




db DRIVE FX90.4 4 Channel Amplifiers User Manual

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db DRIVE FX90.4 4 Channel Amplifiers



Product Information

The product is a series of amplifiers manufactured by DB Drive called the Euphoria 4 channel amplifiers (FX90.4 and FX125.4) and the mono amplifiers (MX600.1, MX1200.1, MX2000.1, MX3000.1). The specifications for the amplifiers are as follows:

FX90.4 Amplifier Specifications

- Power Output: 4 x 90 Watts (4 ohms), 4 x 180 Watts (2 ohms), 2 x 360 Watts (4 ohm bridged)
- Load Voltage & THD: 14.4 volts & 1% (4 ohms), 14.4 volts & 1% (2 ohms)
- Working Voltage: 12 ~ 16 Volts
- Frequency Response: 10Hz ~ 25KHz
- Signal to Noise Ratio: < 105 dB
- Selectable Crossover: HPF/FULL/LPF/BP
- Low Level Input: 6V ~ 0.2V
- High Pass Filter Variable: 20Hz ~ 5KHz
- Low Pass Filter Variable: 50Hz ~ 500Hz

FX125.4 Amplifier Specifications

- Power Output: 4 x 125 Watts (4 ohms), 4 x 250 Watts (2 ohms), 2 x 500 Watts (4 ohm bridged)
- Load Voltage & THD: 14.4 volts & 1% (4 ohms), 14.4 volts & 1% (2 ohms)
- Working Voltage: 12 ~ 16 Volts
- Frequency Response: 10Hz ~ 25KHz
- Signal to Noise Ratio: < 105 dB
- Selectable Crossover: HPF/FULL/LPF/BP
- Low Level Input: 6V ~ 0.2V
- High Pass Filter Variable: 20Hz ~ 5KHz
- Low Pass Filter Variable: 50Hz ~ 500Hz

Mono Amplifier Specifications

The mono amplifiers have similar specifications, with the main difference being the power output:

MX600.1 Amplifier Specifications

- Power Output: 1 x 600 Watts (1 ohm), 1 x 300 Watts (2 ohms), 1 x 150 Watts (4 ohms)
- Load Voltage & THD: 14.4 volts & 1% (1 ohm), 14.4 volts & 1% (2 ohms), 14.4 volts & 1% (4 ohms)
- Working Voltage: 12 ~ 16 Volts
- Frequency Response: 10Hz ~ 200Hz
- Signal to Noise Ratio: < 85 dB
- Low Level Input: 6V ~ 0.2V
- Variable SubSonic Filter: 10Hz ~ 40Hz
- Low Pass Filter Variable: 40Hz ~ 200Hz

MX1200.1 Amplifier Specifications

- Power Output: 1 x 1200 Watts (1 ohm), 1 x 600 Watts (2 ohms), 1 x 300 Watts (4 ohms)
- Load Voltage & THD: 14.4 volts & 1% (1 ohm), 14.4 volts & 1% (2 ohms), 14.4 volts & 1% (4 ohms)
- Working Voltage: 12 ~ 16 Volts
- Frequency Response: 10Hz ~ 250Hz
- Signal to Noise Ratio: < 85 dB
- Low Level Input: 6V ~ 0.2V
- Variable SubSonic Filter: 10Hz ~ 40Hz
- Low Pass Filter Variable: 40Hz ~ 200Hz

MX2000.1 Amplifier Specifications

- Power Output: 1 x 2000 Watts (1 ohm), 1 x 1000 Watts (2 ohms), 1 x 500 Watts (4 ohms)
- Load Voltage & THD: 14.4 volts & 1% (1 ohm), 14.4 volts & 1% (2 ohms), 14.4 volts & 1% (4 ohms)
- Working Voltage: 12 ~ 16 Volts
- Frequency Response: 10Hz ~ 250Hz
- Signal to Noise Ratio: < 85 dB
- Low Level Input: 6V ~ 0.2V
- Variable SubSonic Filter: 10Hz ~ 40Hz
- Low Pass Filter Variable: 40Hz ~ 200Hz

MX3000.1 Amplifier Specifications

- Power Output: 1 x 3000 Watts (1 ohm), 1 x 1500 Watts (2 ohms), 1 x 750 Watts (4 ohms)
- Load Voltage & THD: 14.4 volts & 1% (1 ohm), 14.4 volts & 1% (2 ohms), 14.4 volts & 1% (4 ohms)
- Working Voltage: 12 ~ 16 Volts
- Frequency Response: 20Hz ~ 250Hz
- Signal to Noise Ratio: < 97 dB
- Low Level Input: 6V ~ 0.2V
- Variable SubSonic Filter: 10Hz ~ 40Hz

- Low Pass Filter Variable: 40Hz ~ 200Hz

Product Usage Instructions

To use the amplifiers, follow these instructions:

1. Connect RCA output cables from the headunit to the Euphoria XPERT amplifier's RCA Input.
2. For the FX90.4 and FX125.4 amplifiers:
 - Channels 1 and 2 can be used in the High pass setting or full range.
 - Channels 3 and 4 feature a selectable 3-way crossover system that can be used in High pass, Bandpass, or Low pass settings.
 - Adjust the X-OVER controls for HPF (High Pass Filter), LPF (Low Pass Filter), and BASS BOOST according to your preferences.
 - Adjust the GAIN controls for each channel according to your desired volume level.
 - Connect the power input, ground, and remote wires as indicated on the amplifier.
3. For the MX600.1, MX1200.1, MX2000.1, MX3000.1 amplifiers:
 - Adjust the X-OVER controls for LPF (Low Pass Filter) and SUBSONIC according to your preferences.
 - Adjust the GAIN control for the desired volume level.
 - Connect the power input, ground, and remote wires as indicated on the amplifier.
 - Use the BASS BOOST feature at 45Hz if needed for extra boost in certain subwoofer installations.
 - If necessary, use the SUBSONIC filter to prevent damage to your subwoofer system when played out of the tuning frequency of the enclosure.

Note: The product specifications and features are subject to change without notice due to continuous improvement of the product.

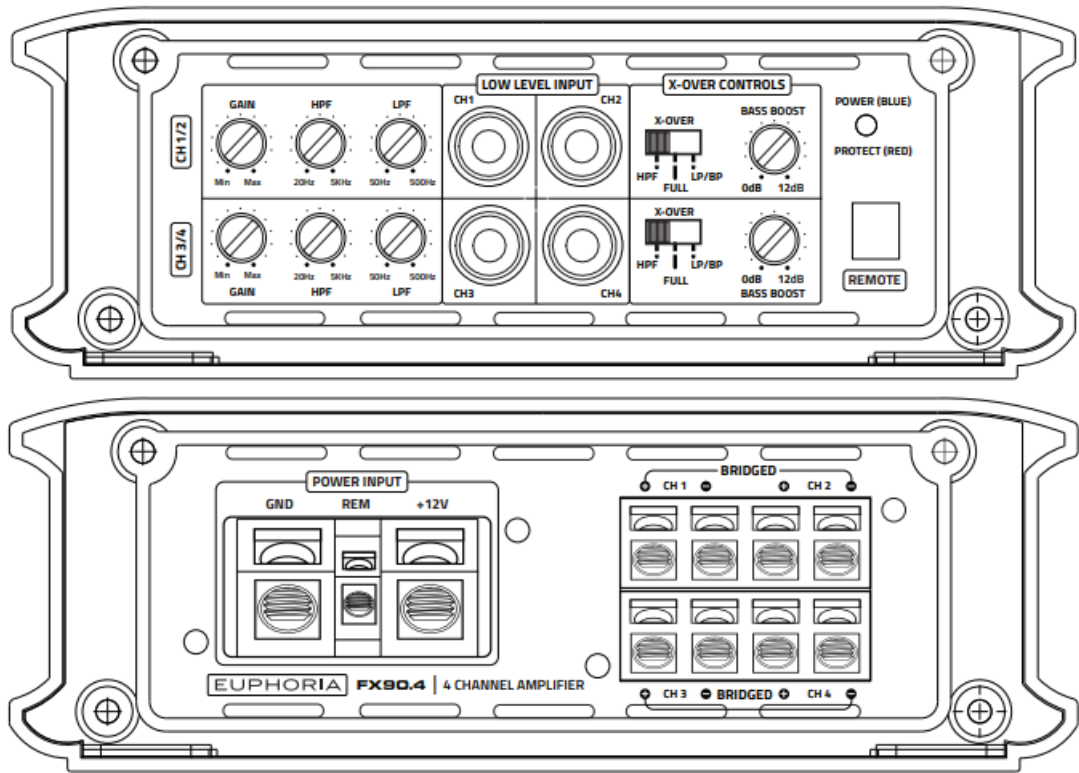
AMPLIFIERS' SPECIFICATIONS

FOUR CHANNEL CLASS D AMPLIFIERS

Load	Voltage & THD	FX90.4	FX125.4
4ohm	14.4 volts & 1%	4 x 90 Watts	4 x 125 Watts
2ohm	14.4 volts & 1%	4 x 180 Watts	4 x 250 Watts
4ohm	Bridged	2 x 360 Watts	2 x 500 Watts
Working Voltage		12 ~ 16Volts	12 ~ 16Volts
Frequency Response		10Hz ~ 25KHz	10Hz ~ 25KHz
Signal to Noise Ratio		< 105 dB	< 105 dB
Selectable Crossover		HPF/FULL/LPF/BP	HPF/FULL/LPF/BP
Low Level Input		6V ~ 0.2V	6V ~ 0.2V
High Pass Filter Variable		20Hz ~ 5KHz	20Hz ~ 5KHz
Low Pass Filter Variable		50Hz ~ 500Hz	50Hz ~ 500Hz

AMPLIFIER'S CONTROL & CONNECTION.

FX90.4



The DB Drive Euphoria 4 channel amplifiers (FX90.4 and FX125.4) feature a 12db Slope crossover network. Channels 1 and 2 can be used in the High pass setting or full range and channels 3 and 4 feature a selectable 3 way crossover system that can be used in High pass, Bandpass or low pass settings.

Adjustments and Settings

- The FX90.4 and FX125.4 amplifiers are equipped with a variable crossover network that allows you to select the crossover mode (Highpass—Full Range) and desired crossover point for channels 1 and 2. With a High Pass range between 20Hz and 5KHz, channels 1 and 2 can be used with a component tweeter or any type of full range speaker requiring High Pass filtering. Channels 3 and 4 allow you to select between a 3 way completely variable High pass Bandpass or Low pass setting that can be configured in many different ways allowing the user set up the perfect audio system.
- For example, if you wish to drive a pair of subwoofers on channels 3 and 4 in the bridged mode, you can select the LP/BP switch settings on the amplifier to filter out the high frequencies. You will then need to adjust the Lowpass control to the desired frequency setting. This will only send low frequencies to your subwoofers. If you wish to use the Bandpass crossover filter you must set crossover switch settings to LP/BP. Once the LP/BP switch setting is selected you will use both the Lowpass and Highpass controls to filter out the unwanted low and high frequencies to create the desired Bandpass filter.

AMPLIFIERS' SPECIFICATION

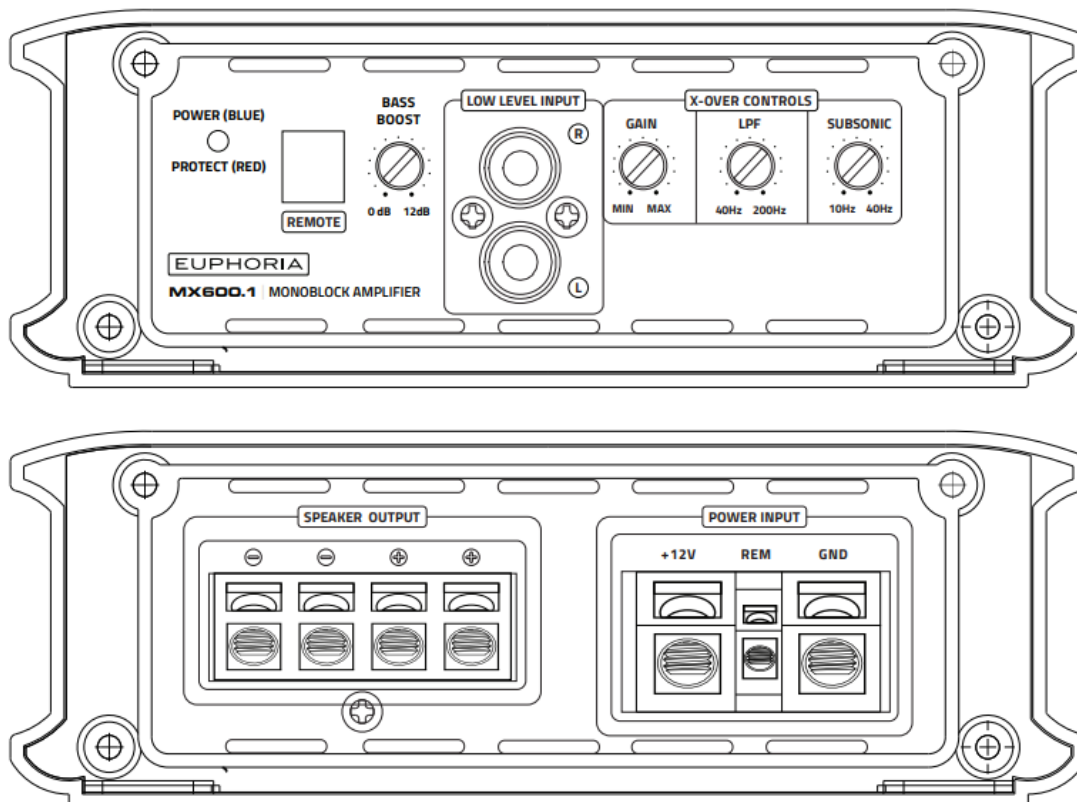
MONO CLASS D AMPLIFIERS

Load	Voltage & THD	MX600.1	MX1200.1	MX2000.1	MX3000.1
1ohm	14.4 volts & 1%	1 x 600 Watts	1 x 1200 Watts	1 x 2000 Watts	1 x 3000 Watts
2ohm	14.4 volts & 1%	1 x 300 Watts	1 x 600 Watts	1 x 1000 Watts	1 x 1500 Watts
4ohm	14.4 volts & 1%	1 x 150 Watts	1 x 300 Watts	1 x 500 Watts	1 x 750 Watts
Working Voltage		12 ~ 16Volts	12 ~ 16Volts	12 ~ 16Volts	12 ~ 16Volts
Frequency Response		10Hz ~ 200Hz	10Hz ~ 250Hz	10Hz ~ 250Hz	20Hz ~ 250Hz
Signal to Noise Ratio		< 85 dB	< 85 dB	< 85 dB	< 97 dB
Low Level Input		6V ~ 0.2V	6V ~ 0.2V	6V ~ 0.2V	6V ~ 0.2V
Variable SubSonic Filter		10Hz ~ 40Hz	10Hz ~ 40Hz	10Hz ~ 40Hz	10Hz ~ 40Hz
Low Pass Filter Variable		40Hz ~ 200Hz	40Hz ~ 200Hz	40Hz ~ 200Hz	40Hz ~ 200Hz

AMPLIFIER'S CONTROL & CONNECTION.

- The MX600.1, MX1200.1, MX2000.1, MX3000.1 are equipped with a variable 12db slope Lowpass crossover network and a 12db slope subsonic filter. The mono amps also feature a variable Bass Boost EQ is set at 45Hz. The Bass Boost is helpful in certain subwoofer installations where enclosure location may require an extra boost.
- In some subwoofer enclosure installations, it may necessary to use the Subsonic filter. The subsonic filters the ultra low bass frequencies from the signal path preventing damage to your subwoofer system when played out of the tuning frequency of the enclosure.

MX600.1



• INPUT

Connect RCA output cables from the headunit to EUPHORIA XPERT amplifiers' RCA Input

• GAIN (6V ~ 0.2V)

Matching the output voltage of the headunit's RCA line-outs to EUPHORIA XPERT amplifiers' input section.

• HIGH PASS FILTER

Controls the High Pass Crossover point for the speaker outputs.

• LOW PASS FILTER

Controls the Low Pass Crossover point for the speaker outputs.

- **+12V (POWER CONNECTION)**

- This must be connected to the fuse positive terminal (+12V) of the battery.
- Recommended wire is 4 gauge or thicker.
- Check the battery voltage.

- **GND (GROUND CONNECTION)**

- It is connected to the negative or ground cables of the vehicle.
- Recommended wire is 4 gauge or thicker.

- **REM (REMOTE)**

It is connected to switched +12V with a trigger cable coming from the head unit.

- **SPEAKER OUTPUTS**

- It connects amplifier's terminal to subwoofer speakers or full range speakers.
- Minimum speaker wire is 12 gauge

- **POWER & PROTECTION INDICATOR**

Power LED – Green-lit shows normal operation. Protect LED – RED-lit shows general malfunction, faulty connection or thermal protection.

INSTALLATION

In case you decide to install the amplifier by yourself, please read the owner's manual very carefully before your installation. Please take all the necessary steps into consideration or , you can choose to have a Euphoria or DB Research's authorized dealer make the proper installation and adjustments to your car audio system.

MOUNTING PREPARATION

Disconnect the negative (–) battery cable before mounting your amplifier or making any connections. Check the battery and alternator ground (–) connections. Make sure they are properly connected and free of corrosion before selecting a mounting location. Please take some concerns into consideration with cooling efficiency and safety.

MOUNTING PREPARATION

- These amplifiers use a specially designed heat radiation heatsink to avoid excessive heat from circuitry.
- But for better heat dissipation, it is good to find the mounting location where you can install vertically with the heatsink fins and better air flow around heatsink.
- For the safety, You have to find a dry and well ventilated location and make sure any cables and drilling car equipment are not interfering with mounting location. Be sure the mounting location and drilling of pilot cables will not present a hazard to any cables, control cables, fuel lines, fuel tanks, hydraulic lines or other vehicle systems or components.

+12V, GND, REM CONNECTION.

12V (POWER CONNECTION)

- Before mounting amplifier, disconnect the negative (–) wire from battery to protect any accidental damage to amplifier and audio system. The amplifier requires at least the use of 4 gauge wiring for all power connections. Connect the power cables to power terminal labeled as +12V. Amplifier is not internally fused and requires external fusing.

- In order to install external fuses, connect one end of fuse holder to the power cable and the other end of fuse holder to positive battery within 18in of the same cable gauge. This fuse location will protect the system and the vehicle against the possibility of a short circuit in the power cable.
- Be sure to use fuses and fuse holders adequate for the current draw application.

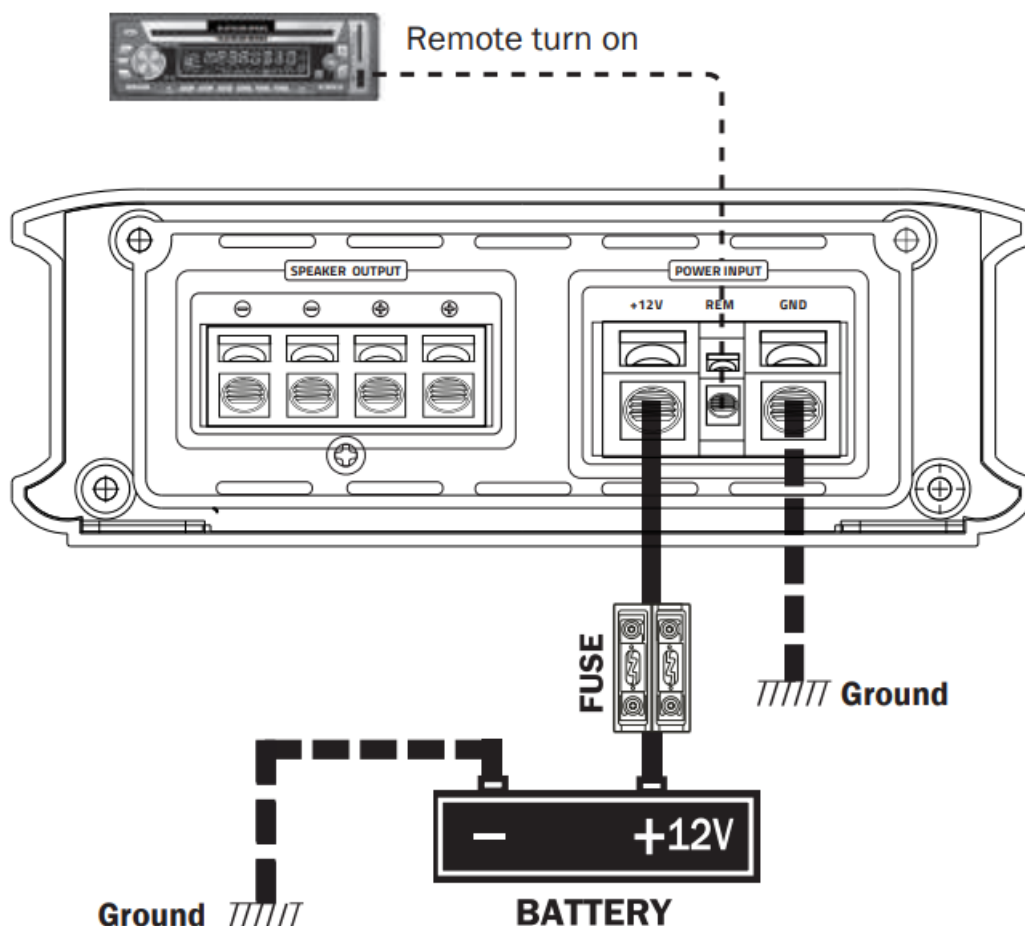
GND (GROUND CONNECTION)

- Locate a secure grounding connection as close as possible. Make sure the location is clean and provides a direct electrical connection to the frame of the vehicle.
- Connect one end of a short piece of the same gauge cable as the power cable to the grounding point.
- Run the 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 screw terminal labeled as GND.

REM (REMOTE CONNECTION)

Run a remote turn on cable from the headunit's remote switched +12V output.

AMPLIFIER +12V, GROUND, REMOTE CONNECTION DIAGRAM



SPEAKER CONNECTION

- DB Drive recommends to use minimum 12 gauge speaker connecting cables. Run 12 gauge speaker connecting cables from your speakers to amplifier's mounting location.
- Keep speaker cables away from the power cables and amplifier's input cables. Use grommets anywhere the

cables have to pass through the holes in the metal frame or sheet metal. Connect to the speakers according to the type of terminals on each speaker. Strip 3/8" of insulation from the end of each cable and twist the cables strands together tightly. Make sure there are no stray strands that might touch other cables or terminals and cause a short circuit.

- Crimp spade lugs over the cable ends or tin the ends with solder to provide a secure termination.
- Connect the cable ends to amplifier as speaker system diagram.

TROUBLE SHOOTING

NO SOUND (NO OUTPUT)

1. Please check all connections, cables' routing, short and voltage at amplifier and headunit.
2. Please check built-in or external fuses, If it is blown, please replace with new one.
3. Please check whether speakers work well, you can test speakers by connecting to another amplifiers.

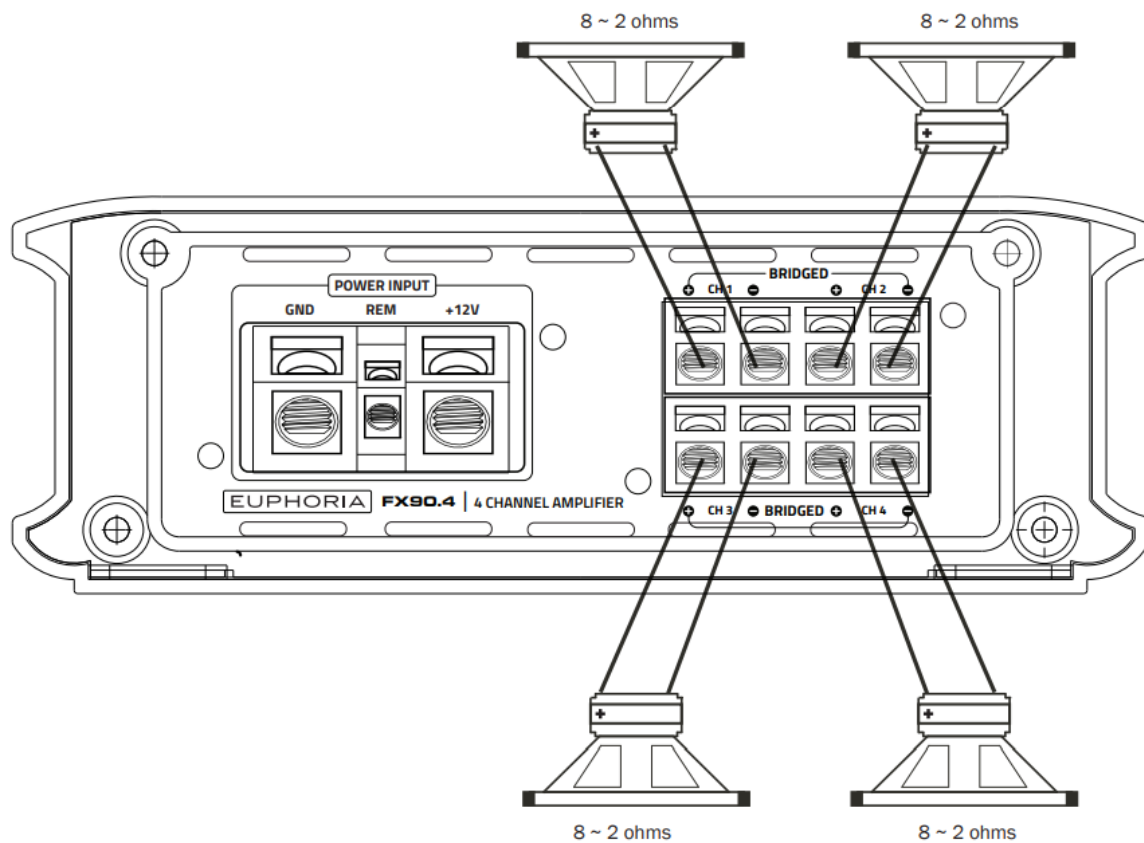
PROTECTION

1. Please check overload, overheat (thermal) , short, voltage and DC offset.
2. Minimum working impedance for 4 Channel amplifiers is 2ohm stereo or 4ohm bridged. Mono amplifier minimum impedance is 1ohm. Working voltage is 10 ~ 16 volts for all amplifiers.
3. If the amplifier is shut down due to overheat, Reset by turning off the remote input and allowing time to cool down. Please make sure there are no airflow obstructions around amplifier to prevent thermal protection.

WHINING NOISE

Engine noise is caused by poor grounding of amplifier, headunit, other components, battery or alternator, so please check all grounding connections

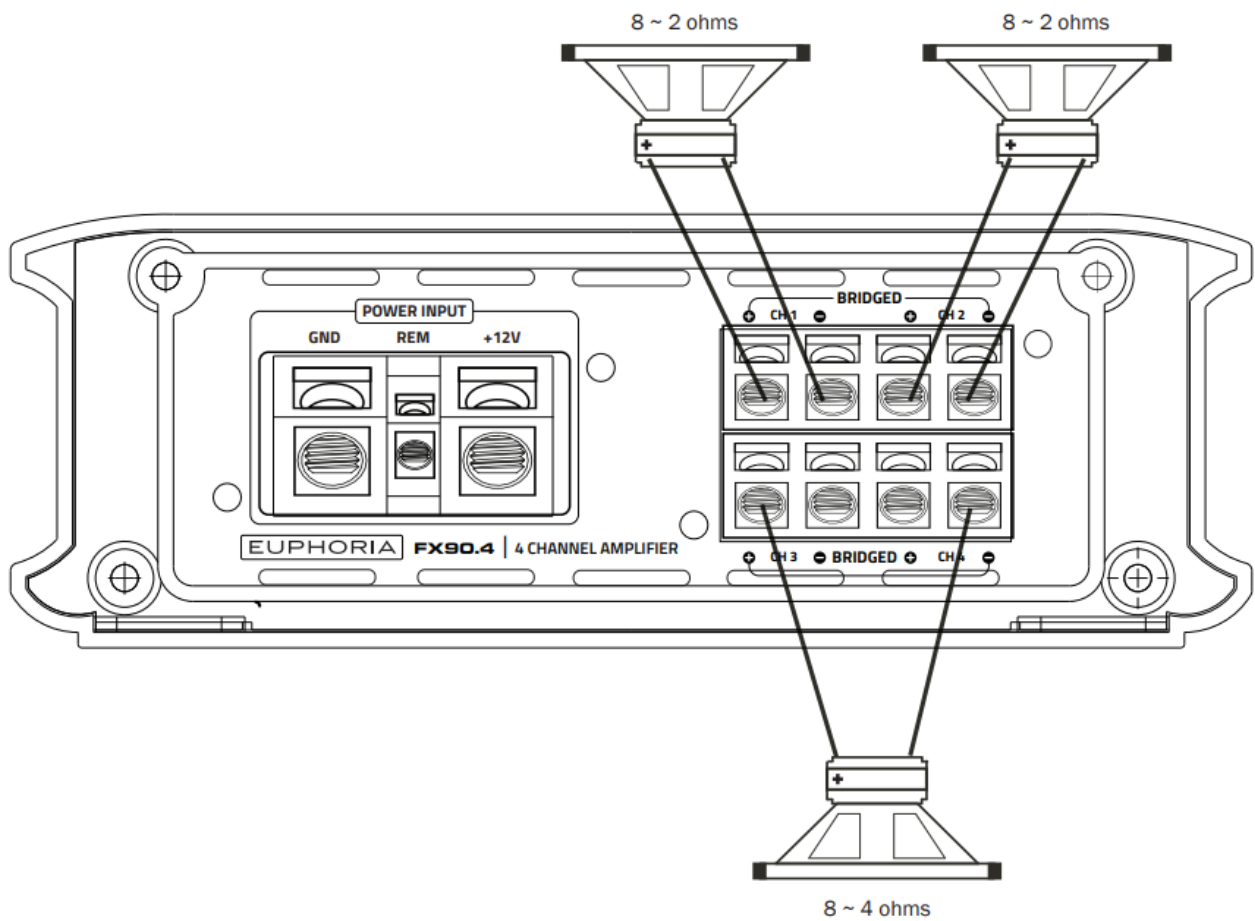
FOUR CHANNEL AMPLIFIER SPEAKER CONNECTION DIAGRAM 1



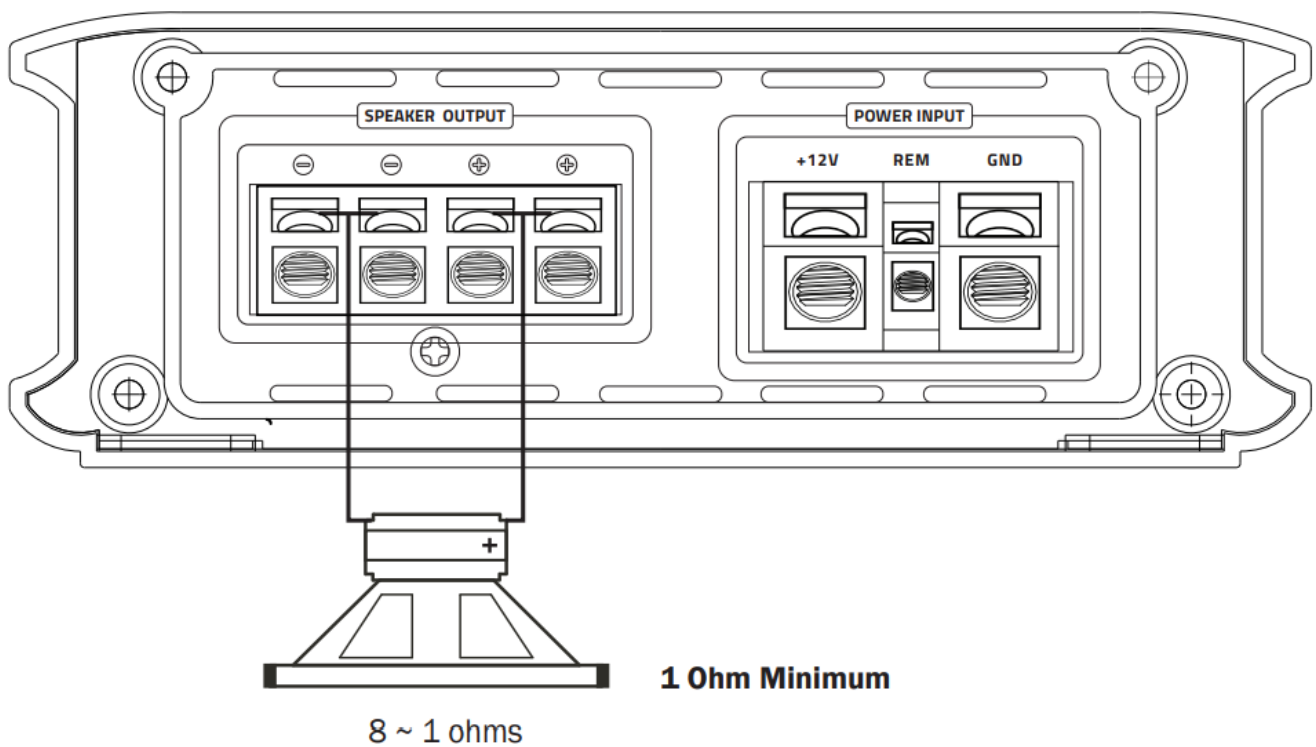
CAUTION

- **Working voltage** is 12 ~ 16volts
- Minimum working impedance is 2ohm in stereo or 4ohm bridged.

FOUR CHANNEL AMPLIFIER SPEAKER CONNECTION DIAGRAM 2



MONO AMPLIFIER SPEAKER CONNECTION DIAGRAM 1

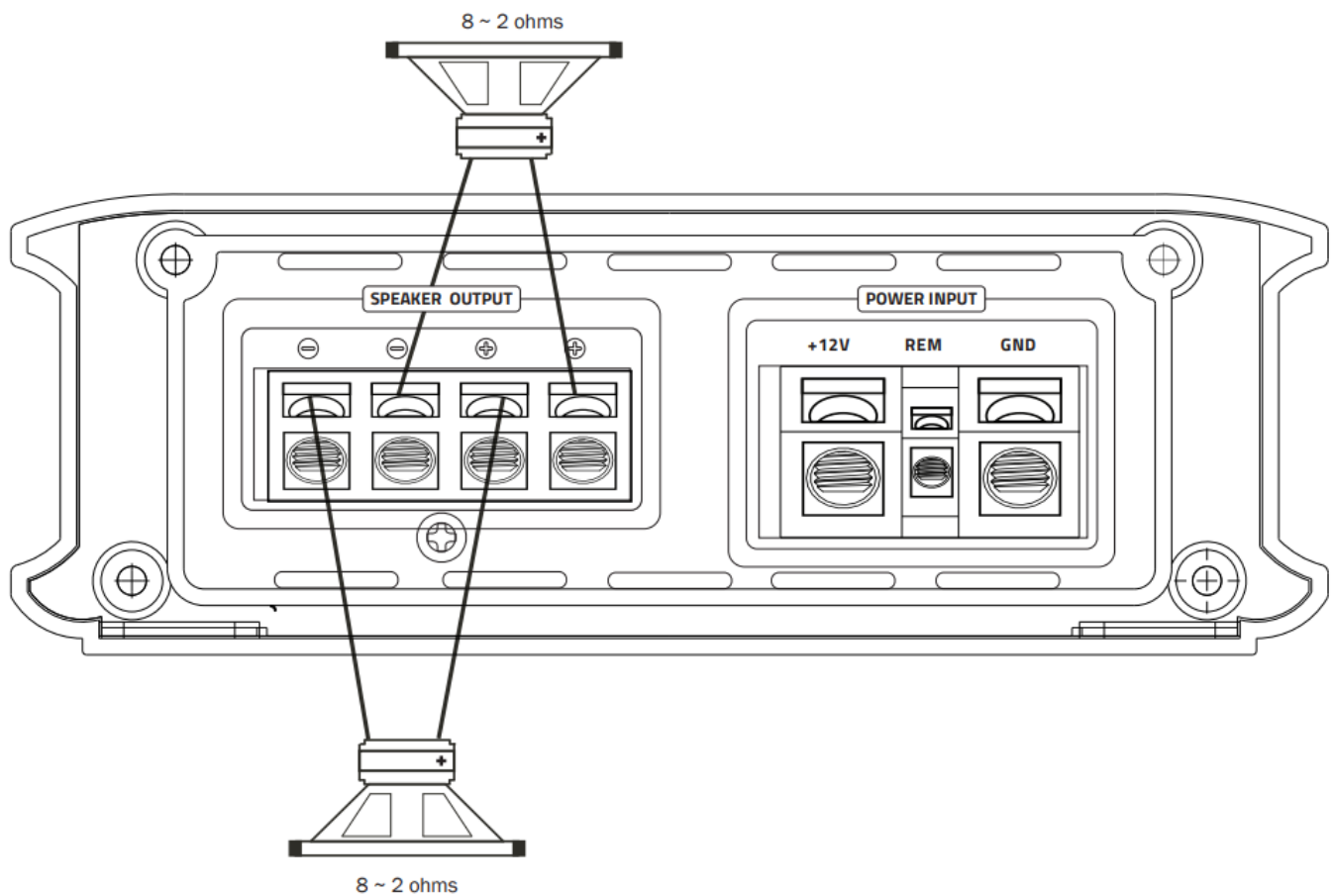


CAUTION

- minimum impedance is 1 ohms.

- **minimum working voltage** : 10V – 16Volts



MONO AMPLIFIER SPEAKER CONNECTION DIAGRAM 2



LIMITED WARRANTY

- DB Drive warrants any Euphoria products purchased in the U.S.A. from an authorized DB Drive Euphoria dealer. All products are warranted to be free from defects in material and workmanship under normal use and service for a period of one (1) year when purchased over the counter. This warranty applies to the original purchase only.
- DB Drive will either repair or replace (as its option) any unit that had been found to be defective and under warranty provided the defect occurs within the one (1) year warranty period.
- DB Drive Euphoria products installed by an authorized
- DB Drive Euphoria dealer will receive (2) years of warranty.
- Either limited warranty periods do not extend to units having been subjected to misuse, abuse, neglect, or accident. In DB Drive's judgment, products that show evidence of having been altered, modified, or serviced without DB Drive's authorization, will be ineligible under this warranty.
- To obtain warranty services please contact your retailer or visit our website at www.dbdrive.net for more details.

Documents / Resources

 <p>db EUPHORIA</p> <p>FX90.4 / FX125.4 MX600.1 / MX1200.1 / MX2000.1 / MX3000.1</p>  <p>USER MANUAL Installation Instructions Owner's Manual</p>	<p>db DRIVE FX90.4 4 Channel Amplifiers [pdf] User Manual</p> <p>FX90.4, FX125.4, MX600.1, MX1200.1, MX2000.1, MX3000.1, FX90.4 4 Channel Amplifiers, FX90.4, 4 Channel Amplifiers, Amplifiers</p>
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