Instruction manual

TARAMPS®

THS 4600
2 x 200W RMS
CLASS D

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

www.taramps.com.br

Índice

Introduction

Congratulations on purchasing a Taramps product.
Developed in a modern laboratory, with highest technology and highly qualified professionals.
This manual explains all the resources, operations and guidelines for resolving questions that may arise in your installation. Take a time to read it carefully and ensure the proper installation and use of all the benefits that this product can offer.
In case of doubt even after reading this manual, please contact our technical support at the number **+55 18 3266 4050** or our website **www.taramps.com.br/en**

Presentation

The TARAMPS THS 4600 is a Multi Channel Receiver developed with high technology to integrate different environments. Compact and powerful it can be used in several applications providing quality sound.
Application examples:
- Environment sound for stores, shops and clinics. It also allows, through the microphone input, that warnings are transmitted via the sound system.
- In your leisure area, gourmet space, country house, etc. Including various audio input options, such as Bluetooth, Micro SD, AUX and USB, it allows the audio sources to be easily changed giving the user flexibility in choosing the preferred audio.

The equipment is automatic bivolt and can be connected to any power plug between 90 and 240V. It features a switching power supply, which is more efficient in electrical energy consumption.
To turn the device on and off, use the ON/STB switch located on the front of the unit. Keep the product turned off when not in use.
If the product will not be used for along period, we recomended unplugging it from the power outlet.

Recomendações importantes

- The THS 4600must be installed in a firm and ventilated place, away from heat and humidity places. Avoid locations with direct sunlight.
- Do not block the ventilation holes on the top and rear.
- Avoid falls and impacts.
- Carefully observe the polarity and impedance of the loudspeakers.
- Use cables according to the distance between the THS 4600 and the loudspeakers.

The table below shows the recommended gauges according to the distances:

Up to 20 m	Cables with gauge greater than or equal to	**1 mm²**
Up to 40 m	Cables with gauge greater than or equal to	**1,5 mm²**
Up to 70 m	Cables with gauge greater than or equal to	**2,5 mm²**
Up to 100 m	Cables with gauge greater than or equal to	**4 mm²**

In case of unwanted noise make sure that the cables and connections are in good condition.Leave the volume at minimum on unused channels.

Audio source

The THS 4600 has the following audio inputs:

1. USB: Flash drive input *
2. MICRO SD CARD *
3. AUX (front): P2 standard auxiliary input.
4. AUX1 and AUX2: RCA standard auxiliary inputs.
5. BLUETOOTH
6. FM Radio
7. Microphone input (standard P10)
8. Optical Input

* The connected device must contain music in MP3 format to be identified by the equipment. Maximum supported size: 64GB.

⚠ We advise you to always have a good antivirus, so there are no problems with the Flash Drive or micro SD card when connecting to the product. Infected devices may cause undesirable effects to the THS 4600, such as: Slow music reading and general failures.

Do not use the USB input to connect to the computer or to recharge other devices that have batteries.

Package content

• 01 Receiver Multi Channel THS 4600

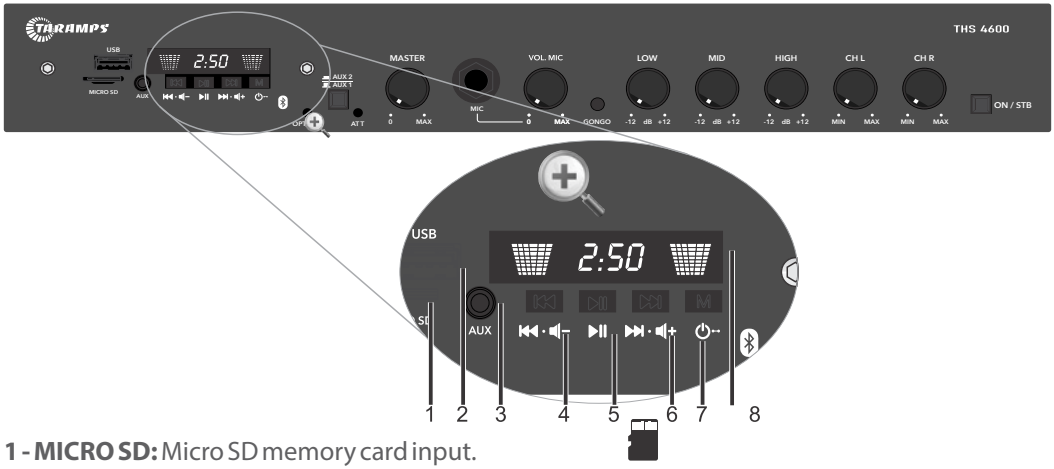
• 01 Remote Control

• 01 Optical Cable

• 01 Bluetooth Antenna

Illustrative images

Front panel



1 - MICRO SD: Micro SD memory card input.
(The card must be positioned as the image shows, with the terminals facing up)

2 - USB: Input to Flash Drive.

3 - Aux. (Conector P2): Receives audio signal from the P2 output of your phone, tablet, MP3, computer, among others. Use good quality cable to avoid unwanted noise.

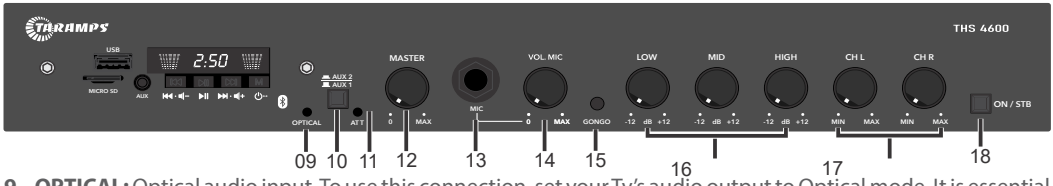
4 - Track - / Volume -:
Short press: Moves back through music tracks when USB/SD/BLUETOOTH sources are selected. Decreases the FM tuning frequency by 0.1MHz.
Long press: Decreases the overall volume. Automatically searches for the previous FM station.

5 - Play / Pause:
Short press: Pauses or starts music playback for USB/SD/BLUETOOTH. Advances to the next saved FM station memory position.
Mute for the AUXILIARY option
Long press: Performs FM station search and stores them in memory

6 - Track + / Volume +:
Short press: Advances through music tracks when USB/SD/BLUETOOTH sources are selected. Increases the FM tuning frequency by 0.1 MHz.
Long press: Increases the overall volume. Automatically searches for the next FM station.
7 - Mode / ON/OFF:
Short press: Selects the following functions: USB/SD/AUXILIARY/BLUETOOTH/FM.
Long press: Turns the player on or off, keeping only the microphone input active.

8 - Display LED - IR sensor for the remote control: To improve communication between the remote control and the device, point the remote toward this area on the display.

Front panel (cont'd)



9 – OPTICAL: Optical audio input. To use this connection, set your Tv's audio output to Optical mode. It is essential that the digital output formart is set to PCM. If loud noises are heard, this indicates that the received signal is incompatible, check the audio settings in your Tv's menu and select the PCM option (refer to the manufacturer's manual if necessary).

10 - AUX1 or AUX 2 Key: Button pressed: Selects the AUX1 input
Button not pressed: Selects the AUX2 input. (Rear panel inputs).

11 - ATT: LED audio attenuation indicator.
When identifying an audio signal from the microphone input or emitting the ding-dong signal (GONGO), the equipment attenuates the output signal, allowing higher evidence of the microphone. After 2 seconds without using the microphone, it returns to the state without attenuation.
It is possible to enable or disable this function. See page 05 (Function configuration mode).

12 - MASTER: Controls the overall volume of the Bluetooth, USB, Micro SD, FM, AUX, AUX1, OPTICAL, and AUX2 inputs.

13 - MIC: P10 Microphone input
Microphone Recommendations:
- The microphone signal has a low amplitude, so improper use can cause unwanted noise.
- Use quality cables and connectors.
- Do not wrap the microphone cables.
- Do not pass the microphone in front of the loudspeakers. This causes microphone feedback.

14 - VOL. MIC: Adjusting the volume of the microphone and the GONGO (ding-dong). If you do not use the microphone and GONGO, it is recommended to keep the volume to a minimum.

15 - GONGO: GONGO activation Key.
When this key is pressed, the audio is attenuated and shortly after the gongo sound will be heard.

16 - EQUALIZATION: Channel equalization adjustment:
LOW = It operates in the bass frequencies.
MID = It operates in the mid range frequencies.
HIGH = It operates in the high frequency range.

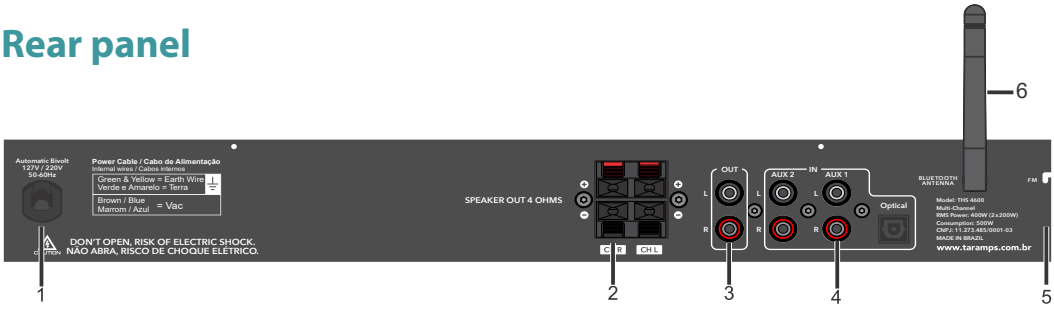
17 - CHL / CHR : Adjusts the volume of each channel (L or R).

18 - TECLA ON/STB: Turns the device on and off, placing it in standby mode

Protection system

The THS 4600 features a protection system agains short circuits and low impedance on the outputs.
When the protections are triggered, the ATT LED blinks and the audio outputs is temporaly muted. After 2 seconds, the audio is restored.
If the protection system is frequently triggered, check the settings and the installation of your sound system.

Rear panel



1 - POWER CABLE: Plugged it into a powered outlet. This product operates from 127V AC to220V AC.

2 - SPEAKER OUT: Power outputs for connecting loudspeakers. In this case, there are two possible connection options: Two high power stereo channels, or one channel for mid and high frequencies and another for a passive subwoofer.
Follow the indicated polarity and the recommended minimum impedance.

3 - OUT: The LINE OUT output allows to send the audio signal (not amplified) to other equipment, such as another THS 4600, an amplifier or active subwoofer.
This signal passes through the device's equalization adjustments (LOW, MID e HIGH).

4 - INPUT AUX 1, OPTICAL e AUX 2: Audio inputs.
To use these inputs, the device must be in the AUX or DIRECT AUX function.
Use the front AUX1 and AUX2 buttons to select the desired input. The OPTICAL input is independent of the position of the AUX1/AUX2 switch on the front panel.
When using the OPTICAL input, the AUTO TURN ON/OFF system automatically turns the device on and off whenever an optical signal is detected at the input. This function can be disabled according to the configuration instructions on page 05.

IMPORTANT: Fot the optical signal to work correctly, the TV or signal source must be configured as standard PCM output. Strong noises indicate that the received signal is not PCM standard. In this case, check the TV menu to see if the digital audio output format is PCM. (Consult your TV manufacturer's manual).

5 - ANTENA FM : External antenna for batter FM signal reception.
Position the antenna in the best possible way to obtain optimal FM reception.

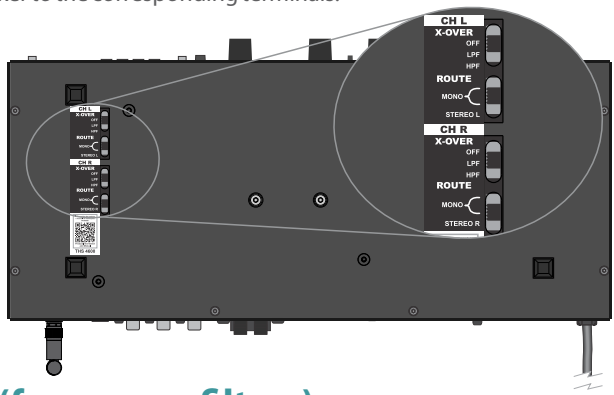
6 - ANTENA BLUETOOTH : External antenna to improve Bluetooth reception and range.

Function configuration mode

Settings are made using the **GONGO** key. Example: With the device turned off, press and hold the **GONGO** key for more than 5 seconds and the blue LEDs **OPTICAL** and **ATT** will light up.
A short press will turn off the **ATT LED**, indicating that attenuation is disabled
With another short press, the **OPTICAL LED** will turn off and the **ATT LED** will light up, indicating that only the **OPTICAL AUTOTURN** is disabled.
With another short press, both LEDs will turn off, indicating that **ATT** and **OPTICAL** are disable. To enable the desired function, press the **ON/STB** key, and the device will turn on.

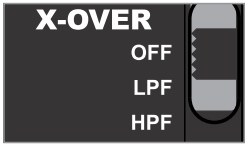
Output configurations

The CHL and CHR outputs can be configured, for example, as two stereo outputs with two high power channels.
The THS 4600 features three resources: Two X-OVER switches to activate frequency filters according to the type of enclosure used, two ROUTE switches to route the input signal to the outputs, and MONO output connectons.
The X-OVER and ROUTE switches are located on the bottom side (image below), recessed into the unit to prevent accidental activation. Each switch operates on one output and can be configured, for example, as two STEREO outputs with two high power channels, or one channel for MID and HIGH frequencies and another for passive SUBWOOFER enclosures.
The MONO connectons are located on the rear panel, at the SPEAKER OUT output connectors, simply connect the loudspeaker to the corresponding terminals.



X-OVER key (frequency filters)

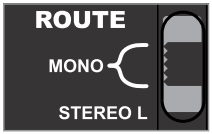
These keys activate the frequency filters of the respective channels. The HPF and LPF filters complement each other and are ideal for combined use, i.e. in separate bass systems with a passive woofer or subwoofer box.
The HPF filter used independently can help increase performance, durability and even improve distortion in small speakers that are not capable of reproducing bass efficiently. The settings are:
OFF: Frequency filters turned off, with no effect.
LPF: Low pass mode frequency filters. These filters only allow low sounds to pass through. Use these filters if you connect a passive woofer or subwoofer speaker.



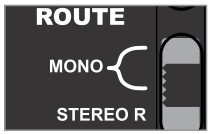
HPF: High pass mode frequency filters. These filters only allow bass-mids, mids and highs to pass through. Use these filters if you are connecting sconce-type speakers or small speakers that are not capable of reproducing sub-bass.

Chave ROUTE (roteamento)

These switches select which L or R (left or right) channel of the source being played will be routed to the CH L or CH R outputs. The playback source may be USB, FM, Bluetooth, AUX1, AUX2 or OPTICAL, and must be selected using other controls. The options are:



ROUTE CH L:
MONO: Routes the mix of the R and L input channels to the L output.



ROUTE CH R:
MONO: Routes the mix of the R and L input channels to the R output.

Remote Control Function

The THS 4600 features a compact remote control, allowing you to conveniently operate the device from a distance.

ON / OFF: Touch this key to turn the player on or off.

MODE: Switch the audio source (USB, BLUETOOTH, SD, AUXILIARY, FM).

MUTE

PLAY / PAUSE: Pause or start the music to USB / SD / BLUETOOTH.
FM: Short press: Advances next saved memory location of FM stations.
Long press: Searches for FM stations and saves them in memory.

TRACK Moves back to the previous track (Short press)
FOLDER - Moves back to the previous folder (Long press)
FM: Short press: Decreases the frequency by 0.1 MHz.
Long press: Automatically searches for the previous station.

TRACK Advances to the next track (Short press)
FOLDER + Advances to the next folder (Long press)
FM: Short press: Increases the frequency by 0.1 MHz .
Long press: Automatically searches for the next statio

EQUALIZATION: Pop / Rock / Jazz / Country / Normal.
Does not work in auxiliary mode.
FM: Short press: Moves back to the previous saved FM station memory position

VOL-: Decreases the volume

VOL+: Increases the volume

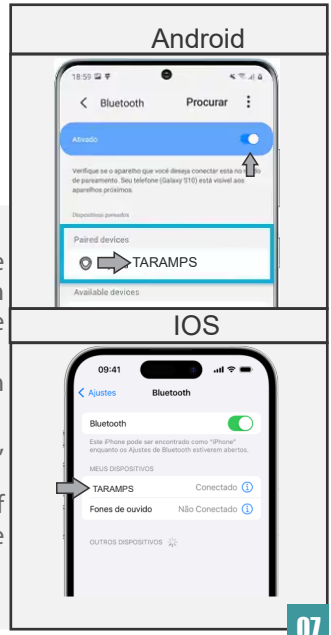
REPEAT: Repeat Options / MP3 Playback

NUMERIC KEYS: FM: Long press saves the FM station.

OBS: The SNC, REC and STOP keys have no function.

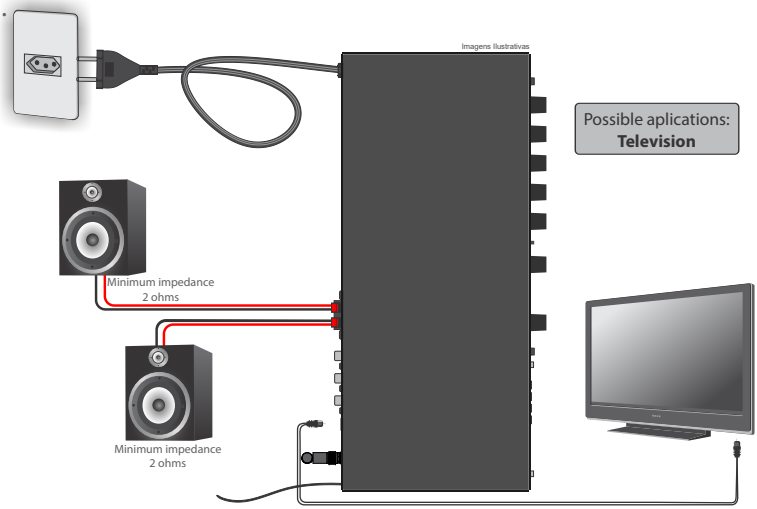
Bluetooth

When selecting the Bluetooth functions (identified as "bt" on the display), the THS 4600 waits for a Bluetooth connection. Search using your cellphone, tablet, PC, or another device for the name "TARAMPS" and perform the pairing.
- To connect a new device, disconnect the current one and perform a new pairing
Bluetooth Specifications: Class II with a maximum range of 50m, which may vary depending on the environment.
* Some televisions have an audio outputs system via Bluetooth. If your television this feature, it is possible to stream the audio to the THS 4600. Refer to your television manufacturer's manual.
For other devices, the connection system is similar (Refer to the manufacturer's manual).



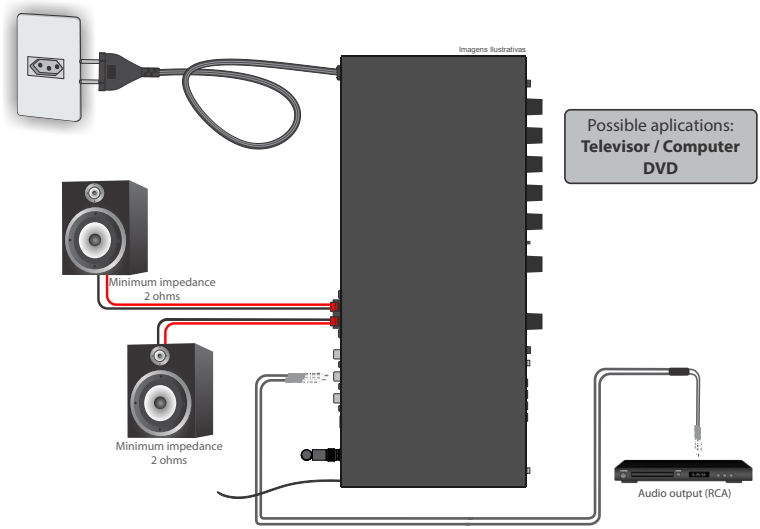
Example of using OPTICAL input

Select AUX mode using the "MODE" key. Set the TV to standard PCM output.
AUTO TURN ON: when the TV sends an optical signal, the device will automatically turn on and the OPTICAL LED will light up on the front panel. When there is no optical signal, the device turns off after 10 seconds.
The AUTO TURN ON function can be deactivated according to the configuration instructions on page 05.



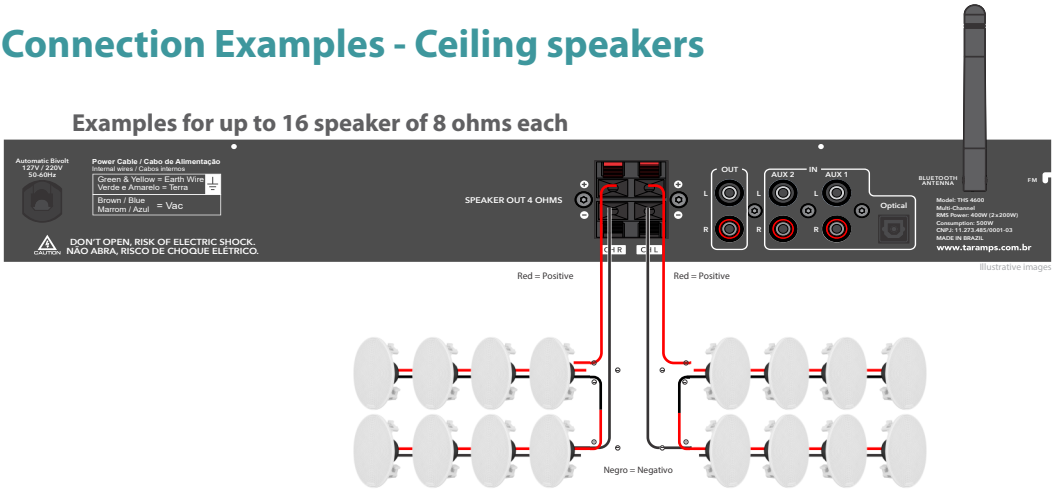
Example of RCA input use (AUX 2)

Select AUX mode using the "MODE " button, with the AUX2 button not pressed



Connection Examples - Ceiling speakers

Examples for up to 16 speaker of 8 ohms each



To connect to wall lights, use cables with a minimum gauge of 1.5mm^2 for up to 40 meters. For longer distances, see table on page 02 “Important recommendations”. It is necessary to make connections in parallel and series as shown in the example, to match impedance.

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 Assistance

For international support, check on our website:
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

Technical specifications

TARAMPS THS 4600:	Receiver Multi Channel Classe D
Number of channels:	02
RMS Power:	400W (2 X 200W) **ABNT NBR IEC 60268-3***
Nominal RMS output voltage of each channel:	28,4V RMS
Total Harmonic Distortion + Noise (THD + N) at the nominal power of each channel (200W)	<10%
Nominal impedance of each channel	4 Ohms
MIC Sensitivity:	10 mV
AUX input sensitivity:	200 mV
MIC input impedance:	2,2K Ohms
AUX input impedance:	5K Ohms
Frequency response (Equalizers set to 0dB):	15 Hz a 50 KHz (-3 db) - 4 OHMS
Typical operation of a 3 way equalizer:	
Low (bass):	±12 dB - 80 Hz
Mid (midrange):	±12 dB - 2 KHz
High (treble):	±12 dB - 10 KHz
Crossover	
HPF (High pass filter):	100 Hz(-12 dB/8ª)Fixed
LPF (Low pass filter):	100 Hz(-12 dB/8ª)Fixed
Power Supply:	90 to 140V AC or 190 to 240V AC
Maximum consumption:	750 W
Standby consumption:	8 W
Internal protection fuse:	6 A
Protection system:	Thermal protection, output short circuit, and low impedance protection
Signal to noise ratio:	>82 db
FM frequency range:	76 MHz to 108 MHz
Dimensions:	398 x 59 x 194 mm (15.67" x 2.32" x 7.64")
Weight:	2.20 Kg (4.85lb)

*Nominal power with a 1KHz sine wave signal and a 4 OHMS resistive load. (Measured in accordance with the ABNT NBR IEC 60268-3 Sound equipament, Part 3: Amplifiers).
**See the protection systems on page 07.

The values as above are typical and may vary, due to electronic components tolerance or manufacturing process.
For further informations or questions, visit our website or contact TARAMPS support.

Taramps reserves the right to modify the contents of this manual without prior notice and not to apply the modifications to units previously produced.

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MN_THS 4600_V2