



RS-AE SERIES

1 CHANNEL AMPLIFIER

**Please carefully read the user manual.
Do not use your device without reading.**

Dear Customer,

First of all, we would like to thank you for choosing our REISS AUDIO branded device, which is the pioneer of quality.

In order for your device, which has been produced in modern facilities and has undergone rigorous quality control, to offer you the best efficiency,

Please read this entire manual carefully before using your device and keep it as a reference.

RULES TO BE FOLLOWED IN MAINTENANCE, REPAIR AND USE

ONLY AUTHORIZED TECHNICAL PERSONS CAN OPEN THE BACK COVER.
THE WARRANTY OF THE DEVICE IS APPLICABLE TO DEVICES WITHOUT OPEN BACK COVER.
TO AVOID FIRE HAZARD AND DANGEROUS SHOCK, DO NOT EXPOSE THE APPLIANCE TO MOISTURE OR RAIN.
DO NOT WIPE WITH A DAMP CLOTH WHILE THE DEVICE IS WORKING.

Wipe the device with a soft cloth.

Do not wipe the device with alcohol, gasoline or chemical cleaning agents.

MATTERS TO BE CONSIDERED DURING HANDLING AND SHIPPING

The device must be transported in its original packaging.
It should not be dropped, it should be kept away from water and excessively humid environment.
SITUATIONS THAT MAY BE HARMFUL TO HUMAN AND ENVIRONMENTAL HEALTH DURING USE
RISK OF ELECTRIC SHOCK INSIDE THE DEVICE, WHICH MAY BE DANGEROUS TO PEOPLE
'DANGEROUS VOLTAGE MAY BE AVAILABLE.
NEVER OPEN THE BACK COVER. OTHERWISE, THIS SITUATION CAN BE DANGEROUS TO PEOPLE AND
MAY CAUSE SERIOUS PROBLEMS IN THE OPERATION OF THE DEVICE

Feature Set of the AE Series Mono Amplifiers

- Heavy Density Aluminum Extruded Heatsink
- 4 Layer PCB, SMD Technology
- Conformal Coated PCB
- Output Clipping Indicators
- Fully Variable Crossover 48dB / Octave Slope
- Boost Eq. 0 – 18dB @ 45Hz Center
- Fully Variable Infrasonic Filter 10Hz – 50Hz @ 24dB/Octave
- Fully Variable Phase 0 -180°
- Power Optimization Circuit to Regulate Output into 2 Ohms and 1 Ohm (AE850.1D Only)
- Selectable Input Voltage
 - High Level Input / Speaker Level Input
 - Low Level Input / RCA Input
 - Remote Input Becomes Remote Output Trigger if High level Input is used.
- Selectable Turn-On Modes
 - Remote, Signal Sensing, DC Offset
- Power and Protection Logo Illuminated Status Indicator
 - Blue Indicates Amplifier is powered On
 - Red Indicates the Amplifier is in Protection
- Gold Plated Differential Balanced Tiffany RCA Input
- Gold Plated Differential Balanced Tiffany RCA Pre-Outs
- Gold Plated 4 Gauge Power & Ground Terminals
 - Gold Plated 1/0 Power & Ground Terminals (AE1500.1D & AE2500.1D)
- Gold Plated 8 Gauge Speaker Output Terminals
 - Gold Plated 4 Gauge Speaker Output Terminals (AE1500.1D & AE2500.1D)
- Advance Protection Circuit Monitoring: Short, Thermal, Overload and Impedance
- Dual Sync Mode for Bridging 2 same AE Mono Amplifier
- Finish: Anodized with Texture Paint

What's Included

- (1) AE Series Channel Amplifier
- (6) Self Tapping Screws; (4) for Amplifier, (2) for Remote
- (2) Allen Wrenches
- (1) Remote Level Controller, Cable and Wing Adapter
- (1) 200 ANL Fuse and Fuse Block (AE2500.1D Only)
- (1) Instruction Manual
- (1) Sticker

Important Safety Considerations

- To prevent personal injury and damage to the unit, please read the following instructions in this manual.
- This product is designed to use in vehicles with 12Volt, negative-ground electrical systems.
- Install this product in a dry location away from your vehicles' safety equipment (airbags, seat belt system, etc.). Water and humidity may damage internal components.
- Use the included mounting accessories to secure this product so that it does not come loose.
- Check before drilling to make sure you do not drill into any vital vehicle system.
- Protect all system wiring from sharp metal edges.
- Do not disassemble or modify this unit; doing so will void your manufacturer's warranty.

Important Installation Precautions

Installation of mobile audio equipment requires experience. Although this manual provides general installation procedures, it will not show the exact installation method for your particular vehicle.

If you do not have the required knowledge and experience, we recommend that you have your equipment installed by an Authorized ReissAudio Dealer.

- Turn off all stereo and other electrical devices before you begin.



Important Installation Precautions Continued

- Disconnect the negative (-) lead from your vehicle's battery to avoid an electrical short. Reconnect the negative lead to your battery once your installation is complete. So, in other words the negative lead from our vehicle's battery is the first connection you remove before starting your installation and the last connect your make after you finish your installation.
- Check your mounting location to make sure there is sufficient room for your installation placement preference.
- Install this product in a dry location away from your vehicles' safety equipment. Each AE Series amplifier circuit board has been coated with a protective layer of Conformal Coating. This will help protect the electronic circuit from harsh environments that may contain humidity and a range of airborne contaminants and varying temperatures. However prolonged exposure to water and high humidity may damage internal components in time so keeping the amplifier dry and installed in a well ventilated area will help ensure many years of listening enjoyment.
- When running power cables through sheet metal it is best to use grommets and loom to properly insulate your cables from metal edges.
- Avoid mounting the amplifier with the top fins facing down as this may increase the operating temperature of your amplifier.
- If mounting underneath a seat, make sure that there is at least 1 inch (25mm) of space above the amplifier to permit proper cooling.
- Avoid mounting the amplifiers on a subwoofer enclosure as prolonged excessive vibration may damage your amplifier.

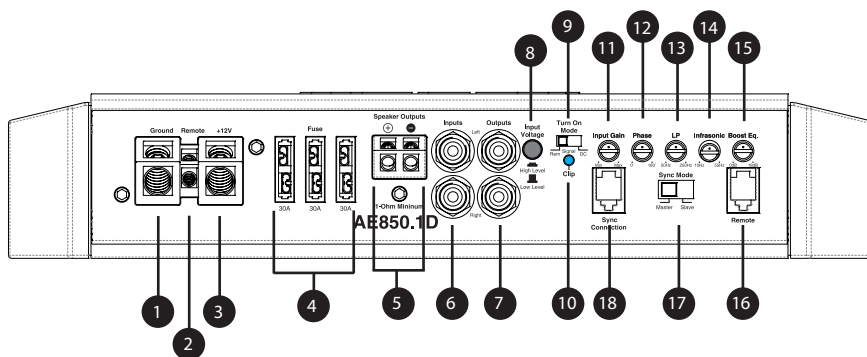
Mounting Placement

Choose a structurally sound location to mount your ReissAudio amplifier, making sure there are no items behind the area where the screws will be driven.

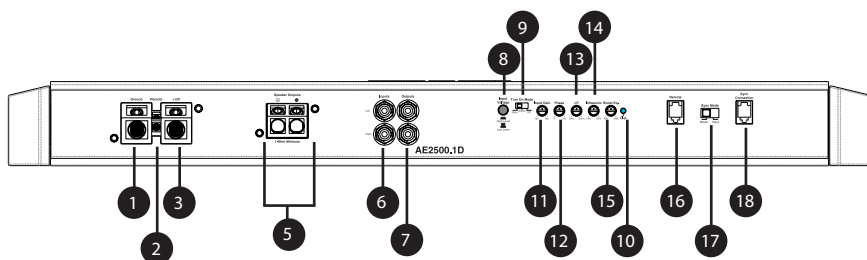
For optimum sound quality, it is highly recommended that you purchase ReissAudio wiring accessories as they are designed to give your amplifiers high-quality signal it needs to operate at peak performance levels. ReissAudio provides a wide selection from RCA cables and power wire to speaker wire and battery connectors.

Side Panel Layout

AE850.1D & AE1500.1D



AE2500.1D



Side Panel Layout Continued

1. Ground: The Ground terminal is designed to accept up to 4 Gauge AWG wire on the AE850.1D and up to 1/0 Gauge AWG wire on the AE1500.1D and the AE2500.1D. Make your ground connection directly to the chassis of the vehicle as close to the amplifier as possible. Make sure this connection is made with the same gauge wire as used for your +12Volt connection. Ensure that all dirt, grease and paint is removed from your chassis ground point prior to attaching the ground wire.

ReissAudio recommends when making your chassis ground to use a Star Washer which will help prevent your ground bolt from loosening. Turn the set screw on this terminal counterclockwise to loosen the screw using the supplied Hex wrench. Strip the PVC jacket from your ground wire ½ inch (12mm). Then insert the bare wire into the terminal block so that no bare ground wire is exposed. Then tighten the set screw by turning it clockwise.

2. Remote Input Terminal: This terminal must be connected to a switched +12Volt source. If the source unit does not have a remote Turn on lead, then a switched +12Volt supply should be used such as the ACC +12Volt. Run an 18-gauge wire from the Remote Turn-On Lead from your headunit / source unit to this terminal.

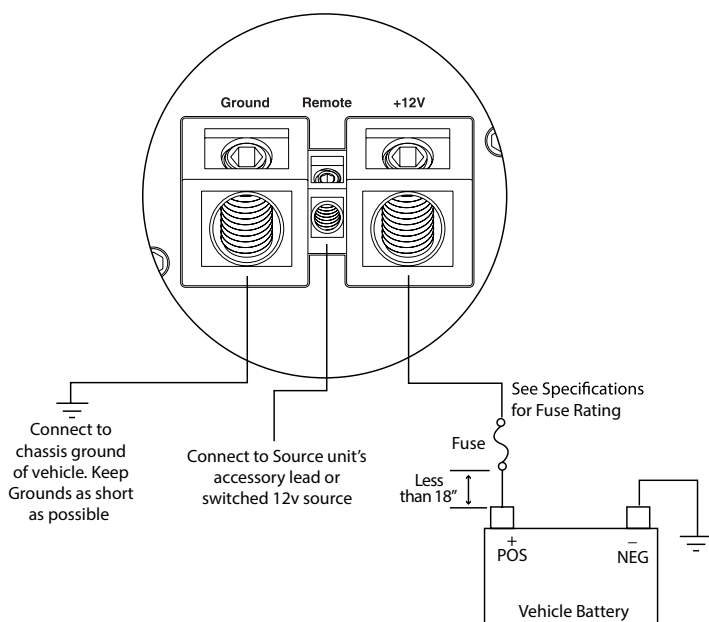
If you are using the High-Level Speaker Outputs connection **to the amplifiers' RCA inputs, you do not need to connect** a remote input to your amplifier. Your amplifier will automatically detect the speaker signal and will turn on your **amplifier via its DC Offset circuit. In addition, the remote** input terminal then becomes a remote output trigger which **can be used to turn on another amplifier or processor that** requires a +12volt remote connection.

Side Panel Layout Continued

3. **+12Volt Positive Terminal:** The +12Volt positive terminal is designed to accept up to 4 Gauge AWG wire on the AE850.1D and up to 1/0 Gauge AWG wire on the AE1500.1D and the AE2500.1D. Make your +12Volt connection directly to the positive battery post. An external fuse use should be installed within 18" (457mm) of the battery. This fuse is vital to protecting the vehicle and amplifier from a dead short. Turn the set screw on this terminal counterclockwise to loosen the screw using the supplied Hex wrench. Strip the PVC jacket from your power wire ½ inch (12mm). Then insert the bare wire into the terminal block so that no bare power wire is exposed. Then tighten the set screw by turning it clockwise.

For maximum current flow, ReissAudio recommends that you tin your power & ground wire before connecting it to the +12Volt terminal. In addition, ReissAudio recommends using high quality 100% OFC (Oxygen Free Cooper) or Tinned 100% OFC speaker wire. This will ensure that your speaker / subwoofer receives maximum output from your amplifier.

Power Connection



Side Panel Layout Continued

4. **Fuse Holder:** This is your amplifier's fuse block. Should there be a short in your system or if your amplifier is being overdriven, these fuse(s) will typically burn to prevent damage to your amplifier. If it is required to replace your fuse(s), use the same fuse rating that comes with your amplifier. Using a higher fuse may damage your amplifier and will void your warranty. (The AE2500.1D is supplied with an in-line 200A ANL fuse and fuse block.)

5. **Speaker Outputs:** Your AE amplifier speaker outputs are designed to accept up to 8 Gauge AWG on the AE850.1D and up to 4 Gauge AWG on the AE1500.1D and AE2500.1D. Turn the set screws on this terminal counterclockwise to loosen the screws using the supplied Hex wrench. Strip the PVC jacket from your speaker wire ½ inch (12mm). Then insert the bare wire into the terminal block so that no bare speaker wire is exposed. Then tighten the set screw by turning it clockwise. For maximum current flow, ReissAudio recommends that you tin your speaker wire before connecting it to the speaker output terminals. In addition, ReissAudio recommends using high quality 100% OFC (Oxygen Free Cooper) or Tinned 100% OFC speaker wire. This will ensure that your speaker / subwoofer receives maximum output from your amplifier. Visit www.ReissAudio.com or talk to your Authorized **ReissAudio** Dealer to see a complete selection of premium installation accessory that will complement and enhance listening experience.
Loading your amplifier below the recommended impedance rating found on page 17 is not recommended and may cause your amplifier to enter into protection mode and may void your warranty.

Side Panel Layout Continued

6. Low Level RCA Inputs: These are your differential balanced inputs that are used to connect audio signal from your headunit / source unit to your amplifier. Your AE Series Amplifier is capable to receiving either High Level Speaker Outputs or Low-Level RCA cables. If you are using High Level Speaker outputs, you may need a high to low level adapter such as the ReissAudio AP-SL2 adapter.

7. Low Level RCA Preouts: This pair of RCAs Preouts can be used to send audio signal from your amplifier to another mono block amplifier without the need of using RCA Splitter Y-Cables.

8. Input Voltage Selector: Your AE Amplifier is designed to accept a wide range of input signal from 250mV to 10V RMS. This button allows you to select how your amplifier will receive its audio input signal. If you are using Low Level RCA's make sure the button is in the outward position. If you are using High level speaker outputs as your signal input, make sure this button is in the inward position. Incorrectly selecting the Input Voltage Selector will result in low or distorted output.

9. Turn On Mode Selector: Your AE amplifier has 3 methods of turning on and turning off which is determined by the position of this Mode Selector.

a. Remote (+12Volt Remote Turn-On Lead): This is the most common method of turning the amplifier on/off. Your amplifier will turn on when there is a +12V present and will turn off when the +12V is switched off.

b. Signal (Signal Sensing Circuit): This is an alternative method of turning your amplifier on and off. If your source unit does not have a dedicated remote turn-on output, using the Signal Sensing Circuit, when your amplifier detects audio signal the amplifier will turn on. When no signal is detected the amplifier will shut off within 30 seconds. **When using Signal Sensing, you will not need to wire a remote input to the amplifier.** This circuit senses input from the Right Channel. The sensitivity of this circuit varies slightly from different vehicles and different OEM (Factory) radios.

Side Panel Layout Continued

c. DC (DC Offset Circuit): This is an alternative method of turning your amplifier on and off. If your source unit does not have a dedicated remote turn-on output, using the DC Offset Circuit will turn your amplifier on/off when it detects a very small amount of DC signal from the audio output of your source unit. The sensitivity of this circuit varies slightly from different vehicles and different OEM (Factory) radios. **When using DC Offset, you will not** need to wire a remote input to the amplifier. This circuit senses input from the Right Channel.

10. Clipping Led Indicators: These LED's will light up when the amplifier output signal is being clipped. When the LED starts to glow, your amplifier output is between 1-2% THD (Total Harmonic Distortion). When the clipping indicators are fully lit, your amplifier output is between 6-7% THD (Total Harmonic Distortion). The ideal gain setting is where the clip indicators are not lit allowing the amplifier to send undistorted clean output. Setting the amplifiers gains improperly where the clip indicators are always lit will over-work the amplifier and may cause excessive heat building and possibly product failure.

11. Input Gain: Use this Input Gain Potentiometer to match the output voltage of your headunit / source unit to the input circuit of your amplifier. This Input Gain is not a volume knob. A simple method of setting your Input Gains is to turn your headunit / source unit up to approximately $\frac{3}{4}$ volume. Then slowly adjust your Input Gains on your amplifiers clockwise until you can hear distortion from your speakers or subwoofers. Then turn the gains down (counterclockwise) till the distortion is no longer heard and your clipping indicators are not fully lit.

Side Panel Layout Continued

12. Phase: Depending on the absolute phase of your main speakers and amplifier and the distances of the subwoofer(s) and the main speaker from the main listening position, the bass in the crossover region maybe smoother if you reverse the subwoofer's phase. Try adjusting your phase at different settings to determine which polarity produces the best overall bass performance in your system. Typically, though, phase is left at the 0° for most installation.

13. Low Pass (LP) Filter Frequency Filter : This potentiometer allows you to adjust the crossover frequency from 50Hz – 250Hz.

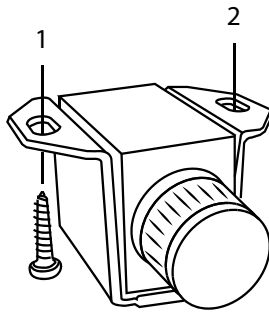
14. Infrasonic Filter: This variable potentiometer will provide a roll off point for lower frequencies (10Hz – 50Hz variable) that could potentially damage your subwoofers from over-exursion. The frequency setting for your Infrasonic Filter is to be set relative to your speaker's low-frequency capabilities along with enclosure tuning. In a sealed box ReissAudio recommends setting the Infrasonic Filter between 25Hz – 35Hz. In a ported enclosure ReissAudio recommends setting the Infrasonic filter at $\frac{1}{2}$ an Octave below your tuned frequency.

For example, let say your ported enclosure is tuned at 40Hz. Take $\frac{1}{2}$ of 40Hz which is 20Hz (this is one octave lower). Now take another half off 20Hz which is then 10Hz (this is half an octave lower). Now take 10Hz from 40Hz which is 30Hz and where you should set your Infrasonic Filter.

15. Boost Eq: Your AE Series amplifiers incorporates a Boost Eq. circuit that can increase output 0-18dB centered at 45Hz. Note if you turn up the Boost Eq, you will need to readjust the Input Gains to avoid clipping the output signal. Using the Clipping LED will help set your Boost Eq and Input Gains properly.

Side Panel Layout Continued

16. Remote Level Control: With the Remote Level Control plugged to your amplifier, you can now adjust the amount of your subwoofer output from the convenience of this controller. There are several mounting options for your controller. With the supplied wing attachment, you can mount the controller under your dash. Should you want to mount the controller flush to your dash, arm rest or any other panel of your vehicle the wing attachment will more than likely not be needed.



17. Sync Mode Selector Switch: Two same AE Mono Amplifiers can be connected together in bridged mode for doubling output power. Doing so will require that the amplifier be loaded to 2 ohms instead of 1 ohm. One amplifier will need to have the switch set to Master and the other amplifier switched to Slave model. The amplifier set in the Master position will be the unit where you will make your input gain and tone control adjustments. The input gain and tone controls on the Slave amplifier then becomes inactive. **(Note, if using only one AE mono amplifier, this Sync Mode Switch needs to be in the Master position. If the switch is in the Slave position, there will be no output.)**

- AE850.1D sync with another AE850.1D = 1,700 watts RMS (2 Ohm Minimum)
- AE1500.1D sync with another AE1500.1D = 3,000 watts RMS (2 Ohm Minimum)
- AE2500.1D sync with another AE2500.1D = 5,000 watts RMS (2 Ohm Minimum)

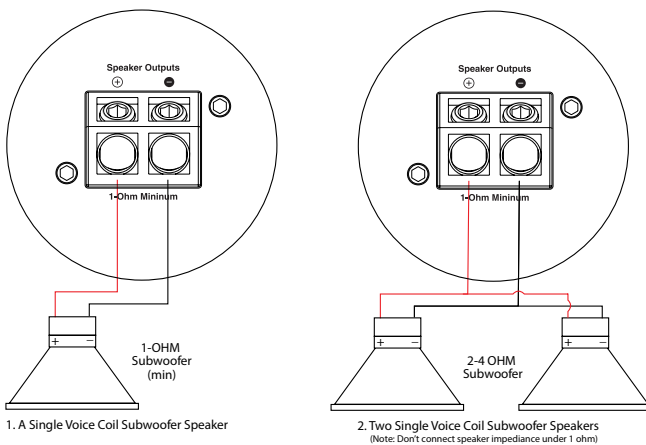
Side Panel Layout Continued

18. Sync Connection Port: When bridging two same AE Mono Amplifiers, this port needs to be connected with the supplied cable which will allow the Master amplifier to control the preamp stage of the Slave unit. So, in other words the Tone controls of the Master amplifier will then also control the Slave amplifier. This will eliminate the need to match the tone control settings of both amplifiers independently.

Common Installation Diagrams

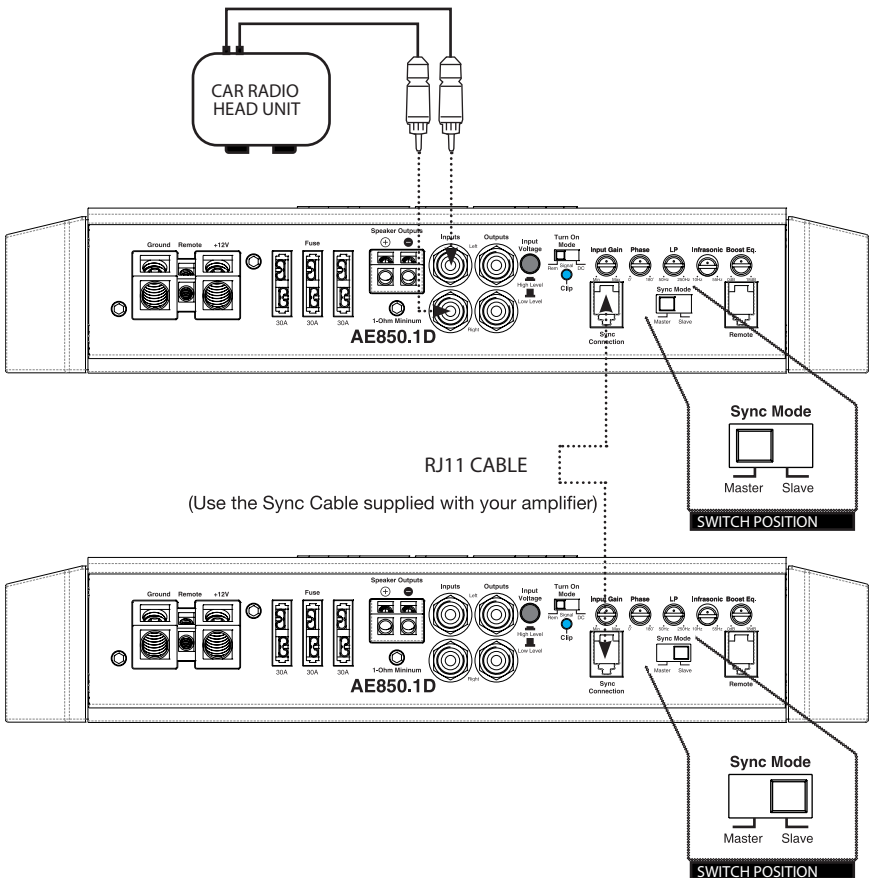
The illustrations below show the common installation methods for your amplifier. It is important to make sure that the impedance of your subwoofers connected to your amplifier is not lower than 1-Ohm. Connecting your amplifier below these impedances is not recommended as they will cause your amplifier to go into protection. If you are unsure of the impedance, it is recommended that use a DMM (Digital Multi-Meter) to check the impedance of your connection at the amplifiers' Speaker Output Terminals. Your amplifier will need to be off in order to get accurate measurements. (Note if using the Sync Mode with bridged two same AE Mono Amplifiers, the impedance load to be at minimum 2-Ohms.)

AE850.1D, AE1500.1D and AE2500.1D



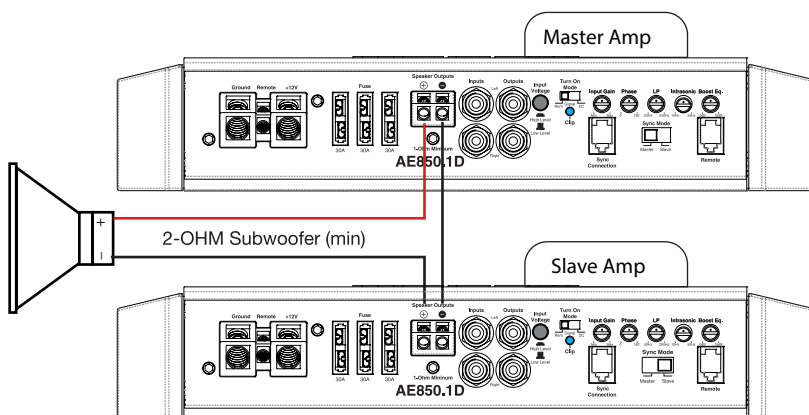
Sync Mode Connection Diagram

The Illustrations below will show you how to properly set up your AE Mono Amplifiers should you use them in Sync Mode. Be sure to follow these instructions carefully as wiring your amplifiers incorrectly will cause your amplifiers to not function properly which may result in damaging both your amplifiers and subwoofers. Sync Mode only operates using 2 same AE Mono Amplifiers. **Using 2 different AE Mono Amplifiers in Sync mode will damage your amplifiers.**



Sync Mode Connection Diagram Continued

In Sync Mode, you will be connecting your subwoofer(s) as shown below. Take the positive (+) terminal of your subwoofer(s) and connect that to the positive (+) terminal on the Master amplifier. Then take the negative (-) terminal of your subwoofer(s) and connect that to the positive (+) terminal of the Slave amplifier. Then run at minimum a 16 Gauge speaker wire from the negative (-) terminal of the Master amplifier to the negative (-) terminal of the Slave amplifier. Be sure to set the Sync Mode Selector switch as shown above.





Note: One of the leading causes of amplifier failure is using inferior Power, Ground and Speaker wires that are not sufficient in quality to deliver the necessary current to keep your amplifier performing at its peak level. As all ReissAudio amplifiers are designed to deliver high power output, we recommend that you do not use any power wires that contains CCA (Copper Clad Aluminum). Instead we recommend only using high quality 100% OFC (Oxygen Free Copper) or 100% Tinned OFC (Oxygen Free Copper) wires. This will help give your amplifier the proper current and will ensure that your amplifier will perform at this peak perform level for many years to come.



Ask your Authorized ReissAudio Dealer or visit www.reissaudio.com.tr to view the complete line of installation accessory that will compliment your audio investment. ReissAudio provides a wide selection from RCA cables and power wire to speaker wire and battery connectors.

Technical Specifications

Specifications	AE850.1D	AE1500.1D
Channels	1	1
Rated RMS Power 4 Ohms Mono @ 14.4 Volts	500 Watts x 1	700 Watts x 1
Rated RMS Power 2 Ohms Mono @ 14.4 Volts	850 Watts x 1	1000 Watts x 1
Rated RMS Power 1 Ohm Mono @ 14.4 Volts	850 Watts x 1	1500 Watts x 1
Sync Power Linking 2 Same Amp @ 2 Ohms, 14.4V	1700 Watts	3000 Watts
Frequency Response	10Hz – 250Hz	10Hz – 250Hz
THD + Noise	< 1.0%	< 1.0%
S/N Ratio A-Weighted	> 107dB	> 104dB
Input Sensitivity (Auto Detect High / Low Level)	250mV – 10V	250mV – 10V
Crossover Low Pass (24dB/Octave)	50Hz – 250Hz	50Hz – 250Hz
Boost EQ Low Pass - 45Hz Centered	0 – 18dB	0 – 18dB
Infrasonic Filter	10Hz – 50Hz	10Hz – 50Hz
Phase - Fully Variable	0 - 180°	0 - 180°
Efficiency @ 4 Ohm	87%	85%
Operating Voltage	9 – 17 Volts	9 – 17 Volts
Fuse Requirement	90A (Included)	160A (Included)
Dimensions (H x W x D) Inches	2.2 x 11.1 x 7.5	2.2 x 16.2 x 7.5
Dimensions (H x W x D) MM	56 x 282 x 191	56 x 411 x 191

Specifications	AE2500.1D
Channels	1
Rated RMS Power 4 Ohms Mono @ 14.4 Volts	1250 Watts x 1
Rated RMS Power 2 Ohms Mono @ 14.4 Volts	2000 Watts x 1
Rated RMS Power 1 Ohm Mono @ 14.4 Volts	2500 Watts x 1
Sync Power Linking 2 Same Amp @ 2 Ohms, 14.4V	5000 Watts
Frequency Response	10Hz – 250Hz
THD + Noise	< 1.0%
S/N Ratio A-Weighted	> 109dB
Input Sensitivity (Auto Detect High / Low Level)	250mV – 10V
Crossover Low Pass (24dB/Octave)	50Hz – 250Hz
Boost EQ Low Pass - 45Hz Centered	0 – 18dB
Infrasonic Filter	10Hz – 50Hz
Phase - Fully Variable	0 - 180°
Efficiency @ 4 Ohm	84%
Operating Voltage	9 – 17 Volts
Fuse Requirement	200A (Included)
Dimensions (H x W x D) Inches	2.2 x 21.8 x 7.5
Dimensions (H x W x D) MM	56 x 554 x 191

Troubleshooting

Problem	Solution
Amplifier does not work; no LED's on	1. Check to see if Power, Remote and Ground is connected to the Amplifier.
	2. Check Power and Remote Turn-on lead for proper +12 Voltage. (12 - 16 Volts DC acceptable range.)
	3. Check the inline fuse, replace if necessary.
Amplifier powers up; no sound	1. Check your RCA connectors to see if there is signal with a DMM (Digital Multi-Meter) to measure AC voltage.
	2. Check your speakers to see if there is short.
Hissing / Engine noise from speakers	1. Readjust your amplifiers gains to lower setting.
	2. Readjust your source unit volume.
	3. Make sure your RCA's and Speaker wires are routed away from your Power and Ground connections.
	4. Remove existing ground wires for all electrical components. Reground wires to a different location. Verify the grounding location is clean, paint from ground point has been removed and is rust free.
	5. Add a secondary ground cable from the negative battery terminal to the chassis metal or engine block of vehicle.
	6. Check your RCA cables or speaker input for any damage.
Distorted sound from speakers	1. Readjust your amplifiers gains to a lower setting.
	2. Readjust your source unit volume.
	3. Readjust the Boost Eq.
Logo Status LED is Red / Protection Circuit Active	1. Amplifier may be in thermal protection due to heat.
	2. Check the inline fuse, replace if necessary.
	3. Check the voltage at the amplifier power input terminals.

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