Instruction manual

TARAMPS®

MD 4000.1

AMPLIFIER 4000WATTS - 1 OHM

The installation of this product must be carried out by a qualified professional.

www.taramps.com.br

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Introduction

Please read this manual carefully before connecting or using the product. In case of doubts, please contact our technical support**: (18) 3266-4050** or **www.taramps.com.br**.

The **MD 4000.1** is a mono amplifier (1 channel) with 4000 Watts RMS power, available in 1 OHM impedance.
This amplifier has been carefully designed with state of the art technology, delivering high efficiency and performance for a wide range of car audio systems. Its wide frequency response of 10Hz ~ 10KHz (-3dB) allows it to be used with a variety of speaker models, including Subwoofers and Woofers.
The power you are looking for is here!

Safety requeriments

To ensure proper use, please read through this manual before using the amplifier. It is specially important that you know the **CAUTIONS** contained here.

- The installation of this amplifier must be done by a qualified professional.
- Wear safety glasses, insulated gloves and correct tools for installing this product.
- This amplifier must be used with 12V batteries. Always check the voltage before installing.
- This amplifier must be installed in a firm place with at least 1" space around the heatsink for proper heat spreading.
- Never install the amplifier in places exposed to dust, humidity and water. Pay attention to install it far from fuel tank, fuel lines, heat sources and other parts of vehicle.
- Be sure to install a protection fuse or a circuit breaker near the battery. Follow the amperes as indicated here in this manual. Use of improper fuse or circuit breaker could result in overheat, smoke, damage to product, injury or burns.
- Avoid running wires over or through sharp edges. Use rubber or plastic grommets to protect any wires routed through car's body.
- Before making connection to amplifier, disconnect the battery's negative terminal.
- When in use, the external surface of the amplifier becomes hot. Avoid touching the heatsink area and keep children far from the amplifier.
- This amplifier may produce high sound pressure levels. Avoid continuous exposure to levels over 85dB to prevent permanent hearing loss.
- Output connections for speakers may have voltage levels when the amplifier is operating. Make sure that the amplifier is turned OFF before proceeding any connection or disconnection in this terminal.
- If you want to dispose this amplifier, don't throw it on domestic waste. It must be collected by a disposal service for wasted electronic products proper recycling.

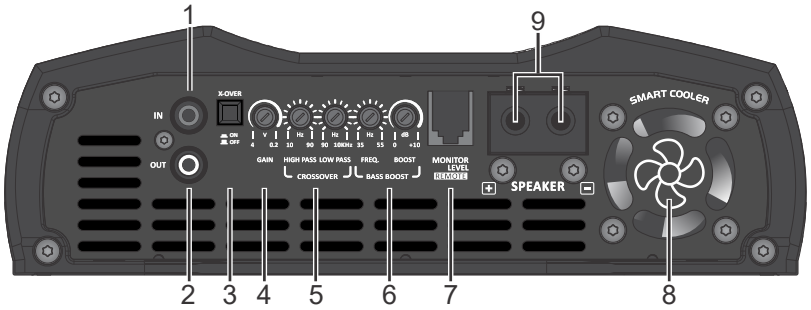
⚠ Safety

Pay attention to the safety symbols.

⚠ CAUTION This symbol with **"CAUTION"** is intended to alert the user about the presence of important instructions. Failure to heed the instructions will result in risk of injury to user or product damage.

Taramps reserves the right to modify the contents of this document at any time without prior notice and does not have the obligation to apply the changes in units which were previously produced.

Functions, inputs and outputs



1 - IN: Input for the signal to be amplified. Connect it to the RCA output of the Head unit using a high quality shielded cable to avoid noise pickup.

2 - OUT: Audio signal output. Sends the same input signal (IN) to another amplifier, allowing a daisy chain connection.

3 - X-OVER: Allows enabling or disabling the crossover.

4 - GAIN: Adjusts the amplifier's input sensitivity, allowing perfect matching to the output signal levels of virtually all Head units on the market. It can adjusted from 4V (minimum sensitivity) down to 0.2V (maximum sensitivity).

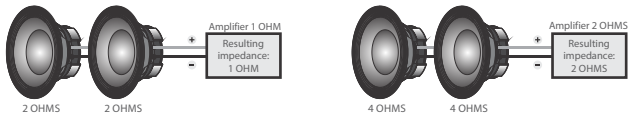
5 - CROSSOVER
HIGH PASS FILTER (HPF): Variable adjustment from 10Hz to 90Hz, which sets the starting frequency of the amplifier's operation.
LOW PASS FILTER (LPF): Variable adjustment from 10Hz to 90Hz, which sets the cutoff frequency of the amplifier's operation.

6 - BASS BOOST
FREQ.: Sets the operating frequency of the Bass Boost from 35Hz to 55Hz.
BOOST: Boost for sub-bass frequencies, with variable amplitude from 0 to +10dB.

7 - MONITOR LEVEL REMOTE: Connection for an accessory that functions to control the gain and monitor the amplifier, where all the indicator LED information, such as amplifier on (ON), distortion (CLIP/TEMP),and protection activation (PROT), will be displayed simultaneously. (Acessory not included).

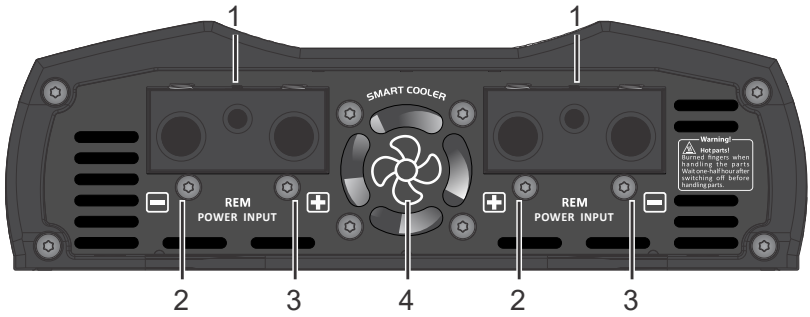
8 - SMART COOLER: See next page.

9 - SPEAKER: Output (positive and negative) for connecting the transducers (loudspeakers). Follow the indicated polary and the recommended minimum impedance.
For loudspeakers connections, the impedance to be considered is the resulting impedance.
See the examples below:



CAUTION Due to the presence of voltage on the output terminals when the product is powered on, avoid contact with them. Risk of electric shock.

Power connector



1 - REMOTE TERMINAL: It must be connected to the remote output of the Head unit using a 0.75mm^2 cable.

2 - NEGATIVE POWER TERMINAL: A 50mm^2 cable, as short as possible, must be used, connected to the negative terminal of the battery.

3 - POSITIVE POWER TERMINAL: Use a 50mm^2 cable directly from the positive terminal of the battery with a fuse or circuit breaker (180A) as close as possible to it.

We recommend that all cables have tinned ends to improve electrical contact.

⚠ CAUTION Before making any connection to the power terminals, make sure that the vehicle's battery negative (-) is disconnected.

4 - SMART COOLER: This amplifier has two internal cooling fans. For proper opertion, the amplifier must be installed in a dry and ventilated place, with a minimum clearance of 1" (25mm) on each side. The normal operating temperature of this amplifier is 65°C.

⚠ CAUTION The cooling fan and ventilation openings are responsible for cooling the amplifier when in use therefore, they must not be obstructed.

Indicator LEDs and protection systems

ON

Blue LED on continuously:

Indicates that the amplifier is on.

CLIP TEMP

Flashing yellow LED: Excessive temperature (May be caused by obstructions of the internal cooling fans, improper installation, or placement in a poorly ventilated area).

When the amplifier reaches a temperature of approximately 80°C, the thermal protection is activated, the audio is interrupted, and the yellow LED starts flashing. The cooling fan will remain on to quickly cool the components. Only when the amplifier reaches a safe temperature will the audio be restored and the amplifier return to normal operation.

We recommend not turning off the amplifier so that the cooling time is reduced through the ventilation provided by the fans.

Yellow LED flashing according to the music: Indicates that the amplifier is operating at the distortion threshold. If the red LED also flashes, it indicates excessive distortion.

PROT

Red LED on continuously:

A short curcuit or an mpedance lower than supported at the output has been detected.

Red LED blinks 2x:

Power supply voltage lower than 9V.

Red LED blinks 3x:

Supply voltage higher than 16V

Yellow and red LEDs fhashing: Low impedance protection (Automatically restarts).

Installation

CAUTION Any connection to the power, input, or output terminals must be made only with the amplifier turned off.

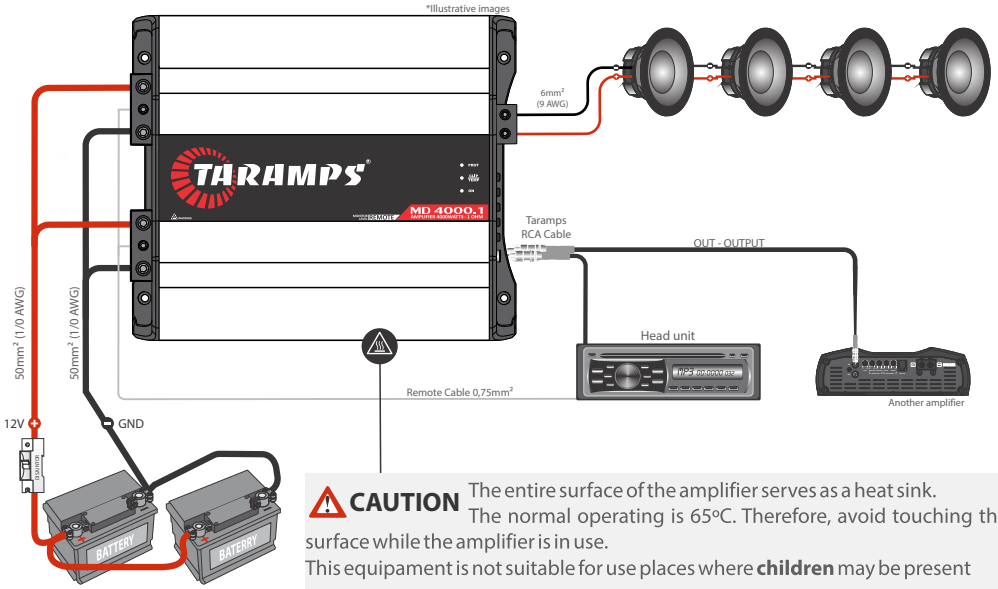
Recommended wiring gauge and fuse

Positive / Negative power cable_____**50mm²(1/0 AWG)**
Speaker output wire gauges_____**6mm² (9 AWG)**
Remote wire gauge_____**0,75mm² (18 AWG)**
Protective fuse or circuit breaker_____**180A**

Calculated considering a maximum length of 4m. For distances greater than this, it will be necessary to increase the cable gauge.

CAUTION The use of wiring with a smaller gauge than recommended causes power loss and overheating of the wiring.
Observe polarity, never reverse the power cables, as this may damage the amplifier.
It is mandatory to install fuse or circuit breakers as close as possible to the batteries.

OBS: In the case of drivers and tweeters, it is essential to install a passive filter on their positive terminals (refer to the manufacturer's manual).



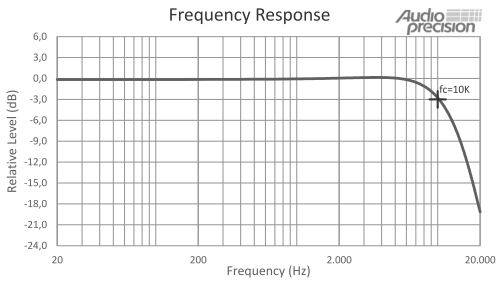
CAUTION The entire surface of the amplifier serves as a heat sink.
The normal operating is 65ºC. Therefore, avoid touching this surface while the amplifier is in use.
This equipament is not suitable for use places where **children** may be present

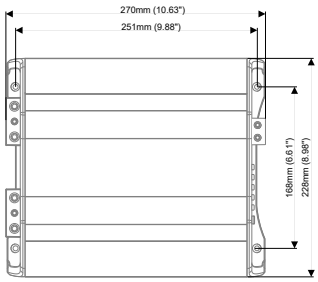
Examples of power input connections:
Obs: Minimum required battery bank capacity: 180Ah

Technical specifications

Minimum output impedance:	1 Ohm
Number of channels:	01
Rated power @14.4VDC*	
1 OHM:	4000W RMS
2 OHMS:	2680W RMS
4 OHMS:	----------
8 OHMS:	----------
Input sensitivity:	0.22 V ~ 4 V
Signal to Noise / Ratio :	>90dB
Frequency response (Full Range):	10Hz ~ 10KHz (-3dB)**
Crossover HPF (High pass filter):	10Hz ~ 90Hz (-12dB/8ª) Variable
LPF (Low pass filter):	90Hz ~ 10KHz (-12dB/8ª) Variable
Bass Boost: Freq.: Boost:	35Hz ~ 55Hz 0 ~10dB (50Hz)
Input impedance:	1K Ohms
Protection system:	Output short circuit, output short to ground, low impedance protection, high/low voltage protection, and thermal protection.
Minimum supply voltage:	9VDC
Maximum supply voltage:	16VDC
Idle consumption:	1.80A
Musical consumption @14.4VDC:	180A
Consumption at rated power:	360A
Dimensions (W x H x D):	228 x 70 x 270mm (8.98" x 2.76" x 10.63")
Weight:	2.90Kg (6.35lb)

*Rated power with a sinusoidal signal from 60Hz to 1KHz and THD <= 1% at the output, using a resistive load at the minimum impedance, measured with an audio analyzer (Audio Precision APx525 or equivalent performance and accuracy equipament), with the product at a maximum temperature of 50°C and supply voltage of 14.4V.
**Frequency response measured at twice the minimum impedance.
The values listed are typical and may vary slightly due to component tolerances or the manufacturing process.
For more information or questions, visit our website or contact TARAMPS support.





Declaration of conformity

Declaration of conformity

CE

TARAMPS ELECTRONICS LTDA
Alfredo Marcondes - SP
Brasil

It is hereby declared that the MD 4000.1 product is in conformity with directive 2014/30/EU, in accordance with the following technical standard.

-EN 50498:2010 Electromagnetic compatibility (EMC) - Product family standard for aftermarket electronic equipment in vehicles

The full text of the EU declaration of conformity is available on the product page on the website.

At the end of its service life, this product must not be disposed of with household waste. Please take it to an electronic equipament collection or recycling center for proper dispolsal.

Warranty terms

TARAMPS, located at Júlio Budisk highway, SN, KM 30 – Alfredo Marcondes, SP - Brazil, ZIP CODE 19180-120, warrants this product against any defects on terms of project, making, assembling, and/or with solidarity, due to project vices which cause it improper or inadequate to its original use within 12 months from the date of purchase. In case of defect during the warranty period, TARAMPS responsibility is limited to the repairing or replacement of the device of its own making.

This warranty excludes:

•Damaged products by improper installation, water infiltration, violation by unauthorized individuals;
•Tamper or torn warranty seal;
•Cases in which the product is not used in adequate conditions;
•Defects caused by accessories, modifications or features attached to the product;
•The product with damage from falling, bumps or nature related problems (flooding, lightning, etc);
•Warranty card is not properly filled or torn;
•Costs involving uninstallation, reinstallation of equipment as well the shipment to the factory;
•Damage of any kind, due to problems in the product, as well as losses caused by discontinued use of the product.

Technical support

For international support, check on our website:

www.taramps.com.br/en/rede-de-assistencias-tecnicas or contact directly the factory support:
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www.taramps.com.br

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