



**DIAMOND**  
AUDIO

# **DXM Series**

## **DIGITAL AMPLIFIERS**

**DXM1200.1D/DXM600.2D**  
**DXM800.4D/DXM1000.6D**



# **Owners Manual**

## INTRODUCTION

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Congratulations, you have just purchased one of the finest mobile audio products on the market. Diamond Audio products represent the latest advances in acoustic technology in sound reproduction for your vehicle. Diamond Audio products are designed, developed, and engineered in the USA using the latest innovative materials and components to provide the finest sound reproduction possible. Every Diamond Audio product has been verified and tested to ensure the best sounding and most reliable product on the market, if installed properly. Diamond Audio products will provide many years of the ultimate listening experience.

Please note that prolonged exposure to sound pressure levels in excess of 100dB can cause permanent hearing loss. Using Diamond Audio products can exceed that level so please exercise restraint in its operation in order to preserve your ability to enjoy its high fidelity sound for many years to come.

Diamond Audio recommends our products be professionally installed by an authorized Diamond Audio dealer to achieve the best possible system recommendation and installation. This will ensure a true Diamond Audio listening experience and sound you would expect from Diamond Audio products. With proper validation, using a Diamond Audio Retailer for installation, your newly purchased amplifier, Diamond Audio will extend the product warranty from one year to Two Years!!

Go ahead, Hear the Music

## FEATURES

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- ◎ IRS (International Rectifier) Full Range Capable Class-D Topology
- ◎ Balanced Differential Inputs For Noise-Free Operation Regardless Of the Source
- ◎ Variable Full-Crossover Filter: LPF/FULL/HPF (DXM600.2D/DXM800.4D/DXM1000.6D)
- ◎ Surface Mount Component Technology
- ◎ Audio Precision Quality Control Verification
- ◎ Stable & Reliable Four Layers PCB Trace Layout
- ◎ IPX67 Rated Waterproof Design For Powersports & Marine Applications
- ◎ Power & Protection Led Light Status Indicator
- ◎ Short circuit, thermal, and voltage protection
- ◎ Remote Bass Knob (DXM1000.6D/DXM1200.1D)

**WARNING:** Prolonged exposure to sound pressure levels in excess of 100dB can cause permanent hearing loss. Diamond Audio Mobile amplifiers can exceed that level so please exercise restraint when listening and enjoying your new amplifier.

## GENERAL PRECAUTIONS

- This unit is designed for negative ground 12V DC operation only.
- Total system impedance must not be less than 2ohms, in a bridged OR stereo configuration
- Avoid installing the unit where:
  - It would be subject to high temperatures, such as from direct sunlight or hot air from the heater.
  - It would be exposed to rain or moisture.
  - It would be subject to dust or dirt.
- Do not cover the unit with carpet or wires.
- Do not use the unit with a weak auto battery. Optimum performance depends on a normal battery supply voltage.
- For safety reasons, keep the volume of your car audio system moderate while driving your vehicle so that you can still hear normal traffic sounds outside your car.
- There is NO speaker level input connector, you can cut RCA's and solder the wires and connect directly thru low level input(RCA)

## MOUNTING PRECAUTIONS

Although Diamond Audio amplifiers incorporate heat sinks and protection circuits, mounting the amplifier in a tight space without any air movement can still damage internal circuitry over time. Choose a location that provides adequate ventilation around the amplifier. For easy system set-up, mount the amplifier so the side panel controls will be accessible after installation. To increase thermal run times on low impedance loads, an additional fan is recommended, remember any moving air across the amplifier will reduce heat.

In addition, observe the following precautions:

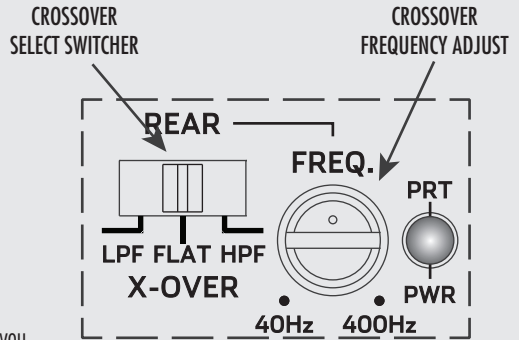
1. Using a felt pen mark the mounting hole locations.
2. Mounting the amplifier on carpet will significantly reduce air flow, resulting in reduced thermal run times.
3. Mount the amplifier on a solid surface. Avoid mounting to sub woofer enclosures or areas prone to vibration. Do not install the amplifier on plastic or other combustible materials.
4. Prior to mounting the amplifier, make sure not to cut or drill into the fuel tank, fuel lines, brake lines (under chassis) or electrical wiring.

## WIRING PRECAUTIONS

1. Before installation, make sure the source unit power switch is in the OFF position.
2. Disconnect the negative (-) lead of the battery before making any power connections.
3. When making connections, be sure that each one is clean and secure. Insulate all of your connections. Failure to do so may damage your equipment.
4. A secure clean ground connection is critical to the performance of your amplifier. Connect the ground directly to the car chassis to minimize resistance and avoid any noise problems.
5. Add an external fuse on the amplifier's positive (+) power lead and connect it as close as possible to the vehicle's (+) battery terminal. Use a rating that equals the total current consumption at full output of all amplifiers in the system. This external fuse will protect the vehicle from short circuits that can cause a fire.

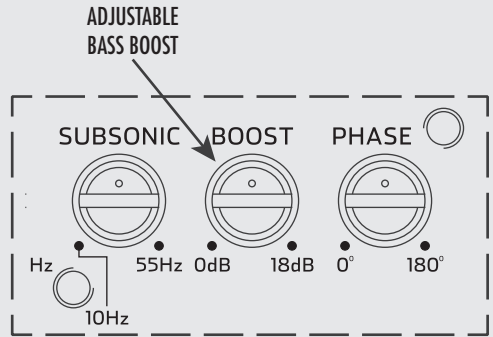
## CROSSOVER CONTROLS

A crossover is a device that removes unwanted frequencies from a speaker or amplifier. A Tweeter can easily be destroyed by bass notes if they are not filtered out. Likewise a sub-woofer will not sound natural if it is playing midrange notes. A crossover remove these sounds from the speaker speaker. As you might guess, carefull adjustment in need to ensure that all the speakers are playing at the right sound that you are left with no "holes" or low spots in the frequency response.



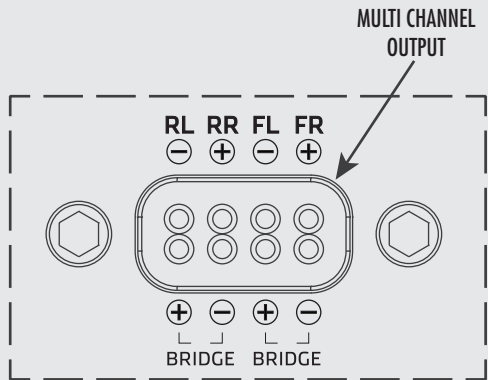
## BASS BOOST

DIAMOND MOTORSPORT Series amplifiers have an adjustable bass boost. Begin your adjustments at low volume. If you do not hear any improvement then woofer does not need any BASS BOOST. The Low Pass Filter (LPF) must be switched on for the bass boost to activate. Use Bass Boost carefully. The demands on power output are tremendous. Try to minimize the use by changing woofer position or the enclosure size.



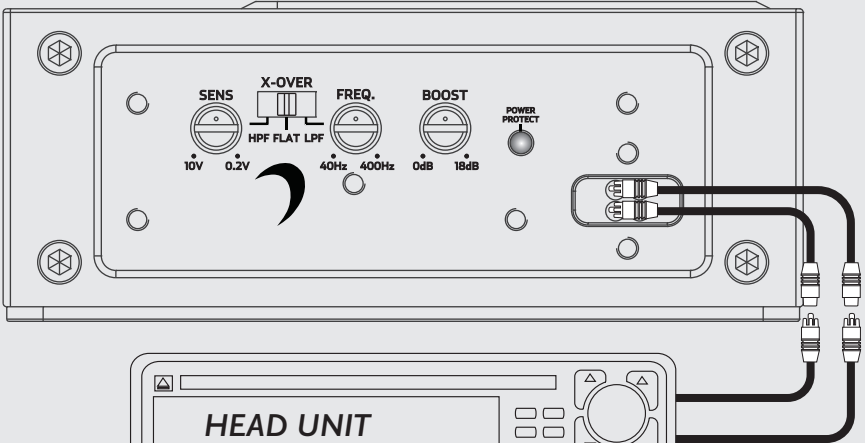
## SPEAKER OUTPUTS

This amplifier is a multi channel amplifier design. Meaning it has more than one channel of speaker outputs. It is equipped with thick wire cable for speaker connection carefully and neatly strip the wire back and twist the exposed leads and solder them into the Amplifier's wires while being careful that there is no loose or frayed strands of wire and put heat shrink tube to seal the connection points until the wire is tightly secured in place. If the wires ever come to in contact with each other the amplifier will go into protection. **Know your total ohm load before you make any connections.**

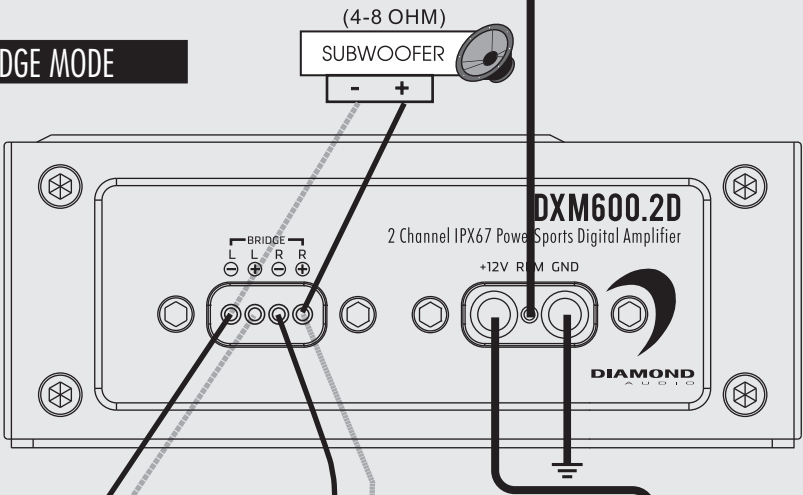


# SYSTEM CONFIGURATION

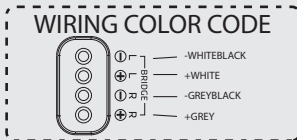
## DXM600.2D



### BRIDGE MODE

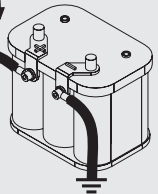


### NORMAL MODE



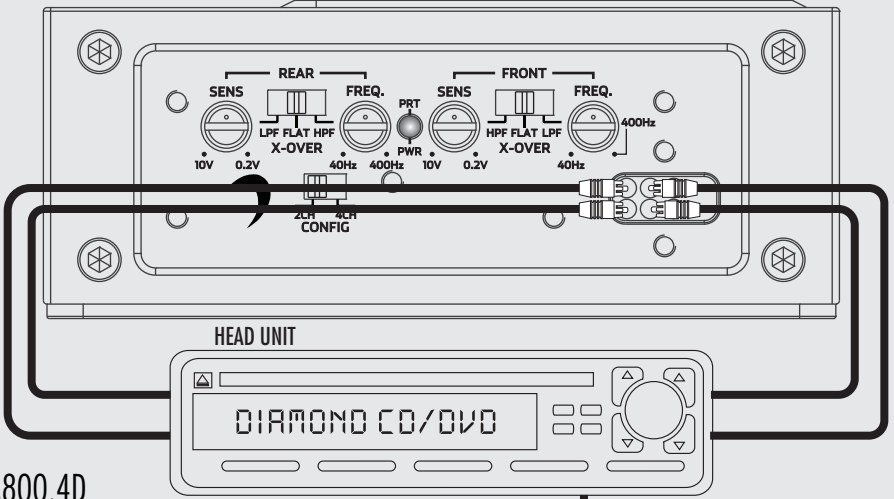
**FUSE 35A**

FUSE AT BATTERY FOR WIRE SHORT PROTECTION



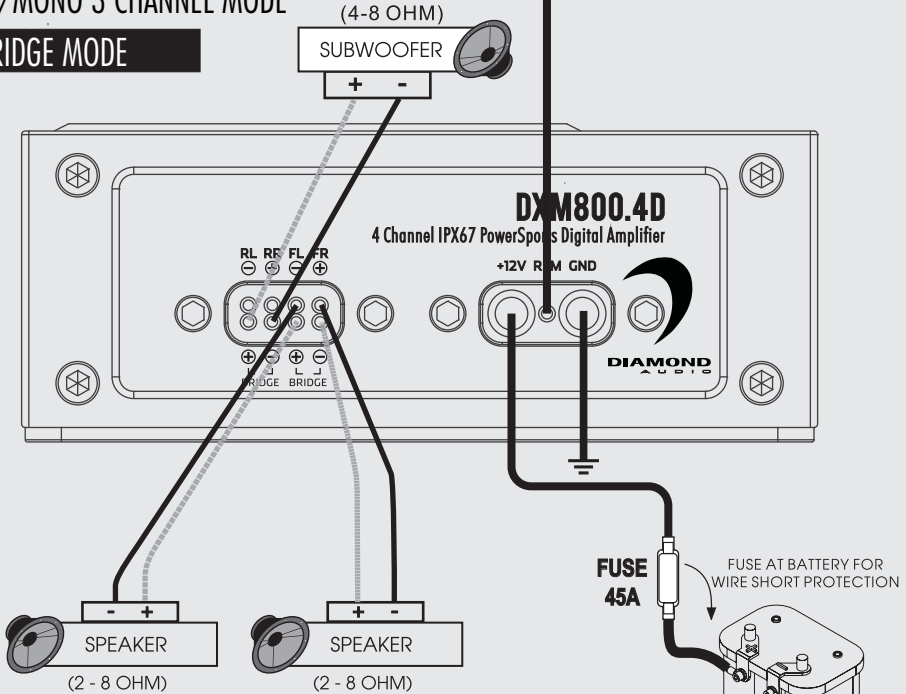
# SYSTEM CONFIGURATION

## DXM800.4D



### DXM800.4D STEREO/MONO 3 CHANNEL MODE

#### BRIDGE MODE

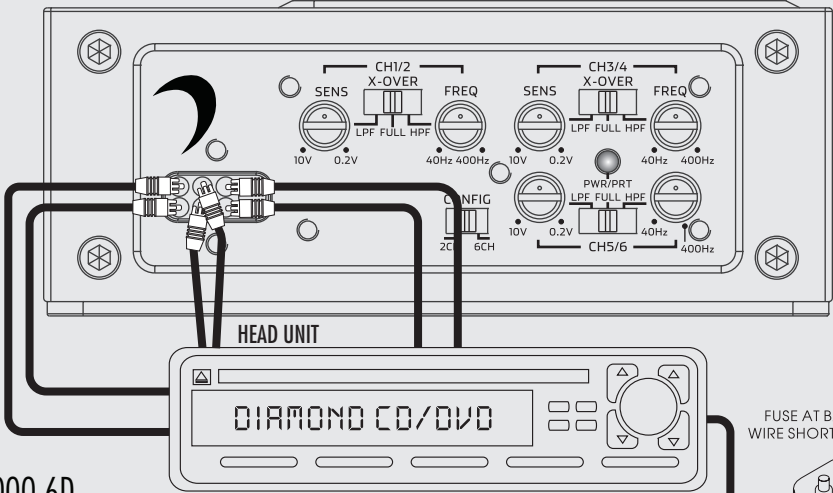


#### STEREO MODE



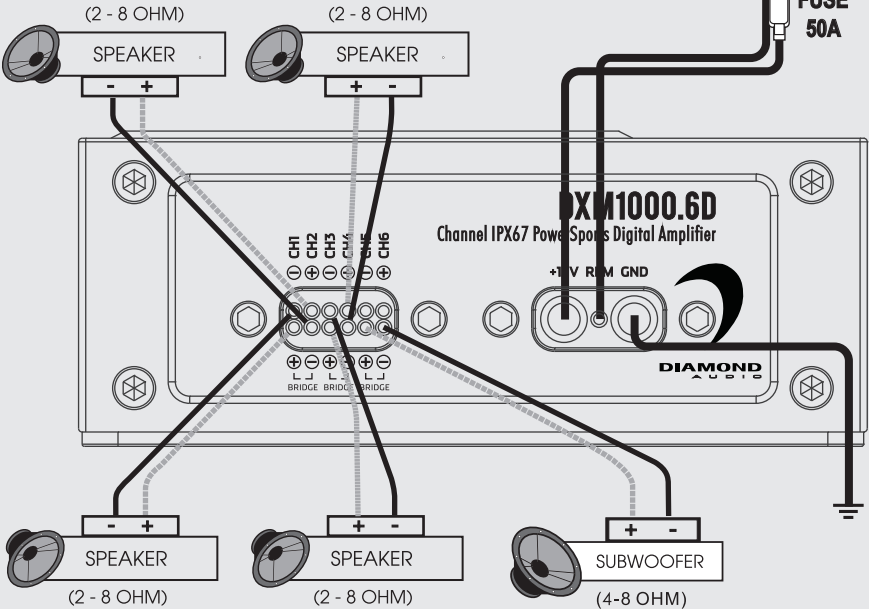
# SYSTEM CONFIGURATION

## DXM1000.6D



### DXM1000.6D 5 CHANNEL MODE - FRONT/REAR/SUB

#### STEREO MODE



#### STEREO MODE

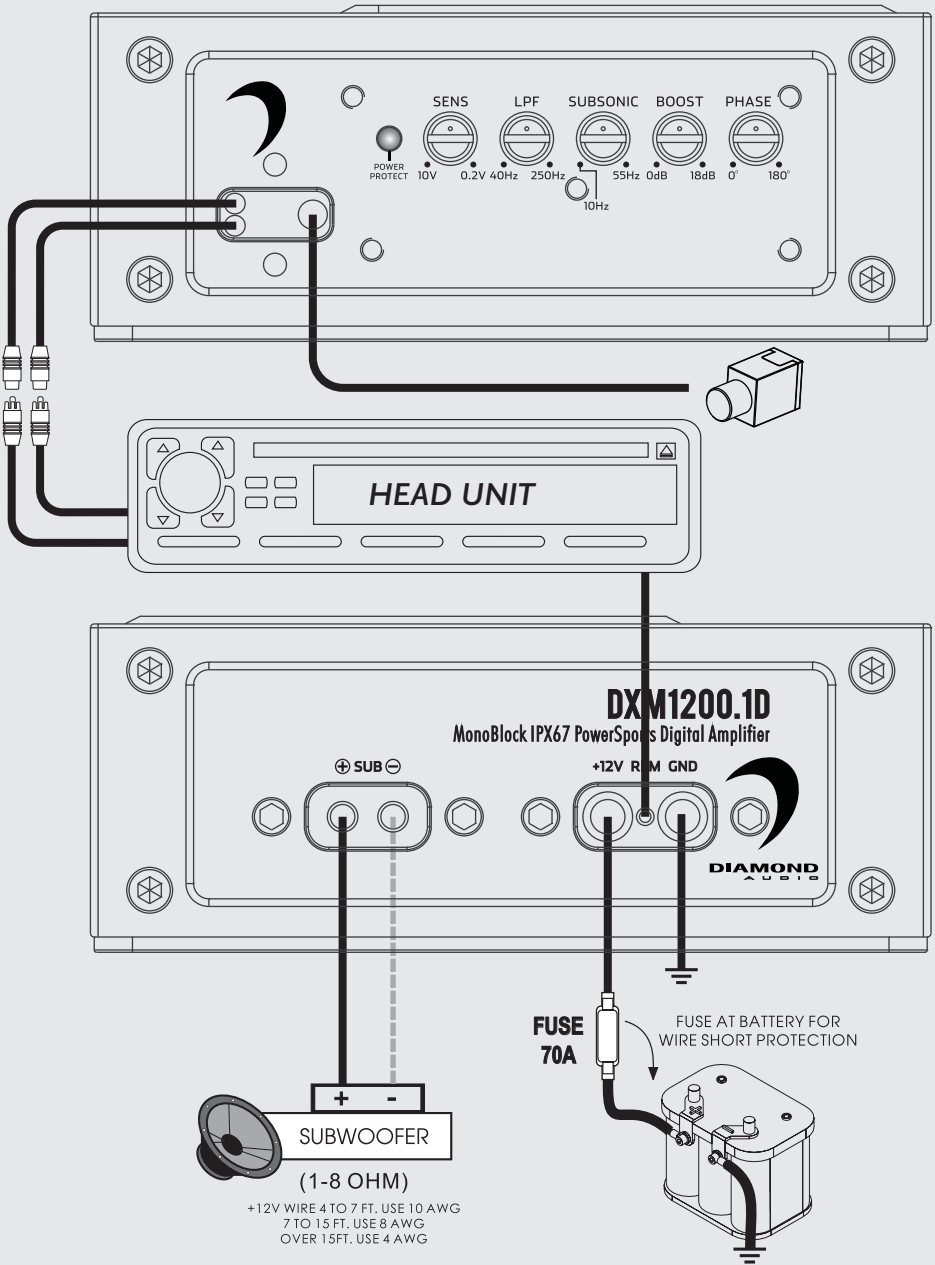
#### WIRING COLOR CODE



#### BRIDGE MODE

# SYSTEM CONFIGURATION

## DXM1200.1D





Professional installation by an authorized DIAMOND MOTORSPORT SERIES amps dealer is highly recommended! Otherwise, the performance of your new gear may not be satisfactory. In the event that you decide to do your own installation, please read and follow this manual very carefully. Failure to do so may compromise the integrity of this product, your automobile and possibly void the product warranty.

**WARNING:** Amplifiers are generally mounted in the hatch/trunk area of a car or SUV, and under or behind the seat of most pickup trucks. Select a location that will provide adequate ventilation for the amplifier. Avoid mounting the amplifier with the fins facing down. The fins should be facing up, either vertically or horizontally. Secure the amplifier with screws provided.

## INSTALLATION INSTRUCTIONS

1. Before you start, disconnect the negative cable from the car battery. Tape up the end so it is isolated from the battery.
2. Run an appropriate gauge wire from the battery to the amplifier. Plan this of the installation carefully. This cable will carry very high current. If it should short to the body and it is not properly fused it could catch a fire.
3. Connect the power wire to the battery using a fuse capable of the total current load of all amplifiers connected. **Don't install the fuse yet.** Wait until the end. Locate the fuse as close as possible to the battery. If the fuse is further than 18 inches (wire length) from the battery you should reevaluate the wire and fuse placement.
4. Find the closest clear metal area to the amp for a ground, sand, grind, or scrape all paint and undercoating from the body and screw the ground securely in place. It is advisable to test the ground with an ohm-meter between the ground cable and the negative battery to ensure a good low resistance connection. Some alloys used in modern cars do not offer the best ground. If you believe this is the case consult with the vehicle manufacturer.
5. Run the speaker wire to the speakers. It is advised that you leave some extra wire at this point.
6. If you haven't already done so, mount the amp now.
7. Connect the power and ground to the amplifier.

### Only after this step should you install the fuse at the battery.

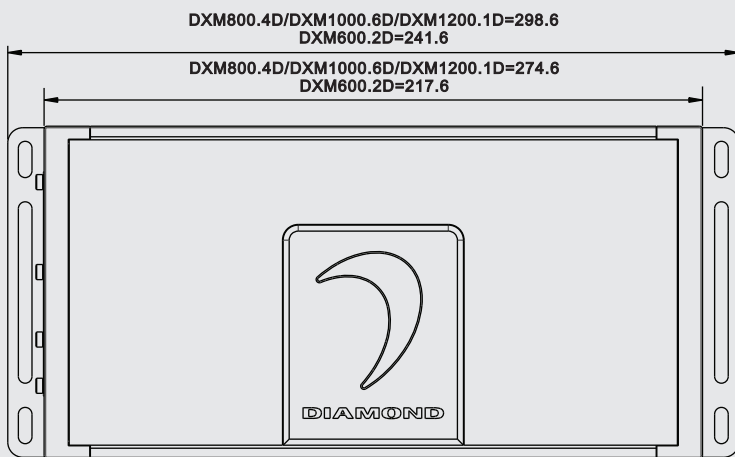
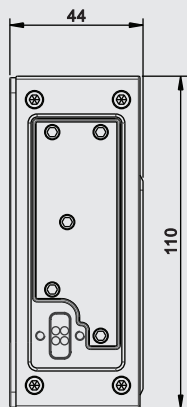
8. Connect the remote wire from the head unit to the amplifier. Now is a good time to turn on the amp for the first time. Make sure it turns on properly and does not go into protection.
9. Connect the speaker wires to the amp and speakers (make sure the amp is off first). Make sure the polarity (+and-) is correct.
10. Connect the RCA's to the amp.
11. Double check the amplifier controls at this time. Make sure everything is set correctly for your system.
12. Now you're ready to play it for the first time. It is best to leave the gain all the way down at first. Start with the head unit volume low and work your way up.
13. Now you can tune the amp. Take your time and make only one adjustment at a time. It may take some time to get the system fully adjusted. During this time, the amp is drawing current from the battery. You should check the battery voltage from time to time and re-charge it if it gets low. That's it. You're done. Now have fun!

# SPECIFICATIONS

MODEL NO.	DXM1200.1D	DXM600.2D	DXM800.4D	DXM1000.6D
POWER OUTPUT AT 1 Ω	1200W	-	-	-
POWER OUTPUT AT 2 Ω	800W	300Wx2	200Wx4	150Wx6
POWER OUTPUT AT 4 Ω	500W	200Wx2	125Wx4	100Wx6
POWER OUTPUT AT 4 Ω BRIDGED	-	600Wx1	400Wx2	300Wx3
TOTAL HARMONIC DISTORTION	<0.3%	<0.3%	<0.3%	<0.3%
S/N RATIO REF 1W AT 4 Ω	>-102dB	>-102dB	>-102dB	>-96dB
GAIN RANGE	0.2-10V	0.2-10V	0.2-10V	0.2-10V
CROSSOVER RANGE	40-250Hz	40-400Hz	40-400Hz	40-400Hz
FREQUENCY RANGE	40-300Hz	10Hz-33KHz	10Hz-33KHz	10Hz-33KHz
SUBSONIC	10-55Hz	-	-	-
BASS BOOST	0-18dB	0-18dB	-	-
BASS REMOTE CONTROL	Yes	-	-	-
CURRENT DRAW (FULL POWER & MUSIC)	140A/14A (avg)	70A/7A (avg)	93A/9.3A (avg)	105A/10.5A (avg)
RECOMMENDED FUSE RATING	**70A	**35A	**45A	**50A
DIMENSIONS (LENGTHxWIDTHxHEIGHT)	298.6x110x44 mm (11.8x4.3x1.7 Inch)	241.6x110x44 mm (9.5x4.3x1.7 Inch)	298.6x110x44 mm (11.8x4.3x1.7 Inch)	298.6x110x44 mm (11.8x4.3x1.7 Inch)

**\*\*FUSE RATINGS ARE TO PROTECT THE VEHICLE, NOT THE AMPLIFIER - FUSES WILL NEVER PROTECT ANY 12 VOLT AMPLIFIER**

## CURRENT RATING



# WARRANTY

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Diamond Audio Technologies (DAT), a division of CV & DA Holdings Incorporated, warrants this product to be free from defects in material and workmanship for a period of one (1) year from the original date of purchase, provided it was purchased from an authorized DAT retailer within the United States. Product warranty period starts at the date of purchase or one year past the manufacture date whichever is first. However, upon purchase and completion of the on-line registration and installation by an authorized DAT dealer your warranty period will be extended to two (2) years. This warranty extension offer will only be recognized upon completion of the on-line registration of your product within thirty (30) days of the date of purchase.

THIS WARRANTY IS NOT TRANSFERABLE AND APPLIES ONLY TO THE ORIGINAL PURCHASER OF THIS PRODUCT IN ITS ORIGINAL INSTALLATION. Original purchaser must reside in the United States and be able to provide proof of purchase and installation with the sales receipt and completion of online registration from the authorized DAT retailer that sold and installed the product.

Should a manufacturing defect occur during above said warranty period, DAT will replace or repair the defective product with a product of the same or equivalent value and performance, at DAT's discretion.

Damage or failure caused by any of the following is not covered under this warranty policy: negligence, improper use, abuse, product modification, unauthorized repair attempts, accident, acts of God, misrepresentations by DAT retailers, and improper/inadequate packaging during return shipping.

**Warranty is void if serial numbers have been removed, altered or defaced.**

## HOW TO OBTAIN WARRANTY SERVICE

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In the event a DAT product should require service, you should visit the authorized DAT retailer you purchased the product from and they can expedite your claim. All claims must fall into the guidelines listed above and be accompanied by a copy of the original sales and installation receipt from that authorized DAT retailer.

Product returned for warranty service must be freight-prepaid, properly packaged and clearly marked with the Return Authorization (RA) number issued by DAT. Any product returned to DAT that is improperly packaged, does not have a RA number clearly marked on the package, or never received a RA number may be refused upon delivery. DAT does not assume responsibility for lost or misdirected product.

Repair or replacement under this warranty is the exclusive remedy of the consumer. DAT shall not be liable for any incidental or consequential damages for breach of any expressed or implied warranty on this product. Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights that may vary from state to state.

Customers outside the United States should contact their local sales office to obtain information on pricing, exchange unit availability, instructions, service and warranty/non-warranty replacement or repair.

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