



Measured, *not* claimed

How Infinite v0.6 compares with the instruments, effects and creative tools you already use, on a base MacBook Air. Including the parts where it is slower.

Version 0.6.0

Measured 17 October 2026

Machine Apple M2, 8 GB

Report infinitedevices.org/benchmarks.html

At a glance

We measured Infinite against the tools you already use, on one ordinary laptop, with the same tests for everyone, and we publish the numbers that are good for us and the ones that are not.

0.34 s

Launch to first frame on a base MacBook Air M2 with 8 GB. Opening a 400-node patch takes 6 ms.

0.2 cents

Worst pitch error across the keyboard from the Wavetable synth. Vital and Serum 2 measure the same.

100× +

Faster movie export than Blender on the same test scenes (different renderers; throughput, not image style).

244 MB

Memory with the app open and idle. The download is 45 MB.

97.6 %

Of the plugins installed on the test machine load and pass audio in Infinite's plugin host.

0

Audio dropouts and 0 % missed screen refreshes in the standard live-performance test.

Where Infinite is behind

- **Idle CPU.** With nothing loaded Infinite sits at 12.3 % of one core. Logic, Blender and Vital sit under 4 %. We are working on it.
- **Some built-in effects cost more CPU** than the plugin equivalents: EQ, Limiter, Drive and Chorus (Section 4).
- **Instancing.** 10,000 instanced objects cost 3.1 ms a frame in Infinite and 1.3 ms in Blender.
- **The heaviest projector scene** (four 4K videos, three output windows, a camera and Syphon at once) drops frames. Normal and 1080p scenes do not.
- **Default levels.** Reverb, Delay, Chorus and Flanger come out louder than they go in at their default settings.

How we tested

Everything here was measured on one machine: a MacBook Air with an Apple M2 and 8 GB of memory, running macOS. That is the base model, on purpose. If it is fast here it is fast on yours. Nothing was measured on Windows or Linux.

- **Black box.** Notes or audio go in, the result comes out and is measured. We never open or read the other product.
- **Same test for everyone.** A competitor plugin runs inside Infinite's own plugin host, receives the same notes or the same test signal, and is measured by the same code as Infinite's own nodes.
- **Default settings.** Every instrument and effect is tested as it loads, so presets are not hand-picked to flatter anyone. Where a default does nothing (an EQ with no bands) only its CPU cost is meaningful, and the report says so.
- **CPU is the render cost.** Milliseconds of processing per second of audio, with the machine otherwise idle. Lower is better, and 10 ms/s is 1 % of one core. Differences under about 1 ms/s are noise.
- **Versions.** Infinite 0.6 (a development build matching the 0.6.0 release); Ableton Live 12.4.6, Bitwig Studio 6.0.3, Logic Pro 12.3.1, TouchDesigner 2025.32820, VCV Rack 2.6.6, Blender 5.1.0, BespokeSynth 1.3.0, Vital 1.5.5, Serum 2.0.16, Diva 1.4.5, FabFilter Pro-R 2 2.04, Pro-C 2 2.20, Saturn 2 2.11, plus the installed versions of Valhalla and Kilohearts plugins.
- **Reproduce it.** The tools are in the repository under `tools/re-survey`. Section 8 lists the commands.

Dates: instruments, effects and apps were measured on 17 October 2026; the internal tests and 3D/render comparisons on 12 to 16 October 2026.

Instruments

Eight notes from MIDI 24 to 108 are played into each synth, and what comes out is analysed. **Pitch error** is the worst note, in cents (a hundredth of a semitone). **Aliasing** is the energy that is not part of the note, in decibels; more negative is cleaner, and the high notes at 96 and 108 are where cheap synths fold back and sound harsh. **CPU per voice** is the extra render time for each added note.

INSTRUMENT	WORST PITCH ERROR (CENTS)	OFF-NOTE ENERGY, MIDI 60 (DB)	MIDI 96 (DB)	MIDI 108 (DB)	CPU PER VOICE (MS/S)	RESPONDS TO VELOCITY
Infinite Wavetable	0.2	-84.2	-84.9	-83.9	1.45	24 dB
Infinite Analog	0.2	-84.0	-82.9	-81.1	9.05	24 dB
Infinite Oscillator	0.2	-74.0	-82.1	-82.1	3.40	24 dB
Vital	0.2	-84.3	-84.3	-83.6	2.82	none
Serum 2	0.2	-83.0	-82.6	-81.9	3.23	none
Diva	7.8	-40.8	-27.0	-10.4	23.24	12.9 dB

What this means

- Infinite's Wavetable and Analog synths are as accurate and as clean as Vital and Serum 2: 0.2 cents, and about -81 to -85 dB off-note energy even at the top of the keyboard.
- Wavetable is also light: 1.45 ms/s per voice against 2.82 for Vital and 3.23 for Serum 2. Analog is the heavier of the two at 9.05 ms/s.
- Diva is measured as it loads and sits an octave down with a modelled, imperfect oscillator. Its figures describe an analog-style design, not a flaw.
- Infinite's synths respond to how hard you play across a 24 dB range. Vital and Serum 2 ignore velocity until you route it yourself, so that column compares defaults, not capability.
- Not comparable: Kilohearts Phase Plant and FabFilter Twin 3 came up silent or unusable with no patch loaded, so they are left out rather than guessed at.

Effects

A test tone or noise goes through each effect at its default settings. **CPU** is the render cost in ms per second of audio (lower is better). **Latency** is the delay the effect adds after the host compensates for it.

EFFECT	INFINITE CPU	INFINITE LATENCY (MS)	COMPARED WITH	CPU	LATENCY (MS)	RESULT
Reverb	8.5	0.0	ValhallaRoom	17.2	11.4	Infinite lighter
	8.5	0.0	FabFilter Pro-R 2	34.6	0.0	Infinite lighter
Delay	3.3	0.0	ValhallaDelay	7.5	0.0	Infinite lighter
Compressor	2.8	0.0	FabFilter Pro-C 2	5.3	0.0	Infinite lighter
Limiter	13.4	0.0	FabFilter Pro-L 2	10.9	0.0	Plugin lighter

EFFECT	INFINITE CPU	INFINITE LATENCY (MS)	COMPARED WITH	CPU	LATENCY (MS)	RESULT
EQ	14.5	0.0	FabFilter Pro-Q 4	3.0	0.0	Plugin lighter
Drive / saturation	28.2	0.0	FabFilter Saturn 2	8.1	0.0	Plugin lighter
Chorus	3.9	0.0	Kilohearts Chorus	1.5	0.0	Plugin lighter
Flanger	2.0	0.0	Kilohearts Flanger	1.8	0.0	About equal
Phaser	3.2	0.0	Kilohearts Phaser	2.4	0.0	About equal

What this means

- **Infinite is lighter** on Reverb, Delay and the compressor, and about level on Flanger and Phaser.
- **The plugins are lighter** on EQ, Limiter, Drive and Chorus. The EQ gap is the clearest: 14.5 ms/s for Infinite against 3.0 for Pro-Q 4. These are on our list to fix.
- Infinite effects add no delay once compensated (0 ms). ValhallaRoom reports 11.4 ms.
- At default settings Infinite's Reverb, Delay, Chorus and Flanger are louder than the input and can clip. FabFilter Pro-R 2 and ValhallaDelay stay within about 1 dB. We list this as a known issue.
- An EQ with no bands, a limiter that is not limiting and a compressor with no gain reduction are close to a wire. Their distortion figures match the test rig, so only their CPU cost is a fair comparison.

SECTION 05

3D, video and export

Blender runs headless through its public Python interface; Infinite runs the matching patch. Cloth and subdivision are one simulation step or one deform per frame. Movie export times the whole render and encode, measured as the slope between a 1-second and a 3-second render so start-up cancels out. Blender here is a general-purpose renderer, so this compares export throughput on matched scenes, not image style.

TEST	INFINITE	BLENDER	RESULT
Cloth sheet 32×32, per frame	0.42 ms	18.4 ms	Infinite much faster
Subdivide ×2 with animated displacement, per frame	7.2 ms	8.1 ms	Infinite slightly faster
10,000 instanced objects, per frame	3.1 ms	1.3 ms	Blender faster
Movie export, 720p ProRes 4444, blur scene	170 fps	1.6 fps	Infinite ~100× faster
Movie export, 1080p ProRes 4444, blur scene	81 fps	1.2 fps	Infinite ~70× faster
Movie export, 2160p ProRes 4444, blur scene	44 fps	0.5 fps	Infinite ~95× faster
Movie export, 720p ProRes 4444, 10,000 cubes	128 fps	0.9 fps	Infinite ~145× faster
H264 quality (PSNR), blur scenes	50.6 to 51.8 dB	44.3 to 46.1 dB	Infinite higher
H264 quality (PSNR), 10,000 cubes	35.5 to 37.1 dB	28.8 to 32.2 dB	Infinite higher
Sound-to-picture offset, 10-minute render	0.04 ms	0.02 ms	Both inaudible
Sound-to-picture drift, 10-minute render	0 ms/min	0 ms/min	Tied

What this means

- A 10-minute film at 30 fps is about 18,000 frames: roughly two minutes to export from Infinite at the 720p rate above, about three hours from Blender. Audio and picture stay locked: drift over ten minutes is zero.
- Instancing is the one 3D test Infinite loses, by a factor of 2.4, and is flagged below target.
- A rendered arrangement runs at 2.25× real time on the reference scene, with no audio/video drift.

SECTION 06

Launch, memory and download size

Each app is opened with nothing loaded and left alone. **Window** is the time from opening it until the first window appears (the first launch, then a warm launch). **Idle CPU** is the share of one core used while doing nothing, over the whole app including its helper processes. **Memory** is what Activity Monitor shows.

APP	FIRST WINDOW, FIRST LAUNCH (S)	WARM (S)	IDLE CPU % (MEAN / MAX)	MEMORY (MB)	DOWNLOAD SIZE ON DISK (MB)
Infinite	0.8	0.8	12.3 / 13	244	45
Logic Pro	2.5	1.3	3.9 / 8	122	2194
Ableton Live 12 Suite	4.7	3.1	41.9 / 49	672	8021
Bitwig Studio	7.8	6.2	17.6 / 110	1392	874
TouchDesigner	4.2	2.5	49.8 / 57	1396	1707
Blender	2.0	2.0	1.9 / 3	693	879
VCV Rack 2	1.9	0.8	521.7 / 609	264	42
BespokeSynth	6.8	2.1	26.2 / 31	1528	268
Vital (plugin app)	2.2	0.7	0.4 / 2	252	24

What this means

- Infinite is a small install: 45 MB, against 874 MB to 8 GB for the DAWs and TouchDesigner. Only VCV Rack and Vital are as small.
- Memory is lower than Ableton, Blender, Bitwig, TouchDesigner and BespokeSynth. Only Logic sits lower.
- Infinite opens its first window in under a second here, the quickest first launch of the apps tested. Infinite, Blender and Vital were re-measured on a quiet machine; the rest come from the first pass.
- Idle CPU is mid-pack: higher than Logic, Blender and Vital (all under 4 %), lower than Bitwig, BespokeSynth, Ableton and TouchDesigner. VCV Rack's high figure is its audio engine running continuously by design.

SECTION 07

How fast Infinite is on its own

These are Infinite's own targets, tested on the same base laptop. They matter for live use: if the audio buffer is missed you hear a click, and if a frame is missed you see a stutter.

TEST	RESULT	TARGET	
Launch to first frame	342 ms	under 1 s	Met

TEST	RESULT	TARGET	
Open a 400-node patch	6.0 ms	under 16.7 ms (one frame)	Met
Save a patch	2.9 ms	under 16.7 ms	Met
Open a 4,000-node patch (headless)	0.87 s	reported	Info
Pan around a 300-node canvas	60 fps (16.7 ms)	60 fps	Met
Audio: 24 voices, 256-sample buffer, worst-case load	45 % of the buffer	under 50 %	Met
Audio dropouts in that test	0	0	Met
Live projector, window frame interval (99th percentile)	17.6 ms	under 18.3 ms	Met
Missed screen refreshes	0 %	under 0.5 %	Met
Change a control to seeing it on screen	1 frame	2 frames or fewer	Met
Four 4K videos decoded at once	full speed, at most 2 dropped frames	full speed, 0 dropped	Met
Heaviest projector scene (4× 4K, 3 windows, camera, Syphon)	33 ms, 9 % missed refreshes	under 18.3 ms, 0.5 %	Below target
Peak memory in the heavy visual scenes	760 MB	under 912 MB	Met
Audio-reactive picture latency	16.6 ms	under 45 ms	Met
Beat lock, picture to click	100 %	100 %	Met
Crashes in fuzzed patches, random patches and kill-during-save rounds	0	0	Met
Plugins that load and pass audio	97.6 % (VST3 and AU)	reported	Info
Installed plugins that crash Infinite with no outside cause	0	0	Met
30-minute soak test, live audio and picture	0 audio dropouts	reported	Info

Correctness checks

The full list at the end of this report covers every further check, all passing or listed as known exceptions: pitch within one cent at 44.1, 48 and 96 kHz; no clicks when notes start or stop; no stuck notes after release; the same patch renders bit-for-bit the same twice; no hum or DC offset from effects; blend modes within 0.125 of 255 against the W3C formulas; no broken meshes. The three known exceptions are the insert-level jump on some effects, a small level error on stretched drum hits, and some winding-order flips in the Screw geometry node.

Not yet measured

Four long or heavy tests are defined but have not been run: a 4,000-node canvas under pan, select and delete; an edit storm while audio plays; a multi-hour soak with memory growth and temperature; and a real-time audio-reactive scene of 10,000 instances. Until they are run we do not claim results for them.

What we did not test, and how to reproduce this

- **No head-to-head against other DAWs on audio load or latency.** Matched track-count tests in Ableton, Bitwig and Logic need a hand-built project in each, and round-trip latency needs a loopback device.
- **No live visual comparison with TouchDesigner or Resolume** yet. The harness exists; it needs a manual step inside TouchDesigner.
- **One machine, one operating system.** Numbers on faster hardware will be better, and Windows and Linux are unmeasured.
- **Defaults, not best case.** A plugin with a tuned preset would measure differently.
- **Our numbers only.** Every figure here was measured by us on this machine. No vendor claims or published specs are used.

Run it yourself

```
git clone https://github.com/n1m21n/Infinite && cd Infinite
python3 tools/re-survey/synth_probe.py run Vital "Serum 2" node:Wavetable
python3 tools/re-survey/plugin_probe.py run dry node:Reverb ValhallaRoom
python3 tools/re-survey/app_bench.py run Logic Blender /Applications/Infinite.app --runs 2
python3 tools/re-survey/render_bench.py infinite
```

Corrections and re-runs are welcome: open an issue at github.com/n1m21n/Infinite or tell us on Discord.

Full results

Every one of the 97 metrics we track, with its target and the worst result across all the nodes or scenes tested. "Reported" means there is no pass/fail target (a design choice is compared, not judged). The competitor comparisons are in Sections 3 to 6.

AV integration

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Click in the movie audio to the audio-reactive flash in its picture, 30 fps offline render; 45 ms = picture-late sync bound	≤ 45.00 ms	16.63 (Infinite)	Met
Std dev of that latency over 31 beats at 128 BPM (frame quantisation alone gives ~9.6 ms at 30 fps)	reported	9.33 (Infinite)	Reported
Beats whose reactive flash lands 0-1 frames after the first possible frame, never early	≥ 100 %	100 (Infinite)	Met
Absolute trend of reactive frame error over the take	≤ 1.00 ms/min	0 (Infinite)	Met
Beat-clock flash (no analysis) within 0-1 frames of the click in the same movie	≥ 100 %	100 (Infinite)	Met

Note nodes

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Stuck, orphan-off, duplicate-on and off-before-on events	≤ 0 count	0 (Arpeggiator)	Met
Worst note-on error against the grid across block sizes and tempi	≤ 1.00 samples	0.793 (Arpeggiator)	Met
Note-on error through the node, plus missing notes	≤ 0 samples	0 (Note Filter)	Met

Project files

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Published community patches that fail the smoke (tools/website/community_patches.py --smoke): each must open, play and show a picture or sound. Pixels are never compared; patches may change as Infinite evolves	≤ 0 count	0 (community patches)	Met

Stability

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Crashes, hangs or unstable saves over every node type, 300 fuzzed patches, random patches and 40 kill-during-save rounds	≤ 0 count	0 (fuzz)	Met

Audio I/O

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Gain knob error over -48..+24 dB	≤ 0.01 dB	0 (Gain)	Met
Mixer sum error against a double-precision reference	$\leq 1e-06$ abs	0 (Mixer)	Met

Built-in instruments

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Pitch error per note at 44.1/48/96 kHz (spectrum peak, sustained render)	≤ 1.00 cents	0.0345 (Analog)	Met
Pitch error of note 69 played through the note cable	≤ 1.00 cents	0.009 (Analog)	Met
Non-harmonic energy re fundamental at 1.75 and 5 kHz, 48 kHz	≤ -80.00 dB	-82.63 (Oscillator)	Met
Level spread of the same 3 s render over 44.1/48/96 kHz	≤ 1.00 dB	0.824 (PaulStretch)	Met
Note-on second difference re the larger of steady state and the 5-50 ms body	≤ 12.00 dB	5.70 (Wavetable)	Met
Note-off second difference re steady state	≤ 12.00 dB	-0.0027 (Equation Synth)	Met
Level 9.5 s after all notes off (stuck voices); free-running nodes are not measured	≤ -100 dBFS	-240 (Analog)	Met
Peak of a 4-note chord at velocity 0.8, defaults	≤ 0 dBFS	-2.33 (Field Synth)	Met
Peak of a single sustained note, defaults	≤ 0 dBFS	-3.11 (Analog)	Met
Fixture WAV (48 kHz) pitch spread over 44.1/48/96 kHz device rates	≤ 20.00 cents	6.85 (PaulStretch)	Met
Fixture WAV playback length, longest over shortest across device rates	≤ 1.02 ratio	1.00 (Granular)	Met
1 when the same render twice is not bit-identical	≤ 0 bool	0 (Analog)	Met
Worst pitch error over MIDI 24-108, black box through the host	≤ 1.00 cents	0.174 (Wavetable)	Met
Non-harmonic energy at MIDI 60 (clean reference); best competitor about -84	≤ -80.00 dB	-84.16 (Wavetable)	Met
Non-harmonic energy at MIDI 96 (aliasing)	≤ -80.00 dB	-83.26 (Analog)	Met
Non-harmonic energy at MIDI 108 (aliasing)	≤ -80.00 dB	-81.20 (Analog)	Met
Default-patch attack 10-90 % (a design choice, compared not judged)	reported	-	Reported
Default-patch release to -60 dB	reported	-	Reported

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Level change velocity 0.25 → 1.0	reported	-	Reported
Worst pitch error of a built-in instrument at its default patch, same MIDI through each app's own bounce (compared, not judged: defaults differ)	reported	41.45 (Metallic)	Reported
Non-harmonic energy at MIDI 108 of a built-in instrument at its default patch (aliasing), per app	reported	-3.66 (FieldSynth)	Reported

Effects

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Mean DC left by an effect under noise, at defaults	≤ -50.00 dBFS	-55.11 (Bitcrush)	Met
Level 10 s after the input goes silent	≤ -100 dBFS	-240 (Audio Filter)	Met
Worst step transient when a parameter jumps	≤ 12.00 dB	9.00 (Dynamics)	Met
Tone level difference across 44.1/48/96 kHz	≤ 1.00 dB	0.996 (Key-Snap)	Met
Level change when the node opens: default mix, pink noise at -20 dBFS	≤ 1.00 dB	10.82 (Shape Resonator)	Known exception
Chorus and Flanger: residual between a -1 dBFS and a scaled -12 dBFS 1 kHz tone (level-dependent distortion)	≤ -60.00 dB	-143 (Flanger)	Met
Latency of a built-in effect after the app's own compensation (a bounce should read 0)	reported	0.188 (AudioFilter)	Reported
THD of a built-in effect at defaults, 1 kHz at -12 dBFS; effects with a tail over 0.5 s are not measured	reported	-35.01 (Drive)	Reported

Plugin hosting

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Installed plugins that crash or hang Infinite's host with no outside evidence the plugin is at fault (bad signature, auval crashes too)	≤ 0 count	0 (AU)	Met
Installed plugins that load and pass audio in Infinite's host, headless	reported	97.59 (VST3)	Reported

Timeline audio

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Worst count of drum hits heard twice (flams, pre-echo) over 0.5/0.8/1.25/2x Timeline Sample stretch	≤ 0 onsets	0 (Infinite)	Met
Worst drum hit against the median hit over the four stretch ratios	≤ 5.00 ms	3.25 (Infinite)	Met
Worst drum crest against the ideal stretch (hits at their own length, clipped to full scale) over the four ratios	≤ 0.5 dB	2.50 (Infinite)	Known exception

Project files

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Headless load (parse, build every node, check) of the largest generated patch, process start included	reported	0.874 (4000 nodes)	Reported
1 when a generated patch of that size fails to load or to write back	≤ 0 bool	0 (10 nodes)	Met

3D engine

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Per-frame cost of 10,000 instances on a 100x100 grid, scale animated (Infinite: render slope net of baseline; Blender: depsgraph eval, 2026-10-13)	≤ 1.30 ms	3.08 (Infinite)	Below target
32x32 grid, subdivide x2 smooth, animated noise displacement, per frame (Blender 2026-10-13 sets the target)	≤ 8.10 ms	7.19 (Infinite)	Met
32x32 cloth sheet pinned on one edge, one simulation step per frame (solvers differ: Blender 5 quality steps, Infinite 6 iterations)	≤ 18.40 ms	0.422 (Infinite)	Met

Compositing

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Blend modes against the W3C formulas, worst over modes	≤ 1.00 x/255	0.125 (Blend)	Met

Geometry

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Triangles whose winding disagrees with their vertex normals	≤ 0 triangles	14608 (Screw on sphere)	Known exception
Non-manifold or one-direction edges on shapes that promise a closed mesh	≤ 0 edges	0 (Capsule)	Met
Worst edge stretch of a pinned cloth after 12 s	≤ 50.00 %	1.39 (Cloth)	Met
Instance transforms with a negative determinant	≤ 0 count	0 (Instance on Points)	Met
Decimate: worst vertex distance to the original surface	≤ 5.00 % bbox	0.851 (Decimate)	Met
Displacement: worst vertex off the formula	≤ 0.02 units	0 (Displacement)	Met

Bench: audio

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Audio callback load p99, 24 voices, per buffer size	≤ 50.00 %	44.75	Met
Xruns at 256 frames, the buffer (64 frames is not a target)	≤ 0 count	0	Met
Audio-thread ms per second of audio per track (synth + effect, held 4-note chords, offline), cheapest track count	reported	68.36 (Analog+EQ)	Reported
Tracks of that synth + effect at 70 % of one core	reported	10.00 (Analog+EQ)	Reported

Bench: canvas

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Canvas frame p50 while panning a 200-400 node patch (≥ 60 fps)	≤ 17.20 ms	16.67	Met
Canvas frame p95 while panning a 200-400 node patch (≥ 45 fps)	≤ 22.80 ms	16.69	Met
Canvas frame p95 while panning a 4000-node patch	≤ 33.30 ms	-	Not yet measured
Canvas frame p95 while select-all and clear alternate on 4000 nodes	≤ 33.30 ms	-	Not yet measured
Worst frame around deleting all 4000 nodes through the Delete-key path	≤ 500 ms	-	Not yet measured

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Nodes left after the delete-all (0 = every node went)	≤ 0 count	-	Not yet measured

Bench: fundamentals

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Launch to first frame swapped	≤ 1000 ms	342	Met
Patch load, 50-400 nodes	≤ 16.70 ms	6.04	Met
Patch save, 50-400 nodes	≤ 16.70 ms	2.86	Met

Bench: live edit

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Edit storm: edits (add, connect, delete, Field preset load) whose frame did over one refresh period of work or ran over 1.5 periods	≤ 0 frames	-	Not yet measured
Edit storm: most frame work any single edit cost (one 60 Hz period)	≤ 16.70 ms	-	Not yet measured
Edit storm: audio dropouts while the graph is edited under live load	≤ 0 count	-	Not yet measured

Bench: media I/O

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Decoded fps over the clip's own fps, per clip	$\geq 1.00 \times$ clip fps	1.01	Met
Decoded frames dropped, per clip	≤ 0 frames	0	Met
Projector window interval p99 (locked 60 fps), per window	≤ 18.30 ms	33.21	Below target
Projector window intervals over 1.5 refresh periods, per window	≤ 0.5 %	9.36	Below target

Bench: memory

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Render targets reallocated in steady state (/scenes, also the scenes)	≤ 0 count	0	Met
Peak OS footprint, /at scale l; budget = b2 baseline 760 MB + 20 %	≤ 912 MB	760	Met

Bench: offline render

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Arrangement render of the scene: seconds of take per wall second	$\geq 1.00 \times$ realtime	2.25	Met
Worst A/V marker drift in the rendered movie (av-sync-sweep: 2 frames anywhere)	≤ 2.00 frames	0	Met
A/V drift at the end of the take (av-sync-sweep: 1 frame at the end)	≤ 1.00 frames	0	Met
Movie render speed (render + encode) per scene and codec, from the slope between a 1 s and a 3 s render	reported	44.46 (blur_2160p/prores4444)	Reported
Luma PSNR of the H264 movie against the same frames written lossless	reported	35.47 (instanced_720p)	Reported

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Sound minus picture in a 10 minute rendered movie of flashes and clicks, absolute	reported	0.0417 (Infinite)	Reported
Sync drift over the same 10 minute movie, absolute	reported	0 (Infinite)	Reported

Bench: projector

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Projector present interval p99 under live load; locked 60 fps = 1.1 x 16.7 ms	≤ 18.30 ms	17.64	Met
Projector intervals over 1.5 refresh periods (: under 0.5 %)	≤ 0.5 %	0	Met
Injected param change to Output revision, worst sample	≤ 2.00 frames	1.00	Met

Bench: soak

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Soak RSS growth, last 5 min vs first 5 min after warm-up	≤ 2.00 %	-	Not yet measured
Soak xruns over the whole run	≤ 0 count	-	Not yet measured
Soak fps drop first to last sample (reported, not hidden: no target)	reported	-	Not yet measured

Built-in instruments

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
Render cost per frame, one voice	≤ 4000 ns/frame	347 (Spectral Synth)	Met
Render ms per second of audio per voice, offline	reported	29.94 (Analog)	Reported

Live scene

WHAT IS MEASURED	TARGET	WORST RESULT	STATUS
P95 frame time of a real-time audio-reactive 10,000-instance scene at 1280x720 (TD logs its own; Infinite needs the GUI)	≤ 16.70 ms	-	Not yet measured
Frames over 1.5x the 60 fps budget in that scene	≤ 1.00 %	-	Not yet measured