Identify trunk circuit by card position type and unit number

(3A) Lift Card extractors at top and bottom of card  
(3B) Remove trunk card from the shelf

|   |
|---|
| SET CO TRUNK SWITCHES<br>(TYPES -211/311) |
| MAP200- 506                               |
| Issue 1, December 1982                    |
| Sheet 2 of 8                              |



(5A) Identify trunk circuit  
 (5B) Set idle conditions on Trunk BUSY switch (see Notes)

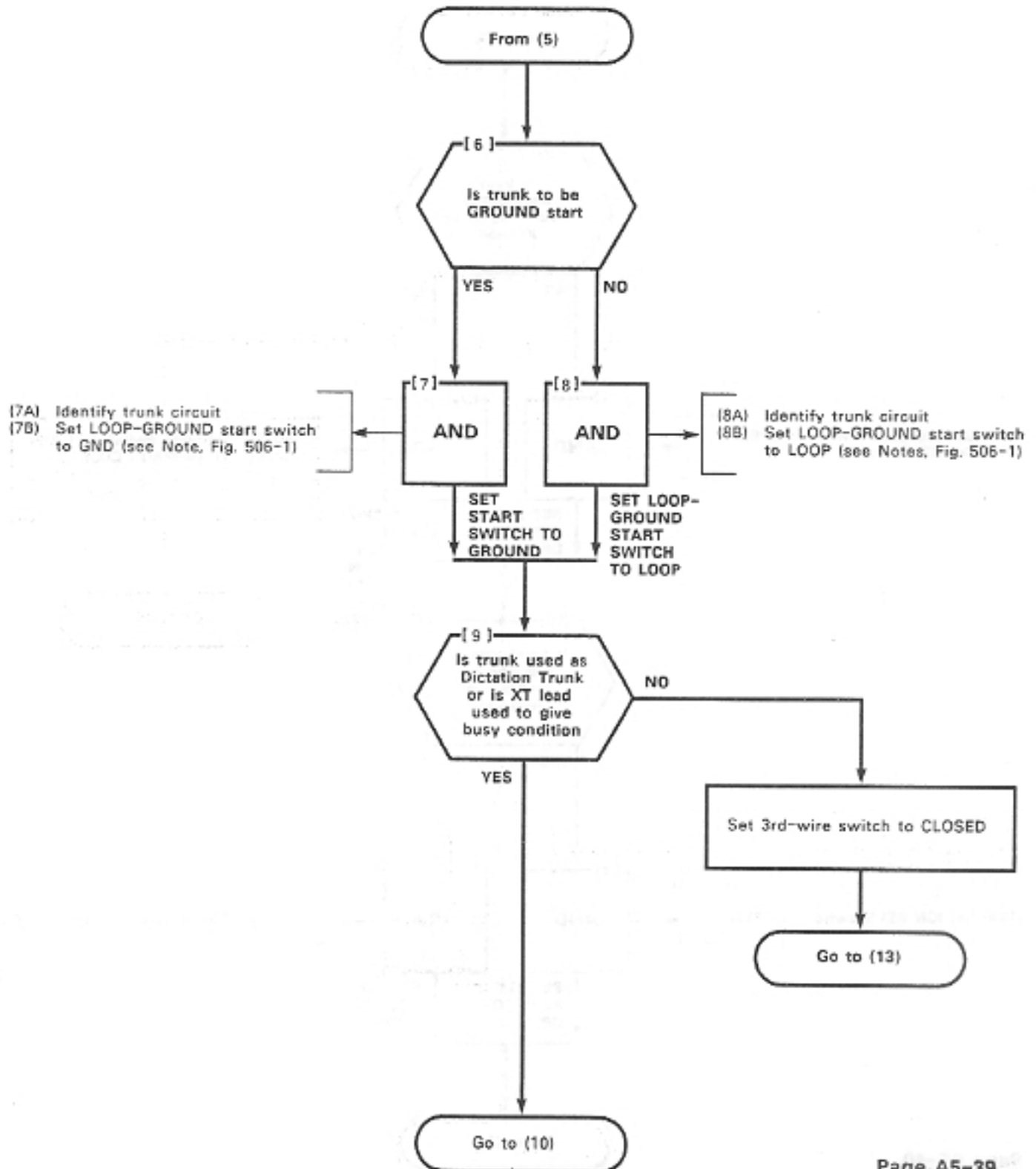


|   |
|---|
| SET CO TRUNK SWITCHES<br>(TYPES -211/311) |
|---|

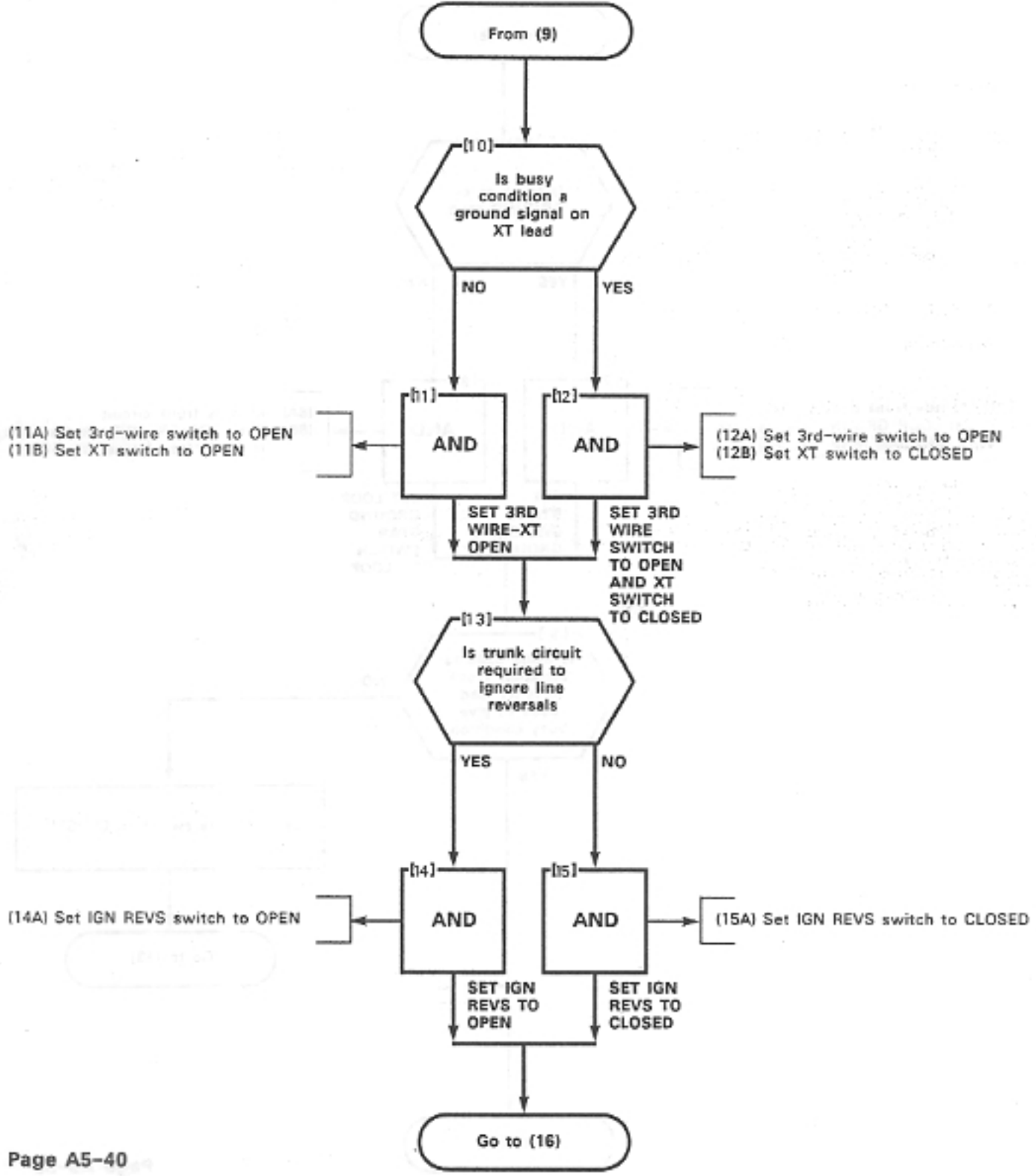
|             |
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| MAP200- 506 |
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| Issue 1, December 1982 |
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| Sheet 3 of 8 |
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|   |
|---|
| SET CO TRUNK SWITCHES<br>(TYPES -211/311) |
| MAP200- 506                               |
| Issue 1, December 1982                    |
| Sheet 4 of 8                              |

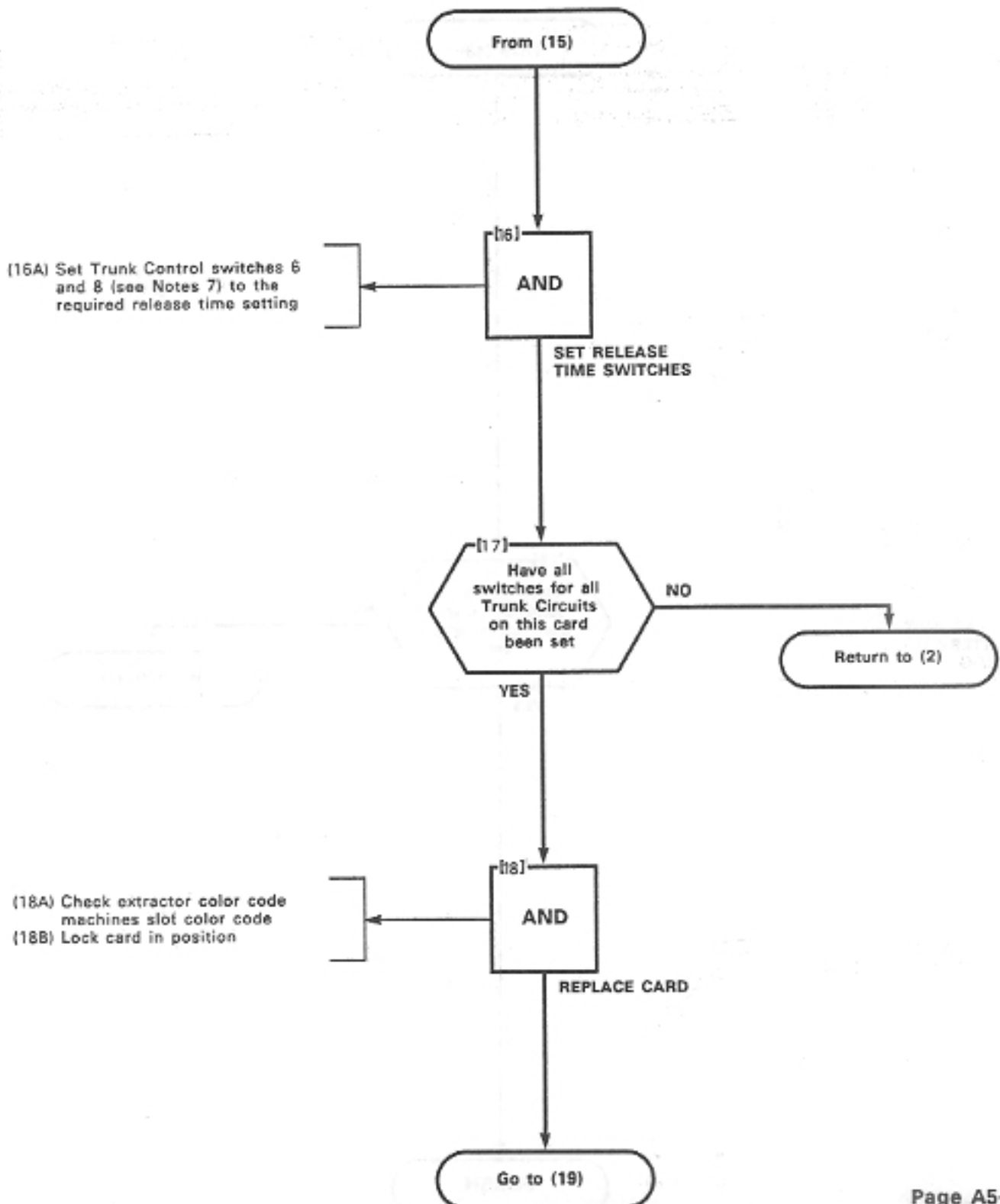


|   |
|---|
| SET CO TRUNK SWITCHES<br>(TYPES -211/311) |
|---|

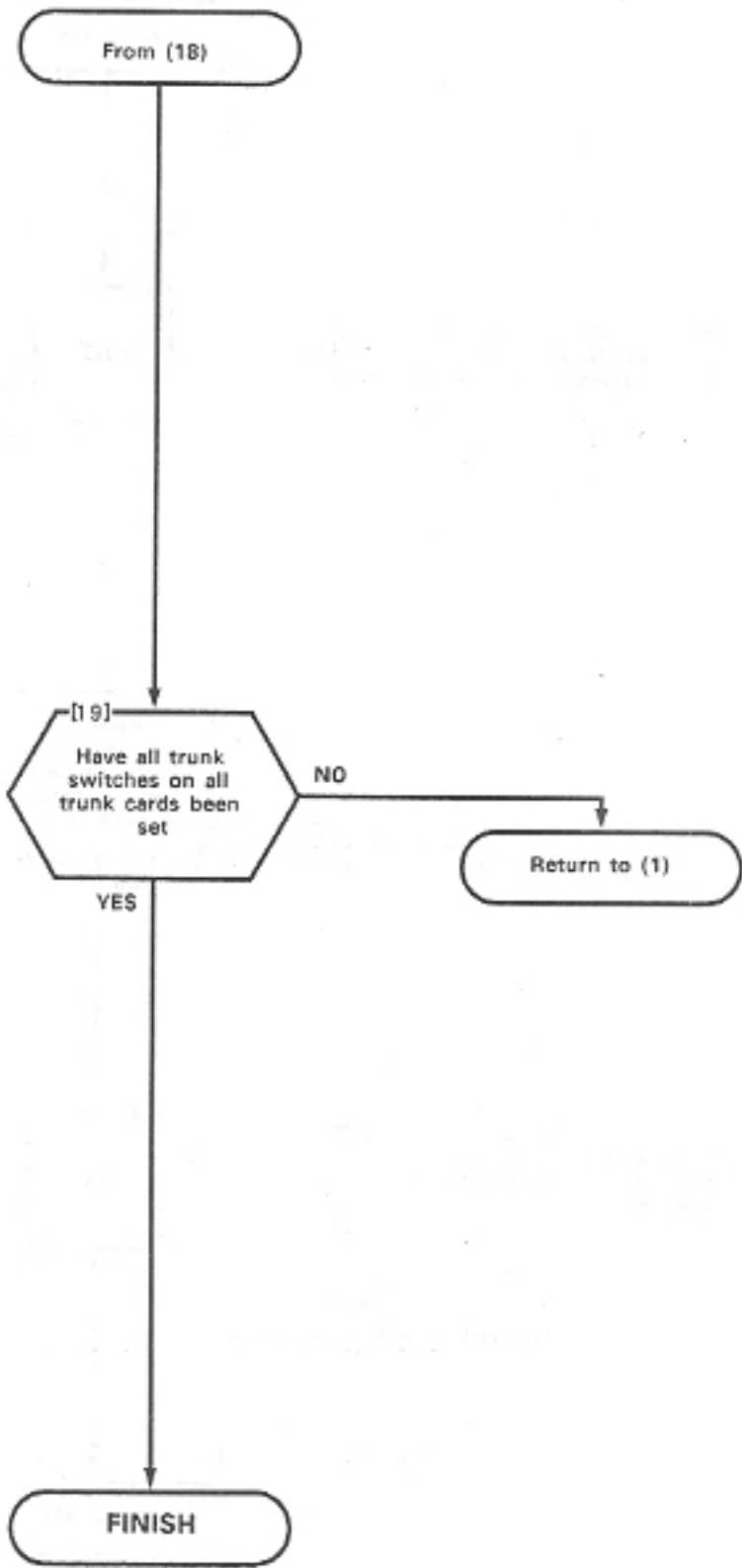
|            |
|------------|
| MAP200-506 |
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|------------------------|
| Issue 1, December 1982 |
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|              |
|--------------|
| Sheet 5 of 8 |
|--------------|



|   |
|---|
| SET CO TRUNK SWITCHES<br>(TYPES -211/311) |
| MAP200- 506                               |
| Issue 1, December 1982                    |
| Sheet 6 of 8                              |



SET CO TRUNK SWITCHES  
(TYPES -211/311)

MAP200- 506

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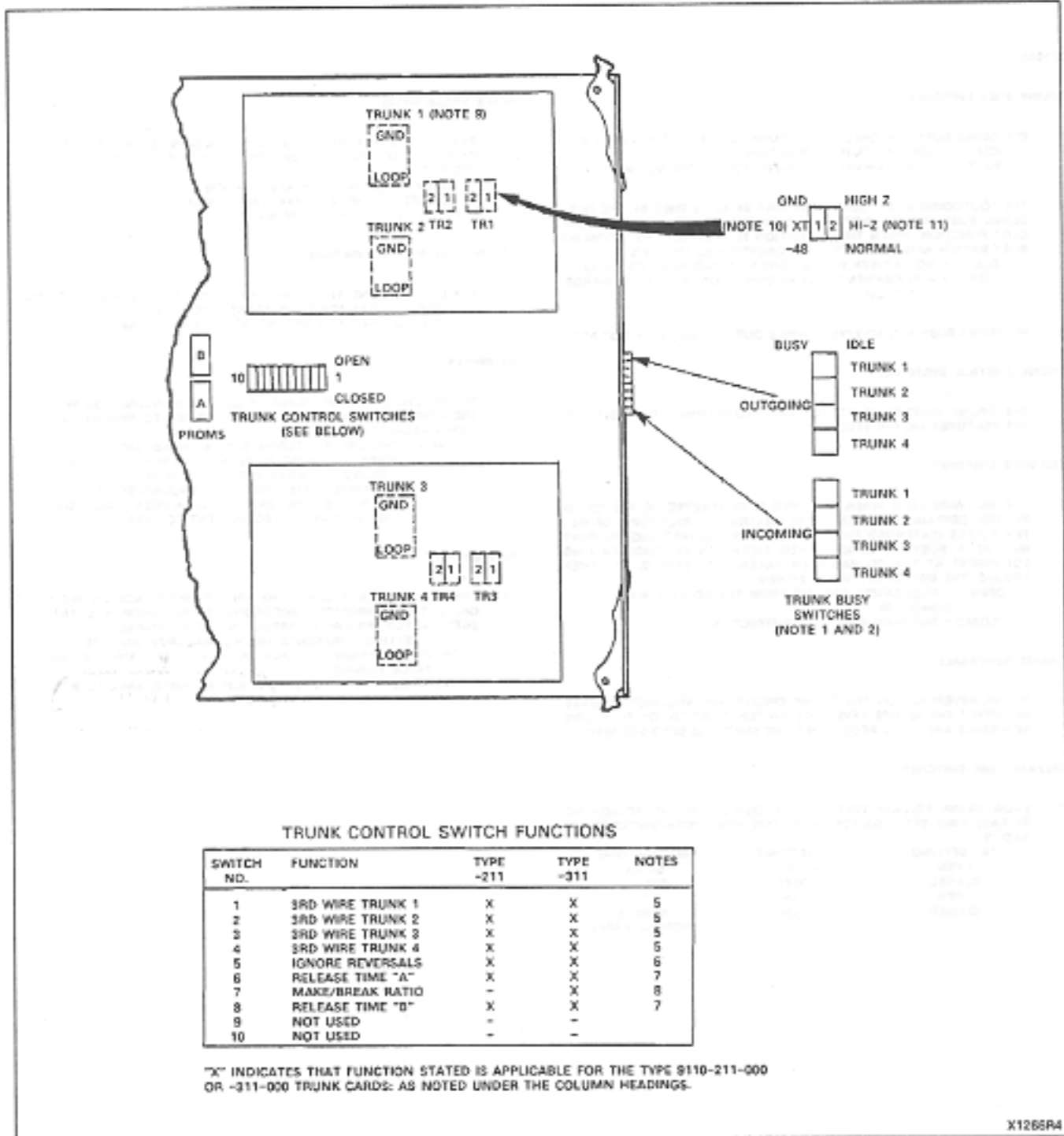


Fig. 506-1 Trunk Card Switch Identification

|   |
|---|
| SET CO TRUNK SWITCHES<br>(TYPES -211/311) |
| MAP200- 506                               |
| Issue 1, December 1982                    |
| Sheet 8 of 8                              |

## NOTES:

## TRUNK BUSY SWITCHES

1. OUTGOING BUSY SWITCHES (1 PER TRUNK) CAN BE SET FOR EITHER:  
IDLE - NORMAL TRUNK OPERATION  
BUSY - TRUNK CANNOT BE SEIZED FOR OUTGOING CALL
2. THE "OUTGOING BUSY" CONDITION MAY BE SET EITHER BY THE OUTGOING BUSY SWITCH (NOTE 1), OR BY THE CONSOLE "TRUNK BUSY OUT" FUNCTION. WHEN THIS CONDITION IS IN EFFECT THE INCOMING BUSY SWITCH AFFECTS THE TRUNK CONDITION AS FOLLOWS:  
IDLE - NO ANSWER WILL BE GIVEN TO INCOMING CO CALLS  
BUSY - A PERMANENT SEIZURE CONDITION IS GIVEN TOWARDS THE CO
3. INCOMING BUSY HAS NO EFFECT WHILE OUTGOING BUSY IS NOT SET

## TRUNK CONTROL SWITCHES

4. THE TRUNK CONTROL SWITCHES ARE PROGRAMMED TO RESULT IN THE FEATURES SHOWN BELOW.

## 3RD WIRE SWITCHES

5. THE 3RD WIRE LEAD WHEN REQUIRED IS CONNECTED TO THE CO TO PROVIDE CERTAIN FACILITIES. THESE INCLUDE THE RECORDING OF METER PULSES (EXTENDED FROM THE CO); OR ANOTHER REQUIREMENT MAY BE A BUSY CONDITION WHEN DICTATION OR CODE CALLING EQUIPMENT AT THE CO HAS BEEN TAKEN INTO SERVICE BY OTHER TRUNKS. THE SWITCH SETTING IS EITHER:  
OPEN - RECOGNIZES GROUND FROM THE CO AS A BUSY CONDITION  
CLOSED - 3RD WIRE SWITCH IS INEFFECTIVE

## IGNORE REVERSALS

6. IF LINE REVERSALS ON THE TRUNK CIRCUIT ARE REQUIRED TO HAVE NO EFFECT THE IGNORE REVERSALS SWITCH IS SET TO "OPEN". IF LINE REVERSALS ARE TO BE RECOGNIZED THE SWITCH IS SET TO CLOSED.

## RELEASE TIME SWITCHES

7. VALID TRUNK RELEASE TIMES ARE RECOGNIZED BY THE FOLLOWING RELEASE TIME SETTINGS FOR FROM TYPE -0204 WITH SWITCHES "A" AND "B":

| "A" SETTING | "B" SETTING | RELEASE TIME              |
|-------------|-------------|---------------------------|
| OPEN        | CLOSED      | 50 ms                     |
| CLOSED      | CLOSED      | 500 ms                    |
| OPEN        | OPEN        | 2.5 s                     |
| CLOSED      | OPEN        | INFINITE<br>(NON-RELEASE) |

## MAKE/BREAK RATIO

8. THE MAKE/BREAK RATIO SWITCH FUNCTION IS PROGRAMMED FOR TYPE 9110-311 ONLY. THE SWITCH SETTINGS RESULT IN THE FOLLOWING RATIOS:  
OPEN - 33/66 (33% MAKE; 66% BREAK)  
CLOSED - 40/60 (40% MAKE; 60% BREAK)  
TYPE 9110-211 IS FIXED AT 40/60 RATIO.

## LOOP/GROUND START SWITCHES

9. THE LOOP/GROUND START SWITCHES (1 PER TRUNK) CAN BE SET TO:  
LOOP - USED FOR LOOP-START TYPE TRUNKS  
GROUND - USED FOR GROUND-START TYPE TRUNKS

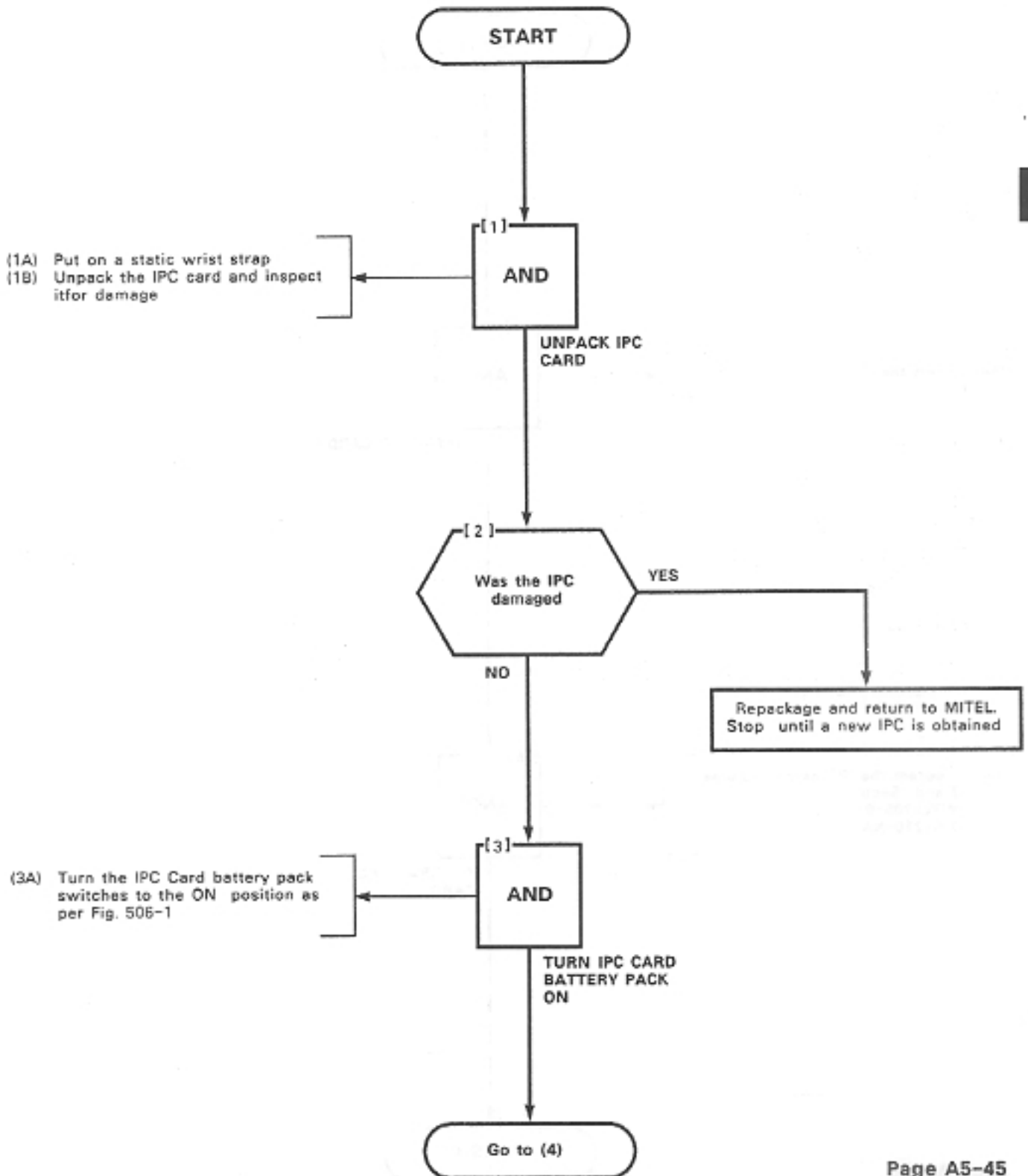
## XT SWITCH

10. THE XT SWITCH (1 PER TRUNK) IS USED IN CONJUNCTION WITH THE 3RD WIRE SWITCH (NOTE 5) AND CAN BE SET TO PROVIDE THE FOLLOWING CONDITIONS:  
-48 V - THE CIRCUIT RESPONDS TO A -48 Vdc SIGNAL (E.G. WHEN IT IS A METER PULSE OR A BUSY CONDITION). A GROUND IS EQUIVALENT TO AN OPEN.  
GND - THE CIRCUIT RESPONDS TO A GROUND SIGNAL (E.G. WHEN IT IS A METER PULSE OR A BUSY CONDITION). A -48 Vdc SIGNAL IS EQUIVALENT TO OPEN.

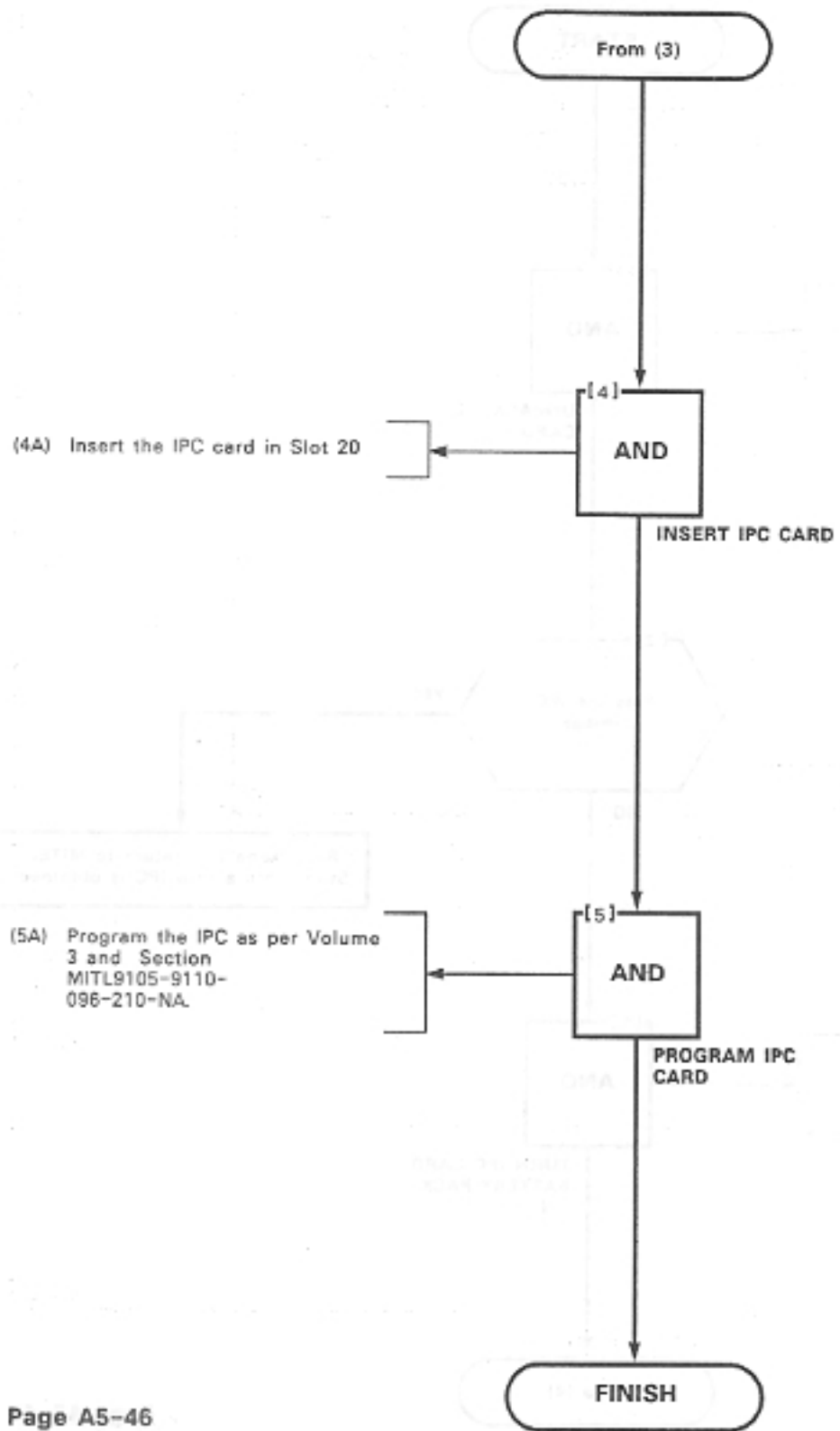
## HI-Z SWITCH

11. THE HI-Z SWITCH ALLOWS THE PROPER IMPEDANCE ON INCOMING CALLS, TO BE PRESENTED ACCORDING TO REQUIREMENTS. THE TWO SETTINGS FOR THE SWITCH RESULT IN THE FOLLOWING:  
HI-Z SETTING - PRESENTS THE NORMAL IMPEDANCE TO INCOMING RINGING SIGNALS, BUT A HIGH BLOCKING IMPEDANCE TO VOICE SIGNALS  
NORM SETTING - PRESENTS A NORMAL IMPEDANCE TO BOTH RINGING SIGNALS AND VOICE SIGNALS

|                        |
|------------------------|
| SET IPC BATTERY SWITCH |
| MAP200- 507            |
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|                        |
|------------------------|
| SET IPC BATTERY SWITCH |
| MAP200- 507            |
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| Sheet 2 of 3           |





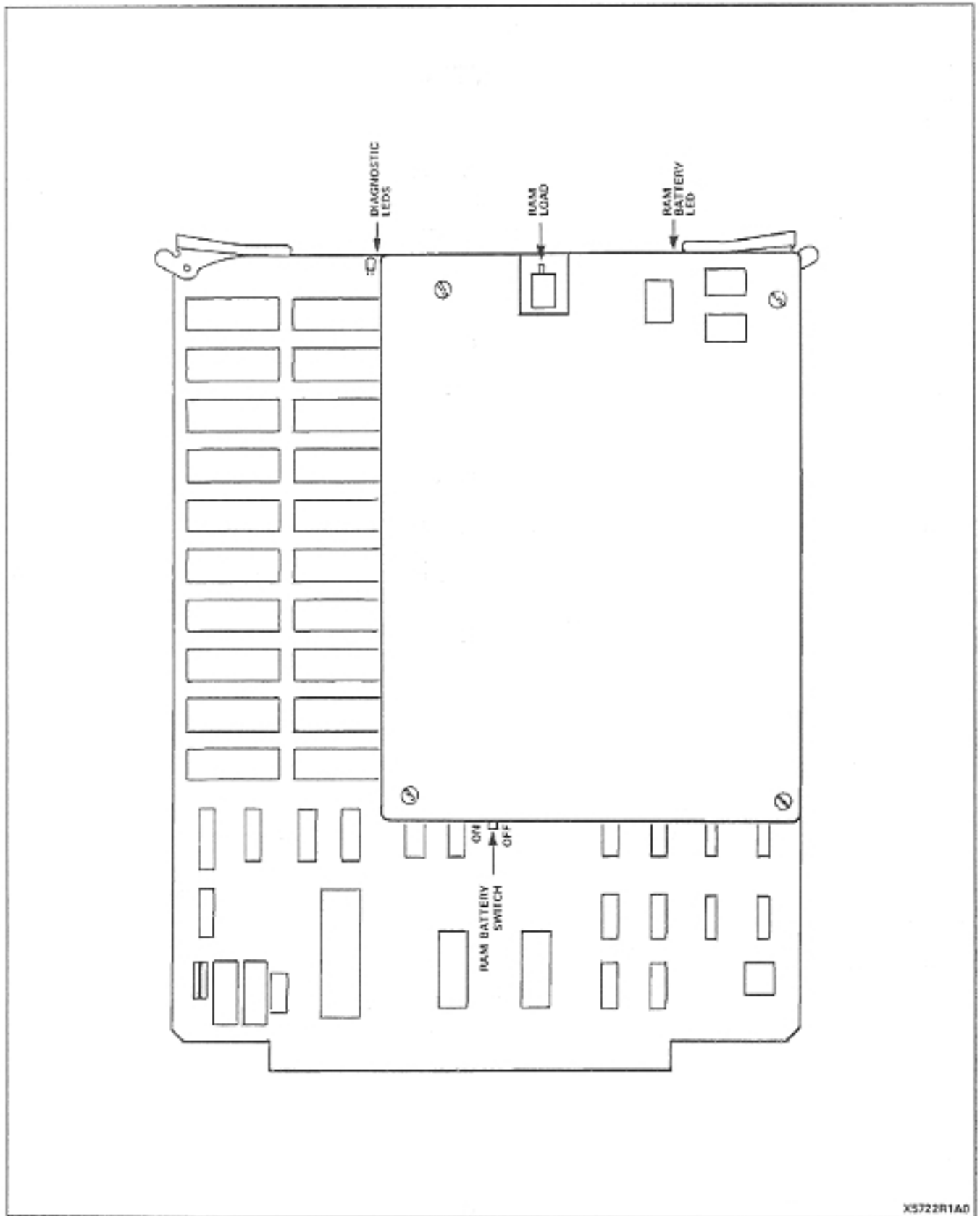


Fig. 507-1 IPC Card

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### CONCLUSION

The results of the study indicate that...

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## APPENDIX 6

### ADDITIONAL EQUIPMENT INSTALLATION

#### 1. GENERAL

A6.01 The MAP's contained in this Appendix are concerned with additional installation requirements which may be required during initial or subsequent installation phases.

A6.02 A list of these additional requirements is shown in Table A6-1.

TABLE A6-1  
ADDITIONAL INSTALLATION REQUIREMENTS

| Step | Procedure                                     | Reference  |
|------|---|------------|
| 1    | Shelf 2 Installation (SX-200)                 | MAP200-601 |
| 2    | Install New Cards                             | MAP200-602 |
| 3    | Reserve Power Supply Installation (SX-200)    | MAP200-603 |
| 4    | Console Interface Board Installation (SX-200) | MAP200-604 |
| 5    | Backplane Translator Board Installation       | MAP200-605 |
| 6    | Installation of RCP Card                      | MAP200-606 |
| 7    | Reserve Power Supply Installation (SX-100)    | MAP200-607 |
| 8    | Printer Installation                          | MAP200-608 |
| 9    | Static Wrist Strap Installation               | MAP200-609 |



|                               |             |
|-------------------------------|-------------|
| SHELF 2 INSTALLATION (SX-200) |             |
| MAP200-601                    | 158-1021A01 |
| Issue 1, December 1982        | 158-1021A01 |
| Sheet 1 of 6                  | 158-1021A01 |

**TOOLS REQUIRED**  
 1 Screwdriver 1/4 inch blade  
 1 Screwdriver Phillips

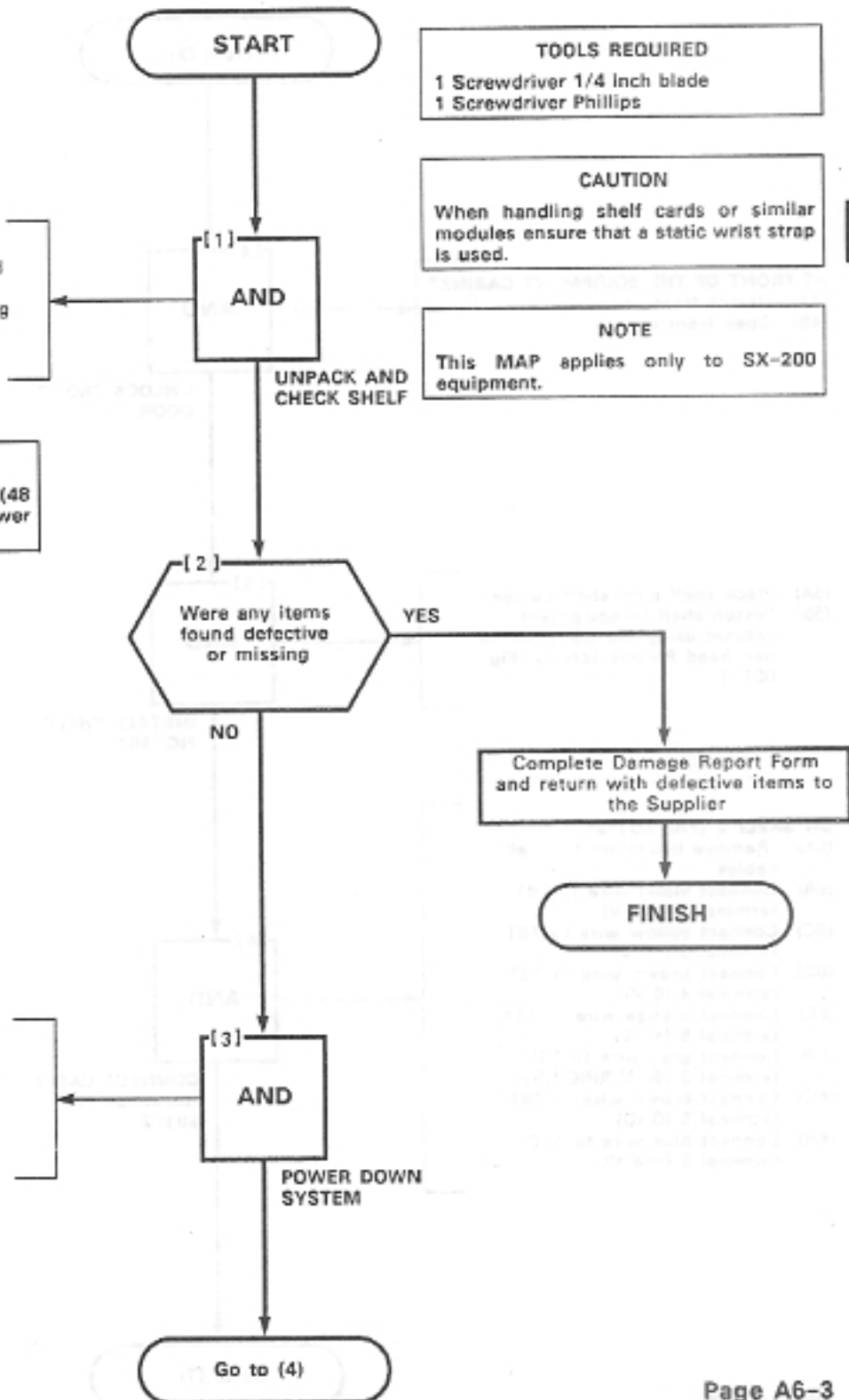
**CAUTION**  
 When handling shelf cards or similar modules ensure that a static wrist strap is used.

**NOTE**  
 This MAP applies only to SX-200 equipment.

- (1A) Unpack shelf
- (1B) Check backplane for cracks and bent pins
- (1C) Check hardware against packing slip
- (1D) Check fuses (if supplied)

**WARNING**  
 If the system has any power to it (48 Vdc reserve or AC power), this power must be removed (Step 3).

- AT REAR OF CABINET**
- (3A) Set CONVERTER INPUT switch to OFF
  - (3B) Set BATT switch to OFF
  - (3C) Remove power plug(s) from outlet



|                               |
|-------------------------------|
| SHELF 2 INSTALLATION (SX-200) |
| MAP200-601                    |
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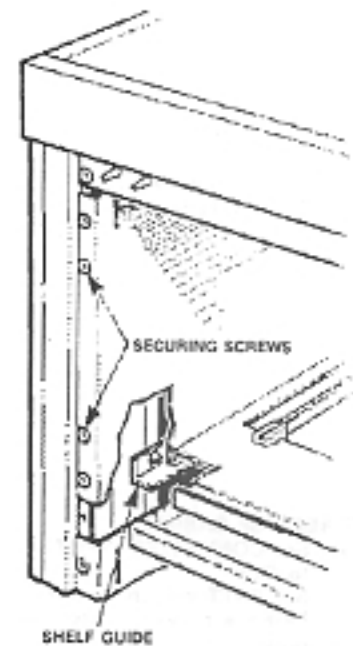
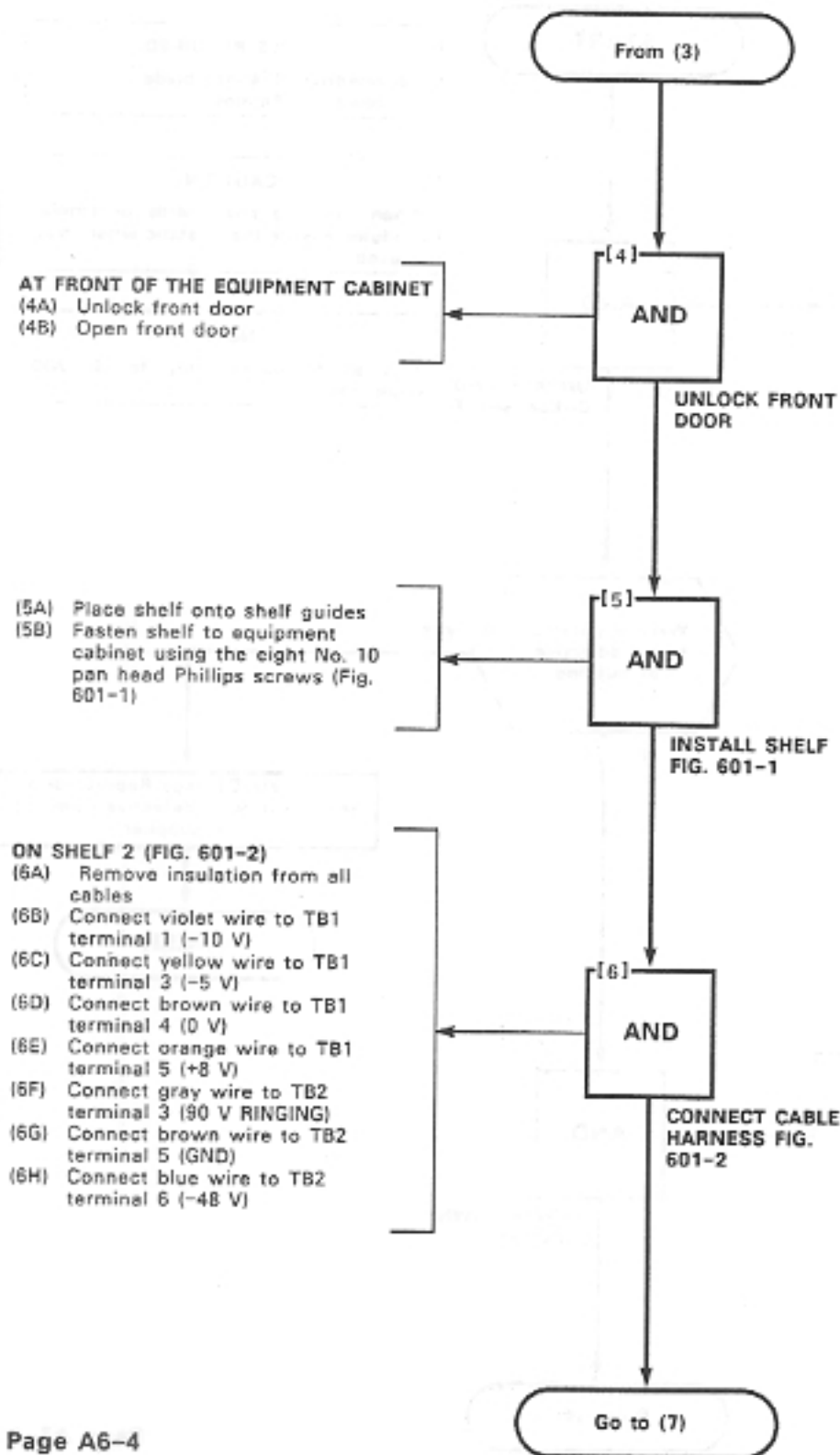


Fig. 601-1

SHELF 2 INSTALLATION (SX-200)

MAP200-601

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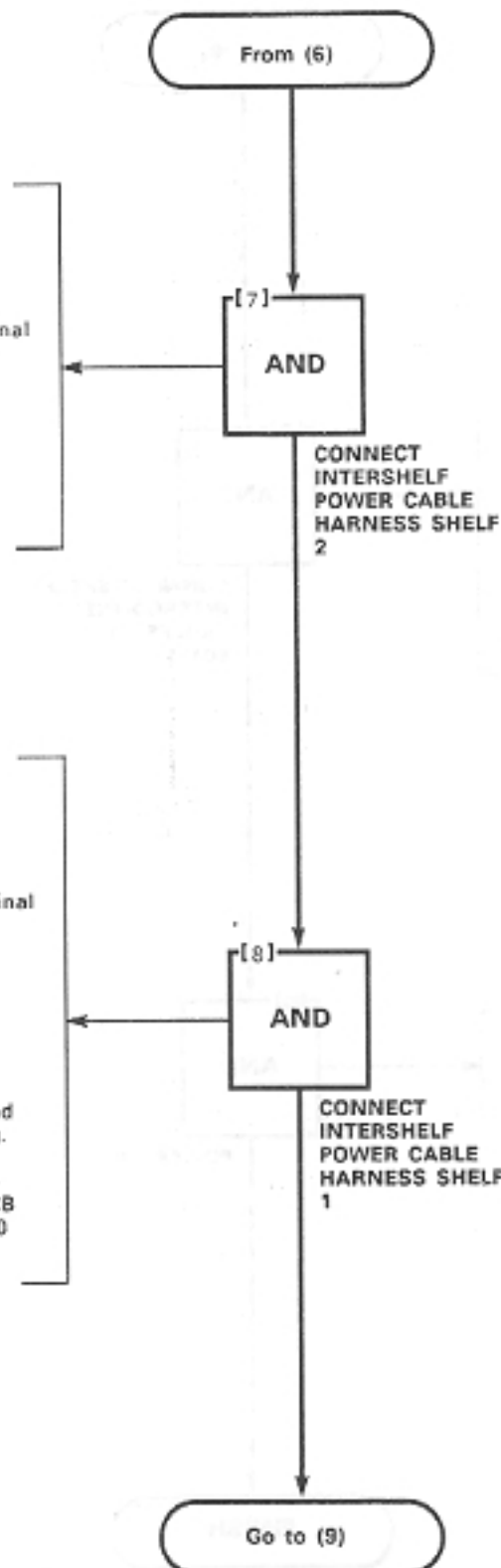
Sheet 3 of 6

**ON SHELF 2 (FIG. 601-2)**

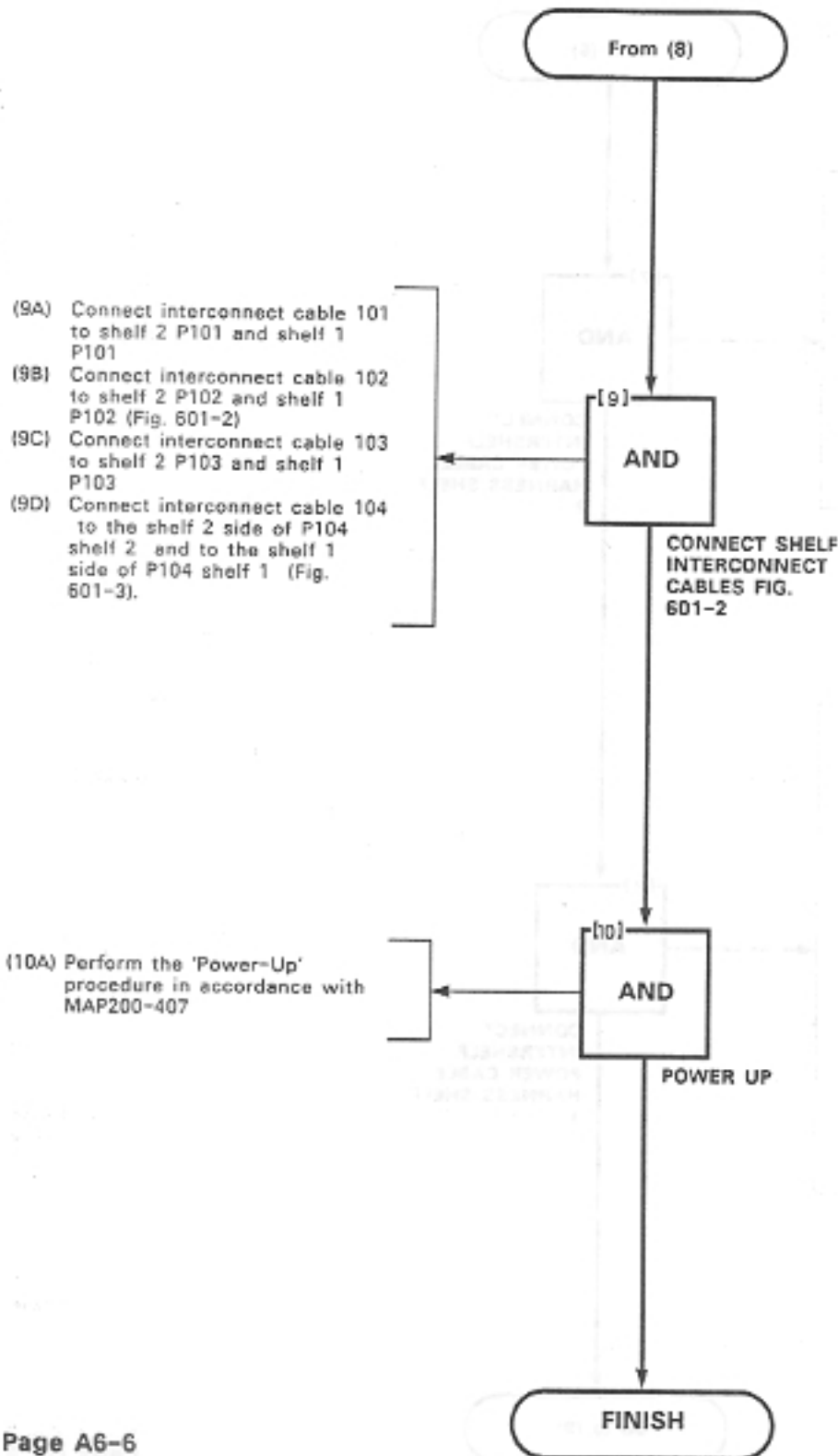
- (7A) Connect orange wire to the spare 8 Vdc terminal on TB1. Tighten both 8 Vdc terminals
- (7B) Connect brown wire to TB1 terminal 4 (0 V). Tighten terminal
- (7C) Connect violet wire to TB1 terminal 2 (-10 Vdc). Tighten terminal
- (7D) Connect yellow wire to TB1 terminal 3 (-5 Vdc). Tighten terminal
- (7E) Connect blue wire to TB2 terminal 6 (-48 Vdc)

**ON SHELF 1 (FIG. 601-2)**

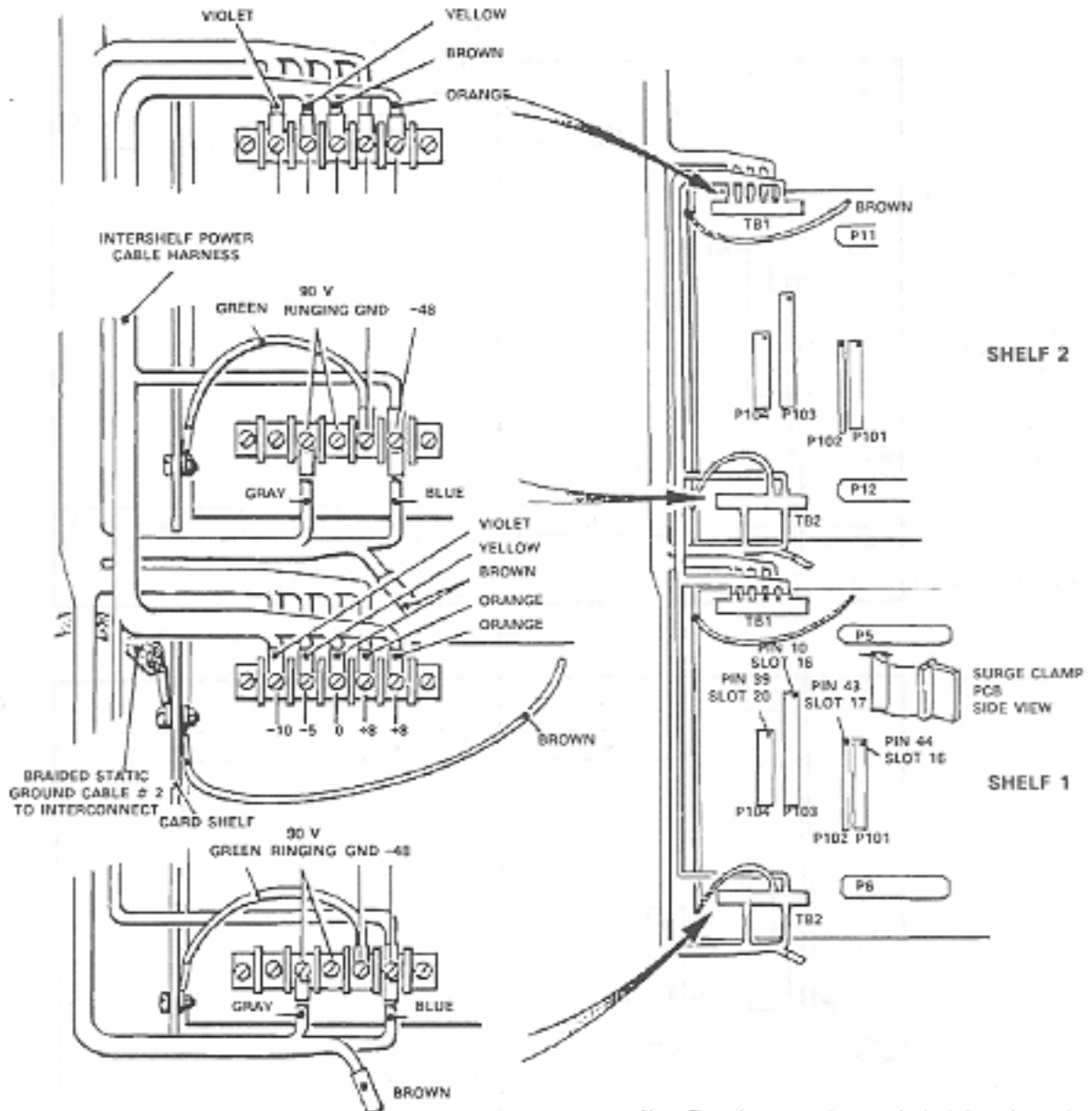
- (8A) Connect orange wire to the spare 8 Vdc terminal on TB1. Tighten terminal
- (8B) Connect brown wire to TB1 terminal 4 (0 V). Tighten terminal
- (8C) Connect violet wire to TB1 terminal 2 (-10 Vdc). Tighten terminal
- (8D) Connect yellow wire to TB1 terminal 3 (-5 Vdc). Tighten terminal
- (8E) Connect blue wire to TB2 terminal 6 (-48 Vdc)
- (8F) Take the Surge Clamp PCB and install it on Shelf 1 as per Fig. 601-2. Ensure the TOP of the PCB is towards the top of the shelf. The first pins on the PCB should plug into pins 9 and 10 of slot 16



|                               |
|-------------------------------|
| SHELF 2 INSTALLATION (SX-200) |
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Note: There is a surge clamp on both shelves. Surge clamp on second shelf not shown. Second shelf surge clamp in same position as first shelf clamp.

X116R4

Fig. 601-2 SX-200 Backplanes

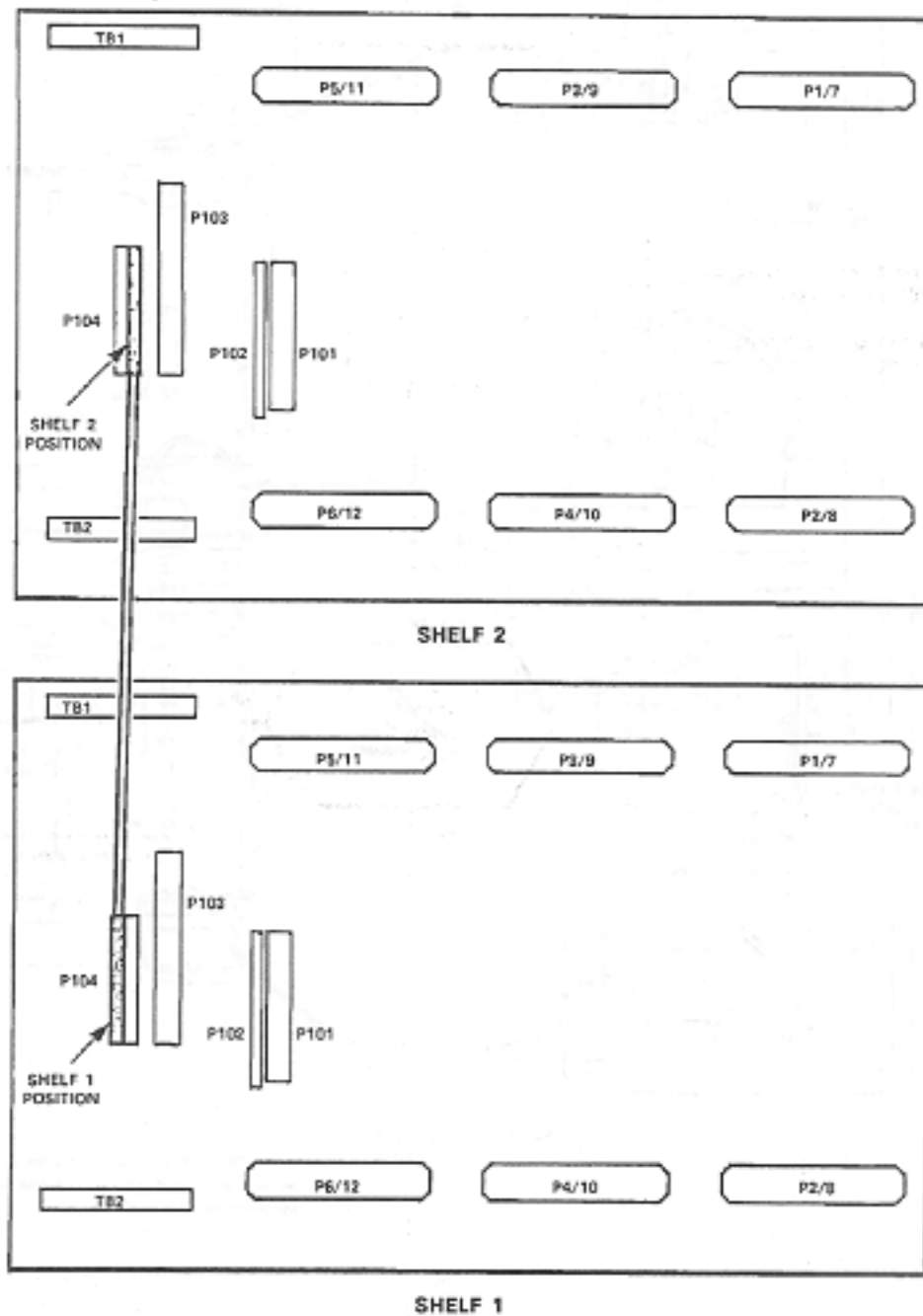


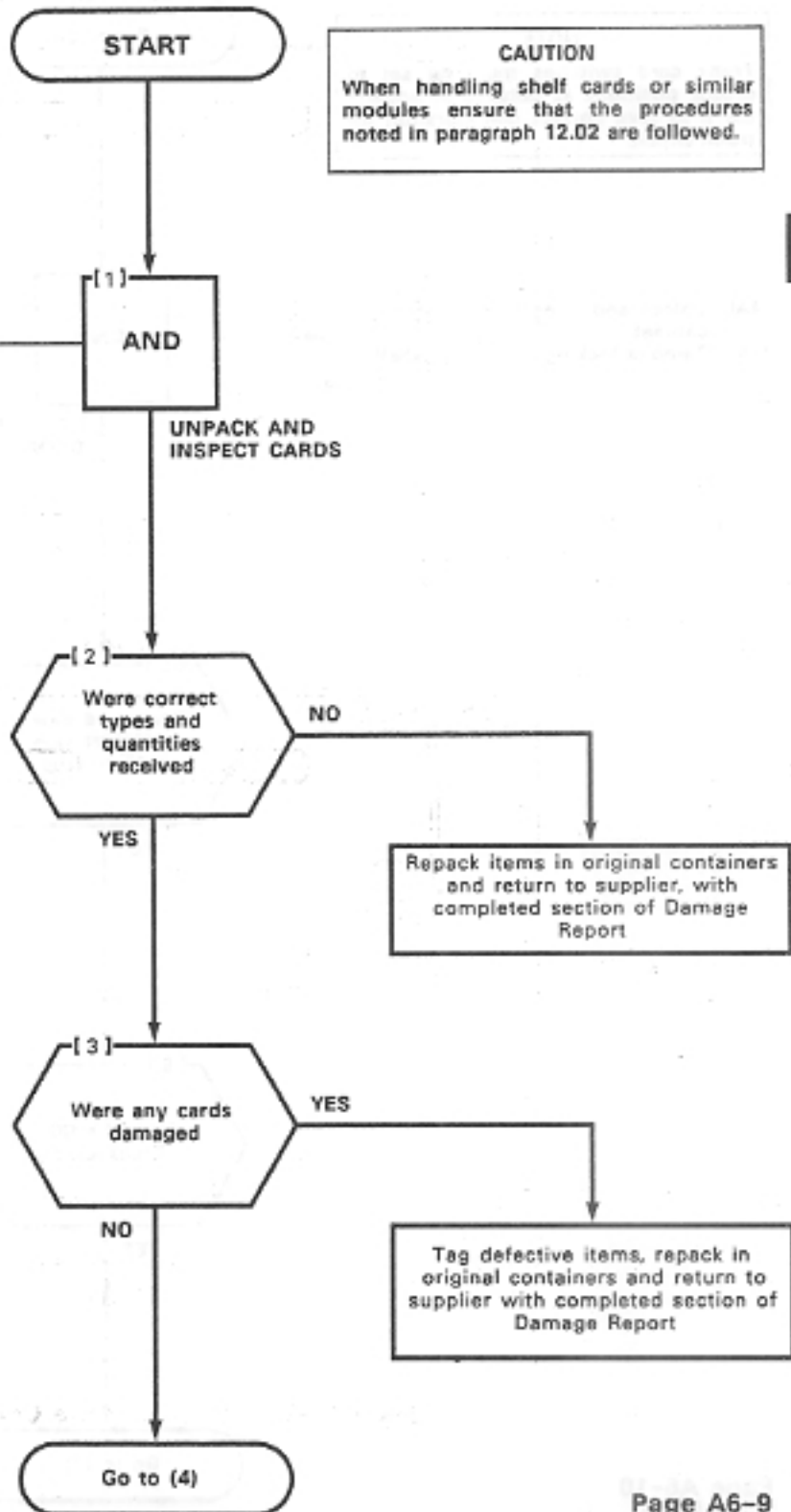
Fig. 601-3 P104 Backplane Connections

XB046

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| INSTALL NEW CARDS      |
| MAP200- 602            |
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**CAUTION**  
When handling shelf cards or similar modules ensure that the procedures noted in paragraph 12.02 are followed.

- (1A) Unpack cards from containers
- (1B) Inspect cards for physical damage
- (1C) Check card types and quantities against invoice



INSTALL NEW CARDS

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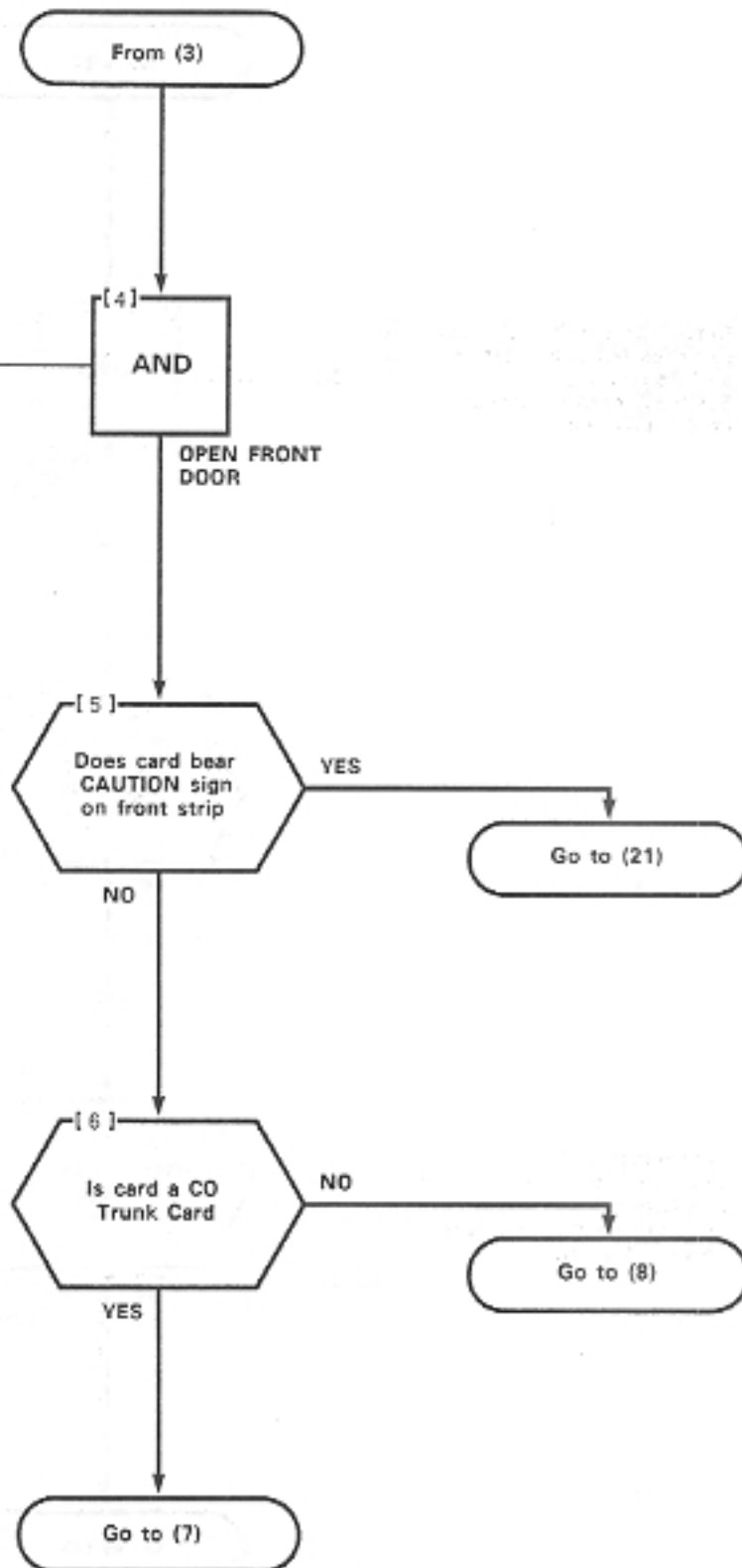
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## NOTE

Trunk card switches must be set to proper positions as detailed in Appendix 5 to give correct configuration for trunk circuit.

- (4A) Unlock and open front door of cabinet  
 (4B) Remove locking bars from shelf

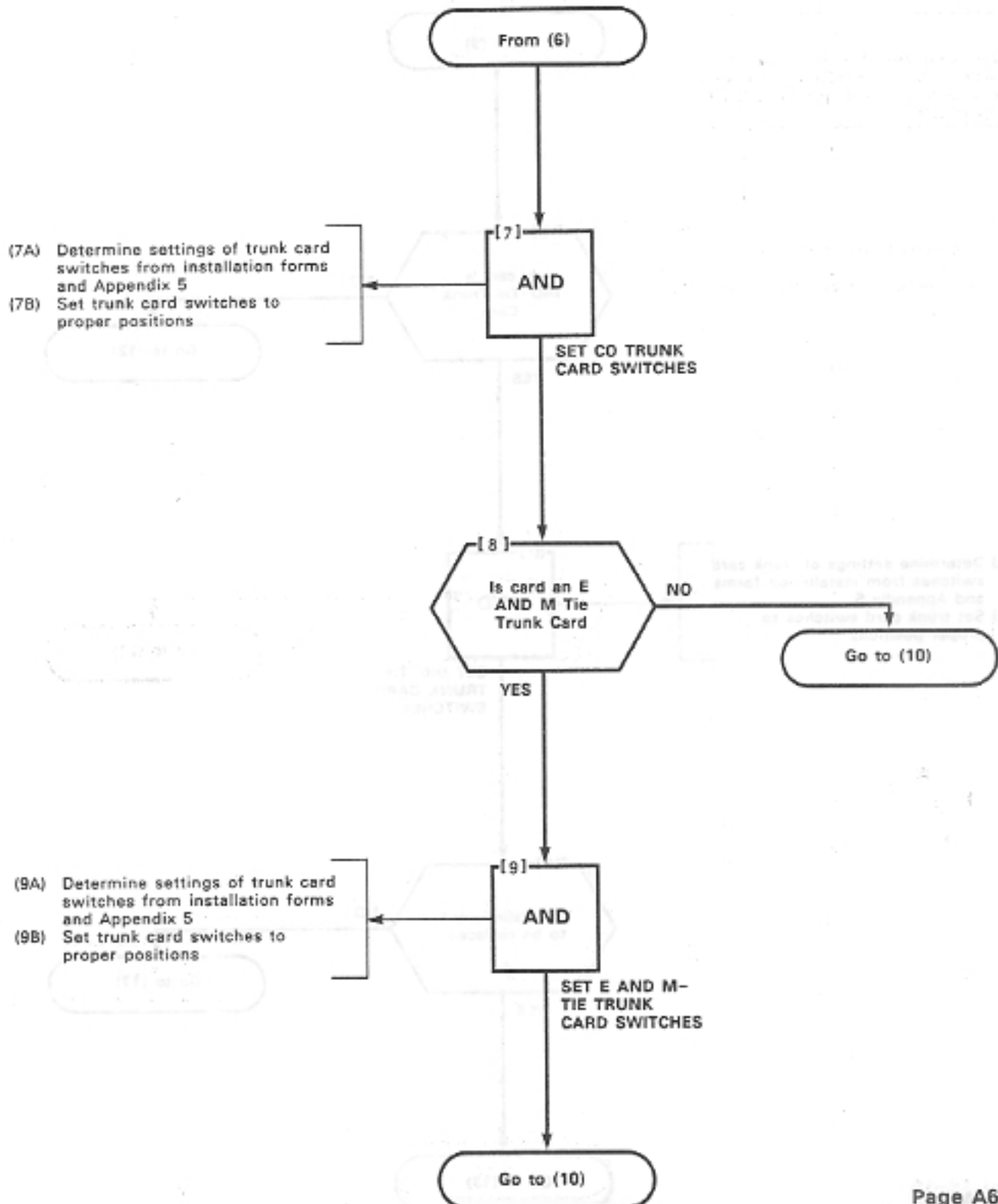


INSTALL NEW CARDS

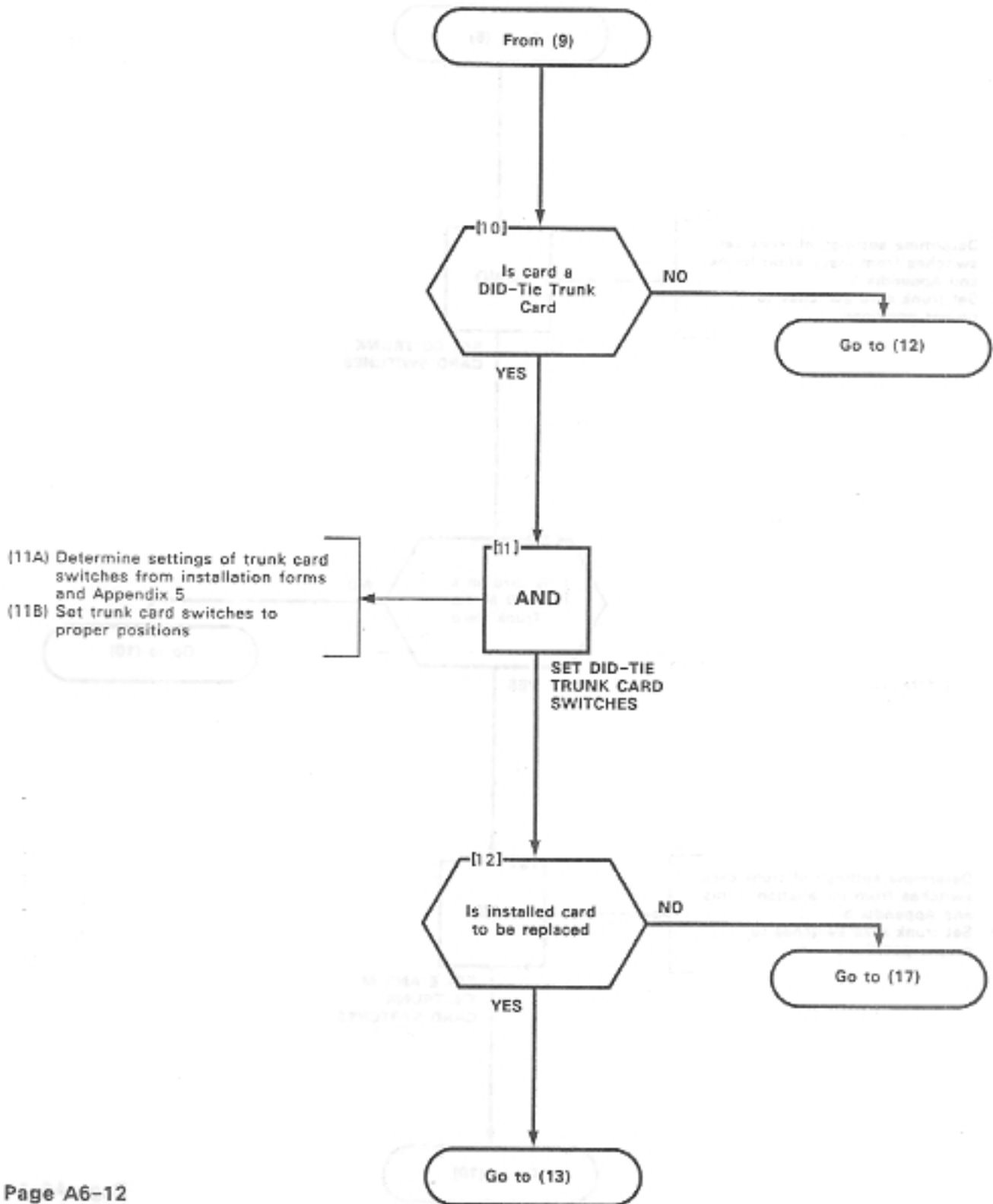
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| INSTALL NEW CARDS      |
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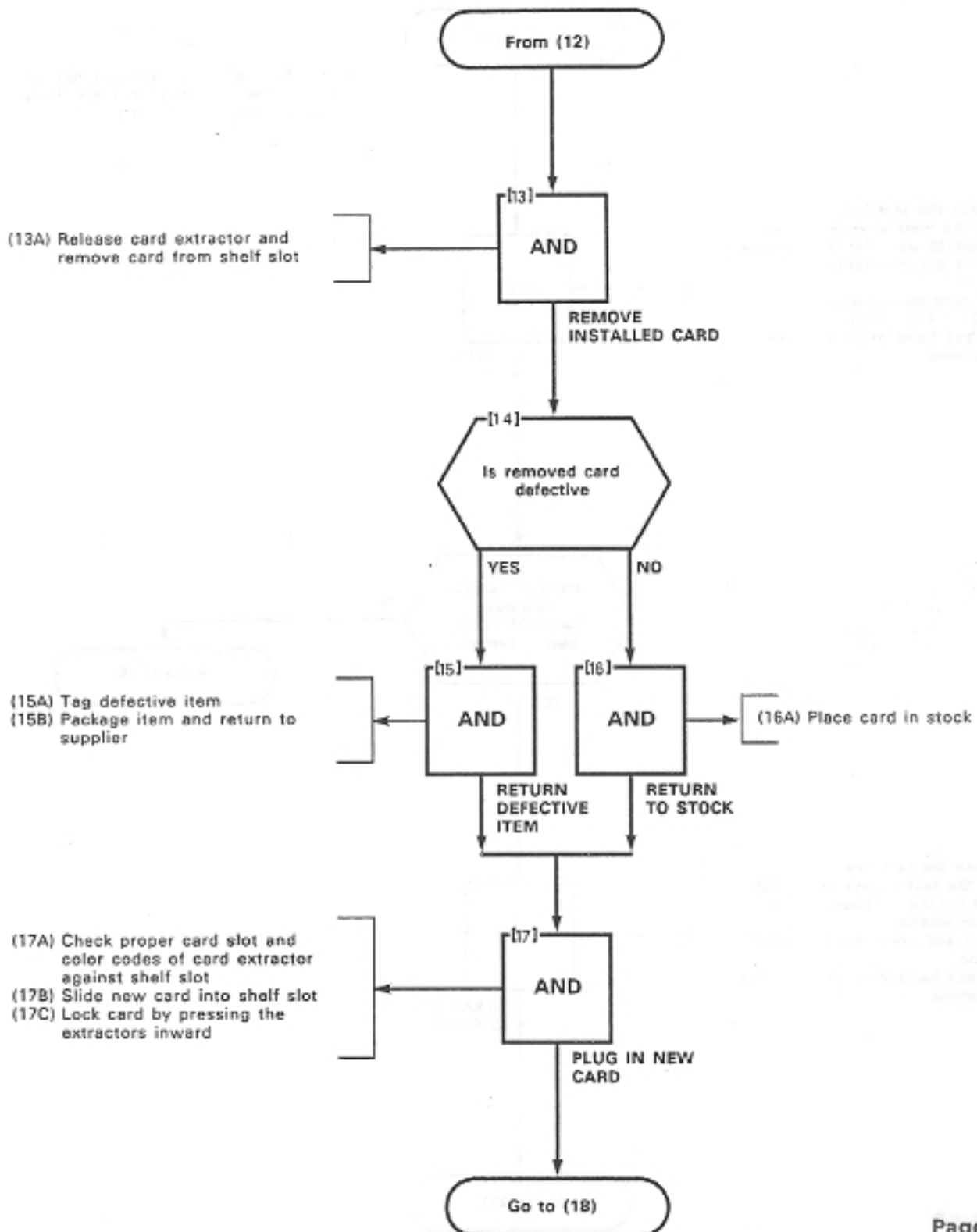


INSTALL NEW CARDS

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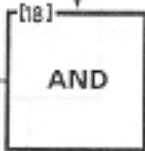


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| INSTALL NEW CARDS      |
| MAP200- 602            |
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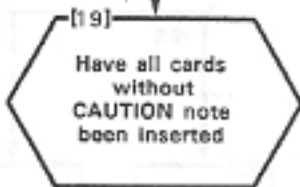
**NOTE 1**  
 A standard telephone set can not be used as the test line if there is a SUPERSET line card in Slot 1

- (18A) Access the test line
- (18B) Dial the maintenance access code (555 used for the purpose of this documentation)
- (18C) Dial 5
- (18D) Dial card slot number (1 - 17-31 - 42) - Note 1
- (18E) Replace handset of test line telephone

From (17)

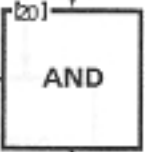


INITIALIZE NEW CARD



Return to (6)

- (20A) Access the test line
- (20B) Dial the test access code (555 used for the purpose of this documentation)
- (20C) Dial 1 and press the RELEASE button
- (20D) Replace handset of the test line telephone



CLEAR MINOR ERRORS

Go to (21)

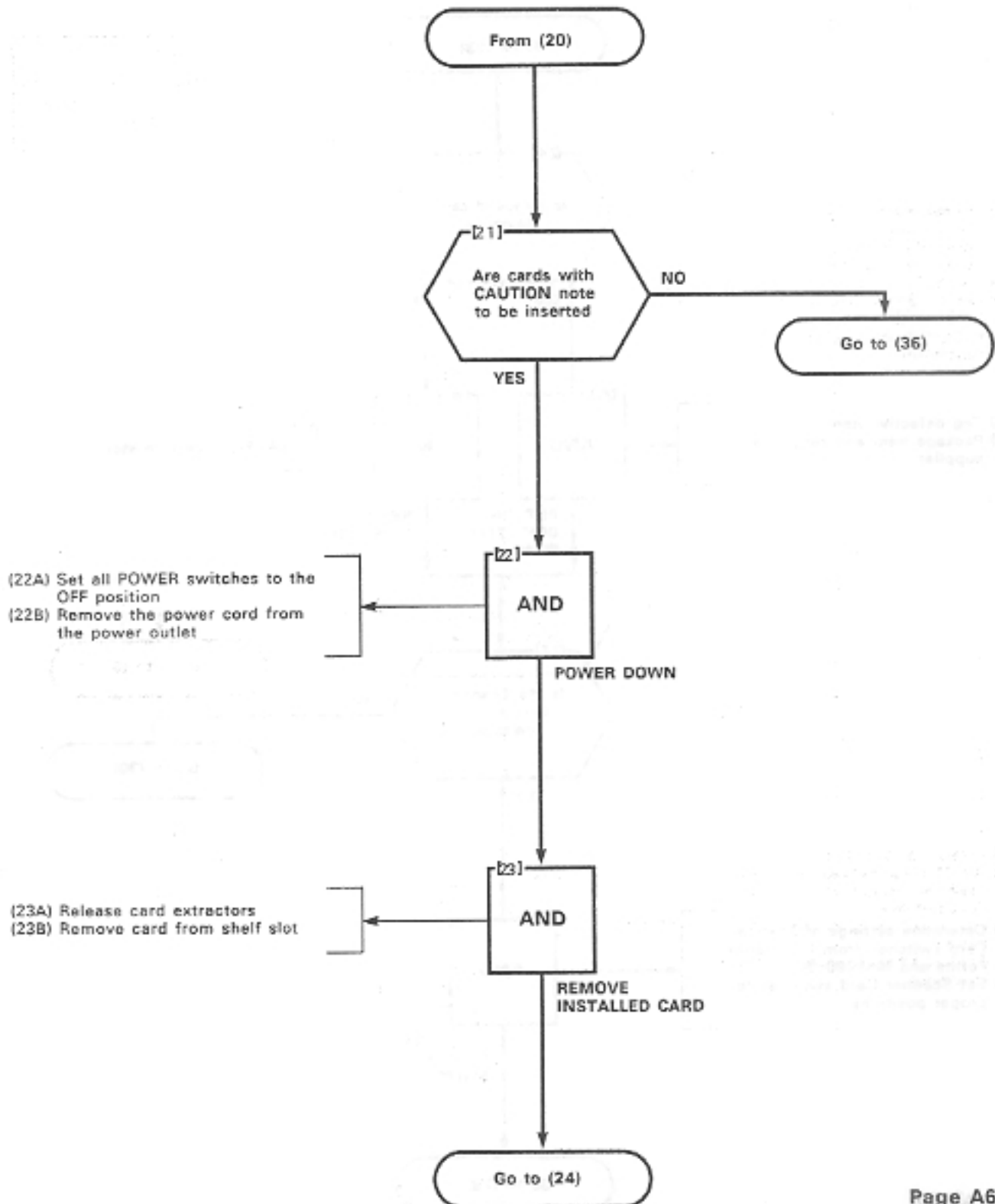


INSTALL NEW CARDS

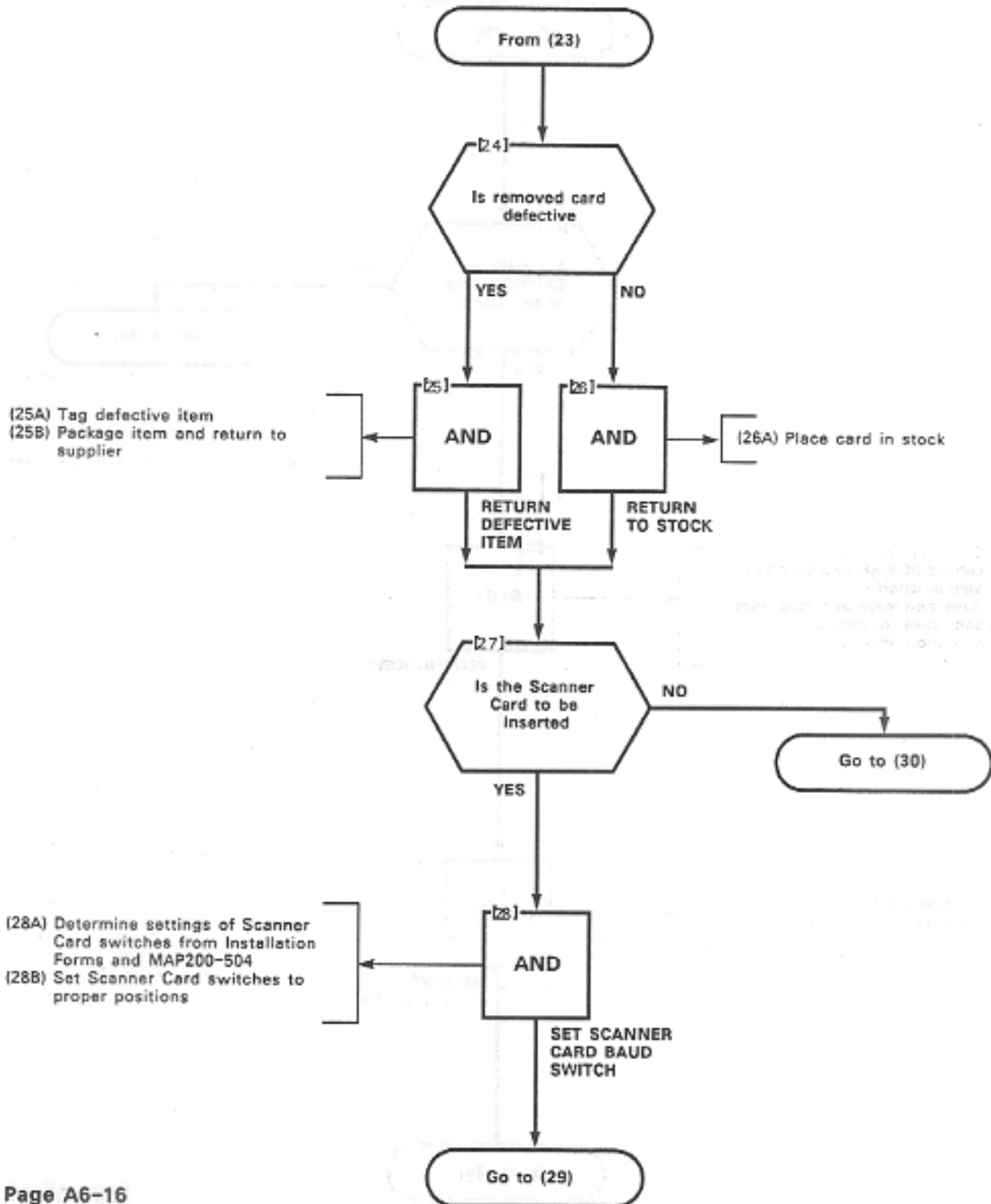
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| INSTALL NEW CARDS      |
| MAP200- 602            |
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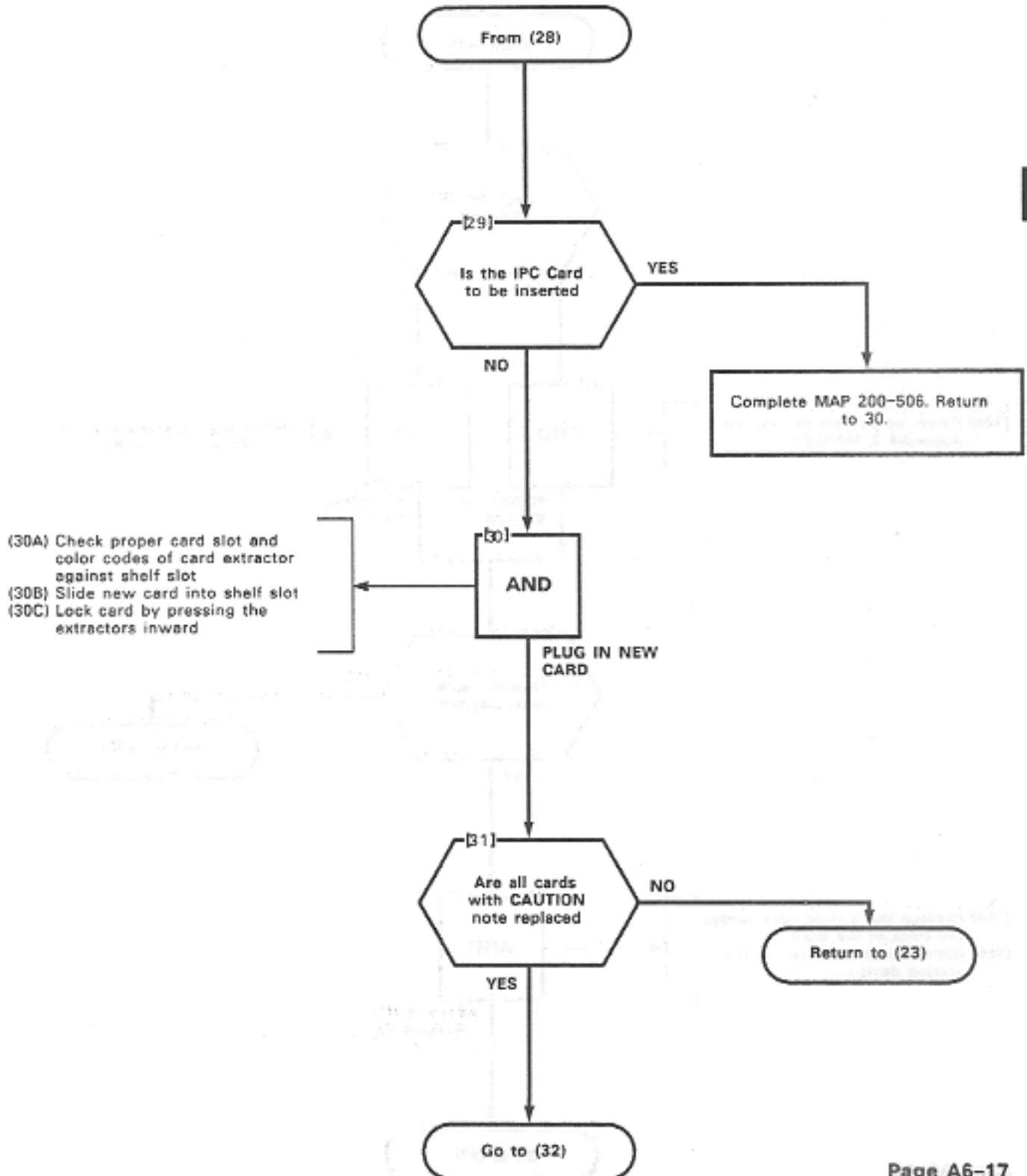


INSTALL NEW CARDS

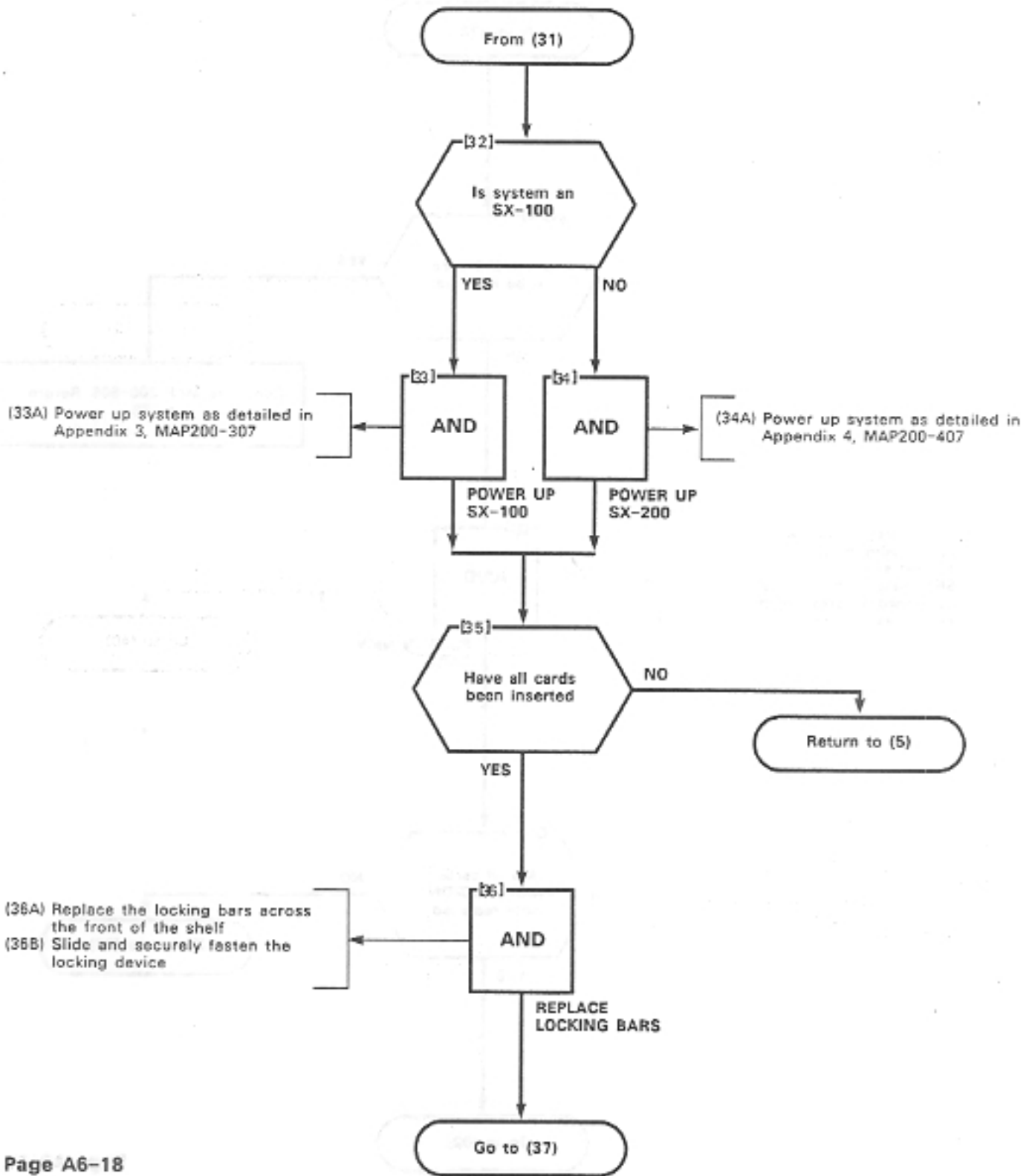
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| INSTALL NEW CARDS      |
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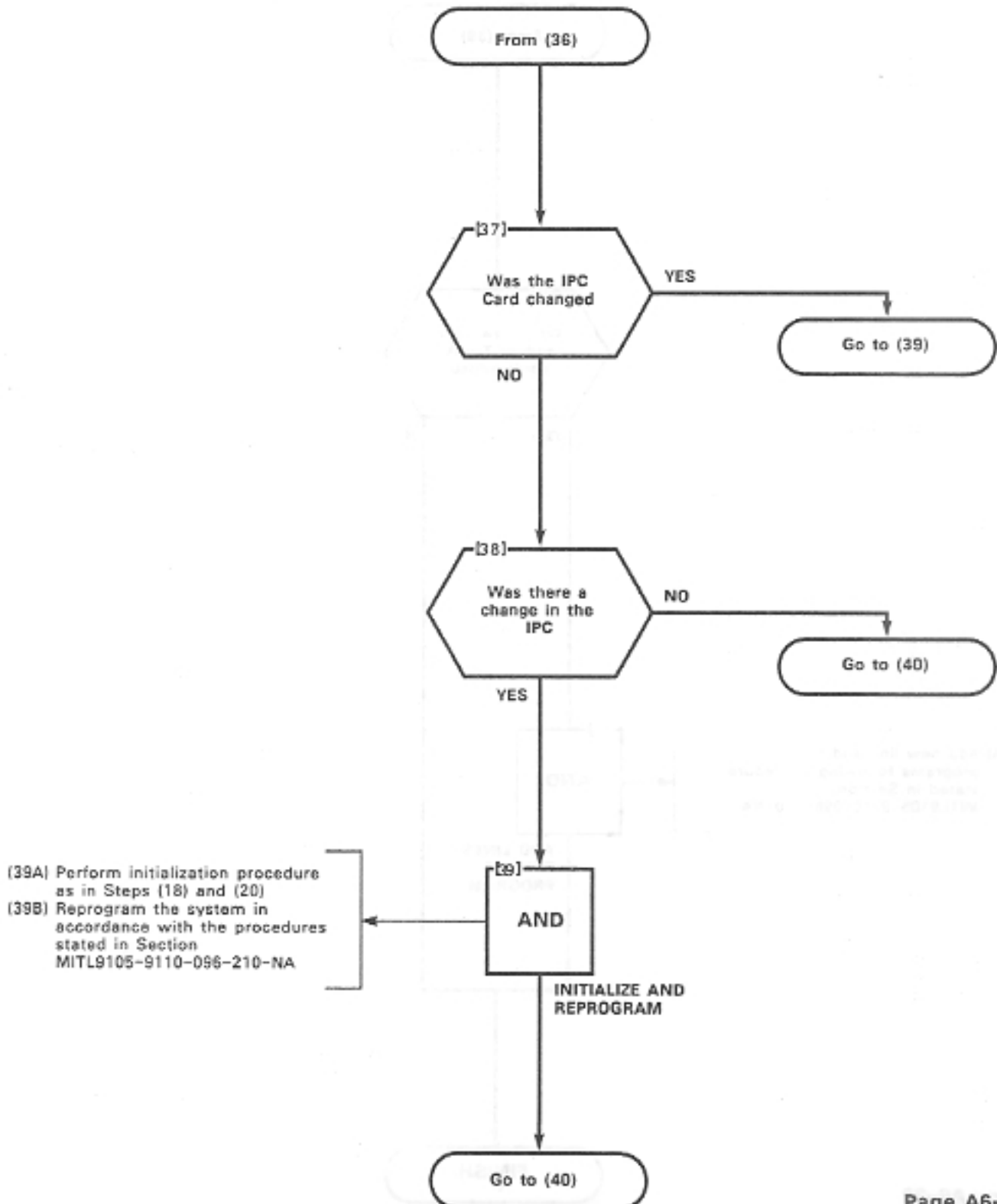


INSTALL NEW CARDS

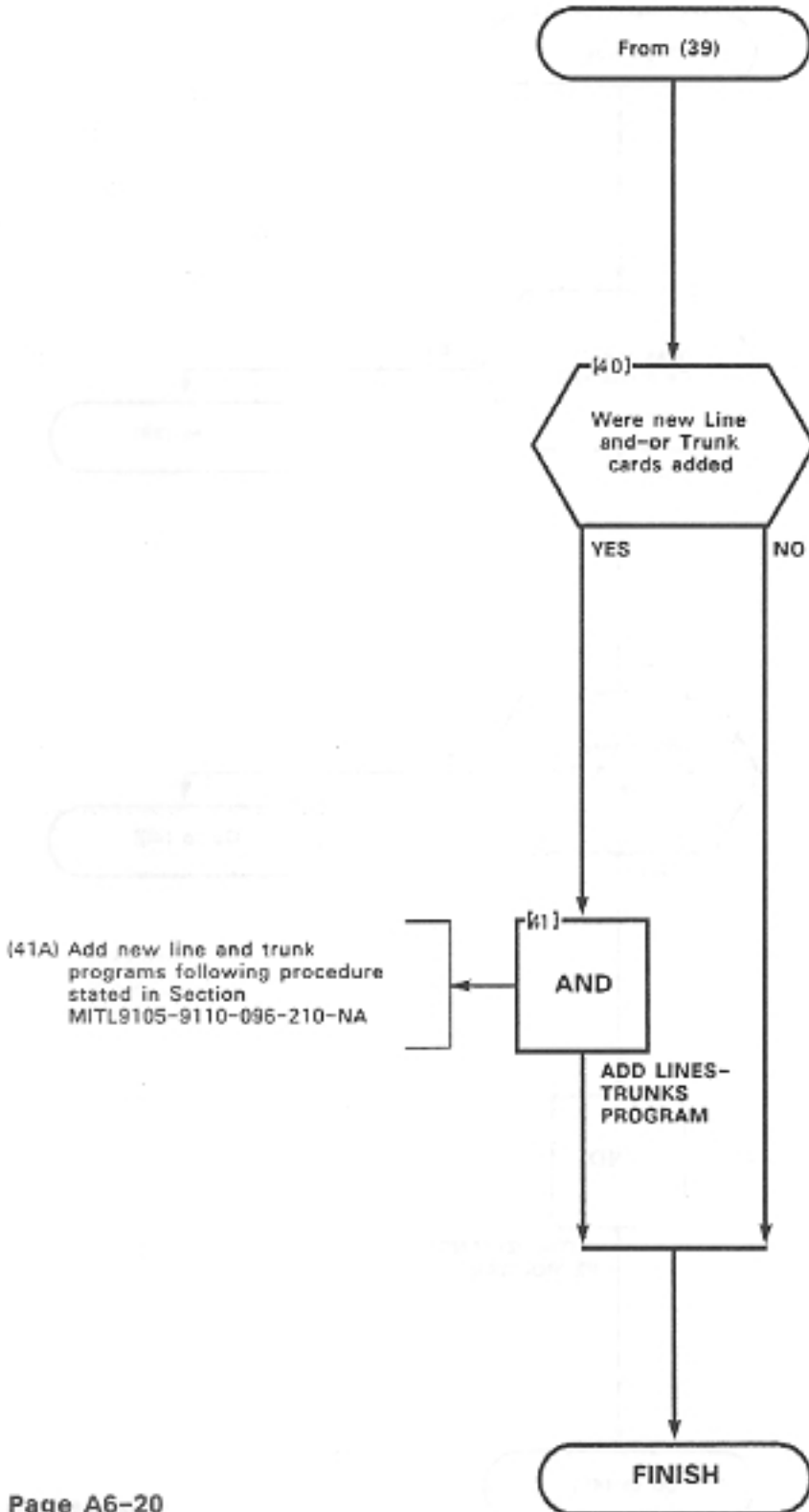
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| INSTALL NEW CARDS      |
| MAP200- 602            |
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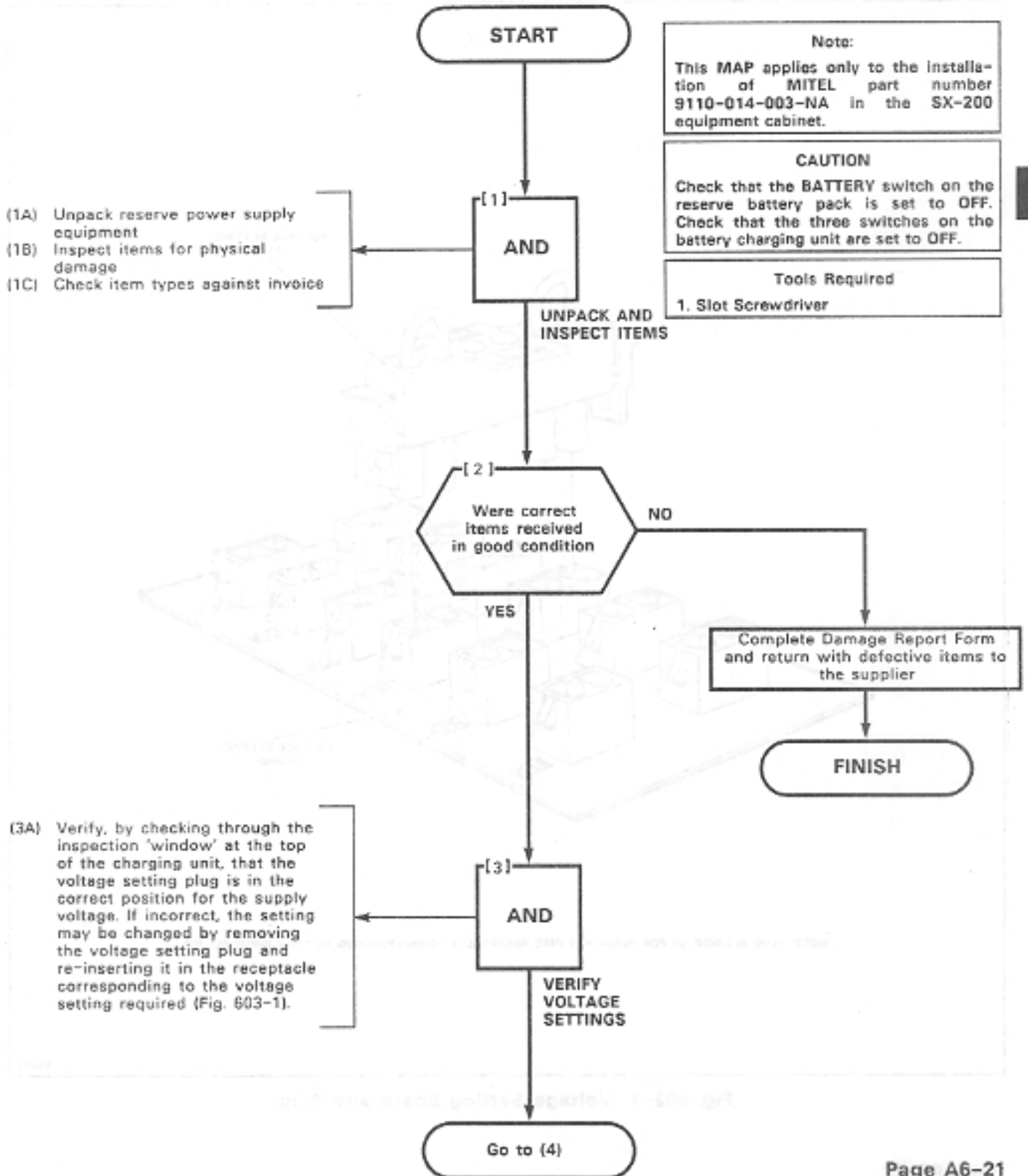


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| RESERVE POWER SUPPLY<br>INSTALLATION (SX-200) |
| MAP200-603                                    |
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**Note:**  
This MAP applies only to the installation of MITEL part number 9110-014-003-NA in the SX-200 equipment cabinet.

**CAUTION**  
Check that the BATTERY switch on the reserve battery pack is set to OFF. Check that the three switches on the battery charging unit are set to OFF.

**Tools Required**  
1. Slot Screwdriver



RESERVE POWER SUPPLY  
INSTALLATION (SX-200)

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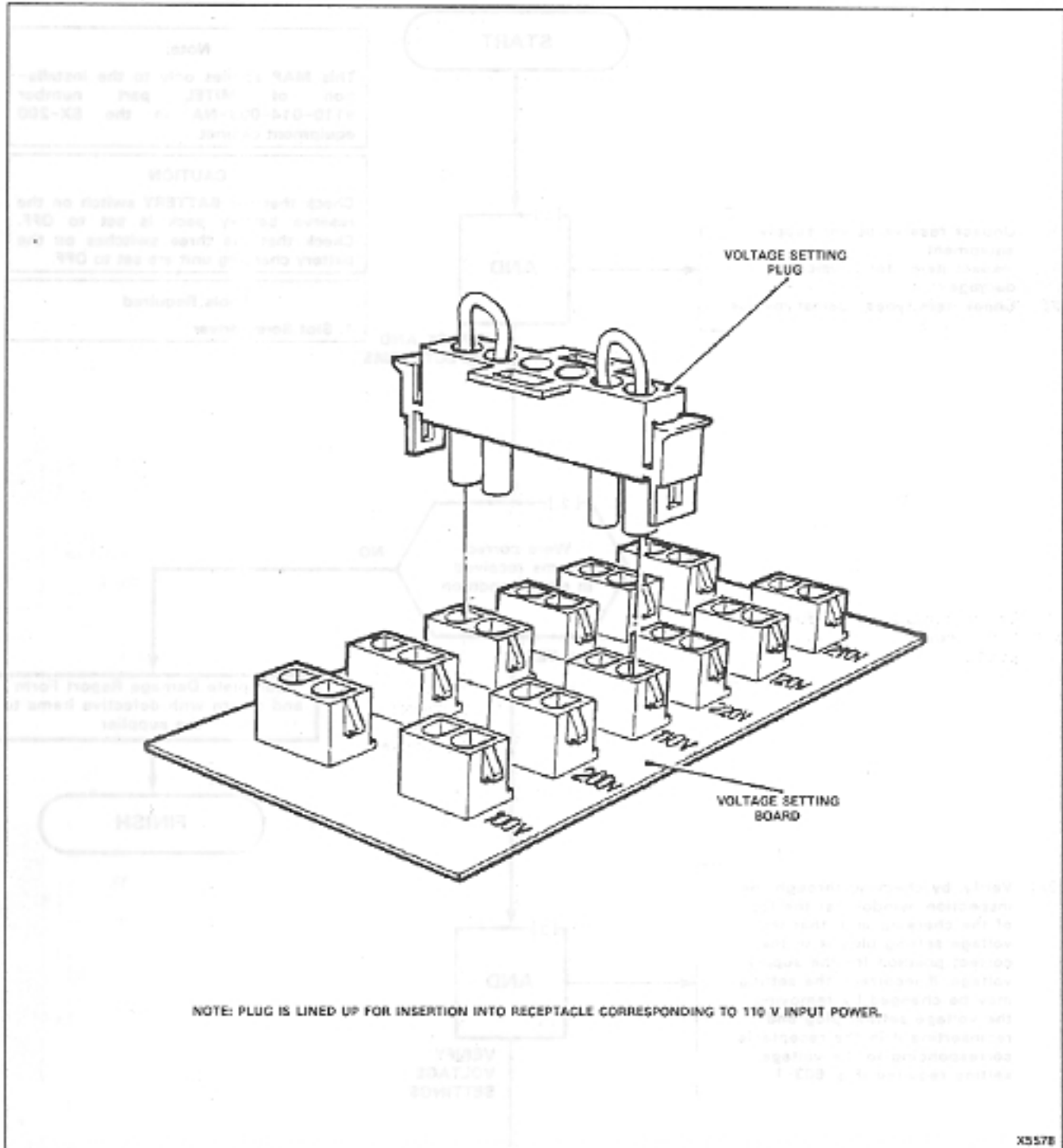


Fig. 603-1 Voltage Setting Board and Plug

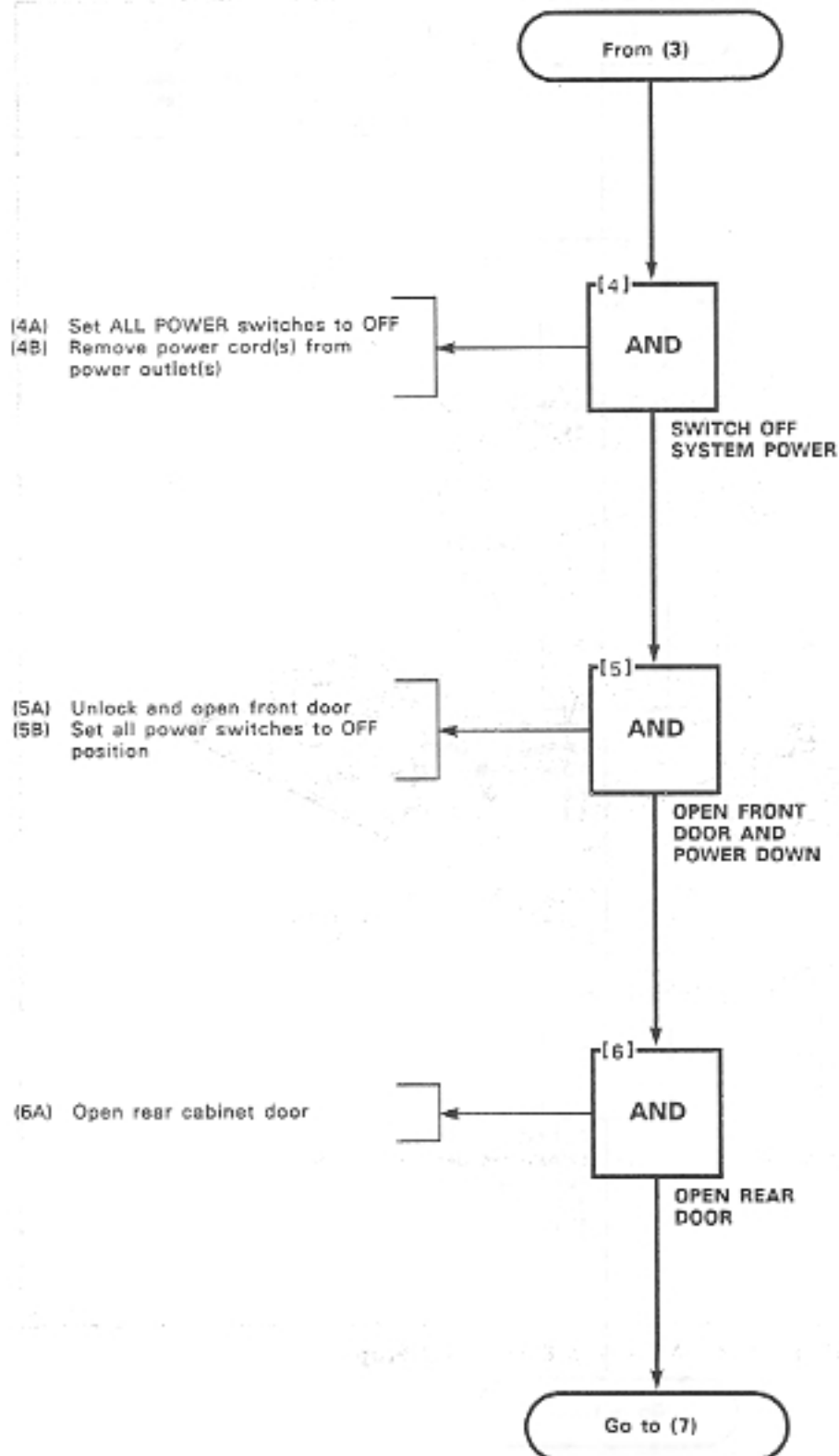


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| RESERVE POWER SUPPLY<br>INSTALLATION (SX-200) |
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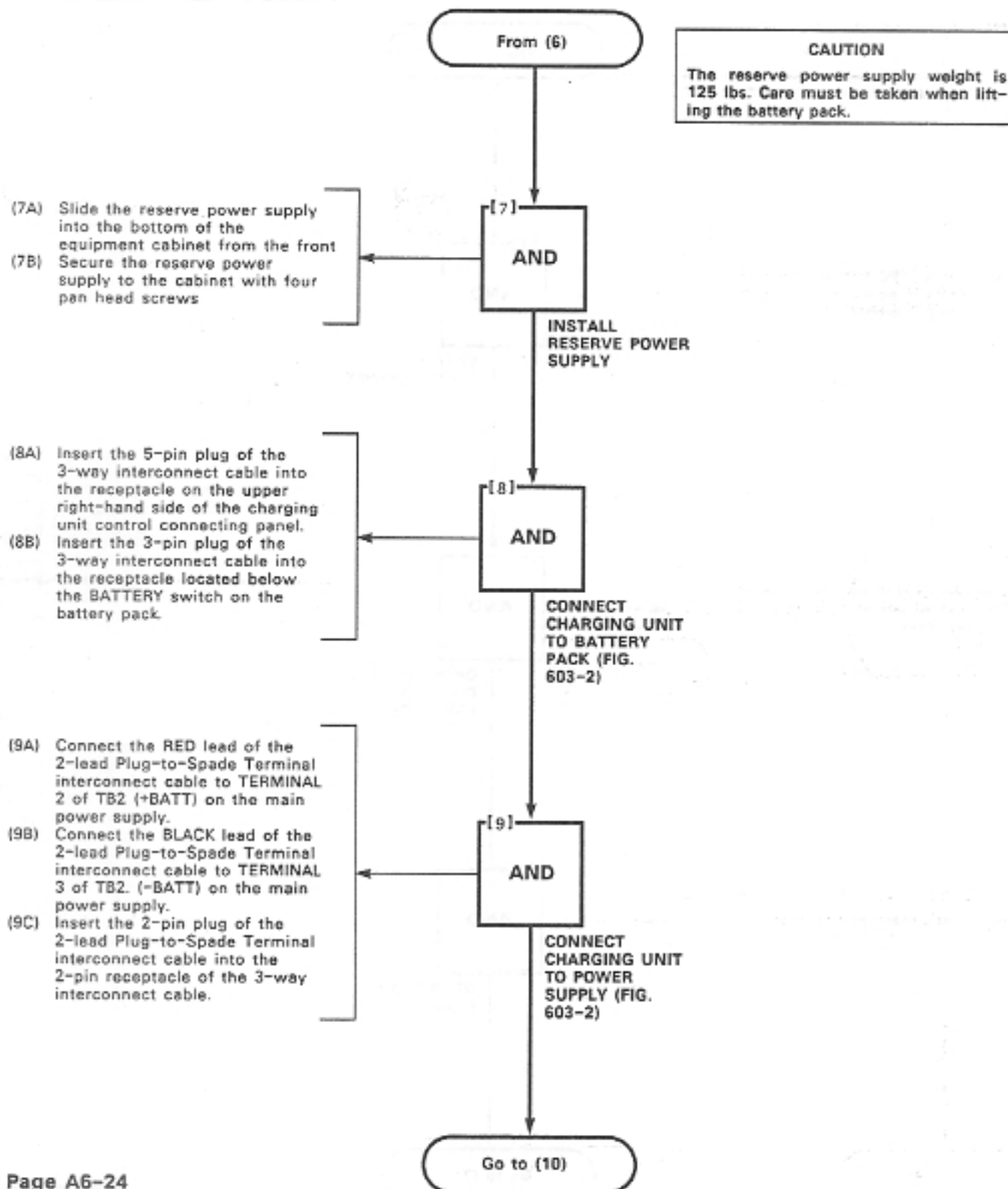


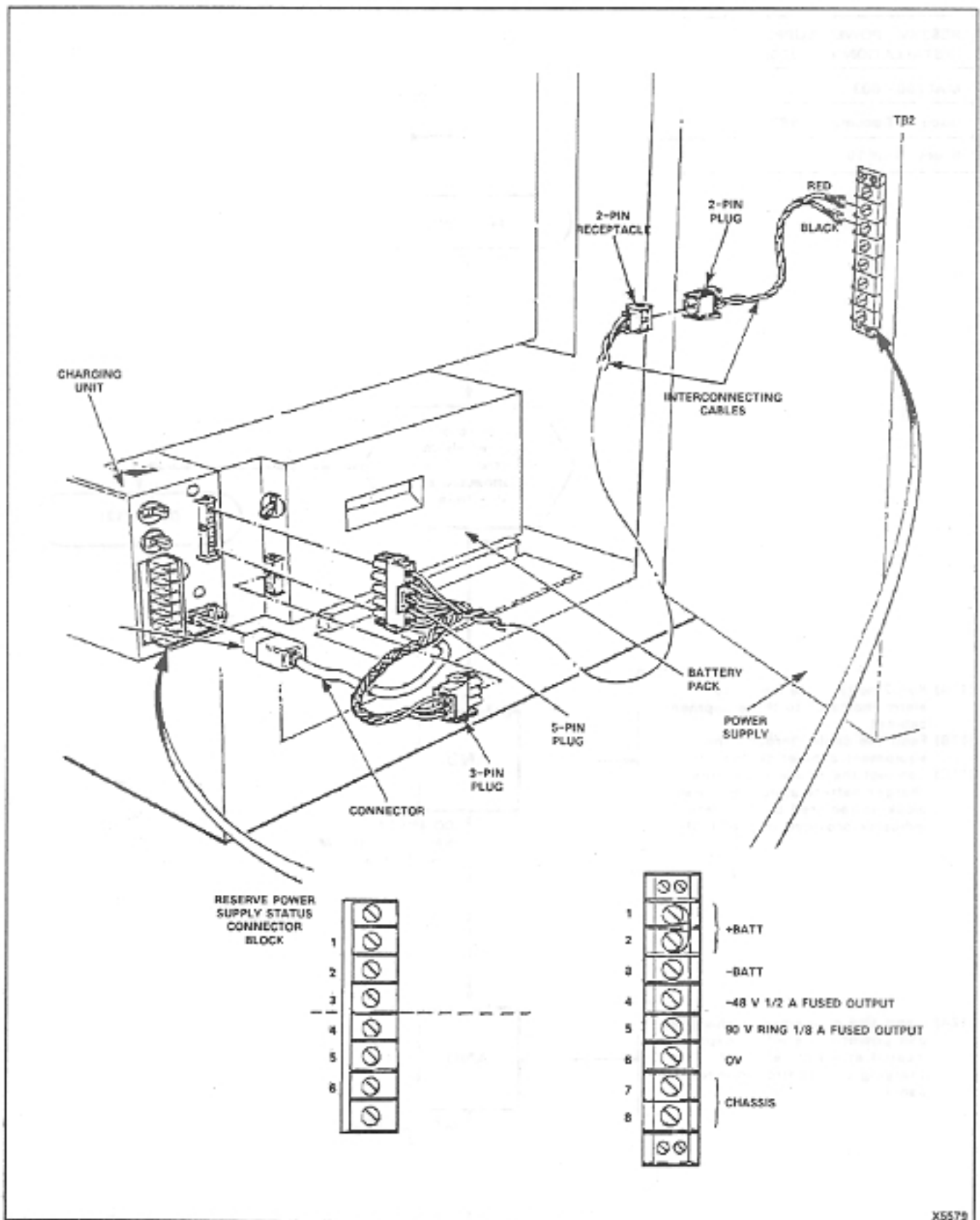
RESERVE POWER SUPPLY  
INSTALLATION (SX-200)

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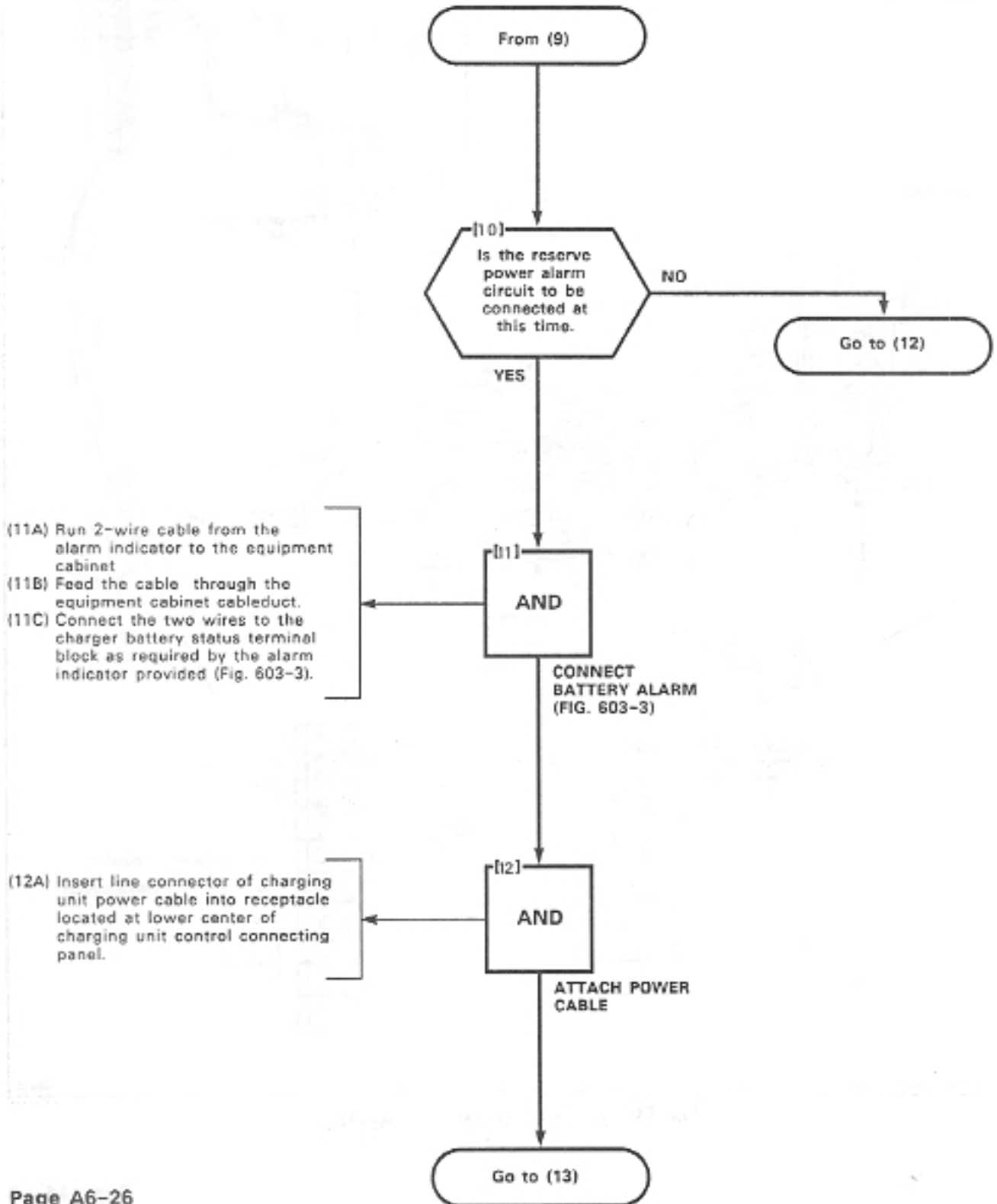




X5579

Fig. 603-2 Reserve Power Supply

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| RESERVE POWER SUPPLY<br>INSTALLATION (SX-200) |
| MAP200- 603                                   |
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RESERVE POWER SUPPLY  
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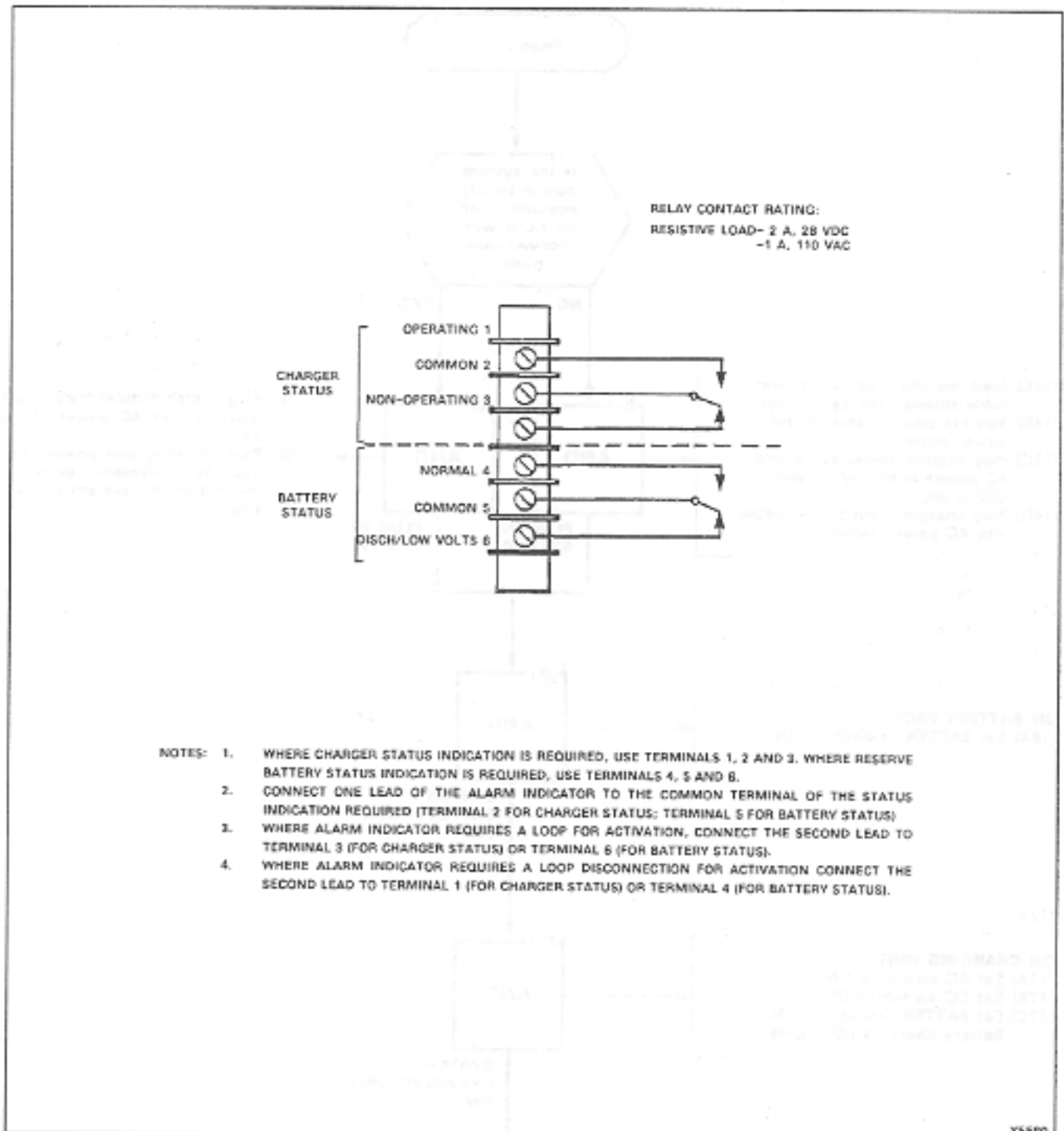


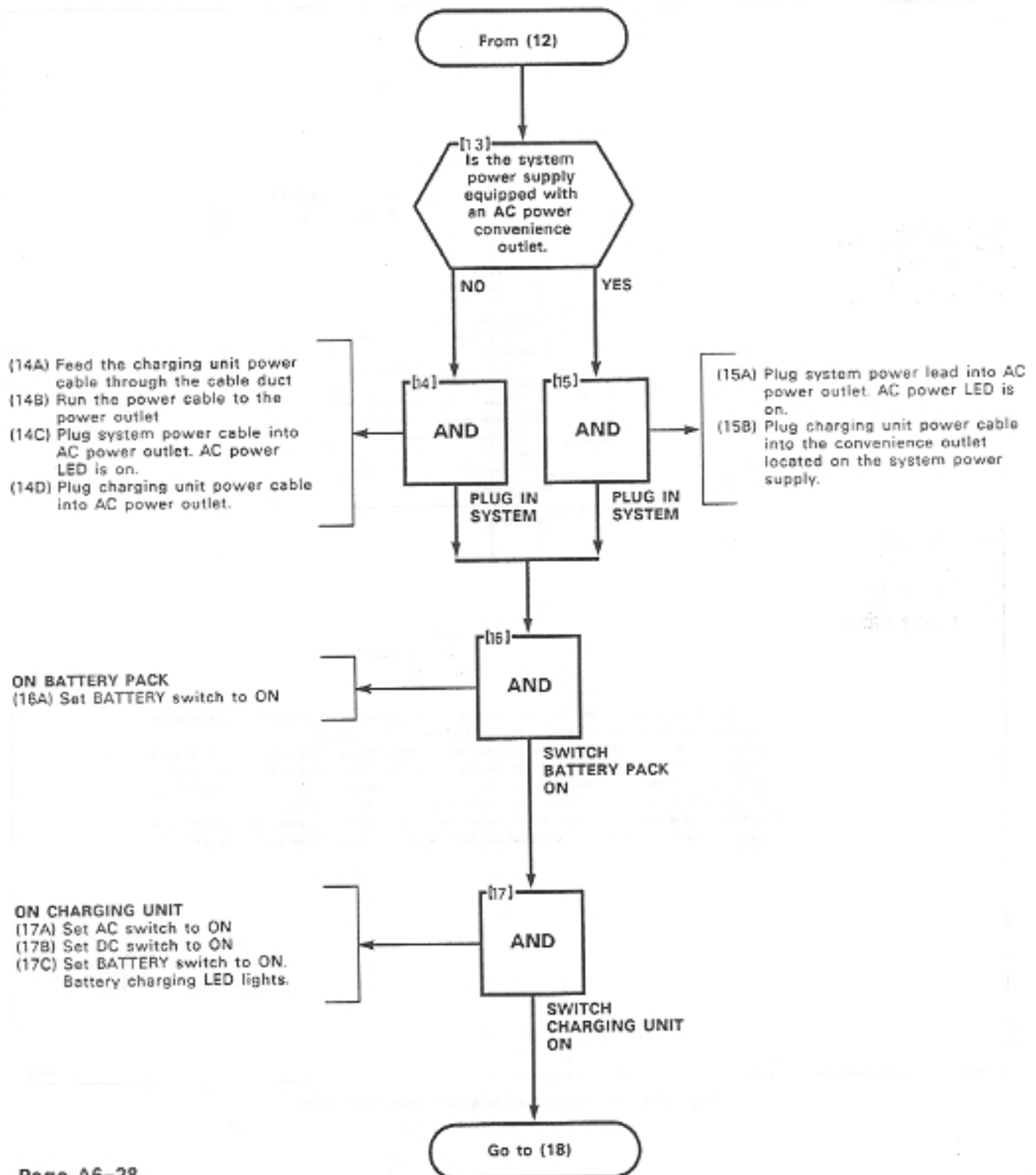
Fig. 603-3 Alarm Indicator Connections

RESERVE POWER SUPPLY  
INSTALLATION (SX-200)

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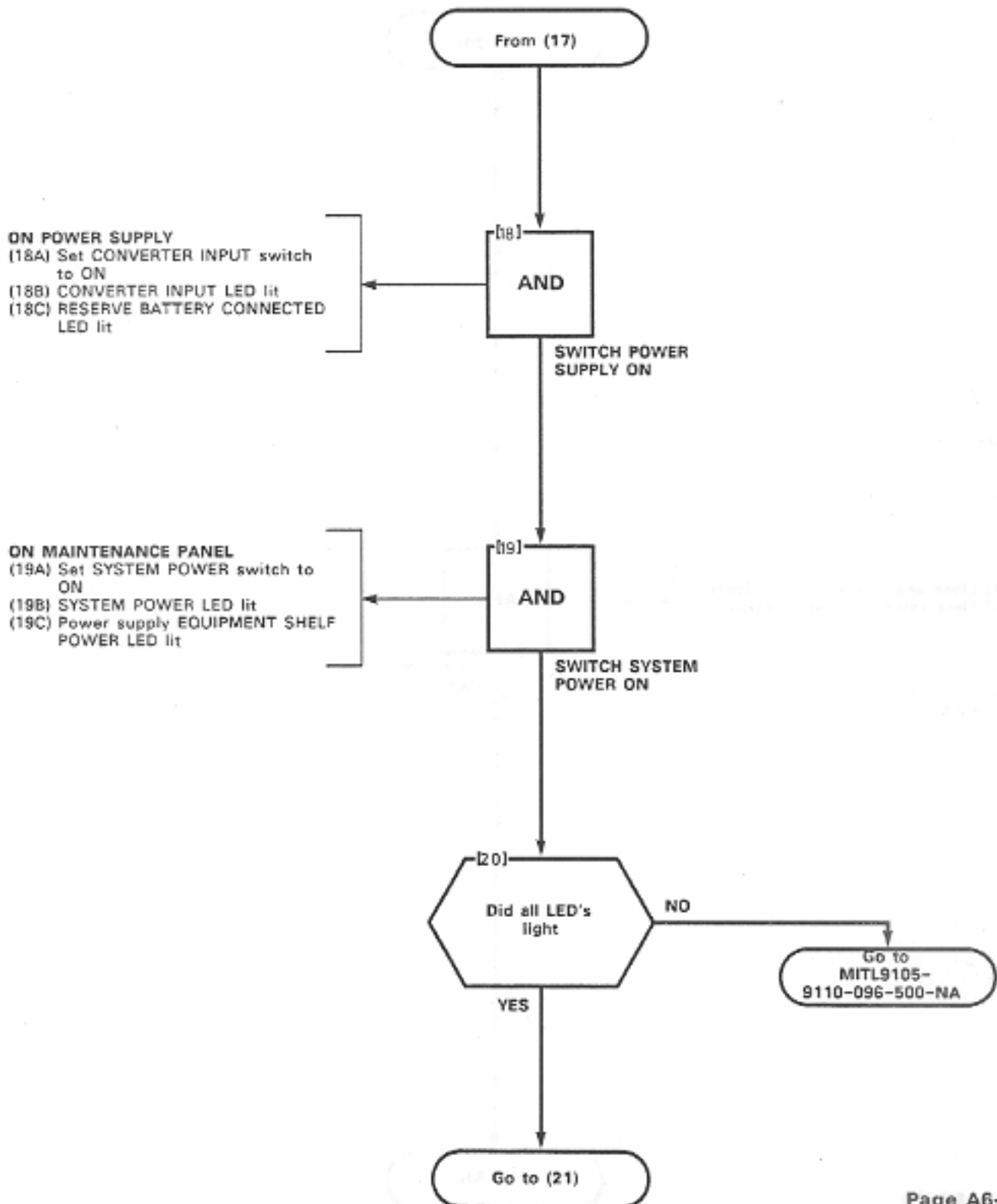


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| RESERVE POWER SUPPLY<br>INSTALLATION (SX-200) |
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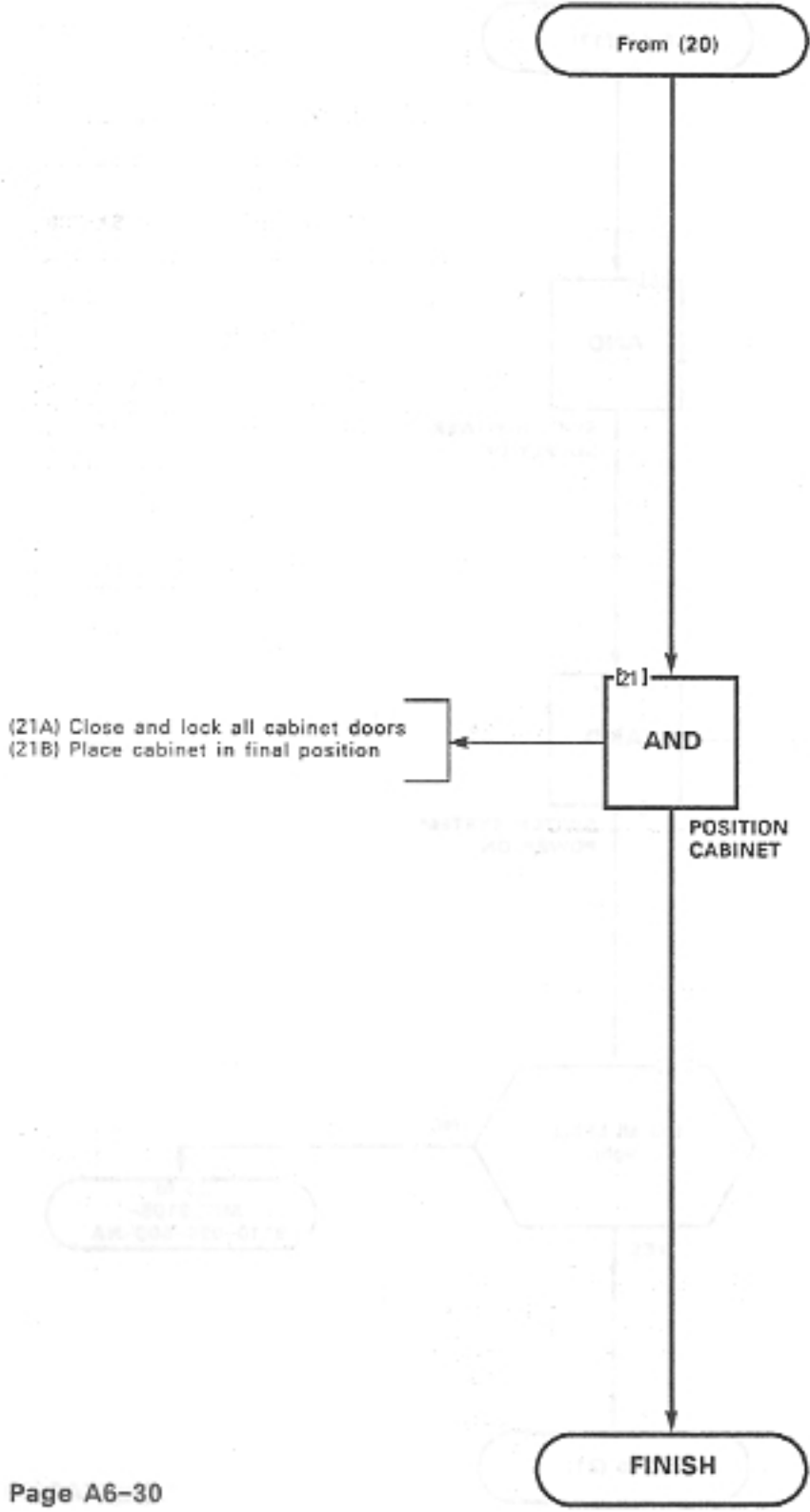
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| RESERVE POWER SUPPLY<br>INSTALLATION (SX-200) |
| MAP200- 603                                   |
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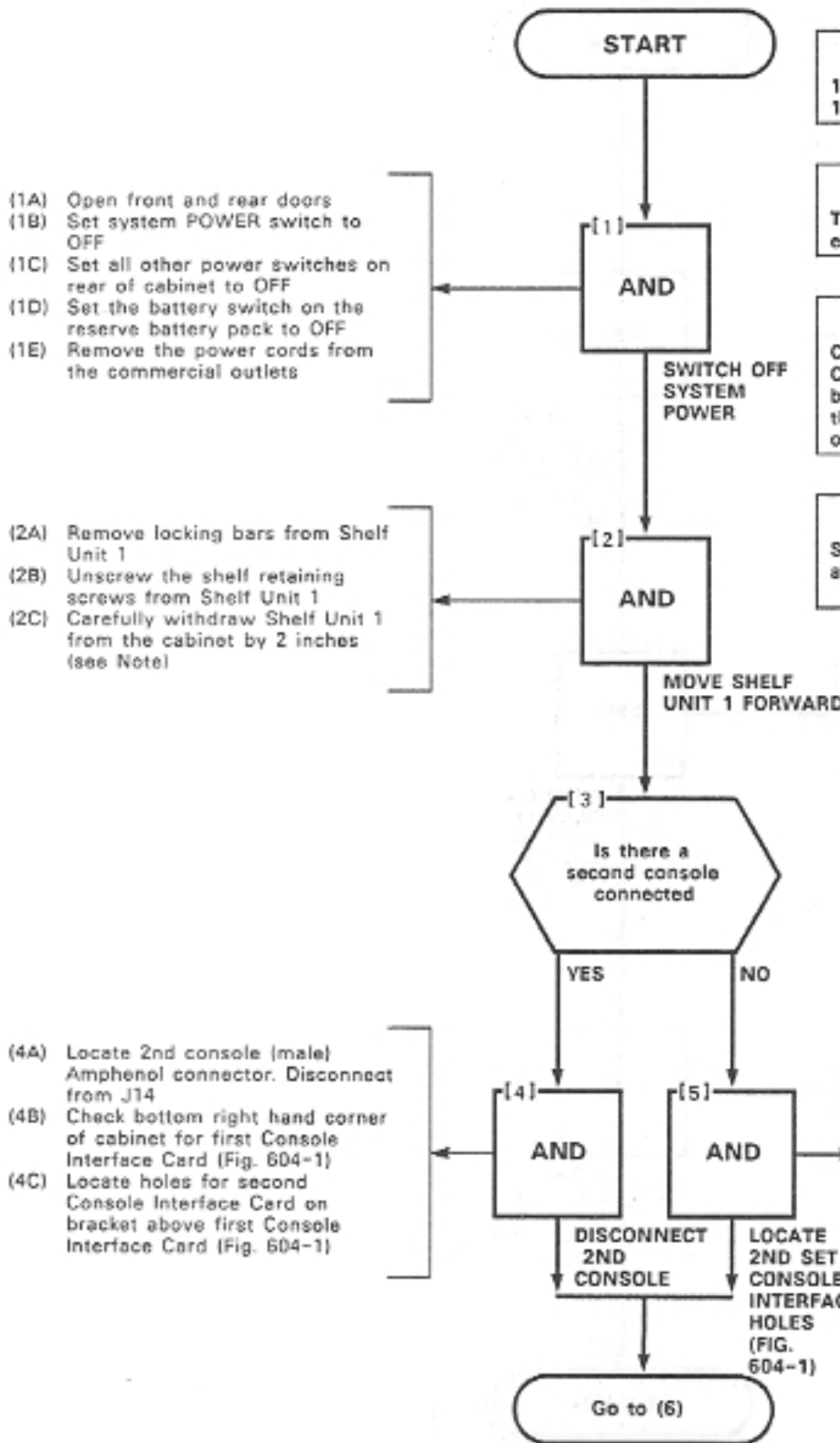
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| <b>CONSOLE INTERFACE BOARD<br/>INSTALLATION (SX-200)</b> |
| MAP200-604   |
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| <b>TOOLS REQUIRED</b>                         |
| 1 Wrench 1/2 inch<br>1 Flat blade screwdriver |

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| <b>NOTE</b>                                |
| This MAP applies only to SX-200 equipment. |

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| <b>CAUTION</b>  |
| Check that main power is off.<br>Check that the three switches on the battery charging unit are set to OFF. If there is a reserve battery pack set it to off. |

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| <b>NOTE</b>   |
| Step 2 is required to make room to affix Console card to bracket in Step 7. |

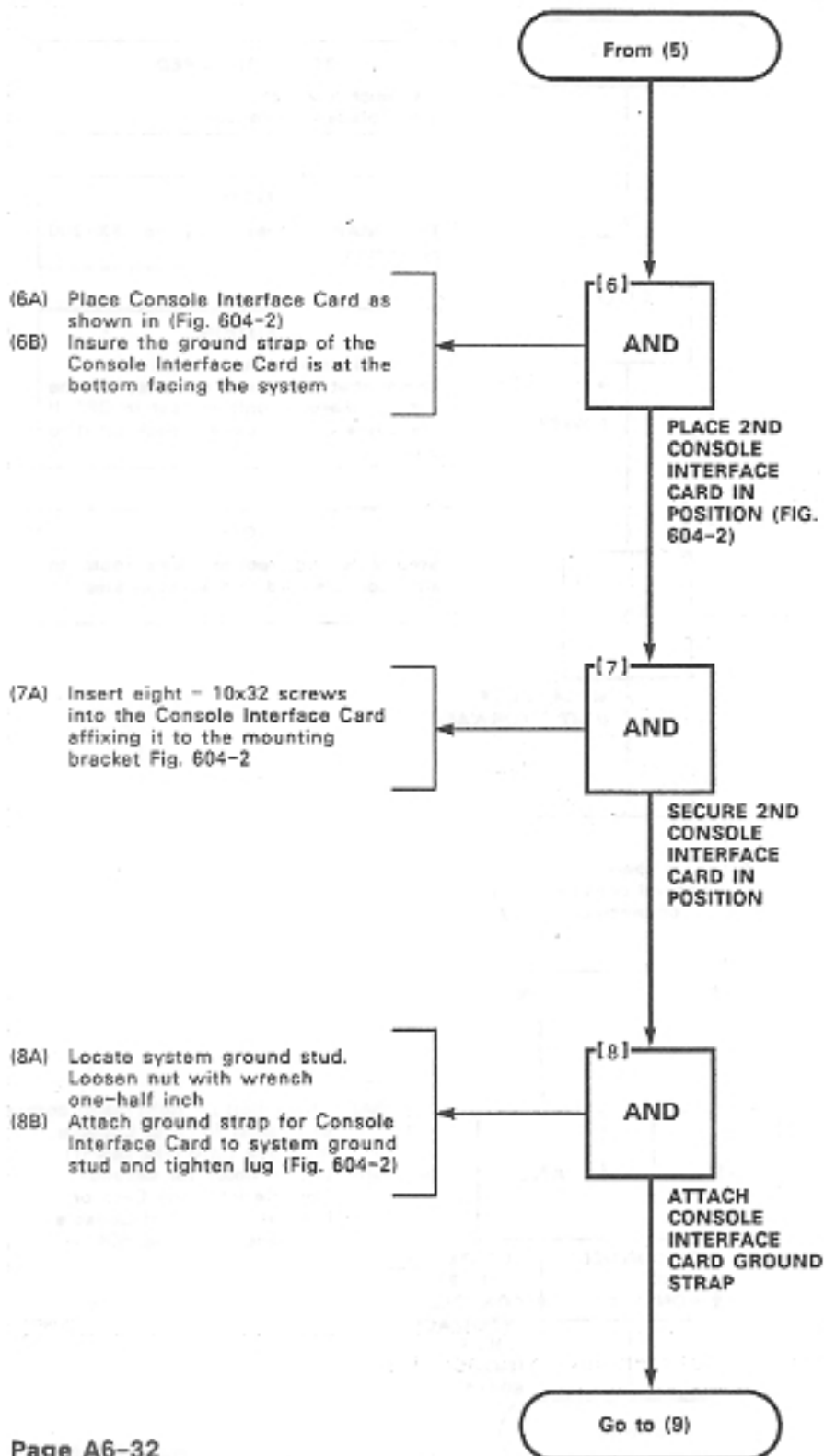


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| CONSOLE INTERFACE BOARD<br>INSTALLATION (SX-200) |
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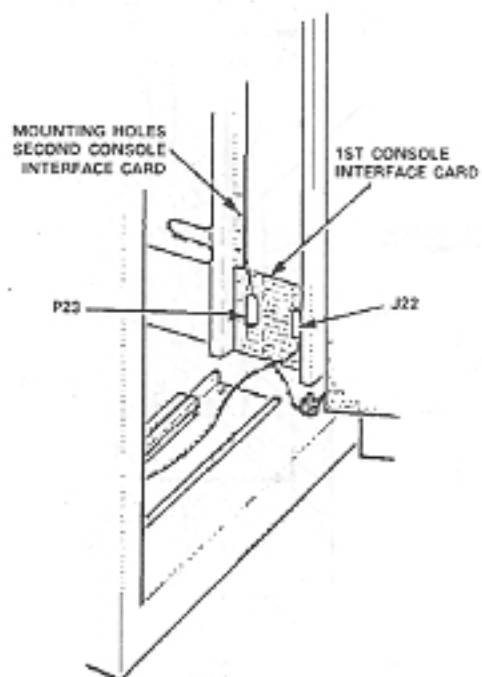


CONSOLE INTERFACE BOARD  
INSTALLATION (SX-200)

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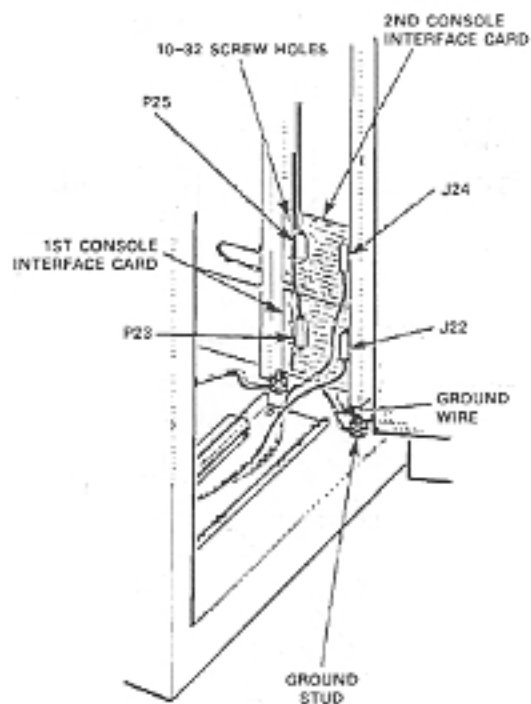
Fig. 604-1 1st Console Interface PCB

CONSOLE INTERFACE BOARD  
INSTALLATION (SX-200)

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Fig. 604-2 2nd Console Interface PCB's

**CONSOLE INTERFACE BOARD  
INSTALLATION (SX-200)**

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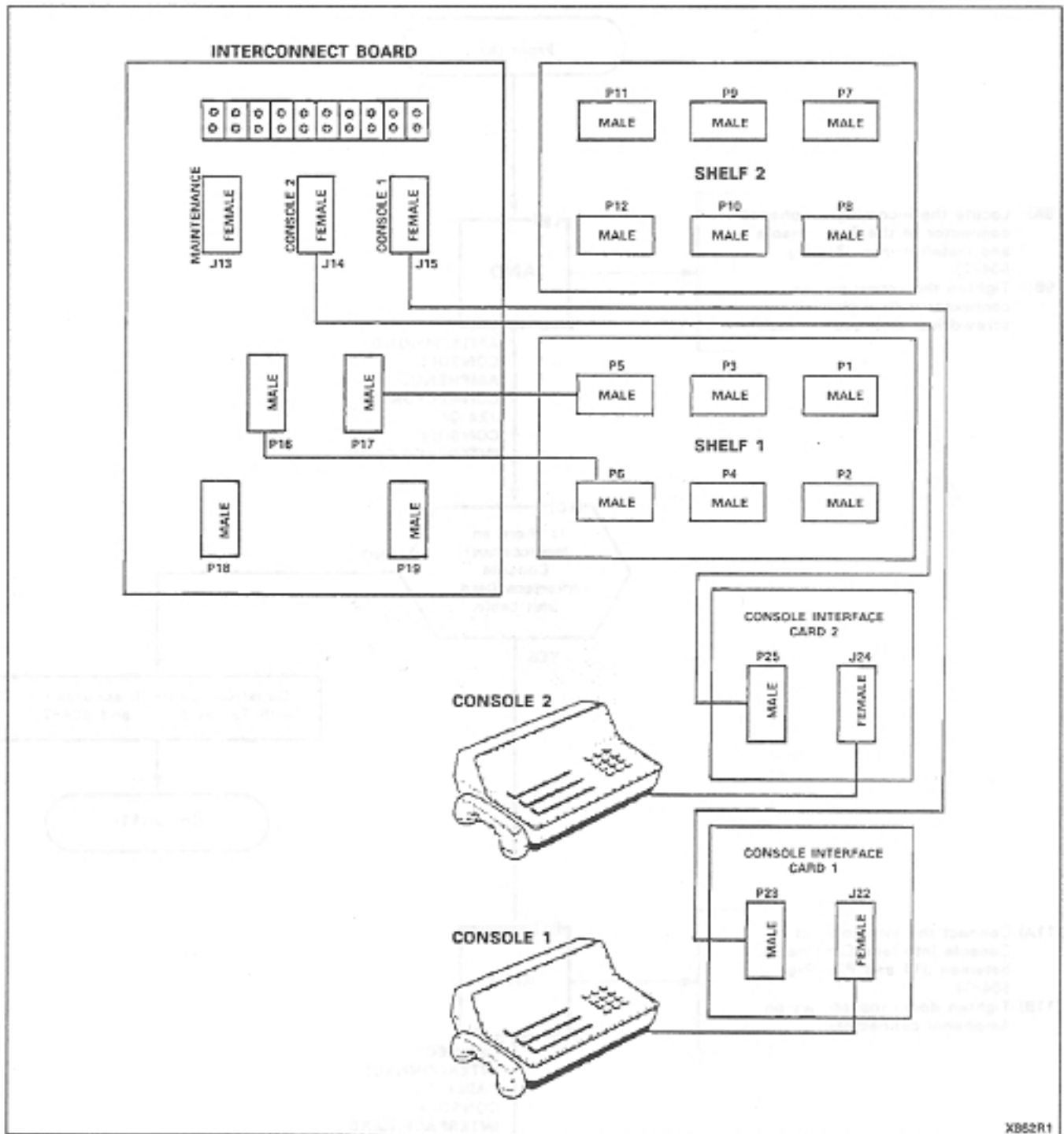
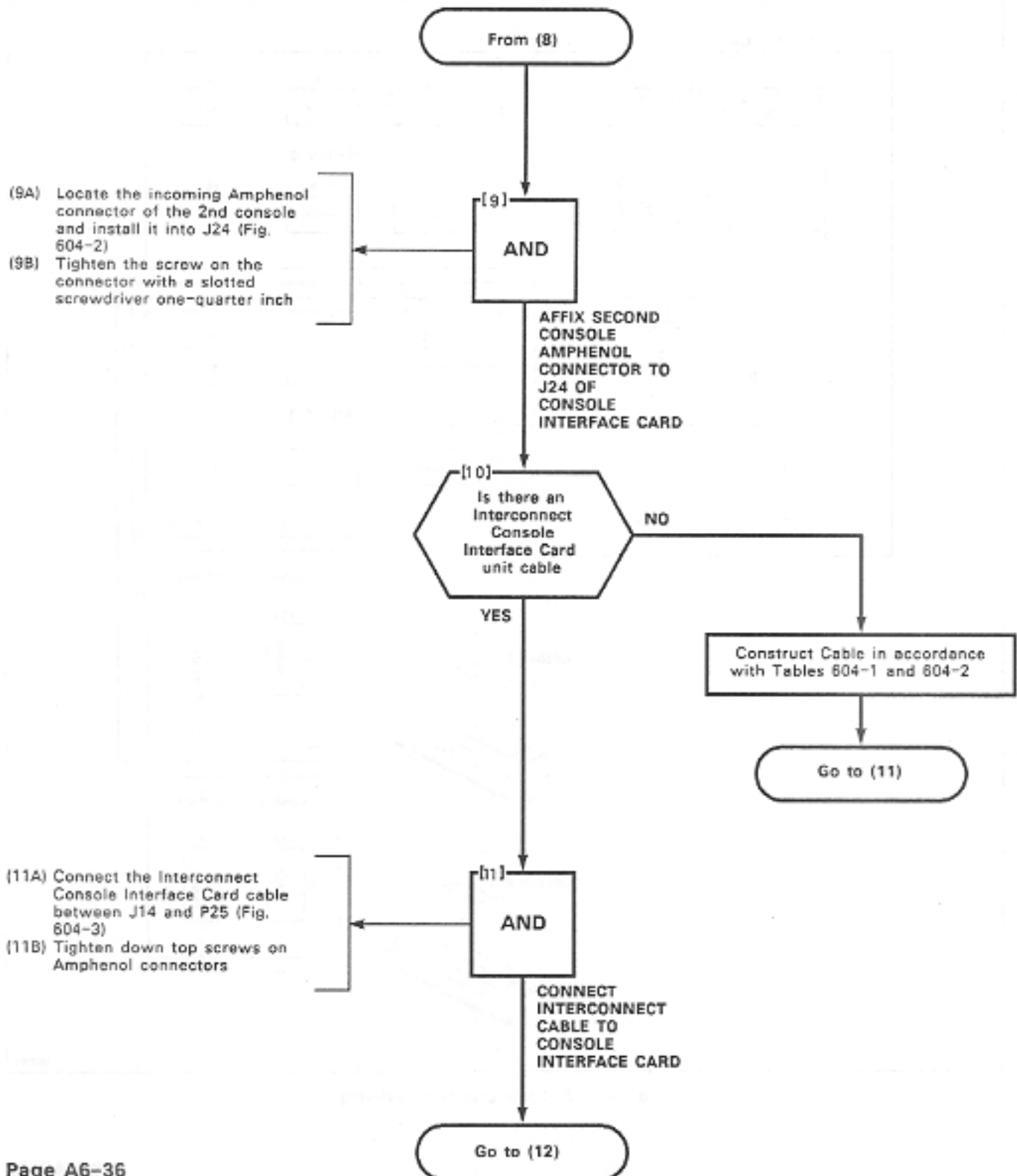
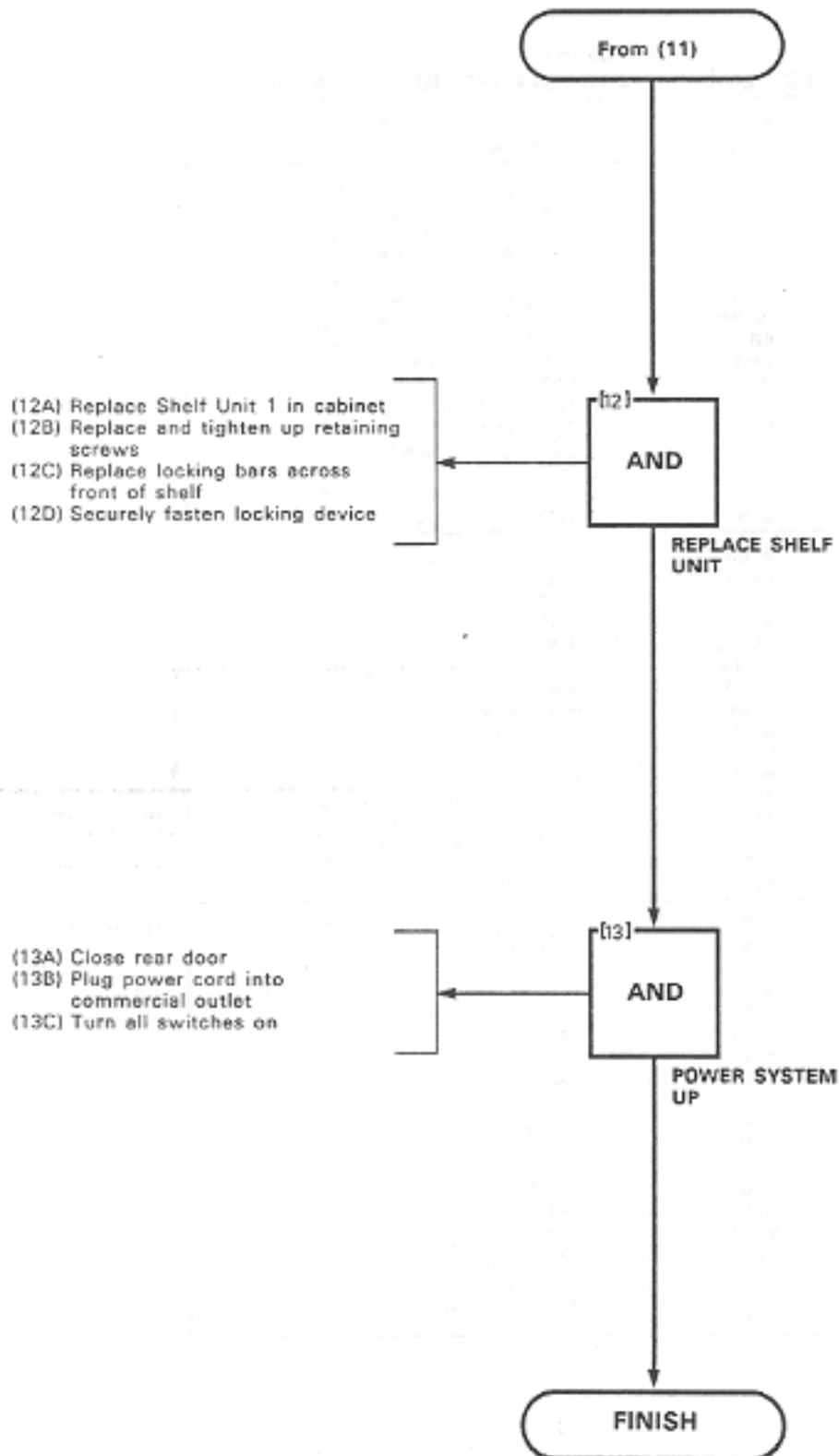


Fig. 604-3 Interconnect Wiring

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| CONSOLE INTERFACE BOARD<br>INSTALLATION (SX-200) |
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| CONSOLE INTERFACE BOARD<br>INSTALLATION (SX-200) | MAP200- 604  |
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INSTALLATION (SX-200)

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TABLE 604-1  
INTERCONNECT BLOCK - CONSOLE INTERFACE CARD

| Pin No. | Pair Color | Lead Designation     |
|---------|------------|----------------------|
| 26      | W-BL       | ELECTROSTATIC GROUND |
| 1       | BL-W       | ELECTROSTATIC GROUND |
| 27      | W-O        | ELECTROSTATIC GROUND |
| 2       | O-W        | ELECTROSTATIC GROUND |
| 28      | W-G        | ELECTROSTATIC GROUND |
| 3       | G-W        | ELECTROSTATIC GROUND |
| 29      | W-BR       | ELECTROSTATIC GROUND |
| 4       | BR-W       | ELECTROSTATIC GROUND |
| 30      | W-S        | DATA IN COMMON       |
| 5       | S-W        | DATA IN              |
| 31      | R-BL       | ELECTROSTATIC GROUND |
| 6       | BL-R       | ELECTROSTATIC GROUND |
| 32      | R-O        | DATA OUT COMMON      |
| 7       | O-R        | DATA OUT             |
| 33      | R-G        | ELECTROSTATIC GROUND |
| 8       | G-R        | ELECTROSTATIC GROUND |
| 34      | R-BR       | ELECTROSTATIC GROUND |
| 9       | BR-R       | ELECTROSTATIC GROUND |
| 35      | R-S        | CUTOVER SWB          |
| 10      | S-R        | CUTOVER SWA          |
| 36      | BK-BL      | ELECTROSTATIC GROUND |
| 11      | BL-BK      | ELECTROSTATIC GROUND |
| 37      | BK-O       | MAJOR ALARM          |
| 12      | O-BK       | MAJOR ALARM          |
| 38      | BK-G       | TIP                  |
| 13      | G-BK       | RING                 |
| 39      | BK-BR      | ELECTROSTATIC GROUND |
| 14      | BR-BK      | ELECTROSTATIC GROUND |
| 40      | BK-S       | ELECTROSTATIC GROUND |
| 15      | S-BK       | ELECTROSTATIC GROUND |
| 41      | Y-BL       | ELECTROSTATIC GROUND |
| 16      | BL-Y       | ELECTROSTATIC GROUND |
| 42      | Y-O        | ELECTROSTATIC GROUND |
| 17      | O-Y        | ELECTROSTATIC GROUND |
| 43      | Y-G        | 0 V                  |
| 18      | G-Y        | -48 V                |
| 44      | Y-BR       | 0 V                  |
| 19      | BR-Y       | -48 V                |
| 45      | Y-S        | 0 V                  |
| 20      | S-Y        | -48 V                |
| 46      | V-BL       | 0 V                  |
| 21      | BL-V       | -48 V                |
| 47      | V-O        | 0 V                  |
| 22      | O-V        | -48 V                |
| 48      | V-G        | 0 V                  |
| 23      | G-V        | -48 V                |
| 49      | V-BR       | 0 V                  |
| 24      | BR-V       | -48 V                |
| 50      | V-S        | 0 V                  |
| 25      | S-V        | -48 V                |



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| CONSOLE INTERFACE BOARD<br>INSTALLATION (SX-200) |
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TABLE 604-2  
CONSOLE WIRING

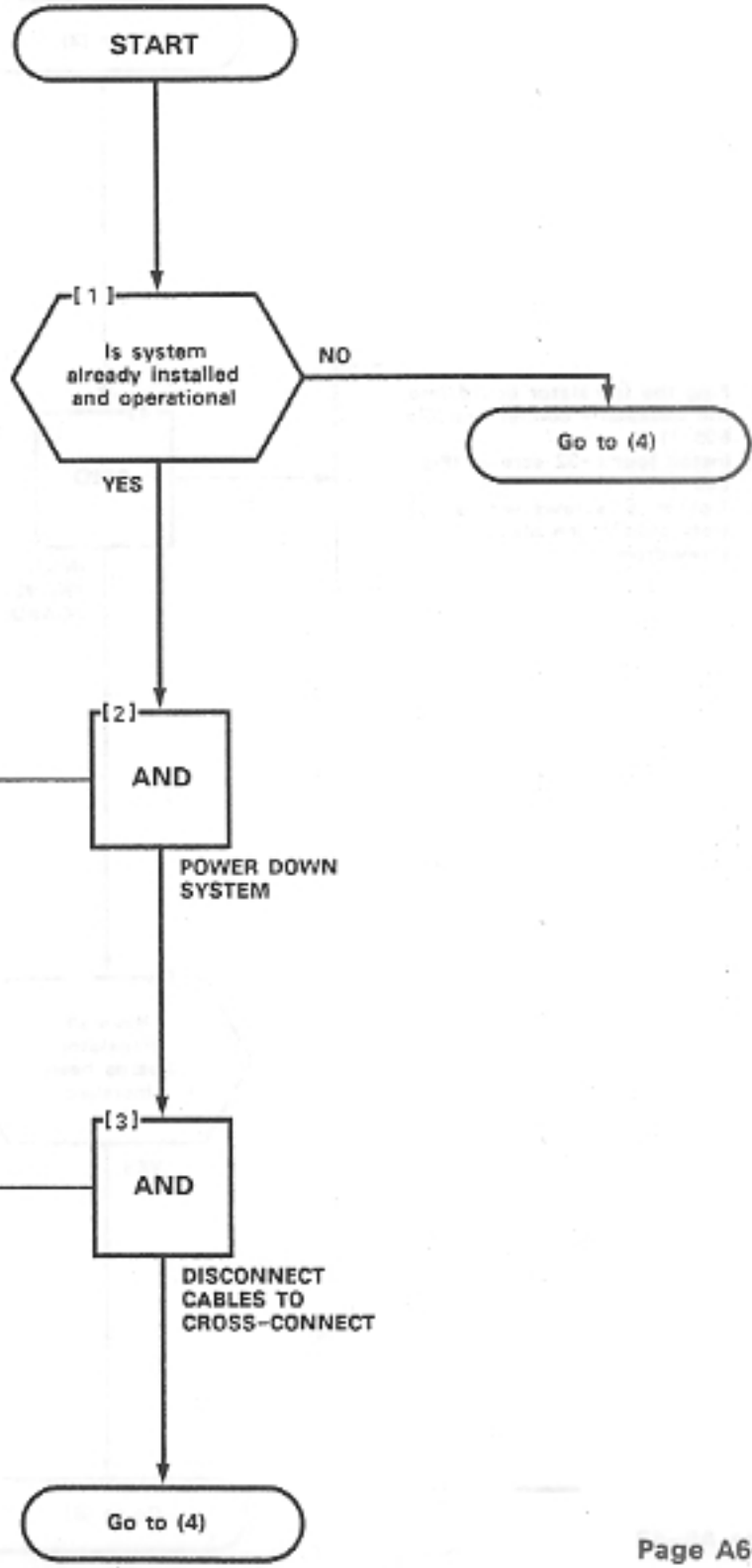
| POSITION | LEAD DESIGNATION                       | P5 | P17 | J14 | P25 | J24 |    |    |    |    |    |    |
|----------|--|----|-----|-----|-----|-----|----|----|----|----|----|----|
| 16       | CONSOLE 2                              |    |     |     |     |     |    |    |    |    |    |    |
|          | T (A)                                  | 28 | 38  | 38  | 38  | 38  |    |    |    |    |    |    |
|          | R (A)                                  | 12 | 12  | 13  | 13  | 13  |    |    |    |    |    |    |
|          | S DATA OUT T (A)                       | 29 | 39  | 32  | 32  | 32  |    |    |    |    |    |    |
|          | S DATA OUT R (A)                       | 14 | 14  | 7   | 7   | 7   |    |    |    |    |    |    |
|          | S DATA IN T (A)                        | 40 | 40  | 30  | 30  | 30  |    |    |    |    |    |    |
|          | S DATA IN R (A)                        | 15 | 15  | 5   | 5   | 5   |    |    |    |    |    |    |
|          | MAJOR ALARM TB1-5                      |    |     | 12  | 37  | 12  | 37 | 12 | 37 |    |    |    |
|          | -48 V TB 301                           |    |     | 18  | 19  | 20  | 18 | 19 | 20 | 18 | 19 | 20 |
|          |  |    |     | 21  | 22  | 23  | 21 | 22 | 23 | 21 | 22 | 23 |
|          |  |    |     | 24  | 25  | 24  | 25 | 24 | 25 | 24 | 25 |    |
|          | 0V TB301-1                             |    |     | 43  | 44  | 45  | 43 | 44 | 45 | 43 | 44 | 45 |
|          |  |    |     | 46  | 47  | 48  | 46 | 47 | 48 | 46 | 47 | 48 |
|          |  |    |     | 49  | 50  | 49  | 50 | 49 | 50 | 49 | 50 |    |
|          |  |    |     | 25  | 25  | 35  | 35 |    |    |    |    |    |
|          |  |    |     | 10  | 10  | 10  |    |    |    |    |    |    |
|          | ALL UNLISTED PINS<br>GO TO ESG TB301-3 |    |     |     |     |     |    |    |    |    |    |    |
| 17       | CONSOLE 1                              |    |     |     |     |     |    |    |    |    |    |    |
|          | T (A)                                  | 42 | 42  | 38  | 38  | 38  |    |    |    |    |    |    |
|          | R (A)                                  | 17 | 17  | 13  | 13  | 13  |    |    |    |    |    |    |
|          | S DATA IN T (A)                        | 18 | 18  | 5   | 5   | 5   |    |    |    |    |    |    |
|          | S DATA IN R (A)                        | 43 | 43  | 30  | 30  | 30  |    |    |    |    |    |    |
|          | S DATA OUT T (A)                       | 19 | 19  | 7   | 7   | 7   |    |    |    |    |    |    |
|          | S DATA OUT R (A)                       | 44 | 44  | 32  | 32  | 32  |    |    |    |    |    |    |
|          | MAJOR ALARM TB1-5                      |    |     | 12  | 37  | 12  | 37 | 12 | 37 |    |    |    |
|          | -48 V TB 301                           |    |     | 18  | 19  | 20  | 18 | 19 | 20 | 18 | 19 | 20 |
|          |  |    |     | 21  | 22  | 23  | 21 | 22 | 23 | 21 | 22 | 23 |
|          |  |    |     | 24  | 25  | 24  | 25 | 24 | 25 | 24 | 25 |    |
|          | 0V TB 301-1                            |    |     | 43  | 44  | 45  | 43 | 44 | 45 | 43 | 44 | 45 |
|          |  |    |     | 46  | 47  | 48  | 46 | 47 | 48 | 46 | 47 | 48 |
|          |  |    |     | 49  | 50  | 49  | 50 | 49 | 50 | 49 | 50 |    |
|          |  |    |     | 35  | 35  | 35  |    |    |    |    |    |    |
|          |  |    |     | 10  | 10  | 10  |    |    |    |    |    |    |
|          | ALL UNLISTED PINS<br>GO TO ESG TB301-3 |    |     |     |     |     |    |    |    |    |    |    |



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| <b>BACKPLANE TRANSLATOR BOARD<br/>INSTALLATION</b> |
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**TOOLS REQUIRED**  
1 Slotted screwdriver 1/4 inch

**WARNING:** A SUPERSET 4 line card and the equipment numbers associated with the card, may be used only with SUPERSET 4 electronic telephone sets. This should be taken into account when using backplane translators.



- (2A) Open front door
- (2B) Open rear door (SX-200)
- (2C) Set SYSTEM POWER switch to OFF
- (2D) Set all power switches on rear door to OFF
- (2E) Set battery switch (SX-200) to OFF
- (2F) Remove power cable(s) from power outlet(s)

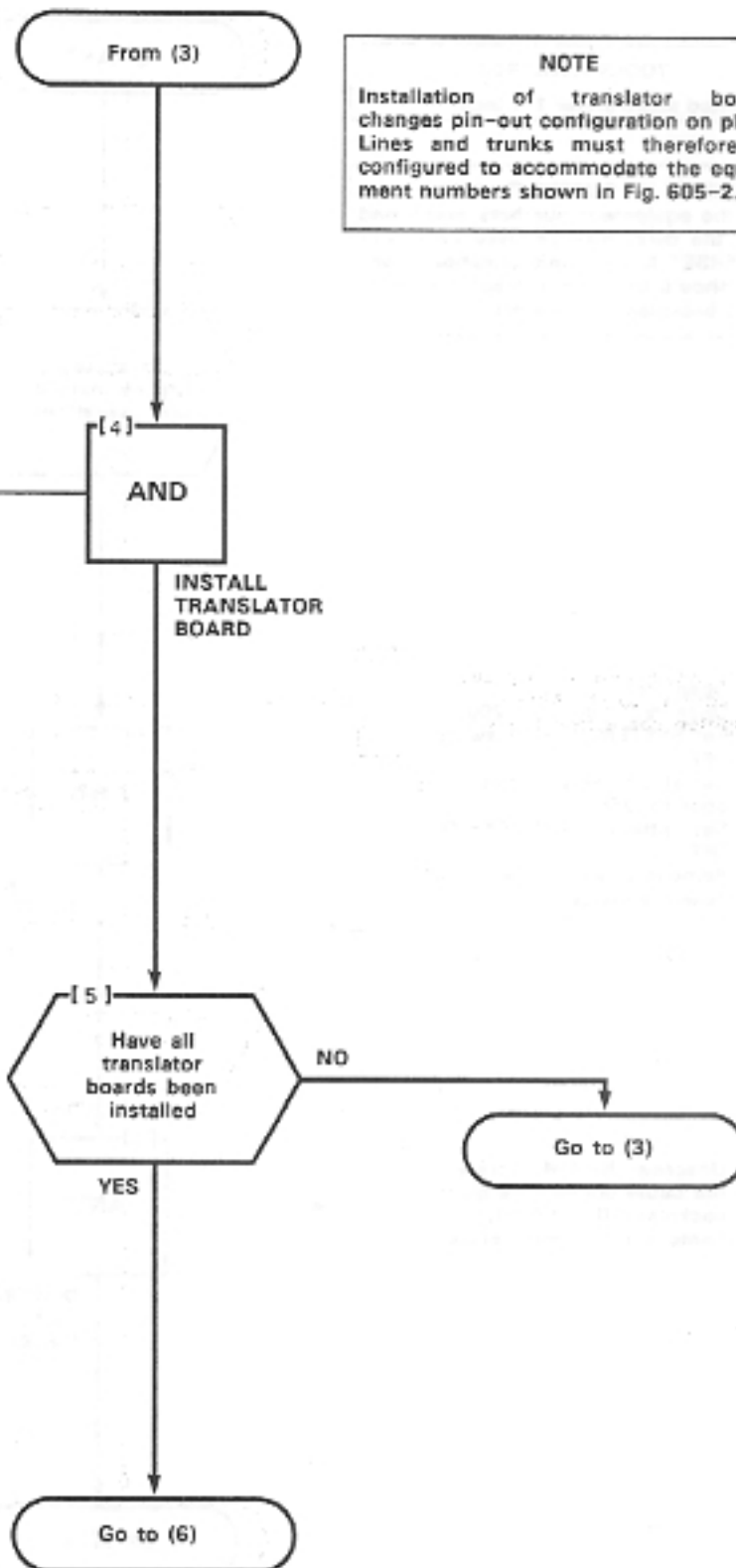
- (3A) Unscrew the 4-40 screw from the cable connectors on the backplane (Fig. 605-1)
- (3B) Remove cable connectors

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**NOTE**

Installation of translator boards changes pin-out configuration on plugs. Lines and trunks must therefore be configured to accommodate the equipment numbers shown in Fig. 605-2.

- (4A) Plug the translator board into the backplane connectors (Fig. 605-1)
- (4B) Install four 6-32 screws (Fig. 605-1)
- (4C) Tighten all screws with a slotted 0.25 inch blade screwdriver

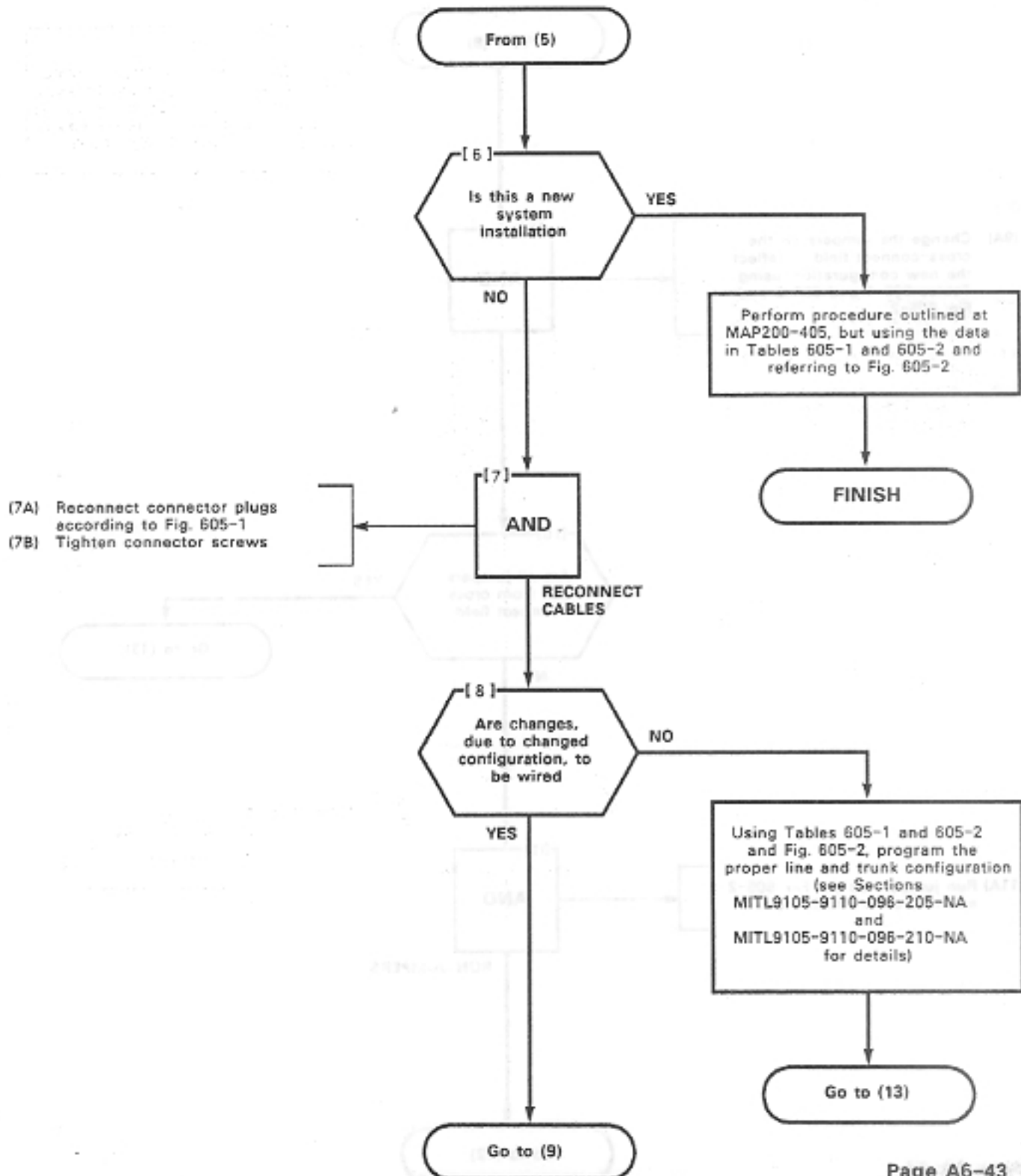


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| BACKPLANE TRANSLATOR BOARD<br>INSTALLATION |
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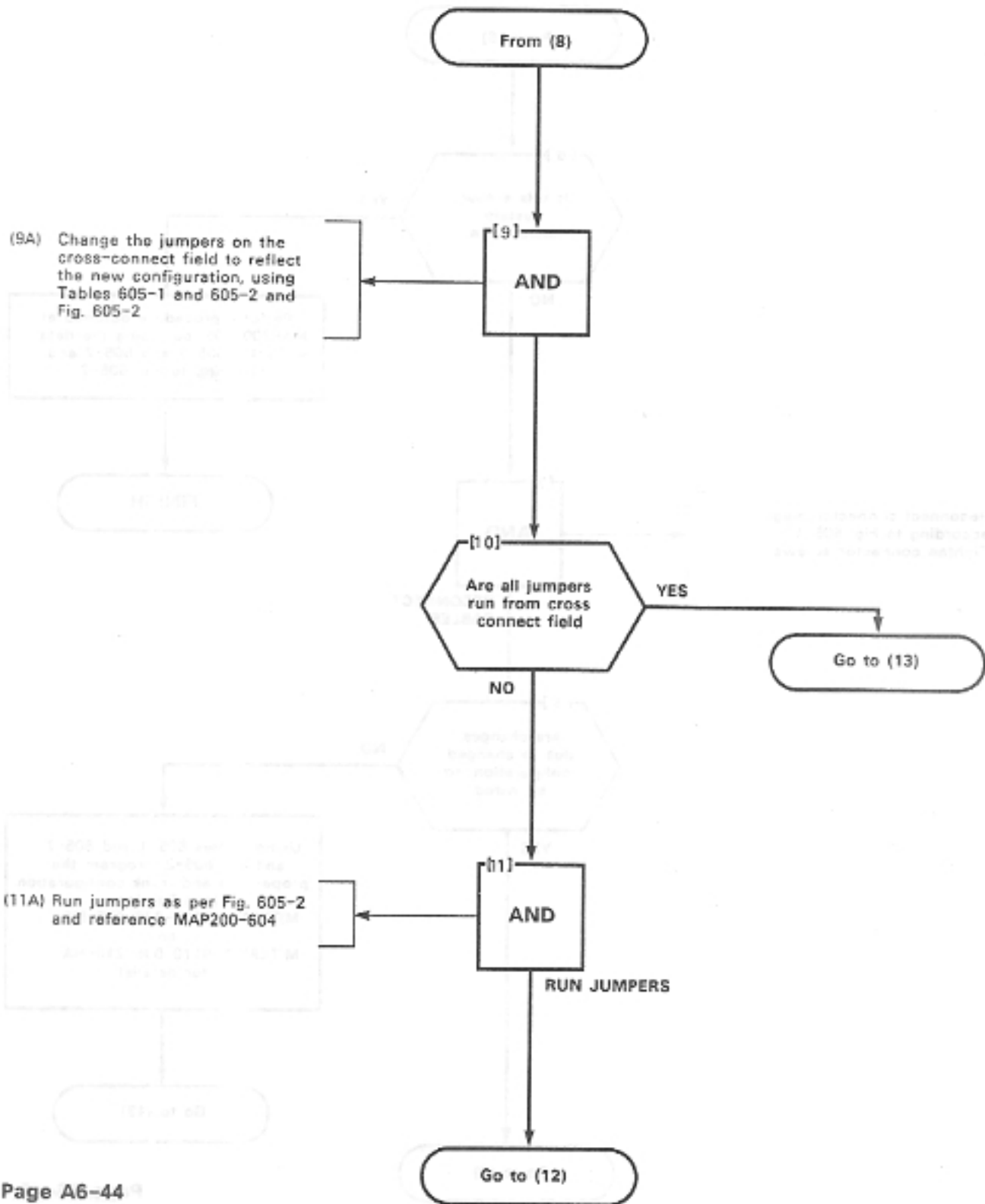
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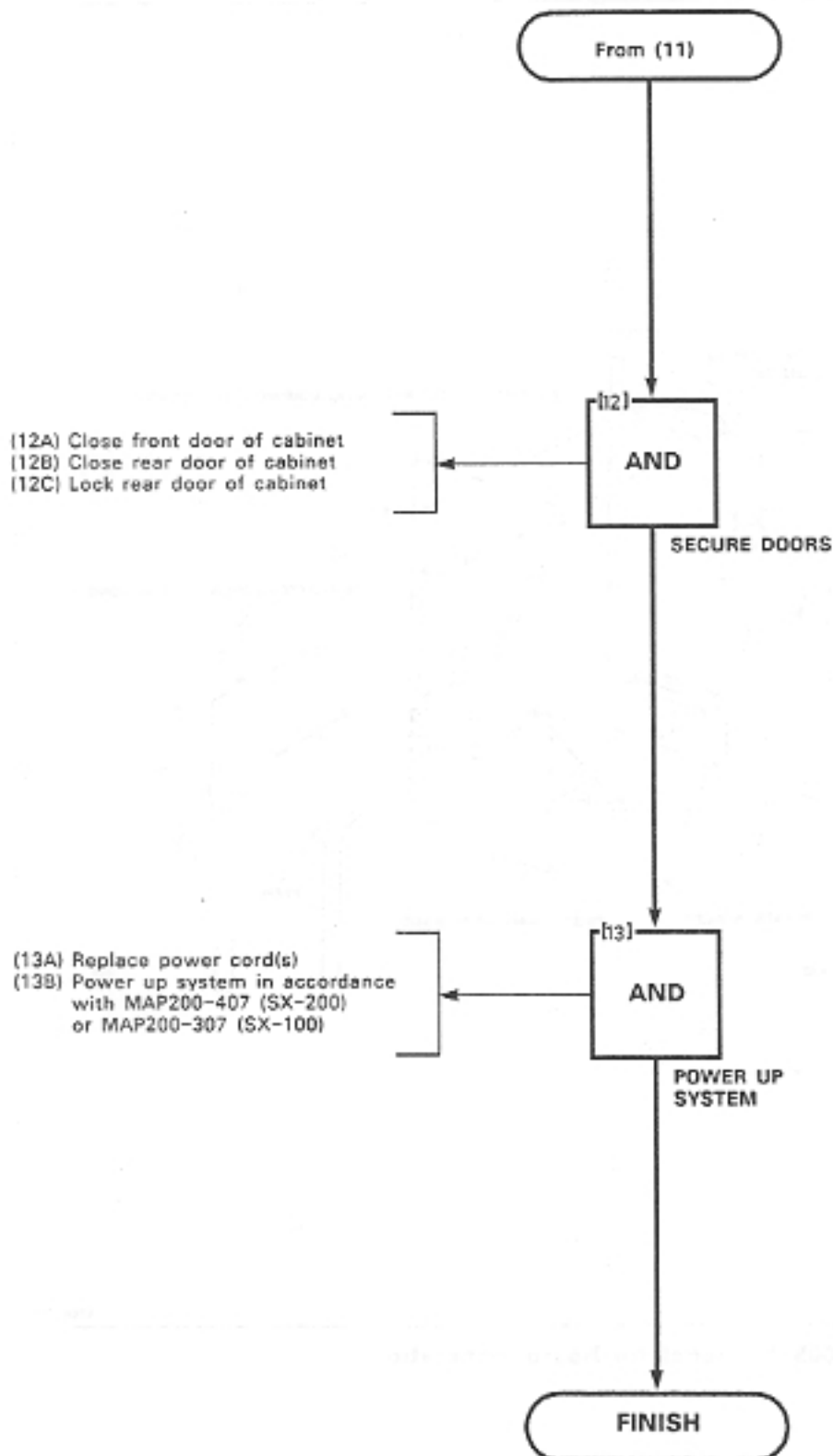


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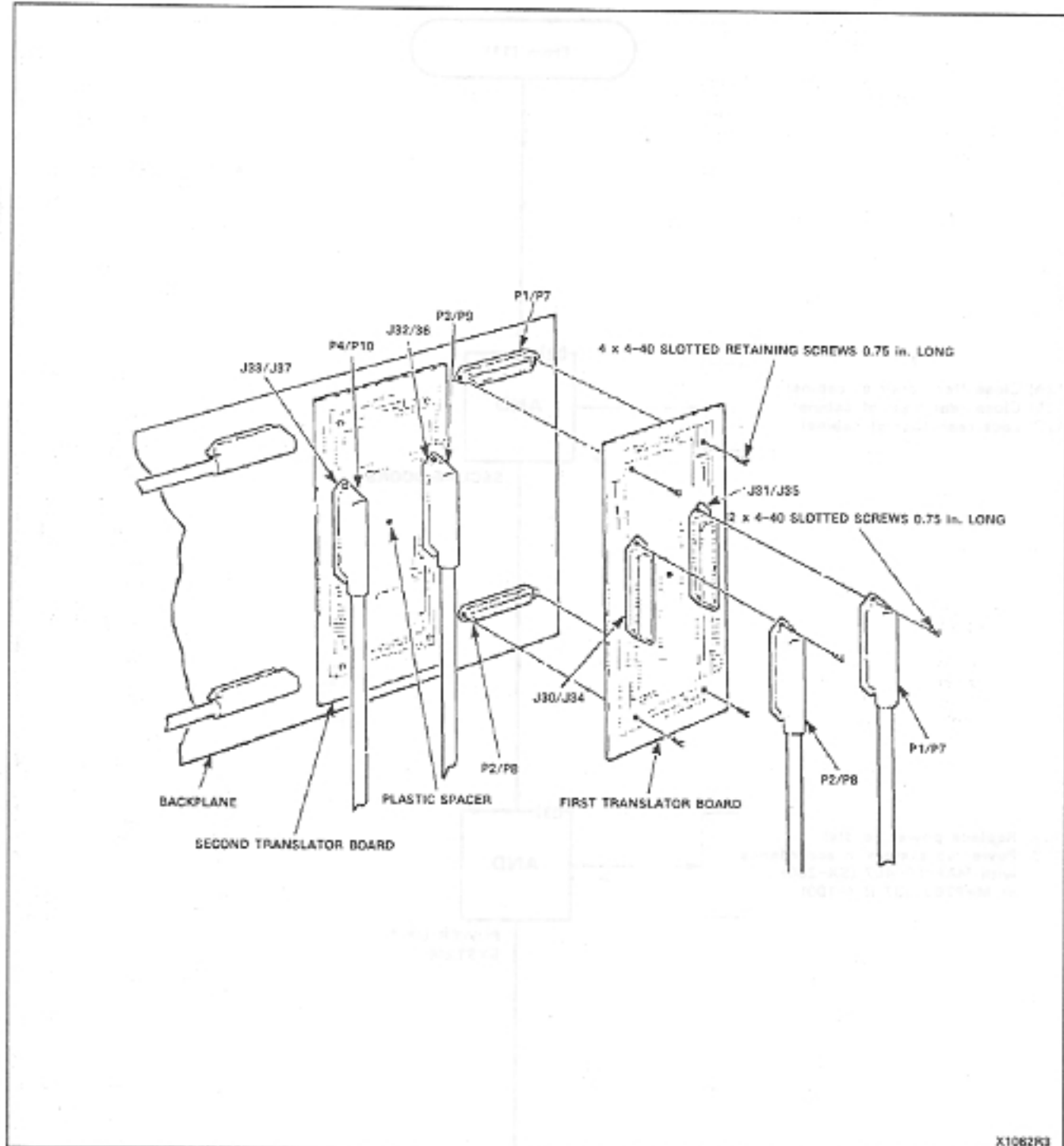


Fig. 605-1 Translator Board Installation



BACKPLANE TRANSLATOR BOARD  
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TABLE 605-1 BACKPLANE TRANSLATOR BOARD CONNECTIONS (SHELF 1)  
TO CROSS-CONNECT FIELD

| Pin | Pair Color | Line and Trunk Connections |     |         |      | Shelf 1 Translator Board Plug Numbers |  |  |                                   |  |                                   |                                   |  |     |                                   |                                   |  |     |                                   |     |  |
|-----|------------|----------------------------|-----|---------|------|---------------------------------------|--|--|-----------------------------------|--|-----------------------------------|-----------------------------------|--|-----|-----------------------------------|-----------------------------------|--|-----|-----------------------------------|-----|--|
|     |            | Extn                       | CO  | DID/Tie | E&M+ | P1                                    | P2   | P3   | P4                                |  |                                   |                                   |  |     |                                   |                                   |  |     |                                   |     |  |
| 26  | W-BL       | T1                         | T1  | T1      | T1   | 001                                   | Equipment Numbers Card Position 1                | 025  | Equipment Numbers Card Position 4 | 049  | Equipment Numbers Card Position 7 | 073                               | Equipment Numbers Card Position 10               |     |                                   |                                   |  |     |                                   |     |  |
| 1   | BL-W       | R1                         | R1  | R1      | R1   | 002                                   |  | 026  |                                   | 050  |                                   | 074                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 27  | W-O        | T2                         | XT2 |         | TR1  | 003                                   |  | 027  |                                   | 051  |                                   | 075                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 2   | O-W        | R2                         | XT1 |         | RR1  | 004                                   |  | 028  |                                   | 052  |                                   | 076                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 28  | W-G        | T3                         | T2  |         | E1   | 005                                   |  | 029  |                                   | 053  |                                   | 077                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 3   | G-W        | R3                         | R2  |         | M1   | 006                                   |  | 030  |                                   | 054  |                                   | 078                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 29  | W-BR       | T4                         |     | T2      | T2   | 007                                   |  | 031  |                                   | 055  |                                   | 079                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 4   | BR-W       | R4                         |     | R2      | R2   | 008                                   |  | 032  |                                   | 056  |                                   | 080                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 30  | W-S        | T5                         | T3  |         | T2   | 009                                   | Equipment Numbers Card Position 2                | 033  | Equipment Numbers Card Position 5 | 057  | Equipment Numbers Card Position 8 | 081                               | Equipment Numbers Card Positions 11              |     |                                   |                                   |  |     |                                   |     |  |
| 9   | BR-R       | R1                         | R1  | R1      | R1   | 010                                   |  | 034  |                                   | 058  |                                   | 082                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 35  | R-S        | T2                         | XT2 |         | TR1  | 011                                   |  | 035  |                                   | 059  |                                   | 083                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 10  | S-R        | R2                         | XT1 |         | RR1  | 012                                   |  | 036  |                                   | 060  |                                   | 084                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 36  | BK-BL      | T3                         | T2  |         | E1   | 013                                   |  | 037  |                                   | 061  |                                   | 085                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 11  | BL-BK      | R3                         | R2  |         | M1   | 014                                   |  | 038  |                                   | 062  |                                   | 086                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 37  | BK-O       | T4                         |     | T2      | T2   | 015                                   |  | 039  |                                   | 063  |                                   | 087                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 12  | O-BK       | R4                         |     | R2      | R2   | 016                                   |  | 040  |                                   | 064  |                                   | 088                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 38  | BK-G       | T5                         | T3  |         | T2   | 017                                   | Equipment Numbers Card Position 3                | 041  | Equipment Numbers Card Position 6 | 065  | Equipment Numbers Card Position 9 | 089                               | Equipment Numbers Card Position 12<br>(See Note) |     |                                   |                                   |  |     |                                   |     |  |
| 13  | G-BK       | R5                         | R3  |         | R2   | 018                                   |  | 042  |                                   | 066  |                                   | 090                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 39  | BK-BR      | T6                         | XT4 |         | TR2  | 019                                   |  | 043  |                                   | 067  |                                   | 091                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 14  | BR-BK      | R6                         | XT3 |         | RR2  | 020                                   |  | 044  |                                   | 068  |                                   | 092                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 40  | BK-S       | T7                         | T4  |         | E2   | 021                                   |  | 045  |                                   | 069  |                                   | 093                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 15  | S-BK       | R7                         | R4  |         | M2   | 022                                   |  | 046  |                                   | 070  |                                   | 094                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 41  | Y-BL       | T8                         |     | T2      | T2   | 023                                   |  | 047  |                                   | 071  |                                   | 095                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 16  | BL-Y       | R8                         |     | R2      | R2   | 024                                   |  | 048  |                                   | 072  |                                   | 096                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 42  | Y-O        | T1                         | T1  | T1      | T1   | 017                                   | Equipment Numbers Card Position 12<br>(See Note) | 041  | Equipment Numbers Card Position 6 | 065  | Equipment Numbers Card Position 9 | 089                               | Equipment Numbers Card Position 12<br>(See Note) |     |                                   |                                   |  |     |                                   |     |  |
| 17  | O-Y        | R1                         | R1  | R1      | R1   | 018                                   |  | 042  |                                   | 066  |                                   | 090                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 43  | Y-G        | T2                         | XT2 |         | TR1  | 019                                   |  | 043  |                                   | 067  |                                   | 091                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 18  | G-Y        | R2                         | XT1 |         | RR1  | 020                                   |  | 044  |                                   | 068  |                                   | 092                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 44  | Y-BR       | T3                         | T2  |         | E1   | 021                                   |  | 045  |                                   | 069  |                                   | 093                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 19  | BR-Y       | R3                         | R2  |         | M1   | 022                                   |  | 046  |                                   | 070  |                                   | 094                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 45  | Y-S        | T4                         |     | T2      | T2   | 023                                   |  | 047  |                                   | 071  |                                   | 095                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 20  | S-Y        | R4                         |     | R2      | R2   | 024                                   |  | 048  |                                   | 072  |                                   | 096                               |  |     |                                   |                                   |  |     |                                   |     |  |
| 46  | V-BL       | T5                         | T3  |         | T2   | 021                                   |  | Equipment Numbers Card Position 12<br>(See Note) |                                   | 045  |                                   | Equipment Numbers Card Position 6 |  | 069 | Equipment Numbers Card Position 9 | 093                               | Equipment Numbers Card Position 12<br>(See Note) |     |                                   |     |  |
| 21  | BL-V       | R5                         | R3  |         | R2   | 022                                   |  |  |                                   | 046  |                                   |                                   |  | 070 |                                   | 094                               |  |     |                                   |     |  |
| 47  | V-O        | T6                         | XT4 |         | TR2  | 023                                   |  |  |                                   | 047  |                                   |                                   |  | 071 |                                   | 095                               |  |     |                                   |     |  |
| 22  | O-V        | R6                         | XT3 |         | RR2  | 024                                   |  |  |                                   | 048  |                                   |                                   |  | 072 |                                   | 096                               |  |     |                                   |     |  |
| 48  | V-G        | T7                         | T4  |         | E2   | 023                                   |  |  |                                   | 047  |                                   |                                   |  | 071 |                                   | 095                               |  |     |                                   |     |  |
| 23  | G-V        | R7                         | R4  |         | M2   | 024                                   |  |  |                                   | 048  |                                   |                                   |  | 072 |                                   | 096                               |  |     |                                   |     |  |
| 49  | V-BR       | T8                         |     | T2      | T2   | 024                                   |  |  |                                   | Equipment Numbers Card Position 12<br>(See Note) |                                   |                                   |  | 048 |                                   | Equipment Numbers Card Position 6 |  | 072 | Equipment Numbers Card Position 9 | 096 | Equipment Numbers Card Position 12<br>(See Note) |
| 24  | BR-V       | R8                         |     | R2      | R2   | 024                                   |  |  |                                   |  |                                   |                                   |  | 048 |                                   |                                   |  | 072 |                                   | 096 |  |
| 50  | V-S        | SPARE                      |     |         |      |                                       |  |  |                                   |  |                                   |                                   |  |     |                                   |                                   |  |     |                                   |     |  |
| 25  | S-V        | SPARE                      |     |         |      |                                       |  |  |                                   |  |                                   |                                   |  |     |                                   |                                   |  |     |                                   |     |  |

NOTE: Position 12 can be used for lines, trunks or receiver #4 card.  
\* For 2-Wire E&M Trunk operation DO NOT connect RR and TR leads.

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TABLE 605-2 BACKPLANE TRANSLATOR BOARD CONNECTIONS (SHELF 2)  
TO CROSS-CONNECT FIELD

| Pin | Pair Color | Line and Trunk Connections |     |         |      | Shelf 2 Translator Board Plug Numbers |     |     |     |
|-----|------------|----------------------------|-----|---------|------|---------------------------------------|-----|-----|-----|
|     |            | Extn                       | CD  | DID/Tie | E&M+ | P7                                    | P8  | P9  | P10 |
| 26  | W-BL       | T1                         | T1  | T1      | T1   | 161                                   | 185 | 209 | 233 |
| 1   | BL-W       | R1                         | R1  | R1      | R1   | Equipment Numbers Card Position 1     | 186 | 210 | 234 |
| 27  | W-O        | T2                         | XT2 |         | TR1  |                                       |     |     |     |
| 2   | O-W        | R2                         | XT1 |         | RR1  |                                       |     |     |     |
| 28  | W-G        | T3                         | T2  |         | E1   |                                       |     |     |     |
| 3   | G-W        | R3                         | R2  |         | M1   |                                       |     |     |     |
| 29  | W-BR       | T4                         |     |         |      |                                       |     |     |     |
| 4   | BR-W       | R4                         |     |         |      |                                       |     |     |     |
| 30  | W-S        | T5                         | T3  | T2      | T2   |                                       |     |     |     |
| 5   | S-W        | R5                         | R3  | R2      | R2   |                                       |     |     |     |
| 31  | R-BL       | T6                         | XT4 |         | TR2  |                                       |     |     |     |
| 6   | BL-R       | R6                         | XT3 |         | RR2  |                                       |     |     |     |
| 32  | R-O        | T7                         | T4  |         | E2   |                                       |     |     |     |
| 7   | O-R        | R7                         | R4  |         | M2   |                                       |     |     |     |
| 33  | R-G        | T8                         |     |         |      |                                       |     |     |     |
| 8   | G-R        | R8                         |     |         |      |                                       |     |     |     |
| 34  | R-BR       | T1                         | T1  | T1      | T1   | 169                                   | 193 | 217 | 241 |
| 9   | BR-R       | R1                         | R1  | R1      | R1   | Equipment Numbers Card Position 2     | 194 | 218 | 242 |
| 35  | R-S        | T2                         | XT2 |         | TR1  |                                       |     |     |     |
| 10  | S-R        | R2                         | XT1 |         | RR1  |                                       |     |     |     |
| 36  | BK-BL      | T3                         | T2  |         | E1   |                                       |     |     |     |
| 11  | BL-BK      | R3                         | R2  |         | M1   |                                       |     |     |     |
| 37  | BK-O       | T4                         |     |         |      |                                       |     |     |     |
| 12  | O-BK       | R4                         |     |         |      |                                       |     |     |     |
| 38  | BK-G       | T5                         | T3  | T2      | T2   |                                       |     |     |     |
| 13  | G-BK       | R5                         | R3  | R2      | R2   |                                       |     |     |     |
| 39  | BK-BR      | T6                         | XT4 |         | TR2  |                                       |     |     |     |
| 14  | BR-BK      | R6                         | XT3 |         | RR2  |                                       |     |     |     |
| 40  | BK-S       | T7                         | T4  |         | E2   |                                       |     |     |     |
| 15  | S-BK       | R7                         | R4  |         | M2   |                                       |     |     |     |
| 41  | Y-BL       | T8                         |     |         |      |                                       |     |     |     |
| 16  | BL-Y       | R8                         |     |         |      |                                       |     |     |     |
| 42  | Y-O        | T1                         | T1  | T1      | T1   | 177                                   | 201 | 225 | 249 |
| 17  | O-Y        | R1                         | R1  | R1      | R1   | Equipment Numbers Card Position 3     | 202 | 226 | 250 |
| 43  | Y-G        | T2                         | XT2 |         | TR1  |                                       |     |     |     |
| 18  | G-Y        | R2                         | XT1 |         | RR1  |                                       |     |     |     |
| 44  | Y-BR       | T3                         | T2  |         | E1   |                                       |     |     |     |
| 19  | BR-Y       | R3                         | R2  |         | M1   |                                       |     |     |     |
| 45  | Y-S        | T4                         |     |         |      |                                       |     |     |     |
| 20  | S-Y        | R4                         |     |         |      |                                       |     |     |     |
| 46  | V-BL       | T5                         | T3  | T2      | T2   |                                       |     |     |     |
| 21  | BL-V       | R5                         | R3  | R2      | R2   |                                       |     |     |     |
| 47  | V-O        | T6                         | XT4 |         | TR2  |                                       |     |     |     |
| 22  | O-V        | R6                         | XT3 |         | RR2  |                                       |     |     |     |
| 48  | V-G        | T7                         | T4  |         | E2   |                                       |     |     |     |
| 23  | G-V        | R7                         | R4  |         | M2   |                                       |     |     |     |
| 49  | V-BR       | T8                         |     |         |      |                                       |     |     |     |
| 24  | BR-V       | R8                         |     |         |      |                                       |     |     |     |
| 50  | V-S        | SPARE                      |     |         |      |                                       |     |     |     |
| 25  | S-V        | SPARE                      |     |         |      |                                       |     |     |     |

NOTE: Position 12 can be used for lines, trunks or receiver #4 card.  
 \* For 2-Wire E&M Trunk operation DO NOT connect RR and TR leads.

## HARDWARE/EQUIPMENT NUMBERING

| HARDWARE POSITION NUMBER | PLUG 7 |     |     | PLUG 8 |     |     | PLUG 9 |     |     | PLUG 10 |     |     |
|--------------------------|--------|-----|-----|--------|-----|-----|--------|-----|-----|---------|-----|-----|
|                          | 161    | 169 | 177 | 185    | 193 | 201 | 209    | 217 | 225 | 233     | 241 | 249 |
|                          | 162    | 170 | 178 | 186    | 194 | 202 | 210    | 218 | 226 | 234     | 242 | 250 |
|                          | 163    | 171 | 179 | 187    | 195 | 203 | 211    | 219 | 227 | 235     | 243 | 251 |
|                          | 164    | 172 | 180 | 188    | 196 | 204 | 212    | 220 | 228 | 236     | 244 | 252 |
|                          | 165    | 173 | 181 | 189    | 197 | 205 | 213    | 221 | 229 | 237     | 245 | 253 |
|                          | 166    | 174 | 182 | 190    | 198 | 206 | 214    | 222 | 230 | 238     | 246 | 254 |
|                          | 167    | 175 | 183 | 191    | 199 | 207 | 215    | 223 | 231 | 239     | 247 | 255 |
|                          | 168    | 176 | 184 | 192    | 200 | 208 | 216    | 224 | 232 | 240     | 248 | 256 |
|                          | 1      | 2   | 3   | 4      | 5   | 6   | 7      | 8   | 9   | 10      | 11  | 12  |

## SHELF 2 (SX-200)

| HARDWARE POSITION NUMBER | PLUG P1 |     |     | PLUG P2 |     |     | PLUG P3 |     |     | PLUG P4 |     |     |
|--------------------------|---------|-----|-----|---------|-----|-----|---------|-----|-----|---------|-----|-----|
|                          | 001     | 009 | 017 | 025     | 033 | 041 | 049     | 057 | 065 | 073     | 081 | 089 |
|                          | 002     | 010 | 018 | 026     | 034 | 042 | 050     | 058 | 066 | 074     | 082 | 090 |
|                          | 003     | 011 | 019 | 027     | 035 | 043 | 051     | 059 | 067 | 075     | 083 | 091 |
|                          | 004     | 012 | 020 | 028     | 036 | 044 | 052     | 060 | 068 | 076     | 084 | 092 |
|                          | 005     | 013 | 021 | 029     | 037 | 045 | 053     | 061 | 069 | 077     | 085 | 093 |
|                          | 006     | 014 | 022 | 030     | 038 | 046 | 054     | 062 | 070 | 078     | 086 | 094 |
|                          | 007     | 015 | 023 | 031     | 039 | 047 | 055     | 063 | 071 | 079     | 087 | 095 |
|                          | 008     | 016 | 024 | 032     | 040 | 048 | 056     | 064 | 072 | 080     | 088 | 096 |
|                          | 1       | 2   | 3   | 4       | 5   | 6   | 7       | 8   | 9   | 10      | 11  | 12  |

## SHELF 1 SX-100/SX-200

NOTE: EQUIPMENT POSITION 001 IS RESERVED FOR THE TEST LINE AND MUST THEREFORE BE EQUIPPED WITH A LINE CARD. TRUNK EQUIPMENT NUMBER IS SAME AS INDIVIDUAL TRUNK ACCESS CODE.  
EQUIPMENT NUMBERS ASSIGNED TO SUPERSSET 4  
LINE CARDS CAN ONLY BE USED WITH SUPERSSET 4  
ELECTRONIC TELEPHONE SETS.

X1318

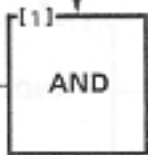
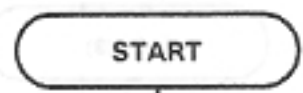
Fig. 605-2 Backplane Translator Board Plug Appearances



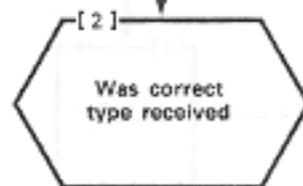
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| INSTALLATION OF RCP CARD |
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**NOTE**  
 The RCP card provides a remote access facility. See Section MITL9105/9110-98-101-NA Remote Maintenance, Administration and Test Description for details.

- (1A) Unpack card from container
- (1B) Inspect card for physical damage
- (1C) Check card type against invoice



UNPACK AND INSPECT CARD



NO

Repack item in original container and return to supplier, with completed section of Damage Report

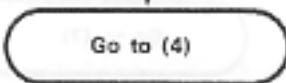
YES



YES

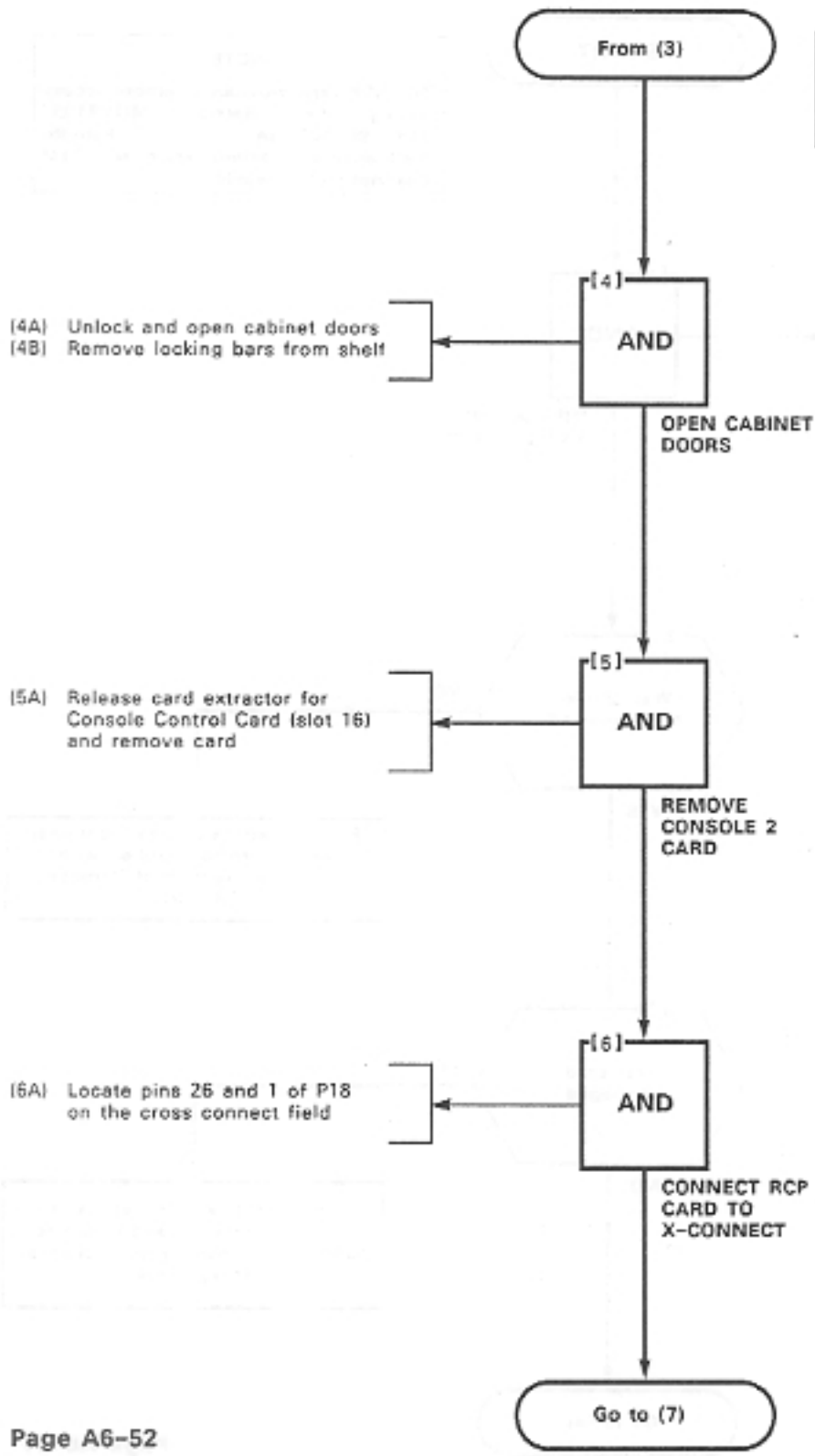
Tag defective item, repack in original container and return to supplier with completed section of Damage Report

NO



|                          |
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| INSTALLATION OF RCP CARD |
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**NOTE**  
 RCP card is to be used in Shelf 1 Slot 16. The existing console control card (if installed) must be removed.



## INSTALLATION OF RCP CARD

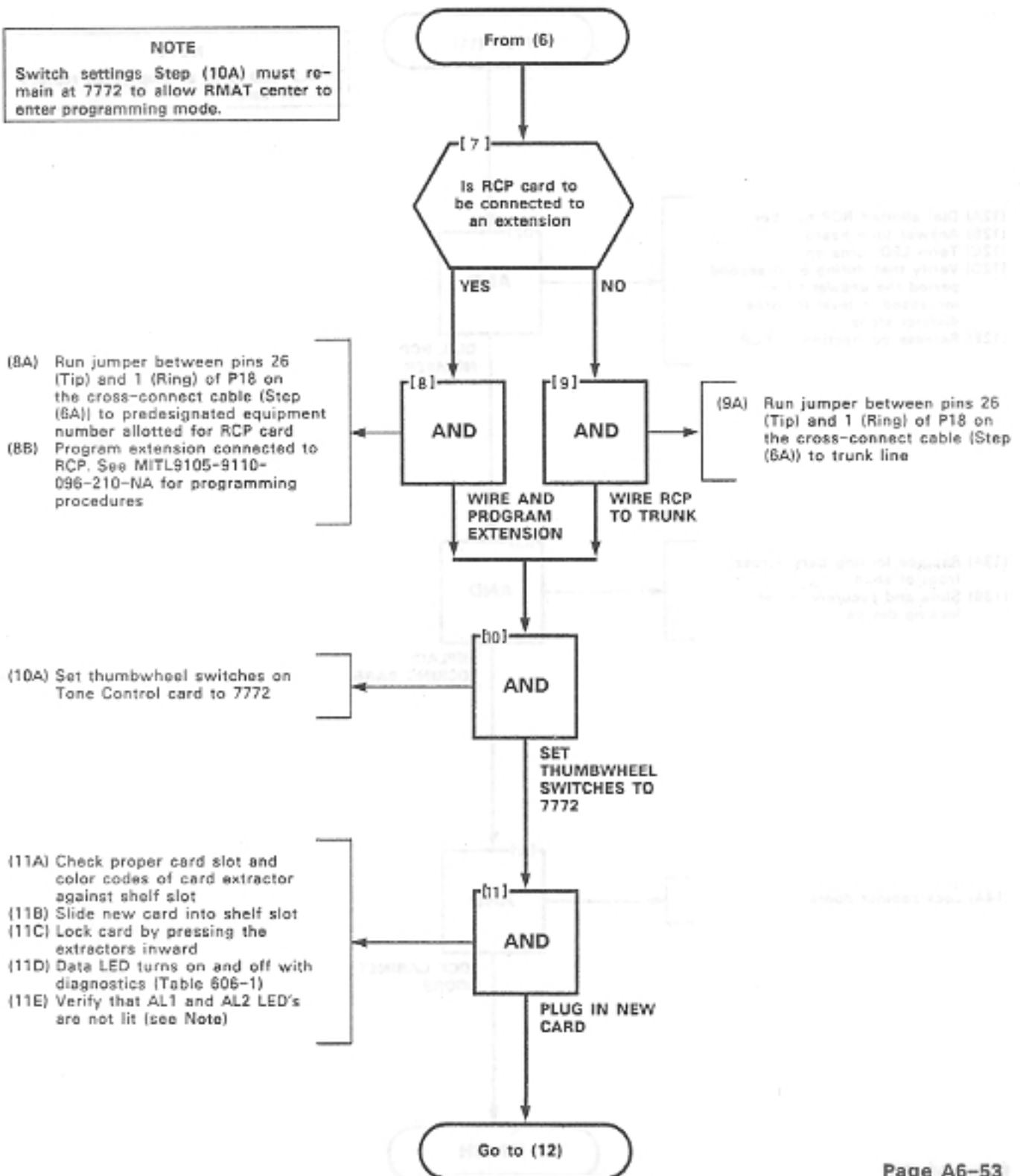
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## NOTE

Switch settings Step (10A) must remain at 7772 to allow RMAP center to enter programming mode.



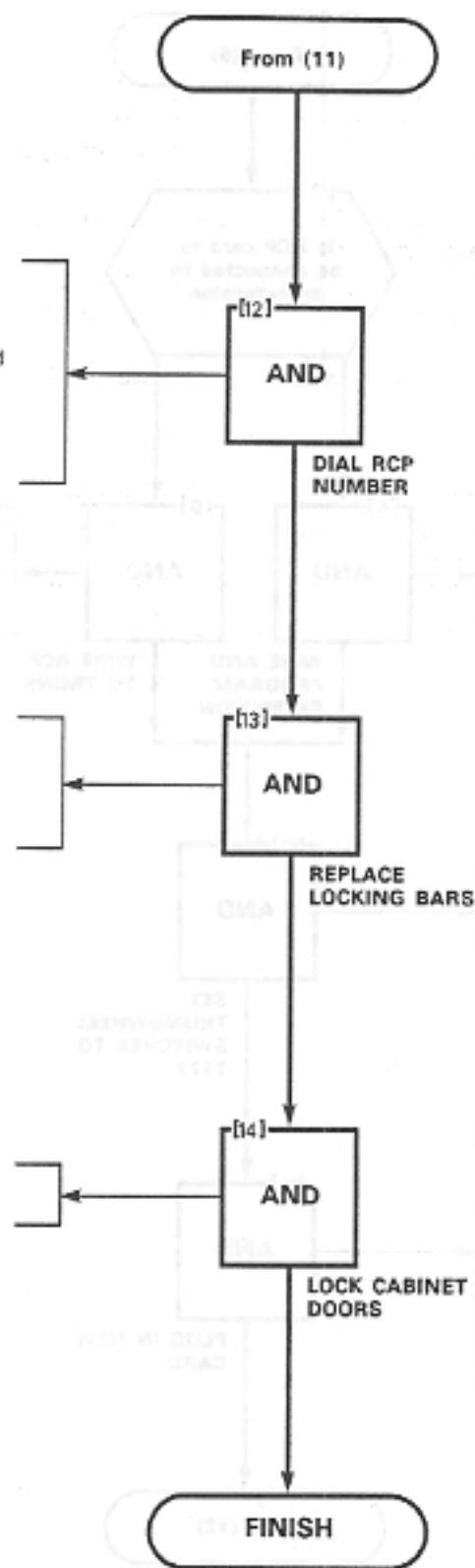
|                          |
|--------------------------|
| INSTALLATION OF RCP CARD |
| MAP200- 606              |
| Issue 1, December 1982   |
| Sheet 4 of 5             |

**NOTE**  
If AL2 LED is lit at Step (11D) replace the RCP card.

- (12A) Dial allotted RCP number
- (12B) Answer tone heard
- (12C) Term LED turns on
- (12D) Verify that during a 10 second period the answer tone increased in level in three distinct steps
- (12E) Release connection to RCP

- (13A) Replace locking bars across front of shelf
- (13B) Slide and securely fasten locking device

- (14A) Lock cabinet doors





INSTALLATION OF RCP CARD

MAP200-606

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**TABLE 606-1**  
**RCP LED INDICATIONS**

| DESIGNATION | DESCRIPTION OF INDICATIONS   |
|-------------|--|
| DATA        | <ol style="list-style-type: none"> <li>1. LED lit when the RCP is connected to the RMAT Controller and data is being transmitted.</li> <li>2. LED lit during diagnostic tests. Tests consist of three 10 second periods followed by 17 seconds during which LED is off.</li> </ol> |
| TERM        | LED is lit when the RCP answers the RMAT Controller  |
| AL1         | Alarm LED AL1 is lit when alarm is activated by the watchdog timer   |
| AL2         | Alarm LED flashes if failure occurs during the RCP self-test diagnostics. The LED is lit steadily if a checksum or RAM failure occurs during initialization.   |

SECTION 101.001 - 101.002

SECTION 101.001 - 101.002

SECTION 101.001 - 101.002

|   |
|---|
| RESERVE POWER SUPPLY<br>INSTALLATION (SX-100) |
| MAP200-607                                    |
| Issue 1, December 1982                        |
| Sheet 1 of 12                                 |

**NOTE**  
This MAP applies only to SX-100 equipment.

**CAUTION**  
Check that the BATTERY switch on the reserve battery pack is set to OFF.  
Check that the three switches on the battery charging unit are set to OFF.

- (1A) Unpack reserve power supply equipment
- (1B) Inspect items for physical damage
- (1C) Check item types against invoice

START

[1]  
AND

UNPACK AND INSPECT ITEMS

[2]  
Were correct items received in good condition

NO

Complete Damage Report Form and return with defective items to the supplier

Go to End

YES

[3]  
Is SX-100 a wall-mount version

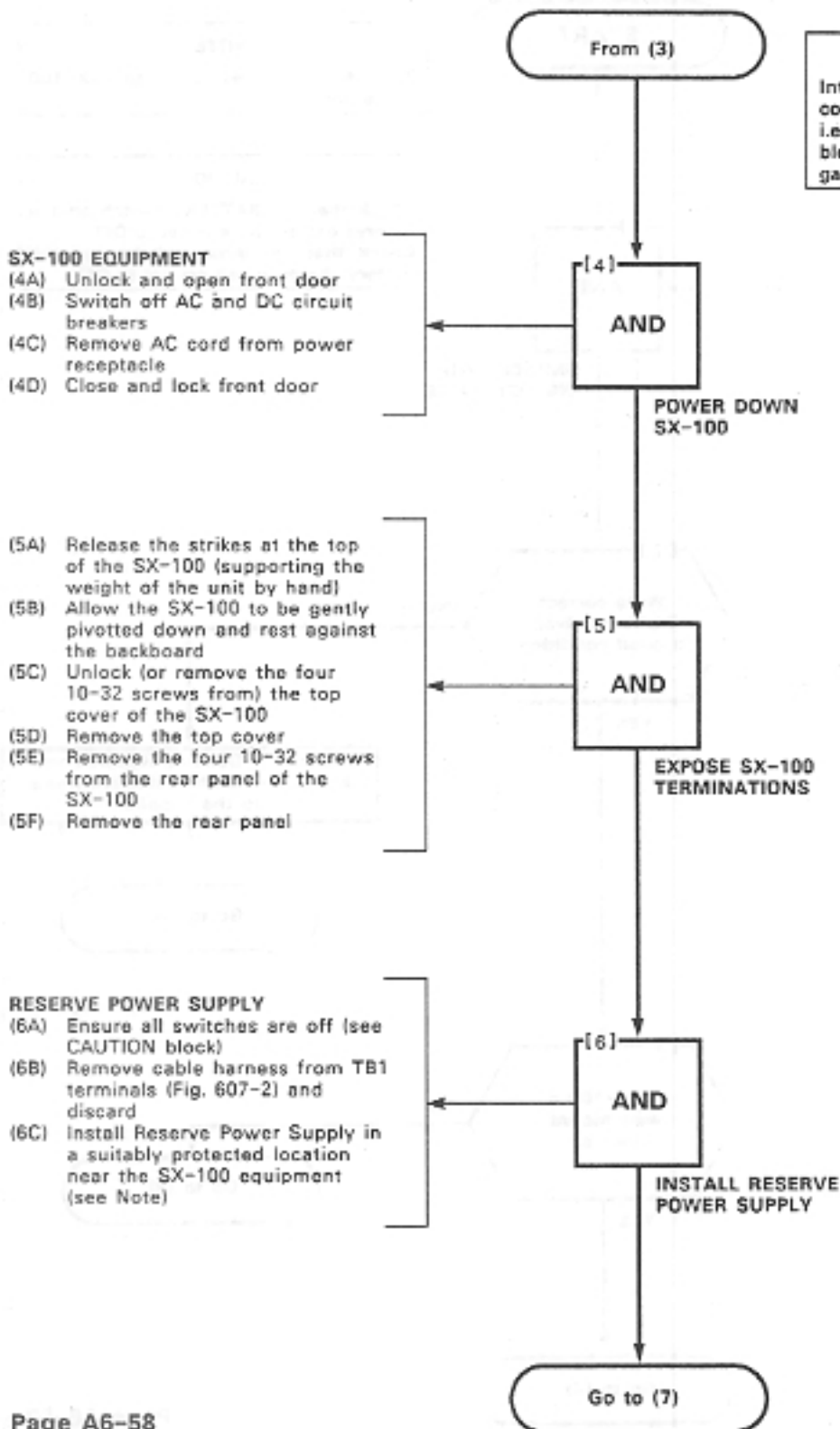
NO

Go to (9)

YES

Go to (4)

|   |
|---|
| RESERVE POWER SUPPLY<br>INSTALLATION (SX-100) |
| MAP200- 607                                   |
| Issue 1, December 1982                        |
| Sheet 2 of 12                                 |



|   |        |
|---|--------|
| RESERVE POWER SUPPLY<br>INSTALLATION (SX-100) | SYMBOL |
| MAP200-607                                    | SYMBOL |

|            |        |
|------------|--------|
| MAP200-607 | SYMBOL |
|------------|--------|

|                        |        |
|------------------------|--------|
| Issue 1, December 1982 | SYMBOL |
|------------------------|--------|

|               |        |
|---------------|--------|
| Sheet 3 of 12 | SYMBOL |
|---------------|--------|

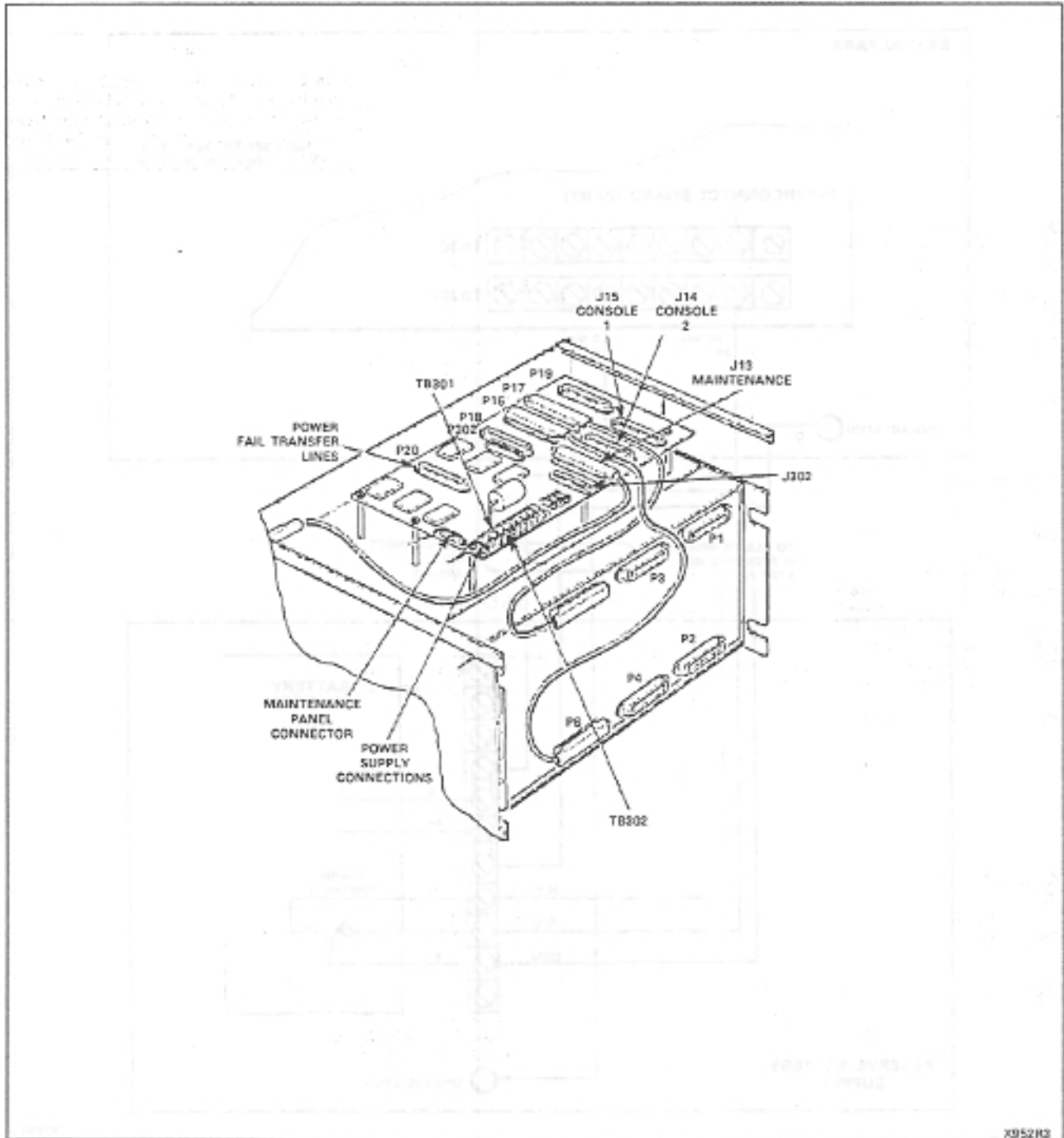


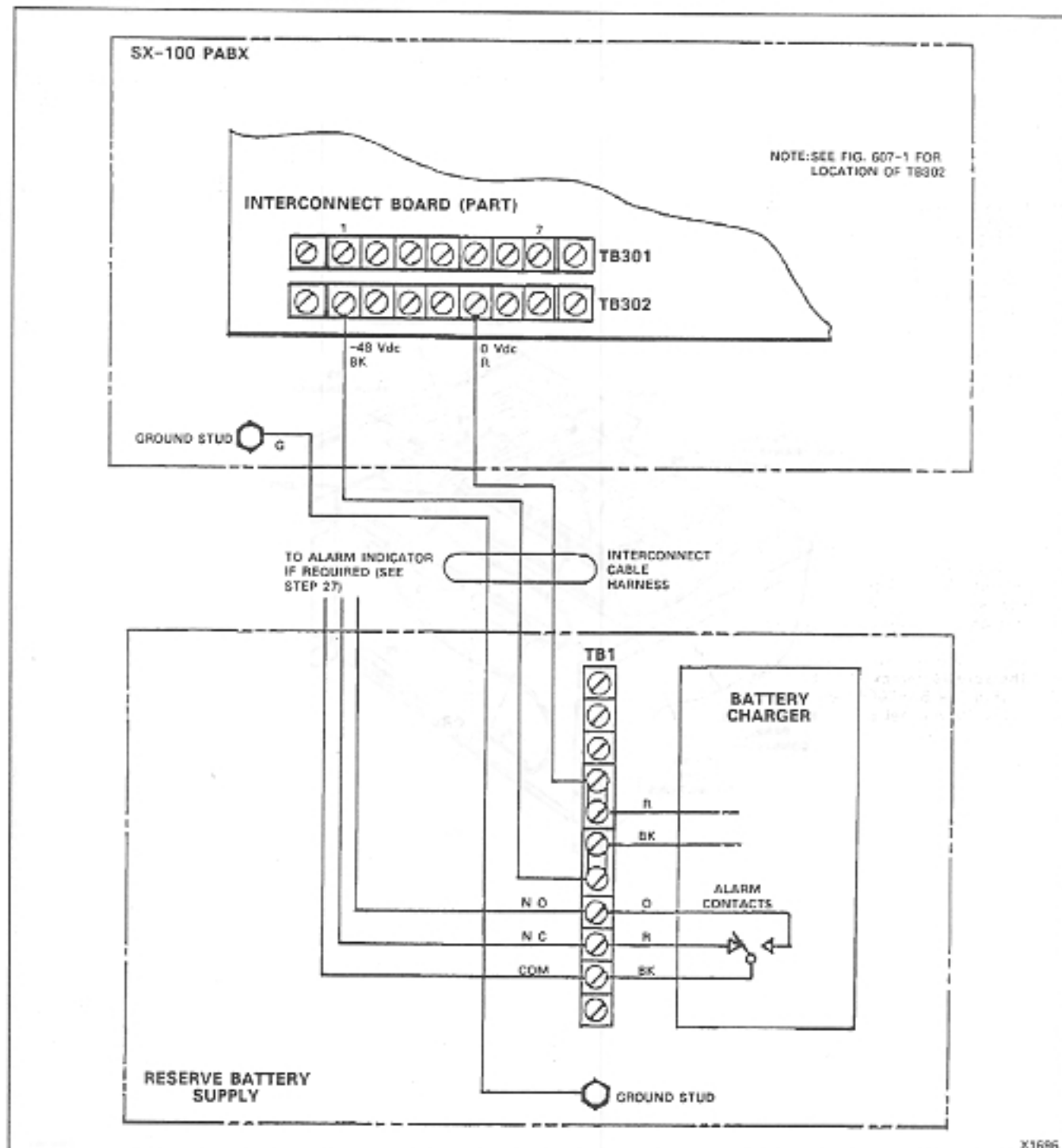
Fig. 607-1 Cable Connections

RESERVE POWER SUPPLY  
INSTALLATION (SX-100)

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X1696

Fig. 607-2 Cable Harness Interconnections

RESERVE POWER SUPPLY  
INSTALLATION (SX-100)

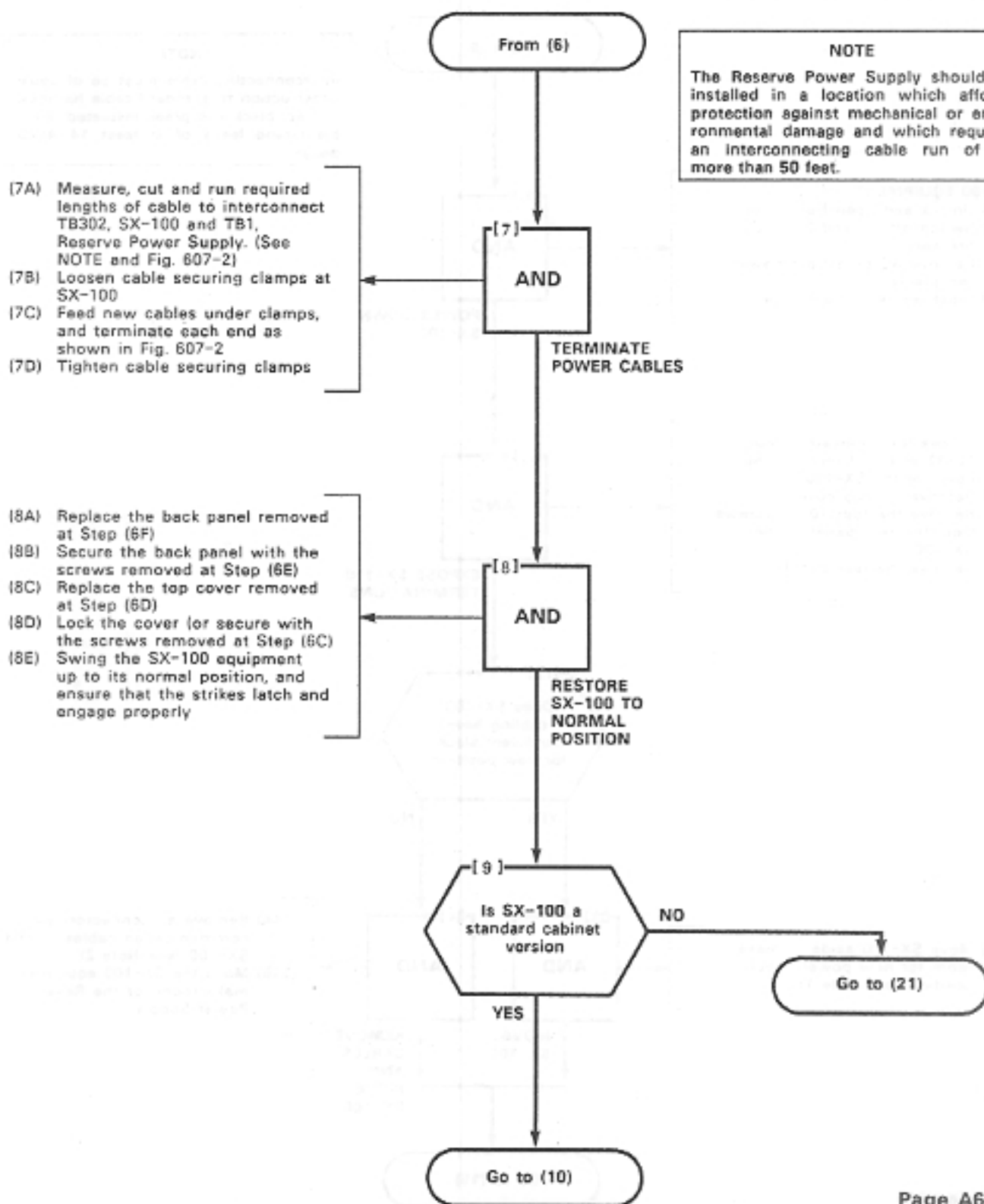
MAP200-607

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## NOTE

The Reserve Power Supply should be installed in a location which affords protection against mechanical or environmental damage and which requires an interconnecting cable run of no more than 50 feet.

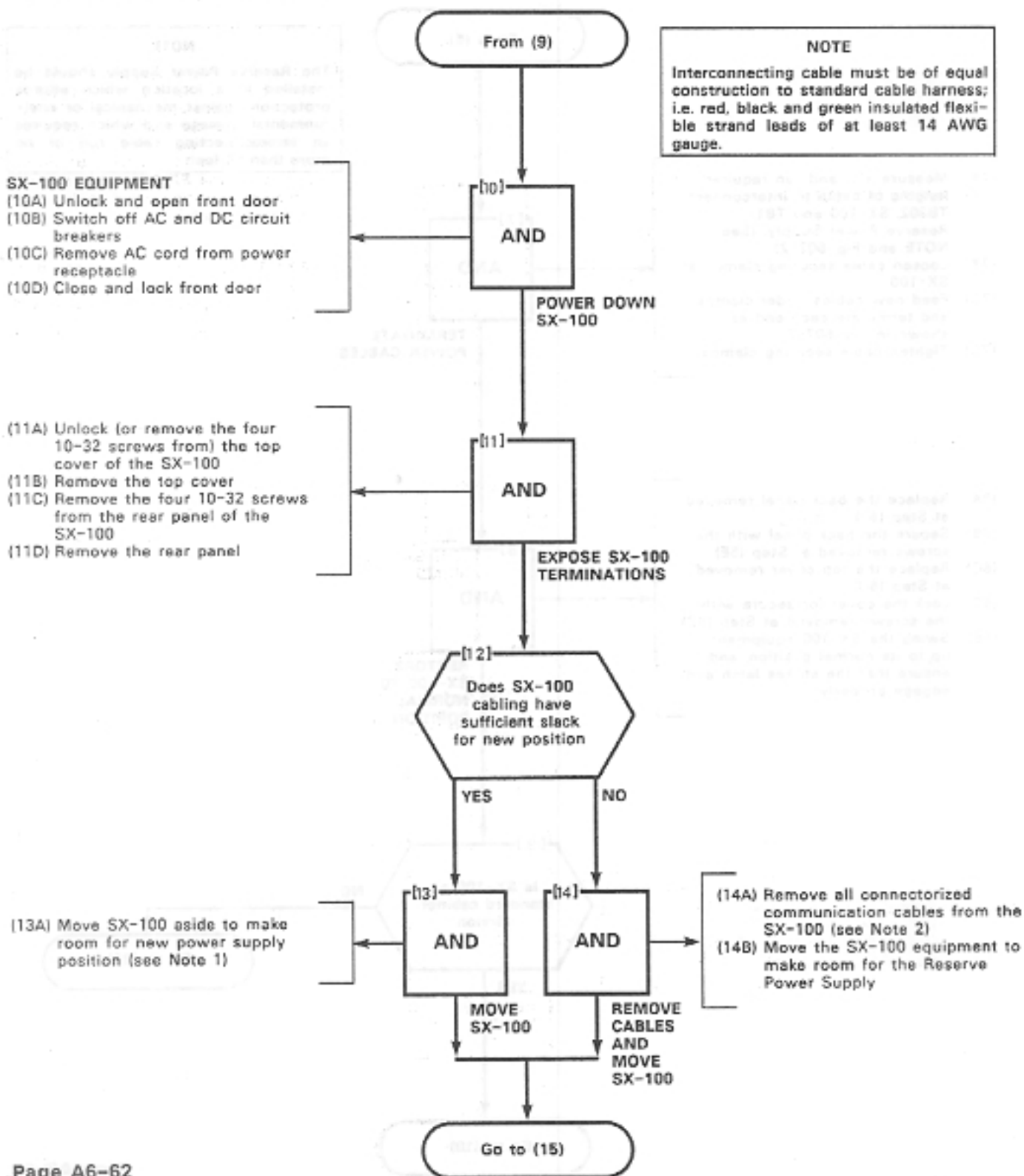


RESERVE POWER SUPPLY  
INSTALLATION (SX-100)

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RESERVE POWER SUPPLY  
INSTALLATION (SX-100)

MAP200-607

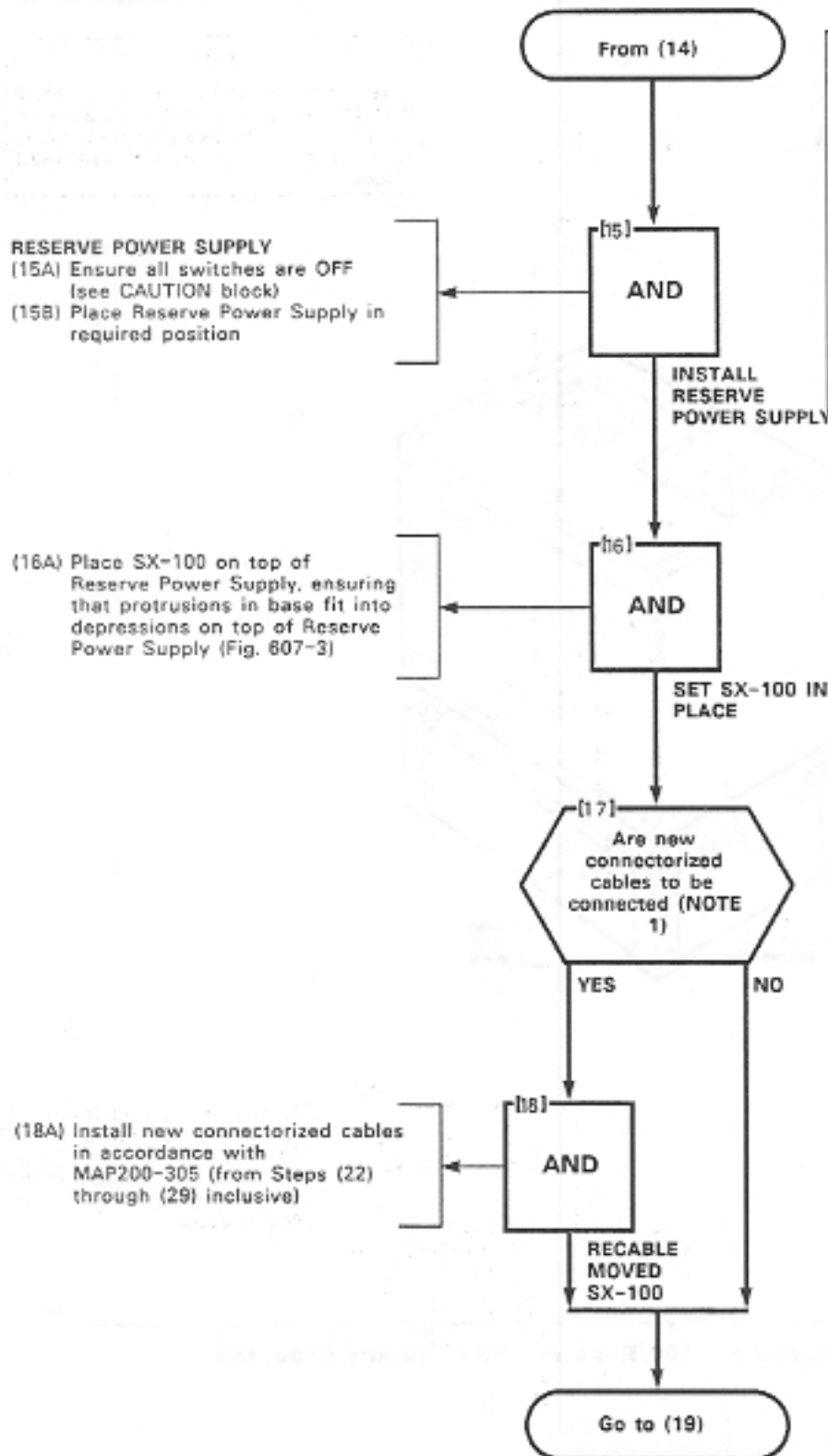
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## NOTES

1. The SX-100, when used with the Reserve Power Supply is mounted on top of the Reserve Power Supply (Fig. 607-3). If sufficient slack in cables exist to permit new configuration proceed as in Step 13. If a new location is selected or the SX-100 otherwise requires new connectorized cables proceed as in Step 14.

2. Refer to all instructions in MAP200-305 regarding marking, identification and cable locations for review and reference prior to proceeding with Step 14.



|   |
|---|
| RESERVE POWER SUPPLY<br>INSTALLATION (SX-100) |
| MAP200- 607                                   |
| Issue 1, December 1982                        |
| Sheet 8 of 12                                 |

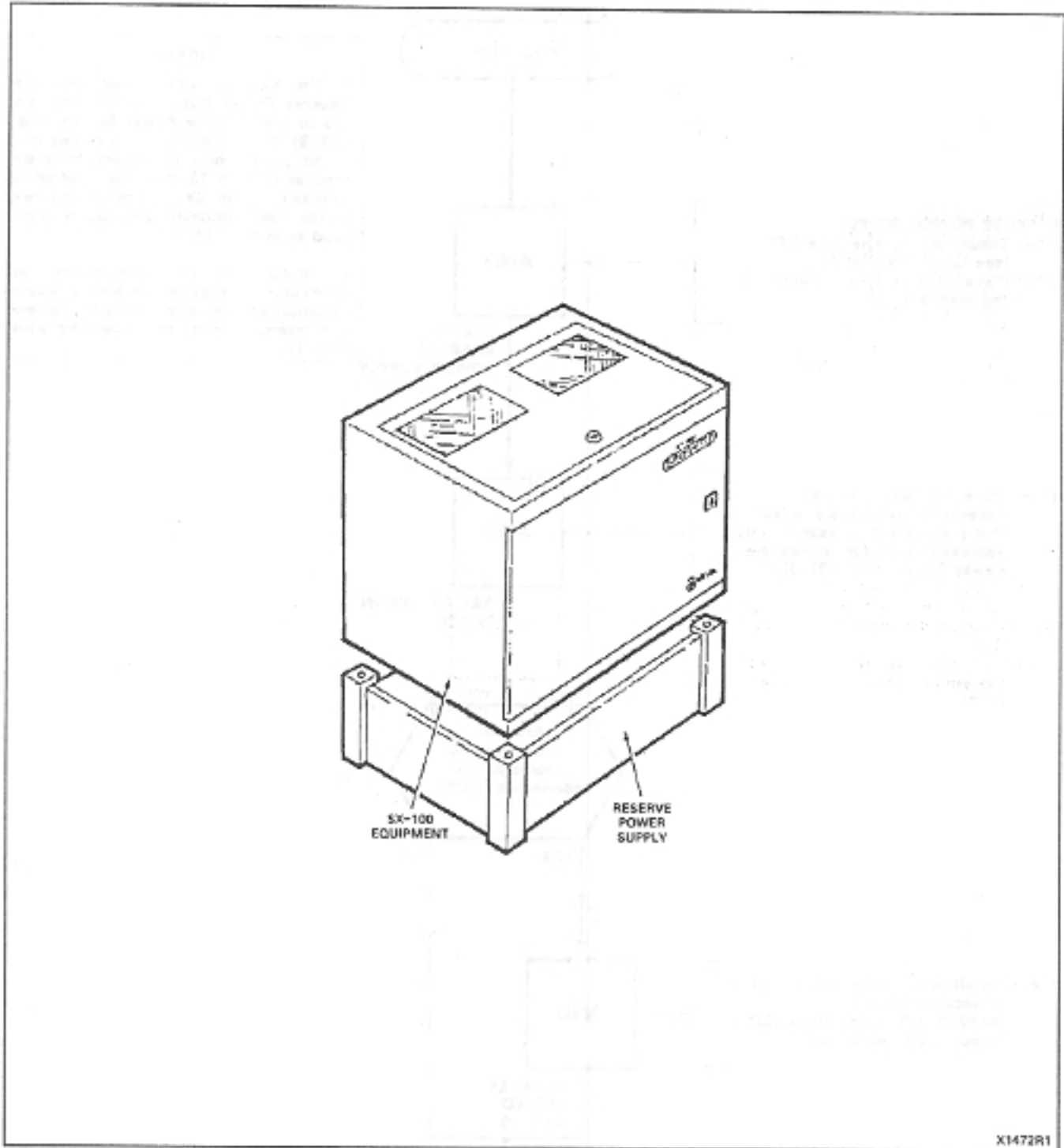


Fig. 607-3 Combined SX-100/Reserve Power Supply Grouping

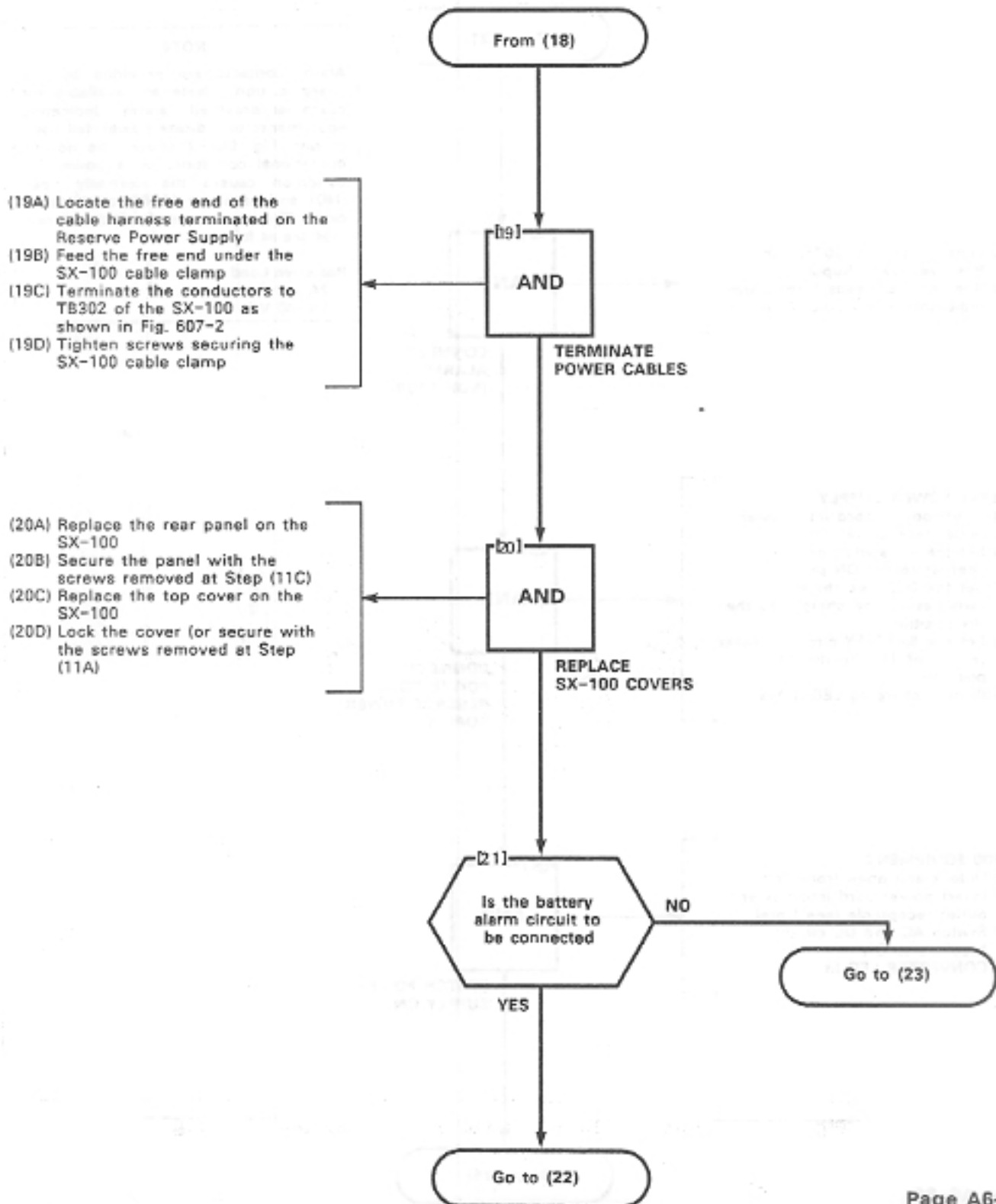
X1472R1

RESERVE POWER SUPPLY  
INSTALLATION (SX-100)

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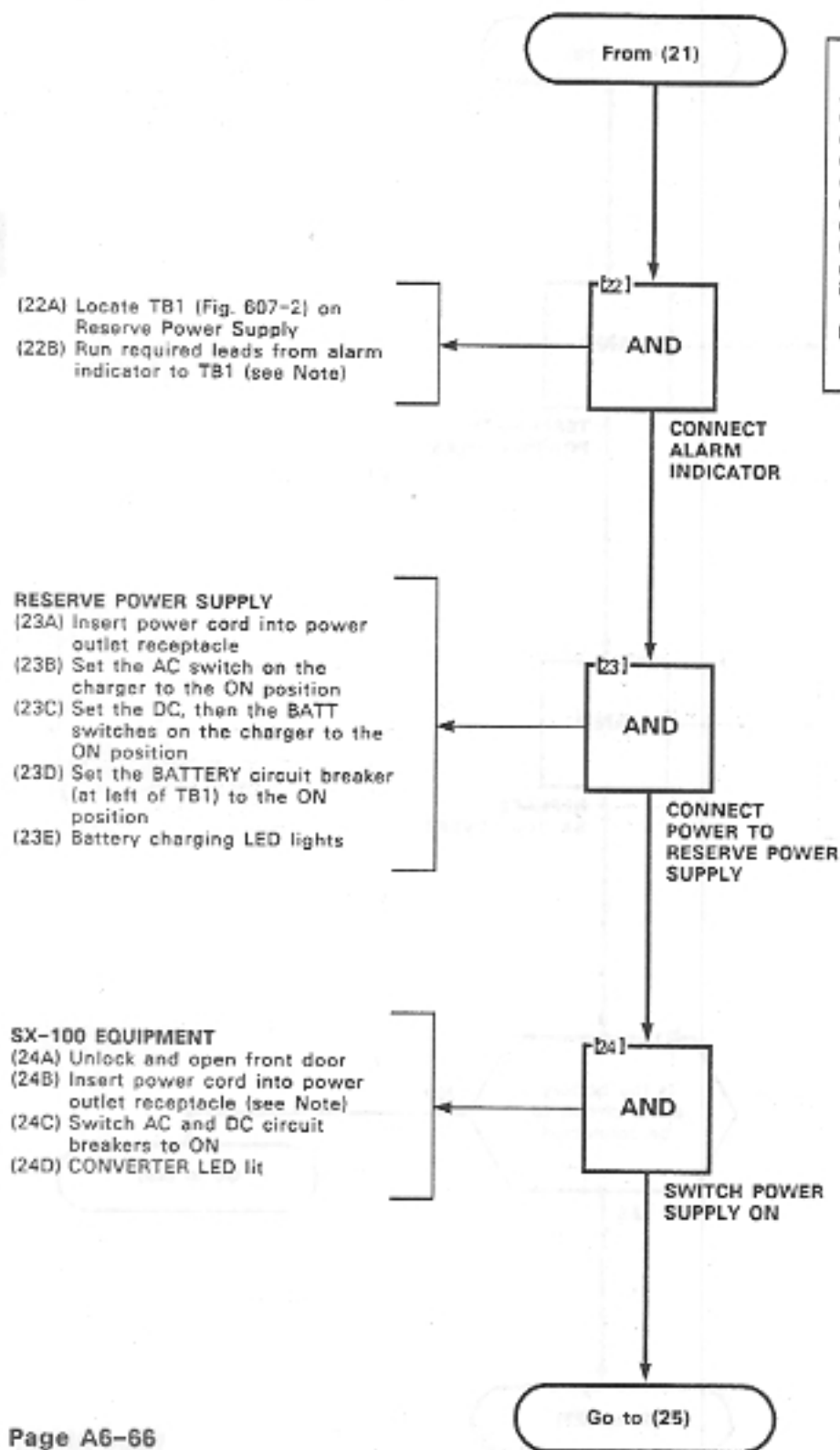


RESERVE POWER SUPPLY  
INSTALLATION (SX-100)

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## NOTE

Alarm contacts are provided by the charging unit. These are available for customer-provided alarm indicating equipments to indicate power-fail conditions. Fig. 607-2 shows the normal operational condition; i.e. a power-fail condition causes the normally open (NO) and common (COM) contacts to close. The alarm contact electrical ratings are as follows:

Resistive Load  
2A, 28 Vdc  
1A, 40 Vdc

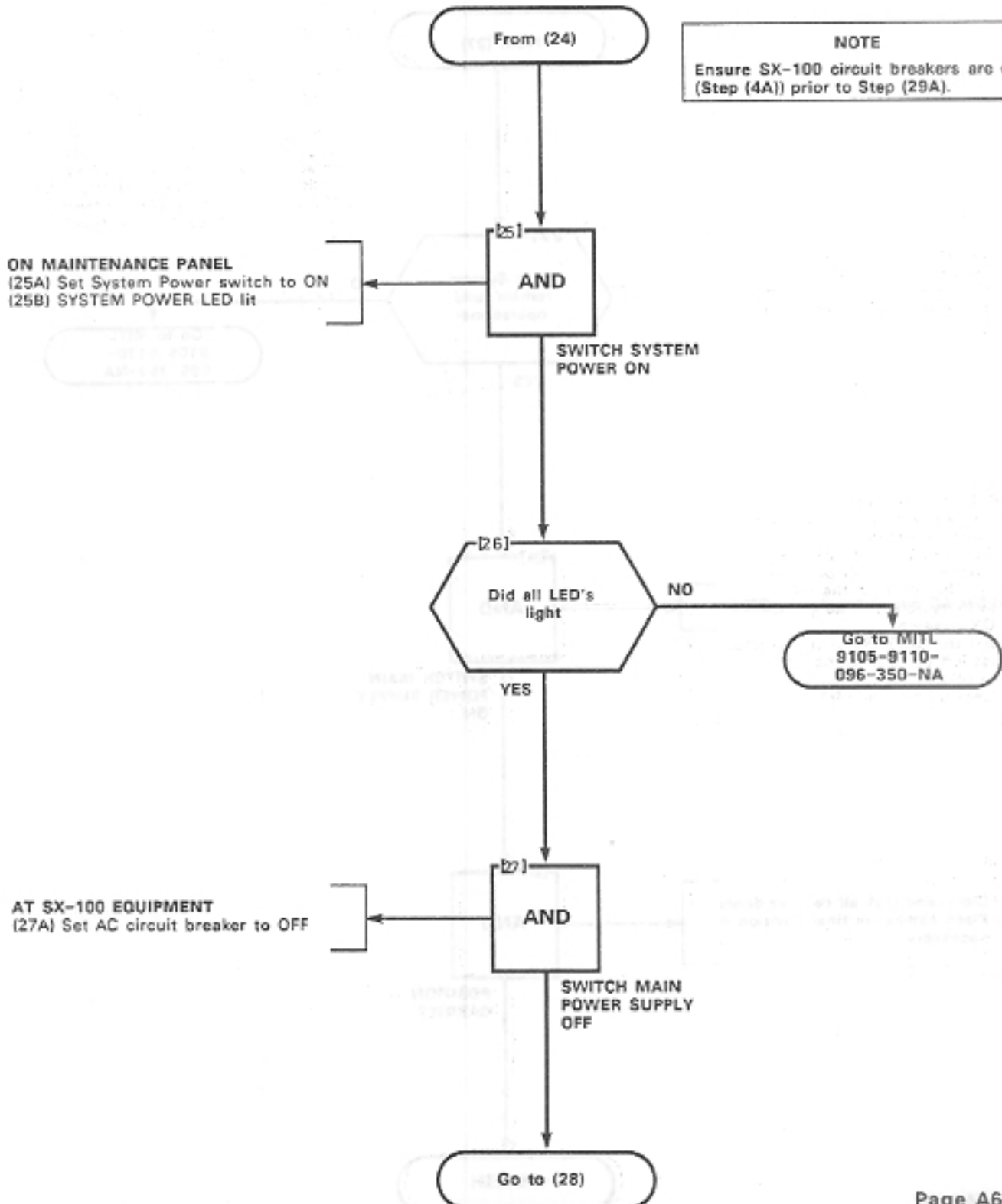
RESERVE POWER SUPPLY  
INSTALLATION (SX-100)

MAP200-607

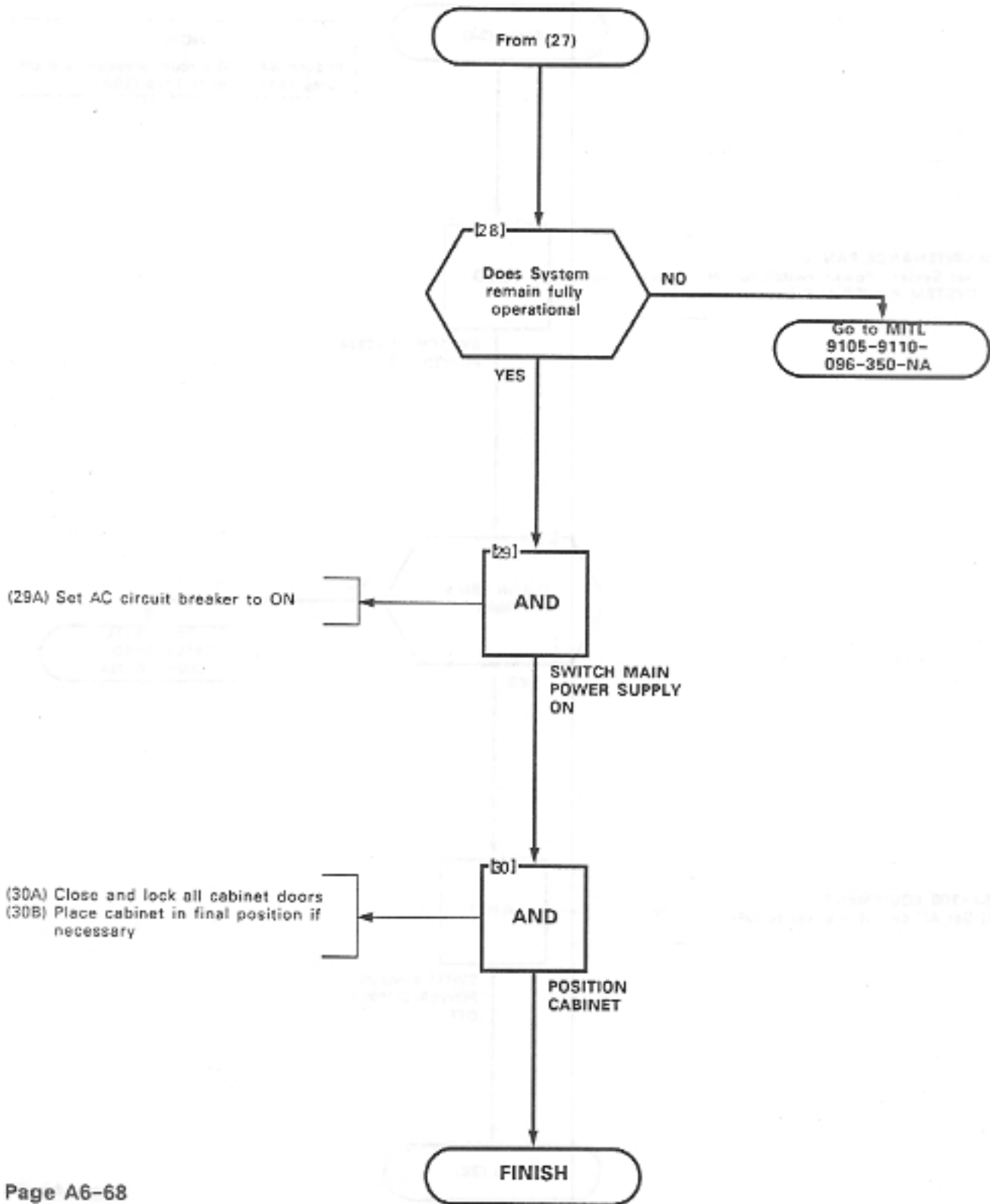
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## NOTE

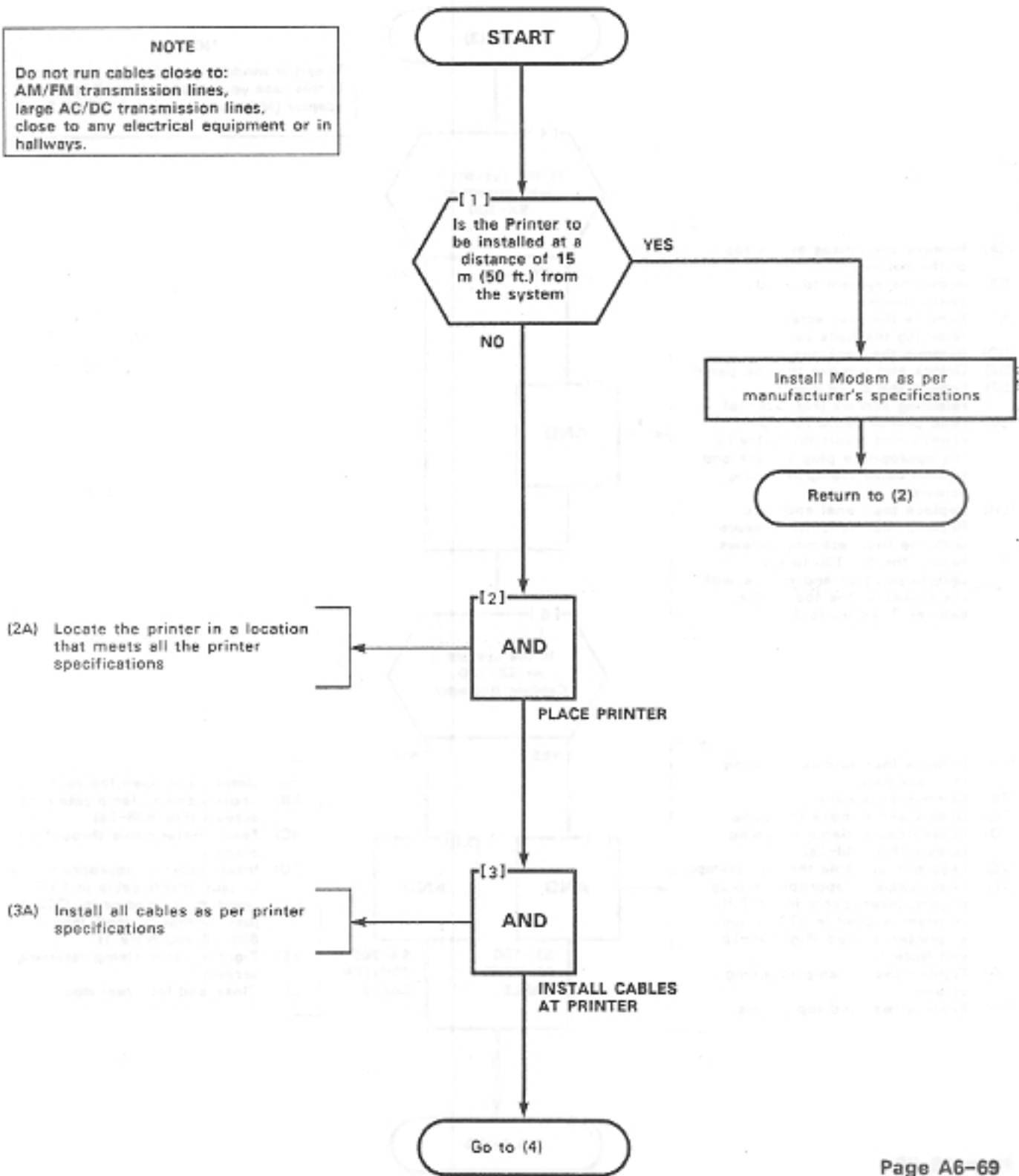
Ensure SX-100 circuit breakers are off  
(Step (4A)) prior to Step (29A).

|   |
|---|
| RESERVE POWER SUPPLY<br>INSTALLATION (SX-100) |
| MAP200- 607                                   |
| Issue 1, December 1982                        |
| Sheet 12 of 12                                |

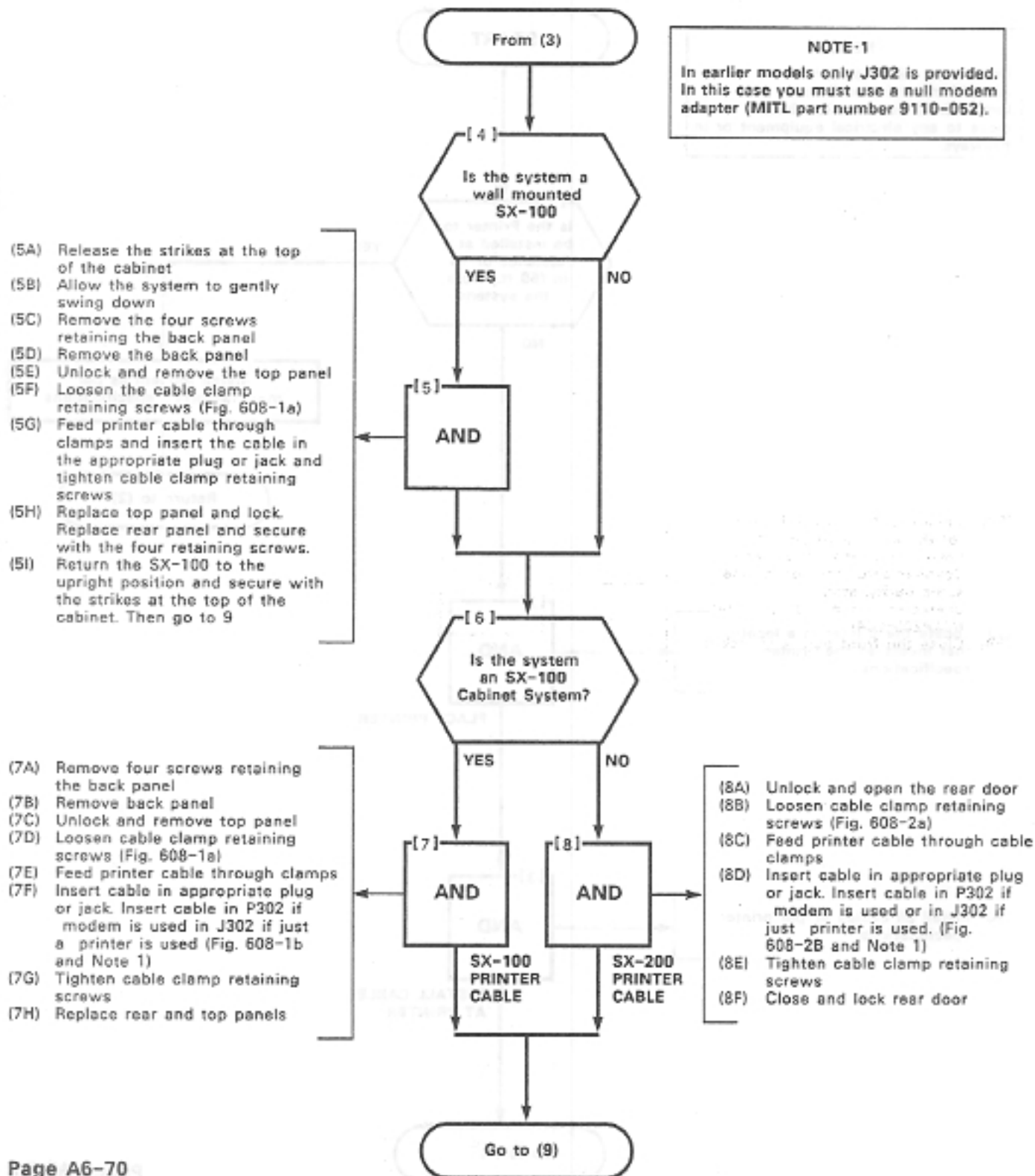


|                             |
|-----------------------------|
| <b>PRINTER INSTALLATION</b> |
| MAP200-608                  |
| Issue 1, December 1982      |
| Sheet 1 of 7                |

**NOTE**  
 Do not run cables close to:  
 AM/FM transmission lines,  
 large AC/DC transmission lines,  
 close to any electrical equipment or in  
 hallways.



|                        |
|------------------------|
| PRINTER INSTALLATION   |
| MAP200- 608            |
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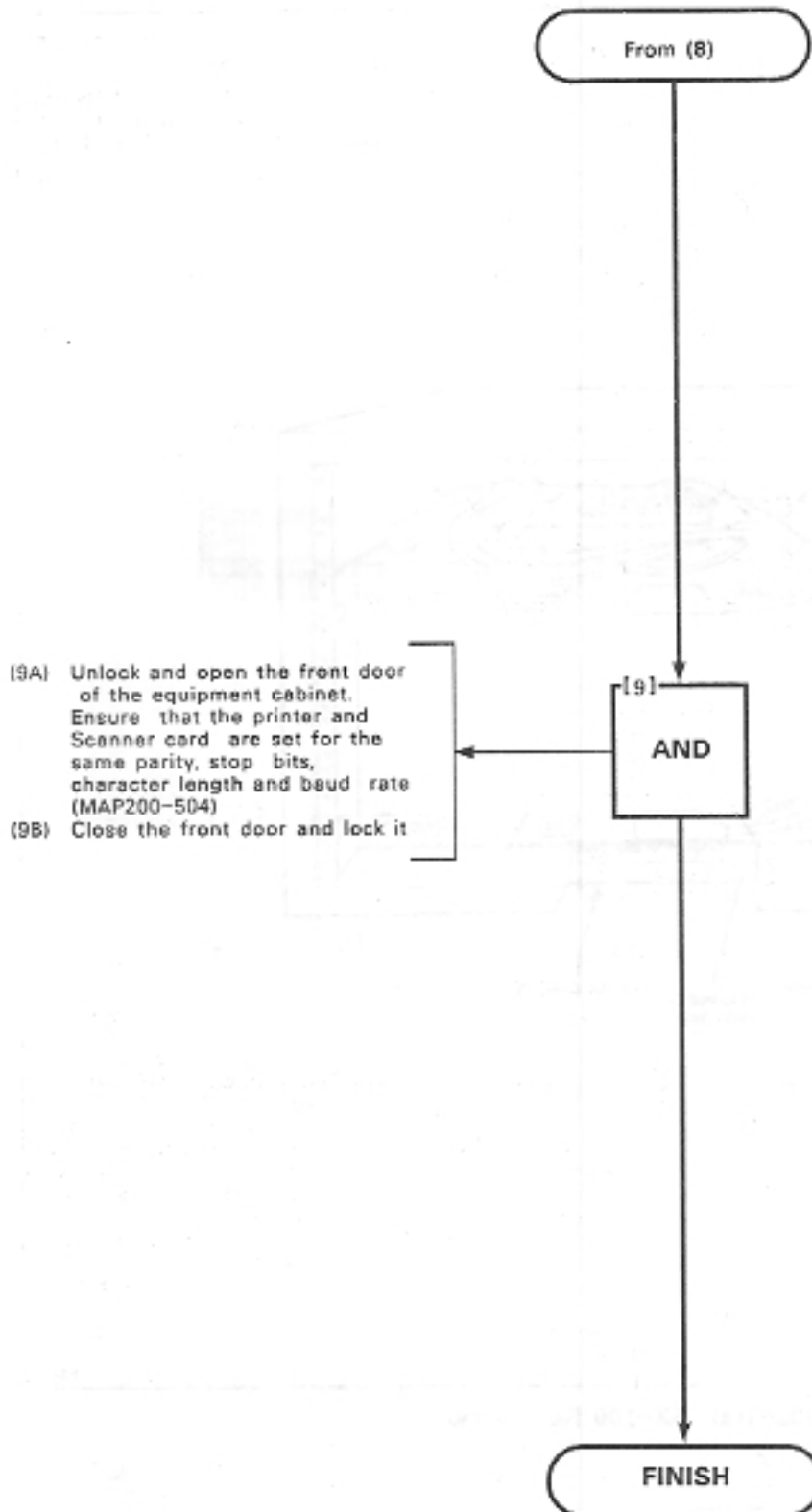


PRINTER INSTALLATION

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|                        |
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| PRINTER INSTALLATION   |
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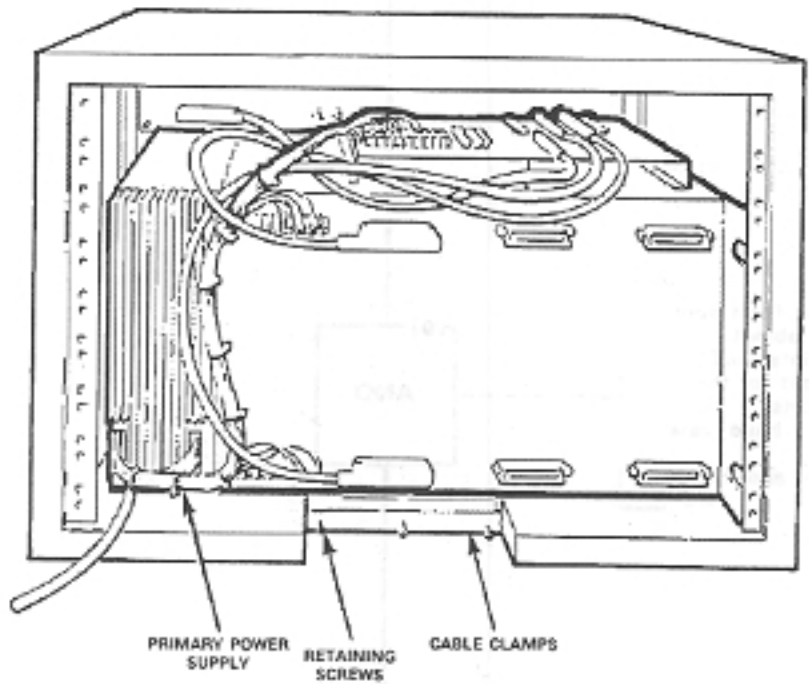


Fig. 608-1(a) SX-100 Rear View

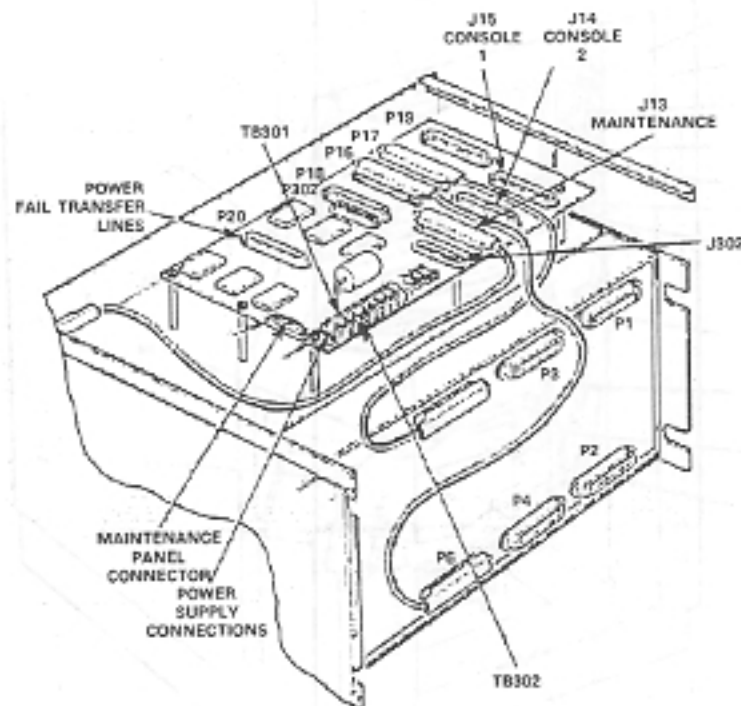
X5455

## PRINTER INSTALLATION

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X952R3

Fig. 608-1(b) SX-100 Top View

|                        |
|------------------------|
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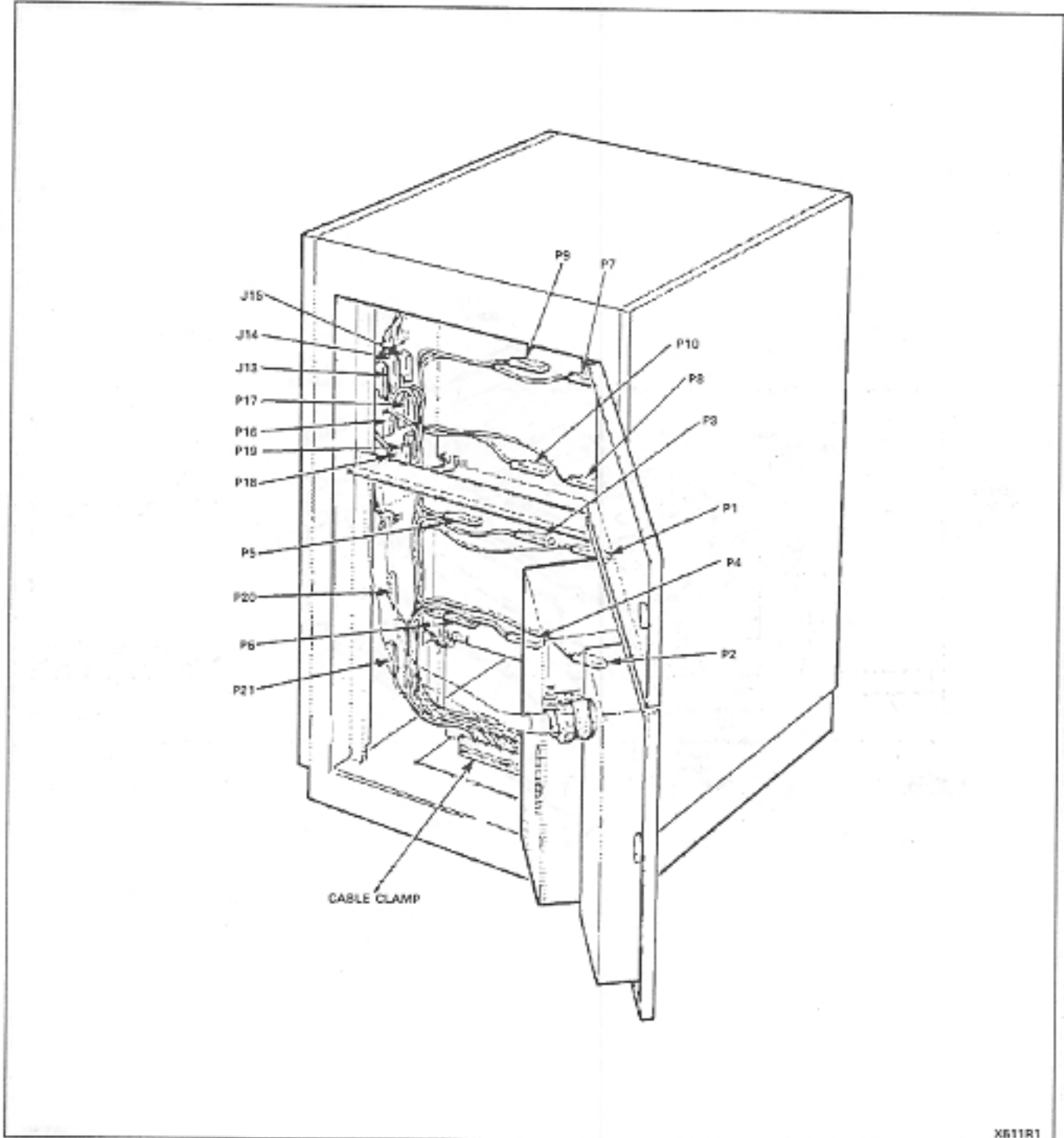


Fig. 608-2(a) SX-200 Rear View

## PRINTER INSTALLATION

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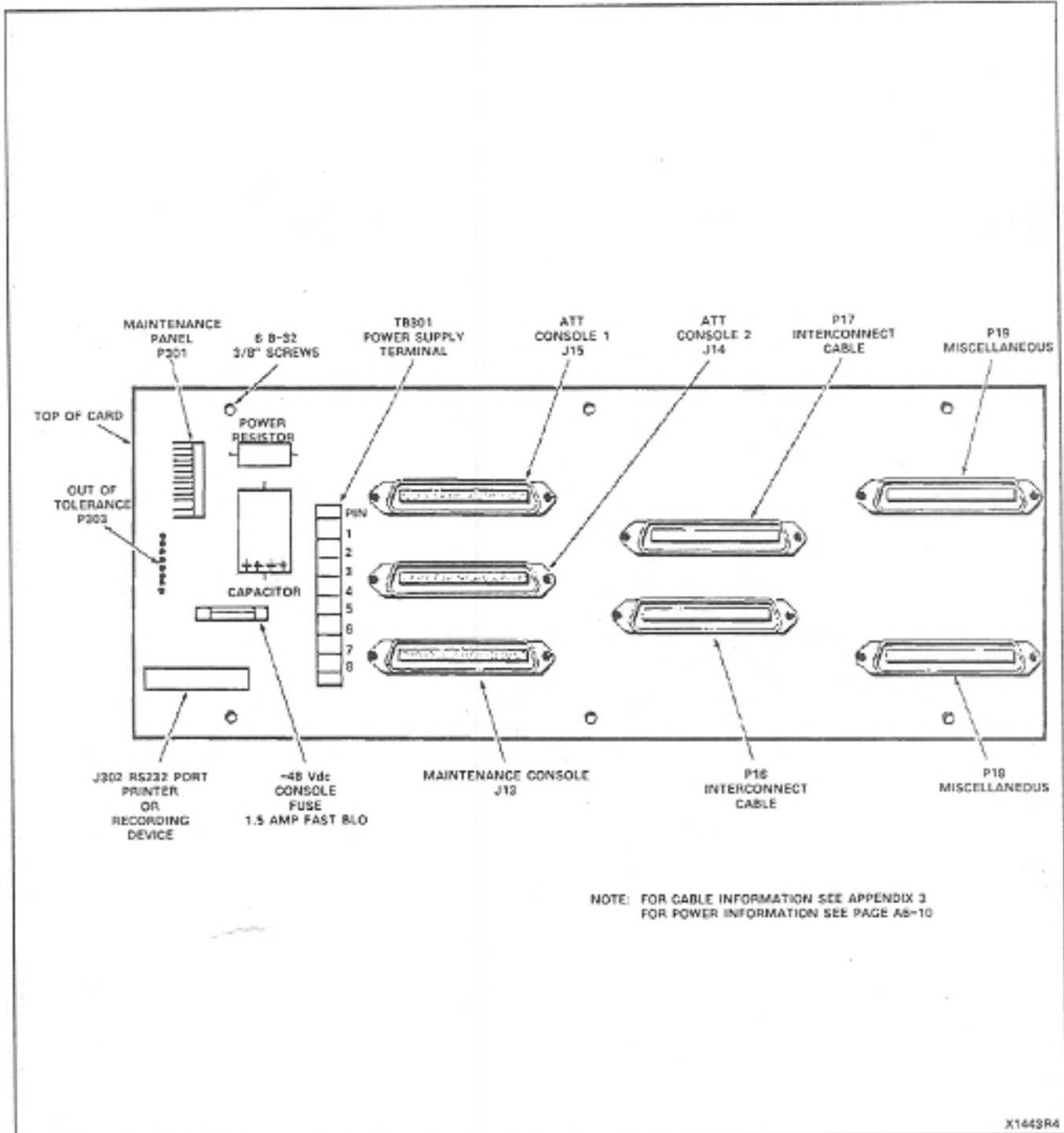
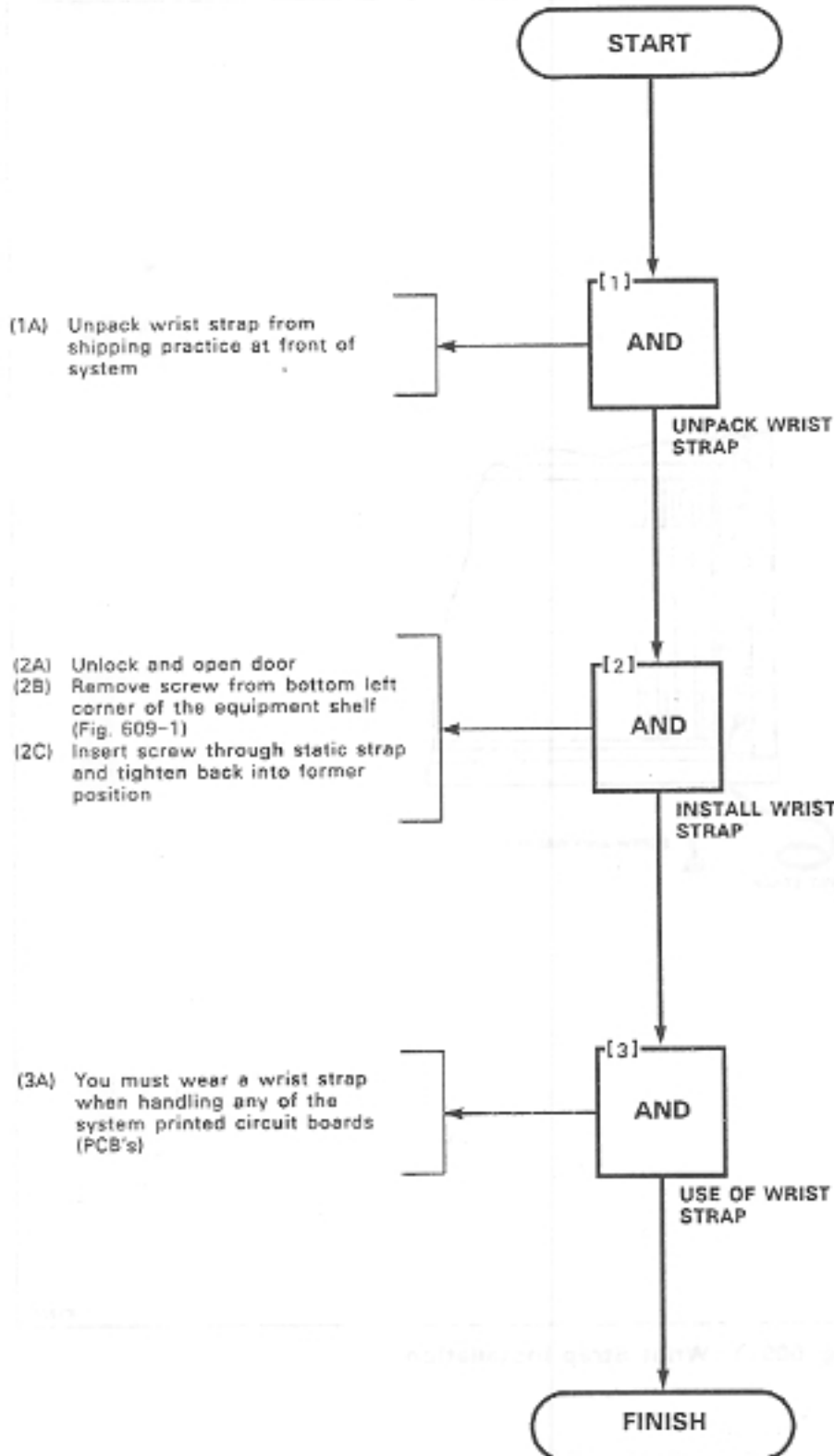


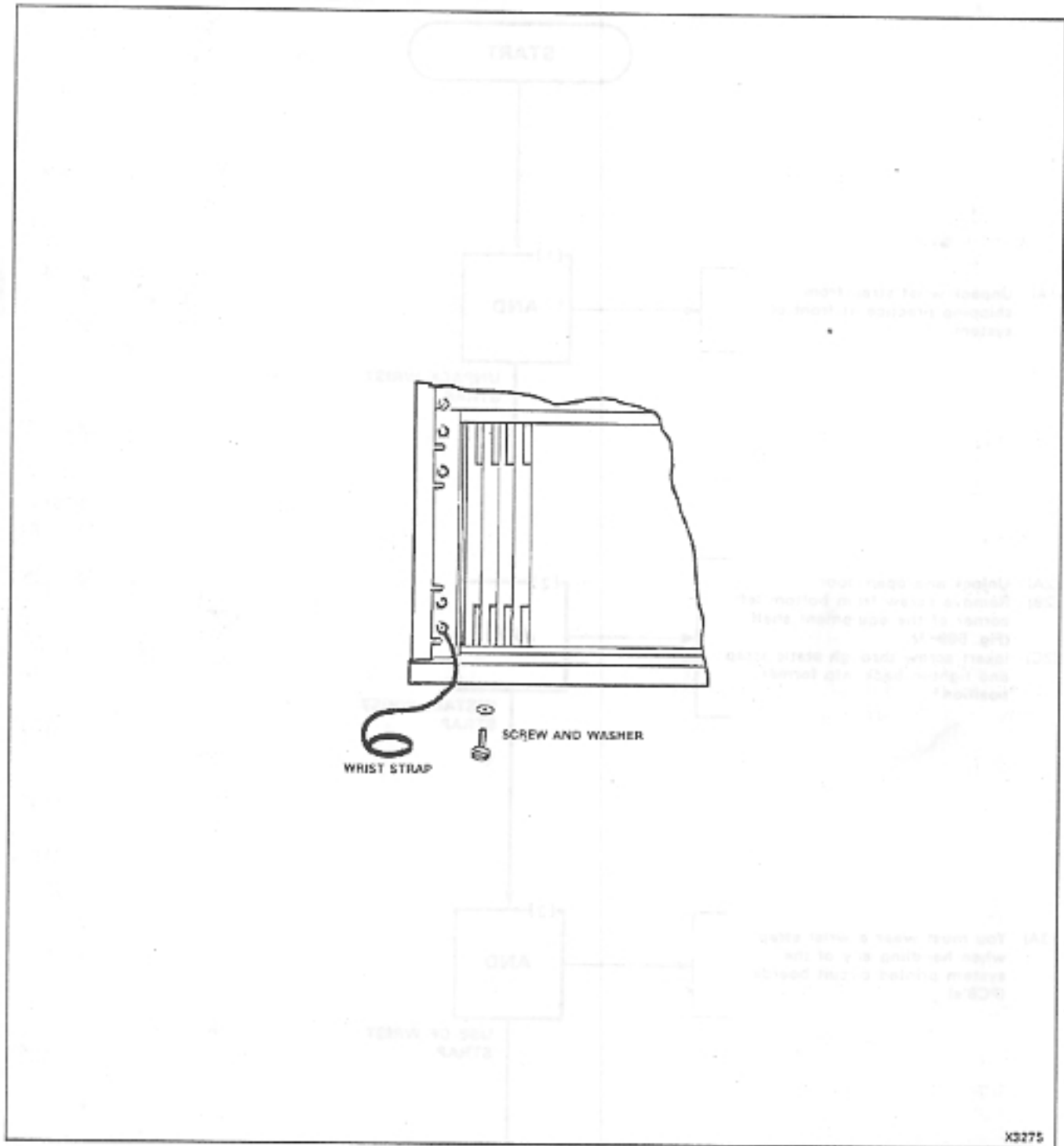
Fig. 608-2(b) SX-200 Interconnect Board



|                                    |                        |
|------------------------------------|------------------------|
| STATIC WRIST STRAP<br>INSTALLATION | MAP200-609             |
| MAP200-609                         | Issue 1, December 1982 |
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|                                    |
|------------------------------------|
| STATIC WRIST STRAP<br>INSTALLATION |
| MAP200- 609                        |
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| Sheet 2 of 2                       |



X2275

Fig. 609-1 Wrist Strap Installation



**SX-100\* AND SX-200\***  
**SUPERSWITCH\***  
**ELECTRONIC PRIVATE AUTOMATIC EXCHANGE**  
**SYSTEM PROGRAMMING**  
**GENERIC 217**

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## 1. GENERAL

### Introduction

1.01 The SX-100 and SX-200 PABX's are processor-controlled switching systems. In order to process calls, the central processor needs to know certain information about the calling and called equipment. This information is described by blocks of data held in the system memories. A number of service change programs are provided to allow additions, deletions and changes to be made to the equipment configuration. The seven service change programs provided are:

- **System Options.** Describes the options which may be enabled on a system basis.

- **Class-of-Service Options.** Each class of service specifies the features which may be used by stations assigned that Class of Service (COS). A maximum of 16 different classes of service may be specified for each system.
- **Feature Access Codes.** A number of features within the system are accessed by dialing a special access code. This program allows the access codes for the features to be defined.
- **Extensions.** This program allows the equipment number, extension number, Class of Service (features allowed), toll access, busy lamp field assignment and pickup group assignment, for each extension to be made.
- **Hunt Groups.** This program allows the extensions within each hunt group to be specified, together with the hunt group master number (access code).
- **Trunks.** This program allows each trunk to be described in terms of the equipment number, trunk type, listed directory number, day and night numbers, busy lamp number, COS and toll access.
- **Trunk Group.** This program allows the trunks within each group to be specified, together with trunk group type, access code and overflow group.

### Reason for Issue

1.02 This Section is issued to provide the Generic 217 programming information for SX-100 and SX-200 PABX's.

1.03 Other additional service programs, dependent upon the type of software Generic installed in the PABX, may be implemented. These are listed below and include relevant MITEL Practice references, which should be consulted for descriptions and programming requirements.

- (a) Traffic Measurement: see Section MITL9105/9110-096-450-NA.

- (b) Multi Digit Toll Control: see Section MITL9105/9110-096-212-NA.
- (c) Station Message Detail Recording. See Section MITL9105/9110-096-451-NA.
- (d) Speed Call. see Section MITL9105/9110-096-220-NA.
- (e) Automatic Route Selection: see Section MITL9105/9110-096-213-NA.

### Purpose

**1.04** This Section consists of three parts, each part explaining a different facet of the system programming.

- Part 1 General - general description of system programming contents and purpose of the programming manual.
- Part 2 Program Description - a description of each program and definition of each entry and possible response.
- Part 3 Programming - a general introduction to the system programming and MITEL Action Procedures (MAP's), which detail how to use each program. When entering data, the system checks each entry to ensure that the codes entered are correct, and if an error is detected, it sounds the console ringer and displays the required error code. These codes and their meaning are defined in this Part.

## 2. PROGRAM DESCRIPTION

### General

**2.01** Because the PABX is controlled by a processor, data describing each extension, trunk, feature etc. must be entered into the system. This is done by pressing keys and dialing codes. The codes dialed are held in the system memories and used by the system during call processing. Seven basic programs are provided which allow data to be entered into the system as equipment is added, or existing

data to be changed or removed as the system configuration changes. The following paragraphs describe the seven programs (see 1.01). These programs specify the keys to be pressed and explain the entries that may be made. The Appendices to this Section contain an introduction to MITEL Action Procedures (MAP's) and the actual MAP's which detail each step in system programming. A complete description of each feature and option is given in Section MITL9105/9110-096-105-NA, Features and Services Description. Other types of programs are referenced in 1.03.

### System Options

**2.03** The system options are selected by the console keys, as described below:

- **OPTION.** This key selects the option program which allows the system to set-up or change the active option list. The code entered (Table 2-1) after selecting the option program, defines the option to be added or removed from the active option list; see Table 2-2 for possible option conflicts.
- **ADD.** When pressed, this key adds the option code to the active system option list, making the option available for use by the system.
- **DELETE.** Pressing the DELETE key, after dialing an option code, removes the code from the active option list inhibiting further use of that option.
- **CANCEL.** As entries are made during the option program, they are stored in a temporary memory. If after making a number of entries, an error is discovered, all new entries may be removed by pressing the CANCEL key.
- **ENTER.** After all entries have been made to the system option, they may be moved from the temporary storage to permanent storage by pressing the ENTER key. Additional changes may be made by reentering the option program.

**TABLE 2-1  
SYSTEM OPTIONS**

R1

| Option Number | Option   | Description  |
|---------------|--|--|
| 100           | BELL OFF Enable                                  | Enables the BELL OFF button. If this option is not selected, the "BELL OFF" button is ineffective; i.e., the console ringer cannot be turned off.  |
| 101           | BOTH Button Enable                               | Enables the "BOTH" button. If this feature is not selected, the attendant will be able to split between source and destination, but will not be able to speak to both source and destination at the same time.   |
| 102           | Both Mode Standard                               | Causes the attendant to be normally connected to both the Source and Destination of calls through the console. Manual splitting can be achieved using the SOURCE and DEST buttons. If this option is not selected, the console will operate in an automatic split mode; i.e., the attendant will always be split toward the source upon answering calls, and will be split toward the destination as soon as the destination number is dialed. Manual splitting can still be achieved using the SOURCE and DEST buttons. |
| 103           | Attendant Busy Override                          | Allows attendant override.   |
| 104           | CALLBACK Button Enable                           | Enables the "CALLBACK" button; i.e. gives the attendant access to the callback feature.  |
| 105           | Controlled Station-to-Station Restriction Setup  | Enables the CALL BLOCK button; i.e., allows the attendant to inhibit calls between stations with "H/M Station-Station Restrict Applies" feature in their Class of Service. If this feature is selected, attendant HOLD 4 button is unavailable.  |
| 106           | SUPERSET 4 Sub-Attendant                         | This option, when enabled, allows the SUPERSET 4 to be a Sub-Attendant position. All calls handled by the SUPERSET will recall to the SUPERSET.  |
| 106           | Attendant Camp-On                                | Allows attendant camp-on. If this option is not selected, pressing the RELEASE button when attempting to connect a call to a busy station, will release the call. See "Attendant-Timed Recall Camp-On" options.  |
| 107           | Attendant CO Trunk - CO Trunk Connect Enable     | Allows the attendant to make CO trunk to CO trunk connections via the console.   |
| 108           | Attendant CO Trunk - Non-CO Trunk Connect Enable | Allows the attendant to make CO trunk to Non-CO trunk connections via the console.   |
| 109           | Attendant Non-CO Trunk - Non-CO Trunk            | Allows the attendant to connect Non-CO trunks together via the console.  |

TABLE 2-1 (CONT'D)  
SYSTEM OPTIONS

| Option Number | Option                                     | Description  |
|---------------|--|--|
| 110           | Attendant Conference                       | Allows attendant conference.   |
| 111           | Attendant DISA Code Setup Enable           | Allows the attendant to change the Direct Inward Systems Access (DISA) security code from the console.   |
| 112           | Do Not Disturb and Message Waiting Display | Enable the attendant to display which extensions have Do Not Disturb active and extensions that have a message waiting active.   |
| 113           | GUEST ROOM Button Enable                   | Allows use of the GUEST ROOM button which allows the attendant to display and change the feature in use by a hotel room.   |
| 115           | Lockout Alarm Enable                       | Causes a minor alarm when an extension is locked out.  |
| 116           | New Call Tone Enable                       | Causes the first incoming call to signal the attendant with a single tone ringer burst, if the attendant is already busy on another call. If the option is not selected, incoming calls which arrive while the attendant is handling another call, will not provide any audible signal, until the attendant releases from that call. |
| 117           | PAGE Button Enable                         | Allows the attendant access to the paging equipment by pressing the PAGE button.   |
| 118           | Attendant Printer Control Enable           | This option allows the attendant to control the printer from the console.  |
| 119           | ROOM STATUS Button Enable                  | Allows the attendant to display and change status of a hotel room.   |
| 120           | Attendant Serial Call                      | Allows attendant serial call. If this option is selected, hotel/motel guest room capability is unavailable unless the FLASH button is programmed as the SERIAL CALL button (System Option 121).  |
| 121           | Serial Call Override Flash Button          | This option allows both the Guest Room feature and the Serial Call feature to be used in the same system. This is done by enabling the FLASH button as the SERIAL CALL button.   |
| 122           | Attendant Station Busy-Out Enable          | Enables the attendant to make an extension inoperative and to also remove the busy-out condition.  |
| 123           | Attendant-Timed Recall Camp-On 20 seconds  | Causes Attendant-Timed Recall Camp-On after 20 seconds.  |

**TABLE 2-1 (CONT'D)  
SYSTEM OPTIONS**

| Option Number | Option   | Description   |
|---------------|--|---|
| 124           | Attendant-Timed Recall Camp-On 40 seconds              | Causes Attendant-Timed Recall Camp-On after 40 seconds. If neither of these two options is selected, the Attendant Camp-On Recall time-out will be 30 seconds. These time-outs are only effective if the "Attendant Camp-On" feature has been selected. |
| 125           | Attendant-Timed Recall - Don't Answer 10 s             | This option, when set, recalls attendant-handled calls (to the attendant that are not answered within 10 s) to the Attendant Console.   |
| 126           | Attendant-Timed Recall Don't Answer - 20 seconds       | Causes Attendant-Timed Recall Don't Answer after 20 seconds.  |
| 127           | Attendant-Timed Recall Don't Answer - 40 seconds       | Causes Attendant-Timed Recall Don't Answer after 40 seconds. If neither of these two options is selected, Attendant Timed Recall Don't Answer will be 30 seconds.   |
| 128           | Attendant-Timed Recall Hold, 20 seconds                | Causes Recall Hold after 20 seconds.  |
| 129           | Attendant-Timed Recall Hold, 40 seconds                | Causes Recall Hold after 40 seconds. If neither of these two options is selected, Attendant Recall Hold time will be 30 seconds.  |
| 130           | Trunk Busy Out Enable                                  | Allows the attendant to "busy out" and "debusy" individual trunks. If this option is not selected, the attendant will still be able to access individual trunks, but will not be able to busy them out or remove a busy-out condition.                  |
| 133           | DID,CCSA to Non-CO Trunks via Attendant Inhibit        | Prevents DID trunks from being connected to Non-CO trunks via the attendant.  |
| 134           | End of Dial Signal for Outgoing Trunks (#)             | Enables the use of the octothorp (#) button to signal end of dialing to the PABX on outgoing trunk calls from the attendant console or extension.   |
| 135           | DID/Dial-In/CCSA Vacant/Illegal Intercept to Attendant | This option causes calls on DID/Dial-In and CCSA trunk calls that attempt access to a vacant or not-allowed number, to intercept to the attendant.  |
| 136           | Illegal Access Intercept to Attendant                  | Causes all calls, other than DID or Dial-In Tie Trunk calls to unauthorized access codes, to be routed to the attendant for intercept. If this option is not selected, such calls will receive reorder tone.  |

**TABLE 2-1 (CONT'D)  
SYSTEM OPTIONS**

| Option Number | Option                                    | Description   |
|---------------|---|---|
| 137           | Vacant Number Intercept to Attendant      | Causes all calls, other than DID or Dial-In Tie Trunk calls to vacant levels and numbers, to be routed to the attendant for intercept. If this option is not selected, such calls will receive reorder tone.  |
| 138           | Do Not Disturb Intercept to the Attendant | Causes calls directed to extensions with Do Not Disturb active to be routed to the attendant.   |
| 150           | 24-Hour Clock                             | Enables the console digital clock to display 24-hour time. If this option is not selected, the clock will display 12-hour time.   |
| 151           | Data DeMultiplexer Enable                 | This option allows the RS232 information to be output to four different recording devices through a Data Demultiplexer see Section MITL9160-080-300-NA.   |
| 152           | DID Intercept to the Attendant            | This option, when set, allows vacant or illegal DID calls to be intercepted to the attendant.   |
| 153           | Digit Translation Plan 1                  | If this option is selected the digit:<br>1 produces 2 pulses,<br>2 produces 3 pulses,<br>3 produces 4 pulses,<br>4 produces 5 pulses,<br>5 produces 6 pulses,<br>6 produces 7 pulses,<br>7 produces 8 pulses,<br>8 produces 9 pulses,<br>9 produces 10 pulses,<br>0 produces 1 pulse. |
| 154           | Digit Translation Plan 2                  | If this option is selected the digit:<br>1 produces 9 pulses,<br>2 produces 8 pulses,<br>3 produces 7 pulses,<br>4 produces 6 pulses,<br>5 produces 5 pulses,<br>6 produces 4 pulses,<br>7 produces 3 pulses,<br>8 produces 2 pulses,<br>9 produces 1 pulses,<br>0 produces 1 pulse.  |

TABLE 2-1 (CONT'D)  
SYSTEM OPTIONS

| Option Number | Option                                      | Description   |
|---------------|---|---|
| 155           | Digit Translation Plan 3                    | If this option is selected the digit:<br>1 produces 10 pulses,<br>2 produces 9 pulses,<br>3 produces 8 pulses,<br>4 produces 7 pulses,<br>5 produces 6 pulses,<br>6 produces 5 pulses,<br>7 produces 4 pulses,<br>8 produces 3 pulses,<br>9 produces 2 pulses,<br>0 produces 1 pulse. |
| 156           | Flexible Night Service                      | Enables flexible night service.   |
| 157           | Identified Trunk Group Enable               | This option allows trunks to be programmed as Identified Trunks.  |
| 158           | Incoming to Outgoing Call Forwarding Enable | This option allows incoming calls to be forwarded (by speed call) to an external number.  |
| 159           | Inhibit Automatic Supervision               | This option allows an Incoming tie to dial a CO trunk through the PABX. This allows any supervisions from the CO to be passed on to the tie trunk.  |
| 160           | Limited Wait for Dial Tone                  | Limits the "wait for dial tone" trunk group option to wait a maximum of 5 seconds and then, cut through even if no dial tone is detected. If this option is not selected, there is no time limit on the "wait for dial tone" trunk group option.                                      |
| 161           | Music on Hold Disable                       | If music on hold is not provided, this option should be selected.   |
| 162           | Night Bell 3 with Minor Alarm Enable        | This option allows Night Bell 3 to be rung in the event of a minor system alarm.  |
| 163           | Night Service Automatic Switching           | Enables night service automatic switching.  |
| 164           | Night Service Time-Out 20 seconds           | Sets Night Service Automatic Switching at 20 seconds.   |
| 165           | Night Service Time-Out 40 seconds           | Sets Night Service Automatic Switching time-out at 40 seconds. If neither of these two options is selected, the Night Service Automatic Switching time-out will be 30 seconds. These time-outs are only effective if the Night Service Automatic Switching option has been selected.  |



TABLE 2-1 (CONT'D)  
SYSTEM OPTIONS

| Option Number | Option  | Description  |
|---------------|---|--|
| 166           | Remote System Reset - Protection Override                                   | This option allows the system to be reset from the test line on the console, without setting the thumbwheel switches on the Tone Control card to 777n. |
| 167           | Final Ring Time-Out: 1 Minute   | If this option is selected, the ringing time-out will be reduced to 1 minute (from 5 minutes).   |
| 168           | System ID Enable  | This option allows the System ID to be printed with all Traffic Measurements, Data Dumps and SMDR reports.   |
| 169           | Station Transfer Security Partial Inhibit                                   | Sets the minimum switchhook flash time as 250 ms.  |
| 180           | Can Flash if Talking to Station   | Allows extensions to switchhook flash on extension calls.  |
| 181           | Can Flash if Talking to an Incoming Trunk                                   | Allows extensions to switchhook flash on incoming trunk calls.   |
| 182           | Can Flash if Talking to an Outgoing Trunk                                   | Allows extensions to switchhook flash on outgoing trunk calls.   |
| 183           | Cannot Dial a Trunk After Flashing  | Inhibits dialing a trunk after flashing. This option does not apply to dialing a trunk for broker's call.  |
| 184           | Cannot Dial a Trunk After Flashing if Holding or in Conference with a Trunk | Inhibits dialing a trunk after flashing, only if the existing call has a trunk party. This option does not apply to broker's call.                     |
| 185           | Discriminating Dial Tone  | An extension having Do Not Disturb or Call Forwarding Follow Me in effect, will receive a distinct dial tone.  |
| 186           | Discriminating Ringing  | Enables discriminating ringing for trunk and attendant-handled calls.  |
| 187           | Controlled Station Restriction Setup  | Enables the (DO NOT DISTB) button; i.e., allows the attendant to use the controlled station restriction feature.                                       |
| 188           | Extension Non-Co Trunk to Trunk Connect Enable                              | This option allows an extension to connect a Non-CO trunk to a CO trunk, then go on-hook and leave the two trunks connected.                           |
| 189           | Flash Timer - 0.7 seconds   | Sets the switchhook flash recognition time to lie between 190 ms and 700 ms.   |
| 190           | Flash Timer - 0.9 seconds   | Sets the switchhook flash recognition time to lie between 190 ms and 900 ms.   |

TABLE 2-1 (CONT'D)  
SYSTEM OPTIONS

| Option Number | Option   | Description  |
|---------------|--|--|
| 191           | Flash Timer - 1.1 seconds                          | Set the switchhook flash recognition time to lie between 190 ms and 1100 ms.   |
| 192           | Message Registration Enable                        | Allows the system to keep count of the number of completed local Central Office calls made from each extension.  |
| 193           | Message Registration Count Additional Supervisions | Counts all real (pseudo answer supervisions are ignored) answer supervisions received during each call.  |
| 194           | Message Registration Timer 20 seconds              | Causes a single pseudo answer supervision signal to be generated after 20 seconds if the serving CO does not provide answer supervision.   |
| 195           | Message Registration Timer 40 seconds              | Causes a pseudo answer supervision signal to be generated after 40 seconds, if the serving CO does not provide answer supervision. If neither of these two options are selected, the pseudo answer supervision signal is generated after 30 seconds. |
| 196           | Message Registration Multiplier - 2 units          | Multiplies the Message Register count by 2.  |
| 197           | Message Registration Multiplier - 3 Units          | Multiplies the Message Register count by 3.  |
| 198           | Message Registration Multiplier - 4 Units          | Multiplies the Message Register count by 4.  |
| 199           | Message Registration Surcharge - 1 Unit            | Adds a surcharge of 1 unit to the FIRST answer supervision signal received.  |
| 200           | Message Registration Surcharge - 2 Units           | Adds a surcharge of 2 units to the FIRST answer supervision signal received.   |
| 201           | Message Registration Surcharge - 3 Units           | Adds a surcharge of 3 units to the FIRST answer supervision signal received.   |
| 202           | Message Registration Surcharge - 4 Units           | Adds a surcharge of 4 units to the FIRST answer supervision signal received.   |
| 203           | Message Registration Surcharge - 5 Units           | Adds a surcharge of 5 units to the FIRST answer supervision signal received on each call.  |
| 204           | Message Registration Surcharge - 6 Units           | Adds a surcharge of 6 units to the FIRST answer supervision signal received on each call.  |

TABLE 2-1 (CONT'D)  
SYSTEM OPTIONS

| Option Number | Option                                    | Description  |
|---------------|---|--|
| 205           | Message Registration Surcharge - 7 Units  | Adds a surcharge of 7 units to the FIRST answer supervision signal received on each call.  |
| 206           | Message Registration Surcharge - 8 Units  | Adds a surcharge of 8 units to the FIRST answer supervision signal received on each call.  |
| 208           | Outgoing Trunk Camp-On                    | Allows station camp-on feature to be used on trunks. If station camp-on is not enabled, this option is ineffective on trunks.  |
| 209           | Outgoing Trunk Callback                   | Allows busy callback feature to be used on trunks.   |
| 210           | Call Park Recall - 2 minutes              | Sets the Call Park and Call Hold Recall time-out at 2 minutes.   |
| 211           | Call Park Recall - 4 minutes              | Sets the Call Park and Call Hold Recall time-out at 4 minutes. If neither of these two options is selected, the Call Park and Call Hold Recall timer will be 3 minutes. These time-outs are only effective if the "Call Park" or "Call Hold" stations feature has been selected. |
| 212           | Range Programming Enable                  | This option enables the Range Programming feature.   |
| 213           | Single Digit Dialing Enable               | Allows single digit codes to be used for special services even if the codes conflict with the numbering plan.  |
| 214           | Single Digit Dialing Time-Out - 3 seconds | Completes a single digit dialed call after 3 seconds.  |
| 215           | Single Digit Dialing Time-Out - 5 seconds | Completes a single digit dialed call after 5 seconds. If neither of these options are selected, single digit calls are completed after 4 seconds.  |
| 217           | Repeated Camp-on Tones 5 seconds          | This option, when enabled with the COS Option 107, specifies the repeated camp-on to occur every 5 seconds. The call will not recall to the attendant.   |
| 218           | Repeated Camp-on Tones 15 seconds         | This option when enabled with the COS Option 107 specifies the repeated camp-on to occur every 15 seconds. The call will not recall to the attendant.  |
| 219           | TAFAS Available During Day                | Enables TAFAS during day.  |
| 220           | Transfer Dial Tone                        | Enables transfer dial tone.  |
| 230           | Account Code Enable                       | This option enables the Account Code Feature.  |

TABLE 2-1 (CONT'D)  
SYSTEM OPTIONS

| Option Number | Option   | Description  |
|---------------|--|--|
| 232           | Account Code Length:<br>- 4 Digits                                   | This option specifies the Account Code length to be 4 digits.  |
| 233           | Account Code Length:<br>- 8 Digits                                   | This option specifies the Account Code length to be 8 digits.  |
| 234           | Account Code Length:<br>- 12 Digits                                  | This option specifies the Account Code length to be 12 digits.   |
| 235           | Variable Length Account Codes  | This option allows Account Codes to be of a variable length up to 12 digits.   |
| 238           | ARS Enable   | This option enables the ARS feature.   |
| 239           | ARS: Return Dial Tone  | If this option is selected, dial tone will be returned after dialing the ARS code. This will encourage the user to continue dialing, after the ARS code has been dialed. |
| 240           | ARS Dial Tone Time-Out 5 seconds                                     | If this option is selected, "Dial 0" long-distance calls are subject to a 5 second time-out (on first digit zero).   |
| 241           | ARS Dial Tone Time-Out 10 seconds                                    | If this option is selected, "Dial 0" long-distance calls are subject to a 10 second time-out (on first digit zero).  |
| 242           | ARS Interchangeable Office Code Enable                               | Allows area and office codes to be used interchangeably.   |
| 245           | Automatic Wake-Up Enable   | Allows the attendant to enable the system to ring an extension at a prearranged time.  |
| 246           | Wake-Up Alarm Enable   | This option allows an extension to set its own Wake-Up alarm.  |
| 247           | Automatic Wake-Up Music on Hold                                      | This option allows an extension answering a Wake-Up call to receive Music on Hold.   |
| 248           | Automatic Wake-Up Print  | This option enables all Wake-Ups that are attempted, not answered and answered, to be printed.   |
| 253           | Call Forwarding Busy (System DID, Dial-In CCSA)                      | Enables the DID, Dial-In, or CCSA Trunk Call Forwarding - Busy feature.  |
| 254           | Call Forwarding - Don't Answer Time-Out (System, DID, Dial-In, CCSA) | Enables the DID, Dial-In, or CCSA trunk Call Forwarding - Don't Answer feature. See Call Forwarding - Don't Answer Time-Out system options.                              |

TABLE 2-1 (CONT'D)  
SYSTEM OPTIONS

| Option Number | Option   | Description   |
|---------------|--|---|
| 255           | Call Forwarding Don't Answer Time-Out 10 s           | This option limits the Call Forwarding Don't Answer Time-Out to 10 seconds.   |
| 256           | Call Forwarding - Don't Answer Time-Out - 20 seconds | Causes Call Forwarding Don't Answer to forward after 20 seconds of ringing.   |
| 257           | Call Forwarding - Don't Answer Time-Out - 40 seconds | Causes Call Forwarding Don't Answer to forward after 40 seconds of ringing. If neither of these two options is selected, the Call Forwarding Don't Answer time-out will be 30 seconds. These time-outs are only effective, if the "Call Forwarding Don't Answer" features are selected. The time-out selected will apply to both the station and system features. |
| 258           | Controlled Outgoing Restriction Setup                | Enables the (ROOM RESTR) button; i.e., allows the attendant to set up the controlled outgoing restriction feature. If this feature is selected, Night Service 2 is not available.   |
| 259           | Customer Printout Enable                             | This option allows the Customer RAM data to be output in a logical format on a printer.   |
| 260           | Customer Programming Enable                          | This option enables programming from the attendant console by the attendant.  |
| 261           | Customer Programming of ARS Enable                   | This option enables ARS definition by the attendant.  |
| 262           | Customer Programming of COS Definitions Enable       | This option enables COS definition by the attendant.  |
| 263           | Customer Programming of Extensions Enable            | This option enables Extension definition by the attendant.  |
| 264           | Customer Programming of Features Enable              | This option enables Feature definition (of access codes) by the attendant.  |
| 265           | Customer Programming of Hunt Groups Enable           | This option enables Hunt Group definition by the attendant.   |
| 266           | Customer Programming of Speed Call Enable            | This option enables Speed Call definition by the attendant.   |
| 267           | Customer Programming of System Options Enable        | This option enables System Option programming by the attendant.   |

TABLE 2-1 (CONT'D)  
SYSTEM OPTIONS

| Option Number | Option   | Description  |
|---------------|--|--|
| 268           | Customer Programming of Toll Control Enable                      | This option enables Toll Control definition by the attendant.  |
| 269           | Customer Programming of Trunk Groups Enable                      | This option enables Trunk Group definition by the attendant.   |
| 270           | Customer Programming of Trunks Enable                            | This option enables Trunk definition by the attendant.   |
| 271           | Customer Range Programming Enable                                | This option enables Range programming.   |
| 272           | Customer Programming of SUPERSET 4 Enable                        | This option, when set, allows the attendant to program equipment as SUPERSET 4's or change the programming of a SUPERSET 4.  |
| 273           | External Call Forwarding Enable                                  | This option enables the External Call - Forwarding feature.  |
| 274           | Hands-Free Enable  | This option enables the Hands-Free feature.  |
| 275           | Message Waiting Setup (Bell)                                     | Enables the "MSGE WAIT" button and allows the attendant to cause the PABX to distinctively ring extension every 20 minutes, to signal a "message waiting" condition. |
| 276           | Message Waiting Setup (Lamp)                                     | Enables the "MSGE WAIT" button and allows the attendant to cause the PABX to light "message waiting" lamps on extension.   |
| 277           | Station Message Detail Recording Outgoing Calls                  | This option when activated initiates SMDR on outgoing calls.   |
| 278           | Station Message Detail Recording Incoming Calls                  | This option when enabled initiates SMDR on all incoming calls.   |
| 279           | SMDR: Record Only Incoming CO Calls (CCSA & Non Dial Tie Trunks) | This option records all incoming calls in the switch.  |
| 280           | SMDR: Record Meter Pulses  | This option allows the system to record all meter pulses from the CO.  |
| 281           | SMDR: Drop Incomplete Outgoing Call                              | If this option is selected, outgoing calls that are not complete are not recorded.   |
| 282           | SMDR: Drop Calls of Less than 8 Digits                           | This option will eliminate all trunk calls of eight digits or less from the SMDR records.  |

TABLE 2-1 (CONT'D)  
SYSTEM OPTIONS

| Option Number | Option                                       | Description   |
|---------------|--|---|
| 283           | SMDR Extended Record                         | This option allows the length of the SMDR record to be extended from 80 to 88 characters. This allows the last four digits to 12-digit Account Codes and the system ID to be printed. |
| 284           | SMDR: Indicate Long Calls                    | This option flags all calls that are longer than 5 minutes.   |
| 286           | Special ANI Feature                          | This option enables the special Automatic Number Identification feature.  |
| 287           | Speed Call Enable                            | This option enables the system Speed Call Feature.  |
| 288           | Speed Call Programming Enable                | This option allows the attendant to program a Common Use Table.   |
| 289           | Speed Call Confidential Number Display       | This option allows the attendant to observe a Common Use number.  |
| 291           | First Digit Toll Deny                        | Causes toll denial if the first digit dialed is 1, 0, * or #. If this option is not selected, toll denial will be on the first or second digit.                                       |
| 292           | Multi-Digit Toll Control Enable              | This option enables the Multi-Digit Toll Control Feature.   |
| 295           | Traffic Measurement Autoprint                | This option allows traffic data to be output automatically at the end of each hour.   |
| 296           | Traffic Measurement: Compact Traffic Report  | This option causes the Traffic Measurements to be output in a compact format.   |
| 297           | Traffic Measurement: Console Function Enable | If this option is selected, the Traffic Measurement may be controlled from the attendant console.   |
| 298           | Traffic Measurement Enable                   | This option enables the Traffic Measurement Feature.  |
| 299           | Traffic Measurement: Extreme Value Mode      | This option allows an active register's contents to be transferred to a storage register, if the active register is greater than the storage register.                                |
| 300           | Traffic Measurement Polling                  | This option allows traffic data to be polled by an external device.   |
| 310           | MITEL Printer Condensed SMDR Print           | This option when used with the MITEL printer will condense the printout from 132 to 88 characters.  |
| 311           | Ignore Print Enable                          | Allows the attendant to dial a code that will purge and ignore the RS232 output.  |

TABLE 2-1 (CONT'D)  
SYSTEM OPTIONS

| Option Number | Option   | Description  |
|---------------|--|--|
| 312           | Message Register & Message Waiting Change Print Enable | This option allows all Message Registers and Message Waiting to be printed.                      |
| 313           | Printer Carriage Return Delay                          | This option allows additional time for the printer carriage to return.                           |
| 314           | Printer Transmit Additional Nulls                      | This option allows the transmission of additional nulls to the printer.                          |
| 315           | Printouts: Extra Line Feeds                            | This option allows for two extra line feeds for the printer in Hotel/Motel applications.         |
| 316           | Room Message Register Audit Enable                     | This option allows an Audit of all extension Message Registers that have any contents.           |
| 317           | Room Status Audit Enable                               | This option will allow the Room Status of all rooms to be printed.                               |
| 318           | Zero Message Register After Room Register Audit        | If this option is selected, the Message Registers will be zeroed after an audit.                 |
| 330           | SUPERSET Disconnect Alarm                              | This option raises a minor alarm at the Attendant Console if a SUPERSET 4 is disconnected.       |
| 331           | SUPERSET Immediate Line Selection Enable               | This option allows the SUPERSET 4 user to always have a free line to access.                     |
| 332           | SUPERSET 4 Last Number Redial Enable                   | This option allows the SUPERSET 4 user to use a softkey on the SUPERSET as a last number redial. |
| 334           | SUPERSET 4 Auto Hold Disable                           | This option disables the auto-hold button on the SUPERSET 4.                                     |



TABLE 2-2  
SYSTEM OPTION CONFLICTS

R1

The following System Options are mutually exclusive; i.e. they cannot be simultaneously enabled on the same PABX.

|             |   |
|-------------|---|
| 208 and 286 | Outgoing Trunk Camp-On & Special ANI Feature.   |
| 209 and 286 | Outgoing Trunk Callback & Special ANI Feature.  |
| 209 and 230 | Outgoing Trunk Callback & Account Code Enable.  |
| 120 and 113 | Attendant Serial Call & GUEST ROOM Button Enable.                                       |
| 120 and 119 | Room Status Enable & Attendant Serial Call.   |
| 296 and 275 | Message Waiting Setups (lamp or bell).  |
| 248 and 300 | Automatic Wake-Up Print & Traffic Measurement Polling.                                  |
| 316 and 300 | Room Audit Enable & Traffic Measurement Polling.  |
| 317 and 300 | Message Register Print & Traffic Measurement Polling.                                   |
| 312 and 300 | Message Register and Message Waiting Change Print Enable & Traffic Measurement Polling. |
| 300 and 295 | Traffic Measurement Polling & Traffic Measurement Autoprint.                            |

In addition to the above system options, some console service features are mutually exclusive. These features are listed below:

ROOM RESTRICT and NIGHT 2  
 ROOM STATUS and NIGHT 2  
 CALL BLOCK and HOLD 4  
 SERIAL CALL and GUEST ROOM (Unless System Option 121 is enabled)

NOTE: The Room Restriction and Room Status features utilize the same button, but are not mutually exclusive, as the Room Status feature can be arranged to include the Room Restriction function, if System Option 258 is selected.

### Class-of-Service Options

**2.04** Each system may contain up to 16 different Classes of Service (COS). The COS defines which of the available options (Table 2-3) are active, and therefore available for use by any extensions assigned that COS.

**2.05** The individual Classes of Service (COS) are selected by the console keys, as described below:

- **COS DEFINE.** This key selects the Class-Of-Service program which permits changes to be made to any of the 16 individual COS. The entry made after selecting the program identifies which COS is to be modified.
- **OPTION.** The code entered (Table 2-3), after pressing the OPTION key, defines the extension option which is to be

added or removed from the COS specified.

- **ADD.** Add the option to this COS.
- **DELETE.** Remove the option from the COS.
- **CANCEL.** If, after entering a number of codes for a COS, an error is discovered, the new entries may be removed from the system by pressing the CANCEL key.
- **ENTER.** After all entries have been made for the COS, the entries may be transferred to permanent storage by pressing the ENTER key.

## Feature Access Codes

2.06 A number of features (Table 2-4) require access codes to allow the extension users to select and use the features. Each feature access code must be unique within the system. The feature access codes are programmed from the console keys as described below:

- **FEATURE.** This key selects the feature program and allows the access codes to be defined. The number dialed (Table 2-4), after pressing the FEATURE key, specifies the feature to which the access code is to be assigned.
- **ACCESS CODE.** After pressing this key, the number dialed (1 to 4 digits) is assigned as the access code of the feature selected. The system, automatically, checks to see if the code is assigned to any other equipment or feature within the system, and if a match is found, displays an error message.
- **CANCEL.** The access just assigned to a feature may be removed by pressing the CANCEL key. The new access code may be assigned immediately.
- **DELETE.** Pressing this key deletes the access code assigned to the feature, rendering the feature inoperative.
- **ENTER.** Transfers all new entries to permanent memory.

## Extensions

2.07 The extension program allows all data associated with extensions to be specified, changed, or removed from the system memories. The extension program is selected by the console keys as described below:

- **RANGE.** To enable faster programming, extensions may be programmed in a range (i.e. extension numbers 200-250). The following information must be common for the range: hunt group, COS and toll control. A starting and ending point

must be defined for equipment numbers, and a starting point must be defined for busy lamp numbers and extension access codes. No conflicts are allowed with equipment numbers, extension access codes busy lamp numbers and hunt groups.

- **EXTN.** Pressing this key enables the extension program, which allows new data to be entered or existing data to be changed or removed.
- **EQPT NUMBER.** The number (1-112, 161-256), entered after pressing the EQPT NUMBER key, defines the equipment number of the line circuit serving the extension (Fig. 2-1).
- **EXTN NUMBER.** The 1-, 2-, 3- or 4-digit number entered after pressing the EXTN NUMBER key specifies the extension number of the telephone set being added or changed. This number must not conflict with other extension numbers or access codes. If nonconflicting single digit dialing is required, enter N#, where N is the single digit.
- **COS NUMBER.** The number (1-16) entered after pressing the COS NUMBER key, specifies the Class of Service, and therefore the features, that may be accessed by the extension (see 2.04 Class-of-Service Option).
- **TOLL DENY.** Each extension may be defined as TOLL-ALLOWED - allowed to originate calls to the toll network; or TOLL-DENIED - not allowed to make calls to the toll network. To make the extension TOLL-ALLOWED, press the TOLL DENY key, then the DELETE key. To make the extension TOLL-DENIED, press the TOLL DENY key, then the ADD key. The extension will be TOLL-DENIED, only if the extension and the trunk group are TOLL-DENIED. This allows Toll Denial on a trunk group basis if System Option 292 was enabled. See also Section MITL9105/9110-096-212-NA, Multi-Digit Toll Control.

TABLE 2-3  
CLASS OF SERVICE OPTIONS

R1

| Option Number | Option                         | Description  |
|---------------|--------------------------------|--|
| 33            | Automatic Callback             | Allows Automatic Callback - Busy and Automatic Callback - Don't Answer. See system option Outgoing Trunk Callback.             |
| 34            | Call Forwarding - Busy         | Allows Call Forwarding - Busy.   |
| 35            | Call Forwarding - Don't Answer | Allows Call Forwarding - Don't Answer.   |
| 36            | Call Forwarding - Follow Me    | Allows Call Forwarding - Follow Me.  |
| 37            | Call Park                      | Allows Call Park. See "Park Recall" system options.  |
| 38            | Never a Forwardee              | Prevents calls being forwarded to this line.   |
| 39            | Directed Call Pickup           | Allows Directed Call Pickup - this is required for remote access of Call Park.   |
| 40            | Executive Busy Override        | Allows Executive Busy Override.  |
| 41            | Data Security                  | Provides security against any audio intrusion.   |
| 42            | Station Override Security      | Provides security against Executive Busy Override.   |
| 43            | Inward Restriction (DID)       | Denies Direct-In-Dial calls.   |
| 44            | Originate Only                 | Denies all incoming calls.   |
| 45            | Receive Only                   | Denies all outgoing calls.   |
| 46            | Flash Disable                  | Inhibits recognition of switchhook flash.  |
| 47            | Never a Consultee              | Denies incoming calls that originated from a Consultation Hold.  |
| 48            | Broker's Call                  | Allows Broker's Call. Denies transfer and add-on. Cannot be provided together with Station Conference, or Flash for Attendant. |
| 49            | Station Conference             | Allows Station-Controlled Conference.  |
| 50            | Meet-Me Conference             | Allows access to Meet-Me Conference.   |
| 51            | Camp-On                        | Allows Station Camp-On. See System Option "Outgoing Trunk Camp-On".  |
| 52            | Do Not Overflow                | Prevents an extension from accessing trunk groups via overflow.  |

**TABLE 2-3 (CONT'D)  
CLASS OF SERVICE OPTIONS**

| Option Number | Option                             | Description   |
|---------------|------------------------------------|---|
| 53            | Pager Access                       | Allows access to both paging amplifiers.  |
| 54            | TAFAS Access                       | Allows Trunk Answer From Any Station access.  |
| 55            | Hold Pickup                        | Allows access to the Hold Pickup feature.   |
| 56            | Account Code Access                | Allows an extension to use an account code on trunk calls.  |
| 57            | Manual Line                        | Routes all originating calls directly to the attendant for completion.  |
| 58            | Contact Monitor                    | Allows the line to be used for contact monitoring and to call the attendant upon detection of contact closure.  |
| 59            | Non-CO Trunk via Attendant Inhibit | Denies access to Non-CO trunks via the attendant.   |
| 60            | CO Trunks via Attendant Inhibit    | Denies access to CO trunks via the attendant.   |
| 61            | No Dial Tone                       | Denies dial tone to originating calls from incoming tie-lines.  |
| 62            | Flash For Attendant                | Provides automatic connection to the attendant console when the switchhook is flashed (Attendant Transfer) Cannot be provided together with Broker's Call, Consultation Hold, Transfer and Add-On, or Station Conference. |
| 63            | H/M Stn-Stn Restrict Applies       | Allows controlled station-to-station restriction to apply, when activated by the attendant. See system option "Controlled Station-to-Station Restriction".  |
| 64            | Message Register                   | Allows the system to keep count of the local call units made from this extension.   |
| 65            | Trunk Group 1                      | Allows access to individual trunk groups.   |
| 66            | Trunk Group 2                      | Allows access to individual trunk groups.   |
| 67            | Trunk Group 3                      | Allows access to individual trunk groups.   |
| 68            | Trunk Group 4                      | Allows access to individual trunk groups.   |
| 69            | Trunk Group 5                      | Allows access to individual trunk groups.   |
| 70            | Trunk Group 6                      | Allows access to individual trunk groups.   |

TABLE 2-3 (CONT'D)  
CLASS OF SERVICE OPTIONS

| Option Number | Option                           | Description  |
|---------------|----------------------------------|--|
| 71            | Trunk Group 7                    | Allows access to individual trunk groups.  |
| 72            | Trunk Group 8                    | Allows access to individual trunk groups.  |
| 73            | Trunk Group 9                    | Allows access to individual trunk groups.  |
| 74            | Trunk Group 10                   | Allows access to individual trunk groups.  |
| 75            | Trunk Group 11                   | Allows access to individual trunk groups.  |
| 76            | Trunk Group 12                   | Allows access to individual trunk groups.  |
| 77            | Message Waiting Applies          | Allows the attendant to set a message waiting indication at the extension.   |
| 78            | Room Do Not Disturb Setup Enable | Allows the extension user to set up and cancel Do Not Disturb for the extension - by dialing appropriate access codes. |
| 79            | Call Hold and Retrieve Access    | Allows the extension access to the Call Hold and Retrieve feature.   |
| 80            | Room Status Applies              | Allows the Room Status of the extension to be displayed at the attendant console.                                      |
| 81            | Call Forwarding System Inhibit   | The system Call Forwarding options 149 and 150 are inactive on extensions with this Class-of-Service option.           |
| 82            | Alarm Call Setup Enable          | Allows either the extension to change or cancel its own wake-up time.  |
| 83            | Forced Account Code Entry        | An extension, with this option in its COS, must dial a 1- to 12-digit Account Code before dialing a client's number.   |
| 84            | No SMDR Record Applies           | An extension with this option in its COS will not be recorded by Station Message Detail Recording.                     |
| 85            | Speed Call Table 1 & 2 Access    | Allows access to common-use Speed Call Tables specified.   |
| 86            | Speed Call Table 3 & 4 Access    | Allows access to common-use Speed Call Tables specified.   |
| 87            | Speed Call Table 5 & 6 Access    | Allows access to common-use Speed Call Tables specified.   |
| 88            | Speed Call Table 7 & 8 Access    | Allows access to common-use Speed Call Tables specified.   |

**TABLE 2-3 (CONT'D)  
CLASS OF SERVICE OPTIONS**

| Option Number | Option                                  | Description  |
|---------------|---|--|
| 89            | Speed Call Table 9 & 10 Access          | Allows access to common-use Speed Call Tables specified.   |
| 90            | Speed Call Table 11 & 12 Access         | Allows access to common-use Speed Call Tables specified.   |
| 91            | Speed Call Table 13 & 14 Access         | Allows access to common-use Speed Call Tables specified.   |
| 92            | Speed Call Table 15 & 16 Access         | Allows access to common-use Speed Call Tables specified.   |
| 93            | Speed Call Table 17 & 18 Access         | Allows access to common-use Speed Call Tables specified.   |
| 94            | Cannot Dial a Trunk After Flashing      | An extension, with this option in its COS, will not be able to dial a trunk after flashing.  |
| 95            | Incoming Trunk Rotary Dial Only         | An incoming trunk, with this option in its COS, will ignore DTMF signaling.  |
| 96            | ARS Restricted                          | An extension, with this option in its COS, will not have access to the last route selected by ARS.   |
| 97            | External Call Forwarding Connect Enable | An extension must have this option in its COS, in order to have a call it makes to an extension with External Call Forwarding in effect completed.   |
| 98            | Transfer with Privacy                   | An extension with this option in its COS will be able to: put a call on hold, dial a new number and consult privately or hang up and the call on hold and the new number will be connected.  |
| 99            | Hands-Free Station                      | An extension with this option in its COS need not go off-hook to answer a call since it should be in the off-hook position.  |
| 100           | ARS Allowed                             | An ARS user with this option will be able to access a Trunk Group, even though the user's COS was not enabled for that Trunk Group. This will occur when the ARS feature finds that the only Trunk Group free is not in the user's COS but will force a connection. This option must be enabled for an extension to use ARS. |
| 101           | Earth Ground Button                     | This option allows the use of a Earth Ground Button on an extension's telephone set. Note: A special line card is required when using this COS option.   |

TABLE 2-3 (CONT'D)  
CLASS OF SERVICE OPTIONS

| Option Number | Option   | Description  |
|---------------|--|--|
| 102           | Call Announce Port                               | This COS option allows a SUPERSET 4 user to use an alternate equipment number as an announcement port.   |
| 106           | SUPERSET Sub-Attendant Enable                    | This COS option allows a SUPERSET 4 to be used as Sub-Attendant position. All calls handled to the Sub-Attendant will recall to the Sub-Attendant.   |
| 107           | Repeated Camp-On Beeps                           | This COS option, when enabled in an extension or trunk's COS, will enable the trunk or extension to camp-on to a party and not recall. The camped-on to party will receive continuous camp-on tones at 5, 10 or 15 second intervals (as programmed). If neither System Options 217 or 218 are programmed, the repeated tones will be every 10 seconds. |
| 108           | SUPERSET Background Music                        | This option, when enabled, allows the SUPERSET 4 user to access the Music on Hold path and listen to the Music by pressing the softkey indicating the musical note.  |
| 109           | SUPERSET 4 Sub-Attendant Programming of Messages | This option allows only the Sub-Attendant to program the SUPERSET messages.  |

TABLE 2-3 (CONT'D)  
OPTION CONFLICTS

|    |                     |     |    |                     |
|----|---------------------|-----|----|---------------------|
| 45 | Receive Only        | and | 58 | Contact Monitor     |
| 46 | Flash Disable       | and | 48 | Broker's Call       |
| 46 | Flash Disable       | and | 49 | Station Conference  |
| 46 | Flash Disable       | and | 62 | Flash for Attendant |
| 48 | Broker's Call       | and | 49 | Station Conference  |
| 62 | Flash for Attendant | and | 49 | Station Conference  |
| 62 | Flash for Attendant | and | 48 | Broker's Call       |

TABLE 2-4  
FEATURE ASSIGNMENTS

R1

| Feature Number | Description   |
|----------------|---|
| 1              | Attendant Access  |
| 2              | Callback - Don't Answer   |
| 3              | Call Forwarding - Busy  |
| 4              | Call Forwarding - Don't Answer                                    |
| 5              | Call Forwarding - Follow Me                                       |
| 6              | Call Park   |
| 7              | Dial Call Pickup  |
| 8              | Directed Call Pickup  |
| 9              | Meet-Me Conference  |
| 10             | Pager 1   |
| 11             | Pager 2   |
| 12             | Hold Pickup Access  |
| 13             | Pager 1 and 2   |
| 14             | TAFAS-All   |
| 15             | TAFAS-1   |
| 16             | TAFAS-2   |
| 17             | TAFAS-3   |
| 18             | Attendant Function  |
| 19             | Maintenance Function  |
| 20             | DID Attendant Access Code   |
| 21             | Direct Inward System Access                                       |
| 22             | Executive Busy Override (Single Digit)†                           |
| 23             | Callback - Busy (Single Digit)†                                   |
| 24             | Room Do Not Disturb Setup and Cancel                              |
| 25             | Call Hold   |
| 26             | Call Retrieve (Local)   |
| 27             | Call Retrieve (Remote)  |
| 28             | Room Status Update (Maid in Room)                                 |
| 29             | Programming Security Code   |
| 30             | Alarm Call  |
| 31             | Account Code  |
| 32             | Speed Call  |
| 33-42          | Assign access codes features 33-42 for Trunk Group 1 if necessary |
| 43             | Customer Programming Security Code                                |
| 44             | ARS Access Code   |
| 45             | Hands-Free Activation   |
| 46             | Call Forwarding Busy/Don't Answer                                 |
| 47             | Reserved  |
| 48             | SUPERSET 4 Loopback Test  |

† First digit conflicts between these codes and other access codes are allowed. See Section MITL9105/9110-096-105-NA for complete description of feature operation.



| HARDWARE<br>POSITION NUMBER | PLUG 7 |     |     |     |     |         | PLUG 9 |     |     |     |     |         | PLUG 11 |    |    |    |    |    | EXTENSION<br>UNIT NO. | TRUNK UNIT<br>NO. (4 TRUNK) | TRUNK UNIT<br>NO. (2 TRUNK) |               |    |    |    |   |
|-----------------------------|--------|-----|-----|-----|-----|---------|--------|-----|-----|-----|-----|---------|---------|----|----|----|----|----|-----------------------|-----------------------------|-----------------------------|---------------|----|----|----|---|
|                             | 1      | 2   | 3   | 4   | 5   | 6       | 7      | 8   | 9   | 10  | 11  | 12      | 13      | 14 | 15 | 16 | 17 | 18 |                       |                             |                             | 19            | 20 | 21 | 22 |   |
| 161                         | 169    | 177 | 185 | 193 | 201 | 209     | 217    | 225 | 233 | 241 | 249 |         |         |    |    |    |    |    |                       |                             |                             |               | 1  |    |    |   |
| 162                         | 170    | 178 | 186 | 194 | 202 | 210     | 218    | 226 | 234 | 242 | 250 |         |         |    |    |    |    |    |                       |                             |                             |               | 2  | 1  |    | 1 |
| 163                         | 171    | 179 | 187 | 195 | 203 | 211     | 219    | 227 | 235 | 243 | 251 |         |         |    |    |    |    |    |                       |                             |                             |               | 3  |    |    |   |
| 164                         | 172    | 180 | 188 | 196 | 204 | 212     | 220    | 228 | 236 | 244 | 252 |         |         |    |    |    |    |    |                       |                             |                             |               | 4  | 2  |    |   |
| 165                         | 173    | 181 | 189 | 197 | 205 | 213     | 221    | 229 | 237 | 245 | 253 |         |         |    |    |    |    |    |                       |                             |                             |               | 5  |    |    |   |
| 166                         | 174    | 182 | 190 | 198 | 206 | 214     | 222    | 230 | 238 | 246 | 254 |         |         |    |    |    |    |    |                       |                             |                             |               | 6  | 3  |    | 2 |
| 167                         | 175    | 183 | 191 | 199 | 207 | 215     | 223    | 231 | 239 | 247 | 255 |         |         |    |    |    |    |    |                       |                             |                             |               | 7  |    |    |   |
| 168                         | 176    | 184 | 192 | 200 | 208 | 216     | 224    | 232 | 240 | 248 | 256 |         |         |    |    |    |    |    |                       |                             |                             |               | 8  | 4  |    |   |
| 1                           | 2      | 3   | 4   | 5   | 6   | 7       | 8      | 9   | 10  | 11  | 12  | 13      | 14      | 15 | 16 | 17 | 18 | 19 | 20                    | 21                          | 22                          | CARD POSITION |    |    |    |   |
| 31                          | 32     | 33  | 34  | 35  | 36  | 37      | 38     | 39  | 40  | 41  | 42  | 43      | 44      | 45 | 46 | 47 | 48 | 49 | 50                    | 51                          | 52                          | SLOT NUMBER   |    |    |    |   |
| PLUG 8                      |        |     |     |     |     | PLUG 10 |        |     |     |     |     | PLUG 12 |         |    |    |    |    |    |                       |                             |                             |               |    |    |    |   |

## SHELF 2 (SX-200 ONLY)

| HARDWARE<br>POSITION NUMBER | PLUG 1 |     |     |     |     |        | PLUG 3 |     |     |     |     |                              | PLUG 5                  |              |    |    |    |    | EXTENSION<br>UNIT NO. | TRUNK UNIT<br>NO. (4 TRUNK) | TRUNK UNIT<br>NO. (2 TRUNK) |               |    |    |    |  |   |   |  |   |
|-----------------------------|--------|-----|-----|-----|-----|--------|--------|-----|-----|-----|-----|------------------------------|-------------------------|--------------|----|----|----|----|-----------------------|-----------------------------|-----------------------------|---------------|----|----|----|--|---|---|--|---|
|                             | 1      | 2   | 3   | 4   | 5   | 6      | 7      | 8   | 9   | 10  | 11  | 12                           | 13                      | 14           | 15 | 16 | 17 | 18 |                       |                             |                             | 19            | 20 | 21 | 22 |  |   |   |  |   |
| 001                         | 009    | 017 | 025 | 033 | 041 | 049    | 057    | 065 | 073 | 081 | 089 | 097                          | 105                     | 113          |    |    |    |    |                       |                             |                             |               |    |    |    |  | 1 |   |  |   |
| 002                         | 010    | 018 | 026 | 034 | 042 | 050    | 058    | 066 | 074 | 082 | 090 | 098                          | 106                     | 114          |    |    |    |    |                       |                             |                             |               |    |    |    |  | 2 | 1 |  | 1 |
| 003                         | 011    | 019 | 027 | 035 | 043 | 051    | 059    | 067 | 075 | 083 | 091 | 099                          | 107                     | 115          |    |    |    |    |                       |                             |                             |               |    |    |    |  | 3 |   |  |   |
| 004                         | 012    | 020 | 028 | 036 | 044 | 052    | 060    | 068 | 076 | 084 | 092 | 100                          | 108                     | 116          |    |    |    |    |                       |                             |                             |               |    |    |    |  | 4 | 2 |  |   |
| 005                         | 013    | 021 | 029 | 037 | 045 | 053    | 061    | 069 | 077 | 085 | 093 | 101                          | 109                     | 117          |    |    |    |    |                       |                             |                             |               |    |    |    |  | 5 |   |  |   |
| 006                         | 014    | 022 | 030 | 038 | 046 | 054    | 062    | 070 | 078 | 086 | 094 | 102                          | 110                     | 118          |    |    |    |    |                       |                             |                             |               |    |    |    |  | 6 | 3 |  | 2 |
| 007                         | 015    | 023 | 031 | 039 | 047 | 055    | 063    | 071 | 079 | 087 | 095 | 103                          | 111                     | 119          |    |    |    |    |                       |                             |                             |               |    |    |    |  | 7 |   |  |   |
| 008                         | 016    | 024 | 032 | 040 | 048 | 056    | 064    | 072 | 080 | 088 | 096 | 104                          | 112                     | 120          |    |    |    |    |                       |                             |                             |               |    |    |    |  | 8 | 4 |  |   |
| 1                           | 2      | 3   | 4   | 5   | 6   | 7      | 8      | 9   | 10  | 11  | 12  | 13                           | 14                      | 15           | 16 | 17 | 18 | 19 | 20                    | 21                          | 22                          | CARD POSITION |    |    |    |  |   |   |  |   |
| 1                           | 2      | 3   | 4   | 5   | 6   | 7      | 8      | 9   | 10  | 11  | 12  | 13                           | 14                      | 15           | 16 | 17 | 18 | 19 | 20                    | 21                          | 22                          | SLOT NUMBER   |    |    |    |  |   |   |  |   |
| PLUG 2                      |        |     |     |     |     | PLUG 4 |        |     |     |     |     | PLUG 6                       |                         |              |    |    |    |    |                       |                             |                             |               |    |    |    |  |   |   |  |   |
|                             |        |     |     |     |     |        |        |     |     |     |     | CONSOLE<br>CONTROL/RECP CARD | CONSOLE<br>CONTROL CARD | TOBE CONTROL |    |    |    |    |                       |                             |                             |               |    |    |    |  |   |   |  |   |
|                             |        |     |     |     |     |        |        |     |     |     |     | RESERVED                     |                         |              | 2  | 1  |    | 1  |                       |                             |                             |               |    |    |    |  |   |   |  |   |
|                             |        |     |     |     |     |        |        |     |     |     |     | FOR                          |                         |              | 4  | 2  |    |    |                       |                             |                             |               |    |    |    |  |   |   |  |   |
|                             |        |     |     |     |     |        |        |     |     |     |     | COMMON                       |                         |              | 3  |    |    |    |                       |                             |                             |               |    |    |    |  |   |   |  |   |
|                             |        |     |     |     |     |        |        |     |     |     |     | CONTROLS                     |                         |              | 6  | 3  |    | 2  |                       |                             |                             |               |    |    |    |  |   |   |  |   |
|                             |        |     |     |     |     |        |        |     |     |     |     |                              |                         |              | 7  |    |    |    |                       |                             |                             |               |    |    |    |  |   |   |  |   |
|                             |        |     |     |     |     |        |        |     |     |     |     |                              |                         |              | 8  | 4  |    |    |                       |                             |                             |               |    |    |    |  |   |   |  |   |

## SHELF 1

- NOTES:
1. DUAL AND OR QUAD RECEIVER EQUIPMENT NUMBERS ARE 090, 098, 106, 114, 092, 100, 108 AND 116.
  2. QUAD RECEIVER EQUIPMENT NUMBERS ARE 094, 102, 110, 118, 096, 104, 112 AND 120.
  3. EQUIPMENT POSITION 001 IS RESERVED FOR THE TEST LINE AND MUST THEREFORE BE EQUIPPED WITH A LINE CARD.
  4. TRUNK EQUIPMENT NUMBER IS SAME AS INDIVIDUAL TRUNK ACCESS CODE.
  5. SLOT 15 IS RESERVED FOR RECEIVER NO. 1.
  6. MAXIMUM NUMBER OF SUPERSET 4's = 64

Fig. 2-1 Equipment Number

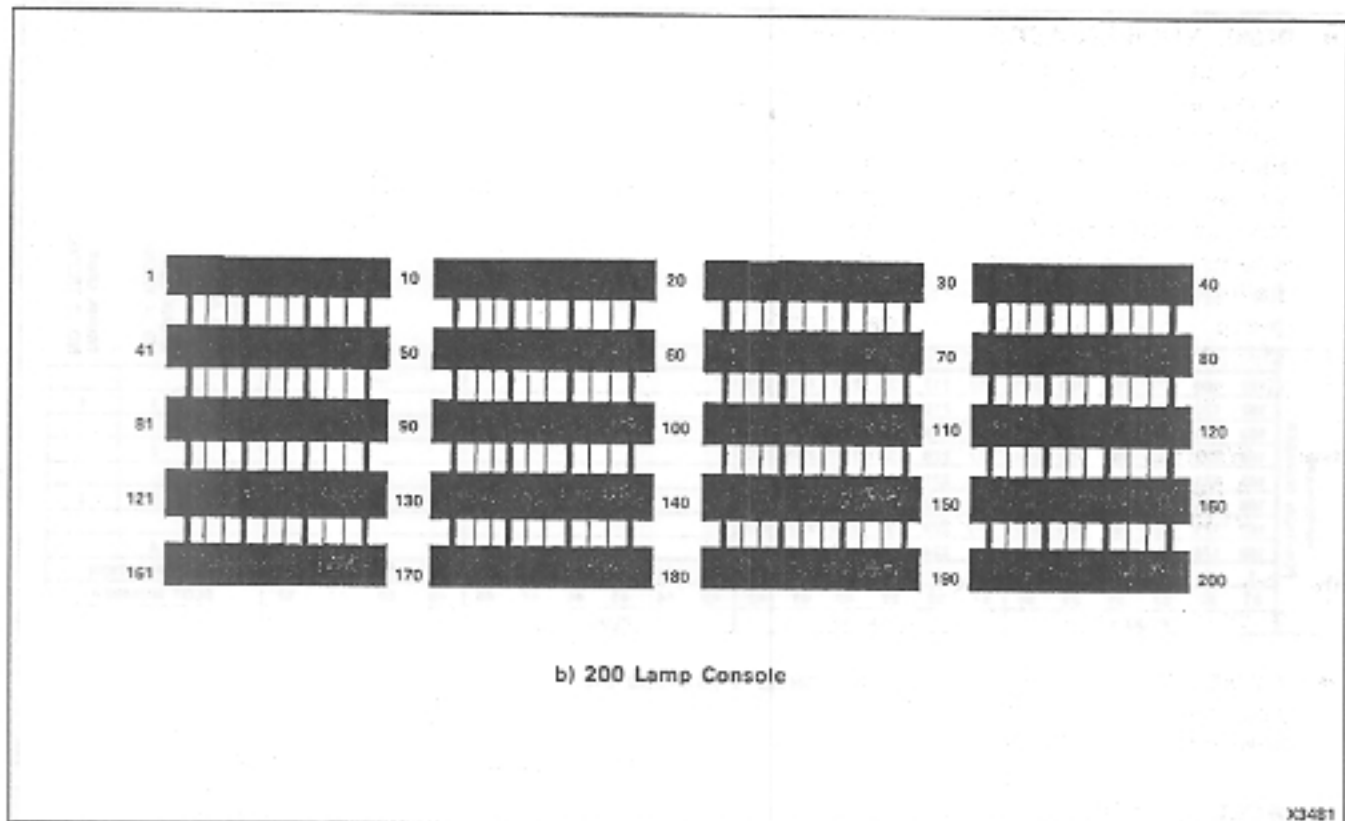


Fig. 2-2A Busy Lamp Position Numbering

- **BUSY LAMP NUMBER.** After pressing this key, the number entered (1-200) defines the position (Fig. 2-2) of the busy lamp to be associated with the extension. If the extension is not to be assigned a busy lamp, no entry is required.
  - **DELETE.** Pressing the DELETE key removes the existing busy lamp assignment.
  - **PICKUP GROUP.** The system may hold up to 30 independent call pickup groups. An extension may be made a member of any group, by entering the pickup group number after pressing the PICKUP GROUP key. Any number of extensions may be assigned to a pickup group, but an extension may only be a member of one group at any time.
  - **CANCEL.** Pressing the CANCEL key, prior to the operation of the ENTER key, removes any data entered during the foregoing Extension Program sequence.
  - **ENTER.** Transfer all new data for the extension to permanent memory.
- ### Hunt Groups
- 2.08** The system can hold up to 12 different hunt groups. Each hunt group may contain an unlimited number of members and be specified as:
- **TERMINAL HUNTING.** The hunt group sequence starts at the first equipment number and ends at the last number in the hunt chain. The call is completed at the first idle number encountered.
  - **CIRCULAR HUNTING.** Hunting starts at the last equipment number reached and hunts over all members of the hunt group. The call is completed at the first idle number found.
  - **SECRETARIAL HUNTING.** This is terminal hunting where the last number is common to two or more extension hunt groups.

- **DUAL NUMBER ACCESS.** An extension may be programmed to allow it to be accessed by two different numbers. The first number is assigned when programming the extension and the second number by programming a hunt group with the extension as the only member. The extension may therefore be accessed by dialing the extension number or the hunt group master number (see Section MITL9105/9110-096-105-NA Single Digit Dialing).

**Note:** When changing the list of members of a hunt group in any way, all members of the hunt group must be reentered.

**2.09** The following console keys are activated to program the hunt groups:

- **HUNT GROUP.** Allows the hunt group required to be selected by dialing the hunt group number (1-12).
- **ACCESS CODE.** Allows the 1-, 2-, 3- or 4-digit code identifying the hunt group master number to be entered.
- **DELETE.** Pressing this key deletes the hunt group from the system memory.
- **EQPT NUMBER.** This key must be pressed before dialing the equipment number of each extension in the hunt group. If circular hunting is to be defined, the last entry in the hunt group must be the same as the first entry. Membership in a hunt group is mutually exclusive with "message registration" and "room status" for this extension.
- **CANCEL.** Deletes all new data entered associated with the hunt group.
- **ENTER.** Transfers all new data for the hunt group to permanent memory.

### Trunks

**2.10** This program allows the type console appearances, day and night assignment, COS and toll deny codes of each trunk to be specified.

**2.11** The following console keys are employed to enter this program:

- **TRUNK.** Selects the trunk program
- **EQPT NUMBER.** The number entered (10-112; 162-256, even numbers only) specifies the equipment number of the trunk circuit serving this trunk (Fig. 2-1).
- **TYPE.** The code entered, defines the type of trunk being specified.
  - Code 1 - CO trunk + VNL
  - Code 2 - DISA trunk + VNL
  - Code 3 - DID trunk + VNL
  - Code 4 - Dial-In tie trunk + VNL
  - Code 5 - Non Dial-in tie trunk + VNL
  - Code 6 - CCSA trunk + VNL
  - Code 11 - CO trunk + NON VNL
  - Code 21 - DISA trunk + NON VNL
  - Code 31 - D ID trunk + NON VNL
  - Code 41 - Dial-In tie trunk + NON VNL
  - Code 51 - Non Dial-In tie trunk + NON VNL
  - Code 61 - CCSA trunk + NON VNL
- **DELETE.** If this key is pressed, the information associated with this trunk is removed from the system memory.
- **BUSY LAMP NUMBER.** The number (1-200) defines the position (Fig. 2-2) of the busy lamp to be associated with this trunk. If the trunk is not to be assigned, a busy lamp no entry is required.
- **DELETE.** If this key is pressed, the busy lamp assignment for this trunk is deleted.
- **LDN NUMBER (Types 1, 5, 11, 51 only).** his single digit entry defines the Listed Directory Number key (LDN 1, 2, 3 or 4)

on the attendant console which is to be associated with the trunk. If the trunk is not to appear on the attendant console, no entry is required. DID trunk calls to the attendant always appear on LDN 4.

- **DAY NUMBER (Types 1, 5, 11, 51 only).** The code entered for Day Number specifies any special assignments of the trunk during normal day time service. These assignments may be:
  - no assignment to bells, extensions or hunt groups, console appearance only (Default code #0)
  - assigned to ring bell 1, code #1
  - assigned to ring bell 2, code #2
  - assigned to ring bell 3, code #3
  - assigned to one extension - enter equipment number of extension
  - assigned to a hunt group, codes 1 to 12.
- **I/C (Types 3, 6, 31, 61 only).** This 2- or 3-digit entry for DID or CCSA trunks defines the number of incoming digits, the number of digits to be absorbed; and the digit to be added to the incoming number after absorption.
- **NIGHT 1 (Types 1, 5, 11, 51 only).** This entry defines the assignment of the trunk during Night Service 1. Assignment is made in the same manner as for DAY NUMBER assignment.
- **NIGHT 2.** The entry defines the assignment of the trunk during Night Service 2. This assignment is made in the same manner as for DAY NUMBER assignment.
- **COS NUMBER (Types 2, 4, 21, 41 only).** The number (1-16) entered, after pressing this key, specifies the Class of Service and therefore the features, that may be accessed by the dial-in trunk. See 2.04 Class-of-Service Option.
- **TOLL DENY (Types 2, 4, 21, 41 only).** Each dial-in trunk may be defined as

TOLL-ALLOWED - allowed to originate calls to the toll network; or TOLL-DENIED - not allowed to make calls to the toll network. To make the tie trunk TOLL-ALLOWED, press the TOLL DENY key, then the DELETE key. To make the tie trunk TOLL-DENIED, press the TOLL DENY key, then the ADD key. If System Option 292 is enabled, see also Section MITL9105/9110-096-212-NA Multi-Digit Toll Control.

- **CANCEL.** Pressing this key, prior to the operation of the ENTER key, removes any data entered in the temporary storage.
- **ENTER.** Deletes previous data associated with this trunk and stores the new data.

### Trunk Groups

2.12 The trunk group program specifies the trunks forming the trunk group, the restrictions and options common to all trunks in the group. The trunk group may employ terminal or circular hunting (see 2.08). When making any change to the list of members of a trunk group, all members of the group must be reentered. The following console keys are activated to program the trunk groups:

- **TRUNK GROUP.** The number (1-12) entered specifies the trunk group to be set up or changed.
- **ACCESS CODE.** Allows the 1-, 2-, 3- or 4-digit code identifying the trunk group to be specified.
- **DELETE.** Pressing this key deletes the trunk group from the system memory.
- **TYPE.** The 4-digit code entered after pressing the TYPE key specifies the trunk group type parameters as detailed in Table 2-5.
- **TOLL DENY.** Each trunk group may be specified as TOLL-ALLOWED - allowed to originate calls to the toll network, or TOLL-DENIED - not allowed to make calls to the toll network. To make the trunk group TOLL-ALLOWED, press the TOLL DENY key, then the DELETE key. To make

the trunk group TOLL-DENIED, press the TOLL DENY key, then the ADD key. Toll Denial is effective only when both the trunk group and the extension or dial-in trunk involved are TOLL DENIED. are ignored by the PABX. This prevents circumvention of the toll denial by dialing a fast valid digit before CO dial tone is received.

- **OVERFLOW.** The number entered (1-12) specifies the trunk overflow group number. If all trunks within the trunk group being defined are busy, any additional calls directed to the trunk group will be rerouted to the overflow group. Overflow arrangements which direct the callback to the original group must NOT be specified.
- **EQPT NUMBER.** This key must be pressed before dialing the equipment number (2-112; 162-256) of each trunk in the group. If circular hunting is to be defined, the last entry in the hunt group must be the same as the first entry. If circular hunting is not required, the trunk group is terminal hunting (see 2.08).
- **CANCEL.** Pressing the CANCEL key removes all new data entered for the trunk group, leaving any existing data unchanged.
- **ENTER.** Removes all old data associated with the trunk group and transfers the new data entered to permanent memory.

### 3. PROGRAMMING

#### General

**3.01** After all installation procedures have been completed in accordance with Section MITL9105/9110-096-200-NA, the system should be programmed as detailed in the MITEL Action Procedures (MAP's) contained in

Appendices 1 and 2. Each MAP in Appendix 2 also contains a sample programming form pertinent to the MAP.

#### Error/Confirm Codes

**3.02** During standard system programming, the console DESTINATION display may show "error" or "confirm" codes, with the meanings indicated in Tables 3-1 and 3-2, respectively. These tables also indicate required action when the code is displayed. In the extended programming mode, errors may also be displayed at the console. Tables 3-3, 3-4, 3-5 and 3-6 show the meanings of these errors.

#### Attendant Function Access Codes

**3.03** Table 3-7 is a listing of the attendant function access codes. To select any of the attendant functions, the access code for Feature 18 must have been dialed. The code \* is used in Table 3-7.

#### Maintenance Function Access Codes

**3.04** Table 3-8 lists the maintenance function access codes. To select any of the maintenance functions, the access code assigned for the maintenance function must be dialed (Feature Number 19). The code 555 is used in Table 3-8, for the maintenance code and may be dialed from the test line or console.

#### Time-Out Information

**3.05** During programming, it may be necessary to know the time-out information with regard to certain functions. Table 3-9 is such a listing of the time-out information.

TABLE 2-5  
TRUNK GROUP TYPE CODES

R1

| First Digit (Note 1)                                | Second Digit                              | Third Digit (Note 2)                 | Fourth Digit  |
|---|---|--------------------------------------|---|
| 1 No supervision                                    | 1 No Message Register                     | +1 Dial pulse, no wait for dial tone | 1 CO trunk  |
| 2 Answer supervision                                | 2 Message Register                        | +2 Dial pulse, wait for dial tone    | 2 Non-CO trunk  |
| 3 Toll Reversal                                     | 3 SMDR Enable and no Message Register     | 3 DTMF, no wait for dial tone        | **3 Identified Trunk Group (Type XX13) only is valid) |
| 4 Outgoing audio inhibited until answer supervision | 4 SMDR Enable and Message Register Enable | 4 DTMF, wait for dial tone           |   |

+ If extensions are DTMF, the trunk will convert to dial pulse. Early line split is not provided. Trunks will repeat DTMF or dial pulse signals unless outgoing audio is inhibited.

- Note 1**
- If answer supervision is not required (or not provided by the CO), then use 1 (No supervision).
  - If trunks provide answer supervision and tandem trunking or message registration is used, then specify 2 (Answer Supervision).
  - If supervision is used to indicate toll calls, and this feature is required, then use 3 (Toll supervision).
  - If audio cut-through on tie-trunk tandem calls is required only after receipt of answer supervision, then use 4 (Outgoing audio inhibit until answer supervision). In addition the audio is inhibited until timed out or unless a # is dialed.

- Note 2**
- If "wait for dial tone" is selected, then any digits dialed prior to receipt of CO dial tone

TABLE 3-1  
PROGRAMMING ERROR CODES

R1

| Error Code | Cause   | Key Affected   | Key Flashing     | Meaning  | Action Required   |
|------------|---|--|------------------|--|---|
| E0         | Invalid key pressed.  | ALL  | NONE             | The last key pressed is invalid at this time.  | Check procedure and press correct key.  |
| E1         | Invalid number.   | ALL  | None             | The number entered is out of range or contains corrupted data.   | Press key associated with entry and re-entry number.  |
| E2         | Key other than ENTER OR CANCEL pressed.   | LAMP TEST<br>COS OPTION<br>FEATURE<br>EXTN NUMBER,<br>TRUNK HUNT<br>GROUP<br>TRUNK GROUP<br>NEXT, EQPT<br>NUMBER | ENTER,<br>CANCEL | An attempt was made to leave the current mode, after some parameters were changed, but before ENTER or CANCEL was pressed. ENTER may be used to write the new programming information back to the non-volatile RAM, or use CANCEL to ignore all programming changes made, since the last time ENTER was pressed.   | Press ENTER to transfer the data to permanent or CANCEL to remove the data from the temporary store.  |
| E3         | Access code has not been entered.   | HUNT GROUP,<br>TRUNK GROUP   | ACCESS<br>CODE   | Attempting to enter members into a hunt or trunk group before an access code has been assigned to the group.   | Press ACCESS CODE key and enter required access code.   |
| E4         | The extension number or access code entered is already assigned.                              | EXTN,<br>ACCESS<br>CODE  | None             | The extension number of access code entered is already assigned to an extension, feature, hunt group or trunk group. In Trunk mode, an attempt is made to delete a member of a trunk group. Equipment Numbers desired must be entered. In Trunk Group mode, an attempt is made to place a trunk into a trunk group while that trunk is currently programmed into another trunk group. Callback and Executive Override conflict, i.e., trying to enter a Callback code while same code is assigned to Executive Busy Override and vice-versa. | Check code entered.<br>1 If code is correct, terminate entry, remove other appearance of code and re-enter all new data.<br>2 If code is incorrect, press key associated with entry and re-enter extension number or access code. |
| E5         | Number entered contains incorrect number of digits or conflicting option enabled in this COS. | EXTN NUMBER,<br>ACCESS CODE  | None             | The extension number or access code is in conflict with the existing numbering plan. Attempting to add an option to a COS in which a conflicting option is enabled. Attempting to add a System Option when a conflicting option exists.  | Check entry. Press key associated with entry and re-enter number.   |

**TABLE 3-1 (CONT'D)  
PROGRAMMING ERROR CODES**

R1

| Error Code | Cause  | Key Affected | Key Flashing | Meaning  | Action Required  |
|------------|--|--------------|--------------|--|--|
| E6         |  |              |              | During trunk or extension programming and attempting to assign an equipment number as a line or a trunk when other equipment numbers previously programmed for that slot identify the slot as other than the type being programmed (i.e. line, trunk, or superset)   |  |
| E6         |  |              |              | During trunk programming an attempt has been made to change the programming for the trunk and the trunk has an appearance on a SUPERSET 4. The trunk appearance must be deleted from any SUPERSET 4 keys before changing the trunk.  |  |
| E6         |  |              |              | During extension programming an attempt has been made to delete an extension which has an appearance on a SUPERSET 4. The extension appearance must be deleted from any SUPERSET 4 keys before deleting the extension.   |  |
| E6         | Incorrect equipment number entered.  | EQPT NUMBER  | None         | Attempting to assign an equipment number that is:<br>- undefined<br>- defined as a trunk to an extension hunt group or extension<br>- defined as an extension to a trunk group or a trunk<br>- an extension with message registration to hunt group or pickup group.<br>An equipment number assigned to an extension must be deleted as an extension, before being programmed as a trunk. An equipment number assigned to a trunk must be deleted as a trunk, before being programmed as an extension. | Remove conflicting option<br>(a) Assign equipment number correctly<br>(b) Enter new equipment number |
| E6         | In extension mode the equipment number assigned as a; call announce port, programmed SUPERSET or a single line set with appearances. | EQPT NUMBER  | None         | The equipment number selected to be programmed has already been programmed in SUPERSET programming as:<br>a SUPERSET,<br>single line set with appearances or an announce port.   | Enter Correct equipment number or delete conflicting SUPERSET programming                            |



TABLE 3-1 (CONT'D)  
PROGRAMMING ERROR CODES

R1

| Error Code  | Cause  | Key Affected | Key Flashing | Meaning   | Action Required  |
|-------------|--|--------------|--------------|---|--|
| E6          | In trunk mode the trunk selected has appearances on a SUPERSET.  | EQPT NUMBER  | None         | The trunk equipment number already has an appearance on a SUPERSET.   | Delete appearances on SUPERSET.  |
| E7          | System is busy.  | ENTER,       | None         | (a) Attempting to initialize a system while PABX is in use.<br>(b) Attempting to change data of an extension or trunk while that extension or trunk is in use. It must be idle or busied-out. | (a) Wait until system is idle<br>(b) Wait until extension or trunk is idle   |
|             | Extension has a message register that is not zeroed or has a message waiting, or has Do Not Disturb set. | ENTER        | None         | - a valid message register exists for this extension<br>- extension has a message waiting or Do Not Disturb set   | Zero message register, reset message waiting or Do Not Disturb and reprogram |
| E8          | Trunk or equipment number already assigned.  | ENTER        | None         |   | (a) Enter proper trunk or equipment number<br>(b) Press ENTER                |
| E9          | Non-Volatile RAM error   | ENTER        | None         | Ones and Zeros test failed  |  |
| E020        |  |              | None         |   | Non-Volatile RAM must be initialized and/or reprogrammed.                    |
| E022<br>-20 | At Power Up  |              | None         |   | Non-Volatile RAM must be initialized and/or reprogrammed                     |

**TABLE 3-2  
STANDARD CONFIRM CODES**

R1

| Confirm Code | Cause  | Key Affected | Flashing Lamp | Action Required   |
|--------------|--|--------------|---------------|---|
| C0           | Attempting to assign an equipment number for an extension to a slot containing a trunk card                  | EQPT NUMBER  | CONFIRM       | Check assignment-<br>- if correct, press CONFIRM key. Equipment number entered is accepted as the number for the equipment type being programmed. All data associated with the original appearance of the equipment number is removed.<br>- if incorrect, press EQPT NUMBER and re-enter new equipment number.  |
| C0           | Attempting to assign an equipment number for a trunk to an empty slot or a slot containing an extension card | EQPT NUMBER  | CONFIRM       | Check assignment-<br>- if correct, press CONFIRM key. The extension number entered is accepted as the extension number for the equipment being defined. All data associated with the original appearance of the extension number is removed.<br>- If incorrect, press EXTN NUMBER and reenter extension number. |
| C1           | Attempting to assign an extension that already exists  | EXTN NUMBER  | CONFIRM       | Check assignment-<br>- if correct, press CONFIRM key. Busy lamp assignment is accepted for this equipment. All data associated with original assignment is removed.<br>- If incorrect, press BUSY LAMP and reenter busy lamp assignment.  |
| C2           | The busy lamp assignment already exists  | BUSY LAMP    | CONFIRM       | Check assignment-<br>- if correct, press CONFIRM key. Busy lamp assignment is accepted for this equipment. All data associated with original assignment is removed.<br>- If incorrect, press BUSY LAMP and reenter busy lamp assignment.  |

**AUTOMATIC ROUTE SELECTION CONFIRM CODE**

R1

| Error | Applies to: | Meaning   |
|-------|-------------|---|
| C6    | Area Code   | A request has been made to delete all entries in a table. |

**TOLL CONTROL PROGRAMMING CONFIRM CODES**

R1

| Error | Applies to:                     | Meaning  |
|-------|---------------------------------|--|
| C5    | Control Plan mode<br>Table mode | An attempt was made to assign a table which is currently assigned elsewhere. Pressing the confirm key will deassign the table from wherever it was previously assigned to assign it to the specified place.  |
| C6    | Table Mode                      | A request has been made to delete all entries in a table. If CONFIRM is pressed all entries will be deassigned. The old data in the non-volatile RAM will not be destroyed until the ENTER key is pressed, and the table itself can be reprogrammed as desired before the ENTER key is used. |

TABLE 3-3  
EXTENDED PROGRAMMING ERROR CODES - TOLL CONTROL

M1

| Error | Applies to:                           | Meaning  |
|-------|---------------------------------------|--|
| E0    | All modes                             | Invalid key pressed. Consult MAP for correct procedure. System Option 292 may not be enabled.  |
| E1    | Trunk Group mode<br>Control Plan mode | Number is not within the range of the parameter being defined. Reenter parameter key defined.  |
| E2    | All modes                             | An attempt was made to leave the current mode after some parameters were changed but before ENTER or CANCEL was pressed. ENTER may be used to write the new programming information back to the non-volatile RAM, or use CANCEL to ignore all programming changes made since the last time ENTER was pressed.  |
| E3    | Control Plan mode                     | The number entered is not valid. Reenter a number which is valid.  |
| E4    | Table mode                            | The table entry code is invalid for the table programmed. This occurs in the following situation: <ol style="list-style-type: none"> <li>1. A code of more than 3 digits in the length for an 800-entry or 20-range table.</li> <li>2. A code not in the range of 200-999 for an 800-entry table.</li> <li>3. A code which already exists or a code which would be ambiguous in conjunction with the existing table entries, for a 4-entry table.</li> </ol> |
| E5    | Table mode                            | The table is full and cannot hold the entry.   |
| E7    | Configuration mode                    | Initialization is not allowed because the Tone Control card switches are not 7776 or the system is not idle.   |
| E9    | Configuration mode                    | A hardware failure was detected while clearing the extended customer non-volatile RAM.   |

TABLE 3-4  
EXTENDED PROGRAMMING ERROR CODES - SPEED CALL

R1

| Error Code | Key Involved  | Explanation   |
|------------|---------------|---|
| E1         | EQPT NUMBER   | The Equipment Number entered is outside the range of valid numbers. Check procedures and press key, then redial proper digits.  |
| E1         | ACCESS NUMBER | The Access Number entered is not the first of the 5-number group. Enter the proper Access Number.   |
| E1         | NUMBER REDIAL | An invalid Number Redial value was entered. Enter the proper redial value.  |
| E2         | All modes     | An attempt was made to leave the current mode after some parameters were changed but before ENTER or CANCEL was pressed. ENTER may be used to write the new programming information back to the non-volatile RAM, or use CANCEL to ignore all programming changes made since the last time ENTER was pressed. |
| E3         | TABLE         | The Table number entered is not allowed.  |
| E4         | ACCESS NUMBER | An attempt was made to enter an Access Number for a common-use table.   |
| E4         | NUMBER REDIAL | An attempt was made to enter a Number Redial digit for a common-use table.  |
| E5         | ACCESS NUMBER | The Access Number entered already exists for another table assigned to the same equipment number.   |
| E5         | NUMBER REDIAL | Number Redial already exists for another table assigned to the same equipment number (only 1 Number Redial attribute per user is allowed).  |
| E6         | SPEED CALL    | Speed Call feature not enabled.   |

TABLE 3-5  
EXTENDED PROGRAMMING ERROR CODES - AUTOMATIC ROUTE SELECTION

R1

| Error Code | Key Involved   | Explanation  |
|------------|--|--|
| E0         | All modes  | Invalid key pressed.   |
| E1         | Area Code Table mode<br>Office Code Table mode<br>Routing Table mode<br>Local Area mode<br>Table Quantity mode | Number is not within range.  |
| E2         | All modes  | An attempt was made to leave the current mode after parameters were changed, but before ENTER or CANCEL was pressed. |
| E3         | Office Code mode   | The Office Code table number is not valid for this configuration.  |
| E4         | Routing Table mode   | An attempt was made to enter a trunk group number that is not defined.   |
| E5         | Office Code Table mode   | The 9-entry Office Code Table is full and cannot hold the entry.   |
| E6         | Routing Table mode   | Schedule A hours and Schedule B hours are not mutually exclusive.  |
| E7         | Configuration mode   | Initialization is not allowed because the Tone Control card switches are not 7776 or the system is not idle.         |
| E9         | Configuration mode   | A hardware failure was detected while clearing the extended customer non-volatile RAM.                               |

**TABLE 3-6**  
**EXTENDED PROGRAMMING ERROR CODES - SUPERSET 4 PROGRAMMING**

R1

| Error Code | Key Involved      | Explanation  |
|------------|-------------------|--|
| E0         |                   | This error is given when entering SUPERSET 4 programming if either the SUPERSET 4's are not enabled, or the attendant attempts to use Customer Programming of SUPERSET 4 and System Option 272 is not enabled. This error is also given throughout SUPERSET 4 programming when an invalid key is pressed.  |
| E1         | PRIME KEY         | Entering a SUPERSET 4 equipment number as slot 1 (equipment numbers 001-008).  |
| E1         | PRIME KEY         | Number out-of-range error. Given in PRIME KEY mode when attempting to enter COS number, Toll Deny, Busy Lamp number, Pickup Group number, or Call Announce Port number.  |
| E3         | SET EQPT NUMBER   | Given when entering a SUPERSET 4 equipment number if the number supplied is defined within the system as something other than a SUPERSET 4. Also given if the key type supplied is not valid.  |
| E3         | PRIME KEY         | Attempting to assign an equipment number as a SUPERSET when other equipment numbers previously programmed for that slot identify the slot as other than a SUPERSET 4 Line card.  |
| E4         | SET KEY NUMBER    | Given if the key number supplied is invalid (other than 2-15).   |
| E10        | LISTED NUMBER     | Directory number was not entered when attempting to define a Prime Key.  |
| E11        | TYPE              | Type was not entered when attempting to define a Non-Prime key.  |
| E12        | LISTED NUMBER     | Directory number was not entered before defining a Non-Prime key.  |
| E13        | TRUNK EQPT NUMBER | Trunk equipment number was not entered when required when defining a Non Prime key.  |
| E20        | LISTED NUMBER     | The directory number supplied is conflicting with an existing system access code. This error is also given when attempting to add a key line appearance of a single line set. The appearance of a single line set must be multiple call.   |
| E21        | LISTED NUMBER     | The directory supplied is invalid, because it would result in mixing key line and multiple call appearances with the same directory number. This error occurs when attempting to add a Non-Prime key, and the directory number exists as either a prime with the wrong type of appearances or a primeless list of the wrong type (i.e. key line or multiple call). |

**TABLE 3-6 (CONT'D)**  
**EXTENDED PROGRAMMING ERROR CODES - SUPERSET 4 PROGRAMMING**

| Error Code | Key Involved      | Explanation   |
|------------|-------------------|---|
| E22        | PRIME KEY         | <p>This occurs when attempting to add a prime, but the directory number supplied exists, and does not exist as a primeless list.</p> <p>This error is also given if the directory number supplied (when adding a prime) does not exist, but conflicts with an existing system access code.</p>  |
| E23        | REVIEW            | <p>This is given in Review mode, when the directory number supplied does not exist, or is in conflict with an existing system access code.</p>  |
| E24        | REVIEW            | <p>This is given in Review mode, when the directory number supplied exists, but not as either a prime line access code or the access code for a primeless appearance list. This error indicates in the first three digits of the SOURCE display who the actual owner is.</p> <p>If the first idigit is 0:</p> <ul style="list-style-type: none"> <li>-000 - 135 equipment numbers 1 to 136</li> <li>-136 - 147 trunk group numbers 1 to 12</li> <li>-148 - 159 hunt group numbers 1 to 12</li> <li>-160 - 255 equipment numbers 161 to 256</li> </ul> <p>If the first digit is a 1:</p> <ul style="list-style-type: none"> <li>000 - 063 service routines 1 to 64 (features)</li> </ul> |
| E25        | LISTED NUMBER     | <p>An attempt has been made to change the DN of a prime key, but the new directory number (listed number) is in use or is in conflict with an existing access code. The new listed number for a prime key must be unique, and cannot be that of a primeless list even.</p>  |
| E26        | TRUNK EQPT NUMBER | <p>The equipment number entered (after pressing TRUNK EQPT NUMBER) is not that of a defined CO trunk or Dial In trunk. The equipment number entered here must have been defined in Standard Programming as a trunk. Also, if in Review mode, this error means that the equipment number entered (after pressing TRUNK EQPT NUMBER) has not been used for either a DTS or private line key.</p>  |
| E27        |                   | <p>The trunk is currently assigned to a DTS appearance list. An attempt has been made to use it for a private line key.</p>   |
| E28        |                   | <p>An attempt has been made to assign a port for call announce use but the port is currently programmed for another function. The call announce port must be dedicated to the call announce function.</p>   |

TABLE 3-6 (CONT'D)  
EXTENDED PROGRAMMING ERROR CODES - SUPERSET 4 PROGRAMMING

| Error Code | Key Involved         | Explanation   |
|------------|----------------------|---|
| E28        | ANNOUNCE EQPT NUMBER | Attempting to assign an equipment number as a Call Announce Port when other equipment numbers previously programmed for that slot identify the slot as other than a Line card.  |
| E30        |                      | An attempt has been made to delete a prime key (this is equivalent to deleting the set) and a Non-Prime key on the set was defined. Before a set can be deleted, all Non-Prime keys must be undefined (deleted).  |
| E31        |                      | An attempt has been made to define a Non-Prime key when the prime for the equipment number has not yet been defined (the set itself has not been defined). The prime key must be the first key defined for a set.   |
| E32        | NEW SET EQPT NUMBER  | When attempting to move a set the equipment number specified can not be moved as it is not programmed as a SUPERSET.  |
| E33        | NEW SET EQPT NUMBER  | When attempting to move a set to a new equipment number that has been programmed already.   |
| E33        | NEW SET EQPT         | Attempting move a SUPERSET to an equipment number when other equipment numbers previously programmed for that slot identify the slot as other than a SUPERSET Line card.  |
| E40        |                      | A prime key is being added, and the listed number is the same as an existing primeless list. This can normally be done, but in this case the primeless list is not idle, so the addition of the prime cannot be performed.  |
| E41        |                      | Addition of a key line appearance is attempted, but cannot be performed because the listed number is not idle. Or, addition of a DTS or private line was attempted, but cannot be performed because the trunk chosen for the key is not idle.   |
| E42        |                      | An attempt has been made to delete a prime key, but the listed number is not completely idle. Note: All multiple call appearances of a prime must be idle if the prime is to be deleted i.e. when a multiple call appearance 'somewhere' is busy it will prevent prime deletion although the prime appears idle. When this happens, use the REVIEW mode to find where all the appearances are, then delete each individually. The busy one will cause an error. |



TABLE 3-6 (CONT'D)  
EXTENDED PROGRAMMING ERROR CODES - SUPERSET 4 PROGRAMMING

| Error Code | Key Involved | Explanation  |
|------------|--------------|--|
| E43        |              | An attempt was made to delete a prime, but the set has a message waiting, and deletion is not allowed.   |
| E44        |              | An attempt was made to delete a prime, but the set has a non-zero message register, and deletion is not allowed.   |
| E45        |              | An attempt was made to delete a Non-Prime key, but the key was not idle, and deletion is not allowed. Also given when one of the Non-Prime keys is not idle when a deletion is attempted.                                  |
| E50        |              | An attempt was made to add a prime key, but 64 sets have already been defined.   |
| E51        |              | An attempt was made to add a Non-Prime which requires an internal system resource, of which all have been used. If any multiple call key, or an entire primeless key line list is deleted, one (1) resource will be freed. |
| E52        |              | An attempt was made to add a Non-Prime key which requires an internal system resource. This time, if either a complete DTS or private line list is deleted, one (1) internal resource will be freed.                       |

Special set error numbers are arranged in groups, each numerical group having a general significance. The groups are:

- E0 - E9 No special significance.
- E10 - E19 The required parameters were not entered.
- E20 - E29 There are incompatibilities with the data base values and the parameter values being entered to define or change a key.
- E30 - E39 There are prerequisites to the operation being attempted which have not been satisfied.
- E40 - E49 The desired operation cannot be performed due to system activity involving the set or key selected.
- E50 - E59 The desired operation cannot be performed due to internal system limitations.

**Note:** An E5 error will be given when entering (or moving) a SUPERSET 4 equipment number to a slot that would indicate more than 8 slots programmed.

**TABLE 3-7  
ATTENDANT FUNCTION ACCESS CODES**

R3

These codes assume the use of \* as the Attendant Function code (Feature Number 18). For Attendant Function codes used in Traffic Measurement see Section MITL9105/9110-096-450-NA.

To cancel all call forwarding:

- a) Dial \*1, or \*11
- b) Dial #
- c) Press RELEASE button

To access an individual trunk:

- a) Dial \*20
- b) Dial individual trunk access number (equipment number)
- c) Dial \*
- d) Press RELEASE button

To force-release an individual trunk:

- a) Dial \*20
- b) Dial individual trunk access number (equipment number)
- c) Dial # #
- d) Press RELEASE button

To make flexible night service assignments (Note 3):

- a) Dial \*3
- b) Dial individual trunk access number (equipment number)
- c) Press NIGHT 1 or NIGHT 2
- d) Dial extension number
- e) Press RELEASE button

To cancel all system callbacks:

- a) Dial \*4
- b) Dial #
- c) Press RELEASE button

To set the clock time:

- a) Dial \*5
- b) Dial time (2-digit hour plus 2-digit minutes plus 2-digit year)
- c) Dial \* for p.m., otherwise a.m.
- d) Press RELEASE button

To make trunk group attendant access only:

- a) Dial \*6
- b) Dial trunk group (1 through 10)
- c) Dial \*
- d) Press RELEASE button

To make trunk group extension and attendant access:

- a) Dial \*6
- b) Dial trunk group (1 through 10)
- c) Dial #
- d) Press RELEASE button

To change the Direct Inward System Access Code:

- a) Dial \*7
- b) Dial DISA code
- c) Press RELEASE button

To cancel a minor alarm (Note 1):

- a) Dial \*8
- b) Dial #
- c) Press RELEASE button

To busy out an individual trunk (Note 3):

- a) Dial \*9
- b) Dial individual access number (equipment number)
- c) Dial \*
- d) Press RELEASE button

To de-busy an individual trunk (Note 3):

- a) Dial \*9
- b) Dial individual trunk access number (equipment number)
- c) Dial #
- d) Press RELEASE button

To change the status of all occupied clean rooms to occupied and needs cleaning:

- a) Dial \*10
- b) Dial \*
- c) Press RELEASE button

To change the status of all occupied rooms in the need of cleaning to occupied clean:

- a) Dial \*10
- b) Dial #
- c) Press RELEASE button

**TABLE 3-7 (CONT'D)  
ATTENDANT FUNCTION ACCESS CODES**

**To set up call forwarding:**

- a) Dial \*11nnn, where nnn is the extension number of the forwarding extension
- b) Dial call forwarding code (1-4)
- c) Dial mmm, where mmm is the number to which the calls are to be forwarded
- d) Press RELEASE button

**To cancel call forwarding for an extension:**

- a) Dial \*11nnn, where nnn is the extension number of the forwarding extension
- b) Dial #
- c) Press RELEASE button

**To display call forwarding set for an extension:**

- a) Dial \*11nnn, where nnn is the extension number of the forwarding extension
- b) Press RELEASE button

**To cancel all call forwarding:**

- a) Dial \*1# or \*11#
- b) Press RELEASE button

**To busy out an extension (Note 3):**

- a) Dial \*12nnn, where nnn is the number of the extension to be busy out
- b) Dial \*
- c) Press RELEASE button

**To de-busy an extension (Note 3):**

- a) Dial \*12nnn, where nnn is the number of the extension to be de-busy
- b) Dial #
- c) Press RELEASE button

**To suspend the printer (Note 3):**

- a) Dial \*14\*
- b) Press RELEASE button

**To purge and ignore the printer (Note 3):**

- a) Dial \*14 00
- b) Press RELEASE button

**To enable the printer (Note 3):**

- a) Dial \*14 #
- b) Press RELEASE button

**To change the date:**

- a) Dial \*15 and 3- or 4-digit date (1- or 2-digit month, 2-digit day)
- b) Press RELEASE button

**To print the room register audit (Notes 2 & 3):**

- a) Dial \*16
- b) Press RELEASE button

**To change the system identity (Note 3):**

- a) Dial \*17nnn (1- to 3-digit ID, 0-999)
- b) Press RELEASE button

**To display current system identity:**

- a) Dial \*17
- b) Press RELEASE button

**To print the "room status" audit (Note 2):**

- a) Dial \*18
- b) Press RELEASE button

**To print stored customer data (Note 4):**

- a) Dial \*19 + n, where n is:
  - 0 A complete print (Note 5)
  - 1 System Options, Feature Access Codes, Classes of Service, Hunt Groups and Extensions
  - 2 Trunk and Trunk Group Data
  - 3 Special Set Data
  - 4 Toll Control Data
  - 5 Speed Call Data
  - 6 Automatic Route Selection Data
  - \* System-Wide Data (Note 6)
- b) Press RELEASE button

**TABLE 3-7 (CONT'D)  
ATTENDANT FUNCTION ACCESS CODES**

- |              |  |
|--------------|--|
| <b>Notes</b> | <ol style="list-style-type: none"> <li>1. The errors will be sequentially stacked in the memory and may be recalled sequentially (most recent first) by repeating the above procedure.</li> <li>2. Printer starts after RELEASE button is pressed.</li> <li>3. Requires system option programming.</li> <li>4. The customer must have programming access to the features in order to request a printout.</li> <li>5. This prints all sections provided the customer has programming access to the features.</li> <li>6. This will print only the system-wide speed call tables and the system special set messages.</li> </ol> |
|--------------|--|

**TABLE 3-8**  
**MAINTENANCE FUNCTION ACCESS CODES**

R3

To select any of the functions, the access code assigned for the maintenance function must be dialed (Feature Number 19). The code 555 is used in the following part for the maintenance code. This may be dialed from the test line or console.

Clear all errors:

- a) Dial 555 + 1

Direct trunk or station access:

- a) Dial 555 + 20  
b) Dial individual equipment number (3-digit equipment number for trunk or station)

Busy out of a receiver

- a) Dial 555 + 3  
b) Dial equipment number of receiver

Busy out of a speech path:

- a) Dial 555 + 33  
b) Dial speech path number (01-31)

De-busy a receiver

- a) Dial 555 + 4  
b) Dial equipment number of receiver

De-busy a speech path:

- a) Dial 555 + 43  
b) Dial speech path number (01-31)

Initialize card slot:

- a) Dial 555 + 5  
b) Dial card slot number (01-17, 31-42)

System reset (Notes 2 and 3):

- a) Dial 555 + 6

To initiate system dump (from test line):

- a) Dial 555 + 7 and hang up  
b) Go off-hook  
c) Dial 555 + 8 + # (or 2)

To initiate system dump (from console)

- a) Dial 555 + 7  
b) Dial \*14#  
c) Press RELEASE button

To suspend printer (Note 3):

- a) Dial 555 + 8 + \* (or 1), or  
b) Dial \*14\* console only

To enable printer (Note 3):

- a) Dial 555 + 8 + \* (or 2), test line  
b) Dial \*14# console only  
c) Press RELEASE button

To purge and ignore printer (Note 3):

- a) Dial 555 + 8 + 00, test line  
b) Dial \*1400 console only  
c) Press RELEASE button

To print stored Customer Data:

- a) Dial 555 + 9 + n, where n is:
- 0 A complete print (Note 4)
  - 1 System Options, Feature Access Codes, Classes of Service, Hunt Groups and Extensions
  - 2 Trunk and Trunk Group Data
  - 3 Special Set Data
  - 4 Toll Control Data
  - 5 Speed Call Data
  - 6 Automatic Route Selection Data
  - \* System-Wide Data (Note 5)
- b) Press RELEASE button

- Note:**
1. For Traffic Measurement Access Codes see MITL9105/9110-096-450-NA.
  2. The thumbwheel switches on the Tone Control card should be set to XXYX, where X = any digit 0 - 9 and Y cannot be the digit 7.
  3. Requires System Option Programming.
  4. This prints all sections.
  5. This will print only the system-wide speed call tables and the system special set messages.

**TABLE 3-9  
SYSTEM TIME-OUT INFORMATION**

R1

| Description                                  | Time-Out   |
|--|--|
| Attendant Timed Recall (Don't Answer)        | 10 s, 20 s, 30 s, or 40 s                        |
| Attendant Timed Recall (Camp-On)             | 20 s, 30 s, or 40 s                              |
| Attendant Timed Recall (Hold)                | 20 s, 30 s, or 40 s                              |
| Automatic Night Switching                    | 20 s, 30 s, or 40 s                              |
| Dial Tone Time-Out                           | 15 s   |
| Interdigit Time-Out (Extensions)             | 15 s   |
| Interdigit Time-Out (Trunks)                 | 10 s   |
| Lockout Time-Out                             | 45 s   |
| Callback Clear Time-Out                      | 8 hours  |
| Callback Don't Answer Reset                  | 6 rings  |
| Call Park Recall                             | 2, 3 or 4 minutes                                |
| Call Hold Recall                             | 2, 3 or 4 minutes                                |
| Call Forwarding - Don't Answer Time-Out      | 10 s, 20 s, 30 s, or 40 s                        |
| Call Forwarding Busy - Don't Answer Time-Out | 10 s, 20 s, 30 s, or 40 s                        |
| Switchhook Flash                             | Min. 200 ms<br>Max. 0.7 s, 0.9 s, 1.1 s or 1.5 s |
| Ringing Time-Out                             | 5 minutes, 1 minute programmable                 |
| Automatic Wake-Up Ringing                    | 6 rings, 3 s each                                |
| Automatic Wake-Up Attempts                   | 3 at 5 minute Intervals                          |

## APPENDIX 1

### MITEL ACTION PROCEDURES

#### GENERAL

**A1.01** Task-oriented functions in this Section are implemented using MITEL Action Procedures (MAP's).

**A1.02** A MAP is a step-by-step procedure using a flow chart principle, written and illustrated where necessary to a level of detail that allows both experienced and inexperienced personnel to carry out the tasks detailed. A MAP contains two levels of information as follows:

- (a) For experienced personnel, a series of steps (level one) each numbered (n) and annotated with minimal information.
- (b) For inexperienced personnel, each step referred to in (a) above is amplified by a connected series of numbered sub-steps (nA) (level two).

**A1.03** A typical example of a MAP is shown in Fig. A1-1, with the two levels detailed.

#### MAP SYMBOLS

**A1.04** There are four basic symbol shapes which may be used in a MAP, and are defined as follows.

**A1.05 AND Block:** Used to indicate a level one step that must be performed. Consists of a square with the word AND centered in the block.

**A1.06 OR Block:** Used to indicate a choice of level one steps, one of which must be performed. Consists of a rectangle, with the text centered in the block, and the word OR appearing between the alternative operations.

**A1.07** The rectangle is also used to border instructions which imply that the operator must perform a task outside the scope of the MAP. The text is centered in the rectangle.

**A1.08 DECISION Block:** Used to indicate a decision within the level one steps which must be made. The symbol is based on a hexagon with the top and bottom sides extended. Decision text is centered in the symbol.

**A1.09 START/FINISH/JUMP TO Block:** Used to indicate the start and finish of a MAP. Also used to indicate "jump to" points within the MAP, for example "go to (n)" or "from (n)" or "return to (n)". The symbol is a rectangle with semicircular ends. Text is centered in the symbol.

#### THE OPERATOR'S USE OF MAP'S

##### Experienced Operator

**A1.10** For the experienced operator to complete a task using a MAP, reference to the sequential short form level one step is usually all that is necessary. Using Fig. A1-1 as an example, the experienced operator would proceed as follows.

**A1.11** At (1) the operator makes a decision based on the information within the block. If the answer is YES, the operator must proceed to a different MAP. If the answer is NO, the operator is faced with another decision at block (2).

**A1.12** At (2) if the decision is NO, there is no requirement to proceed further and the test is abandoned. This naturally results in a FINISH block. If the decision is YES, the operator proceeds to (3) and (4) in succession, i.e. dials the DID station number and completes the call to the check extension.

|                           |
|---------------------------|
| INSTALL EQUIPMENT CABINET |
| MAP200-002                |
| Issue 1, December 1981    |
| Sheet 1 of 5              |

|   |
|---|
| TOOLS REQUIRED  |
| Screwdriver   |
| Backboard (optional) Minimum size<br>23 1/2 in. 1595 mm) X 15.5 in. (420<br>mm) |
| 4 - Mounting screws (Shank 0.25<br>in., length 1.5 in. min)                     |

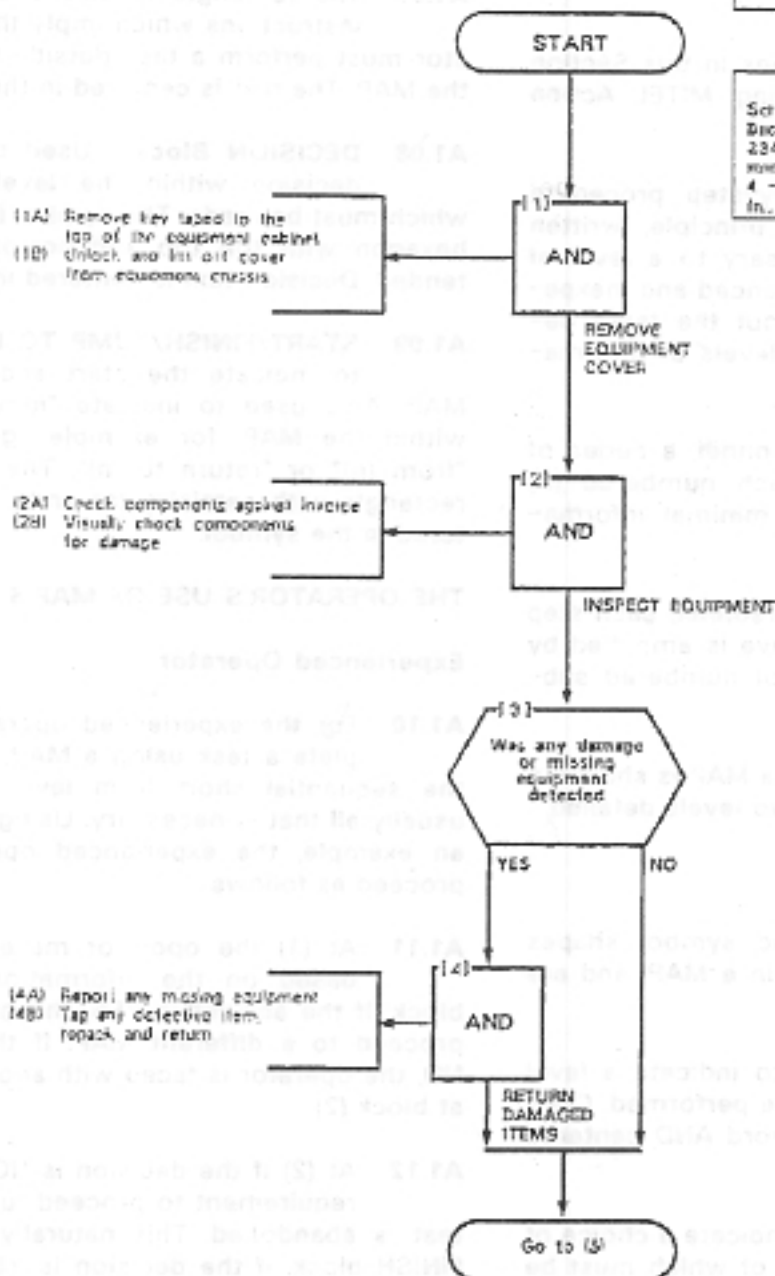


Fig. A1-1 Typical MAP Page



## APPENDIX 2

### SYSTEM PROGRAMMING PROCEDURES

#### GENERAL

**A2.01** This Appendix details the preferred order in which the SX-100 or SX-200 PABX should be programmed for features and options required by the customer. This Appendix also includes procedures for programming Multi-Digit Toll Control, Speed Call and Automatic Route Selection.

**A2.02** Table A2-1 details the order of the standard system programming procedures. Table A2-2 details the order of the Multi-Digit Toll Control programming procedures. Table A2-3 details the order of Speed Call programming of the system. Table A2-4 details the order of Route Selection programming of the system. Table A2-5 lists all SUPERSET 4 programming MAP's.

**TABLE A2-1  
 STANDARD PROGRAMMING**

| Step | Title                                 | MAP     |
|------|---------------------------------------|---------|
| 1    | System Programming                    | 210-201 |
| 2    | Select Programming Options            | 210-202 |
| 3    | Program System Options                | 210-203 |
| 4    | Program COS Options                   | 210-204 |
| 5    | Assign Feature Access Codes           | 210-205 |
| 6    | Program Extensions                    | 210-206 |
| 7    | Program Extension Hunt Groups         | 210-207 |
| 8    | Program Non-Dial-In Trunks            | 210-208 |
| 9    | Program Dial-In Trunks                | 210-209 |
| 10   | Program DID Trunks                    | 210-210 |
| 11   | Program Trunk Groups                  | 210-211 |
| 12   | Range Programming for Extensions      | 210-212 |
| 13   | Terminating Standard Programming Mode | 210-213 |

**TABLE A2-2  
 MULTI-DIGIT TOLL CONTROL**

| Order | Option                            | MAP No. |
|-------|-----------------------------------|---------|
| 1     | Selection of Extended Programming | 210-221 |
| 2     | Absorb Plan                       | 210-222 |
| 3     | Control Plan                      | 210-223 |
| 4     | Trunk Group Class of Restriction  | 210-224 |
| 5     | Restriction Tables                | 210-225 |
| 6     | Add an Entry                      | 210-226 |
| 7     | Displaying Sequential Entries     | 210-227 |
| 8     | Search for an Entry               | 210-228 |
| 9     | Delete an Entry                   | 210-229 |
| 10    | Terminating Programming           | 210-284 |

TABLE A2-3  
SPEED CALL

| Order | Option                                    | MAP No. |
|-------|---|---------|
| 1     | Selection of Extended Programming         | 210-221 |
| 2     | Programming Personal Tables               | 210-242 |
| 3     | Convert Table from Personal to Common Use | 210-243 |
| 4     | Terminating Programming                   | 210-284 |

TABLE A2-4  
AUTOMATIC ROUTE SELECTION

| Order | Option   | MAP No. |
|-------|--|---------|
| 1     | Code Table Quantity Selection or Change            | 210-250 |
| 2     | Area Code Table Programming                        | 210-251 |
| 3     | Review Area Code Table Programming                 | 210-252 |
| 4     | Delete an Area Code Table                          | 210-253 |
| 5     | Area Code/Office Code Programming                  | 210-254 |
| 6     | Review or Delete Part or All Area Code/Office Code | 210-255 |
| 7     | Program Modify Digits                              | 210-256 |
| 8     | To Review or Delete Modify Digit Tables            | 210-257 |
| 9     | Route Table Programming                            | 210-258 |
| 10    | To Review or Delete a Route Table                  | 210-259 |
| 11    | Review or Delete Routes                            | 210-260 |
| 12    | Terminate Programming                              | 210-284 |

TABLE A2-5  
SUPERSET 4 PROGRAMMING

| Order | Option                      | MAP No. |
|-------|-----------------------------|---------|
| 1     | Program a Prime Key         | 210-270 |
| 2     | Program a Non-Prime Key     | 210-271 |
| 3     | Delete a Non-Prime Key      | 210-272 |
| 4     | Delete a Prime Key          | 210-273 |
| 5     | Changing Any Key            | 210-274 |
| 6     | Moving a SUPERSET 4         | 210-275 |
| 7     | Review SUPERSET Programming | 210-276 |

The following information was obtained from the records of the Department of Health, Education and Welfare, Office of the Assistant Secretary for Health, Washington, D.C. on 1-10-1974.

The records of the Department of Health, Education and Welfare, Office of the Assistant Secretary for Health, Washington, D.C. contain information regarding the activities of the National Health Service, the National Health Insurance Program, and the National Health Care Program.

The records of the Department of Health, Education and Welfare, Office of the Assistant Secretary for Health, Washington, D.C. contain information regarding the activities of the National Health Service, the National Health Insurance Program, and the National Health Care Program.

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The records of the Department of Health, Education and Welfare, Office of the Assistant Secretary for Health, Washington, D.C. contain information regarding the activities of the National Health Service, the National Health Insurance Program, and the National Health Care Program.

A1.13 The description of the instructions, carried out in A1.05 and A1.06 have assumed the level of competence of the operator, is such that short form level one steps contain sufficient information, and therefore, the operator reads only the center column of the MAP, top to bottom of the page.

A1.14 Using Fig. A1-1 as an example, the path followed should be:

(a) At (1) and (2), make the decisions called for at these steps as before.

(b) At step (3), dial the DID station number by performing substeps (3A), (3B) and (3C).

#### TOOLS, TEST EQUIPMENT AND SPECIAL INSTRUCTIONS

A1.15 Any tools, test equipment or special instructions that the operator requires or needs to know are stated on the first page of each MAP. If the MAP is long, and contains a number of sub procedures, these are listed in synopsis form on the first page.

**Button Definition**

**A2.03** For a description of buttons in each programming mode consult Table A2-6.

**TABLE A2-6  
BUTTON DESCRIPTIONS**

| Feature                   | Practice   |
|---------------------------|--|
| Standard Programming      | MITL9105/9110-096-315-NA                             |
| Multi Digit Toll Control  | MITL9105/9110-096-315-NA<br>MITL9105/9110-096-212-NA |
| Speed Call                | MITL9105/9110-096-315-NA<br>MITL9105/9110-096-220-NA |
| Automatic Route Selection | MITL9105/9110-096-315-NA<br>MITL9105/9110-096-213-NA |
| SUPERSET 4                | MITL9105/9110-096-315-NA                             |

**Programming Overlays**

**A2.04** The appropriate programming overlay must be used to program each feature. To ensure using the correct overlay see Table A2-7.

**TABLE A2-7  
PROGRAMMING OVERLAYS**

| Feature                   | Refer to Figure |
|---------------------------|-----------------|
| Standard Programming      | Fig. A2-1       |
| Multi Digit Toll Control  | Fig. A2-2       |
| Speed Call                | Fig. A2-2       |
| Automatic Route Selection | Fig. A2-3       |
| SUPERSET 4                | Fig. A2-4       |

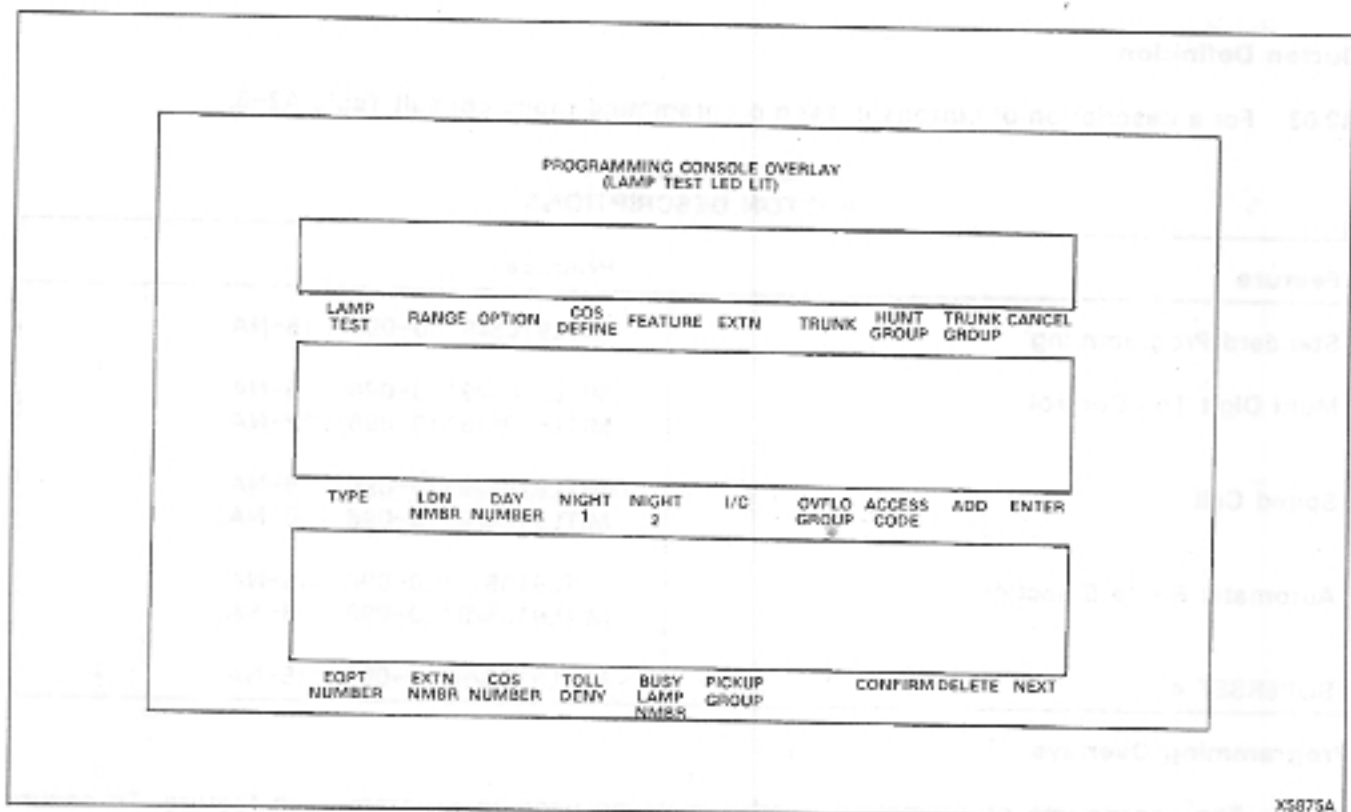


Fig. A2-1 Standard Programming Overlay

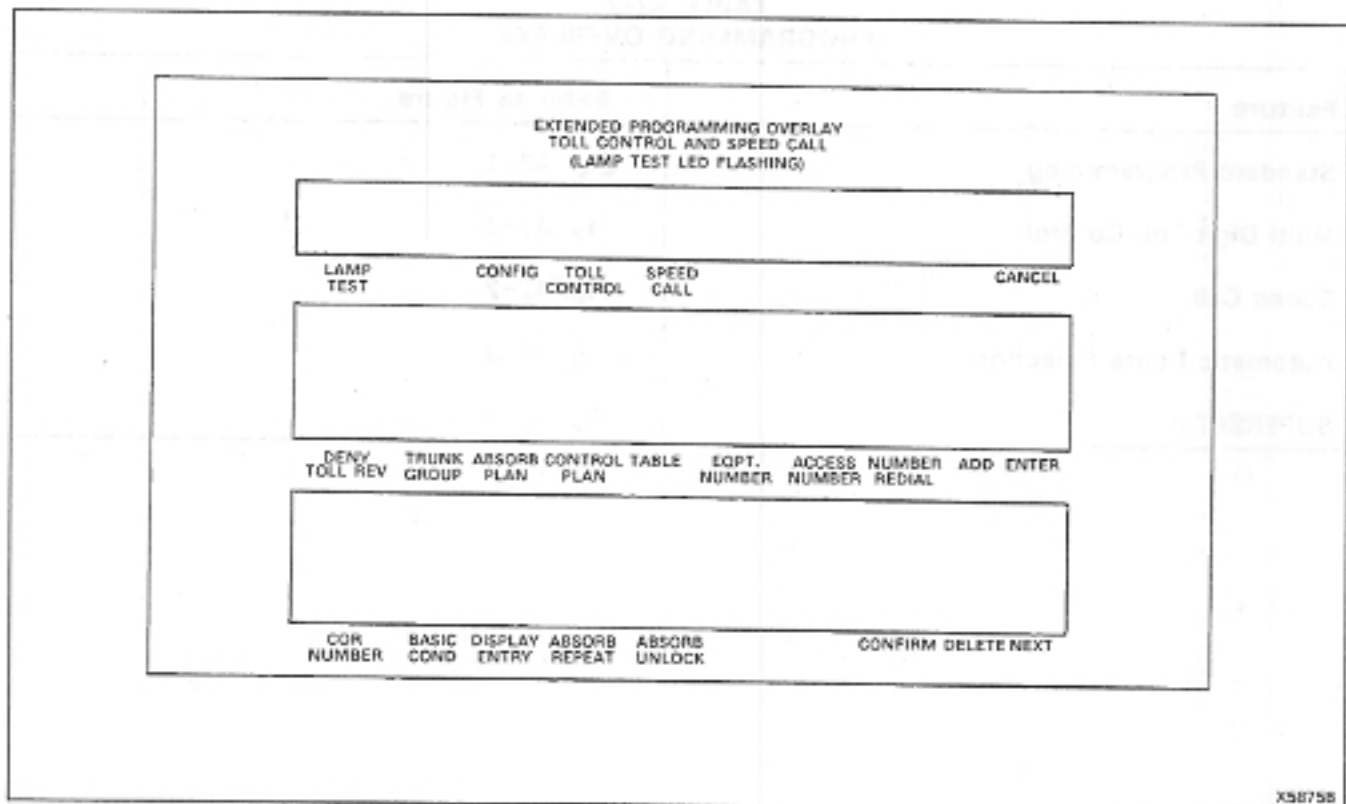


Fig. A2-2 Extended Programming Overlay

EXTENDED PROGRAMMING OVERLAY  
AUTOMATIC ROUTE SELECTION  
(LAMP TEST LED FLASHING)

|               |            |             |               |               |            |            |         |        |       |
|---------------|------------|-------------|---------------|---------------|------------|------------|---------|--------|-------|
|               |            |             |               |               |            |            |         |        |       |
| LAMP TEST     | CONFIG     | ARS         | CANCEL        |               |            |            |         |        |       |
|               |            |             |               |               |            |            |         |        |       |
| TABLE QTY     | CODE TABLE | AREA CODE   | ROUTE TABLE   | OFFICE CODE   | SCHED A    | SCHED B    | SCHED C | ADD    | ENTER |
|               |            |             |               |               |            |            |         |        |       |
| CHDICE NUMBER | ROUTE NMBR | TRUNK GROUP | MODIFY DIGITS | DIGITS DELETE | DIGITS ADD | LOCAL AREA | CONFIRM | DELETE | NEXT  |

X5875C

Fig. A2-3 ARS Overlay

SUPERSET 4 PROGRAMMING OVERLAY  
(LAMP TEST LED FLASHING)

|                 |             |                |                   |                     |              |                 |         |        |       |
|-----------------|-------------|----------------|-------------------|---------------------|--------------|-----------------|---------|--------|-------|
|                 |             |                |                   |                     |              |                 |         |        |       |
| LAMP TEST       | SUPER SET   |                |                   |                     |              | CANCEL          |         |        |       |
|                 |             |                |                   |                     |              |                 |         |        |       |
| SET EQPT NUMBER | PRIME KEY   | SET KEY NUMBER | TRUNK EQPT NUMBER | NEW SET EQPT NUMBER |              |                 | REVIEW  | ADD    | ENTER |
|                 |             |                |                   |                     |              |                 |         |        |       |
| TYPE            | LISTED NMBR | COS NUMBER     | TOLL DENY         | BUSY LAMP NMBR      | PICKUP GROUP | ANNOUNCE EQPT # | CONFIRM | DELETE | NEXT  |

X5875D

Fig. A2-4 SUPERSET 4 Overlay



FIGURE 1 - PLAN VIEW



FIGURE 2 - PLAN VIEW

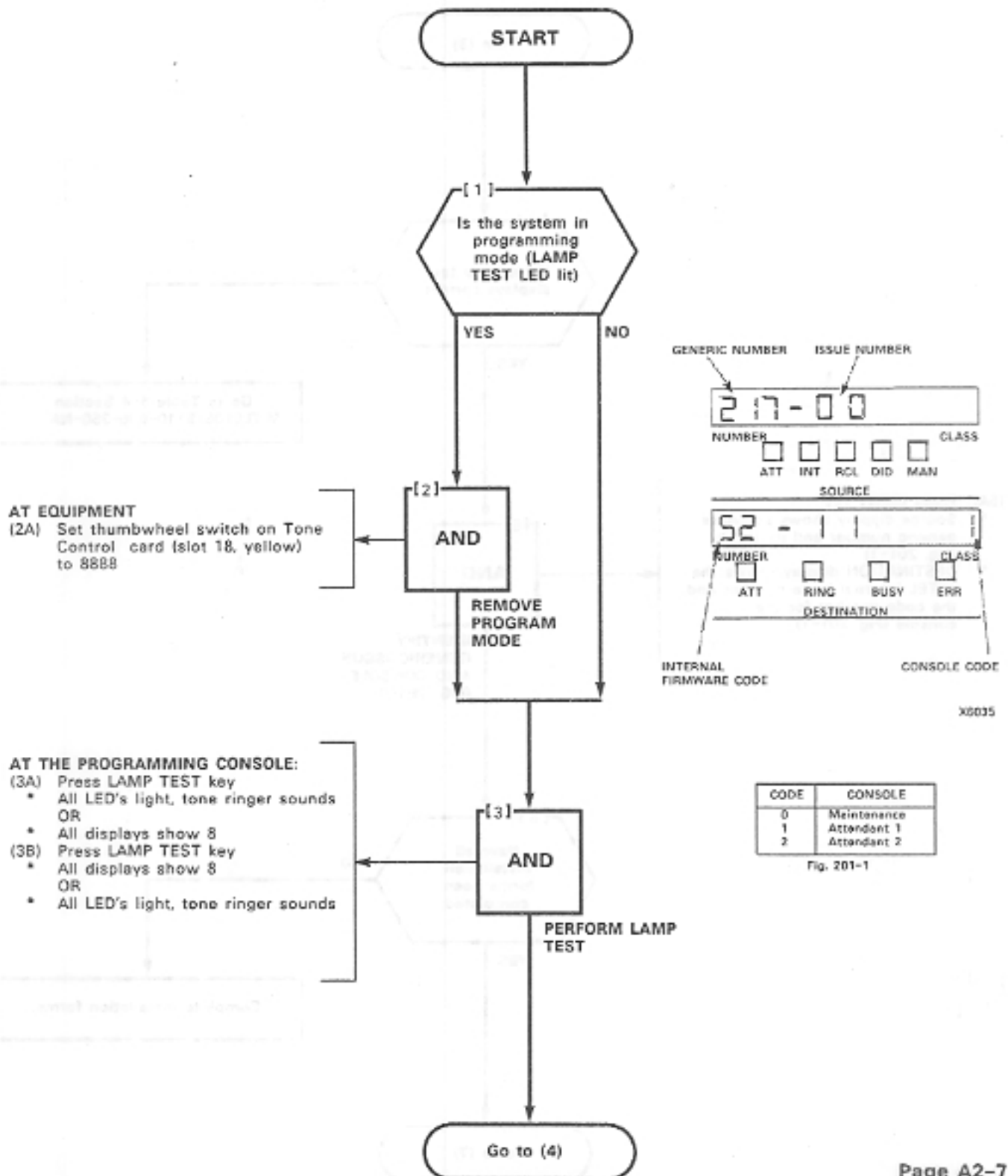


## SYSTEM PROGRAMMING

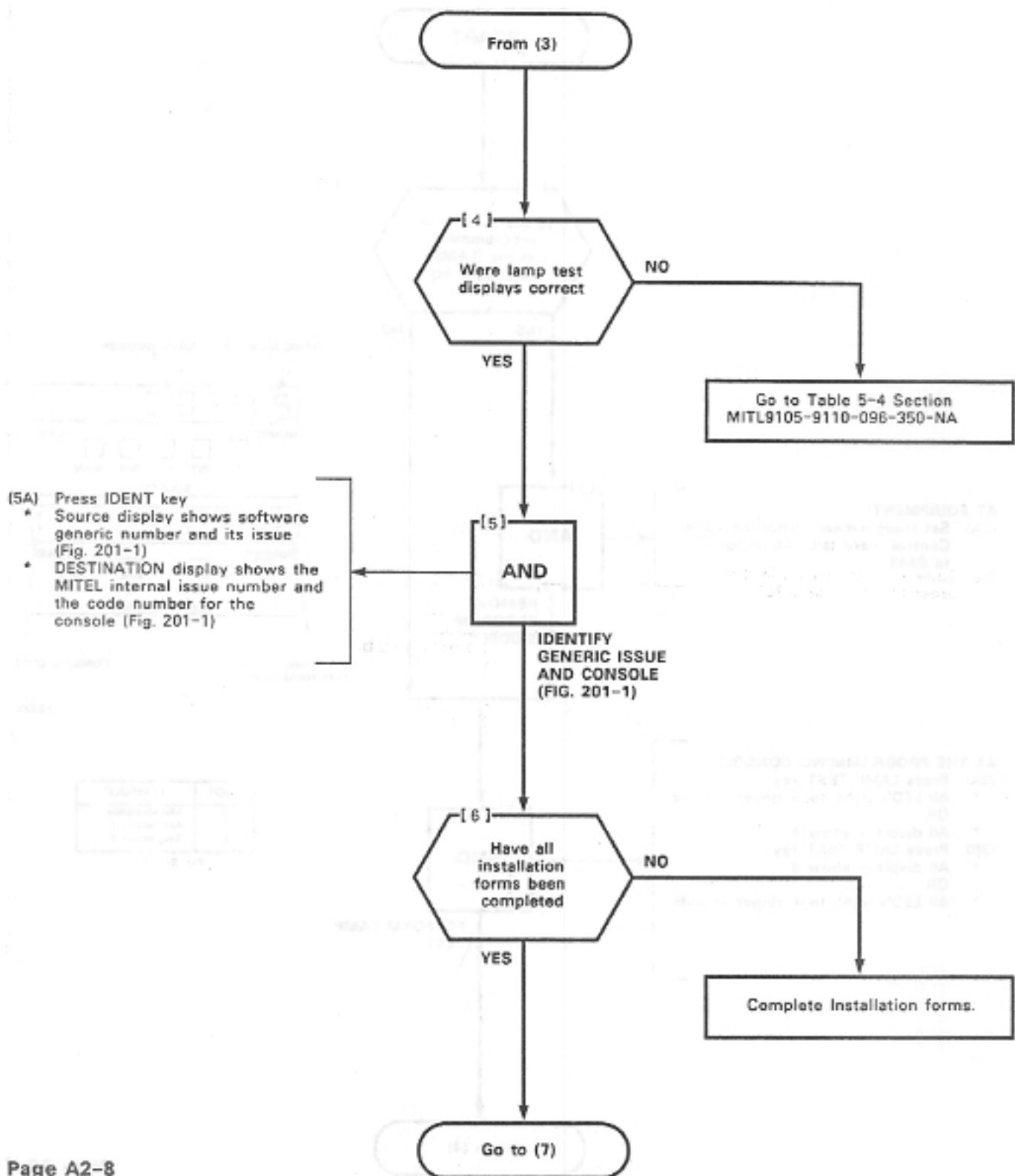
MAP210-201

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Sheet 1 of 4



|                        |
|------------------------|
| SYSTEM PROGRAMMING     |
| MAP210- 201            |
| Issue 1, December 1982 |
| Sheet 2 of 4           |

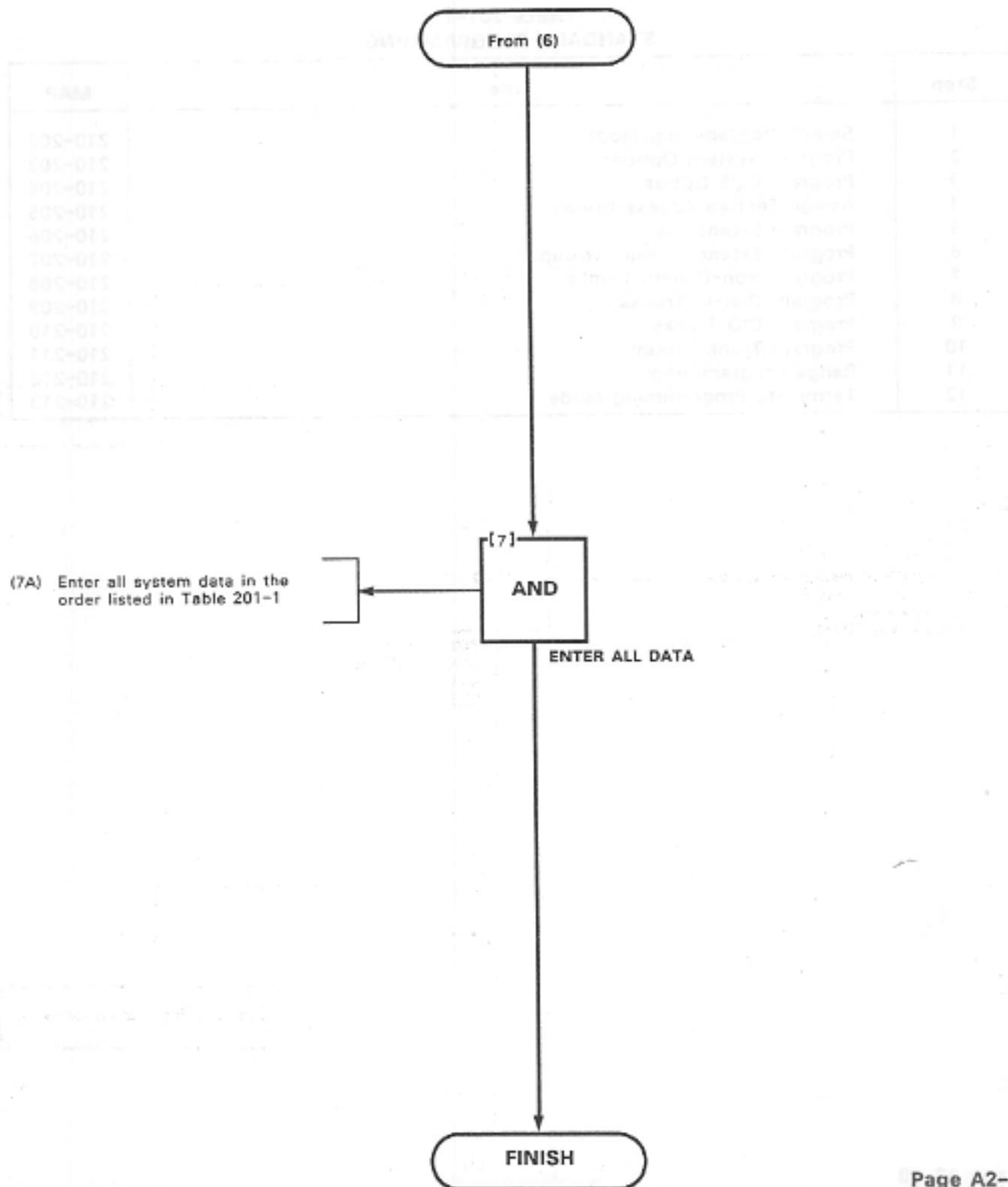


SYSTEM PROGRAMMING

MAP210-201

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Sheet 3 of 4



|                        |
|------------------------|
| SYSTEM PROGRAMMING     |
| MAP210- 201            |
| Issue 1, December 1982 |
| Sheet 4 of 4           |

TABLE 201-1  
STANDARD PROGRAMMING

| Step | Title                         | MAP     |
|------|-------------------------------|---------|
| 1    | Select Programming Mode       | 210-202 |
| 2    | Program System Options        | 210-203 |
| 3    | Program COS Optios            | 210-204 |
| 4    | Assign Feature Access Codes   | 210-205 |
| 5    | Program Extensions            | 210-206 |
| 6    | Program Extension Hunt Groups | 210-207 |
| 7    | Program Non-Dial-In Trunks    | 210-208 |
| 8    | Program Dial-In Trunks        | 210-209 |
| 9    | Program DID Trunks            | 210-210 |
| 10   | Program Trunk Groups          | 210-211 |
| 11   | Range Programming             | 210-212 |
| 12   | Terminate Programming Mode    | 210-213 |

SELECT PROGRAMMING MODE

MAP210-202

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Sheet 1 of 3

**CAUTION**

Equipment must be in nonprogram mode at start. See MAP210-201 Step (2).

**NOTE**

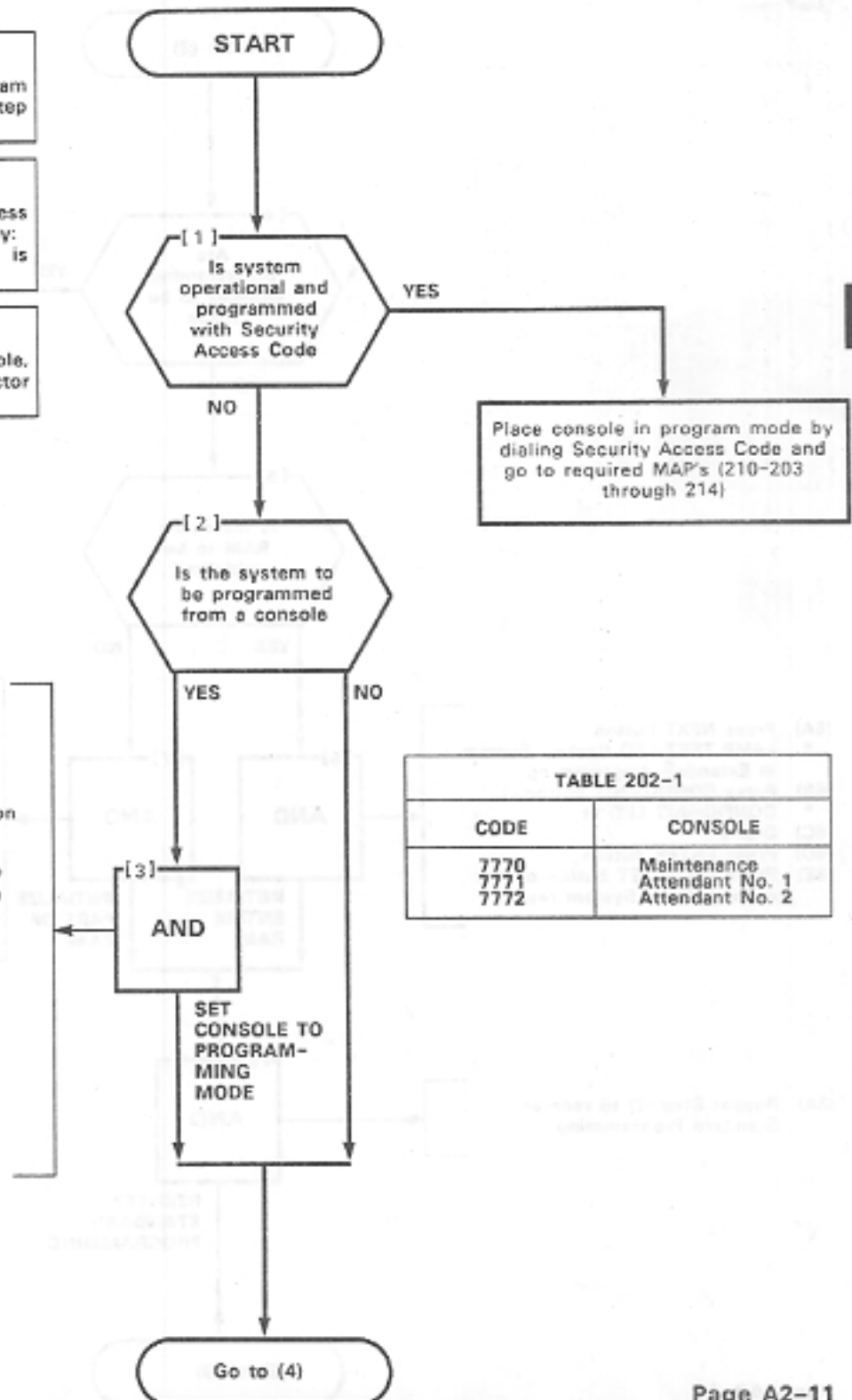
To use Programming Security Access Code the following criteria must apply: Feature 29 (MAP210-205) is programmed with the code

**NOTE**

When using the Maintenance console, plug it in to the maintenance connector on the cabinet maintenance panel.

**PLACE CONSOLE IN PROGRAMMING MODE**

- (3A) Place programming console overlay over console faceplate  
 (3B) Set thumbwheel switches on Tone Control card (card position 18, yellow) to appropriate position (Table 202-1)  
 (3C) Press LAMP TEST button LAMP TEST lamp lit. The second LED on the RAM-COS card will be lit for the duration of programming. If the system is not idle an E7 error will be presented

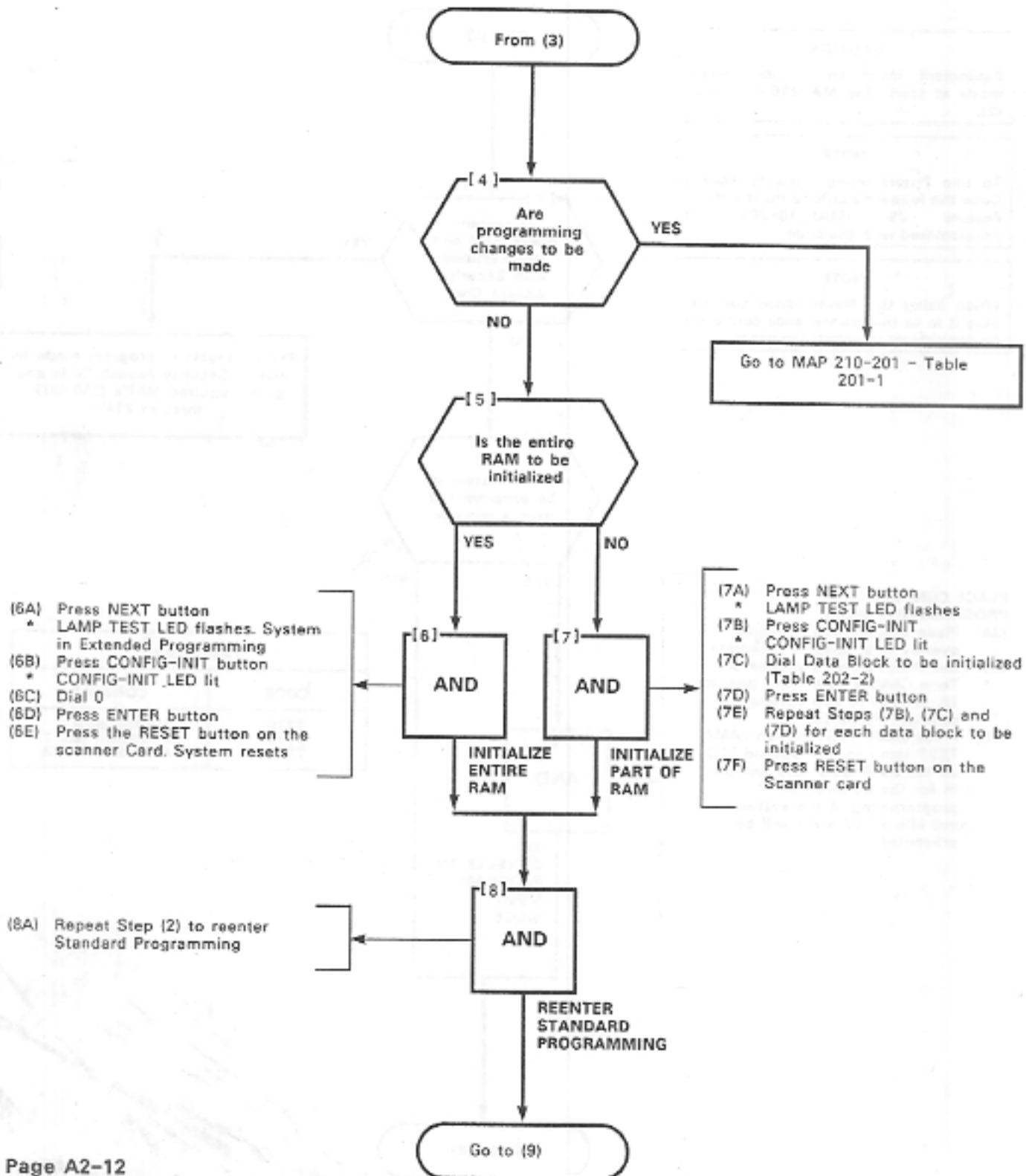


Place console in program mode by dialing Security Access Code and go to required MAP's (210-203 through 214)

TABLE 202-1

| CODE | CONSOLE         |
|------|-----------------|
| 7770 | Maintenance     |
| 7771 | Attendant No. 1 |
| 7772 | Attendant No. 2 |

|                         |
|-------------------------|
| SELECT PROGRAMMING MODE |
| MAP210- 202             |
| Issue 1, December 1982  |
| Sheet 2 of 3            |



SELECT PROGRAMMING MODE

MAP210-202

Issue 1, December 1982

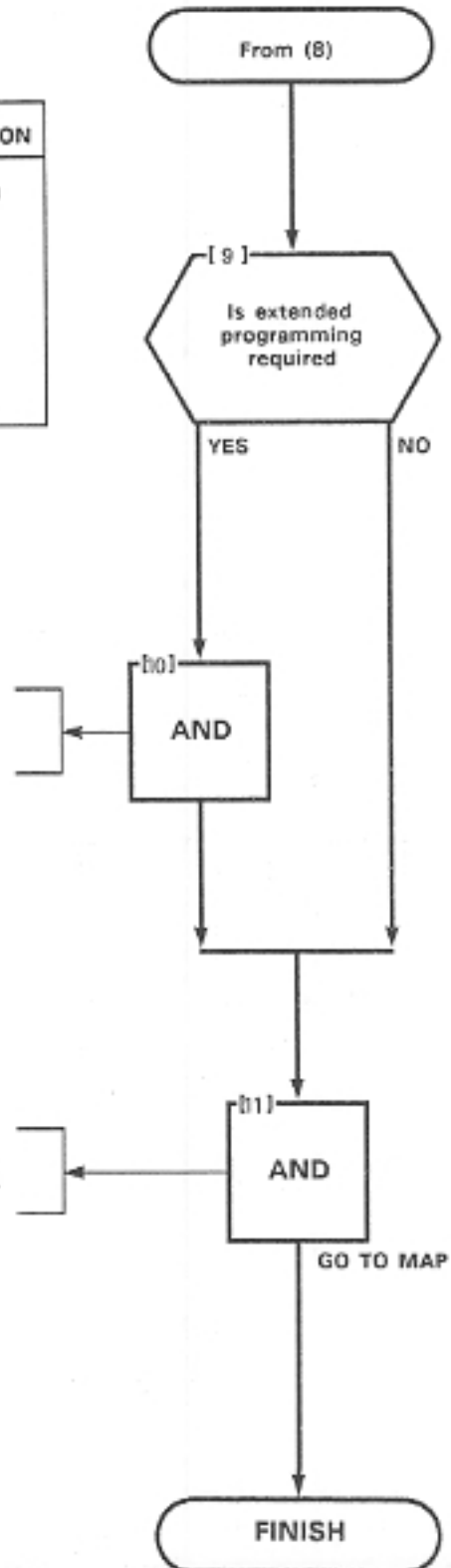
Sheet 3 of 3

TABLE 202-2

| NUMBER | DATA BLOCK INFORMATION                           |
|--------|--|
| 1      | All Standard Programming and Customer Data       |
| 3      | ARS  |
| 4      | Toll Control                                     |
| 5      | Station Information (Msge/Register, Room Status) |
| 6      | Alarm Call                                       |
| 7      | System Speed Call                                |
| 8      | SUPERSET Speed Call                              |

(10A) Press the NEXT button  
\* LAMP TEST LED flashes

(11A) Go to relevant programming  
MAP's as per paragraph A2.02.



|                         |
|-------------------------|
| PROJECT AND DRAWING NO. |
| DATE                    |
| SCALE                   |
| BY                      |



TABLE NO. 1

| NO. | DESCRIPTION          |
|-----|----------------------|
| 1   | Start                |
| 2   | Is the data correct? |
| 3   | Data is correct?     |
| 4   | End                  |

DATE: 10/10/10

BY: [Signature]



## PROGRAM SYSTEM OPTIONS

MAP210-203

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Sheet 1 of 8

## NOTES

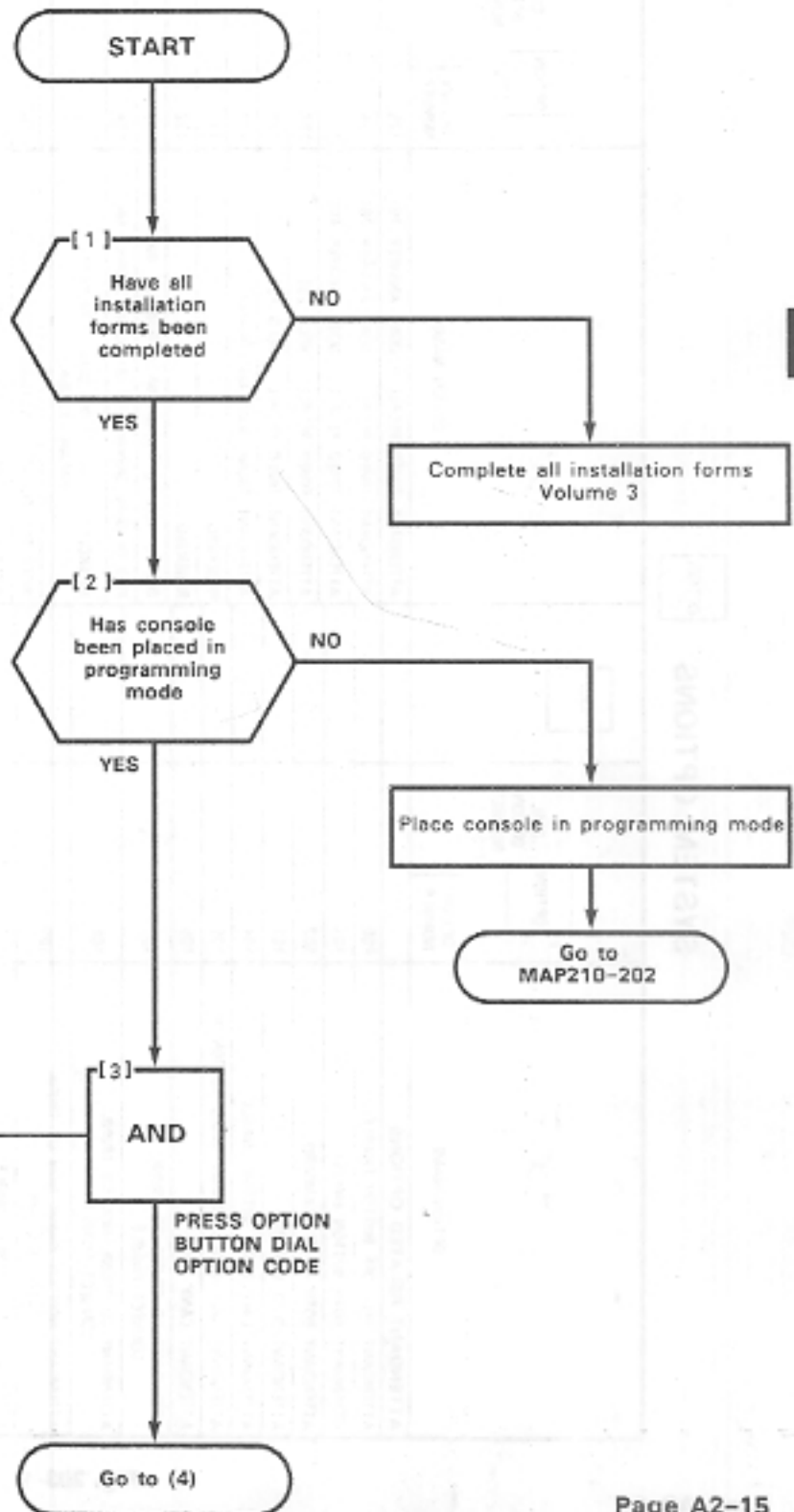
- (1) All entries are made from the console dial pad.  
 (2) OPTION lamp lit throughout procedure.  
 (3) A display of E0 indicates that an incorrect key had been pressed. Press the button specified.

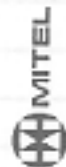
## SYNOPSIS

Select option mode.  
 Enter required system codes. (100-339)  
 Press ADD or DELETE buttons.  
 Press ENTER button.

## SELECT SYSTEM OPTION

- (3A) Press OPTION button  
 \* OPTION lamp lit  
 \* SOURCE display shows 100 and 0 if no options enabled, or the number of the first option enabled and 1.  
 (3B) Dial option number required (100-393) (Fig. 203-1).  
 \* SOURCE display shows number dialed and 1 if the option enabled or 0 if the option is not enabled





## SYSTEM OPTIONS

| OPTION NUMBER | OPTION NAME  | DIAL OPTION NUMBER (1100-335) | OPTION NUMBER | OPTION NAME  | DIAL OPTION NUMBER (100-330) | ADD |
|---------------|--|-------------------------------|---------------|--|------------------------------|-----|
|               | ATTENDANT RELATED OPTIONS                            |                               |               |  |                              | ADD |
| 100           | ATTENDANT BELL OFF BUTTON ENABLE                     |                               | 100           | ATTENDANT TIMED RECALL - DONT ANSWER 10S           | 125                          |     |
| 101           | ATTENDANT BOTH BUTTON ENABLE                         |                               | 101           | ATTENDANT TIMED RECALL - DONT ANSWER 20S           | 126                          |     |
| 102           | ATTENDANT BOTH MODE STANDARD                         |                               | 102           | ATTENDANT TIMED RECALL - DONT ANSWER 40S           | 127                          |     |
| 103           | ATTENDANT BUSY OVERRIDE                              |                               | 103           | ATTENDANT TIMED RECALL - HOLD 20S                  | 128                          |     |
| 104           | ATTENDANT CALL BACK BUTTON ENABLE                    |                               | 104           | ATTENDANT TIMED RECALL - HOLD 40S                  | 129                          |     |
| 105           | ATTENDANT CALL-BLOCK ENABLE HOLD BUTTON 4I           |                               | 105           | ATTENDANT TRUNK BUSY OUT ENABLE                    | 130                          |     |
| 106           | ATTENDANT CAMP ON                                    |                               | 106           | RESERVED   | 131                          |     |
| 107           | ATTENDANT CO TRUNK-CO TRUNK CONNECT ENABLE           |                               | 107           | RESERVED   | 132                          |     |
| 108           | ATTENDANT CO TRUNK-NON CO TRUNK CONNECT ENABLE       |                               | 108           | CO TO NON-CO TRUNK VIA ATTENDANT INHIBIT           | 133                          |     |
| 109           | ATTENDANT NON CO TRUNK-NON CO TRUNK CONNECT ENABLE   |                               | 109           | END OF-DIAL SIGNAL FOR OUTGOING TRUNKS 1M          | 134                          |     |
| 110           | ATTENDANT CONFERENCE ENABLE                          |                               | 110           | INTERCEPT TO ATT - DID DIAL - IN CCSA VACANT/LEGAL | 135                          |     |
| 111           | ATTENDANT DISA CODE SET-UP ENABLE                    |                               | 111           | INTERCEPT TO ATT - ILLEGAL ACCESS                  | 136                          |     |
| 112           | ATTENDANT DO NOT DISTURB AND MESSAGE WAITING DISPLAY |                               | 112           | INTERCEPT TO ATT - VACANT NUMBER                   | 137                          |     |
| 113           | ATTENDANT GUEST ROOM BUTTON ENABLE                   |                               | 113           | INTERCEPT TO ATT - DO NOT DISTURB                  | 138                          |     |
| 114           | RESERVED   |                               | 114           | RESERVED   | 139                          |     |
| 115           | ATTENDANT LOCK OUT ALARM ENABLE                      |                               | 115           | RESERVED   | 140                          |     |
| 116           | ATTENDANT NEW CALL TONE ENABLE                       |                               | 116           | RESERVED   | 141                          |     |
| 117           | ATTENDANT PAGE BUTTON ENABLE                         |                               | 117           | RESERVED   | 142                          |     |
| 118           | ATTENDANT PRINTER CONTROL ENABLE                     |                               | 118           | RESERVED   | 143                          |     |
| 119           | ATTENDANT ROOM STATUS BUTTON ENABLE & DISPLAY ENABLE |                               | 119           | RESERVED   | 144                          |     |
| 120           | ATTENDANT SERIAL CALL                                |                               | 120           | RESERVED   | 145                          |     |
| 121           | ATTENDANT SERIAL CALL OVERRIDE FLASH BUTTON ENABLE   |                               | 121           | RESERVED   | 146                          |     |
| 122           | ATTENDANT STATION BUSY OUT ENABLE                    |                               | 122           | RESERVED   | 147                          |     |
| 123           | ATTENDANT TIMED RECALL - CAMP ON 20S.                |                               | 123           | RESERVED   | 148                          |     |
| 124           | ATTENDANT TIMED RECALL - CAMP ON 40S                 |                               | 124           | RESERVED   | 149                          |     |
|               |  |                               |               | SYSTEM RELATED OPTIONS                             |                              |     |
|               |  |                               |               | 24 HOUR CLOCK                                      | 150                          |     |
|               |  |                               |               | DATA DEMULTIPLEX ENABLE                            | 151                          |     |
|               |  |                               |               | RESERVED   | 152                          |     |

Fig. 203-1



## SYSTEM OPTIONS

OPTION

| OPTION NUMBER           | OPTION NAME                               | OPTION NUMBER | OPTION NAME  | OPTION NUMBER | DIAL OPTION NUMBER (100-339) |
|-------------------------|---|---------------|--|---------------|------------------------------|
| 153                     | DIGIT TRANSLATION PLAN 1                  | 153           | CANNOT DIAL TRUNK AFTER FLASH  | 153           |                              |
| 154                     | DIGIT TRANSLATION PLAN 2                  | 154           | CANNOT DIAL TRUNK AFTER FLASH IF HOLDING OR IN CONFERENCE WITH TRUNK | 154           |                              |
| 155                     | DIGIT TRANSLATION PLAN 3                  | 155           | DISCRIMINATING DIAL TONE   | 155           |                              |
| 156                     | FLEXIBLE NIGHT SERVICE                    | 156           | DISCRIMINATING RINGING   | 156           |                              |
| 157                     | IDENTIFIED TRUNK GROUP ENABLE             | 157           | DO NOT DISTURB ENABLE  | 157           |                              |
| 158                     | INCOMING TO OUTGOING CALL FORWARD ENABLE  | 158           | EXTENSION NON - CO TRUNK TO TRUNK CONNECT ENABLE                     | 158           |                              |
| 159                     | INHIBIT AUTOMATIC SUPERVISION             | 159           | FLASH TIMING = 3 SECONDS   | 159           |                              |
| 160                     | LIMITED WAIT FOR DIAL TONE 55             | 160           | FLASH TIMING = 3 SECONDS   | 160           |                              |
| 161                     | MUSIC ON HOLD DISABLE                     | 161           | FLASH TIMING = 1.1 SECONDS   | 161           |                              |
| 162                     | NIGHT BELL 3 WITH MIRROR ALARM ENABLE     | 162           | MESSAGE REGISTRATION ENABLE  | 162           |                              |
| 163                     | NIGHT SERVICE AUTOMATIC SWITCHING         | 163           | MESSAGE REGISTRATION COUNT ADDITIONAL SUPERVISIONS                   | 163           |                              |
| 164                     | NIGHT SERVICE TIMEOUT = 20S               | 164           | MESSAGE REGISTRATION TIMER = 20 SECONDS                              | 164           |                              |
| 165                     | NIGHT SERVICE TIMEOUT = 40S               | 165           | MESSAGE REGISTRATION TIMER = 40 SECONDS                              | 165           |                              |
| 166                     | REMOTE SYSTEM RESET - PROTECTION OVERRIDE | 166           | MESSAGE REGISTRATION MULTIPLIER = 2 UNITS                            | 166           |                              |
| 167                     | RINGING TIMEOUT 1 MINUTE                  | 167           | MESSAGE REGISTRATION MULTIPLIER = 3 UNITS                            | 167           |                              |
| 168                     | SYSTEM ID ENABLE                          | 168           | MESSAGE REGISTRATION MULTIPLIER = 4 UNITS                            | 168           |                              |
| 169                     | TRUNK RE-CALL PARTIAL INHIBIT             | 169           | MESSAGE REGISTRATION SURCHARGE = 1 UNITS                             | 169           |                              |
| RESERVED                |   | 170           | MESSAGE REGISTRATION SURCHARGE = 2 UNITS                             | 170           |                              |
| RESERVED                |   | 171           | MESSAGE REGISTRATION SURCHARGE = 3 UNITS                             | 171           |                              |
| RESERVED                |   | 172           | MESSAGE REGISTRATION SURCHARGE = 4 UNITS                             | 172           |                              |
| RESERVED                |   | 173           | MESSAGE REGISTRATION SURCHARGE = 5 UNITS                             | 173           |                              |
| RESERVED                |   | 174           | MESSAGE REGISTRATION SURCHARGE = 6 UNITS                             | 174           |                              |
| RESERVED                |   | 175           | MESSAGE REGISTRATION SURCHARGE = 7 UNITS                             | 175           |                              |
| RESERVED                |   | 176           | MESSAGE REGISTRATION SURCHARGE = 8 UNITS                             | 176           |                              |
| RESERVED                |   | 177           | RESERVED   | 177           |                              |
| RESERVED                |   | 178           | RESERVED   | 178           |                              |
| RESERVED                |   | 179           | RESERVED   | 179           |                              |
| STATION RELATED OPTIONS |   |               |  |               |                              |
| 180                     | CALL FLASH IF TALKING TO A STATION        | 180           | OUTGOING TRUNK CALL - BACK   | 180           |                              |
| 181                     | CALL FLASH IF TALKING TO A INCOMING TRUNK | 181           | OUTGOING TRUNK CAMP ON   | 181           |                              |
| 182                     | CALL FLASH IF TALKING TO A OUTGOING TRUNK | 182           | PARK AND CALL - HOLD RECALL - 2 MINUTES                              | 182           |                              |
|                         |   |               | PARK AND CALL - HOLD RECALL - 4 MINUTES                              | 211           |                              |

Fig. 203-1 (cont'd)

| SYSTEM OPTIONS |                                     | OPTION        |   | MITEL         |             |
|----------------|-------------------------------------|---------------|---|---------------|-------------|
| OPTION NUMBER  | OPTION NAME                         | OPTION NUMBER | OPTION NAME   | OPTION NUMBER | OPTION NAME |
| 212            | RANGE PROGRAMMING ENABLE            | 241           | ARS DIAL 0 TIMEOUT 10 SEC                                   | 241           |             |
| 213            | SINGLE DIGIT DIALING ENABLE         | 242           | ARS UNRESTRICTED OFFICE CODE ENABLE                         | 242           |             |
| 214            | SINGLE DIGIT DIALING TIME OUT - 3 S | 243           | RESERVED  | 243           |             |
| 215            | SINGLE DIGIT DIALING TIME OUT - 5 S | 244           | RESERVED  | 244           |             |
| 216            | RESERVED                            | 245           | AUTOMATIC WAKE - UP ENABLE                                  | 245           |             |
| 217            | REPEATED CAMP ON BEEP - 5 SECONDS   | 246           | AUTOMATIC WAKE - UP ALARM TO ATTENDANT ENABLE               | 246           |             |
| 218            | REPEATED CAMP ON BEEP - 15 SECONDS  | 247           | AUTOMATIC WAKE - UP MUSIC ON HOLD                           | 247           |             |
| 219            | TAFAS AVAILABLE DURING DAY          | 248           | AUTOMATIC WAKE - UP PRINT                                   | 248           |             |
| 220            | TRANSFER DIAL TONE                  | 249           | RESERVED  | 249           |             |
| 221            | RESERVED                            | 250           | RESERVED  | 250           |             |
| 222            | RESERVED                            | 251           | RESERVED  | 251           |             |
| 223            | RESERVED                            | 252           | RESERVED  | 252           |             |
| 224            | RESERVED                            | 253           | CALL FORWARDING - BUSY (SYSTEM DIAL IN TRUNK, CCSA)         | 253           |             |
| 225            | RESERVED                            | 254           | CALL FORWARDING - DON'T ANSWER SYS, DND, DIAL - IN TR, CCSA | 254           |             |
| 226            | RESERVED                            | 255           | CALL FORWARDING - DON'T ANSWER TIMEOUT - 10 SECONDS         | 255           |             |
| 227            | RESERVED                            | 256           | CALL FORWARDING - DON'T ANSWER TIMEOUT - 20 SECONDS         | 256           |             |
| 228            | RESERVED                            | 257           | CALL FORWARDING - DON'T ANSWER TIMEOUT - 40 SECONDS         | 257           |             |
| 229            | RESERVED                            | 258           | CONTROLLED OUTGOING RESTRICTION SET - UP                    | 258           |             |
|                | FEATURE RELATED OPTIONS             | 259           | CUSTOMER DATA PRINT OUT ENABLE                              | 259           |             |
| 230            | ACCOUNT CODE ENABLE                 | 260           | CUSTOMER PROGRAMMING ENABLE                                 | 260           |             |
| 231            | RESERVED                            | 261           | CUSTOMER PROGRAMMING OF ARS ENABLE                          | 261           |             |
| 232            | ACCOUNT CODE LENGTH 4 DIGITS        | 262           | CUSTOMER PROGRAMMING OF COS DEFINITIONS ENABLE              | 262           |             |
| 233            | RESERVED                            | 263           | CUSTOMER PROGRAMMING OF EXTENSIONS ENABLE                   | 263           |             |
| 234            | ACCOUNT CODE LENGTH 8 DIGITS        | 264           | CUSTOMER PROGRAMMING OF FEATURES ENABLE                     | 264           |             |
| 235            | ACCOUNT CODE LENGTH 12 DIGITS       | 265           | CUSTOMER PROGRAMMING OF HUNT GROUPS ENABLE                  | 265           |             |
| 236            | VARIABLE LENGTH ACCOUNT CODES       |               |   |               |             |
| 237            | RESERVED                            |               |   |               |             |
| 238            | ARS ENABLE                          |               |   |               |             |
| 239            | ARS RETURN DIAL TONE                |               |   |               |             |
| 240            | ARS DIAL 0 TIMEOUT 5 SECONDS        |               |   |               |             |

Fig. 203-1 (cont'd)



## SYSTEM OPTIONS

OPTION

| OPTION NAME                                   | OPTION NUMBER | DIAL OPTION NUMBER (1000-3331) | OPTION | OPTION NAME   | OPTION NUMBER | OPTION |
|---|---------------|--------------------------------|--------|---|---------------|--------|
| CUSTOMER PROGRAMMING OF SPEED CALL ENABLE     | 266           |                                | ADD    | RESERVED  | 293           |        |
| CUSTOMER PROGRAMMING OF SYSTEM OPTIONS ENABLE | 267           |                                |        | RESERVED  | 294           |        |
| CUSTOMER PROGRAMMING OF TOLL CONTROL ENABLE   | 268           |                                |        | TRAFFIC MEASUREMENT AUTOPRINT                           | 295           |        |
| CUSTOMER PROGRAMMING OF TRUNK GROUPS ENABLE   | 269           |                                |        | TRAFFIC MEASUREMENT COMPACT REPORT                      | 296           |        |
| CUSTOMER PROGRAMMING OF TRUNKS ENABLE         | 270           |                                |        | TRAFFIC MEASUREMENT CONSOLE FUNCTION ENABLE             | 297           |        |
| CUSTOMER RANGE PROGRAMMING ENABLE             | 271           |                                |        | TRAFFIC MEASUREMENT ENABLE                              | 298           |        |
| CUSTOMER PROGRAMMING OF SUPERSET 4 ENABLE     | 272           |                                |        | TRAFFIC MEASUREMENT EXTREME VALUE MODE                  | 299           |        |
| EXTERNAL CALL FORWARDING ENABLE               | 273           |                                |        | TRAFFIC MEASUREMENT POLLING                             | 300           |        |
| HANDS FREE ENABLE                             | 274           |                                |        | RESERVED  | 301           |        |
| MESSAGE WAITING SET - IP (BELL)               | 275           |                                |        | RESERVED  | 302           |        |
| MESSAGE WAITING SET - IP (LANP)               | 276           |                                |        | RESERVED  | 303           |        |
| SMR RECORD OUTGOING CALLS                     | 277           |                                |        | RESERVED  | 304           |        |
| SMR RECORD INCOMING CALLS                     | 278           |                                |        | RESERVED  | 305           |        |
| SMR RECORD ONLY RECEIVING CO CALLS            | 279           |                                |        | RESERVED  | 306           |        |
| SMR RECORD METER PULSES                       | 280           |                                |        | RESERVED  | 307           |        |
| SMR DROP INCOMPLETE OUTGOING CALLS            | 281           |                                |        | RESERVED  | 308           |        |
| SMR DROP CALLS OF LESS THAN 8 DIGITS          | 282           |                                |        | RESERVED  | 309           |        |
| SMR EXTENDED RECORD                           | 283           |                                |        | PRINTER RELATED OPTIONS                                 |               |        |
| SMR INDICATE LONG CALLS                       | 284           |                                |        | CONDENSED SMNR PRINT ENABLE (CENTROBUS 130 - 3 PRINTER) | 310           |        |
| RESERVED                                      | 285           |                                |        | EGADRE PRINT ENABLE                                     | 311           |        |
| RESERVED                                      | 286           |                                |        | MESSAGE REGISTER & MESSAGE WAITING CHANGE PRINT ENABLE  | 312           |        |
| SPEED CALL ENABLE                             | 287           |                                |        | PRINTER CARRIAGE RETURN DELAY                           | 313           |        |
| SPEED CALL PROGRAMMING ENABLE                 | 288           |                                |        | PRINTER TRANSMIT ADDITIONAL DILLS                       | 314           |        |
| SPEED CALL CONFIDENTIAL NUMBER DISPLAY ENABLE | 289           |                                |        | PRINTOUTS EXTRA LINE FEEDS (HOTEL/MOTEL ONLY)           | 315           |        |
| RESERVED                                      | 290           |                                |        | ROOM MESSAGE REGISTER AUDIT ENABLE                      | 316           |        |
| TOLL CONTROL - FIRST DIGIT                    | 291           |                                |        | ROOM STATUS AUDIT ENABLE                                | 317           |        |
| TOLL CONTROL - MULTI DIGIT                    | 292           |                                |        |   |               |        |

Fig. 203-1 (cont'd)

| SYSTEM OPTIONS                                  |               |  |               |
|---|---------------|--|---------------|
| OPTION NAME                                     | OPTION NUMBER | OPTION NAME                              | OPTION NUMBER |
| ZERO MESSAGE REGISTER AFTER ROOM REGISTER AUDIT | 318           |  |               |
| RESERVED  | 319           |  |               |
| RESERVED  | 320           |  |               |
| RESERVED  | 321           |  |               |
| RESERVED  | 322           |  |               |
| RESERVED  | 323           |  |               |
| RESERVED  | 324           |  |               |
| RESERVED  | 325           |  |               |
| RESERVED  | 326           |  |               |
| RESERVED  | 327           |  |               |
| RESERVED  | 328           |  |               |
| RESERVED  | 329           |  |               |
|   |               | SUPERSET RELATED OPTIONS                 |               |
|   |               | SUPERSET DISCONNECT ALARM                | 330           |
|   |               | SUPERSET IMMEDIATE LINE SELECTION ENABLE | 331           |
|   |               | SUPERSET LAST NUMBER REDIAL ENABLE       | 332           |
|   |               | SUPERSET AUTO HOLD DISABLE               | 333           |
|   |               | RESERVED                                 | 334           |
|   |               | RESERVED                                 | 335           |
|   |               | RESERVED                                 | 336           |
|   |               | RESERVED                                 | 337           |
|   |               | RESERVED                                 | 338           |
|   |               | RESERVED                                 | 339           |

AFTER ALL OPTIONS ARE ADDED PRESS

NOTES TO DELETE SYSTEM OPTIONS:

AFTER ALL REQUIRED OPTIONS HAVE BEEN REMOVED:

TO REVIEW SYSTEM OPTIONS:




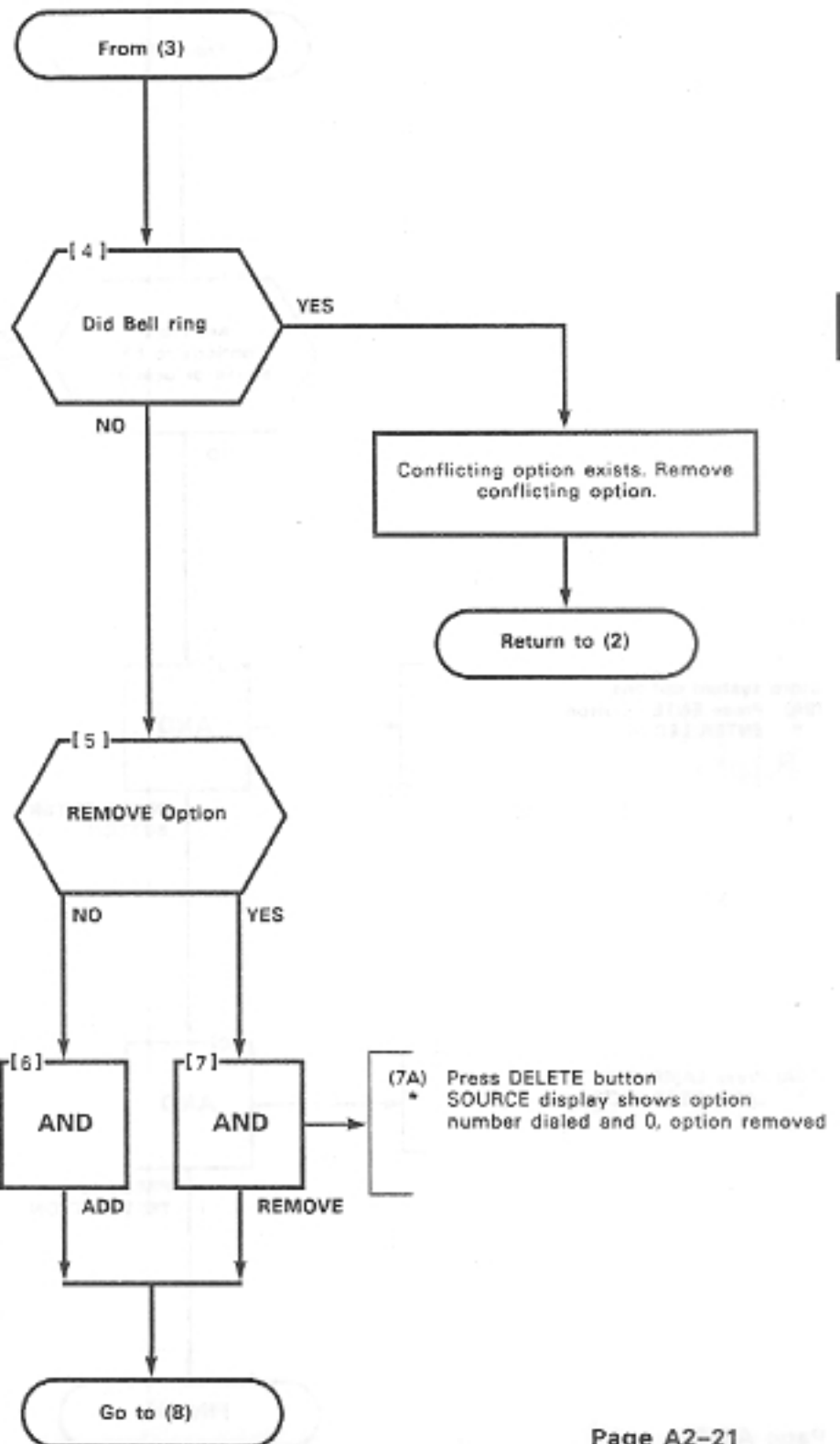
Fig. 203-1 (cont'd)

## PROGRAM SYSTEM OPTIONS

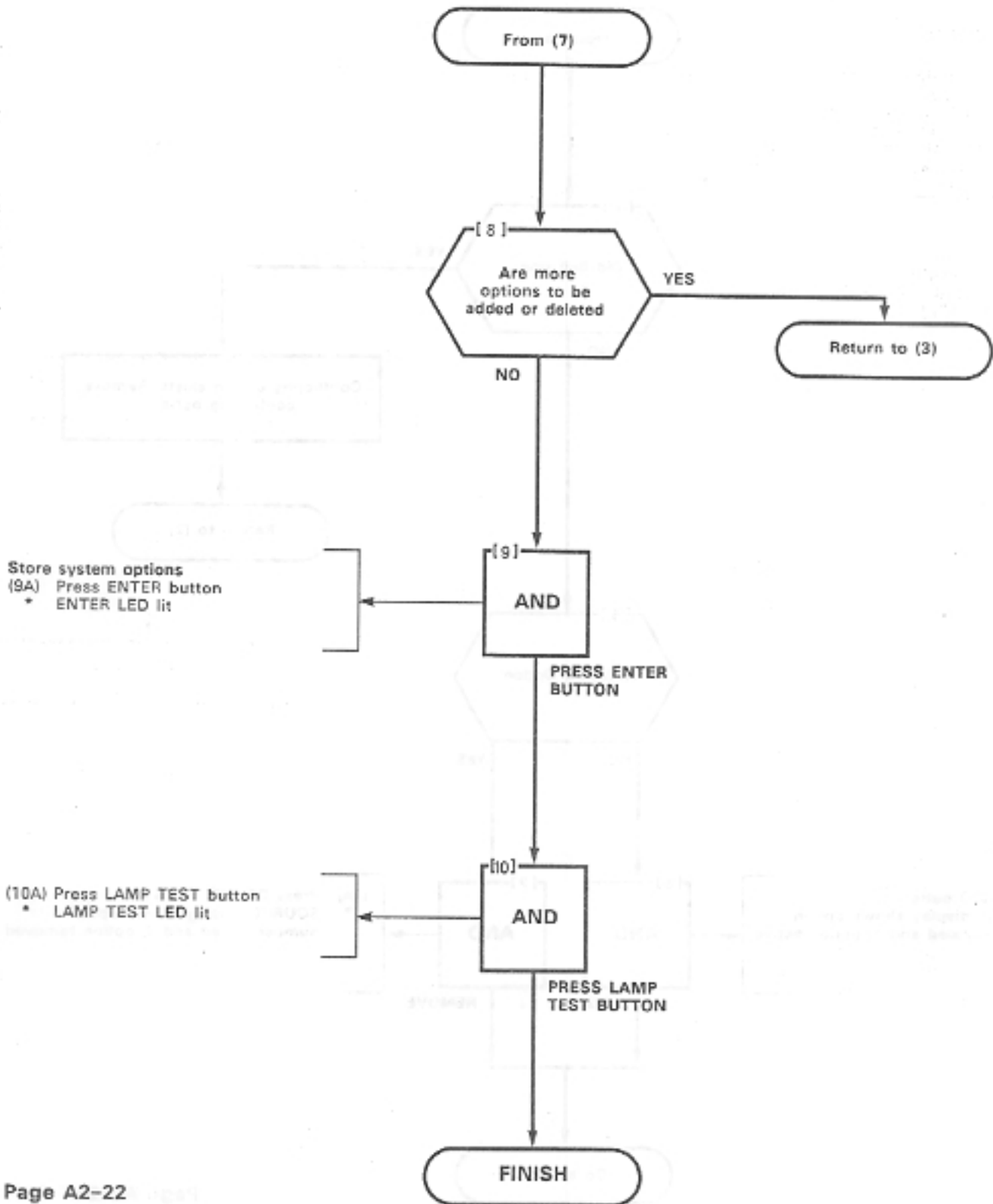
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PROGRAM COS OPTIONS

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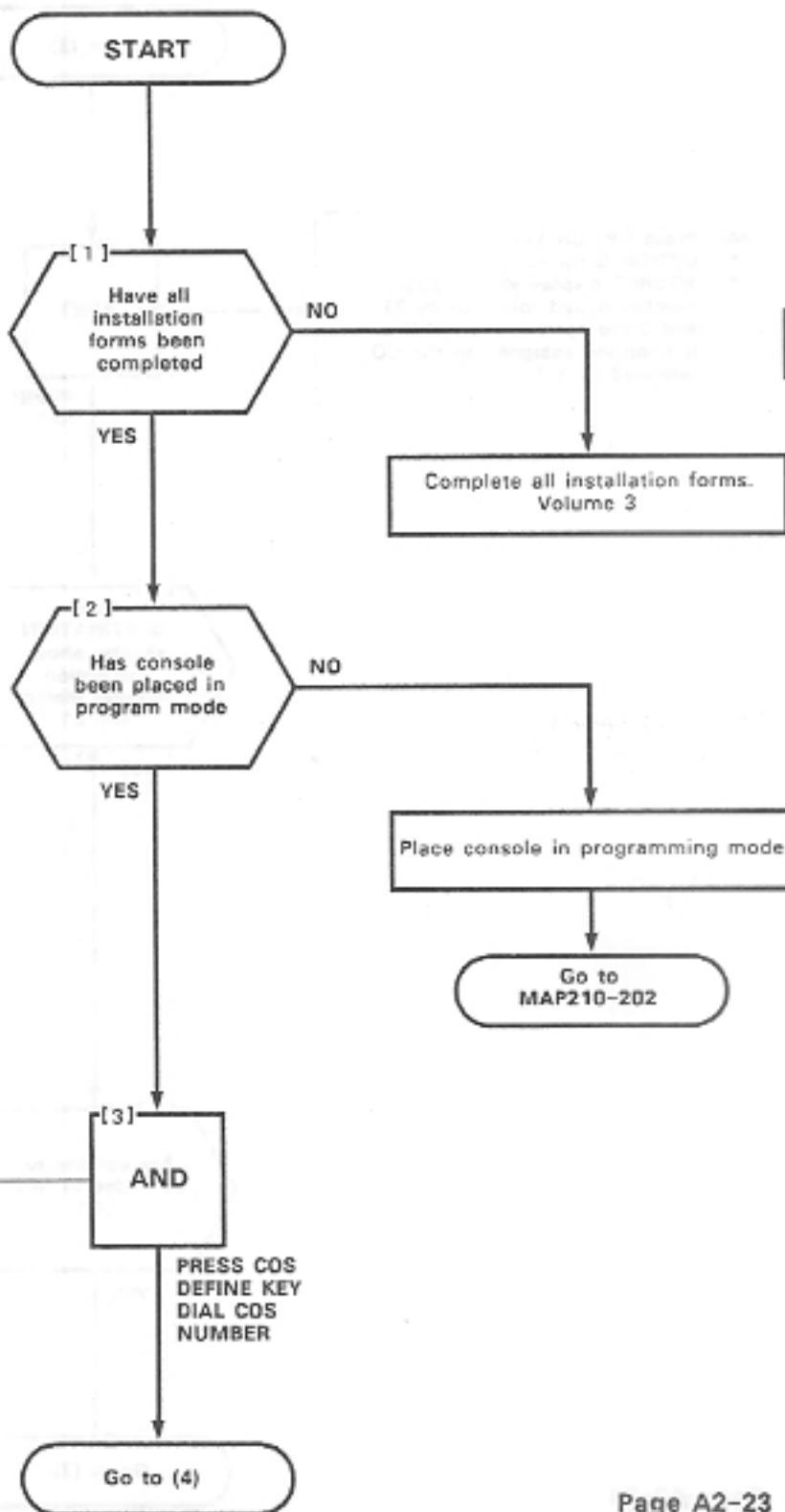
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## NOTES

- (1) All entries are made from the console dial pad  
 (2) COS DEFINE lamp remains lit through procedure  
 (3) A display of ED indicates that an incorrect key was pressed; press key specified

## SYNOPSIS

Define COS group (1-16)  
 Enter all option codes (33-110)  
 Press ADD or DELETE keys  
 Press ENTER key

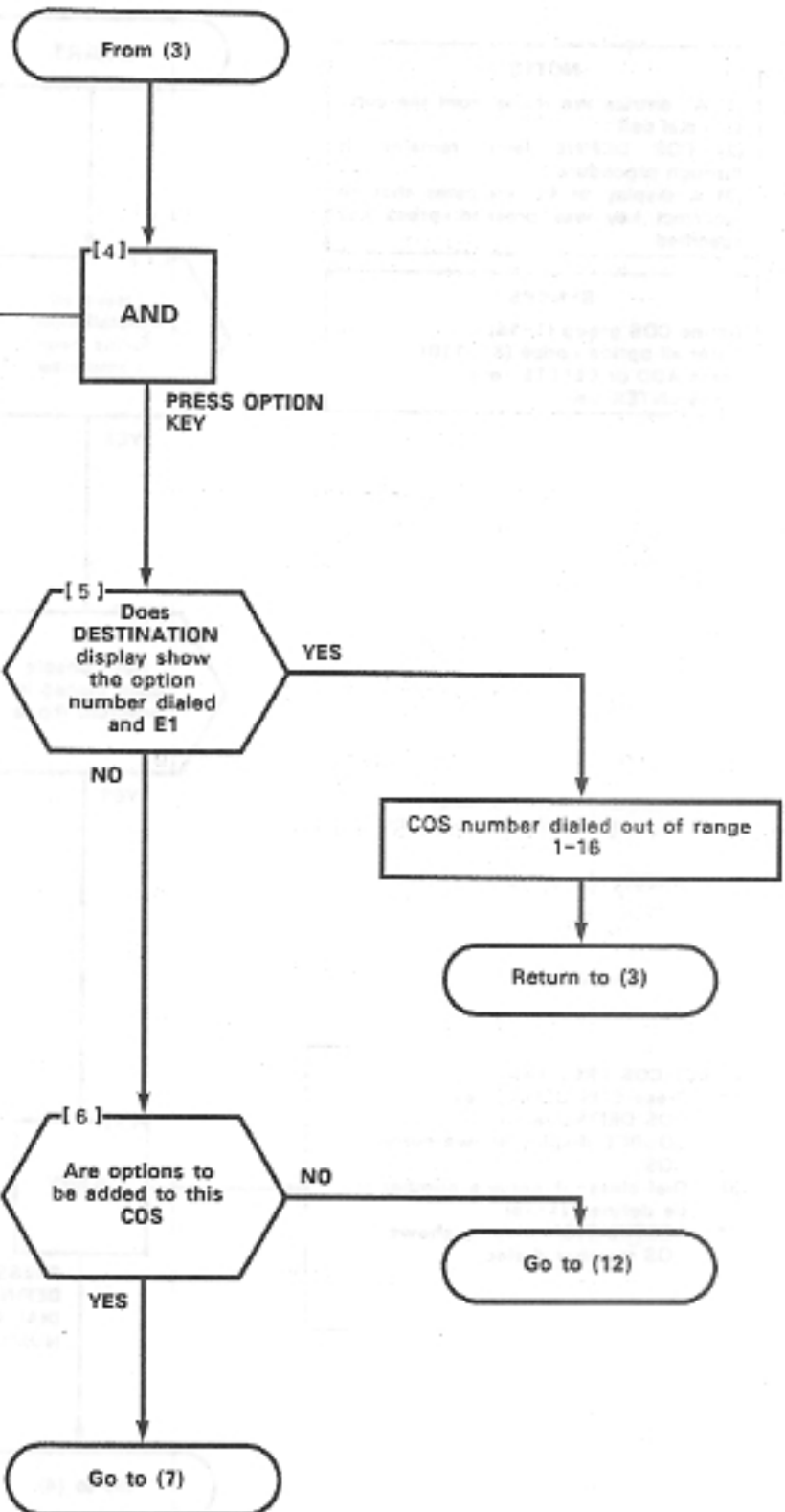


## SELECT COS PROGRAM

- (3A) Press COS DEFINE key  
 \* COS DEFINE lamp lit  
 \* SOURCE display shows current COS
- (3B) Dial class-of-service number to be defined (1-16)  
 \* DESTINATION display shows COS number dialed

|                        |
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- (4A) Press OPTION key
- \* OPTION lamp lit
  - \* SOURCE display shows COS number dialed followed by 33 and 0 (no options assigned) or first option assigned to the COS followed by a 1.

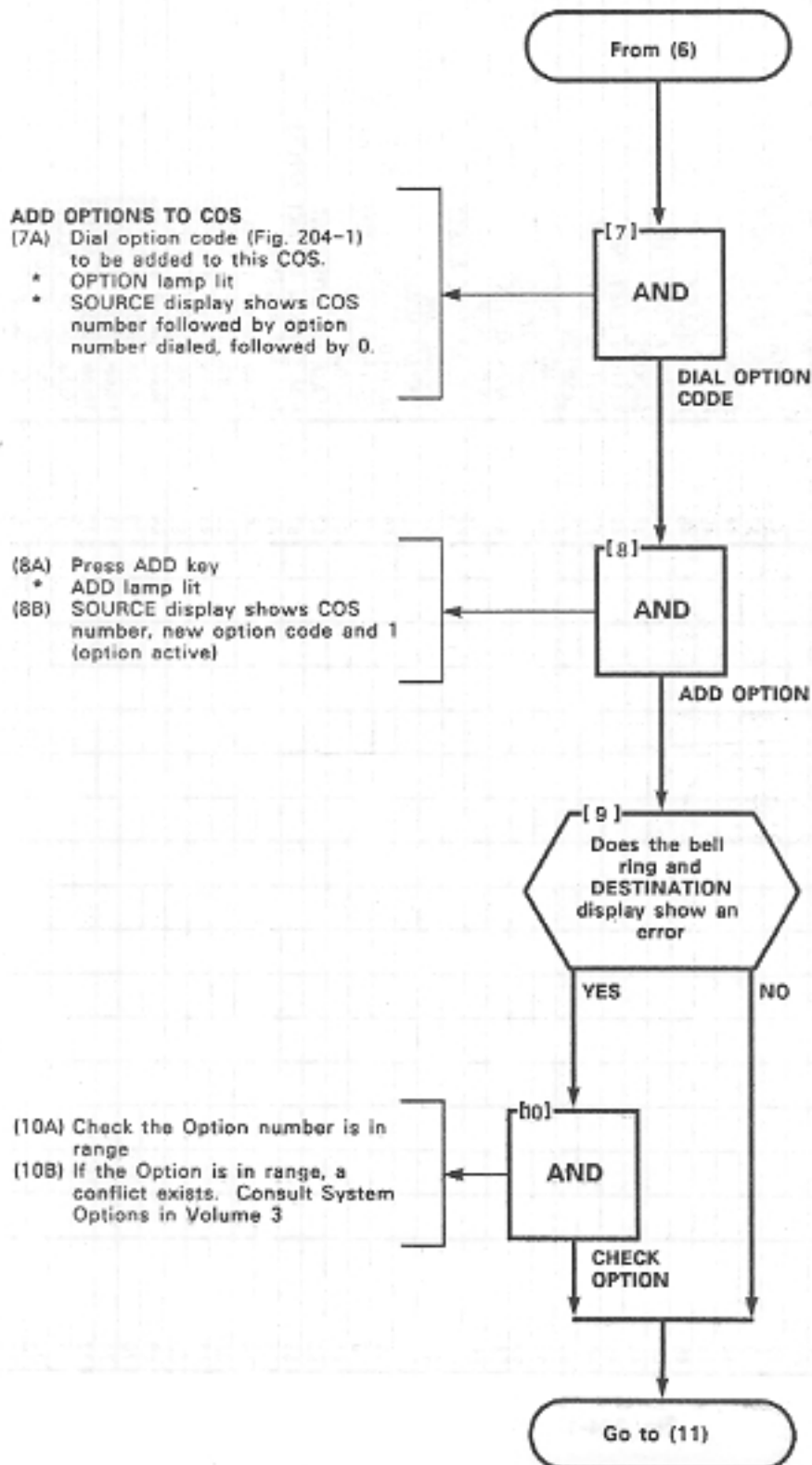


## PROGRAM COS OPTIONS

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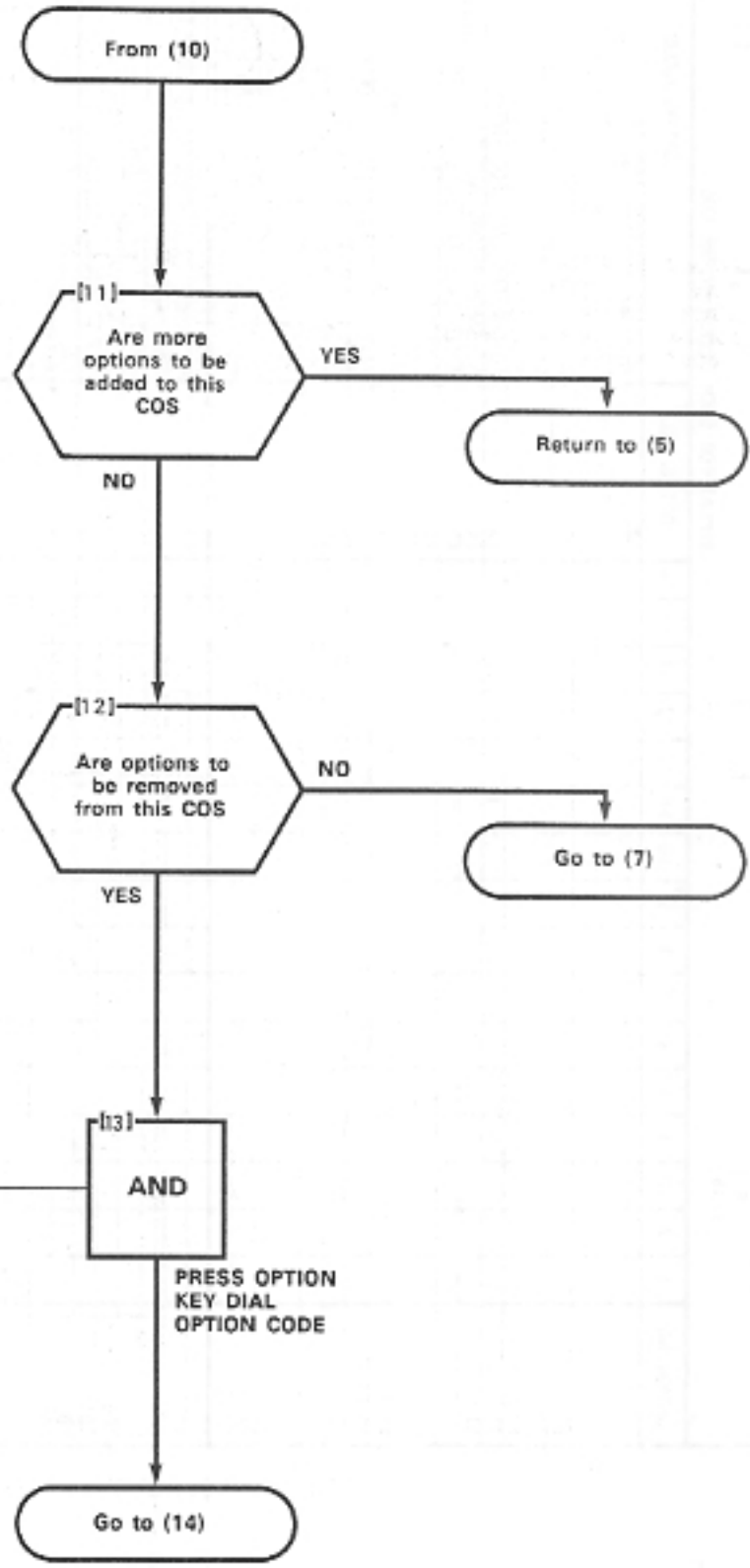


| MITEL      |   | DIAL COS NUMBER 1-16 TO CHANGE ANY OPTION FOR A COS 1-16 PRESS OPTION DIAL OPTION NUMBER 33-107 PRESS ADD TO ENABLE OR PRESS DELETE TO REMOVE |   |   |   |   |   |   |   |    |    |    |    |    |    |    |            |                                     |
|------------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|------------|-------------------------------------|
| OPTION NO. | 1 | 2   | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | OPTION NO. | OPTION NAME                         |
| 33         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 33         | AUTOMATIC CALLBACK                  |
| 34         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 34         | CALL FORWARDING - BUSY              |
| 35         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 35         | CALL FORWARDING - DONT ANSWER       |
| 36         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 36         | CALL FORWARDING - FOLLOW ME         |
| 37         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 37         | CALL PARK                           |
| 38         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 38         | NEVER A FORWARDEE                   |
| 39         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 39         | DIRECTED CALL PICKUP                |
| 40         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 40         | EXECUTIVE BUSY OVERRIDE             |
| 41         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 41         | DATA SECURITY                       |
| 42         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 42         | STATION OVERRIDE SECURITY           |
| 43         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 43         | INWARD RESTRICTION (IRDI)           |
| 44         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 44         | ORIGINATE ONLY                      |
| 45         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 45         | RECEIVE ONLY                        |
| 46         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 46         | FLASH DISABLE                       |
| 47         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 47         | NEVER A CONSULTEE                   |
| 48         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 48         | BROKERS CALL                        |
| 49         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 49         | STATION CONFERENCE                  |
| 50         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 50         | MEET ME CONFERENCE                  |
| 51         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 51         | CAMP-ON                             |
| 52         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 52         | DO NOT OVERFLOW                     |
| 53         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 53         | PAGING ACCESS                       |
| 54         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 54         | TAFAS ACCESS                        |
| 55         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 55         | HOLD PICKUP                         |
| 56         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 56         | ACCOUNT CODE ACCESS                 |
| 57         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 57         | MANUAL LINE                         |
| 58         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 58         | CONTACT MONITOR                     |
| 59         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 59         | NON-CO TRUNKS VIA ATTENDANT INHIBIT |
| 60         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 60         | CO TRUNKS VIA ATTENDANT INHIBIT     |
| 61         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 61         | NO DIAL TONE                        |
| 62         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 62         | FLASH FOR ATTENDANT                 |
| 63         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 63         | H/M STR-SIN RESTRICT APPLIES        |
| 64         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 64         | MESSAGE REGISTER                    |
| 65         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 65         | TRUNK GROUP 1 ACCESS                |
| 66         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 66         | TRUNK GROUP 2 ACCESS                |
| 67         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 67         | TRUNK GROUP 3 ACCESS                |
| 68         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 68         | TRUNK GROUP 4 ACCESS                |
| 69         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 69         | TRUNK GROUP 5 ACCESS                |
| 70         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 70         | TRUNK GROUP 6 ACCESS                |
| 71         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 71         | TRUNK GROUP 7 ACCESS                |
| 72         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 72         | TRUNK GROUP 8 ACCESS                |
| 73         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 73         | TRUNK GROUP 9 ACCESS                |
| 74         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 74         | TRUNK GROUP 10 ACCESS               |
| 75         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 75         | TRUNK GROUP 11 ACCESS               |
| 76         |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    | 76         | TRUNK GROUP 12 ACCESS               |

Fig. 204-1



|                        |
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**REMOVE OPTION FROM COS**  
 (13A) Press OPTION key  
 (13B) Dial option code (33-110) to be removed from the COS  
 \* SOURCE display shows COS number, option code, and 1 (option active)

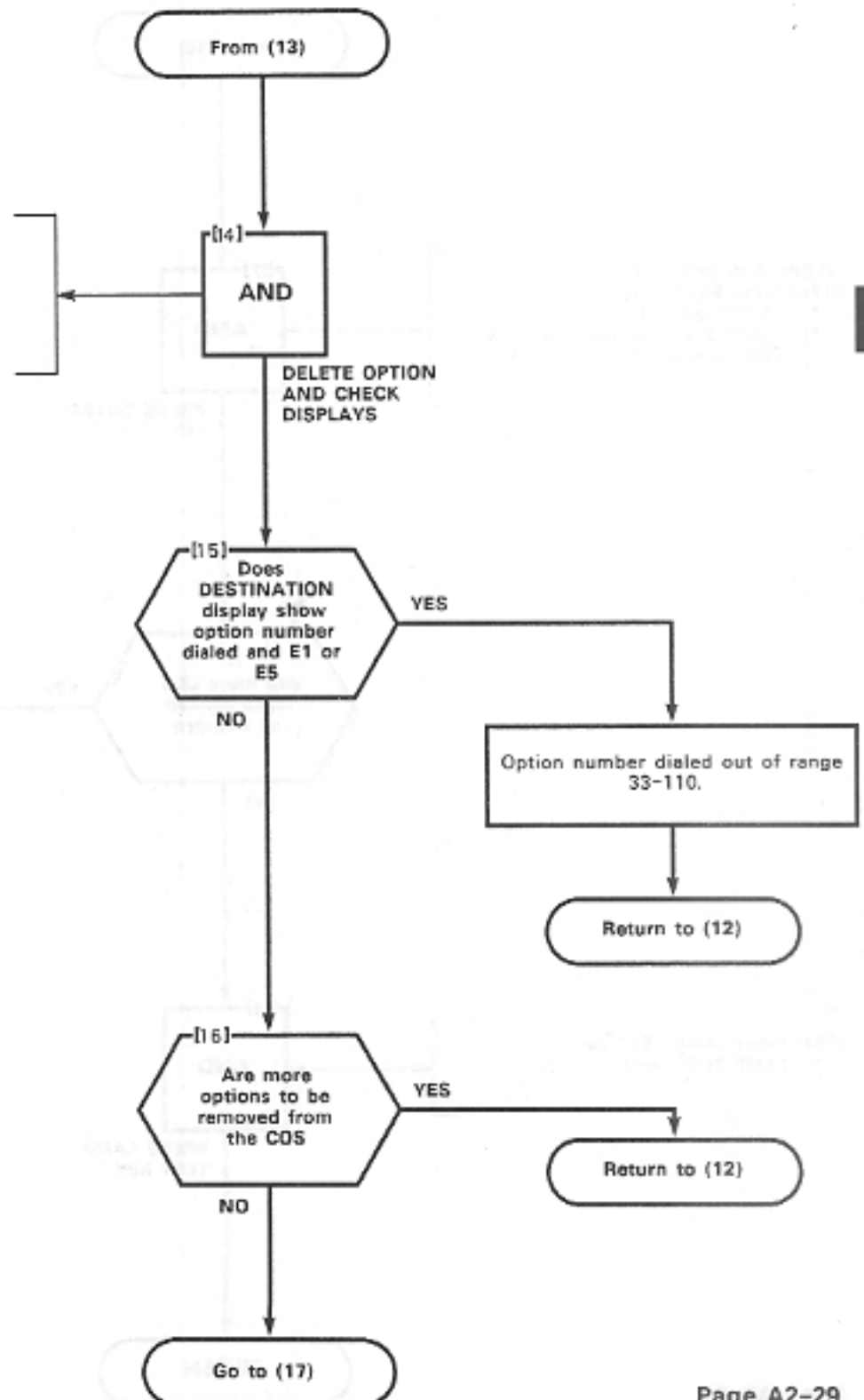
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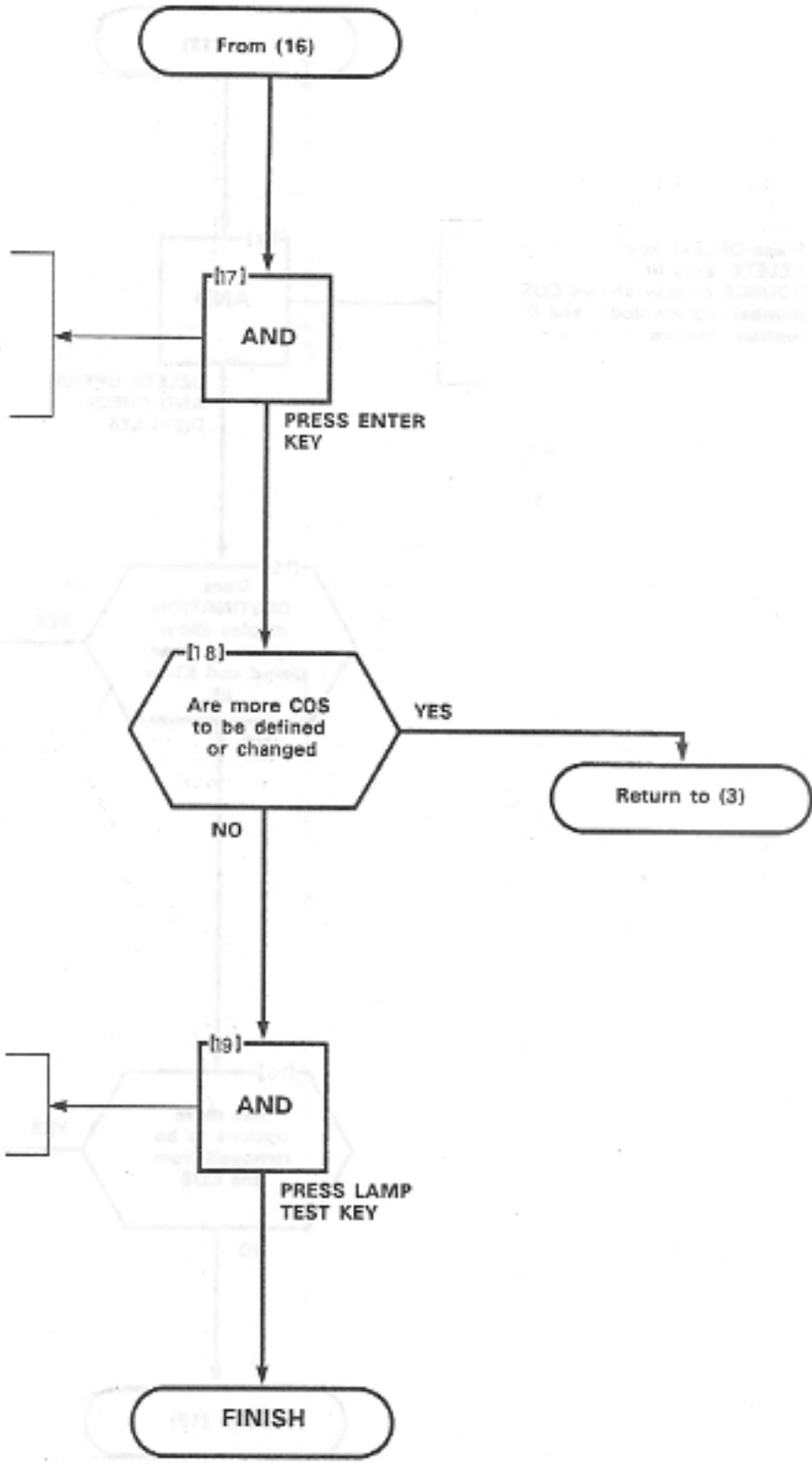
(14A) Press DELETE key  
 \* DELETE lamp lit  
 \* SOURCE display shows COS  
 number, option code, and 0  
 (option inactive)



|                        |
|------------------------|
| PROGRAM COS OPTIONS    |
| MAP210- 204            |
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**STORE COS OPTIONS**  
 (17A) Press ENTER key  
 \* ENTER lamp lit  
 \* SOURCE display shows current COS number

(19A) Press LAMP TEST key  
 \* LAMP TEST lamp





## ASSIGN FEATURE ACCESS CODES

MAP210-205

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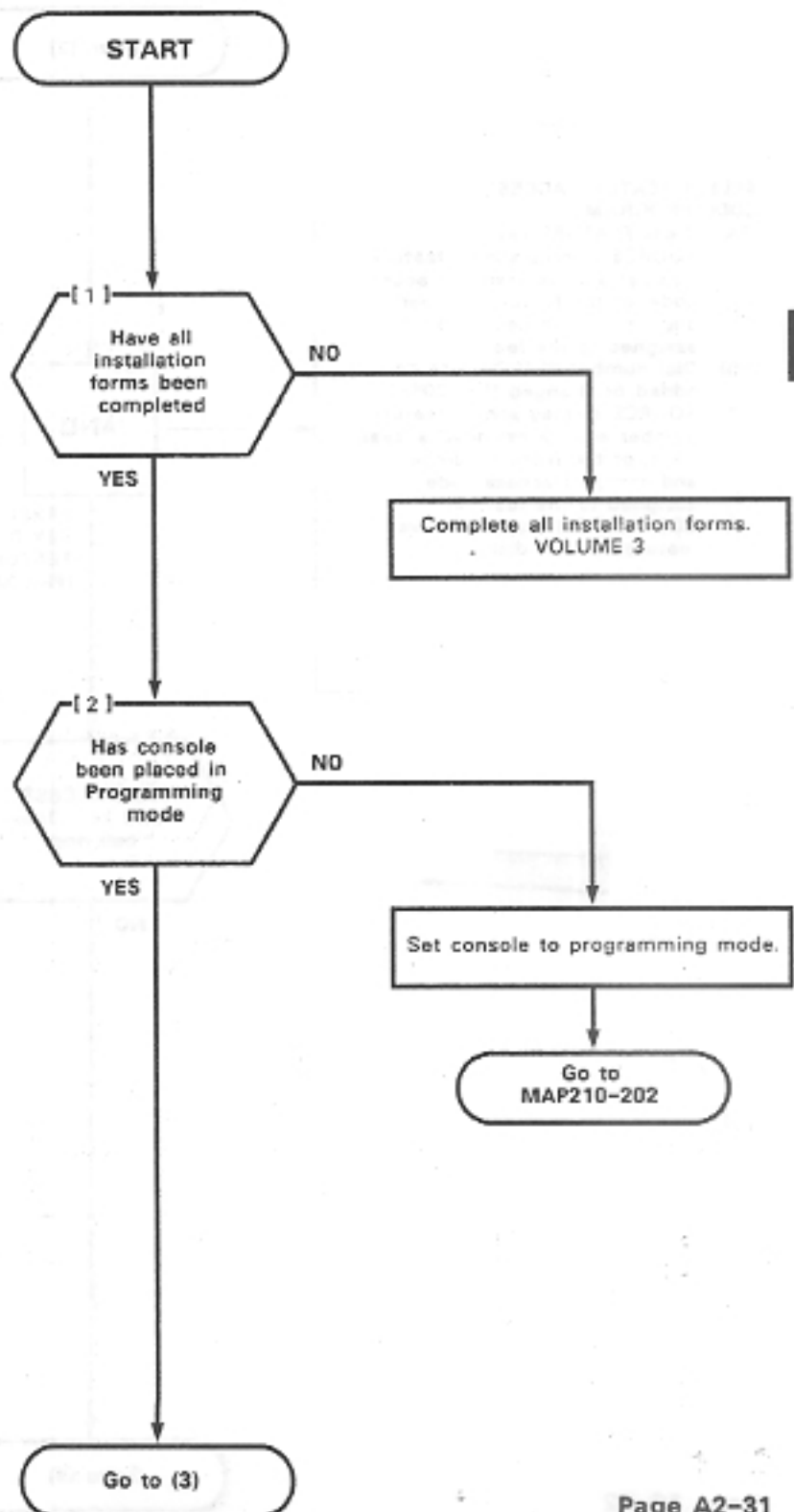
Sheet 1 of 5

## NOTES

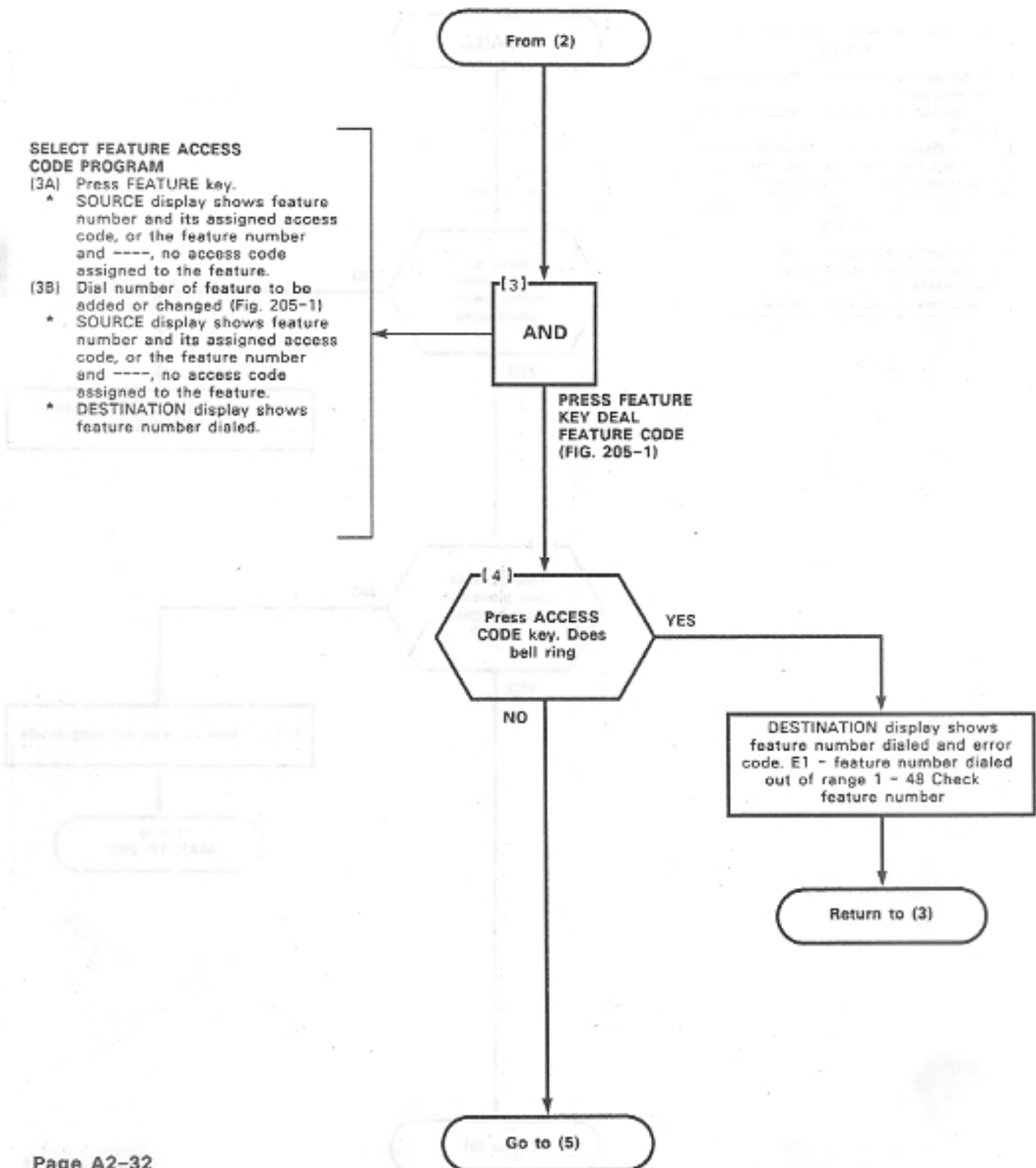
- (1) All entries are made from the console dial pad.  
 (2) FEATURE lamp lit throughout procedure.  
 (3) A display of EO indicates that an incorrect key was pressed, check procedure and press correct key.

## SYNOPSIS

- Enter feature number. (1-48).  
 Assign or delete access code.  
 Press ENTER key.  
 Repeat for all required features.



|                             |
|-----------------------------|
| ASSIGN FEATURE ACCESS CODES |
| MAP210- 205                 |
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## ASSIGN FEATURE ACCESS CODES

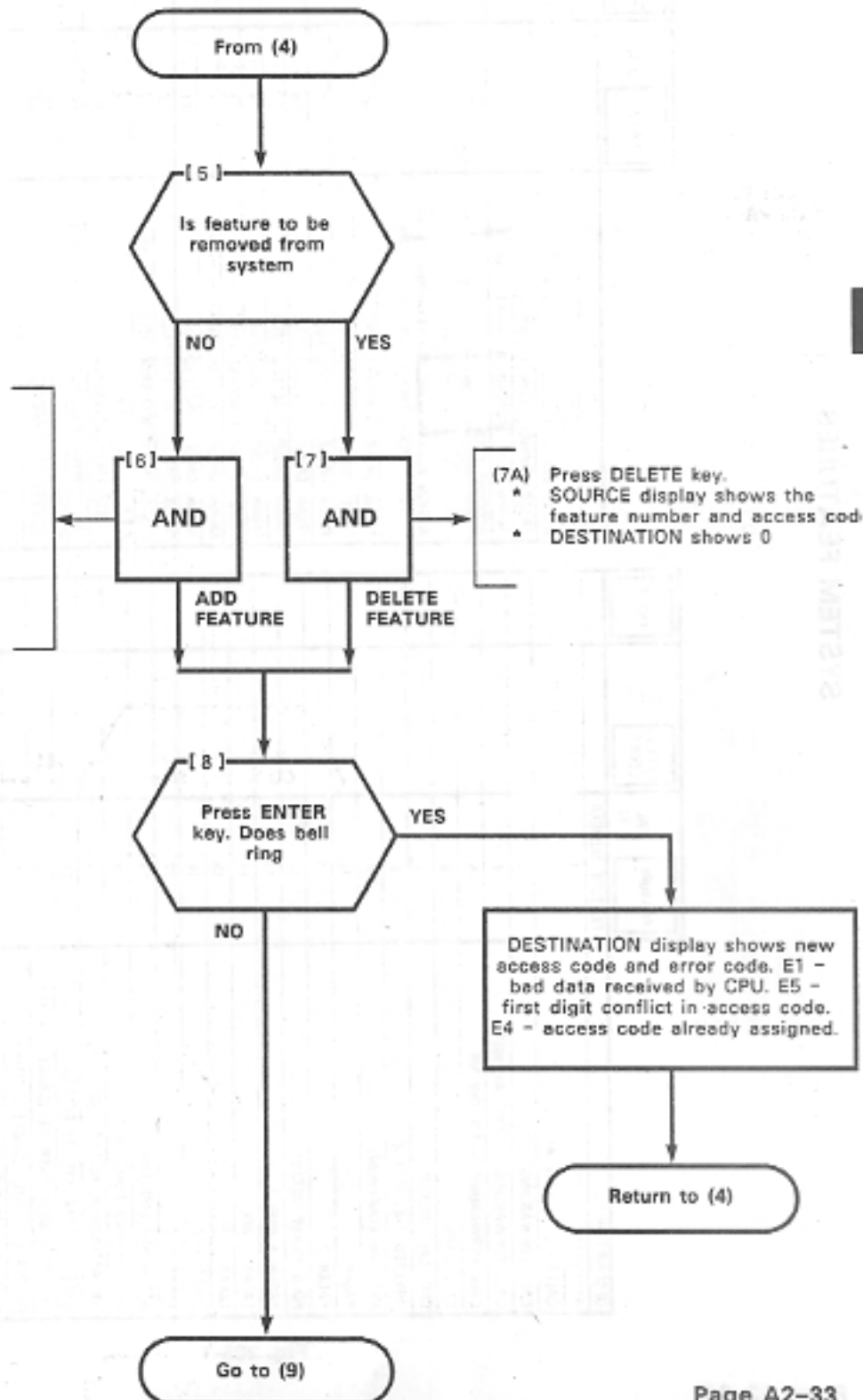
MAP210-205

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**ASSIGN FEATURE ACCESS CODE**  
 (6A) Dial new access code  
 \* ACCESS CODE lamp lit  
 \* SOURCE display shows new feature number and its access code, or the feature number and ----, if no access code is assigned to the feature.  
 \* DESTINATION display shows access code to be assigned

(7A) Press DELETE key.  
 \* SOURCE display shows the feature number and access code  
 \* DESTINATION shows 0



## SYSTEM FEATURES

| DESCRIPTION  | FEATURE NUMBER | FEATURE DIAL 1-48 | ACCESS CODES | MOVING AND CALLING CODES | ENTER |
|--|----------------|-------------------|--------------|--------------------------|-------|
| ATTENDANT ACCESS   | 1              |                   |              |                          | ENTER |
| CALLBACK - DON'T ANSWER  | 2              |                   |              |                          |       |
| CALL FORWARDING - BUSY   | 3              |                   |              |                          |       |
| CALL FORWARDING - DON'T ANSWER                                       | 4              |                   |              |                          |       |
| CALL FORWARDING - FOLLOW ME  | 5              |                   |              |                          |       |
| CALL PARK  | 6              |                   |              |                          |       |
| DIAL CALL PICKUP   | 7              |                   |              |                          |       |
| DIRECTED CALL PICKUP   | 8              |                   |              |                          |       |
| MEET ME CONFERENCE   | 9              |                   |              |                          |       |
| PAGER 1  | 10             |                   |              |                          |       |
| PAGER 2  | 11             |                   |              |                          |       |
| HOLD PICKUP ACCESS   | 12             |                   |              |                          |       |
| PAGER 1 AND 2  | 13             |                   |              |                          |       |
| TAFAS - ALL  | 14             |                   |              |                          |       |
| TAFAS - 1  | 15             |                   |              |                          |       |
| TAFAS - 2  | 16             |                   |              |                          |       |
| TAFAS - 3  | 17             |                   |              |                          |       |
| ATTENDANT FUNCTION   | 18             |                   |              |                          |       |
| MAINTENANCE FUNCTION   | 19             |                   |              |                          |       |
| BID ATTENDANT ACCESS CODE  | 20             |                   |              |                          |       |
| DIRECT INWARD SYSTEM ACCESS  | 21             |                   |              |                          |       |
| EXECUTIVE BUSY OVERRIDE (SINGLE DIGIT)***                            | 22             |                   |              |                          |       |
| CALLBACK - BUSY (SINGLE DIGIT)***                                    | 23             |                   |              |                          |       |
| ROOM DO NOT DISTURB  | 24             |                   |              |                          |       |
| CALL HOLD  | 25             |                   |              |                          |       |
| CALL RETRIEVE (LOCAL)  | 26             |                   |              |                          |       |
| CALL RETRIEVE (REMOTE)   | 27             |                   |              |                          |       |
| ROOM STATUS UPDATE (MID IN ROOM)                                     | 28             |                   |              |                          |       |
| PROGRAMMING SECURITY CODE  | 29             |                   |              |                          |       |
| ALARM CALL AUTOMATIC WAKE - UPI                                      | 30             |                   |              |                          |       |
| ACCOUNT CODE   | 31             |                   |              |                          |       |
| SPEED CALL   | 32             |                   |              |                          |       |
| ASSIGN ACCESS CODES TO FEATURES 33-42 FOR TRUNK GROUP 1 IF NECESSARY |                |                   |              |                          |       |
| TRUNK GROUP 1 ACCESS CODE  | 33             |                   |              |                          |       |
| TRUNK GROUP 1 ACCESS CODE  | 34             |                   |              |                          |       |
| TRUNK GROUP 1 ACCESS CODE  | 35             |                   |              |                          |       |
| TRUNK GROUP 1 ACCESS CODE  | 36             |                   |              |                          |       |
| TRUNK GROUP 1 ACCESS CODE  | 37             |                   |              |                          |       |
| TRUNK GROUP 1 ACCESS CODE  | 38             |                   |              |                          |       |
| TRUNK GROUP 1 ACCESS CODE  | 39             |                   |              |                          |       |
| TRUNK GROUP 1 ACCESS CODE  | 40             |                   |              |                          |       |
| TRUNK GROUP 1 ACCESS CODE  | 41             |                   |              |                          |       |
| TRUNK GROUP 1 ACCESS CODE  | 42             |                   |              |                          |       |
| CUSTOMER PROGRAMMING SECURITY CODE                                   | 43             |                   |              |                          |       |
| A.R.S. ACCESS CODE   | 44             |                   |              |                          |       |
| HANDS-FREE ACTIVATION  | 45             |                   |              |                          |       |
| CALL FORWARDING BUSY - DON'T ANSWER                                  | 46             |                   |              |                          |       |
| RESERVED   | 47             |                   |              |                          |       |
| SUPERSET 1 LOUDBACK TEST   | 48             |                   |              |                          |       |



TO REVIEW ACCESS CODES

FEATURE

ACCESS CODE

DELETE

ENTER

DELETE

ENTER

DELETE

ENTER

\*\*\*FIRST DIGIT COMPACT ALLOWED WITH OTHER ACCESS CODES

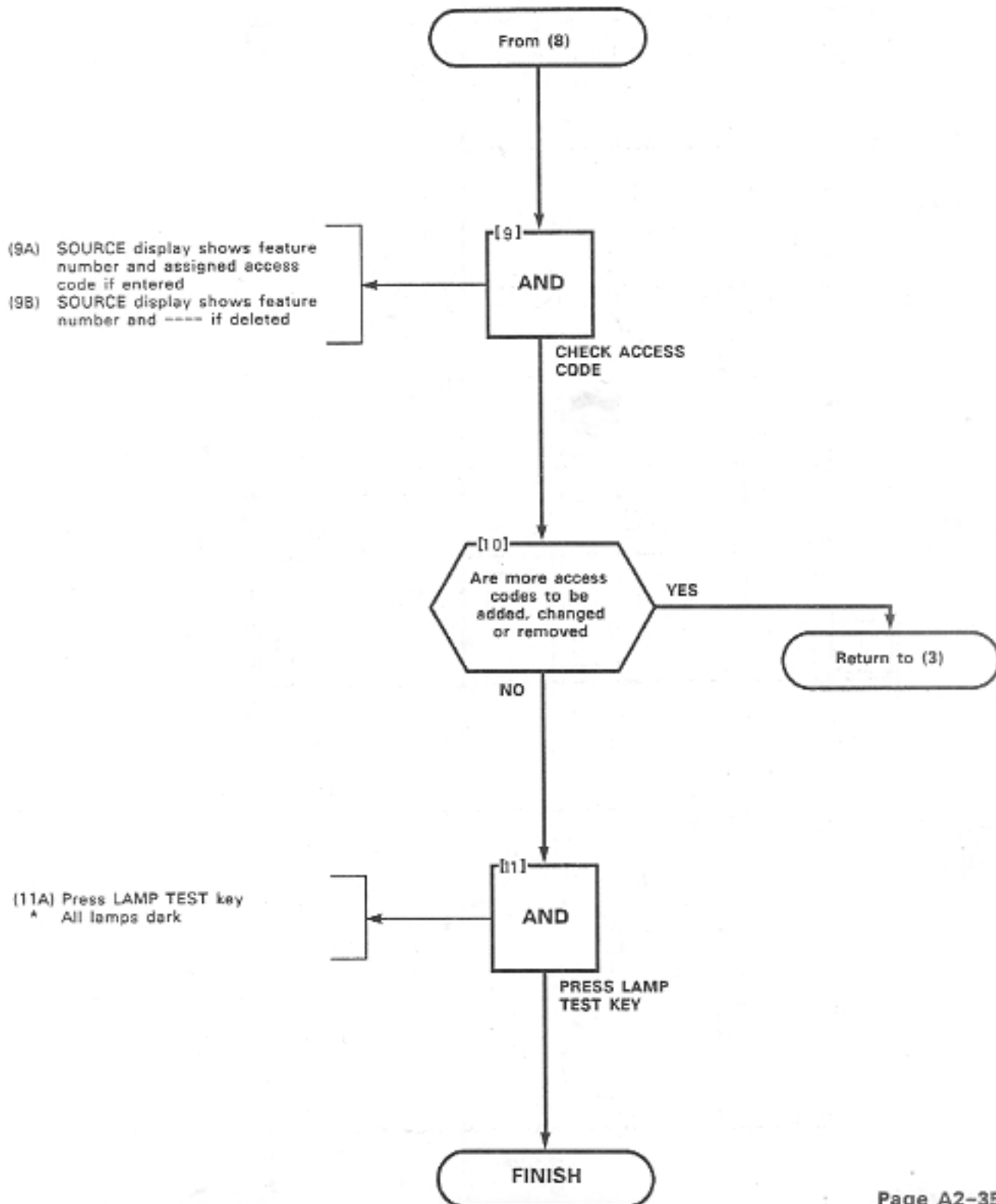
Fig. 205-1

## ASSIGN FEATURE ACCESS CODES

MAP210-205

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1000 - 1000 - 1000 - 1000  
1000 - 1000 - 1000 - 1000  
1000 - 1000 - 1000 - 1000  
1000 - 1000 - 1000 - 1000



## PROGRAM EXTENSIONS

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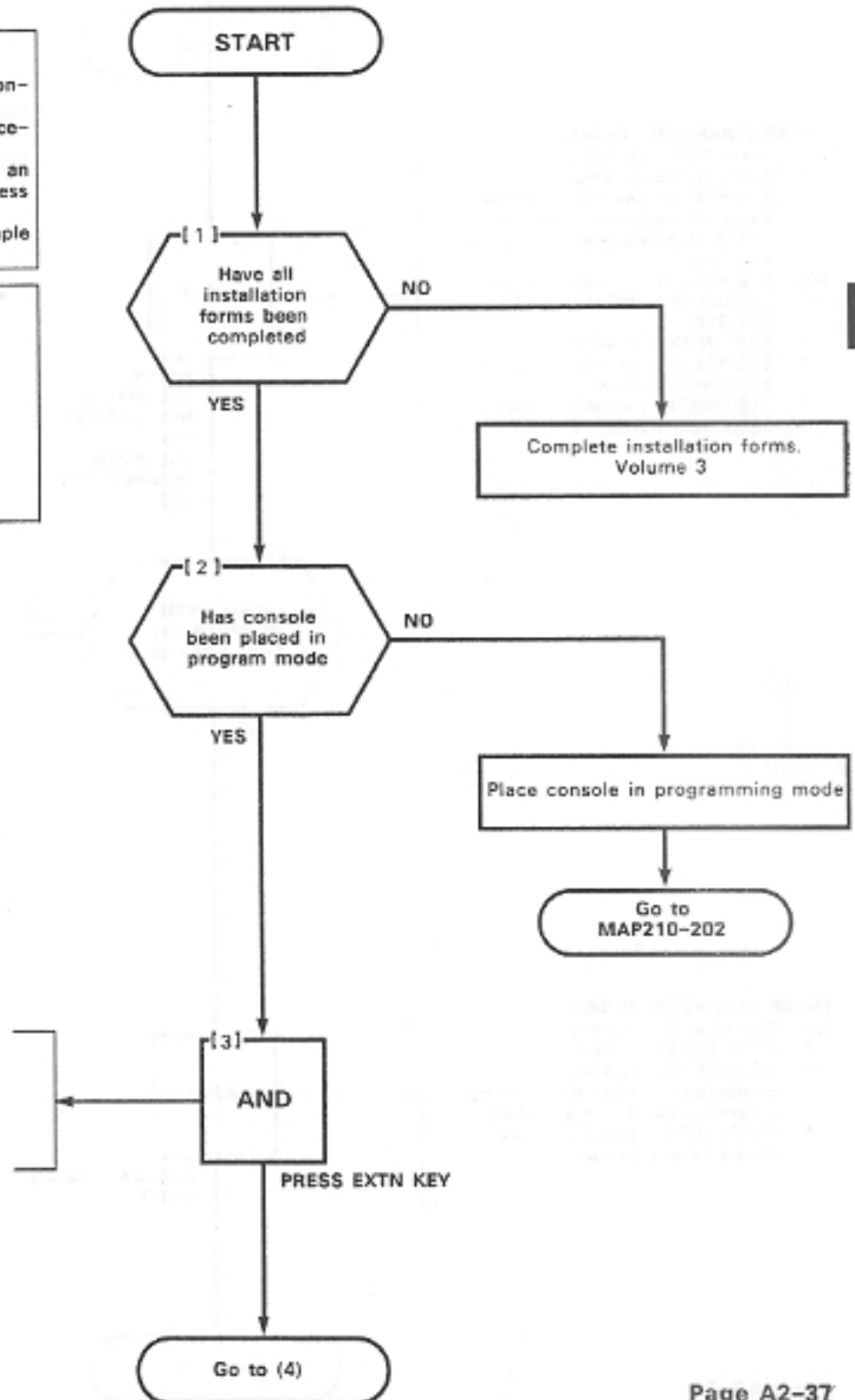
Sheet 1 of 11

## NOTES

- (1) All entries are made from the console dial pad.  
 (2) EXTN lamp lit throughout procedure.  
 (3) A display of E0 indicates that an incorrect key has been pressed. Press the key specified in the MAP.  
 (4) Refer to Fig. 206-3 for an example of the form.

## SYNOPSIS

Enter EXTN programming.  
 Enter extension equipment number.  
 Enter extension number.  
 Enter COS number.  
 Enter toll allow/deny or CDR 1, 2, 3.  
 Enter busy lamp position number.  
 Enter pickup group number.  
 Press ENTER key.



## SELECT EXTENSION PROGRAM

- (3A) Press EXTN key  
 \* EXTN lamp lit

## PROGRAM EXTENSIONS

MAP210- 206

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Sheet 2 of 11

## ENTER EQUIPMENT NUMBER

- (4A) Press EQPT NUMBER key
- \* EQPT NUMBER lamp lit
  - \* SOURCE display shows lowest assigned equipment number or 001 if no equipment number is assigned
- (4B) Dial equipment number to be defined. (Fig. 206-1). (1-112 161-256)
- \* EQPT NUMBER lamp lit
  - \* SOURCE display shows current equipment number
  - \* DESTINATION display shows equipment number dialed

## NOTE

Equipment number 001 is reserved for the test line and should not be assigned to a working extension.

From (3)

[4]  
AND

PRESS  
EQUIPMENT  
NUMBER KEY  
DIAL  
EQUIPMENT  
NUMBER (FIG.  
206-1)

[5]

Press EXTN  
NUMBER key.  
Does bell ring

YES

DESTINATION display shows  
equipment number and error code.  
E1 number dialed out of range  
1-112 161-256. Check number.  
Fig. 206-1

Return to (4)

NO

[6]  
AND

DIAL EXTENSION  
NUMBER

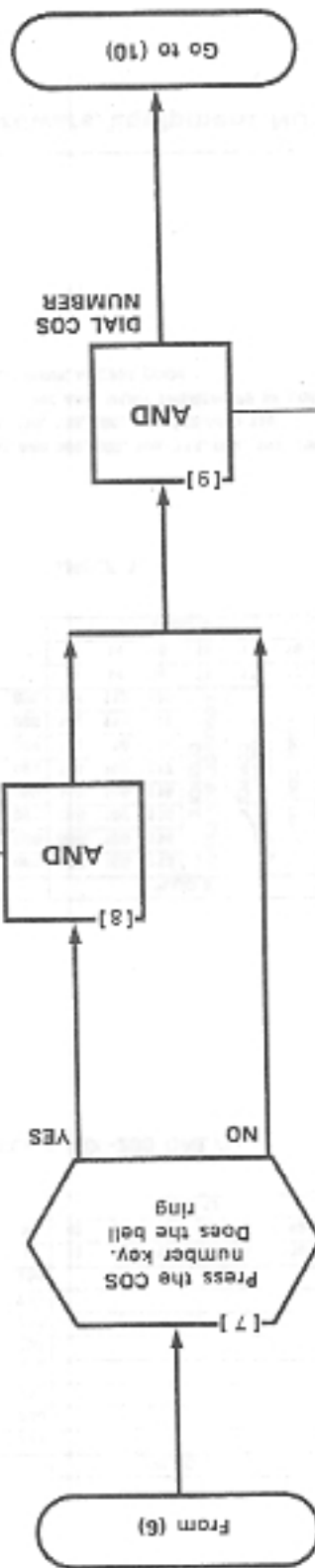
Go to (7)

## ENTER EXTENSION NUMBER

- (6A) Dial extension number
- \* EXTN NUMBER lamp lit
  - \* SOURCE display shows equipment number and existing extension number if assigned
  - \* DESTINATION display shows dialed extension number



|                        |
|------------------------|
| PROGRAM EXTENSIONS     |
| MAP210-206             |
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ENTER COS NUMBER

- Dial COS number (1-16)
- COS NUMBER lamp lit
- SOURCE display shows equipment number and existing COS number
- COS number
- DESTINATION display shows COS number dialed

(8A) If the DESTINATION display shows:

- E1 - bad data received by CPU
- E4 - extension number conflict exists
- E5 - extension number in conflict with existing numbering plan
- C1 - numbering plan conflict. If entry is correct, press CONFIRM button and continue (the original assignment is deleted)

(8B) Return to (5)

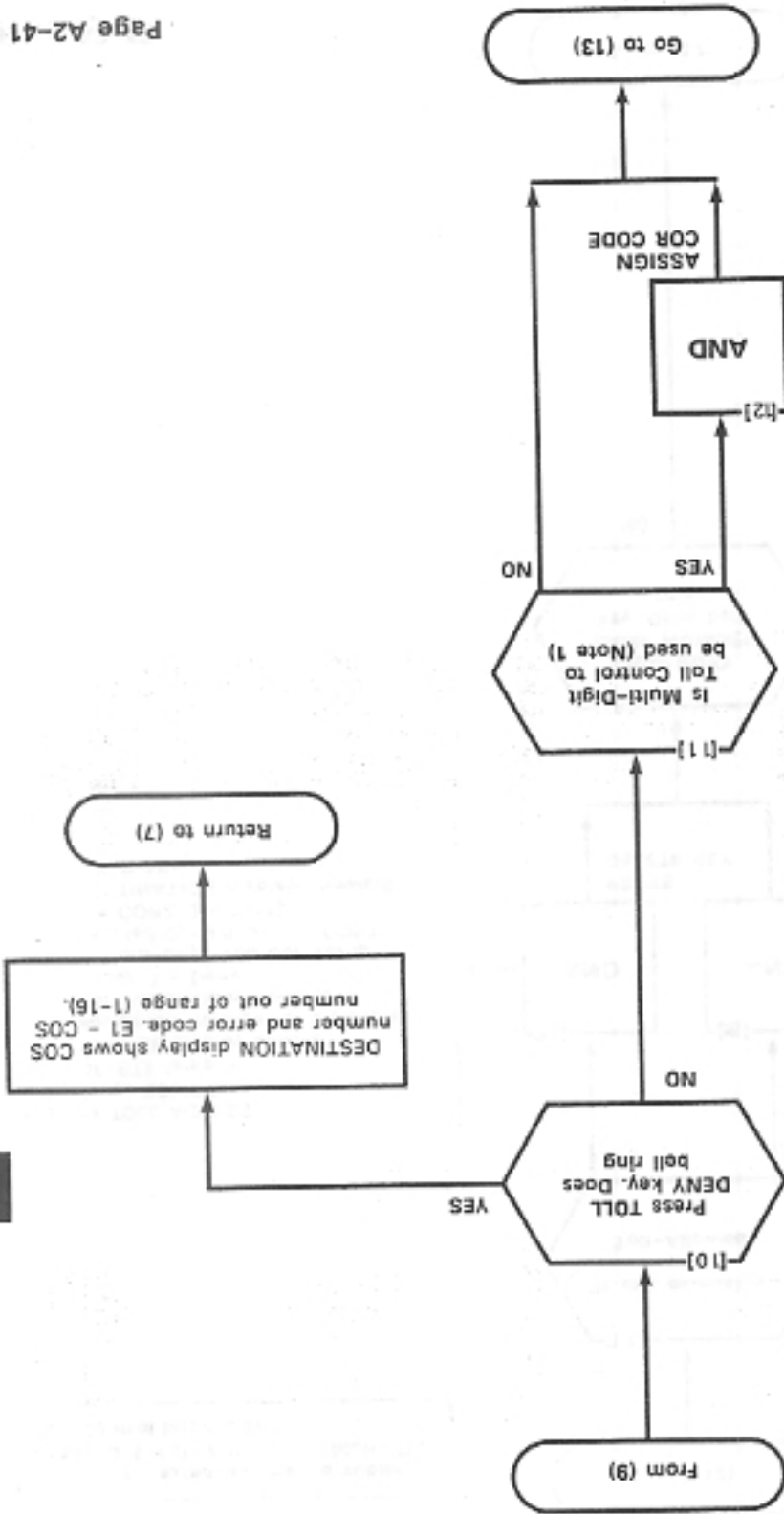
Fig. 206-1 Hardware/Equipment Number

NOTES: 1. DUAL AND OR QUAD RECEIVER EQUIPMENT NUMBERS ARE 090, 098, 108, 114, 082, 100, 108 AND 118.  
 2. QUAD RECEIVER EQUIPMENT NUMBERS ARE 094, 102, 110, 118, 096, 104, 112 AND 120.  
 3. EQUIPMENT POSITION 001 IS RESERVED FOR THE TEST LINE AND MUST THEREFORE BE EQUIPPED WITH A LINE CARD.  
 4. TRUNK EQUIPMENT NUMBER IS SAME AS INDIVIDUAL TRUNK ACCESS CODE.  
 5. SLOT 15 IS RESERVED FOR RECEIVER NO. 1.  
 6. MAGNUM NUMBER OF SUPPSET 41 = 64.

**SHELF 1**

| HARDWARE POSITION NUMBER | PLUG 8 |     |     |     |     |     |     |     |     |     |     |     | PLUG 6 |     |     |     |     |     |     |     |     |     |     |     | PLUG 2 |     |     |     |     |     |     |     |     |     |     |     | PLUG 1 |     |     |     |     |     |     |     |     |     |     |     | PLUG 5 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |    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| 001                      | 009    | 017 | 025 | 033 | 041 | 049 | 057 | 065 | 073 | 081 | 089 | 097 | 105    | 113 | 121 | 129 | 137 | 145 | 153 | 161 | 169 | 177 | 185 | 193 | 201    | 209 | 217 | 225 | 233 | 241 | 249 | 257 | 265 | 273 | 281 | 289 | 297    | 305 | 313 | 321 | 329 | 337 | 345 | 353 | 361 | 369 | 377 | 385 | 393    | 401 | 409 | 417 | 425 | 433 | 441 | 449 | 457 | 465 | 473 | 481 | 489 | 497 | 505 | 513 | 521 | 529 | 537 | 545 | 553 | 561 | 569 | 577 | 585 | 593 | 601 | 609 | 617 | 625 | 633 | 641 | 649 | 657 | 665 | 673 | 681 | 689 | 697 | 705 | 713 | 721 | 729 | 737 | 745 | 753 | 761 | 769 | 777 | 785 | 793 | 801 | 809 | 817 | 825 | 833 | 841 | 849 | 857 | 865 | 873 | 881 | 889 | 897 | 905 | 913 | 921 | 929 | 937 | 945 | 953 | 961 | 969 | 977 | 985 | 993 | 1001 | 1009 | 1017 | 1025 | 1033 | 1041 | 1049 | 1057 | 1065 | 1073 | 1081 | 1089 | 1097 | 1105 | 1113 | 1121 | 1129 | 1137 | 1145 | 1153 | 1161 | 1169 | 1177 | 1185 | 1193 | 1201 | 1209 | 1217 | 1225 | 1233 | 1241 | 1249 | 1257 | 1265 | 1273 | 1281 | 1289 | 1297 | 1305 | 1313 | 1321 | 1329 | 1337 | 1345 | 1353 | 1361 | 1369 | 1377 | 1385 | 1393 | 1401 | 1409 | 1417 | 1425 | 1433 | 1441 | 1449 | 1457 | 1465 | 1473 | 1481 | 1489 | 1497 | 1505 | 1513 | 1521 | 1529 | 1537 | 1545 | 1553 | 1561 | 1569 | 1577 | 1585 | 1593 | 1601 | 1609 | 1617 | 1625 | 1633 | 1641 | 1649 | 1657 | 1665 | 1673 | 1681 | 1689 | 1697 | 1705 | 1713 | 1721 | 1729 | 1737 | 1745 | 1753 | 1761 | 1769 | 1777 | 1785 | 1793 | 1801 | 1809 | 1817 | 1825 | 1833 | 1841 | 1849 | 1857 | 1865 | 1873 | 1881 | 1889 | 1897 | 1905 | 1913 | 1921 | 1929 | 1937 | 1945 | 1953 | 1961 | 1969 | 1977 | 1985 | 1993 | 2001 | 2009 | 2017 | 2025 | 2033 | 2041 | 2049 | 2057 | 2065 | 2073 | 2081 | 2089 | 2097 | 2105 | 2113 | 2121 | 2129 | 2137 | 2145 | 2153 | 2161 | 2169 | 2177 | 2185 | 2193 | 2201 | 2209 | 2217 | 2225 | 2233 | 2241 | 2249 | 2257 | 2265 | 2273 | 2281 | 2289 | 2297 | 2305 | 2313 | 2321 | 2329 | 2337 | 2345 | 2353 | 2361 | 2369 | 2377 | 2385 | 2393 | 2401 | 2409 | 2417 | 2425 | 2433 | 2441 | 2449 | 2457 | 2465 | 2473 | 2481 | 2489 | 2497 | 2505 | 2513 | 2521 | 2529 | 2537 | 2545 | 2553 | 2561 | 2569 | 2577 | 2585 | 2593 | 2601 | 2609 | 2617 | 2625 | 2633 | 2641 | 2649 | 2657 | 2665 | 2673 | 2681 | 2689 | 2697 | 2705 | 2713 | 2721 | 2729 | 2737 | 2745 | 2753 | 2761 | 2769 | 2777 | 2785 | 2793 | 2801 | 2809 | 2817 | 2825 | 2833 | 2841 | 2849 | 2857 | 2865 | 2873 | 2881 | 2889 | 2897 | 2905 | 2913 | 2921 | 2929 | 2937 | 2945 | 2953 | 2961 | 2969 | 2977 | 2985 | 2993 | 3001 | 3009 | 3017 | 3025 | 3033 | 3041 | 3049 | 3057 | 3065 | 3073 | 3081 | 3089 | 3097 | 3105 | 3113 | 3121 | 3129 | 3137 | 3145 | 3153 | 3161 | 3169 | 3177 | 3185 | 3193 | 3201 | 3209 | 3217 | 3225 | 3233 | 3241 | 3249 | 3257 | 3265 | 3273 | 3281 | 3289 | 3297 | 3305 | 3313 | 3321 | 3329 | 3337 | 3345 | 3353 | 3361 | 3369 | 3377 | 3385 | 3393 | 3401 | 3409 | 3417 | 3425 | 3433 | 3441 | 3449 | 3457 | 3465 | 3473 | 3481 | 3489 | 3497 | 3505 | 3513 | 3521 | 3529 | 3537 | 3545 | 3553 | 3561 | 3569 | 3577 | 3585 | 3593 | 3601 | 3609 | 3617 | 3625 | 3633 | 3641 | 3649 | 3657 | 3665 | 3673 | 3681 | 3689 | 3697 | 3705 | 3713 | 3721 | 3729 | 3737 | 3745 | 3753 | 3761 | 3769 | 3777 | 3785 | 3793 | 3801 | 3809 | 3817 | 3825 | 3833 | 3841 | 3849 | 3857 | 3865 | 3873 | 3881 | 3889 | 3897 | 3905 | 3913 | 3921 | 3929 | 3937 | 3945 | 3953 | 3961 | 3969 | 3977 | 3985 | 3993 | 4001 | 4009 | 4017 | 4025 | 4033 | 4041 | 4049 | 4057 | 4065 | 4073 | 4081 | 4089 | 4097 | 4105 | 4113 | 4121 | 4129 | 4137 | 4145 | 4153 | 4161 | 4169 | 4177 | 4185 | 4193 | 4201 | 4209 | 4217 | 4225 | 4233 | 4241 | 4249 | 4257 | 4265 | 4273 | 4281 | 4289 | 4297 | 4305 | 4313 | 4321 | 4329 | 4337 | 4345 | 4353 | 4361 | 4369 | 4377 | 4385 | 4393 | 4401 | 4409 | 4417 | 4425 | 4433 | 4441 | 4449 | 4457 | 4465 | 4473 | 4481 | 4489 | 4497 | 4505 | 4513 | 4521 | 4529 | 4537 | 4545 | 4553 | 4561 | 4569 | 4577 | 4585 | 4593 | 4601 | 4609 | 4617 | 4625 | 4633 | 4641 | 4649 | 4657 | 4665 | 4673 | 4681 | 4689 | 4697 | 4705 | 4713 | 4721 | 4729 | 4737 | 4745 | 4753 | 4761 | 4769 | 4777 | 4785 | 4793 | 4801 | 4809 | 4817 | 4825 | 4833 | 4841 | 4849 | 4857 | 4865 | 4873 | 4881 | 4889 | 4897 | 4905 | 4913 | 4921 | 4929 | 4937 | 4945 | 4953 | 4961 | 4969 | 4977 | 4985 | 4993 | 5001 | 5009 | 5017 | 5025 | 5033 | 5041 | 5049 | 5057 | 5065 | 5073 | 5081 | 5089 | 5097 | 5105 | 5113 | 5121 | 5129 | 5137 | 5145 | 5153 | 5161 | 5169 | 5177 | 5185 | 5193 | 5201 | 5209 | 5217 | 5225 | 5233 | 5241 | 5249 | 5257 | 5265 | 5273 | 5281 | 5289 | 5297 | 5305 | 5313 | 5321 | 5329 | 5337 | 5345 | 5353 | 5361 | 5369 | 5377 | 5385 | 5393 | 5401 | 5409 | 5417 | 5425 | 5433 | 5441 | 5449 | 5457 | 5465 | 5473 | 5481 | 5489 | 5497 | 5505 | 5513 | 5521 | 5529 | 5537 | 5545 | 5553 | 5561 | 5569 | 5577 | 5585 | 5593 | 5601 | 5609 | 5617 | 5625 | 5633 | 5641 | 5649 | 5657 | 5665 | 5673 | 5681 | 5689 | 5697 | 5705 | 5713 | 5721 | 5729 | 5737 | 5745 | 5753 | 5761 | 5769 | 5777 | 5785 | 5793 | 5801 | 5809 | 5817 | 5825 | 5833 | 5841 | 5849 | 5857 | 5865 | 5873 | 5881 | 5889 | 5897 | 5905 | 5913 | 5921 | 5929 | 5937 | 5945 | 5953 | 5961 | 5969 | 5977 | 5985 | 5993 | 6001 | 6009 | 6017 | 6025 | 6033 | 6041 | 6049 | 6057 | 6065 | 6073 | 6081 | 6089 | 6097 | 6105 | 6113 | 6121 | 6129 | 6137 | 6145 | 6153 | 6161 | 6169 | 6177 | 6185 | 6193 | 6201 | 6209 | 6217 | 6225 | 6233 | 6241 | 6249 | 6257 | 6265 | 6273 | 6281 | 6289 | 6297 | 6305 | 6313 | 6321 | 6329 | 6337 | 6345 | 6353 | 6361 | 6369 | 6377 | 6385 | 6393 | 6401 | 6409 | 6417 | 6425 | 6433 | 6441 | 6449 | 6457 | 6465 | 6473 | 6481 | 6489 | 6497 | 6505 | 6513 | 6521 | 6529 | 6537 | 6545 | 6553 | 6561 | 6569 | 6577 | 6585 | 6593 | 6601 | 6609 | 6617 | 6625 | 6633 | 6641 | 6649 | 6657 | 6665 | 6673 | 6681 | 6689 | 6697 | 6705 | 6713 | 6721 | 6729 | 6737 | 6745 | 6753 | 6761 | 6769 | 6777 | 6785 | 6793 | 6801 | 6809 | 6817 | 6825 | 6833 | 6841 | 6849 | 6857 | 6865 | 6873 | 6881 | 6889 | 6897 | 6905 | 6913 | 6921 | 6929 | 6937 | 6945 | 6953 | 6961 | 6969 | 6977 | 6985 | 6993 | 7001 | 7009 | 7017 | 7025 | 7033 | 7041 | 7049 | 7057 | 7065 | 7073 | 7081 | 7089 | 7097 | 7105 | 7113 | 7121 | 7129 | 7137 | 7145 | 7153 | 7161 | 7169 | 7177 | 7185 | 7193 | 7201 | 7209 | 7217 | 7225 | 7233 | 7241 | 7249 | 7257 | 7265 | 7273 | 7281 | 7289 | 7297 | 7305 | 7313 | 7321 | 7329 | 7337 | 7345 | 7353 | 7361 | 7369 | 7377 | 7385 | 7393 | 7401 | 7409 | 7417 | 7425 | 7433 | 7441 | 7449 | 7457 | 7465 | 7473 | 7481 | 7489 | 7497 | 7505 | 7513 | 7521 | 7529 | 7537 | 7545 | 7553 | 7561 | 7569 | 7577 | 7585 | 7593 | 7601 | 7609 | 7617 | 7625 | 7633 | 7641 | 7649 | 7657 | 7665 | 7673 | 7681 | 7689 | 7697 | 7705 | 7713 | 7721 | 7729 | 7737 | 7745 | 7753 | 7761 | 7769 | 7777 | 7785 | 7793 | 7801 | 7809 | 7817 | 7825 | 7833 | 7841 | 7849 | 7857 | 7865 | 7873 | 7881 | 7889 | 7897 | 7905 | 7913 | 7921 | 7929 | 7937 | 7945 | 7953 | 7961 | 7969 | 7977 | 7985 | 7993 | 8001 | 8009 | 8017 | 8025 | 8033 | 8041 | 8049 | 8057 | 8065 | 8073 | 8081 | 8089 | 8097 | 8105 | 8113 | 8121 | 8129 | 8137 | 8145 | 8153 | 8161 | 8169 | 8177 | 8185 | 8193 | 8201 | 8209 | 8217 | 8225 | 8233 | 8241 | 8249 | 8257 | 8265 | 8273 | 8281 | 8289 | 8297 | 8305 | 8313 | 8321 | 8329 | 8337 | 8345 | 8353 | 8361 | 8369 | 8377 | 8385 | 8393 | 8401 | 8409 | 8417 | 8425 | 8433 | 8441 | 8449 | 8457 | 8465 | 8473 | 8481 | 8489 | 8497 | 8505 | 8513 | 8521 | 8529 | 8537 | 8545 | 8553 | 8561 | 8569 | 8577 | 8585 | 8593 | 8601 | 8609 | 8617 | 8625 | 8633 | 8641 | 8649 | 8657 | 8665 | 8673 | 8681 | 8689 | 8697 | 8705 | 8713 | 8721 | 8729 | 8737 | 8745 | 8753 | 8761 | 8769 | 8777 | 8785 | 8793 | 8801 | 8809 | 8817 | 8825 | 8833 | 8841 | 8849 | 8857 | 8865 | 8873 | 8881 | 8889 | 8897 | 8905 | 8913 | 8921 | 8929 | 8937 | 8945 | 8953 | 8961 | 8969 | 8977 | 8985 | 8993 | 9001 | 9009 | 9017 | 9025 | 9033 | 9041 | 9049 | 9057 | 9065 | 9073 | 9081 | 9089 | 9097 | 9105 | 9113 | 9121 | 9129 | 9137 | 9145 | 9153 | 9161 | 9169 | 9177 | 9185 | 9193 | 9201 | 9209 | 9217 | 9225 | 9233 | 9241 | 9249 | 9257 | 9265 | 9273 | 9281 | 9289 | 9297 | 9305 | 9313 | 9321 | 9329 | 9337 | 9345 | 9353 | 9361 | 9369 | 9377 | 9385 | 9393 | 9401 | 9409 | 9417 | 9425 | 9433 | 9441 | 9449 | 9457 | 9465 | 9473 | 9481 | 9489 | 9497 | 9505 | 9513 | 9521 | 9529 | 9537 | 9545 | 9553 | 9561 | 9569 | 9577 | 9585 | 9593 | 9601 | 9609 | 9617 | 9625 | 9633 | 9641 | 9649 | 9657 | 9665 | 9673 | 9681 | 9689 | 9697 | 9705 | 9713 | 9721 | 9729 | 9737 | 9745 | 9753 | 9761 | 9769 | 9777 | 9785 | 9793 | 9801 | 9809 | 9817 | 9825 | 9833 | 9841 | 9849 | 9857 | 9865 | 9873 | 9881 | 9889 | 9897 | 9905 | 9913 | 9921 | 9929 | 9937 | 9945 | 9953 | 9961 | 9969 | 9977 | 9985 | 9993 | 10001 | 10009 | 10017 | 10025 | 10033 | 10041 | 10049 | 10057 | 10065 | 10073 | 10081 | 10089 | 10097 | 10105 | 10113 | 10121 | 10129 | 10137 | 10145 | 10153 | 10161 | 10169 | 10177 | 10185 | 10193 | 10201 | 10209 | 10217 | 10225 | 10233 | 10241 | 10249 | 10257 | 10265 | 10273 |

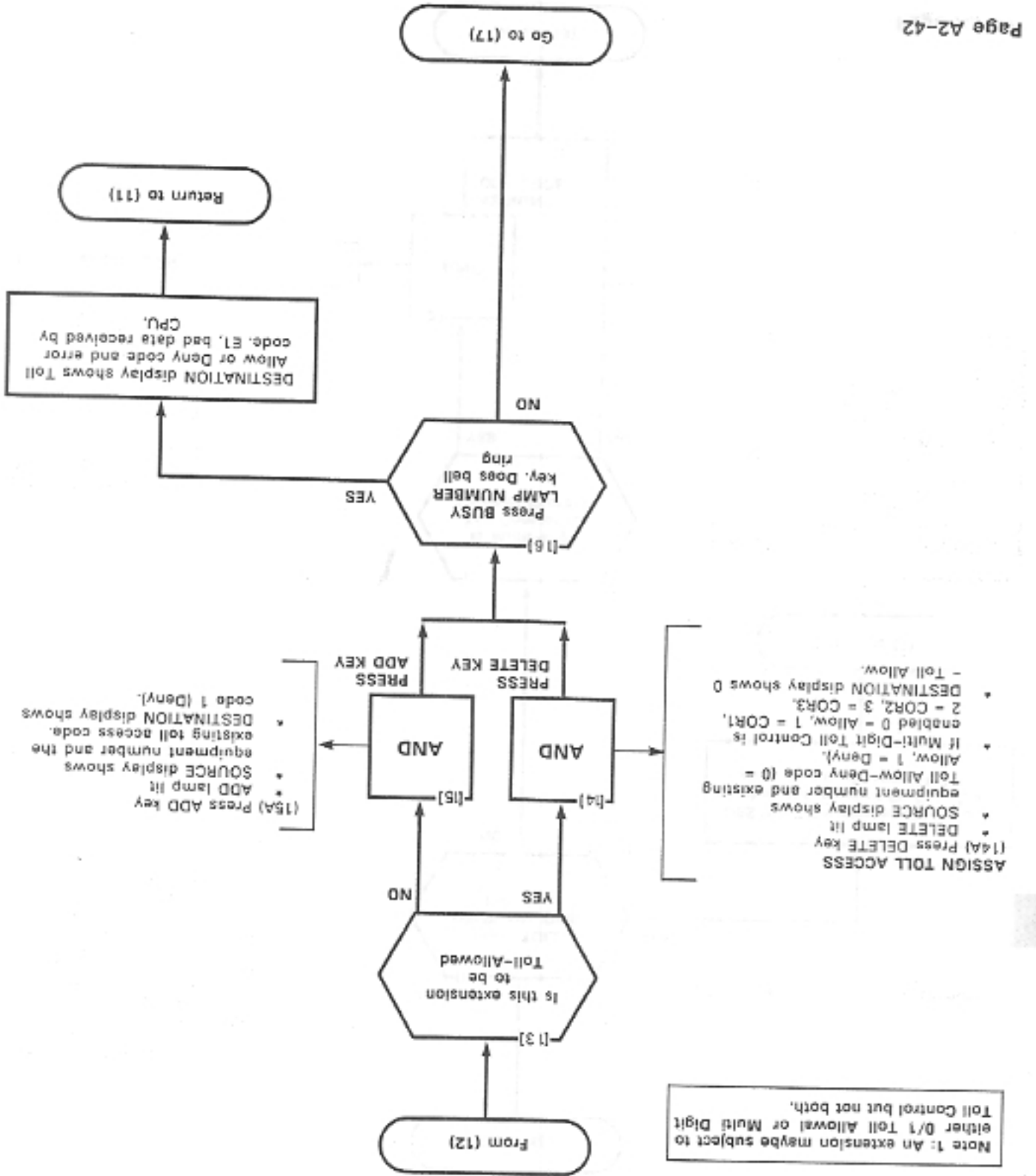
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| PROGRAM EXTENSIONS     |
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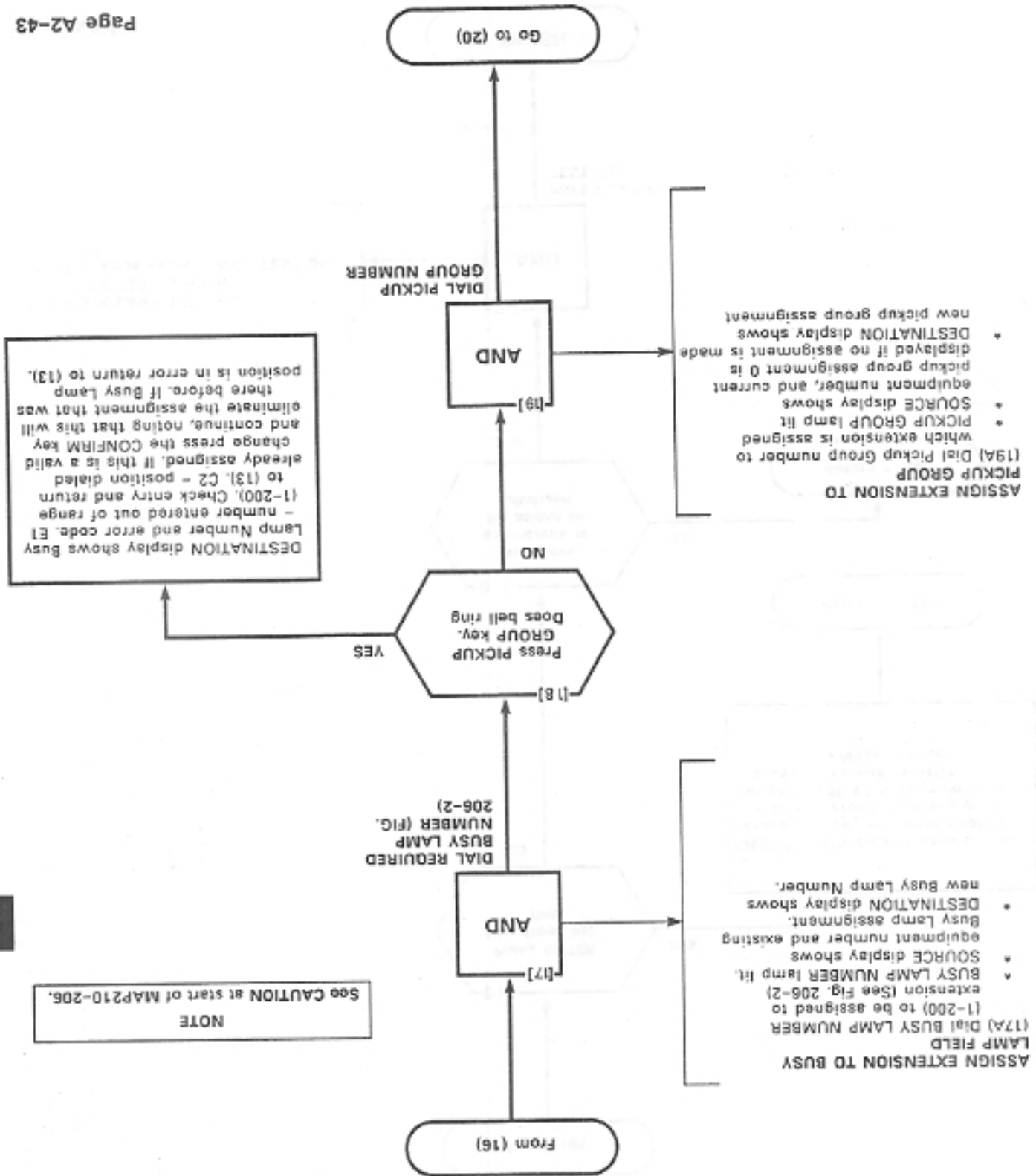


(12A) Dial COR code 1, 2 or 3.

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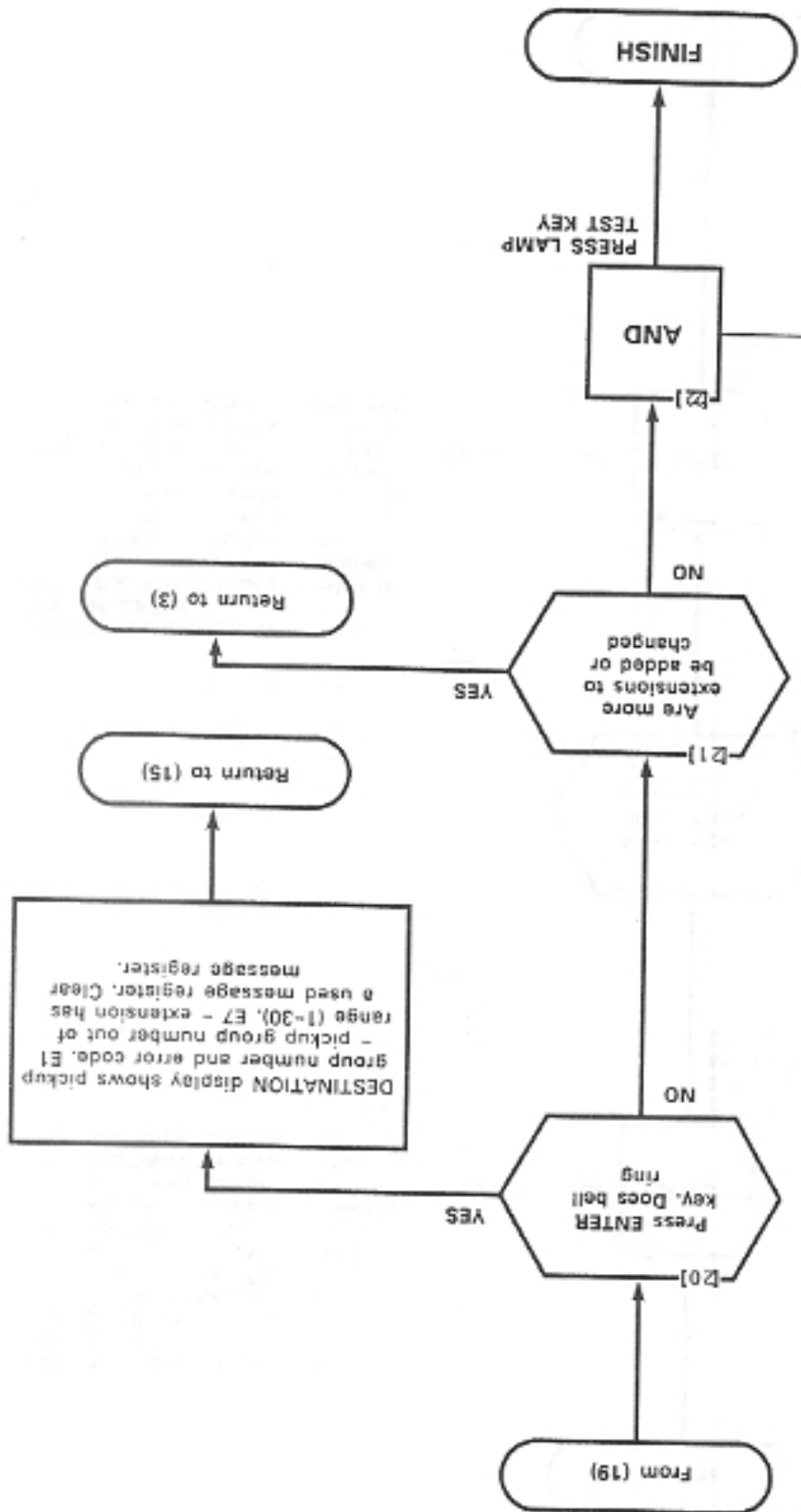
Note 1: An extension maybe subject to either 0/1 Toll Allowal or Multidigit Toll Control but not both.





NOTE  
See CAUTION at start of MAP210-206.

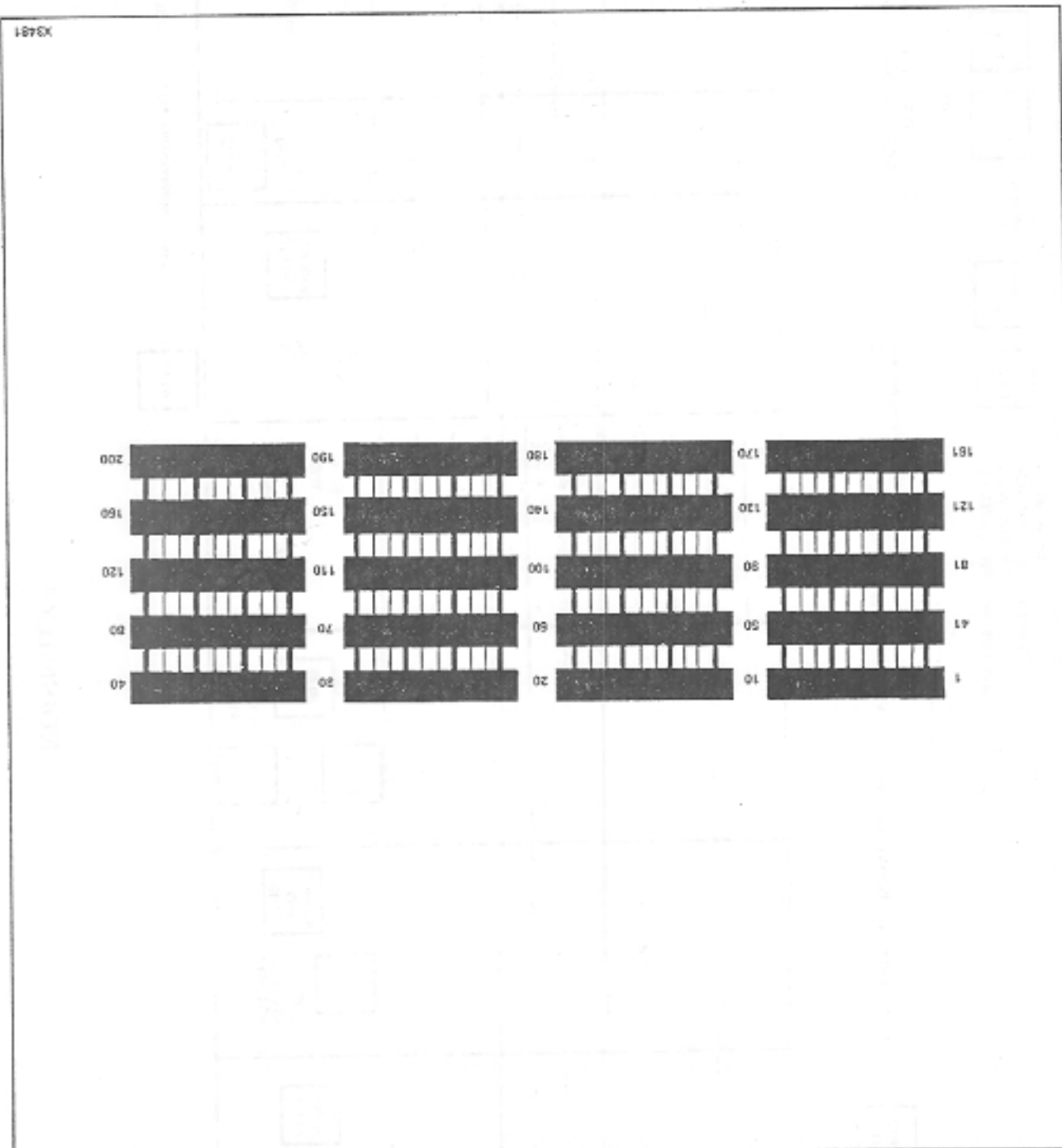
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(22A) Press LAMP TEST key  
 \* LAMP TEST lamp lit  
 \* All lamps except LAMP TEST go dark

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Fig. 206-2 Busy Lamp Position Numbering



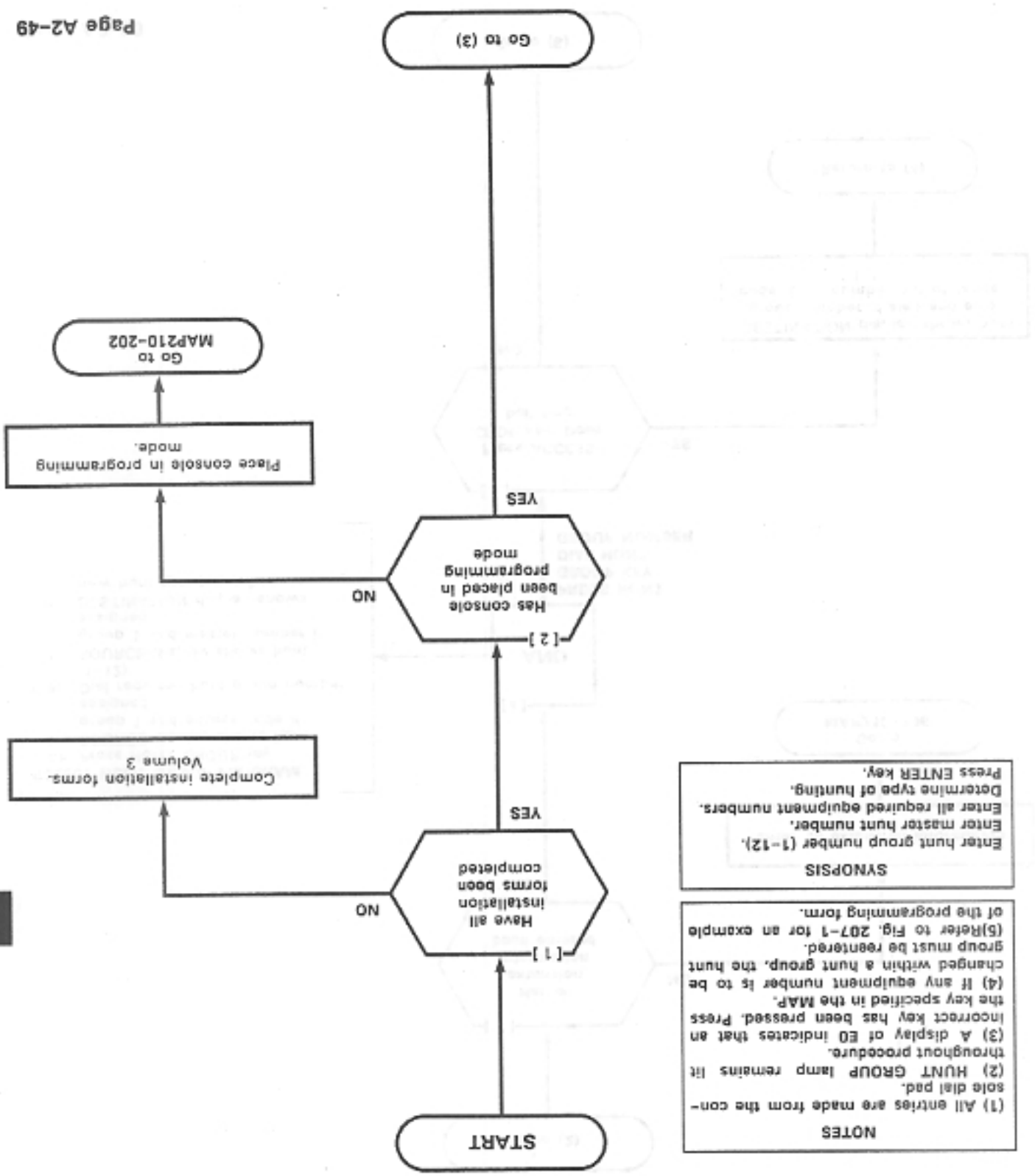
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| PROGRAM EXTENSIONS     |
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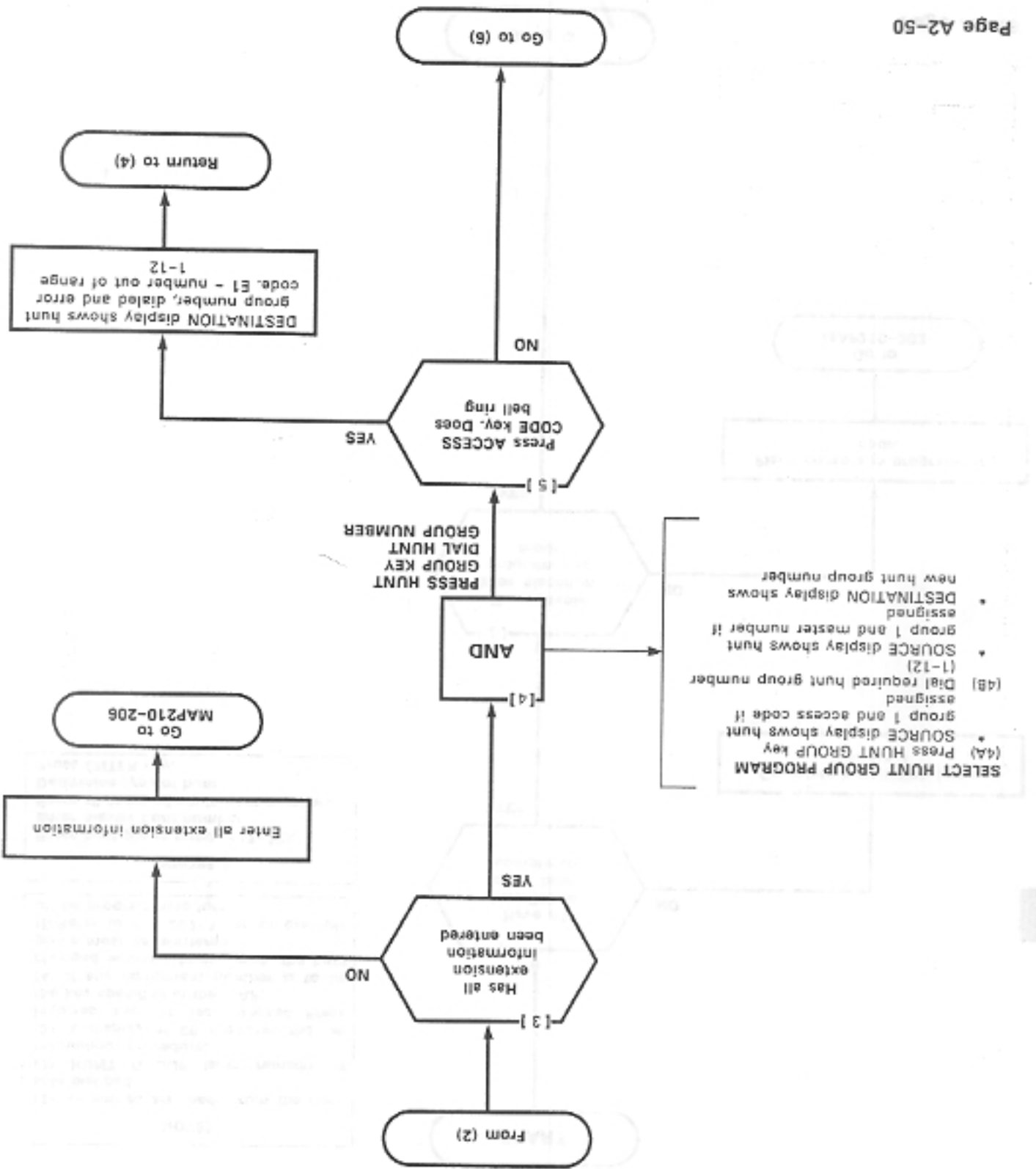


**SYNOPSIS**  
 Enter hunt group number (1-12).  
 Enter master hunt number.  
 Enter all required equipment numbers.  
 Determine type of hunting.  
 Press ENTER key.

**NOTES**  
 (1) All entries are made from the console dial pad.  
 (2) HUNT GROUP lamp remains lit throughout procedure.  
 (3) A display of E0 indicates that an incorrect key has been pressed. Press the key specified in the MAP.  
 (4) If any equipment number is to be changed within a hunt group, the hunt group must be reentered.  
 (5) Refer to Fig. 207-1 for an example of the programming form.

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| PROGRAM EXTENSION HUNT GROUPS |
| MAP210-207                    |
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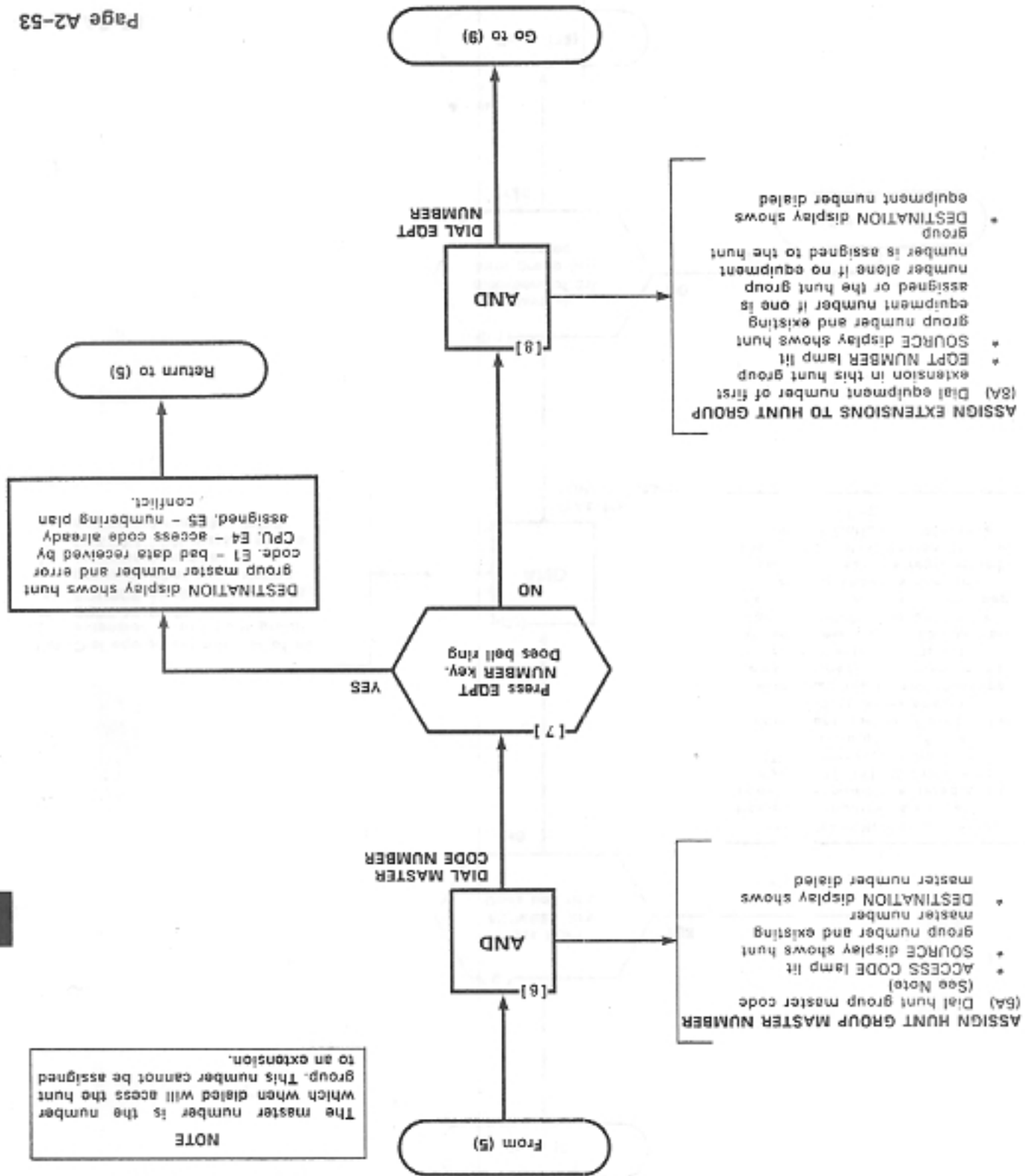




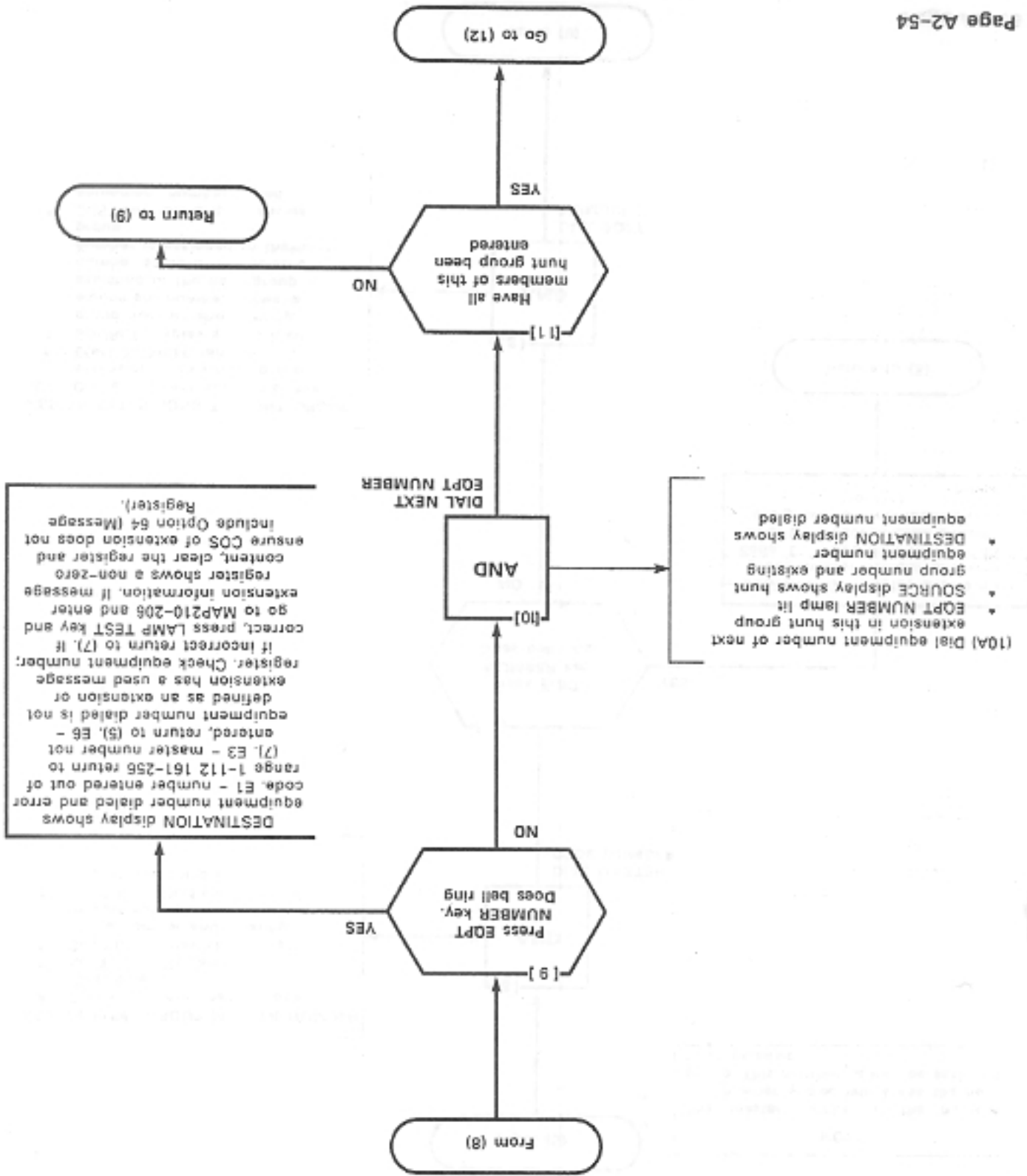


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| PROGRAM EXTENSION HUNT GROUPS |
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**NOTE**  
The master number is the number which when dialed will access the hunt group. This number cannot be assigned to an extension.

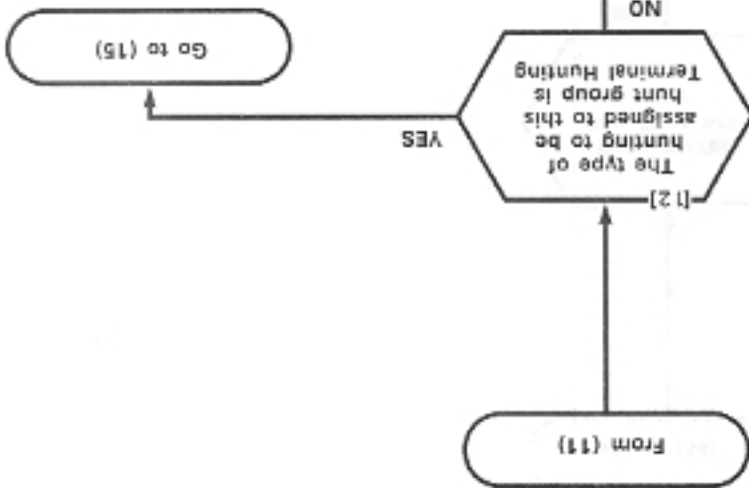


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| PROGRAM EXTENSION HUNT GROUPS |
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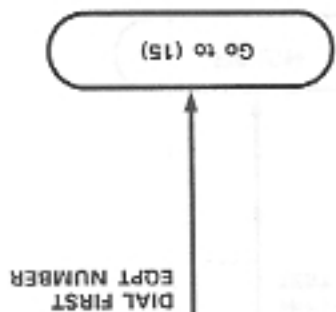




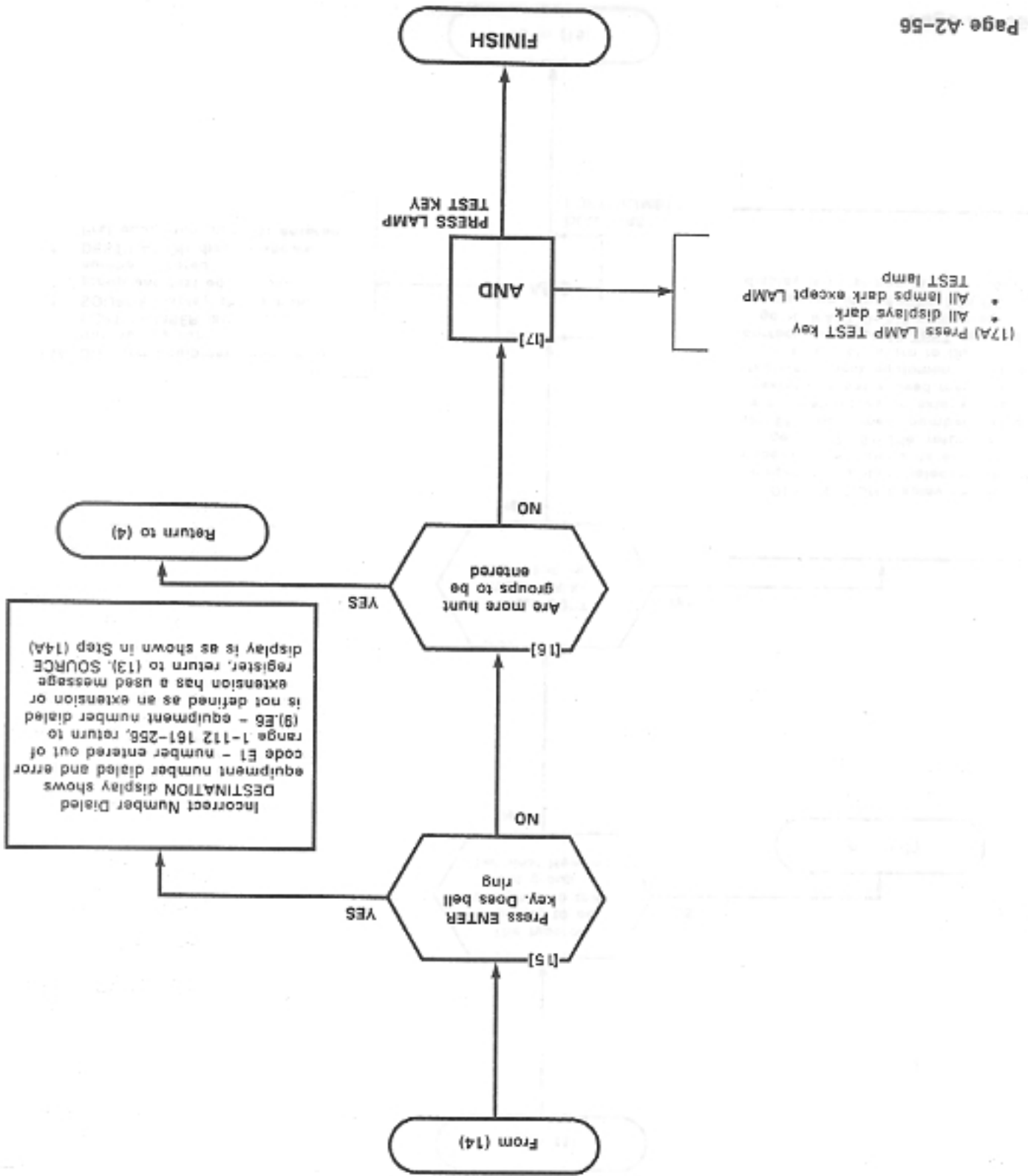
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DESTINATION display shows equipment number dialed and error code. E1 - number entered out of range 1-112 161-256, return to (9). E6 - equipment number dialed is not defined as an extension or extension has a used message register. Check equipment number, if incorrect return to (8). If correct, press LAMP TEST key and go to MAP210-206 and enter extension information. SOURCE display is as shown in Step (14a).



- (14a) Dial first equipment number on this hunt group
- EQPT NUMBER lamp lit
  - SOURCE display shows hunt group and last equipment number entered
  - DESTINATION display shows first equipment number entered



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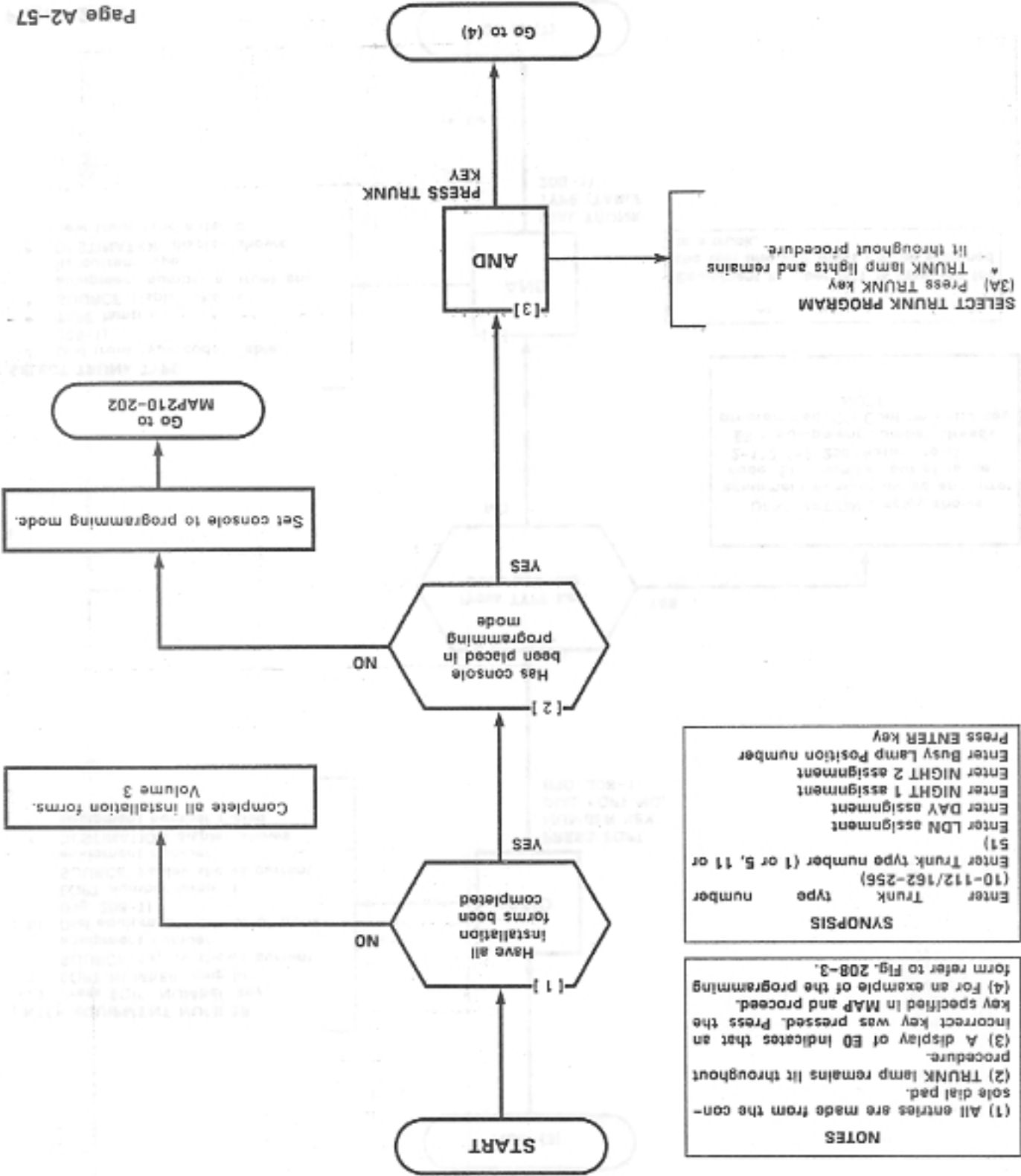
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| PROGRAM NON-DIAL-IN TRUNKS |
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**NOTES**

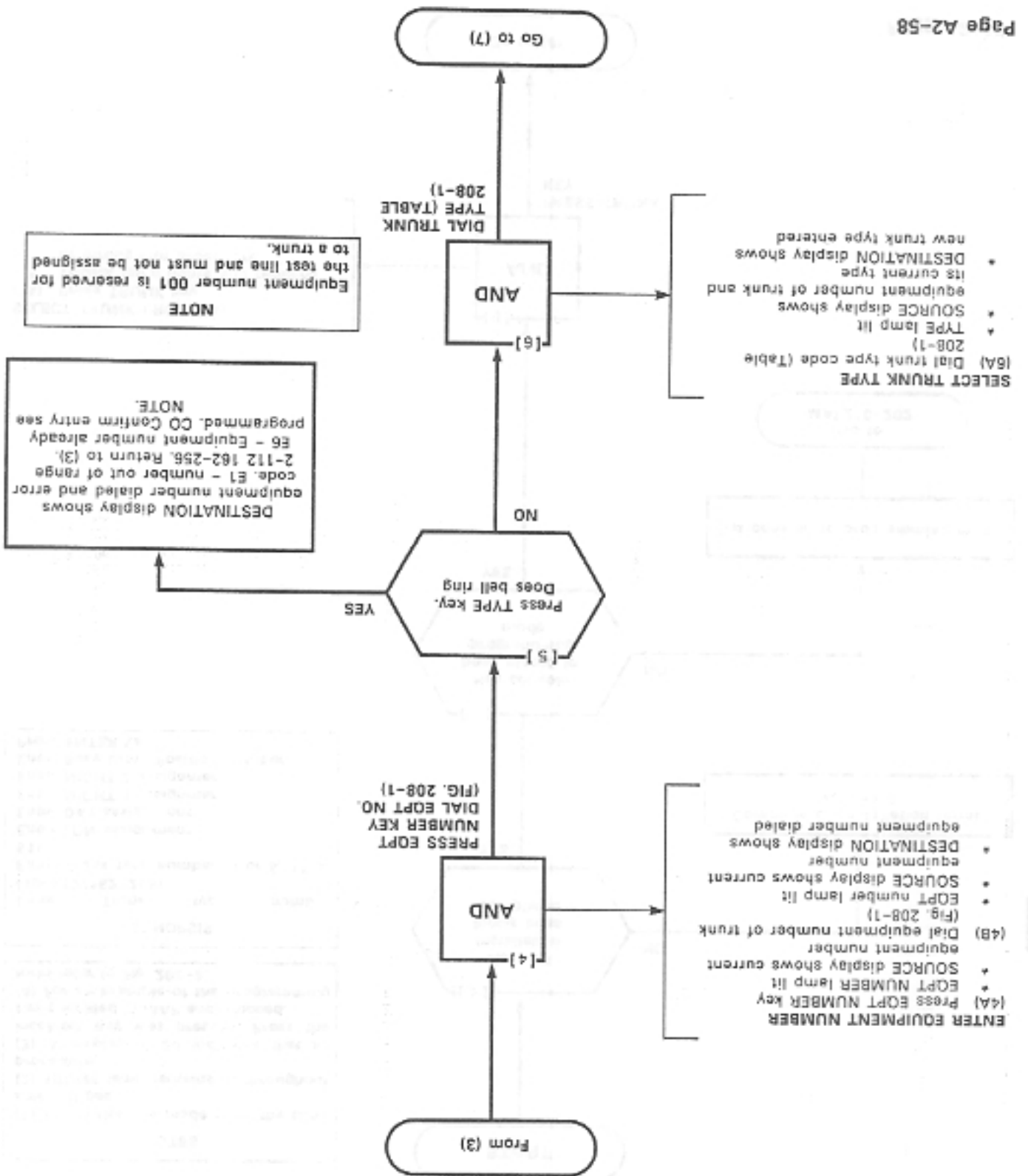
(1) All entries are made from the console dial pad.  
 (2) TRUNK lamp remains lit throughout procedure.  
 (3) A display of E0 indicates that an incorrect key was pressed. Press the key specified in MAP and proceed.  
 (4) For an example of the programming form refer to Fig. 208-3.

**SYNOPSIS**

Enter Trunk type number  
 (10-112/162-256)  
 Enter Trunk type number (1 or 5, 11 or 51)  
 Enter LDN assignment  
 Enter DAY assignment  
 Enter NIGHT 1 assignment  
 Enter NIGHT 2 assignment  
 Enter Busy Lamp Position number  
 Press ENTER key



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**NOTE**

The equipment number dialed is either assigned to an extension or does not contain a trunk card.

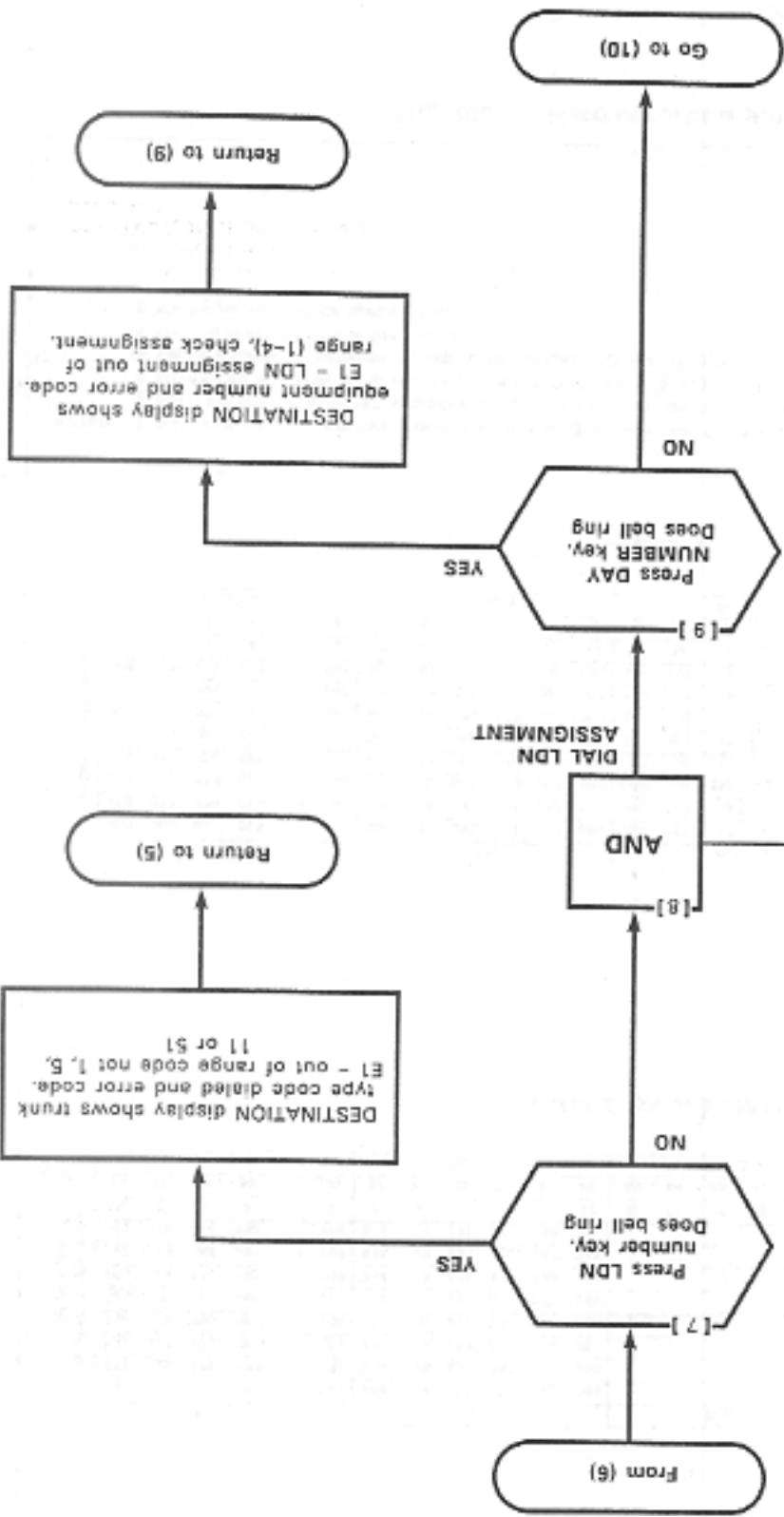
Check equipment number and card slot. If you wish to remove the previous assignment and assign this equipment position to the trunk press **CONFIRM** key and return to (3). If you wish to change the equipment entry, return to (3).

**TABLE 208-1**

| Code | Type                      |
|------|---------------------------|
| 1    | Both way CO trunk VNL     |
| 2    | Non Dial-In Trunk VNL     |
| 11   | Both way CO Trunk Non VNL |
| 51   | Non Dial-In Trunk Non VNL |

**ASSIGN TRUNK TO LDN KEY** (BA) Dial LDN key number (1-4) to be assigned to trunk

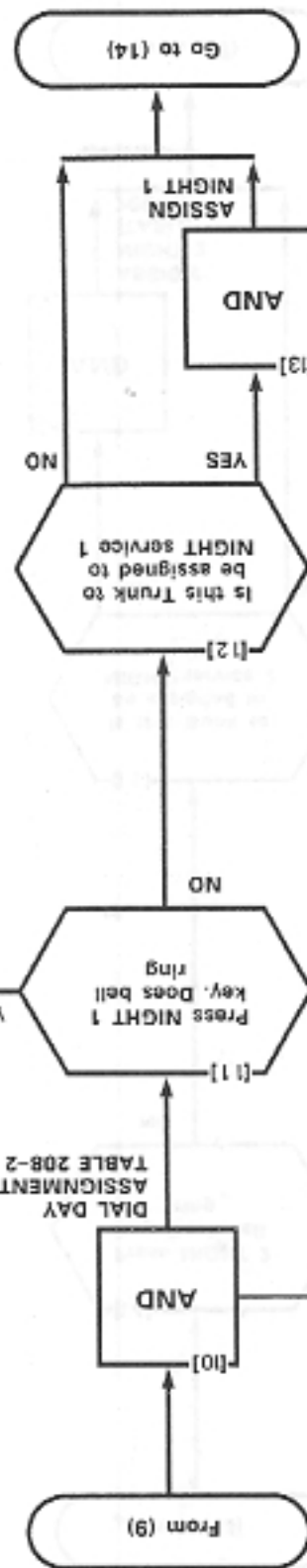
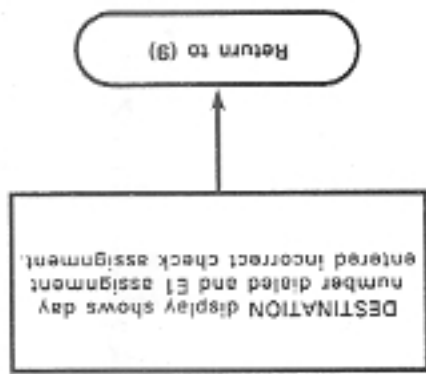
- \* LDN lamp !!
- \* SOURCE display shows equipment number and current LDN key assignment
- \* DESTINATION display shows new LDN assignment



**TABLE 208-2**

| Code Assignment             | Display |
|-----------------------------|---------|
| Attendant                   | 0       |
| #1 Bell 1 plus Attendant    | 1       |
| #2 Bell 2 plus Attendant    | 2       |
| #3 Bell 3 plus Attendant    | 3       |
| non-Equipment Number        | non     |
| of extension                | non     |
| * as Hunt Group number 5-12 | xxx     |

**NOTE**  
 The # Key is displayed as 1 on the console display. The \* Key is displayed as L on the console display.



- ENTER DAY ASSIGNMENT (10A) Dial DAY assignment of trunk**
- DAY lamp lit (see Table 208-2)
  - SOURCE display shows equipment number and current day assignment (Table 208-2)
  - DESTINATION display shows new day assignment (Table 208-2)

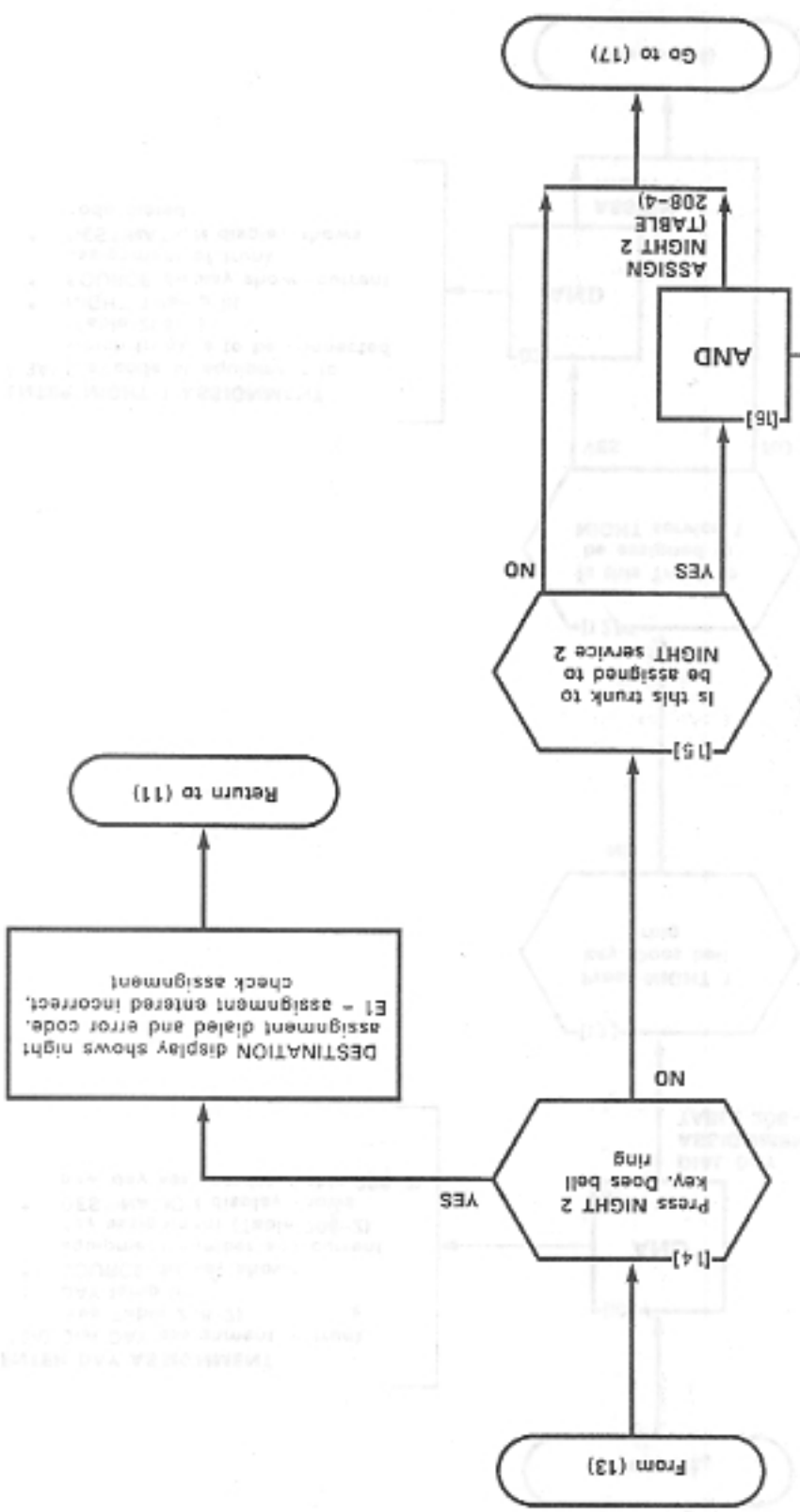
- ENTER NIGHT 1 ASSIGNMENT (13A) Dial code of equipment to which trunk is to be connected**
- NIGHT 1 lamp lit (Table 208-3)
  - SOURCE display shows current assignment of trunk
  - DESTINATION display shows code dialed

TABLE 208-3

| Code Assignment             | Display |
|-----------------------------|---------|
| #0 Attendant console        | 0       |
| #1 Bell 1 plus attendant    | 1       |
| #2 Bell 2 plus attendant    | 2       |
| #3 Bell 3 plus attendant    | 3       |
| non Equipment Number        | non     |
| of extension                |         |
| * as Hunt Group number 1-12 | Las     |

NOTE  
 The # Key is displayed as 1 on the console display. The \* Key is displayed as L on the console display.

- (16A) Dial code of equipment to which trunk is to be connected (Table 208-4)
- NIGHT 2 lamp lit
  - SOURCE display shows current assignment of trunk
  - DESTINATION display shows code dialed





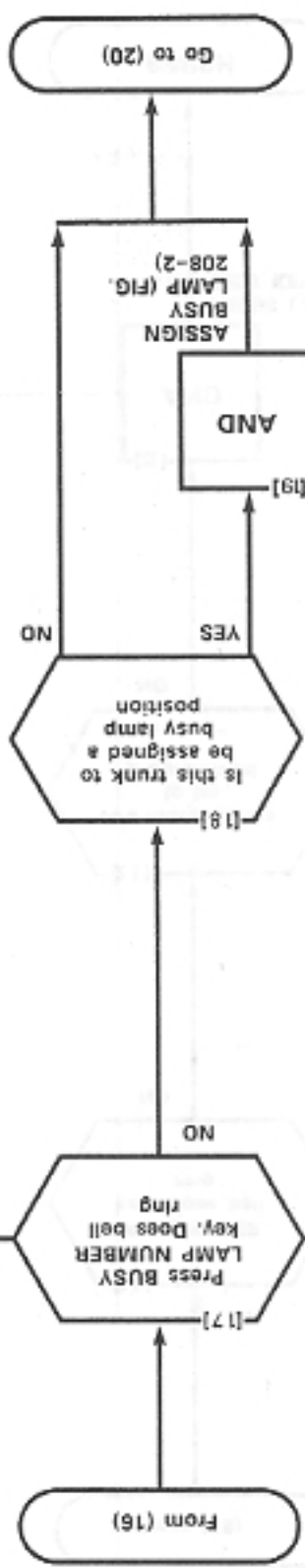
**TABLE 208-4**

| Code Assignment                          | Display |
|--|---------|
| #0 Attendant console                     | 0       |
| #1 Bell 1 plus Attendant                 | 1       |
| #2 Bell 2 plus Attendant                 | 2       |
| #3 Bell 3 plus Attendant                 | 3       |
| non Equipment Number                     | non     |
| * as Hunt Group number 1-12 of extension | Las     |

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DESTINATION display shows Night assignment dialed and E1 - assignment entered incorrect, check assignment

Return to (14)



**NOTE**  
 The # Key is displayed as 1 on the console display. The \* Key is displayed as L on the console display.

- ASSIGN TRUNK TO BUSY LAMP FIELD**  
 (19A) Dial busy lamp position assigned to the trunk (Fig. 208-2)
- \* BUSY LAMP number lamp lit
  - \* SOURCE display shows equipment number of trunk and current busy lamp assignment
  - \* DESTINATION display shows new busy lamp assignment

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**NOTE**  
 The busy lamp position dialed already exists. If assignment dialed is correct, press the CONFIRM key, this will re-move the original assignment and as-sign the busy lamp position to this trunk. The busy lamp will therefore, in-dicate multiple numbers. Multiple ap-pearances may be removed by proceeding through this MAP.

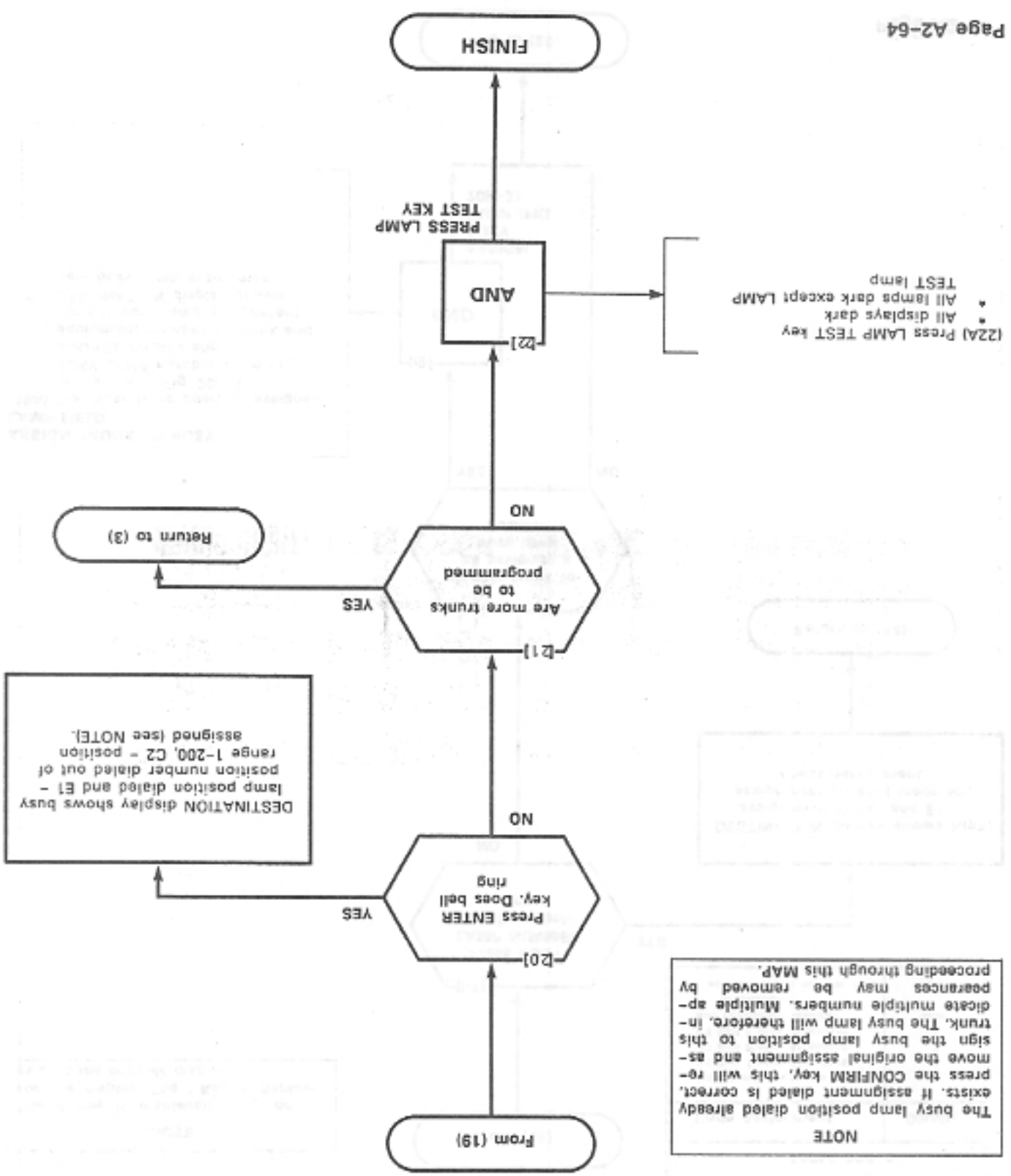
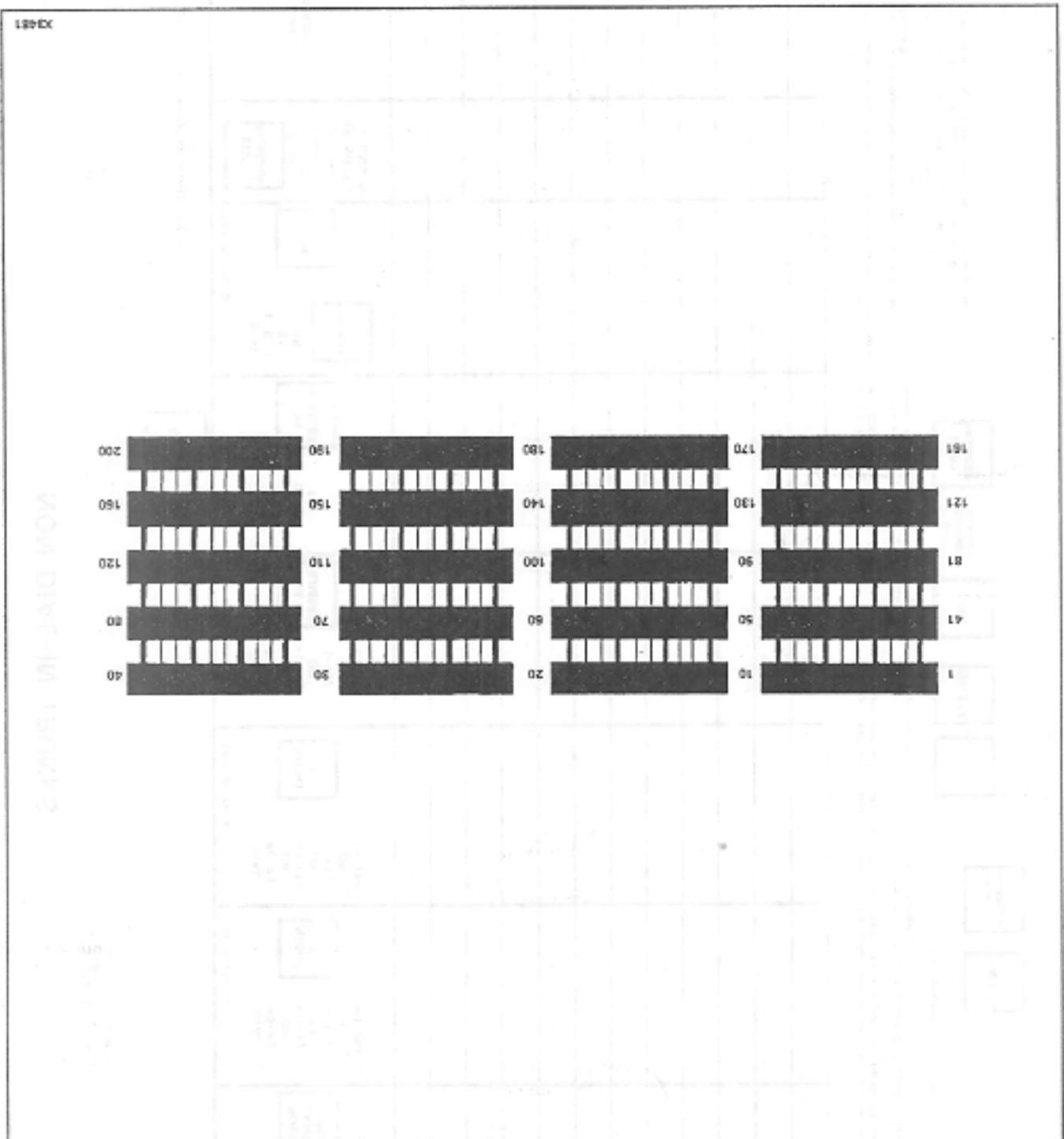


Fig. 208-2 Busy Lamp Position Numbering



|                            |
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## NOTES

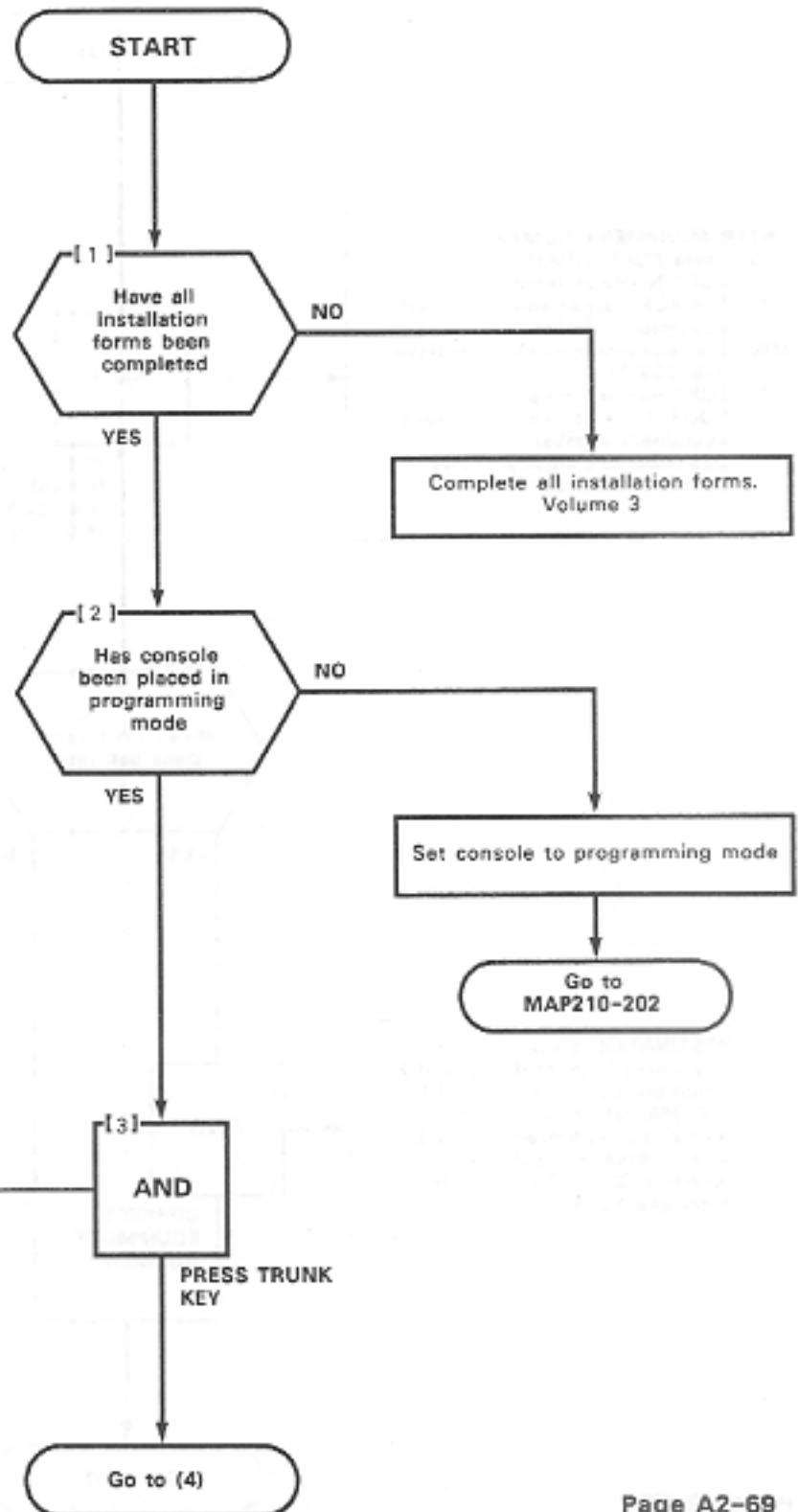
- (1) All entries are made from the console dial pad  
 (2) TRUNK lamp remains lit throughout procedure  
 (3) A display of EO indicates that an incorrect key was pressed. Press the key specified in MAP and proceed.  
 (4) This flow chart applies to E&M, LOOP and DX Tie Trunks  
 (5) Refer to Fig. 209-3 for an example of the form.

## SYNOPSIS

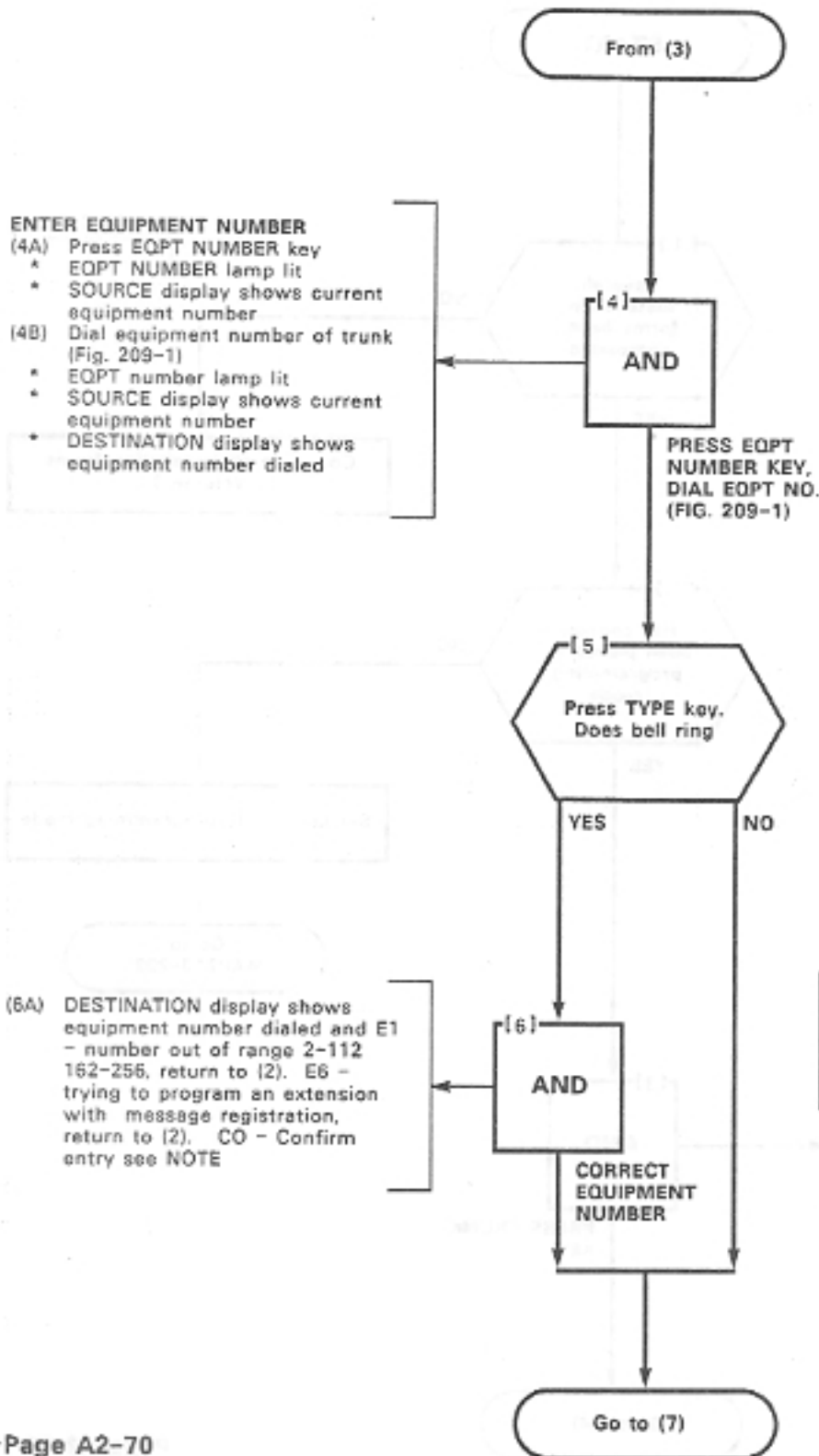
Press TRUNK key.  
 Enter Equipment number  
 (10-161/162-256)  
 Enter Trunk type number 2 or 4, 21 or 41  
 Enter Trunk COS  
 Enter Toll Allow/Deny code  
 Enter Busy Lamp Position number  
 Press ENTER

## SELECT TRUNK PROGRAM

- (3A) Press TRUNK key  
 \* TRUNK lamp lights and remains lit throughout procedure.



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|                        |
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**NOTE**  
 The equipment number dialed is either assigned to an extension or does not contain a trunk card. Check equipment number and card slot. If you wish to remove the previous assignment and assign this equipment position to the trunk press CONFIRM button so the present entry will be eliminated, and return to (5). IF you wish to change the equipment entry return to (4).

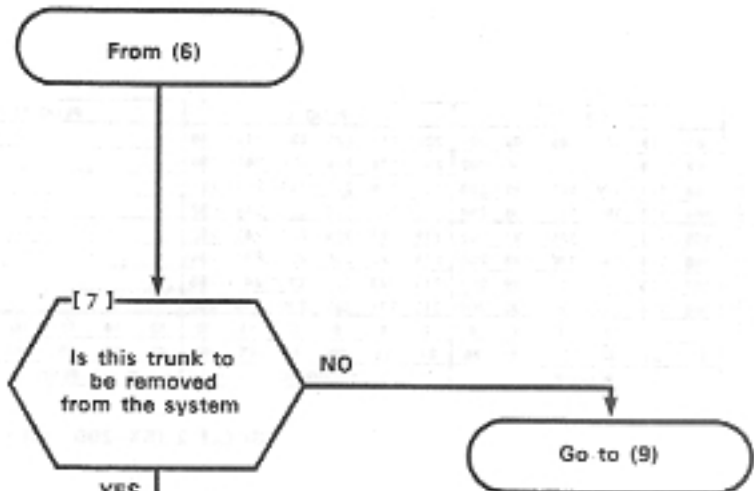
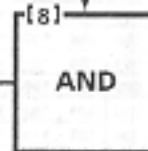


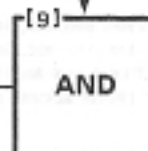
TABLE 209-1

| CODE | TYPE                                |
|------|-------------------------------------|
| 2    | Direct Inward System Access VNL     |
| 4    | Dial-in Trunk VNL                   |
| 21   | Direct Inward System Access Non VNL |
| 41   | Dial-in Trunk VNL                   |

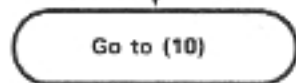
- (8A) Press DELETE key  
 \* DELETE lamp lit  
 \* SOURCE display shows equipment number and its current class  
 \* DESTINATION display shows 0



- SELECT TRUNK TYPE**  
 (9A) Dial trunk code (Table 209-1)  
 \* TYPE lamp lit  
 \* SOURCE display shows the equipment number of the trunk and its current type  
 \* DESTINATION display shows trunk type entered

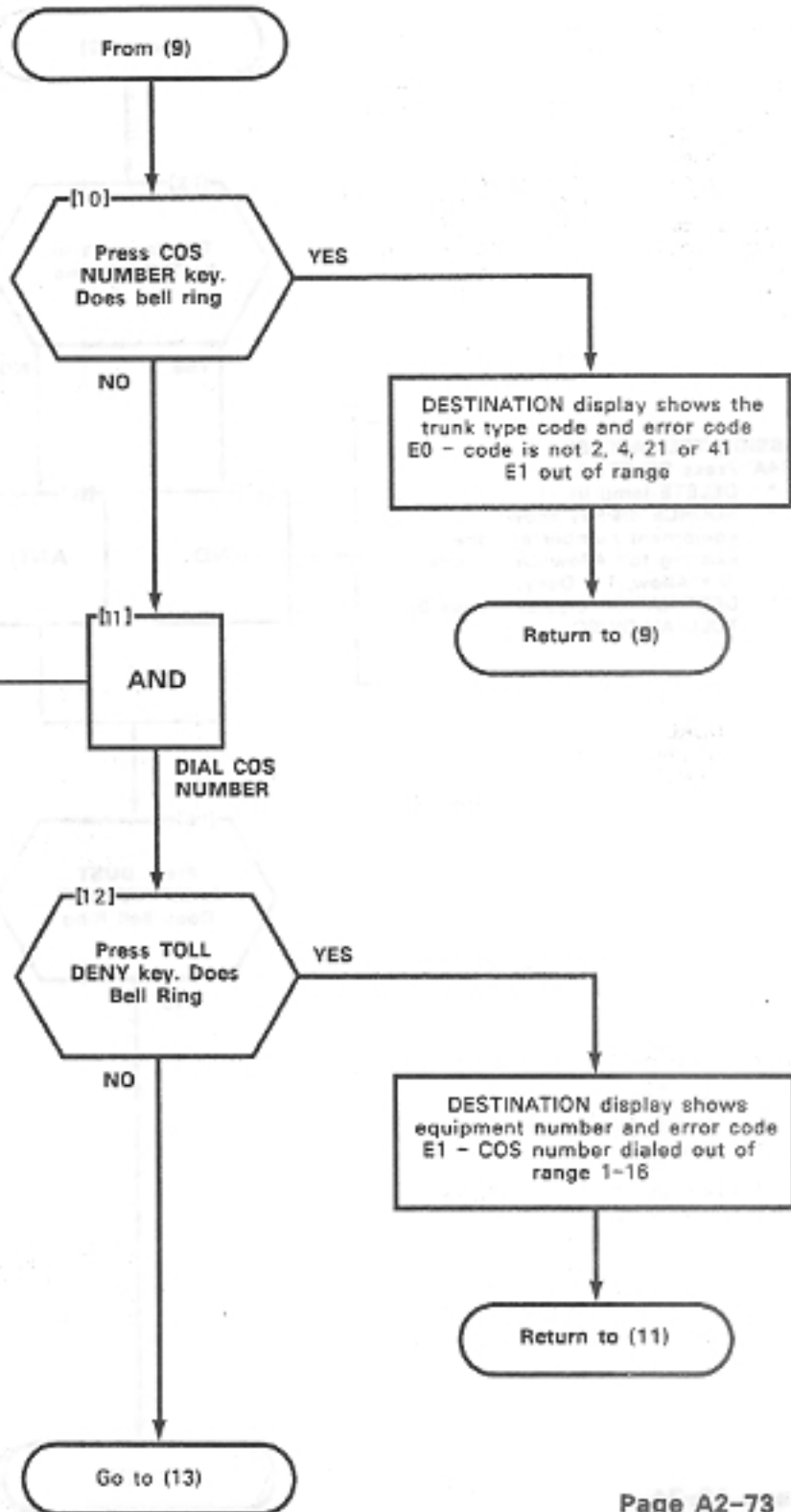


**CAUTION**  
 Trunks **MUST** be removed from trunk groups before being removed from the system. Trunks cannot be deleted or changed while they are in use.

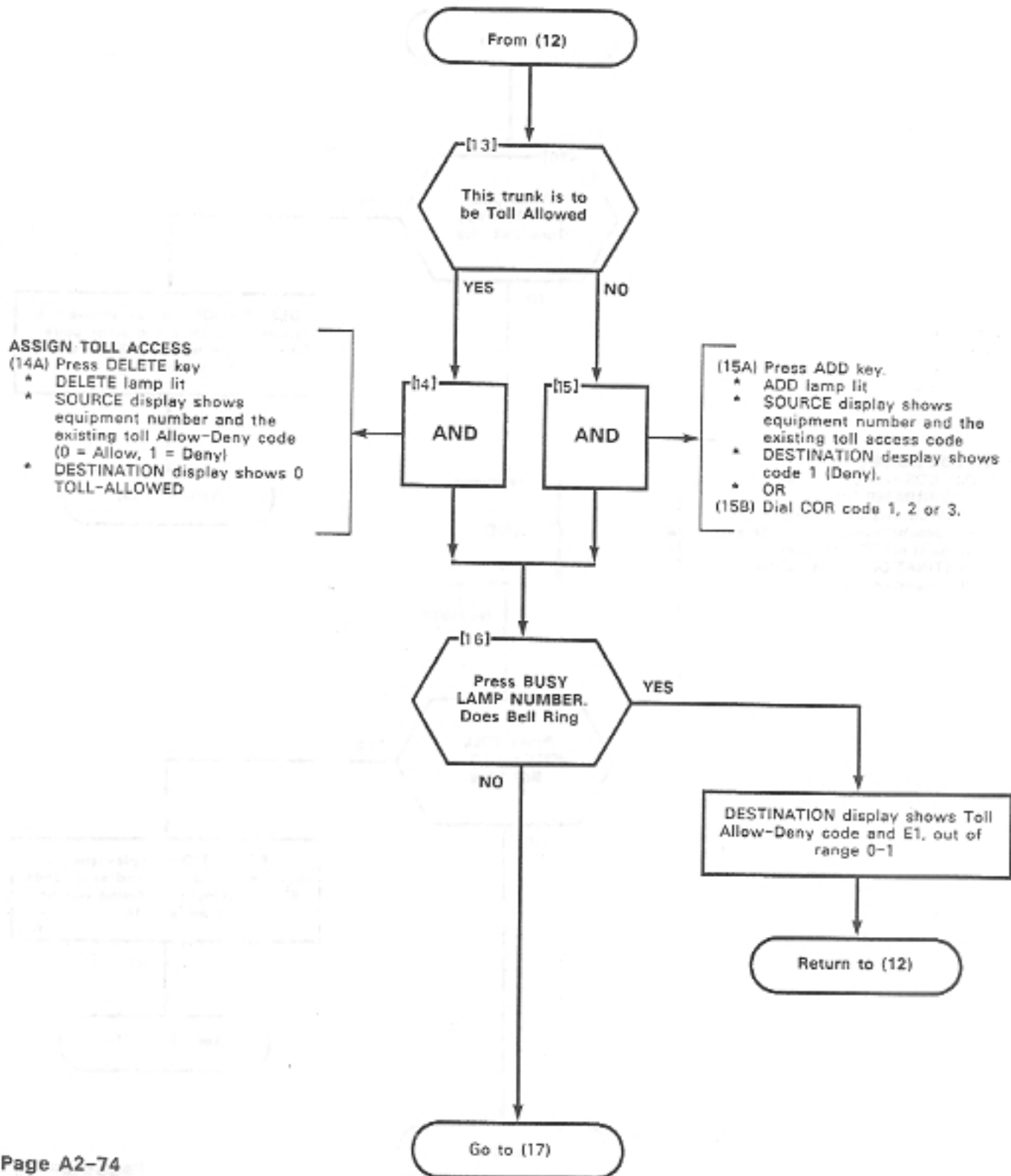


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**ENTER COS NUMBER**  
 (11A) Dial COS number (1-16)  
 \* COS NUMBER lamp lit  
 \* SOURCE display shows equipment number of trunk and its existing COS number  
 \* DESTINATION display shows COS number dialed



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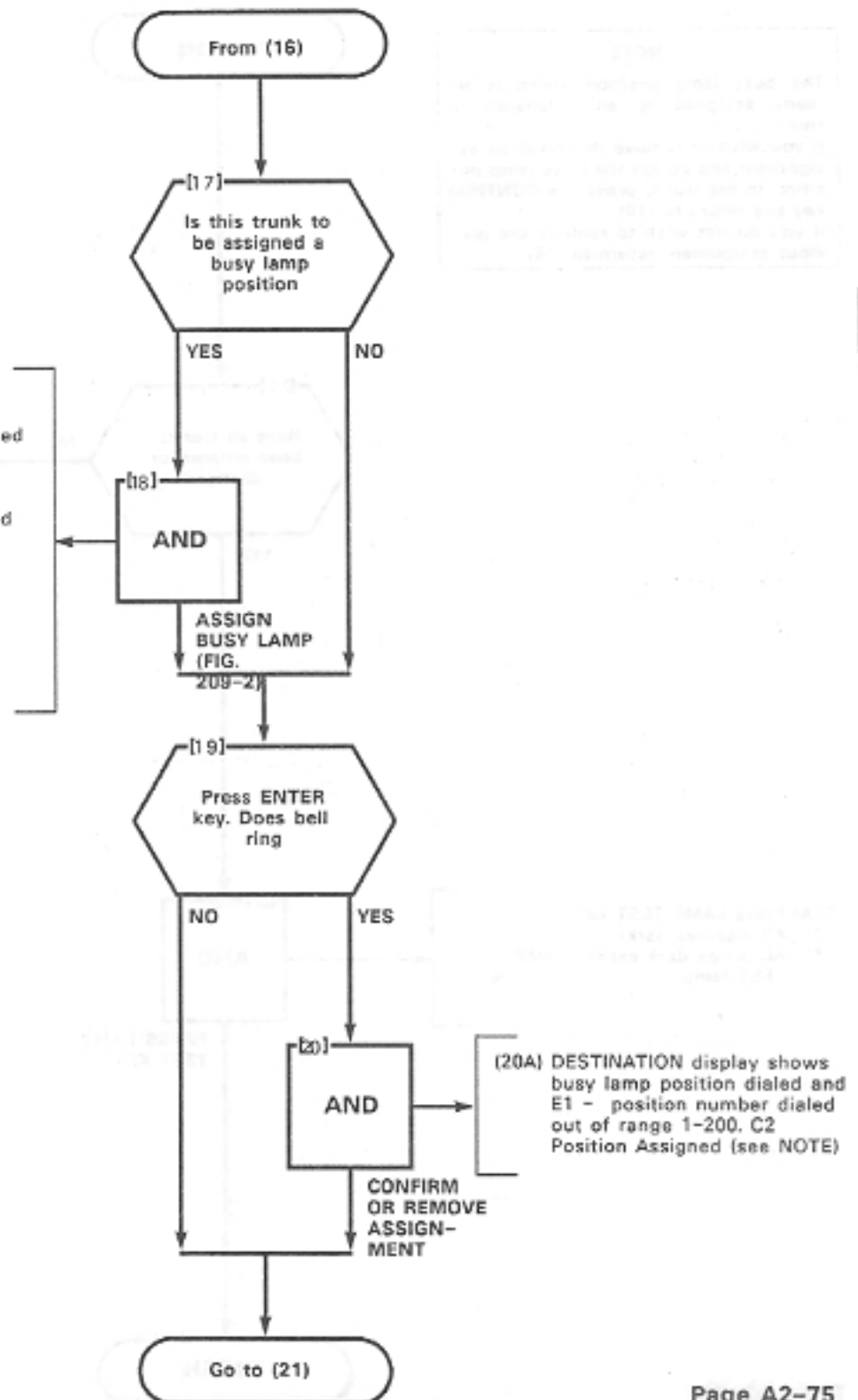
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**ASSIGN TRUNK TO BUSY LAMP FIELD**

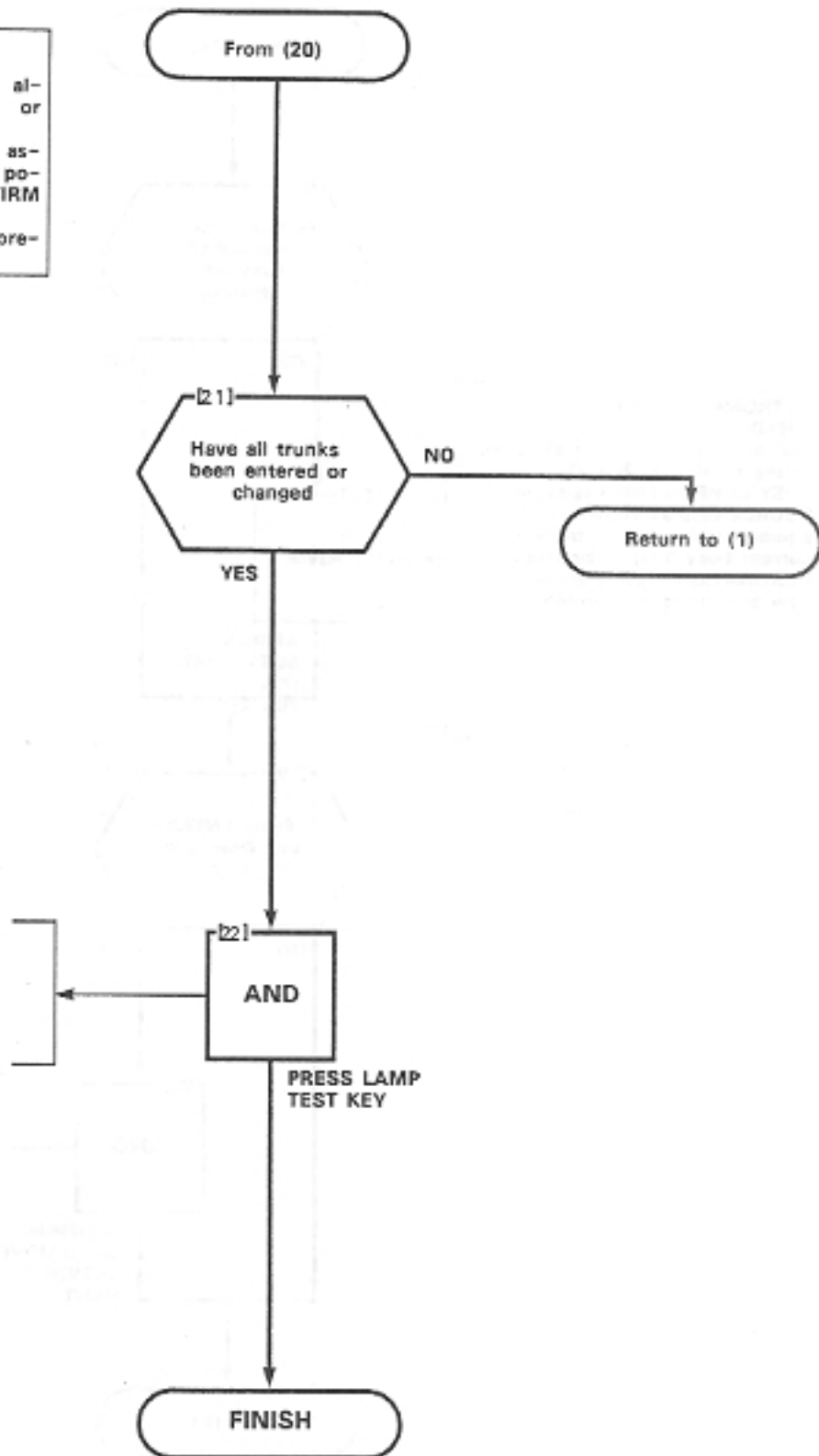
(18A) Dial busy lamp position assigned to the trunk (Fig. 209-2)

- \* BUSY LAMP NUMBER lamp lit
- \* SOURCE display shows equipment number of trunk and current busy lamp assignment
- \* DESTINATION display shows new busy lamp assignment



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| PROGRAM DIAL-IN TRUNKS |
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| Sheet 8 of 11          |

**NOTE**  
 The busy lamp position dialed is already assigned to an extension or trunk.  
 If you wish to remove the previous assignment and assign the busy lamp position to the trunk, press the CONFIRM key and return to (19).  
 If you do not wish to remove the previous assignment return to (16).

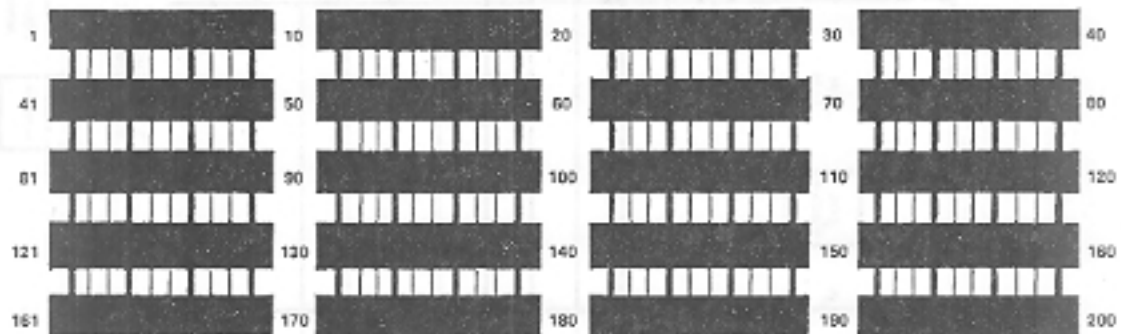


PROGRAM DIAL-IN TRUNKS

MAP210-209

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X3481

Fig. 209-2 Busy Lamp Position Numbering









PROGRAM DID TRUNKS

MAP210-210

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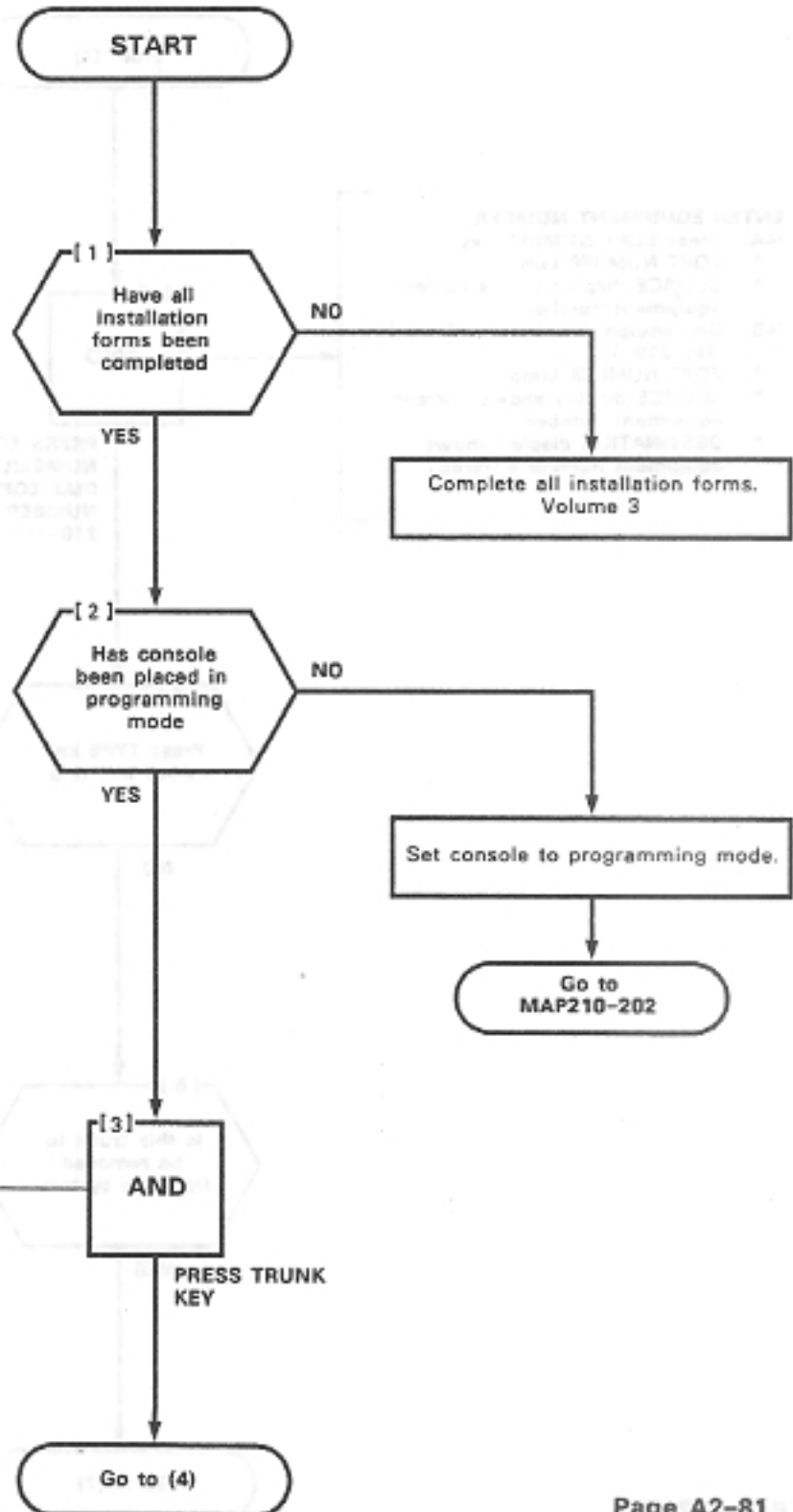
Sheet 1 of 9

## NOTES

- (1) All entries are made from the console dial pad.  
 (2) Trunk lamp remains lit throughout procedure.  
 (3) A display of ED indicates that an incorrect key has been pressed. Press the key specified in the MAP and proceed.  
 (4) For an example of the form refer to Fig. 210-3.

## SYNOPSIS

Enter equipment number  
 10-112/162-256  
 Enter trunk type code 3, 31, 6 or 61.  
 Enter I/C code.  
 Enter Busy Lamp assignment.  
 Press ENTER.



## SELECT TRUNK PROGRAM

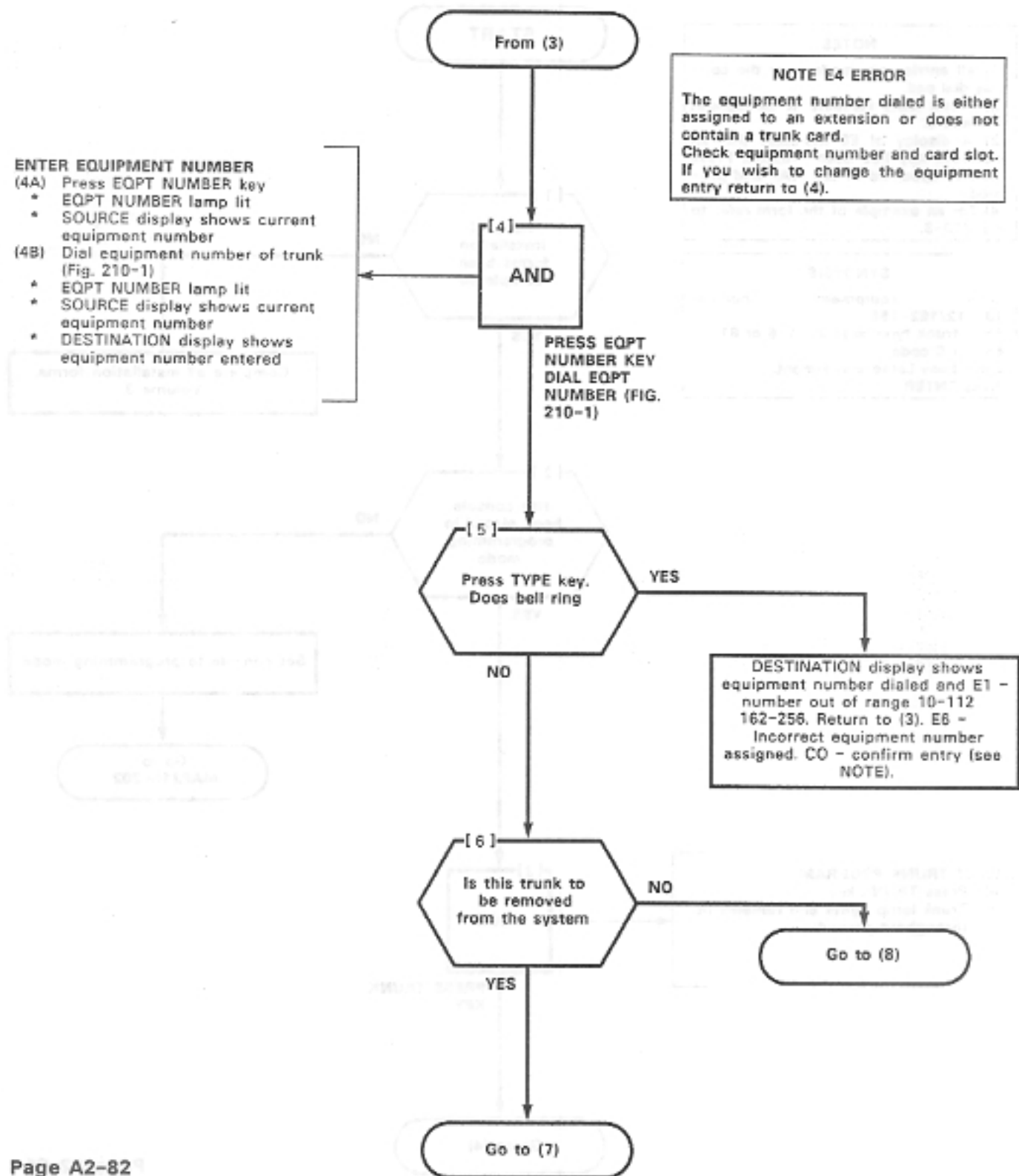
- (3A) Press TRUNK key  
 • Trunk lamp lights and remains lit throughout procedure

|                        |
|------------------------|
| PROGRAM DID TRUNKS     |
| MAP210- 210            |
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- ENTER EQUIPMENT NUMBER**
- (4A) Press EQPT NUMBER key
- EQPT NUMBER lamp lit
  - SOURCE display shows current equipment number
- (4B) Dial equipment number of trunk (Fig. 210-1)
- EQPT NUMBER lamp lit
  - SOURCE display shows current equipment number
  - DESTINATION display shows equipment number entered

**NOTE E4 ERROR**

The equipment number dialed is either assigned to an extension or does not contain a trunk card. Check equipment number and card slot. If you wish to change the equipment entry return to (4).



| HARDWARE<br>POSITION NUMBER | PLUG 7 |     |     |     |     |     | PLUG 9 |     |     |     |     |     | PLUG 11 |    |    |    |    |    | EXTENSION<br>UNIT NO. | TRUNK UNIT<br>NO. (4 TRUNK) | TRUNK UNIT<br>NO. (2 TRUNK) |               |    |    |    |    |    |    |    |    |    |             |  |
|-----------------------------|--------|-----|-----|-----|-----|-----|--------|-----|-----|-----|-----|-----|---------|----|----|----|----|----|-----------------------|-----------------------------|-----------------------------|---------------|----|----|----|----|----|----|----|----|----|-------------|--|
|                             | 161    | 169 | 177 | 185 | 193 | 201 | 209    | 217 | 225 | 233 | 241 | 249 |         |    |    |    |    |    |                       |                             |                             |               | 1  |    |    |    |    |    |    |    |    |             |  |
| 162                         | 170    | 178 | 186 | 194 | 202 | 210 | 218    | 226 | 234 | 242 | 250 |     |         |    |    |    |    |    | 2                     | 1                           | 1                           |               |    |    |    |    |    |    |    |    |    |             |  |
| 163                         | 171    | 179 | 187 | 195 | 203 | 211 | 219    | 227 | 235 | 243 | 251 |     |         |    |    |    |    |    | 3                     |                             |                             |               |    |    |    |    |    |    |    |    |    |             |  |
| 164                         | 172    | 180 | 188 | 196 | 204 | 212 | 220    | 228 | 236 | 244 | 252 |     |         |    |    |    |    |    | 4                     | 2                           |                             |               |    |    |    |    |    |    |    |    |    |             |  |
| 165                         | 173    | 181 | 189 | 197 | 205 | 213 | 221    | 229 | 237 | 245 | 253 |     |         |    |    |    |    |    | 5                     |                             |                             |               |    |    |    |    |    |    |    |    |    |             |  |
| 166                         | 174    | 182 | 190 | 198 | 206 | 214 | 222    | 230 | 238 | 246 | 254 |     |         |    |    |    |    |    | 6                     | 3                           | 2                           |               |    |    |    |    |    |    |    |    |    |             |  |
| 167                         | 175    | 183 | 191 | 199 | 207 | 215 | 223    | 231 | 239 | 247 | 255 |     |         |    |    |    |    |    | 7                     |                             |                             |               |    |    |    |    |    |    |    |    |    |             |  |
| 168                         | 176    | 184 | 192 | 200 | 208 | 216 | 224    | 232 | 240 | 248 | 256 |     |         |    |    |    |    |    | 8                     | 4                           |                             |               |    |    |    |    |    |    |    |    |    |             |  |
| 1                           | 2      | 3   | 4   | 5   | 6   | 7   | 8      | 9   | 10  | 11  | 12  | 13  | 14      | 15 | 16 | 17 | 18 | 19 | 20                    | 21                          | 22                          | CARD POSITION |    |    |    |    |    |    |    |    |    |             |  |
| 21                          | 22     | 23  | 24  | 25  | 26  | 27  | 28     | 29  | 30  | 31  | 32  | 33  | 34      | 35 | 36 | 37 | 38 | 39 | 40                    | 41                          | 42                          | 43            | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | SLOT NUMBER |  |
|                             |        |     |     |     |     |     |        |     |     |     |     |     |         |    |    |    |    |    |                       |                             |                             |               |    |    |    |    |    |    |    |    |    |             |  |
|                             |        |     |     |     |     |     |        |     |     |     |     |     |         |    |    |    |    |    |                       |                             |                             |               |    |    |    |    |    |    |    |    |    |             |  |

## SHELF 2 (SX-200 ONLY)

| HARDWARE<br>POSITION NUMBER | PLUG 1 |     |     |     |     |     | PLUG 3 |     |     |     |     |     | PLUG 5 |     |     |    |    |    | EXTENSION<br>UNIT NO. | TRUNK UNIT<br>NO. (4 TRUNK) | TRUNK UNIT<br>NO. (2 TRUNK) |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               |   |
|-----------------------------|--------|-----|-----|-----|-----|-----|--------|-----|-----|-----|-----|-----|--------|-----|-----|----|----|----|-----------------------|-----------------------------|-----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---------------|---|
|                             | 001    | 009 | 017 | 025 | 033 | 041 | 049    | 057 | 065 | 073 | 081 | 089 | 097    | 105 | 113 |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               | 1 |
| 002                         | 010    | 018 | 026 | 034 | 042 | 050 | 058    | 066 | 074 | 082 | 090 | 098 | 106    | 114 |     |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 | 1 | 1             |   |
| 003                         | 011    | 019 | 027 | 035 | 043 | 051 | 059    | 067 | 075 | 083 | 091 | 099 | 107    | 115 |     |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               |   |
| 004                         | 012    | 020 | 028 | 036 | 044 | 052 | 060    | 068 | 076 | 084 | 092 | 100 | 108    | 116 |     |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               |   |
| 005                         | 013    | 021 | 029 | 037 | 045 | 053 | 061    | 069 | 077 | 085 | 093 | 101 | 109    | 117 |     |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               |   |
| 006                         | 014    | 022 | 030 | 038 | 046 | 054 | 062    | 070 | 078 | 086 | 094 | 102 | 110    | 118 |     |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               |   |
| 007                         | 015    | 023 | 031 | 039 | 047 | 055 | 063    | 071 | 079 | 087 | 095 | 103 | 111    | 119 |     |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               |   |
| 008                         | 016    | 024 | 032 | 040 | 048 | 056 | 064    | 072 | 080 | 088 | 096 | 104 | 112    | 120 |     |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               |   |
| 1                           | 2      | 3   | 4   | 5   | 6   | 7   | 8      | 9   | 10  | 11  | 12  | 13  | 14     | 15  | 16  | 17 | 18 | 19 | 20                    | 21                          | 22                          |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | CARD POSITION |   |
| 1                           | 2      | 3   | 4   | 5   | 6   | 7   | 8      | 9   | 10  | 11  | 12  | 13  | 14     | 15  | 16  | 17 | 18 | 19 | 20                    | 21                          | 22                          |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   | SLOT NUMBER   |   |
|                             |        |     |     |     |     |     |        |     |     |     |     |     |        |     |     |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               |   |
|                             |        |     |     |     |     |     |        |     |     |     |     |     |        |     |     |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               |   |
|                             |        |     |     |     |     |     |        |     |     |     |     |     |        |     |     |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               |   |
|                             |        |     |     |     |     |     |        |     |     |     |     |     |        |     |     |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               |   |
|                             |        |     |     |     |     |     |        |     |     |     |     |     |        |     |     |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               |   |
|                             |        |     |     |     |     |     |        |     |     |     |     |     |        |     |     |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               |   |
|                             |        |     |     |     |     |     |        |     |     |     |     |     |        |     |     |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               |   |
|                             |        |     |     |     |     |     |        |     |     |     |     |     |        |     |     |    |    |    |                       |                             |                             |  |  |  |  |  |  |  |  |  |  |  |  |  |   |   |               |   |

## SHELF 1

- NOTES: 1. DUAL AND OR QUAD RECEIVER EQUIPMENT NUMBERS ARE 099, 098, 106, 114, 092, 100, 108 AND 116.  
 2. QUAD RECEIVER EQUIPMENT NUMBERS ARE 094, 102, 110, 118, 096, 104, 112 AND 120.  
 3. EQUIPMENT POSITION 001 IS RESERVED FOR THE TEST LINE AND MUST THEREFORE BE EQUIPPED WITH A LINE CARD.  
 4. TRUNK EQUIPMENT NUMBER IS SAME AS INDIVIDUAL TRUNK ACCESS CODE.  
 5. SLOT 15 IS RESERVED FOR RECEIVER NO. 1.  
 6. MAXIMUM NUMBER OF SUPERSET 4's = 64

Fig. 210-1 Hardware/Equipment Number

|                        |
|------------------------|
| PROGRAM DID TRUNKS     |
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TABLE 210-1

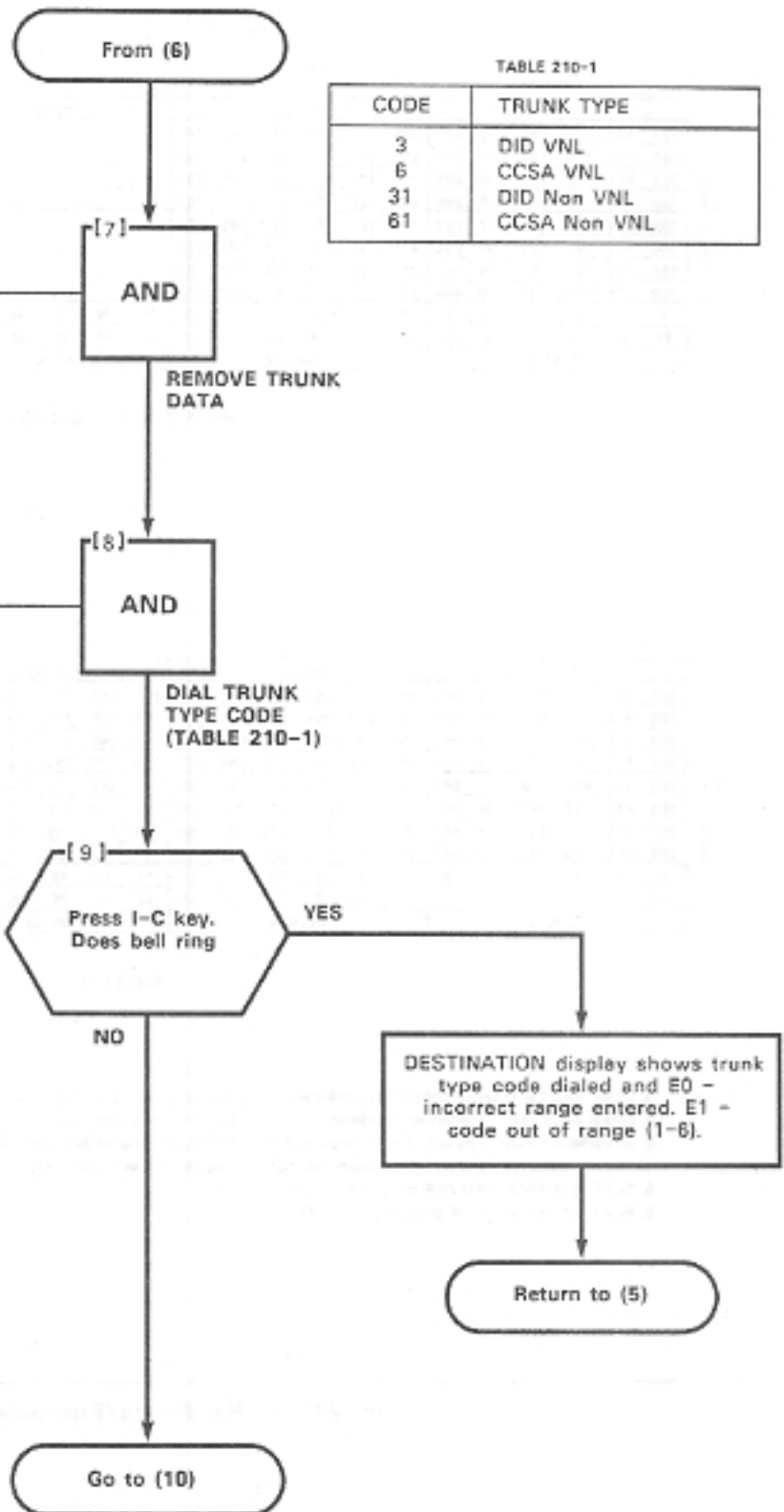
| CODE | TRUNK TYPE   |
|------|--------------|
| 3    | DID VNL      |
| 6    | CCSA VNL     |
| 31   | DID Non VNL  |
| 61   | CCSA Non VNL |

- (7A) Press DELETE key
- \* DELETE lamp lit
  - \* SOURCE display shows equipment number and its current class
  - \* DESTINATION display shows 0

- ENTER TYPE CODE
- (8A) Dial type code. (Table 210-1)
- \* TYPE lamp lit
  - \* SOURCE display shows equipment number of the trunk and its current type code
  - \* DESTINATION display shows new trunk type code

**CAUTION**

Trunks **MUST** be removed from trunk groups before being removed from the system. Trunks cannot be deleted or changed while they are in use.

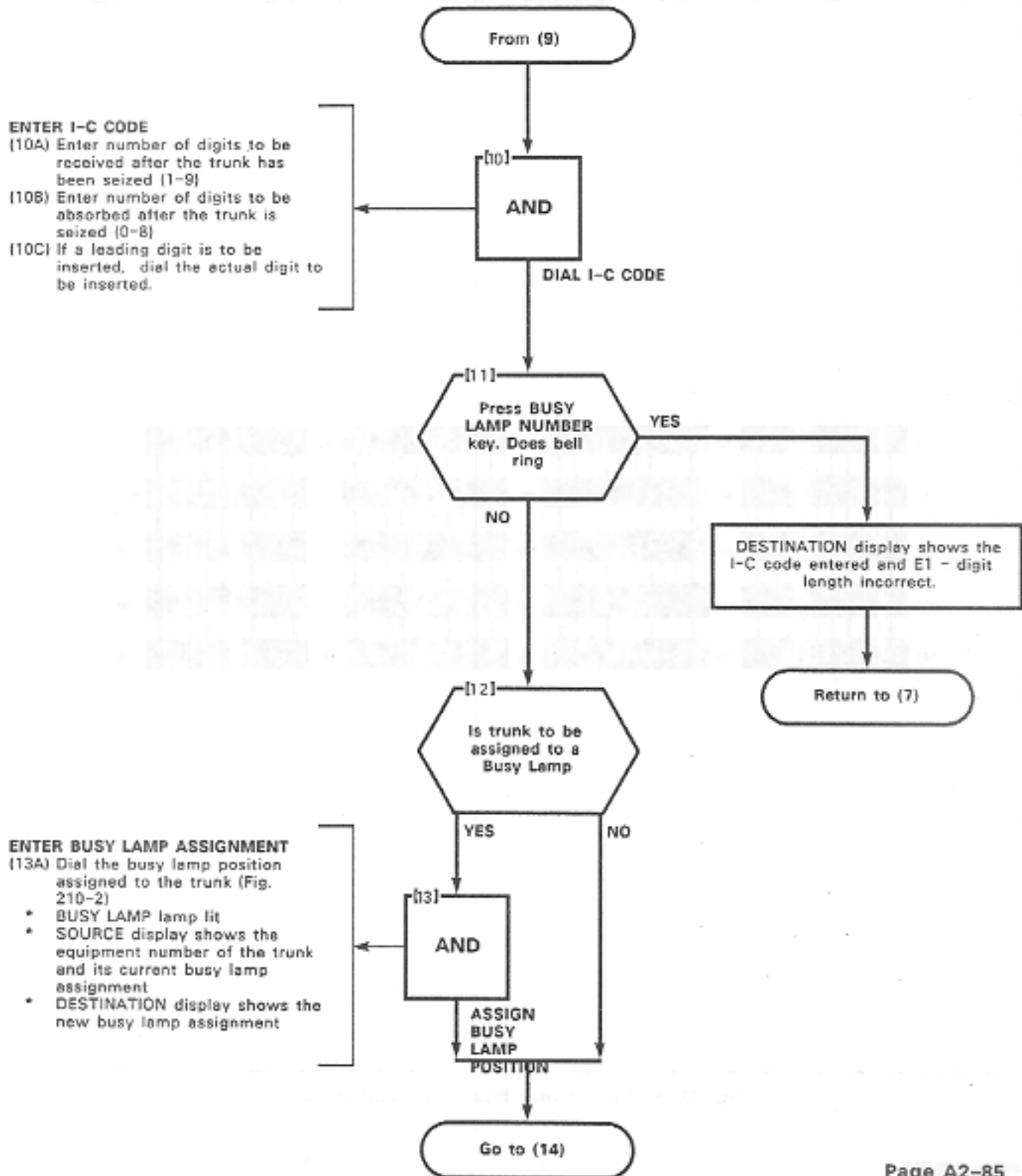


PROGRAM DID TRUNKS

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|                        |
|------------------------|
| PROGRAM DID TRUNKS     |
| MAP210- 210            |
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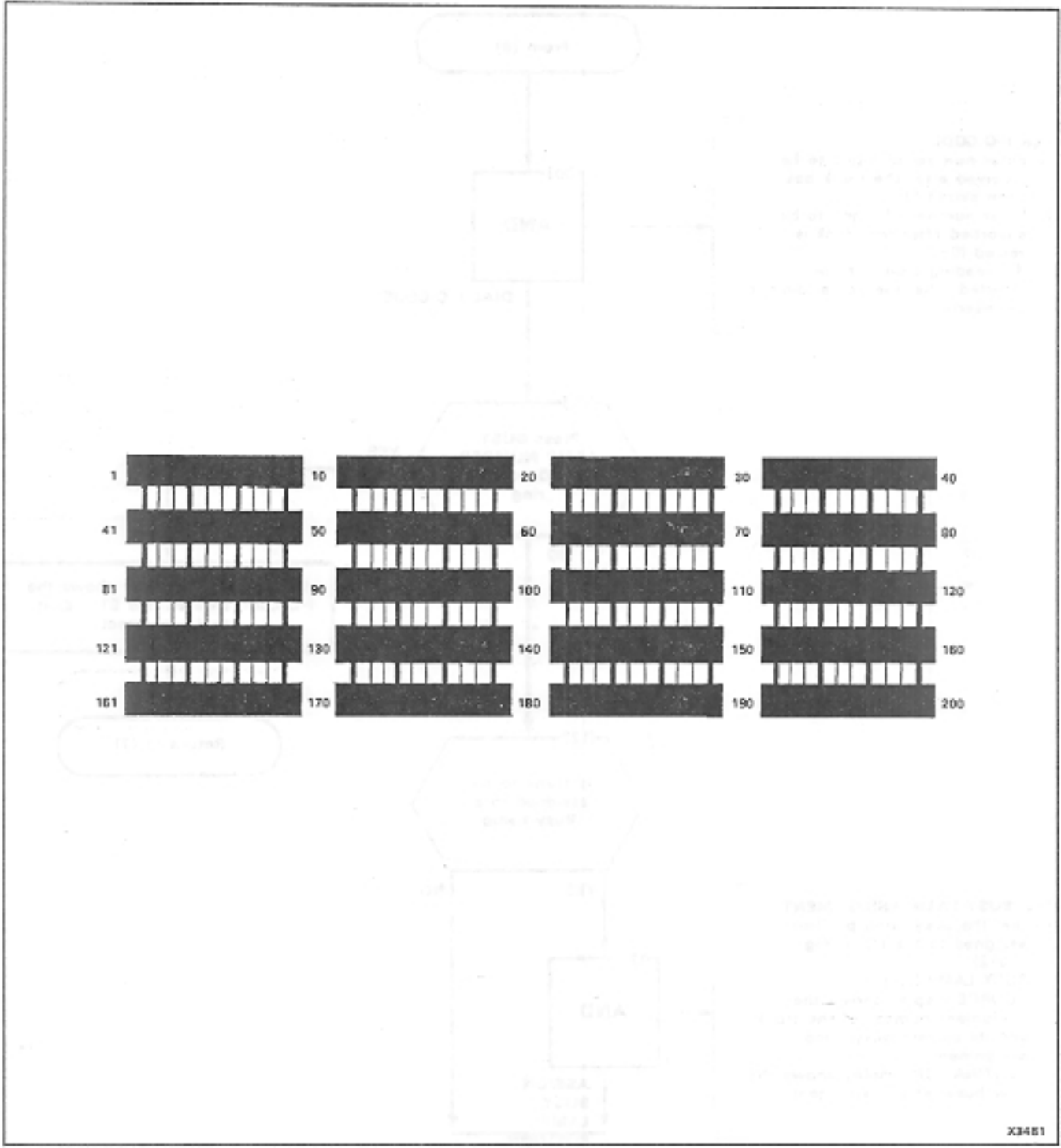


Fig. 210-2 Busy Lamp Position Numbering



PROGRAM DID TRUNKS

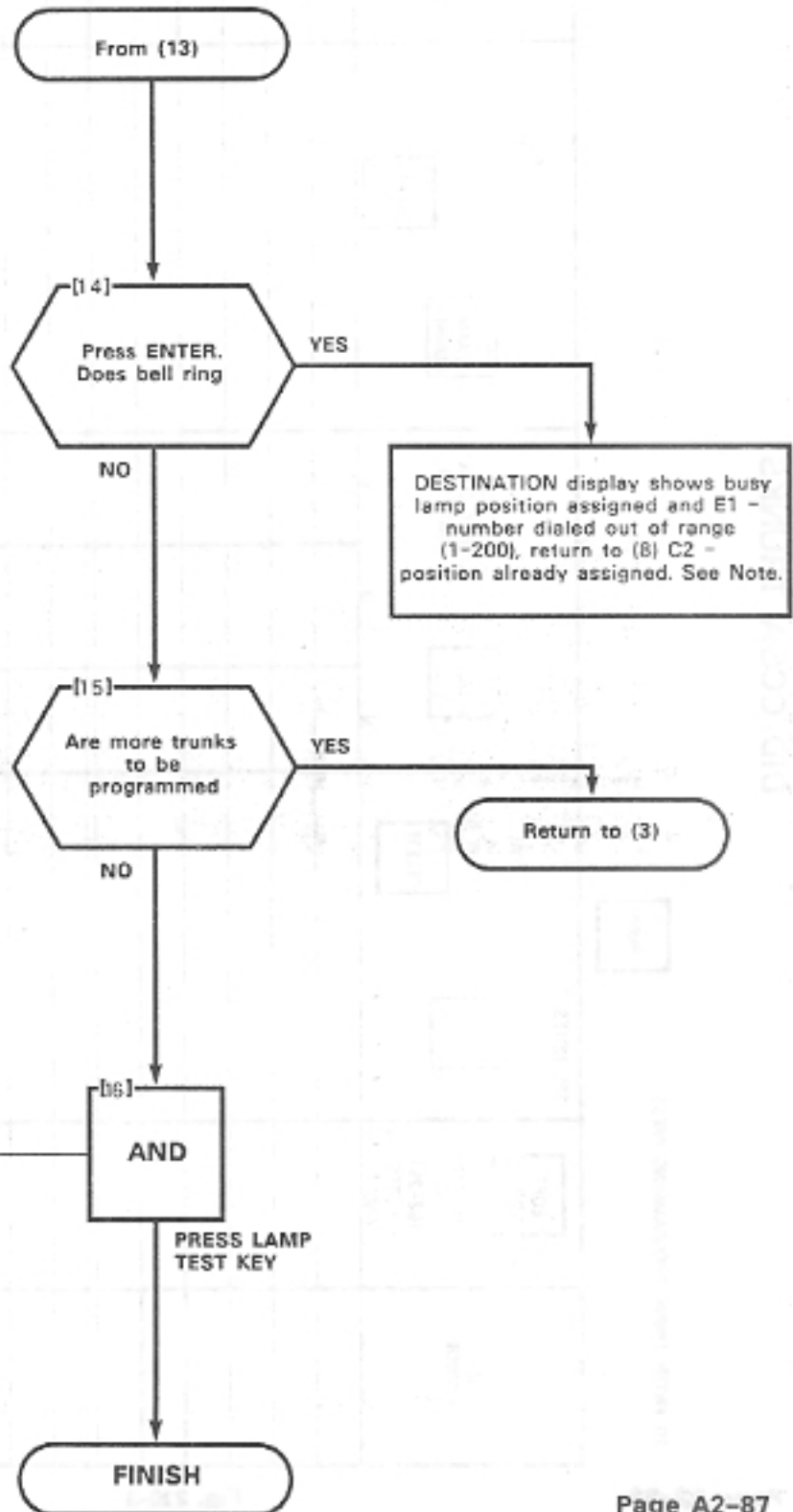
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## NOTE

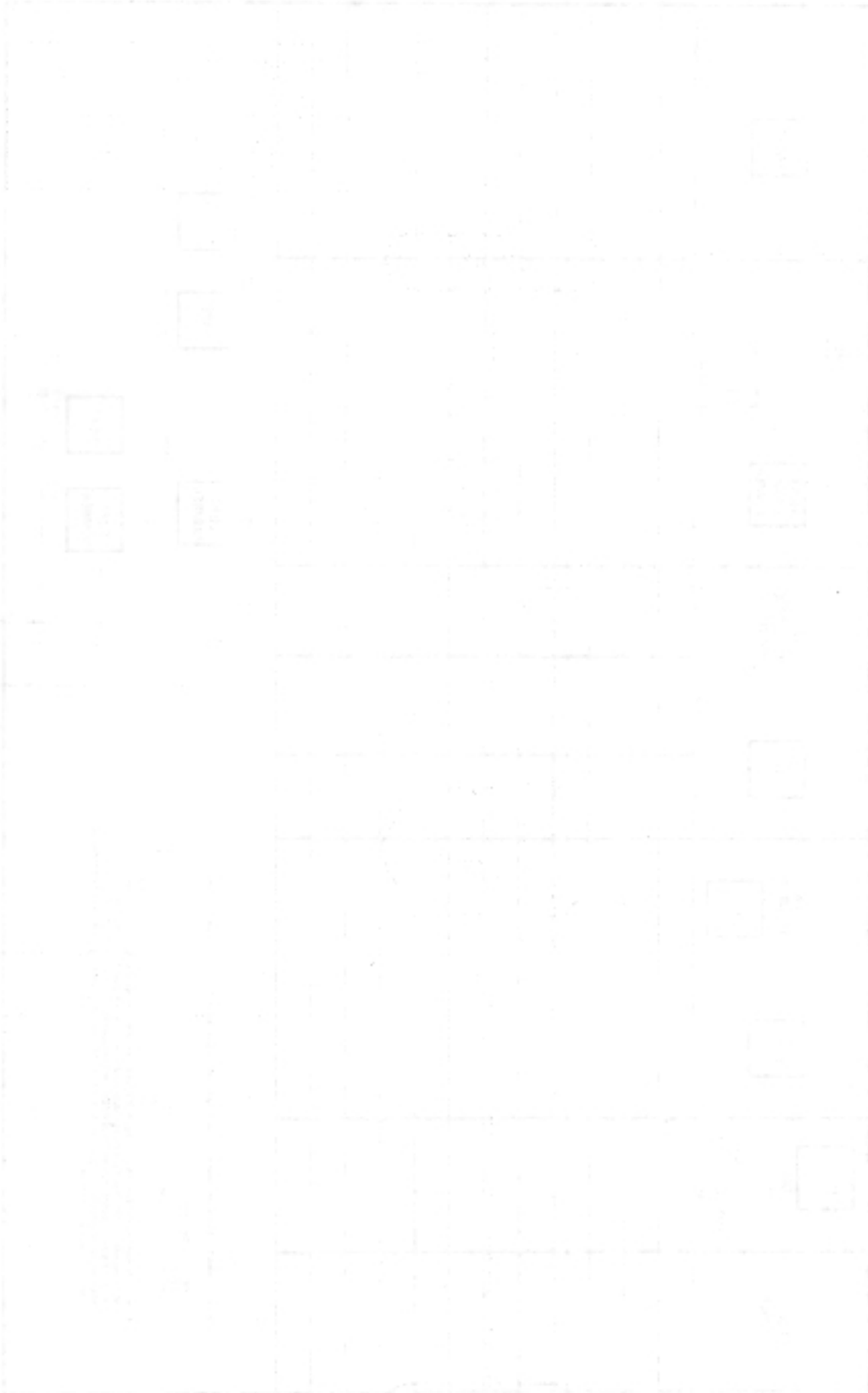
The Busy Lamp Position dialed already exists. If the assignment is correct, press the CONFIRM key, this will remove the old assignment and assign the position to this trunk. If the assignment is incorrect, return to (12).



(16A) Press LAMP TEST key  
 • All indicators go dark except LAMP TEST lamp







Vertical text on the right side of the page, possibly a title or a reference number, oriented vertically.

Vertical text on the right side of the page, possibly a title or a reference number, oriented vertically.

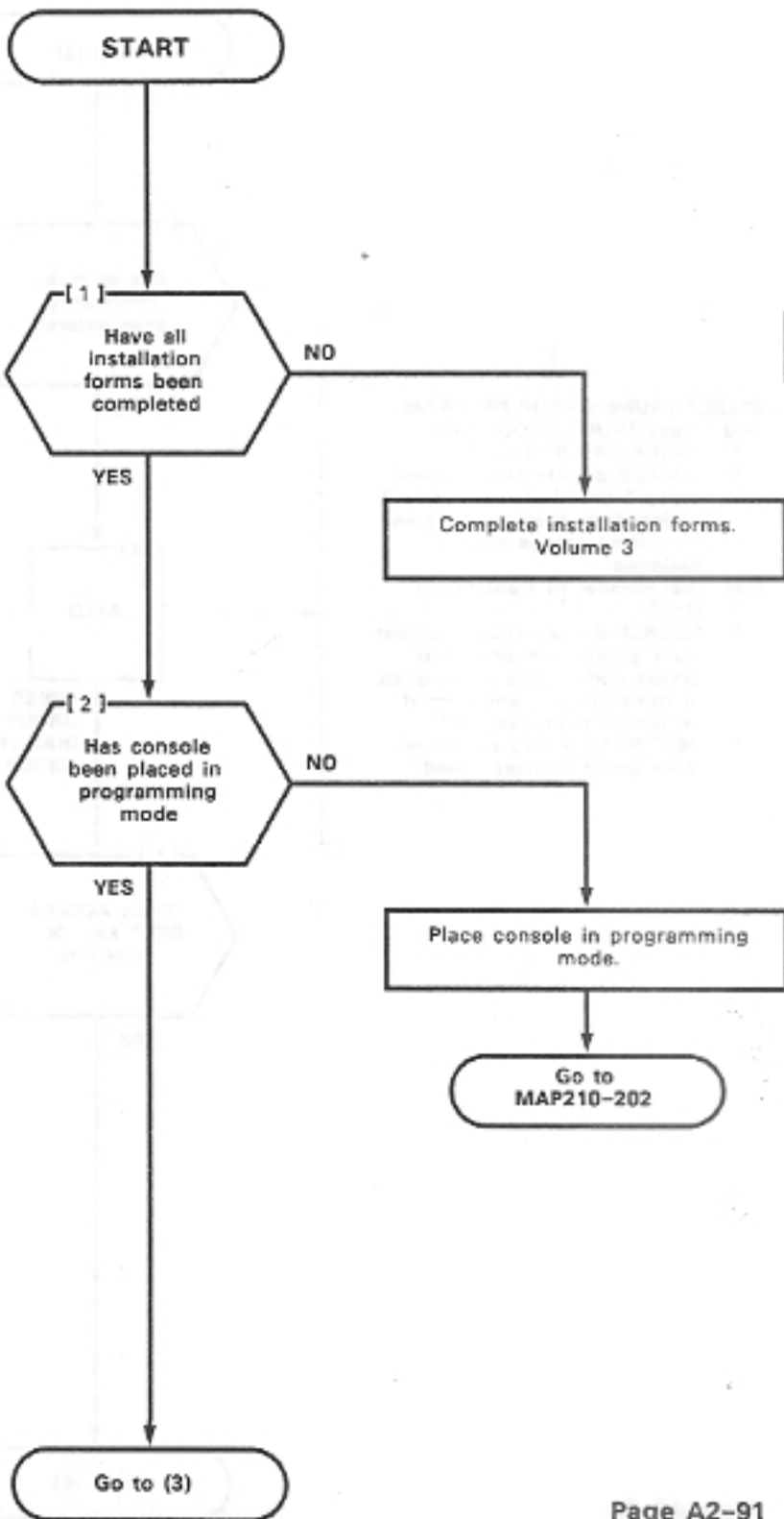
|                        |
|------------------------|
| PROGRAM TRUNK GROUPS   |
| MAP210- 211            |
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**NOTES**

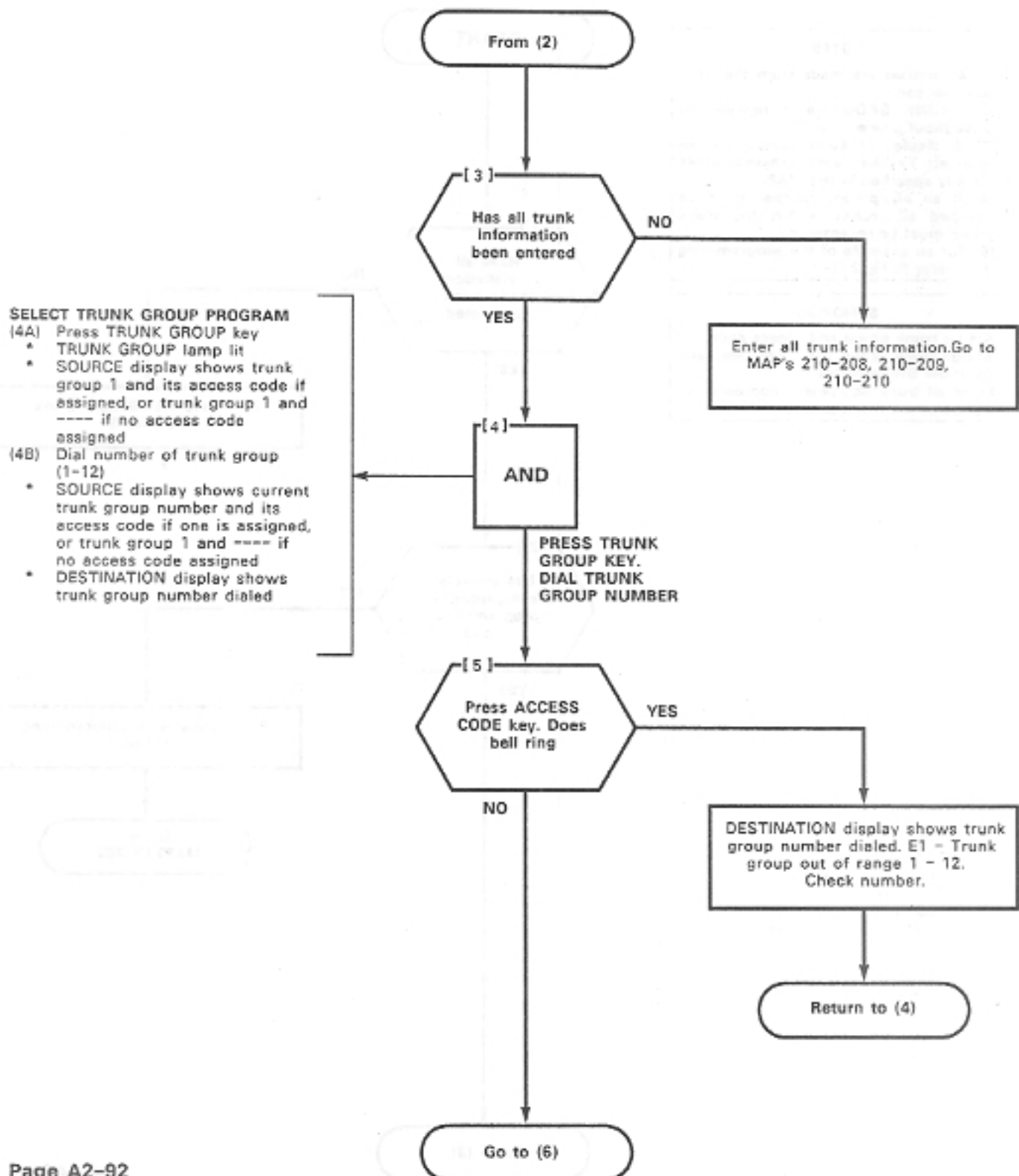
(1) All entries are made from the console dial pad.  
 (2) TRUNK GROUP lamp remains lit throughout procedure.  
 (3) A display of E0 indicates that an incorrect key has been pressed, press the key specified in the MAP.  
 (4) If an equipment number is to be changed all trunks within the trunk group must be re-entered.  
 (5) For an example of the programming form refer to Fig.211-1.

**SYNOPSIS**

Set up trunk group and access code.  
 Assign trunk group type, Toll Deny and Overflow Group codes.  
 Enter all trunk equipment numbers assigned to the trunk group.



|                        |
|------------------------|
| PROGRAM TRUNK GROUPS   |
| MAP210- 211            |
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PROGRAM TRUNK GROUPS

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**ASSIGN TRUNK GROUP  
ACCESS CODE**

- (6A) Dial access code to be assigned to this trunk group
- \* ACCESS CODE lamp lit
  - \* SOURCE display shows new trunk group and existing access code if assigned, or the new trunk group and ---- if no access code assigned.
  - \* DESTINATION display shows new access code dialed

AND

DIAL ACCESS  
CODEPress TYPE key.  
Does bell ring

YES

DESTINATION display shows  
equipment number dialed and E1 -  
bad data received by CPU E4 -  
access code already assigned E5  
- first digit conflict Check entry.

Return to (5)

AND

DIAL TYPE CODE  
TABLE 211-1

Go to (9)

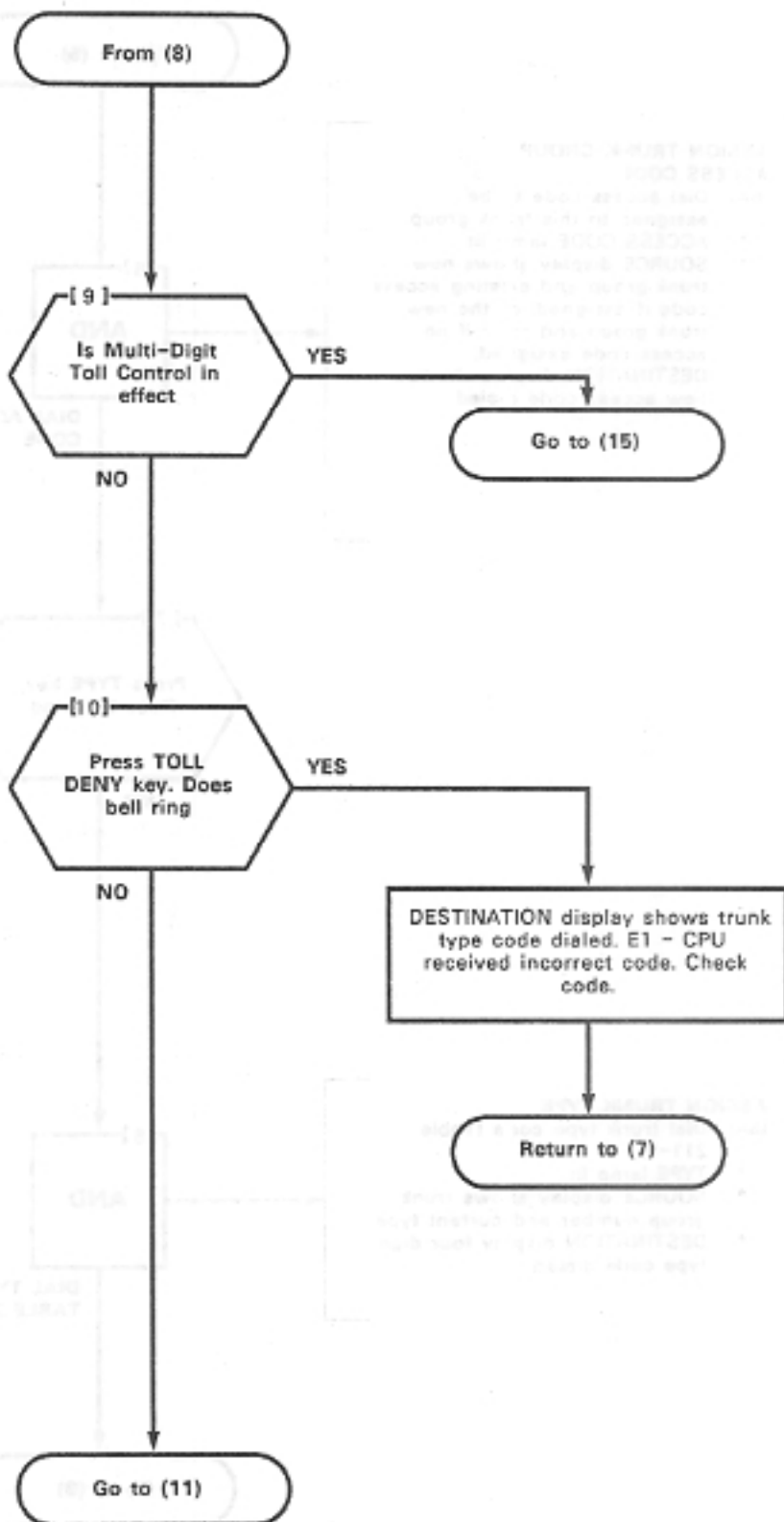
**ASSIGN TRUNK TYPE**

- (8A) Dial trunk type code (Table 211-1)
- \* TYPE lamp lit
  - \* SOURCE display shows trunk group number and current type
  - \* DESTINATION display four digit type code dialed

|                        |
|------------------------|
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TABLE 211-1

| Entry        | Code | Description                                       |
|--------------|------|---|
| First digit  | 1    | No Answer Supervision                             |
| Note         | 2    | Answer Supervision                                |
|              | 3    | Toll Supervision                                  |
|              | 4    | Outgoing audio inhibited until answer supervision |
| Second digit | 1    | No message register                               |
|              | 2    | Message register                                  |
|              | 3    | SMDR without message register                     |
|              | 4    | SMDR with message register                        |
| Third digit  | *1   | Rotary dial office, no wait for dial tone         |
| Note         | *2   | rotary dial office, wait for dial tone            |
|              | **3  | DTMF dial office, no wait for dial tone           |
|              | **4  | DTMF dial office, wait for dial tone              |
| Fourth digit | 1    | CO trunk  |
| Note         | 2    | Non-CO trunk                                      |
|              | 3    | Identified Trunk Group (Non CO)                   |





PROGRAM TRUNK GROUPS

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## NOTE 1

- If answer supervision is not required (or not provided by the CO), then use 1 - No Answer Supervision.
- If tandem trunking or Message Registration is used, then use 2 - Answer Supervision.
- If supervision is used to indicate toll calls, and this feature is required, then use 2 - Toll Supervision.
- If audio cut-through on the trunk tandem calls is required only after receipt of answer supervision, then use 4 - Outgoing Audio Inhibit until Answer Supervision.

## NOTE 2

- If "wait for dial tone" is selected then any digits dialed prior to receipt of CO dial tone are ignored by the PABX. This prevents circumvention of the toll denial by dialling a fact valid digit before CO dial tone is received.

## NOTE 3

- If the fourth digit selected is 3, the third digit must be 1.

- \* If extensions are DTMF the trunk will convert to dial pulse. Early line split is not provided.

- \*\* Trunks will repeat DTMF or dial pulse signals.

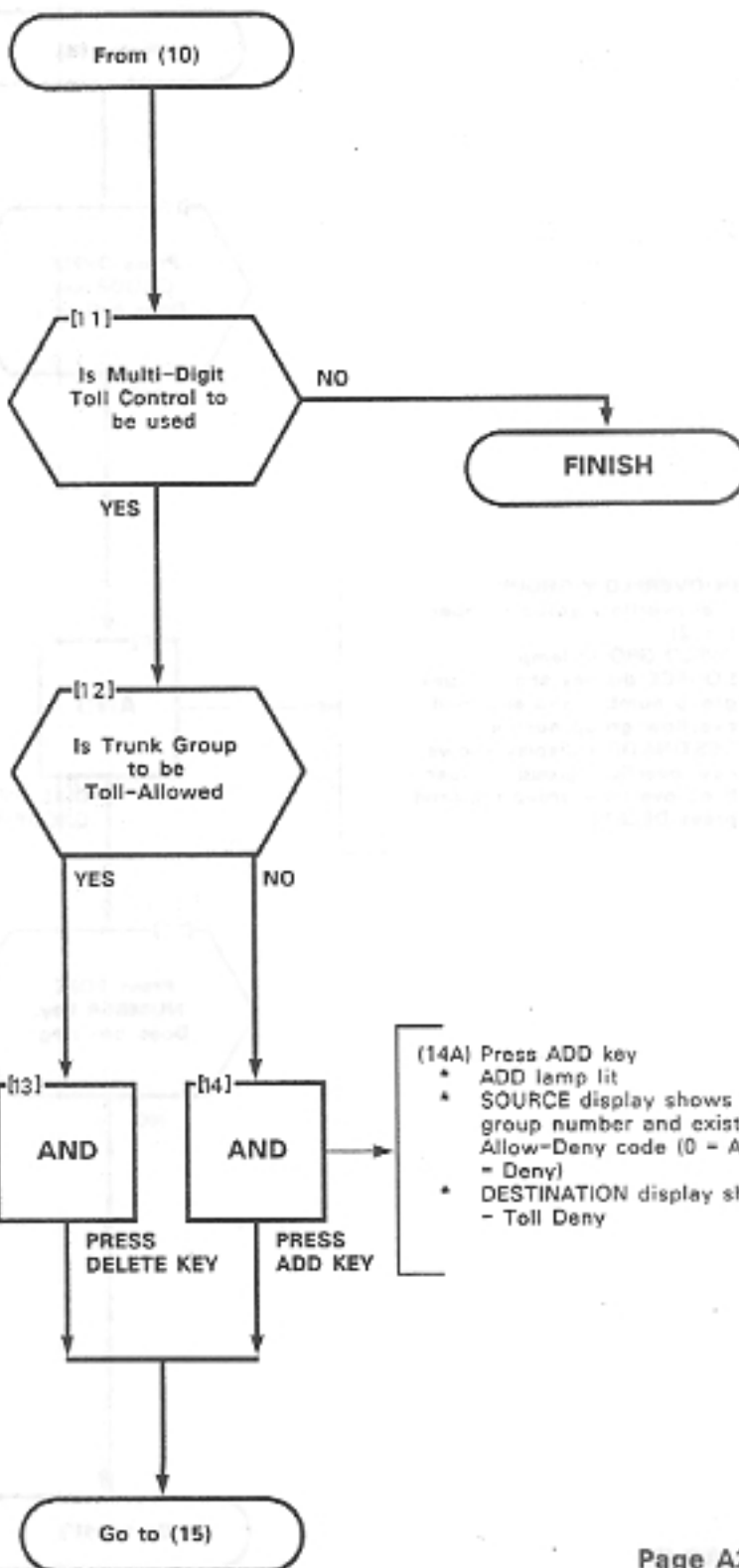
## ASSIGN TOLL ACCESS

(13A) Press DELETE key

- \* DELETE lamp lit
- \* SOURCE display shows trunk group number and existing Toll Allow-Deny code (0 = Allow, 1 = Deny)
- \* DESTINATION display shows 0 - Toll Allow

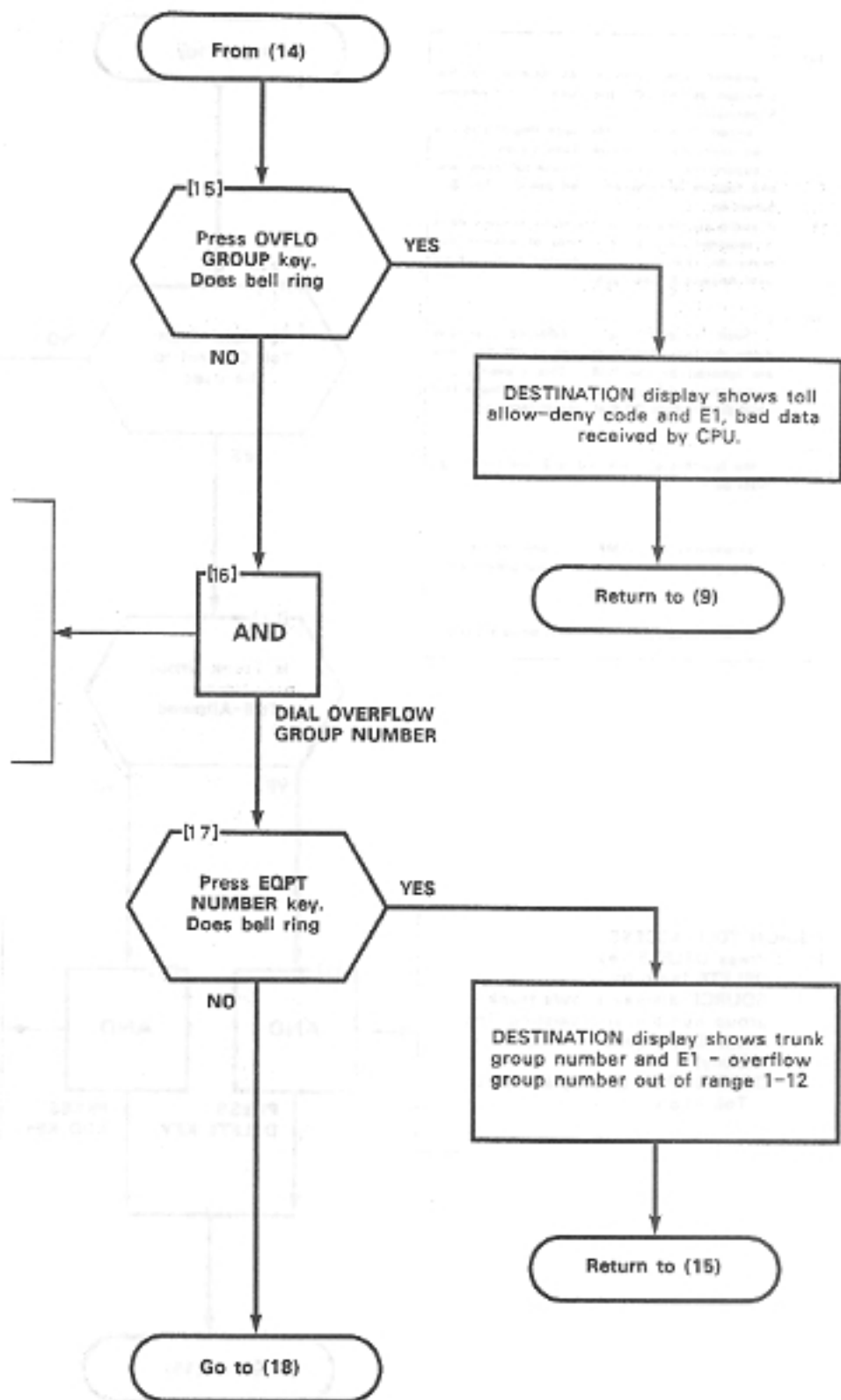
(14A) Press ADD key

- \* ADD lamp lit
- \* SOURCE display shows trunk group number and existing Toll Allow-Deny code (0 = Allow, 1 = Deny)
- \* DESTINATION display shows 1 - Toll Deny



|                        |
|------------------------|
| PROGRAM TRUNK GROUPS   |
| MAP210- 211            |
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**ASSIGN OVERFLOW GROUP**  
 (16A) Dial overflow group number (1-12)  
 \* OVFL0 GROUP lamp lit  
 \* SOURCE display shows trunk group number and assigned overflow group number  
 \* DESTINATION display shows new overflow group number  
 (16B) If no overflow group required press DELETE



|                        |                |
|------------------------|----------------|
| PROGRAM TRUNK GROUPS   | MARCOBY        |
| MAP210-211             | FEE-OTSTAR     |
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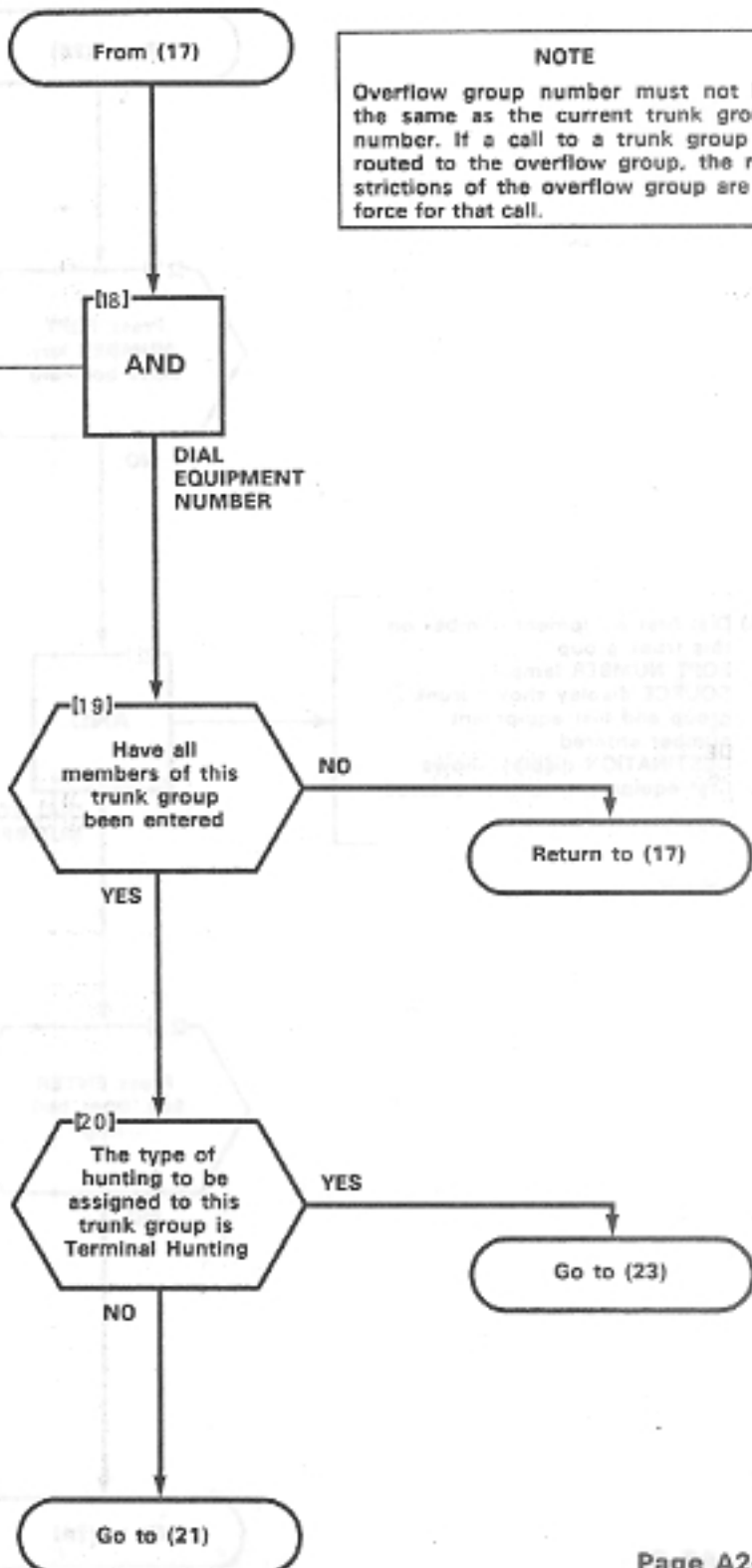
## NOTE

Overflow group number must not be the same as the current trunk group number. If a call to a trunk group is routed to the overflow group, the restrictions of the overflow group are in force for that call.

## ASSIGN EQUIPMENT NUMBERS TO THIS TRUNK GROUP

(18A) Dial equipment number of trunk in trunk group (10-112 162-256)

- EQPT NUMBER lamp lit
- SOURCE display shows the trunk group number and existing equipment number



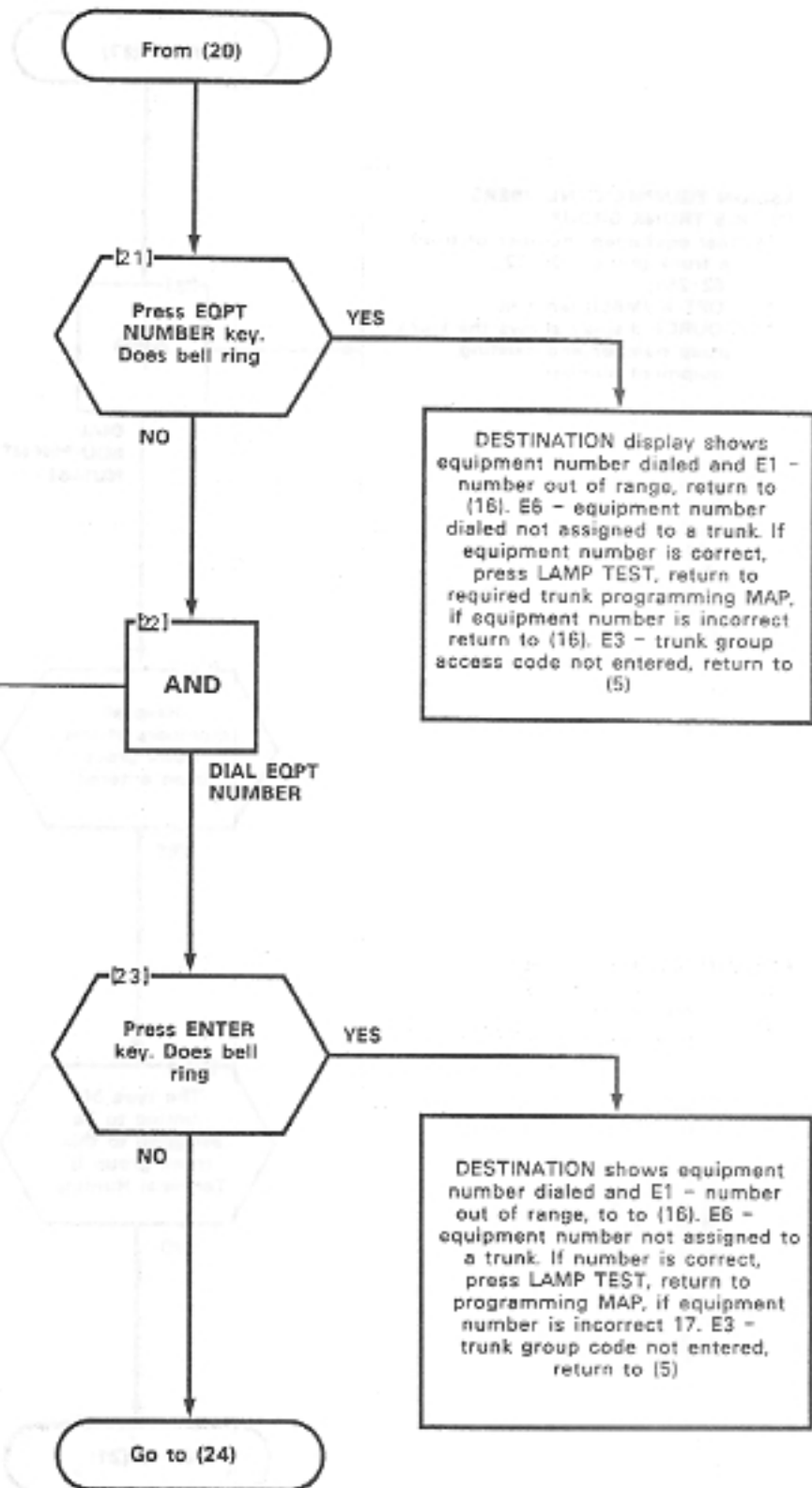
PROGRAM TRUNK GROUPS

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- (22A) Dial first equipment number on this trunk group
- EQPT NUMBER lamp lit
  - SOURCE display shows trunk group and last equipment number entered
  - DESTINATION display shows first equipment number entered

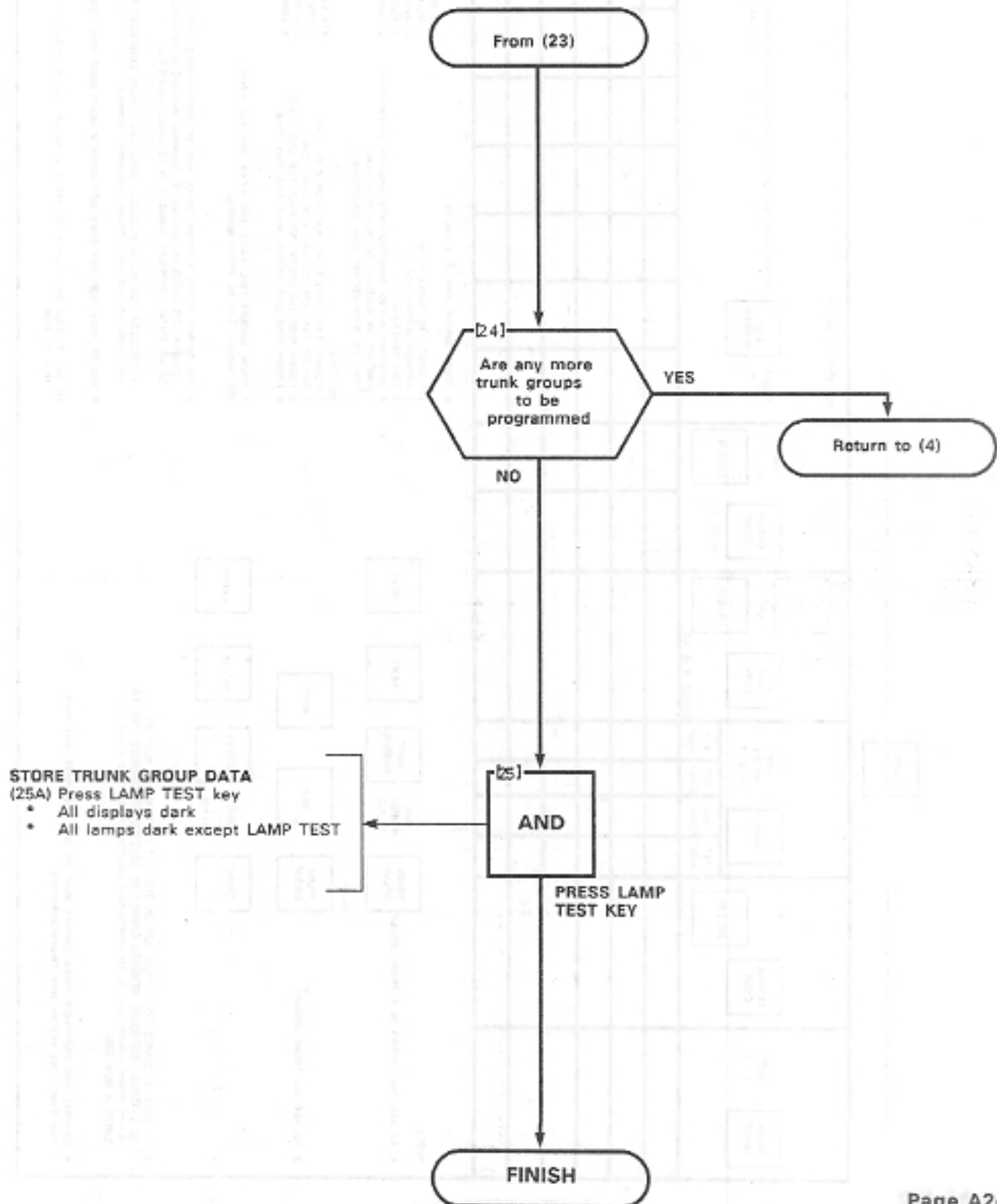


PROGRAM TRUNK GROUPS

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|                                 |            |
|---------------------------------|------------|
| RANGE PROGRAMMING FOR EXTENSION | 302100     |
| MAP210-212                      | 2100000000 |
| Issue 1, December 1982          | 1 1982     |
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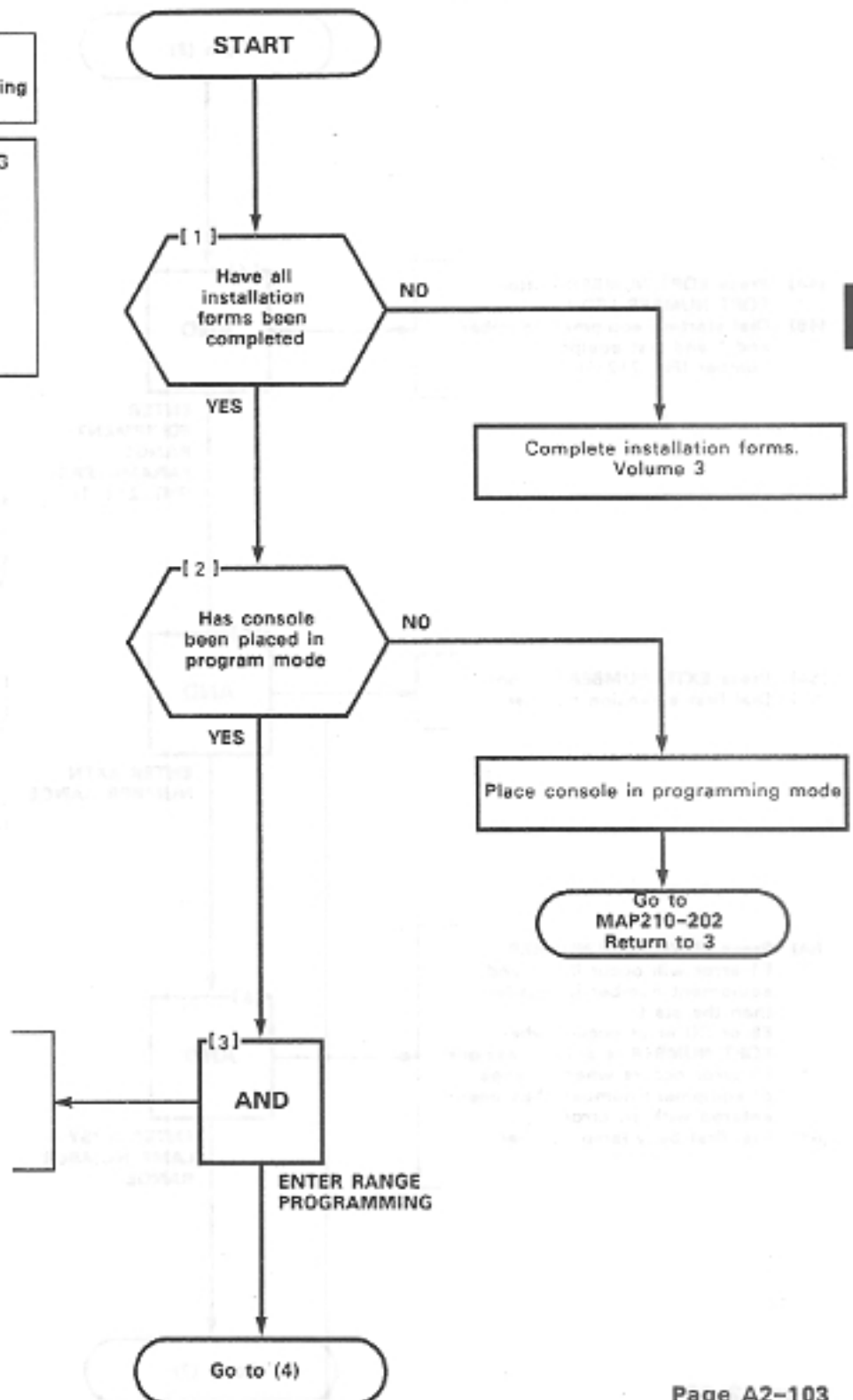
**NOTE**

For an example of the programming form refer to Fig. 212-2.

**SYNOPSIS RANGE PROGRAMMING**

Enter RANGE programming  
 Enter first equipment number, dial \*  
 Enter last equipment number  
 Enter first extension number  
 Enter first BUSY LAMP NUMBER  
 Enter COS number for Range  
 Enter Toll Deny  
 Enter Pick-Up Group  
 Enter Data

(3A) Press the RANGE button.  
 \* RANGE LED lit.



|                                  |
|----------------------------------|
| RANGE PROGRAMMING FOR EXTENSIONS |
| MAP210- 212                      |
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From (3)

[4] AND

- (4A) Press EQPT NUMBER button.
- EQPT NUMBER LED lit
- (4B) Dial starting equipment number, and \* and last equipment number (Fig. 212-1).

ENTER EQUIPMENT RANGE PARAMETERS (FIG. 212-1)

[5] AND

- (5A) Press EXTN NUMBER button
- (5B) Dial first extension number

ENTER EXTN NUMBER RANGE

[6] AND

- (6A) Press BUSY LAMP NUMBER
- E1 error will occur if the end equipment number is smaller than the start
- E6 or CO error occurs when EQPT NUMBER is already assigned
- E0 error occurs when a range of equipment numbers has been entered with an error
- (6B) Dial first busy lamp number

ENTER BUSY LAMP NUMBER RANGE

Go to (7)

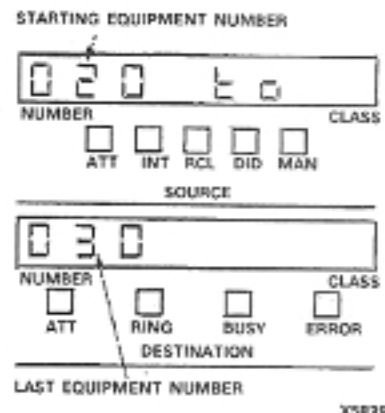


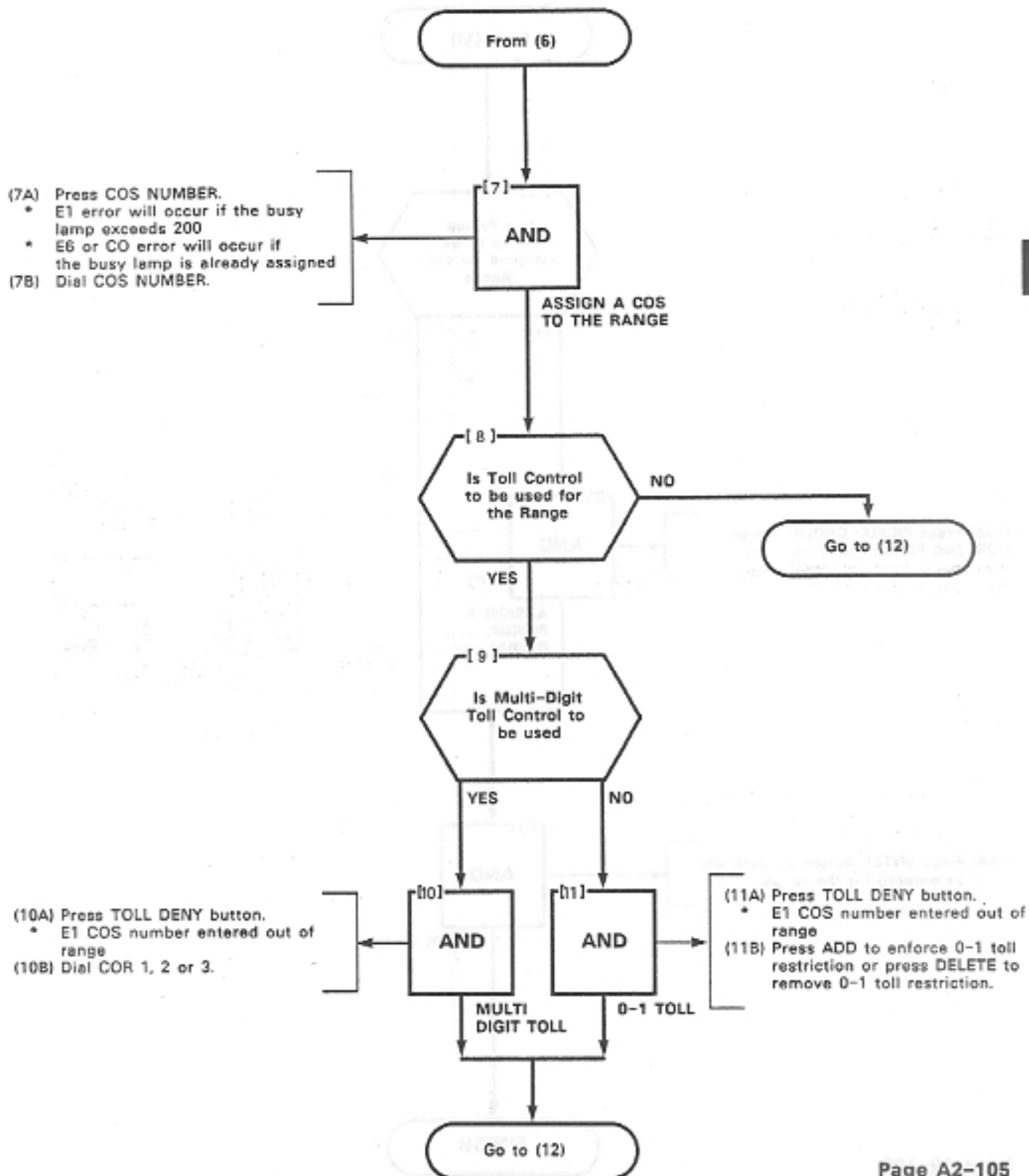
Fig. 213-1

RANGE PROGRAMMING FOR  
EXTENSION

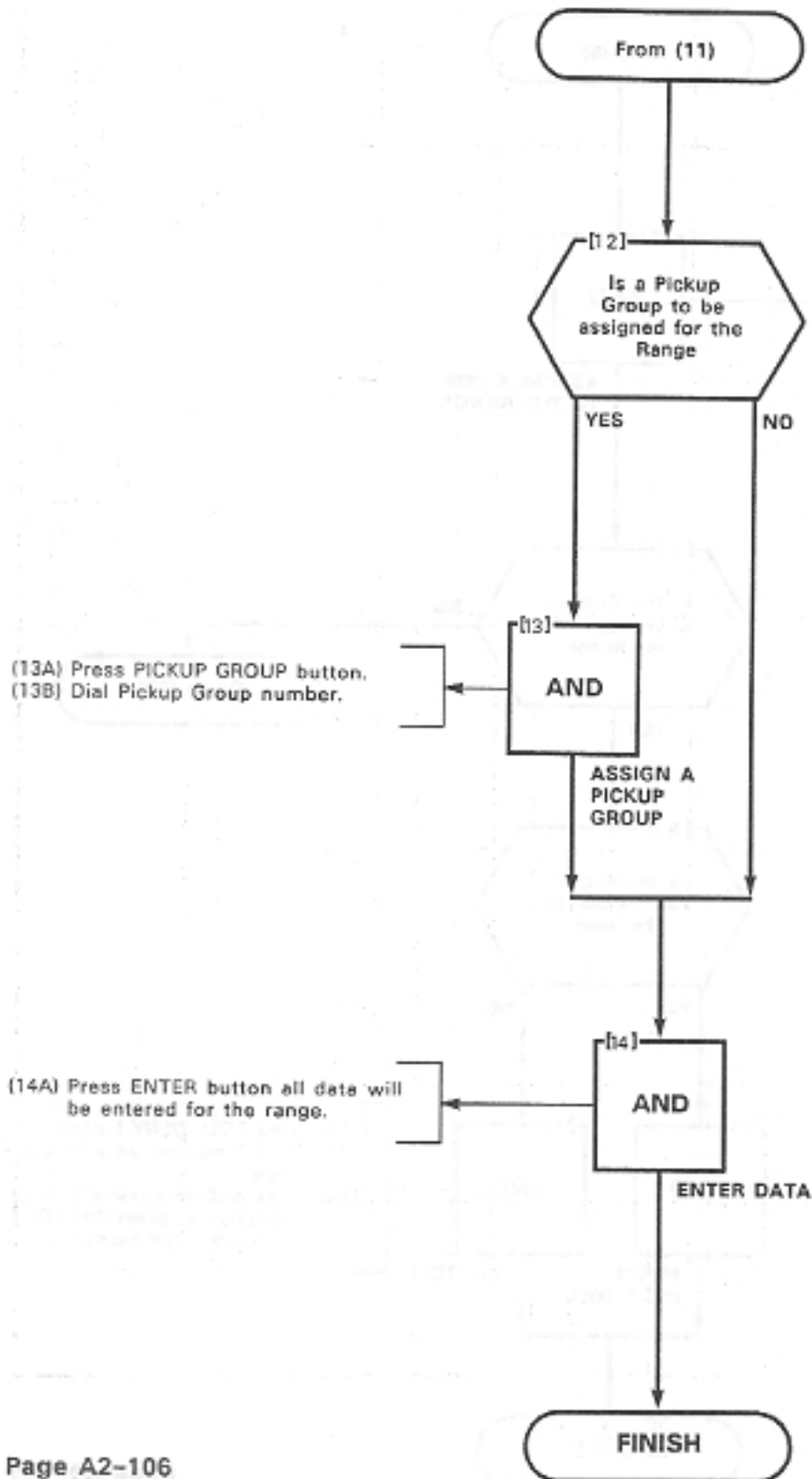
MAP210-212

Issue 1, December 1982

Sheet 3 of 6



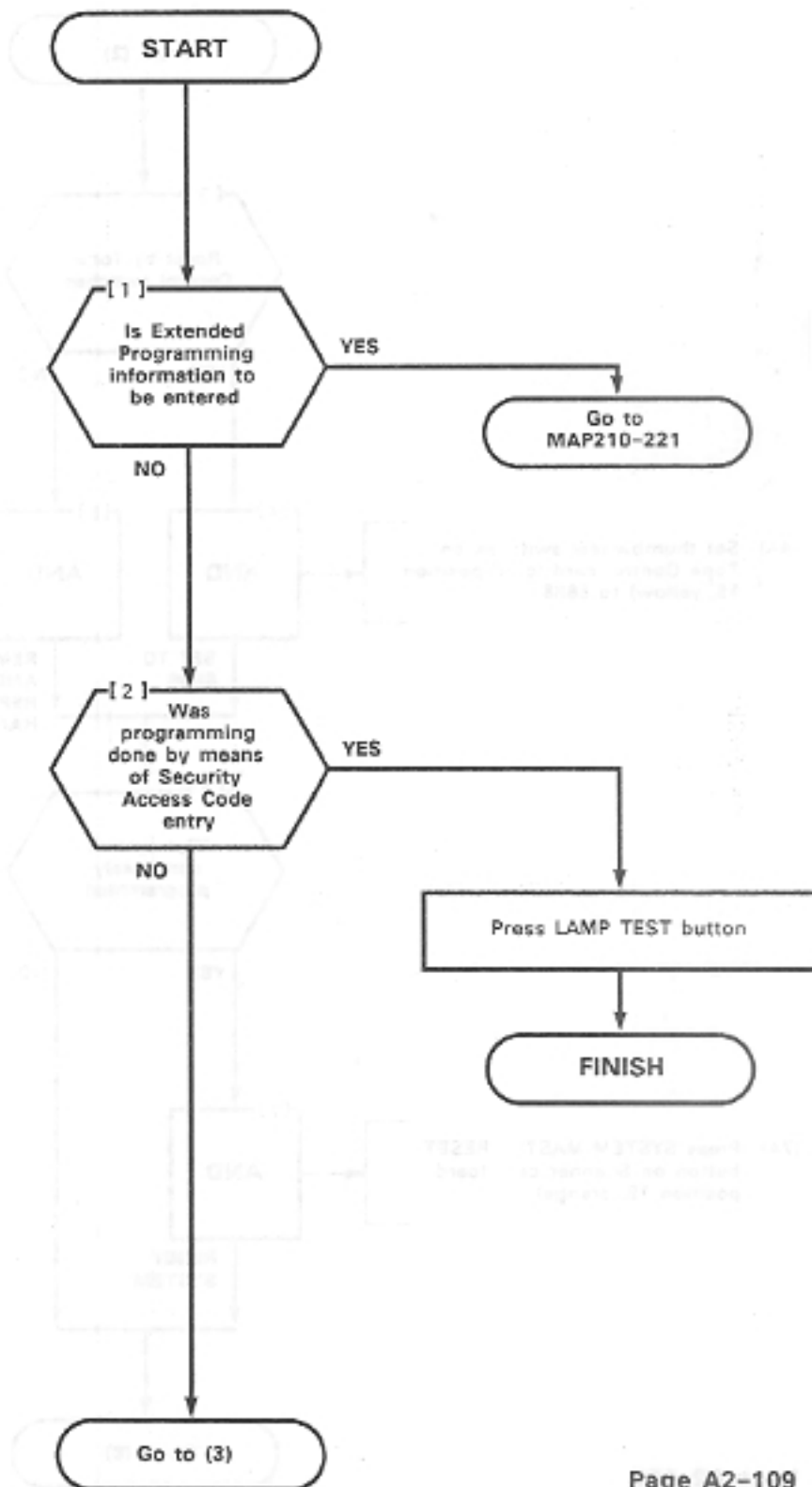
|                                  |
|----------------------------------|
| RANGE PROGRAMMING FOR EXTENSIONS |
| MAP210- 212                      |
| Issue 1, December 1982           |
| Sheet 4 of 6                     |



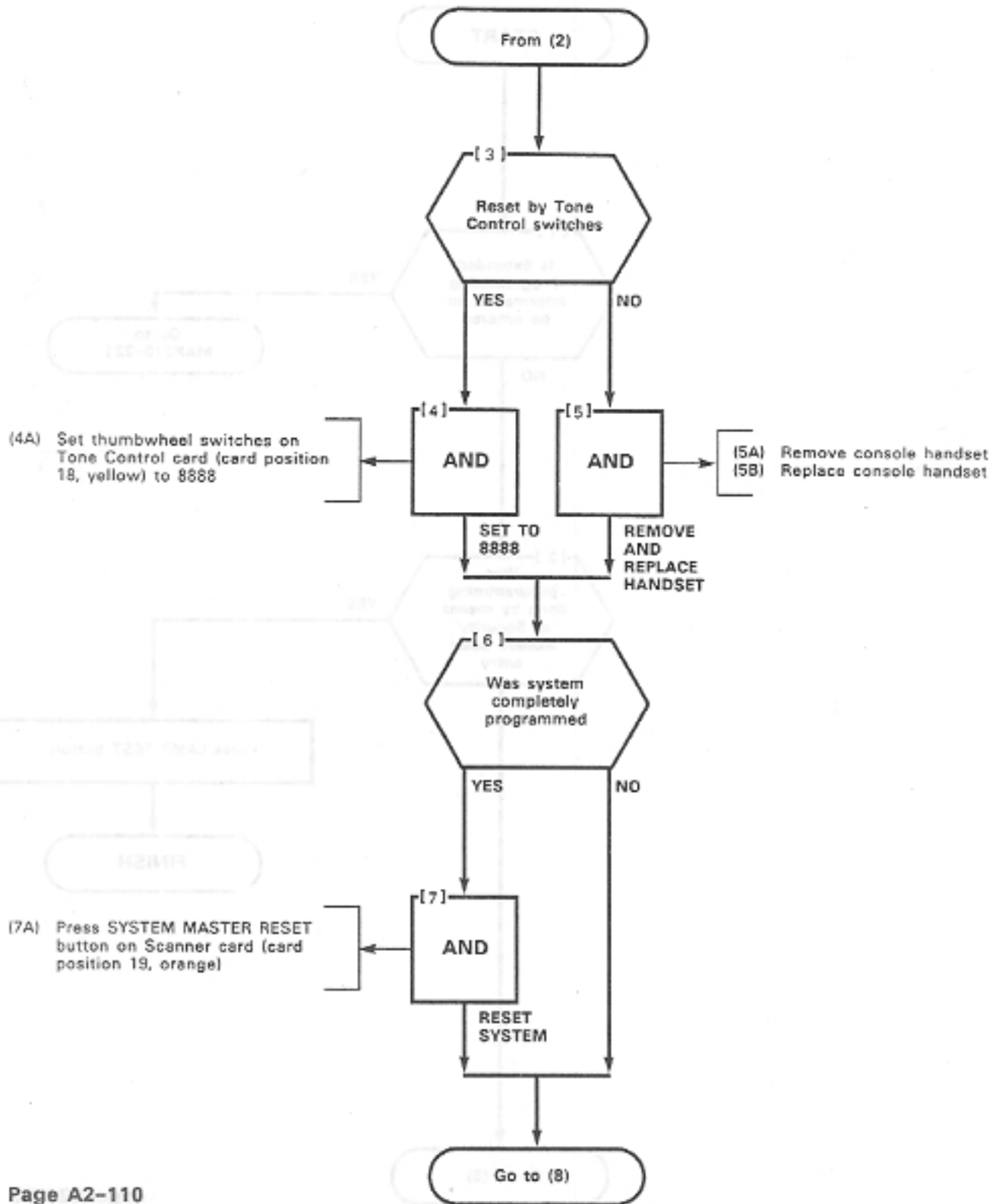




|                                       |               |
|---------------------------------------|---------------|
| TERMINATING STANDARD PROGRAMMING MODE | 17 JAN 1983   |
| MAP210- 213                           | OTS -0103AM   |
| Issue 1, December 1982                | 100007 3 0000 |
| Sheet 1 of 3                          | 2 10 2 1982   |



|                                       |
|---------------------------------------|
| TERMINATING STANDARD PROGRAMMING MODE |
| MAP210- 213                           |
| Issue 1, December 1982                |
| Sheet 2 of 3                          |



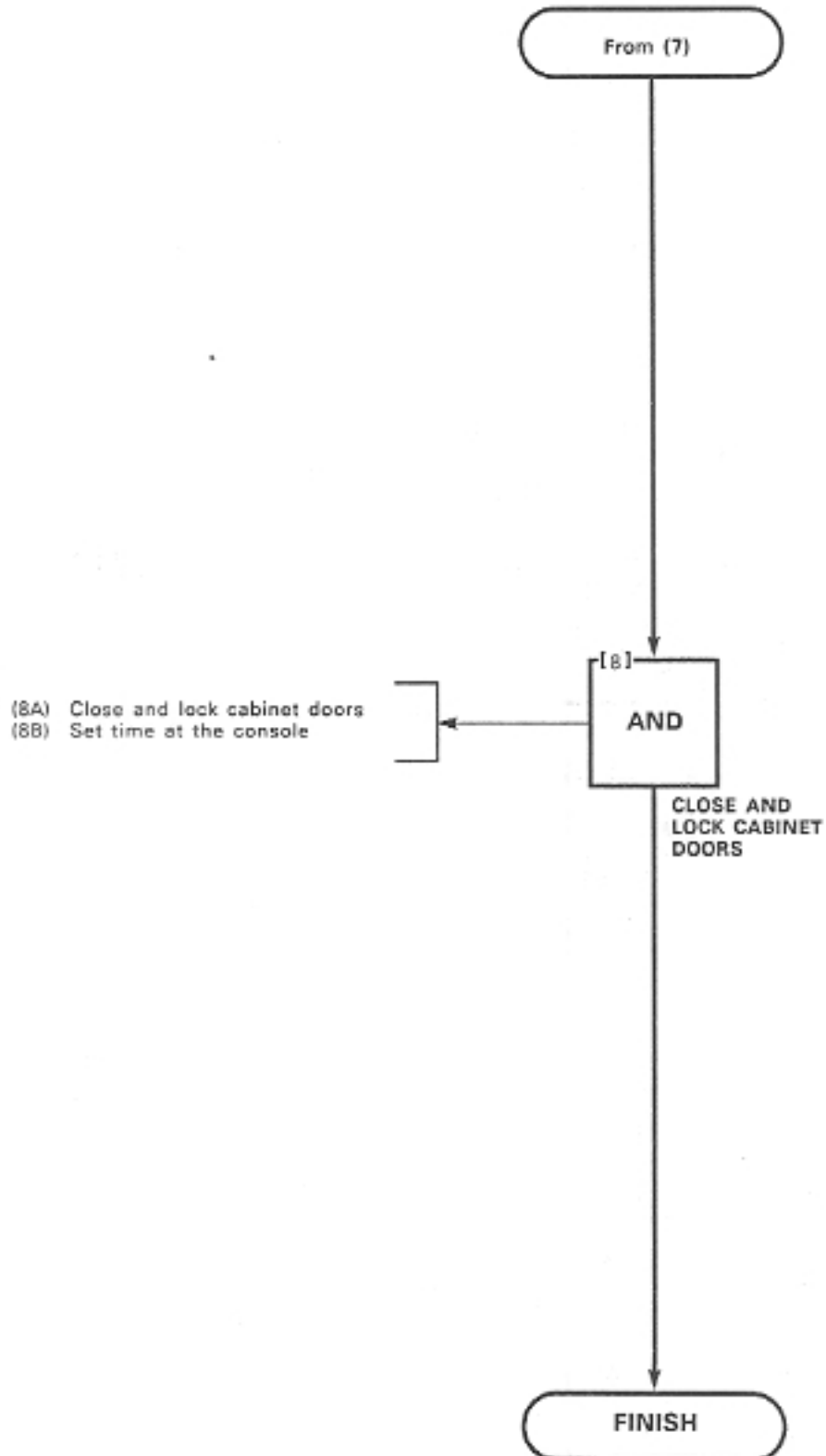


|  |
|--|
| TERMINATING STANDARD<br>PROGRAMMING MODE |
|--|

|            |
|------------|
| MAP210-213 |
|------------|

|                        |
|------------------------|
| Issue 1, December 1982 |
|------------------------|

|              |
|--------------|
| Sheet 3 of 3 |
|--------------|



|                   |
|-------------------|
| TERMINAL STANDARD |
| PROGRAMMING MODE  |
| MODE-311          |
| MODE-311          |
| MODE-311          |

START

CBA

DO NOT  
FORGET TO  
CHECK THE  
CBA

DO NOT FORGET TO CHECK THE CBA

FINISH

SELECTION OF EXTENDED  
PROGRAMMING

MAP210-221

Issue 1, December 1982

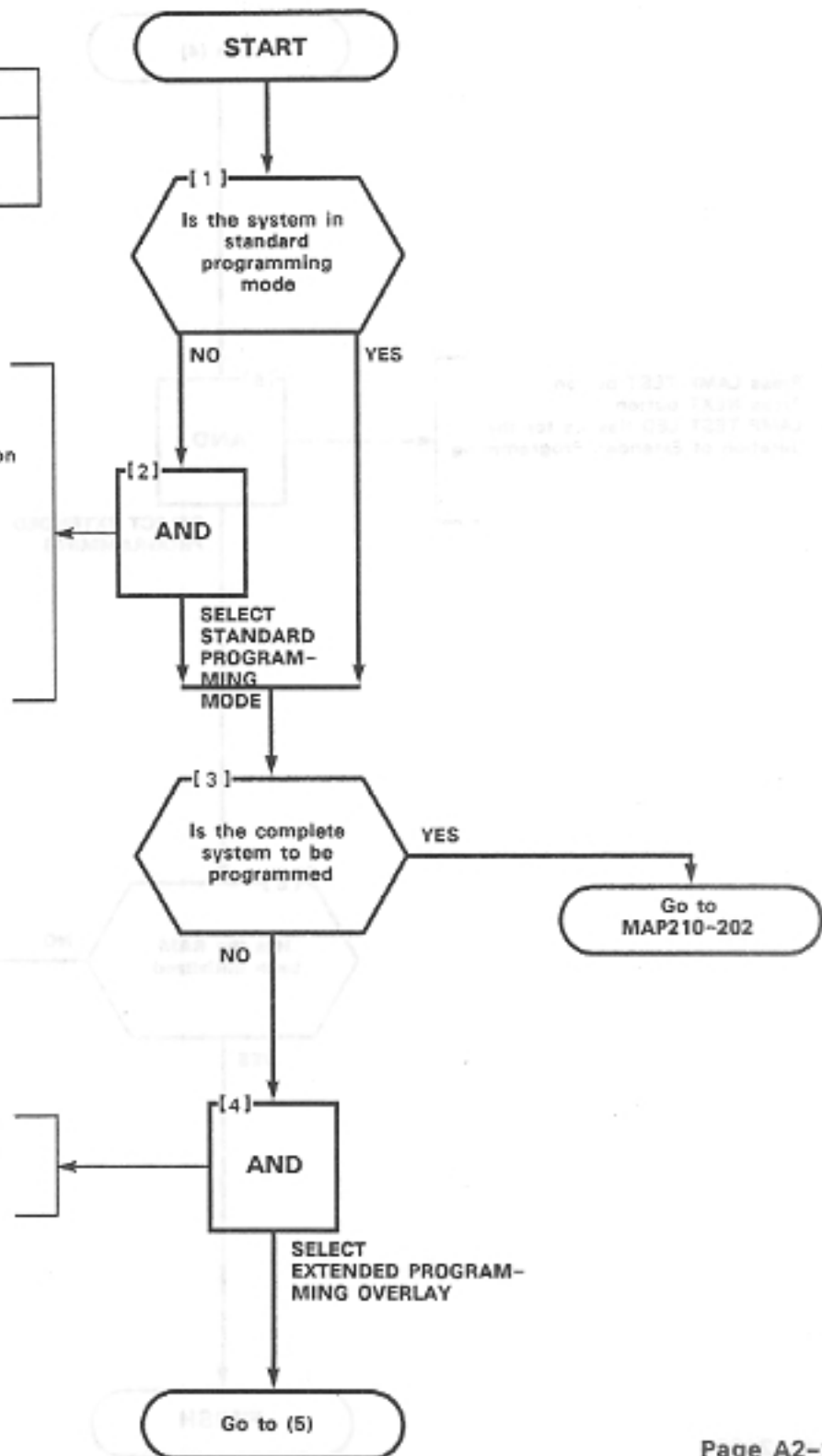
Sheet 1 of 2

TABLE 221-1

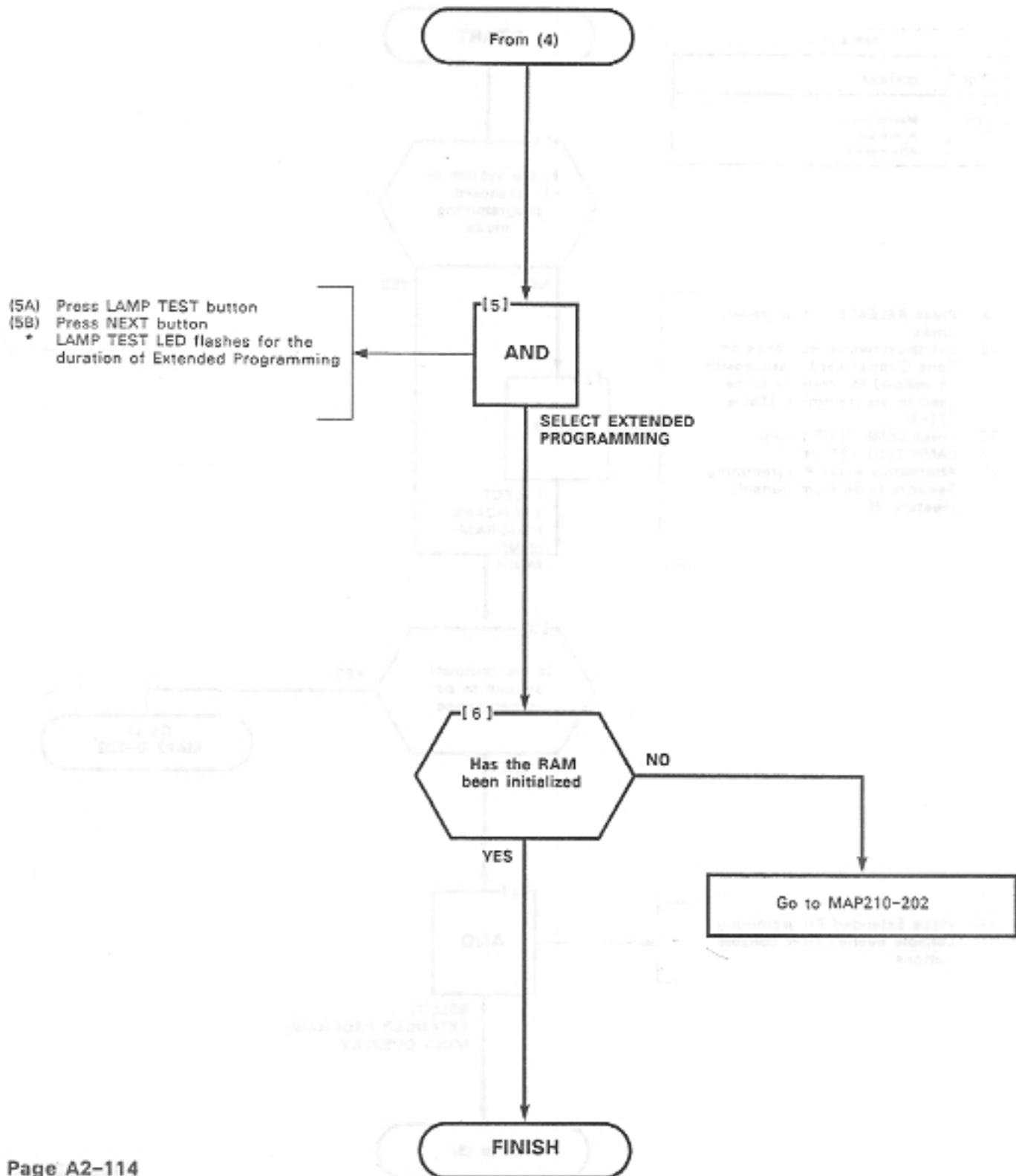
| CODE | CONSOLE     |
|------|-------------|
| 7770 | Maintenance |
| 7771 | Attendant 1 |
| 7772 | Attendant 2 |

- (2A) Press RELEASE button several times
- (2B) Set thumbwheel switches on Tone Control card (card position 18 yellow) for console to be used in programming (Table 221-1)
- (2C) Press LAMP TEST button  
• LAMP TEST LED lit
- (2D) Alternately enter Programming Security Code from console (Feature 29)

- (4A) Place Extended Programming console overlay over console buttons



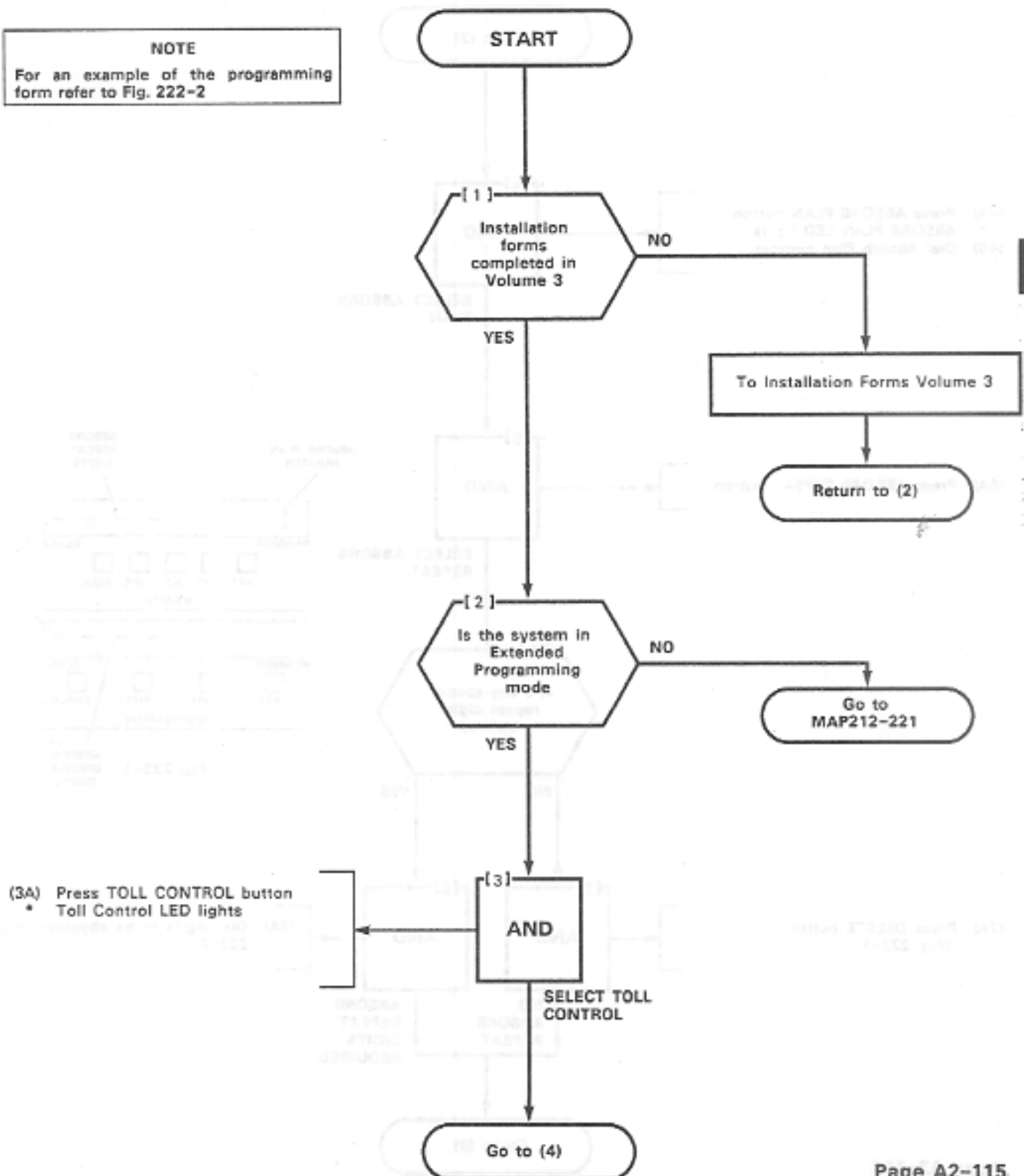
|                                   |                            |
|-----------------------------------|----------------------------|
| SELECTION OF EXTENDED PROGRAMMING | WGT09-105<br>BY: WEAARDCAF |
| MAP210-221                        | 100-8121/00                |
| Issue 1, December 1982            | 1000 7 0000                |
| Sheet 2 of 2                      | 1 to 2 0000                |



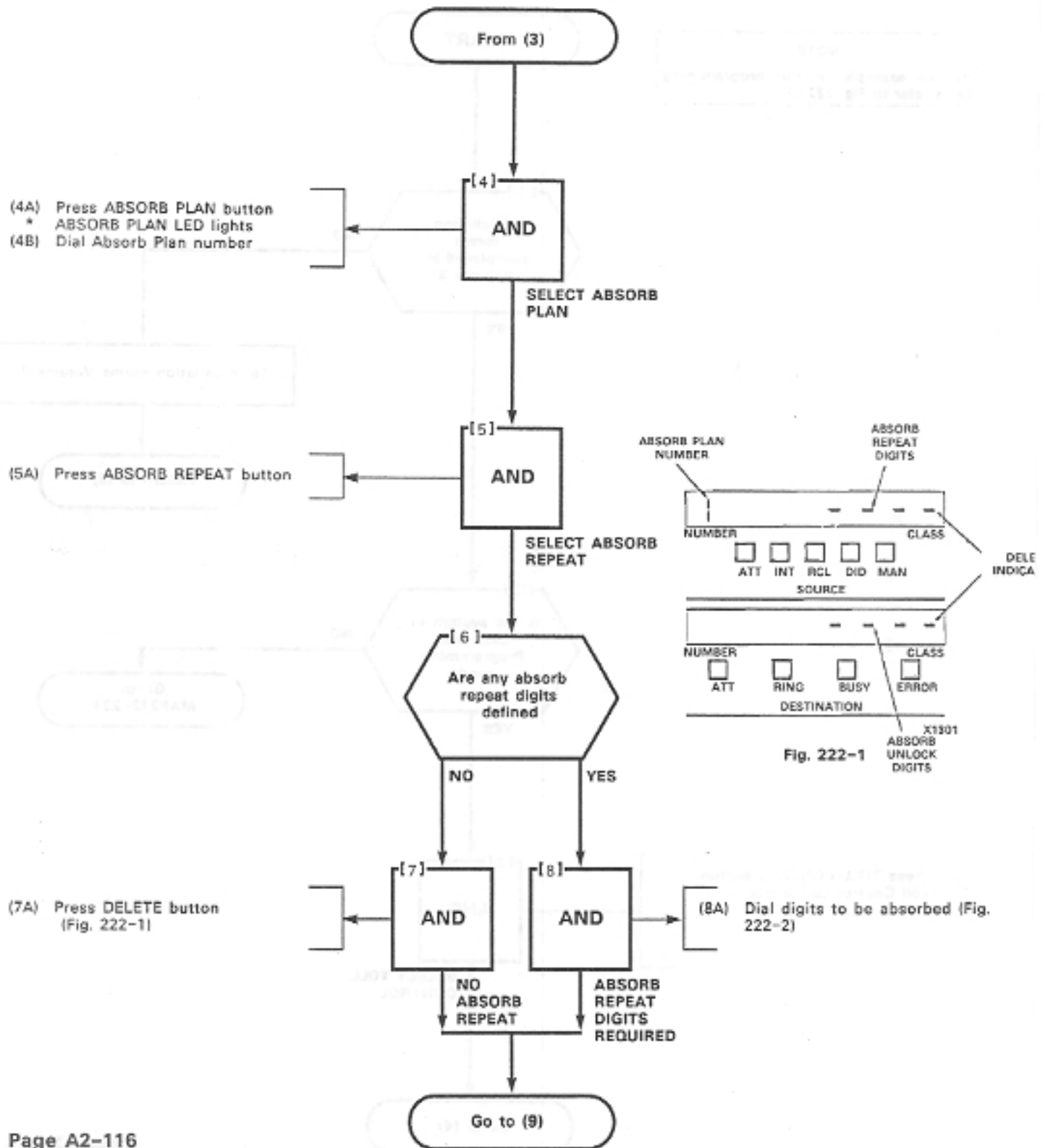
|                        |             |
|------------------------|-------------|
| ABSORB PLAN            | HALP BRODGA |
| MAP210-222             | SEC -0151AM |
| Issue 1, December 1982 | 1000 1 1000 |
| Sheet 1 of 6           | 3 to 5 1000 |

**NOTE**

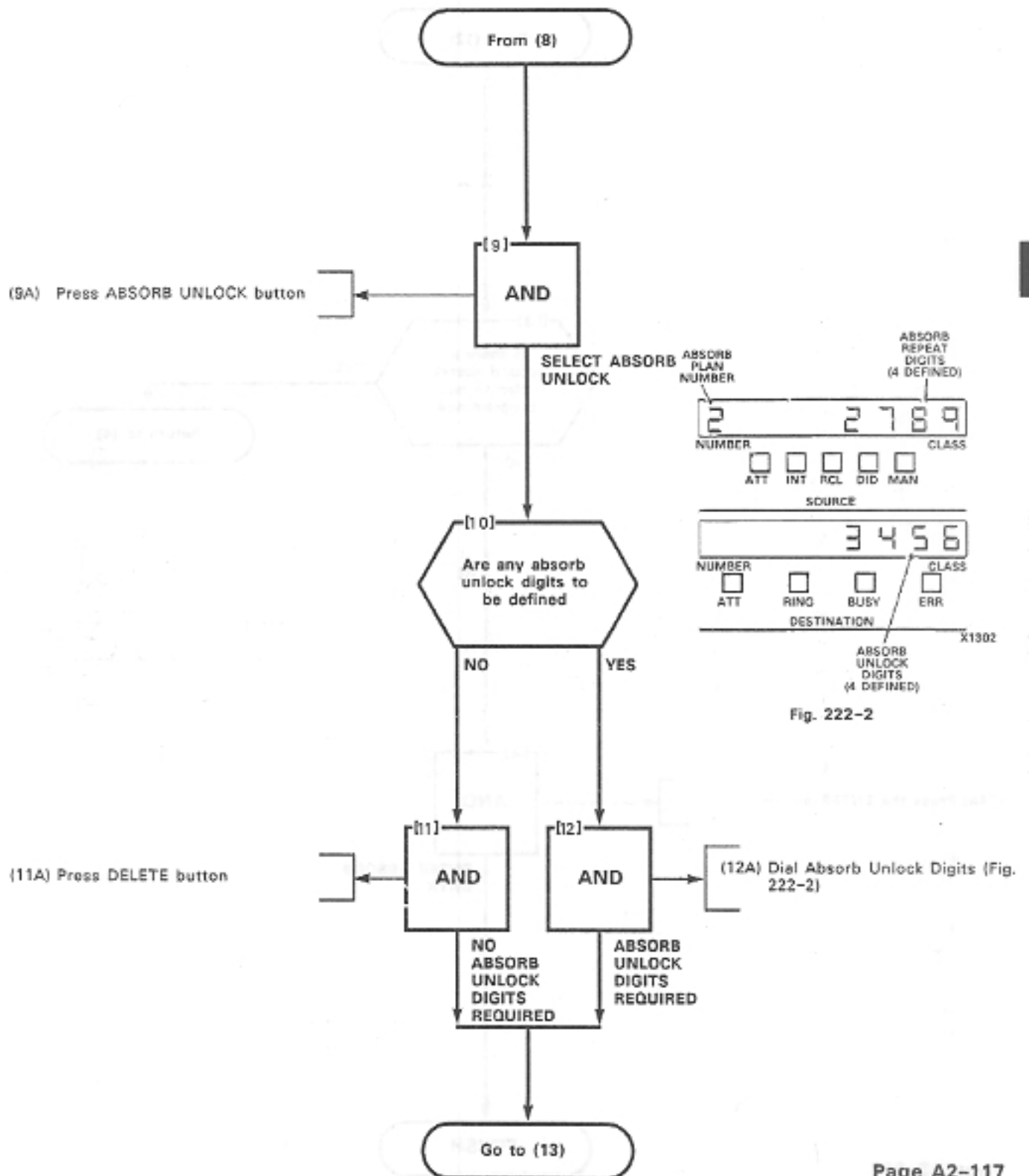
For an example of the programming form refer to Fig. 222-2



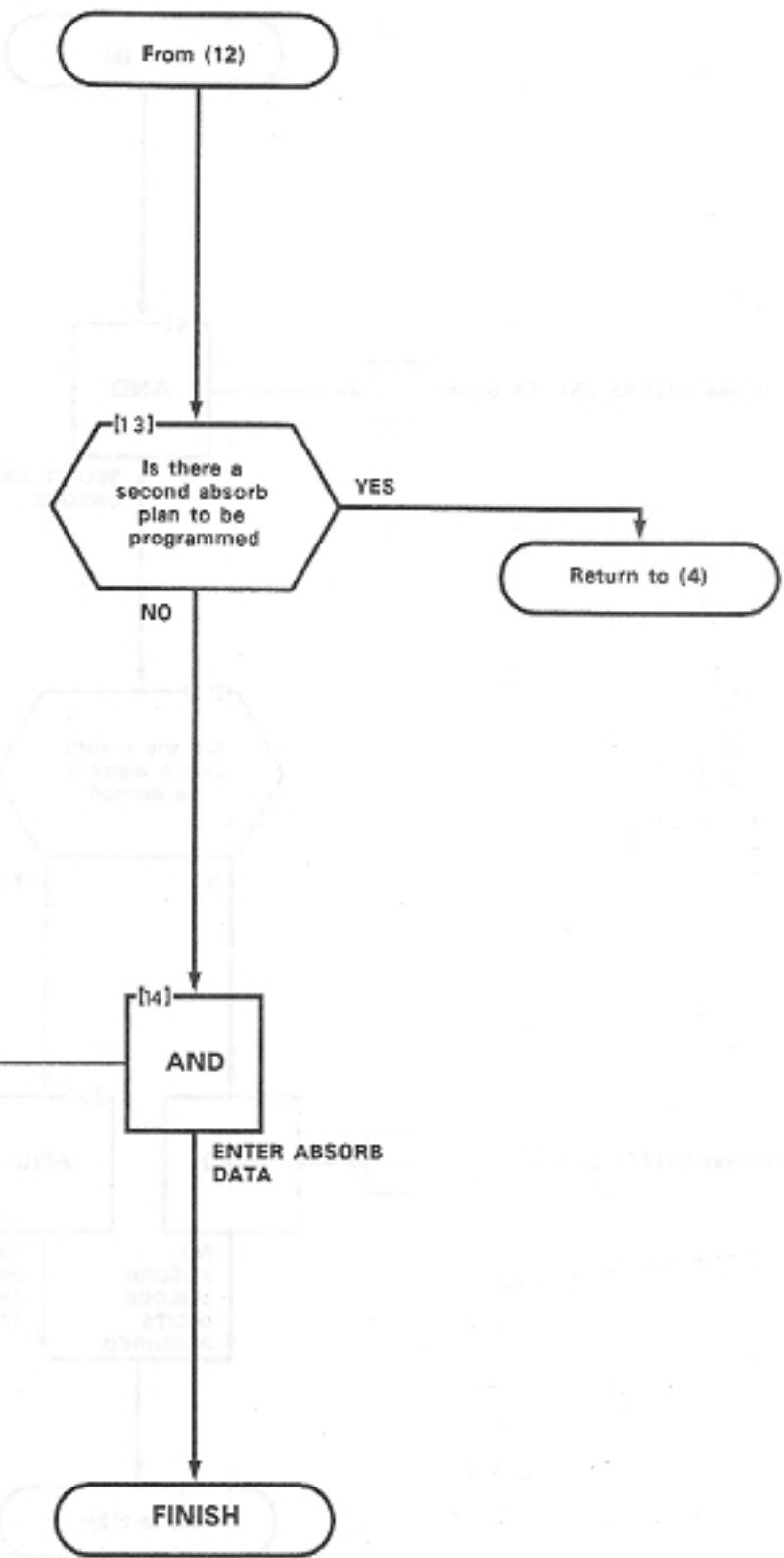
|                        |
|------------------------|
| ABSORB PLAN            |
| MAP210- 222            |
| Issue 1, December 1982 |
| Sheet 2 of 6           |



|                        |            |
|------------------------|------------|
| ABSORB PLAN            | MAP210-222 |
| MAP210-222             | ISSUE 1    |
| Issue 1, December 1982 |            |
| Sheet 3 of 6           |            |



|                        |
|------------------------|
| ABSORB PLAN            |
| MAP210- 222            |
| Issue 1, December 1982 |
| Sheet 4 of 6           |



(14A) Press the ENTER button



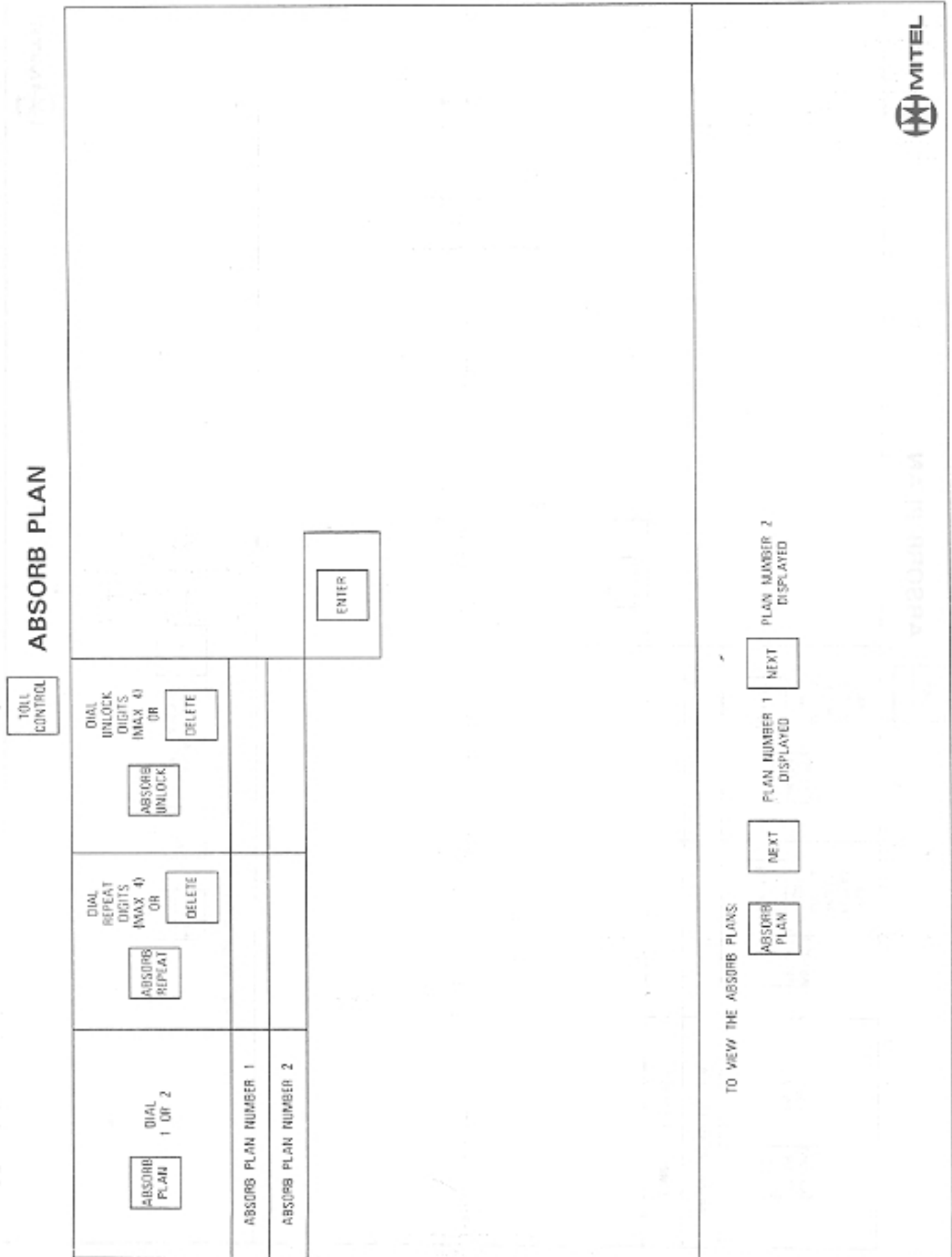


Fig. 222-3

# ABSORB PLAN

TOLL CONTROL

|                                       |  |  |              |
|---------------------------------------|--|--|--------------|
| <p>ABSORB PLAN</p> <p>DIAL 1 OR 2</p> | <p>ABSORB REPEAT</p> <p>DIAL REPEAT DIGITS (MAX 4) OR DELETE</p> | <p>ABSORB UNLOCK</p> <p>DIAL UNLOCK DIGITS (MAX 4) OR DELETE</p> | <p>ENTER</p> |
| <p>ABSORB PLAN NUMBER 1</p>           |  |  |              |
| <p>ABSORB PLAN NUMBER 2</p>           |  |  |              |

TO VIEW THE ABSORB PLANS

ABSORB PLAN

NEXT

PLAN NUMBER 1 DISPLAYED

NEXT

PLAN NUMBER 2 DISPLAYED



CONTROL PLAN

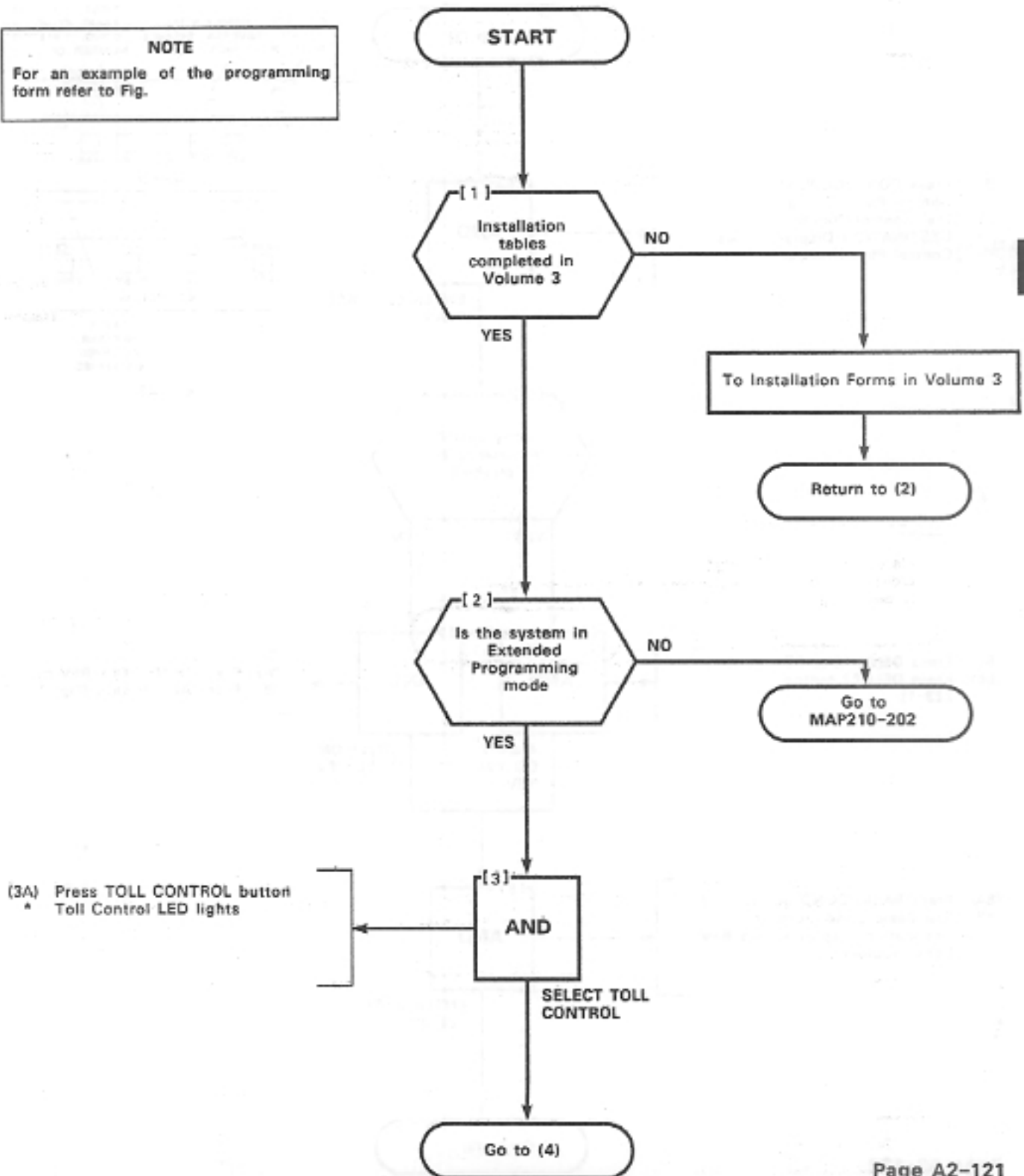
MAP210-223

Issue 1, December 1982

Sheet 1 of 7

## NOTE

For an example of the programming form refer to Fig.



|                        |
|------------------------|
| CONTROL PLAN           |
| MAP210- 223            |
| Issue 1, December 1982 |
| Sheet 2 of 7           |

- (4A) Press CONTROL PLAN button
- Control Plan LED lights
- (4B) Dial Control Plan number
- DESTINATION Display shows Control Plan Number

- (6A) Press DENY TOLL REV button
- (6B) Press DELETE button (Fig. 223-1).

- (8A) Press BASIC COND button
- (8B) Dial Basic Cond. number
- Destination Display shows Basic Cond. number

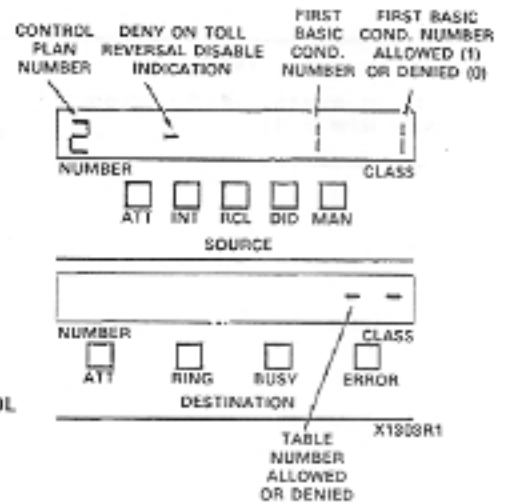
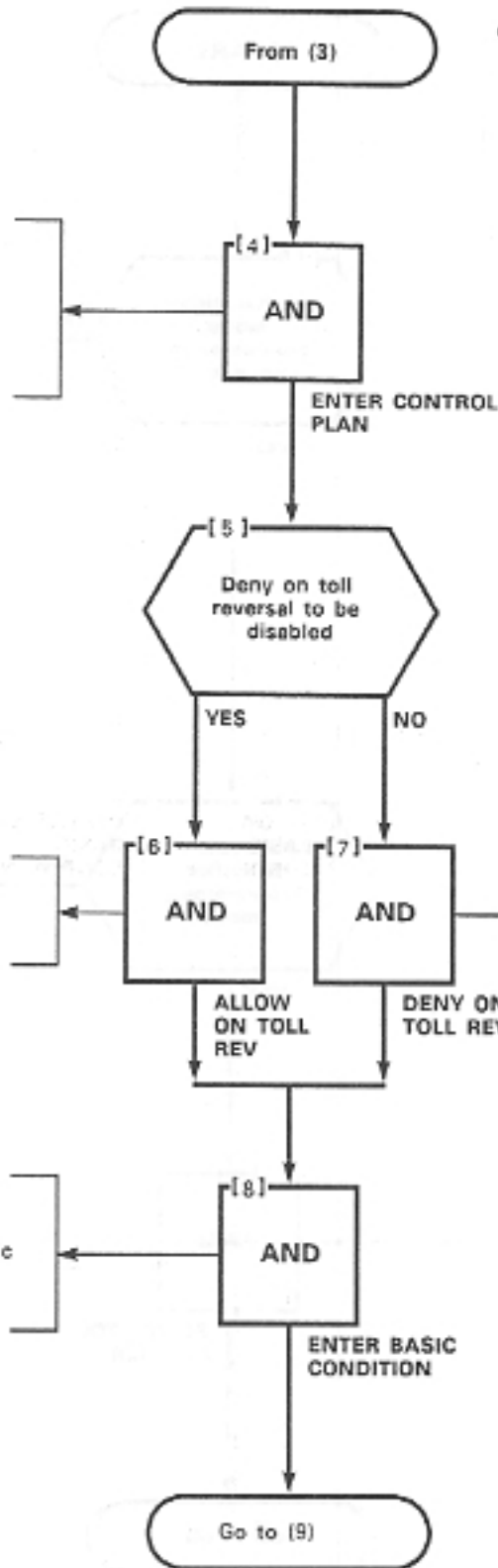
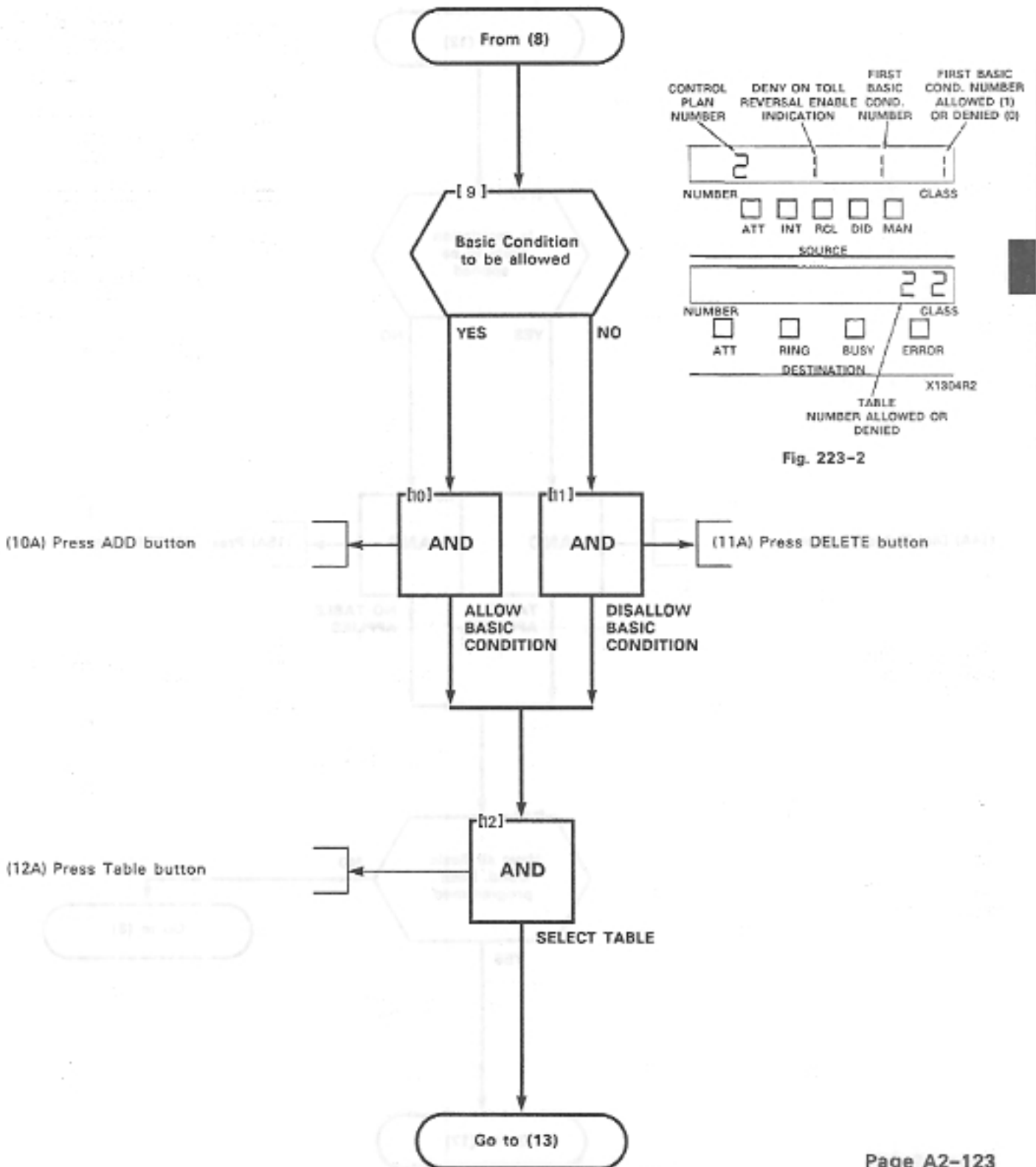


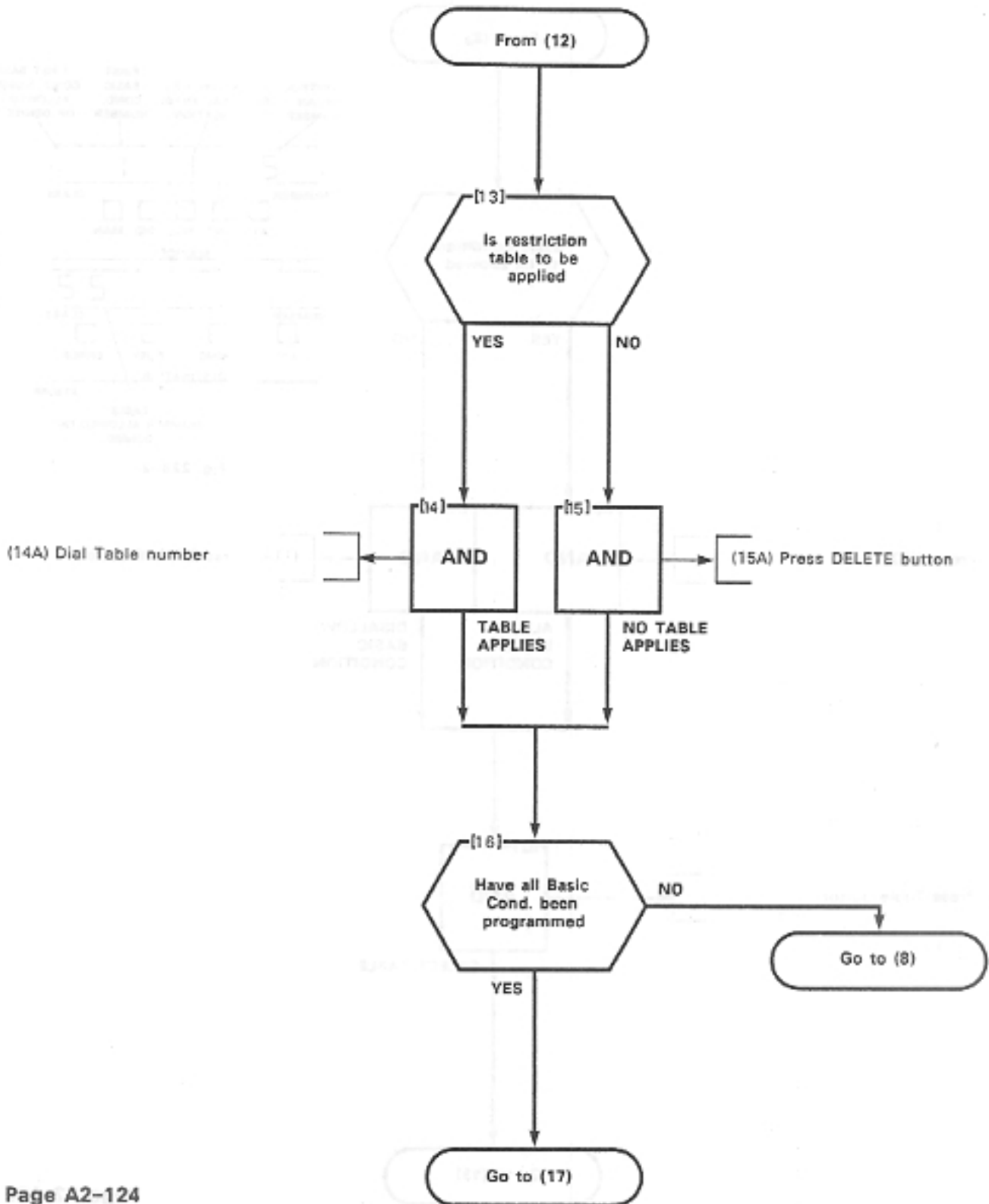
Fig. 223-1

- (7A) Press DENY TOLL REV button
- (7B) Press ADD button (Fig. 223-2).

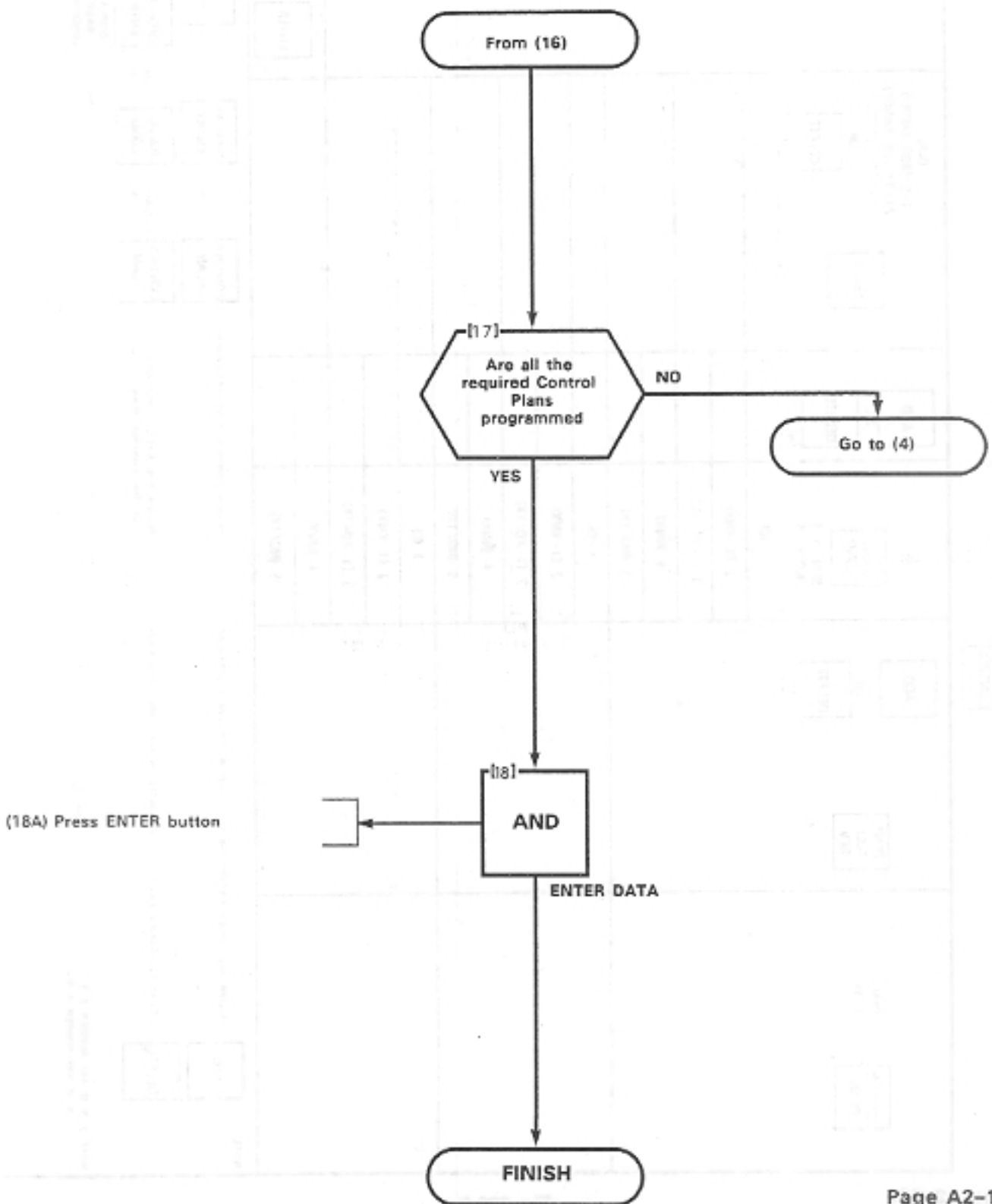
|                        |                        |
|------------------------|------------------------|
| CONTROL PLAN           | MAP210-223             |
| MAP210-223             | ISSUE 1, DECEMBER 1982 |
| Issue 1, December 1982 | SHEET 3 OF 7           |

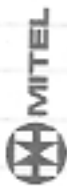


|                        |                |
|------------------------|----------------|
| CONTROL PLAN           | PL-1 CONTINUED |
| MAP210- 223            | 12-01-1982     |
| Issue 1, December 1982 |                |
| Sheet 4 of 7           |                |



|                        |
|------------------------|
| CONTROL PLAN           |
| MAP210-223             |
| Issue 1, December 1982 |
| Sheet 5 of 7           |





| CONTROL PLAN |           | TOLL CONTROL  |               | CONTROL PLAN |           | BASIC COND    |           | ADD OR DELETE |           | DIAL         |           | 1-9 (800 ENTRY)<br>21-33 (20 RANGE)<br>51-73 (4 ENTRY)<br>OR<br>DELETE |           |
|--------------|-----------|---------------|---------------|--------------|-----------|---------------|-----------|---------------|-----------|--------------|-----------|--|-----------|
| CONTROL PLAN | DIAL 1-15 | DENY TOLL REV | ADD OR DELETE | BASIC COND   | DIAL 1-15 | ADD OR DELETE | DIAL 1-15 | CONTROL PLAN  | DIAL 1-15 | CONTROL PLAN | DIAL 1-15 | CONTROL PLAN   | DIAL 1-15 |
| CONTROL PLAN | DIAL 1-15 | DENY TOLL REV | ADD OR DELETE | BASIC COND   | DIAL 1-15 | ADD OR DELETE | DIAL 1-15 | CONTROL PLAN  | DIAL 1-15 | CONTROL PLAN | DIAL 1-15 | CONTROL PLAN   | DIAL 1-15 |
|              |           |               |               | 1 (0)        |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 2 (1-XXXX)   |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 3 (1-X0/1X)  |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 4 (NNX)      |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 5 (N0/1X)    |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 1 (0)        |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 2 (1-XXXX)   |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 3 (1-X0/1X)  |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 4 (NNX)      |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 5 (N0/1X)    |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 1 (0)        |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 2 (1-XXXX)   |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 3 (1-X0/1X)  |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 4 (NNX)      |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 5 (N0/1X)    |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 1 (0)        |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 2 (1-XXXX)   |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 3 (1-X0/1X)  |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 4 (NNX)      |           |               |           |               |           |              |           |  |           |
|              |           |               |               | 5 (N0/1X)    |           |               |           |               |           |              |           |  |           |

NOTE 1 - ALLOW ALL CODES EXCEPT THOSE LISTED IN THE TABLE SPECIFIED

TO REVIEW CONTROL PLAN ASSIGNMENTS

CONTROL PLAN

DIAL 1-15

DISPLAY ENTRY

ENTER

DISPLAY ENTRY

DISPLAY BASIC CONDITION

DISPLAY BASIC CONDITION

NOTE 2 - DENY ALL CODES EXCEPT THOSE LISTED IN THE TABLE SPECIFIED

TO REVIEW THE BASIC CONDITIONS OF THE CONTROL PLAN

CONTROL PLAN

DIAL 1-15

BASIC COND

ENTER

DISPLAY ENTRY

DISPLAY BASIC CONDITION

DISPLAY BASIC CONDITION

NOTE 3 - N IS ANY NUMBER 2-9  
X IS ANY NUMBER 0-9

Fig. 222-3



## CONTROL PLAN

TOLL  
CONTROL

| CONTROL PLAN<br>DIAL<br>1-15 | DENY<br>TOLL<br>REV | ADD<br>OR<br>DELETE | BASIC<br>COND<br>DIAL 1-5<br>(NOTE 2) | ADD<br>OR<br>DELETE<br>(NOTE 1) | DIAL<br>1-9 (800 ENTRY)<br>21-33 (20 RANGE)<br>51-73 (4 ENTRY)<br>OR<br>DELETE | ENTER |
|------------------------------|---------------------|---------------------|---------------------------------------|---------------------------------|--|-------|
|                              |                     |                     | 1 (0)                                 |                                 |  |       |
|                              |                     |                     | 2 (1-XXXX)                            |                                 |  |       |
|                              |                     |                     | 3 (1-XX/1X)                           |                                 |  |       |
|                              |                     |                     | 4 (NNX)                               |                                 |  |       |
|                              |                     |                     | 5 (NO/1X)                             |                                 |  |       |
|                              |                     |                     | 1 (0)                                 |                                 |  |       |
|                              |                     |                     | 2 (1-XXXX)                            |                                 |  |       |
|                              |                     |                     | 3 (1-XX/1X)                           |                                 |  |       |
|                              |                     |                     | 4 (NNX)                               |                                 |  |       |
|                              |                     |                     | 5 (NO/1X)                             |                                 |  |       |
|                              |                     |                     | 1 (0)                                 |                                 |  |       |
|                              |                     |                     | 2 (1-XXXX)                            |                                 |  |       |
|                              |                     |                     | 3 (1-XX/1X)                           |                                 |  |       |
|                              |                     |                     | 4 (NNX)                               |                                 |  |       |
|                              |                     |                     | 5 (NO/1X)                             |                                 |  |       |

NOTE 1  
 - ALLOW ALL CODES EXCEPT THOSE LISTED IN THE TABLE SPECIFIED  
 - DENY ALL CODES EXCEPT THOSE LISTED IN THE TABLE SPECIFIED

NOTE 2: N IS ANY NUMBER 2-9  
 X IS ANY NUMBER 0-9

TO REVIEW CONTROL PLAN ASSIGNMENTS

TO REVIEW THE BASIC CONDITIONS OF THE CONTROL PLAN

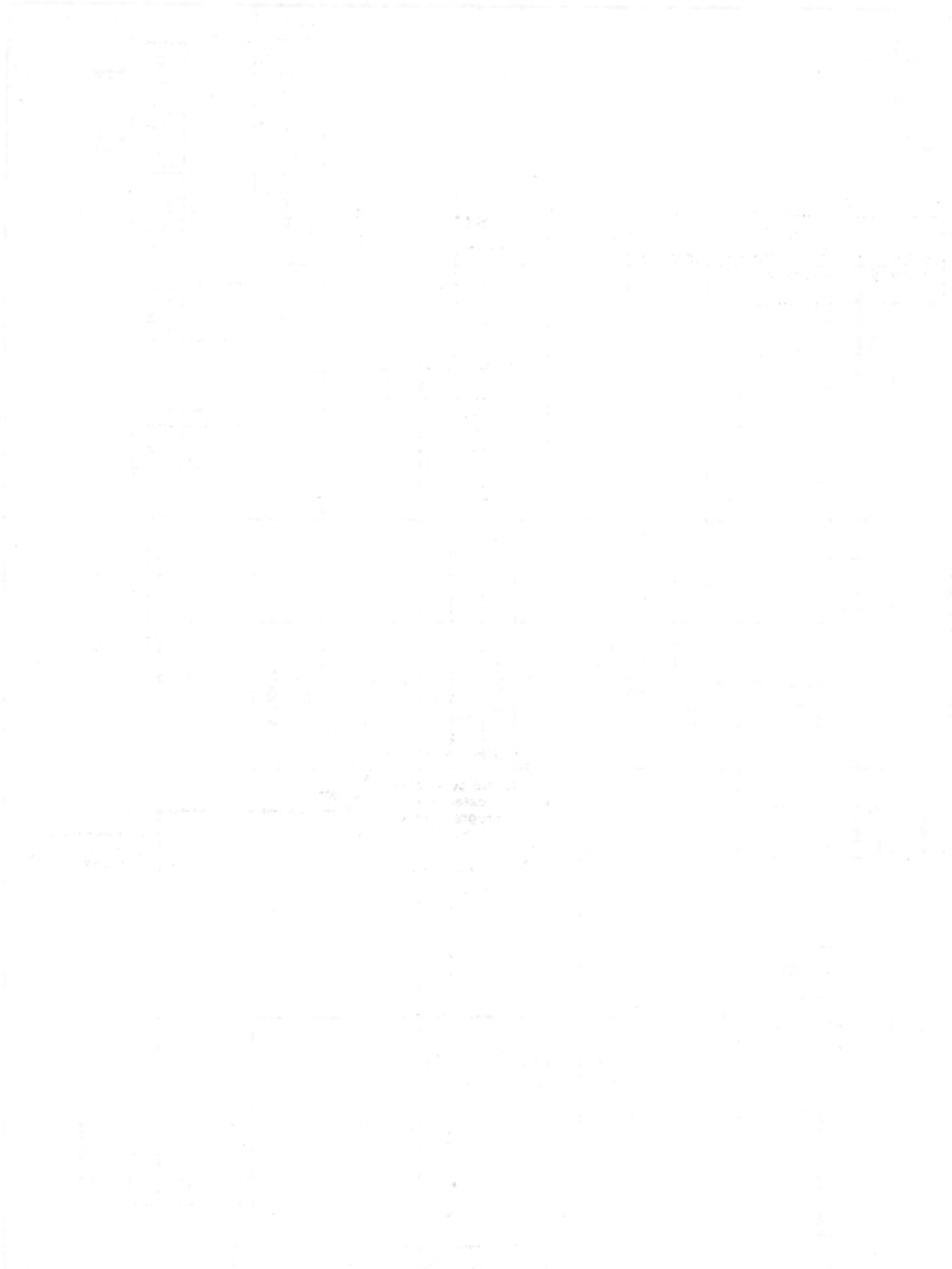
CONTROL PLAN  
 OVAL 1-15  
 OVAL 1-15  
 OVAL 1-15  
 OVAL 1-15

DISPLAY ENTRY  
 DIAL 1  
 DIAL 1  
 DIAL 1  
 DIAL 1

BASIC COND  
 BASIC CONDITION 1  
 BASIC CONDITION 2  
 BASIC CONDITION 3

NEXT  
 NEXT  
 NEXT  
 NEXT  
 NEXT

Fig. 223-3 (cont'd)



|                                  |
|----------------------------------|
| TRUNK GROUP CLASS OF RESTRICTION |
|----------------------------------|

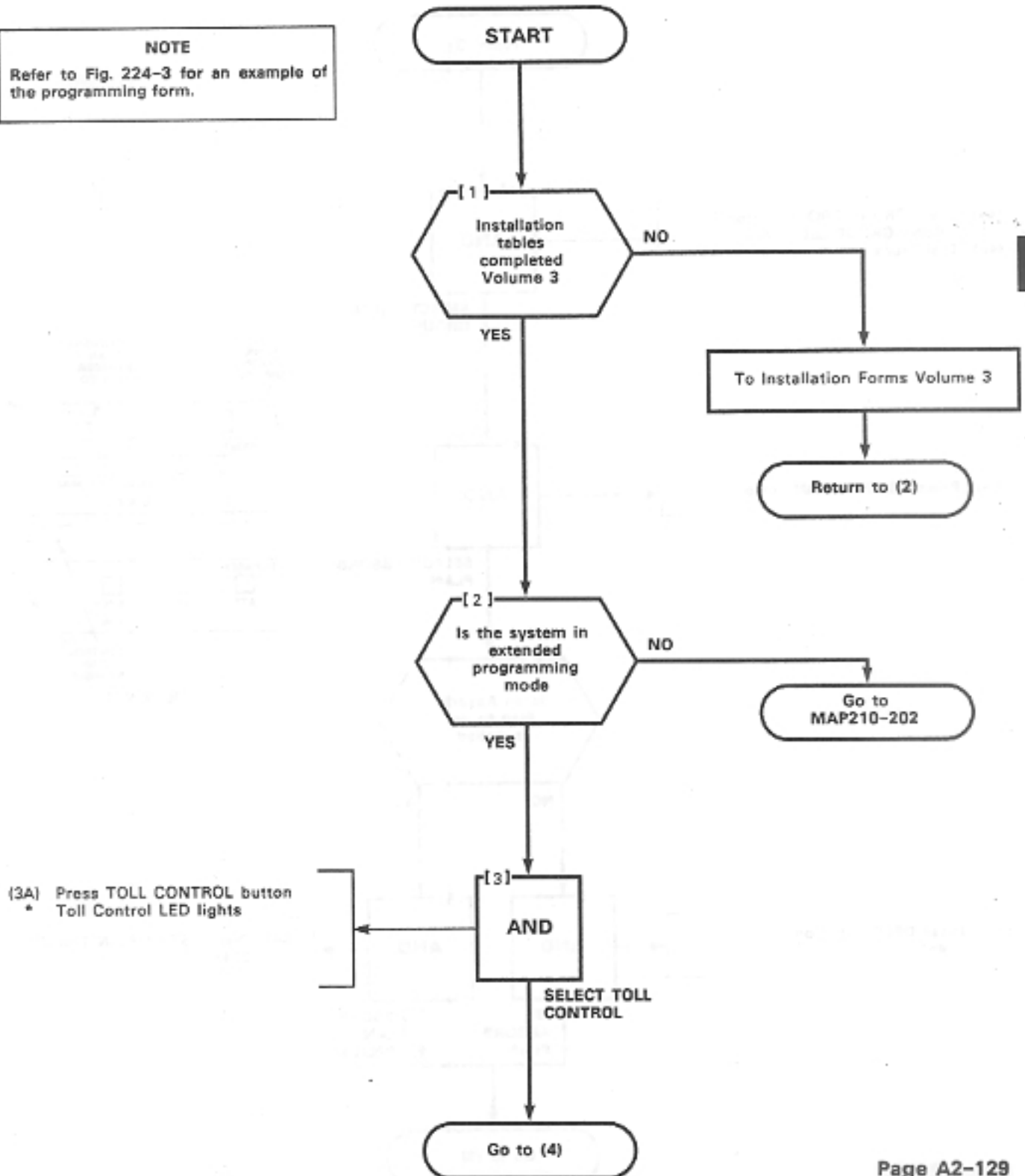
|            |
|------------|
| MAP210-224 |
|------------|

|                        |
|------------------------|
| Issue 1, December 1982 |
|------------------------|

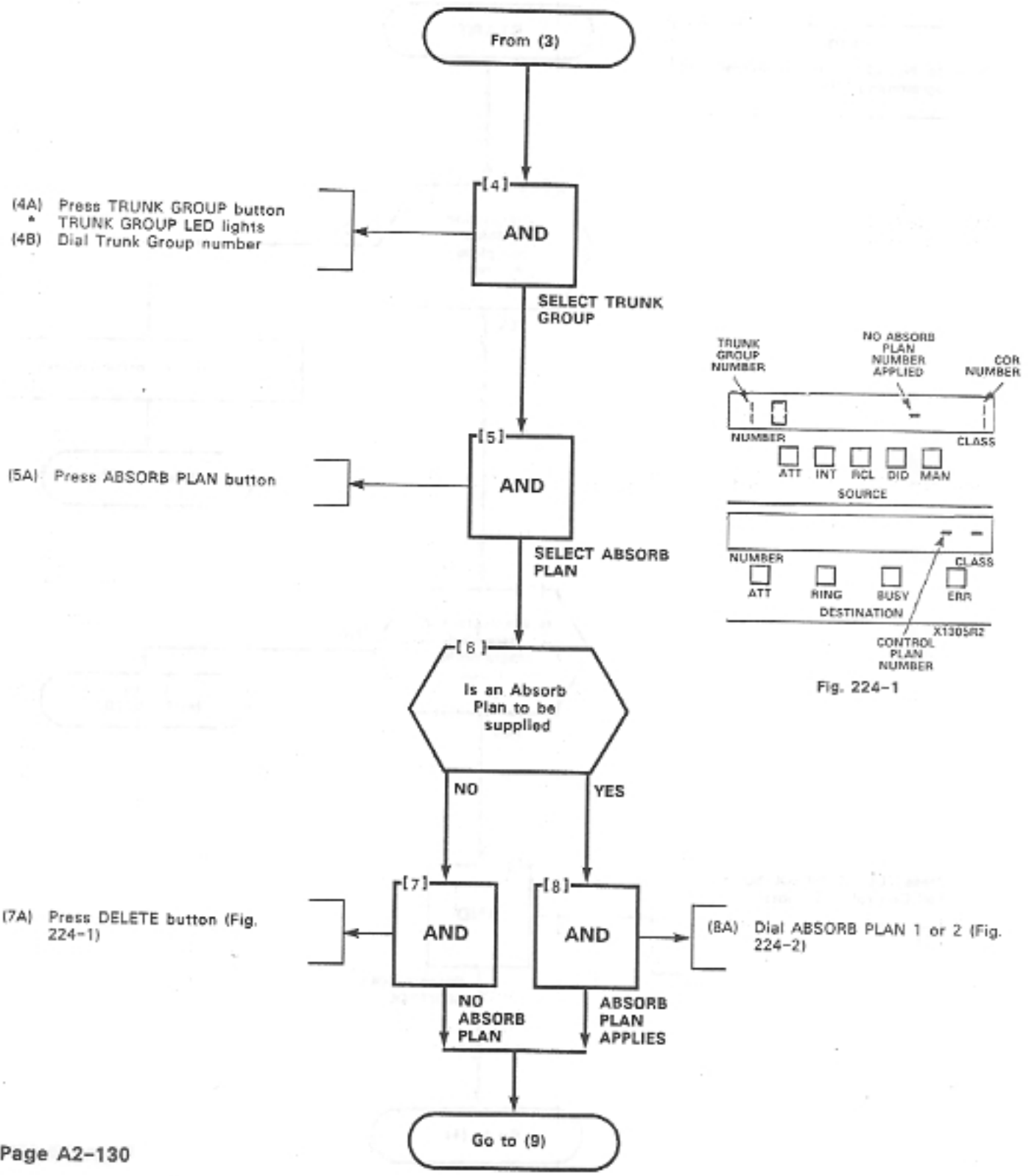
|              |
|--------------|
| Sheet 1 of 6 |
|--------------|

## NOTE

Refer to Fig. 224-3 for an example of the programming form.



|                                  |
|----------------------------------|
| TRUNK GROUP CLASS OF RESTRICTION |
| MAP210- 224                      |
| Issue 1, December 1982           |
| Sheet 2 of 6                     |



|                                  |              |
|----------------------------------|--------------|
| TRUNK GROUP CLASS OF RESTRICTION | COND REPORT  |
| MAP210-224                       | INTCMT224    |
| Issue 1, December 1982           | ISSUE 1 1982 |
| Sheet 3 of 6                     | 8 to 9 1982  |

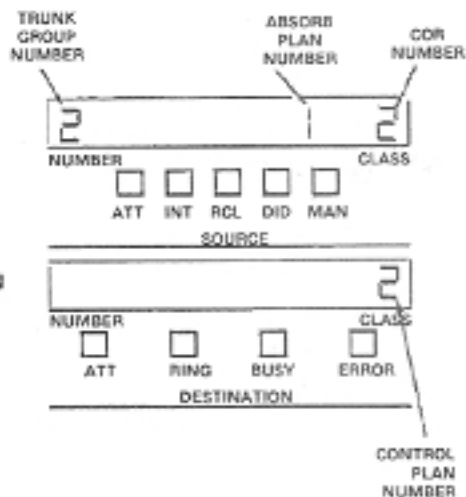
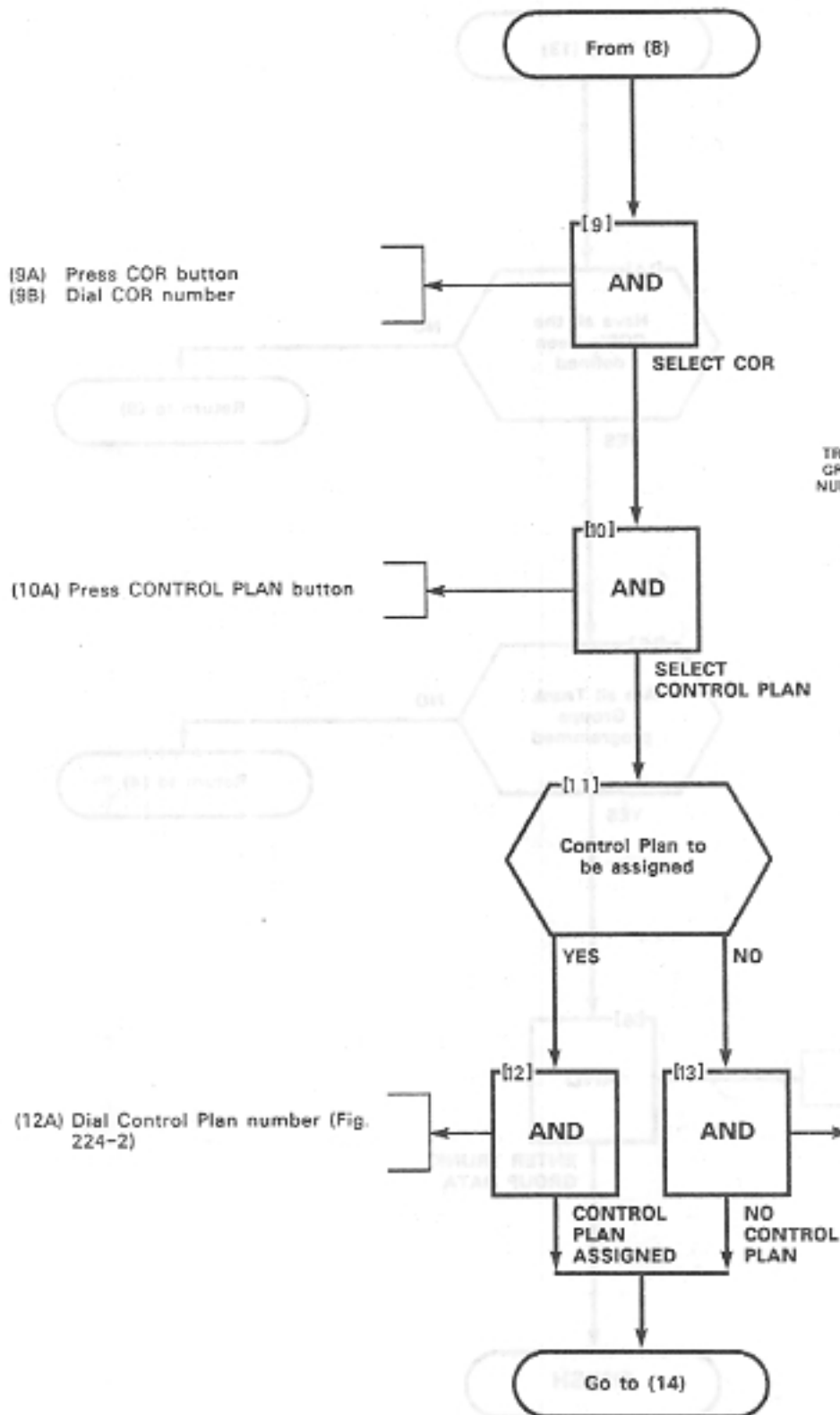
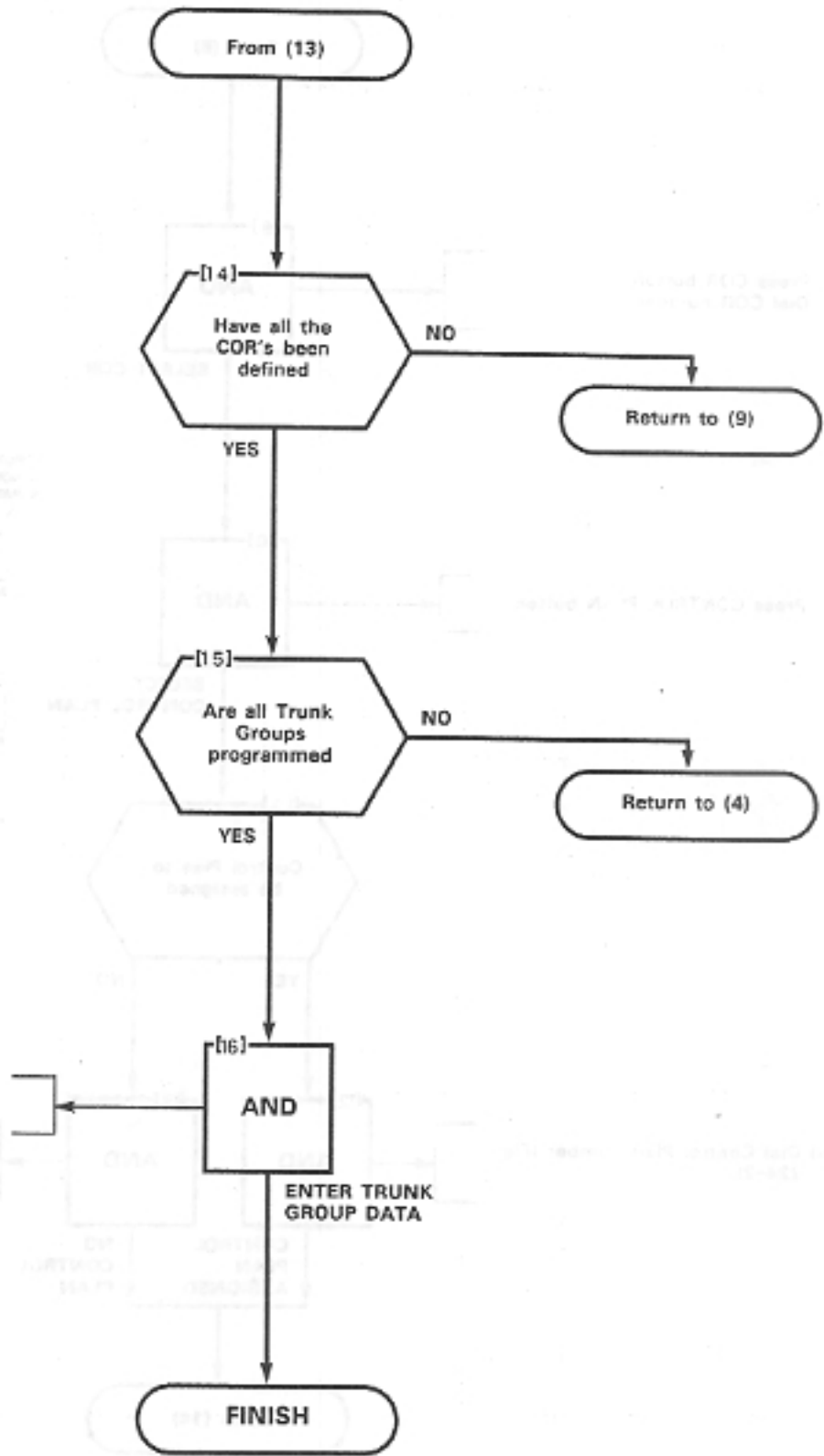


Fig. 224-2 X1306R1

|                                  |
|----------------------------------|
| TRUNK GROUP CLASS OF RESTRICTION |
| MAP210- 224                      |
| Issue 1, December 1982           |
| Sheet 4 of 6                     |





CLASS OF RESTRICTION

TRUNK GROUP

TO CONTROL

TO NEW NEXT TRUNK GROUP CLASS OF RESTRICTION

TO REVIEW CLASS OF RESTRICTION OF A TRUNK GROUP

| TRUNK GROUP<br>DIAL 1-12 | ASSOCS PLAN | DIAL 1-2 OR | DIAL 1-3 | DIAL 1-14 OR |
|--------------------------|-------------|-------------|----------|--------------|
| TRUNK GROUP              | ASSOCS PLAN | DIAL 1-2 OR | DIAL 1-3 | DIAL 1-14 OR |
| TRUNK GROUP              | ASSOCS PLAN | DIAL 1-2 OR | DIAL 1-3 | DIAL 1-14 OR |
| TRUNK GROUP              | ASSOCS PLAN | DIAL 1-2 OR | DIAL 1-3 | DIAL 1-14 OR |
| TRUNK GROUP              | ASSOCS PLAN | DIAL 1-2 OR | DIAL 1-3 | DIAL 1-14 OR |
| TRUNK GROUP              | ASSOCS PLAN | DIAL 1-2 OR | DIAL 1-3 | DIAL 1-14 OR |
| TRUNK GROUP              | ASSOCS PLAN | DIAL 1-2 OR | DIAL 1-3 | DIAL 1-14 OR |
| TRUNK GROUP              | ASSOCS PLAN | DIAL 1-2 OR | DIAL 1-3 | DIAL 1-14 OR |

ENTER

TRUNK GROUP

ASSOCS PLAN

DIAL 1-2 OR

DIAL 1-3

DIAL 1-14 OR

DELETE

TO REVIEW CLASS OF RESTRICTION OF A TRUNK GROUP

TO NEW NEXT TRUNK GROUP CLASS OF RESTRICTION

TO CONTROL

TO NEW NEXT TRUNK GROUP CLASS OF RESTRICTION

TO REVIEW CLASS OF RESTRICTION OF A TRUNK GROUP





## RESTRICTION TABLES

MAP210-225

Issue 1, December 1982

Sheet 1 of 8

## NOTE 1

Refer to Figs. 225-1, 225-2 and 225-3 for an example of the programming form.

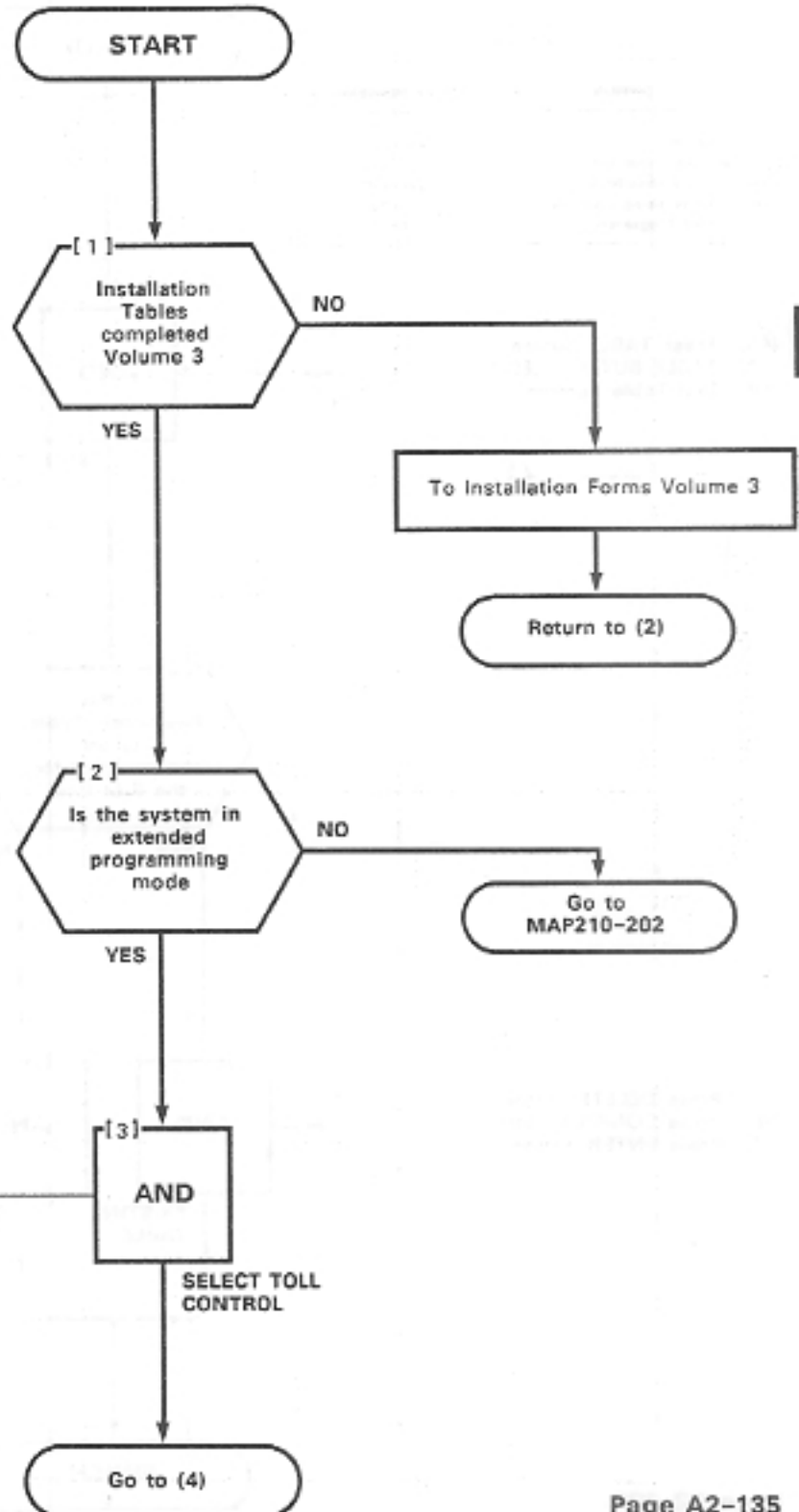
## NOTE 2

If the wrong number is entered by mistake go back to step 3.

## NOTE 3

Use these MAP's to perform desired modifications.

[3A) Press the TOLL CONTROL button  
\* Toll Control LED lights



|                           |
|---------------------------|
| <b>RESTRICTION TABLES</b> |
| MAP210- 225               |
| Issue 1, December 1982    |
| Sheet 2 of 8              |

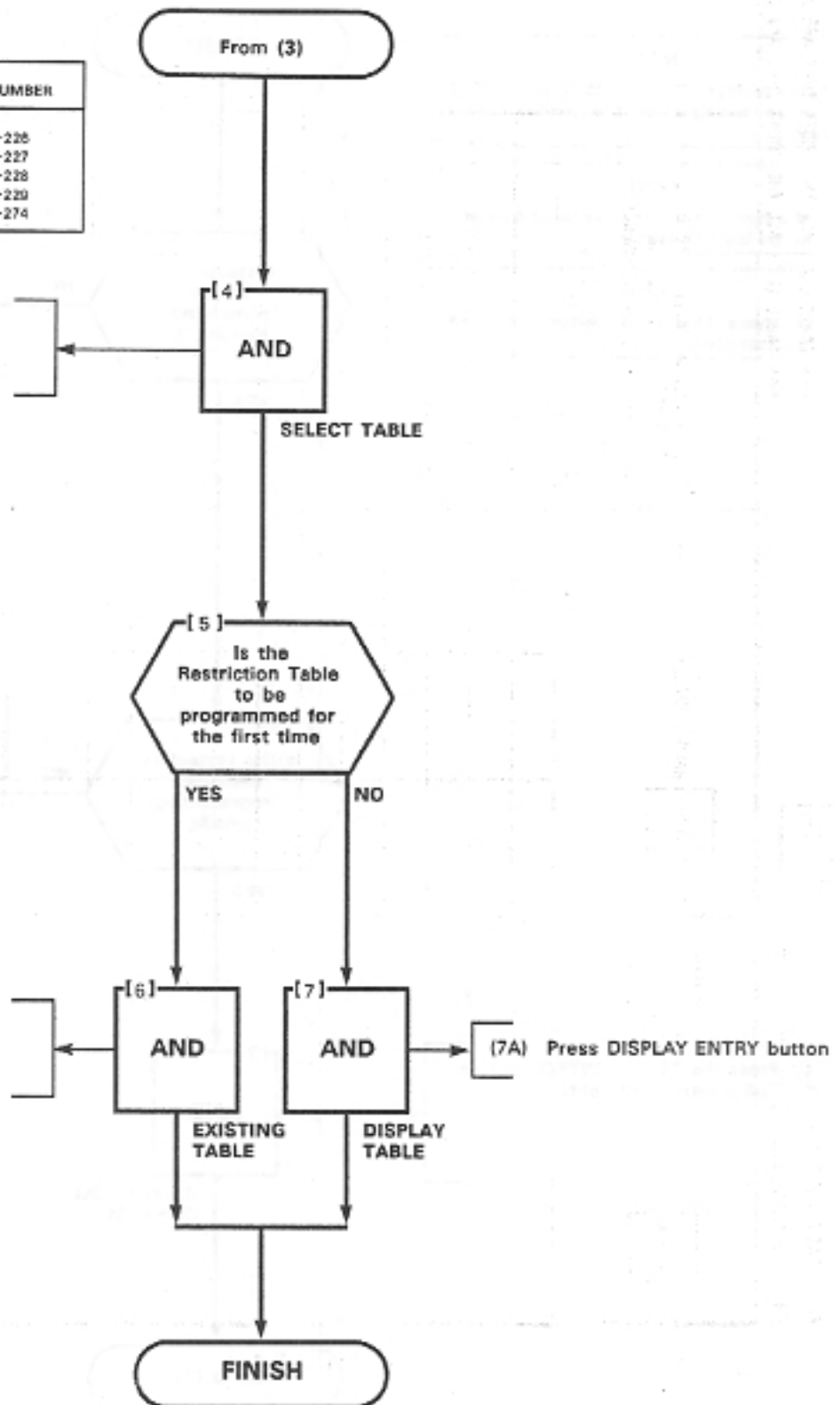
TABLE 225-1 (Note 1)

| OPTION                       | MAP NUMBER |
|------------------------------|------------|
| Add an entry                 | 210-226    |
| Display sequential entries   | 210-227    |
| Search for a specific entry  | 210-228    |
| Delete entry being displayed | 210-229    |
| Terminated Programming       | 210-274    |

(4A) Press TABLE button  
 \* TABLE BUTTON LED lights  
 (4B) Dial Table number

(6A) Press DELETE button  
 (6B) Press CONFIRM button  
 (6C) Press ENTER button

(7A) Press DISPLAY ENTRY button













4 ENTRY EXCEPTION TABLE

FROM BASIC CONDITION \_\_\_\_\_  
OR TABLE NUMBER \_\_\_\_\_

CONTROL PLAN \_\_\_\_\_

TOLL CONTROL

THIS TABLE LISTS ALL THE CODES THAT ARE ALLOWED   
THIS TABLE LISTS ALL THE CODES THAT ARE DENIED

|   |  |   |              |
|---|--|---|--------------|
| <p>TABLE</p> <p>DIAL 51-73</p> <p>DISPLAY ENTRY</p> | <p>PRESS ADD BEFORE DIALING EACH ENTRY</p> | <p>IF AN EXPANSION TABLE IS TO BE APPLIED TO THIS ENTRY</p> <p>TABLE</p> <p>DIAL TABLE NUMBER<br/>1-9 OR<br/>21-33 OR<br/>51-73</p> | <p>ENTER</p> |
| <p>TABLE NUMBER</p>                                 |  |   |              |
|   |  |   |              |
|   |  |   |              |

TO SEARCH FOR A SPECIFIC ENTRY

DISPLAY ENTRY

DIAL ENTRY

DISPLAY ENTRY

IF THE ENTRY DOES NOT EXIST DASHES ARE SHOWN IN THE ENTRY DISPLAY

NEXT

TO DISPLAY THE NEXT ENTRY HAS Y IN THE TABLE AFTER THE ENTRY HAS BEEN SELECTED

TO DELETE THE ENTRY BEING DISPLAYED

DELETE

ENTER

NOTE: ANY OPERATIONS MAY BE PERFORMED IN ANY ORDER.

TO DELETE ALL ENTRIES FROM A TABLE

TABLE

DIAL TABLE NUMBER

DELETE

CONFIRM

ENTER



Fig. 225-3 (cont'd)



ADD AN ENTRY

MAP210-226

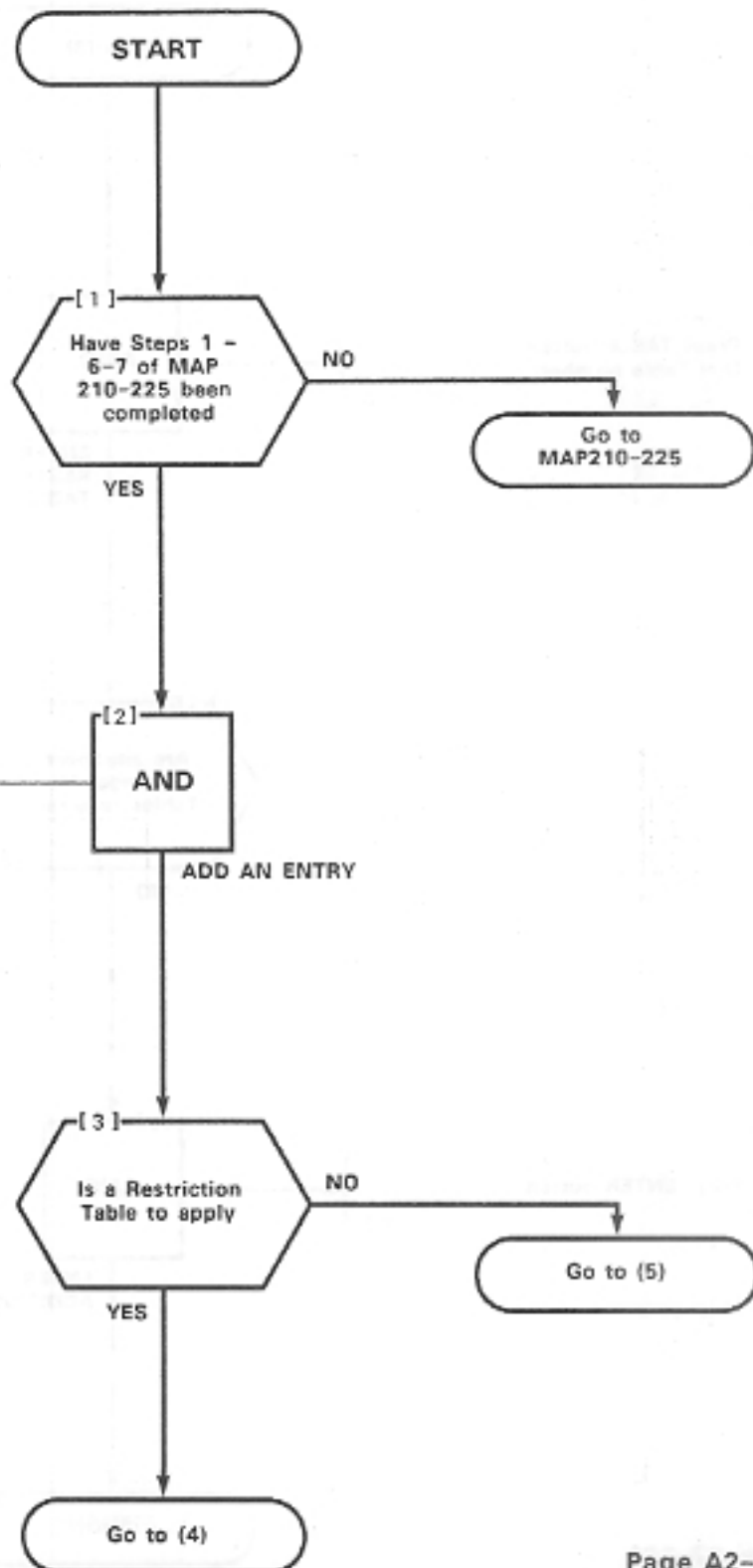
Issue 1, December 1982

Sheet 1 of 2

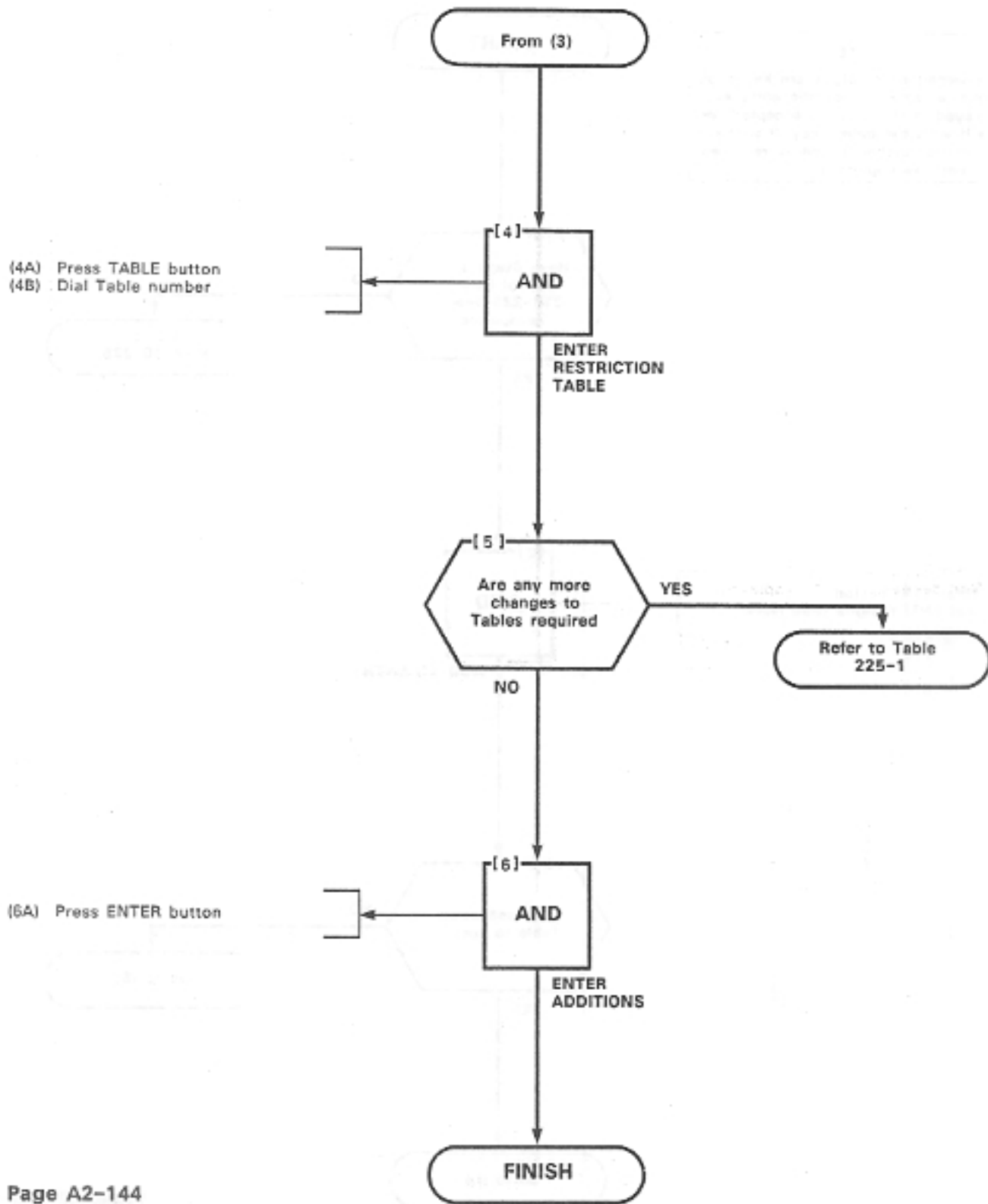
## NOTE

If the wrong entry digits are keyed by mistake, attempt to add the entry as it was keyed. If the entry is accepted remove it with the delete key. If an error is given no further action is required, as the entry was ignored.

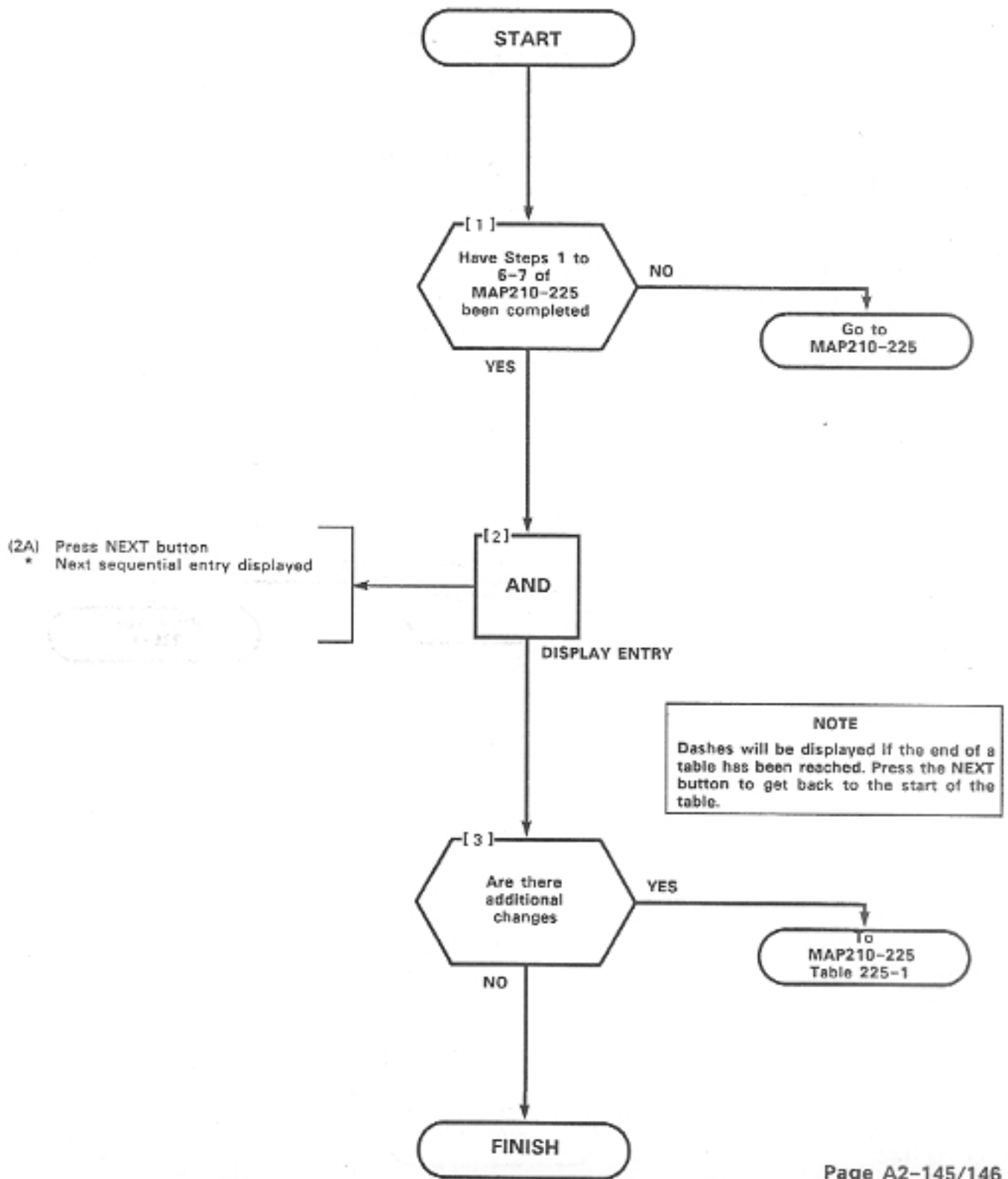
(2A) Press ADD button  
(2B) Dial ENTRY digits (See Note)



|                        |
|------------------------|
| ADD AN ENTRY           |
| MAP210- 226            |
| Issue 1, December 1982 |
| Sheet 2 of 2           |

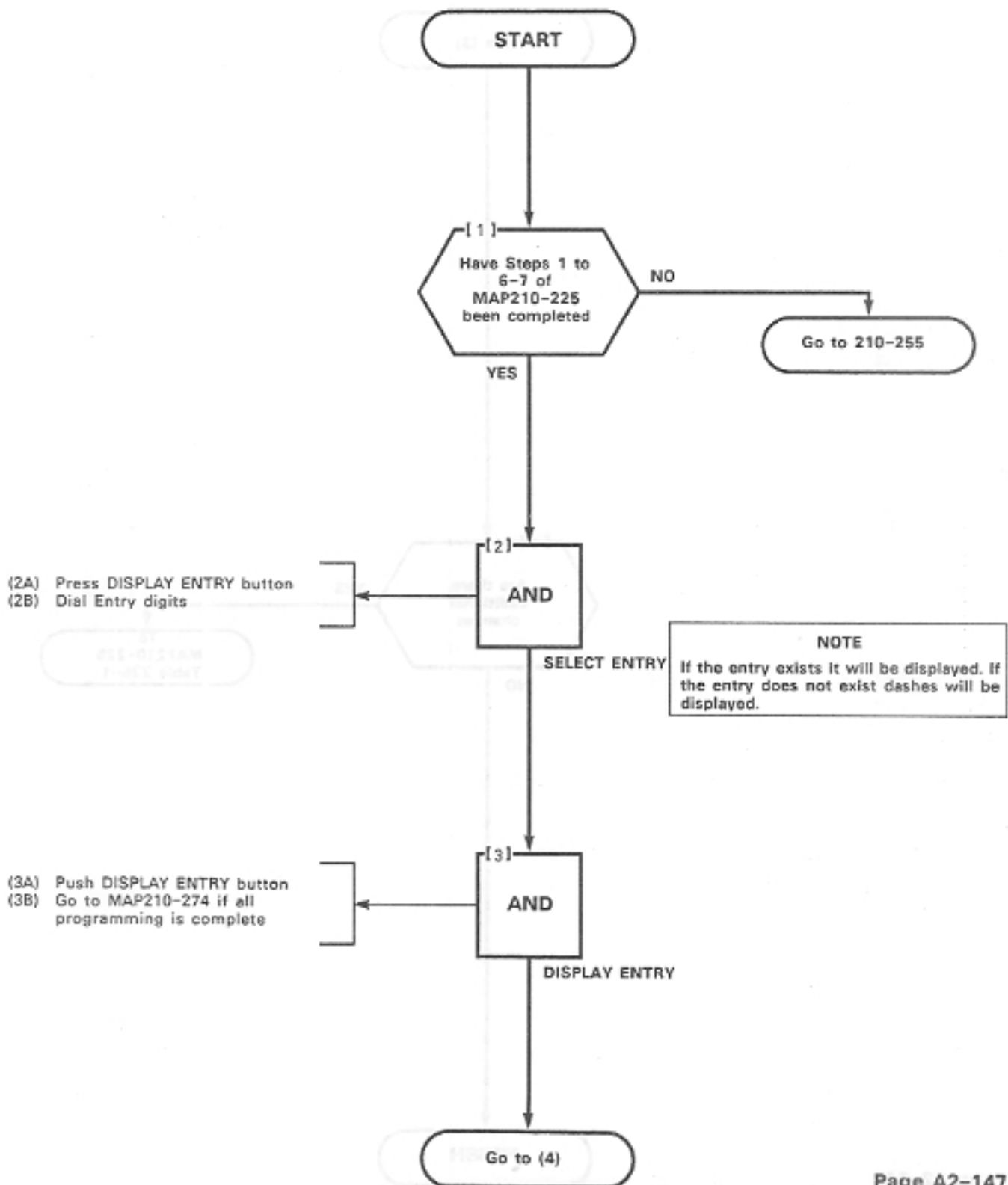


|                               |
|-------------------------------|
| DISPLAYING SEQUENTIAL ENTRIES |
| MAP210- 227                   |
| Issue 1, December 1982        |
| Sheet 1 of 1                  |

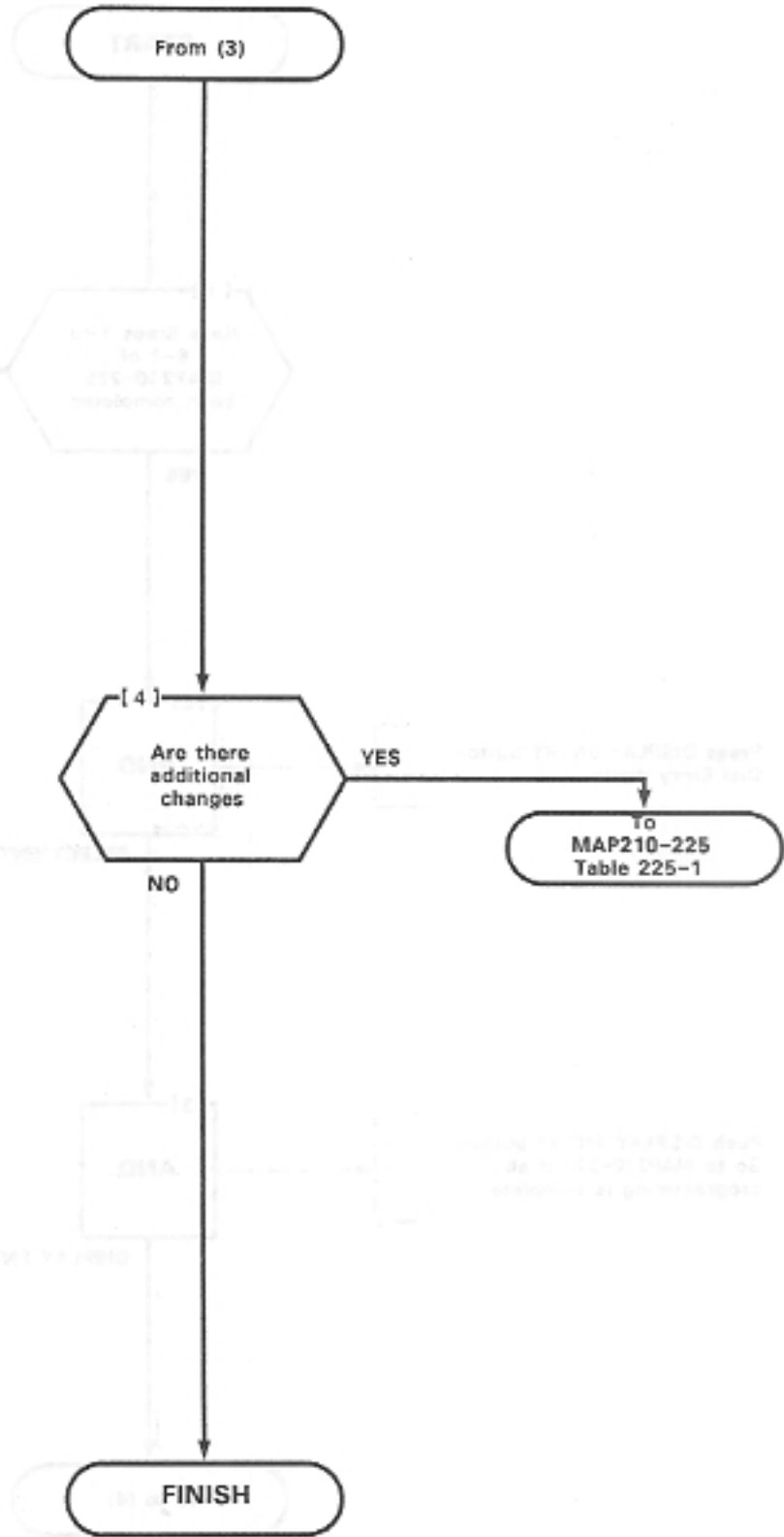




|                        |                           |
|------------------------|---------------------------|
| SEARCH FOR AN ENTRY    | REF: 9105/9110-096-210-NA |
| MAP210-228             | ISS: 01/1982              |
| Issue 1, December 1982 | ISS: 01/1982              |
| Sheet 1 of 2           | ISS: 01/1982              |



|                        |             |
|------------------------|-------------|
| SEARCH FOR AN ENTRY    | 177 1028438 |
| MAP210- 228            | 633-0132407 |
| Issue 1, December 1982 | 10 2 0000   |
| Sheet 2 of 2           | 10 1 0000   |

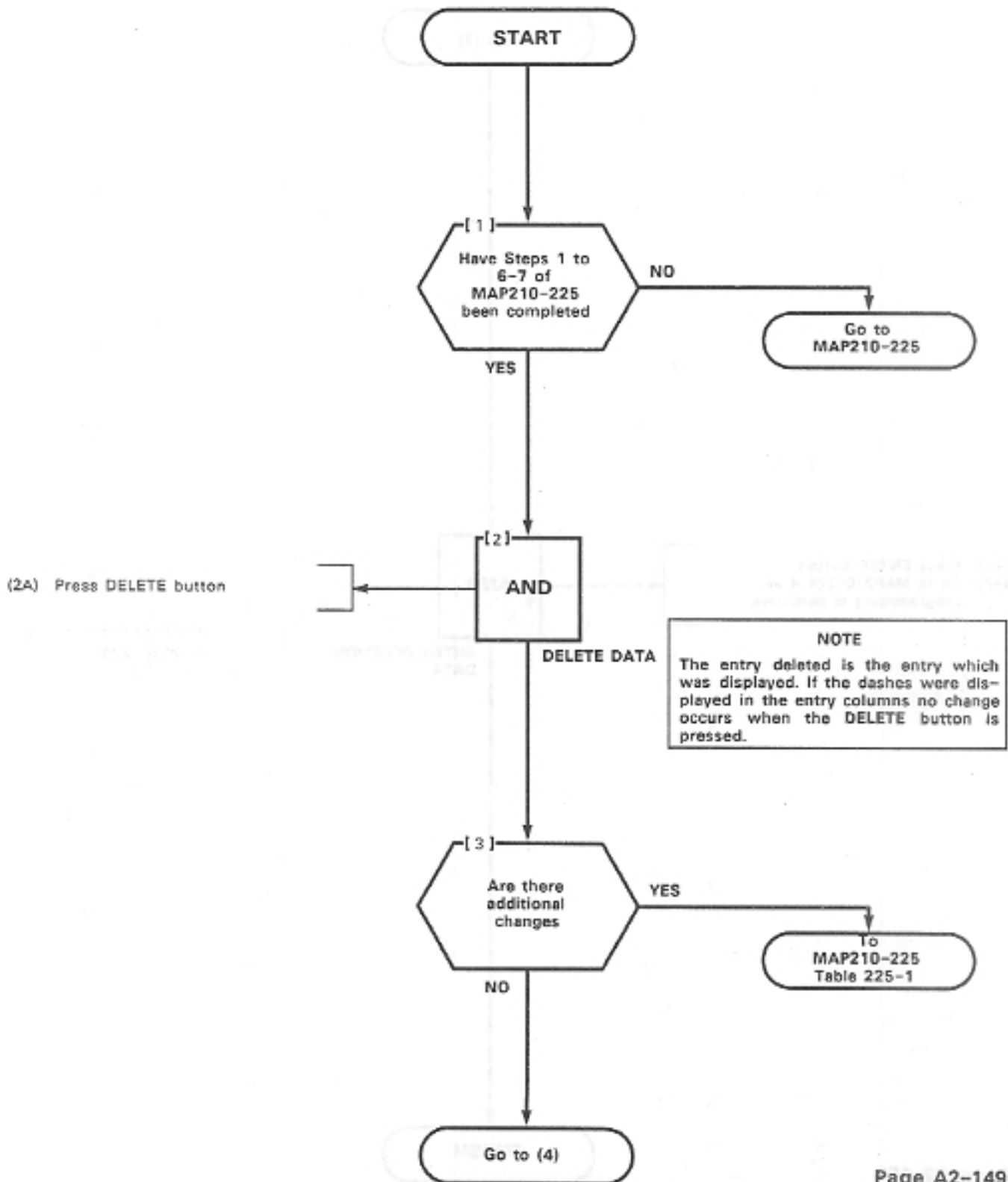


DELETE AN ENTRY

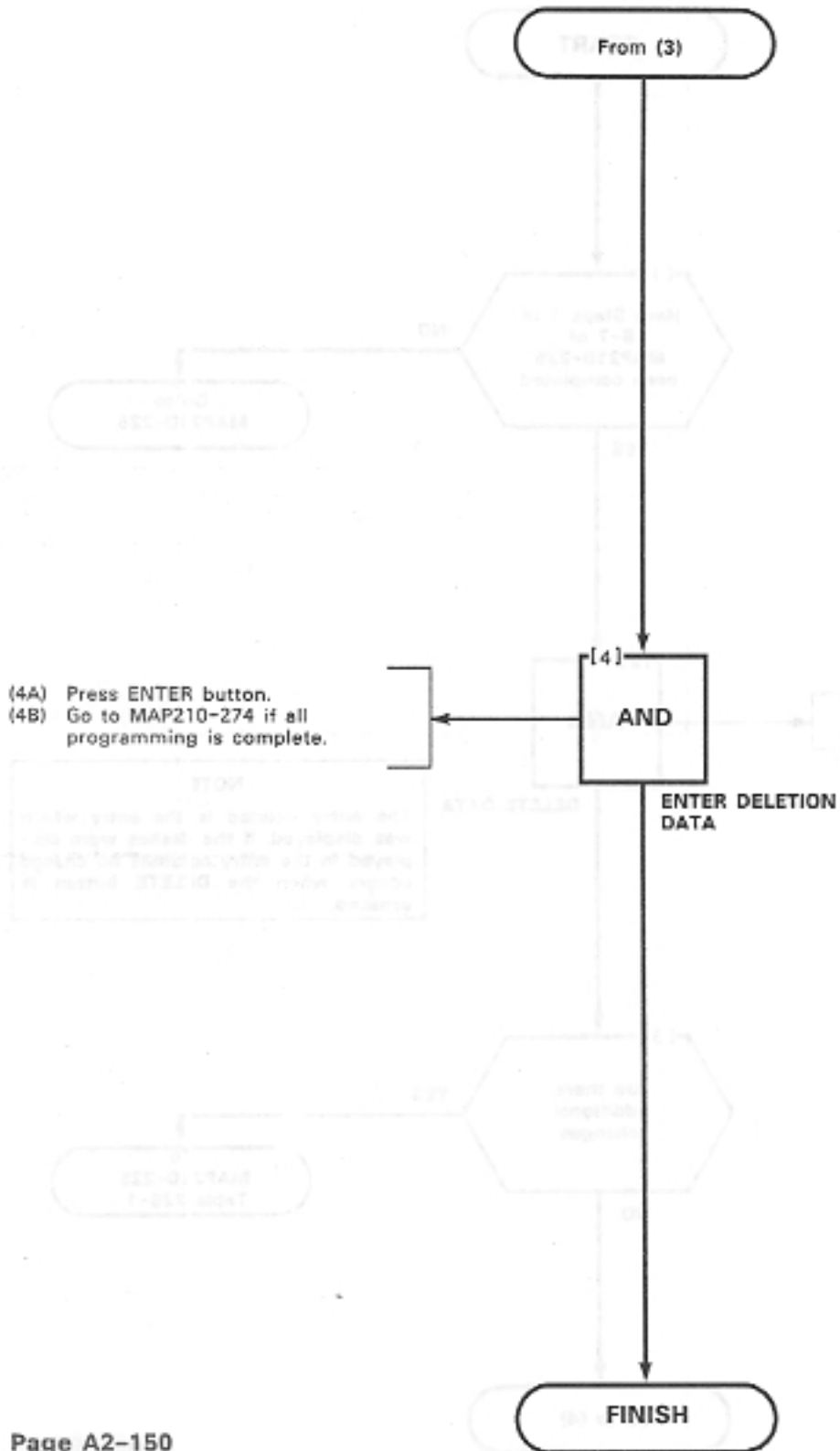
MAP210-229

Issue 1, December 1982

Sheet 1 of 2



|                        |
|------------------------|
| DELETE AN ENTRY        |
| MAP210- 229            |
| Issue 1, December 1982 |
| Sheet 2 of 2           |





## PROGRAMMING PERSONAL TABLES

MAP210- 242

Issue 1, December 1982

Sheet 1 of 11

## NOTES

1. Prior to making programming entries on this MAP, Form SC-2 must have been completed. The completed form is used in conjunction with the relevant steps noted in this MAP.

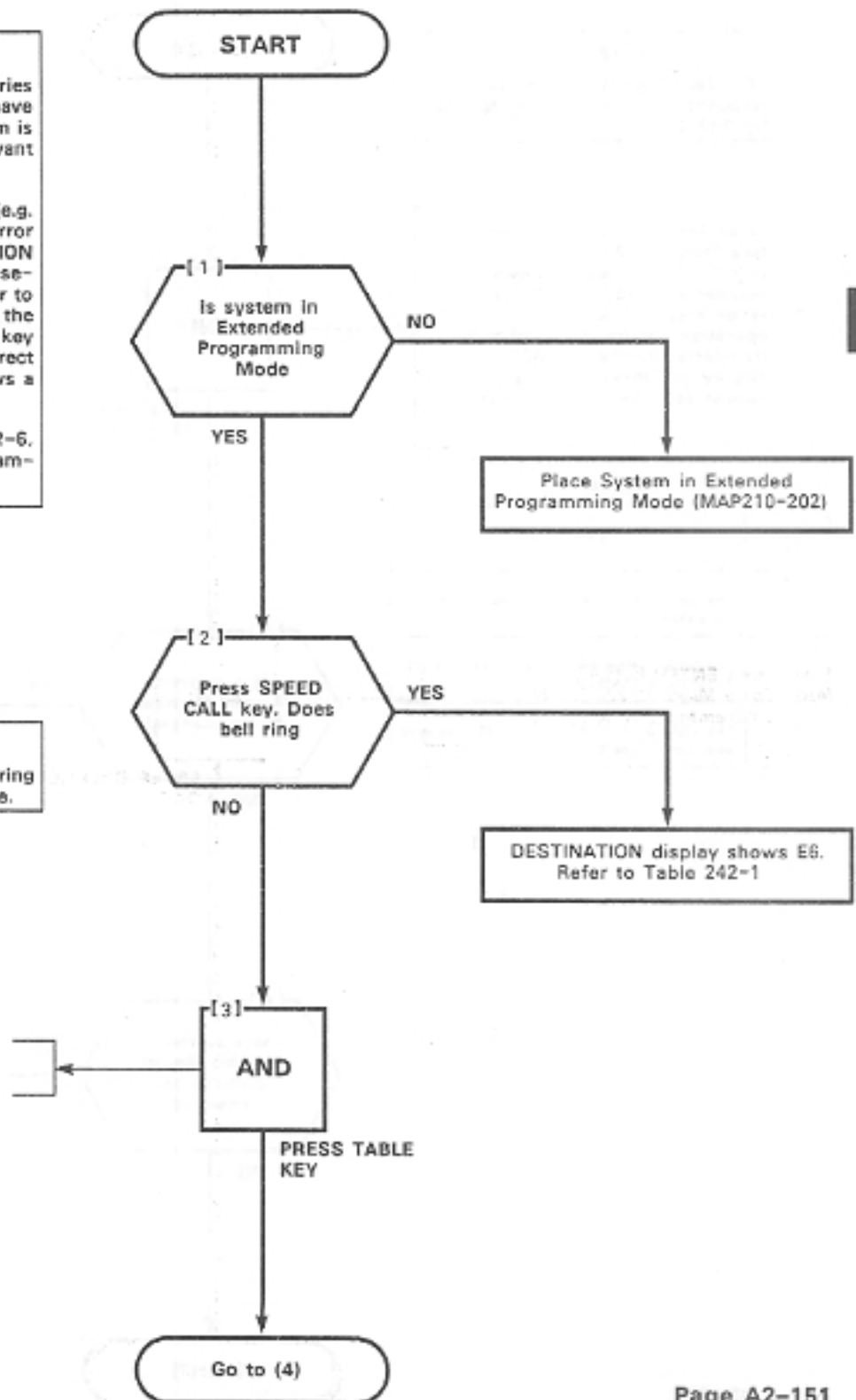
2. After digit entries are made (e.g. Step (4)), the bell may ring and an error code may appear in the DESTINATION display when the key in the next sequence is pressed. In this event refer to Tables 242-1 or 242-2, and repeat the sequence, i.e. the relevant function key and its digit entries, in order to correct the previous entry. Fig. 242-2 shows a typical error code entry.

3. Refer to Figs. 242-4, 242-5, 242-6, 242-7, 242-8 and 242-9 for an example of the programming forms.

## NOTE

The SPEED CALL LED remains lit during programming in the Speed Call mode.

(3A) Press TABLE key



|                             |
|-----------------------------|
| PROGRAMMING PERSONAL TABLES |
| MAP210- 242                 |
| Issue 1, December 1982      |
| Sheet 2 of 11               |

**NOTE**  
 Error E3 (Table 242-1) may occur after a subsequent key operation. See Note 2 and Fig. 242-2.

- (4A) Enter Table number required (see From SC-2)
- \* DESTINATION display shows number entered (Fig. 242-1)
  - \* When a subsequent key operation occurs the number is transferred to the SOURCE display and three hyphens appear as shown in (Fig. 242-1).

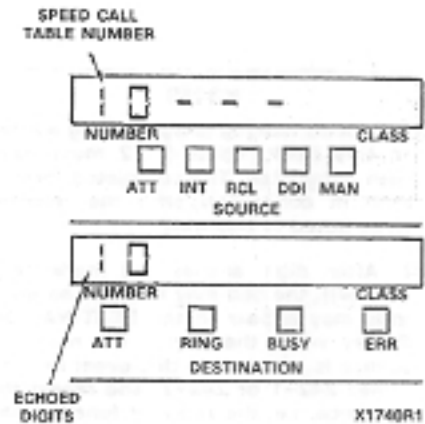
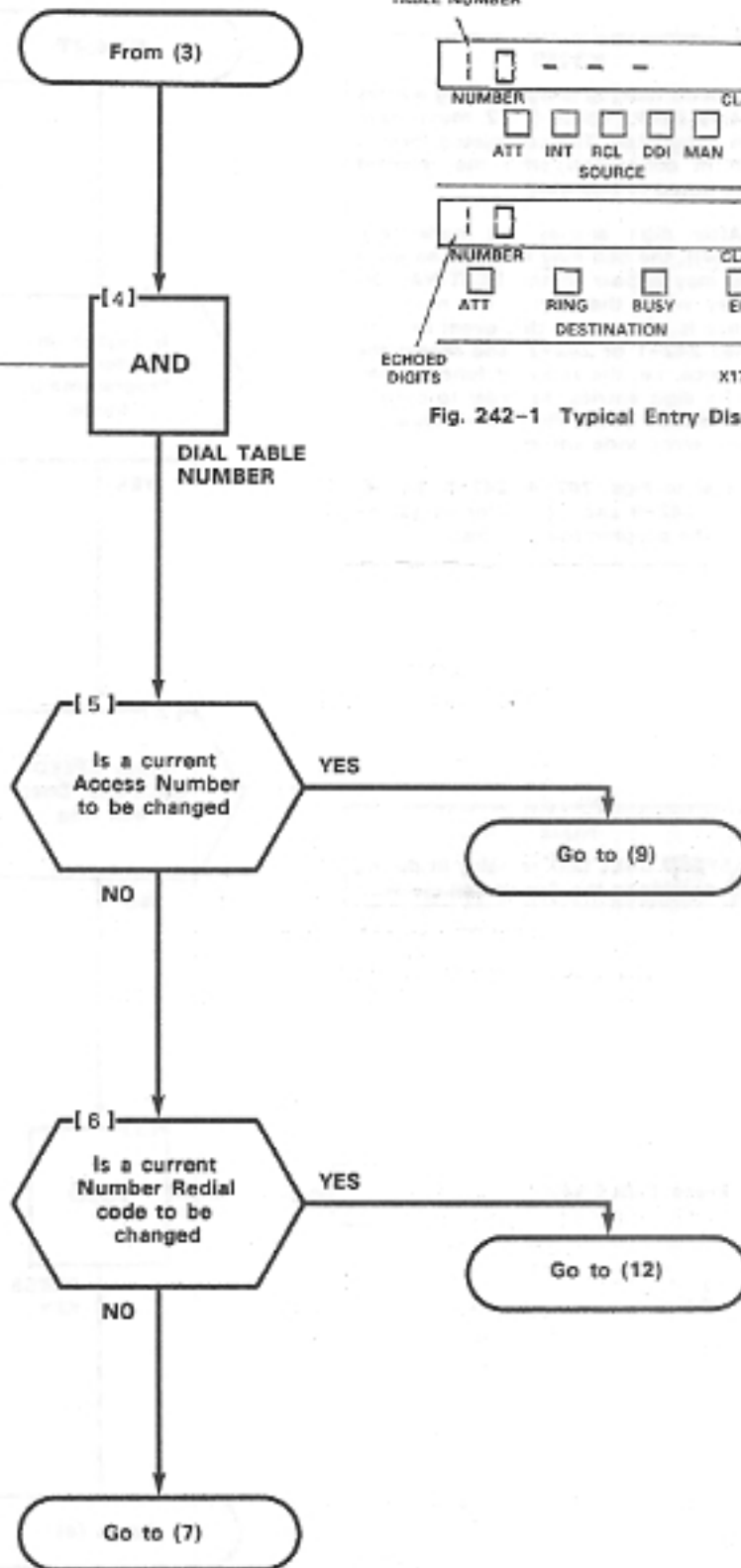


Fig. 242-1 Typical Entry Display

TABLE 242-1

| ERROR CODE | DESCRIPTION  |
|------------|--|
| E1         | The equipment number entered is not that for a station                   |
| E3         | The table number entered is not valid for the current site CONFIGURATION |
| E6         | The CONFIGURATION (MAP210-221) entered does not include Speed Call       |

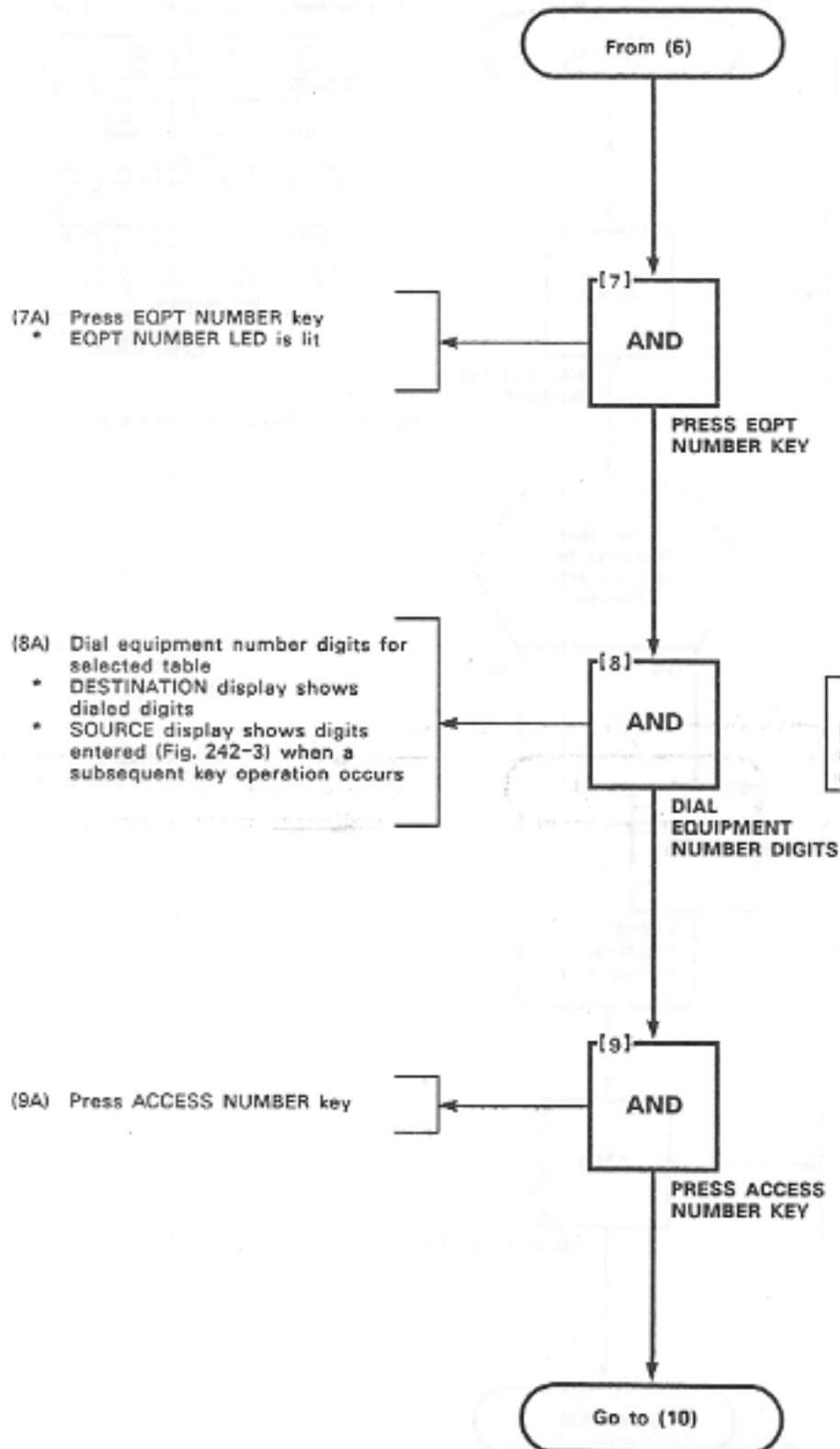


## PROGRAMMING PERSONAL TABLES

MAP210-242

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X1741

Fig. 242-2 Typical Error Code Display

## NOTE

Error E1 (Table 242-1) may occur after a subsequent key operation. See Note 2 and Fig. 242-2.

|                             |
|-----------------------------|
| PROGRAMMING PERSONAL TABLES |
| MAP210- 242                 |
| Issue 1, December 1982      |
| Sheet 4 of 11               |

**NOTE**  
 Error E1 (Table 242-1), or Error E5 (Table 242-2) may occur after Step (10). See Note 2 and Fig. 242-2

(10A) Dial first speed call access number digits for the selected table (see Form SC-2)  
 • DESTINATION display shows dialed digits in first two positions which go to the last two positions when a subsequent key operation occurs (Fig. 242-3).

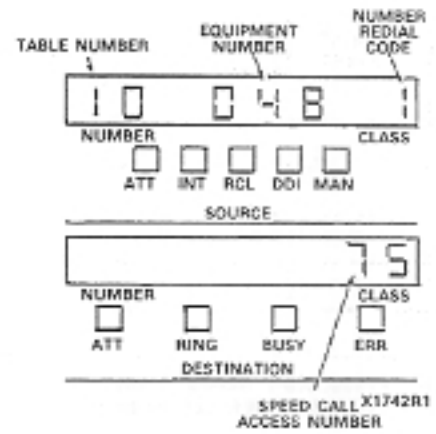
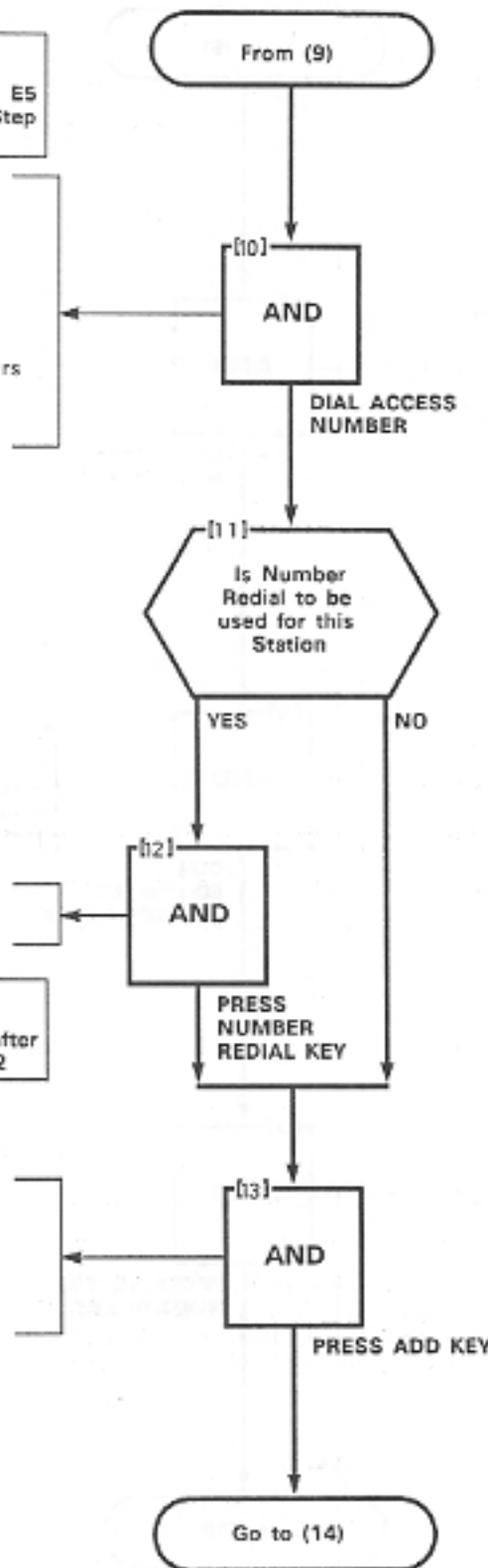


Fig. 242-3 Completed Entries Display

(12A) Press Number Redial Key

**NOTE**  
 Error E5 (Table 242-3) may occur after Step (13). See Note 2 and Fig. 242-2

(13A) Press ADD key  
 • DESTINATION display shows Access Number  
 • SOURCE display shows digit 1



| TABLE NUMBER |  | ENTRY ACCESS NUMBERS |          | EQPT NUMBER | REDIAL | CLASS OF SERVICE |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
|--------------|--|----------------------|----------|-------------|--------|------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|
|              |  | COMMON-USE           | PERSONAL |             |        | 1                | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 1            |  | 10-14                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 2            |  | 15-19                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 3            |  | 20-24                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 4            |  | 25-29                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 5            |  | 30-34                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 6            |  | 35-39                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 7            |  | 40-44                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 8            |  | 45-49                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 9            |  | 50-54                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 10           |  | 55-59                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 11           |  | 60-64                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 12           |  | 65-69                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 13           |  | 70-74                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 14           |  | 75-79                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 15           |  | 80-84                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 16           |  | 85-89                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 17           |  | 90-94                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 18           |  | 95-99                |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 19           |  |                      |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 20           |  |                      |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 21           |  |                      |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 22           |  |                      |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 23           |  |                      |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 24           |  |                      |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |
| 25           |  |                      |          |             |        |                  |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |

- NOTES: 1. IF TABLE IS TO BE ASSIGNED AS A PERSONAL TABLE, STRIKE OUT COMMON-USE ENTRY ACCESS NUMBERS. ENTER NEW ENTRY ACCESS NUMBERS IN PERSONAL COLUMN.  
2. CHECK IN REMAINING COLUMNS AS REQUIRED FOR EACH TABLE

Fig. 242-4

**PERSONAL TABLE PROGRAMMING FORM SC-2  
(SYSTEM MUST BE IN EXTENDED PROGRAMMING MODE)**



PRESS **SPEED CALL**

| TABLE<br>DIAL TABLE NO. | EQPT<br>NUMBER<br>DIAL EQUIPMENT NO.<br>(1 = 112; 16.1 - 256)<br>OR DELETE | NOTE 2 & 10<br>ACCESS<br>NUMBER<br>DIAL ACCESS NO. | NOTE 21<br>NUMBER<br>REDIAL<br>ADD OR DELETE |
|-------------------------|--|--|--|
| 1                       |  |  |  |
| 2                       |  |  |  |
| 3                       |  |  |  |
| 4                       |  |  |  |
| 5                       |  |  |  |
| 6                       |  |  |  |
| 7                       |  |  |  |
| 8                       |  |  |  |
| 9                       |  |  |  |
| 10                      |  |  |  |
| 11                      |  |  |  |
| 12                      |  |  |  |
| 13                      |  |  |  |
| 14                      |  |  |  |
| 15                      |  |  |  |
| 16                      |  |  |  |
| 17                      |  |  |  |
| 18                      |  |  |  |
| 19                      |  |  |  |
| 20                      |  |  |  |
| 21                      |  |  |  |
| 22                      |  |  |  |
| 23                      |  |  |  |
| 24                      |  |  |  |
| 25                      |  |  |  |

SEE  
NOTE  
5 TO  
ENTER  
DATA

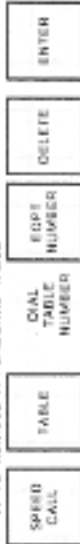
NOTES

1. USE THE ENTRIES MADE ON FORM SC-1 FOR THE PERSONAL TABLES BY TRANSCRIBING THESE IN TURN TO THEIR RESPECTIVE COLUMNS AGAINST THE SAME TABLE NUMBERS ON FORM SC-2. COMMON - USE TABLES HAVE BLANK ENTRIES.
2. ONLY THE FIRST ACCESS NUMBER FOR EACH PERSONAL TABLE IS REQUIRED TO BE ENTERED. THE REMAINING ACCESS NUMBERS ARE AUTOMATICALLY ALLOCATED FOR THE TABLE.
3. THE SAVED NUMBER REDIAL OPERATION IS INITIALLY OMITTED IF NOT REQUIRED. FOR SUBSEQUENT PROGRAMMING SEE NOTES 8 & 9.
4. PERSONAL TABLE DATA IS PROGRAMMED IN EXTENDED PROGRAMMING MODE. SEE SECTION MITL9105/9110-096-210 - NA APPENDIX 2 FOR FULL DETAILS.

5. THE ENTER BUTTON MAY BE PRESSED AT ANY TIME TO ENTER DATA, OR PRESSED WHEN ALL DATA IS ENTERED

6. REMOVING A PERSONAL TABLE REMOVES ALL ITS CONTENTS. ACCESS NUMBERS AND REDIAL VALUE EF AVAIL.

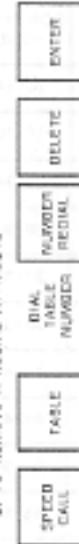
7. TO REMOVE A PERSONAL TABLE



8. TO ADD A REDIAL ATTRIBUTE



9. TO REMOVE A REDIAL ATTRIBUTE



10. TO CHANGE A SPEED CALL ACCESS NUMBER



Fig. 242-5

**SPEED CALL NUMBER RECORDS FORM SC-3 (Sheet 1 of 4)**

(CONFIDENTIAL WHEN COMPLETED)

SPEED CALL FEATURE CODE .....



**SPEED CALL NUMBER**

Special sequences can be entered at any point in the telephone number listing:

- \*1 occupies 1 digit space and causes a 5 sec. pause in use
- \*2 occupies 1 digit space and causes a 5 sec. wait for dial tone
- \*3NN occupies 2 digit spaces and enables manually dialed digits to be entered
- NN represents the number of digits to be dialed

| TABLE | CO | ENTRY ACCESS NUMBER | SPEED CALL NUMBER |   |    |    |    |    |    |      |        |  | DIGITS |  | CALLED PARTY |  |  |  |
|-------|----|---------------------|-------------------|---|----|----|----|----|----|------|--------|--|--------|--|--------------|--|--|--|
|       |    |                     | 1                 | 5 | 10 | 15 | 20 | 25 | 26 | USED | DIAGED |  |        |  |              |  |  |  |
| 1     |    | 10                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |    |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |    |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
| 2     |    | 15                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |    |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |    |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
| 3     |    | 20                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |    |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |    |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |

**LISTING YOUR NUMBERS**

1. Tables available for use are indicated on the form by the installer. Your Feature Access Code and Classes of Service also have been entered.
2. Opposite the first available entry access number, write in your first telephone number including the trunk group access code. You can use special sequences (see above).
3. Write in the next entry access number, under the first entry number, using a fresh line and continuing with the next telephone number opposite this second entry number.
4. Complete your list of numbers following the above procedure.

**INSTRUCTIONS FOR USER (ATTENDANT)**

- How to Enter or Change a Number
5. Dial Feature Access Code.
  6. Dial 0.
  7. Dial entry access number required.
  8. Dial telephone number for that entry number.
  9. Press the RELEASE button.
  10. Repeat the above sequences for each of the remaining entries on the list.
- How to Delete a Number
11. Perform Steps 5 through 9 but omit Step 8.

**How to Dial a Speed Call Number**

12. Dial Feature access code.
13. Dial entry access number.
14. Call proceeds in usual manner.

SEE CONSOLE OPERATING INSTRUCTIONS FOR OTHER DETAILS

SC-3 (9/83)

Fig. 242-6

**SPEED CALL NUMBER RECORDS FORM SC-3 (Sheet 2 of 4)**

CONFIDENTIAL WHEN COMPLETED

SPEED CALL FEATURE CODE .....



**SPEED CALL NUMBER**

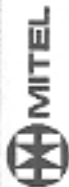
Special sequences can be entered at any point in the telephone number listing

- \*1 occupies 1 digit space and causes a 5 sec. pause in use
- \*2 occupies 1 digit space and causes a 5 sec. wait for dial tone
- +3NN occupies 2 digit spaces and enables manually dialed digits to be entered
- NN represents the number of digits to be dialed

| TABLE | COS | ENTRY ACCESS NUMBER | SPEED CALL NUMBER |   |    |    |    |    |    |      |        |  | DIGITS |  | CALLED PARTY |  |  |  |
|-------|-----|---------------------|-------------------|---|----|----|----|----|----|------|--------|--|--------|--|--------------|--|--|--|
|       |     |                     | 1                 | 5 | 10 | 15 | 20 | 25 | 28 | USED | DIALED |  |        |  |              |  |  |  |
| 4     |     | 20                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
| 5     |     | 30                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
| 6     |     | 35                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
| 7     |     | 40                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
| 8     |     | 45                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |

Fig. 242-7





**SPEED CALL NUMBER RECORDS FORM SC-3 (Sheet 3 of 4)**

CONFIDENTIAL WHEN COMPLETED

SPEED CALL FEATURE CODE .....

**SPEED CALL NUMBER**


Special sequences can be entered at any point in the telephone number listing:

- \*1 occupies 1 digit space and causes a 5 sec. pause in use
- \*2 occupies 1 digit space and causes a 5 sec. wait for dial tone
- \*3NN occupies 2 digit spaces and enables manually dialed digits to be entered
- NN represents the number of digits to be dialed

| TABLE | COS | ENTRY ACCESS NUMBER | SPEED CALL NUMBER |   |    |    |    |    |    |      |        |  | DIGITS |  | CALLED PARTY |  |  |  |
|-------|-----|---------------------|-------------------|---|----|----|----|----|----|------|--------|--|--------|--|--------------|--|--|--|
|       |     |                     | 1                 | 5 | 10 | 15 | 20 | 25 | 28 | USED | UNUSED |  |        |  |              |  |  |  |
| 9     |     | 50                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
| 10    |     | 55                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
| 11    |     | 60                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
| 12    |     | 65                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
| 13    |     | 70                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |

5/83 mitel

Fig. 242-8



**SPEED CALL NUMBER RECORDS FORM SC-3 (Sheet 4 of 4)**  
(CONFIDENTIAL WHEN COMPLETED)

SPEED CALL FEATURE CODE .....

**SPEED CALL NUMBER**

Special sequences can be entered at any point in the telephone number listing

- \*1 occupies 1 digit space and causes a 5 sec. pause in use
- \*2 occupies 1 digit space and causes a 5 sec. wait for dial tone
- \*3NN occupies 2 digit spaces and enables manually dialed digits to be entered
- NN represents the number of digits to be dialed

| TABLE | COS | ENTRY ACCESS NUMBER | SPEED CALL NUMBER |   |    |    |    |    |    |      |        |  | DIGITS |  | CALLED PARTY |  |  |  |
|-------|-----|---------------------|-------------------|---|----|----|----|----|----|------|--------|--|--------|--|--------------|--|--|--|
|       |     |                     | 1                 | 5 | 10 | 15 | 20 | 25 | 28 | USED | DIALED |  |        |  |              |  |  |  |
| 14    |     | 76                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
| 15    |     | 80                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
| 16    |     | 85                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
| 17    |     | 90                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
| 18    |     | 95                  |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |
|       |     |                     |                   |   |    |    |    |    |    |      |        |  |        |  |              |  |  |  |

Fig. 242-9

12/84 0211031

## PROGRAMMING PERSONAL TABLES

MAP210-242

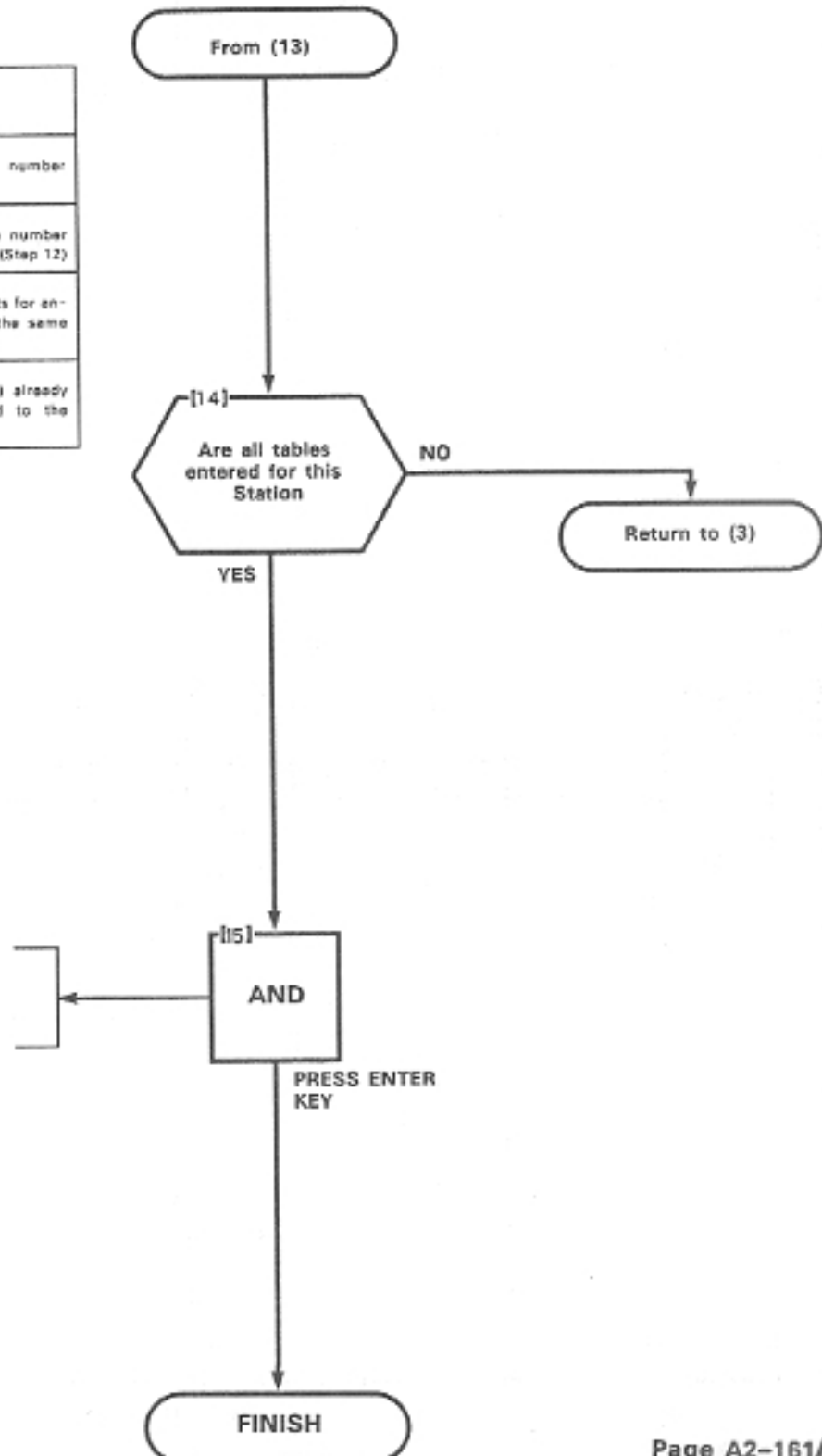
Issue 1, December 1982

Sheet 11 of 11

TABLE 242-2

| ERROR CODE | DESCRIPTION   |
|------------|---|
| E4         | Indicates attempt to enter access number (Step 10) for a common-use table                         |
| E4         | Indicates attempt made to allocate number radial digits in a common-use table (Step 12)           |
| E5         | Indicates number radial already exists for another table (Step 13) assigned to the same equipment |
| E5         | Indicates access number (Step 10) already exists for another table assigned to the equipment      |

(15A) Press ENTER key.  
 (15B) Go to MAP210-274 if all programming is complete.





CONVERT TABLE FROM PERSONAL  
TO COMMON-USE

MAP210-243

Issue 1, December 1982

Sheet 1 of 3

**NOTE**

Common-use Tables do not require programming. This MAP is the procedure used to convert a Personal Table to a Common-use Table.

**NOTES**

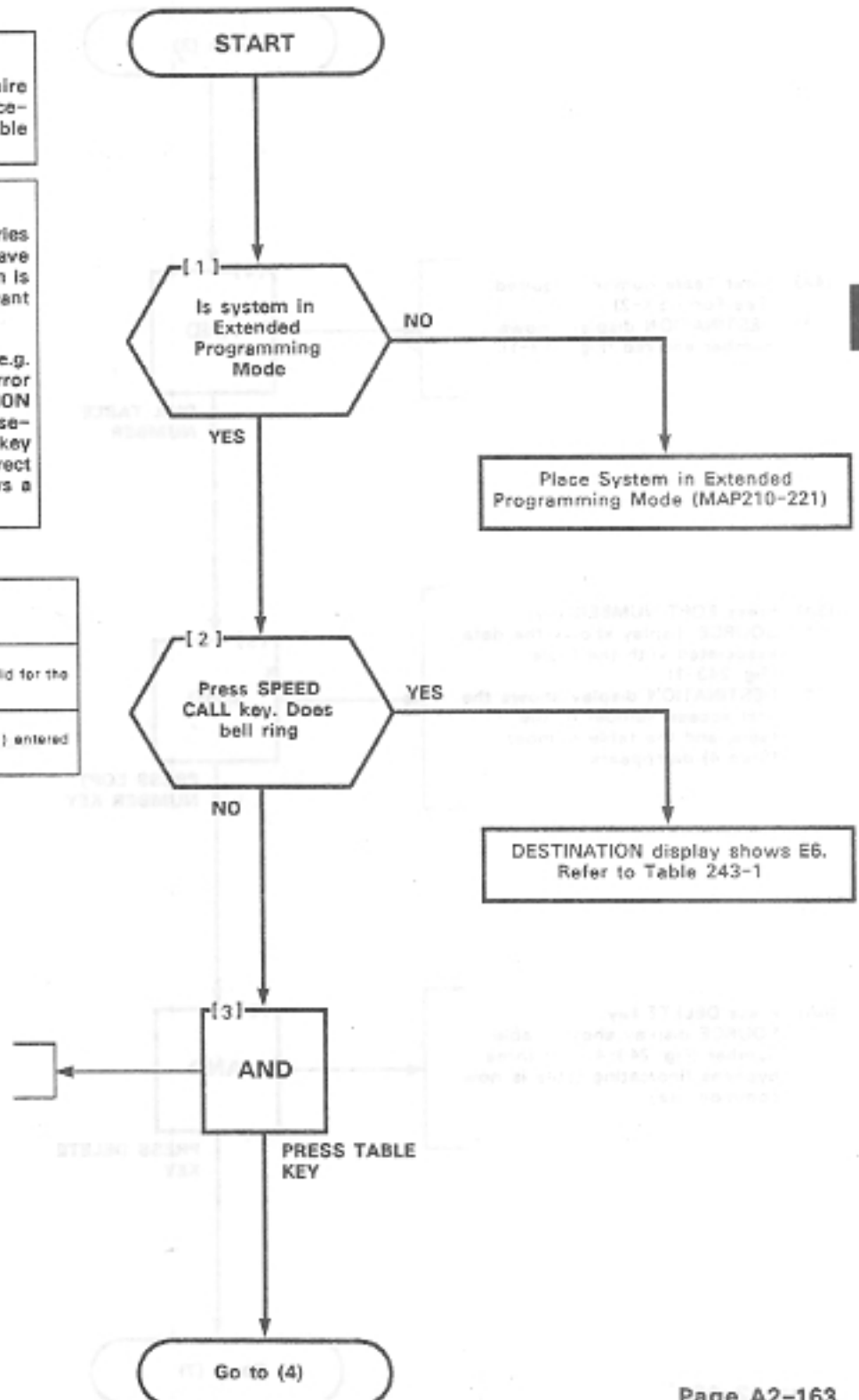
1. Prior to making programming entries on this MAP, Form SC-2 must have been completed. The completed form is used in conjunction with the relevant steps noted in this MAP.

2. After digit entries are made (e.g. Step (4)), the bell may ring and an error code may appear in the DESTINATION display when the key in the next sequence (i.e. the relevant function key and its digit entries) in order to correct the previous entry. Fig. 243-2 shows a typical error code entry.

TABLE 243-1

| ERROR CODE | DESCRIPTION  |
|------------|--|
| E3         | The table number entered is not valid for the current size CONFIGURATION |
| E6         | The CONFIGURATION (MAP210-221) entered does not include Speed Call       |

(3A) Press TABLE key



|   |
|---|
| <p><b>CONVERT TABLE FROM PERSONAL TO COMMON-USE</b></p> |
| <p>MAP210- 243</p>                                      |
| <p>Issue 1, December 1982</p>                           |
| <p>Sheet 2 of 3</p>                                     |

From (3)

[4] AND

DIAL TABLE NUMBER

[5] AND

PRESS EQPT NUMBER KEY

[6] AND

PRESS DELETE KEY

Go to (7)

- (4A) Enter Table number required (See Form SX-2)
- \* DESTINATION display shows number entered (Fig. 243-1).

- (5A) Press EQPT NUMBER key
- \* SOURCE display shows the data associated with the table (Fig. 243-1)
- \* DESTINATION display shows the first access number of the table, and the table number (Step 4) disappears

- (6A) Press DELETE key
- \* SOURCE display shows Table number (Fig. 243-4) and three hyphens (indicating table is now common use)

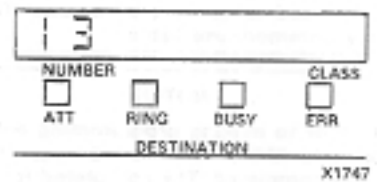


Fig. 243-1 Table Number Display

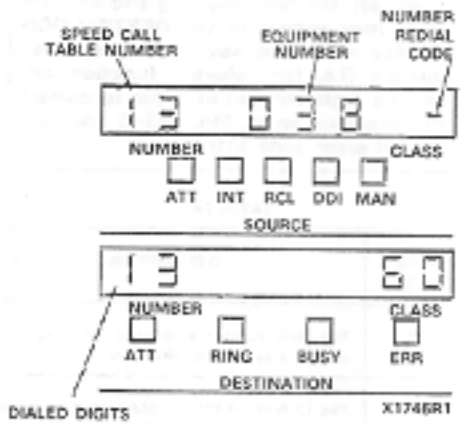


Fig. 243-2 Typical Entry Display

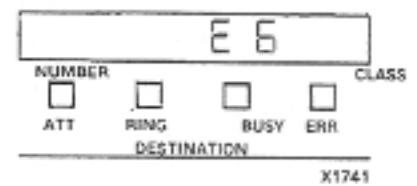


Fig. 243-3 Typical Error Code Display

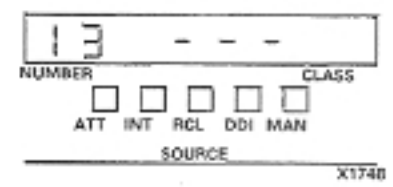


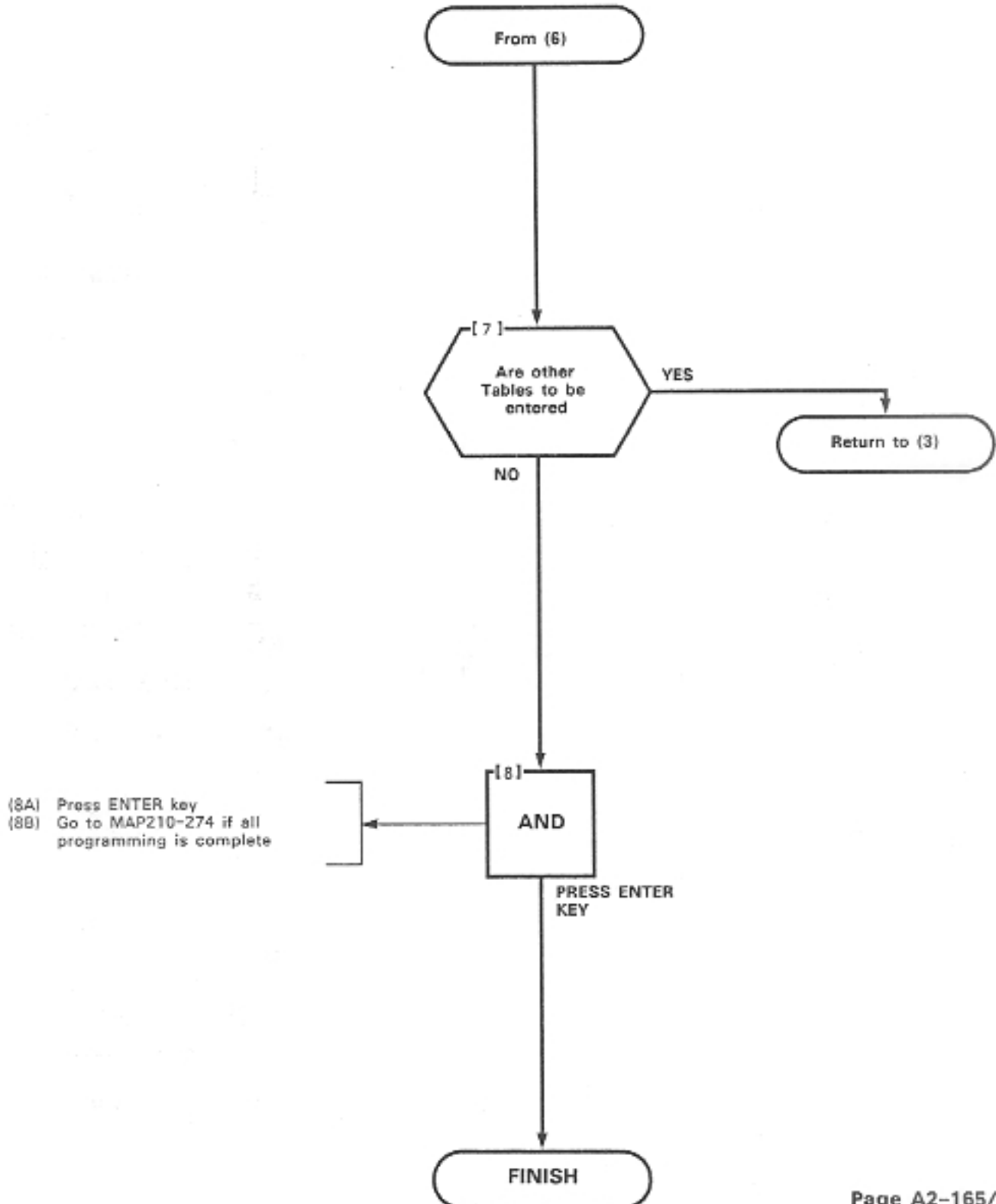
Fig. 243-4 Completed Entry Display

|  |
|--|
| CONVERT TABLE FROM PERSONAL<br>TO COMMON-USE |
|--|

|            |
|------------|
| MAP210-243 |
|------------|

|                        |
|------------------------|
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|------------------------|

|              |
|--------------|
| Sheet 3 of 3 |
|--------------|



CONFIDENTIAL  
TO CONTROL THE  
FLOW OF INFORMATION  
IN THE  
SYSTEM



CONFIDENTIAL  
TO CONTROL THE  
FLOW OF INFORMATION  
IN THE  
SYSTEM





|  |
|--|
| CODE TABLE QUANTITY<br>SELECTION OR CHANGE |
| MAP210- 250                                |
| Issue 1, December 1982                     |
| Sheet 2 of 2                               |

From (3)

[4]  
AND

SELECT TABLE  
QUANTITY

FINISH

- (4A) Press TABLE QUANT.
- (4B) Dial Table quantity digits 250-1).
- (4C) Press Enter.

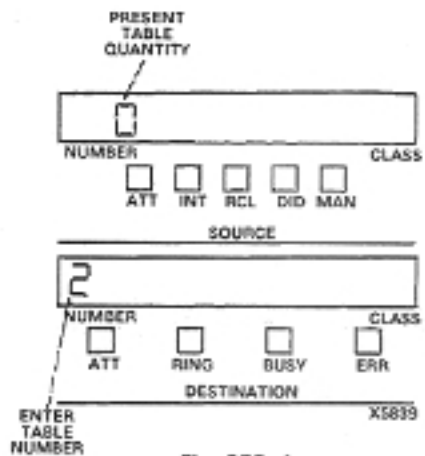


Fig. 250-1

## AREA CODE TABLE PROGRAMMING

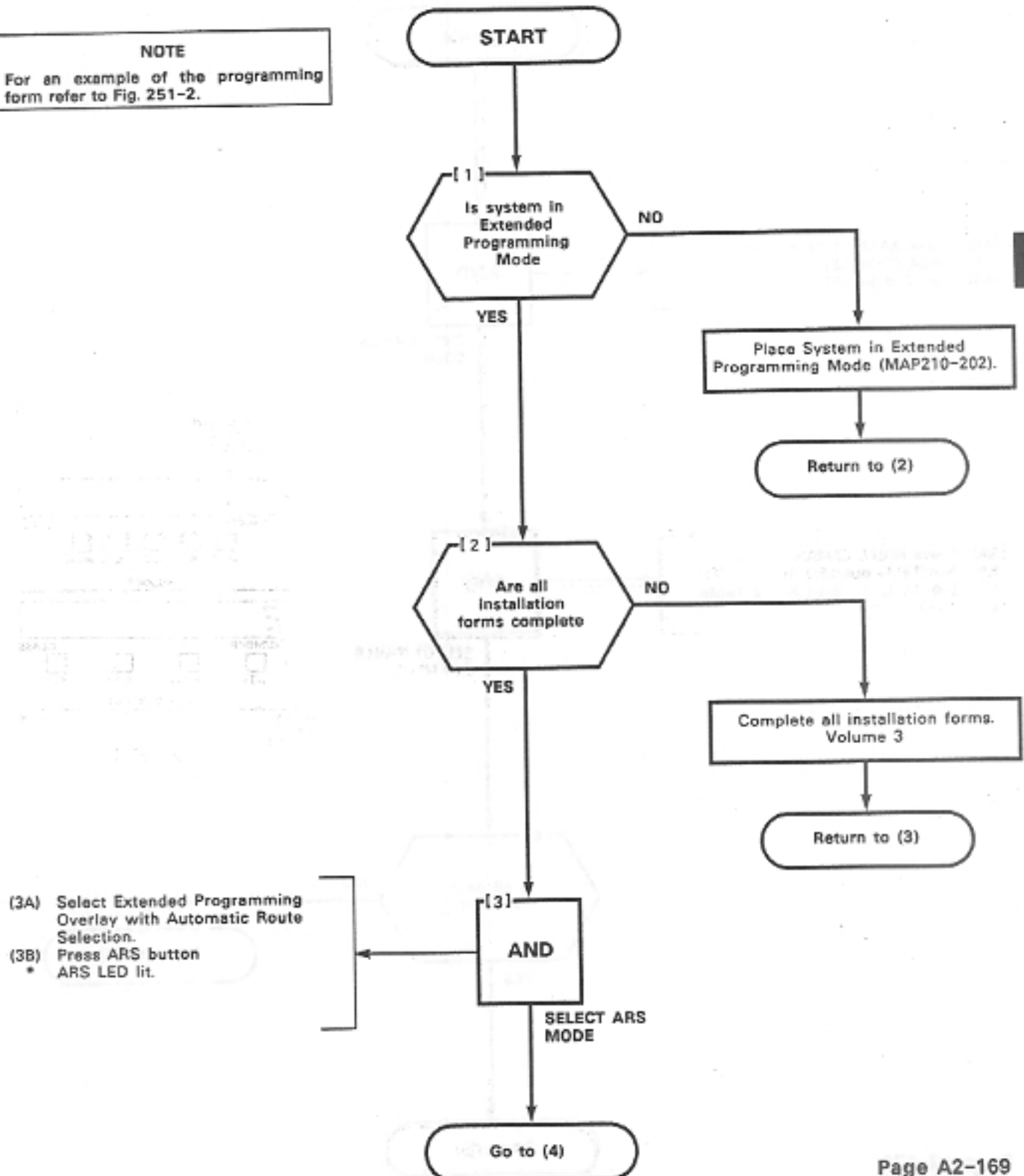
MAP210-251

Issue 1, December 1982

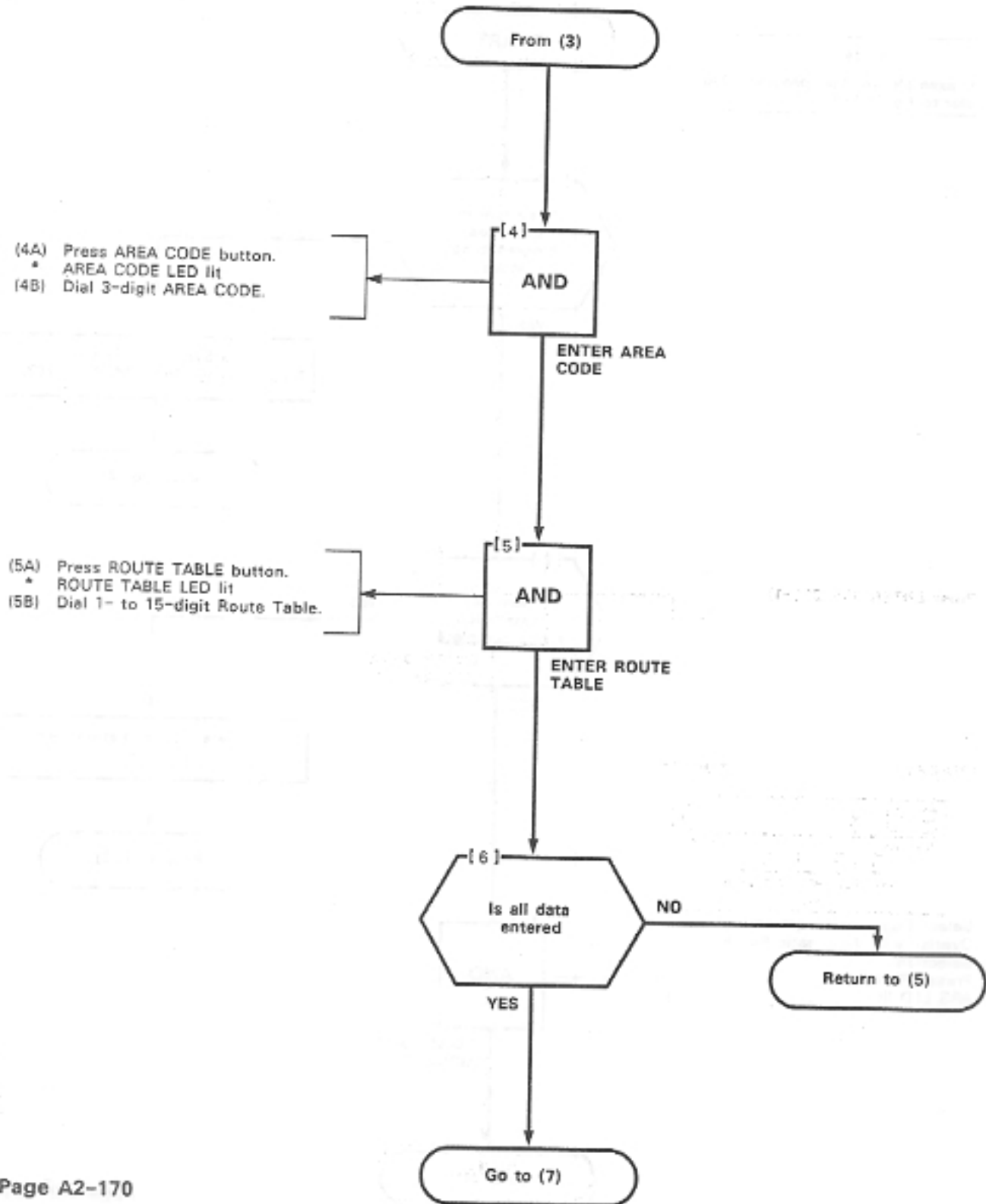
Sheet 1 of 4

## NOTE

For an example of the programming form refer to Fig. 251-2.



|                             |
|-----------------------------|
| AREA CODE TABLE PROGRAMMING |
| MAP210- 251                 |
| Issue 1, December 1982      |
| Sheet 2 of 4                |



AREA CODE TABLE PROGRAMMING

MAP210-251

Issue 1, December 1982

Sheet 3 of 4

From (6)

[7]  
AND

(7A) Press ENTER (Fig. 251-1).

ENTER DATA  
(FIG. 251-1)

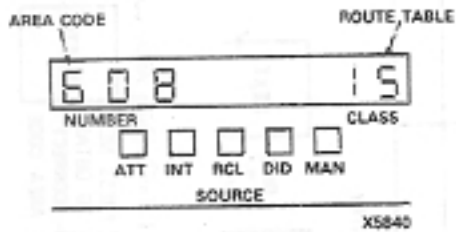


Fig. 251-1

FINISH

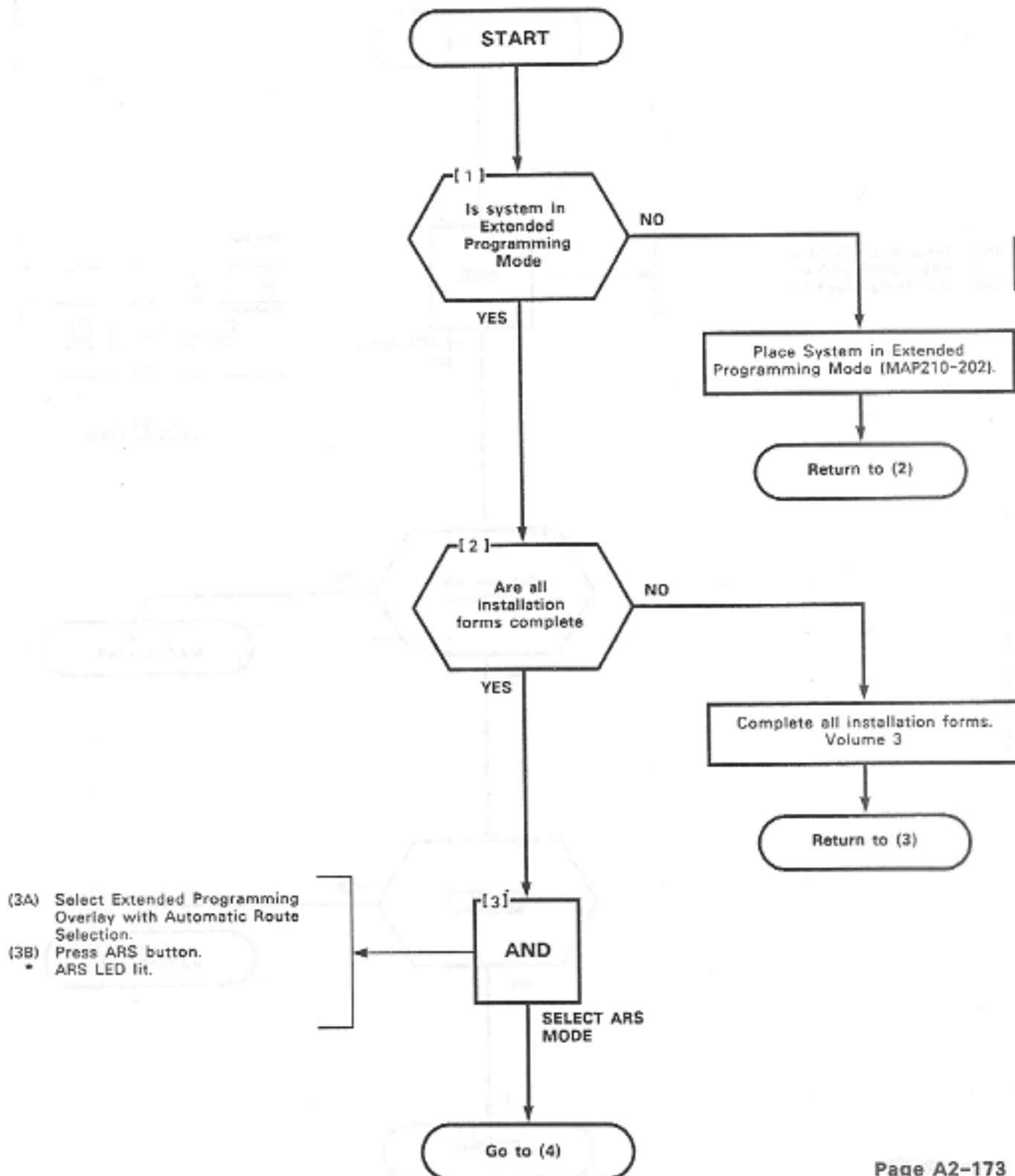


|                                       |
|---------------------------------------|
| REVIEW AREA CODE TABLE<br>PROGRAMMING |
|---------------------------------------|

|             |
|-------------|
| MAP210- 252 |
|-------------|

|                        |
|------------------------|
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|--------------|
| Sheet 1 of 2 |
|--------------|



|                                    |  |
|------------------------------------|--|
| REVIEW AREA CODE TABLE PROGRAMMING |  |
| MAP210- 252                        |  |
| Issue 1, December 1982             |  |
| Sheet 2 of 2                       |  |

From (3)

[4]  
AND

SELECT AREA CODE

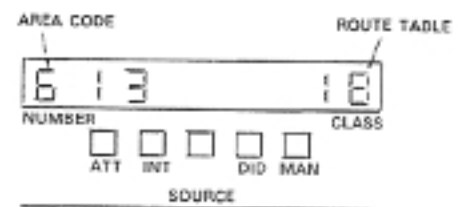


Fig. 252-1 Area Code Table

- (4A) Press AREA CODE button.
- \* AREA CODE LED lit
- (4B) Dial 3-digit Area Code

[5]  
Are ther any additions

Go to MAP210-251

[6]  
Are there deletions

Go to MAP210-253

FINISH



DELETE AN AREA CODE TABLE

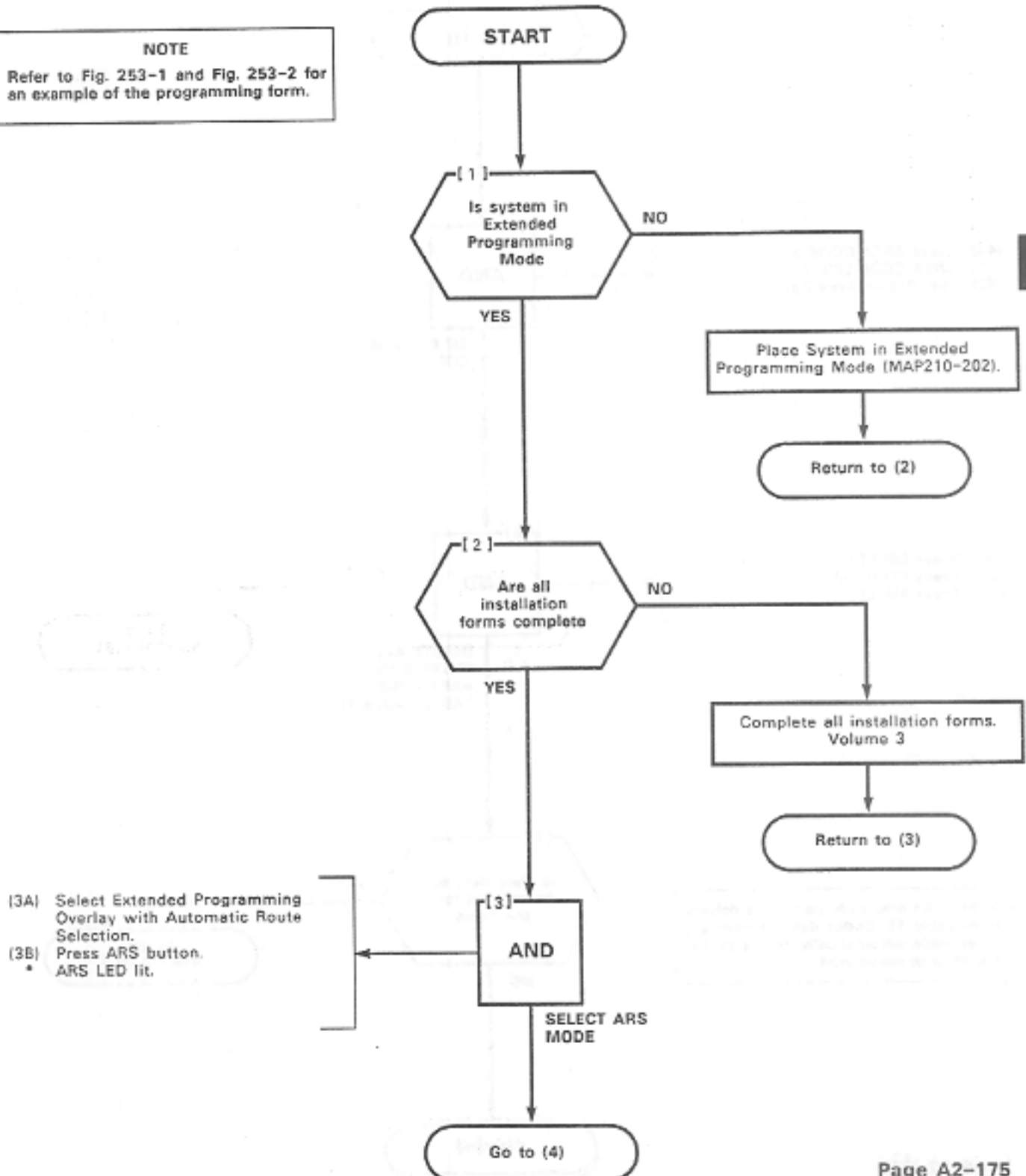
MAP210-253

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Sheet 1 of 5

## NOTE

Refer to Fig. 253-1 and Fig. 253-2 for an example of the programming form.



|                           |
|---------------------------|
| DELETE AN AREA CODE TABLE |
| MAP210- 253               |
| Issue 1, December 1982    |
| Sheet 2 of 5              |

From (3)

[4]  
AND

(4A) Press AREA CODE button.  
 ^ AREA CODE LED lit.  
 (4B) Dial 3-digit Area Code.

SELECT AREA CODE

[5]  
AND

(5A) Press DELETE  
 (5B) Press CONFIRM  
 (5C) Press ENTER.

DELETE ALL ENTRIES IN AREA CODE TABLE (NOTE 1)

[6]  
Is New Data to be entered for the Table

YES

Go to MAP210-251

NO

FINISH

Note 1: An area code cannot be deleted from Table 15. Codes deleted from any other table automatically return to Table 15 until reassigned.



**MODIFY DIGITS PROGRAMMING FORM ARS-5**

NOTES

1. DIAL DIGITS FOR REQUIRED MODIFY DIGITS TABLE
2. DIAL DIGIT REPRESENTING QUANTITY OF DIGITS TO BE DELETED (E.G. 3 FOR AN AREA CODE)
3. TO ADD DIGITS (E.G. ACCESS CODES TO FANDED SWITCHING EQUIPMENT) DIAL ACTUAL DIGITS TO BE ADDED
4. THE FOLLOWING SPECIAL SEQUENCES MAY BE ADDENDUMS REQUIRED (TO A MAXIMUM OF 4 SEQUENCES PER LINE)
  - \*1 - OCCUPIES 1 DIGIT SPACE AND CAUSES A 55 PAUSE AT THAT POINT
  - \*2 - OCCUPIES 1 DIGIT SPACE AND CAUSES A WAIT FOR DIAL TONE AT THAT POINT
  - \*5 - OCCUPIES 1 DIGIT SPACE AND CAUSES A 105 PAUSE AT THAT POINT.

PRESS **ARS**

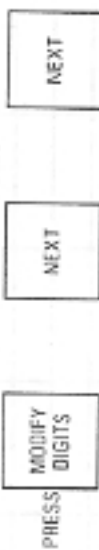
| PRESS<br><b>MODIFY DIGITS</b><br>DIAL<br>1-12<br>(NOTE 1) | PRESS<br><b>DIGITS DELETE</b><br>DIAL<br>0-10<br>(NOTE 2) | PRESS<br><b>DIGITS ADD</b> | PRESS<br><b>ENTER</b><br>FOR<br>EACH<br>LINE |
|---|---|----------------------------|--|
| 1   |   |                            |  |
| 2   |   |                            |  |
| 3   |   |                            |  |
| 4   |   |                            |  |
| 5   |   |                            |  |
| 6   |   |                            |  |
| 7   |   |                            |  |
| 8   |   |                            |  |
| 9   |   |                            |  |
| 10  |   |                            |  |
| 11  |   |                            |  |
| 12  |   |                            |  |

DIAL ACTUAL DIGITS TO BE ADDED, UP TO  
A MAXIMUM OF 20 DIGITS (NOTES 3 AND 4)

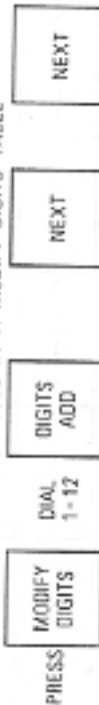
1. TO DELETE A MODIFY DIGIT TABLE



2. TO VIEW ALL MODIFY DIGIT TABLES



3. TO VIEW ALL DIGITS ADDED IN A MODIFY DIGITS TABLE



4. TO ADD DIGITS TO A MODIFY DIGITS TABLE

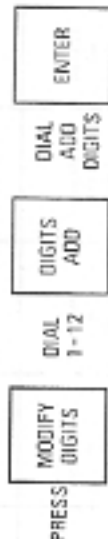


Fig. 253-2

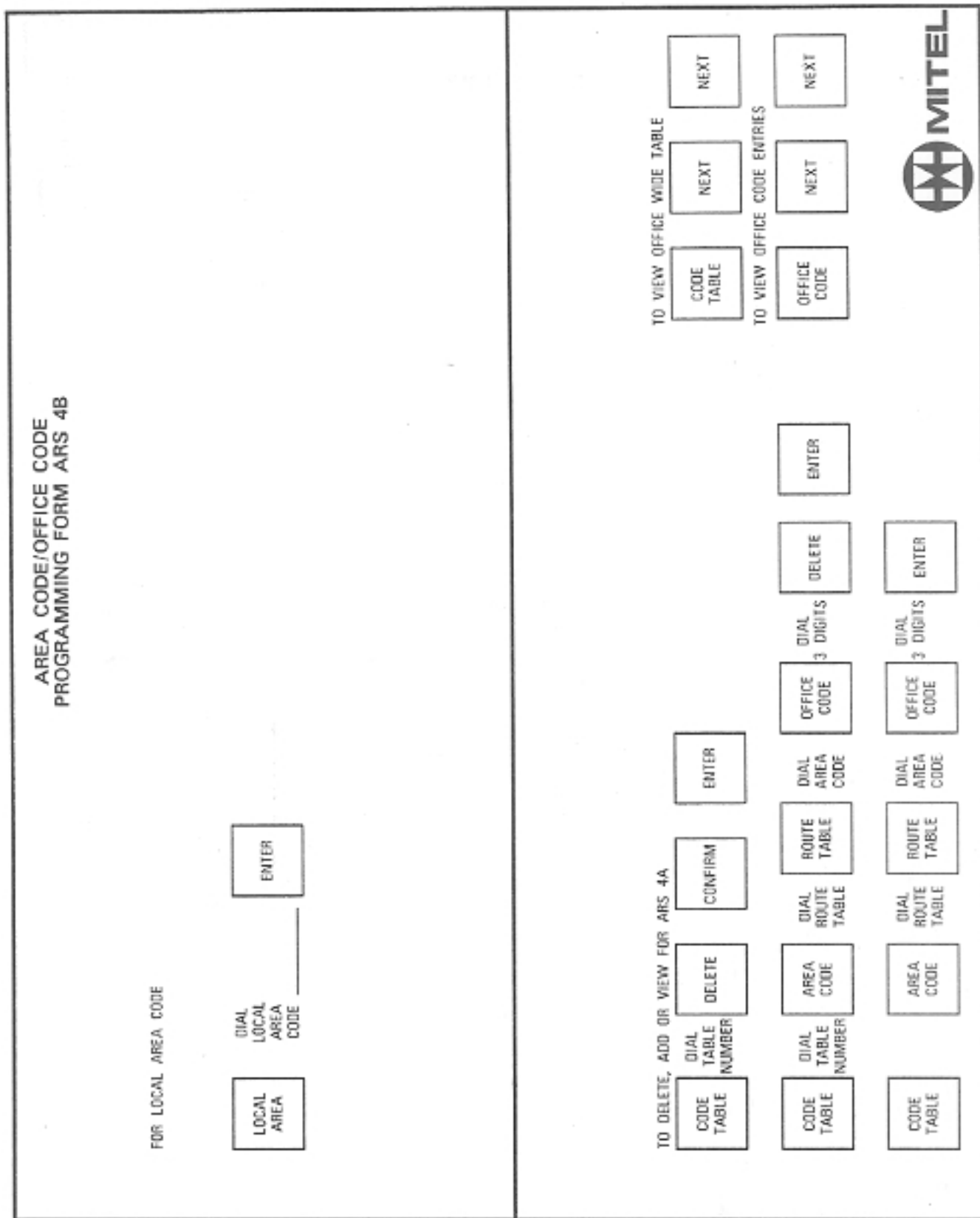
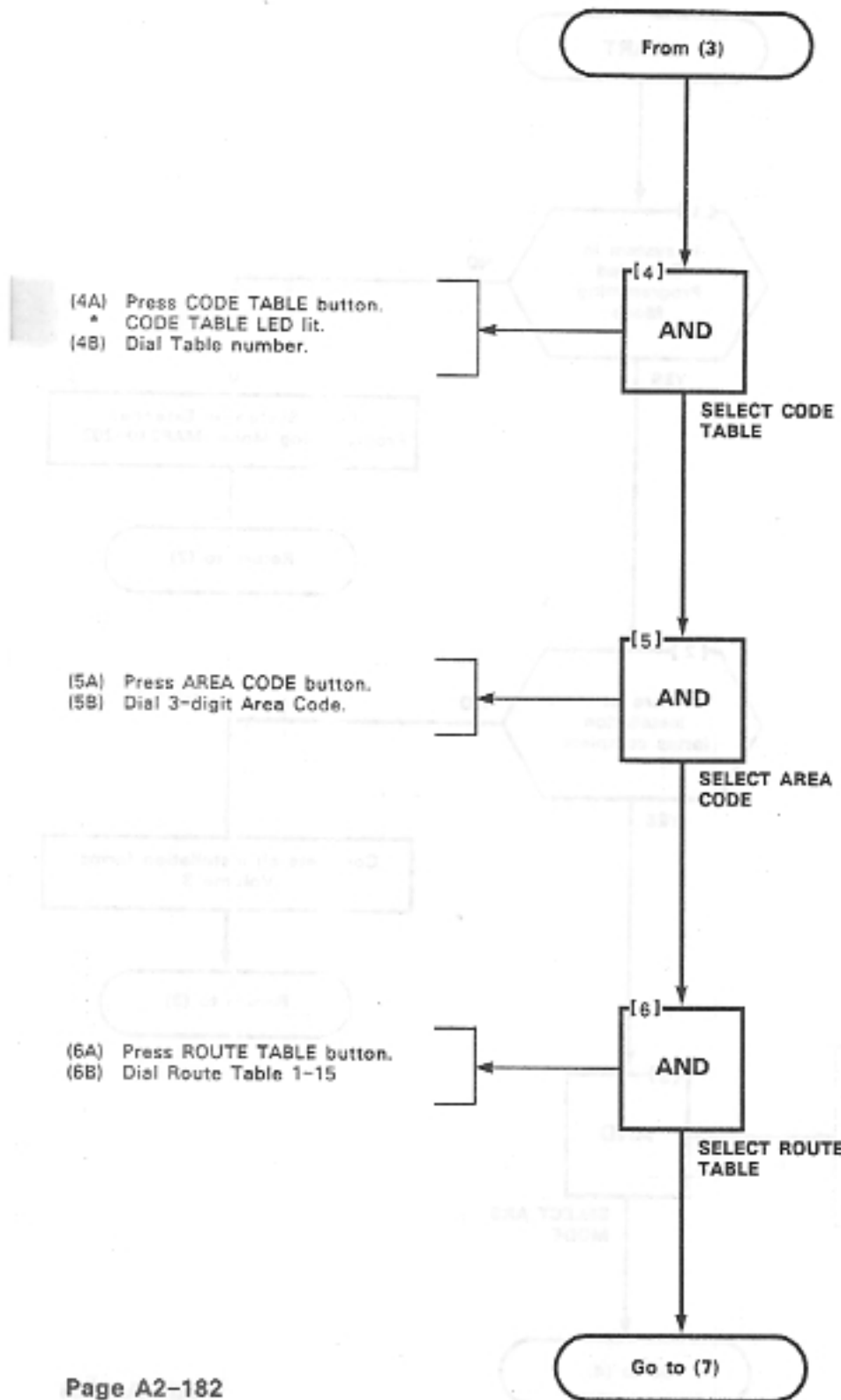


Fig. 253-2 (cont'd)





|                                      |
|--------------------------------------|
| AREA CODE/OFFICE CODE<br>PROGRAMMING |
| MAP210- 254                          |
| Issue 1, December 1982               |
| Sheet 2 of 4                         |



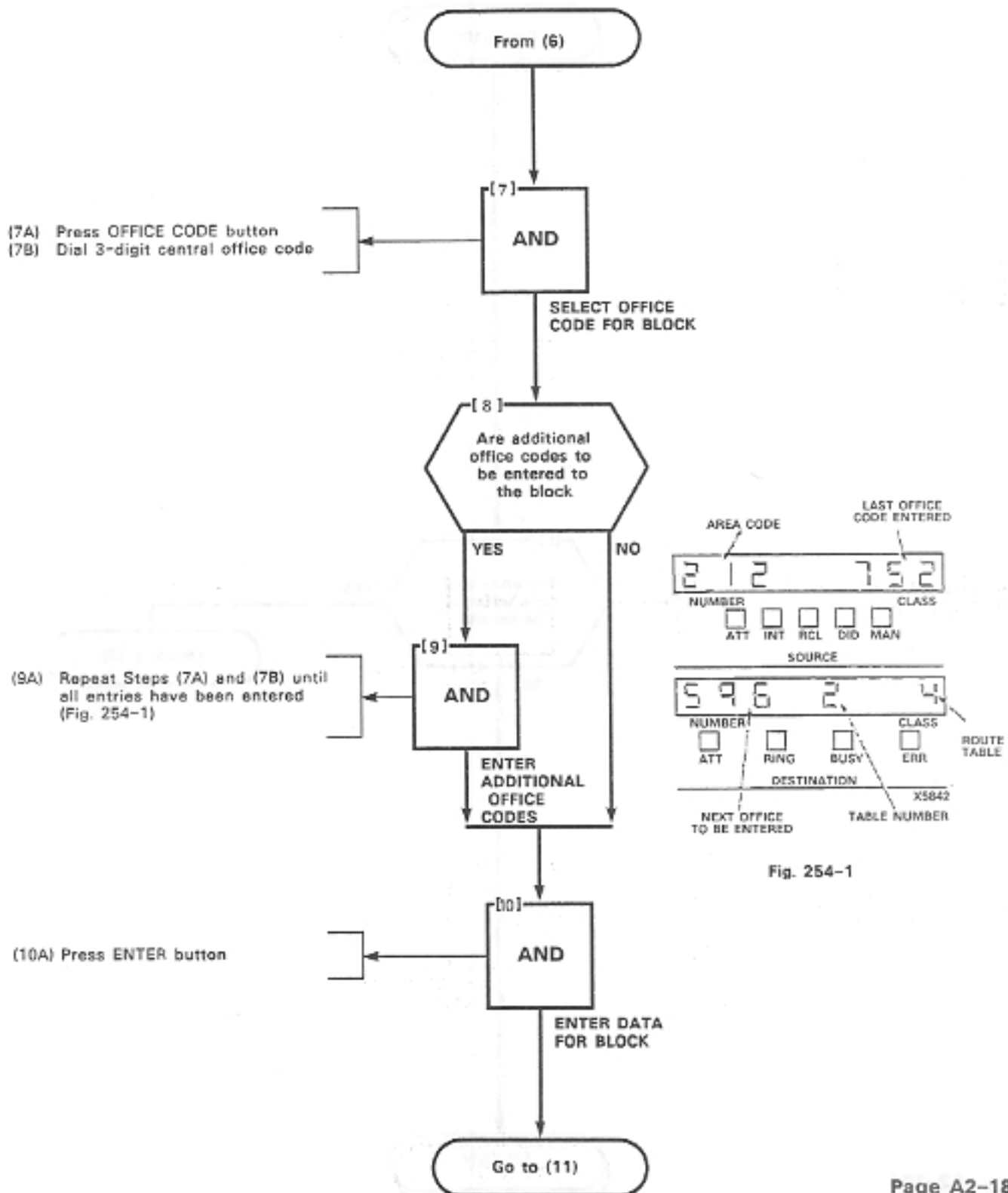


|                                      |
|--------------------------------------|
| AREA CODE/OFFICE CODE<br>PROGRAMMING |
|--------------------------------------|

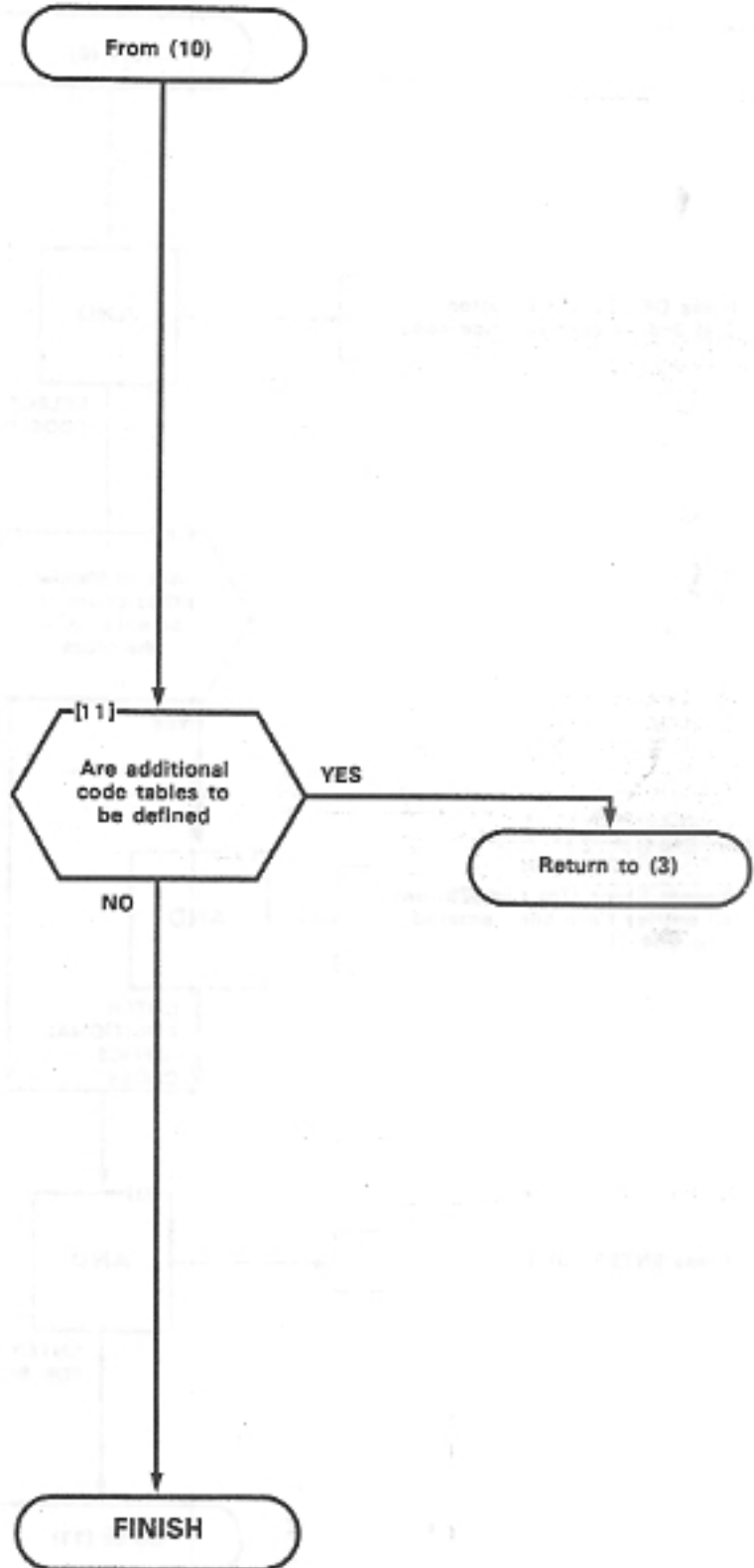
|            |
|------------|
| MAP210-254 |
|------------|

|                        |
|------------------------|
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|              |
|--------------|
| Sheet 3 of 4 |
|--------------|



|                                      |
|--------------------------------------|
| AREA CODE/OFFICE CODE<br>PROGRAMMING |
| MAP210- 254                          |
| Issue 1, December 1982               |
| Sheet 4 of 4                         |



|   |
|---|
| REVIEW OR DELETE PART OR<br>ALL AREA CODE/OFFICE CODE |
|---|

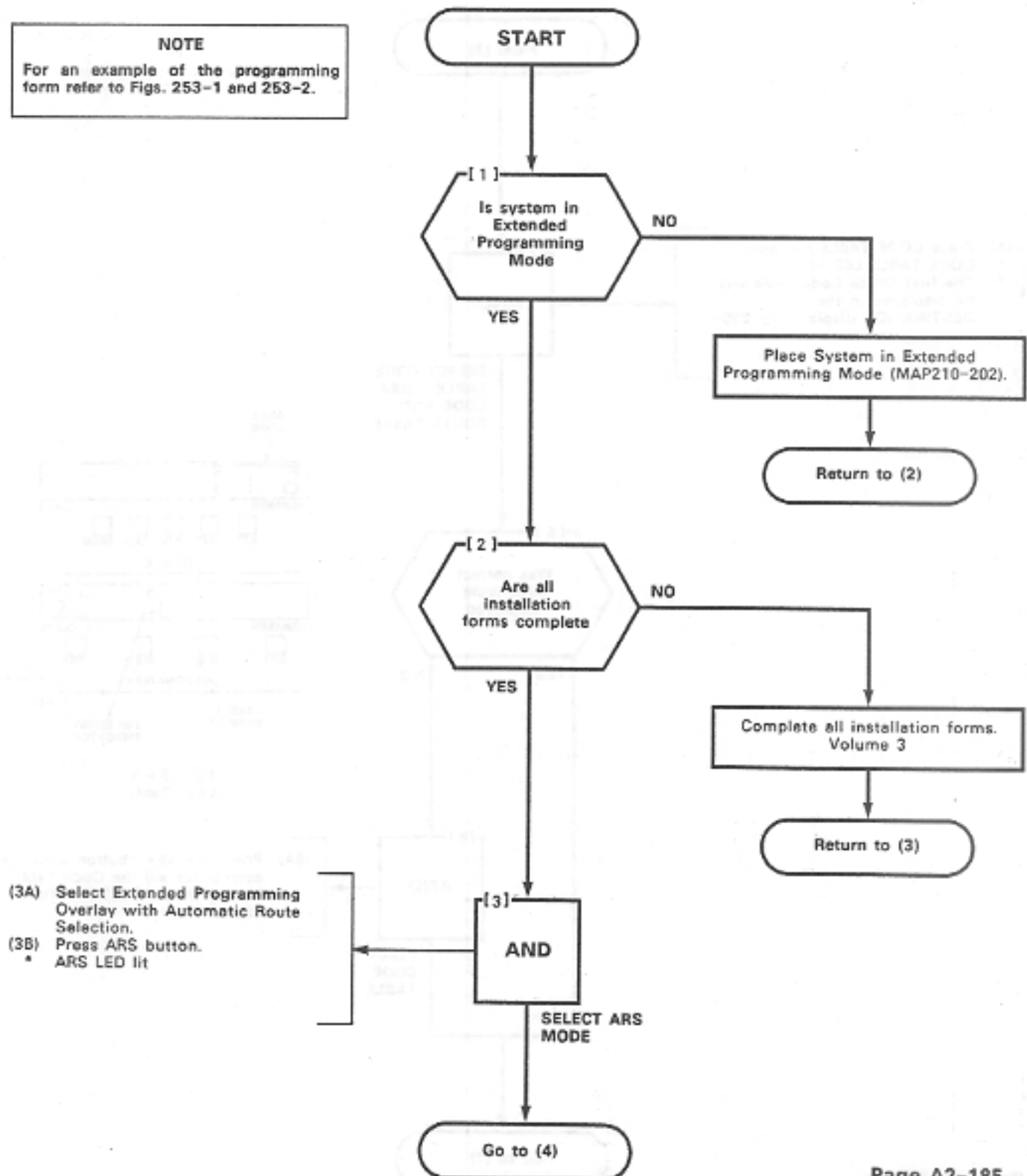
|            |
|------------|
| MAP210-255 |
|------------|

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|              |
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| Sheet 1 of 4 |
|--------------|

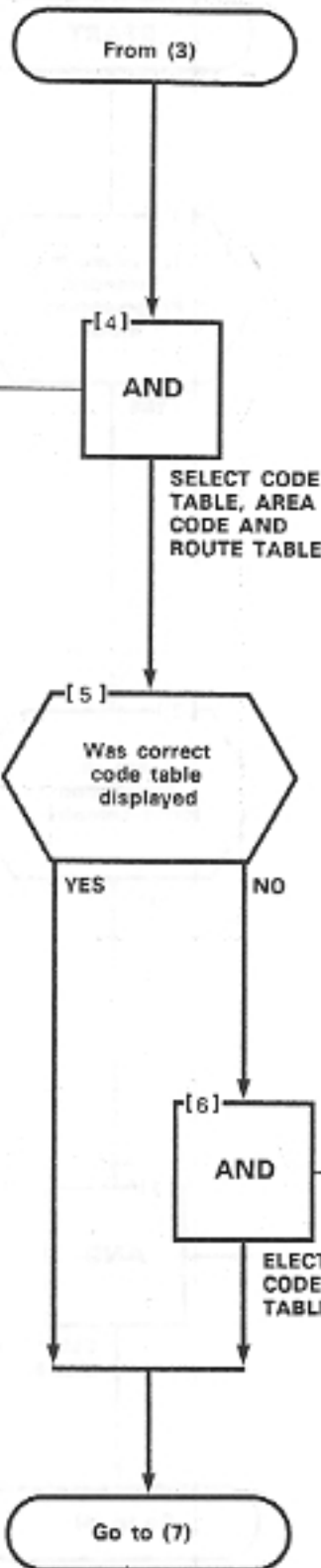
**NOTE**

For an example of the programming form refer to Figs. 253-1 and 253-2.



|  |
|--|
| REVIEW OR DELETE PART OR ALL AREA CODE/OFFICE CODE |
| MAP210- 255  |
| Issue 1, December 1982                             |
| Sheet 2 of 4                                       |

(4A) Press CODE TABLE button.  
 \* CODE TABLE LED lit.  
 \* The first Office Code table will be displayed in the DESTINATION display (Fig. 255-1).



SELECT CODE TABLE, AREA CODE AND ROUTE TABLE

ELECT CODE TABLE

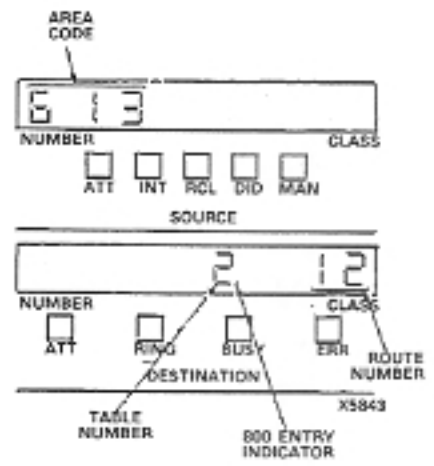


Fig. 255-1 Code Table

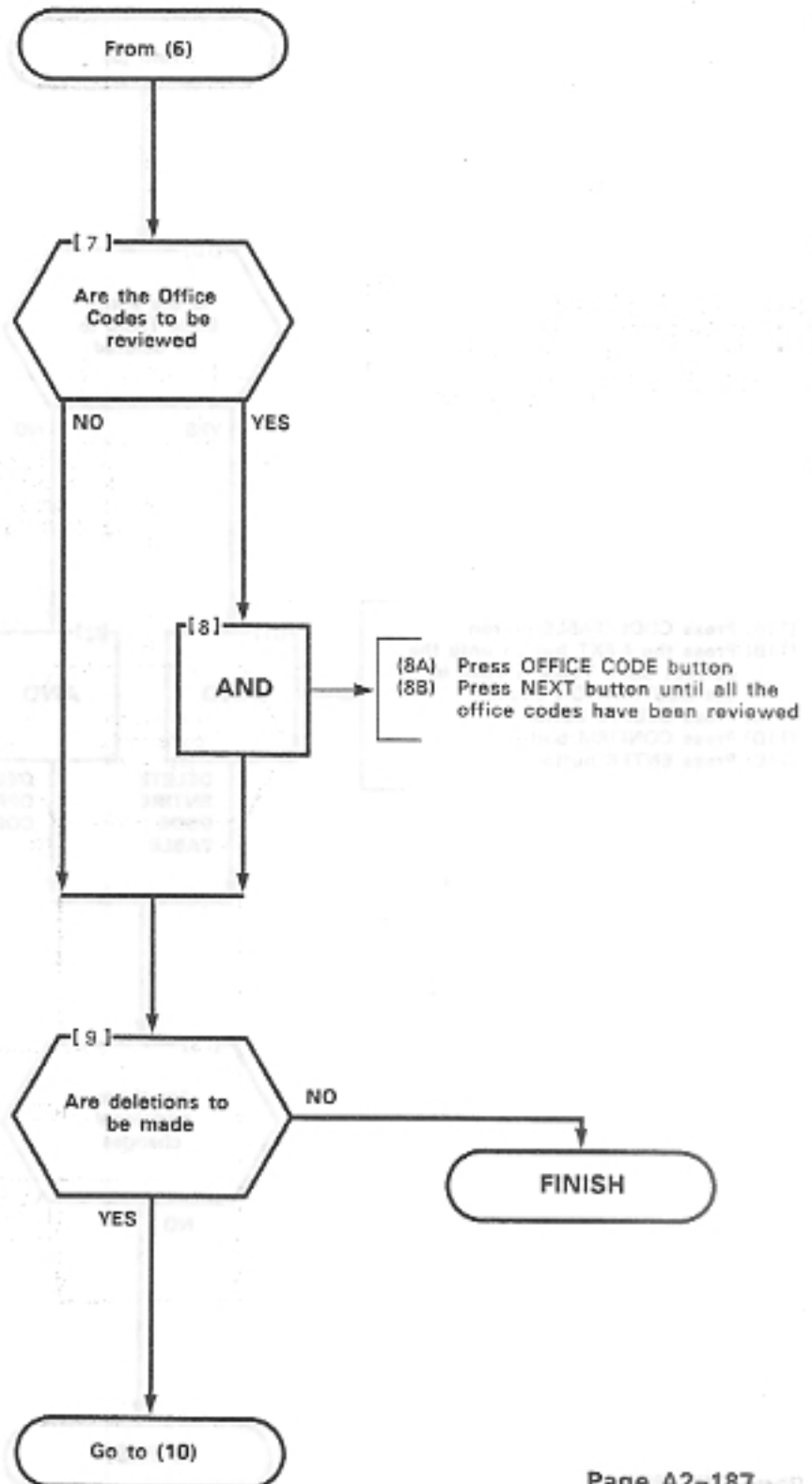
(6A) Press the NEXT button until the correct (or all) the Code Table is seen in the DESTINATION display.

REVIEW OR DELETE PART OR  
ALL AREA CODE/OFFICE CODE

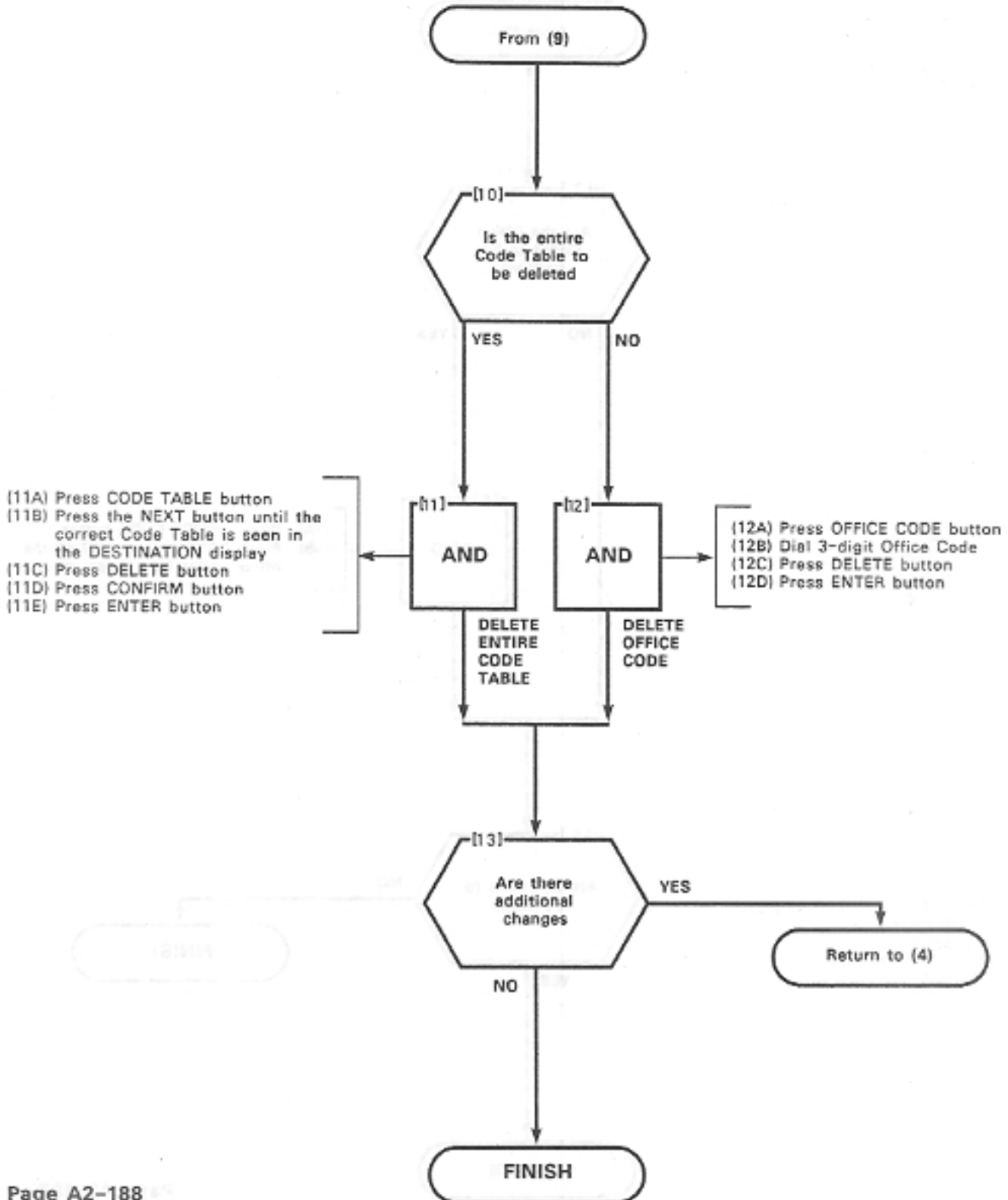
MAP210- 255

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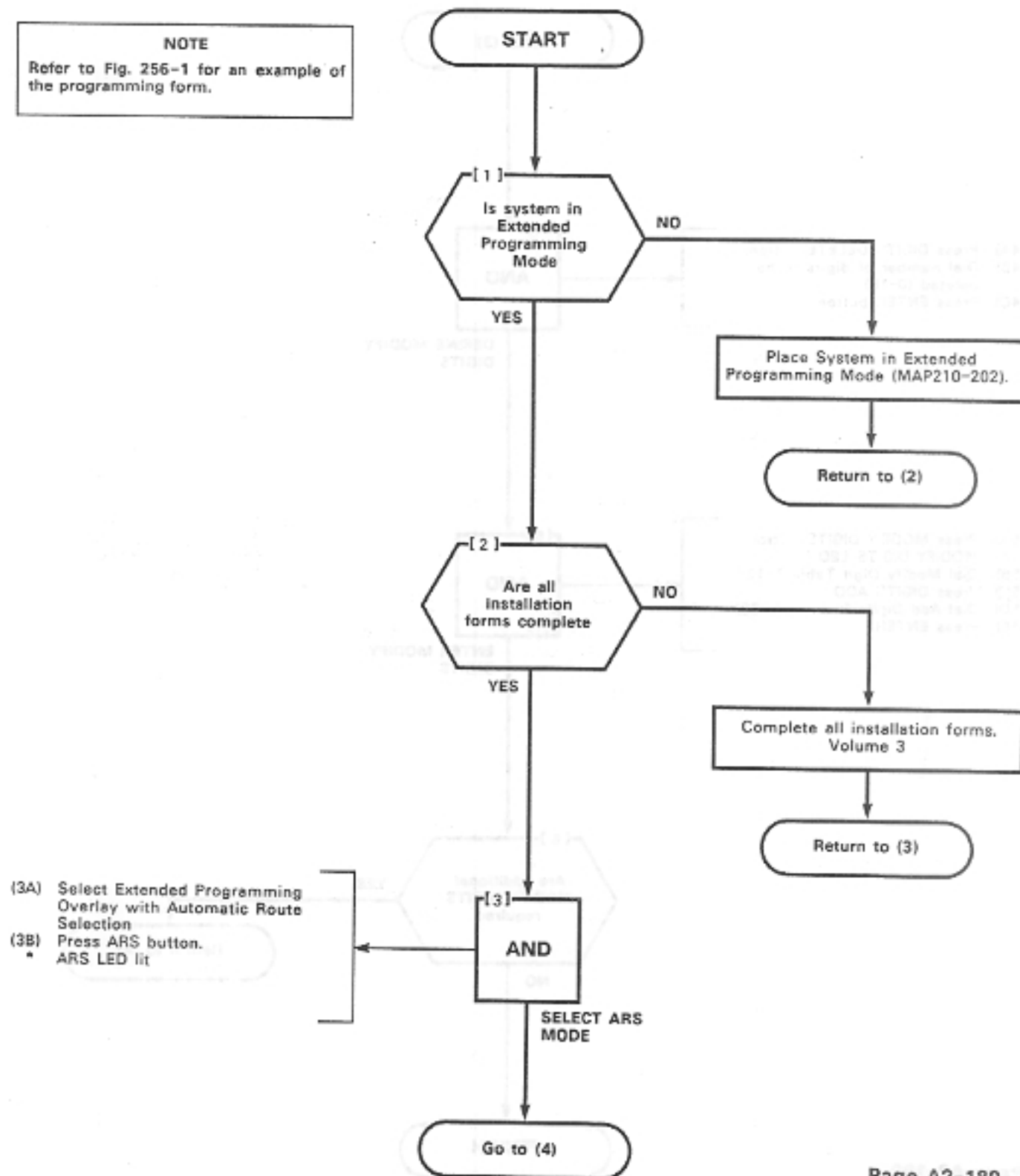


|  |
|--|
| REVIEW OR DELETE PART OR ALL AREA CODE/OFFICE CODE |
| MAP210- 255  |
| Issue 1, December 1982                             |
| Sheet 4 of 4                                       |

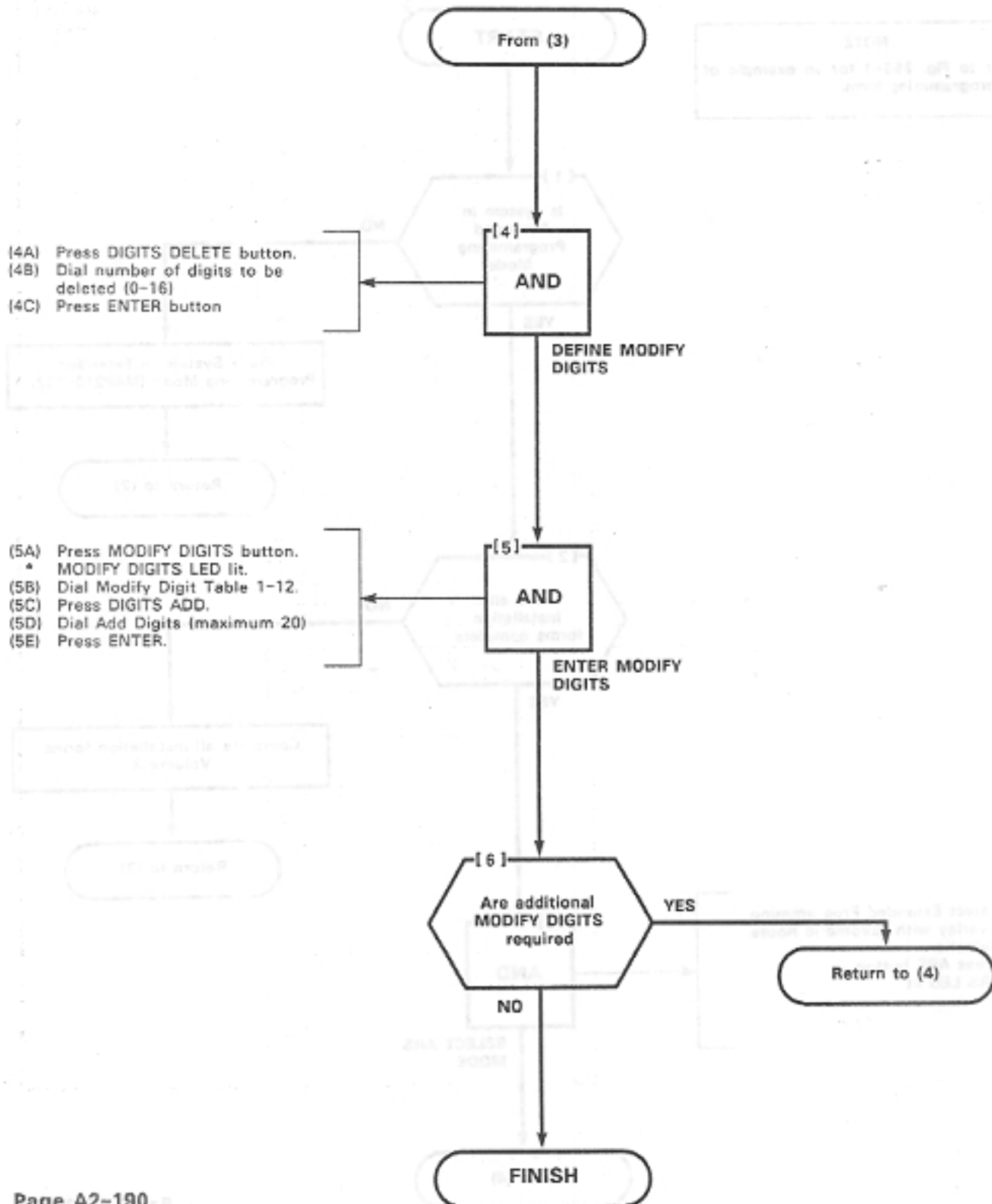


|                        |              |
|------------------------|--------------|
| PROGRAM MODIFY DIGITS  | MAP210- 256  |
| Issue 1, December 1982 | Sheet 1 of 3 |

**NOTE**  
Refer to Fig. 256-1 for an example of the programming form.



|                        |
|------------------------|
| PROGRAM MODIFY DIGITS  |
| MAP210- 256            |
| Issue 1, December 1982 |
| Sheet 2 of 3           |





**MODIFY DIGITS PROGRAMMING FORM ARS-5**

NOTES

1. DIAL DIGITS FOR REQUIRED MODIFY DIGITS TABLE
2. DIAL DIGIT REPRESENTING QUANTITY OF DIGITS TO BE DELETED (E.G. 3 FOR AN AREA CODE)
3. TO ADD DIGITS (E.G. ACCESS CODES TO TANDEM SWITCHING EQUIPMENT) DIAL ACTUAL DIGITS TO BE ADDED
4. THE FOLLOWING SPECIAL SEQUENCES MAY BE SOMEWHERE REQUIRED (TO A MAXIMUM OF 4 SEQUENCES PER LINE)
  - \*1 - OCCUPIES 1 DIGIT SPACE AND CAUSES A 55 PAUSE AT THAT POINT
  - \*2 - OCCUPIES 1 DIGIT SPACE AND CAUSES A WAIT FOR DIAL TONE AT THAT POINT
  - \*5 - OCCUPIES 1 DIGIT SPACE AND CAUSES A 105 PAUSE AT THAT POINT.

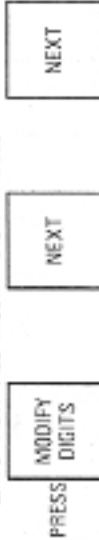
PRESS **ARS**

|                    | PRESS <b>MODIFY DIGITS</b>   | PRESS <b>DIAL DIGITS DELETE</b> | PRESS <b>DIGITS ADD</b> | PRESS <b>ENTER</b> |
|--------------------|--|---------------------------------|-------------------------|--------------------|
|                    | DIAL ACTUAL DIGITS TO BE ADDED, UP TO A MAXIMUM OF 20 DIGITS (NOTES 3 AND 4) |                                 |                         |                    |
| DIAL 1-12 (NOTE 1) |  | DIAL 0-10 (NOTE 2)              |                         | FOR EACH LINE      |
| 1                  |  |                                 |                         |                    |
| 2                  |  |                                 |                         |                    |
| 3                  |  |                                 |                         |                    |
| 4                  |  |                                 |                         |                    |
| 5                  |  |                                 |                         |                    |
| 6                  |  |                                 |                         |                    |
| 7                  |  |                                 |                         |                    |
| 8                  |  |                                 |                         |                    |
| 9                  |  |                                 |                         |                    |
| 10                 |  |                                 |                         |                    |
| 11                 |  |                                 |                         |                    |
| 12                 |  |                                 |                         |                    |

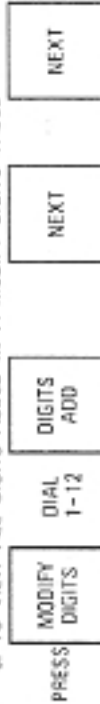
1. TO DELETE A MODIFY DIGIT TABLE



2. TO VIEW ALL MODIFY DIGIT TABLES



3. TO VIEW ALL DIGITS ADDED IN A MODIFY DIGITS TABLE



4. TO ADD DIGITS TO A MODIFY DIGITS TABLE

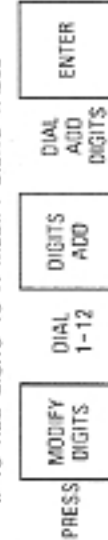


Fig. 256-1



|  |
|--|
| TO REVIEW OR DELETE<br>MODIFY DIGIT TABLES |
|--|

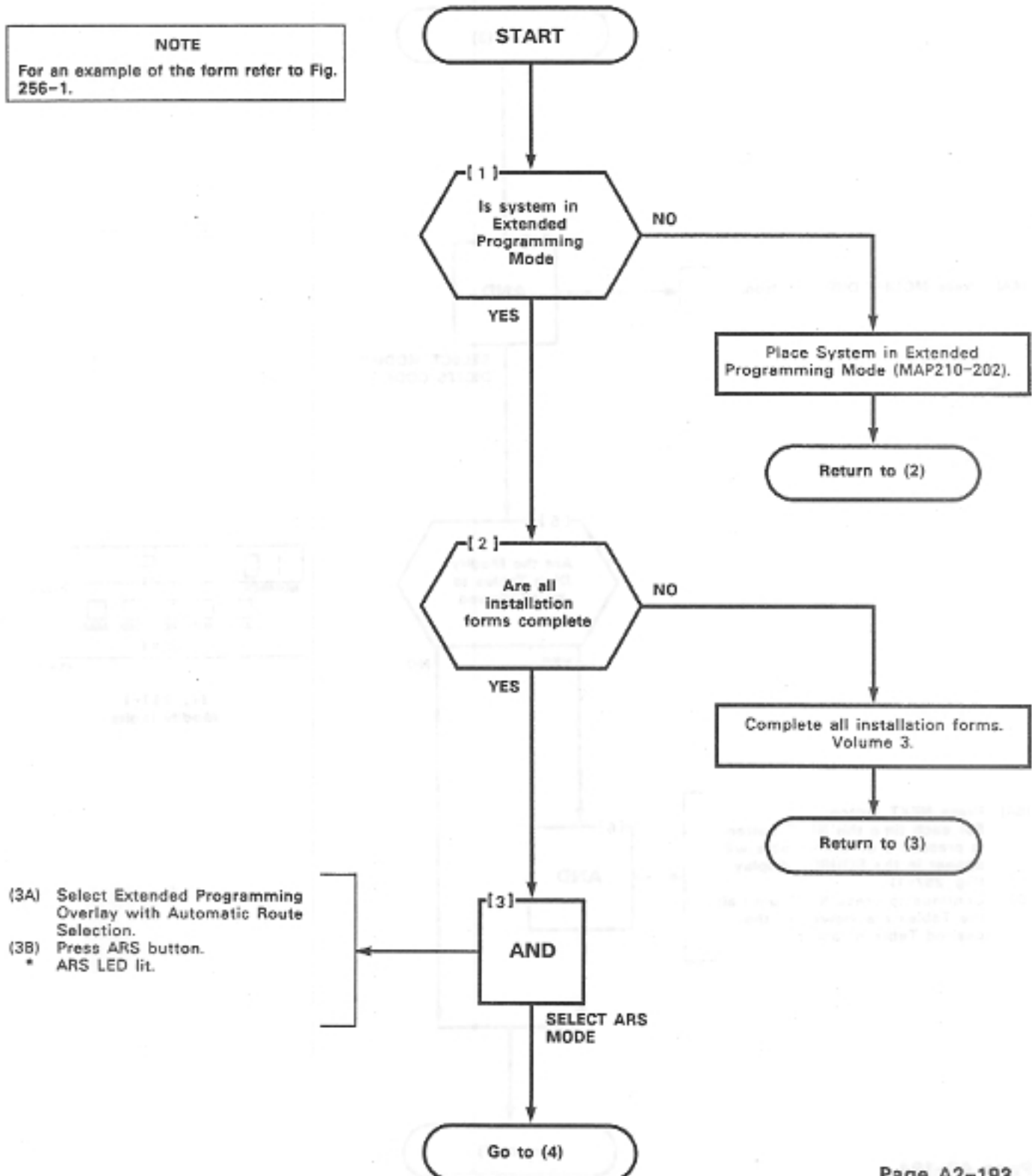
|            |
|------------|
| MAP210-257 |
|------------|

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|              |
|--------------|
| Sheet 1 of 4 |
|--------------|

## NOTE

For an example of the form refer to Fig. 256-1.



|  |
|--|
| TO REVIEW OR DELETE<br>MODIFY DIGIT TABLES |
| MAP210- 257                                |
| Issue 1, December 1982                     |
| Sheet 2 of 4                               |

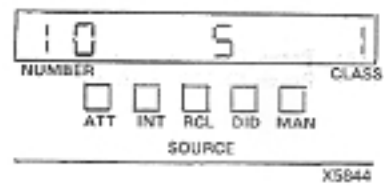
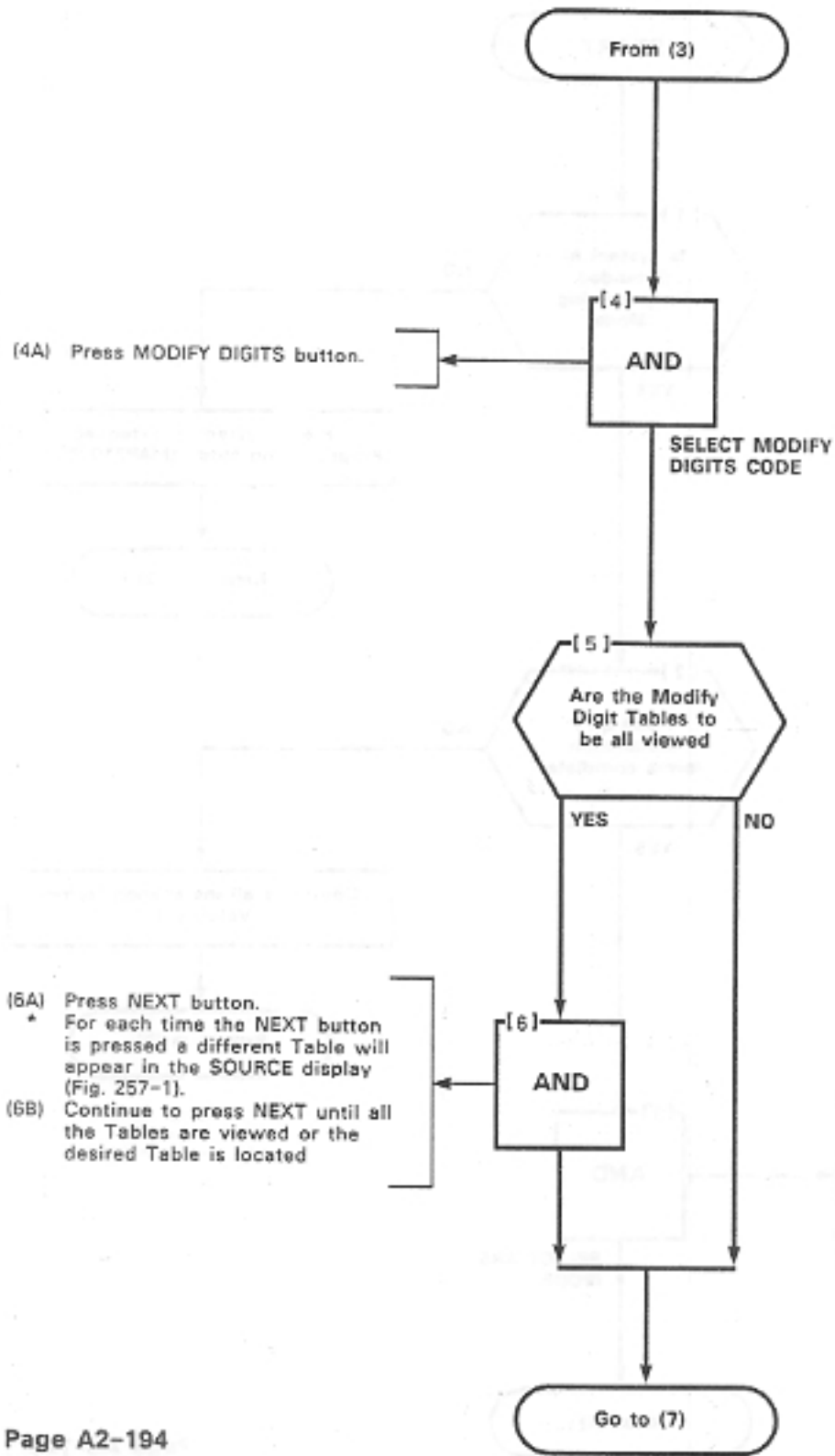


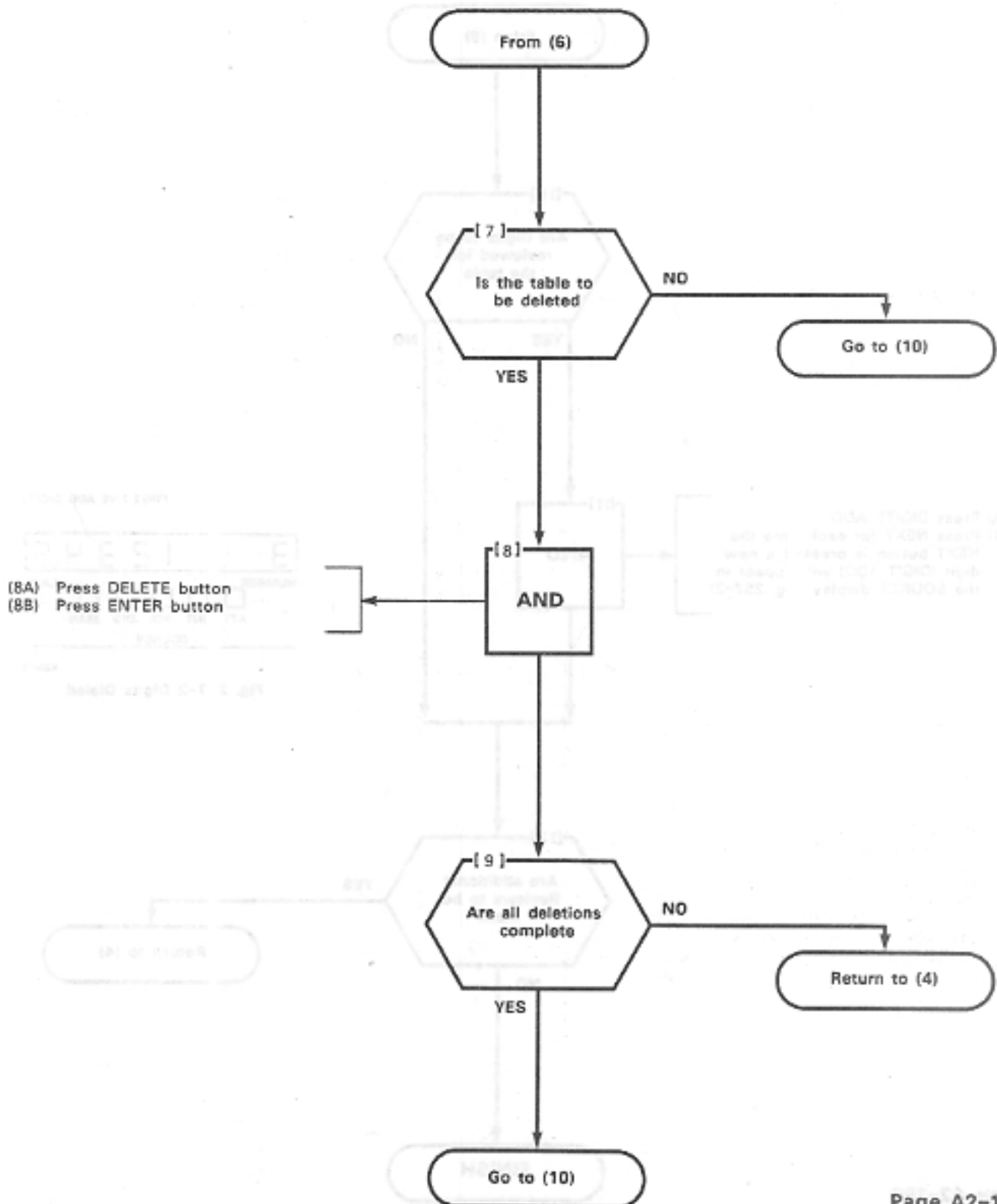
Fig. 257-1  
Modify Digits

|  |
|--|
| TO REVIEW OR DELETE<br>MODIFY DIGIT TABLES |
|--|

|            |
|------------|
| MAP210-257 |
|------------|

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|------------------------|
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|              |
|--------------|
| Sheet 3 of 4 |
|--------------|



|  |
|--|
| TO REVIEW OR DELETE<br>MODIFY DIGIT TABLES |
| MAP210- 257                                |
| Issue 1, December 1982                     |
| Sheet 4 of 4                               |

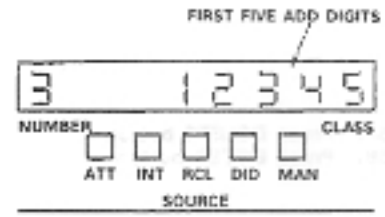
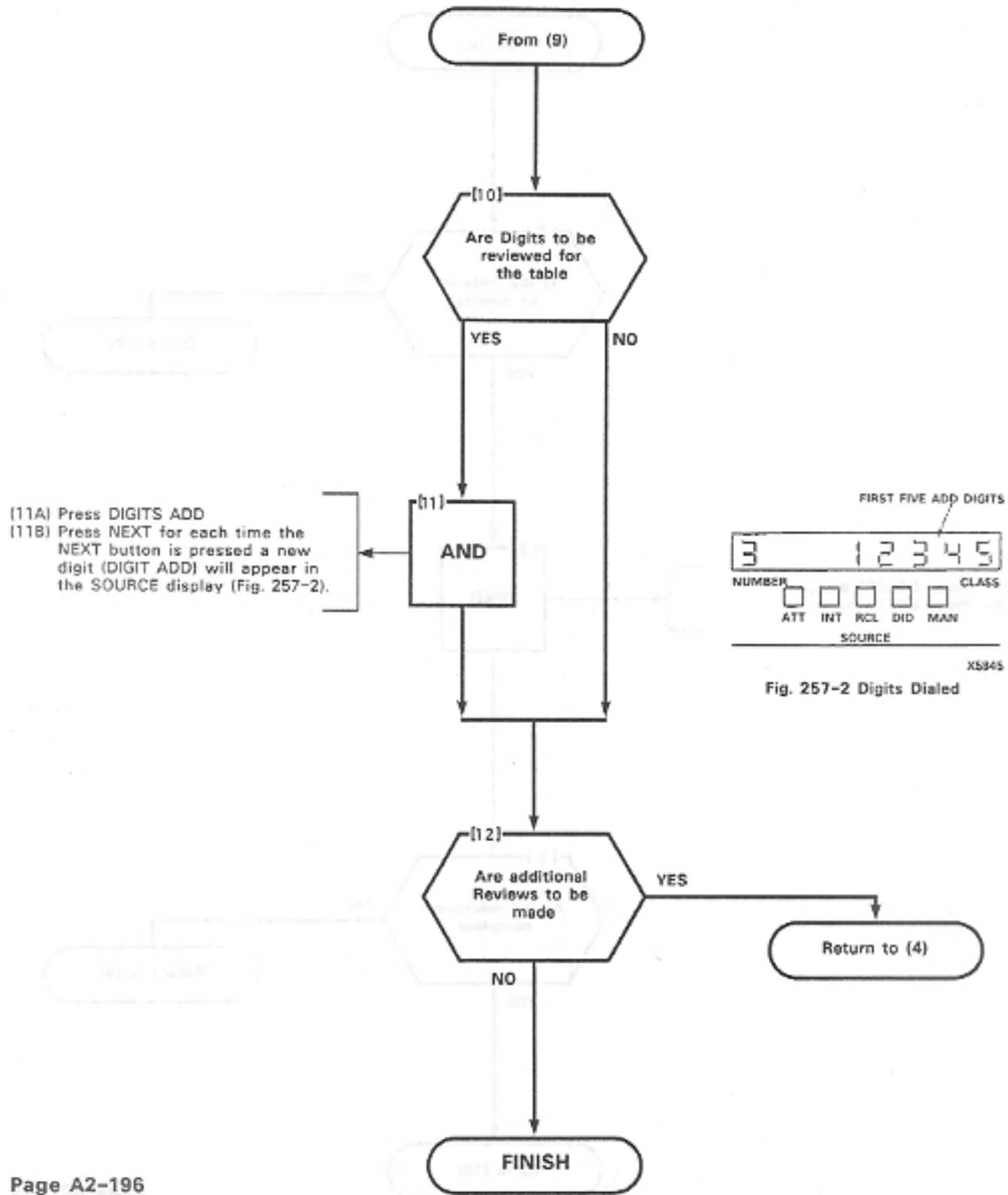


Fig. 257-2 Digits Dialed

X5945

## ROUTE TABLE PROGRAMMING

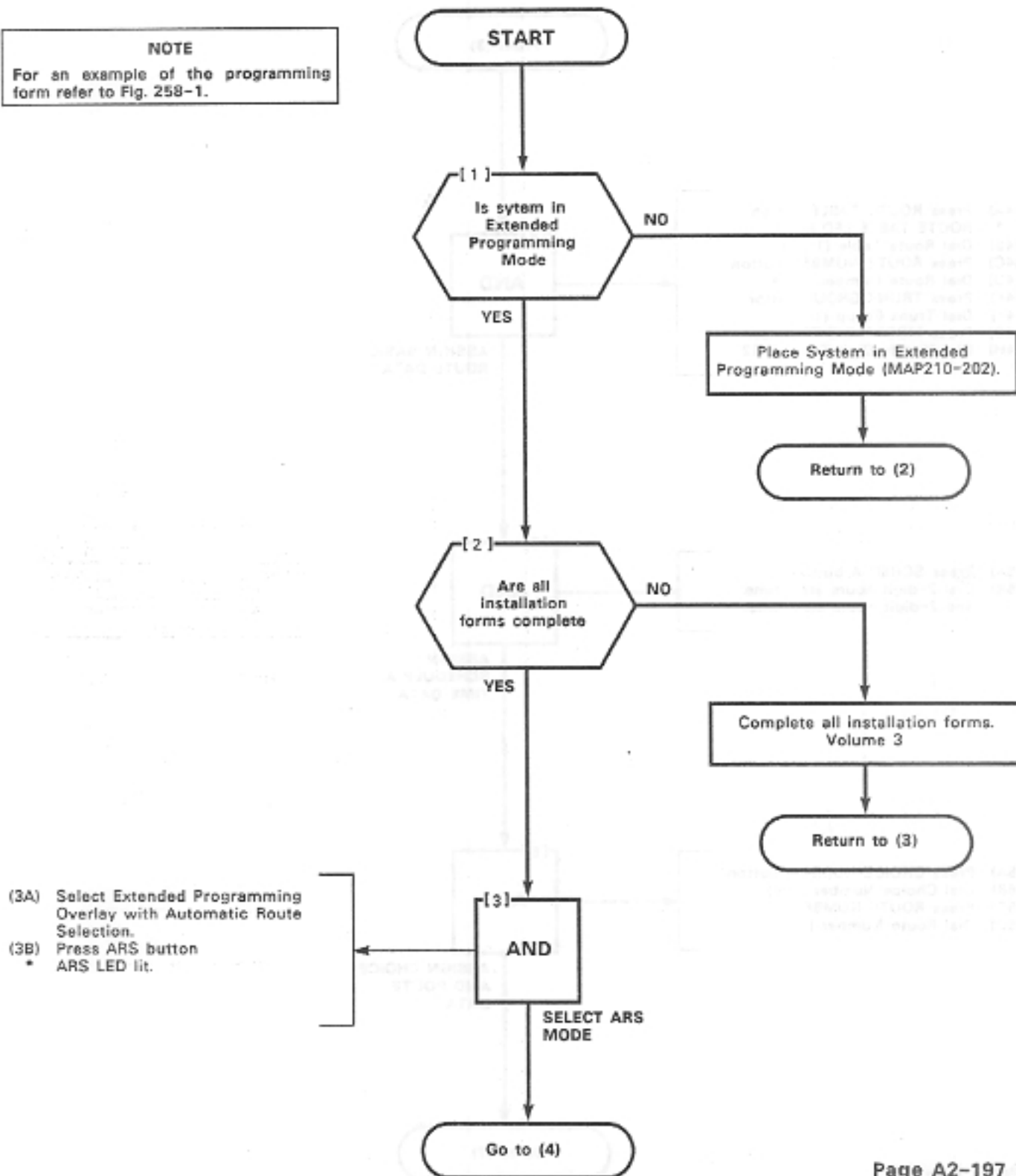
MAP210-258

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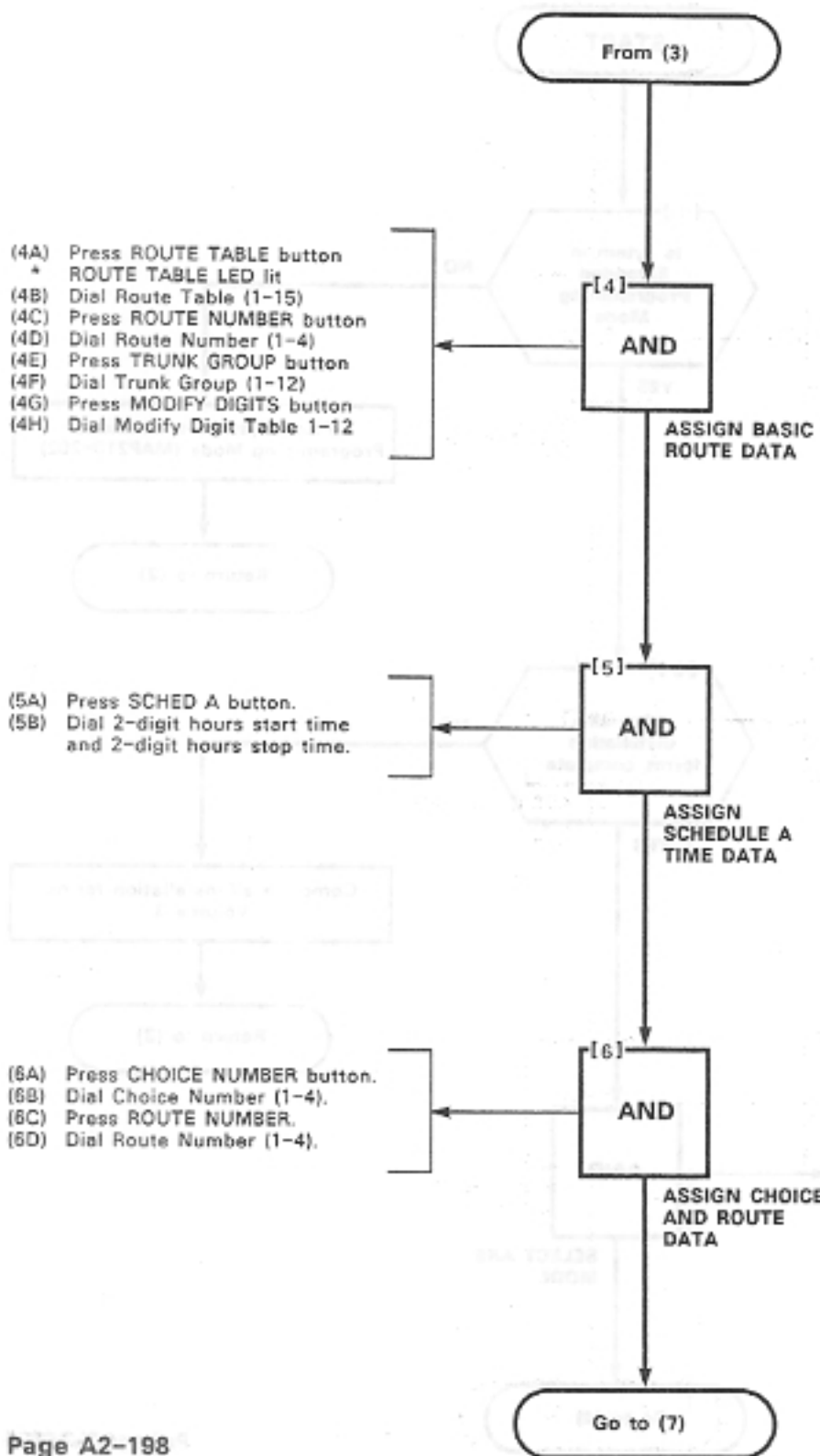
Sheet 1 of 6

## NOTE

For an example of the programming form refer to Fig. 258-1.



|                                |
|--------------------------------|
| <b>ROUTE TABLE PROGRAMMING</b> |
| MAP210- 258                    |
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| Sheet 2 of 6                   |



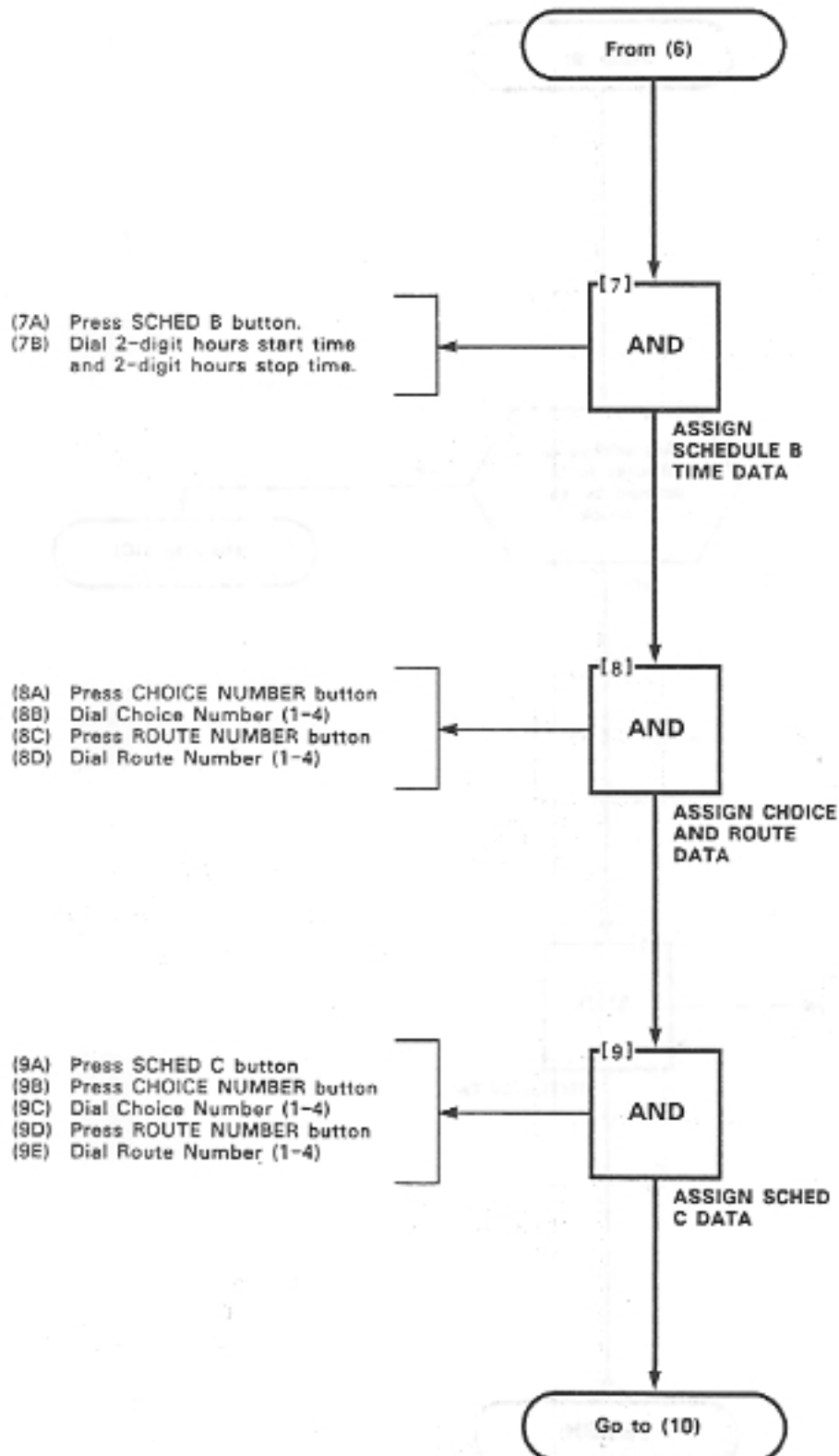


## ROUTE TABLE PROGRAMMING

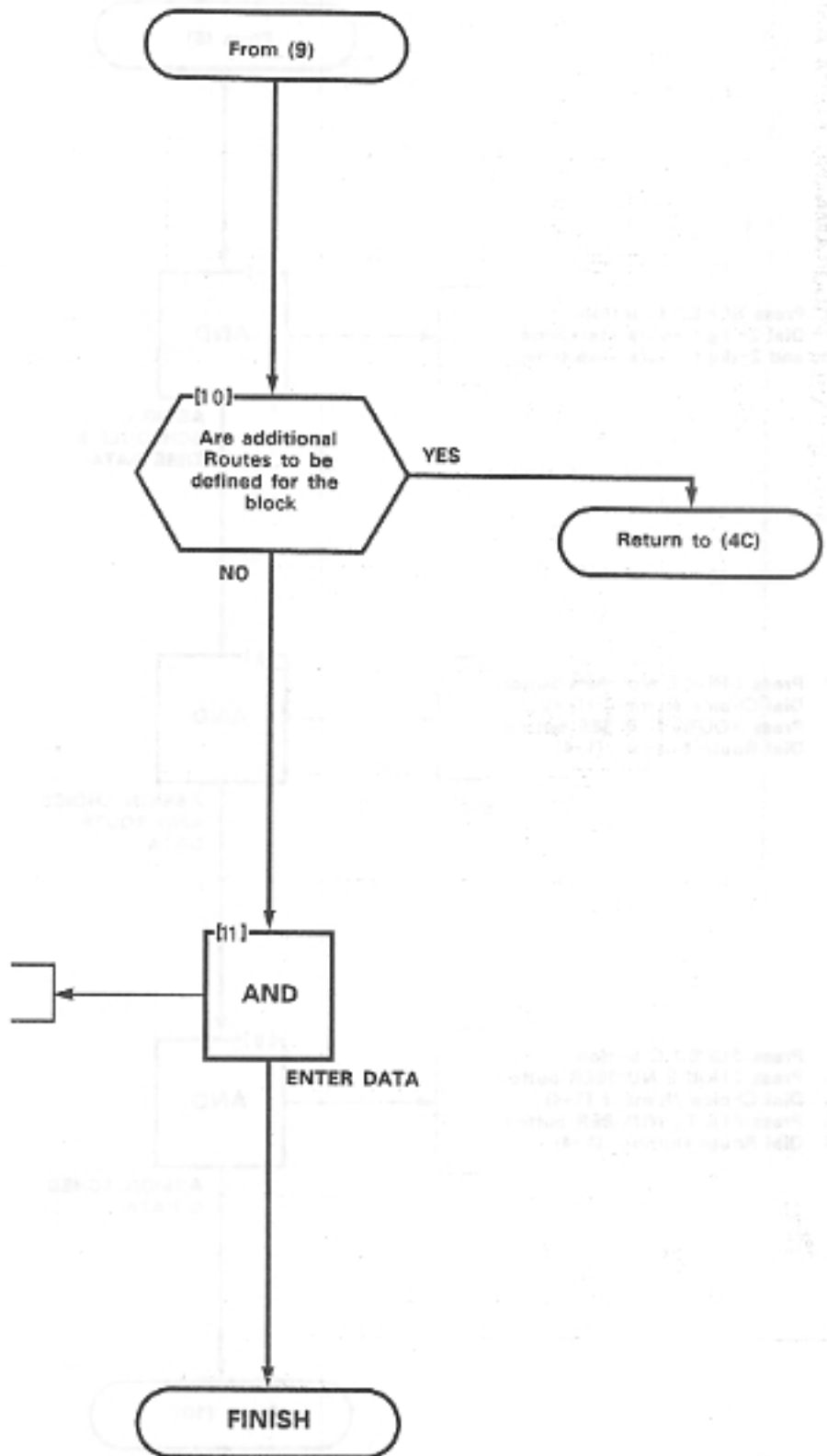
MAP210-258

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|                         |
|-------------------------|
| ROUTE TABLE PROGRAMMING |
| MAP210- 258             |
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| Sheet 4 of 6            |



(11A) Press ENTER button



## ROUTE TABLE PROGRAMMING FORM ARS-6 (2 OF 2)

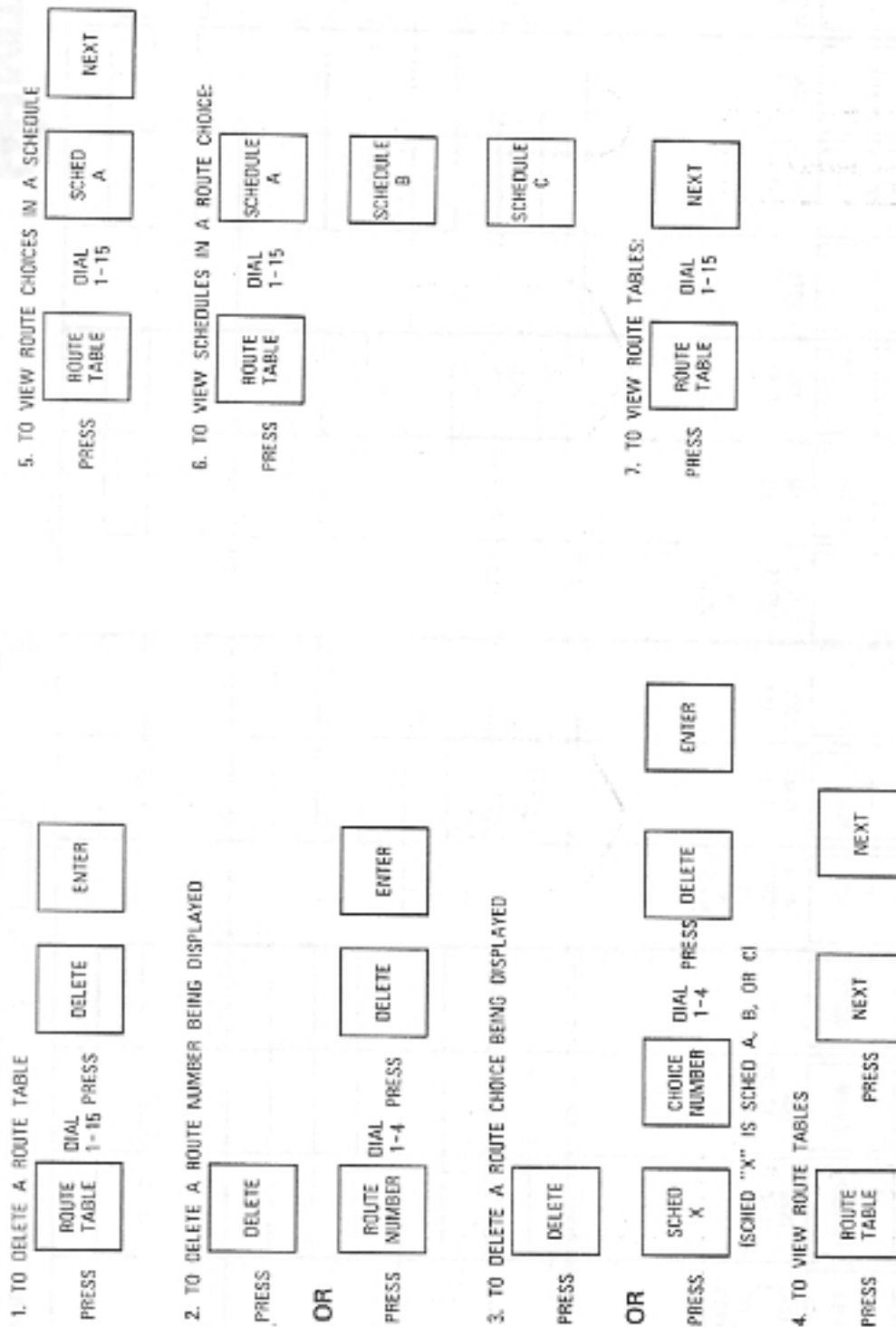


Fig. 258-1 (cont'd)

|                                      |
|--------------------------------------|
| TO REVIEW OR DELETE A<br>ROUTE TABLE |
|--------------------------------------|

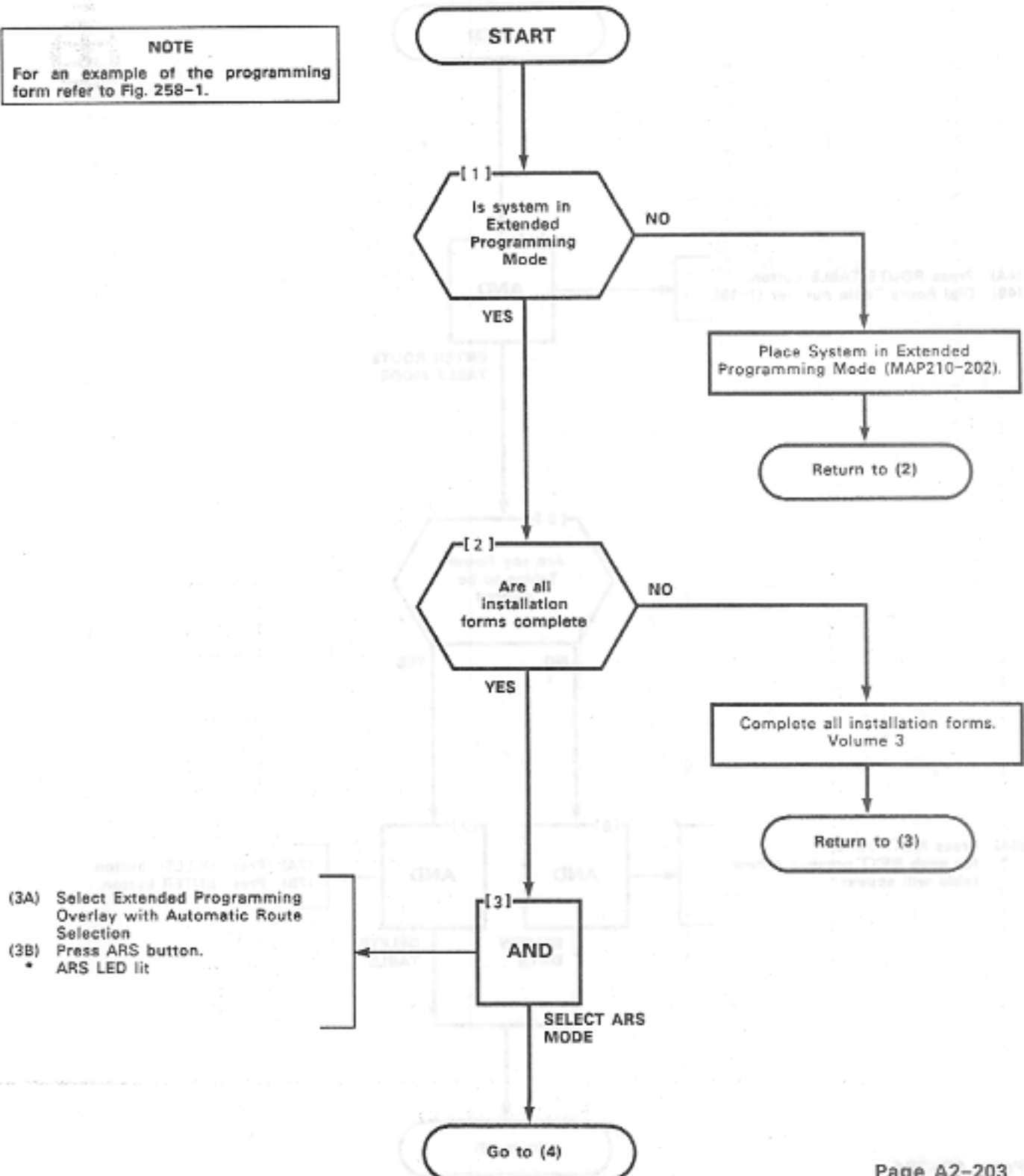
|            |
|------------|
| MAP210-259 |
|------------|

|                        |
|------------------------|
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|------------------------|

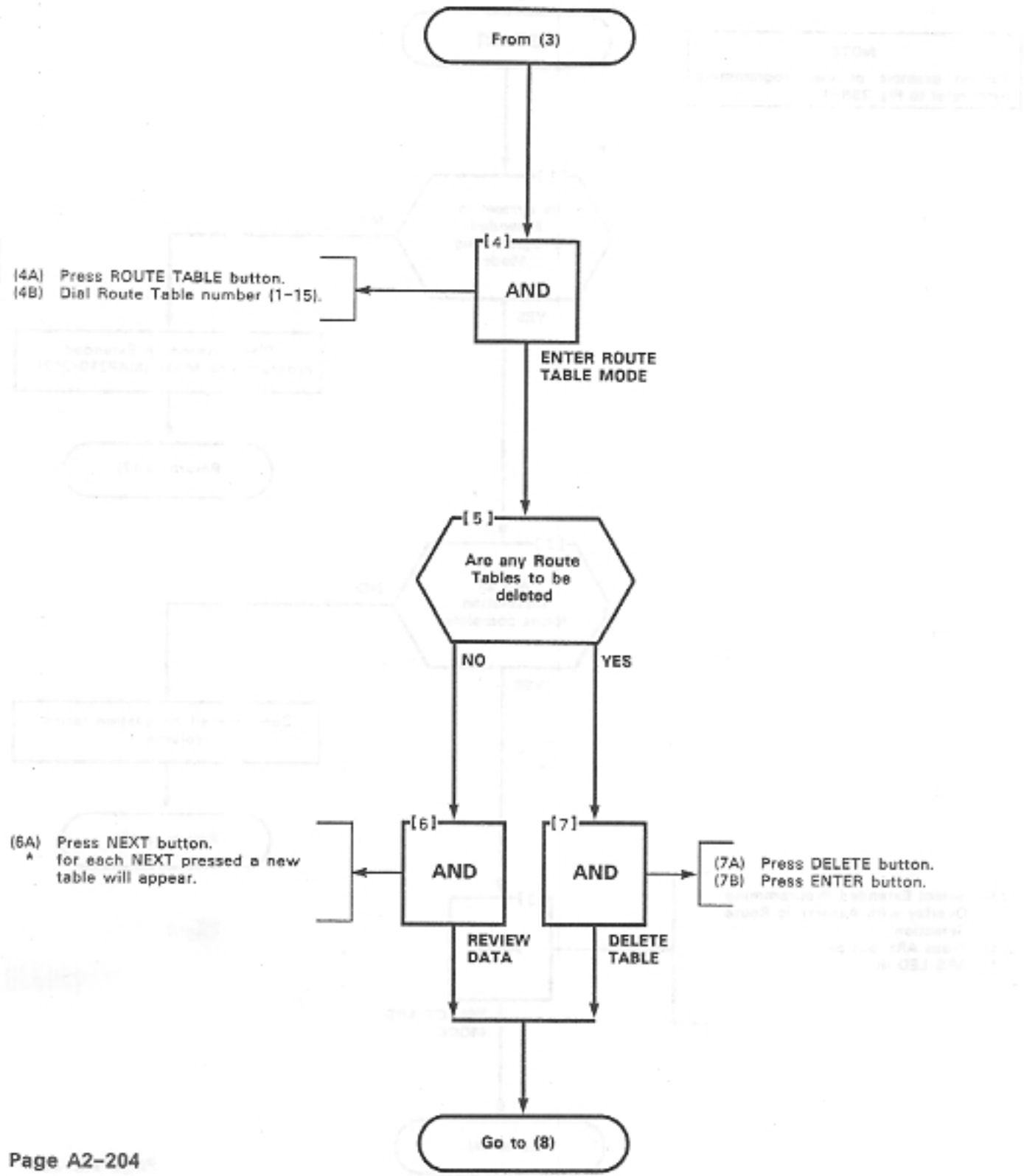
|              |
|--------------|
| Sheet 1 of 3 |
|--------------|

**NOTE**

For an example of the programming form refer to Fig. 258-1.



|                                      |
|--------------------------------------|
| TO REVIEW OR DELETE A<br>ROUTE TABLE |
| MAP210- 259                          |
| Issue 1, December 1982               |
| Sheet 2 of 3                         |

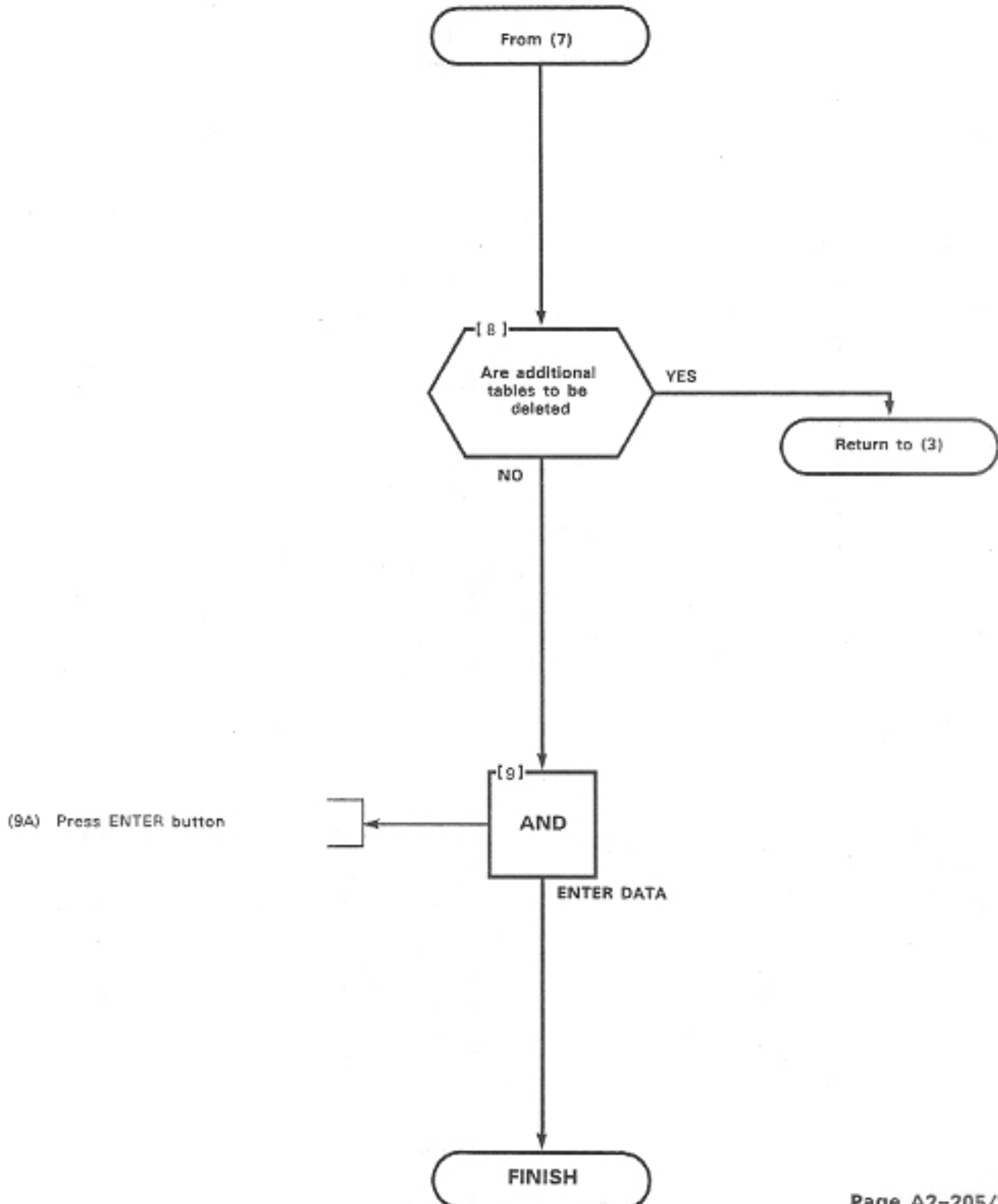


|                                      |
|--------------------------------------|
| TO REVIEW OR DELETE A<br>ROUTE TABLE |
|--------------------------------------|

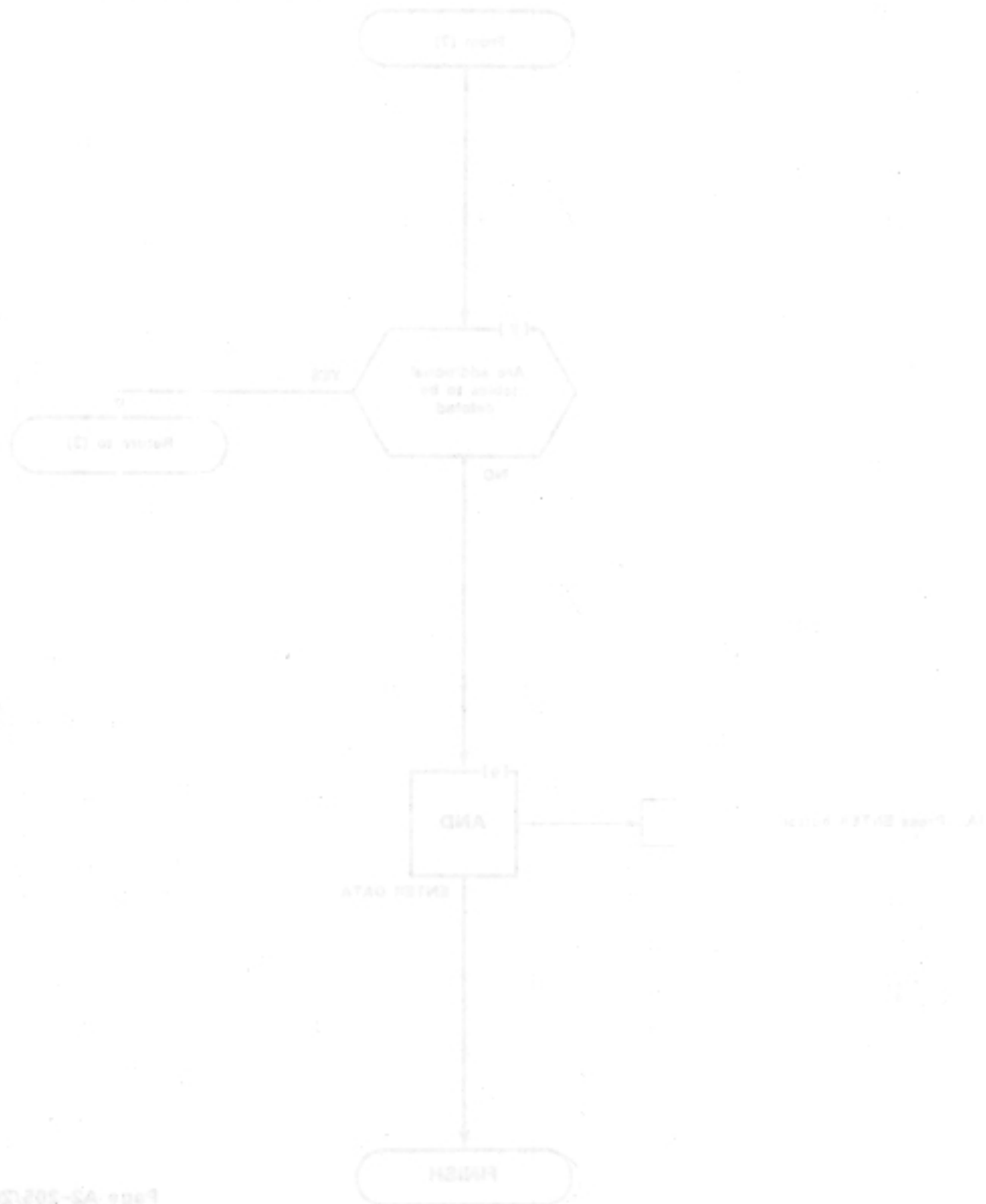
|            |
|------------|
| MAP210-259 |
|------------|

|                        |
|------------------------|
| Issue 1, December 1982 |
|------------------------|

|              |
|--------------|
| Sheet 3 of 3 |
|--------------|



|  |
|--|
| 1. A STUDENT MUST BE ADVISED OF THE RESULTS OF THE TEST AT THE TIME OF THE TEST.   |
| 2. THE STUDENT MUST BE ADVISED OF THE RESULTS OF THE TEST AT THE TIME OF THE TEST. |
| 3. THE STUDENT MUST BE ADVISED OF THE RESULTS OF THE TEST AT THE TIME OF THE TEST. |
| 4. THE STUDENT MUST BE ADVISED OF THE RESULTS OF THE TEST AT THE TIME OF THE TEST. |



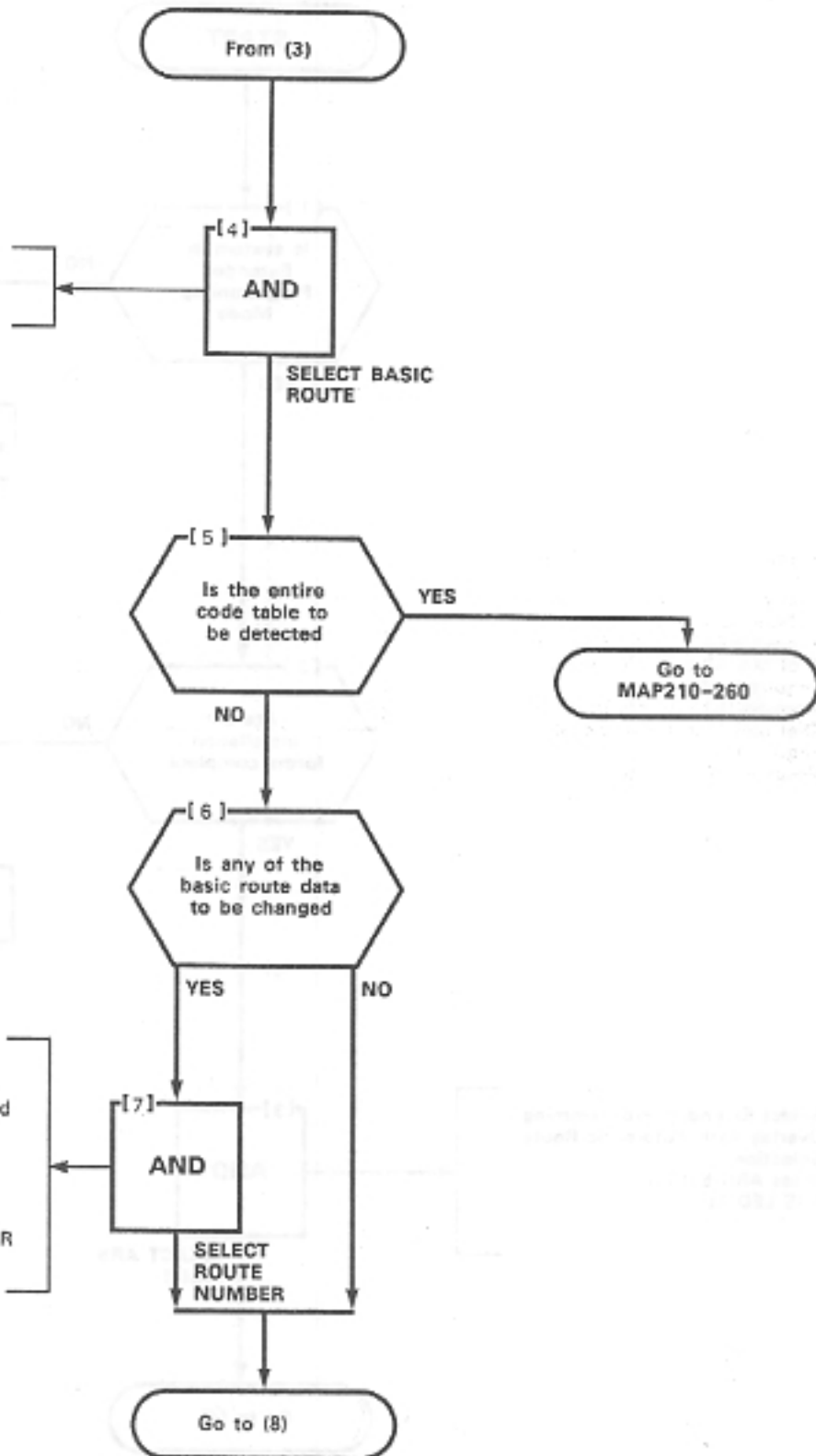




|                         |
|-------------------------|
| REVIEW OR DELETE ROUTES |
| MAP210- 260             |
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| Sheet 2 of 3            |

(4A) Press ROUTE TABLE button.  
 (4B) Dial Route Table.

(7A) Press ROUTE NUMBER button.  
 (7B) Dial Route Number (1-4).  
 (7C) Press TRUNK GROUP button and dial new Trunk Group number (1-12) and or press MODIFY DIGITS button and dial Modify Digit Table.  
 \* Note: To delete press MODIFY DIGITS button and press ENTER button.

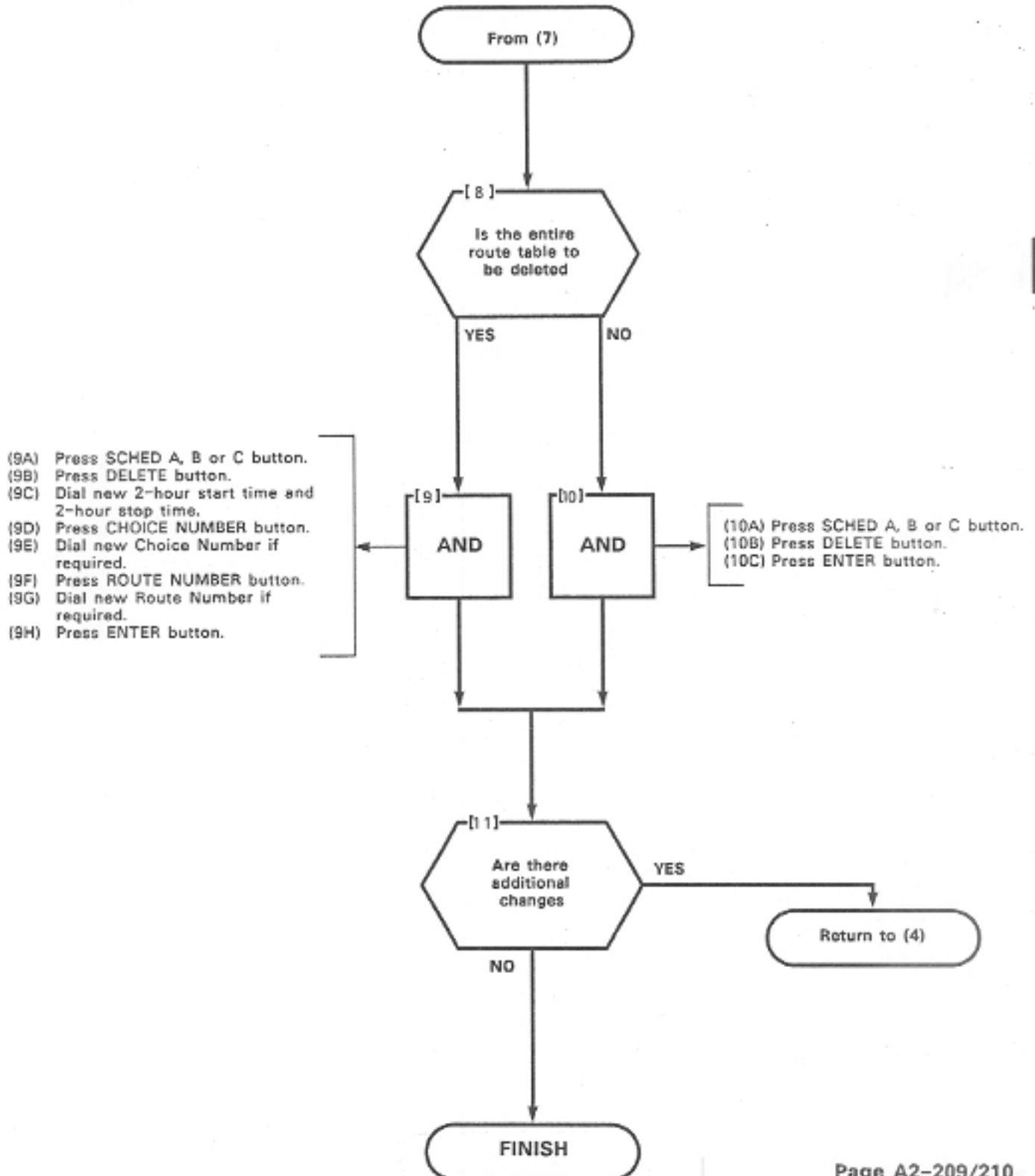


REVIEW OR DELETE ROUTES

MAP210-260

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Sheet 3 of 3





PROGRAM A PRIME KEY

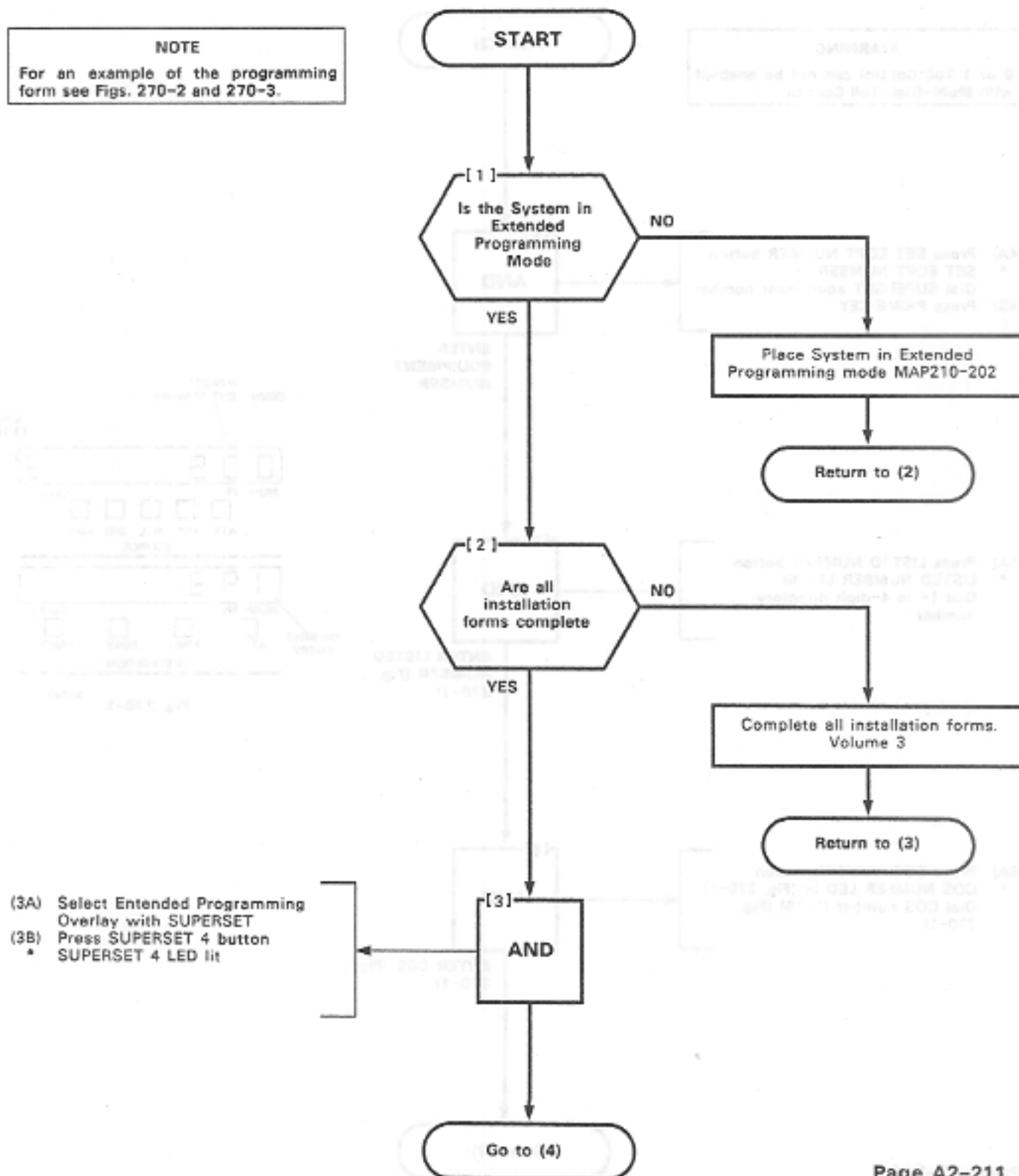
MAP210-270

Issue 1, December 1982

Sheet 1 of 10

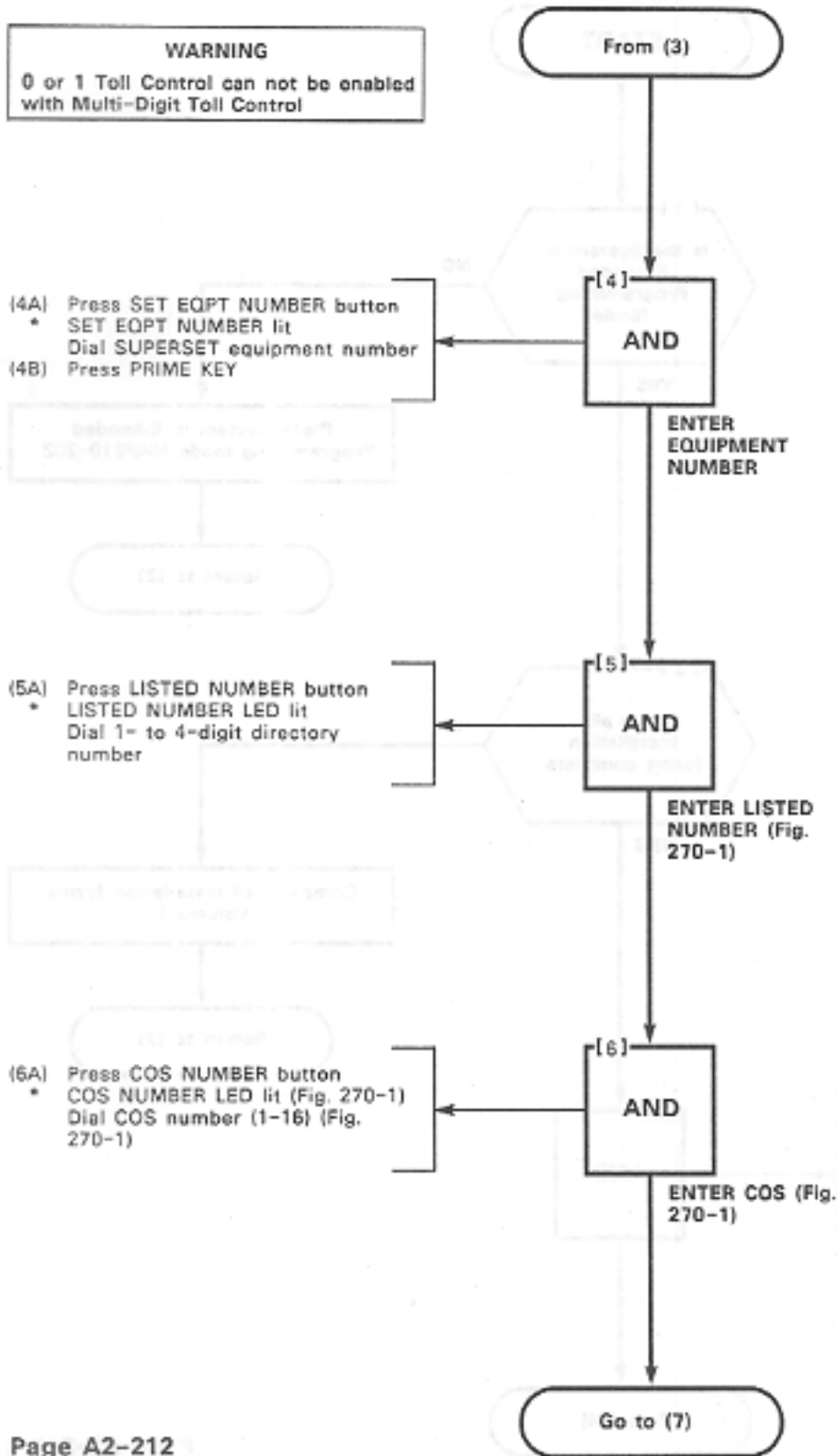
## NOTE

For an example of the programming form see Figs. 270-2 and 270-3.



|                        |
|------------------------|
| PROGRAM A PRIME KEY    |
| MAP210- 270            |
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| Sheet 2 of 10          |

**WARNING**  
0 or 1 Toll Control can not be enabled with Multi-Digit Toll Control



270-1  
X6043

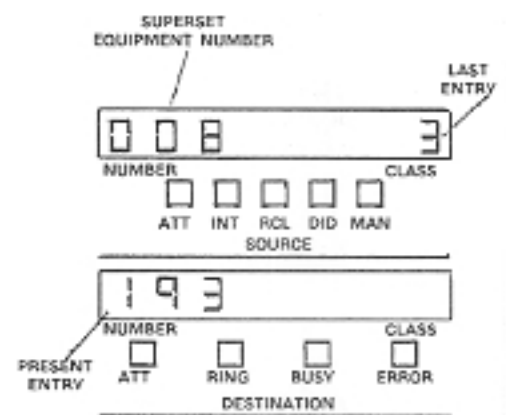


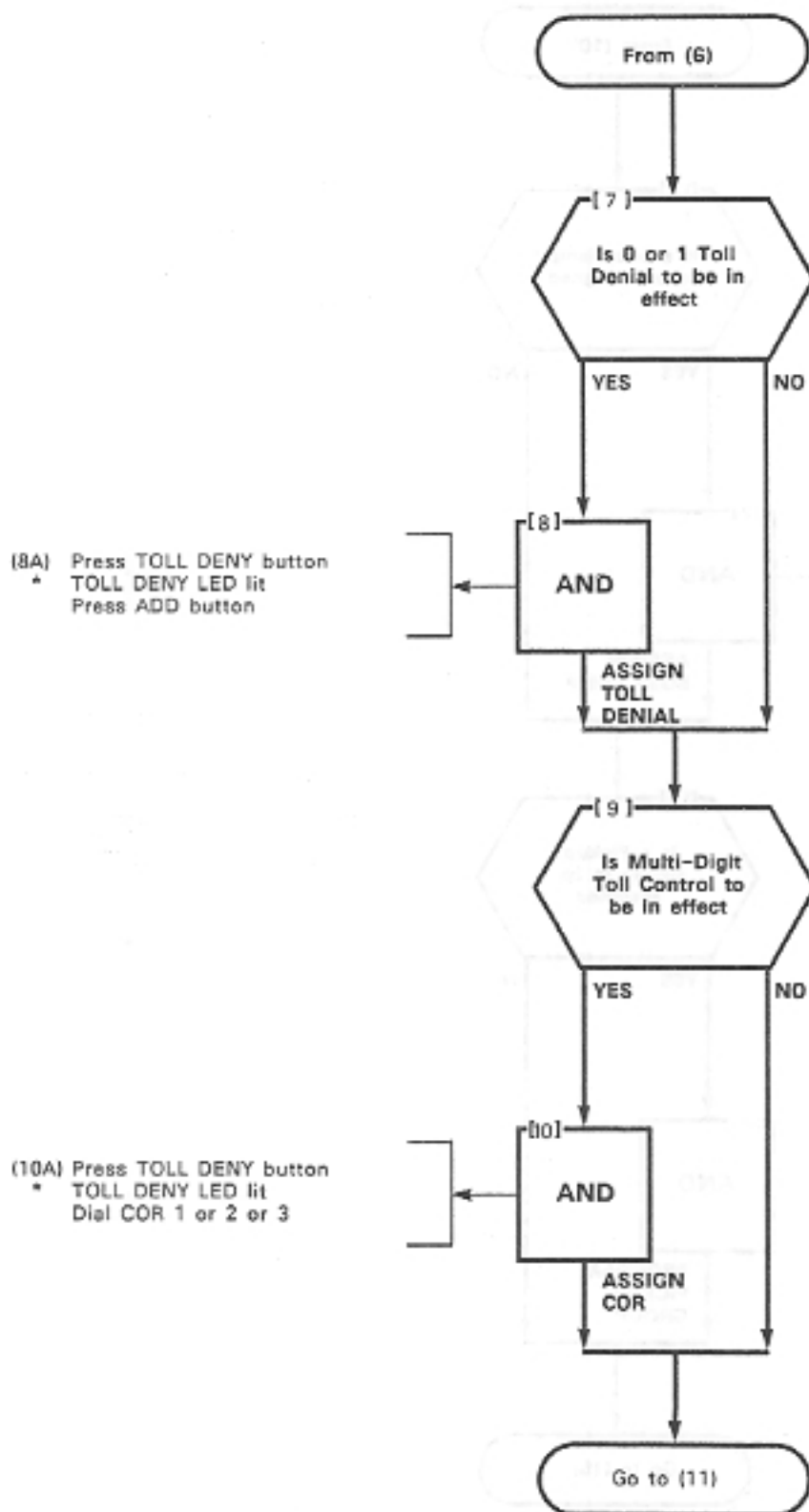
Fig. 270-1 X6043

PROGRAM A PRIME KEY

MAP210-270

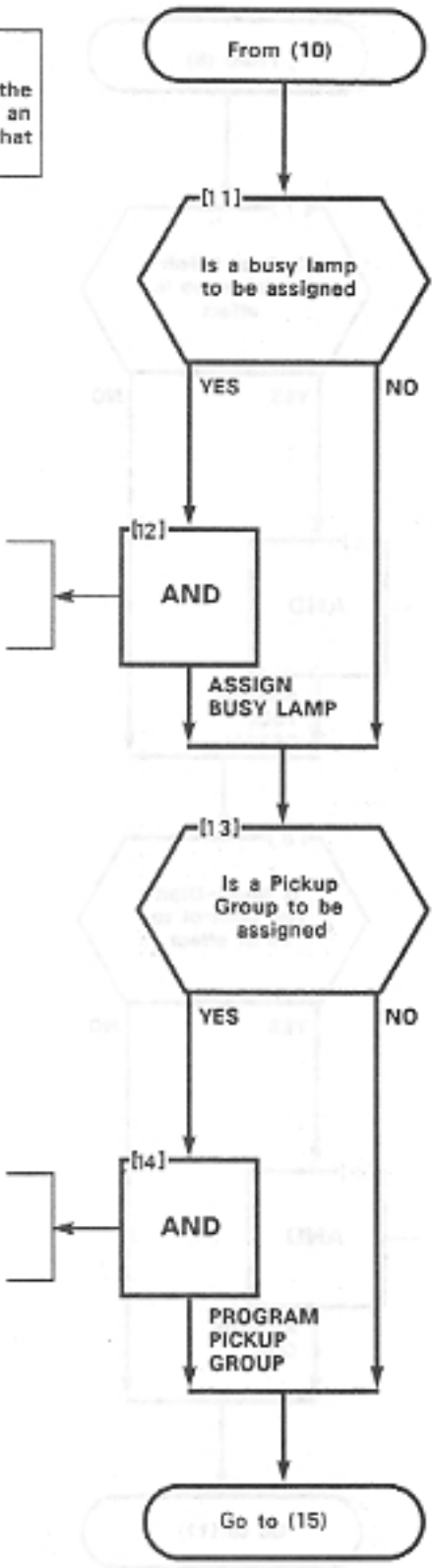
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|                        |
|------------------------|
| PROGRAM A PRIME KEY    |
| MAP210- 270            |
| Issue 1, December 1982 |
| Sheet 4 of 10          |

**WARNING**  
 An Announce Port requires that the equipment number used as an Announce Port is dedicated to that task.



(12A) Press BUSY LAMP button  
 \* BUSY LAMP LED lit (Fig. 270-1)  
 Dial busy lamp number (1-200)

(14A) Press PICKUP GROUP  
 \* Dial pickup group (1-30) (Fig. 270-1)

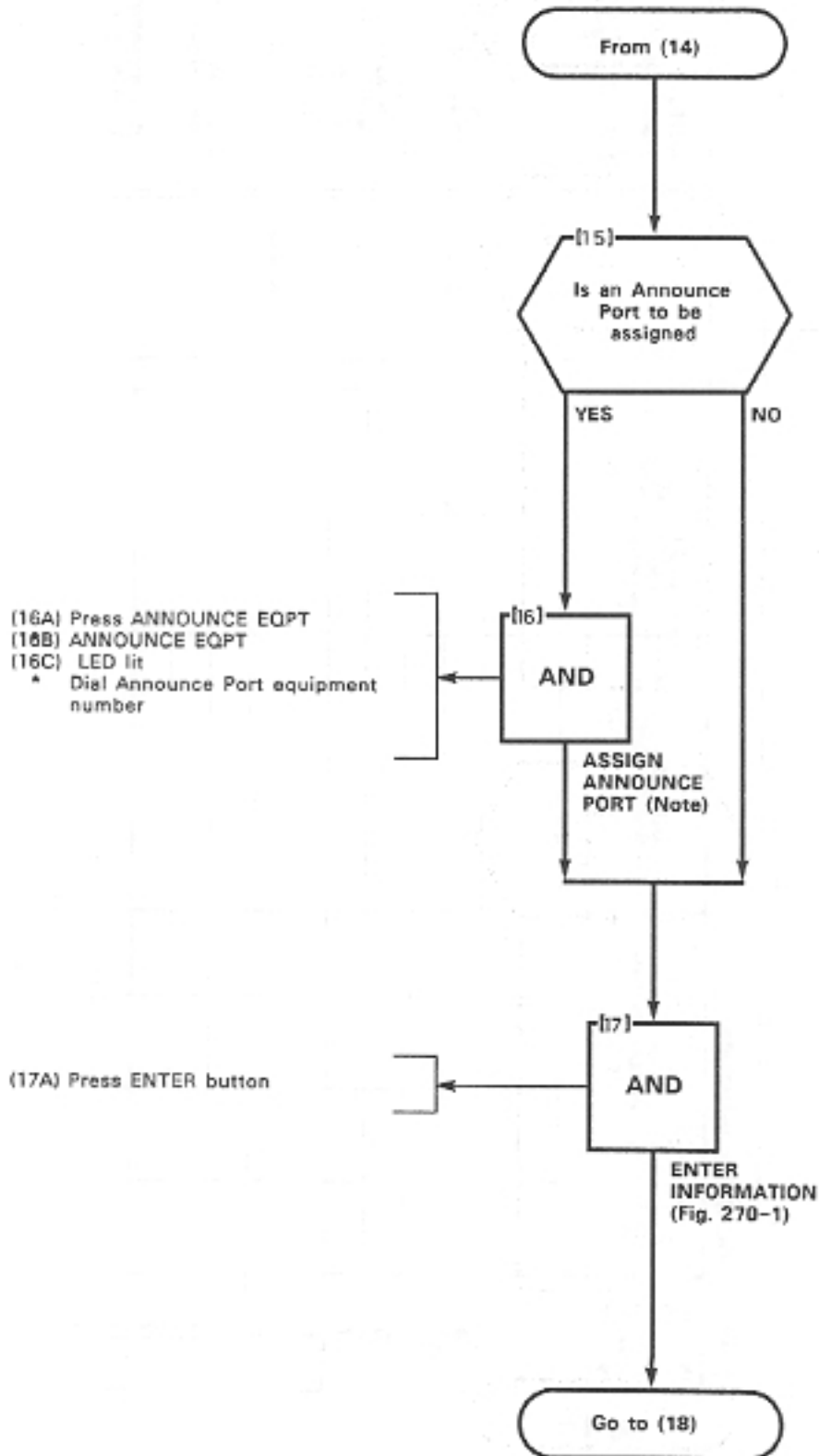


PROGRAM A PRIME KEY

MAP210-270

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**SUPERSET 4 PROGRAMMING S4 - 2**

(SEE FORM S4-1 FOR PROGRAMMING PROCEDURES)

SET EQPT NUMBER OF SUPERSET \_\_\_\_\_

**1. PRIME KEY DEFINITION**

|           |  |                         |           |                             |               |   |   |   |       |
|-----------|--|-------------------------|-----------|-----------------------------|---------------|---|---|---|-------|
| PRIME KEY | LISTED NUMBER<br>DIAL 1-4 DIGIT DIRECTORY NUMBER | COG NUMBER<br>DIAL 1-16 | TOLL DENY | PRESS<br>OR<br>OR COR 1,2,3 | ADD<br>DELETE | BUSY LAMP<br>DIAL 1-200<br>OR<br>DELETE | PICKUP GROUP<br>DIAL 1-30<br>OR<br>DELETE | ANNOUNCE EQPT #<br>DIAL 2-256<br>OR<br>DELETE | ENTER |
|-----------|--|-------------------------|-----------|-----------------------------|---------------|---|---|---|-------|

**2. NON - PRIME KEY DEFINITION**

| NOTE 1<br>SET KEY NUMBER<br>DIAL 2-15 | TYPE | DIAL KEY TYPE<br>1,2, OR 4 DIGITS<br>DEPENDING ON TYPE<br>OR DELETE<br>(NOTE 2) | LISTED NUMBER | DIAL 1-4 DIGIT<br>DIRECTORY<br>NUMBER | TRUNK EQPT<br>NUMBER<br>(NOTE 3) | DIAL 10-256<br>FOR DTS TYPE<br>(NOTE 3) |
|---------------------------------------|------|---|---------------|---------------------------------------|----------------------------------|---|
| 2                                     |      |   |               |                                       |                                  |   |
| 3                                     |      |   |               |                                       |                                  |   |
| 4                                     |      |   |               |                                       |                                  |   |
| 5                                     |      |   |               |                                       |                                  |   |
| 6                                     |      |   |               |                                       |                                  |   |
| 7                                     |      |   |               |                                       |                                  |   |
| 8                                     |      |   |               |                                       |                                  |   |
| 9                                     |      |   |               |                                       |                                  |   |
| 10                                    |      |   |               |                                       |                                  |   |
| 11                                    |      |   |               |                                       |                                  |   |
| 12                                    |      |   |               |                                       |                                  |   |
| 13                                    |      |   |               |                                       |                                  |   |
| 14                                    |      |   |               |                                       |                                  |   |
| 15                                    |      |   |               |                                       |                                  |   |

**NOTES**

- UNDEFINED KEYS DEFAULT TO SPEED CALL
- USE LISTINGS BELOW TO PRODUCE THE ONE, THREE, OR FOUR DIGIT KEY TYPE CODES

A LINE TYPE FIRST DIGIT

|                     |   |                  |
|---------------------|---|------------------|
| PRIME LINE          | 1 | NO VARIANTS      |
| PERSONAL O/G LINE   | 6 |                  |
| KEY LINE            | 2 | SPECIFY VARIANTS |
| MULTIPLE CALL       | 3 | (B.L.C. BELOW)   |
| DIRECT TRUNK SELECT | 4 | SPECIFY VARIANTS |
| PRIVATE LINE        | 5 | (O.C. BELOW)     |

B DIRECTION VARIANT SECOND DIGIT

|               |   |
|---------------|---|
| BOTH WAY      | 1 |
| INCOMING ONLY | 2 |
| OUTGOING ONLY | 3 |

C RING VARIANT THIRD DIGIT

|                |   |
|----------------|---|
| IMMEDIATE RING | 1 |
| DELAYED RING   | 2 |
| NO RING        | 3 |

D SECRETARIAL VARIANT FOURTH DIGIT

|                   |   |
|-------------------|---|
| NON - SECRETARIAL | 1 |
| SECRETARIAL       | 2 |

3. IT IS RECOMMENDED THAT SLOT 1 CONTAIN A LINE CARD, IF SO THE FIRST POSSIBLE TRUNK EQPT. NUMBER IS 010 (SLOT 2)

PRESS

ENTER

AFTER DEFINING EACH KEY

Fig. 270-2

# SUPERSET 4 PROGRAMMING S4 - 2

USE FORM S4-1 FOR PROGRAMMING PROCEDURES



SET KEY NUMBER OF SUPERSET

DIAL EOPT NUMBER OF SUPERSET

## 1. PRIME KEY DEFINITION

|           |  |                         |  |   |   |   |       |
|-----------|--|-------------------------|--|---|---|---|-------|
| PRIME KEY | LISTED NUMBER<br>DIAL 1-4 DIGIT DIRECTORY NUMBER | COS NUMBER<br>DIAL 1-16 | TOLL DENY<br>PRESS<br>OR<br>OR COR 1,2,3 | DUSY LAMP<br>DIAL 1-200<br>OR<br>DELETE | PICKUP GROUP<br>DIAL 1-30<br>OR<br>DELETE | ANNOUNCE EOPT #<br>DIAL 2-256<br>OR<br>DELETE | ENTER |
|-----------|--|-------------------------|--|---|---|---|-------|

## 2. NON - PRIME KEY DEFINITION

| NOTE 1<br>SET KEY NUMBER<br>DIAL 2-15 | TYPE | DIAL KEY TYPE<br>(1,3, OR 4 DIGITS<br>DEPENDING ON TYPE)<br>OR DELETE<br>(NOTE 2) | LISTED NUMBER | DIAL 1-4 DIGIT<br>DIRECTORY<br>NUMBER | TRUNK<br>EOPT<br>NUMBER | DIAL 10-256<br>FOR OTS TYPE<br>(NOTE 3) |
|---------------------------------------|------|---|---------------|---------------------------------------|-------------------------|---|
| 2                                     |      |   |               |                                       |                         |   |
| 3                                     |      |   |               |                                       |                         |   |
| 4                                     |      |   |               |                                       |                         |   |
| 5                                     |      |   |               |                                       |                         |   |
| 6                                     |      |   |               |                                       |                         |   |
| 7                                     |      |   |               |                                       |                         |   |
| 8                                     |      |   |               |                                       |                         |   |
| 9                                     |      |   |               |                                       |                         |   |
| 10                                    |      |   |               |                                       |                         |   |
| 11                                    |      |   |               |                                       |                         |   |
| 12                                    |      |   |               |                                       |                         |   |
| 13                                    |      |   |               |                                       |                         |   |
| 14                                    |      |   |               |                                       |                         |   |
| 15                                    |      |   |               |                                       |                         |   |

### NOTES

- UNDEFINED KEYS DEFAULT TO SPEED CALL
- USE LISTINGS BELOW TO PRODUCE THE ONE, THREE, OR FOUR DIGIT KEY TYPE CODES

#### A LINE TYPE FIRST DIGIT

- |                     |   |                  |
|---------------------|---|------------------|
| PRIME LINE          | 1 | NO VARIANTS      |
| PERSONAL DIG LINE   | 6 |                  |
| KEY LINE            | 2 | SPECIFY VARIANTS |
| MULTIPLE CALL       | 3 | (B.C.D. BELOW)   |
| DIRECT TRUNK SELECT | 4 | SPECIFY VARIANTS |
| PRIVATE LINE        | 5 | (B.C. BELOW)     |

#### B DIRECTION VARIANT SECOND DIGIT

- |               |   |
|---------------|---|
| BOTH WAY      | 1 |
| INCOMING ONLY | 2 |
| OUTGOING ONLY | 3 |

#### C RING VARIANT THIRD DIGIT

- |                |   |
|----------------|---|
| IMMEDIATE RING | 1 |
| DELAYED RING   | 2 |
| NO RING        | 3 |

#### D SECRETARIAL VARIANT FOURTH DIGIT

- |                   |   |
|-------------------|---|
| MON - SECRETARIAL | 1 |
| SECRETARIAL       | 2 |

- IT IS RECOMMENDED THAT SLOT 1 CONTAIN A LINE CARD IF SO THE FIRST POSSIBLE TRUNK EOPT NUMBER IS 010 (SLOT 2)

PRESS

ENTER

AFTER  
DEFINING  
EACH KEY

## SUPERSET 4 PROGRAMMING S4-1

SHEET 1 OF 2

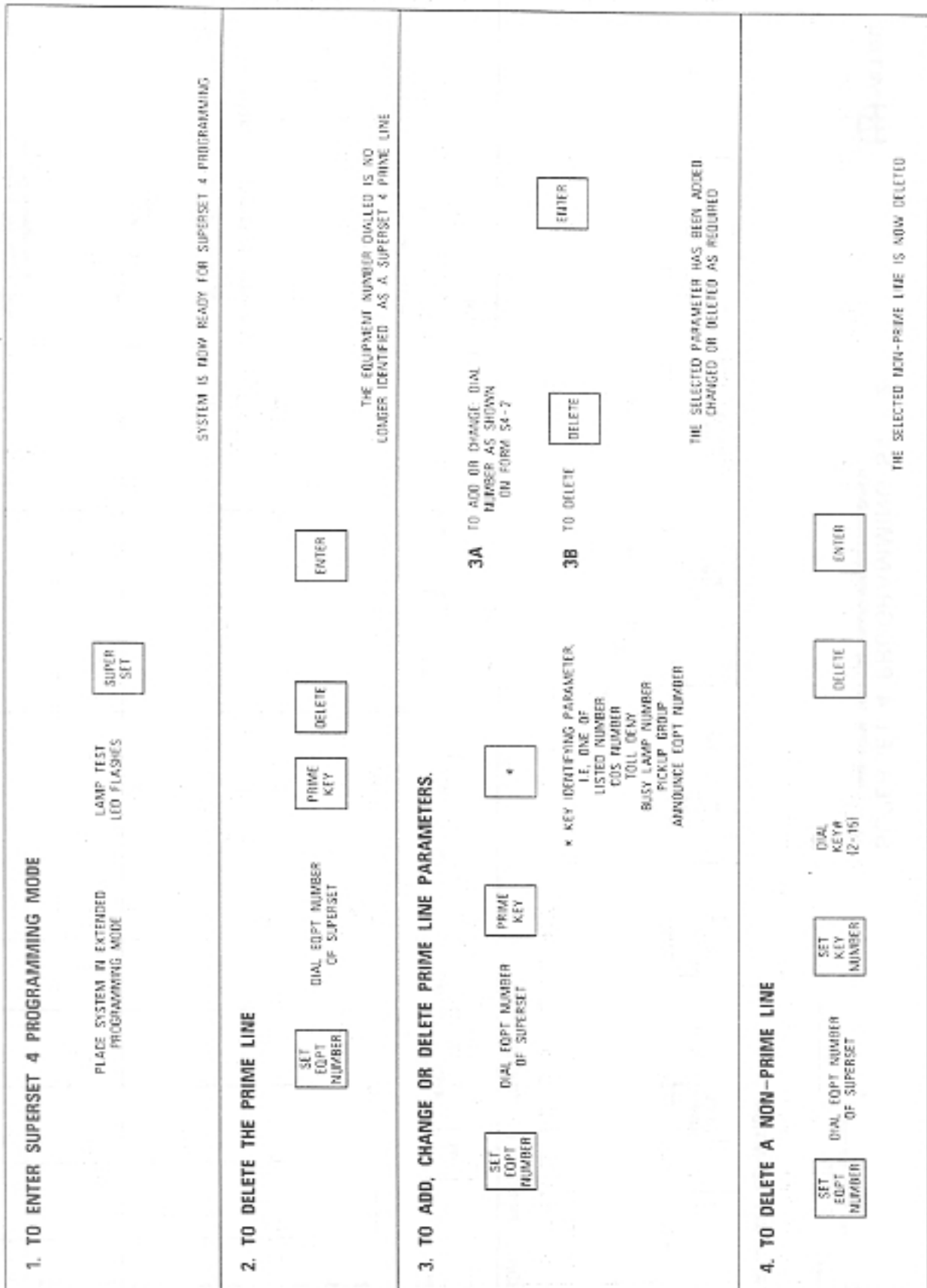


Fig. 270-3

## SUPERSET 4 PROGRAMMING S4-1

SHEET 2 OF 2

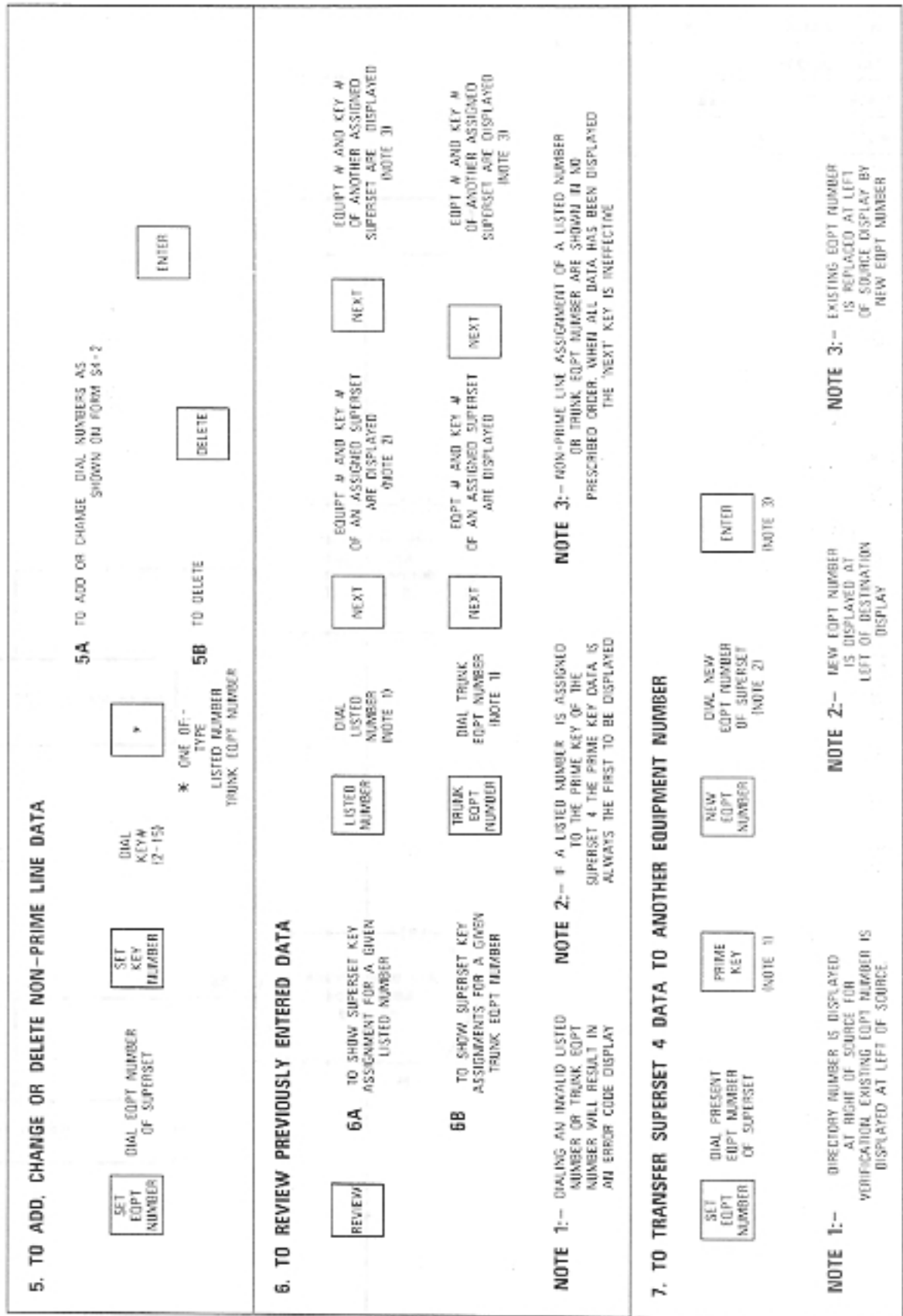
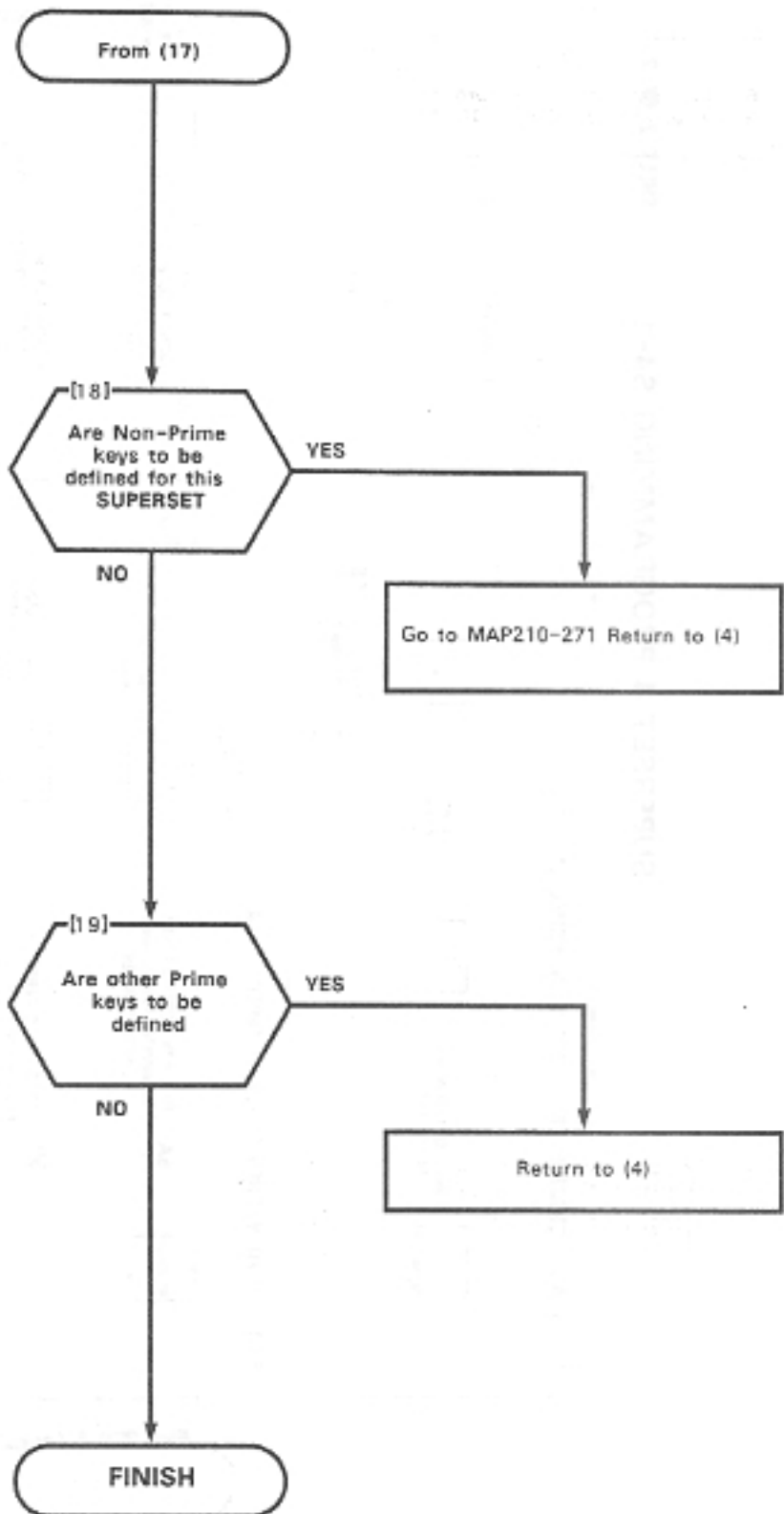


Fig. 270-3 (cont'd)

|                        |
|------------------------|
| PROGRAM A PRIME KEY    |
| MAP210- 270            |
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PROGRAM A NON-PRIME KEY

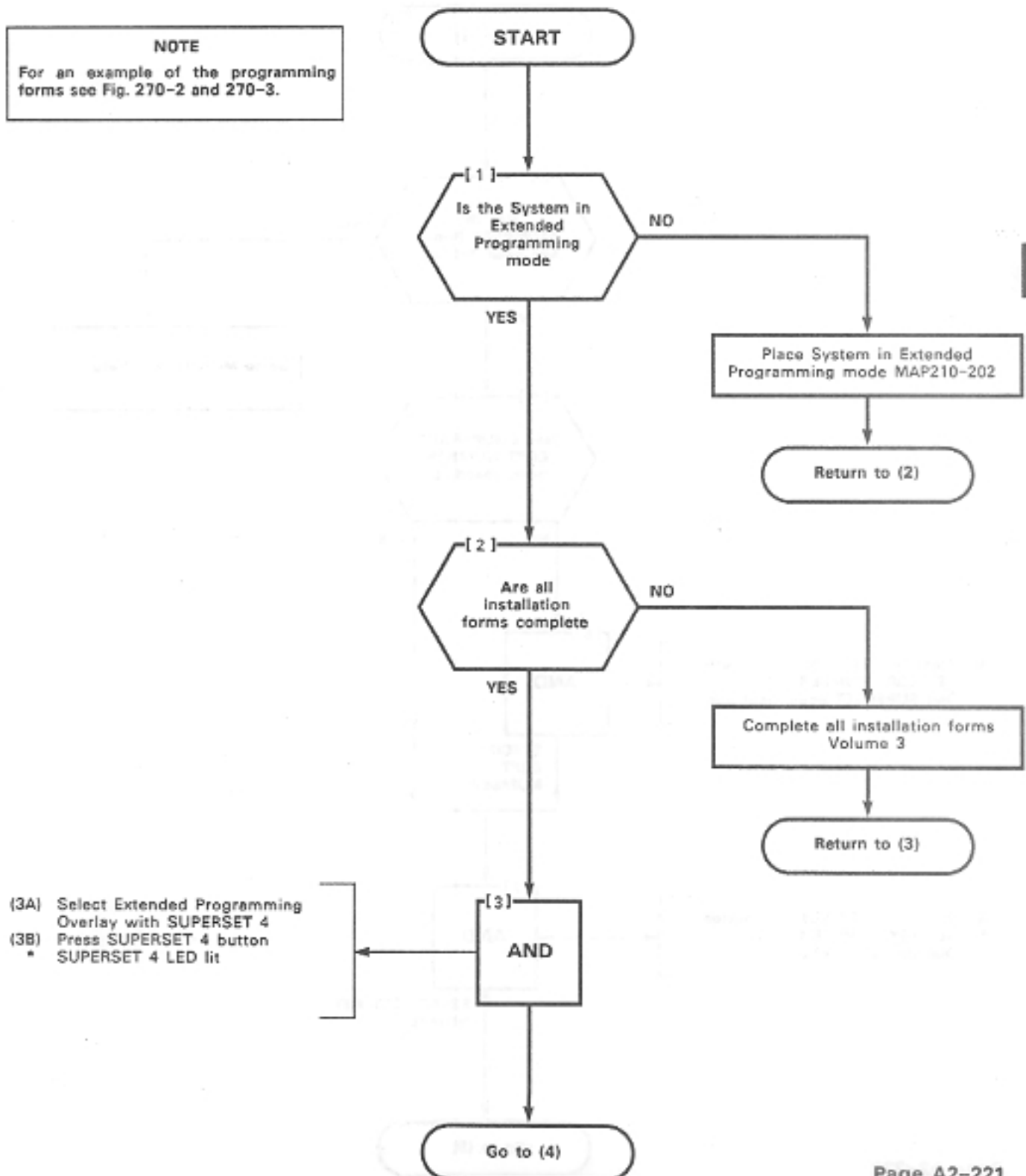
MAP210-271

Issue 1, December 1982

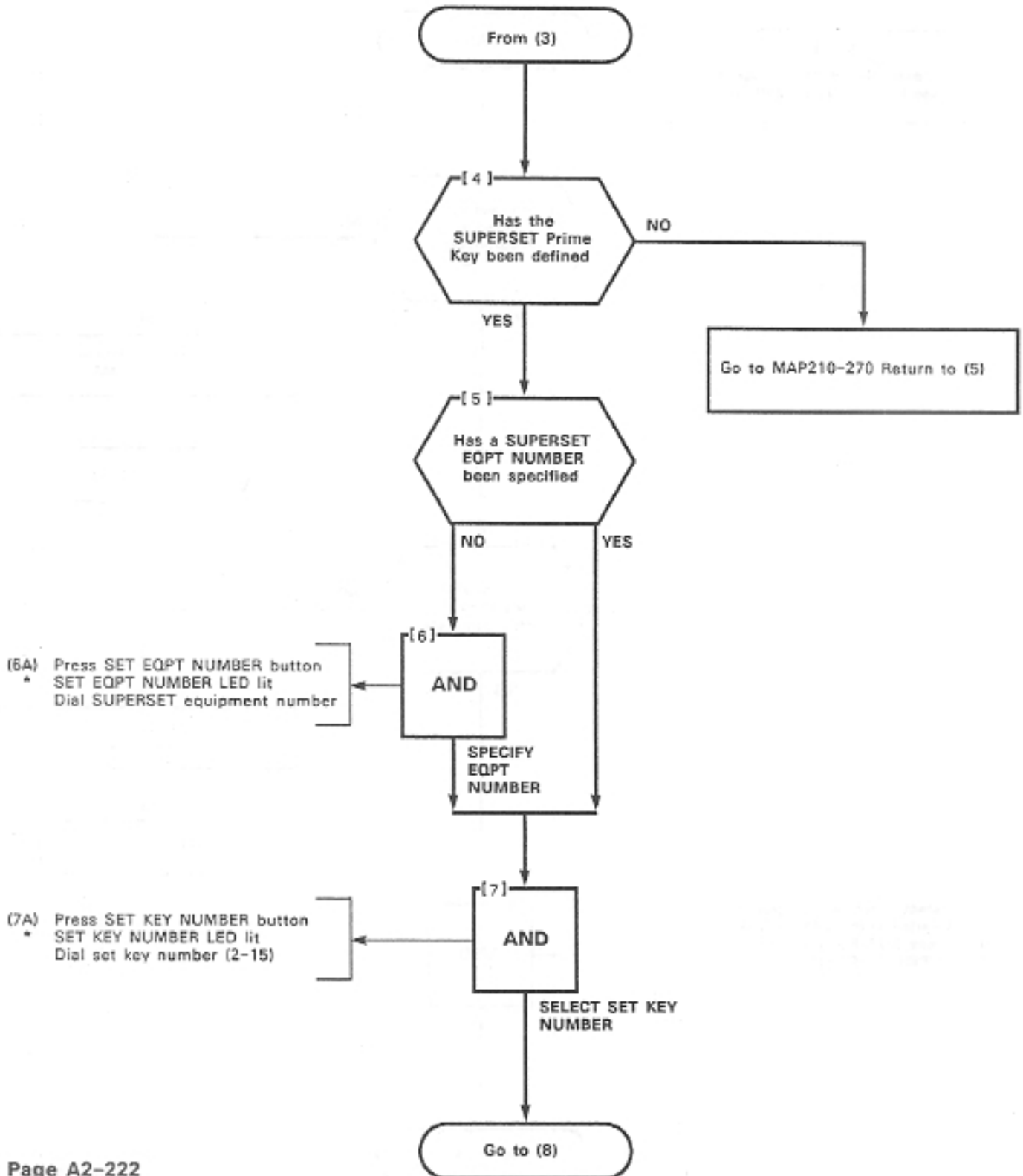
Sheet 1 of 5

**NOTE**

For an example of the programming forms see Fig. 270-2 and 270-3.



|                         |
|-------------------------|
| PROGRAM A NON-PRIME KEY |
| MAP210- 271             |
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## PROGRAM A NON-PRIME KEY

MAP210- 271

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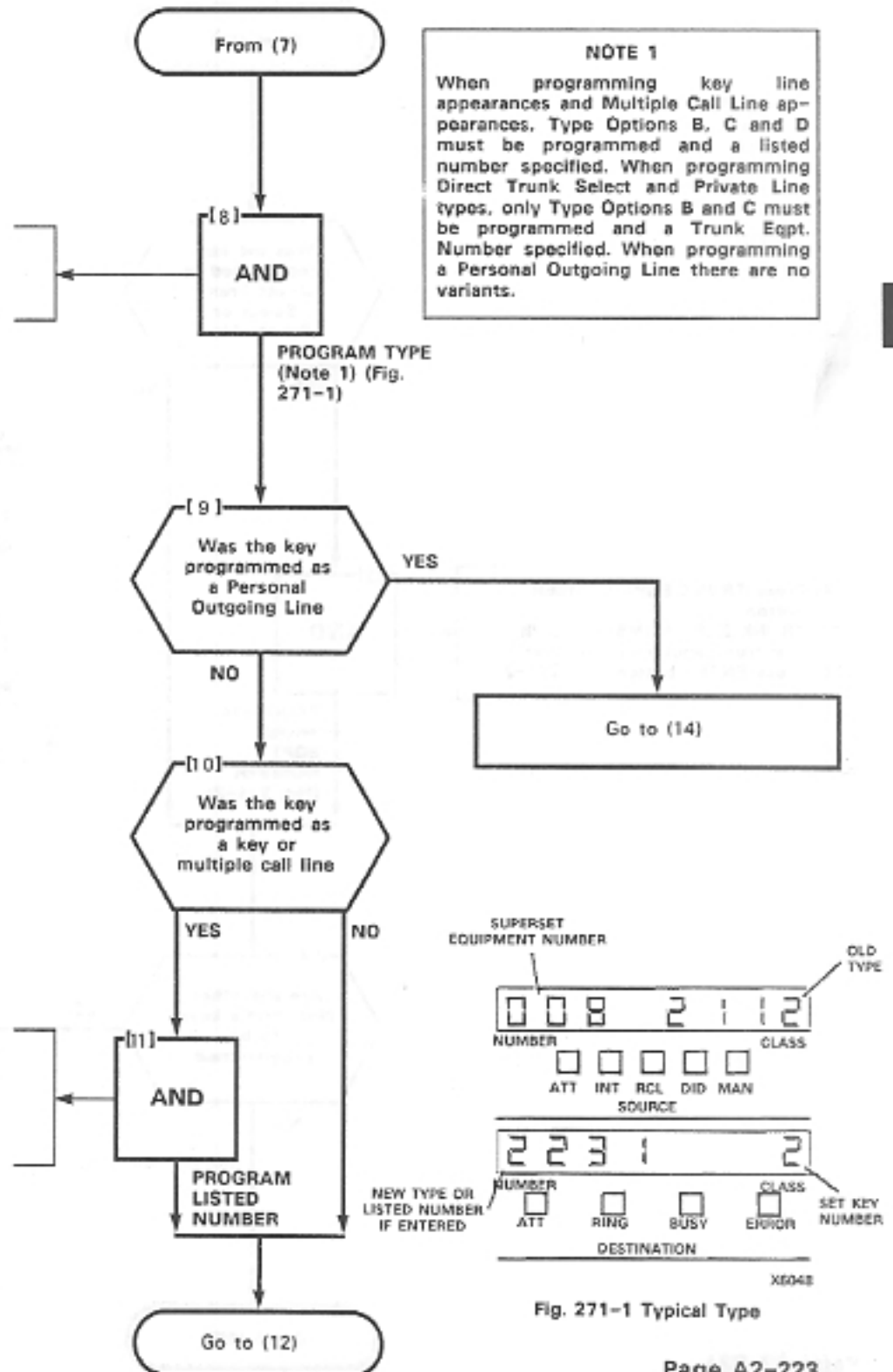
Sheet 3 of 5

## NOTE 1

When programming key line appearances and Multiple Call Line appearances, Type Options B, C and D must be programmed and a listed number specified. When programming Direct Trunk Select and Private Line types, only Type Options B and C must be programmed and a Trunk Eqpt. Number specified. When programming a Personal Outgoing Line there are no variants.

(8A) Press TYPE button  
\* TYPE LED lit  
Dial type (Note 1) (Fig. 271-1)

(11A) Press LISTED NUMBER button  
\* LISTED NUMBER LED lit  
Dial 1- to 4-digit directory number (Fig. 271-1)  
(11B) Press ENTER button



|                         |
|-------------------------|
| PROGRAM A NON-PRIME KEY |
| MAP210- 271             |
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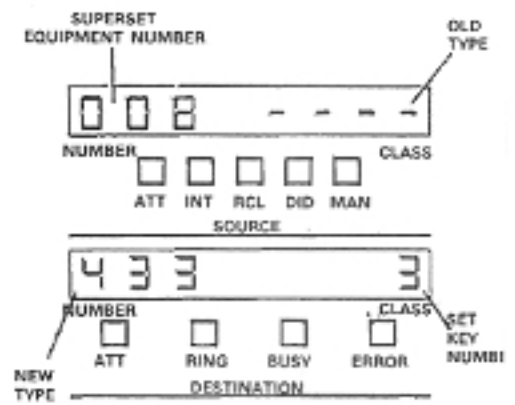
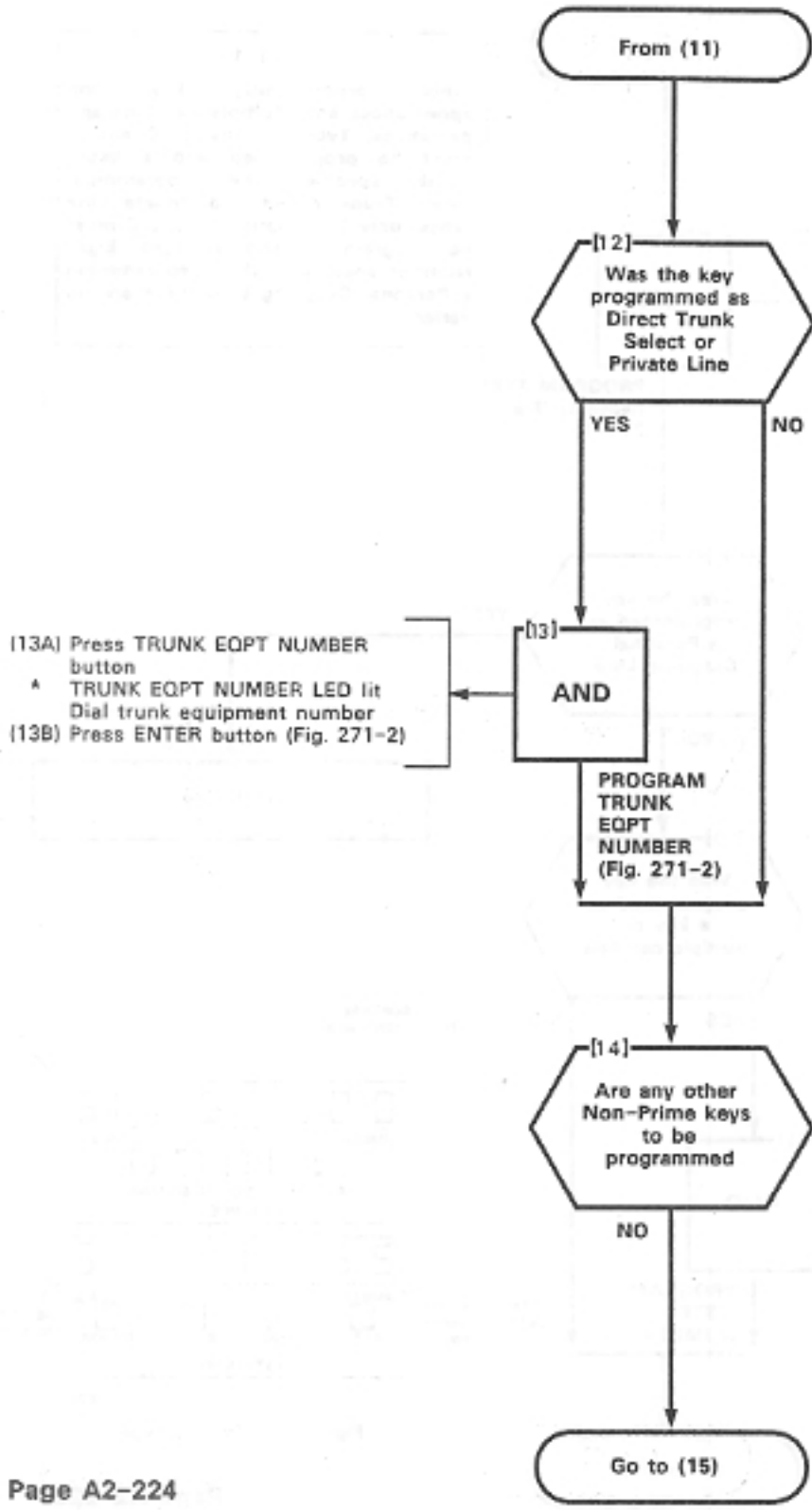
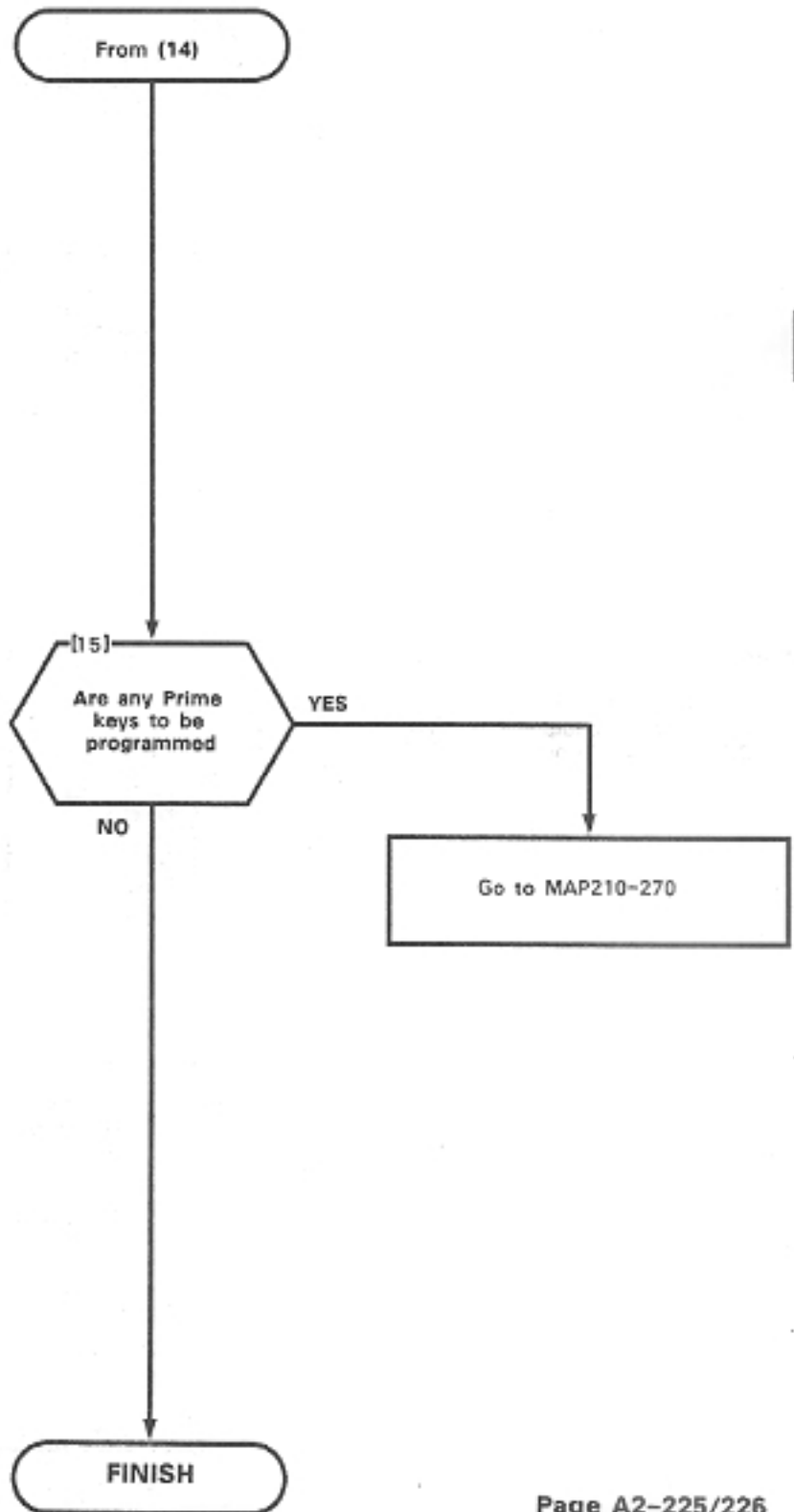


Fig. 271-2 Typical Entry

|                         |
|-------------------------|
| PROGRAM A NON-PRIME KEY |
| MAP210-271              |
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FOR THE USE OF THE  
SYSTEM APPROVAL  
COMMISSION  
BY THE  
SYSTEM APPROVAL  
COMMISSION



DELETE A NON-PRIME KEY

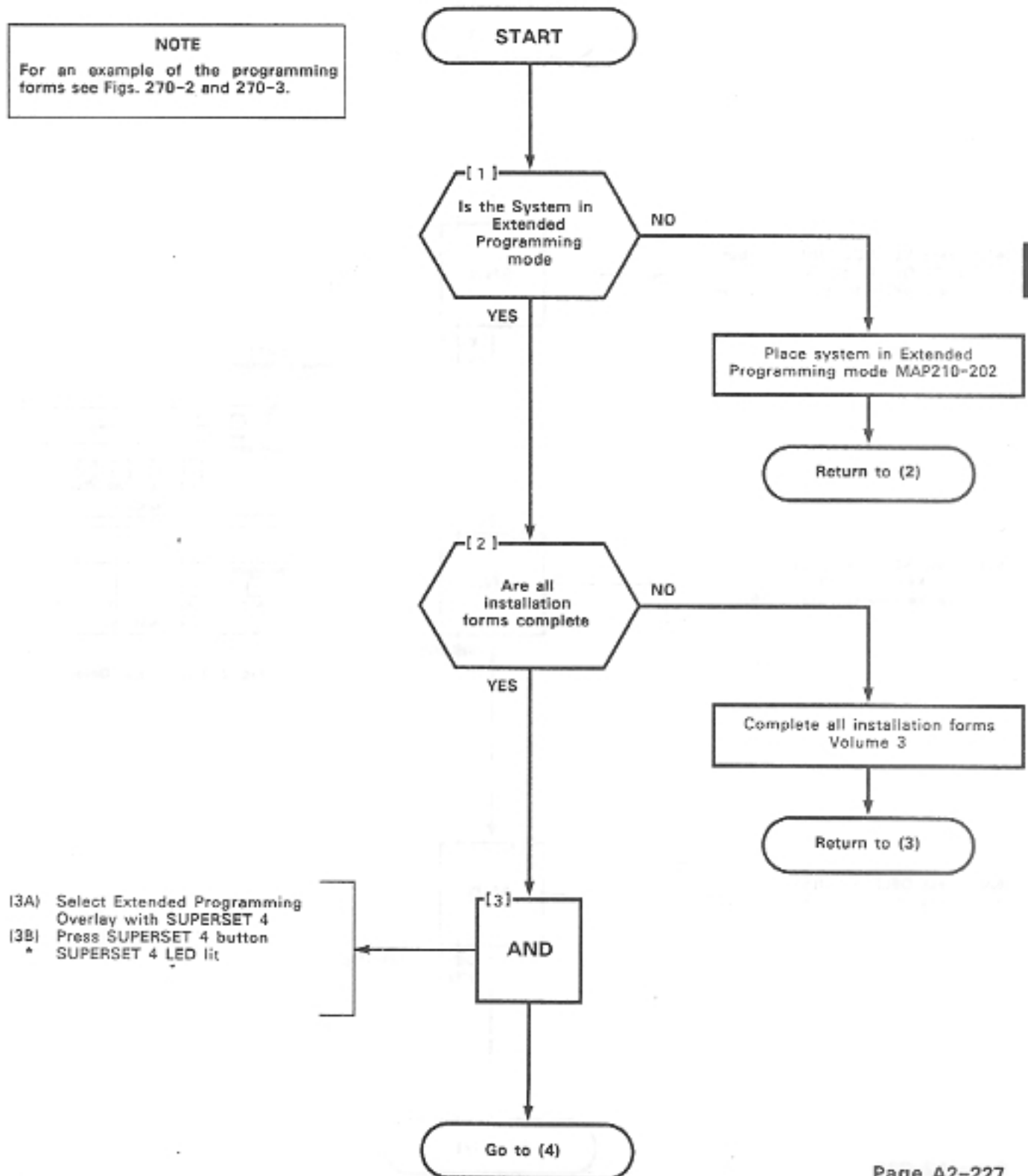
MAP210- 272

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## NOTE

For an example of the programming forms see Figs. 270-2 and 270-3.



|                        |
|------------------------|
| DELETE A NON-PRIME KEY |
| MAP210- 272            |
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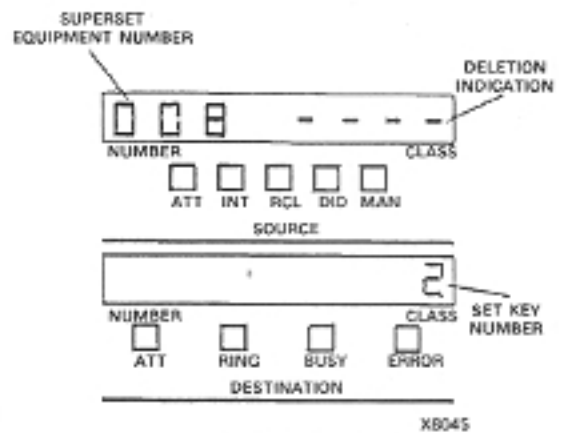
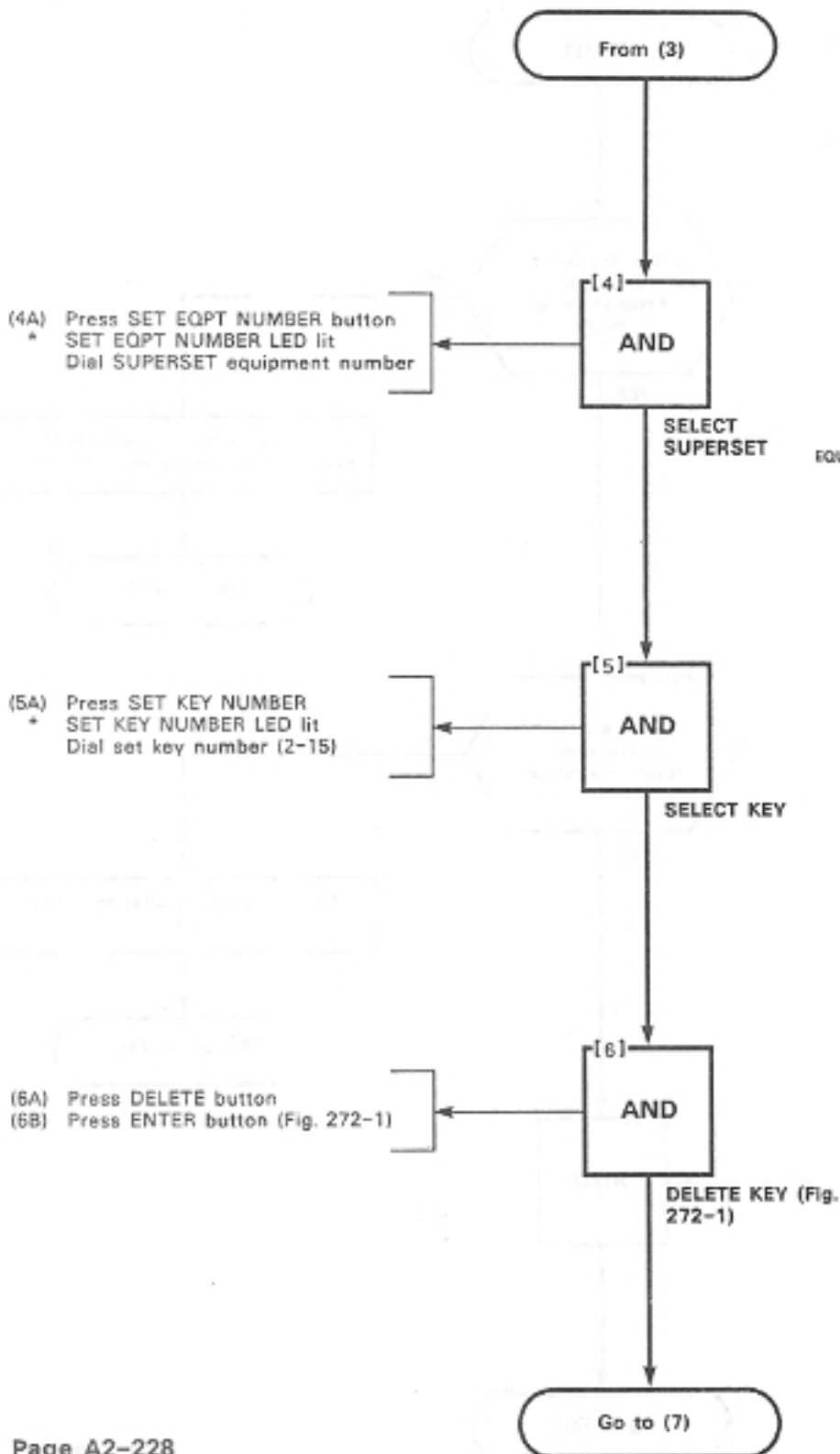


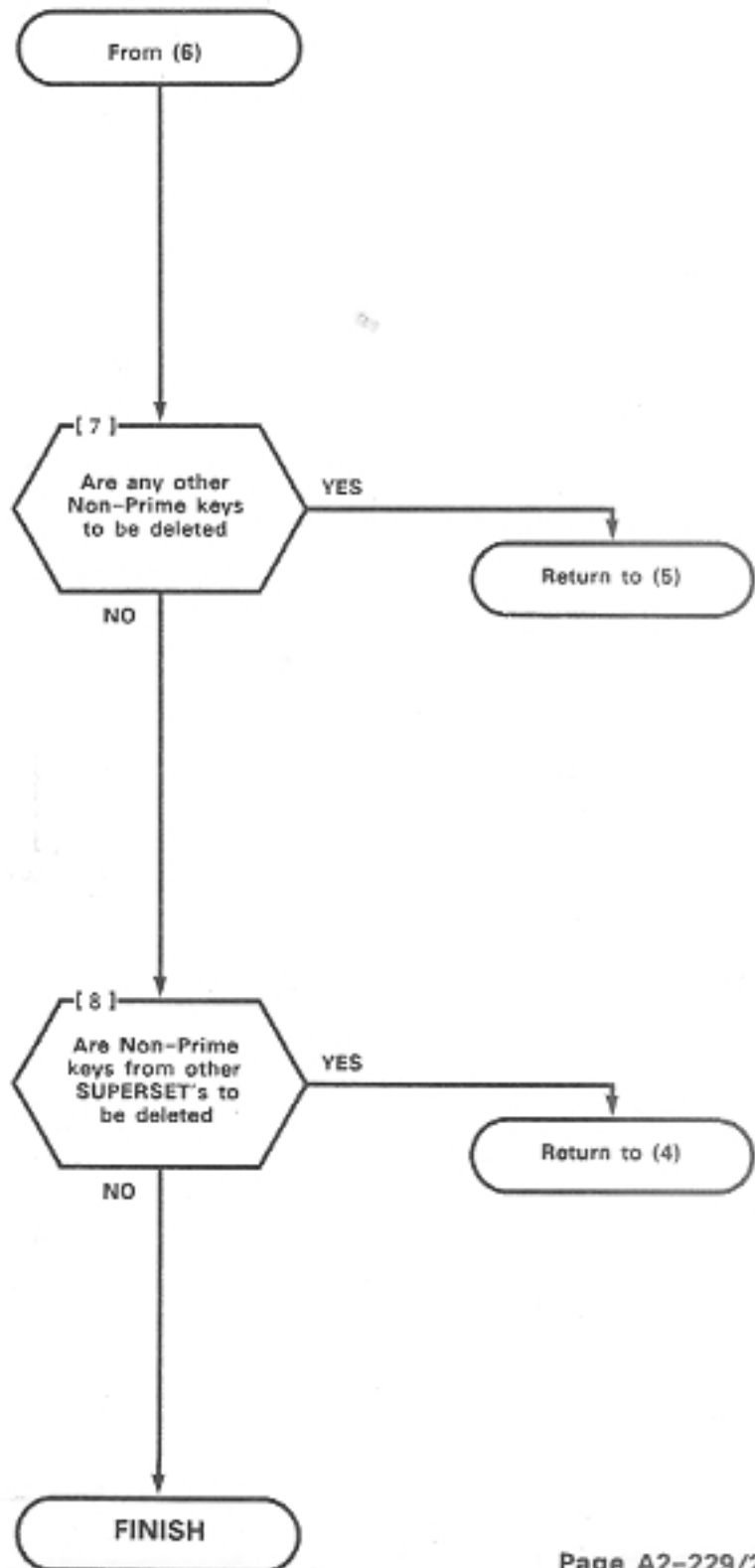
Fig. 272-1 Typical Deletion

DELETE A NON-PRIME KEY

MAP210-272

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DELETE A PRIME KEY

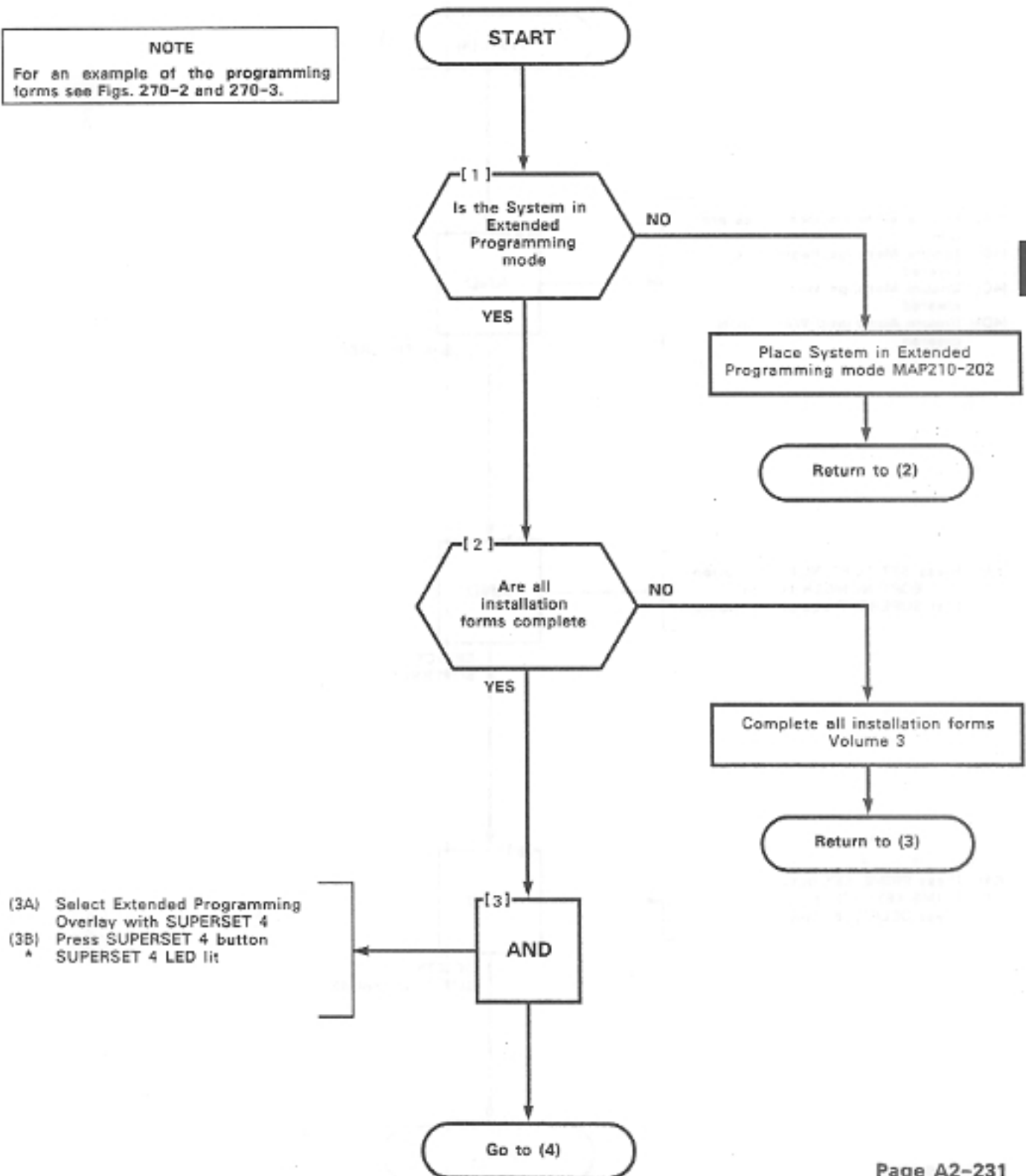
MAP210-273

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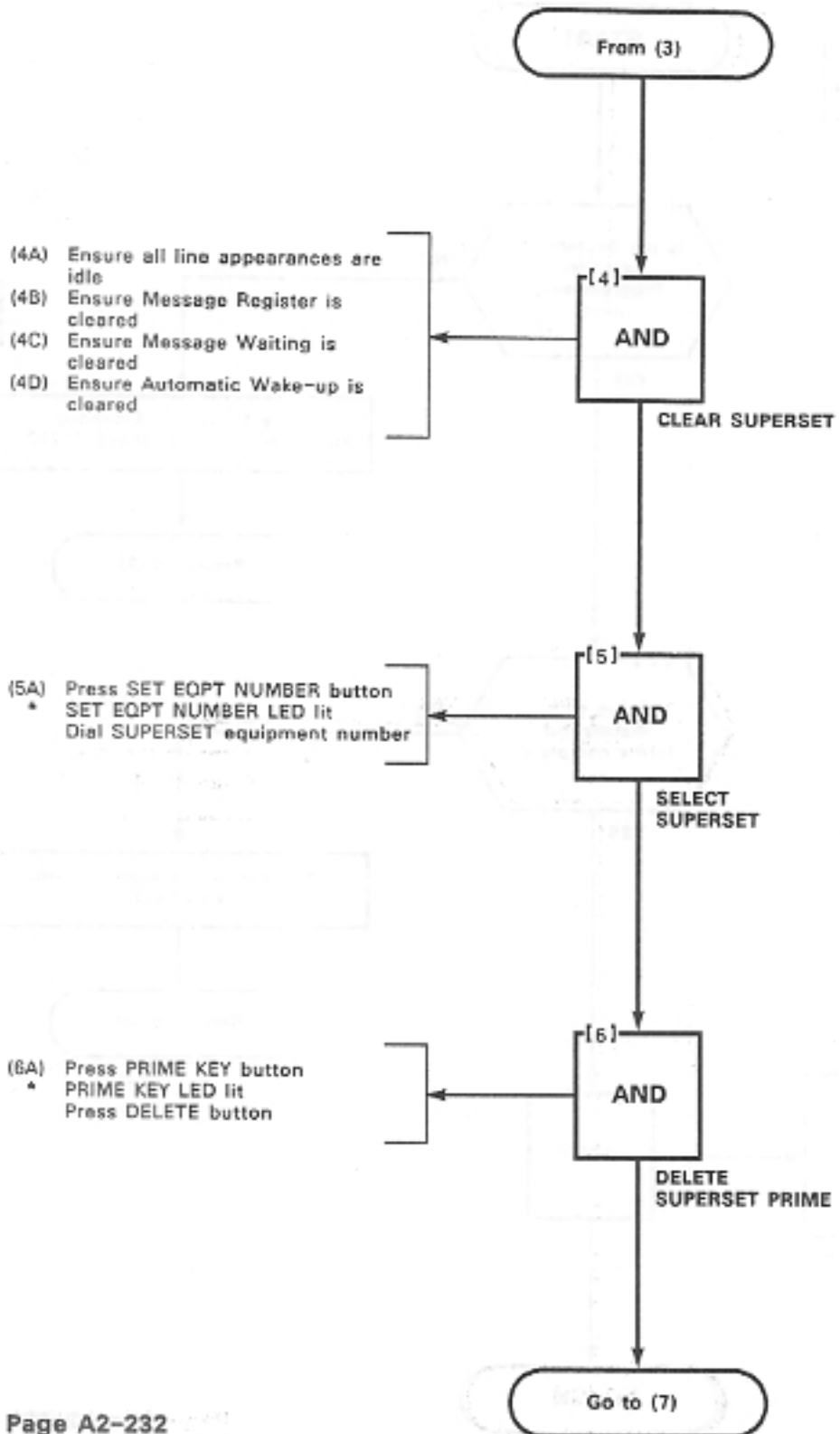
Sheet 1 of 3

## NOTE

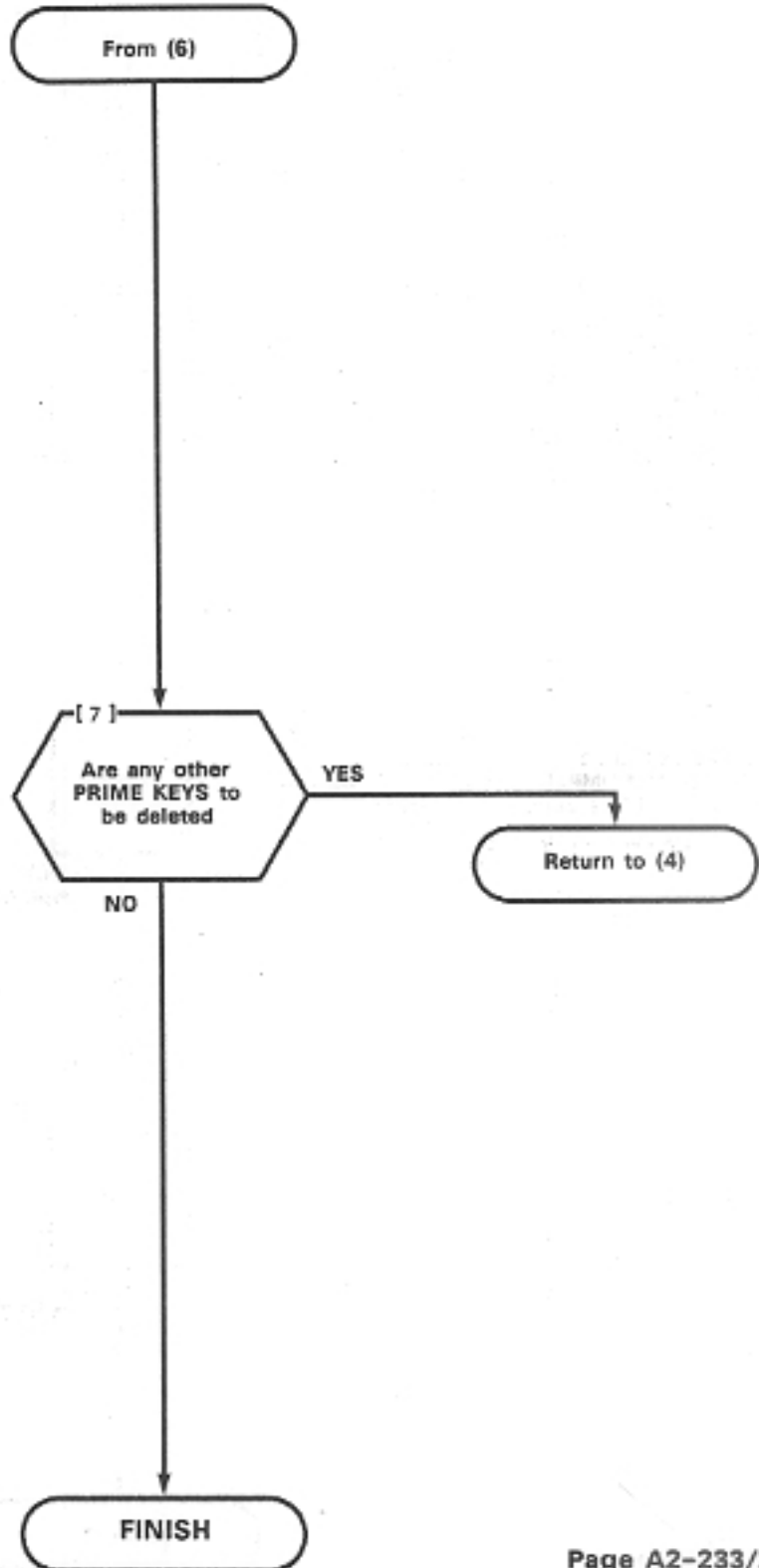
For an example of the programming forms see Figs. 270-2 and 270-3.



|                        |
|------------------------|
| DELETE A PRIME KEY     |
| MAP210- 273            |
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|                        |
|------------------------|
| DELETE A PRIME KEY     |
| MAP210- 273            |
| Issue 1, December 1982 |
| Sheet 3 of 3           |



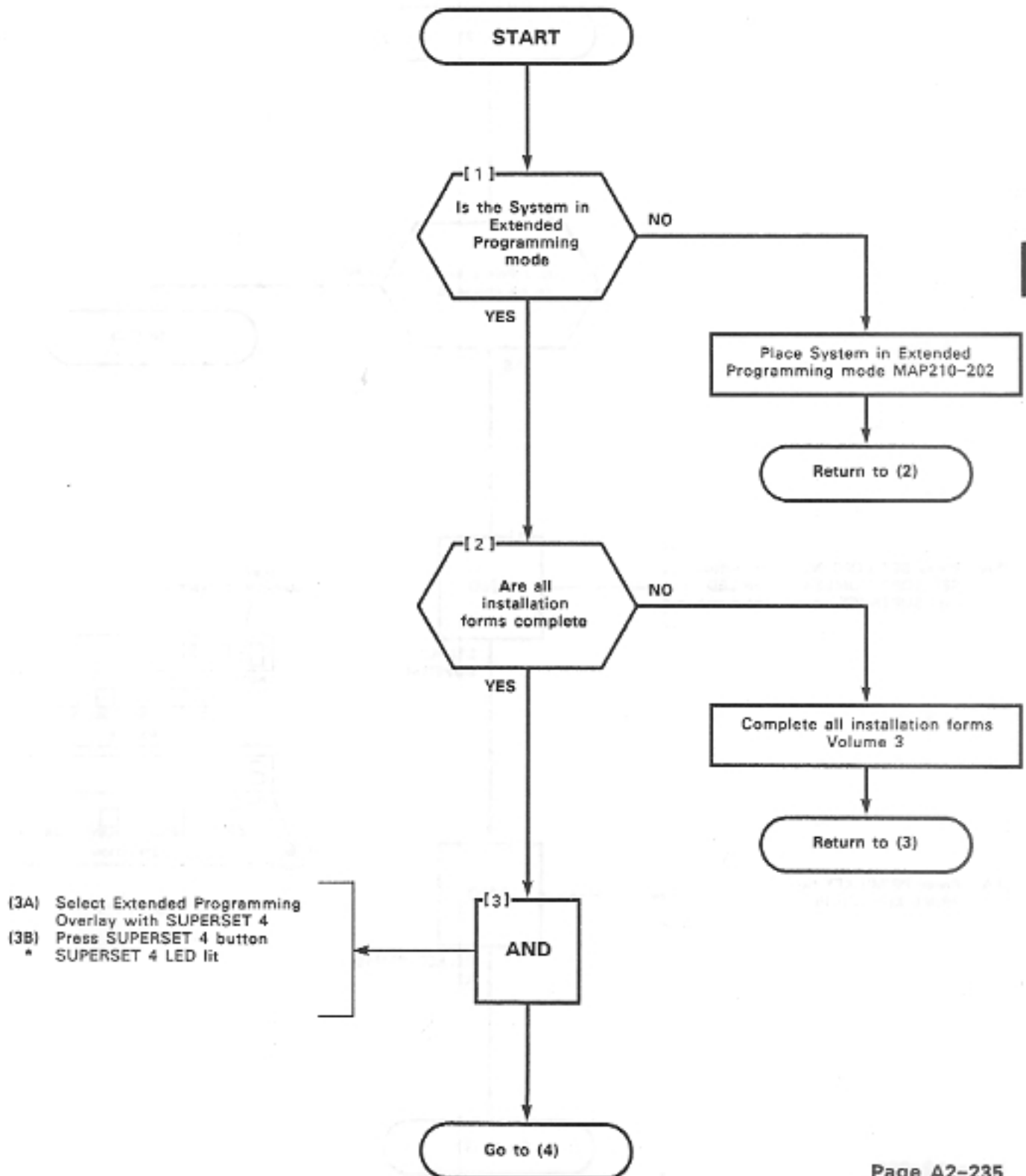


CHANGING ANY KEY

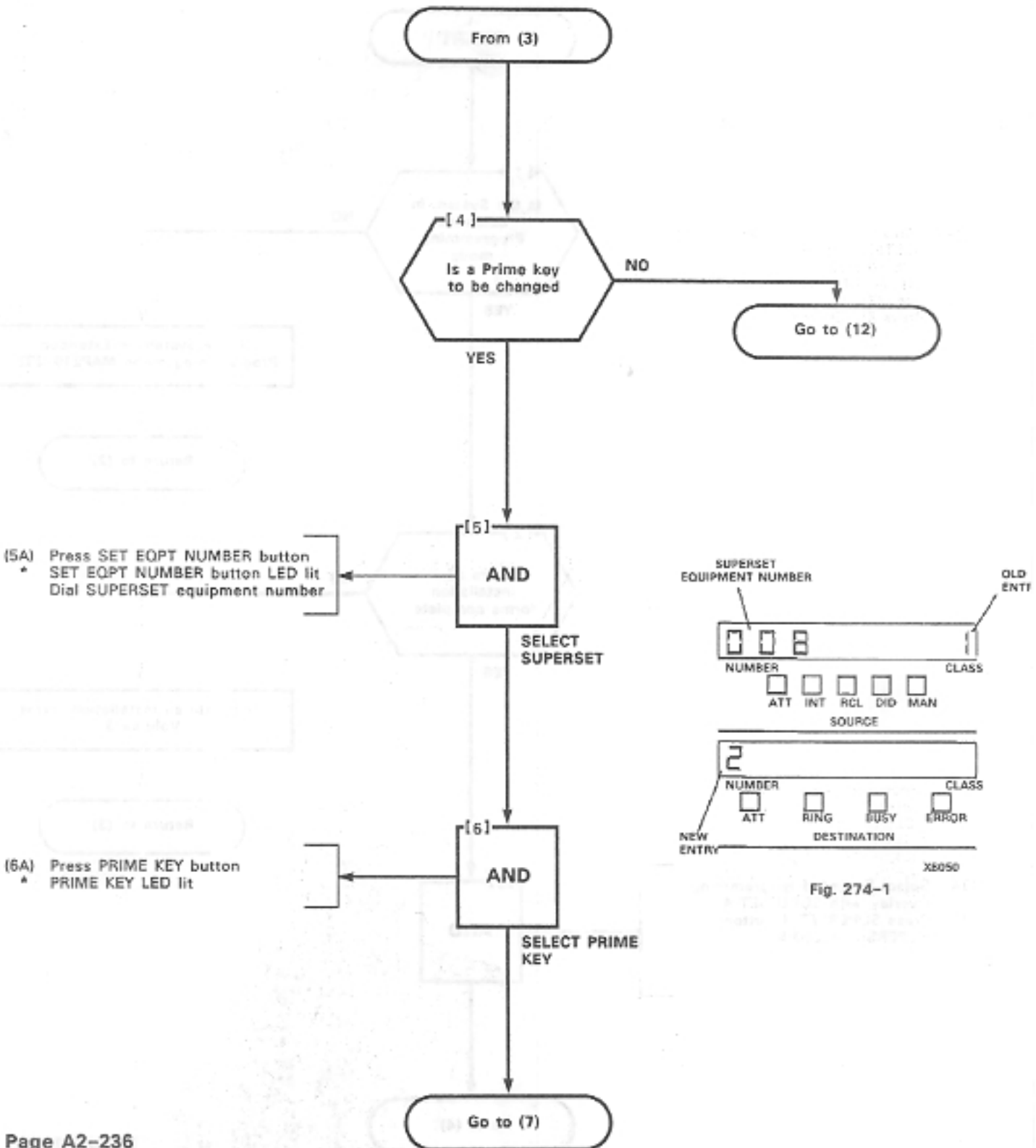
MAP210-274

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|                        |
|------------------------|
| CHANGING ANY KEY       |
| MAP210- 274            |
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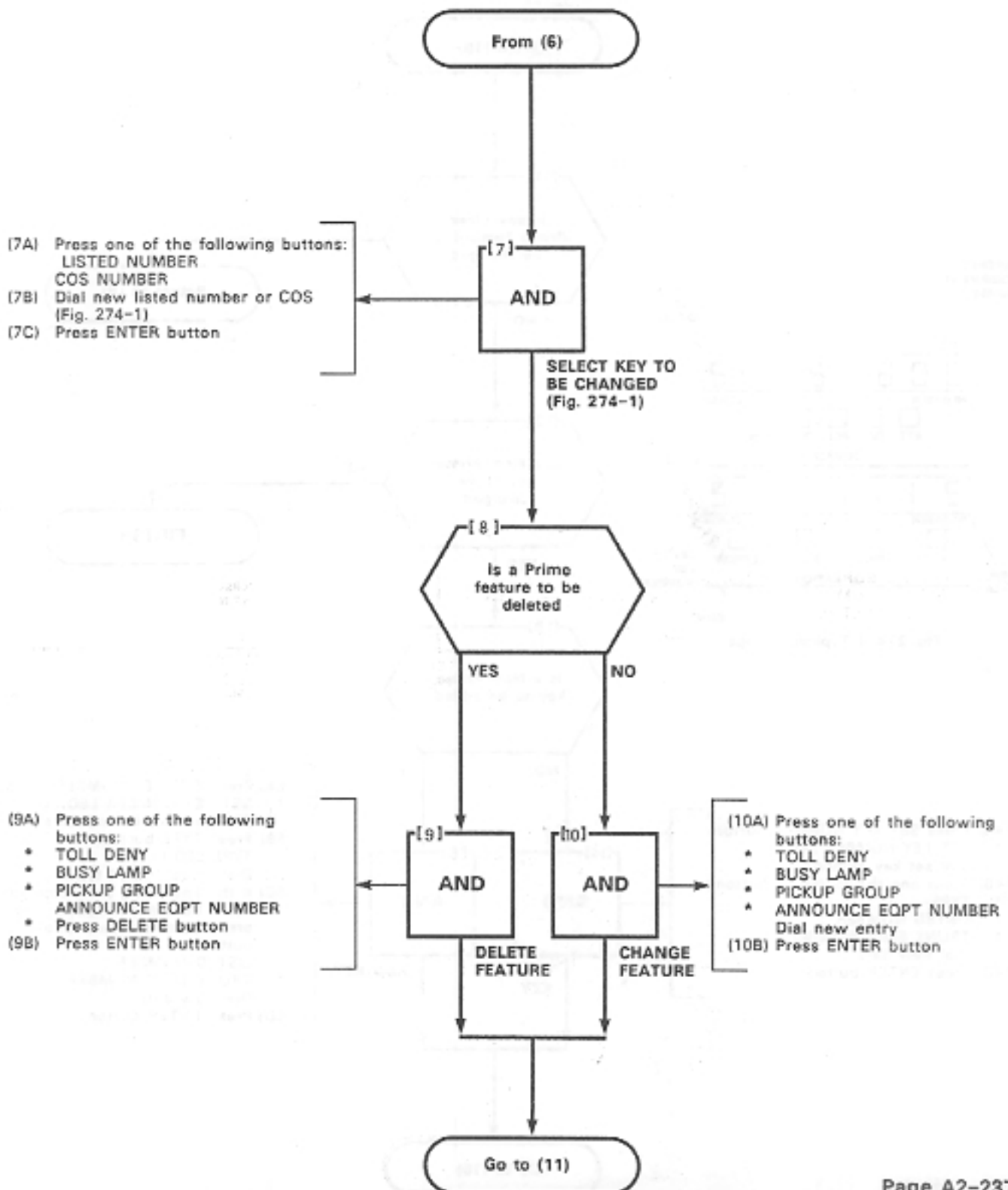


CHANGING ANY KEY

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CHANGING ANY KEY

MAP210- 274

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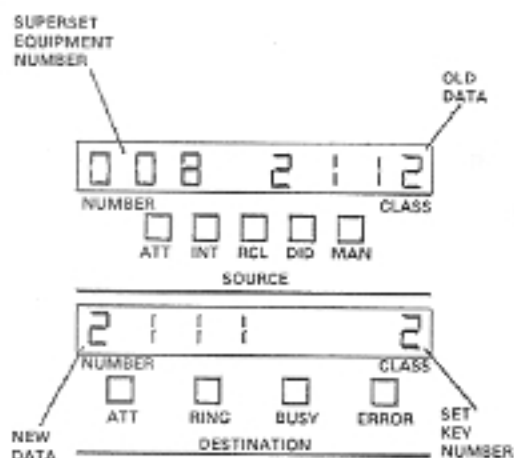
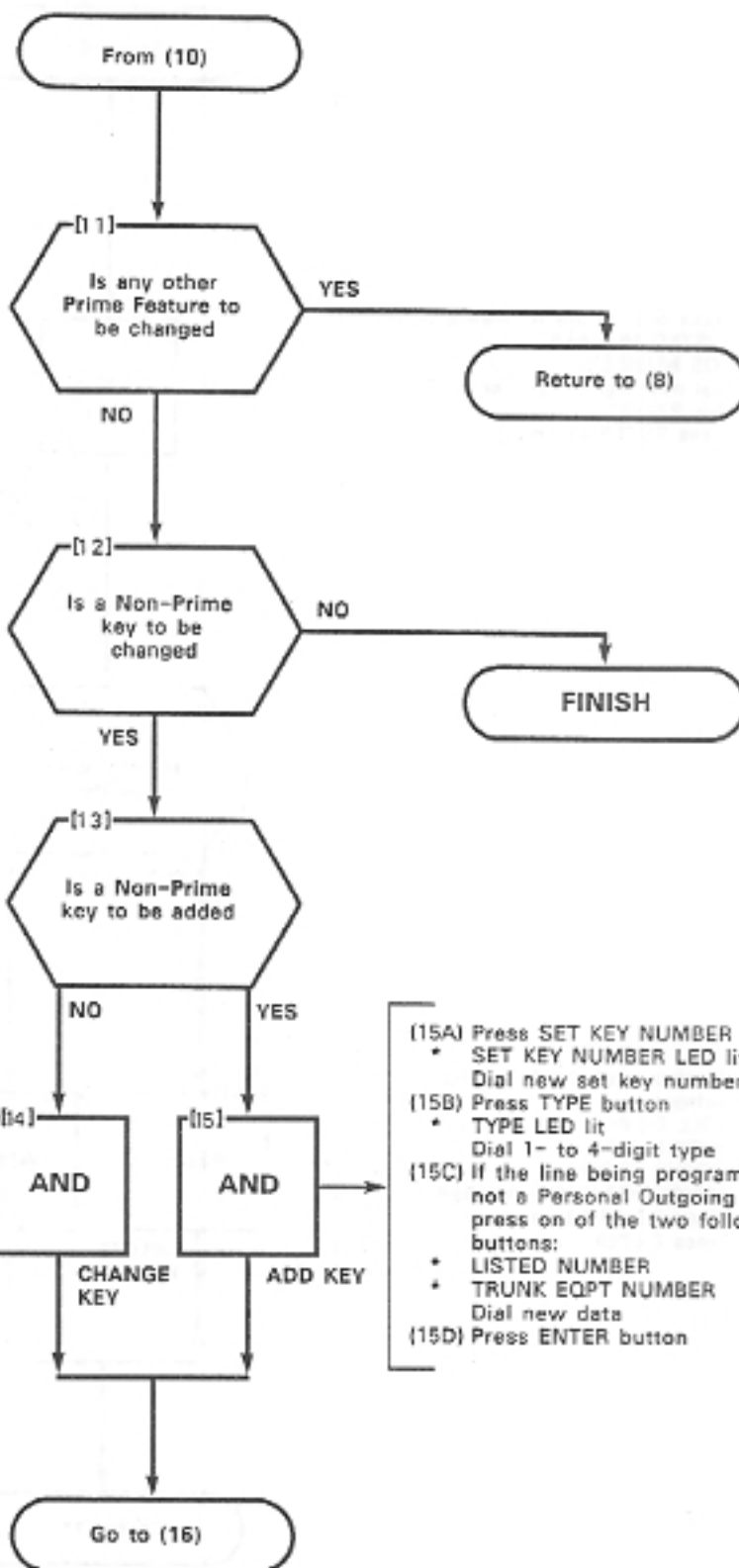


Fig. 274-2 Typical Change

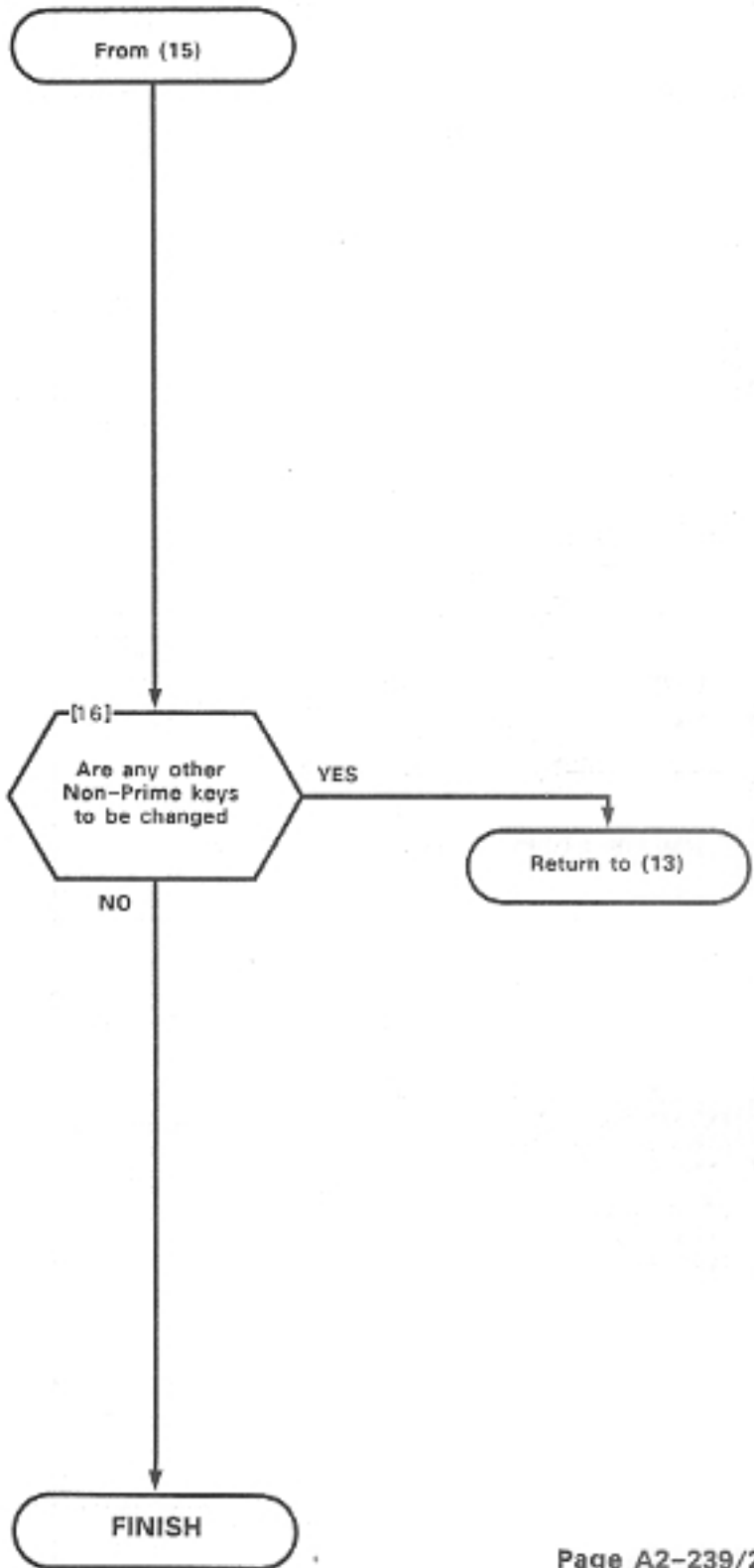
- (14A) Press SET KEY NUMBER button  
 \* SET KEY NUMBER LED lit  
 Dial set key number
- (14B) Press one of the following buttons:  
 \* TYPE  
 \* LISTED NUMBER  
 \* TRUNK EQPT NUMBER  
 Dial new data
- (14C) Press ENTER button

- (15A) Press SET KEY NUMBER button  
 \* SET KEY NUMBER LED lit  
 Dial new set key number
- (15B) Press TYPE button  
 \* TYPE LED lit  
 Dial 1- to 4-digit type
- (15C) If the line being programmed is not a Personal Outgoing Line, press on of the two following buttons:  
 \* LISTED NUMBER  
 \* TRUNK EQPT NUMBER  
 Dial new data
- (15D) Press ENTER button





|                        |
|------------------------|
| CHANGING ANY KEY       |
| MAP210- 274            |
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MOVING A SUPERSET

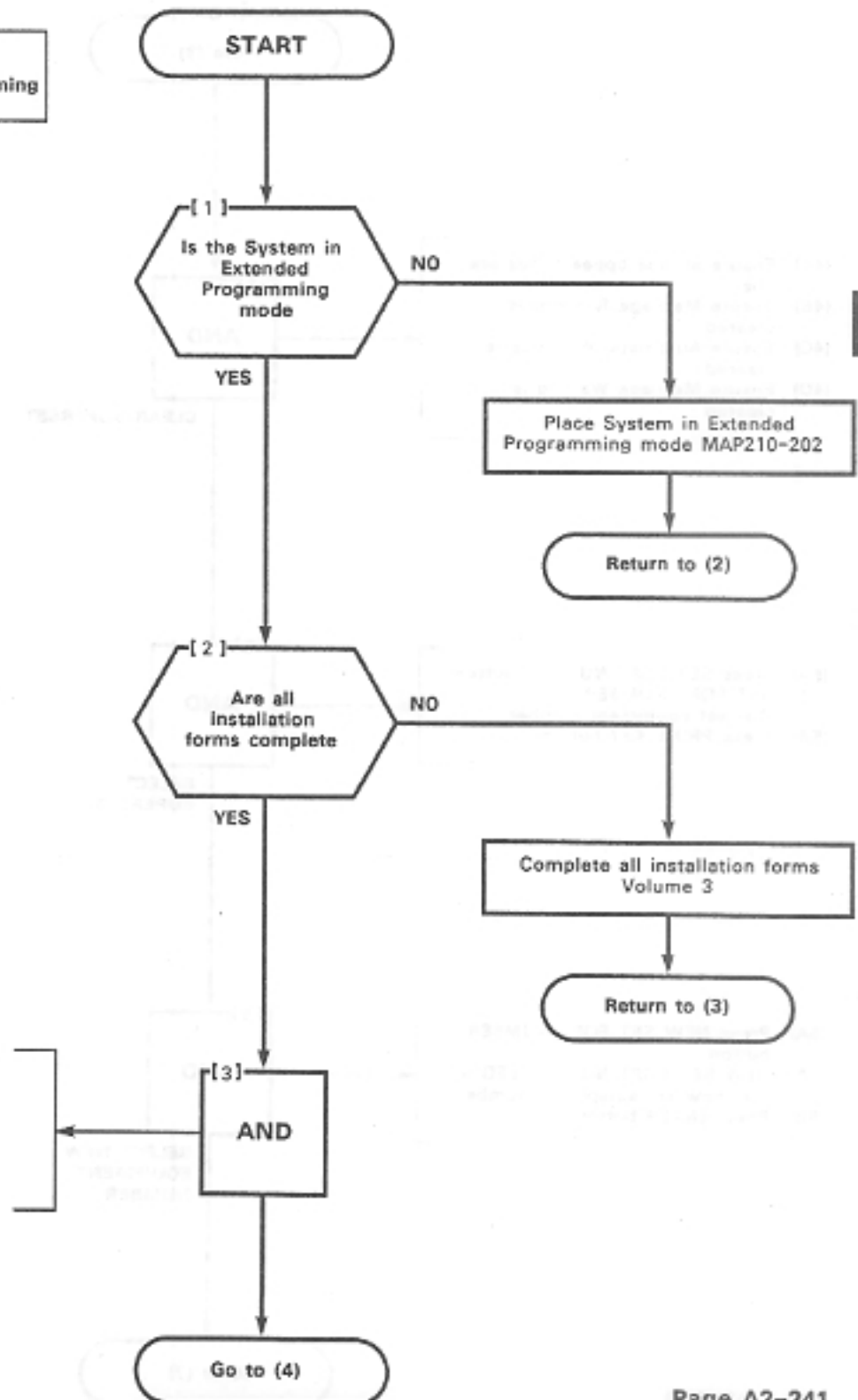
MAP210-275

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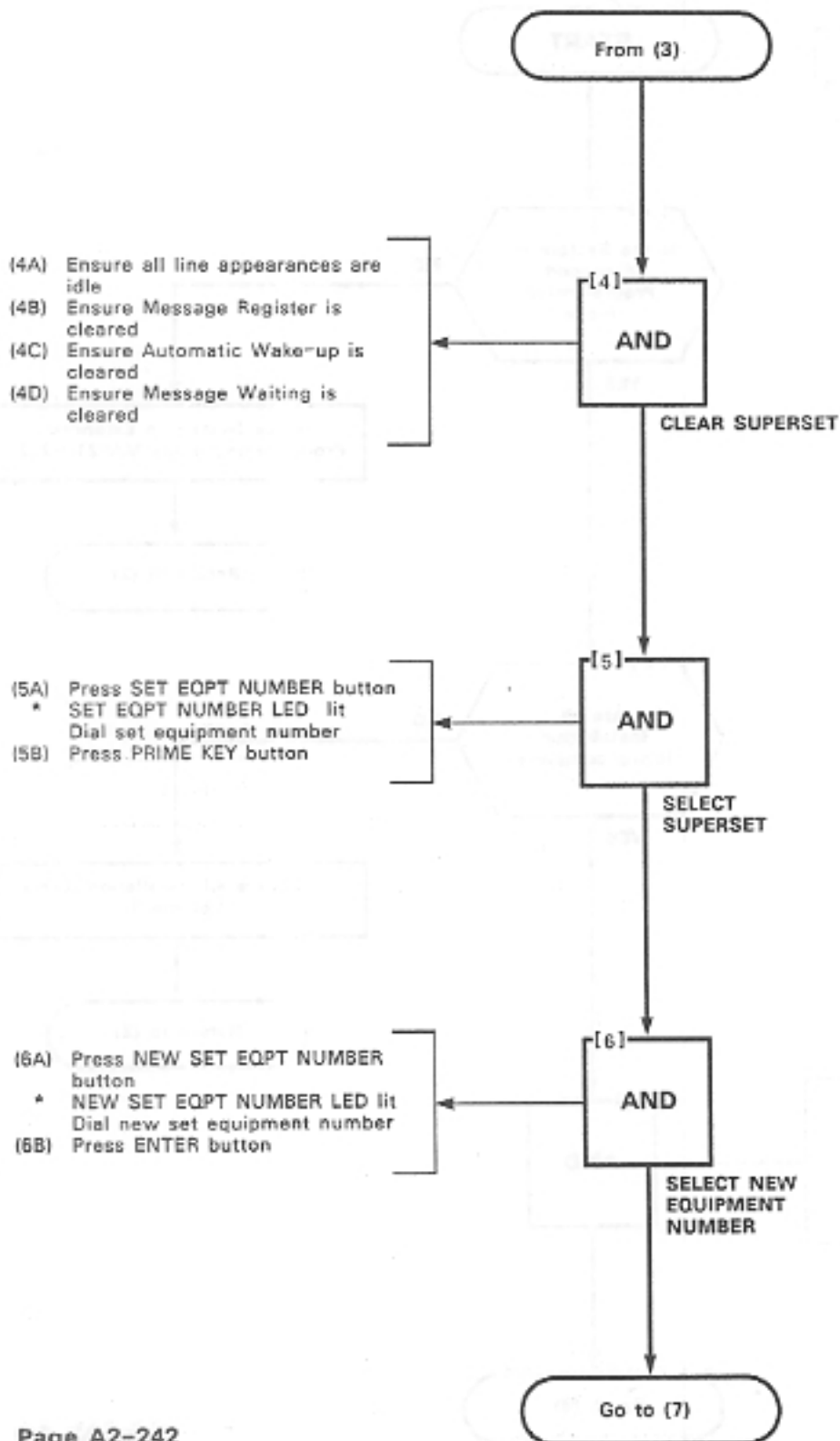
## NOTE

For an example of the programming forms see Figs. 270-2 and 270-3.

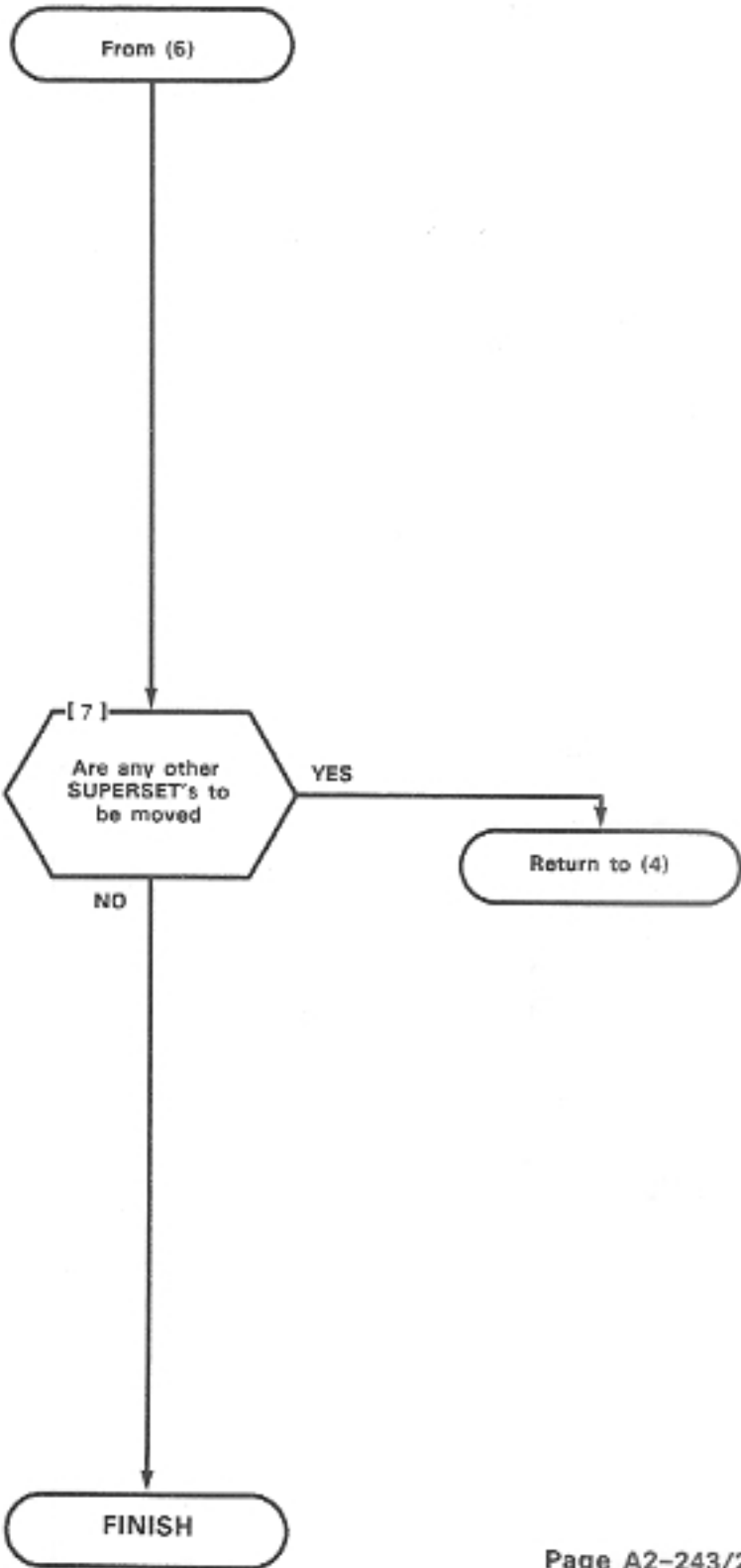


- (3A) Select Extended Programming Overlay with SUPERSET 4  
 (3B) Press SUPERSET 4 button  
 • SUPERSET 4 LED lit

|                        |
|------------------------|
| MOVING A SUPERSET      |
| MAP210- 275            |
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| Sheet 2 of 3           |



|                        |
|------------------------|
| MOVING A SUPERSET      |
| MAP210- 275            |
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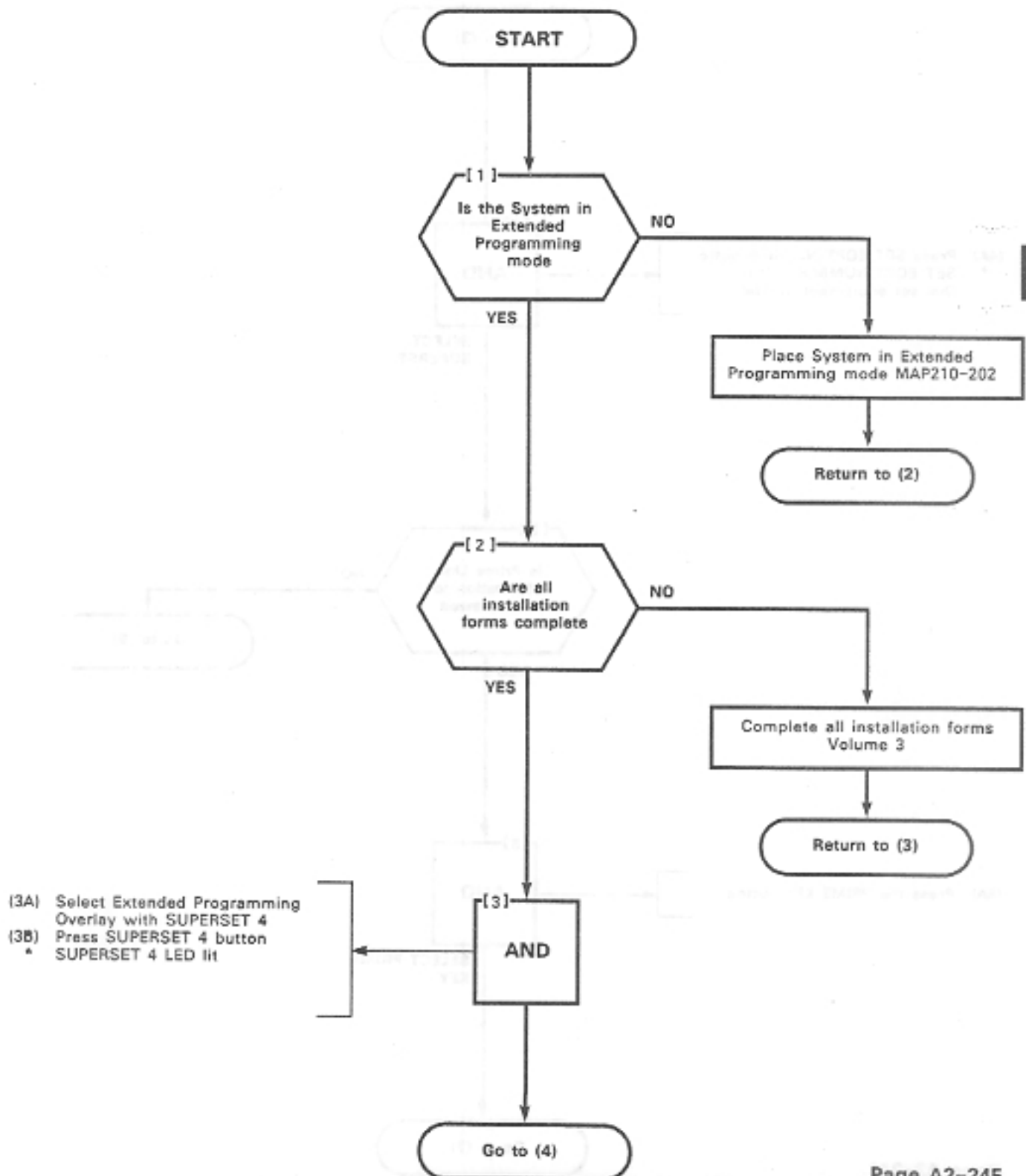


REVIEW SUPERSET PROGRAMMING

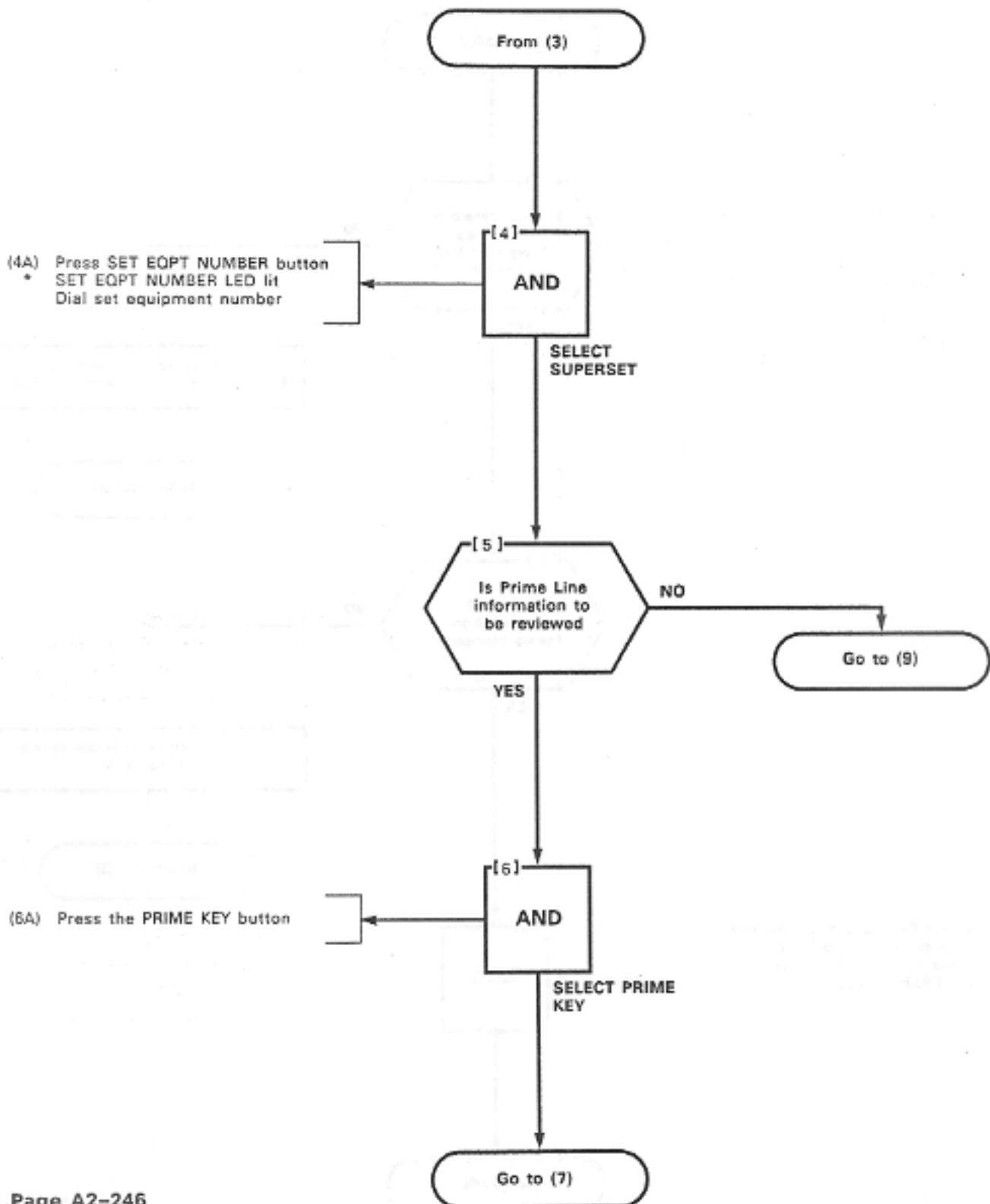
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|                             |
|-----------------------------|
| REVIEW SUPERSET PROGRAMMING |
| MAP210- 276                 |
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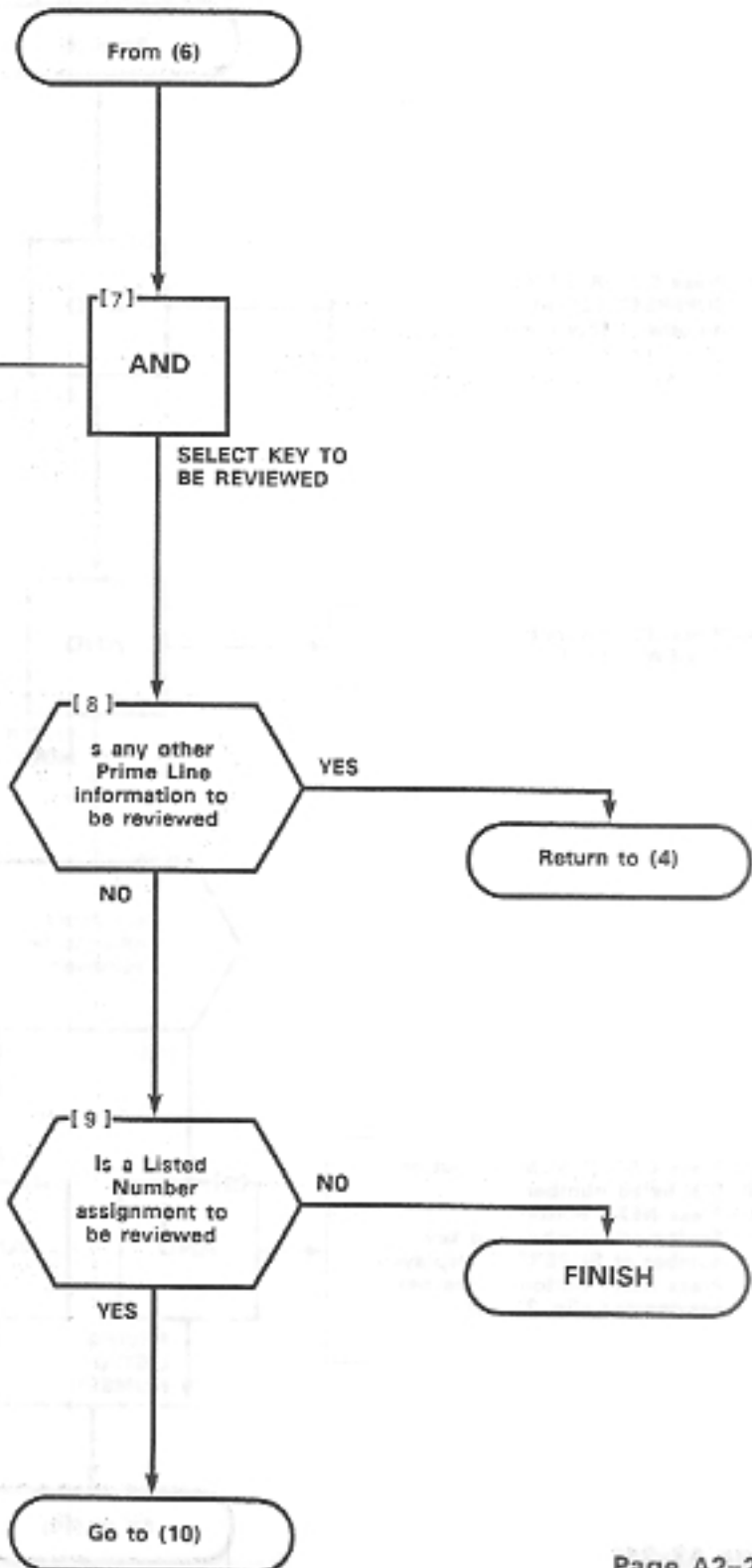
## REVIEW SUPERSET PROGRAMMING

MAP210- 276

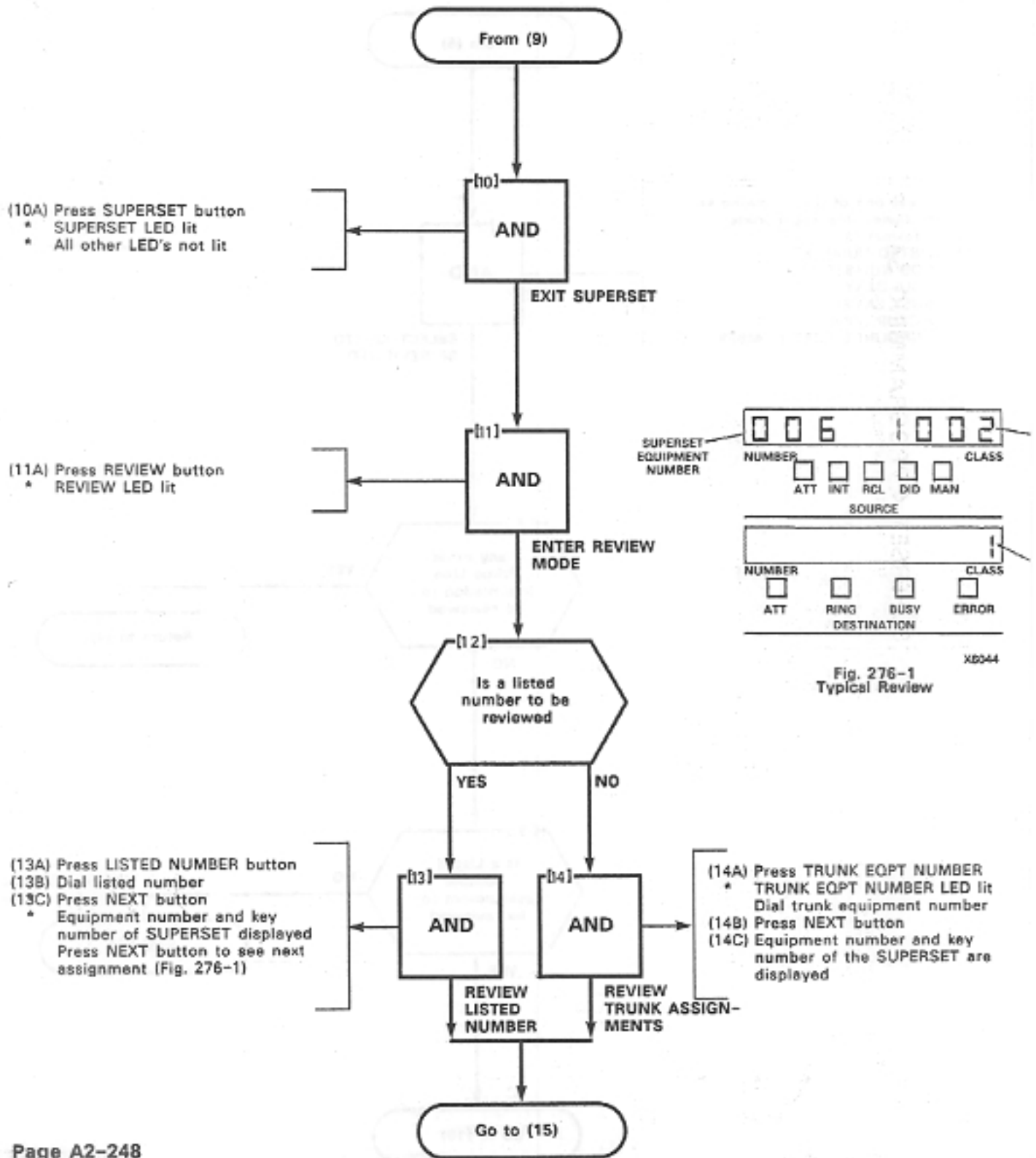
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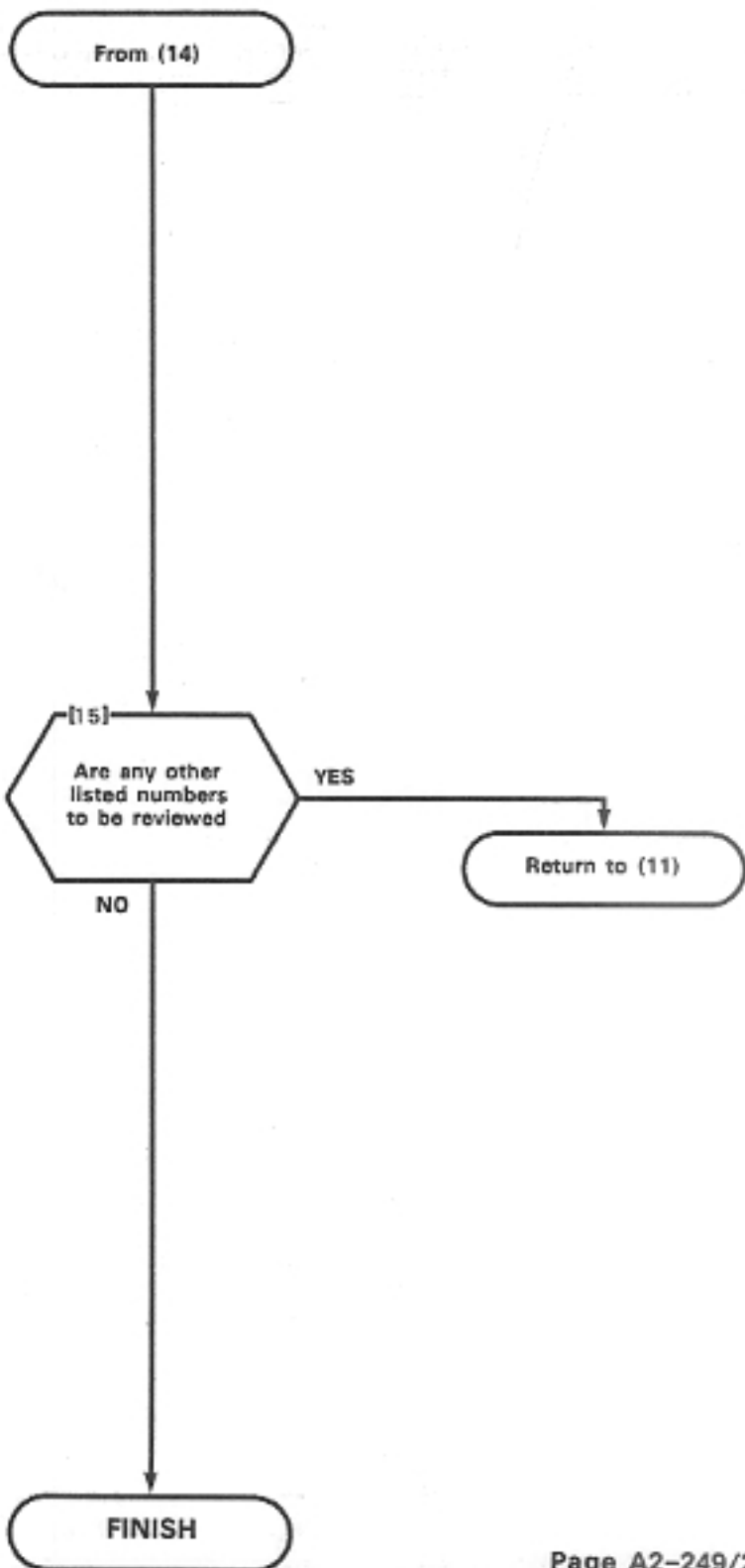
- (7A) Press one of the following keys to review the appropriate information:
- \* LISTED NUMBER
  - \* COS NUMBER
  - \* TOLL DENY
  - \* BUSY LAMP
  - \* PICKUP GROUP
  - \* ANNOUNCE EQPT NUMBER



|                                    |
|------------------------------------|
| <b>REVIEW SUPERSET PROGRAMMING</b> |
| MAP210-276                         |
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|                             |
|-----------------------------|
| REVIEW SUPERSET PROGRAMMING |
| MAP210- 276                 |
| Issue 1, December 1982      |
| Sheet 5 of 5                |



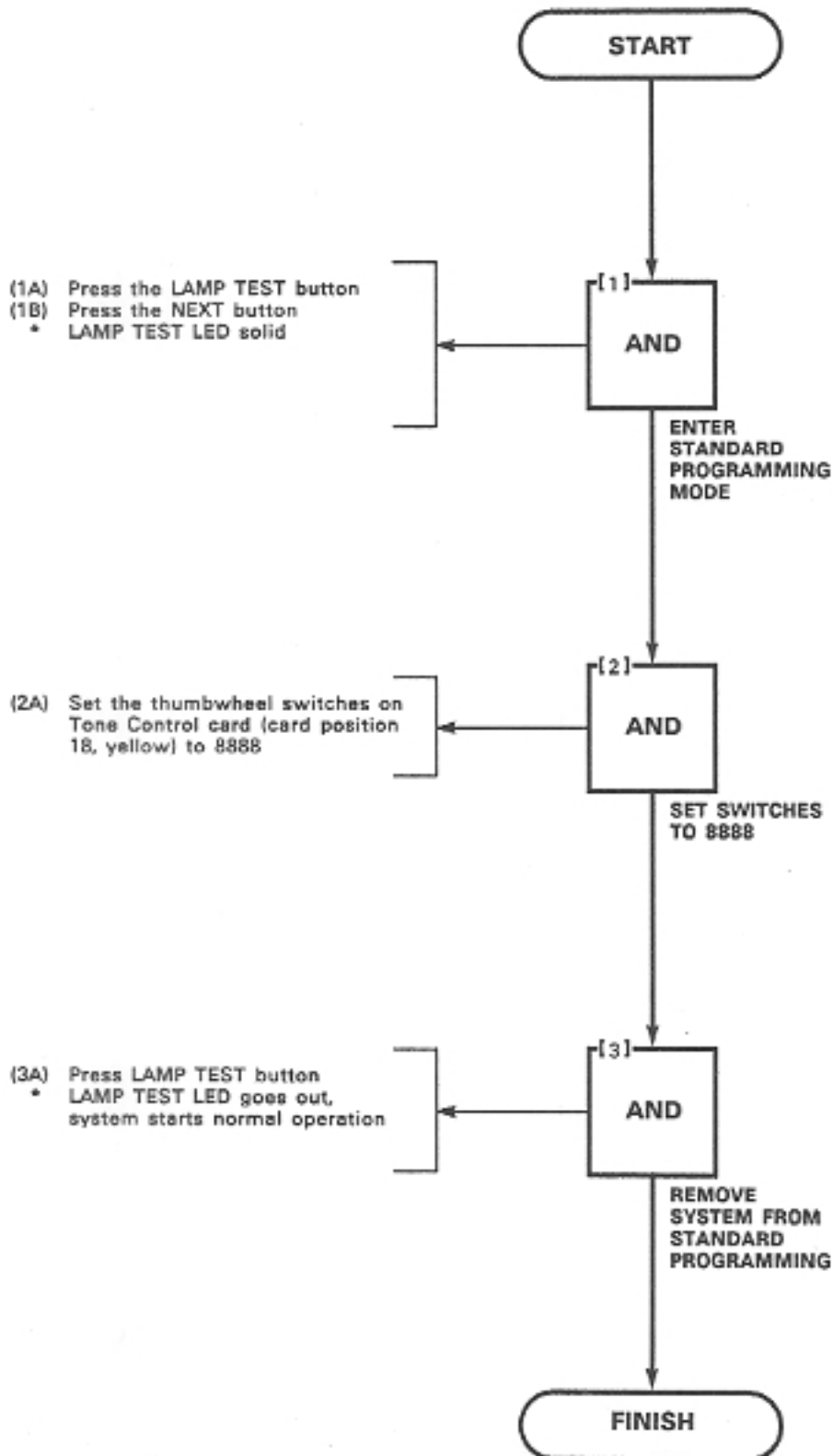


## TERMINATING PROGRAMMING

MAP210-284

Issue 1, December 1982

Sheet 1 of 1





**SX-100\*/SX-200\***  
**SUPERSWITCH\***  
**ELECTRONIC PRIVATE AUTOMATIC BRANCH EXCHANGE**  
**SYSTEM TEST PROCEDURES**  
**GENERIC 217**

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pose and use of MAP's is contained in Appendix 1. Actual system test procedures to be used for the PABX are as detailed in the following paragraphs.

**System Test Procedures**

**2.02** The System Test Procedures are divided into two appendices: Extension Tests and Console Tests. The test level relationship is

given in Tables 2-1 and 2-2. Some tests may not be relevant; i.e. Hotel/Motel (H/M) options when the system is configured for a business arrangement. Tables 2-3 and 2-4 give the suggested applications of these tests as Hotel/Motel (H/M) and Business. Note: in some situations some systems may use Options that seem out of context to the Hotel/Motel and Business sections, however the relevant test should still be performed for these options.

TABLE 2-1  
EXTENSION TESTS

R1

| TEST                              | APPLICATION |
|-----------------------------------|-------------|
| Set Up Test Equipment             | All         |
| Broker's Call                     | All         |
| Call Forwarding - Busy            | All         |
| Call Forwarding - Don't Answer    | All         |
| Call Forwarding - Follow Me       | All         |
| Call Park                         | All         |
| Call Pickup                       | All         |
| Camp-On                           | All         |
| Consultation Hold/Transfer/Add-On | All         |
| Automatic Callback - Don't Answer | All         |
| Automatic Callback - Busy         | All         |
| Meet Me Conference                | All         |
| Executive Busy Override           | All         |
| Paging                            | All         |
| Do Not Disturb                    | All         |
| Call Hold                         | All         |
| Room Status                       | H/M         |
| Automatic Wake-Up (Alarm Call)    | H/M         |
| Personal Speed Call               | H/M         |
| Common Use Speed Call             | Business    |
| External Call Forwarding          | All         |
| Transfer with Privacy             | All         |
| Account Code                      | Business    |
| Hands-Free Station                | All         |
| Call Forwarding Busy/Don't Answer | All         |
| Enable Non-CO to Trunk Connect    | All         |
| Repeated Camp-On Tones            | All         |

TABLE 2-2  
CONSOLE TEST

R1

| TEST  | APPLICATION |
|---|-------------|
| Answer Incoming Call                        | All         |
| Automatic Callback                          | All         |
| Extending Internal Calls                    | All         |
| Answering Recall                            | All         |
| Override                                    | All         |
| Flexible Night Service                      | All         |
| Trunk Busy Operation                        | All         |
| Trunk Group Attendant Access                | All         |
| Trunk Group Dial Access                     | All         |
| Test Termination                            | All         |
| Answer Incoming CO Trunk Call               | All         |
| Attendant Do Not Disturb                    | All         |
| Message Waiting                             | All         |
| Attendant Call Forwarding - Busy            | All         |
| Attendant Call Forwarding - Don't Answer    | All         |
| Attendant Call Forwarding - Follow Me       | All         |
| Attendant Call Forwarding Busy/Don't Answer | All         |
| Attendant Controlled Conference             | All         |
| Attendant Station Busy Out                  | All         |
| Call Block                                  | H/M         |
| Attendant Do Not Disturb                    | All         |
| Message Registration                        | H/M         |
| Controlled Outgoing Call Restriction        | All         |
| Room Status                                 | H/M         |
| Automatic Wake-Up (Alarm Call)              | H/M         |
| Message Waiting H/M                         | H/M         |
| Console Date Display and Date Utility       | All         |
| Customer Program Dump Load                  | All         |
| Controlling the Printer                     | All         |
| Room Audit                                  | H/M         |
| System Identifier                           | All         |
| Common Use Speed Call                       | Business    |
| Customer Programming                        | All         |
| External Call Forwarding                    | All         |
| Test Audible Tone Indicators                | All         |
| SUPERSET 4 Disconnect Alarms                | All         |

TABLE 2-3  
EXTENSION APPLICATIONS

R1

| TEST                              | APPLICATION |
|-----------------------------------|-------------|
| Set Up Test Equipment             | Both        |
| Broker's Call                     | Business    |
| Call Forwarding - Busy            | Business    |
| Call Forwarding - Don't Answer    | Business    |
| Call Forwarding - Follow Me       | Business    |
| Call Park                         | Business    |
| Call Pickup                       | Business    |
| Camp-On                           | Business    |
| Consultation Hold/Transfer/Add-On | Business    |
| Automatic Callback - Don't Answer | Business    |
| Automatic Callback - Busy         | Business    |
| Meet Me Conference                | Business    |
| Executive Busy Override           | Business    |
| Paging                            | Business    |
| Do Not Disturb                    | Both        |
| Call Hold                         | Business    |
| Room Status                       | H/M         |
| Automatic Wake-Up (Alarm Call)    | H/M         |
| Personal Speed Call               | Business    |
| Common Use Speed Call             | Business    |
| External Call Forwarding          | Business    |
| Transfer with Privacy             | Business    |
| Account Code                      | Business    |
| Hands-Free Station                | Business    |
| Call Forwarding Busy/Don't Answer | Business    |
| Enable Non-CO to Trunk Connect    | Business    |
| Repeated Camp-On Tones            | Business    |

TABLE 2-4  
CONSOLE APPLICATION

R1

| TEST  | APPLICATION |
|---|-------------|
| Answer Incoming Call                        | Both        |
| Automatic Callback                          | Both        |
| Extending Internal Calls                    | Both        |
| Answering Recall                            | Both        |
| Override                                    | Business    |
| Flexible Night Service                      | Both        |
| Trunk Busy Operation                        | Both        |
| Trunk Group Attendant Access                | Both        |
| Trunk Group Dial Access                     | Both        |
| Test Termination                            | Both        |
| Answer Incoming CO Trunk Call               | Both        |
| Attendant Do Not Disturb                    | Both        |
| Message Waiting                             | H/M         |
| Attendant Call Forwarding - Busy            | Business    |
| Attendant Call Forwarding - Don't Answer    | Business    |
| Attendant Call Forwarding - Follow Me       | Business    |
| Attendant Call Forwarding Busy/Don't Answer | Business    |
| Attendant Controlled Conference             | Business    |
| Attendant Station Busy Out                  | Both        |
| Call Block                                  | H/M         |
| Attendant Do Not Disturb                    | H/M         |
| Message Registration                        | H/M         |
| Controlled Outgoing Call Restriction        | H/M         |
| Room Status                                 | H/M         |
| Automatic Wake-Up (Alarm Call)              | H/M         |
| Message Waiting H/M                         | H/M         |
| Console Date Display and Date Utility       | Both        |
| Customer Program Dump Load                  | Both        |
| Controlling the Printer                     | Both        |
| Room Audit                                  | H/M         |
| System Identifier                           | Both        |
| Common Use Speed Call                       | Business    |
| Customer Programming                        | Both        |
| External Call Forwarding                    | Business    |
| Test Audible Tone Indicators                | Both        |
| SUPERSET 4 Disconnect Alarm                 | Business    |



## APPENDIX 1

### MITEL ACTION PROCEDURES

#### GENERAL

**A1.01** Task-oriented functions in this Section are implemented using MITEL Action Procedures (MAP's).

**A1.02** A MAP is a step-by-step procedure using a flow chart principle, written and illustrated where necessary to a level of detail that allows both experienced and inexperienced personnel to carry out the tasks detailed. A MAP contains two levels of information as follows:

- (a) For experienced personnel, a series of steps (level one) each numbered (n) and annotated with minimal information.
- (b) For inexperienced personnel, each step referred to in (a) above is amplified by a connected series of numbered substeps (nA) (level two).

**A1.03** A typical example of a MAP is shown in Fig. A1-1, with the two levels detailed.

#### MAP SYMBOLS

**A1.04** There are four basic symbol shapes which may be used in a MAP, and are defined as follows.

**A1.05 AND Block:** Used to indicate a level one step that must be performed. Consists of a square with the word AND centered in the block.

**A1.06 OR Block:** Used to indicate a choice of level one steps, one of which must be performed. Consists of a rectangle, with the text centered in the block, and with the word OR appearing between the alternative operations.

**A1.07** The rectangle is also used to border instructions which imply that the operator must perform a task outside the scope of the MAP. The text is centered in the rectangle.

**A1.08 DECISION Block:** Used to indicate a decision within the level one steps which must be made. The symbol is based on a hexagon with the top and bottom sides extended. Decision text is centered in the symbol.

**A1.09 START/FINISH/JUMP TO Block:** Used to indicate the start and finish of a MAP. Also used to indicate "jump to" points within the MAP, for example "go to (n)" or "from (n)" or "return to (n)". The symbol is a rectangle with semicircular ends. Text is centered in the symbol.

#### THE OPERATORS USE OF MAP'S

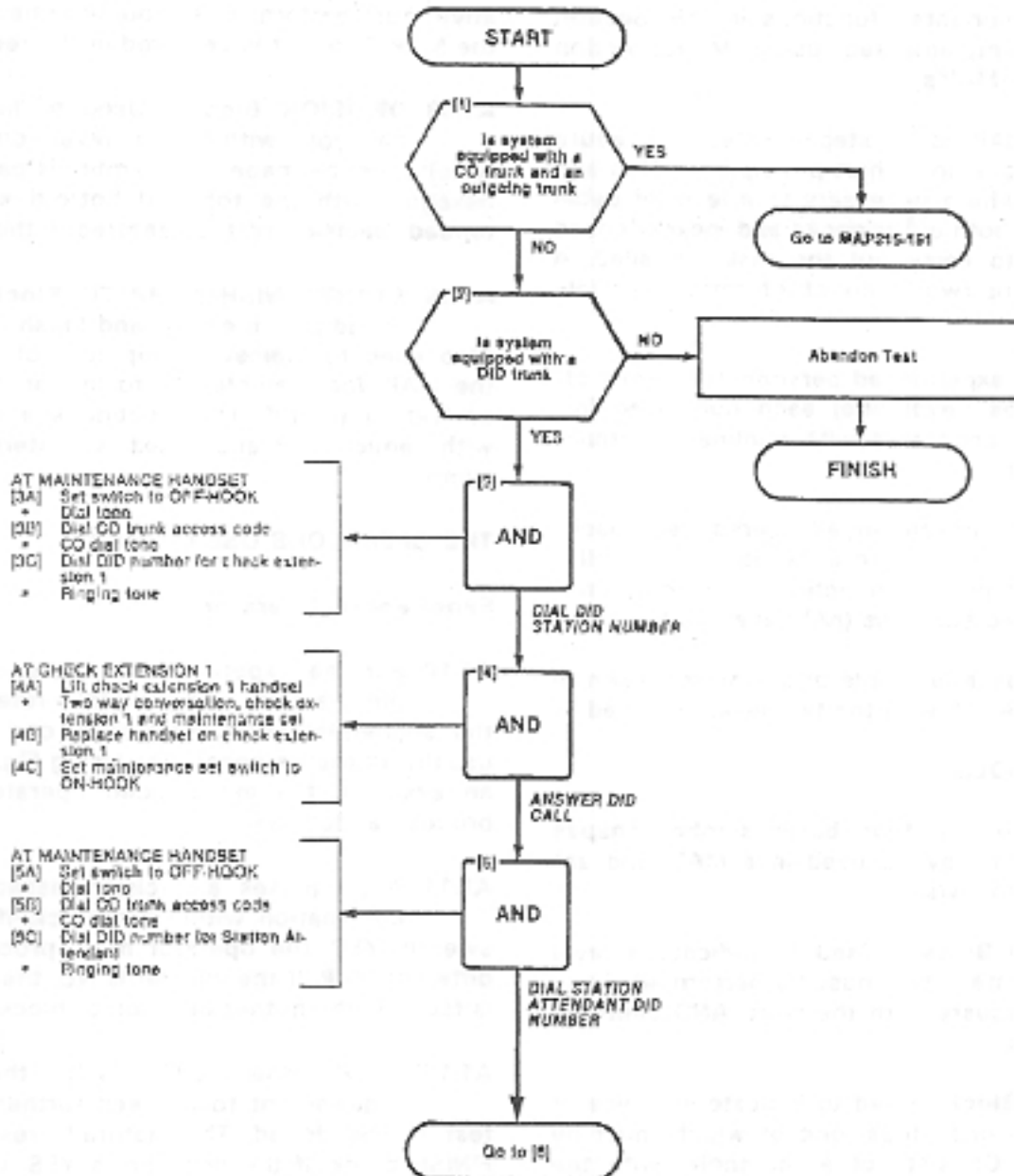
##### Experienced Operator

**A1.10** For the experienced operator to complete a task using a MAP, reference to the sequential short form level one steps is usually all that is necessary. Using Fig. A1-1 as an example, the experienced operator would proceed as follows.

**A1.11** A (1) makes a decision based on the information within the block. If the answer is YES, the operator must proceed to a different MAP. If the answer is NO, the operator is faced with another decision at block (2).

**A1.12** At (2) if the decision is NO, there is no requirement to proceed further and the test is abandoned. This naturally results in a FINISH block. If the decision is YES, the operator proceeds to (3) and (4) in succession; i.e. dials the DID station number and completes the call to the check extension.

|                       |
|-----------------------|
| ANSWER DID TRUNK CALL |
| MAP215-152            |
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M110

Fig. A1-1 Typical MAP Page



**A1.13** The description of the instructions carried out in A1.05 and A1.06 have assumed that the level of competence of the operator is such that short form level one steps contain sufficient information, and therefore the operator reads only the center column of the MAP, top to bottom of the page.

**Inexperienced Operator**

**A1.14** If the operator's experience is such that the level two substeps should be referred to as follows.

- (a) At (1) and (2) make the decisions called for at these steps as before.

- (b) At step (3) dial the DID station number by performing substeps (3A), (3B) and (3C).

In terms of steps and substeps, the operative follows a decision, decision then step and sub-step paths in the example shown.

**TOOLS, TEST EQUIPMENT AND SPECIAL INSTRUCTIONS**

**A1.16** Any tools, test equipment or special instructions that the operator required or needs to know are stated on the first page of each MAP. If the MAP is long, and contains a number of sub procedures, these are listed in synopsis form on the first page.



## APPENDIX 2

### EXTENSION TESTS

**A2.01** The following test are a series of extension tests. Specific reference should be made to Table 2-1 and Table 2-3. These Tables will determine if the test is relevant to the system application.

**TABLE A2-1**  
**EXTENSION TESTS**

R1

| ORDER | OPTION                            | MAP No. |
|-------|-----------------------------------|---------|
| 1     | Set Up Test Equipment             | 215-201 |
| 2     | Broker's Call                     | 215-202 |
| 3     | Call Forwarding - Busy            | 215-203 |
| 4     | Call Forwarding - Don't Answer    | 215-204 |
| 5     | Call Forwarding - Follow Me       | 215-205 |
| 6     | Call Park                         | 215-206 |
| 7     | Call Pickup                       | 215-207 |
| 8     | Camp-On                           | 215-208 |
| 9     | Consulation Hold/Transfer/Add-On  | 215-209 |
| 10    | Automatic Callback - Don't Answer | 215-210 |
| 11    | Automatic Callback - Busy         | 215-211 |
| 12    | Meet Me Conference                | 215-212 |
| 13    | Executive Busy Override           | 215-213 |
| 14    | Paging                            | 215-214 |
| 15    | Do Not Disturb                    | 215-215 |
| 16    | Call Hold                         | 215-216 |
| 17    | Room Status                       | 215-217 |
| 18    | Automatic Wake-Up (Alarm Call)    | 215-218 |
| 19    | Common Use Speed Call             | 215-219 |
| 20    | Personal Speed Call               | 215-220 |
| 21    | External Call Forwarding          | 215-221 |
| 22    | Transfer with Privacy             | 215-222 |
| 23    | Account Code                      | 215-223 |
| 24    | Hands-Free Station                | 215-224 |
| 25    | Call Forwarding Busy/Don't Answer | 215-225 |
| 26    | Enable Non-CO to Trunk Connect    | 215-226 |
| 27    | Repeated Camp-On Tones            | 215-227 |



## SET UP TEST EQUIPMENT

MAP215-201

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## TEST EQUIPMENT REQUIRED

Maintenance Handset (BUTT-IN)  
Console  
1, 2, and 3 Telephone Sets (Check Extensions located within reach of equipment cabinet).

Note: Check extension must have access to all features to be tested.

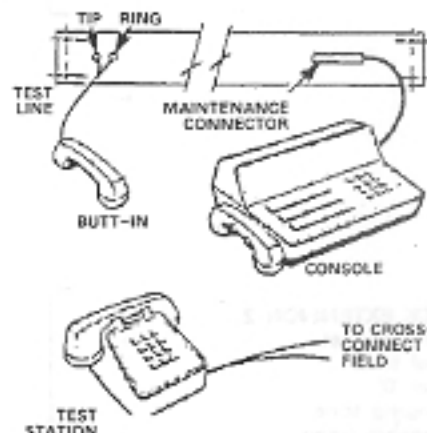
- (1A) Unlock and open cabinet door on cabinet versions  
**ON MAINTENANCE PANEL**  
(1B) Connect maintenance handset Tip lead to TIP stud (Fig. 201-1)  
(1C) Connect maintenance handset Ring lead to RING stud  
(1D) Insert console connector into MAINTENANCE CONNECTOR  
**AT CHECK EXTENSION 1, 2, AND 3**  
(1E) Connect check extension Tip and Ring lead to TIP and RING pins on Cross-Connect Field

- AT MAINTENANCE HANDSET**  
(2A) Set switch to OFF-HOOK  
\* Dial tone  
(2B) Dial 0  
\* Ringing tone  
\* Console rings  
**AT CONSOLE**  
(2C) Press ANSWER  
\* SOURCE display shows number and class-of-service of test line, ATT lamp lit  
(2D) Note number of test line  
(2E) Press RELEASE  
(2F) Set maintenance handset switch to ON-HOOK

START

[1]  
AND

CONNECT TEST EQUIPMENT (FIG. 201-1)



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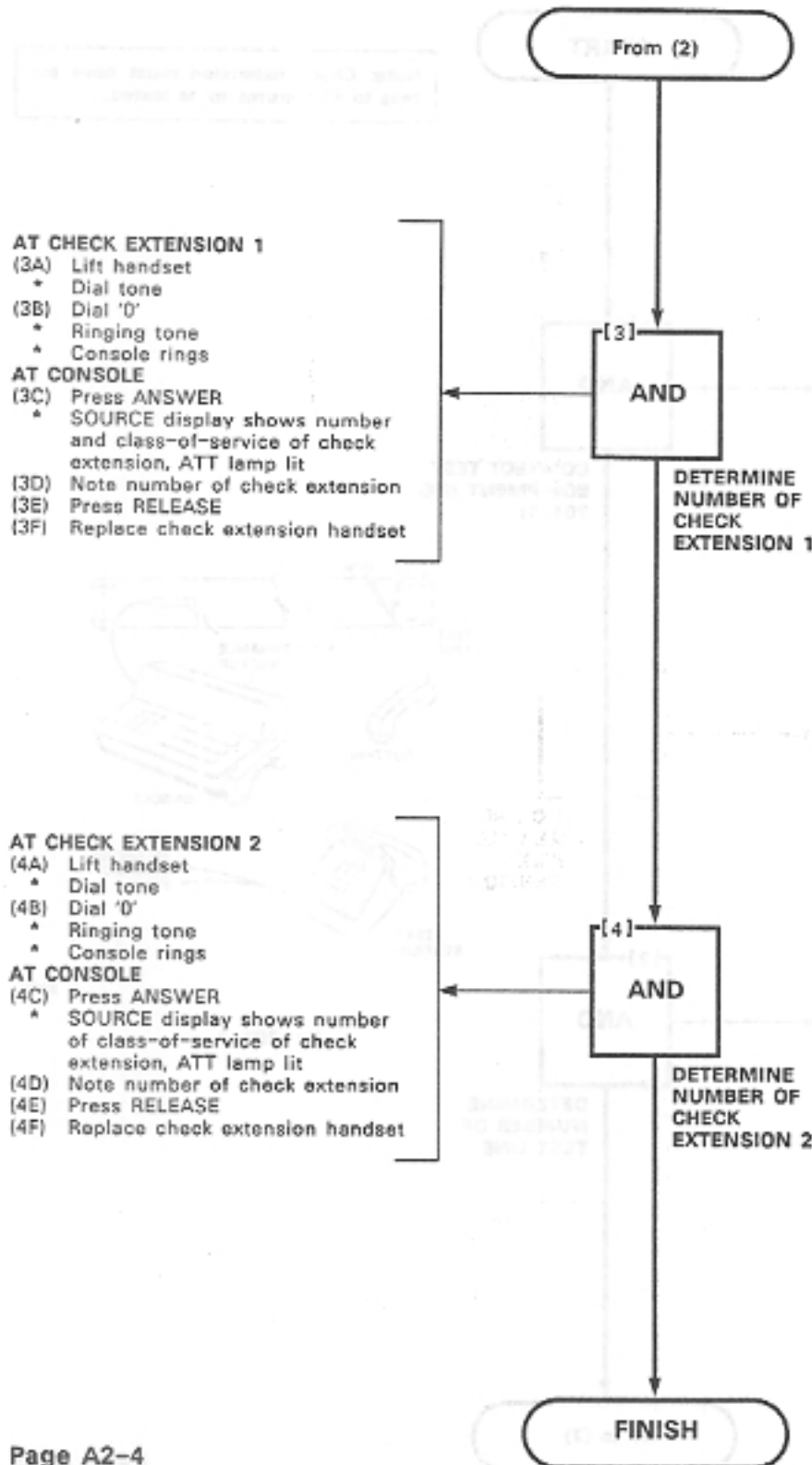
Fig. 201-2

[2]  
AND

DETERMINE NUMBER OF TEST LINE

Go to (3)

|                        |
|------------------------|
| SET UP TEST EQUIPMENT  |
| MAP215- 201            |
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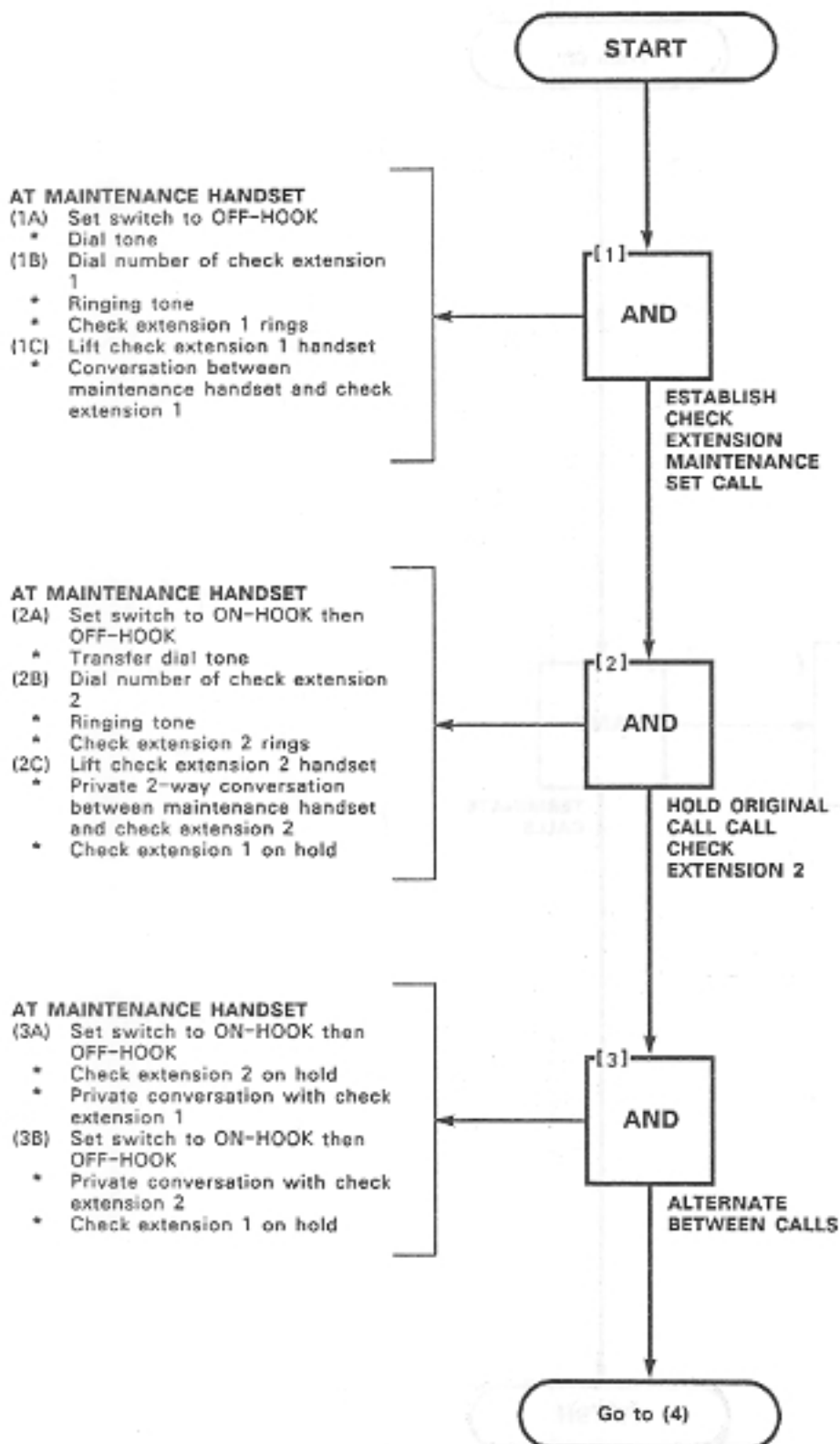


BROKER'S CALL

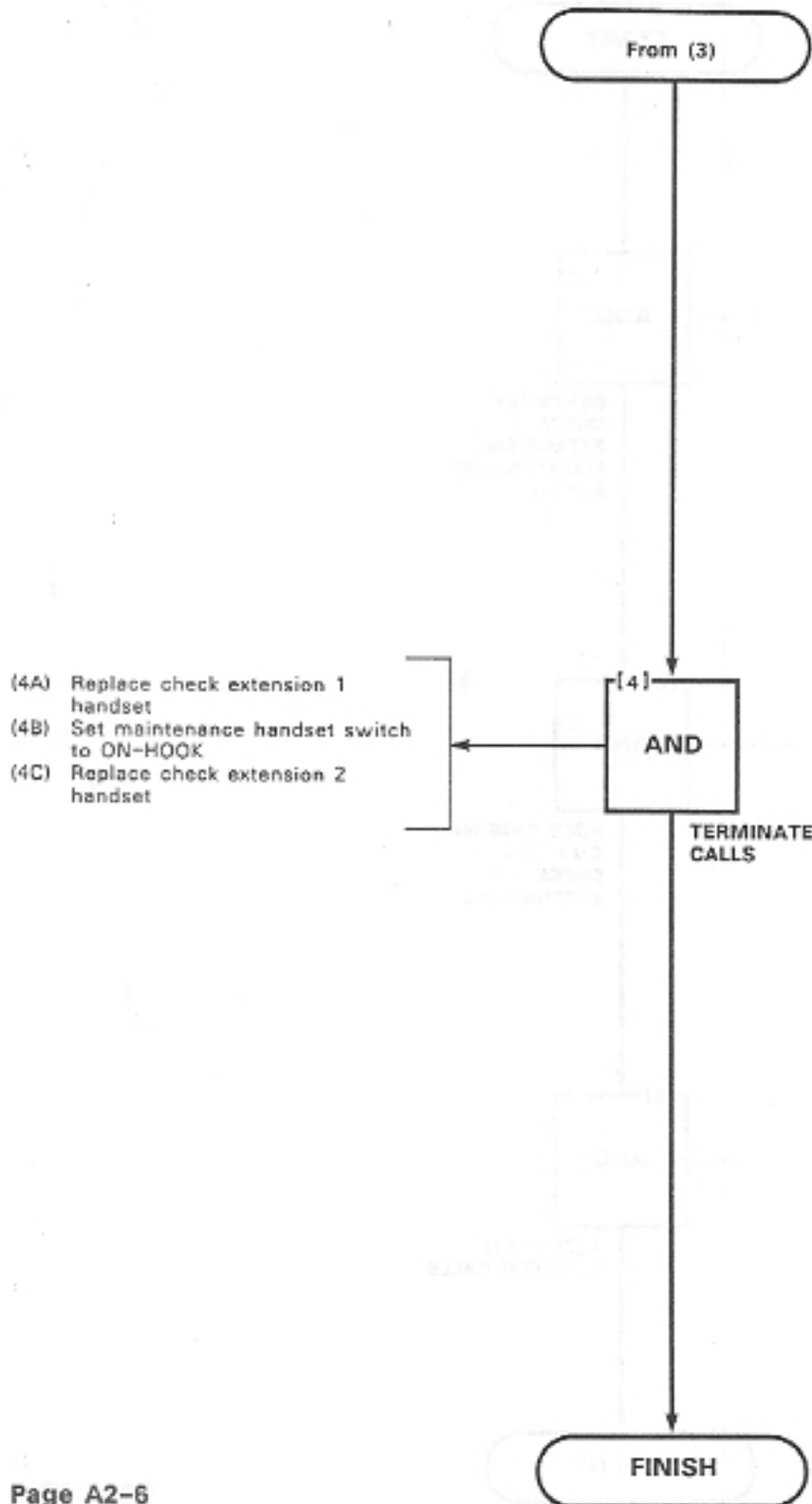
MAP215-202

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|                        |
|------------------------|
| BROKER'S CALL          |
| MAP215- 202            |
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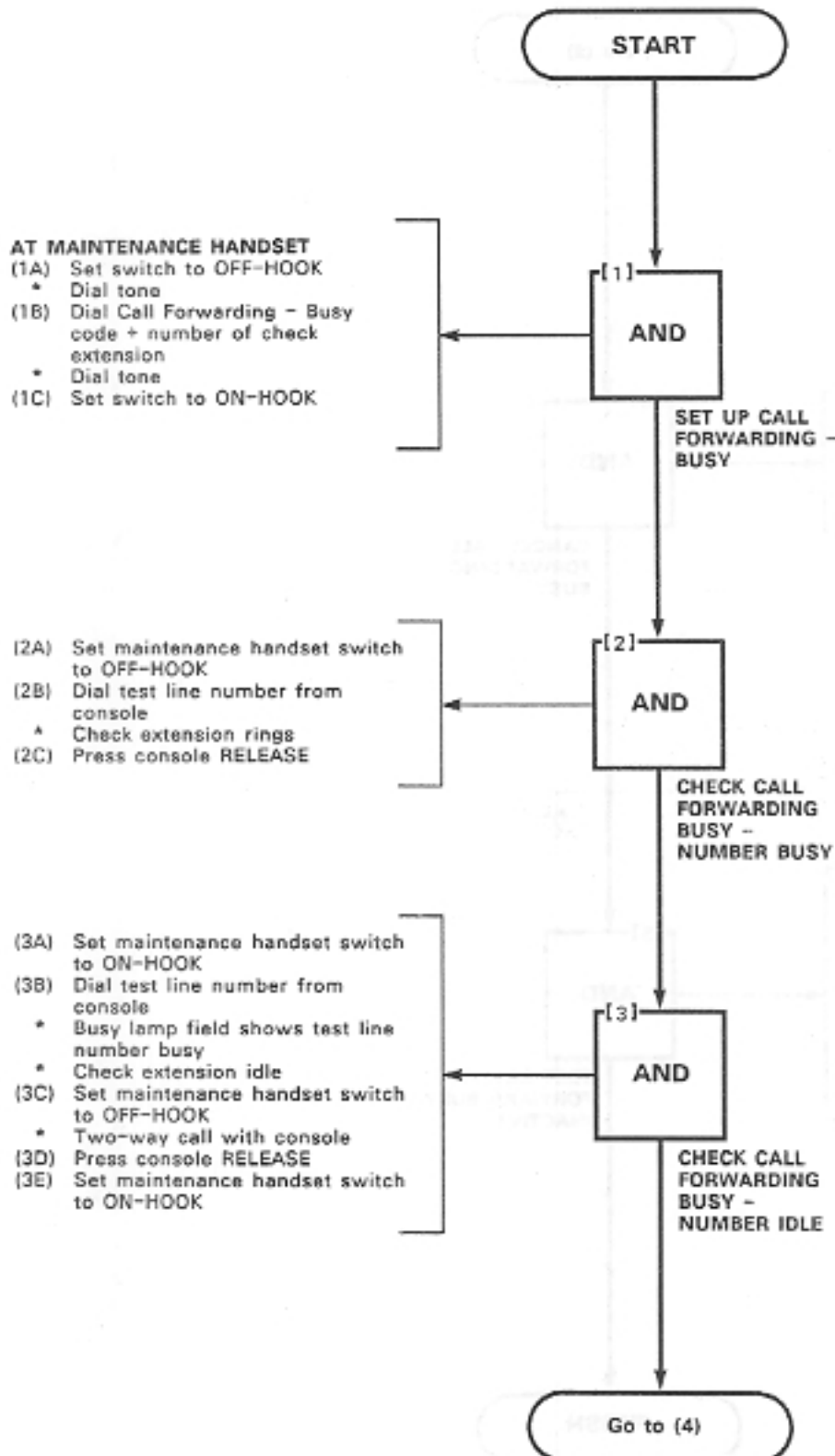


CALL FORWARDING - BUSY

MAP215-203

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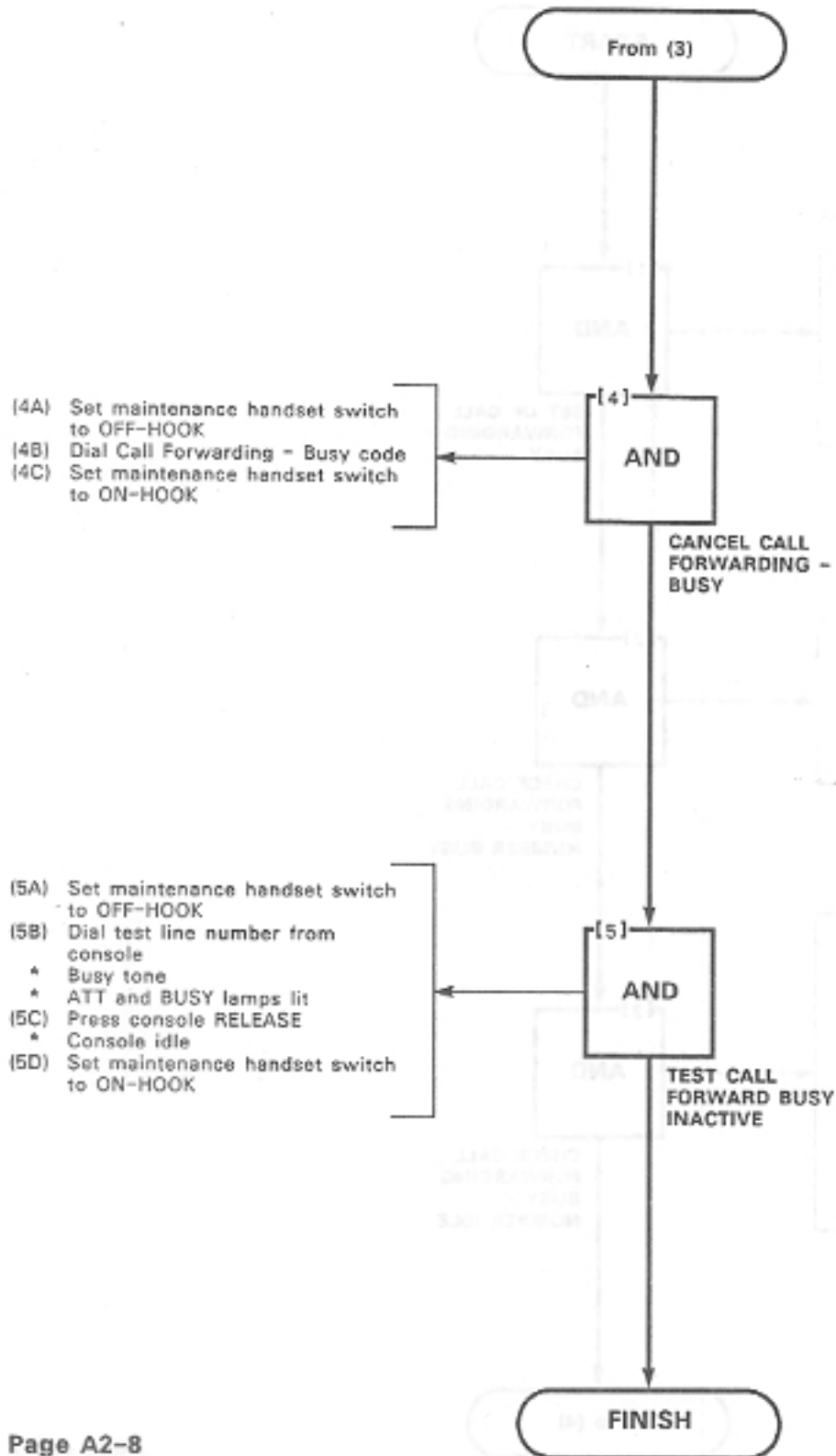


CALL FORWARDING - BUSY

MAP215- 203

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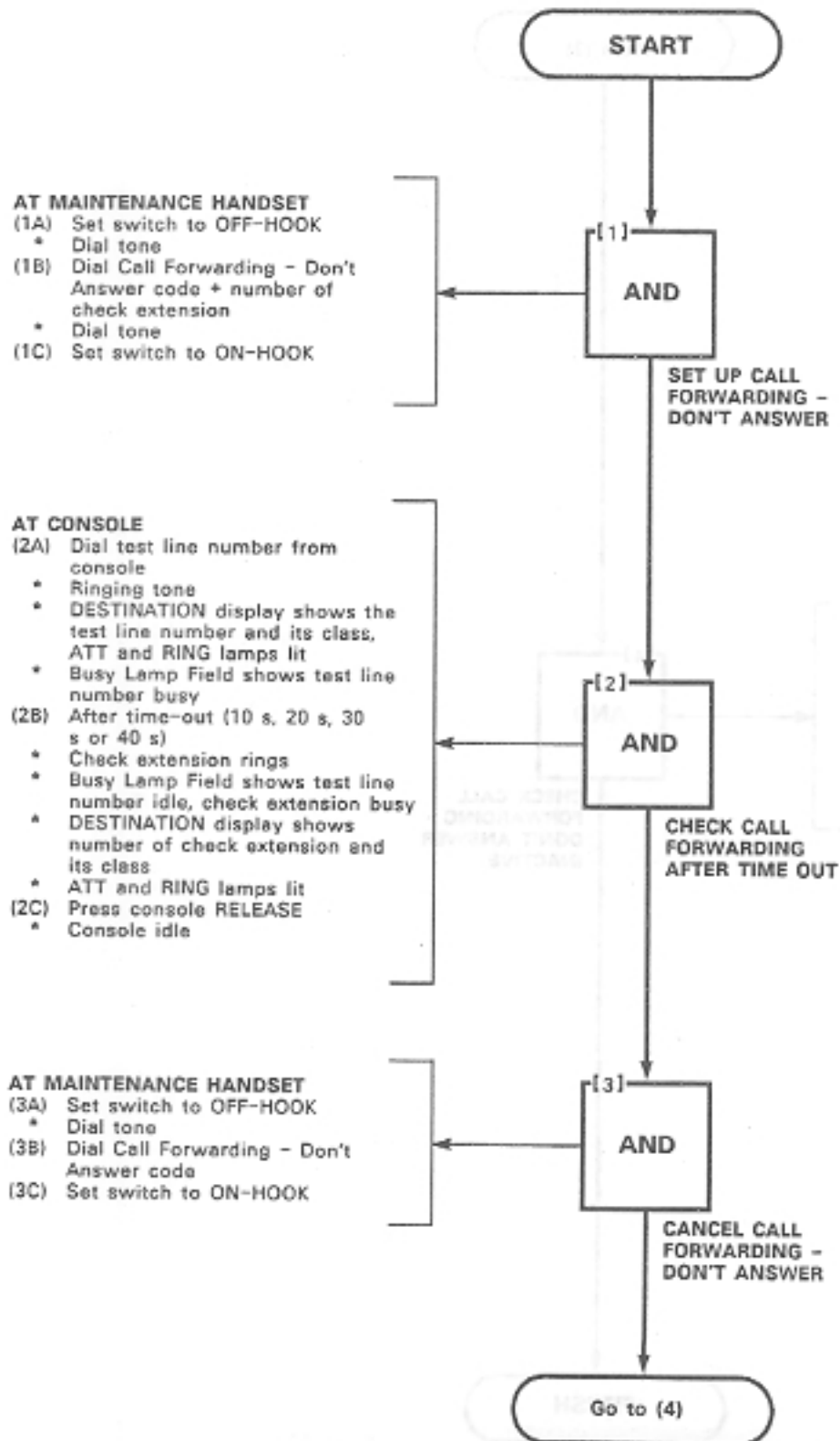


CALL FORWARDING - DON'T ANSWER

MAP215- 204

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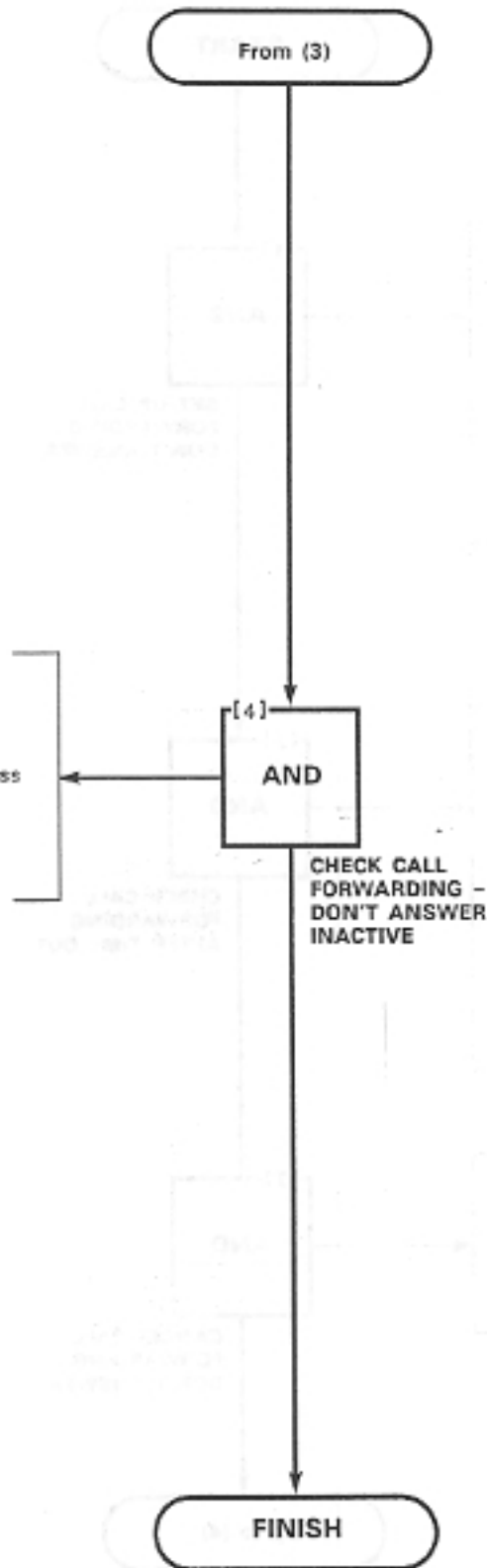
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|                                       |
|---------------------------------------|
| <b>CALL FORWARDING - DON'T ANSWER</b> |
| MAP215- 204                           |
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**AT CONSOLE**

- (4A) Dial test line number
  - \* Ringing tone
  - \* DESTINATION display shows number of test line and its class
  - \* ATT and RING lamps lit
- (4B) Wait 45 s - no change
- (4C) Press console RELEASE
  - \* Console idle

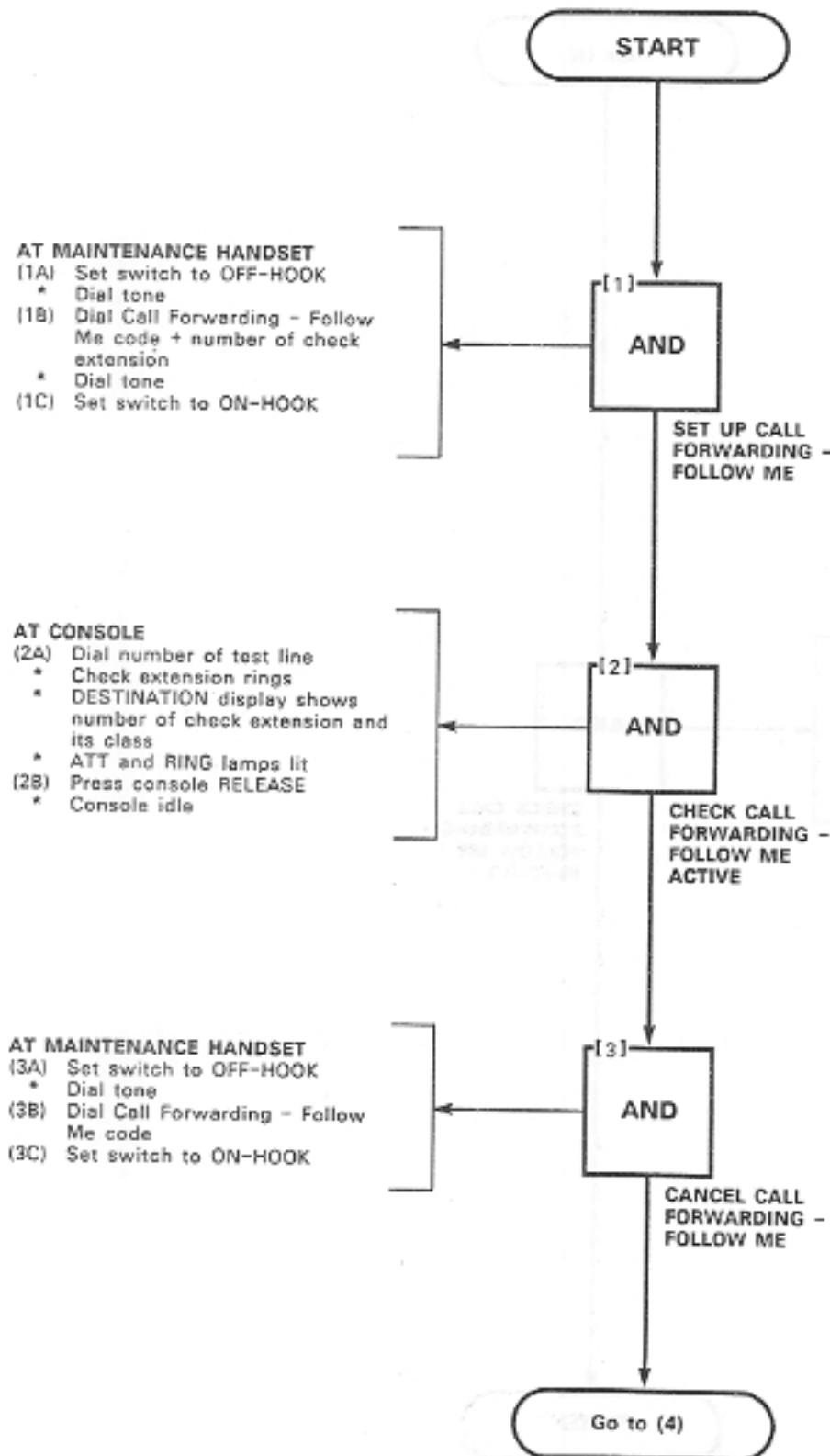


CALL FORWARDING - FOLLOW ME

MAP215-205

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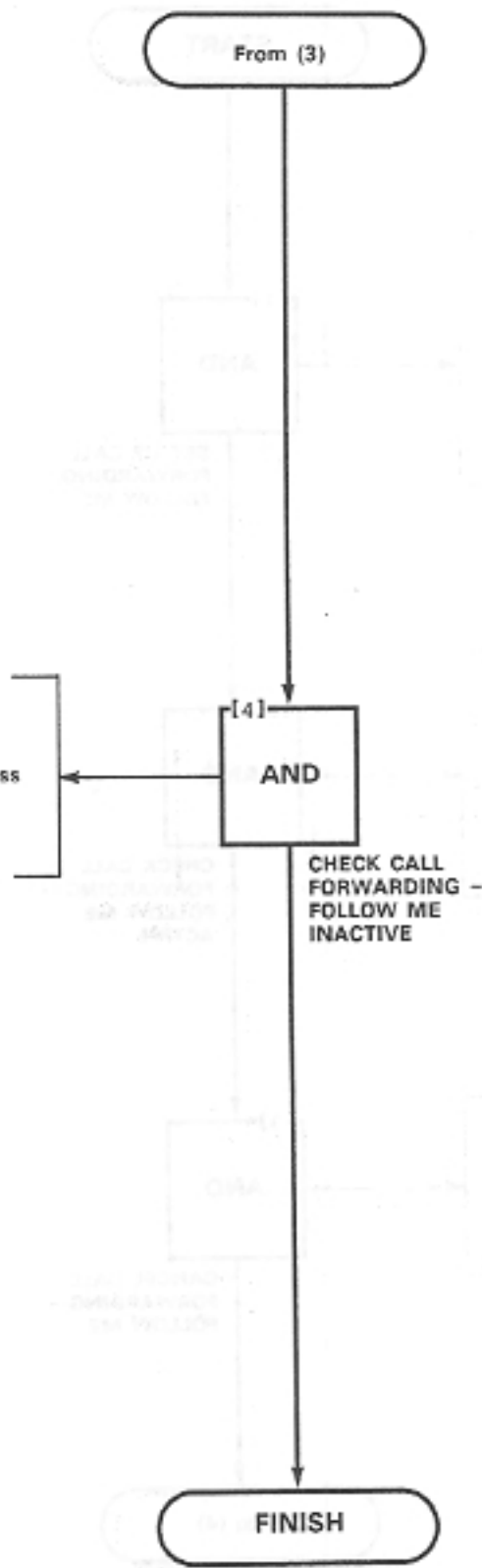
Sheet 1 of 2



|                             |
|-----------------------------|
| CALL FORWARDING - FOLLOW ME |
| MAP215- 205                 |
| Issue 1, December 1982      |
| Sheet 2 of 2                |

**AT CONSOLE**

- (4A) Dial test line number
- DESTINATION display shows number of test line and its class
  - ATT and RING lamps lit
- (4B) Press console RELEASE
- Console Idle

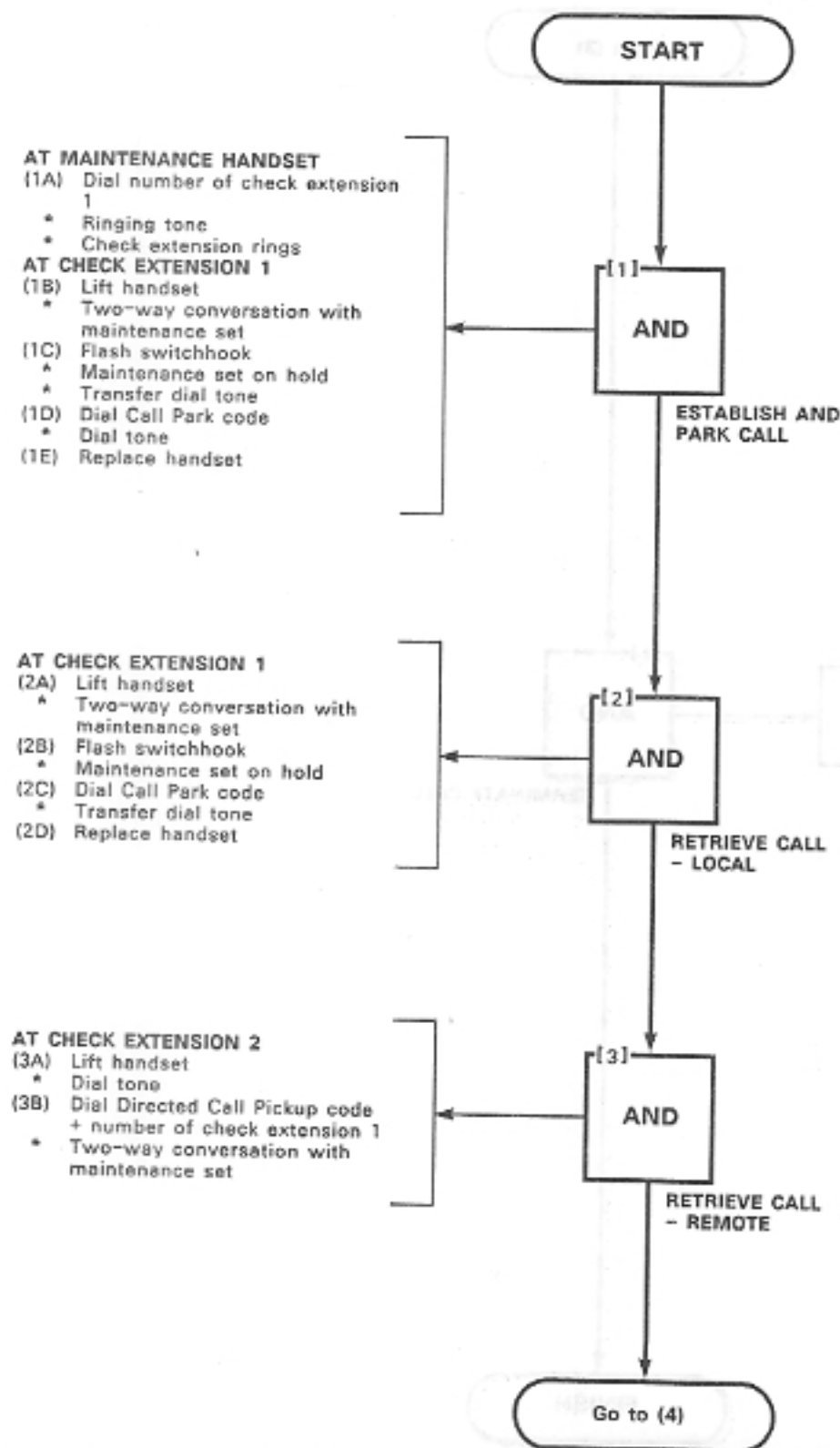


CALL PARK

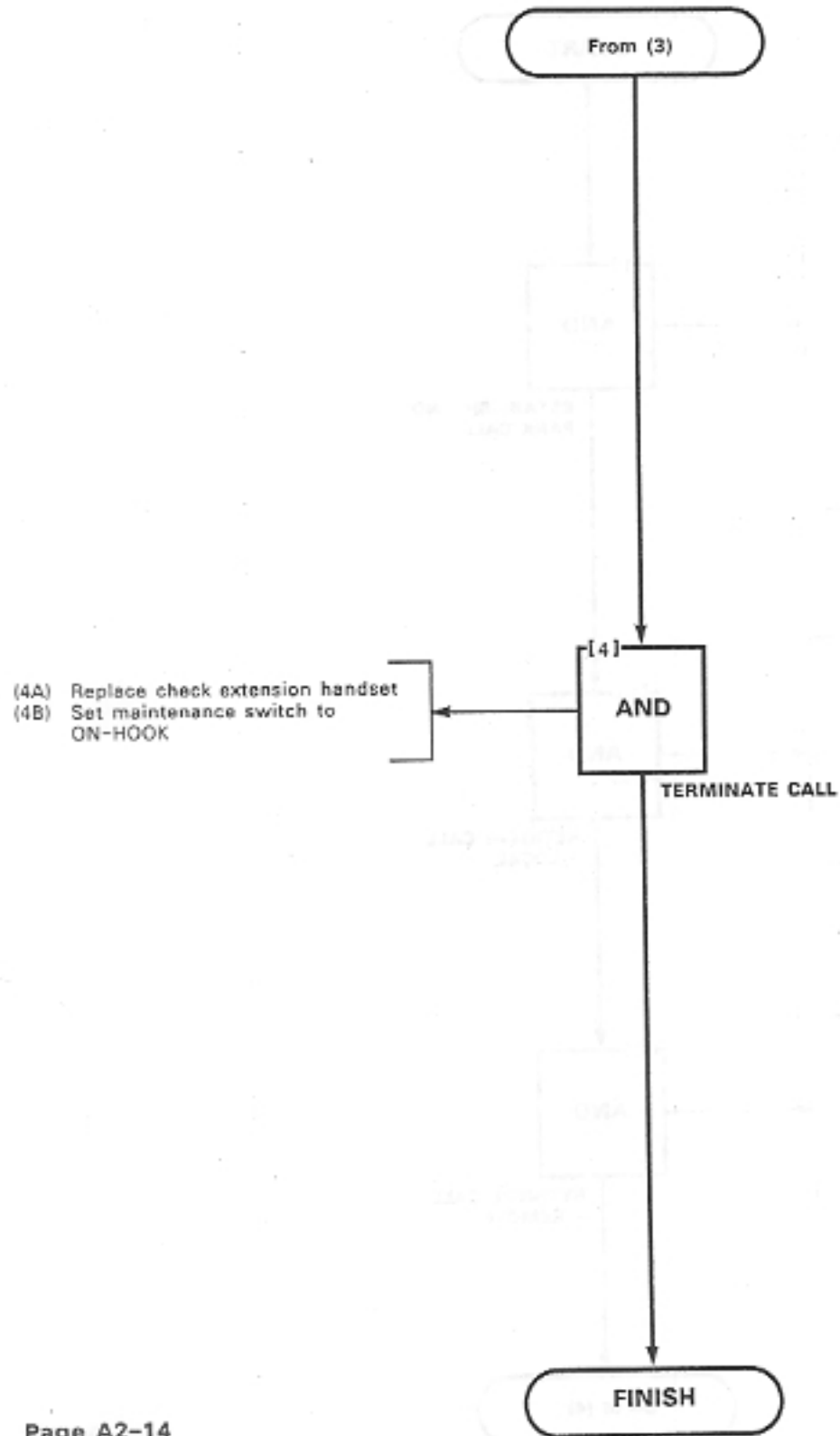
MAP215-206

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|                        |
|------------------------|
| CALL PARK              |
| MAP215- 206            |
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| Sheet 2 of 2           |



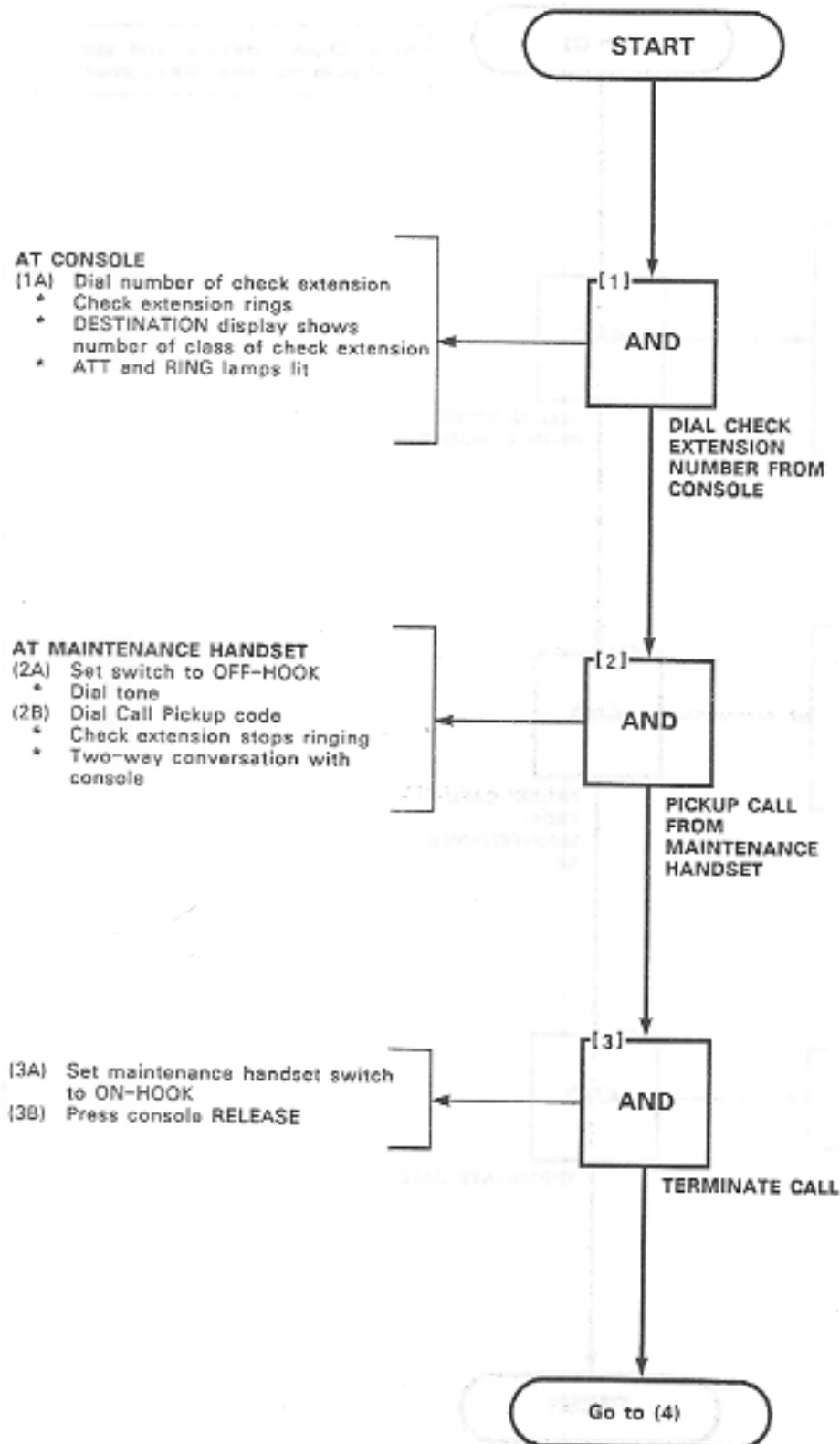


CALL PICKUP

MAP215- 207

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Sheet 1 of 2



|                        |
|------------------------|
| CALL PICKUP            |
| MAP215- 207            |
| Issue 1, December 1982 |
| Sheet 2 of 2           |

Note: Check extension and test line must be in the same Pickup group.

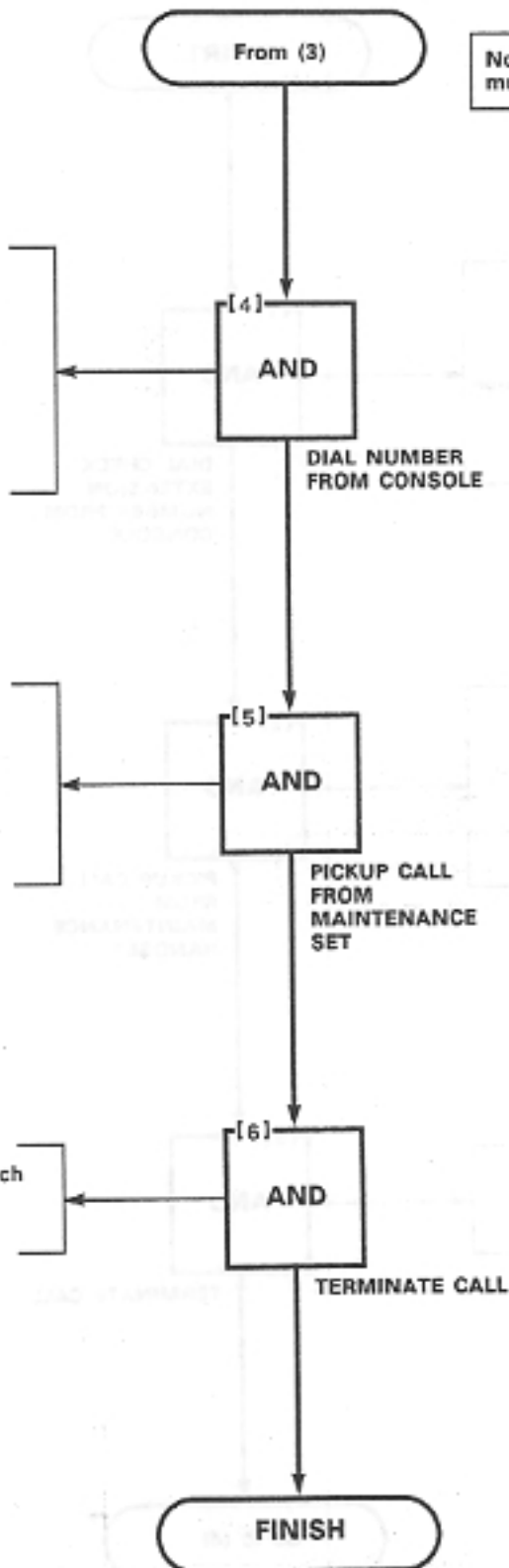
**AT CONSOLE**

- (4A) Dial number other than that of test line or check extension
- \* DESTINATION display shows number dialed and class of extension dialed
  - \* ATT and RING lamps lit
  - \* Busy Lamp Field shows called number busy

**AT MAINTENANCE HANDSET**

- (5A) Set switch to OFF-HOOK
- \* Dial tone
- (5B) Dial Directed Call Pickup code + number dialed in (4A)
- (5C) Two-way conversation with console

- (6A) Set maintenance handset switch to ON-HOOK
- (6B) Press console RELEASE

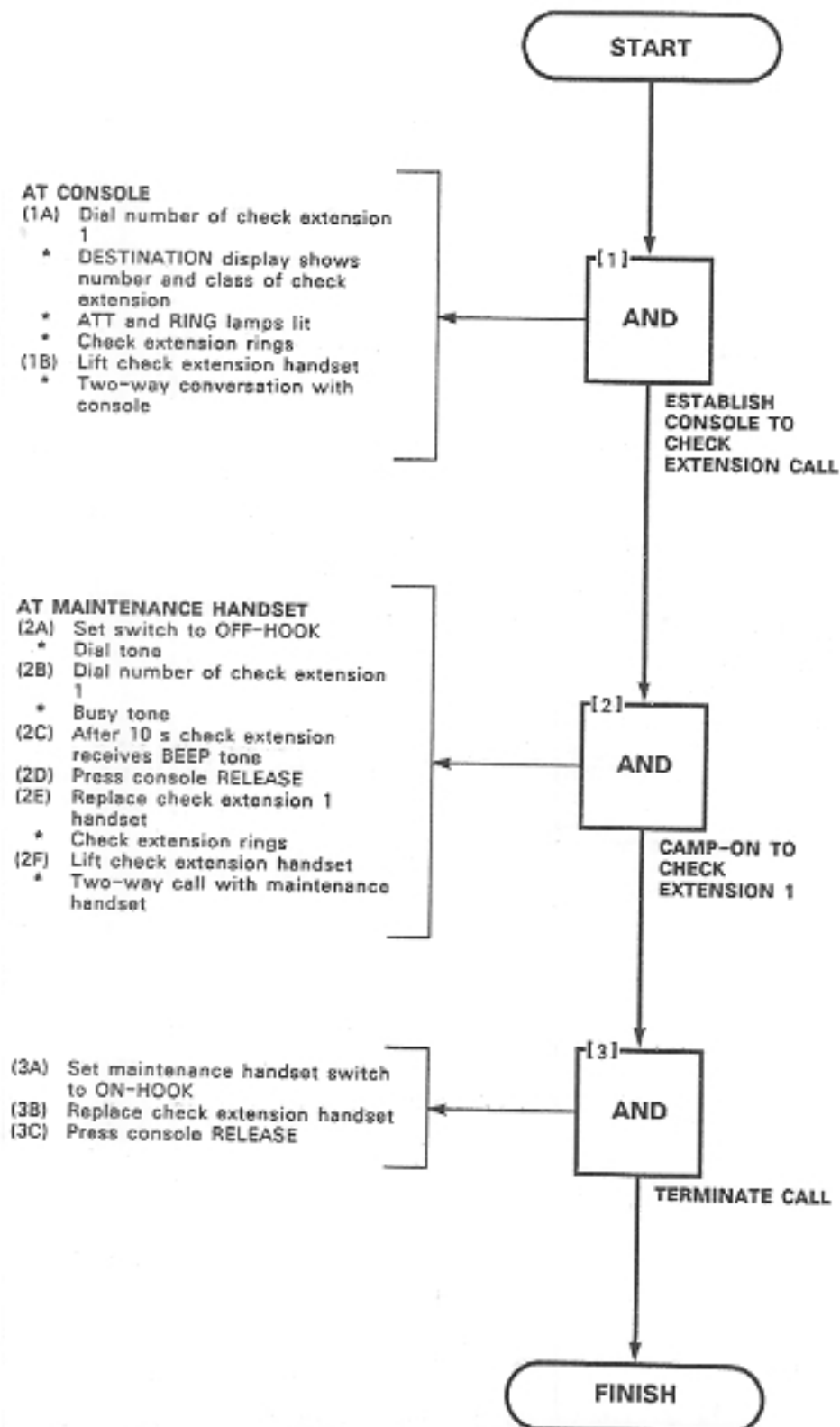


CAMP-ON

MAP215-208

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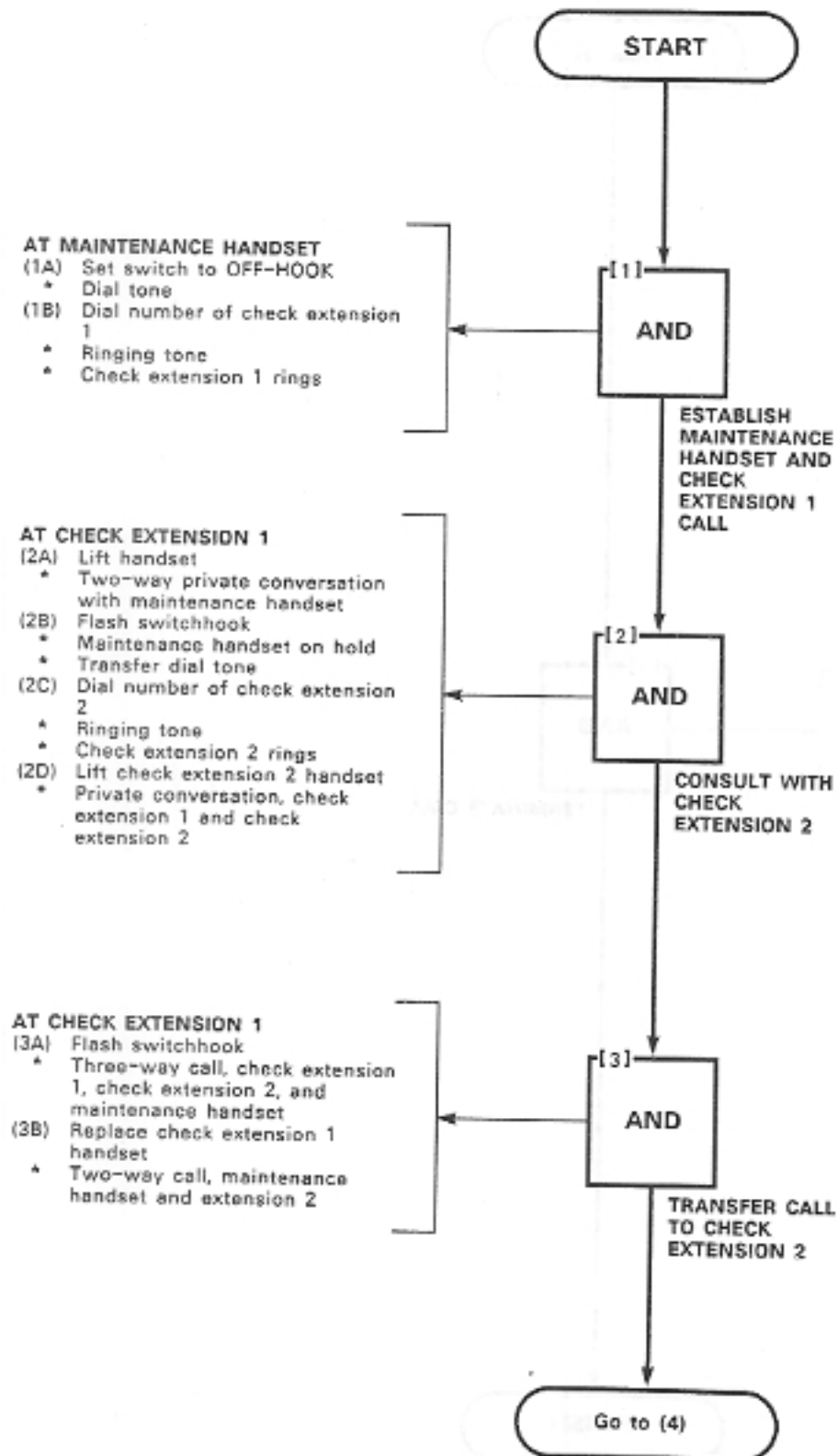


|                                      |
|--------------------------------------|
| CONSULTATION<br>HOLD/TRANSFER/ADD-ON |
|--------------------------------------|

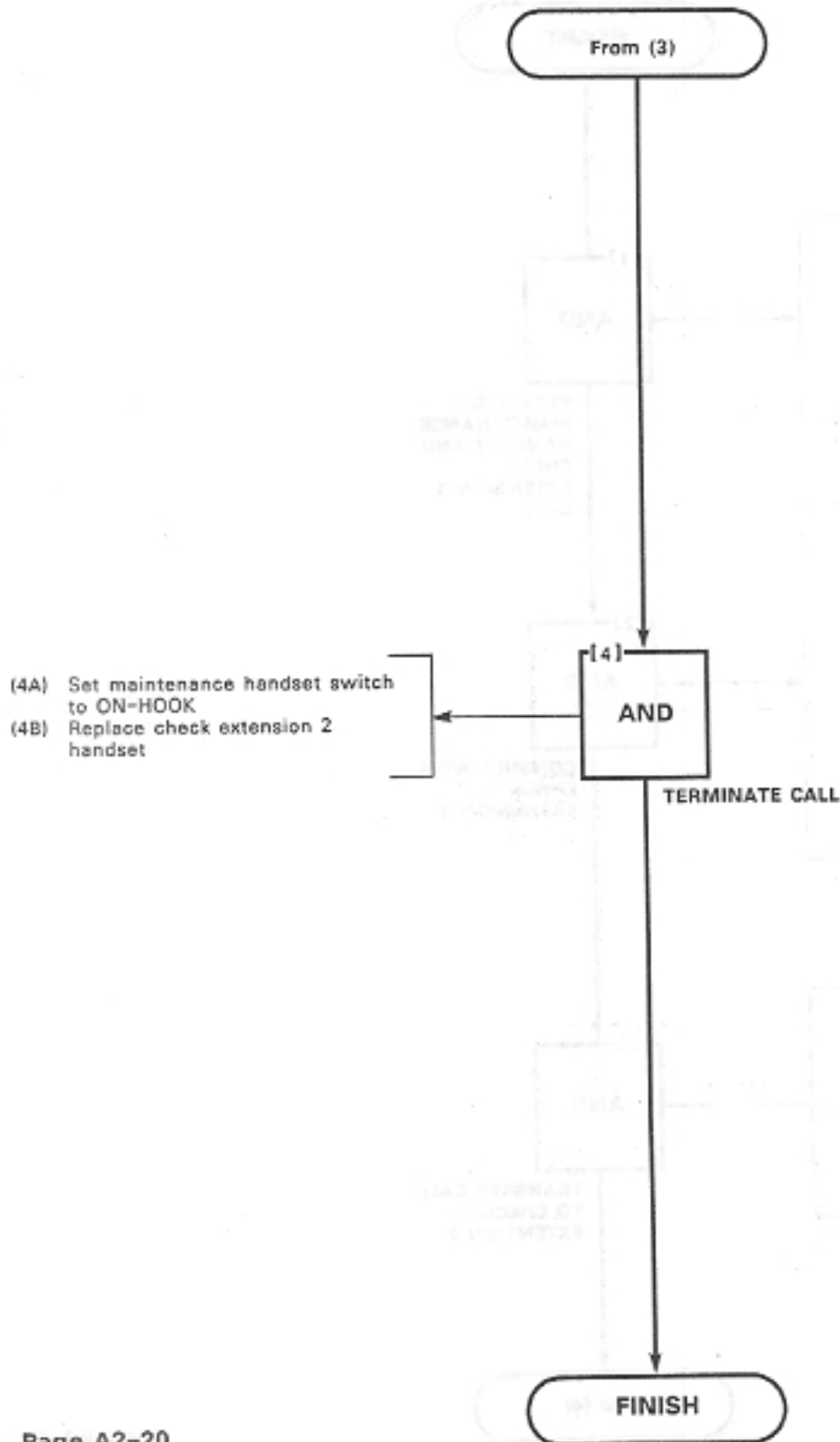
|            |
|------------|
| MAP215-209 |
|------------|

|                        |
|------------------------|
| Issue 1, December 1982 |
|------------------------|

|              |
|--------------|
| Sheet 1 of 2 |
|--------------|



|                        |              |
|------------------------|--------------|
| CONSULTATION           | PC: 11/25/82 |
| HOLD/TRANSFER/ADD-ON   | 1/27/83      |
| MAP200- 209            | 11/25/82     |
| Issue 1, December 1982 | 11/25/82     |
| Sheet 2 of 2           | 11/25/82     |

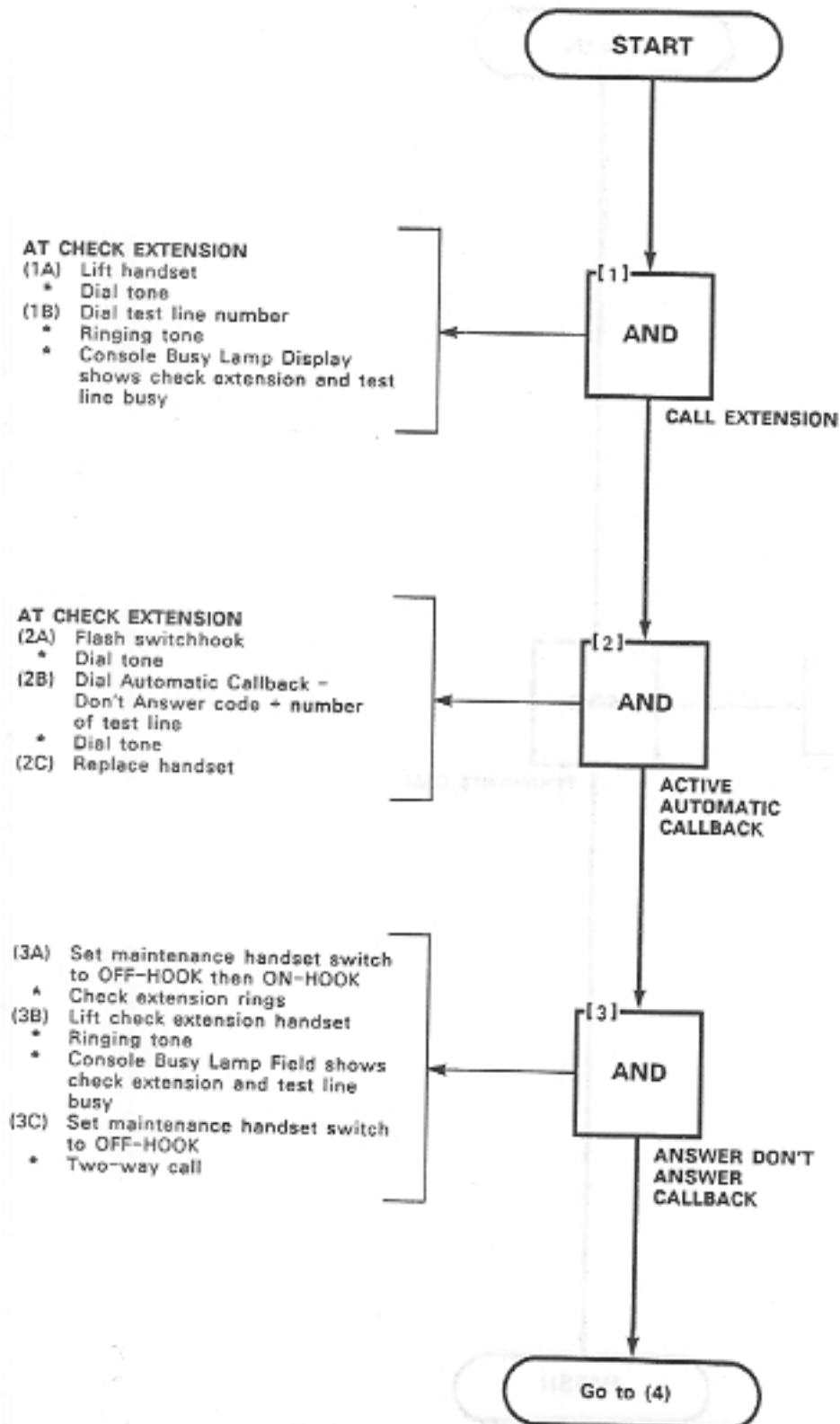


|                                   |
|-----------------------------------|
| AUTOMATIC CALLBACK - DON'T ANSWER |
|-----------------------------------|

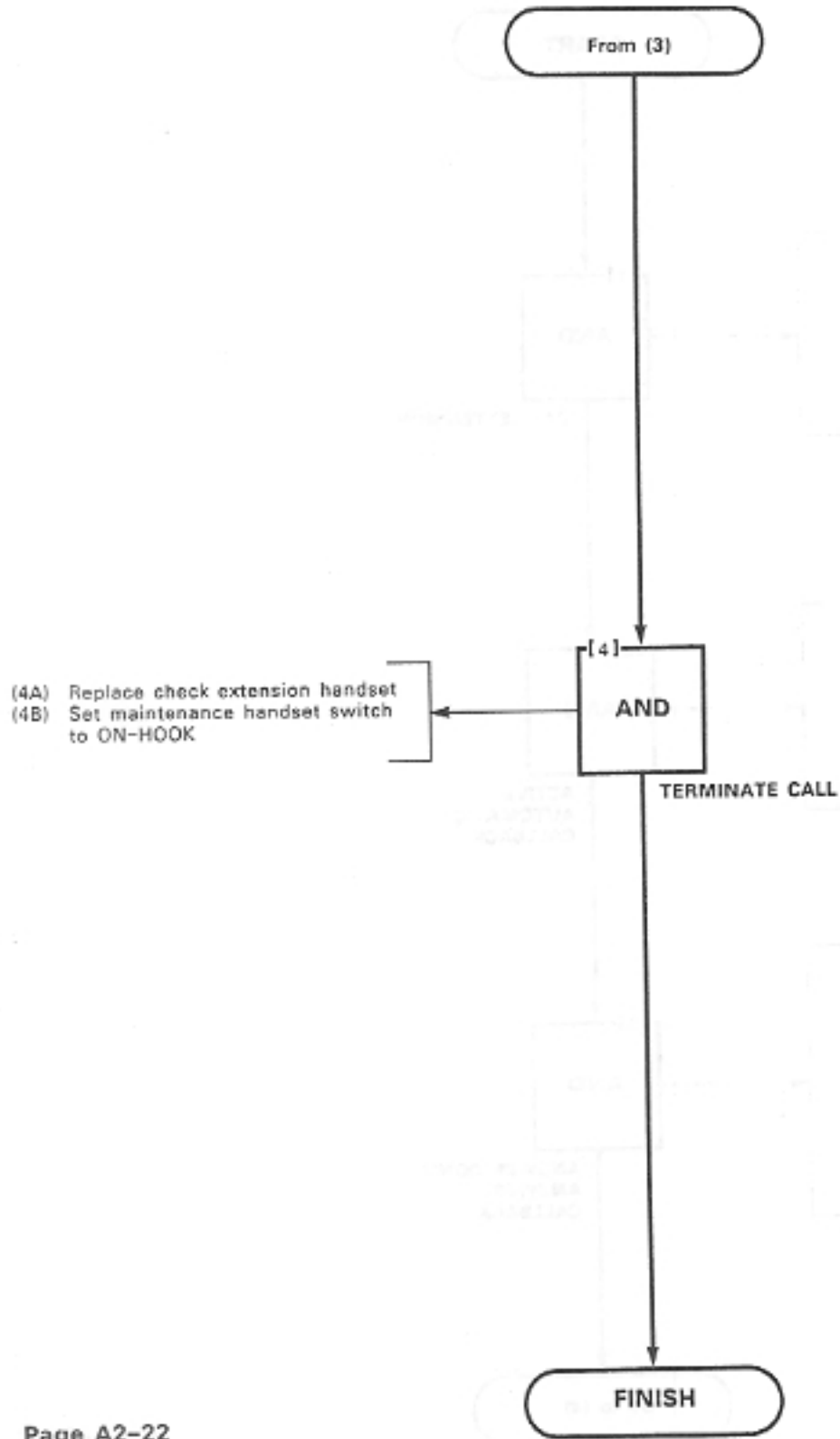
|            |
|------------|
| MAP215-210 |
|------------|

|                        |
|------------------------|
| Issue 1, December 1982 |
|------------------------|

|              |
|--------------|
| Sheet 1 of 2 |
|--------------|



|                                   |
|-----------------------------------|
| AUTOMATIC CALLBACK - DON'T ANSWER |
| MAP200- 210                       |
| Issue 1, December 1982            |
| Sheet 2 of 2                      |



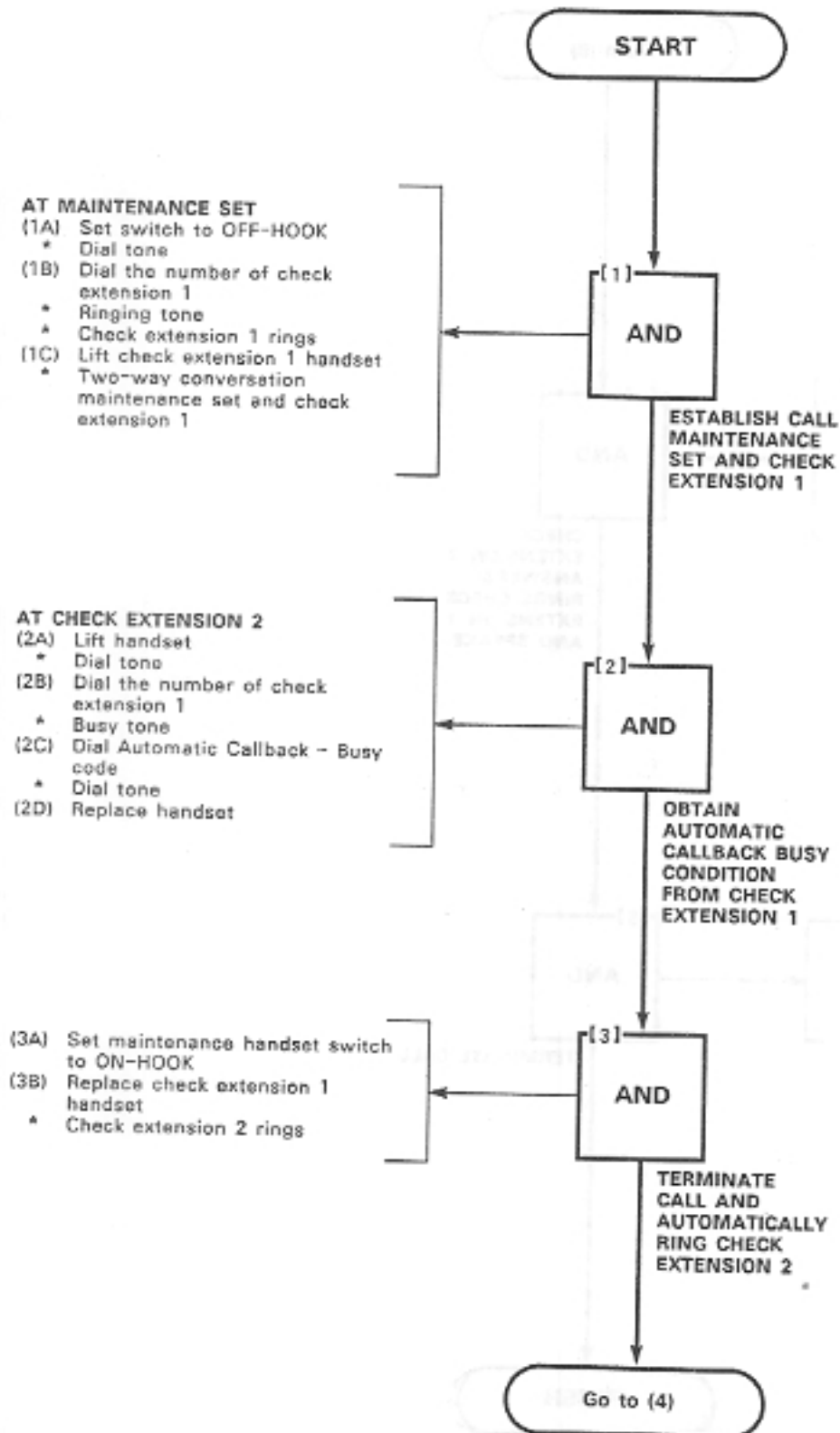


AUTOMATIC CALLBACK - BUSY

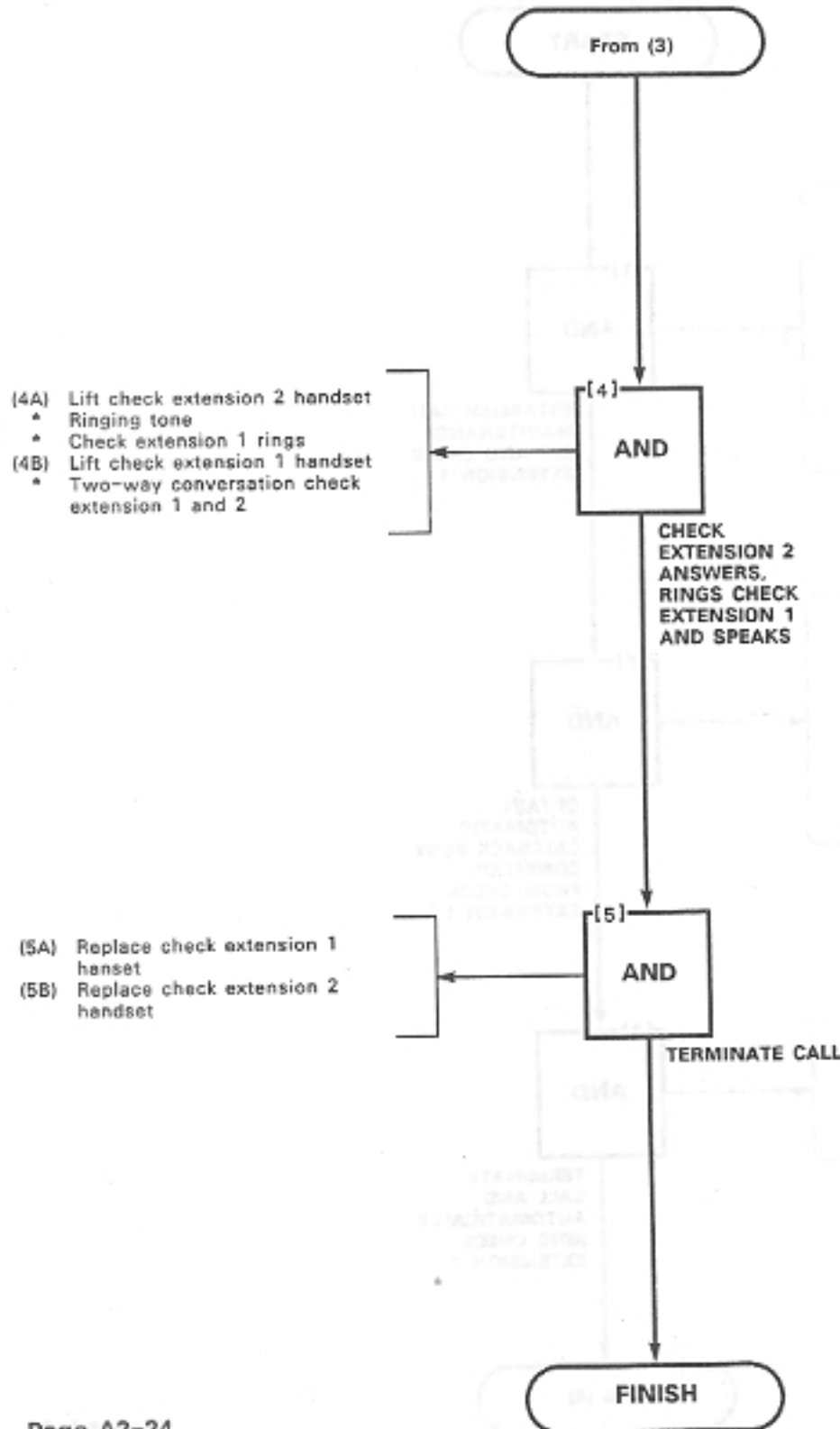
MAP215-211

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|                           |
|---------------------------|
| AUTOMATIC CALLBACK - BUSY |
| MAP215- 211               |
| Issue 1, December 1982    |
| Sheet 2 of 2              |

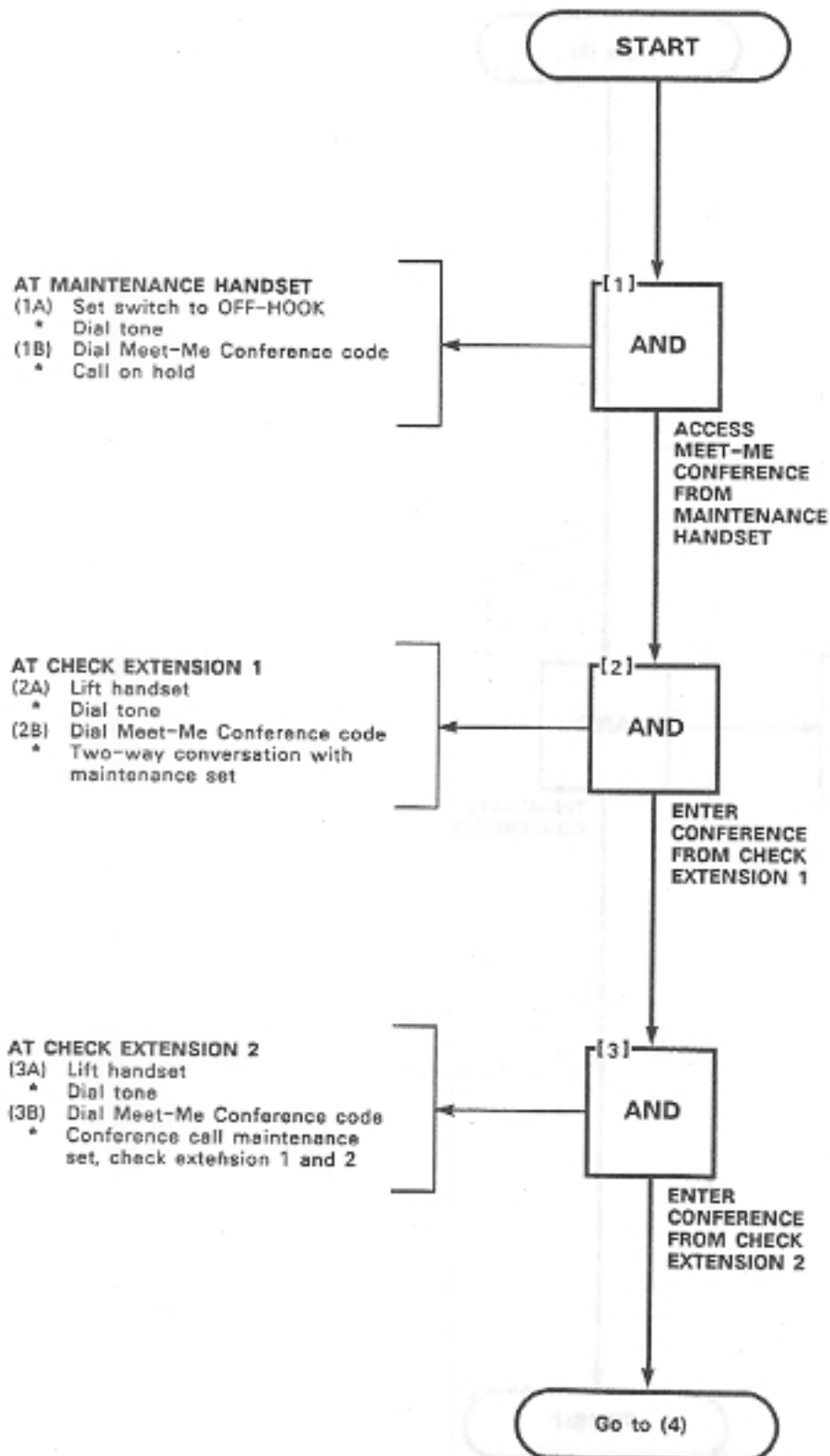


MEET-ME CONFERENCE

MAP215-212

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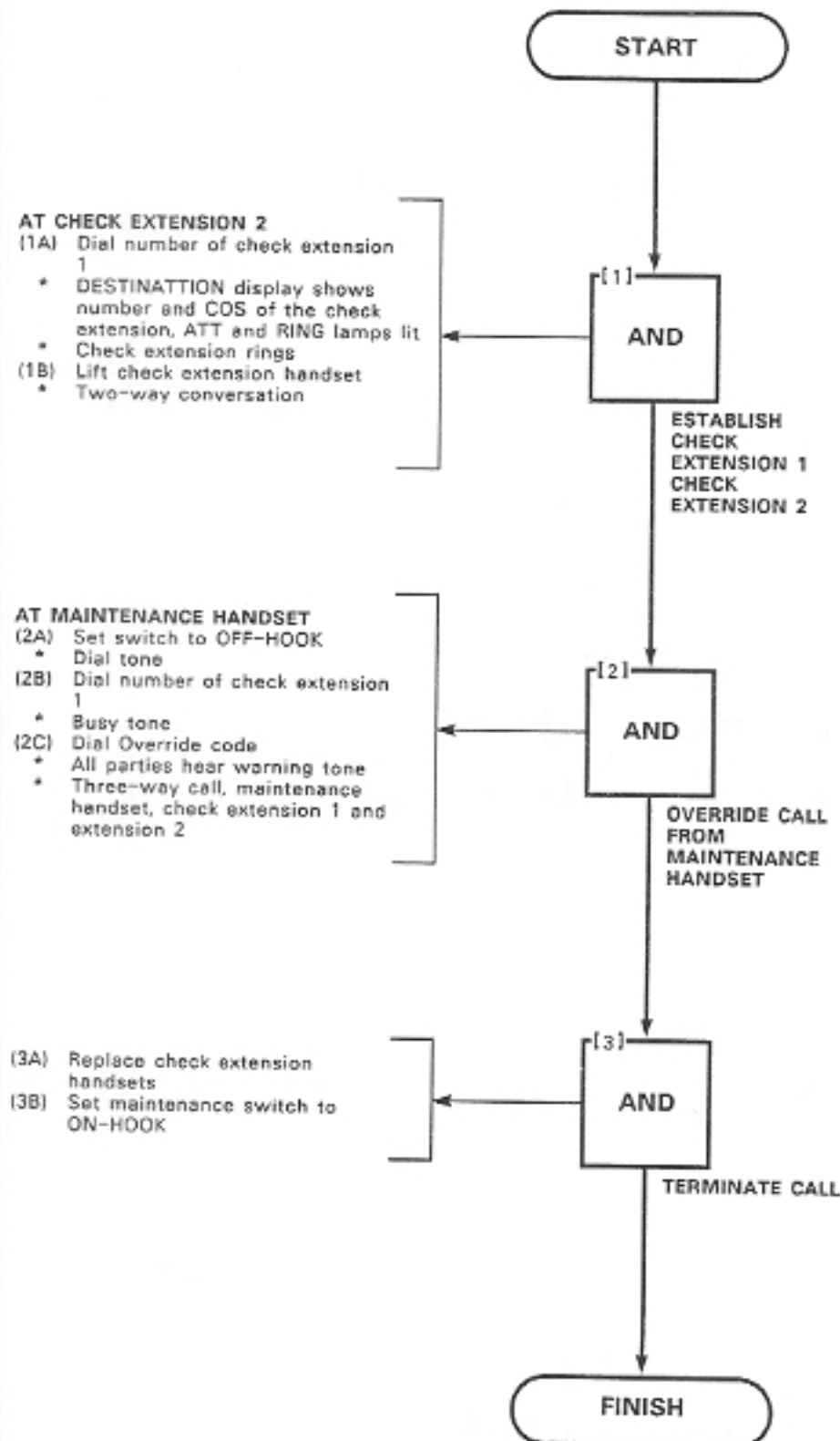


EXECUTIVE BUSY OVERRIDE

MAP215-213

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Sheet 1 of 1



|                       |               |
|-----------------------|---------------|
| FORM NO. 100-375-4884 | REV. 11-19-60 |
| TEST PROCEDURE        |               |
| TEST PROCEDURE        |               |
| TEST PROCEDURE        |               |

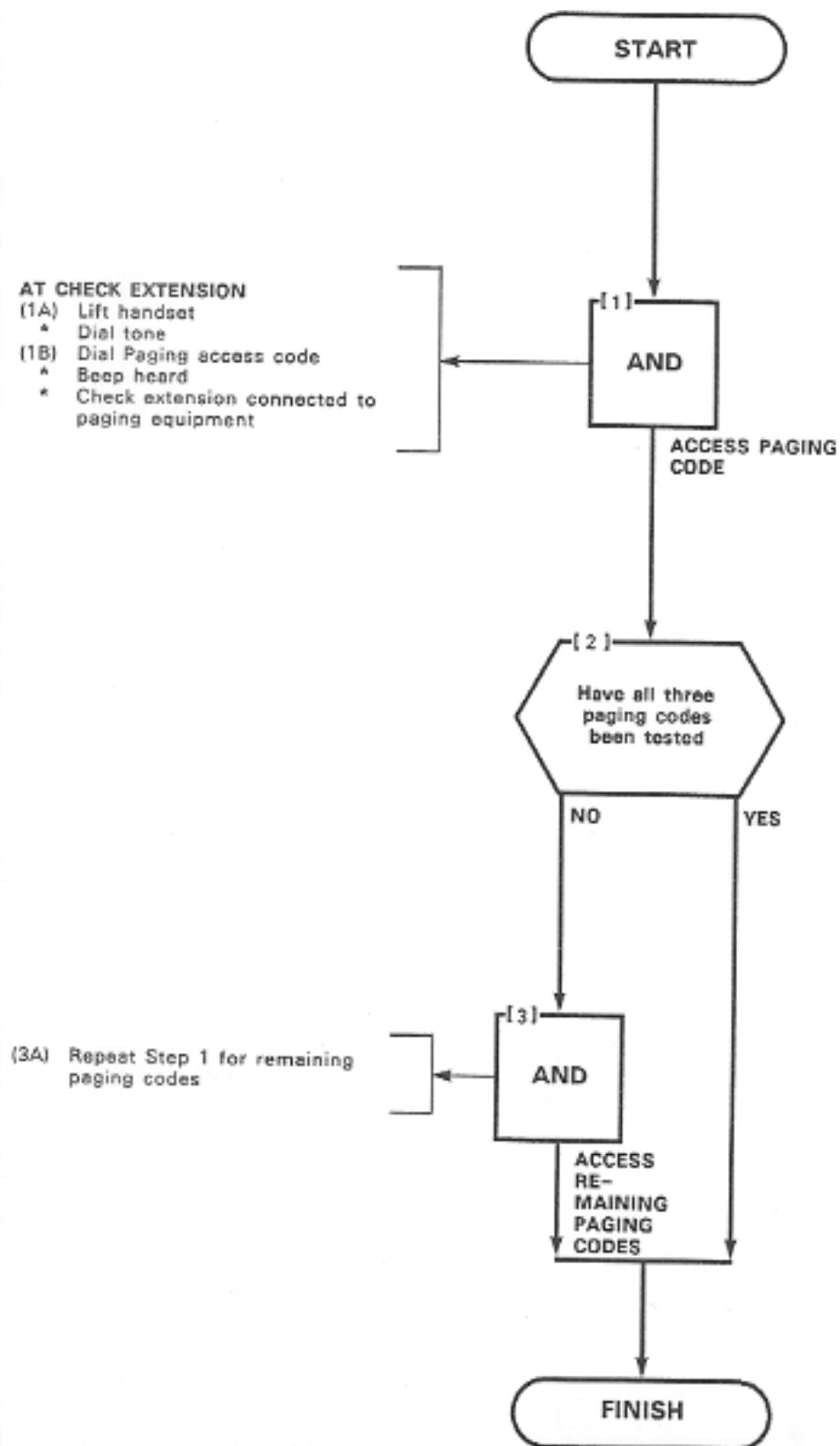


PAGING

MAP215-214

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DO NOT DISTURB

MAP215-215

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Sheet 1 of 2

## AT CHECK EXTENSION

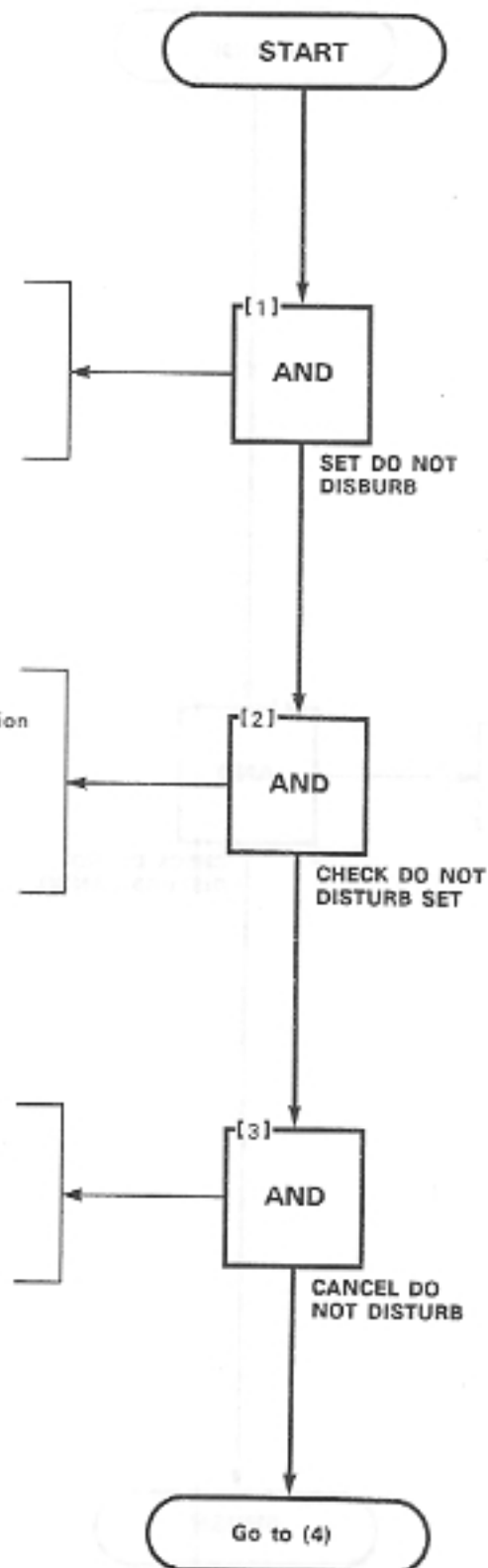
- (1A) Lift handset  
 \* Dial tone  
 (1B) Dial Do Not Disturb access  
 code + 1  
 \* Dial Tone

## FROM THE CONSOLE

- (2A) Dial check extension. Destination  
 shows:  
 \* Extension number  
 \* ATT lamp lit  
 \* ERR lamp lit  
 DO NOT DSTB lamp flashes  
 (2B) Press RELEASE

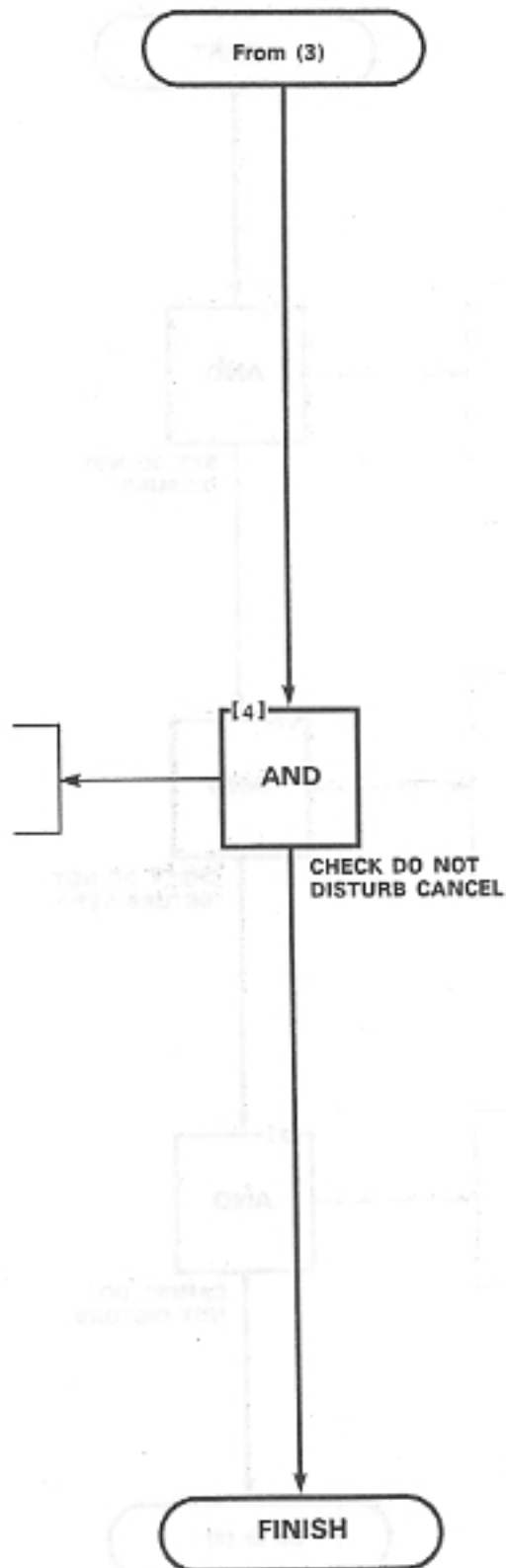
## AT CHECK EXTENSION

- (3A) Lift handset  
 \* Dial tone  
 (3B) Dial Do Not Disturb access  
 code + 2  
 \* Dial tone



|                        |
|------------------------|
| DO NOT DISTURB         |
| MAP215- 215            |
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| Sheet 2 of 2           |

FROM THE CONSOLE  
(4A) Dial check extension  
\* Check extension rings

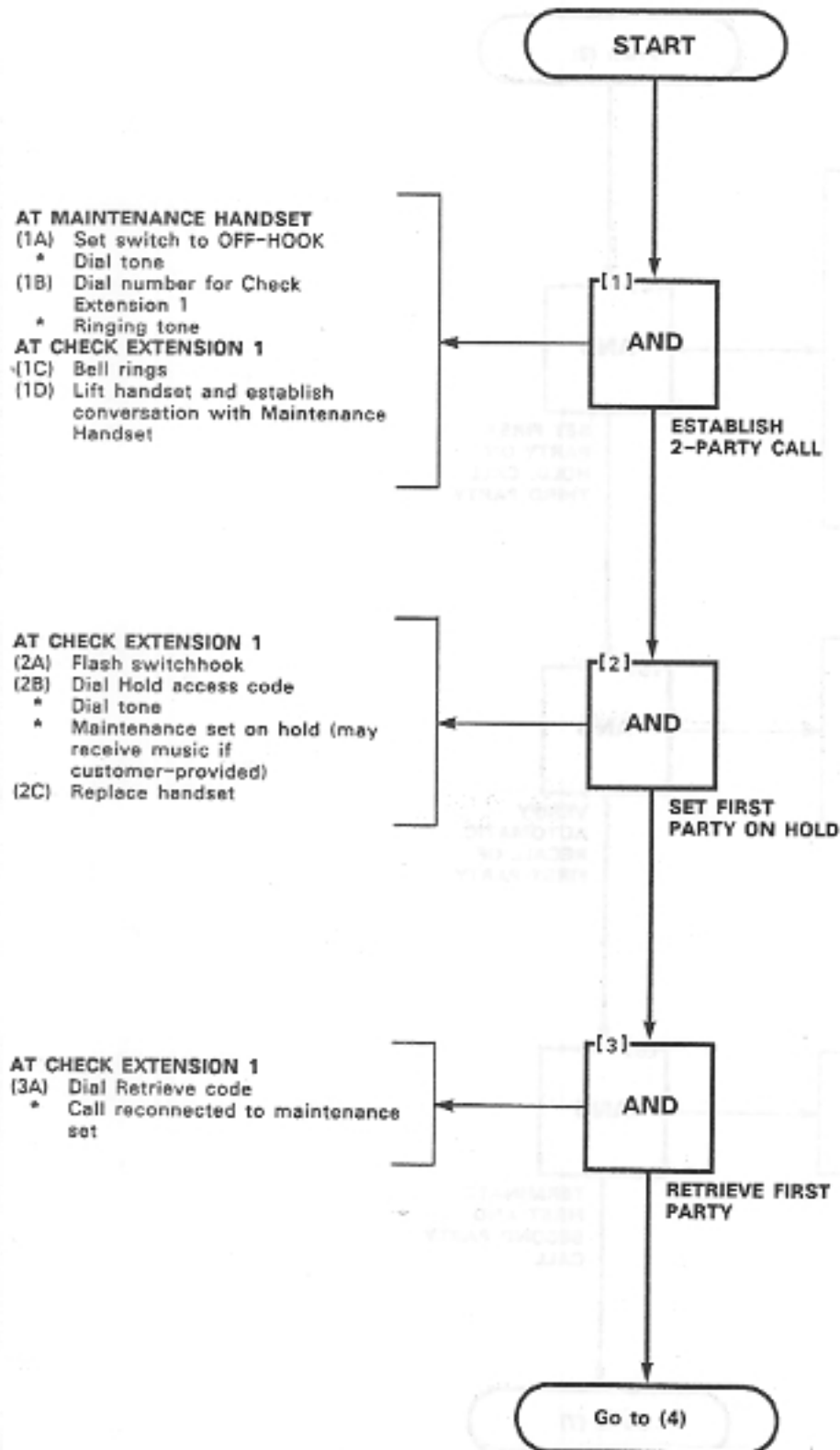


CALL HOLD

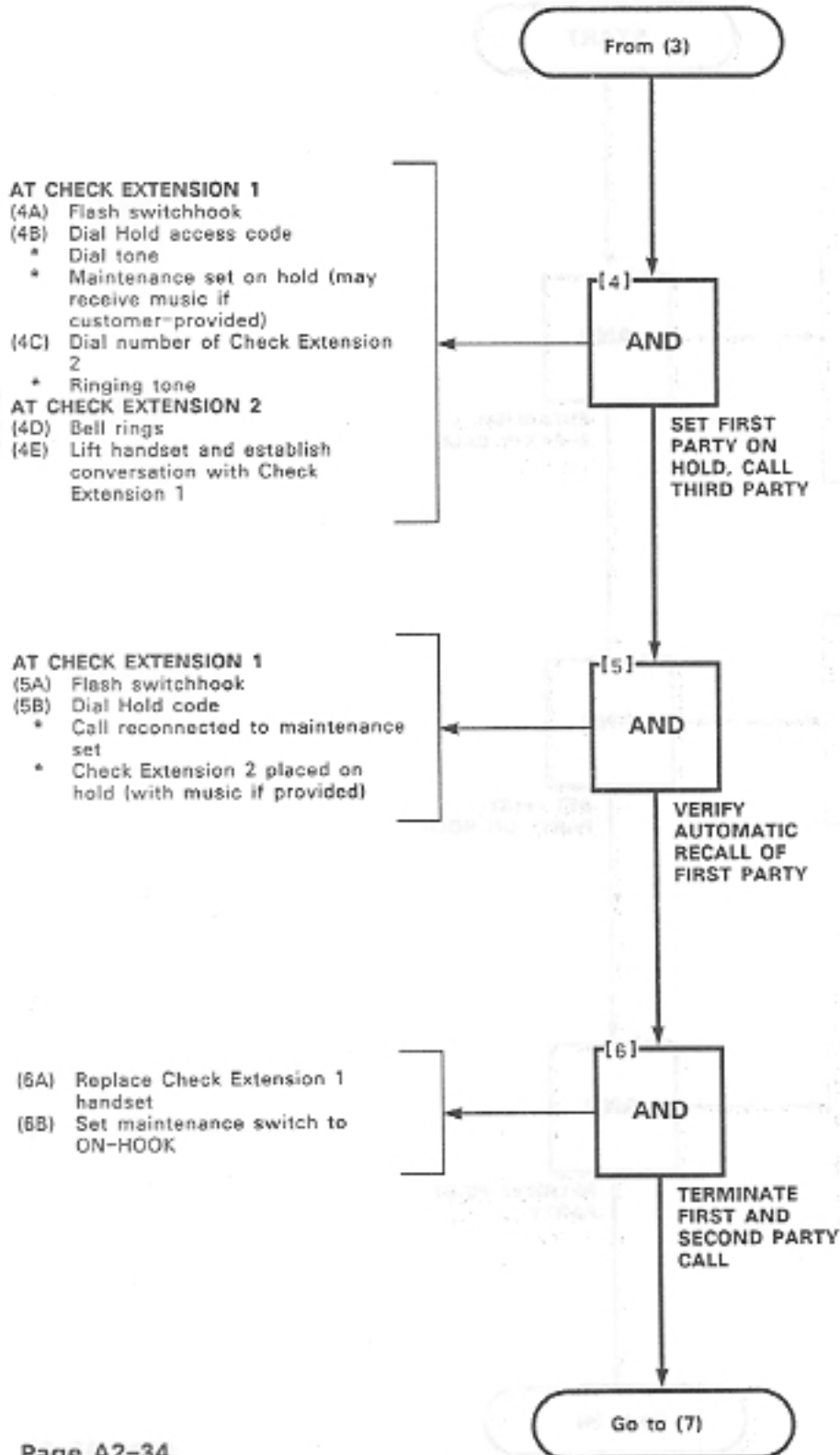
MAP215-216

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Sheet 1 of 4



|                        |
|------------------------|
| CALL HOLD              |
| MAP215-216             |
| Issue 1, December 1982 |
| Sheet 2 of 4           |

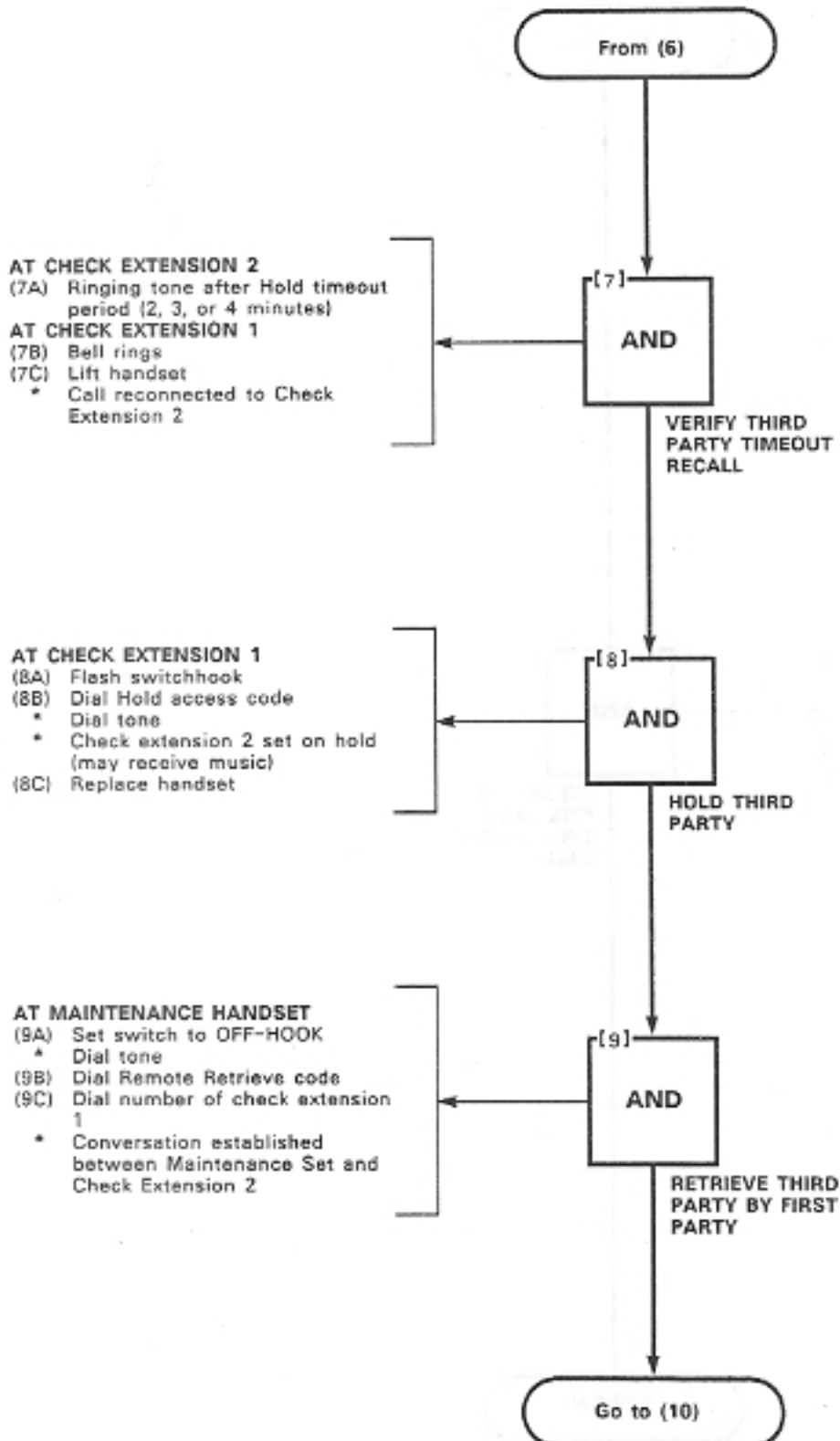


CALL HOLD

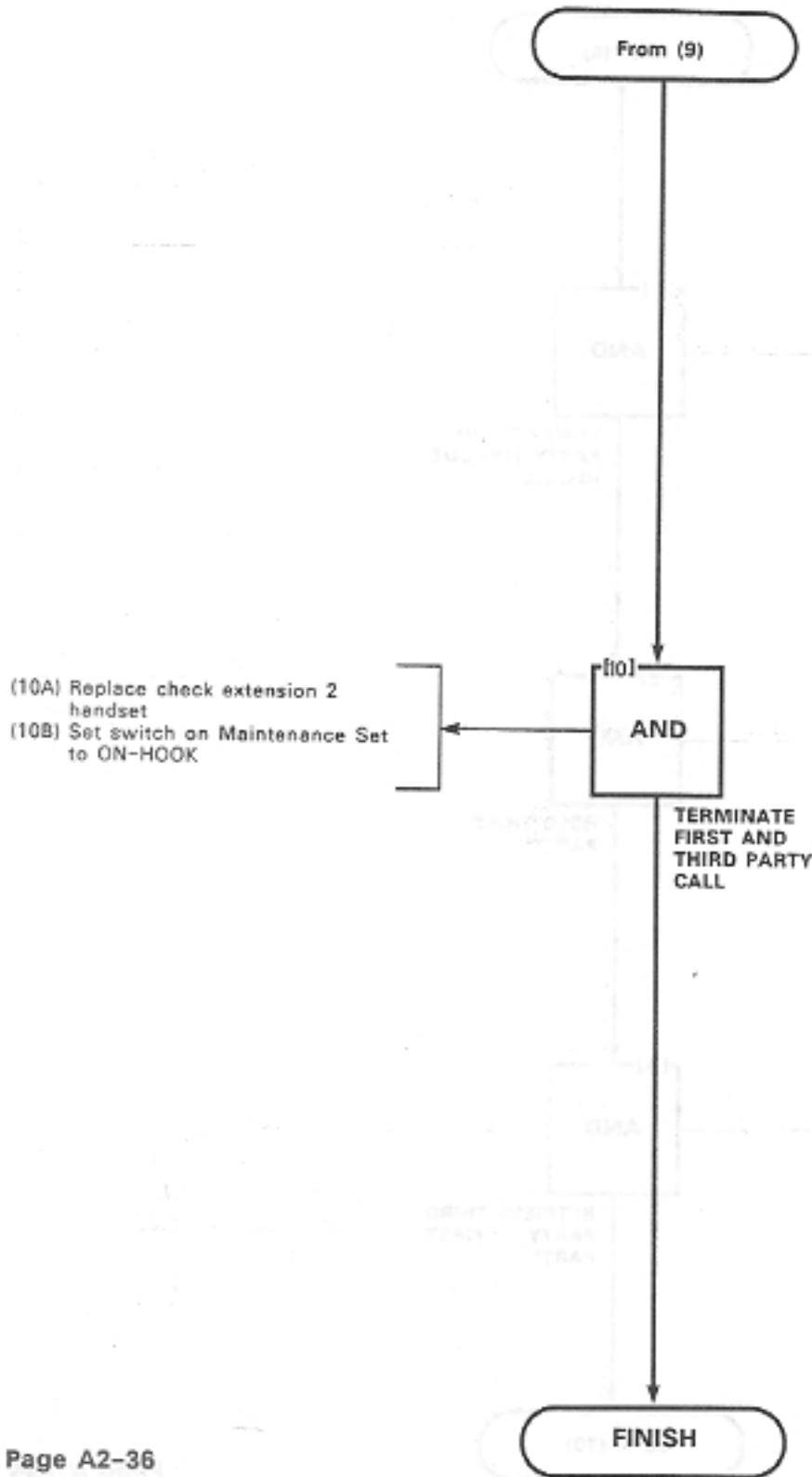
MAP215-216

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|                        |
|------------------------|
| CALL HOLD              |
| MAP215- 216            |
| Issue 1, December 1982 |
| Sheet 4 of 4           |



ROOM STATUS

MAP215- 217

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Sheet 1 of 1

## SYNOPSIS

The maid may update the Room Status from the room.

## AT CHECK EXTENSION

- (1A) Lift handset  
 \* Dial tone  
 (1B) Dial Room Status access code  
 + Maid code (Table 217-1)

## AT CONSOLE

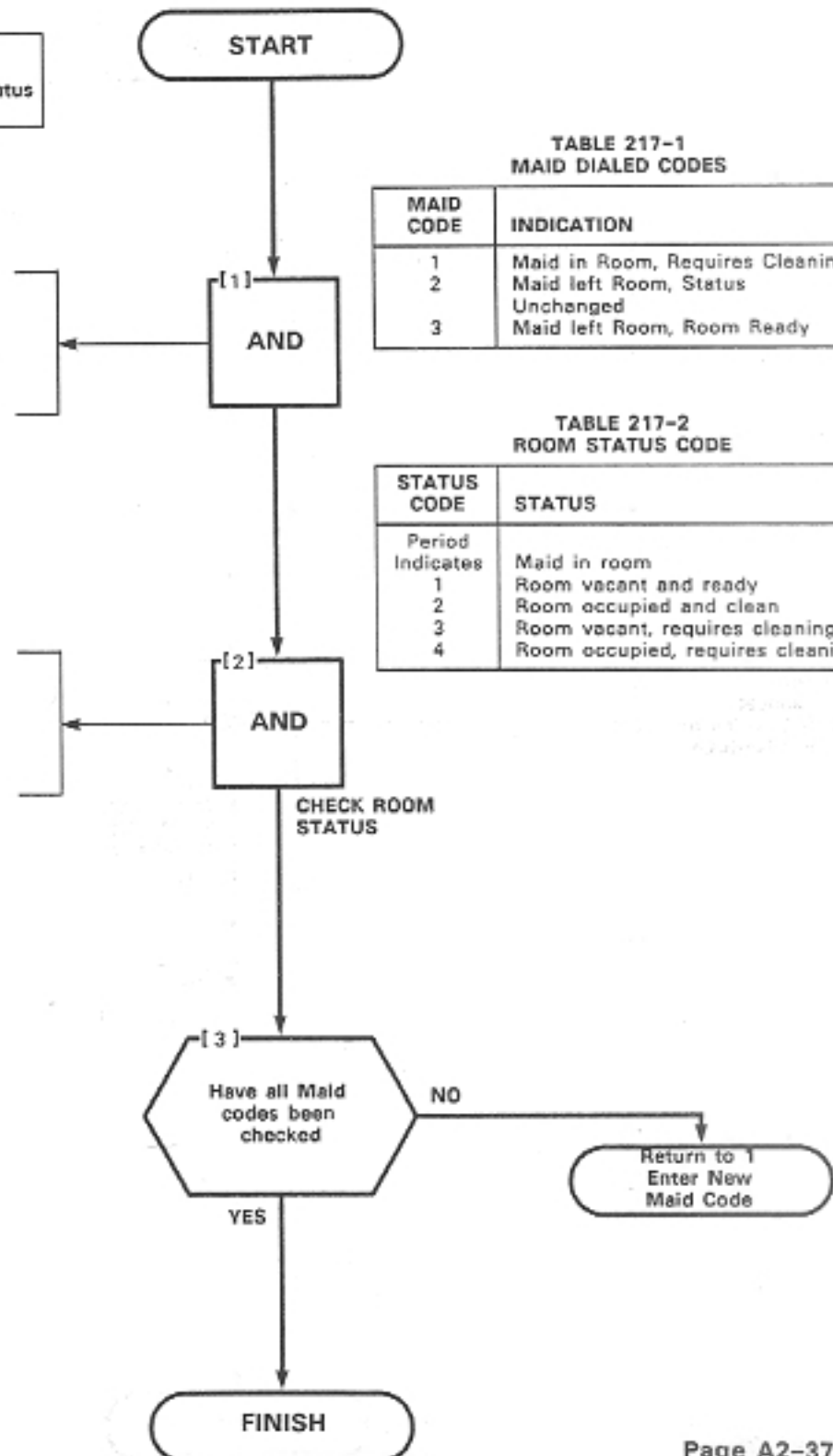
- (2A) Press GUEST ROOM  
 (2B) Dial Check Extension.  
 Destination display shows numbers as in Table 217-2

TABLE 217-1  
MAID DIALED CODES

| MAID CODE | INDICATION                       |
|-----------|----------------------------------|
| 1         | Maid in Room, Requires Cleaning  |
| 2         | Maid left Room, Status Unchanged |
| 3         | Maid left Room, Room Ready       |

TABLE 217-2  
ROOM STATUS CODE

| STATUS CODE      | STATUS                           |
|------------------|----------------------------------|
| Period Indicates | Maid in room                     |
| 1                | Room vacant and ready            |
| 2                | Room occupied and clean          |
| 3                | Room vacant, requires cleaning   |
| 4                | Room occupied, requires cleaning |





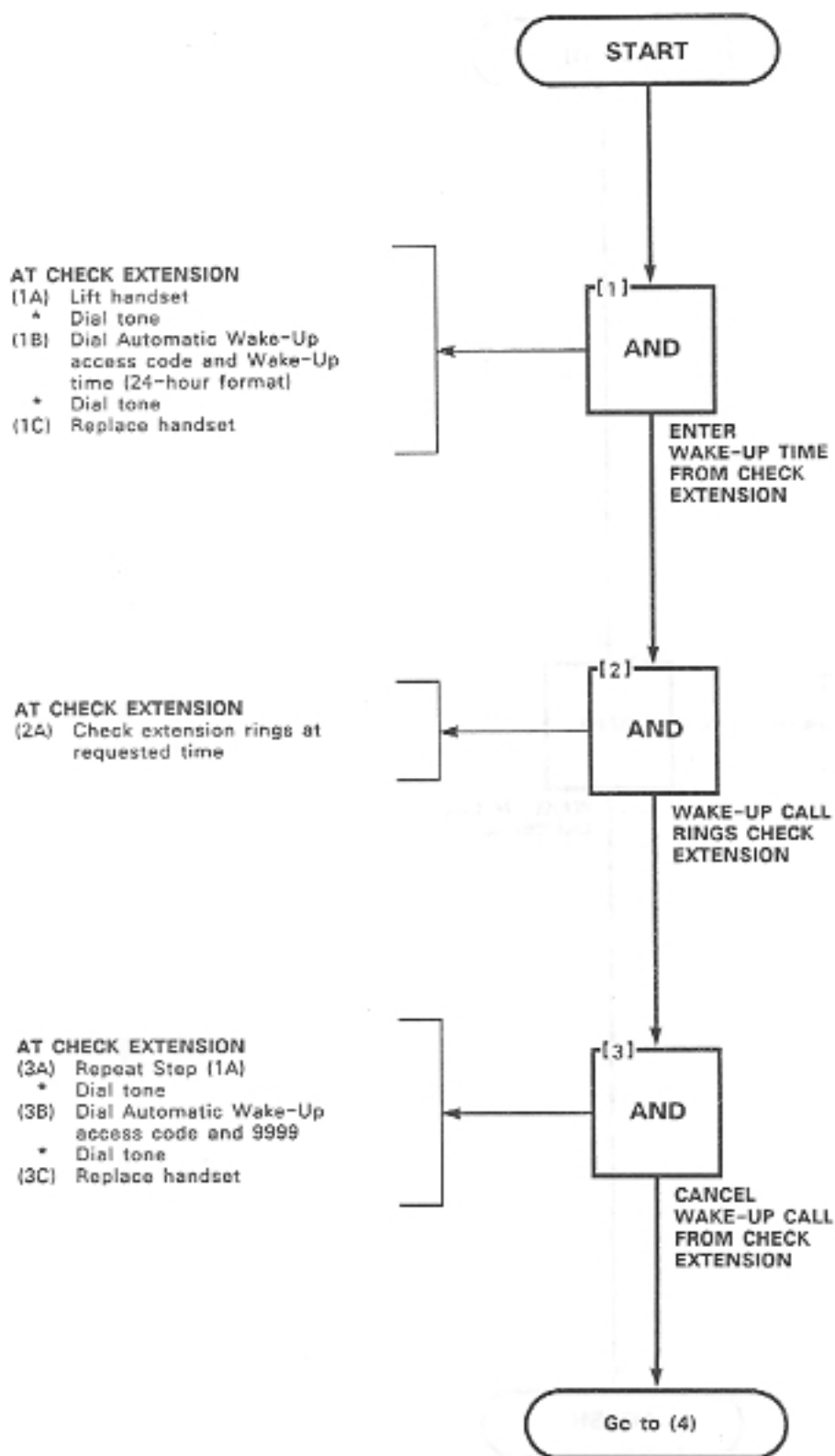


AUTOMATIC WAKE-UP (ALARM CALL)

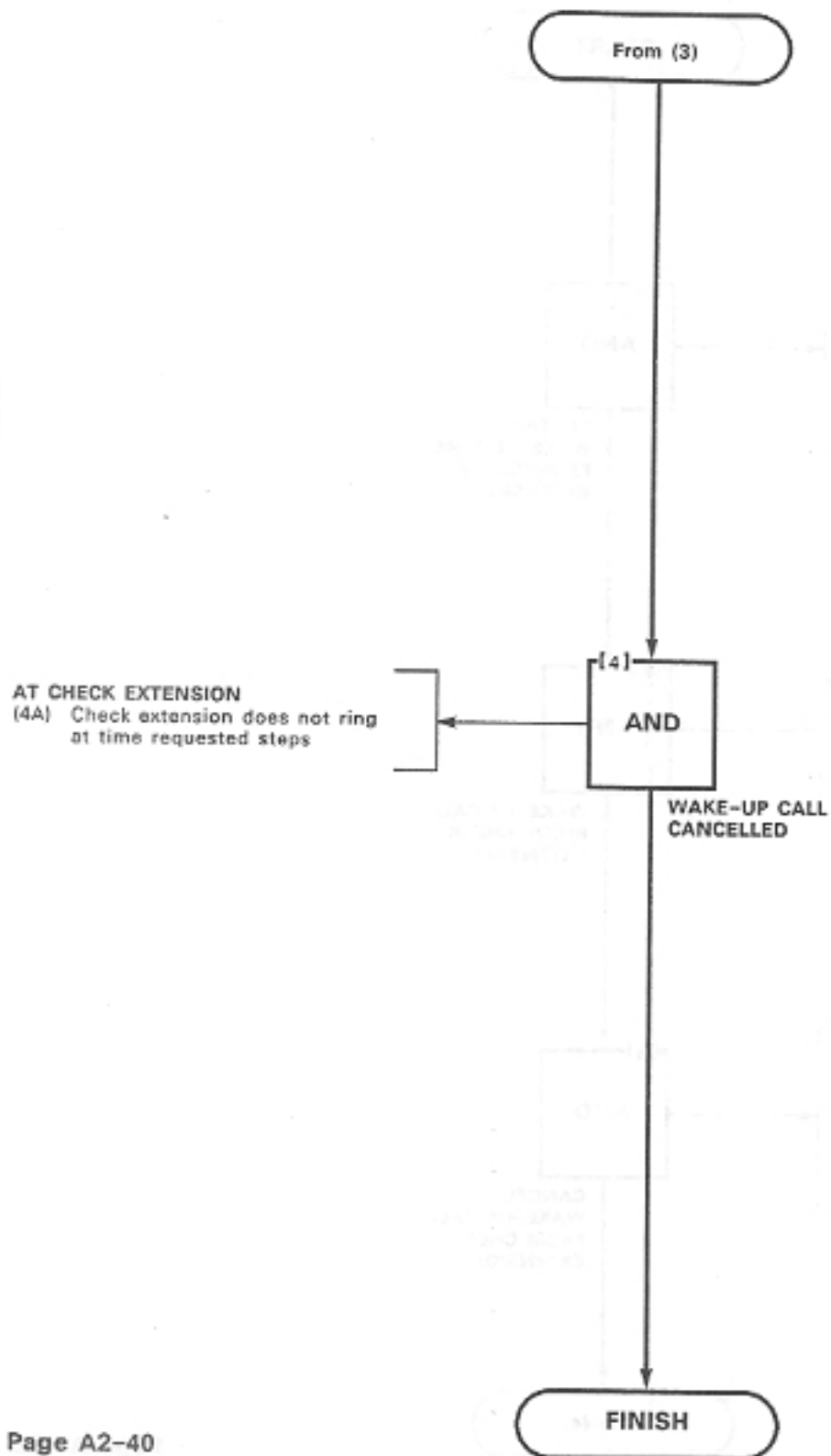
MAP215-218

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|                                |
|--------------------------------|
| AUTOMATIC WAKE-UP (ALARM CALL) |
| MAP215- 218                    |
| Issue 1, December 1982         |
| Sheet 2 of 2                   |

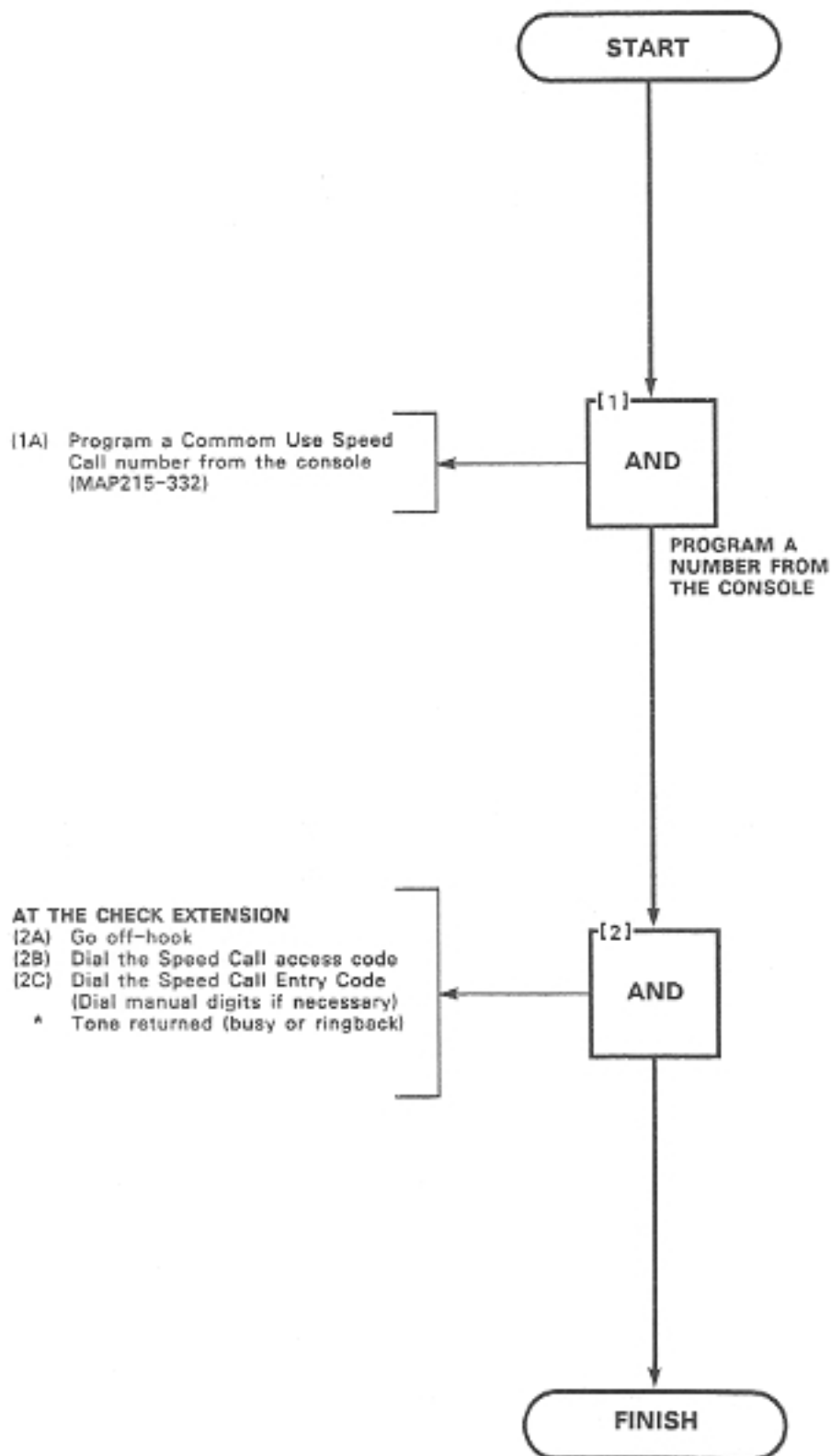


USE A COMMON USE SPEED CALL

MAP215-219

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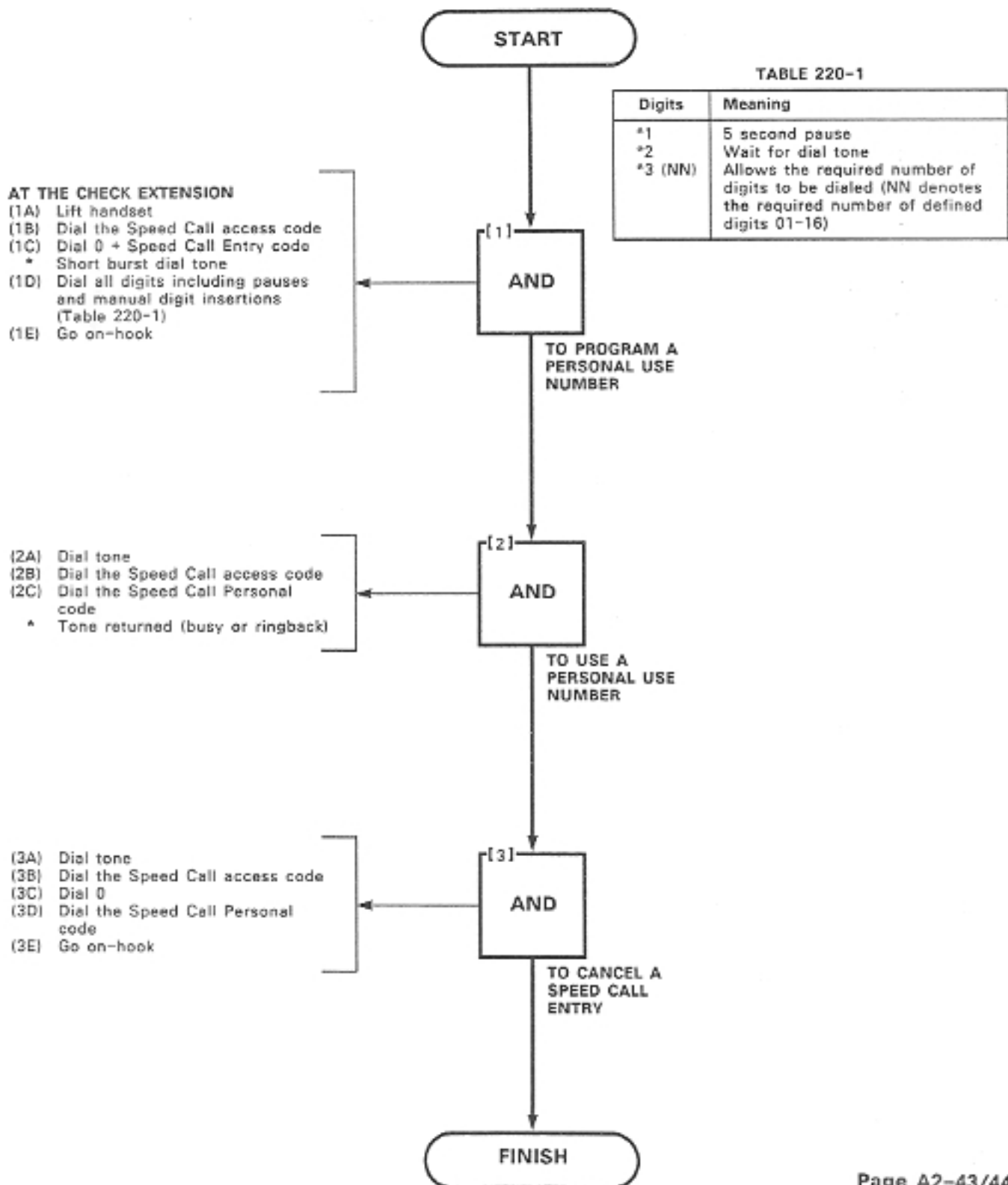


## PERSONAL SPEED CALL

MAP215-220

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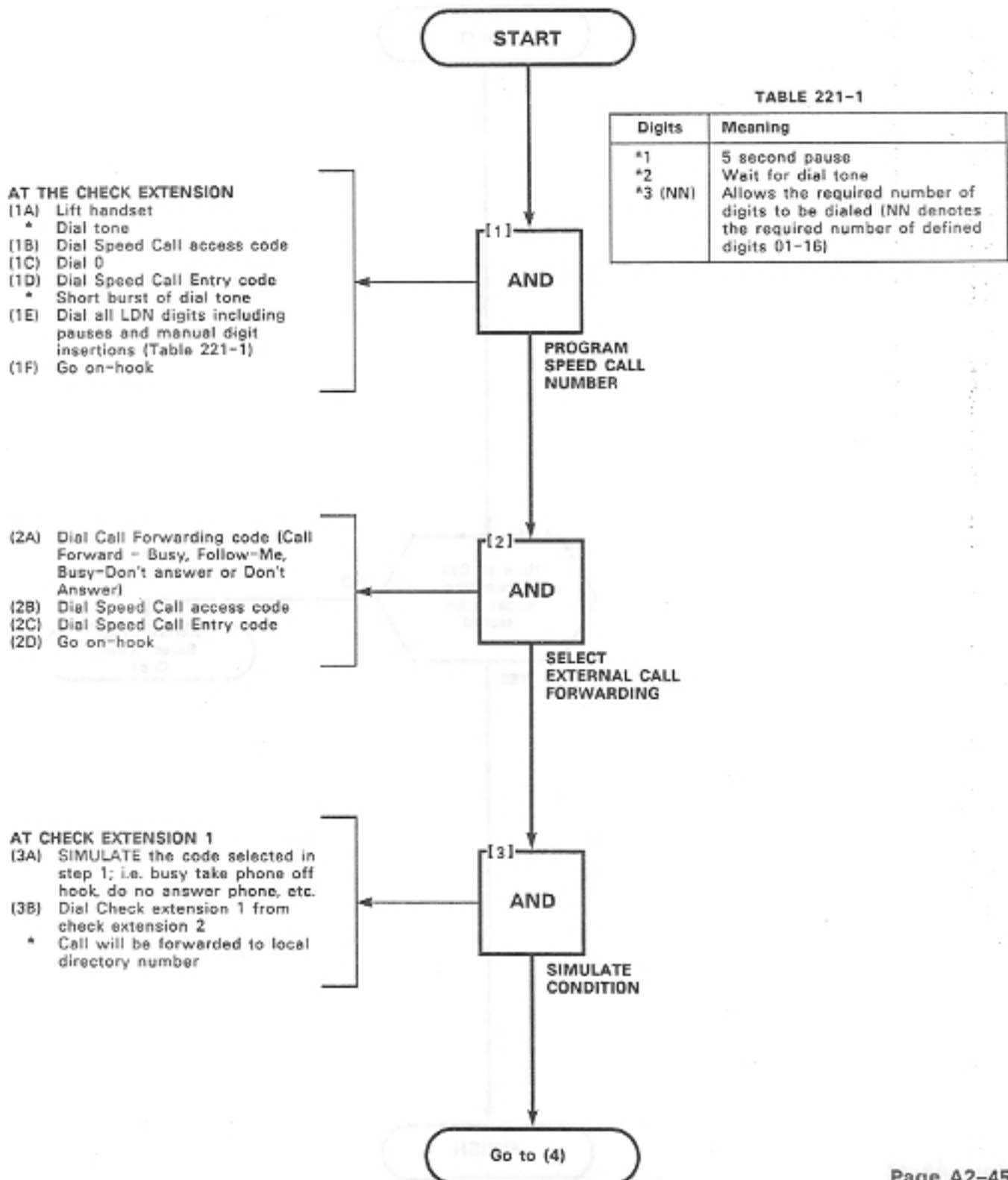


## EXTERNAL CALL FORWARDING

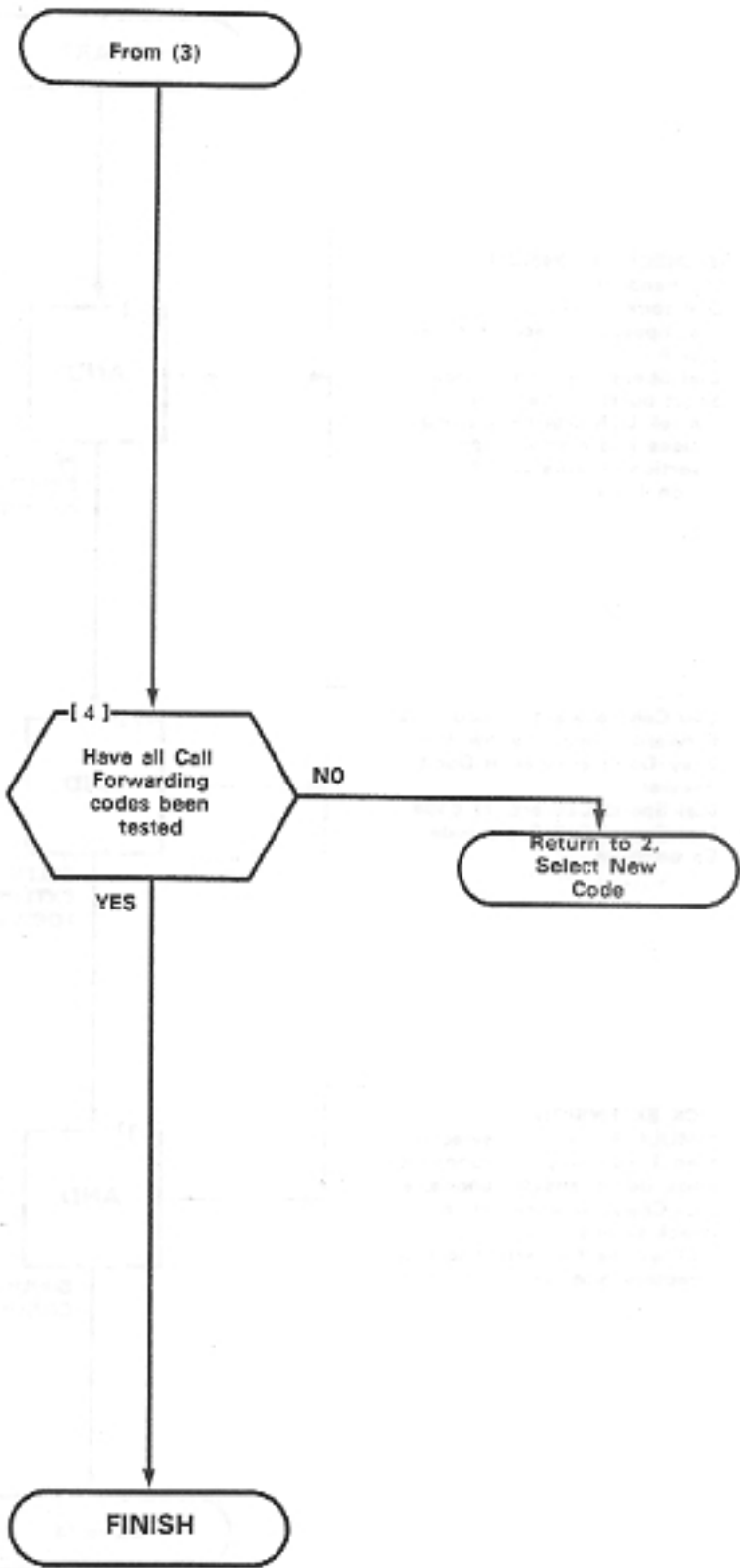
MAP215-221

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|                          |
|--------------------------|
| EXTERNAL CALL FORWARDING |
| MAP215- 221              |
| Issue 1, December 1982   |
| Sheet 2 of 2             |



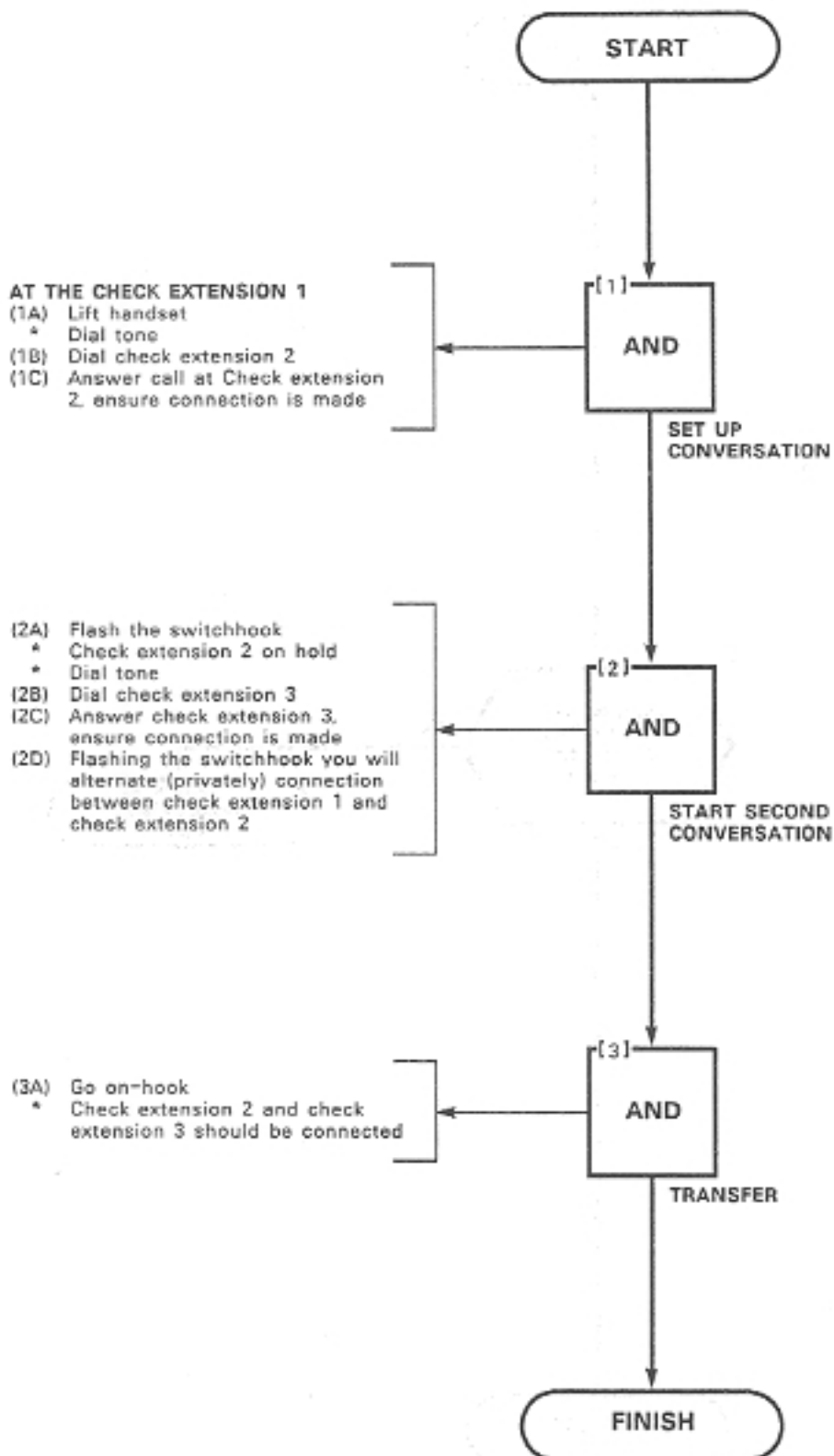


TRANSFER WITH PRIVACY

MAP215-222

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Sheet 1 of 1



|                    |                        |
|--------------------|------------------------|
| TO: DIRECTOR       | FROM: SAC, [illegible] |
| DATE: [illegible]  | RE: [illegible]        |
| CLASS: [illegible] | BY: [illegible]        |
|                    |                        |



ACCOUNT CODE

MAP215-223

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Sheet 1 of 2

**Note**

SMDR must be enabled for this test.

- (1A) Connect printer to RS232 port via a RS232 connection  
 (1B) Ensure Scanner Card and printer are set up for the same baud rate, character set and parity  
 (1C) Clear printer port by dialing:  
 \* 1400  
 \* Press RELEASE  
 (1D) Enable printer port by dialing:  
 \* 14 + number sign  
 \* Press RELEASE

- (2A) Account Codes may be:  
 \* Account Code Length: 4 digits (System Option 231)  
 \* Account Code Length: 8 digits (System Option 232)  
 \* Account Code Length: 12 digits (System Option 233)  
 \* Variable Length Account Codes (System Option 234)  
 (2B) Review programming to see which Account Code Length is applicable

**AT CHECK EXTENSION 1**

- (3A) Lift handset, Dial tone  
 (3B) Dial:  
 \* Account Code access code  
 \* Appropriate Account Code (see Step (2))  
 \* Dial tone returned  
 \* Dial Trunk access code  
 \* Dial Directory Number including prefix, area code etc.

**TOOLS REQUIRED:**

1 PRINTER: RS232 COMPATIBLE  
 88 characters/line,  
 300 or 1200 baud

START

[1]  
AND

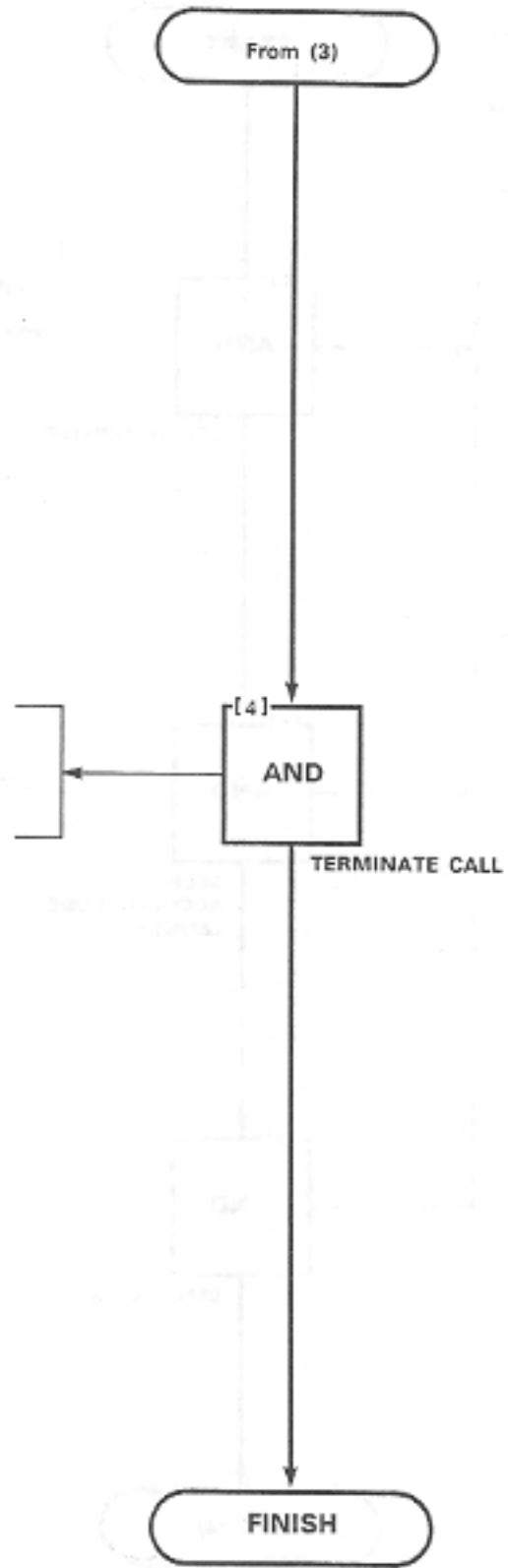
SET UP PRINTER

[2]  
ANDSELECT  
ACCOUNT CODE  
LENGTH[3]  
AND

DIAL DIGITS

Go to (4)

|                        |              |
|------------------------|--------------|
| ACCOUNT CODE           | MAP215- 223  |
| Issue 1, December 1982 | Sheet 2 of 2 |



AT CHECK EXTENSION 1  
(4A) Terminate the call  
(4B) SMDR printout access with  
Account Code included

HANDS-FREE STATION

MAP215-224

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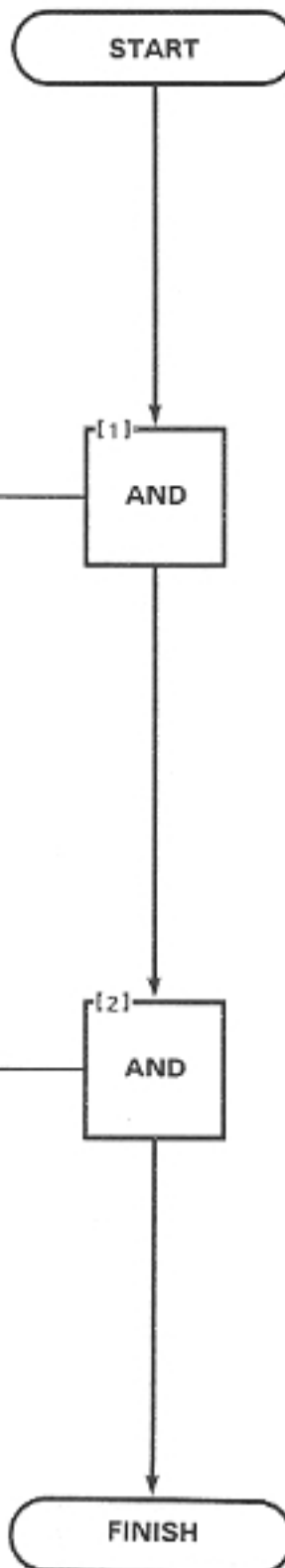
## Note

For maximum results check extension 1 should be a speaker phone or a SUPERSET 4.

## AT CHECK EXTENSION 2

- (1A) Lift handset  
 \* Dial tone  
 (1B) Dial check extension 1 (check extension 1 should be in the hands-free state)  
 \* Check extension 1 rings for 1 second and connection is made

- (2A) Ensure there is a connection between check extension 1 and check extension 2  
 (2B) Go on-hook



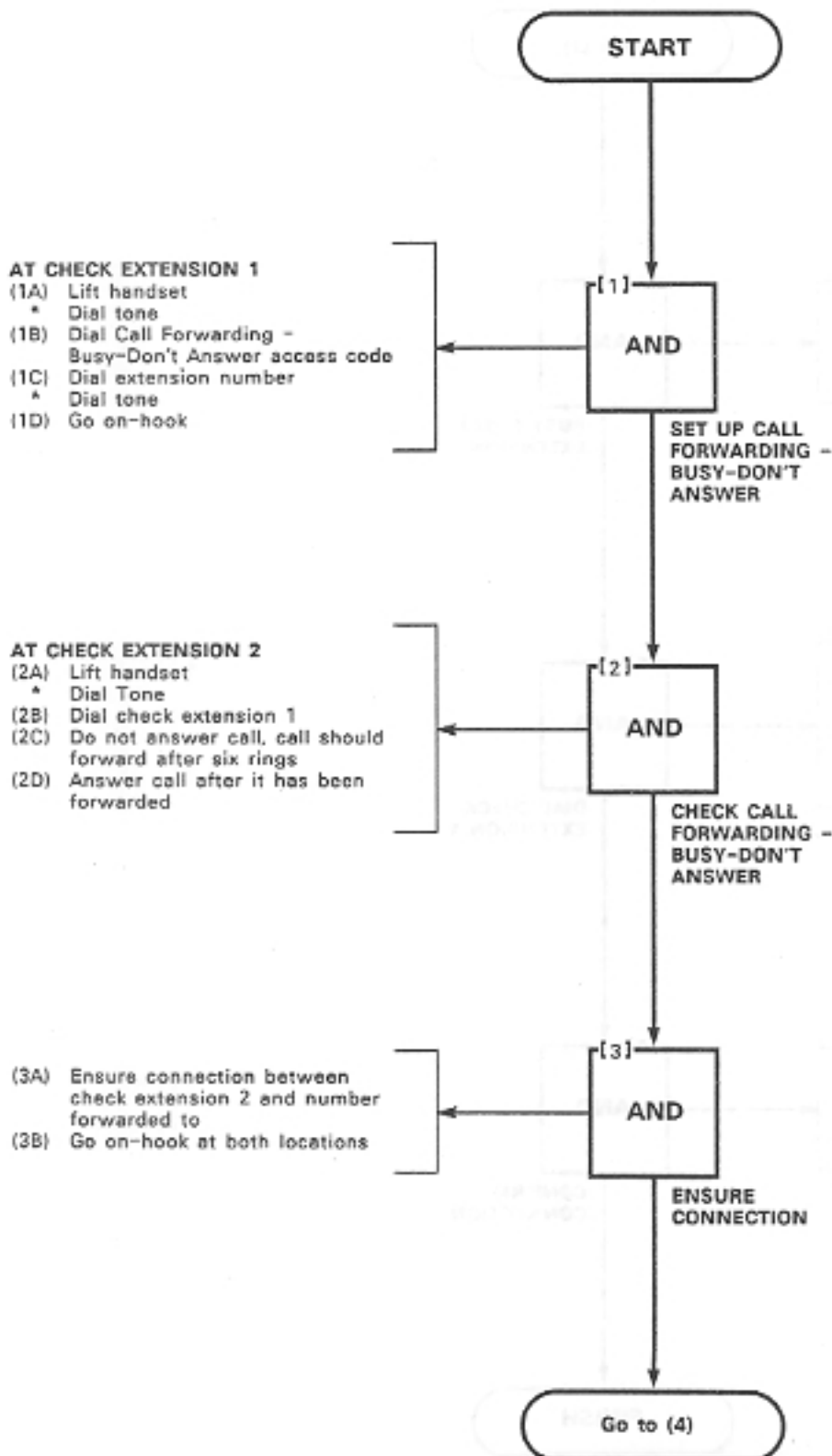


|  |
|--|
| CALL FORWARDING -<br>BUSY/DON'T ANSWER |
|--|

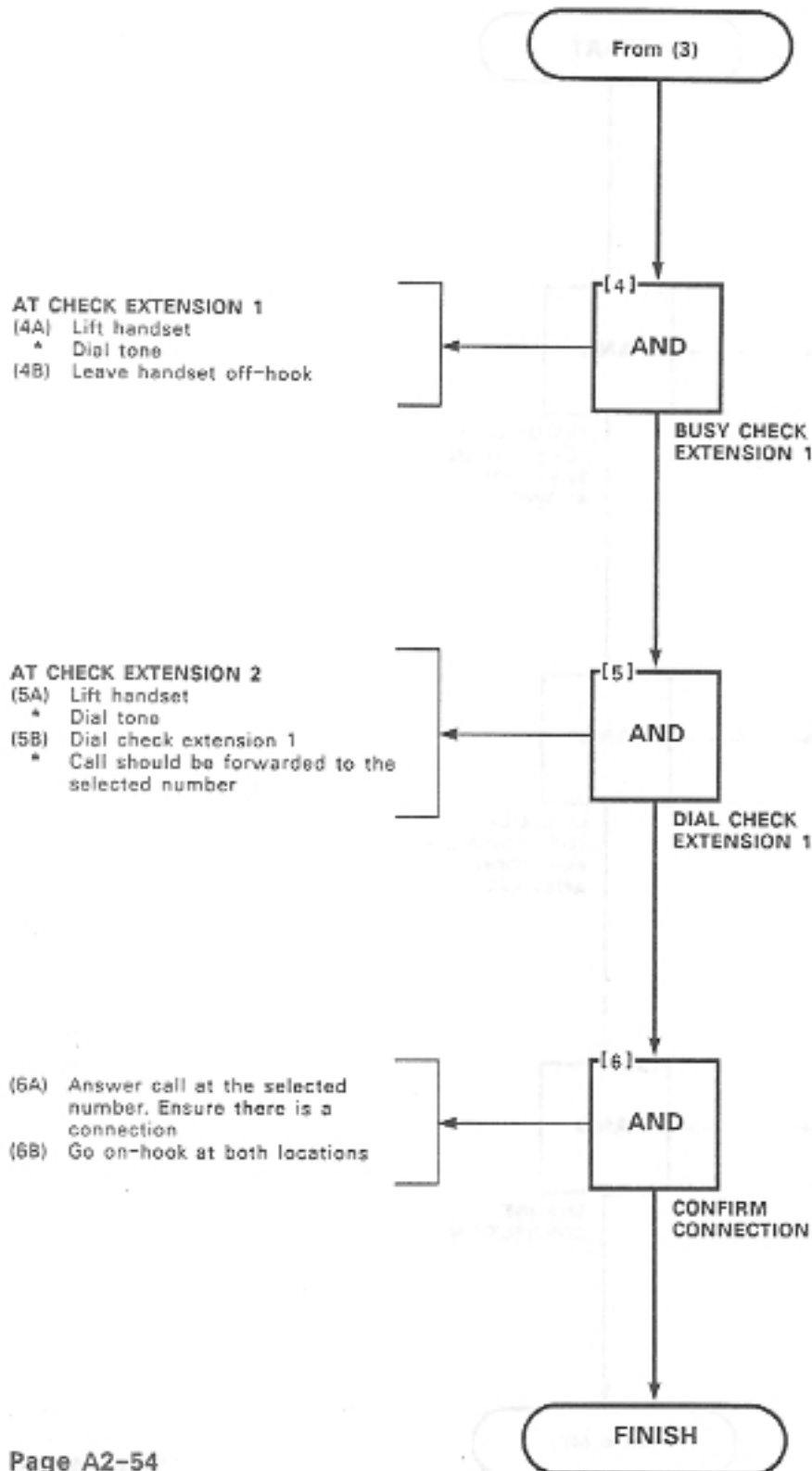
|            |
|------------|
| MAP215-225 |
|------------|

|                        |
|------------------------|
| Issue 1, December 1982 |
|------------------------|

|              |
|--------------|
| Sheet 1 of 2 |
|--------------|



|   |
|---|
| CALL FORWARDING --<br>BUSY/DON'T ANSWER |
| MAP200- 225                             |
| Issue 1, December 1982                  |
| Sheet 2 of 2                            |



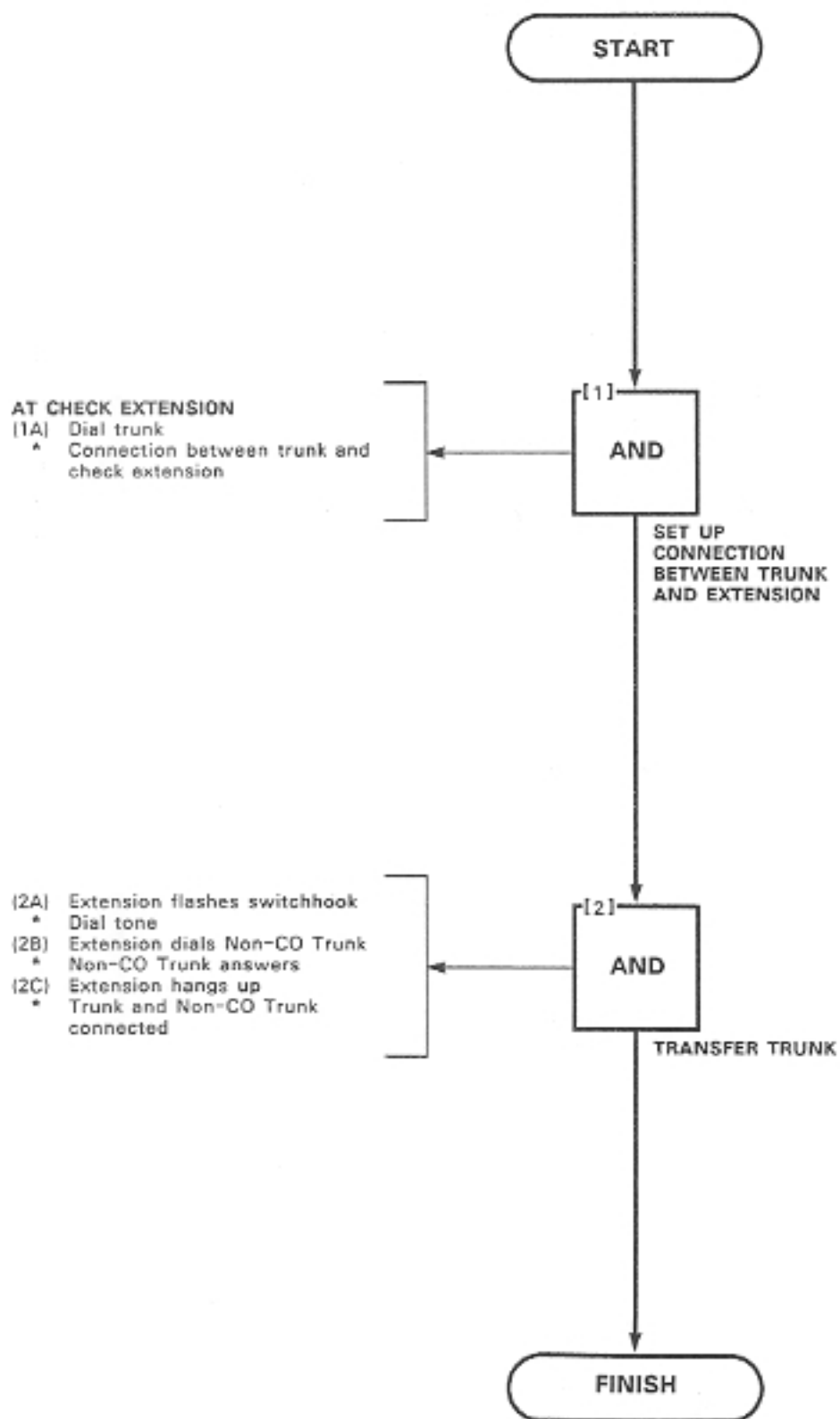


|   |
|---|
| ENABLE NON-CO TRUNK<br>TO TRUNK CONNECT |
|---|

|            |
|------------|
| MAP215-226 |
|------------|

|                        |
|------------------------|
| Issue 1, December 1982 |
|------------------------|

|              |
|--------------|
| Sheet 1 of 1 |
|--------------|



|                 |                     |
|-----------------|---------------------|
| TABLE NO. - 001 | TO: DIRECTOR, FBI   |
| TABLE NO. - 001 | FROM: SAC, NEW YORK |
| TABLE NO. - 001 | DATE: 10/15/68      |
| TABLE NO. - 001 | RE: [REDACTED]      |

START

AND

SET UP  
CORRECTION  
RESEARCH UNIT  
AND EVALUATION

AND

IMPLEMENTATION

FINISH

1. TO: DIRECTOR, FBI  
2. FROM: SAC, NEW YORK  
3. DATE: 10/15/68  
4. RE: [REDACTED]

1. TO: DIRECTOR, FBI  
2. FROM: SAC, NEW YORK  
3. DATE: 10/15/68  
4. RE: [REDACTED]

REPEATED CAMP-ON TONES

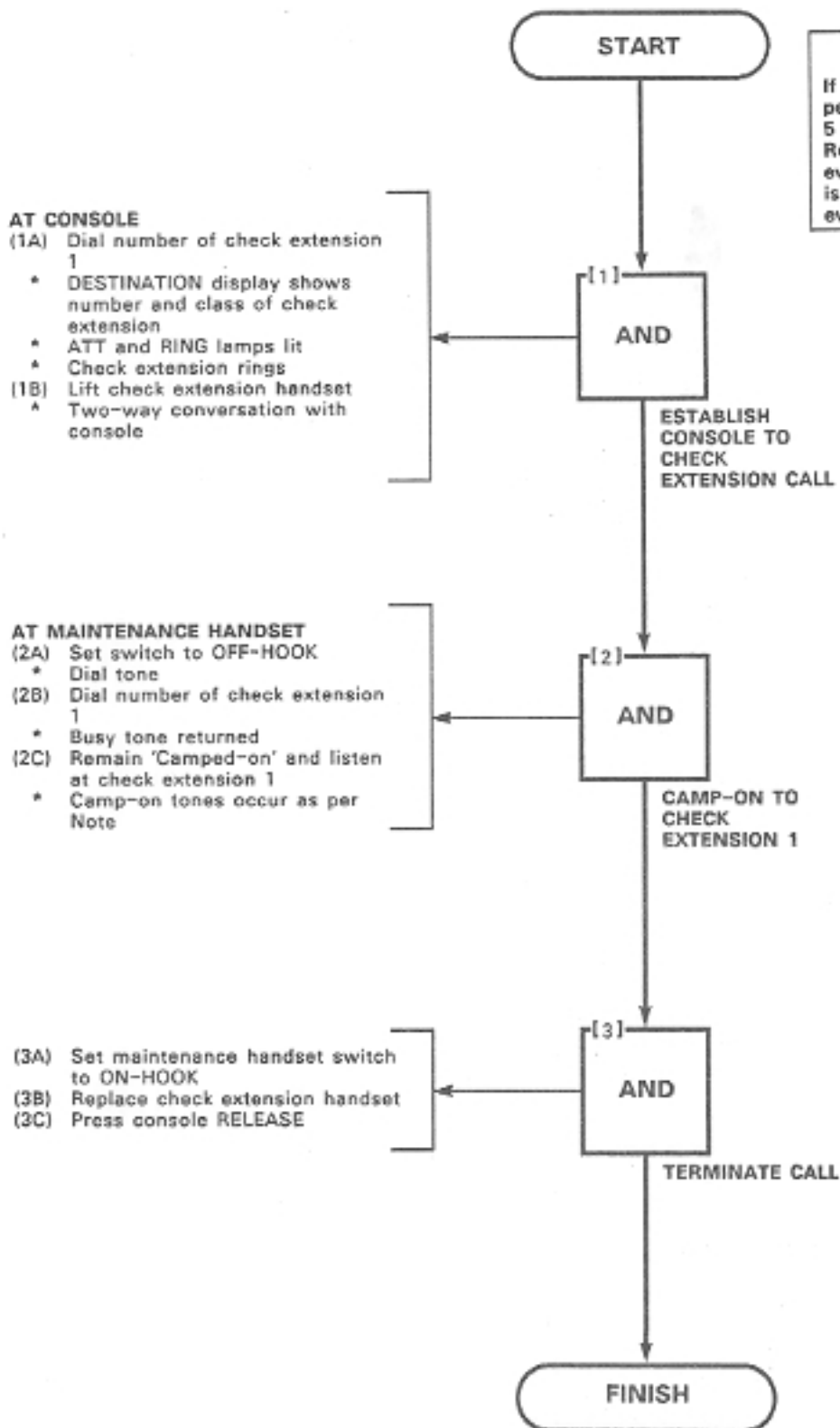
MAP215-227

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## NOTE

If System Option 217 is enabled, Repeated Camp-on Tones will occur every 5 s. If System Option 218 is enabled Repeated Camp-on Tones will occur every 15 s. If neither Option 217 or 218 is enabled, the tones will be repeated every 10 s.





### APPENDIX 3

## CONSOLE TESTS

A3.01 The following tests are a series of console tests. Specific reference should be made to Table 2-2 and Table 2-4. These Tables will determine if the test is relevant to the system application.

TABLE A3-1  
CONSOLE TESTS

R1

| ORDER | TEST  | MAP No. |
|-------|---|---------|
| 1     | Answer Incoming Call                          | 215-300 |
| 2     | Automatic Callback                            | 215-301 |
| 3     | Extending Internal Calls                      | 215-302 |
| 4     | Answering Recall                              | 215-303 |
| 5     | Override                                      | 215-304 |
| 6     | Flexible Night Service                        | 215-305 |
| 7     | Trunk Busy Operation                          | 215-306 |
| 8     | Trunk Group Attendant Access                  | 215-307 |
| 9     | Trunk Group Dial Access                       | 215-308 |
| 10    | Test Termination                              | 215-309 |
| 11    | Answer Incoming CO Trunk Call                 | 215-310 |
| 12    | Attendant Do Not Disturb                      | 215-311 |
| 13    | Message Waiting                               | 215-312 |
| 14    | Attendant Call Forwarding - Busy              | 215-313 |
| 15    | Attendant Call Forwarding - Don't Answer      | 215-314 |
| 16    | Attendant Call Forwarding - Follow Me         | 215-315 |
| 17    | Attendant Call Forwarding - Busy/Don't Answer | 215-316 |
| 18    | Attendant-Controlled Conference               | 215-317 |
| 19    | Attendant Station Busy-out                    | 215-318 |
| 20    | Block   | 215-319 |
| 21    | Attendant Do Not Disturb (H/M)M               | 215-320 |
| 22    | Message Registration                          | 215-321 |
| 23    | Controlled Outgoing Call Restriction          | 215-322 |
| 24    | Room Status                                   | 215-323 |
| 25    | Automatic Wake-Up (Alarm Call)                | 215-324 |
| 26    | Message Waiting H/M                           | 215-325 |
| 27    | Console Date Display and Date Utility         | 215-326 |
| 28    | Customer Program Dump Load                    | 215-327 |
| 29    | Controlling the Printer                       | 215-328 |
| 30    | Room Audit                                    | 215-329 |
| 31    | System Identifier                             | 215-330 |
| 32    | Common Use Speed Call                         | 215-331 |
| 33    | Customer Programming                          | 215-332 |
| 34    | External Call Forwarding                      | 215-333 |
| 35    | Test Audible Tone Indicators                  | 215-334 |
| 36    | Single Digit Dialing                          | 215-335 |
| 37    | Common Alerting Devices                       | 215-336 |
| 38    | Answer DID Trunk Call                         | 215-337 |
| 39    | SUPERSET 4 Disconnect Alarm                   | 215-338 |

## APPENDIX 3 MUSCLE TESTS

The following table lists the muscle tests performed on the subjects during the study. The table is organized by subject and lists the muscle tested, the test procedure, and the results of the test.

TABLE 3  
 MUSCLE TESTS

| Subject | Muscle | Test Procedure | Results |
|---------|--------|----------------|---------|
| 1       | ...    | ...            | ...     |
| 2       | ...    | ...            | ...     |
| 3       | ...    | ...            | ...     |
| 4       | ...    | ...            | ...     |
| 5       | ...    | ...            | ...     |
| 6       | ...    | ...            | ...     |
| 7       | ...    | ...            | ...     |
| 8       | ...    | ...            | ...     |
| 9       | ...    | ...            | ...     |
| 10      | ...    | ...            | ...     |
| 11      | ...    | ...            | ...     |
| 12      | ...    | ...            | ...     |
| 13      | ...    | ...            | ...     |
| 14      | ...    | ...            | ...     |
| 15      | ...    | ...            | ...     |
| 16      | ...    | ...            | ...     |
| 17      | ...    | ...            | ...     |
| 18      | ...    | ...            | ...     |
| 19      | ...    | ...            | ...     |
| 20      | ...    | ...            | ...     |
| 21      | ...    | ...            | ...     |
| 22      | ...    | ...            | ...     |
| 23      | ...    | ...            | ...     |
| 24      | ...    | ...            | ...     |
| 25      | ...    | ...            | ...     |
| 26      | ...    | ...            | ...     |
| 27      | ...    | ...            | ...     |
| 28      | ...    | ...            | ...     |
| 29      | ...    | ...            | ...     |
| 30      | ...    | ...            | ...     |
| 31      | ...    | ...            | ...     |
| 32      | ...    | ...            | ...     |
| 33      | ...    | ...            | ...     |
| 34      | ...    | ...            | ...     |
| 35      | ...    | ...            | ...     |
| 36      | ...    | ...            | ...     |
| 37      | ...    | ...            | ...     |
| 38      | ...    | ...            | ...     |
| 39      | ...    | ...            | ...     |
| 40      | ...    | ...            | ...     |
| 41      | ...    | ...            | ...     |
| 42      | ...    | ...            | ...     |
| 43      | ...    | ...            | ...     |
| 44      | ...    | ...            | ...     |
| 45      | ...    | ...            | ...     |
| 46      | ...    | ...            | ...     |
| 47      | ...    | ...            | ...     |
| 48      | ...    | ...            | ...     |
| 49      | ...    | ...            | ...     |
| 50      | ...    | ...            | ...     |

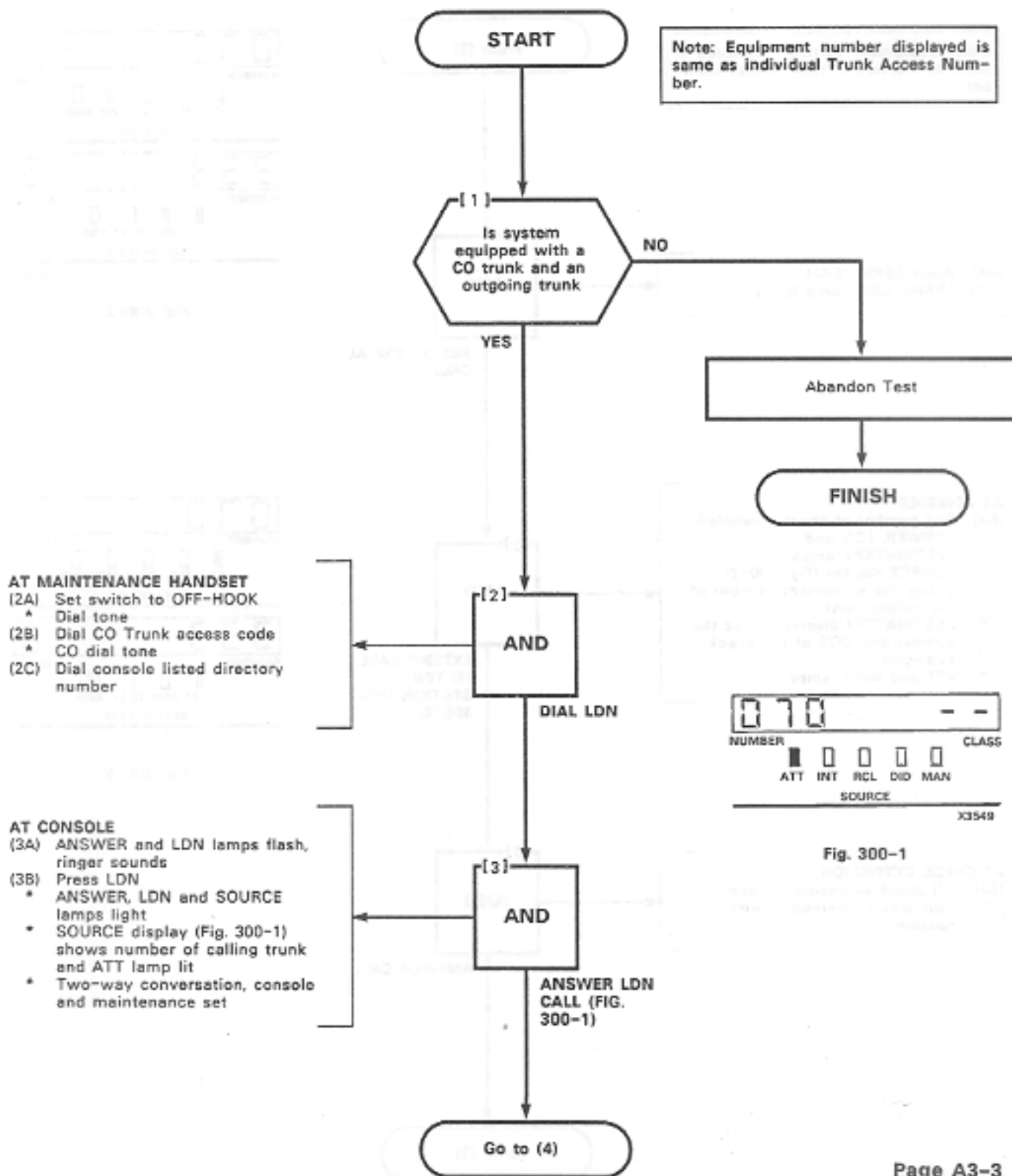
ANSWER INCOMING CALL

MAP215- 300

Issue 1, December 1982

Sheet 1 of 5

Note: Equipment number displayed is same as individual Trunk Access Number.



|                        |
|------------------------|
| ANSWER INCOMING CALL   |
| MAP215- 300            |
| Issue 1, December 1982 |
| Sheet 2 of 5           |

Note: Equipment number displayed is same as Individual Trunk Access Number.

(4A) Press SERIAL CALL  
 \* SERIAL CALL lamp lights

AT CONSOLE  
 (5A) Dial number of check extension  
 \* ANSWER, LDN and DESTINATION lamps lit  
 \* SOURCE display (Fig. 300-2) shows the equipment number of the calling trunk  
 \* DESTINATION display shows the number and COS of the check extension  
 \* ATT and RING lamps lit

AT CHECK EXTENSION  
 (6A) Lift check extension handset  
 \* Two-way conversation with console

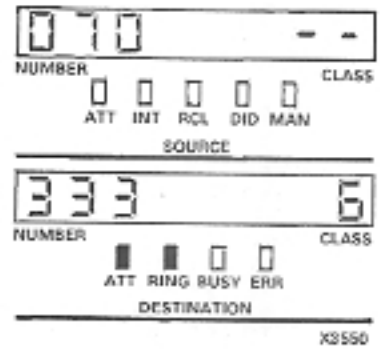
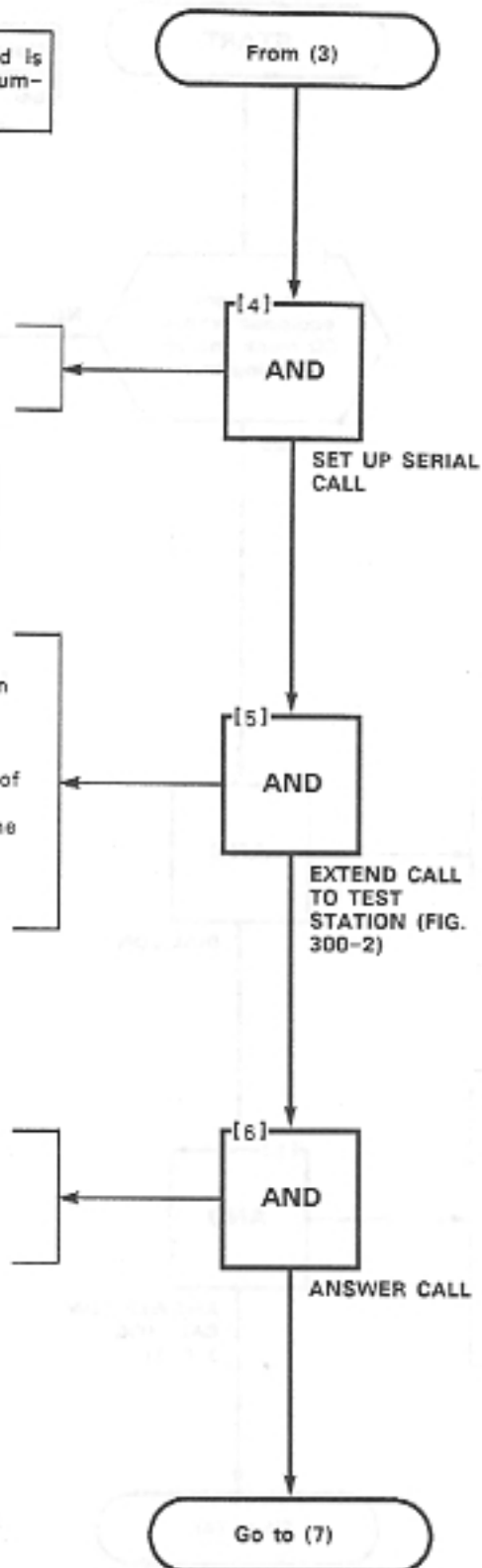


Fig. 300-2

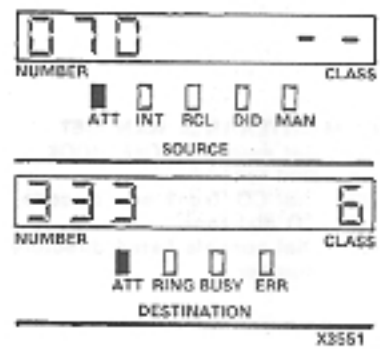


Fig. 300-3



ANSWER INCOMING CALL

MAP215-300

Issue 1, December 1982

Sheet 3 of 5

Note: Equipment number displayed is same as individual Trunk Access Number.

**AT CONSOLE**

(7A) Press SOURCE

- \* ANSWER, LDN and SOURCE lamps lit
- \* SOURCE display (Fig. 300-3) shows the number of the calling trunk, ATT lamp lit
- \* DESTINATION display shows number and COS of check extension
- \* Two-way private call with maintenance set

**AT CONSOLE**

(8A) Press DEST

- \* ANSWER, LDN and DEST lamps lit
- \* SOURCE display (Fig. 300-4) shows the equipment number of the calling trunk
- \* DESTINATION display shows the number and COS of the check extension
- \* ATT lamp lit
- \* Two-way private call with check extension

**AT CONSOLE**

(9A) Press BOTH

- \* ANSWER, LDN and BOTH lamps lit
- \* SOURCE display (Fig. 300-5) shows equipment number of calling trunk
- \* ATT lamp lit
- \* DESTINATION display shows number and COS of check extension
- \* ATT lamp lit
- \* Three-way call, check extension, maintenance set and console

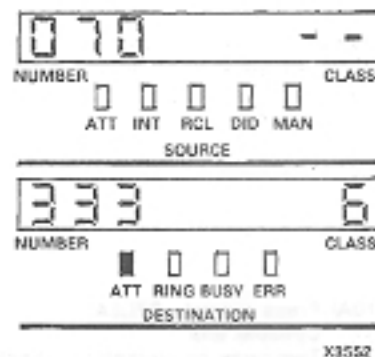
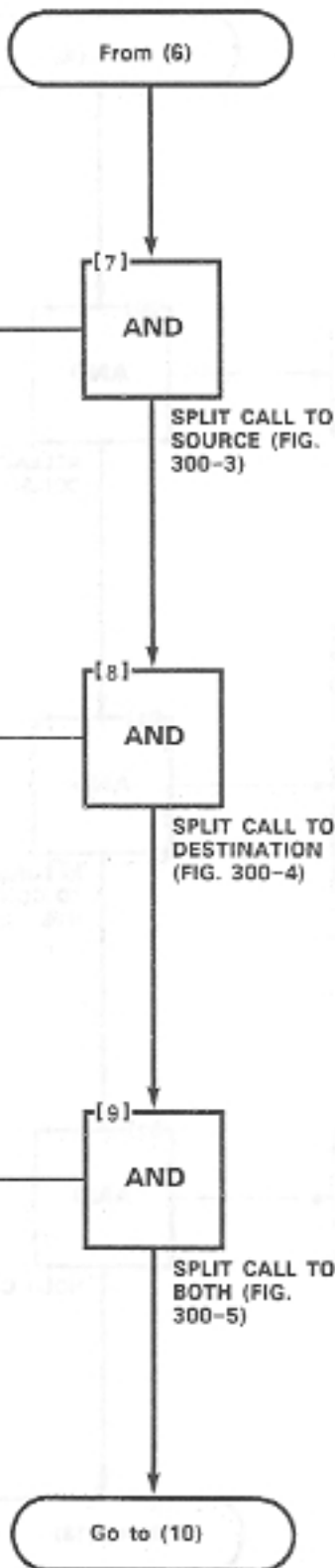


Fig. 300-4

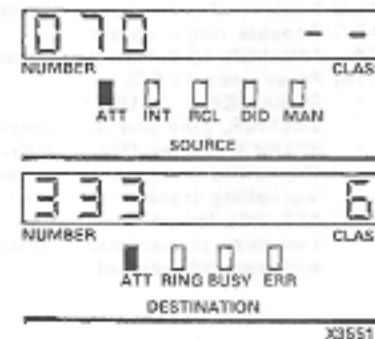


Fig. 300-5

|                        |
|------------------------|
| ANSWER INCOMING CALL   |
| MAP215- 300            |
| Issue 1, December 1982 |
| Sheet 4 of 5           |

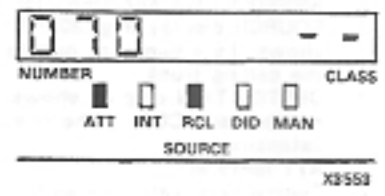
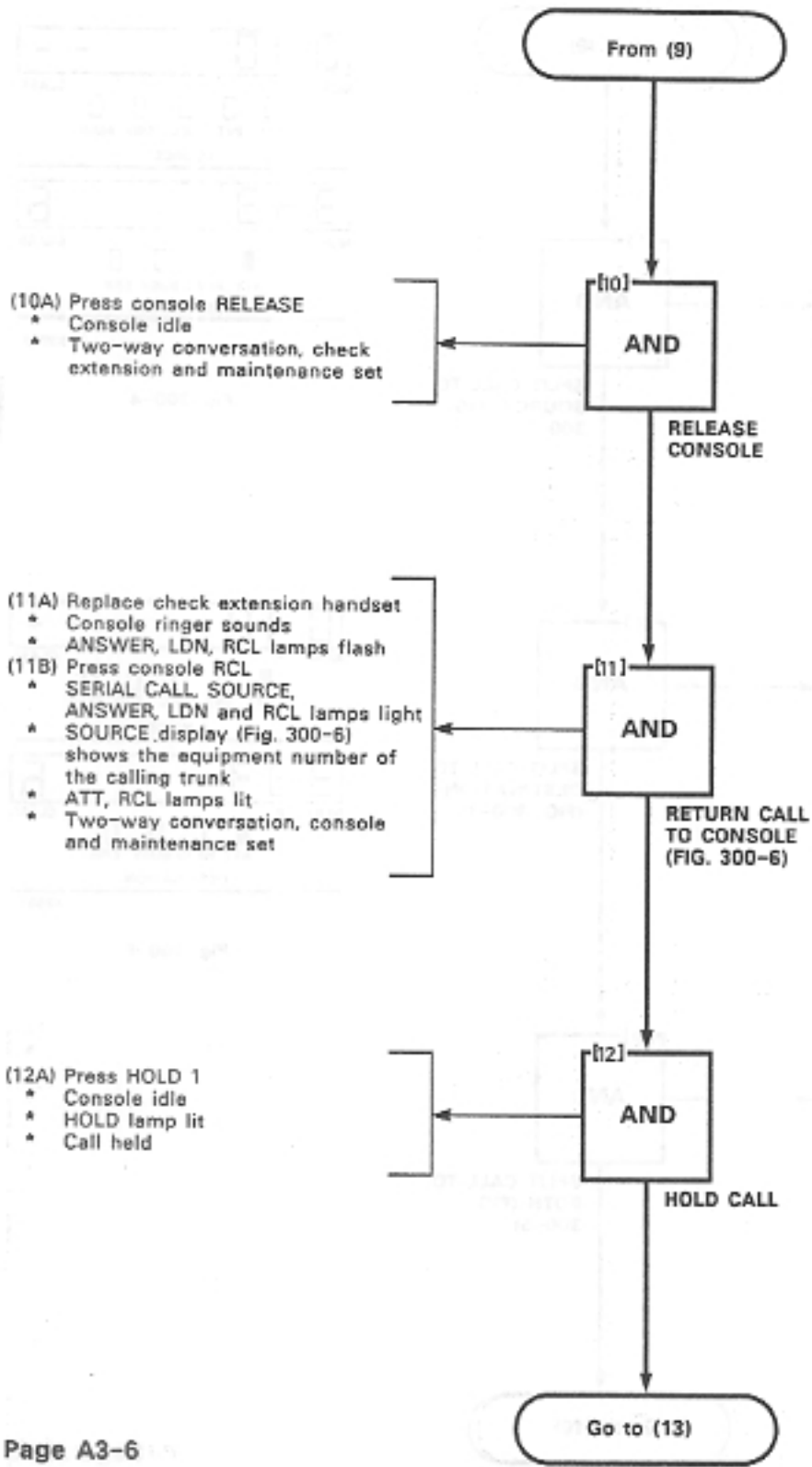


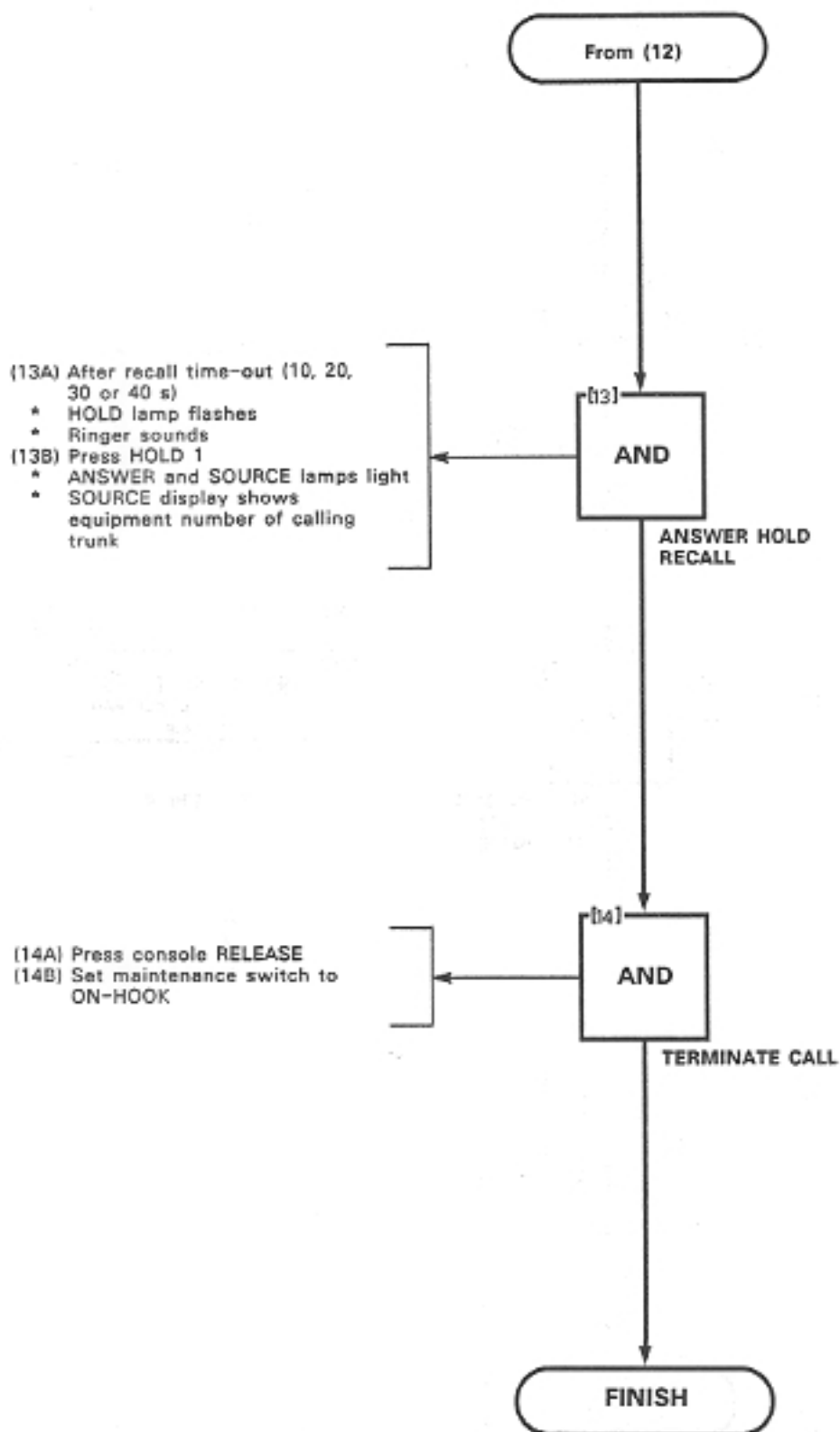
Fig. 300-6

ANSWER INCOMING CALL

MAP215- 300

Issue 1, December 1982

Sheet 5 of 5



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## AUTOMATIC CALLBACK

MAP215-301

Issue 1, December 1982

Sheet 1 of 2

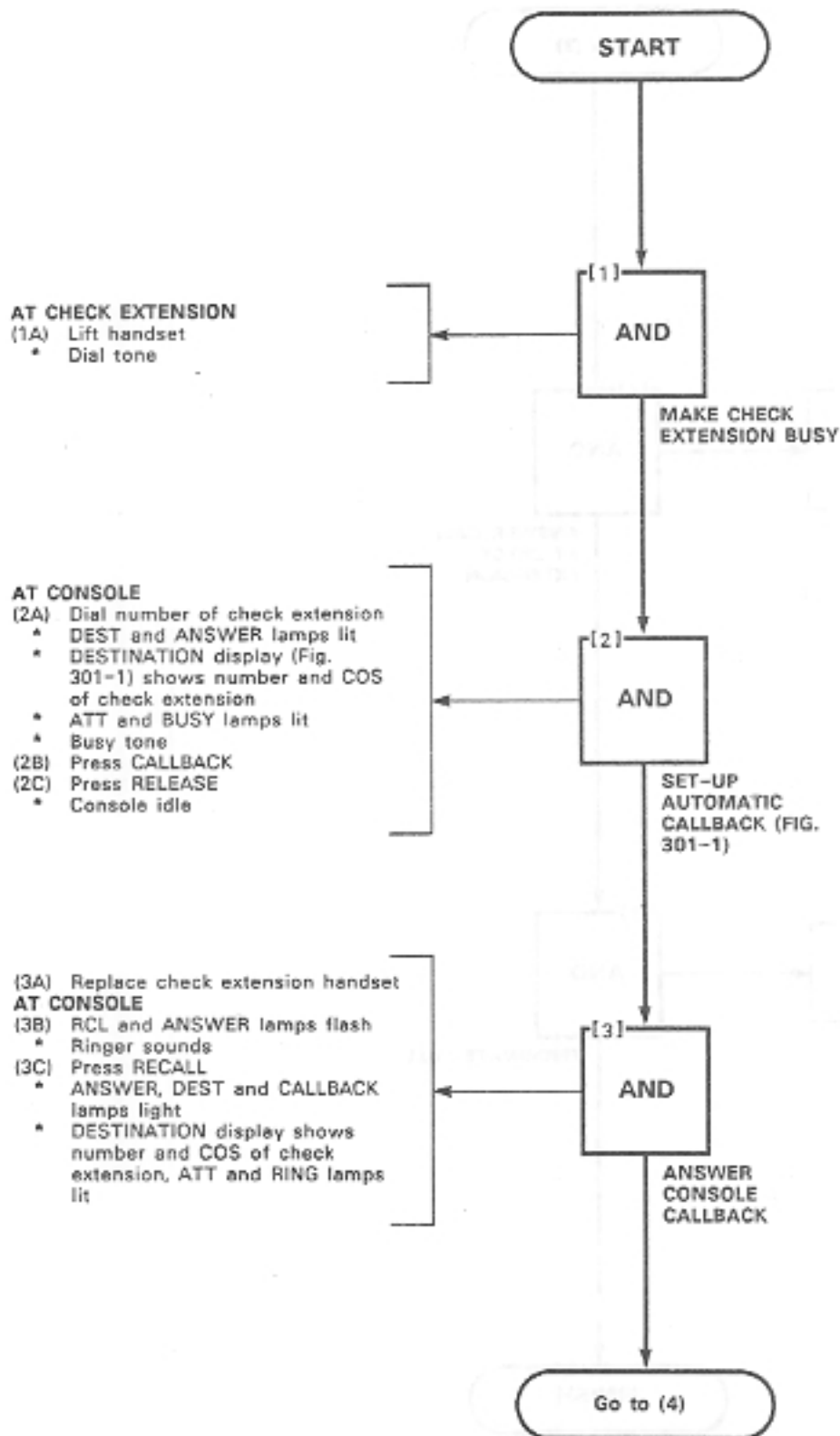
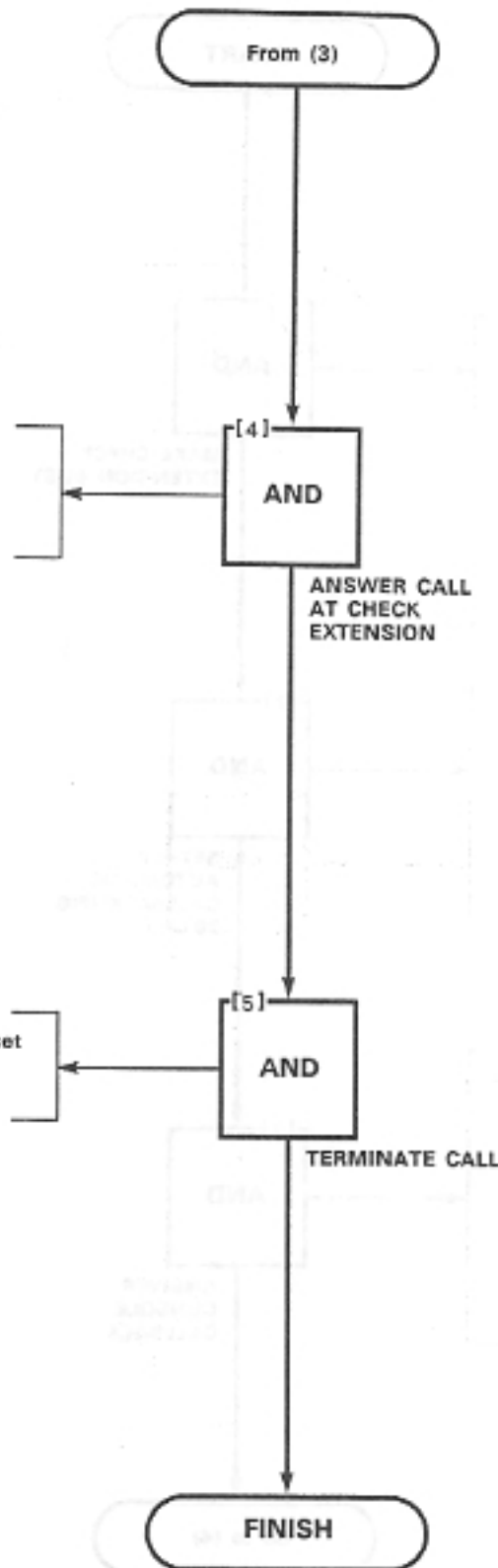


Fig. 301-1

|                        |
|------------------------|
| AUTOMATIC CALLBACK     |
| MAP215- 301            |
| Issue 1, December 1982 |
| Sheet 2 of 2           |

**AT CHECK EXTENSION**  
 (4A) Ringer sounds  
 (4B) Lift handset  
 \* Two-way call

(5A) Replace check extension handset  
 (5B) Press console RELEASE  
 \* Console idle



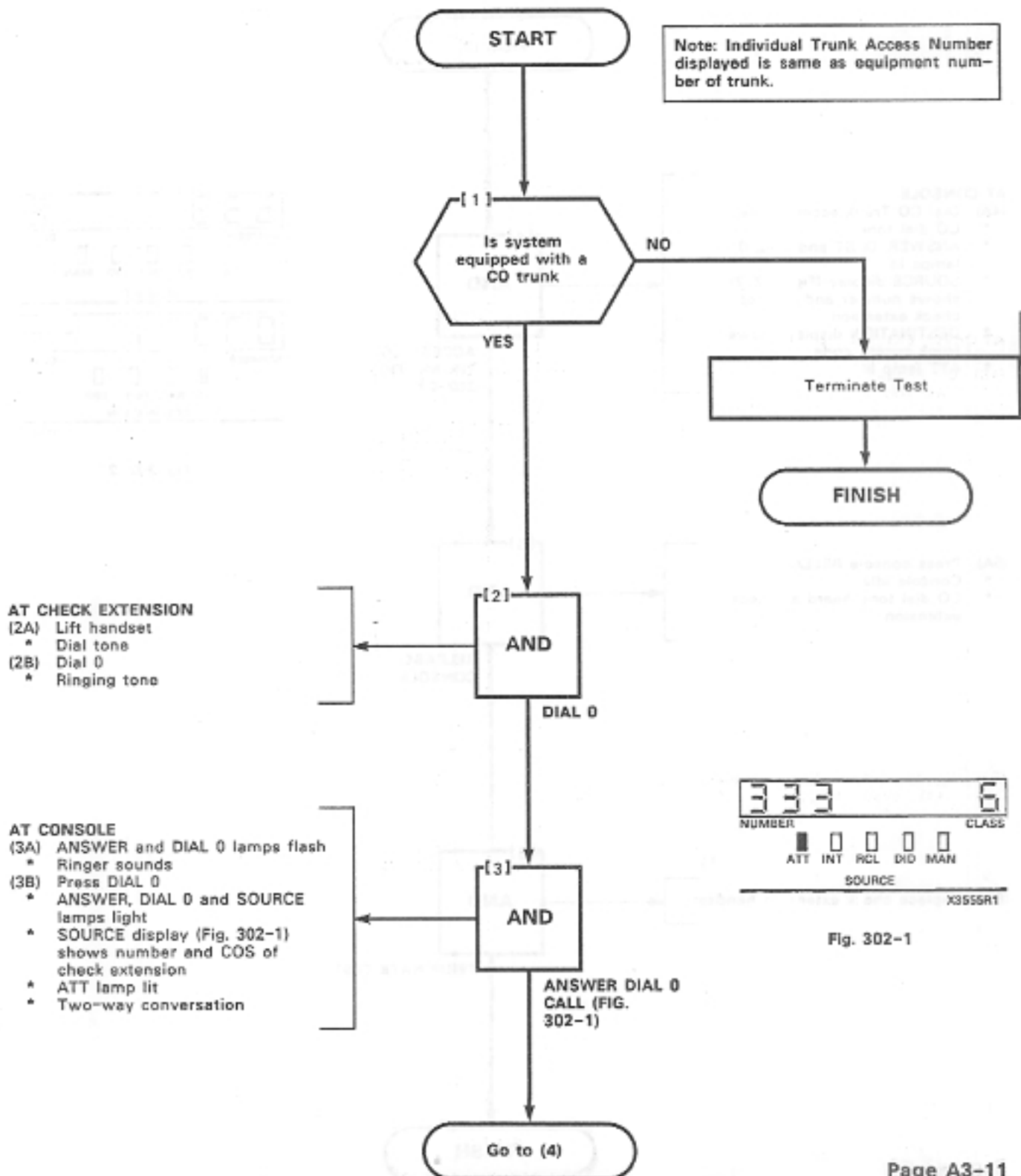
## EXTENDING INTERNAL CALLS

MAP215-302

Issue 1, December 1982

Sheet 1 of 2

Note: Individual Trunk Access Number displayed is same as equipment number of trunk.



|                          |
|--------------------------|
| EXTENDING INTERNAL CALLS |
| MAP215- 302              |
| Issue 1, December 1982   |
| Sheet 2 of 2             |

- AT CONSOLE**
- (4A) Dial CO Trunk access code
- \* CO dial tone
  - \* ANSWER, DEST and DIAL 0 lamps lit
  - \* SOURCE display (Fig. 302-2) shows number and COS of check extension
  - \* DESTINATION display shows trunk access code
  - \* ATT lamp lit

- (5A) Press console RELEASE
- \* Console idle
  - \* CO dial tone heard at check extension

- (6A) Replace check extension handset

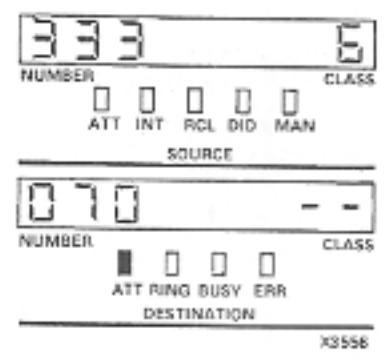
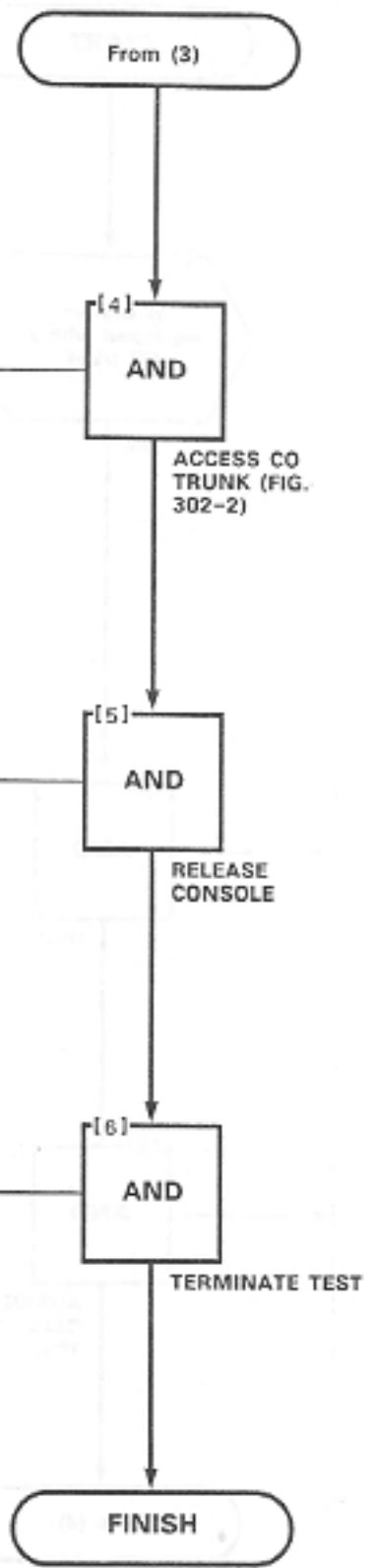


Fig. 302-2



ANSWERING RECALL

MAP215-303

Issue 1, December 1982

Sheet 1 of 2

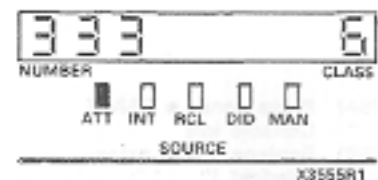
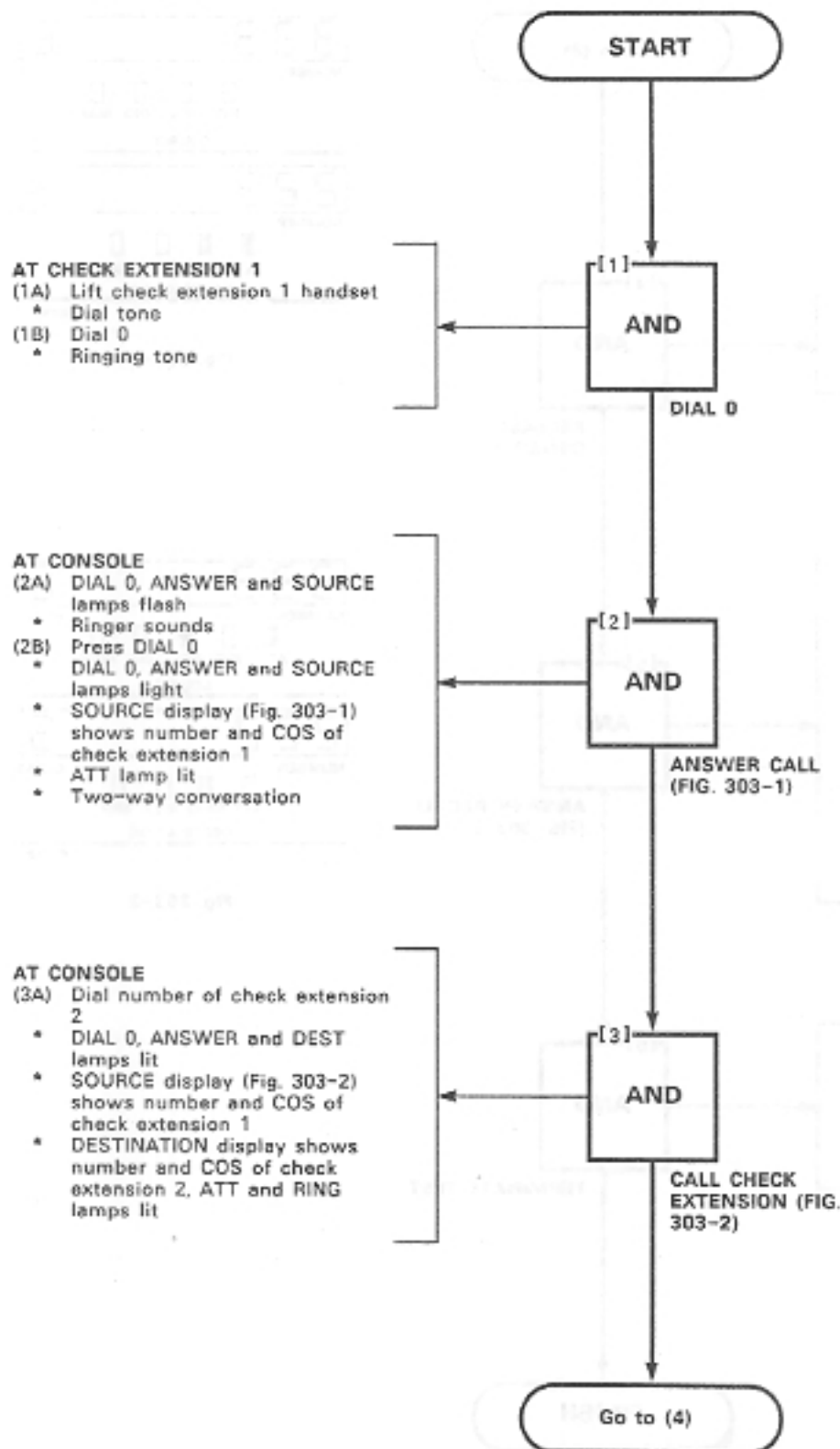
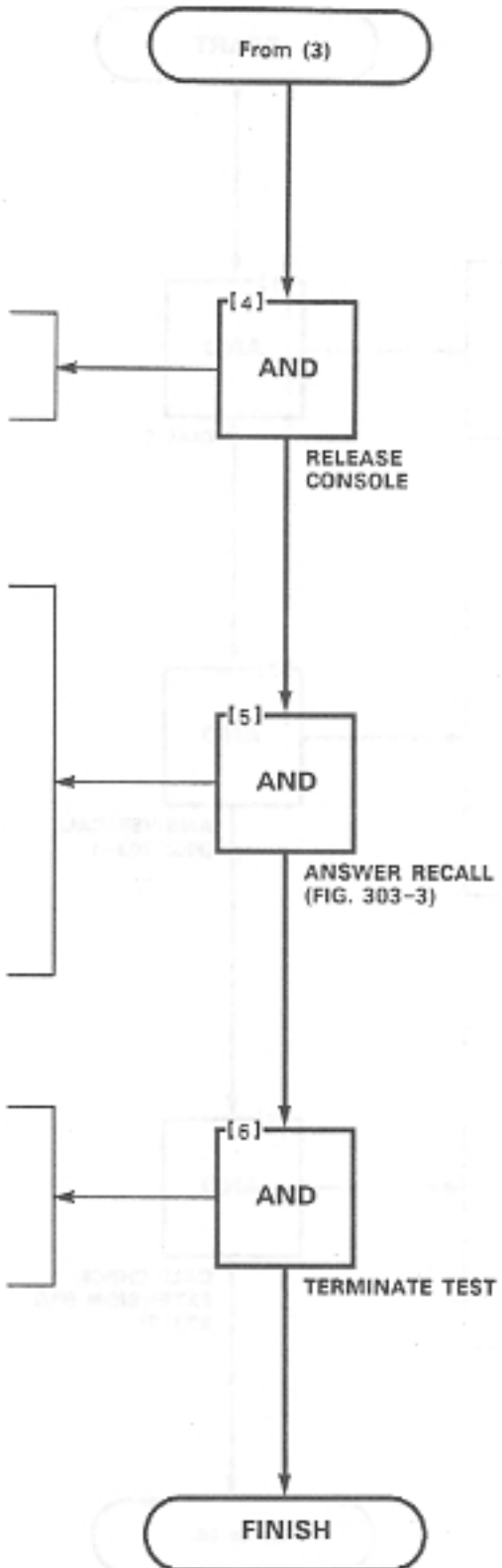


Fig. 303-1

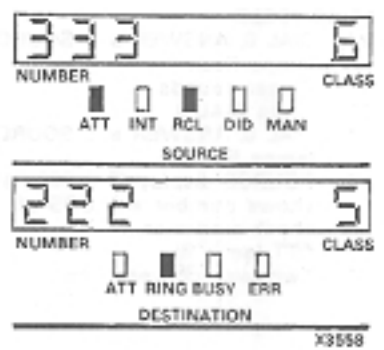
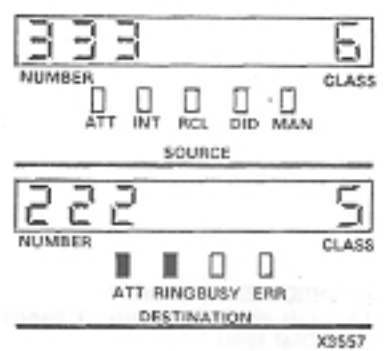
|                        |
|------------------------|
| ANSWERING RECALL       |
| MAP215- 303            |
| Issue 1, December 1982 |
| Sheet 2 of 2           |



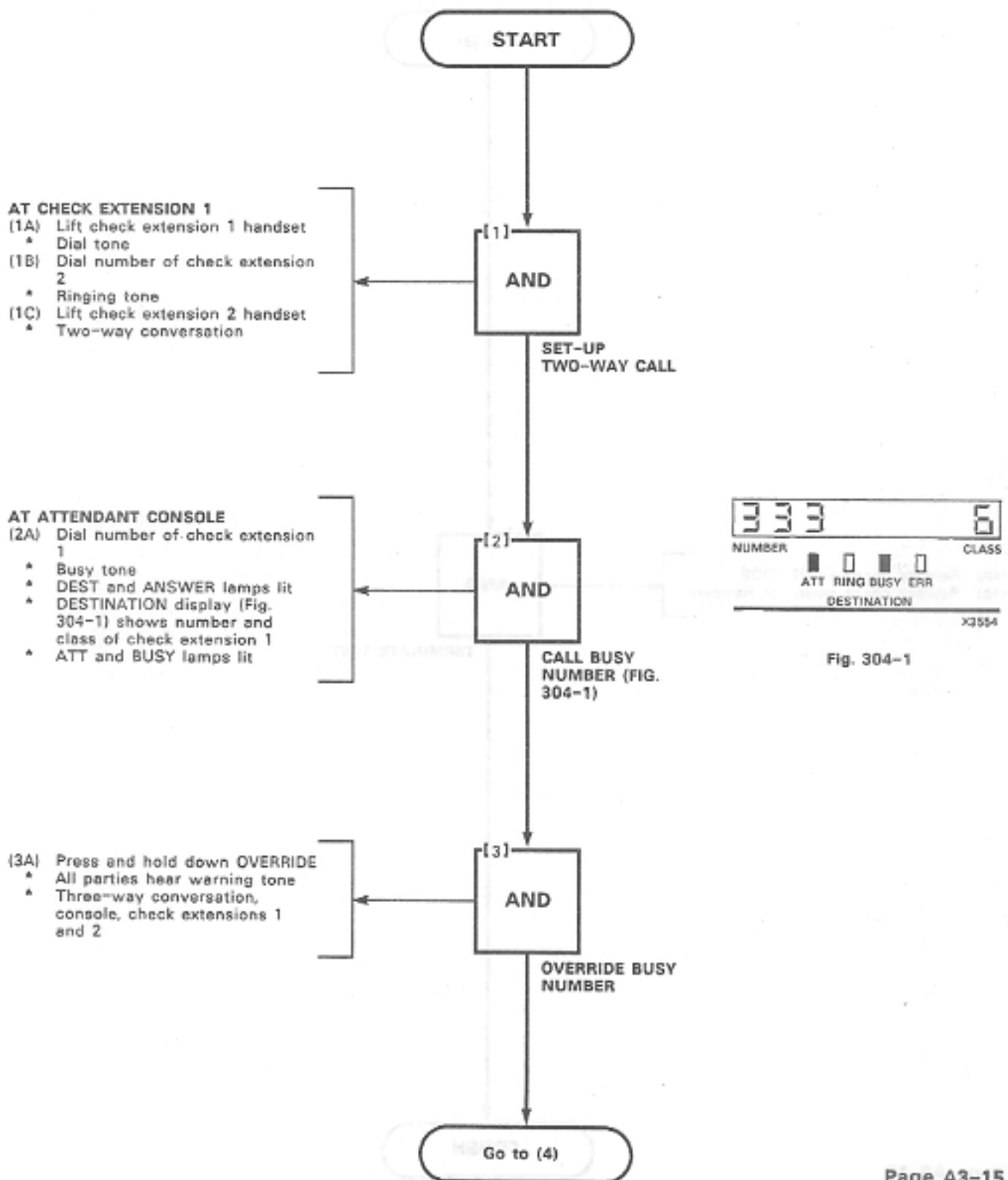
- (4A) Check extension 2 rings
- (4B) Press console RELEASE
- \* Console idle

- AT CONSOLE**
- (5A) After time out period (10, 20, 30 or 40 s)
    - \* RCL and ANSWER lamps flash
    - \* Ringer sounds
  - (5B) Press RECALL
    - \* RCL, ANSWER and SOURCE lamps light
    - \* SOURCE display (Fig. 303-3) shows the number and COS of check extension 1
    - \* ATT and RCL lamps lit
    - \* DESTINATION display shows number and COS of check extension 2

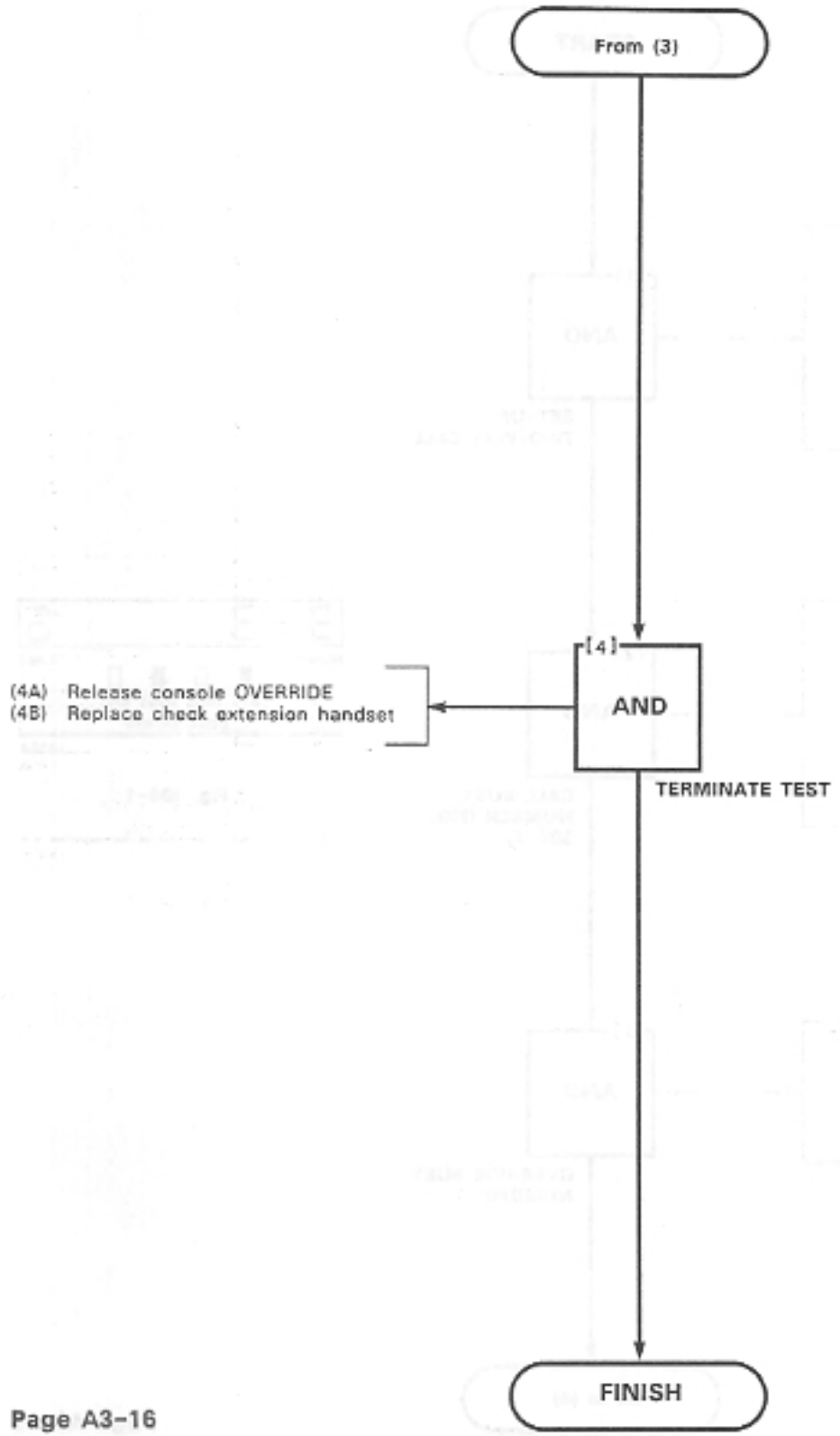
- (6A) Press console CANCEL
- \* Console idle
- (6B) Replace check extension handset 1
- (6C) Press console RELEASE
- \* Console idle



|                        |                |
|------------------------|----------------|
| OVERVERRIDE            | 304-1-2-1      |
| MAP215-304             | ADD - 11/11/82 |
| Issue 1, December 1982 | ISSUE 1        |
| Sheet 1 of 2           | 2 of 2, 10000  |



|                        |  |
|------------------------|--|
| OVERRIDE               |  |
| MAP215- 304            |  |
| Issue 1, December 1982 |  |
| Sheet 2 of 2           |  |



FLEXIBLE NIGHT SERVICE

MAP215-305

Issue 1, December 1982

Sheet 1 of 2

Note: Individual Trunk Access Number displayed is the equipment number of the trunk.

## AT CONSOLE

(1A) Dial ^, 3

- ANSWER and DEST lamps lit

(1B) Dial Individual Trunk access code (equipment number)

- ANSWER and DEST lamps lit
- DESTINATION display shows individual trunk (equipment) number

(2A) Press NIGHT 1

- ANSWER and DEST lamps lit
- SOURCE display shows individual Trunk Equipment Number and Night Service assignment
- DESTINATION display shows existing extension or Hunt Group assignment

(2B) Dial number of check extension 1

- ANSWER and DEST lamps lit
- SOURCE display (Fig. 305-1) shows individual trunk number and night assignment
- DESTINATION display shows number of check extension 1

(2C) Press RELEASE

(3A) Press NIGHT 1 button selected in step (2A)

- NIGHT lamp lit
- Night trunk is connected to check extension

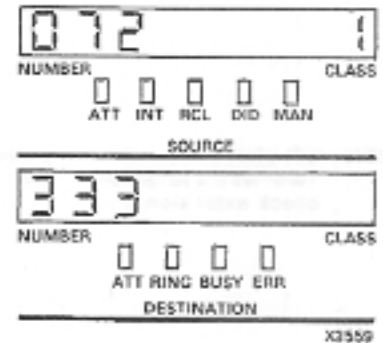
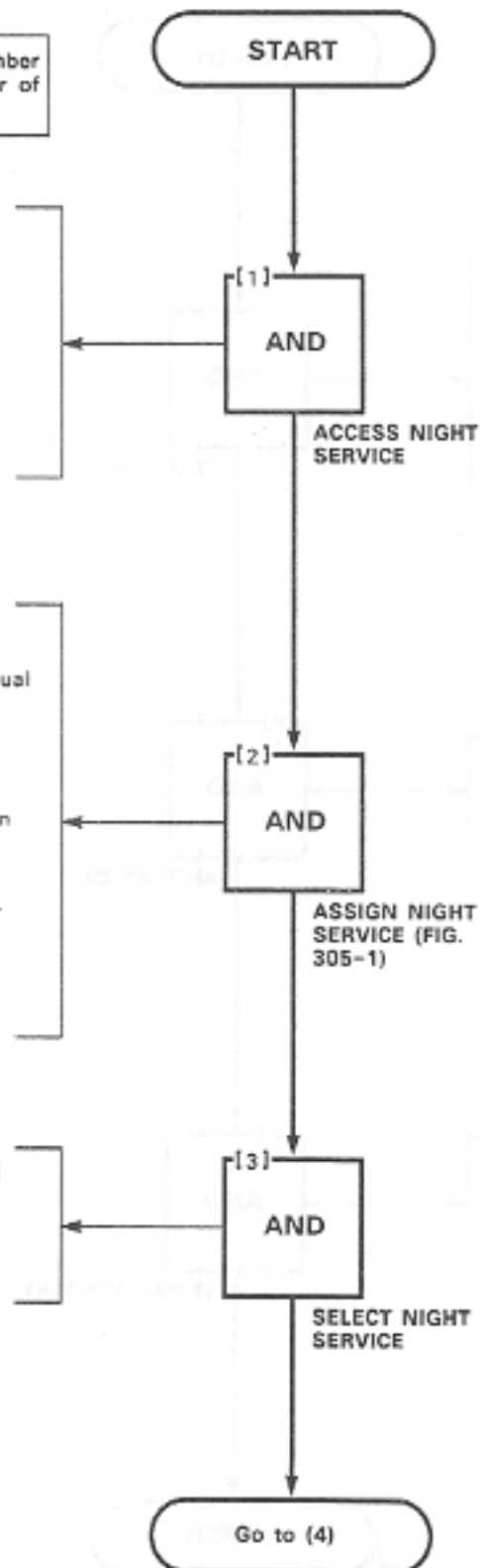
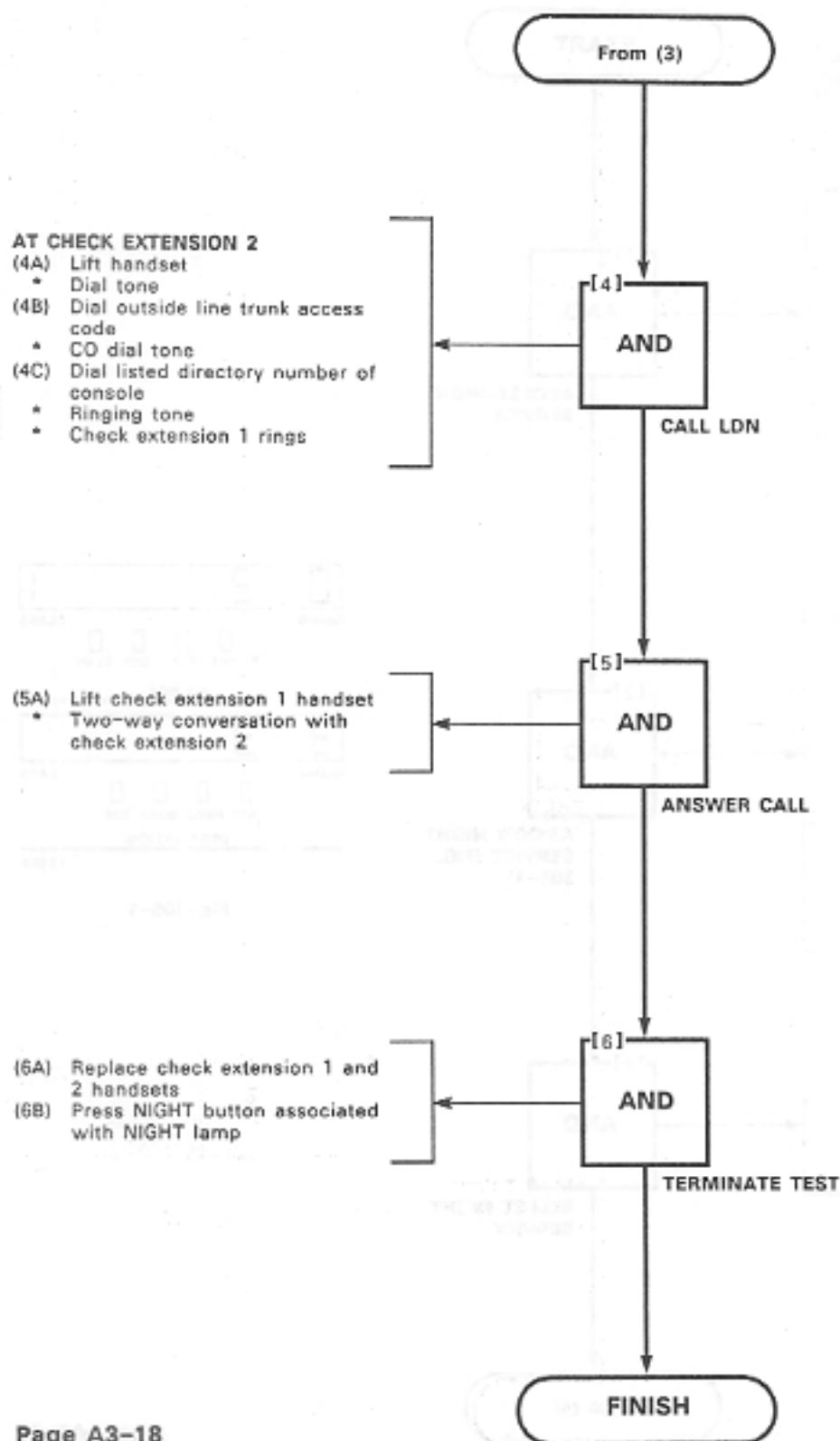


Fig. 305-1

|                        |
|------------------------|
| FLEXIBLE NIGHT SERVICE |
| MAP215- 305            |
| Issue 1, December 1982 |
| Sheet 2 of 2           |



## TRUNK BUSY OPERATION

MAP215-306

Issue 1, December 1982

Sheet 1 of 2

Note: Individual Trunk Access Number displayed is same as equipment number of trunk.

## AT CONSOLE

- (1A) Dial \*, 9 individual Trunk number, \*
- \* ANSWER and DEST lamps light
  - \* Dial tone returned if trunk is free
- (1B) Press RELEASE

- (2A) Dial \*, 9 individual Trunk Number dialed in (1A) + \*
- \* ANSWER and DEST lamps lit
  - \* DESTINATION display shows number dialed, ATT lit (Fig. 306-1)
  - \* Busy tone
- (2B) Press RELEASE

- (3A) Dial \*, 9 Individual Trunk Number, number sign
- \* ANSWER and DEST lamps lit
  - \* DESTINATION display (Fig. 306-2) shows number dialed, ATT lit
- (3B) Press RELEASE

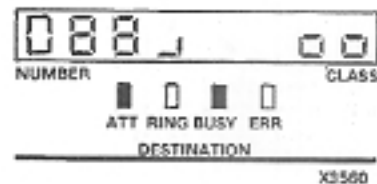
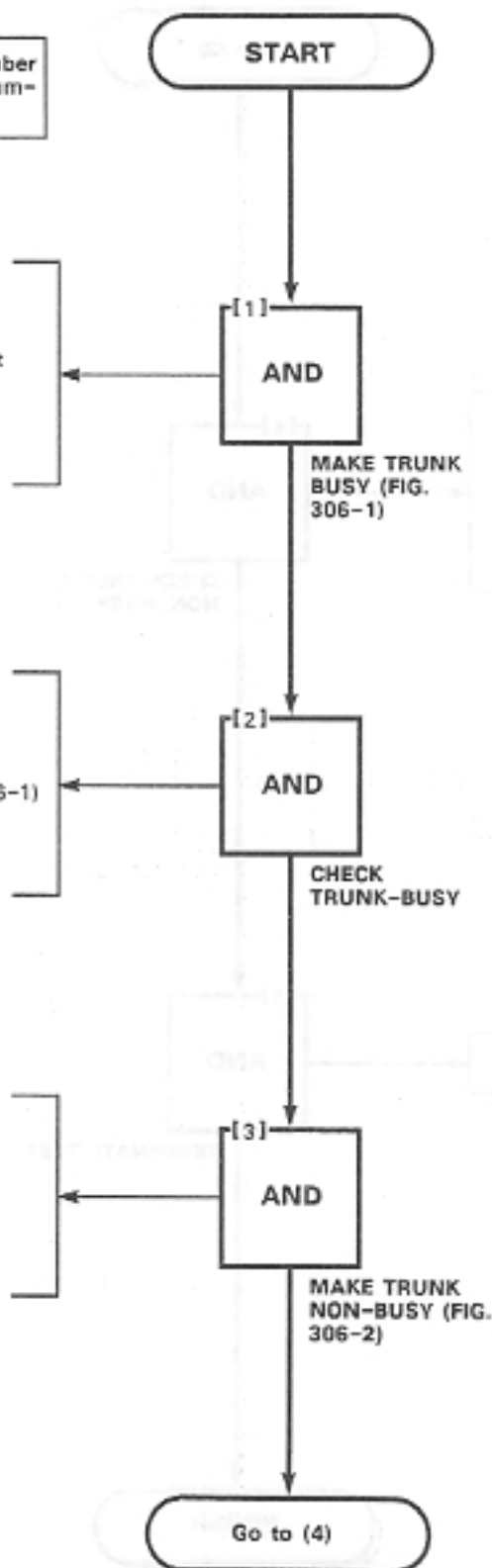


Fig. 306-1

|                        |
|------------------------|
| TRUNK BUSY OPERATION   |
| MAP215- 306            |
| Issue 1, December 1982 |
| Sheet 2 of 2           |

- (4A) Dial \*, 20, Individual Trunk Number, ^
- \* ANSWER and DEST lemps light
  - \* DESTINATION display shows number dialed, ATT lit (Fig. 306-2)
  - \* CO dial tone

(5A) Press RELEASE

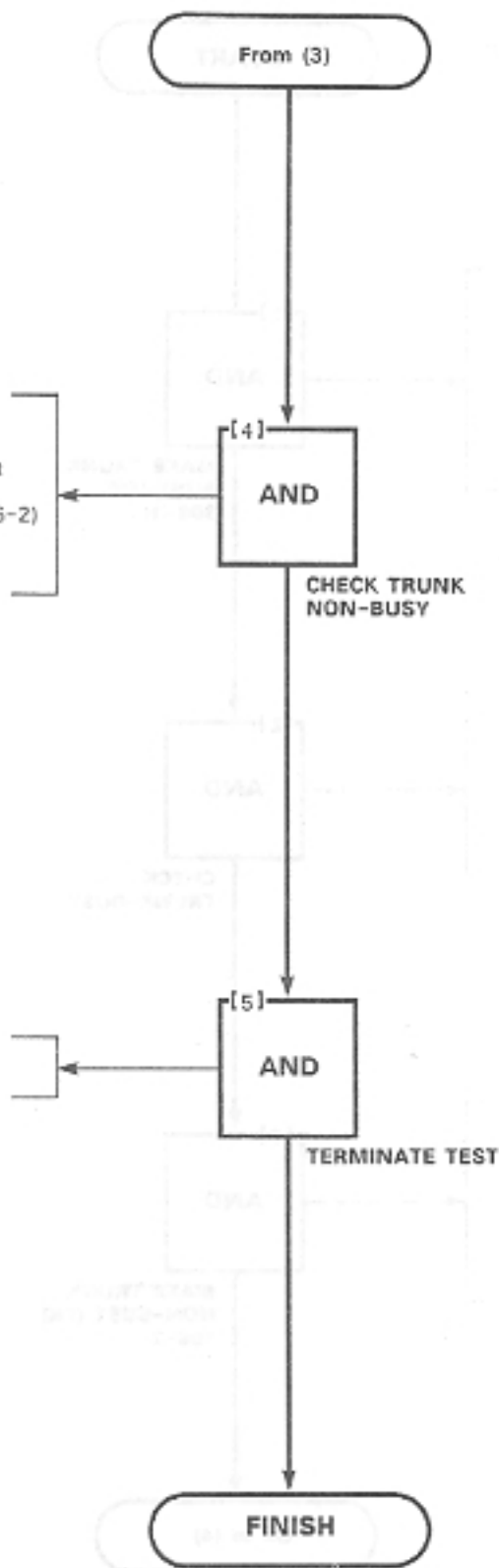


Fig. 306-2



## TRUNK GROUP ATTENDANT ACCESS

MAP215- 307

Issue 1, December 1982

Sheet 1 of 2

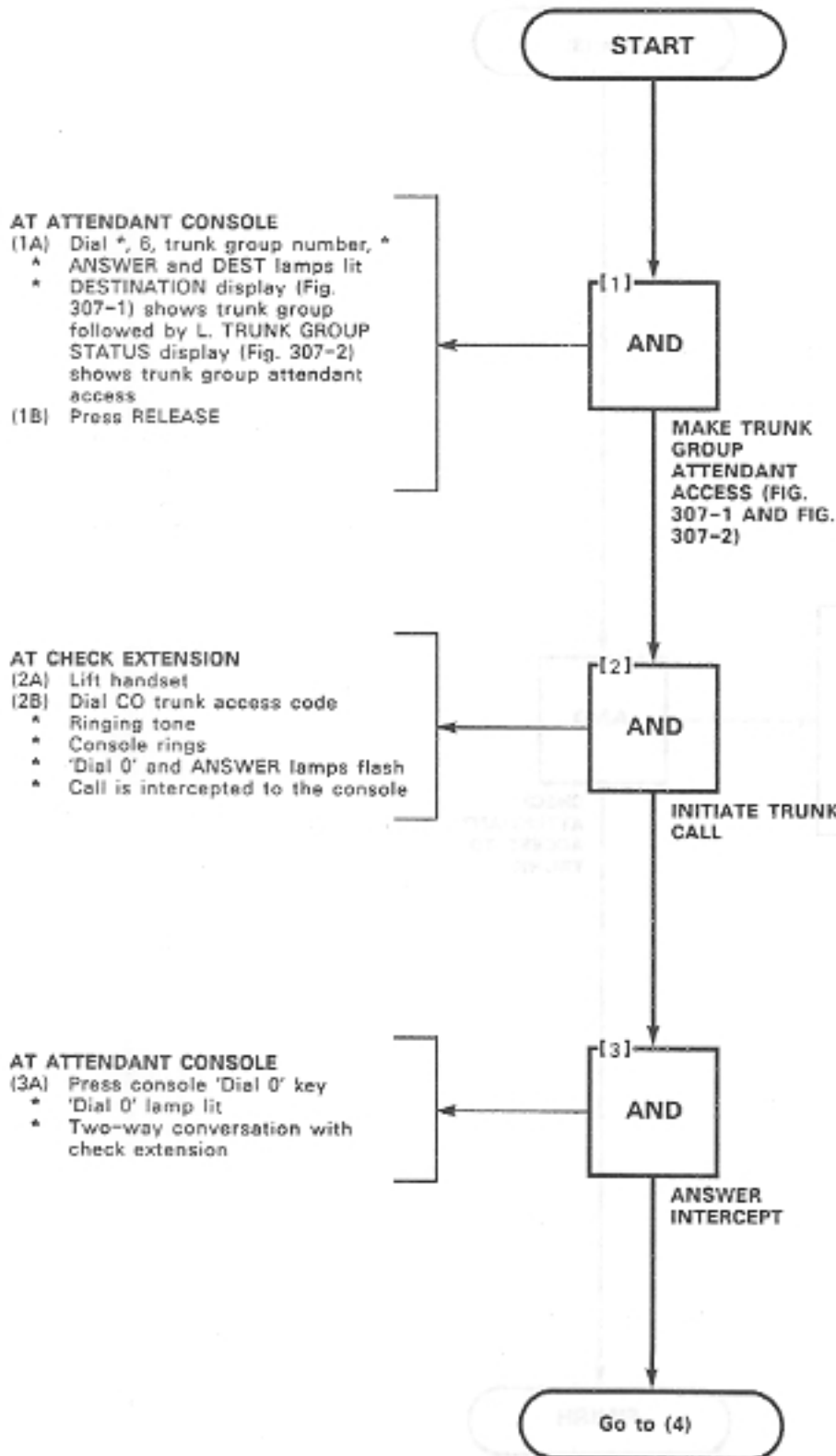


Fig. 307-1

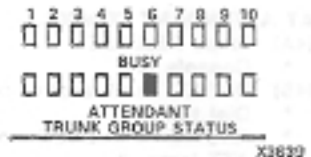
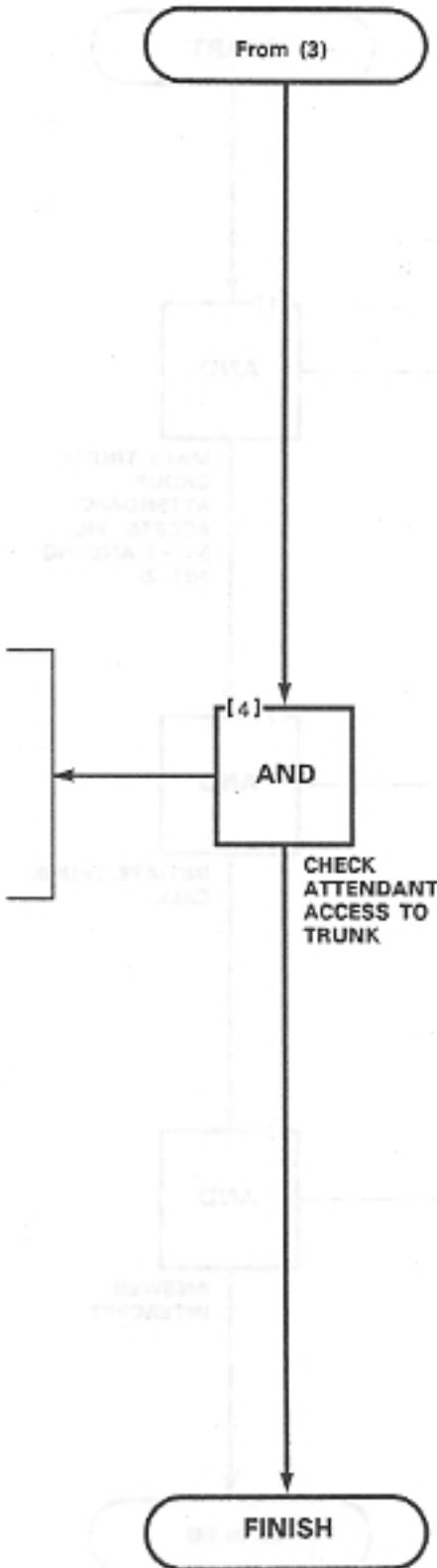


Fig. 307-2

|                              |
|------------------------------|
| TRUNK GROUP ATTENDANT ACCESS |
| MAP215- 307                  |
| Issue 1, December 1982       |
| Sheet 2 of 2                 |

- AT ATTENDANT CONSOLE**
- (4A) Press RELEASE
    - \* Console idle
  - (4B) Dial CO trunk access code
    - \* Dial tone
    - \* ANSWER and DEST lamps lit
    - \* ATT lamp lit
  - (4C) Press RELEASE
    - \* Console idle



## TRUNK GROUP DIAL ACCESS

MAP215-308

Issue 1, December 1982

Sheet 1 of 2

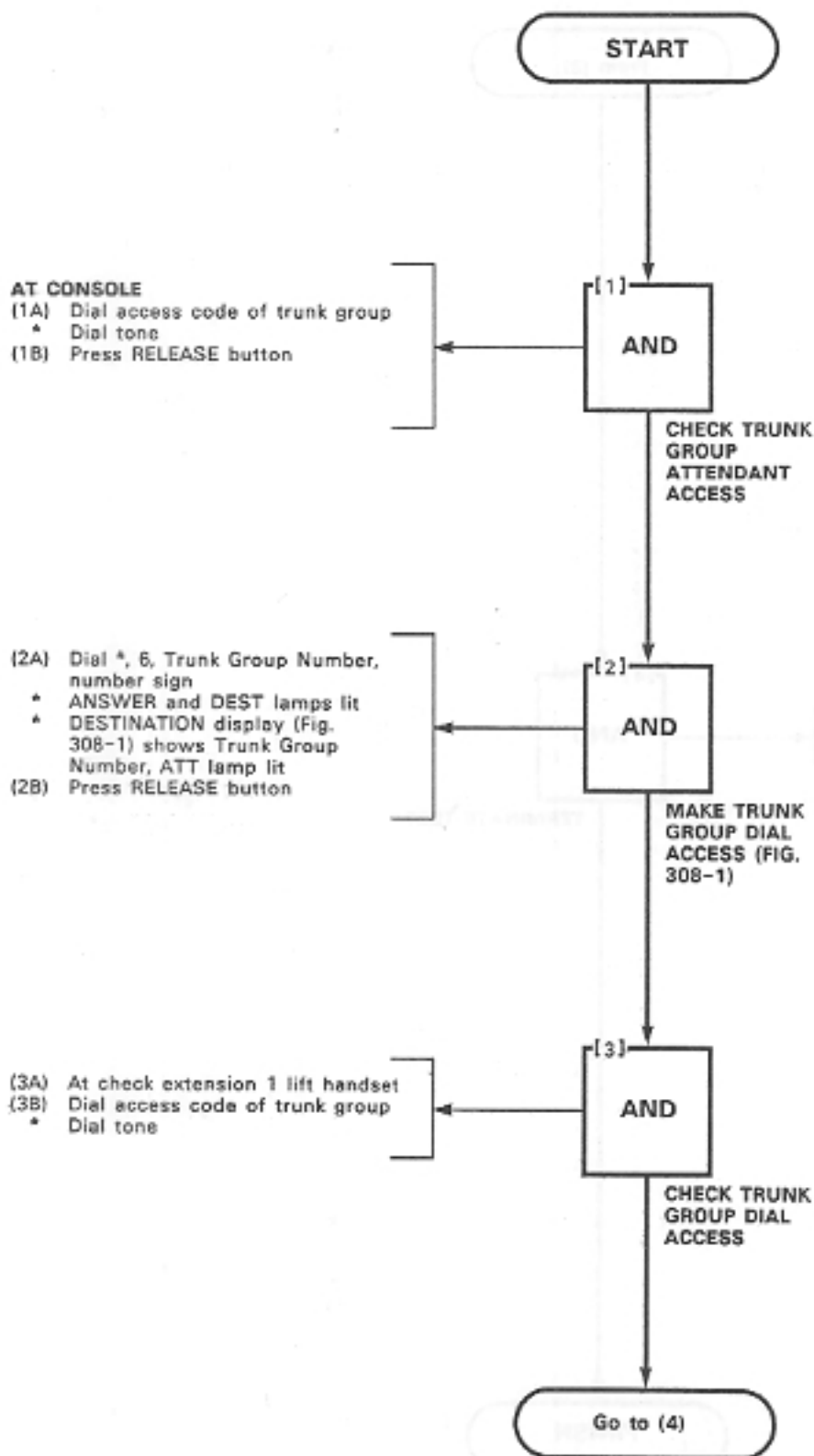
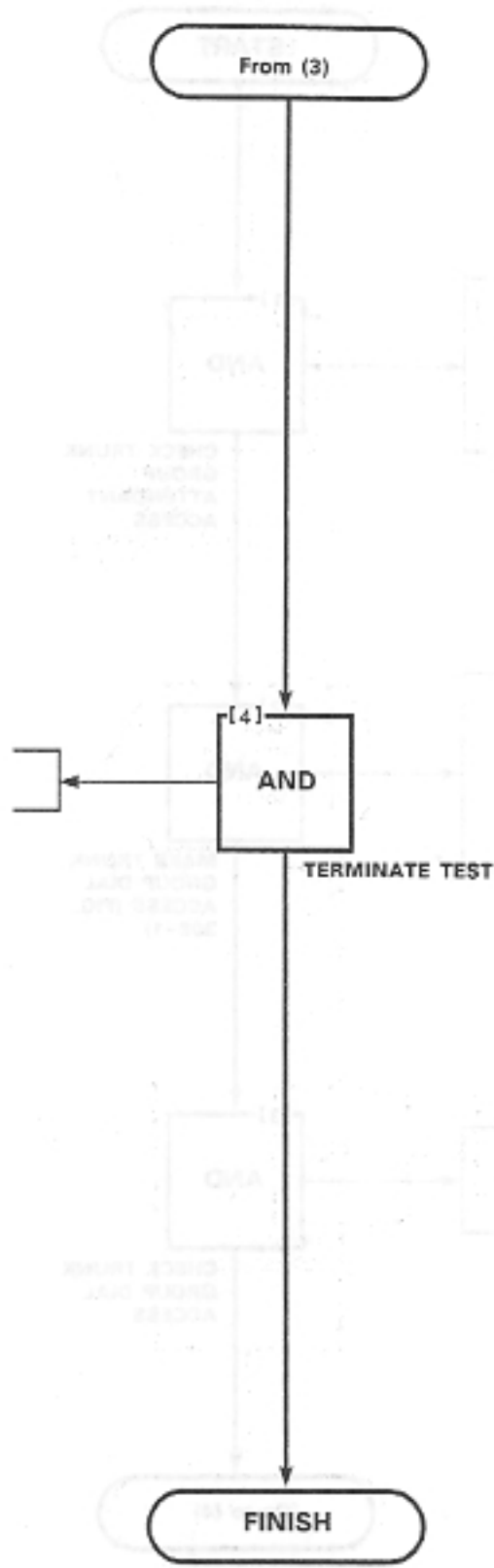


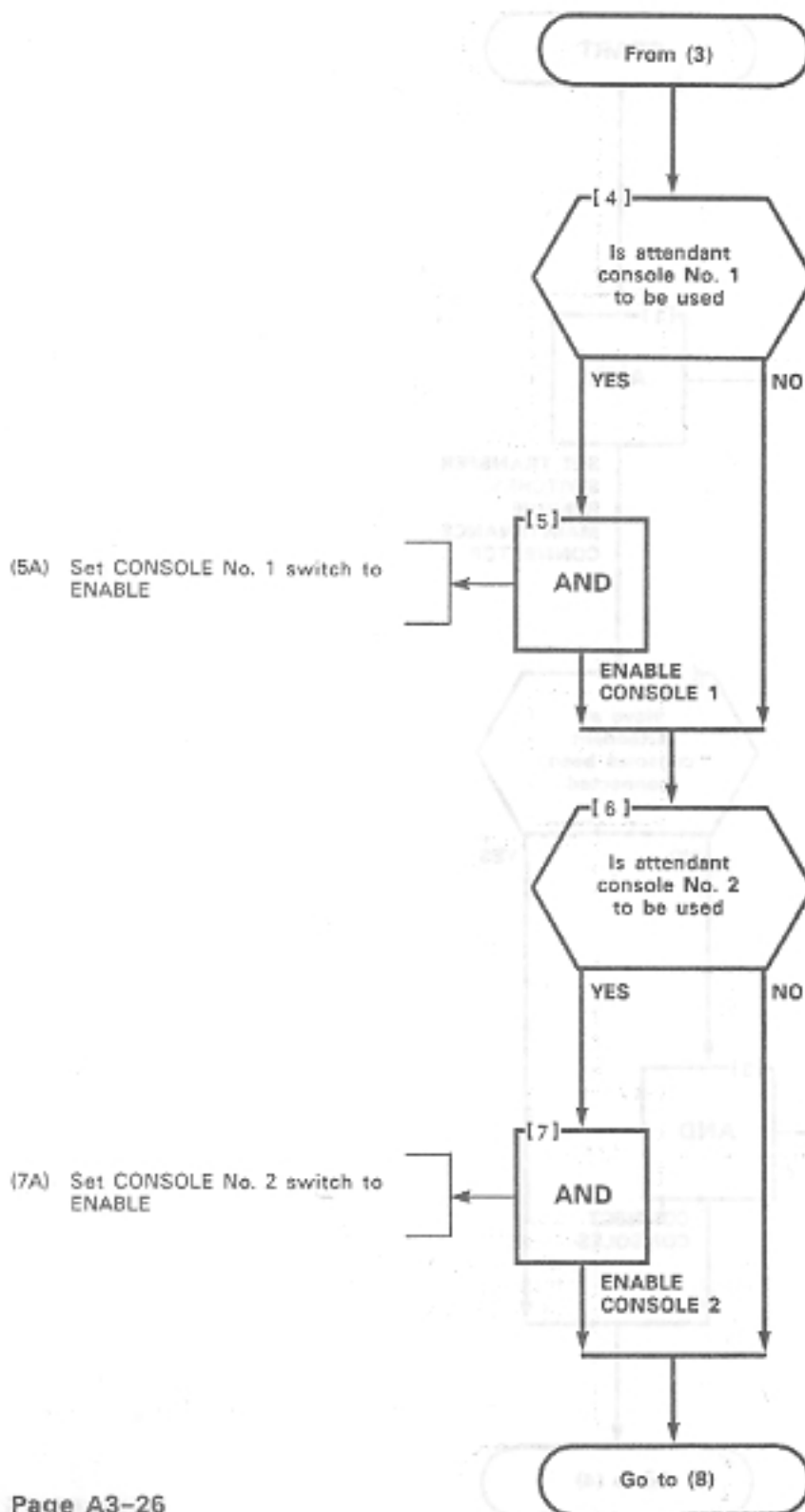
Fig. 308-1

|                         |
|-------------------------|
| TRUNK GROUP DIAL ACCESS |
| MAP215- 308             |
| Issue 1, December 1982  |
| Sheet 2 of 2            |

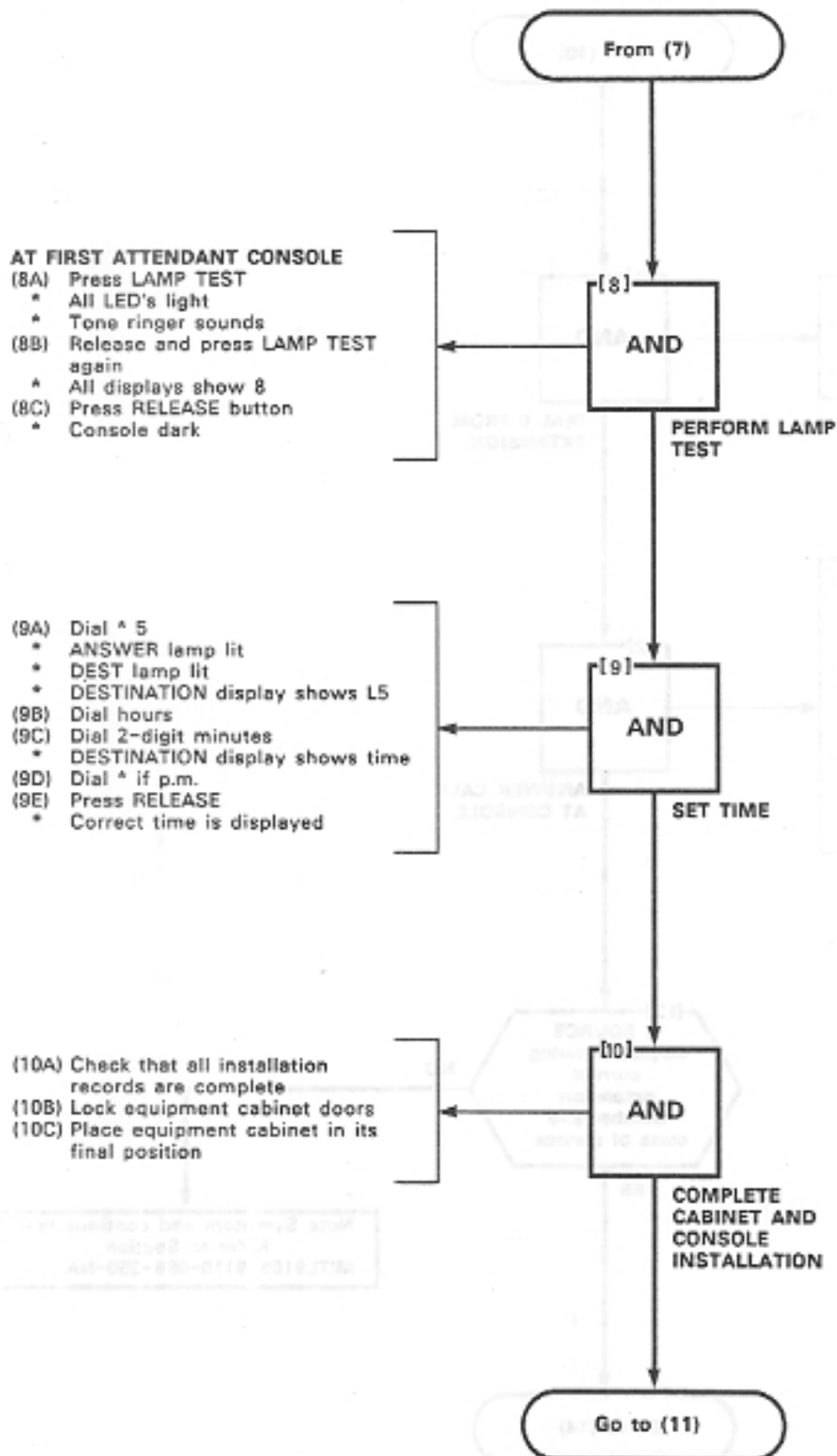




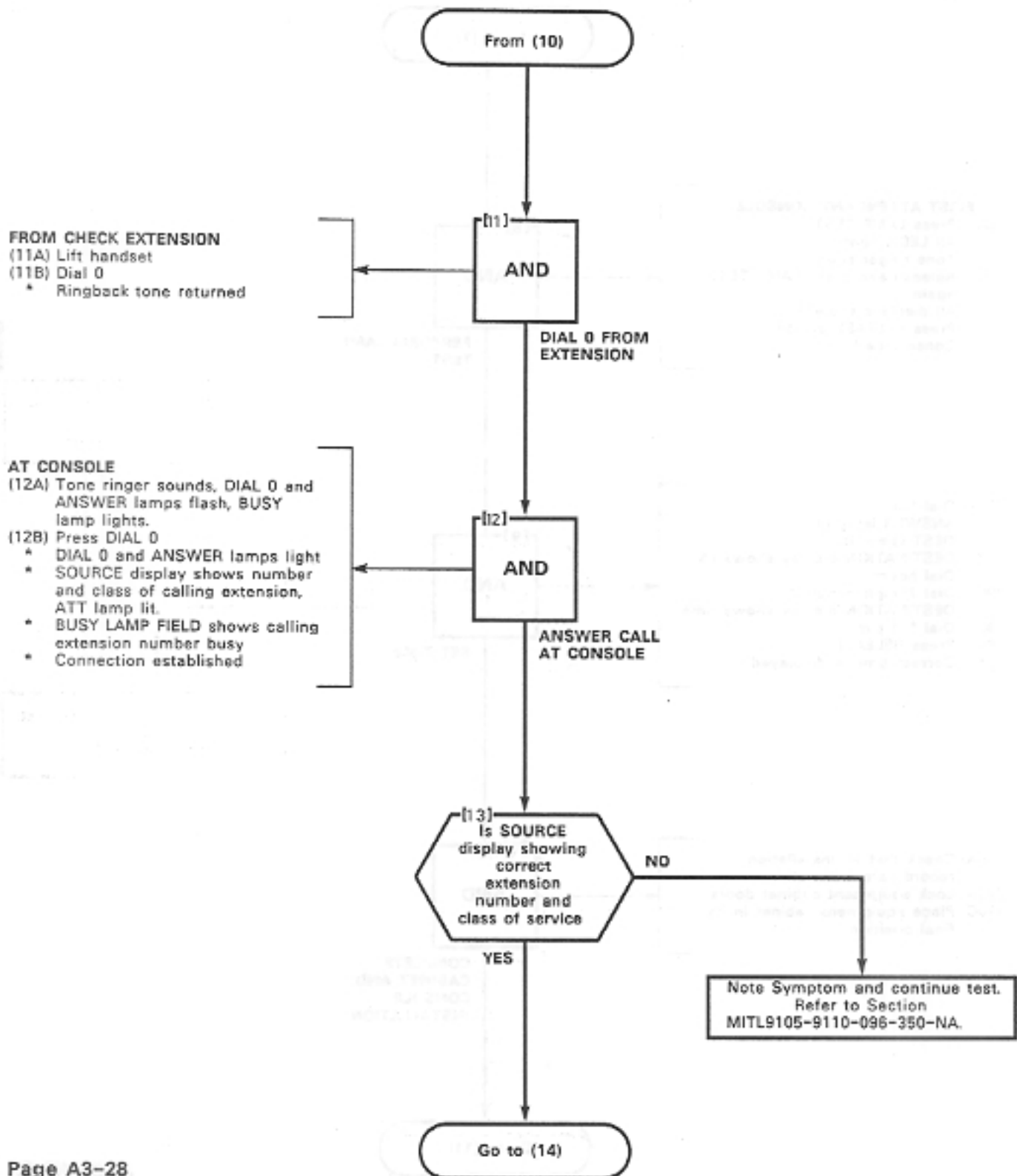
|                        |          |
|------------------------|----------|
| TEST TERMINATION       | 10/10/82 |
| MAP215- 309            | 10/10/82 |
| Issue 1, December 1982 | 10/10/82 |
| Sheet 2 of 8           | 10/10/82 |



|                        |            |
|------------------------|------------|
| TEST TERMINATION       | 1982       |
| MAP215- 309            | 096-215-NA |
| Issue 1, December 1982 |            |
| Sheet 3 of 8           |            |



|                        |  |
|------------------------|--|
| TEST TERMINATION       |  |
| MAP215- 309            |  |
| Issue 1, December 1982 |  |
| Sheet 4 of 8           |  |



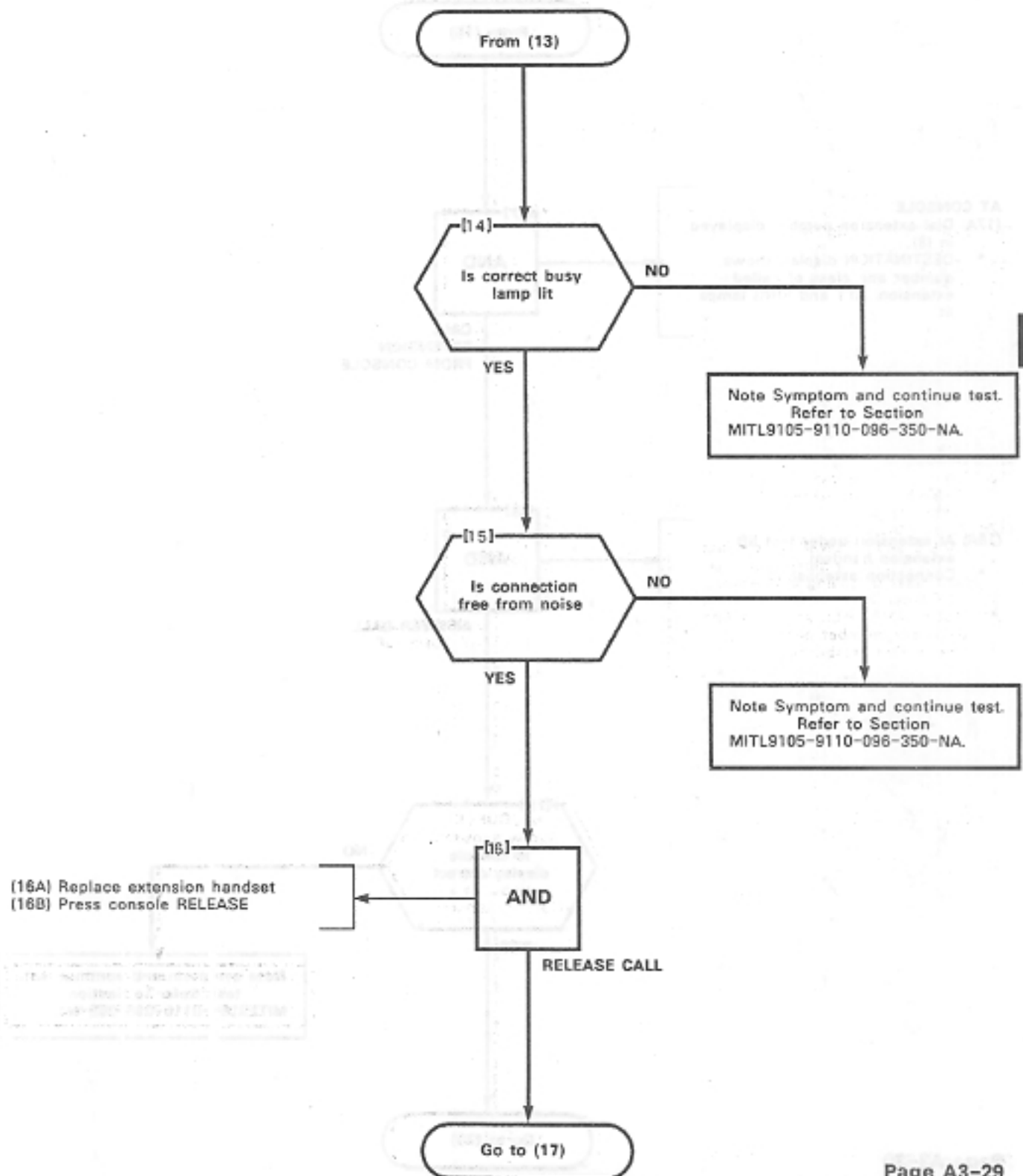


## TEST TERMINATION

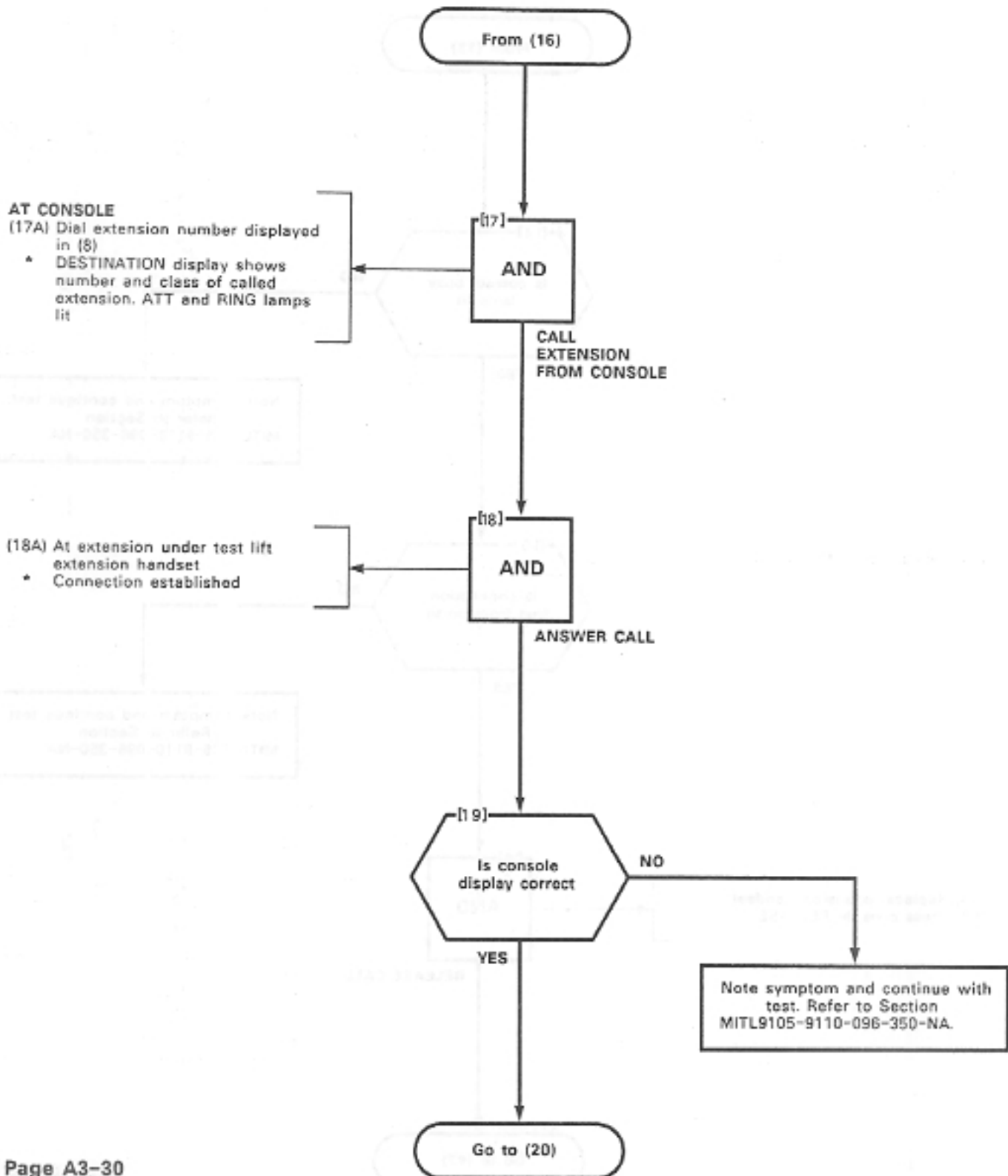
MAP215-309

Issue 1, December 1982

Sheet 5 of 8



|                         |
|-------------------------|
| <b>TEST TERMINATION</b> |
| MAP215- 309             |
| Issue 1, December 1982  |
| Sheet 6 of 8            |

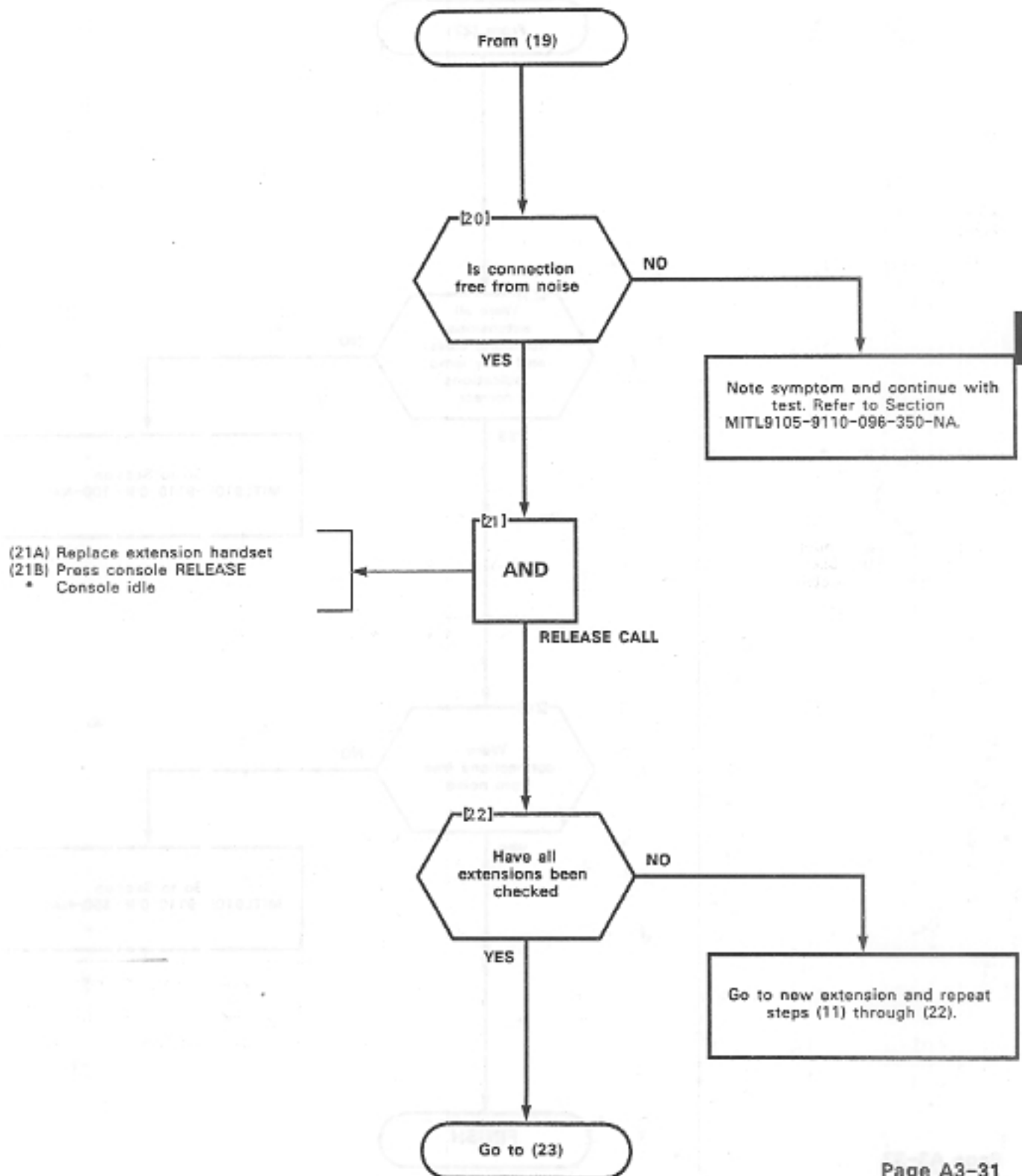


TEST TERMINATION

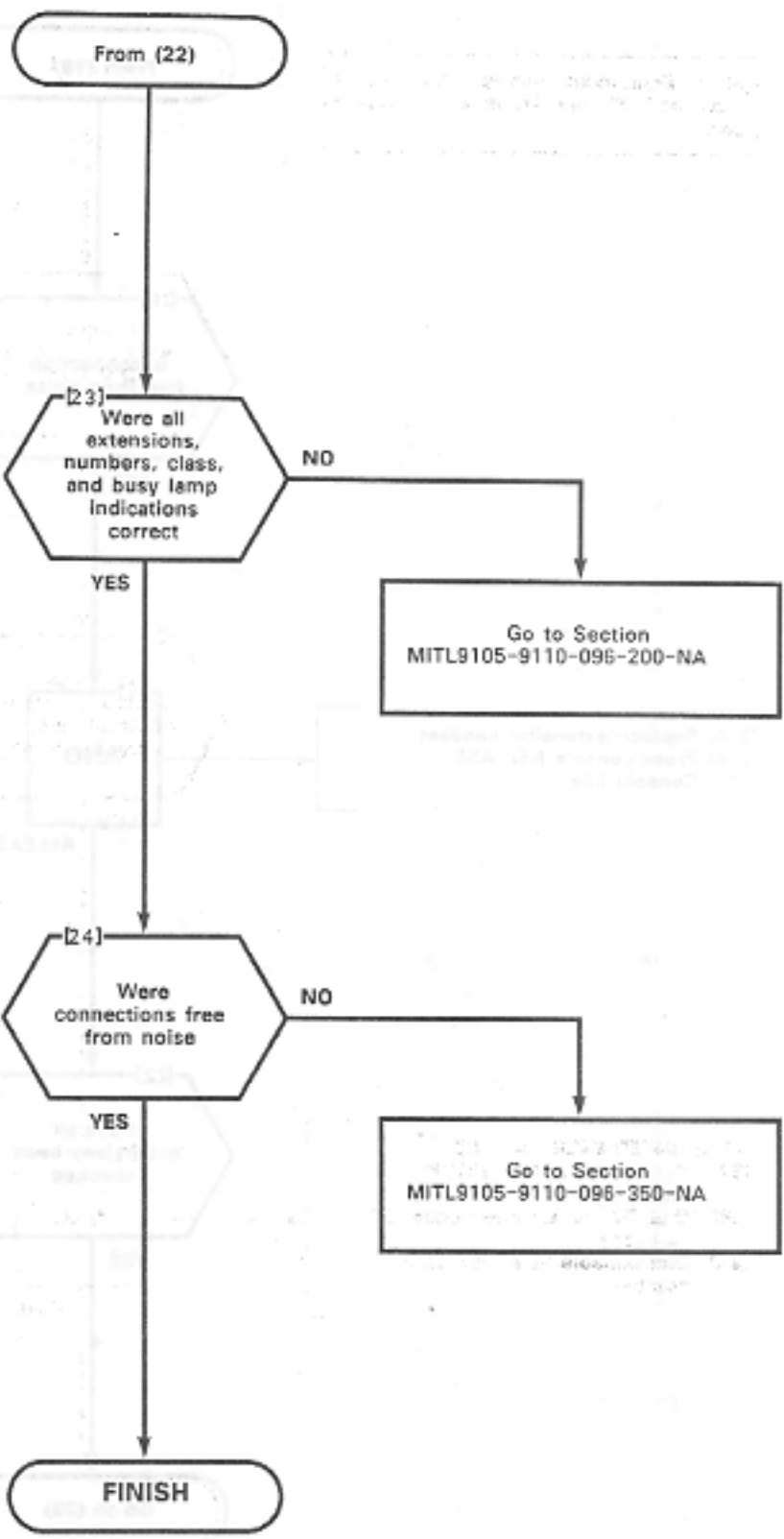
MAP215-309

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Sheet 7 of 8



|                        |
|------------------------|
| TEST TERMINATION       |
| MAP215- 309            |
| Issue 1, December 1982 |
| Sheet 8 of 8           |



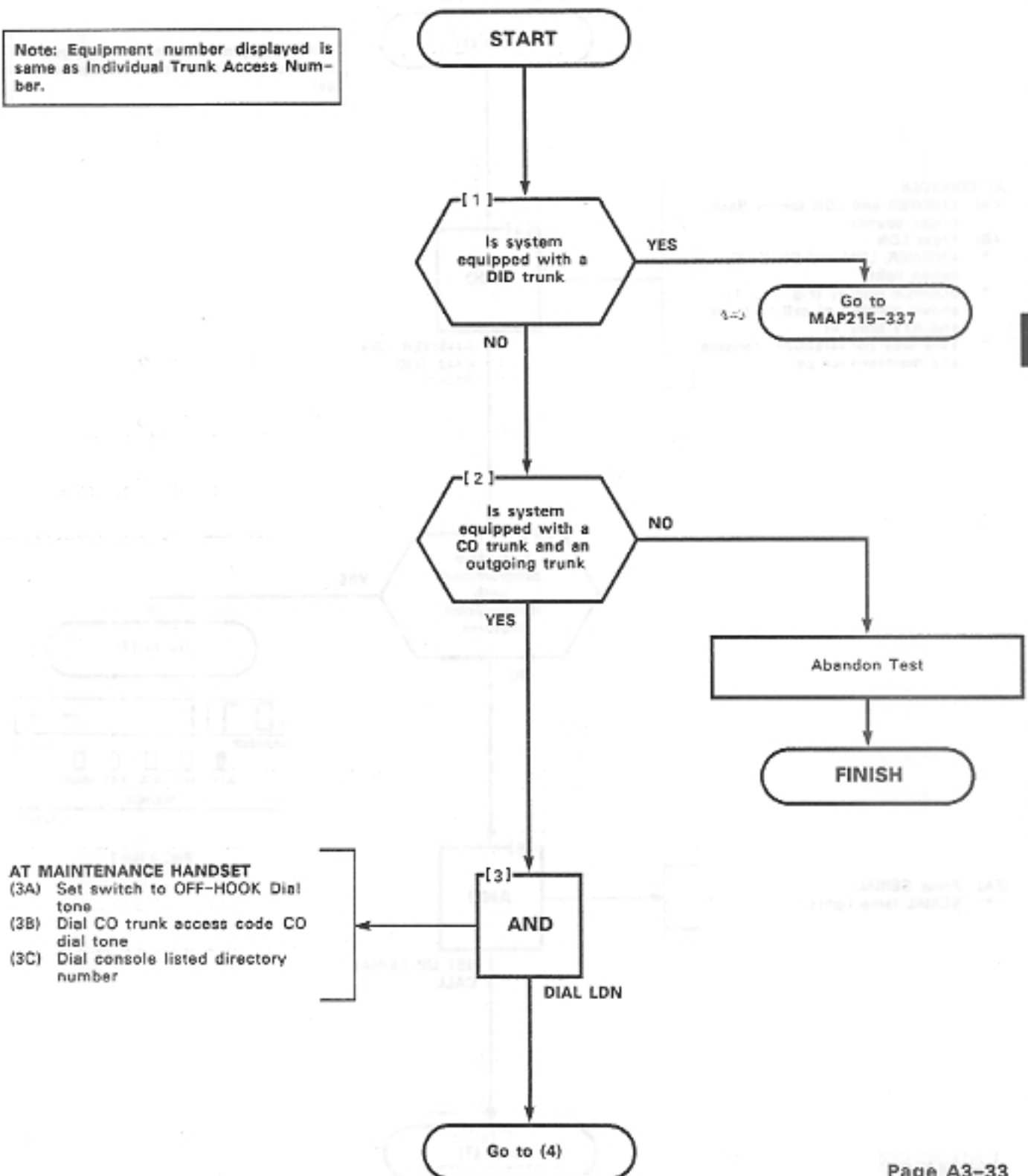
ANSWER INCOMING CO TRUNK CALL

MAP215-310

Issue 1, December 1982

Sheet 1 of 6

Note: Equipment number displayed is same as Individual Trunk Access Number.



|                               |
|-------------------------------|
| ANSWER INCOMING CO TRUNK CALL |
| MAP215- 310                   |
| Issue 1, December 1982        |
| Sheet 2 of 6                  |

Note: Equipment number displayed is same as Individual Trunk Access Number.

- AT CONSOLE**
- (4A) ANSWER and LDN lamps flash, ringer sounds
  - (4B) Press LDN
    - ANSWER, LDN and SOURCE lamps light
    - SOURCE display (Fig. 310-1) shows number of calling trunk and ATT lamp lit
    - Two-way conversation, console and maintenance set

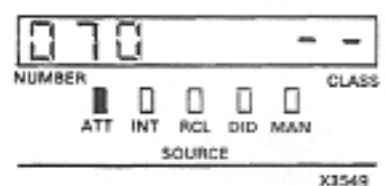
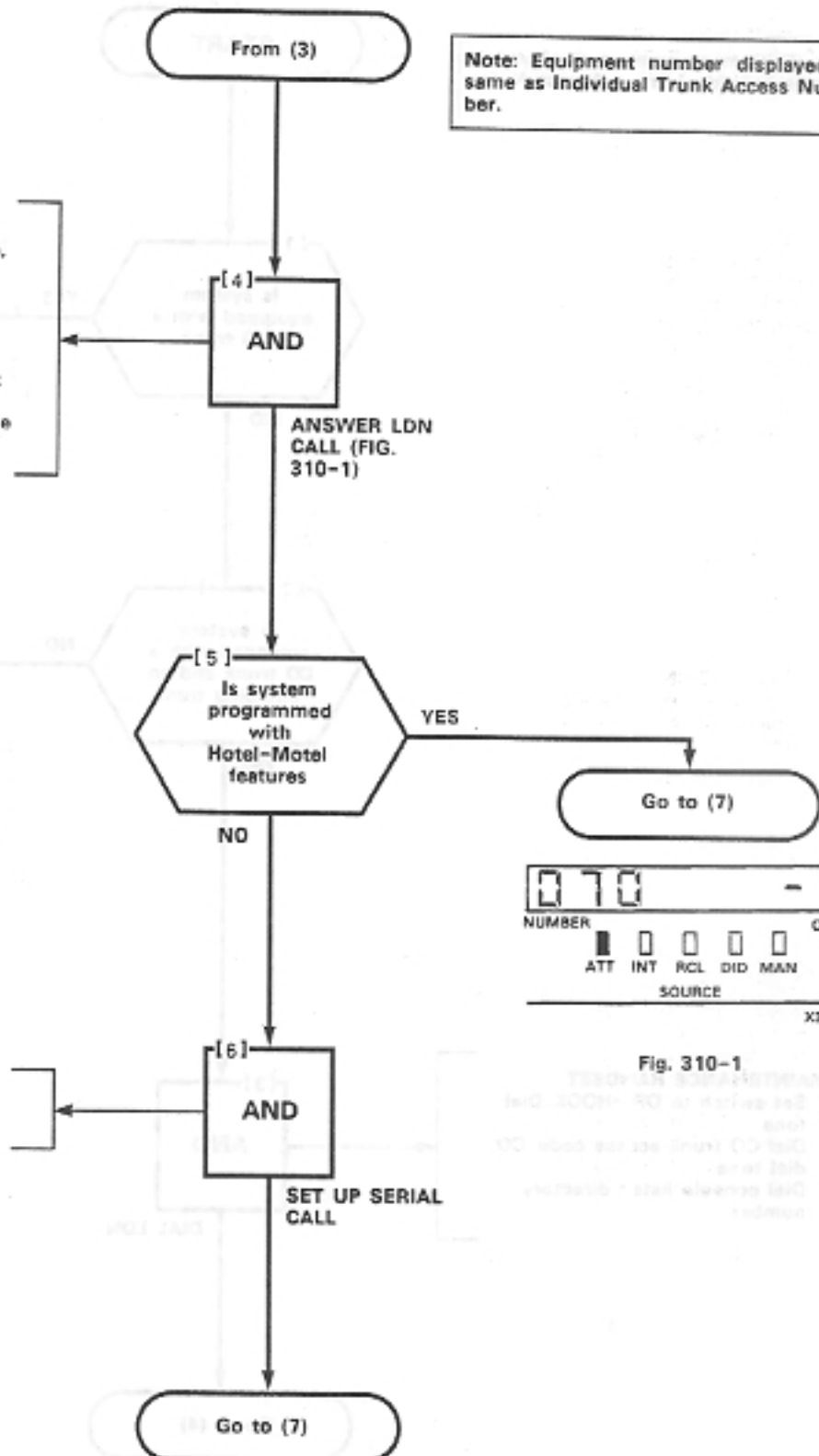


Fig. 310-1

- (6A) Press SERIAL
  - SERIAL lamp lights

ANSWER INCOMING CO TRUNK CALL

MAP215- 310

Issue 1, December 1982

Sheet 3 of 6

Note: Equipment number displayed is same as Individual Trunk Access Number.

**AT CONSOLE**

- (7A) Dial number of check extension
- ANSWER, LDN, and DEST lamps lit
  - SOURCE display (Fig. 310-2) shows the equipment number of the calling trunk
  - DESTINATION display shows the number and COS of the check extension
  - ATT and RING lamps lit

**AT CHECK EXTENSION**

- (8A) Lift check extension handset
- Two-way conversation with console

**AT CONSOLE**

- (9A) Press SOURCE
- ANSWER, LDN and SOURCE lamps lit
  - SOURCE display (Fig. 310-3) shows the number of the calling trunk
  - ATT lamp lit
  - DESTINATION display shows number and COS of check extension
  - Two-way private call with maintenance set

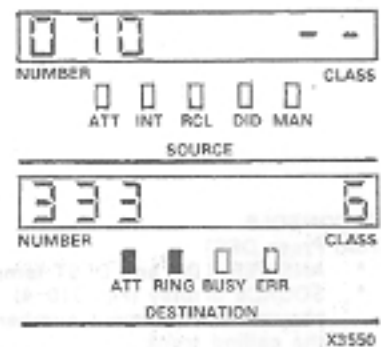
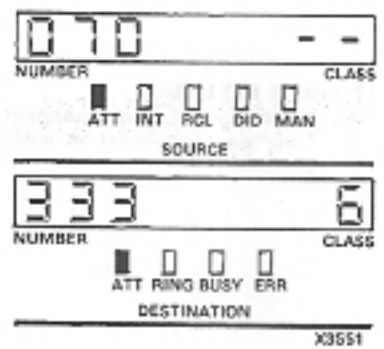
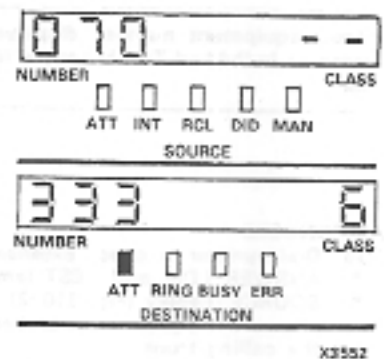
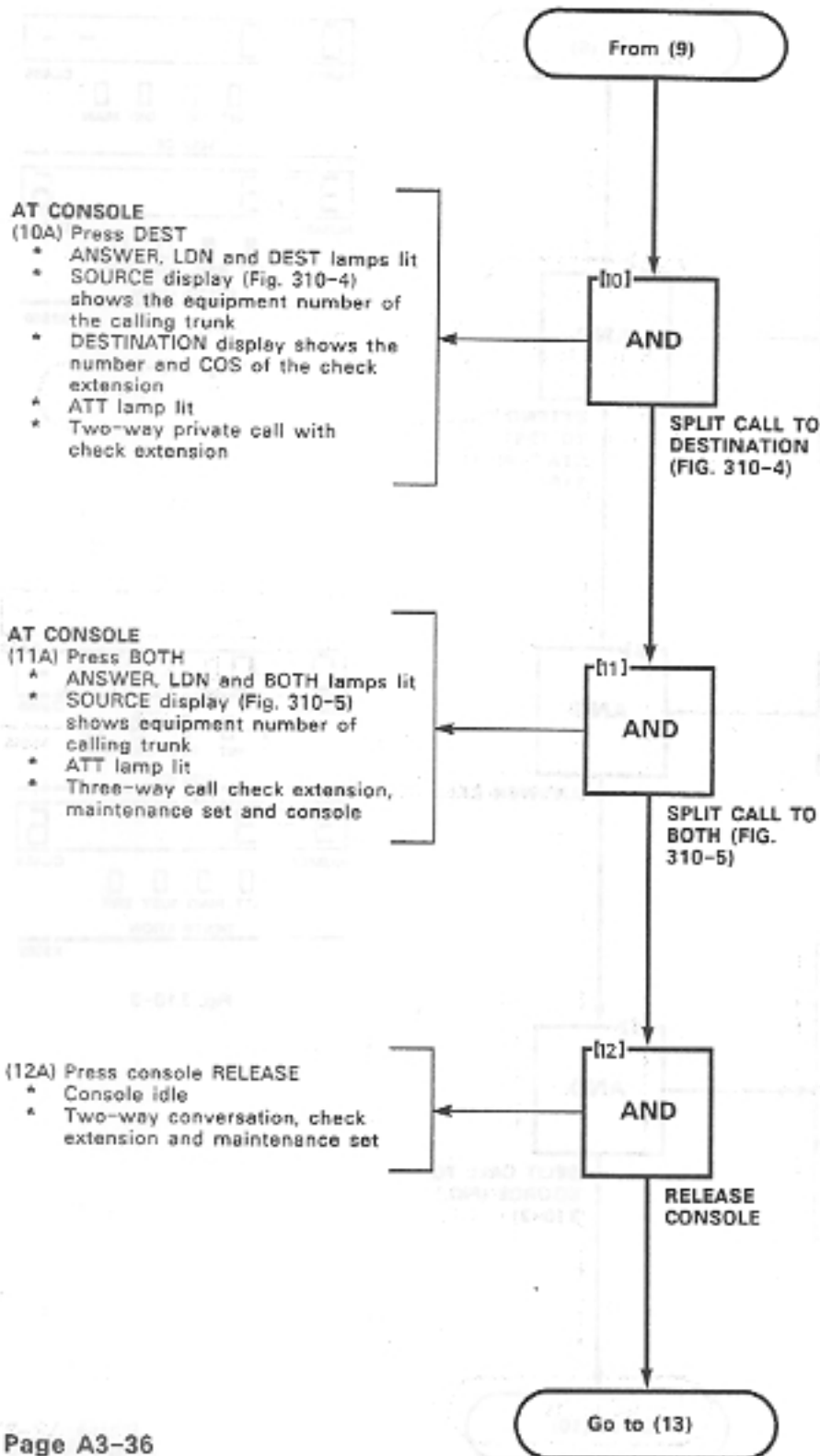


Fig. 310-2



Fig. 310-3

|                               |
|-------------------------------|
| ANSWER INCOMING CO TRUNK CALL |
| MAP215- 310                   |
| Issue 1, December 1982        |
| Sheet 4 of 6                  |



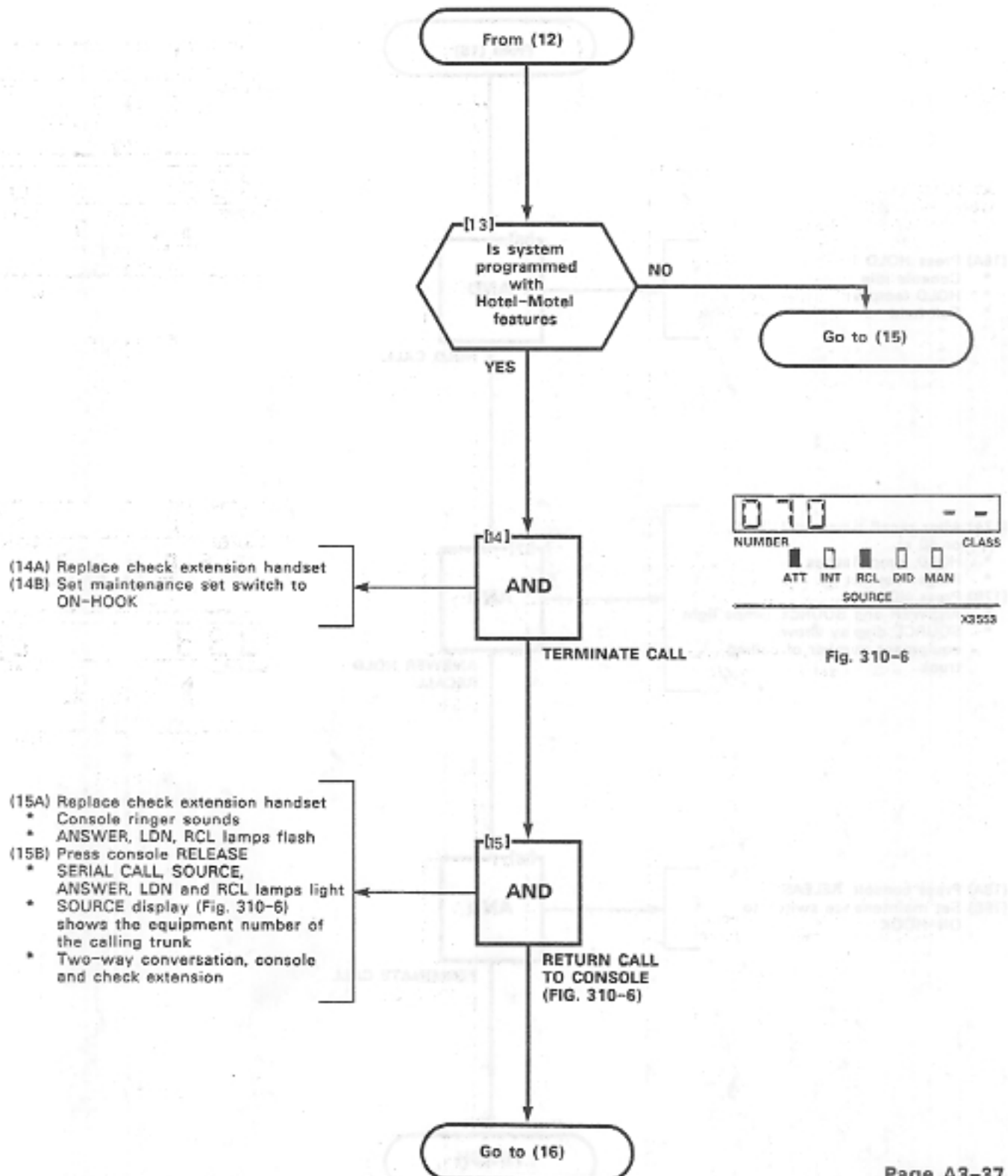


ANSWER INCOMING CO TRUNK CALL

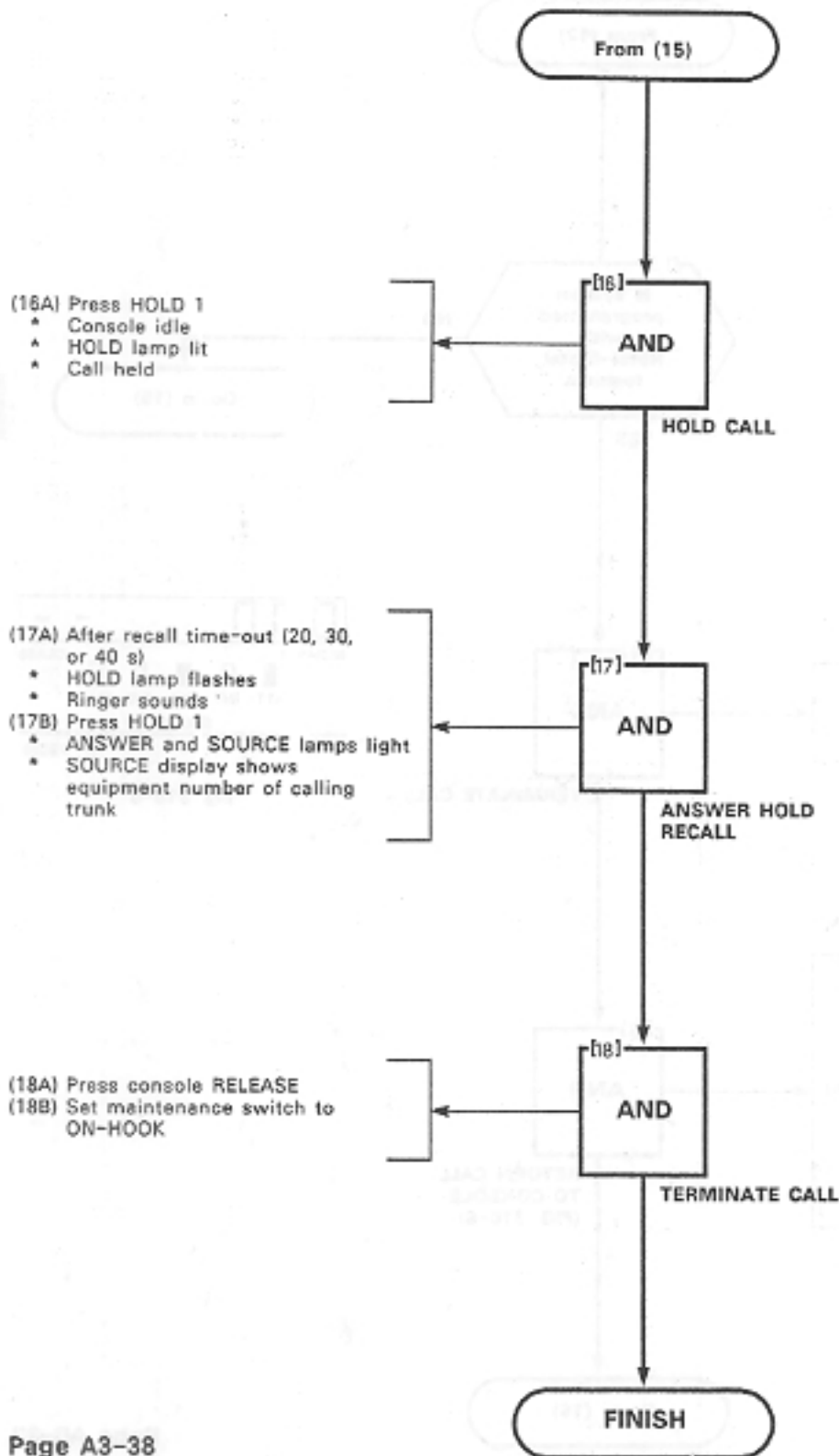
MAP215-310

Issue 1, December 1982

Sheet 5 of 6



|                               |
|-------------------------------|
| ANSWER INCOMING CO TRUNK CALL |
| MAP215- 310                   |
| Issue 1, December 1982        |
| Sheet 6 of 6                  |



ATTENDANT DO NOT DISTURB

MAP215-311

Issue 1, December 1982

Sheet 1 of 2

## Note 1:

Ring is given in substep (2B) if System Option 138 is selected. Otherwise re-order tone is given and remainder of (2) substeps are omitted.

## AT CONSOLE

- (1A) Press GUEST ROOM button and dial check extension 1 number  
 (1B) Press DO NOT DSTB  
 \* DO NOT DSTB lamp lit  
 (1C) Press RELEASE

## AT CONSOLE

- (2A) Check extension 1 lamp in Busy Lamp Field lit

## AT CHECK EXTENSION 2

- (2B) Lift handset  
 \* Dial tone  
 (2C) Dial number of Check Extension 1  
 \* Ringing tone (NOTE 1)  
 \* Console rings

## AT CONSOLE

- (2D) ANSWER and DIAL 0 lamps flash  
 (2E) Press ANSWER  
 \* SOURCE display shows number of Check Extension 2 and class  
 \* ATT and INT lamps lit (Fig. 311-1)  
 (2F) Two-way conversation, Check Extension 2 and console  
 (2G) Press console RELEASE  
 (2H) Replace handset at Check Extension 2

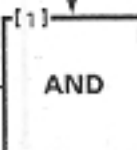
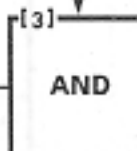
## AT CHECK EXTENSION 1

- (3A) Lift handset  
 \* Dial tone  
 (3B) Dial Do Not Disturb access code followed by digit 2  
 (3C) Replace handset

## AT CONSOLE

- (3D) Check Extension 1 lamp in Busy Lamp Field goes off

START

ENABLE  
FEATURE FROM  
CONSOLEVERIFY ENABLED  
FEATURECANCEL DO  
NOT DISTURB  
FEATURE

Go to (4)

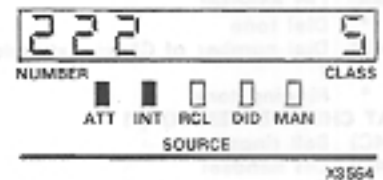
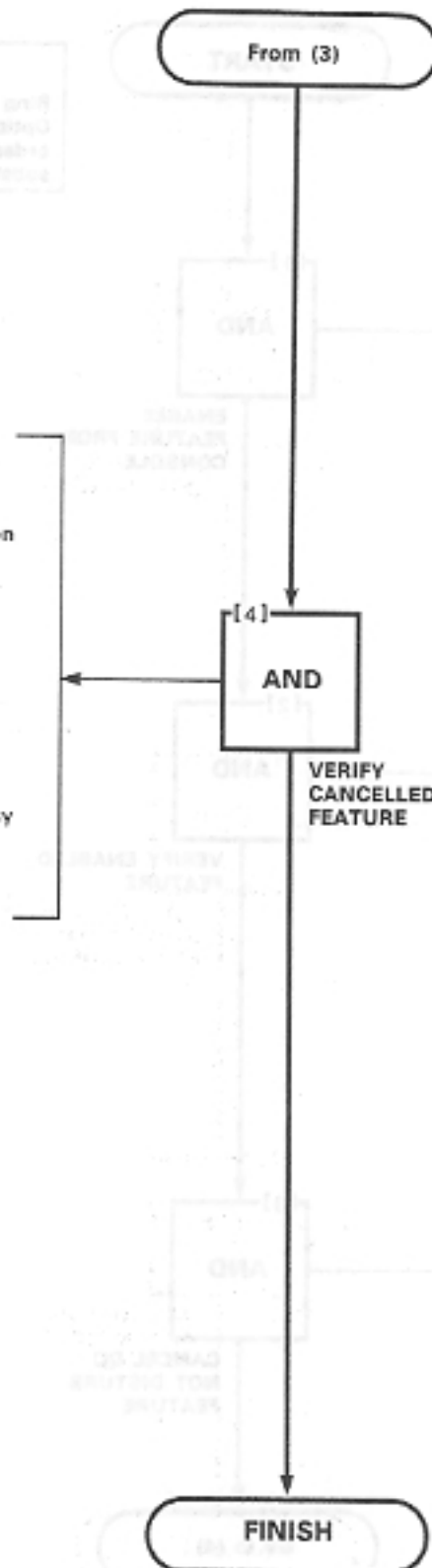


Fig. 311-1

|                          |
|--------------------------|
| ATTENDANT DO NOT DISTURB |
| MAP215- 311              |
| Issue 1, December 1982   |
| Sheet 2 of 2             |

- AT CHECK EXTENSION 2**
- (4A) Lift handset
- Dial tone
- (4B) Dial number of Check Extension 1
- Ringing tone
- AT CHECK EXTENSION 1**
- (4C) Bell rings
- (4D) Lift handset
- Two-way conversation, Check Extension 1 and 2
- (4E) Replace Check Extension handsets
- AT CONSOLE**
- (4F) Press DO NOT DSTB key
- Check Extension 1 lamp in Busy Lamp Field is not lit
- (4G) Release DO NOT DSTB key
- Console idle



MESSAGE WAITING

MAP215-312

Issue 1, December 1982

Sheet 1 of 2

## WARNING

Pressing MSGE WAIT when console is active with an extension may activate or remove the feature at the extension.

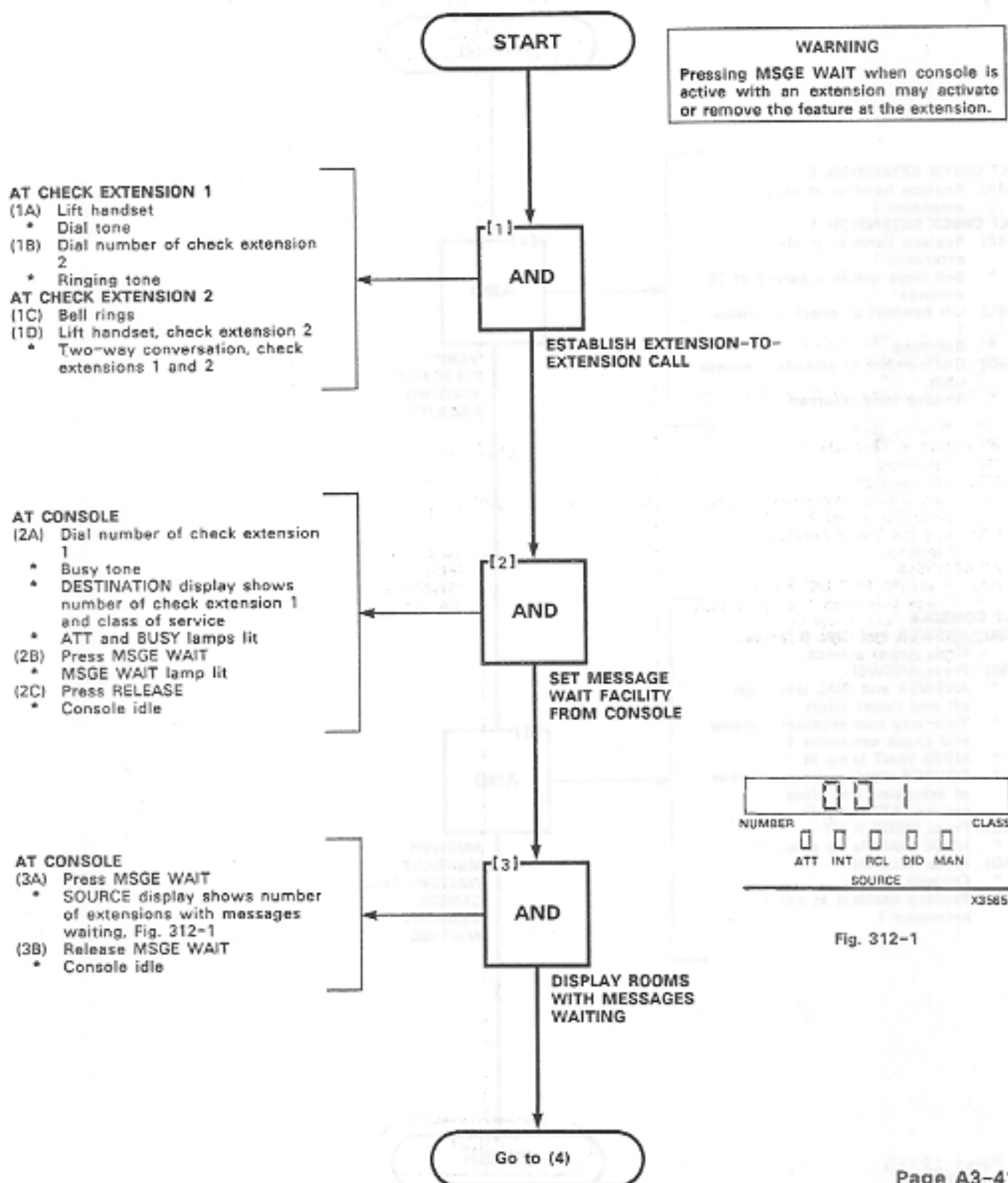
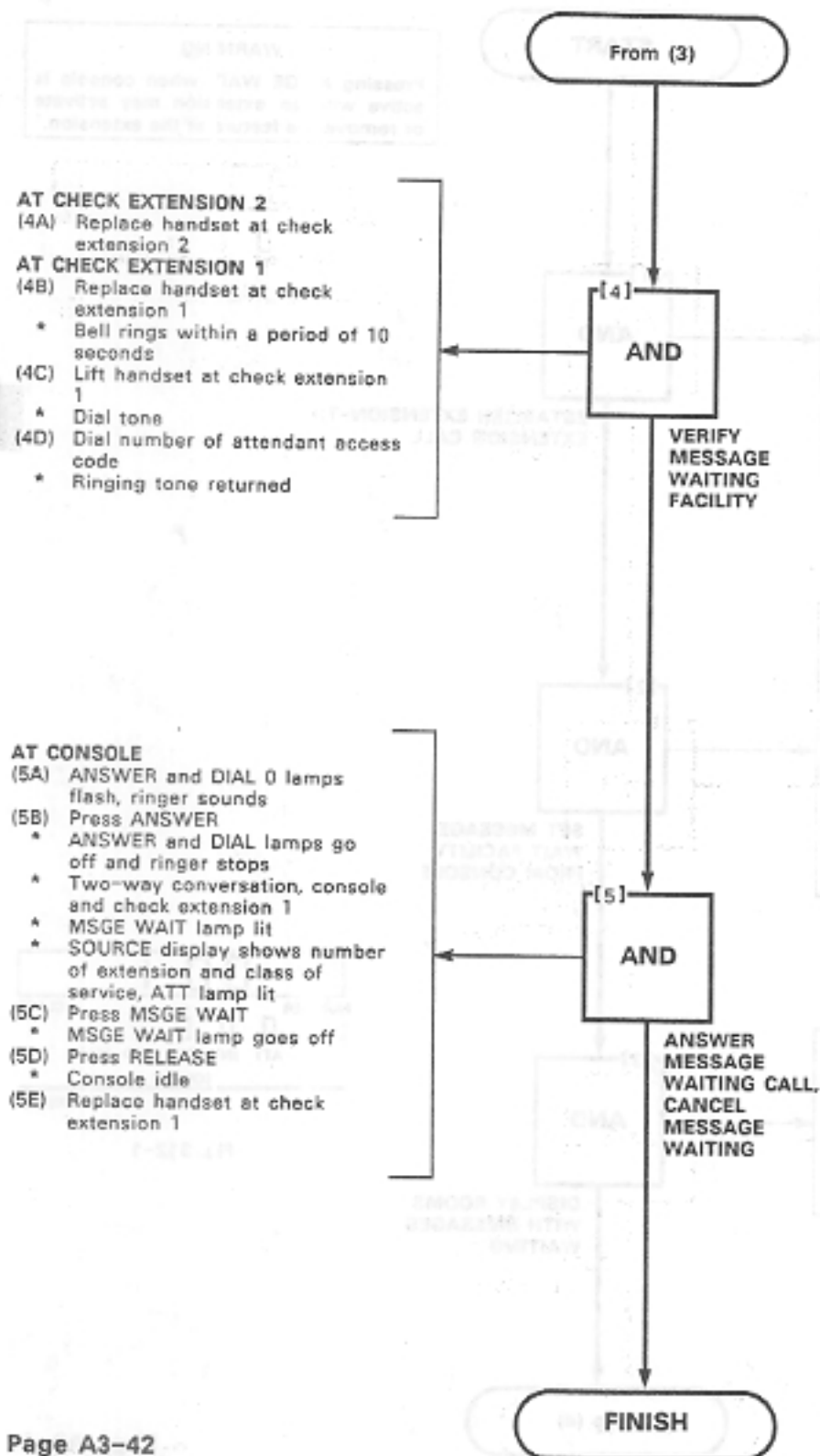


Fig. 312-1

|                        |
|------------------------|
| MESSAGE WAITING        |
| MAP215-312             |
| Issue 1, December 1982 |
| Sheet 2 of 2           |



ATTENDANT CALL  
FORWARDING - BUSY

MAP215- 313

Issue 1, December 1982

Sheet 1 of 2

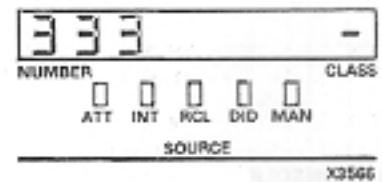
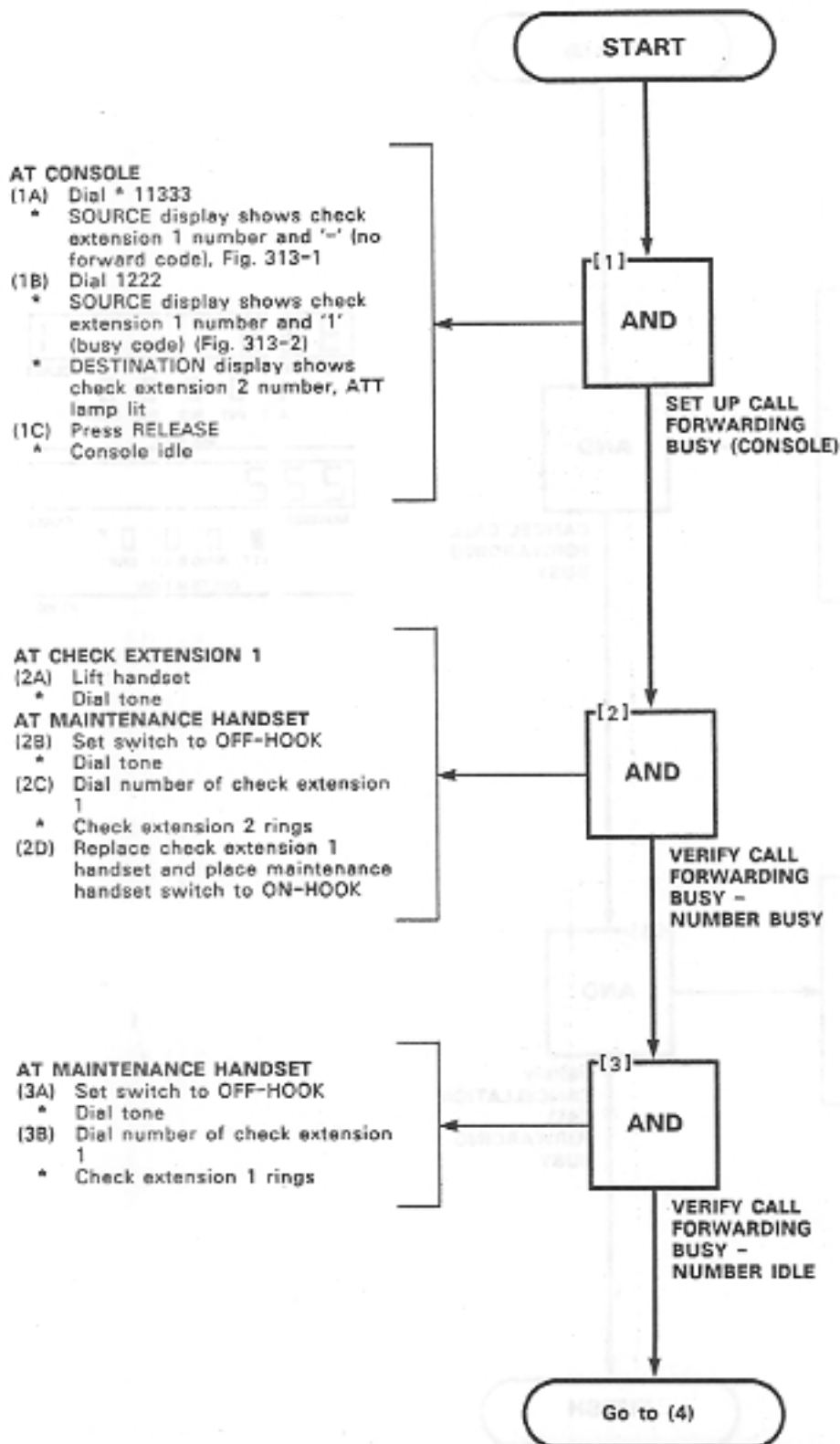
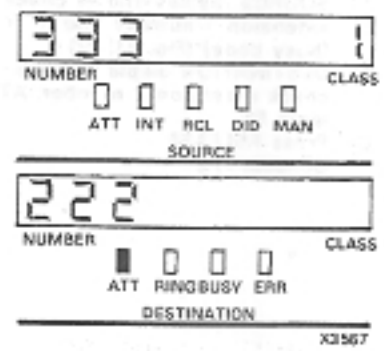
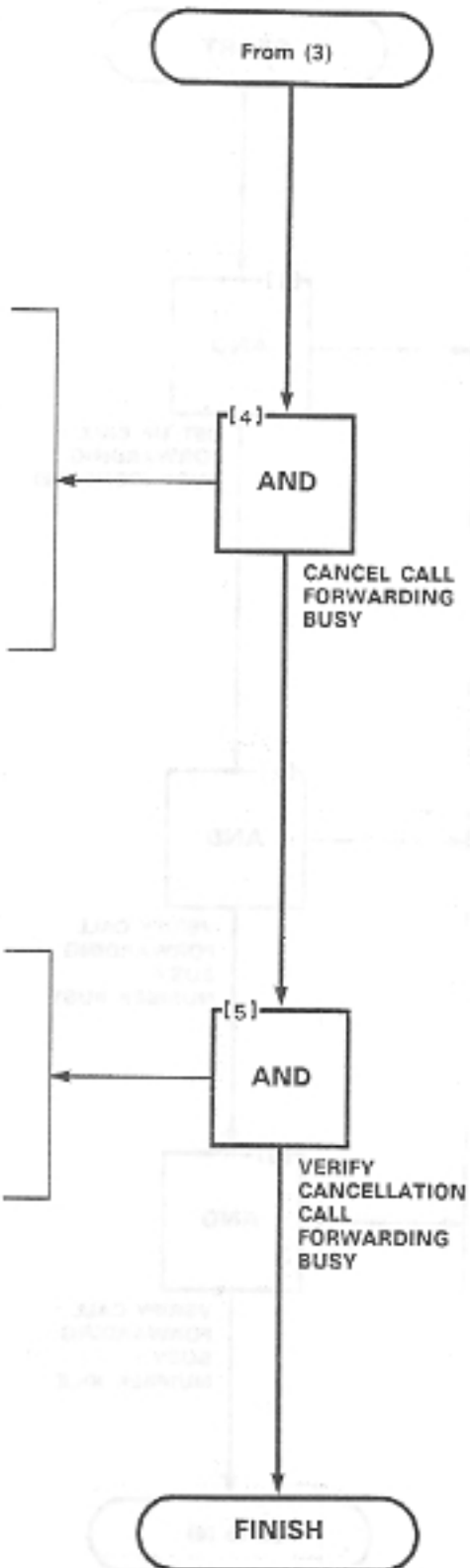


Fig. 313-1

|                                     |
|-------------------------------------|
| ATTENDANT CALL<br>FORWARDING - BUSY |
| MAP200- 313                         |
| Issue 1, December 1982              |
| Sheet 2 of 2                        |

- AT CONSOLE**
- (4A) Dial \* 11333
- \* SOURCE display shows check extension 1 number and 'busy' code (1), ATT lamp lit
  - \* DESTINATION shows check extension 2 number (see Fig. 213-2)
- (4B) Dial number
- (4C) Press RELEASE
- AT CHECK EXTENSION 1**
- (4D) Lift handset
- \* Dial tone

- AT MAINTENANCE HANDSET**
- (5A) Set switch to OFF-HOOK
- \* Dial tone
- (5B) Dial number of check extension 1
- \* Busy tone
- (5C) Replace check extension 1 handset, place maintenance handset switch to OFF-HOOK





ATTENDANT CALL FORWARDING  
- DON'T ANSWER

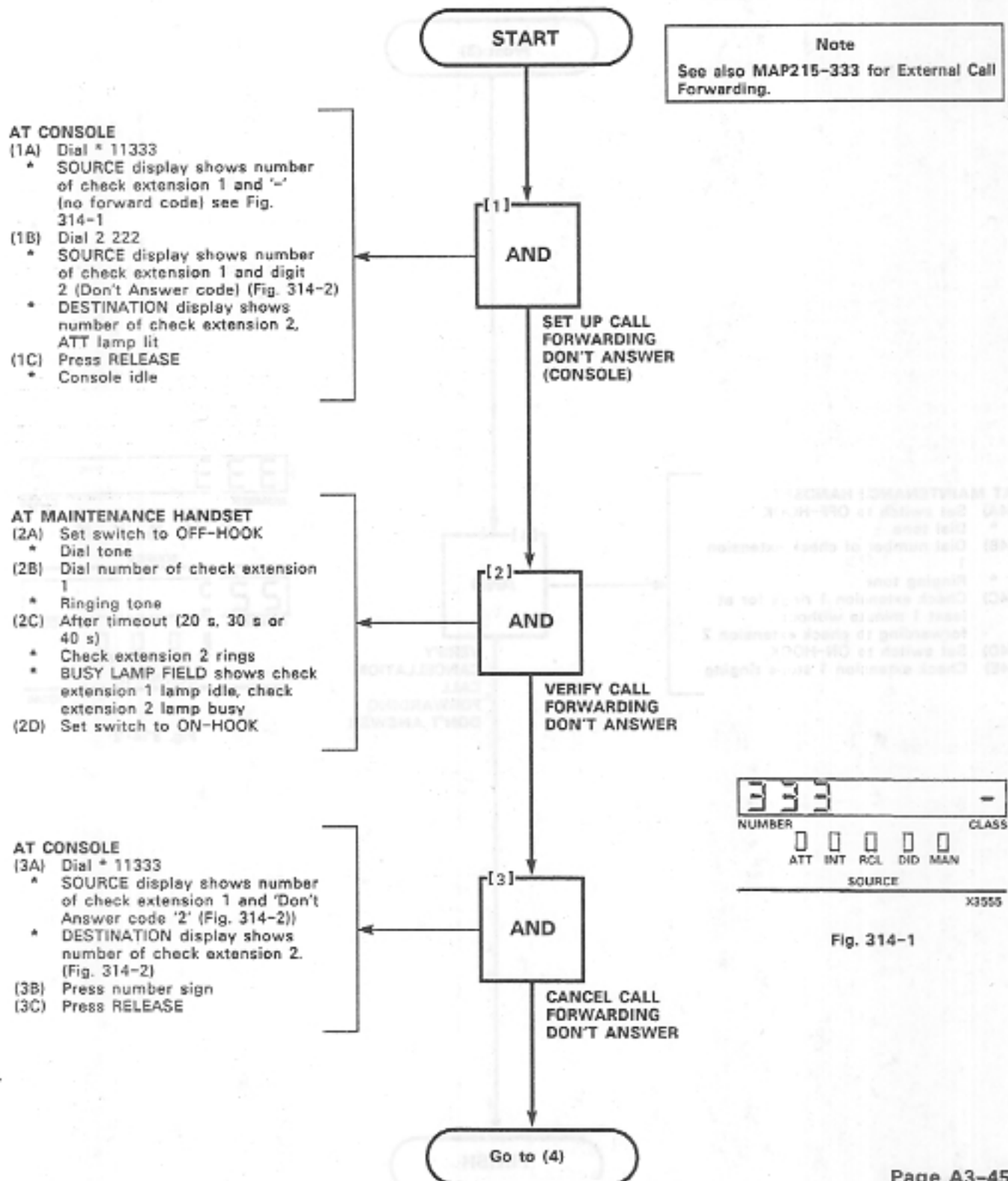
MAP215-314

Issue 1, December 1982

Sheet 1 of 2

## Note

See also MAP215-333 for External Call Forwarding.



|   |
|---|
| <b>ATTENDANT CALL FORWARDING<br/>- DON'T ANSWER</b> |
| MAP200- 314   |
| Issue 1, December 1982                              |
| Sheet 2 of 2  |

From (3)

[4]  
**AND**

VERIFY  
CANCELLATION  
CALL  
FORWARDING  
DON'T ANSWER

FINISH

- AT MAINTENANCE HANDSET**
- (4A) Set switch to OFF-HOOK
    - \* Dial tone
  - (4B) Dial number of check extension 1
    - \* Ringing tone
  - (4C) Check extension 1 rings for at least 1 minute without forwarding to check extension 2
  - (4D) Set switch to ON-HOOK
  - (4E) Check extension 1 stops ringing

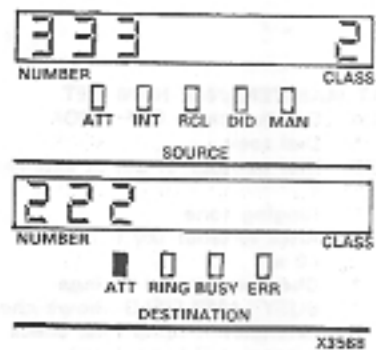


Fig. 314-2

ATTENDANT CALL FORWARDING  
- FOLLOW ME

MAP215-315

Issue 1, December 1982

Sheet 1 of 2

## Note

See also MAP215-333 for External Call Forwarding.

## AT CONSOLE

- (1A) Dial \* 11333  
 \* SOURCE display shows number of check extension 1 and '-' (no forward code) (See Fig. 315-1)
- (1B) Dial 3 222  
 \* SOURCE display shows number of check extension 1 and digit 3 (Call Forward - Follow Me code) (Fig. 315-2)  
 \* DESTINATION display shows number of check extension 2, ATT lamp lit (Fig. 315-2)
- (1C) Press RELEASE  
 \* Console idle

## AT MAINTENANCE HANDSET

- (2A) Set switch to OFF-HOOK  
 \* Dial tone
- (2B) Dial number of check extension 1  
 \* Ringing tone
- (2C) Check extension 2 rings  
 \* BUSY LAMP FIELD shows check extension 1 lamp idle, check extension 2 lamp busy
- (2D) Set switch to ON-HOOK

## AT CONSOLE

- (3A) Dial \* 11333  
 \* SOURCE display shows number of check extension 1 and 'Call Forward - Follow Me' '3' (Fig. 315-2)  
 \* DESTINATION display shows number of check extension 2. (Fig. 315-2)
- (3B) Press number
- (3C) Press RELEASE

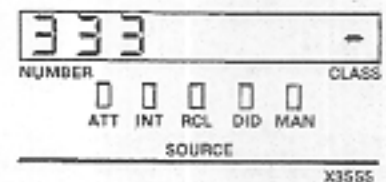
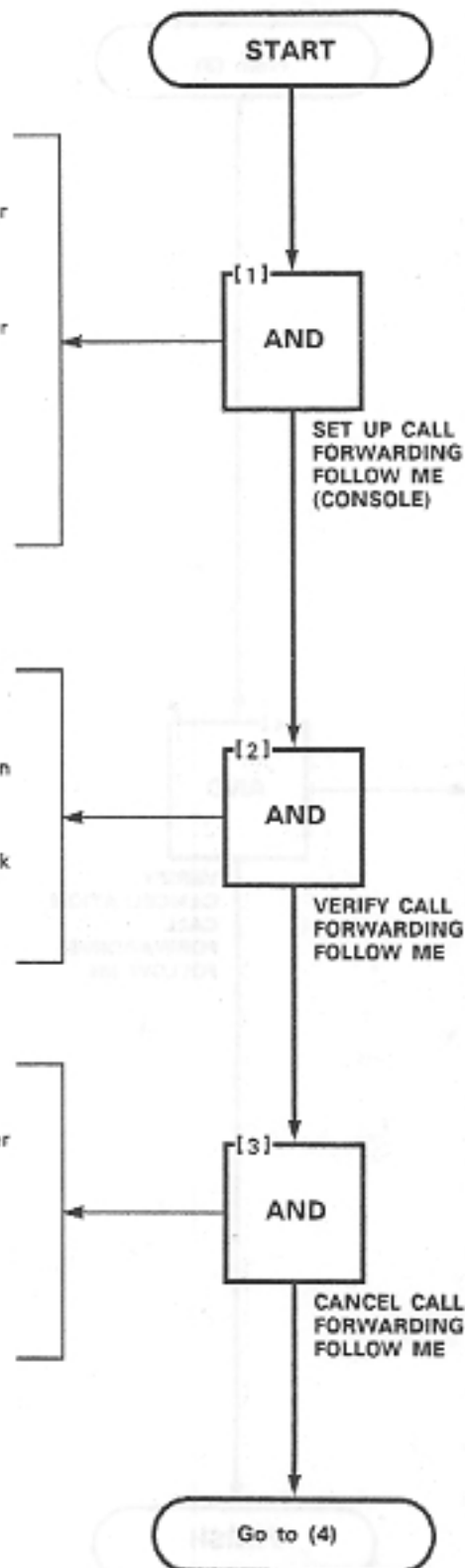


Fig. 315-1

|  |
|--|
| ATTENDANT CALL FORWARDING<br>- FOLLOW ME |
| MAP200- 315                              |
| Issue 1, December 1982                   |
| Sheet 2 of 2                             |

From (3)



Fig. 315-2

- AT MAINTENANCE HANDSET**
- (4A) Set switch to OFF-HOOK
    - \* Dial tone
  - (4B) Dial number of check extension 1
    - \* Ringing tone
  - (4C) Check extension 2 rings
  - (4D) Set switch to ON-HOOK
  - (4E) Check extension 1 stops ringing

[4]  
AND

VERIFY  
CANCELLATION  
CALL  
FORWARDING  
FOLLOW ME

FINISH

ATTENDANT CALL FORWARDING  
BUSY/DON'T ANSWER

MAP215-316

Issue 1, December 1982

Sheet 1 of 2

## Note

See also MAP215-335 for External Call Forwarding.

## AT CONSOLE

- (1A) Dial \* 11333  
 \* SOURCE display shows number of check extension 1 and '-' (no forward code) (See Fig. 316-1)  
 \* ATT lamp lit
- (1B) Dial 4 222  
 \* SOURCE display shows number of check extension 1 and digit 4 (Don't Answer code) (Fig. 316-2)  
 \* DESTINATION display shows number of check extension 2, ATT lamp lit
- (1C) Press RELEASE  
 \* Console idle

## AT MAINTENANCE HANDSET

- (2A) Set switch to OFF-HOOK  
 \* Dial tone
- (2B) Dial number of check extension 1  
 \* Ringing tone
- (2C) After timeout (20 s, 30 s or 40 s)  
 \* Check extension 2 rings  
 \* BUSY LAMP FIELD shows check extension 1 lamp idle, check extension 2 lamp busy
- (2D) Set switch to ON-HOOK

## AT CHECK EXTENSION 1

- (3A) Lift handset  
 \* Dial tone
- (3B) Leave handset off-hook
- AT MAINTENANCE HANDSET  
 (3C) Switch to OFF-HOOK  
 \* Dial tone
- (3D) Dial number of check extension 1  
 \* Ringing tone  
 \* Check extension 2 rings
- (3E) Answer check extension 2 and verify connection
- (3F) Go on-hook at all locations

START

[1]  
AND

SET UP CALL FORWARDING - BUSY-DON'T ANSWER (CONSOLE)

[2]  
AND

VERIFY CALL FORWARDING - DON'T ANSWER

[3]  
AND

VERIFY CALL FORWARDING - BUSY

Go to (4)

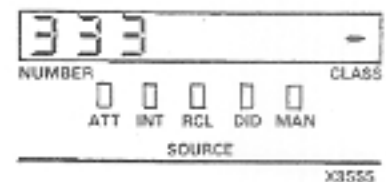
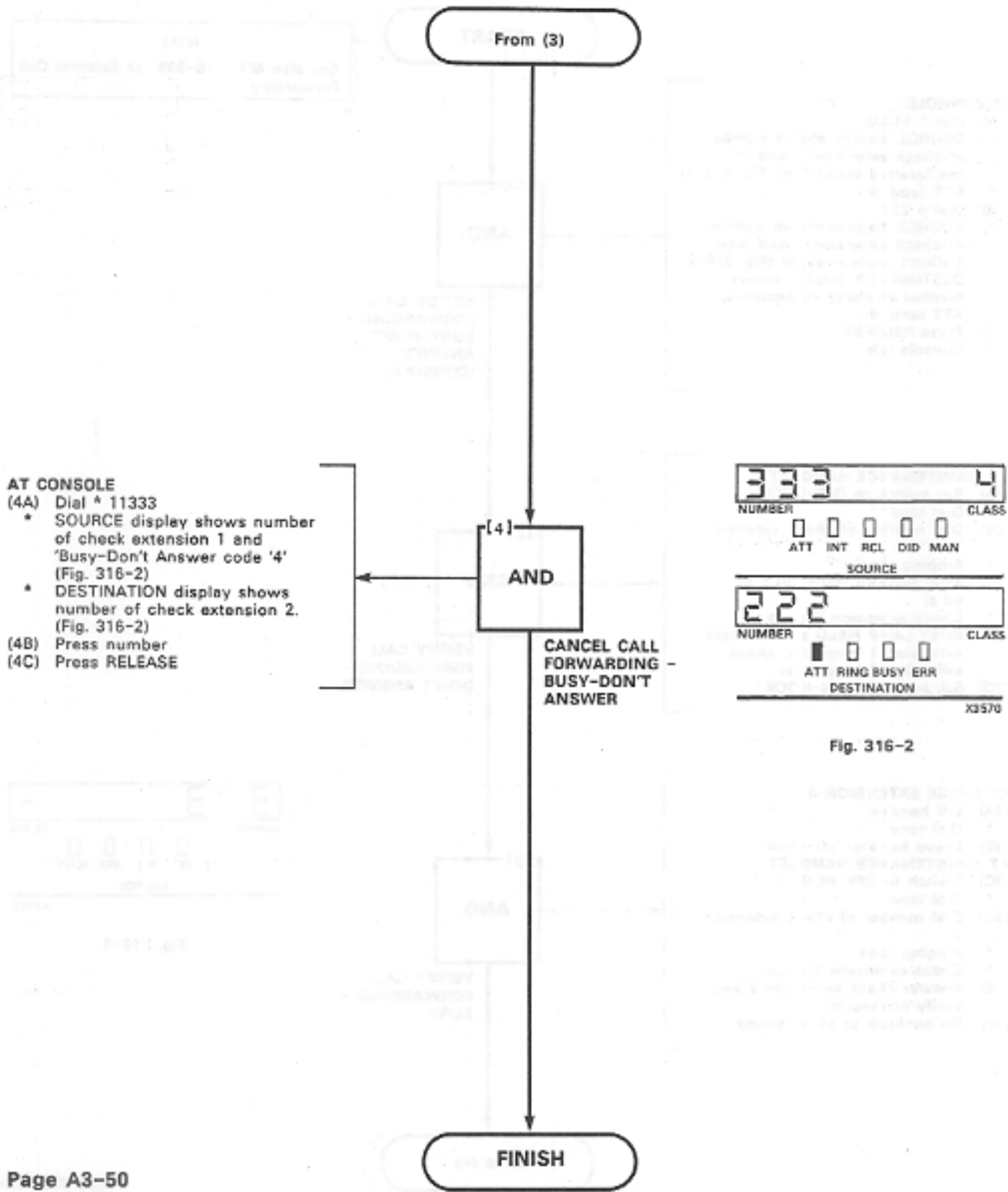


Fig. 316-1

|  |
|--|
| <b>ATTENDANT CALL FORWARDING<br/>BUSY/DON'T ANSWER</b> |
| MAP200- 316  |
| Issue 1, December 1982                                 |
| Sheet 2 of 2   |



|                                    |
|------------------------------------|
| ATTENDANT-CONTROLLED<br>CONFERENCE |
|------------------------------------|

|            |
|------------|
| MAP215-317 |
|------------|

|                        |
|------------------------|
| Issue 1, December 1982 |
|------------------------|

|              |
|--------------|
| Sheet 1 of 3 |
|--------------|

**AT CHECK EXTENSION 1**

(1A) Lift handset

- \* Dial tone

(1B) Dial digit '0'

- \* Ringing tone
- \* Console rings

**AT CONSOLE**

(1C) Press ANSWER

- \* SOURCE display shows number and class of service of check extension 1

- \* ATT lamp lit (See Fig. 317-1)

(1D) Press CONF

- \* CONF lamp lit
- \* SOURCE display cleared
- \* DESTINATION display shows letter C (Fig. 317-2)

**AT CONSOLE**

(2A) Press RELEASE

- \* CONF lamp remains lit
- \* Console idle
- \* Check extension 1 receives music-on-hold if customer-provided

**AT CONSOLE**

(3A) Dial number of check extension 2

- \* Ringing tone
- \* DESTINATION display shows number of check extension 2 and class
- \* ATT and RING lamps lit

(3B) Check extension 2 lifts handset

(3C) Press CONF

- \* One second beep tone heard by check extension 1
- \* Console and check extension 2 hear shorter burst of beep tone

(3D) Verify console and two extensions can speak to each other

(3E) Press RELEASE

- \* Console idle
- \* CONF lamp lit

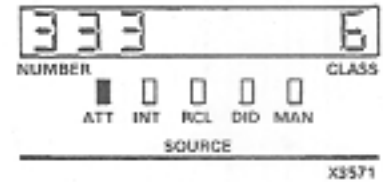
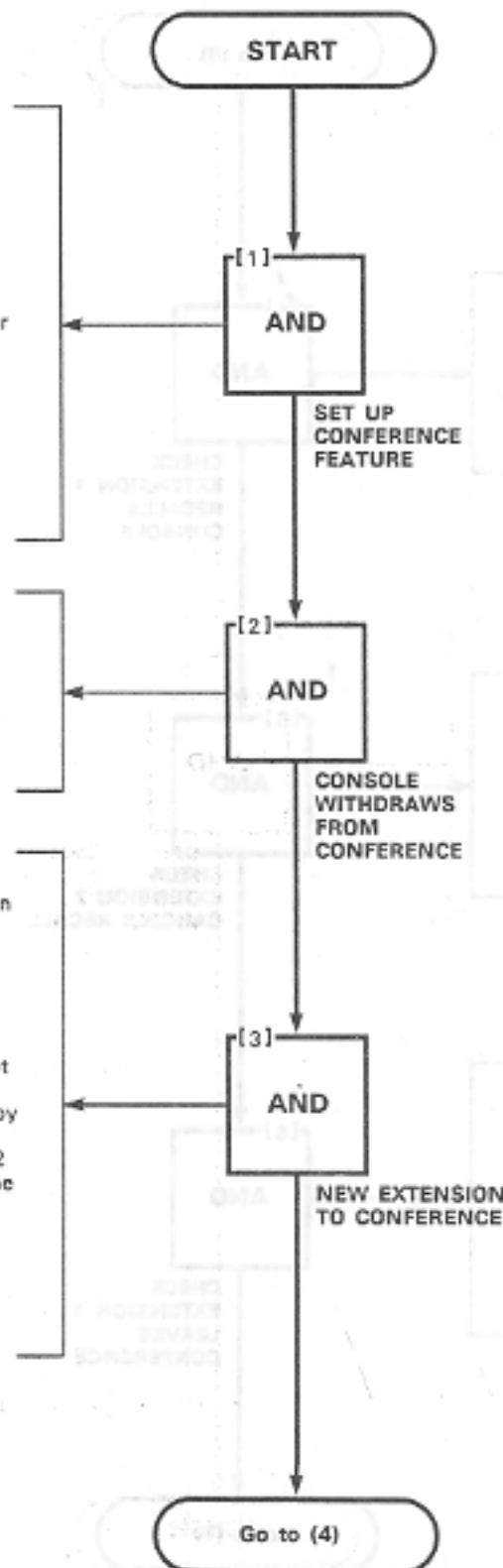


Fig. 317-1



ATTENDANT-CONTROLLED  
CONFERENCE

MAP200- 317

Issue 1, December 1982

Sheet 2 of 3

## AT CHECK EXTENSION 1

(4A) Flash switchhook  
\* Ringing tone applied to  
conference(4B) IAT CONSOLE/CONF lamp flashes  
\* CW display shows 1 more call  
\* Console bell may ring

## AT CHECK EXTENSION 2

(5A) Flash switchhook  
\* Ringing tone removed from  
conference

## AT CONSOLE

(5B) CONF lamp lit  
\* Console bell silent  
\* CW display drops count by 1

## AT CHECK EXTENSION 1

(6A) Replace handset

## AT CHECK EXTENSION 2

(6B) After a period of 1 minute  
\* Ringing tone

## AT CONSOLE

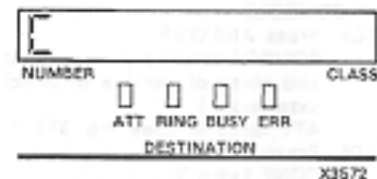
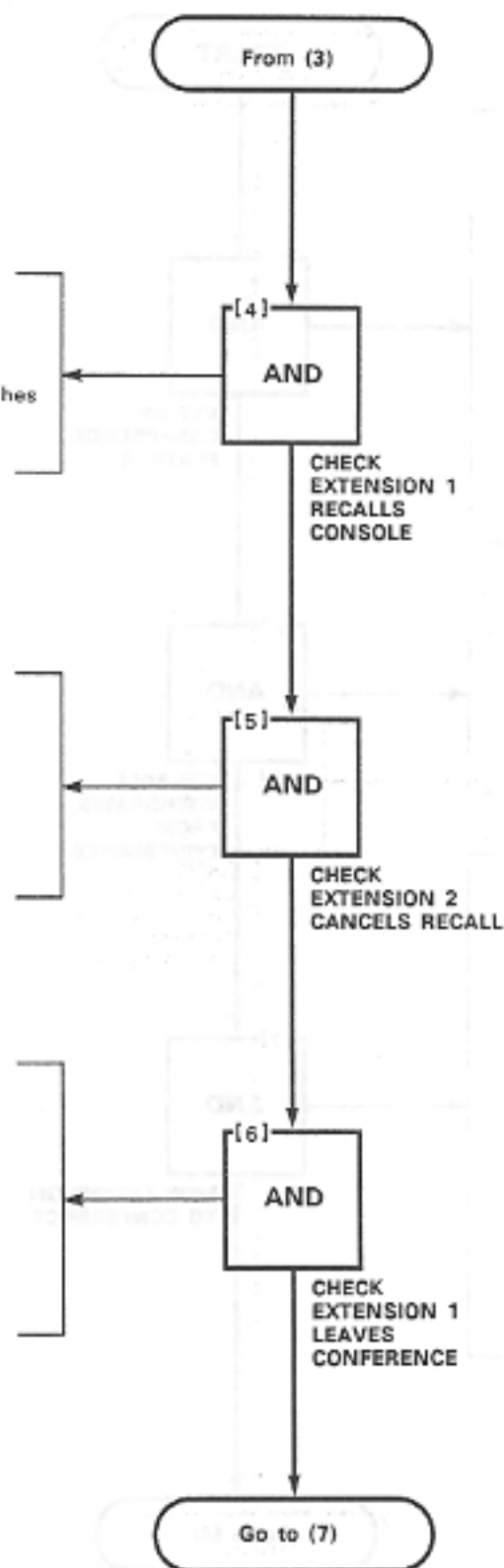
(6C) RECALL and ANSWER lamps  
flash  
\* CONF lamp goes off  
\* Console bell rings

Fig. 317-2

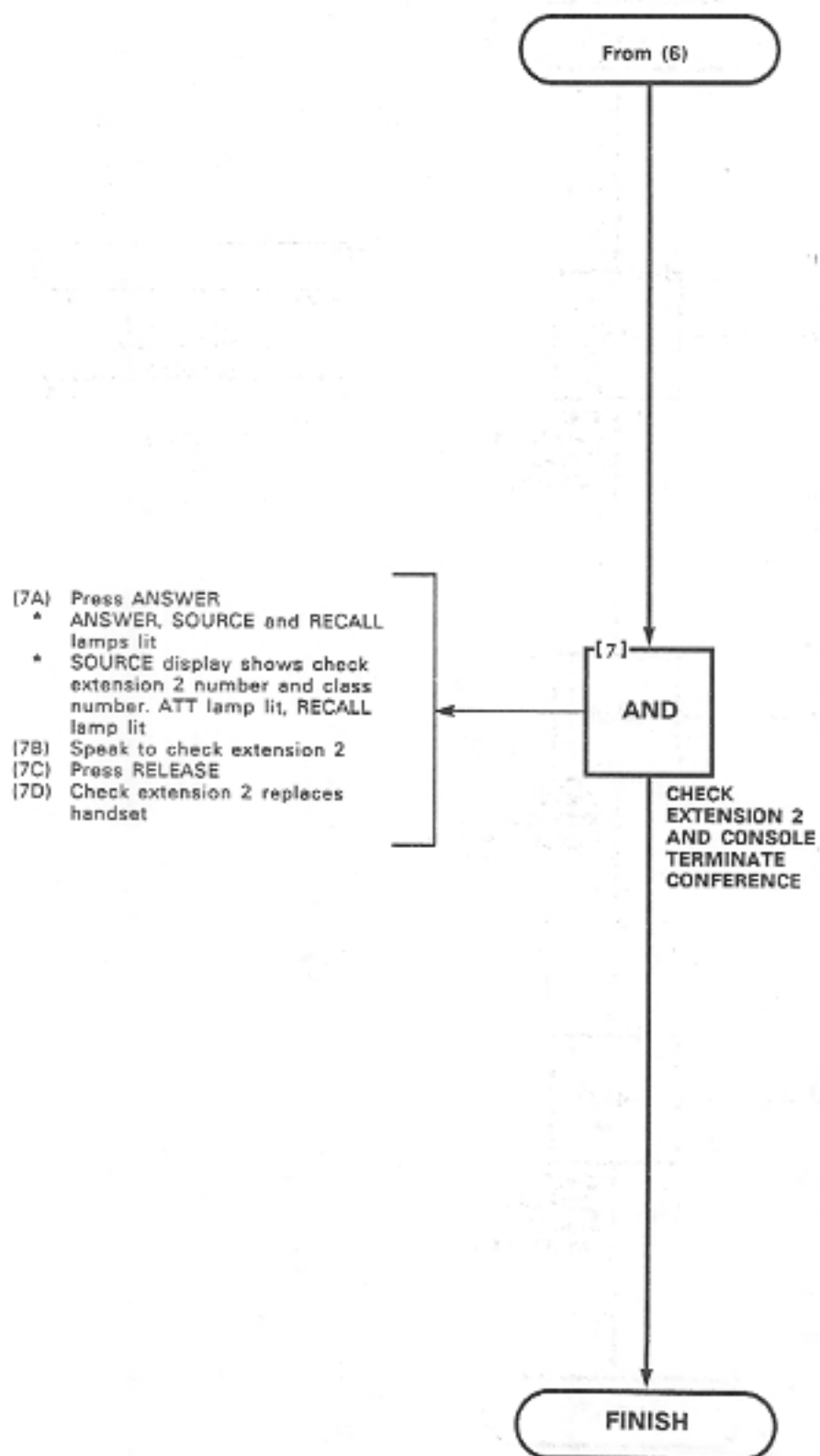


|                                    |
|------------------------------------|
| ATTENDANT-CONTROLLED<br>CONFERENCE |
|------------------------------------|

|             |
|-------------|
| MAP215- 317 |
|-------------|

|                        |
|------------------------|
| Issue 1, December 1982 |
|------------------------|

|              |
|--------------|
| Sheet 3 of 3 |
|--------------|



|             |                 |
|-------------|-----------------|
| ATTENDANT   | 10-202-10-10-10 |
| CONTRACTOR  | 10-202-10-10-10 |
| MAINTENANCE | 10-202-10-10-10 |
| OPERATOR    | 10-202-10-10-10 |
| REPAIR      | 10-202-10-10-10 |

START

END

CONTRACTOR  
OPERATOR  
REPAIR

1. 10-202-10-10-10  
 2. 10-202-10-10-10  
 3. 10-202-10-10-10  
 4. 10-202-10-10-10  
 5. 10-202-10-10-10  
 6. 10-202-10-10-10  
 7. 10-202-10-10-10  
 8. 10-202-10-10-10  
 9. 10-202-10-10-10  
 10. 10-202-10-10-10

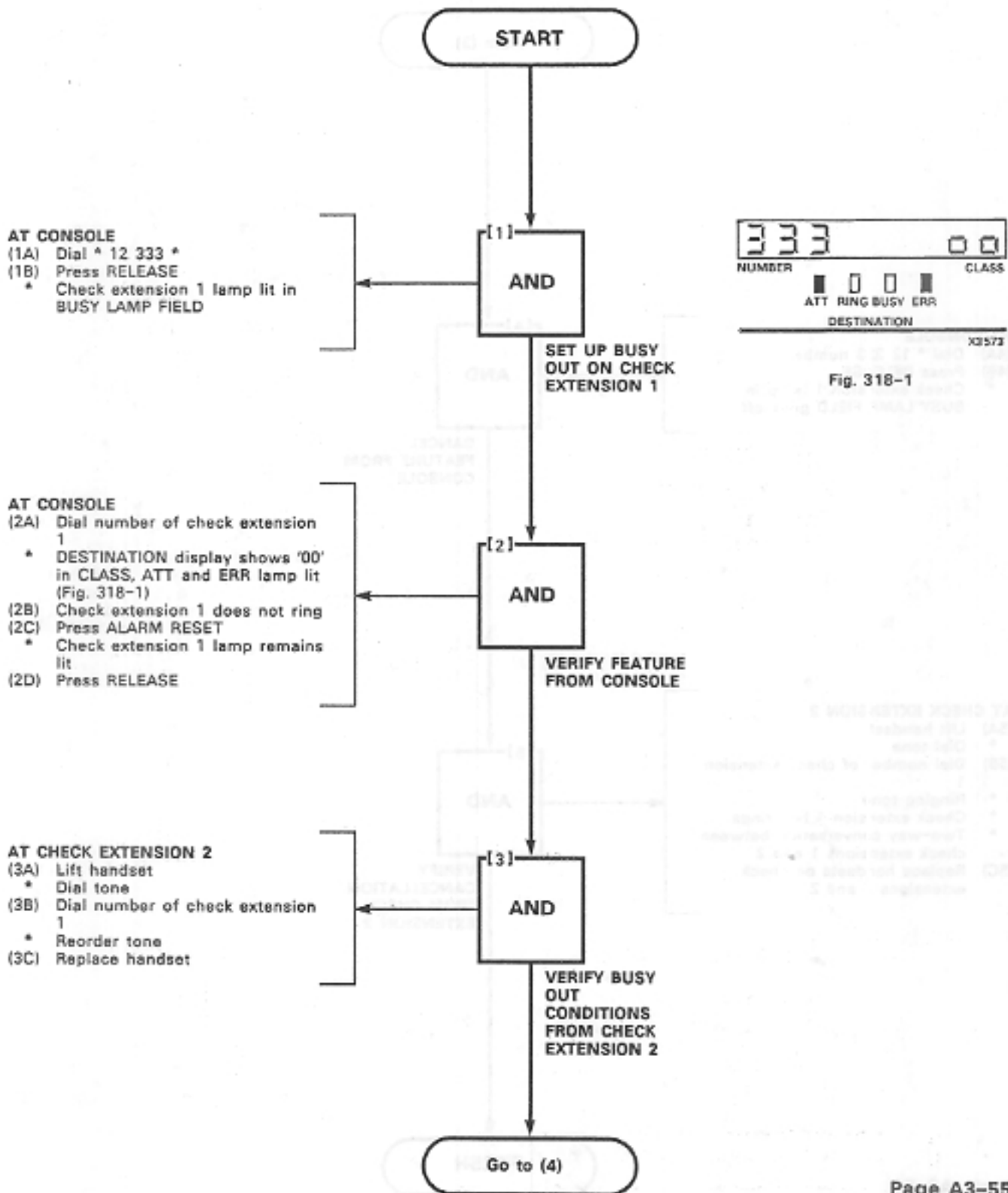
FINISH

ATTENDANT STATION BUSY-OUT

MAP215-318

Issue 1, December 1982

Sheet 1 of 2

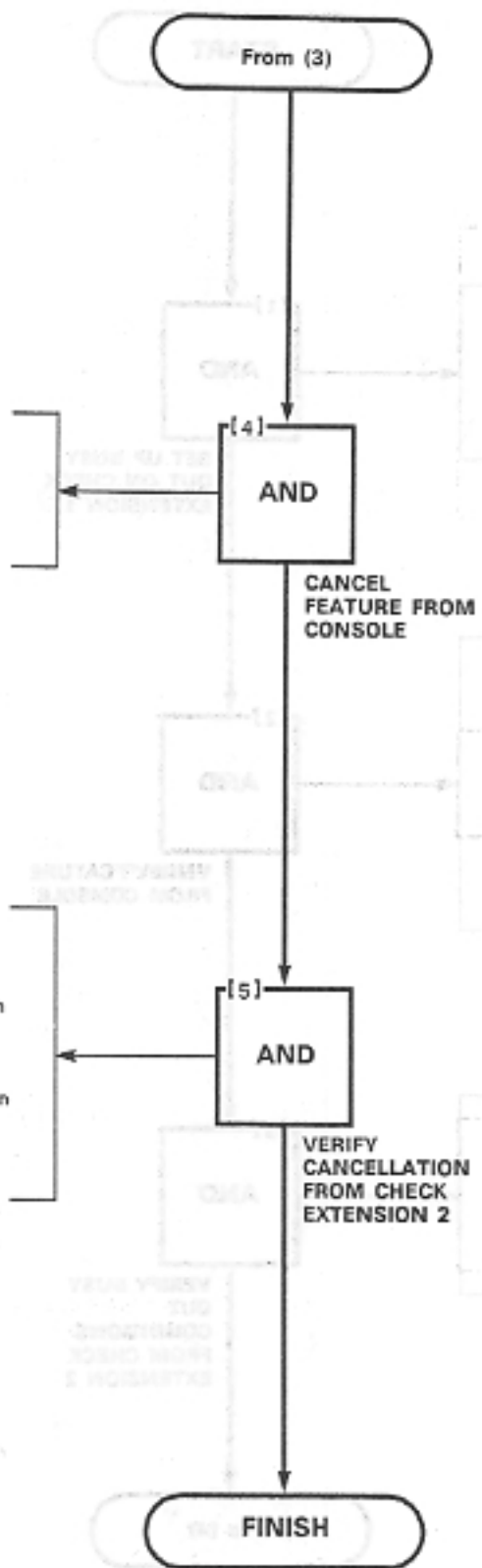


|                            |              |
|----------------------------|--------------|
| ATTENDANT STATION BUSY-OUT | 113          |
| MAP215- 318                | 170-272MAN   |
| Issue 1, December 1982     | 1100 2 2000  |
| Sheet 2 of 2               | 1 10 7 10000 |

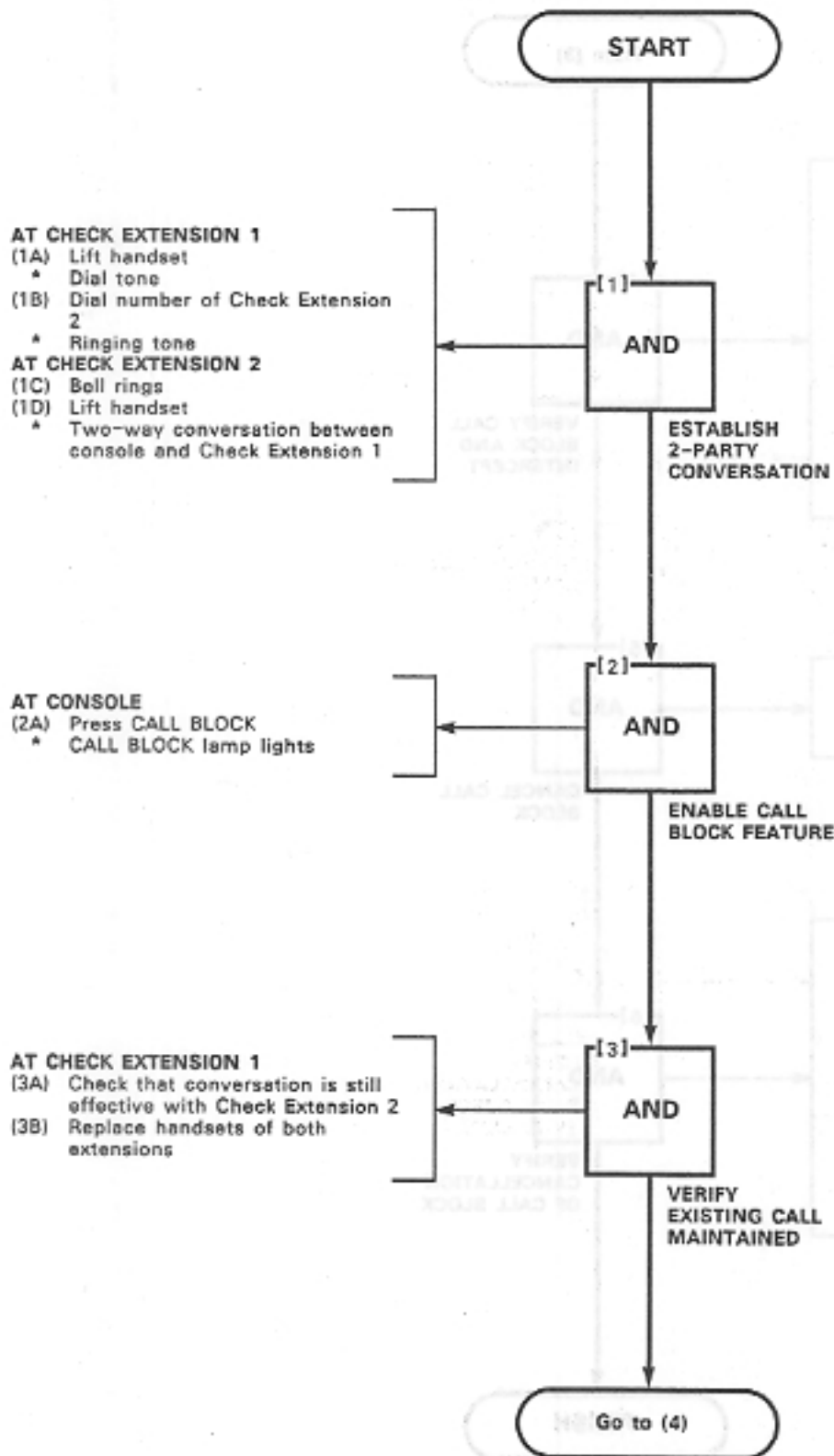


- AT CONSOLE**
- (4A) Dial \* 12 333 number
  - (4B) Press RELEASE
    - \* Check extension 1 lamp in BUSY LAMP FIELD goes off

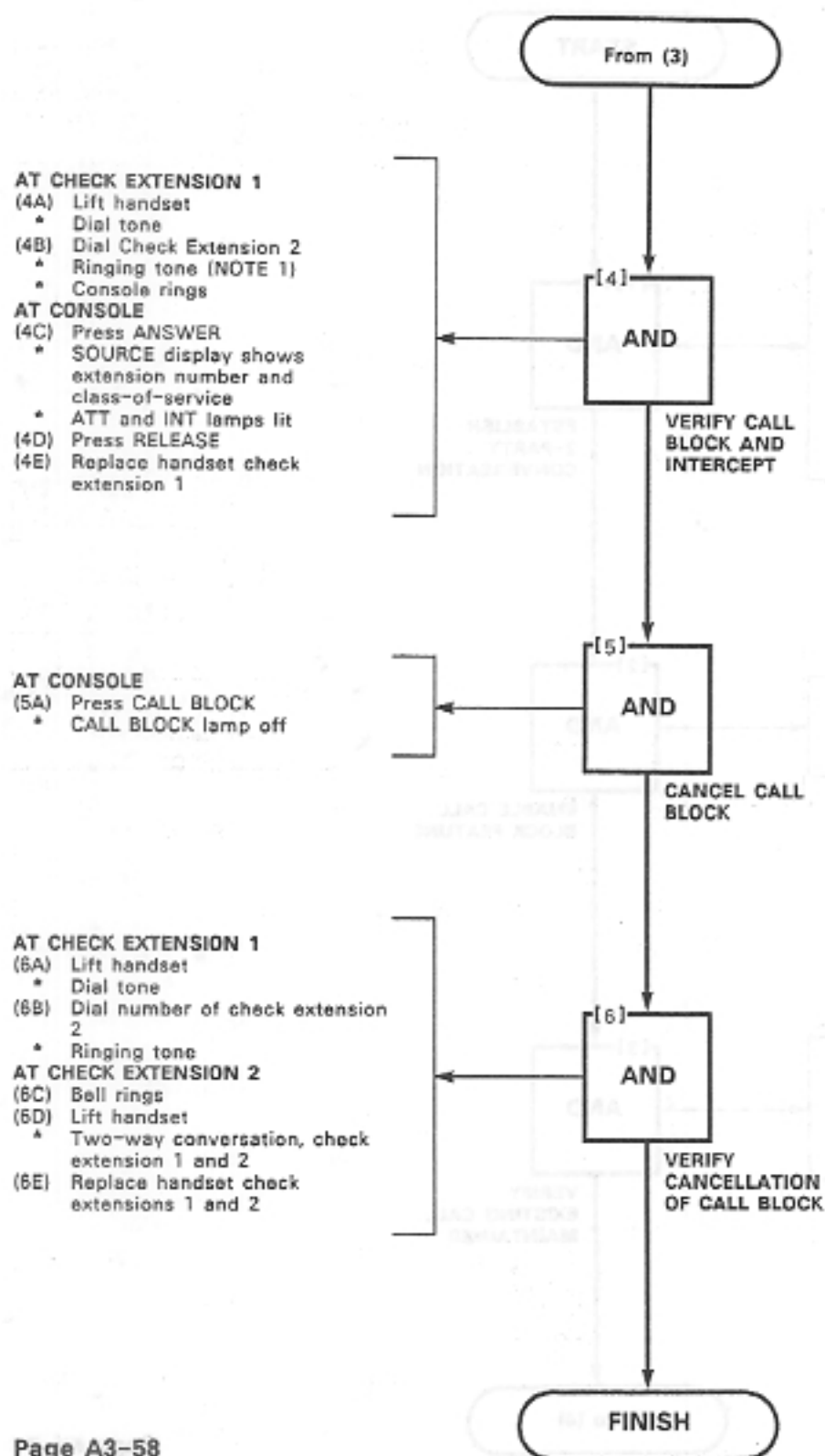
- AT CHECK EXTENSION 2**
- (5A) Lift handset
    - \* Dial tone
  - (5B) Dial number of check extension 1
    - \* Ringing tone
    - \* Check extension 1 bell rings
    - \* Two-way conversation between check extensions 1 and 2
  - (5C) Replace handsets on check extensions 1 and 2



|                        |             |
|------------------------|-------------|
| CALL BLOCK             | NOV 21 1982 |
| MAP215-319             | 012-2151AM  |
| Issue 1, December 1982 |             |
| Sheet 1 of 2           |             |



|                        |                        |
|------------------------|------------------------|
| CALL BLOCK             | CALL BLOCK             |
| MAP215- 319            | MAP215- 319            |
| Issue 1, December 1982 | Issue 1, December 1982 |
| Sheet 2 of 2           | Sheet 2 of 2           |



ATTENDANT DO NOT DISTURB (H/M)

MAP215-320

Issue 1, December 1982

Sheet 1 of 3

**WARNING**

Pressing DO NOT DSTB key when console is active with an extension may activate or remove the feature at the extension.

**AT CONSOLE**

- (1A) Press GUEST ROOM  
\* GUEST ROOM lamp lit
- (1B) Dial number of check extension 1  
\* SOURCE display shows check extension number and message register, ATT lamp lit  
\* DESTINATION display shows room status code (Fig. 320-1)
- (1C) Press DO NOT DSTB  
\* DO NOT DSTB lamp lit  
\* Check extension 1 lamp lit in Busy Lamp Field
- (1D) Press RELEASE  
\* Console idle

**AT CHECK EXTENSION 2**

- (2A) Lift handset  
\* Dial tone
- (2B) Dial number of check extension 1  
\* Ringing tone (NOTE 1)  
\* Console rings  
\* DIAL 0 and ANSWER lamps flash
- AT CONSOLE**
- (2C) Press ANSWER  
\* SOURCE display shows number of check extension 2 and class of service  
\* ATT and INT lamps lit
- (2D) Two-way conversation, console and check extension 2
- (2E) Press RELEASE
- (2F) Replace check extension 2 handset

**AT CONSOLE**

- (3A) Press DO NOT DSTB  
\* SOURCE display, Fig. 320-2, shows total number of rooms with 'do not disturb' facility
- (3B) Release DO NOT DSTB  
\* Console idle

START

[1]  
AND

DISPLAY GUEST ROOM STATUS AT CONSOLE

[2]  
AND

VERIFY FEATURE FROM SECOND PARTY

[3]  
AND

DISPLAY NUMBER OF ROOMS WITH DO NOT DISTURB ACTIVATED

Go to (4)

Note 1: Ringing is given in substep (2B) if System Option 174 is selected. Otherwise, reorder tone is given and remainder of step (2) is omitted.

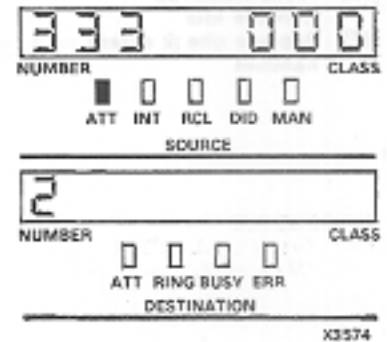


Fig. 320-1

|                                |               |
|--------------------------------|---------------|
| ATTENDANT DO NOT DISTURB (H/M) |               |
| MAP215- 320                    | 432-8723448   |
| Issue 1, December 1982         | Issue 3 of 3  |
| Sheet 2 of 3                   | 1 of 7 sheets |

- AT CONSOLE**
- (4A) Dial check extension 1
    - \* ERR lamp lit in DESTINATION display
    - \* DO NOT DSTB lamp flashes
  - (4B) Press DO NOT DSTB
    - \* ERR lamp goes out
    - \* Ringing tone
  - AT CHECK EXTENSION 1**
  - (4C) Check extension 1 rings
  - (4D) Lift handset
    - \* Two-way conversation, check extension 1 end console
  - (4E) Press RELEASE
    - \* Console idle
  - (4F) Replace check extension 1 handset

- AT CONSOLE**
- (5A) Press GUEST ROOM
    - \* GUEST ROOM lamp lit
  - (5B) Dial check extension 1 number
    - \* SOURCE display shows check extension number and message register
    - \* DESTINATION display shows room status code (See Fig. 320-1)
  - (5C) Press DO NOT DSTB
    - \* DO NOT DSTB lamp goes off
    - \* Extension lamp in BUSY LAMP FIELD goes off
  - (5D) Press RELEASE
    - \* Console idle

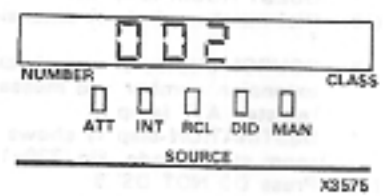
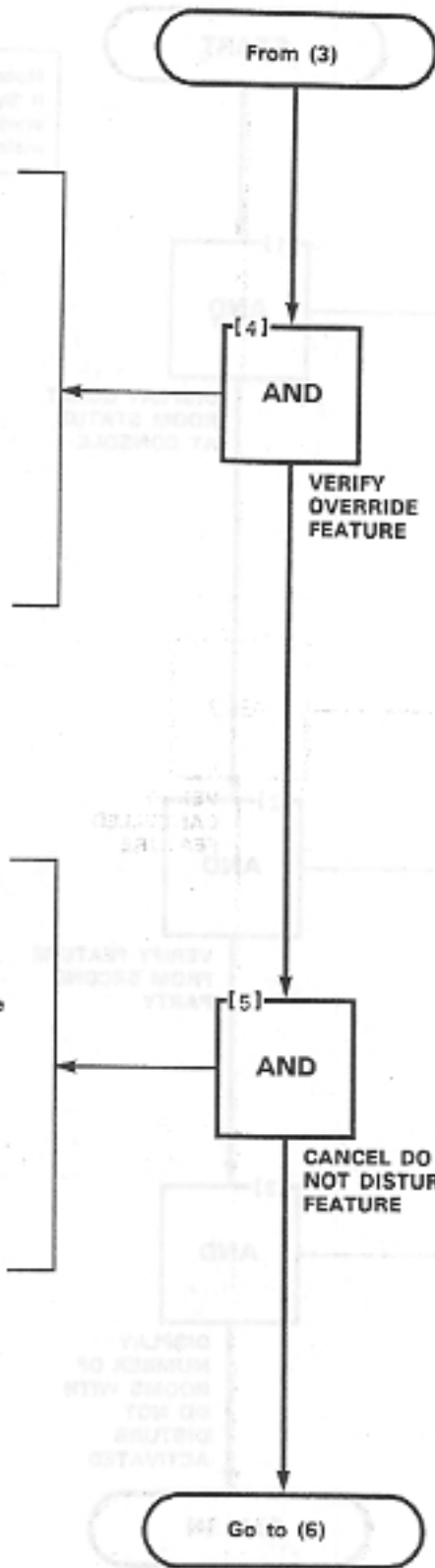


Fig. 320-2

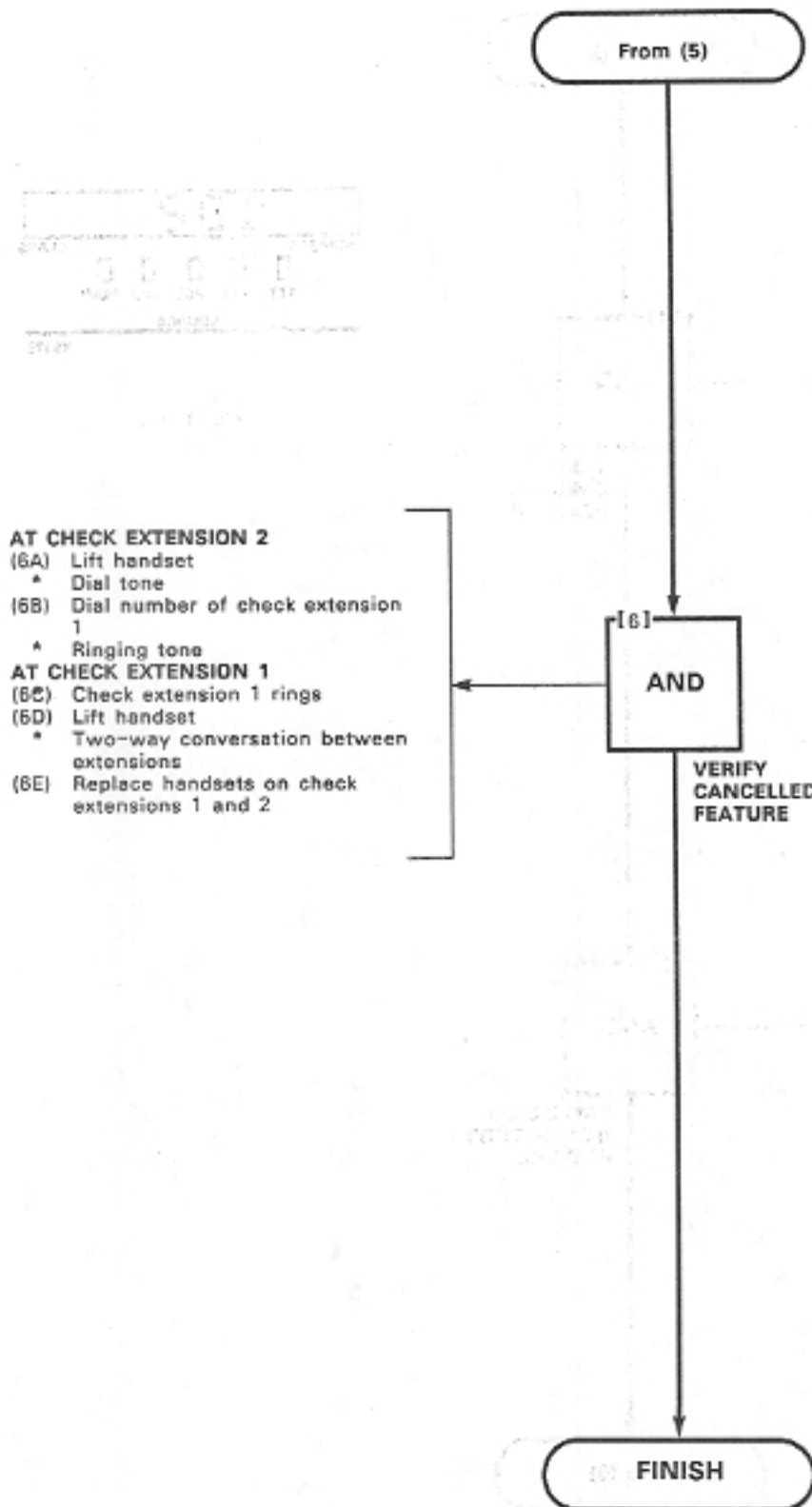


ATTENDANT DO NOT DISTURB (H/M)

MAP215-320

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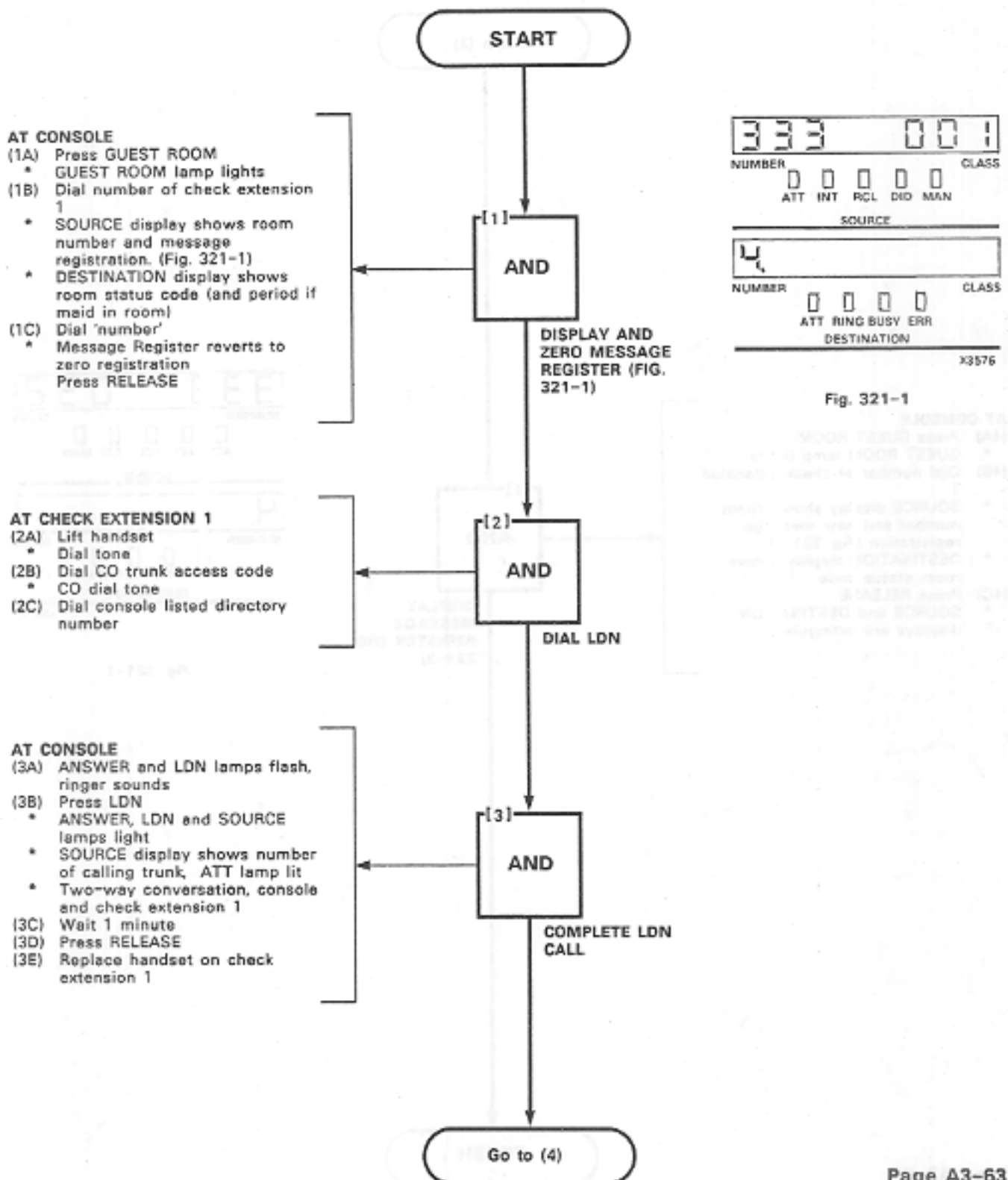


MESSAGE REGISTRATION (H/M)

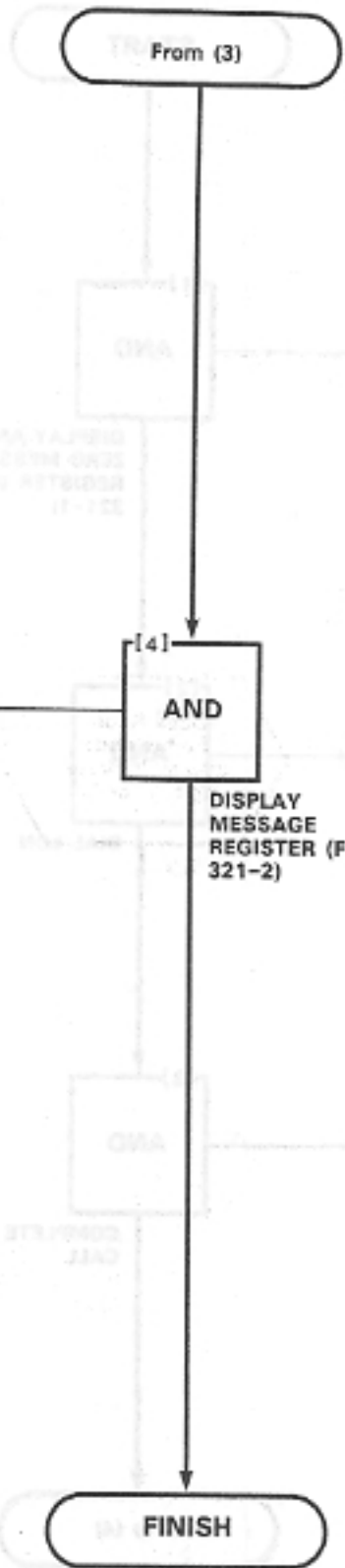
MAP215-321

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Sheet 1 of 2



|                            |
|----------------------------|
| MESSAGE REGISTRATION (H/M) |
| MAP215- 321                |
| Issue 1, December 1982     |
| Sheet 2 of 2               |



- AT CONSOLE**
- (4A) Press GUEST ROOM
    - \* GUEST ROOM lamp lights
  - (4B) Dial number of check extension 1
    - \* SOURCE display shows room number and new message registration (Fig. 321-2)
    - \* DESTINATION display shows room status code
  - (4C) Press RELEASE
    - \* SOURCE and DESTINATION displays are extinguished

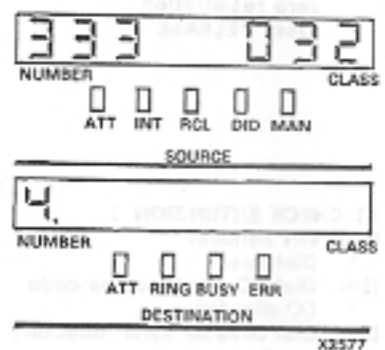


Fig. 321-2

CONTROLLED OUTGOING CALL  
RESTRICTION (H/M)

MAP215-322

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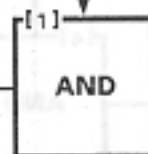
Note: This MAP applies when console has ROOM RESTR. If ROOM STATUS see MAP215-323.

TABLE 322-1  
ROOM STATUS CODES

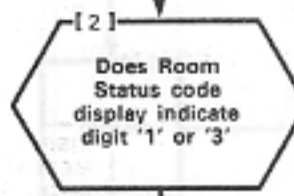
| CODE | STATUS                                 |
|------|--|
| 1    | Room is vacant and ready               |
| 2    | Room is occupied and clean             |
| 3    | Room is vacant but requires cleaning   |
| 4    | Room is occupied but requires cleaning |

AT CONSOLE

- (1A) Press GUEST ROOM
  - \* GUEST ROOM lamp lit
- (1B) Dial check extension 1
  - \* SOURCE display shows number and message register count
  - \* DESTINATION display shows room status code (and period if maid in room) (See Fig. 322-1 and Table 322-1)



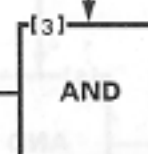
VERIFY ROOM STATUS



YES

Go to (4)

NO



ENABLE ROOM RESTRICTION (OUTGOING CALLS)

Go to (4)

AT CONSOLE

- (3A) Dial digit 1
  - \* SOURCE display shows room number and message registration
  - \* DESTINATION display changes to read digit '1' for room status (Fig. 322-1)
- (3B) Press ROOM RESTR
  - \* ROOM RESTR lamp lit
- (3C) Press RELEASE
  - \* SOURCE and DESTINATION displays are cleared
  - \* ROOM RESTR lamp cleared

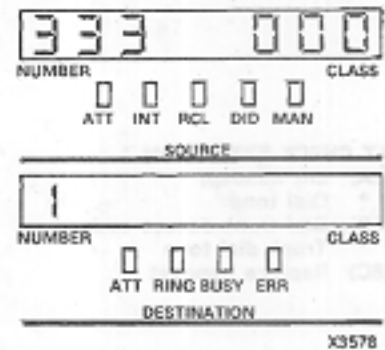


Fig. 322-1

|   |
|---|
| <b>CONTROLLED OUTGOING CALL<br/>RESTRICTION (H/M)</b> |
|---|

|             |
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| MAP200- 322 |
|-------------|

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| Sheet 2 of 2 |
|--------------|

**AT CHECK EXTENSION 1**

- (4A) Lift handset  
 • Dial tone  
 (4B) Dial trunk access code  
 • Reorder tone (NOTE 1)  
 (4C) Replace handset

**AT CONSOLE**

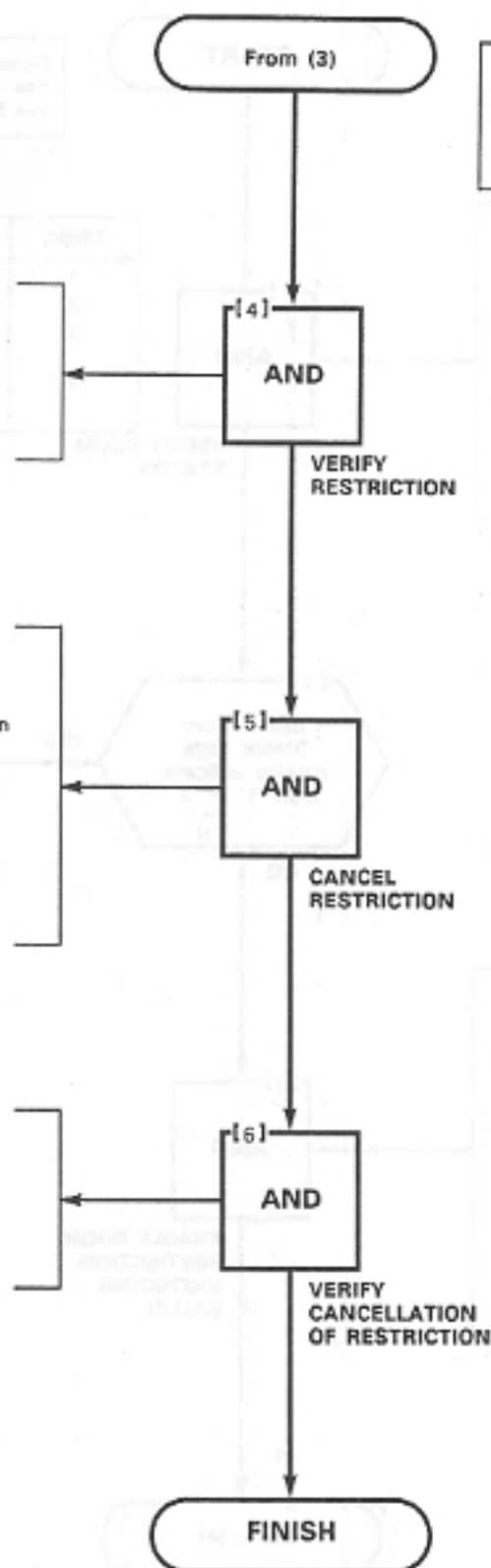
- (5A) Press GUEST ROOM  
 • GUEST ROOM lamp lit  
 (5B) Dial number of check extension  
 1  
 • SOURCE and DESTINATION  
 displays repeat information  
 shown in Fig. 322-1  
 • ROOM RESTR lamp lit  
 (5C) Press ROOM RESTR lamp off  
 (5D) Press RELEASE

**AT CHECK EXTENSION 1**

- (6A) Lift handset  
 • Dial tone  
 (6B) Dial trunk access code  
 • Trunk dial tone  
 (6C) Replace handset

**Note 1:**

Extension will receive intercept to attendant in Step (4B) when console is in 'Day' service if System Option 116 is enabled.



ROOM STATUS (H/M)

MAP215- 323

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Sheet 1 of 4

## NOTES

(1) The single-digit codes in the following procedures have meanings shown in Tables 323-1 and 323-2.

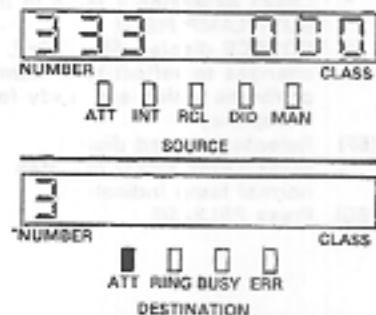
(2) Maid codes are dialed from room only, after the 'Maid Access' code has been dialed (Table 323-2).

TABLE 323-1  
ROOM STATUS CODES

| STATUS CODE | STATUS                           |
|-------------|----------------------------------|
| 1           | Room vacant and ready            |
| 2           | Room occupied and clean          |
| 3           | Room vacant, requires cleaning   |
| 4           | Room occupied, requires cleaning |

TABLE 323-2  
MAID-DIALED CODES

| MAID CODE | INDICATION (NOTE 2)              |
|-----------|----------------------------------|
| 1         | Maid in room, requires cleaning  |
| 2         | Maid left room, status unchanged |
| 3         | Maid left room, room ready       |



X3579

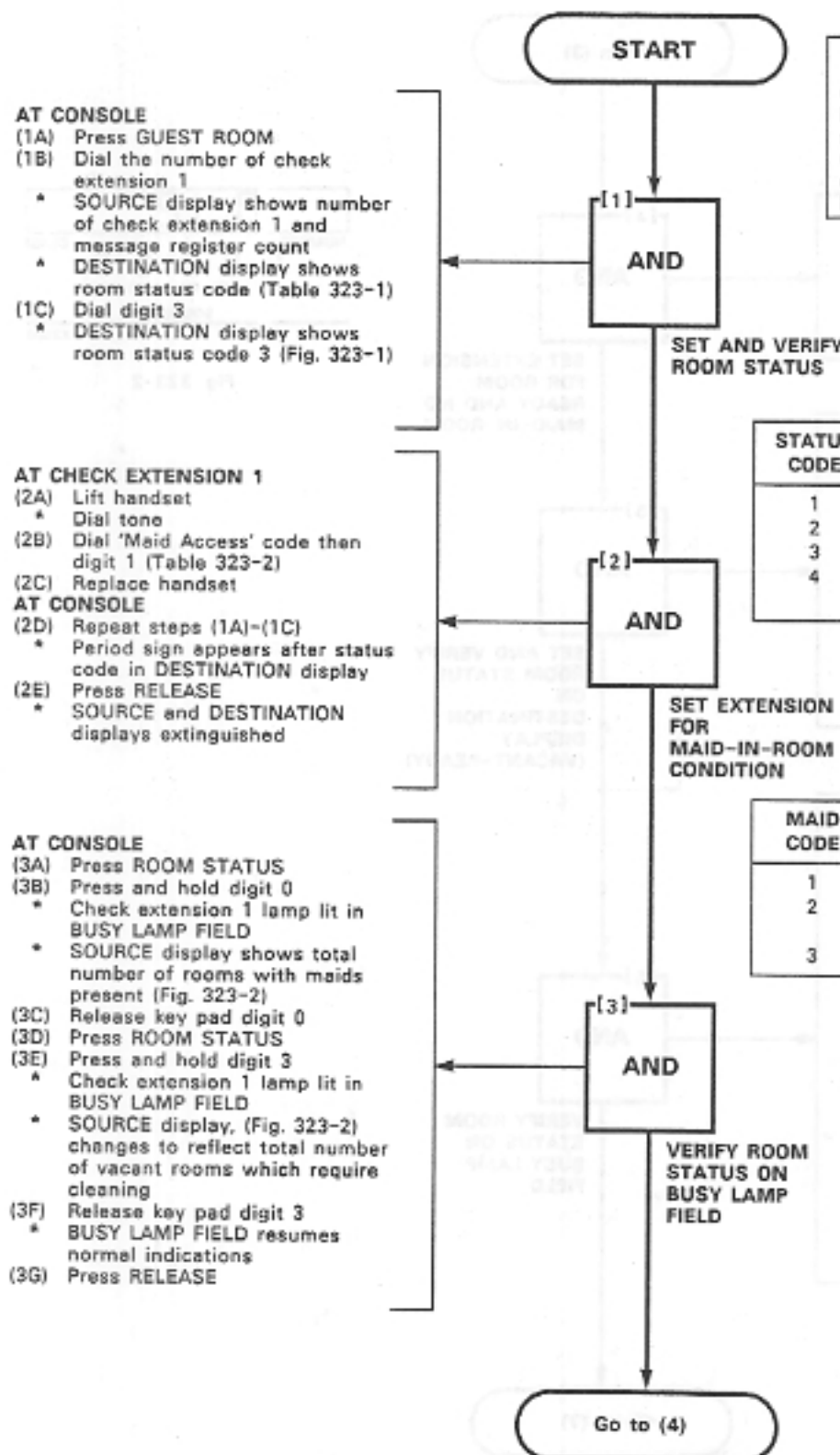


Fig. 323-1

|                        |
|------------------------|
| ROOM STATUS (H/M)      |
| MAP215- 323            |
| Issue 1, December 1982 |
| Sheet 2 of 4           |

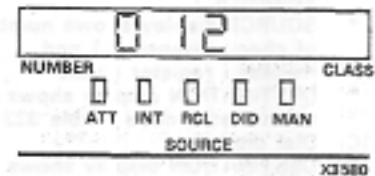
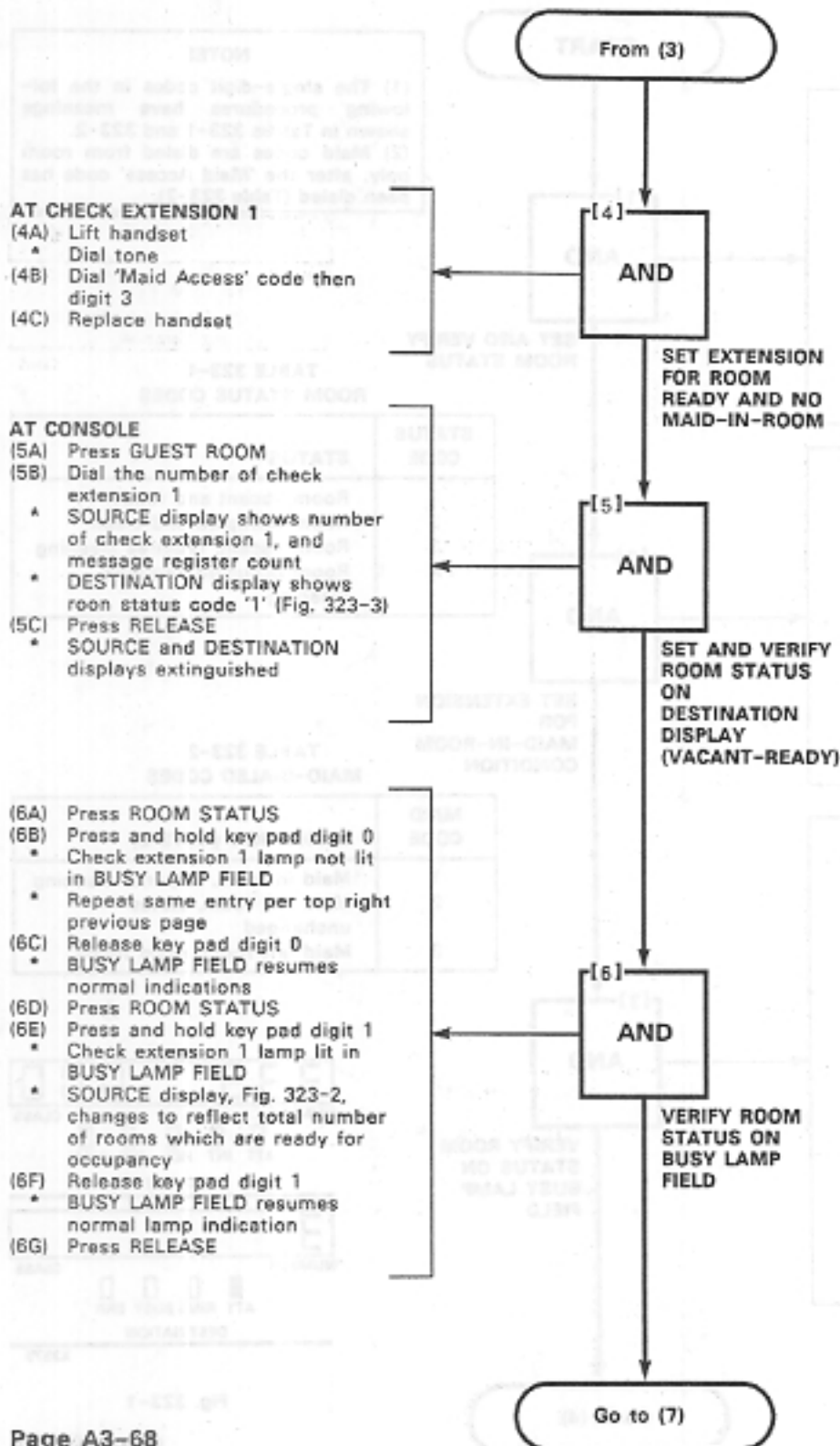


Fig. 323-2

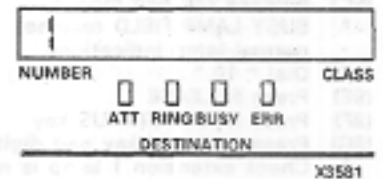
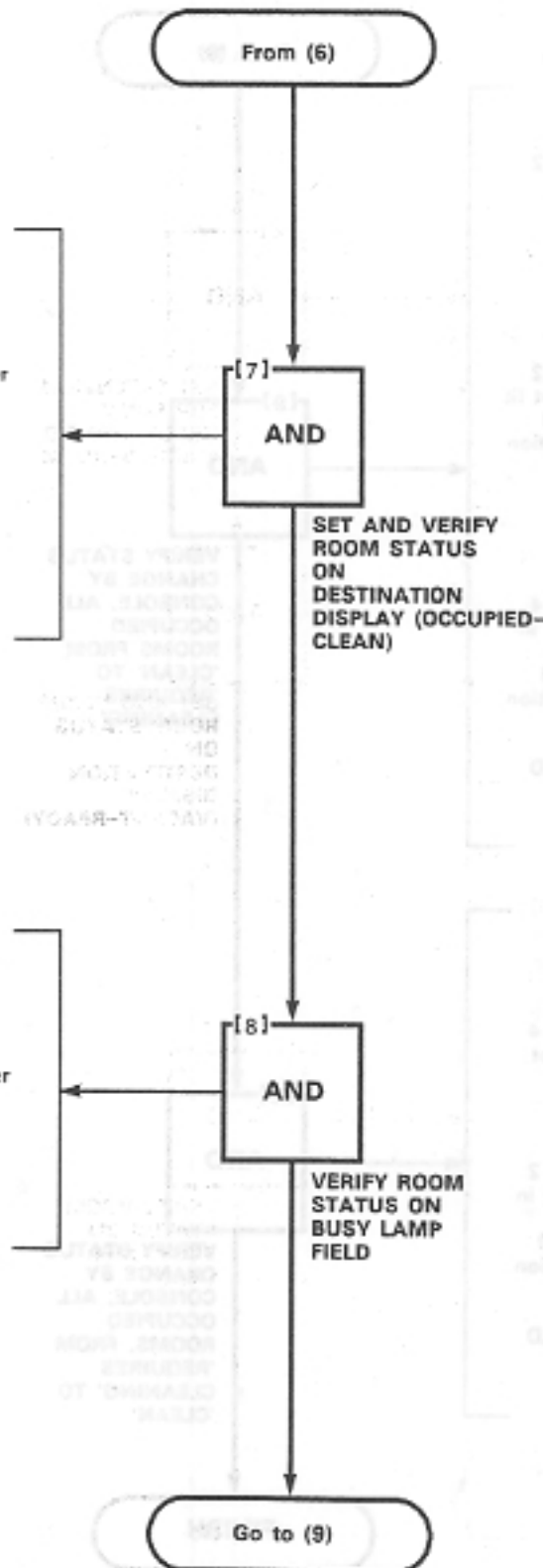


|                        |              |
|------------------------|--------------|
| ROOM STATUS (H/M)      | STATUS ROOM  |
| MAP215-323             | SEE -SYSTEM  |
| Issue 1, December 1982 | FIG 323-3    |
| Sheet 3 of 4           | 4 to 3 pages |

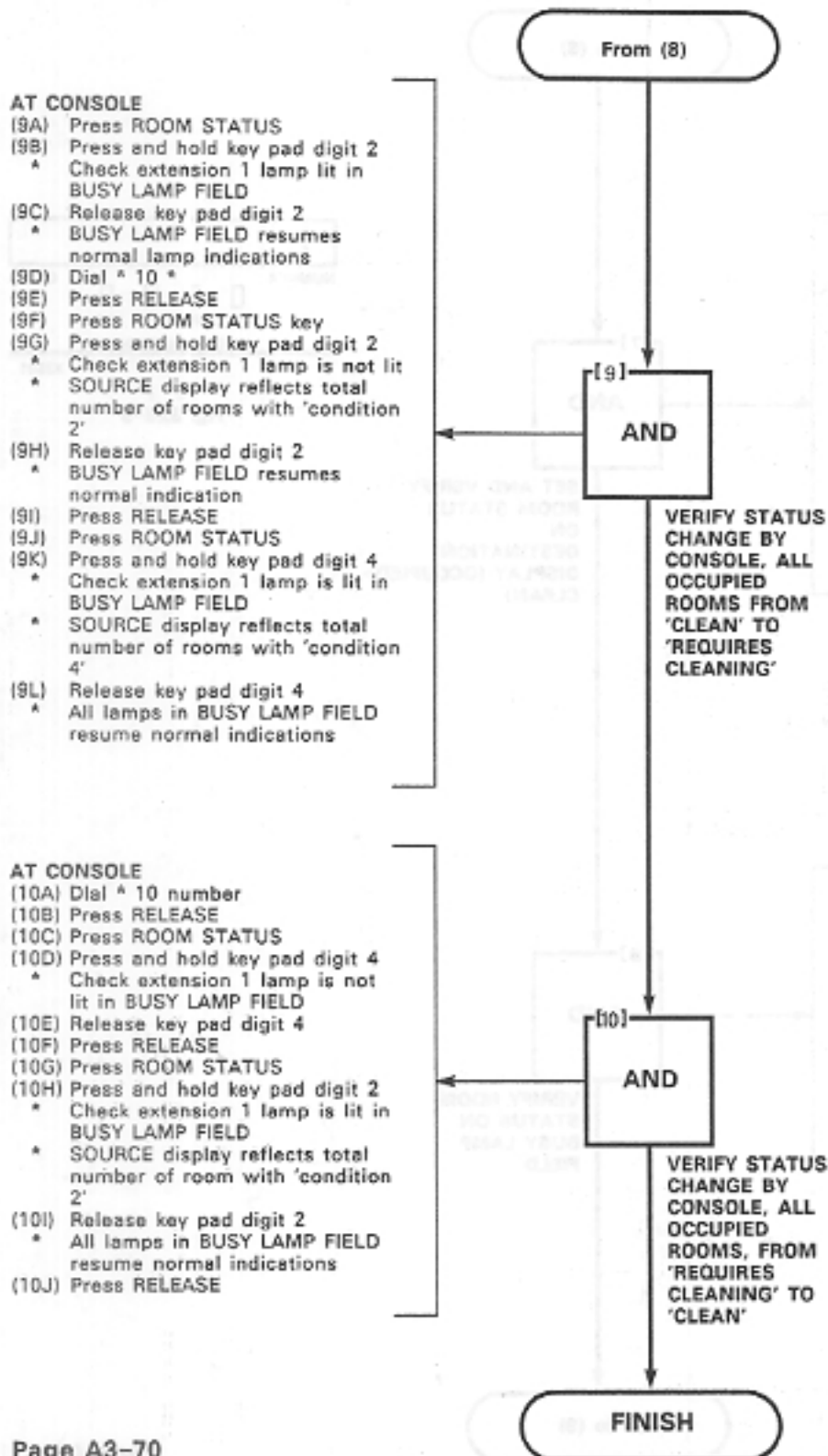
**AT CONSOLE**

- (7A) Press GUEST ROOM  
 (7B) Dial the number of check extension 1 and Message Register count
- SOURCE display shows number of check extension 1
  - DESTINATION display shows room status '1' (Fig. 323-3)
- (7C) Dial digit 2
- DESTINATION display shows room status code '2'
- (7D) Press RELEASE
- SOURCE and DESTINATION displays extinguished

- (8A) Press ROOM STATUS  
 (8B) Press and hold key pad digit 2
- Check extension 1 lamp lit in BUSY LAMP FIELD
  - SOURCE display, Fig. 323-2, changes to reflect total number of rooms which are occupied and cleaned
- (8C) Release key pad digit 2
- BUSY LAMP FIELD resumes normal lamp indications
- (8D) Press RELEASE



|                        |            |
|------------------------|------------|
| ROOM STATUS (H/M)      | STATE ROOM |
| MAP215-323             | STATE ROOM |
| Issue 1, December 1982 | STATE ROOM |
| Sheet 4 of 4           | STATE ROOM |



|                                   |
|-----------------------------------|
| AUTOMATIC WAKE-UP<br>(ALARM CALL) |
|-----------------------------------|

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| MAP215-324 |
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| Sheet 1 of 2 |
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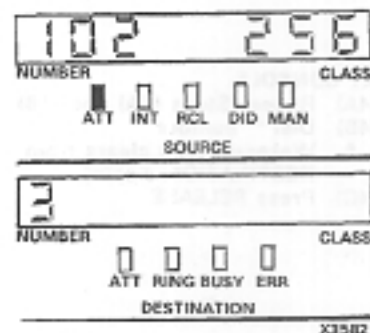
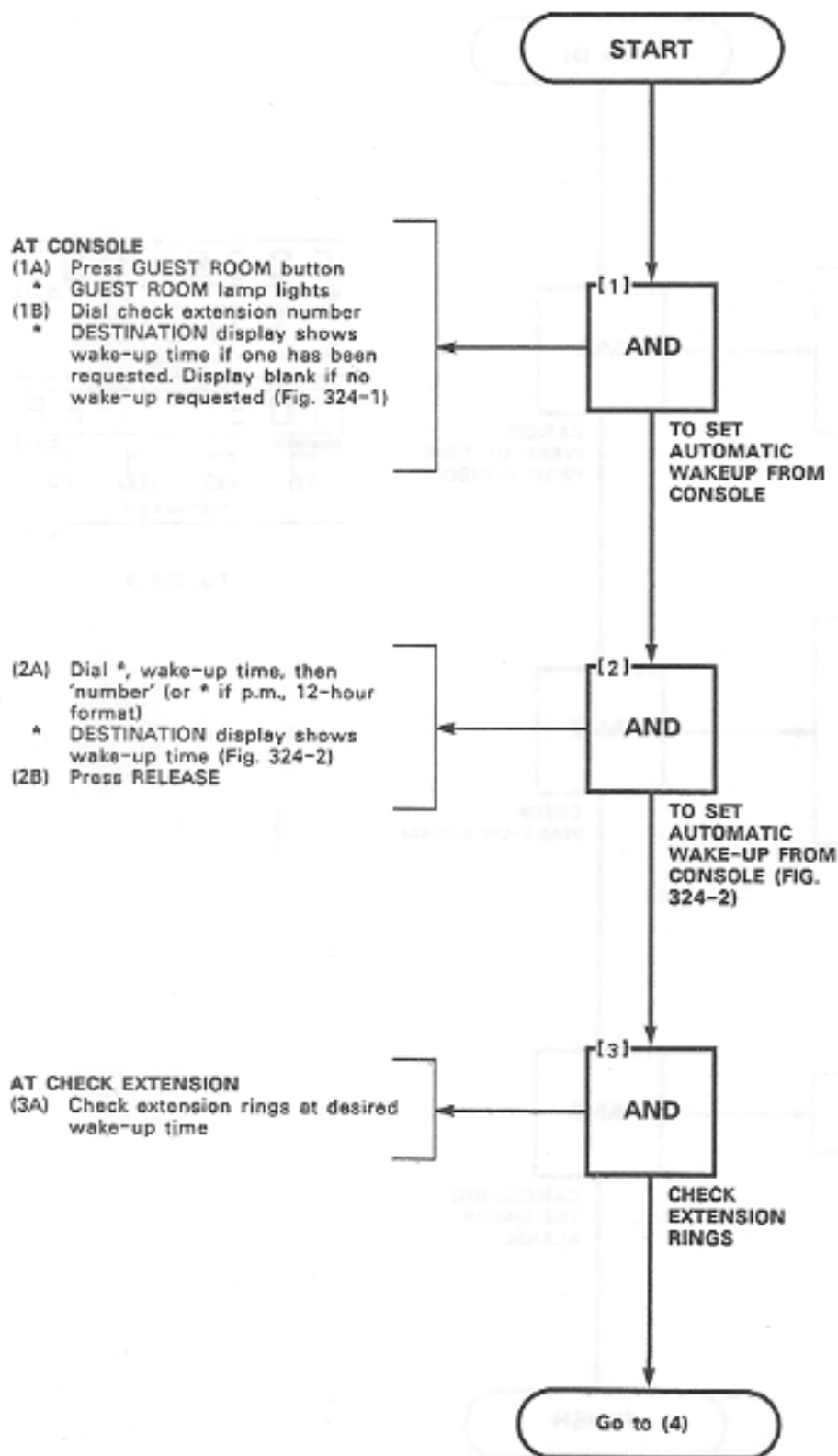


Fig. 324-1



Fig. 324-2

|                                   |
|-----------------------------------|
| AUTOMATIC WAKE-UP<br>(ALARM CALL) |
| MAP200- 324                       |
| Issue 1, December 1982            |
| Sheet 2 of 2                      |

**AT CONSOLE**

- (4A) Repeat Steps (1A) and (1B)
- (4B) Dial \* 'number'
- \* Wake-up time clears from DESTINATION display
- (4C) Press RELEASE

- (5A) Repeat Steps 1 and 2
- (5B) Allow check extension to ring at 3, 5 minute intervals unanswered
- (5C) At the end of the third attempt console MIN alarm LED will light and the console ringer will sound
- (5D) Press the ALARM RESET, display should be similar to Fig. 324-3

- (6A) Press \* 8 'number'
- (6B) Press RELEASE

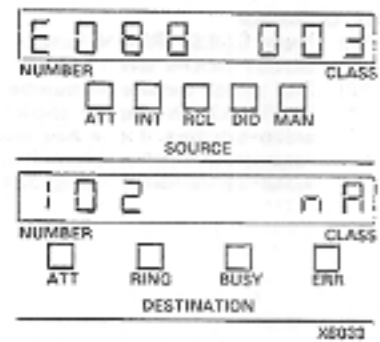
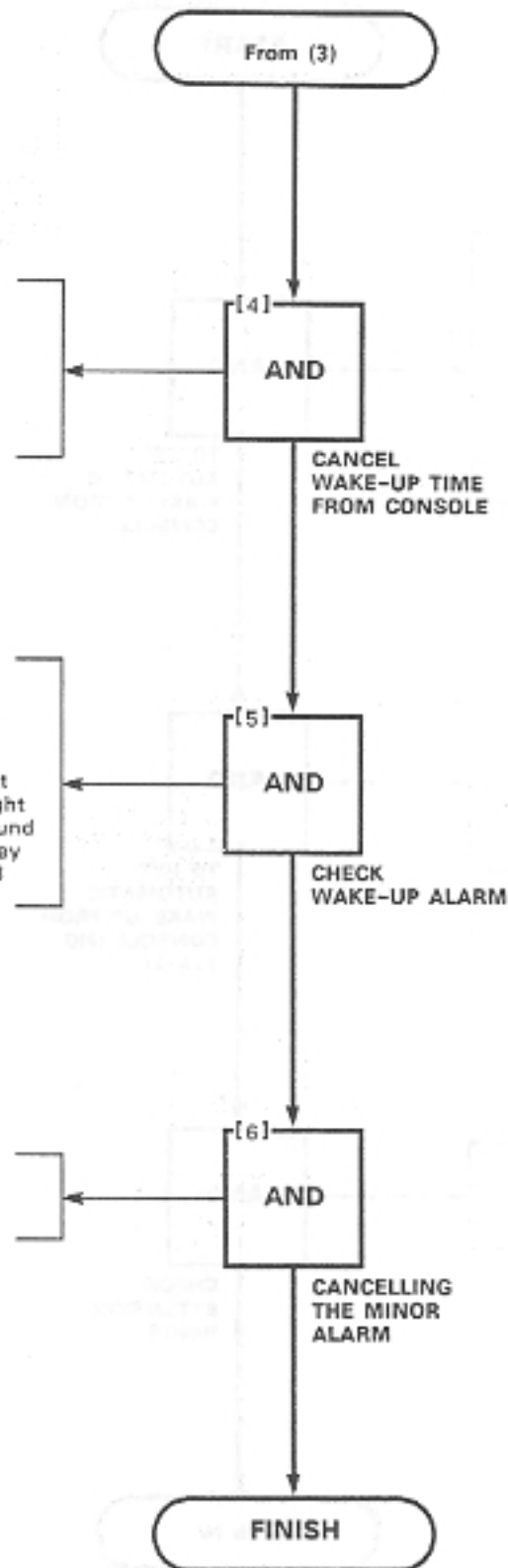
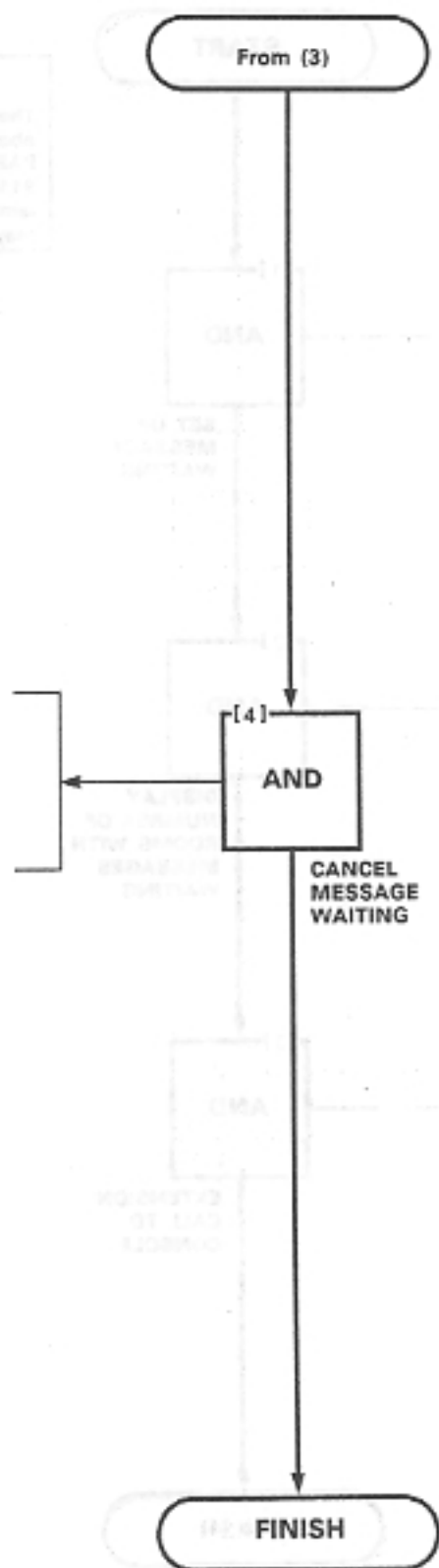


Fig. 324-3



|                        |
|------------------------|
| MESSAGE WAITING (H/M)  |
| MAP215- 325            |
| Issue 1, December 1982 |
| Sheet 2 of 2           |

- AT CONSOLE
- (4A) Press MSGE WAIT
    - \* MSGE WAIT lamp goes off
  - (4B) Press RELEASE
  - (4C) Replace handset at check extension 1

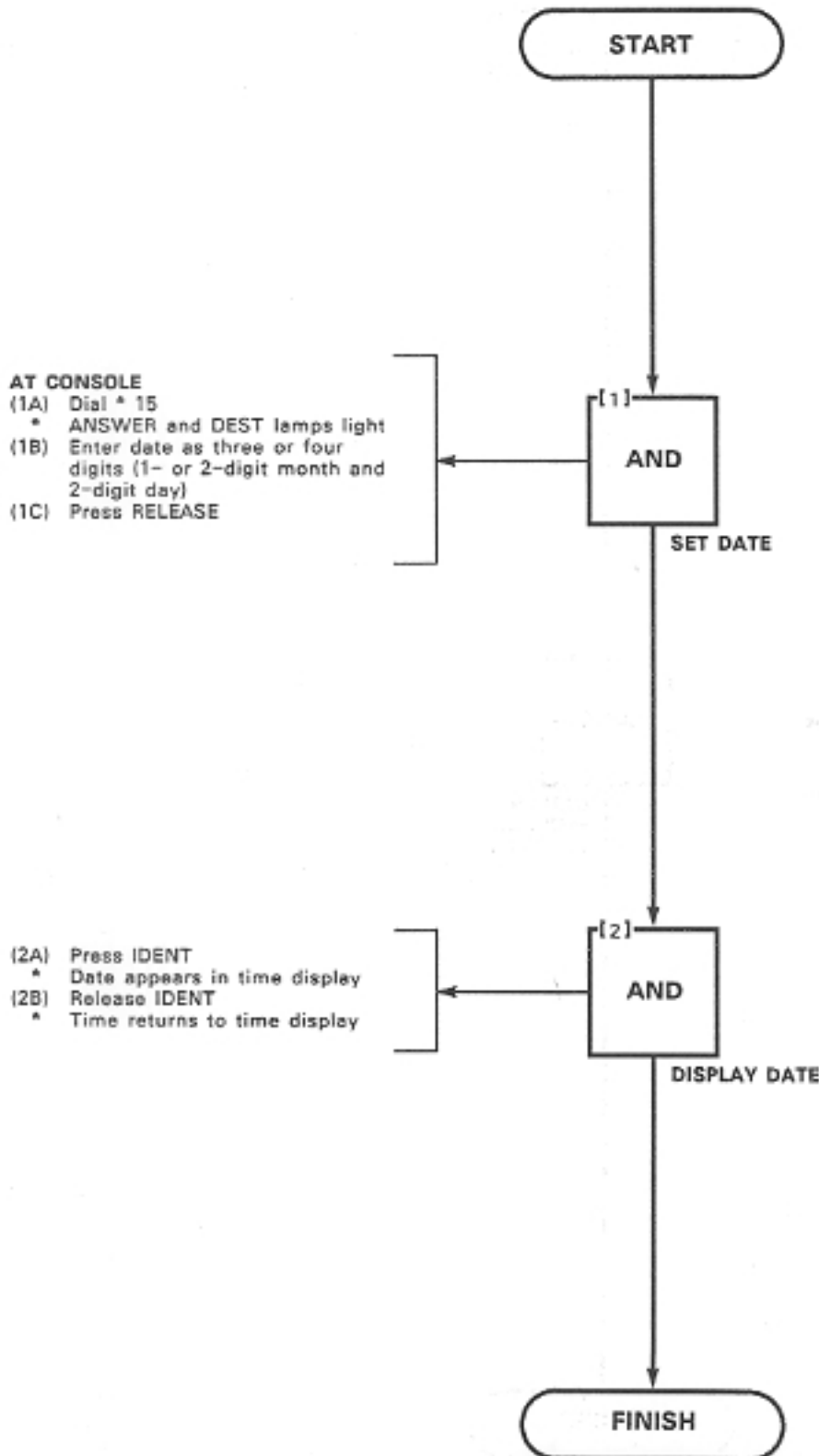


|  |
|--|
| CONSOLE DATE DISPLAY AND<br>DATE UTILITY |
|--|

|            |
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| MAP215-326 |
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| Sheet 1 of 1 |
|--------------|







CONTROLLING THE PRINTER

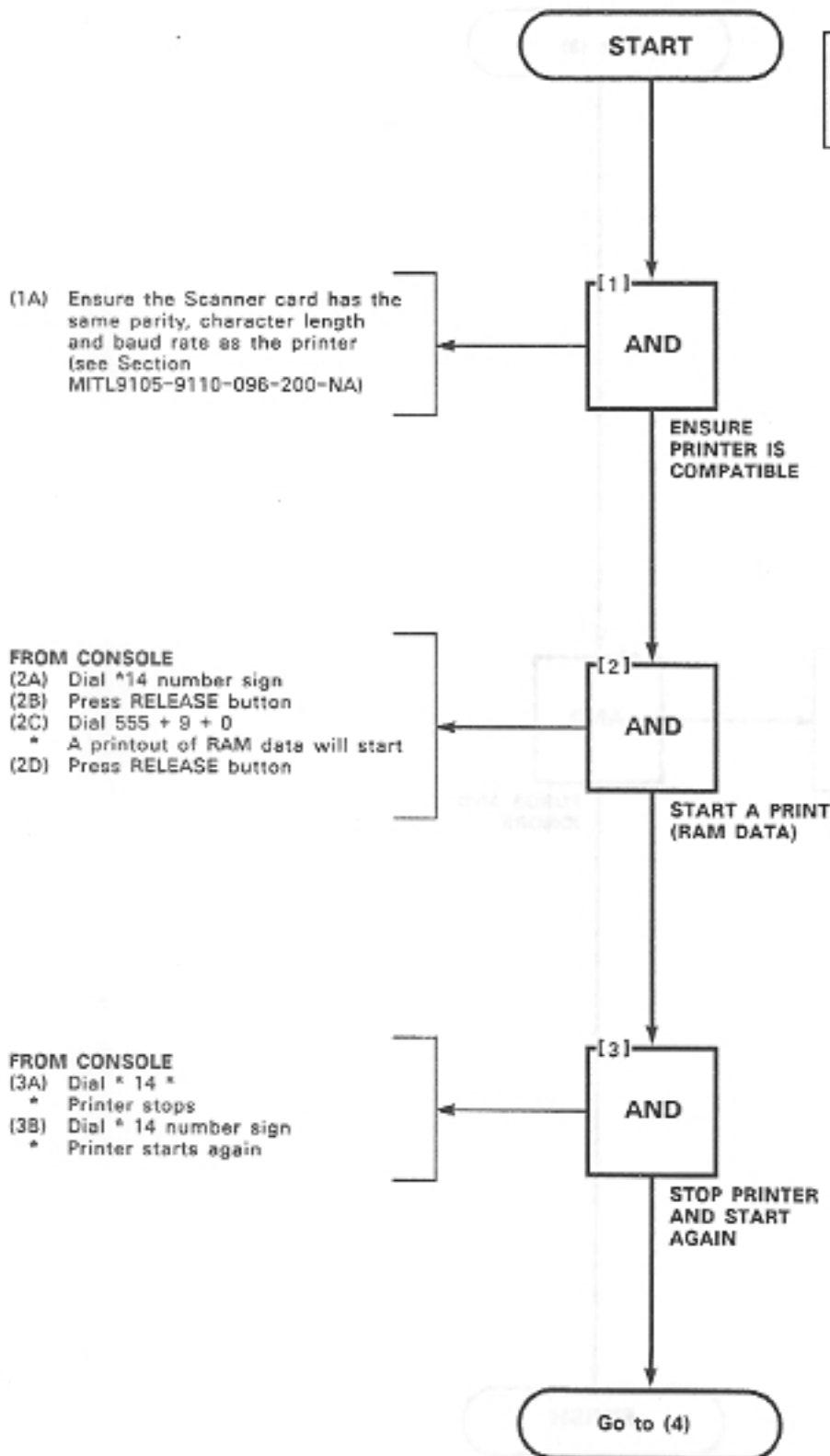
MAP215-328

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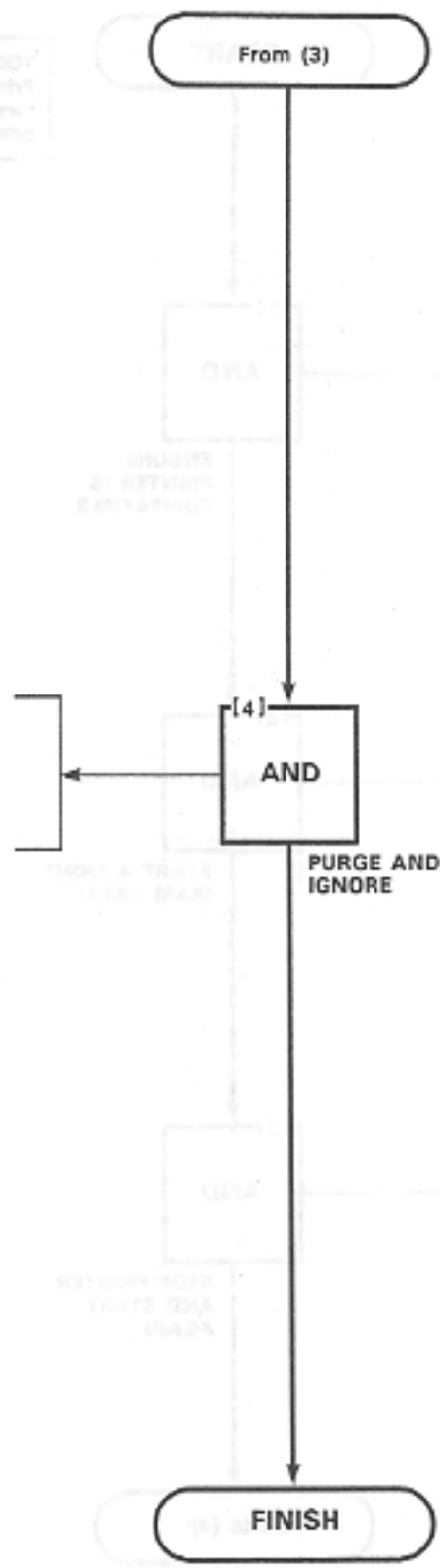
Sheet 1 of 2

**TOOLS REQUIRED:**

Printer, RS232 compatible, 88 characters per line and 300 or 1200 baud print rate.



|                                |
|--------------------------------|
| <b>CONTROLLING THE PRINTER</b> |
| MAP215- 328                    |
| Issue 1, December 1982         |
| Sheet 2 of 2                   |



- (4A) Dial \*1400
  - \* Printer stops, all output from the system is ignored
- (4B) Dial \* 14 number sign
  - \* Printer is enabled

|                        |
|------------------------|
| ROOM AUDIT             |
| MAP215- 329            |
| Issue 1, December 1982 |
| Sheet 1 of 1           |

Note: Ensure Printer is not in local mode.

- (2A) Printer must:
- \* Meet EIA RS232 requirements
  - \* Be capable of 88 characters per line
  - \* Be capable of 300 or 1200 baud
- (2B) Connect Printer to system RS232 port

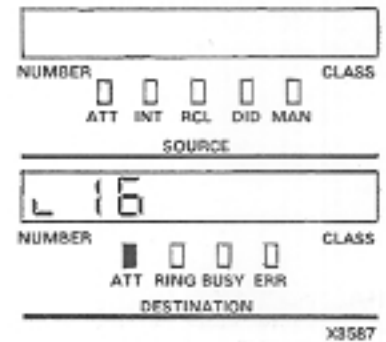
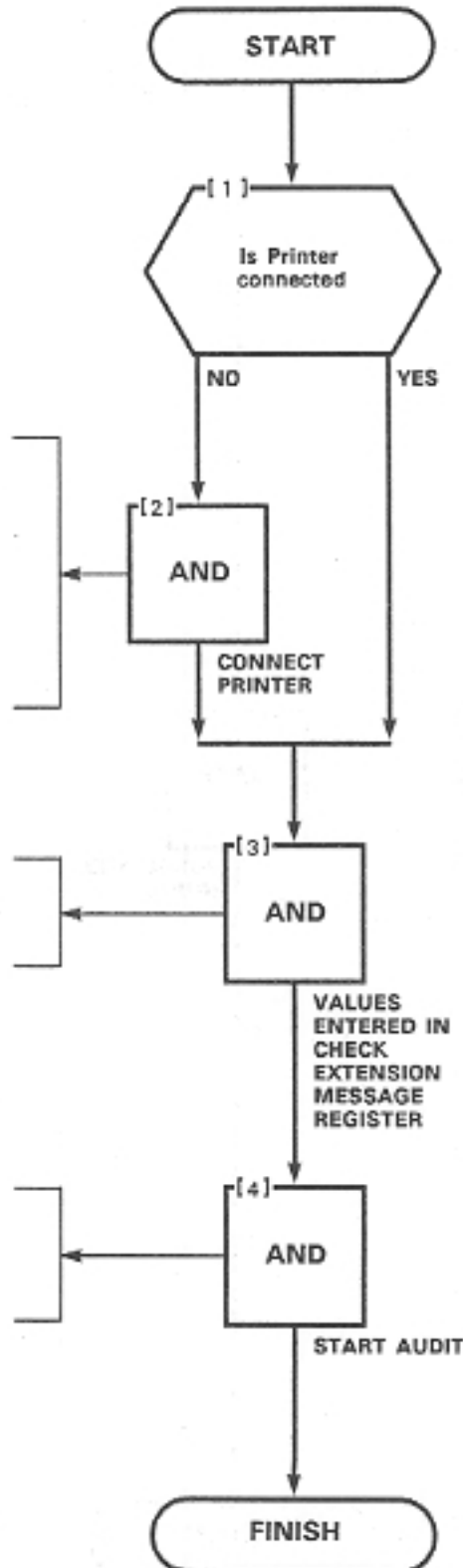


Fig. 329-1

- AT CHECK EXTENSION
- (3A) Complete a number of calls to local directory numbers

- AT CONSOLE
- (4A) Dial \* 16 (Fig. 329-1)
- (4B) Press RELEASE
- \* Printout of entries produced





|                        |             |
|------------------------|-------------|
| SYSTEM IDENTIFIER      | XXXXXXXXXX  |
| MAP215-330             | XXX-XXXXXX  |
| Issue 1, December 1982 | XXXX-XXXX   |
| Sheet 1 of 2           | 2 of 2 XXXX |

**AT CONSOLE**  
 (1A) Dial \*17  
 \* Source display shows the current system ID (Fig. 330-1)

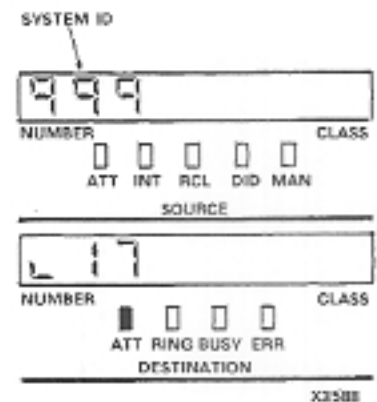
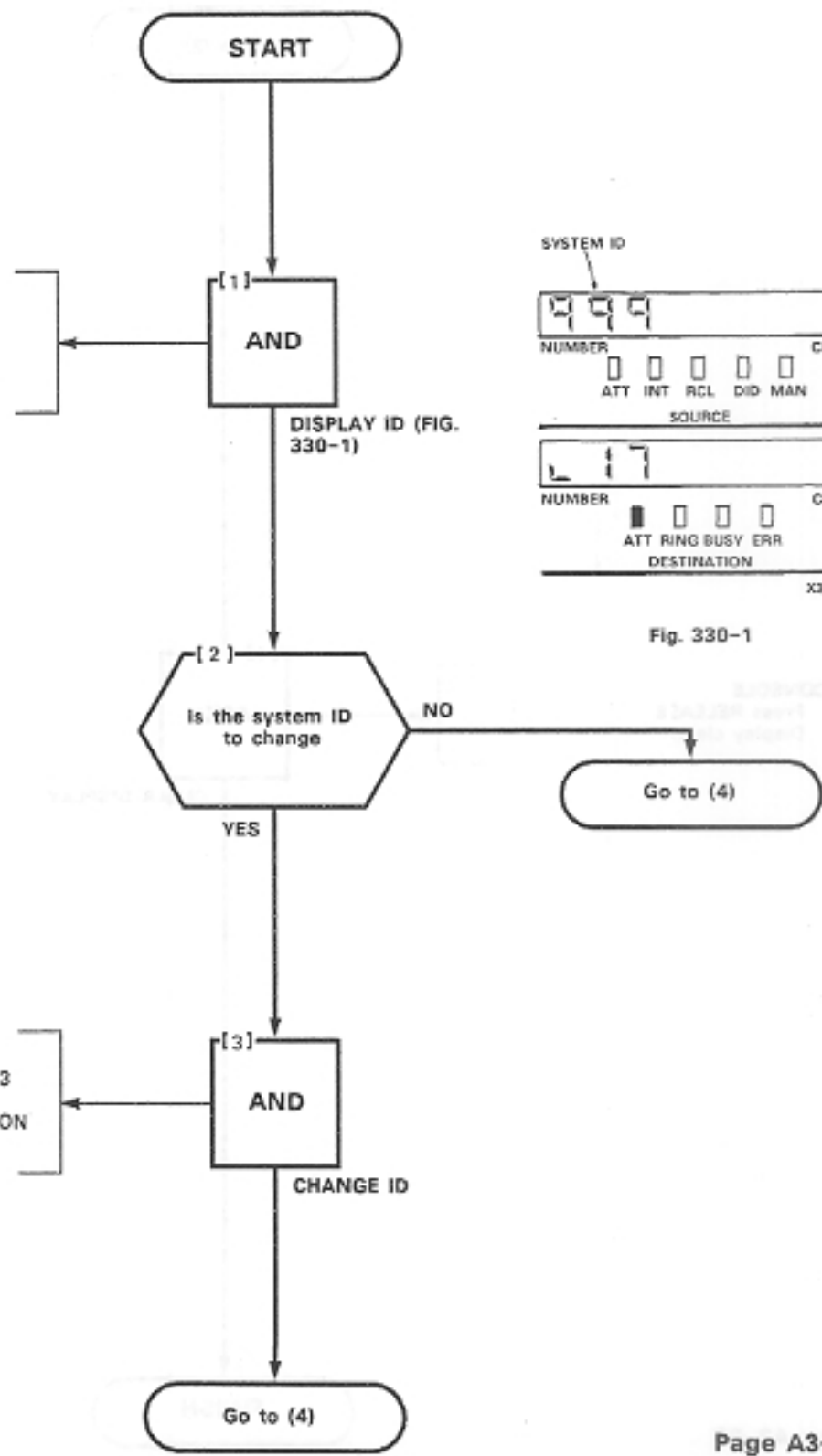


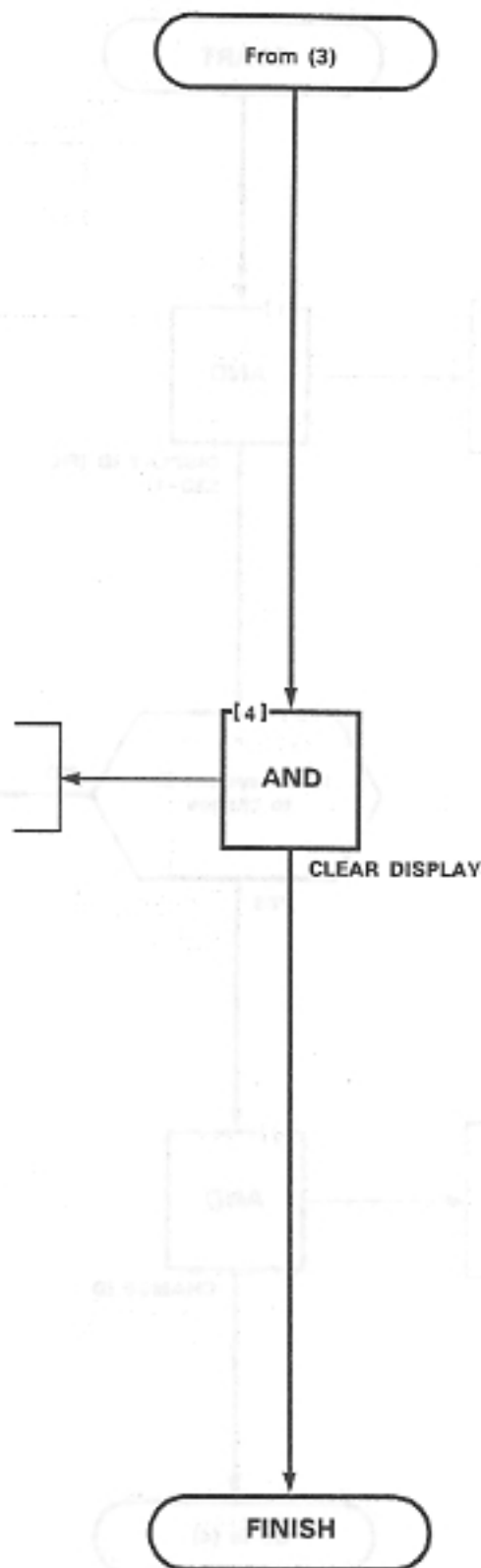
Fig. 330-1



**AT CONSOLE**  
 (3A) Dial new system identifier (1-3 digits)  
 \* New ID appears in DESTINATION display

|                        |
|------------------------|
| SYSTEM IDENTIFIER      |
| MAP215- 330            |
| Issue 1, December 1982 |
| Sheet 2 of 2           |

AT CONSOLE  
(4A) Press RELEASE  
• Display clears



## COMMON USE SPEED CALL

MAP215-331

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Sheet 1 of 1

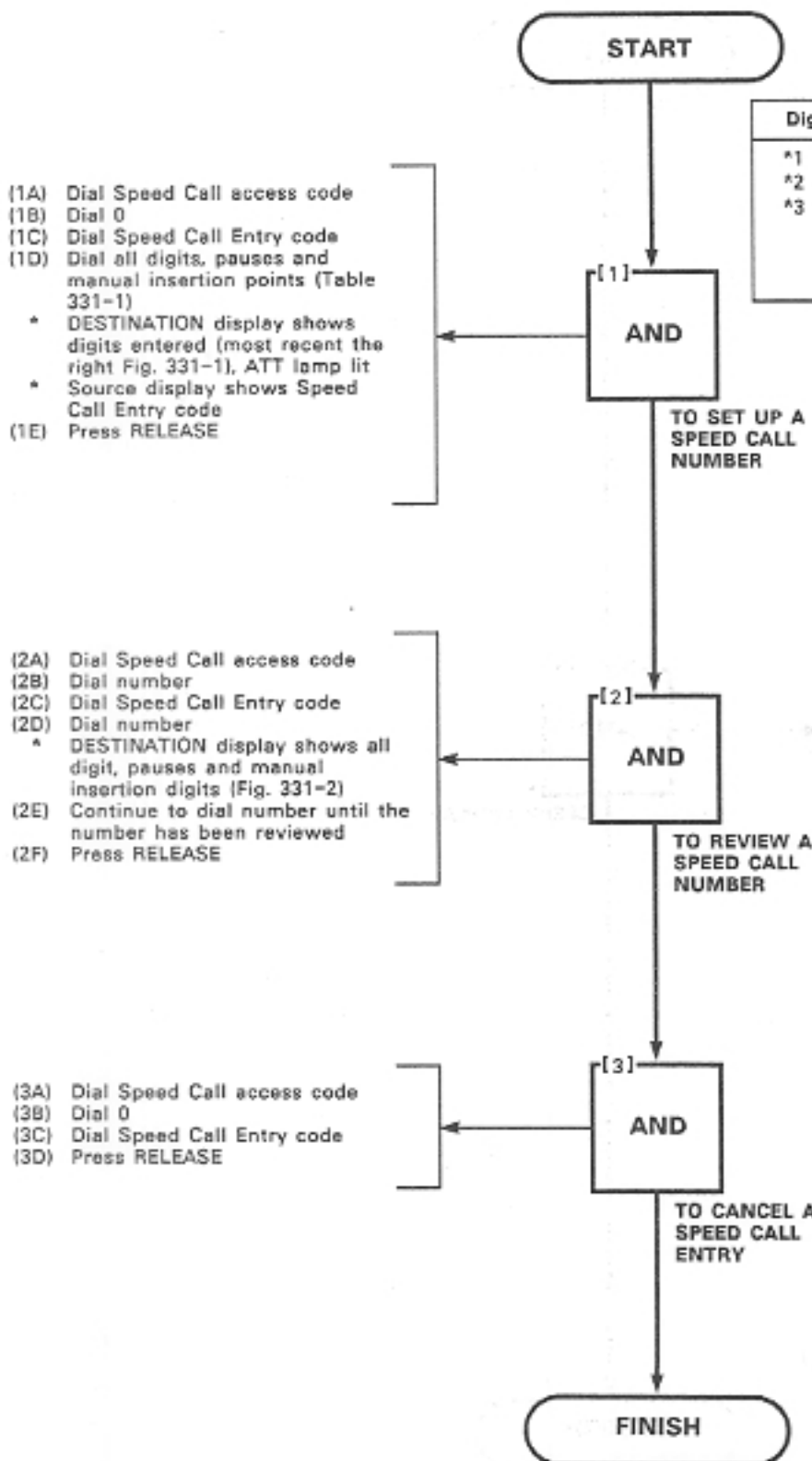
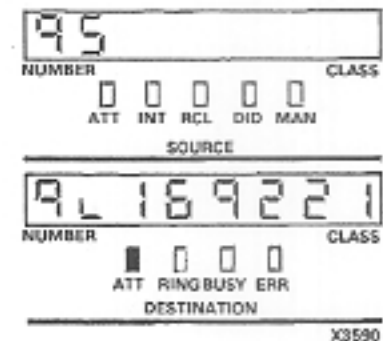
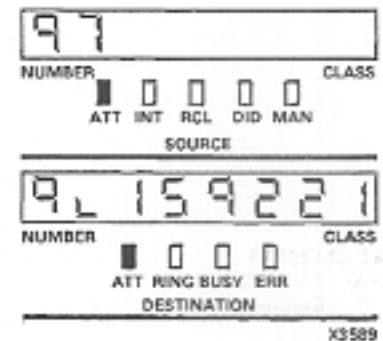


TABLE 331-1

| Digits  | Meaning   |
|---------|---|
| *1      | 5 Second pause  |
| *2      | Wait for dial tone  |
| *3 (NN) | Allows the required number of manual digits to be dialed (NN denotes the required number of defined digits) |





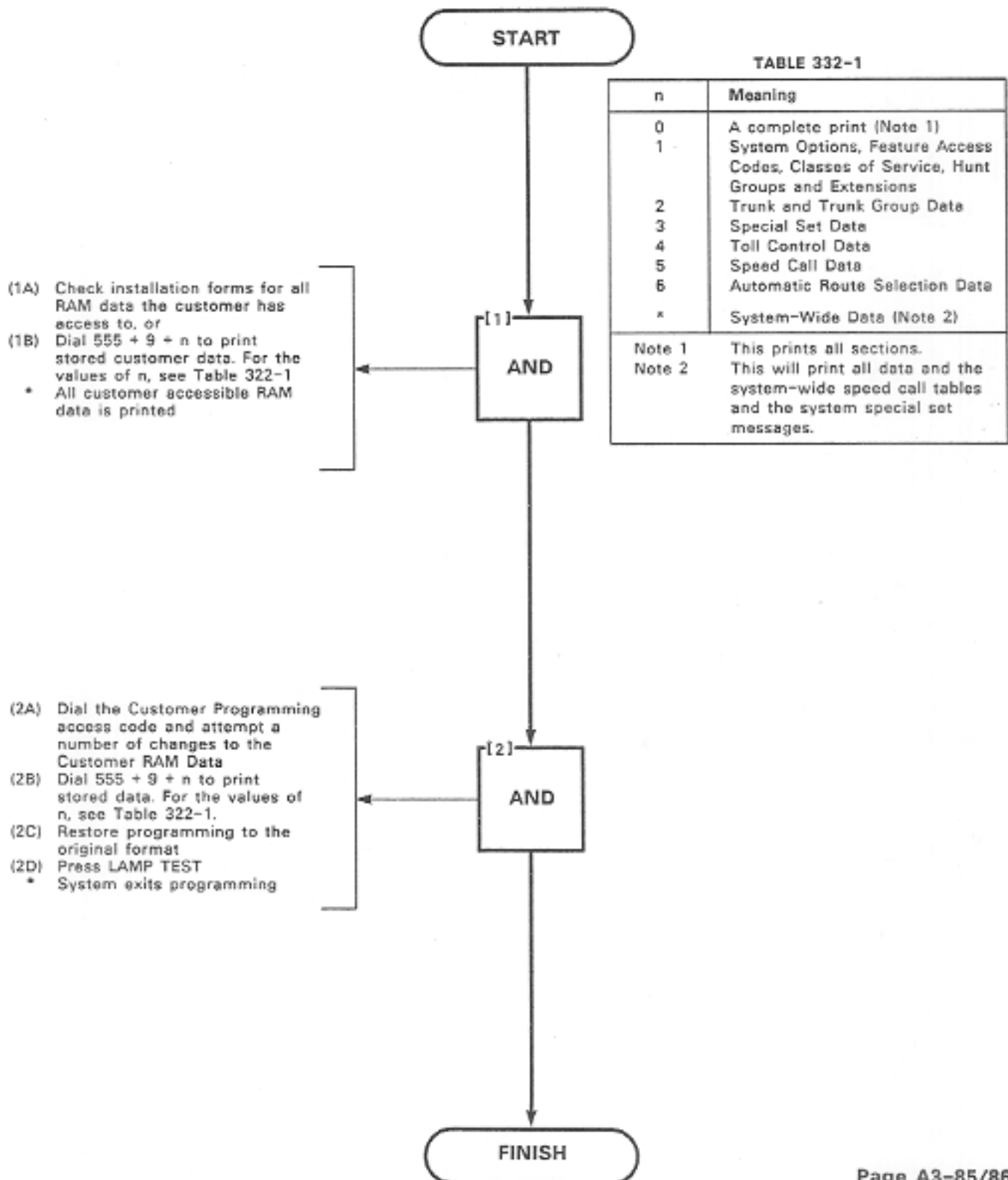


## CUSTOMER PROGRAMMING

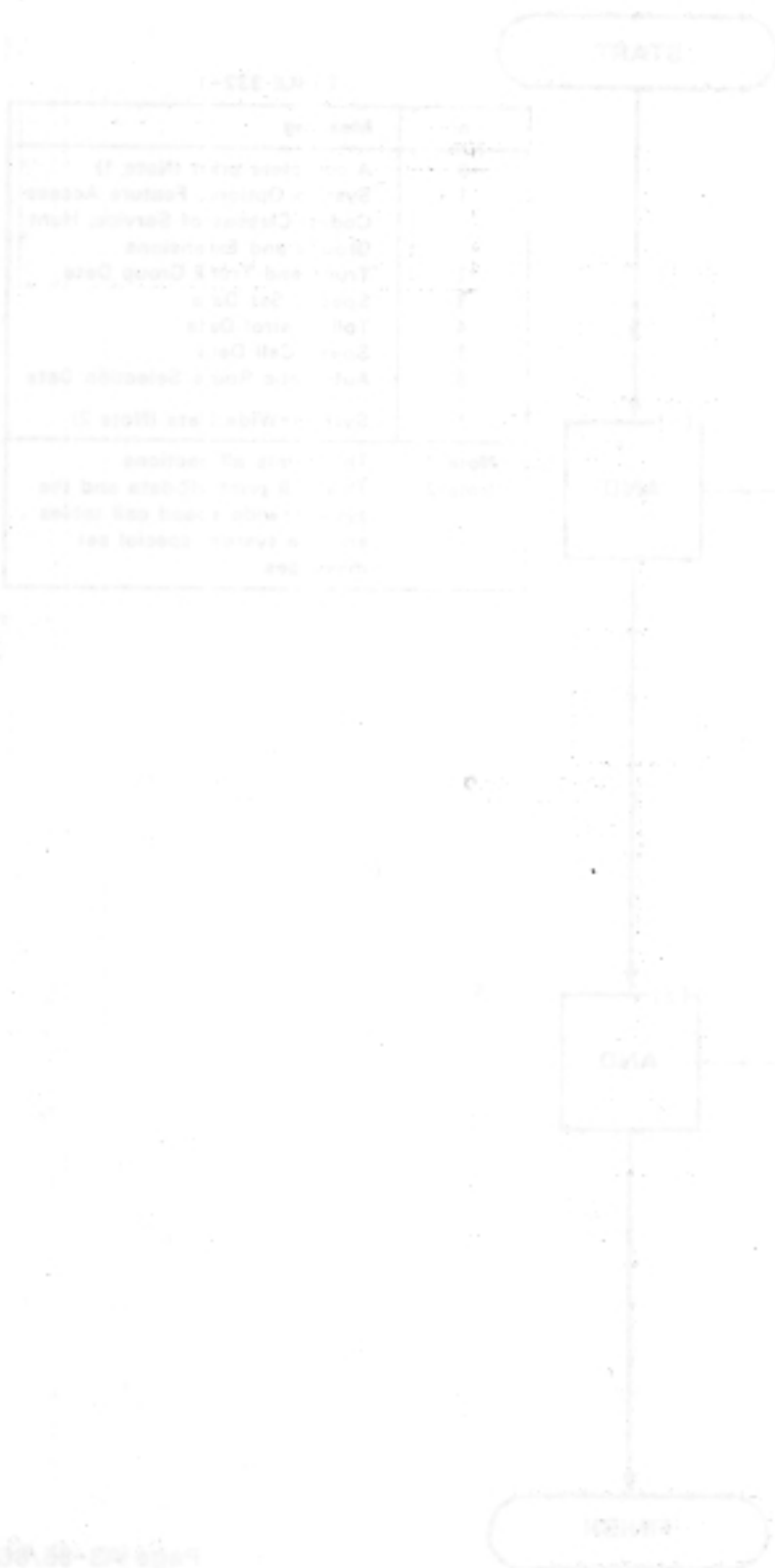
MAP215-332

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Sheet 1 of 1



|                     |
|---------------------|
| Customer Accounting |
| 1985-1986           |
| Page 1 of 1         |



Analysis of the data shows a significant increase in sales over the period. The total revenue reached 1,000,000 units, which is a 20% increase from the previous year. This growth was primarily driven by an increase in the number of units sold, rather than a change in price. The cost of goods sold also increased, but at a slower rate than sales, resulting in a higher profit margin. The company's financial position remains strong, with total assets exceeding total liabilities. The equity section shows a steady increase in value, reflecting the company's successful operations and prudent financial management.

The data indicates that the company's sales are highly dependent on a few key products. These products account for a large percentage of the total revenue, which may pose a risk if market conditions change. It is recommended that the company diversify its product line to reduce this dependency. Additionally, the company should continue to monitor its cost structure closely to maintain its competitive advantage. The overall performance is positive, but there is still room for improvement in certain areas.

The financial statements provide a clear picture of the company's performance. The income statement shows a strong profit, which is a positive sign for investors and management alike. The balance sheet shows a healthy level of liquidity, with sufficient cash and assets to cover all liabilities. The cash flow statement indicates that the company is generating positive cash flow, which is essential for long-term growth. The company's financial ratios are within acceptable ranges, suggesting a well-managed and financially sound organization. The data supports the conclusion that the company is on a solid growth trajectory.

## EXTERNAL CALL FORWARDING

MAP215-333

Issue 1, December 1982

Sheet 1 of 2

TABLE 333-1  
CALL FORWARDING CODES

| CODE | MEANING           |
|------|-------------------|
| 1    | Busy              |
| 2    | Don't Answer      |
| 3    | Follow Me         |
| 4    | Busy/Don't Answer |

## AT CONSOLE

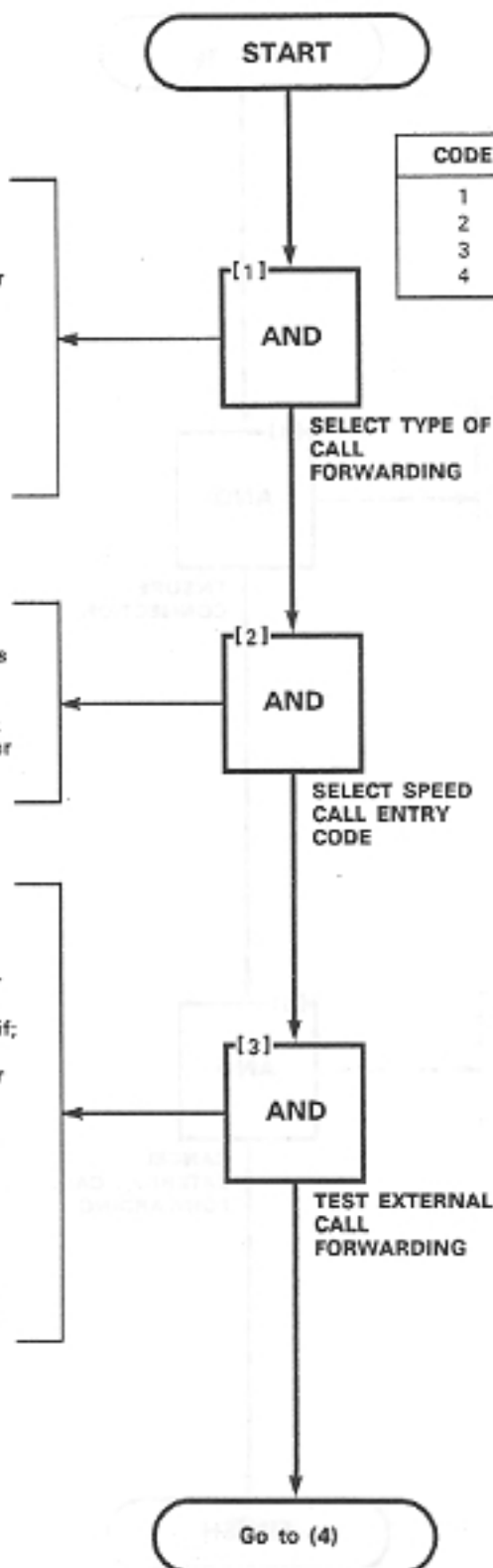
- (1A) Dial \*11 + check extension 1 number
- \* SOURCE display shows number of check extension 1 and type of call forwarding in effect (a (-) if no call forwarding)
  - \* ATT lamp lit
- (1B) Dial type of call forwarding (Table 333-1)

## AT CONSOLE

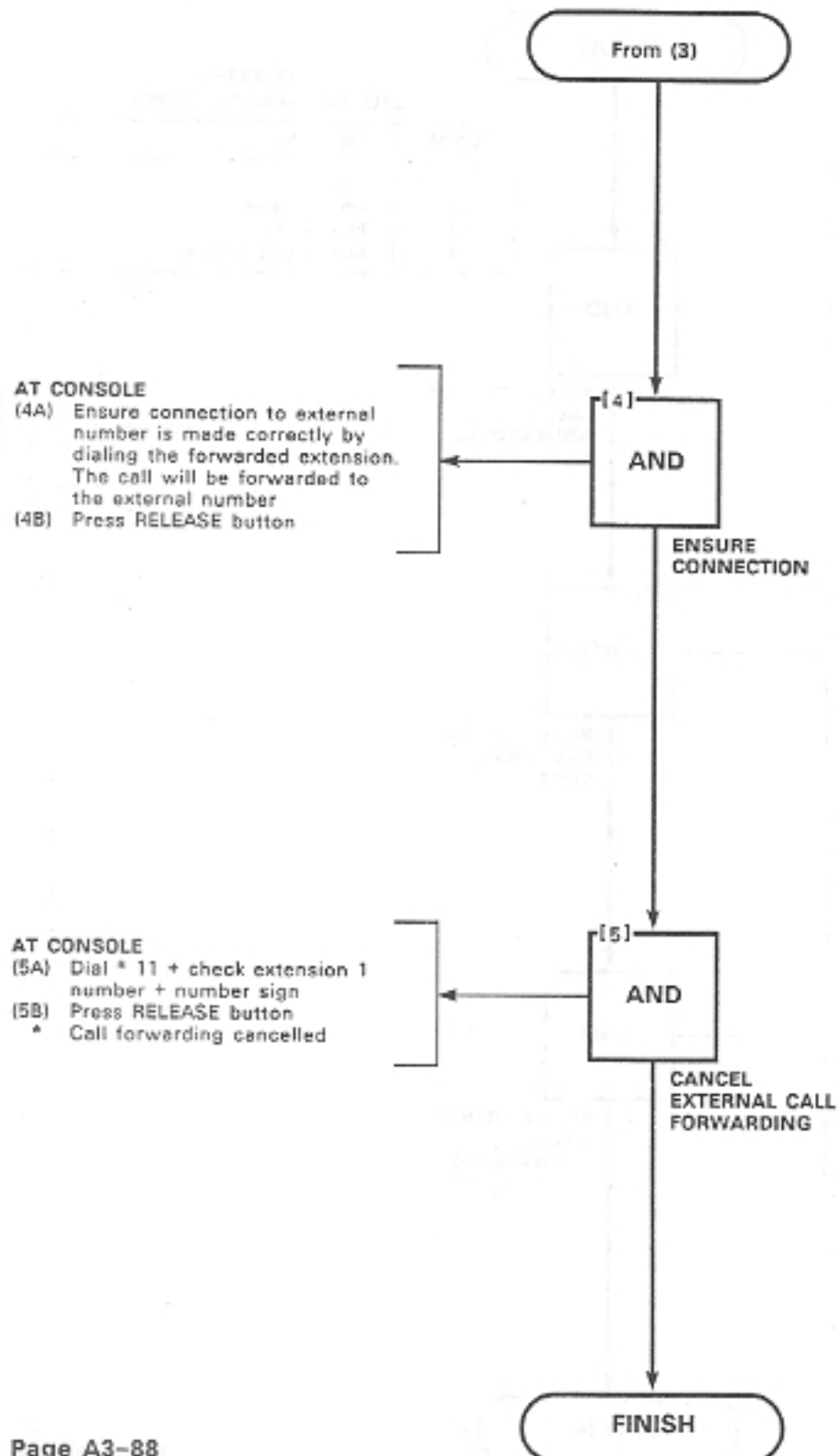
- (2A) Dial System Speed, Call Access Code, Dial Speed Call, Table Number (personal or common use) Note: Table Number must contain a valid external number
- (2B) Press RELEASE button

## AT CHECK EXTENSION 2

- (3A) Lift handset
- \* Dial tone
- (3B) Dial check extension 1 number
- \* Call will be forwarded to an external location immediately if: Call Forwarding Busy, Call Forwarding Busy-Don't Answer or Call Forward Follow Me is used (Note: Create a busy situation at check extension 1 before dialing if Call Forward Busy or Busy Don't Answer is used) or
  - \* Call will be externally forwarded after six rings at check extension 1 if Call Forward Don't Answer is used



|                          |
|--------------------------|
| EXTERNAL CALL FORWARDING |
| MAP215- 333              |
| Issue 1, December 1982   |
| Sheet 2 of 2             |

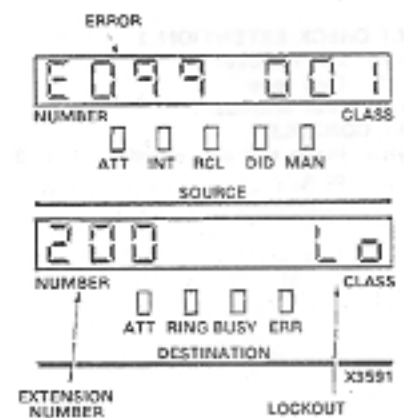
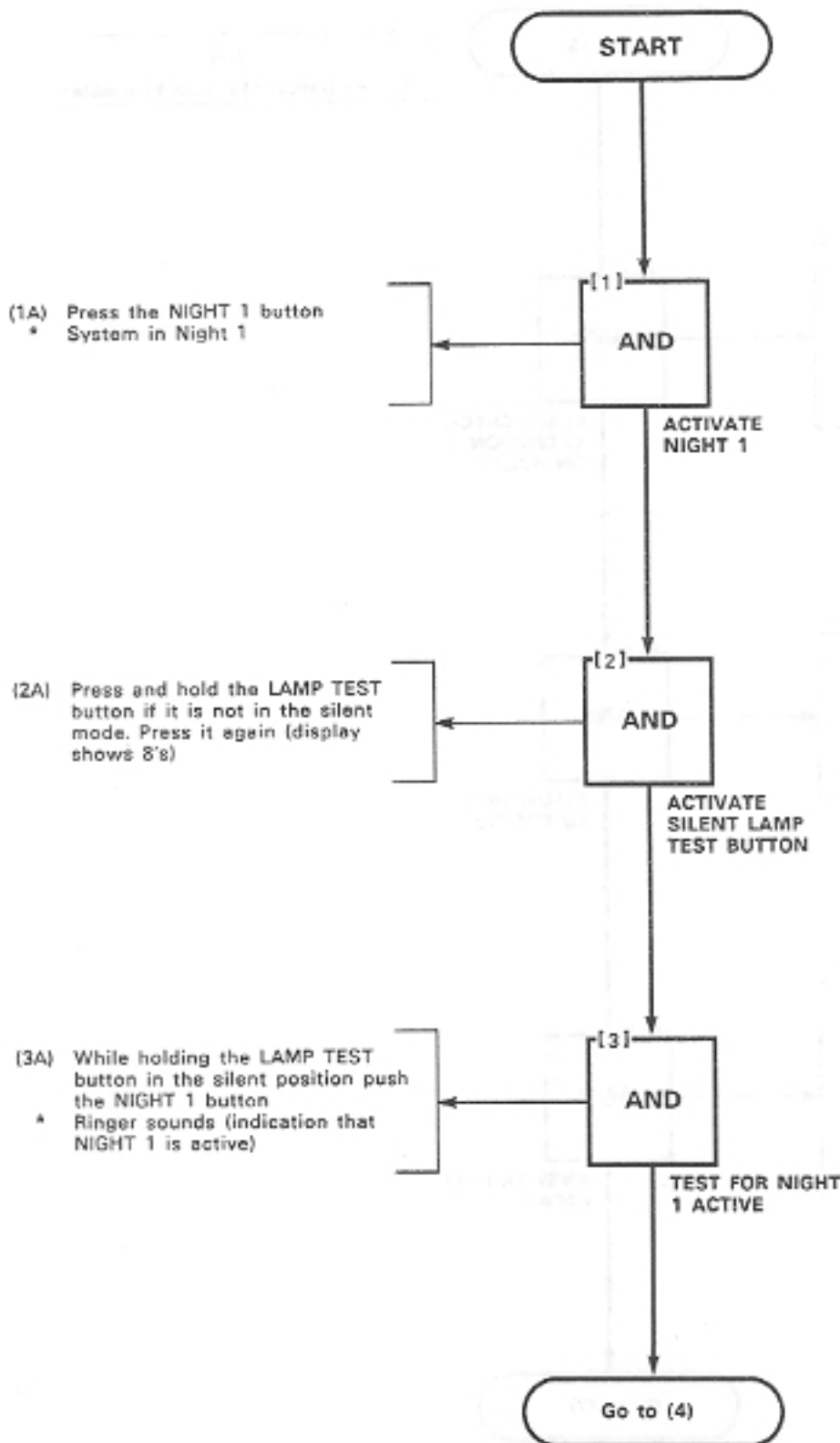


## TEST AUDIBLE TONE INDICATORS

MAP215- 334

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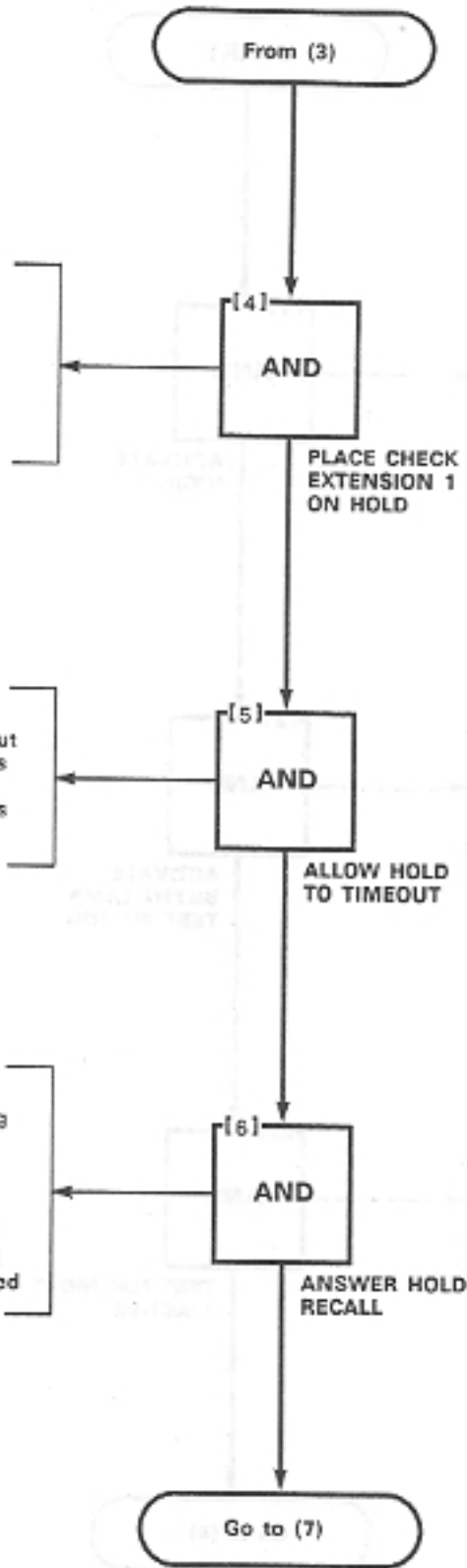
|                              |
|------------------------------|
| TEST AUDIBLE TONE INDICATORS |
| MAP215- 334                  |
| Issue 1, December 1982       |
| Sheet 2 of 4                 |

Note  
System Option 115 must be enabled.

**AT CHECK EXTENSION 1**  
 (4A) Lift handset  
     \* Dial tone  
 (4B) Dial attendant  
**AT CONSOLE**  
 (4C) Place the call on HOLD 1, 2, 3  
       or 4

(5A) Allow check extension 1 on hold to timeout; HOLD 1 timeout is one bip. A HOLD 2 timeout is two bips. A HOLD 3 timeout is three bips. A HOLD 4 timeout is four bips

**AT CONSOLE**  
 (6A) Answer HOLD recall by pressing the flashing HOLD button  
 (6B) Place call on a different HOLD button. Allow the hold to timeout again as per (5A)  
 (6C) Continue to answer recalls and place them on HOLD (1-4) until all HOLD buttons have been tried

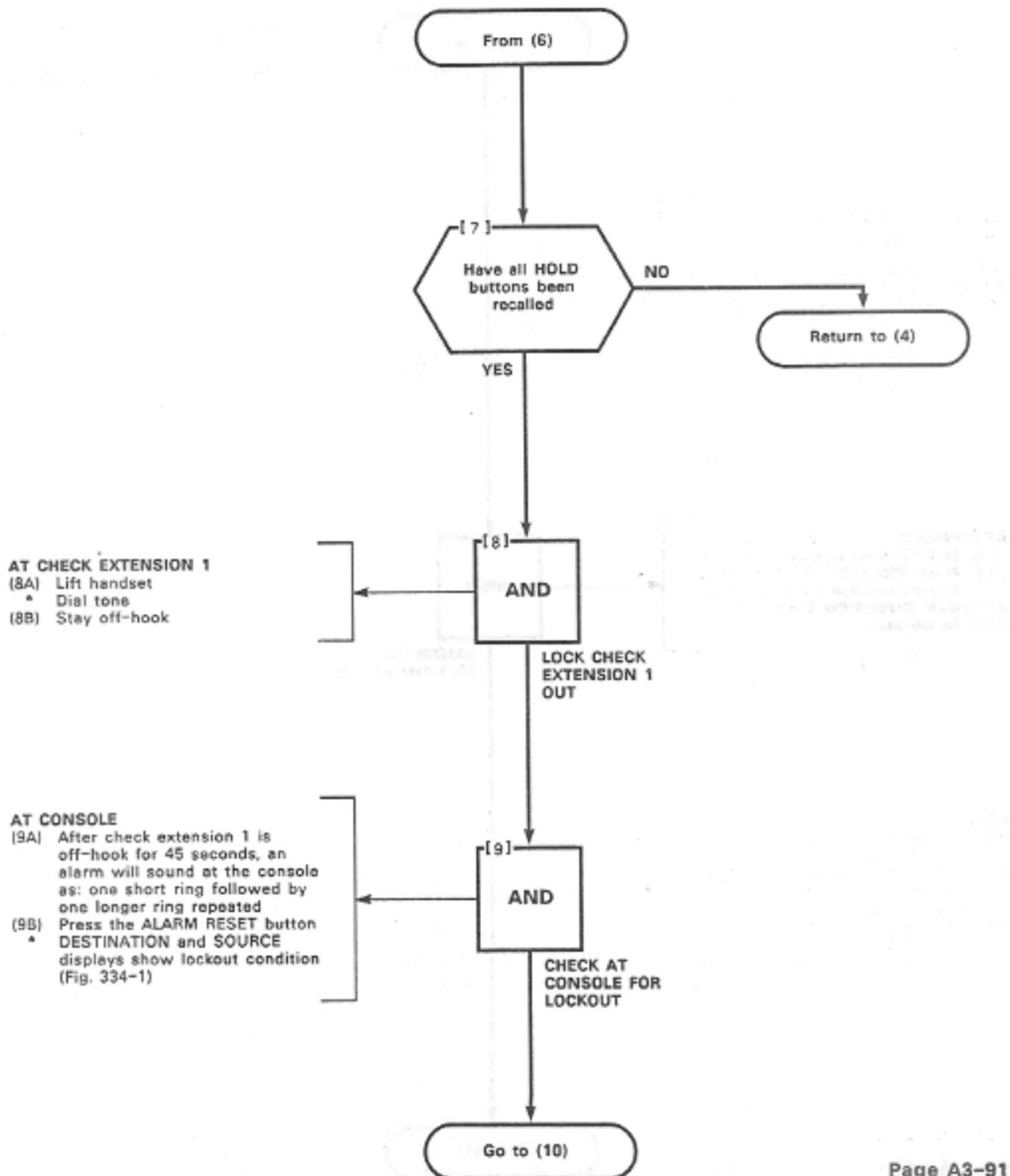


TEST AUDIBLE TONE INDICATORS

MAP215-334

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Sheet 3 of 4



|                              |
|------------------------------|
| TEST AUDIBLE TONE INDICATORS |
| MAP215- 334                  |
| Issue 1, December 1982       |
| Sheet 4 of 4                 |

From (9)

(10)  
AND

CANCEL  
LOCKOUT ALARM

FINISH

AT CONSOLE  
(10A) Dial \* 8 number sign  
(10B) Press RELEASE  
\* Alarm cancelled  
AT CHECK EXTENSION 1  
(10C) Go on-hook



SINGLE DIGIT DIALING

MAP215- 335

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Sheet 1 of 2

## NOTE

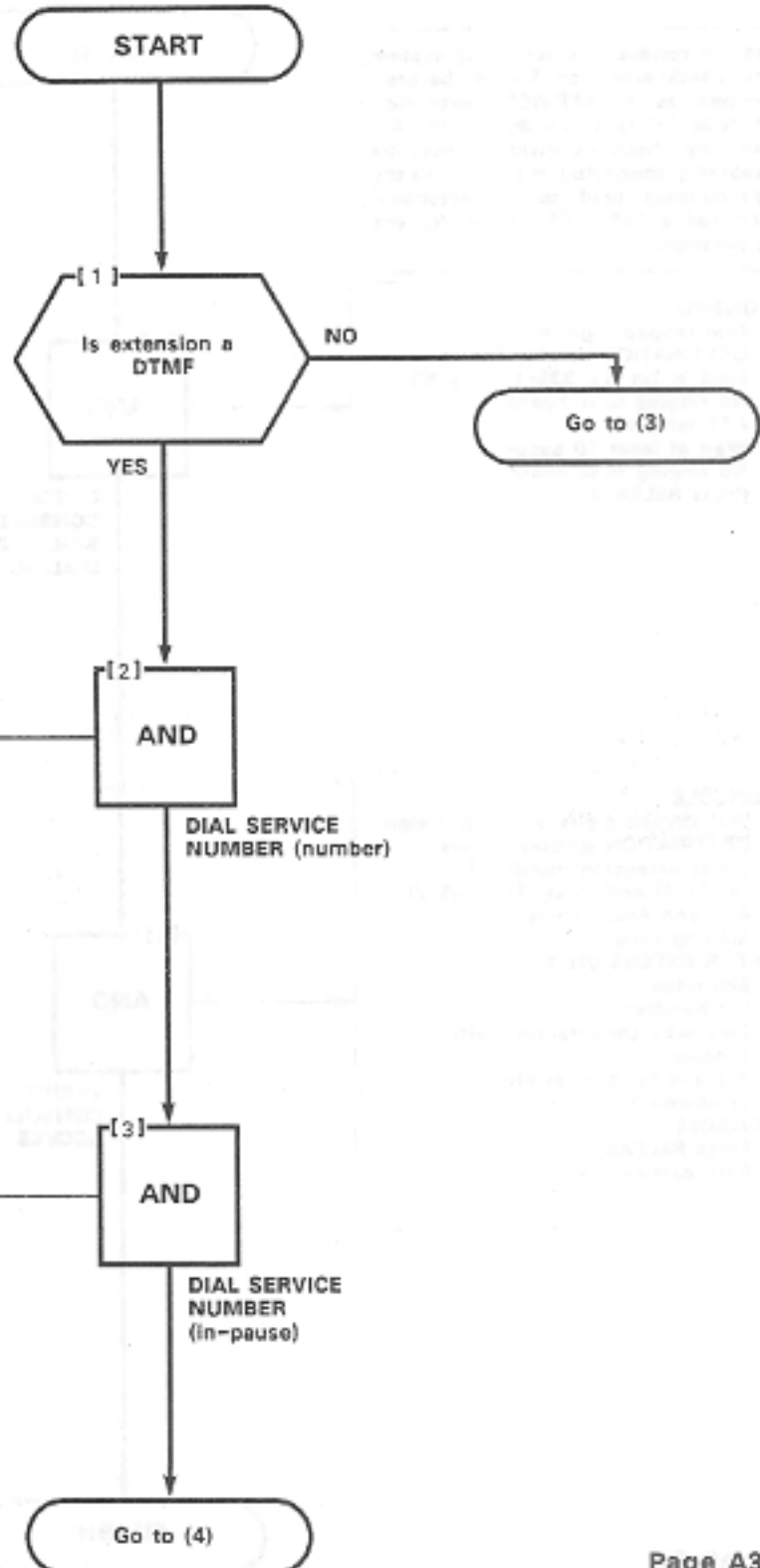
Step (2) is for DTMF telephones and gives immediate ring. Step (3) is for DTMF or rotary dial telephones and tests programmed timeout interval (3, 4 or 5 s).

## AT CHECK EXTENSION 2

- (2A) Lift handset  
 \* Dial tone  
 (2B) Dial 'n' (see above note) followed immediately by 'number'  
 \* Ringing tone  
 \* Check extension 1 bell rings  
 (2C) Lift handset at check extension 1  
 \* Two-way conversation, check extensions 1 and 2  
 (2D) Replace handsets on check extensions 1 and 2

## AT CHECK EXTENSION 2

- (3A) Lift handset  
 \* Dial tone  
 (3B) Dial 'n' (see note)  
 \* Ringing tone  
 \* Check extension 1 bell rings  
 (3C) Lift handset at check extension 1  
 \* Two-way conversation, check extensions 1 and 2  
 (3D) Replace handsets on check extensions 1 and 2

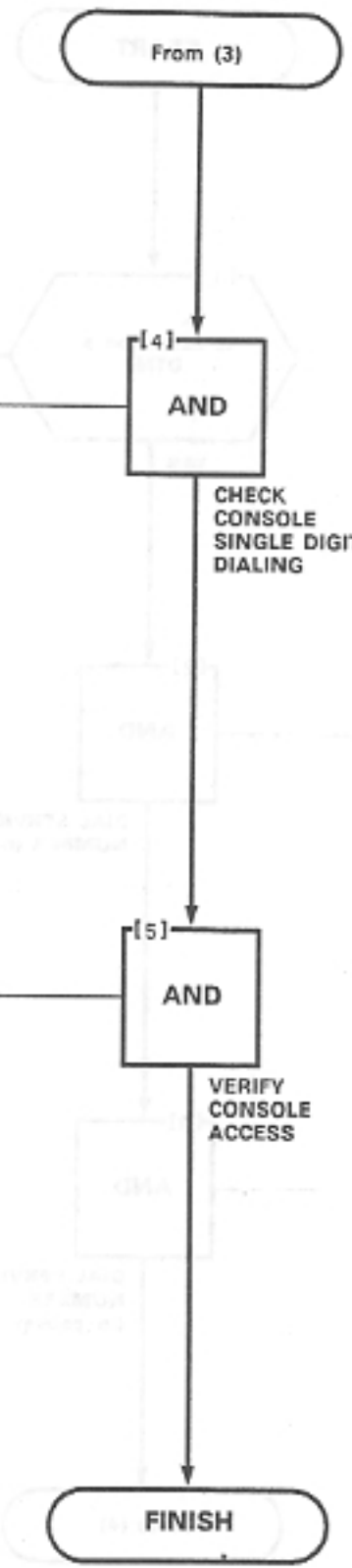


|                        |
|------------------------|
| SINGLE DIGIT DIALING   |
| MAP215- 335            |
| Issue 1, December 1982 |
| Sheet 2 of 2           |

Note: To conduct the following system tests, check extension 1 must be programmed as a "SERVICE" extension with code "n" (a single digit code). Alternatively check extension 1 may be temporarily connected in parallel on the cross-connect field to an extension which has a "SERVICE" code, for the test duration.

- AT CONSOLE**
- (4A) Dial keypad digit 'n'  
 \* DESTINATION display shows digit 'n' (in Fig. 335-1 'n' is '5')  
 \* No ringing tone heard  
 \* ATT lamp lit
- (4B) Wait at least 10 seconds  
 \* No ringing tone heard
- (4C) Press RELEASE

- AT CONSOLE**
- (5A) Dial keypad digits 'n number sign'  
 \* DESTINATION display shows check extension number 1 (NOTE 1) and class (Fig. 335-2)  
 \* ATT and RING lamps lit  
 \* Ringing tone
- AT CHECK EXTENSION 1**
- (5B) Bell rings
- (5C) Lift handset  
 \* Two-way conversation with console
- (5D) Replace handset at check extension 1
- AT CONSOLE**
- (5E) Press RELEASE  
 \* Both parties idle



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Fig. 335-1



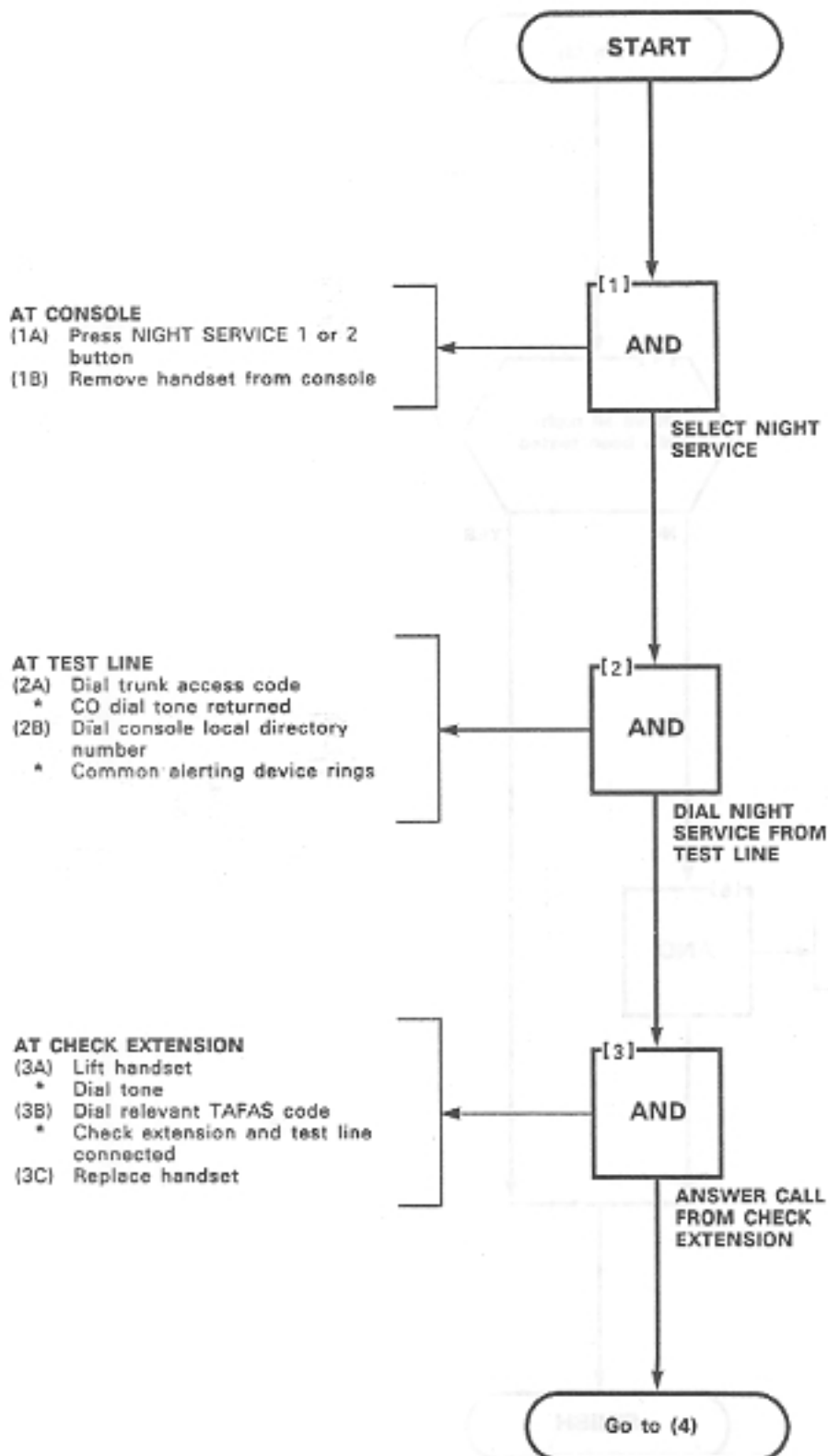
Fig. 335-2

COMMON ALERTING DEVICES

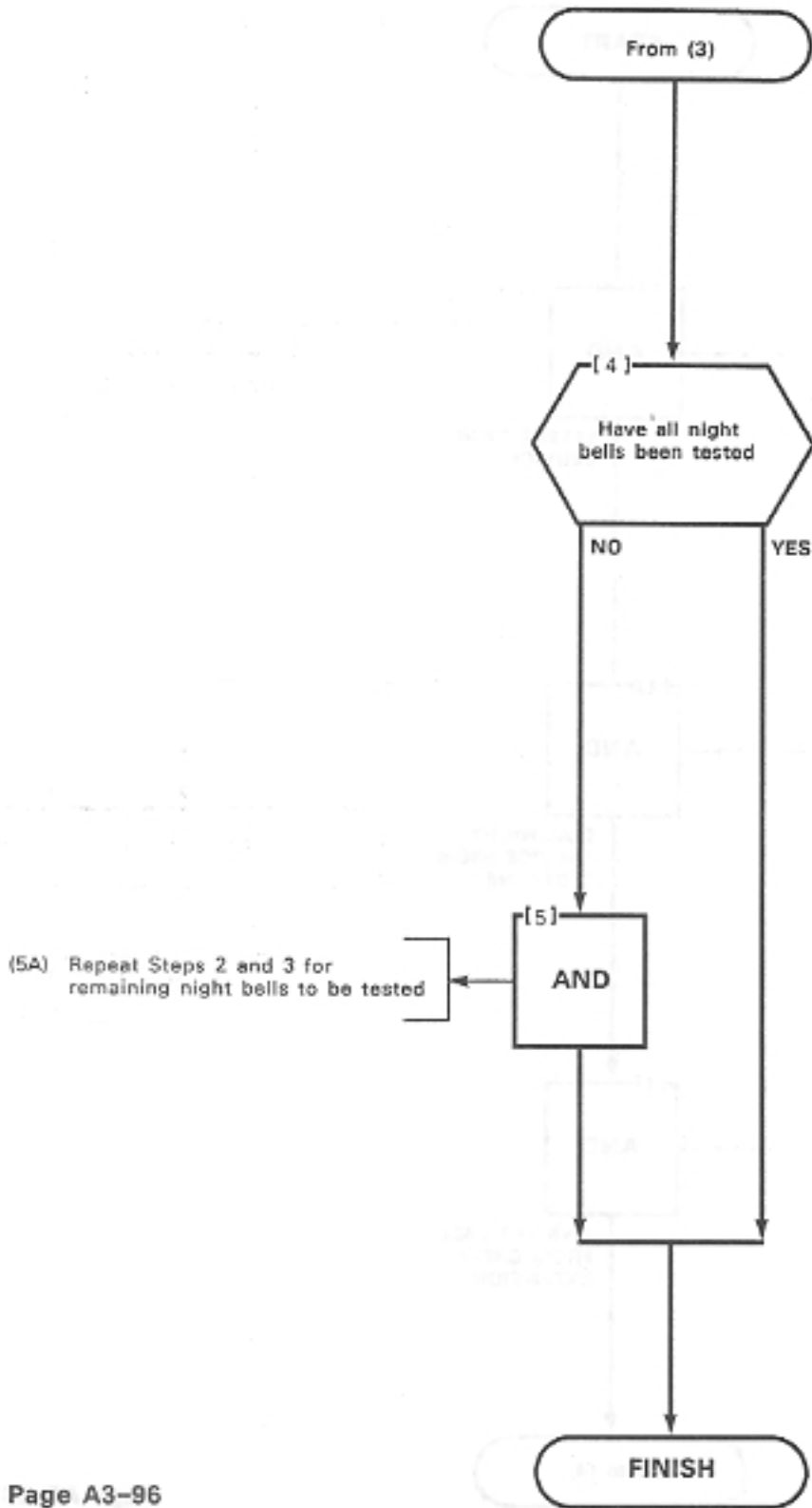
MAP215-336

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Sheet 1 of 2



|                         |
|-------------------------|
| COMMON ALERTING DEVICES |
| MAP215- 336             |
| Issue 1, December 1982  |
| Sheet 2 of 2            |

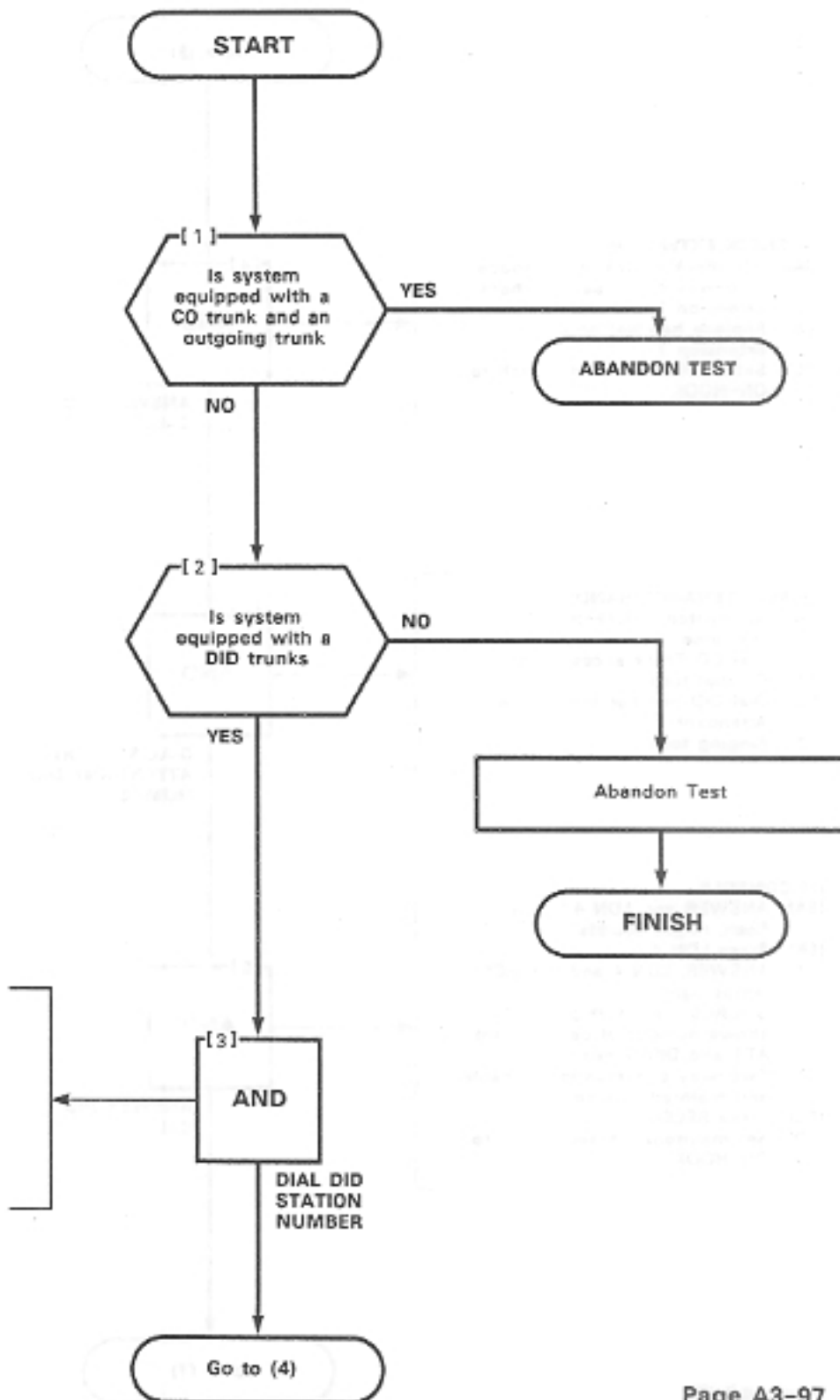


ANSWER DID TRUNK CALL

MAP215-337

Issue 1, December 1982

Sheet 1 of 3



|                        |
|------------------------|
| ANSWER DID TRUNK CALL  |
| MAP215- 337            |
| Issue 1, December 1982 |
| Sheet 2 of 3           |

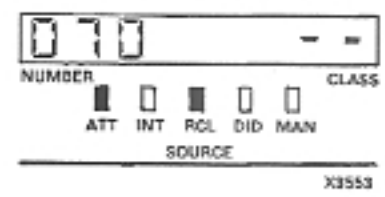
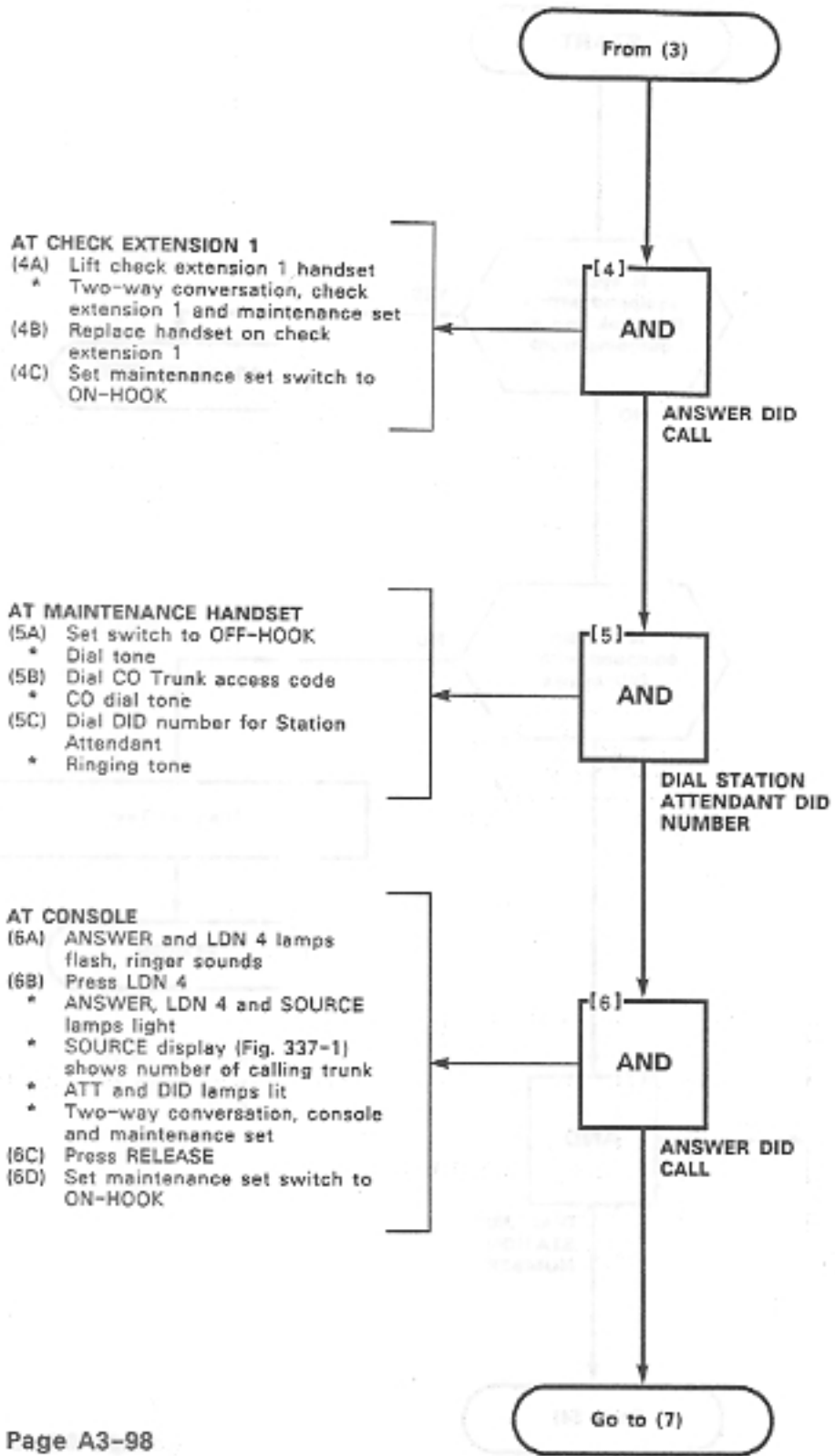


Fig. 337-1

ANSWER DID TRUNK CALL

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Sheet 3 of 3

- AT MAINTENANCE HANDSET**
- (7A) Set switch to OFF-HOOK  
\* Dial tone
- (7B) Dial CO Trunk access code  
\* CO dial tone
- (7C) Dial DID number for check extension 1 but omit dialing the last digit  
\* Ringing tone

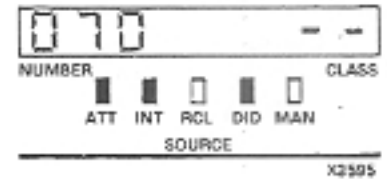
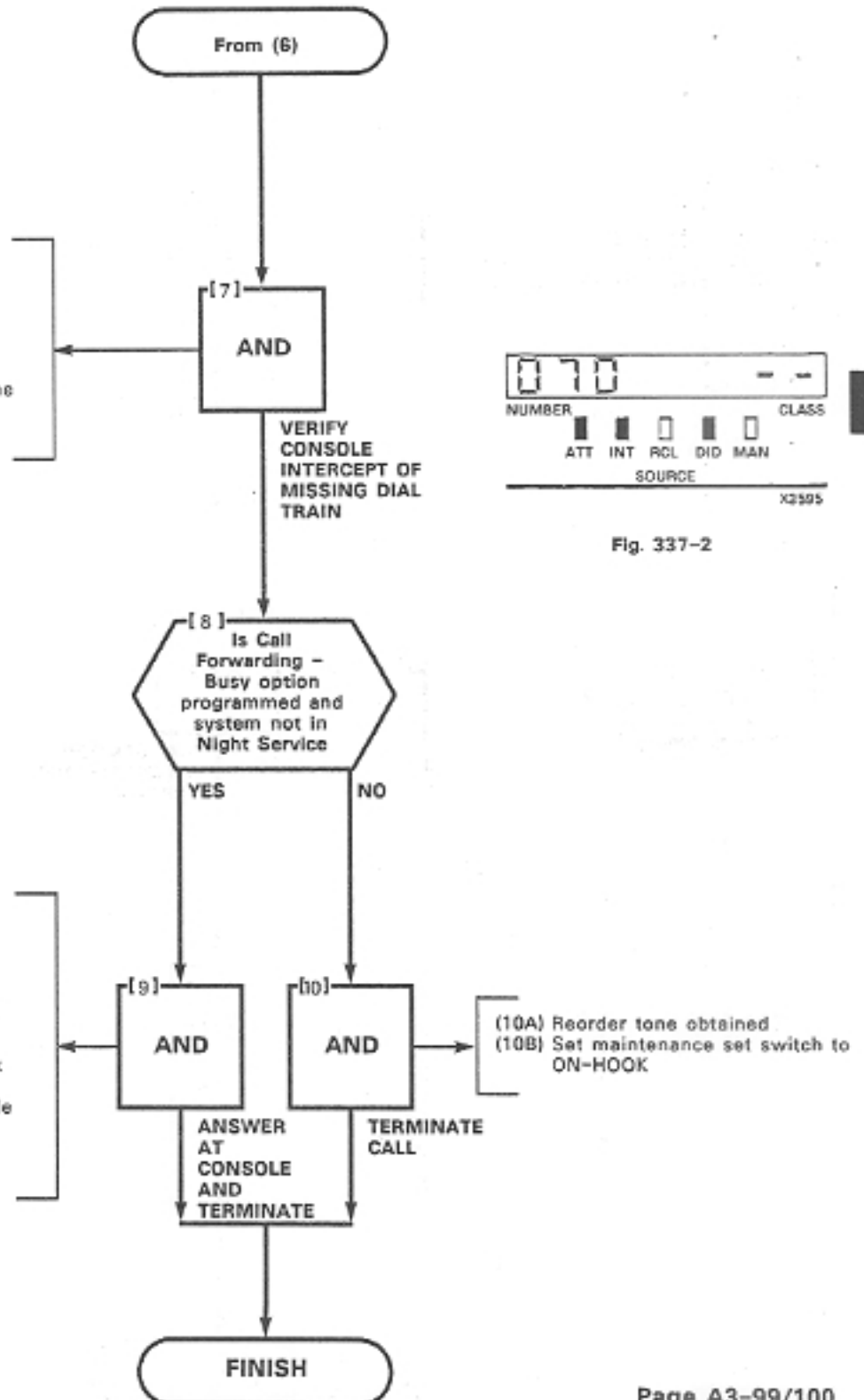


Fig. 337-2

- AT CONSOLE**
- (9A) DIAL 0 and ANSWER lamps flash, ringer sounds
- (9B) Press DIAL 0 key  
\* ANSWER, DIAL 0 and SOURCE lamps lit  
\* SOURCE display (Fig. 337-2) shows number of calling trunk  
\* ATT, INT and DID lamps lit  
\* Two-way conversation, console and maintenance set
- (9C) Press RELEASE  
\* Console idle



|             |             |
|-------------|-------------|
| 100-100-100 | 100-100-100 |
| 100-100-100 | 100-100-100 |
| 100-100-100 | 100-100-100 |
| 100-100-100 | 100-100-100 |



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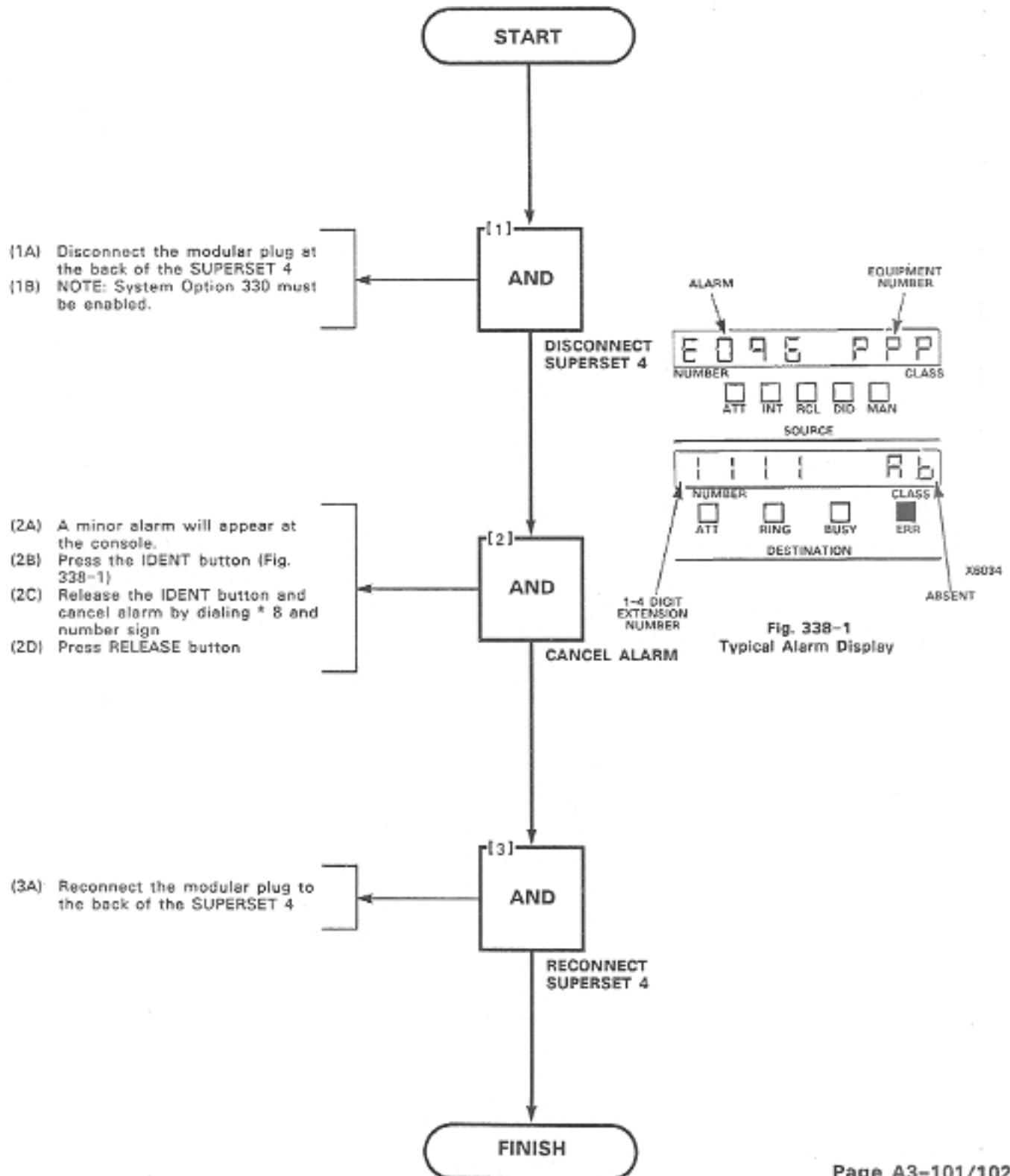


## SUPERSET 4 DISCONNECT

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Sheet 1 of 1





**SX-100\*/SX-200\***  
**SUPERSWITCH\***  
**ELECTRONIC PRIVATE AUTOMATIC BRANCH EXCHANGE**  
**EXTENSION TEST PROCEDURES**  
**GENERIC 217**

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**1. GENERAL**

**1.01** This Section describes the extension test procedures for SX-100/SX-200 PABX's. These procedures should be performed as operational tests, upon installation of extensions after the initial system installation. See Section MITL9105/9110-097-200-NA for system installation instructions.

**Reason for Issue**

**1.02** This practice has been issued to include Generic 217 information requiring an extension test procedure.

**SUPERSET 4**

**1.03** For SUPERSET 4 extension test procedures, see Section MITL9174-518-320-NA.

**2. TEST AND OPERATIONAL PROCEDURES**

**General**

**2.01** Satisfactory completion of the extension test procedures confirms that the apparatus has been installed and programmed correctly.

2.02 If any operating procedure cannot be completed as described, verify that:

- The procedure is applicable to the extension (i.e. the feature being tested is assigned to the extension).
- The apparatus which provides the feature (e.g. Music on Hold) is correctly installed.

**Operating Procedures**

2.03 Chart 2-1 should be performed on each extension. Charts 2-2 through 2-28 should be performed once per system.

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Chart 2-28

**CHART 2-1  
STATION-TO-STATION CALL**

| STEP  | ACTION  | VERIFICATION  |
|---|---|---|
| Called station idle:                          |   |   |
| 1.  | Lift handset.                                   | Dial tone returned.   |
| 2.  | Dial any extension number.                      | Dial tone removed after first digit; ringback tone heard after completion of dialing.           |
| 3.  | Called extension answers.                       | Ringback tone removed; 2-way conversation.  |
| 4.  | Called and calling extensions replace handsets. |   |
| Called station busy (enable Callback Busy):   |   |   |
| 5.  | Lift handset.                                   | Dial tone returned.   |
| 6.  | Dial originating extensions number.             | Busy tone returned.   |
| 7.  | Dial Callback code.                             | Dial tone returned.   |
| 8.  | Replace handset.                                |   |
| 9.  | Busy extension goes on-hook.                    | Original extension rings.   |
| 10.   | Original extension answers.                     | Ringback tone returned; called extension rings.   |
| 11.   | Called extension answers.                       | Two-way conversation.   |
| Called station busy (member of a hunt group): |   |   |
| 12.   | Lift handset.                                   | Dial tone returned.   |
| 13.   | Dial Hunt Group access code.                    | Dial tone removed after first digit; ringback tone heard; next free extension of group is rung. |
| 14.   | Free extension answers.                         | Ringback tone removed; 2-way conversation.  |
| 15.   | Extensions replace handset.                     |   |

**CHART 2-2  
HUNT GROUP**

| STEP                                  | ACTION                       | VERIFICATION   |
|---------------------------------------|------------------------------|--|
| <b>First station idle (Terminal):</b> |                              |  |
| 1.                                    | Lift handset.                | Dial tone returned.  |
| 2.                                    | Dial Hunt Group access code. | Dial tone removed after first digit; ringback tone heard upon completion of dialing. First extension in group hears ringing.   |
| 3.                                    | First extension answers.     | Ringback tone removed; 2-way conversation.   |
| <b>First station busy (Terminal):</b> |                              |  |
| 4.                                    | Repeat Steps 1 and 2.        | Next idle extension in group hears ringing.  |
| 5.                                    | Next idle extension answers. | Ringback tone removed, 2-way conversation.   |
| <b>Hunt groups (Circular):</b>        |                              |  |
| 6.                                    | Repeat Steps 1 and 2.        | Hunting starts at the extension after the last extension rung in the group. System will ring first idle extension in the hunt group; if no idle extension is found, busy tone is returned. |

**CHART 2-3  
BROKER'S CALL**

| STEP  | ACTION  | VERIFICATION   |
|---|---|--|
| <b>Extension in conversation wishes a private alternative conversation after flashing switchhook:</b> |   |  |
| 1.  | Flash switchhook.   | Transfer dial tone returned.                                     |
| 2.  | Extension dials number of third party.  | Third party phone rings.   |
| 3.  | Third party answers.  | Extension and third party may now converse in private.           |
| 4.  | Extension flashes switchhook.   | Extension returns to original (1st) party.                       |
| 5.  | Third party is on hold. Extension may alternate between conversations by flashing switchhook. | The three parties CANNOT be joined together in one conversation. |

**CHART 2-4  
CALL HOLD**

| STEP   | ACTION  | VERIFICATION   |
|--|---|--|
| <b>To set up a Call Hold:</b>                          |   |  |
| 1.   | Extension in conversation wishes to put call on hold, flashes switchhook. | No tones or sound heard by extension on hold unless Music on Hold is provided. Flashing extension receives transfer dial tone. |
| 2.   | Extension dials Call Hold code.   | Dial tone returned.  |
| 3.   | Extension replaces handset.   | Extension is now free to make or receive calls.  |
| <b>To retrieve the call at the original extension:</b> |   |  |
| 4.   | Extension lifts handset.  | Dial tone returned.  |
| 5.   | Extension dials Call Hold Local Retrieve code.                            | Extension connected to call on hold.   |
| <b>To retrieve a call at another extension:</b>        |   |  |
| 6.   | Extension lifts handset.  | Dial tone returned.  |
| 7.   | Extension dials Call Hold Remote Retrieve code.                           | No tones or sound heard.   |
| 8.   | Extension dials Call Holding extension's number.                          | Extension connected to call on hold.   |
| <b>To use Call Hold as a Broker feature:</b>           |   |  |
| 9.   | Perform Steps 1, 2 and 3 under "To set up a Call Hold".                   |  |
| 10.  | Extension lifts handset.  | Dial tone returned.  |
| 11.  | Extension dials third party.  | Ringback tone heard; third extension's phone is ringing.   |
| 12.  | Third party answers.  | Conversation takes place.  |
| 13.  | Extension flashes switchhook.   | Transfer dial tone is returned.  |
| 14.  | Extension dials Call Hold code.   | Third party is placed on hold, second party is retrieved.  |



## CHART 2-4 (CONT'D)

## CALL HOLD

| STEP   | ACTION   | VERIFICATION  |
|--|--|---|
| 15.  | Controlling extension may repeat Steps 13 and 14 as often as required. | Each repetition exchanges the party on hold with the one in the conversation. |
| To join all three parties into one conversation: |  |   |
| 16.  | Extension flashes switchhook on second extension.                      | Transfer dial tone returned.  |
| 17.  | Extension dials Call Hold Retrieve code.                               | Extension connected to third party.   |
| 18.  | Extension flashes switchhook.  | Three parties in conversation.  |

**Note:** A conference CANNOT be put on Call Hold.

CHART 2-5  
CALL FORWARDING - BUSY

| STEP                                | ACTION  | VERIFICATION  |
|-------------------------------------|---|---|
| To set up Call Forwarding - Busy:   |   |   |
| 1.                                  | Forwarding extension lifts handset.   | Dial tone returned.   |
| 2.                                  | Extension dials Call Forwarding - Busy code, and number of extension to which calls are to be forwarded (calls may also be forwarded to the attendant). | Dial tone returned; forwarding successful.                      |
| 3.                                  | Extension replaces handset.   |   |
| To test Call Forwarding - Busy:     |   |   |
| 4.                                  | At extension in Steps 1-3 lift handset.   | Dial tone returned.   |
| 5.                                  | At an alternate extension lift the handset.   | Dial tone returned.   |
| 6.                                  | Dial extension with Call Forwarding - Busy in effect.   | Ringback tone returned; extension that was forwarded to, rings. |
| 7.                                  | Replace handset.  |   |
| To cancel a Call Forwarding - Busy: |   |   |
| 8.                                  | Extension lifts handset.  | Dial tone returned.   |
| 9.                                  | Extension dials Call Forwarding - Busy code.  | No tones or sound heard.  |
| 10.                                 | Extension replaces handset.   | Cancellation complete.  |
| To test cancellation:               |   |   |
| 11.                                 | Repeat Step 4.  | Busy tone returned.   |
| 12.                                 | Replace handset.  |   |

**CHART 2-6  
CALL FORWARDING - DON'T ANSWER**

| STEP   | ACTION   | VERIFICATION   |
|--|--|--|
| <b>To set up Call Forwarding - Don't Answer:</b> |  |  |
| 1.   | Extension lifts handset.   | Dial tone returned.  |
| 2.   | Extension dials Call Forwarding - Don't Answer code and number of extension to which calls are to be forwarded (calls may also be forwarded to the attendant). | Dial tone returned; forwarding successful.   |
| 3.   | Extension replaces handset.  |  |
| <b>To test Call Forwarding - Don't Answer:</b>   |  |  |
| 4.   | At an alternate extension lift the handset.  | Dial tone returned.  |
| 5.   | Dial extension with Call Forwarding - Don't Answer in effect.  | Ringback tone returned.<br>Do not answer the call after a time-out. The call will be transferred to the extension selected in 2. |
| 6.   | Replace handset.   |  |
| <b>To cancel Call Forwarding - Don't Answer:</b> |  |  |
| 7.   | Extension lifts handset.   | Dial tone returned.  |
| 8.   | Extension dials Call Forwarding - Don't Answer code.   | No tones or sound heard.   |
| 9.   | Extension replaces handset.  | Cancellation complete.   |
| <b>To test cancellation:</b>                     |  |  |
| 10.  | Repeat Steps 4 and 5.  | Extension dialled rings normally.  |
| 11.  | Replace handset.   |  |

**CHART 2-7**  
**CALL FORWARDING - FOLLOW ME**

| STEP  | ACTION  | VERIFICATION  |
|---|---|---|
| <b>To set up Call Forwarding - Follow Me:</b> |   |   |
| 1.  | Extension lifts handset.  | Dial tone returned.   |
| 2.  | Extension dials Call Forwarding - Follow Me code and number of extension to which calls are to be forwarded (calls may also be forwarded to the attendant). | Dial tone returned; forwarding successful.                      |
| 3.  | Extension replaces handset.   |   |
| <b>To test Call Forwarding - Follow Me:</b>   |   |   |
| 4.  | At an alternate extension lift the handset.   | Dial tone returned.   |
| 5.  | Dial the extension with Call Forwarding - Follow Me in effect.  | Ringback tone returned; extension that was forwarded to, rings. |
| 6.  | Replace handset.  |   |
| <b>To cancel Call Forwarding - Follow Me:</b> |   |   |
| 7.  | Originating extension lifts handset.  | Dial tone returned.   |
| 8.  | Originating extension dials Call Forwarding - Follow Me code.   | No tones or sound heard.  |
| 9.  | Extension replaces handset.   | Cancellation complete.  |

CHART 2-8  
OVERRIDE

| STEP | ACTION                                 | VERIFICATION   |
|------|--|--|
| 1.   | Establish a 2-party call.              | Talking connection.  |
| 2.   | Extension lifts handset.               | Busy tone returned.  |
| 3.   | Dial busy extension.                   | Busy tone returned.  |
| 4.   | Calling extension dials Override code. | Parties in conversation hear a 1 second warning tone unless the COS of one or more of them prevents being overridden. After beep, calling extension is in conversation. All extensions will hear a short warning tone every 6 seconds. |

**CHART 2-9  
DIAL CALL PICKUP**

| STEP  | ACTION                                 | VERIFICATION                             |
|---|--|--|
| Any extension in the Pickup group is ringing: |  |  |
| 1.  | Idle extension lifts handset.          | Dial tone returned.                      |
| 2.  | Extension dials Dial Call Pickup code. | Extension is connected to calling party. |

CHART 2-10  
CAMP-ON

| STEP | ACTION   | VERIFICATION  |
|------|--|---|
| 1.   | Establish a 2-party call.                                    |   |
| 2.   | Extension lifts handset.                                     | Dial tone returned.   |
| 3.   | Dial busy extension.   | Busy tone returned.   |
| 4.   | Calling extension remains off-hook for more than 10 seconds. | a) Calling extension (after 10 seconds) receives a change in busy tone.<br>b) The dialed extension receives a short warning tone. |
| 5.   | Busy extensions hang up.                                     | Dialed extension is rung.   |

**CHART 2-11**  
**AUTOMATIC CALLBACK - BUSY**

| STEP | ACTION  | VERIFICATION  |
|------|---|---|
| 1.   | Extension lifts handset.                                | Dial tone returned.   |
| 2.   | Dial busy extension.                                    | Busy tone returned.   |
| 3.   | Calling extension dials Automatic Callback - Busy code. | Dial tone returned.   |
| 4.   | Calling extension replaces handset.                     |   |
| 5.   | Called extension replaces handset.                      | a) Calling extension rings.<br>b) Called extension rings when calling extension answers.<br>c) Calling extension hears ringback tone.<br>d) Two-way conversation. |



**CHART 2-12  
DO NOT DISTURB**

| STEP                                     | ACTION  | VERIFICATION  |
|--|---|---|
| <b>Extension sets up Do Not Disturb:</b> |   |   |
| 1.                                       | Extension lifts handset.                                  | Dial tone returned.   |
| 2.                                       | Extension dials Do Not Disturb code followed by 1.        | Dial tone returned.   |
| 3.                                       | Extension replaces handset.                               |   |
| 4.                                       | Extension is not called while in the Do Not Disturb mode. | A calling extension receives reorder tone or attendant intercept. |
| <b>Extension cancels Do Not Disturb:</b> |   |   |
| 5.                                       | Extension lifts handset.                                  | Dial tone returned.   |
| 6.                                       | Extension dials Do Not Disturb code followed by 2.        | No tone or sound; Do Not Disturb is cancelled.                    |
| 7.                                       | Extension replaces handset.                               | Calling extensions can ring the original extension.               |

**CHART 2-13  
CALL PARK/PICKUP**

| STEP   | ACTION   | VERIFICATION  |
|--|--|---|
| To park an established call:                           |  |   |
| 1.   | Flash switchhook.  | Transfer dial tone returned.  |
| 2.   | Extension dials Call Park code.  | Dial tone returned to parking extension. No tones or sound heard unless music provided to parked extension. |
| 3.   | Extension replaces handset.  |   |
| To pick up a parked call from the parking extension:   |  |   |
| 4.   | Extension lifts handset.   | Extension connected to parked call.   |
| To pick up a parked call using an alternate extension: |  |   |
| 5.   | Lift handset of alternate extension.   | Dial tone returned.   |
| 6.   | Alternate extension dials Call Park/Directed Call Pickup code and number of parking extension. | Alternate extension connected to parked call.   |

CHART 2-14  
PAGING

| STEP | ACTION                            | VERIFICATION   |
|------|-----------------------------------|--|
| 1.   | Extension lifts handset.          | Dial tone returned.  |
| 2.   | Extension dials Paging zone code. | Extension receives a short warning tone. Extension may now page. |
| 3.   | Extension replaces handset.       |  |

Repeat for each of the three codes if assigned.

CHART 2-15  
TRUNK ANSWER FROM ANY STATION

| STEP                    | ACTION                            | VERIFICATION                          |
|-------------------------|-----------------------------------|---------------------------------------|
| To answer a TAFAS call: |                                   |                                       |
| 1.                      | Extension user hears Night Bell.  |                                       |
| 2.                      | Extension lifts handset.          | Dial tone returned.                   |
| 3.                      | Extension dials TAFAS night code. | Extension is connected to trunk call. |

CHART 2-16  
CONSULTATION HOLD/TRANSFER/ADD-ON

| STEP                     | ACTION  | VERIFICATION   |
|--------------------------|---|--|
| <b>CONSULTATION HOLD</b> |   |  |
| Established call:        |   |  |
| 1.                       | Extension flashes switchhook.                   | a) Flashing extension receives transfer dial tone.<br>b) Second extension in conversation is put on hold, and hears music if provided. |
| 2.                       | Extension which flashed, dials third extension. | Third extension rings.   |
| 3.                       | Third extension answers.                        | Effecting extension and third extension are connected. Second extension remains on hold.   |
| <b>TRANSFER</b>          |   |  |
| To idle extension:       |   |  |
| 4.                       | Perform Steps 1 and 2 in Consultation Hold.     | Third extension rings.   |
| 5.                       | Extension effecting transfer replaces handset.  | Extension on hold receives ringing tone, and is connected to third extension when it is answered.                                      |
| To busy extension:       |   |  |
| 6.                       | Perform Steps 1 and 2 in Consultation Hold.     | Third extension busy, effecting extension receives busy tone.  |
| 7.                       | Extension effecting transfer replaces handset.  | Extension on hold receives busy tone and is camped-on to busy line after 10 seconds.   |
| During consultation:     |   |  |
| 8.                       | Perform Steps 1 to 3 in Consultation Hold.      | Effecting extension and third extension converse.  |
| 9.                       | Effecting extension hangs up.                   | Extension on hold and third extension are connected.   |

**CHART 2-16 (CONT'D)**  
**CONSULTATION HOLD/TRANSFER/ADD-ON**

| STEP                      | ACTION                                     | VERIFICATION   |
|---------------------------|--|--|
| ADD-ON                    |  |  |
| 10.                       | Perform Steps 1 to 3 in Consultation Hold. | Effecting extension and third extension connected. Second extension remains on hold. |
| 11.                       | Effecting extension flashes switchhook.    | All three extensions connected.  |
| After 3-way consultation: |  |  |
| 12.                       | Perform Steps 1 to 3 in Consultation Hold. | Effecting extension and third extension converse.                                    |
| 13.                       | Effecting extension flashes switchhook.    | All extensions connected.  |
| 14.                       | Effecting extension replaces handset.      | Remaining extensions remain connected.   |

**CHART 2-17**  
**AUTOMATIC WAKE-UP (ALARM CALL)**

| STEP   | ACTION  | VERIFICATION  |
|--|---|---|
| <b>Extension sets Automatic Wake-up (Alarm Call):</b>    |   |   |
| 1.   | Extension lifts handset.  | Dial tone returned.   |
| 2.   | Extension dials Automatic Wake-Up access code and Wake-Up time as a 4-digit number (24-hour clock). | Dial tone returned.   |
| 3.   | Extension replaces handset.   |   |
| 4.   | At selected time:   | Extension receives 6 rings every 5 minutes for a total of three attempts.<br>a) Extension receives no tone or receives Music on Hold if provided. |
| <b>Extension cancels Automatic Wake-up (Alarm Call):</b> |   |   |
| 5.   | Extension lifts handset.  | Dial tone returned.   |
| 6.   | Extension dials Automatic Wake-Up access code and 9999.   | Dial tone returned.   |
| 7.   | Extension replaces handset.   |   |

CHART 2-18  
MEET-ME CONFERENCE

| STEP                            | ACTION   | VERIFICATION   |
|---------------------------------|--|--|
| To set up a Meet-Me Conference: |  |  |
| 1.                              | At at prearranged time, dial Meet-Me Conference access code from up to seven extensions. | First extension on hold. First extension hears warning tone as second extension is connected. Extensions in conference hear warning tone as succeeding extensions are connected. |



CHART 2-19  
AUTOMATIC CALLBACK - DON'T ANSWER

| STEP   | ACTION   | VERIFICATION   |
|--|--|--|
| To set up Automatic Callback - Don't Answer: |  |  |
| 1.   | Extension lifts handset.   | Dial tone returned.  |
| 2.   | Extension dials destination.   | Destination extension rings.                                   |
| 3.   | Extension receives no answer, flashes switchhook.                                      | Dial tone returned.  |
| 4.   | Extension dials Automatic Callback - Don't Answer code and number of extension called. | Dial tone returned.  |
| 5.   | Extension replaces handset.  |  |
| 6.   | Called extension uses extension.   | Extension goes busy for duration of call.                      |
| 7.   | Called extension replaces handset.   | Calling extension rings.                                       |
| 8.   | Calling extension lifts handset.   | Called extension rings; calling extension hears ringback tone. |
| 9.   | Called extension answers.  | Conversation takes place.                                      |

CHART 2-20  
DIRECTED CALL PICKUP

| STEP                      | ACTION   | VERIFICATION                    |
|---------------------------|--|---------------------------------|
| Any extension is ringing: |  |                                 |
| 1.                        | Extension lifts handset.   | Dial tone returned.             |
| 2.                        | Extension dials Directed Call Pickup code, and the number of the extension being rung. | Extension is connected to call. |

**CHART 2-21  
STATION CONFERENCE**

| STEP | ACTION   | VERIFICATION  |
|------|--|---|
| 1.   | Extension lifts handset.   | Dial tone returned.   |
| 2.   | Extension dials first conferee extension for Station Conference.   | Called party extension rings.   |
| 3.   | Called extension answers. Calling extension informs of conference, flashes switchhook and dials second conferee extension. | a) Calling extension and called extension connected.<br>b) Called extension goes on hold. Calling extension receives transfer dial tone.<br>c) Second conferee extension rings. |
| 4.   | Second conferee answers.   |   |
| 5.   | Calling extension flashes switchhook.  | All extensions connected.   |
| 6.   | Any extension may add up to a total of seven extensions to the Station Conference by repeating Steps 3(b) & 3(c).          |   |

CHART 2-22  
SPEED CALL

| STEP                             | ACTION   | VERIFICATION   |
|----------------------------------|--|--|
| Extension programs a Speed Call: |  |  |
| 1.                               | Extension lifts handset.   | Dial tone returned.  |
| 2.                               | Extension dials Speed Call access code.                            |  |
| 3.                               | Extension dials 0.   |  |
| 4.                               | Extension dials Speed Call Entry access code.                      |  |
| 5.                               | Extension dials Trunk Group access code or ARS code.               | See Note.  |
| 6.                               | Extension dials digits to be used as Speed Call Number.            | See Note.  |
| 7.                               | Extension replaces handset.  |  |
| To verify programmed number:     |  |  |
| 8.                               | Extension dials Speed Call access code.                            |  |
| 9.                               | Extension dials Entry Access Number and manual digits if required. | If the call is successful, ringback tone will be returned from the CO and the correct number will be rung. |

**Note:** \*1 for 5 second pause, \*2 for Wait for Dial Tone, or \*3nn for user-dialed digits may be entered at any time.

**CHART 2-23  
SAVED NUMBER REDIAL**

| STEP                                     | ACTION   | VERIFICATION               |
|--|--|----------------------------|
| Extension programs a last number redial: |  |                            |
| 1.                                       | After completion of dialing an outside number, the extension has 10 seconds to dial an *. This will store the dialed number in the last number redial. |                            |
| To use Saved Number Redial:              |  |                            |
| 2.                                       | Extension goes off-hook.   | Dial tone returned.        |
| 3.                                       | Extension dials Speed Call Feature access code.  |                            |
| 4.                                       | Extension dials Entry Access Number for saved number redial.   | Saved number dialed rings. |

**CHART 2-24**  
**EXTERNAL CALL FORWARDING**

| STEP  | ACTION   | VERIFICATION   |
|---|--|--|
| Extension wishes to transfer all calls to an external number: |  |  |
| 1.  | Repeat Steps 1-7 of Chart 2-22.<br>(Note: It is possible to use manual digit insertion.) |  |
| 2.  | Extension lifts handset.   | Dial tone returned.  |
| 3.  | Extension dials the External Call Forwarding access code.                                | No tone returned.  |
| 4.  | Extension dials Speed Call access code and Speed Call Entry access code from Step 1.     | Dial tone returned.  |
| To verify External Call Forwarding:                           |  |  |
| 5.  | From an alternate extension dial the External Call Forwarded extension.                  | If the External Call Forwarding is successful, the external number will be rung. |

**CHART 2-25**  
**CALL FORWARDING BUSY/DON'T ANSWER**

| STEP  | ACTION  | VERIFICATION                                     |
|---|---|--|
| Extension wishes to have Call Forwarding Busy/Don't Answer active at the same time: |   |  |
| 1.  | Extension lifts handset.  | Dial tone returned.                              |
| 2.  | Extension dials Call Forwarding Busy/Don't Answer code.               | No tones returned.                               |
| 3.  | Extension dials extension number, calls are to be forwarded to.       | Dial tone returned; all calls will be forwarded. |
| To test Call Forwarding Busy/Don't Answer:  |   |  |
| 4.  | Repeat Steps 4, 5 and 6 of Chart 2-5, and Steps 4 and 5 of Chart 2-6. |  |

CHART 2-26  
HANDS-FREE

| STEP  | ACTION   | VERIFICATION   |
|---|--|--|
| Extension wishes to place itself in a Hands-Free state: |  |  |
| 1.  | Extension lifts handset.   | Dial tone returned.                                  |
| 2.  | Extension dials Hands-Free access code or remains off-hook for 15 seconds.     | No tone returned; extension now in Hands-Free state. |
| 3.  | To remove extension from Hands-Free state, return handset to on-hook position. | Extension will be rung normally.                     |



**CHART 2-27  
TRANSFER WITH PRIVACY**

| STEP  | ACTION  | VERIFICATION   |
|---|---|--|
| An extension wishes to consult with two parties privately, with the option of connecting them both together by going on-hook: |   |  |
| 1.  | Extension is conversing with first party.   | Normal conversation.   |
| 2.  | Extension flashes the switchhook.   | Dial tone returned.  |
| 3.  | Extension dials new extension number.   | Ringback tone returned, and extension converses privately when call is answered. |
| 4.  | Extension flashes switchhook and returns to original party. Extension may alternate between parties privately by flashing the switchhook. | Private conversation between original party and extension.                       |
| 5.  | Extension returns the handset to the on-hook position.  | Both parties may now converse.   |

**CHART 2-28  
REPEATED CAMP-ON**

| STEP   | ACTION   | VERIFICATION  |
|--|--|---|
| By enabling the appropriate COS and System Option, an extension or trunk will remain camped-on to an extension and have the camp-on warning tones repeated (programmable - every 5, 10 or 15 seconds). |  |   |
| 1.   | Establish a 2-party call.                                    |   |
| 2.   | Alternate extension lifts handset.                           | Dial tone returned.   |
| 3.   | Dial extension in 2-party call.                              | Busy tone returned.   |
| 4.   | Calling extension remains off-hook for more than 10 seconds. | <ul style="list-style-type: none"> <li>a) Calling extension (after 10 seconds) receives a change in busy tone.</li> <li>b) The dialed extension receives a short warning tone.</li> </ul> |
| 5.   | Calling extension remains off-hook.                          | The dialed extension continues to receive warning tones (every 5, 10 or 15 seconds as programmed).  |
| 6.   | Dialed extension hangs up.                                   | The dialed extension is rung; dialing extension receives ringback tone. Answer call; ensure 2-party call.   |