

# Instruction manual



**TS 400X4**  
AMPLIFIER - 400WATTS - 2 OHMS  
4 X 100W RMS



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

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## Introduction

Read this manual before preparing the product. In case of doubt, contact our technical support: **+55 (18) 3266-4050** or **[www.taramps.com.br/en](http://www.taramps.com.br/en)**

O amplificador **TS 400X4**, foi desenvolvido com a mais alta performance pros mais variados tipos de sistemas de som automotivo. É multicanal, sendo 4 canais de 100 Watts RMS, com potência máxima de 400 Watts RMS e com impedância de 2 Ohms.

OTS 400×4 é FULL RANGE tocando todas as frequências na medida certa para você. Possui proteção térmica e contra curto-circuito, além do LED indicativo e crossover.

## Safety requirements

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 is for use 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 protection fuse or a circuit breaker near to battery. Follow the ampere rating 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 make any connection to amplifier, disconnect the battery negative terminal.
- When in use, the external surface of may amplifier becomes hot. Avoid touching the heatsink area and keep childrens 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 proceed any connection or disconnection in this terminals.
- If you want to dispose this amplifier, don't throw it on domestic waste. It must be collected by an used electronic product disposal service for proper recycling.

## Safety

As you read this manual, pay attention to the safety symbols.

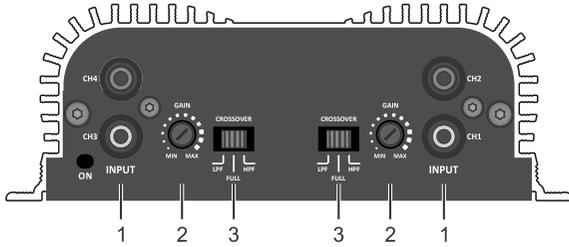


This symbol with "**CAUTION**" is intended to alert the user to the presence of important instructions. Failure to heed the instructions will result in risk of injury to user or product damage.



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.

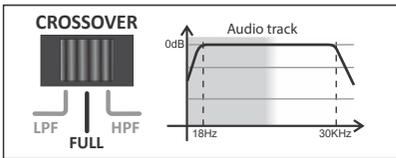
# Functions & inputs



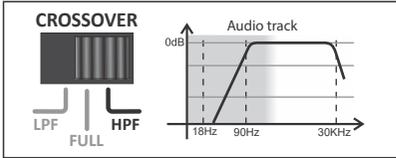
**1 - INPUT:** Inputs of signals to be amplified. Connect these signals to RCA outputs of Head Unit, using good quality shielded cables to avoid noise interference.

**2 - LEVEL:** It sets the amplifier input sensitivity, which allows an optimal adjustment to the output signals levels of nearly all models of Head Units found in the market.

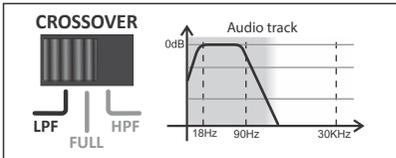
**3 - CROSSOVER:** Set the Aoperating mode of amplifier :



**SELECTOR POSITION - FULL**  
Amplifies the whole audio range, responding from 18Hz to 30KHz. This function is normally used when there is an external crossover in the system.

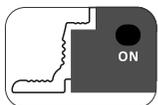


**SELECTOR POSITION - HPF - (HIGH PASS)**  
Amplifies signals with more intensity above 90Hz. This type of function is used mid-bass, mid-range speakers or tweeters.



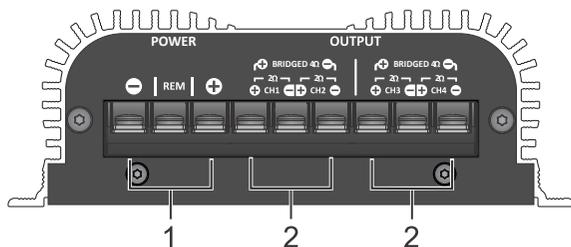
**SELECTOR POSITION - LPF - (LOW PASS)**  
Amplifies only bass signal, the response is limited to 90Hz (-12dB/8<sup>a</sup>), an optimal frequency cutoff for sub-woofers.

## LED indicator



ON: Indicates that amplifier is on.

# Output & power supply connector



**1 - POWER (Power Supply Connector):** The connector terminal (+) must be connected to the battery's positive pole with a 4mm<sup>2</sup> (minimum) wire gauge. The connector terminal (-) must be properly connect to the battery's negative pole with a same wire gauge. The remote terminal must be connected to the Head Unit REMOTE output with a 0.75mm<sup>2</sup> wire.

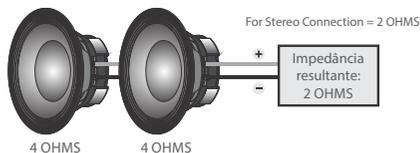
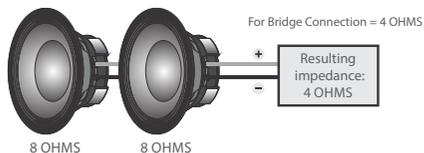
**CAUTION** Before making any connections to the power terminals, make sure that the negative (-) of the vehicle battery is disconnected.

**2 - OUTPUT:** To connect the speakers. Follow the polarity and the minimum impedance recommended.

For STEREO connections, the minimum impedance is 2 ohms at each channel; for BRIGDED connections is 4 ohms.

To combine speakers, the resulting impedance must be taken in consideration.

See the examples below:



## Protection system

**Short-circuit Protection:** Shutdown the amplifier when detect a short- circuit or impedance lower than the supported at the output.

**Thermal Protection:** The amplifier will shutdown if the heatsink gets too hot. Check the installation (speakers impedance, hot places or wrong installation).

# Installation

**CAUTION** All connections to power supply, input and output connectors must be carried out only with amplifier off.

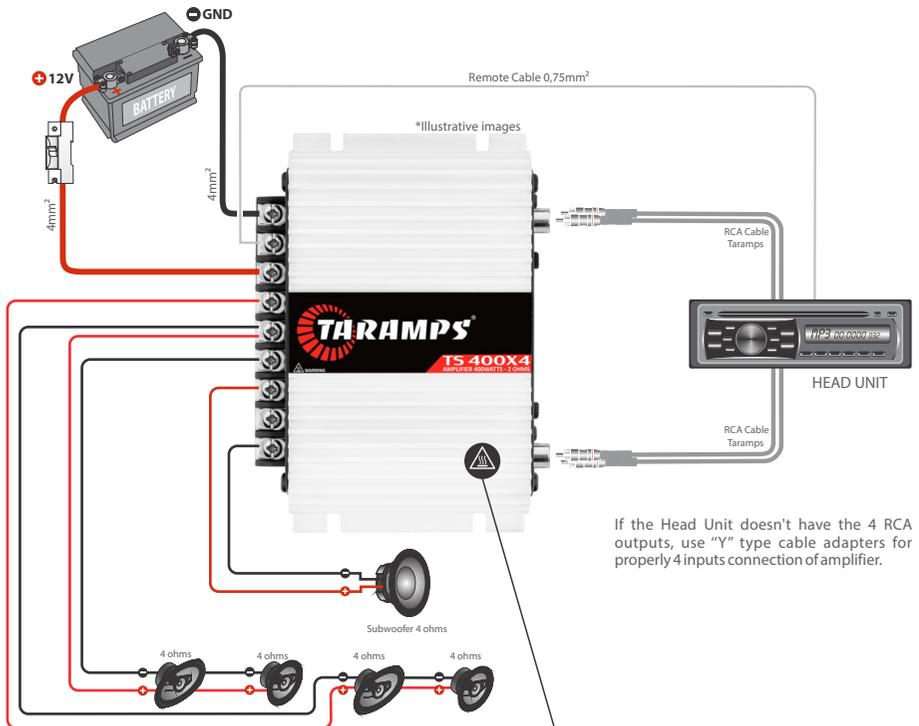
## Recommended wire gauge & fuse

Positive / negative power supply cable	11 AWG
Output cables wire gauge	15 AWG
Remote cable	18 AWG
Protection fuse or circuit breaker	20A

Calculated considering a maximum length of 4m. Distance greater than this, you will need to increase the cable gauges.

**CAUTION** Using wire gauges below the recommendation will result in power loss and overheating of wiring.

Check polarity and never reverse power supply cables due to the risk of damage to the amplifier. It is compulsory to install a protection fuses or circuit breakers as close as possible from batteries.



Connection example in the output: Stereo + Bridged

**Note:** In case of compression driver and tweeters you must install a passive filter in the positive terminal of the same ones (Consult transducer's manufacturer manual).

If the Head Unit doesn't have the 4 RCA outputs, use "Y" type cable adapters for properly 4 inputs connection of amplifier.

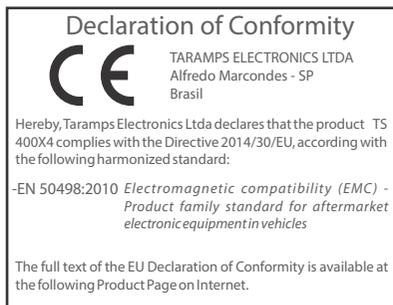
**CAUTION** The entire aluminum surface of the amplifier serves as a heat sink. The usually working temperature is 65°C. So, avoid contact with this surface when the amplifier is in use. This equipment is not suitable for use in places where children may be present.

## Technical features

Minimum output impedance:	2 Ohms
Number of channels	04
Rated power @13.8VDC - 2 OHMS:	400W RMS (4 x 100W RMS)*
Rated power @13.8VDC - 4 OHMS:	252W RMS (4 x 63W RMS)
2 Channels Bridged - 4 Ohms:	400W RMS (2 x 200W RMS)
Input Sensitivity (Level 100%):	200mV
Signal To Noise Ratio :	>90dB
Frequency Response (Full Range):	18Hz ~ 30KHz (-3dB)**
Crossover HPF (High pass filter):	90Hz (-12dB/8°) Fixed
LPF (Low pass filter):	90Hz (-12dB/8°) Fixed
Input Impedance	22K Ohms
Protection System	Output short circuit and thermal protection
Minimum Supply Voltage	8VDC
Maximum Supply Voltage:	16VDC
Idle Consumption:	0.8A
Musical Consumption @13.8VDC:	16.5A
Rated Power Consumption:	33A
Dimensions (W x H x L):	(140 x 48 x 100mm) 5.51" x 1.89" x 3.94"
Weigth:	0.45Kg (0.99lb)

- Rated power at 1KHz, resistive load at the indicated impedance, with THD  $\leq$  10% and V = 13.8V.

- Due to the natural tolerances of the internal components of the manufacturing process, the technical characteristics presented here may vary.



At the end of its useful life, this product must not be disposed of in household waste. Look for an electronic equipment collection or recycling center for proper disposal.

## Term of Warranty

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 Assistance

For international support, check on our website:

[www.taramps.com.br/en/rede-de-assistencias-tecnicas](http://www.taramps.com.br/en/rede-de-assistencias-tecnicas) or contact direct the factory support:

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