ST FONT NANO Stereo Filter Module User Guide

Quick guide

Thank you for choosing ST·FONT for your Eurorack System.

Contents

Powering up

1. Turn off the power of your modular synthesizer.
2. Double check the power cord polarity. If you plug the module backwards you might damage its electronic circuits.

If you flip over your ST·FONT, you will find the “RED” mark at the PCB power connector, which must match the colored line on the ribbon cable.

3. Once you have checked all the connections, you can turn on your modular system.
4. If you notice any anomalies, turn your system off right away and check again your connections.

Description

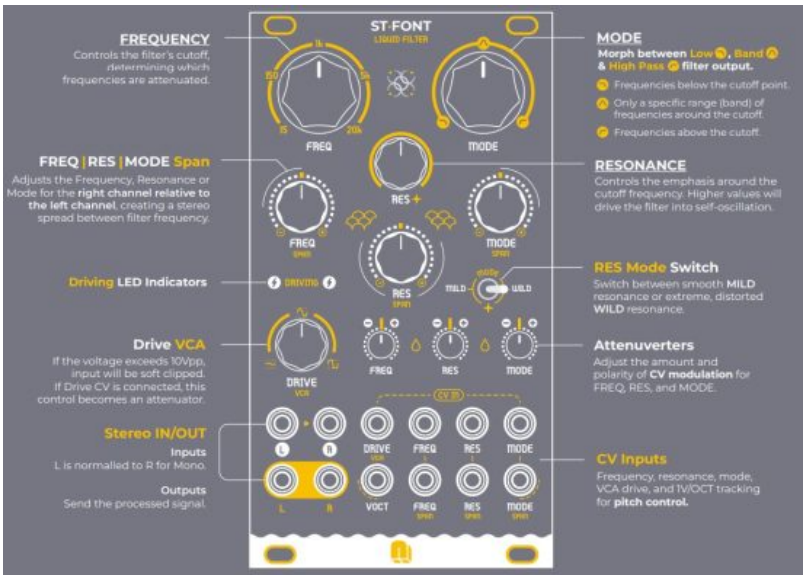
ST·FONT is a stereo liquid filter that takes the beloved core of the FONT module and expands it into a powerful stereo filtering tool. With a dual filter core (one for each channel), it offers a massive liquid sound with smooth resonance, adding warmth and depth to any audio signal.
The filter core includes Low Pass, Band Pass, and High Pass modes, allowing crossfading between them for versatile sound shaping.
Additional features include a stereo VCA with soft clipping, mild-to-wild resonance modes for subtle or extreme feedback and distortion, and full CV control with dedicated attenuverters.
The span controls for frequency, resonance, and filter mode spread further enhance the stereo imaging capabilities, making ST FONT a creative powerhouse for modular synth setups.

Key features

- Dual-Core Stereo Filtering. Independent filter cores for left and right channels with Low Pass, Band Pass, and High Pass modes, plus seamless crossfading between filter outputs.
- Integrated Stereo VCA. Built-in VCA with soft clipping for rich sound shaping, plus CV control.
- Dynamic Resonance Modes. Switch between Mild for traditional resonance or Wild for extreme distortion and aggressive filtering.
- Stereo Span Controls. Dedicated FREQ Span, RES Span, and MODE Span knobs allow you to create a wide, immersive stereo field by adjusting the spread of parameters across both channels.

Layout · General view

This image will clarify the function of each of the elements of the module.



Dual-core Stereo Filtering

Independent filter cores for left and right channels with Low Pass, Band Pass, and High Pass modes, plus smooth crossfading between filter outputs.

Fig.1 Difference between L and R outputs with different Resonance settings

Integrated Stereo VCA

Built-in stereo VCA with soft clipping, adding warmth and harmonic richness to your sound. From clean amplification to heavy saturation, enhancing tone before it reaches the filter stage.

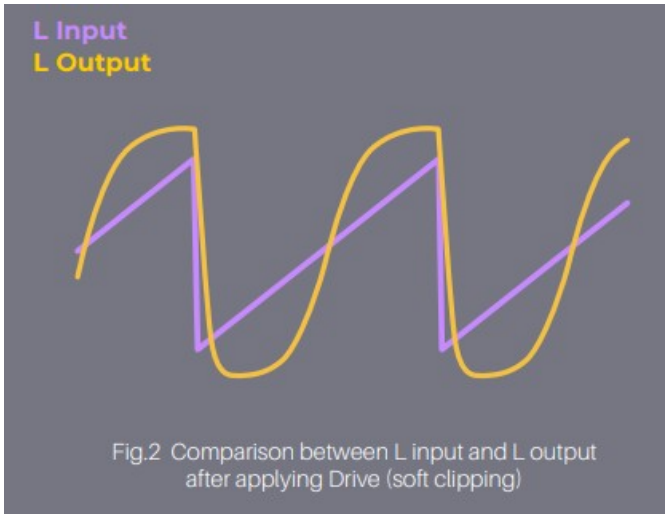


Fig.2 Comparison between L input and L output after applying Drive (soft clipping)

Dynamic Resonance Modes

MILD keeps the resonance smooth and musical, ideal for classic filtering effects, while WILD pushes the resonance to its limits, delivering intense, aggressive sounds with heavy distortion that brings an extra edge to your signal.

Fig.3 Differences between
Mild & Wild Resonance Mode

Stereo Span Controls

Dedicated FREQ Span, RES Span, and MODE Span knobs allow you to create a wide, immersive stereo field by adjusting the spread of Frequency, Resonance and Mode across both channels.

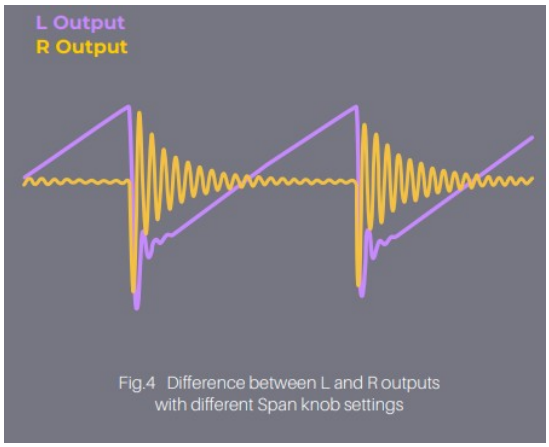


Fig.4 Difference between L and R outputs
with different Span knob settings

Controls

- **Frequency**

  Adjusts the filter's cutoff point, determining which frequencies are attenuated. The range spans from 15 Hz to 20 kHz, allowing for deep sub-bass filtering to crisp high-frequency attenuation. Lower values filter out higher frequencies, while higher values filter out lower frequencies.

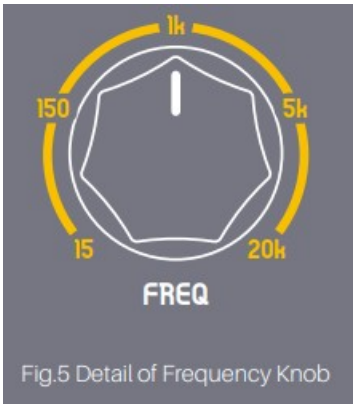


Fig.5 Detail of Frequency Knob

- **Resonance**

  Controls the emphasis around the cutoff frequency. Higher values increase resonance, driving the filter into self-oscillation for richer harmonic textures.

Fig.6 Detail of Resonance Knob

This control is closely related to the Mode Switch (Mild/Wild). The resonance behavior changes depending on whether the mode is set to smooth MILD resonance or aggressive, distorted WILD resonance, indicated by the same icon ( )

Fig.7 Detail of Shape Mode Knob

- **Mode Shape**

  Morphs the filter output between:

- **Low-Pass** . Frequencies below the cutoff are passed.
- **Band-Pass** . Only a specific range of frequencies around the cutoff is passed.
- **High-Pass** . Frequencies above the cutoff are passed.
- **SPAN Controls**

  Sets the offset for the Frequency, Resonance or Mode of the right channel relative to the left channel, creating a stereo effect.

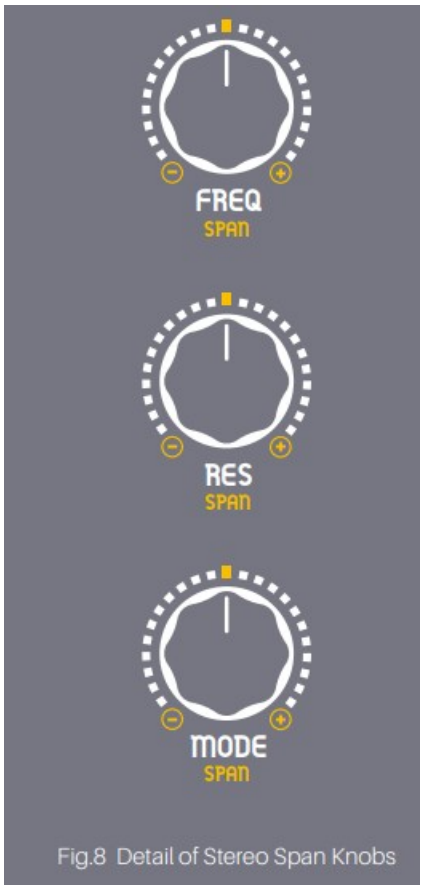


Fig.8 Detail of Stereo Span Knobs

- **Drive**

  Controls the VCA input gain. When the input voltage exceeds 10Vpp, the signal is soft-clipped, adding subtle distortion.

  If a CV is connected to the Drive input, the knob acts as an attenuator for the incoming modulation.

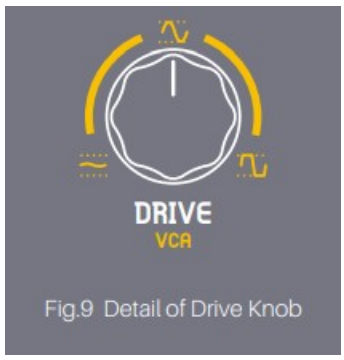


Fig.9 Detail of Drive Knob

- **CV Attenuverters**
- **FREQ CV.** Controls the amount and polarity of CV modulation applied to the Frequency knob. This allows external signals to modulate the filter's cutoff dynamically.
- **RES CV.** Adjusts the CV modulation depth and direction for the Resonance control, letting you shape the harmonic intensity in real-time.

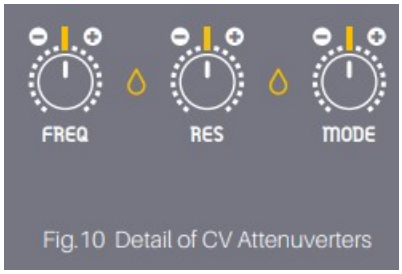


Fig.10 Detail of CV Attenuverters

- **MODE CV**. Modifies the CV modulation applied to the Mode knob, enabling external control over the filter's morphing behavior between Low Pass, Band Pass, and High Pass modes.
- **Inputs**

Left Input (L)

Normalled to the Right Input (R) for mono signals.

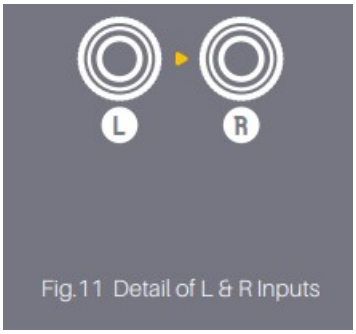


Fig.11 Detail of L & R Inputs

Right Input (R)

Processes stereo signals when used in combination with the left input.

- **CV Inputs**

  /DRIVE

  Enables external modulation of the Drive VCA. When connected, Drive knob acts as an attenuator.

  /VOCT

  Tracks pitch to allow the filter to act as a sine wave oscillator when Resonance is set to self-oscillation. It can track 4-5 octaves when tuned properly.

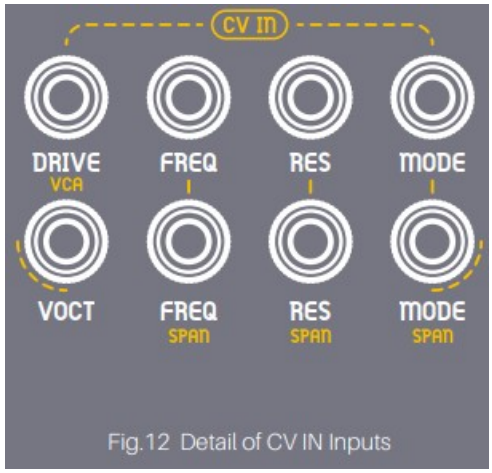


Fig.12 Detail of CV IN Inputs

  /FREQ, MODE & RES

  Allows external control of the Frequency, Mode or Resonance parameters. Input signals goes to the attenuverters

  /FREQ, MODE & RES SPAN

  Allows external control of the Frequency, Mode or Resonance Span parameters.

- Outputs

  L & R

  Processed audio signal for both left and right channels.

Fig.13 Detail of L & R Outputs

Contols / Common Section

- **LED Indicators**

MAIN LED

This LED is lighten up when the module is powered.

Fig.14 Detail of Main LED Indicator

DRIVING

The LEDs (L & R) lighten up when the signal exceeds the clipping threshold, giving users visual feedback of the filter's drive behavior.

- **RES Mode Switch**

  Switches between two resonance styles:

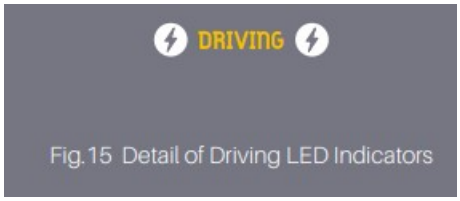


Fig.15 Detail of Driving LED Indicators

- **MILD.** Smooth and controlled resonance for subtle sound shaping.
- **WILD.** Aggressive and distorted resonance for extreme effects and experimentation.

Fig.16 Detail of Resonance Mode Switch

Calibration

ST·FONT is factory calibrated with precision sources. The following procedure is for adjusting inaccuracies in your system:

- **Left & Right HP Tuning 1 2**

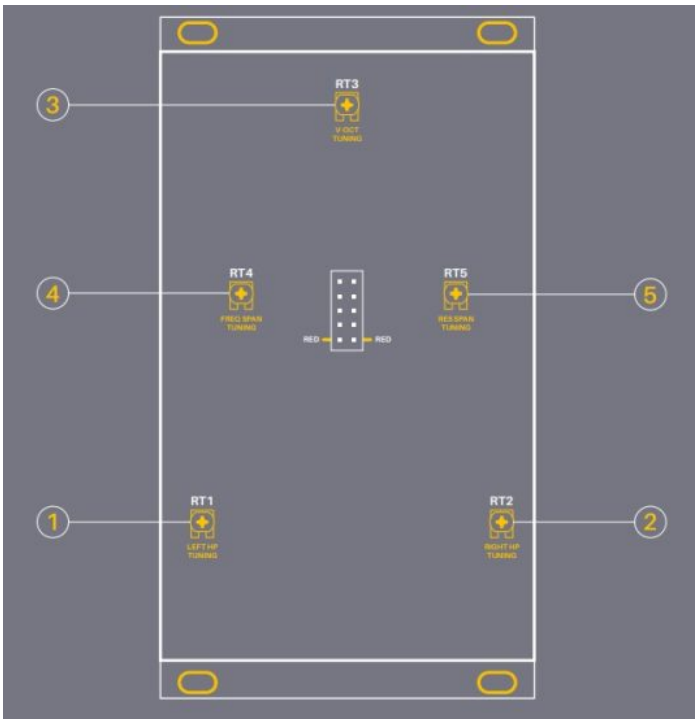
  Adjust the resistor value for the left channel high-pass filter (HPF).

- **V-OCT Tuning 3**

  Adjust this trimmer to calibrate the 1V/Oct tracking of the module around 4-5 octaves.

- **FREQ & RES Span Tuning 4 5**

  Adjust this trimmer to set the center point for the Frequency or the Resonance SPAN control.



Compliance

This device complies to the EU guidelines and is manufactured RoHS conforming without use of led, mercury, cadmium and chrome. Nevertheless, this device is special waste and disposal in household waste is not recommended.
This device meets the requirements of the following standards and directives:

- EMC: 2014/30/EU
- EN 55032. Electromagnetic compatibility of multimedia equipment.
- EN 55103-2. Electromagnetic compatibility – Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use.
- EN 61000-3-2. Limits for harmonic current emissions.
- EN 61000-3-3. Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems.
- EN 62311. Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields.
- RoHS2: 2011/65/EU
- WEEE: 2012/19/EU

Guarantee

This product is covered by 2 years of guarantee on purchased goods, which begins when you receive your package.

- This guarantee covers

  Any defect in the manufacturing of this product.

Replacement or repair, as decided by NANO Modules.

- This guarantee does not cover

  Any damage or malfunction caused by incorrect use , such as, but not limited to:

  – Power cables connected backwards.

  – Excessive voltage levels.

  – Unauthorized mods.

  – Exposure to extreme temperature or moisture levels.

Please contact our customer service – **jorge@nanomodul.es** – for a return authorization before sending the module. The cost of sending a module back for servicing is paid for by the customer.

Technical Specifications
Dimensions 14HP – 70×128,5mm
Current +12V 100mA / +5V 0mA / -12V 100mA
Input & Output Signals ±10V
Impedance Input 10k – Output 1k
Materials PCB and Panel – FR4 1,6mm
Depth 40mm including connectors – Skiff friendly
Modules are designed and assembled in València.

Contact
Bravo!
You have learned the basic
fundamentals of your ST·FONT Module.
If you have any doubts, please feel free to contact us.
nano-modules.com/contact

Modules are designed and assembled in València.

Documents / Resources

	**ST FONT NANO Stereo Filter Module** [pdf] User Guide NANO Stereo Filter Module, Stereo Filter Module, Filter Module, Module

References

- **User Manual**