Sound Tangents Manual

Overview

This instrument is a step-based sequencer with per-track sound engines, per-track control parameters, global harmonic control, scene-based pattern paging, and multiple send-based effects. Audio is generated, processed, and mixed internally, with real-time performance controls and direct WAV recording.

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1. Transport and Global Controls

Start / Stop

Starts or stops the global sequencer clock. When stopped, no steps advance and no audio is triggered.

Tempo

Sets the global tempo in beats per minute. This controls the rate at which steps advance and clocks all time-synced effects.

Clear Grid

Clears all active steps across all tracks in the current scene.

Record WAV

Records the stereo master output to a WAV file in real time. Recording includes all effects, scene changes, and performance actions.

Key

Sets the global root note. Also used by pitch-aware systems such as Harmonic Gate.

Scale

Sets the global musical scale.

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2. Scenes and Pattern Paging

Scene Buttons (1–4)

Select the active scene (pattern page). Each scene contains up to 16 steps per track.

Scene Navigation (← / →)

Moves to the previous or next scene.

Add Scene (+)

Creates a new blank scene after the current one.

Duplicate Scene (Shift +)

Duplicates the current scene into a new scene after others.

Remove Scene (−)

Deletes the current scene.

Chain

When enabled, scenes play sequentially during playback instead of looping the current scene.

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3. Tracks and Step Grid

Tracks

Each horizontal row represents one track. Tracks are independent and may have different sounds, envelopes, step lengths, and effect sends.

Step Grid

Each track contains up to 16 visible steps per scene. A step can be active or inactive.

- Active steps trigger the track's sound.
- Inactive steps do nothing.

Current Step Indicator

The currently playing step is visually highlighted during playback.

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4. Per-Track Controls

Volume, Pan, Tone, Pitch

Per-track mix controls.

- **Volume:** Sets the track's output level. Setting the slider to zero effectively silences the track.
- **Pan:** Positions the track in the stereo field.
- **Tone:** Applies per-track tone shaping.
- **Pitch:** Slider that controls pitch for entire track. Can be used for microtonal variation.
- **Diatonic:** Per-track switch that constrains pitch-based behavior to the current global scale. In contrast to default chromatic scaling. For accurate display of key and transposition, used samples tuned to C.

Solo (Double Click)

Double-clicking a track solos it. Double-clicking additional tracks adds them to the solo group. Double-clicking again removes the track from solo.

Sample / Sound Controls

Each track can load an external audio file or use an internal sound source.

Loading Samples

Samples may be loaded per track. Supported formats are WAV and AIF. MP3 is not supported.

- Short samples (approximately 1–2 seconds) are recommended for rhythmic and percussive use.
- Longer samples are supported, up to 60 seconds per track. Samples are not truncated by retrigger.

Sample playback is tightly integrated with the sequencer, envelopes, and effects. Using custom samples is a primary way to define the character of the instrument.

Sends

Controls how much of the track's signal is sent to each effect bus.

- Dub: Delay-based effect
- Reverse Ghost: Texture processor
- Hum: Resonant reverb and drone generator
- Maja: Analog-style tone shaping
- Harmonic Gate: Pitch-selective resonant processor

Sends are post-track processing. All effects except Harmonic Gate are post-fader. Harmonic Gate, however, will continue to produce output even when the track's dry level is reduced to zero if still triggered.

Per-Track Length Rail

Red rail and cursor above each track definines how many steps in the grid are active.

- Steps beyond the length marker are visually dimmed and not triggered.
- Length can differ per track and per scene.

ADSR Controls

Defines the amplitude envelope for the track's sound.

- **Attack:** Time to reach full level after trigger
- **Decay:** Time to fall from peak to sustain
- **Sustain:** Level held while the sound is active
- **Release:** Time to fade after the sound ends

ADSR Readout

The ADSR numeric readout is shown for the Silencer track only.

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5. Autofill

The Autofill dropdown provides pattern-generating shortcuts for a track.

Autofill operations modify step activation within the current scene only.

Functions include:
- Filling steps at regular intervals
- Creating alternating or offset patterns
- Generating polyrhythmic distributions
- Applying probabilistic variations

Autofill does not affect sample data, envelopes, per-step parameter values, or effect settings.

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6. Per-Step Controls

Per-step controls apply to individual steps within a track. These settings are evaluated only when a step is active.

Interval

Sets how often an active step triggers relative to the grid, expressed as a ratio from 1 to 8.

Blend

Selects a second sound (track) for per-step crossfading.

Amount

Sets the balance between the current track and the selected blend target. This can also be used to reduce audio level by blending with the Silencer track.

Timing

Offsets when a step triggers relative to its grid position. This is used for swing (to push and pull the timing of a sound.)

Pitch

Applies a per-step pitch offset to sounds. Scale is constrained when the Diatonic option is enabled.

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7. Phrase Sampler Track

The Phrase Sampler track records and plays back fixed-length 64-step audio phrases.

- After recording, a phrase can be selected from the dropdown.
- Playback is triggered by steps like other tracks. But cursor only advances at 1/64 the rate of the other tracks cursors.
- Phrase playback may be processed by effects but does not use ADSR envelopes.
- Phrase playback continues to completion even after the transport is stopped.

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8. Global Effects

Effects are applied via send buses. Each effect processes the summed signal sent to it from all tracks.

Effect Linking and Order

Effect modules can be reordered by dragging and dropping them. The horizontal left-to-right order determines signal flow.

Each effect module has a red connection dot. Clicking a dot connects effects into a linked signal chain.

- Linked effects process sequentially in the defined order.
- Linking can enable additional behaviors in some effects (for example, Reverse Ghost Clock becomes active only when Reverse Ghost is linked).

Maja

Analog-style tone shaping.

- Tilt: Balances low vs high frequencies
- Drive: Adds harmonic distortion
- Spread: Stereo movement depth
- LFO Rate: Speed of internal movement
- LFO Depth: Amount of internal movement
- LFO Target: Parameter affected

Dub

Delay-based effect with feedback.

- Time: Delay length (tempo-related)
- Feedback: Amount of delayed signal feedback
- Tone: High-frequency damping
- React: Alters delay behavior based on input energy
- Warble: Adds pitch instability (wow and flutter)

Reverse Ghost

Creates textures based on incoming audio.

- Length: Duration of the reverse buffer
- Pitch: Pitch shift applied to the reversed signal
- Mix: Level of processed signal
- Density: Event density within the buffer
- Reverse: Amount of reversal applied
- Oblique: Alters how audio is sampled and placed in time beyond a simple offset
- Reverb: Adds diffusion
- Clock: Time division for buffer updates (only active when Reverse Ghost is linked)

Hum

Resonant reverb and drone generator.

- Root: Fundamental frequency
- Bloom: Spectral balance
- Tail: Decay length
- Wet: Output level

Harmonic Gate

Pitch-selective resonant processor driven by incoming transients.

- Mix: Wet/dry balance
- Q: Bandwidth of resonant filters
- Resonance: Strength of pitch emphasis
- Gain: Output amplification
- Threshold: Minimum signal level required to open the gate

- Attack: Time for the gate to open
- Release: Time for the gate to close

Harmonic Gate derives pitch from incoming audio and constrains output using the global Key and Scale. It can continue producing sound even when the track's dry level is reduced or off.

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9. Scene Behavior, Persistence, and State

Nothing in the instrument is saved between sessions.

- Patterns, scenes, samples, effect settings, and parameters exist only for the duration of the session.
- Reloading or refreshing the page clears/reverts all settings to default state.
- The only persistent output is audio recorded using Record WAV.

Scene Change Behavior

Scene changes affect step data and per-track length rails only.

The following elements are global and continue uninterrupted across scene changes:
- Tempo
- Global Key and Scale
- Effect order, connections, and internal state
- Phrase Sampler audio

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10. Signal Flow Summary

1. Track sound is generated or played
2. If applicable, an ADSR envelope is applied
3. Signal is sent to selected effects via sends
4. Effects process summed sends
5. Dry and wet signals are mixed
6. Master processing is applied
7. Output is sent to speakers and recorder

11. Recording and Export

Recording captures the full master output, including scene changes, parameter adjustments, and effect behavior.

Recording and Downloading Audio

Starting a Recording

1. Click Record WAV.
2. Recording begins immediately and captures the full stereo master output.
3. All audio heard during recording is included.

There is no pre-roll or count-in.

Stopping a Recording

1. Click Record WAV again to stop recording.
2. The audio file is finalized internally.

Do not click the button again after stopping unless you intend to discard the recording.

Downloading the File

1. After recording stops, a Download link will appear.
2. The link may take 20–30 seconds or longer to appear, depending on recording length and system performance.
3. Click the link to download the WAV file.

If the download link is not clicked, the recording will be lost.

Important Warnings

- Clicking Record WAV again after stopping deletes the previous recording.
- Refreshing or closing the page permanently discards the recording.
- Only one recording exists at a time.
- There is no recovery mechanism.

Audio Quality

- The WAV file captures the exact master output of the instrument.
- Audio quality is determined by the browser audio engine and the system audio sample rate.
- The instrument does not perform offline rendering or sample-rate conversion.