

▲
GATEWAY TXP

operated by

Endorphines
AIRWAYS



Flight Plan v. 2.0

First things first

RTFM – be so kind and read the manual. It will provide you with the information you need to fully indulge in the module you just purchased – for which we like to thank you.

Enjoy your sound experiences, dear sonic traveller.

Beginning from the product's purchase date a 1-year warranty is guaranteed for each product 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

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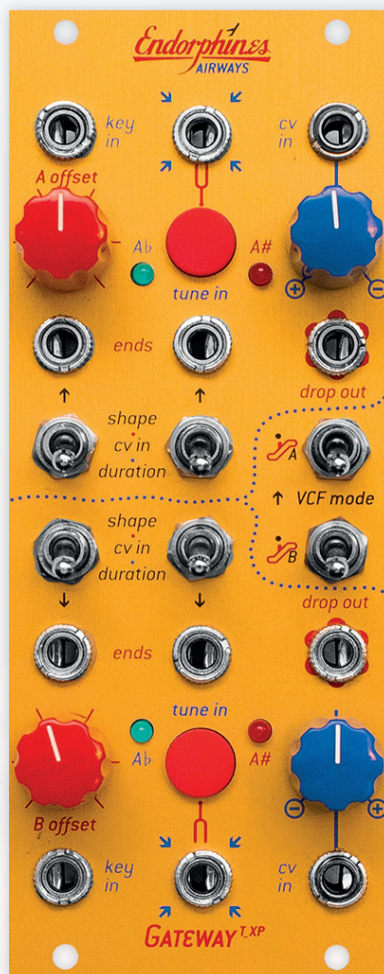
Drop us a line:

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FURTH BARCELONA, S.L.

VAT ID:ES B66836487

Gateway^{T-XP} operated by Endorphin.es Airways



Grand Terminal/Terminal XPanded

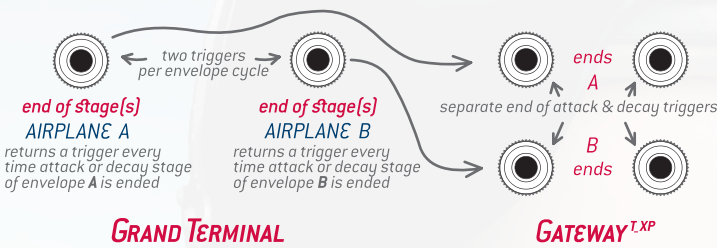
- 10 HP/TE width, up to 1" in depth (super slim & therefore shuttle friendly)
- Expands by giving you access to Grand Terminal's/Terminal's functions located on the backside of the pcbs—this gives you more control over Grand Terminal's/Terminal's envelopes and the capability to use them as oscillators.
- Improved tuners with revolutionary Autotune algorithm – tune your VCOs automatically in a second to the signals nearest A note.
- Works as a dual 1+1 attenuverting mixer with DC-offset shift.
- **Works with every Grand Terminal/Terminal!**

1. Grand Terminal/Terminal operated by Endorphines Airways is a versatile and complex module. This makes it almost impossible to put all its controls on the faceplate. That's why some rarely used functions could only be accessed with jumpers on the backside of the module. Some parts of the Grand Terminal/Terminal became so advanced that an external module become necessary to open up its full potential. That's why we presented the Grand Terminal/Terminal XPansion module.

It features **two identical sections**. The upper section of the module corresponds with Airplane A and the lower one with Airplane B. **Everything in this manual referring to the Terminal, also refers to the Grand Terminal and will be from here on abbreviated with "GT/T".**

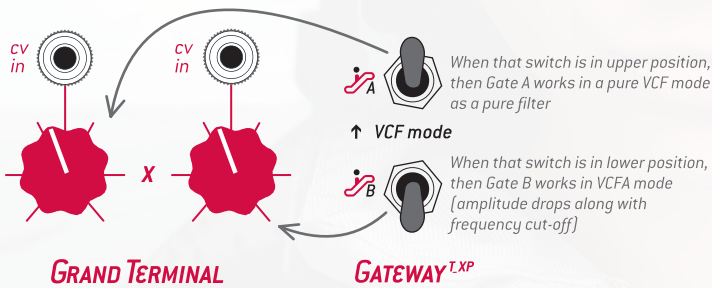
2. The middle section of the module corresponds to **EXP_A** and **EXP_B** jumper sections of the **GT/T** module and switches the CV destination of each stage to be applied either to stage's duration or shape.

'End' jacks for each of the Airplanes stand for the separate end of attack and end of decay trigger outputs. When the Gateway^{XP} is connected to the **GT/T** module, the end of stage(s) outputs of the **GT/T** will return both end of attack AND end of decay trigger outputs.

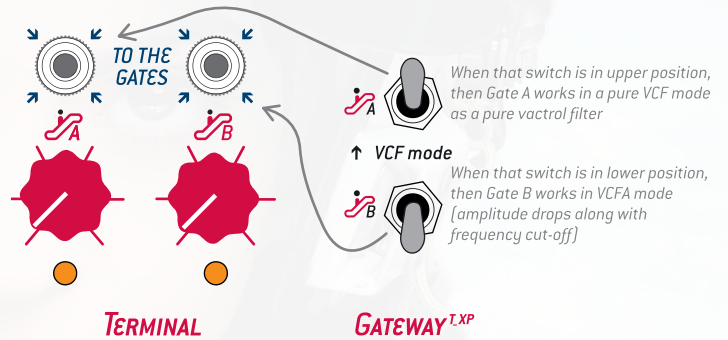
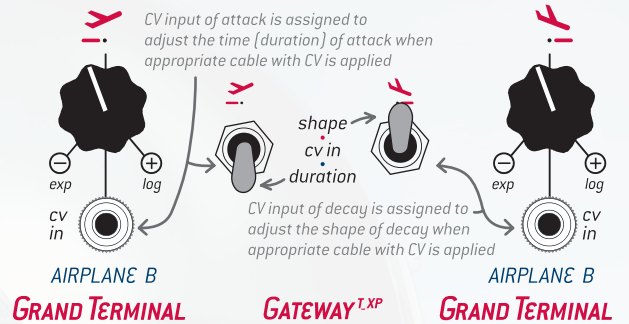
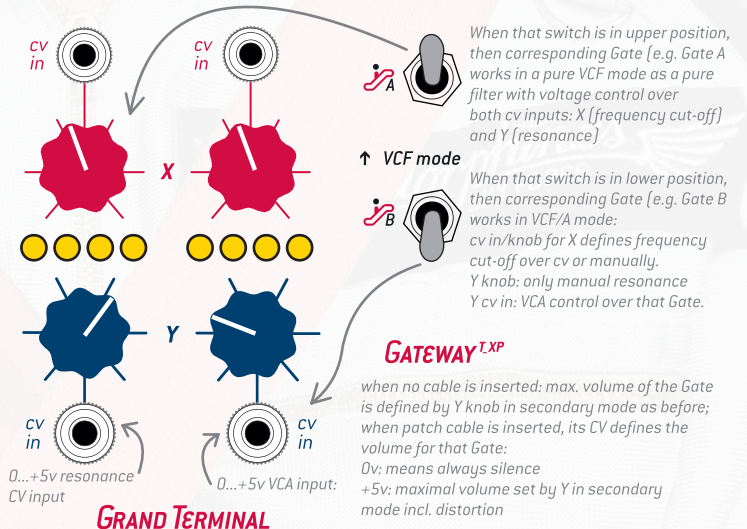


3. VCF Mode

For TERMINAL: If the VCF mode switch is turned **UP** it enables **full 12db/oct** filtering on the appropriate Gate A or B. When the switch is down, also the amplitude is affected.



For GRAND TERMINAL fw. v1.6 and above: When that switch is in upper position, then the Gate works in VCF mode/purely as a filter. When the switch is in the lower position, the 'X' jack accepts CV for the filter Cutoff as before and the knob attenuates the modulation. The CV applied to the 'Y' jack doesn't affect the resonance anymore, but the Amplitude of the signal. With the 'Y' knob you can still control the resonance of the filter chosen. So in this mode you have two separate options to modulate your signal with CV—Cutoff [VFC] and Amplitude [VCA].



For GRAND TERMINAL fw. v1.5 and lower: When that switch is in upper position, then the Gate works in VCF mode/purely as a filter. When that switch is in lower position, then the Gate works in VCFA mode (amplitude drops along with frequency cut-off) for every of the 8 filter types.

4. Mixing signals

Gateway^{TXP} is essentially a dual 1+1 channel mixer for CV (as well as audio) signals. Key in is an input for CV that comes from your Keyboard your MIDI-to-CV converter or quantizer.

The CV in at the Gateway's blue knob is also an input that you can use for other audio signals to frequency modulate Gate A or B in looping mode or other signals that are passing through equipped with an appropriate attenuverting knob.

A/B Offset is a manual offset knob that adds from 0 to approximately 6.5V mixed together with Key and FM inputs. The final signal comes out at DROP out jack.

So far all we have here is a simple CV mixer. **Now comes the special part – the tuning possibilities.**

5. The Tuner

By default, each end of decay triggers are routed there via the normalised knobs however using any audio signal as an input source is possible. The input features Schmidt trigger input – i.e. it will understand even very low non-modular level signals like line out or guitar pickup signals. Afterwards the tuner is functionally identical to the one in our famous Furthrrrr Generator. The signal is being analyzed if the tune is higher or lower to the nearest A note.

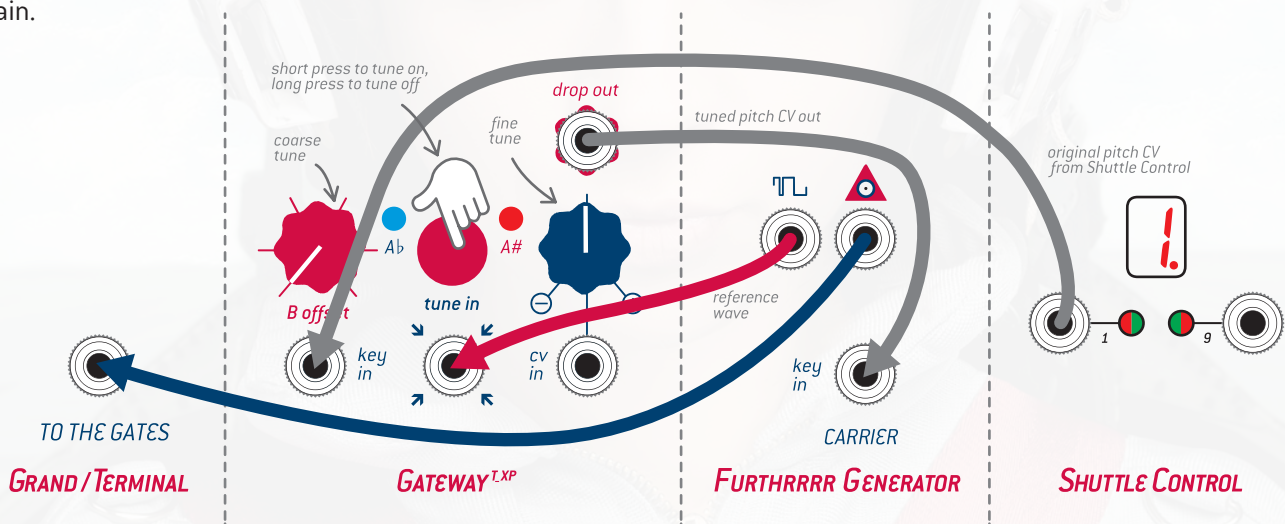
When the incoming signal is higher than the nearest A note the red LED will light up when it is lower the blue LED will do so.

And this is where the magic happens. Assuming you have put the drop out signal into your oscillator's 1v/oct key input and then press the tune to A button the module will output stepped CV at the drop out jack and will tune your oscillator to the nearest A-note (the lower or higher one – depending on which A note is closer).

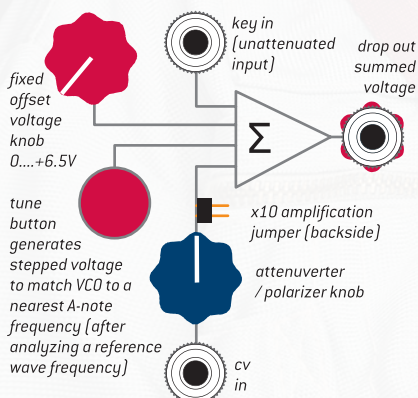
The CV from the drop out output may also be connected to the **GT/T's** "key in" input to tune **GT/T's** oscillators when the **GT/T** is in Looping mode.

The tuning time depends on your oscillator frequency – in lower range it may take up to a 1 second and in the higher ranges it **will tune almost instantly**. Play around with it a little to get used to the various response timings of the tuner.

If you press the **tune to** button for more than 2 seconds you will turn the tuner off (i.e. will null the applied CV offset generated by the appropriate Autotune function generator). After pressing the button again the tuner will tune the signal to the nearest A again.



This technique is extremely useful for live performances, especially when playing in a band. Just press an A note on your MIDI keyboard so it will output proper CV for an A note. Afterwards press the TUNE to A button and the module will automatically tune your generators to a proper A note.

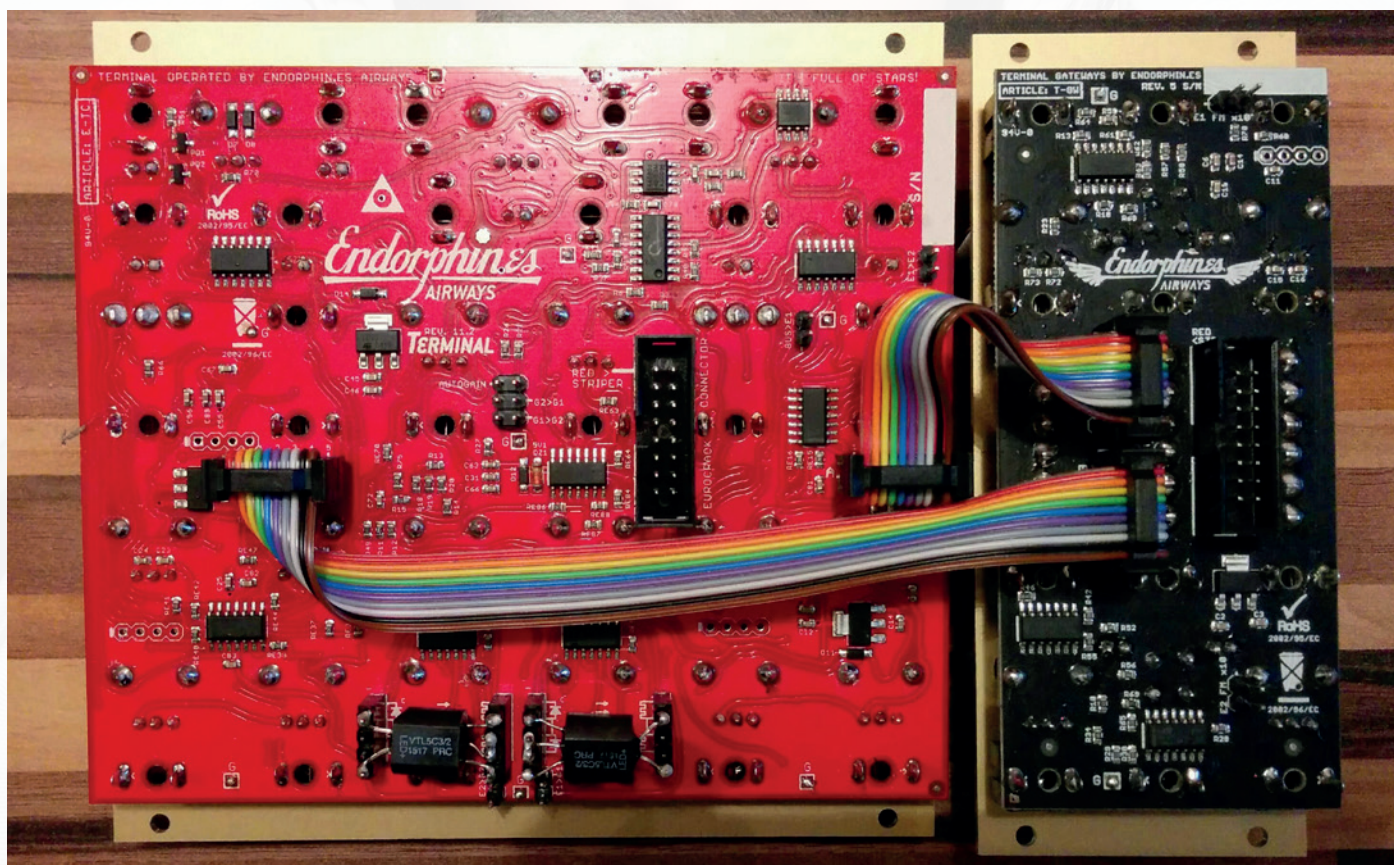
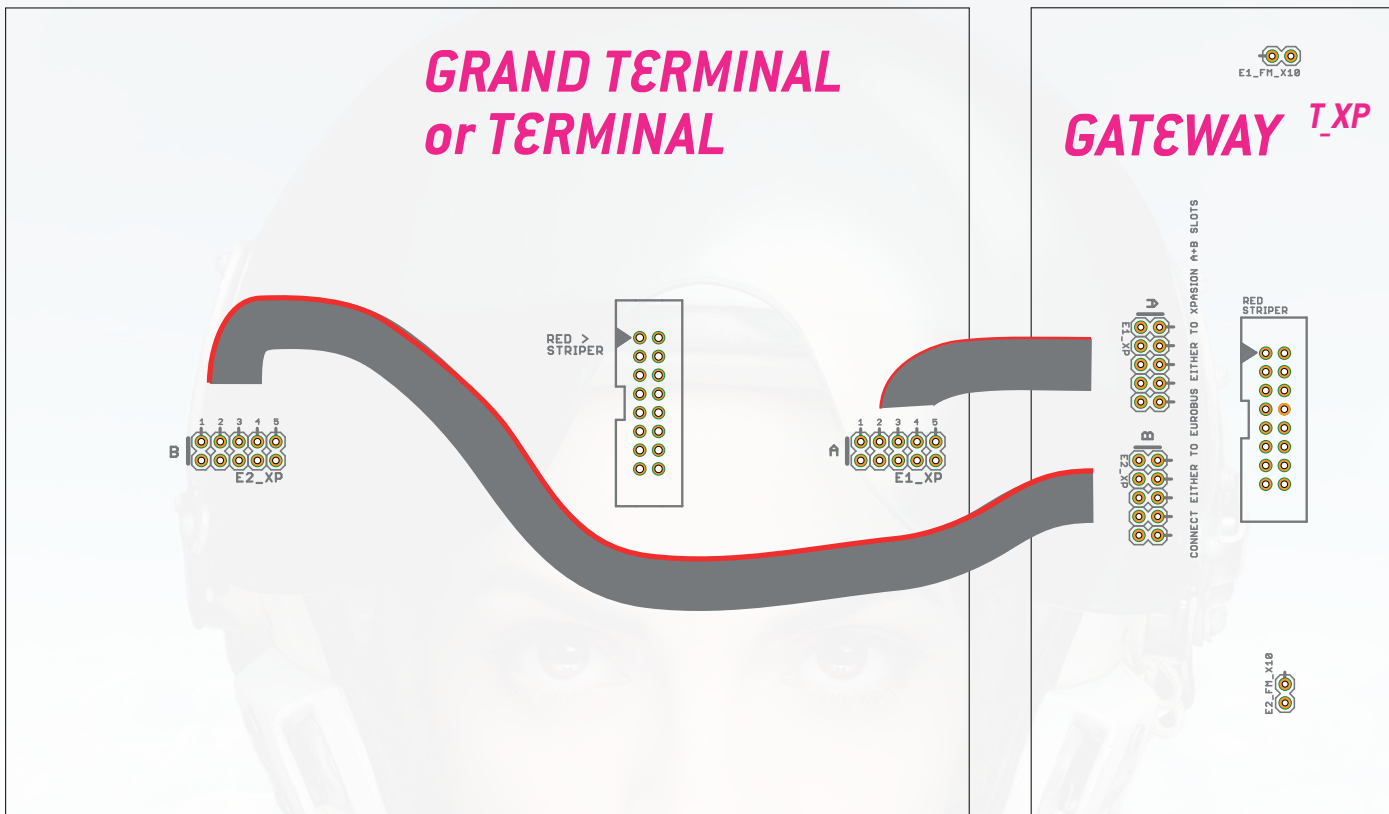


6. Amplifying signals

Two jumpers on the backside of the module: E1 FM_{x10} and E2 FM_{x10} amplify the input signal at CV IN of both parts of the module in ten times (when the jumper is installed). That's useful to amplify the line-out signal up to approximately ten times – 1V x 10 times = 10Volt – (e.g. from iPad or MP3-player) which is usually ~1V to a modular ~10v level.

The Power consumption of GATEWAY^{T_XP} is the following: max 70 mA from **positive +12 volts rail** and max 30 mA from **negative -12 volts rail** or **up to 100 mA in total**. No +5 volt bus power is required. Unit may be powered: either by connecting it to a busboard directly (without owning/using a GT/T module, but then the 6 switches in the middle are not functional) or powering the Gateway^{T_XP} via the GT/T module using the **two simultaneously connected** 10-pin ribbon cables (**mind the red stripe on the cable to fit the white line on the back side of each connector**). Make sure you have connected the Gateway^{T_XP} to your GT/T with the ribbon cables supplied to the equal GT/T's channel A or B.

DO NOT CONNECT THE MODULE TO THE GRAND TERMINAL/TERMINAL AND POWER BUS-BOARD SIMULTANEOUSLY. Connect it either to the GT/T (preferred for using all the switches) or to the bus-board (for standalone usage without GT/T).



The characteristics of the product described are subject to change without notice.