

INTRODUCING REDESIGNED CRYSTAL CLEAR SOUNDING MIXER

ENDORPHINES

COCKPIT X



MANUAL V 1.0

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WARRANTY

1-year warranty guaranteed from the product's purchase date in case of any manufacturing errors or other functional deficiencies during runtime.

The warranty does not apply in case of:

- damage caused by misuse
- mechanical damage arising from careless treatment (dropping, vigorous shaking, mishandling, etc.)
- damage caused by liquids or powders penetrating the device
- heat damage caused by overexposure to sunlight or heating
- electric damage caused by improper connecting

The warranty covers replacement or repair, as decided by us. Please contact us via email for a return authorization before sending anything. Shipping costs of sending a module back for servicing is paid by the customer. Device complies with all EU regulations concerning RoHS lead-free manufacturing and WEEE disposal.

VISIT US

<https://endorphin.es>

<https://youtube.com/user/TheEndorphines>

<https://facebook.com/TheEndorphines>

https://twitter.com/endorphin_es

<https://www.instagram.com/endorphin.es/>

<https://www.modulargrid.net/e/modules/browser/vendor:167>

For technical requests: [**support@endorphin.es**](mailto:support@endorphin.es)

For dealer / marketing inquiries: info@endorphin.es

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It is doing business as FURTH BARCELONA, S. L. (EU VAT ID: ES B66836487)

INTRO

Cockpit 1U is a 6 channel stereo mixer with crystal transparent VCAs:

- 4 stereo channels via separate left and right jacks and
- 2 stereo inputs via AUX/MIXUP inputs – for daisy chaining, routing external audio etc.

CONNECTING THE POWER

Before installing a new module in your case, ensure your power supply has a free power header and sufficient available capacity to power the module.

Connect the module directly to the power bus-board with supplied 10-16 ribbon cable like any other eurorack module. Pair of **RED/BROWN** pins on the multicolor ribbon cable corresponds to **NEGATIVE -12 VOLTS**.

Make sure to align the power cable with the '**RED/BROWN STRIPE**' label on the module that corresponds to -12V, to the 10-pin connector and with typically a white line for the 16-pin connector on the bus board.

TECHNICAL SPECIFICATIONS

- Width: 24 HP/TE, 1U height (Intellijel format)
- Depth: 30 mm or 1.2" with inserted ribbon cable
- Current draw: +12V: 55 mA, -12V: 35 mA
- Audio input range: typical eurorack standard +/-5V (10Vpp)
- Audio output: typical +/-5V eurorack standard (unity gains on all 4 channels at full channels/master faders CW)

OVERVIEW

COCKPIT X 1U is a purely analog eurorack mixer designed for use in the live environment by professional musicians and producers but is equally at home in a small studio.

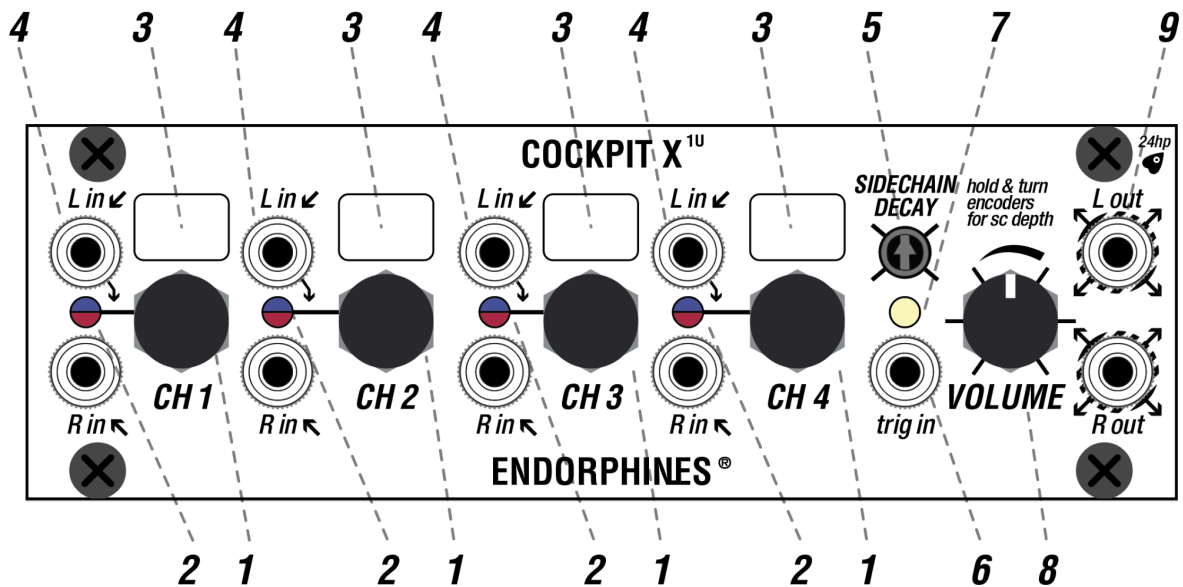
It is unique in offering four true stereo input channels plus two stereo AUX channels in a compact 1U format with side-chain ducking not currently available on any comparable device

COCKPIT X 1U is what you need if you are into stereo modules in 1U cases which are the latest eurorack trend now - as it allows to keep the modular system at a compact size while maintaining wide functionality and accessibility.

Nevertheless you can also mix mono sources without any issues as the left inputs are pre-patched (normalled) into the right inputs so you will always have audio appearing in proper channels.

COCKPIT X 1U is the successor module of the COCKPIT 1U based on the modern Sound Semiconductor™ chips giving a transparent VCA sound, zero bleeding at muted states, proper line/modular levels headroom and hands-on operation.

INTERFACE



1. ROTARY ENCODERS / FADERS

are four endless encoders which click on turn and have a push button. Used to adjust the volume of each channel when turning; acting as mute/unmute buttons when pressed and setting the sidechain amount per channel when pressed and turned. Turning the encoder clockwise will make the channel's level higher and turning it counter-clockwise will attenuate the channel off to full silence. Since the encoder's rotation is endless, it doesn't have a line that shows its current position to understand the level of the channel. For that reason there's a bi-colour LED (2) near each encoder knob and the brightness of the LED shows how high the level is

2. CHANNEL BI-COLOR LEDs are LEDs near each channel. When the LED is **BLUE** the channel is on. Shortly pushing the encoder knob mutes that channel. When the channel is muted, the LED color turns **RED**. The brightness of the LED remains the same as it was before and indicates the volume level also in the muted state. With this feature you can also decrease or increase the level of the channel when muted, which comes in handy, if you want to mute (push encoder) a sound at full volume, change the volume to zero (by turning CCW), unmute it (push encoder) and fade it back into the mix again (by turning CW).

→ **HINT:** Every few seconds the state of all encoders (volume levels of all 4 channels, mute states and side-chain depth amounts) are stored into memory so after turning your modular system power off and on again you will have all the settings you had before.

3. CHANNEL LABEL is a white color printed area near each channel dedicated to writing with a CD/DVD marker to label the channel. You may use typical 90° ethyl alcohol from the supermarket to clean the written labels afterwards.

4. L IN / R IN AUDIO INPUTS: are 4 channels 1/8" TS audio inputs for separate left and right channels. In those L/R jacks the left input is pre-wired (normalled) to the right input when nothing is plugged into the right jack. In such a way you can always plug MONO sources into left input only and it will be spread into right input as well.

5. SIDECHAIN DECAY KNOB: is a tiny set-and-forget knob sets the length of internally generated DECAY envelope generated when trigger (6) applied.

6. TRIGGER INPUT JACK: trigger input for the onboard decay/sidechain envelope. Typically you split here the same trigger you launch the kick-drum with. Every pulse input will generate an envelope visualized with SIDECHAIN LED (7).

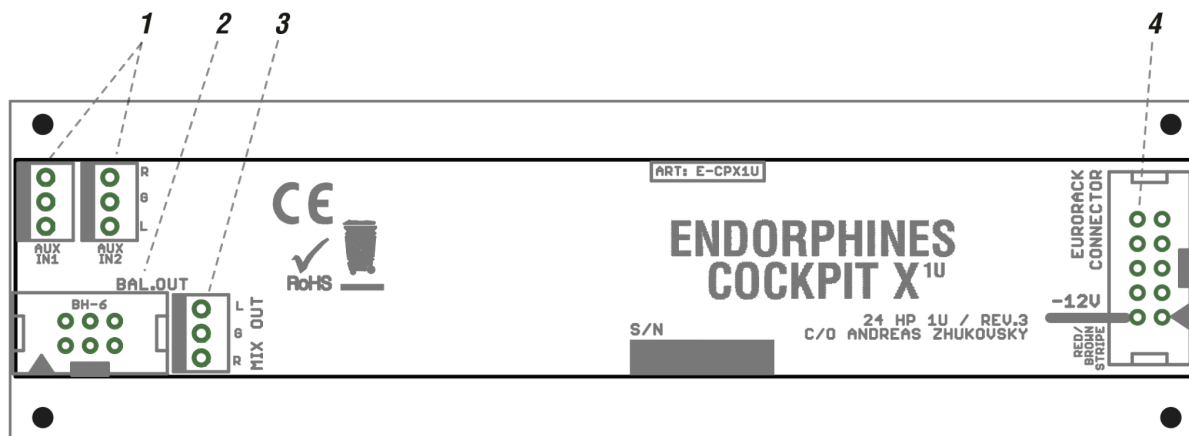
7. SIDECHAIN LED: shows sidechain envelope activity on each pulse input at trigger jack (6).

8. MASTER VOLUME KNOB: adjusts the final mix output level. That Master volume applies to all 4 rear channels and 2 auxiliary inputs.

9. L OUT / R OUT OUTPUT JACKS: final stereo audio outputs. Those can drive headphones connected with an Airline adapter or be used as separate L/R outputs wired with mono cables. Both audio inputs (4) and outputs (9) support airline audio jack adapters ([sold separately](#)) to connect with a single 3.5mm TRS stereo (AUX) cable directly.

REAR CONNECTIONS

COCKPIT X 1U features extra rear connections, that are either used for daisy chaining multiple modules together to act as one big mixer or to wire the Inputs / Outputs to either other modules or ¼ inch TRS outputs via the Intellijel Jacks IO v2 board.



- 1. AUX IN1, AUX IN2** are two auxiliary stereo inputs which accept audio input from other Mix Bus compatible modules and are basically another 2 stereo inputs to be mixed with the other 4 rear channels. Those AUX inputs are pre-volume master 'fader' - meaning adjusting the VOLUME knob (8) will apply the volume attenuation on those inputs as well from 100% volume at CW to full silence at CCW.
- 2. MIX OUT** is post-master volume knob audio output, compatible with other Mix Bus modules.
- 3. STEREO BALANCED LINE OUT** is a 6-pin connector for the Intellijel Jacks IO v2 board. This lets you route the final post master volume knob output straight to the TRS jacks in the 1U cases. COCKPIT X 1U comes factory supplied with that 6 pin cable. Further using 1/4" TRS cables can be used as pseudo-balanced outputs as a DI-box with better performance with noise cancellation since the ring is connected to ground, catches the same hum which then self-cancels from the audio from the tip, however, it can be freely used with 1/4" TR cables as well.
- 4. POWER CONNECTOR** is 10 pin typical +/-12V eurorack power connector with reverse protection. Side red/brown pair of ribbon pins correspond to the negative -12V volts. COCKPIT X 1U comes factory supplied with that 10 to 16 pin cable - typically rainbow or silver color.

SIDE-CHAIN DUCKING

The sidechain input accepts triggers in standard modular level (everything that is higher approx. 0.65V is recognized as *ON* and lower than 250mV as *OFF*). Every trigger pulse generates an internal DECAY envelope (falling ramp). That envelope has an instant (near zero) attack and the decay time is defined manually by the tiny SIDECHAIN DECAY knob (5). Time of decay varies from 10ms to 10 seconds and at full CCW knob position there is no effect applied.

DAISY CHAINING

You can daisy-chain multiple COCKPIT X 1U modules to increase the amount of input channels. Typically we recommend two COCKPIT X 1U modules per standard 7U 104HP case. To daisy chain two mixers, you have to use typical 3-pin connectors called MOLEX, MTA or DUPONT, most important - **FEMALE-FEMALE** type. Get them longer - at least 20 cm or >8". Those 3 pins correspond to LEFT and RIGHT channels with the GROUND pin in the middle. You can also use those pins to wire extra channels via 1/4" jacks inputs in the case or extra expander modules - e.g. Stereo Line In Jacks 1U or Stereo Line Out 1U etc.

CREDITS

ENDORPHIN.ES® – COCKPIT X 1U

Module idea, hardware design, manual and photos by Andreas Zhukovsky

ENDORPHIN.ES are made in Barcelona province of Spain

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COMPLIANCE

FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes / modifications not approved by ENDORPHIN.ES (doing business as Furth Barcelona, S.L.) could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

CE

This device meets the requirements of the following standards:

EMC: 2014/30/EU

EN55032:2015; EN55103-2:2009 (EN55024); EN61000-3-2; EN61000-3-3

Low Voltage: 2014/35/EU EN 60065:2002+A1:2006+A11:2008+A2:2010+A12:2011

RoHS2: 2011/65/EU

WEEE: 2012/19/EU