

since 1988



HIGH-PERFORMANCE CAR-AMPLIFIER

OWNER'S MANUAL

M-SERIES
BY AUDIO SYSTEM



M-500.4 MD
M-560.2 MD
M-600.4 MD 24V
M-650.2 MD 24V

Congratulation on your purchase of your new **M-SERIES** amplifier.

IMPORTANT: Before installation your power amplifier, we recommend to read the owner's manual carefully and to follow the instructions regarding connection and fitting exactly.

ATTENTION: Pay attention to advices and instructions of the car manufacturer.

IMPORTANT: Your proof of purchase is evidence of warranty claim for repair or replacement. Keep your proof of purchase, manual and original packaging.

ATTENTION: Use of sound components can impair your ability to hear necessary traffic sounds and may constitute a hazard while driving your automobile.

AUDIO SYSTEM GERMANY accepts no liability for hearing loss, bodily injury or property damage as a result of use or misuse of our products. We recommend installing the equipment by an authorized service center or dealer. A professional fitting and connection is the requirement for further warranty and perfect sound.

M-500.4 MD / M-600.4 MD 24V

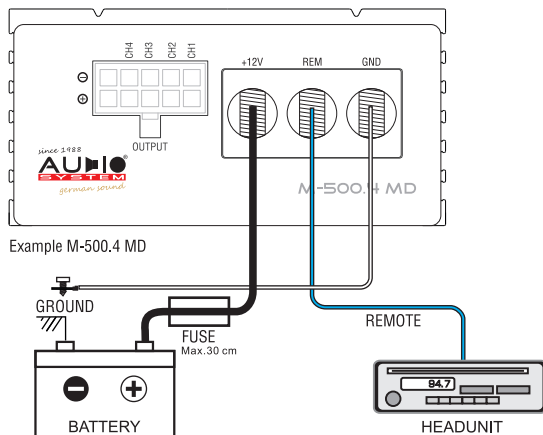
- 4-Channel Class D High Performance Full-Range amplifier
- MOSFET PWM power supply
- Low heat development due to high efficiency
- Stable into 2 Ohm Stereo per channel and into 4 Ohm bridged
- Variable switchable Band-Pass-Filter from 10 to 4500 Hz
- Variable switchable High-Pass-Filter from 10 to 4500 Hz
- High-Level-Input (for OEM radio) with Auto-Turn-On feature
- 2 or 4 channel input mode selectable
- Wide input voltage range from 0,4 V to 8 V
- Multi-Way-Protection-Circuit for overheating, overcurrent, short circuitry and DC speaker protection
- Voltage range from 9 - 16V for **M-500.4 MD** and 18 - 32V for **M-600.4 MD 24V**
- Small size extruded aluminium heatsink for easy mounting



M-560.2 MD / M-650.2 MD 24V

- 4-Channel Class D High Performance Full-Range amplifier
- MOSFET PWM power supply
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M-500.4 MD / M-600.4 MD 24V / M-560.2 MD / M-650.2 MD 24V



1. Battery disconnection

First, disconnect the power supply of the vehicle by removing the ground cable of the battery.

2. Ground connection

Connect the GND (ground) connection of the amplifier with the car chassis.

Keep this cable as short as possible (not longer than 50 cm) and use a suitable cross section (AWG size 8-6).

Make sure, that the connection with the vehicle chassis is free of paint, dirt and dust.

3. Power connection

Connect the +12V(+24V for M-600.4 MD 24V and M-650.2 MD 24V) contact of the amplifier with the supply cable via a fuse directly to the vehicle battery. Keep in mind, that the length of the cable from fuseholder to vehicle battery has to be maximum 30cm. For the amplifier to function at its best, use a high quality fuse holder and suitable cable preferably AWG 8-6 cable. This fuse protects the amplifier and the vehicle against the possibility of a short circuit in the power cable.

4. Remote connection

Connect the REM terminal of the amplifier to the remote-output for amplifier or antenna-output of the head unit. Use a 0,5 - 1,5 mm power cable.

When using High-Level-Input with Auto-Turn-On this terminal does not need to be connected.



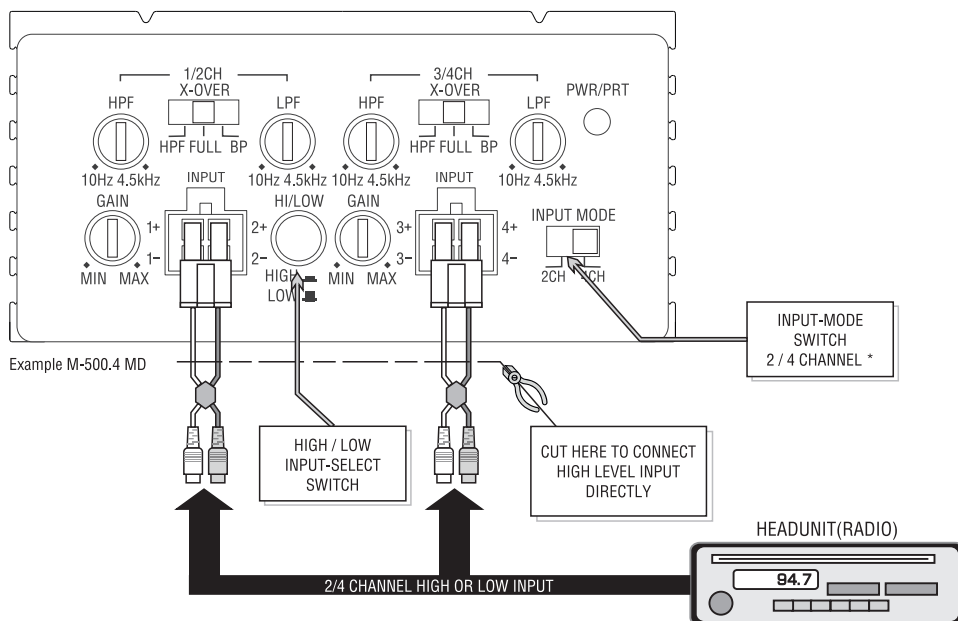
ATTENTION



Please follow the instructions during the installation of your amplifier:

1. Take care of a professional attachment. Pay attention, that no electrical cable, gas tank, hydraulic breakes or other components get damaged.
2. There has to be enough cooling and air circulation. Avoid the installation in small closed boxes or close to heatening parts.
3. Protect the amplifier from fluids, wetness, heat and foreign material as well as from other influences.
4. The amplifier is only to be built into vehicles with a 12 V / 24 V DC power supply.
5. Never install the power supply cable with other original wires of the vehicle (gas cables), fan motors, fire control moduls etc.
6. Install the signal cable (RCA cable) as well as the speaker cable far away of the power cables to avoid noise to the music signal.
7. The cables of your amplifier have to be installed, so that there is no danger of binding, squeezing or breaking.

M-500.4 MD / M-600.4 MD 24V / M-560.2 MD / M-650.2 MD 24V



*only connect CH1 and CH2 when using 2 channel input mode

The **M-SERIES** amplifier has RCA inputs, which are connected by cinch cables to the preamplifier outputs of the headunit. If this is not possible (usually with an original radio, OEM), the speaker outputs of the car radio can be connected directly to the RCA inputs. It is important that the corresponding HI/LOW select switch is switched to 'HIGH'. The amplifier will turn on automatically when using High-Level inputs.

If using only 2 inputs (i.e. full-active or stereo+sub system) the switch INPUT MODE must be set to 2 channel input mode.

IMPORTANT: Please set GAIN to lowest first and slowly rise. The amplifier will switch on when remote signal or high level signal is connected.

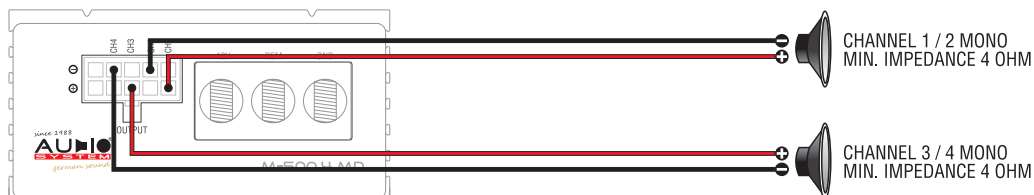
Available accessories are **HLAC2 / HLAC4** and **RCA HI** as well as Plug'n Play cable **Z-X-MD-ISO4** und **Z-X-MD-QUAD5**.

By setting the variable high(HPF)- and band(BPF)-pass-filters and the GAIN the amplifier can be adjusted to your car, speakers and listening preferences. Also a full-active setup is possible with the amplifiers.

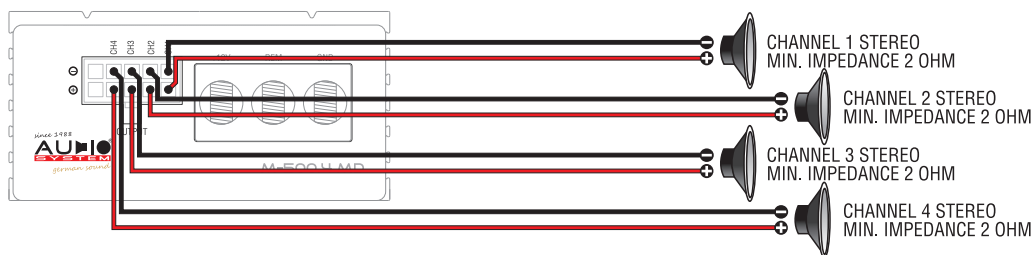
In this regard, **AUDIO SYSTEM GERMANY** recommends that you have your amplifier adjusted to your needs by a specialist company, specialist dealer or an expert.

M-500.4 MD / M-600.4 MD 24V

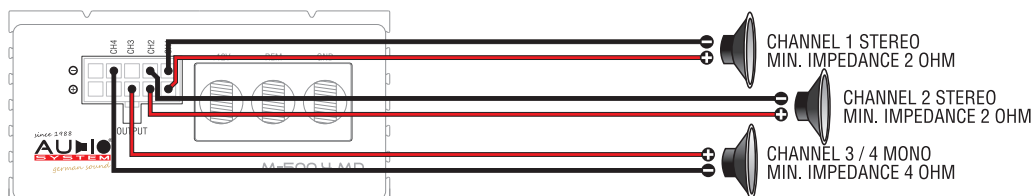
2-Kanal Dual-Mono operation



4-Kanal Stereo operation

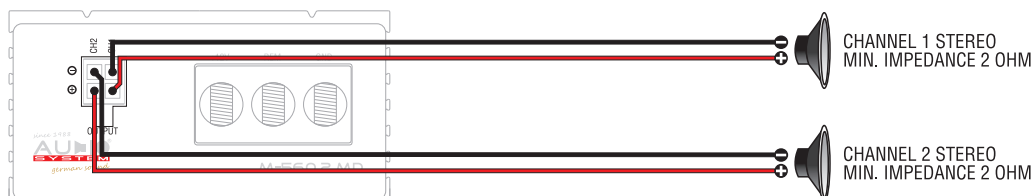


3-Kanal Stereo + Mono operation

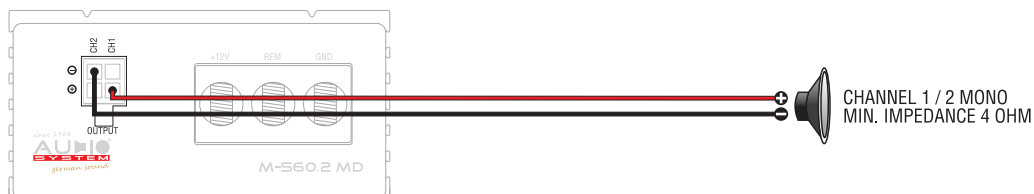


M-560.2 MD / M-650.2 MD 24V

2-Kanal Stereo operation



1-Kanal Mono operation



This power amplifier is featured with an efficient protection system to prevent any damages like over-heating, overvoltage, short-circuit and DC at the loudspeaker output.

Occuring an error the protection-LED will light in red. In order to check the problem, first turn down all levels of the head unit, afterwards turn it off.

Amplifier not power up, no LED lightening	- ground connection professional connected? - +12V / +24V powercable professional connected? - remote cable professional connected? - fuses inserted and alright? - analyze voltage on the amplifier
Amplifier no sound, LED lightening	- cinch cable alright and professional connected - loudspeaker professional connected? - head unit alright?
Amplifier power up but Protect LED lightening	- amplifier too hot? - short-circuit at the loudspeaker output? - short-circuit caused by loudspeaker cable with vehicle chassis (ground)? - operation voltage checked?
Overheating (red Protect-LED lightening)	- impedance alright? - loudspeaker error? - adequate airflow of the amplifier? ! CAUTION ! After cooling down, the amplifier turns on automatically.
Error in amplifier fuse	- ground professional connected? - loudspeaker impednce alright? - operatin voltage high enough? ! CAUTION ! Make sure when changing fuses to use the same value.
Sound too low or low distorted sound	- output level control of the head unit alright? - GAIN adjusted properly to headunit? - loudspeaker error? - loudspeaker cable checked? - crossover frequencies has been properly set?
High hiss-engine noise in speakers	- ground connection professional connected? - cinchcable (RCA) and/or loudspeaker cabel installed too close to the power connection cable? - cinch ground (RCA) of the head unit alright?

ATTENTION

Please contact your specialized dealer if the amplifier is still not working after it has been checked with the error list!

For warranty adjustement / repairs the original invoice has to be attached!

Opening the power amplifier is leading to a lost of warranty in either case!

M-500.4 MD

Power supply voltage	9 - 16V
Rated output power at 14.4 V	
-RMS power @ 4 Ohm Stereo	4x 75W
-RMS power @ 2 Ohm Stereo	4x 125W
-RMS power @ 4 Ohm Bided	2x 250W
Signal to noise ratio	> 90dB
Bandpassfilter CH1/2 CH3/4	10 ~ 4.5 kHz 10 ~ 4.5 kHz
Hochpassfilter CH1/2 CH3/4	10 ~ 4.5 kHz 10 ~ 4.5 kHz
Frequency response	10 Hz ~ 25 kHz (+/-1dB)
THD @ 4 Ohm and 1/2 rated power	< 0.03%
Channel separation	75dB
Fuse rating	1x 40 A
Input sensitivity	400 mV ~ 8 V
Dimensions	121(L)x 45(H) x 88(W) mm

M-600.4 MD 24V

Power supply voltage	18 - 32V
Rated output power at 28.8 V	
-RMS power @ 4 Ohm Stereo	4x 85W
-RMS power @ 2 Ohm Stereo	4x 150W
-RMS power @ 4 Ohm Bided	2x 300W
Signal to noise ratio	> 90dB
Bandpassfilter CH1/2 CH3/4	10 ~ 4.5 kHz 10 ~ 4.5 kHz
Hochpassfilter CH1/2 CH3/4	10 ~ 4.5 kHz 10 ~ 4.5 kHz
Frequency response	10 Hz ~ 25 kHz (+/-1dB)
THD @ 4 Ohm and 1/2 rated power	< 0.03%
Channel separation	75dB
Fuse rating	1x 20 A
Input sensitivity	400 mV ~ 8 V
Dimensions	121(L)x 45(H) x 88(W) mm

since 1988



german sound

AUDIO SYSTEM GERMANY
FALLTORSTRASSE 6 - 76707 HAMBRÜCKEN

DESIGNED AND ENGINEERED BY AUDIO SYSTEM GERMANY
WWW.AUDIO-SYSTEM.DE

M-560.2 MD

Power supply voltage	9 - 16V
Rated output power at 14.4 V	
-RMS power @ 4 Ohm Stereo	2x 160W
-RMS power @ 2 Ohm Stereo	2x 280W
-RMS power @ 4 Ohm Bided	1x 560W
Signal to noise ratio	> 90dB
Bandpassfilter CH1/2	10 ~ 4.5 kHz
Hochpassfilter CH1/2	10 ~ 4.5 kHz
Frequency response	10 Hz ~ 25 kHz (+/-1dB)
THD @ 4 Ohm and 1/2 rated power	< 0.03%
Channel separation	75dB
Fuse rating	1x 40 A
Input sensitivity	400 mV ~ 8 V
Dimensions	121(L)x 45(H) x 88(W) mm

M-650.2 MD 24V

Power supply voltage	18 - 32V
Rated output power at 28.8 V	
-RMS power @ 4 Ohm Stereo	2x 190W
-RMS power @ 2 Ohm Stereo	2x 325W
-RMS power @ 4 Ohm Bided	1x 650W
Signal to noise ratio	> 90dB
Bandpassfilter CH1/2	10 ~ 4.5 kHz
Hochpassfilter CH1/2	10 ~ 4.5 kHz
Frequency response	10 Hz ~ 25 kHz (+/-1dB)
THD @ 4 Ohm and 1/2 rated power	< 0.03%
Channel separation	75dB
Fuse rating	1x 20 A
Input sensitivity	400 mV ~ 8 V
Dimensions	121(L)x 45(H) x 88(W) mm

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