

STEREO INTEGRATED  
AMPLIFIER

# KA-3500

INSTRUCTION MANUAL



## INTRODUCTION

Thank you for purchasing our amplifier. Because we take great pride in the long tradition of quality components, the name Kenwood amplifier places you in a distinguished family of connoisseurs of superb high-fidelity sound reproduction.

The purpose of this manual is to acquaint you with the operating features of your new amplifier. You will notice that in every detail of planning, engineering, styling, operating convenience, and adaptability, we have sought to anticipate your needs and desires.

We suggest that you read this manual carefully. Knowing how to set up your amplifier to the best advantage will enhance your listening pleasure right from the start. You will also become aware of the ease with which you can adjust your amplifier to meet your special requirements.

Turn the pages, and become acquainted with the exciting features of your new amplifier that will remain new for endless hours of listening pleasure.

## MAINTENANCE

### CONCERNING TRANSISTORS

Transistors differ fundamentally from radio vacuum tubes and require special attention to ensure their full performance capabilities. Given proper care, transistors will provide years of practically trouble-free performance.

- (a) Avoid locations subject to direct sunlight.
- (b) Avoid high or low temperature extremes.
- (c) Keep the amplifier away from heat-radiating sources.

### CLEANING PRECAUTIONS

Do not use alcohol, thinner or gasoline when cleaning the amplifier surface. Use a silicon cloth or a soft dry cloth.

## NOTES

1. Units shipped to the U.S.A. and CANADA are designed to be operated with 120 volts AC only. Therefore the above units are not equipped with an AC Voltage Selector Switch so all reference to such a switch throughout this manual should be disregarded.
2. Units shipped to all other countries are equipped with an AC Voltage Selector Switch on the rear panel that is preset at the factory to the voltage generally available in the destination area.  
It is very important, however, to check the Voltage Selector Switch setting and make sure that it corresponds to your line voltage before connection the power cord into an AC outlet. If the Voltage Selector Switch requires re-setting, follow the directions outlined on page 7.

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

# CONTROLS AND THEIR FUNCTIONS

## ① SPEAKERS switch

**OFF** — This position silences all speakers for private headphones listening.

**A** — Activates speakers connected to the "A" speaker terminals on the rear panel.

**B** — Activates speakers connected to the "B" speaker terminals on the rear panel.

**A+B** — Activates simultaneously two sets of speaker systems connected to the "A" and "B" speakers terminals.

## ② POWER switch

**ON** — This position the amplifier turns on.

**OFF** — This position the amplifier turns off.

## ③ PHONES jack

Plug a stereo headphones into this jack for private listening. The speakers are silenced when the **SPEAKERS** switch is set to **OFF** position.

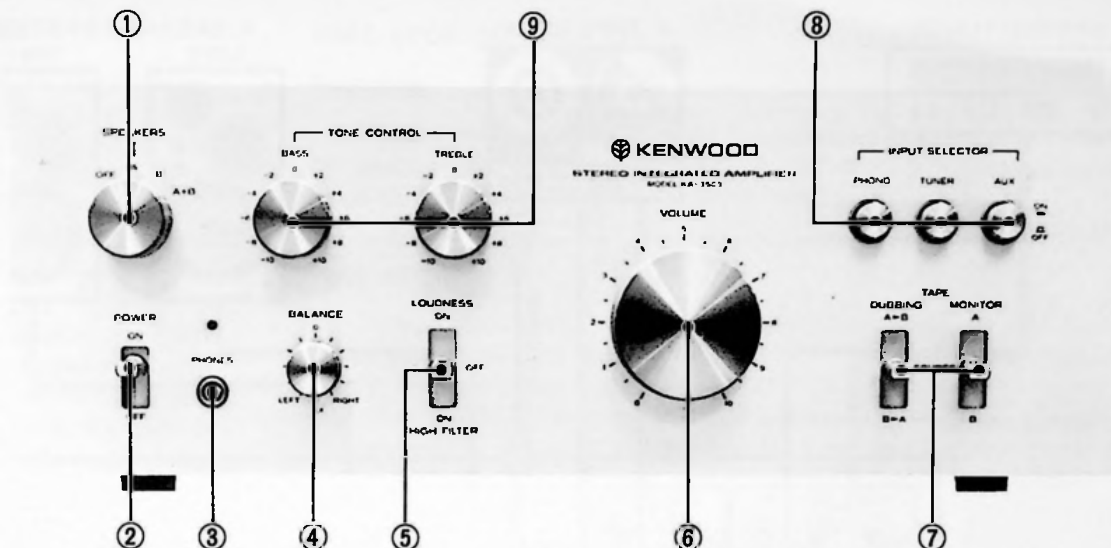
## ④ BALANCE control

This **BALANCE** control adjusts unequal volume from any program source in right and left channels. The left channel is accentuated when this adjuster is turned from center "0" toward the left side, and conversely.

## ⑤ LOUDNESS switch & HIGH filter

**LOUDNESS** — The **LOUDNESS** switch boosts bass response to compensate for the human ear's lack of response to those frequencies at low volume levels. This control should be switched off when listening at normal and high levels.

**HIGH FILTER** — Setting this switch to on reduces any high frequency noise such as tape hiss, record scratch, etc. Generally, this switch should be used only when necessary.



## ⑥ VOLUME control

The **VOLUME** control performs simultaneous adjustment of volumes in both channels (right and left). Set it to your own most satisfactory listening level.

## ⑦ TAPE switches MONITOR switch

Switch positions and functions are as follows:

**SOURCE** — The source signal is heard.

**A** — For monitoring a recording or for playback on a tape deck connected to the **TAPE A** jacks. Sound recorded on the tape is heard.

**B** — For monitoring a recording or for playback on a tape deck connected to the **TAPE B** jacks. Sound recorded on the tape is heard.

For further details refer to pages 6, 7.

## DUBBING switch

Switch positions and functions are as follows:

**DUBBING (A ▶ B)** — For dubbing from a tape deck connected to the **TAPE A** jacks into a tape deck connected to the **TAPE B** jacks.

**DUBBING (B ▶ A)** — For dubbing from a **B** tape deck to **A**.

For further details refer to pages 6, 7.

## ⑧ INPUT SELECTOR switches

Switch positions and functions are as follows:

**PHONO** — In this position the turntable is available if connected to the **PHONO** input jacks on the rear panel.

**TUNER** — In this position the tuner is available if connected to the **TUNER** input jacks on the rear panel.

**AUX** — Selects source connected to the **AUX** jacks.

## ⑨ TONE controls

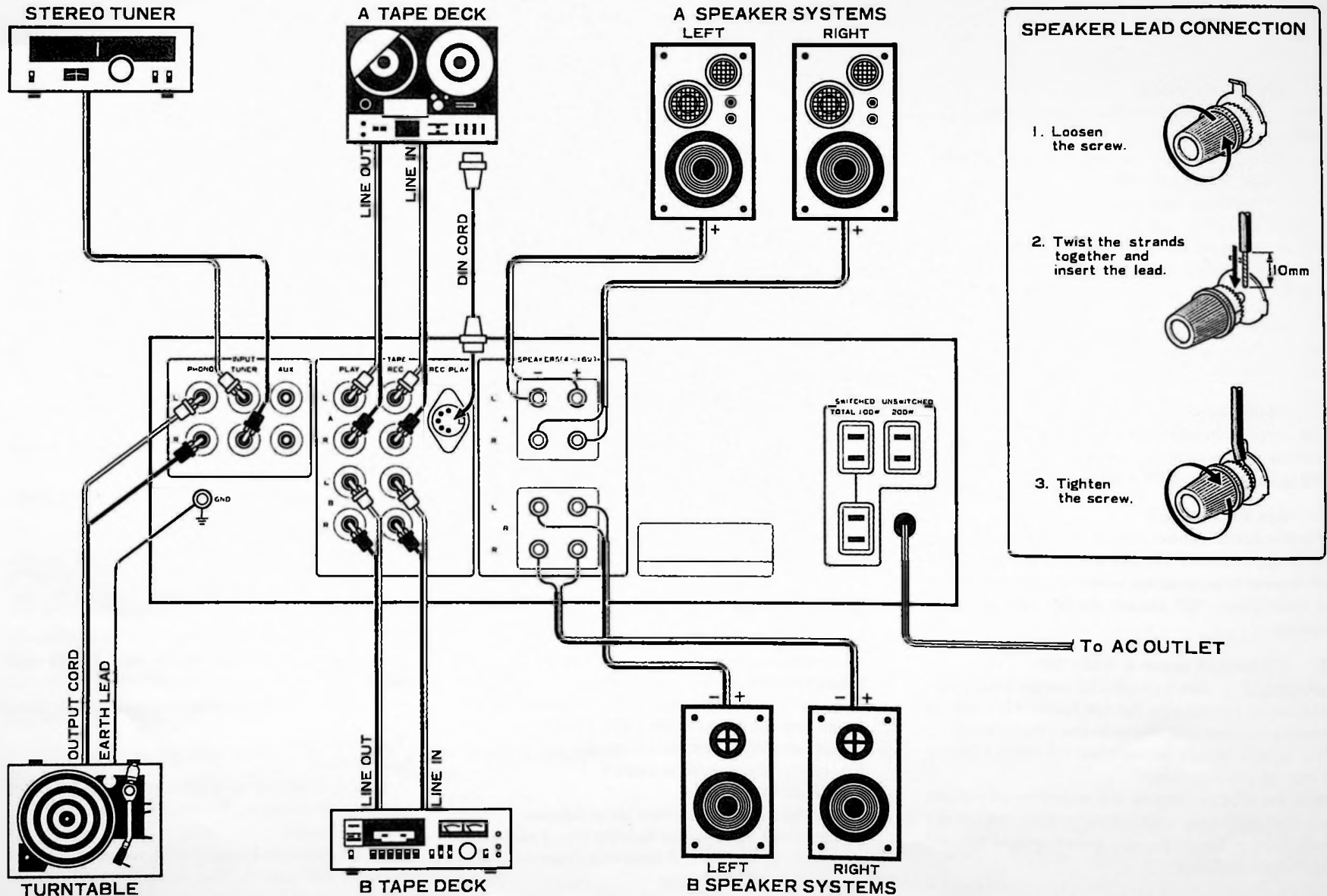
### BASS control

Turning it clockwise increases bass tone and counter-clockwise decreases it. Tone is flat at zero position.

### TREBLE control

Turning it clockwise increases treble tone and counter-clockwise decreases it. Tone is flat at zero position.

# INTERCONNECTING DIAGRAM



# CONNECTING INSTRUCTIONS

## SPEAKER CONNECTING AND SPEAKER SWITCH

In connecting only one set of speakers, connect the right speaker to right speaker terminals and left speaker to left speaker terminals of "A" speaker terminals. Should plus or minus of either right or left channel be reversely connected, sounds at the center section will be adversely affected by lack of separation. To connect additional set of speakers, connect right speaker to right speaker terminals and left speaker to left speaker terminals of "B" speaker terminals.

Sound cannot be heard when the SPEAKERS switch on the front panel is set to the A+B position and only one pair of speaker system is used with connections made either to "A" speaker terminals or "B" speaker terminals. When connecting the speaker leads to the speaker terminals, make sure that the bare wire strands at the ends of the speaker leads don't touch each other or adjacent terminal.

## TURNTABLE CONNECTION

The two shielded audio cables from your stereo turntable are normally terminated with phono plugs. Connect the left channel of the turntable to the "L" PHONO input jack and the right channel to the "R" PHONO input jack.

If the turntable has a grounding wire, connect it to this amplifier's GND terminal to avoid hum.

## TUNER CONNECTION

Use the TUNER terminals for connection to an FM stereo or AM-FM stereo tuner.

Connect the left channel of the tuner to the "L" TUNER input jack and the right channel of the tuner to the "R" TUNER input jack.

## AUX (AUXILIARY INPUTS)

High level AUX input jacks are for miscellaneous sources, such as extra tape decks, additional tuners and/or receivers, TV sound outputs, and other external components.

## TAPE DECK CONNECTION

### Recording

A tape deck can be connected for recording as follows: left channel input of the tape deck to TAPE A "L" REC jack, right channel input of the tape deck to TAPE A "R" REC jack.

### Playback

A tape deck can be connected for playback as follows: left channel output of the tape deck to TAPE A "L" PLAY jack, right channel output of the tape deck to TAPE A "R" PLAY jack.

If an additional tape deck is used and two tape decks are operated simultaneously, the same connections must be provided for TAPE B jacks.

## DIN CONNECTOR (REC/PLAY CONNECTOR)

If your tape deck is equipped with a DIN connector, connect it to the "TAPE A" REC/PLAY connector with a DIN connecting cord. A DIN connector enables recording and playback with this single cord.

**Note:** When a DIN cord is used for connecting to the tape deck, the PLAY and REC jacks should not be used.

## AC OUTLETS

The AC outlets on the rear panel of the amplifier may be used to supply power to other components, such as a turntable, tape deck, etc.

### 1. SWITCHED outlets

These outlets are controlled by the POWER switch on the front panel. (The total capacity is 100 watts maximum.)

### 2. UNSWITCHED outlet

This outlet delivers power at all times. (The capacity is 200 watts maximum.)

**Notes:** 1. The AC OUTLETS are used for AUDIO units only. Units of the great capacity should not be absolutely connected.

2. Units shipped to the European countries are not equipped with the AC OUTLETS.

# OPERATING INSTRUCTIONS

## PHONO OPERATION

1. To reproduce the output of the turntable that is connected to PHONO jacks, set the INPUT SELECTOR switch to PHONO.
2. Set the TAPE (DUBBING) switch, TAPE (MONITOR) switch to SOURCE.
3. Adjust the VOLUME to the desired listening level.
4. Use the BASS, TREBLE, LOUDNESS controls to adjust the sound to your preference and to the acoustic conditions of your room.

## TAPE DECK OPERATION

### TAPE MONITORING

If you use the amplifier with 3-head type tape decks, you can check the sound quality of the recording that is being made by momentarily comparing the recorded signal with the source signal as follows: Set the TAPE (MONITOR) switch to A (or B) to monitor the recorded sound. Set the TAPE (MONITOR) switch to SOURCE to monitor the source signal before it is recorded.

### WHEN RECORDING WITH ONE TAPE DECK

Connect the tape deck to either the TAPE A jacks or TAPE B jacks on the rear panel.

#### Recording

1. Set the INPUT SELECTOR switch to the desired program source. Set the TAPE (DUBBING) switch to source. To monitor the recording, set the TAPE (MONITOR) switch to A or B, whichever side the tape deck is connected.
2. Recording level should be adjusted with the volume control of your tape deck.
3. Recording is not affected by the VOLUME, BASS, TREBLE, LOUDNESS, etc., controls of the amplifier.

### WHEN RECORDING WITH TWO TAPE DECKS

Connect one tape deck to TAPE A jacks and the other to TAPE B jacks on the rear panel.

#### Recording

1. Set the INPUT SELECTOR switch to the desired program source.
2. Set the TAPE (MONITOR , DUBBING) switch to SOURCE.
3. Recordings can now be made into both tape decks simultaneously. To monitor these recordings, use the TAPE (MONITOR) switch as follows: Set it to A to monitor the recording being made with the tape deck connected to TAPE A jacks. Set it to B to monitor the recording being made in the tape deck connected to TAPE B jacks.
4. Recording levels should be adjusted exactly as described previously for single tape deck operation.

#### Playback

1. The INPUT SELECTOR switch can be at any position.
2. Set the TAPE (MONITOR) switch to the corresponding position (A or B).
3. Adjust volume and tonal quality.

#### Dubbing

Tape recordings may be easily duplicated from one tape deck to another with minimal loss of quality by setting the TAPE (DUBBING) switch to (A ► B) or (B ► A) as follows:

1. The INPUT SELECTOR switch can be at any position.
2. Set the TAPE (DUBBING) switch to (A ► B) when it is desired to copy recorded material on the tape deck A for re-recording on the tape deck B.  
Set the TAPE (DUBBING) switch to (B ► A) when it is desired to copy a recording on the tape deck B for re-recording on the tape deck A. The recording can be monitored.
3. Operate both tape decks simultaneously.

# OPERATING INSTRUCTIONS

## THE THROUGH CIRCUIT

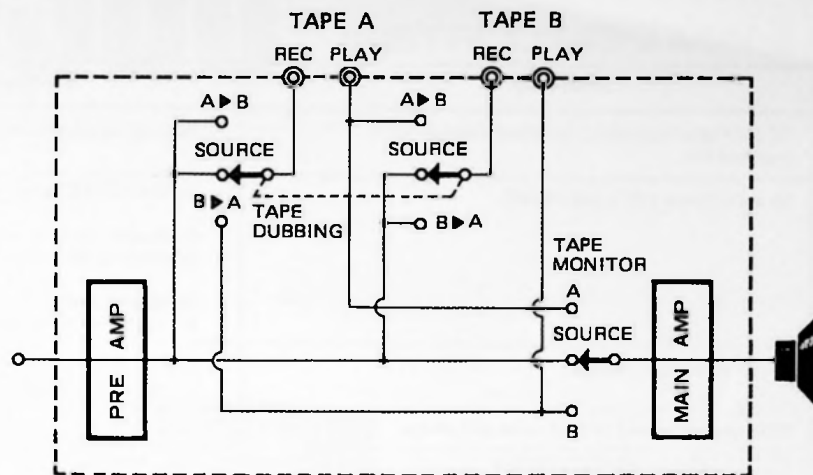
This unit permits listening to other program sources, such as FM broadcasts or records while tape dubbing.

- FM broadcasts can be tape recorded while simultaneously listening to records as follows:

1. Connect the Tuner to the "PLAY" jacks of the TAPE A group connector jacks on the rear panel of this unit and the Tape Deck to the TAPE B group connectors.
2. Connect the Turntable to PHONO jacks on the rear panel and set the INPUT SELECTOR switch to PHONO.
3. FM broadcasts can be recorded when the TAPE (DUBBING) switch is then set to A ► B and the Tape Deck is operated in recording mode.
4. Disc record sound is reproduced when the TAPE (MONITOR) switch is set to SOURCE.
5. FM broadcasts are reproduced when the TAPE (MONITOR) switch is set to A. The recorded sound of FM broadcasts are reproduced and can be monitored when the TAPE (MONITOR) switch is set to B.

- Disc record sound sources can be tape recorded while simultaneously listening to FM broadcasts as follows:

1. Connect the Tuner to the "PLAY" jacks of the TAPE A group connector jacks on the rear panel of this unit and the Tape Deck to the TAPE B group connectors.
2. Connect the Turntable to PHONO jacks on the rear panel, and set the INPUT SELECTOR switch to PHONO.
3. Set the TAPE (MONITOR) switch to A and tune in FM broadcasts.
4. Set the TAPE (DUBBING) switch to SOURCE and the Tape Deck to recording mode. The sound from the disc record can then be recorded.
5. The FM broadcasts are reproduced when the TAPE (MONITOR) switch is then set to A. When it is set to SOURCE, the sound of the disc record will be reproduced. When it is set to B, the tape recorded sound of the disc record can be monitored.



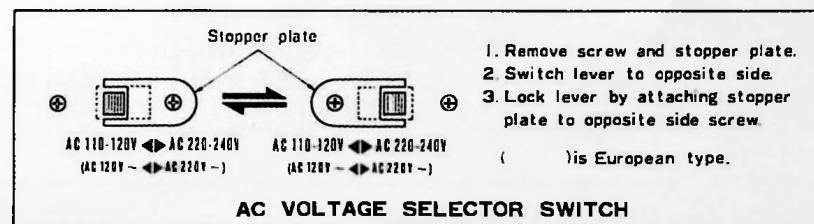
The DIAGRAM of The TAPE Switch (DUBBING, MONITOR)

## AC VOLTAGE SELECTION

The KA-3500 operates on AC 110 ~ 120 volts or AC 220 ~ 240 volts. The AC Voltage Selector Switch on the rear panel is set to the voltage that prevails in the area to which the amplifiers are shipped. Before operating this amplifier, make sure that the position of the AC Voltage Selector Switch matches your line voltage. If not, it must be changed to the proper setting.

To change, disconnect the AC line cord.

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





# TROUBLE SHOOTING

In initially installing this amplifier improper connections to a tuner or turntable may result in one of the following indications of trouble. Their possible causes and corrective measures are listed below to facilitate installation.

| SYMPTOM   | PROBABLE CAUSE   | CORRECTION   |
|---|--|--|
| No pilot lamp indication, no sound although AC is switched ON.            | Poor AC plug connection.   | Check plug contact   |
| No sound from LEFT and RIGHT.   | a) SPEAKERS switch set to A + B position<br>b) Speaker cords disconnected.<br>c) SPEAKERS switch set to OFF position.<br>d) Volume Control (extreme left).<br>e) TAPE (MON) switch at A or B position. | a) A-B groups of speakers are required in this case for response from both sides.<br>b) Check connections from amp. output to speakers.<br>c) SPEAKERS switch should be switched to OFF only when using stereo headphones.<br>d) Set to appropriate volume level.<br>e) Always set to SOURCE except when using tape decks. |
| Sound only from one side.   | a) Poor speaker cord connections.<br>b) BALANCE control set to one extreme or other.   | a) Check amp. output and speakers connections.<br>b) Adjust BALANCE control.   |
| Difference in volume level of radio and phono.                            | Difference in received signal and phono output levels.   | Set to appropriate volume level.   |
| No sound from LEFT and RIGHT, or sound only from one side.                | Turntable output cord disconnected.  | See that turntable output cord is firmly plugged into amp. input.  |
| Loud hum drowns out sound.  | Poor turntable output cord prong connections.  | See that turntable output cord is firmly plugged into amp. input.  |
| Sound audible but background hum occurs.                                  | a) Turntable output cord picking up hum from AC cord.<br>b) Turntable not grounded.  | a) Keep turntable output cord away from AC cords. Choose cord paths which keep hum at a minimum. Reverse turntable AC plug connections.<br>b) Connect ground wire to GND terminal.   |
| Sound audible but continuous background buzz interferes.                  | TV signal picked up by Turntable output cord. Frequency occurs near TV transmitting antenna.   | Route turntable cord so that hum is minimized.   |
| Howling noise occurs when volume is raised or bass response is increased. | Speaker vibrations induce feedback in Pickup.  | Increase distance between turntable and speakers. Choose speaker locations carefully. Remember, loose flooring induces howling.  |

## RATING

|                    |                         |
|--------------------|-------------------------|
| Power Consumption: | 280 watts at full power |
| Dimensions:        | W 14-31/32" (380 mm)    |
|                    | H 5-1/2" (140 mm)       |
|                    | D 10-1/32" (255 mm)     |
| Weight:            | 17.2 lbs. (7.8 kg)      |

