

A14 - μ THRU - USER MANUAL

(for units shipped after June 2026)

The main use of the module is to send MIDI from one input to five outputs (this is the 'common Thru' function). In addition there is a second MIDI input which will merge MIDI data to the 5 outputs as well. MIDI inputs will accept both TRS types (A or B) automatically (no setup needed), and each output type can be swapped to A or B from the front panel. If desired, the 3 bottom outputs can send 5V analog synchronisation signals instead of MIDI data.

• DESCRIPTION

- 1 - Main MIDI input.
- 2 - MIDI input activity LED (left for main input, right for merge input).
- 3 - Merge MIDI input.
- 4 - Merge enabled LED.
- 5 - Unique button to enter config and set options.
- 6 - A/B output TRS type LED status.
- 7 - MIDI output.
- 8 - MIDI output or "2 pulses" sync analog signal for TE / KORG.
- 9 - MIDI output or Reset analog signal output.
- 10 - MIDI output or Sync analog signal output.

• BUTTON ACTIONS

The module has a single button (5) that performs different actions depending on how long you press it.

Short press — Panic / Reset

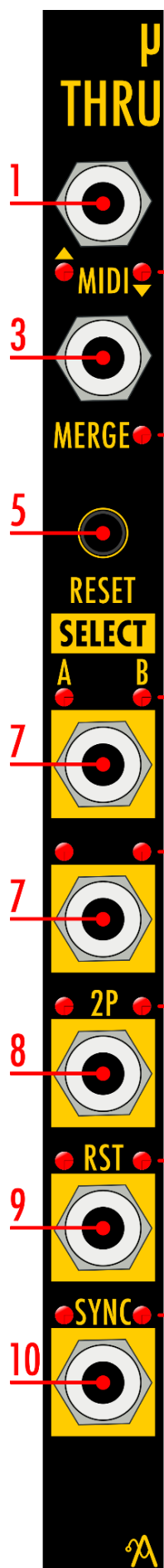
Kills any hanging notes by sending "All Notes Off" and "All Sound Off" on all 16 MIDI channels. Also resets internal MIDI buffers.

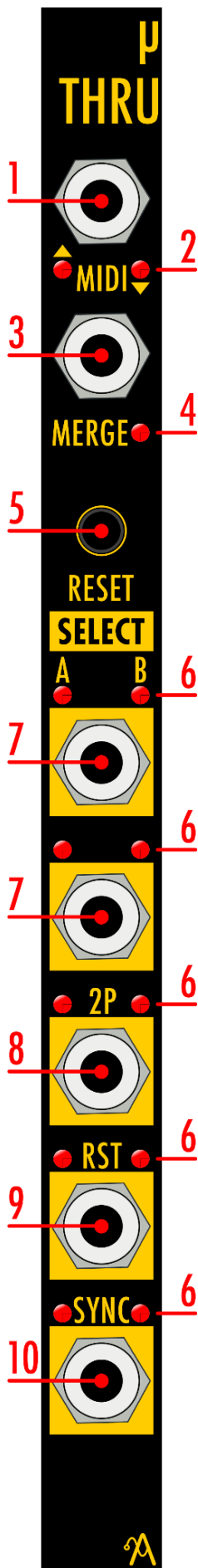
Long press (1 second) — Setup menu / Change parameter

Press and hold for one second to enter the output setup menu. Use short presses to cycle through the options, and long presses to toggle or cycle through the available states. The menu exits automatically after 4 seconds of inactivity.

Very long press (4 seconds) — Global config menu

Hold the button for 5 seconds until the merge LED (4) starts blinking. Navigation works the same way as the output setup menu. To save and exit, navigate to the merge LED position and use a long press.





• OUTPUT SETUP MENU

Press and hold the button (5) for one second to enter the output setup menu. The LED of the currently selected output will blink. Use short presses to cycle through the outputs, and long presses to change the state.

Output 1&2 (7) — TRS type. Toggle between TRS type A and B. One LED on means type A, the other means type B.

Output 3 (8) — **2P** stands for “two pulses”. MIDI or 2-pulse analog sync. Cycles through three states: TRS type A, TRS type B, or analog sync (both LEDs blink). When analog sync is enabled, the output sends 2 pulses per quarter note for Korg and Teenage Engineering devices. Use a mono cable only to connect these devices.

Output 4 (9) — **RST** — MIDI or Reset signal. Same three states as output 3. When analog sync is enabled, the Reset signal behaviour is set in the global config menu.

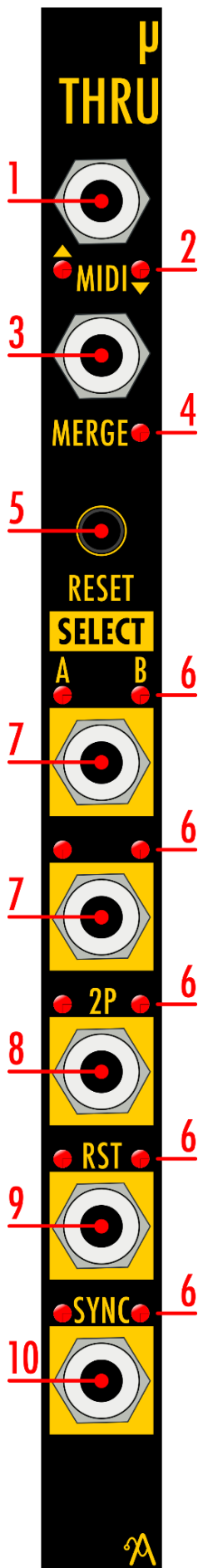
Output 5 (10) — **SYNC** — MIDI or Sync signal. Same three states as output 3. When analog sync is enabled, the clock rate is set in the global config menu. When using a TRS cable, the tip carries the clock signal and the ring carries the Run/Stop signal. This is DIN Sync standard.

Merge input (3) — 6th position — Merge enable. Toggle the software merge. Merge LED (4) blinking fast means merge is enabled. Merge LED (4) blinking slow means merge is disabled — data from the main input is routed directly to the outputs with no latency (hardware bypass). The disabled merge input can still respond to MIDI clock and output analog sync signals.

After changing an output type, the module sends “All Notes Off” on all MIDI channels to kill any hanging notes.

Changes take effect immediately — no need to exit the menu to test them.

If no action is taken, the menu automatically exits after **5 seconds**.



- **GLOBAL CONFIG MENU** (*visual memo on page 5*)

Hold the button (5) for 4 seconds until the merge LED (4) starts blinking. This indicates you have entered the global configuration menu. Use short presses to cycle through the options, and long presses to toggle or cycle through states. To save and exit, navigate to the merge LED position and use a long press.

Output 1 (7) — Free run (default: disabled, LED A on): When enabled (LED B on), the analog sync outputs run continuously as long as MIDI clock messages are received, regardless of MIDI Start or Stop messages. When disabled (LED A on), the analog sync outputs only run between a MIDI Start and a MIDI Stop message. Some MIDI masters send clock continuously without transport messages (such as the Elektron Digitakt) — enable free run if you want to output analog sync pulses in that case.

Output 2 (7) — Reset timing: Controls the timing relationship between the Reset and Clock signals. LED A on: Reset and Clock are sent simultaneously on the first clock after a Start message. LED B on: Reset is sent immediately on the Start message, and the first Clock follows 2ms later. Use LED B if your DIN SYNC device does not start correctly with LED A.

Output 4 (9) — Reset behaviour: Three states.

LED A on: a 1ms trigger pulse is sent on MIDI Start.

LED B on: a 1ms trigger pulse is sent on MIDI Stop.

LED A + B on: output is high during play and low when stopped, equivalent to the DIN Sync Run signal.

Output 5 (10) — Pulse rate:

LED A on: 4 PPQN (1 pulse per step, 50% duty cycle).

LED B on: 24 PPQN (DIN Sync compatible, 1ms pulse width).

Changes take effect immediately — no need to exit the menu to test them.

• NOTES

Don't worry if you plug +/- 10v modular signals into the MIDI inputs or outputs, everything is designed to support those situations.

Use a **mono cable only** to feed sync to Teenage Engineering and Korg devices.

Reset signal compatibility: Different sequencers have different expectations for the reset signal. If your sequencer does not start on the first step, try switching between the three reset behaviour modes (Output 4 in the global config menu) and the two reset timing options (Output 2 in the global config menu).

Clock input priority: Both MIDI inputs (1) and (3) respond to MIDI clock messages. The first input to receive a clock message is selected as the clock source and the other is ignored. The lock is released automatically after 3.75 seconds without any clock message, or immediately when a MIDI Stop message is received. This allows seamless switching between two clock sources — simply stop the current master and start the new one.

MIDI Time Code doesn't have input priority handling. Make sure you don't send MIDI Time Code on both inputs.

Sysex is handled this way: messages are treated first in, first out. Each input has a 1000 bytes buffer. Don't send two large Sysex dumps at the same time on both inputs.

“**Active Sensing**” (\$FE) and “**System Reset**” (\$FF) are filtered and discarded by the module.

Pulse width: The 2-pulse output (8) has a fixed 20ms pulse width. The Reset output (9) has a 1ms pulse width. The Sync output (10) has a 1ms pulse width in 24 PPQN mode, and a 50% duty cycle in 4 PPQN mode.

Factory reset jumper: A jumper on the PCB allows you to reset all settings to factory defaults. Remove the jumper and power the module on — factory settings will be loaded and saved to internal memory. Replace the jumper to resume loading your personalized settings on power-up.

Internal MIDI outputs: Two additional MIDI output connectors are available on the PCB for internal wiring.

DAW usage: Most DAWs send MIDI clock immediately after a MIDI Start message without compensating for output latency. Based on my testings, Ableton Live appears to delay the generated MIDI clock pulses to align them with the audio output, resulting in tighter synchronisation.

