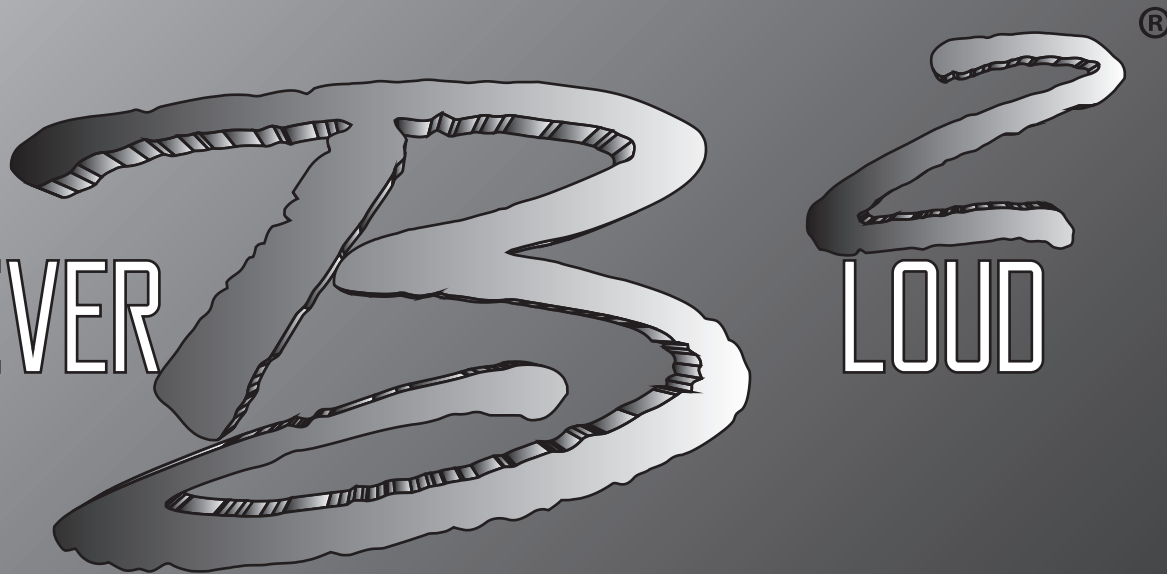


IT CAN NEVER



LOUD

Zero 12

MANUAL

WWW.B2AUDIO.COM - WWW.FACEBOOK.COM/B2AUDIO - [@B2AUDIOGRAM](https://www.instagram.com/B2AUDIOGRAM)

INTRODUCTION

The evolution of the game! For the first time ever, the Zero's crosses into 2 digits. Usually this was an unknown territory for the Zero amplifiers. However with the introduction of the Zero 9, (the enhancement of the Zero 8), the introduction of the new circuits had begun already. But that's old news! Deciding to step up the game for 2023, we wanted to commit to something entirely new! Just like we did back in 2016, when the Raven / M15R took the market by storm!

So we are proud to introduce a 2 digit Zero amplifier, that lacks nothing of the esteemed M-series that dates back to 2008!

Zero 12

2 digits, you say? What does it all mean?

It was a hard decision stepping away from the M-series, but over several years, we've seen the amps usher in new designs, continuously raising the bar in both performance and reliability. As with all greats, the designs were eventually copied! It might seem like flattery, but when the tables are turned and we end up being called the copycats, it was time to come with a new concept!

With the knowledge of past designs and user feedback, we already had valuable info, prior to developing the amplifier. Partially regulated power supply at lower voltages (derived from the Zero 9) done! That feature ensures greater power, even after rise, so you don't need to run the amp in the dirt! Running lithium with a need to charge above 16.5 v, no problem! Mirrored Quads? Yes, you read correct. The power supply inputs are arranged in a way that makes sense. Not Negative, Positive, Positive, Negative, Positive, Negative connections for the power wire. it's a Mirrored Quad, arranged in a way that makes sense. Going from left to right there's Negative, Negative, Positive, Positive, then Positive, Positive and Negative, Negative. Which equals mirrored. Back to the 2 digits, This Zero is a Zero 12, thus it now boasts an impressive dynoed performance of 12 KW @ 1 ohm certified! A new era has begun with the Zero 12!



AUDIOPHILE ACOUSTICS

IS THE CORNERSTONE OF B2 AUDIO. IT'S THE PHILOSOPHY OF ADDING SOMETHING UNIQUE. KEEP IN MIND THAT CONTINUOUS EXPOSURE TO SPL ABOVE 100 DB CAN SERIOUSLY DAMAGE YOUR HEARING. TODAY'S HIGH POWER AUTO SOUND SYSTEMS CAN EASILY PRODUCE SPL OVER 140 DB. ENJOY YOUR MUSIC WITH SENSE.

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DESIGN FEATURES

CIRCUIT CONFIGURATION:
FREQUENCY RESPONSE:
SIGNAL TO NOISE RATIO:
INPUT SENSITIVITY:
CROSSOVER CIRCUIT:
LOW PASS CROSSOVER:
SUBSONIC CROSSOVER:
PHASE:
DAMPING FACTOR:
REMOTE CONTROL W/CLIP, VOLTMETER & THERMAL LED:
POWER TERMINAL GAUGE
FUSE RATING:
DIMENSIONS:

Zero 12

HI-EF CLASS D
10 HZ ~ 300 HZ
>95 DB
5 V ~ 0.2 V
24 DB / OCT
35 HZ ~ 250 KHZ
10 HZ ~ 50 HZ
0 ~ 180
>400
☺
0 GA X 4
1000 A
31.5 X 12.4 X 2.95" / 80 X 31.5 X 7.5 CM

ALL FEATURES ARE SUBJECT TO CHANGE IN THE CONTINUING EFFORT TO IMPROVE THE PRODUCTS WITHOUT NOTICE

CONTINUOUS OUTPUT POWER (RMS)

MEASURED @ <1% THD (40 HZ) USING AUDIO PRECISION

	12.6 V < 1% THD	13.8 V < 1% THD	14.4 V < 1% THD	16 V < 1% THD
OUTPUT POWER @ 4 Ω:	3200 W	4000 W	4000 W	4500 W
OUTPUT POWER @ 2 Ω:	5800 W	7000 W	7500 W	8200 W
OUTPUT POWER @ 1 Ω:	9500 W	11000 W	12500 W	14000 W

DYNAMIC RATED POWER (MUSIC / SPL BURP)

>20000 W @ 12.5 V

DESCRIPTIONS OF SPECIFICATIONS

OPERATION BELOW MINIMUM IMPEDANCE WILL STRESS THE AMPLIFIER & VOID THE WARRANTY. EXCESSIVE HEAT WILL OCCUR, CAUSING THE AMPLIFIER TO GO INTO THERMAL PROTECTION. THE CIRCUIT MAY SUSTAIN PERMANENT DAMAGE AND PROTECTION LIGHTS WON'T TURN OFF OR FLASH SEQUENTIALLY. OPERATIONAL VOLTAGE IS FROM 9V TO 17.5V

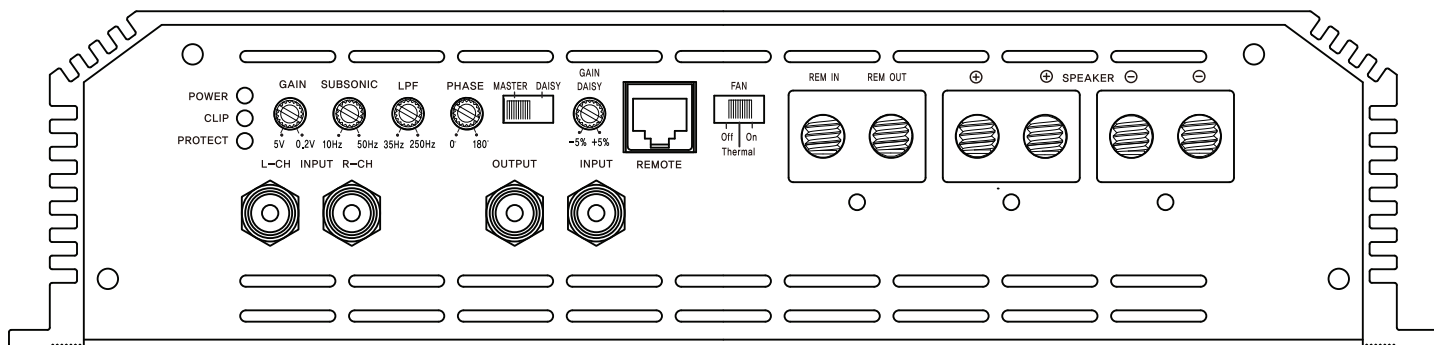
PROTECTION MAY ALSO BE CAUSED BY THE FOLLOWING

- *INPUT VOLTAGE FROM HEADUNIT BEING TOO HIGH / LOW / POWER SUPPLY VOLTAGE TOO HIGH / LOW.
- *SPEAKER OVERLOAD
- *SHORT CIRCUIT

*FULL OUTPUT POWER ACCORDING TO THE SPEC IS BASED ON A SUFFICIENT ELECTRICAL SUPPLY SYSTEM. IF YOUR SYSTEM IS INADEQUATE, THE EFFICIENCY OF THE AMPLIFIER DECREASES HURTING THE PERFORMANCE!

THE ZERO 12 WILL NEED A DEDICATED AGM BATTERY SUPPLY OF MIN 700 AH AND 7500 CCA. IF YOU ARE USING A COMMON LITHIUM SOURCE OF 6C, A 200 AH LITHIUM BATTERY WILL SUFFICE.

PANEL LAYOUT



INPUT

RCA signal input for left & right channel.
A minimum of 0.2V input signal is required for correct operation. Using only 1 input will minimize input signal and amplifier will need to be gained as such.

POWER & PROTECTION INDICATOR

Power LED, blue light shows correct operation,
Protect LED, red light shows general malfunction, faulty connection or thermal protection.

CLIP INDICATOR

The LED will light up if signal is clipped. An occasional flashing light is acceptable, a constant lit diode is not.

GAIN (5V-0.2V)

Adjusts signal input voltage from the input source to match the amplifiers input stage.
0.2 V ~ 5 V is the operational voltage.
Voltages beyond may cause errors or damage to the input section.

SUBSONIC

Variable subsonic setting from 10 Hz to 50 Hz.
It is highly recommended to set it according to the tuning of your subwoofer enclosure to avoid unnecessary strain to your sound system.

LPF (LOW PASS FILTER 20 HZ -200 HZ, 24 DB/OCT)

Adjusts the cut off point for the low pass crossover at the frequency chosen.

PHASE

Variable phase adjustment from 0 ~ 180°
adjusted in accordance with the amplifiers gain.

MASTER / DAISY

Master & Daisy switch for daisy chain link or master mode.
In daisy, the master amplifier will route the gained signal to daisy (linked) amplifier. The gain on the daisy is controlled the master.

GAIN DAISY

Fine tuning of the master signal routed to the daisy amp.
While the ordinary gain on daisy amps are disabled, the daisy amp is gain matched by the master, but if there is a slight variance in signal up to +/- 5%, the Daisy gain can equalize it.

REMOTE

Remote level control port with clip and voltage output.

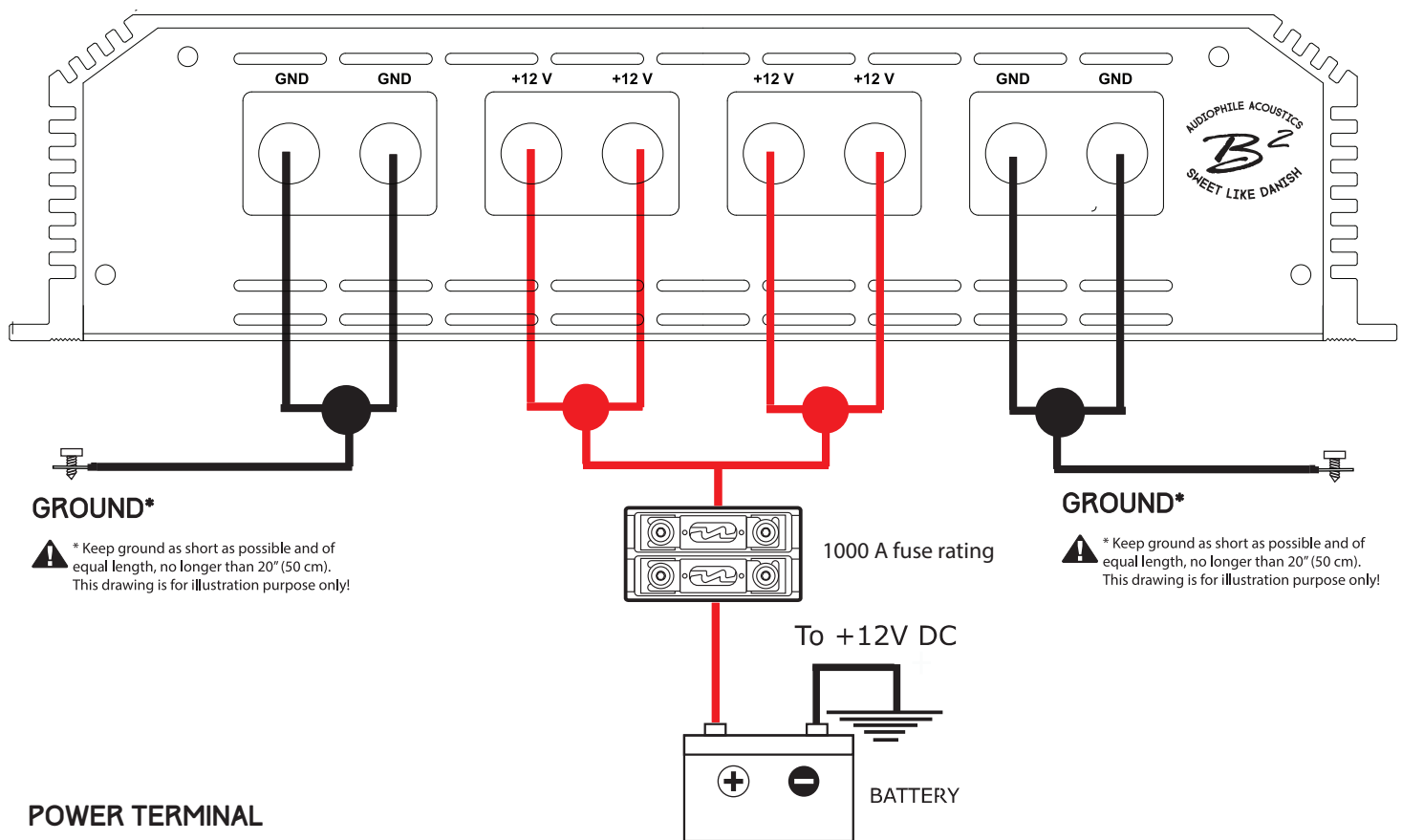
FAN

Switch selection of the internal fans operational mode.
Off turns of the fan entirely. Thermal mode will have the fans kick in at set temperature. On is continuous mode

REM IN / REM OUT

REM IN = Switched remote signal to turn on the amplifier.
REM OUT = Switched remote signal output. This can be used for daisy amps or other 12V equipment.

POWER TERMINALS



POWER TERMINAL

GND (GROUND CONNECTION)

Connects to the vehicle's chassis. Keep as short as possible (< 20" / 50 cm). Use minimum 0AWG cable for optimal operation.

+12V (POWER CONNECTION)

Connects to the positive terminal of the battery. For specified performance 0AWG cable is required. Fuses shall be placed within 8" / 20 cm of the battery.

⚠ CAUTION

INSTALLATION OF THE AMPLIFIER SHALL BE DONE IN THE FOLLOWING STEPS:

1. Connect the +12V wire, keep in mind this wire has to be fused at the battery as well.
2. Ensure the ground is appropriate, then connect it to the amplifier.
3. Connect the switched remote.
4. Reattach negative wire (ground) to the battery.
5. Operation over 17.5V will cause the amplifier to go into protect & can void the warranty!

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INSTALLATION

INSTALLATION CONSIDERATIONS

If you choose to install the amplifier by yourself, please read the entire owner's manual carefully. Before you start your installation, please take all steps into consideration. If in doubt, please go to your place of purchase for authorized distributors / dealers that will be able to configure your set up & ensure the warranty of your amplifier.

PREPARATION

Disconnect the negative (-) battery cable before mounting or making any connection. Check the battery & alternator ground (-) connection. Make sure they are properly connected/dimensioned & free of corrosion. Before selecting a mounting location for the amplifier, please take cooling & safety into consideration. Avoid areas with excessive vibration & up side down installation!

In order to avoid excessive heat from the amplifier, it is recommended to find a mounting location that allows for vertical positioning of the heatsink fins. For safety purposes, install the amplifier in a dry and well ventilated location and make sure no cables or other harness of the car is interfaced with the mounting location or will present a hazard to the car's cable, control cables, fuel lines/tanks, hydraulic lines or other components of the vehicle. Route the RCA cables away from high current wires, if possible run RCA, Power and Speaker cables individually and with a good distance from each other.

POWER CONNECTORS

12V (POWER CONNECTION)

Before mounting the amplifier, disconnect the negative (-) wire from the battery to protect any accidental damage to the amplifier or the audio system. The amplifier is equipped with quad 0 AWG power & ground terminals. It is crucial that all terminals are used with the adequate cable to ensure correct operation. Connect the power cables to the power terminal labeled as +12V.

The amplifier is not equipped with fuses, so external fuses are required at both the battery and the amplifier. Connect one end of the fuse holder to the power cable and the other end of the fuse holder to the positive battery terminal within 8" / 20 cm of the same cable. The same shall be done at the other end of the cable that connects to the amplifier. The fuses will protect the system and the vehicle against the possibility of a short circuit in the power cable. Make sure that the fuses and the fuse holder is according to the system requirements.

GND (GROUND CONNECTION)

Locate a secure grounding connection as close as possible to the amplifier. Make sure the location is clean and provides a direct electrical connection to the chassis of the vehicle. Connect one end of an equal sized cable as the positive cable to the location of ground. It is important that the ground cable is as short as possible, but no longer than 20" / 50 cm at maximum. Run one end of the cable to the grounding point. Run the other end of the cable to the mounting location. Connect the ground cable to the terminals labeled as GND.

REM (REMOTE CONNECTION)

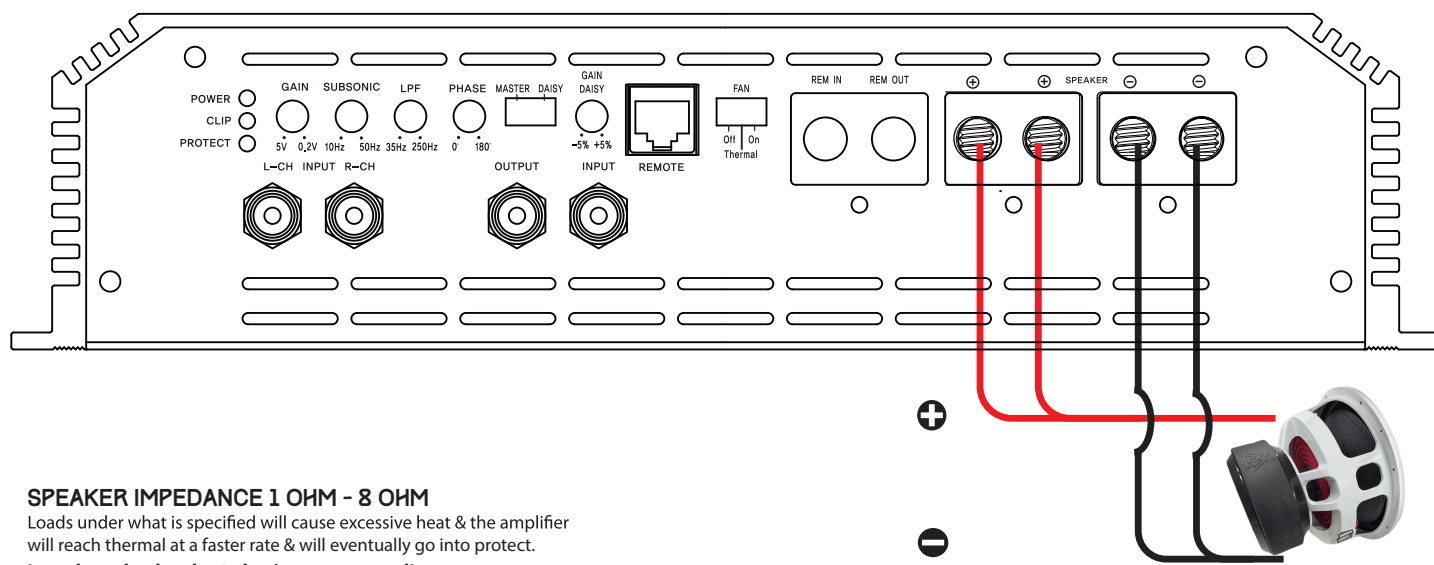
Run a remote turn on cable from the switched +12 V source. This may be a toggle switch, a relay, the source unit's remote output cable or power antenna trigger cable. Connect the remote turn on cable to the power terminal labeled as REM. The REM out terminal is mainly intended for connection of another amplifier ran in a chain, but it can also be used for other units.

INPUT (RCA CABLE)

Run the RCA cables away from the high current cables / speaker cables and connect to the amplifier. Use high quality cables with a secure grounding point to avoid amplifier malfunction and / or alternator whine.

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SPEAKER CONNECTION



We recommend using minimum 8 Ga speaker cables to acquire the intended performance & efficiency. Run the speaker cables from your speakers to the amplifier's mounting location. Ensure these are ran separately and away from high current cables and if possible the RCA cables as well. In all cases where cables are penetrating the vehicle's chassis use grommets to protect the cable.

Connect the speaker wires according to the terminals on the speaker(s). Strip 3/8" / 1 cm of insulation of the end of each cable and twist the cable strands together tightly. Make sure there are no stray strands that could touch other cables or terminals as it can cause a short circuit. Crimp spade plugs over the end of the cable or tin the ends with solder to provide a solid terminal. Connect the cable ends to the amplifier as shown in the diagram. Note, the amplifier's speaker terminals are internally bridged.

⚠ CAUTION

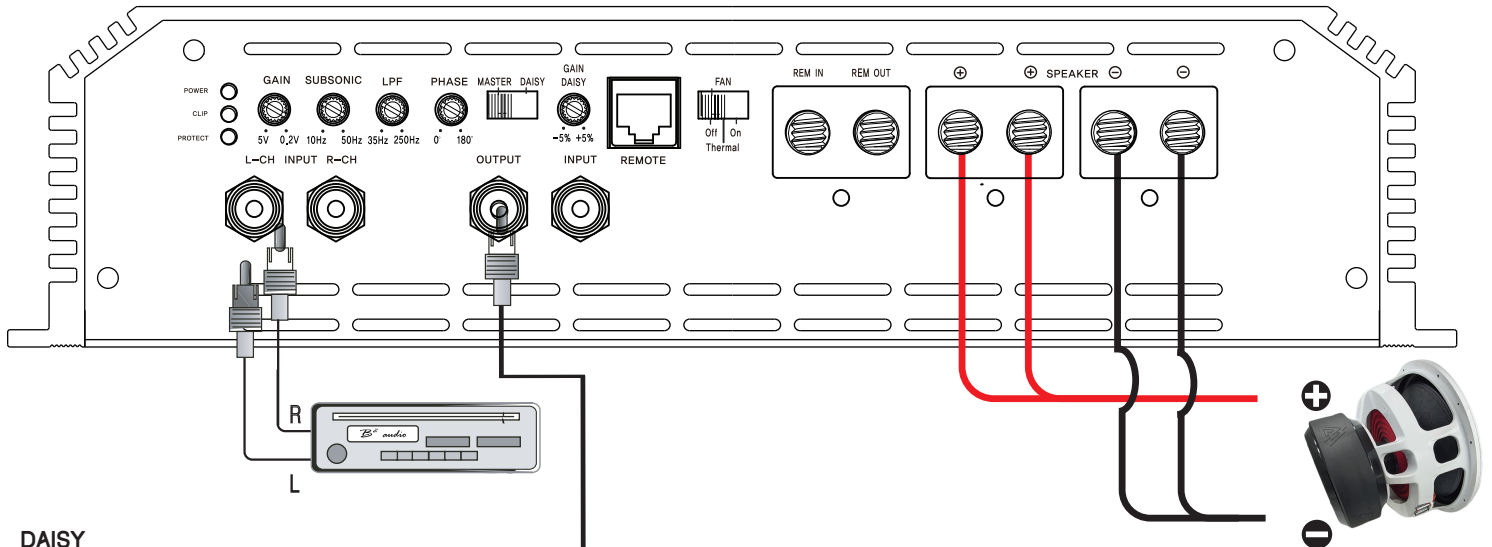
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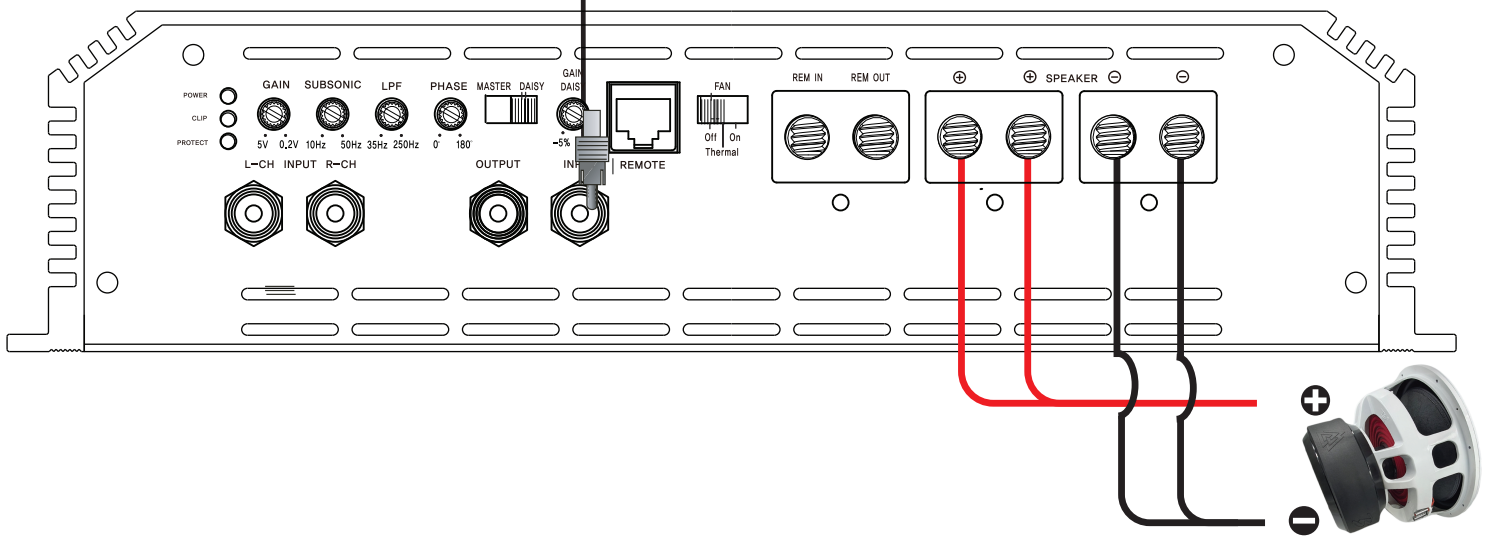
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DAISY CONTROL PANEL SETTING / SPEAKER WIRING

MASTER

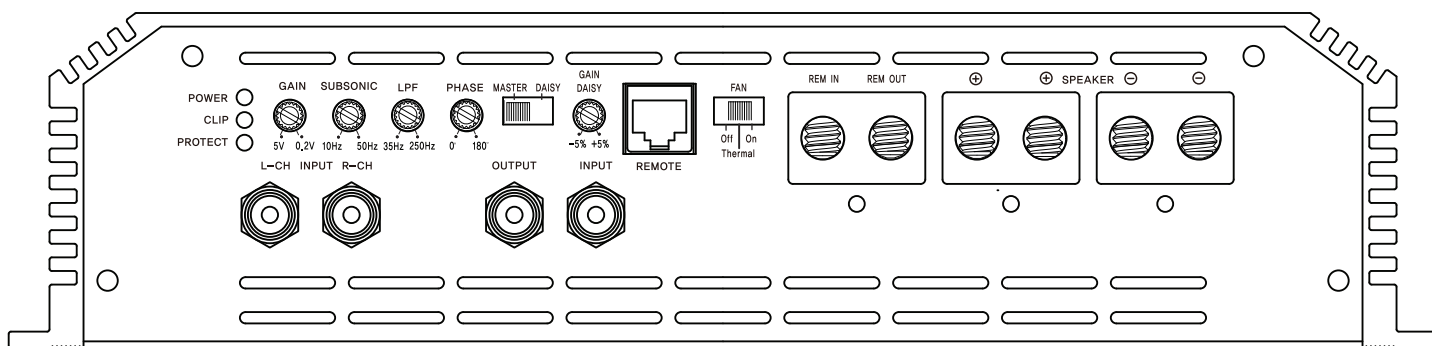


DAISY



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ACCU8 CROSSOVER



LOW PASS.

The low pass crossover is 24 dB / oct. Setting it at 80 Hz will have the signal attenuated with 24 dB at 40 Hz (1 octave). To ensure accuracy for the individual crossover frequency the pot feature 41 clicks, each with a corresponding frequency. The same is valid for the bass boost settings, which also features 41 clicks. We call this feature for ACCU8.

CLICK SETTINGS FOR LPF

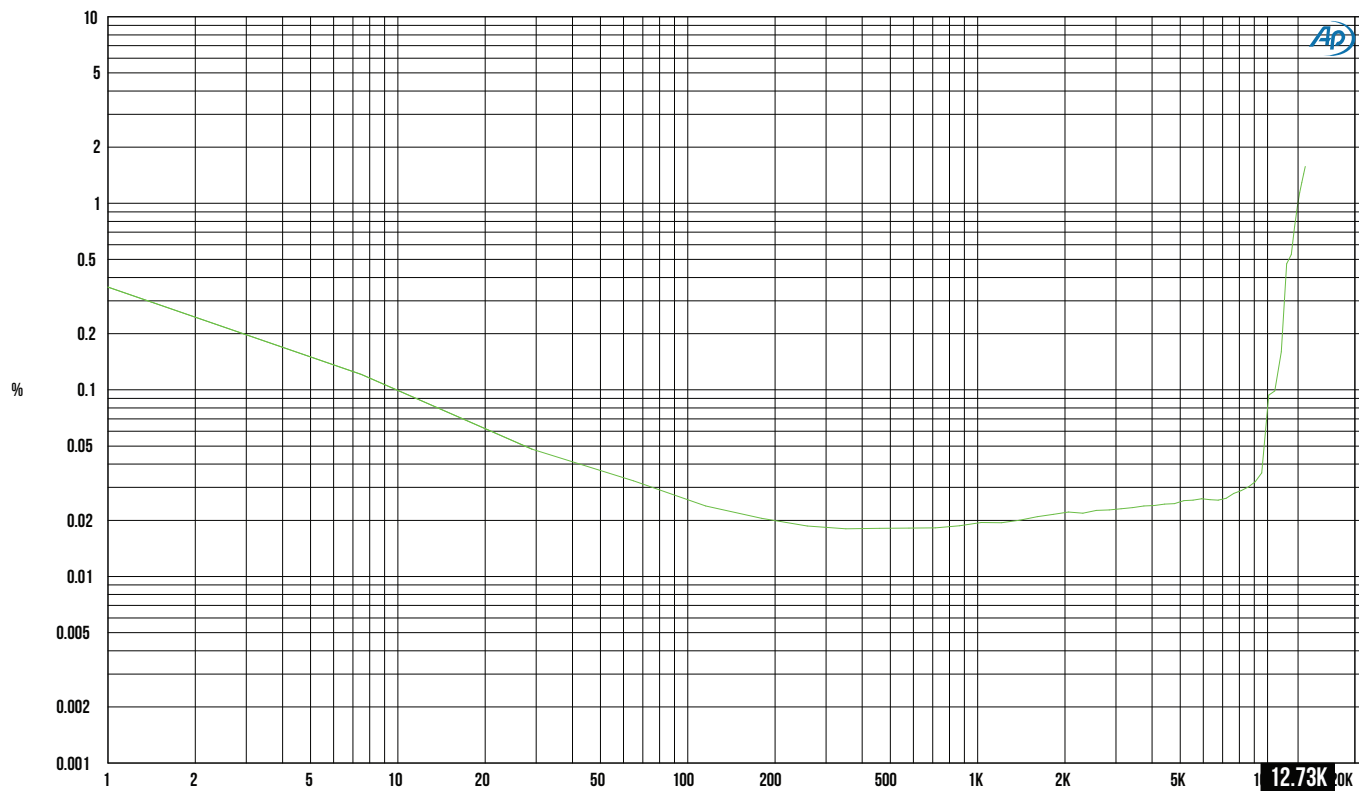
LPF	LPF	LPF
1. 33 Hz	15. 61 Hz	29. 160 Hz
2. 34 Hz	16. 68 Hz	30. 170 Hz
3. 34 Hz	17. 76 Hz	31. 181 Hz
4. 35 Hz	18. 86 Hz	32. 185 Hz
5. 35 Hz	19. 100 Hz	33. 190 Hz
6. 36 Hz	20. 111 Hz	34. 195 Hz
7. 36 Hz	21. 116 Hz	35. 200 Hz
8. 39 Hz	22. 120 Hz	36. 203 Hz
9. 41 Hz	23. 125 Hz	37. 207 Hz
10. 43 Hz	24. 130 Hz	38. 210 Hz
11. 46 Hz	25. 135 Hz	39. 230 Hz
12. 50 Hz	26. 140 Hz	40. 240 Hz
13. 55 Hz	27. 144 Hz	41. 250 Hz
14. 57 Hz	28. 151 Hz	

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AUDIO PRECISION CHARTS

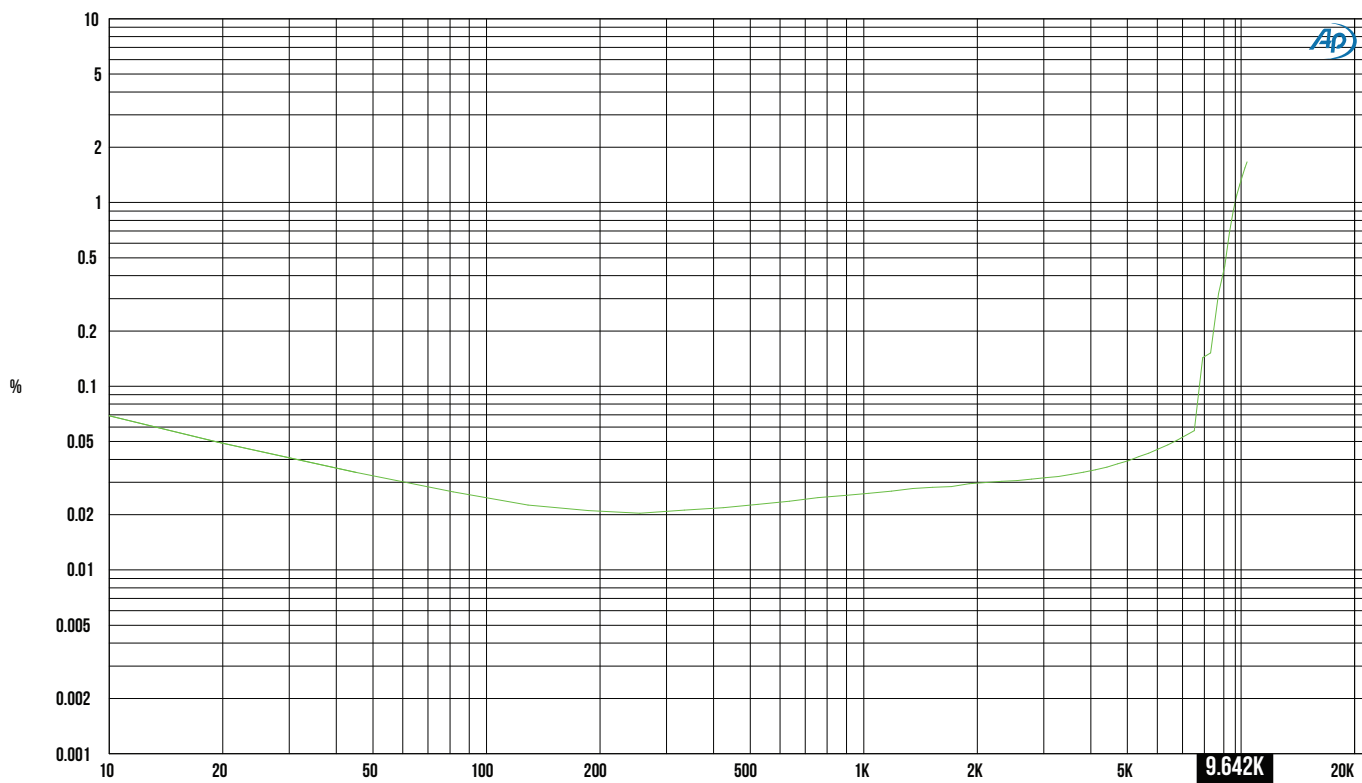
Zero 12

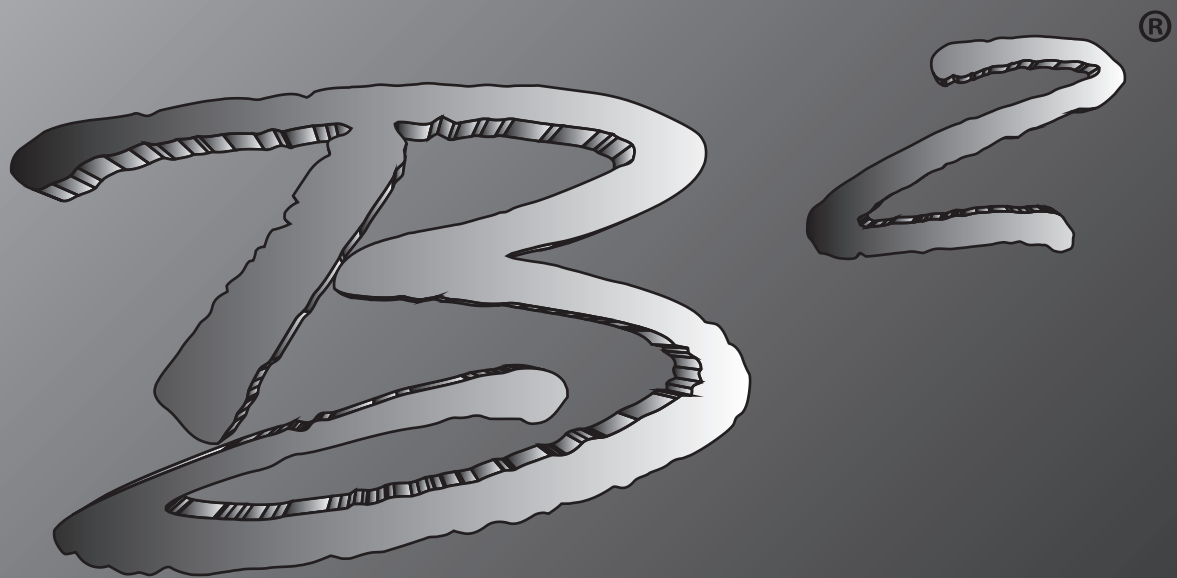
14.4V 40HZ 1 OHM



Zero 12

12.6V 40HZ 1 OHM





LIMITED WARRANTY INFORMATION

B2 audio offers a limited warranty under the following terms:

The product is to be free of defects in material & workmanship under normal use for a period of 1 year from the date of the original purchase, when installed by an authorized dealer. Items not installed by authorized dealers will be warrantied for 30 days from the original purchase. Original sales receipts must be accompanied with all returns. The warranty applies to the original purchaser of the product & it being sold by authorized B2 audio dealers.

The warranty does not cover: 1. Damage caused by accident, abuse, misuse, improper operation, water / solvents & shipping.

2. Product modification, neglect, failure to follow installation instructions & misrepresentation by the seller.

3. Products used for competition purposes or are of such a character 4. Any product that has been opened.

5. Products that has had the serial number defaced, altered or removed.

6. The cost of shipping the product back for repair to an authorized repair centre & cost of return of non-defective items.