

tape! User Manual

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Introduction

WIP

This manual is in the deep work in progress state. Please do not rely on it heavily :)

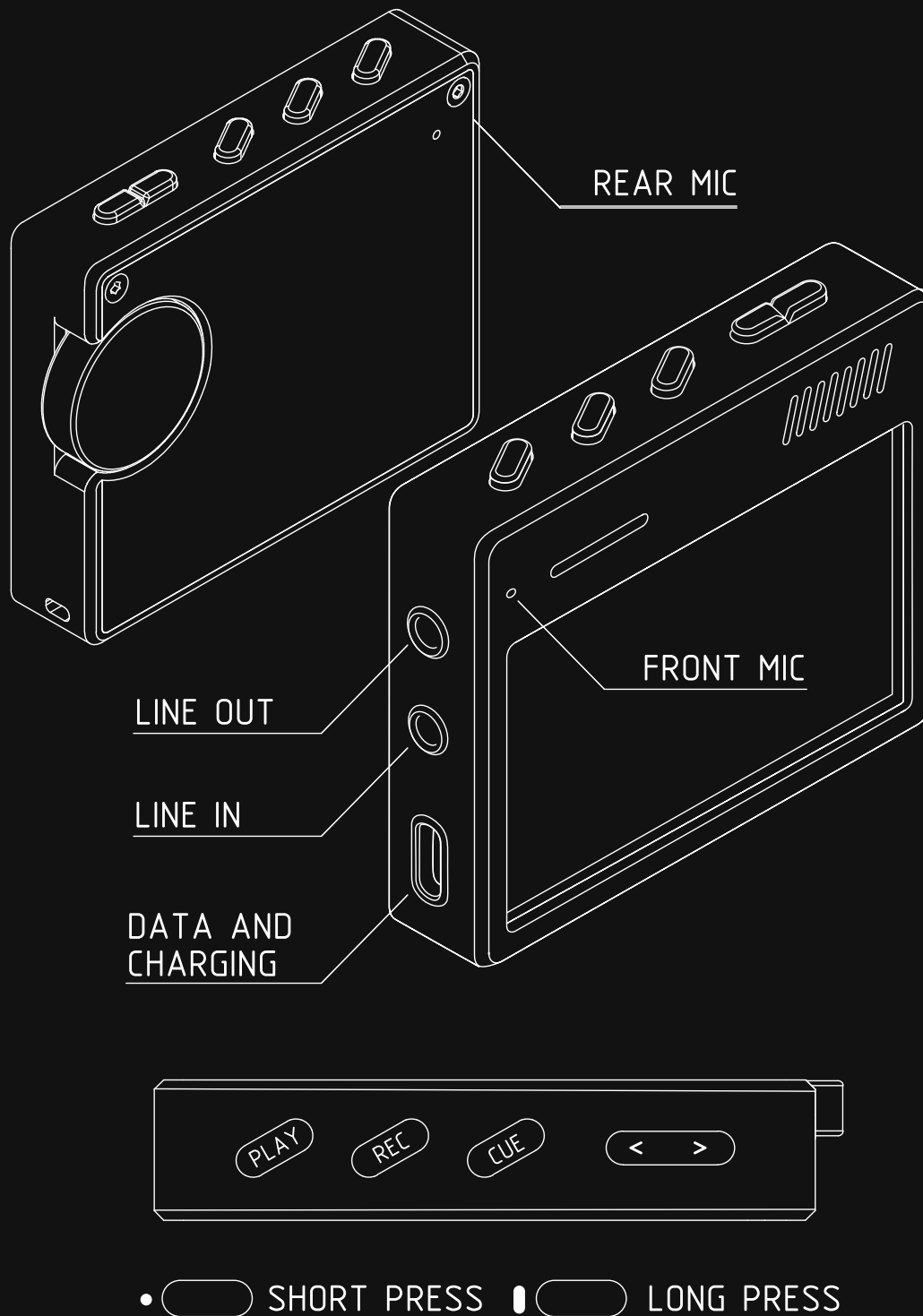


Figure 1: Physical layout

User Interface

The primary display is divided into three functional zones for real-time feedback and navigation.



Figure 2: Main interface: transport controls (top), tape reels, and the Tapehead timeline with Marks (bottom)

- **Status Bar:** Displays current transport state, and battery percentage.
- **Hint Overlay:** Dynamic context-sensitive labels mapping physical buttons and the encoder to active functions.
- **Timeline:** Shows the waveforms for the 4 *Tapeheads*, active loop regions, and *Marks*.

Quick Start

Tapehead navigation and recording

The basics you need to start exploring tape: record some audio and create a loop.

Press < / >: to switch between *tapeheads* (A, B, C, D).

Press REC to arm the *tapehead*

Press PLAY to begin the recording.

Press REC to pause or disarm recording.

Press CUE: toggle loop on/off for the active *tapehead*.

Note

Only one tapehead can record at a time.

Congrats! You've recorded your first loop. Now it is time to have some fun.

Unlike a physical tape loop, you can play back the same recorded segment from multiple tapeheads simultaneously. Each tapehead can have its own playback speed and direction, allowing you to create layered textures, harmonies, rhythmic variations, and even reverse playback from the same source material.

Operations

Mixer Parameters

Hold **PLAY** to display the Mixer quick menu.

Adjust the output level, FX send, feedback, and input level for the active *tapehead*.

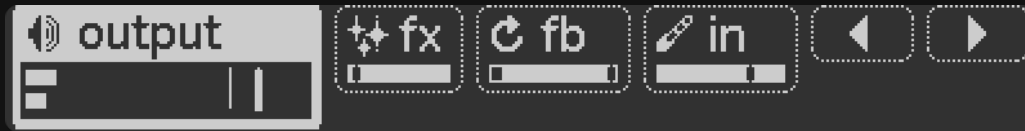


Figure 3: PLAY Context menu

- **Rotate Encoder:** level adjustments.
- **Press < / >:** Cycle between *Output*, *FX*, *Feedback*, and *Input* levels.
- **Output** controls the playback level of the active tapehead.
- **FX** controls the tapehead's send level to the effects chain.

100% Wet

The **FX** send is independent of **Output**, so you can create a 100% wet signal by turning **Output** down while leaving **FX** up.

- **Feedback** controls how much newly recorded audio replaces the existing material. Higher values preserve more of the previous recording, while lower values overwrite it more aggressively.

Delay vs SOS

This is the key difference between a delay effect and Sound-on-Sound recording.

- **Input** adjusts the recording input level for the active tapehead.

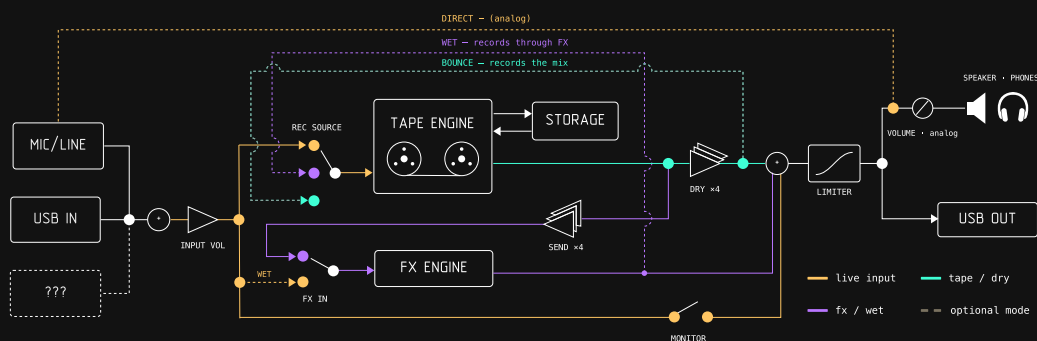


Figure 4: Signal flow

Recording options

Hold **REC** to open the Recording Options quick menu.

Configure recording behavior, input source, monitoring, undo, and bounce settings.



Figure 5: REC Context menu

- **UNDO:** press *PLAY* to undo/redo last recording.
- **ERASE:** hold *PLAY* to clears current loop region.
- **INPUT:** press < to toggle between *line* and *mic* inputs.

Feedback Risk

Internal Mic: Monitoring the internal Mic without headphones will create a high-gain feedback loop. The system automatically disables monitoring in this configuration if no headphones or line-out connected automatically.

- **DRY/WET:** hold < to switch.
 - **Dry** — record the input signal before the effects chain.
 - **Wet** — record the input after the effects chain, allowing effects to become part of the recording.
- **MONITORING** press > to toggle input monitoring on and off.
- **BOUNCE** hold < to enable bounce mode.

Bounce flow

Each tapehead can be bounce/resample only previous tapeheads, so its not possible to bounce at tapehead **A**

Edit Mode

Hold **CUE** to open the Edit quick menu.

Create cues, split regions, scrub the timeline, and perform slip editing.



Figure 6: CUE Context menu

- **Press PLAY (Set):** Turns on loop mode.
- **Hold PLAY (Cue):** Add or delete a manual *Cue* at the current tapehead position.
- **Press REC (Split):** Partition the current region at the *Tapehead* position. *Result:* Creates two independent segments.
- **Rotate encoder:** scrub over timeline if assigned to *Speed*, otherwise Slip.

Loop Slipping

When the encoder is assigned to *Start* or *End* points (see Quick Menu):

- **Hold CUE + Rotate Encoder:** Move both loop points simultaneously.

Experiment

Don't forget to have fun with slipping very short loops.

Quick Menu

Hold < / > to open the Quick Menu.

Assign the encoder to one of the primary tapehead controls.



Figure 7: Quick Context menu

Assigns the encoder to primary *Tapehead* parameters.

- **Press PLAY:** Assign the encoder to *Speed*.
- **Press REC:** Assign the encoder to *Loop Start*.
- **Press CUE:** Assign the encoder to *Loop End*.

Note

Quick menu is not available during recording.

Menu

Main menu

Entering main menu: - **Long press** < / > to access quick hints



Figure 8: main menu

- **Long press** < - open main menu

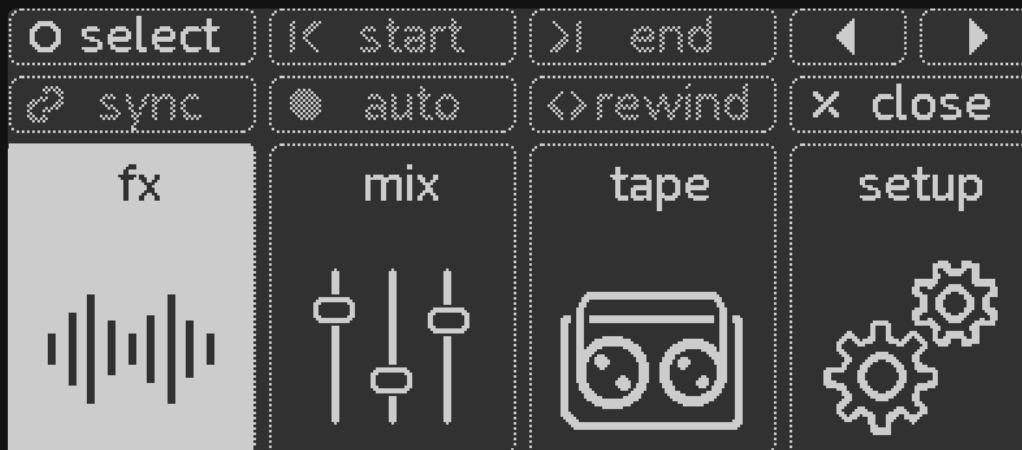


Figure 9: main menu

FX

Node-based fx processing chain

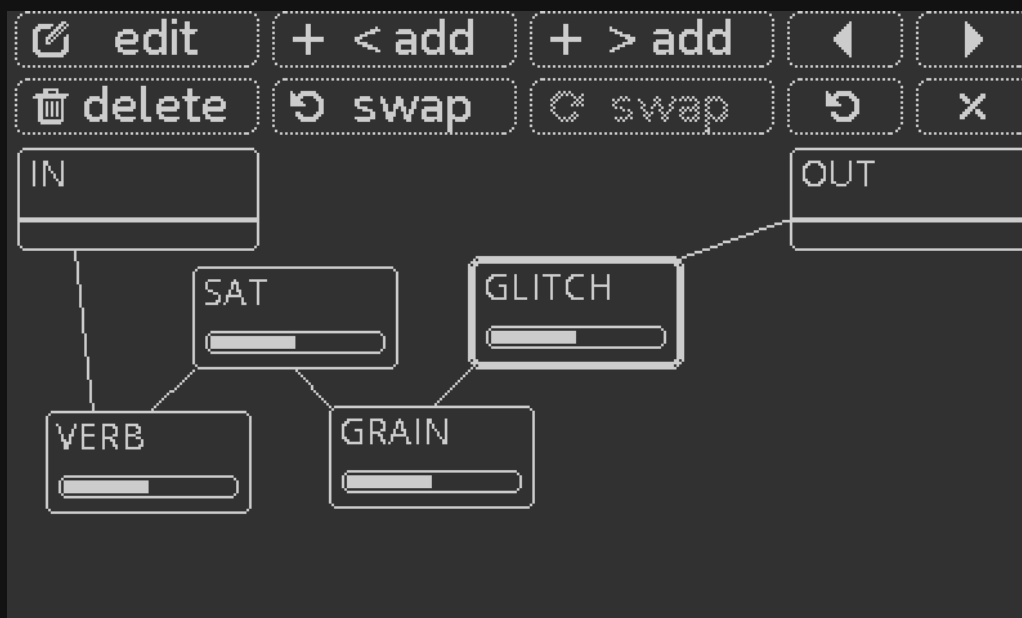


Figure 10: fx menu

Navigation

- **Rotate Encoder or press** </>: Scroll through active processing *Chain*.
- **Press PLAY**: Edit primary node parameter.

Adding effects

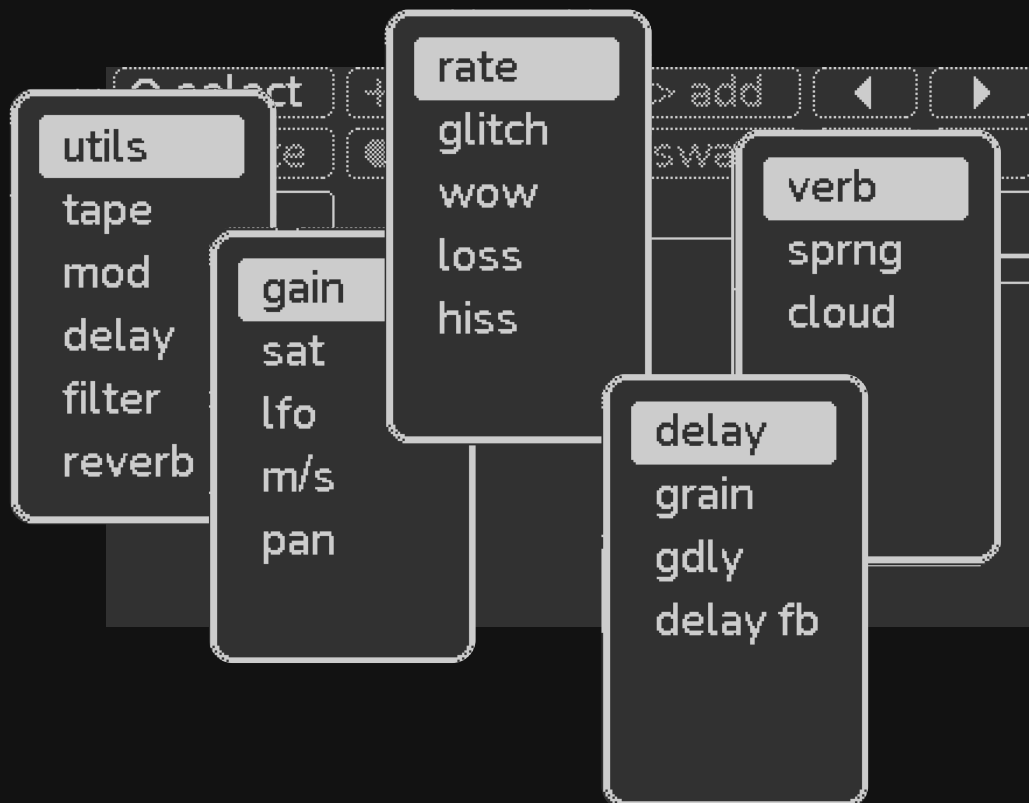


Figure 11: fx types

- **Press REC/CUE:** Insert new node before/after current selection.
- **Hold REC/CUE:** Swap node position. *Audio:* Processing order updates instantly.

[IMAGE PLACEHOLDER] > Node Editor: Screenshot of a node parameter being adjusted (e.g. Reverb Decay).

Mix

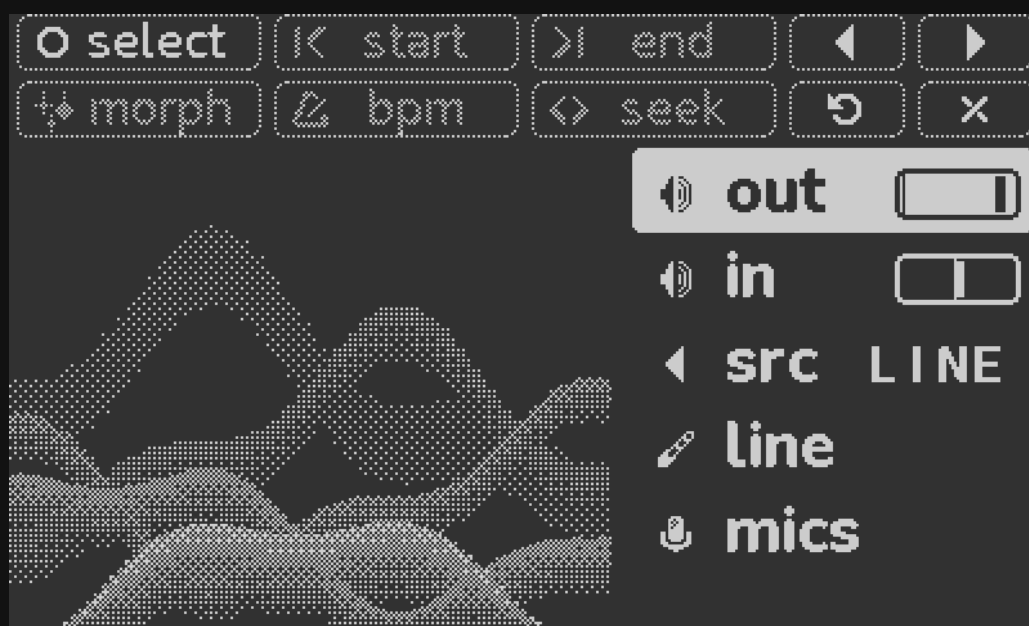


Figure 12: mix menu

Controls

- **main:** global device volume
- **input:** global input volume
- **src:** input source selection
- **line/mics:** mix input settings
 - **stereo / L+R / left / right / L-R**
 - **HI-Z:** input jack mode
 - **beamforming** mic controls (WIP)

Tape



Figure 13: New tape

Create a New Tape

Follow this sequence to provision fresh storage for a session.

1. **Enter Tape Menu:** Select **new**.



Figure 14: New tape

2. **Set Name:** Select **name** for manual entry or **random** for generated naming.
3. **Set tape length:** Rotate the **encoder** to select total session length (1-45 min).
4. Select **ok**, wait for the loading animation to complete.

Capacity Limit

tape! size is fixed at creation. It cannot be expanded later without creating a new file.

Mount an Existing Tape

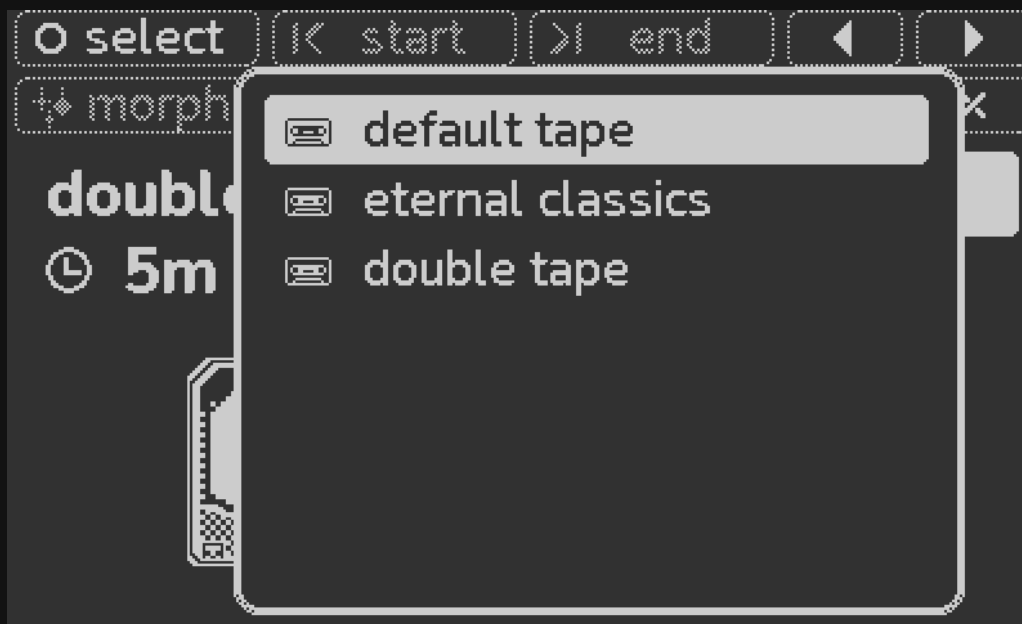


Figure 15: Load tape

1. **Enter Tape Menu:** Select **load**.
2. **Select File:** Scroll the list of .wav files.
3. **Load:** Press **PLAY** to mount.
4. **Verify:** Wait for playback engine to initialize.

Delete a Tape



Figure 16: Delete tape

1. **Enter Tape Menu:** Select **delete**.
2. **Confirm:** Long Press **PLAY** (2 seconds).
3. **Verify Removal:** System returns to a blank default state.

Destruction Risk

Permanent Action: Deletion is not undoable via the *Buffer*. Files are unlinked immediately at the OS level.

Export cues

Transfer your saved cues to a host computer.

1. **Connect Hardware:** Plug the unit into a host PC via USB.
2. **Enter Tape Menu:** Select **loops**.
3. **Access Files:** Open the new mass storage device on your computer.

USB Audio & MIDI

While connected via USB, the device also functions as a class-compliant 2×2 audio interface and midi interface.

Settings

Setup menu



Figure 17: mix menu

Settings

Configure editing behavior, paste mode, MIDI options, controller mappings, and synchronization.

Edit Mode

Choose how edit operations affect the source audio.

- **CUT** — Moves the selected audio to the new location.
- **COPY** — Duplicates the selected audio, leaving the original unchanged.

Paste Mode

Choose how pasted audio is applied.

- **OVER** — Replaces the destination audio.
- **MIX** — Mixes the pasted audio with the existing destination audio.

MIDI

The device supports several MIDI playback modes.

- **NOTES** — A 4-voice polyphonic sampler. Select a tapehead, then use four MIDI notes to play the selected loop region at different pitches.
- **SLICE** — Divides the current loop into 12 equal slices. MIDI notes trigger individual slices. MIDI channels **1–4** select the tapehead.
- **CUES** — MIDI notes trigger saved cue points. MIDI channels **1–4** select the tapehead.

CC Mode

Choose how MIDI Control Change (CC) messages are interpreted.

- **ABS** — Standard absolute CC values (0–127). Compatible with virtually all MIDI controllers.
- **REL** — Relative CC mode. Ideal for adjusting parameters such as loop start, loop end, or playback speed without hitting value limits.

Relative CC

Relative MIDI CC messages send *increments* instead of absolute values. Typically, a value of **1** represents **-1**, while **127** represents **+1** (the exact implementation depends on the controller). This allows parameters to be adjusted continuously without being limited to a fixed position.

Toggle Mode

Configure how on/off controls respond to MIDI CC messages.

- **GATE** — A CC value of **127** turns the parameter on, while **0** turns it off.
- **LATCH** — Each received value of **127** toggles the parameter between on and off.

MIDI Mapping

Mapping the reason we do not publish MIDI implementations chart - it lets you customize your controller exactly as you like. You can even assign multiple parameters to the same CC to create simple performance macros.

You can learn mapping from incoming MIDI messages when parameter is selected.

Sync

Sync resets the active loop to its start point, allowing **tape!** to stay tightly synchronized with the rest of your performance.

Four sync modes are available:

- **OFF** — Synchronization is disabled.
- **INT** — All tapeheads restart whenever **Tapehead A** completes a loop.
- **MIDI** — Synchronizes to incoming MIDI Clock messages.
- **EXT** — Uses an external trigger signal to restart all loops. Select which input channel to use:
 - **Left** (Tip)
 - **Right** (Ring)

The **Division** setting determines how often synchronization occurs. Available values range from **1/4 note** (one beat) and **1/2 note** up to **32 bars**.

Storage

Manage the device's internal storage.

- **Format** the internal storage.
- **USB Drive Mode** — Mount the internal storage as a removable drive when connected to a computer.

System

Configure general system behavior and power management: - **LATCH** — enable or disable latching for on-screen hints. - **SLEEP** — set the inactivity timeout before the device automatically powers down. - **MIRROR** — enable or disable display mirroring using our application. - **SHUTDOWN** — Safely shut down **tape!**.

About

Displays system information, including firmware version (make sure the last one is installed!) and unique device ID.

System

Power Management

- **Power On:** Long Press > (2 seconds) to power on *tape!*
- **Power Off:** Long Press > (5 seconds) to enter shutdown mode.
- **Battery Status:** The battery charge is visible in the top-right of the Status Bar. The icon flashes when the battery level is critical.
- **Standby charging** during standby charging, led strip animates current charge status and turns off on charge completion

Hard reset

In case of device freeze or not powering up hold **PLAY** and > buttons for ~15s, with **usb disconnected** to hard reset *tape!*

Firmware update



Figure 18: Legend

To update firmware, **enter bootloader mode** by holding **PLAY** while powering up *tape!*.

Connect the *tape!* to a host computer via USB - **tape! boot** volume will appear.

Drag and drop the .img firmware file into the mounted volume.

Upon transfer completion *tape!* will automatically reboot.

Warning

Do not disconnect the USB cable during the flashing process.