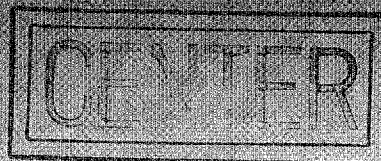


# YAMAHA GE-3

*Natural Sound Stereo Graphic Equalizer  
10 Frequency Bands for Left and Right Channels  
Attenuator Control  
Equalization of Recordings  
Tape Monitor Function*



## OWNER'S MANUAL

*Thank you for purchasing the Yamaha GE-3 stereo graphic equalizer.*

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### IMPORTANT

Please record the serial number of your unit in the space below.

Model: GE-3

Serial No.:

The serial number is located on the rear of the cabinet.  
Retain this Owner's Manual in a safe place for future reference.


### WARNING

To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

## CAUTION (PREPARED IN ACCORDANCE WITH UL STANDARD 1270)

- 1** Read Instructions — All the safety and operating instructions should be read before the appliance is operated.
- 2** Retain Instructions — The safety and operating instructions should be retained for future reference.
- 3** Heed Warnings — All warnings on the appliance and in the operating instructions should be adhered to.
- 4** Follow Instructions — All operating and other instructions should be followed.
- 5** Water and Moisture — The appliance should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near swimming pool, etc.
- 6** Carts and Stands — The appliance should be used only with a cart or stand that is recommended by the manufacturer.
- 7** Wall or Ceiling Mounting — The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
- 8** Ventilation — The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
- 9** Heat — The appliance should be situated away from heat sources such as radiators, stoves, or other appliances that produce heat.
- 10** Power Sources — The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
- 11** Power-Cord Protection — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
- 12** Cleaning — The appliance should be cleaned only as recommended by the manufacturer.
- 13** Nonuse Periods — The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
- 14** Object and Liquid Entry — Care should be taken so that objects do not fall into and liquids not spilled into the inside of the appliance.
- 15** Damage Requiring Service — The appliance should be serviced by qualified service personnel when:
  - A. The power-supply cord or the plug has been damaged; or
  - B. Objects have fallen, or liquid has been spilled into the appliance; or
  - C. The appliance has been exposed to rain; or
  - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
  - E. The appliance has been dropped, or the cabinet damaged.
- 16** Servicing — The user should not attempt to service the appliance beyond those means described in the operating instructions. All other servicing should be referred to qualified service personnel.

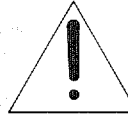
**CAUTION: READ THIS BEFORE  
OPERATING YOUR GE-3**



**CAUTION**

**RISK OF ELECTRIC SHOCK**

**DO NOT OPEN**

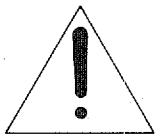


CAUTION: TO REDUCE THE RISK OF  
ELECTRIC SHOCK, DO NOT REMOVE  
COVER (OR BACK). NO USER-SERVICEABLE  
PARTS INSIDE. REFER SERVICING TO  
QUALIFIED SERVICE PERSONNEL.

• Explanation of Graphical Symbols



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert you 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 you to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**1**

For optimum operation of this sophisticated stereo graphic equalizer, read this manual carefully for proper installation and connection.

**2**

For best results, the GE-3 should not be placed in direct sunlight or near a heat source. Choose a location free from vibrations and excessive dust, heat, cold, or moisture, and do not place near sources of hum such as transformers or motors.

**3**

If a foreign object falls into the set, or if the set must be opened for any reason, contact your dealer to avoid risking damage to the unit or shock:

**4**

Do not apply excessive force to switches and knobs.

**5**

If the unit must be moved, first pull out the power cord and disconnect all connection wires.

**6**

To prevent damage to the GE-3's finish, do not clean with chemical solvents. Instead, use a clean, dry cloth.

**7**

Read the "troubleshooting" section in this manual for common operating errors if any problems occur. If they cannot be remedied in this way, contact your dealer.

**8**

Check power requirements of audio components before connecting them to the AC outlet on the back panel. If they require more power than the outlet can provide, do not connect them.

**9**

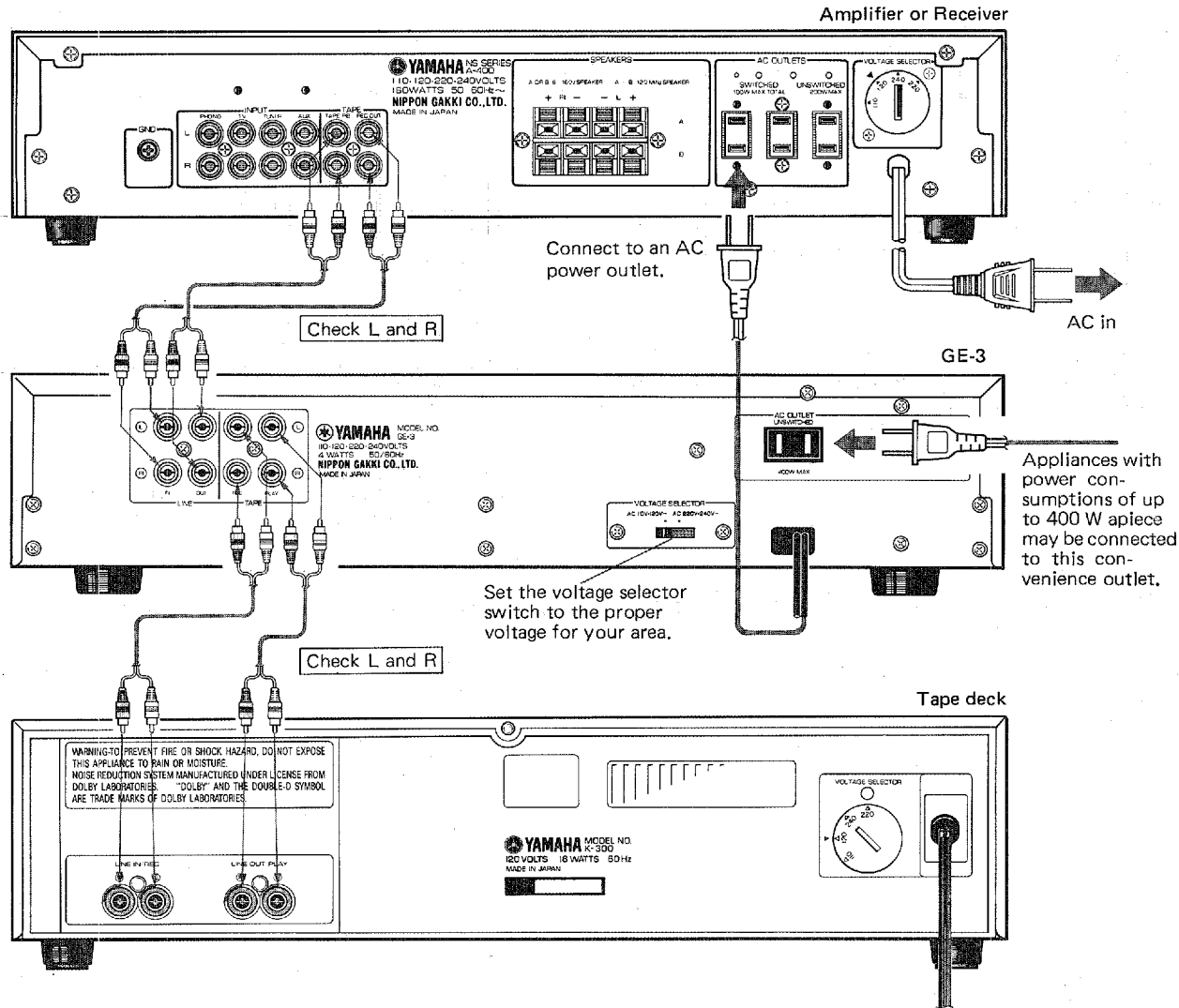
Set the voltage selector switch to the proper voltage for your area BEFORE plugging in the GE-3's power cord to an AC outlet. Voltages are 110-120V/220-240V, AC 50/60 Hz.

**10**

Keep this manual in a safe place for future reference.

# GE-3

## CONNECTION DIAGRAM

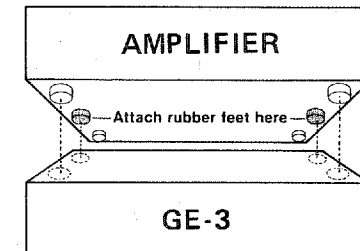


### PRECAUTIONS FOR CONNECTIONS

- Before connecting the GE-3 to other components, make sure that all power switches are OFF. Connect properly referring to connection diagrams.
- Each connecting wire must be connected securely to the proper terminals (R to R and L to L). Improper connections can cause static.
- To prevent line noise or other deterioration of sound quality, do not tie the input/output cords together with the power cord or put the cords in tension.

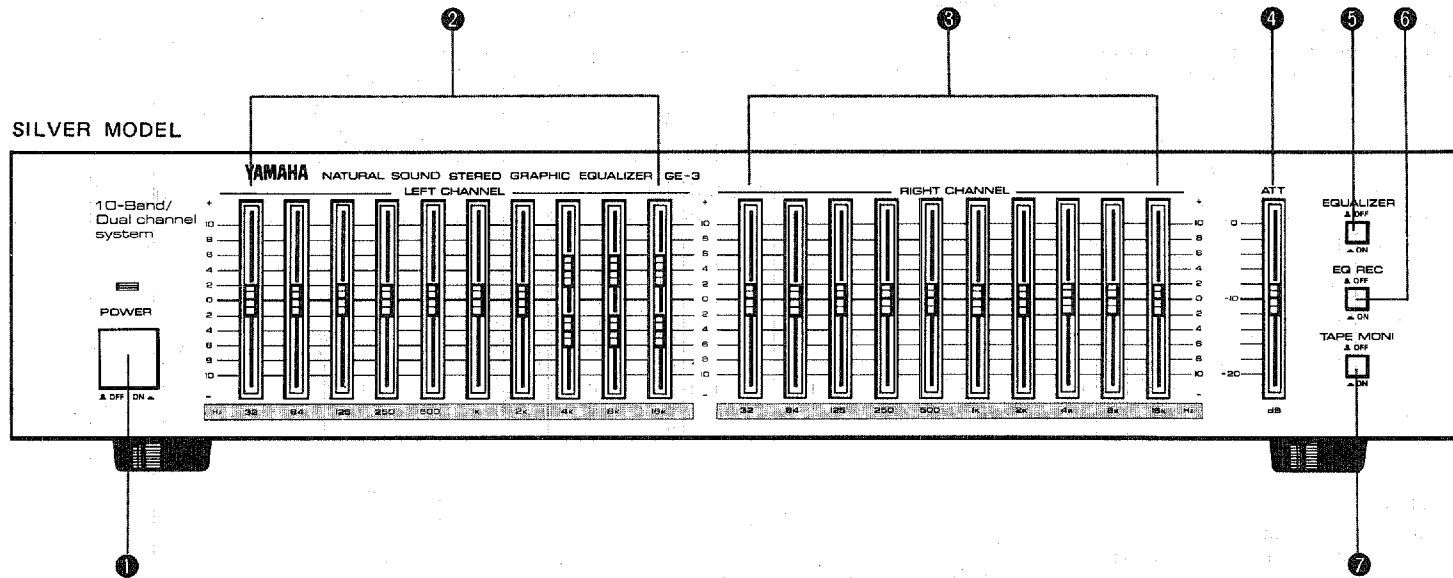
### CAUTION

When assembling a Yamaha component system in an audio rack, the two extra rubber feet provided should be attached to the base plate of the component above the GE-3, as shown in the accompanying diagram. This is to keep the other components level in relation to the GE-3, on which they rest.



Refer to the appropriate owner's manuals when connecting amplifiers, etc.

## FRONT PANEL PARTS AND FUNCTIONS



### 1 POWER switch

Depress to turn power on (indicator will light to indicate that power is on). Depress again to turn power off.

### 2 3 LEFT CHANNEL equalizer controls 2 / RIGHT CHANNEL equalizer controls 3

These levers permit frequency adjustment by  $\pm 10$  dB in the ranges of 32, 64, 125, 250, 500 Hz and 1, 2, 4, 8, 16 kHz. Before adjusting, place all levers in the middle "0" position (flat response).

#### • 32 Hz

Sliding this lever up will boost low frequency sounds such as bass violins or pipe organs. Sliding it down will reduce unpleasant low frequency and subsonic noise such as rumble, hum, and low frequency vibrations.

#### • 64 Hz

This lever adjusts bass sounds such as those produced by bass instruments and drums.

#### • 125 Hz

This lever also adjusts bass sounds; slide up to increase bass response.

#### • 250 Hz

Higher settings emphasize medium-low frequencies such as those produced by acoustic guitars.

#### • 500 Hz

This lever is mainly used to adjust vocal levels. Depth and richness can be added when lever is in higher positions.

#### • 1 kHz

Vocal presence is enhanced when this lever is raised. To de-emphasize vocals, slide down to minus levels.

#### • 2 kHz

This lever also controls vocals and can also be used to control brass sounds. Higher settings will increase brightness and brilliance of both; lower settings will make them more mellow.

#### • 4 kHz

High frequency echo sounds such as vocals and string instruments are enhanced at higher settings. Control of violin sound is best done with this lever.

- **8 kHz**  
This lever effectively emphasizes high frequencies in order to give the effect of increased fidelity. Lowering the setting decreases the sharpness of higher frequency sounds.
- **16 kHz**  
This lever controls the overall sound presence. Higher settings will emphasize high frequency sounds such as cymbals. Conversely, if high frequency noise such as tape hiss is present, lowering this lever will reduce it.

#### ④ ATT control (attenuator)

When the equalizer levers are set to high levels, or the EQUALIZER switch is in the ON position, the volume level is also often increased. When this happens, adjustment of the ATT level will retain the equalized signal while reducing volume to the EQUALIZER OFF level. This control is also used to eliminate the possibility of distortion due to high level input signals.

#### ⑤ EQUALIZER switch

Press to turn ON, which brings the equalizer into effect to modify the frequency. Turn the switch OFF to terminate equalization.

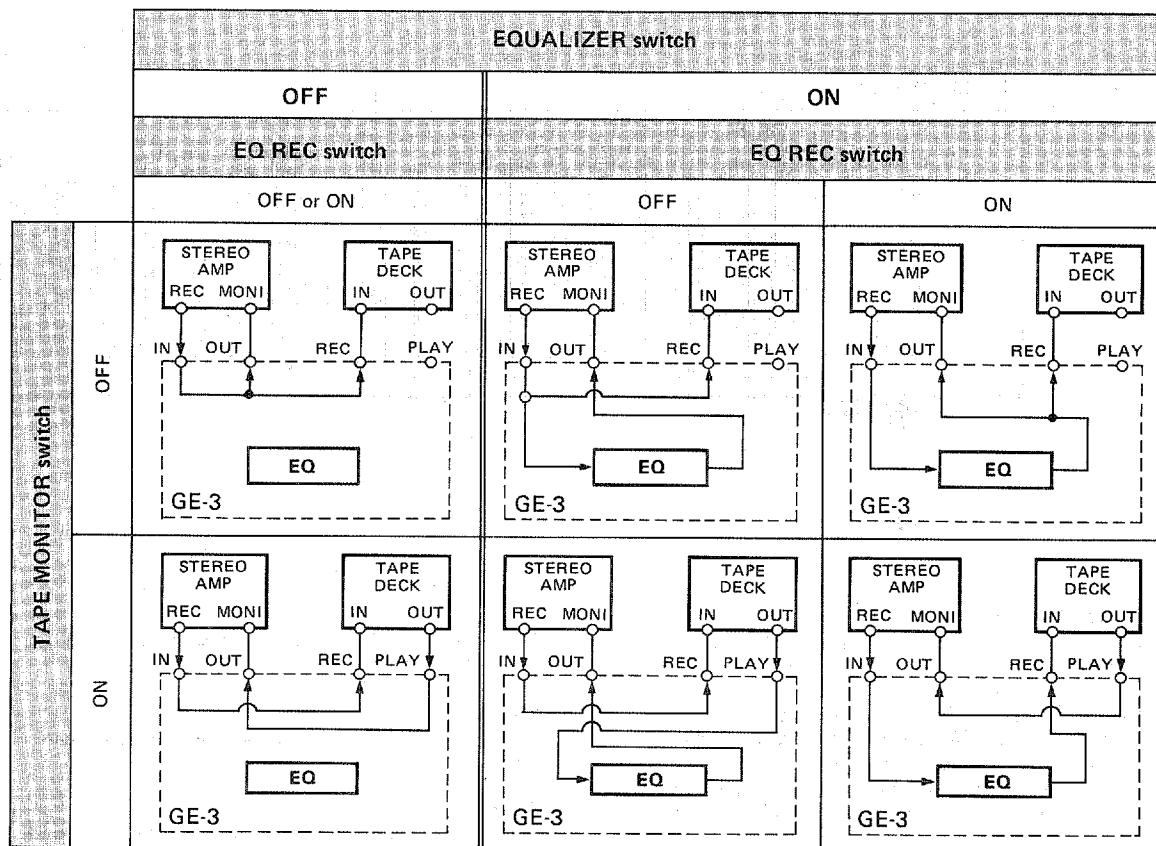
#### ⑥ EQ REC switch (equalizer recording)

With this switch pressed ON, the output to the tape deck is equalized and will be recorded in the equalized mode. When this switch is OFF, unequalized output is sent to the tape deck.

#### ⑦ TAPE MONI switch (tape monitor)

In the ON position, a tape deck connected to the GE-3 is played back, even during recording. In the OFF position, other music sources connected to the amplifier are played (AM/FM tuner, turntable, mic, etc.).

### • OPERATING DIAGRAM



## OPERATIONS

- Refer to amplifier and tape deck owner's manuals.
- Set amplifier tone controls to flat response ("0").

### ■ EQUALIZING RECORDS/FM BROADCASTS (Fig. 1)

1. Turn each component's power ON.
  2. Set the amplifier tape monitor switch to TAPE or ON.
  3. Start the program source.
  4. Turn EQUALIZER switch ON.
  5. Adjust amplifier volume control and GE-3's equalization to achieve desired sound coloration and presence.
- \* Check equalization effect by turning EQUALIZER switch on and off.

### ■ EQUALIZING TAPE DECK PLAYBACK (Fig. 2)

1. Turn each component's power ON.
  2. Set amplifier's tape monitor switch to TAPE or ON.
  3. Turn EQUALIZER switch ON.
  4. Turn EQ REC switch ON.
  5. Turn TAPE MONI switch ON.
  6. Start tape deck playback.
  7. Adjust amplifier volume control and GE-3's equalization to achieve desired sound coloration and presence.
- \* Check equalization effect by turning EQUALIZER switch on and off.

### ■ EQUALIZING RECORDS AND FM BROADCASTS FOR RECORDING (Fig. 1)

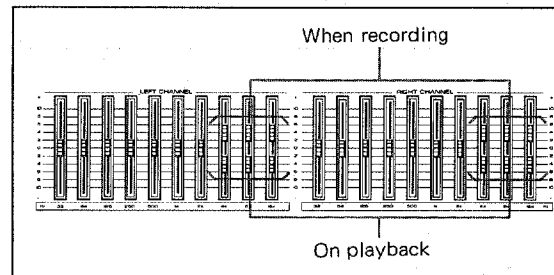
1. Turn each component's power ON.
2. Turn EQUALIZER switch ON.
3. Turn EQ REC switch ON and TAPE MONI switch OFF.

4. Start recording source (turntable, FM tuner, etc.).
  5. Adjust equalization to taste.
  6. Prepare tape deck (tape type, recording level, etc.) and begin recording.
- \* Even if the EQ switch is ON, the source being recorded will not be equalized if the EQ REC switch is OFF.
  - \* Recording in progress can be monitored by the GE-3's TAPE MONI switch ON.

### ■ APPLICATIONS

#### • Reduction of Tape Hiss

Because tape hiss is in the high frequency range, it can be easily reduced by setting the 4 kHz to 16 kHz control levers at +4 dB during recording, and lowering them to -4 dB during playback. This will bring the frequency response back to "0" but with the hiss eliminated!



#### • Compensation for room acoustics

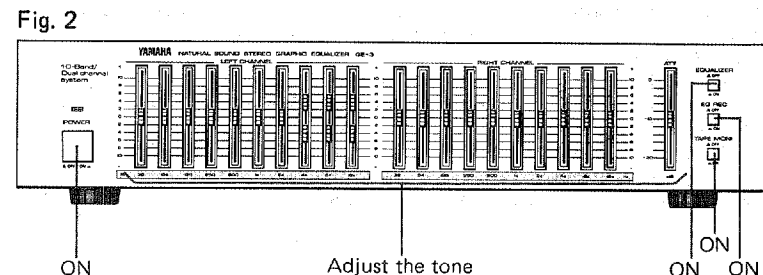
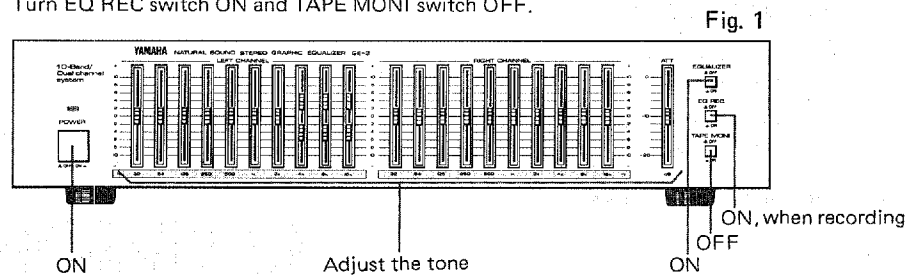
Speaker characteristics, type and location of furniture, wall materials, rugs, curtains, and other physical conditions all affect the tonal response of the listening room. By adjusting the equalizer levels for both channels it is possible to compensate for these factors and greatly improve the sound.

#### • Emphasizing preferred frequencies

The GE-3 gives you tremendous flexibility in adjusting the speaker sound to achieve the tone and coloration of music that you prefer. If you like bass, set the low frequency levels higher for more presence. If you like more vocal definition, the middle frequencies will provide the sound you prefer. And if you like overall clarity and brightness, high frequency levels can be adjusted accordingly. In short, you can tailor your system to produce the sound you prefer under all listening conditions.

#### • Better sound from your car stereo

Car stereo systems tend to emphasize the midranges at the expense of the lowest and highest frequencies. With the GE-3 you can adjust the bass and treble levels accordingly to make your car stereo sound the best it ever has.



# GE-3

## TROUBLESHOOTING / SPECIFICATIONS

Before assuming that your equalizer is faulty, check the following troubleshooting list which details the corrective action you can take yourself without having to call a service engineer. If you have any doubts or questions, get in touch with your nearest Yamaha dealer.

Fault	Cause	Cure
No sound is heard.	<ul style="list-style-type: none"> <li>* Power plug or connecting cords are plugged in incompletely.</li> <li>* There is a mistake in the connections.</li> <li>* The INPUT SELECTOR is set improperly.</li> </ul>	<ul style="list-style-type: none"> <li>* Plug in firmly.</li> <li>* Check the connections.</li> <li>* Press the TAPE MONITOR switch to play tapes back; set OFF in other cases.</li> </ul>
Excessive noise.	<ul style="list-style-type: none"> <li>* Electric appliances being used nearby.</li> <li>* Connecting cords are not plugged in securely.</li> </ul>	<ul style="list-style-type: none"> <li>* Turn off the appliances causing the noise.</li> <li>* Check the connections.</li> </ul>
Playback sound is not properly balanced.	<ul style="list-style-type: none"> <li>* Tone controls, etc. on the amp are not set to flat.</li> </ul>	<ul style="list-style-type: none"> <li>* When using the equalizer, set the tone control of the amplifier to either flat or Defeat.</li> </ul>

### ■ SPECIFICATIONS

**Center Frequency** . . . . . 32, 64, 125, 250, 500 Hz,  
 1, 2, 4, 8, 16 kHz  
**Equalizer Control Range** . . . . . ±10 dB  
**Input Sensitivity/Impedance**  
 (1 kHz) . . . . . 150 mV/47 kΩ  
**Output Level/Impedance**  
 (1 kHz) . . . . . 150 mV/600 Ω  
**Maximum Output**  
 (1 kHz, 0.1 %) . . . . . Better than 6 V  
**Frequency Response** . . . . . 10 to 35,000 Hz, ±0.5 dB  
**Signal-to-Noise Ratio**  
 (IHF-A-Network, Input  
 Shorted, 150 mV output,  
 Unequalized) . . . . . Better than 92 dB

**Harmonic Distortion**  
 (1 kHz, 1 V Output,  
 Unequalized) . . . . . Less than 0.005 %  
**Attenuator** . . . . . 0 to -20 dB  
**Power Consumption** . . . . . 4 W  
**Power Supply** . . . . . AC 110/120/220/240 V,  
 50/60 Hz  
 Matched to supply voltage  
 and Frequency of each area  
**Dimensions (W x H x D)** . . . . . 435 x 91 x 227 mm  
 (17-1/8" x 3-5/8" x 9")  
**Weight** . . . . . 2.8 kg (6 lbs. 3 oz.)

Specifications subject to change without notice.