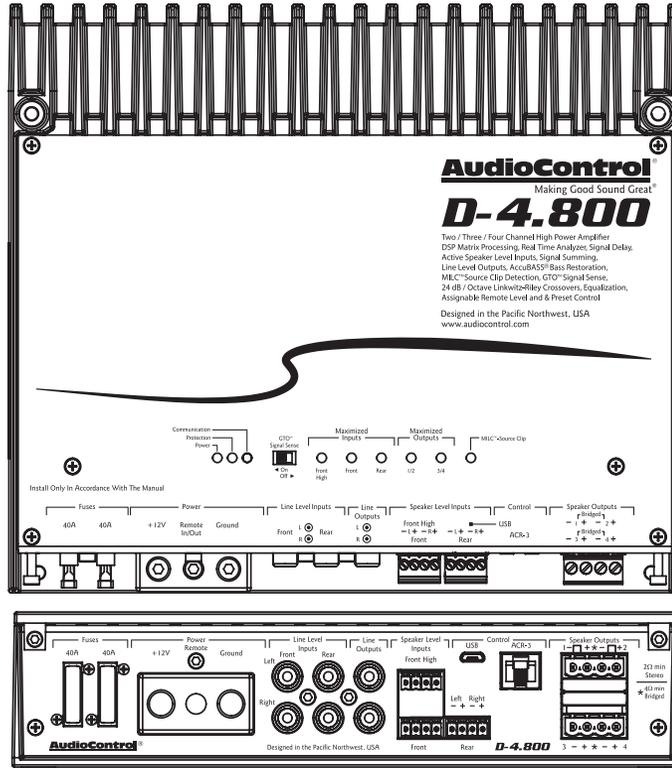


AudioControl®

Making Good Sound Great™

Features

- 2/3/4 high power amplifier channels
- 4x 125 W @ 4Ω, 4x 200 W @ 2Ω, 2x 400 W @ 4Ω Bridged
- Smart User Interface software included
- Input and Output RTA for precise and informed tuning
- GTO™ Signal Sensing (ch 1-2)
- MILC™ Clip Detection (ch 1-2)
- AccuBASS®
- Signal Summing
- Signal Delay
- 12 and 24 dB/octave crossovers
- 30 band equalizer
- Optional ACR-3 remote for preset recall and level control
- Solid and Rugged Chassis
- Pine Scented DSP



D-4.800

High Power Multi Channel Amplifier
with DSP Matrix Processor

Quick Start Guide

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as mufflers, silencers, exhaust pipes, or other apparatus (including amplifiers) that produce heat.
9. **WARNING:** Improper installation may lead to permanent injury or death. Installation of the apparatus must be done with great care by qualified personnel, to prevent damage to fuel lines, power, and other electrical wiring, hydraulic brake lines, and other systems, that might compromise vehicle safety.
10. Provide +12V and Ground insulated wiring of between 8 and 3 AWG to ensure adequate current to the amplifier.
11. Use rubber grommets to protect wiring whenever passing wires through metal openings or bulkheads.
12. Only use attachments/accessories specified by the manufacturer.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as the power input terminals are damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

14. This apparatus shall not be exposed to dripping or splashing, and no object filled with liquids, shall be placed on the apparatus.
15. Fuses shall be replaced only with the correct type and fuse value, and only when the apparatus is powered off.
16. Exposure to high sound pressure levels may lead to permanent hearing loss. Take every precaution to protect your hearing.



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.



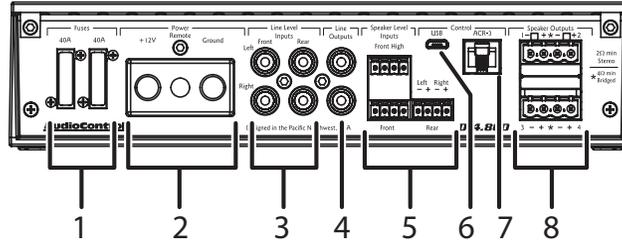
The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Caution: to reduce the risk of electric shock, do not disassemble the apparatus, other than to remove the top panel to access the controls. There are no user-serviceable parts inside. Refer servicing to qualified personnel.



Recycling notice: If the time comes and this apparatus has fulfilled its destiny, do not throw it out into the trash. It has to be carefully recycled for the good of mankind, by a facility specially equipped for the safe recycling of electronic apparatus. Please contact your local or state recycling leaders for assistance in locating a suitable nearby recycling facility. Or, contact us and we might be able to repair it for you.

Features



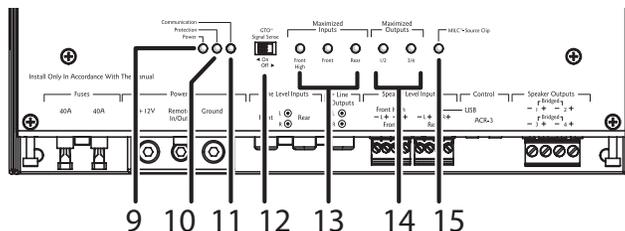
- 1. Fuses 40A** – Replace these fuses only with the exact same style and Ampere rating. Disconnect 12V power before changing or inspecting the fuses.
- 2. Power Input Terminal +12V** – The left screw terminal connects to the +12V battery binding post of the vehicle. Use good quality insulated wire, between 8 and 3 gauge.
Power Input Terminal Ground – The right screw terminal connects to a good ground connection on the vehicle. Use good quality insulated wire, between 8 and 3 gauge.
Remote Power Input Terminal – The middle screw terminal connects to the 12V remote trigger output of some head units. When the head unit is turned on, then the D-4.800 will turn on. Alternatively, you can use the GTO™ feature of the D-4.800 so it will turn on when an audio signal is detected at the speaker-level or line-level inputs of channels 1-2 (front).
- 3. RCA Analog Line-Level Inputs** – The line-level output from the head unit or factory-installed radios can connect here, so the D-4.800 will receive the line-level audio signals.
- 4. RCA Analog Line-Level Outputs** – These line-level analog outputs from the D-4.800 connect to the line-level inputs of your power amplifiers and other equipment. The matrix capabilities of the D-4.800 allow you to pick and choose the outputs from any combination of inputs, add crossovers and EQ as required.
- 5. Speaker-Level Inputs** – The speaker-level output from amplifiers and factory installed radios can connect here, so the D-4.800 will receive the audio signals this way and do its thing. Make sure that you follow the plus and minus polarity markings on the D-4.800 and match it to the polarity of the speaker wiring. Speaker-level Inputs 1-2 have the GTO™ (great turn on) signal-sense circuit that will awaken the D-4.800 when an input signal is present.

- 6. USB Micro Connector** – This connects to the USB A port of your computer in order to use the control software to configure the D-4.800.
- 7. Remote Control Connector** – This connects to the optional ACR-3 remote level control using a standard telephone cord and connectors.
- 8. Speaker-Level Output Terminals** – These screw terminals connect with speaker wire to your loudspeakers. Make sure that the average combined speaker impedance does not dip below 2 Ohms, or 4 Ohms in Bridged mode. Outputs 1 and 2 can be combined in Bridge mode to power a single speaker. Use the 1+ and 2- terminals only. Outputs 3 and 4 can also be combined in bridge mode, use the 3+ and 4- terminals only.
- 9. Power LED** – If you have connected your battery power, vehicle ground, and turn-on lead (or GTO™ signal sensing) correctly, then this light should be **GREEN** to indicate the power is ON. An internal blue glow will also emanate from the heatsink area to indicate that the power is ON. There are times when this blue glow will flash, such as during power-up, and when the protection circuits have detected a problem. See the table below.
- 10. Protection LED** – The D-4.800 amplifier has built in diagnostic codes to tell you exactly what is going wrong should the amplifier detect a problem. Below is a list of diagnostic codes to help you understand what is going on with your amplifier:

If the protection LED should come on, read the red codes quickly before turning off the system and investigating. Shorts, like

crushed-velvet hot pants, are not a good thing. Note that the blue power codes mentioned in the table are for the internal blue glow from behind the heatsink area, and not the power LED which is green. You might not notice the subtle blue glow at first, unless you are in the dark or the shade. If there seems to be a problem with the unit, the sensing circuit will shut down the unit to protect itself, and this protection LED will come on. For example, this might happen if the temperature within the unit is too high. Check there is good ventilation around the unit, and that the speaker wires are not short circuiting, and check that you are not running too low of a speaker impedance.

Power (Blue) Codes	(These are the blue LEDs inside the unit)
Power Up	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
Reset Boot	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
Protection Activated	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
Protection (Red) Codes	(This is the red Protection LED on the unit)
1 Short	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
2 Repeated Short	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
3 Under Voltage	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
4 Over Voltage	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
5 DC Offset	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
6 Thermal Heatsink	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●
7 Thermal Transformer	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●



11. Communications LED – This LED turns on when there is USB activity between the D-4.800 and your computer during set up.

12. GTO™ Signal Sense – In the ON position, the D-4.800 amplifier will turn on gracefully when it detects an incoming audio signal on inputs 1 and 2, and it will turn off after a period of time when the audio signal fades away to silence. In some situations, factory installed audio systems may turn on or “wake up” due to convenience features like door chimes, alarms, and cell phone signals that trigger the source unit in the vehicle to come on. To prevent these from turning your audio system on unexpectedly, you can bypass the GTO™ circuit by moving the GTO™ switch to the OFF position and use a switched 12-volt signal connected to the Remote In terminal instead.

13. Maximized Input LEDs – These LEDs illuminate when a maximum audio signal is present on any of the analog audio inputs. During power-up, these LEDs and the output LEDs will turn on momentarily, one after the other. Turn down the levels if these LEDs are on a lot.

14. Maximized Output LEDs – These LEDs illuminate when there is maximum signal present on any of the analog audio outputs. Turn down the output levels if these LEDs are on a lot.

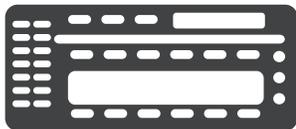
15. MILC™ Source Clip LED – The MILC™ (Maximum Input Level Control) patent-pending level-setting circuit (on inputs 1-2 only) prevents clipping and damaging distortion. It calculates when the waveform of an incoming audio signal is clipping, and if it is, this LED will fulfill its destiny and shine forth.

With this advanced feature, you are able to optimize the level of the incoming audio signal until the Source Clip LED is just about to come on. If the LED comes on during normal operation, you should adjust the level of the audio signals before they reach the D-4.800.

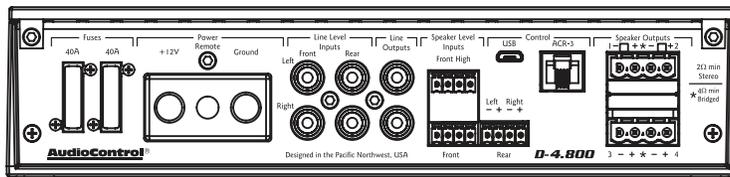
After an interview with the lead engineer included the words “differential calculus,” and some hieroglyphics on a chalk board, the technical writer’s eyes glazed over and he had to be brought round with a nice cup of tea and two donuts with sprinkles.

Power Connections

Head Unit



Remote
+12V Trigger



+12V

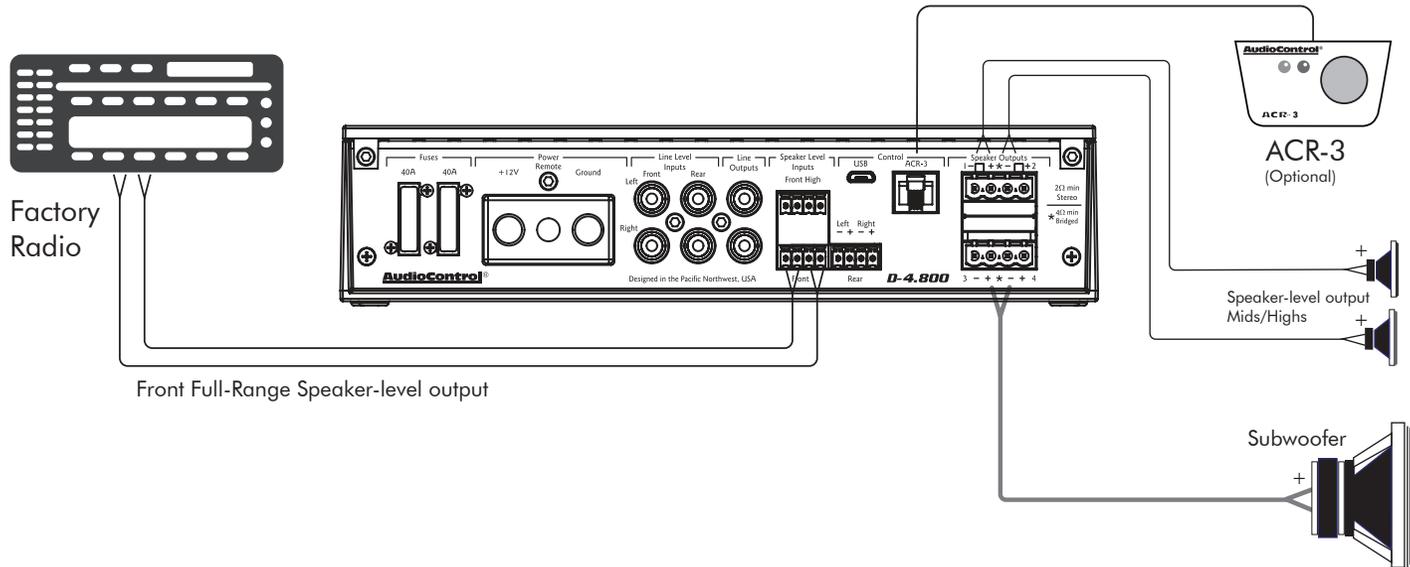
Ground

In this example, the head unit has a +12V trigger output that is connected to the D-4.800 remote input terminal. When the head unit is turned on, it will turn on the D-4.800.

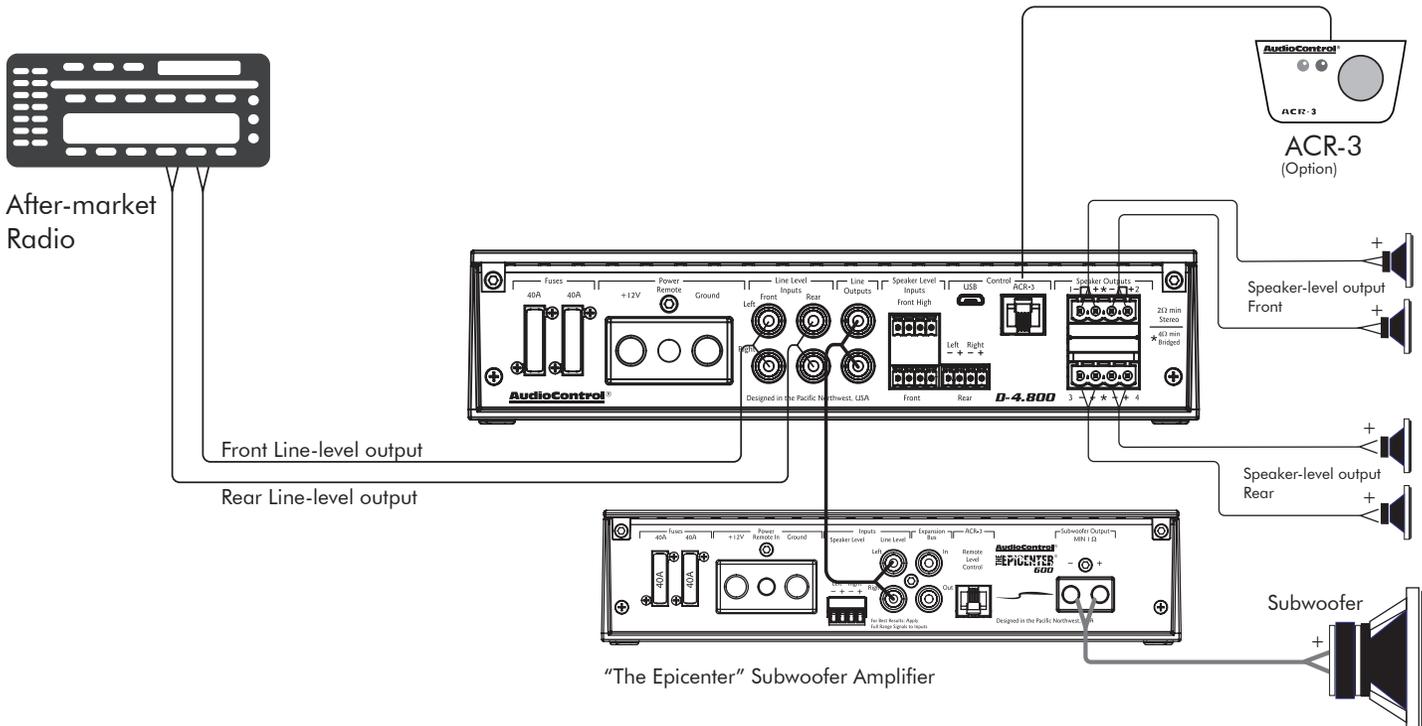
Alternatively, the GTO™ signal sense feature can be used to gently turn on the D-4.800 when an audio input signal is detected at inputs 1-2. (Then the connection to the D-4.800's remote input terminal is not required.)

The +12V power wiring and Ground wiring should be between 8 and 3 AWG.

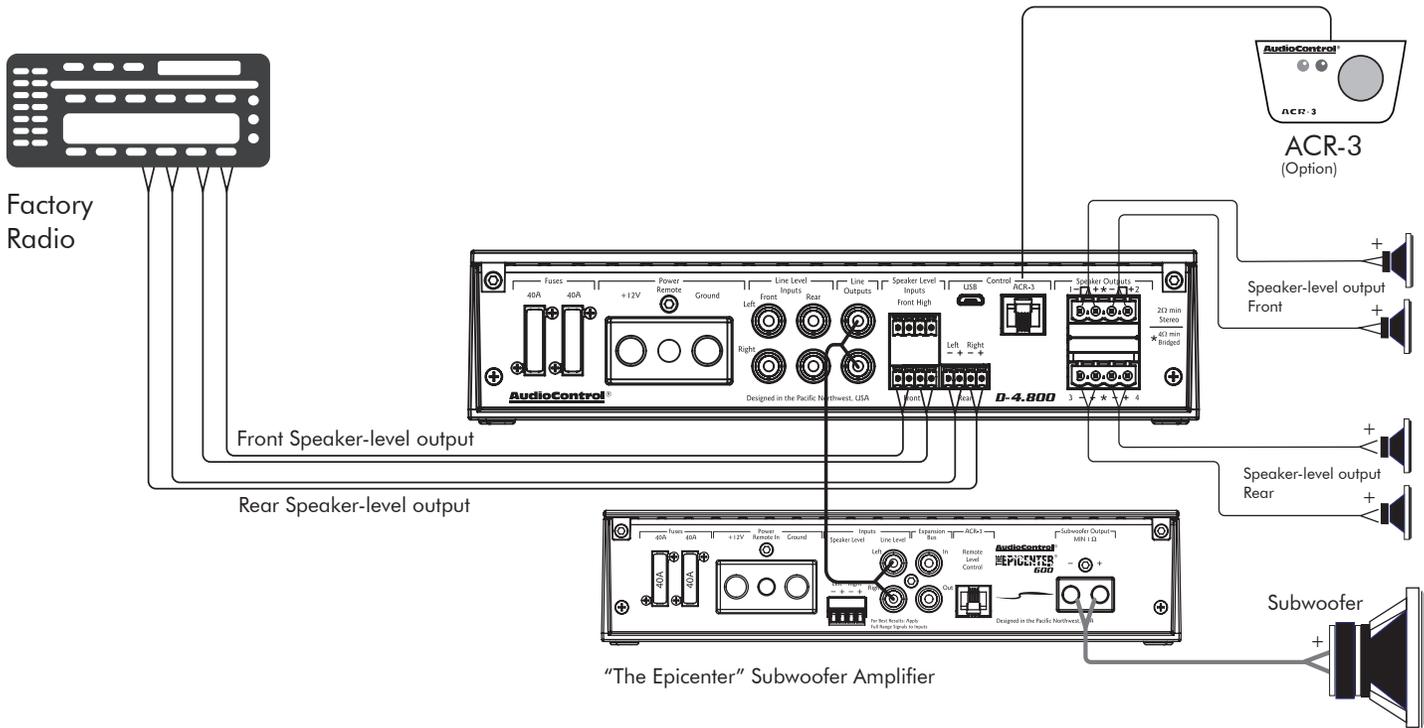
System #1: Using speaker-level inputs



System #2: Using line-level inputs



System #3: Using an external subwoofer amplifier



Installation

We recommend mounting the D-4.800 in the trunk/boot or cargo area of the vehicle. An alternative location would be under the front seat of your vehicle if there is enough room to install and also to reach the controls. When choosing a location, please keep these things in mind:

1. Before you start, disconnect the +12V positive and negative cables from the battery in the vehicle to prevent any damage to the vehicle or the amplifier during the installation process.
2. Pick a mounting location that will provide access to the controls and connections, provide adequate ventilation, and also protect the unit from heat, moisture, and dirt.
3. The D-4.800 needs to be securely mounted using the four mounting holes located in each corner.
4.  Before drilling any holes, take every precaution to prevent damage to fuel lines, power and other electrical wiring, hydraulic brake lines, and other systems, that might compromise vehicle safety.
5. Always mount the unit as far from the antenna in the vehicle as possible, and away from the radio or any other RF sensitive electronics in the vehicle.
6. Use between 8 and 3 gauge insulated power cable to connect the +12V terminal of the D-4.800 to the positive terminal of the vehicle battery.
7. Use between 8 and 3 gauge insulated cable to connect the ground terminal of the D-4.800 to the negative terminal of the vehicle battery.
8. The D-4.800 has speaker-level inputs that are designed to accept amplified, speaker-level signals from a factory source unit or amplifier. You may need to refer to a factory service manual or wiring-harness schematic to determine which wires are the speaker wires for your system. If you are unsure which are the speaker wires, we recommend you look at the color of the speaker wires connected to the speakers and follow them back to the source. Connect the speaker wires to the D-4.800 speaker-level input plugs using the correct polarity.
9. Line-level audio signals will generally come from your after-market radio, or if you are really getting the most out of your car audio system they may be coming from a really awesome product like the AudioControl LC6i (shameless plug). There are generally only two things to consider when using the line-level RCA inputs:
 1. Use good shielded or twisted pair RCA cables.
 2. Run your RCA cables at least 18" away from power and speaker cables to avoid picking up radiated noise in your system.

ACR-3 Dash Control Option

The optional AudioControl ACR-3 dash control is a dual-function remote for your D-4.800. It may be mounted under the dash using its own bracket, or through a custom hole in the dash. The endless knob should be within reach of the driver, and in a spot where the two LEDs are plainly visible. Disconnect the vehicle battery +12V and Ground connections before installation.



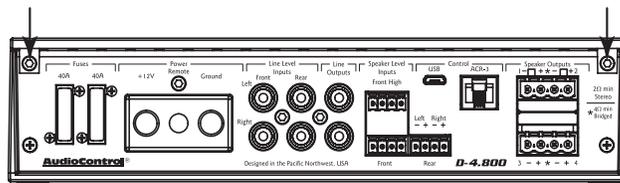
1. When the left (**BLUE**) LED is on, turn the remote knob clockwise to turn the level up, and counterclockwise to turn it down.
2. To recall a memory preset with the ACR-3, press the knob in to switch from blue mode (volume control) to **RED** mode (preset recall). If, within two seconds, you turn the knob clockwise one click, it will recall one preset higher than you are currently operating. If, within two seconds, you turn the knob counter-clockwise, it will recall one preset lower than you are currently operating (for example, to change from Memory 2 to Memory 1).

Top Lid Removal

The top lid must be removed to gain access to the controls, and then put back on again to protect the controls from dust bunnies.

Removal Procedure

1. Locate the two screws that hold the straight edge of the lid onto the connector side of the amplifier.



2. Use the supplied hex key to loosen both screws just enough until this edge of the lid can lift freely up just a little. (There is no need to remove the screws all the way, in case you lose them.)
3. Slide the lid toward the heatsink fins just a tad, before further lifting the straight edge of the lid about 2", then disengage the remaining two points of contact (under the wavy edge).
4. Place the lid in a safe and handy place, ready for the time when you have finished adjusting the controls to your immense satisfaction, and just before Chivers brings tea and sandwiches.

Quick Start

Before you start, please take a moment to visit our knowledge base: www.audiocontrol.com/knowledge-base. It will help you with a plethora of sound advice, and help set the mood for the installation.

1. The following details give a brief overview of the steps required to install the D-4.800 in your system. The steps below are explained in more detail throughout the on-line manual.
2.  Undo the +12V and Ground connections to the car battery before making any connections to the D-4.800.
3. When making connections, designate red RCA plugs as right, and designate white, black, or grey plugs as left.
4. Use quality interconnect cables. We know from experience that really cheap cables can cause a multitude of problems.
5. Connect the +12V input terminal of the unit to the +12V terminal of the vehicle battery.
6. Connect the Ground terminal of the unit to the negative terminal of the vehicle battery.
7. Connect the remote power terminal of the unit to the remote turn-on switch of your source unit. Alternatively, you can skip this connection and use the GTO™ Signal sensing on inputs 1-2.
8. Connect your audio inputs to the unit – either speaker-level or line-level RCA.
9. Run the optional ACR-3 remote to the front of the vehicle to adjust the level on the fly.
10. Note that the following initial setting up is carefully done with no speakers connected, to help prevent tweeter damage (for example) during the D-4.800 setup.
11. When you are satisfied that all is looking good and correct, reconnect the vehicle battery. Make sure that any external amplifiers are off.
12. Install the control application onto your computer, but make sure that the computer is not connected to the unit during the installation.
13. Connect the computer to the unit using the USB micro connection, and run the application. The unit will be recognized and you can enter an initial password (1234) that you can customize later.
14. Use the application to adjust every aspect of the D-4.800 operation until you have the system just right. Set up the optional remote control to adjust the levels you want.
15. With the computer removed, the D-4.800 will now operate just as you have it set up.
16. Turn off the power, and connect your loudspeakers to the D-4.800 or your external amplifiers.
17. Turn on the system and play the source at minimum volume to begin with, then bring up the levels slowly.
18. Enjoy the drive!

The Display

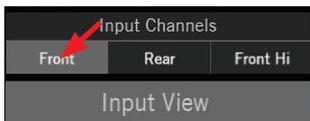
The display has three main sections: Input View, Output View, and Dashboard View, in addition to the top menu bar (File, Tools, Help) and the Memory (1, 2, 3, 4) section.

For more details of the software application, please take a look at the on-line owner's manual.

Input View

This display allows you to set the input gains, polarities and delays. The goal of the Input View display is to get all of the signals arriving to the D-4.800 evenly balanced in level, and time-aligned so that they can be summed as desired later. The integrated Real Time Analyzer (RTA) is helpful in achieving this objective.

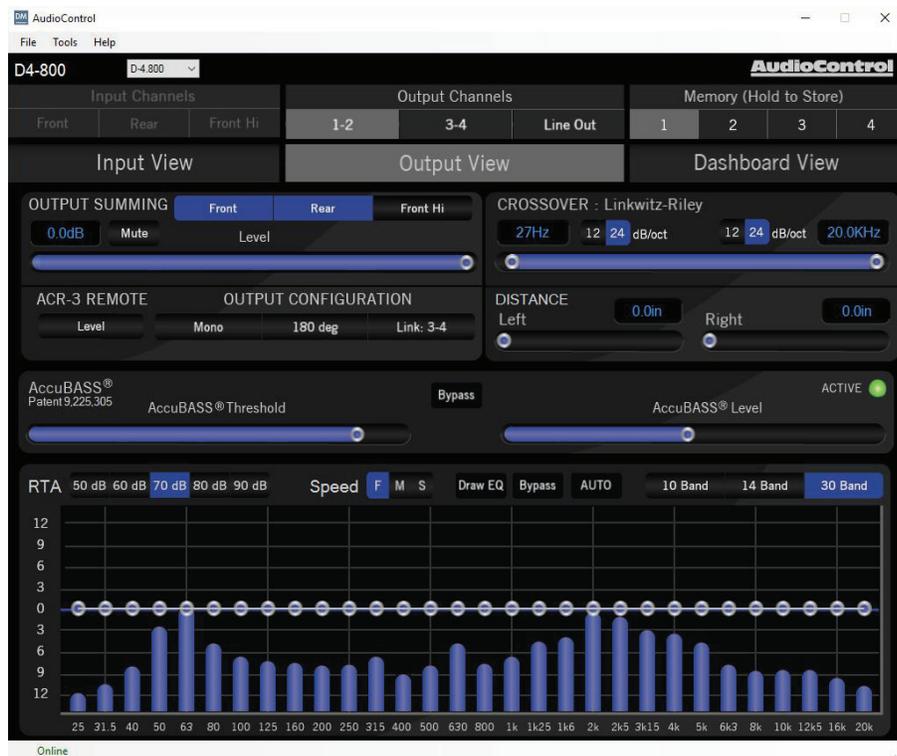
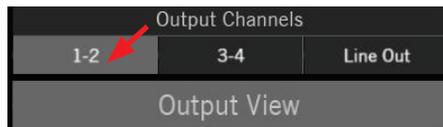
1. Select an input pair from this row, then the parameters shown will be for this input pair.



Output View

This is where you will spend the majority of your tuning time, as it is where you will set routing and summing, output levels, crossovers, EQ and AccuBASS® settings. The D-4.800 is exceptionally flexible, and can be configured to use any output in any bandwidth or source and match the needs of the installation.

1. Select an output from this list, and it will be highlighted in glorious living grey. Then all the parameters shown are for this output pair.



Dashboard View

This display allows you to conveniently see the settings of any one input and any one output simultaneously. All of the controls work the same as the Input View and Output View.



Specifications

All specifications are measured at 14.4 VDC (standard automotive voltage). As technology advances, AudioControl reserves the right to continuously change our specifications, like our Pacific Northwest weather, although we are working on changing that as well.

D-4.800

Power Output	4 x 125 Watts @ 4 Ohms	Digital input sample rate32 - 96 kHz
.....	4 x 200 Watts @ 2 Ohms	Digital input bit depth16 / 24 bit
.....	2 x 400 Watts @ 4 Ohms Bridged	Clipping detection	MILC™ pat pend
Frequency Response	20 Hz - 24 kHz	Crossover filters	12 or 24 dB Linkwitz-Riley
S/N Ratio	102 dBa, Ref 200 Watts @ 2 Ohm	Crossover frequencies	20 Hz - 20 kHz
Damping Factor	670 at 10 V, 4 Ohm Output, 100 Hz	Weight50 lbs
THD+N	< 0.1%	Dimensions	9.00" W X 7.95" D X 2.10" H
Bass Processing	AccuBASS® Restoration		
.....	(AccuBASS® Patent # 9,225,305)		
Power / Ground Wire Gauge	Between 8 and 3 AWG		
Fuse Rating	2 x 40 Amps		
Speaker-Level Inputs	6 x summable, 40 V (400W) max		
Line-Level Inputs	4 x balanced RCA, 8 V max		
Line-Level Outputs	2 x balanced RCA, 8.5 V max		

Hand-grown and ecologically harvested from the wooded slopes of Mountlake Terrace, Washington.

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