ATC500.1

CAR AUDIO CLASS-D MONO AMPLIFIER

User Manual

INTRODUCTION

Thank you for purchasing a Recoil amplifier for your car audio system. You have chosen Recoil because you deserve the best!
Please thoroughly read through this manual before getting started. If you have any questions and require additional assistance, please contact support@recoilaudio.com.

CAUTION

GENERAL PRECAUTIONS

• This unit is designed for negative ground 12V DC operation only.
• Total system impedance must not be less than 2 ohms, in a bridged OR stereo configuration.
• Do not cover the amplifier with carpet or wires.
• For safety reasons, keep the volume of your car audio system moderate while driving your vehicle so that you can still hear normal traffic sounds and emergency vehicles outside your car.

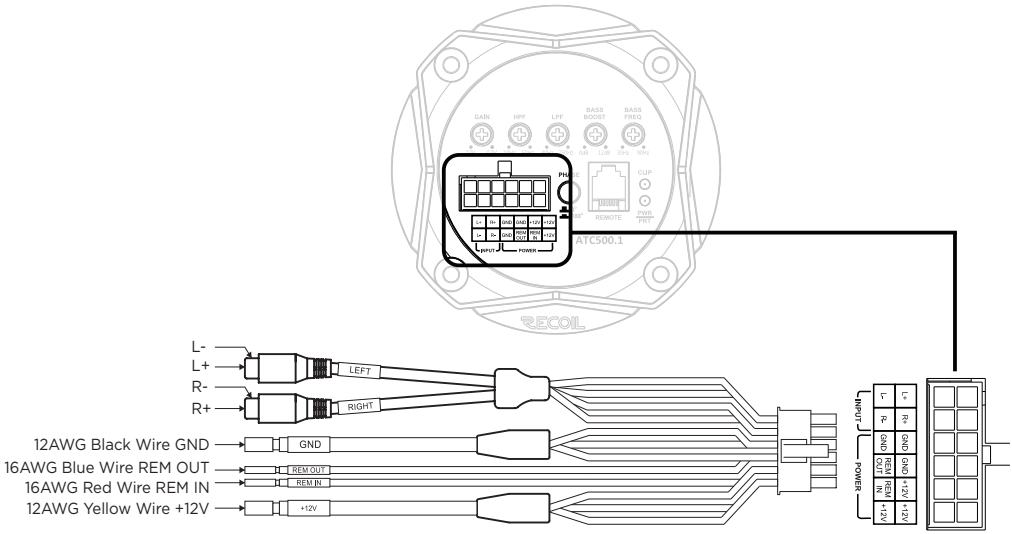
MOUNTING PRECAUTIONS

Choose a location that provides adequate ventilation around the amplifier. For easy system setup, mount the amplifier so the so the top panel controls will be accessible panel controls will be accessible after installation. In addition, observe the following precautions:

1. Using a felt pen mark, mark the mounting hole locations.
2. Mounting the amplifier on carpet will significantly reduce air flow, resulting in reduced thermal run times.
3. Mount the amplifier on a solid surface. Avoid mounting to subwoofer enclosures or areas prone to vibration.
4. Prior to mounting the amplifier, make sure not to cut or drill into the fuel tank, fuel lines, brake lines (under chassis) or electrical wiring.
5. Prior to mounting the amplifier, make sure not to cut or drill into the fuel tank.

WIRING PRECAUTIONS

1. Before installation, make sure the source unit power switch is in the OFF position.
2. Disconnect the negative (-) lead of the battery before making any power connections.
3. When making connections, be sure that each one is clean and secure.
4. A secure clean ground connection is critical to the performance of your amplifier. Connect the ground directly to the car chassis to minimize resistance and avoid any noise problems.
5. Add an external fuse on the amplifier's positive (+) power lead and connect it as close as possible to the vehicle's (+) battery terminal. 18 inches is the usual dimension.



RCA INPUTS

The RCA jacks allow for a normal Left and Right channel signal input. Simply connect to the source unit using RCA type audio cables, keeping them away from power wiring wherever possible to reduce risk of noise.

BATT (12V POWER)

Before mounting amplifiers, disconnect the negative cable from the battery to protect any accidential damage to your amplifiers and audio system. Connect the power cables to power terminal 12V. Connect one end of fuse holder to the power cable going into the amplifiers and the other end of fuse holder to positive battery. This fuse location will protect the system and the vehicle against the possibility of a short circuit in the power cable. Be sure to use fuses and fuse holder adequate for the application.

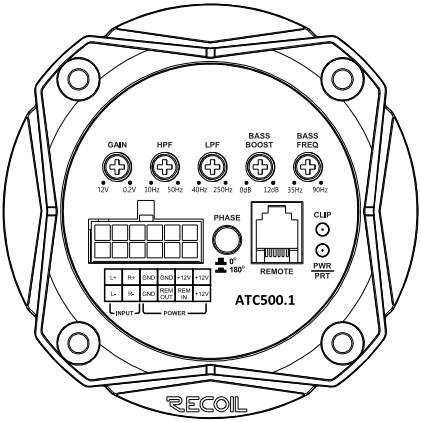
GND (GROUND)

Locate a secure grounding connection as close to amplifier as possible. Make sure the location is clean and provides a direct electrical connection to the frame of the vehicle. The ground needs to have as low of a resistance as possible. Connect one end of a short piece of the same size cable as the power cable to the grounding point or to one of your batteries or battery bank. Run the other end of 12 ga cable to the mounting location of the amplifiers for connection to the amplifiers ground terminals and connect the ground cable to the GND (ground terminal).

REM IN

Run a remote turn on cable from the switched 12V source . This may be a toggle switch, a relay, your source unit's remote trigger cables, or power antenna trigger cable. Connect the remote turn on cable to the REM (remote) terminal.

CONTROL PANEL



GAIN
The input gain control is preset to match the output of most source units. It can be adjusted to match output levels from a variety of source units.

HPF
For High Pass Mode adjust the knob by turning clockwise/counter clockwise, this control limits the frequencies that are distributed to the speakers within the range 10Hz - 50Hz.

LPF
For Low Pass Mode adjust the knob by turning clockwise/counter clockwise, this control limits the frequencies that are distributer to the speakers within the range 40Hz - 250Hz.

BASS BOOST
Increases sound level in lower frequencies by 12dB..

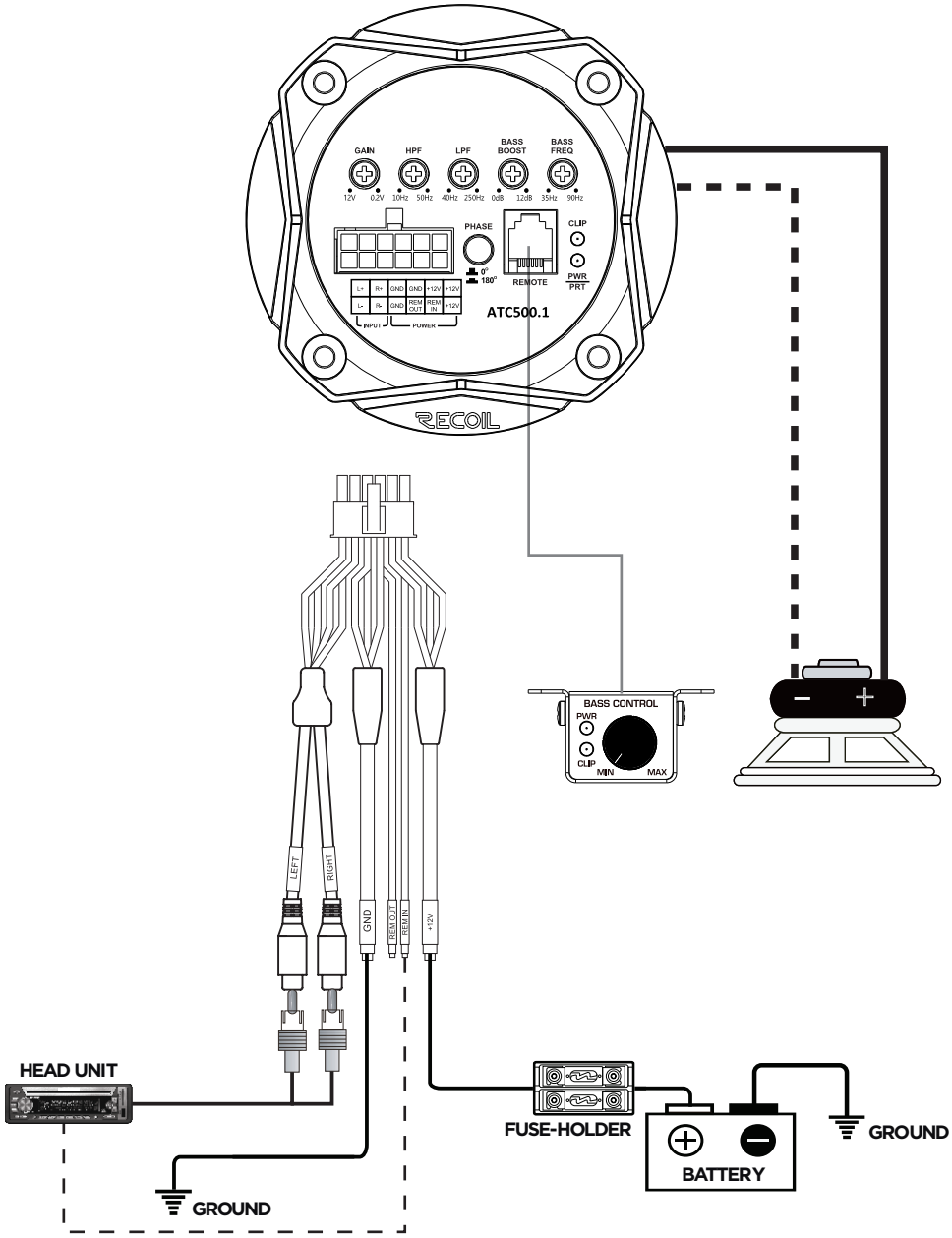
BASS FREQ
Used in conjunction with the level to adjust the center frequency (35-90Hz) of the bass boost. Amplitude of the low-frequency boost (0-12dB).

REMOTE
This port is for the remote level control. The control is intended to allow the user to control the level of the amplifier from your driver's seat.

POWER & PROTECT INDICATORS
These lights indicate when the amplifier is powered up normally and when there is a protection fault. The Protect LED is laminated when there is a problem with your amplifier. The CLIP LED is when flashing indicates clipping is present while playing source material At this point it is suggested to adjust the amplifiers gain level until the CLIP LED is only flashing on peak notes.

PHASE
Use this switch to help compensate for time alignment problems in the system. Such problems usually result from having the subwoofer at a different distance from the listener than the other speakers in the system.

CONNECTION DIAGRAM



SPECIFICATONS

Model	AT500.1
RMS power @ 4 ohm(14.4V)	1x300W
RMS power @ 2 ohm(14.4V)	1x500W
RMS power @ 1 ohm(14.4V)	NA
RMS power @ 4 ohm mono(14.4V)	NA
Frequency Response	20Hz-250Hz
Signal to Noise	100dB
Efficiency @ 4 ohm	OVER 90%
Input Sensitivity	0.2V-12V
Subsonic Filter	NA
High Pass Filter	10Hz-50Hz
Low Pass Filter	40Hz-250Hz
Bass Boost	0-12dB
Remote Control	YES
Dimensions(mm)	Ø4.09x7.68 in Ø104x195mm

TROUBLE-SHOOTING

• AT500.1 amplifier have protection features to prevent any damages from misuse or faulty conditions.
• If AT500.1 amplifier sense excessive heat, short circuited speakers DC, or voltage the protection indicator will light, and the system will be turned off.
• In order to check the problem, you should turn all levels down and all power off and carefully check the installation for wiring mistakes or short.
• If AT500.1 amplifier shuts down due to excessive heat, They will be working later when it is cooled down before removing your amplifier, refer to the list below and follow the suggested procedures.

NO SOUND (NO OUTPUT)

• Please check all connections, cables rounting, short & voltage.
• Please check the fuses, If they are blown,
• Please replace with new one
• Please check whether speakers work well, you can test speakers by connecting to another amplifier.

DISTORTION NOISE

• Readjust input level and check the speaker quality at another amplifier. Replace poor quality speakers with good quality ones.
• Check amplifiers and headunits ground contact. All grounds should be common.
• Check RCA Jack, then replace with new one or reroute RCA cable
• Engine noise is caused by poor grounding of amplifiers, headunit, other components, battery or alternator, so please check all grounding connection.

POOR BASS RESPONSE

• Please check speaker cables and reverse polarity.

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