STEREO INTEGRATED AMPLIFIER

KA-8300

INSTRUCTION MANUAL

the sound approach to quality

KENWOOD

INTRODUCTION

Thank you for purchasing our amplifier. Because we take great pride in the long tradition of quality components, the name Kenwood represents, your purchase of a 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 features that will remain new for endless hours of listening pleasure.

MAINTENANCE

CONCERNING TRANSISTORS

Transistors differ fundamentally from radio vacuum tubes and requires 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.

PROTECTION CIRCUIT

The newly developed protection circuit is completely effective and prevents damage which may be caused by short-circuiting at the speaker terminals or the power output circuit of the amplifier. When a short-circuit occurs, this protection circuit will function automatically to protect the Power Darlington Block. If the Power Darlington Block fails, this protection circuit will function automatically to protect the speakers.

NOTES

1. Units shipped to the U.S.A. and CANADA are designed to be operated with 120 volts AC only. Units shipped to the Scandinavian countries are designed to be operated with 220 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 resetting, follow the directions outlined on page 7.

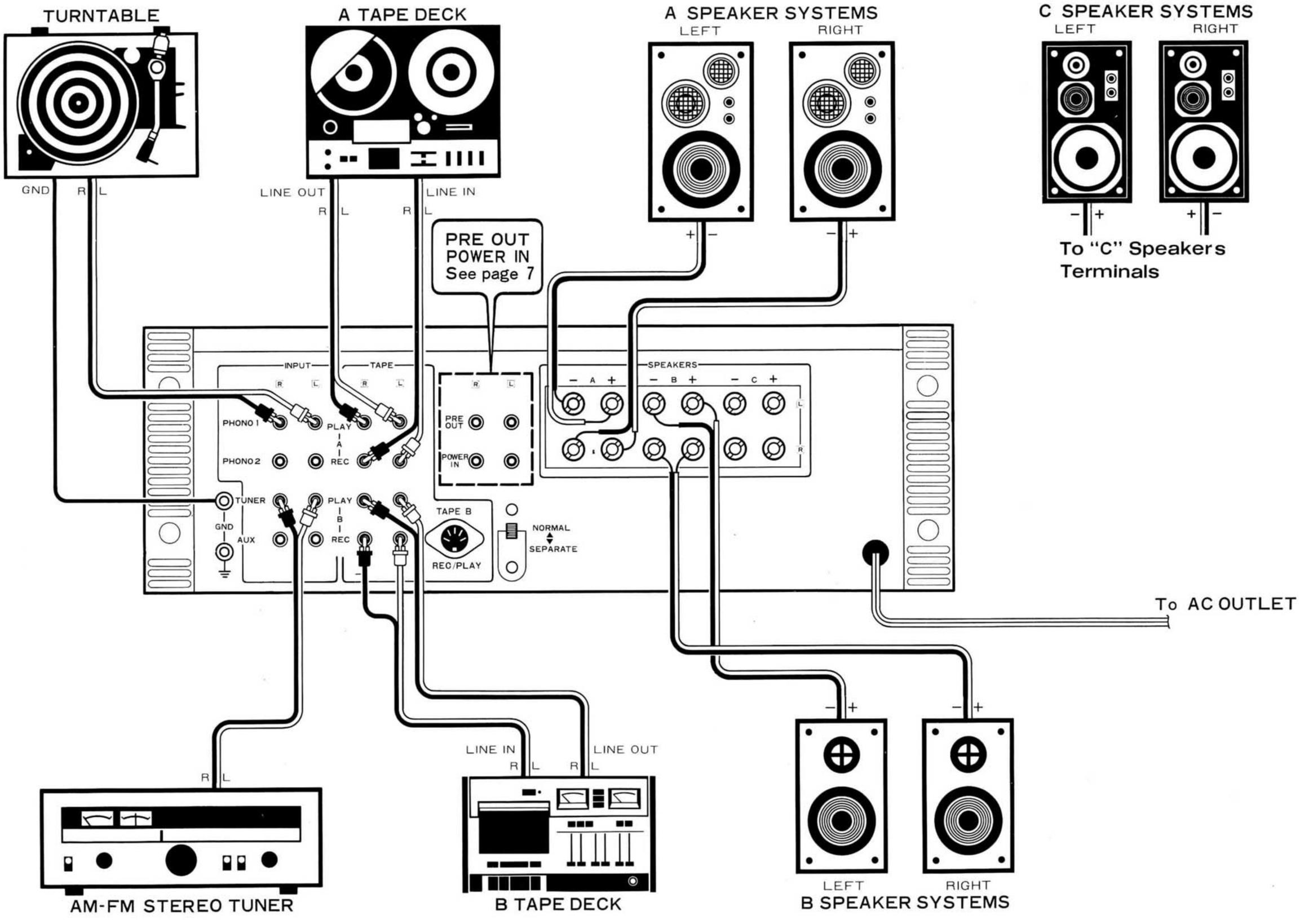
CONTENTS

FEATURES

1. Power Darlington I.C. developed by Kenwood to upgrade reliability of Power Amplifier Section.
2. 2 Large Power Meters with logarithmic compressed wide range scales, 30 mW – 100 W and 10 mW – 3 W.
3. Low Noise Operational Amp's I.C. in Tone Control Section.
4. Input Dynamic Margin of RMS 260 mV in EQ Amp. Section.
5. Dual Level Control with 41 click stop V.R. to upgrade S/N and T.H.D. at small signals.
6. Presence Control to strengthen Mid Range Frequency and to select Frequency either 800 Hz or 3 kHz Program Source.
7. Miscellaneous
   - Step loudness control selector
   - Tone control (Bass, treble) with turnover selector
   - High filter
   - Low filter
   - Mode selector
   - Speaker selector for A, B, C
   - Tape monitor A/B with tape to tape dubbing selector

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

INTERCONNECTING DIAGRAM



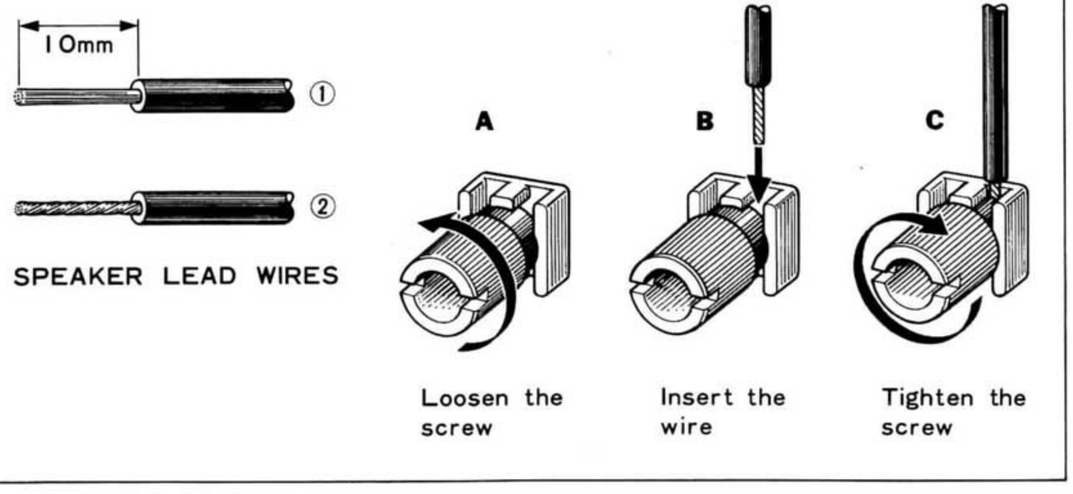
CONNECTING INSTRUCTIONS

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" or "C" 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. This is because A and B speaker circuits are in series and is not an indication of any trouble. 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.

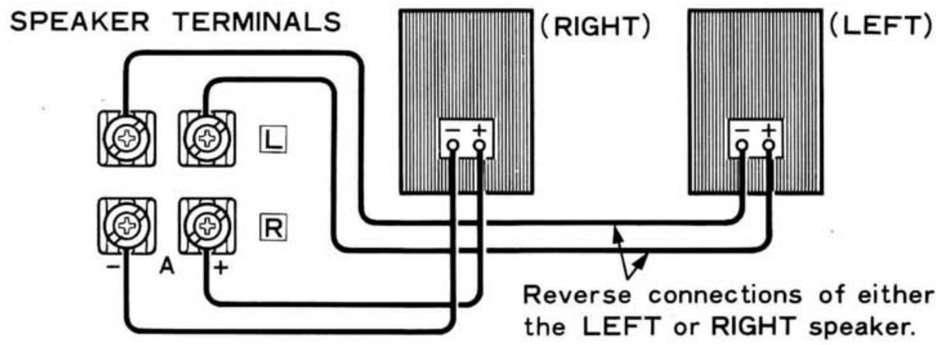
It is recommended that the tips of the speaker cord leads are soldered, or the strands of each individual lead twisted together to eliminate any possibility of short-circuits forming in the speaker connecting network.



PHASING OF THE SPEAKERS

Speaker phasing can be determined in the following manner:

1. Set the MODE switch to MONO.
2. Set the INPUT SELECTOR switch to PHONO 1, and adjust the VOLUME control to the desired listening level.
3. Play a familiar record.
4. If the sound is coming directly from the front, the speakers are in phase. If the sound comes from both sides and there is a noticeable loss in low frequencies, the speakers are out of phase. In this case reverse the leads on one speaker.



CONNECTING INSTRUCTIONS

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 1 input jack and the right channel to the "R" PHONO 1 input jack.

If an additional turntable is used in order to operate two turntables, connect the left channel to the "L" PHONO 2 input jack and the right channel to the "R" PHONO 2 input jack.

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

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 B" REC/PLAY connector with a DIN connecting cord. A DIN connector enables recording and playback with this single cord.

Notes: 1. Please note that the REC/PLAY connector corresponds to the TAPE B REC and TAPE B PLAY jacks — the signal must be controlled with TAPE (MONITOR) switch on the front panel.
2. When a DIN cord is used for connecting to the tape deck, the PLAY and REC jacks should not be used.

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.

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 300 watts maximum.)

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

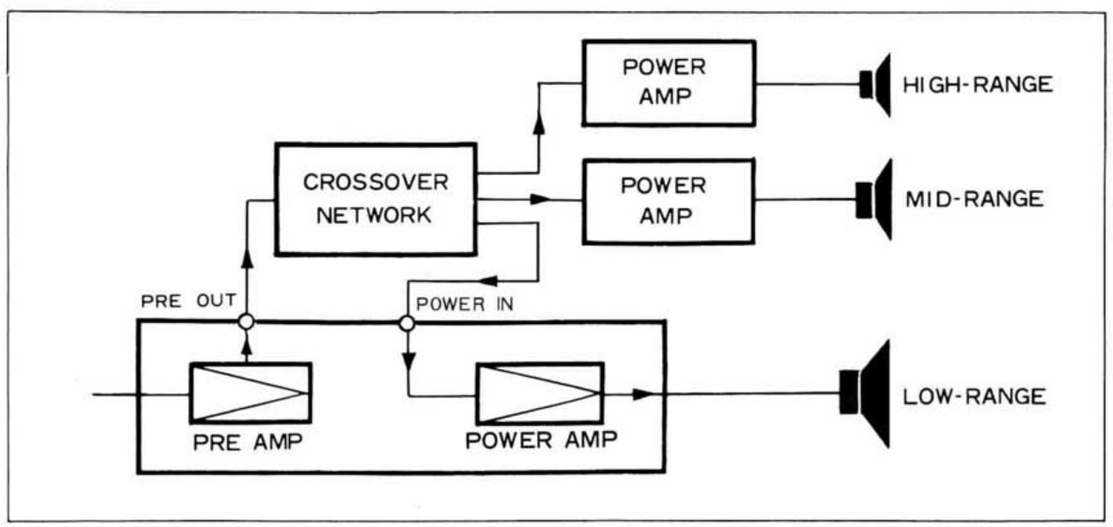
CONNECTING INSTRUCTIONS

PRE OUTPUT POWER IN

By utilizing these jacks and interconnecting with other equipment as shown in Figure below (left), the KA-8300 can be used for multi-channel system. By simply connecting an adaptor to these jacks, a 4-channel reproduction can be enjoyed.

In such a case, the NORMAL-SEPARATE switch must be set to SEPARATE position as follows:

1. Remove the stopper which holds the slide switch in place in its present position at NORMAL.
2. Reset the switch to SEPARATE for pre-amplifier or power amplifier only function.
3. Reattach plate to lock switch in the new position.



AC VOLTAGE SELECTION AND POWER FUSE

The KA-8300 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 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.

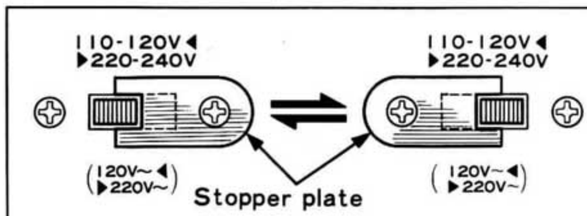
To change, first disconnect the AC line cord. Then remove the stopper plate and slide the AC Voltage Selector Switch to the opposite side. Then reattach the stopper plate to the other side.

When the position of the AC Voltage Selector Switch is changed, it is also necessary to change the power fuse.

In such a case, consult a qualified serviceman.

When you replace the fuse, turn the fuse holder in the direction of the arrow using a Phillips screw driver. In some districts, the set will be provided with another type of fuse holder, which allows easy replacement of the fuse without using the Phillips screw driver.

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

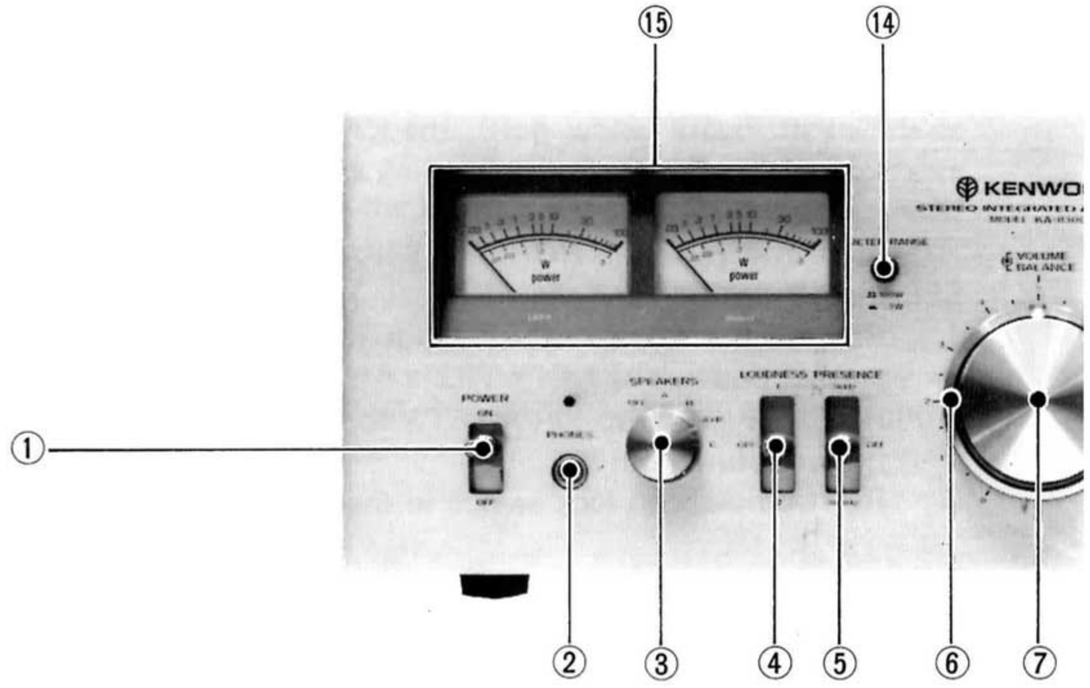


1. Remove screw and stopper plate.
2. Switch lever to opposite side.
3. Lock lever by attaching stopper plate to opposite side screw.

( )is European type.

AC VOLTAGE SELECTOR SWITCH

CONTROLS AND THEIR FUNCTIONS



① POWER switch

ON – This position the amplifier turns on.
OFF – This position the amplifier turns off.

② PHONES jack

Plug a stereo headphones into this jack for private listening.

③ 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" speaker terminals.
C – Activates speakers connected to the "C" speaker terminals on the rear panel.

④ LOUDNESS switch

The LOUDNESS switch boosts bass response to compensate for the human ear's lack of response to those frequencies at low volume levels.
Switch positions and functions are as follows:
"OFF" . . . . flat
"1" . . . . . +7.5 dB at 100 Hz
"2" . . . . . +3.5 dB at 100 Hz

⑤ PRESENCE control

This PRESENCE control provide the frequency response emphasize around 800 Hz or 3 kHz. Set the PRESENCE control according to the type of broadcast, or personal preference.

⑥ BALANCE control

This BALANCE control (Outer knob) adjusts unequal volume from any program source in right and left channels. The left channel is accentuated when this adjuster is turned from center "5" toward the left side, and conversely.

⑦ VOLUME control

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

⑧ TONE controls

The BASS and TREBLE controls are for adjusting the bass and treble response. Each knob controls both left and right channels equally.
Turning the knobs clockwise increases bass and treble response and counterclockwise decreases bass and treble response.

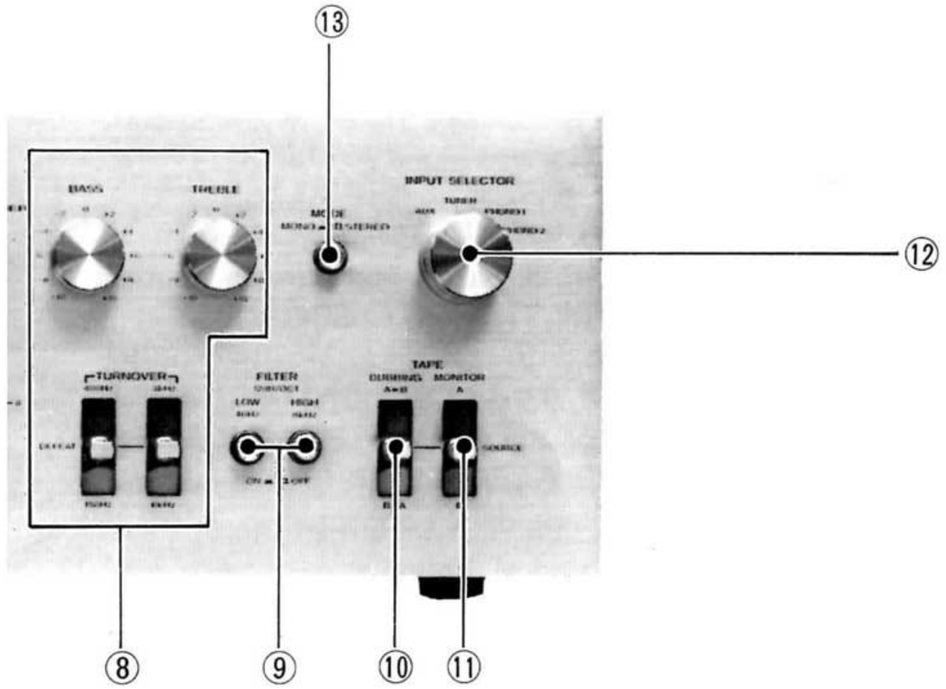
You can select the bass and treble TURNOVER frequencies (150 Hz or 400 Hz for bass control, 3 kHz or 6 kHz for treble control) with the TURNOVER switches. DEFEAT position provides completely flat frequency response with tone control circuit deactivated.
Switch positions and functions are as follows:

150 Hz:	±5 dB at 100 Hz	3 kHz:	±7.5 dB at 10 kHz
400 Hz:	±7.5 dB at 100 Hz	6 kHz:	±5 dB at 10 kHz

⑨ FILTER switches

LOW FILTER – Setting this switch to ON reduces low frequency noise, such as turntable rumble, etc., which may interfere with program material.
Frequencies below 40 Hz are attenuated by 12 dB/octave.
HIGH FILTER – Setting this switch to ON reduces any high frequency noise, such as tape hiss, record scratch, etc.
Frequencies above 8 kHz are attenuated by 12 dB/octave.

CONTROLS AND THEIR FUNCTIONS



⑫ INPUT SELECTOR switch

Switch positions and functions are as follows:

AUX – Selects source connected to the AUX jacks.

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

PHONO 1 – In this position the turntable is available if connected to the PHONO 1 input jacks on the rear panel.

PHONO 2 – In this position the turntable is available if connected to the PHONO 2 input jacks on the rear panel.

⑬ MODE switch

This switch determines the manner in which program sources (previously selected by the INPUT SELECTOR switch) will go through the amplifier section.

STEREO – This provides stereophonic reproduction of any stereo program source. The left channel is heard from the left speaker, and the right channel is heard from the right speaker.

MONO – The left and right channels are mixed together and heard from both speakers.

⑭ METER RANGE control

This switch controls the sensitivity of both the left and right channel output level meters. Use the switch suitable for your listening requirements.

Note: To protect the meters from overswinging, make it a practice to push the "100W" first, and advance successively to "3W" when no deflection can be observed.

⑮ POWER meters

These meters indicate the strength of the output volume level. They can be read directly in watts from 0.01 to 100 watts into 8 ohms (controlled by the Meter Range Control switch).

⑩ TAPE (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 10, 11.

⑪ TAPE (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 10, 11.

OPERATING INSTRUCTIONS

PHONO OPERATION

1. Two pairs of phono input jacks, PHONO 1 and PHONO 2, are provided to enable connections to two turntables. To reproduce the output of the turntable that is connected to PHONO 1 jacks, set the INPUT SELECTOR switch to PHONO 1. To reproduce the output of the turntable that is connected to PHONO 2 jacks, set the INPUT SELECTOR switch to PHONO 2.
2. Set the MODE switch to STEREO (OFF) and the TAPE (DUBBING) switch, TAPE (MONITOR) switch to SOURCE.
3. Adjust the VOLUME to the desired listening level.
4. Use the BASS, TREBLE, FILTER, LOUDNESS and PRESENCE 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 (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, FILTER, LOUDNESS, PRESENCE, 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

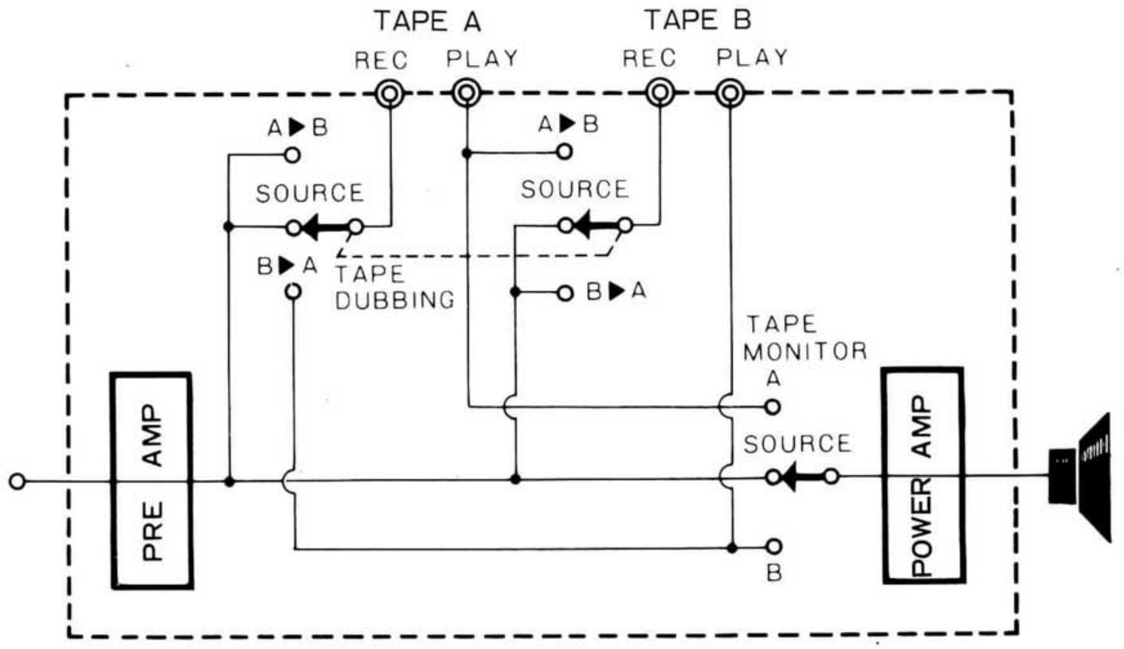
This unit permits listening to other program sources such as FM broadcasts or records while tape dubbing.

- **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 either PHONO 1 or PHONO 2 and set the INPUT SELECTOR switch to whichever connector that is used.
3. FM broadcasts can be recorded when the TAPE (DUBBING) switch is then set to A ▸ B and the Tape Deck 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 either PHONO 1 or PHONO 2, and set the INPUT SELECTOR switch to whichever connector that is used.
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)

TROUBLE SHOOTING

SYMPTOM	PROBABLE CAUSE	CORRECTION
No pilot lamp indication, no sound although AC is switched ON.	Poor AC plug connection. Blown fuse.	Check plug contact Replace fuse. If it blows again, trouble muse be corrected.
No sound from LEFT and RIGHT.	a) SPEAKERS switch set to A + B position b) Speaker cords disconnected. c) SPEAKERS switch set to OFF position. d) Volume Control (extreme left). 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. b) Check connections from amp. output to speakers. c) SPEAKERS switch should be switched to OFF only when using stereo headphones. d) Set to appropriate volume level. e) Always set to SOURCE except when using tape decks.
Sound only from one side.	a) Poor speaker cord connections. b) BALANCE control set to one extreme or other.	a) Check amp. output and speakers connections. 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. 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. 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:	550 watts at full power		
Dimensions:	W	16-15/16″	(430 mm)
	H	5-7/8″	(149 mm)
	D	14-13/16″	(376 mm)
Weight:	35.3 lbs (16 kg)		

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