

AM-FM STEREO RECEIVER

KR-8010

INSTRUCTION MANUAL



the sound approach to quality
KENWOOD

INTRODUCTION

The purpose of this manual is to acquaint you with the operating features of this receiver. 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 through this manual carefully. Knowing how to set up the receiver, 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 the receiver to meet your special requirements.

SERIAL NUMBER

Record your SERIAL NUMBER on the spaces designated on the warranty card. You will find the serial number on the back of the receiver.

AFTER UNPACKING

After unpacking, we recommend you inspect and examine the receiver for any possible shipping damage. If your receiver is damaged or fails to operate, notify your dealer immediately. If your receiver was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the receiver) can file a claim against the carrier for shipping damage.

We recommend you retain the original carton and packing materials to prevent any damage should you transport or ship your receiver in the future.

INSTALLATION PRECAUTIONS

- Avoid locations subject to direct sunlight.
- Avoid high or low temperature extremes.
- Keep the receiver away from heat radiating source.
- Choose stable locations with as little vibration and dust as possible.

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

IMPORTANT!

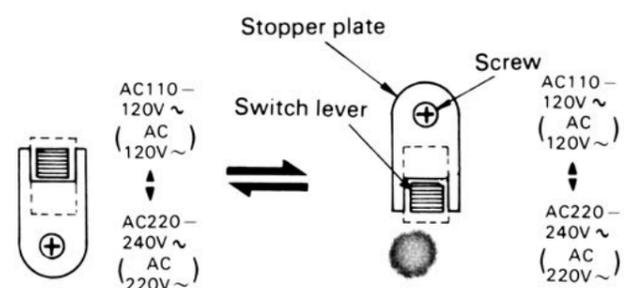
- Receivers shipped to U.S.A. and Canada are designed to operate on 120 volts AC only. They are not equipped with an AC Voltage Selector Switch and the following description on such a switch should be disregarded.
- Receivers shipped to all other countries are equipped with an AC Voltage Selector Switch on the rear panel. The following description should be carefully read.

AC VOLTAGE SELECTION

This receiver operates on 110 — 120 volts or 220 — 240 volts AC. The AC Voltage Selector Switch is set to the AC line voltage generally available in the country where it is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your AC line voltage. If not, it must be properly changed in accordance with the directions below.

Note:

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



- Remove screw and stopper plate.
- Slide switch lever to your AC voltage.
- Lock switch lever with stopper plate and screw.

() European type.

AC Voltage Selector Switch

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FEATURES

1. High Power Output with Low Distortion. 125 watts per channel, min. RMS both channels driven, at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.03% total harmonic distortion.
2. Perfect protection circuit with ASO circuitry and mechanical relay.
3. Very Quiet: 84 dB of phono S/N (Signal to Noise) ratio at 2.5 mV input.
4. Triple Tone Controls with true Defeat switch.
5. Sound Injection System for adding a voice of your own.
6. High Sensitive FM Front end with Dual Gate MOS FET and 4 gang V.C. (Variable Capacitor).
7. Low Distortion and High Selectivity IF section with Two Differential IC and Newly Developed Four 2 element Ceramic Filters.
8. FM MUTING has an outstanding two different level positions and performs Stereo ↔ Mono by automatic switching circuit at low input antenna level.
9. Pilot Signal Canceler and Steep Slope 2 Pole LC Filter for Interference of Carrier Leakage.
10. Many Useful Functions:
 - Three Speaker Systems Selector.
 - Two Tape Monitors with Through Circuit.
 - De-emphasis Selector as 25, 50 and 75 μ s.
 - And High Filter, Subsonic Filter, Loudness Control, Mode Selector as Stereo/Mono.

SAFETY PRECAUTIONS

Ventilation

- Never close the ventilation holes on the case top with a record, table cloth, curtain, etc. Nothing must be put on the receiver especially when using for a long time. Keep the receiver at least four inches (about ten centimeters) away from the wall and other things.

Cleaning

- Do not use volatile liquid such as alcohol, thinner, gasoline, benzine, etc., when cleaning the receiver surface. Use silicon cloth or soft dry cloth.

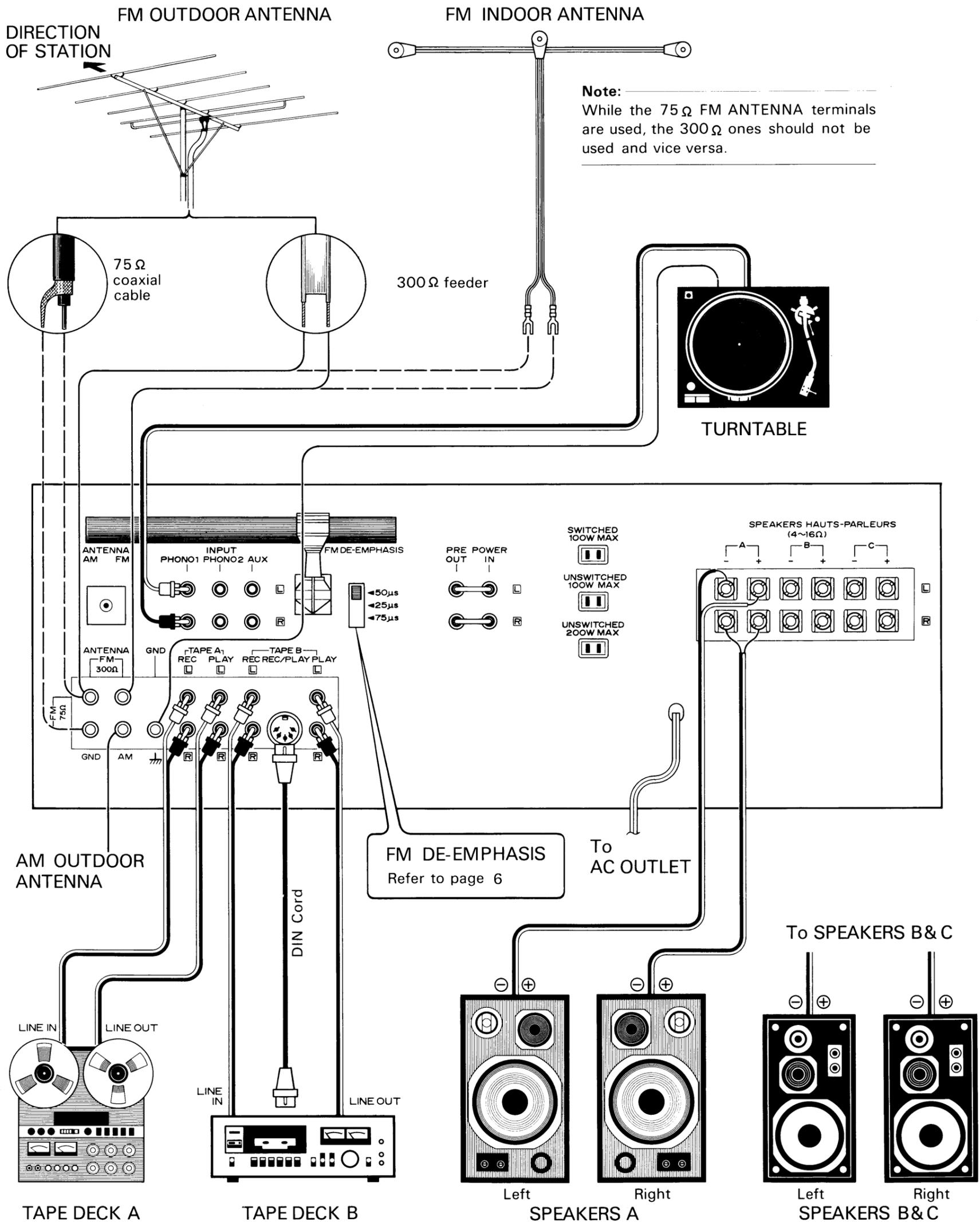
Modification

- Never dismantle the case from the receiver and touch the internal part. Never modify the internal part. Otherwise, the danger of electric shock will be incurred.

Extraneous Matter

- Do not put on and near the receiver what contains water (vase, pitcher, etc.).
- Do not drop in the receiver the inflammable (paper, celluloid, etc.) and the metal (needle, hairpin, coin, etc.).

INTERCONNECTING DIAGRAM



CONNECTING INSTRUCTIONS

SPEAKER

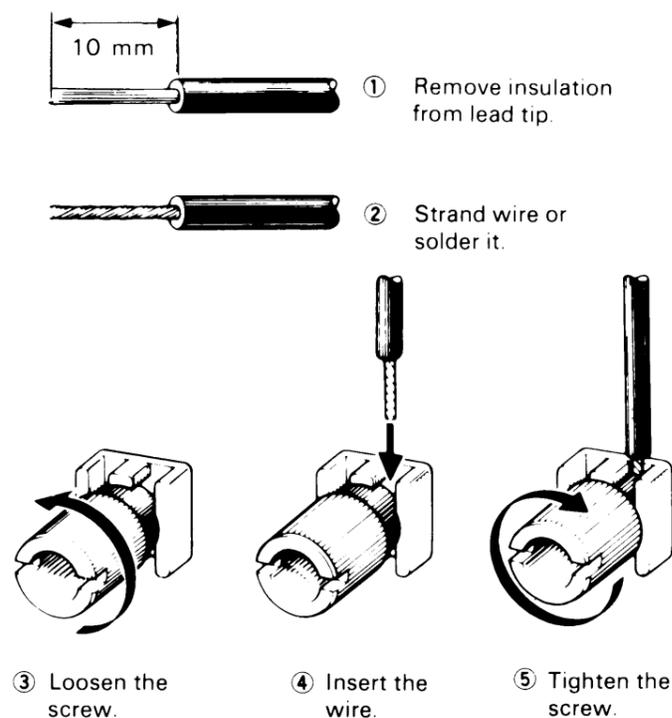
In connecting only one pair of speakers, connect the left speaker to **L** and the right speaker to **R** of the SPEAKERS A terminals. Should (+) or (-) of either right or left channel be reversely connected, sounds at the center section will be adversely affected by the lack of separation. When connecting the speaker leads to the speaker terminals, make sure that the bare wires at the speaker lead tips do not touch the adjacent terminal. It is recommended that the bare wires of individual speaker lead tips are soldered or they are stranded together to eliminate any possibility of short-circuits forming in the speaker connecting network.

In connecting an additional pair of speakers, connect the left speaker to **L** and the right speaker to **R** of the SPEAKERS B or C terminals.

Sound cannot be heard when the SPEAKERS switch on the front panel is set to "A+B" and only one pair of speakers (connected to either SPEAKERS A terminals or B ones) are used. This is because A and B speaker circuits are in series and is not an indication of any trouble.

Note:

Each speaker impedance should be 4 ohms or more when only one pair of speakers are used or when two pairs of speakers are simultaneously used (A+B).



Speaker Lead Connection

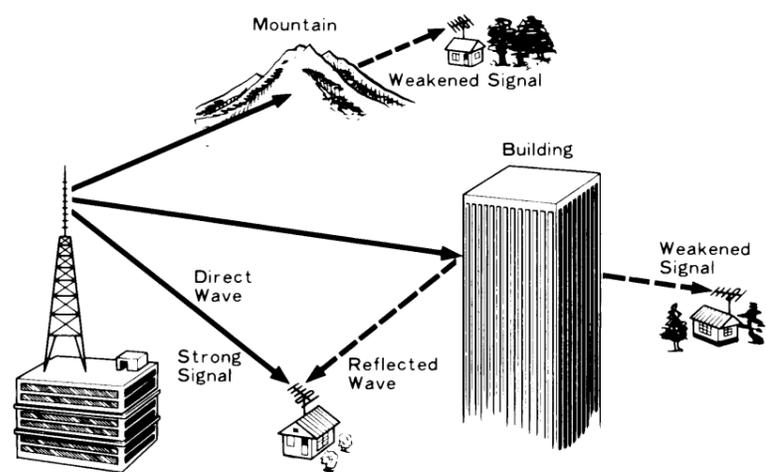
PHASING OF THE SPEAKERS

Speaker phasing can be determined in the following manner:

1. Set the SELECTOR switch to "FM", and the MODE/FM MUTING switch, to "MONO".
2. Adjust the VOLUME control to your desired listening level.
3. If the sound comes 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.

FM ANTENNA

Since FM broadcast signals travel along a straight and direct-line path, they become rather weak behind hills and buildings even in the vicinity of a transmitting station. FM signals also become weak in areas distant from a station even though there may not be any obstruction to the direct-line path of the signal. Therefore, a good FM antenna should be installed in the most effective manner for the best possible FM reception.

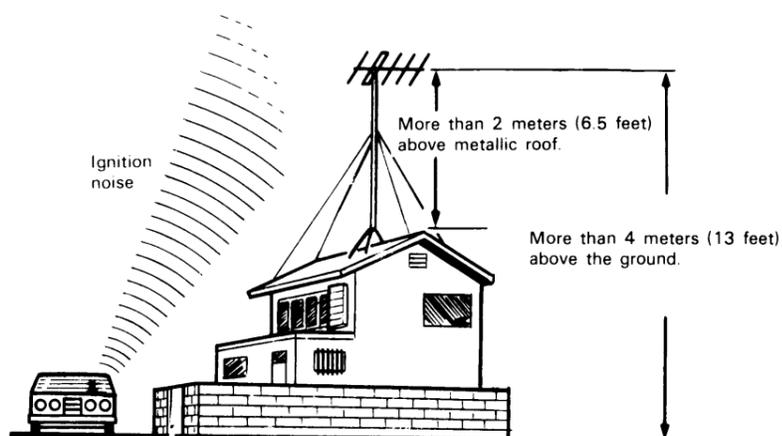


Direct Wave and Reflected Wave

CONNECTING INSTRUCTIONS

FM Outdoor Antenna

In areas at a greater distance from the transmitting station, the use of an outdoor antenna is highly recommended. Erect it, referring to the figure shown below. It is available in various types. For reception of stations located in many directions, a non-directional type antenna will offer better results. When using a directional antenna, always orient it for the best reception of the desired station. The correct position will be indicated by maximum deflection of the SIGNAL meter on the receiver.



- Keep the antenna away from roads to avoid ignition noise. The coaxial cable will bring better results.
- Keep the antenna at least 2 meters (6.5 feet) distant from ferroconcrete buildings and other antennas.
- Keep the antenna feeder or coaxial cable away from other structure not to touch directly.
- Make the antenna feeder or coaxial cable as short as possible.

FM Outdoor Antenna Erection

FM Indoor Antenna

In areas close to the transmitting station, the supplied T-type antenna may suffice. Spread two arms of the antenna horizontally and position them for the best reception, listening to an FM station. The antenna can then be taped to a wall or ceiling and must not be rounded nor folded. It should be remembered, however, that the pickup of reflections (similar to "ghosts" on TV) will result in poor stereo reception. These reflections must be reduced to a minimum, either by careful orientation of the T-type antenna or, if this will not eliminate them, by using a more directional outdoor antenna.

FM De-Emphasis Switch

Prior to our shipment, this switch is set as follows in accordance with the delivery area. Check the setting position before operating the receiver.

Improper setting will adversely affect the high frequency range.

Europe, Oceania and South Africa 50 μ s
Others 75 μ s

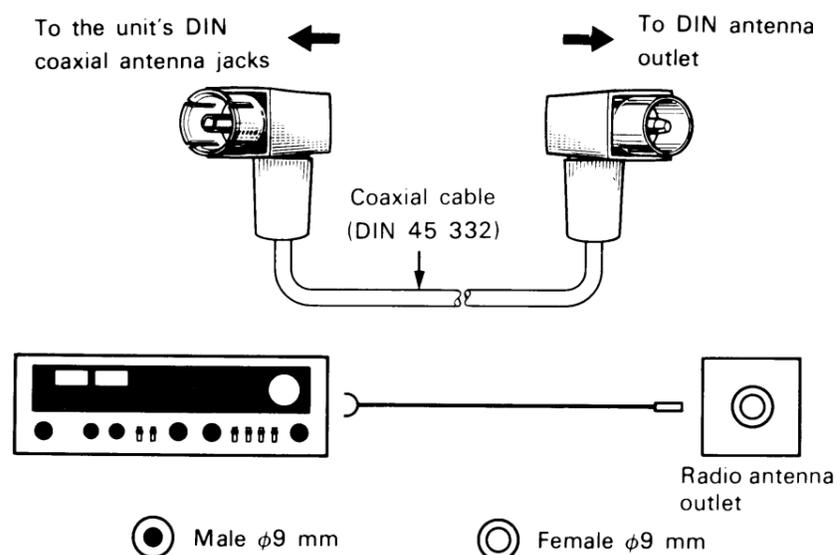
Note:

The "25 μ s" position should be selected only when the receiver is used with an auxiliary Dolby* NR adaptor to receive FM Dolby broadcasts.

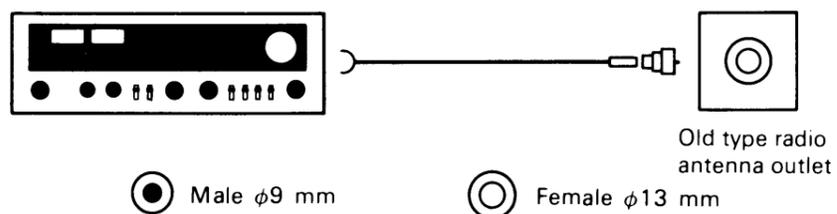
*Dolby is a trademark of Dolby Laboratories, Inc.

IEC COAXIAL ANTENNA JACKS

The male jack, recommended by IEC, is equipped on the rear panel of the unit shipped to a European country. Use an IEC antenna connector (shown below) when connecting them to your IEC antenna outlet.

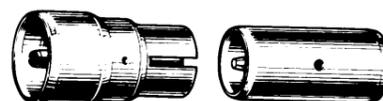


However, if the antenna outlet is old type IEC standard 13 mm diameter, there comes an adaptor along with the IEC standard cable with which you can convert into old type connector.



IEC standard cable (DIN 45 332)

* Adaptors as below



CONNECTING INSTRUCTIONS

AM ANTENNA

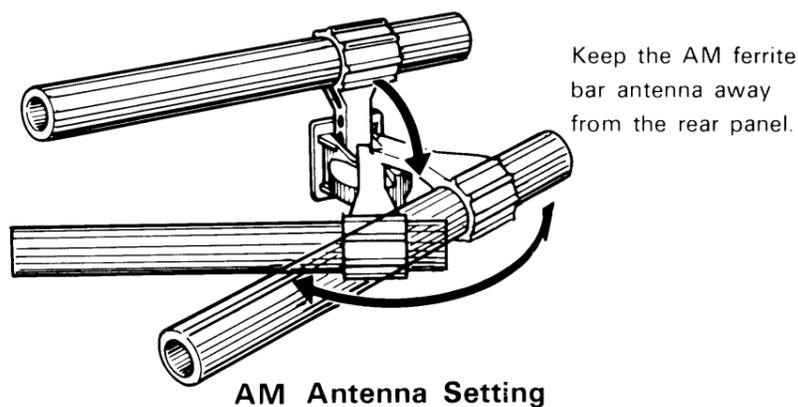
Position the ferrite bar antenna for best reception, listening to an AM station.

AM Outdoor Antenna

In fringe areas or in locations surrounded by ferroconcrete buildings where satisfactory reception cannot be obtained with the ferrite bar antenna, an AM outdoor antenna should be erected.

AM Bar Antenna

The ferrite bar antenna has high sensitivity and assures optimum AM reception.



TAPE DECK

Playback

Connect the left channel output of the tape deck to **L** and the right channel output of the tape deck to **R** of the TAPE B PLAY jacks.

Recording

Connect the left channel input of the tape deck to **L** and the right channel input of the tape deck to **R** of the TAPE B REC jacks.

Second Tape Deck

If the second tape deck is connected, similar connections for playback and recording must be made on the TAPE A jacks.

DIN 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. The DIN connector corresponds to the TAPE B PLAY and TAPE B REC jacks. The signal must be controlled with the TAPE MONITOR switch on the front panel.

Note:

While a DIN cord is connected, the TAPE B PLAY and TAPE B REC jacks should not be used.

TURNTABLE

Two shielded audio cables from your stereo turntable are normally terminated with phono plugs. Connect the left channel of the turntable to **L** and the right channel to **R** of the INPUT PHONO jacks. If the turntable has a grounding wire, connect it to the receiver's GND terminal to avoid hum.

AUX JACKS

High level INPUT AUX jacks are for miscellaneous sources, such as extra tape decks, TV sound outputs, and other external components.

AC OUTLETS

The AC outlets on the rear panel of the receiver may be used to supply power to other components such as a turntable, tape deck, etc. Never connect here any equipment whose power consumption exceeds the capacity of each outlet.

- SWITCHED outlet — This is 100 watts maximum in capacity and is controlled by the POWER switch on the front panel.
- UNSWITCHED outlets — One of these is 100 watts, and the other one is 200 watts maximum in capacity. These are available at all times.

Note:

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

CONTROLS AND FUNCTIONS

① POWER switch

ON This position turns the receiver on.
OFF This position turns the receiver off.

② SPEAKERS switch

OFF This position silences all speakers for private headphones listening.
A Activates speakers connected to the SPEAKERS A terminals on the rear panel.
B Activates speakers connected to the SPEAKERS B terminals on the rear panel.
A+B Activates simultaneously two pairs of speaker systems connected to the SPEAKERS A and B terminals.
C Activates speakers connected to the SPEAKERS C terminals on the rear panel.

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 FILTER buttons

SUBSONIC — Frequencies below 18 Hz are attenuated by 6 dB/octave. Although such subsonic frequencies are inaudible to the human ear, they can cause intermodulation distortions. It is recommendable to depress (in) the button at all times, even if no record rumble etc. is heard.
OFF — No attenuation of subsonic frequencies.
HIGH — Setting this button to ON (in) reduces any high frequency noise, such as tape hiss, record scratch, etc.
 Frequencies above 5 kHz are attenuated by 6 dB/octave.

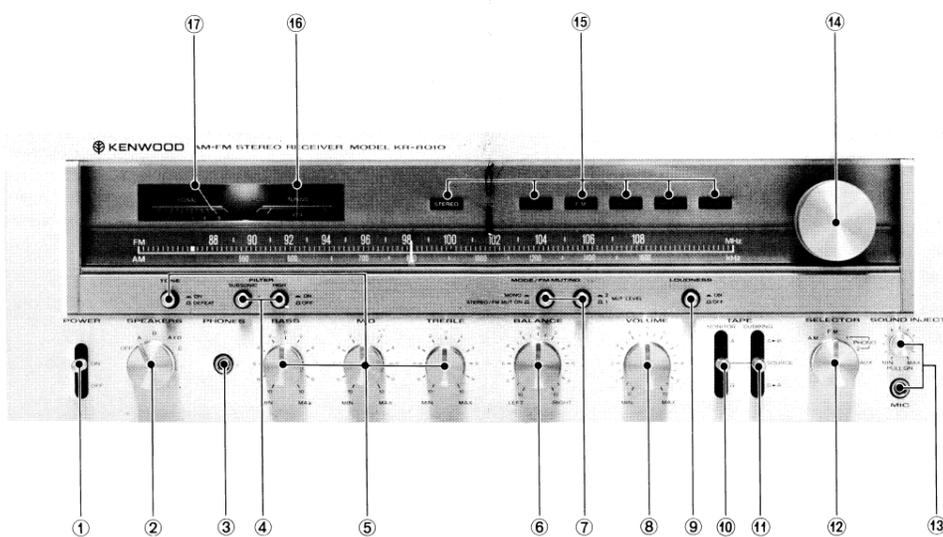
⑤ TONE controls

BASS Turning it clockwise increases bass tone and counterclockwise decreases it.

MID Turning it clockwise increases mid range tone and counterclockwise decreases it.

TREBLE Turning it clockwise increases treble tone and counterclockwise decreases it.

However, frequency response is flat when these BASS, MID and TREBLE are left at zero positions.



TONE switch

DEFEAT position provides perfect flat frequency response with bypassing circuit of Tone controls. And TONE controls are operated by ON position.

⑥ BALANCE control

This control adjusts unequal volume from any program source in right and left channels. Turn it from center position (zero mark) toward left side when accentuating the left channel. Turn it from center position toward right side when accentuating the right channel.

⑦ MODE/FM MUTING

STEREO/FM MUT ON position always has muting function working with MUT LEVEL either 1 or 2.

MONO position does not connect with muting function and provides always Mono broadcasting without noise.

MUT LEVEL, however, works only time when STEREO/FM MUT ON is selected. For details on page 10.

⑧ VOLUME control

This control adjusts simultaneously volumes in both right and left channels. Set it to your desired listening level.

⑨ LOUDNESS switch

ON Bass tone is boosted at low listening level. Our ears have less sensitivity to low frequencies at low listening level. This position compensates for this deficiency.
OFF This position is used when listening at normal and high levels.

⑩ TAPE MONITOR switch

SOURCE .. The source signal is heard.

A For monitoring a recording or for playback on a tape deck connected to the TAPE A jacks. Recorded sound on the tape is heard.

B For monitoring a recording or for playback on a tape deck connected to the TAPE B jacks. Recorded sound on the tape is heard. For further details refer to page 11.

CONTROLS AND FUNCTIONS

⑪ TAPE DUBBING switch

A ▶ B For dubbing from a tape deck connected to the TAPE A jacks into a tape deck connected to the TAPE B jacks.
B ▶ A For dubbing from a B tape deck to A. For further details refer to page 11.

⑫ SELECTOR switch

AM AM broadcast is reproduced.
FM FM broadcast is reproduced.
PHONO 1 .. A turntable connected to the INPUT, PHONO 2 PHONO 1 or PHONO 2, jacks is operated.
AUX A source connected to the INPUT AUX jacks is heard.

⑬ SOUND INJECTION and MIC input

The SOUND INJECTION system is used to make mixing recording with your desired source sound selected by the SELECTOR switch and the microphone. The SOUND INJECTION switch must be set to the ON position. Mixing level can be adjusted by the mix level control. This switch should be turned OFF except when using the SOUND INJECTION. And a microphone jack for mono sound only. The SOUND INJECTION switch is turned ON by pulling the SOUND INJECTION knob. For further details on pages 12 and 13.

⑭ TUNING knob

AM or FM station desired is selected by turning this knob.

⑮ Indicators

One of the indicators (AM, FM, PHONO1, PHONO 2 and AUX) lights in accordance with the source selected by the SELECTOR switch. The STEREO indicator also lights while the MODE/FM MUTING switch is set to "STEREO/FM MUT ON" and FM stereo broadcast is received.

⑯ TUNING meter

This meter indicates FM tuning conditions. Best reception (maximum separation/minimum distortion) is obtained when the meter pointer is in the center of the meter scale.

⑰ SIGNAL meter

This meter indicates signal strength of AM or FM. Best reception is obtained at the maximum deflection of the meter pointer.

OPERATING INSTRUCTIONS

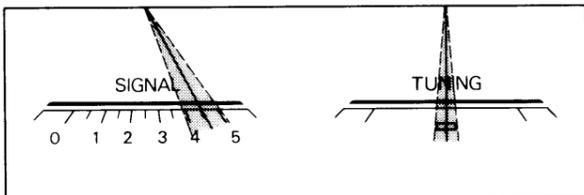
Prior to turning on the receiver, set each control and switch as below.

- VOLUME → MIN.
- TAPE MONITOR, DUBBING → SOURCE
- SELECTOR → FM
- MODE/FM MUTING → STEREO/FM MUT ON
- MUT LEVEL → 1
- BALANCE, BASS, MID and TREBLE → Center position

Next, turn on the receiver and set the SPEAKERS switch to "OFF" (PHONES), "A", "B", "A+B" or "C" in accordance with the item to be operated.

FM RECEPTION

1. Set the SELECTOR switch to "FM".
2. Set the MODE/FM MUTING switch to "STEREO/FM MUT ON".
3. Turn the TUNING knob to select your station. Best reception is obtained when the SIGNAL meter pointer deflects to the extreme right and the TUNING meter pointer is exactly in the center.



4. Adjust volume and the tonality.

MODE/FM MUTING

To begin with, simple operation of MODE/FM MUTING is mentioned at the beginning and then explanations of each function. Simple operation of MODE/FM MUTING.

1. Set MODE/FM MUTING to STEREO/FM MUT ON with MUT LEVEL 1 all the time. However, it must be switched to MONO when the reception will be cut off by this position.
2. Just select the MUT LEVEL on 2, when you desire to receive strong enough stations only.
3. Except above mentioned cases, better select MODE/FM MUTING to MONO so that it will provide clear reception without interstation noise and interference.

Explanations of each function

As for functions of this switch, there are two positions, STEREO/FM MUT ON and MONO position. Utilization of MONO function is same as the one in the past. And STEREO/FM MUT ON position, however, has an outstanding utilization in an attempt to listen better quality FM broadcast and two choices of MUT LEVEL.

However, MUT LEVEL works only time when STEREO/FM MUT ON is utilized.

This MUT LEVEL contributes to the advancement of stereo sound quality.

Details as follows:

STEREO/..... This position provides FM stereo **FM MUT ON** reception in accordance with signal strength of antenna input which is controlled by MUT LEVEL either position 1 or 2.

MUT LEVEL

These two positions (1 and 2) play an important role of FM sound quality in accordance with the signal strength of antenna input which is divided into three ranges of signal strength, strong electric field (strong service area), comparably weak electric field (weak service area) and the rest of mono area.

1) Muting is set at low level for considerably weak station and provides stereo or mono reception according to the signal strength. In other words, strong enough service area for stereo, it reproduces in stereo and less signal strength service area, it reproduces in mono by automatic switching circuit. But the signal will be cut off, when antenna input is very weak.

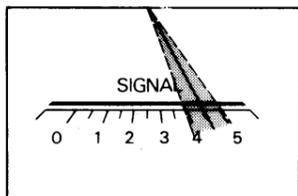
2) Muting is set at high level for strong signal station. This position accepts only stations which are clear and good stereo separation broadcasts.

MONO..... This position has two purposes. One purpose is that you will intend to have mono from stereo broadcast. The other is that you will like to eliminate noise on stereo and interference from vicinal stations.

OPERATING INSTRUCTIONS

AM RECEPTION

1. Set the SELECTOR switch to "AM".
2. Turn the TUNING knob to select your station. Best reception is obtained when the SIGNAL meter pointer deflects to the extreme right.



3. Adjust the volume and the tonality.

TAPE DECK

Playback

1. The 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.

Monitoring

If you use the receiver 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.

Recording (with one tape deck)

1. Set the 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, MID, TREBLE, FILTERS, LOUDNESS, etc., controls of the receiver.

Recording (with two tape decks)

1. Set the SELECTOR switch to the desired program source.
2. Set the TAPE 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 recorder connected to TAPE B jacks.
4. Recording levels should be adjusted with the volume controls of your tape decks.

Tape-to-Tape (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 SELECTOR switch can be at any position.
2. Set the TAPE DUBBING switch to A ► B when it is desired to copy a recording on the tape deck B from re-recording on the tape deck A. The recording can be monitored. (If the TAPE MONITOR switch is set to SOURCE, SOURCE can be listened to even during the tape-to-tape dubbing.)
3. Operate both tape decks simultaneously.

TURNTABLE

1. If the turntable is connected to the PHONO 1 inputs, set the SELECTOR switch at PHONO 1.
 1. If the turntable is connected to the PHONO 2 inputs, set the SELECTOR switch to position PHONO 2.
2. Operate the turntable.
3. Adjust the volume and the tonality.

AUX JACKS

1. Set the SELECTOR switch to "AUX".
2. Operate the component connected.
3. Adjust the volume and the tonality.

OPERATING INSTRUCTIONS

PRE OUT-POWER IN JACKS

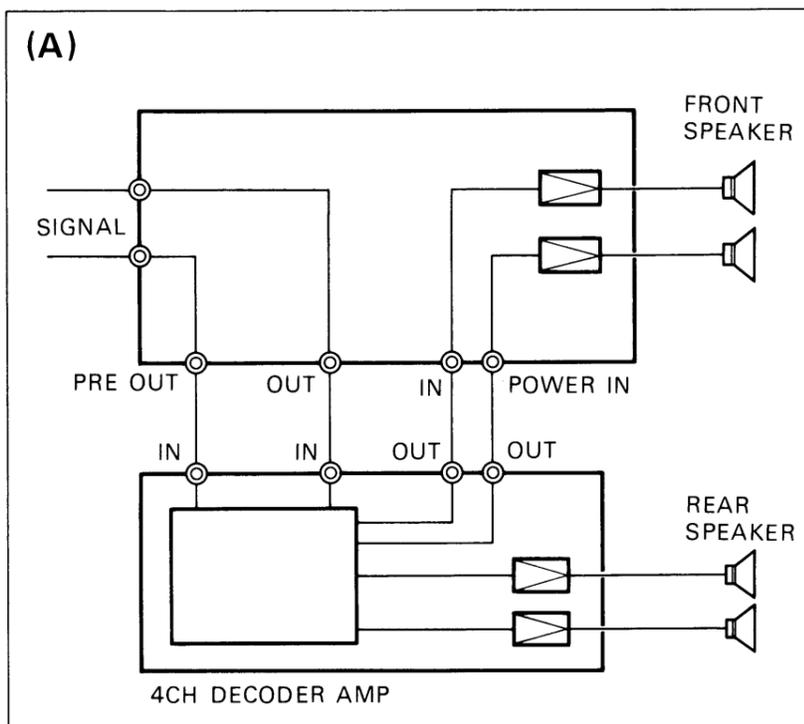
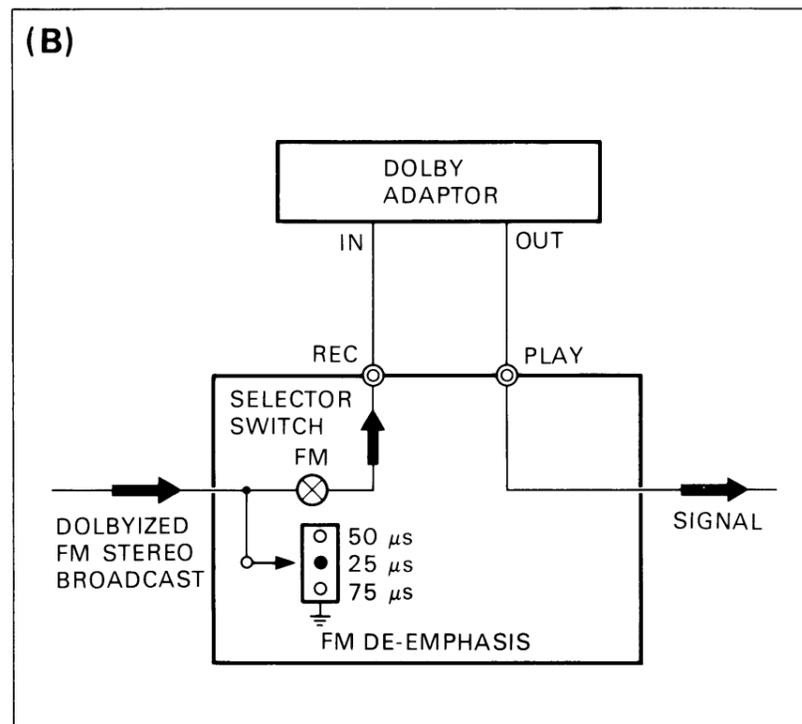
When it is desired to set up a 4-Channel stereo system, remove the attached jumper connector and connect another decoder amplifier or demodulator to the PRE OUT-POWER IN jacks at rear of the receiver. It must be remembered, however, that a 4-Channel program source is necessary for such operation. See figure (A).

Note:

When using the PRE OUT-POWER IN jacks do not use the attached jumper connector for other jacks. Keep it because it must be plugged back into these jacks when they are not used.

Dolbyized FM Broadcasts Reception

1. Connect the Dolby NR adaptor to the REC/PLAY jacks as shown in the figure (B).
2. Set the SELECTOR switch to FM and tune in to a Dolbyized FM broadcast.
3. Set the FM DE-EMPHASIS switch (on the rear panel) to 25 μ s position.



SOUND INJECTION

1. MIC and SOURCE SOUND Mixing

To begin with, connect your tape deck to TAPE B, since mixing recording of MIC and SOURCE SOUND is only available at TAPE B. TAPE A is linked with U shaped connectors (these are already connected before shipping) in order to feed the source signal. Therefore, U shaped connectors should not be removed.

Procedures are as follows:

1. Set the SOUND INJECTION switch ON by pulling the knob. And select your desired source by SELECTOR switch.
2. Set the TAPE DUBBING switch to A \blacktriangleright B in this case and adjust mix level control according to your desired.
3. Mixing recording can be made in the Tape Deck connected to TAPE B.
4. In this case, TAPE MONITOR switch to:
SOURCE .. The sound from speaker is MIC only.
A Mixing of MIC and source.
B Playback of TAPE B.

Refer to the table 1 on page 13.

OPERATING INSTRUCTIONS

2. MIC and TAPE SOUND Mixing

To begin with, U shaped connectors (these are already connected before shipping) should be removed and connect two tape decks to both TAPE A and TAPE B on the rear panel in order to make mixing recording of MIC and TAPE A program to the TAPE B.

And then turn the SOUND INJECTION switch ON by pulling the knob and set the TAPE DUBBING, TAPE MONITOR switches in accordance with the positions. Refer to the table 2.

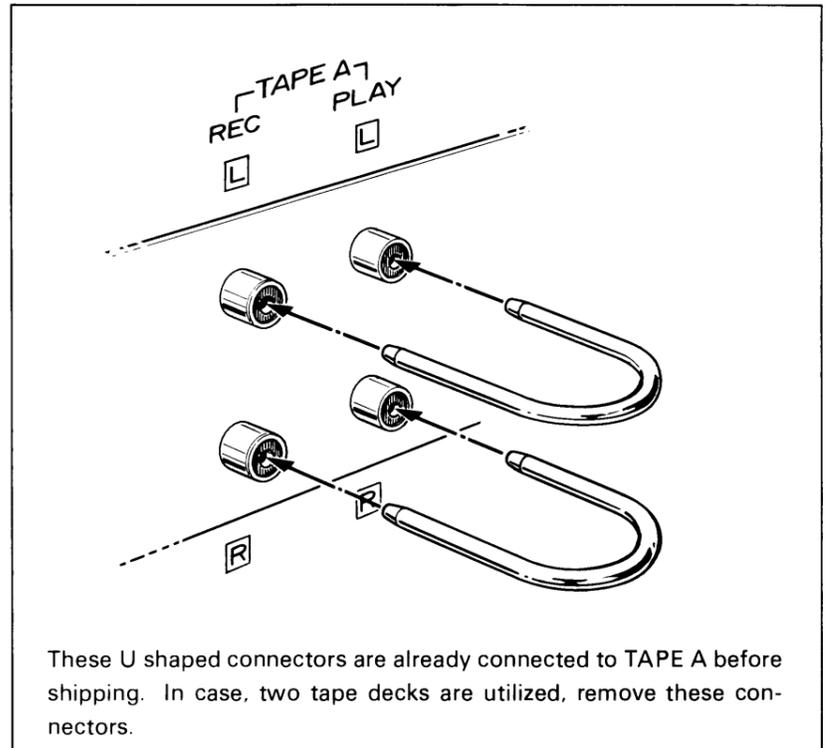


Table 1

SOUND INJECTION SWITCH	TAPE DUBBING SWITCH POSITION	TAPE MONITOR SWITCH POSITION	SPEAKER SOUND	SOUND FROM TAPE A "REC" JACKS	SOUND FROM TAPE B "REC" JACKS	REFERENCE
"ON"	"SOURCE"	"SOURCE"	MIC ONLY	SOUND SELECTED BY SELECTOR	SOUND SELECTED BY SELECTOR	MIXING VOLUME INOPERATIVE
		"A"	MIC AND SOURCE	SOUND SELECTED BY SELECTOR	SOUND SELECTED BY SELECTOR	
		"B"	TAPE B	SOUND SELECTED BY SELECTOR	SOUND SELECTED BY SELECTOR	
	"A ▶ B"	"SOURCE"	MIC ONLY	SOUND SELECTED BY SELECTOR	MIC AND SOURCE	
		"A"	MIC AND SOURCE	SOUND SELECTED BY SELECTOR	MIC AND SOURCE	
		"B"	TAPE B	SOUND SELECTED BY SELECTOR	MIC AND SOURCE	

Table 2

SOUND INJECTION SWITCH	TAPE DUBBING SWITCH POSITION	TAPE MONITOR SWITCH POSITION	SPEAKER SOUND	SOUND FROM TAPE B "REC" JACKS	SOUND FROM REFERENCE JACKS	REFERENCE
"ON"	"SOURCE"	"SOURCE"	MIC ONLY	SOUND SELECTED BY SELECTOR	SOUND SELECTED BY SELECTOR	MIXING VOLUME INOPERATIVE
		"A"	MIC TAPE A	SOUND SELECTED BY SELECTOR	SOUND SELECTED BY SELECTOR	
		"B"	TAPE B	SOUND SELECTED BY SELECTOR	SOUND SELECTED BY SELECTOR	
	"A ▶ B"	"SOURCE"	MIC ONLY	SOUND SELECTED BY SELECTOR	MIC AND TAPE A	
		"A"	MIC AND TAPE A	SOUND SELECTED BY SELECTOR	MIC AND TAPE A	
		"B"	TAPE B	SOUND SELECTED BY SELECTOR	MIC AND TAPE A	

BEFORE ASKING SERVICE

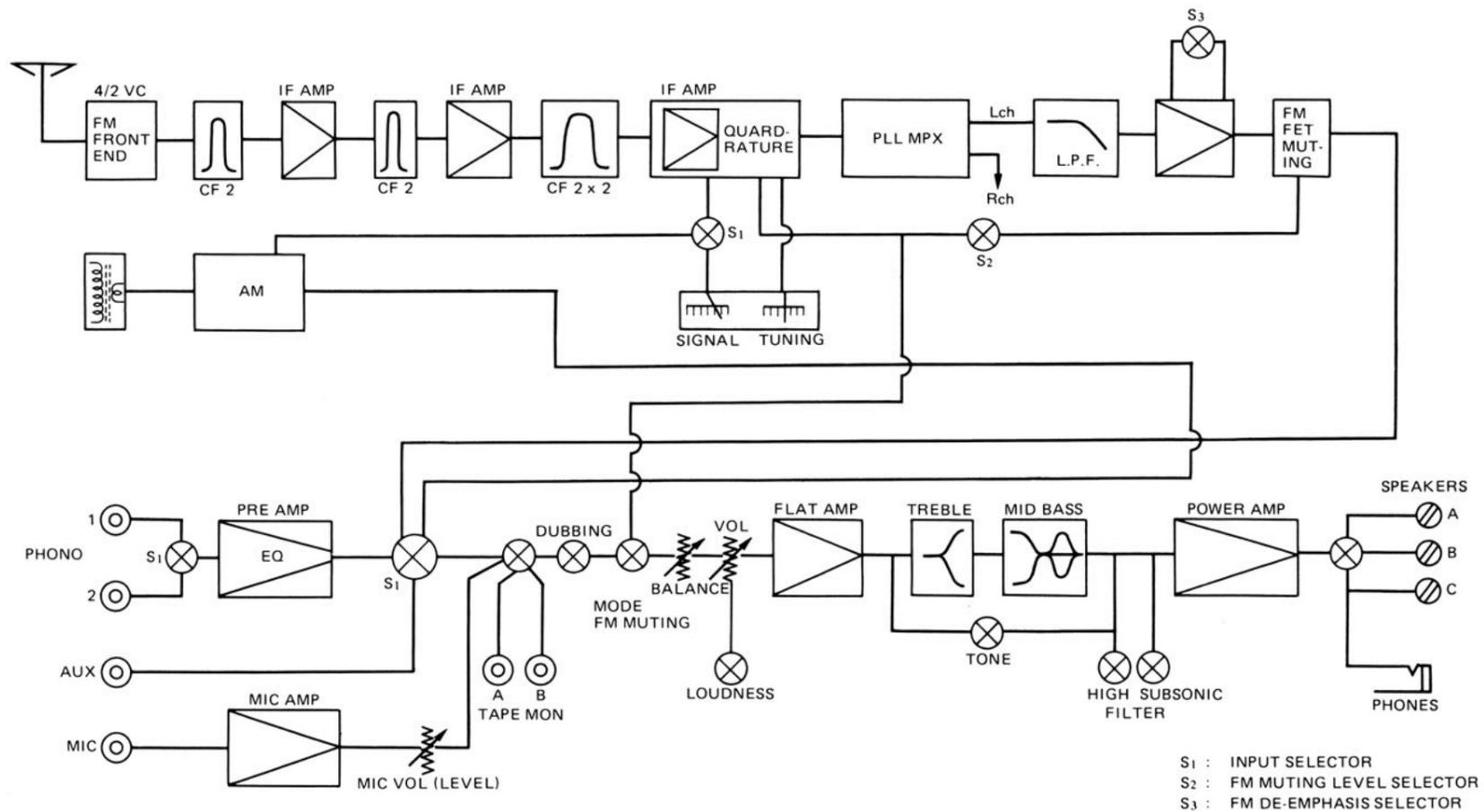
When the receiver does not operate as desired, it is often considered to have a trouble. In most cases, however, this is attributable to improper connecting of cord, lead, feeder, etc., and/or improper setting of switch and control. Re-check your receiver before asking service, referring to the table below.

Occurs Only During AM Reception	Cause	Correction
Continuous low frequency buzz. Most noticeable at night on weak signal stations.	<ul style="list-style-type: none"> Interference from electrical appliances or atmospherics. 	Erecting a 10 meter outdoor antenna and securing good ground conditions should reduce interference considerably. Complete elimination is difficult.
Continuous high frequency which increases at night	<ul style="list-style-type: none"> TV interference. 10 kHz beat interference from adjacent AM station. 	Turn TV off. (Neighboring TV set may also be a cause.) Impossible to eliminate from receiver side. This is one disadvantage of the AM broadcast system. Use High Filter to cut off high frequency interference.
Intermittent buzzing or sharp crackling noise.	<ul style="list-style-type: none"> Lightening interference. Interference from fluorescent lamps. AC Plug Connection. 	Occurs when lamps are on and cannot be helped. Try reversing AC plug connections. Occurs only on certain stations due to high voltage power line and cannot be helped in many areas.
Occurs Only During FM Reception	Cause	Correction
Continuous hiss or buzzing interference with broadcast. Becomes louder during stereo.	<ul style="list-style-type: none"> Incoming signal too weak at ANT terminal. 	Erect outdoor FM antenna if only indoor T-type is used. A 5 or 7 element antenna is necessary if you are located at a considerable distance from the broadcasting station.
Occasional sharp buzzing or crackling noise.	<ul style="list-style-type: none"> Automobile ignition-noise. More noticeable on weak signals. 	Erect outdoor FM antenna as far away from roads as practicable.
Weak right channel response when listening to LEFT only test FM Stereo broadcast.	<ul style="list-style-type: none"> Called crosstalk, a very slight response is normal. 	It is not a sign of trouble. It cannot be reduced to zero.
FM Automatic Circuit fails to respond to stereo broadcast.	<ul style="list-style-type: none"> Incoming signal is exceptionally weak. 	Erect an FM outdoor antenna.
During AM, FM or Record Playback	Cause	Correction
No illumination, no sound although Power is switched ON.	<ul style="list-style-type: none"> Poor AC plug connection. Blown fuse. 	Check plug contact. Replace fuse. If it blows again, trouble must be corrected.
No sound from LEFT and RIGHT.	<ul style="list-style-type: none"> SPEAKERS switch set to A + B position. Speaker cords disconnected. SPEAKERS switched to OFF. Volume Control (extreme left). TAPE MONITOR switch at A or B position. 	A-B groups of speakers are required in this case for response from both sides. Check connections from amp output to speakers. SPEAKERS switch should be switched to OFF only when using stereo headphones. Set to appropriate volume level. Always set to SOURCE except when using tape deck.
Sound only from one side.	<ul style="list-style-type: none"> Poor speaker cord connections. BALANCE control set to one extreme or other. 	Check amp. output and speakers connections. Adjust BALANCE control.
Noise when AC is switched ON or when volume is adjusted immediately after.	<ul style="list-style-type: none"> Insufficient circuit warmup. 	Allow 2 ~ 3 second interval after switching AC ON, before manipulating volume control.
Difference in volume level of radio and phono.	<ul style="list-style-type: none"> Difference in received signal and phono output levels. 	Set to appropriate volume level.

BEFORE ASKING SERVICE

During Phono Record Playbacks Only	Cause	Correction
No sound from LEFT and RIGHT, or sound only from one side.	<ul style="list-style-type: none"> • Turntable output disconnected. 	See that turntable output cord is firmly plugged into amp. input.
Loud hum drowns out sound.	<ul style="list-style-type: none"> • Poor turntable output cord prong connections. 	See that turntable output cord is firmly plugged into amp. input.
Sound audible but background hum occurs.	<ul style="list-style-type: none"> • Turntable output cord picking up hum from AC cord. • Turntable not grounded. 	Keep turntable output cord away from AC cord. Choose cord paths which keep hum at a minimum. Twist LEFT RIGHT turntable output cords together. Reverse turntable AC plug connections. Connect ground wire to GND terminal.
Sound audible but continuous background buzz interference.	<ul style="list-style-type: none"> • 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.	<ul style="list-style-type: none"> • Speaker vibrations induce feedback in Pickup. 	Increase distance between turntable and speakers. Choose speaker locations carefully. Remember, loose flooring induces howling.

BLOCK DIAGRAM



SPECIFICATIONS

POWER AMPLIFIER SECTION

Power Output

125 watts* per channel, minimum RMS both channels driven, at 8 ohms from 20 to 20,000 Hz with no more than 0.03% total harmonic distortion:

Both Channels Driven	130 + 130W 8Ω at 1 kHz 135 + 135W 4Ω at 1 kHz
Dynamic Power Output	360W 4Ω
Total Harmonic Distortion	0.03% at rated power into 8Ω (20 to 20 kHz from AUX) 0.02% at 1/2 rated power into 8Ω
Intermodulation Distortion	0.03% at rated power into 8Ω (60 Hz:7 kHz=4:1 from AUX) 0.02% at 1/2 rated power into 8Ω
Power Bandwidth	5 Hz to 70,000 Hz
Frequency Response	5 Hz to 100,000 Hz - 1 dB
Signal to Noise Ratio	120 dB (short circuited)
Damping Factor	35
(20 to 20 kHz 8Ω)	
Input Sensitivity/Impedance	1V/40 kΩ

PREAMPLIFIER SECTION

Input Sensitivity/Impedance

Phono 1 and 2	2.5 mV/50 kΩ
AUX and Tape	150 mV/50 kΩ
Mic	2.0 mV/50 kΩ
Signal to Noise Ratio (IHF A curve)	
Phono 1 and 2	84 dB for 2.5 mV input 90 dB for 5.0 mV input
AUX and Tape	105 dB for 150 mV input
Mic	73 dB for 2.0 mV input
Maximum Input Level	250 mV (RMS), T.H.D. 0.03% at 1 kHz
Frequency Response	
Phono	RIAA standard curve ±0.2 dB
AUX and Tape	10 Hz to 100,000 Hz - 1.0 dB
Tone Control	
Bass	±12 dB at 50 Hz
Mid	±12 dB at 800 Hz
Treble	±12 dB at 15 kHz
Loudness Control (Vol. -30 dB) ..	+ 10 dB at 100 Hz
Subsonic Filter	18 Hz 6 dB/oct.
High Filter	5 kHz 6 dB/oct.
Output Level/Impedance	
Tape REC (Pin)	150 mV/300Ω
Tape REC (DIN)	30 mV/80 kΩ
PRE Out	1.0V/1 kΩ

FM TUNER SECTION

Usable Sensitivity 9.8 dBf (1.7 μV)

50 dB Quieting Sensitivity

Mono	14.1 dBf (2.8 μV)
Stereo	36.3 dBf (36 μV)
Signal to Noise Ratio at 65 dBf	
Mono	80 dB
Stereo	72 dB
	75 dB at 10 mV

Total Harmonic Distortion

Mono	0.1%
Stereo	0.15%
Frequency Response	20 Hz to 15,000 Hz + 0.2, - 2.0 dB 30 Hz to 15,000 Hz + 0.2, - 0.5 dB

Capture Ratio	1.0 dB
Image Rejection Ratio	85 dB
Spurious Response Ratio	105 dB
IF Response Ratio	90 dB
Alternate Channel Selectivity	85 dB
AM Suppression Ratio	60 dB
Stereo Separation Ratio	45 dB at 1,000 Hz 30 dB at 50 Hz to 15,000 Hz
Sub Carrier Product Ratio	67 dB
Antenna Impedance	300Ω balances and 75Ω unbalanced
FM Frequency Range	88 MHz to 108 MHz

AM TUNER SECTION

Usable Sensitivity	10 μV (250 μV/m)
Signal to Noise Ratio	50 dB
Image Rejection	50 dB
Selectivity	35 dB

GENERAL

Power Consumption	850W at full power
AC Outlet	Switched 1, Unswitched 2
Dimensions	W 21-1/32" (534 mm) [22-3/4" (578 mm)] H 6-19/32" (167.5 mm) [7-15/32" (189.5 mm)] D 18-1/16" (459 mm) [18-1/16" (459 mm)]
Weight (Net)	40.3 lb (18.3 kg) [46.3 lb (21.0 kg)]
(Gross)	47.4 lb (21.5 kg) [52.0 lb (23.6 kg)]

* Measured pursuant to Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifier in U.S.A.

Note:

Kenwood follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.



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