Instruction manual

TARAMPS®

TS 400X4

AMPLIFIER - 400WATTS - 2 OHMS
4 X 100W RMS

12~24V



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

www.taramps.com.br

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Introduction

Read this manual carefully before making any connections or using the product. If you have any questions, please contact our technical support: **+55 (18) 3266-4050** or **www.taramps.com.br/en**

The **TS 400X4** amplifier was developed to deliver high performance for a wide variety of car audio systems. It is a multi-channel amplifier with 4 channels of 100 Watts RMS each, a maximum power output of 400 Watts RMS, and a 2-Ohms impedance.
The TS 400X4 is FULL RANGE, reproducing all frequencies at the right levels for you.
It features thermal and short-circuit protection, as well as an indicator LED and crossover.
Supports 12 V (cars) or 24 V (trucks and buses) power systems.

Safety Requirements

- To ensure proper use, read this manual before using the amplifier. It is important that you understand the **CAUTIONS** described herein.

- This amplifier must be installed by a qualified professional.
- Wear safety glasses, insulated gloves, and use the proper tools when installing this product.
- This amplifier can be used in 12 V or 24 V systems. Always check the voltage before installation.
- This amplifier must be installed in a secure location with at least 1" (25 mm) of clearance around the heatsink to ensure proper heat dissipation.
- Never install the amplifier in locations exposed to dust, moisture, or water. Make sure to install it away from the fuel tank, fuel lines, heat sources, and other vehicle components.
- Make sure to install a protective fuse or circuit breaker near the battery. Follow the amperage specified in this manual. Using an incorrect fuse or circuit breaker may result in overheating, smoke, product damage, injury, or burns.
- Avoid routing wires over or through sharp edges. Use rubber or plastic grommets to protect any wires routed through the vehicle body.
- Before making any connections to the amplifier, disconnect the negative (-) battery terminal.
- When in use, the outer surface of the amplifier may become hot. Avoid touching the heatsink area and keep children away from the amplifier.
- This amplifier can produce high sound pressure levels. Avoid continuous exposure to levels above 85 dB to prevent permanent hearing loss.
- The speaker output connections may carry voltage when the amplifier is operating. Make sure the amplifier is TURNED OFF before making or disconnecting any connections at these terminals.
- If you wish to dispose of this amplifier, do not discard it with household waste. It must be collected by an electronic waste disposal service for proper recycling.

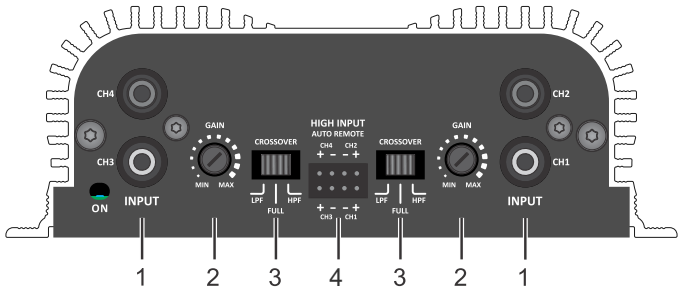
⚠ Safety

Throughout this manual, pay attention to the safety symbols.

⚠ CAUTION This **"Caution"** symbol is intended to alert the user to important instructions. Failure to follow these instructions may result in risks to the user or damage to the product.

Taramps reserves the right to modify the contents of this manual without prior notice and without any obligation to apply such modifications to previously manufactured units.

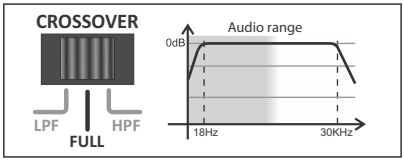
Functions and inputs



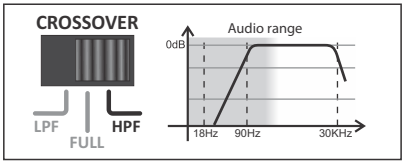
1 - INPUT (RCA): Inputs for the signals to be amplified. Connect them to the RCA outputs of the head unit using high-quality shielded cables to prevent noise pickup.

2 - LEVEL: Adjusts the amplifier's input sensitivity, allowing precise matching to the output signal levels of virtually all head units available on the market.

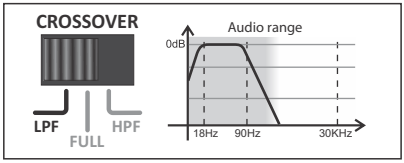
3 - CROSSOVER: Configures the amplifier's operating mode:



SELECTOR IN THE FULL POSITION
Amplifies the entire audio frequency range.



SELECTOR IN THE HPF (HIGH PASS) POSITION
Amplifies signals from 90Hz and above. This function is used for reproduction through mid-bass and midrange speakers, such as component speaker systems and 6x9" speakers.

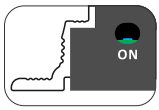


SELECTOR IN THE LPF (LOW PASS) POSITION
Amplifies only sub-bass and bass frequencies, as the frequency response is limited to 90Hz (-12 dB/octave), an ideal cutoff for subwoofers.

4 - HIGH INPUT (WIRE): Four-channel input for high-level/low-impedance signals (from the speaker outputs of head units or multimedia systems), featuring an automatic remote turn-on system compatible with factory multimedia systems with diagnostics (A.S.S. Advanced Speaker Simulation OEM HU). The REMOTE IN wire from the power connector is not required when using this input.

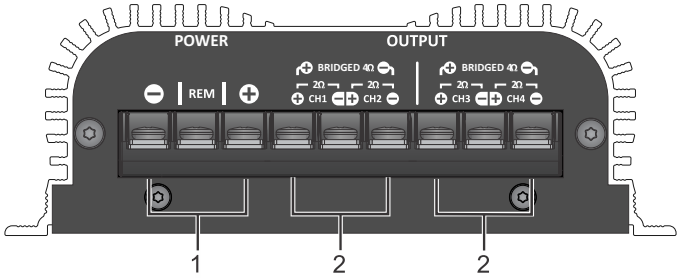
Note: *The system is designed for use with virtually all head units and multimedia systems on the market. However, automatic turn-on may not work with some units due to the type of audio output circuit. In this case, use the REMOTE wire for turn-on as usual.*

Indicator LED



ON: When lit, indicates that the amplifier is turned on.

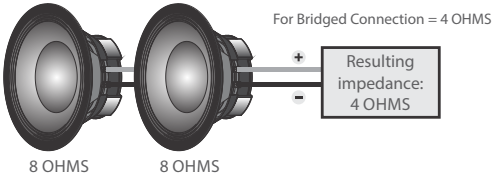
Output and power connector

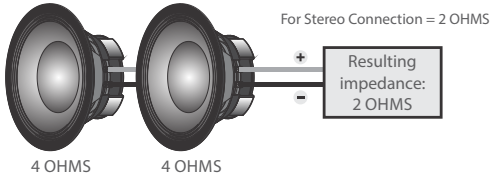


1 - POWER (Power Connector): The (+) terminal of the connector must be connected to the positive battery terminal using a cable with a minimum gauge of 4 mm^2 (11 AWG). The (-) terminal of the connector must be properly connected to the negative battery terminal using a cable with a gauge equivalent to the positive cable. The remote terminal must be connected to the REMOTE output of the head unit using a 0.75 mm^2 (18 AWG) cable.

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

2 - OUTPUT: For connecting the speakers. Observe the indicated polarity and the recommended minimum impedance.
Para ligações no modo STEREO, a impedância mínima é de 2 ohms em cada canal; no modo BRIDGED, é de 4 ohms.
For speaker configurations, the resulting impedance must be taken into account.
See the examples below:





Protection system

Short circuit protection: Cuts off the audio signal if a short circuit or an output impedance below the supported minimum is detected.
Thermal protection: The amplifier will shut down if the heatsink becomes too hot. Check the installation (speaker impedance, exposure to hot areas, or improper installation).

Installation (12 V)

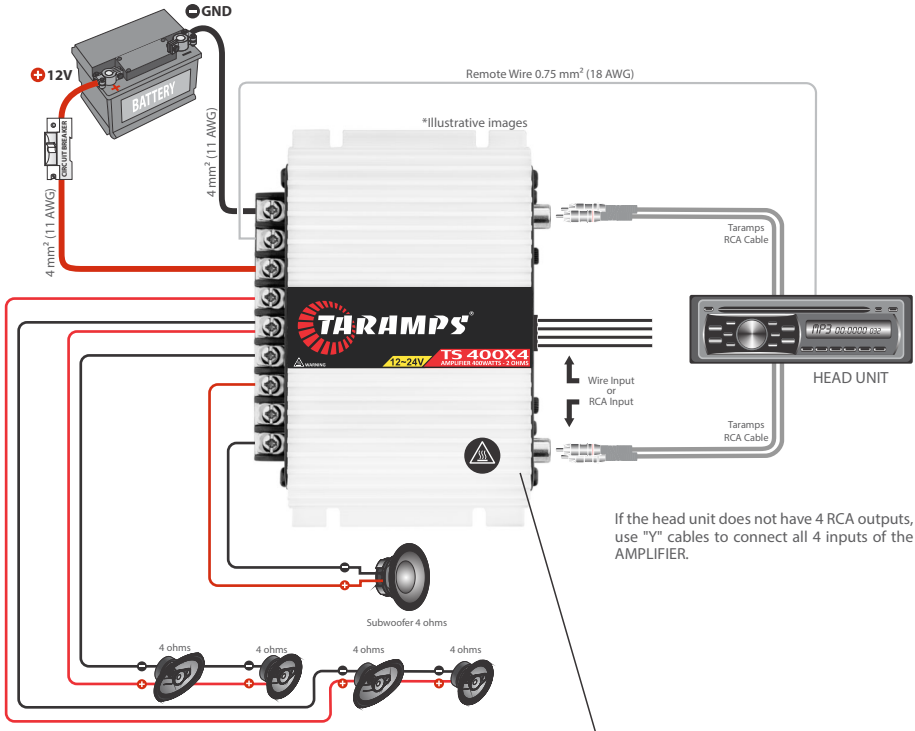
CAUTION deverá ser feita somente com o amplificador desligado.
Any connections to the power, input, or output connectors must be made only when the amplifier is turned off.

Recommended wire gauge and fuse

Positive / Negative power cable	**4 mm² (11 AWG)**
Output cable gauge	**1.5 mm² (16 AWG)**
Remote wire gauge	**0.75 mm² (18 AWG)**
Protection fuse or circuit breaker	**20A**

Calculated considering a maximum cable length of 4 m. For longer distances, larger wire gauges will be required.

CAUTION Using a wire gauge smaller than recommended may result in power loss and overheating of the wiring.
Observe the polarity. Never reverse the power cables, as this may damage the amplifier.
It is mandatory to install protective fuses or circuit breakers as close to the battery (or batteries) as possible.



Output Connection Example: Stereo + Bridged
OBS: For drivers and tweeters, a passive filter must be installed on their positive terminals (refer to the manufacturer's manual).

CAUTION The entire aluminum surface of the amplifier serves as a heatsink.
The normal operating temperature is 65°C. Therefore, avoid touching this surface while the amplifier is in use.
This equipment is not suitable for use in locations where children may be present.

Installation (24 V)

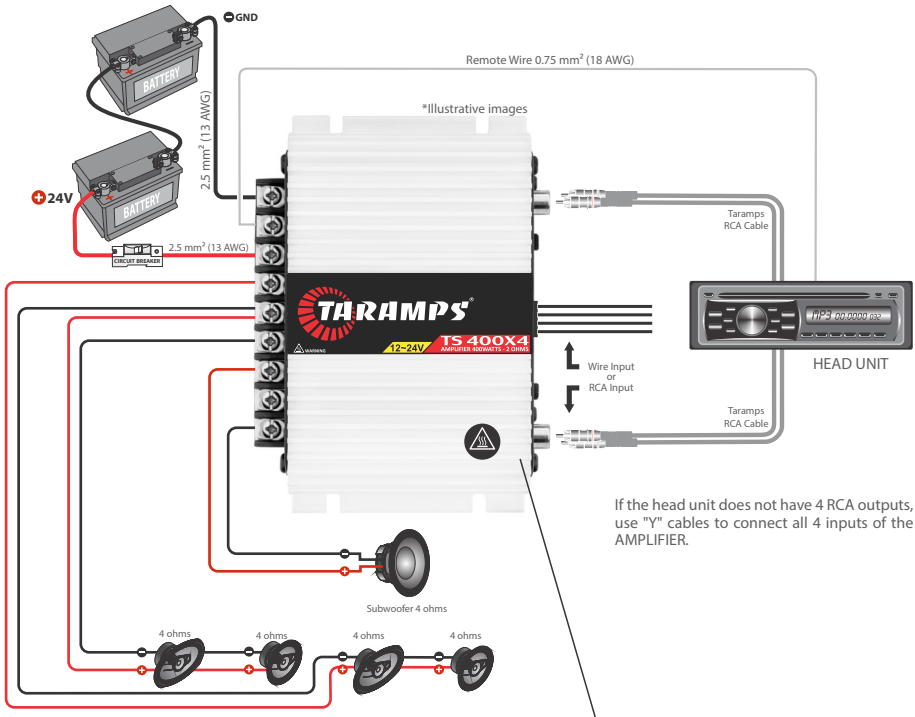
CAUTION Any connections to the power, input, or output connectors must be made only when the amplifier is turned off.

Recommended wire gauge and fuse

Positive / Negative power cable _____ **2.5 mm² (13 AWG)**
Output cable gauge _____ **1.5 mm² (16 AWG)**
Remote wire gauge _____ **0.75 mm² (18 AWG)**
Protection fuse or circuit breaker _____ **20A**

Calculated considering a maximum cable length of 4 m. For longer distances, larger wire gauges will be required.

CAUTION Using a wire gauge smaller than recommended may result in power loss and overheating of the wiring.
Observe the polarity. Never reverse the power cables, as this may damage the amplifier.
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Características técnicas

Minimum Output Impedance:	2 Ohms
Number of Channels:	04
Rated Power @12.6 VDC - 2 OHMS:	400W RMS (4 x 100W RMS)*
Rated Power @12.6 VDC - 4 OHMS:	250W RMS (4 x 63W RMS)
2 Bridged Channels - 4 Ohms:	400W RMS (2 x 200W RMS)
Input Sensitivity (Gain = Max):	180mV
Input Sensitivity (Gain = Min):	4V
Signal to Noise - Ratio:	>90dB
Frequency Response (Full Range):	10Hz ~ 26KHz (-3dB)**
Crossover HPF (High Pass Filter):	90Hz (-12dB/8ª) Fixed
LPF (Low Pass Filter):	90Hz (-12dB/8ª) Fixed
Input Impedance:	10K Ohms (RCA)
Protection System:	Output short circuit
Minimum Supply Voltage:	8VDC
Maximum Supply Voltage:	32VDC
Idle Current Draw:	0.6A (12.6V) / 0.30A (24V)
Music Current Draw @14.4 VDC:	19A
Rated Power Current Draw:	43A (12.6V) / 21.5A (24V)
Dimensions (W x H x D):	140 x 48 x 101 mm (5.5" x 1.9" x 3.9")
Weight:	0.46 kg (1.01lb)

Notes:

*Rated power with a 1 kHz sine wave signal and THD ≤ 10%, using a resistive load at the minimum impedance, measured with an Audio Precision APx525 audio analyzer or equipment with equivalent performance and accuracy, with the product at a maximum temperature of 50°C and a supply voltage of 12.6 V.

**Frequency response measured at twice the minimum impedance.

The values shown are typical and may vary slightly due to component tolerances or the manufacturing process.

Declaration of conformity

Declaration of Conformity

CE

TARAMPS ELECTRONICS LTDA
Alfredo Marcondes - SP
Brazil

Declares that the TS 400X4 V7 product complies 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 online.



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

Warranty terms

TARAMPS, located at Júlio Budisk Highway, SN, KM 30 - Alfredo Marcondes - SP, ZIP Code 19.180-120, warrants this product against defects in design, manufacturing, assembly, and/or design-related defects that render it unfit or unsuitable for its intended use, for a period of 12 months from the date of purchase.

In the event of a defect during the warranty period, TARAMPS' liability is limited to the repair or replacement of the product manufactured by TARAMPS.

This warranty excludes:

• Products damaged due to improper installation, water ingress, or tampering by unauthorized persons;
• Warranty seal that has been altered or torn;
•Products not used under normal operating conditions;
•Defects caused by accessories, modifications, or equipment connected to the product;
•Damage to the product resulting from drops, impacts, or natural events (floods, lightning, etc.).;
•Warranty card that has not been completed or has been altered;
•Costs of removing and reinstalling the equipment, as well as transportation to the technical service center;
•Damages of any kind resulting from product-related issues, as well as losses caused by interruption of use.

Technical support

For international support, check on our website:
www.taramps.com.br/en/rede-de-assistencias-tecnicas or contact direct the factory support:
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Made in Brazil
www.taramps.com.br

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