# OWNER'S MANUAL

# JX250/1
# JX500/1
# JX1000/1D

Monoblock Subwoofer Amplifiers

*Thank you for purchasing a JL Audio amplifier for your automotive sound system.*

*Your amplifier has been designed and manufactured to exacting standards in order to ensure years of musical enjoyment in your vehicle. For maximum performance, we highly recommend that you have your new amplifier installed by an authorized JL Audio dealer. Your authorized dealer has the training, expertise and installation equipment to ensure optimum performance from this product. Should you decide to install the amplifier yourself, please take the time to read this manual thoroughly so as to familiarize yourself with its installation requirements and setup procedures.*

*If you have any questions regarding the instructions in this manual or any aspect of your amplifier's operation, please contact your authorized JL Audio dealer for assistance. If you need further assistance, please call our Technical Support Department at (954) 443-1100 during business hours.*

JL AUDIO®

## PROTECT YOUR HEARING!

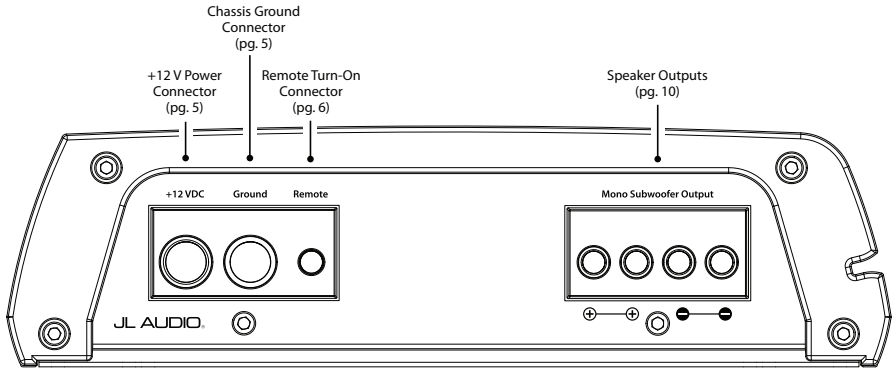
We value you as a long-term customer. For that reason, we urge you to practice restraint in the operation of this product so as not to damage your hearing and that of others in your vehicle. Studies have shown that continuous exposure to high sound pressure levels can lead to permanent (irreparable) hearing loss. This and all other high-power amplifiers are capable of producing such high sound pressure levels when connected to a speaker system. Please limit your continuous exposure to high volume levels.

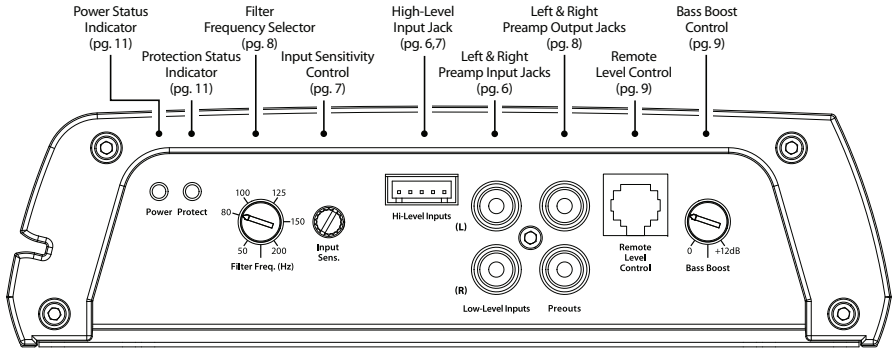
While driving, operate your audio system in a manner that still allows you to hear necessary noises to operate your vehicle safely (horns, sirens, etc.).

## SERIAL NUMBER

In the event that your amplifier requires service or is ever stolen, you will need to have a record of the product's serial number. Please take the time to enter that number in the space provided below. The serial number can be found on the bottom panel of the amplifier and on the amplifier packaging.

**Serial Number:**






## INSTALLATION APPLICATIONS

This amplifier is designed for operation in vehicles with 12V, negative-ground electrical systems. Use of this product in vehicles with positive ground and/or voltages other than 12V may result in damage to the product and will void the warranty.

This product is not certified or approved for use in aircraft. Do not attempt to "bridge" the outputs of this amplifier with the outputs of a second amplifier, including an identical one.

## PLANNING YOUR INSTALLATION

It is important that you take the time to read this manual and that you plan out your installation carefully. The following are some considerations that you must take into account when planning your installation.

### Cooling Efficiency Considerations:

The outer shell of your JL Audio amplifier is designed to remove heat from the amplifier circuitry. For optimum cooling performance, this outer shell should be exposed to as large a volume of air as possible. Enclosing the amplifier in a small, poorly ventilated chamber can lead to excessive heat build-up and degraded performance. If an installation calls for an enclosure around the amplifier, we recommend that this enclosure be ventilated with the aid of a fan. In normal applications, fan-cooling is not necessary.

**! IMPORTANT!**

**Mounting the amplifier upside down is strongly discouraged.**

If mounting the amplifier under a seat, make sure there is at least 1 inch (2.5 cm) of space above the amplifier's outer shell to permit proper cooling.

### Safety Considerations:

Your amplifier needs to be installed in a dry, well-ventilated environment and in a manner which does not interfere with your vehicle's safety equipment (air bags, seat belt systems, ABS brake systems, etc.). You should also take the time to securely mount the amplifier using appropriate hardware so that it does not come loose in the event of a collision or a sudden jolt to the vehicle.

### Stupid Mistakes to Avoid:

- Check before drilling any holes in your vehicle to make sure that you will not be drilling through a gas tank, brake line, wiring harness or other vital vehicle system.
- Do not run system wiring outside or underneath the vehicle. This is an extremely dangerous practice which can result in severe damage to your vehicle and person.
- Protect all system wires from sharp metal edges and wear by carefully routing them, tying them down and using grommets and loom where appropriate.
- Do not mount the amplifier in the engine compartment, under the vehicle, on the roof or in any other area that will expose the amplifier circuitry to the elements.

## PRODUCT DESCRIPTION

JL Audio JX monoblock subwoofer amplifiers are specifically designed to drive subwoofers. Their frequency response is limited to the range below 150 Hz., making them unsuitable for driving midrange speakers or tweeters. For detailed specifications, please refer to Appendix B (page 13).

## TYPICAL INSTALLATION SEQUENCE

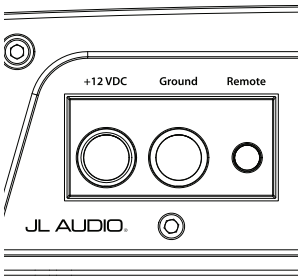
The following represents the sequence for a typical amplifier installation, using an aftermarket source unit or OEM Interface product. Additional steps and different procedures may be required in some applications. If you have any questions, please contact your authorized JL Audio dealer for assistance.

**1)** Disconnect the negative battery post connection and secure the disconnected cable to prevent accidental re-connection during installation. This step is not optional!
**2)** Run power wire from the battery location to the amplifier mounting location, taking care to route it in such a way that it will not be damaged and will not interfere with vehicle operation. See next page for appropriate wire size.
**3)** Connect power wire to the positive battery post. Fuse the wire with an appropriate fuse block (and connectors) within 18 inches (45 cm) wire length of the positive battery post. This fuse is essential to protect the vehicle. Do not install the fuse until the power wire has been connected to the amplifier.
**4)** Run signal cables (RCA cables) and remote turn-on wire from the source unit to the amplifier mounting location.
**5)** Run speaker wire from the speaker systems to the amplifier mounting location.
**6)** Find a good, solid metal grounding point close to the amplifier and connect the negative power wire to it using appropriate hardware. Use the same size power wire used for the +12V connection, no longer than 36 inches (90 cm) from the amplifier's ground (GND) connector to the ground connection point. In some vehicles, it may be necessary to upgrade the battery ground wire. (See page 5 for important notice).
**7)** Securely mount the amplifier using appropriate hardware.
**8)** Connect the positive and negative power wires to the amplifier.
**9)** Connect the remote turn-on wire to the amplifier.
**10)** Connect the input cables to the amplifier.
**11)** Connect the speaker wires to the amplifier.
**12)** Carefully review the amplifier's control settings to make sure that they are set according to the needs of the system.
**13)** Install power wire fuse (see next page for correct value) and reconnect the negative battery post terminal.
**14)** Turn on the source unit at a low level to double-check that the amplifier is configured correctly. Resist the temptation to crank it up until you have verified the control settings.
**15)** Make necessary adjustments to the input sensitivity controls to obtain the right overall output and the desired balance in the system. See Appendix A (page 12) for the recommended input sensitivity setting method.
**16)** Enjoy the fruits of your labor with your favorite music.



## POWER CONNECTIONS

Before installing the amplifier, disconnect the negative (ground) wire from the vehicle's battery. This will prevent accidental damage to the system, the vehicle and your person during installation.




The amplifier's "**+12 VDC**" (positive) and "**Ground**" (ground) connections are designed to accept up to 4 AWG power wire.

**Minimum Power / Ground Wire Size Requirements:**
JX250/1: 8 AWG
JX500/1: 4 AWG
JX1000/1D: 4 AWG

**Note:** Smaller AWG numbers mean bigger wire and vice-versa (1/0 AWG is the largest, 2 AWG is smaller, then 4 AWG, then 8 AWG, etc.).

The above wire gauge recommendations assume no other amplifiers are connected to the same wire. Use larger wire with a fused distribution block (or separate wires) for multiple amplifiers.

If you are installing this amplifier with other amplifiers and wish to use a single main power wire, use 2 AWG or 1/0 AWG main power wire (depending on the overall current demands of all the amplifiers in the system). This 2 AWG or 1/0 AWG power wire should terminate into a fused distribution block mounted as close to the amplifiers as possible and should connect to the JX monoblock with 4 AWG power wire (8 AWG is sufficient for the JX250/1 only).

To connect the power and ground wires to the amplifier, strip 1/2-inch (12 mm) of insulation from each wire and insert the bare wire into the appropriate terminal block positions on the JX250/1. Use the supplied 2.5 mm hex wrench to secure the wire via the screw on the top of each terminal.

The **"Ground"** connection should be made using 4 AWG wire (8 AWG is sufficient for JX250/1 only) and should be kept as short as possible, while accessing a solid piece of sheet metal in the vehicle. The surface of the sheet metal should be sanded at the contact point to create a clean, metal-to-metal connection between the chassis and the termination of the ground wire. The use of a #10 sheet metal screw and star washer to lock down the connection is advisable. Alternatively, you can use a specialized grounding lug, such as the JL Audio XB-MGLU. Any wires run through metal barriers (such as firewalls), must be protected with a high quality insulating grommet to prevent damage to the insulation of the wire. Failure to do so may result in a dangerous short circuit.

**! IMPORTANT!**

**Many vehicles employ small (10 AWG - 6 AWG) wire to ground the battery to the vehicle chassis and to connect the alternator's positive connection to the battery. To prevent voltage drops, these wires should be upgraded to 4 AWG when installing amplifier systems with main fuse ratings above 60A.**

## FUSE REQUIREMENTS

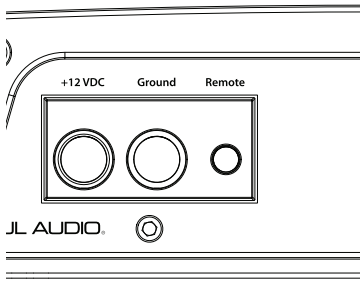
JX250/1: 30A (AGU or MAXI®)
JX500/1: 60A (AGU or MAXI®)
JX1000/1D: 80A (AGU, ANL or MAXI®)

An appropriate fuse at the main power wire(s) to the amplifier(s) is vital for vehicle safety! This fuse must be installed within 18 inches (45 cm) of the positive battery post connection. If the JX monoblock is the only device connected to this main wire, use the corresponding fuse value listed above (no other fuse is required in this situation).

When running multiple devices from one main power wire, the main fuse value and rating of the main power wire must be high enough for all of the equipment being run from it. Use a fused distribution block to split the main power wire feed to each device, with appropriate fusing and power wire for each device.

## REMOTE TURN-ON

The JX monoblock amplifier is turned on and off using a conventional +12V remote turn-on lead, typically controlled by the source unit's remote turn-on output.

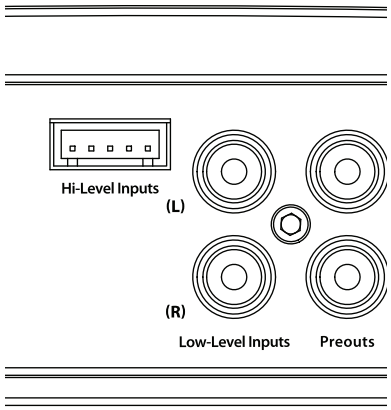



The amplifier will turn on when +12V is present at its **"Remote"** input and turn off when +12V is switched off. If a source unit does not have a dedicated remote turn-on output, the amplifier's turn-on lead can be connected to +12V via a switch that derives power from an ignition-switched circuit.

18 AWG wire is more than adequate for the remote turn-on connection. To connect the remote turn-on wire to the amplifier, strip 1/2-inch (12 mm) of insulation from the wire and insert it into the **"Remote"** receptacle on the power connector. Tighten the connector down using the supplied 2.5 mm hex wrench.

## AMPLIFIER INPUTS

The JX monoblock amplifier offers two input connection methods, one for high-level (speaker level) signals and one for low-level (preamp level) signals.




You may run a stereo or a mono signal into the inputs of the amplifier. The amplifier's input section automatically sums stereo signals to mono for the internal amplifier section.

The amplifier will operate with only one input connection (left or right), but will require an increase in input sensitivity to overcome the loss of signal. For this reason, when feeding a mono input signal into the **"Low-Level Inputs"**, use a **Y-adaptor splitter** to split the mono signal and connect it to both the Left and Right Low-Level Inputs of the amplifier.

When feeding a mono signal to the **"Hi-Level Inputs"**, connect it in parallel to both left and right input wires.

**1) Low-Level Inputs:** A standard left/right pair of RCA type jacks is used for preamp level (low-level) signal input on the JX monoblocks. This is the preferred connection method whenever available.

**2) Hi-Level Inputs:** If your system does not offer a preamp level signal option, you can connect speaker level signals directly to the **"Hi-Level Inputs"** connector using the supplied mating connector and wire harness. Simply splice the appropriate left/right and positive/negative wires to the included harness and plug the harness into the **"Hi-Level Inputs"** connector on the amplifier. The JX monoblock will attenuate the high-level signal to make it compatible with its input stage.

**! IMPORTANT!**

**Make sure you observe correct polarity in making the "Hi-Level Input" connections. Failure to do so will result in a complete loss of signal (no bass).**

The connections for the **"Hi-Level Inputs"** plug wires are as follows from left to right on the plug:

**White:** Left Positive (+)
**White/Black:** Left Negative (–)
**Black:** Common Ground (rarely used)*
**Gray:** Right Positive (+)
**Gray/Black:** Right Negative (–)

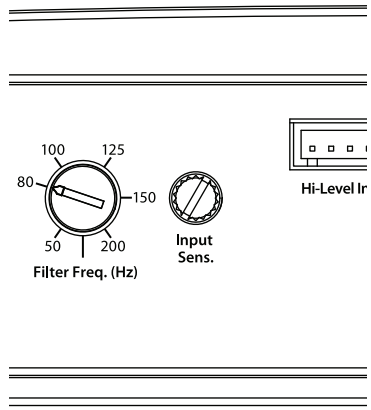
*The only time you will use the **"Common Ground"** connection is with some older (pre-1980's) factory systems or head units that ground their speakers to chassis ground. To use this connection, ground the black wire on the plug to chassis ground and only connect the Left and Right Positive plug wires to the factory radio outputs.

**! IMPORTANT!**

**If you plan to use the preamp outputs to feed a stereo amplifier, you must connect stereo signals to the inputs of the amplifier. A mono signal into the amplifier will result in a mono signal out of its preamp output.**

## "INPUT SENSITIVITY" (GAIN) ADJUSTMENT

Located to the left of the input connectors is a rotary control labeled **"Input Sens."**. This rotary control can be used to match the source unit's output voltage to the input stage of the amplifier for maximum clean output.




Rotating the control clockwise will result in higher sensitivity (louder for a given input voltage). Rotating the control counter-clockwise will result in lower sensitivity (quieter for a given input voltage). To properly set the amplifier for maximum clean output, please refer to Appendix A (page 12) in this manual. After using this procedure, you can then adjust the level of the amplifier by adjusting the input sensitivity downward, if the amplifier requires attenuation to achieve the desired system balance.

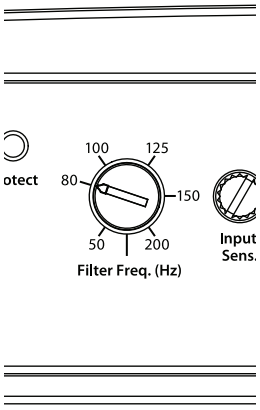
Do not increase the **"Input Sens."** setting for any amplifier in the system beyond the maximum level established during the procedure outlined in Appendix A (page 12). Doing so will result in audible distortion and possible speaker damage.

ENGLISH

## LOW-PASS FILTER CONTROL

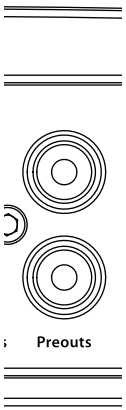
The JX monoblock employs a 12dB/octave low-pass active filter for its internal channel. This feature is designed to attenuate frequencies above its filter frequency, so that the system's subwoofers do not reproduce any audible mid-range content.

The low-pass filter is fully variable between 50 Hz and 200 Hz via the **"Filter Frequency"** control knob. 80 Hz (as shown in the diagram below) is a good starting point for system tuning.




## "PREOUTS"

The JX monoblock incorporates a pass-through preamp output (Preouts) section, designed to make multiple amplifier systems easy to set up. This section consists of a pair of RCA-type jacks marked "**Preouts**".



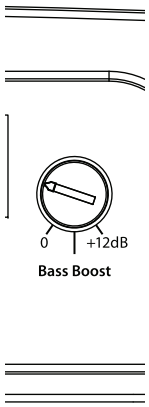

These preamp outputs deliver the same signal that is being fed to the Low-Level inputs. (If the input signals are full-range, the preamp outputs will be full-range). This signal is not affected by the bass boost or Filter processing selected for the amplifier.

**! IMPORTANT!**

**The "Preouts" of the JX250/1 and JX500/1 will not pass signals from the Hi-Level inputs. The JX1000/1D will pass signals from the Hi-Level inputs and will attenuate them to Low-Level.**

## "BASS BOOST" CONTROL

The JX monoblock includes a single band, boost-only bass equalizer controlled by a rotary knob marked **"Bass Boost"**. This control has a boost range of 0dB (full-counterclockwise) to +12dB (full-clockwise) and is centered at 45 Hz.

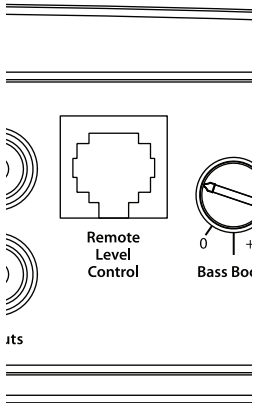



## REMOTE LEVEL CONTROL

With the optional RBC-1 Remote Level Control (sold separately), you can control the subwoofer volume from the front of the vehicle.

The RBC-1 connects to the jack labeled **"Remote Level Control"** on the Connection Panel of the JX Monoblock amplifier, using a standard telephone cable (supplied with the RBC-1).

When connected to the amplifier, the Remote Level Control operates as follows. At full counter-clockwise rotation, the audio will mute completely. At full clockwise rotation the level will be the same as if the RBC-1 was not connected at all. In other words, it operates strictly as a level **attenuator.** This control will not affect the **"Bass Boost"** feature of the JX Monoblock.



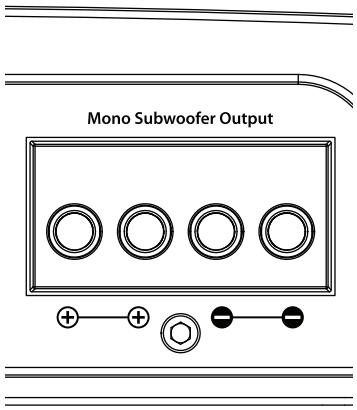

Care should be taken to securely mount this control in a manner that does not interfere with vehicle operation.

When setting the amplifier's input sensitivity, the Remote Level Control should be unplugged or at full clockwise rotation (maximum level).

ENGLISH

## SPEAKER OUTPUT

Subwoofer connection to the JX monoblock is straightforward and takes place at the far right of the power/speaker connection panel. Two positive ("+") connections and two negative ("–") connections are available via a connector labeled **"Speaker Output (Mono)"**. The dual connections allow for two separate speaker wire runs to be parallel-connected to the amplifier's mono output.




**! IMPORTANT!**

**Speaker loads below 2Ω nominal are not recommended and will cause the amplifier to enter into a protection mode.**

Do not chassis ground any speakers connected to this or any other JL Audio amplifier. Doing so will cause the amplifier to go into protection.

To connect the speaker wires to the amplifier, strip 1/2-inch (12 mm) of insulation from each speaker wire and insert them into their appropriate connector (observing correct polarity). Then, tighten each connector using the supplied 2.5 mm hex wrench.

**! IMPORTANT!**

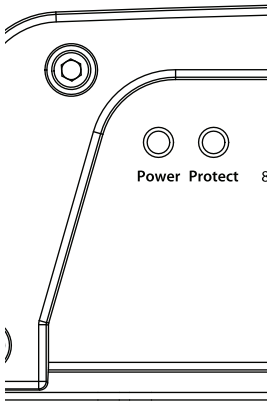
**Do NOT attempt to "bridge" two JX monoblocks together or combine their output to a single load in any manner. Doing so will damage the amplifier(s).**

**! IMPORTANT!**

**Before reconnecting the battery ground and turning the system on, verify that all control settings on the amplifier are set according to the needs of the system.**



## STATUS INDICATOR LIGHTS / PROTECTION CIRCUITRY




There are two status indicator lights on the amplifier's control panel. These are as follows:

**1) "Power" (Green)**: Located at the far left of the amplifier's control panel, this LED lights to indicate that the amplifier is turned on and operating normally.

**2)** "**Protect**" **(Red)**: Indicates that the amplifier protection circuitry has been activated to prevent product failure due to thermal overload, short-circuit or a dangerously low impedance connected to the amplifier outputs. Connecting the speaker output to an impedance lower than 2 ohms will cause this protection mode to activate. When this protection mode is activated, the amplifier will shut down to protect its circuitry. When the problem is corrected, the amplifier will return to normal operation and the **"Protect"** LED will shut off.

## SERVICING YOUR AMPLIFIER

If your amplifier fails or malfunctions, please return it to your authorized JL Audio dealer so that it may be sent in to JL Audio for service. There are no user serviceable parts or fuses inside the amplifier. The unique nature of the circuitry in the JL Audio amplifiers requires specifically trained service personnel. Do not attempt to service the amplifier yourself or through unauthorized repair facilities. This will not only void the warranty, but may result in the creation of more problems within the amplifier.

If you have any questions about the installation or setup of the amplifier not covered in this manual, please contact your dealer or technical support.

**JL Audio Technical Support:**
(954) 443-1100
9:00 AM – 5:30 PM (Eastern Time Zone)
Monday - Friday

## APPENDIX A:
## Input Sensitivity Level Setting

Following the directions below will allow the installer to adjust the input sensitivity of each amplifier channel pair simply and easily in just a few minutes using equipment which is commonly available in installation bays.

### Necessary Equipment

- Digital AC Voltmeter
- CD with a sine-wave test tone recorded at 0 dB reference level in the frequency range to be amplified (50 Hz is a good choice). Do not use attenuated test tones (-10 dB, -20 dB, etc.).

### The Nine-Step Procedure

**1)** Disconnect the subwoofer(s) from the amplifier's subwoofer output connector (you need only disconnect Pos. or Neg., not both).

**2)** Turn off all processing (bass/treble, loudness, EQ, etc.) on the source unit, processors (if used) and amplifier. Set the source unit's fader control to center position and its subwoofer level control to 3/4 of maximum. If connected, set the amplifier's Remote Level Control at maximum (full clockwise).

**3)** Turn the amplifier's **"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 charts on this page, determine the target voltage for input sensitivity adjustment according to the nominal impedance of the speaker system connected to the amplifier outputs. Make sure you reference the appropriate chart for your specific JX monoblock model.

**6)** Verify that you have disconnected the speakers before proceeding. Play a track with an appropriate sine wave (50 Hz is recommended) at 3/4 source unit volume.

**7)** Connect the AC voltmeter to the speaker output connectors of the amplifier. Make sure you test the voltage at the correct connectors (+ and –).

**8)** Increase the **"Input Sens."** control until the target voltage is observed with the voltmeter.

**9)** Once you have adjusted the amplifier to its maximum low-distortion output level, reconnect the speaker(s) and listen to the system. The **"Input Sens."** controls can now be adjusted downward if the amplifier requires attenuation to achieve the desired system balance.

**! IMPORTANT!**

**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.**

It will be necessary to re-adjust the **"Input Sens."** for the affected channels 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.

| JX250/1 | |
|---|---|
| **Nom. Impedance** | **Target AC Voltage** |
| **4Ω** | 26.5 V |
| **3Ω** | 25.1 V |
| **2Ω** | 22.4 V |

| JX500/1 | |
|---|---|
| **Nom. Impedance** | **Target AC Voltage** |
| **4Ω** | 36.9 V |
| **3Ω** | 35.5 V |
| **2Ω** | 31.6 V |

| JX1000/1D | |
|---|---|
| **Nom. Impedance** | **Target AC Voltage** |
| **4Ω** | 44.7 V |
| **3Ω** | 47.4 V |
| **2Ω** | 44.7 V |



## APPENDIX B:
## Specifications

### Input Section (all models):

**Low-Level Input:** Single-ended with RCA jacks
**Low-Level Input Range:** 200mV - 4V RMS
**High-Level Input:** Single-ended with molded connector
**High-Level Input Range:** 2.0V - 10.0V RMS

### Signal Processing (all models):

**Filter Type:** 12dB/octave Low-Pass with continuously variable cutoff frequency selection from 50 - 200 Hz. Not defeatable.
**Preamp Output:** 2-Ch., pass-through with RCA-type jacks
**Bass Boost:** Single-band with 45 Hz center frequency, adjustable from 0 to +12dB.
**Remote Level Control:** Via optional, wired RBC-1 remote control knob. Full mute to 0 dB range. (RBC-1 is sold separately.)

### JX250/1 Specifications:

**Amplifier Topology:** Class A/B
**Power Supply:** Unregulated PWM switching type
**Frequency Response:** 10 - 150 Hz (+0/– 1 dB)
**Signal to Noise Ratio:**
>87 dBA referred to highest rated power, >63 dBA referred to 1W (20 Hz - 20 kHz noise bandwidth)
**Damping Factor:** >160 @ 4 ohms / >80 @ 2 ohms
**THD + Noise @ Rated Power:** 1 %
**Rated Continuous (RMS) Power @ 14.4V:**
175W RMS x 1 @ 4Ω
210W RMS x 1 @ 3Ω
250W RMS x 1 @ 2Ω
**Rated Continuous (RMS) Power @ 12.5V:**
130W RMS x 1 @ 4Ω
170W RMS x 1 @ 3Ω
210W RMS x 1 @ 2Ω
**Recommended Fuse Value (Type):** 30A (MAXI or AGU)
**Minimum Copper Power/Ground Wire Gauge:** 8 AWG
**Dimensions (LxWxH):**
10.94" x 7.68" x 2.09" (278 mm x 195 mm x 53 mm)
**Net Weight:** 6.0 lbs. (2.72 kg)

### JX500/1 Specifications:

**Amplifier Topology:** Class A/B
**Power Supply:** Unregulated PWM switching type
**Frequency Response:** 10 - 150 Hz (+0/– 1 dB)
**Signal to Noise Ratio:**
>90 dBA referred to highest rated power, >63 dBA referred to 1W (20 Hz - 20 kHz noise bandwidth)
**Damping Factor:** >160 @ 4 ohms / >80 @ 2 ohms
**THD + Noise @ Rated Power:** 1 %
**Rated Continuous (RMS) Power @ 14.4V:**
340W RMS x 1 @ 4Ω
420W RMS x 1 @ 3Ω
500W RMS x 1 @ 2Ω
**Rated Continuous (RMS) Power @ 12.5V:**
270W RMS x 1 @ 4Ω
340W RMS x 1 @ 3Ω
410W RMS x 1 @ 2Ω
**Recommended Fuse Value (Type):** 60A (MAXI or AGU)
**Minimum Copper Power/Ground Wire Gauge:** 4 AWG
**Dimensions (LxWxH):**
13.70" x 7.68" x 2.15" (348 mm x 195 mm x 53 mm)
**Net Weight:** 7.9 lbs. (3.58 kg)

### JX1000/1D Specifications:

**Amplifier Topology:** Class D
**Power Supply:** Unregulated PWM switching type
**Frequency Response:** 20 - 150 Hz (+/– 1 dB)
**Signal to Noise Ratio:**
>75 dBA referred to highest rated power, >45 dBA referred to 1W (20 Hz - 20 kHz noise bandwidth)
**Damping Factor:** >1000 @ 4 ohms
**THD + Noise @ Rated Power:** 1 %
**Rated Continuous (RMS) Power @ 14.4V:**
500W RMS x 1 @ 4Ω
750W RMS x 1 @ 3Ω
1000W RMS x 1 @ 2Ω
**Rated Continuous (RMS) Power @ 12.5V:**
500W RMS x 1 @ 4Ω
700W RMS x 1 @ 3Ω
900W RMS x 1 @ 2Ω
**Recommended Fuse Value (Type):** 80A (MAXI or ANL)
**Minimum Copper Power/Ground Wire Gauge:** 4 AWG
**Dimensions (LxWxH):**
10.94" x 7.68" x 2.09" (278 mm x 195 mm x 53 mm)
**Net Weight:** 7.0 lbs. (3.18 kg)

Due to ongoing product development, all specifications are subject to change without notice.

## APPENDIX C: TROUBLESHOOTING

**"How do I properly set the input sensitivity on my amplifier"**

**Please** refer to Appendix A (page 12) to set the input sensitivity for maximum, low-distortion output.

**"My amplifier doesn't turn on"**

**Check** the fuse, not just visually, but with a continuity meter. It is possible for a fuse to have poor internal connections that cannot be found by visual inspection. It is best to take the fuse out of the holder for testing. If no problem is found with the fuse, inspect the fuse-holder.

**Check** the integrity of the connections made to each of the **"+12VDC"**, **"Ground"**, and **"Remote"** terminals. Ensure that no wire insulation is pinched by the terminal set screw and that each connection is tight.

**Check** to make sure there is +12V at the **"Remote"** connection of the amplifier. In some cases, the turn-on lead from the source unit is insufficient to turn on multiple devices and the use of a relay is required. To test for this problem, jump the **"+12VDC"** wire to the **"Remote"** terminal to see if the amplifier turns on. If this does not work, proceed to the next step.

**"My amplifier's output fluctuates when I tap on it or hit a bump"**

**Check** the connections to the amplifier. Make sure that the insulation for all wires has been stripped back far enough to allow a good contact area inside the terminal block.

**Check** the input connectors to ensure that they all are making good contact with the input jacks on the amplifier.



**"My amplifier turns on, but there is no output"**

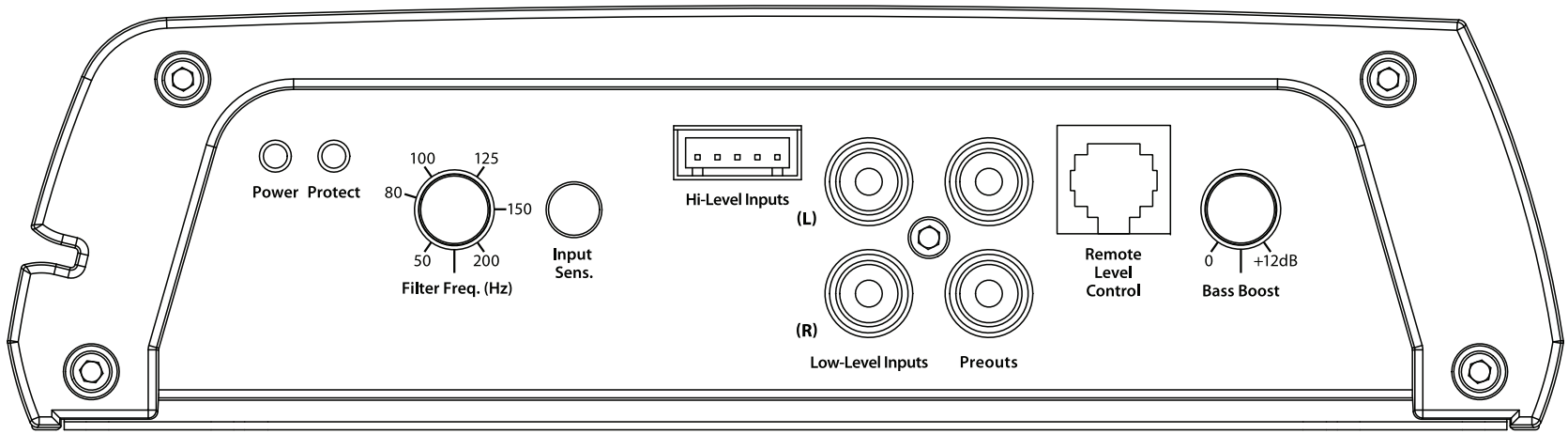
**Check** the input signal using an AC voltmeter to measure the voltage from the source unit while an appropriate test tone is played through the source unit (disconnect the input cables from the amplifier prior to this test). The frequency used should be in the range that is to be amplified by the amplifier (example: 50 Hz for a sub bass application or 1 kHz for a full range / high-pass application). A steady, sufficient voltage (between 0.2 and 8.0-volts) should be present at the output of the signal cables.

**Check** the output of the amplifier. Using the procedure explained in the previous check item (after plugging the input cables back into the amplifier) test for output at the speaker outputs of the amplifier. Unless you enjoy test tones at high levels, it is a good idea to remove the speaker wires from the amplifier while doing this. Turn the volume up approximately half way. 5V or more should be measured at the speaker outputs. This output level can vary greatly between amplifiers but it should not be in the millivolt range with the source unit at half volume. If you are reading sufficient voltage, check your speaker connections as explained below.

**Check** to ensure that the speaker wires are making a good connection with the metal inside the terminal block. The speaker wire connectors are designed to accept up to 8 AWG wire. Make sure to strip the wire to allow for a sufficient connection with the metal inside the terminal block.

**INSTALLATION NOTES:**
Use this diagram to document your amplifier's switch and control positions.





**LIMITED WARRANTY - AMPLIFIERS (USA)**

JL AUDIO warrants this product to be free of defects in materials and workmanship for a period of two (2) years. The warranty is extended to three (3) years total if installation is performed by an authorized JL Audio dealer using a JL Audio Premium Power Connection System for power wiring.

This warranty is not transferrable and applies only to the original purchaser from an authorized JL AUDIO dealer. 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. Damage caused by the following is not covered under warranty: accident, misuse, abuse, product modification or neglect, failure to follow installation instructions, unauthorized repair attempts, misrepresentations by the seller. This warranty does not cover incidental or consequential damages and does not cover the cost of removing or reinstalling the unit(s). Cosmetic damage due to accident or normal wear and tear is not covered under warranty.

**Warranty is void if the product's serial number has been removed 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 warranty returns should be sent to JL Audio 's Amplifier Service Facility freight-prepaid through an authorized JL Audio dealer and must be accompanied by proof of purchase (a copy of the original 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 previous to purchase date. 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.

**For Service Information in the U.S.A. please call**
**JL Audio Customer Service**: (954) 443-1100
9:00 AM – 5:30 PM (Eastern Time Zone)
**JL Audio, Inc**
10369 North Commerce Pkwy.
Miramar, FL 33025
(do not send product for repair to this address)

**International Warranties:**
Products purchased outside the United States of America are covered only by that country's distributor and not by JL Audio, Inc.