



BLANK BOX

User Manual

Version 1.0

A probabilistic step sequencer for macOS

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1 — Overview

Blank Box is a probabilistic step sequencer for macOS. Rather than playing every activated step on every cycle, each step fires according to an adjustable probability — creating evolving, generative rhythms and melodies that stay musical but never quite repeat.

The sequencer runs seven parallel lanes across two bars (16 steps per lane at 1x speed), each with its own sample, probability settings, direction mode, pattern bank, and signal chain. Lanes can run at different speeds, in different directions, and be gated by each other for rhythmic interaction.

Blank Box ships with a curated library of embedded samples across all seven lane types. You can also load your own samples from disk. All sessions save as **.shluti** files.

Lane layout

Lane	Type	Primary role
Kick	Drum	Bass drum / low transient hits
Snare	Drum	Snare, clap, mid transient hits
Hi-Hat	Drum	Cymbals, shakers, high frequency hits
Misc	Drum	Any additional percussion
Bass	Inst	Melodic bass lines with per-step pitch
Melody	Inst	Lead melody with per-step pitch
Drone	Drone	Continuous sustained tone, single toggle pad

2 — The Interface

The Blank Box window has three vertical zones:

Title Bar — App name, skin selector, VU meter, and the solo indicator.

Transport Bar — Play/Stop, BPM, clock source, Make It So, Quick Drums, Song Mode, Throw/Catch active indicator, and the Something's Solo'd alert.

Lane Grid — Seven lanes stacked vertically. Each lane has a control panel on the left and the 16-step grid on the right.

The window is horizontally scrollable — if your screen is narrow, the transport bar scrolls independently of the lane grid.

3 — Transport Bar

■ Play / ■ Stop

Starts and stops the sequencer. All lanes reset to step 1 on start. Keyboard shortcut: Space.

BPM Slider

Drag to set tempo from 40–240 BPM. Alt-click to reset to 120. Scroll the mouse wheel over the slider for fine adjustment.

CLOCK INT / EXT

INT: Blank Box generates its own clock and transmits MIDI Beat Clock on the selected output port. EXT: Blank Box syncs to incoming MIDI Beat Clock from the selected input port, with weighted rolling-average BPM display and 20% phase-lock nudging for stability.

✦ Make It So

Opens the export dialog. Renders your sequence to WAV or MP3. Also accessible via Cmd+E.

■ Quick Drums

Loads a drum preset onto the four drum lanes without touching Bass, Melody, or Drone.

Free Jam / Song Mode

Toggles between free playback and structured song arrangement. Clicking while in Free Jam opens the Song Mode chain editor.

■ Throw/Catch Active

Indicator that lights when at least one Throw lane and one Catch lane are both active. Shows the current keying mode (Duck / Gate / Pulse).

✦ Something's Solo'd

Appears at the far right when any lane is soloed. Acts as a reminder that other lanes are muted.

4 — Lane Types

Drum Lanes (Kick, Snare, Hi-Hat, Misc)

The four drum lanes each have a Throw button for sending a keying signal to Catch lanes. Steps are on/off with a probability knob. The Tune slider transposes the sample in semitones. Direction buttons (Fwd/Rev/Pend) and Rate ($\frac{1}{2}x$ / $1x$ / $2x$) control playback speed and direction.

Instrument Lanes (Bass, Melody)

Instrument lanes have per-step pitch arrows (▲▼) next to each step button, allowing you to set a specific pitch offset for each step. This lets you program melodic sequences. Instrument lanes have either a Throw button or a Catch button — not both simultaneously.

Tip: Alt-click any pitch arrow to reset it to 0 semitones.

Drone Lane

The Drone lane has a single amber toggle pad instead of a 16-step grid. When active, the drone sample plays continuously as a sustained tone. The drone has its own Vol, Tune, Reverb, and HP/LP filter controls, and a Catch button for receiving keying signals. The drone note can be set via the note selector.

5 — Step Grid & Probability

Each lane has 16 steps arranged in a grid representing one two-bar phrase. Steps are either on or off. When a step is on, it fires with a probability determined by its probability knob.

Activating steps

Click a step button to toggle it on or off. Click and drag across multiple steps to paint them all to the same state. Right-click a step to access its individual probability and offset controls.

Probability knob

The probability knob (shown as a number 0–100 below each step when active) sets the chance that step will fire on any given cycle. At 100% the step fires every time. At 50% it fires roughly half the time. At 0% it never fires even if it is activated.

Step offset

Each step can be nudged forward or backward in time with a micro-offset. Positive values push the hit slightly late (behind the beat); negative values push it early. This adds human-feel swing to patterns.

6 — Lane Controls

Vol

Master volume for the lane, 0–100. Alt-click the slider to reset to 80.

Tune

Transposes the sample in semitones, ± 24 . Alt-click to reset to 0.

Rate

$\frac{1}{2}x$, 1x, or 2x playback speed. Changes queue at the next cycle boundary so lanes stay in sync.

Fwd / Rev / Pend

Direction mode. Fwd plays steps 1→16. Rev plays 16→1. Pend bounces back and forth 1→16→1, re-triggering the pivot steps. All changes queue at the cycle boundary.

M (Mute)

Silences the lane without stopping it. The step grid continues to advance. Press again to unmute.

S (Solo)

Solos this lane, muting all others. Multiple lanes can be soloed simultaneously. The Something's Solo'd indicator appears in the transport bar.

Reverb knob

Controls wet/dry mix of the reverb send. The dropdown next to it selects the reverb tail length: Short, Medium, Long, or Hall.

HP / LP filters

High-pass and low-pass filter frequencies for the lane, set in the frequency range control.

Near / Far

Stereo width and placement control.

Tone

Harmonic tone control — a gentle high-shelf EQ.

REV

Reverses the sample playback.

7 — Samples

Every lane can play a sample. Blank Box ships with a curated embedded library, and you can load your own samples at any time.

Built-in library

The — **built-in** — dropdown below the + sample button lists all embedded samples for that lane type. Selecting one loads it instantly without any file dialog. Built-in samples are baked into the app — no external files required.

Loading your own samples

Click + **sample** to open a file browser, or drag and drop any audio file directly onto the lane. WAV, AIFF, MP3, OGG, and FLAC files are all supported. The sample is stored in your session file as base-64 data, so it travels with your saved sessions.

Sample name display

The loaded sample name appears next to the + sample button. Click the ✕ button to clear the current sample. If no sample is loaded, the lane plays silently.

8 — Dual Sample Layers

Every lane (except Drone) supports a second sample layer. Click the  expand button on the right of the sample row to reveal the layer panel.

Switch mode

In Switch mode, each step has a small coral B-select button below its probability knob. When B is selected for a step, that step fires the B sample instead of the A sample. Use this to create patterns that alternate between two different sounds.

Dual mode

In Dual mode, both samples fire simultaneously on every active step. Use this to layer two sounds together — for example, a sub bass with a click transient.

Layer controls

The B sample has its own volume slider (Vol B) and tuning slider (Tune B), independent of the primary sample. The B sample can be loaded from the built-in library or from a file, exactly like the primary sample.

9 — Pattern Banks

Each lane can hold up to four independent 16-step patterns. The pattern strip appears above the step grid and shows numbered buttons for each stored pattern.

Switching patterns

Click a pattern number button to queue it for the next cycle boundary. The active pattern glows amber; a queued pattern shows a dashed amber border until it takes effect at the start of the next bar. This keeps all pattern changes musically locked.

Adding patterns

Click the **[+]** button to open the pattern menu. Choose **New** to create a blank 16-step pattern, or **Same** to duplicate the current pattern as a starting point for variation. Up to 4 patterns per lane.

Deleting patterns

Click the **×** on a pattern button to delete it. If a lane has only one pattern, the **×** clears it to a blank state instead. Deleting the active pattern waits for the current cycle to finish before removing it.

10 — Direction Modes

Fwd (Forward)

Steps play in order from 1 to 16, then loop back to 1. This is the default mode.

Rev (Reverse)

Steps play from 16 down to 1, then loop back to 16. The sample content is unchanged — only the order of steps is reversed.

Pend (Pendulum)

Steps bounce back and forth: 1→16→1→16. The pivot steps (1 and 16) fire twice on each pass — once going out and once coming back. This creates natural-feeling polyrhythmic textures when combined with other lanes in Fwd or Rev.

All direction changes queue at the cycle boundary — exactly like speed changes. A dashed blue border on the button shows which mode is pending. Changing direction while in Pendulum mode correctly inherits the current travel direction so the transition is seamless.

All lanes share a universal cycle boundary at every 32 scheduler ticks (one bar at 1x speed), keeping every lane — regardless of speed or direction — phase-locked to the same musical grid.

11 — Keyed Gating

Keyed gating lets one lane control the amplitude of another — a classic side-chain / gate / pulse effect. Any Drum lane can be a **Throw** (trigger sender), and any Instrument or Drone lane can be a **Catch** (gate receiver).

↓ **Duck**

The Catch lane plays at full volume on resting beats and dips to a lower level when the Throw lane fires. Classic side-chain compression effect. The Threshold slider controls the depth of the dip.

↓ **Gate**

The Catch lane plays at full volume and drops to silence when the Throw fires. Creates choppy rhythmic cuts. The Threshold slider controls how long the silence holds.

↑ **Pulse**

The Catch lane is silent by default and opens up when the Throw fires. The Threshold slider controls how long the gate stays open. Use this to create rhythmic bursts from a sustained sound.

Advanced envelope

Click ☒ **Advanced** on the Catch panel to reveal independent Attack, Hold, and Release sliders for full envelope control. The simple Threshold slider auto-calculates all three values, so Advanced mode is only needed for fine-tuning.

12 — Song Mode

Song Mode lets you arrange your patterns into a structured performance. Click **Free Jam** in the transport bar to enter Song Mode and open the Chain Editor.

Sections

The top of the chain editor shows section tabs (Intro, Verse, Chorus, etc.). Each section has a length in cycles and a pattern assignment grid for all seven lanes. Click a tab name to rename it via preset dropdown (single click) or free text (double click). Click + to add a new section.

Pattern grid

The grid shows lanes as rows and cycles as columns. Click any cell to assign a pattern number (1–4) for that lane during that cycle. The Drone lane shows — and plays continuously throughout.

Song strip

Below the grid, the Song Strip is where you arrange sections into a playback order. Click a section in the strip to add it to the arrangement. An amber playbar sweeps across the strip during playback, auto-scrolling to keep the current position visible.

Exiting Song Mode

Closing the modal (X) keeps Song Mode active. Click ■ **Turn Off Song Mode** inside the modal to return to Free Jam. While Song Mode is active, the transport button reads **Song Mode** in amber instead of **Free Jam**.

13 — Quick Drums

Click ■ **Quick Drums** in the transport bar to load one of six built-in drum presets onto the four drum lanes. Bass, Melody, and Drone lanes are untouched.

Available presets:

- Haitian Divorce
- Electro
- New Wave
- Hip Hop
- Mother Popcorn
- Bouncy

Each preset sets sample assignments, probability patterns, tuning, EQ, reverb, speed, and even BPM — giving you an instant rhythmic foundation to build on.

14 — Export — Make It So

Click **Make It So** or press **Cmd+E** to open the export dialog.

Format

WAV (24-bit uncompressed) or MP3 at 128, 192, 256, or 320 kbps.

Sample Rate

Auto (matches AudioContext), 44.1 kHz, 48 kHz, or 96 kHz.

Cycles

Number of cycles to render. One cycle = one 16-step pass at 1x.

Print complete song

When Song Mode is active, this checkbox auto-calculates the total cycles from your arrangement and renders the full song.

Export each lane separately

Creates individual stem files per lane, named by lane type and name. Useful for mixing in a DAW.

Export MIDI

Renders a MIDI file of the sequence for use in other software.

Make whole song loud

Applies a final loudness maximiser pass for sharing or streaming.

Include reverb trail

Adds extra silence at the end to allow reverb tails to decay fully.

15 — Skins

Blank Box supports user-installable visual themes called skins. The skin selector is in the title bar.

Installing a skin

Double-click any **.bbskin** file to install it. The skin is copied to **~/Library/Application Support/Blank Box/skins/** and appears in the skin dropdown immediately. The app title bar briefly confirms the install with "✓ Skin Name installed".

Skins folder

Select **■ Open Skins Folder** from the skin dropdown to reveal the skins directory in Finder. You can add, remove, or edit skin files there directly. Changes take effect on the next app launch.

Creating a skin

A **.bbskin** file is a plain CSS file with metadata comments at the top. The full annotated template is available from shlutibox.com/skins. Open it in any text editor to customise colours, and use the macOS **Digital Color Meter** (set to Display in sRGB as Hexadecimal) to sample colours from anywhere on screen.

Additional Skins

Additional skins are available at shlutibox.com/skins. Select **■ Additional Skins...** from the dropdown to open the page in your browser.

16 — Sessions & File Format

Sessions are saved as **.shluti** files — JSON documents containing all lane settings, patterns, samples (embedded as base-64), and song arrangement data.

Cmd+S	Save the current session. Opens a Save dialog on first save.
Cmd+Shift+S	Save As — save with a new name or to a new location.
Cmd+O	Open an existing .shluti session file.
Cmd+N	New session — clears all lanes and resets to defaults.

Sessions save as flat files alongside a shared samples/ subfolder. Multiple sessions in the same folder share samples, keeping file sizes small when working on related projects.

17 — MIDI Beat Clock

Internal clock (INT)

Blank Box generates 24 pulses per quarter note (24ppqn) and transmits MIDI Beat Clock on the selected output port. Any MIDI hardware or software set to receive external clock will sync to Blank Box's tempo.

External clock (EXT)

Select EXT and choose an input port to sync Blank Box to incoming MIDI Beat Clock. The BPM display shows the detected tempo using a weighted rolling average. A 20% phase-lock nudge corrects drift on each clock pulse. Switching to EXT while playing takes effect immediately.

Clock messages

Blank Box responds to MIDI Start (0xFA), Stop (0xFC), and Clock (0xF8) messages. The last used MIDI port is saved and restored between sessions.

18 — Keyboard Shortcuts

Shortcut	Action
Space	Play / Stop
Cmd+E	Open Make It So (Export)
Cmd+S	Save Session
Cmd+Shift+S	Save Session As
Cmd+O	Open Session
Cmd+N	New Session
Alt+click Vol slider	Reset volume to 80
Alt+click Tune slider	Reset tuning to 0
Alt+click pitch arrow	Reset step pitch to 0
Click+drag step grid	Paint multiple steps to same state