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DB DRIVE DX Series Amplifier

Introduction

Congratulations on your purchase of a DX-Series state-of-the-art amplifier. Your selection of a DX-Series product indicates a true appreciation of fine musical reproduction. Whether adding to an existing system or including your DX-Series amplifier in a new system, you are certain to notice immediate performance benefits.

Product Commitment

DB's engineering professionals harnessed years of expertise, experience, and passion, coupled with exhaustive testing and creative design, to develop the optimal product and performance for your musical enjoyment. This is our commitment to you. It's what you deserve and have come to expect from DB DRIVE. We appreciate the confidence and look forward to your positive experience.

Keep Your Sales Receipt

Take this time to attach your sales receipt to the manual and put in a safe place. In case of any unforeseen reason this product may need warranty service, your receipt will be necessary to establish purchase date.

Recommendation

A power amplifier's performance is only as good as its installation. Proper installation will maximize the system's overall performance. It is recommended that you have our

product installed by an authorized DB Drive retailer. However, if you decide to install it yourself, please carefully read through this manual and take your time to do a quality installation.

Optimal Product Choice

To get the Maximum performance out of your stereo system, we recommend using 100% authentic DB Drive electronics and DB LINK wiring and accessories. Matching DB Drive amplifiers and speakers with your state-of-the-art electronics purchase is critical to optimizing your system's performance. Wiring is the lifeblood of a system; make sure your audio system has adequate current and signal transfer it deserves and needs. DB Link has it all, from wiring rolls, speaker power ground, remote to amplifier kits, RCAs, fuse holders, distribution blocks, and battery connectors. Insist on getting the best, DB LINK. It's what you deserve to get the optimum performance from your audio system.

IMPORTANT!

Before making any connections, disconnect the car's battery until the installation is completed to avoid possible damage to the electrical system.

WARNING!

Exposure to a high-power sound system can cause hearing loss or damage. Listening to your system at loud levels while driving will impair your ability to hear traffic sounds and emergency vehicles. Use common sense when listening to your system.

Serial# _____ _ MQdel # _____ _

DX-SERIES AMPLIFIER'S SPECIFICATION

DX-A4090 – 4 Channel Class D Full Range Amplifier

DX-A601 – Class D Subwoofer Amplifier

Load	**Voltage & THD**	**DX-A4090**
40	14.4 Volts & 1%	4 x 90 Watts
20	14.4 Volts & 1%	4 x 150 Watts

40 Bridged	14.4 Volts & 1%	2 x 300 Watts

- Ch 1-2 High Pass Crossover 20Hz- 5kHz
- Ch 1-2 Low Pass Crossover 50Hz- 5kHz
- Ch 3-4 High Pass Crossover 20Hz- 5kHz
- Ch 3-4 Low Pass Crossover 50Hz- 5kHz
- Crossover Slope @ 12 dB
- Bass Boost @45Hz: 0-12dB
- Input Sensitivity 250Mv – 6V
- Signal to Noise Ratio >92dB
- Frequency Response 10Hz-22KHz

DX-A601 – Class D Subwoofer Amplifier

Load	**Voltage & THD**	**DX-A601**
10	14.4 Volts & 1 %	1 x 600 Watts
20	14.4 Volts & 1 %	1 x 450 Watts
40	14.4 Volts & 1%	1 x 250 Watts

- Low Pass Crossover 40Hz – 300Hz
- Subsonic Filter 0 – 25 Hz
- Bass Boost @45Hz: 0-12dB
- Input Sensitivity 250Mv – 6V
- Signal to Noise Ratio >95dB
- Frequency Response 10Hz-350Hz

DX-A1201 – Class D Subwoofer Amplifier

Load	**Voltage & THD**	**DX-A1201**
10	14.4 Volts & 1%	1 x 1200 Watts

20	14.4 Volts & 1%	1 x 650 Watts
40	14.4 Volts & 1%	1 x 350 Watts

- Low Pass Crossover 40Hz – 300Hz
- Subsonic Filter O – 25 Hz
- Bass Boost @45Hz: 0-12dB
- Input Sensitivity 250Mv – 6V
- Signal to Noise Ratio >90dB
- Frequency Response 10Hz-350Hz

DX-A1005 – 5 Channel Class D Full Range Amplifier

Load	**Voltage & THD**	**DX-A1005**
40	14.4 Volts & 1%	4 x 90 Watts + 250 Watts
20	14.4 Volts & 1%	4 x 150 Watts + 500 Watts

- Ch 1-2 High Pass Crossover 40Hz – 300Hz
- Ch 3-4 High Pass Crossover 40Hz – 300Hz
- Ch 5 Low Pass Crossover 40Hz – 300Hz
- Subsonic Filter O – 25 Hz
- Crossover Slope @ 12 dB
- Bass Boost @45Hz: 0-12dB
- Input Sensitivity 250Mv – 6V
- Signal to Noise Ratio >92dB
- Frequency Response 10Hz-22KHz

DX-SERIES AMPLIFIER'S CONTROL & CONNECTION.

DX_SERIES – Class D Subwoofer Amplifiers

COLLECTIVE HEAT MANAGEMENT

The DX-Series amplifiers use a specially designed heat radiation heatsink to avoid excessive heat from the circuitry

AUDIO PROTECTION CIRCUIT

- POWER & PROTECTION INDICATOR Power LED – BLUE-lit shows normal operation
- Protect LED – RED-lit shows general malfunction, faulty connection, or thermal protection

SIGNAL EVALUATION STATUS INDICATOR.

RED-lit LED shows clipping peaks of the audio signal.

- **SESIGAIN (6V – 0.2V)**
  Matching the output voltage of the head unit's RCA line-outs to the DX-Series amplifiers' input section.
- **BASS BOOST**
  @ 45Hz: 0-12dB
- **SUBSONIC FILTER:**
  0 -25 Hz
- **CLASS D AMPLIFIERS**
  Low Pass Filter: 40Hz – 300Hz
- **REMOTE LEVEL CONTROL PORT**
  This port is for connecting remote gain level control. +12V (POWER CONNECTION)
  This must be connected to the fuse positive terminal (+12V) of the battery.

- **GND (GROUND CONNECTION)**

  It is connected to the Negative or chassis ground on the Vehicle.

POWER WIRE INPUT

MODEL	GAUGE
DX-A601	4
DX-A1005	4

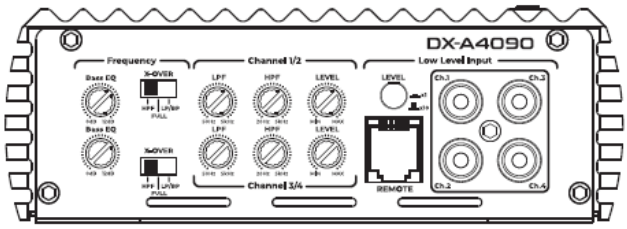
REM (REMOTE)

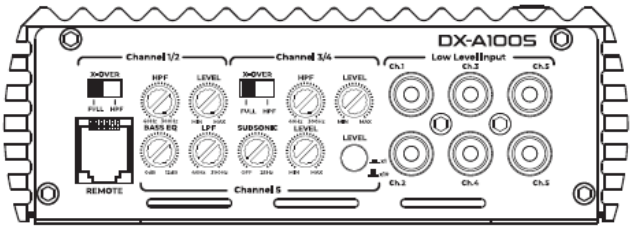
It is connected to a switched +12V with a trigger cable coming from the head unit.

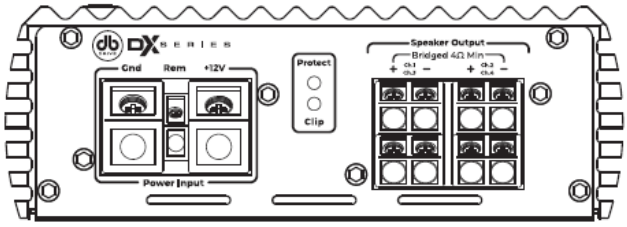
SPEAKER OUTPUTS

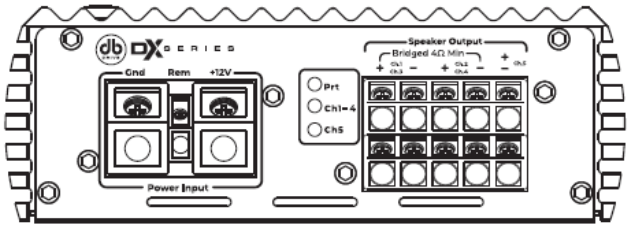
- It connects the amplifier's terminals to the subwoofer speakers. Minimum speaker wire is 12-gauge.
- Minimum impedance is 1 ohm

DX_SERIES – 4 Channel Class D Amplifier/ 5 Channel Class D Amplifier









CHM

COLLECTIVE HEAT MANAGEMENT

- The DX-Series amplifiers use a specially designed heat radiation heatsink to avoid

excessive heat from the circuitry

AUDIO PROTECTION CIRCUIT

- POWER & PROTECTION INDICATOR Power LED – BLUE-lit shows
- normal operation. Protect LED – RED-lit shows general malfunction, faulty connection, or thermal protection

SIGNAL EVALUATION STATUS INDICATOR

- RED-Lit LED shows clipping peaks of the audio signal

ADAPTIVE CROSSOVER TECHNOLOGY

- Adaptive crossover system capable of adapting to any configuration. Select both HP and LP for bandpass for running midrange or midbass drivers. This setting will filter out both unwanted low and high frequencies according to the setting of each control.

HIGH PASS FILTER

- Controls the high-pass point for the speaker outputs.
- *Refer to section 2-3A for more details.

LOW PASS FILTER

- Controls the low-pass crossover point for the speaker outputs.

GAIN (6V ~ 0.2V)

- The gain control matches the voltage of the head unit's RCA line-outs to the DX-Series amplifiers' input section.

REMOTE LEVEL CONTROL PORT

- This port is for connecting the remote gain level control.

GND (GROUND CONNECTION)

- It is connected to the negative or chassis ground of the vehicle.

POWER WIRE INPUT

MODEL	GAUGE
DX-A4090	4
DX-A1005	4

REM (REMOTE)

- Connected to the switched +12V remote cable from the head unit. +12V (POWER CONNECTION)
- This must be connected to a fused positive terminal (+12V) of the battery.

SPEAKER OUTPUTS

- The minimum recommended speaker wire is 16 gauge. The minimum impedance is 2 ohm stereo or 4 ohm Bridged

4-CHANNEL AMPLIFIER

- Ch 1-2 High Pass Crossover: 20Hz- 5kHz
- Ch 1-2 Low Pass Crossover: 50Hz- 5kHz
- Ch 3-4 High pass Crossover: 20Hz- 5kHz
- Ch 3-4 Low pass Crossover: 50Hz- 5kHz

5-CHANNEL AMPLIFIER

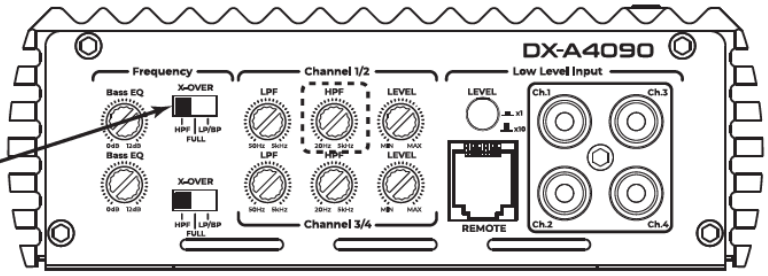
- Ch 1-2 High Pass Crossover: 40Hz – 300Hz
- Ch 3-4 High Pass Crossover: 40Hz – 300Hz

  Ch 5 Low Pass Crossover: 40Hz – 300Hz

DX_SERIES – AMPLIFIER'S CONTROL & CONNECTION

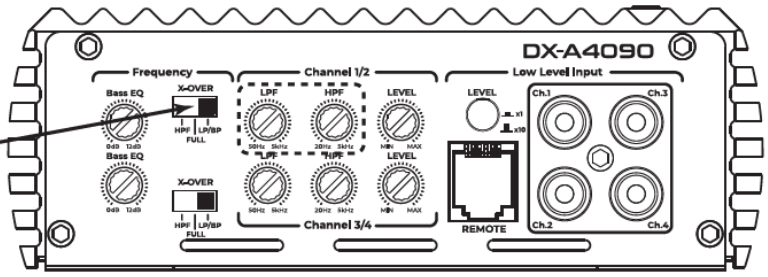
HIGH-PASS FILTER

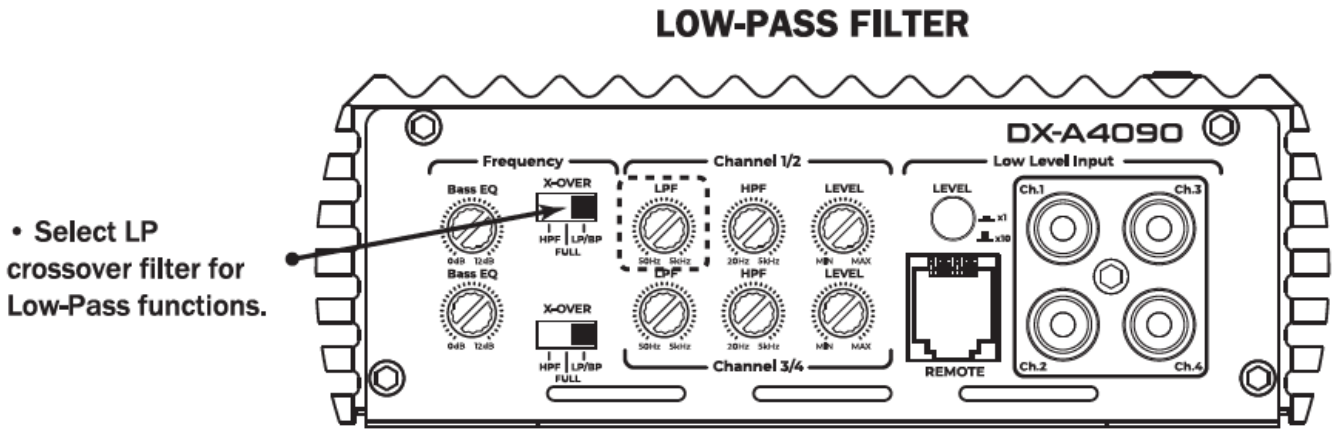
• Select only the HP crossover filter for High-Pass functions.

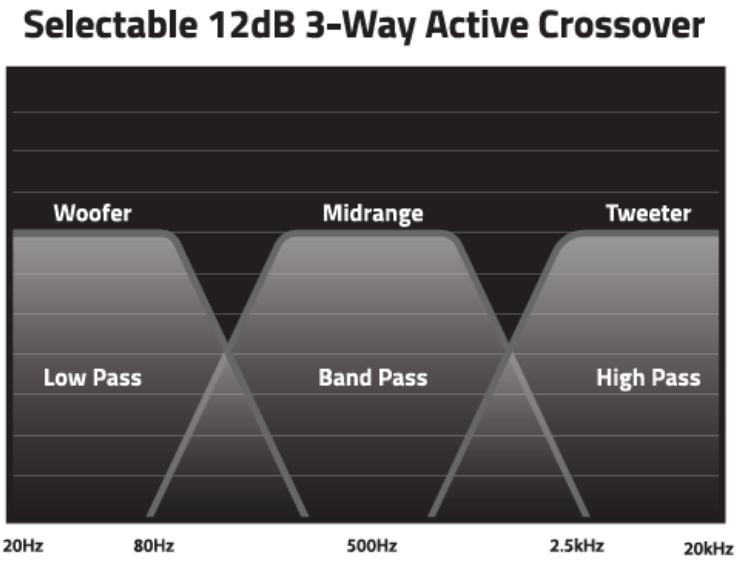


BAND-PASS FILTER

• Select both HP and LP crossover filters for Band Pass functions.







INSTALLATION

In case you install the DX-Series amplifiers by yourself, please read the owner's manual very carefully. Before you start your installation, please consider all steps, or you can have a DB Drive or DB Research's authorized dealer check the installation and help set your car audio systems.

MOUNTING PREPARATION

- Disconnect the negative(-) battery cable before mounting your DX-Series 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 also take into consideration cooling efficiency and safety.

MOUNTING PREPARATION

- The DX-Series amplifier uses a specially designed heat radiation heatsink to avoid excessive heat from the DX-Series circuitry. But for better heat dissipation, it is recommended to find the mounting location where you can install the DX-Series where the heatsink fins have better air flow. For safety, you have to find a dry well well-ventilated location. Before mounting, be sure the 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. 3-3. +12V, GND, REM CONNECTION

A) 12V (POWER CONNECTION)

- Before mounting DX-Series amplifiers, disconnect the negative (-) wire from the battery to protect against any accidental damage to the amplifier and the audio system. DX-A4090 and DX-A1005 are designed to use, at a minimum, 4-gauge power and ground cables. DX-A601 & DX-A1201 are designed to use, at a minimum, 0-gauge cables. Connect the power cables to the power terminal labeled as + 12V.

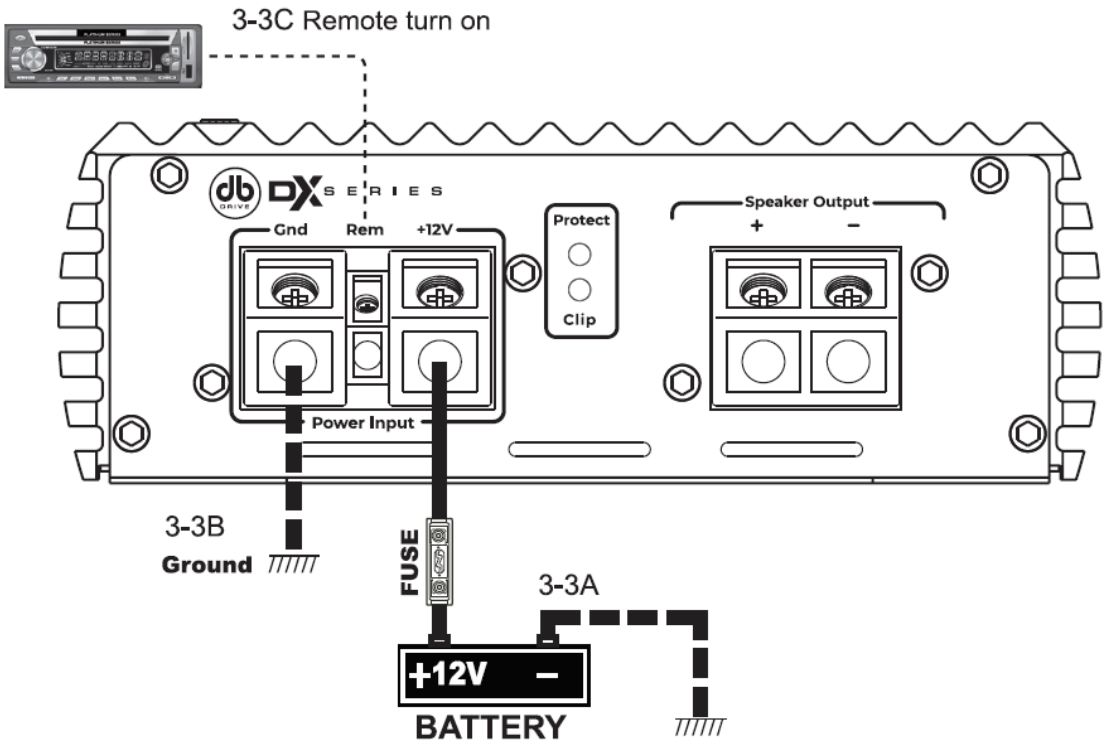
B) GND (GROUND CONNECTION)

- Locate a secure grounding connection as close to the DX-Series amplifiers 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 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.

C) REM (REMOTE CONNECTION)

- Run a remote turn-on cable from the head unit’s remote switch 12V output.

DX-SERIES +12V, GROUND, REMOTE CONNECTION DIAGRAM



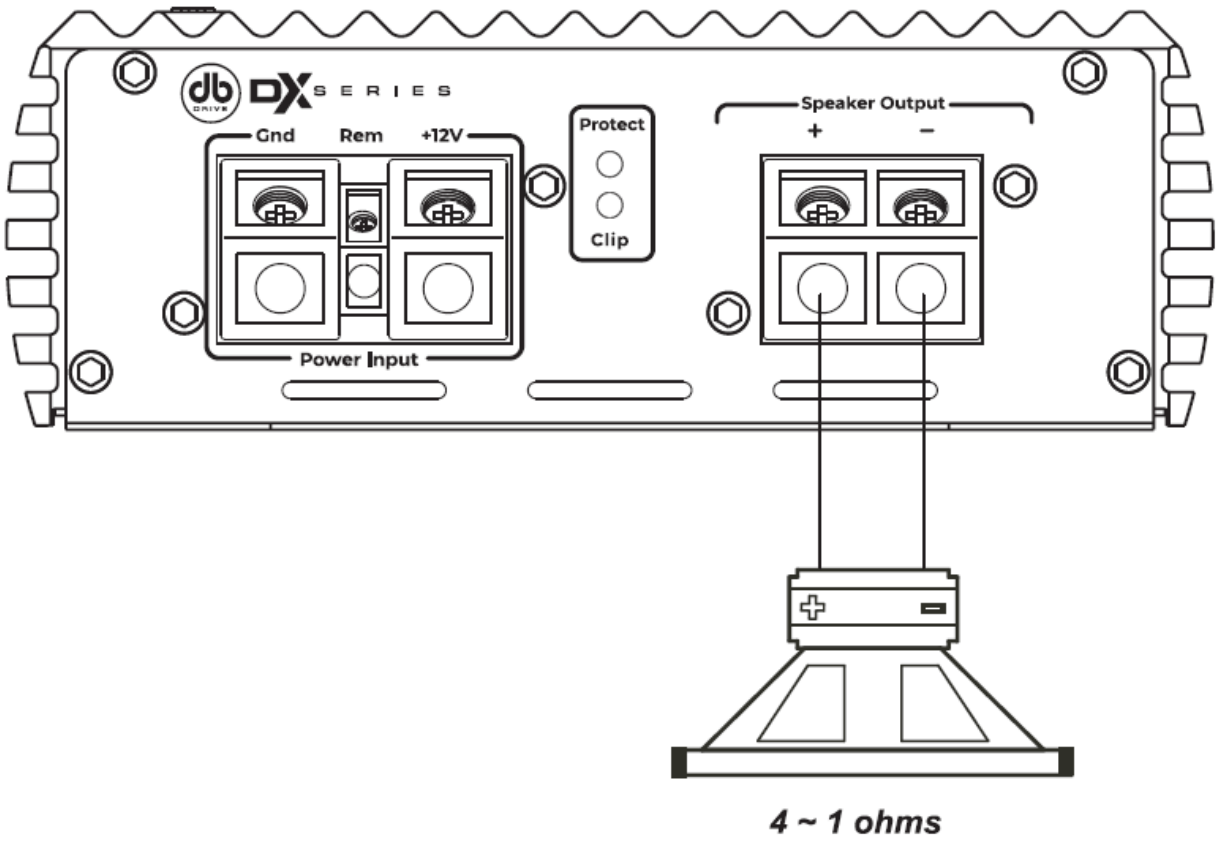
SPEAKER CONNECTION

DB Drive recommends using a minimum of 112-gauge speaker connecting cables. Run 12-gauge speaker connecting cables from your speakers to the DX-Series amplifier's mounting location. Keep speaker cables away from power cables and the DX-Series 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 strands of the cable together tightly. Make sure there are no stray strands that might touch other cables or terminals, causing a short. Crimp spade lugs over the cable ends or tin the ends with solder to provide a secure termination. Connect the cable ends to the DX-Series amplifiers as shown on the speaker system diagrams.

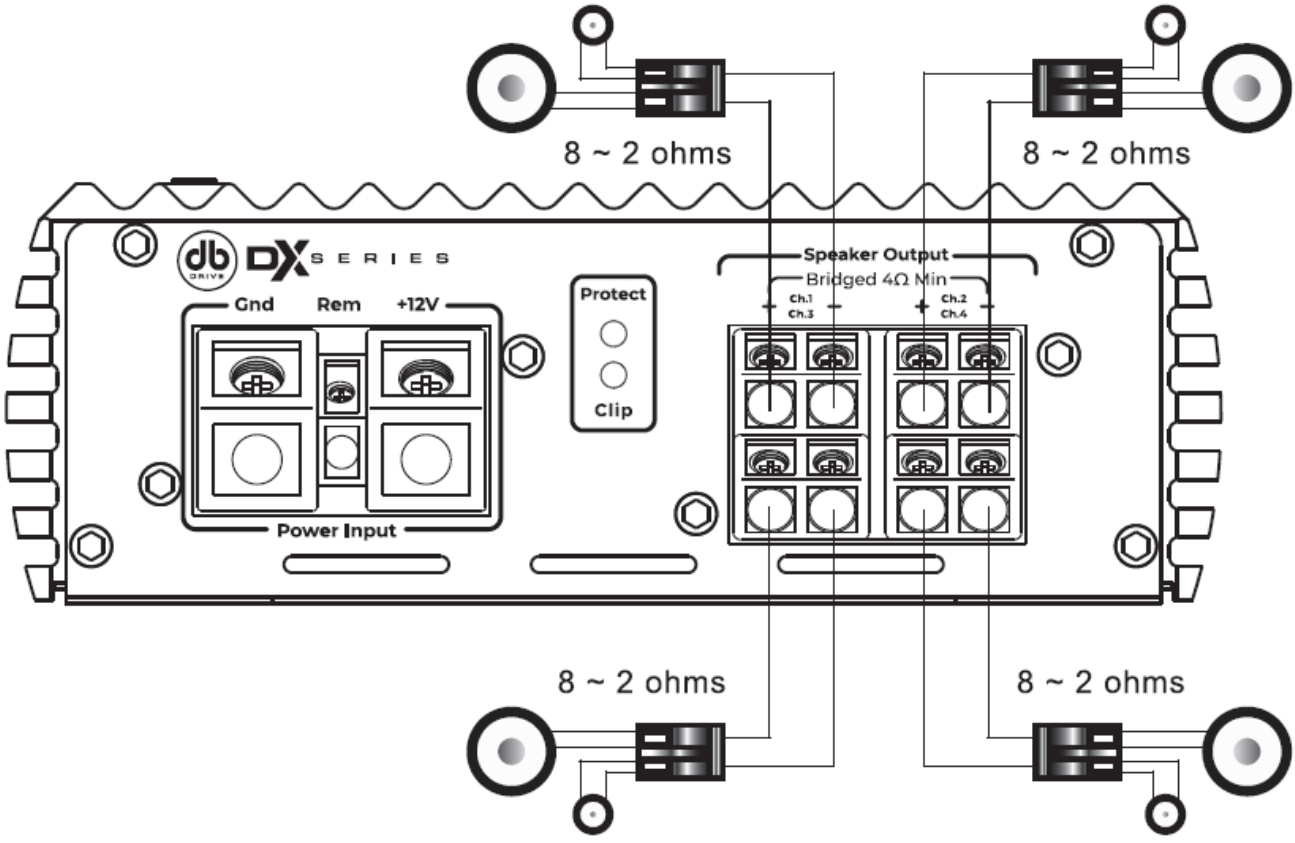
A CAUTION !!

DX-A601 and DX-A1201 amplifiers minimum impedance is 1 ohms.

DX-SERIES CLASS D MONOBLOCK AMPLIFIERS' SPEAKER CONNECTION DIAGRAM 1.



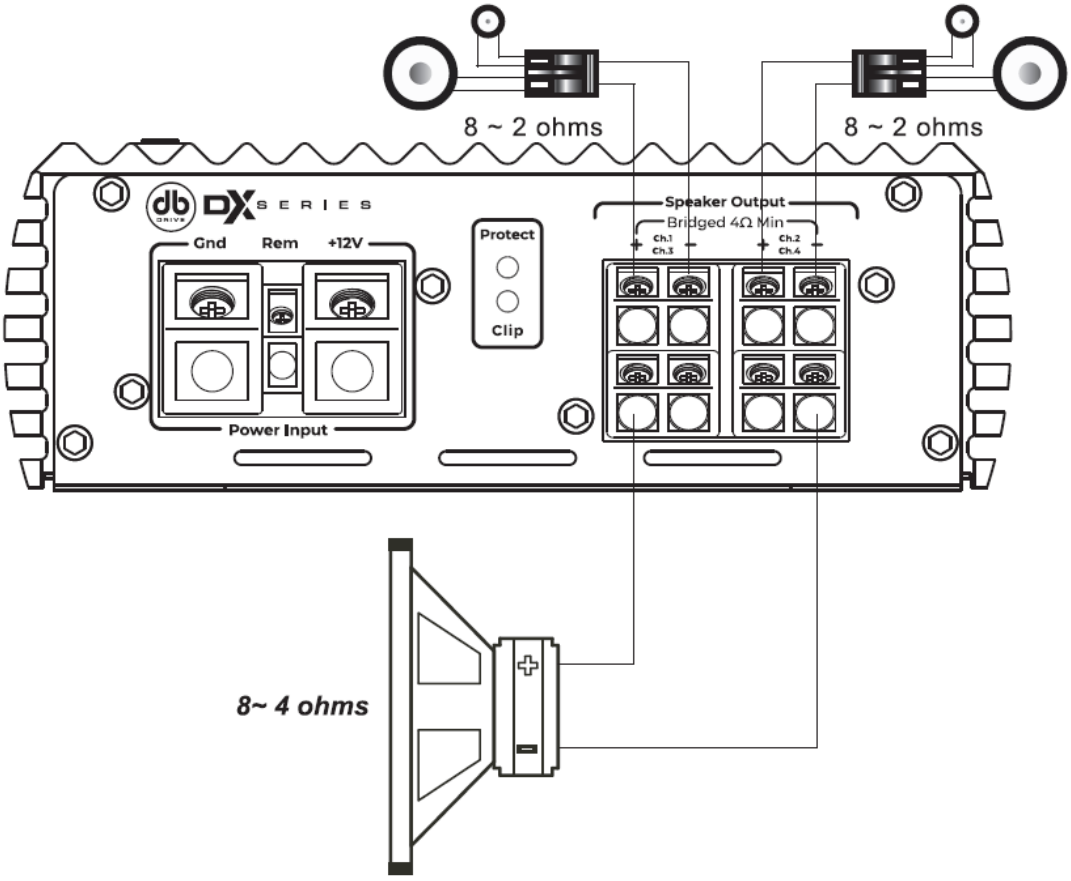
DX-SERIES 4-CHANNEL AMPLIFIERS' SPEAKER CONNECTION DIAGRAM 1.



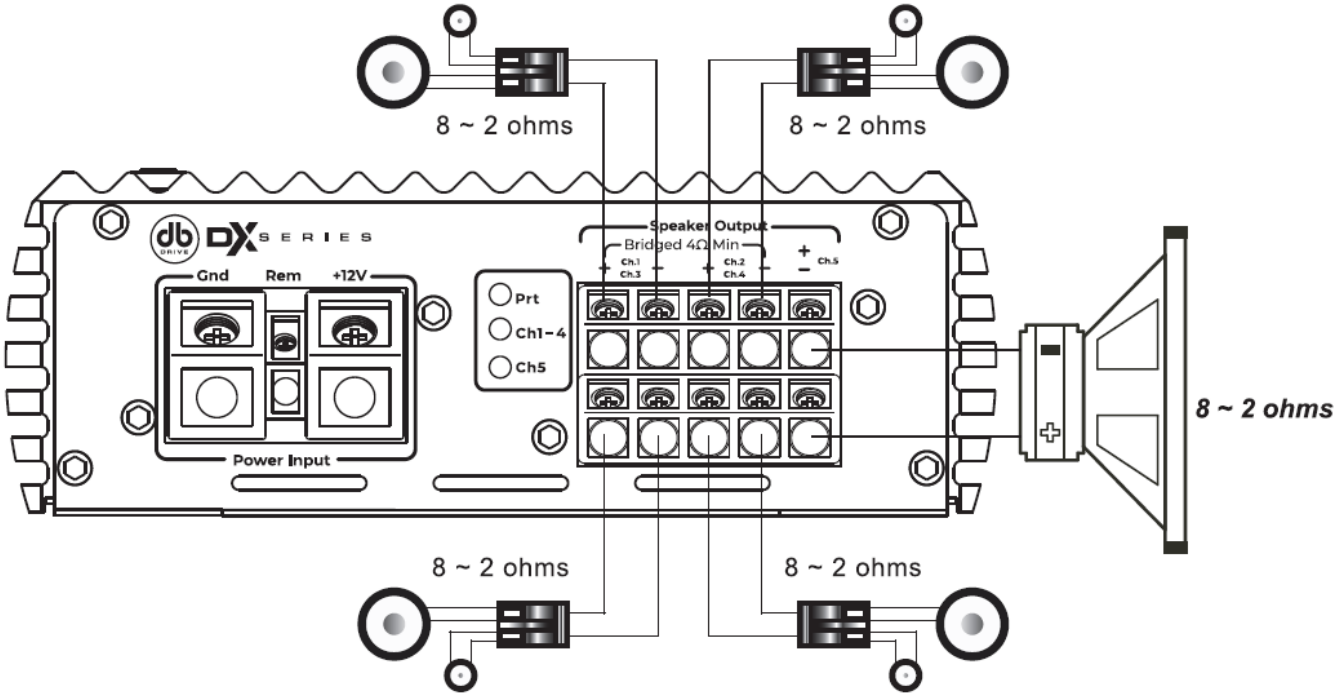
A CAUTION!!

- DX-A4090 Amplifiers' minimum impedance is 2 ohms stereo or 4 ohms mono

DX-SERIES 4-CHANNEL AMPLIFIERS' SPEAKER CONNECTION DIAGRAM 2.



DX-SERIES 5-CHANNEL AMPLIFIER'S SPEAKER CONNECTION DIAGRAM 1.



TROUBLESHOOTING NO SOUND (NO OUTPUT)

1. Please check all connections, cables' routing, shorts, and voltage at the DX-Series amplifiers and headunit.
2. Please check the external fuse at the battery. If any are blown, replace them with a new one.
3. Please check whether the speakers work well. You can test speakers by connecting to another amplifier.

PROTECTION

1. Please check overload, overheat (thermal), short, voltage, and DC offset.
2. Minimum working impedance for 4-channel amplifiers is 2 ohms stereo or 4 ohms mono.
3. Minimum working impedance for all Class D mono amplifiers is 1 ohm for single unit and 2 ohm for linked operation.
4. If DX-Series amplifier shuts down due to overheat, reset by turning off the remote input and allowing time to cool down.
5. Please make sure there are no airflow obstructions around DX-Series amplifiers to prevent thermal protection. 4) DX-A601 and DX-A1201 have voltage operation of 9V~16V
6. If the Voltage is out of range of the above, DX-Series amplifiers will be protected.

POOR BASS RESPONSE

1. Please check speaker polarities

WHINING NOISE

1. Engine noise is caused by poor grounding of DX-Series amplifiers, headunit, other components, battery or alternator, so please check all grounding connections.

Llimited warranty

- DB Drive TM warrants any DX-Series amplifiers purchased in the USA from an authorized DX-Series dealer. All DX-Series amplifiers are warranted to be free from

defects in material and workmanship under normal use and service for one (1) year when the unit is installed by an authorized dealer. Non-authorized dealers installed amplifiers carry a one (1) year parts and labor limited warranty. This warranty applies to the original purchase only, non-transferable.

- DB Drive™ will either repair or replace (at its option) any unit that is defective and under warranty.
- This limited warranty does not extend to units that have been subjected to misuse, abuse, neglect, accident, or defacement. Products that, in DB Drive™ ‘s judgment, show evidence of having been altered, modified, abused, or serviced without DB Drive™ ‘s authorization will be ineligible under this warranty.
- The original sales invoice must be presented at the time any warranty is inspected before any warranty agreement is issued.
- To obtain warranty services, please contact your local retailer or
- DB Research directly or visit our website www.dbdrive.net for more details.
- DB Research L.L.P.
- 302 Hanmore Industrial Parkway
- Harlingen, TX 78550 Ph: 877-787-0101
- Fax: 956-421-4513
- tech support: support@dbdrive.net
- Designed and Engineered in the U.S.A. 11!!!1§

Documents / Resources

	DB DRIVE DX Series Amplifier [pdf] User Manual DX Series Amplifier, DX Series, Amplifier

References

- User Manual

DB DRIVE Amplifier, DB DRIVE, DX Series, DX Series Amplifier

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