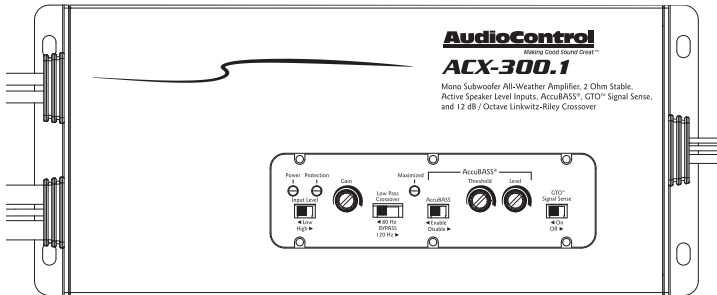


# **AudioControl®**

*Making Good Sound Great™*

## **Features**

- Compact High Power Mono Subwoofer Amplifier
- High Current Design
- 1 x 300 Watts @ 2 Ohms, 1x175 watts @ 4 Ohm
- 12 dB/Octave Linkwitz-Riley Alignment Crossover
- GTO™ Signal Sense (Great Turn On)
- 2 RCA Inputs - switchable for Low and High Level signals
- Optional wired ACR-1 Remote Control for Output Level
- All-weather rated - IPX6 rated!
- Cage-free op-amps



# **ACX-300.1**

COMPACT HIGH POWER ALL-WEATHER MONO AMPLIFIER

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 wiring of sufficient size to ensure adequate current to the amplifier. For the ACX-300.4 this means 8 gauge wire or thicker.
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 or objects have fallen into the apparatus, does not operate normally, or has been dropped.

14. Fuses shall be replaced only with the correct type and fuse value, and only when the apparatus is powered off.
15. 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.



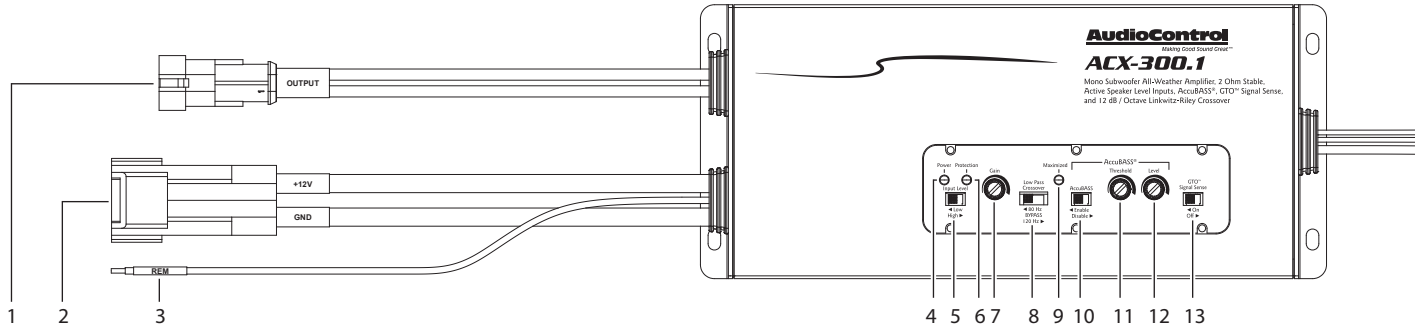
Caution: to reduce the risk of electric shock, do not disassemble the apparatus, other than to remove the top panel to access the controls. There are no user-serviceable parts inside. Refer servicing to qualified personnel.



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.

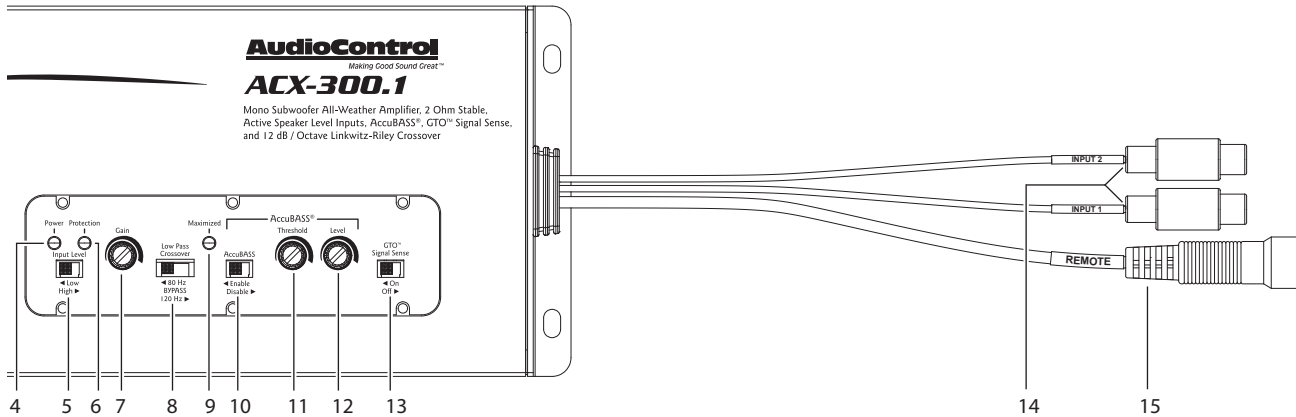


# Connection Features



- 1. Speaker Output** – Connect these wires to your subwoofer using the included water resistant harness. Speaker wire may then be crimped or soldered onto the bare leads. Use a decent sized wire gauge as this baby is powerful!
- 2. Power Input Terminal +12V & Ground** – Connect these wires to the +12V and Negative binding posts of the vehicle battery via one of two included harness options. You may use either the included water resistant harness, or the included harness kit to terminate your own custom-length water-resistant harness. Use quality insulated wiring of the recommended wire gauge, such as wire gauge 8 or thicker.

- 3. Remote Power Input Wire** – This wire connects to the 12V remote trigger output of some head units and controls the on/off state of the amplifier. Alternatively, you can use the GTO™ feature of the amplifier so it will turn on when an speaker level signal is detected at the RCA inputs.
- 4. Power LED** - When the unit has been powered on, the LED will glow warmly red
- 5. Input Level** - Use this switch to specify which type of signal input voltage type you are using - high is speaker level & low is RCA line level.



- 6. Protection LED** – This LED will shine if there is a problem being sensed by the unit. See troubleshooting section for best practice to determine the cause of the issue.
- 7. Gain Control** - This controls allows you to adjust the overall output level, with counterclockwise decreasing the level and clockwise increasing. Adjust this knob to the point where the Maximized light shines briefly. This will be your optimal gain setting.

- 8. Low Pass Crossover** – Since component speakers (like woofers) are designed to reproduce certain frequency ranges, a crossover allows you to match the speaker to the appropriate frequency range. Choosing the correct crossover point based on the manufacturer's specification will provide increased speaker reliability and optimum sound quality. The ACX-300.1 amplifier has selectable 12 dB/Octave Linkwitz-Riley crossover points at 80 Hz, 120 Hz, and a "bypass" option. The amplifier reproduces the frequency range below the crossover point. Select the crossover frequency on the ACX-300.1 amplifier to best match the value specified by your loudspeaker's manufacturer.

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## Control Panel Features

- 9. Gain Maximized LED** - This LED indicates when the ACX-300.1 amplifier gain has been maximized for optimum performance.
- 10. AccuBASS®** - This switch enables the renowned AccuBASS® bass enhancement to work its magic on the lower bass of speaker outputs.
- 11. AccuBASS® Threshold** - Sets the level at which AccuBASS® will begin to work.
- 12. AccuBASS® Level** - Adjusts the level of the AccuBASS® enhancement circuitry.
- 13. GTO™ Signal Sense** - In the ON position, the ACX-300.1 amplifier will turn on gracefully when it detects an incoming audio signal, 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 switch to the OFF position and use a switched 12-volt signal connected to the Remote In wire instead.
- 14. RCA Inputs** - This is where you connect your source signal to. If using low level signals, make sure your Input Level setting switch is set to Low. If you are using high or speaker level signals, set your Input Level to High.
- 15. Remote Level Port** - Using the cable that came with the ACX-300.1, connect your optional ACR-1 level control knob here.

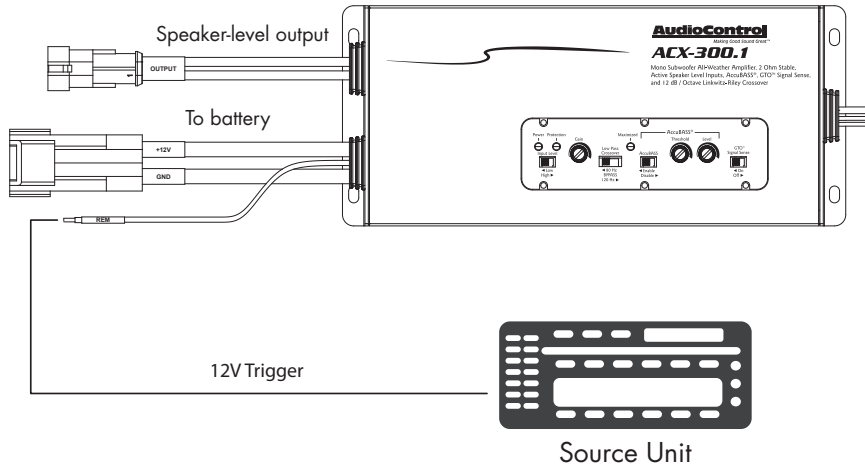
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## Quick Start

Here are a few general steps to get your ACX-300.1 amplifier up and running:

1. Undo the +12V and Ground connections to the battery before making any connections to the amplifier.
2. Pick a mounting location that will provide access to the controls and connections, provide plenty of good ventilation, and also protect the amplifier from heat, moisture, and dirt.
3. The ACX-300.1 amplifier needs to be securely mounted using the four mounting holes located in each corner.
4.  Before drilling any holes, take every precaution to prevent any damage to fuel lines, power and other electrical wiring, hydraulic brake lines, and other systems, that might compromise vehicle safety.
5. When making connections, designate red RCA plugs as right, and designate white, black, or gray plugs as left. This is a good idea for consistency.
6. Use quality interconnect cables.
7. Connect the +12V input wire on the included wiring harness assembly to the +12V terminal of the vehicle battery, using the appropriate gauge wire
8. Connect the Ground wire of the included wiring harness assembly to a ground source such as the negative battery terminal, vehicle chassis, or other ground source, using the same wire gauge as the +12V power wire.
9. Connect the remote power wire 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.
10. Connect your audio inputs to the unit – either speaker-level or line-level RCA... not both.
11. Connect your loudspeakers (minimum impedance of 2 Ohms).
12. When all connections are made, reconnect the vehicle battery.
13. Adjust your gain setting to maximize your signal level.
14. Set the ACX-300.1 crossover to the frequency recommended by the loudspeaker manufacturer.
15. Enjoy the ride!

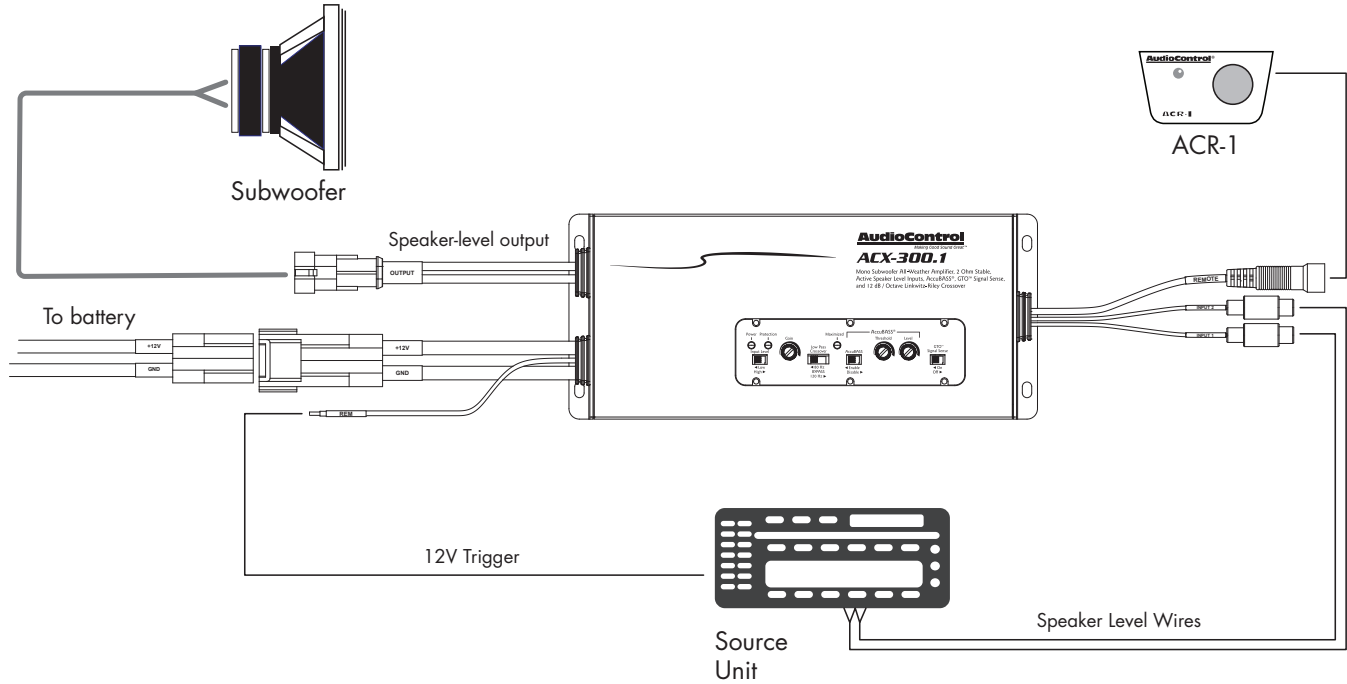
## Power Connections



In this example, the head unit has a +12V trigger output that is connected to the ACX-300.1 remote input terminal. When the head unit is turned on, it will turn on the ACX-300.1 amplifier.

Alternatively, the GTO™ Signal Sense feature can be used to gently turn on the ACX-300.1 amplifier when an audio input signal is detected. (The connection to the ACX-300.1 remote input terminal is not required when using the GTO™ signal sense.)

# System #1: Using Speaker-Level Inputs



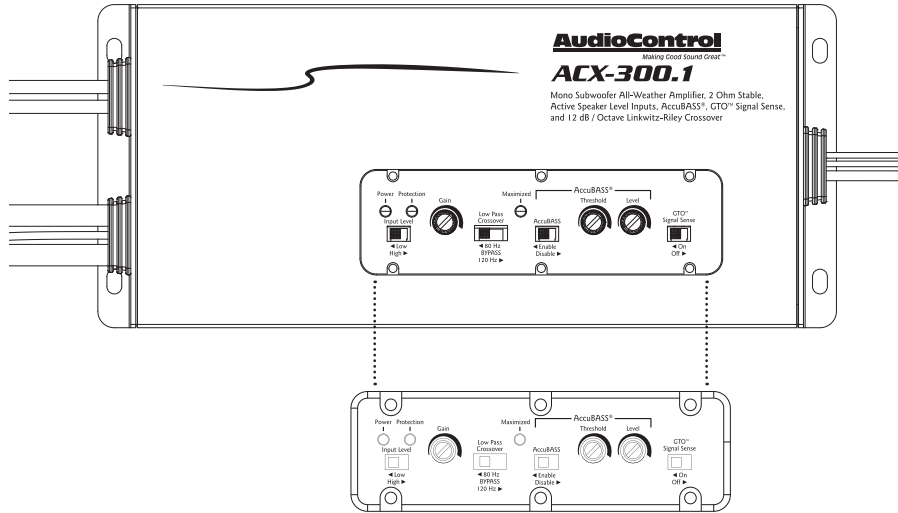


## Cover Plate Removal

The cover plate must be removed to gain access to the controls, and then sealed again to protect the controls against moisture and debris.

### Removal Procedure

1. Locate the top six hex screws that hold down the sealed top cover.
2. Use a 2.5mm hex wrench to remove the six screws.
3. Gently lift cover off. It's a very tight fit there, so you may need to use some gentle force. Yes, it is with you!
4. Keep the cover plate and screws in a safe and handy place, until you have finished adjusting the controls to your immense satisfaction.



## 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.*

### The ACX-300.1 Amplifier

Power Output (RMS) .....1x175 Watts @ 4 Ohms  
.....1x300 Watts @ 2 Ohms  
Frequency Response ..... 26 Hz - 22 kHz  
Total Harmonic Distortion + N ..... < 0.05%  
S/N Ratio ..... 102 dBa, Ref 175 Watts @ 4 Ohms  
Power / Ground Wire Gauge ..... Between 8 and 4 AWG  
Crossover ..... 12dB/Octave Linkwitz-Riley, 80 Hz, 120 Hz, Bypass  
Line/Speaker-Level Inputs ..... 500mV - 6V/1V - 12VRMS  
Weight .....7.2 lbs  
Dimensions..... 9.875" W X 3.875" D X 2.125" H

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### Warranty

For details of the limited warranty for your ACX-300.1 please visit the following page on our website: [audiocontrol.com/warranty](http://audiocontrol.com/warranty)

Please keep your receipt in a safe place.

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