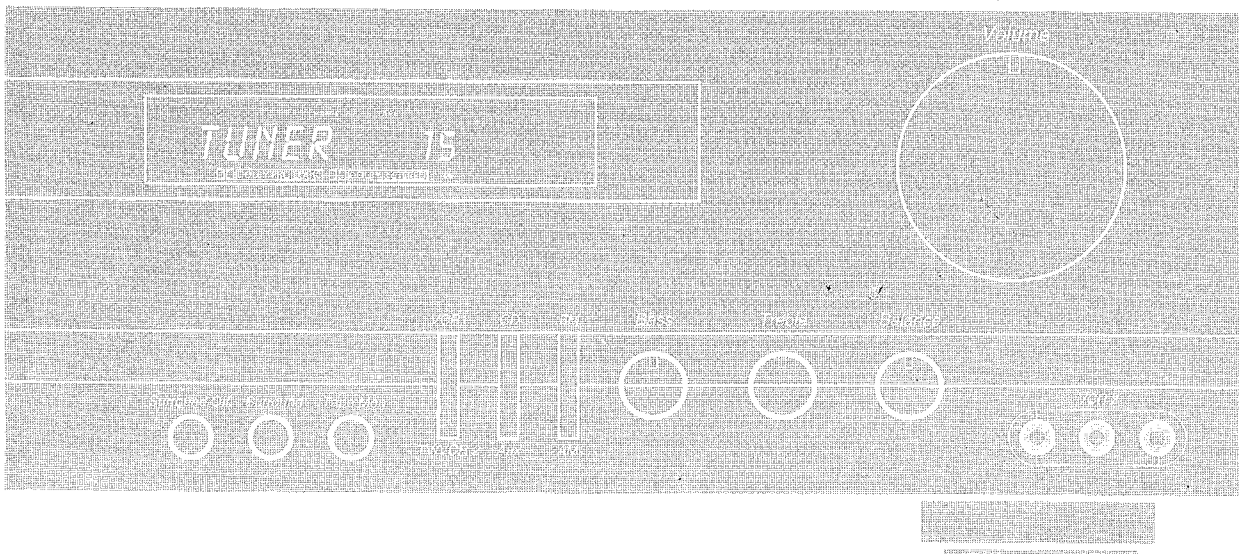


AVI100

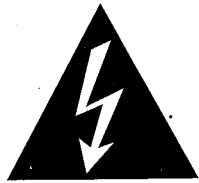


harman/kardon

Audio and Video Amplifier
Audio und Video Verstärker
Amplificateur Audio/Vidéo
Amplificador de audio y video
Audio/video versterker
Amplificador Audio/vídeo

OWNER'S MANUAL
BEDIENUNGSANLEITUNG
MODE D'EMPLOI
MANUAL DEL USUARIO
GEBRUIKSAANWIJZING
MANUAL DE INSTRUÇÕES

Amplificatore Audio/Video ISTRUZIONI PER L'USO
Στερεοφωνικός Ραδιοεπισχυτής ΟΔΗΓΙΕΣ ΧΡΗΣΗΣ
Audio og video förstärkar BRUKSANVISNING
Audio og video forstærker BRUGSANVISNING
Audio/videovahvistin KÄYTTÖOPAS



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 to 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 to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Harman Kardon AVI100

Date of purchase _____

Purchased from _____

Address of business purchased from _____

Installed by _____

Date Installed _____

Serial No. _____

Thank you for choosing a Harman Kardon Audio/Video Amplifier.

Your new Unit is an exceptionally well-engineered product that will give you years of superb performance.

Save all packing material.

It is essential for shipping should you move, or in the event the unit ever needs repair.



HANDLE THE POWER CORD GENTLY

- To disconnect the plug from the AC outlet, pull on the plug itself, not on the cord.
- Disconnect the plug from the AC outlet whenever the unit is to be left unused for an extended period of time.
- Do not place furniture or other heavy objects on the cord, and avoid dropping heavy objects on it. Also do not make a knot in the cord.

PLACE THE UNIT ON A FIRM AND LEVEL SURFACE

Avoid installing it:

- In moist or humid places
- Close to heating equipment or in places exposed to direct sunlight
- In a direct draft from an air conditioner or in other very cold locations
- In places subject to excessive vibration or dust
- In poorly ventilated places

MOVING THE UNIT

Before moving the unit, be sure to unplug the power cord from the AC outlet and disconnect all wires to other components.

DO NOT OPEN THE CABINET

Do not attempt to service this unit. Tampering with internal components can cause fire or shock, and may void your guarantee. If water or a small object enters the unit, unplug the power cord immediately and consult an authorized Harman Kardon service center. Using the unit under such conditions may cause a fire or shock hazard.

CLEANING

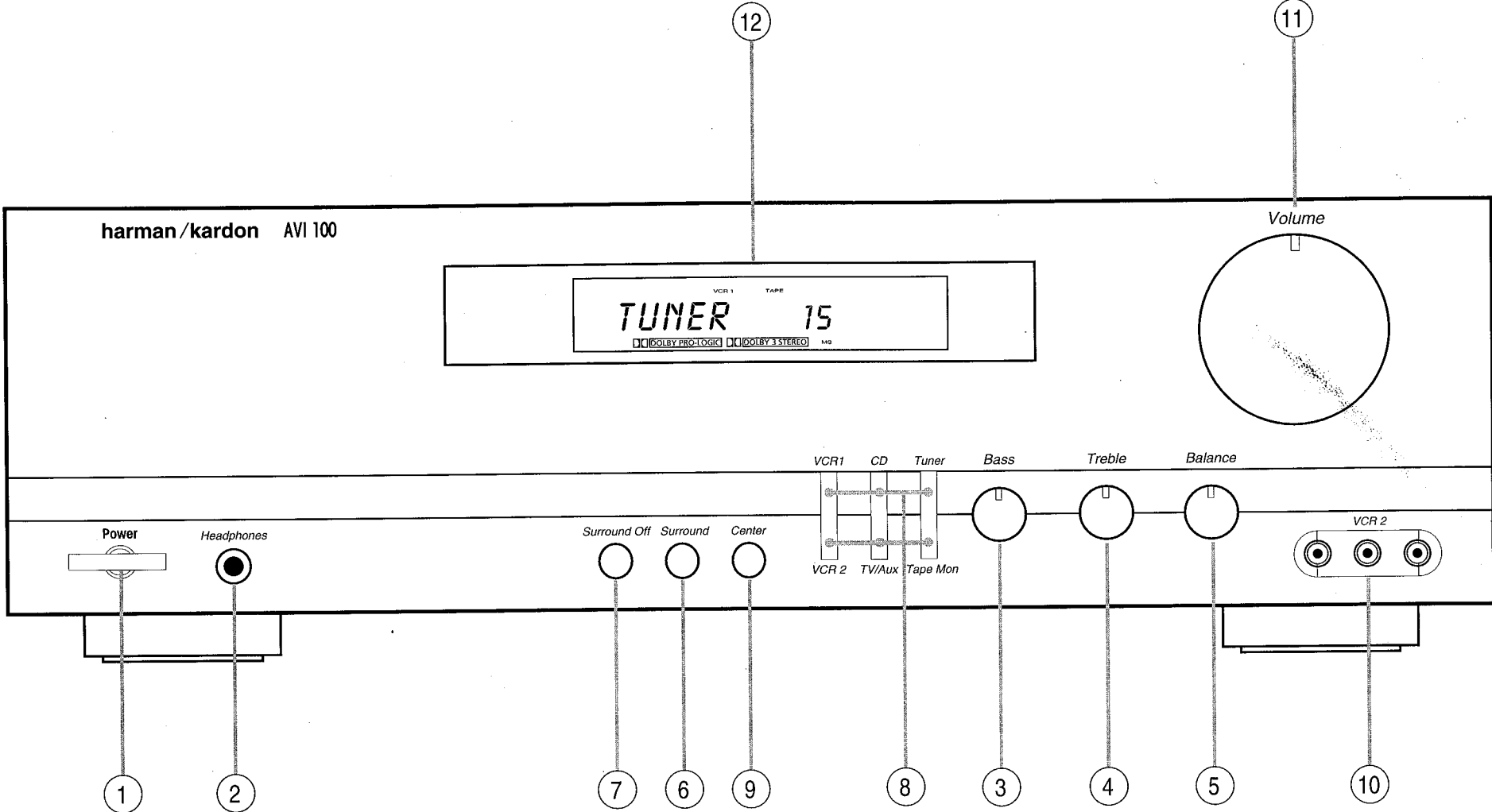
Remove dust by wiping the unit with a soft, dry cloth. If necessary, use a soft cloth lightly dampened with mild soapy water; then wipe with a dry cloth. Never use benzene, thinner, alcohol or other volatile agents, and avoid spraying insecticides near the unit.

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Front Panel Controls

ENGLISH





Front Panel Controls

1. POWER BUTTON

Press this button to turn the power on. Press again to turn the power off. If you connect the other components to the switched outlet, it can also be used as a system power button.

2. HEADPHONE JACK

Stereo headphones can be plugged into this jack for private listening. Headphone impedance should be between 8 and 2K ohms. Best results between 200 and 400 ohms.

3. BASS CONTROL

Modifies the low-frequency sound of the left and right channels as much as +/- 10dB. Set this control at a suitable position for your taste and room acoustics.

4. TREBLE CONTROL

Modifies the high-frequency sound of the left and right channels as much as +/- 10dB. Set this control at a suitable position for your taste and room acoustics.

5. BALANCE CONTROL

This control is used for balancing the relative sound volume of the left and right channel speakers. Clockwise rotation reduces the volume from the left speaker, counterclockwise rotation reduces the volume from the right speaker.

6. SURROUND MODE SELECTOR

Press this button to select the desired surround mode. The mode is changed between DOLBY pro-logic and DOLBY 3-STEREO.

7. BYPASS SELECTOR

Defeats all surround modes.

8. INPUT FUNCTION SELECTOR BUTTONS

Press these buttons to select the desired input source.

9. CENTER

Push this button to change center channel modes.

10. VCR 2 INPUT JACKS

Connect these jacks to the corresponding output jacks of a VCR or Camcorder.

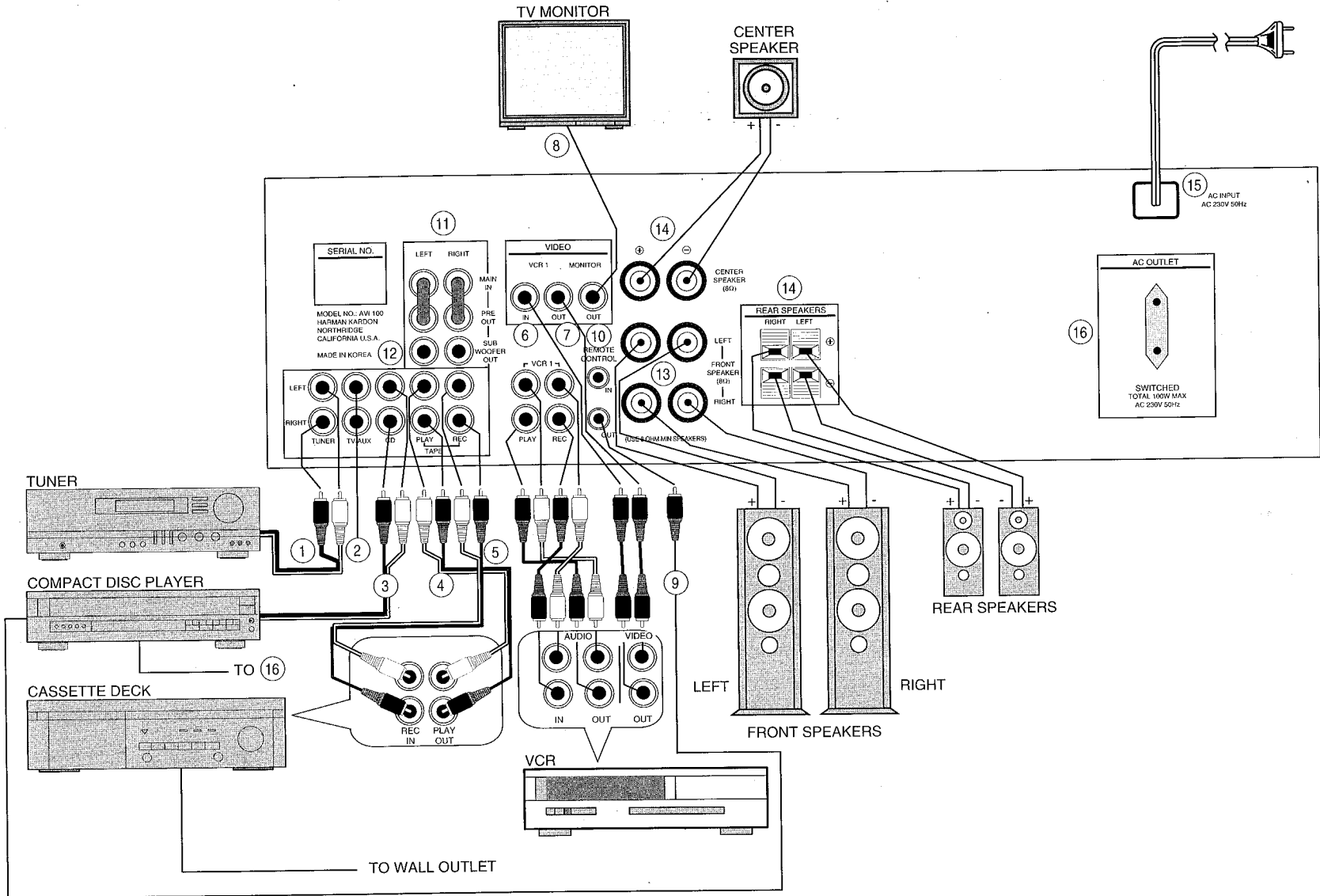
11. VOLUME CONTROL

Turn the VOLUME clockwise to increase the volume and counterclockwise to decrease it. The volume of the front, center, and rear channels is changed at the same time.

12. DISPLAY WINDOW

This window shows the state of operation for easier control of the amplifier. It also contains the IR Remote Sensor.

Rear Panel Connections



Rear Panel Connections

1. TUNER INPUT JACKS

This input is provided for connection of an AM/FM Tuner.

2. TV / AUX INPUT JACKS

This input is provided for any source you want to hear. An additional compact disc player, tape recorder, TV video cassette recorder (VCR), etc. can be plugged into these jacks.

3. CD INPUT JACKS

Connect the output cables of a compact disc player to these jacks.

4. TAPE PLAY JACKS

Connect the line output of your CASSETTE DECK to these jacks.

5. TAPE REC JACKS

Connect the line input of your CASSETTE DECK to these jacks.

6. VIDEO / AUDIO INPUT (PLAY) JACKS OF VCR1

Connect these jacks to the corresponding OUTPUT jacks of your TV (if available) or VCR.

7. VIDEO / AUDIO OUTPUT (REC) JACKS OF VCR1

Connect these jacks to the corresponding INPUT jacks of a VCR. VIDEO OUTPUT jack: Connect this jack to the VIDEO INPUT jack of the VCR. VIDEO REC jack: Connect these jacks to the AUDIO INPUT jacks of the VCR.

8. VIDEO MONITOR JACK

Connect this jack to the VIDEO INPUT jack of a TV/MONITOR.

9. REMOTE CONTROL OUT JACK

Connect this jack to the REMOTE IN jack on a Harman Kardon component. Use one of the accessory mini-plug cables.

You can control many other Harman Kardon components in your system using the AV1100 remote commander.

10. MULTI-ROOM REMOTE IN JACK

Connect a Harman Kardon HE 1000 remote I.R. sensor to this jack. You can operate the unit by remote commander through the adaptor. It is convenient when the unit is located in a separate room.

11. FRONT PRE OUT AND MAIN IN JACKS

Front Pre Out

When a separate power amplifier is used to drive the front speakers, connect the power amplifier input to these jacks.

Front Main In

When a separate pre-amplifier is connected and this unit is used as a power amplifier, connect the pre-amplifier output to these jacks.

NOTE: When you do not use the PRE OUT and MAIN IN separately, always connect the PRE OUT and MAIN IN jacks with a jumper plug.

12. SUBWOOFER OUTPUT JACKS

Connect a powered subwoofer to these jacks. This output may also be used for any external component requiring a full bandwidth line-level input.

13. SPEAKER TERMINALS

Connect the front left (L) and right (R) speakers to the corresponding terminals. Make sure that the positive (+) and negative (-) terminals on the speaker are connected to the corresponding terminals on the amplifier.

14. CENTER/REAR SPEAKER TERMINALS

Connect center and rear speakers to the corresponding terminals. When you connect the rear speakers, connect both L and R speakers.

PLEASE NOTE: Sound will not be provided through the rear speakers unless both speakers are connected.

15. AC INPUT CORD

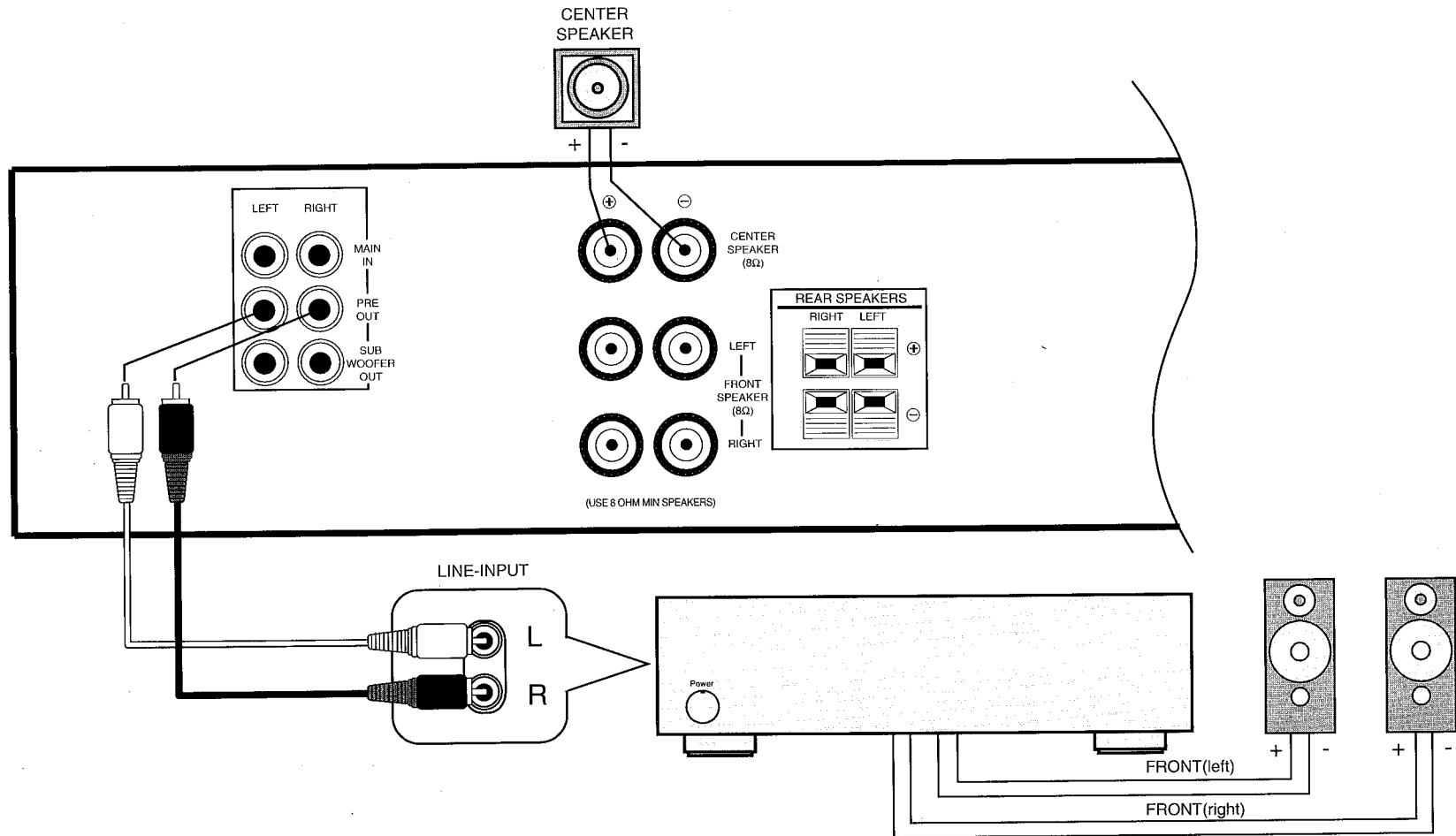
Plug this cord in AC outlet on a wall.

16. AC SWITCHED OUTLET

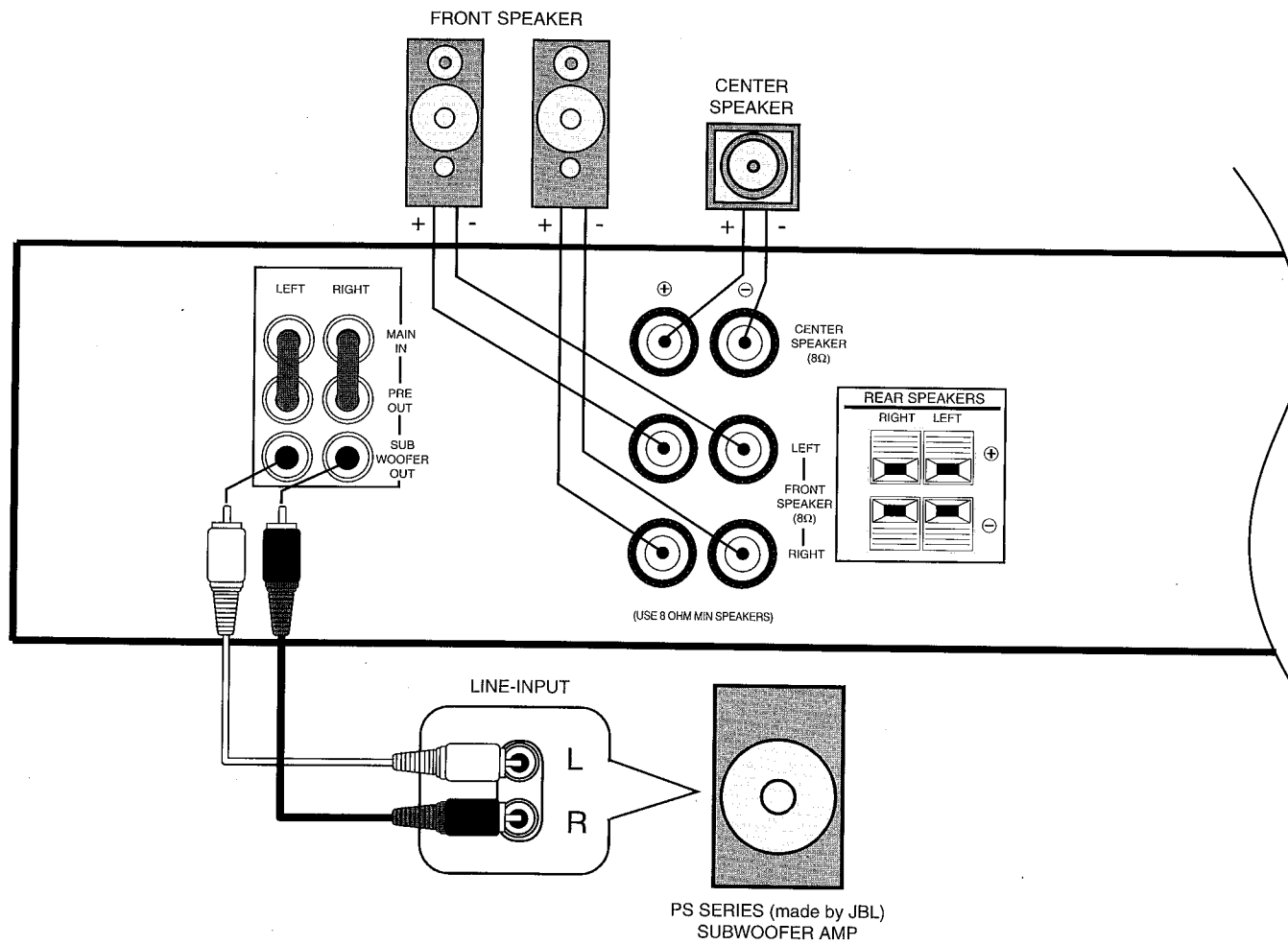
These outlets provide AC power. The AC power is switched by the power button. Use this outlet for a CD player or a cassette deck.

WHEN YOU DRIVE THE FRONT SPEAKERS WITH ANOTHER AMPLIFIER

(Remove PRE-OUT/MAIN IN jumpers when the front speakers are connected to external amplifier.)



WHEN YOU DRIVE THE SUBWOOFER AMP



SURROUND PROCESSING

Dolby 3 Stereo


Combines the front and rear signals so that you can enjoy a regenerated sound field which has comparatively more presence and a more expansive feeling from the front 3 channels (front L, front R, center speaker) than that of ordinary stereo regeneration.

Dolby Pro Logic Surround

A great number of movies made in recent times have the sound track specially encoded with the Dolby Surround Mode (carrying the [Dolby Stereo] or [Dolby Surround] trademark*).

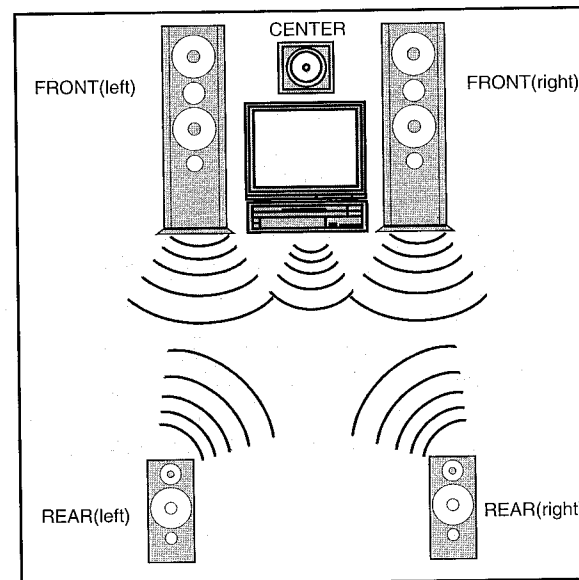
The front speakers provide the dialogue and the normal stereo effect, while the rear speakers reproduce the surround signals. This position provides excellent results when watching television programs, video software, video discs or video tapes of stereo television broadcasts encoded with Dolby Surround. Dolby Stereo films have dramatically changed the role of the movie-goer from that of observer to that of participant. Clearer dialogue, richer music, enveloping ambience and making high-fidelity, multi-dimensional sound are essential parts of cinematic presentations. Imagine recreating the same sort of audio-visual experience right in your own home.

Surround Sound Effects

*Manufactured under license from Dolby Laboratories Licensing Corporation. DOLBY, the double-D symbol  and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.

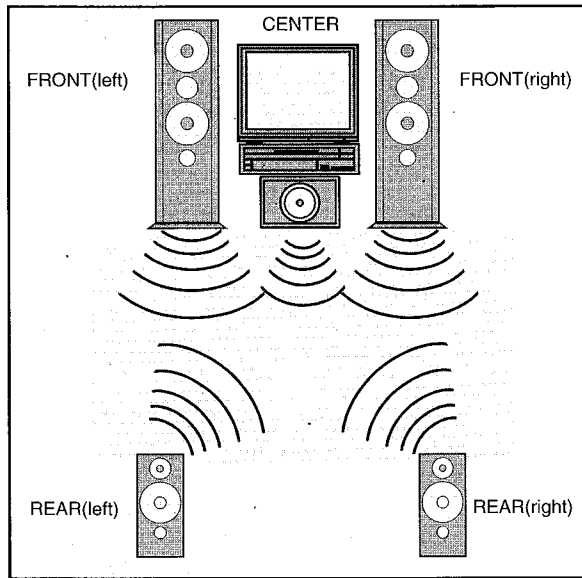
SPEAKER INSTALLATION

The AVI100 incorporates a decoder which reproduces the specially encoded surround sound of Dolby Surround video programs. In Dolby Surround mode, select the speaker operation mode according to your speaker system.



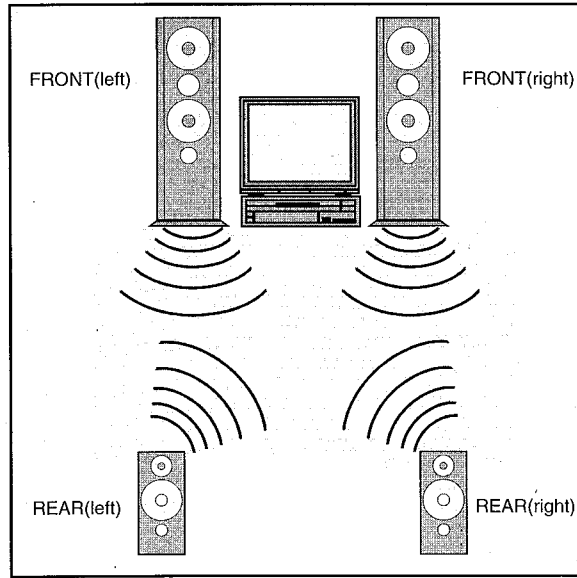
NORMAL mode

Select this mode if you use a small center speaker. The bass sound of the center channel is output from the front speakers, as a small speaker can't produce enough bass.



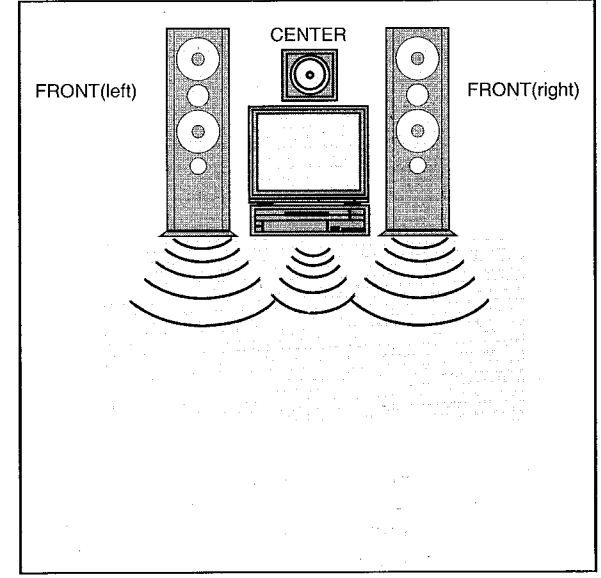
WIDE mode

Select this mode if you use a medium to big center speaker.



PHANTOM mode

Select this mode when you play back a Dolby Surround program source without using a center speaker. The sound of the center channel is output from the front (L and R) speakers.



3 STEREO mode

Select this mode when you play back a Dolby Surround program source only with the front and center speakers. The sound of the rear channel is output from the front (L and R) speakers.

Operation

BASIC OPERATION

- 1 Press the POWER button to turn the power ON, the display panel will then light up.
 - When using the POWER button on the remote control turn the unit off, the unit will go into STANDBY mode.
- 2 Select the desired program source with the INPUT FUNCTION SELECTOR buttons and the selected input function appears in the display.
- 3 Operate the selected component for play back.
 - When viewing and listening to video sources, the picture of the video source appears on the television and the sound can be heard from the speakers.
 - When playing back a video software using a surround sound effect, refer to the "Surround Sound Effects".

- When the TAPE MONITOR button is set to ON so that the TAPE MONITOR indicator lights up, the selected program source cannot be heard from the speakers.
To listen to a program source other than cassette deck be sure to set the TAPE MONITOR button to OFF.
- 4 Adjust the volume to a comfortable listening level with the VOLUME control or VOLUME UP/DOWN buttons on the remote control.
 - 5 For private listening, insert a 1/4 inch plug of the headphone into the HEADPHONE jack.
 - When the headphones are plugged, sound from the speakers is cut off.

RECORDING WITH A CASSETTE DECK

- 1 Select the program source to be recorded with the INPUT FUNCTION SELECTOR buttons.
- 2 Start recording on the cassette deck.
- 3 Play back the desired program source.
 - The volume, balance, bass and treble settings have no effect on the recording or dubbing.
 - When recording is performed on a 3-head cassette deck, the recorded sound can be monitored through the speakers by pressing the TAPE MONITOR button to ON.

DUBBING FROM VCR2 TO VCR1

- 1 Press the VCR2 button as a program source to be recorded.
- 2 Start recording on the VCR connected to VCR1.
- 3 Play back on the VCR connected to VCR2, then the video and audio signals from VCR2 will be dubbed onto VCR1.

RECORDING WITH SEPARATE VIDEO AND AUDIO SOURCES

When dubbing from VCR2 to VCR1, you can replace the audio signal from VCR2 with the audio signal from other program sources.

- 1 Press the VCR2 as a video source to be recorded.
- 2 Select the audio source to be recorded with the INPUT FUNCTION SELECTOR buttons.
- 3 Start recording on the VCR connected to VCR1.
- 4 Play back on the video and audio components, allows you to watch the picture from the video component on the television and listen to the sound from the audio component through the speakers while recording.

NOTE: Be sure to observe the order of steps 1 and 2.

AVI100 System Remote Control

1. INFRARED TRANSMITTER WINDOW

The infrared beam is emitted forward from this window when you press any button on the commander. For the remote controls to function properly, always face this window toward the remote sensor window on the amplifier and do not obstruct this window with any material.

2. STANDBY BUTTON

Press this button to turn the power on and off.

Automatic power on: When you press the input function buttons (CD, TUNER, TAPE, TV/AUX, VCR 1, VCR 2) in STANDBY mode, the power is automatically turned on and the function is selected.

3. TUNING UP/DOWN

PRESET, SCAN and numeric buttons are provided on the handset for use with a Harman Kardon AM/FM Tuner.

4. CD FUNCTION BUTTONS

For a CD PLAYER: DISC (DISC SELECTOR is available for the Harman Kardon FL8400, FL8450 CD changer), PLAY, PAUSE, STOP, BACKWARD SKIP, FORWARD SKIP, A-B and INTRO buttons are available. When selecting a disc, press the DISC button.

5. CASSETTE DECK FUNCTION BUTTONS

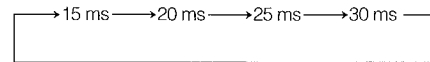
For a cassette deck: PAUSE/RECORD, STOP, REVERSE PLAY, FORWARD PLAY, REWIND, FAST FORWARD buttons are available.

6. DELAY TIME BUTTON

This button operates only in DOLBY PRO LOGIC mode. In this mode the output signal from the surround speakers is delayed slightly from that of the front speakers.

Select appropriate delay time to achieve the best surround sound effect. For Dolby Surround sound, we recommend a 20ms delay. The time is changed as below, when the button is pressed in succession.

DOLBY PRO LOGIC MODE



7. INPUT FUNCTION SELECTOR

Press the button to select the desired input function. The available buttons are CD, TUNER, TAPE MON, TV/AUX, VCR 1, and VCR 2.

8. CENTER LEVEL UP/DOWN BUTTONS

Use these buttons to adjust the sound level of the center speaker to that of the front speakers. These buttons work only in DOLBY PRO LOGIC and DOLBY 3 STEREO mode. These buttons do not work in PHANTOM mode.

9. CENTER MODE BUTTON

Select the CENTER mode.

10. TEST TONE BUTTON

Generates test sounds in all channels (Left, Center, Right and Rear) in succession.

11. REAR LEVEL UP/DOWN BUTTONS

These buttons operate only in Dolby PRO LOGIC mode. Use these buttons to adjust the sound level of the surround speakers. Set the MASTER VOLUME control at the desired level and press the UP or DOWN button until you get the optimum surround effect at your listening position.

12. MASTER VOLUME BUTTONS

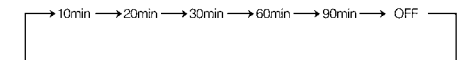
Adjust the overall (Front, Center, and Rear) volume level.

13. DISPLAY BUTTON

Press once and the display dims, press again and it turns off. Press a third time and it goes on.

14. SLEEP BUTTON

Set the amplifier to automatically turn off after 10, 20, 30, 60, or 90 minutes. Each time the button is pressed, the setting is advanced as below.



The display will dim when the sleep function has been set.

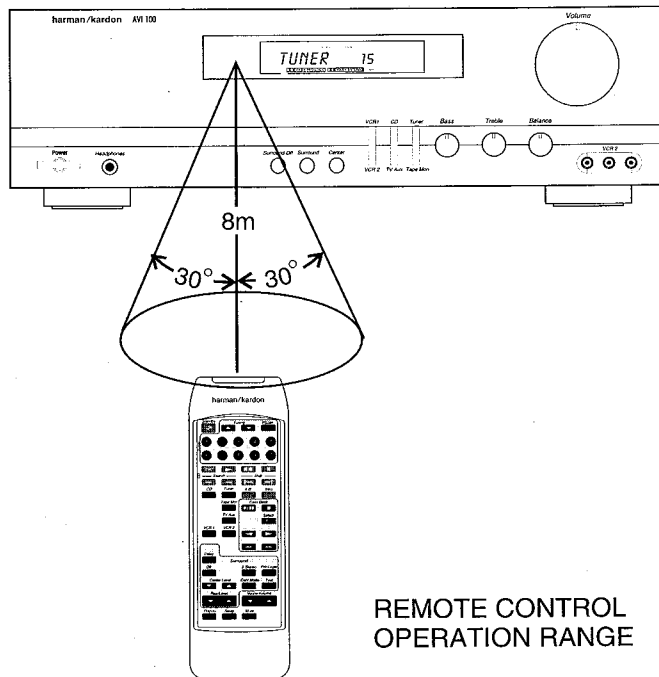
15. MUTE BUTTON

Press this button to silence the speakers temporarily. The volume indicator blinks. Press again to restore the same listening level as before.

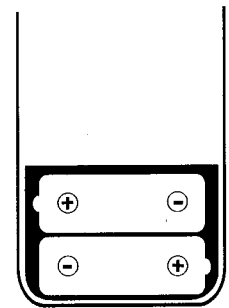
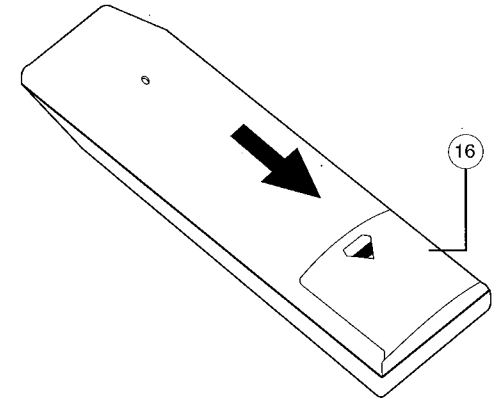
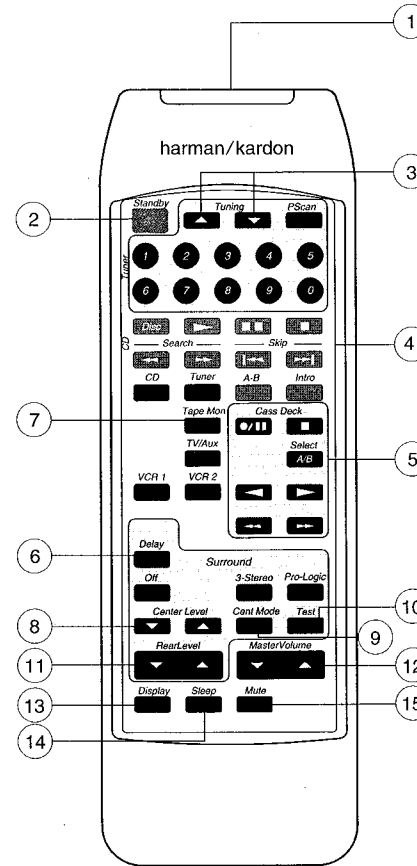
16. BATTERY COMPARTMENT

This battery case is provided as the power source for the commander. To

remove the cover, press it down with your thumb and pull it toward the back side. Two UM-3, size "AA" or R6 1.5V dry batteries are used. When loading the batteries, make sure that the polarity is correct. Remove the batteries from the case if the remote commander will not be used for a long time.



REMOTE CONTROL OPERATION RANGE



Troubleshooting

This unit is designed for trouble-free operation. Most problems users encounter are due to operating errors. So, if you have a problem, first check this list for a possible solution. If the problem persists, consult your authorized Harman Kardon Service Center.

IF THE PROBLEM IS...

No lights illuminate when POWER button is pressed

No sound is heard

Dolby Surround does not work on center and rear channels

Selecting video component produces sound but no picture

The TV picture does not match the sound

No output from one or more channels

No center channel output

MAKE SURE THAT THE...

Unit is plugged into a live outlet

Correct input function selector button has been pressed

Volume is turned up

Speakers are connected properly

Correct surround mode is selected

Rear and Center levels are turned up

Video cables are connected properly

Video sources are properly connected to receiver

Video/Antenna Switch on TV is set to Video

Cables are not defective: Check/replace speaker cables

The signal source is operating and providing proper signal output to the AV1100

Dolby surround mode is turned on

PHANTOM mode is not active

Specifications

STEREO MODE

Continuous Average Power (FTC)
35 Watts from 20Hz-20kHz: @<0.09% THD,
both channels
driven into 8 Ohms

FIVE CHANNEL SURROUND MODE

Continuous average power per channel (FTC)
Front L&R channels
30 Watts from 20Hz-20kHz: @<0.3% THD,
both channels
driven into 8 Ohms

Center channel
30 Watts at 1kHz: @<0.3% THD,
driven into 8 Ohms

Rear channels
20 Watts at 1kHz: @<1.0% THD,
both channels
driven into 4 Ohms

AMPLIFIER SECTION

High-Instantaneous Current Capability
(HCC): ±20 Amps
Negative Feedback: 20dB
Frequency Response
@1W (+0/-3dB): 0.5Hz - 100kHz

Rise Time: 1.8µSec
Transient Intermodulation
Distortion (TIM): Unmeasurable

PREAMPLIFIER SECTION

Signal-to-Noise Ratio (ref. 1 Volt, A-Wtd)
CD: 92dB
Video: 83dB
Input Sensitivity/Impedance
Video, CD, Tape: 150mV/22kΩ
Tone Control Range
Bass @ 50Hz: ±10dB
Treble @ 10kHz: ±10dB

DIMENSIONS (W×H×D):

inches: 17⁵/₁₆ × 4⁷/₈ × 14¹⁵/₁₆
mm: 440 × 125 × 380
Weight (lbs/kgs): 18 lbs, 8.2 kg
Depth measurement includes knobs and buttons.
Height measurement includes feet.

All features and specifications are subject to change without notice.

DECLARATION OF CONFORMITY



We, Harman Marketing Europe a/s
Kongevejen 194B
DK-3460 Birkerød
DANEMARK
declare that the product described in
this owner's manual is in compliance
with technical standards:
EN 55013/6. 1990, EN 55020/6. 1988.

Accredited test laboratory:
MIKES PRODUCT SERVICE GmbH
Ohmstrasse 2-4
D-94342 Strasskirchen
GERMANY, (date tbd) 20. 09. 1995

Steen Michaelsen
Harman Marketing Europe a/s

The appliance conforms with EEC directive
87/308/EEC regarding interference suppression