# CELESTIAL

## Ethereal Reverb Plugin


**DYNAMIXES**

# Table of Contents

# 1 Introduction

## 1.1 Product Overview

CELESTIAL is a professional reverb plugin developed by DYNAMIXES. With four unique reverb algorithms, it can create anything from subtle room ambience to infinite, cosmic textures.

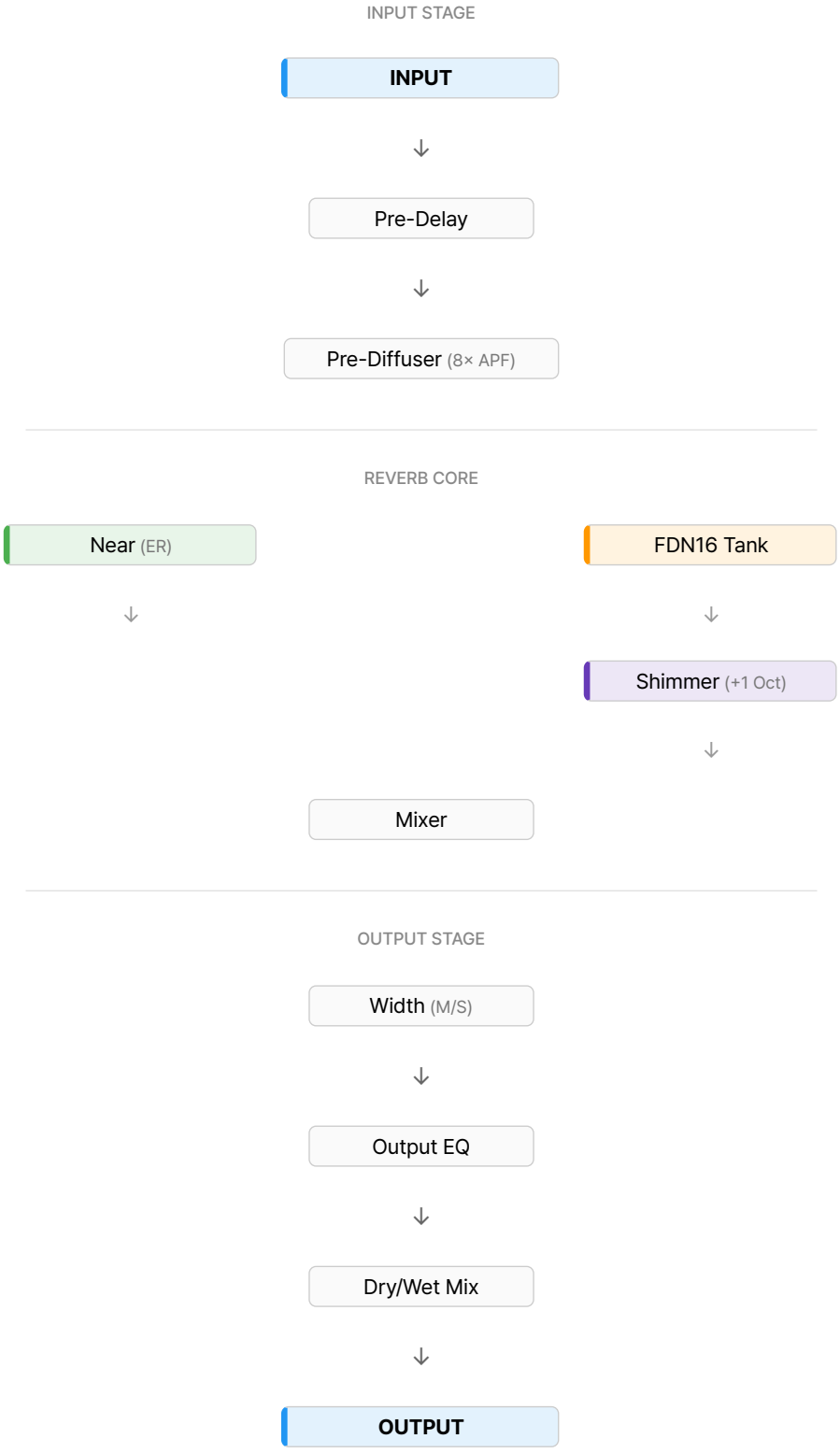
The core engine is based on a 16-channel FDN (Feedback Delay Network), and the Hadamard matrix-based feedback network generates natural, dense reverb tails.

## 1.2 Key Features

| | |
|---|---|
| **4 Reverb Algorithms** | Plate, Hall, Cinematic, and Celestial modes |
| **16-Channel FDN Engine** | High-quality reverb tank based on Hadamard matrix |
| **Parallel Shimmer** | Clean octave effect with pitch shift chain independent of FDN |
| **Dual-Band Parametric EQ** | Output EQ with switchable Shelf/Cut modes |
| **Envelope Follower** | Dynamic parameter modulation responsive to input signal |
| **BPM Sync** | Automatically sync Decay and Pre-Delay to DAW tempo |
| **Real-Time Spectrum Analyzer** | Visualize reverb output frequency |

## 1.3 Signal Flow

Audio signal in CELESTIAL is processed through the following path:




**Envelope Follower** — Tracks the input signal's envelope to modulate the FDN Tank's Decay and Damp in real-time.

# 2 Quick Start

New to CELESTIAL? Get great reverb sounds in just a few minutes.

## 2.1 Getting Started in 3 Steps

**Step 1: Select Mode**

Choose the reverb type that suits your purpose from the mode selector in the center.

| | |
|---|---|
| **Plate** | Vocals, snare, percussion — fast and bright reverb |
| **Hall** | Acoustic, orchestral — natural spatial feel |
| **Cinematic** | Film scores, ambient — dark and deep wash |
| **Celestial** | Pads, synths, special effects — ethereal shimmer |

**Step 2: Adjust Basic Parameters**

Set the core of your reverb with the main knobs at the bottom.

- **Size**: Room size (100% is default)
- **Decay**: Reverb length (1-3 seconds is typical)
- **Mix**: Dry/wet ratio (Insert: 20-40%, Send: 100%)

**Step 3: Fine-Tune**

Refine the tone in the EDIT section on the left.

- **Damp**: High-frequency attenuation (lower for darker reverb)
- **Modulation**: Chorus-like movement (around 30% sounds natural)
- **Shimmer**: Octave effect (Celestial mode only)

**TIP** — Start faster by loading a Factory Preset. Browse presets from the menu and fine-tune from a sound you like.

# 3 Installation

## 3.1 macOS

1. Run the downloaded `.pkg` or `.dmg` file.
2. Follow the installation wizard to complete the installation.
3. The plugin will be installed to the following locations:
   - **AU:** `/Library/Audio/Plug-Ins/Components/`
   - **VST3:** `/Library/Audio/Plug-Ins/VST3/`
   - **Standalone:** `/Applications/`
4. Restart your DAW to scan for the plugin.

> **TIP** — If the plugin doesn't appear in your DAW, try using your DAW's plugin rescan feature. For Logic Pro, you can check the validation status in AU Manager.

## 3.2 Windows

1. Run the downloaded `.exe` installer.
2. Select the installation path and complete the installation.
3. The plugin will be installed to the following locations:
   - **VST3:** `C:\Program Files\Common Files\VST3\`
   - **Standalone:** `C:\Program Files\DYNAMIXES\CELESTIAL\`
4. Restart your DAW to scan for the plugin.

## 3.3 Plugin Validation (macOS)

To check the AU plugin validation status, run the following command in Terminal:

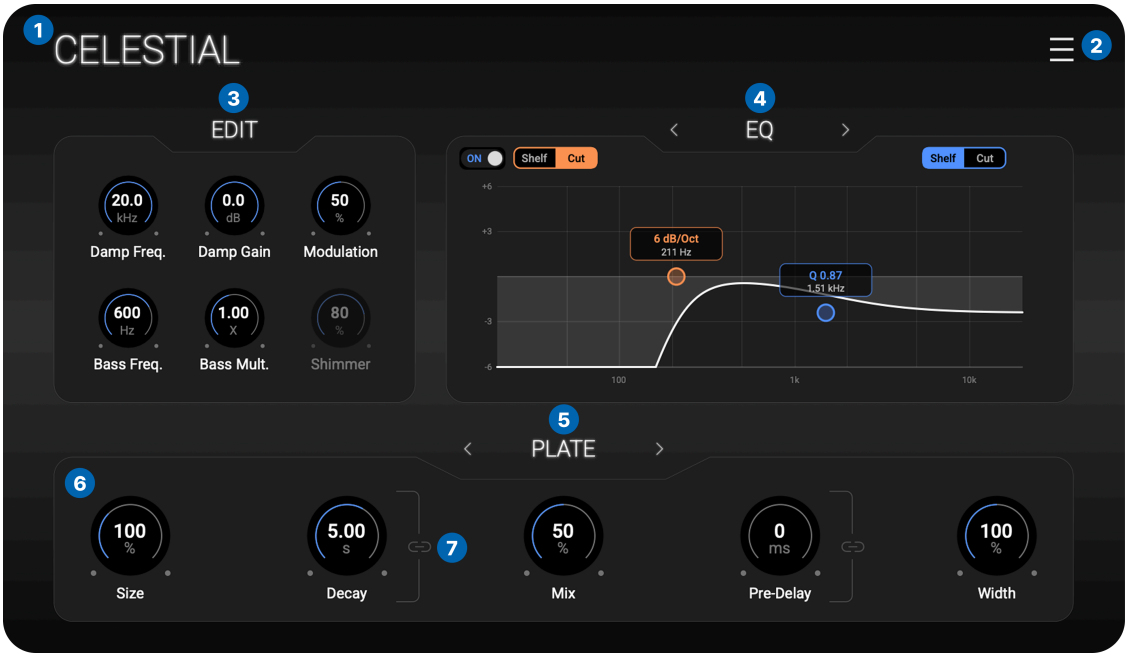
```
auval -v aumu Clst Dymx
```

If validation succeeds, you'll see a `validation succeeded` message.

# 4 Interface Overview

CELESTIAL's user interface is designed with an intuitive layout for fast workflow.

## 4.1 Full Interface




1. **Title** — Plugin name. Double-click to restore default size
2. **Menu** — UI scale, update check, license management
3. **EDIT Section** — 6 tone/character control knobs (Damp, Bass, Modulation, Shimmer)
4. **EQ / Envelope Panel** — Switch with left/right arrows. Real-time spectrum analyzer
5. **Mode Selector** — Select Plate, Hall, Cinematic, or Celestial
6. **Main Controls** — Size, Decay, Mix, Pre-Delay, Width
7. **BPM Sync** — Sync Decay/Pre-Delay to DAW tempo (link icon next to each knob)

## 4.2 Mouse & Keyboard Controls

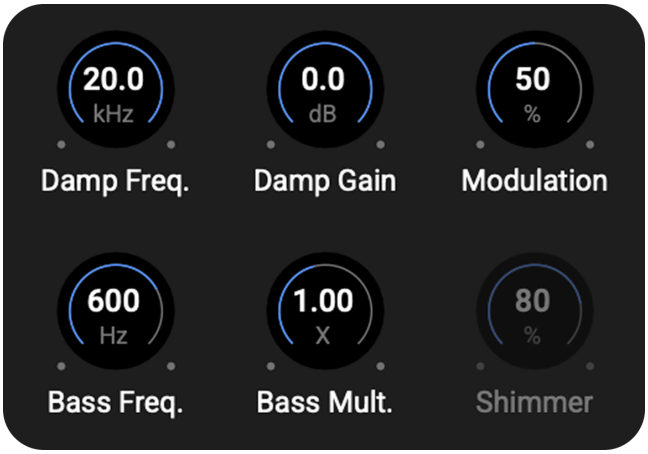
All knobs and controls in CELESTIAL support intuitive mouse interaction.

| Action | Function |
|---|---|
| Drag | Adjust knob value (up/down or circular) |
| Double-click | Reset to default value |
| Shift + Drag | Fine adjustment (precision mode) |
| Mouse wheel | Increment/decrement value (Q adjustment on EQ points) |
| Double-click title | Reset UI size to default (100%) |

**TIP** — Hold Shift while dragging for more precise value adjustments. Useful for mastering and delicate tweaks.

## 4.3 EDIT Section Details

The 6 knobs in the EDIT section control the detailed tone and character of the reverb.




### 4.3.1 Row 1: Tone Controls

**Damp Freq.** 1kHz – 20kHz
Frequency of the high shelf filter in the tank. High frequencies above this point are attenuated in the feedback loop.

**Damp Gain** −18dB – 0dB
Amount of high-frequency attenuation. Lower values create warmer, darker reverb.

**Modulation** 0% – 100%
LFO modulation intensity in the tank. Adds chorus-like movement.

### 4.3.2 Row 2: Bass & Shimmer

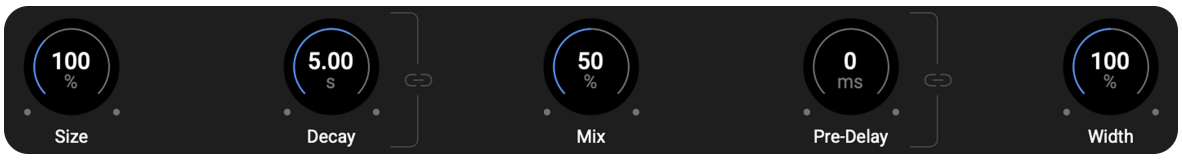
**Bass Freq.** 100Hz – 1200Hz
Crossover frequency where Bass Mult is applied.

**Bass Mult.** ×0.25 – ×4.0
Decay time multiplier for low frequencies. Values above ×1.0 make bass resonate longer.

**Shimmer** 0% – 100%
Intensity of the +1 octave pitch shift effect.
※ Only active in CELESTIAL mode

## 4.4 Main Controls Details

The 5 large knobs at the bottom control the core parameters of the reverb.




| Parameter | Range | Description |
|---|---|---|
| **Size** | 50% – 200% | Size of the reverb space. Controls the delay line length of the FDN tank. |
| **Decay** | 0.1s – 20s | Length of reverb tail (RT60). Time for signal to decay to −60dB. |

| Parameter | Range | Description |
|---|---|---|
| **Mix** | 0% – 100% | Dry/wet mix. Equal Power Crossfade maintains natural volume. |
| **Pre-Delay** | 0 – 500ms | Gap between dry signal and reverb. Improves source clarity. |
| **Width** | 0% – 400% | Stereo width. M/S processing expands/contracts the stereo image. |

**TIP** — Click the link icon (●) next to each knob to sync that parameter to BPM. Decay snaps to bar divisions (1/16 4 Bars), Pre-Delay snaps to note divisions (1/64 1 Bar).

# 5 Reverb Modes

CELESTIAL offers 4 unique reverb algorithms. Each mode has different acoustic characteristics, and internal parameters are set to optimized values for each algorithm when switching modes.

## 5.1 PLATE

Recreates the characteristics of classic plate reverb.

| | |
|---|---|
| **Attack** | Fast — Responds instantly to transients |
| **Frequency Character** | Bright — Remains transparent up to 20kHz |
| **Early Reflections** | Dense — Tight initial reflections |
| **Suitable Sources** | Vocals, snare, percussion, piano |

## 5.2 HALL

Creates a natural concert hall spatial feel.

| | |
|---|---|
| **Attack** | Soft — Natural buildup |
| **Frequency Character** | Warm — Natural rolloff at 10kHz |
| **Early Reflections** | Wide — Diffused initial reflections |
| **Suitable Sources** | Orchestra, acoustic guitar, piano, ensemble |

## 5.3 CINEMATIC

Dark and deep reverb suitable for film scores.

| | |
|---|---|
| **Attack** | Very slow — Wash effect |
| **Frequency Character** | Extremely dark — 400Hz rolloff |
| **Bass** | Enhanced — 2× decay increase |
| **Pre-Delay** | Fixed 80ms (additional settings available) |
| **Early Reflections** | Disabled — Pure tail only |
| **Suitable Sources** | Film scores, ambient, sound design |

## 5.4 CELESTIAL

Signature shimmer reverb creating pitch-shifted ethereal space.

| | |
|---|---|
| **Shimmer** | +1 octave pitch shift (parallel processing with FDN) |
| **Frequency Character** | Bright — Preserves original harmonics |
| **Modulation** | Soft — Natural movement |

| | |
|---|---|
| **Dry Signal** | 1.5× boost — Maintains dry clarity |
| **Suitable Sources** | Ambient, pads, synths, special effects |

**NOTE** — The Shimmer parameter is only active in CELESTIAL mode. In other modes, the knob is disabled and cannot be adjusted.

# 6 Parameter Reference

## 6.1 Main Controls

Core parameters controlled by the 5 large knobs at the bottom.

### 6.1.1 Size

**Range** 50% – 200%
**Default** 100%

Controls the size of the reverb space. This parameter scales the delay line lengths of the FDN tank to change the perceived room size. Lower values create a small room feel, while higher values create a massive hall feel.

### 6.1.2 Decay

**Range** 0.1s – 20s

| Plate | Hall | Cinematic | Celestial |
|---|---|---|---|
| 5.0s | 8.0s | 12.0s | 17.5s |

The time it takes for the reverb tail to decay to −60dB (RT60). Short values create tight room sounds, while long values create hall or infinite reverb. Feedback gain increases as Decay increases.

### 6.1.3 Mix

**Range** 0% – 100%
**Default** 50%

Mix ratio between dry and wet signals. Uses Equal Power Crossfade to maintain consistent perceived volume at any mix position. 0% is fully dry, 100% is fully wet.

### 6.1.4 Pre-Delay

**Range** 0ms – 500ms
**Default** 0ms

The gap between the original signal and reverb onset. Increasing Pre-Delay prevents the reverb from masking the source attack, improving clarity. Long Pre-Delay is also used to simulate large spaces.

### 6.1.5 Width

**Range** 0% – 400%
**Default** 100%

Controls the stereo width of the reverb output. Uses M/S processing to expand or contract the stereo image. 0% is full mono, 100% is original stereo, and 200%+ creates an exaggerated stereo image.

#### 6.1.6 Decay BPM Sync

Click the link icon to the right of the Decay knob to sync Decay to DAW tempo. When sync is active, the icon turns orange.

When synced, turning the Decay knob snaps to the nearest value among these bar divisions:

| 1/16 | 1/8 | 1/4 | 1/2 | 1 Bar | 2 Bars | 4 Bars |
|---|---|---|---|---|---|---|

#### 6.1.7 Pre-Delay BPM Sync

Click the link icon to the right of the Pre-Delay knob to sync Pre-Delay to DAW tempo. When sync is active, the icon turns orange.

When synced, turning the Pre-Delay knob snaps to the nearest value among these note divisions:

| 1/64 | 1/32 | 1/16T | 1/16 | 1/8T |
|---|---|---|---|---|
| 1/8 | 1/4T | 1/4 | 1/2 | 1 Bar |

**NOTE** — In BPM Sync mode, Pre-Delay values are clamped to a maximum of 2000ms. If the calculated sync value exceeds 2000ms, it is automatically limited to 2000ms.

**TIP** — BPM Sync helps reverb blend naturally with the groove in tempo-based music. Especially useful for EDM, hip-hop, and pop.

### 6.2 EDIT Section

Detail parameters controlled by the 6 small knobs in the left panel.

#### 6.2.1 Damp Freq

**Range** 1kHz – 20kHz
**Default** 20kHz

Frequency of the high shelf filter in the tank. High frequencies above this point are attenuated by the amount set in Damp Gain each time they cycle through the reverb feedback loop.

#### 6.2.2 Damp Gain

**Range** −18dB – 0dB
**Default** 0dB

Intensity of tank damping. Lower values cause highs to disappear faster, creating warmer, darker reverb. At −18dB, highs disappear almost instantly; at 0dB, there is no attenuation.

#### 6.2.3 Modulation

**Range** 0% – 100%

| Plate | Hall | Cinematic | Celestial |
|---|---|---|---|
| 5% | 30% | 10% | 80% |

Intensity of LFO modulation in the reverb tank. Subtly modulates delay line lengths to add chorus-like movement. Appropriate modulation reduces static feeling and makes reverb more lively.

#### 6.2.4 Bass Freq

**Range** 100Hz – 1200Hz

**Default** 600Hz

Crossover frequency where Bass Mult is applied. The decay multiplier set by Bass Mult applies to low frequencies below this point.

### 6.2.5 Bass Mult

**Range** ×0.25 – ×4.0

| Plate | Hall | Cinematic | Celestial |
|---|---|---|---|
| ×1.0 | ×1.0 | ×2.0 | ×1.0 |

Decay time multiplier for low frequencies. This parameter affects the **length of resonance**, not volume.

| | |
|---|---|
| **×0.5** | Bass fades quickly — Cleaner mix, reduced muddiness |
| **×1.0** | Neutral — All frequencies decay equally |
| **×2.0** | Bass resonates 2× longer — Grand, full sound |
| **×4.0** | Very long bass tail — For drones, ambient sound design |

### 6.2.6 Shimmer

**Range** 0% – 100%

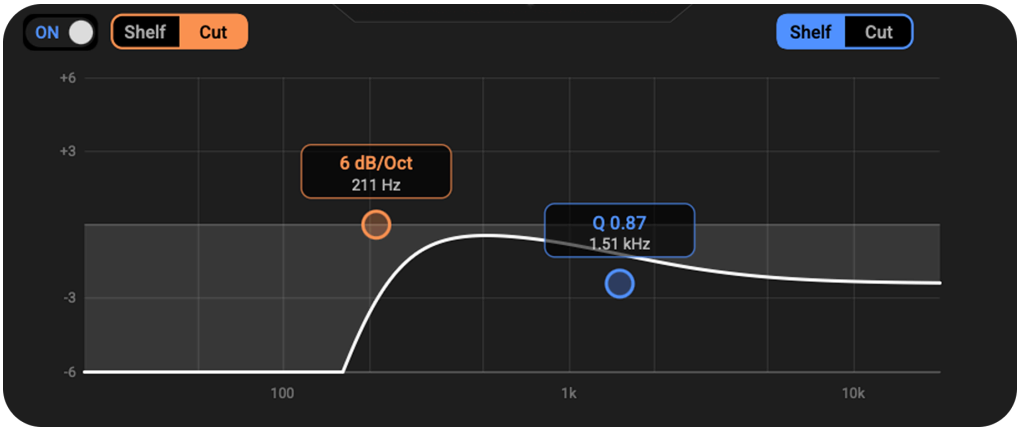
**Default** 40% (Celestial mode)

**Availability** Only available in CELESTIAL mode

Intensity of the shimmer effect. Controls how much the pitch-shifted signal (+1 octave) is mixed into the reverb output. CELESTIAL's shimmer is processed through a parallel chain independent of the FDN, so pitch artifacts don't accumulate in the reverb tank.

# 7 EQ Section

CELESTIAL includes a dual-band parametric EQ applied to the reverb output. Each band can switch between Shelf and Cut modes for flexible tone shaping.




## 7.1 EQ Activation

Toggle the EQ on and off with the switch on the left side of the EQ panel. When EQ is disabled, the signal bypasses EQ processing.

## 7.2 Low Band

| Parameter | Range | Description |
|---|---|---|
| Mode | Shelf / Cut | Shelf: Low boost/cut. Cut: High-pass filter |
| Frequency | 20Hz – 1kHz | Shelf point or cutoff frequency |
| Gain | −12dB – +12dB | Shelf mode only |
| Q | 0.3 – 3.0 | Shelf mode only |
| Slope | 6 / 12 / 24 / 48 dB/oct | Cut mode only |

## 7.3 High Band

| Parameter | Range | Description |
|---|---|---|
| Mode | Shelf / Cut | Shelf: High boost/cut. Cut: Low-pass filter |
| Frequency | 1kHz – 20kHz | Shelf point or cutoff frequency |
| Gain | −12dB – +12dB | Shelf mode only |
| Q | 0.3 – 3.0 | Shelf mode only |
| Slope | 6 / 12 / 24 / 48 dB/oct | Cut mode only |

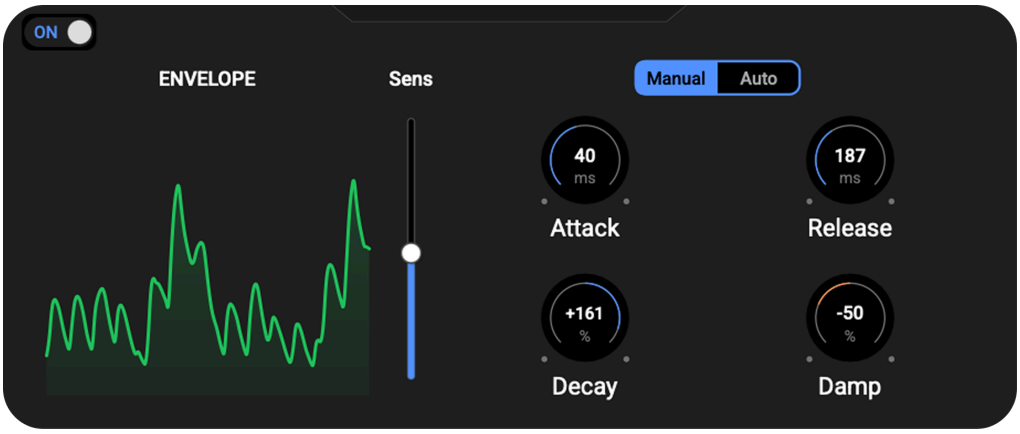
## 7.4 Spectrum Analyzer

The EQ display shows a real-time spectrum analyzer. It visualizes the frequency distribution of the reverb's wet signal output for reference when adjusting EQ.

**TIP** — Drag the EQ point labels to adjust Q (Shelf mode) or Slope (Cut mode).

# 8 Envelope Follower

The Envelope Follower tracks the volume envelope of the input signal to dynamically adjust reverb parameters. This allows you to create expressive reverb effects on dynamic sources like drums or vocals.




## 8.1 Activation

Toggle the Envelope Follower on and off with the switch on the left side of the Envelope panel.

## 8.2 Mode Selection

| | |
|---|---|
| **Auto** | Attack and Release are fixed at 1ms for accurate envelope tracking of the input signal. Works well with most sources and can be used immediately without additional settings. |
| **Manual** | Set Attack and Release manually. Use when custom response is needed for specific sounds. |

## 8.3 Parameters

| Parameter | Range | Description |
|---|---|---|
| Attack | 1ms – 200ms | Envelope rise speed (Manual mode) |
| Release | 50ms – 1000ms | Envelope fall speed (Manual mode) |
| Sensitivity | 0% – 1000% | Envelope detection sensitivity |
| Env → Decay | −200% – +200% | Envelope influence on Decay |
| Env → Damp | −100% – +100% | Envelope influence on Damp Gain |

## 8.4 Modulation Behavior

### 8.4.1 Env → Decay

Positive (+) values: Louder input signal increases Decay.
Negative (-) values: Louder input signal decreases Decay.

#### 8.4.2 Env → Damp

Positive (+) values: Louder input signal increases Damp Gain, brightening the reverb.
Negative (-) values: Louder input signal decreases Damp Gain, darkening the reverb.

## 8.5 Usage Examples

| | |
|---|---|
| **Dynamic Reverb on Drums** | Set Env → Decay to +100% for longer tails on hard hits. |
| **Vocal Brightening** | Set Env → Damp to −50% to brighten reverb when vocals get louder. |
| **Reverse Swell** | Set Env → Decay to negative values for longer reverb when signal is quiet. |

# 9 Tips & Techniques

## 9.1 Vocal Reverb

| | |
|---|---|
| **Mode** | Plate or Hall |
| **Pre-Delay** | 30–80ms (maintain vocal clarity) |
| **Decay** | 1.5–3 seconds |
| **High EQ** | Shelf mode, −3dB at 8kHz (suppress sibilance) |
| **Mix** | 15–25% |

Pre-Delay plays an important role for vocals. Proper Pre-Delay prevents the reverb from masking word attacks, maintaining lyric clarity.

## 9.2 Drum Ambience

| | |
|---|---|
| **Mode** | Plate |
| **Size** | 80–120% |
| **Decay** | 0.5–1.5 seconds |
| **Low EQ** | Cut mode, 150Hz (clean up low end) |
| **Mix** | 20–40% |

Short, tight Plate reverb works well on drums. Use Low Cut to prevent kick drum lows from muddying the reverb.

## 9.3 Orchestral / Film Scores

| | |
|---|---|
| **Mode** | Cinematic |
| **Decay** | 4–8 seconds |
| **Bass Mult** | ×2.0 – ×3.0 (grand bass) |
| **Pre-Delay** | Auto 80ms + additional settings |
| **Mix** | 30–50% |

Cinematic mode places orchestras or pianos in a cinematic space with its dark wash effect. Increase Bass Mult for grand bass tails.

### 9.4 Ambient / Pads

| | |
|---|---|
| **Mode** | Celestial |
| **Shimmer** | 60–100% |
| **Decay** | 8–20 seconds |
| **Modulation** | 50–80% |
| **Width** | 150–200% |
| **Mix** | 50–80% |

Celestial mode's shimmer effect adds ethereal texture to ambient and pads. Create infinitely expansive space with high Decay and Width.

**PRO TIP** — For 100% wet signal, insert CELESTIAL on a send/return bus and set Mix to 100%. This allows precise control of reverb level separate from the dry signal.

## 10 Factory Presets

CELESTIAL includes factory presets ready to use in various situations. Presets are organized by category and can be browsed from the preset browser at the top of the plugin.

### 10.1 Preset Categories

| Category | Characteristics |
|---|---|
| **Plate** | Bright, fast-responding plate reverb. Suitable for vocals, snare, percussion |
| **Hall** | Natural concert hall simulation. Suitable for acoustic instruments, orchestra |
| **Cinematic** | Dark, deep cinematic space. Uses dynamic envelope, modulation |
| **Celestial** | Ethereal shimmer reverb. Suitable for ambient, pads, sound design |

### 10.2 Using Presets

1. Click the preset name at the top of the plugin to open the browser.
2. Select a category and click the desired preset.
3. Once the preset loads, fine-tune parameters to fit your track.

**TIP** — Use factory presets as starting points. Adjust Mix, Decay, and EQ based on each preset to quickly create the perfect reverb for your track.

# 11 System Requirements

## 11.1 macOS

| | |
|---|---|
| **Operating System** | macOS 10.15 Catalina – macOS 26 Tahoe |
| **Processor** | Intel 64-bit or Apple Silicon (M1/M2/M3/M4/M5) |
| **RAM** | 4GB or more recommended |
| **Plugin Formats** | AU, VST3, Standalone |

## 11.2 Windows

| | |
|---|---|
| **Operating System** | Windows 10 / Windows 11 (64-bit) |
| **Processor** | Intel/AMD 64-bit |
| **RAM** | 4GB or more recommended |
| **Plugin Formats** | VST3, Standalone |

## 11.3 Supported DAWs

The following DAWs have been tested and confirmed to work properly:

- Logic Pro 10.8 – 11
- Pro Tools 2024 – 2025
- Ableton Live 12
- Cubase 15
- Nuendo 14
- Studio One 7
- FL Studio 25
- Reaper 7
- Reason 13
- Adobe Audition CC 2025
- Premiere Pro CC 2025
- Maschine 3

**NOTE** — VST2 format is not supported. All plugins are 64-bit only.

# 12 License Activation

## 12.1 Getting a License

1. Create an account at www.dynamixes.com.
2. Request a free download on the CELESTIAL plugin page.
3. A license key will be sent to your email. You can also view it in your dashboard.

## 12.2 Activation Method

1. When you first run the plugin in your DAW, a license input window will appear.
2. Enter your license key. The key format is as follows:

```
XXXXXXXX–XXXX–XXXX–XXXX–XXXXXXXXXXXX
```

3. Click the “Activate” button.
4. The license will be verified via internet connection.

**TIP** — For license-related inquiries, please contact gsik.artist@gmail.com.

# 13 Troubleshooting

## 13.1 Plugin Not Visible in DAW

- Verify that your DAW's plugin folder path is correctly set.
- Run your DAW's plugin rescan feature.
- On macOS, run `auval -a | grep Clst` in Terminal to check AU validation status.
- The plugin may have been blocked by Gatekeeper. Go to System Preferences > Privacy & Security and select "Open Anyway."

## 13.2 License Activation Failure

- Check your internet connection.
- Verify the license key format is correct. It must include hyphens (-).
- If already activated on 3 computers, you must deactivate an existing activation.
- Check if firewall or security software is blocking the connection.

## 13.3 Audio Dropouts / High CPU Usage

- If audio dropouts occur, try increasing your DAW's buffer size.
- Disable unnecessary other plugins.
- CELESTIAL mode (Shimmer) uses more CPU due to additional pitch shift processing.
- CPU usage increases at high sample rates (96kHz and above).

## 13.4 No Sound

- Verify the Mix knob is not set to 0%.
- Check if excessive Cut in the EQ is blocking the signal.
- Verify the input signal is correctly routed to the plugin.
- Check if the plugin is in bypass state.

## 13.5 Settings Not Saved

- Verify you saved the DAW project. Plugin settings are saved with the project.
- Save settings as a preset to use in other projects.
- Some DAWs save plugin state separately. Refer to your DAW manual.

---