

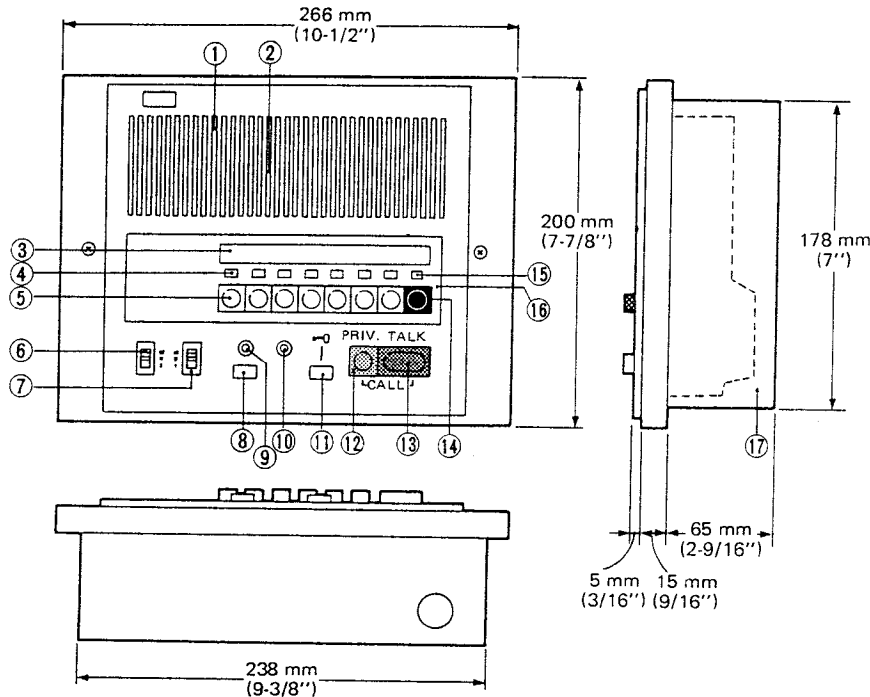
# HOME INTERCOM

**MODEL:**

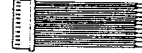
# LAF-7B

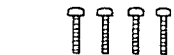
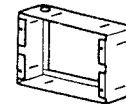
**Master station  
7-call  
semi-flush mount**

## 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.

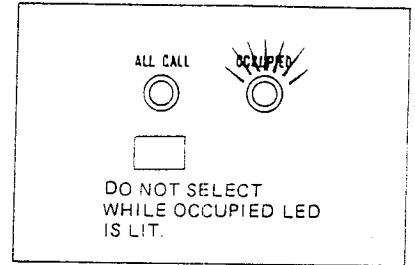
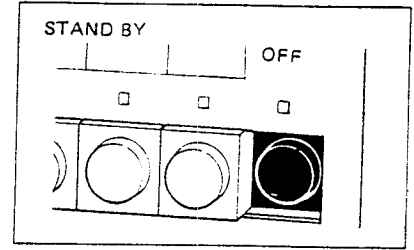


# BEFORE YOU INSTALL AND OPERATE THE EQUIPMENT

## — Prohibitions and precautions —

### \*Operation;

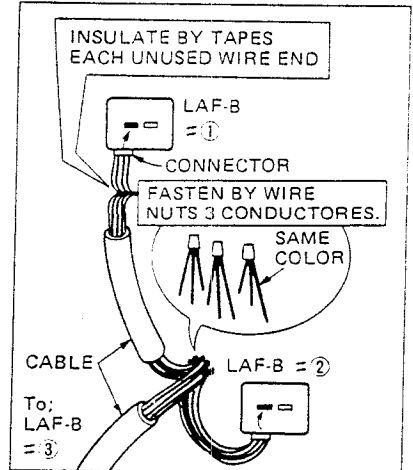
1. On all LAF master stations, except station initiating a call, OFF button MUST BE DEPRESSED and LOCKED DOWN, or system will not work. The illuminated LED above OFF button indicates you forget to depress OFF button, if not in use.
2. The illuminated OCCUPIED LED indicates the other station is using 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;

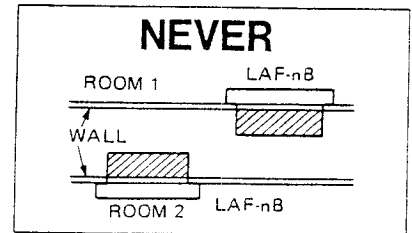
1. DO NOT CONNECT ANY TERMINAL ON ANY UNIT TO AC POWER LINES.
2. Be sure not to plug power supply into AC receptacle until you complete wiring connections, and unplug before opening the unit.
3. Lay out your system in advance. Determine the exact location of each station. Assign station number and make 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.



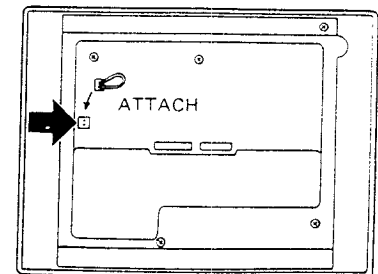
### Unit selection;

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;

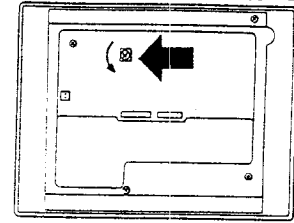
1. Clean your equipment with a soft cloth dampened with neutral household cleanser. Never use thinner nor benzine, etc.

**\*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.

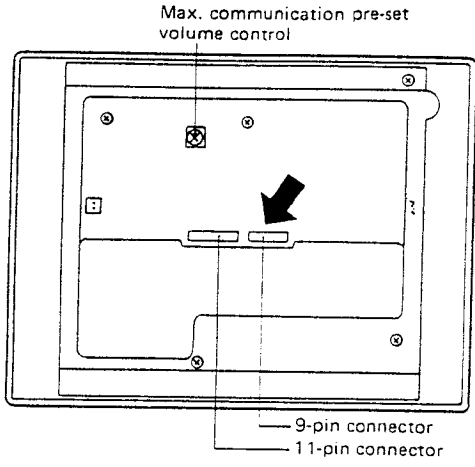
On front panel, LAF-B unit has two volume controls for communication and call tone, each adjustable to three levels as desired.

COMMUNICATION VOLUME



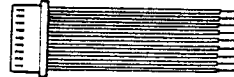
LAF-7B BACK VIEW

# 4 ACTUAL TERMINAL LOCATION

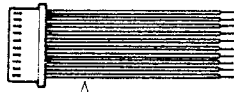


LAF-7B BACK VIEW

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
- P<sub>1</sub> for All Call control
- P<sub>2</sub> , P<sub>3</sub> for All Call output
- Y for sub call-in tone during communication
- L for door release control

**PIN/WIRE COLOR CODE IDENTIFICATION**

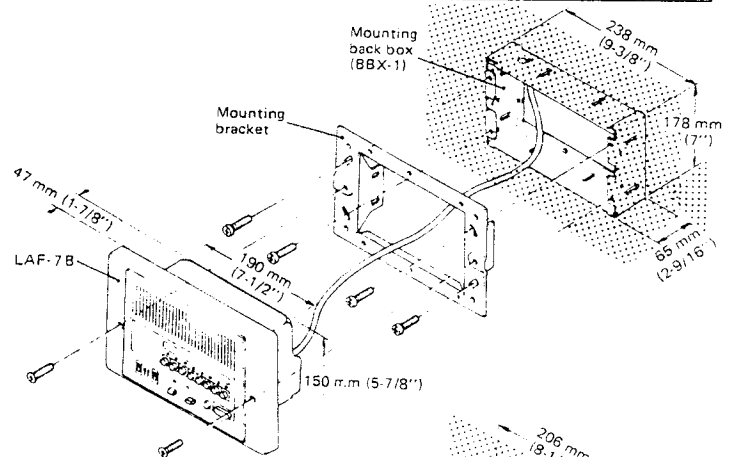
1. Brown	5. Green	9. -	Y. Yellow	R. Gray
2. Red	6. Blue	10. -	P <sub>1</sub> . Green	L. White
3. Orange	7. Purple	C. Brown	P <sub>2</sub> . Blue	+ . Red
4. Yellow	8. -	E. Orange	P <sub>3</sub> . Purple	- . Black

# 5 INSTALLATION

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

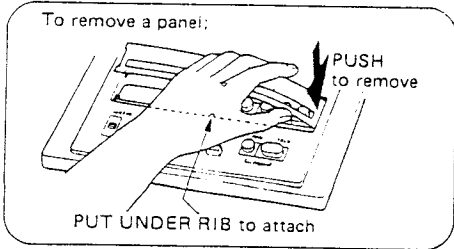
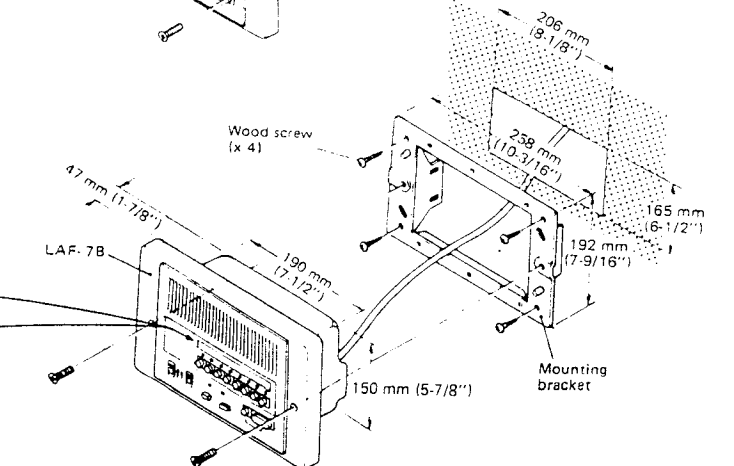
For new construction, use a mounting back box (Model: BBX-1).

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:

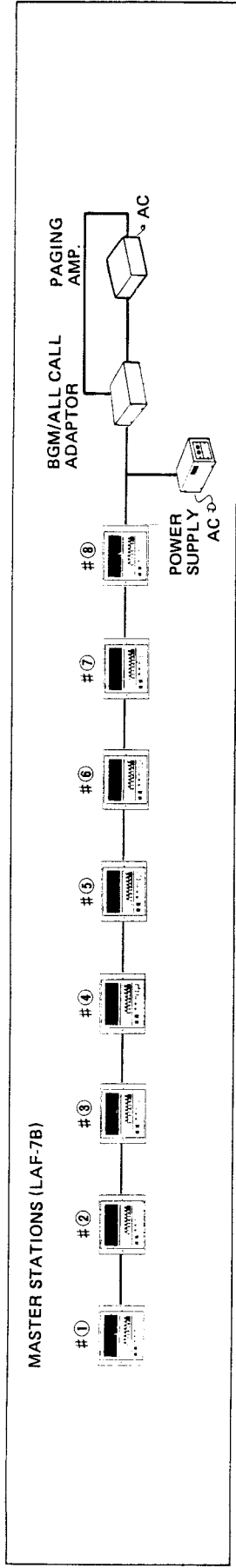
AWG	24 AWG	22 AWG	20 AWG
Distance	400'	650'	1,000'
Diameter	0.5 mm	0.65 mm	0.8 mm
Distance	120 m	200 m	300 m

- \*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.

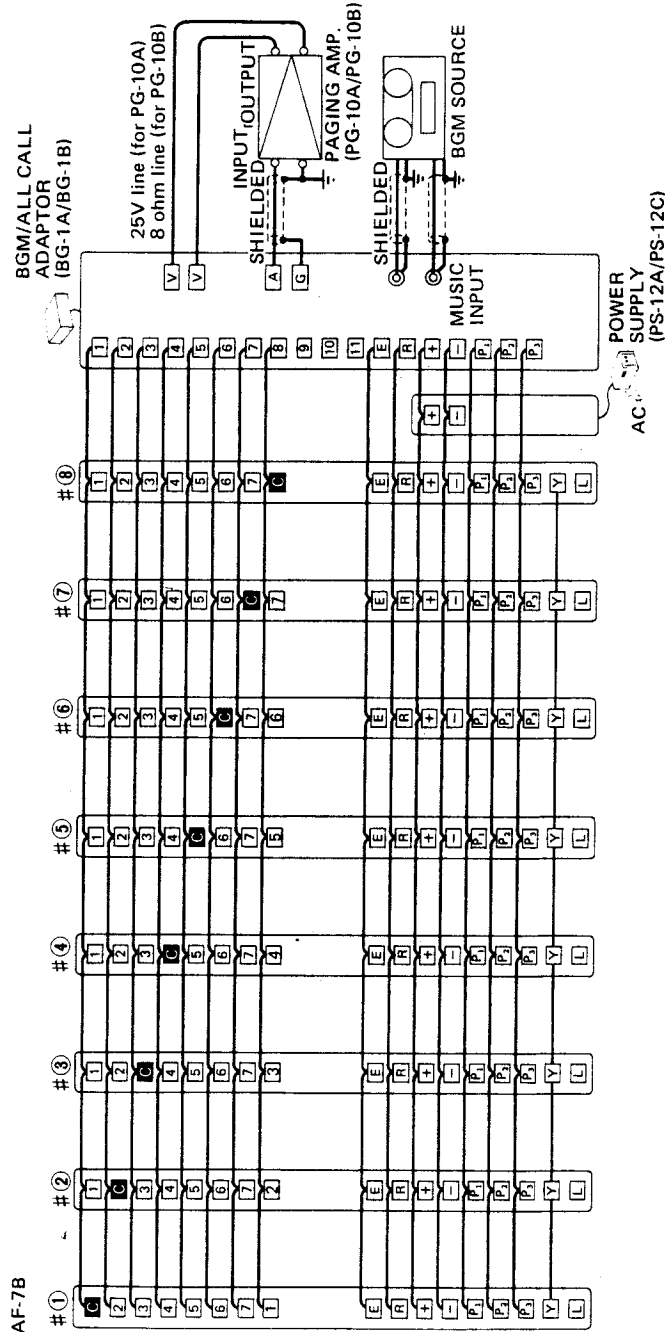
# WIRING DIAGRAM

## #1 LAF-7B ALL-MASTER SYSTEM

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



LAF-7B

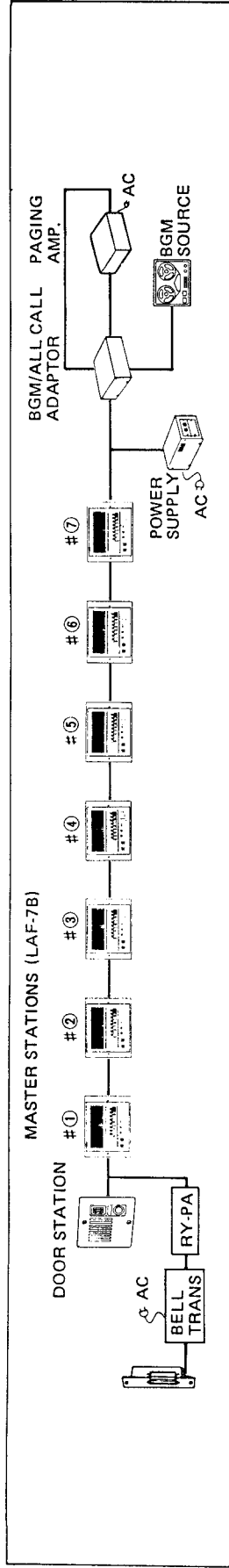


BGM reception/All Call transmission (at any room station)	Communication
<p>(1) When using a STEREO MUSIC SOURCE, eg. FM Tuner, 8-track player or cassette player, etc., connect the PHONO plugs directly to two PHONO jacks on BG-1A/1B.</p> <p>(2) Music source output requirements; Tuner; Use AUDIO output (Range: 300 mV ~ 1.2V, 10 K ohm ~ 100 K ohm). Tape player; Use low level output (Range: 300 mV ~ 1.2V, more than 600 ohm)</p>	<p>Each own number button connects to a last station No. 8.</p>

# # 2 LAF-7B ALL-MASTER SYSTEM

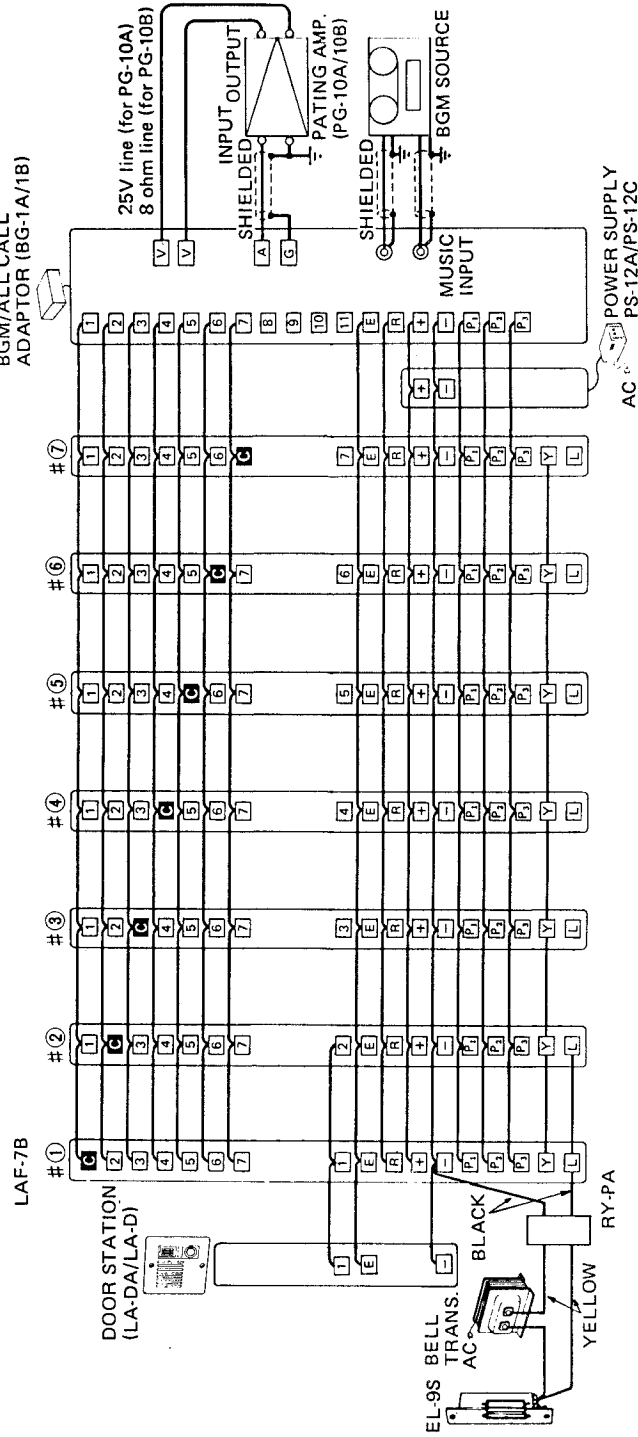
## WITH ONE EACH DOOR STATION & DOOR RELEASE AND BGM/ALL CALL

- \* 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 <sub>1</sub>	Green
P <sub>2</sub>	Blue
P <sub>3</sub>	Purple
R	Gray
L	White
+	Red
—	Black



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

Door station communication

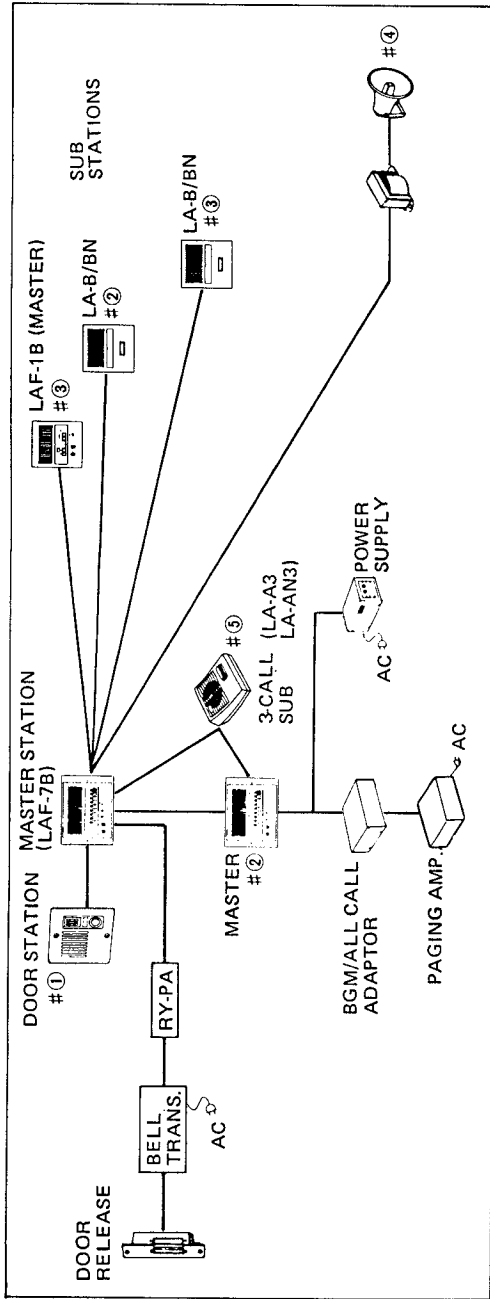
Door release

- (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 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.

- \* 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.

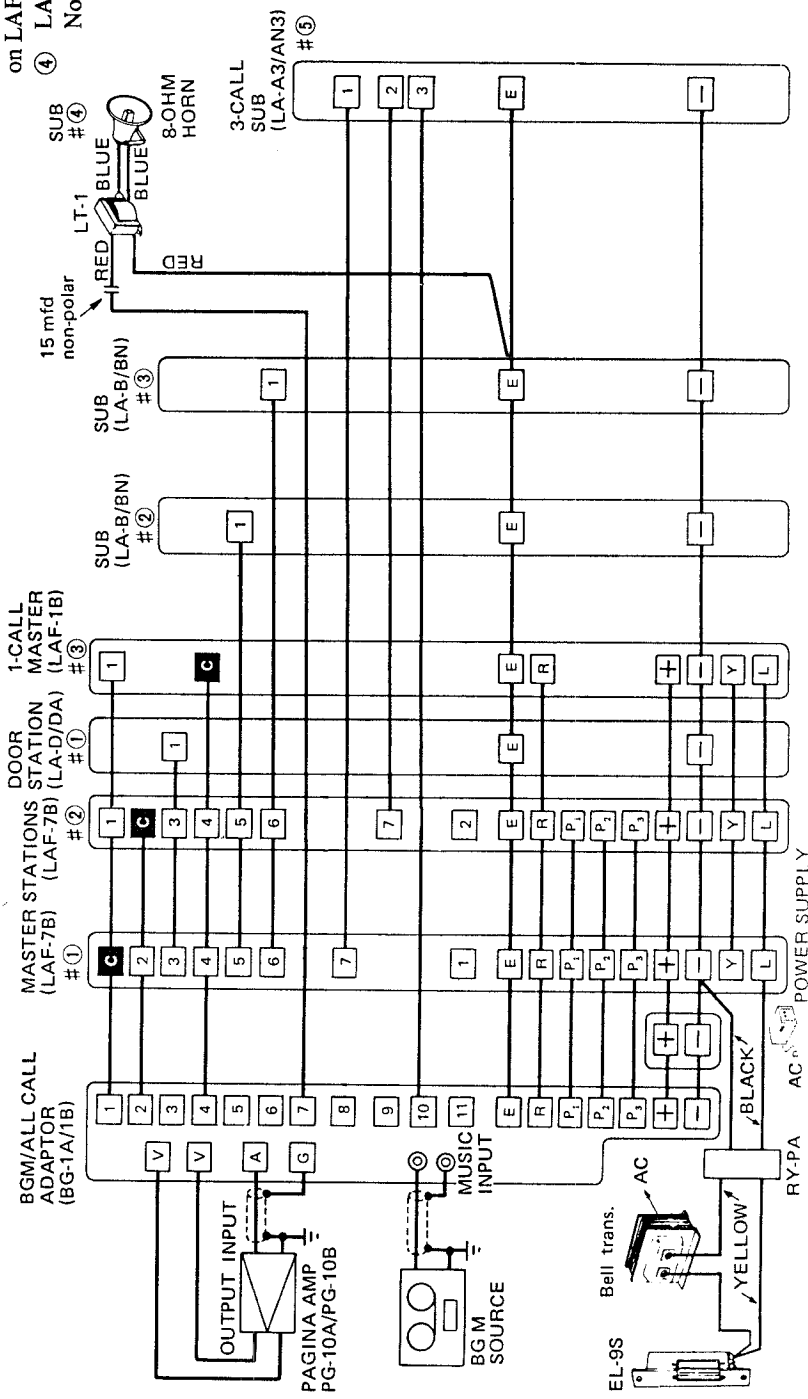
# #3 LA-3 INTERMIXED SYSTEM WITH ONE EACH DOOR STATION, DOOR RELEASE & 3-CALL SUB AND BGM/ALL CALL



- \* 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.

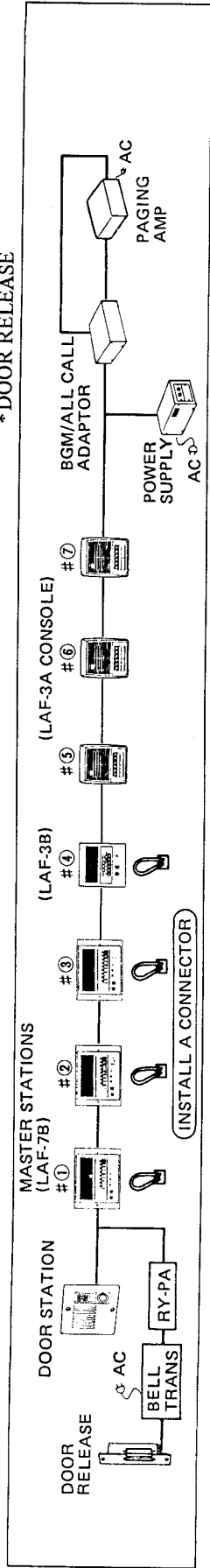


LAF-7B CONNECTOR WIRE COLOR CODES

9	1	Brown
P	2	Red
I	3	Orange
N	4	Yellow
7	5	Green
W	6	Blue
I	7	Purple
R		-
E		-
S		-
11	C	Brown
P	E	Orange
I	Y	Yellow
N	P <sub>1</sub>	Green
10	P <sub>2</sub>	Blue
7	P <sub>3</sub>	Purple
W	R	Gray
I	L	White
R	+	Red
E	-	Black

# # 4 LAF-7B INTERMIXED SYSTEM

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

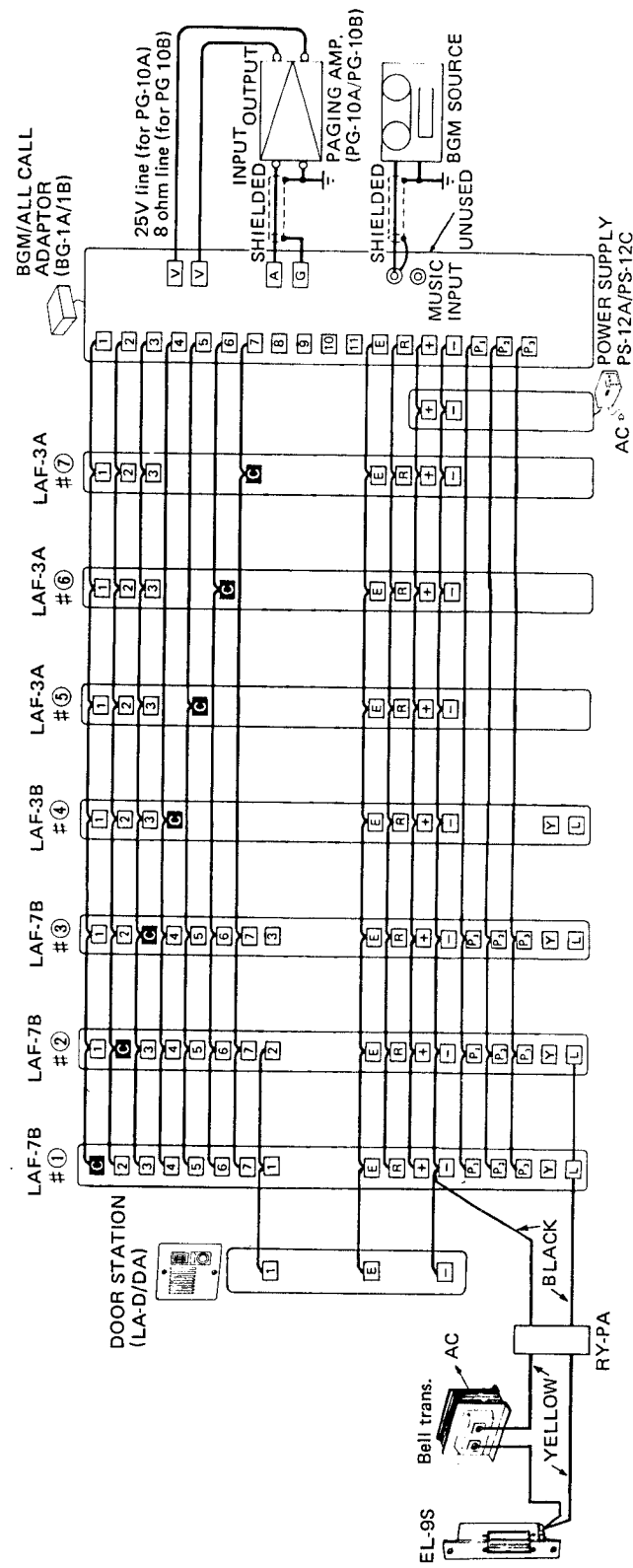


LAF-7B CONNECTOR WIRE COLOR CODES

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

9 P I N ( 7 W I R E S )

11 P I N ( 10 W I R E S )



## 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).