

# Mini-D 4-Channel Amplifier

## INSTALLATION MANUAL

mini **D1000.4**



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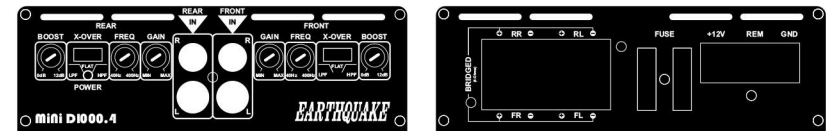
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## THANK YOU

Thank you for choosing Earthquake Sound's line of **mini D** amplifiers, the best way to enhance your factory mobile audio system. With proper installation and responsible listening, your amplifier(s) will give you years of near perfect sound reproduction.

We strongly recommend you to have your new amplifier(s) installed by an authorized Earthquake Sound dealer. Installation professionals employed by your dealer have the correct tools and knowledge to install your amplifier(s) neatly and successfully. Also, when your new products are installed by an authorized dealer, your products will include a **ONE (1) YEAR LIMITED WARRANTY**. If you choose to perform your own installation, your warranty will be subject to further limitations. Dealer policies on handling warranty requests may vary from one dealer to the next.

Please read the warranty information (located at the end of this booklet) in its entirety and use good judgment when making these vital decisions.



**CAUTION:** Earthquake amplifiers are capable of generating high sound pressure levels. You should exercise caution when operating these amplifier systems. Long term exposures to high levels of sound pressure will cause permanent damage to your hearing. Sound pressure levels exceeding 85dB can be dangerous with constant exposure. Set your audio system to a comfortable loudness level. Earthquake Sound Corporation does not assume liability for damages resulting from the direct use of Earthquake amplifiers or other Earthquake products and urges users to play their music at moderate listening levels.

### SOUND LEVEL dBA

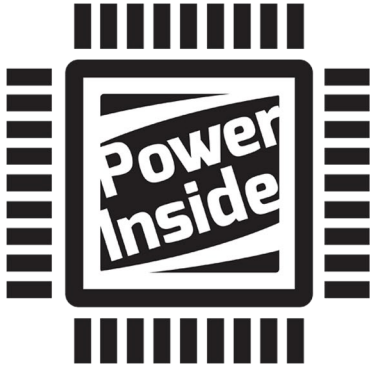
### DURATION PER DAY (HOURS)

90	8
92	6
95	4
97	3
100	2
102	1 - 1 1/2
105	1
110	1/2
115	1/4 OR LESS

THIS CHART SHOWS THE U.S. GOVERNMENT'S OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS WHICH WERE IN EFFECT AT THE TIME OF THIS PUBLICATION FOR PERMISSIBLE NOISE EXPOSURE, PER 29CFR1910.95, TABLE G-16

## Mini-D1000.4 INTRODUCTION

As the first 4-Channel Full-Range amplifier of the MiniD series, the MiNi-D1000.4 is blazing its own trail. It does so by cramming 4 full channels of robust cool running power into a micro chassis the size of a portable hard drive. This level of power density is just now possible thanks to the new Power Chip technology from Earthquake.



### **Power Chip Technology**

The next frontier, in the race to make the smallest and most powerful amplifiers, is Power Chips. A Power Chip is a chip like a computer processor that has all the functions of a normal discrete component output stage. Earthquake is at the forefront of this battle with the introduction of the Hybrid Power Chip amplification technology featured in the Mini-D1000.4 amplifier. It combines the output Power Chip itself with a wideband discrete switch mode power supply connected through an intelligent

communications bridge. This best of both worlds solution has Power Chip compactness and discrete transistor resiliency.



### **VE-TAT Enhanced Power Supply**

VE-TAT (Velocity Enhancing Transistor Augmentative Technology ) is an enhanced transistor dead-time controller. VE-TAT is a component level technology. A critical area for efficiency is the speed and precision by which

the transistors can be opened and closed. VE-TAT dramatically increases transistor velocity, thus eliminating dead-time losses and increasing efficiency. The addition of VE-TAT makes the Earthquake SR-SMPS switch mode power supply one of the most efficient on the planet today.

## Mini-D1000.4 INTRODUCTION



**MARS**(Magnetically Actuated Reanimation System) is a new type of protection system that enables the use of all amplifier power resources without compromising the survivability of the amplifier under catastrophic conditions. Typical protection systems rely on fuses or relays that complicate the signal path thus degrading audio quality.

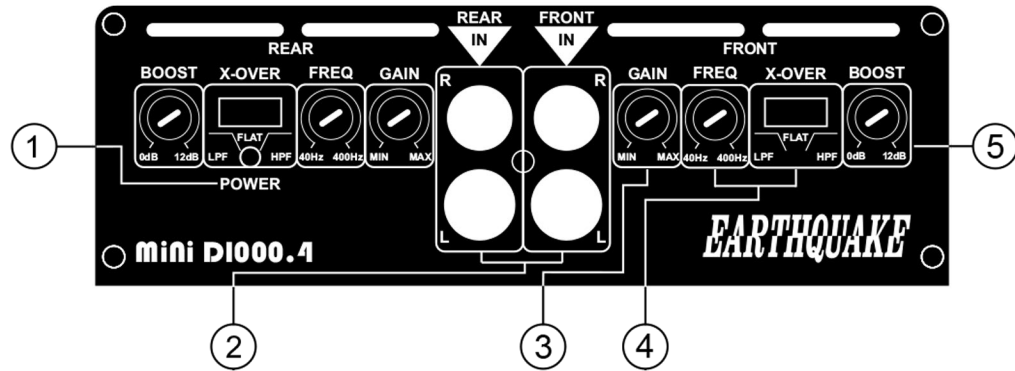
MARS is different as it is not in the signal path, but works by sensing the electromagnetic field of the conducting wires. MARS does not use any relays or other damping-factor reducing mechanical switches that can wear out or fail over time. Instead, a specially designed circuit instantly shuts off the output drive. In the event a short-circuit activates the MARS protection system, it continuously re-scans the output every 10 seconds. Normal operation automatically resumes as soon as the short-circuit condition is removed.

### **Unprecedented Placement Possibilities**

Reclaim your trunk space! The new micro form-factor of the MiniD opens up a new realm of placement possibilities - Under car seats, inside door or chassis panels. It is no longer necessary to stuff your trunk with amplifiers to get great sound.



## mini-D1000.4 FUNCTIONS AND FEATURES



**1. POWER LED:** When lit up, the amplifier is functioning properly.

**2. RCA INPUT:** Low level inputs of D1500.2 is 0.2V to 5V RMS.

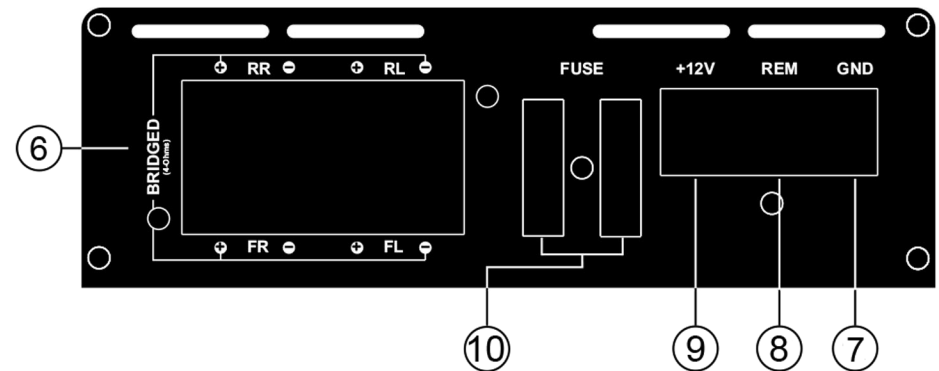
Be sure to use a HIGH LOW LEVEL adaptor if the head unit has only speaker output.

**3. GAIN LEVEL:** Set based on the head unit's output voltage. Note, this is not a volume control. Always start at the MIN and slowly increase the gain. Stop as soon as distortion is heard then lower the gain until the distortion disappear and only clear sound is produced.

**4. XOVER SWITCH & FREQUENCY ADJUST:** Used to adjust the boosted center frequency.

**5. BASS BOOST**

## mini-D1000.4 FUNCTIONS AND FEATURES



**6. SPEAKER CONNECTION:** Each amplifier has bridgeable speaker outputs. Note that the minimum impedance in bridged mode is 4-Ohm.

**7. GROUND TERMINAL:** Connect to vehicle's chassis/ground using a short 4 gauge cable (2 feet maximum in length).

**8. REMOTE TERMINAL:** Connect remote cable to the head unit's remote terminal. If multiple amplifiers are installed in the same system, additional relays may be necessary.

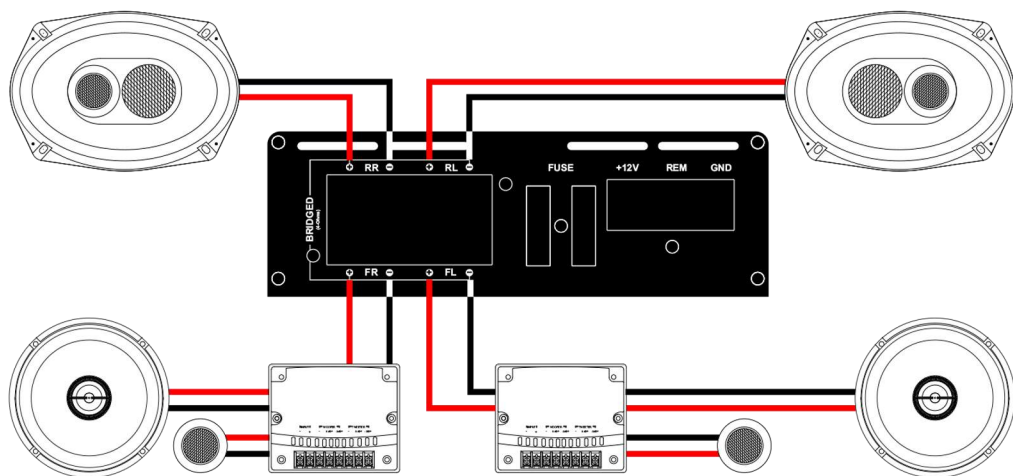
**9. +12V BATTERY TERMINAL:** Connect to battery positive (+) using a 4 gauge cable.

**10. FUSES:** Used as an added protection from damaging excessive current. Be sure to use the proper fuse rating in your installation. The D1000.4 uses two (2) 20A fuses.

## Mini-D 1000.4 WIRING CONFIGURATIONS & PREPARATIONS

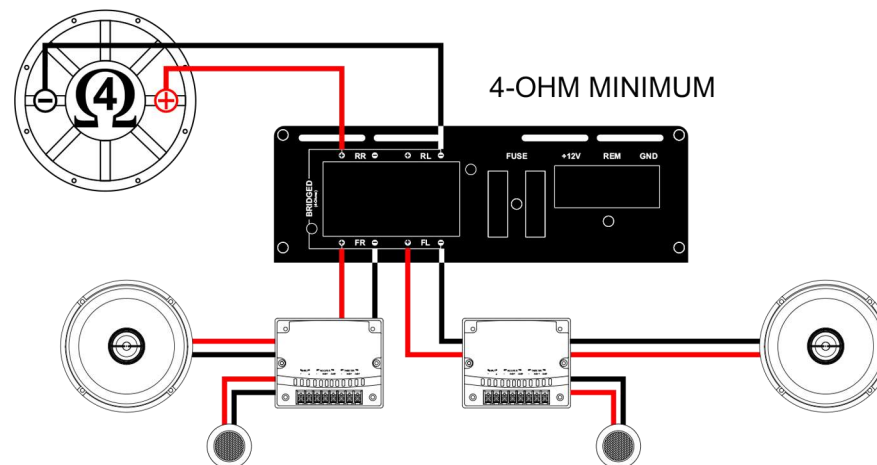
- ☒ Test the alternator output. Factory alternators will produce 60 - 80 amperes at best. Wear and heat will reduce the output by 40%.
- ☒ Alternator ground (-) must be reinforced. Use a 4-gauge cable instead of the factory 8-gauge.
- ☒ Alternator positive (+) to battery (+) must be reinforced. Use 4-gauge cables.
- ☒ Check your battery condition as batteries degrade after a while.
- ☒ Battery (+) to amplifier (+) must be connected using a 4-gauge cable.
- ☒ Ground amplifier to vehicle's chassis (bare metal) using 4-gauge cable, keep the cable short (2 feet max).
- ☒ Use 1 Farad capacitor to compensate for surges in demand.
- ☒ We recommend the use of one (1) auxiliary battery.

### FRONT STEREO & REAR FILL WITH THE **D1000.4**

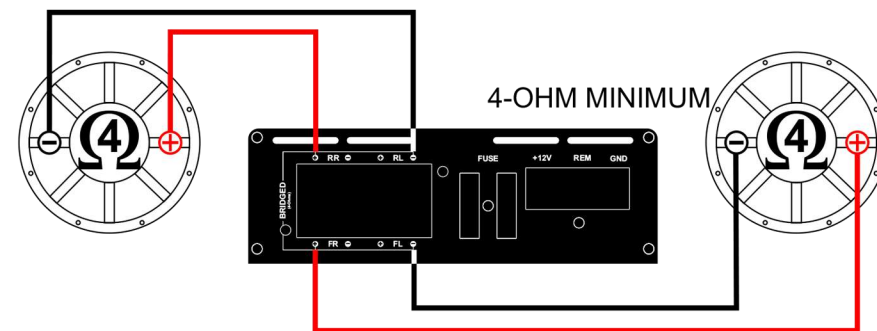


## Mini-D 1000.4 WIRING CONFIGURATIONS

### FRONT STEREO & BASS APPLICATION WITH THE **D1000.4**



### BASS APPLICATION (BRIDGED) WITH THE **D1000.4**



For more technical support, please contact:

- E-mail: [support@earthquakesound.dk](mailto:support@earthquakesound.dk)
- Tel: +45 2343 8007

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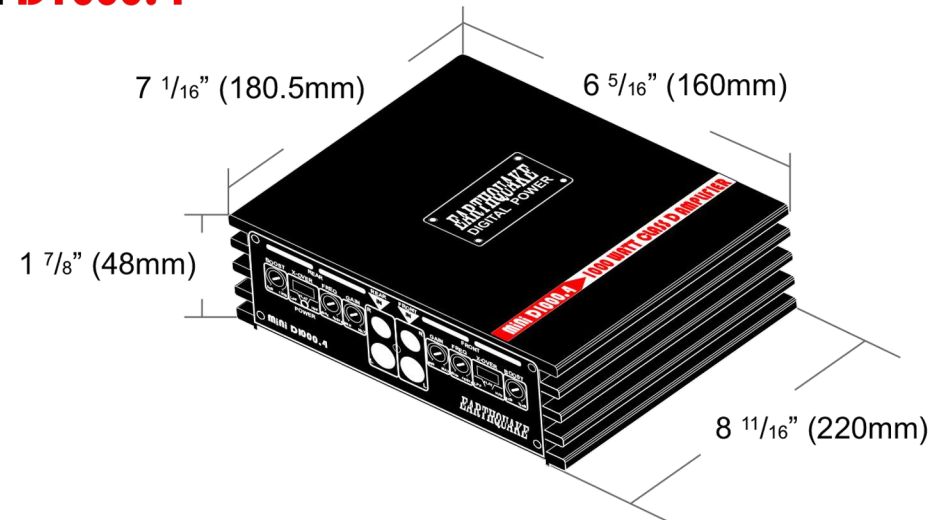
## mini-D 1000.4 SPECIFICATIONS

	<b>mini D1000.4</b>
Amplifier Class	D
Number of Channels	4
Max Power Output	1000 Watts
Power Output @ 4-Ohm	4 x 65 WRMS
Power Output @ 2-Ohm	4 x 90 WRMS
Power Output - Bridged	2 x 190 WRMS @ 4-Ohm
THD+N	.01%
Channel Separation	80dB
Crossover Frequencies	40 - 400 Hz
Bass Boost Gain Level	0 - 12dB
Subsonic Filter	N/A
Signal-to-Noise Ratio	>110dB
Fuse Rating	2 x 20A (included)

ALL OUTPUT POWER MEASUREMENTS ARE MADE WITH DUMMY LOAD FOR THE RMS MEASUREMENTS. DUMMY LOADS ARE HARDER TO DRIVE THAN SPEAKERS AND DEMAND MORE POWER SUPPLY CURRENT

## mini-D 1000.4 SPECIFICATIONS

### mini **D1000.4**



Earthquake warrants the original purchaser that all Factory Sealed New Audio Products be free from defects in material and workmanship, under normal and proper use, for a period of **one (1) year from the date of purchase** (as shown on the original sales receipt with serial number affixed/written on it).

The one (1) year warranty period is valid **only if the product is properly installed by an Earthquake authorized party**, and the warranty registration card is properly filled out and sent to Earthquake Sound Corporation.

**If the product is installed by a non-authorized party, a thirty (30) day limited warranty period applies.**

**(A) One (1) year limited warranty plan coverage guidelines:**

Earthquake pays for labor, parts, and ground freight (only in US mainland, not including Alaska and Hawaii) back to customer.

**(B) Warning:**

- Products (sent for repair) that are tested by Earthquake technicians and deemed to have no problem, will not be covered by the limited warranty. Customer will be charged a minimum of one (1) hour of labor (ongoing rates) plus shipping charges back to customer.
- If products were received with improper protective packaging, customer will be charged product repackaging in addition to labor, parts and shipping charges.

**(C) Earthquake agrees to repair or replace - at our option - all such defective products/parts subject to the following provisions:**

- Defective products/parts have not been altered or repaired by other than an Earthquake factory approved technician.
- Products/parts are not subjected to negligence, misuse, improper use, or accident, damaged by improper line voltage, used with incompatible products, or have its serial number or any part of it altered, defaced, removed, or have been used in any way that is contrary to Earthquake's written instructions.

**(D) Warranty Limitations:**

Earthquake warranty does not cover products that have been modified and/or abused, including but not limited to the following:

- Fading, deterioration of speaker components & finish due to improper exposure to elements.
- Bent amplifier casing, damaged finish on the casing due to abuse, misuse, or improper use of cleaning material.
- Burnt tracers on PCB.
- Product/part damaged due to poor packaging or abusive shipping conditions.
- Subsequent damage to other products.

A warranty claim will not be valid if the warranty registration card is not properly filled & returned to Earthquake with a copy of the sales receipt.

**(E) Service Request:**

To receive product(s) service, contact Earthquake Sound's service department at (510) 732-1000 and request an RMA number (Return Material Authorization), item(s) shipped without a valid RMA number will be refused. Make sure you provide us with your complete and correct shipping address, a valid phone number, and a brief description of the problem you are experiencing with the product. In most cases, our technicians might be able to resolve the problem over the phone, thus eliminating the need to ship the product.

**(F) Shipping Instructions:**

Product(s) must be properly packaged to minimize transport damage and avoid repackaging charges. Shipper claims regarding item(s) damaged in transit must be presented to the carrier. Earthquake Sound Corporation reserves the right to refuse improperly packed product(s). A copy of original sales receipt must accompany product(s) returned for service. We encourage you to include a written description of the problem inside the package. Ship product to:

Earthquake Sound Corp.  
2727 Mc Cone Avenue  
Hayward, CA 94545  
Tel: (510) 732-1000

You are responsible for the cost of shipping the product to Earthquake Sound Corporation.

**(G) Disputes Resolution:**

All disputes - between clients and Earthquake Sound Corporation - resulting from the one (1) year limited warranty policy must be resolved according to the laws & regulations of the county of Alameda, California.

We strongly suggest keeping a copy of your sales receipt and note the model and serial numbers of your amplifier here for future reference.

Model No.

**mini D** \_ \_ \_ \_ . \_ \_

Serial No.

SERIAL NUMBER  
\_ \_ \_ \_ \_ \_ \_ \_ \_ \_

Date of Purchase.

MM / DD / YYYY