

AVR 156

Audio/video receiver

Quick-Start Guide

ENGLISH



harman/kardon
by HARMAN

Introduction

Thank you for choosing a harman kardon® product!

This quick-start guide contains all the information you need to connect and set up your new harman kardon® audio/video receiver.

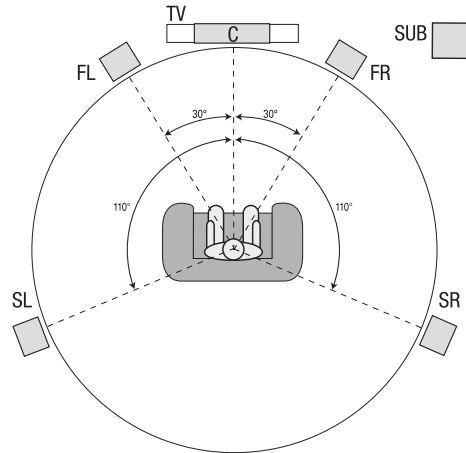
To conserve our natural resources, your AVR does not include a printed owner's manual. An owner's manual containing complete information about operating all of your new AVR's features is available at our Web site. Go to www.harmankardon.com and download the *AVR 156 Owner's Manual*.

Place the AVR

- Place the AVR on a firm and level surface. Be certain that the surface and any mounting hardware can support the AVR's weight.
- Provide proper space above and below the AVR for ventilation. If you install the AVR in a cabinet or other enclosed area, provide cooling air within the cabinet. Under some circumstances, a fan may be required.
- Do not obstruct the ventilation slots on the top of the AVR or place objects directly over them.
- Do not place the AVR directly on a carpeted surface.
- Do not place the AVR in moist or humid locations, in extremely hot or cold locations, in areas near heaters or heat registers, or in direct sunlight.

Place Your Speakers

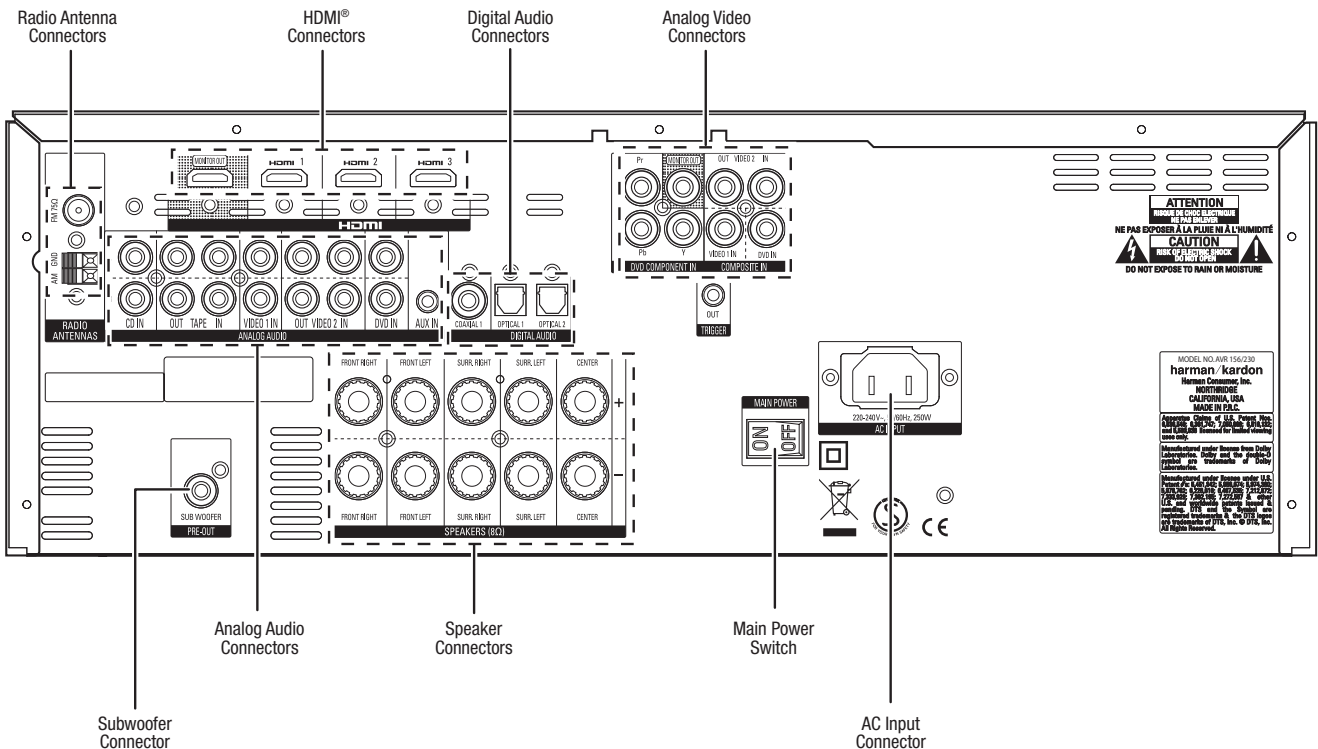
Determine the locations for your system's speakers according to their manufacturer's directions and the layout of your listening room. Use the illustration below as a guide.



For more detailed speaker placement information, including the use of front height speakers, download the complete *AVR 156 Owner's Manual* from www.harmankardon.com.

Connections

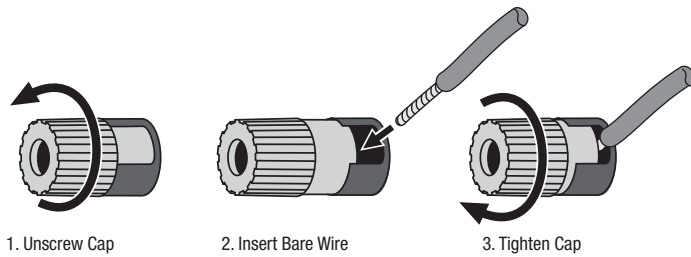
CAUTION: Before making any connections to the audio/video receiver, ensure that the AVR's AC cord is unplugged from the AVR and the AC outlet. Making connections with the AVR plugged in and turned on could damage the speakers.



AVR 156 Rear-Panel Connections

Connect Your Speakers

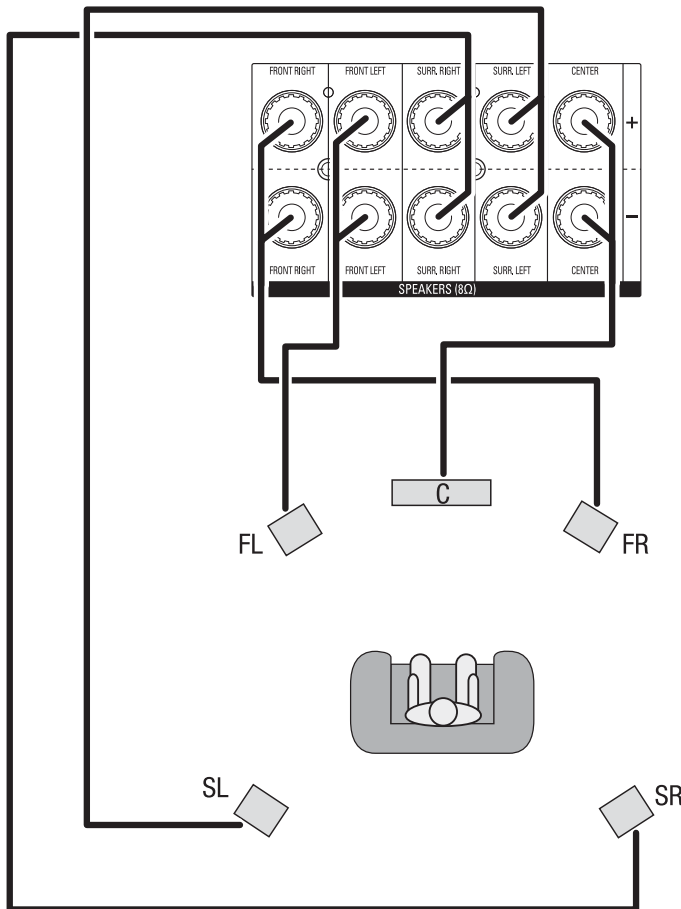
How to use the AVR's speaker terminals:



Always connect the colored (+) terminal on the AVR to the (+) terminal on the speaker (usually red), and the black (-) terminal on the AVR to the (-) terminal on the speaker (usually black).

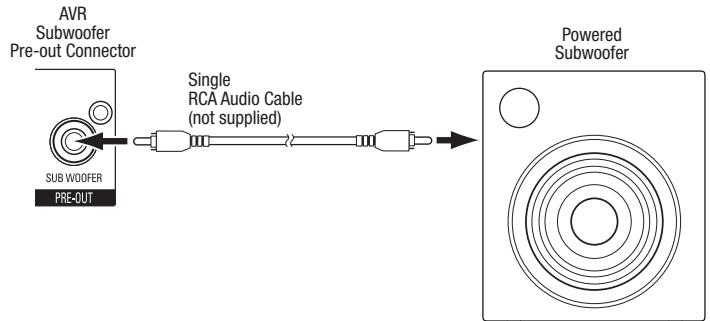
IMPORTANT: Make sure the (+) and (-) bare wires do not touch each other or the other terminal. Touching wires can cause a short circuit that can damage your AVR.

Connect the speakers as shown in the illustration.



Connect Your Subwoofer

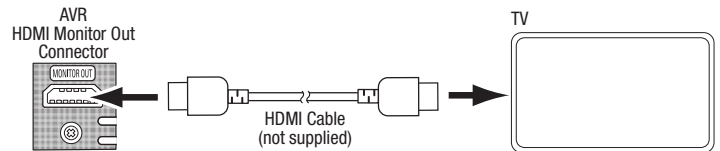
Use a single RCA audio cable to connect the AVR's Subwoofer Pre-Out connector to your subwoofer. Consult your subwoofer's user manual for specific information about making connections to it.



Connect Your TV or Video Display

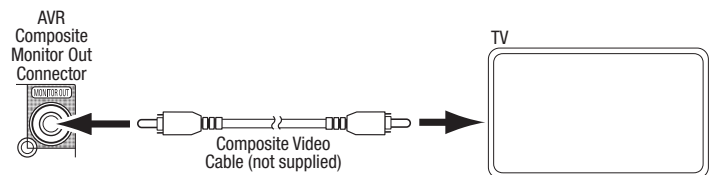
HDMI Monitor Out Connector

If your TV has an HDMI connector and you have HDMI or component video source devices, use an HDMI cable (not included) to connect your TV to the AVR's HDMI Monitor Out connector. It will provide the best possible picture quality.



Composite Video Monitor Out Connector

If your TV does not have an HDMI connector, or if your TV does have an HDMI connector *but you are connecting some source devices with only composite video connectors*, use a composite video cable (not included) to connect the AVR's Composite Monitor Out connector to your TV's composite video connector.



Connect Your Audio and Video Source Devices

Source devices are components where a playback signal originates, e.g., a Blu-ray Disc™ or DVD player; a cable, satellite or HDTV tuner; etc. Your AVR has several different types of input connectors for your audio and video source devices: HDMI, component video, composite video, optical digital audio, coaxial digital audio and analog audio. The connectors are labeled for the types of source devices you are most likely to connect.

Each of your AVR's source buttons is assigned to an analog audio input connector (listed in the "AVR Source Button/Analog Audio Connector" column of the table below). To provide you flexibility for connecting and configuring your system, we have designed the AVR so that you can assign the digital audio inputs and component video input to any of the video AVR sources.

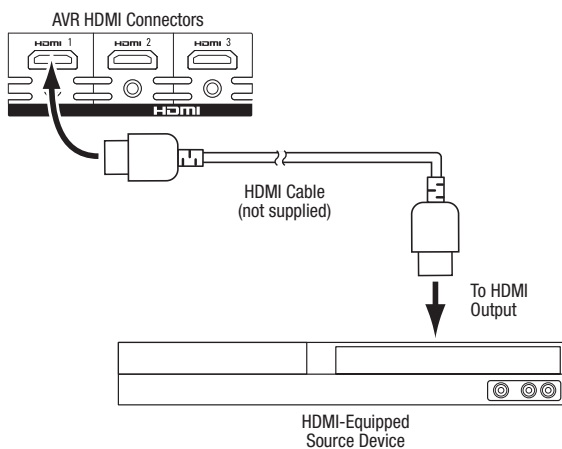
As you connect your various source components, fill out the "Source Device Connected" column in the following table – it will make it easier for you to assign the digital audio input connectors and component video connector later in the setup process.

AVR Source Button/ Analog Audio Connector	Recommended Source Device Type	Source Device Connected	Digital Audio Input Connector Assigned
Video 1	Cable or Satellite Tuner		
Video 2	DVD Recorder or VCR		
DVD	Blu-ray Disc or DVD Player		
CD	CD Player		
Tape	Cassette Deck or Audio Recorder		
Aux 1	Portable Media Player		----
Aux 2	Portable Media Player		
AVR Source Button/ HDMI Connector	-----	Source Device Connected	Digital Audio Input Connector Assigned
HDMI 1	----		
HDMI 2	----		
HDMI 3	----		

Input Connections and Source Buttons

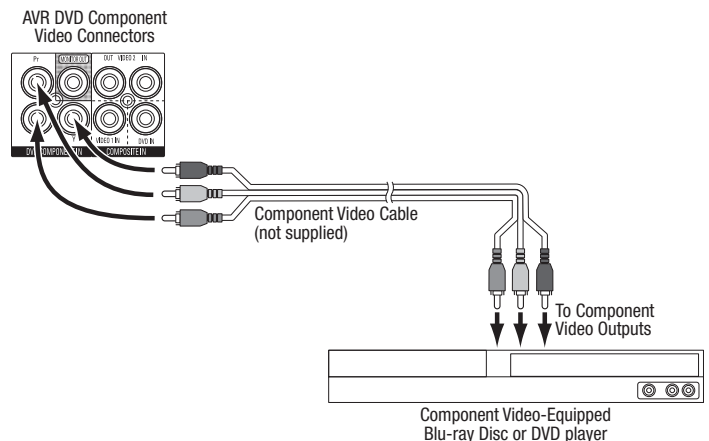
HDMI Devices

If any of your source devices have HDMI connectors, using those connectors will provide the best possible video and audio performance quality. Since the HDMI cable carries both digital video and digital audio signals, you do not have to make any additional audio connections for devices you connect via HDMI cables, although you can assign one of the digital audio connectors to one of the HDMI inputs.



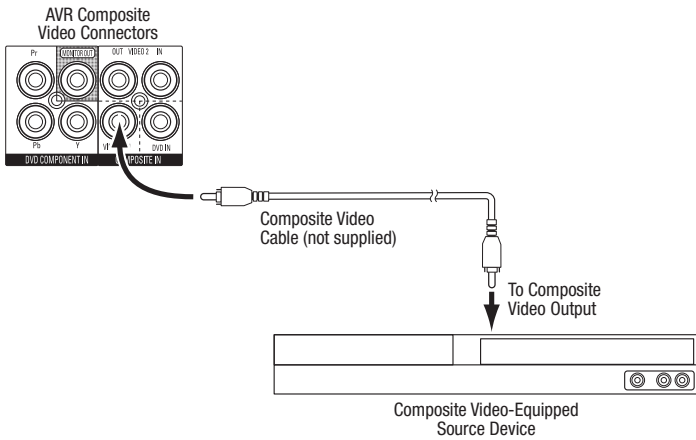
Component Video Device

If your Blu-ray Disc or DVD player does not have an HDMI connector but does have a component video connector, using the component video connector will provide superior video performance. You will also need to make an audio connection from the player to the AVR.



Composite Video Devices

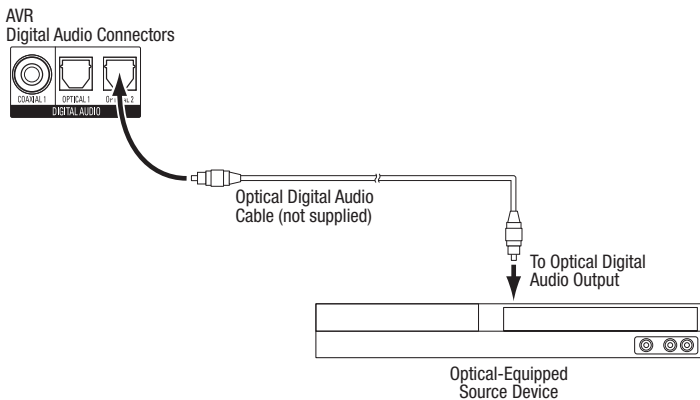
You will need to make composite video connections from your source devices that do not have HDMI or component video connections. You will also need to connect the source device's analog audio outputs to the AVR's corresponding analog audio connectors.



Note: If you connected your Blu-ray Disc or DVD player to the AVR's DVD Component In connectors, do not connect a source device to the AVR's composite DVD In connector.

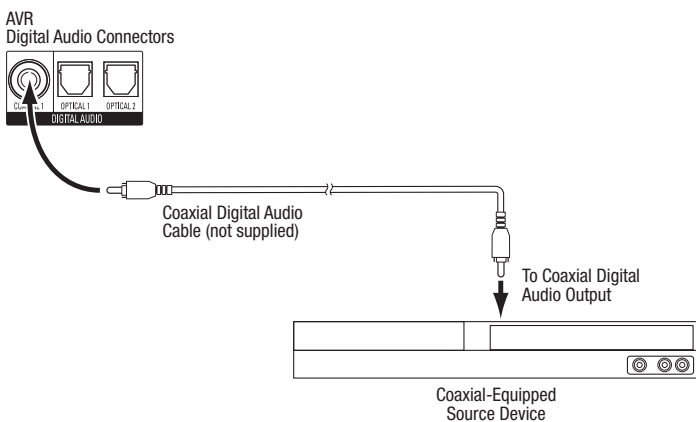
Optical Digital Audio Devices

If your source devices have optical digital outputs, connect them to the AVR's optical digital audio connectors. NOTE: Make only one type of digital connection (HDMI, optical or coaxial) from each device.



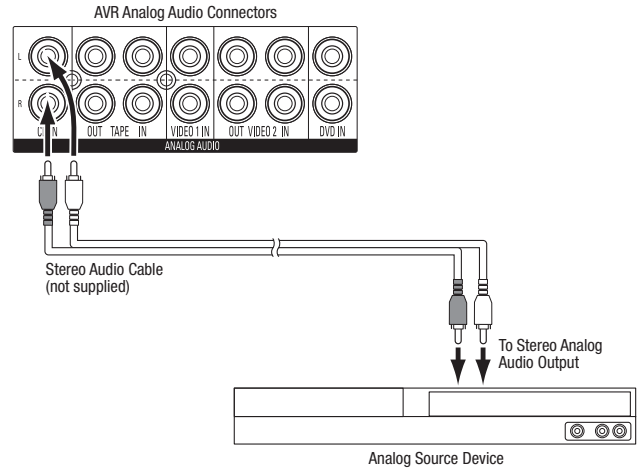
Coaxial Digital Audio Devices

If your source devices have coaxial digital outputs, connect them to the AVR's coaxial digital audio connectors. NOTE: Make only one type of digital connection (HDMI, optical or coaxial) from each device.



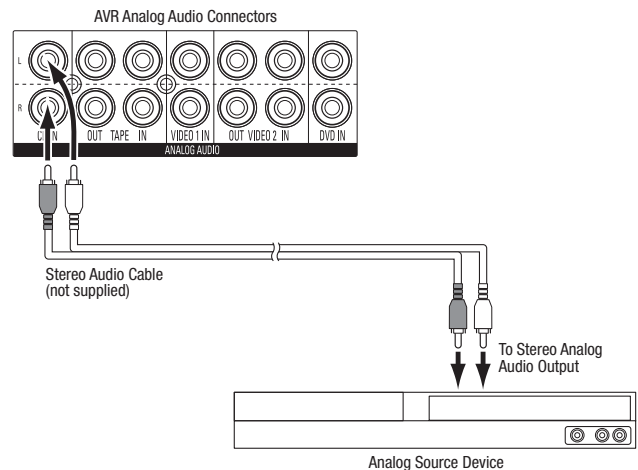
Analog Audio Devices

Make analog audio connections from your source devices that do not have HDMI or digital audio connections. If you're connecting video sources to the AVR's DVD, Video 1 or Video 2 audio inputs, you must also connect the source device's composite video output to the corresponding composite video connector.



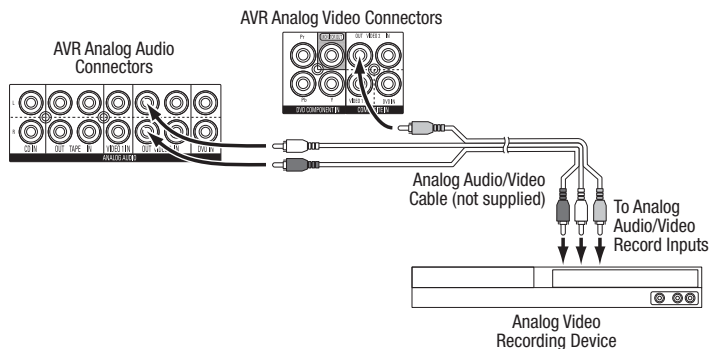
Audio Recorders

Connect an analog audio recorder's inputs to the AVR's analog audio Tape Out connectors. You can record any analog audio input signal.



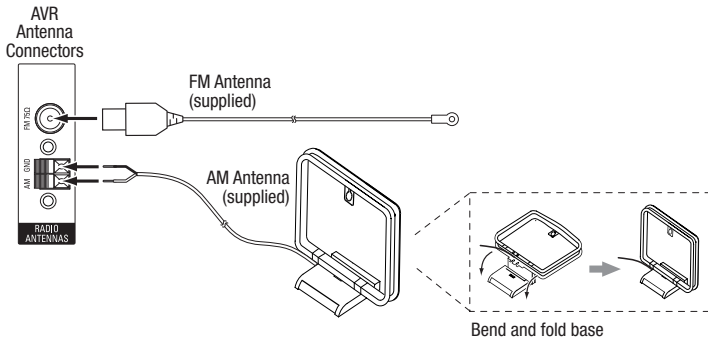
Video Recorders

Connect an analog video recorder's video input connector to the AVR's Video 2 Out composite video connector and its audio input connectors to the AVR's Video 2 Out analog audio connectors. You can record any composite video signal.



Connect the Radio Antennas

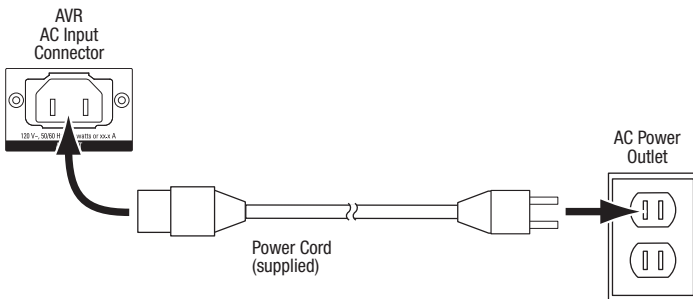
- Connect the supplied FM antenna to the AVR's FM 75Ω antenna connector. For the best reception, extend the FM antenna as far as possible.
- Bend and fold the base of the supplied AM antenna as shown and connect the antenna wires to the AVR's AM and Gnd connectors. (You can connect either wire to either connector.) Rotate the antenna as necessary to minimize background noise.



NOTE: For instructions on connecting the Trigger output to compatible equipment, please download the *AVR 156 Owner's Manual* from www.harmanardon.com.

Connect to AC Power

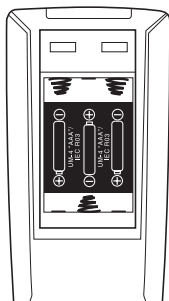
Connect the AC power cord to the AVR's AC Input connector and then to a working, non-switched AC power outlet.



Set Up the AVR

Install the Batteries in the Remote Control

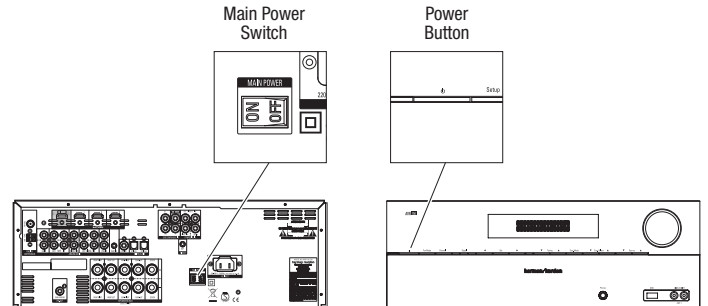
Remove the remote control's battery cover, insert the three supplied AAA batteries as shown in the illustration, and replace the battery cover.



NOTE: Remove the protective plastic from the AVR's front panel to keep it from reducing the remote control's effectiveness.

Turn On the AVR

1. Set the rear-panel Main Power switch to "On." (The front-panel Power indicator will glow amber.)
2. Press the front-panel Power button.



Configure Your Speakers

1. Turn on your TV and select the TV input where you connected the AVR in *Connect Your TV or Video Display*, on page 3.
2. Press the remote control's OSD button. The AVR's on-screen display (OSD) Master Menu will appear on the TV.

** MASTER MENU **

▶ INPUT SETUP
SURROUND SELECT
SPEAKER SETUP
SYSTEM SETUP

Note: If any of the menus disappear (this is done to prevent TV burn-in), press the OSD button again.

3. Use the remote's arrow and OK buttons to select "Speaker Setup." The Speaker Setup menu will appear.

* SPEAKER SETUP *

▶ NUMBER OF SPEAKERS
SUB MODE : SUB
CROSSOVER
DISTANCE
LEVEL ADJUST

BACK TO MASTER MENU

4. Select "Number Of Speakers." The Number Of Speakers menu will appear.

* NUMBER OF SPEAKERS *

▶ LEFT/RIGHT : ON
CENTER : ON
SURROUND : ON
SUBWOOFER : ON

BACK TO MASTER MENU

Use the remote's left and right arrow buttons to select "On" or "Off" for each speaker position, depending on which speakers you have connected to the receiver. When you're finished, select "Back To Master Menu."

For now you can skip the "Sub Mode" and "Crossover" settings. For complete details about making these settings, please download the *AVR 156 Owner's Manual* from www.harmanakardon.com.

5. Measure the distance from each speaker in your system to the listening position. Write down the distances.
6. Select "Distance." The Distance menu will appear.

```

* DISTANCE *
▶ FL : 3.0m    SL : 3.0m
  CEN : 3.0m   SUB : 3.0m
  FR  : 3.0m
  SR  : 3.0m

DELAY RESET : OFF
UNIT : FEET
A/V SYNC DELAY : 0mS

BACK TO SPEAKER SETUP
    
```

Use the remote's left and right arrow buttons to change the distance setting on the screen for each speaker so it matches the distance you measured. Note: If you want, you can change the units from meters to feet by selecting "Unit" and pressing the right arrow button. When you're finished, select "Back To Speaker Setup."

7. Select "Level." The Level Adjust menu will appear.

```

* LEVEL ADJUST*
▶ FL : 0dB     SL : 0dB
  CEN: 0dB     SUB: 0dB
  FR  : 0dB
  SR  : 0dB

CHANNEL RESET: OFF
TEST TONE SEQ: MANUAL
TEST TONE    : OFF

BACK TO SPEAKER SETUP
    
```

Use the remote's down arrow button to select "Test Tone" and press the right arrow button to set "Test Tone" to ON. You will hear test noise through the front left speaker.

8. Sit in the main listening position and note the volume of the test noise through the first speaker. Press the remote's down arrow button to advance the test noise to each of your system's speakers and note the volume level of the noise in each speaker.
9. As you advance the test noise through the speakers, use the remote's left and right arrow buttons to adjust the volumes of the channels until all of them play at the same volume. When you're finished, press the remote's OSD button to turn off the on-screen menus.

Assign the Digital Audio Connectors

1. Review the input connections you listed on the *Input Connections and Source Buttons* table, on page 4. Note which source devices you connected to the digital audio connectors. (If you did not connect any source devices to the digital audio connectors, you can skip this section.)
2. Turn on your TV and select the TV input where you connected the AVR in *Connect Your TV or Video Display*, on page 3.

3. Press the remote control's OSD button. The AVR's on-screen display (OSD) Master Menu will appear on the TV.

```

** MASTER MENU **

▶ INPUT SETUP
  SURROUND SELECT
  SPEAKER SETUP
  SYSTEM SETUP
    
```

4. Use the remote's arrow and OK buttons to select "Input Setup." The Input Setup menu will appear.

```

* INPUT SETUP *
▶ SOURCE      : DVD
  TITLE:
  AUDIO IN   : ANALOG
  AUTO POLL  : OFF
  BXR        : OFF
  TONE       : IN
  BASS       : 0
  TREBLE     : 0

BACK TO MASTER MENU
    
```

5. For each source device you connected to a digital audio input:

- a) Use the remote's up and down arrow buttons to select "Source." Use the left and right arrow buttons to change the listed source to one of the sources you connected to a digital audio input.
- b) Use the remote's down arrow button to select "Audio In."

```

* INPUT SETUP *
▶ SOURCE      : DVD
  TITLE:
  AUDIO IN   : ANALOG
  AUTO POLL  : OFF
  BXR        : OFF
  TONE       : IN
  BASS       : 0
  TREBLE     : 0

BACK TO MASTER MENU
    
```

- c) Use the remote's left and right arrow buttons to select the digital audio input where you connected the source device.

When you're finished, press the remote's OSD button to turn off the on-screen menu.

You are now ready to enjoy your AVR!

IMPORTANT: For complete information about using all of your audio/video receiver's features and capabilities, download the *AVR 156 Owner's Manual* from www.harmanakardon.com.

General Specifications

Power consumption:	<0.5W (standby); 250W (maximum)
Dimensions (W x H x D):	17-5/16" x 6-1/2" x 17-1/16" (440mm x 165mm x 435mm)
Weight:	20 lb (9.1kg)



HARMAN

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Made in P.R.C.

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