

# Instruction manual



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

# Index

## 01 • Introduction

- Presentation

## 02 • Key recommendations

- Security requirements
- Safety

## 03 • Electrical network connections

## 04 • Output connector & AC power

- indicator LEDs

## 05 • Use of parallel power supply

- Battery charger & amplifier power

## 06 • Technical features

## 07 • Term of warranty

- Technical assistance

## Introduction

Congratulations on your purchase of a Taramps product.

It was developed in a modern laboratory and with the latest technology.

This manual covers all features, operations and instructions to solve any doubt that may arise during the installation. Please take some time to read it carefully in order to ensure the proper installation and the use of all benefits that this product can offer.

For questions, please call **+55 (18) 3266-4050**, e-mail **support@taramps.com.br** or visit **www.taramps.com.br**.

## Presentation

The automotive power supply/battery charger **PRO CHARGER 50A** is a modern and efficient battery charger/ power supply for automotive system sound, delivering 50A current continuously.

It uses a digital controller PWM (pulse width modulation) driving IGBT (insulated gate bipolar transistor) in a HALF Bridge configuration, that provide a great performance and stability.

- Robust aluminum casing, with a modern design and great heat dissipation.
- PCB (Printed circuit board) in woven glass (FR4) mounted on automatic process, ensuring quality and robustness.
- Current control: Check all time the current and limit into nominal values.
- Over temperature protection: if the temperature increase so much, the system automatic decreases the output power, avoiding overheating.
- Output short circuit protection. **CAUTION: NEVER REVERSE OUTPUT POLARITY.**

## Key recommendations

- 1- Never uses electric extension less than recommended. The electrical outlet must support the power specified. (see page 03/04).
- 2- This equipment is automatic dual voltage. The input AC voltage must be above 100VAC for 110/127VAC, and above 200VAC for 220VAC.
- 3- Never open it. There is no parts to be replaced by the user.
- 4- Install this equipment on secured and ventilated places. Never install on sound box.
- 5- Avoid installing in locations subject to sunlight.

## Security requirements

- To ensure proper use, read this manual before using the power supply. It is important that you are aware of the **CAUTIONS** contained herein.
- Installation of this product must be performed by a qualified professional.
- This product must be installed in a firm location with at least 1" (25mm) of space around it for proper heat distribution.
- Never install in locations exposed to dust, moisture, water, or near heat sources.
- Do not open. This product is not user-serviceable.
- Do not block or insert objects into the amplifier's ventilation openings.
- Avoid dropping, as this may damage the product.
- Disconnect the product from the power supply during storms or when leaving it unused for an extended period.
- When in use, the outer surface of the power supply heats up, especially on the top. Avoid contact in this area and keep out of reach of children.
- Ensure the power supply is OFF before proceeding with any connection or disconnection at these terminals.
- If you wish to dispose of this product, do not throw it in household waste. It should be collected by an electronic waste disposal service for proper recycling.

## ⚠ Safety

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

The "**Caution**" symbol is intended to alert the user to important instructions.

**⚠ CAUTION** Failure to follow instructions could result in risk to the user or damage to the product.

# Electrical network connections

**OUTLET:** The socket must be sized to resist the maximum current drawn by the power supply.

## ⚠ CAUTION

The user must check if the outlet/ power board is suitable for installing the product according to the usage voltage.

If the electrical installation is not adequate, the performance and efficiency of the power supply will be compromised.

We recommend that the electrical installation be carried out by a qualified professional.

**EXTENSION CORD:** (Optional, not included with the product).

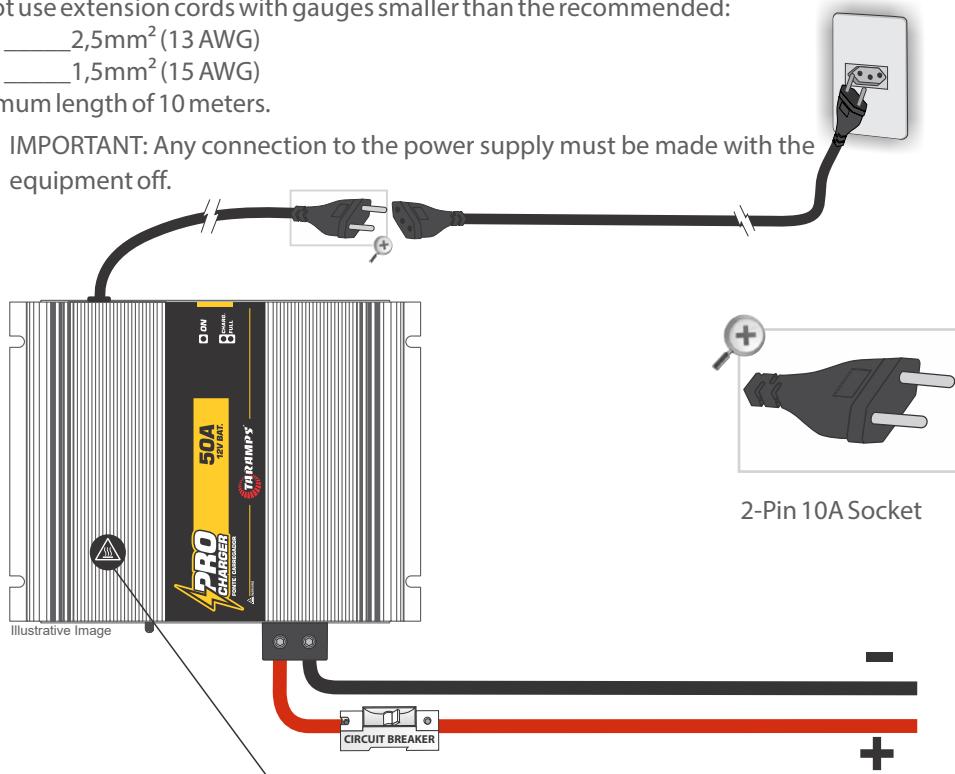
Do not use extension cords with gauges smaller than the recommended:

127V: \_\_\_\_ 2,5mm<sup>2</sup> (13 AWG)

220V: \_\_\_\_ 1,5mm<sup>2</sup> (15 AWG)

Maximum length of 10 meters.

→ **IMPORTANT:** Any connection to the power supply must be made with the equipment off.



## ⚠ CAUTION

### BATTERY CABLES:

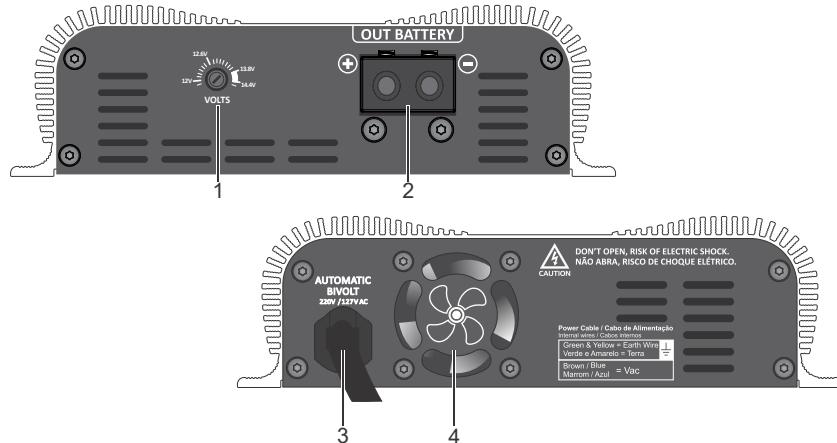
Do not use cables with gauges smaller than recommended:

It is indispensable to install a circuit breaker near the power supply.

Cable: 10mm<sup>2</sup> (7AWG)

Circuit Breaker: 60A

# Output connector & AC power



**1 - VOLTS:** Ajust the output voltage from 12.4V to 14.4V.

IMPORTANT: Do the voltage adjustment before of connect the loads.

For automotive battery recharge, it is recommended to set the output voltage greater than 13.8V.

**2 - OUT BATTERY:** Connect the positive and negative battery cabbles.

(See recommended gauges on page 03).

IMPORTANT: NEVER REVERSE BATTERY OUTPUT POLARITY.



**CAUTION** Before making any connections to the battery(ies), make sure you have the correct polarities.

**3 - AC POWER:** The PRO CHARGER 50A is automatic bivolt (127/220V).

See recommended specifications on 03 page.

**4 - FAN:** The cooling fan keep on while the PRO CHARGER 50A is AC Powered.

IMPORTANT: Never obstruct the fan and leave a 5cm space on the sides.



**CAUTION** The fans and ventilation openings are responsible for cooling the power supply when it is in use, so it cannot be obstructed.

## Indicator LEDs



**LED ON:** The ON (led indicator) keep on while the power suply is connected at AC POWER.



**CHARG.:** Indicates that the source is up to date for battery charge or sound system current.

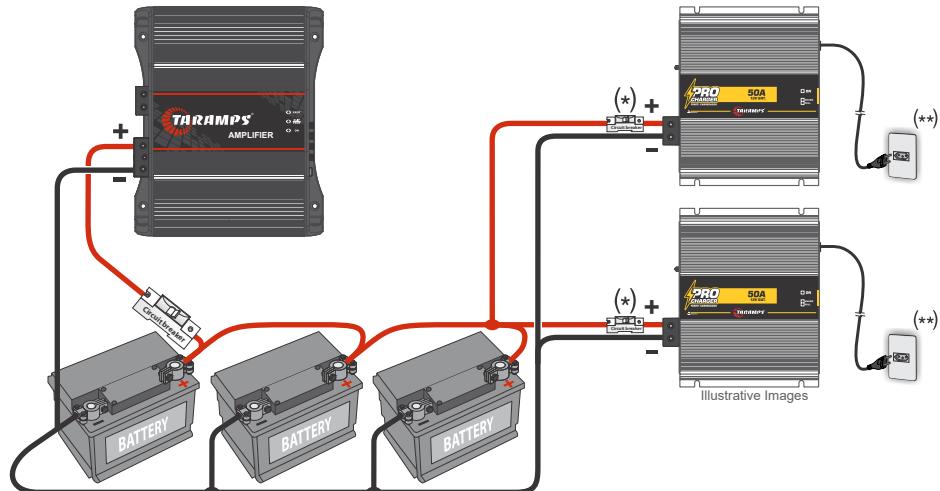


**FULL:** Indicates the battery is charged/floating.

## Use of parallel power supply

Many power supply/battery charger can be used on parallel mode. The output voltage of all power supply/battery charger must be at the same output voltage of the PRO CHARGER 50A. First adjust the voltage of all power suppliers/battery chargers and then do the connections.

The maximum output current will be the sum of each power supply/battery charger. Example: 2 power suppliers/battery chargers PRO CHARGER 50A will supply 100A of total current.



(\*) Use circuit breaker like indicated for each power supply/battery charger.

(\*\*) Use individual AC Power Input as recommended for each power supply/battery charger on page 03.

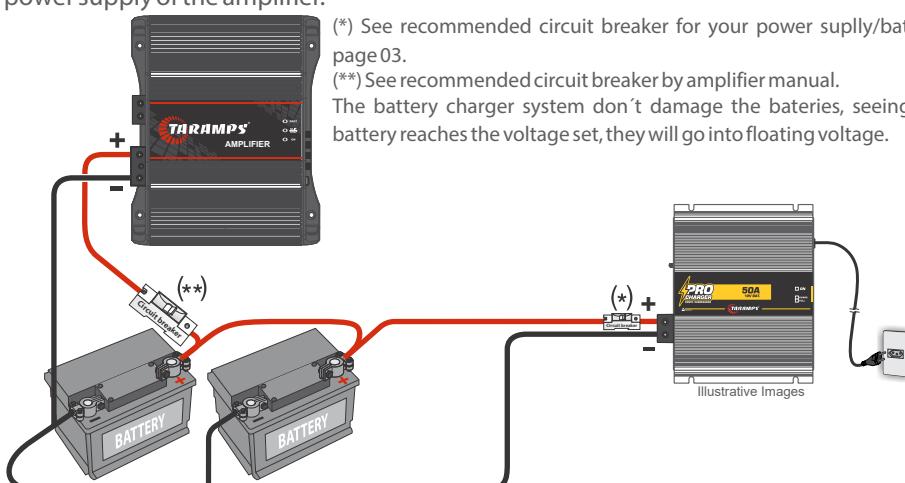
## Battery charger & amplifier power

In this case, beside charging the batteries, the PRO CHARGER 50A will assist the batteries in the power supply of the amplifier.

(\*) See recommended circuit breaker for your power supply/battery charger on page 03.

(\*\*) See recommended circuit breaker by amplifier manual.

The battery charger system don't damage the batteries, seeing that when the battery reaches the voltage set, they will go into floating voltage.



## Technical features

AC Input Voltage:	Bivolt Automatic (127 / 220VAC)
AC Input Voltage 127V:	100 ~ 140V AC
AC Input Voltage 220V:	200 ~ 240V AC
Maximum Output Current(*):	50A
Maximum Output Power Rating:	660W
Efficiency:	90%
Maximum Input Current 127V:	12A
Maximum Input Current 220V:	10A
Maximum Float (50A @12.6V):	<5%
Output Voltage:	12V ~ 14.4V ± 2%
Dimensions (WxHxD):	182 x 52 x 170mm / 7.16"x2"x6.69"
Weight:	1.20Kg / 2.64lb

**Short-circuit and overload protection:** Limits maximum short-circuit and overload current.

**Thermal protection:** Reduces output power if the internal temperature rises, automatically returning to full power with a reduction in temperature.

Note:

(\*) Nominal output current, measured with resistive load, output voltage of Source = 12.6V and mains voltage = 127V / 220V.

## 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:

Phones: +55 18 3266-4050 / +55 18 99749-3391

E-mail: [service@taramps.com.br](mailto:service@taramps.com.br)



 +55 18 3266-4050

Manufactured by:  
TARAMPS ELECTRONICS LTDA  
Tax ID: 11.273.485/0001-03  
Júlio Budisk Rd, SN, KM 30  
Alfredo Marcondes - SP  
Made in Brazil  
[www.taramps.com.br](http://www.taramps.com.br)