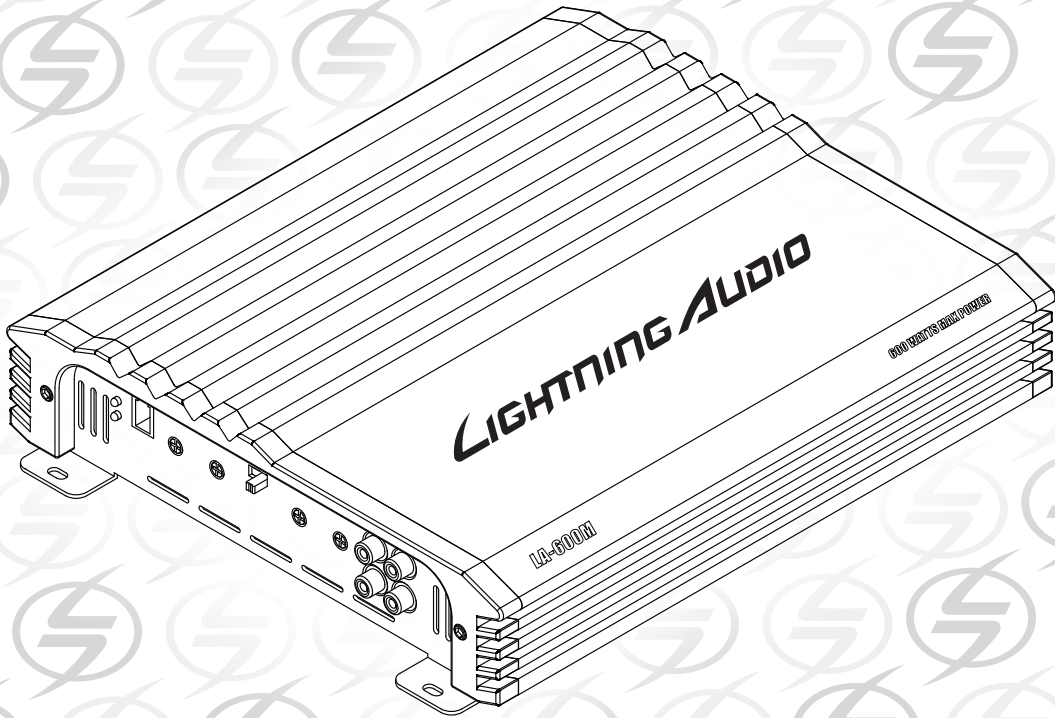




LIGHTNING AUDIO®



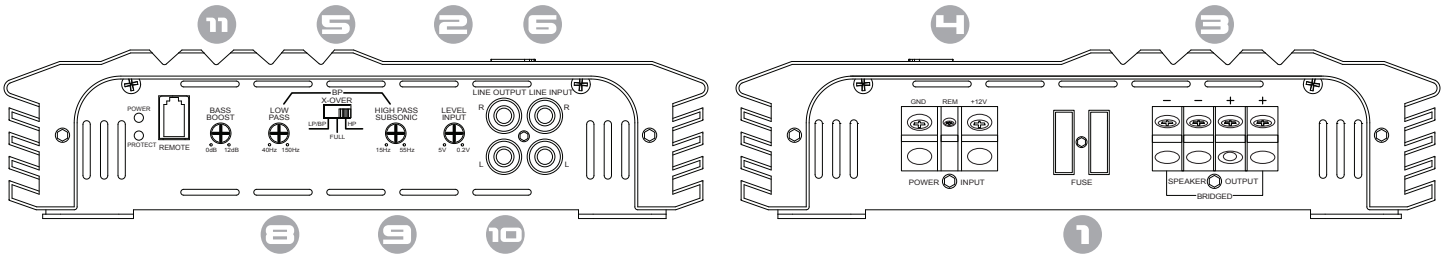
AMPLIFIERS

mono

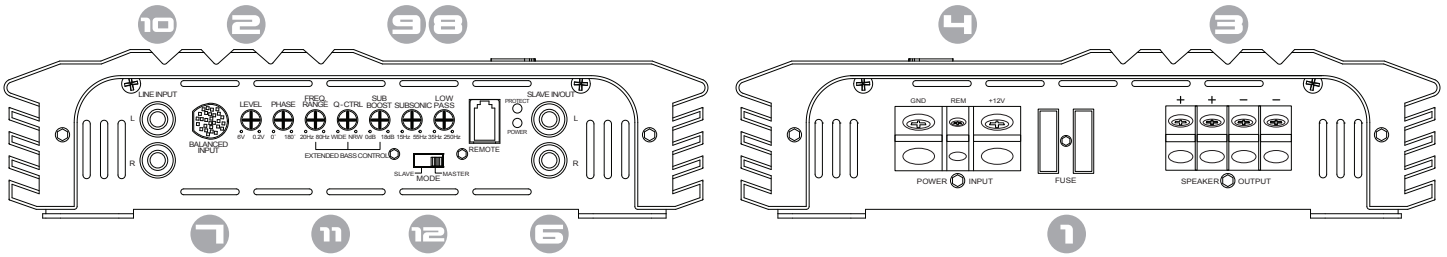
- LA-600M
- LA-1000MD
- LA-2000MD
- LA-3000MD



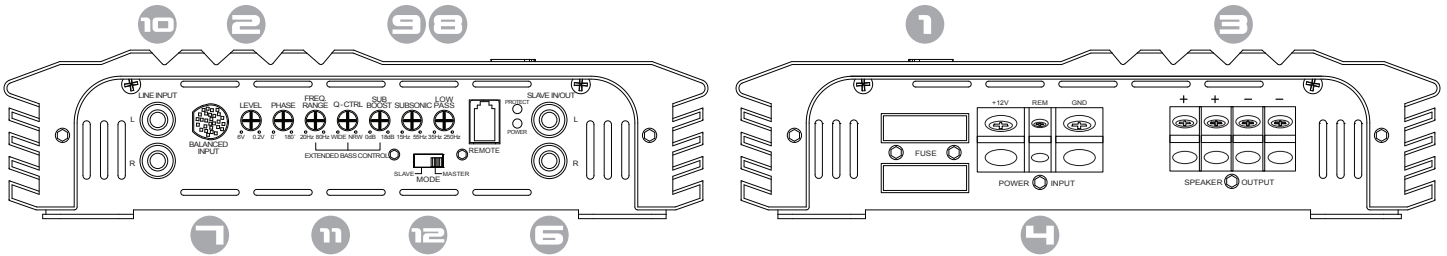
LA-600M



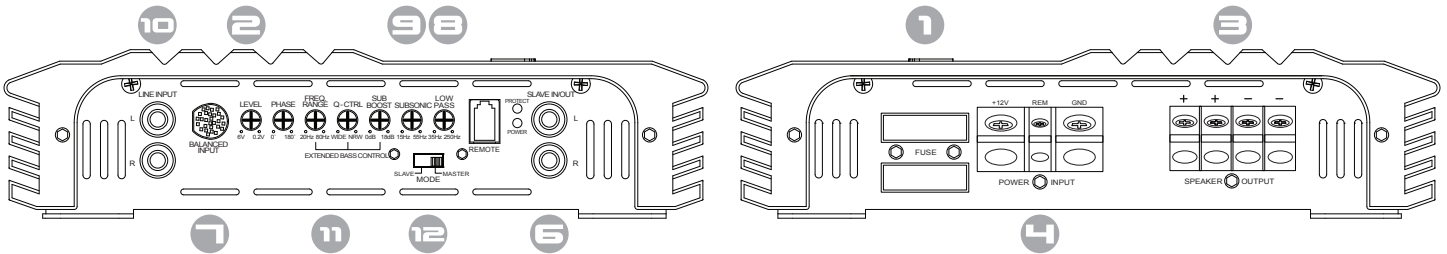
LA-1000MD



LA-2000MD



LA-3000MD



- | | | |
|--|--|--|
| <p>1 FUSE(S): Value dependant on amplifier power output</p> | <p>2 LEVEL CONTROL: Adjust to match the output levels of the source unit.</p> | <p>3 SPEAKER CONNECTOR TERMINAL: positive (+) & negative (-)</p> |
| <p>4 POWER CONNECTOR TERMINAL: power (B+), ground (GND), & remote (REM)</p> | <p>5 CROSSOVER FILTER SWITCH: full range (FULL), high-pass/sub-sonic (HP), & low-pass/bandpass (LP)</p> | <p>6 PASS THRU OUTPUTS: Outputs the same signal that is fed to the inputs or slave in/out (MD models only).</p> |
| <p>7 BALANCED INPUT: Use if the source unit has only speaker line outputs.</p> | <p>8 ADJUSTABLE CROSSOVER FREQUENCY CONTROL: 12db/Oct; 35Hz - 250Hz</p> | <p>9 SUBSONIC CONTROL: Variable subwoofer high pass filter; 15Hz - 55Hz</p> |
| <p>10 RCA INPUTS: Line level from radio pre-outs.</p> | <p>11 EXTENDED BASS CONTROL: Bass Boost, Q-Control, Phase & Frequency Range</p> | <p>12 OUTPUT MODE SWITCH: Select master or slave</p> |

MODEL	LA-600M		LA-1000MD		LA-2000MD		LA-3000MD	
POWER RATING	MAX	RMS	MAX	RMS	MAX	RMS	MAX	RMS
	400 x 1 @ 4Ω	200 x 1 @ 4Ω	500 x 1 @ 4Ω	250 x 1 @ 4Ω	1000 x 1 @ 4Ω	400 x 1 @ 4Ω	1500 x 1 @ 4Ω	600 x 1 @ 4Ω
	600 x 1 @ 2Ω	300 x 1 @ 2Ω	750 x 1 @ 2Ω	375 x 1 @ 2Ω	1500 x 1 @ 2Ω	700 x 1 @ 2Ω	2250 x 1 @ 2Ω	1000 x 1 @ 2Ω
			1000 x 1 @ 1Ω	500 x 1 @ 1Ω	2000 x 1 @ 1Ω	1000 x 1 @ 1Ω	3000 x 1 @ 1Ω	1400 x 1 @ 1Ω
CROSSOVER	12dB/Oct HP/FULL/LPBP		12dB/Oct Low Pass		12dB/Oct Low Pass		12dB/Oct Low Pass	
CROSSOVER FREQUENCY	Variable		Variable		Variable		Variable	
	40Hz - 150Hz		35Hz - 250Hz		35Hz - 250Hz		35Hz - 250Hz	
SUBSONIC FILTER	Variable		Variable		Variable		Variable	
	15Hz - 55Hz		15Hz - 55Hz		15Hz - 55Hz		15Hz - 55Hz	
BASS BOOST	0 to +12dB @ 45Hz (Remote Included)		0 to +18dB @ 45Hz (Remote Included)		0 to +18dB @ 45Hz (Remote Included)		0 to +18dB @ 45Hz (Remote Included)	
INPUTS	RCA		RCA / Balanced Input		RCA / Balanced Input		RCA / Balanced Input	
FUSE(S)	25A(2)		30A(2)		50A(2)		70A(2)	
DIMENSIONS (LxWxH)	9.8" x 9.4" x 2.3"		11" x 9.4" x 2.3"		13.8" x 9.4" x 2.3"		15" x 9.4" x 2.3"	

INSTALLATION

Preliminary Considerations:

- If you feel unsure about installing this system yourself, have it installed by a qualified technician.
- Think before you drill! Be careful not to cut or drill into gas tanks, fuel lines, brake or hydraulic lines, vacuum lines or electrical wiring when working on any vehicle.
- Aftermarket amplifiers will put an increased load on the vehicle's battery and charging system, which can reduce battery and alternator life. It is strongly recommended to upgrade your factory alternator and battery for optimum performance from your new audio system.

CAUTION: Before installation, disconnect the battery negative (-) terminal to prevent damage to the unit, fire and/or possible injury.

1. Choose a mounting location that will be secure and offer plenty of unobstructed space for proper cooling. Then plan the wire routing. Keep RCA cables close together but isolated from the amplifier's power cables and any high power auto accessories, especially electric motors. When feeding the wires through the fire wall or any metal barrier, protect them with plastic or rubber grommets to prevent short circuits. Leave the wires long at this point to adjust for a precise fit at a later time.

NOTE: Never run wires underneath the vehicle.

2. Prepare the power cable for attachment to the amplifier by stripping 1/2" of insulation from the end of the wire. Insert the bared wire into the B+ terminal and tighten the setscrew to secure the cable in place.

3. Trim the power cable within 18" of the battery and strip 1/2" of insulation from the end of the wire.

4. Strip 1/2" from the battery end of the power cable and crimp a large ring terminal to the cable. Use the ring terminal to connect to the battery positive terminal. DO NOT install the fuse at this time.

NOTE: ALWAYS protect the battery and electrical system from damage with proper fusing.

5. Prepare the chassis ground by scraping any paint from the metal surface and thoroughly clean the area of all dirt and grease. Strip the end of the wire and attach a ring connector. Fasten the cable to the chassis using a non-anodized screw and a star washer. Prepare the grounding cable for attachment to the amplifier by stripping 1/2" of insulation from the other end of the wire. Insert the bared wire into the GND terminal and tighten the setscrew to secure the cable in place.

6. Prepare the REM turn-on wire for connection to the amplifier by stripping 1/2" of insulation from the wire end. Insert the bared wire into the REM terminal and tighten the setscrew to secure the cable into place. Connect the other end of the REM wire to a switched 12-volt positive source.

NOTE: The switched voltage is usually taken from the source unit's accessory/remote lead.

7. Securely mount the amplifier to the vehicle or amp rack. Remember: Think before you drill!

NOTE: Be careful not to mount the amplifier on cardboard or plastic panels.

8. Connect the source signal to the amplifier by plugging the RCA cables/high level inputs into the input jacks at the amplifier. Use only one input configuration. Using both the RCA and High Level inputs will cause undesirable operation. When using a Master/Slave configuration (MD models only), select which amplifier will be the master, then set the mode switch to Master and connect RCA cables to the input jacks. The Slave amplifier(s); set the mode switch to Slave and connect RCA cables to the Slave in/out jacks from the Master's Slave in/out jacks.

NOTE: When using High Level Inputs, if audible engine noise is present, connect the Black wire to chassis ground. If noise is still present, contact your local authorized dealer or Lightning Audio customer service. When using a Master/Slave setup do not exceed more than two amplifiers. (MD models only)

9. Connect the speakers. Strip the speaker wires 1/2" and insert into the speaker terminal and tighten the setscrew to secure into place. Be sure to maintain proper speaker polarity. DO NOT chassis ground any of the speaker leads as unstable operation may result.

NOTE: Mono amplifier speaker outputs (A & B) are wired in parallel internally.

10. Perform a final check of the completed system wiring to ensure that all connections are accurate. Check all power and ground connections for frayed wires and loose connections. Complete the installation by installing the proper value fuse.

OPERATION

Adjusting Level: To adjust the level setting, turn the amplifier gain level to the lowest setting. Turn the source unit volume up until distortion is audible and then slowly down until the distortion is inaudible (approximately 3/4 volume position). Next, increase the amplifier level setting until once again distortion is audible and then down slowly until the distortion is inaudible.

NOTE: Proper level setting is done by a trained professional utilizing an oscilloscope. For a more in depth setting procedure, contact Lightning Audio Technical Support. In a Master/Slave setup ONLY adjustments made to the master amplifier will effect the output. (MD models only)

Adjusting Crossover: Select the appropriate position for the crossover filter switch. Turn the crossover adjustment knob to the lowest setting. With the system playing at normal listening level, turn the crossover adjustment knob up slowly until the desired crossover point is achieved. Example: subwoofers- low pass with an 80Hz crossover point and full-range- high pass with a 100Hz crossover point

NOTE: Some models include a subsonic filter with a variable 15-40Hz high pass filter designed to prevent frequencies below the audio range from being applied to the subwoofer from the amplifier. Set this to your personal preference while listening to the system. In a Master/Slave setup ONLY adjustments made to the master amplifier will effect the output. (MD models only)

TROUBLESHOOTING

IF...	THEN...	FIX...
Amplifier does not turn on	B+ or REM not between 10.5 and 15.5 or no voltage present	Check the alternator, battery, fuse, and wiring. Repair as necessary
Amplifier Noise	Amplifier is not properly grounded	Check wiring and repair as necessary
Turn-On Pop	Voltage spike from source unit is entering amplifier's input	Connect a relay turn-on module to REM terminal if pops are eliminated with no input signal to amplifier
Engine Noise	Noise is radiating into signal cables	Re-route signal cables away from sources of high current

LIMITED WARRANTY INFORMATION

LIGHTNING AUDIO OFFERS A LIMITED WARRANTY ON PRODUCTS SUBJECT TO THE FOLLOWING TERMS:

• LENGTH OF WARRANTY:

Speakers - One year replacement warranty from date of original purchase - requires proof of purchase.

Amplifiers - One year replacement warranty from date of original purchase - requires proof of purchase.

• WHAT IS COVERED:

This warranty applies only to Lightning Audio products sold to consumers by an authorized Lightning Audio Dealer in the United States of America. Products purchased by consumers from an authorized Lightning Audio Dealer located outside of the USA are covered by the authorized Lightning Audio Distributor for the country in which the products were purchased.

• WHO IS COVERED:

This warranty covers only the original purchaser of Lightning Audio product purchased from an authorized Lightning Audio Dealer in the United States. In order to receive service, the purchaser must provide Lightning Audio with a dated copy of the sales receipt stating the customer name, dealer name and product(s) purchased. Products found to be defective during the warranty period will be replaced (with a product deemed to be equivalent at Lightning Audio's sole discretion) by Lightning Audio.

• WHAT IS NOT COVERED:

1. Damage caused by accident, misuse, abuse, improper installation or operation, water or moisture, excessive heat, theft, or shipping
2. Any cost or expense related to the removal or reinstallation of product
3. Items previously repaired, serviced or modied by an unauthorized service center
4. Any product which has had the serial number defaced, altered, or removed
5. Subsequent damage to other components
6. Any product purchased outside the U.S.
7. Any product not purchased from an authorized Lightning Audio Dealer

• LIMIT ON IMPLIED WARRANTIES

Any implied warranties of fitness for use and merchantability are limited in duration to the period of the express warranty set forth above. Some states do not allow limitations on the length of an implied warranty, so this limitation may not apply. No person is authorized to assume for Lightning Audio any other liability in connection with the sale of the product.

• HOW TO OBTAIN SERVICE

Defective products should be returned to your local authorized Lightning Audio Dealer for warranty service or, you may call 1-888-881-8186 for Lightning Audio customer service. You must obtain an RA# (Return Authorization number) prior to returning any product to Lightning Audio. Return Authorizations are valid for 30 days. You are responsible for the shipment of defective product to Lightning Audio and you MUST include valid proof of purchase. Mark your RA# clearly on outside of your shipping carton. Products received without a valid RA# will be refused and returned to sender at sender's expense.

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