VITRIC



Plinth Subharmonic Synthesizer

USER MANUAL | VERSION 1.0.2 | UPDATED NOVEMBER 18, 2026 | MUSEHUB EDITION

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Plinth Subharmonic Synthesizer adds a new sub (deep bass) under your sound. It listens to the low end below the DETECT line and finds the notes that are actually there. For each note it takes the fundamental (the lowest, strongest frequency) and generates a clean sine tone exactly one octave lower, at half that frequency. The new tone is phase-locked: it moves in step with the original, so the two never cancel each other out. **BLEND** adds that sub to your untouched dry signal; it does not turn the

dry signal down as you turn it up. There is no compressor and no ducker inside: what you hear is your track plus a real sub. It is for 808s, bass, kicks and mix buses that need weight.

This manual covers Plinth Subharmonic Synthesizer 1.0.2 on macOS and Windows, in VST3, AU and AAX.

01 Quick start

1. Insert **Plinth Subharmonic Synthesizer** on a bass, 808, kick or bus, before any compressor or limiter on the same track, so they catch the extra level the sub adds.
2. Play a passage with a clear bass part or kick, with POWER on, SOLO off and ENGAGE off. Leave DETECT at 350 Hz.
3. Watch the screen: located fundamentals get markers, and the LOCATED SUBHARMONICS chips light with the subs Plinth is generating.
4. Turn **BLEND** down to 0 %, then raise it until the low end feels heavier but the part still sounds like itself.
5. Press **SOLO** to hear only what Plinth adds. Turn SOLO off before you judge the whole mix.
6. Watch your output level: the added sub raises peaks. Trim with **OUTPUT**, and use **CLIP** only when you want soft clipping on the combined signal.

TIP

On a full mix, start from the **Gentle Ground** preset. On an isolated bass part, try **Studio Floor**.

02

What's new in 1.0.2

On macOS 27, Plinth now loads in every format. No change to the sound or features. On Windows this is a maintenance update.

03

What's new in 1.0.0

Only the version number changed. Plinth sounds, looks and works exactly as 0.2.15 did, and your sessions and presets open as you saved them.

04

What's new in 0.2.15

Sub Floor. A new setting for the lowest sub Plinth will generate. With Sub Floor at 25 Hz, for example, a low E on a bass (41 Hz) no longer gets a sub near 20 Hz, and the notes from about 50 Hz up keep theirs. It is Off until you set it, and it has no control on the face yet: set it in your DAW's parameter list for Plinth or with automation. See Sub Floor.

05

What's new in 0.2.14

Fixed a rare crash when the host saves and restores settings at the same time.

On Windows, the plugin window now draws and updates on computers whose display gives it no refresh signal, such as virtual machines and some remote desktops. Closing the window there no longer freezes the host.

06

What's new in 0.2.13

A muted chip no longer stops new notes getting their sub.

With POWER off, the SUB LEVEL meter rests.

On high-refresh displays the screen draws at 80 frames a second and uses much less CPU.

A reopened session shows its preset's name.

07

What's new in 0.2.11

A free fix for every Plinth owner. Frequency readouts at 100 Hz and up now show whole numbers instead of being cut off: a 134 Hz sub reads 134 Hz in its chip and on the screen, where it used to read 133.979 and get cut short. Below 100 Hz the readouts keep one decimal. Nothing about the sound changed, and your songs open exactly as before.

08

What's new in 0.2.10

What changed since 0.2.0:

Your own presets in the PRESETS menu.

The face shows what Plinth does. Plinth runs three generators, so only the first three LOCATED SUBHARMONICS chips respond; the last three stay dark. DETECT's tooltip now says where tracking ends (about 385 Hz). Saved sessions sound the same.

Sessions always reopen as saved, after every update.

Fixes: a crash on macOS 10.15 and 11; Windows user names with accented characters.

09 The window

Plinth has a screen at the top, the PRESETS, LOCATED SUBHARMONICS and SOLO row under it, and the controls below. Drag the corner to resize the window, from 1000 x 552 up to 1740 × 960 pixels; it opens at 1160 × 640 and keeps its shape.

The screen



FIG. 1 The screen on an 808 note: the six values, the located fundamental and the sub being generated, and the row under it.

1. **Value strip.** Click a value to type it.
2. **Status.** What Plinth is doing.
3. **Generated sub.** Each bright arch is a sub being added; the thin numbered lines are the fundamentals.
4. **DETECT line.** The top of the region Plinth listens to.
5. **Preset name.** Default, a factory preset, or Custom.
6. **PRESETS.** Factory presets and your own.
7. **LOCATED SUBHARMONICS.** The three generators.
8. **SOLO.** Hear only the added sub.
9. **... (Options).** Tooltips and shortcuts. Plinth never checks for updates itself in this edition.

The spectrum shows your input. Each located fundamental gets a thin line with its frequency, and each bright arch is a sub Plinth is generating right now, an octave below one of them. Silence leaves an empty trace.

The value strip shows BLEND, RESONANCE, DETECT, OVERRIDE, CLIP and OUTPUT, and follows the knobs and your DAW's automation. Click a value, or focus it and press `Return`, to type an exact value in %, Hz or dB. `Return` applies and `Esc` cancels; a wrong unit or a value out of range stays in the field with an error cue and changes nothing.

The status reads AUTO TRACKING / OVERRIDE STANDBY in normal use: Plinth is tracking on its own and the manual override is off. It reads MANUAL while ENGAGE is on and POWER OFF when POWER is off. While SOLO is on, / SUB SOLO is added. While Sub Floor is on and ENGAGE is off, / FLOOR and its frequency is added, for example / FLOOR 25 Hz.

The DETECT line sets the top of the region Plinth listens to (100 to 500 Hz). Drag it from anywhere in its grab area; it does not jump to the pointer. Hold `Shift` for ten times finer moves. The wheel or arrow keys move it a semitone, one piano key (`Shift`: a tenth of a semitone). Double-click it to go back to 350 Hz.

Above about 385 Hz the line still widens what Plinth listens to, but a higher note is read an octave low, so its sub lands two octaves down.

The preset name reads Default at the defaults, the source and name of a factory preset when the settings match one (for example Mix Bus / Gentle Ground), and Custom otherwise. Your own presets also show Custom once loaded. While you turn a knob, this spot shows its value for a moment.

The LOCATED SUBHARMONICS chips show the frequency of the sub each of the three generators is making, READY while it waits for a note (or while Sub Floor withholds the note's sub), or MUTE when muted. Click a chip to mute or unmute that generator (or focus the row, pick a chip with the left and right arrows and press `Space` or `Return`).

The last three tiles are reserved. They stay dark and do not respond. Your DAW's automation list shows them as Chip 4 to Chip 6; they change nothing.

The controls



FIG. 2 BLEND, the VU meter, RESONANCE, DETECT, OVERRIDE and ENGAGE, OUTPUT, CLIP, POWER and the license chip.

1. **BLEND.** How much sub is added.
2. **VU.** The level of the added sub.
3. **RESONANCE.** Body, and overtones for small speakers.
4. **DETECT.** The listening region.
5. **OVERRIDE and ENGAGE.** A fixed fundamental.
6. **OUTPUT.** The final trim.
7. **CLIP.** Soft clip on the sum.
8. **POWER.** Bypass.
9. **License chip.** Reads MUSEHUB. This edition opens unlocked, so the chip is a label and takes no clicks.

CONTROL	WHAT IT DOES	RANGE	DEFAULT
BLEND	The amount of generated sub added to your dry signal. At 100 % the sub follows the level of your dry low end. Start mid-dial; heavy 808 and kick work can go higher.	0 to 100 %	50 %
DETECT	The top of the region Plinth listens to; same as dragging the DETECT line. Lower it to focus on the bass. Plinth tracks notes up to about 385 Hz; a higher note gets its sub two octaves down instead of one.	100 to 500 Hz	350 Hz
RESONANCE	Adds body and ring to the generated sub. Past halfway it also adds soft overtones of the sub (partials), so phones and laptop speakers that cannot play the sub still suggest it. The sub itself always stays.	0 to 100 %	0 %
OVERRIDE	The source fundamental Plinth uses while ENGAGE is on. 80 Hz aims the generator at a 40 Hz sub.	20 to 120 Hz	55 Hz

CONTROL	WHAT IT DOES	RANGE	DEFAULT
ENGAGE	Replaces automatic tracking with one sub at a fixed pitch, an octave below OVERRIDE, for parts that make the tracker hunt (jump between pitches). The sub still rises, falls and stops with your track. Key E.	On or off	Off
CLIP	Soft clipping on the final output, your track plus the sub: it rounds off peaks instead of letting them go over 0 dBFS, the digital maximum. Adds no latency. At 0 % it is off.	0 to 100 %	0 %
OUTPUT	The final trim.	-12 to +12 dB	0 dB
SOLO	Plays only the generated sub, at its current BLEND level. Key S.	On or off	Off
POWER	True bypass, click-free: off passes the input untouched. The lamp above the switch is lit while Plinth is on.	On or off	On
VU	The peak level of the sub being added, not of the whole mix. The needle rests until the added sub peaks above about -23 dBFS (decibels below the digital maximum), so a quiet sub can show on the screen while the needle stays down.		
... (OPTIONS)	Opens a menu: Show tooltips, Check for updates and the keyboard shortcut sheet. The first two apply to every Vitric plugin on this computer. In this edition Plinth never checks for updates itself, whatever **Check for updates** is set to.		
SUB FLOOR	The lowest sub Plinth will generate. It has no control on the face yet: set it in your DAW's parameter list or with automation (see Sub Floor).	Off, or 10 to 60 Hz	Off

Sub Floor

Sub Floor stops Plinth generating a sub that is too low to be useful. A low E on a bass is 41 Hz, so its sub is near 20 Hz, under what most speakers and many subwoofers play. With Sub Floor at 25 Hz, that note gets no sub and the notes from about 50 Hz up keep theirs.

Sub Floor has no control on Plinth's face yet. Set it from your DAW's parameter list for the plugin, where it appears as Sub Floor, or with an automation lane. In a DAW that has no parameter list, automation is the only way to reach it. The screen's status line shows / FLOOR and the frequency while it is on.

It is measured on the sub, not on the note. The sub is half the note's frequency, so Sub Floor 25 Hz withholds the sub of every note under 50 Hz, and Sub Floor 30 Hz of every note under 60 Hz.

Range: Off, or 10 to 60 Hz in steps of 0.1 Hz. Off is the lowest position and the default. Type "off" or a frequency where your DAW lets you type a value.

Values under about 12.5 Hz do nothing in normal (automatic) use. Plinth tracks notes down to about 25 Hz, so no sub is ever lower than about 12.5 Hz.

Notes above the floor are not changed. Their level, their generator and RESONANCE behave as they do with Sub Floor off. A note above the floor that follows a withheld one gets its sub about a tenth of a second in, as the glide up passes the floor.

A note the floor withholds shows no arch on the screen, and its chip reads READY.

A low note right after a higher one fades out. Plinth glides from the higher note down to the low one, so for about the first 150 ms of the low note you hear the end of that glide, and then the sub fades to silence without a click. RESONANCE does not ring on after it. After a rest of a second or more, a note under the floor gets no sub from its first moment.

A note that sits on the floor does not flicker. Once a sub has been withheld, it comes back only when it rises 3 % above the floor (about half a semitone). Set Sub Floor between two notes, not on one: for E (20.6 Hz sub) off and F (21.8 Hz sub) on, use 21 Hz.

ENGAGE ignores it. While ENGAGE is on, OVERRIDE is your own choice of pitch and plays whatever Sub Floor says.

Presets leave it alone. Sub Floor stays where you set it while you change presets, and your DAW saves it with the project. A project saved before Sub Floor existed opens with it Off.

How Plinth behaves

Zero latency. Plinth reports and adds no latency, always.

The sub arrives just after the note starts. Plinth has to hear a few cycles of a note before it trusts the pitch, so the sub fades in. Under an 80 Hz note, the 40 Hz sub reaches 90 % of its level in about 170 ms. Nothing is delayed or time-shifted.

The sub is mono and dead center. It cannot cancel when a club system or phone plays your mix in mono, and it suits vinyl, which needs centered bass. Your dry signal keeps its stereo image.

It needs pitch. Unpitched or very short sounds may not open a generator.

10 Keyboard and mouse

Keys work when the Plinth window has keyboard focus: click an empty part of the window once. While you type in a value field, the field keeps the keys.

ACTION	MAC	WINDOWS
Open the presets menu	`P`	`P`
SOLO on or off	`S`	`S`
ENGAGE on or off	`E`	`E`
Previous or next factory preset	`[` or `]`	`[` or `]`
Show or close the shortcut sheet	`?` / `Esc`	`?` / `Esc`
Fine drag on a knob or the DETECT line	`Shift` + drag	`Shift` + drag
Step a knob (`Shift` for fine)	Mouse wheel or arrow keys	Mouse wheel or arrow keys
DETECT line a semitone (`Shift`: a tenth of a semitone)	Mouse wheel or arrow keys	Mouse wheel or arrow keys
Reset a knob	Double-click, or `Cmd` + click	Double-click, or `Ctrl` + click
Reset the DETECT line to 350 Hz	Double-click it	Double-click it
Type an exact value	Click a value in the strip	Click a value in the strip
Mute or unmute a generator	Click its chip	Click its chip

In Pro Tools, fine drag is `Cmd` + drag (`Ctrl` on Windows) and reset is `Option` + click (`Alt` on Windows).

11 Recipes

These are starting points from the factory presets. Every source is different, so set BLEND in context and compare with **POWER**.

Add weight under a full mix

START FROM	Gentle Ground
BLEND	28 %
DETECT	300 Hz
RESONANCE	15 %
CLIP	10 %
LISTEN FOR	A fuller low end with the kick and bass still separate; recheck your loudness, since the sub adds level

Listen with SOLO to hear exactly what is being added.

Thicken a bass DI (recorded straight into the interface)

START FROM	Studio Floor
BLEND	50 %
DETECT	350 Hz
RESONANCE	20 %
CLIP	20 %
LISTEN FOR	More weight under each note while the bass still sounds like a bass

Make an 808 hit the floor

START FROM	Concrete Floor
BLEND	100 %
DETECT	200 Hz
RESONANCE	30 %
CLIP	65 %
OUTPUT	-1 dB
LISTEN FOR	The 808 felt on big speakers; check it on small ones too

CLIP catches the extra peak level the sub adds.

Extend a kick

START FROM	Kick Extension
BLEND	70 %
DETECT	160 Hz
RESONANCE	20 %
CLIP	40 %
OUTPUT	-0.5 dB

The sub fades in over the first part of the hit, so it lengthens the kick's body and tail rather than its click.

Steady a part on one note

ENGAGE	On
OVERRIDE	The part's note, for example 110 Hz (an A) for a 55 Hz sub, or 82.4 Hz (low E on a guitar) for a 41.2 Hz sub

ENGAGE holds one pitch, so use it on a part that stays on one note, such as a kick, a drone or a one-note 808, when the tracker hunts (jumps between pitches). On a moving bass line, leave ENGAGE off and lower DETECT instead.

12 Presets

32 factory presets under PRESETS, grouped by source:

SOURCE	PRESETS
808	First Brick, Concrete Floor, Slow Pour, Basement Key, Round Weight, Iron Column, Soft Landing, Deep Set
Bass DI	Studio Floor, Fat String, Quiet Anchor, Motor City Add, P Pickup Plus, Half Step Down, Upright Shadow, Session Deep
Synth Bass	Analog Basement, Reese Under, Acid Footing, Warm Square, Dub Stack, Mono Pillar
Kick	Kick Extension, Four Floor Boost, Punch Footer, Long Tail Kick, Tight Thump
Mix Bus	Gentle Ground, Master Footing, Club Check, Vinyl Safe, Broadcast Floor

A preset sets BLEND, DETECT, RESONANCE, CLIP and OUTPUT, and unmutes every chip. It leaves POWER, SOLO, ENGAGE, the OVERRIDE frequency and Sub Floor alone, so check those if a preset sounds unexpected.

Your own presets

1. Open **PRESETS** and choose **Save preset...**, then type a name.
2. Your presets appear under **User** in the same menu, after the factory presets.
3. **Rename preset** and **Delete preset** manage the list; **Show preset folder** opens the folder on disk.

A saved preset holds BLEND, DETECT, RESONANCE, CLIP, OUTPUT and the chip mutes. Like the factory presets, it leaves POWER, SOLO, ENGAGE, the OVERRIDE frequency and Sub Floor alone. `[` and `]` step through the factory presets only. The files are in `~/Library/Application Support/Vitric Audio/Presets/Plinth Subharmonic Synthesizer` on macOS and `%APPDATA%\Vitric Audio\Presets\Plinth Subharmonic Synthesizer` on Windows.

13 Specifications

Generation: up to three phase-locked sine subs, each one octave below a located fundamental; mono and centered.

Tracking: fundamentals up to about 385 Hz below the DETECT line (100 to 500 Hz); manual override 20 to 120 Hz.

Sub Floor: Off, or 10 to 60 Hz: no sub is generated under it. Set from the DAW's parameter list or automation.

BLEND 0 to 100 %, **RESONANCE** 0 to 100 %, **CLIP** 0 to 100 %, **OUTPUT** ±12 dB.

Latency: none.

Window: 1000 × 552 to 1740 × 960.

Formats: VST3 and AAX on macOS and Windows; AU on macOS.

Not included

Plinth generates one octave down; there is no second octave.

There is no external sidechain and no compressor or ducker.

Plinth works on mono and stereo tracks. It does not support surround or Atmos formats.

14 Installation and updates

Install

1. Save your work and quit your DAW.
2. Install **Plinth Subharmonic Synthesizer** from the MuseHub app. MuseHub downloads it and puts the plugins in place.
3. Open your DAW. If Plinth Subharmonic Synthesizer is not listed, run your DAW's plugin rescan.

Use AU in Logic Pro, AAX in Pro Tools and VST3 in other DAWs. On a Mac the plugins go in the standard folders:

AU: `/Library/Audio/Plug-Ins/Components`

VST3: `/Library/Audio/Plug-Ins/VST3`

AAX: `/Library/Application Support/Avid/Audio/Plug-Ins`

On Windows, MuseHub installs the VST3 and AAX versions.

Nothing to enter

This edition opens and runs as soon as it is installed. Your MuseHub purchase is your license: there is no key, code or account to enter, and nothing to unlock. The chip at the bottom left reads MUSEHUB. It is a label, not a button, so clicking it does nothing.

MuseHub handles the purchase, any trial and any payment question under its own terms. Vitric sets no limit of its own on the number of computers: install Plinth on the computers you personally use, within MuseHub's terms.

Updates

Updates to this edition are free and come through MuseHub. When a new version is out, save your work, quit your DAW and update Plinth in the MuseHub app. Your sessions reopen exactly as saved after every update.

Plinth never checks for updates itself in this edition and shows no update notice, whatever the **Check for updates** option is set to.

Sessions and presets are the same as in the vitricaudio.com edition of Plinth Subharmonic Synthesizer, so your projects open in either edition.

15 Troubleshooting

Plinth does not appear in my DAW

Rescan plugins and restart the DAW. In Logic Pro, use Logic Pro > Settings > Plug-in Manager and **Reset & Rescan Selection**. On Windows, make sure your DAW scans `C:\Program Files\Common Files\VST3`.

There is no sub

Check POWER, BLEND and the chip mutes.

The status line shows / FLOOR: Sub Floor is on, and notes whose sub would be under it get none. Lower it or set it to Off in your DAW's parameter list (see Sub Floor).

The sound may have no clear pitch below the DETECT line. Lower DETECT to focus on the bass, or use ENGAGE and OVERRIDE.

I cannot hear the sub, but the screen shows it

An octave below a bass note is often 20 to 50 Hz, lower than laptop speakers, earbuds and many small monitors can play. Check on headphones or speakers with a subwoofer, and watch the screen. To help small speakers, raise RESONANCE past halfway.

The sub is too low to be useful

The lowest notes of a part can put the sub near 20 Hz, where it uses headroom and few speakers play it. Set Sub Floor to the lowest sub you want, for example 25 Hz: notes whose sub would be under it get none, and the rest sound as before. Sub Floor is in your DAW's parameter list for Plinth, not on the face (see Sub Floor).

The sub wobbles or jumps between notes

The tracker is hunting: something above the bass, such as a chord or a kick's click, is confusing it. Lower DETECT so Plinth hears only the bass. For a part on one note, use ENGAGE and OVERRIDE.

The low end sounds muddy

Lower BLEND, or lower DETECT so only the lowest notes get a sub. On a full mix, start from Gentle Ground.

The sub sits two octaves down

The note is above about 385 Hz, so Plinth reads it an octave low and its sub lands two octaves under the note. Set DETECT to 385 Hz or lower so Plinth listens only to the bass.

The output got louder

BLEND adds signal, so peaks rise. Set OUTPUT by ear and by your meters, and use CLIP if the peaks go over.

Shortcuts do nothing

Click an empty part of the Plinth window once so it has keyboard focus. Some DAWs keep certain keys for themselves; use the mouse for those.

16 Support

MuseHub provides first-line support for this edition and passes anything it cannot solve, such as a plugin fault, on to Vitric. You can also write to support@vitricaudio.com with your Plinth version, operating system, DAW and version, plugin format and the exact error if there is one.

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