THYME+

SEQUENCEABLE ROBOT-OPERATED DIGITAL TAPE MACHINE

Signal-flow and controls

Bastl's THYME+ optimizes your sound and liberates you from the confines of routine work. With numerous parameters at hand, you can delve deep into time-based effects and explore their wildest combinations.

You have the freedom to experiment with delay, phaser, reverb, chorus, pitch shifter, multi-tap delay, tape delay, tremolo, vibrato, and much more – all in stereo!

For full manual and documentation, scan the QR code.

There's a lot THYME+ can do and we will slowly dive into it. Follow these easy steps to comprehend it all, bit by bit...
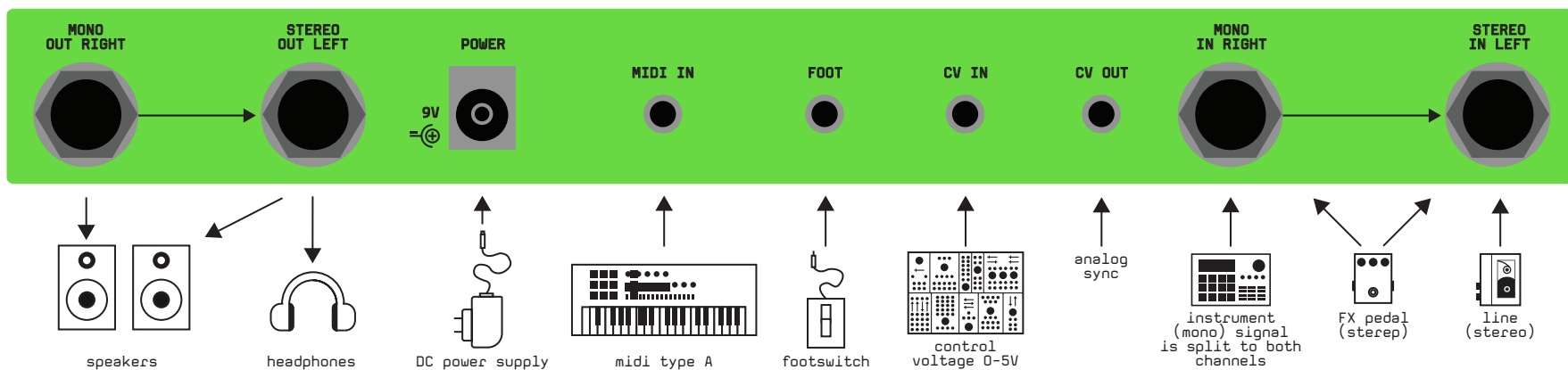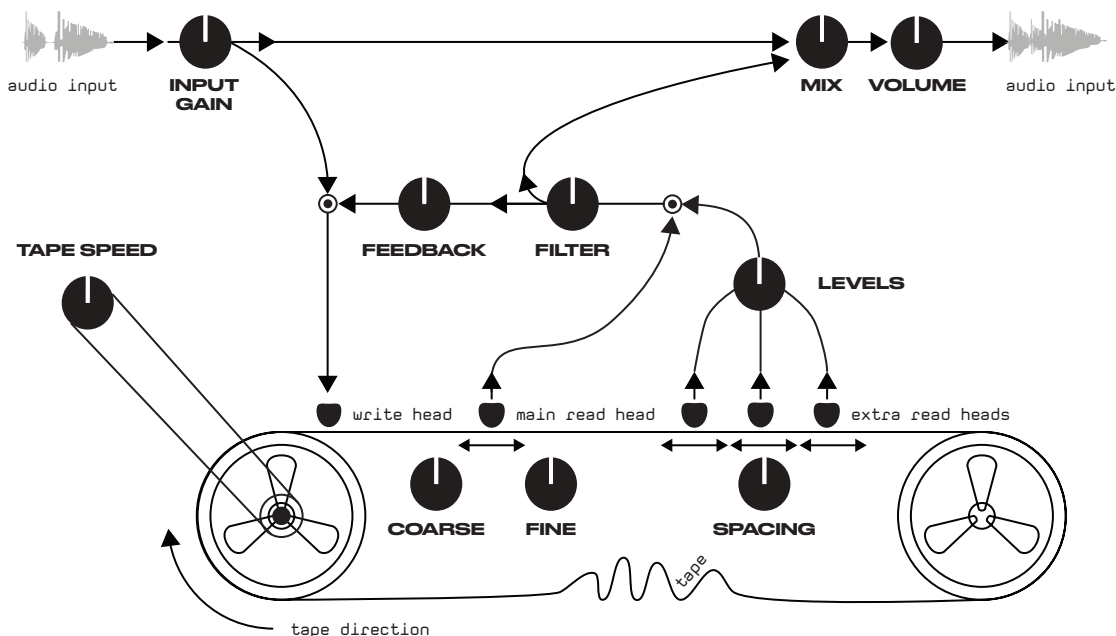
In this quickstart guide, we will look into:
- Tape delay
- Memory
- Sequencer (remember to save your progress as you go, it will be essential)
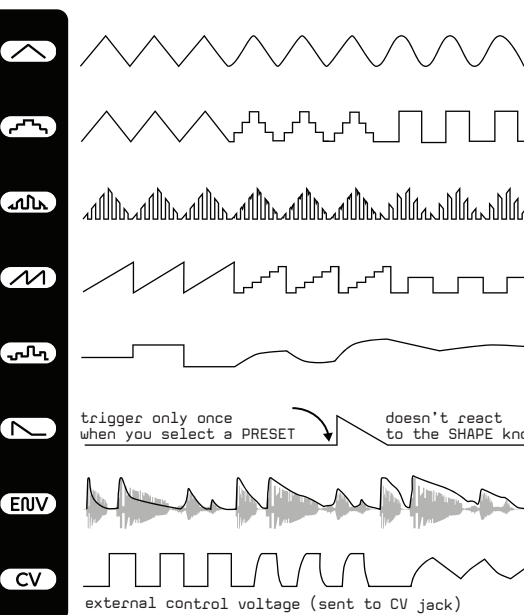- Freeze mode

For the best results follow each step, the way it's written.

And finally, the built-in sequencer enables you to compose these effects into vibrant, dynamic patterns!

Automate and synergize your jam with THYME+, a one-of-a-kind audio effects processor run by friendly Robots ready to handle your audio processing workload.

This quickstart guide provides essential information to get you started right away.

Signal-flow diagram: audio input → INPUT GAIN → MIX → VOLUME → audio input; FEEDBACK, FILTER, LEVELS, TAPE SPEED; write head, main read head, extra read heads; COARSE, FINE, SPACING; tape direction.

Connection panel:
MONO OUT RIGHT — STEREO OUT LEFT — POWER 9V — MIDI IN — FOOT — CV IN — CV OUT — MONO IN RIGHT — STEREO IN LEFT

- speakers
- headphones
- DC power supply
- midi type A
- footswitch
- control voltage 0-5V
- analog sync
- instrument (mono) signal is split to both channels
- FX pedal (sterep)
- line (stereo)

ROBOT WAVESHAPES

ROBOT + RATE = SHAPE

- trigger only once when you select a PRESET
- doesn't react to the SHAPE knob
- ENV
- CV — external control voltage (sent to CV jack)

FREEZE MODE

The **FREEZE** mode samples a short loop, with the length defined by the delay time.

FREEZE allows you to create drones with longer time frames, "lag" the sound with shorter ones, create feedback pitches with the shortest delay times, or glitch the sound with gradual movements.

Change the length of the frozen loop using the **COARSE** & **FINE** knobs.

Control the intensity of the loop with **FEEDBACK** (when fully to the right, the loop will stay indefinitely).

Mix in the extra read heads to the output with **LEVELS**. In the second half of the knob, the signal from extra read heads gets written into the frozen loop. Have fun!

BUTTON COMBOS

Tape machine

SHIFT +		
FREEZE		set tape speed to half
DELAY SYNC		set tape speed to double
TAPE SPEED		lo-fi/analog tape
FEEDBACK	wiggle	negative/positive feedback
SPACING	wiggle	synced/unsynced read heads

Robots

ROBOT +		
any KNOB	wiggle	select for modulation
any KNOB	movement	set amount of modulation
SYNC	robot	stereo robot mode
PRESET 1–8		select waveform of LFO
RATE		modulate shape of waveform
A/B/C/D PATTERN		select phase of LFO
FREEZE/LINK/SYNC		select robot polarity
BYPASS		erase selected robot

Sequencer and clock

WRITE + PRESET 1–8	record preset (live mode)
SELECT + PRESET 1–8	select preset (write mode)
hold PRESET 1–8	select substeps (write m.)
SHIFT + TAP	modeselect clock source
SHIFT + A/B/C/D	select tempo divider

Memory

SHIFT +		
PRESET		select bank
SELECT		save bank
WRITE		copy preset
PLAY		paste preset
BYPASS + SHIFT + PRESET		erase bank
BYPASS + PRESET		erase preset
BYPASS + A/B/C/D		erase pattern
PRESET 8 + PLAY		in test mode memory format

Randomize

ROBOT + SHIFT +		
FREEZE	all robots parameters
LINK	tape machine parameters
SYNC	tape and robots parameters

Midi, hardware test, firmware update

Hold buttons during power up:

WRITE	start/stop message
PRESET 1–8	midi channel 1–8
SHIFT + PRESET 1–8	midi channel 9–16
A+B+C+D	hardware test mode
TAP	bootloader mode to update

ROBOT POLARITY

ROBOT + FREEZE LINK SYNC

There are three different settings:
- negative
- bipolar
- positive

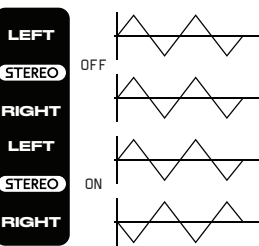Each Robot can modify a parameter in three directions:

knob value — modulation

It can subtract from the knob value, it can modulate around it, or it can add its output to the knob value.

ROBOT PHASES

ROBOT + PATTERN = PHASE

A	0°	default
B	90°
C	180°
D	270°

ROBOT STEREO

ROBOT + SYNC = STEREO

LEFT	
STEREO	OFF
RIGHT	
LEFT	
STEREO	ON
RIGHT	

THYME+
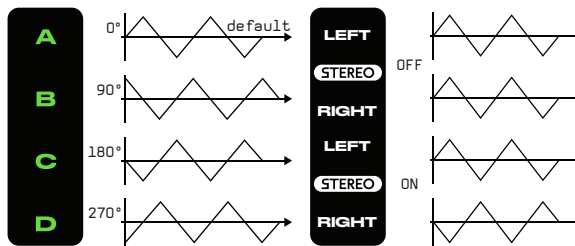
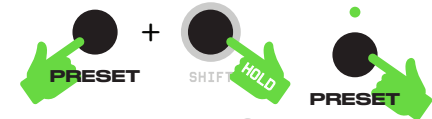## 1. START HERE

Plug in your power supply, input signal, and output signal.

For starters, to learn the instrument and best hear the processes, it's best to use a simple continuous rhythm signal instead of drones or an instrument you would have to play actively.

- Select an empty BANK with empty PRESETS (SHIFT + **PRESET**)

- Select an empty **PRESET**

2. LET THERE BE SOUND

- Adjust **INPUT GAIN** to a desired level. A GREEN light indicates an incoming signal, while a RED light indicates clipping (the signal is too loud)
- Adjust **VOLUME**. Now you can hear your signal!
- Quickly turn **MIX** to unfreeze the knob*
- Adjust between DRY (original) and WET (processed) signal

*Knob freezing is a function keeping the knob values set. It applies to all the knobs except **INPUT GAIN** and **VOLUME**.

INPUT GAIN   **MIX**   **VOLUME**

3. SIMPLE DELAY

Delay is the core of this instrument. It functions as an analog tape machine. There is a virtual digital "tape" as well as write and read heads interacting with it.

- Unlock and adjust the **COARSE** knob. It controls the main delay time
- Use **FINE** to make precise delay time adjustments
- Adjust **FEEDBACK** to control the amount of the signal fed back to the write head

TAPE SPEED changes how fast the tape moves, so it affects the overall duration of the loop and, therefore, the audio sample rate. The slower the tape (turning the knob to the left), the more digital sound artifacts appear.

FEEDBACK   **COARSE**   **TAPE SPEED**

You can press **LINK** to compensate for the change in delay time caused by adjusting **TAPE SPEED**.

- Press **TAP** multiple times to set the tempo of the main clock. The tempo is indicated by the blinking green light above*
- Press the **COARSE SYNC** button to sync the delay time to the main clock
- Play around with all these parameters

*If there's no light indication, check the clock source (SHIFT + **TAP**) and select the TAP option. The setting is indicated by one of the three lights:

FREEZE   **LINK**   **SYNC**

PRESET + SHIFT HOLD
TAP/CLK/MIDI
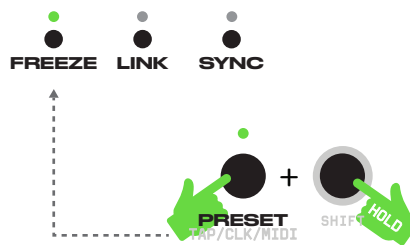
4. COPY & PASTE PRESETS

- Select a **PRESET** (or just stay in the current one)
- Press SHIFT + **WRITE** to COPY the current **PRESET** settings
- Select another **PRESET**
- Press SHIFT + **PLAY** to **PASTE**

5. ADDING DENSITY

You can add three more extra read heads to the tape. They will be added after the main read head.

- Unlock and adjust **LEVELS**. This knob controls the volume level of all three read heads
- Play around with **SPACING**. This knob controls the distance between the three extra read heads

These heads also react to **FEEDBACK** and **TAPE SPEED**. Let's try it out!

6. ERASING A PRESET

If you happen to get lost because things grow a bit too chaotic … don´t panic!

- Press **BYPASS** + **PRESET** to erase the corresponding preset

Since you still have the first preset in your device's memory, you can always **PASTE** it again (SHIFT + **PLAY**).

7. ROBOTS

Now's the time to learn how to automate parameters using Robots.

Let's try it on the **FILTER** parameter:

- Select an empty **PRESET**. PASTE your copied preset again
- Play around with the **FILTER** knob. On the left, it acts as a lowpass (LP), and on the right, as a highpass (HP)
- Hold the ROBOT button and then wiggle the **FILTER** knob
- While still holding ROBOT, the light over the **FILTER** knob should light up green with full brightness. It indicates you've selected this parameter to be modulated by a Robot

FILTER   +   **ROBOT** HOLD

- While still holding the ROBOT button, select one of the Robot waveshapes
- Release the ROBOT button
- Adjust the **RATE** and **AMOUNT** knobs to set the modulation. The R light indicates the modulation progress of the selected Robot

RATE   (R)   **AMOUNT**   **FILTER**

Adjust **FILTER**. The Robot still reacts to the knob's position. Its value is a reference point the Robot modulates around. Try it.

8. MORE ROBOTS

Using Robots, you can create interesting modulations, such as the following one, resulting in a flanger-like effect:

- Select a new **PRESET**
- Adjust **FEEDBACK**
- Turn the **FINE** knob, and listen to the flanger effect
- Hold ROBOT and wiggle **FINE** to automate **FINE** with a Robot
- Release ROBOT and play with **AMOUNT**, **RATE**, and **FINE**

You can change the waveform shape from triangle to sine wave:

- Hold ROBOT and turn **RATE** fully to the left. It now functions as (SHAPE)

Choose a different waveform shape for the Robot modulating the **FINE** knob:

- Hold ROBOT and press a corresponding **PRESET** button to select the desired waveshape. Let's try the random shape (∿∿) for a Sample & Hold-like effect. Now, you can smooth out the edges with the (SHAPE) knob

Every waveshape reacts differently.

If you're curious, check the table on the next page for all the possible waveshaping variants.

9. EVEN MORE ROBOTS

In this next example, we will build a simple tremolo effect:

- Hold ROBOT and automate **VOLUME**
- Set **RATE**, **AMOUNT** and **VOLUME**

Robots can be synced (quantized) to the clock in rhythmical intervals:

- Press the **SYNC** button next to the ROBOT button
- Hold ROBOT and press **SYNC** again. This turns the modulation into (STEREO). Really cool!

Try to automate more parameters using Robots in the same way!

There is even more to Robots on the next page.

10. TOO MANY ROBOTS

Hold ROBOT to see which knobs are automated. Those with an active Robot will flash briefly. Afterwards, the one knob with a lit light is the currently selected Robot.

To erase a Robot, select it with a wiggle of the knob and press ROBOT + **BYPASS**.

11. SAVE & ERASE

- Press SHIFT + **SELECT** to SAVE your whole BANK

This will save all the current settings. All will stay saved even after restarting the device.

Save your presets, so that you can build a sequence with them.

- Press SHIFT + **PRESET** to select a BANK (1–8)
- Press **PRESET** to select a PRESET (1–8) from the active BANK

THYME+ is, by default, shipped with all the BANKS and PRESETS empty. However, if you need to clear a BANK, press **BYPASS** + SHIFT + **PRESET**.

and NOW it's THYME to COMPOSE

Press **PLAY**, this will start the sequencer, and the **WRITE** light will start blinking.*

WRITE   **PLAY** PRESS

Since there are no presets recorded into the sequence yet, all the steps are set to **BYPASS** by default.

BYPASS

To temporarily listen to different presets, hold the corresponding **PRESET**.**

PRESET HOLD

To record presets into the sequence, hold **WRITE** + **PRESET**.

WRITE HOLD   +   **PRESET**

*if not working, make sure your clock source is set to TAP
if not working, stop the sequencer and make sure that the **WRITE light is off.

The sequence is stored in the active **PATTERN**. There are four PATTERNS. (A)(B)(C)(D)

A   B   PRESS

Change the tempo of the sequencer by tapping the **TAP** button.

TAP   PRESS

When switching the sequencer off by pressing **PLAY**, you stay on the preset that played last in the sequence. **WRITE** light stops blinking.

WRITE   **PLAY** PRESS

Now you understand how the sequencer works in the LIVE MODE.

There's also a WRITE MODE which is the more detailed mode and allows for much more precise editing. Learn how the WRITE MODE works in the full THYME+ manual.

Now that you have a few presets prepared & saved, let's learn how to turn them into sequences...