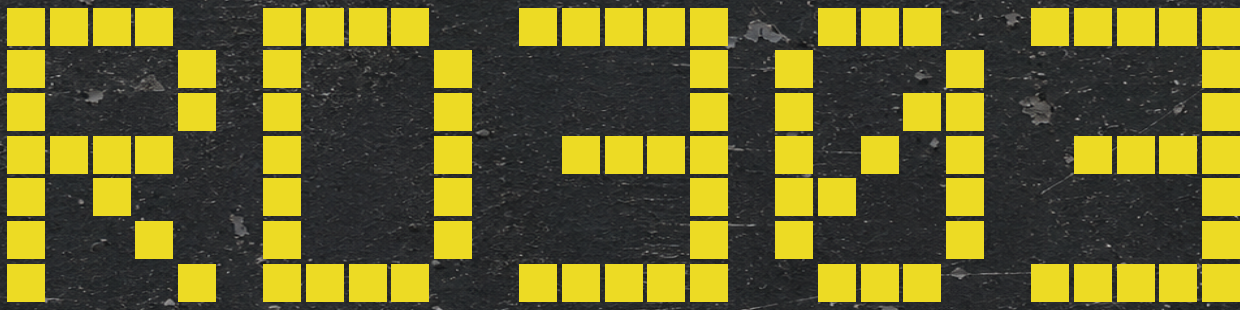




ACID BASS SYNTHESIZER

RAW DOG 303



USER GUIDE

Patterns, recording, modulation and effects.

COMPA + AUv3 / macOS / Windows / Linux / Akai Force

RD303 1.0 user guide / October 2026

COMPA 1.4 / desktop and Force 1.0

RARE DATA

RARE
DATA

01 Start playing

Choose who plays the notes

RD303, nicknamed Raw Dog 303, is a monophonic acid bass synthesizer with a 128-step sequencer, COMPA pattern library, two LFOs and stereo effects. One note sounds at a time; overlapping notes can glide.

Inside COMPA

1. Open + APP and choose RD303 under CHOMP. It gets its own card and mixer channel. New cards start yellow; saved card colors are preserved.
2. Open the RD303 card's instrument editor. Use its built-in keyboard or send notes from COMPA's Keys or Pattern tab.
3. For COMPA's Pattern tab or a MIDI clip to play the synth, keep RD303's Source on MIDI.
4. For RD303's own sequence, open its LIBRARY, choose a pattern and press LOAD PATTERN. Or open GENERATOR and press GENERATE. Both select PATTERN automatically. Start COMPA's transport.

In AUM or another AUv3 host

Install COMPA, then load Rare Data: RD303 in an instrument slot. You do not need to keep COMPA open alongside it. Route MIDI to that slot for MIDI mode. For the internal sequencer, load or generate a pattern, select PATTERN and start the host transport. The host must supply tempo and musical position as well as Play/Stop.

On desktop or Force/MPC

Load RD303 as an instrument. Feed it a MIDI track or pads in MIDI mode, or use PATTERN with the host transport. Use the Force's Q-Links in Screen mode for the controls on the current page.

Use one sequencer as the note source: either the host's MIDI patterns or RD303's internal pattern. PATTERN mode gives the internal sequence priority while the host is running. Switch back to MIDI when you want the host's notes to control the synth.

02 The acid pattern

Sixteen visible steps. Up to eight pages.

Choose Length: 16, 32, 64 or 128 steps. Each step is a sixteenth note. At 4/4, a 16-step page is one bar. PAGE - and PAGE + move through the sequence; the range label tells you which steps you are editing. Narrow phone or AU windows can scroll the strip sideways. On a narrow phone, seeing steps 1-9 does not mean the page ends there: swipe the strip sideways to reach 10-16. PREV 16 and NEXT 16 change the full sixteen-step page.

Control	What it does
Step / pitch bar	Selects that step. The bar and note name show its pitch; an empty gate is a rest. The playback highlight shows the current step.
Note / Octave	Changes the selected note. Setting a note activates its gate. Use Octave for larger register changes.
Gate	Turns the selected note on or makes it a rest.
A - Accent	Emphasizes a sounding note. The Voice Accent amount controls its strength. Accent does not activate an empty rest.
S - Slide	Glides into this note from a preceding held note. Adjacent notes make the effect easiest to hear. The Voice Slide knob sets glide time.
H - Hold	Extends the preceding note through this step without a new attack. A hold at the beginning needs a preceding note to extend; it is not a note by itself.

Move the whole bass line

OCTAVE - and OCTAVE + shift every note in the pattern by one octave, keeping its rhythmic shape. They are separate from the selected-step Octave knob and the keyboard's octave buttons. A shift that would take a sounding note outside the MIDI range is refused.

Edit by hand

Select a step, set its Note and Octave, then turn Gate on or off. Tap A, S or H beneath that exact step to shape the phrase. The selected-step knobs offer the same controls. For smooth acid lines, mix short notes, occasional holds and a few slides instead of sliding every note.

UNDO / REDO is a single checkpoint for musical operations such as loading, generating, varying, transposing or recording. It is not an unlimited history of every knob movement. Save the host project or COMPA Session to keep your work.

03 Library, scales & variation

Start with a phrase. Make it yours.

The COMPA Pattern Library is a source of musical patterns inside RD303. It is not a separate instance of the COMPA app. Genre and Pattern browsing choose what LOAD PATTERN will load; browsing alone does not replace the playing sequence.

1. Choose a Genre. iOS opens a themed scrolling list; desktop and Force use paged lists. User genres appear alongside the factory genres.
2. Tap the pattern name to open the complete choice list, or use Previous and Next. Press LOAD PATTERN to replace the sequence. Factory patterns use your current length; saved user patterns recall their saved length, key and scale.
3. Choose Key and Scale after loading when you want a different tonality. Key transposes the phrase; Scale fits sounding notes into that scale.
4. Use Register or the pattern's OCTAVE buttons to move the entire bass line into a useful bass range.

Vary an existing pattern

Amount sets how strongly VARY changes the current phrase. Style can retain the original character or lean toward a genre recipe. Start with a modest amount, press VARY, listen, and use UNDO / REDO to compare with the previous checkpoint. Changing Scale repeatedly can alter the original intervals; it is a musical edit, not just a playback filter.

Generate a fresh pattern

GENERATOR uses the current Genre, Key, Scale and Length. Density controls how many steps sound; Motion shapes melodic movement. Accent Bias, Slide Bias and Hold Bias favor those gestures. Seed selects a repeatable starting point. Bar Vary changes the amount of development across a longer sequence.

GENERATE builds the phrase from those settings. REROLL advances the seed and creates another. Both replace the current internal pattern and select PATTERN mode. Use UNDO / REDO to compare, then save the host project or COMPA Session when you find something you like.

Sound presets and pattern-library entries are separate. A sound preset changes the voice's eight synth controls; it does not replace the pattern or reset your effects and LFO settings.

04 Save your own patterns

User genres, reusable phrases and recorded movement

Save a phrase once, then reuse it in another Session or project. A user pattern stores all 128 steps, its active length, key, scale, accents, slides, holds and recorded knob automation.

1. Finish note and automation recording before saving. Open LIBRARY and choose SAVE PATTERN. iOS and desktop also offer Save on the Pattern page.
2. Enter a name. Choose User or another user genre. Create a named genre when you want a separate collection. Force supplies an on-screen naming keyboard.
3. Press SAVE. An existing pattern is kept; a repeated name receives a numbered suffix.
4. To recall it, choose its user genre, tap the pattern name, choose the entry and press LOAD PATTERN.

Patterns and complete instrument states

Loading a user pattern keeps your base voice, effects and LFO settings. Its recorded automation then controls those parameters during playback. A note-only saved pattern clears any automation from the previously loaded user pattern. Save the COMPA Session or host project to retain the complete instrument setup.

Where the library lives

Libraries are local to each device. COMPA and its RD303 AUv3 share the same user library on an iPhone or iPad. Desktop plug-in instances share the library for the current user account. Force uses writable attached storage, preferring MPC SSD, under Rare Data/RD303/User Patterns.

This first library pass appends safely: saving does not overwrite earlier patterns. After updating COMPA, reload RD303 in another AUv3 host before checking newly saved entries. Older RD303 builds cannot read patterns or project states containing the new automation.

05 Shape the sound

The voice and its stereo effects

Voice control	Musical use
Wave	Choose SAW for a brighter, buzzy source or SQUARE for a rounder, hollow tone.
Cutoff / Resonance	Set the filter's brightness and emphasis. Sweep Cutoff while the phrase plays; raise Resonance gradually.
Env Mod / Decay	Set how strongly the envelope opens the filter and how long that movement lasts.
Accent / Slide	Set accented-note strength and glide time. The pattern's A and S flags decide where those gestures occur.
Level	Set the dry voice level before the effects chain.

Keyboard mode: Legato or Retrigger

LEGATO lets overlapping live notes glide without a fresh envelope attack. RETRIGGER gives each new live note a fresh filter/amplitude attack and immediate pitch. On iPhone/iPad the switch is above the keyboard; on desktop and Force it is below Slide on the Voice page. The mode is saved per instrument and can be MIDI-mapped or host-automated. Programmed pattern slides are unchanged.

Sixteen starting sounds on iOS and desktop

Open SOUNDS on iOS or the SOUND bar on desktop. The bank includes Soft Saw, Round Square, Slow Glide, Bright Accent, Warehouse 93, Rubber Circuit, Velvet Sub, Chicago Jack, Mercury Slide, Neon Stab, Late Night Dub, Tin Roof Acid, Dusty Pulse, Low Voltage, Liquid Chrome and Open Road. The lean Force skin offers the original four quick sounds.

Drive, chorus, delay and space

DRIVE offers Diode, Tape and Fuzz characters with Drive, Tone and Drive Mix. CHORUS adds motion with Rate and Depth. DELAY has amount, Time, Feedback and Sync; Sync uses musical divisions at the host tempo, with a maximum delay time of four seconds. REVERB adds space using amount, Room and Damping.

FX Mix blends the complete wet chain with the voice. FX On bypasses the effects; Output sets final level, Low Cut reduces low-frequency build-up, and Width adjusts the stereo spread. CLEAR TAILS clears the delay and reverb memory. In iOS these groups share the FX page; desktop splits them across DRIVE, SPACE and SETUP.

Sound presets keep the current LFOs, effects and recorded automation. To compare the bare voices, switch both LFOs off, bypass AUTO PLAY and set FX Mix to zero, then bring them back in.

06 LFOs & note recording

Play it in. Animate it.

Two independent LFOs

Turn a lane On, choose its Target and Shape, then raise Depth. Targets are Cutoff, Resonance, Env Mod, Decay, Accent, Slide and Level. Shapes include Sine, Triangle, Saw Up, Saw Down, Square, Sample & Hold and Random.

SYNC uses rhythmic rates tied to host tempo; FREE uses a rate in Hz. Phase offsets the cycle and Smooth softens changes. A subtle slow triangle on Cutoff creates motion without obscuring the bass pattern. A synchronized square or saw can create stronger rhythmic gestures.

Record played notes into the internal steps

1. Choose Length before recording. Open RECORD and choose Input Channel, or ANY.
2. Press ARM to record into the existing pattern, or NEW TAKE to start with an empty pattern. This selects PATTERN mode.
3. Start the host transport. Play RD303's built-in keyboard, an external MIDI keyboard, COMPA Keys, or the Force pads in Notes mode.
4. Listen as the sequence loops: notes are captured on the sixteenth-note grid. This is step-resolution phrase recording, not an unrestricted piano-roll recording.
5. Disarm or stop the transport to finish. Save the host project or COMPA Session. UNDO / REDO can compare with the pre-recording checkpoint.

Play the built-in keyboard

The iOS editor includes a touch keyboard on VOICE and RECORD. Multiple fingers and sliding between keys are supported, while the synth remains monophonic. The keyboard octave buttons change the notes you play, not the register of an existing pattern. Desktop uses the host's MIDI input; Force uses its pads or external MIDI.

Record status explains when RD303 is armed, recording, missing the host clock, or needs rearming after a seek. Stop or reposition the host deliberately before a fresh take. A song-position jump can end the current recording pass.

07 Record knob movement

Your own cutoff sweeps, accents and effects

Automation recording is separate from note recording. Overdub your hands-on performance over an existing phrase without replacing its notes or the other automation lanes.

1. Open RECORD and find KNOB AUTOMATION. On Force, tap the RECORD bottom tab again for AUTO REC.
2. Start the host transport. On iOS, NEW TAKE clears old knob movement and arms a fresh take; ARM / OVERDUB keeps existing lanes. On Force, use CLEAR ALL then ARM for a fresh take.
3. Move sound knobs on VOICE, LFO or FX while the pattern runs. All 43 voice, LFO and effect controls can record; pattern-editing, theme and scope controls do not become lanes.
4. Stop automation recording when finished. Playback resumes immediately. Save a user pattern or your Session/project to keep the movement.

Overdub and manual control

On iOS and desktop, touching or dragging a knob writes that section; releasing it ends the write and preserves the rest of the curve. You can begin midway through a pattern, cross the loop boundary, and leave recording armed for another knob. MIDI sources without touch/release information use the existing latch behavior.

With recording off, moving a knob overrides its lane until the next loop. RESUME AUTO returns to recorded movement immediately. AUTO PLAY off bypasses the recorded movement and uses the manual values. Stop or a transport seek ends an active recording pass; check the status and rearm if needed.

Control	Action
Automation lane	Selects which recorded control CLEAR LANE affects. It does not restrict which knobs you can record.
CLEAR LANE / CLEAR ALL	Removes that lane or all recorded movement. Notes remain intact.
UNDO AUTO	Toggles the last automation checkpoint. Note editing has its own separate Undo.
Length	Automation follows 16, 32, 64 or 128 steps. Increasing length repeats the previous movement into the added area.

Both the note recorder and automation recorder need the host musical clock. If status remains ARMED / PRESS PLAY, start the host and verify its transport connection. Scope View Gain changes only the picture; it is not an audio-automation control.

08 MIDI controllers

Map the knobs. Route the notes.

Inside COMPA, RD303 uses COMPA MIDI MAP. Learning a knob assignment and routing keyboard or pad notes are separate operations.

Learn a sound control

1. Turn on COMPA MIDI MAP and open RD303. Tap a highlighted control; MOVE MIDI means it is waiting for an assignment.
2. Move the controller knob you want to use. MAPPED shows the learned note or CC number and channel. The incoming-message line includes a counter so repeated values are visibly fresh.
3. Tap DONE to leave map mode and try the control while RD303 is playing. A pad learned instead of a knob creates a note assignment, not a continuous knob assignment.

PreSonus ATOM SQ

Use MIDI mode and the ATM SQ port. Open USER, select Knob and choose an assigned page such as Page 1 with the screen encoder. In the tested controller setup, Knob had a blank page value; choosing Page 1 restored normal CC messages. Relearn controls after changing their assignments or knob bank.

CC numbers come from the controller configuration. A fourth knob assigned to CC4 is valid; it does not have to be CC17. For a learnable touch strip, select USER > Touch > CC, then learn it to the desired RD303 control.

Play hardware pads or keys

In RD303's COMPA PLAY/Keys drawer, select the controller in the CTRL row. Turn MIDI MAP off. Inside RD303's own editor, open the PATTERN bottom tab, then choose MIDI in SOURCE near the top beside Length, Key and Scale. This accepts live notes. PATTERN Source gives RD303's internal sequence priority during host playback; use note-record ARM when recording played notes into that sequence.

CTRL highlights the actual note connection, including restored Sessions. New selections remember that MIDI port across reconnects. If an older Session loses its keyboard connection, select the controller again in CTRL. When changing to another device or MIDI port, choose it explicitly.

For manual patching, open MIX > MATRIX. Sources run across the top and destinations down the left. Tap the crossing between ATOM SQ and RD303 to connect them; long-press a connected crossing for filters and channel settings. MORE also offers MIDI matrix; MIDI ports + sync opens separate port and clock settings.

The input line reports messages arriving from the controller. An endpoint appearing in the device list does not prove that its knobs send usable values. COMPA learns note and CC assignments; a constant channel-pressure message does not provide a usable continuous knob sweep.

09 Make it yours

Themes, scope and saved projects

Eight named colors; two finishes

Choose Raw Steel, Solar Yellow, Midnight Acid, Rare Red, Electric Blue, Molten Orange, Acid Green or Neon Pink. iOS uses the paint-palette selector; desktop uses SETUP. CLEAN and WORN change the finish. Saved projects retain their previous color.

The Force skin retains six colors for its 2 GB memory budget. Acid Green, Neon Pink and the selectable clean finish are currently Apple/desktop options. Keep a copy of older projects before saving them with a newer state format.

Read the audio

SCOPE offers Peaks, Wave, Spectrum, Vector, Depth, Trace and Bars. EXPAND uses the available editor area; RETURN restores the controls. View Gain increases display sensitivity without increasing the audio level. Palette changes the scope colors, and Scope On can disable drawing.

A scope is a visual aid. If it is empty, check that RD303 is making sound, Scope On is enabled, and the display gain suits the signal. Changing View Gain cannot fix a silent audio route.

Save and recall

Save the host project or COMPA Session to retain the voice, internal sequence, recorded automation, LFOs, effects and theme. The iOS/desktop finish preference is saved separately from the compatible sound state. Save before replacing a pattern if you want a permanent copy beyond the single undo checkpoint.

The engine retains the existing Force-compatible sound-state layout. Host project files and preset containers still differ between platforms: this guide does not promise direct import of an Ableton project, AUM session or Force project into another host.

An iPhone or small AU window has less room than an iPad. Scroll the main content vertically and the 16-step strip horizontally when needed; the lower navigation stays available. Desktop editor resizing has a minimum size to keep its controls usable.

10 Platforms & troubleshooting

Know which build you are using

Platform	Current form
COMPA on iPhone / iPad	Built-in RD303 instrument and bundled AUv3 extension. No separate RD303 app is required.
Other iOS / iPadOS hosts	Rare Data: RD303 AUv3 instrument, supplied by the installed COMPA app.
macOS	AU and VST3 instrument; universal arm64 / Intel build. Host architecture and OS support still apply.
Windows / Linux	Native x64 VST3. The Windows build links the C++ runtime statically. The Linux candidate targets Ubuntu 24.04 with glibc 2.38+ and GLIBCXX 3.4.30.
Akai Force / MPC	Native ARM instrument and Force skin. The tested setup is Akai Force, firmware 3.9.1.2, with the supported MockbaMod startup layout, root SSH and executable storage. Other MPC hardware remains unverified.

Native Mac, Windows and Linux 1.0 candidates passed their host-contract and VST3 validator checks. These tests do not establish audible performance in every DAW. Use the exact platform/version when reporting a result.

Keyboard works, but the pattern is silent

Choose PATTERN, confirm that steps have gates, and start the host transport. READY means the sequencer is waiting for Play. PLAY means it is following the host. NO CLK means the musical clock is unavailable. Enable the host's tempo/transport connection if it offers one. In COMPA, use MIDI when you intend COMPA's own Pattern tab to supply the notes.

No audio, stuck notes or an unexpected register

Check the track's output, mute state and mixer level. Try MIDI mode and one note with effects and LFOs off. Use ALL NOTES OFF on iOS if audition notes remain held, or stop the host. If the bass sounds too low or high, use the pattern's OCTAVE buttons to shift the complete phrase.

Installation and known limitations

Install the free Force and desktop versions from Rare Data HQ. Get HQ at getquota.app/rd303, then choose RD303, Install & manage, and This computer or Force / MPC. Save your Force project before installation: HQ checks the supported setup and restarts the instrument software. It does not unlock firmware, install MockbaMod or establish root access. Read getquota.app/hq/guide for setup requirements and recovery.

Software checks and build validation do not replace listening and real-host tests. Report the platform, host, Source mode, page and exact action that caused a problem. Keep the Session or project that reproduces it when possible.

On Force, tab changes can be slow just after loading a project, especially Pattern and Library. Navigation improves after visiting pages; initial delays remain an improvement item.