

LIMITED WARRANTY

REALM Audio warrants this product to be free from defects in material and workmanship, for a period of 3 years from date of purchase if installed by an Authorized REALM Audio dealer. REALM Audio offers this warranty for 1 year period from the date of purchase if purchased over the counter from a Authorized REALM Audio dealer. REALM Audio does not honor or warranty any REALM Audio product NOT purchased through an Authorized dealer. This REALM product is sold with the understanding that purchaser has independently determined the suitability of this product. This warranty DOES NOT cover any expenses incurred from the installation, removal, or re-installation of this product, incidental or otherwise. This warranty is offered to the original purchaser of the product only. This warranty does not cover the product if physically damaged, subjected to negligence or misuse, abuse, improper installation, alteration, accident, or an act of God. Also excluded from the warranty are costs from the correction of faulty installation, and elimination of electromagnetic interference (engine noise). The original dated sales slip or proof of purchase will establish warranty eligibility. If the product should prove defective within the warranty period, REALM Audio at its option will repair or replace the product free of charge. In no event shall REALM Audio be responsible for claims beyond the replacement value of the defective product or in any way be liable or responsible for consequential or incidental damages. REALM Audio cannot be held responsible for discrepancies/inconsistencies that may occur due to manufacturing changes or options.



TECH SUPPORT
(800) 450-8324
www.realm-audio.com

REALM

A400.4 / A600.4



4-CHANNEL AMPLIFIER INSTALLATION / OPERATION INSTRUCTIONS

SHARED FEATURES

- Illuminated Control Dials
- RCA Pass-thru Outputs
- Intelligent LED Status Indicator
- High and Low Level Inputs
- Double Sided Glass-Epoxy Circuit Boards
- Full Differential Inputs
- 12dB Defeatable HP/LP Crossover (50~500Hz)
- Discrete Style Plug Terminals
- Internal Transistor Heat Sinks

A600.4 ONLY:

- Remote Level Control (Rear Channel Only)
- Bass Boost Adjustment (0-12dB @ 45Hz) (Rear Channel Only)

Realm Audio
1550 Pacific Ave
Oxnard, CA 93033
800.450.8324
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SPECIFICATIONS

A400.4:

-60 Watts x4	@ 4-Ohms	1% THD
-100 Watts x4	@ 2-Ohms	1% THD
-200 Watts x2	@ 4-Ohms	1% THD
-THD (RMS Power 1kHz)		0.03%
-RCA Input		150mv-6v
-Speaker Level Input		325m-10v
-Speaker Load Impedance		2 ~ 4 Ohms
-Dimensions (H x W x L)		2.1" x 9.8" x 13.8"

CEA2006 Specifications

60 Watts x4 at 4 Ohms and 1% THD+N
 90dB SN at 1 Watt into 4 Ohms
 20Hz - 20kHz Frequency Response (-3dB)



A600.4:

-90 Watts x4	@ 4-Ohms	1% THD
-150 Watts x4	@ 2-Ohms	1% THD
-300 Watts x2	@ 4-Ohms	1% THD
-THD (RMS Power 1kHz)		0.03%
-RCA Input		150mv-6v
-Speaker Level Input		325m-10v
-Speaker Load Impedance		2 ~ 4 Ohms
-Dimensions (H x W x L)		2.1" x 9.8 x 17.8"

CEA2006 Specifications

90 Watts x4 at 4 Ohms and 1% THD+N
 90dB SN at 1 Watt into 4 Ohms
 20Hz - 20kHz Frequency Response (-3dB)



IMPORTANT!

The quality of the installation can affect the performance and reliability of your REALM audio product. If you have any doubts or questions, contact the REALM Audio Tech Support line at (800) 450-8324.

****READ ALL INSTRUCTIONS BEFORE INSTALLATION!****

BEFORE BEGINNING:

Plan out your installation. Have all necessary supplies, tools, and a general idea of where you are going to install on the vehicle.

TROUBLESHOOTING cont.

PROBLEM	CAUSE	CORRECTION
Amplifier will not turn on or No power (power light not on)	No Voltage on +12V Input.	Use voltmeter to verify voltages at terminals of amplifiers +12V Input should have a minimum of 11.5 volts while ignition of vehicle is ON or OFF.
	No Turn-On from Car Stereo	Use voltmeter to verify voltage at terminal of amplifiers REM input. REM input should have 12 volts while Car Stereo is "ON" and 0 volts While "OFF".
	Bad Connection at Battery or Fuse at Battery	Check main power connection and fuse at battery.
Power but no sound (power light is on)	Bad Connection On RCA Input or Speakers not connected correctly	Check Low level (RCA) connections. Be sure they are connected at Car Stereo and amplifier. Check all Speaker output connections.
Power but no sound (Protection light is on)	Speakers wrong impedance/over load at amplifier.	Disconnect Speaker from Amplifier. Verify speaker impedances with a Digital Volt/Ohm meter. REALM 4 Channel amps are stable at 2 ohms above. If you need further assistance with this please call Tech Support 800 450-8324.
Power but no sound (Protection light is on)	Shorted Speaker line or connections.	Check speakers and/or Speaker wiring for shorts using a Digital volt/Ohm meter.
No sound from one channel or entire side	Car Stereo's balance and fader controls set incorrectly.	Check Car Stereo's balance and fader control positions - verify they are centered.
	Bad Connection at Amplifier or Speaker.	Check speaker connections at amplifier and speaker.
	Bad Input Via RCA or Hi level inputs.	Check all input leads at amplifier. Be sure RCA's are connected to Car Stereo and amplifier. Check High level inputs for connection to amp verify connections.
Very low sound level	Car Stereo's balance and fader controls set incorrectly.	Check Car Stereo's balance and fader control positions - verify they are centered.
	Amplifier's input gain control setting is not correct.	Check amplifier's input gain control settings - adjust levels if necessary.
Power amplifier turns on and off repeatedly.	Low Voltage on +12V Input or Connections at Battery.	Check +12V connections at the battery and amplifier inputs.
	Low vehicle Battery Voltage	Verify battery voltage. Voltage should be greater than 11.5 volts DC at amplifier with engine off.
	Bad Connection on Car Stereo or Amplifier	Check Car Stereo and amplifier's ground connections.

INPUT CONNECTIONS

FRONT / REAR



RCA Input: (Recommended)
Connect to an Available RCA audio output from source unit. Use premium quality twisted pair with multiple shielding. If no RCA is available (Factory radio) then use High level in (see below).

High Level Input:

If you have NO available RCA audio outputs from your source unit e.g. Factory Stereo, then use the High Level signal plug. Connect to speaker wiring of source unit.



WIRE COLOR CODES:

Gray = Right Front Pos. (+)	Gray/Black = Right Front Neg. (-)
White = Left Front Pos (+)	White/Black = Left Front Neg. (-)
Violet = Right Rear Pos. (+)	Violet/Black = Right Rear Neg. (-)
Green = Left Rear Pos. (+)	Green/Black = Left Rear Neg. (-)

SUB



****A600.4 REAR CHANNEL ONLY****

Remote Bass Control: (Optional)
IN: Connect to remote bass adjustment module from front of vehicle.



SETTINGS

GAIN



6V 150mV

GAIN: (x2)

Use the Gain to match the output level of your source unit or signal processor to the input level of the amplifier.

Match the input using these steps:

1. Turn gain (level) control to minimum.
2. Turn on the source unit and set to 2/3 of max volume while playing music.
3. Adjust the gain control until desired, maximum volume is achieved without audible distortion.

CROSSOVER



HP FULL LP

FILTER SWITCH (x2):

This switch controls the amplifiers internal [preamp] crossover.

HP: Allows frequencies ABOVE crossover setting are filtered.

LP: Allows frequencies BELOW crossover setting are filtered.

FULL: Crossover Defeat (FULL RANGE)



CROSSOVER (x2):

This dial controls the relative crossover point based on position of the crossover switch.

BASS BOOST



0dB 12dB

****A600.4 REAR CHANNEL ONLY****

45Hz BOOST:

This dial controls bass boost from 0-Flat to +12dB centering around 45Hz.

Adjust to boost low frequency response. Use caution when adjusting!

AUDIO LINE OUTPUT

OUT



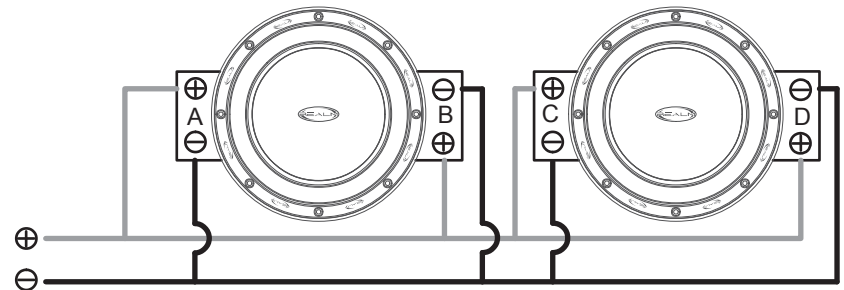
RCA Output

Use the Audio output for an easy solution to link multiple amplifiers together without the need for running additional cables from the headunit.

CONFIGURATIONS

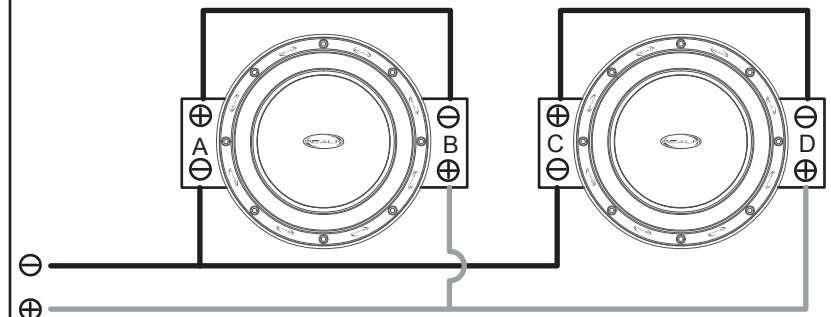
REALM 4 Channel amplifiers will reach their potential at either a 2-Ohm Stereo or 4-Ohm bridged mode. A lower impedance will send the amplifier into current protection and possible damage circuitry. To prevent damage, use the formulas below as a guide to determine the load you are placing on the amplifier. If you have any difficulties, contact REALM Tech Support at (800) 450-8324.

PARALLEL WIRING DUAL VOICE COIL



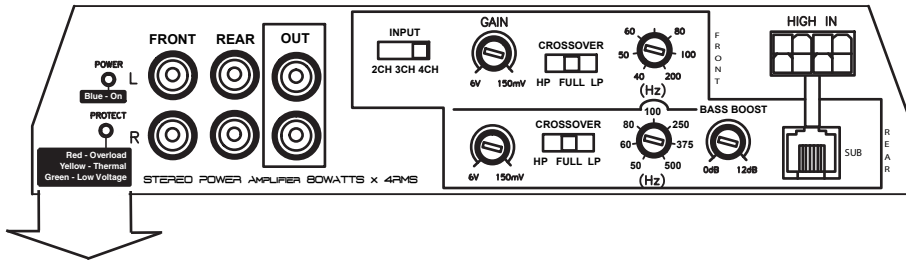
$$\text{Equation: } \frac{(A + B) \times (C + D)}{A + B + C + D} = R$$

SERIES/PARALLEL WIRING DUAL VOICE COIL



$$\text{Equation: } \frac{\sqrt{(A \times B)(C \times D)}}{(A + B) + (C + D)} = R$$

SMART STATUS INDICATORS



POWER LED:

The power LED will illuminate in Blue while amplifier is ON.

PROTECTION MULTI-COLOR LED:

Red: Overload or circuit problem
 Yellow: Thermal problem
 Green: Low Voltage Problem

See **TROUBLESHOOTING**
Next SECTION for detail
information.

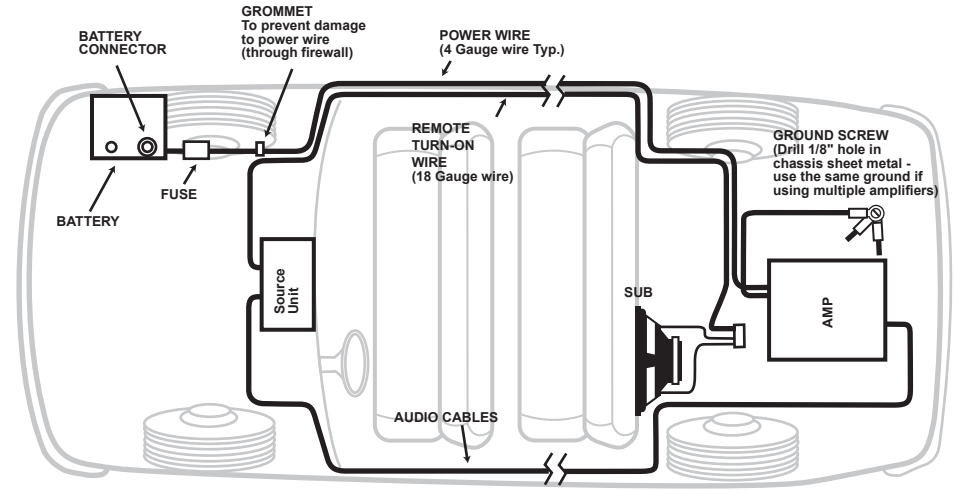
TROUBLESHOOTING

PROBLEM	CAUSE	CORRECTION
Amplifier turns off during loud or distorted passages or Protection Light comes On. (Before or During use)	Amplifier's input gain control may be set too high or setting is not correct.	Check amplifier's input gain control settings - adjust levels if necessary.
	Low vehicle Battery Voltage	Verify battery voltage. Voltage should be greater than 11.5 volts DC at amplifier with engine off.
	Bad Connection on Car Stereo or Amplifier	Check Car Stereo and amplifier's ground connections.
	Wrong Speaker impedances.	Disconnect Speaker from Amplifier. Verify speaker impedances with a Digital Volt/Ohm meter. 4 Channel amplifiers are stable at 2 ohms and above. If you need further assistance with this please call Tech Support: 800-450-8324.
Amplifier operates. But gets very hot.	Input gain control too high	Lower Gain control
	Wrong Speaker impedances.	Disconnect Speaker from Amplifier. Verify speaker impedances with a Digital Volt/Ohm meter. 4 Channel amplifiers are stable at 2 ohms and above. If you need further assistance with this please call Tech Support: 800-450-8324.
	Not enough air circulation around amplifier. Amplifier is covered by Carpet or other material.	Verify mounting location allows free air circulation around amplifier.

PRELIMINARY

Routing wire and cables:

Determining the safest place to run wiring and cable in the vehicle. ALWAYS run Power and Audio cables on opposite sides of the vehicle. If they must cross at any point do so at 90 degree right angles to each other. Avoid any moving parts in the vehicle and use grommets when passing through the firewall.



WIRE GAUGE/AMP WIRING KIT CHART

Amplifier Model#:	Power (Watts)	DISTANCE				
		4 Feet	8 Feet	12 Feet	16 Feet	20 Feet
A400.4	400	AKPA-8(8GA)	AKPA-8	AKPA-8	AKPA-8	AKPA-8
A600.4	600	AKPA-41(4GA)	AKPA-41	AKPA-41	AKPA-41	AKPA-41

(SCOSCHE-EFX WIRING KIT SKUS)

POWER / OUTPUT CONNECTIONS

