

# t-spectrum

sound  machines

## INSTALLATION

Use the supplied power cable to connect the module to your system.

Be aware of the red stripe!

Simply house the module in your Eurorack case, fix it in place with the supplied screws and washers and you are ready to go.

The module is 8 HP wide.

## POWER REQUIREMENTS

150mA on +12V

20mA on -12V

## CONTACTS

Website: [www.sound-machines.it](http://www.sound-machines.it)

Email: [info@sound-machines.it](mailto:info@sound-machines.it)

## REGULATORY

Product: soundmachines t-quadstrip



## QUICK OVERVIEW

**t-spectrum** takes the concept of merging modulation sources and destinations into a single module.

**t-spectrum** is a spectral processor, an organic sound sculpting tool transforming drastically what passes through it.

The powerful modulation engine lets you hear frequency bands dance, smoothly or frantically.

Bring life to your patches with free running or resettable custom drawn modulations.

Maximum automation recording length of 20s for each parameter.

**MODE** allows to change between 1/2/4/16 (max) bands.

**FREQ** moves the filter initial frequency.

**SPREAD** changes the bandpass filters Q peak.

**TILT** moves the selected peaks around the spectrum.

The integrated touch lightstrip controllers can drive four parameters with looping or one-shot recording playback mode on each track with global RESET input.

Secondary distorted output.

The value of modulation inputs that share the same name (slider, pot and CV in) are summed.

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- HOLD/REC BUTTON:** Use this touch button to switch between the different behaviours for each of the touch sliders.

**A.LIVE** When the LED is not on, every time the user touches the slider, the value is read based on the finger position, but when the finger is lifted, the value returns back to zero (read as to the default bottom position).

**B.HOLD** - Press it once (the LED stays lit) to set the slider to HOLD mode.

The slider will maintain the last value once the user lifts the finger from the slider. If you press the button again while a value is being held, the HOLD mode will be disengaged, and the LEDs will show that the value read will return to zero (as to the default bottom position).

**C.REC** - To record an automation while keeping your finger touching the slider, press the button to start recording up to 20 seconds of automations. Keep pressing the button for as long as you want the automation to last.

The recording will be stopped and will start looping when the 20s limit is exceeded.

When an automation is replayed, the LED will blink once a second.

Remember that by touching the slider while a recorded automation is being played, the user can always override the value by touching the slider.

The automation will continue in the background, and once the finger is lifted, the recorded motion will return to be in control of the parameter.

**D.LOOPING/ONE SHOT** - An automation can be configured to be either free looping or one shot. By default, the automations are set to be free-running (the LED blinks once a second). When the button is pressed for at least 2 seconds, the LED will start blinking twice every second. This means that when an automation is recorded, it won't be played right away, but it will wait for a gate or trigger signal in the RESET input (see control n°4 later in this paragraph).

When in looping mode, the RESET signal will simply restart the automation playback from the beginning.

- TOUCH SLIDER:** The slider is the core of this module. Use it to dial in the parameters for the various controls, with the increasing value going from bottom to top.

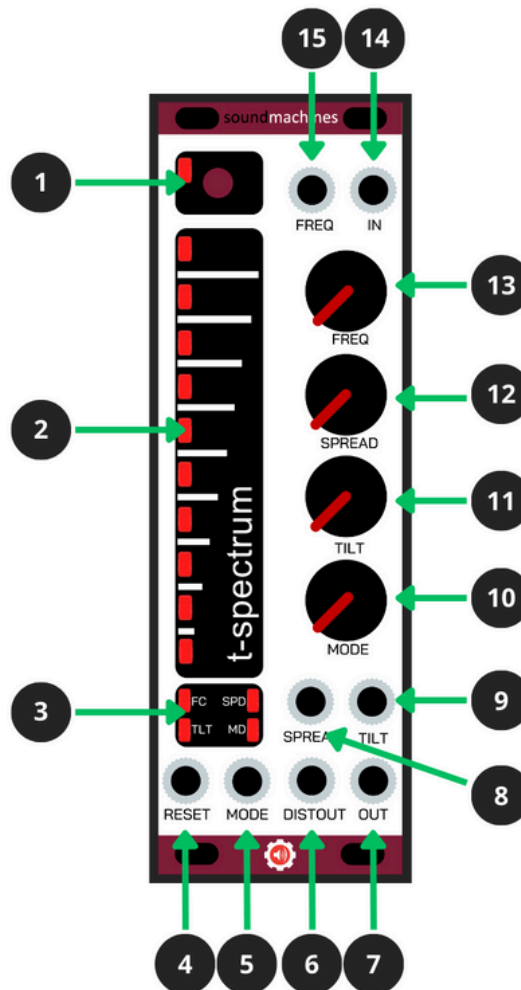
- PARAMETER SWITCH:** The LEDs indicate the parameter you are currently seeing and controlling with the slider. By tapping on it repeatedly, you can cycle between the four parameters, and the LEDs will light up for the relative parameter.

This button is also used to determine if a slider has to be excluded from the RESET input by keeping it pressed for 2 seconds.

For example, if you want to exclude the SPD automation from being triggered or reset by a gate signal in the RESET input, starting from the first power up, press the button once (the LED should now be lit for the SPD parameter), and then keep the button pressed for at least 2 seconds. The four LEDs will blink three times, indicating that the reset input won't affect the automation playback.



# t-spectrum USER MANUAL



Here are the parameters that can be controlled with the sliders:

- FC:** This parameter controls the center filter frequency, allowing to move between all the 16 bandpass filters. It has 16 "virtual" positions, crossfading between a band and the other.
- SPD:** The spread control will change the bandpass filters Q peaks.
- TLT:** (read as "tilt") this parameter is used to move the peaks (the number is selected with the "Mode" parameter) around the audio spectrum.
- MD:** By sliding your finger from bottom to top, the "mode" parameter will increase the number of resonant bands. It will start from 1, then 2, 4, 8 and 16 bands.

- RESET INPUT:** When a gate or a trigger is sent to this input, every automation lane that are set to be affected by the reset (see "3. PARAMETER SWITCH") will start from the beginning.

- MODE CV INPUT:** This CV input is used to change the number of t-spectrum's bands. The selected mode is the result of all the modulation applied to the inputs that share the same name (slider, potentiometer and CV in).

- DISTOUT:** The audio output but with an applied flavourful distortion.

- OUT:** Audio output.

- SPREAD CV INPUT:** Feed CV into it to change the SPREAD value. The spread value will be summed with the relative slider and potentiometer.

- TILT CV INPUT:** Feed CV into it to change the TILT value. The total TILT value will be summed with the relative slider and potentiometer.

- MODE POT:** This potentiometer is the manual control for the MODE parameter. The total MODE value will be summed with the relative slider and CV input.

- TILT POT:** This potentiometer is the manual control for the TILT parameter. The total TILT value will be summed with the relative slider and CV input.

- SPREAD POT:** This potentiometer is the manual control for the SPREAD parameter. The total SPREAD value will be summed with the relative slider and CV input.

- FREQ POT:** This potentiometer is the manual control for the filter frequency parameter. The total FREQ value will be summed with the relative slider and CV input.

- AUDIO INPUT:** The audio input.

- FREQ CV INPUT:** Feed CV into It to change the filter frequency value. The total FREQ value will be summed with the relative slider and potentiometer.