



USER GUIDE

VERSION 0.1.0 · SEPTEMBER 23, 2026

Welcome to GuitarVee - your all-in-one guitar companion built for big screens and TV remotes. This guide walks you through every feature. If something looks confusing, just play around with it - most things are hard to break and easy to undo.

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Getting Around

GuitarVee is designed to work with a **TV remote** (arrow keys + Enter + Escape), a regular mouse and keyboard — or a **game controller**.

- **Arrow keys** move the highlight between items
- **Enter** selects the highlighted item
- **Escape** always goes back one screen
- The **breadcrumb** at the top left shows where you are
- The **session timer** in the top right tracks your practice time (and is logged to the practice heatmap on the Practice Stats page)
- **Control hints** at the bottom of every screen remind you what keys do what
- **Sized for a fingertip or a remote:** every button, chip, field and knob is at least **44 px** tall and wide in the Full interface and **52 px** in Simple mode, so nothing is a fiddly target from the couch or on a touch screen
- **One sound engine:** everything GuitarVee plays — chord strums, drums, the bass line, the metronome, tuner tones, Perform's count-in, the Chord Builder, the Tab Editor and the looper — comes out of one shared audio engine, and every sound passes through a soft headroom limiter on its way to your speakers, so nothing the app plays can hard-clip them. Stopping any sound fades it out in a few milliseconds instead of cutting it, so there is never a click on Stop

The **home screen** is a grid of all the tools. Arrow around, press Enter (or click) to open one. On the Steam Machine a quiet line at the end of the home screen says the build is **experimental** — it is still being worked on and is not the full GuitarVee experience; Windows is.

Folding panels away (Full mode): every block on the Full home carries a small × in its corner or at the end of its row. Press it and that panel is gone — not greyed out, not left as an empty rectangle: the grid re-packs around the gap so the screen holds only what you actually use. Anything a folded tile was the only route to comes straight back as a quick-launch chip, so nothing becomes unreachable, and a **Show hidden panels (n)** chip at the end of the strip brings everything back. What you fold is remembered for next time. The quick-launch strip itself is never foldable — it is the way back.

Global header controls: the header carries these controls, and they follow you everywhere:

- The **Simple | Full** interface toggle — one click (or **F9**) swaps between the uncluttered Simple layout and the full one; see *Simple Mode* below. It is visible in both modes, so the way back is always right there.
- A **Record button** (with a chevron that opens the looper panel) — one press records from any page; see Recorder & Looper below
- The **Drum Loop** and the **Bass Loop** — each with its own **Play** and a settings button. They are separate loops: start either one, or both, and they keep playing on every page, so you can jam over a groove while browsing chords or scales. They share **one clock**: a loop you start while the other is playing comes in on its next bar line, so the two never drift. Each Play reads **Stop** while its loop plays — whoever started it: here, the Drum Machine, the Bass page, the looper or the Progression Builder — and stops just that loop. The settings buttons open the **Drum Machine** and the **Bass page**. The Bass Loop plays the line you last played in the Progression Builder or chose on the Bass page — on a fresh install G · D · Em · C, a bar each, in the Rock 8ths style — and while the Progression Builder is open it plays the chords on that page, from chord 1, with the playhead following. All four buttons are there in Simple mode too; when the row gets tight the labels shorten to *Drums* and *Bass*, on a narrow window the settings buttons step aside too, and both Play / Stop buttons always stay.
- A **master volume** button — a speaker in the accent colour with the level printed inside it (**0**, **-6**, **MUTE**) — the level of everything GuitarVee plays, from 0 dB down to -40 dB, in both modes. Press it (or **F7**) to open its fader; **Ctrl+Up** / **Ctrl+Down** step it 2 dB and **Ctrl+M** mutes, without opening it
- An **Amp** button that opens the amp screen from any page, in both modes; it turns green while the amp is on
- An **amp preset selector** (Full mode; Simple shows it only while the amp is on) — pick a preset and play your guitar through the amp sim from any page (a live input meter appears while it runs); **Amp Off** stops it and releases the mic
- A **GLOBAL TUNING** dropdown with 20 tunings (Standard, Drop D, DADGAD, the open tunings, B Standard, Drop A, and more) plus any custom tunings you save on the Tuner page — shown as *Tuning: Standard*
- A **CAPO** dropdown for your capo position — shown as *Capo: none / Capo 3*. This is the one physical capo in the app: every chord shape, strum and reference note follows it — and a song saved with its own tuning and capo sets both dropdowns for you when you open it in Perform or Karaoke (see *How capo works* under Perform)

- A **fullscreen toggle** (also F11)

Every chord view in the app follows the global tuning and capo. In standard tuning with no capo you get the hand-curated chord library. Put a capo on (still in standard tuning) and chord **names stay the chords that sound** while the diagrams switch to the library shape your hand plays behind the capo — a D at capo 3 shows the B shape, a C shows the A shape, with the nut line standing for the capo and fret numbers counting from it. In any other tuning GuitarVee **computes** playable shapes mathematically. Computed shapes are marked with an orange **computed** badge on their cards (capo'd library shapes get a **capo** badge), and a banner names the tuning/capo in effect so you always know what you're looking at. Perform and Karaoke read a written song sheet instead of a chord name, so there the **names follow the sheet** — the [G] on a chart is the G shape at the song's capo; see *How capo works* under Perform.

Controller support: plug in a gamepad and GuitarVee just works — on a Steam Machine there's nothing to set up. By default the controller is in **Auto** mode: it becomes active whenever a gamepad is connected. Prefer it always on, or want it out of the way? Change it in **Settings** → **Controller**.

BUTTON	WHAT IT DOES
 / left stick	Move the highlight (hold to repeat)
	Select
	Back
 or 	Play / pause
	Chord panel
 / 	Set loop A / B
 / 	Previous / next section
	Clear the loop

Dropdowns are fully driveable too — up/down changes the value, A or B closes the menu. A **controller badge** appears in the header whenever the controller is active, so you always know GuitarVee is listening to it.

If you have opened a song in Perform / Karaoke / Audio Player recently, a **Recently Played** strip appears above the grid with the last 5 songs. Click any chip to jump straight back into the performer.

Simple Mode

GuitarVee has two interface modes. **Simple** is the one you start in: an uncomplicated, easy-to-read layout built for students, beginners, and classroom screens — fewer controls, bigger type, taller controls (52 px instead of 44), wider spacing, nothing to configure. **Full** shows everything, and is designed for a mouse and keyboard; the first time you switch to it, GuitarVee says so once and then never mentions it again. Nobody is asked to choose on first run, and once you pick a mode it sticks — GuitarVee never moves you back.

Switching: click the **Simple | Full** toggle in the top bar (it is there in both modes), press F9 anywhere, or use the matching row at the top of **Settings**. The screen you are on re-draws immediately, a toast confirms *Simple mode / Full mode*, and the choice is remembered for next time.

What Simple mode shows:

- **Home** becomes a **Continue** bar for your last song (when there is one) and six big buttons — **Songs, Practice, Tuner, Amp, Metronome, Settings**. One column on a narrow screen, two on a wide one. Every other tool is still reachable through Songs, Practice, and Settings.
- **Header:** logo, Home/Back, the mode toggle, the master volume, the **Drum Loop** and **Bass Loop** (each a Play / Stop and a settings button), the Amp button, tuning, and capo. The record button, amp preset selector, fullscreen button, and session timers are tucked away.
- **Perform** runs in the Flow view only, with section pills, the transport (restart, pause, A–B and section loops, chords panel, Stage Mode), speed control, and Back — the section-map rail, XP pill, and status readouts are hidden.
- **Amp Sim** shows the same four parts as Full — the amp, the Signal path, Effect settings and the Effects shelf — with fewer choices: Start Amp, Test Riff, the input meter, preset and model pickers, the amp knobs, the input device and channel, the output, and every pedal move. Saving presets, input trim, the OUT/SAG meters, the delay readout, cab / speaker / mic, the shelf's tag chips and the tips are hidden.
- **Drum Machine** keeps the pattern buttons, BPM steppers, Play/Stop, and Level; the step grid, Save Pattern, pan, and custom samples are hidden. Reach it from the header's page button with the loop set to **Drums**.

- **Progression Builder** keeps key/mode, Add Chord, Clear, BPM, Play/Stop, presets, the chord cards and picker, and diagrams; beats-per-chord, time signature, MIDI export, the bass strip, and the beat map are hidden.
- **Bass** keeps everything that makes the bass an instrument — Play/Stop, the chords, the key and preset pickers, all twelve styles, New take, tempo, and Level; only the EQ/pan strip and the link into the Progression Builder are hidden. Reach it from the **Bass page** button in the Progression Builder (the header's page button opens the Builder when the loop is set to **Drums + Bass**).
- **Quick theory games** start on their easy sets (the results screen still offers the full set).
- **No scorekeeping chrome:** XP pills, level tiles, quests, streak widgets, and the notes card are hidden. Practice time and achievements are still recorded quietly in the background.

Nothing is lost. Hidden controls keep whatever values they had, sounds and timing are identical, and switching back to Full brings everything back exactly as you left it.

Songs

This is your song library. Every song you create lives here. A fresh install comes seeded with **100 built-in public-domain songs** so you have something to play on day one.

What you can do:

- Browse your saved songs (sort by Title, Artist, or Difficulty using the bar at the top)
- Press **N** to create a new song
- Select a song to get a menu with options: **Perform**, **Karaoke**, **Edit**, **Audio Player**, **Duplicate**, or **Delete**

Duplicate copies the song JSON with a fresh ID and a **(Copy)** suffix. The original audio file stays with the original — the copy is silent until you upload audio for it.

Tips:

- Songs show their title, artist, BPM, and difficulty badge at a glance
- If a song has an audio file attached, you'll see an audio badge
- Delete asks for confirmation, so don't worry about accidental taps

Song Editor

This is where you build your songs. You'll enter the title, artist, tempo, and most importantly - the lyrics with chords.

How chords work: Write chords inline with your lyrics using square brackets. For example:

```
[G]Amazing [G7]grace, how [C]sweet the [G]sound  
[G]That saved a [Em]wretch like [D]me
```

The performer view will automatically align the chords above the right words.

Sections:

- Add sections like Verse, Chorus, Bridge, Intro, Outro, etc.
- Each section has a label (e.g. "Verse 1") and a lyrics text area
- Use the arrow buttons to reorder sections
- Hit the X to remove a section

Audio:

- After saving a song, you can upload an MP3, WAV, or other audio file
- Once audio is attached, you can define **audio sections** (like "Chorus 1:30-2:00") with custom colors
- These sections become clickable/loopable in the Audio Player

Notes:

- The **Notes** field is a free-text reminder shown in Performer (and Karaoke) when you toggle it with  or the  Notes button. Use it for sticky reminders like "capo 2, no solo tonight, easy on the bridge".

Tuning + Capo:

- The song's **Tuning** and **Capo** describe the physical setup the chart was written for — the capo its chord shapes assume. Open the song in Perform or Karaoke and GuitarVee switches the header **TUNING** and **CAPO** to them, with a quiet one-line notice — *Switched to Drop D, capo 2 for this song — set your guitar* — and a **Keep mine** button that puts your previous setup back while the song stays open. Nothing happens when the song already matches your header, and leaving the song never switches anything back.
- Chord **names follow the sheet**: the written `[G]` is the G shape at the song's capo. Play with the song's capo and the names read exactly as written; keep your own capo instead and the names shift to the shapes that sound the same on your setup (slash chords like `D/F#` move root and bass together).
- To sing in another key without touching the capo, use the +/- transpose keys in Perform — a name-only shift; the sheet's capo is untouched.
- Songs saved before these fields existed carry no tuning or capo of their own and leave the header alone.

Saving:

- Press the **Save** button or hit `Ctrl+S`
- Press **Cancel** or `Escape` to go back without saving
- A toast confirms "Saved"

This page works best with a keyboard on PC.

Perform

Section Map (Flow view): the right-hand rail lists the song's sections — click or press Enter on a row to jump there and tick it off; each first tick in a session banks +15 XP toward your level (the Session pill counts what you've earned tonight). **Notes:** the card under the rail keeps per-song notes; they save automatically.

This is the big one - full-screen auto-scrolling lyrics and chords, designed for playing along on a TV. It has a count-in, a visible transport bar, tap-to-pause, a chord-shapes panel — plus section pills, one-key section looping, Stage Mode, and live capo changes mid-song.

Two lyric views:

- **Flow** (the default): big, clean lyrics with each chord shown as a rounded **chip** sitting right above the syllable it lands on. Chips stay glued to their word even when a long line wraps, and as the song scrolls, the line you should be singing stays at full brightness while the rest dim slightly. Tap any chip to pop open the chord-shapes panel with that chord highlighted.
- **Classic:** the original typewriter-style sheet — chord names on their own line above the lyrics, exactly as before.

Press **V** (or the **Flow** / **Classic** button in the transport bar) to switch any time; your choice is remembered for every song. Everything else — count-in, loops, Stage Mode, capo changes — works the same in both views.

Controls:

KEY	WHAT IT DOES
Enter , Space , or tap the lyrics	Play / pause scrolling
Left / Right arrows	Slower / faster — the tempo in Beat timing, the scroll speed in Free timing
Up / Down arrows	Step to the previous / next line (Beat timing), or nudge the scroll (Free timing)
, (comma) / . (period)	Jump to the previous / next section
L	Loop the current section on/off
D	Toggle Stage Mode
V	Switch between Flow and Classic lyric views
R	Restart from the top with count-in

KEY	WHAT IT DOES
+ or =	Transpose up (all chord names shift up one semitone — not a capo)
-	Transpose down (all chord names shift down one semitone)
0	Reset the transpose to zero
S	Save the tempo and bars per line (Beat timing) or the scroll speed (Free timing) to the song
B	Switch between Beat and Free timing
[	Set loop A (start) at the current scroll position
]	Set loop B (end) — playback will jump back to A when it reaches B
\ (backslash)	Clear the loop
C	Toggle the chord-shapes panel
N	Toggle the song's Notes overlay
Escape	Exit back to song list

The hint bar at the bottom shows the essentials: **Space** Play/Pause, **arrows** Speed, **,** **.** Section, **L** Loop section, **C** Chords, **D** Stage, **V** View, **R** Restart, **Esc** Back. The rest — up/down scroll nudges, +/- transpose, **0** reset, **S** save speed, **[] ** manual loop, **N** notes — all still work; they've just rotated out of the bar to keep it readable.

Count-in: When playback starts (and on Restart), Performer counts **3 - 2 - 1** at the song's BPM, with a click on each count, so you come in on the beat. In a hurry? It's skippable — just start playback again during the count.

Transport bar: A visible bar gives you one-tap access to everything:  restart (with count-in), **▶ / ||** play-pause, a **loop button** that loops the current section, **A / B / X** manual-loop buttons (they light up when the loop points are set), a **moon button** for Stage Mode,  to open the chord-shapes panel, and a **Flow / Classic** button that switches the lyric view.

Tap to pause: Tap anywhere on the lyrics to pause. A PAUSED overlay appears — tap it (or hit a play key) to resume. Your A-B loop survives pausing.

Section pills: A bar of pills sits just under the header — one per section (Verse 1, Chorus, Bridge...). Click a pill to jump straight to that section, or step through them with **,** (back) and **.** (forward). The section you're currently in stays highlighted as you scroll, so you always know where you are in the song.

Loop the current section: Press  (or the loop button in the transport bar) and the section you're in starts looping — the loop indicator shows its name so there's no guessing. Press  again to release it. The manual  \ A-B loop is still there for when you want boundaries the sections don't give you.

Stage Mode: Press  (or the moon button) and, while playing, all the chrome — header, pills, transport, hints — dims away, leaving just the lyrics and chords. Pause and everything comes back. Great for gigs where the screen faces an audience. Your choice is remembered between sessions.

Chord-shapes panel: Press  (or the  button) to slide up a strip along the bottom with a chord diagram for **every chord used in the song**. Diagrams respect your Diagram Orientation setting and follow the header capo — each card shows the shape your hand plays behind the capo for the chord named on the sheet. Chords that aren't in the curated library — C#m, B7, whatever name a transposition lands on — get **computed diagrams automatically**, so no card ever comes up empty.

Timing — Beat or Free: In **Beat timing** (the default) every lyric line lasts a number of **bars at the song's tempo**, and the sheet moves line to line on the beat: the line being played holds on the reading band and the next one glides in during its last beat, arriving on the downbeat. How the lines wrap on your screen no longer changes how long they last. A **beat indicator** in the header lights each beat of the bar — the downbeat larger — with *bar 1 of 2* for the line, and a bar under the current line fills across it, so you can keep time and see how far into the line you are. The dock's **Tempo** (♩, – and +) and **Bars / line** (– and +) set it. Lines are one length by default, worked out from the song's tempo; a line written as two phrases in one lasts twice as long. **Save** keeps both with the song, and Karaoke uses the same numbers. The count-in, section jumps and loops all stay on the beat.

Free timing (press , or the **Beat / Free** button in the dock) is the steady scroll: speed 1 = 8 px/s up to speed 10 = 80 px/s, frame-rate independent. The choice is remembered, for Perform and Karaoke alike.

Lines without a chord: a line with no chord of its own is played on the chord still sounding from the line before, and both views now show it over the line's first word, in brackets and dimmed — so there is always a chord to read.

How capo works: Your real capo goes in the header **CAPO** dropdown — and a song saved with a tuning or capo sets it for you. Open a chart written for Drop D at capo 2 and the header switches

to Drop D, capo 2; a quiet line under the title says *Switched to Drop D, capo 2 for this song* — set your guitar with a **Keep mine** button. Press it (or Tab to it and hit Enter) and your previous tuning and capo come straight back while the song stays on stage. The line fades by itself after a few seconds, the header keeps whatever it shows, and leaving the song never switches anything back. Nothing appears when the song already matches your setup, and in a **Perform All** setlist each song applies its own setup as it comes up. The notice shows in both interface modes.

Chord names follow the sheet. The [G] on a chart written for capo 2 is the G shape behind that capo. With the header on the song's capo you see the names exactly as written, and every chip and chord-panel card shows the shape to finger, with the nut line standing for the capo and fret numbers counting from it; in the Full interface a small *sounds A* line under each name tells you what that shape actually sounds like behind the capo (Simple mode shows just the shape names). Keep your own capo instead — or change the dropdown mid-song — and the names shift by the difference so what you play still sounds right: a G written for capo 2, played with no capo, shows as [A]. The sheet *and* the chord panel update live — no need to back out.

Transpose (+ / -) is different: The +/- keys transpose the chord **names only** — for singing in another key without a capo. Written in G but you want to sing it in A? Press [+] twice and every chord name shifts up two semitones; slash chords like D/F# move root and bass together, so a +2 shift becomes E/G# (the bass note is spelled from the root's letter ladder, the way a chart writes it — E/G#, Gm/Bb, C/Bb — while plain roots use Ab, Bb and Eb as flats and C#, F# as sharps everywhere). Press [0] to reset. The pill at the top of the screen shows both parts — **Capo N • Transpose +M** — and adds **Sheet capo N** whenever your capo differs from the one the chart was written for, so you always know which is which. Karaoke works the same way (without the +/- keys).

Loop A-B (great for drilling a chorus):

1. Scroll to where you want the loop to start, press [I]
2. Scroll to where it should end, press [J]
3. Auto-scroll snaps back from B to A indefinitely; press [N] to clear

Notes overlay: Press [N] (or click  Notes in the header) to show the per-song Notes field you entered in the editor.

Tips:

- Set the song's tempo in the editor, or with **Save** on stage, so Beat timing starts at the right pace
- Fine-tune with the left/right arrows during playback; if every line runs out too soon or too late, change **Bars / line**
- Pause anytime with Enter

Karaoke Mode

Line-by-line lyric display — the current line front and center with the next lines queued below, plus a side panel of the song's chords. Pick **Karaoke** from any song's menu.

Three ways to drive it:

- **Manual** — **Space** (or Enter) advances to the next line; arrow **Left** / **Right** step back and forward
- **Auto-advance** — press **A** and the lines follow the song. In **Beat timing** (the default) each line lasts its bars at the song's tempo, after a one-bar count-in on the **beat indicator**; each line's words are up on its first beat, and a bar under the current line shows how far into it you are; **Up** / **Down** set the tempo and the **Bars** / **line** buttons the line length — the same numbers as Perform. **B** switches to **Free timing**, where every line gets the same time and **Up** / **Down** set the Pace (1–10).
- **Synced to audio** — if the song has an audio file and karaoke timing (set in the Song Editor), **Space** plays/pauses the track and the lines follow the recording

Other keys: **T** toggles the chord panel, **S** saves the tempo and bars per line (Beat timing) or the Pace (Free timing) to the song, **B** switches Beat / Free timing, **R** restarts from the top, **I** and **J** set how loud the song's audio file plays (the **Track** control in the audio bar, shared with the Audio Player), **Escape** exits.

Tuning and capo: a song saved with a tuning or capo switches the header to it when you open it — the same quiet *Switched to ... — set your guitar* line and **Keep mine** button as Perform — and the chord names follow the sheet the same way: the names are the shapes to finger, and the chord panel adds a small *sounds ...* line under each while a capo is on (Full interface). The header tuning and capo re-solve the chord panel live, mid-song.

Audio Player

Play your uploaded audio files with section markers for focused practice.

Controls:

KEY	WHAT IT DOES
Space or Enter	Play / pause
Left arrow	Rewind 5 seconds (or quieter, on the Track row)
Right arrow	Forward 5 seconds (or louder, on the Track row)
Up / Down	Navigate between sections and buttons
Enter (on a section)	Toggle loop on/off for that section
Escape	Go back

Section looping: This is the killer feature for practicing. If you defined sections in the editor (like "Chorus 1:30-2:00"), they show up as colored markers on the progress bar. Select a section and press Enter to loop it - the audio will replay just that section over and over until you turn it off.

Track level: The **Track** row under the progress bar sets how loud the song's audio file plays, from 0 % to 115 %. 100 % is the house level — the same level the drums and bass play at — so a track sits beside the app's own band and beside your amp instead of burying them. Walk to the row with Up/Down and use Left/Right, or drag the slider. The level is remembered, and it applies everywhere a song's audio plays: here, in Karaoke, and in the editor's Karaoke Timing tool. You can also set the starting value in **Settings** → **Backing Tracks** (Full interface).

Tips:

- Click anywhere on the progress bar to jump to that spot
- Sections are color-coded to match what you set in the editor
- The currently playing section is highlighted in the list

Metronome

A simple click track to keep you in time.

Controls:

KEY	WHAT IT DOES
Space	Start / stop
Up arrow	BPM +1
Down arrow	BPM -1
T	Tap tempo
Escape	Go back

Tap tempo: Press T a few times at the tempo you want. The metronome averages your taps and sets the BPM automatically. The more taps, the more accurate it gets.

Time signatures: Twelve to choose from — 2/4, 3/4, 4/4, 5/4, 6/4, 7/4, 3/8, 5/8, 6/8, 7/8, 9/8, and 12/8 — using the buttons. The beat dots at the top change to match - the first beat (downbeat) gets a special accent sound.

BPM is the quarter-note pulse in every signature. In 6/8 the six clicks are eighth notes, so a bar at 120 BPM lasts 1.5 seconds — the same bar the drum machine and the Progression Builder count.

Tips:

- BPM range is 20-300
- The -10 and +10 buttons are handy for big jumps
- The downbeat click is higher pitched so you can hear the "one"

Drum Machine

A step sequencer with real synthesized drum sounds. No audio samples needed - every sound is synthesized live.

Controls:

KEY	WHAT IT DOES
Space	Play / stop
Up arrow	BPM +1
Down arrow	BPM -1
Left / Right	Navigate buttons
Enter	Select focused button
Escape	Go back

How it works: The grid shows rows for each drum sound (Kick, Snare, Hi-hat, Tom) and columns for each beat step. **Click a cell** to toggle it on or off. The current playing step is highlighted as it moves across.

Patterns: Choose from 18 built-in patterns: Basic Rock, Standard Rock, Shuffle, Waltz, Bossa Nova, Country Train, 12-Bar Blues, Funk, Reggae One Drop, Metal Double Kick, Pop Ballad, Disco, Swing, March, 6/8 Feel, Hip Hop, Latin, and Tom Fill. Each one loads a different beat pattern into the grid.

Tempo is always the quarter-note pulse — a 6/8 bar at 120 BPM lasts 1.5 seconds, the same bar the metronome counts; 4/4, 3/4 and 2/4 timing is unchanged.

Pan places the whole kit in the stereo field (drums a touch left, bass a touch right, you in the middle — instant band). It sticks between sessions.

Custom samples: The **Custom Samples** section lets you upload your own sound for any of the four drums — a WAV or other audio file per slot. Uploaded samples play in place of the synthesized sound and persist between sessions; clear a slot to go back to synthesis.

Playing with the band: the drums, the bass (the header's Bass Loop, the Bass page, the looper's bass lane) and the Progression Builder's chords are **one sequence** on one clock, at one tempo. Anything you start while something else plays comes in **on the next bar line** — the tune from its

first chord — never as a second copy. Change the BPM here, on the Bass page or in the Progression Builder and every part follows from the next beat. A page's **Stop** stops all of it; the header's Drum Loop and Bass Loop each stop just their own loop.

Play from anywhere: The **loop control in the app header** starts and stops the current pattern from any page — set up a beat here, then wander off to the Chord Chart or Scale Chart and keep jamming.

Tips:

- Click cells to customize any pattern - go wild
- Patterns are stored in `data/drumPatterns.json` and can be edited directly
- Works great alongside the metronome or performer mode

This page works best with a mouse on PC.

Bass

The other half of the band, on its own page. Open it from the **Bass** chip on the home screen, the header's **Bass Loop** settings button, or the **Bass page** button in the Progression Builder. There is one bass line in GuitarVee: the header's **Bass Loop**, the looper's bass lane and the Progression Builder all play it, so whatever you set here is what the header plays.

Controls:

KEY	WHAT IT DOES
Space	Play / stop
Up arrow	Tempo +1
Down arrow	Tempo -1
Left / Right	Navigate controls
Enter	Select the focused control
Escape	Go back

Chords — pick a **key** and **Major/Minor**, then one of the built-in progressions (the same list the Progression Builder offers: Pop, Classic, Jazz, 50s, Sensitive, Rock, Andalusian in major; Minor Pop, Minor Classic, Dark, Moody, Blues Minor in minor). One bar per chord. **Chords outside the key** — **In key** keeps the chords to the key; **Chromatic** also offers borrowed and secondary chords and adds a row of chromatic presets. It is one setting for the whole app: the Progression Builder, the Scale Chart and the practice pages show the same switch. The chords actually playing are spelled out next to the Play button. Want something of your own? **Build your own progression** opens the Progression Builder, and its **Send to looper** puts that line here.

Style — the twelve bass styles: **Roots, Rock 8ths, Shuffle, Walking, Rockabilly, Country 2-beat, Reggae One-Drop, Funk 16ths, Disco Octaves, Gallop, Bossa, Half-Time Pad**. Each one describes itself under the row. **New take** deals a fresh line in the same style — same chords, different playing.

Tempo — the same ± 10 / ± 1 steppers the Drum Machine uses. It is the band's one tempo: a change here is the drums' and the Progression Builder's tempo too, from the next beat.

Tone — **Level** in both modes; **Low** (90 Hz), **Mid** (650 Hz), **High** (1.8 kHz) and **Pan** in Full mode. This is the bass channel strip: it shapes the bass everywhere it plays — this page, the looper's bass lane and the Progression Builder — and it is remembered between sessions.

Leaving the page does not stop the bass, the same way leaving the Drum Machine does not stop the drums. Stop it with the header's **Stop**, or come back and press Stop.

Practice Games

The hub has two sections: **Guitar Practice** first, played on the guitar in your hands and led by the tab-based drills, then **Theory Games** you answer on screen (no guitar needed).

Guitar Practice (pick up your guitar)

Random Tab Generator

Generates a random guitar lick or solo based on a scale you pick. Great for sight-reading practice.

Settings:

- **Root note** - any of the 12 notes
- **Scale** - pentatonic minor, major, blues, etc. — including any custom scales you've created
- **Difficulty** - Easy (4 notes/bar), Medium (8), Hard (16)
- **Bars** - 2, 4, or 8

Hit **Generate** and you'll get a random tab in standard notation. The notes stay within the scale you chose, and the generator favors stepwise motion so it sounds musical rather than random noise.

Extras:

- **Root notes are highlighted red**, so you can see the scale's anchor points at a glance
- A **Note names** checkbox prints the note name (A, C#, and so on) above each tab number; your choice is remembered between sessions
- The tab uses the **full width of the screen** and wraps into lines of bars like a printed tab book (8, 4, 2 or 1 bars per line, whatever fits), so 8 bars on Hard stay readable from the couch
- The generator **honors the global tuning and capo** from the header dropdowns
- String rows are always drawn **high string on top**, matching standard tab convention

Playback:

- Set the **BPM** (40–240) and hit ► **Play** — the tab plays note-by-note with the currently-playing note highlighted in green as the cursor walks through. A BPM change while it plays takes effect from the next note
- Playback speed follows the difficulty: Easy = 1 note per beat, Medium = 2, Hard = 4

- **Repeat** plays the same tab again: Off (once), 2, 4 or 8 times, or Until Stop. A **Pass 2 of 4** line beside Stop shows where you are. Only **Generate** draws a new tab
- **Countdown before repeat** counts in before each repeat (Off, 2, 4 or 8 beats at the tab's tempo), so you can reset your hands and come back in on time. The first pass starts straight away. A big number counts down over the top-right of the tab with a click on each beat, and the first note is outlined
- ■ **Stop** halts playback at any moment, including during the countdown; generating a new tab or changing a setting also stops it
- Your BPM, Repeat, Countdown and Note names choices are remembered between sessions
- Every control, including BPM, Repeat, Countdown and Note names, is reachable with the arrows and Enter on a controller or keyboard

Technique Exercises

29 drills across five categories — hammer-ons & pull-offs, finger workouts & stretches, harmonics, bends & vibrato, and tricks & showmanship — each with playable tab, a description of exactly what your hands do, and a starting + target tempo. **Techniques are written into the tab** the way real tablature does it: 5h7 hammer-on, 7p5 pull-off, 8b bend (8br8 bend-and-release), 7v vibrato, <12> natural harmonic, t12 tap — with a legend under each exercise listing the symbols it uses. Each technique family has its own color — hammer-ons green, pull-offs orange, bends red, vibrato purple, harmonics blue — in the exercises and the Tab Editor alike, so the legend doubles as the color key. Play at least one exercise from every category and the Gym Rat achievement is yours.

Key: the hammer-on and pull-off drills, the bend and vibrato drills, the pinch-harmonic drill, and the tremolo, octave-slide and tapping tricks have a **Key** choice next to Play. It starts at the exercise's own key (the note under your first finger on the low E string: 5h7 hammer-ons are in A) and moves the whole shape, tab and playback together, to any of the 12 keys, never onto an open string. When you pick another key, a line under the description says so, because the description still quotes the original frets. Your choice is remembered for each exercise. Natural and tap harmonics, open-string drills and finger stretches stay at their written frets and say why. The key names follow the header capo; in a tuning that changes only some of the strings an exercise uses (Drop D on a low-string drill), the choice steps aside and the exercise stays at its standard-tuning frets.

Strum School: Learn

The play-along half of Strum School (described under Theory Games below) has its own card here, because you strum along with the drums on your guitar.

Random Chord Progression

Generates a random 4-chord progression in any key using common patterns.

- Pick a key from the dropdown
- Hit **Generate** for a new progression
- Shows chord names and Roman numerals (I, IV, V, vi, etc.)

Interval Trainer

Shows you an interval between two random notes; find it on your guitar. Good for building fretboard knowledge.

- Displays: interval name, starting note, ending note, and semitone count
- Press **Next** for a new random interval
- Covers everything from Unison to Octave

Note Hunt (live listening)

Plug your guitar in (or use the mic) and GuitarVee names a note — your job is to find it on every string. It listens while you hunt: play the wrong fret and it coaches you in plain terms ("2 frets low — move up 2"); nail it and it moves to the next string. Finish all six and you get a map of everywhere that note lives on the neck. It follows your **global tuning and capo**, so Drop D players learn Drop D positions. Press **N** for a new note, **Enter** to skip a string, **Escape** to leave.

Tips:

- Use the tab generator to practice improvising over scales
- The interval trainer pairs well with the tuner for ear training
- Just play around - there's no wrong answers here

Best experienced with a keyboard on PC.

Theory Games (no guitar needed)

Every hint in these games teaches by **feel and theory** — how the interval, scale or progression sounds and where it sits on the neck — never by naming a song, an artist or a film. Progression Ear's I–V–vi–IV, for example, is "home, tension, a minor dip, then lift".

Seven short, timed games built to teach, not just quiz — **every wrong answer shows the right one with a one-line "why"** (how an interval feels and where it sits on the neck, a scale's flavor, how a key signature builds), and the round ends with a review of your misses. Answer with the mouse, a controller, or keys **1–4**; **Space** replays the sound (always from the beginning); **Enter** advances. **Nothing auto-advances** — right or wrong, the answer and its explanation stay on screen until you move on, and **the round clock pauses while you read**, so taking your time never costs you questions.

- **Ear Training** — hear two notes, name the interval. After you answer, a **mini fretboard** shows the interval as a real shape on the neck (root in orange, target in green) and a short **lick** plays it — root, target, root, target, then both together. **Space** replays it. Easy set (2nds, 3rds, 4ths, 5ths, octave) or the full twelve.
- **Scale Detective** — hear a scale climb, name it: major, minor, pentatonics, blues, Dorian, Mixolydian, harmonic minor.
- **Chord Quality** — hear a chord, name its color: major, minor, dominant 7th, major 7th, minor 7th, diminished, augmented, sus4.
- **Progression Ear** — hear four chords, name the progression: I–V–vi–IV, I–IV–V, ii–V–I, the doo-wop turnaround, and more — each with a one-line note on how it sounds and where it's used.
- **Strum School** — strumming patterns, two ways: a timed **Quiz** and a no-clock **Learn** mode. The **Strum School** card under Theory Games opens the quiz; the **Strum School: Learn** card under Guitar Practice opens Learn; **Quiz / Learn** buttons inside still switch between them, and every quiz answer has a **Learn this pattern** shortcut.

- Quiz** — hear a strummed bar played over one of the drum machine's real grooves, then name the pattern. The notation is the classic strum shorthand: a bar is eight eighth-note slots over the counts **1 & 2 & 3 & 4 &** — ↓ down-strum, ↑ up-strum, • let ring, x muted chuck (palm slap, all attack, no pitch). Rounds ramp from quarter-note downs at a campfire tempo, through the classic eighth patterns (↓ • ↓↑ • ↑ ↓↑), up to syncopated bars with skipped downbeats, chucks and sixteenth slots — and the tempo varies question to question (shown as a ♩ = chip, with the groove name), because the same pattern feels different at 64 and 112. Some questions flip it around: the notation is shown and you name which counts get the up-strums, or where the chuck lands. Every clip is a one-bar hi-hat count-in, then two bars — chords voiced for your **current tuning and capo** — over a groove **matched to the pattern's feel** (a skank rides a reggae beat, a shuffle rides a shuffle, a waltz gets 3/4). The answer names the pattern and its family and explains what makes it tick, draws it as an arrow grid over the counts, and **Replay with the grid** lights each slot in time with the audio. If the drums, bass or Progression Builder chords are playing when you start, they're paused for the game (pattern, tempo and bass line untouched) and come back exactly as they were when you leave.
- Learn** — no clock, no score. Pick any pattern from the catalog (grouped by family, easiest first, with a **Next up** suggestion) and work through three steps: **Listen** (the whole clip at the pattern's target tempo, each arrow lighting up as it sounds), **Slow** (half tempo with the count shown — strum along on a muted chord), and **Play along** (the drums loop a real chord progression in your key; a giant **now** chord with its diagram sits beside a **NEXT** cue that flashes one beat before the change, and the tempo starts around 70% of target and climbs 4 BPM every two clean bars until it gets there — **H** holds it wherever you like). **Space** plays/pauses, **R** restarts from the count-in, **1 / 2 / 3** jump between steps, **N** moves to the next step (or the next pattern), and **Escape** stops the sound and returns to the pattern list, then to the games hub. Key, progression, and groove are switchable on the play-along step. Nothing auto-advances between steps.

- **The catalog** — 74 strumming patterns in 13 families, every one named for its feel (never for a song or an artist) and tagged with a tier from 1 (easy) to 3 (advanced): **Folk & campfire** (Steady Quarter Downs, Rolling Campfire, The Campfire Classic), **Pop ballad** (Ballad Pickup, Ballad Sway), **Rock eighths** (Backbeat Roll, Rock Chug and Roll), **Punk downstrokes** (Full-Throttle Downs, Punk Gallop), **Country boom-chick** (Boom-Chick, Train Roll), **Reggae & ska skank** (Off-Beat Skank, Ska Chop), **Funk sixteenths** (Chuck Two and Four, Funk Sixteenth Chop), **Blues shuffle** (Shuffle Swing, Backbeat Shuffle), **Latin syncopation** (Tresillo (3-3-2), Bossa Lift), **Waltz 3/4** (Waltz Downs, Waltz Lilt), **Sixteenth anthems** (Anthem Sixteenths, Anthem Half-Time), **Percussive acoustic** (Boom-Chuck, Chuck Every Off-Beat), and **GuitarVee originals** (Skipping Stone, Tide Pull, Lantern Swing). Shuffle patterns count in triplets (1 & a), sixteenth patterns in 1 e & a, and waltzes in 1 & 2 & 3 &.
- **Circle of Fifths** — key signatures, fifths up, fourths up, relative minors. The map behind every progression.
- **Fretboard Notes** — name the note at a string and fret (easy = first five frets, full = up to the 12th).

The results screen offers **Play again** and a switch between the easy and full sets. **Lesson Plans** include one quick game per session, rotating daily so a week covers all seven.

Lesson Plans

A fresh, timed practice session every day. Pick a **length** (10 / 30 / 60 minutes) and a **key** — or hit the dice for a random guitar-friendly one — and press **Generate**. The plan is a sequence of segments (warm-up, chords in your key, sight-reading, a quick theory game, and more) sized to the time you picked.

- Each segment has a **Start** button that runs a countdown timer for that segment — the time counts as active practice
- Most segments carry a **deep link** that opens the right tool already configured for your key (a progression preset loaded, the random-tab generator set to your scale, a quick game queued up)
- **Mark done** checks a segment off; the plan remembers your progress for the day
- The plan is the same all day (pressing Generate again gives you today's plan again) and changes daily — the built-in quick game rotates so a week covers all seven
- Complete every segment of a plan and the **Committed** achievement unlocks

Chord Progression Builder

Scales and modes to play over it: under the progression, the scales that fit — the key's own scale and its pentatonics (and the blues scale in a minor key), plus the scale a chord asks for: harmonic minor for a major V in a minor key, Dorian for a major IV in a minor key, Mixolydian for a $\flat$ VII in a major key. In Full mode a second row gives one scale per chord — its mode in the key (Dm $\rightarrow$ D Dorian, G $\rightarrow$ G Mixolydian) or, for a chord outside the key, the closest fit. Pick any of them to see it on the Scale Chart.

The bass follows this page: start the header's **Bass Loop** (or the looper's bass lane) while the builder is open and the bass plays the chords on this page, from chord 1, with the playhead following along — not a line from before.

Beat map: the timeline strip above your progression shows each chord as a colored block across the measure grid — heavier lines mark the bars, so a change landing mid-measure is visible at a glance. Click a block to jump to its chord, **drag a block** to move the chord elsewhere in the progression (its length travels with it), and **grab its right edge** to stretch or shrink it in whole-beat snaps — a live readout shows the new length while you drag. The $\langle \rangle$ buttons on each chord card do the same moves from the keyboard or controller. A **time-signature picker** (4/4, 3/4, 2/4, 6/8) moves the bar lines, and the header shows the loop in real time — "4/4 · 120 BPM · loop 16s" — recalculated the moment the BPM changes or the band syncs to another tempo. In 6/8 each cell is an eighth note (six to a bar), so the loop time reads half what the same cells take in 4/4; BPM is the quarter-note pulse in every signature, and a 6/8 bar at 120 lasts 1.5 seconds. During playback a playhead rides the map beat by beat. Every chord card has **- / + beat steppers** (1–16): give the V a half bar or let the I ring for two — playback, bass, MIDI, and the looper all follow. The global Beats/chord control sets the default (changing it resets per-chord tweaks).

Bass accompaniment: the builder has a built-in bass player. Pick a style — **Roots, Rock 8ths, Shuffle, Walking, Rockabilly, Country 2-beat, Reggae One-Drop, Funk 16ths, Disco Octaves, Gallop, Bossa, Half-Time Pad** — and either play the bass alone or turn on **Bass accompaniment** so it plays under your progression — the band's one bass line, on one clock with the drums (no drift, BPM changes apply on the next beat). Every take is a real line: roots land on the changes, walking lines approach the next chord chromatically, rockabilly runs the boogie ladder. **New take** deals a fresh line in the same style; **Send to looper** makes this progression the band's line without playing it (the looper's bass lane and the header's Drums + Bass pick it

up). **Bass page** opens the Bass page, in Simple mode too. The **channel strip** under the bass controls — Level, Low (90 Hz), Mid (650 Hz), High (1.8 kHz), and Pan — shapes the bass everywhere it plays, looper included, and remembers your settings. Bass can also ride along in the MIDI export (its own toggle).

Build custom chord progressions with visual chord diagrams, tab notation, and in-key/out-of-key color coding.

Controls:

KEY	WHAT IT DOES
Arrow keys	Navigate between controls
	Open chord picker on a slot
	Close picker or go back

How to use it:

1. Pick a **Key** (C, D, E, etc.) and **Mode** (Major or Minor)
2. Set **Chords outside the key** to **In key** or **Chromatic** (Chromatic adds borrowed and secondary chords and their presets)
3. Click a **preset** to load a common progression, or build your own
4. The **key chord badges** below show all chords that belong to your key - click one to add it
5. Click + **Add Chord** for a blank slot, then click the slot to pick a chord
6. Click any existing chord slot to swap it for a different chord

Key changes transpose: if you've built a custom progression and then switch the Key dropdown, your chords transpose with it instead of being wiped — C-F-G-Am in C becomes G-C-D-Em in G, slash chords included. Every slot shows its proper Roman numeral (I, IV, V, vi... lowercase i/iv/v in minor).

Play and export:

- Set **BPM** and **Beats/chord** (4 beats/chord = a chord per bar at 4/4). The BPM is the band's one tempo — the drums and the bass play at it too

- ► **Play** strums each chord on the beat using the synthesized guitar engine and **loops the progression until Stop**; the currently playing slot lights up green. If the drums (or drums and bass) are already playing — from the header, say — your progression comes in on the next bar line from its first chord, and the bass follows your chords: one bass line, never two
- Edit while it plays: a changed chord, length or time signature takes over on the next bar line, with no stop
- Leaving the page fades the chord strums; the drums and the bass keep playing your progression
- ■ **Stop** stops everything the band is playing
- ↓ **MIDI** downloads a `.mid` file you can drop into any DAW or notation program — includes tempo, time signature, and an acoustic-guitar program-change so it sounds right on import

Color coding:

- **Blue border** = chord is in the key (sounds natural)
- **Red border** = chord is out of the key (adds tension/color)

This helps you see at a glance which chords "belong" and which are borrowed or chromatic.

What you see:

- Chord slots with names and Roman numerals
- SVG chord diagrams showing finger positions
- A tablature preview at the bottom showing the full progression

Global tuning + capo: the diagram cards follow the header's GLOBAL TUNING and CAPO dropdowns. Outside standard tuning / capo 0, shapes are computed mathematically and carry an orange **computed** badge, with a banner naming the tuning and capo.

Presets include:

- Pop (I-V-vi-IV), Classic (I-IV-V-I), Jazz (ii-V-I), 50s (I-vi-IV-V), and more
- Minor mode has its own set of presets

Tips:

- Try swapping one chord for an out-of-key chord and see how it sounds
- The chord picker shows every chord in the library, sorted in-key first

- Use the tab preview to practice strumming the progression

Best edited with a mouse/keyboard on PC or phone.

Tablature Editor

A grid-based tab editor for writing your own guitar tablature.

Controls:

KEY	WHAT IT DOES
Arrow keys	Move the cursor around the grid
0 – 9	Type a fret number
Delete	Clear the current cell
Backspace	Clear cell and move cursor left
h	Hammer-on
p	Pull-off
b	Bend
/	Slide up
\	Slide down
x	Muted note
 (pipe)	Insert bar line across all strings
Tab	Jump forward 4 columns
Escape	Go back

Multi-digit fret numbers: Type fast for frets 10-24. If you type "1" followed quickly by "2", it enters "12". If you pause, it accepts the single digit and moves on. You have about half a second to type the second digit.

Buttons:

- **+ 8 Cols / - 8 Cols** - make the tab longer or shorter
- **Clear All** - wipe the whole grid
- **Add Bar Line** - inserts a bar line at the cursor position
- **Copy Tab** - copies the tab to your clipboard in text format

The grid:

- 6 rows = 6 strings (e B G D A E, high to low)
- The blue highlighted cell is your cursor
- Fret numbers show in green, techniques in orange
- Light vertical lines mark every 4 beats

The preview: Below the grid, you'll see your tab rendered in standard text format - exactly what it would look like if you pasted it somewhere.

Tips:

- Click any cell to jump the cursor there
- The preview updates in real-time as you type
- Use the Copy Tab button to share your tabs

Best edited with a keyboard on PC.

Scale Chart

A visual fretboard reference showing any scale in any key.

How to use it:

1. Pick a **root note** from the dropdown
2. Pick a **scale** from the dropdown or the quick-select buttons below
3. Choose how many **Frets** to show — 12 up to the full 24 (15 by default); the choice is remembered
4. Choose **Note names**: *As in the key* (F major shows B $\flat$, E major G $\sharp$), or one fixed name per fret — **Sharps** (C $\sharp$ D $\sharp$ F $\sharp$ G $\sharp$ A $\sharp$, the usual way to learn the neck) or **Flats** — remembered too
5. Choose which of the **Strings** is on top: the high string (like tab, the default) or the low string (E A D G B E reading down, as you look down at the neck). This is the app-wide **Settings** → **Fretboard** choice, so the Note Hunt map, the game fretboards, Karaoke's chord boxes and horizontal chord diagrams follow it
6. The fretboard updates instantly

What you see:

- An SVG fretboard showing 15 frets across all 6 strings by default — the **Frets** picker sets 12, 15, 17, 19, 21, 22 or 24
- **Larger circles** mark the root note positions
- **Smaller circles** mark other scale notes
- Each note is labeled with its name — spelled for the key, or with the Sharps or Flats you picked
- Fret position dots at frets 3, 5, 7, 9, 12 (double dot), 15, 17, 19, 21 and 24 (double dot), as far as the picker shows

Scale info: Below the fretboard you'll see the scale description, the interval pattern, and note name badges for every note in the scale.

Available scales: Major, Natural Minor, Harmonic Minor, Melodic Minor, Pentatonic Major, Pentatonic Minor, Blues, Dorian, Phrygian, Lydian, Mixolydian, Locrian, Whole Tone, and Chromatic.

Custom scales: Click + **Add Custom Scale** at the bottom. A grid of 12 semitone buttons appears (Root is locked). Click any combination, give your scale a name, and **Save Scale**. It now appears alongside the built-in scales for any root note. Each custom scale gets a × delete button next to it.

Tips:

- All scale data lives in `data/scales.json` - you can add your own (or edit the file directly)
- Try switching between related scales (like Pentatonic Minor and Blues) to see what changes
- The quick-select buttons at the bottom are the fastest way to browse

Chord Chart

A visual reference for 151 chord voicings with finger position diagrams.

How to use it:

- Browse the grid of chord cards
- Click any card (or highlight + Enter) to see a larger diagram with finger numbers

Any tuning, any capo: The chart follows the header's GLOBAL TUNING and CAPO dropdowns. In standard tuning with no capo you see the 151 hand-curated voicings. Add a capo in standard tuning and the card names stay the chords that **sound** — each card now shows the library shape your hand plays behind the capo (D at capo 3 is the B shape, C is the A shape), marked with a **capo** badge; the nut line in the diagram is the capo and the fret numbers count from it, so a **Nfr** label means N frets above the capo. Pick any other tuning and GuitarVee's math-based chord solver **computes** playable shapes instead — those cards get an orange **computed** badge. Either way a banner above the grid names the tuning/capo in effect.

Orientation: Diagrams render **horizontal by default** (strings run left-to-right, frets top-to-bottom). A per-page toggle flips them to the classic vertical chord-box layout, and you can change the app-wide default in **Settings** → **Chords** → **Diagram Orientation**.

What the diagrams show (vertical orientation):

- Vertical lines = strings (low E on left, high e on right)
- Horizontal lines = frets
- **Filled dots** = where to press, with finger numbers
-  at the top = open string (play it)
-  at the top = muted string (don't play it)
- A thick line across multiple strings = barre chord

In horizontal orientation the same markings apply, just rotated: strings become rows and frets become columns.

Available chords: Major, Minor, 7th, Major 7th, Minor 7th, Sus2, Sus4, Diminished, Augmented, Power (5), 6th, Minor 6th, 7sus4, and common slash chords (C/E, G/B, D/F#, etc.) — for all 12 root notes with conventional sharp/flat spellings. 151 chords with 206 curated voicings total.

Tips:

- All chord data lives in `data/chords.json` - add your own voicings
- Press Escape to close the detail popup
- The chords here are the same ones used in the Progression Builder diagrams

Chord Builder

The reverse of the Chord Chart: place fingers on a virtual fretboard and GuitarVee tells you what chord you're playing.

How to use it:

- Click fret positions to add or remove fingers; click above the nut to toggle a string between open and muted
- The identified chord name updates live as you build
- The Builder has its **own** tuning and capo pickers (so does the Tablature Editor) — they are authoring tools, so a header change never rebuilds the shape you are placing. A caption shows the header instrument beside them and a **Use header** button copies it over in one click
- Saved shapes go into the shared library as **standard-tuning**, **capo-o** shapes: a shape built behind a capo is normalised (every fretted note moves up by the capo, open strings become the capo fret) before it is saved, and shapes built in another tuning cannot be saved

Layout toggle: The fretboard renders **horizontal by default**. A layout toggle flips it to vertical if you prefer the classic upright chord-box view. The app-wide default lives in **Settings** → **Chords** → **Diagram Orientation**.

Amp Sim

Plug your guitar into your computer and play through a full pedalboard, amp head, and cabinet — all synthesized live with Web Audio, no downloads, no samples. Marked **beta** while it settles in. On the Steam Machine the amp is marked **experimental**, and you may hear a short delay between playing a note and hearing it; Windows is the full experience.

The board: below the amp, the **Signal path** shows your board as it is wired — guitar in → **FRONT** → AMP → **LOOP** → out — with **Effect settings** (the selected pedal) under it and the **Effects shelf** at the bottom: every pedal you own, grouped by family — Dynamics, Drive, Tone, Modulation, Time, Weird, plus a Plugins row for your own pedals. Press + on a shelf pedal to put it on the board (up to 10 slots — the live signal chain). Select a pedal's name in the Signal path to open its knobs, power switch and moves in Effect settings, where **Remove** puts it back on the shelf. With a mouse you can also drag pedals from the shelf into FRONT or LOOP, between the lanes, or off the board. Only the pedals on the board are built and running, and a pedal keeps its knob settings on and off the board.

Front or loop: every pedal on the board sits in one of two lanes. Its tile carries a **Loop** → / ← **Front** button (keyboard: press L with the focus ring on the tile; Effect settings has the same move as **Move to the loop** → / ← **Move to the front**). FRONT is the classic spot — guitar → pedal → amp input, where drives, compressors, and wahs belong. LOOP drops the pedal into the amp's **effects loop**, the series insert between the preamp + tone stack and the power section: delays, reverbs, and modulation placed there get the power-amp character and speaker voicing on the way out but are **never re-clipped by the preamp**, so echo trails stay clean over a high-gain tone. Order within each lane follows the board left to right. A new pedal goes into FRONT unless you drag it into LOOP, a pedal you take off and put back returns to the lane it was in, and saved rigs sound exactly as they always did.

Find a pedal fast: the shelf has a **search box** (filters live on pedal names, descriptions, and tags — try "fuzz", "wobbly", or "ambient") and a row of **tag chips** — high-gain, edge-of-breakup, lo-fi, stereo, bass-friendly and friends. Click chips to combine them (each chip narrows the shelf further), and the category rows collapse to just the matches. Esc clears the search and chips (a second Esc leaves the view). The filter is a browsing tool only — it never changes your board and resets when you come back.

Play it from anywhere: in Full mode the top bar has an **amp selector** — pick any preset (factory or your own) and the amp starts from whatever screen you are on, keeps running while

you navigate, and stops with **Amp Off**. While it runs, a small **input meter** sits next to it: **keep the bar in the green zone** while playing and your interface level is right (gray = too quiet, amber = hot, red = clipping risk). A red line marks where the clip zone starts and the bar's right end is 0 dB — the digital clip point. If any peak gets within half a dB of it, or the amp's output reaches its ceiling, a **CLIP** lamp lights and holds for a moment (so even the briefest spike can't hide) while the meter's border flashes red. The lamp beside the IN meter on the amp screen names the cause: **IN CLIP** — turn down your interface gain or the Input trim; **AMP CLIP** — turn the amp's **Master** down. GuitarVee never opens your mic until you pick a preset.

Gain is not volume: every drive knob (overdrive, distortion, fuzz, and the amp head's gain) is **loudness-neutral** — turning it up adds saturation and character while the level stays put, so you can compare tones honestly. The makeup gain behind this was calibrated against real guitar recordings. The 5-band EQ also has a **Level** knob (default 0 dB) for overall trim after shaping.

Getting started:

1. Plug your guitar into an **audio interface** (any USB interface your computer recognizes as an audio input works)
2. Open the amp — the **Amp** button in the top bar, or **Home** → **Amp Sim** — and in **Guitar in**, at the start of the Signal path, pick your interface. If it has more than one input, also pick the one your guitar is plugged into: **Input 1**, **Input 2**, or **Inputs 1+2 (stereo)** for a stereo source. If the list shows only generic names, press **Find devices**
3. Check **Out**, at the end of the Signal path: it is where the amp and the band play
4. Hit **Start Amp** and allow access to your audio input if you are asked
5. Play — the IN meter at the top shows your signal arriving (Full mode adds the OUT meter, and a SAG meter while a model runs)

No interface? Choose **No input (riff only)** and use the **Test Riff** button instead — more on that below.

Windows, Full mode: once your outputs are listed by name, the **Hear the amp through the audio interface** switch under Out plays the amp through your interface's own outputs (low delay) while the band, drums and backing tracks stay on the output above.

The pedalboard: The table lists every pedal in the library. Only the pedals on your board — up to 10 at a time — are built and running: a pedal is built the moment you add it to the board and released shortly after you take it off, so the rest of the shelf costs no processing. On the board, <

Earlier / Later > in Effect settings (or  / ) reorder a pedal within its lane, live:

PEDAL	KNOBS
Noise Gate	Threshold
Downward Expander	Threshold, Ratio, Range
Auto-Wah	Sensitivity, Range, Peak
Cocked Wah	Position, Honk
Manual Wah	Pedal, Peak
Funk Wah	Sensitivity, Range, Quack
Bass Wah	Sensitivity, Range, Peak
Compressor	Threshold, Ratio
Opto Comp	Compress
Transient Shaper	Attack, Sustain
Auto Swell	Sensitivity, Rise
Boost	Boost, Tone
Treble Boost	Boost
Cascade Boost	Stage 1, Stage 2
Fuzz	Fuzz, Level
Germanium Fuzz	Fuzz, Bias, Level
Octave Fuzz	Fuzz, Level
Gated Fuzz	Fuzz, Choke, Level
Dying Battery	Fuzz, Starve, Level
Fat Sustain	Sustain, Tone, Level
Blues Drive	Drive, Tone, Level
Velvet Drive	Drive, Tone, Level
Overdrive	Drive, Tone, Level
Mid Bite	Drive, Tone, Level
Gold Drive	Drive, Treble, Level
Tape Saturator	Drive, Level
Bass Drive	Drive, Tone, Level

PEDAL	KNOBS
Brown Stack	Gain, Tone, Level
Distortion	Drive, Tone, Level
Chainsaw	Drive, Level
Chug	Drive, Gate, Level
EQ (5-Band)	100 Hz, 250 Hz, 630 Hz, 1.6 kHz, 4 kHz, Level
EQ (10-Band)	31 Hz, 62 Hz, 125 Hz, 250 Hz, 500 Hz, 1 kHz, 2 kHz, 4 kHz, 8 kHz, 16 kHz, Level
Synth Filter	Cutoff, Resonance
Dynamic EQ	Freq, Range, Sensitivity
Acoustic Body	Body, Sparkle
Pickup Morph	Position, Tone
Harmonic Exciter	Amount, Freq
Soft Phase	Rate, Depth
Phaser	Rate, Depth, Feedback
Flanger	Rate, Depth, Feedback
Deep Phaser	Rate, Depth, Feedback, Stages
Zero Flanger	Rate, Depth, Null
Step Flanger	Rate, Steps, Feedback
Touch Phase	Sensitivity, Feedback
Lamp Vibe	Rate, Intensity
Vibe Chorale	Fast, Intensity
Chorus	Rate, Depth, Mix
Wide Chorus	Mode, Width, Mix
Micro Detune	Detune, Width, Blend
Vibrato	Rate, Depth
Tremolo	Rate, Depth
Harmonic Tremolo	Rate, Depth
Pan Tremolo	Rate, Depth
Pattern Tremolo	Rate, Pattern, Depth

PEDAL	KNOBS
Bias Trem	Rate, Depth, Drive
Auto-Pan	Rate, Depth, Shape
Doubler	Tightness, Drift, Width, Double
Rotary Speaker	Speed, Intensity, Mix
Sub Octave	Sub, Direct, Tone
Synth Bass	Sub, Sweep, Direct
Octave Up	Octave, Direct, Tone
Ring Mod	Carrier, Mix
Envelope Ring	Carrier, Sweep, Mix
Bit Crusher	Bits, Mix
8-Bit Console	Rate, Bits, Mix
Vinyl	Wear, Crackle
Animoo	Vowel, Motion, Sensitivity
Talk Tube	Sensitivity, Speed, Mix
Vowel Drone	Vowel, Drone, Mix
Howlround	Pitch, Bloom
Comb Resonator	Key, Decay, Blend
Slicer	Rate, Depth
Dice Filter	Rate, Range, Peak
Tape Stop	Stop, Time
Dive Bomb	Dive, Speed, Sensitivity
Glitch Loop	Rate, Chaos
Delay / Echo	Time, Feedback, Mix
Tape Echo	Time, Feedback, Wobble, Mix
Bucket Delay	Time, Feedback, Mix
Slapback	Time, Mix
Multi-Tap Delay	Time, Feedback, Blend, Mix
Ducking Delay	Time, Feedback, Duck, Mix

PEDAL	KNOBS
Swell Echo	Time, Feedback, Rise, Mix
Ping-Pong Delay	Time, Feedback, Mix
Reverse Swell	Time, Feedback, Mix
Freeze Pad	Hold, Decay, Level
Stereo Widener	Width
Grain Cloud	Scatter, Rate, Mix
Room Reverb	Size, Mix
Early Room	Spread, Mix
Hall Reverb	Size, Mix
Plate Reverb	Size, Mix
Spring Reverb	Size, Mix
Drip Tank	Size, Drip, Mix
Surf Machine	Surf, Rate
Gated Reverb	Gate, Mix
Reverse Reverb	Rise, Mix
Cave Shimmer	Size, Bloom, Mix
Shimmer Reverb	Size, Bloom, Mix

The modulation wave brings ten more: **Lamp Vibe** sweeps four staggered phase stages with a lamp-shaped LFO for the classic seasick swirl, and **Vibe Chorale** runs the same ladder full-wet with a level throb, stereo sway, and a Slow/Fast switch that glides like a spinning speaker; **Soft Phase** is the gentle two-stage vintage phase and **Touch Phase** swirls from your pick attack instead of a clock; **Zero Flanger** sweeps its wet line *through* the dry for a total-cancellation pass no ordinary flanger reaches; **Wide Chorus** spreads two oppositely-detuned voices across the stereo field; **Harmonic Tremolo** rocks bass against treble (the brown-panel amp trick) while **Pan Tremolo** pulses the two sides of the stereo image in opposite phase; **Auto Swell** eats your pick attack so notes bloom in like a bowed string; and **Dice Filter** rolls a random filter step on every clock tick.

A few of the earlier ones deserve a word: **Deep Phaser** is the 8-stage big brother of the Phaser (the Stages knob thins it back to 6 or 4); **Auto-Pan** sweeps you left-right (Shape morphs the

sweep from smooth to hard bounce); **Ring Mod** multiplies your signal with a carrier tone for inharmonic bell-metal; **Bit Crusher** quantizes you down to retro-sampler grit; **Animoo** is a vowel-formant voice pedal — the Vowel knob morphs A-E-I-O-U, Motion auto-sweeps it, and Sensitivity lets your pick attack push the vowel open like a talk box; **Slicer** chops rhythmically at its own rate; **Tape Echo** repeats darken and saturate like tape, with Wobble adding wow and flutter; **Ping-Pong Delay** bounces echoes hard left/right; **Reverse Swell** blooms each echo in from silence for that played-backwards feel; and the four reverbs cover a small room, a concert hall, a bright studio plate, a springy amp tank — plus **Shimmer**, whose tail climbs an octave every regeneration for endless ethereal pads.

The drives-and-dynamics wave brings eleven more boxes: **Opto Comp** is a studio-style optical compressor — one Compress knob, a gentle knee, and the classic two-stage release (half lets go fast, the rest creeps back over seconds) so it glues without pumping; **Treble Boost** is the vintage top-end sharpener that cuts a dark amp like a razor; **Cascade Boost** stacks two boost stages so the second saturates on what the first hands it; **Germanium Fuzz** drifts its bias as you dig in and cleans up off your guitar volume; **Dying Battery** sputters and chokes like a fuzz on its last volt (Starve sets how starved); **Fat Sustain** is the two-clipper wall-of-fuzz sustainer with a scooped voice and a tilt Tone; **Velvet Drive** squeezes the whole note gently — jazz warmth, not bite; **Tape Saturator** rounds hot highs like a reel machine; **Bass Drive** grinds the top while your clean lows pass untouched underneath; **Brown Stack** pushes its mids *into* an asymmetric soft clipper for the cranked-British-stack roar; and **Chug** pairs tight, scooped high-gain with an integrated noise gate for silence between palm mutes.

The time-and-ambience wave brings ten more: **Bucket Delay** is the dark analog repeat machine — every pass through the loop gets noticeably darker, and the time only reaches 0.6 s, like the real chips; **Slapback** is one quick echo with no feedback knob at all, so every setting is the classic fifties snap; **Multi-Tap Delay** answers each note with a dotted-eighth *and* a quarter tap that lock into a rhythm (Blend balances the two without changing loudness); **Ducking Delay** tucks its repeats down while you play and blooms them back the moment you stop; **Freeze Pad** grabs the last half-second of your sound and sustains it as a pad under whatever you play next (Hold on/off, Decay sets how long it breathes); **Stereo Widener** spreads you wide with a short one-sided delay that cancels itself perfectly in mono — no phasey collapse, ever; **Early Room** is a room with the wash removed: just the wall bounces, so you get depth with no tail; **Gated Reverb** is the huge 80s room-slam chopped off by a gate; **Reverse Reverb** builds a true rising, brightening swell behind every note (where Reverse Swell fakes it with blooming echoes — both are here, and they sound nothing alike); and **Cave Shimmer** is the Shimmer's dark twin — its tail sinks an **octave**

down with every regeneration, growing a cathedral floor instead of a choir ceiling.

The filters-and-weird wave brings thirteen more, starting with a proper wah family: **Cocked Wah** is the wah parked at its sweet spot — a fixed midrange honk with nothing to rock; **Manual Wah** puts the treadle on a knob, with a foot-like glide so riding it sounds like wah-wah-wah instead of zipper steps; **Funk Wah** is a second envelope wah with a genuinely different voice from the Auto-Wah — a snappy quack that rides *on top of* your tone instead of filtering it down; and **Bass Wah** sweeps more than an octave lower with a slower, low-string-friendly envelope. **EQ (10-Band)** is the big graphic EQ — ten octave bands from 31 Hz to 16 kHz, ± 12 dB each plus a master level, and dead transparent when flat. **Synth Filter** is a resonant low-pass you sweep by hand, with the resonance reaching a safe, screaming ring. **Micro Detune** spreads two slightly-sharp/slightly-flat voices wide for instant ensemble jangle. **Sub Octave** grows a synth-like octave-down voice under your note (single notes track best — chords growl, like the classic analog boxes). **8-Bit Console** does true sample-rate *and* bit-depth crushing for game-cartridge grit; **Vinyl** adds wow, crackle, and worn-record warmth from a seeded pressing that sounds the same every session; **Talk Tube** is a talk-box that mouths "wah" from your pick attack (a different creature from the Animoo's sung vowels); **Tape Stop** dives your whole sound to a halt on a switch and spools back up when you let go; and **Glitch Loop** rolls seeded dice on a clock and stutters random slices of what you just played.

A later wave brings ten more: **Dynamic EQ** parks one EQ band at a frequency you choose and moves its *gain* with your picking — dig in and the band ducks (or boosts) toward Range, decay and the pedal goes perfectly transparent; **Step Flanger** is the flanger with a quantized sweep — the comb *jumps* between discrete steps instead of gliding, sample-and-hold style; **Pattern Tremolo** chops to real rhythm patterns (tresillo, gallop, backbeat and friends) on a step sequencer instead of a plain pulse, loudness-solved at every depth; **Synth Bass** drives an octave-down voice into a hard square wave and opens a resonant filter with your envelope — a synth bassist under your riff; **Envelope Ring** is a ring modulator whose carrier sweeps up with your pick attack, so the bell-clang blooms per note; **Vowel Drone** parks a sung vowel on three formant resonators and lets it *ring on* under your playing via a regeneration loop; **Howlround** simulates controlled amp feedback — play and it stays polite, let a note die and it blooms into a tuned sing (always stable, by construction); **Swell Echo** feeds the delay line through a volume swell so every repeat is an attackless pad of what you played (your dry signal is untouched); **Drip Tank** is the long-spring *outboard* surf tank — slower, brighter, and much heavier on the drip than the amp spring; and **Surf Machine** wires tremolo *into* a drip tank with one Surf knob riding both — the one-knob surf box.

The final wave completes the library at one hundred: **Downward Expander** is the Noise Gate's studio sibling — instead of snapping open and shut, it turns noise down *by degrees* (every dB under the threshold costs a few more, floored at Range), so decays get ushered out, never chopped; **Transient Shaper** has no threshold at all — it isolates the pick attack and the sustain of every note and lets you scale them separately: more snap, softer snap, or tails that bloom while the attack stays put; **Acoustic Body** dresses an electric in an acoustic's clothes — body resonance, pickup-honk dip, and piezo sparkle, loudness-matched at every knob position; **Pickup Morph** slides your pickup from neck to bridge with a real position notch that moves as you turn it; **Harmonic Exciter** manufactures brand-new top-end harmonics from your own signal (things an EQ can't boost because they aren't there yet) and mixes them under the untouched dry; **Bias Trem** hides its tremolo *inside* a tube-style clipper — the LFO rocks the clipper's operating point, so the tone and harmonics throb along with the volume; **Octave Up** floats a clean octave-up voice over your note (the Sub Octave's mirror image); **Dive Bomb** fires a tremolo-arm-style pitch dive on every hard pick attack — exactly the semitones you dial, then a slow glide home; **Comb Resonator** tunes a feedback comb to a key of your choice so sympathetic strings ring on under your playing; and **Grain Cloud** scatters seeded, pitch-true grains of your last half-second into a hazy ambient wash.

Every pedal has a  **power switch** — off means true bypass, and switching is click-free. The Noise Gate, Compressor, Opto Comp, and Chug also carry a live **activity strip**: the gates show your signal level against their threshold with an open/closed LED, and the compressors show how many dB of gain reduction they're applying, so you can *see* them working instead of guessing.

The amp head: At the top of the screen sits the amp, with a **Model** picker at its left end. **Custom** — the original GuitarVee head with **Gain**, **Bass**, **Mid**, **Treble**, **Master**, and **Pan** — stays first and is exactly what every existing rig sounds like. The **Cab** switch (Full mode) toggles cabinet simulation on and off for whichever amp is active: cab on sounds like a mic'd guitar amp; cab off is the raw amp signal — useful if you're running the output into something else that does its own cab simulation.

Amp models

Pick any of the **13 amp models** and its faceplate appears under the head — period styling, rotary knobs you can drag with the mouse or step with the arrow keys (each knob is a real, focusable control). The models are **modeled on the classic circuits** — tone stacks, tube stages, sag, and speaker voicings built from their published designs:

- **Blackpanel Spring** — black-panel American combo: glassy cleans, deep tube sag, optical tremolo and long spring reverb built in.
- **Tweed Eight** — tiny tweed-era studio combo: one volume knob from warm clean to full recording-desk break-up.
- **Brit 800** — gold-panel British stack: arena-rock crunch, presence bite, EL34-style push.
- **Triple Silicon** — brushed-steel modern high-gain: silicon-rectifier tightness, scooped saturation, huge chug.
- **Citrus Thunder** — thick British crunch: huge low mids, built-in spring reverb.
- **Hot 51** — block-letter high-gain head: the famous tight chug and screaming lead channel.
- **Brit Chime 15** — class-A British combo: chime to grind on one volume knob, top-boost treble, bias tremolo, and a power-amp **Cut** control.
- **Chorus Clean** — solid-state stereo clean machine: glassy transistor headroom with true stereo chorus and vibrato.
- **Pedal Platform** — a clean, flat, high-headroom head that stays clean at every Volume setting, even on a hot interface: the amp to build a pedal sound on, and the one behind the rig presets.
- **D-Style** — understated boutique head: flat, honest front end and a singing, touch-sensitive overdrive channel.
- **Catalog '64** — chrome-strip catalog-store combo: scrappy lo-fi grind and loose lows.
- **Five & Dime** — leatherette shelf-top combo: boxy, honky, charming.
- **Practice Box** — the little black plastic first amp: brittle solid-state crunch, deliberately imperfect.

A few things every model shares:

- **Loudness discipline** — each model is calibrated so that at its default settings it sits at the same level as every other model (and as the Custom head), and the gain knob adds saturation, not volume. **Master** is the loudness knob. Switching models compares *tone*, never volume.
- **Clean at the bottom of the knob** — the bottom of the gain (or Volume) knob is a clean sound on every model, the top is the head's full sound, and the default sits where its presets were voiced. Brit 800's first knob is **Gain**.

- **A real effects loop** — every model has a series send/return between the preamp + tone stack and the power section, exactly where the loop sits on the real circuits (the Custom head has one too). It ships as a transparent straight-through wire; move any board pedal into the **LOOP** lane (its **Loop** → button, or ) to place it there, and it gets the power-section sag and speaker voicing on the way out without being re-clipped by the preamp.
- **A SAG meter** — while a model runs, a small SAG bar next to the CLIP lamp shows how many dB the power supply is dipping in real time. Deep-sag models (tweed and blackpanel school) breathe visibly; silicon-rectifier and solid-state models barely move. That is the difference you're hearing.

Cabinets & speakers

Model amps (and, if you opt in, the Custom head) run through the modeled cabinet system: **9 cabinets** (1x6 Shoebox up to the 8x10 Fridge) × **7 speaker voicings** (Vintage American 12, Brit 25, Modern 60, Studio Clean 12, Paper Eight, Radio Six, Thump Ten), each voicing built from the published response characteristics of the classic speaker families. Only physically sensible pairings are offered (an 8x10 always loads Thump Tens; a 1x12 takes any of the four 12" voicings), every legal combo is loudness-matched so cab-shopping compares tone, and the **Mic** slider moves from close-up (more lows, brighter) to backed-off (roomier) — center is neutral.

The **Custom** amp keeps its original 4x12-style cabinet by default — your saved sound never changes. Tick **Modeled cab** in the amp head to try the cab/speaker system with the Custom head; untick it to go right back.

Presets: The Preset dropdown — in the top bar and on the amp screen — is grouped by sound: **Clean, Overdriven, Rock** and **Heavy** hold every amp model's own presets (at least ten per model, named for playing situations — "Edge of Breakup", "Surf Night", "Chug"... — grouped by how each one measures, then listed by amp), then **Rigs (amp + pedals)** — the five classic rigs (**Clean, Crunch, Classic Fuzz, Ambient Lead, Metal**) and the Pedal Platform rigs — and **Yours**. Model presets set the amp and its knobs but leave your pedalboard and input trim alone; a rig sets the amp *and* the pedalboard, replacing what is on the board. The **Model** picker groups the amps the same way. The groups are measured with the IN meter in the green — a hot, untrimmed input pushes every Clean preset a step dirtier, so set the Input trim first. Dial in something you like and hit **Save...** to store your own preset; yours show up under **Yours** tagged "(yours)". Every knob, switch, and preset persists automatically — come back tomorrow and the rig is exactly as you left it.

Test Riff: Press ► **Test Riff** (or the Spacebar while the amp is running) and a synthesized guitar loop plays through the *exact same* signal chain — pedals, amp, cab, everything. It's the fastest way to audition presets and tweak knobs when you don't have a guitar plugged in, and it works with no audio interface at all.

A word about latency: Sound takes time to get through the browser's audio stack — expect roughly **20–50 ms** from string to speaker depending on your interface and machine. While the amp runs, Full mode shows a **Delay** readout under **Out** at the end of the Signal path: *About N ms* when the system reports the whole delay, *Processing only: N ms* when it reports only part of it, and *Not reported* when it gives no figure. Your interface's converters and any TV processing add to it, so a smaller buffer size in the interface's control panel means less delay. That's fine for practice, tone exploration, and noodling on the couch; it is **not** tight enough for tracking takes against a click. Also, GuitarVee deliberately disables the browser's echo-cancellation, noise-suppression, and auto-gain on the input — those are built for speech and they mangle guitar. That's why the Noise Gate pedal exists.

Plugin pedals

You can add your own pedals to the board. A plugin is a single `.js` file dropped into `data/plugins/` — on the desktop app, that's a `plugins` folder inside the GuitarVee app-data folder, which on Windows is `%APPDATA%\com.guitarvee.app` (you may need to create the `plugins` folder yourself). Restart or re-enter the Amp Sim page and your pedal appears on the shelf, in the Plugins row — press + to put it on the board, and its Effect settings show a "plugin" badge, knobs and all.

A plugin default-exports an object with an id, a name, a knob list, and a `create` function that wires up any Web Audio graph you like. Here's the complete reference example that ships at

`data/plugins/slapback-echo.js` :

```

export default {
  id: 'slapback',
  name: 'Slapback Echo',
  params: [
    { id: 'time', name: 'Time', min: 0.04, max: 0.18, default: 0.09, unit: 's' },
    { id: 'level', name: 'Level', min: 0, max: 1, default: 0.4 },
  ],
  create(ctx) {
    const input = ctx.createGain();
    const output = ctx.createGain();
    const delay = ctx.createDelay(0.5);
    delay.delayTime.value = 0.09;
    const level = ctx.createGain();
    level.gain.value = 0.4;
    input.connect(output);           // dry
    input.connect(delay);
    delay.connect(level);
    level.connect(output);          // single echo, no feedback
    return {
      input, output,
      set(id, v) {
        if (id === 'time') delay.delayTime.setTargetAtTime(v, ctx.currentTime, 0.02);
        if (id === 'level') level.gain.value = v;
      },
    };
  },
};

```

The contract, spelled out:

- **id** — a short unique slug (duplicates of built-in or other plugin ids are rejected)
- **name** — what's printed on the pedal
- **params** — one entry per knob: { id, name, min, max, default, unit?, step? }
- **create(ctx)** — receives the `AudioContext` ; returns { input, output, set(paramId, value), dispose?() }. Connect any Web Audio nodes you like between `input` and `output` ; `set` is called whenever a knob moves; `dispose` (optional) is called when the amp shuts down or the pedal is taken off the board, so you can stop oscillators or free resources. Only pedals on the board are built: `create` runs again each time the pedal goes back on the board.

GuitarVee validates each plugin on load — a broken one shows up in the Plugins line under the effects shelf (Full mode) with a red X and the reason, a pedal that fails when it is built is reported once, and the rest of the board carries on. Your power switch and knob settings for plugin pedals persist just like the built-ins.

A security note: plugins are JavaScript code and run with the same privileges as the app itself. Only install plugins you wrote or trust — treat a plugin file the same way you'd treat any program you run.

Other plugin formats? Native audio plugin formats are not supported — they need a native host. The plugin API above is the way to add your own pedals.

Best experienced with a mouse on PC — and an audio interface.

Recorder & Looper

The **● button in the header** (or ) records from anywhere in the app — press to record, press again to stop, and the take immediately loops. The chevron next to it opens the **looper panel**.

Two capture modes: *Guitar only* records just your input; *+ App* records your guitar mixed with whatever GuitarVee is making — drums, metronome, chords, the amp sim.

Track lanes: every loop slot is a lane with **Mute**, **Solo**, a volume slider, and a **pan** slider (the bass lane pans from its channel strip in the Progression Builder). Any solo silences the other lanes (standard mixer rule). **Play all** starts every unmuted lane together on one clock — each loops at its own length, so a 2-bar riff cycles inside an 8-bar chord loop just like a real looper board.

The bass lane: hit **Send to looper** in the Chord Progression Builder and your bass line appears here as its own lane, playing on the same clock and honoring its mute/solo/volume. Record guitar on top — you're a band now.

Export: every recorded lane has an Export WAV button, and **Export mix** renders your whole audible mix — lane volumes, pans, solo logic, and the bass with its channel-strip tone — into one WAV file. WAV plays everywhere and imports into any editor.

Recordings are session-only: they clear when the app closes. (Full track editing — trimming, splitting, arranging on a timeline — is on the roadmap.)

Tuner

Reference pitches for tuning your guitar — standard EADGBE by default, any of the 20 tunings from the dropdown, or a custom tuning of your own — **plus a live pitch detector** that listens through your microphone.

Live tuner

Click  **Start Live Tuner** and grant microphone access. As you play a string, GuitarVee:

- shows the closest open-string note in big type (E4, B3, G3, D3, A2, E2)
- displays a -50¢ ... +50¢ needle that moves left when flat, right when sharp
- colors the readout green when within $\pm 5\text{¢}$, orange within $\pm 15\text{¢}$, red beyond
- highlights the matched string in the list below and gently pulses it when in tune

Click  **Stop Mic** when you're done — the mic stream is fully released. The live tuner also works with alternate tunings: pick a tuning from the dropdown and the matching string will be detected based on the new open notes.

String mode ignores the capo on purpose. The targets are the tuning's **open** strings — you tune the guitar, not the capo. With a capo on, either take it off to tune, or switch to **Chromatic** mode (below), which simply names whatever pitch it hears.

Chromatic mode

Press the **Chromatic** button in the mode bar (or press  to cycle to it — it's also available as the default in Settings → Tuner). In chromatic mode the live tuner ignores the selected tuning's string targets entirely and simply shows the nearest note:

- the nearest chromatic note name and octave, from C0 up to B8 (A4 = 440 Hz)
- the same -50¢ ... +50¢ needle and the same green $\pm 5\text{¢}$ / orange $\pm 15\text{¢}$ color zones
- no string highlighting — chromatic is absolute pitch, so tuning and capo don't matter

Use it for bass, capo'd guitars, drop tunings you haven't picked from the list, or any other instrument. The reference tones below keep working in chromatic mode (each plays once, like Single).

If your browser denies mic access (some browsers block it on non-HTTPS sites), you'll see a red message. Use the reference-tone tuner below in that case.

Reference-tone tuner

Controls:

KEY	WHAT IT DOES
1 – 6	Quick play that string
S	Stop the current tone
Up / Down	Navigate strings and buttons
Enter	Play the highlighted string
Escape	Go back

The strings:

#	NOTE	FREQUENCY
1	e4	329.63 Hz
2	B3	246.94 Hz
3	G3	196.00 Hz
4	D3	146.83 Hz
5	A2	110.00 Hz
6	E2	82.41 Hz

Play All plays from low E up to high e with a pause between each string.

Alternate tunings: A tuning dropdown on the page carries all 20 tunings (the same list as the header's Global Tuning — Standard, Drop D, Drop C, Drop B, Drop A, B Standard, C Standard, DADGAD, the open tunings, and more). Picking one retunes the reference tones *and* the live detector, so you can tune straight into Open G.

Custom tunings: Press + **Custom tuning** under the dropdown (Full mode). Six pickers — one per string, low to high — start from the tuning on screen; set each open note and octave, give the tuning a name and press **Save tuning**. It joins every tuning list in the app (the top bar, this page, chord shapes, the Tab Editor) and is saved with your settings — pick it in the top bar when you want every chord view on it. Saved custom tunings sit beside the button, each with a × to delete it.

Tips:

- The tone fades naturally over 3 seconds, like a plucked string
- Number keys (1-6) are the fastest way to check a string
- Press S if a tone is still ringing and you want silence

Setlists

Organize your songs into ordered lists for gigs or practice sessions.

How to use it:

1. Click + **Create New Setlist** and give it a name
2. Check the songs you want to include
3. Hit **Create Setlist**

Viewing a setlist:

- Songs are listed in order with title, artist, and BPM
- Click any song to jump straight into Performer mode for that song
- **Perform All** plays through the entire setlist in order
- **Add Songs** lets you add more songs to an existing setlist
- **↓ Export PDF** downloads a printable PDF of the setlist (title, song list, artists, BPMs) — great to keep on a music stand at a gig
- **Delete Setlist** removes it (with in-app confirmation)

Tips:

- Great for planning a set - arrange songs in the order you'll play them
- The Perform All feature chains songs together so you don't have to navigate between them

Import / Export

Share exactly what you choose as a **pack**, or back up / restore your entire library. Two pages, switched by the big tabs at the top.

Export a Pack

Pick any mix of **songs, setlists, chords, drum patterns, and amp presets** — tick items one by one or use **Select all** per category (the song list has a filter box). **Export Selected** saves a single pack ZIP you can email, post, or drop on a USB stick. Great for teachers handing material to students.

- Packs contain plain JSON files — you can open one in any ZIP tool and read it
- Audio recordings are *not* included in packs; use **Full Backup** (bottom of the page) when you need media too

Import a Pack

Drop pack ZIPs or song JSON files on the drop zone (or click it to browse — several files at once is fine). Nothing is written yet: you get a **preview with checkboxes** first.

- Items you already have are badged "**already in library**" — choose **Skip** (default) or **Overwrite**
- Importing the same pack twice never creates duplicates
- Setlists keep working: their song references follow the imported copies automatically
- **Old backups import too**: a full-backup ZIP from any earlier version parses in the same drop zone (audio inside it is skipped with a note — use Restore Full Backup below for that), and songs from older or hand-edited files are cleaned up on the way in

After importing you'll see a summary of what landed, what was skipped, and anything that was renamed or dropped.

Full Backup / Restore

Two whole-library flows: **Full Backup** (Export page) saves your library as one ZIP — songs, audio files, setlists, custom drum samples, chords, scales, and drum patterns. **Restore Full Backup** (Import page) brings a backup ZIP back wholesale. Restores add and overwrite, but never delete anything that wasn't in the ZIP.

****What a backup does *not* carry:**** per-device data stays on each machine — your practice history (heatmap, streaks) and time-based achievement progress live in local storage on the device where you practiced, and app settings and amp presets are stored per install. Moving to a new machine brings your whole library over, but your practice stats start fresh there.

Tips:

- Export a Full Backup regularly if you've added a lot of songs
- Use packs for sharing, Full Backup for moving machines

Steam Workshop (desktop, running under Steam)

When GuitarVee runs through Steam, the Import/Export page grows two extra sections:

- **Publish to Steam Workshop** (Export page): give your current selection a title and description and hit Publish — the pack uploads as a Workshop item others can subscribe to. First-time publishers have to accept Steam's Workshop agreement once; the app shows you the link when Steam asks for it.
- **Steam Workshop** (Import page): every Workshop pack you're subscribed to appears here. "Load into preview" runs it through the exact same import preview as a dropped file — checkboxes, duplicate badges, Skip/Overwrite and all.

Achievements

There are 24 achievements, from **Opening Night** (perform your first song) up to the capstones — **It's Time to Get an Amp** (10 hours on the amp sim), **Certified Theory Master** (10 hours in the theory tools), and **Certified Rockstar** (100 hours of practice, 250 performances, and a 14-day streak). They unlock locally on any platform — a toast pops when you earn one — and the full grid with unlock dates lives on the **Practice Stats** page. On Steam they mirror to your Steam profile automatically. One achievement, **Open Mic** (publish a pack to the Steam Workshop), only appears when GuitarVee is running under Steam.

Practice Stats

The full history page for the practice timers, on the home grid.

- **Summary tiles** — today's active time, the last 7 days, your current streak, and all-time totals with a focus percentage
- **26-week heatmap** — one square per day, colored by *active* time (hover a square for the exact numbers)
- **14-day bars** — total time as a ghost bar with active time overlaid, so you can see how focused each day was
- **Achievements grid** — all achievements with unlock dates; unlocked ones sort to the top

Two timers, one idea: *Total* counts while the app is open; *Active* counts only while you're actually doing something — playing along, running the drums/metronome/amp, or hands on the controls. The heatmap and streaks are what the achievements measure.

Credits

The credits page: the app name and version, a one-line description, a **What's inside** list counted from your live data (songs in your library, the chord library and its solver, pedals, amp models plus the Custom head, cabinets and speaker voicings, quick theory games, drum patterns, tunings, color themes) and the song sources — the songs that ship with GuitarVee are traditional and public-domain works. Nothing on the page takes focus: ↑↓ scroll, `Escape` goes back.

It also shows a **Practice Log summary** — a 12-week × 7-day heatmap of how many minutes you've practiced each day (the app records every 30 seconds while you have a tool open), with active-days, total hours, and your current streak below it. The numbers match the **Practice Stats** page, which holds the full 26-week history. The log is stored locally on your device, so it survives reloads but doesn't leave your machine.

Settings

Open from the home grid.

- **Theme:** 40 color themes in four groups — Core, Grays & Neutrals, Colors & Moods, and Sports Colors — plus the **Auto (Day/Night)** card (Light from 7am–7pm, Dark otherwise) and 8 seasonal holiday themes in their own group. **Nocturne** (Core) is the default look on fresh installs — a quiet near-neutral dark with a single soft accent; if you've already picked a theme, your choice sticks.
- **Holiday Themes:** on by default — around a holiday the app dresses up with a seasonal theme and logo (you can opt out per holiday, or turn the whole thing off here).
- **Chords → Diagram Orientation:** how chord diagrams render everywhere in the app — **Horizontal (default)** or Vertical. Pages with their own orientation/layout toggle (Chord Chart, Chord Builder) can override it on the spot.
- **Fretboard → Strings:** which string is the top line on the Scale Chart, the Note Hunt map, the game fretboards, Karaoke's chord boxes and horizontal chord diagrams — the **high string** (like tab, the default) or the **low string**. Tab always keeps the high string on top.
- **Controller:** gamepad input — **Auto (default)** makes the controller active whenever a gamepad is connected (a Steam Machine just works), or pick **Always on / Off**.
- **Default Scroll Speed:** starting speed for Performer (1–10; speed maps to 8–80 px/s).
- **Font Size Offset:** bump or shrink global font size (-10 to +20).
- **Default BPM:** metronome default.
- **Weekly Goal (minutes):** your weekly practice target (30–1000, default 150) — progress toward it is measured from the practice log's active minutes.
- **Default Tuner Mode:** Single / Sustain / Repeat / Chromatic (live tuner detects any note).
- **Backing Tracks → Track Level (%)** (Full mode): the starting level for a song's audio file (100 % is the house level).
- **Amp → Amp voicing** (Full mode): **Current** or **Previous** — Previous is the voicing the high-gain amps had before the current rework; a pick applies right away and restarts the amp if it is on.

- **Interface mode:** a **Simple** | **Full** row at the top of the page mirrors the header toggle (see *Simple Mode* above). It applies and saves on its own the moment you press it — Cancel never undoes it, and it never touches your other settings.

Press **Save Settings** to keep your changes and go back, or **Cancel** to leave without saving — a toast confirms the save. The Interface mode and Amp voicing switches apply and save on their own.

Editing Reference Data

All of GuitarVee's reference data is stored in editable JSON files:

- `data/chords.json` - 151 chords with 206 curated voicings. Add your own by following the existing format.
- `data/scales.json` - All 14 built-in scales and modes plus any you've added via the custom scale editor.
- `data/drumPatterns.json` - All drum patterns. Create new beat patterns.
- `data/settings.json` - User preferences (theme, default speeds, persisted module settings).
- `data/amp.json` - Your Amp Sim rig (current knob positions and saved presets).
- `data/plugins/` - Amp Sim plugin pedals, one `.js` file each (see the Amp Sim section).
- `data/songs/` , `data/setlists/` , `data/audio/` , `data/samples/` - your library.

These files live in your GuitarVee app-data folder — on Windows, `%APPDATA%\com.guitarvee.app`. After editing any file, restart GuitarVee to see your changes.

Quick Troubleshooting

I hear a clean guitar doubled under the amp sim. Your audio interface is direct-monitoring: it mixes the raw input straight to your headphones/speakers in hardware, before the computer ever sees it. Find the **MIX / Direct Monitor** control on the interface — usually a knob you turn fully towards **playback**, or a button you switch off. It is often labelled MIX, DIRECT, or DIRECT MONITOR. No software setting can mute this — it happens inside the interface.

Nothing happens when I press keys: Make sure the GuitarVee window is focused (click on it). If you're in a text input field, press Escape first to exit the field.

Audio isn't playing: Audio needs one click or keypress before it can start. Click anywhere or press a key, then try again.

The metronome/drums sound weird: All sounds are synthesized - they won't sound like real instruments. They're meant as rhythm references.

The Amp Sim feels laggy: That's audio latency — roughly 20-50 ms is normal on Windows, and about 80 ms on the Steam Machine, where the amp is experimental. A smaller buffer size in your interface's control panel helps a little; it's fine for practice, not a recording rig. The **Delay** readout under **Out** shows what your setup adds.

The amp's IN meter doesn't move: Check **Guitar in** at the start of the Signal path: the right interface, and the input your guitar is plugged into (**Input 1** or **Input 2**, if your interface has more than one). If your interface isn't listed by name, press **Find devices**. Make sure GuitarVee is allowed to use your audio input.

The meters move but I hear nothing from the amp: Signal is reaching the amp, so the problem is on the way out. Check **Out** at the end of the Signal path: pick the output your speakers or headphones are on, and read any note under it (for example, that nothing is connected to that output). Make sure the master volume in the top bar isn't muted (**Ctrl+M** toggles it), turn up the interface's output or headphone level, and check its MIX / Direct Monitor knob isn't turned fully to input. Press ► **Test Riff**: if the riff is silent too, the problem is the output, not your guitar. A Noise Gate threshold set too high can also silence quiet playing.

I messed up a song: If you haven't saved yet, press Cancel or Escape to discard changes. If you already saved, you'll need to edit it again.

I want to start fresh: Delete the contents of the `data/songs/` and `data/setlists/` folders in your GuitarVee app-data folder, then restart GuitarVee.

That's everything! The best way to learn GuitarVee is to just poke around. Most features are intuitive once you start clicking. Happy playing!