



DSP POWER AMPLIFIER

USER MANUAL

M-DSPA.500



MACROM





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Warranty

Thank you for purchasing this Macrom product. Should your product need warranty service, please return it to the shop where you buy it or to the Macrom distributor in your country. The warranty does not cover damage due to improper use and or installation, incorrect connections to power supply and audio sources, exposure to excessive humidity, unauthorized repair attempts or modifications.

Safety information

Before beginning with installation, disconnect the wire from the battery ground terminal to prevent any short during installation.

This subwoofer must properly installed by Macrom authorized installer. Improper installation may damage the unit and /or the vehicle. Verify all electrical and drivability of the vehicle before the installation.

Information on disposal of unit



This product bears the selective sorting symbol for waste electrical and electronic equipment (WEEE).

This means that this product must be handled to the local collecting points or given back to retailer when you buy a new product, in a ratio of one to one (or one to zero if the external dimension is less than 25 cm) pursuant to European Directive 2012/19/EC in order to be recycled or dismantled to minimize its impact on the environment.

For further information, please contact your local or regional authorities.

Electronic products not included in the selective sorting process are potentially dangerous for the environment and human health due to the presence of hazardous substances.

The unlawful disposal of the product carries a fine according to the legislation currently in force.



Features

5-channel amplifier with audio processor controlled by App for smartphones and Bluetooth streaming audio.

- 5-channel amplifier with DSP processor
- Hi-Resolution Audio streaming Bluetooth
- 4 high level inputs
- 5 amplified outputs
- 4 + 1 low level outputs (RCA)
- Bluetooth connection for regulation and control
- App dedicated for Android and iOS
- Active crossover By-pass, Low-pass, Hi-pass and Band-pass
- Time delay adjustable between 0 and 210 cm
- 7-band parametric equalizer
- Dynamic Bass adjustment
- Selector for switch-on mode (REMOTE or SIGNAL)

Specifications

M-DSPA.500 with RCA line input or high level input.

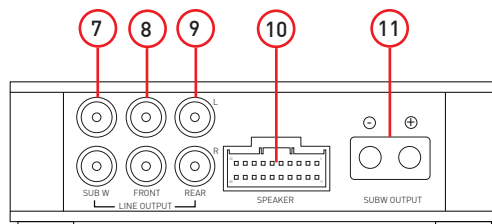
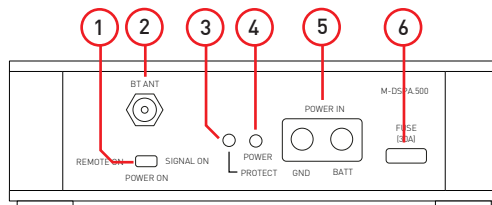
- Nominal output power
54Watt x 4 channels class AB (32W RMS)
300Watt x Class D Subwoofer (170 RMS) min 4 Ohm
- Frequency response from 20Hz to 20KH
- Noise signal ratio→ 120dB
- Dynamic range→ 100dB
- HD: 1KHz \leq 0.001%
- Bluetooth 2402MHz - 2480MHz operating frequency
- EIRP 1.40dBm power
- Standby current \leq 0.01mA
- Maximum current consumption 30A
- Operating voltage from 9Volt to 15.5Volt ---
- Dimensions: 195mm 130mm 38mm



Product overview

Front Panel

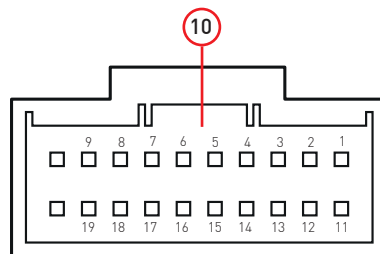
1. Power mode selection switch
(REMOTE or SIGNAL)
2. Bluetooth antenna
3. LED protection indicator
4. Power LED indicator
5. Power connector
6. Fuse [30A]
7. Subwoofer output
8. Front Exit
9. Rear Output
10. Connector for loudspeakers
11. Subwoofer connector



Notice:
The graphic in this manual is for reference only, and may be different from the actual unit.

Speaker connector pins layout


1. Front/Right + input
2. Front/Right - input
3. Front/Left + input
4. Front/Left - input
5. Rear/Left + input
6. Rear/Left - input
7. Rear/Right + input
8. Rear/Right - input
9. Remote output (+12V/Max 500mA)
10. Acc input
11. Rear/Right - output
12. Rear/Right + output
13. Rear/Left - output
14. Rear/Left + output
15. Front/Right - output
16. Front/Right + output
17. Front/Left - output
18. Front/Left + output
19. + Batt (12volts)
20. GND (Ground)





How to install and connect the APP

APP installation

1. Download the APP from Google Play or Apple Store searching for "M-DSPA.500"
2. Install the application in your Android or iPhone mobile phone.
3. Activate Bluetooth on your mobile phone and search for "M-DSPA.500", then pair it.
If necessary, the coupling code is 1234.
4. Open the "M-DSPA.500" APP and click on [], the amplifier will be connected and you can set your own sound from the available functions of the APP.
5. After completing the audio settings, click [Exit] to exit the APP.



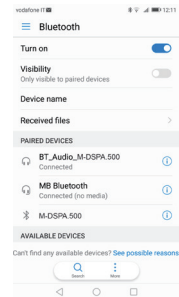
Bluetooth connection for Audio streaming

After pairing and connecting the M-DSPA.500 to your mobile phone you can associate the BT_Audio device for playback Audio Streaming.

1. Access the Bluetooth settings of your mobile phone.
2. Associate the device "BT_Audio_M-DSPA.500"

Now you can play the music files from your mobile phone through the applications available on your device.
By activating playback, the Macrom DSPA.500 will play your music.


In case of an incoming call, the Macrom DSPA.500 will transfer the audio to the your mobile phone.





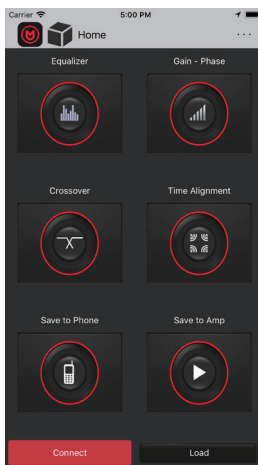
How to install and connect the APP

APP Installation

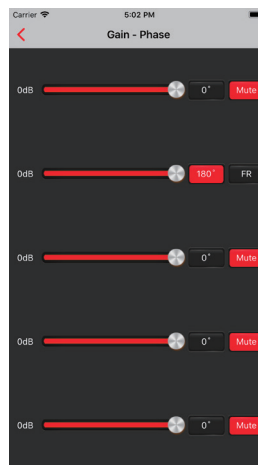
1. Download the APP from Google Play or Apple Store searching for "M-DSPA.500"
2. Install the application in your Android or iPhone mobile phone.
3. Activate Bluetooth on your mobile phone and search for "M-DSPA.500", then pair it.
If necessary, the coupling code is 1234.
4. Open the "M-DSPA.500" APP and click on [], the amplifier will be connected and you can set your own sound from the available functions of the APP.
5. After completing the audio settings, click [Exit] to exit the APP.

APP overview

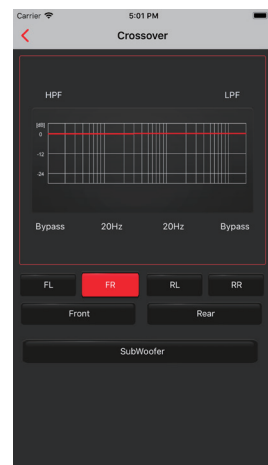
Home



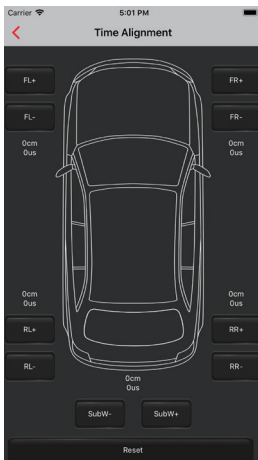
Setting channels



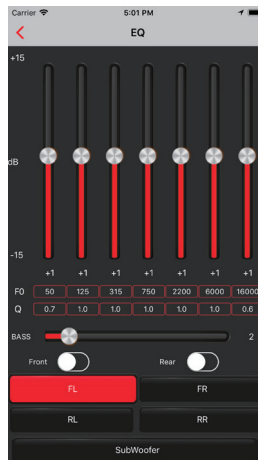
Crossover Filter



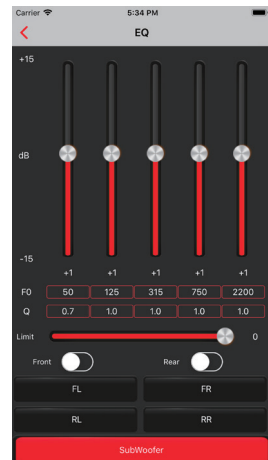
Time alignment



Front & Rear equalizer



Subwoofer equalizer

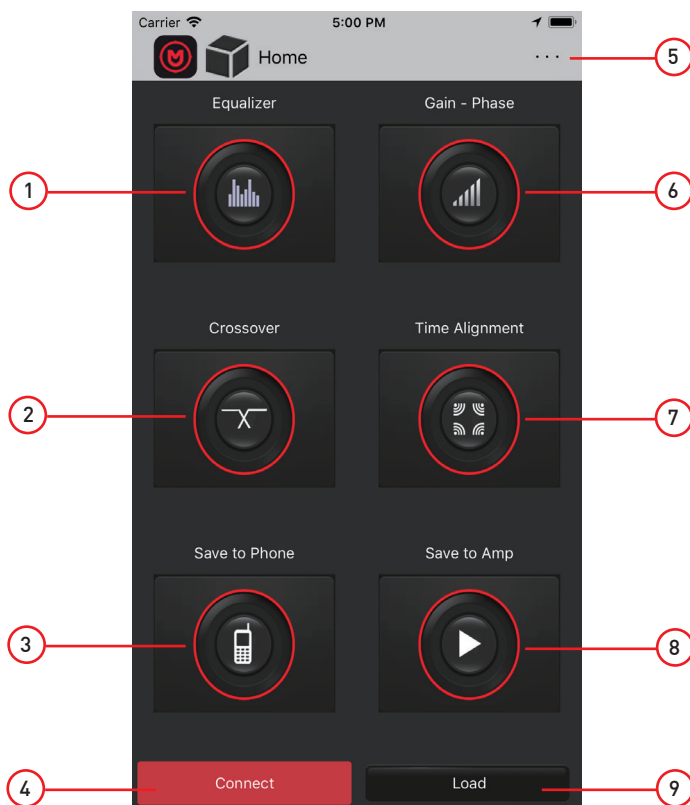




APP overview

Main

1. Parametric equalizer; click to get the equalization functions.
2. Crossover; click to get the crossover functions.
3. Save to phone; after finishing the setting, you can create the name of the audio setting and then with the (OK) button the audio setting will be saved in your mobile phone.
4. Connect; click to connect the amplifier from the APP.
5. Preselection of favorites; it is possible to recall the 5 presets saved in the amplifier.
6. Gain / Phase; click to get the functions of the levels.
7. Time alignment; click to get the alignment functions.
8. Save to amplifier; after finishing the setting, you can save your own audio setting in the five presets.
9. Load preset; click to load the presets stored on the mobile device.

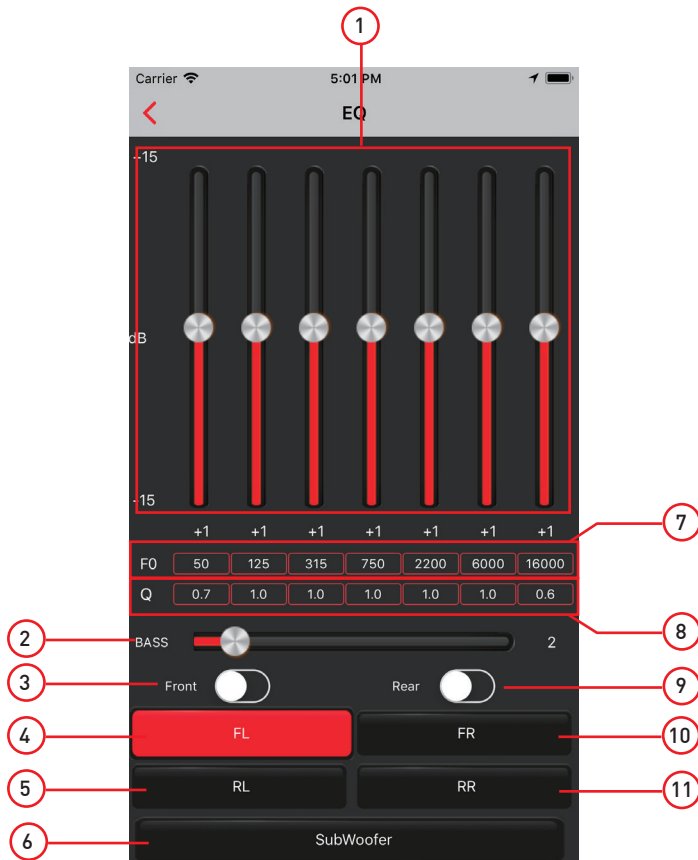




APP overview

Equalizer

1. 7-band equalizer adjustable from +15dB to -15dB.
2. Dynamic Bass setting.
3. Front section selector for parameter copy
4. Front Left, equalizer setting front left section.
5. Rear Left, equalizer setting front left section.
6. Subwoofer, subwoofer section equalizer setting.
7. Variable frequency setting from 20Hz to 20,000Hz.
8. Variable Q Factor from 0.3 to 9.9.
9. Rear section selector for parameter copy
10. Front Right, equalizer setting front right section
11. Rear Right, equalizer setting right rear section

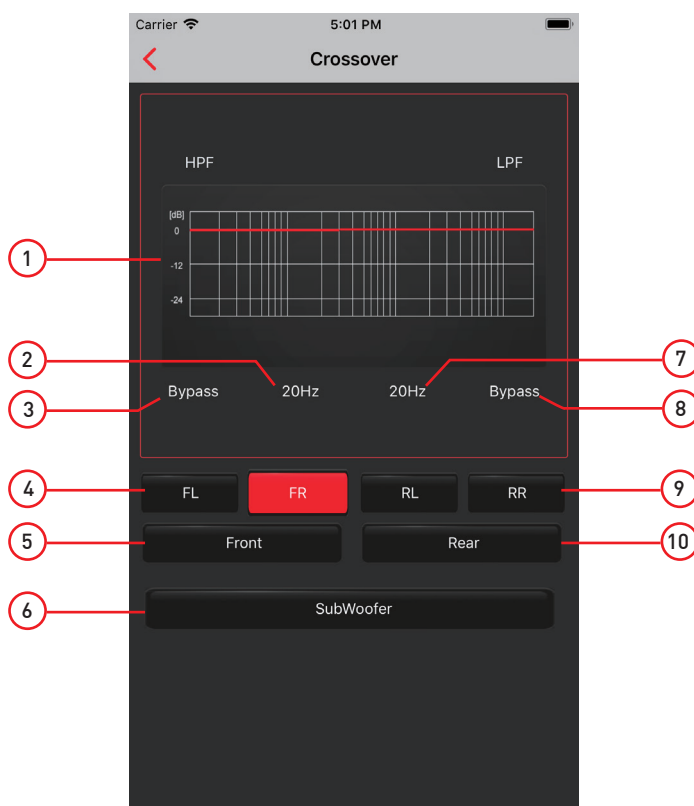




APP overview

Crossover filter

1. Overview of the graph.
2. Low cross-section frequency setting, adjustable from 20Hz to 20,000Hz.
3. Low-pass slope selector, selectable between, 6-12-18-24dB/oct or Bypass (Off).
4. Crossover selector section FL (front left).
5. Crossover selector section RL (rear left).
6. SUB crossover selector (subwoofer).
7. Setting high-pass frequencies, adjustable from 20Hz to 20,000Hz.
8. High pass slope selector, selectable between, 6-12-18-24dB/oct or Bypass (Off).
9. Crossover selector section FR (front right).
10. Crossover selector section RR (rear right).

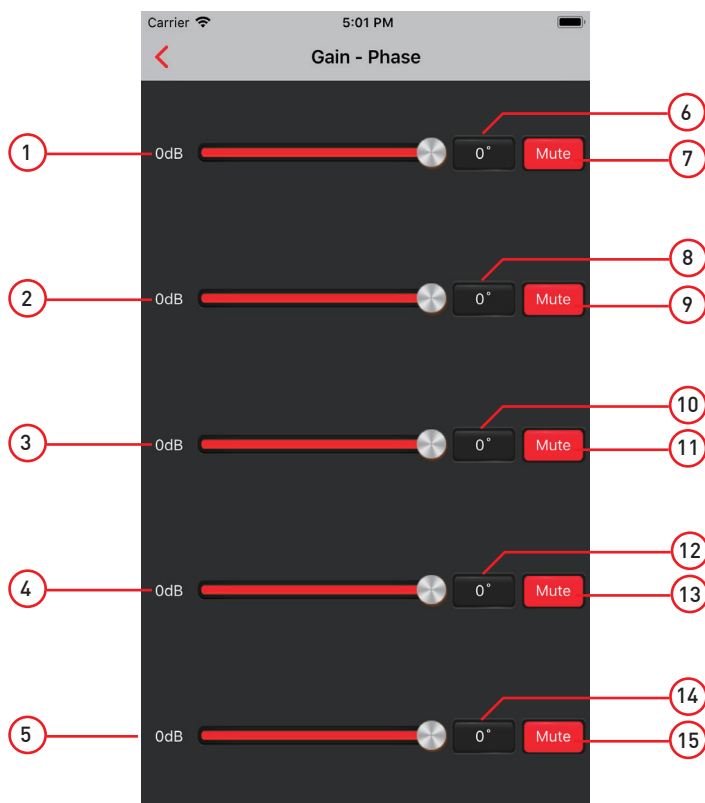




APP overview

Setting channels

1. FL - Left front gain slider, adjusted from Off to 0dB
2. FR - Right front gain slider, adjusted from Off to 0dB
3. RL - Left rear gain slider, adjusted from Off to 0dB
4. RR - Right rear gain slider, set from Off to 0dB
5. SW - Subwoofer gain slider, set from Off to 0dB
6. FL - Selector of the front left phase, 0 ° / 180 °
7. FL - Left front Mute selector switch, On / Off.
8. FR - Selector of the front left phase, 0 ° / 180 °
9. FR - Left front Mute selector switch, On / Off.
10. RL - Selector of the front left phase, 0 ° / 180 °
11. RL - Left front Mute selector switch, On / Off.
12. RR - Selector of the front left phase, 0 ° / 180 °
13. RL - Left front Mute selector switch, On / Off
14. SUB - Subwoofer phase selector, 0 ° / 180 °
15. SUB - Subwoofer Mute Selector, On / Off



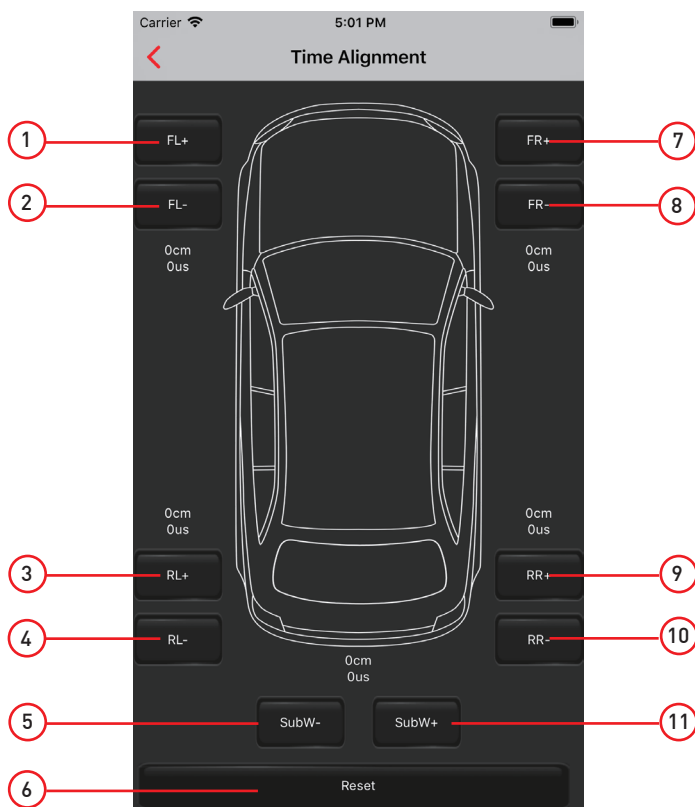


APP overview

Time alignment

1. FL (+) increase front right speaker delay.
2. FL (-) decrease front right speaker delay.
3. RL (+) increase of rear right speaker delay.
4. RL (-) decrease delay speaker rear right.
5. SUB (-) subwoofer delay decrease.
6. Parameter reset
7. FR (+) increase front right speaker delay.
8. FR (-) decrease front right speaker delay.
9. RR (+) increase of rear right speaker delay.
10. RR (-) decrease delay speaker posterior right.
11. SUB (+) subwoofer delay increase.

The time delay is adjustable between 0 and 210cm





APP overview

Selector gain level

1. Value of the chosen level between Off and 0dB (max).
2. Cursor to change the value of the level.



Selector frequency cuts

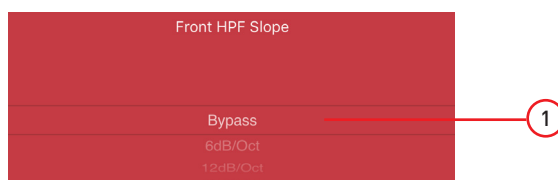
1. Cancel, selection cancel
2. Type the value of the selected cutoff frequency between 20Hz to 20,000Hz.
3. OK, press to confirm the selection.



Slope selector

1. Slider selection cursor
The selection varies between:
 - Bypassas
 - 6dB/octava
 - 12dB/octava
 - 18dB/octava
 - 24dB/octava

NOTE: no cutting or gradient applied to the selected section.





Connections

Plug & Play

1. Plug & Play wiring

Interpose the Plug & Play harness between the Car stereo and the connector coming from the car and connect the end to the M-DSPA.500 amplifier.

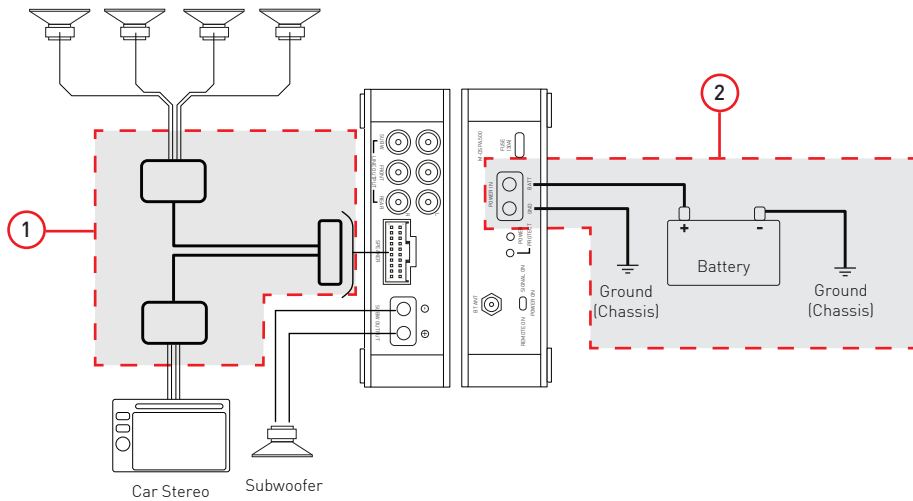
Note: See the wiring list available at www.macrom.it.

2. Power terminal

Connect the (+) terminal to the car's fuse. Make sure that the connection point is sized to deliver a maximum current of 30A.

Or connect directly to the positive terminal of the battery, interposing a 30A protection fuse located near the vehicle battery.

Connect the clamp (-) to the chassis of the car as close as possible to the amplifier.



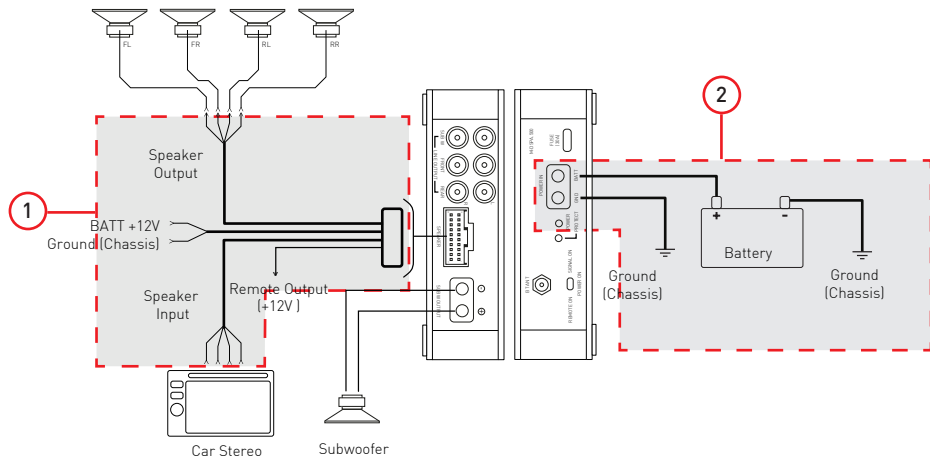
Universal

1. Universal wiring

Follow the instructions on page 5 paragraph 6.

2. Power terminal

See the Plug & Play paragraph description.

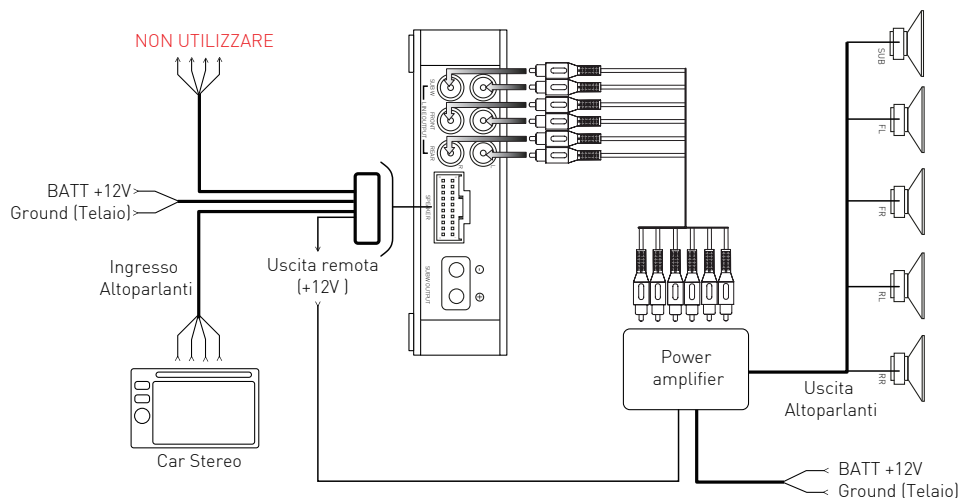




Connections

System extension

Thanks to the pre-amplified outputs present on the product, it is possible to expand the system by adding a multi-channel amplifier (4 + 1) to enhance the sound system.





Declaration of Conformity



M-DSPA.500 DSP POWER AMPLIFIER

Hereby, Aldinet S.p.A, declares that this type of M-DSPA.500, Brand Macrom is in compliance with the essential requirements and other relevant provisions of Directive R&TTE 1999/5/EC.

The full text of the EU Declaration of conformity is available at the following internet address:
www.macrom.it or at Aldinet S.p.A., Viale Colombo, 8 - 20090 Trezzano S/N (MI) Italy

Made in China by
Aldinet S.p.A.
Viale Colombo, 8 - 20090 Trezzano S/N (MI) Italy

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MACROM

ALDINET S.p.A

Viale C. Colombo, 8 - 20090 Trezzano s/N (MI) - Italy

Tel. +39 02 484781

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