

OPERATING MANUAL

PUBLIC ADDRESS


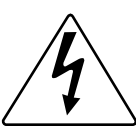

AMPLIFIER

PA-2000/4000/2000R/4000R

interM

UNPACKING AND INSTALLATION

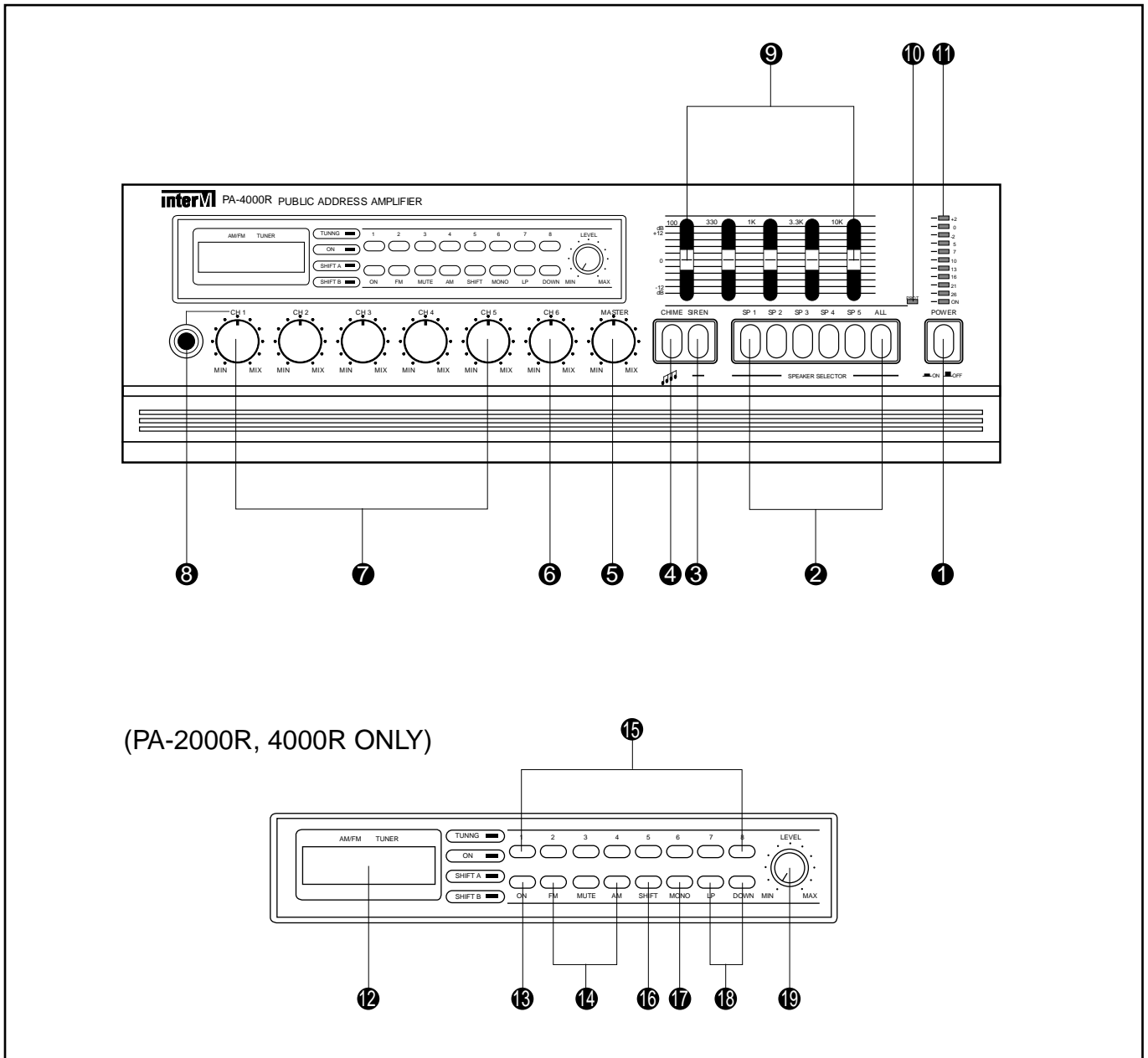
Although it is neither complicated to install nor difficult to operate your amplifier or receiver, a few minutes of your time is required to read this manual for properly wired installation and becoming familiar with its many features and how to use them. Please take a great care in unpacking your set and do not discard the carton and other packing materials. They may be needed when moving your set and are required if it ever becomes necessary to return your set for services. Never place the unit near radiator, in front of heating vents, to direct sun light, in excessive humid or dusty location to avoid early damage and for your years of quality use. Connect your complementary components as illustrated in the following page.

	<p> This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.</p> <p> This symbol is intended to alert the user to the presence of important operation and maintenance (servicing) instructions in the literature accompanying the appliance.</p> <p>Caution: To prevent electric shock do not use this (polarized) plug with an extension cord, receptacle or other outlet unless the blades can be fully inserted to prevent blade exposure.</p> <p>Attention: Pour prévenir les chocs électriques ne pas utiliser cette fiche polarisée avec un prolongateur, une prise de courant ou une autre sortie de courant, sauf si les lames peuvent être insérées à fond sans en laisser aucune partie à découvert.</p>
<p>WARNING</p> <p>To prevent fire or shock hazard, do not expose the unit to rain or moisture.</p>	

FEATURES

- **INPUT GAIN CONTROLS**
This system controls input gain in rear panel input gain volume per CH, you can use conveniently.
- **5 BAND EQUALIZER**
This system is provided the 5 bands equalizer. You can control the tone each frequency by using them.
- **SPEAKER SELSCT**
6 speaker selector switches are provided to enable you to select 5 speakers individually or totally.
- **TUNER MEMORY(PA-2000,4000R ONLY)**
The total 16 memory address in system can memorize the frequency of broadcasting station. You can use the desirable frequency conveniently.
- **TELEPHONE INPUT/MUSIC-ON HOLD**
To connect with the telephone system, the function of Telephone input and Music-on Hold are provided. (Music-on Hold is only for PA-2000R, 4000R)

FRONT PANEL CONTROLS



1. POWER SWITCH

Pressing this switch to ON will supply the power to this unit.

2. SPEAKER SELECTOR

These switches are used for connecting the output of amplifier to the speakers individually or totally.

3. SIREN BUTTON(-)

Pressing this button will activate siren circuitry and pressing again will reduce the siren signal gradually and OFF.

4. CHIME BUTTON

Pressing this button will activate 4 tone chime circuitry.

5. MASTER VOLUME

This control is used for adjusting the volume of finally mixed sound.

6. CH6/PHONO VOLUME

This volume adjust the level of CH6 or PHONO which is selected by the rear panel switch ⑧.

7. CH1-CH5 VOLUME

These volume adjust the level of CH1-CH5.

8. CHANNEL INPUT JACK

This jack is used for CH1. If phone plug is inserted on this jack, input signal of CH1 on rear panel will be cut off.

9. EQUALIZER VOLUME

These 5 bands equalizer controls the tone each frequency $\pm 12\text{dB}$.

10. PROTECT LED

This LED indicated protect circuit execution of internal unit.
When output is cut off this LED lighted.

11. LEVEL INDICATOR

These 10 dot LEDs indicate the output level.

12. TUNING FREQUENCY DISPLAY

You can confirm the frequency of the tuner through this display.

13. TUNER POWER ON SWITCH

To turn on the tuner, press this switch. Then the display window will be light on.

14. BAND SELECTOR (FM, MUTE, AM)

These switches are used for selecting AM, FM or FM MUTE in case of using tuner.

15. ADDRESS SELECT SWITCH

These switches has 8 kind addresses from 1 to 8, but the practical capacity is 16 kind addresses because one address is divided by A or B area.

16. SHIFT SWITCH (A OR B)

This switch is used to select the memory area A or B. The selected area is indicated with the LED.

17. MEMORY SWITCH

This switch is for memorizing the broadcasting frequency.

1. Select the frequency which you want to memorize by the UP, DOWN switch ⑬.
2. Select the memory area A or B with the shift switch ⑬.
3. Press memory switch ⑭, then select the required address with switch ⑮.
4. This present status of tuner will be memorized in selected address.

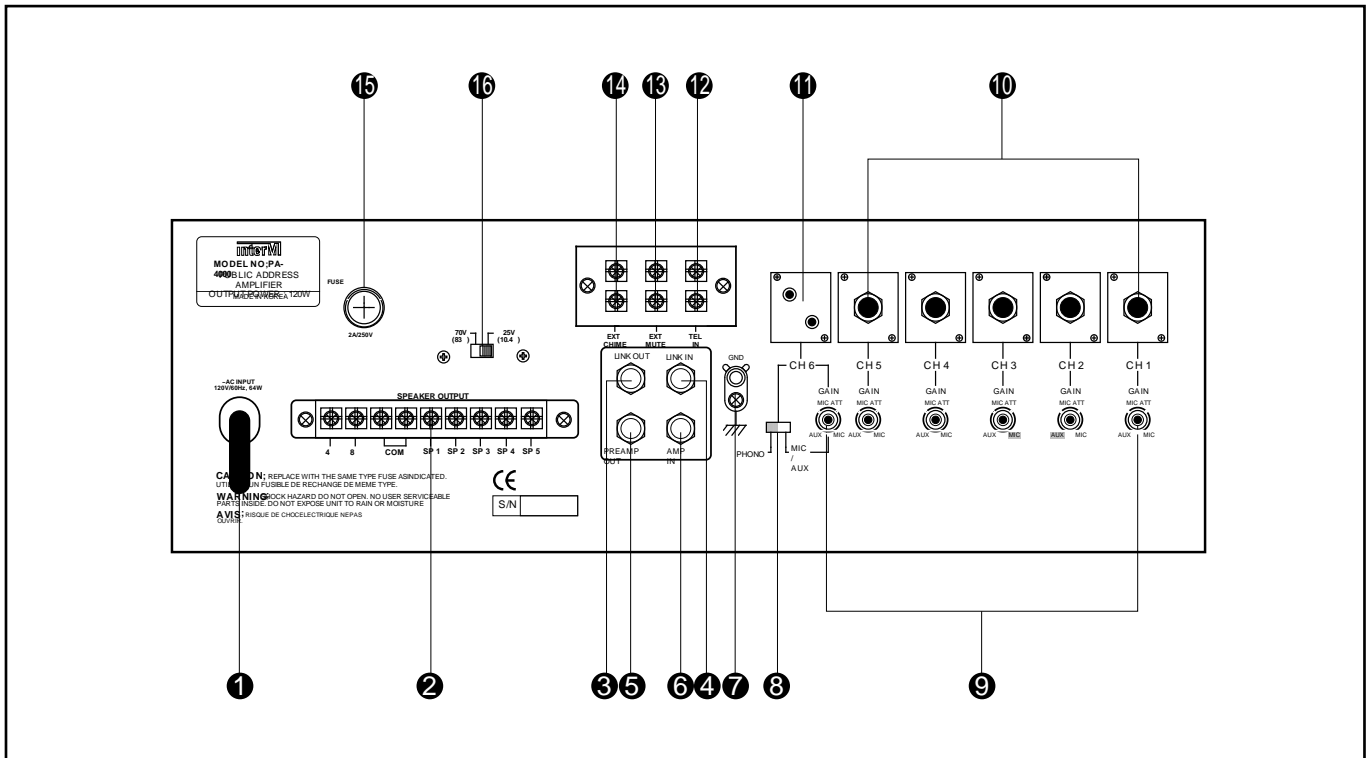
18. UP AND DOWN SWITCH

When these switches are pressed one time, AM/FM frequency is up or down per 9KHz and in case of pressing continually, the frequency is fast up or down.

19. RADIO VOLUME

This volume adjust output of the tuner.

REAR PANEL CONTROLS



1. AC CORD

Plug this AC input cord into AC outlet.

2. SPEAKER OUTPUT TERMINAL

These terminals are for the connecting the speakers. Select the terminals of 4 , 8 or High impedance (PA-2000(R):83 or 10.4 , PA-4000(R):42 or 5.2) not to overload.

NOTE: Pay attention that only high impedance terminal can be controlled by the speaker selector of front panel.

3. LINK OUT JACK

This jack is used to connecting the same kinds amp of this unit and record out of deck.

4. LINK IN

To the expansion of input channels, this jack is provided to connect with the output terminal of external mixer.

5. PRE AMP OUT JACK

This jack is for connecting the preamp out signal to external effect device or external musical instrument. If the plug is inserted on this jack mixed signal of all input is not connect to main amplifier and only amp in signal is connected.

6. AMP IN JACK

This jack is for connecting the external signal input. If plug is inserted on this jack, mixed signal of all input is not connected to main amplifier, and only amp in signal is connected.

NOTE:When switch selected the PHONO, the input gain volume of CH6 is not adjusted.

7. GND TERMINAL

This is ground terminal to be connected with chassis of the turntable to reduce hum to minimum. To further minimize hum, it may be necessary to connect this terminal with a wire to the nearest water pipe which goes directly to real ground.

8. CH6/PHONE SELECTOR

This switch is for select the CH6 or PHONO.

NOTE:When switch selected the PHONO, the input gain volume of CH6 can't adjusting.

9. INPUT GAIN CONTROL

According to the input signal source, adjust adequately these gain controls not to exceed input sensitivity. When the input level exceed the rated sensitivity, output signal of amplifier could be distorted and overloaded. Gain adjusting range of these volumes are 50dB, and general position of the volume is as following.

MIC(Microphone).....-50~-70dB

MIC ATT(Electric Guitar).....-30~-50dB

AUX(Deck, Tuner, etc).....-20~-30dB

10. (OPTION)

These are input terminals which is designed electrical balanced circuitry. Optionally, the type of terminals,XLR female jack, phone jack, screw terminals and RCA jack are provided. And transformer balanced circuitry is optional per buyer's order.

11. PHONO INPUT TERMINAL

This jack is for the input of turntable of magnetic cartridge, and the signal is controlled by the volume.

12. TELEPHONE IN TERMINAL

These terminals are to be connected to telephone exchange system for paging.

NOTE:When there are paging signal through this terminal, all other input signals except AMP IN are muted.

13. EXT MUTE

When these two terminals are shorted, the signals from CH3 to CH6, turner and turntable are muted, and the signals from CH1, CH2, LINK IN and CHIME are not muted. You can use these terminal for remote control.

14. EXT CHIME

When these terminals are shorted, the circuitry of 4 tone chime is activated. Also, you can use these terminal for remote control.

15. FUSE HOLDERS (AC) OPTION

These fuse holders contain AC fuses, replaces them with same type fuse when they are blown out. If they continuously blow, stop replacing fuses and refer servicing to qualified personnel.

DESCRIPTION \ MODEL	PA-2000(R)		PA-4000(R)	
VOLTAGE	AC 100V/120V	AC 220V/240V	AC 100V/120V	AC 220V/240V
FUSE RATING	2A/250V	1A/250V	4A/250V	2A/250V

16. IMPEDANCE SELECTOR SWITCH

This switch is for selecting the high impedance.

PA-2000(R):83 (70V) or 10.4 (25V)

PA-4000(R):42 (70V) or 5.2 (70V)

CONNECTION OF THE ANTENNA AND THE EARTHING CABLE

- **FM RECEIVING ANTENNA**

The electric wave of FM broadcasting is weakening in hills and valleys, around buildings and in iron-reinforced buildings because of its own nature.

- **INSTALLATION OF AN ANTENNA EXCLUSIVELY FOR FM**

Connect the feeder of the antenna of the terminal of 300 (Fig. 1).

Listening to the broadcasting, fix it after deciding the location and the direction so that the receipt condition may be optimum.

- **INSTALLATION OF AN ANTENNA USING THE COAXIAL CABLE**

You may feel the noise at the crowded downtown, city streets and factory sites as well as around power cables, even in the case of using an antenna exclusively for FM. In these regions, install it through connection with a coaxial cable of 75 .

- **INDOOR ANTENNA**

In the regions where FM broadcasting is heard comparatively well due to the near distance to the station or wooden structure, you can receive broadcasting of good quality by using T-type antenna.

Fix the antenna at the best place for receipt after connecting it with a terminal of 300 .

- **AM LEAD ANTENNA**

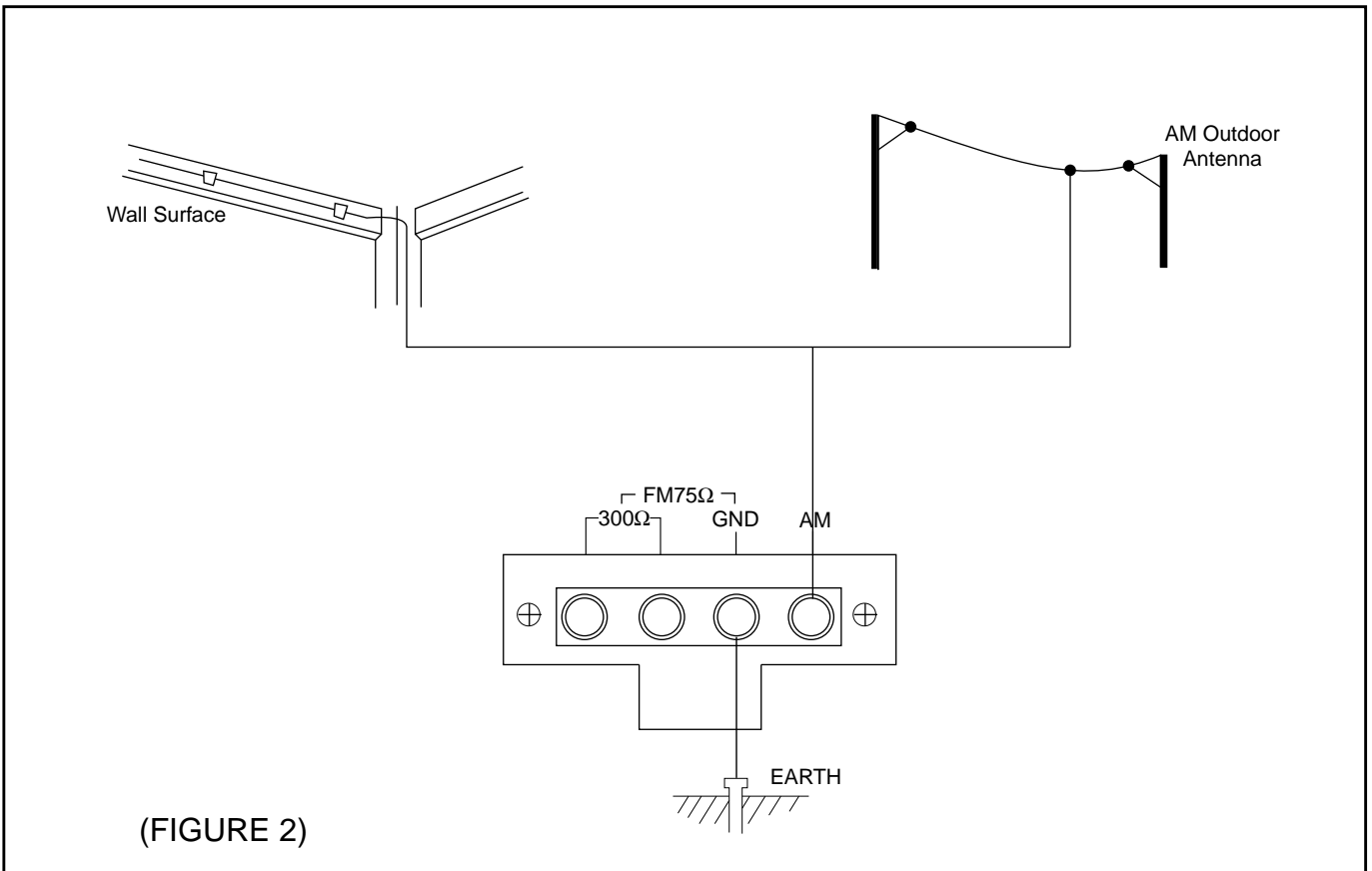
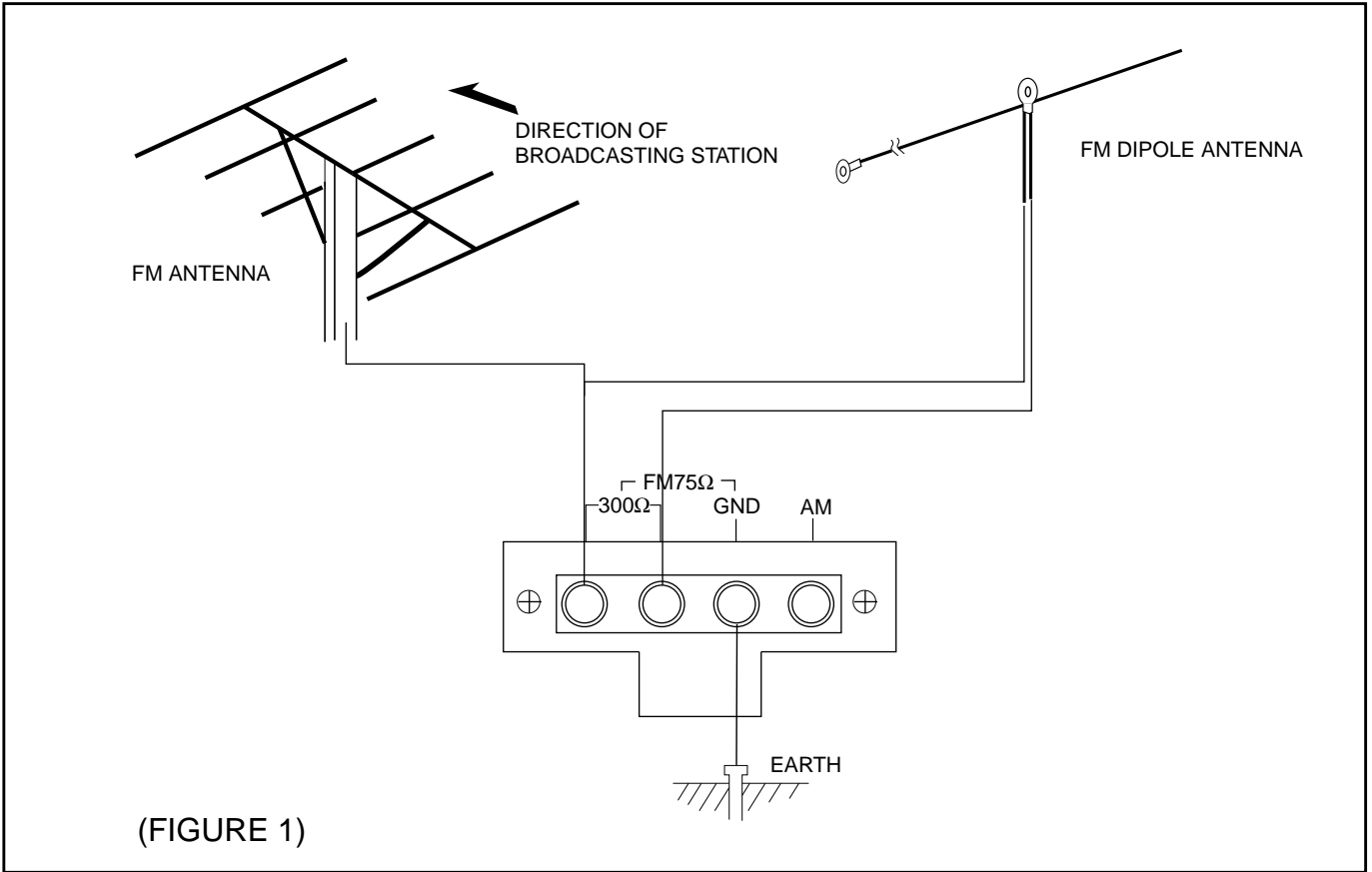
Fix one side to AM terminal and the other to high place like a wall after making the vinyl-coated cable of a single cable about 6~8m long.(Fig. 2)

- **AM OUTDOOR ANTENNA**

Install the vinyl-coated cable at the outdoor place in case you cannot hear quite well though you have installed the lead antenna. (Fig. 2)

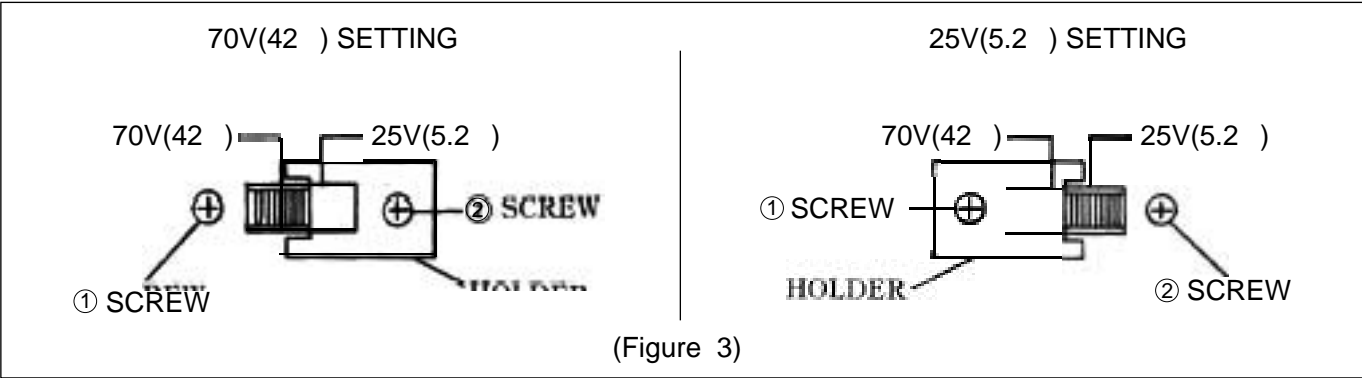
- **ON EARTHING (EARTH GND)**

Broadcasting may be heard well without earth connection. But connect the earth to the earth terminal (GND) for safety and prevention of noise. (Fig. 2)



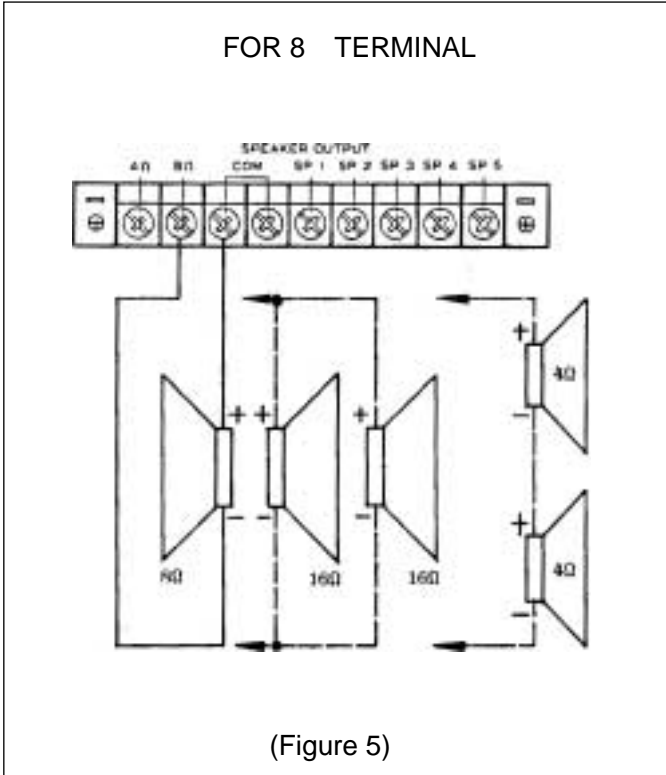
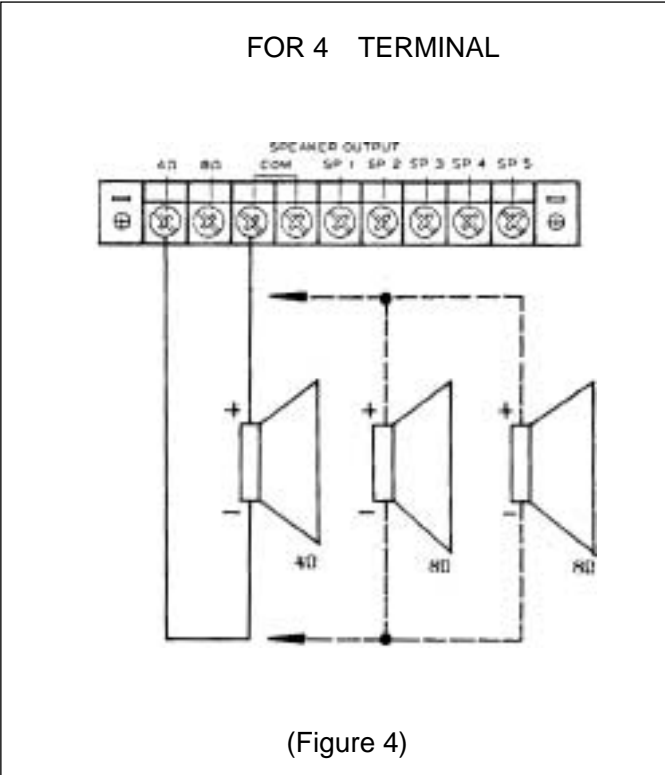
IMPEDEANCE SELECTOR

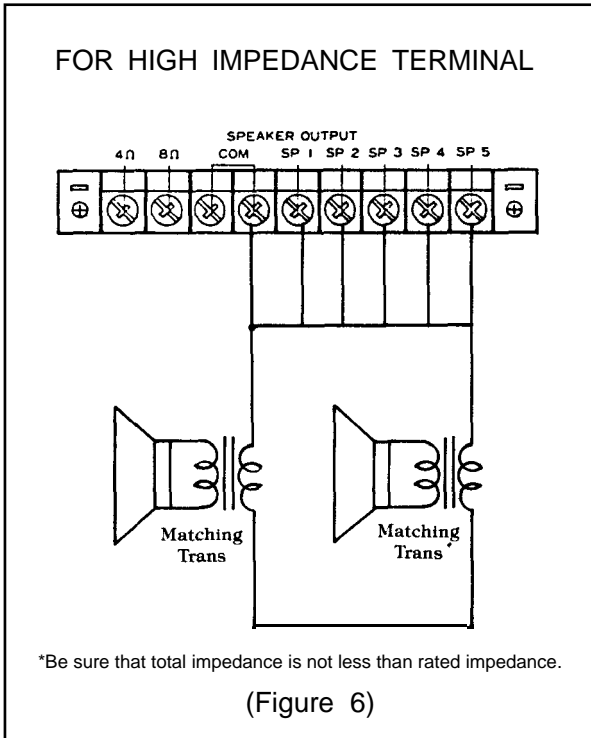
- **IN CASE OF CHANGING 42 TO 5.2 (83 TO 10.4)**
 Loosen the screw ② and undo the holder and set the switch 5.2 , then tighten the screw ② and I-loosen the screw ① and insert the holder in the opposite direction, (refer to Figure 3)and tighten the screw ①.
- **IN CASE OF CHANGING 5.2 TO 42 (10.4 TO 83)**
 Do the reverse of changing 42 to 5.2 .
 * NOTE: a) Don't loosen the screw ① and the screw ② at the same time.
 b) Remove the power cord from the power outlet before operation.



INSTALLSRION OF THE SPEAKERS

When you connect the speaker, remove the power cord from Acountlet. And use the suitable terminals connecting way as belows.
 Be sure that total impedance is not less than rated impedance.





SPECIFICATIONS

■ ELECTRICAL

AMPLIFIER SECTION

- Rated OutputPA-2000(R):60W(RMS)
PA-4000(R):120W(RMS)
- Input Sensitivity/Impedance
 - CH1-CH6.....0.25mV~80mV/600Ω
 - Phone2mV/22KΩ
 - Link in100mV/15KΩ
 - Telephone in0.775V/600Ω
 - Amp in1V/47KΩ
- Frequency Response60Hz~20KHz
- T.H.D(at 1KHz Rated Output).....Less Than 0.5%
- S/N105dB
- Graphic Equalizer(100Hz, 330Hz, 1KHz,3.3KHz,10KHz) ±12dB
- Speaker Output/Impedance 120W:4Ω, 8Ω, 42Ω(70V), 83Ω(100V)
60W:4Ω, 8Ω, 83Ω(70V), 165Ω(100V)
- Link Out/Impedance500mV/600Ω
- Music-On Hold/Impedance(R Type Only)0.775V/600Ω
- Pre Amp Out/Impedance.....1V/600Ω

TUNER SECTION1V/47K OHM

- Tuning RangeFM:87.5-108MHz
AM:522-1710KHz
- Antenna InputFM:300Ω, BAL or 75Ω, UNBAL
- Usable SensitivityFM:2μV
AM:4μV
- S/N.....FM:65dB
AM:50dB

■ GENERAL

- Power SourceAC 110V~240V, 50/60Hz
- Power ConsumptionPA-2000(R):130W
PA-4000(R):230W
- WeightPA-2000:10Kg
PA-4000:12Kg
- DimensionsPA-2000:420(W) × 100(H) × 320(D)mm
PA-4000:420(W) × 133(H) × 320(D)mm

*Specifications and design subject to change without notice for improvements.

interM

MADE IN KOREA