

Instruction manual



PRO 2.6S
DIGITAL AUDIO PROCESSOR



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

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Term of warranty

TARAMPS, located on Abilio Daguano Street 274, Res. Manoel Martins – Alfredo Marcondes, SP - Brazil, ZIP CODE 19.180-000, guarantees 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 substitution 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 as 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

Introduction

Read this manual before installing the product. In case of questions contact our technical support:

+55 (18) 3266-4050 or www.taramps.com.br.



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

Safety requirements

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

- The installation of this product must be done by a qualified professional.
- Use the correct tools for installing this product.
- This product is for use with 12V batteries. Always check the voltage before installing.
- Never install the product 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.
- Automotive sound systems may produce high sound pressure levels. Avoid continuous exposure to levels over 85dB to prevent permanent hearing loss.

Key recommendations

The wire gauge for power supply connections is 1,5mm² (15 AWG) for positive and negative wires, and 0,50mm² (20 AWG) for remote signal wire.

For protection against overload, install a fuse on positive wire, close to battery terminal (1A). See page 12.

- 1 - Power supply negative: Connect to negative pole of battery.
- 2 - Remote signal input: Connect to remote signal output from head unit.
- 3 - Power supply positive: Connect to positive pole (12V) of battery.

Safety

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

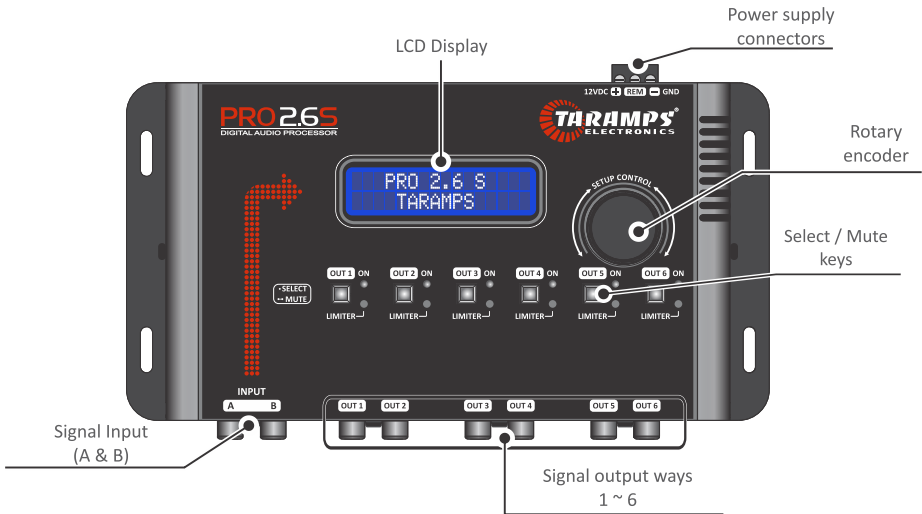


This symbol with **"CAUTION"** is intended to alert the user to the presence of important instructions. Failure to heed the instructions will result in risk of injury to user or product damage.



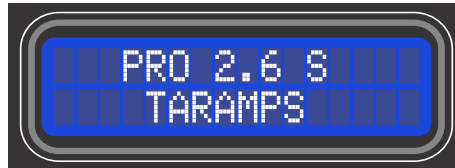
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Processor overview



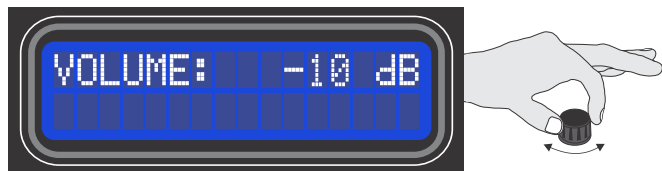
Screens & basic operation:

After startup, the main screen will appear. The blue LEDs for each output way show the active outputs.

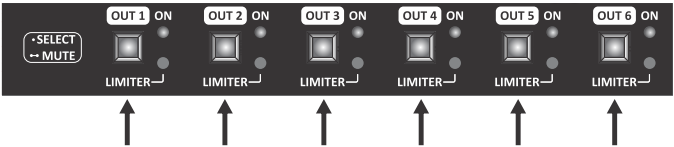


Main screen

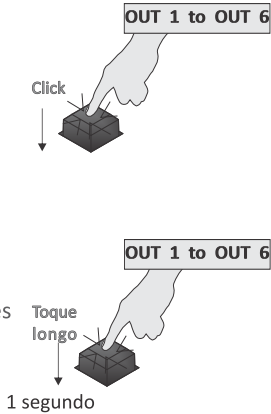
Turning the rotary encoder knob (clockwise or counterclockwise), adjusts the master volume (Input volume).



Short press at OUTx (1 to 6) Keys: Output gain adjust for each way.



Mute for each way: A long press (1 sec.) at OUTx (1 to 6) Keys disables the output (MUTE). To un mute, long press again.



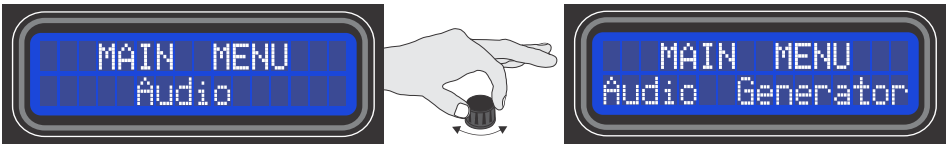
A short press at the rotary encoder center access the Main Menu and its functions.
A long press, back to previous menu. Keep pressed to back to main screen.



Menu & parameters navigation

Use the Rotary encoder, turn it clockwise (increment) or conter clockwise (decrement). The menu selection, option or parameter selection could be done pressing the encoder button (center – short press).

Note: In any audio adjust screen, the OUTx Keys allows to check and adjust the parameters for each way without quit from desired option.

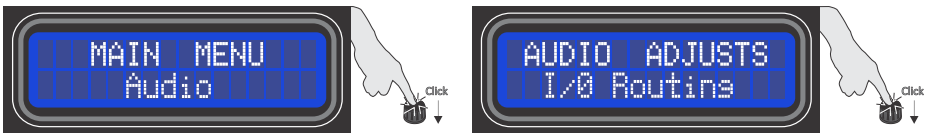


Menu structure & Description

 MAIN MENU :	 MENU PRINCIPAL :
1-Audio	1-Áudio
2-Audio Generator	2-Gerador De Áudio
3-Language	3-Idioma
4-Save Config	4-Salva Config.
5-Load Config	5-Carrega Config
6-Password / Lock	6-Senha/Bloqueio

Press the encoder button (center – long press) to back to Main Screen.

1- Audio menu: Adjusts and controls related to audio processing:

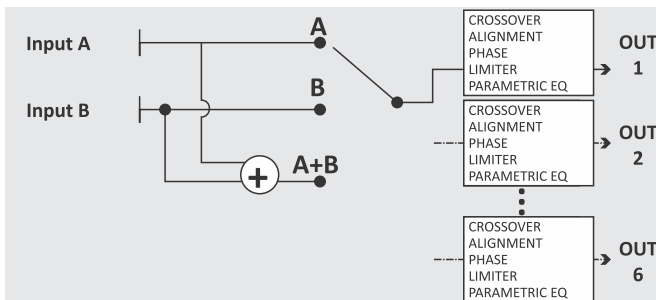


-I/O Routing: Sets the internal connections between the 2 inputs and 6 output. Available options: A, B or A+B (The sum of 2 inputs). As example, if define CH1 -> A, this output CH1 will process the signal coming from input A.

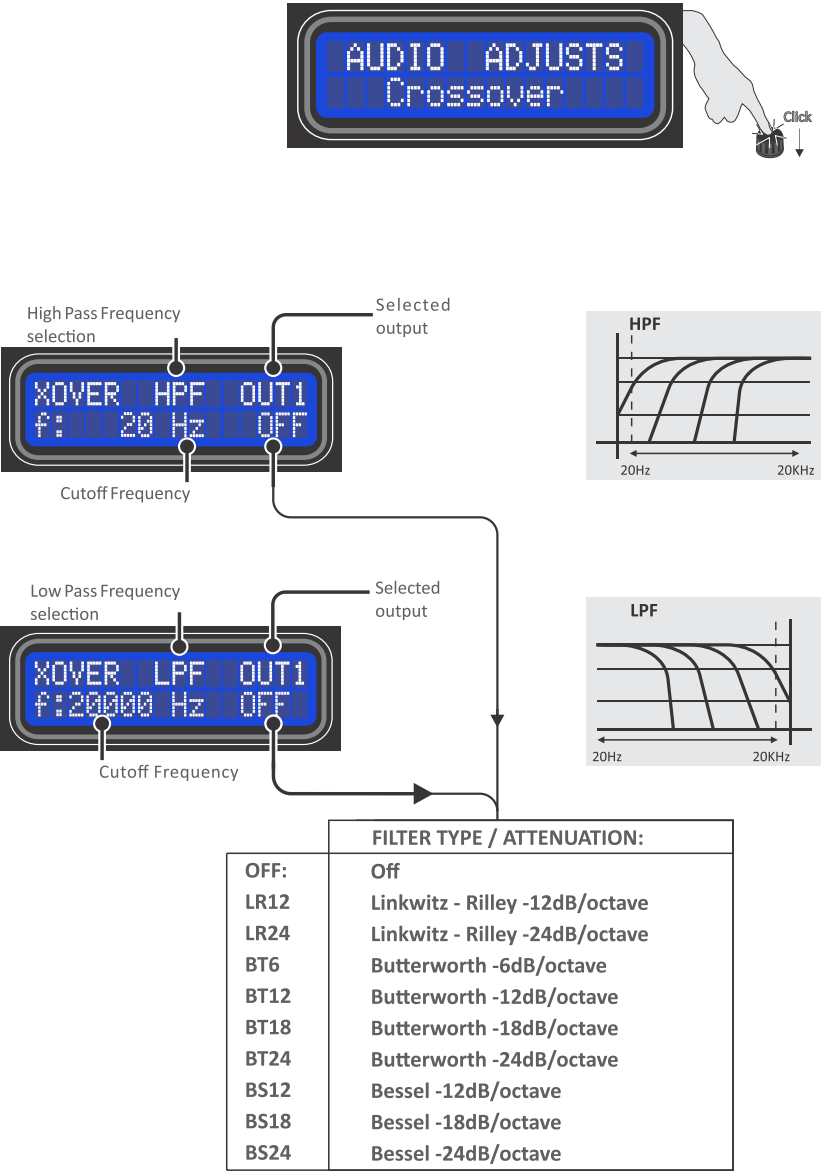


Use the OUTx keys to select the desired way

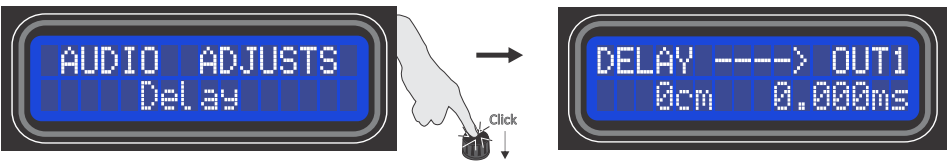
Turn the rotary encoder to select the input



-Crossover: Set the high pass (HPF) and low pass (LPF) filters of selected output way. The cutoff frequencies could be set from 20Hz to 20KHz, and are available some kinds of filters (Butterworth, Bessel, Linkwitz Riley) in different slopes (-6,-12,-18 and -24dB/Octave).



Delay: Set the delay to be applied to audio signal, for systems alignment. The position of transducer's voice coil should be taken in account in order to set the optimal delay value.

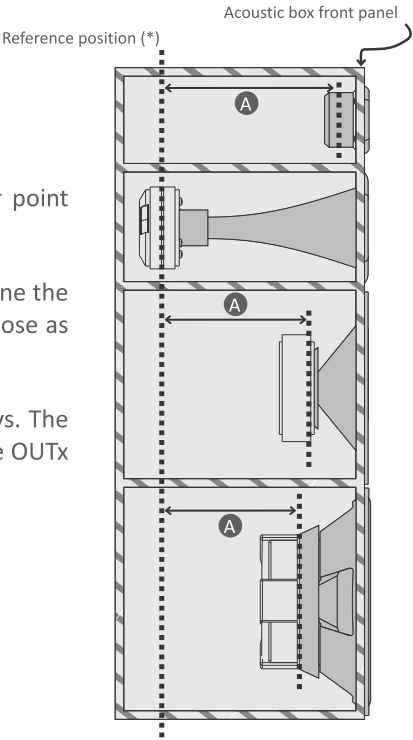


Turn the Rotary encoder to set the delay amount to be applied.

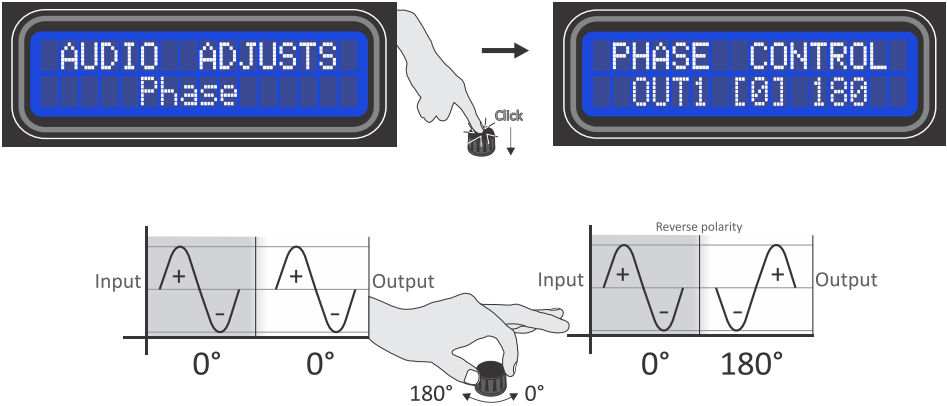
The voice coils of each transducers isn't aligned inside the acoustic box, so there is some delay that can degrade the perfect audio playing. The **Delay** feature apply different delay amount for each output way, in order to get the perfect audio alignment.

How to set the delay parameter value (centimeter):

- 1)Set the reference voice coil (the most far point from acoustic box front panel)
- 2)Measure other transducers in order to define the **A** measure. Ajust the delay parameter as close as possible.
- 3)Repeat the procedure above for other ways. The selection of output ways is done pressing the OUTx (1 to 6) Keys.



-Phase: Inverts the output signal if select the [180] option.
 Select the desired way using the OUTx (1 to 6) Keys. Turn the Rotary encoder to choose 0 degree or 180 degrees.



-Limiter: Define the limiter, limiting the maximum signal level at processor's outputs, in order to don't exceed the loudspeakers maximum power rating.

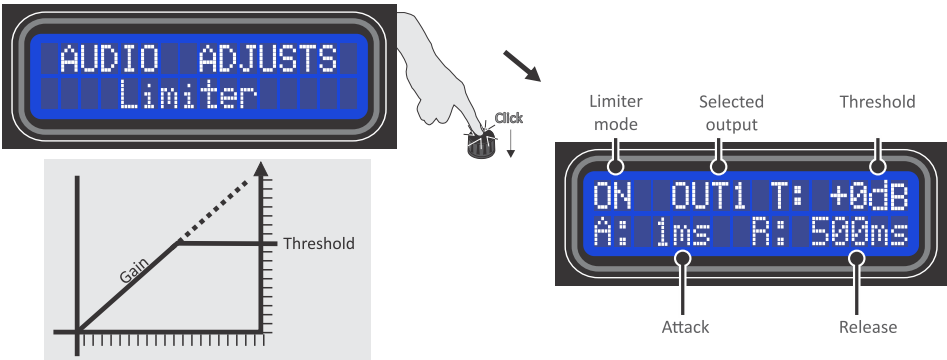
Modes: **OFF**: (disabled) / **ON**: Limiter enabled / **AUT**: Load optimal Attack and Release parameters, based on HPF frequency.

Parameters:

T = Threshold: Set the point for limiter starts the gain reduction;

A = Attack: Set the time before limiter perform the gain reduction after the signal reach the threshold level;

R = Release: Set the time before limiter back to normal gain, after the audio signal back to a level below the threshold.



-Output level: Set the level for each output way. Allow apply up to 6dB gain or -24dB attenuation. Select the desired way using the OUTx (1-6) Keys.

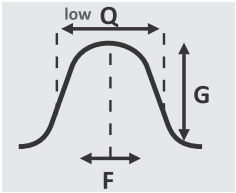
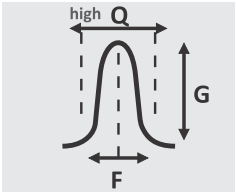
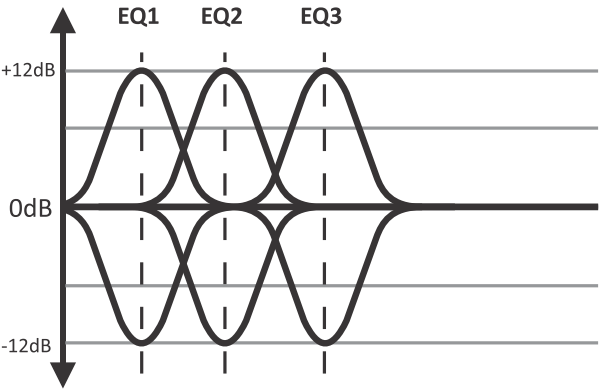
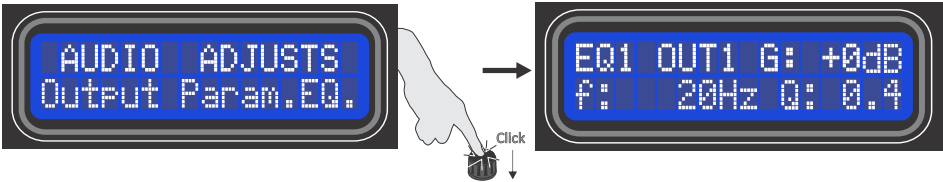


Note: This fuction is available at the main screen, just pressing the desired OUTx (1-6) Key.

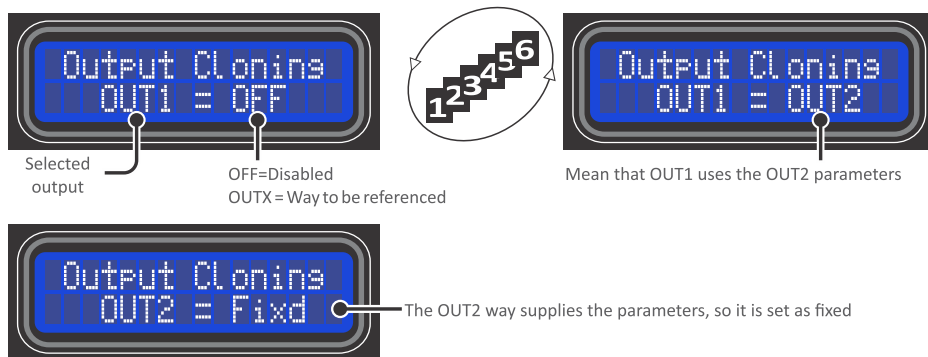
-Output parametric EQ: Parametric equalizer with 3 band for each output way.

Parameters:

- EQ1 – EQ3: Select 3 band available peak filters;
- G = Gain or attenuation of selected band (-12dB to +12dB)
- F = Center frequency of selected filter
- Q = Parameter Q (bandwidth) of selected filter.



-Mirroring: Adjust the selected output way using the other way's parameter, cloning an already configured way.



2-) Audio generator: Sinusoidal Audio Generator, with adjustable frequency and amplitude. When enabled (ON) all outputs will receive the generator's signal.

G: Sinusoidal signal level;

F: Signal frequency;

ON/OFF: Enable / disable the audio generator.



3-) Language: Choose the desired language (Portuguese, English or Spanish)



4-) Save config: Save the current configuration into memory. 3 positions are available for save the user custom parameters.



5-) Load config: Load a previous saved configuration or load the factory settings.

Note: If you need restore the factory settings due to password lost, keep pressed the CH1 and CH2 keys + encoder button while power on the audio processor and select YES. (This procedure will erase all parameters previously saved).

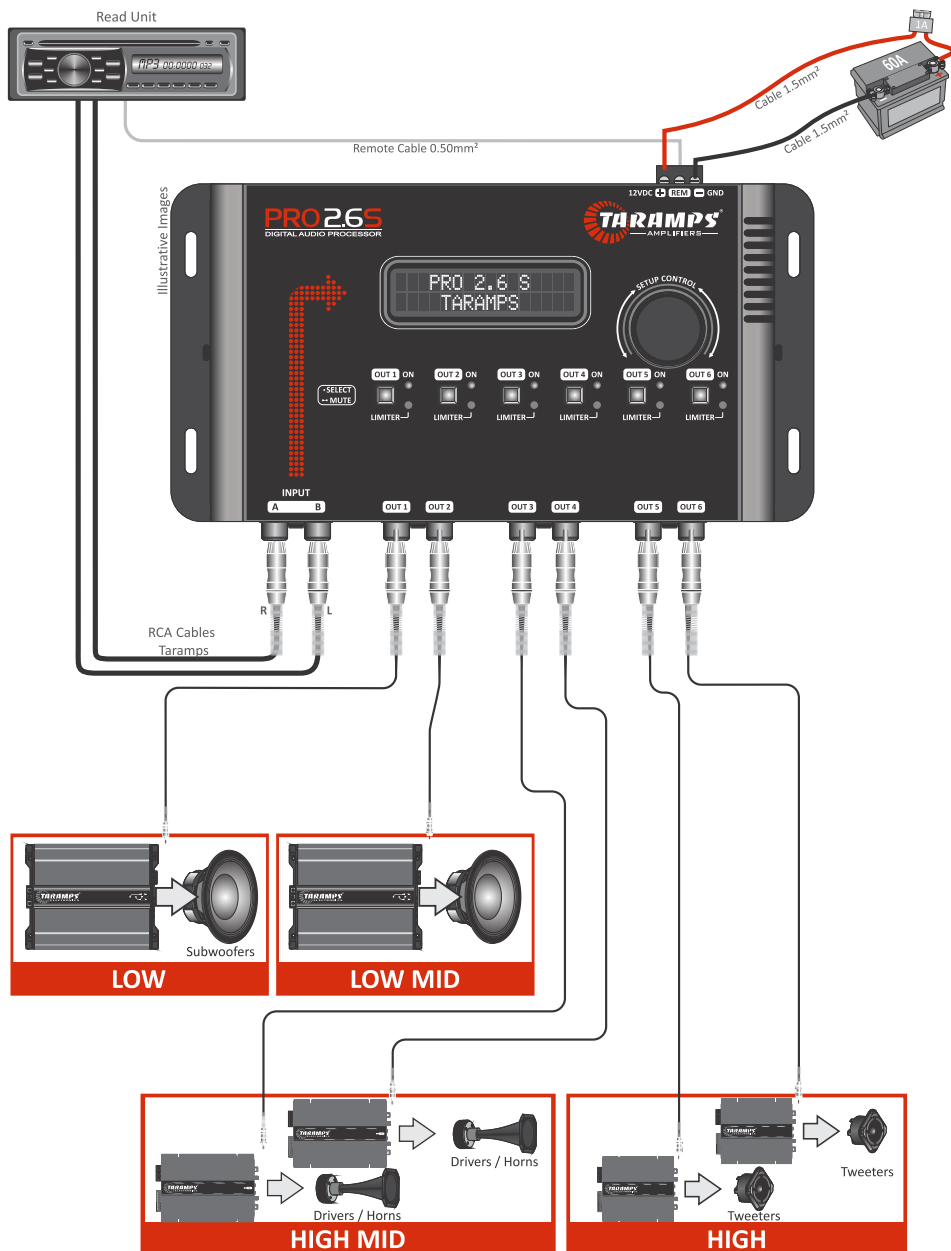


6-) Password / lock: Lock the processor by a 4 digit security password (default password = 1234) and allows change the security password to another custom password.

When the PRO 2.6 is locked, appears an icon on main screen right top corner.

Note: If you need restore the factory settings due to password lost, keep pressed the CH1 and CH2 keys + encoder button while power on the audio processor and select YES. (This procedure will erase all parameters previously saved).

Input & Output Connections



Check power polarity and recommended gauge. it is recommended to install a 1 Ampere fuse on the positive supply terminal.

Technical features

Input & Output:

Input channels:	2
Output channels:	6
Routing:	A, B, A+B
Master level:	-80 ~ 0dB
Output level:	-24 ~ +6dB
Input impedance:	18K ohms
Output impedance:	47 ohms
Maximum input level:	6Vpp (2.1V RMS)
Maximum output level:	10.2Vpp (3.6V RMS)
Frequency response(-1dB \pm 0,5):	10Hz ~ 20KHz
Total Harmonic Distortion (THD):	0.01%
Signal-to-noise Ratio:	>90dB
Crosstalk:	>80dB

Crossover / X-over (HPF / LPF):

Frequency cutoff:	20Hz ~ 20KHz
Filters Linkwitz Riley:	-12, -24dB/oct
Filters Butterworth:	-6,-12,-18, -24dB/oct
Filters Bessel:	-12,-18, -24dB/oct

Delay:.....5.7mS (194cm)

Phase:.....0 / 180°

Adjustable limiter:

Threshold:	-24 ~ 0dB
Attack:	1ms ~ 900ms
Release:	1ms ~ 4000ms

3 Band Parametric EQ:

Center Frequency:	20Hz ~ 20KHz
Attenuation - Gain:	-12dB ~ +12dB
Q factor:	0.4 ~ 10

Adjust mirroring

Mute for each output

Sinusoidal Audio Generator

Frequency Range:	20Hz ~ 20KHz
Gain:	-60 ~ 0dB

Languages:..... Portuguese - English - Spanish

Memory positions:.....3 + Factory default

Access protection:.....4 digit password

Voltage Range:.....9 ~ 16VDC

Nominal Consumption (12.6V):.....0.30A


Dimensions (WxHxD):.....210 x 43 x 122mm / 8.27" x 1.69" x 4.80"

Weight:.....0,550Kg / 1.21lb



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