



DS18 DS-X2 Ultra Compact Class D 2-Channel Amplifier Owner's Manual

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DS-X2 Ultra Compact Class D 2-Channel Amplifier Owner's Manual

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WHERE ARE YOU HEADED?

Thank you for choosing the DS18/X series amplifier! Your choice of candy series amps indicates a desire for high-quality music reproduction in the automobile. DS18/X amplifier brings to you over four decades of car audio expertise. So whether you are a daily driver music lover or a serious car audio competitor. DS18/X amplifiers have the product for you.

To take full advantage of the DS18/X amplifier gear you have just purchased, please read and follow the instructions in this manual. As with all of our products, professional installation by an authorized dealer is highly recommended. Otherwise, the performance of your new gear may not be satisfactory.

In addition to the installation services and expertise offered by an authorized DS18/X amplifier dealer, the

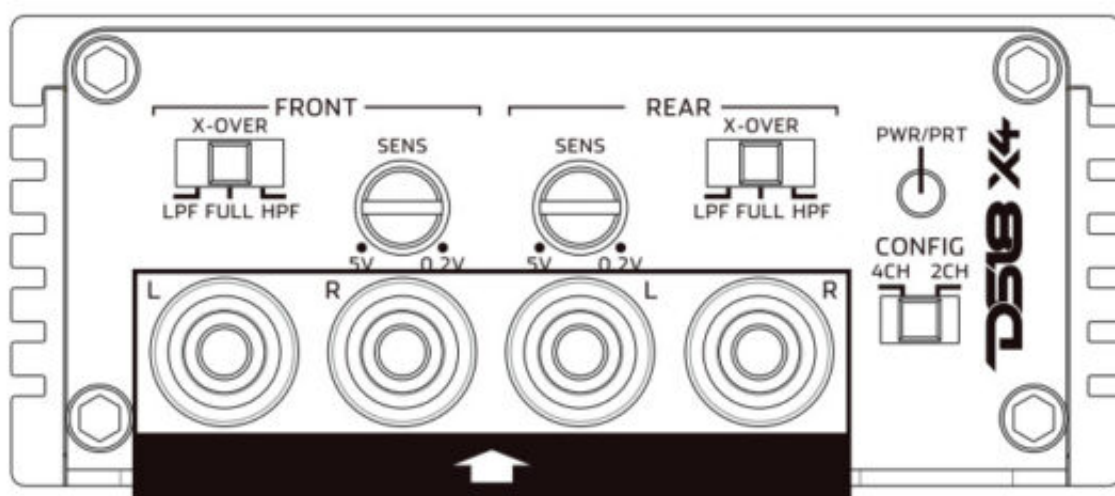
warranty of this product may be extended when installed by an authorized DS18/X amplifier dealer. Be sure to ask your authorized DS18/X amplifier dealer whether your product may qualify for an extended warranty. You are headed in the right direction with the DS18/X amplifier.

INTRODUCTION

The DS18/X amplifier for high-quality audio reproduction for the audiophile and the everyday listener alike. Allowing you the ability to tailor the sound to best fit the speakers and your listening preferences ensures solid electrical connections that resist corrosion. Fully variable crossover. Additionally, they may be used in conjunction with outboard passive or active crossovers, depending on the complexity required by the system. the 12dB per octave slope offers steep roll-off above or below the selected frequency. Protection circuitry against overload, short circuit, thermal, low voltage, high voltage, and reverse polarity.

These protection features are designed to protect the amplifier from misuse, as well as from common causes of amplifier failure.

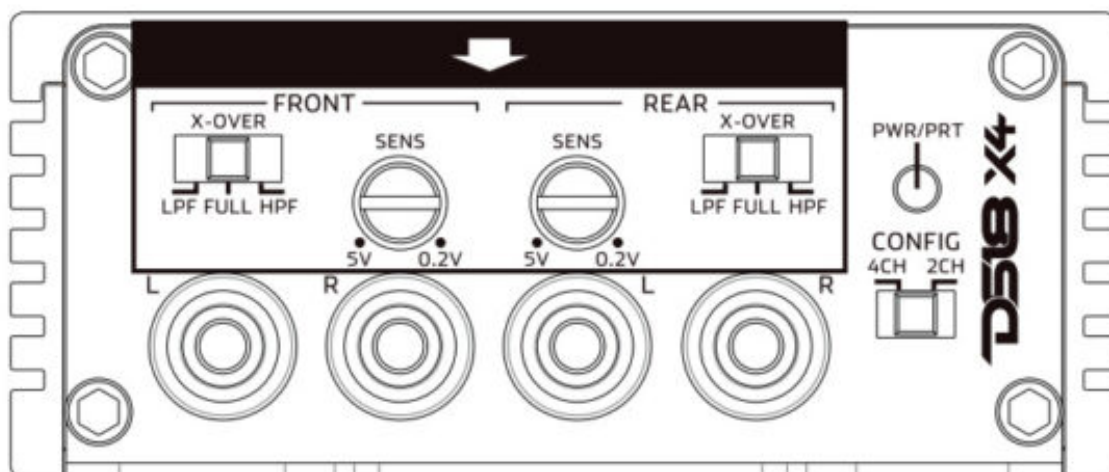
INPUT



CROSSOVER CONTROLS

A crossover is a device that removes unwanted frequencies from a speaker or amplifier. A tweeter can easily be destroyed by bass notes if they are not filtered out. Likewise, a subwoofer will not sound natural if it is playing midrange notes.

A crossover removes these sounds from the speaker. As you might guess, a careful adjustment is needed to ensure that all the speakers are playing the right sounds and that you are left with no "holes" or low spots in the frequency response.



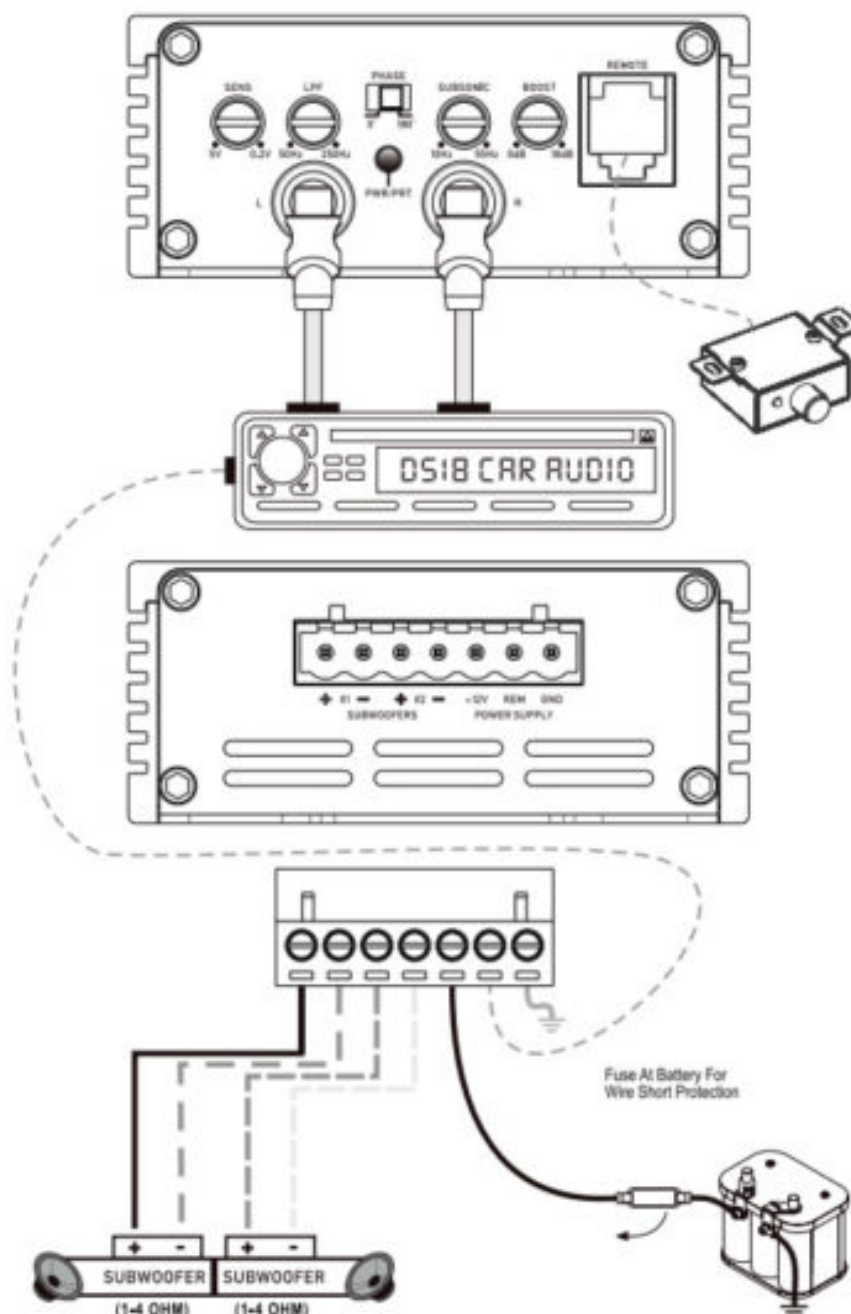
SPECIFICATIONS

	X1	X2	X4
CLASS / CLASE	CLASS-D / DIGITAL	CLASS-D / DIGITAL	CLASS-D / DIGITAL
AMPLIFIER TYPE	MICRO MONOBLOCK AMP. / MICRO AMPLIFICADOR MONOBLOQUE	MICRO STEREO FULL RANGE	MICRO STEREO FULL RANGE
CHANNELS	1	2	4
TOTAL WATTS (PEAK)	900W	1140W	1320W
RMS POWER @ 4 OHM	140W x 1CH	140W x 2CH	70W x 4CH
RMS POWER @ 2 OHM	220W x 1CH	230W x 2CH	140W x 4CH
RMS POWER @ 1 OHM	300W x 1CH		
RMS POWER @ 4 OHM BRIDGE	–	380W x 1CH	220W x 2CH
FREQUENCY RESPONSE	20HZ-500HZ	20HZ-20KHZ	20HZ-20KHZ
SIGNAL/NOISE RATIO	>90 dB	>90 dB	>90 a
EFFICIENCY @ 4OHM	>80%	>80%	>80%
DAMPING FACTOR	>200	>201	>202
THD % / DISTORCION ARMONICA TOTAL (THD)%	<0.2%	<0.2%	<0.2%
LOW LEVEL INPUT RANGE	0.2-5V	0.2-5V	0.2-5V
SELECTABLE X-OVER	FIXED LPF	LPF/FLAT/HPF	LPF/FLAT/HPF
X-OVER FILTER RANGE	50HZ-250HZ	40HZ-400HZ	FIXED 80HZ
BASS BOOST RANGE	0-18 dB	–	–

BASS BOOST FREQUENCY	40HZ	–	–
INFRASONIC FILTER	10-55HZ	–	–
PHASE SELECTOR	0 -180 DEGREES	–	–
MINIMUM IMPEDANCE	1 OHM	2 OHM	2 OHM
LED INDICATOR	POWER/PROTECTION	POWER/PROTECTION	POWER/PROTECTION
POWER INPUT SIZE	12GA	12GA	12GA
FUSE RATING	30A	40A	45A
REMOTE LEVEL CONTROL	YES- DASH MOUNT		–
THERMAL PROTECTION	YES	YES	YES
OVER-LOAD PROTECTION	YES	YES	YES
0C OUTPUT PROTECTION	YES	YES	YES
SHORT CIRCUIT OUTPUT PROTECTION	YES	YES	I YES
VOLTAGE INPUT PROTECTION	YES	YES	YES / SI
DIMENSIONS LxVxH (INCHES)	5.54 X 3.24 X 1.37" / 140.8 X 82.4 X 34.8 MM	5.54 X 3.24 X 1.37" / 140.8 X 82.4 X 34.8 MM	5.54 X 3.24 X 1.37" / 140.8 X 82.4 X 34.8 MM
HEATSINK LENGTH	4.75" / 120.8MM	4.75" / 120.8MM	4.75" / 120.8MM
COMPACT SIZE TO EASY INSTALLATION FOR ANY APPLICATIONS	YES	YES	YES
STABLE/RELIABLE FOUR LAYERSTRACES PCB DESIGN	YES	YES	YES
SURFACE MOUNT COMPONENT TECHNOLOGY	YES	YES	I YES

AUDIO PRECISION QUALITY CONTROL VERIFICATION	YES	YES	YES
CONFIGURATION 2CH/4CH INPUT SELECTOR	NO	NO	YES

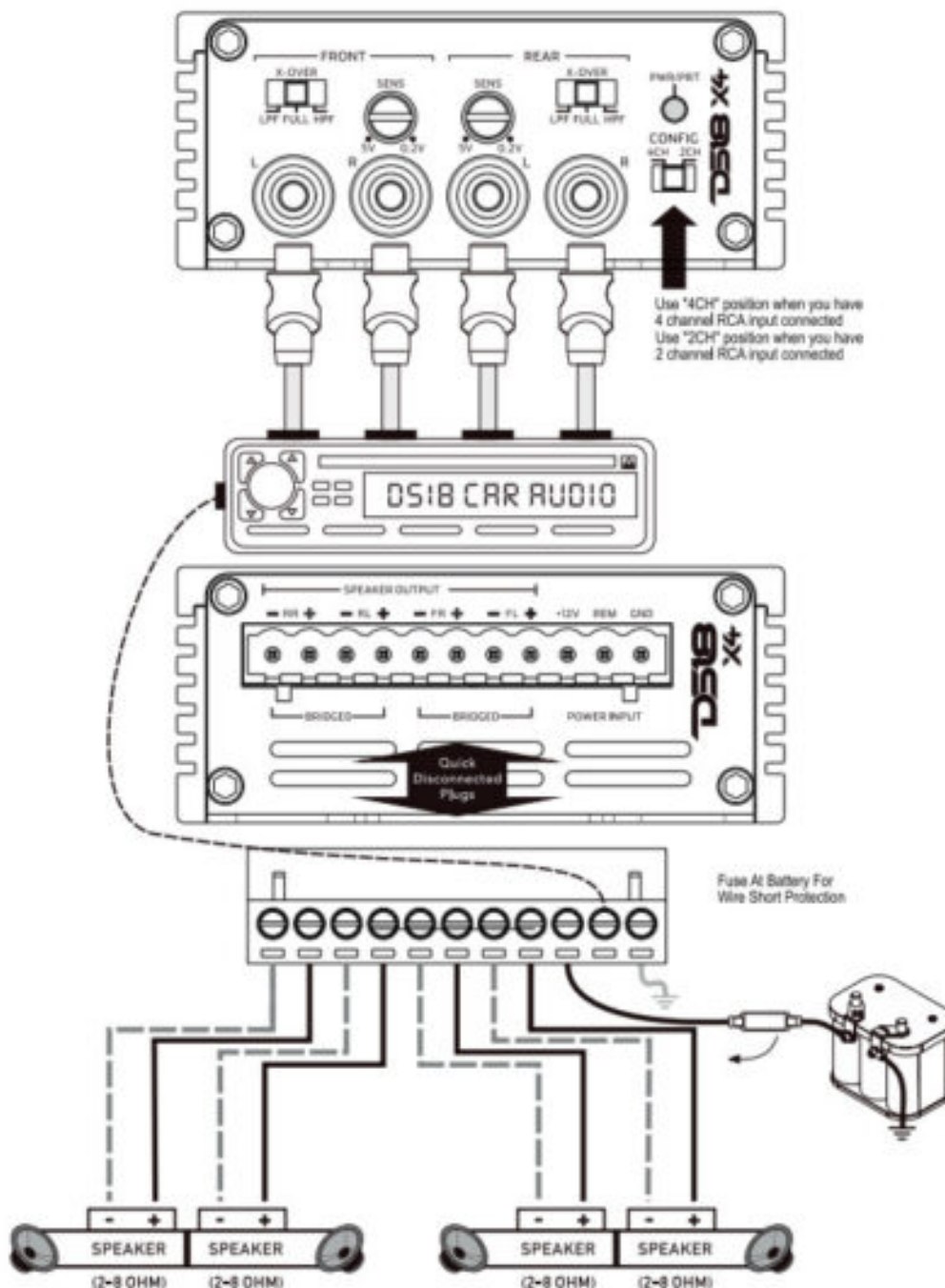
INSTALLATION OF X1



NOTE

If Only connect ONE subwoofer whether #1 or #2, the maximum Impedance of the subwoofer requires 1 ohm; If connect BOTH subwoofer on #1 and #2, the maximum impedance of each subwoofer requires 2 ohms!

INSTALLATION OF X4



INSTALLATION

Professional installation by an authorized DS18/X Series amps dealer is highly recommended! Otherwise, the performance of your new gear may not be satisfactory. In the event that you decide to do your own installation, please read and follow this manual very carefully. Failure to do so may compromise the integrity of this product, and your automobile, and possibly void the product warranty. Amplifiers are generally mounted in the hatch/trunk area of a car or SUV, and under or behind the seat of most pickup trucks.

Select a location that will provide adequate ventilation for the amplifier. Avoid mounting the amplifier with the fins facing down.

The fins should be facing up, either vertically or horizontally. Secure the amplifier with the screws provided.

INPUT

Before securing the amplifier, inspect the mounting location carefully to ensure that you do not drill into or damage any electrical, hydraulic, fluid, or fuel lines.

Input Section

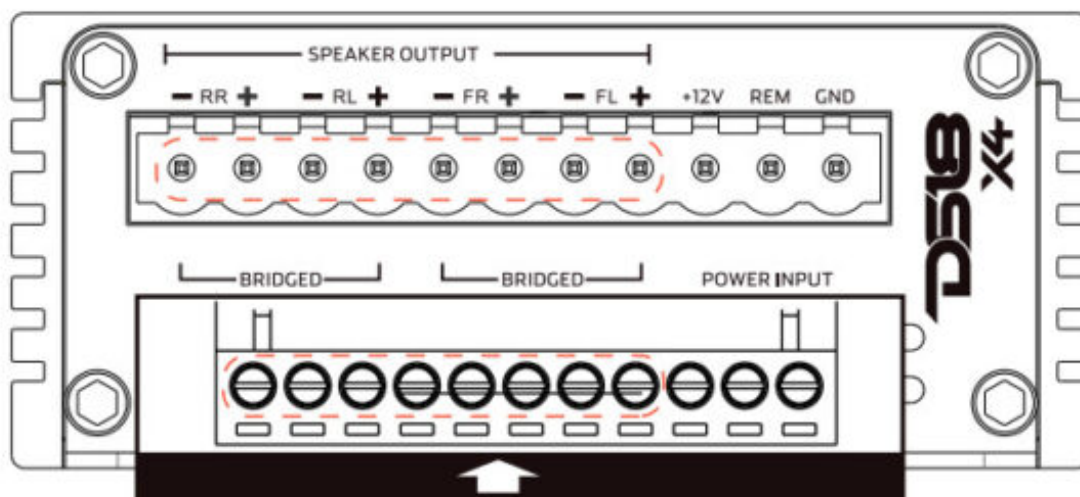
Because of the wide range of head unit output configurations, all DS18/X Series amps have an adjustable input

sensitivity of “Gain”, The gain is not a volume or a power limiting control like a throttle. It makes the amp more sensitive to input from the stereo. With the gain up the amp will reach full output at a lower volume setting on the deck. At higher gain settings the amp also becomes more sensitive to noise from the car’s electrical system. Try to run the gain at the lowest setting possible for your system.

There is no correct gain setting. Because speakers require different power demands to reach the same output, the gains most often need to be used to compensate for these differences. If you, tried to set all the gains at halfway you would probably find the system didn’t sound very good. Using good judgment and listening carefully to each speaker is still the best way to tune a system.

SPEAKER OUTPUT

This amplifier is a multi-channel amplifier design. Meaning it has more than one channel of speaker outputs. It is equipped with a quick disconnected plug for speaker connection. Make this connection carefully and neatly. Strip your wire back and twist the exposed leads and insert them into the block terminal while being careful that there are no loose or frayed strands of wire and tighten the flat head screw down on the terminal till the wire is tightly secured in place. If the wires ever come in contact with each other the amplifier will go into protection. Know your total ohm load before you make any connections.

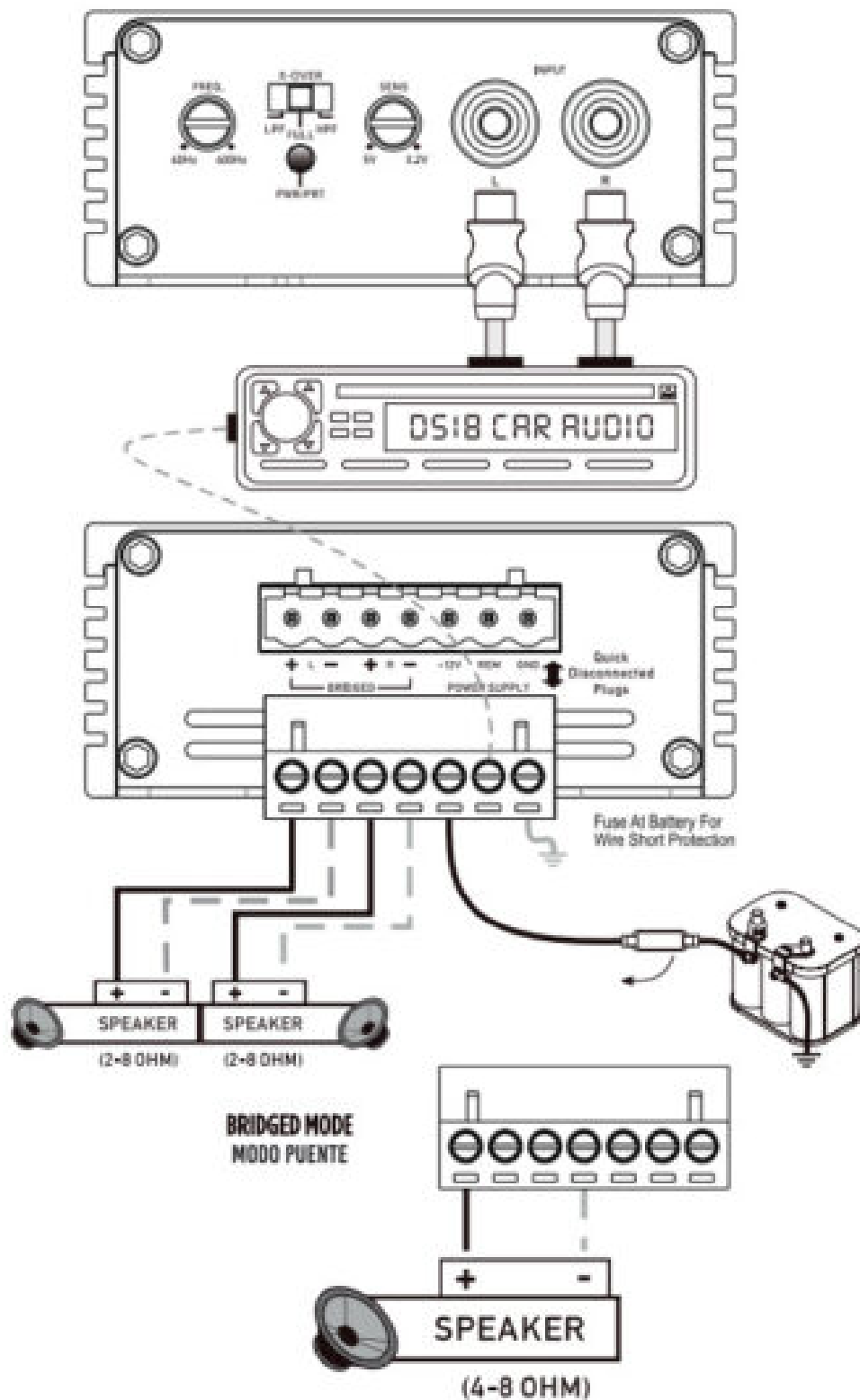


INSTALLATION INSTRUCTIONS

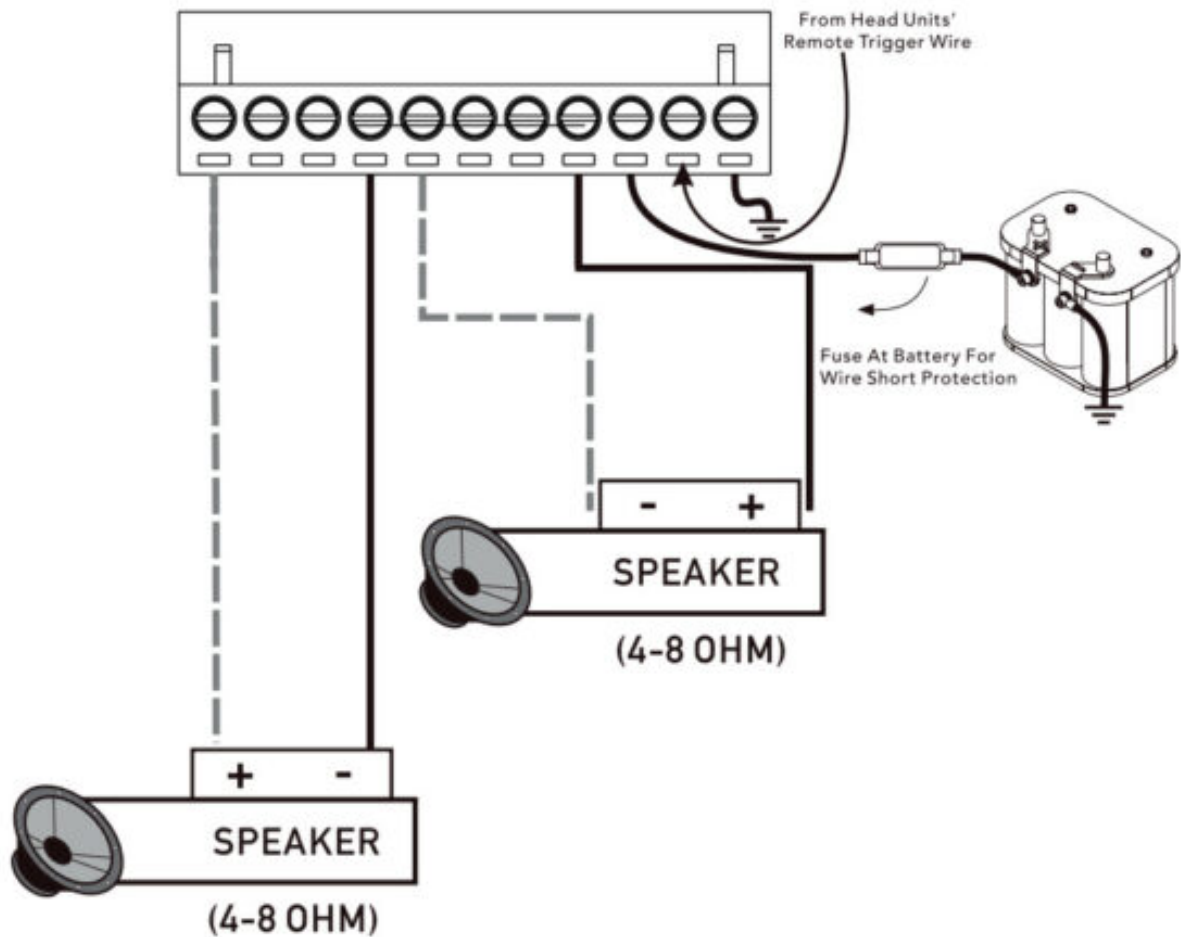
1. Before you start disconnect the negative cable from the battery. Tape up the end so it is isolated from the battery.
2. Run an appropriate gauge wire from the battery to the amplifier. Plan this part of the installation carefully. This cable will carry a very high current. If it should short to the body and it is not properly fused it could catch fire.
3. Connect the power wire to the battery using a fuse capable of the total current load of all amplifiers connected. Don't install the fuse yet Wait until the end. Locate the fuse as close as possible to the battery. The fuse is further than 18 inches (wire length) from the battery you should reevaluate the wire and fuse placement.
4. Find the closest clear metal area to the amp for a ground. Sand, grind or scrape all paint and undercoating from the body and screw the ground securely in place. It is advisable to test the ground with an ohmmeter between the ground cable and the negative battery cable to ensure a good low resistance connection. Some alloys used in some modern cars do not offer the best ground. If you believe this is the case, consult with the vehicle manufacturer.
5. Run the speaker wire to the speakers. it is advised that you leave some extra wire at this point! You can clean it up later.
6. If you haven't already done so, mount the amp now.

7. Connect the power and ground to the amplifier (only after this step should you install the fuse at the battery)
8. Connect the remote wire from the head unit to the amplifier. Now is a good time to turn on the amplifier for the first time and make sure it turns on properly and does not go into protection.
9. Connect the speaker wires to the amp and speakers (make sure the amp is off first) and make sure the polarity (+ and -) are correct
10. Connect the RCAs to the amp.
11. Double-check the amplifier's control at this time. Make sure everything is set correctly for your system.
12. Now you are ready to play it for the first time. It is best to leave the gain all the way down at first. Start with the head unit volume low and make your way up.
13. Now you can tune the amp. Take your time and make only one adjustment at a time. It may take some time to get the system fully adjusted. During this time the amp is drawing current from the battery. You should check the battery voltage from time to time and recharge it if it gets low. That's it. You are done, have fun!

INSTALLATION OF X2



X4 BRIDGED MODE



WARRANTY

Should your amplifier require service please consult with the dealer from which it was purchased, or contact the DS18 local dealer.

Do not attempt to return your amplifier directly to us without first calling for a Return Authorization Number. Units received without an accompanying Return Authorization Number will be processed more slowly. Additionally, you must include a copy of your purchase receipt from an authorized dealer for consideration of in-warranty service; otherwise, repair charges will apply. Units received without a receipt will be held for 30 days, allowing us time to contact you and obtain a copy of the receipt. After 30 days, all units will be returned.



Documents / Resources



[DS18 DS-X2 Ultra Compact Class D 2-Channel Amplifier](#) [pdf] Owner's Manual
X1, X2, X4, DS-X2, Ultra Compact Class D 2-Channel Amplifier, DS-X2 Ultra Compact Class D 2-Channel Amplifier

Manuals+.