STWNSH is a clocked, three-track stereo audio mangler based on SoftCut. The underlying principle is simple: record audio to one or more tracks, press one of the nine **mash slot** keys, and discover new variations of your recorded material.

Each **mash slot** contains settings for the START POINT, LOOP LENGTH, PAN POSITION, PLAYBACK RATE, and RATE SLEW for both playheads of the stereo track. This means the LEFT and RIGHT channels can be mangled **independently**. Although the nine mash slot settings are shared among the three tracks, the results highly depend on the track lengths and the recorded material.

STWNSH also features an **auto-mash** mode, allowing it to function as a probabilistic audio mangler that runs in the background. Play your instrument(s) freely while STWNSH does its thing.

In a more deterministic mood? There are four **pattern slots** for recording and overdubbing a sequence of mash slot key presses. Each pattern can be set to a defined length or recorded freely.

While STWNSH ***can*** function as a clocked looper, it doesn't like to be one. If treated as such, it will behave unexpectedly (an unintended side effect of my code), as the left and right playheads occasionally will go out of phase - let's call it a feature.

Requirements:

- norns
- grid
- audio source (adc in / nb voice via nbin / norns tape)

Supports:

- midi transport (start / stop messages)

MAIN VIEW:

STWNSH's screen displays different parameters depending on the active edit mode on the grid. When no edit mode is active, the main UI is shown, which consists of the script's name. The settings on the main screen do not affect the script's functionality, but they can be fun to interact with.

> **E2:** font size

> **E3:** brightness

> **K2:** start/reset

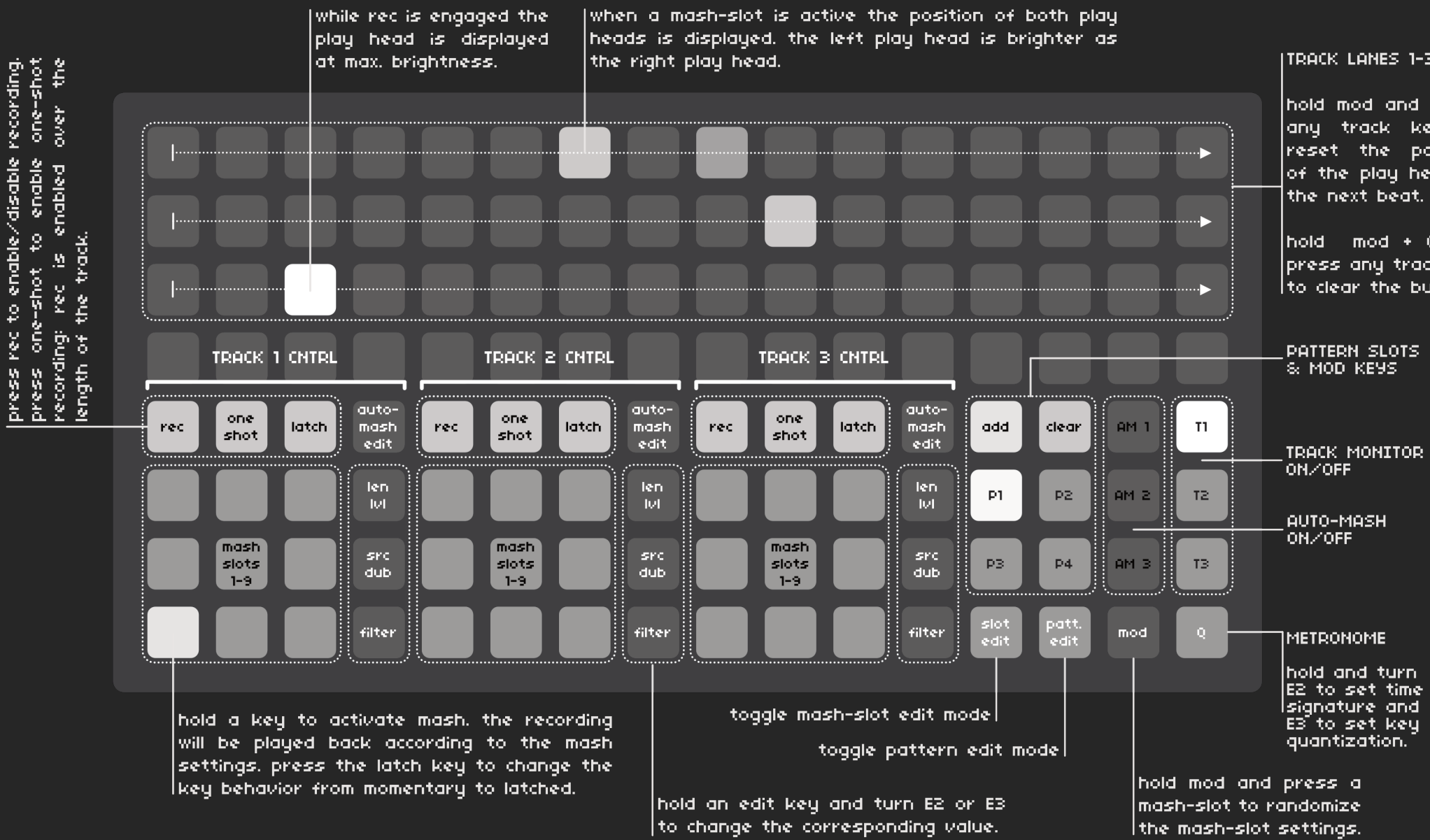
> **K3:** stop

The encoders can be used to change the appearance of the text on the main screen. Turn **E2** to adjust the **font size** and **E3** to modify the overall screen **brightness**.

To **start** or **reset** the track transport, press **K2**, and the tracks will start/reset at the next downbeat. Press **K3** to stop the track transport. If MIDI transport is set to **send** (under parameters > MIDI settings), MIDI transport messages will be sent. STWNSH can also listen for MIDI transport messages if MIDI transport is set to **receive**.

>> If you are sensitive to flashes, turn E2 and E3 a few times counterclockwise to set the minimum values.

GRID OVERVIEW:



STANDARD MASH & QUICK START:

Setting up a Track:

> Hold the **len/lvl** edit key and turn **E2** to set the track length (1-64 beats). Hold the **Q** key and press any track key to reset the playhead at the next beat. (The Q key displays a metronome, with the downbeat flashing brighter than the other beats.)

> Hold the **src/dub** edit key and turn **E2** to set the input source (stereo, mono L, mono R, engine, tape). Turn **E3** to adjust the overdub value; leave it at **0%** to completely replace the recorded material after each pass.

Recording:

> Press the **rec** key to toggle recording **on** (the rec key will flash while recording is enabled).

> Play your instrument(s).

> Press the rec key again to toggle recording off.

Alternatively, press the **one-shot** key to automatically time the recording between the start and end of the track duration. Recording will automatically engage as soon as the playhead reaches the start of the track and will stop after one cycle.

Playing:

> Press any of the nine **mash slot** keys to hear the effect of the mash slot settings. The play-head parameters will **apply** as soon as a mash slot key is pressed and will **reset** once the key is released. If **latch** is enabled, key releases will **not** reset the playhead parameters and position, allowing the mash settings to remain until the latch key is pressed again.

> To listen to the recording while **no** mash slot is active, press the **track monitor** key to enable monitoring. Occasionally, the left and right playheads may go out of phase when the loop restarts, so I recommend keeping monitoring off.

Do Everything Simultaneously:

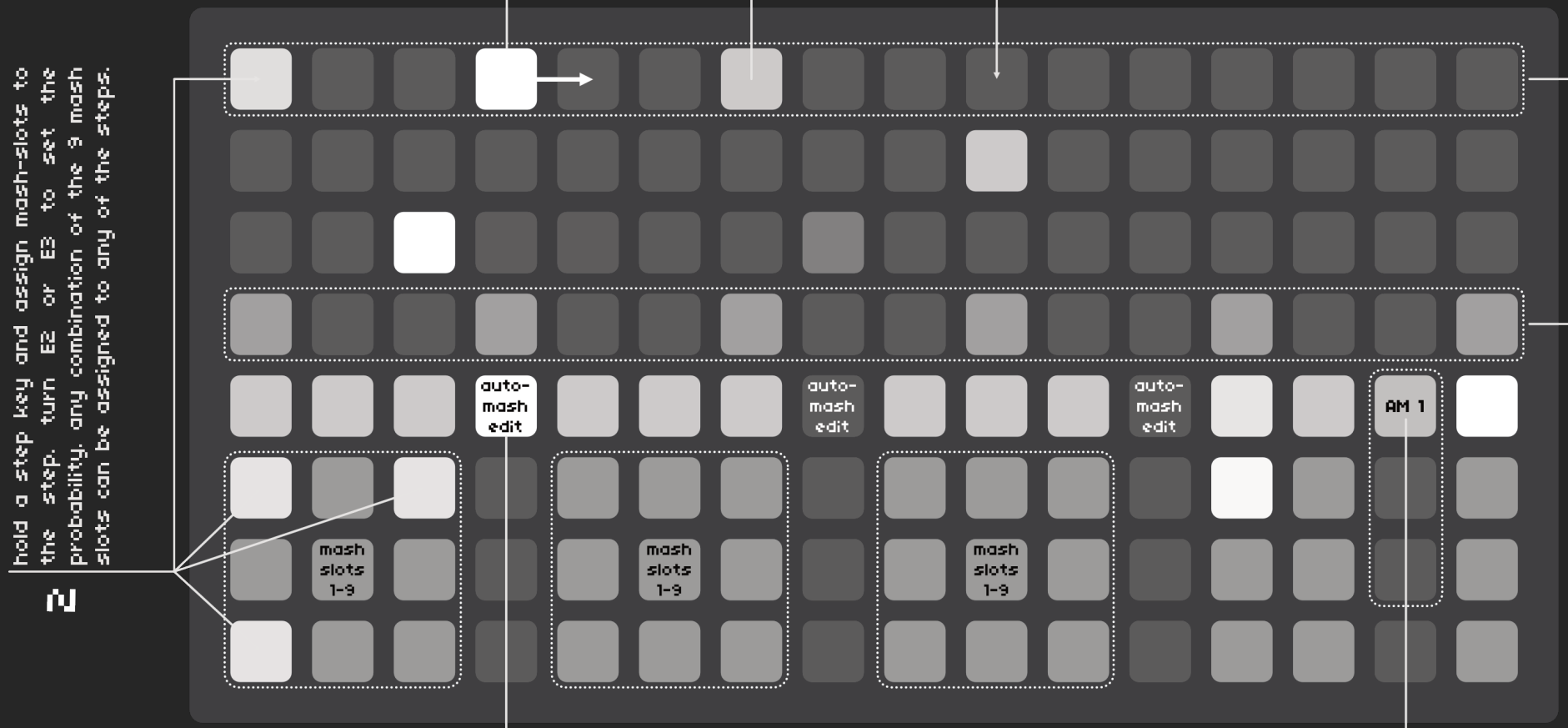
There is no requirement to follow the rec->play paradigm. I encourage you to enable recording and forget about it. Play your instrument(s) and hit a mash slot key whenever you feel like it (recording is temporarily disabled when a mash slot is active, so it won't overwrite with silence if you're not playing while holding a mash key). Record the same source on different tracks set to various lengths (the same mash slot on different tracks will yield different results). Latch onto a phrase on one track by enabling the latch key, and continue to record while momentarily mashing on the other tracks. Do whatever feels fun!

AUTO MASH:

when the step position reaches an active step it will be triggered according to the set probability. when triggered one of the assigned mash-slots is randomly selected and held active until the next active step is reached.

BRIGHT STEPS HAVE SLOTS ASSIGNED

double-tap a key to set the step length



hold a step key and assign mash-slots to the step. turn E2 or E3 to set the probability. any combination of the 9 mash slots can be assigned to any of the steps.

N

1 toggle auto-mash edit to display STEP KEYS and STEP SPEED rows

press to activate auto-mash. while auto-mash is active recording is enabled, the step position advances and mash-slots are activated according to the step-assignment and probability settings.

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AUTO MASH continued:

The auto-mash mode in STWNSH is designed as a hands-off, probabilistic audio mangler with a degree of randomization. The idea is to set it up, enable it, play along, and listen to the outcome.

How does it work?

Each of the three tracks features an independent step sequencer running behind the scenes. The speed and length of the sequence are **decoupled** from the track length. Any step of the sequence can have any combination of the nine mash slots assigned to it. Each step that has mash slots assigned (let's call it an **armed step**) has a probability of being activated. When the playhead of the step sequencer reaches an armed step and it is activated, one of the assigned mash slots is randomly selected and triggered. The mash slot is deactivated when the playhead reaches the next armed step. Note that recording is always enabled in auto-mash mode, and the mash slots cannot be played manually. Additionally, during auto-mash, pattern data for the corresponding track is ignored.

> Press the **auto-mash edit** key to view the sequencer and edit the steps.
>
> >> Double press a **step key** to set the length of the sequence.
>
> >> Press a step **speed key** to set the rate of the sequencer.
>
> >> Hold the **mod** key and press any **step key** to reset the playhead position.

> **Hold** a **step key** and press any combination of **mash slot** keys to assign them to the step. Assigned mash slots appear brightly lit. Press an assigned mash slot again to unassign it. Armed step keys appear brighter than empty step keys. Turn **E2** or **E3** to set the probability of an armed step being triggered.

> Press the **auto-mash edit** key to exit the edit mode (or not, it's up to you).

> Press the **AM** key to enable auto-mash. It will start on the next downbeat and remain enabled until the **AM** key is pressed again.

MASH SETTINGS:

To **edit** the mash slot settings, press the **slot edit** key to enter mash slot edit mode. The screen will display one of the five mash parameters: START, LENGTH, PAN, RATE, and RATE SLEW. Press a **mash slot** key for any of the three tracks to select the mash slot you want to edit. Use **K2** and **K3** to navigate to one of the parameters and turn **E2** and **E3** to set the corresponding values.

Set the start position of the playhead [1-16]. The number corresponds to the 16 steps of the track lane on the grid. The start position is calculated based on the track length setting i.e. if a track is set to 4 beats, start position 9 corresponds to the start of beat 3.

Set the loop length. The available values are fractions of the 16 grid steps.

The **LENGTH** value is clamped based on the **START** value, meaning it cannot exceed the track length.

Set the pan position of the left and right playheads independently.

Setting the left channel to **<100** and the right channel to **100>** will create a full stereo field.

Set the playback rate of the playheads. Negative values will play back in reverse.

The **RATE** value "**STOP**" will set the rate to 0, effectively silencing the playback. This is interesting when used with high RATE SLEW values, as it simulates a tape stop effect.

Set the rate slew time in seconds [0-1]. A **RATE SLEW** value of 0 will result in immediate rate changes.

To randomize all parameter values for each playhead independently, hold **K1** and press **K2** (left playhead) or **K3** (right playhead). To randomize all parameters of both playheads, hold the **mod** key and press the corresponding **mash slot** key.

PATTERNS:

There are four individually configurable pattern slots (P1-P4) that can store and recall a sequence of mash slot key presses. Like the tracks and the step sequencer, the patterns are clocked by the norns system clock, ensuring they remain consistent over tempo changes. Depending on the settings, patterns can be tightly synced or run freely.

Press **the pattern edit** key to enter pattern edit mode. The currently selected pattern slot will be dimly lit. Press the pattern slot you wish to edit, use **K2** and **K3** to navigate through the parameters, and turn **E2** and **E3** to set the values.

REC MODE [onset, synced, free]:

> **onset**: pattern recording starts with the first press of a mash slot key and lasts for the duration set by **METER** and **LENGTH**.

> **synced**: pattern recording starts according to **LAUNCH** setting. When set to **bar**, recording begins at the downbeat; when set to **beat**, it starts at the next beat; and when set to **manual**, it starts at the next fraction of a beat according to the **QUANTIZE** value. Recording lasts for the duration set by **METER** and **LENGTH**.

> **free**: pattern recording starts with the first press of a mash slot key and ends when the active pattern slot key is pressed. When set to **free**, the **METER** and **LENGTH** parameters are not available.

PLAYBACK [loop, oneshot]:

> If set to **loop** pattern playback will seamlessly restart when the end of a pattern is reached; otherwise, playback will stop.

METER [2/4-11/4]:

> Sets the meter of a pattern.

LENGTH [1-16 bars]:

> Sets the length of the pattern. The actual length in beats is calculated by multiplying METER and LENGTH. In this example, the length of the pattern is set to 10 beats.

PATTERNS continued:

LAUNCH [manual, beat, bar]:

> When set to **manual**, pattern playback starts the next fraction of a beat according to the **QUANTIZE** value.
> When set to **beat**, pattern playback starts at the next beat.
> When set to **bar**, pattern playback starts at the next downbeat.

QUANTIZE [1/4-1/64]:

> Sets the quantization value of the pattern, i.e. recorded events will be quantized to the nearest quantization value. E.g. when set to 1/16 all pattern events will align with a 16th note grid. Quantization occurs in real-time so the quantization value can be changed after a pattern has been recorded.

Recording patterns:

> Press one of the pattern slots (P1-P4) to arm the slot for recording. If **REC MODE** is set to **synced**, recording will start automatically; otherwise recording begins with the first keypress of a mash slot. The pattern slot will flash during recording.

> Pattern recording ends either after the set duration (in **REC MODEs onset** and **synced**) or by pressing the **pattern slot** key.

Overdubbing patterns:

> Hold the **add** key and press a playing pattern slot key to enable recording. Any mash slot keypresses will be added to the playing pattern.

> Press the pattern slot key to **save** the pattern or **hold** the **add** key and press the pattern slot key to **undo** the overdub.

Clearing patterns:

> Hold **clear** and press a **pattern slot** to clear the pattern data.

Editing patterns:

> All pattern parameters can be changed after pattern recording. E.g. a 4/4, 4 bar pattern can be modified to a 3/4, 2 bar pattern. The pattern data will not be lost when making a pattern shorter.