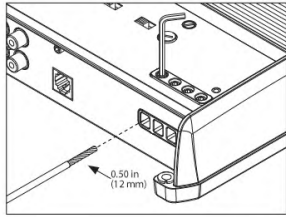
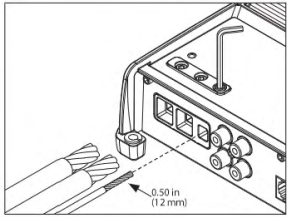
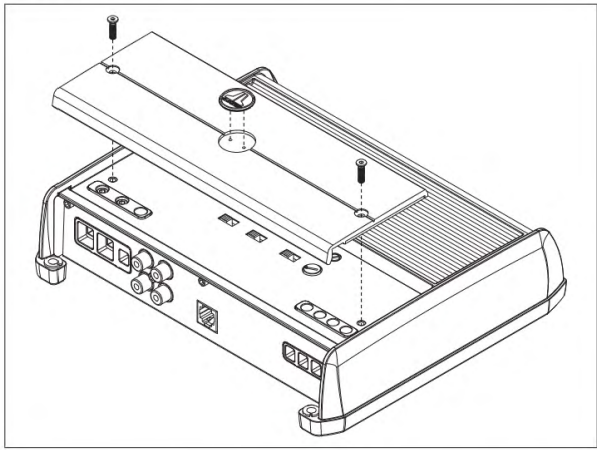
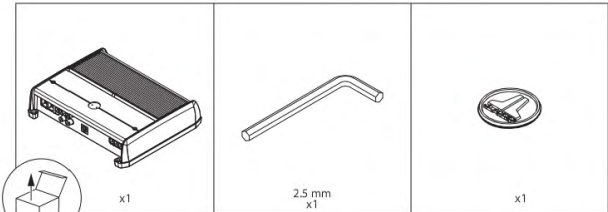




# XDM600/1

600W MONO CLASS D SUBWOOFER AMPLIFIER

OWNER'S MANUAL  
MANUEL D'UTILISATION  
MANUAL DEL PROPIETARIO  
BEDIENUNGSANLEITUNG  
MANUALE DEL PROPIETARIO



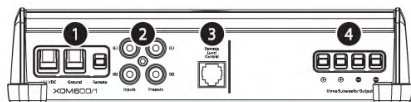
**INSTALLATION CONSIDERATIONS**

- Installation requires appropriate tools and safety equipment. Professional installation is recommended.
- This product is water-resistant. Do not submerge or subject to high-pressure water spray.
- Before installation, turn off the audio system and disconnect the battery system from the audio system.
- When possible, install in a dry, well-ventilated location that does not interfere with factory-installed systems. If a dry environment is not available, a location that is not exposed to heavy splashing may be used.
- Do not install in the engine compartment, any areas of extreme heat or where it will be directly exposed to the elements.
- Before cutting or drilling, check for potential obstacles behind mounting surfaces.
- Carefully route all system wiring away moving parts and sharp edges; secure with cable ties or wire clamps and use grommets and loom where appropriate to protect from sharp edges.

**SAFETY CONSIDERATIONS**

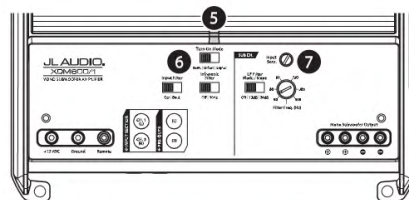
- Only use this product with 12 volt, negative-ground electrical systems. This product is not certified or approved for use in aircraft.
- Mount this product securely to prevent damage or injury in severe conditions.
- An appropriate fuse (or circuit breaker) at the main power wire is vital for vehicle/vessel safety and must be installed within 18 inches (45 cm) of the battery, unless the cable is in an enclosure or conduit.
- For ABYC and NMEA applications, circuit protection is required within 7 inches (18 cm) of the battery, unless the cable is in an enclosure or conduit.
- Listen to your audio system at levels appropriate for operating conditions and hearing safety.

## CONNECTIONS



	Connection	Description	Notes
1	+12VDC	Positive (+12V) Power Connection	<ul style="list-style-type: none"> <li>4 AWG wire (required)</li> <li>Install 50A fuse at (+) battery post</li> </ul>
	Ground	Negative (GND) Ground Connection	<ul style="list-style-type: none"> <li>4 AWG wire (required)</li> </ul>
2	Remote	Positive (+12V) Activation Connection	<ul style="list-style-type: none"> <li>18 – 12 AWG wire capacity</li> <li>See 6 Turn On Mode for more info</li> </ul>
	CH. 1 Input	Left Input Signal, Black RCA	<ul style="list-style-type: none"> <li>Accepts 200mV – 4V input voltage</li> <li>If only one subwoofer channel signal is available, a Yadapter is recommended to feed both inputs.</li> </ul>
	CH. 2 Input	Right Input Signal, Red RCA	
3	Preout 1	Left Pass-Through Preamp Signal, Black RCA	<ul style="list-style-type: none"> <li>Same signal that is connected to CH. 1&amp;2 inputs</li> </ul>
	Preout 2	Right Pass-Through Preamp Signal, Red RCA	<ul style="list-style-type: none"> <li>Unaffected by the amplifier's LP filter</li> </ul>
4	Remote Level Control	Remote Level Controller Connection (optional) (HD-RLC or MHD-RLC)	<ul style="list-style-type: none"> <li>Operates as an attenuator only; Fully counter-clockwise = Level Muted</li> <li>Fully clockwise = Level Unaffected</li> <li>Multiple amplifiers can be controlled from a single HD-RLC using a non-duplex phone line splitter and multiple phone cables.</li> </ul>
	Mono Subwoofer Output	<ul style="list-style-type: none"> <li>(+) Positive Subwoofer Output</li> <li>(+) Positive Subwoofer Output</li> <li>(-) Negative Subwoofer Output</li> <li>(-) Negative Subwoofer Output</li> </ul>	<ul style="list-style-type: none"> <li>Both positive (+) connections are connected in parallel internally</li> <li>Both negative (-) connections are connected in parallel internally</li> <li>Minimum impedance load: &gt;2 ohms</li> <li>16 – 8 AWG wire capacity</li> </ul>

## CONTROLS



	Control (Function)	Setting	Description	
5	Status LED (indicates operating status)	Flashing Green	Amplifier Powering Up, Audio Output Muted	
		Green	On-Normal Operation, Active Audio Output	
		Red	On-Safe Mode, Over-Temperature Condition, Audio Output Reduced Reverts to normal operation when temperature returns to a safe level	
		Amber (yellow)	On-Safe Mode, Over-Current Condition, Audio Output Muted May exhibit repetitive, audible ticking or thumping noise in the output Inspect for speaker/wire short circuit or low impedance	
		LEDs Off	Amplifier Turns Off (unexpectedly), Low-Voltage Condition Occurs when battery or remote turn-on voltage drops below 10V Reverts to normal operation when voltage rises above 11V	
		6	Turn On Mode (configures activation method)	Remote
Offset	DC Offset-Sensing (Automatic) Turns On by detecting the presence of small DC signal in OEM audio outputs and turns Off after the signal is removed			<ul style="list-style-type: none"> <li>Designed for high-level (speaker) signals only</li> <li>Detects input signal from CH. 1 (L) only</li> <li>Using DC Offset or Signal Sensing methods will turn the "Remote" terminal into a +12V turn-on output.</li> </ul>
Signal	Signal-Sensing (Automatic) Turns On by detecting full-range OEM audio signals and turns OFF after the signal is removed (within 30 seconds)			
Input Filter (configures input filter application)	Car Boat			Select for most installations (automotive or marine) Select if experiencing interference from high-current mechanical switches/devices
7	Infraonic Filter (configures high-pass filter)	Off	Filter defeated	<ul style="list-style-type: none"> <li>Designed to conserve amplifier power and protect subwoofer systems, without audibly degrading sub-bass output</li> </ul>
		30 Hz	Attenuates frequencies below 30 Hz, at a rate of 24dB/octave	
		Input Sens. (adjusts the input stage)	Variable	Use to match the source unit's output voltage with the amplifier's inputs. See Appendix A for detailed information.
7	LP Filter Mode/Slope (configures the low-pass filter and slope)	Off	Filter defeated; passes full range of frequencies present at the inputs	
		12dB	Attenuates frequencies above the "Filter Freq. (Hz)" dial, at a rate of 12dB/octave	
		24dB	Attenuates frequencies above the "Filter Freq. (Hz)" dial, at a rate of 24dB/octave	
7	Filter Freq. (Hz) (adjusts the low-pass filter cutoff frequency)	Variable	Use to adjust the cutoff frequency of the low-pass active filter, from 30 Hz – 500 Hz / 12dB per octave	

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## APPENDIX A:

### Input Sensitivity Level Setting

Follow the steps below to adjust the input sensitivity of each amplifier channel pair to achieve overall system balance.

Necessary Equipment
<ul style="list-style-type: none"><li>Digital AC Voltmeter</li><li>Sine-wave test tone recorded at 0 dBfs reference level in the frequency range to be amplified. Do not use attenuated test tones (-10 dB, -20 dB, etc). Full range channel/amplifier applications: 1 kHz Subwoofer channel/amplifier applications: 50 Hz</li><li>Depending on your type of source unit, the sine-wave may be played via a CD, USB thumb drive, portable media player or Bluetooth® audio source. Make sure to disable any EQ/DSP modes on your portable media player during level setting.</li></ul>
The Nine-Step Procedure
1. Disconnect the speaker(s) from the amplifier's speaker output connectors.
2. Turn off all processing (bass/treble, loudness, EQ, etc.) on the source unit, processors (if used) and amplifier. Set the fader control to center position and the subwoofer level control to 3/4 of maximum, if used.
3. Turn the "Input Sens." control all the way down.
4. Set the source unit volume to 3/4 of full volume. This will allow for reasonable gain overlap with moderate clipping at full volume.
5. Using the chart below, determine the target voltage for input sensitivity adjustment according to the nominal impedance of the speaker system connected to the amplifier outputs.
6. Verify that you have disconnected the speakers before proceeding. Play a track with an appropriate sine wave (within the frequency range to be amplified) at 3/4 source unit volume.
7. Connect the AC voltmeter to the speaker output terminals of the amplifier. Make sure to test the voltage at the correct terminals (+ and -).
8. Increase the "Input Sens." control until the target voltage is observed with the voltmeter.
9. Once you have adjusted each channel section to its maximum low-distortion output level, reconnect the speaker(s). The "Input Sens." controls can now be adjusted downward if the amplifier requires attenuation to achieve the desired system balance.
IMPORTANT!
<ul style="list-style-type: none"><li>Do not increase any "Input Sens." setting for any amplifier channel or channel pair in the system beyond the maximum level established during this procedure. Doing so will result in audible distortion and possible speaker damage.</li><li>It will be necessary to re-adjust the "Input Sens." if any equalizer boost is activated after setting the "Input Sens." with this procedure. This applies to any EQ boost circuit, including source unit tone controls or EQ circuits. EQ cuts will not require re-adjustment.</li></ul>

Nominal Impedance	Target AC Voltage
4Ω	40.0 V
3Ω	38.7 V
2Ω	34.6 V
1Ω	not recommended

## SPECIFICATIONS

Amplifier Section			
Amplifier Topology	NexD™ Ultra-High Speed Class D		
Power Supply Type	Unregulated MOSFET Switching		
Minimum Copper Power/GND Wire	4 AWG (Note: CCA/Copper Clad Aluminum wire is not recommended.)		
Recommended Fuse	50 A		
Rated RMS Power @ 14.4V, <1% THD+N	400W x 1 @ 4 Ω	500W x 1 @ 3 Ω	600W x 1 @ 2 Ω
Rated RMS Power @ 12.5V, <1% THD+N	300W x 1 @ 4 Ω	400W x 1 @ 3 Ω	500W x 1 @ 2 Ω
Frequency Response	7Hz–500 Hz (+0, -1dB)		
S/N Ratio (A-weighted, 20 Hz–20 kHz noise bandwidth)	>83 dB (Referred to rated power), >67 dB (Referred to 1 W)		
Damping Factor	>1000 / 50 Hz @ 4 Ω, >500 / 50 Hz @ 2 Ω		
Input Section			
Number of Inputs	2 (One Stereo Pair)		
Input Type	Differential-Balanced with RCA Jack inputs		
Input Voltage Range	200mV – 4V RMS		
Signal Processing			
Filter Type	Active, 12dB or 24dB/octave Low-Pass, (50 – 500 Hz), defeatable		
Remote Level Control	HD-RLC or MHD-RLC (optional), Full mute to 0 dB range.		
Dimensions			
L x W x H	8.52 in. x 7.09 in. x 2.05 in. (217 mm x 180 mm x 52 mm)		







**WARRANTY INFORMATION**  
CAR AUDIO



SKU#011570  
©2021 JL Audio, Inc.



# USA Limited Warranty

## **FOR CAR AUDIO PRODUCTS SOLD AT RETAIL:**

JL Audio warrants these products to be free of defects in materials and workmanship from the original date of purchase for these periods:

**One (1) year from the original date of purchase:** Car Speakers and Subwoofers

**Two (2) years from the original date of purchase:** Car Amplifiers, Electronics, Enclosed Subwoofers, Stealthbox and Connection Products

**Note:** The Car Amplifier Warranty Period is extended to three (3) years when accompanied with the purchase of a qualifying JL Audio Amplifier Power Connection System and with installation by an authorized JL Audio dealer.

This warranty is not transferable and applies only to the original retail purchaser from an authorized JL Audio dealer in the USA. Should service be necessary under this warranty for any reason due to manufacturing defect or malfunction, JL Audio will (at its discretion), repair or replace the defective product with new or remanufactured product at no charge.

**Note:** Products purchased from unauthorized dealers are not covered under warranty.

Damage caused by the following is not covered under warranty: accident, misuse, physical abuse, product modification or neglect, failure to follow installation instructions, unauthorized repair attempts, misrepresentations by the seller. Loudspeakers with thermal or over-excursion damage are not covered under warranty. This warranty does not cover incidental, accidental or consequential damages and does not cover the cost of removing or reinstalling products. Cosmetic damage due to improper handling, accident or normal wear and tear or exposure to harsh chemicals is not covered under warranty. JL Audio will not be responsible for restoring or maintaining custom finishes or cosmetic treatments applied to products.

**This warranty is void if the product's serial number has been removed, altered or defaced.**

Any applicable implied warranties are limited in duration to the period of the express warranty as provided herein beginning with the date of the original purchase at retail, and no warranties, whether express or implied, shall apply to this product thereafter. Some states do not allow limitations on implied warranties, therefore these exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

## **If you need service on your JL Audio product:**

All USA retail warranty returns should be sent to JL Audio freight prepaid through an authorized JL Audio dealer and must be accompanied by proof of purchase (a copy of the original retail sales receipt.) Direct returns from consumers or non-authorized dealers will be refused unless specifically authorized by JL Audio with a valid return authorization number. Warranty expiration on products returned without proof of purchase will be determined from the manufacturing date code. Coverage may be invalidated as this date is prior to purchase date. Return only defective components. (If one speaker fails in a system, return only that speaker component, not the entire system.) Non-defective items received will be returned freight-collect. Customer is responsible for shipping charges and insurance in sending the product to JL Audio. Freight damage on returns is not covered under warranty.

**JL Audio Customer Service:**

1-954-443-1100

9:00 AM – 5:00 PM (Eastern Time Zone)

**JL Audio Technical Support:**

[www.jlaudio.com/support](http://www.jlaudio.com/support)

## Original Equipment Warranty

For JL Audio products installed as original equipment by a boat or vehicle manufacturer, warranty coverage is provided within the boat or vehicle manufacturer's warranty program. Please contact your boat dealer or manufacturer.

## International Warranty

JL Audio Car Audio products are warrantied against defects in materials and workmanship for a minimum time period as stated in the USA warranty above, beginning on the date of purchase from a Dealer authorized by a JL Audio Distributor. The warranty is only valid within the country of purchase and products are covered by each country's JL Audio Distributor warranty program. To find your country's Distributor please visit this link: [www.jlaudio.com/pages/dealer-locator](http://www.jlaudio.com/pages/dealer-locator)

**Consumers in the EEA countries and the Russian Federation are protected by local consumer law and benefit from local statutory warranties.**

JL Audio reserves the right to change or modify any of the terms and conditions contained in this Warranty Statement, at any time and in our sole discretion. Any changes or modification will be effective immediately upon posting of the revisions on the JL Audio website at [www.jlaudio.com/warranty](http://www.jlaudio.com/warranty), and you waive any right you may have to receive specific notice of such changes or modifications.