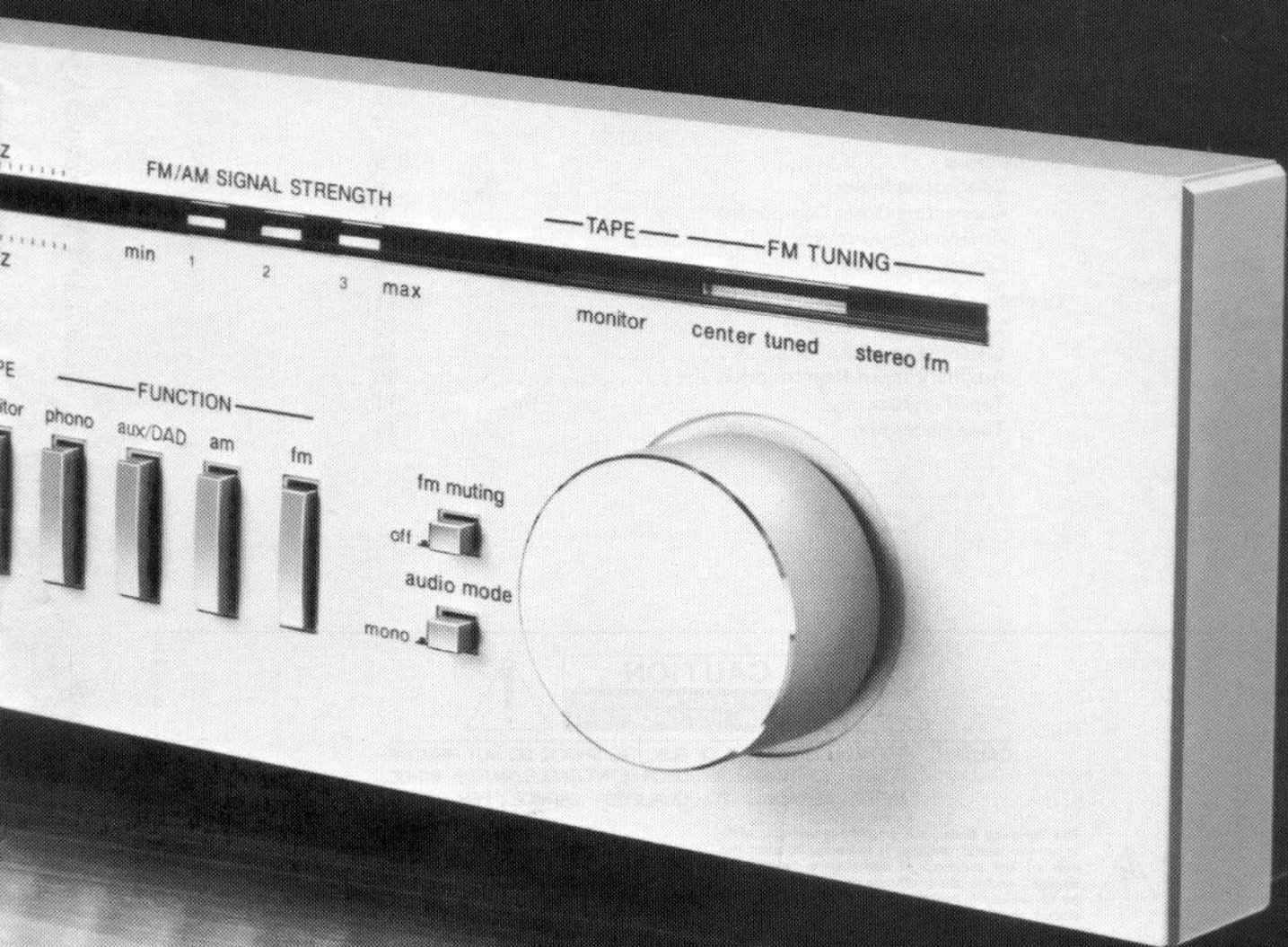


harman/kardon

ULTRAWIDEBAND
LINEAR PHASE STEREO RECEIVER

hk330i


owner's manual




Thanks and congratulation on your choice of the Harman Kardon hk330i Ultrawideband Linear Phase Stereo Receiver. In order to achieve the best performance of which this high precision unit is capable, please be sure to read this owner's manual and use your stereo receiver only in accordance with its instructions. Keep it in a safe place for further reference in case of suspected malfunction or other need.

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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.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure; that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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

Features

- **10A HCC (High Current Capability)**

For ample driving against fluctuation in dynamic impedance of speakers for clear reproduction of controlled sounds.

- **2 - System Speaker Terminals**

For connecting two speaker systems. Music can be enjoyed in two different rooms. The speaker systems can be turned on/off separately by means of push buttons so that all speakers may be used at the same time.

- **Center Tuned**

For easy and best FM tuning, equipped with the center tuned indicator.

- **Push Buttons**

For easy operation of function switches.

- **Light-Green Bright Dial Pointer**

For clear indication of tuning position.

General Instructions

Always Use at 120V AC

This unit is designed for operation with 120V AC. Use only domestic AC outlets. If connect the unit to an outlet supplying a higher voltage, it can create a fire hazard.

Handle the Power Line Cord Gently

- Do not disconnect the plug from the AC outlet by pulling the cord; always pull the plug itself. Pulling the cord may break the connection.
- If you do not intend to use your unit for any considerable length of time, disconnect the plug from the AC outlet.
- Do not place furniture or other heavy objects on the cord, and try to avoid dropping heavy objects upon it. Not only may the cord be damaged, it can also cause short circuits with a consequent fire hazard.

Do Not Open the Cabinet

To prevent shock hazard or unexpected trouble, do not tamper with internal components for inspection or maintenance. Harman Kardon does not guarantee against performance degradation resulting from any modification.

If water, a hairpin or wire accidentally enters the unit, immediately extract the plug from the AC outlet to prevent shock or trouble and consult Harman Kardon service station.

*While you are connecting your receiver to the rest of your high fidelity system, please disconnect the power line cord from the AC outlet.

Place of Installation

Place the unit on a firm and level surface.

Avoid installing your unit under the following conditions:

- ▶ Moist or humid places (bathroom or kitchen).
- ▶ Places exposed to direct sunlight or close to heating equipment.
- ▶ Extremely cold locations such as those in the direct draught from an air conditioner.
- ▶ Place subjects to excessive vibrations or dusts.
- ▶ Poorly ventilated places.

When stacking with other components, carefully plan so as not to obstruct heat radiation from this unit. Use of a Harman Kardon audio rack is recommended.

Cleaning

When the unit gets dirty, wipe it with a soft dry cloth. If heavily contaminated, wipe it with a soft cloth soaked with mild soapy water and then wipe with a dry cloth. Never use alcohol, thinner, benzene or other volatile agent since the painting may be damaged.

The hk330i is a high quality precision instrument. If the instructions in this manual are followed carefully, the receiver should provide many years of musical pleasure.

WARNING: Do not mistake the ferrite loopstick AM antenna for a handle. Its bracket cannot support the unit.

Components and Their Functions

① VOLUME CONTROL KNOB (VOLUME)

This knob controls the sound level. Turning clockwise increases the sound volume, and turning counterclockwise decreases it. Set this knob at a minimum level before turning the power on, and the sound source is changed to prevent the speakers from being damaged by a sudden booming noise.

② LOUDNESS SWITCH (loudness)

This switch functions to create natural reproduction when listening at a low volume by emphasizing the low and the high frequency ranges.

③ BALANCE CONTROL KNOB (BALANCE)

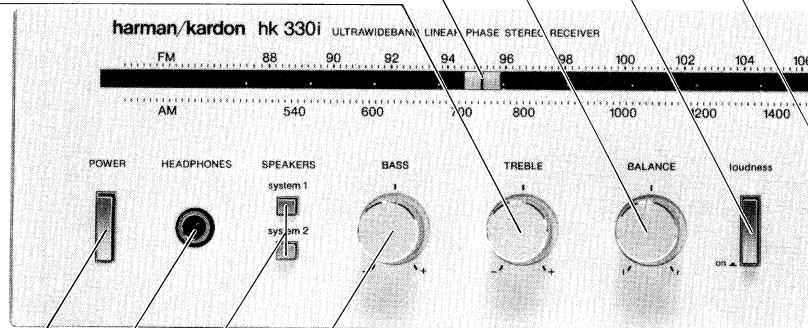
This knob is used to balance the left and the right channels. Usually, it is set at the center. Turn it to the left or right to balance the sound if it comes unbalanced from the speakers or the headphones.

④ DIAL POINTER

This dial pointer illuminates when POWER switch is turned ON.

⑤ TREBLE CONTROL KNOB (TREBLE)



This knob controls the high-pitched tone. Turn it clockwise to emphasize, or counterclockwise to attenuate the high-pitched tone.



⑥ POWER SWITCH (POWER)

When this switch is pressed after the power line cord has been plugged into an AC outlet, the FM/AM dial and the DIAL POINTER are illuminated. Press the switch again to turn the power off.

⑦ STEREO HEADPHONES JACK (HEADPHONES)

The output signal is always supplied to this jack. Sounds can be obtained only through the headphones when both SPEAKER SELECTOR SWITCHES (system 1 and 2) are pressed out to the OFF position ( OFF/  ON).

⑧ SPEAKER SELECTOR SWITCHES (SPEAKERS system 1/2)

Two speaker systems can be connected to this unit. Press down the selector switch corresponding to the speaker system which is connected to the terminals on the rear panel of the unit, if only one system is connected. If two systems are connected, press down the selector switch 1 or 2 corresponding to the system you want to listen to. To use both speaker systems, press down both switches. Press down the switches once again if the use of the speaker systems is not desired.

⑨ BASS CONTROL KNOB (BASS)

This knob controls the low-pitched tone. Turn it clockwise to emphasize or counterclockwise to attenuate the low-pitched tone.

10 SIGNAL INDICATOR (FM/AM SIGNAL STRENGTH)
The receiving signal levels are indicated by 3 LEDs. The better the selected station is tuned in, the more LEDs light up. Adjust with the TUNING knob.



11 TAPE MONITOR INDICATOR (monitor)
This indicator illuminates when the TAPE MONITOR switch is pressed to monitor the tape sound.

12 CENTER TUNED INDICATOR (center tuned)
A green light is turned on when an FM station is correctly tuned in. It may not light up when a weak station is tuned in.

13 FM STEREO INDICATOR (stereo fm)
This indicator is illuminated when the FM stereo broadcasting station is tuned in.

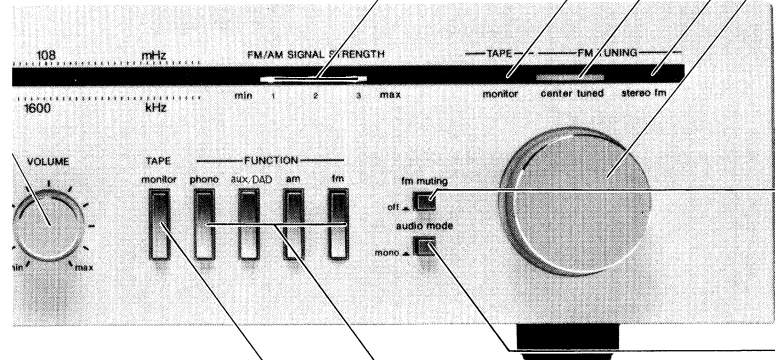
14 TUNING KNOB
This knob is used to search for a broadcasting station. Turn the knob, looking at the SIGNAL INDICATOR to tune in to the desired station.

15 MUTING SWITCH (fm muting)
This switch functions to eliminate irritating interstation noises when the FM reception is being scanned for a station. To tune in to a weak station, press this switch down to invalidate the muting function.

16 AUDIO MODE SELECTOR (audio mode)
This selector is used for the composition of sounds. Usually it is set at the stereo position ( stereo /  mono), but when it is set at "mono", sounds from the two channels are combined into a monaural reproduction. If the FM stereo broadcasting station you are listening to is weak and there is a lot of noise, set this switch at "mono". The sound becomes monaural, but the noise is reduced for more comfortable listening.

17 FUNCTION SELECTORS (FUNCTION)
PHONO switch (phono):
Press this switch to listen to a disc played on the turntable.
AUX/DAD switch (aux/DAD):
Press this switch to listen to the program source connected to the AUX/DAD INPUT terminals.
AM switch (am):
Press this switch to listen to an AM broadcasting program.
FM switch (fm):
Press this switch to listen to an FM broadcasting program.

18 TAPE MONITOR SWITCH (TAPE monitor)
This switch is used for reproducing sounds with a tape or monitoring the sound during recording. The TAPE MONITOR INDICATOR lights up red when the switch is pressed down, indicating for reproduction by tape or monitoring the sound during recording.



Components and Their Functions (Rear Panel)

19 FM ANTENNA TERMINALS
(FM 300Ω BAL) (FM 75Ω UNBAL)
These terminals are connected with feeders from the FM antenna (a 300Ω parallel feeder cable, a 75Ω coaxial cable or the accessory feeder antenna).

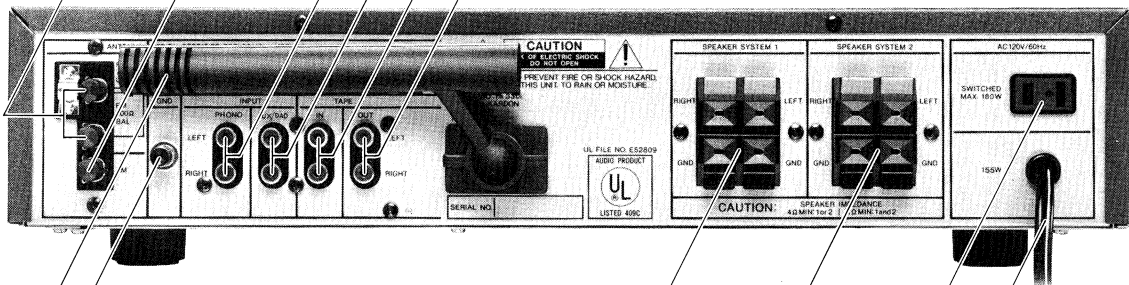
20 AM ANTENNA TERMINAL (AM)
In a fringe reception area or inside a concrete building where the AM broadcasting signals are too weak for good reception, erect an AM outdoor antenna and connect this terminal to it.

21 PHONO INPUT TERMINALS (PHONO INPUT)
Connect these terminals with the output cords of the turntable (Use MM-type cartridges).

22 AUX/DAD INPUT TERMINALS (AUX/DAD INPUT)
Use these terminals when another program source (such as a television tuner or compact disc player) is desired.

23 TAPE INPUT TERMINALS (TAPE IN)
Connect these terminals with the output terminals of the tape deck.

24 TAPE OUTPUT TERMINALS (TAPE OUT)
Connect these terminals with the input terminals of tape deck.



25 GROUND TERMINAL (GND)
Connect this terminal to the ground wire of the turntable.

26 AM FERRITE LOOPSTIC ANTENNA
This antenna is used for AM reception. This high-sensitivity ferrite loopstic antenna requires no AM outdoor antenna except in a fringe reception area where signals are weak. Adjust the antenna back and forth and set it at the optimum reception.

28 POWER LINE CORD
Connect this cord to the AC outlet.

29 AC CONVENIENCE OUTLET (SWITCHED)
This outlet can be used for the turntable, tape deck or other components. The component plugged in this outlet is turned ON and OFF when this unit is turned ON and OFF. The maximum allowable power is 180W.

27 SPEAKER SYSTEM 1 CONNECTOR TERMINALS (SPEAKER SYSTEM 1)
Connect these terminals to the speaker cords. Make certain that the left and the right channels are connected properly, and that the speaker polarities are not reversed.

30 SPEAKER SYSTEM 2 CONNECTOR TERMINALS (SPEAKER SYSTEM 2)
These terminals are for the 2nd speaker system. Connect them in the same manner as speaker system 1.

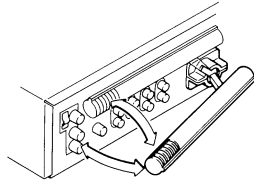
Antenna Instructions

AM Antenna

This unit is equipped with a high-sensitivity ferrite loopstic antenna. It requires no additional outdoor antenna for AM reception except in a fringe reception area where signals are weak.

● Ferrite Loopstic Antenna

Pull this ferrite loopstic antenna away from the rear panel. Adjust it by changing its direction within the range shown in the figure to create the optimum reception.



- If the ferrite loopstic antenna is touching the rear panel, or is too close to it, unpleasant noise may be generated. Keep the antenna further away from the rear panel.
- Noise may be generated if the power cord or the speaker cords are placed near the ferrite loopstic antenna.

● AM Outdoor Antenna

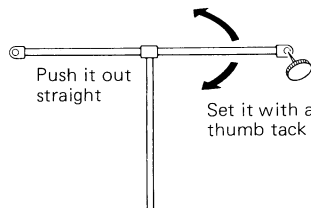
Erect this antenna in a fringe area or inside a concrete building where the reception is weak and the sound is unpleasant to the ear. (Refer to the picture for the connection.)

FM Antenna

Choose an appropriate antenna for your area and receiving conditions for the reproduction of excellent sound of FM broadcasting.

● Accessory Feeder Antenna

This accessory feeder antenna is sufficient in an area with good field reception. Connect the antenna with FM antenna terminal (300Ω BAL). Stretch both ends fully to the sides. Adjust their position by moving them up and down and set them where the reception is optimum with thumb tacks.



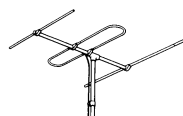
● FM Outdoor Antenna

In an area near the broadcasting station where the field intensity is sufficiently high or in a suburban area characterized with less noise, the accessory feeder antenna is often sufficient. However, it is suggested to erect an outdoor antenna exclusively for FM reception in order to allow this unit to perform to its fullest. If there is not enough room for erecting an outdoor antenna, use a smaller type, which can be set on the veranda or hung from the ceiling.

Selecting FM outdoor antenna

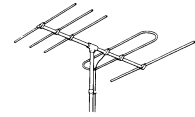
Where the wave is strong (near the broadcasting station where the transmitting antenna is visible).

- ▶ Erect an antenna with 3 to 5 elements.



Where the wave is weak (behind a mountain or in-between large buildings).

- ▶ Erect an antenna with 5 elements or more.



Consult your dealer for selecting an antenna with appropriate number of elements.

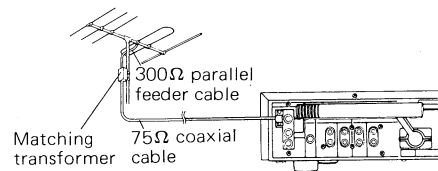
● Feeders

The connecting wire between the feeding point of the antenna input terminal is called a feeder. Most feeders are 300Ω parallel or 75Ω coaxial cables. The coaxial cable has a larger amount of loss, but it has a stronger resistance against peripheral hindrances, and lasts longer. We recommend 3C-2V or 5C-2V coaxial cables to be used for this unit to allow it to perform to its fullest capacity.

● Impedance Matching

If a 75Ω coaxial cable is to be used, it is necessary to match the impedance by installing a matching transformer between the outdoor antenna and the FM antenna terminal (75Ω UNBAL) of the unit. Connect the outdoor antenna and the matching transformer with a 300Ω parallel feeder cable, and connect the matching transformer and the FM antenna terminal on the rear panel of this unit with a 75Ω coaxial cable. Install the matching transformer as close to the outdoor antenna as possible.

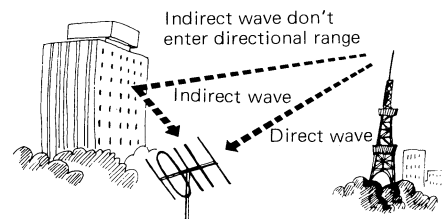
- ▶ An outdoor antenna with five elements or more usually contains a matching transformer so that 75Ω cable can be directly connected.



● Locations for FM Outdoor Antenna Installation

The following is suggested for selecting installation sites.

- 1 A place which allows direct FM reception, without hindrance by buildings.



- ▶ This is to prevent multipath hindrance by indirect waves interfering with the direct wave.
- 2 A place as much away as possible to prevent sensing automobile ignition noises.
- 3 A place at least 2m away from a metal roof, a concrete building or other antenna.
- 4 Normally the antenna should be erected at least 4m above the ground except in a high-altitude or other special areas.

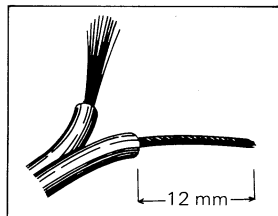
Connections

Connecting Speakers

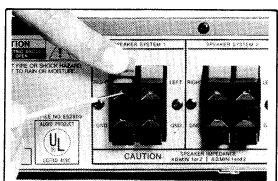
Connect the speaker cords carefully so as not to mistake the left and the right channels and reverse the speaker polarities (+ and -).

1. Use sufficiently thick cords (for example, 30-strand cords) with low electric resistance. It is recommended to use color-coded cords for easy discrimination of polarities. Speaker cords should be as short as possible, and the left and the right channel cords should have the same length.

2. Connection is carried out by inserting the wires. Remove about half an inch (12 mm) of insulation from the end of each cord, and twist the strands of each conductor.



3. Push the plastic head of the connector, and insert the bare end of the cord into the center opening. When the head is released, the end of the cord is automatically held in place.



Caution: Two speaker systems can be connected to this unit. The minimum speaker impedance should be 4Ω when only one speaker system is connected, and 8Ω when two speaker systems are connected.

Connecting Other Component

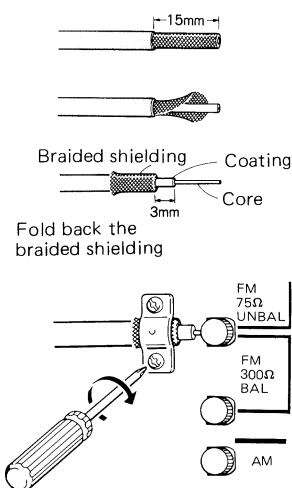
- Make certain that the POWER LINE CORD is unplugged from the AC outlet when other component is to be connected with it. Unplug or turn off other component which is already connected with the unit when another piece is to be connected.
- Connect the left and the right channels properly without reversing polarities.
- Push the plugs in all the way. Unfirm seating of the plugs tend to cause noises or discontinuous sounds.

Caution: The capacity of AC convenience outlet at the rear panel is 180W. It is very dangerous to connect component with a capacity for more. Read manual or labels on the component to check its watt consumption before connecting it to this unit.

Antenna Connections

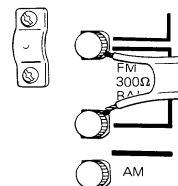
● Connecting a 75Ω Coaxial Cable

1. Remove the insulation from the cable about half an inch (15 mm), and fold the braided shielding back.
2. Remove the coating of the core leaving about 1/8 inches (3 mm) from the insulation, exposing the core.
3. Loosen the clamp located leftside the FM antenna terminal, and insert the cable. Insert the core into the antenna terminal, and screw it in. Retighten the screw of the clamp.



● Connecting a 300Ω Parallel Feeder

1. Remove about half an inch (12 mm) of insulation from each end of the feeder, and twist the strands of each conductor.
2. Insert the strands around the FM antenna terminals and tighten the screws.



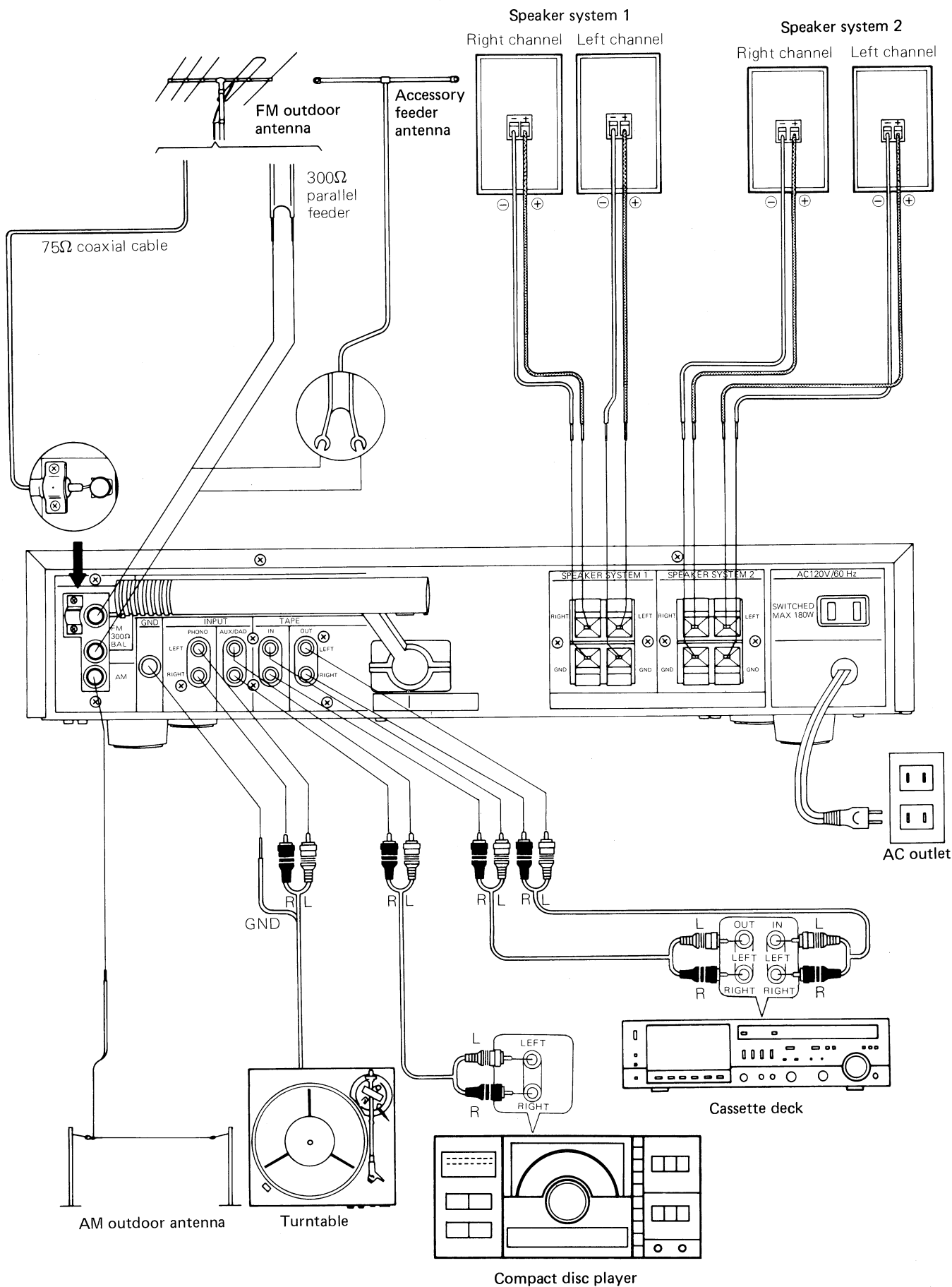
● Connecting a Feeder Antenna

Insert the cord of the feeder antenna around the FM antenna terminal and screw it in.

● Connecting an AM Outdoor Antenna

Insert the feeder of the AM antenna around the AM antenna terminal and screw it in.

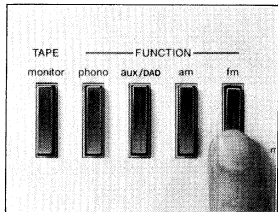
Connections



Operation Procedures

Listening to Broadcasts

1. Turn the VOLUME CONTROL knob to the minimum level and press the POWER switch. The tuning dial and the DIAL POINTER are illuminated.
2. Press the SPEAKER SELECTOR switch for the speakers to be sounded.
3. Press the FM switch of FUNCTION selector for FM reception or AM switch of FUNCTION selector for AM reception.



4. Turn the TUNING knob to search for the desired station. Adjust so that as many SIGNAL INDICATOR LEDs are lighted as possible. The CENTER TUNED INDICATOR lights up when an FM station is properly tuned in. If an FM stereo broadcast is received, the FM STEREO INDICATOR is automatically lighted.
5. Interstation noise during the selection of FM broadcasting stations can be eliminated by pressing up the MUTING switch to its ON position (switch button out). However in an area where the field reception is not sufficient, the muting circuit may eliminate broadcasting sounds as well. Press down the MUTING switch to its OFF position (switch button in) in this case.
6. Advance the VOLUME CONTROL knob clockwise to a comfortable level when the desired station is properly tuned in.
7. Place the AUDIO MODE selector to the MONO or STEREO position according to the broadcasting program.
8. Adjust the BASS, TREBLE and BALANCE CONTROL knobs to obtain the desired tone.

● Listening to a Distant FM Broadcast

In normal FM reception, weak FM signals are eliminated with noise by the FM muting function. To listen to such an FM program, operate as follows;

1. Turn the VOLUME CONTROL knob to the minimum level and press the POWER switch.
2. Press the FM switch of the FUNCTION selector.
3. Press the AUDIO MODE selector at MONO position.
4. Place the MUTING switch to the OFF position.
5. Turn the TUNING knob to search for the desired FM station.

Listening to a Disc

1. Turn the VOLUME CONTROL knob to the minimum level and press the POWER switch.
2. Press the PHONO switch of the FUNCTION selector.
3. Press the SPEAKER SELECTOR switch for the speakers to be sounded.
4. Place the AUDIO MODE selector to the MONO or STEREO position according to the type of the disc to be played.
5. Activate your turntable and place the stylus on the disc.
6. Turn the VOLUME CONTROL knob clockwise to increase the sound volume to the desired level.
7. Adjust the BASS, TREBLE and BALANCE CONTROL knobs to obtain the desired tone.

- If you hear a hum at average listening levels, turn the POWER switch off and check to see that the phono and the ground connections are secure. It sometimes occurs, depending on the cartridge type used, less humming is created without the ground connection.
- If you hear a howling sound, this is usually created by the air or floor vibrations from the speakers conveyed to the turntable. Remove the speakers from the turntable further away or place the turntable on a more solid location.
- A worn-out needle may damage discs or distort sounds. Replace your needle in time.

Auxiliary Input Reproduction

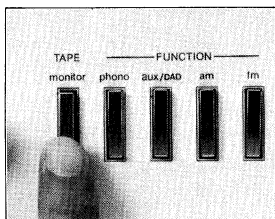
Reproducing sounds of TV Tuner, Compact Disc Player or other Auxiliary component.

1. Turn the VOLUME CONTROL knob to the minimum level and press the POWER switch.
2. Press the AUX/DAD switch of the FUNCTION selector.
3. Press the SPEAKER SELECTOR switch for the speakers to be sounded.
4. Place the AUDIO MODE selector at its MONO or STEREO position according to the source program.
5. Turn on and adjust the component connected to the AUX/DAD INPUT terminals.
6. Turn the VOLUME CONTROL knob clockwise to increase the sound volume to the desired level.
7. Adjust the BASS, TREBLE and BALANCE CONTROL knobs to obtain the desired tone.

Operation Procedures

Tape Playback

1. Turn the VOLUME CONTROL knob to the minimum level and press the POWER switch.
2. Press the TAPE MONITOR switch and confirm that the TAPE MONITOR INDICATOR lights up.



3. Press the SPEAKER SELECTOR switch for the speakers to be sounded.
4. Place the AUDIO MODE selector at its MONO or STEREO position according to the type of the tape to be played back.
5. Mount a recorded tape on the tape deck and set the tape deck to the playback mode.
6. Turn the VOLUME CONTROL knob clockwise to increase the sound volume to the desired level.
7. Adjust the BASS, TREBLE and BALANCE CONTROL knobs to obtain the desired tone.

Tape Recording

Recording from a music source (turntable, FM/AM broadcasting or a component connected to AUX/DAD INPUT terminals) to a tape deck is possible.

1. Turn the VOLUME CONTROL knob to the minimum level and press the POWER switch.
 2. Select the desired program source with the FUNCTION selector.
 3. Press the SPEAKER SELECTOR switch for the speakers to be sounded.
 4. Place the AUDIO MODE selector at its MONO or STEREO position according to the source program.
 5. Start the recording. To enjoy the source sound during recording, adjust the BASS, TREBLE and BALANCE CONTROL knobs as desired. These adjustments do not affect the recording sound.
 6. Press the TAPE MONITOR switch if monitoring of the sound being recorded is desired. The TAPE MONITOR indicator should light up indicating the monitoring condition.
- The sound quality deteriorates when the tape deck head is dirty. Clean the head periodically.
 - The tape deck head may become magnetized over a long period of time, increasing noise or deteriorating the sound quality. Demagnetize the head periodically.
 - Recording into the tape deck is carried out directly from the program source without being influenced by the volume, balance and tone controls of this unit.