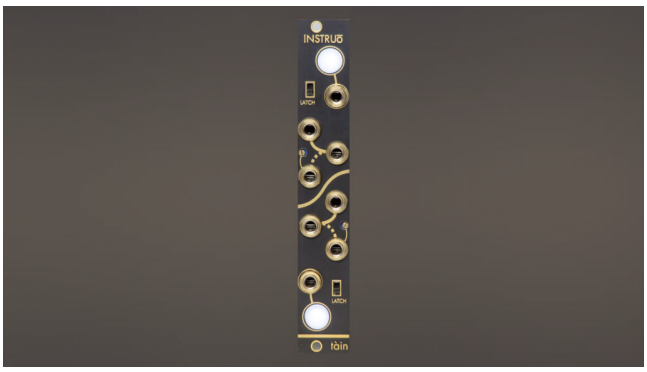

INSTRUO Tàin Switch Utility Module User Manual

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INSTRUŌ | SPECIALIST SYNTHESIZERS

INSTRUO Tàin Switch Utility Module

Description

The Instruō tàin is a two channel analogue bidirectional switch, similar to those found on classic semi-modular systems of the 1970s.
With momentary and latching functionality, external control and a manual button per channel, tàin can seamlessly switch between control voltage contours, trigger/gate patterns as well as audio signals all the way into audio rate.

Features

- Dual analogue bidirectional switching
- Manual button per channel
- Momentary and latching functionality
- Audio and CV compatibility

Installation

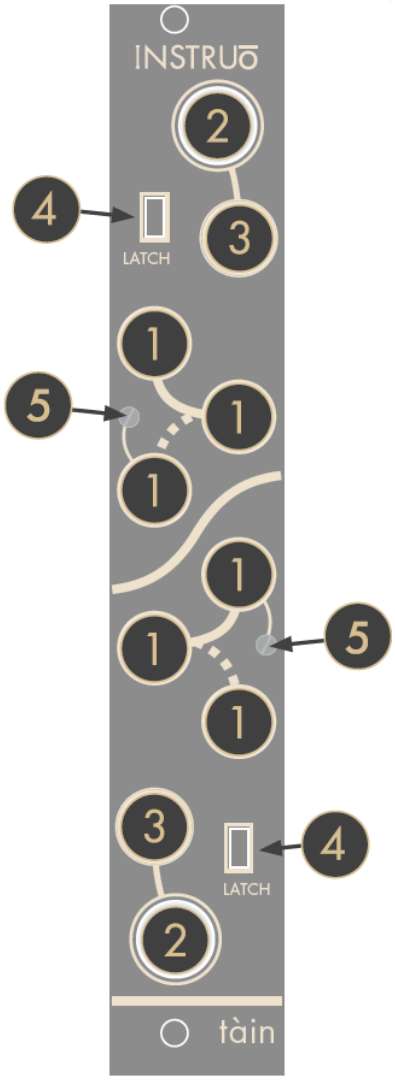
- Confirm that the Eurorack synthesizer system is powered off.
- Locate 4 HP of space in your Eurorack synthesizer case.
- Connect the 10 pin side of the IDC power cable to the 2×5 pin header on the back of the module, confirming that the red stripe on the power cable is connected to -12V.
- Connect the 16 pin side of the IDC power cable to the 2×8 pin header on your Eurorack power supply, confirming that the red stripe on the power cable is connected to -12V.
- Mount the Instruō tàin in your Eurorack synthesizer case.
- Power your Eurorack synthesizer system on.

Note:
This module has reverse polarity protection.
Inverted installation of the power cable will not damage the module.

Specifications

- Width: 4 HP
- Depth: 27mm
- +12V: 10mA
- -12V: 5mA

tàin | verb (close) to block up, to move so as to cover an opening, bring two parts together, to make continuous as in a circuit.



Key

1. I/O
2. Switch Button
3. Switch Control Input
4. Mode Toggle
5. Reference Trimmer

I/O: Because tàin is an analogue switch, inputs and outputs are both bidirectional and multipurpose. We'll refer to the two switch states as the primary state and the secondary state

- This means that each channel can act as a 1 input, 2 output switch, or a 2 input, 1 output switch.
- This also means that tàin can switch between control voltage as well as audio and can be modulated at both control rate and audio rate.
- Throughout the patch examples, these jacks will be referred to as, "the two Inputs and the Output" or "the two Outputs and the Input" on a patch-by-patch basis.

Switch Button: Pressing the Switch Button will change the state of tàin. The button will illuminate white every time the secondary state is active.

- XOR logic is implemented for the Switch Button when Momentary Mode is selected with the Mode Toggle. For instance, if a square waveform is used to control the switching, pressing and holding the Switch Button will effectively invert the control logic. In other words, the switch state always flips on each trigger or button press.

Switch Input: The Switch Input is a trigger/gate input used for changing the switch state of tàin.
Mode Toggle: The Mode Toggle changes the functionality of the Switch Input and Switch Button.

- If the toggle is in the up position, Momentary Mode is set and the Switch Input and Switch Button have momentary functionality. This means that tÃ in will change from the primary state to the secondary state as long as the signal present at the Switch Input is held high or the Switch Button is pressed down. Once the signal present at the Switch Input goes low or the Switch Button is released, the switch returns to the primary state.
- If the toggle is in the down position, Latching Mode is set and the Switch Input and Switch Button have latching functionality. This means that tàin will change between the primary state and the secondary state with every rising edge signal present at the Switch Input or as the Switch Button is pressed.

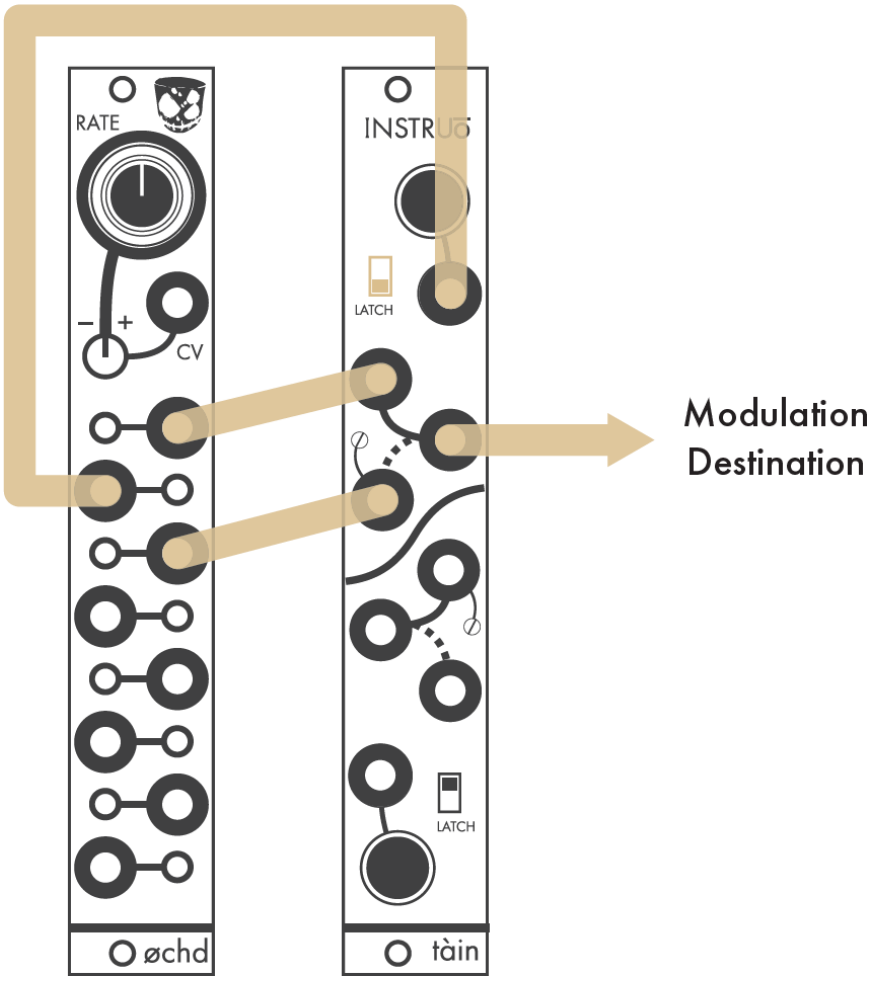
Reference Trimmer: The Reference Trimmer sets a reference voltage that is normalled to the bottom I/O Jack.

- It can be manually adjusted -/+10V.

Patch Examples

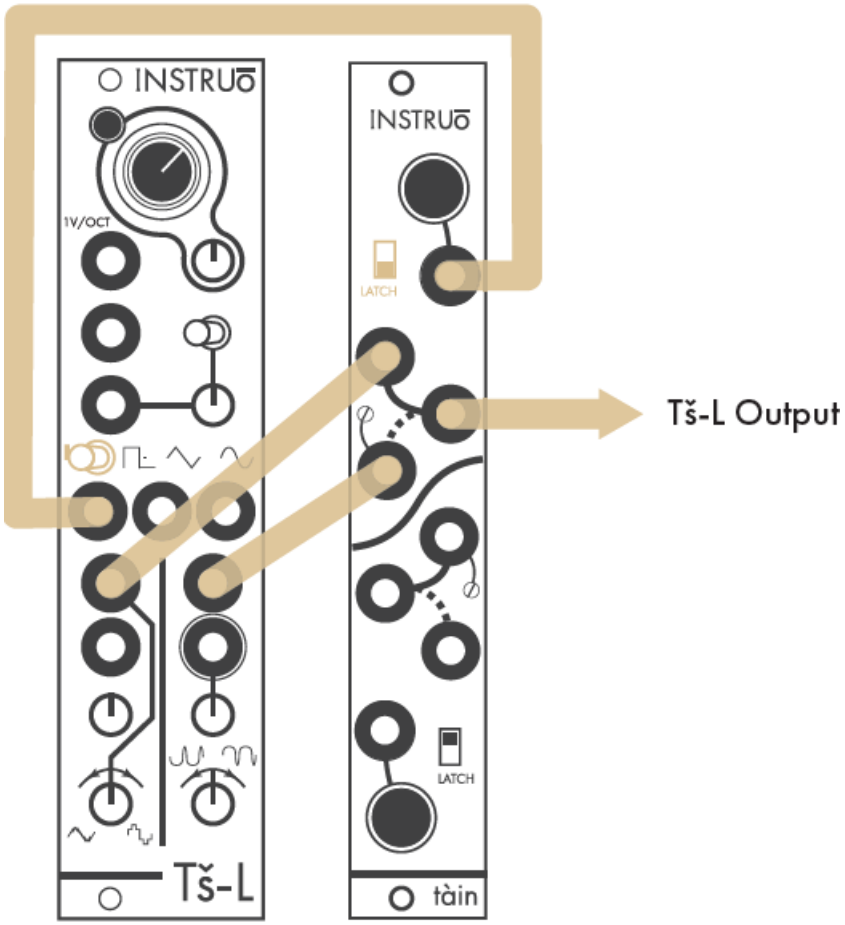
Control Voltage Switching

- Connect two different LFO outputs of øchd to the two Inputs of tàin.
- Connect a third LFO output of øchd to the Switch Input.
- Set the switch mode of tàin to Latching.
- Patch from the output of tàin to the modulation destination.



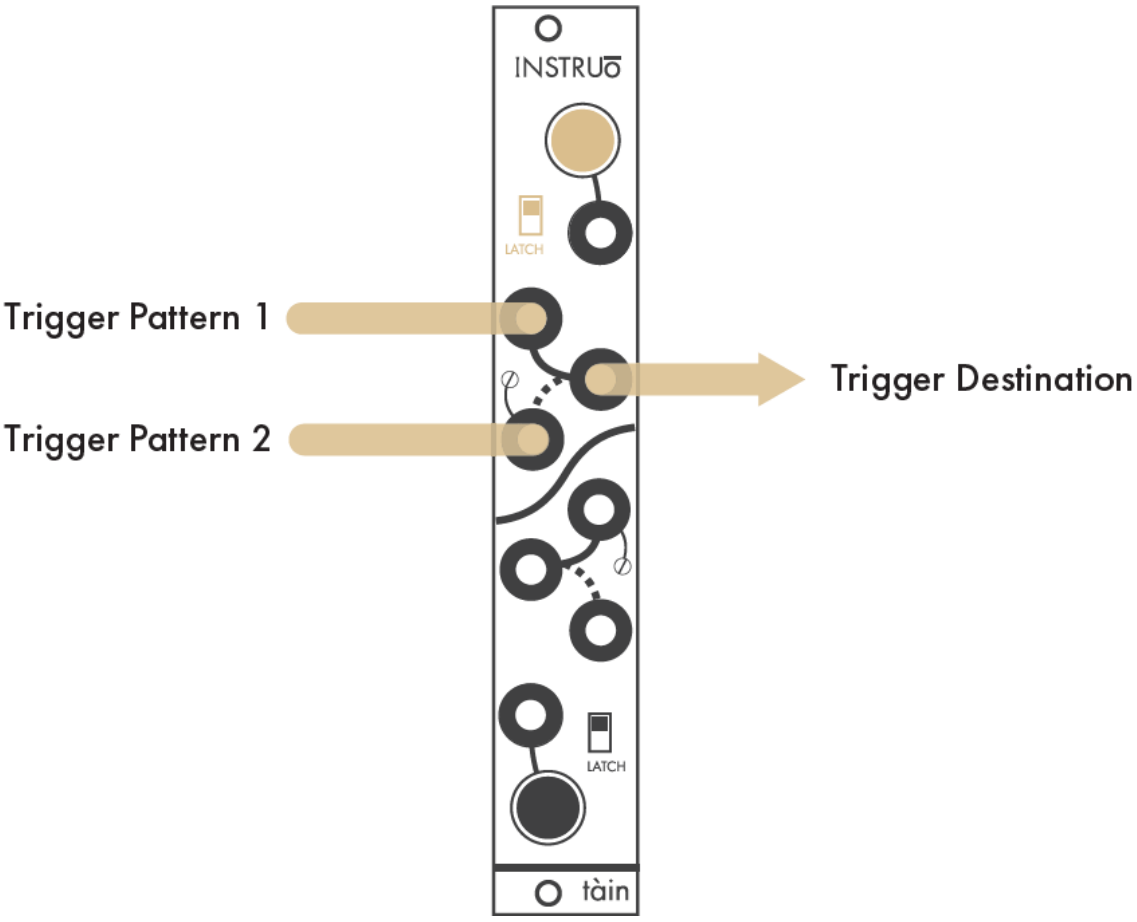
Audio Rate Waveform Splicing

- Connect the PWM and fold waveforms of Tš-L to the two Inputs of tàin.
- The square waveform of Tš-L is connected to the Switch Input.
- Monitor the Output of tàin.
- Changing the octave of the square waveform of Tš-L and the Toggle Mode of tàin will create different timbral results.



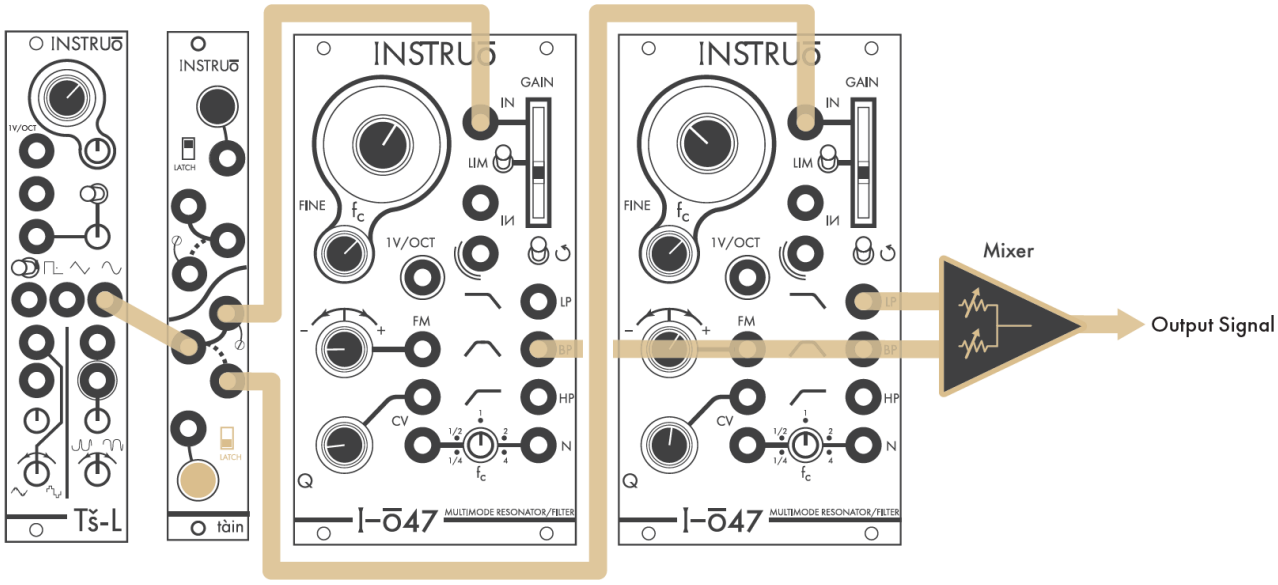
Manual Trigger Pattern Switching

- Connect two different trigger patterns to the two Inputs of tàin.
- Set the Toggle Mode of tàin to Momentary.
- Patch from the Output of tàin to the trigger destination.
- tàin will switch to the secondary state as long as the Switch Button is pressed.



Waveform Routing

- Connect the waveform output of an oscillator to the Input of tÃin.
- Set the Toggle Mode to Latching.
- Connect the two Outputs of tÃin to two different audio paths (like two different filters).
- Monitor both audio paths via a mixer.
- tÃin will switch the routing of the oscillator to both audio paths everytime the Switch Button is pressed.



This device meets the requirements of the following standards: EN55032, EN55103-2, EN61000-3-2, EN61000-3-3, EN62311.

Documents / Resources

	**INSTRUO Tàin Switch Utility Module** [pdf] User Manual T in Switch Utility Module