

AUDIO PROCESSOR J4 PRO



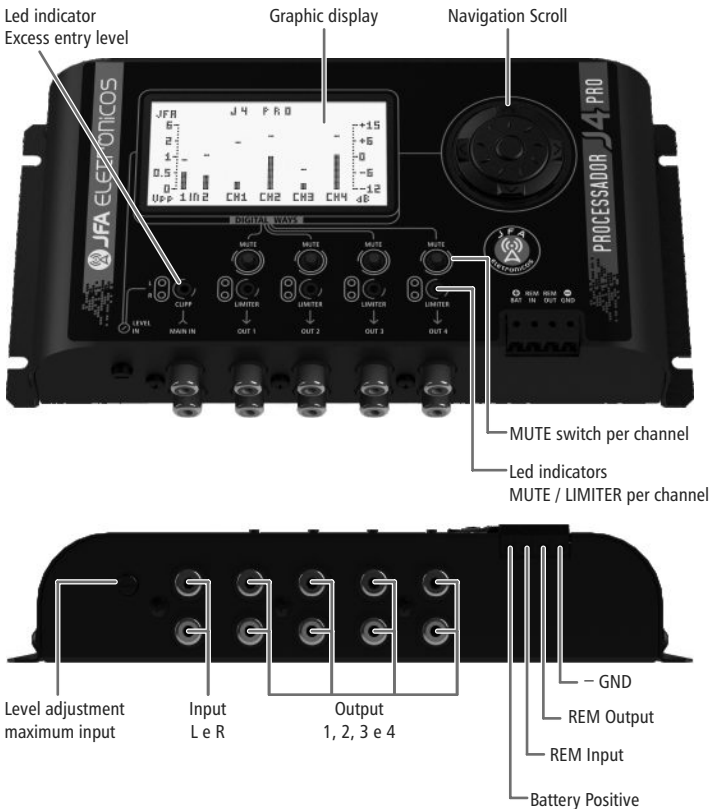
USER MANUAL

AUDIO PROCESSOR J4 PRO

PRESENTATION

The J4 PRO Processor is a digital audio processor with 2 inputs and 4 outputs, which can be configured independently.

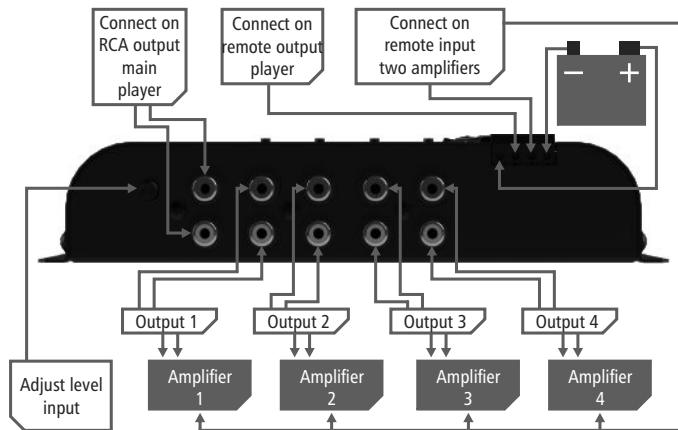
It has a display for real-time visualization of input and output levels, simulating the function of an oscilloscope, as well as a potentiometer for adjusting the maximum level of input audio.



CONNECTION DIAGRAM

Connect the power cables according to the diagram below.

Check out the example of how the outputs can be configured, remembering that the outputs can be configured in other ways.



IMPORTANT RECOMMENDATIONS:

A The recommended wiring gauge is 1.5mm² for the positive-negative wires and 0.50mm² for the wires of the remote. The J4 Pro Processor must be attached to a stable base and easily accessible, away from heat sources. It is not recommended to install the product on the sides of the speakers due to vibration. Do not attach directly to the bodywork of the vehicle.

Never feed the J4 Pro Processor from the vehicle's original wiring. To avoid noise pickup, use shielded signal cables. These can not be passed together with the power cables and should be as short as possible. Observe the cable crossing points. Sharp edges of the bodywork or sharp corners can cut them, causing future problems.

The J4 Pro Processor must be connected before the amplifiers. Failure to do so may result in damage to the speakers. For the purpose of safe operation of the amplifiers, the J4 Pro processor has a REMOTE OUT output, which sends the + 12V signal after the crossover is activated.

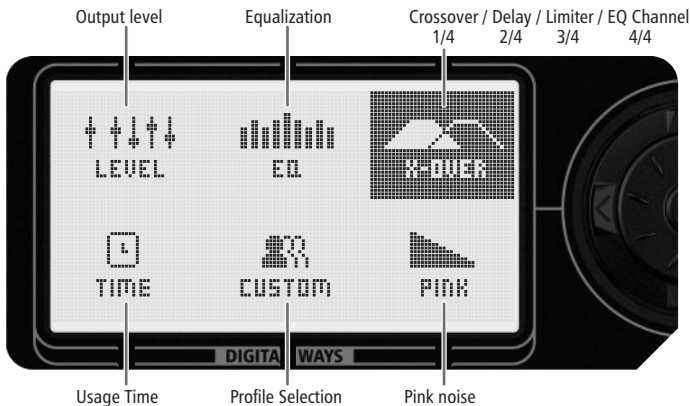


IMPORTANT: Any connection of the power, input or output connectors should only be made with the appliance switched off.

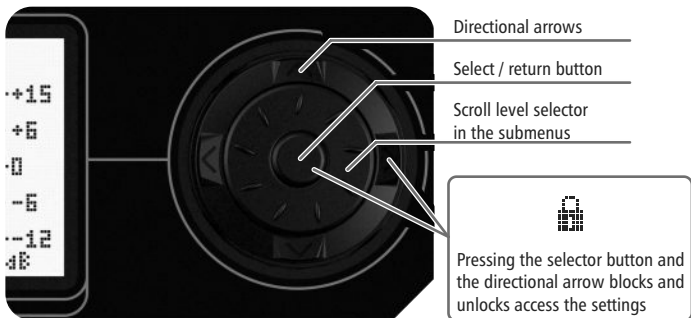
GRAPHIC SCREEN AND NAVIGATION SYSTEM

We recommend that when working with the J4 Pro Processor, always keep the instruction manual handy so that you can consult it whenever necessary.

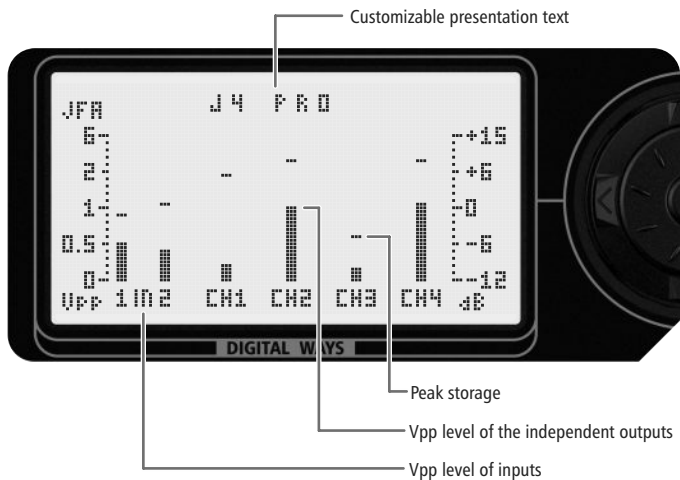
HOME MENU



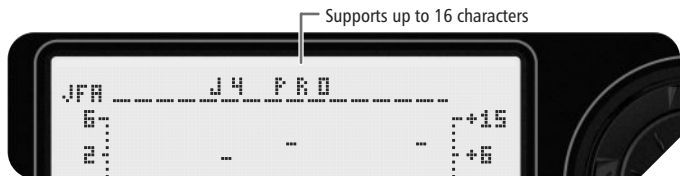
NAVIGATION SCROLL



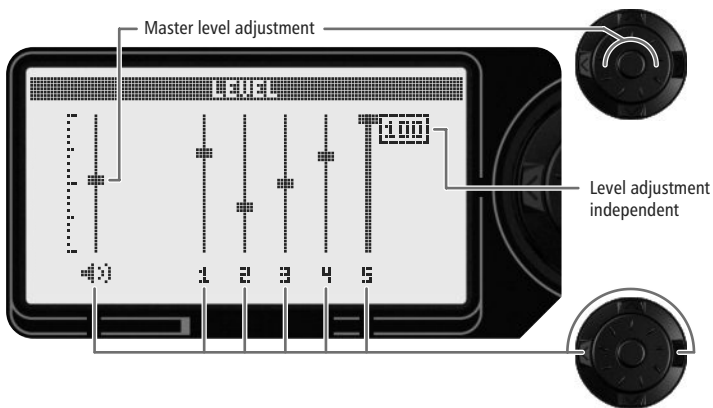
LEVEL METER (OSCILLOSCOPE FUNCTION)



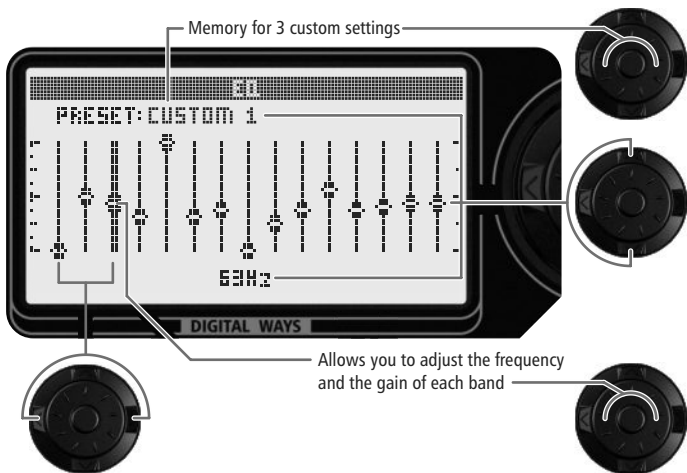
Pressing the screen for 5 seconds of the level meter, enters the of the presentation text.
To exit, simply press the central key.



LEVEL

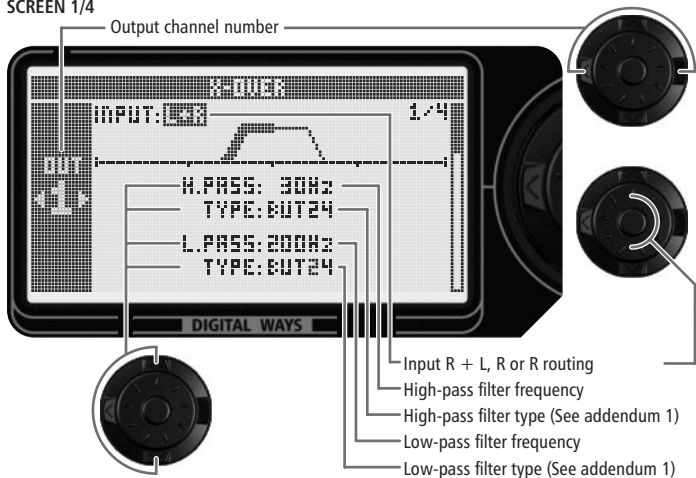


SEMI-PARAMETRIC EQUALIZER

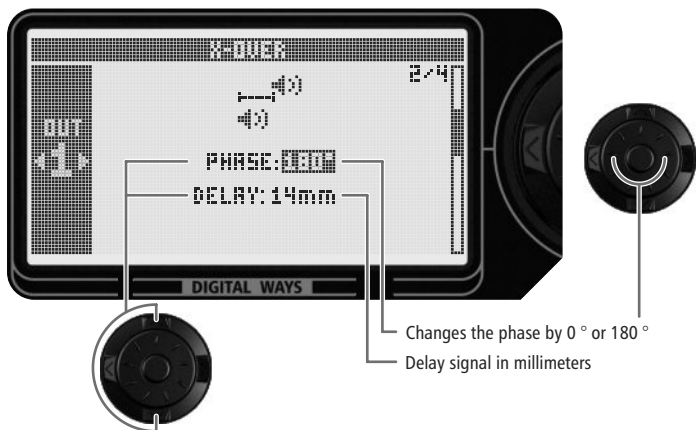


X-OVER

SCREEN 1/4

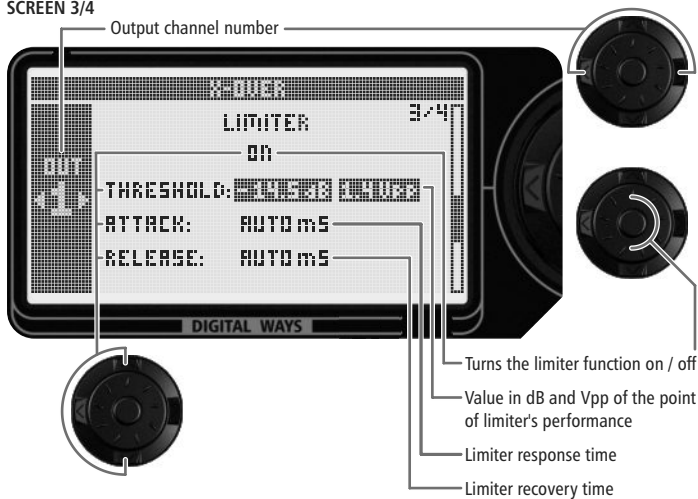


SCREEN 2/4

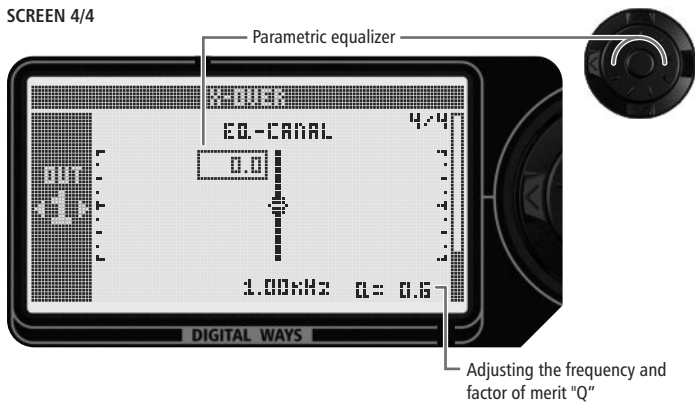


X-OVER

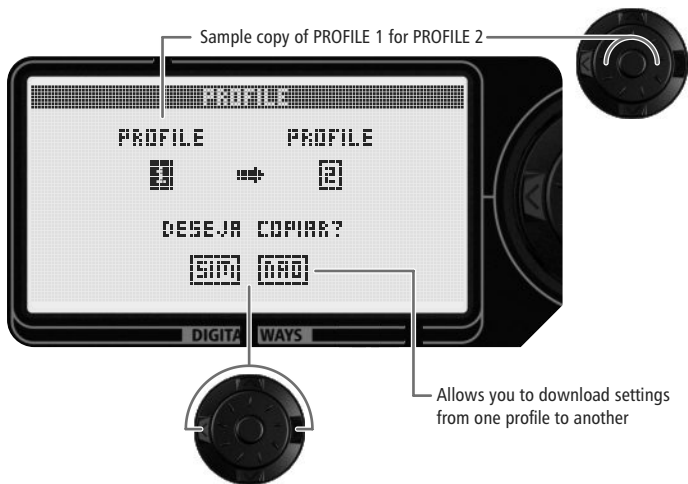
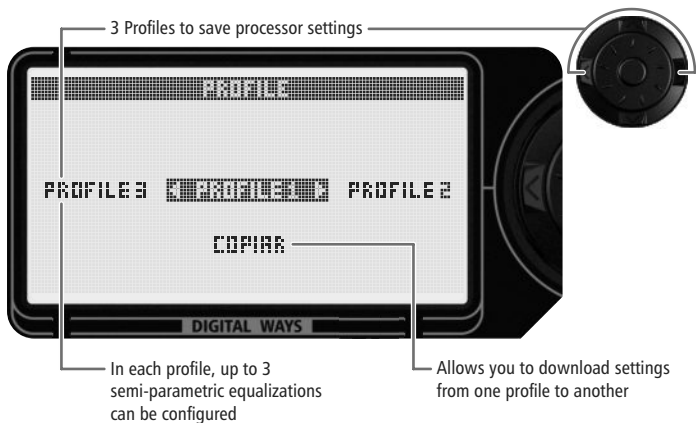
SCREEN 3/4



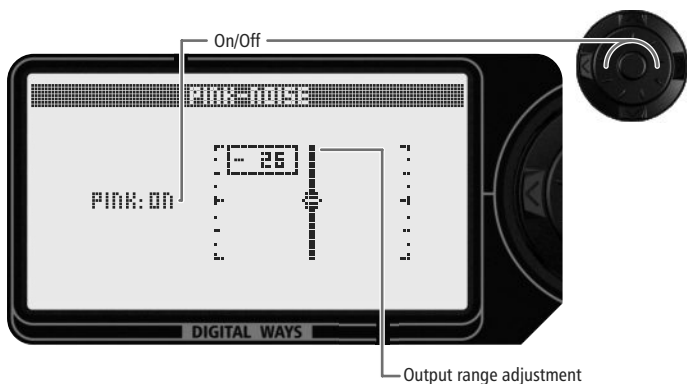
SCREEN 4/4



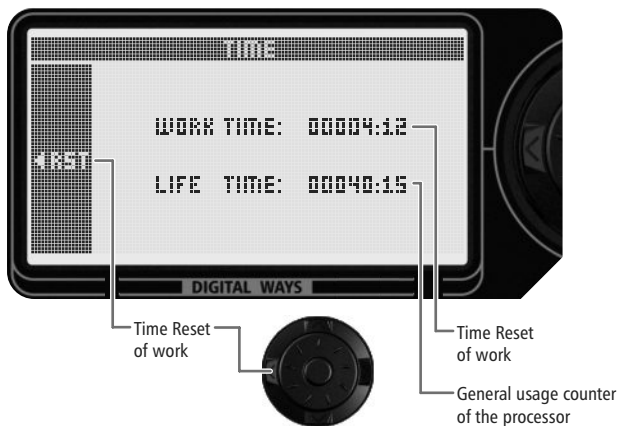
PROFILE



PINK NOISE



TIME



ADDENDUM 01 - FILTER OPTIONS FOR THE X-OVER

The J4 PRO processor has 3 filter structures for cutting in the X-OVER menu, BUT = Butte Work, BES = Bessel and LK = Link Witz, in addition to OFF = filters off.



- BUT cuts in 6, 12, 18, 24 dB/8^a
- BES cuts in 12, 24 dB/8^a
- LK cuts in 12, 24, 36, 48 dB/8^a

ADDENDUM 02 - LIMITER USE OF THRESHOLD, ATTACK AND RELEASE

THRESHOLD - Defines from which level the limiter acts.

The range can be adjusted from 1.4 to 7.0 Vpp.



— Limiter starts to act from of this level

ADDENDUM 02 - LIMITER USE OF THRESHOLD, ATTACK AND RELEASE

ATTACK - It's the limiter's response time. When in AUTO (recommended), the time is set as follows:

$$T = \left(\frac{1}{\text{Frequency Low Pass}} \right) \times 1,5$$

Example:

H.PASS: 800Hz
TYPE: BUT24
L.PASS: 152Hz
TYPE: BUT24

$$T = \left(\frac{1}{152} \right) \times 1,5 = 9,8\text{ms}$$

RELEASE - It is the limiter recovery time. When in AUTO (recommended), this time is 16 times longer than the ATTACK time.

See table of values below:

ATTACK Fast + RELEASE Slow (Mode AUTO of J4 Pro)	Advantage	1 - Efficient Peak Control with discrete actuation of the audio compressor
	Desvantagem	1 - The system receives a first Peak until it enters into action
	Recomendado	1 - For all types of audio where you want a reproduction closest to the original
ATTACK Slow + RELEASE Slow	Advantage	1 - Preserves the dynamics and "Robust" of the audio 2 - Discreet and smooth performance 3 - The music peaks are preserved
	Desvantagem	1 - Low protection against audio peaks
	Recomendado	1 - In audios with longer musical notes 2 - With low battery presence
ATTACK Slow + RELEASE Fast	Advantage	1 - Back firmness, impact and "punch" the audio beats
	Desvantagem	1 - The system receives a first Peak until it enters into action
	Recomendado	1 - For audios that have a following sequence of fast transients.
ATTACK Fast + RELEASE Fast	Advantage	1 - System protection against Clipp
	Disadvantage	1 - Loss of audio dynamics
	Recommended	1 - When you want more protection 2 - When you want to highlight less audible harmonics, increasing the feeling of the environment

TECHNICAL CHARACTERISTICS

Input channels	2
Output channels	4
Frequency response	20Hz to 20kHz
Master semi-parametric equalizer	15 bands -10 to + 10dB
Parametric equalizer per channel	1 band -12 to + 12dB
DSP filter, 24-bit hi-pass and low-pass	20Hz to 20KHz, (off / 6/12/18/24/36 and 48dB / 8 °)
Total harmonic distortion (THD)	0.002% at 1kHz
20Hz to 30kHz signal to noise ratio	> 90dB
Phase	0 and 180 °
Delay	0 to 287cm
Maximum input level	3.8Vpp / 10KΩ
Maximum output level	15Vpp / 470Ω
Bar graph	0 to 6Vpp with "hold peaks"
Dimensions in millimeters (W x H x D)	202 x 103 x 43
Weight in grams	480



AUDIO PROCESSOR J4 PRO



See all the automotive line products on our website.

www.jfaeletronicos.com