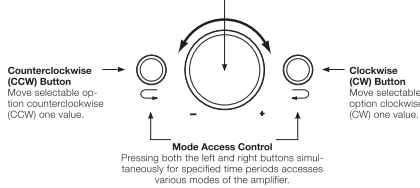


MS-A5001 USER CONTROLS

Rotary Encoder


Rotates clockwise (CW) and counterclockwise (CCW). Each detent represents a value increase (CW) or decrease (CCW).



MS-A5001 SETTINGS GUIDE

INITIAL SETUP

Activating the Controls

Press both CCW and CW buttons at the same time for less than three seconds, and release the buttons to activate the controls. The adjustment-selection indicator  will light up. Use the CCW and CW buttons to move the indicator to the parameter that you wish to adjust. After you've made your adjustments, and the controls have been inactive for more than 30 seconds, the selection-indicator light will go out, and the controls will become deactivated to prevent unintentional adjustment of the amplifier's controls.



Setting the Input Mixer

Once the controls are active, press the CW or CCW button until the input mixer is selected for channels 1 and 2. Turn the rotary control to select the input connector(s) that will feed output channels 1 and 2.

- 1 See "System Diagrams" on pages 12 and 13 for practical examples.
- 2



Setting the Input Level, and Enabling or Disabling Signal-Sensing Turn-On BEFORE YOU BEGIN

If the factory-installed system to which you have connected your MS-series amplifier shows a "speaker disconnected" error message or fails to provide an output signal, move the input-level switch to the H2 position. You may need to turn the vehicle or the factory-installed head unit off and then back on to reset the error message.



NOTE: DO NOT USE THE H2 SETTING WITH THE RCA OUTPUTS OF AFTERMARKET HEAD UNITS!

How to Set a Band-Pass Filter

To build a proper band-pass filter, the low-pass frequency must be greater than the high-pass frequency. The MS-A5001 will not allow you to set the low-pass filter frequency to a lower value than the high-pass filter frequency. To enable a band-pass filter, first select the high-pass filter frequency and slope as indicated above. Next, select the low-pass filter frequency and slope. Once the settings are complete, the controls will time out after 15 seconds.



OUTPUT LEVELS

Setting the Output Level

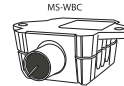
Use the output-level control to adjust the balance between the subwoofer and the full-range speakers, between the front and rear speakers, or between the midrange, mid-bass or tweeters in a bi-amped or tri-amped (all active) system. The output level is adjustable in 0.5dB increments, with a display of 80 indicating maximum output. The lowest setting will mute the output and "—" will show in the display.

To set the output level, press the CW or CCW buttons to highlight the output-level parameter for adjustment, and turn the rotary controller to adjust the output level.

WIRELESS BASS CONTROL

Overview

The MS-WBC wireless bass control (sold separately) is battery-powered; it also includes a +12V plug that can be connected to a +12V source in your vehicle. The MS-WBC transmits a signal only when the control is rotated. The amplifier(s) must be on to receive and respond to the control. Adjustments made to the control when the amplifier(s) are off aren't recognized.



How to Pair the MS-WBC Wireless Bass Control with the MS-A5001
The optional MS-WBC wireless bass controller must be paired to the amplifier in order to be used. When the amplifier is first turned on, it is not paired with any controller.

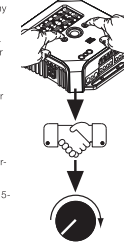
Press and hold both CCW and CW buttons simultaneously for more than three seconds and the amplifier will enter Setup mode. Continue pressing the buttons for four more seconds until the pairing indicator  is illuminated. Release the CCW and CW buttons.

Pairing must occur within 15 seconds. The time remaining is indicated at the far right of the display. Turn the knob on the bass controller during this 15-second period. The amplifier will recognize the controller, and the controller will automatically pair the two together.


After a successful pairing, the upper high-pass filter digits will display the bass controller version number for 3 seconds. Then the amplifier will return to the normal (Run) mode.





If a valid pairing has not occurred, the amplifier will remain unpaired. After the 15-second countdown, the amplifier will return to the setup mode.


If your system includes several MS-series amplifiers, pair them one at a time. Once all the amplifiers are paired and have returned to the normal (Run) mode, turn the knob to synchronize all of the amplifiers.




To Set the Input Level:

1. Move the input-level control to the Hi position (or H2 if you are connecting to a factory-installed system with open-circuit protection).
2. Set the bass, treble, balance and fader controls on your head unit to the center (or flat) positions. Set "loudness" to off. Deselect any sound-enhancement settings (such as DSP, surround sound or FC).
3. Insert the setup CD into your head unit and verify that the CD is playing.
4. Enter the setup mode by pressing CW and CCW buttons simultaneously for more than three seconds until the input-level adjustment icon  illuminates. The amplifier's output will be muted (output-level indicator will show "—" in the display).
5. Turn the head unit's volume control all the way up (to maximum output).
6. Using a small screwdriver on the level-adjustment dial next to the input switch, adjust the input-level control up or down while watching the icons on the amplifier's display panel.

If the green "up" arrow  icon is lit, turn the control clockwise until the  icon lights up. If the red "down" arrow  icon is lit, turn the control counterclockwise until the  icon lights up.

Note: If turning the control fully clockwise doesn't cause the  icon to light, move the input-level control to the "Lo" position and try again.

Once the  icon lights up, stop adjusting. Repeat the procedure for the input-level control on the other channels. When both check marks light up, you have properly set the input levels for each channel pair.

To Enable or Disable Signal-Sensing Turn-On:

7. While in setup mode, enable or disable signal-sensing turn-on by turning the Rotary Control clockwise or counterclockwise to select "SEN On" or "SEN OFF" in the display. If you have connected a remote turn-on lead, set to "SEN OFF."
8. Turn the volume control on your head unit down and remove the setup CD. If you miss or circumvent this step, the audio system will reproduce a loud test signal that could damage your speakers when you exit the setup mode.
9. Press and release the CW and CCW buttons simultaneously to exit the setup mode.
10. Do not adjust the input-level controls further. Use the output-level control to balance the channel levels and to "tune" the system.

Mode	Function
SEN On	Signal Sensing is ON
SEN OFF	Signal Sensing is OFF



SETTING THE FILTERS (CROSSOVERS)

There are 98 selectable frequencies for the low-pass and high-pass filter settings. The selectable frequencies are detailed in the table to the right.

Getting to the Crossover Settings

Press both CCW and CW buttons at the same time for less than three seconds; release the buttons to activate the controls. Use the CCW and CW buttons to navigate to your preferred crossover-adjustment parameter.

How to Set a High-Pass Filter



Navigate to the high-pass filter frequency parameter . Using the rotary encoder, select the desired cutoff frequency. Then navigate to the high-pass filter slope parameter  and, using the rotary encoder, select the desired filter slope.

High-Pass Example

Use the CW and CCW buttons to navigate to the low-pass frequency parameter and set to "OFF".



How to Set a Low-Pass Filter

Navigate to the low-pass filter frequency parameter  and, using the rotary encoder, select the desired cutoff frequency. Then navigate to the low-pass filter slope parameter  and, using the rotary encoder, select the desired filter slope.

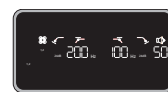
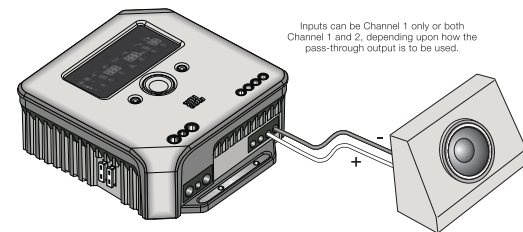
Low-Pass Example

Use the CW and CCW buttons to navigate to the high-pass frequency parameter and set to "OFF".



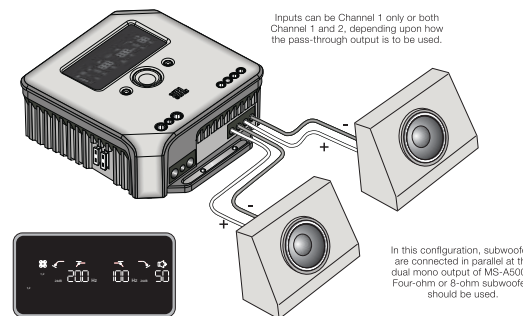
Available Crossover Frequency Settings			
20.0Hz	40.0Hz	60.0Hz	80.0Hz
21.0Hz	41.0Hz	61.0Hz	81.0Hz
22.0Hz	42.0Hz	62.0Hz	82.0Hz
23.0Hz	43.0Hz	63.0Hz	83.0Hz
24.0Hz	44.0Hz	64.0Hz	84.0Hz
25.0Hz	45.0Hz	65.0Hz	85.0Hz
26.0Hz	46.0Hz	66.0Hz	86.0Hz
27.0Hz	47.0Hz	67.0Hz	87.0Hz
28.0Hz	48.0Hz	68.0Hz	88.0Hz
29.0Hz	49.0Hz	69.0Hz	89.0Hz
30.0Hz	50.0Hz	70.0Hz	90.0Hz
31.0Hz	51.0Hz	71.0Hz	91.0Hz
32.0Hz	52.0Hz	72.0Hz	92.0Hz
33.0Hz	53.0Hz	73.0Hz	93.0Hz
34.0Hz	54.0Hz	74.0Hz	94.0Hz
35.0Hz	55.0Hz	75.0Hz	95.0Hz
36.0Hz	56.0Hz	76.0Hz	96.0Hz
37.0Hz	57.0Hz	77.0Hz	97.0Hz
38.0Hz	58.0Hz	78.0Hz	98.0Hz
39.0Hz	59.0Hz	79.0Hz	99.0Hz

SYSTEM DIAGRAMS



Example of filter and input settings for this configuration

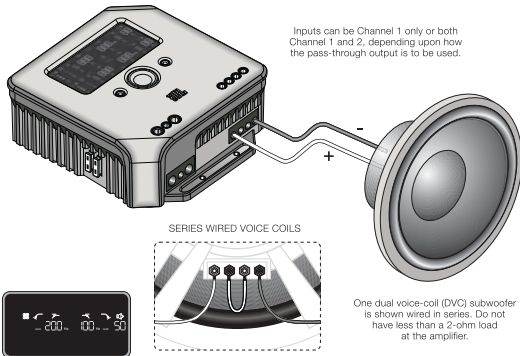
In this configuration, a single subwoofer is connected at one of the MS-A5001 outputs. A 4-ohm or 2-ohm subwoofer can be used.



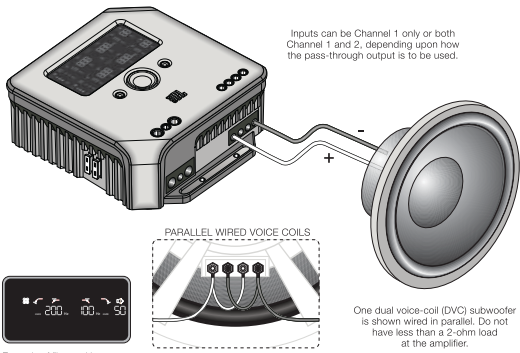
Example of filter and input settings for this configuration

In this configuration, subwoofers are connected in parallel at the dual mono output of MS-A5001. Four-ohm or 8-ohm subwoofers should be used.

SYSTEM DIAGRAMS (DVC SUBS)



Example of filter and input settings for this configuration



Example of filter and input settings for this configuration

CALCULATING SPEAKER LOADS

Use these formulas to calculate total series or parallel resistance of multiple speakers or voice coils on the MS-A5001 amplifier. "R" with a number denotes each nominal voice-coil impedance (such as R₁ and R₂). R_T is the total combined nominal impedance presented to the amplifier. Never connect loads below a total of 2 ohms.

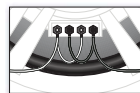


Series Connection



$$R_t = R_1 + R_2 + R_3 \dots$$

Parallel Connection



$$R_t = \frac{1}{\frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} \dots}$$

SPECIFICATIONS

Power output CEA® 2006	500W RMS x 1 channel @ 4 ohms 500W RMS x 1 channel @ 2 ohms
Bridged mode	80dB
Signal-to-noise ratio	106dB
Frequency response	20-270Hz
Maximum input sensitivity	100mV
Maximum input voltage	20V
Dimensions (L x W x H)	7-3/16" x 8-1/4" x 2-3/4"
Weight	183mm x 210mm x 70mm
Beauty carton dimensions	13-15/16" x 11-9/16" x 10-5/16"
Gross weight (with beauty carton)	354mm x 294mm x 264mm



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Harman Consumer, Inc.
8500 Balboa Boulevard
Northridge, CA 91329 USA