

# **MUSIC CENTER**

Model;

BGR-10A

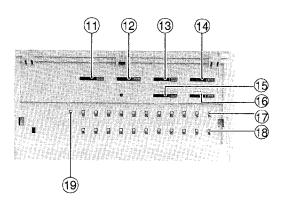
(All call & Music adaptor w/Tuner for LEF-C system)

## **INSTRUCTIONS**

BGR-10A is a Music Center system, which provides all-call and music distribution capability to LEF-C Master Sentry System. Before system installation, please read carefully this Instructions Manual. For the end users, give the included Operation Manual packed with LEF-10C unit for their daily use.

### **Names and Functions**

#### (Under the lid)



#### BGR-10A

- 1 LCD
- ② LOCAL/DX selector switch (under the lid)
- ③ MUSIC volume control
- 4 MUSIC ON/OFF switch
- 5 STN/CLK display changeover switch
- 6 Manual UP/DOWN tuning switch
- (7) SEEK switch
- 8 MEMORY switch
- (9) AM/FM selector switch
- 10 Pre-set channel selector switch(6)

#### (Under the lid)

- (1) Chime call volume control (for door station call-in)
- 12 AUX input volume control
- 13 MUSIC BASS control
- 14 MUSIC TREBLE control
- (5) ALL CALL PRE-TONE volume control
- 16) ALL CALL SPEECH volume control
- MUSIC receiving station ON/OFFswitch(1~11)
- (1) Chime call receiving station ON/OFF switch(1 ~ 11)
- 19 AUX/TUNER selector switch



## **System Features and Components**

### **BGR-10A Features**;

BGR-10A is a Music Center, designed to work with LEF-10C and LEF-5C Communication Systems.

- \* Includes all call amplifier and radio tuner for music distribution.
- \* Provides **chime call tone** for max. 3 door station call-in. (with 11 chime receiving station ON/OFF switches for each respective room station.
- \* AM/FM pre-set tuning buttons(6 buttons).
- \* All call from any LEF-10C, LEF-5C master stations.
- \* Accepts LEF-1C, 1-call sub (LEF-1C calls master station by making all call. Also, can receive a call from door station)
- \* Upgrades LEF-C system to Master Sentry, Music, Video System.
- \* Digital display on LCD for fine tuning.
- \* Includes clock function. STN/CLK switch to show time on LCD.
- \* Semi-flush mount.

### SYSTEM COMPONENTS

#### Audio system

LEF-10C or LEF-5C are main master stations which can be used in the kitchen and/or living rooms, with MUSIC CENTER, allowing to call each max. 10 or 5 other stations. LEF-3C may be used as a 3-call sub master to call main stations or sub stations.

#### Master stations:

LEF-10C 10-call master LEF-5C 5-call master LEF-3C 3-call master

#### Sub stations:

**LE-C** Sub station w/MUSIC VOL.

LE-CN do, w/ privacy
LE-B Sub station

LE-BN " , w/ privacy

#### Door stations:

LE-D Door station, surface-mount
LE-DA " " , flush-mount, stainless

#### Power supply;

PS-12C Power supply for LEF-C system, AC 120V. DC 12V

#### Door release:

EL-9S Door release, AC 12V, 0.35A

RY-PA Relay for door release or any aux. device

PT-1210N AC transformer

#### **Music Center system**

Typically installed in kitchen or family rooms, when combined with the LEF-10C or LEF-5C.

#### Music center:

**BGR-10A** AMFM Music center w/digital clock

#### Sub master station;

LEF-1C Sub station w/ALL CALL button Features door answering, door release, and all call. BGR-10A is necessary for LEF-1C all call oppration.

#### Power supply;

PS-24C Power supply, AC 120V. DC 24V, 1A

### Video system

#### Video door stations;

MY-CA Video door station, surface-mount
MY-DC " " , semi-flush mount
MY-DG " " , metal panel

#### Video monitor:

**MYH-CUB** Video monitor, semi-flush mount.

#### Video adaptor;

MYW-P1L 1-camera video adaptor MYW-P3L 3-camera video adaptor

#### Power supply:

PS-18C Power supply for video system

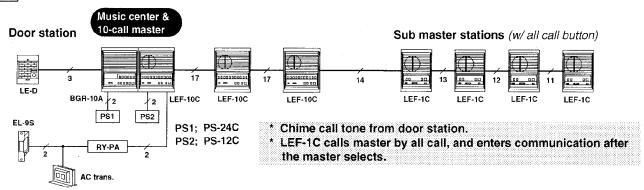
An additional power supply is required to power

3 ~ 5 video monitors.

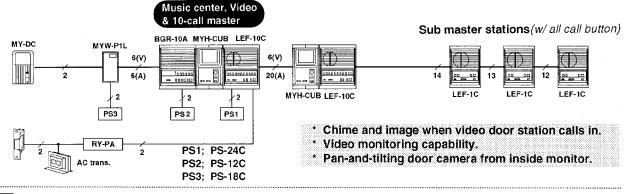


## System / Cable Layout

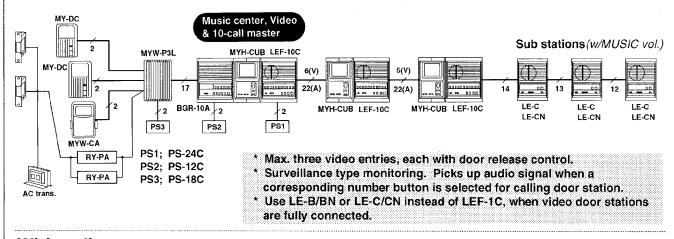
### 1 Basic audio system, with one audio door station



### 2 Basic video system, with one video door station;



### 3 Expanded multi-station video system, with max. three video door stations;



### Wiring distance;

#### Between MY-DC and MYW-P1L, P3L;

AWG	22AWG	18AWG
Distance	165'	330'
Diameter	0.65mm	1.0mm
Distance	50m	100m

## Between MYW-P1, 3L and PS-18C, 18D;

AWG	18AWG
Distance	16'
Diameter	1.0mm
Distance	5m

#### Between MYW-P1, 3L and farthest MYH-CUB;

	w/ 2 monitors	w/ 1 monitor
Distance/ diameter	35m/ 1.0mm	75m/ 1.0mm
Distance/ AWG	115'/ 18AWG	245'/ 18AWG
Wnen +, - wires	75m/ 1.0mm	
are doubled;	245'/ 18AWG	

# IV

### **Installation Guidelines**

- Aiphone recommends that when installing any of its communication products, the wiring must be run at a distance of at least 2 feet (60cm) from any AC wiring, fluorescent lights, or dimmer switches.
- Aiphone Corporation is not responsible for improper installations of its products which result in interference generated by AC voltage, dimmer switches, fluorescent lighting fixtures, or other similar electrical devices. If noise is induced into the intercom system from one of these sources, it must be corrected at the source by the installing party.

### LEF Audio Intercom System Pre-installation: Wiring

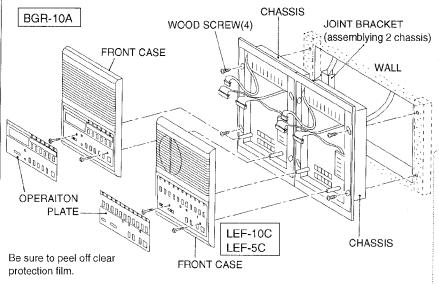
- 1 Select the proper type of wire for the system being installed. Use the maximum number of conductors for the system. Consult the following wiring information to determine how many conductors will be required for your system, and what gauge is required.
- ② Shielded wire is recommended, but not required. It may help to minimize possible interference from outside sources.
- ③ Use a multi-conductor cable with an overall shield, not twisted pairs.
- 4 Run the cable in a "daisy-chained" configuration, in and out of each station in the system from beginning to end. Door stations and sub stations may be homerun to the nearest master station in the system.
  - Note; Some intercom stations require the same common wires, plus individual wires for each station on the wire run. Assure that the cable has enough conductors for every station included.
- (5) When running intercom cable, maintain a distance of at least 24" from any AC wiring., fluorescent lighting, and dimmer switches. When crossing AC wires, do so at a 90° angle. Avoid running intercom cable in the same stud space with electrical wiring, and install the intercom station on a different portion of the wall from electrical devices.

### Installation

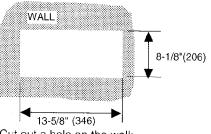
- 1 Lay out your system in advance, determining which stations will be located in each room, and what their respective **station number** will be. Fill in this information on your wiring diagram.
- 2 Cut the proper sized holes in the wall to semi-flush mount the intercom stations(C-version units only).
- (3) Separate the intercom from the back chassis by carefully removing the control panel cover and directory strip and loosening the screws. Lift up on the intercom portion before pulling it outward. Unplug the connectors, and store the intercom unit in the box until the wiring is completed.
- 4 Install the back chassis in the wall, and make wire connections as shown in the appropriate wiring diagram. Be sure to tighten screws securely onto the wires.
- (5) Reattach the intercom unit to the back chassis with the connectors, and place it on the back chassis from the top. Tighten the screws, and replace the directory strip and cover. Remove the plastic film over the control panel cover
- 6 After all connections are made intercom stations installed, test the operation of the system according to the Owner's Guide. leave the Owner's Guide with the end-user for their use.
- (7) Fully train the end-user as to the functions and features of their intercom system. Advise the end-user on which rooms are assigned to each station number so they can fill in the directory card on each station.

## **Installation Guidelines**

### ■ BGR-10A, LEF-10C or LEF-5C

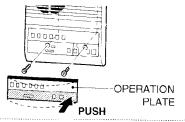


#### **CUTOUT HOLE DIMENSIONS**



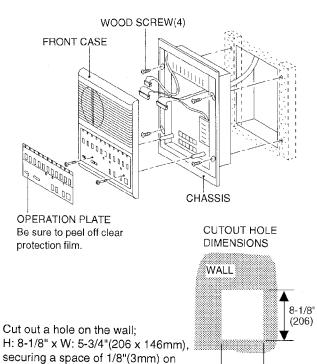
Cut out a hole on the wall; H: 8-1/8" x W: 13-5/8"(206 x 346mm), securing a space of 1/8"(3mm) on each left and right side.

To remove operation plate, push either left or right side of the plate.

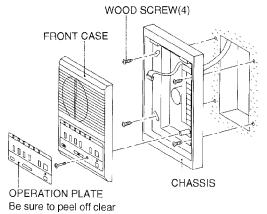


### ■ LEF-10C or LEF-5C

each left and right side.



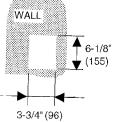
### ■ LEF-3C



Be sure to peel off clear protection film.

Cut out a hole on the wall; H: 6-1/8" x W: 3-3/4"(155 x 96mm), securing a space of 1/8"(3mm) on each left and right side.

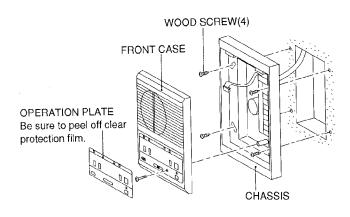




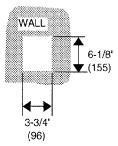
5-3/4" (146)

# Installation Guidelines(cont'd)

### ■ LEF-1C

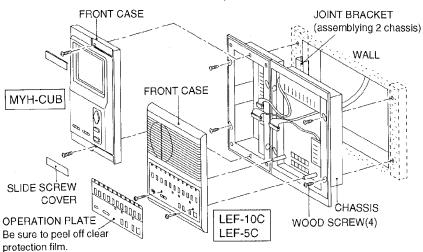


# CUTOUT HOLE DIMENSIONS

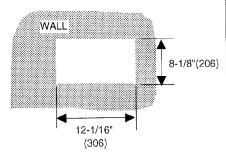


Cut out a hole on the wall; H: 6-1/8" x W: 3-3/4"(155 x 96mm), securing a space of 1/8"(3mm) on each left and right side.

### ■ LEF-10C or LEF-5C, MYH-CUB

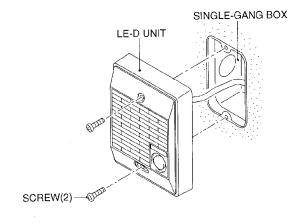


#### **CUTPUT HOLE DIMENSIONS**



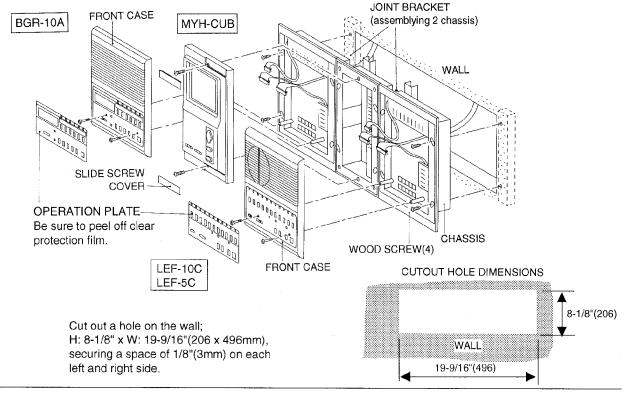
Cut out a hole on the wall; H: 8-1/8" x W: 12-1/16"(206 x 306mm), securing a space of 1/8"(3mm) on each left and right side.

### ■ LE-D



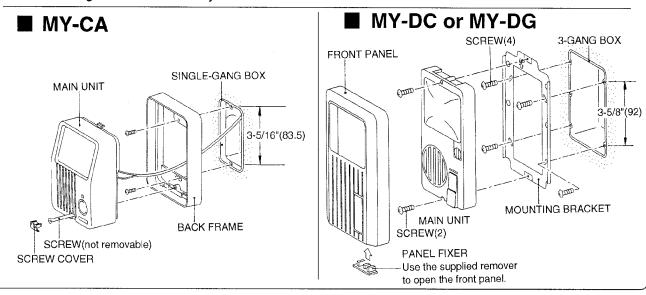
## Installation Guidelines(cont'd)

### ■ BGR-10A, MYH-CUB, LEF-10C or LEF-5C



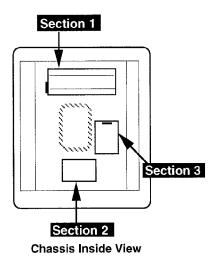
#### Video Door Station Pre-Installation

- ① When using the MY-CA surface mount unit, install a single-gang box or mounting ring.
- ② When using the MY-DC or MY-DG semi-flush mount door station, install a standard 3-gang electrical box, mounted vertically.
- 3 Mount the electrical box so that the height of the camera lens will be at "the average height of an adult, less 12 inches." Typical mounting height is between 4'4" and 4'10 choose the most ideal height and location for your installation."



### **Terminal Identifications**

#### ■ BGR-10A



#### Section 1

1 ~ 11 for music/all call output
P1, P2, P3 for all call control signal input
R, Y, -, E for LEF-C mode control
B, - (DC 24V) for BGR-10A/H power supply
(connect to PS-24C power supply)

#### Section 2

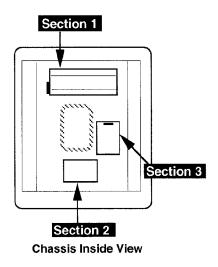
DA(DB, DC) for door station communication
SA(SB, SC) for door station call signal output
AUX L, E for input of music source other than radio tuner(LEFT input)

AUX R, E - do -(RIGHT input)

#### Section 3

**FM** for connecting FM antenna **AM** for connecting AM antenna

### ■ LEF-10C or LEF-5C



#### CN-1

1 ~ 10 Connect to corresponding stations.E for common audio communication

for power supply

#### CN-2

+, -

C for receiving a call and music
R for occupied LED
S Connect to music speaker
(connected S - E terminals)
Y for controlling occupied mode when called
L for door release
P1 for controlling all call
P2, P3 for all call output

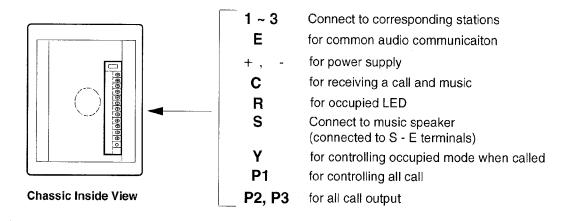
#### CN-3

K1 ~ K10 for controlling camera or external devices

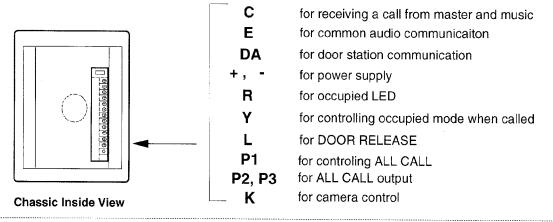
# VI

# Terminal Identifications(cont'd)

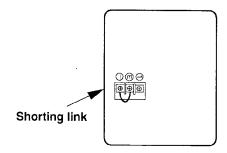
#### **■ LEF-3C**



#### ■ LEF-1C



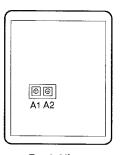
### ■ LE-D



**Back View** 

- for connecting to DA terminal(BGR-10A)
- **E** for connecting to E terminal(BGR-10A)
- for connecting <sup>-</sup> terminal(BGR-10A)
   (Remove a shorting link between E and <sup>-</sup>)

### ■ MY-CA

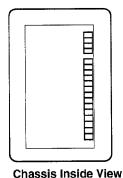


**Back View** 

A1, A2 For connecting to A1, A2 terminals of MYW-P1L video adaptor (for audio, video & PanTilt signals)

# **Terminal Identifications(cont'd)**

### MYH-CUB

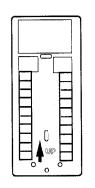


for connecting to **B1**, **B2** terminals(MYW-P1L) A1, A2 for connecting to A1, A2 terminals(next B1, B2 MYH-CUB)

for connecting to U1, U2 terminals(both U1, U2 MYW-P1L and next MYH-CUB)

for connecting to terminals: 18V+, 18V- (MYW-P1L) and to + , - (next MYH-CUB)

### ■ MYW-P1L



**Chassis Inside View** 

for connecting to A1, A2 terminals(MY-CA, DC, DG) A1, A2

B1, B2 for connecting to A1, A2 terminals(MYH-CUB)

U1, U2 for connecting to **U1**, **U2** terminals(MYH-CUB)

for connecting to +, - terminals(MYH-CUB and 18V+, 18V-

PS-18C)

for connecting to **DA** terminal(BGR-10A) DA

(door station terminal)

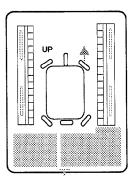
E, R for connecting to each **E**, **R** terminals(BGR-10A)

12V+, 12Vfor connecting to +, - terminals(LEF-10C)

KA for connecting to **K10** terminal(LEF-10C)

(video control)

### ■ MYW-P3L



Chassis Inside View

for connecting to A1, A2 terminals(MYH-CUB) B1, B2

18V+, 18Vfor connecting to +, - terminals(MYH-CUB & PS-18C)

for connecting to **U1**, **U2** terminals(MYH-CUB) U1, U2

1A1, 1A2 for connecting to A1, A2 terminals(MY-DC, etc.)

for connecting to A1, A2 terminals(MY-DC, etc.) 2A1, 2A2

for connecting to **BLUE**, **YELLOW** wires(MYW-CA) 3A1, 3A2 or to A1, A2 terminals(MY-DC, etc.)

for connecting to **DA**, **DB**, **DC** terminals(BGR-10A) DA, DB, DC or to 10, 9, 8 terminals(LEF-10C)

> E, R for connecting to **E**, **A** terminals(BGR-10A)

KA, KB, KC for connecting to **K10**, **K9**, **K8** terminals(LEF-10C) (video control)

> for connecting to **L** terminal(LEF-10C) EL2

for connecting to each +, - terminals(LEF-10C, 12V+, 12Vand BGR-10A & LEF-10C).

Not connected(optional function) MOD

Do not use this for relay/junction terminal.

# VII

### **AM/FM Antenna Installation**

BGR-10A is a MUSIC CENTER for use with LEF-10C system. Includes AM/FM receiver and must be equipped with antenna to receive AM and FM stations.

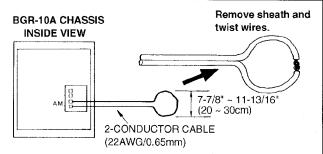
### 1. How to install AM antenna;

Make a loop antenna, using a 2-conductor cable as shown below, and connect to AM ANT terminals on BGR-10A.

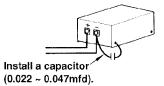
In a weak signal area, make 3 to 5 round loops, which should be turned in the direction attaining the best reception.

#### Notes:

- (1) Keep the looped part of the antenna more than 2m(7') away from power supply and video monitor.
- (2) To avoid interference, take to earth gorund at terminal with a capacitor (0.022 ~ 0.047mfd), if required.



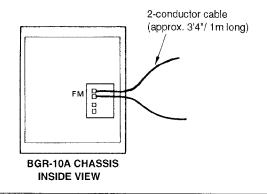
PS-24C POWER SUPPLY



### 2. How to install FM antenna;

To receive FM station, use FM antenna locally available (impedance 300 ohm) in weak signal areas. If BGR-10A is installed in strong sginal areas, it is possible to receive FM station by just connecting 2-conductor cable of approx. 1m (3'4") long to FM terminals on BGR-10A.

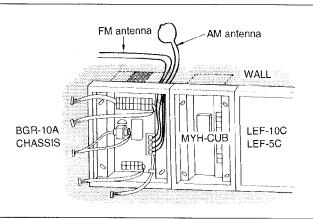
Note; Some household electrical appliances may cause interference if installed nearby. Keep the FM/AM antennas as far as possible from those household appliances.



### 3. AM/FM antenna cable installation;

For best results, install the AM and FM antennas inside the wall during the prewiring phase of installation.

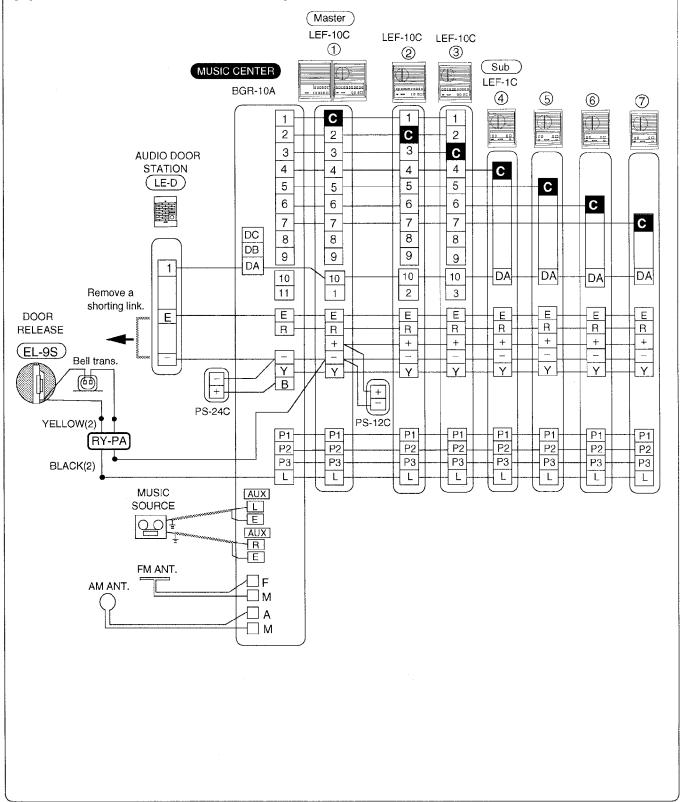
The length of the antenna may be varied, depending on the quality of reception locally. Clearly mark the antenna wires at the BGR-10A location for correct connection.





# **Wiring Diagrams**

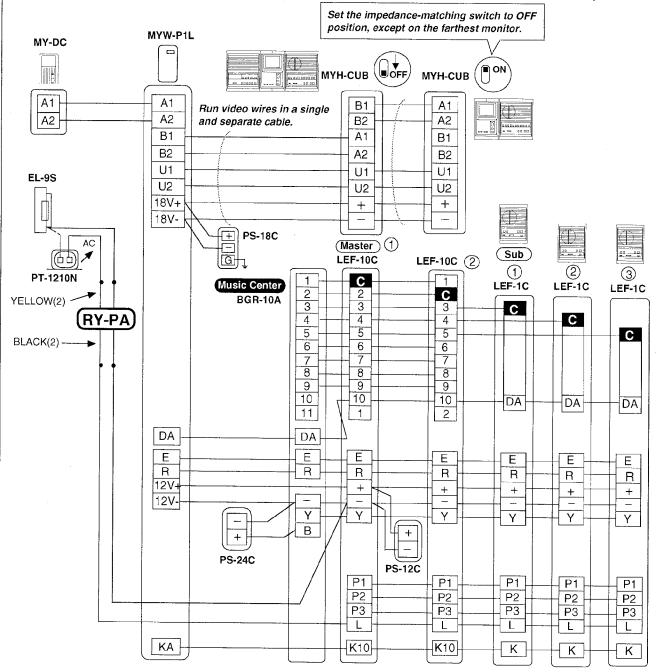
### (1) LEF-10C Music Center System, w/ one audio door station;



# VIII

# Wiring Diagrams(cont'd)

# (2) LEF-10C Music Center System, w/one video door station;

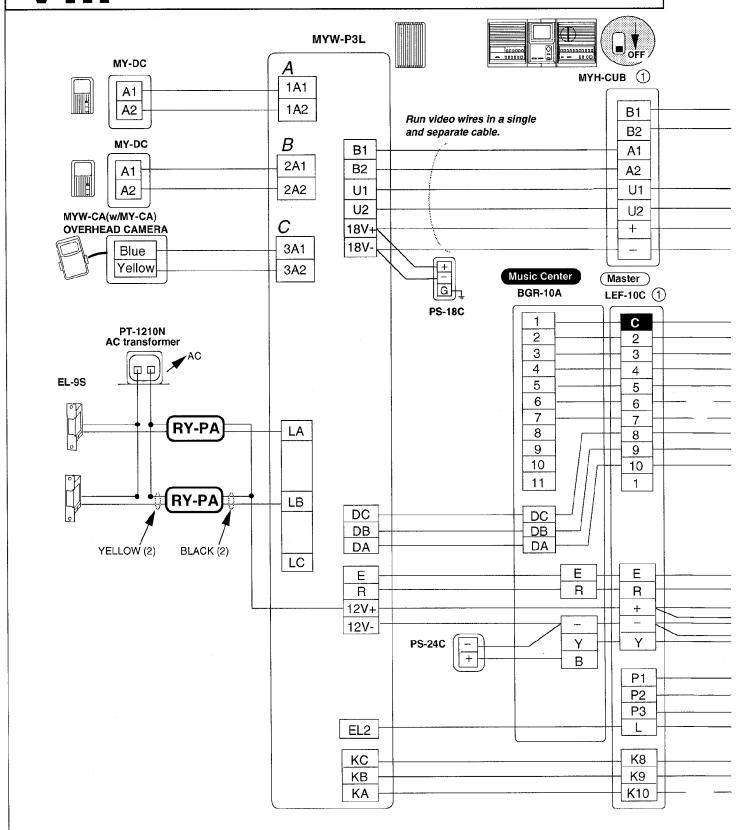


LEF-1C can call LEF-10C master stations by all call.

So, LEF-1C must be used in a system with BGR-10A Music Center.

# VIII

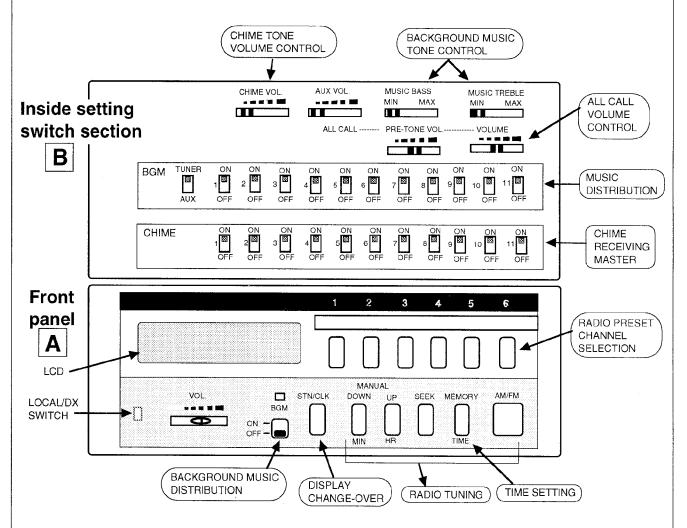
# Wiring Diagrams(cont'd)



#### (3) LEF-10C Music Center System, w/3 video door stations; Set the impedance-matching switch to OFF ON position, except on the farthest monitor. MYH-CUB (2) мүн-сив ③ Α1 B1 A2 B2 B1 Α1 B2 A2 U1 U1 For MYH-CUB 3 power supply, U2 U2 install a PS-18C, leaving + terminal + wire unconnected. PS-18C + LEF-10C (2) LEF-10C (3) Sub 2 C 3 (1) 3 C LE-B, BN LE-B, BN LE-B, BN 4 5 5 1 6 1 6 7 7 1 8 8 9 9 10 10 3 2 Ε Ε Ε Ε Ε R R + Υ Υ PS-12C P1 P1 P2 P2 Р3 **P**3 K8 **K**8 LEF-1C sub master station can not **K**9 **K**9 be used, when three video door K10 K10 stations are fully connected. Instead, use LE-B, BN or LE-C, CN.



### **Operational tests**



### Background music;

- A 1. Set MUSIC ON/OFF switch to upper ON position.
  - 3 2. Set individual ON/OFF switch for each room station.
- **B** 3. Adjust MUSIC TREBLE/BASS controls as desired.

### Chime call;

- Set individual CHIME ON/OFF switch for each room station.
- **B** 2. Adjust CHIME VOLUME switch to the level desired.

### All call:

- B 1. Adjust PRE-TONE volume to the level desired.
- B 2. Adjust ALL CALL SPEECH volume to the level desired.



### Operational tests(cont'd)

### Radio tuning;

- **A** 1. To program up to 6 pre-set frequencies/channels, press MANUAL UP/DOWN button until the required frequency is tuned in, press MEMORY button, then press channel button (1 ~ 6).
- A 2. Search the channel by pressing SEEK button, to either UP or DOWN direction last used.
- A 3. Press AM/FM button to changeover band (band selection).
- 4. While in RADIO mode, press STN/CLK button to show either TIME or FREQUENCY in non-priority mode for 8 seconds and returns to display in priority mode.

  To reverse display in priority mode.

  press both MEMORY button and STN/CLK button at the same time.
- A 5. Set LOCAL/DX switch to LOCAL position in areas of strong electric field.

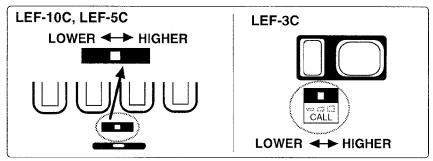
### Clock;

- A 1. To set HOUR, press UP/HR button, holding down MEMORY/TIME button.
- A 2. To set MINUTE, press DOWN/MIN button, holding down MEMORY/TIME button.

#### General notes;

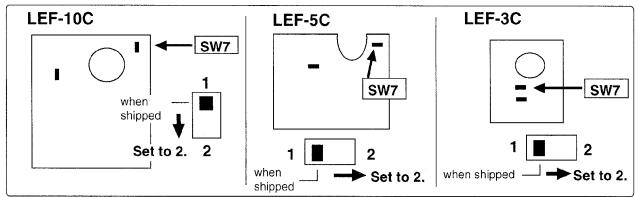
- \* Music and chime call volume can be adjusted only on BGR-10A.
- \* When a room station enters communication, music is muted temporarily.
- \* When BGR-10A system is powered off, pre-set 6 channel memories and time are erased, after 10 to 30 minutes back-up is consumed.
- \* BGR-10A is equipped with power amplifier and its surface temperature can be a little higher than LEF-10C.

### **CALL TONE VOLUME** Front case View (under the Operation Plate)



### MUSIC SPEAKER CONNECTION

When connecting a speaker to Room station, it becomes necessary to set SW7 to 2 position. (SW7 is located on back of front case)





### **Dos and Don'ts**

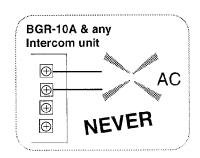
### Installation;

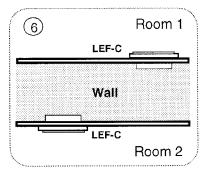
- 1 Be sure not to plug power supplies into AC receptacle until you complete wiring connections.

  Be sure to unplug before opening the unit.
- ② When BGR-10A is used for door chime call-in, set the system selector switch(on back of LEF-10C front case) from B to A position.
- 3 Be careful not to drop BGR-10A unit, as it will damage the built-in LCD. The liquid iside the LCD is harmful. If, by damaging, the inside liquid is running out, do not even attempt to ingest or absorb the liquid. Wash out completely if your hand or skin touched the liquid.



- (4) Select installation locations that would not be exposed to; temperature/humidity extremes,liquids and other damaging materials.
- (5) <u>To avoid feedback</u>, do not place one master station and another master or sub back to back, or on a common wall.





- 6 IMPORTANT: -
  - Aiphone is not responsible for improper installations of its product which result in interference generated by dimmer switches, fluorescent lighting fixtures or other similar electrical devices. Any such installation must be corrected at the source by the installing party.
  - Aiphone also recommends that when installing any of its communication products that a distance of more than 2 feet (60cm) be kept from any AC power cable, fluorescent lights, and dimmer switches as well.
- 7 In LEF-10C video system, run two separate cables with LEF-10C audio wiring together and MYH-CUB wiring together in a completely separate cable. Using the same cable for both audio and video terminals will cause severe interference to the LEF-10C audio communications.
- (8) Do not connect 18V+ terminal on MYW-P1, 3L to A1 or A2 terminal on MYH-CUB, which would damage the MYW-P1, 3L adaptor and other video units.
- 9 To increase inside monitor distance, double +, wires between MYH-CUB (See page 3).

### Maintenance;

(10) To clean, use a soft cloth dampened with neutral household cleanser.



# **Specifications**

## BGR-10A;

* Power source:	BGR-10A; DC 24V. Use PS-24C power supply.	
* Current consumption:	Max. DC 1.0A. 0.25A(standby).	
* No. of door station connectable:	Max. 3 door stations.	
* Number of master station connectable:	Max. 11 room stations.	
* Wiring:	Between BGR-10A and LEF-10C masters (for all call & music) 18 wires do (for chime call-in) additional 3 (max). Between BGR-10A and audio door station 2 common plus 1 individual Between BGR-10A and MYW-P1L 5 wires Between BGR-10A and MYW-P3L 11 wires (max.)	
* Wiring distance:	* Between BGR-10A and LEF-10C;  AWG 24AWG 22AWG 20AWG 18AWG Distance 300' 500' 750' 1,180' Diameter 0.5mm 0.65mm 0.8mm 1.0mm Distance 90m 150m 230m 360m	
* Dimensions(H x W x D) and weight:	BGR-10A; 9-1/2" x 8" x 3". Protrudes 1-1/2" from wall. 240 x 200 x 75(mm). Protrudes 35mm from wall. Approx. 2.36 lbs.(1,070g).	



## Specifications(cont'd)

### MYW-P1L, MYW-P3L;

* Power source:	MYW-P1L, P3L: DC 18V, supplied by PS-18C(in N. America)
* Current consumption:	MYW-P1L: Max. 500mA. 100mA(standby) MYW-P3L: MAX. 600mA. 150mA(standby)
* Wiring:	Between MYW-P1L and BGR-10A & LEF-C; Max. 12 wires.
	Between MYW-P3L and BGR-10A & LEF-C; Max. 17 wires.

#### \* Wiring distance:

\* Between MY-DC and MYW-P1/3L;

AWG	22AWG	18AWG
Distance	<b>1</b> 65'	330'
Diameter	0.65mm	1.0mm
Distance	50m	100m

\* Between MYW-P1/3L and PS-18C;

AWG	18AWG
Distance	16'
Diameter	1.0mm
Distance	5m

\* Between MYW-P1/3L and farthest MYH-CUB:

	w/1 monitor	w/2 monitors
Distance/ AWG	245 <sup>1</sup> / 18AWG	115 <sup>1</sup> / 18AWG
Distance/ diameter	75m/ 1.0mm	35m/ 1.0mm
When +, - wires are doubled		245'/ 18AWG 75m/ 1.0mm

* Dimensions(H x W x D)	<u>MYW-P1L;</u> 7-1/2" x 3" x 1-5/8", 190 x 74 x 42(mm).
& weight:	Approx. 0.57 lbs. (260g)
	MYW-P3L: 9-1/16" $\times$ 6-1/8" $\times$ 2", 230 $\times$ 155 $\times$ 50(mm). Approx. 1.22 lbs.(555g)

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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 change 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.

