

focus[®]

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LODGING II SYSTEM ADMINISTRATOR MANUAL

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1. INTRODUCTION

The **Lodging II** System Administration Guide is designed to assist the system administrator in setting up and operating the **Lodging II** system and configuring it for the particular hotel/motel setting in which it is to be used. The **Lodging II** system is extremely flexible and, using the procedures described in this guide, can be configured to fit a great variety of hotel/motel environments.

1.01 The system administrator will also need to be familiar with the Installation Guide, which is used to set up the computer and load the **Lodging II** program, and the **Lodging II** User Manual, which describes the day-to-day front desk operations of the system. If he wishes to use the specialized call accounting reports available in the **Lodging II** system, the system administrator will also need to refer to the **Lodging II** User Guide

2. OVERVIEW OF SYSTEM CONFIGURATION

2.01 Startup and Main Menu. Once the installation procedures are completed, the **Lodging II** system should be running. If it is not (and assuming the installation procedures were successfully followed), it may be started automatically by turning the computer power switch off and then on again. The software load process takes from two to three minutes, depending on the computer being used. When all the software is loaded and running, the system will display on the computer console the log-in screen shown in Figure 2-1.

2.02 Type a valid user name and press **ENTER**. The cursor will move to the password line. Type the password that is associated with that user name and press **ENTER**. Each letter of the password is displayed as a "." to maintain the security of the password.

2.03 When delivered, the **Lodging II** system is set up with a single valid user name, **ADMIN-SYSTEM**. There is no password associated with this user name; just pressing **ENTER** a second time is sufficient. One of the first tasks for the system administrator, when configuring the **Lodging II** system, is to assign a password to this user name and set up new names and passwords for himself and those who will be using the system.

2.04 If a valid user name and password are entered, the Main Menu (Figure 2-2) of the **Lodging II** system will be displayed; if not, the system prints "Incorrect login" and puts the cursor back to the user name field. Each valid user name and password has associated with it a security level that controls which menu options may be selected.

2.05 Each of the items on the main menu is described briefly below. The remainder of this Administration Guide is essentially a detailed description of items 2 and 3. Items 1, 4 and 5 are described in detail in the **Lodging II** User Manual. Item 6 is defined here.

```
-----  
                LODGING II A1.01  
      Copyright Fujitsu America Inc. 1987  
      All Rights Reserved  
      Software and Database  
  
User Name _____  
Password  _____  
  
-----  
--F1--+-F2--+-F3--+-F4--+-F5--+-F6--+-F7--+-F8--+-F9--+-F10--  
  |   |   |   |   |   |   |   |   |   |   |  
-----
```

Figure 2-1. Log-In Screen

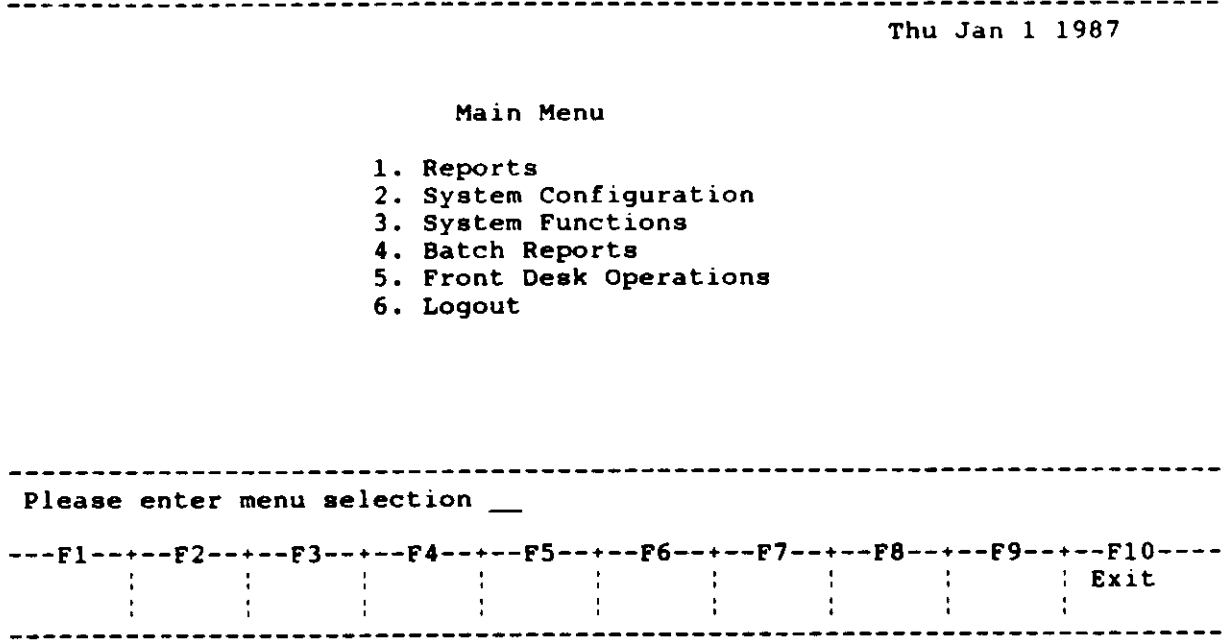


Figure 2-2. Main Menu

1. **Reports.** This item includes cost allocation reports to assign telephone costs to administrative phones, cost control reports to investigate especially long or expensive calls, and trunk traffic reports to analyze usage of outside trunks. For details, see the **Lodging II User Guide**.

NOTE: Reports specific to the hotel/motel environment are not included in this menu item but can be found under item 5, Front Desk Operations.

2. **System Configuration.** This menu item enables the system administrator to configure the system for the particular hotel/motel environment in which it is to be used. Guest room and administrative telephones, outside trunk groups, call costing and pricing strategies, etc. are defined here. The entire system may be set up to operate in the manner desired by the system administrator. For details, see Sections 2 through 7 of this document.
3. **System Functions.** Some of the more critical of the **Lodging II** system features, such as shutting down the entire system, are grouped under this menu item. It can only be accessed by a person logging-in with a user name assigned the highest level of security, typically the system administrator. For details, see Section 8 of this document.
4. **Batch Reports.** This function allows a batch of up to 20 reports to be specified and executed with a single command (for example, a group of week-end or month-end reports). Up to 20 report batches can be defined in a system. For details, see the **Lodging II User Guide**.

5. **Front Desk Operations.** This menu item includes the operations typically performed by hotel personnel on a day-to-day basis, such as Guest Checkout, Telephone Charges Posting Report, etc. For details, see the **Lodging II User Manual.**
6. **Log-out.** This menu item returns the user to the log-in screen where he may enter a new user name and password with a different security level.

2.06 System Configuration Tables. The **Lodging II** system is configured by entering data into the system configuration tables. These tables are accessed by selecting item 2 on the Main Menu, which leads to the System Configuration Menu shown in Figure 2-3. To access this menu, the user name and password entered at log-in must have a security level of 2 (for items 2, 3, 4, and 6 only) or 3 (all items). To change security level, select item 6 on the Main Menu to return to the log-in screen and enter a new name and password with the necessary security level.

2.07 Selections 1, 2, and 3 on the System Configuration Menu call up sub-menus and selections 4, 5, and 6 lead directly to data entry screens. In all, 16 tables may be configured by the system administrator in setting up the **Lodging II** system to perform in the desired manner.

2.08 Section 3 of this guide describes a simplified configuration procedure for the new system administrator who is not yet familiar with the full capabilities of the **Lodging II** system.

1. **Costing and Pricing Configuration.** Costing tables define how the **Lodging II** system will calculate and report the cost and price of a call. There are four costing tables and a table for naming frequently used telephone numbers in this sub-menu:
 - A. **Rate Record Table** - This is the primary table in which the cost and price of a call are defined. Cost and price may be based on a flat rate, a

```

                                     Thu Jan 1 1987

                                System Configuration Menu

                                1. Costing and Pricing Configuration
                                2. Extension Configuration
                                3. Trunk Configuration
                                4. System Parameters
                                5. Password Configuration
                                6. Lodging Configuration

-----
Please enter menu selection ____
-----F1-----F2-----F3-----F4-----F5-----F6-----F7-----F8-----F9-----F10-----
                                     Exit
  
```

Figure 2-3. System Configuration Menu

rate dependent on the duration of the call, or a rate dependent on the duration and the distance to the called point (using the CCMI rate tables described in Section 6 of this guide) and adjustments may be added for fixed costs, taxes, etc. There are 30 Rate IDs in the rate record table, each of which defines a method of costing and/or pricing calls.

- B. Number Analysis Table - Normally, calls are costed according to the trunk group over which they occurred; however, the number analysis table overrides the Rate ID that is defined for this trunk group. It defines specific dialed telephone numbers that are to be costed in a unique way and identifies which Rate IDs will be used to cost or price them.
 - C. OCC Choice Table - As described in Section 5, the OCC choice table enables the **Lodging II** system to cost calls correctly. Even if the PBX is connected to a central office that does not offer equal access to OCCs (other common carriers), the PBX may still access OCCs by dialing their local number directly.
 - D. Local Call Table - This table uses CCMI rate table data to identify local calls. The system then costs and prices the calls according to the specified Rate IDs.
 - E. Named Telephone Numbers - The named telephone number table enables the system administrator to attach a name to commonly dialed numbers so that they can more easily be identified in cost control reports. When a call with a dialed number that appears in the named telephone number table is included in a cost control report, the name will be printed instead of the telephone number in the report's called number field. This applies only to cost control reports, not to the reports generated from the Front Desk Operations option in the Main Menu.
2. **Extension Configuration.** Extension tables define various properties of the PBX telephone extensions. Extensions may be designated as guest room or administrative; extension and organization groups may be defined, as well as account numbers. Six data tables are included:
- A. Extension Groups - Extension groups are used to associate administrative extensions into groups for reporting purposes. Any number of extensions can be included in a group and the system does not limit the number of groups. In a hotel or motel, it is usually not necessary to use extension groups for the guest room extensions.
 - B. Extensions - The extension table defines the individual telephone extensions and their parameters to the **Lodging II** system.
 - C. Organization Groups - Organization groups are comprised of extension groups and other organization groups. Such groups allow a company's organizational structure to be duplicated within the system. This enables telephone costs to be distributed precisely within a company. In a hotel or motel, it is usually not necessary to use organization groups for the guest room extensions.

- D. **Account Numbers** - If account numbers (codes) are used on calls made from administrative telephones, this table allows names to be attached to the account numbers, making reports based on account number more readable. In a hotel or motel, it is usually not necessary to use account numbers.
 - E. **Retroactive Account Code Entry** - This table provides a method of modifying or adding an account code to calls that have been completed and previously stored by the system. The feature is used in conjunction with the "detail by extension" report to update data on the system so that reports that include account numbers are accurate.
 - F. **focusMail Extensions** - When the **Lodging II** system is installed on a PBX that is also equipped with a **focusMail** voice messaging system, the **focusMail** access ports should be defined in this table. This allows the **Lodging II** system to associate, in the call accounting reports, the correct user extension with any outside calls made by the **focusMail** system on behalf of an extension. The **focusMail** extensions should also be entered into the extension table so incoming call usage of **focusMail** can be tracked.
3. **Trunk Configuration.** When the PBX is configured, trunk circuits are given numbers and are assigned to trunk groups. These trunk and trunk group assignments must be entered into the **Lodging II** system. There are two trunk-related tables:
- A. **Trunk Group Table** - Trunk groups in the **Lodging II** system normally correspond to the trunk groups in the PBX. The trunk group table defines and names each trunk group and establishes the Rate IDs that will be used to cost and price incoming and outgoing calls on that trunk group. It can also be used to set up a unique assumed answer time for the trunk group, different from the system-wide assumed answer time defined during system parameter configuration.
 - B. **Trunk Circuit Table** - This table is used to define each trunk and the trunk group to which each trunk circuit belongs.
4. **System Parameters.** The system parameter table defines a variety of parameters which affect the overall operation of the system. In a hotel/motel environment, the most important system parameters are the number of digits in the PBX telephone numbers (2, 3 or 4), whether or not the system is equipped with an external call record buffer between the **Lodging II** system and the PBX and whether call pricing is needed.
5. **Password Configuration.** The system password table defines the name of each authorized system user, the password he is to use, and his security level (i.e., his level of access to the various functions provided by the system).
6. **Lodging Configuration.** The lodging table defines certain parameters related to hotel/motel front desk operations, such as the destination and format of the output of priced calls, the security code for entry of room status by maids, etc.

2.09 Sequence for Configuring Data Entry Tables. The configuration portion of the **Lodging II** system has extensive error checking built in to ensure that the information being entered into each table not only is in the correct format but also makes sense in relation to the other tables. When an entry is made into a configuration table, it is verified against the rest of the configuration tables for consistency. This operation

has the advantage of notifying the system administrator immediately of a conflict or inconsistency in the entered data, but it requires that data be entered into the tables in a specific order to prevent rejection of the input. The suggested order for configuring the tables is as follows:

1. **System Parameters.**
2. **Password Configuration.** The password entry can be done at any point in the configuration; however, since passwords provide security against unauthorized use of the system, the system administrator should configure the user names and passwords as soon as possible.
3. **Extension Configuration.** Extension groups (if used) must be defined before individual extensions. Organization groups (if used) are defined using the add function and sub-groups for each organization group are assigned. (The retroactive account code entry feature can be ignored for now.) Suggested order:

- Define extension groups (if used)
- Define extensions
- Define organization groups (if used)
- Define account numbers (if used)
- Enter **focusMail** extensions (if used)

4. **Costing and Pricing Configuration.** Rate records (Rate IDs) must be defined before entering any other costing or pricing table or adding trunk groups. Once the Rate IDs have been input, the remaining costing and pricing tables may be completed. Suggested order:

- Rate Record Table
- Number Analysis Table (if default values are not acceptable)
- OCC Choice Table (if PBX is configured for OCC choices)
- Local Call Table (if required)
- Named Telephone Number Table (if desired)

5. **Trunk Configuration.** Trunk groups must be identified before trunk circuit numbers can be added; that is:

- Trunk Groups
- Trunk Circuit Assignments

6. **Lodging Configuration.** This information can be entered at any point in the configuration process.

2.10 Ending a Configuration Session. When changes have been made to the system parameter table or the lodging configuration table, the **Lodging II** system must be shut down and restarted to allow the new configuration information to take effect. For consistency, it is recommended that the system be shut down and restarted after every configuration session. (See Section 8 for procedure.)

2.11 The **Lodging II** system must also be shut down and restarted after the date or time in the PBX has been reset manually to allow it to synchronize with the PBX.

3. SAMPLE SYSTEM CONFIGURATION

3.01 The configuration procedures described in this section assume a fairly simple installation, consisting of a **focus 960** PBX, the **Lodging II** system, and a property management system (PMS). The **Lodging II** system is assumed to be equipped with voice cards for entry of room status by maids and a backup printer for recording call records and room status and unsuccessful wakeup attempts. The PBX is assumed to have only one trunk group to the central office and to use only one long distance carrier, AT&T.

3.02 Actual **Lodging II** installations will differ in detail from this idealized and simple case, but the general configuration procedures will still apply with appropriate modifications.

3.03 Ordering and Installation. When the **Lodging II** system was ordered, CCMI rate tables should have been ordered as well, customized to the location where the PBX is installed. It is assumed that the rate tables were ordered with costing for only one carrier, AT&T, but with whatever other options were desired (details for some or all NPAs in North America, international costing, etc.).

3.04 The **Lodging II** system should be installed in accordance with the procedures in the Installation Guide. Instructions include setting up the hardware, loading the software and rate tables, and starting the **Lodging II** program.

3.05 Log-in. Log-in to the **Lodging II** system with a user name and password that has a security level of 3. (If the system has not previously been configured at all, the only valid user name is ADMIN-SYSTEM with no password; type ADMIN-SYSTEM and press **ENTER** twice.) At the Main Menu, select System Configuration and press **ENTER** as explained in Paragraphs 2.01 and 2.06.

3.06 System Parameter Configuration. Select System Parameters from the System Configuration Menu and press **ENTER**. Using the TAB key to move from field to field, skip over the minimum values and assumed answer time fields; this will allow all calls to be sent to the PMS system and be available for all reports. Enter the following information: whether or not there is a call record buffer between the PBX and the **Lodging II** system; whether or not calls should be priced (answer Yes); and the number of digits to be in the extension numbers (typically 3 or 4; the entry here must agree with the number of digits to be programmed under "Extension Configuration"). Press F1 to enter the information into the system parameter table and then F10 to return to the System Configuration Menu. For details, see Paragraph 7.21.

3.07 Password Configuration. Select Password Configuration on the System Configuration Menu. On the Enter Mode screen (see upper left-hand corner), press F1 to enter the Add Mode. For security reasons, a password should be assigned to the default user name. Type in **ADMIN-SYSTEM** and press **ENTER**. Select a password (no more than 8 characters). The security level of 3 cannot be changed so press the F1 function key to save the data.

3.08 Type in a user name for system administration (e.g. ADMIN) and press **ENTER**. Enter a password to be associated with this user name, press TAB to move to the next field, and set the security level at 3 (the highest level). Press F1 to enter this information into the password table. Type a user name such as AUDITOR for auditor reports (Telephone Profit Report, Posting Report, etc.) and press **ENTER**. Enter a password to be associated with this user name, TAB to the next field, and set the

security level at 2 (this level allows access to most of the system configuration screens). Press F1 to enter this information into the password table. Type a user name such as FRONTDESK for front desk operations (Guest Checkout, Guest Room Telephone Status reports, etc.) and press **ENTER**. Enter a password to be associated with this user name and set the security level at 1. (This level also allows access to all the SMDA reports, item 1 on the Main Menu.) Press F1 to enter this information into the password table. Make a careful note of the names and passwords entered; after log-out, the **Lodging II** system cannot be entered again without a pre-programmed name and password.

3.09 When all entries have been made, press F10 twice to return to the System Configuration Menu. For details, see Paragraph 7.22.

3.10 Costing and Pricing Configuration - Rate Record Table. Select Costing and Pricing Configuration on the System Configuration Menu, then select Rate Records on the costing and pricing screen. Assume that Rate ID 1 (AT&T-DDD in the CCMI rate tables) is to be used for costing calls. One of the user-defined rate IDs (15-30) can now be programmed to establish the pricing parameters.

3.11 At the enter Mode screen (see upper left-hand corner), press F1 to go to the Add Mode. Select "15" as the Rate ID and press **ENTER**. In the "Predefined Rate ID" field, enter 1 to identify the link with the AT&T-DDD table. Use the TAB key to move the Increase Cost or Price By field and enter the markup (over actual cost) desired for call pricing. As an example, entering 50 will give a 50% markup; a call costing \$1.00 according to the rate tables will be priced at \$1.50 in the call record which is sent to the PMS or printed out in a front desk report. Press F1 to enter this information into the rate record table, then press F10 three times to return to the System Configuration Menu. For details, see Sections 5, 6, and Paragraph 7.03.

3.12 Extension Configuration - Extension Table. Select Extension Configuration from the System Configuration Menu, then Extensions on the Extension Configuration screen. At the Enter Mode screen (see upper left-hand corner), press F1 to go to Add Mode. Enter an extension (telephone) number that exists in the PBX and press **ENTER**. Using the TAB key to move from field to field, skip over the first few fields and set the Unlisted, No Number, and No Detail fields to N. Define the extension as a G(uest) room or an A(dministrative) extension. Press the F2 key to enter this information into the extension table while retaining the values displayed on the screen. Enter another extension number, press **ENTER**, and proceed as above. All extension numbers must have the same number of digits and this number, typically 2, 3 or 4, must be defined in the system parameter table, as described in Paragraph 3.06, above.

3.13 Repeating the above procedure defines all the extensions in the PBX for the **Lodging II** system. When all the extensions have been identified (and the information on the last extension has been entered into the extension table by pressing F1 or F2), press F10 three times to return to the System Configuration Menu. For details, see Paragraph 7.12.

3.14 Trunk Configuration - Trunk Groups. Select Trunk Configuration from the System Configuration Menu, then Trunk Groups from the Trunk Configuration screen. At the Enter Mode screen (see upper left-hand corner), press F1 to go to Add Mode. Type the number of the PBX trunk group connected to the central office and press **ENTER**. Using the TAB key to move from field to field, name the trunk group "Central Office" and assign the incoming call cost to Rate ID 14 (no charge) and outgoing call cost to Rate ID 1 (AT&T-DDD). The incoming call price can be assigned to Rate ID 14 and

outgoing price to Rate ID 15. Press F1 to enter this information into the trunk group table and then press F10 three times to return to the System Configuration Menu. For details, see Paragraph 7.19.

3.15 Trunk Configuration - Trunks. Select Trunk Configuration from the System Configuration Menu, then Trunks from the Trunk Configuration screen. At the Enter Mode screen (see upper left-hand corner), press F1 to go to Add Mode. Type the number of a trunk circuit in the PBX (in the format XX.XX) and press **ENTER**. Enter the number of the trunk group to which the trunk belongs (the central office trunk group). Press the F2 key to enter this information into the trunk table while retaining the values displayed on the screen. Enter another trunk number, press **ENTER**, and proceed as above.

3.16 When all the trunks have been identified (and the information on the last trunk has been entered into the trunk table by pressing F1 or F2), press F10 three times to return to the System Configuration Menu. For details, see Paragraph 7.20.

3.17 Lodging Configuration. Select Lodging Configuration from the System Configuration Menu. Using the TAB key to move from one field to the next, enter the following information: Y, indicating the PBX has a voice messaging system; the extension numbers in the PBX of the voice cards used for room status input by maids; the security code for entry of room status, if a security code is to be used; and the destination of priced calls (enter a 0 for PMS). The other fields either have the correct default values or are not relevant. Press F1 to enter the information into the lodging table, then F10 to return to the System Configuration Menu. For details, see Paragraph 7.23.

3.18 Shutdown and Restart. At the end of the configuration session, the **Lodging II** system must be shutdown and restarted to allow the new configuration information to take effect. Press F10 to return to the Main Menu. Select System Functions from the Main Menu and Shutdown System from the System Function Menu. When either shutdown option is selected, the **Lodging II** system will display certain warnings. These are necessary because, during the shutdown process, the system will not accept any call records from the PBX. During this period, either PBX call activity must be halted or there must be an external buffer to collect call records (or the loss of some call records during the restart process must be accepted).

NOTE: After completing the Shut Down procedure it is recommended that you back up your data base, thereby storing the information programmed thus far on floppy disk. Refer to Paragraph 8.06

3.19 Select item 1 from the Shutdown Menu, Shutdown and Exit to Operating System. Enter Y and press **ENTER**. Wait for the message "**In process of shutting down Lodging II system**" to disappear. The next message will tell you to press the CTRL, ALT, and DEL keys simultaneously to restart the system. When the loading and starting sequence is finished, the system will display the log-in screen and begin collecting call records. The new configuration information will be in effect. For details, see Section 8.

4. CONFIGURATION PROCEDURES

4.01 General Procedures for Data Entry. Some general considerations which apply to all configuration data entry are described below.

1. **Screen Editing and Function Keys.** The configuration of the **Lodging II** system is screen oriented (i.e., data are entered into predefined fields on the screen of the system console); when all information has been entered, pressing a designated function key causes the system to verify and save the data. On many of the screens, it is sufficient to press the **ENTER** key (←) instead of the F1 function key.
2. **TAB Key.** The TAB key, usually designated with left- and right-facing arrows (< — — >), is used to accept the information entered in a field and advance the cursor to the next entry field on the screen. If the cursor is on the last field of the screen when the TAB key is pressed, the cursor is moved to the first character of the first parameter field on the screen. To enter or change the information in a field, simply type the desired numbers or words starting at the first character of the field. The old information in the field is automatically erased when the first character is entered. When the information is complete, press the TAB key to move to the next field. (It is not necessary to fill in all of the blank spaces of a field before pressing the TAB key.) Pressing the **SHIFT** key at the same time as the TAB key moves the cursor to the previous data field on the screen instead of the next field.
3. **Arrow Keys.** The left and right arrow keys located on the number keypad of the computer can be used to move the cursor within a data field. This allows individual characters to be changed without having to enter the entire field over again.
4. **Modes.** (The information that follows does not apply to certain tables, such as System Parameters and Lodging, which do not use key values.) When a configuration table is called up, the system is in Enter Mode and displays a sample of the data entry screen for the table selected. Four functions are available from the Enter Mode screen:
 - A. Add Mode, for entering new information into a configuration table.
 - B. Change/Look Mode, for modifying or examining information that is already in the configuration table.
 - C. Delete Mode, for removing existing entries from a configuration table.
 - D. Print Mode, for sending a configuration table to the system printer.
5. **Key Fields.** (The information that follows does not apply to certain tables, such as System Parameters and Lodging, which do not use key values.) A key field is one that defines the contents of a table; for example, the trunk number is the key field in the trunk table. When a value is entered in a key field, the system verifies the value for legal characters and checks whether the key already exists in the table. An item may not be added to a table if one with the same key is already in the table and an item cannot be deleted or changed if it is not already in the table. If the system detects an error, it will sound a tone and reposition the cursor at the error. (**Exception:** In the extension table, which uses the extension number as the key, it is possible to have more than one entry

with the same extension number, i.e., the same key. This is useful when two or more people share a telephone and listing all the users in the telephone directory is desired. When reports are generated for such an extension, only the user name entered first during configuration will be shown with the extension number in the reports.)

6. **Parameters.** Parameters are additional fields that are associated with a particular key value; for example, the trunk group associated with a trunk, the costs associated with a rate record, etc. (In the case of tables which do not use key values, all fields are parameter fields.) When entering parameters, the TAB key is used to move from one field to another. Parameters may be required or optional. The system will assume and display a default value for each optional parameter that is not entered; often the optional value will be blank or null.
7. **Validation of Entered Data.** When data entry is complete and a function key (or ENTER) is pressed, the system validates the information on the screen. Not all parameters are checked, only those where an error would affect the operation of the system. If an error is found, the system will sound a tone and position the cursor on the parameter that is at fault. A message is printed on the prompt line of the screen, explaining the error. The user must then re-enter the data that were rejected.

4.02 Procedure for Adding Information to a Table. The following explains in detail the procedure for adding information to a table. The extension table is used as an example but the procedure and use of function keys apply to any table that uses key values.

1. **Select Table to be Edited.** Select System Configuration (item 2) from the Main Menu, the desired configuration category from the System Configuration Menu, and the desired table from the sub-menu, if necessary. The system presents a sample data entry screen for the selected table (Figure 4-1) in the Enter Mode, as indicated in the upper-left corner of the screen.
2. **Press the Add Function Key (F1).** The system will advance to the Add Mode, as indicated in the upper-left corner of the screen, and the cursor will be positioned in the Key field (Figure 4-2) (* = cursor).
3. **Enter the Key Information and Press ENTER or F1.** The system verifies the key field for legal characters and confirms that the key does not exist in the table. A key may not be added if it is already in the table. (**Exception:** In the extension table, it is permissible to have multiple entries with the same key value; this is useful when having several names in the telephone directory with the same extension number is desired.) If the system detects an error, it will sound a tone and reposition the cursor in the key field. If the system accepts the key, the cursor is moved to the parameter area (Figure 4-3) and the function key labels are changed as shown.
4. **Enter Parameter Information Associated with the Key Value.** Use the TAB key to move from one field to another (Figure 4-4). Some parameters are optional and these fields may be skipped over. Others are required; the system will not leave the screen until they have been entered.

```

Enter Mode           Extension Number Entry           Thu Jan 1 1987

Extension Number _____ Date Modified MM/DD/YY
Last Name _____ First Name _____
Location _____
Extension Group _____
Fixed Cost 0.00
Unlisted - (Y/N)
No Number - (Y/N)
No Detail - (Y/N)
Ext. Type - (G/A)

Please select a function.

--F1-- --F2-- --F3-- --F4-- --F5-- --F6-- --F7-- --F8-- --F9-- --F10--
Add   Change Delete Print          Exit
Look

```

Figure 4-1. Extension Number Entry Screen, Add Mode

```

Add           Extension Number Entry           Thu Jan 1 1987

Extension Number * _____ Date Modified MM/DD/YY
Last Name _____ First Name _____
Location _____
Extension Group _____
Fixed Cost 0.00
Unlisted - (Y/N)
No Number - (Y/N)
No Detail - (Y/N)
Ext. Type - (G/A)

Please select a function.

--F1-- --F2-- --F3-- --F4-- --F5-- --F6-- --F7-- --F8-- --F9-- --F10--
Accept          Exit

```

Figure 4-2. Extension Number Entry Screen, Add Mode

```
-----
Add                                Extension Number Entry                                Thu Jan 1 1987

Extension Number 1234           Date Modified MM/DD/YY

Last Name *                         First Name                     

Location                                                                     

Extension Group                                                             

Fixed Cost 0.00

Unlisted   -   (Y/N)
No Number  -   (Y/N)
No Detail  -   (Y/N)

Ext. Type  -   (G/A)

-----
Please select a function.

--F1--|--F2--|--F3--|--F4--|--F5--|--F6--|--F7--|--F8--|--F9--|--F10--
Accept|Accept| Start|         |         |         |         |         |         |  Exit
Clear | Keep  | Over  |         |         |         |         |         |         |         
```

Figure 4-3. Extension Number Entry Screen, Add Mode

```
-----
Add                                Extension Number Entry                                Thu Jan 1 1987

Extension Number 1234           Date Modified MM/DD/YY

Last Name JONES                First Name JIM

Location North Plant

Extension Group                                                             

Fixed Cost 0.00

Unlisted   E   (Y/N)
No Number  N   (Y/N)
No Detail  N*  (Y/N)

Ext. Type  G   (G/A)

-----
Please select a function.

--F1--|--F2--|--F3--|--F4--|--F5--|--F6--|--F7--|--F8--|--F9--|--F10--
Accept|Accept| Start|         |         |         |         |         |         |  Exit
Clear | Keep  | Over  |         |         |         |         |         |         |         
```

Figure 4-4. Extension Number Entry Screen, Add Mode

5. **Select a Function to Complete Data Entry.** When all desired parameters have been entered, press one of the four labeled function keys (F1, F2, F3, F10):

F1 = Accept and Clear. This function accepts the data entered, validates it, and enters it in the configuration table. All fields are cleared and the cursor is positioned on the Key field, ready for entry of another key value. Continue with Step 3 above.

F2 = Accept and Keep. This function also accepts, validates, and stores the data entered but leaves the parameter data intact on the screen so that it may be used with the next key value. The Key field is cleared and the cursor is positioned at this field, ready for the next entry. Continue with Step 3 above. Step 4 will require changing only those fields which differ from previous input.

F3 = Start Over. This function is used to reenter the parameter information from scratch. The Key field is not affected. The screen is not validated nor is the information stored. The parameter information is cleared, and the cursor is positioned at the first parameter field. Continue with Step 4 above.

F10 = Exit. This function exits from the Add Mode and returns to the Enter Mode screen. The information that was entered is not validated or saved.

4.03 Procedure for Changing Information in a Table. The following explains in detail the procedure for changing information in a table. The extension table is used as an example but the procedure and use of function keys apply to any table that uses key values.

1. **Select Table to be Edited.** Select System Configuration (item 2) from the Main Menu, the desired configuration category from the System Configuration Menu, and the desired table from the sub-menu, if necessary. The system presents a sample data entry screen for the selected table (Figure 4-5) in the Enter Mode, as indicated in the upper-left corner of the screen.
2. **Press the Change/Look Function Key (F2).** The system will advance to the Change Mode, as indicated in the upper-left corner of the screen (Figure 4-6), and the cursor will be positioned in the Key field.
3. **Enter the Key Information and Press ENTER or F1.** The system verifies the key field for legal characters and checks that the key exists in the table. An item cannot be changed if its key is not in the table. If the system detects an error, it will sound a tone and reposition the cursor in the key field. If the system accepts the key, the parameters associated with that key are displayed on the screen and the cursor is placed on the first parameter entry field (Figure 4-7).
4. **Make Changes to the Parameters,** if desired, then press one of the five labeled function keys (F1, F2, F3, F4, F10).

F1 = Accept and Clear. This function accepts the parameters on the screen, validates them, and stores them in the table. All fields are cleared and the cursor is positioned on the key field, ready for the entry of the next key. Continue with Step 3 above.

```

-----
Enter Mode           Extension Number Entry           Thu Jan 1 1987
-----
Extension Number _____ Date Modified MM/DD/YY
Last Name _____ First Name _____
Location _____
Extension Group _____
Fixed Cost 0.00
Unlisted   _ (Y/N)
No Number  _ (Y/N)
No Detail  _ (Y/N)
Ext. Type  _ (G/A)
-----
Please select a function.
-----
F1--F2--F3--F4--F5--F6--F7--F8--F9--F10--
Add|Change|Delete|Print|      |      |      |      |      |      |
:Look|      |      |      |      |      |      |      |      |
-----

```

Figure 4-5. Extension Number Entry Screen, Enter Mode

```

-----
Change           Extension Number Entry           Thu Jan 1 1987
-----
Extension Number * _____ Date Modified MM/DD/YY
Last Name _____ First Name _____
Location _____
Extension Group _____
Fixed Cost 0.00
Unlisted   _ (Y/N)
No Number  _ (Y/N)
No Detail  _ (Y/N)
Ext. Type  _ (G/A)
-----
Please select a function.
-----
F1--F2--F3--F4--F5--F6--F7--F8--F9--F10--
Accept|      |      |      |      |      |      |      |      |      |
-----

```

Figure 4-6. Extension Number Entry Screen, Change Mode

```

-----
Change                Extension Number Entry                Thu Jan 1 1987
-----
Extension Number 2222                Date Modified MM/DD/YY
Last Name *JONES                First Name JIM
Location North Plant
Extension Group _____
Fixed Cost 0.00
Unlisted   N (Y/N)
No Number  N (Y/N)
No Detail  N (Y/N)
Ext. Type  G (G/A)
-----
Please select a function.
-----F1-----F2-----F3-----F4-----F5-----F6-----F7-----F8-----F9-----F10-----
Accept|Accept|Next  |New   |      |      |      |      |      |      |      |      |      |      |
Clear |Next  |Rec  |Rec  |      |      |      |      |      |      |      |      |      |
-----

```

Figure 4-7. Extension Number Entry Screen, Change Mode

F2 = Accept and Next. This function also accepts, validates, and stores the parameters on the screen but then automatically changes the key information to the next entry in the table. All information on this new key is displayed. The cursor is positioned on the first parameter entry field. Repeat Step 4 (this step) for the new item.

F3 = Next Record. This function is used to advance to the next entry in the table without modifying the parameters of the current key value. All parameters on the new key are displayed. The cursor is positioned on the first parameter entry field. Repeat Step 4 (this step) for the new item.

F4 = New Record. This function is used to select a new key value without modifying the parameters of the current key value. All fields are cleared and the cursor is positioned on the key entry field. Continue with Step 3 above.

F10 = Exit. This function exits from the Change Mode and returns to the Enter Mode screen. The information that was entered is not validated or saved.

4.04 Procedure for Deleting Information from a Table. The following explains in detail the procedure for deleting information from a table. The extension table is used as an example but the procedure and use of function keys apply to any table that uses key values.

1. **Select Table to be Edited.** Select System Configuration (item 2) from the Main Menu, the desired configuration category from the System Configuration Menu, and the desired table from the sub-menu, if necessary. The system presents a sample data entry screen for the selected table in the Enter Mode, as indicated in the upper-left corner of the screen (Figure 4-8).

```

-----
Enter Mode           Extension Number Entry           Thu Jan 1 1987

Extension Number _____ Date Modified MM/DD/YY

Last Name _____ First Name _____

Location _____

Extension Group _____

Fixed Cost 0.00

Unlisted   _ (Y/N)
No Number  _ (Y/N)
No Detail  _ (Y/N)

Ext. Type  _ (G/A)

-----
Please select a function.

--F1--+-F2--+-F3--+-F4--+-F5--+-F6--+-F7--+-F8--+-F9--+-F10-
Add |Change|Delete| Print|   |   |   |   |   |   |   |   |   |
Look|     |     |     |   |   |   |   |   |   |   |   |   |
-----

```

Figure 4-8. Extension Number Entry Screen, Enter Mode

2. Press the Delete Function Key (F3). The system will change to the Delete Mode, as indicated in the upper-left corner of the screen, and the cursor will be positioned in the Key field (Figure 4-9).

```

-----
Delete             Extension Number Entry           Thu Jan 1 1987

Extension Number * _____ Date Modified MM/DD/YY

Last Name _____ First Name _____

Location _____

Extension Group _____

Fixed Cost 0.00

Unlisted   _ (Y/N)
No Number  _ (Y/N)
No Detail  _ (Y/N)

Ext. Type  _ (G/A)

-----
Please select a function.

--F1--+-F2--+-F3--+-F4--+-F5--+-F6--+-F7--+-F8--+-F9--+-F10-
Accept|   |   |   |   |   |   |   |   |   |   |   |   |   |
-----

```

Figure 4-9. Extension Number Entry Screen, Delete Mode

3. **Enter the Key Information and Press ENTER or F1.** The system verifies the key field for legal characters and checks that the key exists in the table. A key cannot be deleted if it is not in the table. If the system detects an error, it will sound a tone and reposition the cursor in the key field. If the system accepts the key, the information regarding that key is displayed on the screen (Figure 4-10) and the cursor is placed on the first parameter entry field.
4. **Delete the Record or Select Another Record** by pressing one of the five labeled function keys (F1, F2, F3, F4, F10).

F1 = Delete and Clear. This function deletes the item shown on the screen, clears all fields, and positions the cursor on the key field, ready for the entry of the next key. Continue with Step 3 above.

F2 = Delete and Next. This function also deletes the information on the screen, but automatically changes the key information to the next entry in the table. All information on this new key is displayed. The cursor is positioned on the first parameter entry field. Repeat Step 4 (this step) for the new item.

F3 = Next Record. This function is used to advance to the next entry in the table without deleting the current entry. All information on the new key is displayed. The cursor is positioned on the first parameter entry field. Repeat Step 4 (this step) for the new item.

F4 = New Record. This function is used to select a new key field without deleting the information on the entry. All fields are cleared and the cursor is positioned on the key entry field. Continue with Step 3 above.

F10 = Exit. This function exits from the Delete Mode and returns to the Enter Mode screen. The item on the screen is not deleted.

```

-----
Delete                               Extension Number Entry           Thu Jan 1 1987
-----
Extension Number 2222                Date Modified MM/DD/YY
Last Name *JONES                First Name JIM
Location North Plant
Extension Group                     
Fixed Cost 0.00
Unlisted      N (Y/N)
No Number     N (Y/N)
No Detail     N (Y/N)
Ext. Type     G (G/A)
-----
Please select a function.
-----F1-----F2-----F3-----F4-----F5-----F6-----F7-----F8-----F9-----F10-----
Delete|Delete|Next |New   |         |         |         |         |         |         |         |
Clear |Next  |Rec  |Rec  |         |         |         |         |         |         |         |
-----

```

Figure 4-10. Extension Number Entry Screen, Delete Mode

4.05 Procedure for Printing a Table. The following explains in detail the procedure for printing a table. The extension table is used as an example but the procedure and use of function keys apply to any table that uses key values.

1. **Select Table to be Printed.** Select System Configuration (item 2) from the Main Menu, the desired configuration category from the System Configuration Menu, and the desired table from the sub-menu, if necessary. The system presents a sample data entry screen from the selected table in the Enter Mode, as indicated in the upper-left corner of the screen (Figure 4-11).
2. **Ready the Report Printer.** Ensure that the page break on the paper is correctly positioned and that the printer is on-line.
3. **Press the Print Function Key (F4).** The entry screen is erased and the print screen (Figure 4-12) is displayed. While the system is printing, the screen shows the record number (item number in the table) that is currently being printed. When printing is completed, the system again displays the Enter Mode screen.

```

-----
Enter Mode           Extension Number Entry           Thu Jan 1 1987

Extension Number _____ Date Modified MM/DD/YY

Last Name _____ First Name _____

Location _____

Extension Group _____

Fixed Cost 0.00

Unlisted   _ (Y/N)
No Number  _ (Y/N)
No Detail  _ (Y/N)

Ext: Type  _ (G/A)

-----
Please select a function.

-----F1-----F2-----F3-----F4-----F5-----F6-----F7-----F8-----F9-----F10-----
Add | Change | Delete | Print |           |           |           |           |           |           |
Look |         |       |      |           |           |           |           |           |           |
-----

```

Figure 4-11. Extension Number Entry Screen, Enter Mode

Enter Mode	Extension Number Entry	Thu Jan 1 1987							
Printing record <u>22</u>									
System busy									
F1	F2	F3	F4	F5	F6	F7	F8	F9	F10

Figure 4-12. Extension Number Entry Screen, Enter Mode

5. OVERVIEW OF CALL COSTING AND PRICING

5.01 The cost of a call, as established by the **Lodging II** system, is the system's best estimate of what the call will actually cost the hotel; this includes the amount charged by the carrier which handled the call plus any other expenses the hotel incurs. The price of the call is the amount the hotel will charge the guest who made the call; it may be a simple markup of the cost or it may be computed quite differently from the cost. In the case of calls made by hotel staff from administrative telephones, the price of the call is not relevant, only its cost.

5.02 The **Lodging II** system provides a comprehensive call costing system to establish the cost and price of the calls that were made in the PBX. Calls can be costed in various ways based on the trunk group used, the carrier used, the number dialed, the duration of the call, etc. Costing and pricing involve five configuration tables (number analysis, local call, OCC choice, trunk group, and rate record) and also the CCMI rate tables which are ordered with the **Lodging II** system and are customized to the location of the PBX and **Lodging II** equipment.

5.03 The configurable tables are described in detail in Section 7 of this document and the rate tables are discussed in Section 6; however, before attempting to configure the **Lodging II** system to cost and price calls, the system administrator should read the following overview of costing and pricing to learn how the various tables work together to provide a powerful and flexible costing system.

5.04 The key step in costing or pricing a call is selecting the Rate ID (that is, the entry in the rate record table), which will be used. For most calls, the trunk group over which the call was made will determine the Rate ID but, in some cases, special costing and pricing methods will apply, based on the number dialed or the carrier used.

5.05 Costing and Pricing of Calls. As outlined in Figure 5-1, calls that need special costing or pricing can be identified in several ways. They can be separated based on the trunk group used, the OCC carrier used, or the number dialed and on whether they are outgoing or incoming calls.

1. **Outgoing Calls.** Four user-defined database tables are used by **Lodging II** to determine the correct call cost and price rating table entry that will establish the amount charged for an outgoing call.
 - A. Analyze the called number for special cost or price - the called number is analyzed to determine if a special rating method should be used. Examples of such numbers would be 0+ (operator-assisted) calls and equal access calls (10xxx). If a match is identified in the number analysis table, the Rate IDs associated with the number, not those defined for the outgoing trunk group, are used to cost and price the call.
 - B. Separate local calls (if no match in "A") - Often local telephone calls will be costed and priced separately from toll calls. The local call table uses the rate table data to identify local calls. The system then costs and prices local calls according to the Rate IDs defined in the local call table.

PBX OUTPUTS CALL RECORD

NUMBER ANALYSIS TABLE
 DEFINES CALLS NEEDING
 SPECIAL COST OR PRICE

707+ CALLS	COST
	PRICE
011+	COST
	PRICE
976*	COST
	PRICE
LOCAL CALL	COST
	PRICE
OCC TABLE IDENTIFIES CALLS USING OCCS	
SPRINT	COST
	PRICE
MCI	COST
	PRICE
TRK GROUP TABLE DEFINES RATE IDS FOR EACH GROUP	
TG 41	INC COST
	INC PRICE
	OUT COST
	OUT PRICE

CALL RATING TABLE	
1	DDD/ATT
2	ATT OP ASSIST
3	RESERVED
4	INTERNATIONAL
5	RESERVED
6	RESERVED
7	RESERVED
8	ADD'L OCC 1
.	.
.	.
13	ADD'L OCC 6
14	FREE CALL
15	USER-DEFINED
16	USER-DEFINED
17	USER-DEFINED
.	.
.	.
29	USER-DEFINED
30	USER-DEFINED

Figure 5-1. Call Costing and Pricing Flow Diagram

- C. Analyze OCC number (if no match in Steps "A" or "B") - The **focus 960** provides an "OCC NUMBER" in the SMDR record that is sent to the **Lodging II** system; this number identifies which one of four possible common carriers was selected for the call by the Automatic Route Selection system in the PBX. If an entry in the OCC table matches the carrier number in the call record, the Rate IDs for the OCC table entry will be used to determine the cost and price of the call, not the Rate IDs that were defined for the outgoing trunk group.
 - D. Assign circuit to trunk group - When a call is received by the **Lodging II** system, the outgoing trunk number identified in the call record is associated with a trunk group. The trunk group information includes Rate IDs for cost and price that are associated with outgoing calls for that trunk. If the number analysis, local call, and OCC choice tables do not have entries that match a call, the system will cost and price the call using the outgoing Rate IDs for the trunk group.
2. **Incoming Calls.** Only one database table is used by the **Lodging II** system in determining charges for an incoming call.
- A. Assign circuit to trunk group - When a call is received by the system, the incoming trunk number identified in the call record is associated with a trunk group. The trunk group information includes Rate IDs for cost and price that are used to define the charges for all incoming calls received by the trunk group.

6. RATE TABLES

6.01 In Section 5, the general process of costing and pricing a call was described. The key point in that process is the selection of particular Rate IDs (entries in the rate record table) which are to be used to cost and price the call. It is possible to create a complete structure for costing and pricing; typically, however, most outgoing calls will be assigned to a Rate ID which refers the costing and pricing of the call to the predefined rate tables 1-13.

6.02 The CCMI rate tables are a set of costing tables which use the dialed number, call duration, time of day, and day of the week to compute the cost of the call. They are customized to the actual location where the **Lodging II** system will be installed, with distances calculated from this point, and to the carrier or carriers used by the hotel for long distance service. The **Lodging II** system and rate tables must be ordered at the same time. Rate tables may be ordered customized to any point in the United States or Canada.

6.03 The rate tables cannot be altered or configured but, at the time they are ordered, various choices and options are available. These choices primarily affect the accuracy of costing and the cost of the tables.

6.04 When costing calls made to a particular area code (NPA), the rate tables may either cost the call using the exchange code (NXX) actually dialed, which will produce the most accurate costing, or simply cost the call by assuming it was made to an average point or "density center" (typically somewhere near the middle of the area covered by the area code), which will produce a less accurate cost but require much less detail in the rate tables. When ordering the rate tables, a decision must be made as to which area codes are to be handled in detail and which handled only with cost centers. Other selections involve the treatment of international calls, costing of calls made on different long distance carriers, etc.

6.05 Rate Table Sets. When ordering the CCMI rate tables, one of Table Sets A, B, or C must be chosen. Then Options 1-5 may be added as desired.

6.06 Table Set A - 1st NPA Detail (minimum configuration). Table Set A provides detailed pricing for all calls within the area code where the **Lodging II** system is located. Charges for calls placed within the area code are based on the distance between the local CO and the destination CO. Charges for calls outside the local area code are based on the distance from the local CO to a "density center" in the destination area code. There is one density center for each area code in the U.S. and Canada. For improved accuracy, two options can be included with this set:

1. **All NPAs Adjacent to the Home NPA.** This option provides a package deal for more accurate costing of calls to area codes that are immediately adjacent to the local area code. Detailed costing is based on the distance between the local and destination COs instead of to the density centers of adjacent area codes.
2. **Detail for Additional NPAs.** As with Option 1, the detail for additional NPAs allows you to provide more accurate costing for calls to the area codes specified.

6.07 Table Set B - All U.S. NPAs. This version provides more accurate pricing for calls outside the local area code. As explained above, the detailed pricing sets the cost of a call based on the actual destination office code as opposed to the density center within the area code. With this option, calls to Canadian area codes still use density center costing.

6.08 Table Set C - All U.S. and Canadian NPAs. This is the same as Version B except that calls to Canadian area codes are costed to the office code instead of the density center.

6.09 Options for Rate Table Sets. The following options are available for any of the table sets mentioned above:

1. **Overseas (011, 809) Rate Detail.** With this feature, the system can price calls to other countries and those which go to Puerto Rico. If this option is not selected, international calls will not be costed and will be so indicated on the reports. (Other options can be used to provide international costing.)
2. **Mexico NPAs (706, 903, 905) Rate Detail.** With this option, the **Lodging II** system can cost calls placed to Mexico. If this option is not included, calls placed to Mexico will not be costed and will be so indicated on the reports. (Other options can be used to provide international costing.)
3. **Integrated Telephone List.** This feature allows the actual name of the town to be displayed in the location field on the cost control reports. If this option is not included, the field will be left blank. This feature does not provide names for calls to density centers and is not recommended for sites using Table Set A.
4. **Non-Standard Calling Plan.** In some serving areas, call costing within the area code does not follow standard distance banding. This option compensates for the resulting inaccuracies.
5. **Each Additional Rate Classification.** The **Lodging II** system can support CCM rate tables for multiple toll carriers (MCI, U.S. Sprint, etc.). When these services are provided in the PBX, the **Lodging II** system must have additional rate tables as well, one for each carrier. Two toll carriers, one of which must be AT&T, are included in all table sets at no additional charge. Rate tables for additional carriers are ordered with this option. If operator-assisted rates are to be used for pricing the calls made by guests, this option should be ordered as well.

7. DETAILED DESCRIPTION OF CONFIGURATION TABLES

7.01 The configuration tables are described below in the order in which they are accessed from the System Configuration Menu, not as they should be entered into the system (see Paragraph 2.09).

7.02 Item 1 of the configuration display calls Figure 7-1 to the screen.

7.03 Rate Record Table. Refer to Section 5 for an overview of the process of costing and pricing calls. The cost of a call is the **Lodging II** system's estimate of the actual cost to the hotel of the call; the price is the amount charged to the guest who made the call. The name field is used to identify the table and also to specify the type of call shown on the profit summary report.

7.04 The rate record screen (Figure 7-2) shows the fields which are available for defining a Rate ID. The rate record table (see Figure 7-3) is the primary area where parameters for costing and pricing calls are established. The table consists of 30 Rate IDs.

7.05 Using a Rate ID to cost and price a call involves two steps. These are shown in Figure 7-4 and are described in detail below.

1. **Establish Basic Call Charge.** The **Lodging II** system establishes the basic call cost using one of five methods.
 - A. CCMI costing - Rate IDs numbered 1-13 always use CCMI rate tables to establish call charges; these cannot be modified by the user. However, Rate IDs 15-30 can use 1-13 to determine basic charges from the rate tables, then adjust the cost or price of a call according to user-defined criteria.

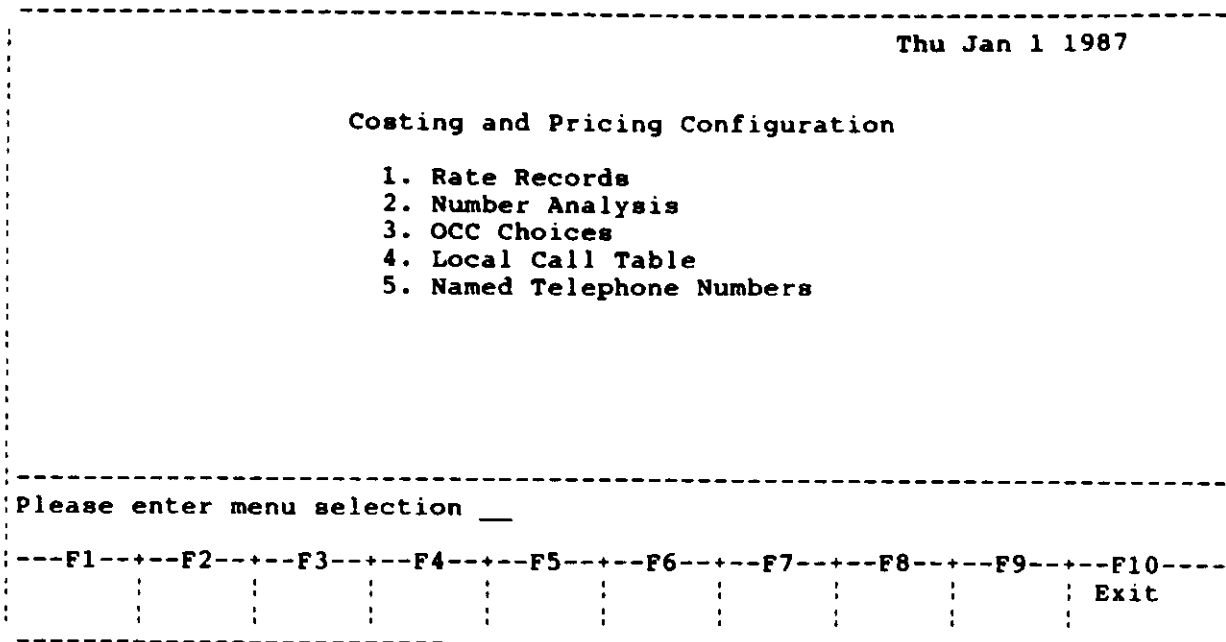


Figure 7-1. Costing and Pricing Configuration Menu

```

-----
Enter mode                Rate Record Entry                Thu Jan 1 1987
Rate ID _____      Name _____      Date Modified _____

CALL COSTING OR PRICING METHOD (Choose one of the following)
- Predefined Rate ID ..... _____ (1-14)
  Actual or Daytime rates ..... _____ (A or D)
- Fixed rate ..... $ _____ /call
- Measured rate ..... $ _____ /minute
- Variable measured rate
  Initial rate period ..... _____ minutes
  Charge for initial rate period ..... $ _____ /period
  Overtime rate period ..... _____ minutes
  Charge for each overtime rate period $ _____ /period

RATE ADJUSTMENTS
- Increase cost or price by ..... %
- Add fixed amount to cost or price .... $ _____ /call
-----

Please select a function.

---F1---+---F2---+---F3---+---F4---+---F5---+---F6---+---F7---+---F8---+---F9---+---F10---
Add  |Change|Delete|Print|      |      |      |      |      |      |Exit
     |Look |      |      |      |      |      |      |      |
-----

```

Figure 7-2. Rate Record Entry Screen

- B. Free call (14 only) - Rate ID 14 is defined as free. Any call which is directed to 14 will show "\$ 0.00" in the appropriate price or cost field. Rate IDs 15-30 can use Rate ID 14 to determine the basic charge of \$ 0.00.
 - C. Fixed costing (15-30 only) - Fixed costing assesses each call a specific dollar amount, regardless of call duration.
 - D. Measured rate costing (15-30 only) - Measured costing establishes a specific rate for each minute of call duration. The system rounds the cost of the calls up to the nearest minute. The rate per minute is entered to the nearest 1/10 cent to provide the accuracy needed in some situations.
 - E. Initial/overtime rate costing (15-30 only) - This costing type charges calls at one rate for an initial period of time and another rate for all subsequent time periods. Time period and cost must be specified in both cases. All calls that are shorter than or equal to the initial time will be charged the initial amount. Calls that are longer than the initial period will be costed with the initial rate, then at the second rate for additional time periods. Duration and cost are rounded up to the next higher period.
2. **Cost Adjustments.** Regardless of the type of rating used for a call, the system allows the result to be modified (with the exception of Rate IDs 1-14 which cannot be adjusted).

RATE ID	DESCRIPTION	COSTING TYPE
1	AT&T DDD	REQUIRED V&H RATE TABLE
2	OPERATOR-ASSISTED	OPTIONAL RATE TABLE
3	RESERVED	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
4	INTERNATIONAL CALLS (011+)	OPTIONAL RATE TABLE
5	RESERVED	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
6	RESERVED	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
7	RESERVED	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
8	CARRIER 1	OPTIONAL RATE TABLE
9	CARRIER 2	OPTIONAL RATE TABLE
10	CARRIER 3	OPTIONAL RATE TABLE
11	CARRIER 4	OPTIONAL RATE TABLE
12	CARRIER 5	OPTIONAL RATE TABLE
13	CARRIER 6	OPTIONAL RATE TABLE
14	FREE CALL	FIXED VALUE OF \$0.00
15	USER-DEFINED	USER-DEFINED
16	USER-DEFINED	USER-DEFINED
.	.	.
.	.	.
30	USER-DEFINED	USER-DEFINED

Figure 7-3. Rate Record Table Description

STEP 1

 * CALL IS DIRECTED *
 * TO RATE ID FOR *
 * COST OR PRICE *
 * CALCULATIONS *

FIXED	MEASURED	INITIAL/OT	USE CCMI	FREE CALL
ESTABLISH BASIC CHARGES	ESTABLISH BASIC CHARGES	ESTABLISH BASIC CHARGES	ESTABLISH BASIC CHARGES	NO CHARGE FOR CALL

STEP 2

ADJUST CHARGE
BY PERCENTAGE

ADJUST CHARGE
BY FIXED AMOUNT

 * CALL CHARGE IS *
 * NOW ESTABLISHED *

Figure 7-4. Rate ID Flow Diagram

- A. Daytime rate adjustment - This adjustment, used when a rate table is selected as the costing or pricing Rate ID, will compute the cost or the price of a call using daytime rates instead of actual time of day rates.
- B. Adjustment percent - The result of the initial rating can be adjusted up or down by a specific percentage. The percent (%) amount specified will be added to the basic amount established above.

EXAMPLE: A call is costed or priced at \$2.00
 The adjustment percent is X 20%
 The adjusted amount for the call is . . . \$2.40

C. Fixed adjustment - The fixed adjustment is added to the total amount for the call after the adjustment by % is determined.

EXAMPLE: A call is costed or priced at \$2.00
 The adjustment percent is X 20%
 The adjusted amount for the call is . . . \$2.40
 The fixed adjustment is + \$1.25
 The total adjusted amount of the call is \$3.65

NOTE: The rate table is made of of 30 Rate IDs, the first 14 of which have been predesignated for particular call types as shown.

NOTE: This table applies to all Rate IDs 15 through 30 for both price and cost calculations. Rate IDs 1-14 only use CCM rate tables to establish the charge for a call and do not allow the adjustments indicated in Step 2.

7.06 Number Analysis Table. Normally calls are costed according to the trunk group over which they occurred. However, the number analysis table (Figure 7-5) identifies specific dialed telephone numbers that are to be costed in a unique way and defines which Rate IDs will be used to cost them. The table is used as follows:

1. The system searches from the first entry in the table to the last entry. The order in which entries are assigned is important.
2. Each telephone number is checked for a match with an entry in the table.

NAD ENTRY #	PATTERN BEING ANALYZED	COST RATE ID	PRICE RATE ID
1	USER-DEFINED	USER-DEFINED	USER-DEFINED
.	.	.	.
.	.	.	.
40	USER-DEFINED	USER-DEFINED	USER-DEFINED
41	011+	#4	#4
42	0+	#14	#14
43	0	#14	#14
44	***555****	#14	#14
45	611	#14	#14
46	911	#14	#14
47	RESERVED	---	---
.	.	.	.
50	RESERVED	---	---

Figure 7-5. Number Analysis Table

3. If any digit does not match, the next higher entry is checked.
4. If a match is found, searching stops and the Rate IDs are assigned to the call even if there is a closer match in a later entry. If no matches are found in the number analysis table, the call is checked by the local call, OCC choice, and trunk group tables.

EXAMPLE: Dialed number 2234567

NAD#	NUMBER	RATE ID		COMMENT
		COST	PRICE	
1	408+	21	21	223 is compared to 408; no match
2	2234666	20	15	2234567 is compared to 2234666; no match
3	7352345	20	15	2234567 is compared to 7352345; no match
4	223+	21	14	223 is compared to 223; SEARCH ENDS HERE
5	2234567	27	14	Not searched, not selected
.	.	.	.	
.	.	.	.	

Information provided in the number analysis table is defined as follows:

1. **NAD Entry Number.** Number analysis data should be arranged so that the most specific numbers, that is, the numbers with the most digits to be analyzed, are assigned to the lowest entry numbers. This ensures that the specific numbers will be matched and costed properly in the system.
2. **Number Plan to be Analyzed.** This is the number to be matched for special costing or pricing. It may contain up to 16 digits or symbols. Special symbols are included to simplify configuring the system. These characters operate as follows:

* The "*" symbol represents any digit 0-9. It is used as a place holder or as a method of counting digits to determine special routing for calls.

+ The "+" symbol can only be used at the end of a specified number. It tells the system to accept additional digits without analyzing them. If a number sequence does not end with a +, then only calls that match the number and the exact length are captured by the entry.

EXAMPLES: 7677777 All calls that have a dialed number 7677777 will use this entry.

712+ All calls that begin with the digits "712" and have at least 1 more digit (e.g., 712-334-1234) will use this entry.

976* All 10-digit calls with the office code "976" will use this entry.