



STEREO GRAPHIC EQUALIZER

GE-56

INSTRUCTION MANUAL

KENWOOD

Rear panel safety precautions

|   |   |
|---|---|
| <div><div>CAUTION</div><div>RISK OF ELECTRIC SHOCK<br/>DO NOT OPEN</div></div>      | CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.   |
|  | The lightning flash with arrowhead symbol, within an equilateral triangle, 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. |
|  | The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.  |



For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model \_\_\_\_\_ Serial number\_\_\_\_\_

Unpacking

Unpack the unit carefully and make sure that all accessories and cables are put aside so they will not be lost. Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage. We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

Important!

U.S.A., Canada, Australia and Europe

These units are not equipped with an AC voltage selector switch and the discussion of such a switch that follows should be disregarded.

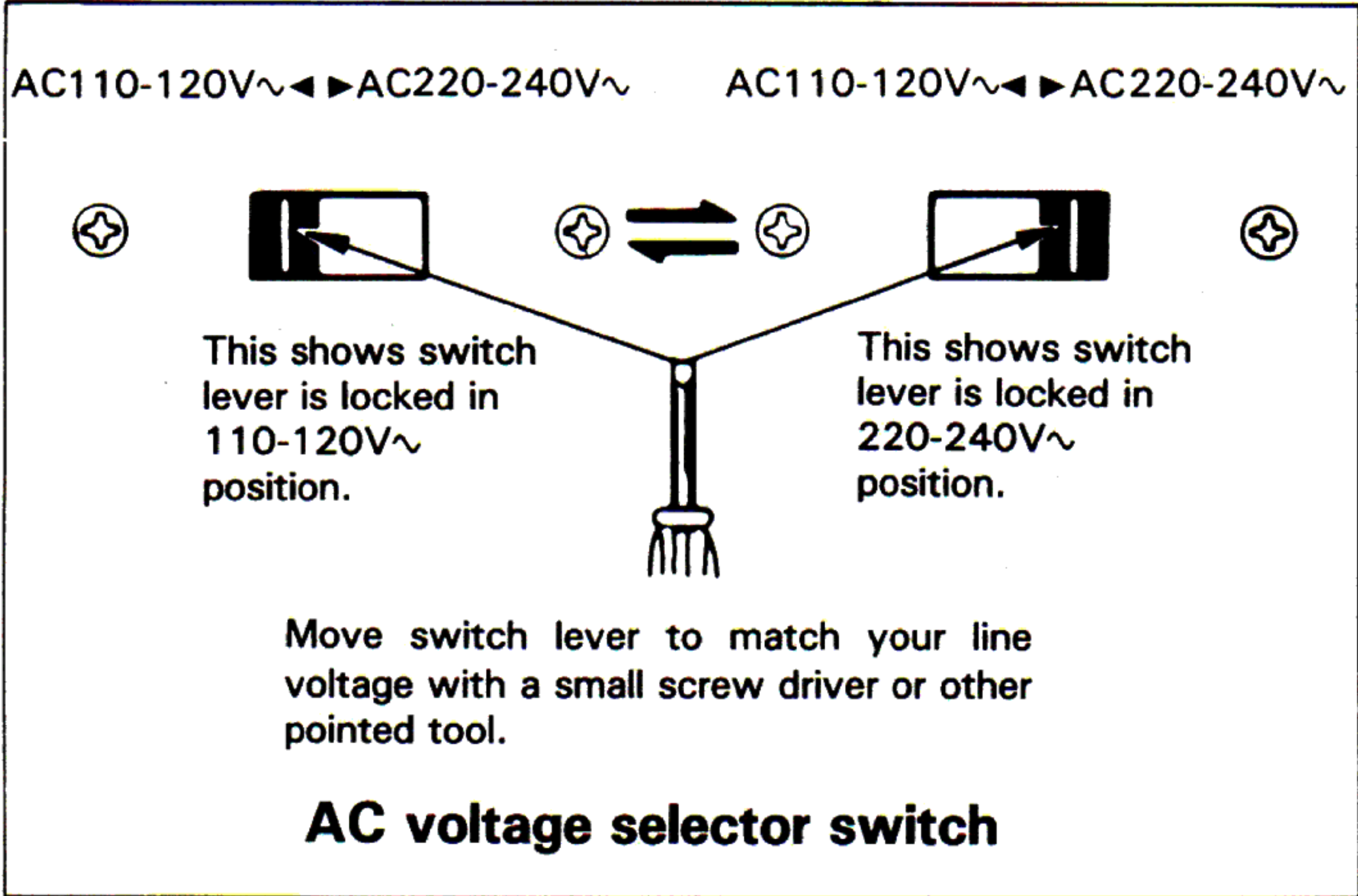
All other countries

Units shipped to countries other than above countries are equipped with an AC voltage selector switch on the rear panel. Refer to the following paragraph for the proper setting of this switch.

AC voltage selection

This unit operates on 110-120 volts or 220-240 volts AC. The AC Voltage Selector Switch on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.

**Note:** Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.



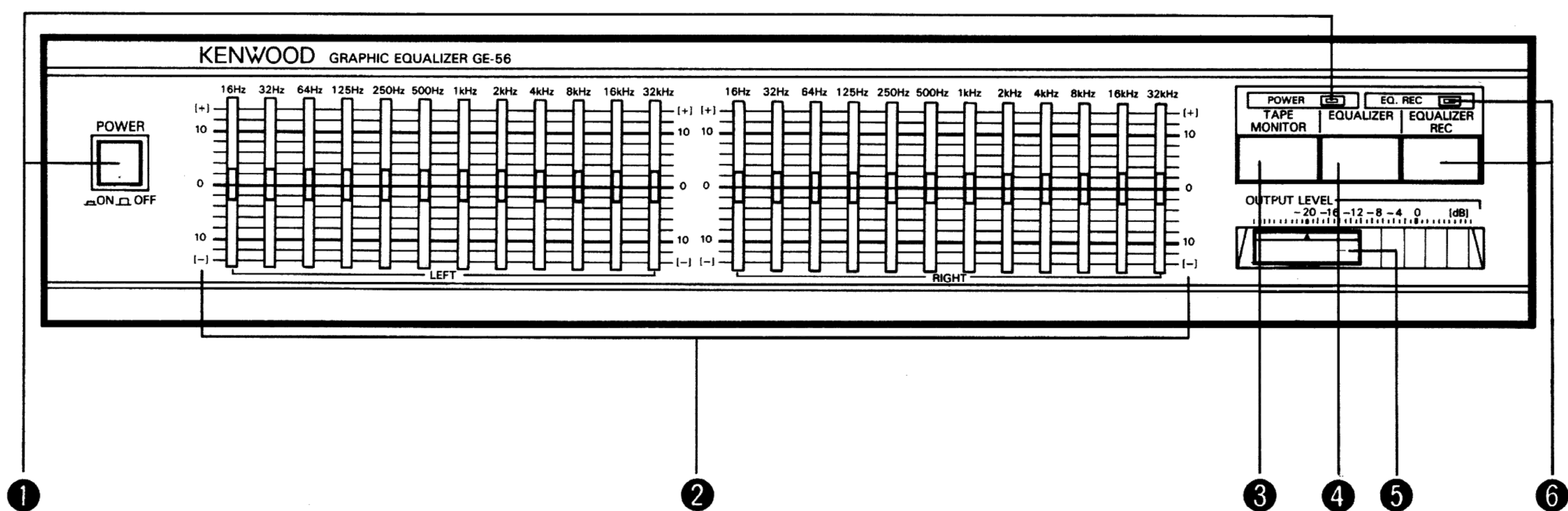
**WARNING:**  
TO PREVENT FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

**Safety precaution for AC plug (For U.S.A. and Canada)**

**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.



# Controls and indicators



## 1 POWER switch/POWER indicator

Depress the power switch and the POWER INDICATOR will light to indicate that the power is on. To turn off the power, depress the switch again.

## 2 RIGHT/LEFT channel equalizer controls (16 Hz...32 kHz)

Move these controls up and down to change the frequency response in a range of  $\pm 10$  dB on the basis of the display frequency. The LEFT equalizer controls are for the left channel, and RIGHT the right channel.

## 3 TAPE MONITOR switch

- ON:** To playback a tape deck connected to the amplifier or to monitor the sounds being recorded.
- OFF:** To listen to program sources (FM/AM, turntable, microphone, etc.) connected to the amplifier.

## 4 EQUALIZER switch

Turn this switch to ON and the frequency characteristic will be modified by passing through the graphic equalizer. The equalizer control indicators will light. In the OFF position, the frequency characteristic remains unchanged.

## 5 OUTPUT LEVEL control

Note that the volume level is often increased when the equalizer controls are set to high positions or the EQUALIZER switch is in the ON position. When this occurs, adjust the attenuator to obtain the optimum volume. The level obtained in this way is essentially the same as the level with the equalizer switch in the OFF position. This control is also used to eliminate any possibility of distortion due to high level input signals.

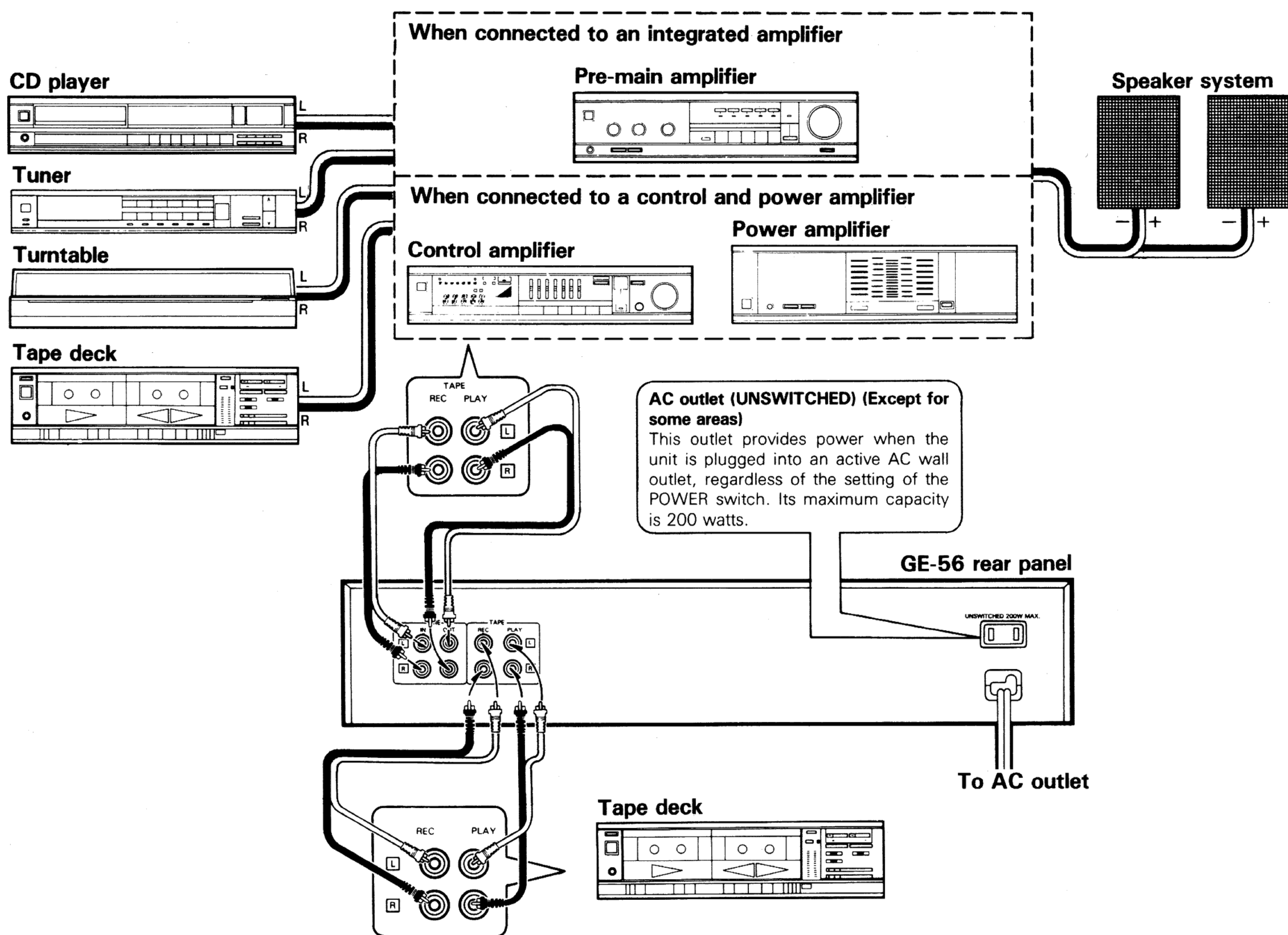
## 6 Equalizer recording switch (EQUALIZER REC)/EQ REC indicator

Depress this switch and EQUALIZER switch to ON signals will allow equalized to be recorded on tape. EQUALIZER REC indicator lights: If you wish to record non-equalized signals with the equalizer switch in the ON position, turn the equalizer recording switch to OFF. This will allow you to hear the equalized signals while recording non-equalized signals.

**Note:** If the tape monitor switch is on, it will not be possible to record the equalized source signal even though the equalizer recording indicator remains lit. Always turn the tape monitor switch off before recording the equalized signal.



# System connections/Operating instructions



## Connections and precautions

1. Each connecting cord must be connected securely to the corresponding terminals (L to L and R to R). Poor connection can result in noise.
2. Before connecting or disconnecting any cord, be sure to turn off the power switches of the unit and pre-main amplifier.
3. Do not bind the input/output cords together with the power cord and speaker cord. Do not extend the input/output cords unnecessarily to avoid the possibility of noise or deterioration of tone quality.

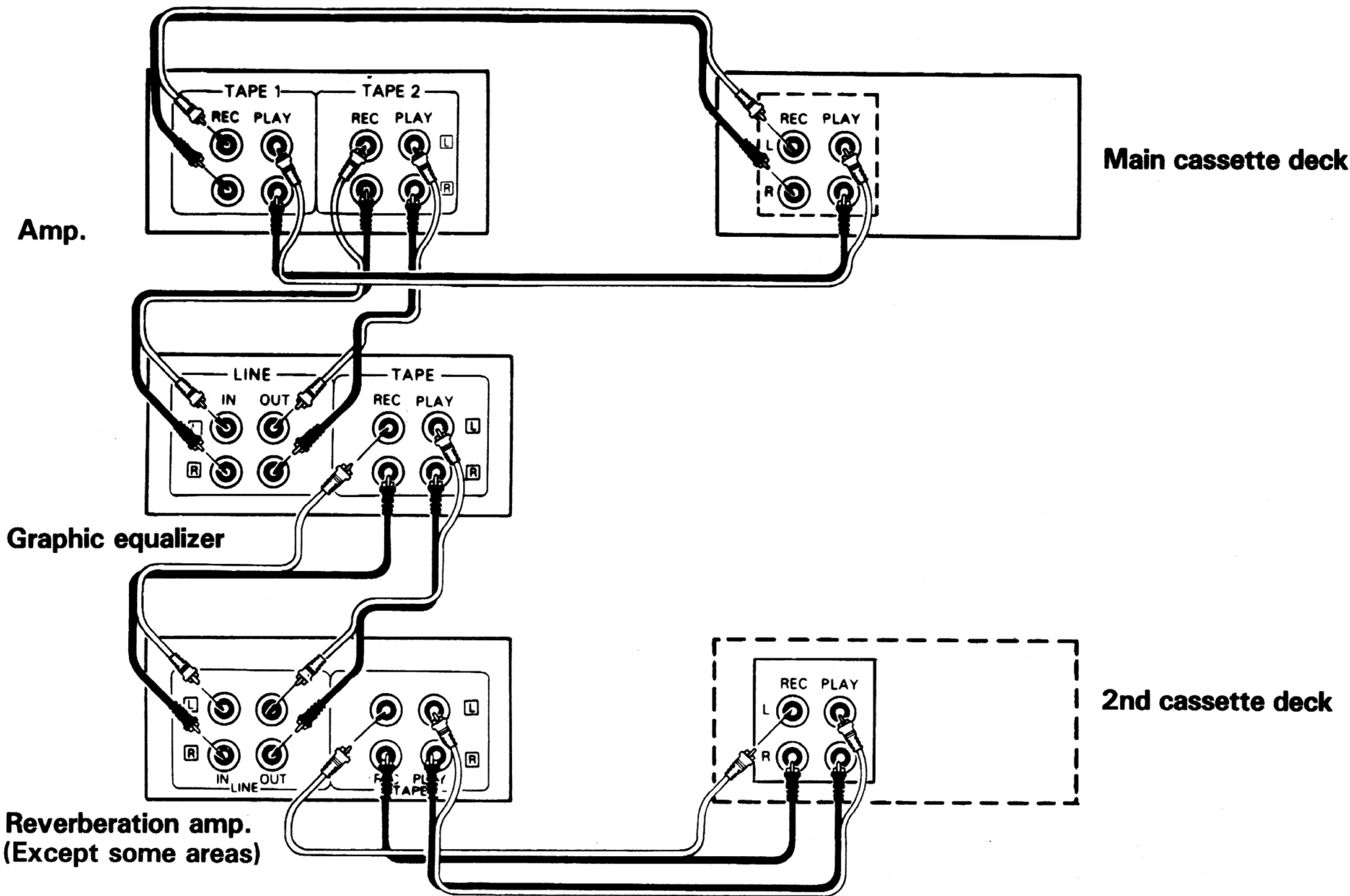
## Operating procedure

1. Depress the power switch to turn on the power.
2. Set the amplifier TAPE MONITOR switch to "TAPE" or "ON".
3. To listen to tape, set the TAPE MONITOR switch to ON. To listen to other program sources (turntable, FM, etc.), set the switch to OFF.
4. Set the EQUALIZER switch to ON and adjust the equalizer controls to suit your listening preference.
5. To record equalized programs on tape, follow the procedures noted in the above items 1, 2, 3 and 4, then set the EQUALIZER REC switch to ON. If it is desired to record non-equalized programs, simply set the EQUALIZER REC switch to OFF.

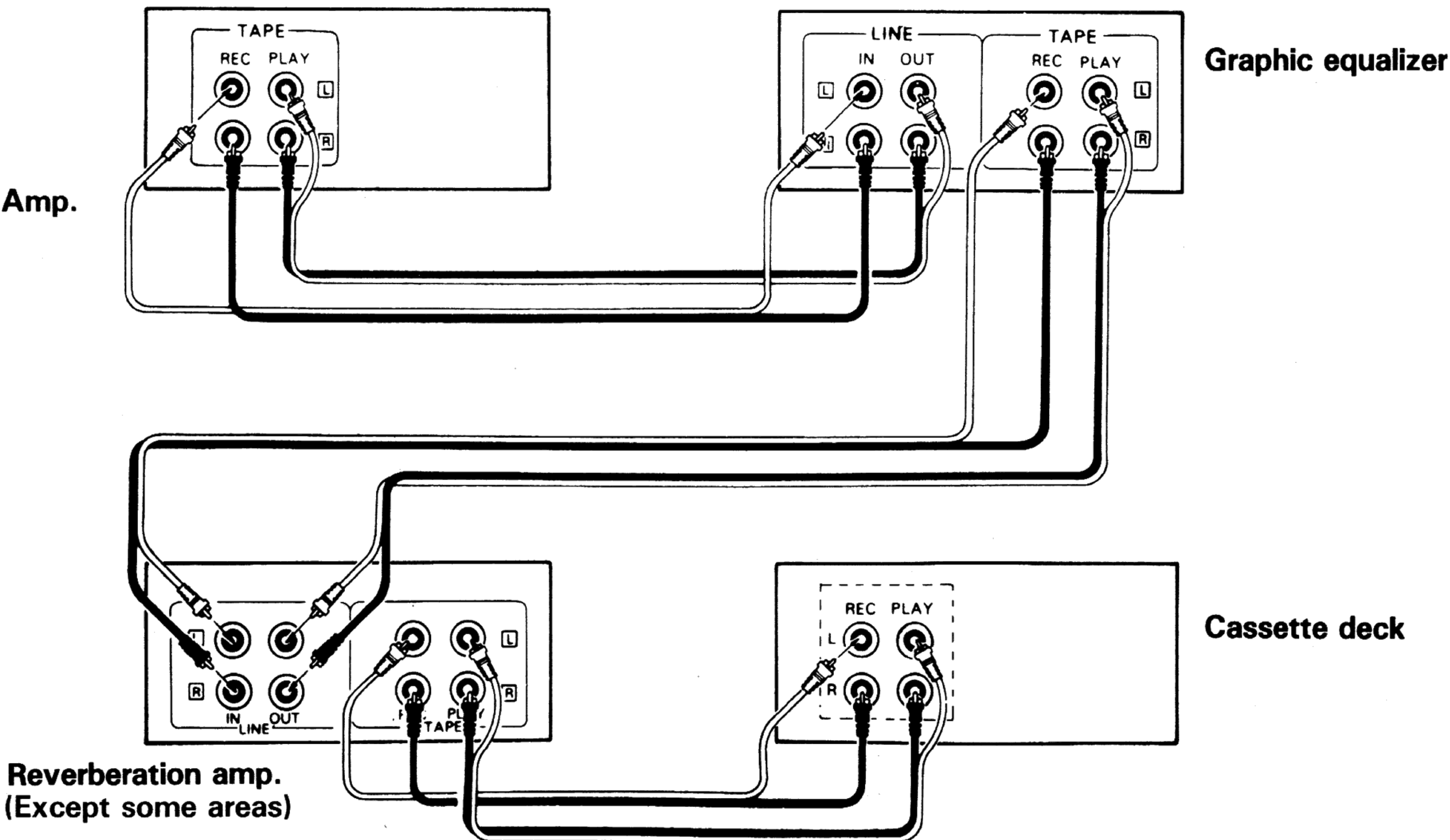


# Connection diagram (Except some areas)

**Connection diagram for amplifier with two pairs of tape jacks**  
When both tape monitor switches are not incorporated with input selectors.



**Connection diagram for amplifier with one pair of tape jacks**





# Operation guide

The operating procedures when the optional accessories are connected are as follows.

**Ex.** When the GE-56 and RA-56 are connected

**When both tape monitor switches are not incorporated with input selectors.**

## < Listening mode >

**When the amplifier is equipped with two pairs of tape jacks**

| SOURCE                                 | Operation mode         |                              | Amplifier input selector       | Amplifier TAPE 2 switch | Graphic equalizer |              |                        | Reverberation amplifier |               |            |
|--|------------------------|------------------------------|--------------------------------|-------------------------|-------------------|--------------|------------------------|-------------------------|---------------|------------|
|  | Graphic equaliser mode | Reverberation amplifier mode |                                |                         | Tape monitoring   | Equalization | Equalization recording | Tape monitoring         | Reverberation | Function   |
| PHONO, TUNER, CD, AUX, VIDEO or TAPE 1 | Out                    | Out                          | PHONO, TUNER, CD/AUX or TAPE 1 | Off                     | ....              | ....         | ....                   | ....                    | ....          | ....       |
|  | In                     | Out                          |                                | On                      | Off               | On           | ....                   | ....                    | ....          | ....       |
|  | Out                    | In                           |                                | On                      | On                | Off          | ....                   | Off                     | On            | SOURCE/MIC |
|  | In                     | In                           |                                | On                      | On                | On           | ....                   | Off                     | On            | SOURCE/MIC |
| TAPE 2                                 | Out                    | Out                          | ....                           | On                      | On                | Off          | ....                   | On                      | Off           | ....       |
|  | In                     | Out                          |                                | On                      | On                | On           | ....                   | On                      | Off           | ....       |
|  | Out                    | In                           |                                | On                      | On                | Off          | ....                   | On                      | On            | SOURCE/MIC |
|  | In                     | In                           |                                | On                      | On                | On           | ....                   | On                      | On            | SOURCE/MIC |

## < Recording mode >

**When the amplifier is equipped with two pairs of tape jacks**

| Operation mode                              | Graphic equaliser mode | Reverberation amplifier mode | Amplifier input selector          | Amplifier TAPE 2 switch | Graphic equalizer |              |                        | Reverberation amplifier |               |            |
|---|------------------------|------------------------------|-----------------------------------|-------------------------|-------------------|--------------|------------------------|-------------------------|---------------|------------|
|   |                        |                              |                                   |                         | Tape monitoring   | Equalization | Equalization recording | Tape monitoring         | Reverberation | Function   |
| PHONO, TUNER, or CD, AUX, VIDEO (to TAPE 1) | Out                    | Out                          | PHONO, TUNER or CD/AUX            | Off                     | ....              | ....         | ....                   | ....                    | ....          | ....       |
|   | In                     | Out                          | Not applicable                    |                         |                   |              |                        |                         |               |            |
|   | Out                    | In                           |                                   |                         |                   |              |                        |                         |               |            |
|   | In                     | In                           |                                   |                         |                   |              |                        |                         |               |            |
| Tape 2 (to TAPE 1)                          | Not applicable         |                              |                                   |                         |                   |              |                        |                         |               |            |
| PHONO, DIRECT RECORDING (to TAPE 2)         | Out                    | Out                          | (VIDEO) PHONO TUNER CD/AUX TAPE 1 | ....                    | On                | ....         | ....                   | On                      | ...           | ....       |
|   | In                     | Out                          |                                   | ....                    | Off               | On           | On                     | On                      | ....          | ....       |
|   | Out                    | In                           |                                   | ....                    | On                | ....         | ....                   | Off                     | On            | SOURCE/MIC |
|   | In                     | In                           |                                   | ....                    | Off               | On           | On                     | Off                     | On            | SOURCE/MIC |
| PHONO, TUNER, CD/AUX or TAPE 1 (to TAPE 2)  | Out                    | Out                          | PHONO, TUNER, CD/AUX or TAPE 1    | ....                    | On                | ....         | ....                   | On                      | ....          | ....       |
|   | In                     | Out                          |                                   | ....                    | Off               | On           | On                     | On                      | ....          | ....       |
|   | Out                    | In                           |                                   | ....                    | On                | ....         | ....                   | Off                     | On            | SOURCE/MIC |
|   | In                     | In                           |                                   | ....                    | Off               | On           | On                     | Off                     | On            | SOURCE/MIC |

**Note:** \_\_\_\_\_

When either of the tape monitor switches is not incorporated with the input selectors, connect this unit to the tape jacks whose tape monitor switch is not incorporated with the input selectors.

## < Listening mode >

**When the amplifier is equipped with one pair of tape jacks**

|                        |     |     |                        | TAPE switch | Graphic equalizer |              |                        | Reverberation amplifier |               |            |
|------------------------|-----|-----|------------------------|-------------|-------------------|--------------|------------------------|-------------------------|---------------|------------|
|                        |     |     |                        |             | Tape monitoring   | Equalization | Equalization recording | Tape monitoring         | Reverberation | Function   |
| PHONO, TUNER or CD/AUX | Out | Out | PHONO, TUNER or CD/AUX | Off         | ....              | ....         | ....                   | ....                    | ....          | ....       |
|                        | In  | Out |                        | On          | Off               | On           | ....                   | ....                    | ....          | ....       |
|                        | Out | In  |                        | On          | On                | Off          | ....                   | Off                     | On            | SOURCE/MIC |
|                        | In  | In  |                        | On          | On                | On           | ....                   | Off                     | On            | SOURCE/MIC |
| TAPE                   | Out | Out | ....                   | On          | On                | Off          | ....                   | On                      | Off           | ....       |
|                        | In  | Out |                        | On          | On                | On           | ....                   | On                      | Off           | ....       |
|                        | Out | In  |                        | On          | On                | Off          | ....                   | On                      | On            | SOURCE/MIC |
|                        | In  | In  |                        | On          | On                | On           | ....                   | On                      | On            | SOURCE/MIC |

## < Recording mode >

**When the amplifier is equipped with one pair of tape jacks**

|                                   |     |     |                         | TAPE switch |      |      |      |     |      |            |
|-----------------------------------|-----|-----|-------------------------|-------------|------|------|------|-----|------|------------|
| PHONO, TUNER, or CD/AUX (to TAPE) | Out | Out | PHONO, TUNER, or CD/AUX | ....        | On   | .... | .... | On  | .... | ....       |
|                                   | In  | Out |                         | ....        | Off  | On   | On   | On  | .... | ....       |
|                                   | Out | In  |                         | ....        | .... | .... | Off  | Off | On   | SOURCE/MIC |
|                                   | In  | In  |                         | ....        | Off  | On   | On   | Off | On   | SOURCE/MIC |



# Sound equalization

- **Super bass (16 Hz, 32 Hz, 63 Hz)**

When these controls are moved up, the bass instrument (double bass, bass drums or pipe organ, etc.) sound is increased.  
When the super bass sound is boomy, move these controls down.

- **Bass (125 Hz, 250 Hz)**

Usually, the listening room resonance frequency is in this range.  
To eliminate bass resonance, move these controls down.

- **Mid-bass range (500 Hz)**

This range is the basis of music. Whether the sound is rich or not depends on this range. When the playback sound is not so good, move this control up.

- **Mid range (1 kHz, 2 kHz)**

When these controls are moved up or down, the bariton or soprano voice is emphasised/de-emphasised. This range is related to the "presence" of the music.

- **Mid-high range (4 kHz)**

This range is related to stimulous and metalic sound. When this range is well compensated, the vivid sound can be obtained.

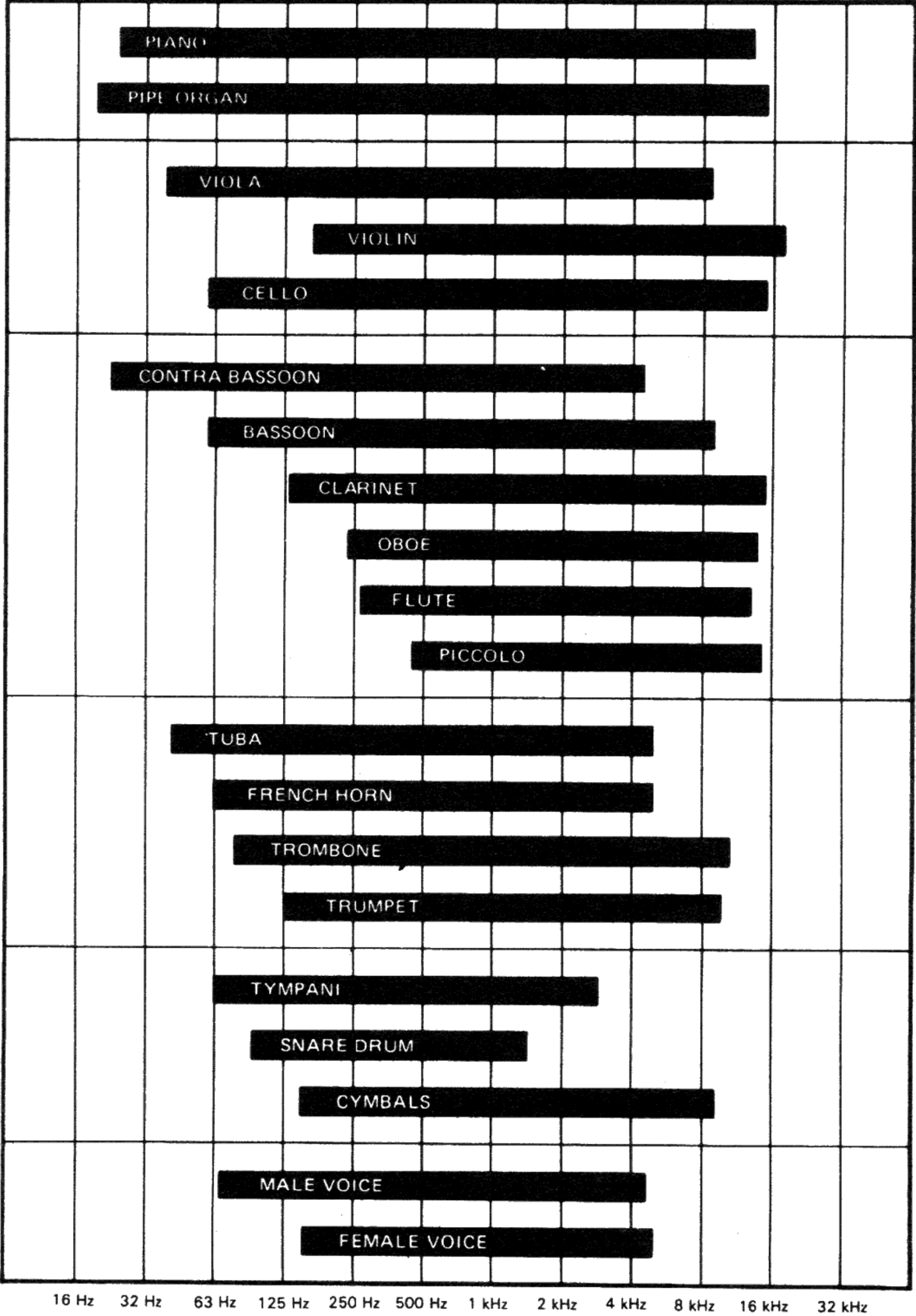
- **High range (8 kHz)**

This frequency range is related to the hardness of the sound. When this control is moved up, strings or brass, such as flute or piccolo, is emphansed. When the control is moved down, the sound will be more soothing.

- **Super high range (16 kHz, 32 kHz)**

This frequency range is related to the details of the music. When these controls are moved up, super high frequency instruments, such as triangle or cymbal, are emphasized, resulting in wide sound and echoes.

Approximate frequency ranges for musical instruments and voice





# Safety precautions

## Cleaning

Do not use volatile solvents such as alcohol, paint thinner, gasoline, benzine, etc. to clean the cabinet. Use a silicone cloth or a clean dry cloth.

## Power cord

Always insert or remove the power plug from the AC outlet by grasping the plug body. Never pull or stretch the cord. Take care that the cord is not subject to trafic or bent sharply around furniture. Keep heavy objects off the cord; never route it under rugs, and avoid the use of extra extension cord. Attention to these precautions will avoid fire or shock hazards.

## Service or modifications

Do not remove the cabinet or touch internal parts. Refer all service to qualified service personnel. Unauthorized modifications can result in a dangerous shock hazard and can void the warranty.

## Installation precautions

- a) Avoid locations subject to direct sunlight.
- b) Avoid high or low temperature extremes.
- c) Keep the unit away from heat radiating sources.
- d) Choose a location that is relatively free of vibration or excessive dust.
- e) Make sure power is off before making any system connections.

# In case of difficulty

If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representatives.

| Symptom   | Cause  | Remedy  |
|---|--|---|
| No sound although AC is switched on. Indicator not illuminated. | Poor AC plug connection.   | Check plug contact.   |
| No sound from LEFT and RIGHT.                                   | 1. Speaker cables disconnected.<br>2. Volume control of amplifier fully counterclockwise.<br>3. TAPE MONITOR switch of amplifier set to SOURCE.<br>4. TAPE MONITOR switch of the unit set to ON. | 1. Check speaker connections.<br>2. Turn up volume control.<br>3. Set TAPE MONITOR switch of amplifier to TAPE.<br>4. Set TAPE MONITOR switch to OFF except when using tape deck. |
| Sound from one side only.                                       | 1. Speaker cords disconnected.<br>2. Input or output cables disconnected.<br>3. Balance control of amplifier set to one extreme or the others.   | 1. Check speaker connections.<br>2. Check input or output connections.<br>3. Adjust balance control of amplifier.   |

# Specifications

## Equalizer characteristic

Variable range.....± 10 dB (L & R independently adjustable)  
Center frequencies.....16 Hz, 32 Hz, 64 Hz, 125 Hz, 250 Hz, 500 Hz  
1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz, 32 kHz

Attenuation.....- 20 dB at 1 kHz

Frequency response.....10 Hz—50 kHz +0 dB, - 1 dB

Harmonic distortion .....Less than 0.01% (20 Hz—20 kHz, all controls flat, output 1 V)

Maximum output.....5 V (1 kHz, THD 0.05%, RL 47 kohms)

S/N ratio.....110 dB (Short-circuited IHF-A network)

Input impedance.....47 kohms

Output impedance.....600 ohms

Gain .....0 dB

AC outlet.....Unswitched x 1 (Except some areas)

Power consumption.....7 W

Dimensions .....W: 420 mm (16-9/16")  
H: 87 mm (3-7/16")  
D: 260 mm (10-1/4")

Weight (Net) .....2.7 kg (6.0 lb)

Note: We follow a policy of continuous advancements in development. For this reason specifications may be changed without notice.