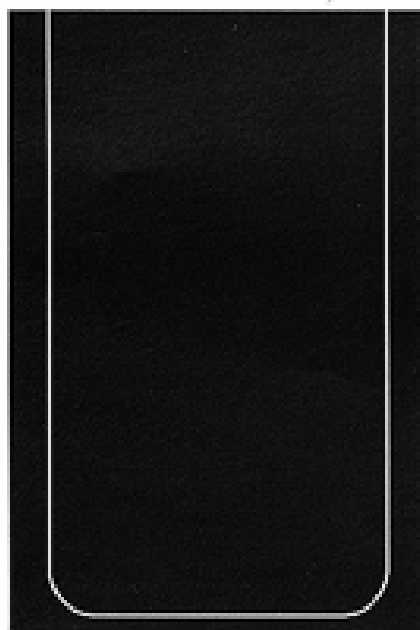
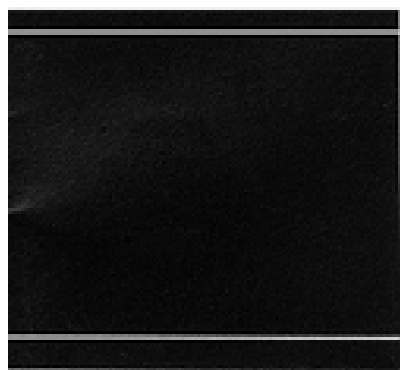


Harman Kardon AVS10 Surround Sound Speaker System



Owner's Manual

harman/kardon

Introduction & Safety Information

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Introduction:

Welcome to the Harman Kardon family! Your new AVS10 speaker system will greatly enhance the sound quality of both your computer programs and audio or video programs that are played through the Destination system.

Please take a few minutes to read these instructions so that you will be familiar with the set up and operation of the speakers. Although the instructions are brief and the controls few, a few minutes spent reviewing this information will yield dividends in the form of many years of enjoyable listening pleasure.

Safety Information:

The AVS Powered Subwoofer contains an amplifier that uses ac current. To assure safe operation of that unit, please make note of the following safety information:

Verify Line Voltage

Your AVS Subwoofer is designed for use with 115-volt ac current. Connection with other line voltage may create a safety and fire hazard, and may damage the unit.

Do Not Use Extension Cords

To avoid safety hazards, use only the power cord attached to your unit. We do not recommend that extension cords be used with this product. As with all electrical devices, do not run power cords under rugs, carpets or place heavy objects on them. Damaged power cords should be replaced immediately by trained personnel with cords meeting factory specifications.

Handle The Power Cord Gently





When disconnecting the power cord from an ac outlet always pull the plug, never pull the cord. If you do not intend to use the unit for any considerable length of time, disconnect it from the ac outlet.

Do Not Open The Cabinet

There are no user serviceable components inside this product. Opening the cabinet may present a shock hazard, and any modification to the product will void your guarantee. If water or any metal object such as a paper clip, wire or staple falls inside the unit, disconnect it from the ac power source immediately and consult an authorized service station.

Cleaning And Care Of Your Speakers

When the speakers become dirty, wipe them with a clean, dry cloth. The subwoofer may also be dusted occasionally with a soft, damp cloth or a quality furniture polish to maintain its original luster. Be extra careful to keep any liquid away from the speaker cones or the electronic components of the unit. NEVER use benzene, aerosol cleaners, thinner, alcohol or any other volatile cleaning agent. Do not use abrasive cleaners, as they may damage the finish of the cabinets. Avoid spraying insecticide near the speakers.

	CAUTION RISK OF ELECTRICAL 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.	
WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.		
CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.		
ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.		

Unpacking & Subwoofer Installation

Unpacking:

Carefully remove the speakers from their cartons and verify that you have received all of the following items:

- Four (4) AVS10 Satellite Speakers
- Four (4) Mounting Brackets for the AVS10 Satellites
- One (1) AVS10 Center-Channel Speaker
- One (1) AVS10 Powered Subwoofer

The carton and shipping materials used to protect your new speakers during shipment were specially designed to cushion them from shock and vibration.

We suggest saving the cartons and packing materials for use in shipping if you move or should the unit ever need repair. To minimize the size of the carton, you may wish to flatten it. This is done by carefully slitting the tape seams on the bottom or carefully removing any staples and collapsing the carton down to a more two-dimensional appearance. Other carton inserts may be stored in the same manner. Packing materials that cannot be collapsed should be saved along with the carton in a plastic bag.

If you do not wish to save the packing materials, please note that the carton and many other sections of the shipping protection are recyclable and can be discarded at a local recycling center.

Subwoofer Installation:

Since the subwoofer is ac-powered, it requires special care in installation. After observing the instructions for placement of the subwoofer from a sonic standpoint, make certain that the chosen location is a firm and level surface. Make certain that there is sufficient room around the speaker both for sound distribution and for ventilation of the equipment.

Avoid installation in extremely hot or cold locations, or in an area that is exposed to direct sunlight or heating equipment. Also, avoid moist or humid locations.

Speaker Placement

Speaker placement is an essential aspect of your system installation. Correct location of the individual speakers can have an important effect on the quality of sound, the spaciousness of the surround sound fields and the impact of low frequency bass effects.

Front Center-Channel Placement

Place the AVS10 Center-Channel speaker on top of your Destination monitor, as shown in Figure 1.

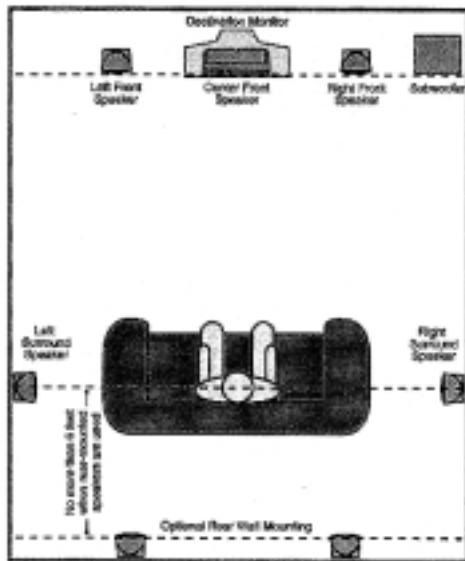


Figure 1. Speaker placement floor plan.

Ideally, it should sit above the center of the monitor, as close to the top of the screen as possible. Since the speaker is magnetically-shielded, its placement will not impact picture quality. Should you wish to attach the center speaker directly to a wall, follow the instructions shown in Figure 2.

AVS10 CENTER-CHANNEL SPEAKER (Rear View)

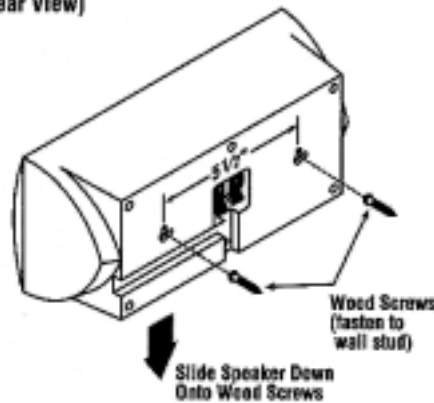


Figure 2. (Optional) To mount the AVS10 Center-Channel Speaker horizontally on a wall, fasten the wood screws (not included) to a desired wall stud, leaving a 1/8" clearance between the screw head and the wall. Align keyholes on the rear of the speaker with the wood screws and slide speaker down.

Front Left/Right-Channel Placement

Place two of the four satellite speakers on the left and right sides of the Destination monitor (refer to Figure 1). For best results, the left and right speakers should be placed a few feet away from either side of the monitor, not directly next to it. A good rule of thumb is to have the distance between the front speakers equal the distance from the Destination Monitor to the preferred seating position. The remaining two satellites will be used for rear-surround effects (see *Rear-Surround Channel Placement*).

For best imaging, place the left and right speakers in line with the center-channel speaker. If possible, adjust all front speakers to aim at ear height when seated in the listening position. Once the center speaker is positioned, adjust the height of the left and right speakers so that the tweeters of those speakers are no more than 24" off center from the tweeter on the center channel speaker.

Rear-Surround Channel Placement

Place the remaining two satellite speakers on the side walls of the room, at or slightly behind the listening position. The speakers should be located so that the bottom of each cabinet is at least two feet higher than the listener's ears when in the main listening position.

If side wall mounting is not practical, the speakers may be placed on a rear wall, behind the listening position. Again, they should be located so that the bottom of the cabinet is at least two feet higher than the listener's ears, as shown in Figure 3. Ideally, the speakers should be no more than six feet behind the rear of the seating area.

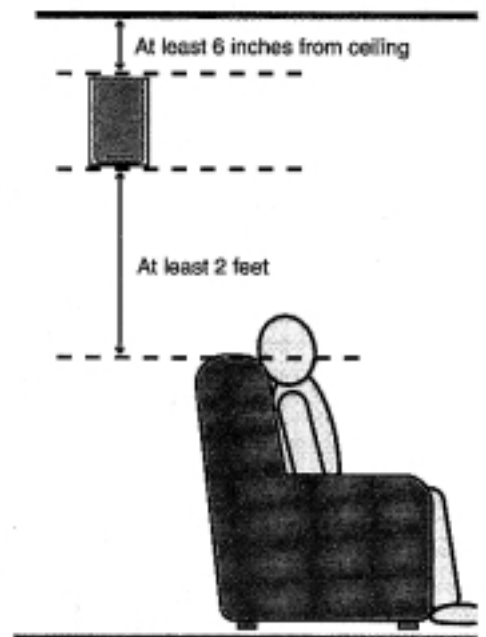


Figure 3. Ideal surround-speaker mounting height.

The satellite speakers (for front or rear) may be mounted directly to walls using either screws or the supplied mounting bracket, as shown in Figures 4 and 5.

Speaker Placement

**AVS10 SATELLITE SPEAKER
(Rear View)**

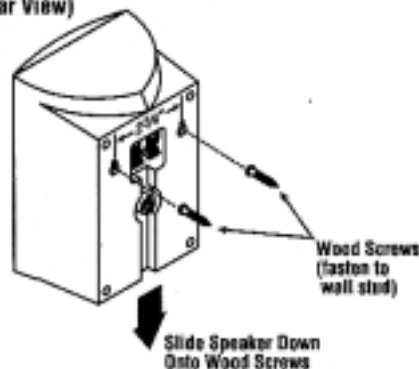


Figure 4. (Optional) To mount an AVS10 Satellite Speaker directly on a wall, fasten the wood screws (not included) to a desired wall stud, leaving a 1/8" clearance between the screw head and the wall. Align keyholes on the rear with the wood screws and slide the speaker down.

**AVS10 SATELLITE SPEAKER
(Rear View)**

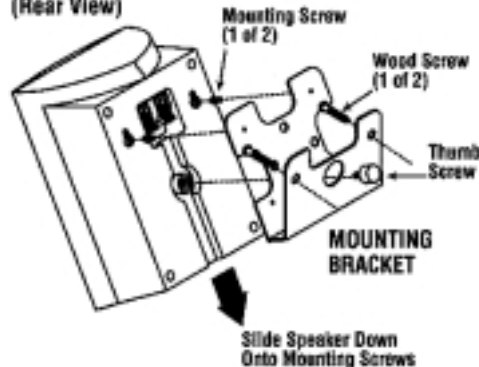


Figure 5. (Optional) For downward vertical mounting, thread the mounting screws onto the mounting bracket, leaving a 1/8" clearance between the screw head and the bracket. Fasten the mounting bracket securely to a desired wall stud with wood screws (not included). Align keyholes on the rear of the speaker with mounting screws and slide speaker down. Finally, insert and tighten thumb screw.

Subwoofer Placement

Subwoofer placement is often more complicated than other speakers, as low frequency reproduction is influenced to a much greater degree by the shape and size of your room, the "hardness" of the walls, floors and furnishings and many other factors. Moreover, it is also important to carefully adjust the output levels of the AV receiver and the subwoofer's own level control. Setting the subwoofer level too high will result in overpowering, boomy bass. Setting it too low will result in weak bass response.

Most audio authorities agree that low frequencies (below 125 Hz) are non-directional and, therefore, placement of a subwoofer within any listening room is not critical. While in theory this is true (for extremely low frequencies because of their larger wavelengths) the fact is, when installing a subwoofer within the limited confines of a room, reflections, standing waves, and absorptions generated within the room will strongly influence the performance of any subwoofer system. As a result, specific location of the subwoofer does become important, and we strongly recommend experimenting with several placements in the room before choosing a final location.

It will take time and patience to find the most pleasing acoustic location for your subwoofer. You should always judge sonic balance and blending from your normal listening position, using a wide range of source material. As a starting point, we recommend initially placing the subwoofer behind your right channel satellite speaker, about 3 or 4 inches from the wall. (We suggest trying this location first because in an orchestra, the bass instruments are usually located in the back and to the right).

If you decide to place the subwoofer on its side, never place its port too close to a wall or piece of furniture, as this will prevent it from operating properly. Since the port is an integral part of the subwoofer's design, it should freely emit sound waves into the listening room without obstruction. Again, careful experimentation will enable you to determine the best placement position.

If bass response seems low, move the subwoofer closer to a wall or corner. If the bass becomes too heavy, try turning the subwoofer so the port faces away from the wall. This will help diminish bass output.

Wiring the System

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Connect the speakers to the AVR10 receiver as shown on the Installation Guide that accompanies this system. Also refer to Figure 6 (below) while performing the following steps:

Center/Satellite Speaker Connections

1. Individually connect speaker wire to the front left, center, and right speakers. Be sure to use the same color wire to connect the red terminal on the rear of each speaker to the matching red terminal on the receiver's rear panel. Hold each spring clip down and push each wire through the proper hole, making certain that the inner copper conductors do not fray and separate and that no insulation is caught in the clip. Release the clip to secure the connection.

- Individually connect the wires from each front speaker to the AVR10's rear panel. Make certain that the speaker locations are matched to the designations (on the rear panel) for left, center, and right. Twist the plastic clamp counter-clockwise, and insert the exposed wire through the slot in the base of the binding post. Turn the clamp clockwise to tighten. **HAND TIGHTEN** the speaker terminals only.
- Repeat steps 1 and 2 for the surround speakers, again paying special attention to speaker polarity. Make certain you connect the surround speakers to the rear speaker spring-clip connections on the AVR10's rear panel.

Subwoofer Connections

- Link the AVS10 Powered Subwoofer to the AVR10 using the stereo audio connection cable.
- At the subwoofer, insert the RCA plug with the red band into the matching red Line Level Input jack for the right channel connection. Insert the plug with the white band into the line level input jack marked "left".

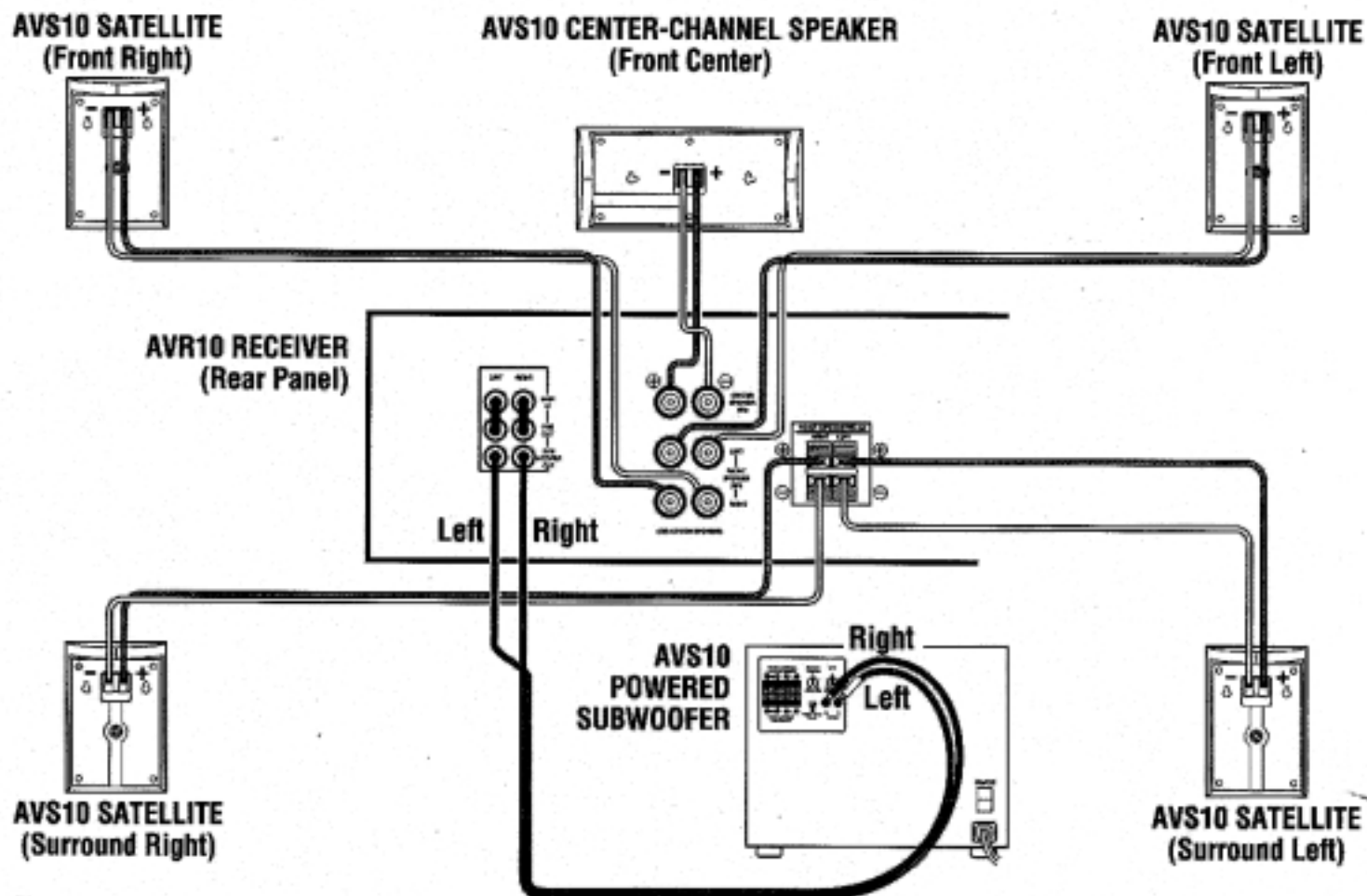


Figure 6. AVS10 Wiring Diagram.

Specifications

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AVS10 Satellite Speakers

Frequency Response:	200 Hz ~20 kHz
Crossover Frequency:	5 kHz
Sensitivity:	87 dB @ 1 watt/1 meter
Nominal Impedance:	8 ohms
Power Rating:	15 ~ 80 watts (rms)
Driver Complement:	3 1/2" paper-cone woofer 1/2" polycarbonate-dome tweeter (with acoustic lens)
Cabinet Finish:	Black
Dimensions (<i>w x b x d</i>):	4 3/4 x 7 x 3 3/4" (not including bracket) 119 x 175 x 94 mm

AVS10 Powered Subwoofer

Amplifier Power:	50 watts (rms)
Frequency Response:	32 ~ 250 Hz (-6 dB)*
* Determined by crossover setting	
Crossover Frequency:	50 ~ 200 Hz (continuously variable)
Driver Type:	6 1/2" paper-cone woofer
Voice-Coil Diameter:	1"
Cabinet Finish:	Black
Dimensions (<i>w x b x d</i>):	14 x 11 x 7 1/4" 356 x 280 x 184 mm
Weight:	21 lb (9.5 kg)

AVS10 Center-Channel Speaker

Frequency Response:	180 Hz ~20 kHz
Crossover Frequency:	5 kHz
Sensitivity:	87 dB @ 1 watt/1 meter
Nominal Impedance:	8 ohms
Power Rating:	15 ~ 80 watts (rms)
Driver Complement:	(2) 3 1/2" paper-cone woofers 1/2" polycarbonate-dome tweeter (with acoustic lens)
Cabinet Finish:	Black
Dimensions (<i>w x b x d</i>):	10 7/16 x 4 3/4 x 3 3/4" 265 x 119 x 94 mm

All features and specifications are subject to change without notice.

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