

VibraScope

Measure a guitar on the bench: tune it, check its intonation, walk a setup step by step, and capture how the instrument responds when you play or tap it.



Overview

VibraScope is a measurement tool for guitar players, techs, and luthiers. It uses your device's microphone, and on iPhone its motion sensors, to tune an instrument, check intonation at the twelfth fret, guide a setup in shop order, and measure resonance, sustain, and damping. Every reading describes the instrument. None of them is a score or a grade.

VibraScope works with guitars, basses, and mandolins. You can keep a collection of your instruments, and every measurement you save is filed against one of them.

Requirements

- iPhone or iPad with iOS 18 or later.
- The built-in microphone. An audio interface also works for the pickup balance test when it is the device's audio input.
- For the tap test: an iPhone. The tap test uses the phone's motion sensors pressed against the body, so it is not offered on iPad.
- For setup measurements: your own gauge. VibraScope does not measure string height with the camera; you read a string action ruler, feeler gauge, digital caliper, or DL Action Finder and type the reading in.
- Optional: an iCloud account signed in on the device, for iCloud sync.

No VibraScope account is needed.

Player and Luthier benches

VibraScope draws every tool at one of two detail levels, called the bench mode:

- **Player** shows verdicts in words (Sharp, Flat, Good, Near limit, Out of spec) and only the controls an everyday guitarist needs. A **More detail** control on each results screen reveals the numbers in place.
- **Luthier** shows every reading, target, and control all the time, and adds the full tool grid on the home screen.

Both modes read and write the same instruments, sessions, and checklist. VibraScope starts in Player mode. To switch, tap the **VibraScope** wordmark at the top of the home screen, then tap **Player** or **Luthier**. On iPad the switch is at the top of the sidebar.

Use cases

- **Tune before you play.** Open the tuner, pick the reference pitch your band uses (for example 442 Hz), and walk the strings in order.
- **Check whether your setup has moved.** After a season change or a flight, run the tuner, the intonation check, and the action check in one guided sequence and see which steps now read Near limit or Out of spec.
- **Set a guitar up from scratch.** Follow the setup checklist in shop order: pitch, nut, relief, string heights, pickup balance, saddle intonation, fret level, and a final resonance capture. Progress is kept per instrument.
- **Intonate after a string change.** Play each open string and its twelfth-fret note; VibraScope tells you which way to move each saddle and by roughly how many millimeters, then lets you retest one string.
- **Find a dead spot.** Play one string fret by fret and see which note dies faster than its neighbors.
- **Compare before and after a change.** Record the change (new strings, a new saddle, a setup), capture the instrument before and after, and see whether the difference is larger than the instrument's normal measurement spread.
- **Date a guitar from its serial number.** Type or scan the serial, choose the brand, and read the build date and origin the serial encodes.
- **Hand a guitar's setup summary to someone.** Make a one-page PDF of the guitar's setup and intonation verdicts from its page in your collection.

Getting started

Install and open the app

1. Install VibraScope from the App Store on your iPhone or iPad.
2. Open VibraScope. A short splash screen shows while the built-in specification catalog loads.
3. The home screen opens in Player mode, with **Nothing on the bench** until you add a guitar.

Add your first guitar

1. On the home screen, tap **My guitars** (in Luthier mode, tap **Collection**).
2. Tap **Add My First Guitar**.
3. Enter the brand, model, and any details you know, then tap **Save**.

The guitar you choose becomes the instrument *on the bench*; the setup tools, the tuner, and the measurements use its string count, tuning, scale length, and published specifications. To

work without a saved guitar, choose a generic **Guitar**, **Bass**, or **Mandolin** when VibraScope asks which instrument you are working on.

Permissions

VibraScope asks for two permissions, each the first time a tool needs it:

- **Microphone**, the first time a tool listens, such as the tuner. VibraScope uses it to hear the instrument for tuning, intonation, and every measurement.
- **Camera**, the first time you take a guitar photo or scan a serial number. VibraScope uses it to photograph instruments and read serial numbers.

If you deny microphone access, the listening tools show a message and an **Open Settings** button. Turn on **Microphone** for VibraScope in the Settings app to use them.

Features

Home screen

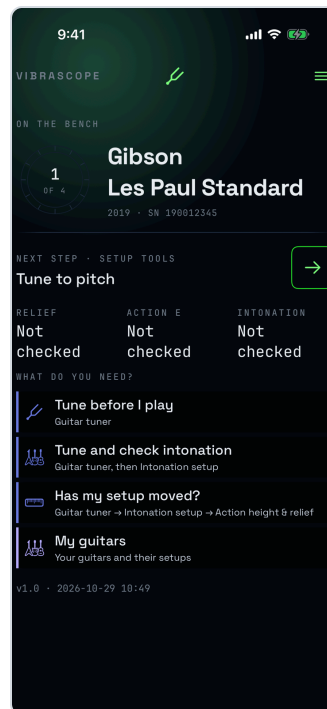
The home screen is the launcher. It does not listen or measure on its own.

- **Tuner** (the tuning-fork button at the top) opens the tuner.
- **Menu** (top right) opens every tool and the settings screens.
- **On the bench** shows the instrument you are working on, a dial with how many setup steps are done, and the next step of its setup checklist. Tap the instrument to open your collection; tap the arrow to open the checklist at that step.
- Three readouts sit under the next step. In Player mode they are verdict words for **Relief**, **Action E**, and **Intonation**. In Luthier mode they are the recorded relief and action values and the latest sustain time.

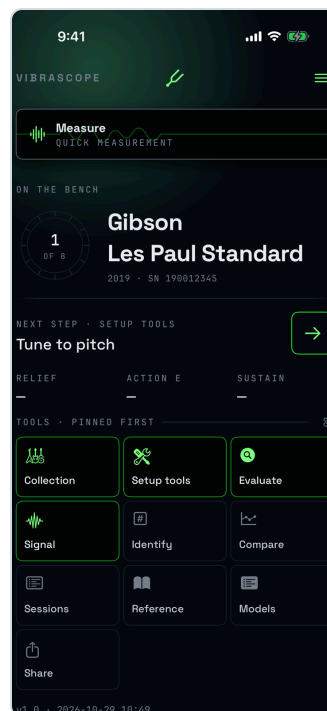
In Player mode the lower half lists three everyday jobs and **My guitars**:

- **Tune before I play** opens the tuner.
- **Tune and check intonation** opens the tuner, then offers the intonation check when you finish.
- **Has my setup moved?** walks the tuner, the intonation check, and the action check in turn.

In Luthier mode the lower half is a **Measure** bar that starts a Quick Measurement, and a grid of tools: Collection, Setup tools, Evaluate, Identify, Compare, Sessions, Reference, Models, Signal, and Share. Touch and hold a tool to pin or unpin it, and drag tools to reorder them. Pinned tools sort to the front.



The Player home screen with a guitar on the bench, its next setup step, and the three everyday jobs.



The Luthier home screen with the Measure bar and the tool grid.

Choose a job

Menu > Choose a job lists every guided job, including the ones that are not on the Player home screen:

- **Set this guitar up** opens the setup checklist.

- **Characterize this guitar** runs audio calibration if you have not calibrated, then a Quick Measurement, with optional sustain, dead spot, tap test, and tonal character tools.
- **Full sitting** walks identification, calibration, setup, evaluation, comparison, and export.

While a job is under way, the screen shows **Continue setup** with the next tool, and **End setup** to stop.

iPad layout

On iPad, VibraScope uses a sidebar instead of the launcher. In Player mode the sidebar lists Tuner, Check intonation, Check setup, Setup checklist, and My guitars. In Luthier mode it lists the bench actions (Tuner, Measure, Setup checklist) and every tool. With a hardware keyboard, use the **Go** menu: Command-1 through Command-9 open the sidebar items, and Command-Comma opens the menu.

Tuner

The tuner shows a strobe ring with the note name, the offset in cents, and which way to turn the peg (**SHARP • SLACKEN**, **FLAT • TIGHTEN**, or **IN TUNE**), with the raw frequency underneath. The ring turns clockwise when the string is sharp and faster the further out it is; it stops when the string is in tune. If you turn on Reduce Motion in iOS, the tuner shows a needle instead of the rotating ring.

Under the ring, a map of the tuning posts walks you through the strings in order, marking each one done, drifted, current, or waiting. The layout follows the instrument on the bench: 3+3, in-line, or slotted.

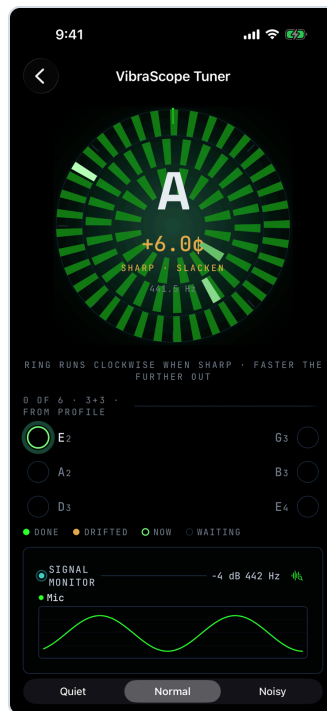
To tune:

1. Tap the tuning fork on the home screen.
2. Play one string at a time and turn the peg until the readout says **IN TUNE**.
3. Move to the next post on the map.

Settings on the tuner screen:

- **Sensitivity:** **Quiet** responds fastest, **Normal** balances speed and stability, **Noisy** is the most stable in a loud room.
- **A4 Reference:** the pitch standard, from 415.0 to 466.0 Hz in half-hertz steps. VibraScope remembers it.
- **Signal monitor:** a live trace of what the microphone hears, with its level and frequency. Expand it for a spectrum, to diagnose a weak or noisy signal.

To save battery, the tuner pauses after a period with no sound and shows **Paused to save battery**. Tap **Resume Listening** to continue.



The tuner reading an A six cents sharp, with the tuning-post map for a 3+3 headstock underneath.

Setup tools and the setup checklist

Setup tools (on the Luthier home grid) shows the instrument you are working on, with **Change** to pick another, and three groups:

- **Setup a guitar:** the ordered checklist.
- **One tool at a time:** the tuner, intonation, action height, and pickup balance on their own, without advancing the checklist.
- **From your readings:** the buzz margin map.

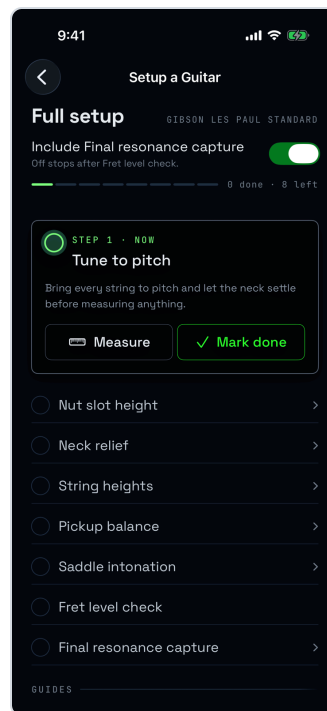
The checklist walks the setup in shop order. Open it from **Setup tools**, from the arrow beside **Next step** on the home screen, or from **Menu > Setup a guitar**. In Luthier mode the steps are:

1. **Tune to pitch.** Bring every string to pitch and let the neck settle.
2. **Nut slot height.** No capo. Measure the gap over the first fret on each string.
3. **Neck relief.** Capo the first fret, hold a string down where the neck meets the body, and read the gap midway between.
4. **String heights.** Leave the capo on and measure each string at the fret the maker publishes for.
5. **Pickup balance.** Only for instruments with pickups.
6. **Saddle intonation.** Compare the twelfth-fret note with the open string and move the saddle by the difference.
7. **Fret level check.** Sight the neck and rock a fret rocker across any string that still buzzes. There is no in-app tool for this step; you mark it done yourself.

8. **Final resonance capture.** One capture, so the finished setup leaves a baseline to compare against. Turn off **Include Final resonance capture** to end the checklist at the fret level check.

In Player mode the checklist is four steps: tune to pitch, neck relief, string heights (the two E strings only), and saddle intonation.

On each step, tap **Measure** to open the tool for that step, or **Mark done** when the evidence is in. A measured step counts as done when the reading is within tolerance, or when you accept a reading outside it on purpose, for example a higher action for slide. The progress line reports done and to-spec as separate counts. **Reset checklist** clears this instrument's checklist and the readings recorded against its steps; saved measurement sessions are not touched.



The Luthier setup checklist for the guitar on the bench, at step 1.

Action height and relief

The action setup screen measures the nut slots, neck relief, and string heights, and compares each reading with the target for the instrument on the bench. Targets come from the maker's published specifications in VibraScope's catalog when the model is in it.

1. Open **Setup tools > Action height & relief**, or tap **Measure** on a checklist step.
2. Follow the instruction for the step: where to put the capo and which fret to measure at.
3. Read your gauge and type each value in. The screen marks each reading against its target.
4. Repeat for the next step. String heights wait until relief is settled; tap **Already done** if you set relief another way. Tap **Skip for now** to move on and come back to a step later.

If you change relief, the screen asks **Did you adjust the truss rod?** so you can log the turn you made. Tap **Log it** or **Skip**.

Tap **Measuring setup** to change how targets are worked out:

- **Measuring tool:** String action ruler, Feeler gauge, Digital caliper (default), or DL Action Finder. This sets the unit and how fine a difference the screen reports, and applies to every instrument.
- **How low do you want it?:** Higher, Standard (the maker's published numbers, default), Lower, or Ultra Low. Kept per instrument.
- **Press fret:** the fret where the neck joins the body, pressed when measuring relief.
- **Arc reference:** whether string heights follow the fretboard radius under the strings (default), through the string centers, or over the strings. Using string centers or tops needs string gauges on the guitar's profile.

Setup Card shows every step's readings against their targets in one table, and **Procedure** opens a step-by-step adjustment guide.



The action setup at the nut step, with the published target for each string.

Buzz margin map

The buzz margin map predicts which fret buzzes first as the action comes down. It is computed from the relief, string height, and nut readings saved in the action setup for this instrument, so it stays empty (**Nothing to predict from yet**) until those are measured.

Choose a **Playing style** (Light, Medium, or Hard) to set how far the string swings when played. The map shows the margin over every fret for each string. It is a geometry prediction, not a

measurement: confirm by playing before you lower or cut anything.

Intonation

The intonation check compares each open string with the same string fretted at the twelfth fret. On a correctly intonated instrument the two notes are exactly an octave apart.

VibraScope uses the fretted note, not the twelfth-fret harmonic, because the harmonic stays an octave whatever the saddle is doing.

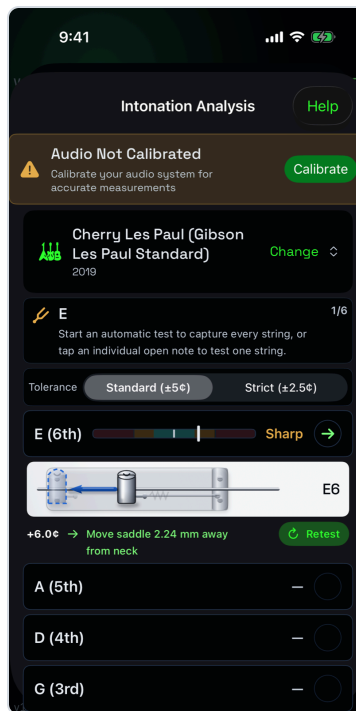
1. Tune the instrument and find a quiet room.
2. Open **Setup tools > Intonation setup**. In Player mode the automatic test starts as soon as the screen opens; in Luthier mode tap **Start automatic test**.
3. Play each open string on its own, in any order, muting the others. Wait for its cell to turn green.
4. When every open string is captured, play each string fretted at the twelfth fret, in any order.
5. Read the results. Each string shows **Sharp**, **Flat**, or **Good**, with an arrow for which way to move the saddle. Luthier mode, or **More detail** in Player mode, adds the cents error, the stability of the two captures, and a saddle instruction such as `Move saddle 0.42 mm away from neck`.
6. Adjust the saddle, then tap **Retest** on that string.

A green cell means the note was captured, not that it is in tune. If a string reads more than half a semitone out, the screen gives no saddle advice: the capture has most likely failed, and you should retest the string.

Settings on the intonation screen:

- **Tolerance: Standard ($\pm 5\phi$)** (default) or **Strict ($\pm 2.5\phi$)**. Changing it rejudges every row.
- **Scale length**: the scale length used to convert cents into saddle travel. It comes from the guitar's specification when VibraScope has one.

When intonation results exist, the action setup's nut section can also compare the first fret with the twelfth to tell a nut cut too high from a saddle set too long. Results file to the guitar on the bench.



An intonation result in Luthier mode: the low E reads six cents sharp, with the saddle travel to correct it.

Pickup balance

Pickup balance measures how evenly a pickup answers each string, and how far to raise or lower each side to even it out.

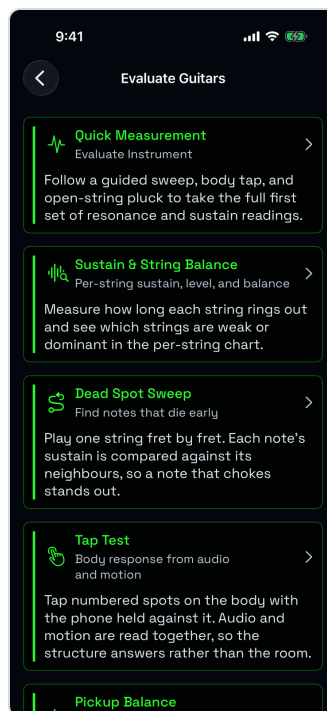
1. Open **Setup tools > Pickup balance**.
2. Under **What the phone hears**, choose **Amp or monitor** (the microphone hears the amp, default), **Audio interface** (the guitar is plugged into an interface that is the device's input), or **Acoustic**.
3. Choose **Strum** or **Pluck**, and which pickup you are measuring.
4. Tap **Start** and play:
 - **Strum**: rake down across all the open strings, slowly enough that each string lands separately. VibraScope asks for three rakes; tap **Next rake** between them. If the strings land too close together, it says so and asks you to slow the rake down.
 - **Pluck**: pluck one string at a time as prompted, for example **Pluck string 6, Low E**. Slower, and unambiguous.
5. Read the string-to-string output and the suggested height change for each side of the pickup, in millimeters. A string that could not be separated cleanly is left out rather than guessed. Tap **Retest** to capture again.

With an amp or an acoustic, absolute levels depend on the room and the volume, so compare captures rather than absolute numbers. With an audio interface, absolute levels count.

Evaluate guitars

Evaluate (on the Luthier grid, or **Menu > Evaluate guitars**) collects the capture tools that measure how the instrument responds:

- **Quick Measurement:** a guided sweep, body tap, and open-string pluck.
- **Sustain & String Balance:** how long each string rings and which strings are weak or dominant.
- **Dead Spot Sweep:** notes that die early along one string.
- **Tap Test:** body response from audio and motion together (iPhone only).
- **Pickup Balance:** the same tool as in Setup tools.
- **Full Guided Analysis:** the full capture plus identification, baseline comparison, and setup recommendations.
- **Intonation Check:** the same tool as in Setup tools.
- **Tonal Character**, under **Further analysis:** a reference comparison, not a measurement.



The Evaluate screen lists the capture tools.

Quick Measurement

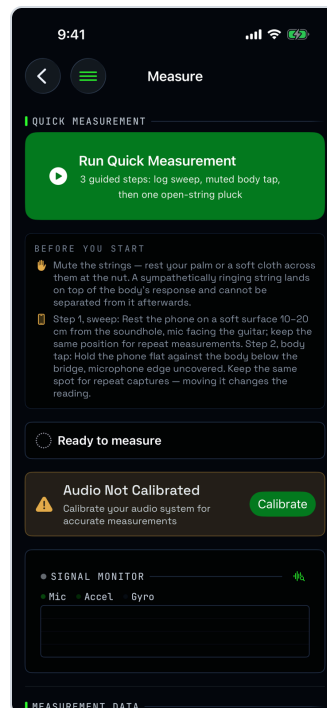
Quick Measurement takes the first full set of resonance and sustain readings in three guided steps, with a pause between each to reposition. To start it, tap **Measure** on the Luthier home screen, or open **Evaluate > Quick Measurement**.

1. Tap **Run Quick Measurement**.
2. **Log sweep.** The device's speaker plays a sine sweep from 80 Hz to 10 kHz. VibraScope asks you to set the volume to maximum first; tap **Volume is max, Start**.

3. **Muted body tap.** Mute the strings and tap the body.
4. **Open-string pluck.** Pluck one open string.

Before you start, the **Before you start** card says where to put the device for each step and reminds you to mute the strings with your palm or a soft cloth at the nut. A string ringing in sympathy lands on top of the body's response and cannot be separated from it afterwards. On iPhone, the card asks you to rest the phone on a soft surface 10 to 20 cm from the soundhole for the sweep, then hold it flat against the body below the bridge for the tap. Keep the same placement for repeat captures; moving it changes the reading.

Analysis stays locked until all three steps are complete. The measurement table shows which rows are still empty; tap a row to replay just that stimulus. Then tap **Analyze** to open the results, and save the measurement to a guitar. If you leave without saving, VibraScope asks before discarding it. Luthier mode adds **Repeat Capture**, which records several trials of one stimulus from one placement for before-and-after comparison.



Quick Measurement before a run, with the placement and muting instructions.

Sustain and string balance

Record three isolated plucks per string. Each result is the median sustain time, and the spread across the three trials is kept with it. The per-string chart shows which strings ring longest and which are weak or dominant. Tap **View decay analysis** for the decay curve. When a guitar has earlier sustain captures, the **Across captures** panel shows how sustain has changed over time, which is how aging strings show up.

Dead spot sweep

A dead spot is a note that dies faster than its neighbors. The sweep compares every note with the notes around it on the same string.

1. Choose **Whole neck** or **Just the G**, and set the highest fret (8 to 22, default 14).
2. Play each note as prompted, at a steady, normal strength.
3. Use **Skip this fret**, **Skip this string**, **Finish now**, or **Stop and discard** as needed.

Notes that could not be measured are left out and counted in the results.

Tap test

On iPhone, the tap test reads the body's response from the microphone and the motion sensors together, with the phone held against the body.

1. Choose **Acoustic** or **Electric**. The soundhole is tapped only on an acoustic.
2. Tap **Start tap test** and tap each numbered location in turn: bridge, soundhole, upper bout, lower bout, neck joint, and headstock.
3. Tap **View detailed results** to see each location's response and data quality.

The levels are uncalibrated: tap strength, the microphone, and the room all shape them. Use the tap test to compare two instruments, or one instrument before and after a change, recorded the same way.

Full guided analysis

Full guided analysis walks seven phases: a welcome, identification, the full resonance and sustain capture, material assessment, baseline comparison, setup recommendations, and a report. The report scores **Baseline similarity** out of 100 against your earlier full guided runs on the same instrument. It needs at least three earlier runs; with fewer, the report says there is no score. The score measures consistency, not instrument quality. Reports are listed on the guitar's page under **Guided reports**.

Tonal character

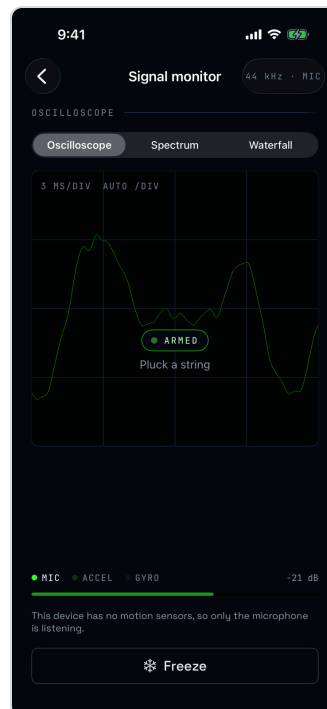
Tonal character reads a saved capture and describes where the instrument puts its energy, how steeply the top end falls away, and how quickly the overtones leave the note. That part is measured.

It then compares the damping measured from your capture with a table of published tonewood loss factors and names the nearest one. This is a comparison against a reference table, not wood identification: it matches on damping alone, and its confidence is capped by design. Read the result as "this damps like published figures for this wood", and nothing more.

1. Open **Evaluate > Tonal Character**.
2. Choose a **Saved measurement** to read.
3. Switch between **Charts** and **Details** to read the results.

Signal monitor

The signal monitor is a live view of the input, for checking a signal before you measure. Choose **Oscilloscope**, **Spectrum** (with the fundamental marked), or **Waterfall** at the top. On iPhone it also shows the accelerometer and gyroscope. The oscilloscope waits **Armed** for a pluck and captures it; use **Freeze** and **Resume** to hold a trace, and **Re-arm** to capture the next pluck.



The signal monitor's oscilloscope, armed and waiting for a pluck.

Audio calibration

Calibration listens to your room, plays a test tone, and listens again. The noise floor it finds is applied to every resonance, sustain, and audio measurement from then on. The other readings it takes describe the conditions; they are saved with each capture and included in exports. Calibrate once, and again when your room changes. Until you do, the measuring screens show an **Audio Not Calibrated** banner with a **Calibrate** button. Open calibration from that button or from **Menu > Audio calibration**, keep the room quiet, and tap **Start Calibration**. Tap **Reset Calibration** to discard it.

Menu > Measurement setup explains the stimuli VibraScope can play or ask for, which sensors listen during each, and the practices that make a reading repeatable.

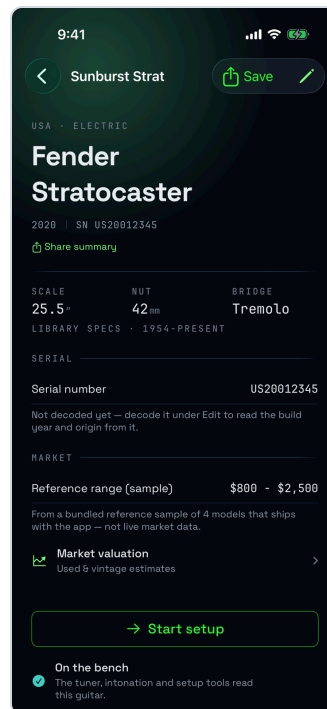
Guitar collection and guitar pages

My guitars lists your instruments, with the one on the bench at the top and its setup progress. Filter with **All** or **Needs work**. Tap the plus button to add a guitar, touch and hold a guitar to **Edit** or **Delete** it, and tap a guitar to open its page. **Back Up** saves your whole collection and its measurements to a VibraScope backup file.

A guitar's page shows:

- Its identity: brand, model, year, serial number, photos, and notes, with scale length, nut width, and bridge type from the catalog when the model is in it.
- **Put on the bench**, to make this the guitar the tools work on, and **Start setup** (or **Resume setup**) to open its checklist.
- **Current readings** from its setup checklist, and the setup progress.
- **String tension** and total neck load, when string gauges are on the profile.
- **Guided reports**, **Changes**, and **Sessions** for this guitar.
- **Market**: a reference price range, when VibraScope has data for the model. The range comes from a small sample of price data bundled with the app, not live market data. If you enter what you paid, the page sets it against the range.
- **Save** (top of the page) exports this guitar's data to a file.
- **Share summary**: a one-page PDF of the guitar's setup and intonation. In Player mode it carries verdict words only; in Luthier mode it adds the readings, targets, and cents.

To edit a guitar, tap **Edit**. You can set the basics (brand, model, year, color), decode the serial number, add photos, and fill in specifications such as bridge type, string gauge, construction, neck/body joint, tuning, and per-string gauges. Setup geometry fields feed the action setup's targets. Deleting a guitar deletes its saved measurements too, and you cannot get them back.



A guitar's page, with its identity, catalog specifications, serial, and market range.

Record a change

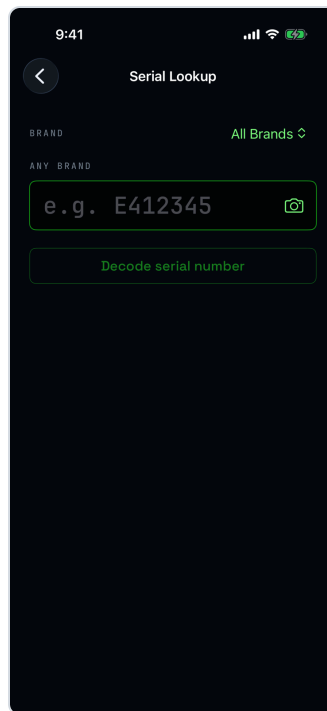
Before you make a change to a guitar, such as new strings or a new saddle, tap **Record a change** on its page. Choose the kind of change, and VibraScope suggests the capture that shows it best. Capture the instrument before the work and again after. The change then reads **Did the change matter?** with each reading's before and after values. Only one change can be open per guitar at a time; tap **Close change** when you are done.

Serial number lookup

Identify (or **Menu > Serial number lookup**) decodes the build date and origin a serial number encodes.

1. Optional: choose the **Brand** (the default is **All Brands**). When a serial shape matches several brands, VibraScope asks you to choose.
2. Type the serial number, or tap the camera button in the field to scan it.
3. Tap **Decode serial number**.
4. Read the decoded date, origin, and confidence. Tap **Verify with manufacturer** to open the maker's own lookup in the browser.
5. Optional: choose the model and tap **Add to collection** to save the guitar.

A serial usually identifies a date and a factory, not an exact model. Some serials carry no date at all, and some only place the guitar in a production window; VibraScope shows those as estimates, such as **c. 1987 (estimate)**, and does not save an estimate as the build year.



Serial number lookup, ready for a serial to be typed or scanned.

Models

Models browses VibraScope's built-in catalog of guitar, bass, and mandolin specifications. Search by name, filter by instrument type, and sort alphabetically or by scale length. Open a model to see its specifications, then tap **Add to collection** to save it as one of your guitars with those specifications filled in.

Compare

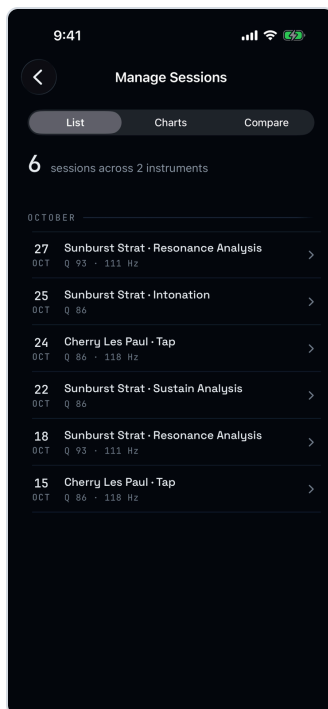
Compare has three flows:

- **Sessions:** two captures of the same test on the same instrument, usually before and after a change.
- **Profiles:** one instrument's baselines against each other. A baseline appears once an instrument has enough saved sessions.
- **Instruments:** your instrument against one imported from someone else's backup.

VibraScope compares only captures that can be compared: the same test on the same instrument. For each reading it shows the change and whether the difference is larger than the instrument's normal measurement spread. When it is not, the comparison says the difference is noise, not a change in the guitar. Tap **Export** to save the comparison.

Sessions

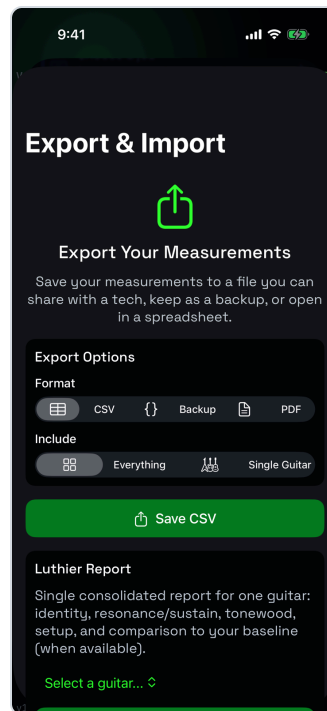
Sessions lists every saved measurement, newest first, with the guitar, the test, and its headline readings. Switch between **List**, **Charts**, and **Compare** at the top. Tap a session to see its readings and charts. To delete one, swipe left on it and tap **Delete**. Deleting a session cannot be undone.



Sessions lists every saved measurement across your guitars.

Share, export, and import

- **Share** lists your sessions; pick one to share or export it.
- **Menu > Export & import** saves measurements to a file. Choose a **Format** (CSV for a spreadsheet, **Backup** for a VibraScope backup file, or **PDF**) and whether to **Include Everything** or a **Single Guitar**.
- **Luthier Report**, on the same screen, makes one consolidated PDF for one guitar: identity, resonance and sustain, tonewood, setup, and comparison with its baseline when one exists.
- **Import Backup File** reads a VibraScope backup file. VibraScope shows what came in before you add it. Imported instruments and captures are marked as imported and stay out of your own instruments' history and baselines. After an import, tap **Compare With Mine** to compare an imported instrument with yours.



Export & import, with the format and scope choices.

iCloud sync

Menu > iCloud sync shows the sync status, when the app last synced, and how many guitars and measurements are in your library. Tap **Turn On iCloud Sync** to start, **Sync Now** to sync, or **Download from iCloud** to bring your library to a new device. Your guitars, including their setup geometry, and your saved measurements sync through your own private iCloud account. When the same guitar is edited on two devices, the more recent edit wins. Once sync is on and you are signed in to iCloud, VibraScope also syncs when it starts.

Reference library

Menu > Reference library collects formulas, research summaries, and guitar knowledge. Search it, bookmark items, and open a formula in **Calculator** to work it with your own values. Research items list their authors, year, and DOI.

Settings

VibraScope has no separate settings screen. Each setting lives on the screen it affects and is remembered.

Setting	Where	What it does	Default
Bench mode	Home (tap the wordmark)	Player shows verdicts; Luthier shows every reading	Player
Sensitivity	Tuner	Trades tuner speed for stability	Normal
A4 Reference	Tuner	Pitch standard, 415–466 Hz	440.0 Hz
Tolerance	Intonation	Band a string must fall in to read Good	Standard ($\pm 5\phi$)
Scale length	Intonation	Converts cents into saddle travel	The guitar's spec
Measuring tool	Action setup	Unit and resolution of your gauge	Digital caliper
Action tier	Action setup	How far under or over spec the targets sit	Standard
Press fret	Action setup	Fret pressed for relief	The guitar's neck joint
Arc reference	Action setup	How string heights follow the radius	Under the strings
Include Final resonance capture	Setup checklist	Ends the checklist with a resonance capture	On
Playing style	Buzz margin map	String swing used in the prediction	Medium
Signal source	Pickup balance	Amp, interface, or acoustic	Amp or monitor
Strum or Pluck	Pickup balance	How you play the strings	Strum
Pinned tools	Luthier home	Tools sorted to the front of the grid	Setup tools, Evaluate, Collection, Signal
Audio calibration	Menu	Noise floor applied to every measurement	Not calibrated
iCloud sync	Menu	Syncs guitars and measurements	Off

Troubleshooting

The tuner or a measurement says microphone access is required. Open the Settings app, tap **VibraScope**, and turn on **Microphone**. The listening screens also offer **Open Settings**.

"Listening couldn't start. Close any other app using the microphone, then try again." Another app holds the microphone. Close it and return to VibraScope.

"Another app is playing audio, and the microphone will record it along with the instrument." Measurements mix with other audio, so music playing in another app lands in the recording. Pause it before measuring.

"Another screen took over the microphone." Only one VibraScope screen listens at a time. Return to the screen you were using and tap **Resume**, or start again.

"Paused to save battery." The tuner stopped after a period of silence. Tap **Resume Listening**.

"Input is clipping." The signal is too loud. Move the device away from the string or amp.

"Low signal-to-noise ratio detected." Move to a quieter room or bring the device closer to the guitar.

Quick Measurement will not analyze. All three steps must be captured. Check the measurement table for an empty row and tap it to replay that stimulus.

An intonation string gives no saddle advice. The reading is more than half a semitone out, which usually means the open string was still ringing when the fretted note was captured. Tap **Retest** for that string.

The buzz margin map says "Nothing to predict from yet". Measure relief, string heights, and the nut in the action setup first. The map reads those saved readings.

"Couldn't read a serial number." Move closer, add light, and hold steady, or type the serial in by hand.

"Couldn't open the camera." Close any other app using the camera, then reopen the screen.

iCloud sync fails. Make sure an iCloud account is signed in on the device and that you are online, then tap **Sync Now**. Messages such as "Couldn't send your guitars to iCloud. Check your connection and try again." mean the device could not reach iCloud.

"Couldn't open that file." The file you picked is not a VibraScope backup VibraScope can read. Pick it again, or choose a different backup.

Readings differ between devices. Phones and iPads have different microphones and speakers. Compare captures taken on the same device and in the same way.

Privacy

- **Microphone.** VibraScope uses the microphone to measure the instrument. Audio is processed on the device.
- **Motion sensors.** On iPhone, the accelerometer and gyroscope are read during body captures and in the signal monitor.
- **Camera.** VibraScope uses the camera to photograph your instruments and to read serial numbers. Photos are stored with the guitar on the device.
- **Your data.** Guitars, photos, measurements, and checklists are stored on the device. They leave it only when you export or share a file, or when you turn on iCloud sync, which stores your guitars and measurements in your own private iCloud account.
- **Links.** Buttons such as **Verify with manufacturer** and reference documents open a web page in your browser.

VibraScope has no account, no advertising, and no analytics. Endogen LLC collects no data from VibraScope. Read the full policy at <https://endogenllc.com/privacy/>.

Support

Email support@endogenllc.com with questions or problems, and include your device model and iOS version. The VibraScope page is <https://endogenllc.com/vibrascope/>.