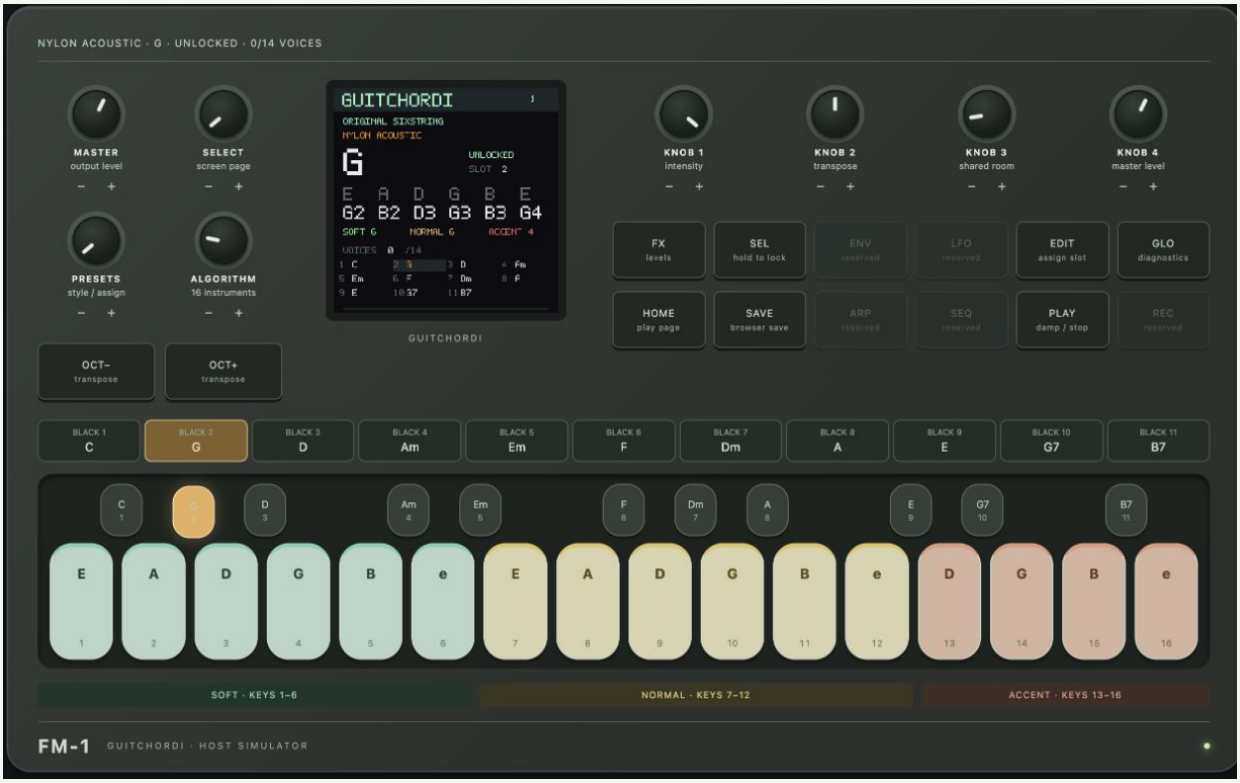
Start playing

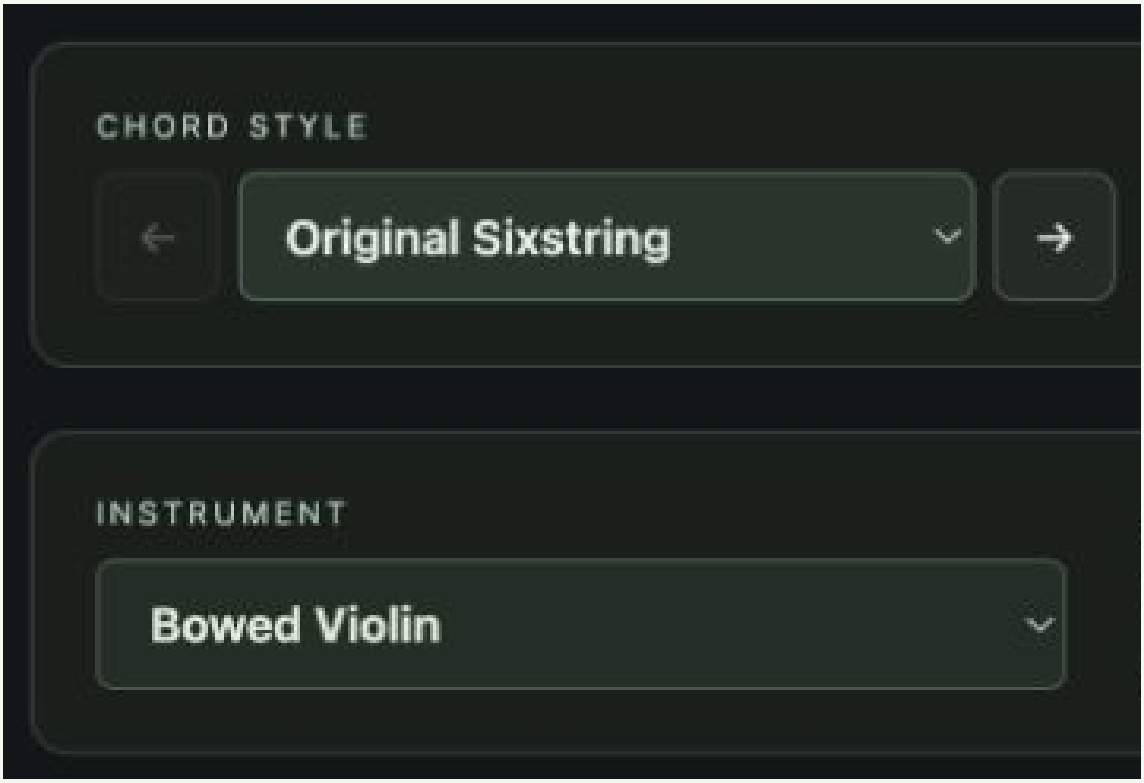


Open and switch on
Open the panel simulator at localhost:8769, then click Switch on. Start with a comfortable MASTER level. Standard EADGBE remains the default guitar reference.

Choose a chord, then play
The eleven black keys choose chord slots. The strip above them shows every chord at all times; the LCD shows the selected chord. Tap or sweep the sixteen light keys to make sound. Only contacted keys attack; muted parts stay silent.

Let it ring, or stop it
Releasing a key leaves its natural, finite tail. Click Damp all strings, press Escape, or use PLAY to stop ringing notes. Mute output silences the speaker path while the instrument continues running.

Change instrument and style



1. Choose the chord style first
Use CHORD STYLE or turn PRESETS. There are fifty banks, including jazz, lo-fi, rock, blues, pop, soul and folk. A style loads its factory chords and suggested instrument/room settings.

2. Choose the sound
Use INSTRUMENT or turn ALGORITHM. The sixteen choices include Wood/Wire/Glow; nylon, steel, jumbo, palm-muted, clean, jazz, crunch and heavy guitars; harp, bowed violin, pizzicato cello, bass and dulcimer. Instrument changes affect future key contacts and create no attack.

3. Keep your combination
Press SAVE after choosing your bank, instrument and settings. In the browser this persists across reloads. Changing style again loads that bank's factory chords and suggested sound; choose your preferred instrument afterwards.

Violin notes and playing zones

Green: soft / keys 1-6
Gentle attacks. Amber keys 7-12 give normal attacks; coral keys 13-16 give accented attacks. The coloured key tops, note lettering, active highlights and zone legend stay consistent. This is a simulated contact intensity, not measured pressure or bow speed.

Four parts across sixteen contacts
Violin and cello repeat four upper chord parts; bass repeats four lower parts. The violin key labels now show the actual sounding note and octave, such as D4. The same pitch can appear in several zones: play it softly, normally or with an accent. Hover for the note, part and physical key number.

A bowed colour with a finite tail
Bowed Violin uses noise-excited strings and a gentle onset. Notes are capped at three seconds and releases retain the tail. It is a lightweight synthesis approximation, with no continuous bow-pressure control. The LCD shows note names and colours the last-played part for its zone.

Lock, edit and save

Lock the chord
Hold SEL for five uninterrupted seconds. Releasing early cancels. LOCKED appears on the LCD and status strip. Black keys, chord styles and slot edits are then blocked; instrument, level and transpose controls remain available. Hold SEL for another five seconds to unlock.

Edit a chord slot
While unlocked, choose a black-key slot, press EDIT, then turn PRESETS to change its assigned voicing. Press EDIT again to leave assignment mode. The black-key labels, chord strip and LCD follow the actual assignment.

Understand SAVE
SAVE stores the active bank, its current slot edits, instrument and settings in this browser. It does not maintain fifty separately edited banks. Loading another style replaces current slots with its factory set. Reload restores the last save; ringing notes and held keys are never saved. Browser saves are separate on ports 8768 and 8769.

Controls and keyboard shortcuts

Knobs
MASTER: output level. SELECT: LCD page. PRESETS: chord style, or assigned voicing while EDIT is active. ALGORITHM: instrument. KNOB 1: intensity. KNOB 2: transpose (-12 to +12 semitones). KNOB 3: shared room. KNOB 4: output level. Drag up/down, scroll, use arrow keys when focused, or press the minus/plus buttons.

Panel buttons
FX opens levels; GLO opens diagnostics; HOME returns to the play page and exits assignment mode. OCT- and OCT+ shift by an octave within the transpose limits. PLAY damps sound. ENV, LFO, ARP, SEQ and REC are reserved and disabled.

Computer keys
String contacts, left to right: A S D F G H J K L ; ' Z X C V B. Chord slots: Q W E R T Y U I O P [. Hold Space with page focus for the five-second lock. Escape damps. Focused buttons/keys also support Space or Enter. Repeated keydown events do not create repeated attacks.

Two small details
Switching off pauses audio; switching back on resumes the current session. Reloading boots from your last save. On a phone, landscape gives more room; the device panel can scroll horizontally.

Sound, headroom and troubleshooting

Will the FM-1 sound like this?
The browser and target firmware share the C instrument and fixed-point string model, with the same patch settings and 44.1 kHz design rate. That is a strong basis for the same core timbre. Actual FM-1 boot, codec rate/format, gain, analog output and processor execution have not been tested; exact sound or full-polyphony parity is not established.

Memory fits; CPU is still unknown
Sixteen instruments are selectable patches, sharing fourteen voice slots. They are not sixteen simultaneous engines. The current link report uses 54,352 of 98,304 bytes in the main RAM region and 115,200 of 344,064 bytes in the framebuffer pool. Those are separate from the reserved stack regions. That does not measure real-time audio headroom or stack high-water usage. A 128-frame half-buffer allows about 2.90 ms at 44.1 kHz, including input handling and rendering. Real hardware must meet that deadline under the worst patch/voice load.

What happens when the device arrives
Verify stock recovery, boot with low output, test screen and one key, then the full map. Measure output rate, worst render time, missed DMA halves, stack depth and playing latency while increasing voice counts. Use those results to choose a safe budget. Flash-backed SAVE and the running app's USB updater are still pending; the experimental target currently saves snapshots in RAM only.

If something seems wrong
No sound: switch on, unmute and check MASTER. Missing notes: inspect muted keys and the selected voicing; four-part patches repeat notes. Wrong sound after changing style: reselect INSTRUMENT, then SAVE. Bank will not change: unlock SEL and leave EDIT if active. Stuck or overly busy tails: Damp all strings or Escape. The simulator requires a 44.1 kHz AudioContext and reports startup failures beside Switch on.

Link report: app 30,472 B; data/BSS 54,352 B; framebuffer pool 115,200 B.