dam audio

SPLAY · STEREO WIDENER · USER GUIDE

Splay
User Guide

From mono to a wide stereo field with phase alone, at zero latency. Installation, license activation and every control of the plugin, Split mode included.

EDITION

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1.0.0

SUPPORT

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CHAPTER 1

Welcome

What Splay does, what you need to run it, and the two kinds of license.

1.1 What Splay does

Splay widens a sound with phase instead of delays, chorus or reverb. One control sets how wide, another sets which frequencies open. Mono or stereo in, stereo out, with no latency.

Most ways of turning one channel into two add something to the sound: a short delay, a modulation, a little room. They work until the mix is played in mono, or until a transient comes out smeared. Splay adds nothing. It shifts the phase of the left and right channels in opposite directions, by the **same fraction of a wavelength at every frequency**: a quarter of a wavelength at 200 Hz, a quarter of a wavelength at 8 kHz. Both channels keep the level of the source, so the image opens from the centre without leaning to one side.

Because the rule is simple, the controls are too. **Width** is the angle between the two channels, in degrees. **Range** is the part of the spectrum that opens. **In phase** keeps the mono sum exactly equal to the source. When one setting is not enough, **Split** cuts the spectrum into up to eight sections, each with its own width.

Splay is made of short recursive filters: no block processing, no lookahead, no reported latency. It can sit on a vocal on stage as well as on forty tracks of a session. An optional **Linear phase** mode trades latency for ideal filters, with a choice of two qualities, Low latency and High (section 5.2).



Splay as it opens: In phase on, Width 90°, Range over the whole spectrum.

1.2 System requirements

	MACOS	WINDOWS
Operating system	macOS 12 Monterey or later	Windows 10 or 11, 64-bit
Processor	Apple silicon or Intel (universal binary)	x64
Plugin formats	Audio Unit (category Imaging), VST3 and AAX (category Sound Field)	VST3 and AAX (category Sound Field); no Audio Unit on Windows
Hosts	Any 64-bit AU or VST3 host, for example Logic Pro, Reaper, Ableton Live, Cubase, Nuendo, Bitwig Studio; Pro Tools for AAX	Any 64-bit VST3 host, for example Reaper, Cubase, Nuendo, Ableton Live, Bitwig Studio, FL Studio, Studio One; Pro Tools for AAX
Channel layouts	Mono to stereo, stereo to stereo	Same
Sample rates	44.1 to 192 kHz	Same
Internet	Once for activation (or a second device for offline activation); not needed afterwards	Same

1.3 Licenses at a glance

LICENSE 80 €, one-time payment, no subscription. Permanent, every feature, activates on **two computers**, online or offline.

TRIAL 15 days, the complete plugin with nothing held back, on **one computer**. A trial is given once per person and per product.

WITHOUT A LICENSE Splay opens on its License panel and **outputs silence** until a license is active.

YOUR SETTINGS Your sessions keep their Splay settings when you move from the trial to a full license.

The full terms are summarised in section 8.3.

CHAPTER 2

Installation

Run the installer for your system, choose your plugin formats, and rescan plugins in your host.

2.1 macOS

The installer is a single file, signed and notarized by Apple: **Splay-1.0.0-macOS.pkg**. The download link is in the e-mail that carries your license key, and on the Splay page of **dam-audio.com**.

1. Quit your audio software.
2. Double-click **Splay-1.0.0-macOS.pkg** and follow the installer.
3. On the **Installation Type** screen, click **Customize** to choose the formats you need: **VST3**, **Audio Unit (Logic Pro)** and **AAX (Pro Tools)**. All three are selected by default.
4. Enter your administrator password when asked: plugins are installed for all users of the computer.
5. Open your host. Most hosts scan new plugins at launch; in Logic Pro, open **Logic Pro › Settings › Plug-in Manager** if Splay is not listed, or if it is listed as failed: select it and click **Reset & Rescan Selection**.

FORMAT	INSTALLED IN
VST3	/Library/Audio/Plug-Ins/VST3/Splay.vst3
Audio Unit	/Library/Audio/Plug-Ins/Components/Splay.component
AAX	/Library/Application Support/Avid/Audio/Plug-Ins/Splay.aaxplugin

2.2 Windows

The Windows installer is a single signed file: **Splay-1.0.0-Windows-x64-Setup.exe**, from the same download link.

1. Quit your audio software.
2. Run **Splay-1.0.0-Windows-x64-Setup.exe**. Windows asks for administrator rights, because the plugins go into the shared plugin folders.
3. Choose the formats you need: **VST3**, **AAX (Pro Tools)**, or both.
4. Open your host and rescan plugins if Splay does not appear.

FORMAT	INSTALLED IN
VST3	C:\Program Files\Common Files\VST3\Splay.vst3
AAX	C:\Program Files\Common Files\Avid\Audio\Plug-Ins\Splay.aaxplugin

On both systems the plugin needs nothing else: no runtime or other component has to be installed. Its identifiers are **DSpl** (plugin code) and **DmAu** (manufacturer code, DAM Audio).

2.3 Updating and uninstalling

To update, run the new installer over the old version. Your license is kept, and your sessions find the plugin again with all their settings.

On macOS, to uninstall, delete **Splay.vst3**, **Splay.component** and **Splay.aaxplugin** from the folders listed in section 2.1. On Windows, open **Settings › Apps › Installed apps**, select **Splay** and choose **Uninstall**.

TIP Before removing Splay from a computer for good, deactivate it (section 3.5) so the activation can be used on another machine. Uninstalling does not deactivate it. A computer activated offline cannot be deactivated (section 3.3).

CHAPTER 3

License and activation

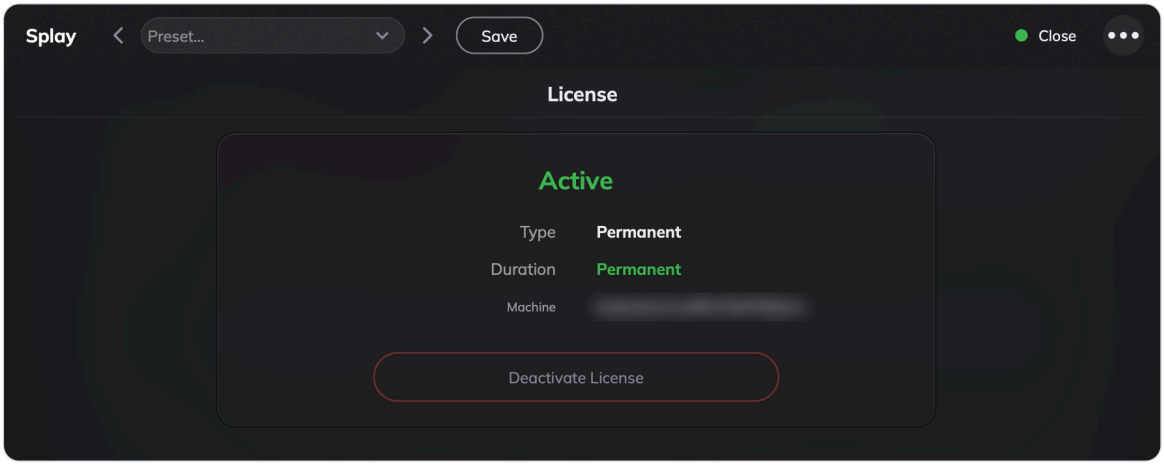
Your key, online and offline activation, working without internet, and moving to another computer.

3.1 Your license key

After your order on **dam-audio.com**, your key arrives by e-mail. It is **16 characters long and starts with DS**, for example **DSXX-XXXX-XXXX-XXXX**. Type or paste it as received: dashes, spaces and letter case are ignored. A trial key works the same way.

The license is tied to each computer it is activated on, through a machine identifier computed by the plugin. It is not tied to a host: once a computer is activated, every host on that computer can use Splay, in every format.

Until the plugin is activated, it **outputs silence** and its window opens on the License panel. The license state at the top right of the window shows a red dot and **Not licensed**; it turns into a green dot and **Licensed** once the license is active. Click it at any time, or choose **License…** in the ••• menu, to open the License page over the plugin; click **Close** in the same place to go back to the controls.



The License page of an activated computer: state, type, duration and machine identifier (blurred out here), with Deactivate License below.

3.2 Activating online

1. Insert Splay on a track and open its window. It opens on the License panel.
2. Paste your key in the **Product Key…** field under **Online Activation**.
3. Click **Activate Now**. The panel shows **Activated!**, then **Active** in green, the license type (Permanent or Trial), its duration and the machine identifier.
4. Click **Close** at the top right to reach the controls.

If the key is incomplete or belongs to another product, the panel says so under the button: check the 16 characters and the DS prefix.

3.3 Activating offline

Use this when the computer running your studio has no internet access. You need a second device (computer or phone) that is online.

> **IMPORTANT** An offline activation is permanent. It can never be deactivated or moved to another computer: if you remove the license from this computer later, the activation stays counted on your license and is lost. If you may need to move the license one day, activate online instead.

1. On the studio computer, open the License panel and scroll down to **Offline Activation**. Paste your key in its **Product Key...** field and click **Generate Request Code**. A request code appears in the field below.
2. Copy the request code to the online device (by USB key, or by typing it).
3. On the online device, open **download.dam-audio.com/offline-activation**, paste the request code and get your **activation code**. Copy it.
4. Back on the studio computer, paste the activation code in **Paste the activation code here...** and click **Activate with Token**.

The activation code only works on the computer that produced the request code, and only with that key: the panel tells you if it was made for another computer or another license.

> **TIP** If you cannot open the page, write to contact@dam-audio.com with your key and the request code; we reply with the activation code.

> **NOTE** An offline activation counts as one of your activations, like an online one. The computer never needs to go online afterwards.

3.4 Working offline and license messages

When the computer is online, Splay checks its license with the server when it opens, then about once a day, in the background, without interrupting audio. If the server cannot be reached, Splay **keeps working, with no time limit**: a studio computer can stay offline for good. A trial still ends on its end date.

When audio stops, the License panel says why:

MESSAGE	WHAT IT MEANS	WHAT TO DO
This Splay license ended on …	The trial period is over.	Buy a license and activate it with the new key.
This computer's date is … days behind / ahead of the real date	The computer's date differs from the real date by more than a day (checked when online).	Set the correct date and time; audio comes back at the next check.
The license file was modified or removed outside Splay	The license file was edited, deleted or copied from elsewhere.	Activate again with the same key: online, it takes no extra activation; offline, paste your activation code again.
License revoked by the server	The key was deactivated on our side.	Contact contact@dam-audio.com.
System clock is inconsistent	The computer's date went back in time.	Set the correct date and time, then reopen the plugin.

3.5 Moving to another computer

1. On the computer you are leaving, open the License panel and click **Deactivate License**. Confirm. The activation is released on the server.
2. On the new computer, install Splay and activate it with the same key.

Deactivating needs an internet connection. If the license server cannot be reached, the panel says so and the license stays on the computer: connect it and try again.

> **IMPORTANT** A computer activated offline cannot be deactivated: its activation stays counted on your license.

If a computer activated online is no longer available (lost, reinstalled), write to contact@dam-audio.com with your key: we release the activation for you.

CHAPTER 4

Using Splay in your host

Step by step in Logic Pro, Pro Tools and VST3 hosts such as Reaper: on a mono source, or on a stereo one.

4.1 Logic Pro (Audio Unit, macOS)

Logic Pro and the Audio Unit exist on macOS only. On a mono track, Splay turns the channel strip into a stereo one. On a stereo track it works stereo to stereo.

1. Select the track and click an empty **Audio FX** slot of its channel strip.
2. On a mono track, choose **Audio Units › DAM Audio › Splay** in its **Mono → Stereo** version. On a stereo track, choose the **Stereo** version. In the category view, Splay is listed under **Imaging**.
3. Play the track. The display shows the opening by frequency, coloured by the spectrum of your sound, and the Correlation meter shows the result at the output.
4. To check the mono sum, insert Logic's **Gain** plugin after Splay and switch on its **Mono** button (section 7.1).

4.2 Pro Tools (AAX)

These steps are the same on macOS and Windows. Splay appears in the **Sound Field** category of the insert menus.

1. On a **mono** track, click an insert and choose **plug-in › Sound Field › Splay (mono/stereo)**. The track continues in stereo after the insert.
2. On a **stereo** track, choose **multichannel plug-in › Sound Field › Splay**, not the multi-mono version: Splay needs to see both channels together.
3. Open the plugin window and activate your license if it is the first time (chapter 3).

4.3 Reaper and other VST3 hosts (macOS and Windows)

1. Click the **FX** button of the track and add **VST3: Splay (DAM Audio)**.
2. Leave the track at 2 channels. A mono item on a Reaper track reaches Splay on both channels; Splay sees identical channels and opens them as a mono source, with the full angle.
3. Play, and adjust Width and Range.

Any host that loads VST3 plugins works the same way, on macOS and Windows: Cubase, Nuendo, Ableton Live, Bitwig Studio, FL Studio, Studio One. Insert Splay on a mono or stereo track whose output is stereo. To check the mono sum in Reaper, use the **Mono** button of the master track.

CHAPTER 5

The interface

A tour of the window: the header, the display and the three controls below it.

5.1 Overview



The main window, Split off.

1. **Presets** arrows and menu: factory and user presets (section 5.2).
2. **Save** store the current settings as a user preset.
3. **License state** green: Licensed, red: Not licensed. Opens the License page.
4. **••• menu** Shortcuts..., License..., Delete preset.
5. **Output** level after the processing, −24 to +6 dB.
6. **Linear phase** ideal filters, with latency; Low or High quality in the menu at its left (section 5.2).
7. **In phase** keeps the mono sum equal to the source (section 5.6).
8. **Split** a different width for each part of the spectrum (chapter 6).
9. **Bypass** the input as it is, with a 20 ms crossfade.
10. **Display** the opening by frequency; drag the curve to set Width (section 5.3).
11. **Legend** the mode and the angle set, or the correlation in Split.
12. **Width** the angle between left and right (section 5.4).
13. **Range** where the sound opens (section 5.5).
14. **Correlation** of the output, from −1 to +1 (section 5.7).

Drag a slider to change its value. Double-click a value to type an exact number. All settings are exposed to your host for automation, except the solo button of Split mode. The window has a fixed size of 888 × 576 points.

NOTE Version 1.0 brings a new look, presets, the ••• menu and the Shortcuts panel. The Size choice of 0.1 is gone; sessions saved with 0.1 open with the same settings.

5.2 Header, presets and the row of switches



The header: presets, Save, license state and the ••• menu.

Presets

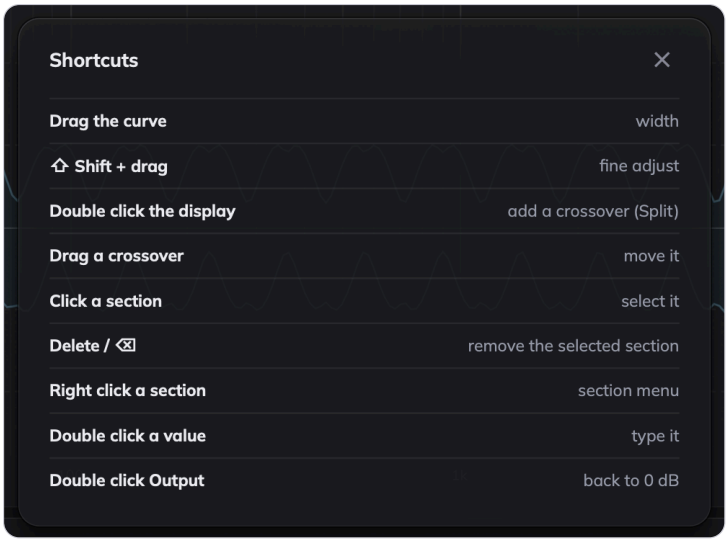
The preset menu lists seven **factory presets**, then your own. The arrows on each side step to the previous or next one. Presets leave Linear phase, its quality and Bypass as they are.

FACTORY PRESET	WHAT IT SETS
Default	In phase on, Width 90°, Range over the whole spectrum: the setting Splay opens with.
Subtle	In phase on, Width 45°.
Wide (phase)	In phase off, Width 140°: a pure phase shift, wider, at the expense of the mono sum.
Mono bass	In phase on, Width 90°, Range from 150 Hz: the low end stays centred.
Vocal	In phase on, Width 110°, Range 200 Hz to 12 kHz.
Maximum in phase	In phase on, Width at its stop of 150°.
Split: tight low, wide top	Split on, one crossover at 250 Hz: below it off, above it 130° in phase off.

Save asks for a name and stores the settings as a **user preset**, a file shared by every host on the computer. **Delete preset**, in the ••• menu, moves the selected user preset to the trash; factory presets cannot be deleted. Your host's own presets and session recall work as usual.

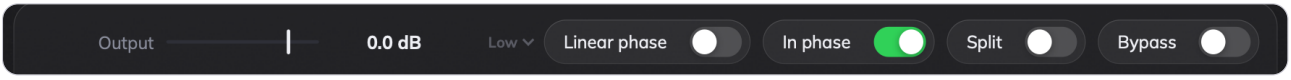
The ••• menu

The round ••• button at the top right opens **Shortcuts...** (every mouse and keyboard gesture, below), **License...** and **Delete preset**.



The Shortcuts panel. Press Escape, click the cross or click outside to close it.

The row of switches



Output, Linear phase and its quality, In phase, Split and Bypass, at the top of the display.

OUTPUT –24 to +6 dB in steps of 0.1 dB, 0 dB by default. Applied after the processing. Double-click the slider to come back to 0 dB, double-click the value to type one. In bypass, the output returns to 0 dB: bypass is the input as it is.

LINEAR PHASE Off by default. When on, Splay computes the same modes with linear phase filters: the two channels are shifted by exactly 90° from each other at every frequency in the range, and the sections of Split use zero phase crossovers. The price is a latency, which Splay reports to the host for compensation. Switching it fades the sound out and back in over 20 ms. Keep it off for live use and for tracking.

LOW / HIGH The quality of Linear phase, chosen in the small **Low** ▾ menu left of the switch, and greyed while Linear phase is off. **Low** (Low latency, the default) keeps the latency short and is a little less precise below about 150 Hz. **High** is finer in the low end, with a longer latency. Changing it during playback mutes the sound for a fraction of a second while the filters are rebuilt, then the host is told the new latency.

LATENCY (SAMPLES)	44.1 AND 48 KHZ	88.2 AND 96 KHZ	176.4 AND 192 KHZ
Linear phase off	0	0	0
Low latency	1151 (24 ms at 48 kHz)	2302	4604
High	4223 (88 ms at 48 kHz)	8446	16892

5.3 The display

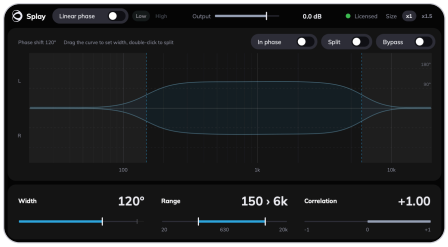
The display shows **where the sound opens, frequency by frequency**, from 20 Hz on the left to 20 kHz on the right. The left channel is drawn above the centre line, the right channel below it. The height is the angle between

the channels, on a scale from 0 to 180 degrees: on the centre line the sound is mono, on the first dotted line (90°) left and right are a quarter of a wavelength apart, on the second (180°) they are in opposite polarity.

The shape follows your settings, not the signal: it is always there, pale when no sound plays. As the track plays, the spectrum of the input colours the shape, so you see which frequencies actually carry energy. The dashed lines mark the edges of Range.



In phase on, Width 90°: the opening ripples from one third of an octave to the next.



In phase off, Width 120°, Range 150 Hz to 6 kHz: a constant shift inside the range.

Drag the curve

Click in the display and drag **away from the centre line** to open, **towards it** to close, from above or below. The legend shows the value during the gesture. Hold **Shift** for five times finer steps. The gesture stops at the same limit as the Width slider.

Legend

At the bottom left of the display, the legend gives the mode (**In phase** or **Phase shift**) and the angle set, or the value being changed during a gesture. It shows **Bypassed** when Bypass is on. The gestures are listed in the Shortcuts panel.

> **TIP** Double-clicking the display switches Split on, with a crossover where you clicked (chapter 6).

5.4 Width

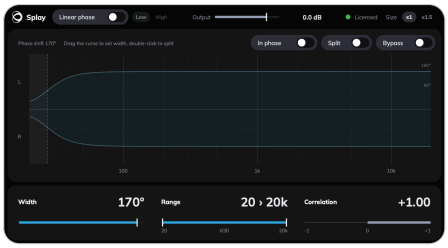
Width sets the **angle between left and right**, in degrees, on a scale from 0 to 180. Splay opens at **90°**: at that angle, the two channels of a mono source are fully decorrelated. At 0° nothing opens.

Beyond 90°, the channels move towards opposite polarity: wider still, at the expense of the mono sum. Width therefore stops at **170°**, or **150°** with In phase on. A short mark on the slider shows the stop, and the slider, the typed value and the curve gesture all stop there. Switching In phase on brings a larger width back to 150°.

The shift is a fraction of the wavelength, so it is long in time for a bass note and very short for a cymbal. A phase shift is heard mostly in the low and middle frequencies; at the top of the spectrum, on headphones, it is discreet.



In phase on, Width at its stop of 150°.



In phase off, Width at its stop of 170°.

5.5 Range



Width, Range and Correlation.

Range has **two handles**, from 20 Hz to 20 kHz, kept at least one octave apart. Between them the sound opens; outside them it stays where it was. The value above the slider reads the range, for example **150 › 6k**.

The edges are phase matched with the rest of the signal, so the image does not tilt where the range starts and stops. Keep the low end of a bass in the centre and open its harmonics; open the body of a pad and leave the air alone.

5.6 In phase

Splay has two ways of opening a sound. The **In phase** switch, on by default, chooses between them.

IN PHASE ON Splay leaves the source as it is, then adds a side signal to the left and takes the same signal away from the right. Summed to mono, the two cancel and **the input comes back exactly, sample for sample**. Left and right come out a little louder as the image opens: about 2 dB at 90°, more beyond. The opening ripples from one third of an octave to the next.

IN PHASE OFF The purest phase shift, **constant across the range**. The mono sum keeps the spectrum of the source but drops by 3 dB at 90°, more beyond, and its phase is turned. The legend then reads Phase shift. Output brings the level back where you want it.

WIDTH	IN PHASE ON: LEFT AND RIGHT	IN PHASE OFF: MONO SUM
90°	about +2 dB	−3 dB
120°	about +6 dB	−6 dB
150°	about +12 dB	−12 dB
170°	(stops at 150°)	−21 dB

Stereo sources

On a stereo track, nothing is summed to mono first. Splay measures how close the two channels are and **adds only the phase that is missing** to reach the width you asked for. A mono source gets the full angle, a narrow stereo source part of it, and a source already as wide as your setting passes through as it is.

5.7 Correlation and Bypass

The **Correlation** meter shows how alike the two output channels are, from −1 to +1. At +1 they are identical (mono); around 0 they are decorrelated, which is what Width 90° gives on a mono source; towards −1 they are in opposite polarity and cancel in mono. In Split mode the value moves to the legend of the display.

Bypass outputs the input as it is. Because the processed signal does not have the phase of the input, Splay cross-fades between the two over 20 ms, so switching is click free. Output returns to 0 dB in bypass.

CHAPTER 6

Split mode

A different width for every part of the spectrum: up to seven crossovers and eight sections.

6.1 Switching to Split



Split mode as it opens: one crossover at 500 Hz, two sections. Section 1 is the chosen one.

Switch **Split** on, or **double-click anywhere in the display**: Split switches on with a crossover where you clicked. The display becomes a crossover editor, like the bands of an EQ, and the controls below become one column per section. Split always keeps at least one crossover; the first one sits at 500 Hz.

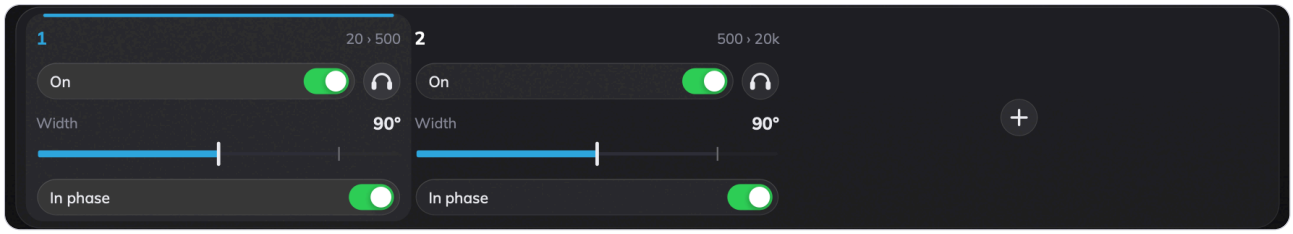
In Split, the global Width, Range and In phase controls make room for the columns, and the correlation moves to the legend. The settings of the simple mode are kept: switch Split off and they come back as they were.

6.2 Crossovers

ACTION	RESULT
Double-click in the display	Adds a crossover there (up to seven).
Drag a crossover	Moves it, between 40 Hz and 16 kHz.
+ button, right of the last column	Cuts the chosen section in two, in the middle in octaves. If it is narrower than two thirds of an octave, the widest section is cut instead.

Two crossovers stay at least one third of an octave apart. Adding a crossover cuts a section into two halves that keep its settings. Removing one joins two sections under the settings of the lower one. The crossovers are Linkwitz-Riley filters, 24 dB per octave, phase aligned between sections.

6.3 Sections



One column per section, always in view, and the + button.

Sections are numbered from the lowest to the highest. Each column shows the frequencies of its section and three settings:

ON Switches the section on or off. Off, that part of the spectrum stays as it was.

WIDTH 0 to 180° on the scale, 90° by default, with the same stops as the main Width: 170°, or 150° with In phase on.

IN PHASE The same choice as in the simple mode, section by section: keep the kick and the bass mono safe, and let the guitars open with a pure phase shift.

Click a section in the display, or any control of its column, to choose it: it takes a light veil in the display and its column comes forward. **Drag the curve** of a section to set its width, as in the simple mode.

Right-click a section and choose **Delete section**, or press **Delete** (or **Backspace**) after clicking it, to delete it: the section below extends to take its place (for section 1, the section above). A deletion is refused when only two sections remain. Some hosts keep the Delete key for themselves: if it does nothing, use the right-click menu.

6.4 Listening to one section

The round **headphone button** next to **On** plays that section alone, so you hear exactly what you are opening before you put it back in the mix. The other sections go under a dark veil in the display. One section plays alone at a time; click the button again to hear the whole mix. Solo listening is not automatable and not saved with the session; adding or removing a crossover ends it.

6.5 What to expect from Split

- Crossovers have slopes of 24 dB per octave. A narrow section does not reach its full angle: a section one octave and a third wide, set to 90°, opens to about 67° in its centre, and spills a few degrees onto its neighbours.
- Between a section opened to its maximum (In phase off) and a section that is off, each channel can dip by up to 3 dB at the crossover, as at the edges of Range in the simple mode.
- On a stereo source, the missing phase is computed from the correlation of the whole spectrum, not section by section.
- When at least one section has In phase off, the mono sum keeps its spectrum in the In phase sections but not its exact phase. With every section In phase, the mono sum is the input, sample for sample.

CHAPTER 7

Practical tips

Checking mono compatibility, a few starting points, and fair comparisons.

7.1 Checking mono compatibility

A wide sound must survive a mono playback: club systems, phones, broadcast. Check it as you set Splay:

1. Sum the output to mono: Logic's **Gain** plugin with **Mono** on, the **Mono** button of Reaper's master track, or your monitor controller.
2. Toggle **Bypass** in mono. With In phase on, nothing changes: the mono sum is the input, sample for sample.
3. With In phase off, listen for the level drop in the range (3 dB at 90°, 6 dB at 120°). If it matters, lower Width, narrow Range, or switch In phase on.
4. Watch the **Correlation** meter. Around 0 is wide and safe; a value that stays well below 0 announces losses in mono.

TIP For a mix that must be mono safe at all costs, keep In phase on everywhere, in Split as well.

7.2 Starting points

SOURCE	SUGGESTED SETTING
Mono vocal, double or lead	In phase on, Width 60 to 90°, Range from about 150 Hz to keep the chest centred.
Bass or kick	Range low at 120 to 150 Hz: the low end stays centred, the harmonics open.
Pad or keys	Width 90 to 120°, Range up to about 6 kHz to leave the air alone.
Mono guitar	In phase off for the widest image, then check in mono.
Stereo bus	Width above the current width of the bus: Splay only adds the phase that is missing.
Full mix	Split: low section off or narrow, mids and highs opened by small amounts, In phase on.

7.3 Fair comparisons

With In phase on, left and right come out louder as Width grows (about 2 dB at 90°). Louder often sounds better, so set **Output** to compensate before you judge with **Bypass**: for example –2 dB at Width 90°.

Judge on real material, not on noise, and on your speakers as well as on headphones: at the top of the spectrum, a phase shift is more discreet on headphones.

CHAPTER 8

Reference and help

Every parameter, the specifications, the license terms, and answers to common problems.

8.1 Parameter reference

PARAMETER	RANGE	DEFAULT
Width	0 to 180° (stops at 170°, 150° with In phase)	90°
Range low	20 Hz to 20 kHz	20 Hz
Range high	20 Hz to 20 kHz	20 kHz
In phase	Off / On	On
Linear phase	Off / On	Off
Linear phase quality	Low latency / High	Low latency
Output	–24 to +6 dB	0 dB
Bypass	Off / On	Off
Split	Off / On	Off
Crossover 1 to 7	40 Hz to 16 kHz	Crossover 1 at 500 Hz
Crossover 1 to 7 on	Off / On	Crossover 1 on, others off
Section 1 to 8 on	Off / On	On
Section 1 to 8 width	0 to 180° (same stops)	90°
Section 1 to 8 in phase	Off / On	On

Solo listening and the chosen section are neither parameters nor saved.

8.2 Specifications

	SPLAY 1.0.0
Channel layouts	Mono to stereo, stereo to stereo
Processing	Native C++ engine of recursive filters; no block processing
Latency	0 samples with Linear phase off. Linear phase, Low latency: 1151 samples at 44.1 and 48 kHz (24 ms at 48 kHz), 2302 at 88.2 and 96 kHz, 4604 at 176.4 and 192 kHz. Linear phase, High: 4223 samples at 44.1 and 48 kHz (88 ms at 48 kHz), 8446 at 88.2 and 96 kHz, 16892 at 176.4 and 192 kHz. Always reported to the host
Width	Phase angle between left and right, 0 to 180° on the scale, 90° when loaded; stops at 170°, 150° with In phase on; slider or drag the curve
Range	Two handles, 20 Hz to 20 kHz, one octave apart at least; phase matched edges
In phase	On: left plus right is the input, sample for sample, left and right about 2 dB louder at 90°. Off: constant phase shift, mono sum 3 dB lower at 90°, more beyond
Split	1 to 7 crossovers, 2 to 8 sections; crossovers from 40 Hz to 16 kHz, one third of an octave apart at least; Linkwitz-Riley, 24 dB per octave, phase aligned between sections
Per section	On; Width 0 to 180°, same stops; In phase; listen to the section alone
Stereo input	Input correlation measured continuously; only the missing phase is added
Output	−24 to +6 dB, after the processing; back to 0 dB in bypass
Display	Opening by frequency, left above and right below, 0 to 180°; input spectrum in colour; output correlation; crossover editor in Split mode
Window	888 × 576 points, fixed
Bypass	Click free, 20 ms crossfade
Sample rates	44.1 to 192 kHz
Formats	macOS: Audio Unit (Imaging), VST3, AAX (Sound Field). Windows: VST3, AAX (Sound Field)
Platforms	macOS 12 or later, Apple silicon and Intel; Windows 10 and 11, 64-bit
Identifiers	Plugin code DSpl, manufacturer code DmAu

8.3 License terms

	LICENSE	TRIAL
Price	80 €, one-time payment, no subscription	Free
Duration	Permanent	15 days
Computers	2 activations, online or offline, on Mac or PC in any mix	1 computer
Features	The complete plugin	The complete plugin, no feature held back
Conditions	Online activations can be moved to another computer	Once per person and per product

- An online activation can be released from the License panel and used on another computer (section 3.5). An offline activation is permanent and cannot be moved.

- The license and its machine binding work the same way on macOS and Windows: one license can be activated on a Mac and a PC.
- Without an active license, the plugin outputs silence.
- Activating Splay means accepting the Terms of Use and Sale published on **dam-audio.com**. To activate and check the license, the plugin uses a machine identifier computed from your computer.

8.4 Files and folders

	MACOS	WINDOWS
License	~/Library/DAMAudio/Licenses/DS.license	%APPDATA%\DAMAudio\Licenses\DS.license
Plugins	/Library/Audio/Plug-Ins/VST3 and /Library/Audio/Plug-Ins/Components; AAX: /Library/Application Support/Avid/Audio/Plug-Ins	C:\Program Files\Common Files\VST3; AAX: C:\Program Files\Common Files\Avid\Audio\Plug-Ins

Do not edit, delete or copy the license file: it only works on the computer that created it, and a modified or deleted file has to be activated again.

8.5 Troubleshooting

NO SOUND — Open the License panel (click the license state at the top right). If it says **UNLICENSED** or shows a message, see chapter 3. Without a license, Splay outputs silence.

TRIAL ENDED — The panel says **This Splay license ended on …**. Buy a license on dam-audio.com and activate it with the new key; your sessions keep their settings.

ACTIVATION REFUSED — Check the key: 16 characters, starting with DS. If every activation is in use, deactivate Splay on another computer (section 3.5) or write to support.

NOT IN THE PLUGIN LIST — Rescan plugins in your host. In Logic Pro, use the Plug-in Manager (section 2.1). Check that the installer included the format your host uses, in the folders of sections 2.1 and 2.2.

NOT FOUND ON WINDOWS — Check that your host scans C:\Program Files\Common Files\VST3 (its plugin folder settings), then rescan plugins.

NOT IN PRO TOOLS — Check that **Splay.aaxplugin** is in the AAX folder (section 2.1 for macOS, 2.2 for Windows), then restart Pro Tools: it scans plugins at launch. Look under **Sound Field** (section 4.2).

LOUDER, OR THIN IN MONO — In phase on adds level as Width grows: lower Output. In phase off thins the mono sum: switch it on, or lower Width (sections 5.6, 7.1).

OUT OF TIME WITH OTHER TRACKS — Linear phase adds latency, longer in High quality. Check that your host's delay compensation is on, choose Low, or switch Linear phase off.

8.6 Support

Write to **contact@dam-audio.com**. Please include your system (macOS or Windows version), your host and its version, the plugin format, and, for a license question, your key and the machine identifier shown in the License panel. Product page, downloads and updates: **dam-audio.com**.