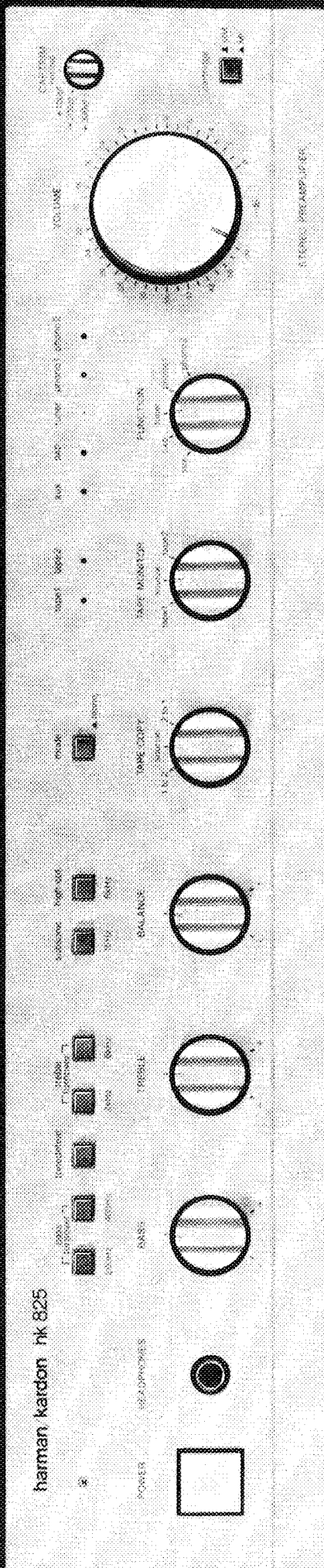


harman/kardon
STEREO PREAMPLIFIER

HK825

owner's manual



Congratulations on your choice of the Harman
Kardon hk825 Stereo Preamplifier.

In order to achieve the best performance from
this unit, please be sure to read this owner's manual
and use your preamplifier only in accordance with
its instructions. Keep it in safe place for future
reference.



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

■ Ultrawide Bandwidth

The bandwidth of this unit is exceptionally wide and independent of negative feedback. This improves transient accuracy and phase linearity.

■ Low Negative Feedback

This unit has been designed to have low distortion and wide bandwidth without high negative feedback. This further improves its dynamic accuracy.

■ Dual RIAA Phono Equalization

The phono section employs Harman Kardon's unique dual RIAA equalization circuitry. RIAA equalization is used in both the open-loop and closed-loop signal path (with and without negative feedback). This permits the application of constant low-level negative feedback throughout the audio range.

■ Discrete Component Circuitry

In order to achieve the above goals, all discrete electronic circuitry has been employed. All available integrated circuits could not provide this high level of performance.

■ Moving Coil Cartridge Amplifier

A high sensitivity, low noise amplifier is provided. This permits the direct input of most moving coil cartridges.

■ Capacitance Trim Selector

This feature enables precise impedance matching between moving magnet type cartridges and the phono circuitry. The widest, flattest frequency response possible can be obtained from any high quality phono cartridge.

■ Switchable Bass and Treble Turnover points

Switchable turnover points vary the effects of the bass and treble controls over the upper bass, midrange and lower treble frequencies.

SPECIFICATIONS

Input Sensitivity/Impedance

Phono (MM)	: 2.2mV/47k ohms and 130pF
Phono (MC)	: 130 μ V/100 ohms
Aux, Tuner, DAD	: 130mV/22k ohms
Tape (Play)	: 130mV/22k ohms

Signal-to-Noise Ratio (A-WTD)

Phono (MM)	: 83dB
Phono (MC)	: 80dB
Tuner, Aux, DAD,	: 92dB
Tape	

Output Level

Rated	: 1V
Maximum	: 10V

Filters

Subsonic	: 15Hz (6dB/Octave)
High Cut	: 6kHz (6dB/Octave)

Input Terminals

: Phono-1 (MM, MC),
Phono-2 (MM, MC),
Tuner, DAD, Aux,
Tape-1 (Play), Tape-2 (Play)

Output Terminals

: Tape-1 (Rec), Tape-2 (Rec),
Output (2 pairs),
Headphones

Turnover Frequency

Bass	: 200Hz/400Hz
Treble	: 2kHz/6kHz

Power Supply

: AC 120V, 60Hz

Power Consumption

: 45W

Dimensions (W x H x D)

: 17-7/16" x 4-1/16" x 13-13/16"

(with legs, knobs, terminals) (443 x 103 x 351mm)

Weight

: 12lbs.13oz. (5.8kg)

GENERAL INSTRUCTIONS

Always Use 120V AC

This unit is designed for operation with 120V AC. Use only domestic AC outlets. Never connect the unit to an outlet supplying a higher voltage. This may create a fire hazard.

Handle the Power Cord Gently

- Do not disconnect the plug from the AC outlet by pulling the cord; always pull the plug itself. Pulling the cord may damage it.
- 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. Also do not make a knot in the power cord. Not only may the cord be damaged, it can also cause a short circuit with a consequent fire hazard.

Place of Installation

Place the unit on a firm and level surface. Avoid installing your unit under the following conditions:

- ▶ Moist or humid places.
- ▶ Places exposed to direct sunlight or close to heating equipment.
- ▶ Extremely cold locations.
- ▶ Places subject to excessive vibration or dust.
- ▶ Poorly ventilated places.

Do not obstruct the ventilation slots on the top surface of the unit by placing objects over them. Otherwise, the temperature inside the unit may rise, possibly affecting its long term reliability.

Do Not Open the Cabinet

To prevent shock hazard, 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 and consult an authorized Harman Kardon service station. If you use the unit under this condition, it may cause a fire or shock hazard.

Moving the Unit

Before moving the unit, be sure to pull out the power cord from the AC outlet and disconnect the interconnection wires with other units.

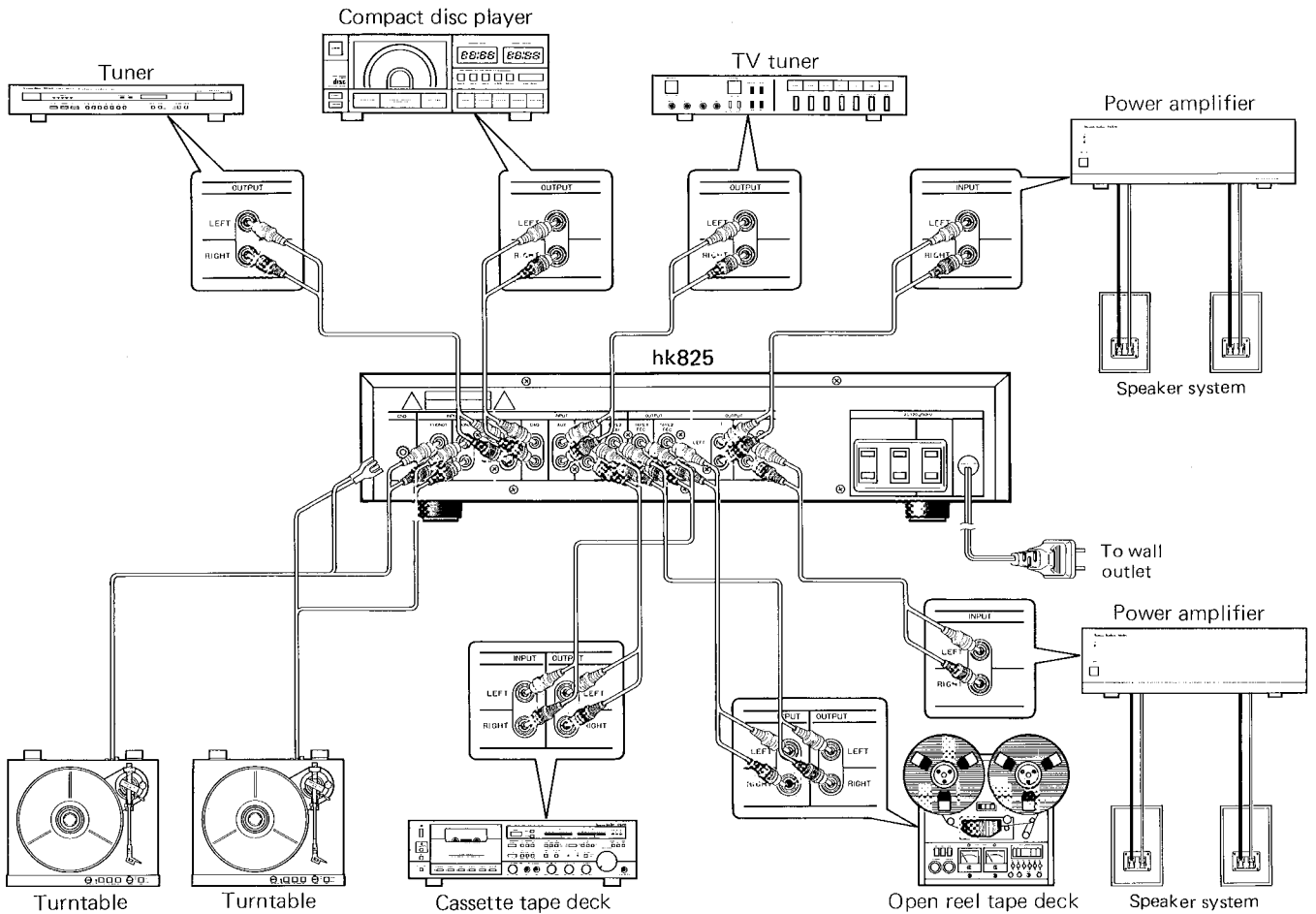
Cleaning

When the unit gets dirty, wipe it with a soft dry cloth. If necessary, wipe it with a soft cloth dampened with mild soapy water and then with a dry cloth.

Never use benzene, thinner, alcohol or other volatile agent, or avoid spraying an insecticide near the unit.

Hexagon Headed Wrench Attached to This Unit

When such knobs as BASS, TREBLE, BALANCE, TAPE COPY, TAPE MONITOR or FUNCTION on the front panel are loosened, retighten them using hexagon headed wrench attached to this unit after inserting it into the holes on the bottom panel just under them.



To make the most of the hk825's sophisticated phono section, the PHONO input terminals are gold-plated. It is recommended that high quality phono cables be used since their quality may have a large affect on the sound quality.

Carefully connect the plugs to each left and right channel terminals. Push the plugs in all the way. Poorly seated plugs tends to cause hum, noise or intermittent contact that can damage the speakers.

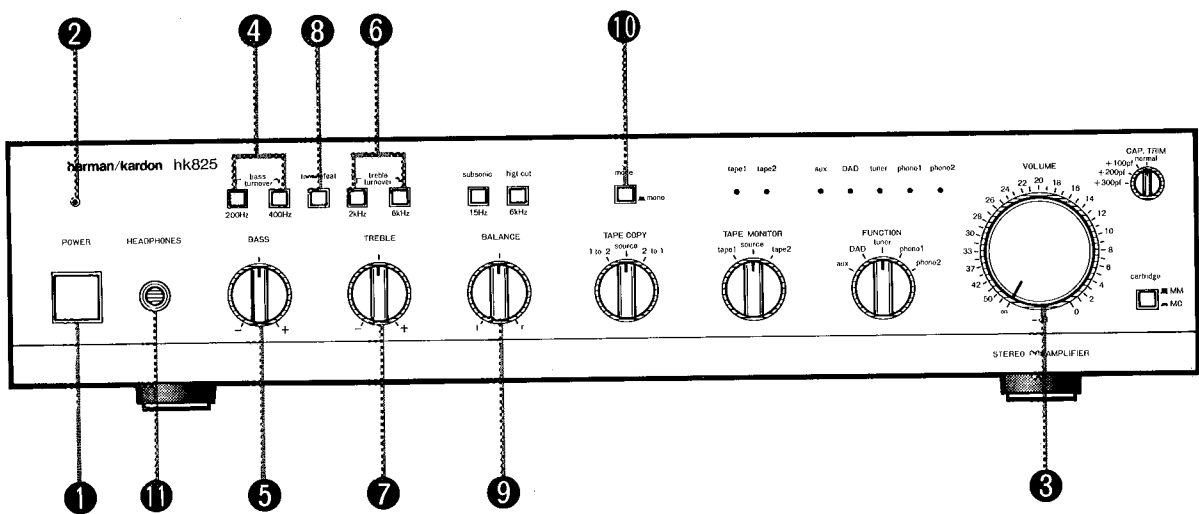
NOTE: While you are connecting this unit to the rest of your high fidelity system, please unplug the power cord, disconnecting not only this unit but all the components, from the AC outlet.

Do not interwind the connection wires with the power cord. If interwound, it may degrade the sound quality.

The AC convenience outlets on the rear panel have a total capacity of 200 watts and can be used for tuners, turntables or tape decks. It is very dangerous to connect a component with a capacity for more than 200 watts. Read the manual or labels on the component to check its power consumption before connecting it to this unit.

SWITCHED: The power to this outlet is turned ON and OFF by this unit's power switch.

UNSWITCHED: The power to this outlet is independent of this unit's power switch.



1 POWER SWITCH (POWER)

When this switch is depressed, the POWER indicator blinks for about eight seconds. During this period, the output is muted, providing protection from turn-on transients. The POWER indicator stops blinking and lights up when the circuit has stabilized. Press the switch again to turn the power off.

NOTE: When the power is turned on, the FUNCTION indicator corresponding to the position of the FUNCTION selector will also blink for about eight seconds due to the muting circuit. When a selection between PHONO 1 and PHONO 2 or between MM and MC, the corresponding FUNCTION indicator as well as the POWER indicator will blink for about two seconds.

2 POWER INDICATOR

When the POWER switch is pressed, the POWER indicator blinks for about eight seconds until the circuit is stabilized, which indicates that the protection circuit is functioning. When the circuit stabilizes, the POWER indicator lights up in red to indicate that the unit has stabilized. While this indicator is blinking, the preamplifier output is muted.

3 VOLUME CONTROL KNOB (VOLUME)

This knob controls the output level. Turning clockwise increases the volume, and turning counterclockwise decreases it. Set this knob at a minimum level before turning the power on or changing the source to protect the speakers from a sudden change in level.

4 BASS TURNOVER SELECTOR (bass turnover)

These switches are used to select the bass turnover frequency. After pressing either the 200Hz or 400Hz switch, the low frequency sound below the selected frequency is controlled by the BASS control knob.

If these switches are both in the button out position, 400Hz switch is activated prior to 200Hz switch.

5 BASS CONTROL KNOB (BASS)

This knob controls the low frequency sound level. Turn it clockwise to boost or counterclockwise to reduce the low frequency sound level.

6 TREBLE TURNOVER SELECTOR (treble turnover)

These switches are used to select the treble turnover frequency. After pressing either the 2kHz or 6kHz switch, the high frequency sound above the selected frequency is controlled by the TREBLE control knob. If these switches are both in the button out position, 2kHz switch is activated prior to 6kHz switch.

7 TREBLE CONTROL KNOB (TREBLE)

This knob controls the high frequency sound level. Turn it clockwise to boost or counterclockwise to reduce the high frequency sound level.

8 TONE DEFEAT SWITCH (tone defeat)

This switch is used to make the frequency characteristic flat. By internally bypassing the tone control circuitry. Set this switch to the OFF position (button out) when you want to use the tone control knobs.

9 BALANCE CONTROL KNOB (BALANCE)

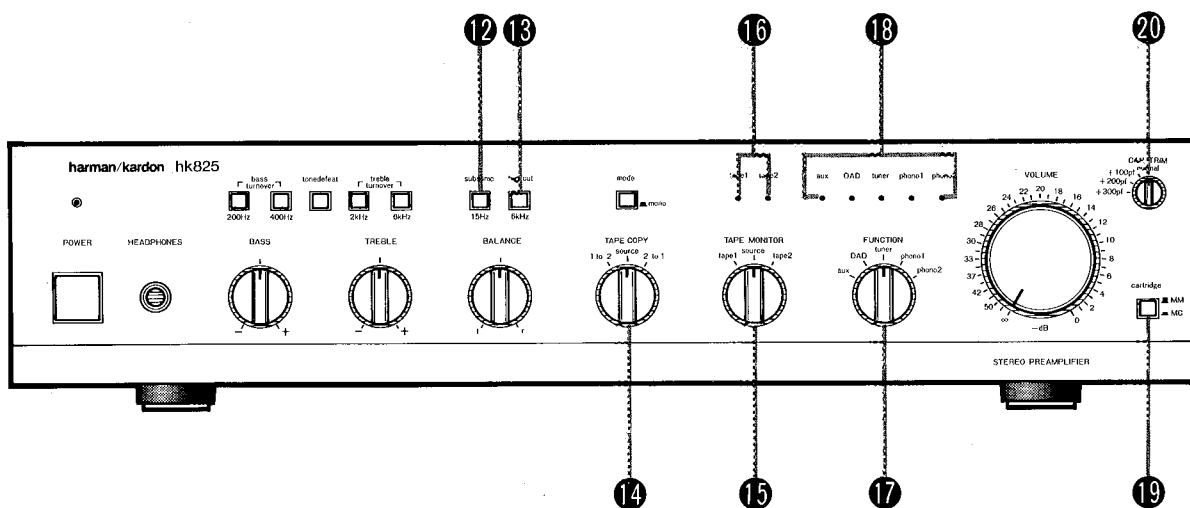
This knob is used to balance the left and the right channels. Usually, it is set at the center. Turn it to the left or right to balance the sound if it seems unbalanced from the speakers or the headphones.

10 MODE SELECTOR (mode)

This switch is used to combine the left and right channels and create a mono signal.

11 HEADPHONE JACK (HEADPHONES)

The output signal is always supplied to this jack. When listening only through headphones, the power amplifier may be turned off. The headphone level can then be adjusted by the VOLUME control knob.



12 SUBSONIC FILTER SWITCH (subsonic)

When playing the turntable, this filter switch can be depressed to cut off super-low frequencies.

13 HIGH CUT FILTER SWITCH (high cut)

This switch is pressed to cut off high frequency noise such as disc scratches or tape hiss.

14 TAPE COPY SELECTOR (TAPE COPY)

This selector is used for dubbing between two tape decks or when recording from another input.

1 to 2 : Select this position to duplicate the tape in the deck connected to the TAPE 1 terminals onto the tape in the deck connected to the TAPE 2 terminals.

source : Select this position to record the program source selected by the FUNCTION selector in either or both of the two tape decks connected to the TAPE 1 and TAPE 2 terminals.

2 to 1 : Select this position to duplicate the tape in the deck connected to the TAPE 2 terminals onto the tape in the deck connected to the TAPE 1 terminals on the rear panel.

15 TAPE MONITOR SELECTOR (TAPE MONITOR)

This selector is used when listening to a tape or monitoring the sound during recording. The TAPE MONITOR indicator (TAPE 1 or TAPE 2) lights up in red corresponding to the selector position.

tape 1 : Select this position to play a tape or to monitor the sound during recording on the tape deck connected to the TAPE 1 terminals.

source : Select this position to listen to a program source other than a tape.

tape 2 : Select this position to play a tape or to monitor the sound during recording on the tape deck connected to the TAPE 2 terminals.

16 TAPE MONITOR INDICATORS (tape 1, tape 2)

These indicators illuminate when the TAPE MONITOR selector is switched to TAPE 1 or TAPE 2.

17 FUNCTION SELECTOR (FUNCTION)

This switch is used to select a program source other than a tape:

aux : Select this position to listen to the component connected to the AUX input terminals.

DAD : Select this position to listen to the compact disc player connected to the DAD input terminals.

tuner : Select this position to listen to an FM or AM broadcast.

phono 1 : Select this position to use the turntable connected to the PHONO 1 input terminals.

phono 2 : Select this position to use the turntable connected to the PHONO 2 input terminals.

18 FUNCTION INDICATORS

(aux, DAD, tuner, phono 1, phono 2)

The function indicators illuminate according to the position of the FUNCTION selector switch.

19 CARTRIDGE SELECTOR (cartridge)

This feature matches the gain and input impedance to the type of cartridge used. Set it in the MM position when an MM (moving magnet) cartridge is used and in the MC position for an MC (moving coil) cartridge.

20 CAPACITANCE TRIM SELECTOR (CAP. TRIM)

This switch is used to select the optimum load capacitance for the MM cartridge used in the turntable connected to the PHONO input terminals.

Listening to a Disc

1. Turn the VOLUME control knob to the minimum level and press the POWER switch.
2. Set the FUNCTION selector to the PHONO 1 position when the turntable connected to the PHONO 1 input terminals is to be used and to the PHONO 2 position for the turntable connected to the PHONO 2 input terminals. The corresponding PHONO 1 or PHONO 2 FUNCTION indicator will light up.
3. Set the CARTRIDGE selector in the MM or MC position, depending upon the type of cartridge used. The MM position is for MM (moving magnet) cartridges and the MC position is for MC (moving coil) cartridge.
4. When you use an MM cartridge, set the CAPACITANCE TRIM selector to its optimum load capacitance. (See the next section for details.)
5. Set the TAPE MONITOR selector to the SOURCE position.
6. Activate your turntable and place the stylus on the disc.
7. Turn the VOLUME control knob clockwise to increase the volume to the desired level.
8. If the disc has a large warp, press the SUBSONIC filter switch.
9. Adjust the BASS and TREBLE control knob to obtain the desired tonal balance.
10. Activate the TONE DEFEAT, tone TURNOVER, HIGH CUT filter switch or MODE selector as desired.

Adjusting the Capacitance Trim

Select the optimum load capacitance for your MM cartridge by referring to the table below:

Cartridge manufacturer's recommended load capacitance	Capacitance trim selector position
200pF or less	normal
200 – 300pF	+100pf
300 – 400pF	+200pf
400pF or more	+300pf

Most cartridge manufacturers list the recommended load capacitance in their specifications.

NOTE: Be sure to turn the VOLUME control knob to the minimum level when changing the FUNCTION selectors to PHONO 1 or PHONO 2 or setting the CARTRIDGE selector.

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 that, depending on the cartridge used, less hum is created without the ground wire connected.

When only one turntable is used, be sure to insert the attached short-pin plug into the PHONO input terminals that are not being used.

Listening to Broadcasts

1. Turn the VOLUME control knob to the minimum level and press the POWER switch.
2. Set the FUNCTION selector to the TUNER position and confirm that the TUNER FUNCTION indicator lights up.
3. Set the TAPE MONITOR selector to the SOURCE position.
4. Turn on the tuner and tune to a broadcast frequency.
5. Set the MODE selector in the STEREO or MONO position according to the broadcast reception.
6. When the desired station is selected, advance the VOLUME control knob to a comfortable level and adjust the BASS and TREBLE control knobs as desired.

Listening to DAD and AUX Components

When using a compact disc player connected to the DAD input terminals, or a TV tuner or other auxiliary component connected to the AUX input terminals:

1. Turn the VOLUME control knob to the minimum level and press the POWER switch.
2. Set the FUNCTION selector to the DAD or AUX position and confirm that the proper FUNCTION indicator lights up.
3. Set the TAPE MONITOR selector to the SOURCE position.
4. Turn on the component connected to the DAD or AUX input terminals and set it in the play mode.
5. Advance the VOLUME control knob to a comfortable level and adjust the BASS and TREBLE control knobs as desired.

Tape Recording

Recording from a program source (disc, FM/AM broadcast, or component connected to DAD or AUX) to either or both tape decks connected to the TAPE 1 and TAPE 2 terminals:

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. The FUNCTION indicator lights up to indicate the program source selected.
3. Set the TAPE COPY selector to the SOURCE position.
4. Set the MODE selector to the MONO or STEREO position according to the program source.
5. Start recording by activating the tape deck(s) connected to the TAPE 1 and/or TAPE 2 terminals.
6. To monitor the sound being recorded, set the TAPE MONITOR selector to the TAPE 1 or TAPE 2 position, depending upon which tape deck is to be monitored. The corresponding TAPE 1 or TAPE 2 TAPE MONITOR indicator lights up, indicating the monitoring state.

NOTE: Recording into the tape deck is carried out directly from the program source without being influenced by the VOLUME, BALANCE, BASS and TREBLE controls or MODE switch of this unit.

Tape Dubbing

Two tape decks can be connected to this unit and dubbing can be done from either tape deck to the other.

Dubbing from tape deck 1 to tape deck 2

1. Turn the VOLUME control knob to the minimum level and press the POWER switch.
2. Set the TAPE COPY selector to the 1 TO 2 position.
3. Dubbing will begin by setting the tape deck connected to the TAPE 1 terminals to playback and the tape deck connected to the TAPE 2 terminals to record.
4. To monitor the sound being played, set the TAPE MONITOR selector to the TAPE 1 position. To monitor the sound being recorded, set the TAPE MONITOR selector to the TAPE 2 position.

Dubbing from tape deck 2 to tape deck 1

1. Set the TAPE COPY selector to the 2 TO 1 position.
2. Dubbing will begin by setting the tape deck connected to the TAPE 2 terminals to playback and the tape deck connected to TAPE 1 terminals to record.

Another program source (phono, tuner, aux., DAD) can be listened to during dubbing, with no effect on the dubbing quality.

1. Set the TAPE MONITOR selector to the SOURCE position.
2. Select the desired program source with the FUNCTION selector.

Tape Playback

Listening to a tape.

1. Turn the VOLUME control knob to the minimum level and press the POWER switch.
2. Set the TAPE MONITOR selector switch to the position (TAPE 1 or TAPE 2) corresponding to the tape deck to be played. Confirm that the proper TAPE MONITOR indicator lights up.
3. Insert a recorded tape in the tape deck and set the tape deck in the playback mode.
4. Advance the VOLUME control knob to a comfortable level and adjust the BASS and TREBLE control knobs as desired.

Most of the problems customers have with their high fidelity system are due to incorrect operation of the components. If this unit does not operate as you intended, first check the items in the checklist. Also check other

related components such as the tuner, amplifier, speaker systems and other electrical equipment you use with this preamplifier.

Problem	Cause	Remedy
The POWER indicator does not light up and no sound is heard by pressing the POWER switch.	<ul style="list-style-type: none"> ●The power cord is not plugged in. ●The protection circuit is being activated and the POWER indicator is blinking. 	<ul style="list-style-type: none"> ●Plug in the power cord securely. ●Wait for about eight seconds until the circuit has stabilized.
The POWER indicator lights up, but no sound is heard.	<ul style="list-style-type: none"> ●The speaker wires are disconnected or breaking. ●The TAPE MONITOR selector is set to the TAPE 1 or TAPE 2 position. ●The FUNCTION selection was not made properly. 	<ul style="list-style-type: none"> ●Check the speaker wires and connect them correctly. ●Set the TAPE MONITOR selector to the SOURCE position. ●Set the FUNCTION selector to the proper position for the desired program source.
One channel has no sound.	<ul style="list-style-type: none"> ●The connection of speaker wires is incorrect or incomplete. ●The connection wires to other equipment are disconnected or damaged. ●The BALANCE control knob is turned to either the extreme right or extreme left. 	<ul style="list-style-type: none"> ●Check the speaker wires for damage or a poor connection and reconnect them correctly. ●Check the connection wires for damage and connect them correctly. ●Set the BALANCE control knob to the center position.
Tone control is not functioning.	<ul style="list-style-type: none"> ●The TONE DEFEAT switch is depressed. 	<ul style="list-style-type: none"> ●Release the TONE DEFEAT switch (button out).
When listening to stereo sound, the left and right channels are reversed.	<ul style="list-style-type: none"> ●The left and right speaker wires are reversed. ●The left and right connection wires to other equipment are reversed. 	<ul style="list-style-type: none"> ●Check the speaker wires and connect them correctly. ●Check the connection wires to other equipment and connect them correctly.

TROUBLESHOOTING CHECKLIST

Problem	Cause	Remedy
When playing a turntable, a low-pitched noise ("hum" or "buz") is heard.	<ul style="list-style-type: none"> ●The turntable ground wire is disconnected. ●The turntable wires are poorly connected. 	<ul style="list-style-type: none"> ●Make the ground connection correctly. ●Insert the turntable wire plugs firmly into the PHONO terminals of this unit.
When increasing the volume while playing a turntable, prolonged low frequency sound (howling) is heard.	<ul style="list-style-type: none"> ●"Howling" is created by the speakers and turntable being too close together. ●"Howling" is created by the excessive bass boost. 	<ul style="list-style-type: none"> ●Place the speakers further away from the turntable. ●Place the turntable on a more solid surface. ●Reduce the bass boost. ●Set the SUBSONIC filter switch to the ON position.
The sound quality is poor.	<ul style="list-style-type: none"> ●Input components have not been set up correctly. ●Tone control is not proper. 	<ul style="list-style-type: none"> ●Check the tuner, antenna, turntable, cartridge, tape deck heads, etc. and make corrections as needed. ●Adjust the BASS and/or TREBLE control knobs to obtain a desired tone.

Warranty and After-sale Service

- Please find the warranty card enclosed with this unit when you purchased it.
- After filling in the required items and reading the contents of the warranty card, keep it in a safe place.
- The warranty term is two years after the date of purchase.
- If this unit does not operate normally, first check this unit by yourself following the instructions provided in "Troubleshooting Checklist" in the manual.
- If a problem persists even though you have done as suggested in the checklist, consult your authorized Harman Kardon service station.
- Repair within the warranty term is made according to the conditions specified in the warranty card. For details, refer to the warranty card.