



DS18 ZR500.1D Monoblock Class D Subwoofer Amplifier Owner's Manual

[Home](#) » [DS18](#) » DS18 ZR500.1D Monoblock Class D Subwoofer Amplifier Owner's Manual 

Contents

- 1 DS18 ZR500.1D Monoblock Class D Subwoofer Amplifier
- 2 Product Information
- 3 Product Usage Instructions
- 4 FEATURES
 - 4.1 ZR500.1D
 - 4.2 ZR1000.1D | ZR1500.1D | ZR2000.1D
 - 4.3 ZR600.4D | ZR800.4D | ZR1600.4D
- 5 LED STATUS INDICATOR
- 6 CONNECTIONS
 - 6.1 POWER CONNECTION LEADS
 - 6.2 DUAL SUBWOOFER CONNECTION
 - 6.3 SPEAKER CONNECTION
 - 6.4 FRONT PANEL CONNECTION
- 7 MASTER / SLAVE MODE (STRAP)
- 8 SPECIFICATIONS
 - 8.1 ZR500.1D
 - 8.2 ZR1000.1D
 - 8.3 ZR1500.1D
 - 8.4 ZR2000.1D
 - 8.5 ZR600.4D
 - 8.6 ZR800.4D
 - 8.7 ZR1600.4D
- 9 TROUBLESHOOTING
- 10 DIMENSIONS
- 11 WARNING
- 12 WARRANTY
- 13 Documents / Resources
 - 13.1 References
- 14 Related Posts



DS18 ZR500.1D Monoblock Class D Subwoofer Amplifier



Product Information

The product is a monoblock class D subwoofer amplifier. It is available in different models, including ZR500.1D, ZR1000.1D, ZR1500.1D, ZR2000.1D, ZR600.4D, ZR800.4D, and ZR1600.4D.

The amplifier features various input and output connections, including a remote controller input jack, low-level input for RCA audio signals from the source (head unit), power input terminals, speaker output terminals, and a remote output.

It has a gain knob for adjusting the input gain, ranging from 0.2V to 6V input signal. The amplifier also includes a bass level knob for adjusting the volume remotely.

LED status indicators are available to provide information about the device's status. The CLIP LED turns yellow when the signal is clipped, the PROTECT LED turns on red when the device enters protection mode, and the POWER LED turns on blue when the device is powered on.

The amplifier operates with an applied voltage between 10 and 15VDC.

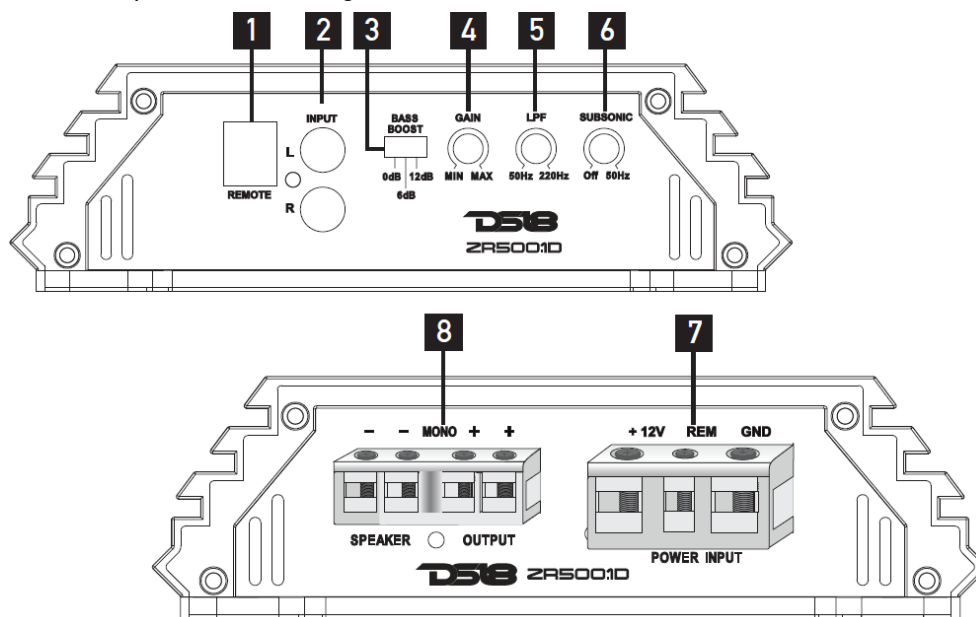
Product Usage Instructions

1. Connect the Bass level knob to the REMOTE controller input jack to adjust the volume remotely.
2. Connect the source (head unit) to the INPUT low-level input using RCA audio cables.
3. Adjust the input gain using the GAIN knob. The range is from 0.2V to 6V input signal.
4. Connect the power input terminals to a power source with an applied voltage between 10 and 15VDC.
5. Connect the speakers to the SPEAKER OUTPUT terminals.
6. For models with a POTENCIADOR DE GRAVES (bass boost selector switch), select the desired bass boost gain (0dB, 6dB, or 12dB).
7. For models with LED status indicators, monitor the CLIP LED for signal clipping, the PROTECT LED for protection mode, and the POWER LED for power status.
8. Refer to the user manual for specific instructions regarding stereo mode or bridge mode speaker connections based on the amplifier model.
9. Adjust the crossover settings, filter settings, and gain as desired using the available controls on the front panel.
10. For master/slave mode (strap), refer to the user manual for detailed instructions on how to connect multiple amplifiers together.

FEATURES

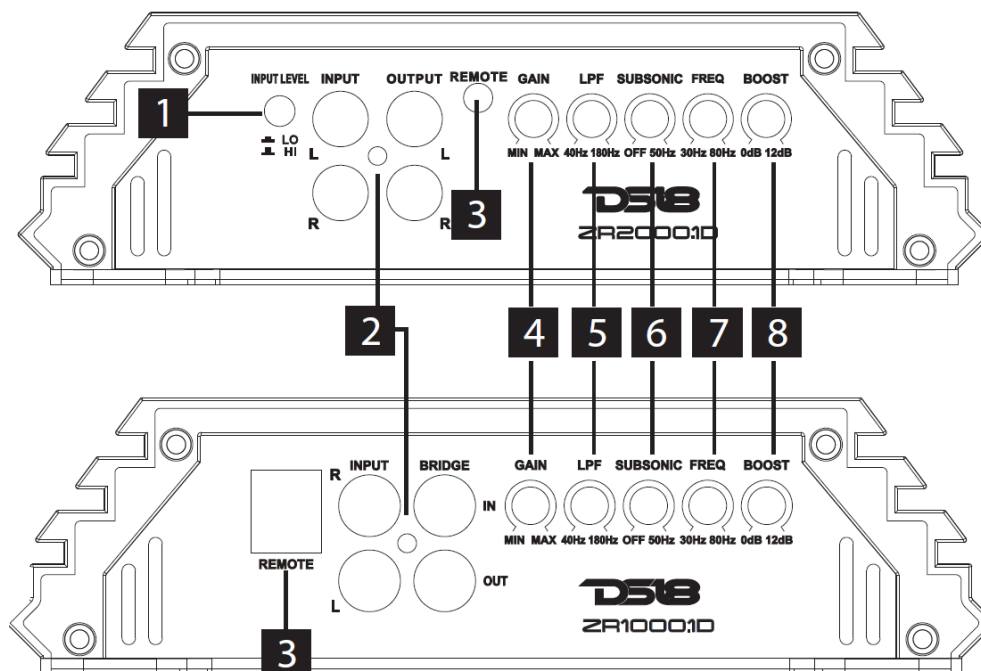
ZR500.1D

1. **REMOTE** – Controller Input Jack, plug the Bass level knob to adjust the volume remotely.
2. **INPUT** – Low Level Input, this is your RCA audio signal input from the source (head unit).
3. **BASS BOOST** – Switch selector for Bass Boost gain, this can be selected for 0dB, 6dB or 12dB gain.
4. **GAIN** – Knob for input gain adjustment, this ranges from 0.2V to 6V input signal.
5. **LPF** – Knob for Low Pass Frequency adjustment, this ranges from 50Hz to 220Hz.
6. **SUBSONIC** – Knob for Subsonic frequency adjustment, this ranges from 10Hz to 50Hz.
7. **POWER INPUT** – Power connection terminals.
 - +12V – Positive Terminal, using a 4 Ga wire connect it Directly to the Positive (+) Post of the car battery.
 - REM – Terminal to Remote cable, which comes from the source and controls the amplifier switching on. (Applied voltage must be between 10 and 15VDC).
 - GND – Ground terminal, using a 4 Ga wire connect it to the car chassis. Keep the length of the ground cable to a minimum.
8. **SPEAKER OUTPUT** – Speaker connecting terminal.



ZR1000.1D | ZR1500.1D | ZR2000.1D

1. **HI / LO** – Level input Button Selector.
2. **INPUT** – Low Level Input, this is your RCA audio signal input from the source (head unit).
 - OUTPUT (Only for ZR2000.1D) – Low Level Output, A daisy chain output for connection to another amplifier with a low-level input.
 - BRIDGE (Only for ZR1000.1D and ZR1500.1D) – for Strapping two amplifiers as one with one Master and one Slave configuration.
 - IN – use an RCA to connect from the Master Amplifier, use this when this is used as a Slave amplifier.
 - OUT – use an RCA to connect to a Slave Amplifier, use this when this is used as a Master Amplifier.
3. **REMOTE** – Controller Input Jack, plug the Bass level knob to adjust the volume remotely.
4. **GAIN** – Knob for input gain adjustment, this ranges from 0.2V to 6V input signal.
5. **LPF** – Knob for Low Pass Frequency adjustment, this ranges from 40Hz to 180Hz.
6. **SUBSONIC** – Knob for Subsonic frequency adjustment, this ranges from 10Hz to 50Hz.
7. **FREQ** – Knob for Bass Boost Frequency adjustment, this ranges from 30Hz to 80Hz.
8. **BOOST** – Knob for Bass Boost gain, this ranges from 0dB to +12dB.

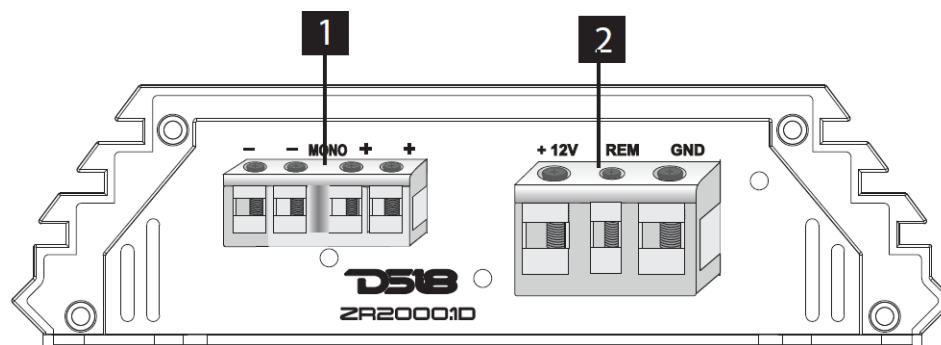


ZR1000.1D | ZR1500.1D | ZR2000.1D

1. SPEAKER OUTPUT – Speaker connecting terminal.

POWER INPUT – Power connection terminals.

- +12V – Positive Terminal, using a 4 or 0 Ga wire connect it Directly to the Positive (+) Post of the car battery.
- REM – Terminal to Remote cable, which comes from the source and controls the amplifier switching on. (Applied voltage must be between 10 and 15VDC)
- GND – Ground terminal, using a 4 or 0 Ga wire connect it to the car chassis. Keep the length of the ground cable to a minimum.

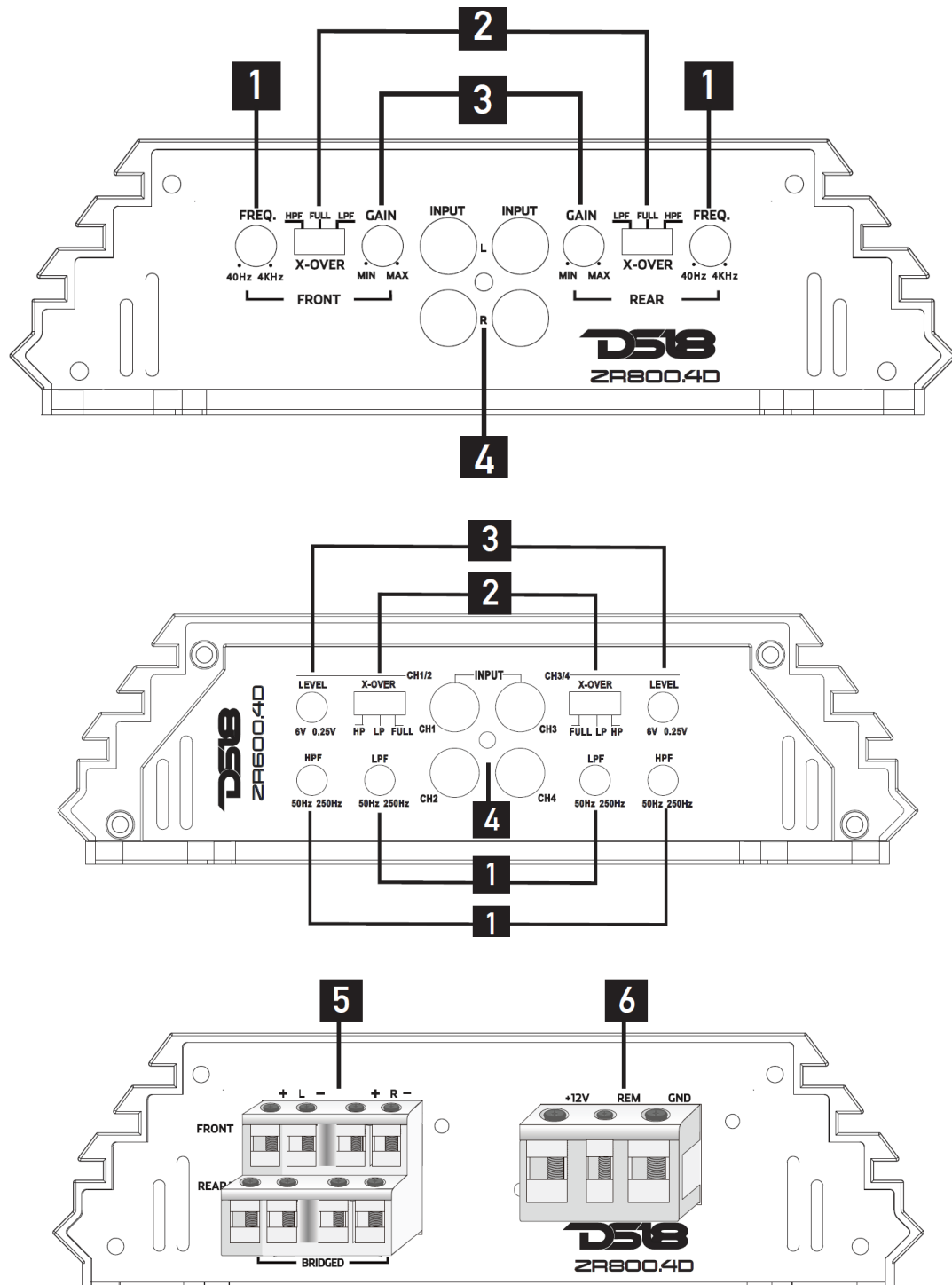


ZR600.4D | ZR800.4D | ZR1600.4D

- FREQ** – Knob for Frequency adjustment, this ranges from 40Hz to 4KHz.
- FREQUENCY SELECTOR SWITCH** – HP High frequency, LP low frequency, F Full frequency.
- GAIN** – Knob for input gain adjustment, this ranges from 0.2V to 6V input signal.
- INPUT** – Low Level Input, this is your RCA audio signal input from the source (head unit).
- SPEAKER OUTPUT** – Speaker connecting terminal.
- POWER INPUT** – Power connection terminals.
 - +12V – Positive Terminal, using a 4 or 0 Ga wire connect it Directly to the Positive (+) Post of the car battery.
 - REM – Terminal to Remote cable, which comes from the source and controls the amplifier switching on.

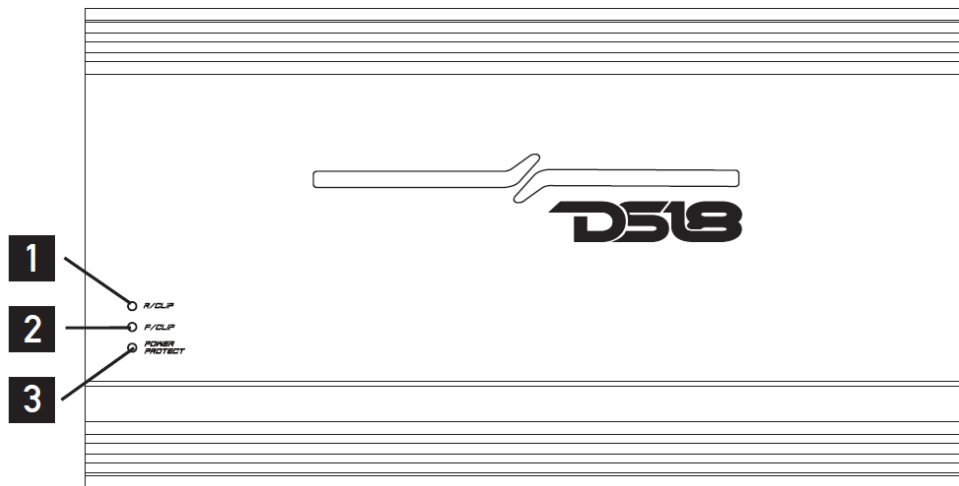
(Applied voltage must be between 10 and 15VDC).

- GND – Ground terminal, using a 4 or 0 Ga wire connect it to the car chassis. Keep the length of the ground cable to a minimum.



LED STATUS INDICATOR

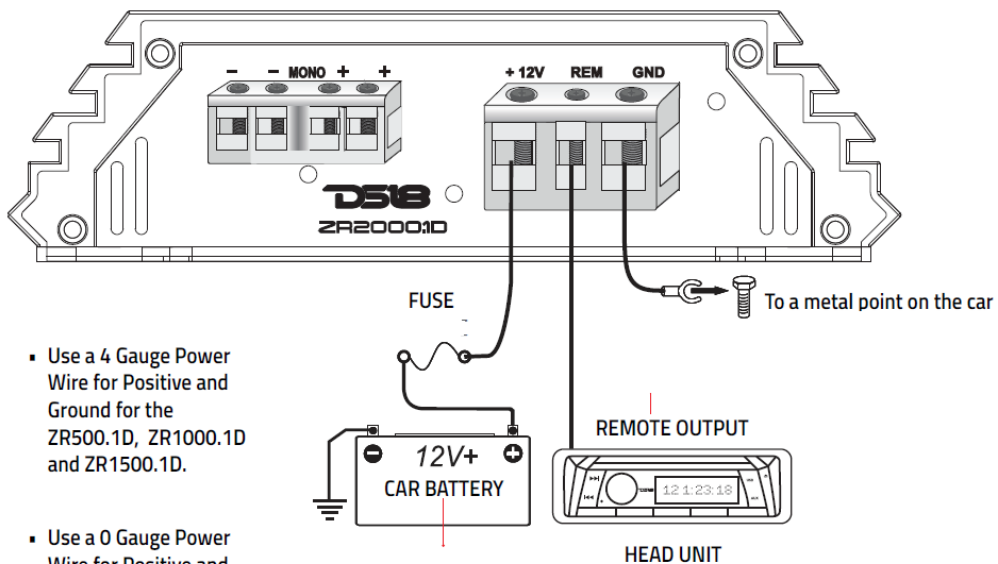
1. **CLIP:** When signal is clipped the LED will turn YELLOW.
2. **PROTECT:** When the device enter into protection the LED will turn on RED.
3. **POWER:** When the devices is powered on the LED turn on blue.



CONNECTIONS

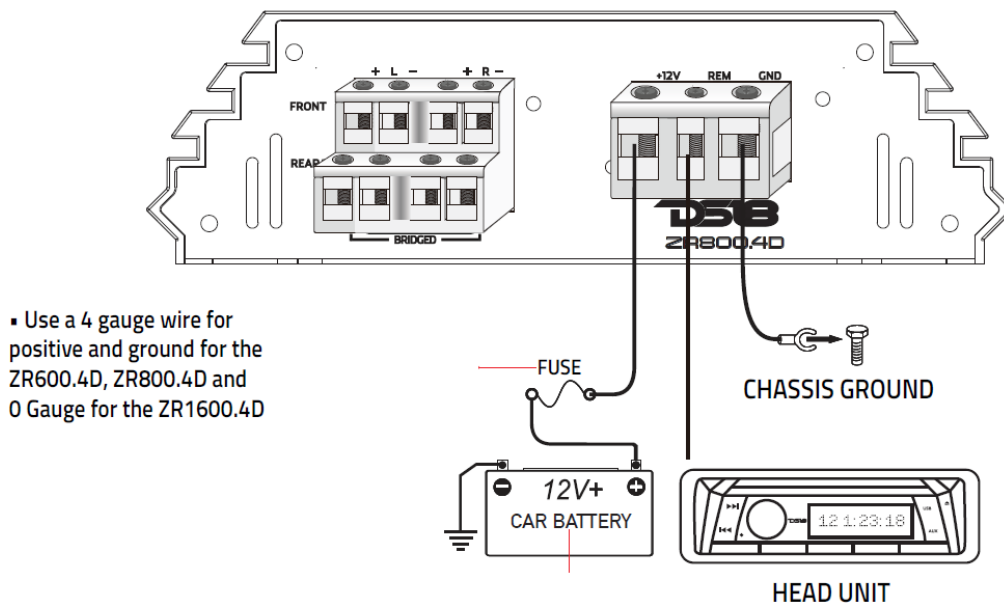
POWER CONNECTION LEADS

ZR500.1D | ZR1000.1D | ZR1500.1D | ZR2000.1D



- Use a 4 Gauge Power Wire for Positive and Ground for the ZR500.1D, ZR1000.1D and ZR1500.1D.
- Use a 0 Gauge Power Wire for Positive and Ground for the ZR2000.1D.

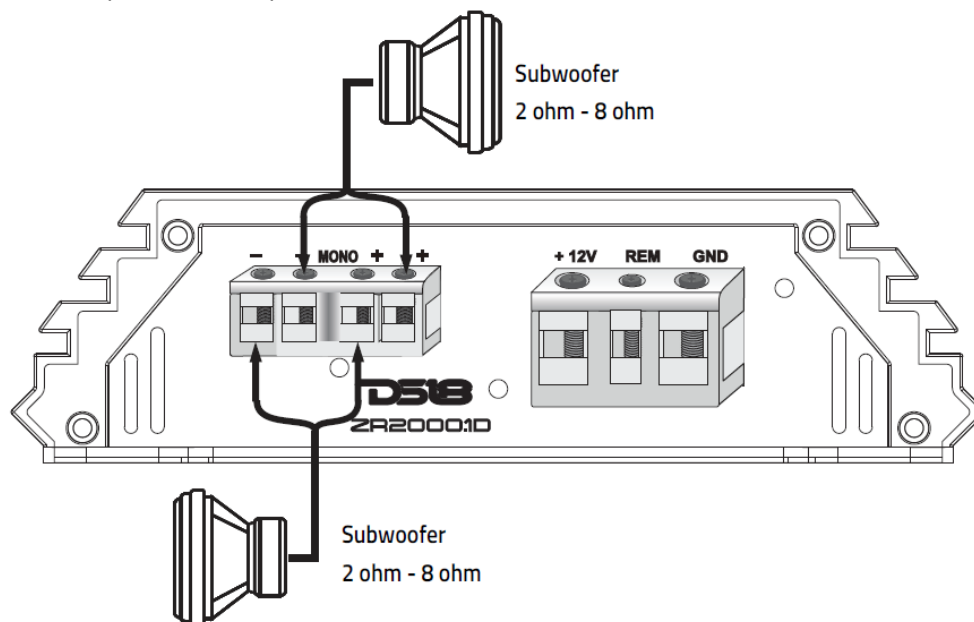
ZR6004.D | ZR800.4D | ZR1600x4D



- Use a 4 gauge wire for positive and ground for the ZR600.4D, ZR800.4D and 0 Gauge for the ZR1600.4D

DUAL SUBWOOFER CONNECTION

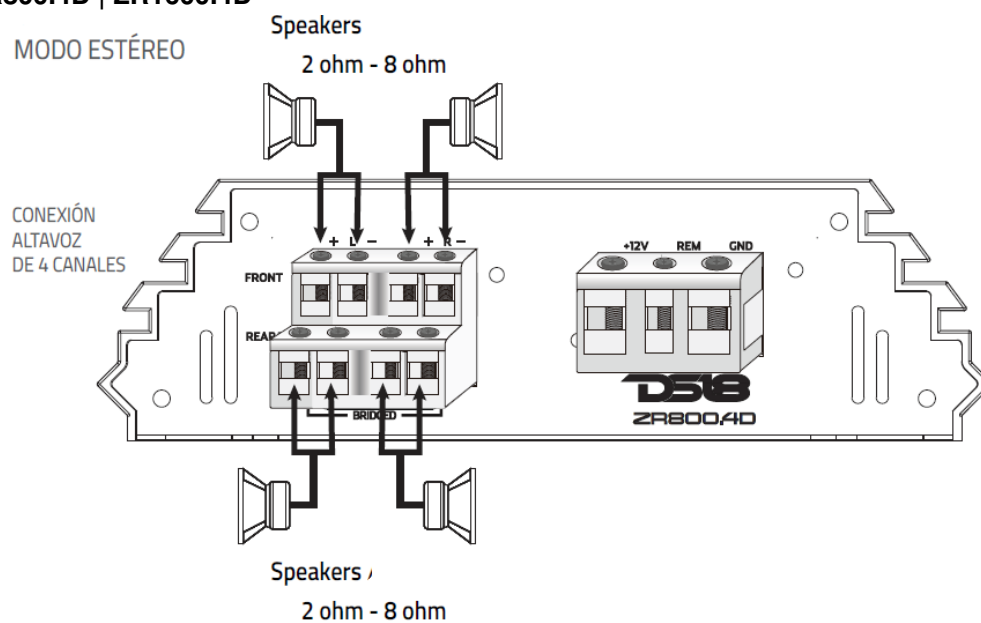
ZR500.1D | ZR1000.1D | ZR1500.1D | ZR2000.1D

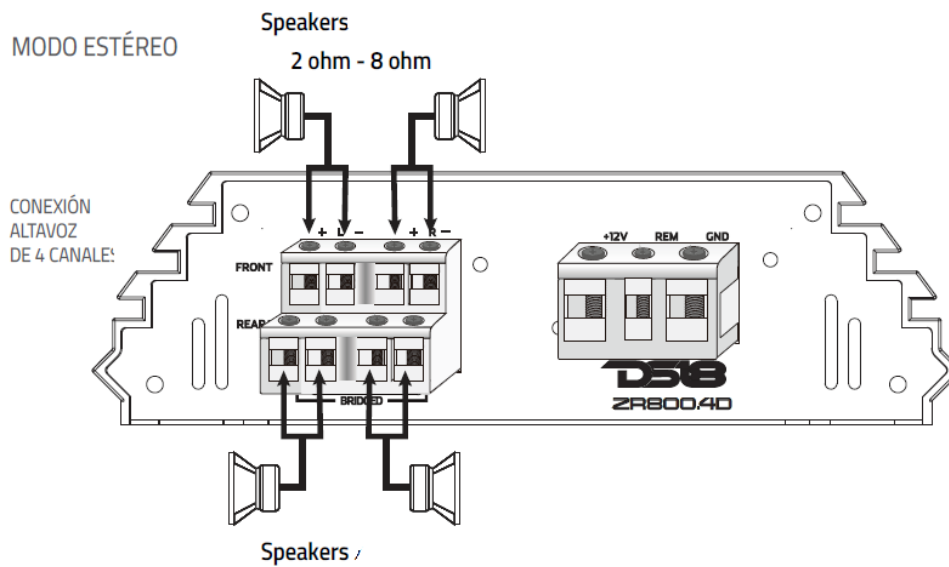


SPEAKER CONNECTION

ZR600.4D | ZR800.4D | ZR1600.4D

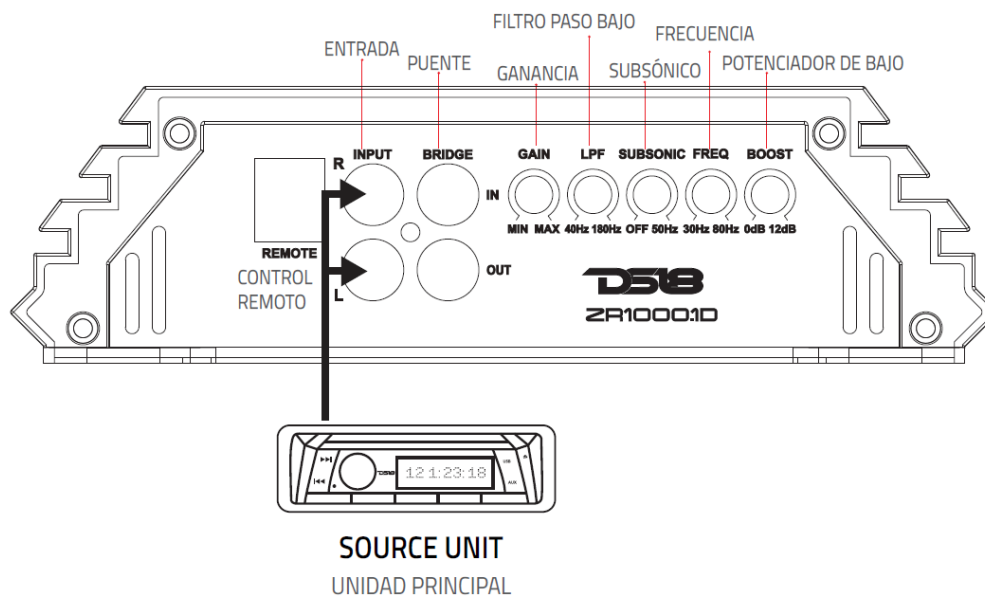
MODO ESTÉREO



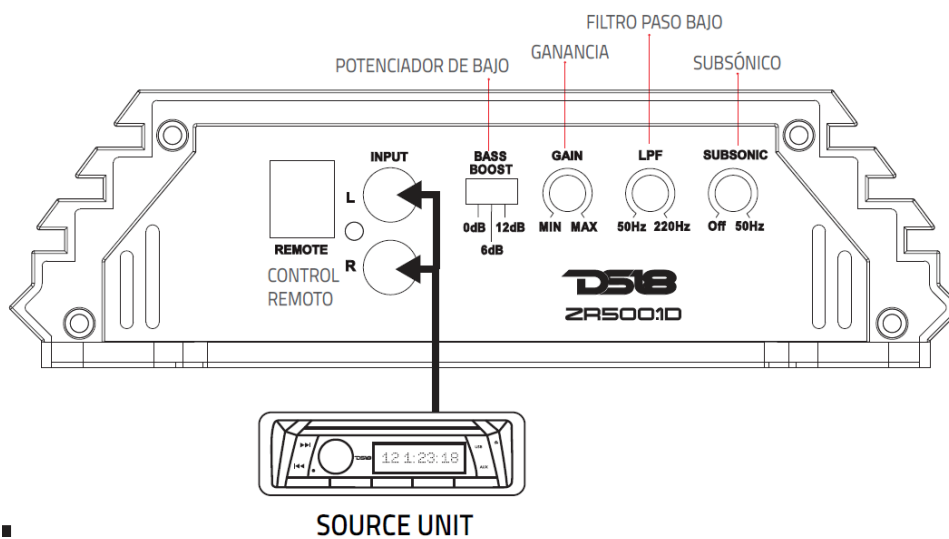


FRONT PANEL CONNECTION

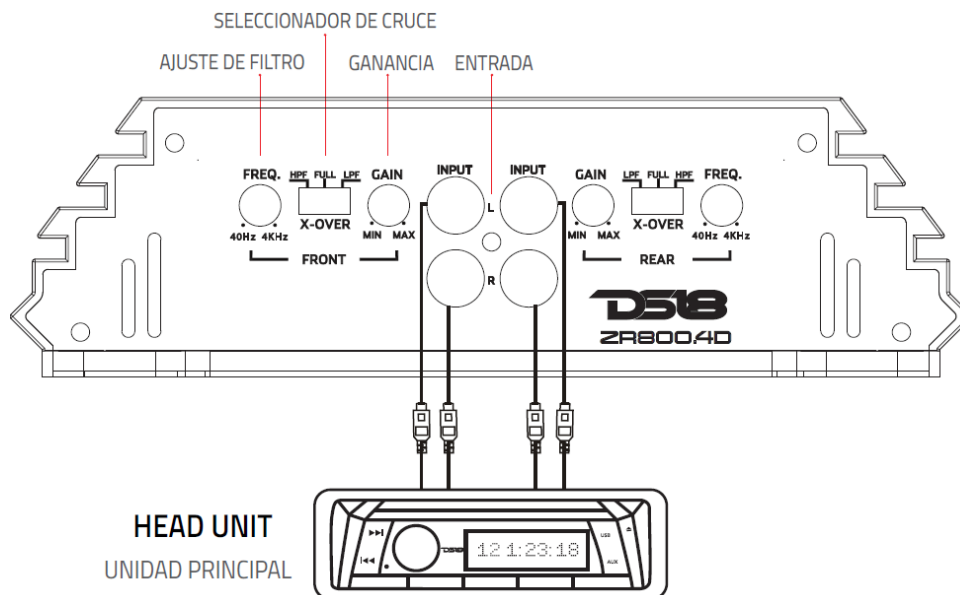
- ZR1000.1D / ZR1500.1D / ZR2000.1D



- ZR500.1D

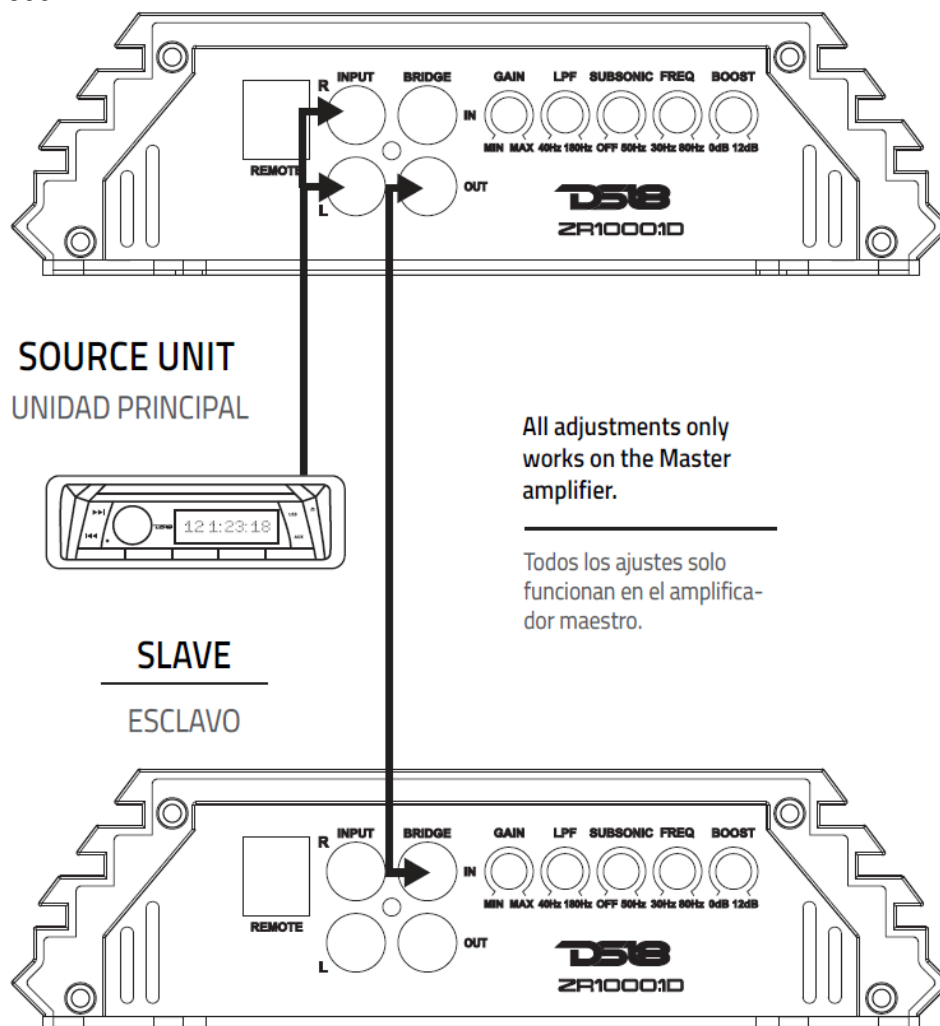


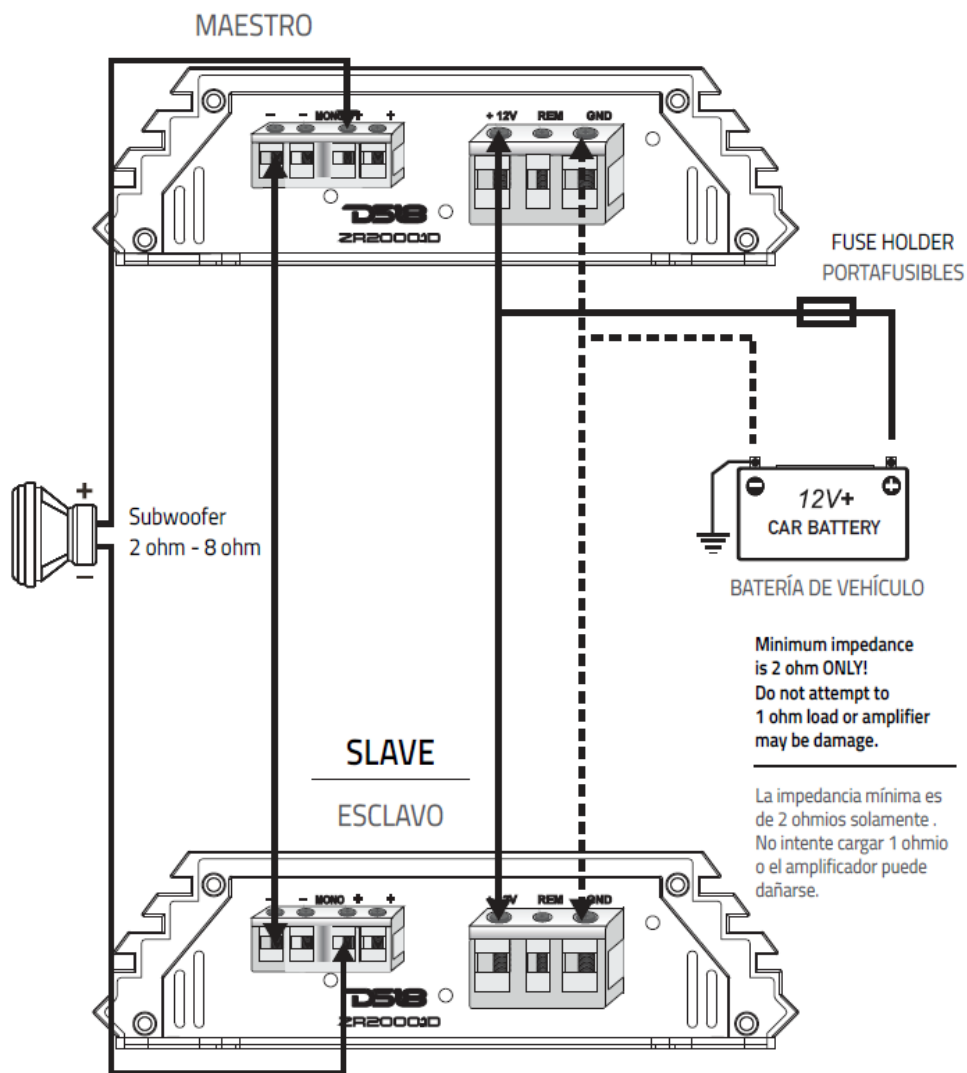
- ZR600.4D / ZR800.4D / ZR1600.4D



MASTER / SLAVE MODE (STRAP)

ZR1000.1D / ZR1500.1D





SPECIFICATIONS

ZR500.1D

POWER

- Total Watts (Peak)1500W
- RMS Power 200W
- RMS Power 300W
- RMS Power 500W

AUDIO

- Frequency Response :10 – 220Hz
- Signal to Noise Ratio : >95dB
- Efficiency @ 4ohm :

-85%
- Damping Factor
.....160
- Input Impedance.....
20K ohm
- Total Harmonic Distortion (THD) :
0.01%
- Low Level Input Range : 0.2v – 6v
- Selectable X-Over : LPF Fixed
- X-Over Filter Range : 50-
220Hz
- Bass Boost Range : 0/6/12dB
- Bass Boost Frequency:30-80hz
- Infrasonic Filter :
.....10~50Hz
- Phase Selector :
.....0-
180

FEATURES

- Amplifier Class:
..... Digital
- Amplifier Type :MonoBlock Subwoofer
- Number of Channels :1 Channel
/ 1 Canal
- Minimum Impedance :
.....1 ohm
- LED Indicator / Indicator LED:..... Clipping / Protect / Power
- Power Input Terminal Size:4Ga
- Recommended Fuse Size :
60A
- Remote Level Control : Yes – Dash Mount
- Thermal Protection :
.....Yes
- Over-Load Protection :
.....Yes
- DC Output Protection :Yes
- Short Circuit Output Protection :Yes
- Voltage Input Protection : Yes / Si <9 / >16 V
- Clipping Protection:
.....Yes
- Body Color / Finish :Black Aluminum Brush
- LED logo :

.....
Yes

MEASUREMENT

- Overall Length :8.46" /
215mm
- Overall Wide:7.24" / 184mm
- Overall Height:2"
/ 53mm
- Heatsink Length:..... 7" / 180mm
- Gross Single Unit Weight3.15lb

ZR1000.1D

POWER

- Total Watts (Peak)3000W
- RMS Power
380W
- RMS Power
650W
- RMS Power
1000W

AUDIO

- Frequency Response :10 –
220Hz
- Signal to Noise Ratio :..... >95dB
- Efficiency @ 4ohm :80%
- Damping Factor220
- Input Impedance.....
20K ohm
- Total Harmonic Distortion (THD) :
0.01%
- Low Level Input Range :..... 0.2v – 6v
- Selectable X-Over :..... LPF Fixed

- X-Over Filter Range : 40-180Hz
- Bass Boost Range : 0-12dB
- Bass Boost Frequency:30-80hz
- Infrasonic Filter :10~50Hz
- Phase Selector :0-180

FEATURES

- Amplifier Class: Digital
- Amplifier Type :MonoBlock Subwoofer
- Number of Channels :1 Channel
- Minimum Impedance :1 ohm
- LED Indicator / Indicator LED:..... Clipping / Protect / Power
- Power Input Terminal Size:4Ga
- Recommended Fuse Size :60A
- Remote Level Control : Yes – Dash Mount
- Thermal Protection :Yes
- Over-Load Protection :Yes
- DC Output Protection :.....Yes
- Short Circuit Output Protection :.....Yes
- Voltage Input Protection :..... Yes / Si <9 / >16 V
- Clipping Protection:Yes
- Body Color / Finish :.....Black Aluminum Brush
- LED logo :
Yes

MEASUREMENT

- Overall Length :11.8" / 301mm
- Overall Wide:7.24" / 184mm

- Overall Height:2" / 53mm
- Heatsink Length:..... 10.24" / 266mm
- Gross Single Unit Weight5.8lb

ZR1500.1D

POWER

- Total Watts (Peak)4500W
- RMS Power 550W
- RMS Power 950W
- RMS Power 1500W

AUDIO

- Frequency Response :10 – 220Hz
- Signal to Noise Ratio :..... >95dB
- Efficiency @ 4ohm :85%
- Damping Factor220
- Input Impedance..... 20K ohm
- Total Harmonic Distortion (THD) : 0.01%
- Low Level Input Range :..... 0.2v – 6v
- Selectable X-Over :..... LPF Fixed
- X-Over Filter Range :..... 40-180Hz
- Bass Boost Range : 0-12dB
- Bass Boost Frequency:30-80hz
- Infrasonic Filter :10~50Hz
- Phase Selector :0-180

FEATURES

- Amplifier Class:
..... Digital
- Amplifier Type : MonoBlock Subwoofer
- Number of Channels : 1 Channel
- Minimum Impedance :
..... 1 ohm
- LED Indicator / Indicator LED: Clipping / Protect / Power
- Power Input Terminal Size: 4Ga
- Recommended Fuse Size :
160A
- Remote Level Control : Yes – Dash Mount
- Thermal Protection :
..... Yes
- Over-Load Protection :
..... Yes
- DC Output Protection : Yes
- Short Circuit Output Protection : Yes
- Voltage Input Protection : Yes / Si <9 / >16 V
- Clipping Protection:
..... Yes
- Body Color / Finish : Black Aluminum Brush
- LED logo :
.....
Yes

MEASUREMENT

- Overall Length :
..... 14.8" /
376mm
- Overall Wide:
..... 7.24" / 184mm
- Overall Height:
..... 2"
/ 53mm
- Heatsink Length: 13.4" /
341mm
- Gross Single Unit Weight 7lb

ZR2000.1D

POWER

- Total Watts (Peak)6000W
- RMS Power800W
- RMS Power1300W
- RMS Power2000W

AUDIO

- Frequency Response :10 – 220Hz
- Signal to Noise Ratio : >95dB
- Efficiency @ 4ohm :80%
- Damping Factor220
- Input Impedance.....20K ohm
- Total Harmonic Distortion (THD) :0.01%
- Low Level Input Range : 0.2v – 6v
- Selectable X-Over : LPF Fixed
- X-Over Filter Range : 40-180Hz
- Bass Boost Range : 0-12dB
- Bass Boost Frequency:30-80hz
- Infrasonic Filter :10~50Hz
- Phase Selector :0-180

FEATURES

- Amplifier Class: Digital
- Amplifier Type :MonoBlock Subwoofer
- Number of Channels :1 Channel
- Minimum Impedance :1 ohm
- LED Indicator / Indicator LED: Clipping / Protect / Power
- Power Input Terminal Size:0Ga

- Recommended Fuse Size :
200A
- Remote Level Control : Yes – Dash Mount
- Thermal Protection :Yes
- Over-Load Protection :Yes
- DC Output Protection :.....Yes
- Short Circuit Output Protection :.....Yes
- Voltage Input Protection :..... Yes / Si <9 / >16 V
- Clipping Protection:Yes
- Body Color / Finish :.....Black Aluminum Brush
- LED logo :
Yes

MEASUREMENT

- Overall Length :19.3" /
486mm
- Overall Wide:7.24" / 184mm
- Overall Height:2"
/ 53mm
- Heatsink Length:..... 17.75" /
451mm
- Gross Single Unit Weight8.1lb

ZR600.4D

POWER

- Total Watts (Peak)2400W
- RMS Power
4x150W
- RMS Power
4x120W
- RMS Power
2x400W

AUDIO

- Frequency Response :20Hz – 20kHz
- Signal to Noise Ratio : >90dB
- Efficiency @ 4ohm :90%
- Damping Factor160
- Input Impedance..... 20K ohm
- Channel Separation 60dB
- Total Harmonic Distortion (THD) :1%
- Low Level Input Range : 0.2v – 6v
- Selectable X-Over : LPF Fixed
- X-Over Filter Range : 40Hz- 40KHz

FEATURES

- Amplifier Class: Digital
- Amplifier Type :MonoBlock Subwoofer
- Number of Channels :4 Channel
- Minimum Impedance :2 ohm/4 ohm
- LED Indicator / Indicator LED:..... Clipping / Protect / Power
- Power Input Terminal Size:4Ga
- Recommended Fuse Size : 2x30A
- Remote Level Control : Yes – Dash Mount
- Thermal Protection :Yes
- Over-Load Protection :Yes
- DC Output Protection :Yes
- Short Circuit Output Protection :Yes
- Voltage Input Protection : Yes / Si <9 / >16 V
- Clipping Protection:Yes
- Body Color / Finish :Black Aluminum Brush
- LED logo :

Yes

MEASUREMENT

- Overall Length :10" / 254mm
- Overall Wide:7.24" / 184mm
- Overall Height:2"
/ 53mm
- Heatsink Length:..... 8.54" /
217mm
- Gross Single Unit Weight4.11lb

ZR800.4D

POWER

- Total Watts (Peak)3600W
- RMS Power
4x200W
- RMS Power
4x320W
- RMS Power
2x600W

AUDIO

- Frequency Response :20Hz –
20kHz
- Signal to Noise Ratio : >90dB
- Efficiency @ 4ohm :88%
- Damping Factor160
- Input Impedance.....
20K ohm
- Channel Separation 60dB
- Total Harmonic Distortion (THD) :1%
- Low Level Input Range : 0.2v – 6v
- Selectable X-Over : LPF Fixed

- X-Over Filter Range : 40Hz-40KHz

FEATURES

- Amplifier Class: Digital
- Amplifier Type : MonoBlock Subwoofer
- Number of Channels : 4 Channel
- Minimum Impedance : 2 ohm/4 ohm
- LED Indicator / Indicator LED: Clipping / Protect / Power
- Power Input Terminal Size: 4Ga
- Recommended Fuse Size : 120A
- Remote Level Control : Yes – Dash Mount
- Thermal Protection : Yes
- Over-Load Protection : Yes
- DC Output Protection : Yes
- Short Circuit Output Protection : Yes
- Voltage Input Protection : Yes / Si <9 / >16 V
- Clipping Protection: Yes
- Body Color / Finish : Black Aluminum Brush
- LED logo : Yes

MEASUREMENT

- Overall Length : 10" / 254mm
- Overall Wide: 7.24" / 184mm
- Overall Height: 2" / 53mm
- Heatsink Length: 8.54" / 217mm
- Gross Single Unit Weight 5lb

POWER

- Total Watts (Peak)7200W
- RMS Power
4x400W
- RMS Power
4x680W
- RMS Power
2x1200W

AUDIO

- Frequency Response :20Hz –
20kHz
- Signal to Noise Ratio : >90dB
- Efficiency @ 4ohm :82%
- Damping Factor160
- Input Impedance.....
20K ohm
- Channel Separation 60dB
- Total Harmonic Distortion (THD) :1%
- Low Level Input Range : 0.2v – 6v
- Selectable X-Over : LPF Fixed
- X-Over Filter Range : 40Hz-
40KHz

FEATURES

- Amplifier Class: Digital
- Amplifier Type :MonoBlock Subwoofer
- Number of Channels :4 Channel
- Minimum Impedance :2 ohm/4 ohm
- LED Indicator / Indicator LED:..... Clipping / Protect / Power
- Power Input Terminal Size:0Ga
- Recommended Fuse Size :
280A
- Remote Level Control : Yes – Dash Mount
- Thermal Protection :

-Yes
- Over-Load Protection :
.....Yes
- DC Output Protection :.....Yes
- Short Circuit Output Protection :.....Yes
- Voltage Input Protection :..... Yes / Si <9 / >16 V
- Clipping Protection:
.....Yes
- Body Color / Finish :.....Black Aluminum Brush
- LED logo :
.....
Yes

MEASUREMENT

- Overall Length :
.....12.83" /
326mm
- Overall Wide:
.....7.24" / 184mm
- Overall Height:
.....2"
/ 53mm
- Heatsink Length:..... 11.54" /
291mm
- Gross Single Unit Weight6.18lb

TROUBLESHOOTING

Before removing your amplifier, refer to the list below and follow the suggested procedures. Always test the speakers and their wires first.

AMPLIFIER WILL NOT POWER UP

- Check for good ground connection.
- Check that remote DC terminal has at least 10V DC.
- Check that there is battery power on the+ terminal.
- Check all FUSES.
- Check that Protection LED is not lit. If it is lit, shut off amplifier briefly and then re-power it.

HIGH HISS OR ENGINE NOISE (ALTERNATOR WHINE) IN SPEAKERS.

Disconnect all RCA inputs to the amplifier, if hiss / noise disappears, then plug in the component driving the amplifier and unplug its inputs. If hiss / noise disappears, go on until the faulty / noisy component is found. It is best to set the amplifier input level as insensitive as possible. The best subjective S/N ratio is obtainable this way. Try to drive as high a signal level from the head unit as possible. PROTECTION LED COMES ON WHEN THE AMPLIFIER IS POWERED UP.

Check for shorts on speaker leads. Check that volume control on the head unit is turned down low. Remove

speaker leads, and reset the amplifier. If the Protection LED still comes on, then the amplifier is faulty. The amplifier will shut down automatically when the units' temperature goes up to 85°C This will protect the units from damage.

AMPLIFIER GETS VERY HOT.

Check that the minimum speaker impedance for that model is correct. Check for speaker shorts. Check that there is good airflow around the amplifier. In some applications, an external cooling fan may be required. **DISTORTED SOUND**

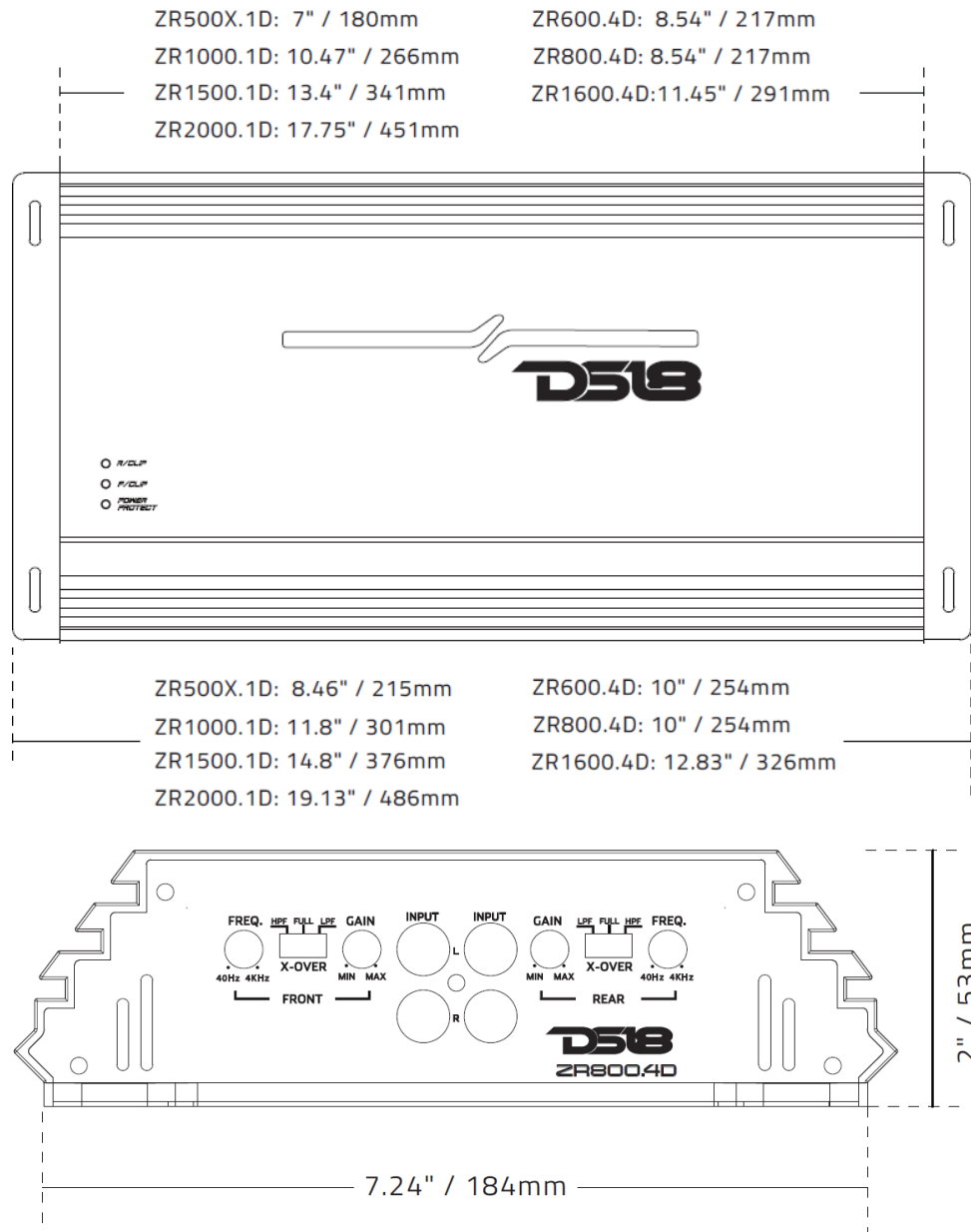
Check that the Level control's is set to match the signal level of the head unit. Check that all crossover frequencies have been properly set. Check for shorts on the speaker leads.

HIGH SQUEAL NOISE FROM SPEAKERS.

This is always caused by a poorly grounded RCA patch cord.

DIMENSIONS

We reserve the right to change products and specifications at any time without notice. Images may or may not included optional equipment.



WARNING

Professional installation by an authorized DS18 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, 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 pick-up trucks. Select a location that will provide adequate ventilation for the amplifier. Avoid mounting the amplifier with the fins down. The fins should be facing up either vertically or horizontally. Secure the amplifier with the screws provided.

1. Over high volume will damage your speakers.
2. Be cautious when you use the amplifier near gasoline tank and electric wires.
3. Protect the connecting wires and parts to avoid any damage or short circuit.
4. The power must be lee from the anode of the battery via FUSE.
5. The sound system must be in turning-off situation when you check the amplifier.
6. Be sure that you use the same type of FUSE when you need to replace it .

* We reserve the right to make needed change or improvement to the product, without informing customer about this in advance.

WARRANTY

Please visit our website [DS18.com](https://www.ds18.com) for more information on our warranty policy.

Documents / Resources

	DS18 ZR500.1D Monoblock Class D Subwoofer Amplifier [pdf] Owner's Manual ZR500.1D, ZR1000.1D, ZR1500.1D, ZR2000.1D, ZR500.1D Monoblock Class D Subwoofer A mplifier, Monoblock Class D Subwoofer Amplifier, Class D Subwoofer Amplifier, Subwoofer Am plifier, Amplifier
---	---

References

- [Official DS18 Pro Audio Store - Speakers, Subwoofers, Amps & More!](#)