

# Mini D Mono Amplifiers

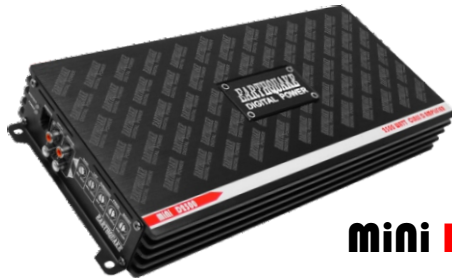
## INSTALLATION MANUAL



**Mini D1000**



**Mini D2000**



**Mini D2500**



The Sound That Will Move You

# 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 judgement when making these vital decisions.

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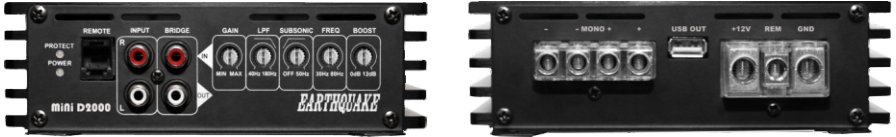
**CAUTION** Earthquake amplifiers are capable of generating high sound pressure levels. You should exercise caution when operating these amplifier systems. Long term exposures to high levels of sound pressure will cause permanent damage to your hearing. Sound pressure levels exceeding 85dB can be dangerous 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.

<u>SOUND LEVEL dBA</u>	<u>DURATION PER DAY (HOURS)</u>	
90	8	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
92	6	
95	4	
97	3	
100	2	
102	1 - 1 1/2	
105	1	
110	1/2	
115	1/4 OR LESS	

# INTRODUCING **mini D** AMPLIFIERS

The **mini D** amplifier series is the most efficient class D series ever made, running cool as they deliver unbelievable power despite their compact size.

Designed with the patented Optical Control Circuitry, each **mini D** amplifier comes with a built in protection fuse which can handle 1 to 4-Ohm loads (it is most efficient in 2-Ohm installation). Furthermore, the amplifier will automatically reset once the protection circuit is triggered, unless the problem persists. Equipped with soft clipping circuitry, these amps will not produce any audible distortion when clipped by 10%.



The **mini D** amplifier series has a built in pre-amplifier that allows users to custom design the frequency response and shape to their requirement. The pre-amplifier stage includes the following features:

## **Bass Boost**

The bass boost allows you to select the center frequency that you want to boost as well as the quantity. For most application, the best setting is at  $\frac{1}{2}$  turn (2 o'clock position).

## **Variable Subsonic Filter**

Subsonic filters are often used to protect speakers from harmful low frequencies and DC voltage. Often clipped low frequencies could have the same effect as that of DC input. The best setting for most systems is at 30Hz Highpass.

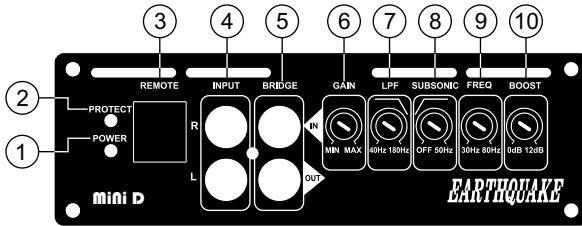
## **LPF (Low Pass Filter)**

Often mistaken as crossover, the LPF is used to filter out unwanted mid and high frequencies, leaving the woofer to respond to low frequencies. For most subwoofer application, the best crossing point is about  $\frac{1}{2}$  turn (2 o'clock position).

## **Gain Control**

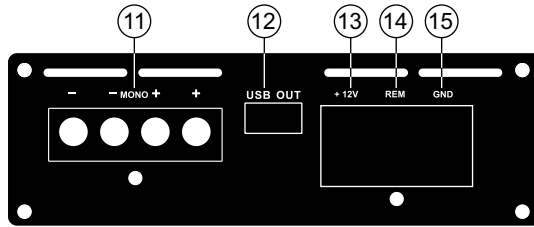
Gain control regulates the amplifier's sensitivity to match the signal output voltage of the audio source/head unit. It is not a volume control. The **mini D** amplifiers have gain controls that are extremely sensitive and therefore, should be adjusted with caution. When set at MIN, it will need 4V to clip these amplifiers. But with a mere  $\frac{1}{4}$  turn, the amplifiers can clip with only 0.5V.

# Mini D AMPLIFIER FUNCTIONS AND FEATURES



- ① **POWER LED:** When lit up, the amplifier is functioning properly.
- ② **PROTECTION LED:** When lit up upon powering on, the amplifier may be in self-test mode. If this LED stays on, shut down the amplifier and locate what may have triggered the amplifier to protection mode. If problem persists, call us for further assistance.
- ③ **REMOTE SUB LEVEL:** Used to adjust the amplifier's bass output from a location of your choice.
- ④ **RCA INPUT:** Low level inputs with range of **0.1V to 5V RMS**. Be sure to use a HIGH LOW LEVEL adaptor if the head unit has only speaker output.
- ⑤ **BRIDGE IN/OUT:** Used when linking 2 amplifiers together. The BRIDGE IN receives signal from the master amplifier and should only be used when the amplifier is the slave amplifier (all functions of the slave amplifier will be adjusted by the master amplifier). The BRIDGE OUT sends signal to the slave amplifier and should only be used when the amplifier is the master amplifier. Note that **both bridged amplifiers must be of the same model** with **minimum impedance is 2-Ohm**.
- ⑥ **GAIN CONTROL:** 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.
- ⑦ **LPF (LOW PASS FILTER):** Used to filter out unwanted mid and high frequencies.
- ⑧ **SUBSONIC FILTER:** Used to protect the speakers from harmful low frequencies and DC Voltage. The best setting for most system is at 30Hz (2 o'clock position).
- ⑨ **FREQUENCY ADJUST:** Used to adjust the boosted center frequency. The best setting for most system is at ½ turn (2 o'clock position).
- ⑩ **BASS BOOST:** Used to add 0 - 12dB to the chosen center frequency. Again, the best setting for most system is at ½ turn (2 o'clock position).

## Mini D AMPLIFIER FUNCTIONS AND FEATURES



- ① **SPEAKER CONNECTION:** These terminals have been internally bridged/jumped. When connecting to both sets of terminals, there is a 2-Ohm minimum impedance per terminal.
- ② **USB POWER PORT:** This port provides 5.2V (2A) of power and can be used to power a Bluetooth® or WiFi adapter (sold separately)
- ③ **+12V BATTERY TERMINAL:** Connect to battery positive (+) using a 4 gauge cable.
- ④ **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.
- ⑤ **GROUND TERMINAL:** Connect to vehicle's chassis/ground using a short 4 gauge cable (2 feet maximum in length).

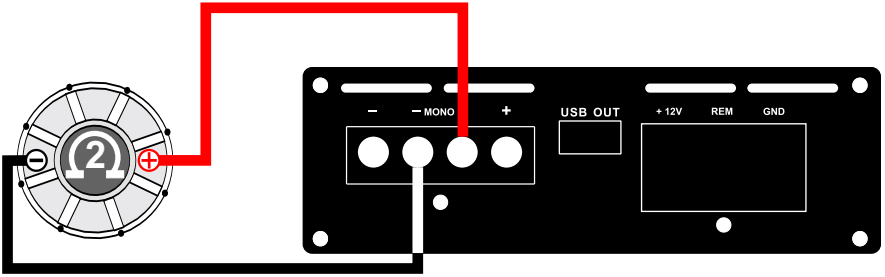
**NOTE:** Be sure to follow the wiring preparations/guidelines as listed on the next page to ensure proper installation.

## **Mini D AMPLIFIER WIRING PREPARATIONS**

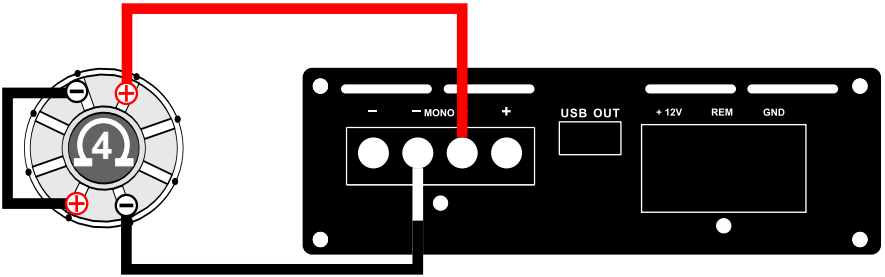
- ☑ Test the alternator output. Factory alternators will produce 60 - 80 amperes at best. Wear and heat will reduce the output by 40%.
- ☑ Alternator ground (-) must be reinforced. Use a 4-gauge cable instead of the factory 8-gauge.
- ☑ Alternator positive (+) to battery (+) must be reinforced. Use 4-gauge 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.

# Mini D AMPLIFIER WIRING CONFIGURATIONS

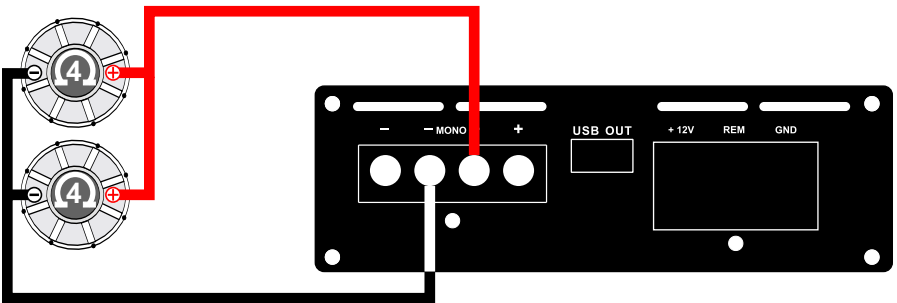
## ONE SINGLE SUBWOOFER (1-OHM MINIMUM)



## ONE DUAL 4-OHM SUBWOOFER @ 8-OHM

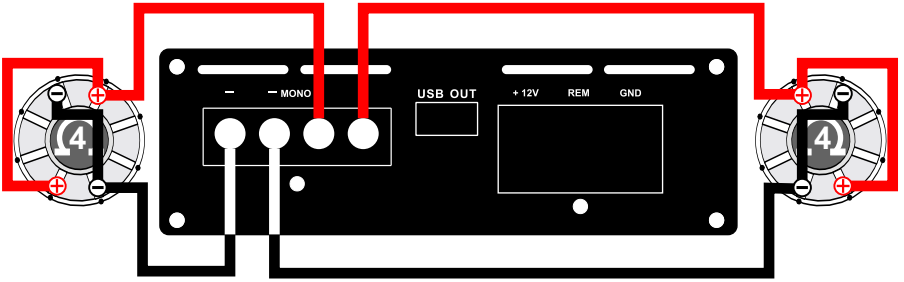


## TWO SINGLE 4-OHM SUBWOOFERS @ 2-OHM

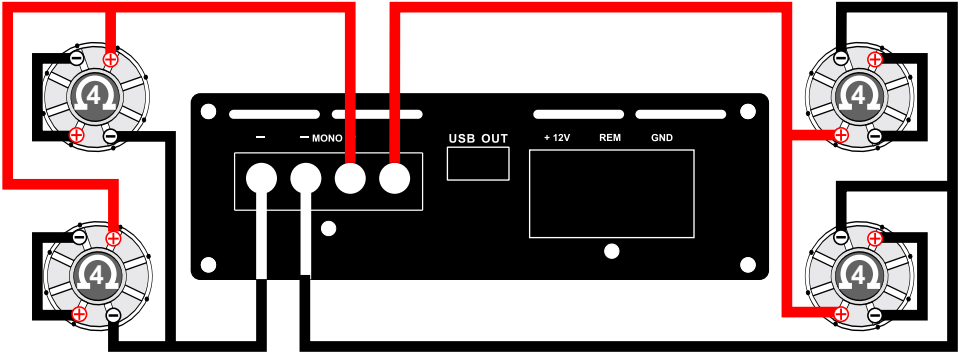


# Mini D AMPLIFIER WIRING CONFIGURATIONS

## TWO DUAL 4-OHM SUBWOOFERS @ 1-OHM



## FOUR DUAL 4-OHM SUBWOOFERS @ 2-OHM (PARALLEL)

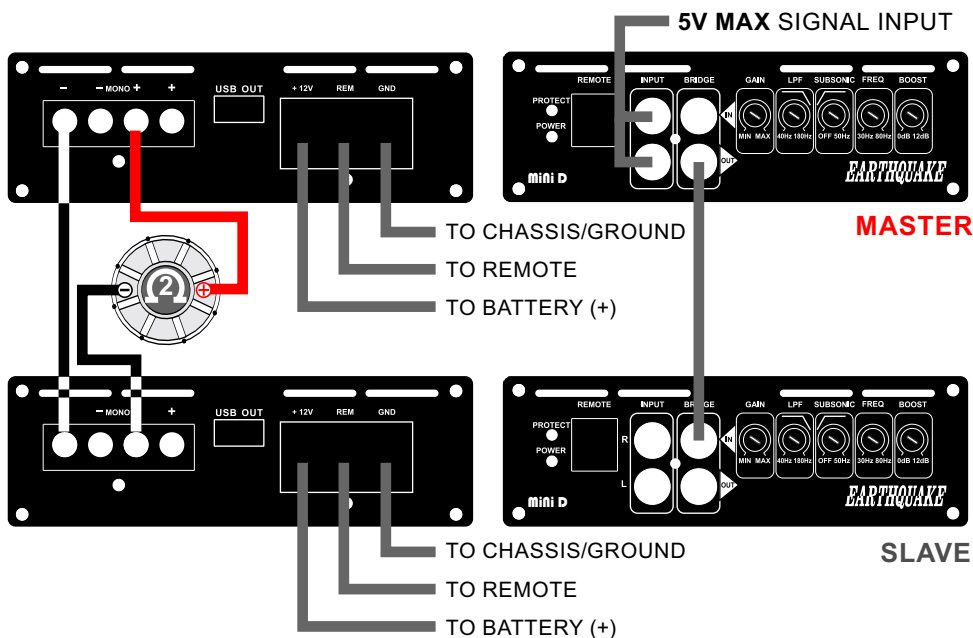




## BRIDGING 2 AMPS TO ONE SINGLE SUBWOOFER (2-OHM MINIMUM)

### NOTES:

- BOTH BRIDGED AMPLIFIERS MUST BE OF THE SAME MODEL
- DO NOT USE THE INPUT JACKS OF THE SLAVE AMPLIFIER



For more technical support, please contact:

E-mail: [tech@earthquakesound.com](mailto:tech@earthquakesound.com)  
Tel: 510-732-1000  
Fax: 510-732-1095

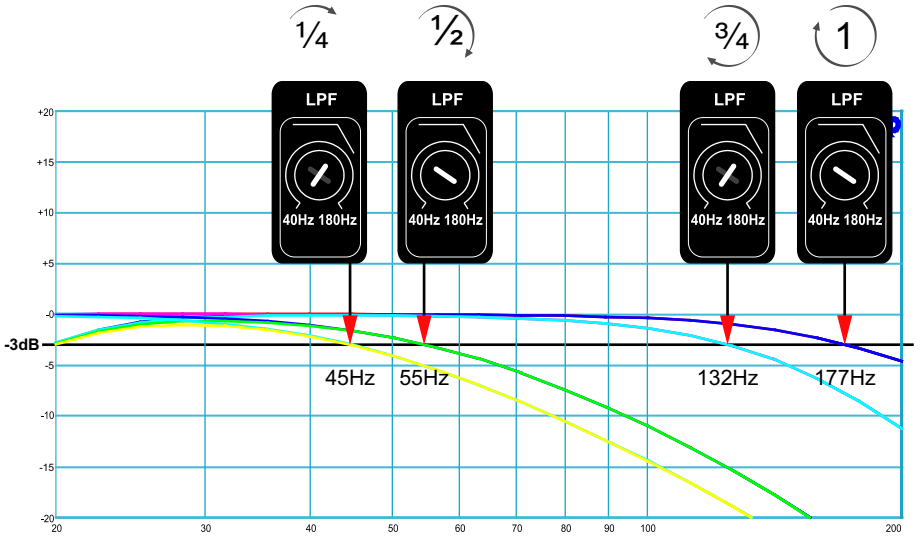
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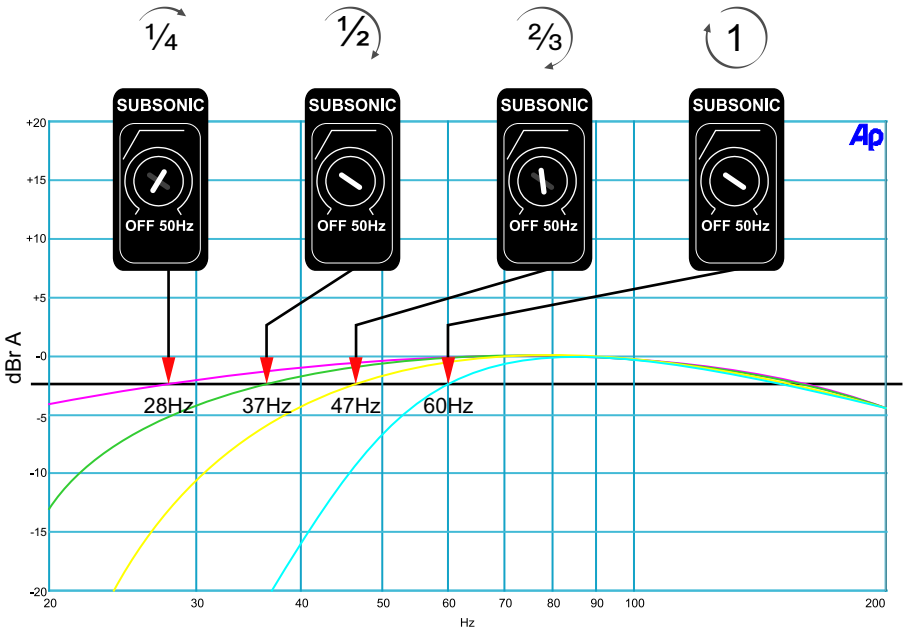
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# Mini D AMPLIFIER SETTINGS

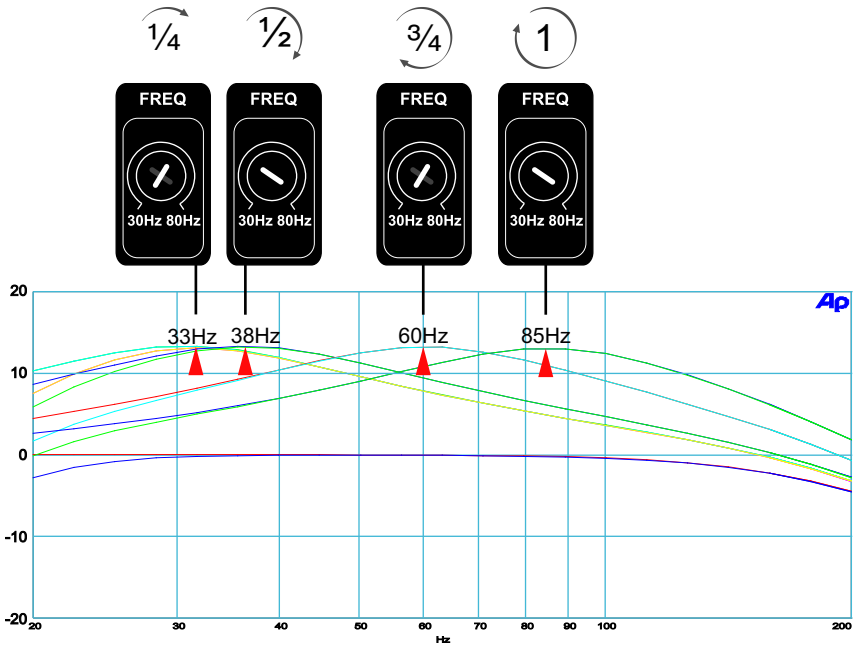
## SELECTING LOW PASS FILTER FREQUENCY



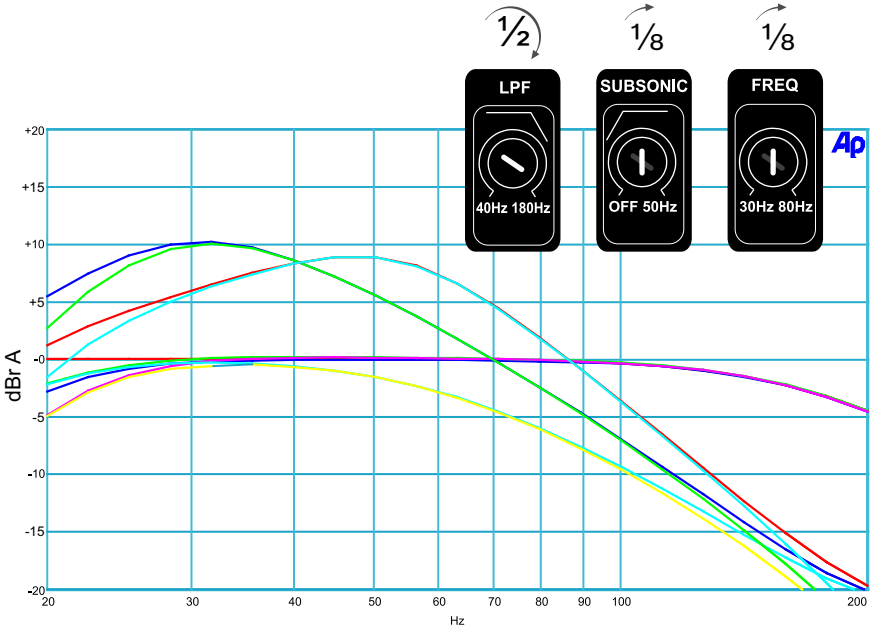
## SELECTING SUBSONIC FILTER FREQUENCY



## SELECTING BASS BOOST FREQUENCY



## SUGGESTED COMBINED SETTING

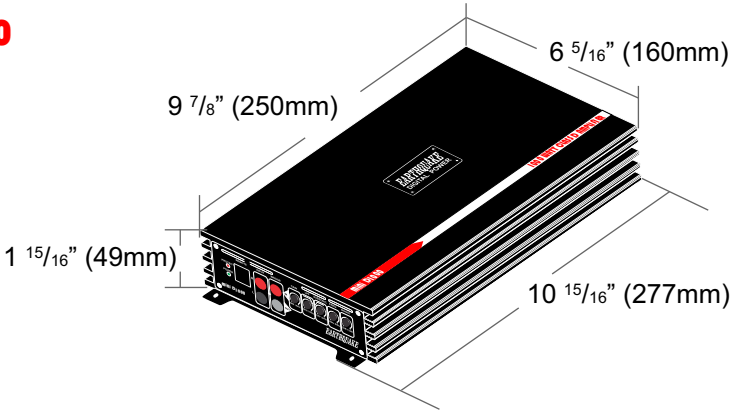


## **mini D AMPLIFIERS SPECIFICATIONS**

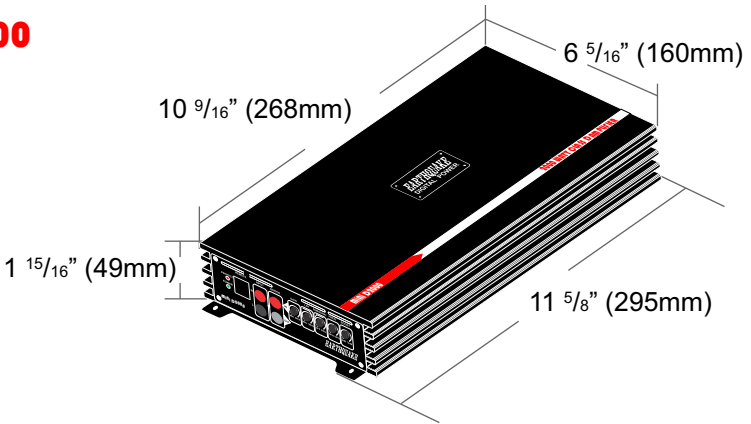
	<b>mini D1000</b>	<b>mini D2000</b>	<b>mini D2500</b>
Amplifier Class	D	D	D
Amplifier Output	Mono	Mono	Mono
Max Power	1000 Watts	2000 Watts	2500 Watts
Subsonic Filter	18Hz Variable Level	18Hz Variable Level	18Hz Variable Level
Crossover Variable Low Pass	40 - 180Hz	40 - 180Hz	40 - 180Hz
Bass Boost Frequency Range	30 - 80Hz	30 - 80Hz	30 - 80Hz
Bass Boost Gain Level	0 - 12dB	0 - 12dB	0 - 12dB
Stereo Input (RCA)	Yes	Yes	Yes
Mono Input (RCA)	Yes	Yes	Yes
Mono Output (RCA)	Yes	Yes	Yes
Short Circuit Protection	Yes, with Auto Reset	Yes, with Auto Reset	Yes, with Auto Reset
Fuse Rating	40A	80A	100A
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.			
1Ω Watt Peak - 50% LOADING	600	1200	2000
1Ω Watt Peak - 100% LOADING	400	1000	1800
2Ω Watt Peak - 50% LOADING	360	1000	1800
2Ω Watt Peak - 100% LOADING	320	900	1200
4Ω Watt Peak - 50% LOADING	180	650	850
4Ω Watt Peak - 100% LOADING	180	650	750

# Mini D AMPLIFIERS SPECIFICATIONS

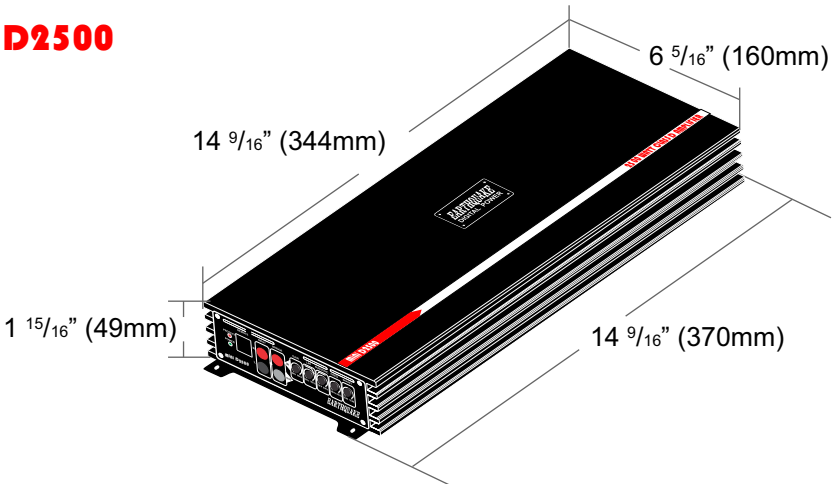
## Mini D1000



## Mini D2000



## Mini D2500



## **Mini D Amplifiers**

### **One (1) Year Limited Warranty Guidelines (Valid in US Mainland Only)**

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.

## Mini D Amplifiers

One (1) Year Limited Warranty Guidelines (Valid in US Mainland Only)

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.

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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.

M M / D D / Y Y Y Y



**The Sound That Will Move You**

Earthquake Sound reserves the right to amend the details of the specifications without notice.

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