

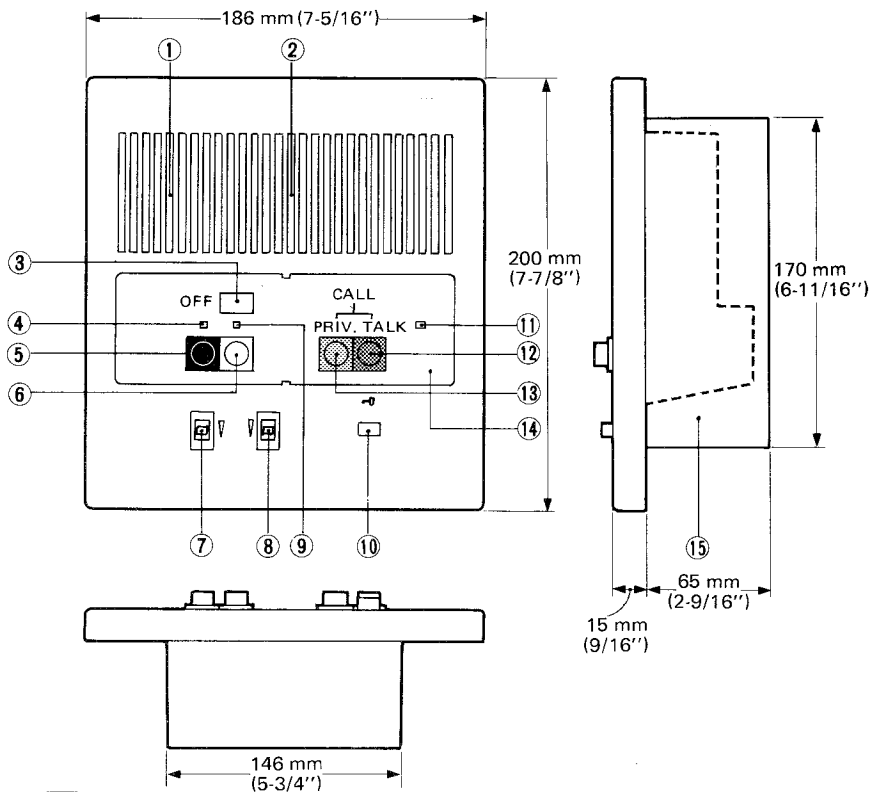
HOME INTERCOM

MODEL:

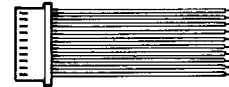
LAF-1B

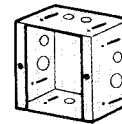
**Master station
1-call
semi-flush mount**

INSTALLATION MANUAL


Mounting accessories;

WOOD SCREW (x 2)
(4.1 x 22 ±)

SHORTING CHIP
(Attach on LAF-1B
when combined with
existing LAF models)

**10-PIN CONNECTOR
WITH 8 WIRES**
(for station wiring)

Mounting back box (Model: BBX-2)

SCREW (x 2)
(4 x 25 ±)

**Must be ordered separately.*

1

NAMES AND FUNCTIONS

- | | |
|-----------------------------------|------------------------------------|
| ① Microphone | ⑨ Call annunciator LED |
| ② Speaker | ⑩ Door release button |
| ③ Directory card | ⑪ OCCUPIED LED |
| ④ Station selection indicator LED | ⑫ TALK button |
| ⑤ OFF button | ⑬ PRIVACY button |
| ⑥ Station selector button | ⑭ Panel |
| ⑦ Communication volume control | ⑮ Mounting back box (Model: BBX-2) |
| ⑧ Call tone volume control | |

2

SYSTEM FEATURES

- Versatile communication system, Either All-master, Single-master or Intermixed System can be created.
- Intermixable masters and subs, either semi-flush mount (LAF-B) or desk/wall mount type (LAF).
- Can receive All Call announcement and Background music.
- Sub call-in annunciator LED stays lit for approx. 20 seconds.
- During your communication, sub call-in can be signalled by soft tone.
- Options: * Door stations. * Door release, using RY-PA relay.
* Paging thru an 8-ohm horn with talkback.

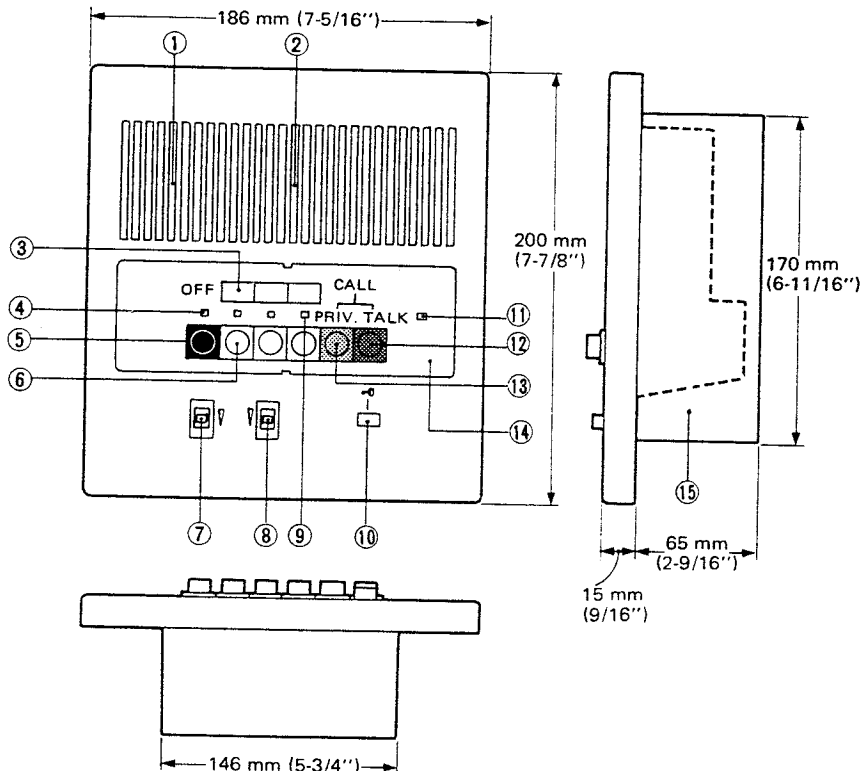
HOME INTERCOM

MODEL:

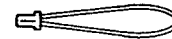
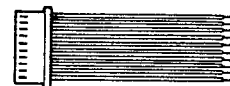
LAF-3B

 Master station
 3-call
 semi-flush mount

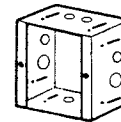
INSTALLATION MANUAL



Mounting accessories;


 WOOD SCREW (x 2)
 (4.1 x 22 ±)

 2-PIN CONNECTOR
 (Attach on LAF-3B
 when combined with
 existing LAF models)

 10-PIN CONNECTOR
 WITH 10 WIRES
 (for station wiring)

Mounting back box (Model: BBX 2)


 SCREW (x 2)
 (4 x 25 ±)

*Must be ordered separately.

1

NAMES AND FUNCTIONS

- | | |
|-----------------------------------|------------------------------------|
| ① Microphone | ⑨ Call annunciator LED |
| ② Speaker | ⑩ Door release button |
| ③ Directory card | ⑪ OCCUPIED LED |
| ④ Station selection indicator LED | ⑫ TALK button |
| ⑤ OFF button | ⑬ PRIVACY button |
| ⑥ Station selector button | ⑭ Panel |
| ⑦ Communication volume control | ⑮ Mounting back box (Model: BBX-2) |
| ⑧ Call tone volume control | |

2

SYSTEM FEATURES

- Versatile communication system. Either All-master, Single-master or Intermixed System can be created.
- Intermixable masters and subs, either semi-flush mount (LAF-B) or desk/wall mount type (LAF).
- Can receive All Call announcement and Background music.
- Sub call-in annunciator LED stays lit for approx. 20 seconds.
- During your communication, sub call-in can be signalled by soft tone.
- Options: * Door station (any number). * Door release, using RY-PA relay.
* Paging thru an 8-ohm horn with talkback.

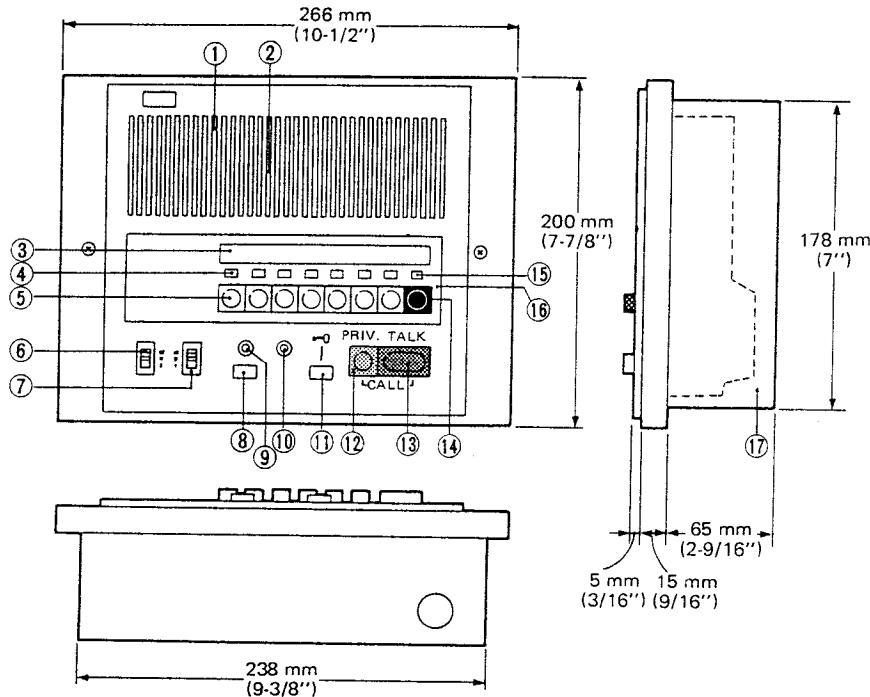
HOME INTERCOM

MODEL:

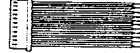
LAF-7B

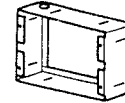
**Master station
7-call
semi-flush mount**

INSTALLATION MANUAL


Mounting accessories:
WOOD SCREW (4.1 x 22 ±) (x 4)

2-PIN CONNECTOR
 (Attach on LAF-7B
 when system includes
 existing LAF models.)

9-PIN CONNECTOR
 (for station wiring)

11-PIN CONNECTOR
 (for station wiring)

Mounting back box (Model: BBX-1)

SCREW (4 x 25 ±) (x 4)

*Must be ordered separately.

1

NAMES AND FUNCTIONS

- | | |
|--------------------------------|------------------------------------|
| ① Speaker | ⑨ ALL CALL indicator LED |
| ② Microphone | ⑩ OCCUPIED LED |
| ③ Directory card | ⑪ Door release button |
| ④ Call annunciator LED | ⑫ PRIVACY button |
| ⑤ Station selector button | ⑬ TALK button |
| ⑥ Communication volume control | ⑭ OFF button |
| ⑦ Call tone volume control | ⑮ Station selection indicator LED |
| ⑧ ALL CALL button | ⑯ Panel |
| | ⑰ Mounting back box (Model: BBX-1) |

2

SYSTEM FEATURES

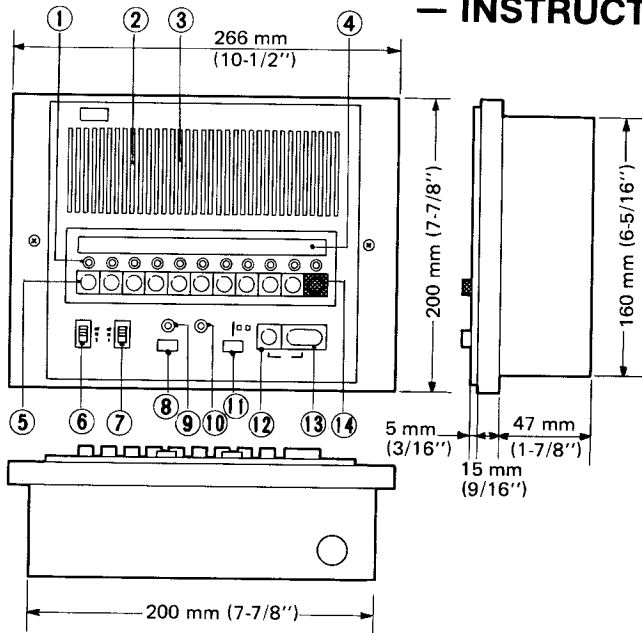
- Versatile communication system. Either All-master, Single-master or Intermixed System can be created.
- Intemixable masters and subs, either semi-flush mount (LAF-B) or desk/wall mount type (LAF).
- All Call announcement and Background music distribution, using BG-1A/1B and an amplifier.
All call announcement may be initiated in occupied mode when the system consists of LAF-7B and LAF-1B/3B/10B (Type A) stations (with no existing LAF-10B or LAF console stations intermixed).
- Handsfree reply and high output power.
- Sub call-in annunciator LED stays lit for approx. 20 seconds.
- During your communication, sub call-in can be signalled by soft tone.
- Options; * Door station (any number). * Door release, using RY-PA relay.
* Paging thru an 8-ohm horn with talkback.

HOME INTERCOM

Model: LAF-10B (10-call master, Semi-flush mount)

LAF-10B, SEMI-FLUSH MOUNT TYPE CAN BE INTERMIXED WITH LAF SYSTEM MASTERS: LAF-3A, LAF-5, LAF-10 & LAF-10S AND SUBS: LA-A, LA-AN, LA-A3, LA-AN3, LA-D & LA-DA.

— INSTRUCTIONS —



NAMES AND FUNCTIONS

- ① Call-in annunciator light (x 10)
- ② Speaker
- ③ Microphone
- ④ Directory card
- ⑤ Selector button (x 10)
- ⑥ Volume control for communication
- ⑦ Volume control for call tone
- ⑧ All Call button
- ⑨ All Call output indicator light
- ⑩ Occupied light
- ⑪ Door release button
- ⑫ Privacy button
- ⑬ TALK button
- ⑭ OFF button

SPECIFICATIONS

- * Power source: DC-12V. Use PS-12A (or PS-12C in North America) power supply.
- * Current consumption: 350mA maximum.
- * Power output: 800mW maximum at 20 ohm.
- * Wiring: 4 common wires plus 1 individual wire per station between masters.
2 common wires plus 1 individual wire per sub station to master station.
If system includes BGM and/or All Call functions, additional wires are required as shown below;
- * Switch capacity for door release: AC 240V, 1A or DC 30V, 1A

	Between masters	Between masters & BG-1A/BG-1B
For communication	4 common + 1 individual	—
For BGM	4 common + 1 individual	4 common + 1 individual
For All Call	7 common + 1 individual	7 common + 1 individual
For both BGM and All Call	7 common + 1 individual	7 common + 1 individual
For Door Release	Additional 2 common	—

FEATURES

CAN BE INTERMIXED WITH LAF-LOUDSPEAKER INTERCOM SYSTEM: LAF-3A, LAF-5, LAF-10 AND LAF-10S AND RELATED SUBS.

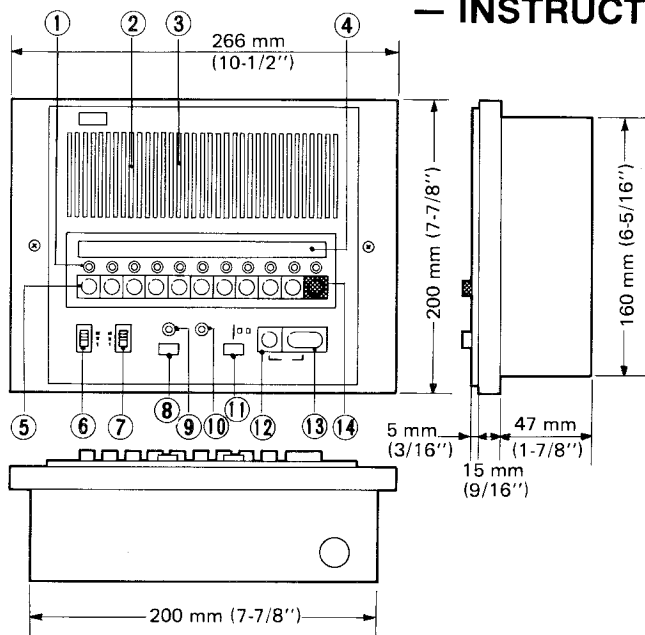
- * Hands free reply and high output power allow use in large or noisy rooms.
- * BGM and All Call can be incorporated using an adaptor: BG-1A/BG-1B and an amplifier.
- * Single talk path. Occupied lamp illumination indicates the system is in use.
- * Semi-flush mounts to wall.
- * Separate volume controls for communication and call tone.
- * Privacy switch prevents station from being monitored.
- * Call lamp for sub call-in remains illuminated at master for approx. 20 seconds.
- * Includes a button for door release.

HOME INTERCOM

Model: LAF-10BS (10-call master, Semi-flush mount)

LAF-10BS, SEMI-FLUSH MOUNT TYPE CAN BE INTERMIXED WITH LAF SYSTEM MASTERS: LAF-3A, LAF-5, LAF-10 & LAF-10S AND SUBS: LA-A, LA-AN, LA-A3, LA-AN3 & LA-D.

— INSTRUCTIONS —



NAMES AND FUNCTIONS

- ① Call-in annunciator light (× 10)
- ② Speaker
- ③ Microphone
- ④ Directory card
- ⑤ Selector button (× 10)
- ⑥ Volume control for communication
- ⑦ Volume control for call tone
- ⑧ All Call button
- ⑨ All Call output indicator light
- ⑩ Occupied light
- ⑪ Door release button
- ⑫ Privacy button
- ⑬ TALK button
- ⑭ OFF button

SPECIFICATIONS

- * Power source: DC-12V. Use PS-12A (or PS-12C in North America) power supply.
- * Current consumption: 350mA maximum.
- * Power output: 800mW maximum at 20 ohm.
- * Wiring: 4 common wires plus 1 individual wire per station between masters.
2 common wires plus 1 individual wire per sub station to master station.
If system includes BGM and/or All Call functions, additional wires are required as shown below;
- * Switch capacity for door release: AC 240V, 1A or DC 30V, 1A

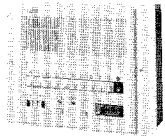
	Between masters	Between masters & BG-1A/BG-1B
For communication	4 common + 1 individual	—
For BGM	4 common + 1 individual	4 common + 1 individual
For All Call	7 common + 1 individual	7 common + 1 individual
For both BGM and All Call	7 common + 1 individual	7 common + 1 individual
For Door Release	Additional 2 common	—

FEATURES

CAN BE INTERMIXED WITH LAF-LOUDSPEAKER INTERCOM SYSTEM: LAF-3A, LAF-5, LAF-10 AND LAF-10S AND RELATED SUBS.

- * Hands free reply and high output power allow use in large or noisy rooms.
- * BGM and All Call can be incorporated using an adaptor: BG-1A/BG-1B and an amplifier.
- * Single talk path. Occupied lamp illumination indicates the system is in use.
- * Semi-flush mounts to wall.
- * Separate volume controls for communication and call tone.
- * Privacy switch prevents station from being monitored.
- * Call lamp for sub call-in remains illuminated at master for approx. 20 seconds.
- * Includes a button for door release.

COMPONENTS AVAILABLE FOR USE IN LAF-10BS SYSTEM



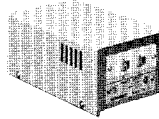
LAF-10BS, 10-call master.
Semi-flush mount.



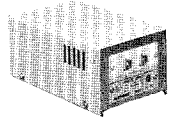
BG-1B, BGM & All Call adaptor.
Use with PG-10B.



BG-1A, BGM & All Call adaptor.
Use with PG-10A
(for N. America only)



PS-12A, Standard power supply.



PS-12C, UL & CSA LISTED power
supply (for N. America only)



PG-10B, Standard paging amplifier,
10W.



PG-10A, UL & CSA LISTED paging
amplifier (for N. America
only), 10W.



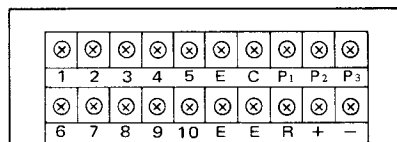
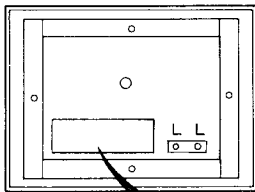
PG-3: 3-watt paging amplifier.

NOTE: The LAF system masters: LAF-3A, LAF-5, LAF-10, LAF-10S and the related subs: LA-A, LA-AN, LA-A3, LA-AN3, LA-D and LA-DA can be intermixed with your LAF-10BS system. For details, please refer to the Instructions packed with LAF masters.

INSTALLATION

Do not attempt to install your LAF-10BS system until you have read and thoroughly understand the installation instructions. Aiphone's warranty is void if system is installed in a manner other than described in this manual.

ACTUAL TERMINAL LOCATION



- 1 ~ 10 : for connecting station units.
- C : for receiving a call and BGM
- + ~ - : for power supply
- E : for common communication
- R : for occupied lamp
- P₁ : for All Call control
- P₂ , P₃ : for All Call output
- L , L : for door release

WIRING

Lay out your system in advance. Determine the exact location of each station. Make a sketch showing the number of wires required from each station to other stations. Assign station numbers at this time.

Begin your installation with master station #1. All masters included in your system should be connected and tested before beginning sub station installation. A space is provided at the left of the diagram to write in your color code. Note the position of C terminal on each master station. Be sure you wire each station correctly.

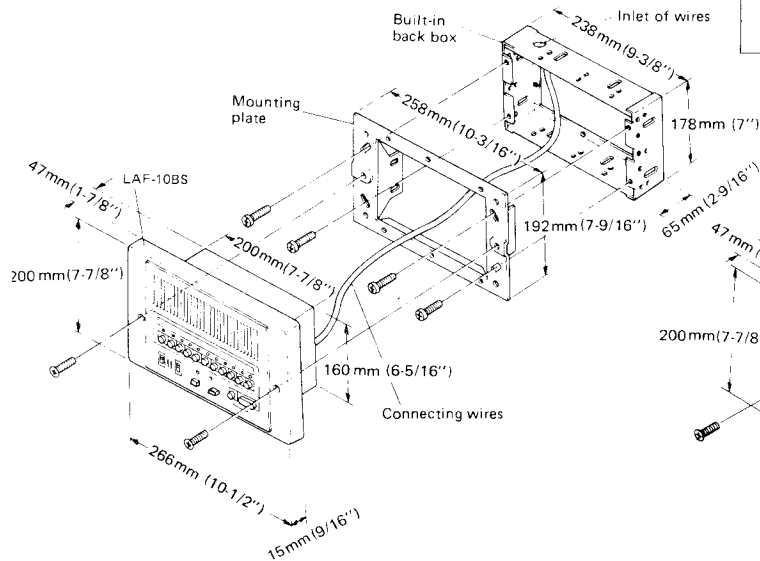
After installing your second station we recommend the power supply be connected to plus and minus and a test be made for all functions, calling and talking between each station. Unplug power supply while making connections.

Refer to the chart below and select the proper wire gauge to meet your distance requirements.

AWG WIRE SIZE	24 AWG	22 AWG	20 AWG
DISTANCE (feet)	400'	650'	1,000'
DIAMETER OF WIRE	0.5 mm	0.65 mm	0.8 mm
DISTANCE (meter)	120 m	200 m	300 m

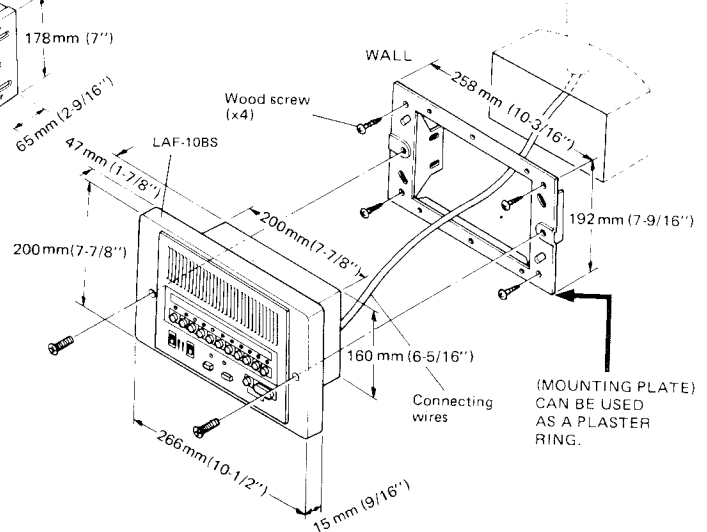
WALL MOUNTING INSTALLATION

LAF-10BS is shipped with a built-in back box. For use in new construction, the mounting plate is attached to the back box. After wiring, mount a LAF-10BS unit to the mounting plate.



To install to existing wall, attach the mounting plate directly to wall, and mount the LAF-10BS unit to the mounting plate.

NOTE: TO AVOID FEEDBACK, DO NOT PLACE MASTER STATION AND MASTER/SUB STATIONS BACK TO BACK, OR IN A COMMON WALL BETWEEN ROOMS.

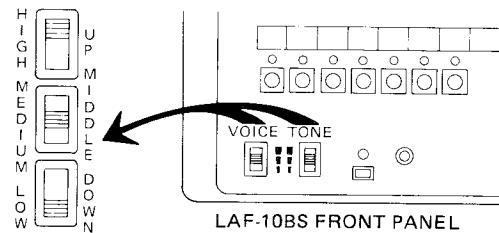


ADJUSTING VOLUME CONTROLS

LAF-10BS is provided with two volume controls on front panel and allows separate volume adjustment for communication and incoming call tone to each of three levels as desired.

NOTE: It is recommended VOICE volume be set at middle position and TONE volume at high or medium position for normal use.

LAF-10BS has pre-setting volume control, which allows lowering the maximum level of communication. Open the back case by removing 6 screws. Using the minus driver, turn the volume counter-clockwise to achieve the desired level.

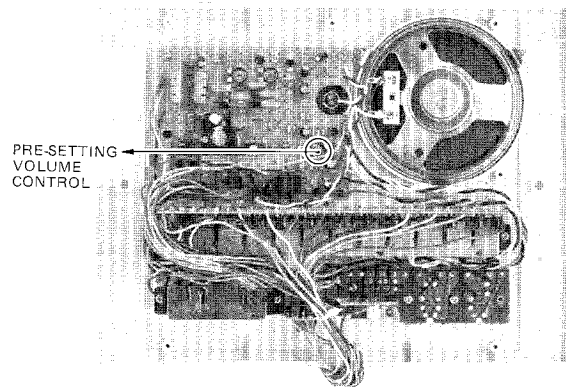


CONNECTING BG-1A/BG-1B ADAPTOR

Your LAF-10BS system, in conjunction with a BG-1A/BG-1B and an amplifier provides All Call and/or background music when connected to music source.

There are 11 music selector switches on BG-1A/BG-1B adaptor, which allow each LAF-10BS to receive BGM distribution individually.

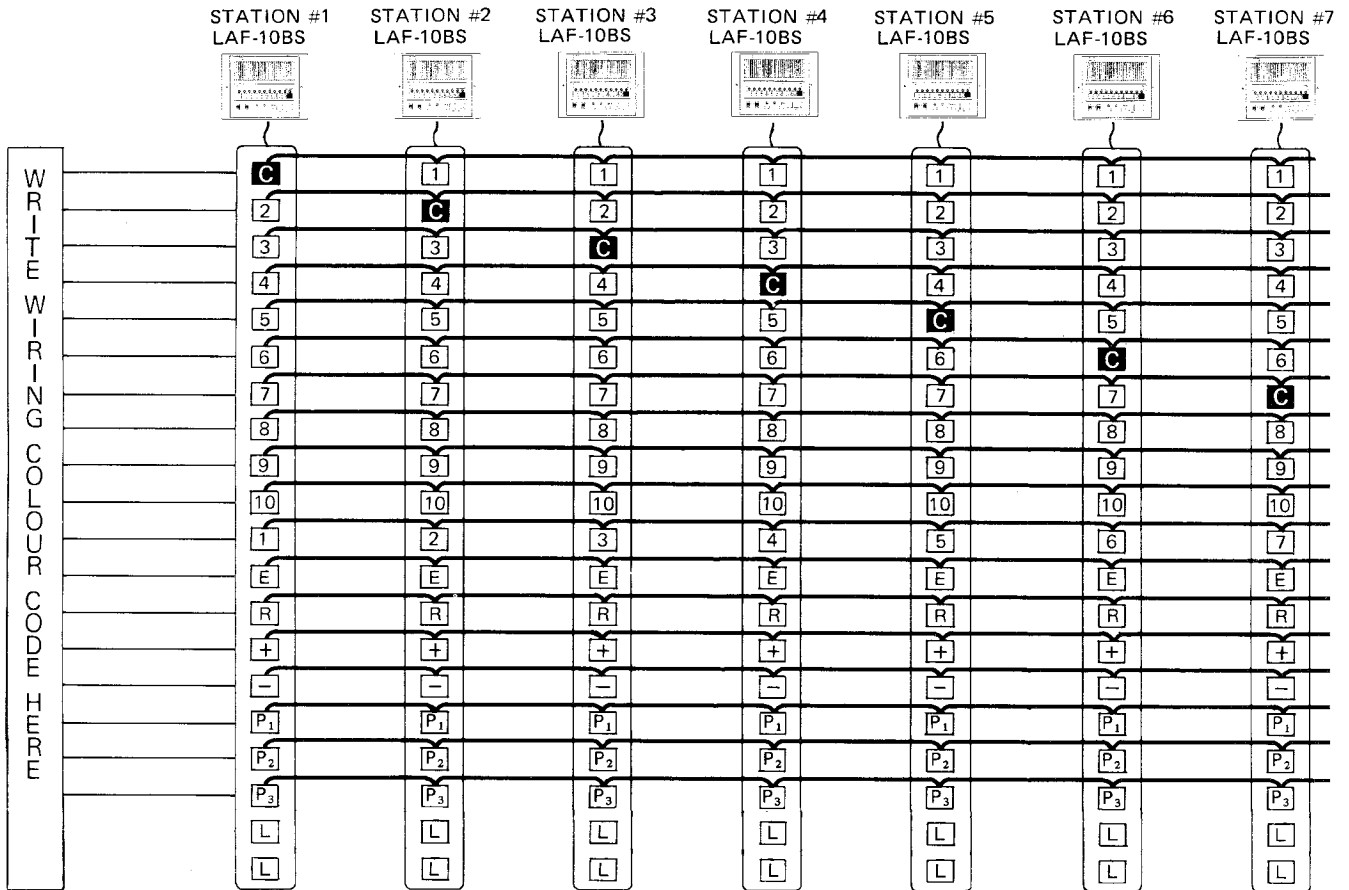
Please note the followings;



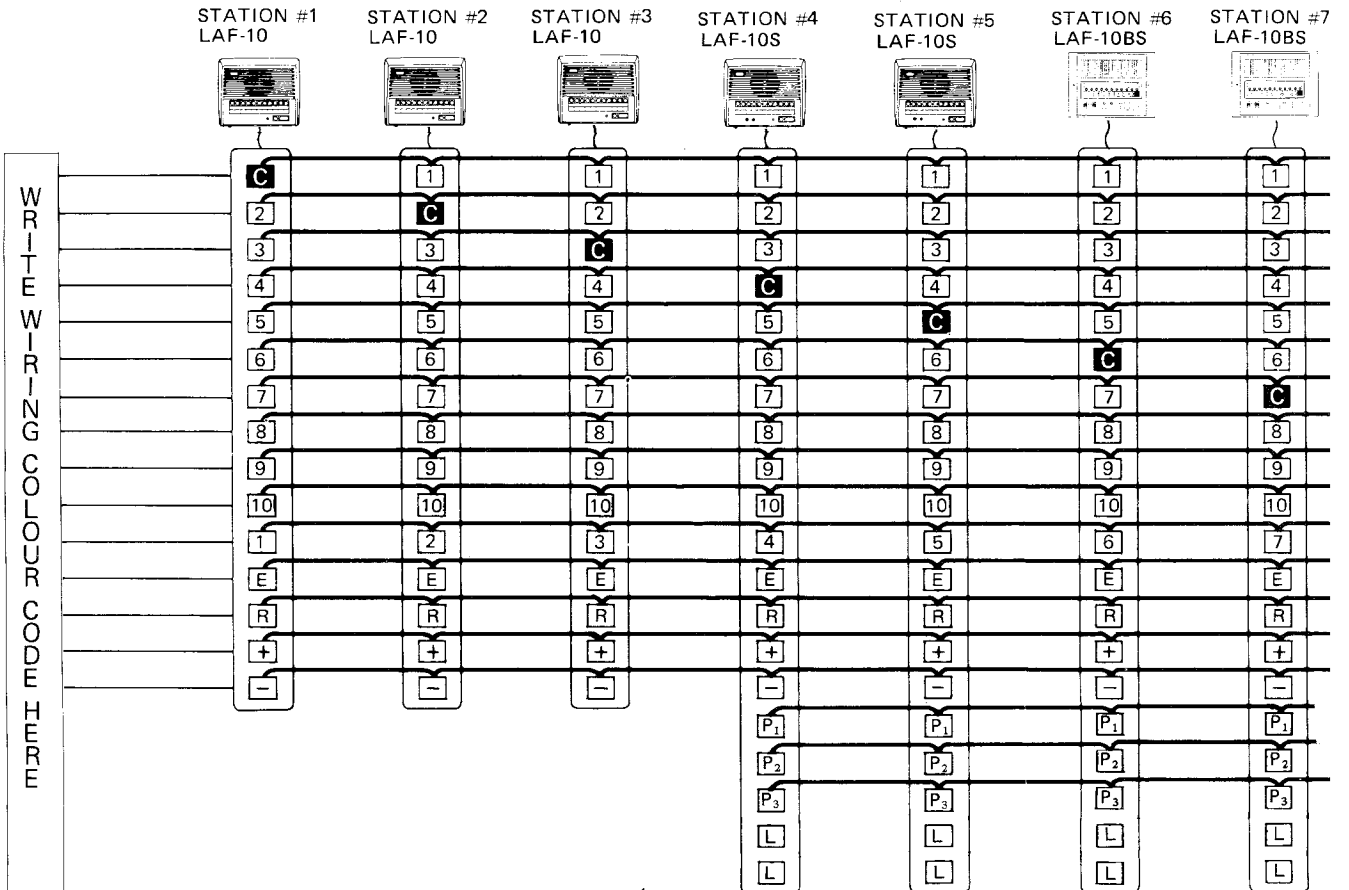
LAF-10BS INSIDE VIEW

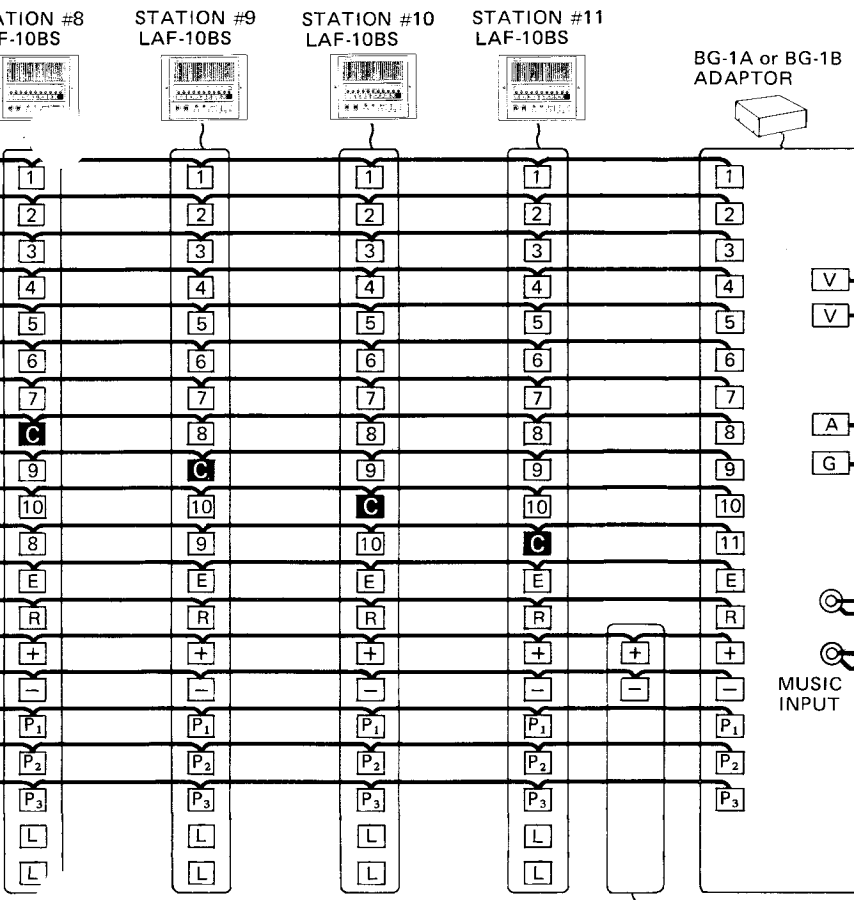
- 1) In an intermixed system, either LAF-10BS or LAF-10S can initiate All Call, while other LAF masters (LAF-3A, LAF-5 or LAF-10) can receive BGM distribution and/or All Call.
- 2) LA-A3 or LA-AN3, 3-call sub station can be connected to BG-1A/BG-1B adaptor for All Call/BGM reception and to one or two masters for communication (Please refer to wiring diagram Page 6).
- 3) DO NOT USE LA-A, LA-AN, LA-D NOR LA-DA FOR ALL CALL/BGM RECEPTION.
- 4) Locate BG-1A/BG-1B as near the power supply as possible.

LAF-10BS ALL MASTER SYSTEM WITH BG-1A/BG-1B ADAPTOR



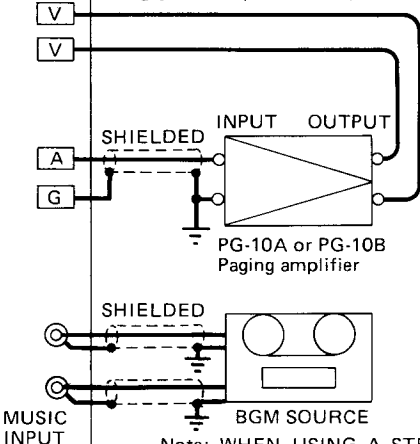
ALL-MASTER SYSTEM OF LAF-10BS/LAF-10S/LAF-10 WITH BG-1A/BG-1B ADAPTOR





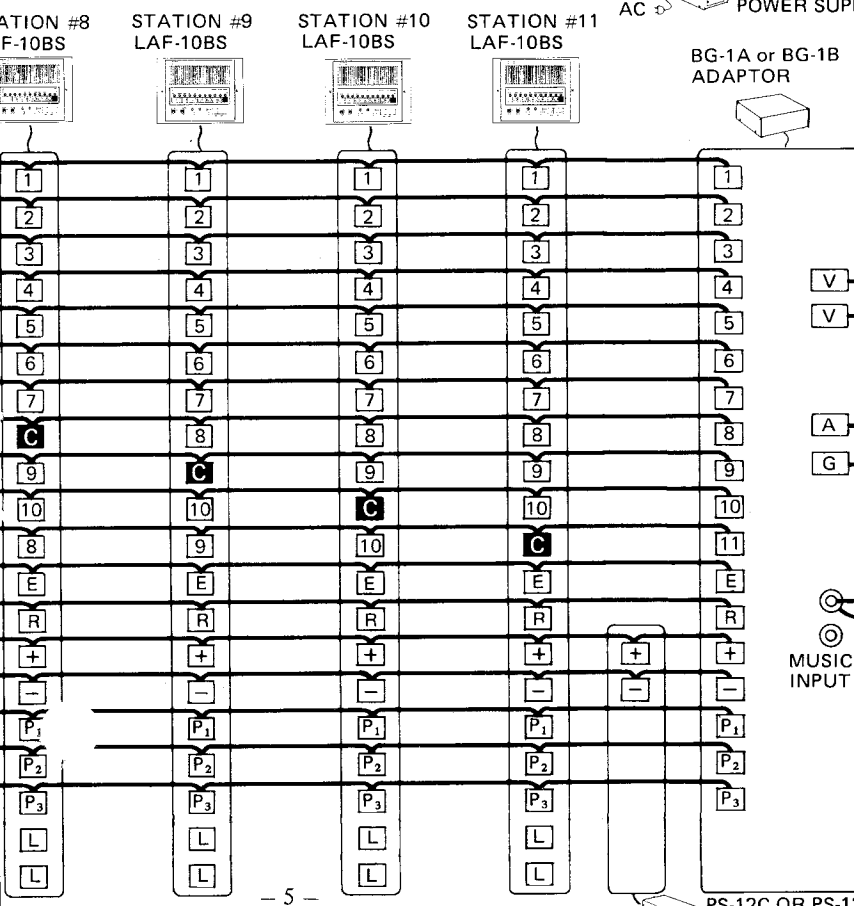
Note: Door release may be incorporated into your LAF-10BS system. Please refer to page 6 for door release installation instructions.

25V line (for PG-10A)
8 ohm line (for PG-10B)

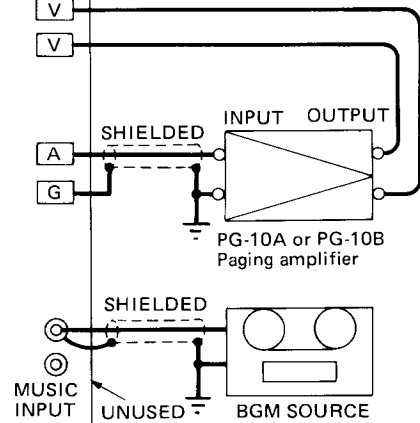


Note: WHEN USING A STEREO MUSIC SOURCE, eg. FM TUNER, 8-TRACK PLAYER OR CASSETTE PLAYER etc., CONNECT THE PHONO PLUGS DIRECTLY TO TWO PHONO JACKS ON THE BG-1A/BG-1B.

* Output requirements of music source:
Tuner; Use audio output: RANGE; 300mV ~ 1.2V, 10K ohm ~ 100K ohm.
Tape player; Use low level output: RANGE; 300mV ~ 1.2V, more than 600 ohm.



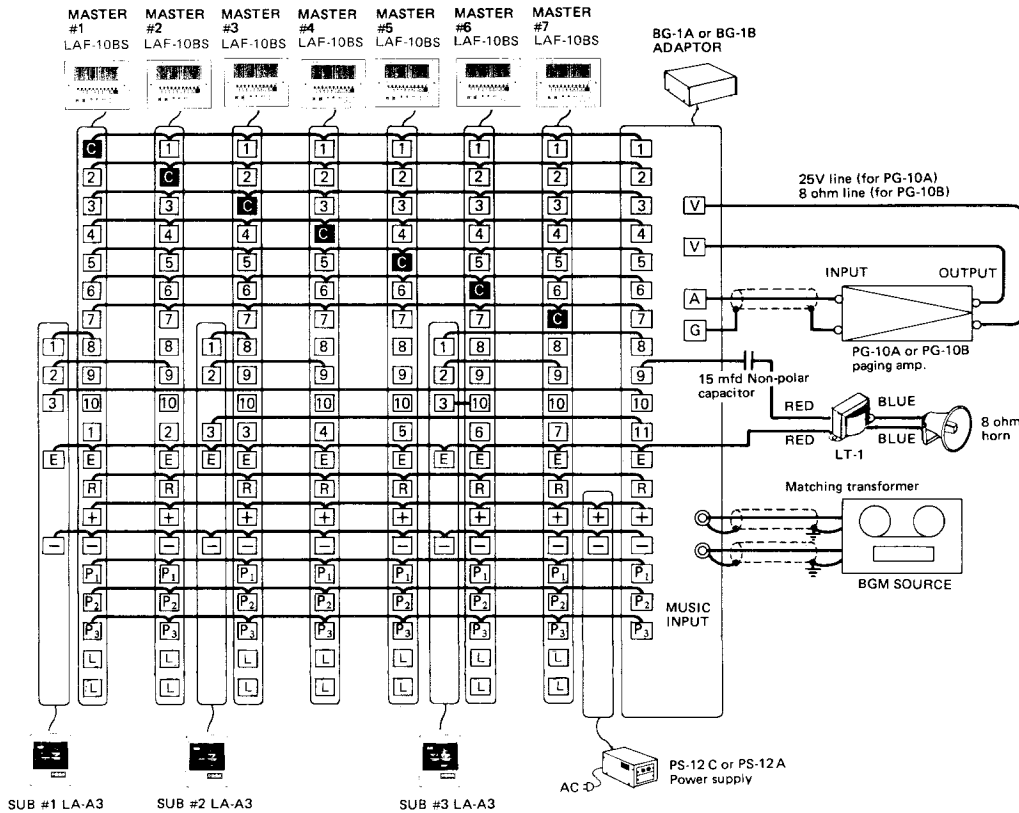
25V line (for PG-10A)
8 ohm line (for PG-10B)



Note: WHEN USING A MONO MUSIC SOURCE, eg. FM TUNER, 8-TRACK PLAYER OR CASSETTE PLAYER etc., CONNECT THE PHONO PLUG TO EITHER PHONO JACK ON THE BG-1A/BG-1B.

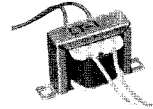
* Output requirements of music source:
Tuner; Use audio output: RANGE; 300mV ~ 1.2V, 10K ohm ~ 100K ohm.
Tape player; Use low level output: RANGE; 300mV ~ 1.2V, more than 600 ohm.

LAF-10BS INTERMIXED SYSTEM WITH BG-1A/BG-1B



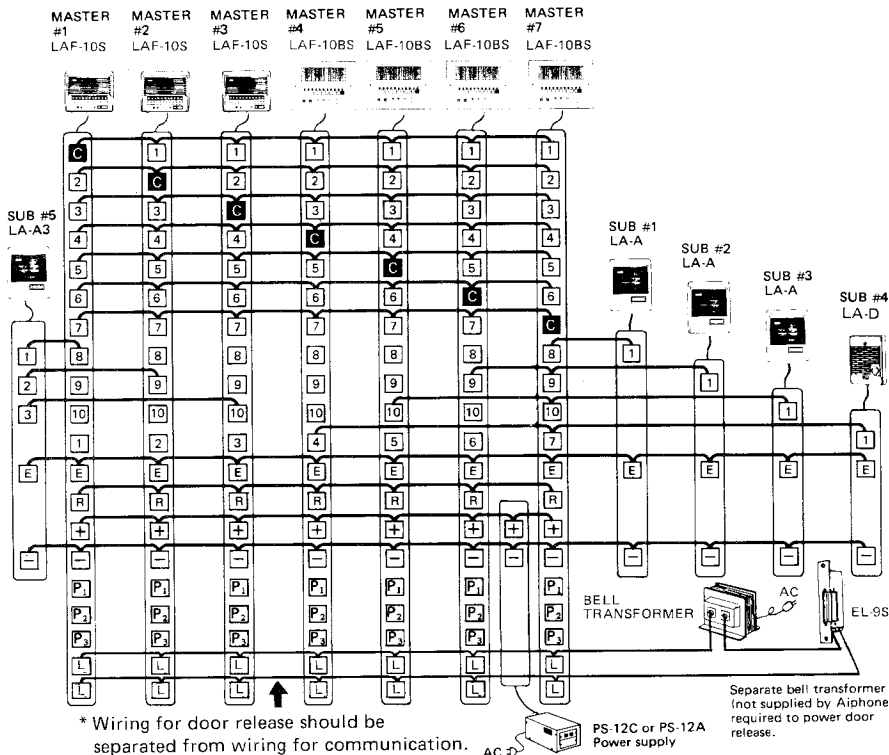
This diagram illustrates LAF-10BS system, using 3 LA-A3, 3-call sub stations intermixed.

Each LA-A3 can receive All Call and BGM, and communicate with two respective LAF-10BS masters.



LT-1:
20 ohm to 8 ohm matching transformer
Connects LAF-10BS to a 8 ohm paging horn.
(The 8 ohm speaker can only receive All Call and BGM.)

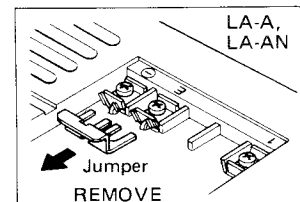
LAF-10BS AND LAF-10S WITH DOOR RELEASE



A call from LA-D door station will be annunciated at LAF-10BS #4 and #7. Door lock may be released from any LAF-10S or LAF-10BS masters.

All call and BGM may be added into LAF-10BS system incorporating door release.

Remove jumper between E and - terminals on all subs when used in an intermixed system.



MASTER STATION OPERATION

* Placing a call;

- 1) If occupied light is not lit, depress the selector button for the desired station.
- 2) To call by tone, momentarily depress both PRIVACY and TALK buttons.
- 3) To call by voice, depress TALK button and speak to the microphone.
- 4) Use TALK button to control communications.
- 5) Upon completing conversation, depress OFF button.

NOTE: LAF-10BS master station OFF button, when depressed, puts station in standby position as well as off position. OFF button MUST BE DEPRESSED and LOCKED DOWN on all master stations except station initiating a call or system will not work. Station selection will be indicated by a selection light above OFF button.

* Receiving a call from another master;

- 1) When your station is in non-privacy position, no action is required and communication is hands free.
- 2) When your station is switched for privacy, release privacy button by momentarily depressing TALK button, then resuming hands free operation.

NOTE: There is no LED annunciation between master stations except the Occupied light.

* Receiving a call from a sub station;

- 1) An incoming call is annunciated both by tone and light. Depress the selector button below the lighted annunciator light (and the light goes off).
- 2) Use TALK button to control communications. Upon completing conversation, depress OFF button.
- 3) Receiving a call from door station: Depress door release button for unlocking the door.

NOTE: When you receive calls from another master and a sub at the same time, reply first to master and, after the occupied light goes out, depress the selector button of the calling sub and communicate.
DO NOT DEPRESS THE SELECTOR BUTTON WHILE THE OCCUPIED LIGHT IS ILLUMINATED.

* Distributing BGM;

- 1) Turn on the ON/OFF switch for music on BG-1A/BG-1B as well as BGM source and an amplifier and BGM will be distributed through the selected station(s).
BGM is cut off automatically during communication.
- 2) When not distributing BGM, turn off the ON/OFF switch on BG-1A/BG-1B.

NOTE: A call tone from a sub during BGM distribution, will be announced through all the master station speakers, while the annunciator light on the called master stays lit for about 20 seconds.

* All Call (LAF-10BS and LAF-10S only)

- 1) Depress All Call button. A pre-tone will sound at the connected master station speakers. BGM is cut off automatically during All Call.
- 2) Depress TALK button while making announcement.
- 3) After announcement, unlock All Call switch by pushing it.

NOTE: DO NOT MAKE ALL CALL ANNOUNCEMENT WHILE OCCUPIED LIGHT IS LIT.

LA-A3/LA-AN3 OPERATION

- * Momentarily depress call button of desired master (unlock the privacy switch first for LA-AN3). After master replies, communication from LA-A3 (or LA-AN3) is hands free.
- * If no call tone is heard when call button is depressed, the system is occupied with another conversation. Please call later.
- * At conclusion of conversation, depress privacy button (only for LA-AN3).

NOTE: Background music will be cut off temporarily if you press the call button connected to BG-1A/BG-1B adaptor on LA-A3 or LA-AN3.

TO PREVENT ELECTRIC SHOCK

- * DO NOT CONNECT ANY TERMINAL ON ANY UNIT TO AC POWER LINES.
- * BE SURE TO REMOVE PLUG OF PS-12C (or PS-12A) FROM POWER OUTLET BEFORE YOU OPEN THE UNIT, OR MAKE WIRING CONNECTIONS.
- * Do not pinch connecting wires in windows, doors or desks.
- * LAF-10BS must be installed in as dry and dust-free environment as possible.

CLEANING YOUR INTERCOM STATIONS

- * Your Aiphone intercom stations may be cleaned with a soft cloth dampened with household cleanser, such as Mr. Clean or Fantastik.

We at Aiphone are proud of our products. Our designers and engineers strive to bring you the finest in communication equipment. Each item has been carefully tested and inspected before leaving our factory. Properly installed and used, your Aiphone intercom system should give years of trouble-free service.

We are pleased to offer the following warranty:

WARRANTY

Aiphone warrants its products to be free from defects of material and workmanship under normal use and service for a period of one year after delivery to the ultimate user and will repair free of charge or replace at no charge, should it become defective upon which examination shall disclose to be defective and under warranty. Aiphone reserves unto itself the sole right to make the final decision whether there is a defect in materials and/or workmanship; and whether or not the product is within the warranty.

This warranty shall not apply to any Aiphone product which has been subject to misuse, neglect, accident, or to use in violation of instructions furnished, nor extended to units which have been repaired or altered outside of the factory.

This warranty does not cover batteries or damage caused by batteries used in connection with the product.

This warranty covers bench repairs only, and any repairs must be made at the shop or place designated in writing by Aiphone. Aiphone will not be responsible for any costs incurred involving on site service calls.

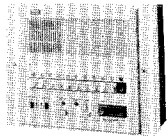
Aiphone Co., Ltd., Nagoya, Japan
Aiphone Corporation, Bellevue, Washington
LAF-10BSI-1284 ©



INTERCOM SYSTEMS
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COMPONENTS AVAILABLE FOR USE IN LAF-10B SYSTEM



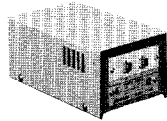
LAF-10B, 10-call master.
Semi-flush mount.



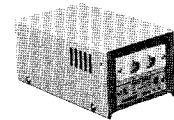
BG-1B, BGM & All Call adaptor.
Use with PG-10B.



BG-1A, BGM & All Call adaptor.
Use with PG-10A
(for N. America only)



PS-12A, Standard power supply.



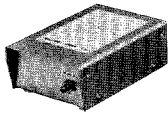
PS-12C, UL & CSA LISTED power
supply (for N. America only)



PG-10B, Standard paging amplifier,
10W.



PG-10A, UL & CSA LISTED paging
amplifier (for N. America
only), 10W.



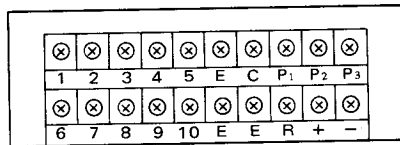
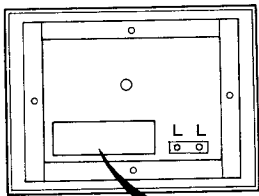
PG-3: 3-watt paging amplifier.

NOTE: The LAF system masters: LAF-3A, LAF-5, LAF-10, LAF-10S and the related subs: LA-A, LA-AN, LA-A3, LA-AN3, LA-D and LA-DA can be intermixed with your LAF-10B system. For details, please refer to the Instructions packed with LAF masters.

INSTALLATION

Do not attempt to install your LAF-10B system until you have read and thoroughly understand the installation instructions. Aiphone's warranty is void if system is installed in a manner other than described in this manual.

ACTUAL TERMINAL LOCATION



- 1 ~ 10 : for connecting station units.
- C : for receiving a call and BGM
- + ~ - : for power supply
- E : for common communication
- R : for occupied lamp
- P₁ : for All Call control
- P₂ , P₃ : for All Call output
- L , L : for door release

WIRING

Lay out your system in advance. Determine the exact location of each station. Make a sketch showing the number of wires required from each station to other stations. Assign station numbers at this time.

Begin your installation with master station #1. All masters included in your system should be connected and tested before beginning sub station installation. A space is provided at the left of the diagram to write in your color code. Note the position of C terminal on each master station. Be sure you wire each station correctly.

After installing your second station we recommend the power supply be connected to plus and minus and a test be made for all functions, calling and talking between each station. Unplug power supply while making connections.

Refer to the chart below and select the proper wire gauge to meet your distance requirements.

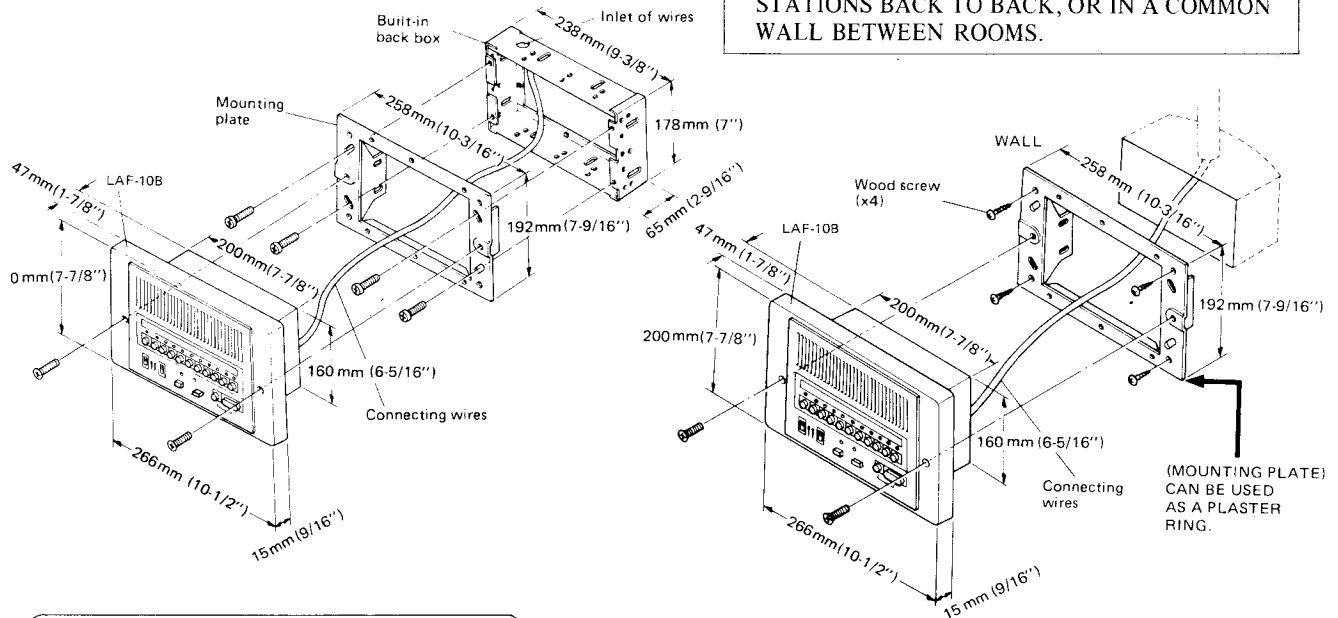
AWG WIRE SIZE	24 AWG	22 AWG	20 AWG
DISTANCE (feet)	400'	650'	1,000'
DIAMETER OF WIRE	0.5 mm	0.65 mm	0.8 mm
DISTANCE (meter)	120 m	200 m	300 m

WALL MOUNTING INSTALLATION

LAF-10B is shipped with a built-in back box. For use in new construction, the mounting plate is attached to the back box. After wiring, mount a LAF-10B unit to the mounting plate.

To install to existing wall, attach the mounting plate directly to wall, and mount the LAF-10B unit to the mounting plate.

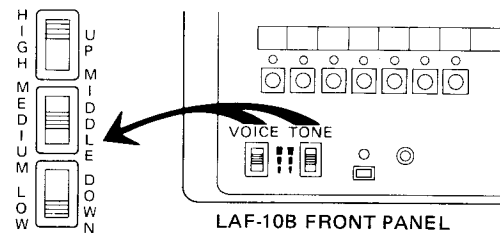
NOTE: TO AVOID FEEDBACK, DO NOT PLACE MASTER STATION AND MASTER/SUB STATIONS BACK TO BACK, OR IN A COMMON WALL BETWEEN ROOMS.



ADJUSTING VOLUME CONTROLS

LAF-10B is provided with two volume controls on front panel and allows separate volume adjustment for communication and incoming call tone to each of three levels as desired.

NOTE: It is recommended VOICE volume be set at middle position and TONE volume at high or medium position for normal use.

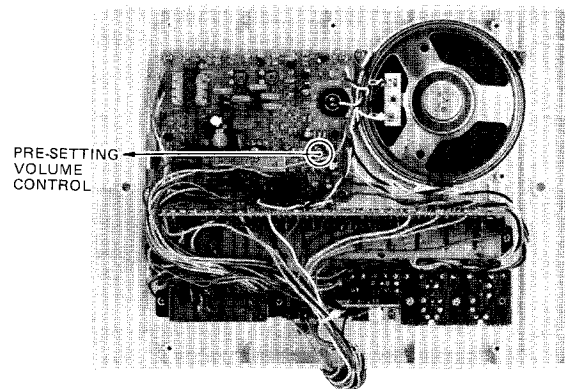


LAF-10B has pre-setting volume control, which allows lowering the maximum level of communication. Open the back case by removing 6 screws. Using the minus driver, turn the volume counter-clockwise to achieve the desired level.

CONNECTING BG-1A/BG-1B ADAPTOR

Your LAF-10B system, in conjunction with a BG-1A/BG-1B and an amplifier provides All Call and/or background music when connected to music source.

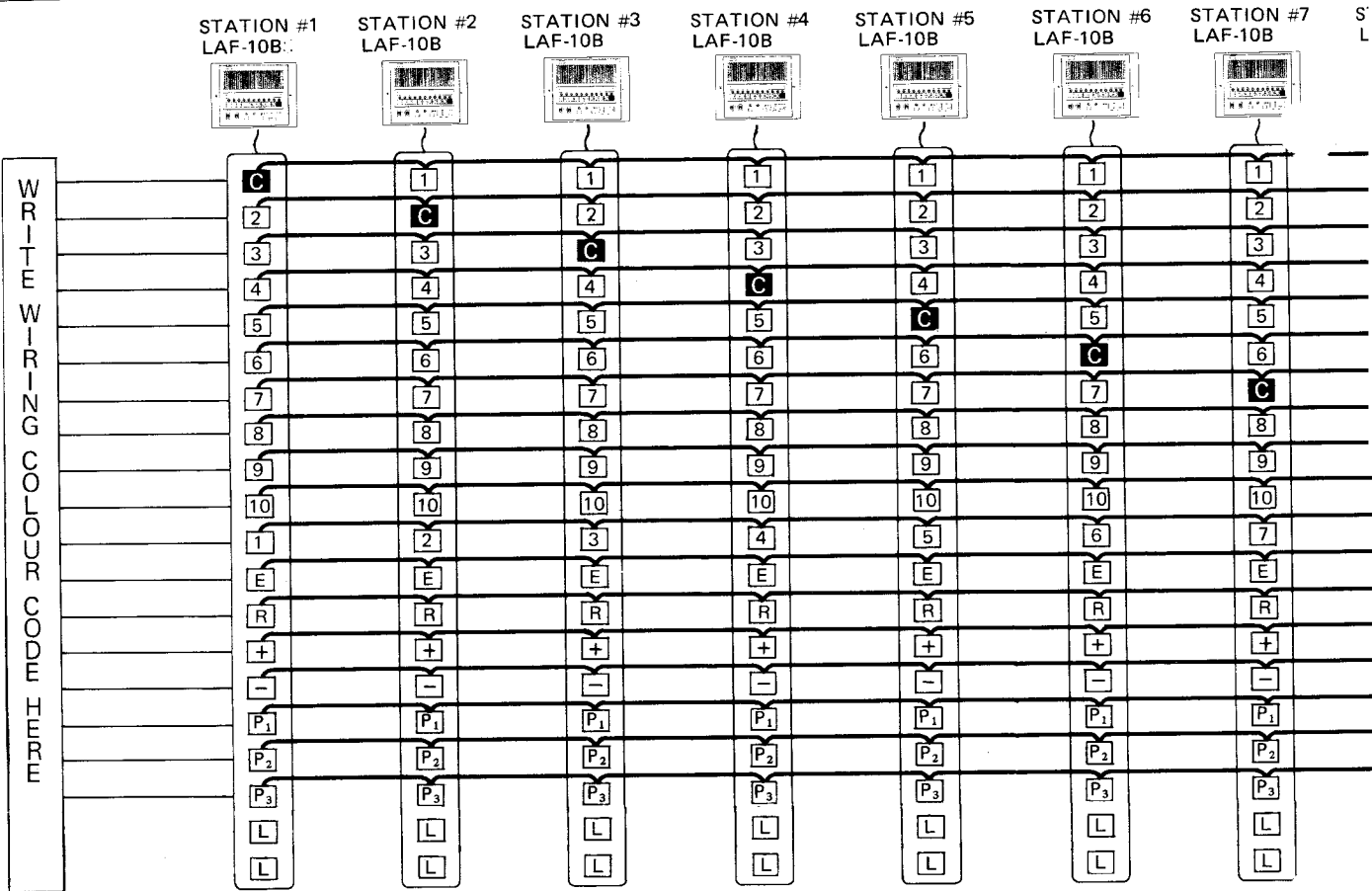
There are 11 music selector switches on BG-1A/BG-1B adaptor, which allow each LAF-10B to receive BGM distribution individually. Please note the followings;



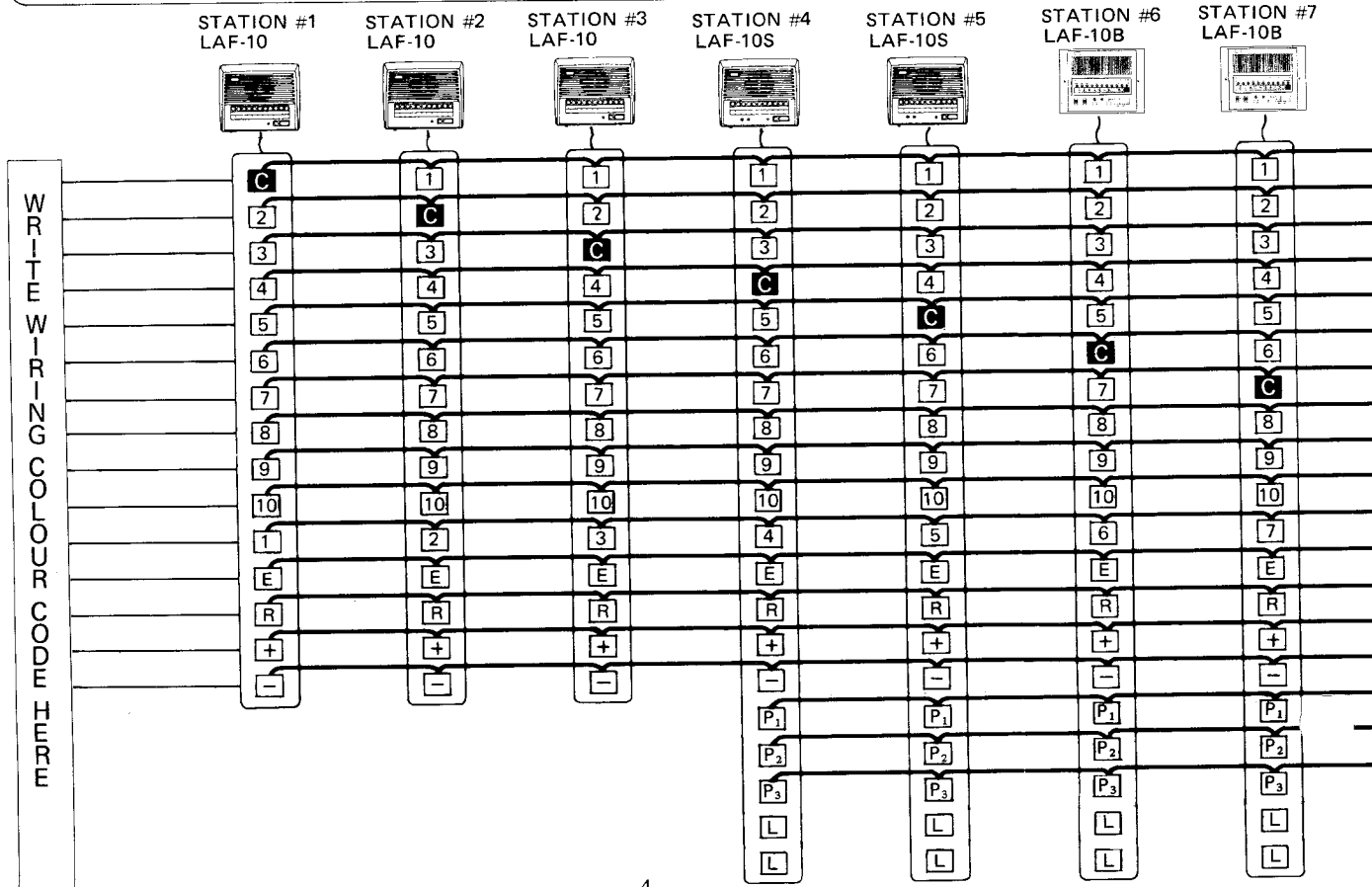
LAF-10B INSIDE VIEW

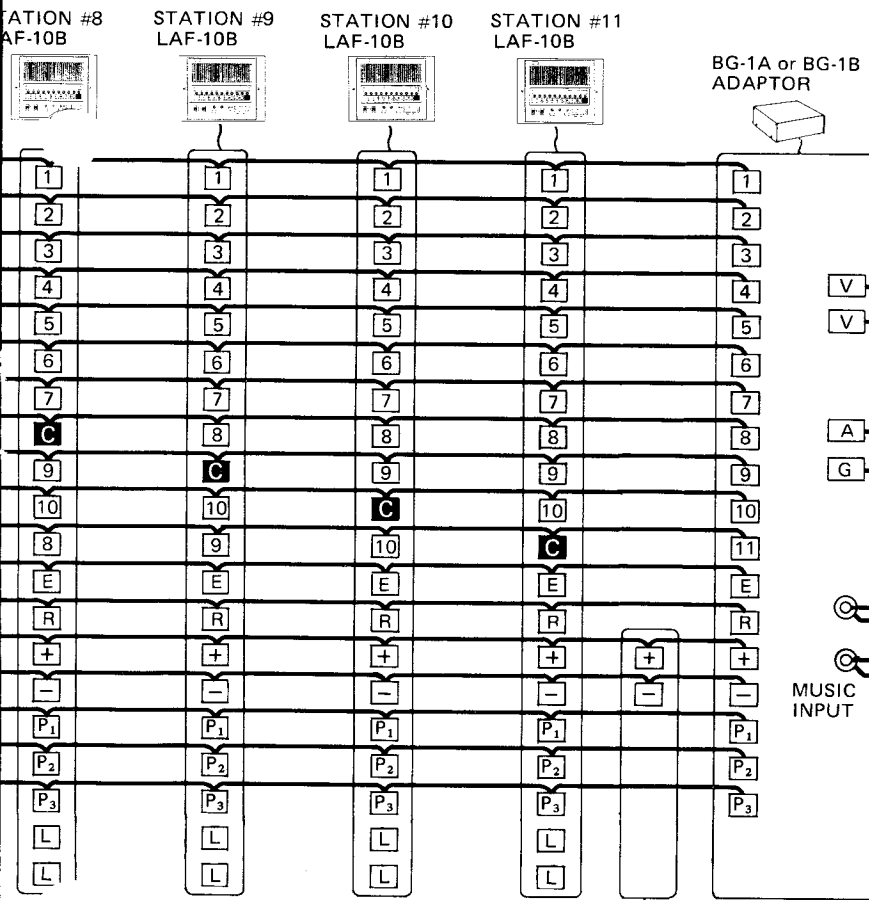
- 1) In an intermixed system, either LAF-10B or LAF-10S can initiate All Call, while other LAF masters (LAF-3A, LAF-5 or LAF-10) can receive BGM distribution and/or All Call.
- 2) LA-A3 or LA-AN3, 3-call sub station can be connected to BG-1A/BG-1B adaptor for All Call/BGM reception and to one or two masters for communication (Please refer to wiring diagram Page 6).
- 3) DO NOT USE LA-A, LA-AN, LA-D NOR LA-DA FOR ALL CALL/BGM RECEPTION.
- 4) Locate BG-1A/BG-1B as near the power supply as possible.

LAF-10B ALL MASTER SYSTEM WITH BG-1A/BG-1B ADAPTOR

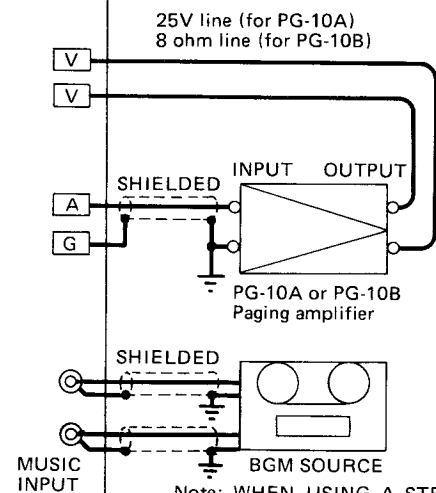


ALL-MASTER SYSTEM OF LAF-10B/LAF-10S/LAF-10 WITH BG-1A/BG-1B ADAPTOR



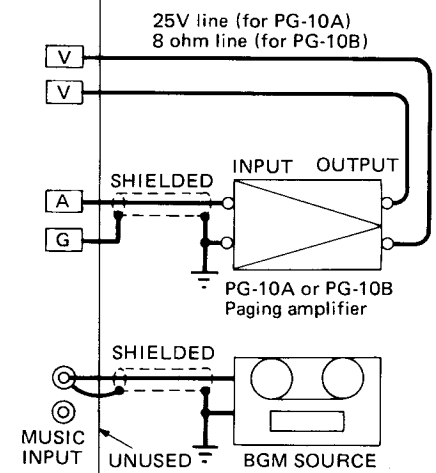
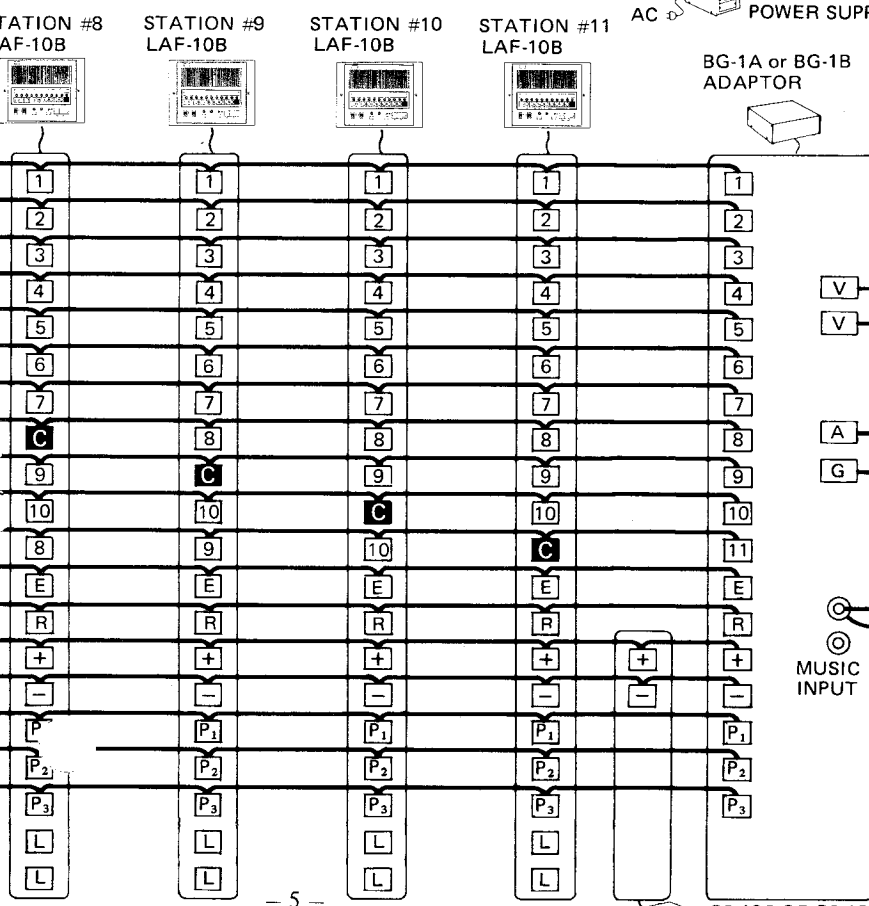


Note: Door release may be incorporated into your LAF-10B system. Please refer to page 6 for door release installation instructions.



Note: WHEN USING A STEREO MUSIC SOURCE, eg. FM TUNER, 8-TRACK PLAYER OR CASSETTE PLAYER etc., CONNECT THE PHONO PLUGS DIRECTLY TO TWO PHONO JACKS ON THE BG-1A/BG-1B.

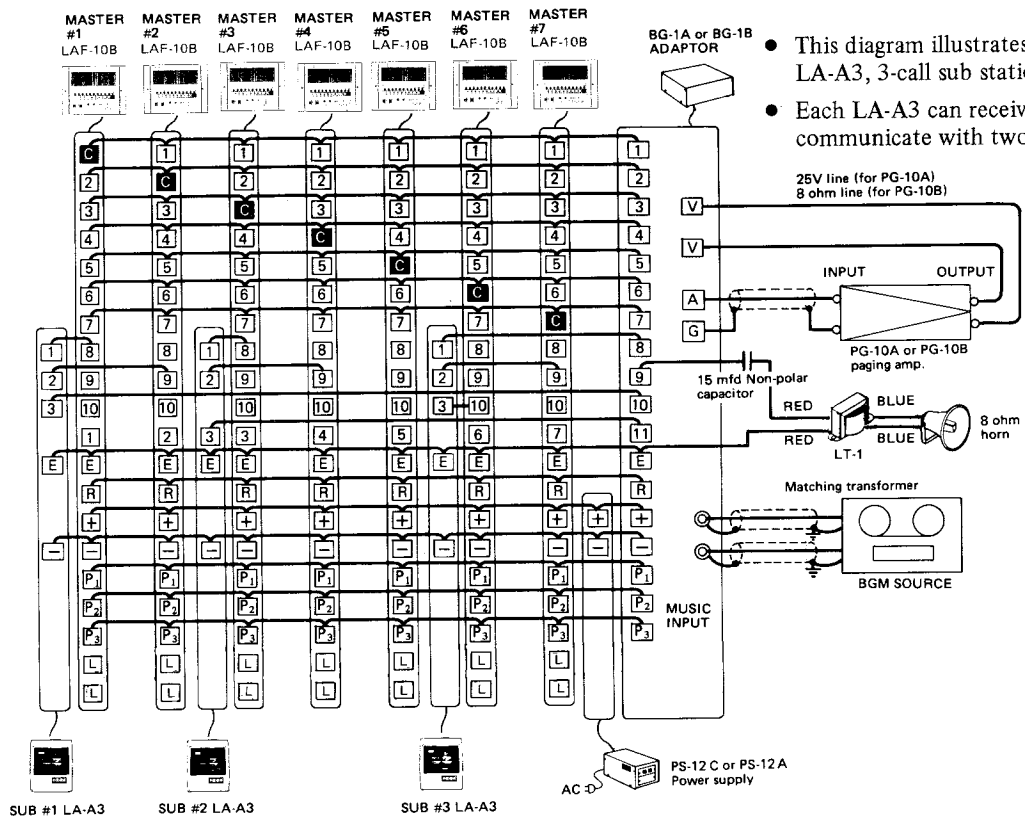
* Output requirements of music source:
Tuner; Use audio output: RANGE; 300mV ~ 1.2V, 10K ohm ~ 100K ohm.
Tape player; Use low level output: RANGE; 300mV ~ 1.2V, more than 600 ohm.



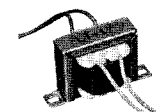
Note: WHEN USING A MONO MUSIC SOURCE, eg. FM TUNER, 8-TRACK PLAYER OR CASSETTE PLAYER etc., CONNECT THE PHONO PLUG TO EITHER PHONO JACK ON THE BG-1A/BG-1B.

* Output requirements of music source:
Tuner; Use audio output: RANGE; 300mV ~ 1.2V, 10K ohm ~ 100K ohm.
Tape player; Use low level output: RANGE; 300mV ~ 1.2V, more than 600 ohm.

LAF-10B INTERMIXED SYSTEM WITH BG-1A/BG-1B

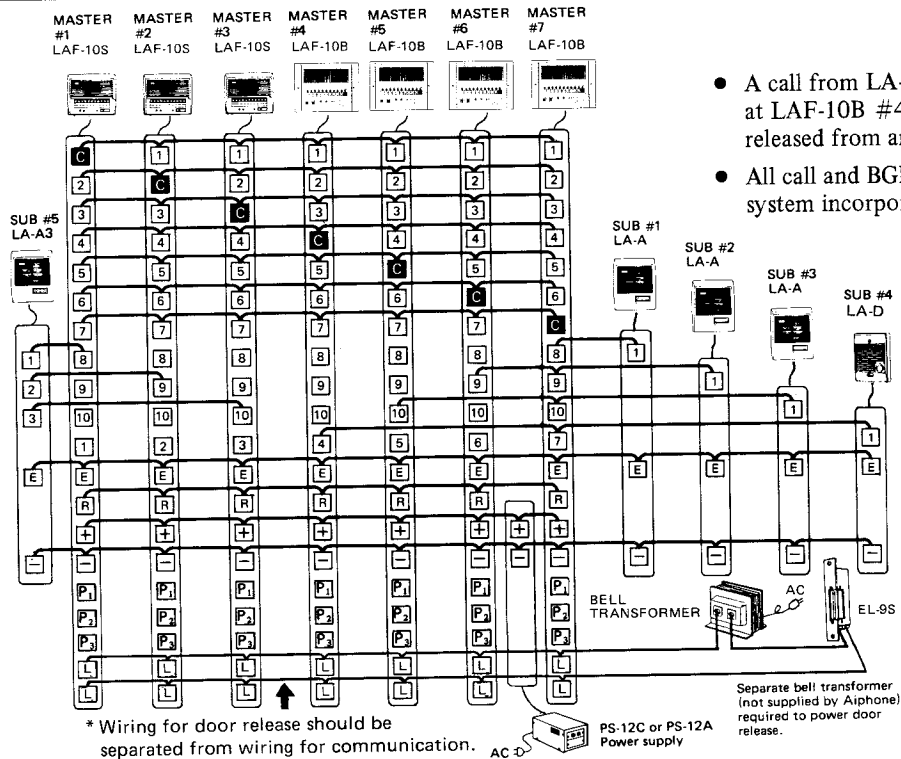


- This diagram illustrates LAF-10B system, using 3 LA-A3, 3-call sub stations intermixed.
- Each LA-A3 can receive All Call and BGM, and communicate with two respective LAF-10B masters.



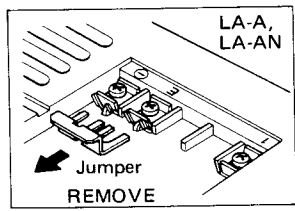
LT-1:
20 ohm to 8 ohm matching transformer. Connects LAF-10B to a 8 ohm paging horn.
(The 8 ohm speaker can only receive All Call and BGM.)

LAF-10B AND LAF-10S WITH DOOR RELEASE



- A call from LA-D door station will be annunciated at LAF-10B #4 and #7. Door lock may be released from any LAF-10S or LAF-10B masters.
- All call and BGM may be added into LAF-10B system incorporating door release.

Remove jumper between E and - terminals on all subs when used in an intermixed system.



* Wiring for door release should be separated from wiring for communication.

Separate bell transformer (not supplied by Aiphone) required to power door release.

MASTER STATION OPERATION

- * Placing a call;
 - 1) If occupied light is not lit, depress the selector button for the desired station.
 - 2) To call by tone, momentarily depress both PRIVACY and TALK buttons.
 - 3) To call by voice, depress TALK button and speak to the microphone.
 - 4) Use TALK button to control communications.
 - 5) Upon completing conversation, depress OFF button.

NOTE: LAF-10B master station OFF button, when depressed, puts station in standby position as well as off position. OFF button **MUST BE DEPRESSED and LOCKED DOWN** on all master stations except station initiating a call or system will not work. Station selection will be indicated by a selection light above OFF button.

- * Receiving a call from another master;
 - 1) When your station is in non-privacy position, no action is required and communication is hands free.
 - 2) When your station is switched for privacy, release privacy button by momentarily depressing TALK button, then resuming hands free operation.

NOTE: There is no LED annunciation between master stations except the Occupied light.

- * Receiving a call from a sub station;
 - 1) An incoming call is annunciated both by tone and light. Depress the selector button below the lighted annunciator light (and the light goes off).
 - 2) Use TALK button to control communications. Upon completing conversation, depress OFF button.
 - 3) Receiving a call from door station: Depress door release button for unlocking the door.

NOTE: When you receive calls from another master and a sub at the same time, reply first to master and, after the occupied light goes out, depress the selector button of the calling sub and communicate.
DO NOT DEPRESS THE SELECTOR BUTTON WHILE THE OCCUPIED LIGHT IS ILLUMINATED.

- * Distributing BGM;
 - 1) Turn on the ON/OFF switch for music on BG-1A/BG-1B as well as BGM source and an amplifier and BGM will be distributed through the selected station(s).
BGM is cut off automatically during communication.
 - 2) When not distributing BGM, turn off the ON/OFF switch on BG-1A/BG-1B.

NOTE: A call tone from a sub during BGM distribution, will be announced through all the master station speakers, while the annunciator light on the called master stays lit for about 20 seconds.

- * All Call (LAF-10B and LAF-10S only)
 - 1) Depress All Call button. A pre-tone will sound at the connected master station speakers. BGM is cut off automatically during All Call.
 - 2) Depress TALK button while making announcement.
 - 3) After announcement, unlock All Call switch by pushing it.

NOTE: DO NOT MAKE ALL CALL ANNOUNCEMENT WHILE OCCUPIED LIGHT IS LIT.

LA-A3/LA-AN3 OPERATION

- * Momentarily depress call button of desired master (unlock the privacy switch first for LA-AN3). After master replies, communication from LA-A3 (or LA-AN3) is hands free.
- * If no call tone is heard when call button is depressed, the system is occupied with another conversation. Please call later.
- * At conclusion of conversation, depress privacy button (only for LA-AN3).

NOTE: Background music will be cut off temporarily if you press the call button connected to BG-1A/BG-1B adaptor on LA-A3 or LA-AN3.

TO PREVENT ELECTRIC SHOCK

- * DO NOT CONNECT ANY TERMINAL ON ANY UNIT TO AC POWER LINES.
- * BE SURE TO REMOVE PLUG OF PS-12C (or PS-12A) FROM POWER OUTLET BEFORE YOU OPEN THE UNIT, OR MAKE WIRING CONNECTIONS.
- * Do not pinch connecting wires in windows, doors or desks.
- * LAF-10B must be installed in as dry and dust-free environment as possible.

CLEANING YOUR INTERCOM STATIONS

- * Your Aiphone intercom stations may be cleaned with a soft cloth dampened with household cleanser, such as Mr. Clean or Fantastik.

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Aiphone Co., Ltd., Nagoya, Japan
Aiphone Corporation, Bellevue, Washington

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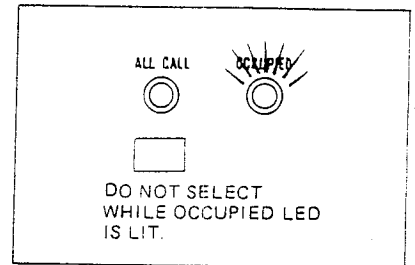
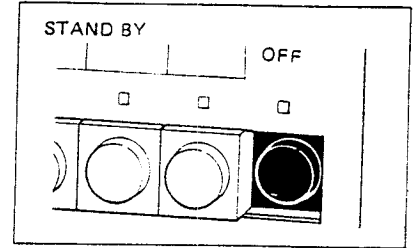


BEFORE YOU INSTALL AND OPERATE THE EQUIPMENT

— Prohibitions and precautions —

*Operation;

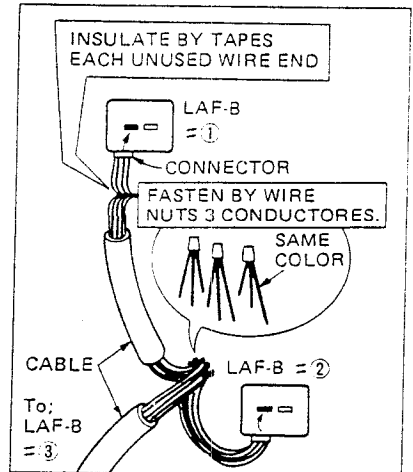
1. On all LAF master stations, except station initiating a call, OFF button MUST BE DEPRESSED and LOCKED DOWN, or system will not work. The illuminated LED above OFF button indicates you forget to depress OFF button, if not in use.
2. The illuminated OCCUPIED LED indicates the other station is using the system. While this OCCUPIED LED is lit,
 - (1) Do not depress any selector button. The squeak sound will come out at initiating and receiving stations.
So, when you receive calls from another master and a sub at the same time, REPLY FIRST TO THE MASTER and, after the OCCUPIED LED goes out, depress a selector button of the calling sub and communicate.
 - (2) Do not make All Call nor any other operation, when LAF-B units are intermixed with existing models (LAF-3A/5/10/10S/10B/10BS).
3. When a sub station calls during Background music distribution, the call tone will come out through all LAF station speakers, and call-in annunciator LED stays lit for approximately 20 seconds on the called master station.



Installation: 4

* Installation;

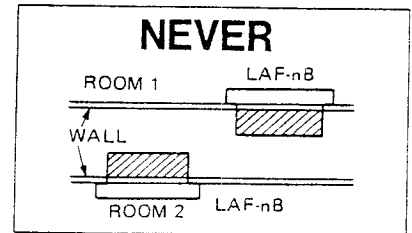
1. DO NOT CONNECT ANY TERMINAL ON ANY UNIT TO AC POWER LINES.
2. Be sure not to plug power supply into AC receptacle until you complete wiring connections, and unplug before opening the unit.
3. Lay out your system in advance. Determine the exact location of each station. Assign station number and make a sketch showing the number of wires and color codes from one station to another. Begin your installation with master station No. 1. Upon installing second master station, we recommend a test be made for all functions, calling and talking between each station. After completing all the masters connection and testing, begin sub station installation.
4. Insulate by tape, etc. each unused connector wire end. If touches the other wires or back box it will cause damage to the units.



Installation location: 6

Installation location;

5. Select the installation locations that would not be exposed to temperature/humidity extremes, water, oil, dust, iron dust, inflammable and chemical products, etc.
6. To avoid feedback, DO NOT PLACE MASTER STATION AND ANOTHER MASTER OR SUB STATION BACK TO BACK, OR ON A COMMON WALL BETWEEN ROOMS.



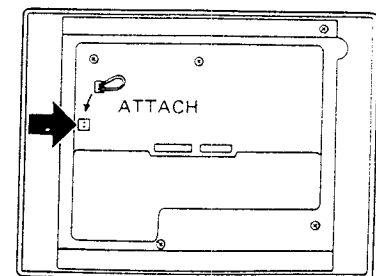
Unit selection;

7. When making an intermixed system, note in advance that master stations: LAF-3A, LAF-5, LAF-10 console types have no button for All Call nor door release. LAF-1B and LAF-3B have only door release button. If such functions required at console type station, please use LAF-10S.
8. If any LAF-B station: LAF-1B/3B/7B/10B (Type A) is intermixed with existing models: LAF-3A/5/10/10S/10B, install a supplied 2-pin connector on back of all the LAF-B units.

Unit selection: 8

Adaptor installation location;

9. Locate PS-12A (or PS-12C) power supply near center of the system.
10. Locate BG-1A/1B adaptor near by the power supply.



LAF-7B BACK VIEW

*Maintenance;

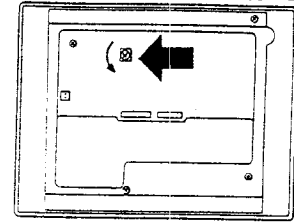
1. Clean your equipment with a soft cloth dampened with neutral household cleanser. Never use thinner nor benzine, etc.

***Volume adjustment;**

LAF-B unit has pre-setting volume, allowing to lower the maximum level of communication. On back of LAF-B unit, using a philip screwdriver, turn the volume counter-clockwise to achieve the desired level.

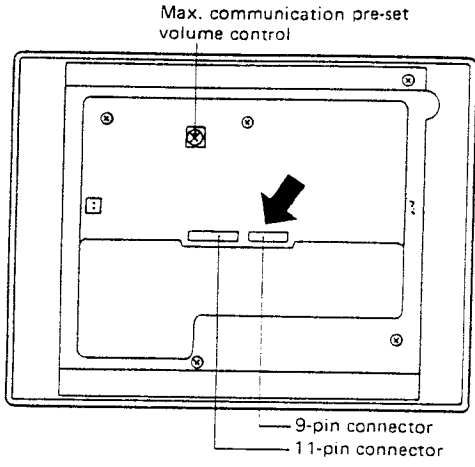
On front panel, LAF-B unit has two volume controls for communication and call tone, each adjustable to three levels as desired.

COMMUNICATION VOLUME



LAF-7B BACK VIEW

4 ACTUAL TERMINAL LOCATION

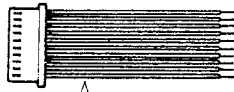


LAF-7B BACK VIEW

9-pin connector with 7 wires of approx. 22 cm (8-5/8")



11-pin connector with 10 wires of approx. 22 cm (8-5/8")



- I ~ 7 for connecting station unit 1 ~ 7
- C for receiving a call and BGM
- + , - for power supply
- E for common communication
- R for occupied lamp
- P₁ for All Call control
- P₂ , P₃ for All Call output
- Y for sub call-in tone during communication
- L for door release control

PIN/WIRE COLOR CODE IDENTIFICATION

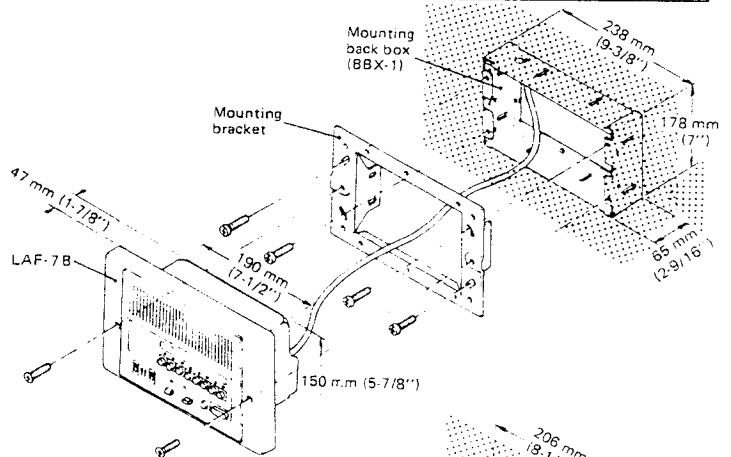
1. Brown	5. Green	9. -	Y. Yellow	R. Gray
2. Red	6. Blue	10. -	P ₁ . Green	L. White
3. Orange	7. Purple	C. Brown	P ₂ . Blue	+ . Red
4. Yellow	8. -	E. Orange	P ₃ . Purple	- . Black

5 INSTALLATION

(1) Semi-flush mounting to wall (in new construction);

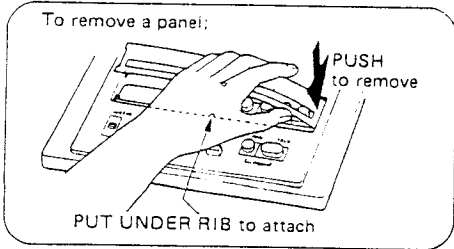
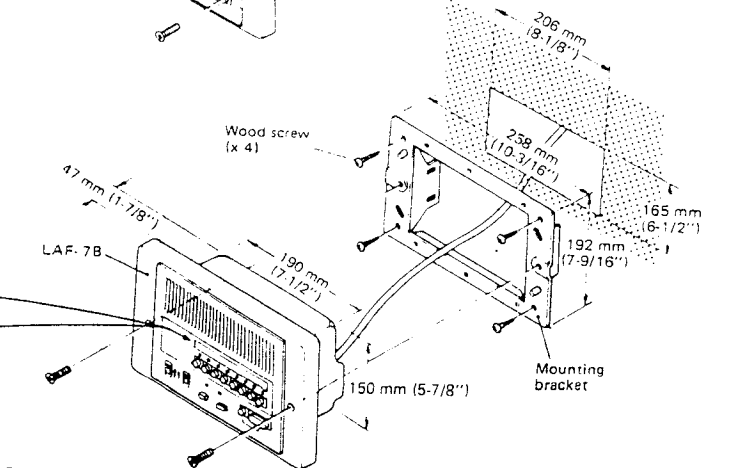
For new construction, use a mounting back box (Model: BBX-1).

1. Install the back box in the wall.
2. Attach the supplied mounting bracket with four screws (supplied).
3. Mount LAF-7B unit to the bracket with two screws (supplied).



(2) Semi-flush mounting to an existing wall;

1. To install LAF-7B unit to an existing wall, cut and open a hole of H: 165 mm (6-1/2") x W: 206 mm (8-1/8"), securing depth of more than 47 mm (1-7/8").
2. Attach the mounting bracket directly to wall with four wood screws (supplied).
3. Mount LAF-7B unit to the bracket with two screws (supplied).



6

SPECIFICATIONS

- *Power source: DC 12V. Use PS-12A (or PS-12C in North America) power supply.
- *Current consumption: 350 mA maximum.
- *Communication: Press-to-talk release-to-listen at calling master.
- *Communication output: 800 mW maximum at 20 ohm.
- *Communication network: Either of All-Master, Single-Master or Intermixed System can be created.
- *Calling: Electronic tone and an illuminated LED (staying lit for approx. 20 seconds), when called by sub (at master)
Electronic tone or Voice direct when called by master (at master)
Electronic tone or Voice direct when called by master (at sub).
- *Talk channel: 1 talk channel.
- *Wiring: ① Between master stations;

	Between masters	Between masters & BG-1 A/1 B
For communication only	5 common + 1 individual	
For communication and BGM reception	5 common + 1 individual	4 common + 1 individual
For communication and All Call transmission	8 common + 1 individual	7 common + 1 individual
For communication, BGM reception and All Call transmission	8 common + 1 individual	7 common + 1 individual
For door release	plus 1 common (additional)	
For all functions as above	9 common + 1 individual	7 common + 1 individual

- ① Between sub station; 3 wires for each sub station.
Between two farthest master stations;

*Wiring distance:

AWG	24 AWG	22 AWG	20 AWG
Distance	400'	650'	1,000'
Diameter	0.5 mm	0.65 mm	0.8 mm
Distance	120 m	200 m	300 m

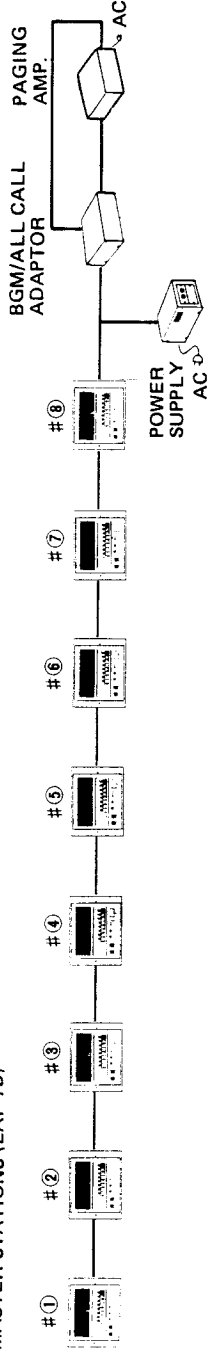
- *Dimensions: H : 200 mm x W : 266 mm x D : 20 mm
(H : 7-7/8" x W : 10-1/2" x D : 13/16")
- Recessed: H : 150 mm x W : 190 mm x D : 47 mm
(H : 5-7/8" x W : 7-1/2" x D : 1-7/8")
- *Back box dimensions: H : 178 mm x W : 238 mm x D : 65 mm
(H : 7" x W : 9-3/8" x D : 2-9/16")
- *Weight: Approximately 1,020 g (2.25 lbs.)
- *RY-PA relay contact capacity: AC 110V, 1A.
DC 24V, 1A.

WIRING DIAGRAM

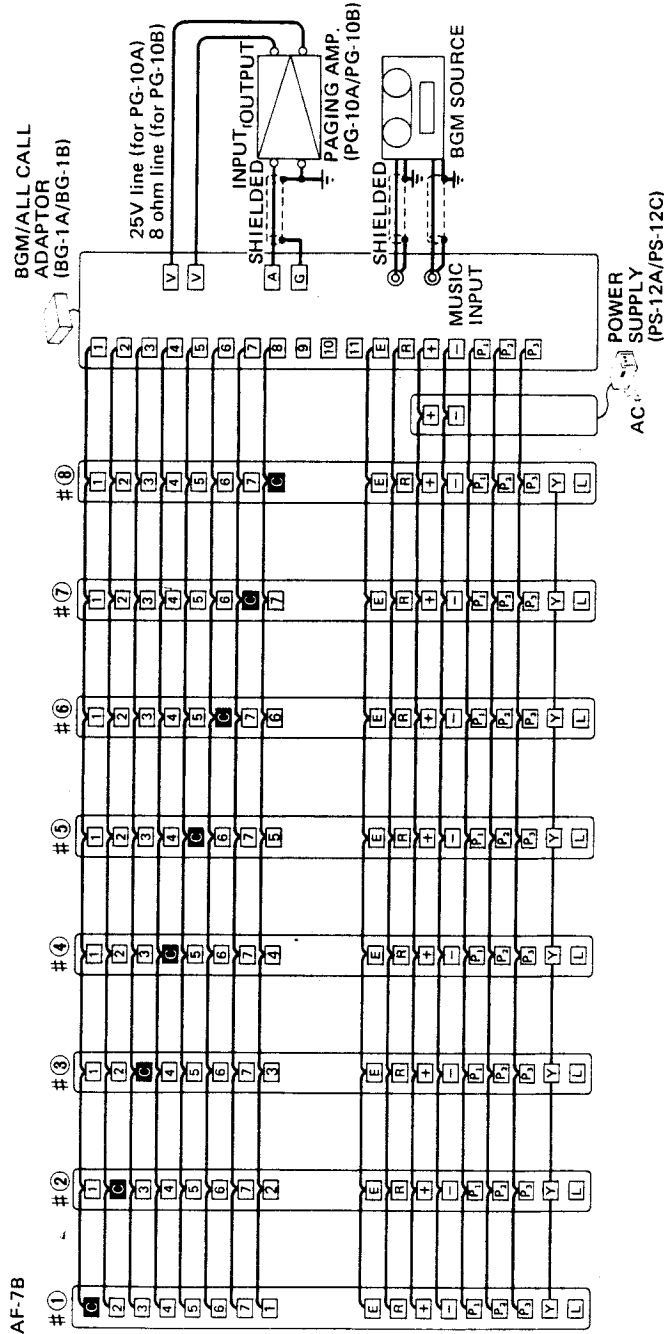
#1 LAF-7B ALL-MASTER SYSTEM

- *ROOM-TO-ROOM COMMUNICATION
- *BGM RECEPTION/ALL CALL TRANSMISSION

MASTER STATIONS (LAF-7B)



LAF-7B



BGM reception/All Call transmission (at any room station)

- When using a STEREO MUSIC SOURCE, eg. FM Tuner, 8-track player or cassette player, etc., connect the PHONO plugs directly to two PHONO jacks on BG-1A/1B.
- Music source output requirements;
Tuner; Use AUDIO output (Range: 300 mV ~ 1.2V, 10 K ohm ~ 100 K ohm).
Tape player; Use low level output (Range: 300 mV ~ 1.2V, more than 600 ohm)

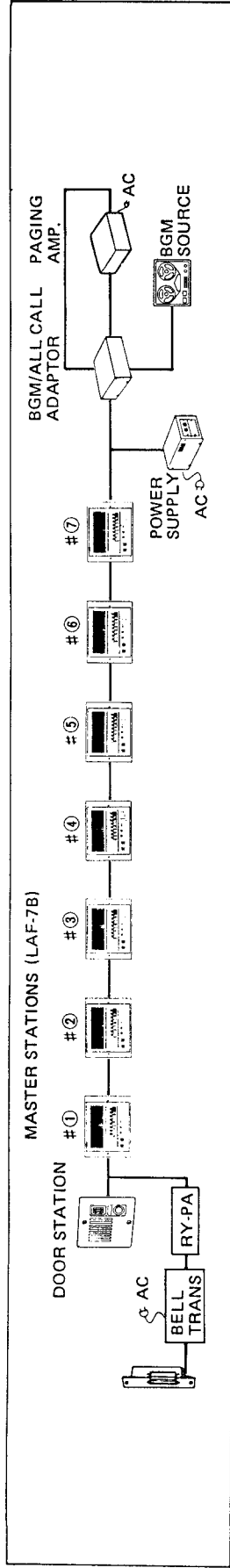
Communication

Each own number button connects to a last station No. 8.

② LAF-7B ALL-MASTER SYSTEM

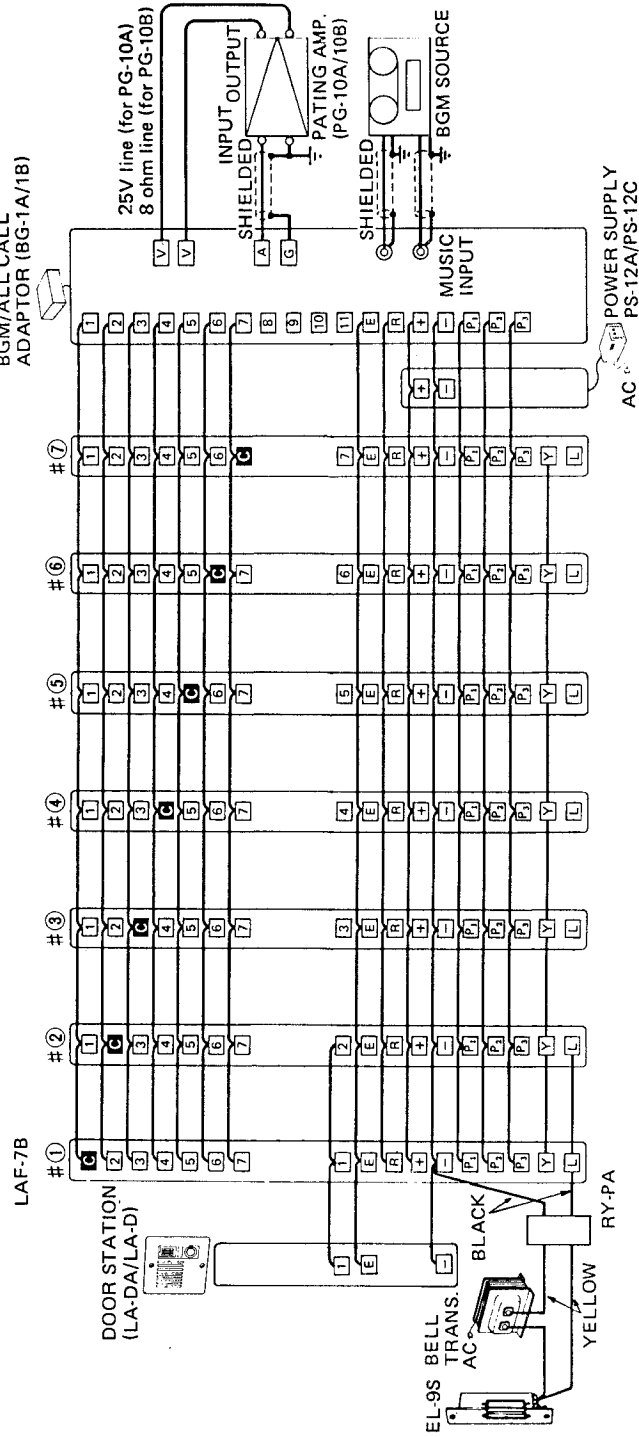
WITH ONE EACH DOOR STATION & DOOR RELEASE AND BGM/ALL CALL

- * ROOM-TO-ROOM COMMUNICATION
- * DOOR STATION CALL-IN
- * DOOR RELEASE
- * BGM RECEPTION/ALL CALL TRANSMISSION



LAF-7B CONNECTOR WIRE COLOR CODES

1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Purple
	—
	—
C	Brown
E	Orange
Y	Yellow
P ₁	Green
P ₂	Blue
P ₃	Purple
R	Gray
L	White
+	Red
—	Black



BGM reception/All Call transmission
(at any room station)

- (1) When using a STEREO MUSIC SOURCE, eg. FM Tuner, 8-track player or cassette player, etc., connect the PHONO plugs directly to two PHONO jacks on BG-1A/1B.
- (2) Music source output requirements:
Tuner; Use AUDIO output (Range: 300 mV ~ 1.2V, 10 K ohm ~ 100 K ohm).
Tape player; Use low level output (Range: 300 mV ~ 1.2 V, more than 600 ohm).

Door station communication

Door station call can be received at max. two room stations (Nos. ① and ② in the above diagram). So, do not connect each own number terminal on all the room stations except Nos. ① and ②.

Door release

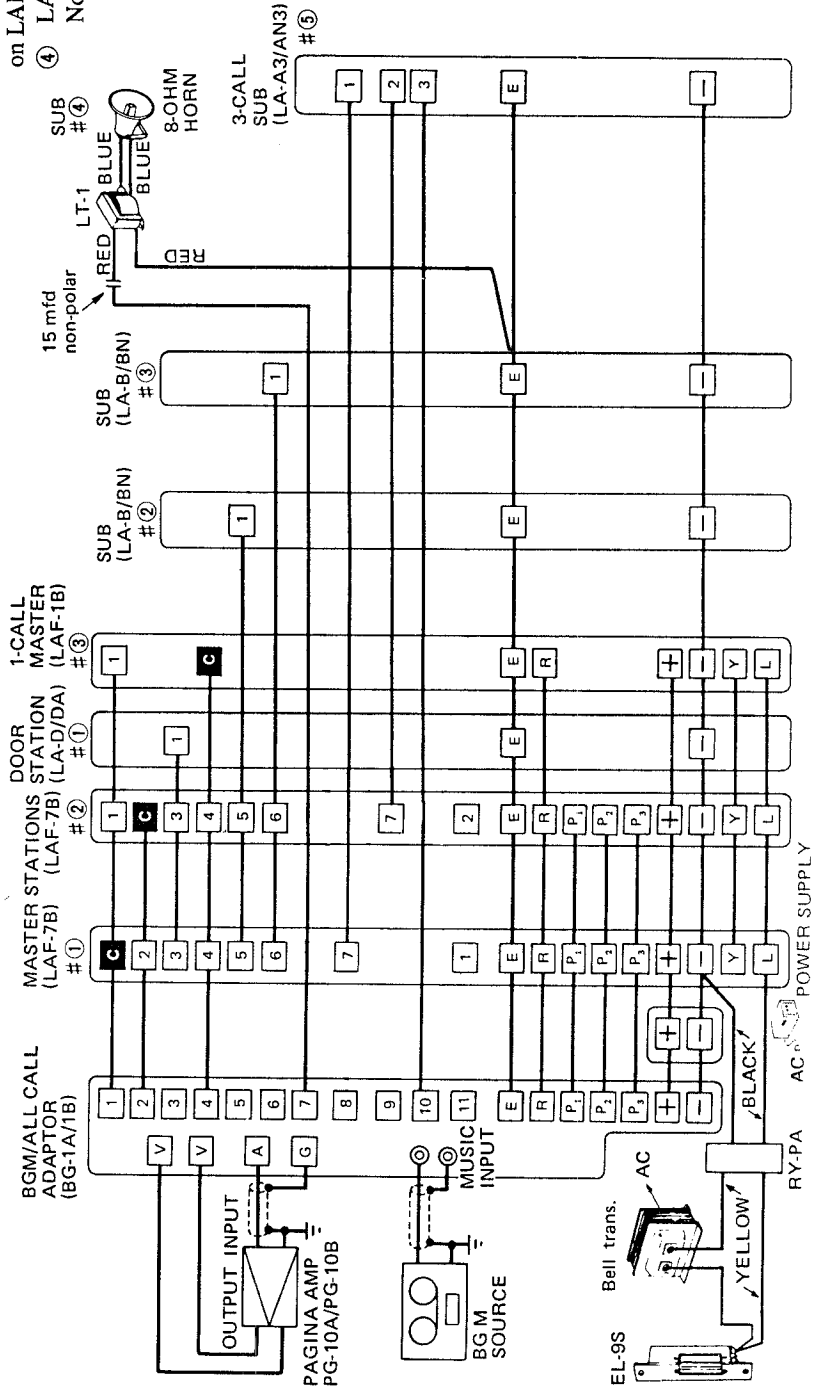
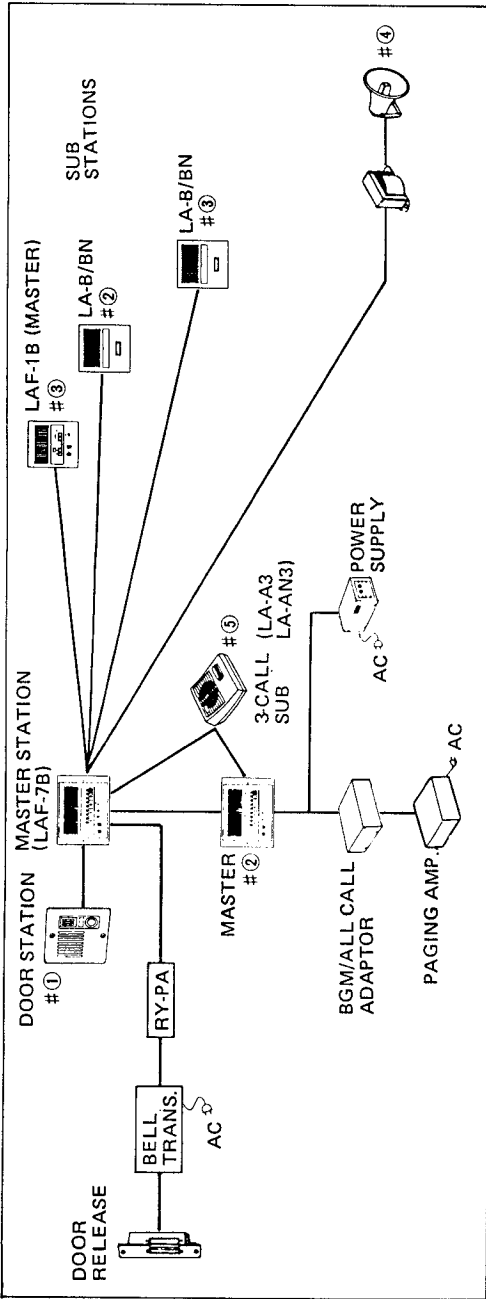
- * Connect terminal on room stations Nos. ① and ②, accepting doorphone call.
- * Use a bell transformer: AC 12V, 0.25A or more to power EL-9S.
- * Separate wiring for door release from wiring for communication.

#3 LA-3 INTERMIXED SYSTEM WITH ONE EACH DOOR STATION, DOOR RELEASE & 3-CALL SUB AND BGM/ALL CALL

- * ROOM-TO-ROOM COMMUNICATION (MASTER-TO-MASTER, MASTER-TO-SUB)
- * DOOR STATION CALL-IN
- * DOOR RELEASE
- * MASTER ALL-CALL TRANSMISSION
- * BGM RECEPTION AT MASTERS & 3-CALL SUB
- * LA-A3/AN3 SELECTIVE CALL TO MASTERS

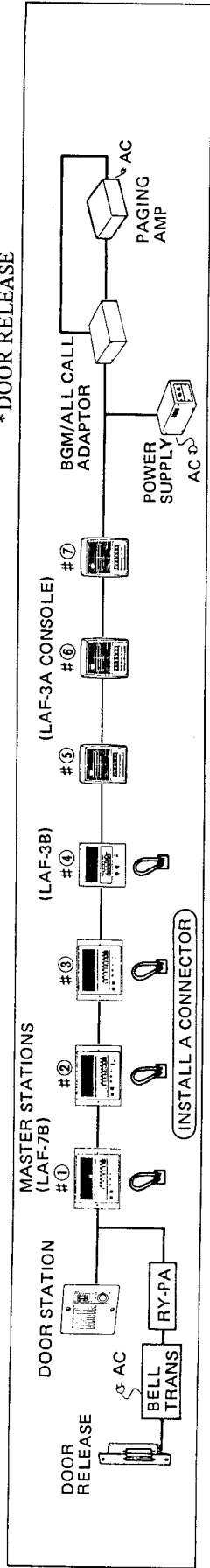
NOTES:

- ① A call from sub Nos. 1 ~ 3 signals two masters simultaneously.
- ② Sub No. 5 can call and communicate each master selectively and receive BGM and All Call.
- ③ Sub No. 4 can only receive BGM and All Call. If talkback is required, connect the wire to a vacant No. terminal on LAF-7B master.
- ④ LAF-1B (No. ③) can call a master No. ① and also receive BGM/All Call.



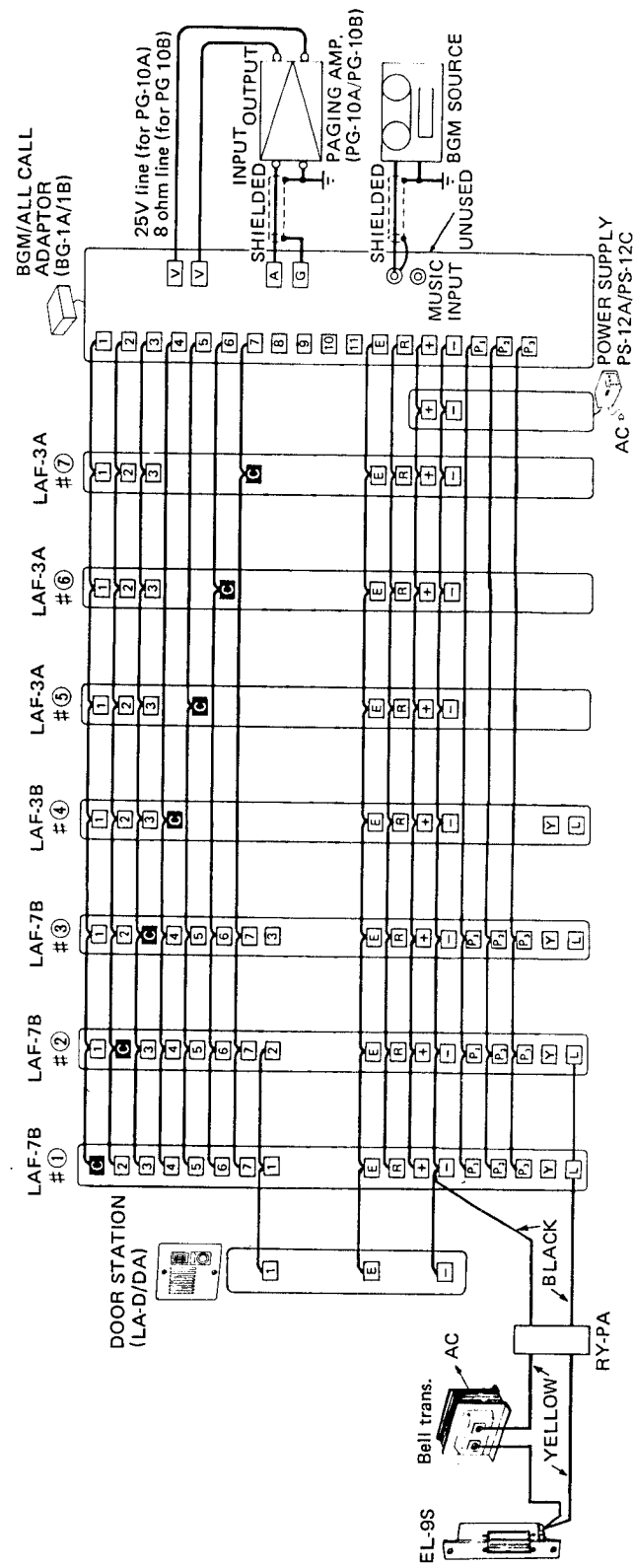
4 LAF-7B INTERMIXED SYSTEM

- * COMMUNICATION BETWEEN MASTERS
- * (No communication between LAF-3A masters)
- * DOOR STATION CALL-IN
- * DOOR RELEASE



LAF-7B CONNECTOR WIRE COLOR CODES

1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Purple
	—
	—
C	Brown
E	Orange
Y	Yellow
P ₁	Green
P ₂	Blue
P ₃	Purple
R	Gray
L	White
+	Red
—	Black



NOTES:

① When intermixing LAF-7B units with LAF-3A/5/10/IOS units, install a supplied connector on back of each LAF-7B. And [Y] terminals on LAF-7B units may remain unconnected.

② LAF-3B and LAF-3A stations can call each LAF-7B station, but can not communicate with each other.

③ All Call announcement is available from LAF-7B stations. LAF-3B and LAF-3A stations have no All Call button and can only receive All Call and BGM.

④ When using a MONO MUSIC SOURCE, eg. FM tuner, 8-track player or cassette player, etc., connect the PHONO plug to either PHONO jack on BG-1A/BG-1B.

* Music source output requirements;
 Tuner: Use AUDIO output (Range: 300 mV ~ 1.2V, 10 K ohm ~ 100 K ohm).
 Tape player: Use Low LEVEL output. (Range 300 mV ~ 1.2V, more than 600 ohm).

3

BEFORE YOU INSTALL AND OPERATE THE EQUIPMENT — Prohibitions and precautions —

*Operation;

1. On all LAF master stations, except station initiating a call, OFF button **MUST BE DEPRESSED** and **LOCKED DOWN**, or system will not work. The illuminated LED above OFF button indicates you forget to depress OFF button, if not in use.
2. The illuminated OCCUPIED LED indicates the other station is using the system. While this OCCUPIED LED is lit,
 - (1) Do not depress any selector button. The squeak sound will come out at initiating and receiving stations.
So, when you receive calls from another master and a sub at the same time, **REPLAY FIRST TO THE MASTER** and, after the OCCUPIED LED goes out, depress a selector button of the calling sub and communicate.
 - (2) Do not make All Call nor any other operation, when LAF-B units are intermixed with existing models (LAF-3A/5/10/10S/10B/10BS).
3. When a sub station calls during Background music distribution, the call tone will come out through all LAF station speakers, and call-in annunciator LED stays lit for approximately 20 seconds on the called master station.

*Installation;

1. **DO NOT CONNECT ANY TERMINAL ON ANY UNIT TO AC POWER LINES.**
2. Be sure not to plug power supply into AC receptacle until you complete wiring connections and unplug before opening the unit.
3. Lay out your system in advance. Determine the exact location of each station. Assign station number and make a sketch showing the number of wires and color codes from one station to another. Begin your installation with master station No. 1. Upon installing second master station, we recommend a test be made for all functions, calling and talking between each station.
After completing all the masters connection and testing, begin sub station installation.
4. Insulate by tape, etc. each unused connector wire end. If touches the other wires or back box it will cause damage to the units.

Installation location;

5. Select the installation locations that would not be exposed to temperature/humidity extremes, water, oil, dust, iron dust, inflammable and chemical products, etc.
6. To avoid feedback, **DO NOT PLACE MASTER STATION AND ANOTHER MASTER OR SUB STATION BACK TO BACK, OR ON A COMMON WALL BETWEEN ROOMS.**

Unit selection;

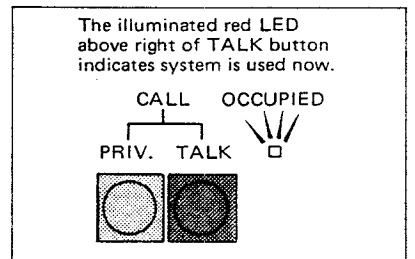
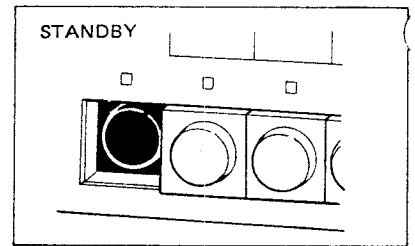
7. When making an intermixed system, note in advance that master stations: LAF-3A, LAF-5, LAF-10 console type have no button for All Call nor door release. LAF-1B and LAF-3B have only door release button. If such functions are required at console type station, please use LAF-10S.
8. If any LAF-B station: LAF-1B/3B/7B/10B (Type A) is intermixed with existing models: LAF-3A/5/10/10S/10B, install a 2-pin supplied connector on back of all the LAF-B units.

Adaptor installation location;

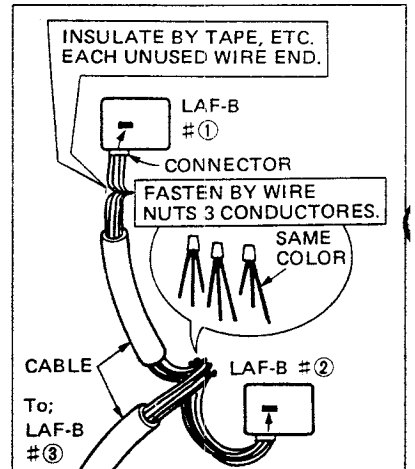
9. Locate PS-12A (or PS-12C) power supply near center of the system.
10. Locate BG-1A/1B adaptor near by the power supply.

*Maintenance;

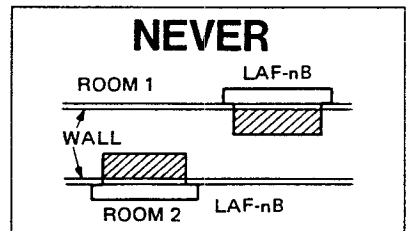
1. Clean your equipment with a soft cloth dampened with neutral household cleanser. Never use thinner nor benzene, etc.



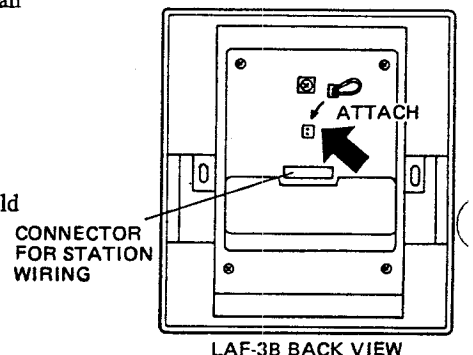
Installation: 4



Installation location: 6



Unit selection: 8

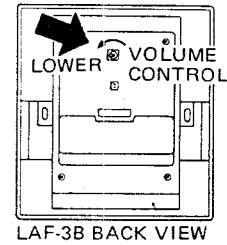


***Volume adjustment;**

LAF-B unit has pre-setting volume, allowing to lower the maximum level of communication. On back of LAF-3B unit, using a philip screwdriver, turn the volume counter-clockwise to achieve the desired level.

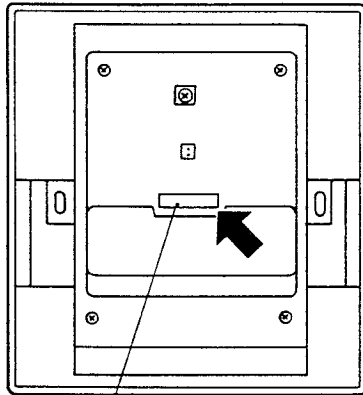
On front panel, LAF-B unit has two volume controls for communication and call tone, each adjustable to three levels as desired.

TO LOWER MAX. COMMUNICATION VOLUME



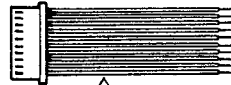
LAF-3B BACK VIEW

4 ACTUAL TERMINAL LOCATION



10-PIN CONNECTOR (male)
LAF-3B BACK VIEW

10-PIN CONNECTOR WITH 10 WIRES OF APPROX. 22 CM (8-5/8")



PIN/WIRE COLOR CODE IDENTIFICATION

- + Red
- Black
- 1 Brown
- 2 Pink
- 3 Orange
- C Yellow
- E Green
- Y Blue
- R Purple
- L Gray

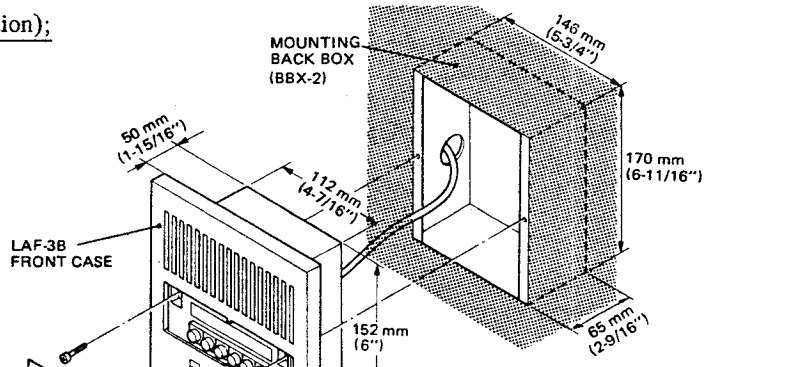
- + , - : for power supply
- 1 ~ 3 : for connecting station unit
- C : for receiving a call and BGM
- E : for common communication
- Y : for sub's call-in tone during communication
- R : for occupied LED
- L : for door release

5 INSTALLATION

(1) Semi-flush mounting to wall (in new construction);

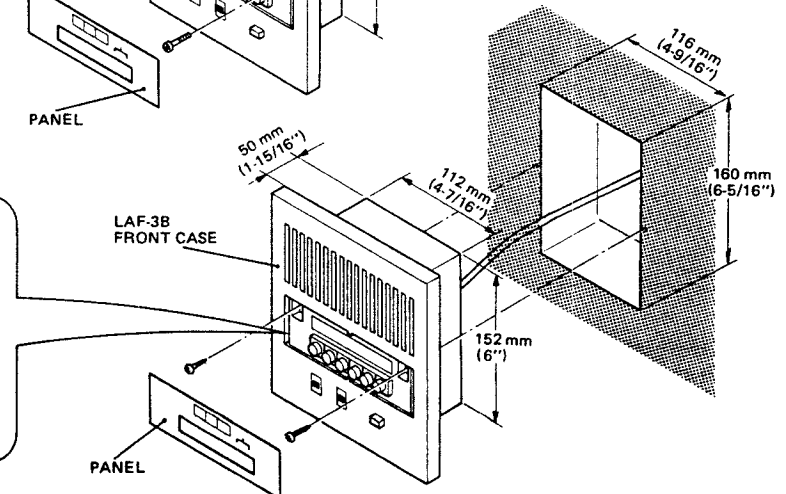
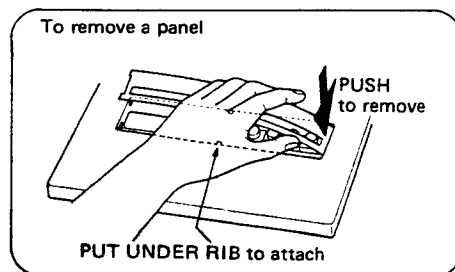
For new construction, use a mounting back box (Model BBX-2).

1. Install the back box in the wall.
2. Remove a panel on LAF-3B front case.
3. Mount LAF-3B unit to the back box with two screws (supplied).
4. Reattach the panel.

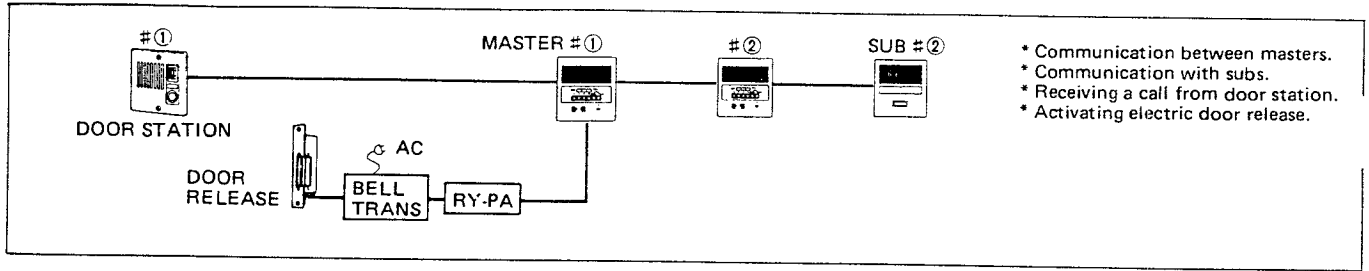


(2) Semi-flush mounting to an existing wall;

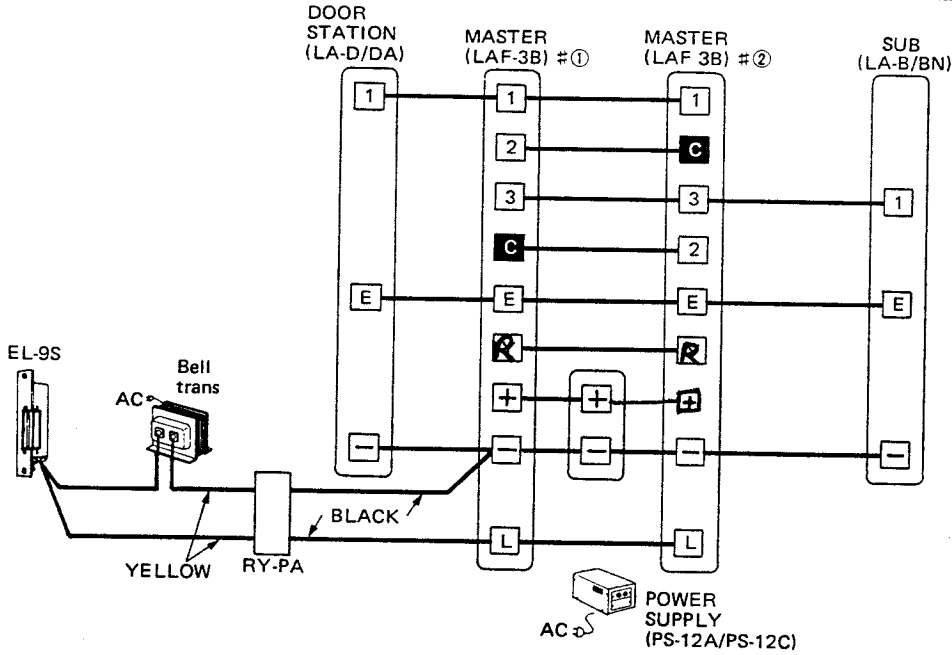
1. To install LAF-3B unit to an existing wall, cut and open a hole of H: 160 mm (6-5/16") x W: 116 mm (4-9/16"), securing depth of more than 50 mm (1-15/16").
2. Remove a panel on LAF-3B. Mount LAF-3B unit directly to wall with two wood screws (supplied).
3. Reattach the panel.



#3 LAF-3B INTERMIXED SYSTEM



- * Communication between masters.
- * Communication with subs.
- * Receiving a call from door station.
- * Activating electric door release.



NOTES;

- ① LAF-3B master station can call and communicate with each other, and also with door station & sub.
- ② Door release can be activated by either LAF-3B master, answering door-phone call.
- ③ Door station call-in tone sounds softly at a communicating master station.

LAF-3B CONNECTOR WIRE COLOR CODES

10 PIN (10 WIRES)	+	Red
	-	Black
	1	Brown
	2	Pink
	3	Orange
	C	Yellow
	E	Green
	Y	Blue
	R	Purple
	L	Gray

LA-B/LA-BN CONNECTOR WIRE COLOR CODES

3 PIN (3 WIRES)	-	Black
	E	Blue
	1	Brown

6

SPECIFICATIONS

- *Power source: DC 12V. Use PS-12A (or PS-12C in North America) power supply.
- *Current consumption: 350 mA maximum.
- *Communication: Press-to-talk, release-to-listen at calling master.
- *Communication output: 800 mW maximum at 20 ohm.
- *Communication network: Either of All-Master, Single-Master or Intermixed System can be created.
- *Calling: Electronic tone and an illuminated LED (staying lit for approx. 20 seconds), when called by sub (at master)
Electronic tone or Voice direct when called by master (at master)
Electronic tone or Voice direct when called by master (at sub).
- *Talk channel: 1 talk channel.
- *Wiring: ① Between master stations;

	Between masters	Between masters & BG-1A/1B
For communication only	5 common + 1 individual	—
For communication and BGM reception	5 common + 1 individual	4 common + 1 individual
For door release	Plus 1 common (additional)	—
For all functions as above	6 common + 1 individual	4 common + 1 individual

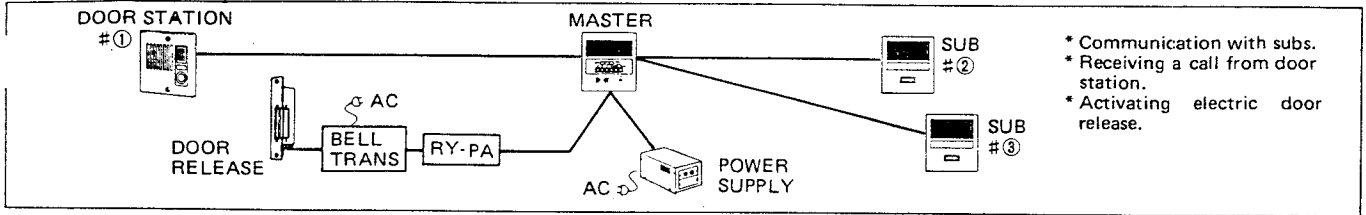
- *Wiring distance: ② Between sub station; 3 wires for each sub station.
Between two farthest master/sub stations;

AWG	24 AWG	22 AWG	20 AWG
Distance	400'	650'	1,000'
Diameter	0.5 mm	0.65 mm	0.8 mm
Distance	120 m	200 m	300 m

- *Dimensions: H : 200 mm x W : 186 mm x D : 15 mm
(H : 7-7/8" x W : 7-5/16" x D : 9/16")
- Recessed: H : 152 mm x W : 112 mm x D : 50 mm
(H : 6" x W : 4-7/16" x D : 1-15/16")
- *Weight: Approximately 480 g (1.06 lbs.).
- *RY-PA relay contact capacity: AC 110V, 1A.
DC 24V, 1A.

WIRING DIAGRAM

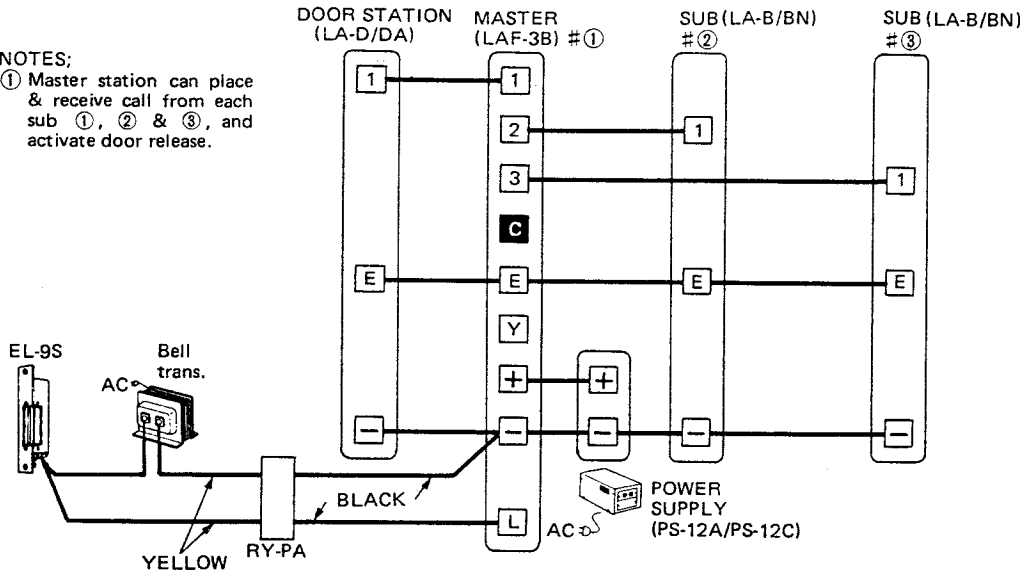
① LAF-3B MASTER SELECTIVE SYSTEM WITH DOOR STATION



- * Communication with subs.
- * Receiving a call from door station.
- * Activating electric door release.

NOTES;

- ① Master station can place & receive call from each sub ①, ② & ③, and activate door release.



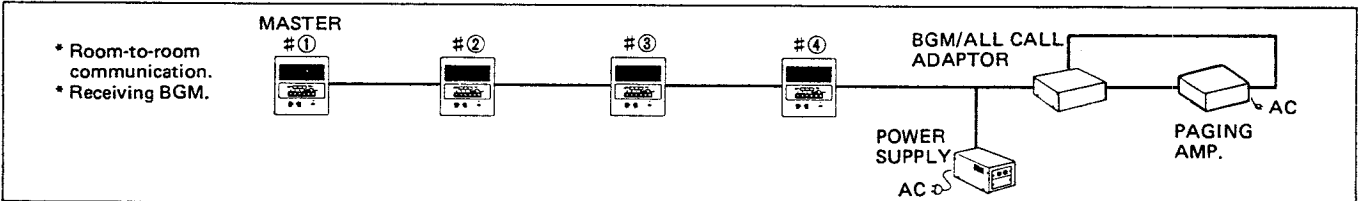
LAF-3B CONNECTOR WIRE COLOR CODES

10 P I N 10 W I R E S	+	Red
	-	Black
	1	Brown
	2	Pink
	3	Orange
	C	Yellow
	E	Green
	Y	Blue
	R	Purple
	L	Gray

LA-B/LA-BN CONNECTOR WIRE COLOR CODES

3 P I N S	-	Black
	E	Blue
	1	Brown

② LAF-3B ALL-MASTER SYSTEM WITH BACKGROUND MUSIC



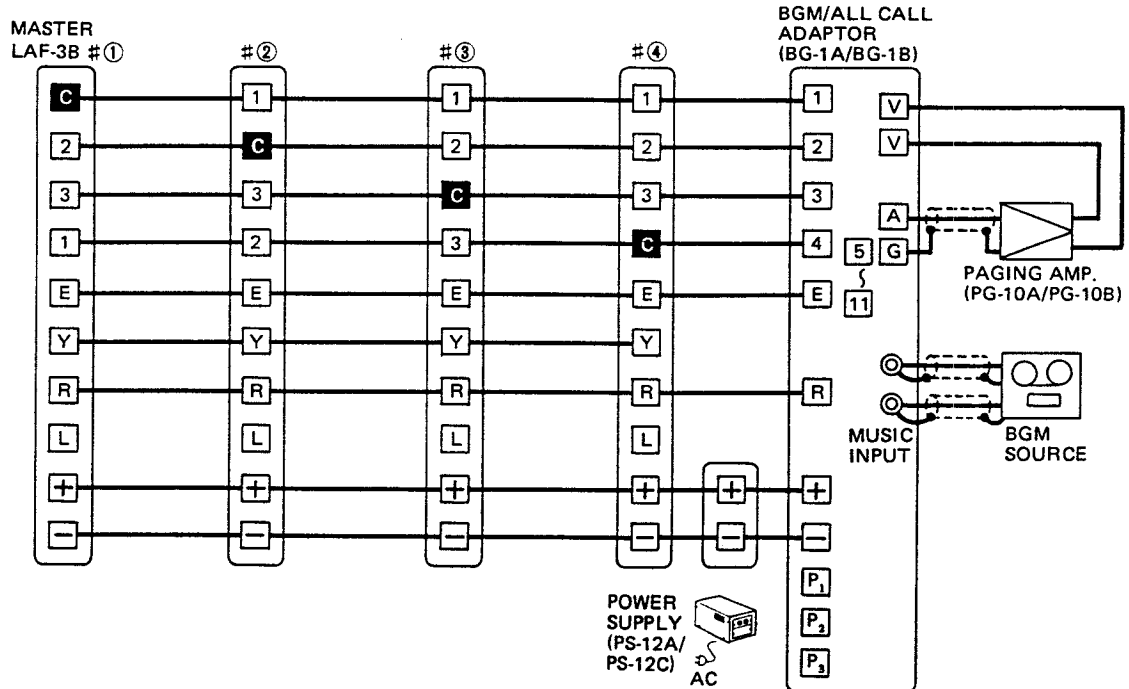
- * Room-to-room communication.
- * Receiving BGM.

NOTES;

- ① Each master station can place and receive calls with any other master station.
- ② Background music can be received at each station (All call announcement is not available from LAF-3B).

LAF-3B CONNECTOR WIRE COLOR CODES

10 P I N 10 W I R E S	+	Red
	-	Black
	1	Brown
	2	Pink
	3	Orange
	C	Yellow
	E	Green
	Y	Blue
	R	Purple
	L	Gray



3

BEFORE YOU INSTALL AND OPERATE THE EQUIPMENT — Prohibitions and precautions —

* Operation;

1. On all LAF master stations, except station initiating a call, OFF button **MUST BE DEPRESSED** and **LOCKED DOWN**, or system will not work. The illuminated LED above OFF button indicates you forgot to depress OFF button, if not in use. (See Fig. 1)
2. The illuminated **OCCUPIED** LED indicates the other station is using the system. While this **OCCUPIED** LED is lit, (See Fig. 2)
 - (1) Do not depress any selector button, or an electronic feedback will occur at initiating and receiving stations.
So, when you receive calls from another master and a sub at the same time, **REPLY FIRST TO THE MASTER** and, after the **OCCUPIED** LED goes out, depress selector button of the calling sub and communicate.
 - (2) Can not make All Call announcement.
3. When a sub station calls during Background music distribution, the call tone will come out through all LAF station speakers, and call-in annunciator LED stays lit for approximately 20 seconds on the called master station.

* Installation;

1. **DO NOT CONNECT ANY TERMINAL ON ANY UNIT TO AC POWER LINES.**
2. Maintain at least 50 cm (20") distance from any AC wiring. Shielded cable should be used to reduce the possibility of AC inductance.
3. Be sure not to plug power supply into AC receptacle until you complete wiring connections, and unplug before opening it.
4. Lay out your system in advance. Determine the exact location of each station. Assign station number and make a sketch showing the number of wires and color codes from one station to another. Begin your installation with master station No. 1. Upon installing second master station, we recommend a test be made for all functions, calling and talking between each station.
After connecting and testing all the masters, begin sub station installation.
5. Insulate by tape, etc. each unused connector wire end. If connector wire end touches the other wires or back box it will cause damage to the units.

Installation location;

6. Select the installation locations that would not be exposed to temperature/humidity extremes, water, oil, dust, iron dust, inflammable and chemical products, etc.
7. To avoid feedback, **DO NOT PLACE MASTER STATION AND ANOTHER MASTER OR SUB STATIONS BACK TO BACK, OR ON A COMMON WALL BETWEEN ROOMS.** (See Fig. 4)

Unit selection;

8. When making an intermixed system, note in advance that master stations: LAF-3A, LAF-5, LAF-10 console type have no button for All Call nor door release. LAF-1B and LAF-3B have only door release button. If such functions are required at console type station, please use LAF-10S.
9. If any LAF-B station: LAF-1B/3B/7B/10B (Type A) is intermixed with existing models: LAF-3A/5/10/10S/10B, install a supplied shorting chip on back of all the LAF-B units. (See Fig. 5)

Adaptor installation location

10. Locate PS-12A (or PS-12C) power supply near center of the system.

* Maintenance

1. Clean your equipment with a soft cloth dampened with neutral household cleanser. Never use thinner or benzine, etc.

Fig. 1

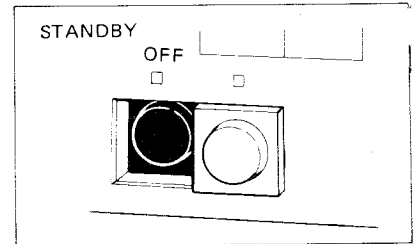


Fig. 2

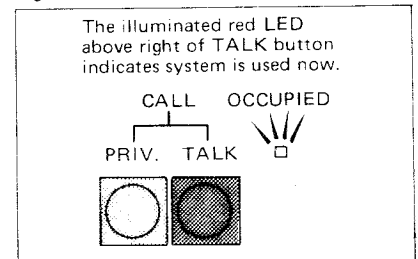


Fig. 3

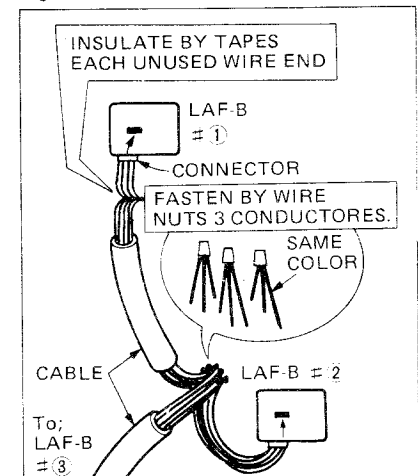


Fig. 4

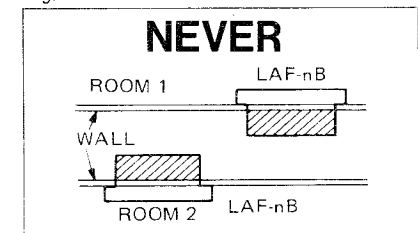
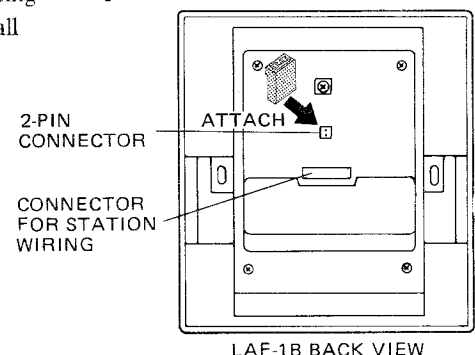


Fig. 5



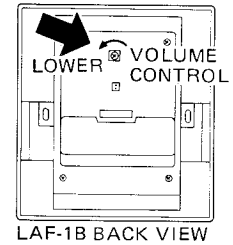
LAF-1B BACK VIEW

***Volume adjustment;**

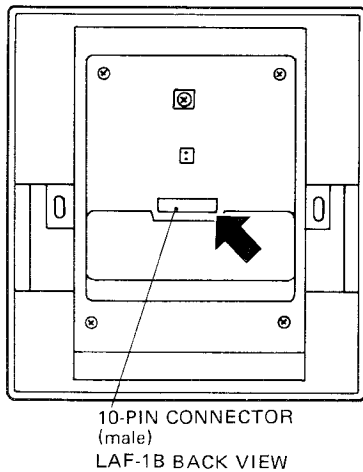
LAF-B unit has preset volume control, allowing you to lower the maximum level of communication. On back of LAF-1B unit, using a philip screwdriver, turn the volume counter-clockwise to achieve the desired level.

On front panel, LAF-B unit has two volume controls for communication and call tone, each adjustable to three levels as desired.

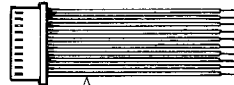
TO LOWER MAX. COMMUNICATION VOLUME



4 ACTUAL TERMINAL LOCATION



10-PIN CONNECTOR WITH 8 WIRES OF APPROX. 22 CM (8-5/8")



PIN/WIRE COLOR CODE IDENTIFICATION

- + Red
- Black
- 1 Brown
-
- C Yellow
- E Green
- Y Blue
- R Purple
- L Gray

- + , - : for power supply
- 1 : for connecting station unit
- C : for receiving a call and BGM
- E : for common communication
- Y : for sub's call-in tone during communication
- R : for occupied LED
- L : for door release

5 INSTALLATION

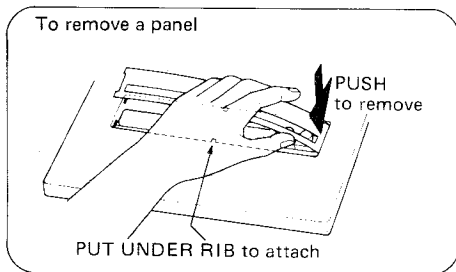
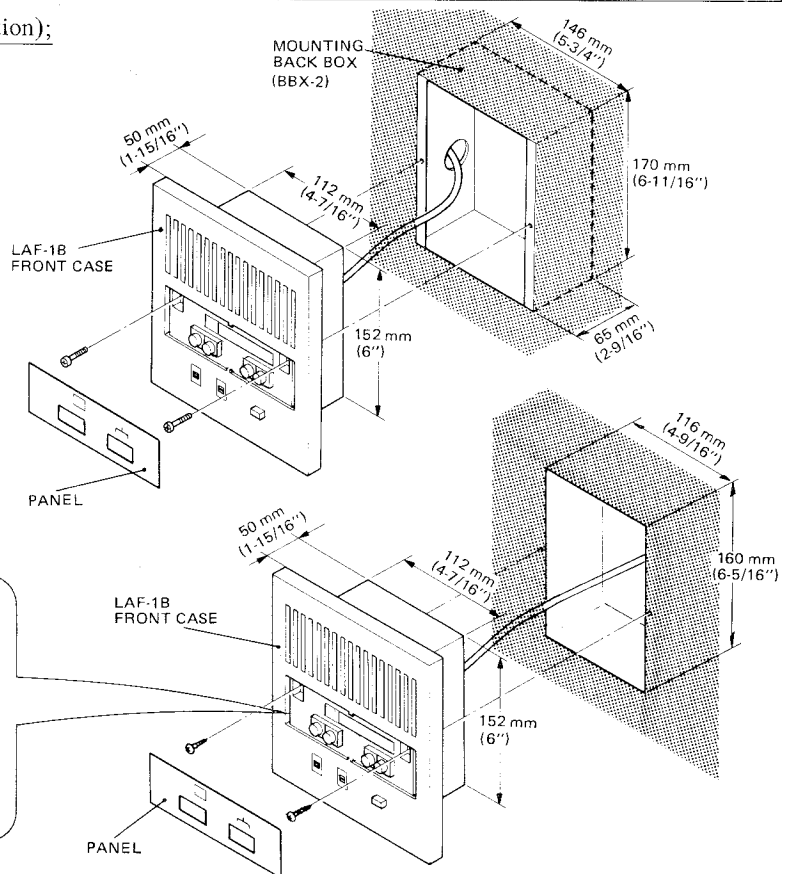
(1) Semi-flush mounting to wall (in new construction);

For new construction, use a mounting back box (Model BBX-2).

1. Install the back box in the wall.
2. Remove a panel on LAF-1B front case.
3. Mount LAF-1B unit to the back box with two screws (supplied).
4. Reattach the panel.

(2) Semi-flush mounting to an existing wall;

1. To install LAF-1B unit to an existing wall, cut and open a hole of H: 160 mm (6-5/16") x W: 116 mm (4-9/16"), securing depth of more than 50 mm (1-15/16").
2. Remove a plate on LAF-1B front case. Mount LAF-1B unit directly to wall with two wood screws (supplied).
3. Reattach the panel.





SPECIFICATIONS

- *Power source: DC 12V. Use PS-12A (or PS-12C in North America) power supply.
- *Current consumption: 350 mA maximum.
- *Communication: Press-to-talk, release-to-listen at calling master.
- *Communication output: 800 mV maximum at 20 ohm.
- *Communication network: Either All-Master, Single-Master or Intermixed System can be created.
- *Calling: Electronic tone and an illuminated LED (staying lit for approx. 20 seconds), when called by sub (at master)
Electronic tone or voice direct when called by master (at master)
Electronic tone or voice direct when called by master (at sub).
- *Talk channel: 1 talk channel.
- *Wiring: ① Between master stations;

	Between masters	Between masters & BG-1A/1B
For communication only	5 common + 1 individual	—
For communication and BGM reception	5 common + 1 individual	4 common + 1 individual
For door release	Plus 1 common (additional)	—
For all functions as above	6 common + 1 individual	4 common + 1 individual

② Between sub station; 3 wires for each sub station.

- *Wiring distance: Between master and farthest master/sub station;

AWG	24 AWG	22 AWG	20 AWG	18 AWG
Distance	400'	650'	1,000'	1,600'
Diameter	0.5 mm	0.65 mm	0.8 mm	1.0 mm
Distance	120 m	200 m	300 m	480 m

- *Dimensions: H : 200 mm x W : 186 mm x D : 15 mm
(H : 7-7/8" x W : 7-5/16" x D : 9/16")
- Recessed: H : 152 mm x W : 112 mm x D : 50 mm
(H : 6" x W : 4-7/16" x D : 1-15/16")
- *Weight: Approximately 460 g (1.01 lbs.).
- *RY-PA relay contact capacity: AC 110V, 1A.
DC 24V, 1A.

