Intellijel Swells v1.3 – 2026.11.19

Multi-Model Reverberation Module with Swell Generator

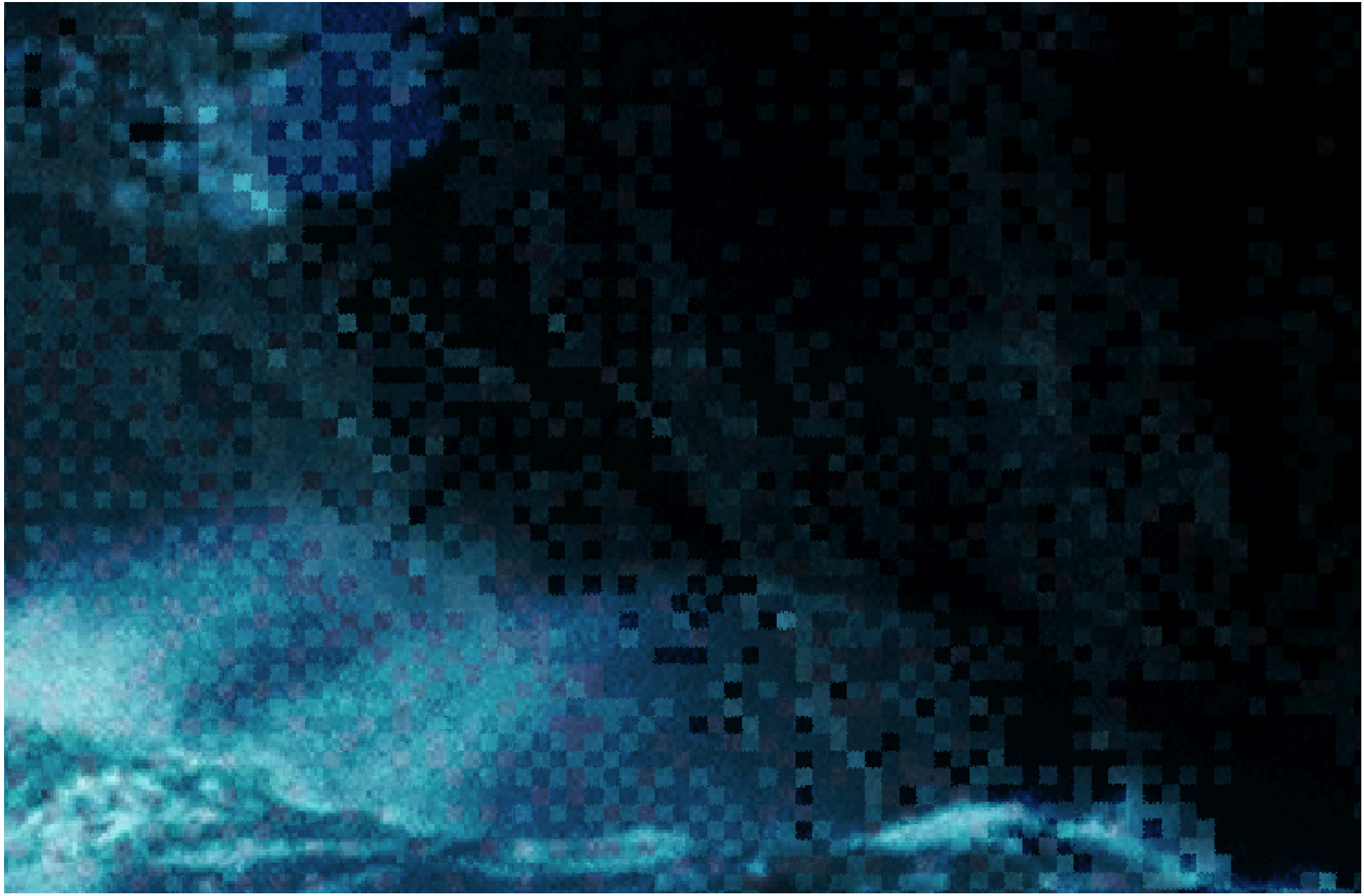


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Compliance Statements

FCC COMPLIANCE STATEMENT

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

EUROPEAN UNION REGULATION COMPLIANCE STATEMENT

This device meets the requirements of the following standards and directives:
EMC: 2014/30/EU
EN55032:2015 ; EN55103-2:2009 (EN55024) ; EN61000-3-2 ; EN61000-3-3
Low Voltage: 2014/35/EU
EN 60065:2002+A1:2006+A11:2008+A2:2010+A12:2011
RoHS2: 2011/65/EU
WEEE: 2012/19/EU

CANADA

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003.

LEGAL DISCLAIMER

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Installation

Installation ⟩ Before you install

Swells is designed to be used with a Eurorack-compatible case and power supply. We recommend our Intellijel Cases and Power Supplies.

You will need…

- Ribbon power cable (included)
- Rack screws (included) and a screwdriver (not included).
- 20HP of 3U rack space.
- One free power header on your Power Bus Board.
- Enough current draw from your Case Power Supply.

Check your PSU has enough juice (aka current)

1. For every module connected to the power supply board (inc. Swells), record the current draw at each voltage: +12V, -12V and +5V. This info is commonly found in the manual. See **Technical Stuff** for specs.
2. Sum all current values with matching voltages, giving you three separate current values.
3. Compare these to the current values stated in the specifications of your Case Power Supply. If the current value at each voltage for all modules is less than the Power Supply's current values, Swells can be installed.

⚠ **Failure to adequately power your modules may result in damage to your modules or power supply.**

We would strongly recommend against:

- Leaving gaps between modules – dirt and debris can fall in and cause issues such as electrical shorts.
- Using open frames or enclosures that expose the backside of the module or power supply.

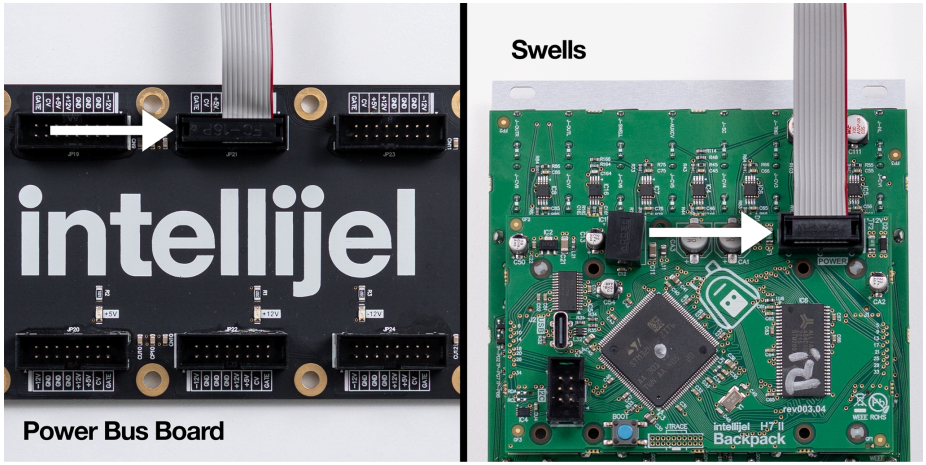
You can use a tool like **ModularGrid** to assist in your planning. If you are unsure about anything relating to installation, please **contact us** before proceeding.

Installation ⟩ Install your Module

1. Switch off and disconnect the power supply from your Eurorack case.

⚠ **Failure to do so may result in serious injury or equipment damage.**

2. Connect the 10-pin end of the included ribbon cable to the power header on Swells. The header is shrouded to help with orientation. This cable may already be connected to the module. If so, ensure it is seated correctly. The red stripe on the ribbon cable should be aligned with the side of the connector marked "-12V."



3. Connect the 16-pin end of the ribbon cable to an available header on your case's power bus board. Ensure the red stripe on the ribbon cable aligns with the side of the power header labelled "-12V" or similar. Current Intellijel cases use shrouded headers to help with orientation. If you're unsure, please check the manual for your power supply or case.

⚠ **Misalignment or a backwards ribbon cable can potentially damage the module. Double-check alignment and that the headers are fully seated before continuing.**

Reconnect the power supply and switch on. Immediately check that all modules are switched on and operating correctly. If you notice a problem, power off your system immediately and check for mistakes.

Welcome to Swells

Intellijel Swells is a multi-model reverb module with a built-in **SWELL Generator**.

Choose from nine unique reverb models, passionately researched and developed by Intellijel. The models include everything from lush halls and plates, to reimagined vintage digital devices, to downright bizarre and otherworldly “spaces”.

Each reverb model has a comprehensive set of controls, including eight dedicated sliders for **PREDELAY**, **SIZE**, **DECAY**, **DAMP**ing, and **EQ**, plus two “per-model” controls called **EBB** and **FLOW**. Set the optimum balance of dry and wet signals using the dedicated **INPUT** and **MIX** controls. There’s also a **DRIVE** option to saturate the signal fed into the reverb. All of these controls respond very smoothly to both internal and external modulation.

The **SWELL** generator creates waves of modulation. It is essentially an envelope follower with four operating modes. A ‘SWELL’ can be triggered from the input signal, output signal or a dedicated external sidechain input. You can also trigger it manually with the **TRIG** input or **SWELL** button. Adjust **RISE**, **FALL** and **THRESH**old to determine the shape and reactivity of your **SWELL** modulation.

The output of the **SWELL** generator is normalled to all reverb parameters, for instant self-modulation. Assign **SWELL** to parameters using the attenuverters – start with them at noon, then apply positive or negative modulation as you explore. The **SWELL** generator has a dedicated output, so you can send swells of modulation to other modules, too.

Swells features additional effects to spice up your reverbs: **FREEZE**, **REVERSE**, **BURST**, and **LO-FI**. **FREEZE** captures a slice of audio for infinite sustain through the reverb. **REVERSE** flips the audio playback from the pre-delay. Then there’s **BURST**, which fires off a momentary effect – such as a burst of noise or a surge of pre-delay feedback. Assign any or all of these FX to the **TRIG** Input.

LO-FI applies a model-specific effect which degrades or modifies the audio through your reverb to impose new dimensions of character. There are three levels of LO-FI: **OFF**, **MIN**imum and **MAX**imum.

The diverse and versatile set of reverb models in Swells lets you conjure a virtually infinite variety of reverberant spaces for your sound explorations. Swells is a reverb module that rewards those who like to tweak, explore and experiment.

Reading this Manual

Various Controls and Jacks will be referred to with **BOLD ALL CAPS** text, sometimes coloured to match Swell’s Panel.

For example, **ALT** functions will be referred to in GREY, and unique elements will be written as they appear, such as **SWELL** or **OUT L**.

LED colours and behaviours also play an important role in the operation of Swells. We refer to their colour and behaviour in *ITALIC ALL CAPS*. For example, the parameter slider position is indicated by a *LIT GREEN* LED.

Getting Started

Before diving into the depths of Swells, here's a quick guide to the core functions. This page will also help you to interpret the Model Reference Table.

Controls, Modulation, and LED Behaviour

There are **8 Slider Controls**, plus the **INPUT** and **MIX** knobs, which control the main parameters and mix of your reverb. Patch audio into **IN L** ⍰ **IN R** and out from **OUT L** / **OUT R**, then experiment with these controls.

All of these controls can be modulated by the **SWELL** Generator, or by external CV patched to the input jacks above the sliders. Attenuverters control the modulation amount and polarity. The **LEVEL** CV input affects both **INPUT** and **MIX**.

Parameter LEDs reflect control values, including their modulated position and polarity. When no modulation is applied, parameter LEDs appear *GREEN* (upper range) or *RED* (lower range).

When modulation is assigned from the attenuverters, the Parameter LED will change colour to *CYAN* (upper range) or *PURPLE* (lower range).

SWELL Modulation: Assignment and Controls

The **SWELL Generator** is normalled to all **8 Slider Controls**, plus **INPUT** and **MIX** via the **LEVEL** attenuverters. **SWELL** can be easily assigned to any parameter, by turning the associated attenuverter – the parameter LEDs will change colour as described previously.

The CV from the **SWELL Generator** is output from **SWELL** and can be patched to other Eurorack modules.

To remove **SWELL** modulation from a control, set the attenuverter to the centre position. **We recommend starting with all 10 attenuverters centred** (no modulation), then adjust to taste.

The **SWELL Generator** is controlled by the **RISE**, **FALL** and **THRESH** knobs at the bottom of the module. The **IN/SC/OUT** switch selects the trigger source, and the **SWELL** button can be used to manually activate the envelope.

Model Reference Table

The table on the next page describes the controls for each of Swells nine reverb models.

The overall sound of Swells is determined by the **MODEL** and **LO-FI** switches, **EBB** and **FLOW** will change function based on the switches.

MODEL — Choose your Reverb Model

The **MODEL Switch** on the left selects bank **X**, **Y** or **Z**.
The **MODEL Switch** on the right selects **1**, **2** or **3**.

The combined positions of the two **MODEL** switches select the currently active reverb model.

LO-FI — Modify your Model

The **LO-FI** selector switch is a model modifier, located on the right of the **MODEL** selector switches. It has three positions: **OFF**, **MIN**, and **MAX**, which determine the intensity of the effect.

Models in banks **X** and **Y** each have common **LO-FI** effects. The exotic Models in Bank **Z** are each affected individually by the **LO-FI** switch. Refer to the Model Reference Table on the next page for more information.

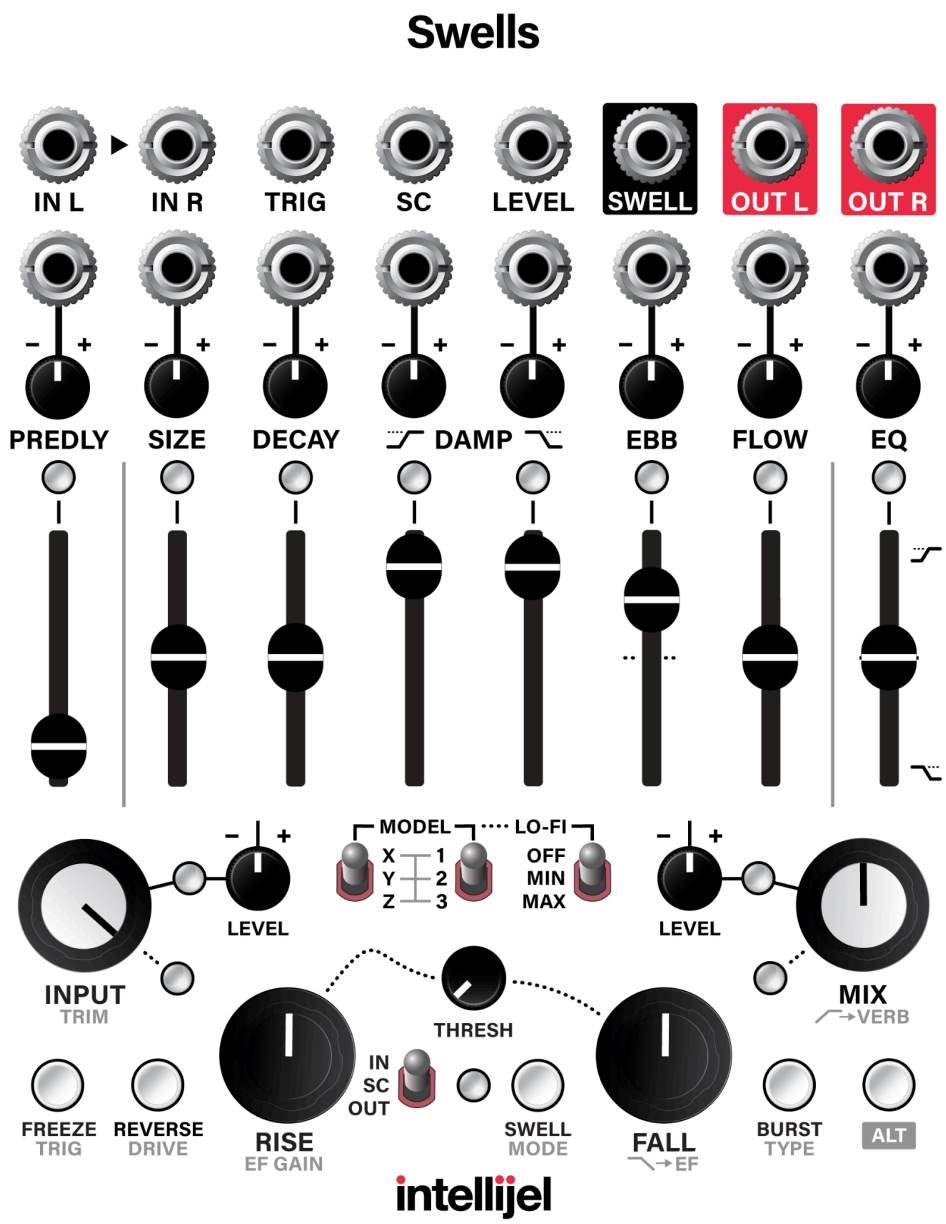
EBB / **FLOW**

EBB and **FLOW** each add two unique parameters per model, determined by the **MODEL** and **LO-FI** switches.

Either slider may be *unipolar* or *bipolar* (min in centre position), depending on the parameter assigned. This will be indicated by the parameter LED behaviour for the control, and marked with "**±**" on the Model Reference Table.

MODEL	DESCRIPTION	EBB	FLOW	LO-FI OFF	MIN	MAX
X—1	**Fog** Sealegs' classic lush reverb, offered here with full control.	**Diffusion** Sparse → Smeared	**Modulation ±** ↑ Sine ↓ Random	—	**Tape Wow** **Subtle Saturation**	**Tape Wow/Flutter** **Deep Saturation**
X—2	**Blur** The mutant offspring of Multigrain's built-in reverb.	**Diffusion** Sparse → Smeared	**Modulation ±** ↑ Sine ↓ Random	—	**Tape Wow** **Subtle Saturation**	**Tape Wow/Flutter** **Deep Saturation**
X—3	**Shadow** Classic Dark Hall, long corridors, huge spaces.	**Diffusion** Sparse → Smeared	**Modulation ±** ↑ Sine ↓ Random	—	**Tape Wow** **Subtle Saturation**	**Tape Wow/Flutter** **Deep Saturation**
Y—1	**Velvet** High echo density with fast attack but no metallic ringing. Modern and bright.	**Diffusion** Sparse → Smeared	**Modulation ±** ↑ Sine ↓ Random	—	**Jel Compression** Fast Att / Slow Rel 4:1 / Medium Thresh	**Squash Compression** Slow Att / Slow Rel 8:1 / Low Thresh
Y—2	**Asterion** A metastable multitap delay, inspired by celestial vintage hardware units of yore.	**Diffusion** Sparse → Smeared	**Modulation ±** ↑ Sine ↓ Random	—	**Jel Compression**	**Squash Compression**
Y—3	**Deadspace** Non-Newtonian smearing for the astrally inclined, rending the fabric of space and time.	**Filter Resonance** Off → Max	**Force ±** ↑ Push ↓ Pull	—	**Jel Compression**	**Squash Compression**
Z—1	**Buckets** A matrix of variable sample-rate delays, with cruft and crunch intact.	**Mod Rate** Slow → Fast	**Mod Depth ±** ↑ Sine ↓ Random	**BBD Clock Rate** 1/1	**BBD Clock Rate** 2/3	**BBD Clock Rate** 1/2
Z—2	**Ritual** Hail to this harmonious reverb, octaves, fifths, and spiralling dissonance.	**Pitch / Freq Shift ±** ↑ Shift Up ↓ Shift Down	**Shifted Feedback** Off → Max	**Quantized Pitch** ± 2nd, 4th, 5th, Oct	**Free Pitch** ± 1 Oct	**Freq Shifting** ± 100Hz
Z—3	**Gaze** Inspired by classic nonlinear algorithms with a modern slant.	**Diffusion** Sparse → Smeared	**Shape** Flat → Ramp	**Saturation**	**Boost w/ Saturation**	**High gain w/ Hard Clip**

Panel



Note: *The controls in this diagram are set to a 'neutral position', which is a good starting point for exploring the module.*

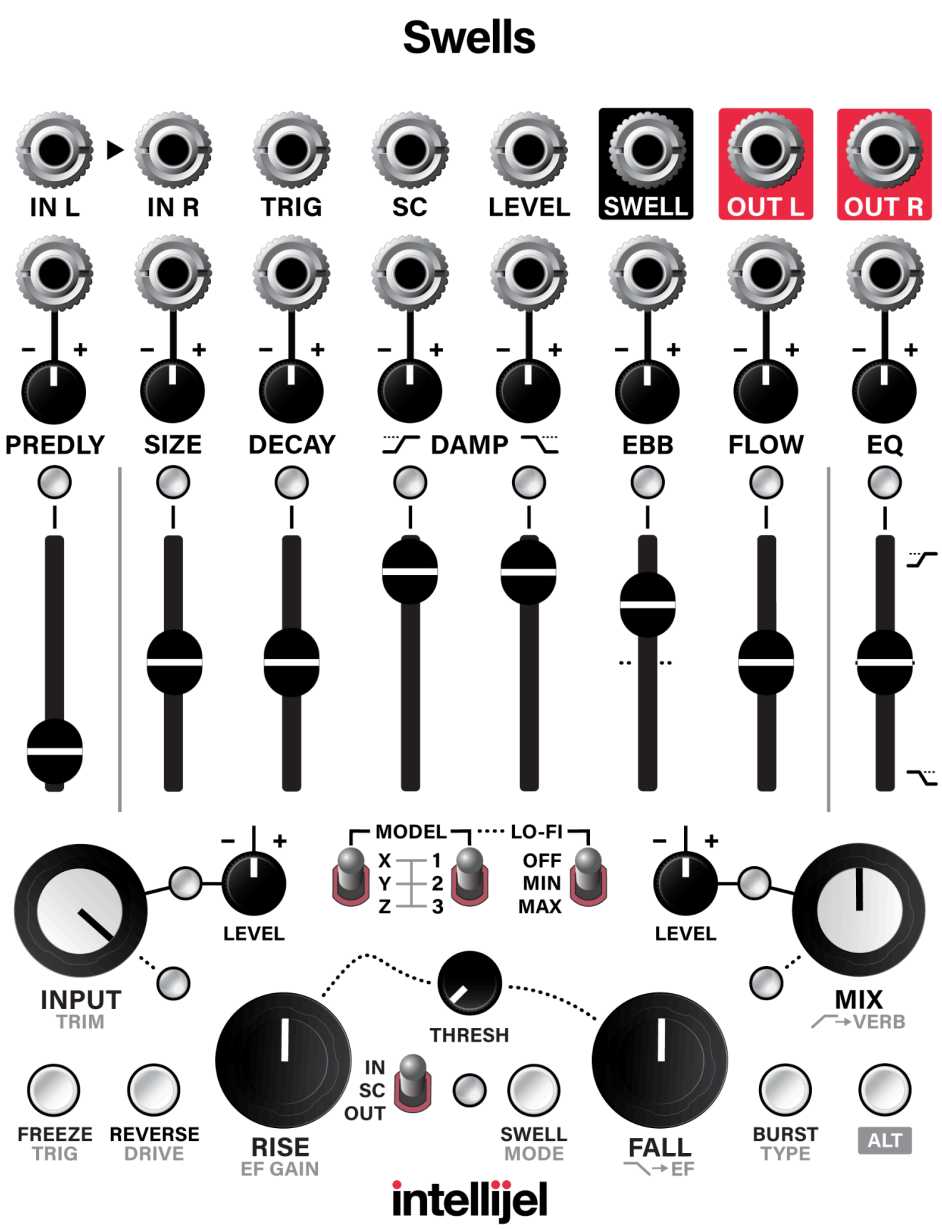
Input and Output Jacks

IN L / IN R	Left and right audio input (left normals to right)
TRIG	Assignable Trigger input (>1.2V)
SC	Sidechain audio / CV input for **Swell** (±10V)
LEVEL	CV input for **INPUT** and **MIX** controls (±10V)
SWELL	**SWELL** envelope output (0-5V)
OUT L / OUT R	Left and right audio output
Mod Inputs 1-8	Parameter modulation Inputs (±10V)

Knobs and Sliders

PREDLY	Pre-delay parameter
SIZE	Size parameter
DECAY	Decay / Feedback parameter
Lo-DAMP	Low-frequency damping
Hi-DAMP	High-frequency damping
EBB	Model-specific parameter 1
FLOW	Model-specific parameter 2
EQ	High / Low Tilt EQ for the reverb signal
CV Attn 1-8	Attenuverters for **Mod Inputs 1-8** / **SWELL**
INPUT	Level of **IN L / IN R** signal to reverb
MIX	Dry / Wet mix control
LEVEL Attn (INPUT)	CV attenuverter for **LEVEL** to **INPUT**
LEVEL Attn (MIX)	CV attenuverter for **LEVEL** to **MIX**
RISE	Controls rise / attack time of **SWELL**
FALL	Controls fall / decay time of **SWELL**
THRESH	Threshold setting for triggering **SWELL**

Panel (Continued)



Note: *The controls in this diagram are set to a 'neutral position', which is a good starting point for exploring the module.*

Buttons and Switches

MODEL X / Y / Z	Reverb Bank selector switch
MODEL 1 / 2 / 3	Reverb Model selector switch
LO-FI	Reverb modifier effect switch
FREEZE	Freeze effect toggle
REVERSE	Reverse effect toggle
IN/SC/OUT	Switch selects signal source for **SWELL**
SWELL	Manual trigger for **SWELL**
BURST	Manual trigger for "Burst" effect
ALT	Accesses ALT functions (labelled in grey)

Alt Functions

TRIM	Adjusts the gain of input signal
HPF → VERB	Sets highpass cutoff on the input to the reverb
TRIG	Assign **TRIG** Input to functions
DRIVE	Toggle **DRIVE** saturation for **INPUT**
EF GAIN	Sets the gain of trigger source for **SWELL**
MODE	Selects the trigger mode of **SWELL**

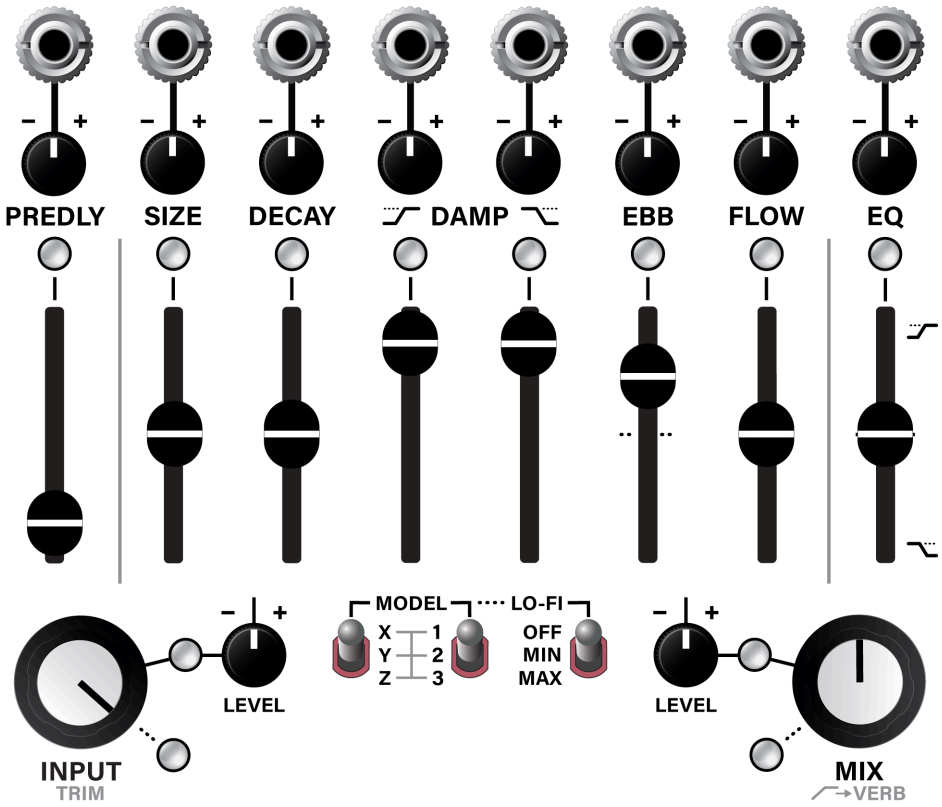
BLUE	**Follow**
AMBER	**Gated**
GREEN	**One Shot**
PURPLE	**Delayed One Shot**
RED	**Looping**

LPF → EF	Sets lowpass cutoff on the **SWELL** source
TYPE	Selects **BURST** type

WHITE	**White Noise**
PINK	**Pink Noise**
PURPLE	**Velvet Noise**
RED	**High Feedback** on **PREDLY**
YELLOW	**Unburst** v1.1

Reverb

Swells has a comprehensive set of controls on the panel, most of which will be familiar if you've used reverbs before. The controls are tuned for each reverb. **EBB**, **FLOW** and **LO-FI** are unique for each model. Their functions are outlined in the Model Reference Table. ➜



The **Slider Controls** on Swells are your eight main reverb parameters. Each slider has a linked Parameter LED, Attenuverter and CV input directly above it. **INPUT** and **MIX** each have an Attenuverter and LED, but share a single **LEVEL** CV input.

The Parameter LED displays the slider's current position in *GREEN* (unipolar or upper range) or *RED* (bipolar lower range). Modulation is assigned with the CV attenuverters. When modulated, the parameter LED will show the modulated position in *CYAN* or *PURPLE*.

MODEL Selector Switches

The combined positions of the two **MODEL** switches select the currently active reverb model.

The **MODEL Switch** on the left selects bank **X**, **Y** or **Z**.
The **MODEL Switch** on the right selects **1**, **2** or **3**.

LO-FI

The **LO-FI** selector switch is a model modifier, located on the right of the **MODEL** selector switches. It has three positions: **OFF**, **MIN**, and **MAX**, which determine the intensity of the effect.

Model-specific functions, as noted in the Model Reference Table. ➜

INPUT

Sets the level from **IN L** ⍰ **IN R** to the reverb signal path only (post TRIM).
The LED with the dotted line to **INPUT** is the **Input Activity LED**. This displays input signal level to the reverb from min to max: *OFF>GREEN>YELLOW>RED*. On Swells, it's perfectly okay to push the signal louder towards *YELLOW* / *RED* as models will purposely soft or hard clip the signal.

If you feel your input signal range or dry signal is too loud or too quiet, you may need to adjust TRIM instead of **INPUT**. When the DRIVE toggle is enabled, **INPUT** will also control the drive amount.

See Reverb ALT Functions for more on DRIVE, TRIM and **INPUT** Position. ➜

MIX

Sets the mix between the dry input signal and the reverb signal.
The response curve of the **MIX** control is set to 'equal power', meaning the overall output level is optimised for equal loudness as you transition from dry to reverbed signal.

The LED with the dotted line to MIX is the Output Activity LED. This displays the module output level from min to max: *OFF>GREEN>YELLOW>RED*.

PREDLY

Sets the pre-delay time of the reverb from 0 to 250ms.
The **PREDLY** is also used to set the time/division for the **REVERSE** delay.

See Reverse for more. ➜

SIZE

Determines the perceived size of the reverb – minimum **SIZE** values sound *small*, maximum values sound *large* (or even *massive*). Each model on Swells has its own range for **SIZE**.

DECAY

Sets the time it takes for reverb to fade into silence. Minimum **DECAY** values fade *quickly*, maximum values fade over *long* or *near infinite* time scales.

Note: DECAY is also affected by **SIZE** and **DAMP** controls.

HI-DAMP and LO-DAMP

Two controls that reduce the decay time specifically for the low and high frequencies – at the top of the slider, minimal damping is applied; at the bottom of the slider, maximum damping is applied.

The **DAMP** controls are linked to the **DECAY** setting. For maximum decay times, all three of these sliders would be set at maximum.

EBB / FLOW

Model-specific functions, as noted in the Model Reference Table. ➜

Either slider may be *unipolar* or *bipolar* (min in centre position), depending on the parameter assigned. This will be indicated by the LED behaviour for the control, and marked with "±" on the Model Reference Table.

EQ

A sweepable high / low tilt **EQ** on the reverb signal only.
This slider has a bipolar range. The upper range will *boost highs* and *cut lows*. The lower range will *boost lows* and *cut highs*. In the centre position, the **EQ** has *no effect* on the reverb.

Reverb ALT Functions

The following reverb functions are accessible from the Alt page and are labelled on the panel in GREY.

Press ALT to open the Alt Page. Press again to exit. The Alt Page will timeout after 20 seconds of inactivity. v1.1

Alternatively, press and hold ALT for momentary access. Release to exit.

Note: When the Alt Page is active, the parameter LEDs display modulation amount – giving you a quick overview of your modulation assignments.

TRIM (ALT + INPUT)

Adjusts the gain of the inputs **IN L** **IN R**.

Press or hold ALT to enter the Alt Page, then adjust TRIM from x0.5 gain (CCW) to x2.5 gain (CW), with x1 in the centre position.

When entering the Alt Page or adjusting TRIM, the **INPUT LEVEL LED** displays gain level (*CYAN*); it will *FADE* when set to 1x (default). v1.1

When the TRIM is idle, this LED indicates the input signal at (pre **INPUT**) from min to max: *OFF>BLUE>YELLOW>RED*.

DRIVE (ALT + REVERSE)

Overdrive the **INPUT** signal to the reverb.
Note: DRIVE does not affect the dry signal level.

Press ALT, then press DRIVE to enable. The button will turn *LIT BLUE.*

HPF ➜ VERB (ALT + MIX)

Applies a highpass filter to the reverb signal path.

The highpass frequency range is set from 50Hz (CCW) to 400Hz (CW).

The **MIX LEVEL LED** (*CYAN*) displays HPF frequency; it will *DIMLY FADE* when set to its minimum level at 20Hz (default). v1.2

INPUT/DRIVE Position (Hold ALT + IN/SC/OUT Switch) v1.3

The signal chain position of the **INPUT** control—and in turn, the DRIVE function—can be changed by holding ALT and simultaneously toggling the **IN/SC/OUT** Switch position. Take note that you need to hold ALT while the switch changes position, unlike the other Alt functions.

Note: It's helpful to toggle this with a signal present, as its state is indicated on the Activity LEDs.

ALT + IN = Module Input

- **INPUT/DRIVE** control the level from the audio inputs, this will affect the dry and wet signal.
- **INPUT Activity LED** will light *PINK* for a moment as you switch, then the colour scheme switches to *OFF>PINK>PURPLE>RED* in normal operation.

ALT + SC = Reverb Input (Default)

- **INPUT/DRIVE** control the level of the signal into the reverb, dry signal is unaffected
- **SWELL Activity LED** will *FADE PINK* for a moment as you switch.
- **INPUT** / **MIX Activity LEDs** display *OFF>GREEN>YELLOW>RED* in normal operation.

ALT + OUT = Module Output Boost

- **INPUT/DRIVE** boost the output level the module
- DRIVE will toggle between a clean output boost, and Swells' Overdrive Saturation
- **INPUT** controls the gain amount added to the module Output. Fully CCW adds no additional gain, and fully CW adds 10dB.
- **MIX Activity LED** will light *PINK* for a moment as you switch, then the colour scheme switches to *OFF>PINK>PURPLE>RED* in normal operation.

Note: All of Swells' output is processed through a subtle limiter to avoid hard clipping. Using the Module Output Boost option, you can actually drive his limiter pretty hard for some additional compression effects.

LO-FI Override (Hold ALT + LO-FI Switch) v1.3

You can override the default Lo-Fi types on each model by holding ALT and simultaneously moving the position of the **LO-FI Switch**. Take note that you need to hold ALT while the switch changes position, unlike the other Alt functions.

ALT + OFF = Default Lo-Fi Effects

- Lo-Fi effects as shown on the **Model Reference Table**
- ALT button will *FADE RED* when held, and *OFF* in normal function

ALT + MIN = Lo-Fi Tape Effect on all banks

- Bank **X** remains the same
- Bank **Y** Lo-Fi Compressor effect is replaced by Lo-Fi Tape effect
- Bank **Z** Lo-Fi Tape effect combines with individual Lo-Fi effect
- ALT button will be lit *PINK* when enabled

ALT + MAX = Lo-Fi Compressor effect on all banks

- Bank **X** Lo-Fi Tape effect is replaced by Lo-Fi Compressor
- Bank **Y** remains the same
- Bank **Z** Lo-Fi Compressor effect combines with individual LO-FI effect
- ALT button will be lit *PURPLE* when enabled

ALT + BURST + LO-FI = Access Bank Z LO-FI effect Switch

You can still access each of the **Z** Model's individual Lo-Fi settings, by holding ALT + **BURST** together, whilst simultaneously toggling the **LO-FI switch** position.

When Lo-Fi Override is enabled, the individual Lo-Fi setting is preserved for each **Z** Model – even when switching between Models. When Lo-Fi override is disabled (normal operation), the Lo-Fi setting always follows the **LO-FI switch** position.

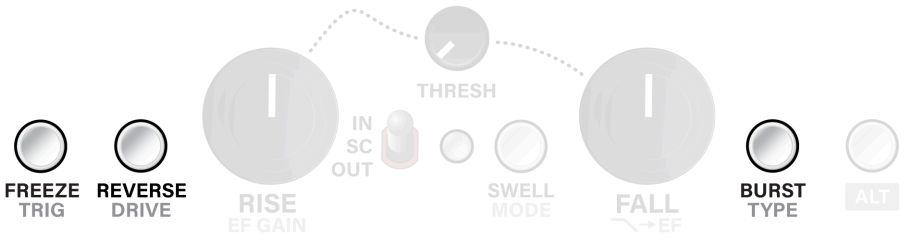
When Lo-Fi Override is applied on Bank **Z**, the Model's individual Lo-Fi effect is applied pre-override effect.

Momentary FX

Swells features some interesting one-button effects that complement the primary function of this module. These effects are usually toggled on/off or activated momentarily.

They can also be triggered externally from the **TRIG** input.

See TRIG Assignment for more. ➜



FREEZE

Freeze the input signal to the reverb for eternal, droning soundscapes.

Press the **FREEZE** button to toggle on/off, or hold for momentary activation. It will turn *LIT BLUE* when enabled.

You can still hear the dry signal when mixed in, but no new audio will reach the reverb when **FREEZE** is active.

REVERSE

Reverses the input signal to the reverb for some wonderfully trippy reverberations.

Press the **REVERSE** button to toggle on/off, or hold for momentary activation. It will turn *LIT PINK* when enabled.

REVERSE + PREDLY — Reverse Time

Hold **REVERSE** and adjust the **PREDLY** slider to adjust **Reverse Time**.

The parameter LED for **PREDLY** will turn *PINK* when holding **REVERSE**. Adjusting **Reverse Time** does not affect **PREDLY** time or modulation.

You can set the **Reverse Time** from 100ms to 2 seconds, or as divisions if **Reverse Sync** is enabled (/1, /2, /4, /8)**.**

See Reverse Sync for more. ➜

BURST

Injects a momentary burst of noise into the input path of the reverb.

Press and hold the **BURST** button for momentary activation. The button LED is *LIT* when activated, and its colour will reflect the currently selected TYPE.

TYPE (ALT + BURST)

There are four different types of **BURST**.

Press or hold ALT to access the Alt Page, then press TYPE repeatedly to cycle through the following options:

WHITE	White Noise Burst
PINK	Pink Noise Burst
PURPLE	Velvet Noise Burst
RED	Sets High Feedback on **PREDLY**
YELLOW	Unburst — Smoothly kills any signal in the reverb buffer v1.1

Note: The Alt Page will timeout after 20 seconds of inactivity. v1.1

Latching Behaviour

Swells Momentary FX can all be latched into an *ON* position.

FREEZE and **REVERSE** can be both toggled *ON/OFF* with a tap of the button. If the button is held, the effect will only be active until the button is released.

SWELL and **BURST** are both momentary by default; the effect will be active when the button is held, and inactive when the button is released.

FREEZE, **REVERSE**, **SWELL**, and **BURST** can all be latched *ON* by pressing the ALT button when any of these other buttons are held down.

This can be useful if you would like to have sustained noise from **BURST** or if you are holding **FREEZE** and decide you would like your hand back, but keep things frozen.

TRIG Assignment

Swells has a single assignable Trigger/Gate input amongst the patch points, labelled **TRIG**. This can be assigned to the **FREEZE**, **REVERSE**, **SWELL** or **BURST** buttons in any simultaneous combination.

When the voltage is high on the **TRIG** jack it will toggle the current state of the assigned button(s), any latched assignments will momentarily turn off. v1.3

TRIG (ALT + FREEZE)

Press ALT, then press TRIG to enter the **TRIG** Assignment Page.

Press **FREEZE**, **REVERSE**, **SWELL** and **BURST** to toggle **TRIG** assignment on/off. The button LEDs are *LIT AMBER* when assigned to the **TRIG** input.

Press ALT to exit the **TRIG** assignment page. The **TRIG** Assignment Page will timeout after 20 seconds of inactivity. v1.1

*Note: The **TRIG** Assignment Page is a sub-page of the Alt Page. The rest of the controls here will function as they do on the Alt Page.*

Reverse Sync

Reverse Time can be synchronized to a clock signal patched into **TRIG.**

On the **TRIG** Assignment Page, hold **REVERSE** for ~1sec to enable.
The **REVERSE** button LED will *FLASH AMBER* when synced and will show a short LED pulse to show the divided sync signal on the Home page. v1.1

When adjusting **Reverse Time**, the PREDLY LED brightness is stepped to denote the four divisions of the clock sync (/1, /2, /4, /8).

See Reverse Time for more. ➜

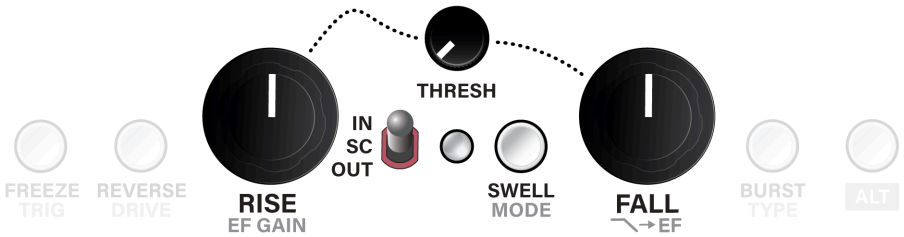
Note: In order for **Reverse Sync** to work, the clock signal must have a period between 50ms and 1.25sec. If the clock period is longer, this function may not be able to stay synchronized. Also, if there's no clock signal patched into **TRIG**, and **Reverse Sync** is enabled, **REVERSE** will not output signal to the reverb. Therefore the reverb path will go silent.

Swell and Modulation

Modulation is an integral part of Swells. The eight sliders, input control and mix control can be controlled with external CV, or modulated with its internal modulation source '**SWELL**'. Assign modulation to each parameter with a range of your choosing, using the attenuverters.

SWELL

SWELL is a built-in envelope generator that can be triggered by a variety of sources, shaped in great detail, and rapidly assigned to the **8 Slider Controls**, **INPUT** and **MIX** through extensive normalling. **SWELL** also has a dedicated CV output (0-5V), so you can patch it out to the rest of your system.



To assign **SWELL** to any of the **8 Slider Controls**, turn the parameter attenuverters in either direction past the centre. To assign it to **INPUT** or **MIX**, turn the linked **LEVEL Attenuverters**. The associated parameter LEDs will change colour set from *GREEN/RED* to *CYAN/PURPLE*, to show that the control is under the influence of modulation (internal or external).

Swell Source Switch

Select the source signal for triggering **SWELL**.
There are three options to choose from:

IN - Swells are generated from signal at **IN L** ⍰ **IN R** (pre **INPUT**)
SC - Swells are generated from signal patched to **SC** Input (Sidechain)
OUT - Swell are generated from the reverb signal (pre **MIX**)

RISE

Sets the attack time of the envelope when **SWELL** is triggered.
This ranges from 10ms (CCW) - 5sec (CW)
RISE is *logarithmic* – the initial rise is faster, and slows as it reaches the end of the rise. The trigger mode and threshold will also affect the **RISE** time.

MODE and **THRESH** will also affect **RISE**.

FALL

Sets the envelope's release time after the **RISE** section completes.
This ranges from 10ms (CCW) - 5sec (CW)
FALL is *exponential* – the level drops faster when **FALL** starts, and becomes shallower as it reaches the end.

MODE and **THRESH** will also affect **FALL**.

THRESH

Sets the threshold at which **SWELL** is activated by the trigger source.
Set a low threshold for more swells by turning CCW. Or set a high threshold for less swells by turning CW.

Swell Activity LED

Visualises the activity of **SWELL**. It is situated between the **Swell Source Switch** and **SWELL Button**. LED colour is dependent on the Swell MODE.

SWELL button

Manually trigger a **SWELL** by pressing the **SWELL button**.
SWELL will trigger based on the currently selected **MODE**. ➜

The **SWELL button** is typically momentary, but it can be latched.
Hold **SWELL button** and then press ALT to latch on.
To unlatch, press **SWELL** again.

The **SWELL button** function can be assigned to the **TRIG** input.

See **TRIG Assignment Page** Input for more. ➜

Swell ALT Functions

Note: The Alt Page will timeout after 20 seconds of inactivity. v1.1

MODE (ALT + SWELL)

Selects the trigger mode for **SWELL**.

To switch between Swell Modes, Press ALT to enter the Alt Page, then Press MODE to toggle.

There are five to choose from, identified by the colour of the MODE button:

BLUE	**Follow** – Classic Envelope Follower, input determines output level.
AMBER	**Gated** – When the threshold is reached, the input signal is treated as full scale.
GREEN	**One Shot** – Passing the threshold will trigger a full-length envelope.
PURPLE	**Delayed One Shot** – Passing the threshold will trigger a delayed full-length envelope - to be fired when the signal drops below the threshold again.
RED	**Looped** – Looping Envelope, passing threshold will retrigger.

EF GAIN (ALT + RISE)

Set the source signal gain that triggers **SWELL** independently from the rest of the signal path. This helps to offset the range of **THRESH** without affecting the signal level through the reverb.

Press ALT to enter the Alt Page, then turn EF GAIN (**RISE**) to set the level, from x0.5 gain (CCW) to x2.5 gain (CW).

On the Alt Page, The **INPUT Activity LED** indicates the EF GAIN setting. The LED will *SLOWLY FADE BLUE* when EF GAIN is set to the default of x1 gain (Centre). v1.1

LPF ➜ EF (ALT + FALL)

Set the frequency of a lowpass filter that's applied to the source signal triggering **SWELL**.

Press ALT to enter the Alt Page, then turn LPF ➜ EF (**FALL**) to set the frequency of lowpass filter. Frequency ranges from 40Hz (CCW) to 'Filter Off' (CW).

On the Alt Page, The **MIX Activity LED** indicates the the LPF ➜ EF setting. The LED will *SLOWLY FADE BLUE* when the filter is off (CW) as this is the default. v1.1

External CV Modulation

Of course, it's also possible to modulate Swells parameters with external CV. The unlabelled patch points above the parameters are the CV inputs for parameter sliders directly below them.

Simply patch in a CV modulation source (±10V), and use the attenuverters to set the range and inversion of the modulation.

INPUT and **MIX** share a modulation input labelled **LEVEL**. Patch in a modulation source (±10V), and use the linked **LEVEL Attenuverters** to set the modulation range for each.

In regular operation, patching in to the CV inputs for parameters will break the normalling between **SWELL** and the linked parameter. However, it is possible to combine **SWELL** and external modulation.

Continue to the next page for Advanced CV + SWELL Assign Mode. ➜

Advanced CV + SWELL Assign mode

This assignment mode allows both external **CV** and **SWELL** to modulate parameters simultaneously.

External **CV** modulation is assigned from the Home Page, with the eight parameter and two level attenuverters.

SWELL modulation is assigned from the Alt Page with those same ten attenuverters.

The parameter LEDs will now show attenuversion amount on each page, *instead of the parameter's value or modulated value.*

Since the attenuverters are now shared between two sources, the assignments are stored in the module – this means that the physical positions of the attenuverters may not always match the modulation depth on either page. When you move an attenuverter, the modulation amount will immediately sync with its physical position (aka 'Jump' behaviour).

This mode is truly for the tinkerers!

ALT + SWELL (Hold 5 Sec) — Toggle Advanced/Normal Mode

Hold ALT and **SWELL** for five seconds to toggle between normal and advanced CV modes. Swells will exit the Alt page when the mode is changed.

When entering Advanced mode, all parameter modulation is reset.

ALT + SWELL (Hold 1 Sec) — Clear Modulation Assignments

In this advanced modulation assignment mode, you can quickly clear assignments.

Hold ALT and **SWELL** for one second,
The parameter LEDs will *FLASH WHITE* and all modulation assigned to external **CV** and **SWELL** will be immediately cleared.

System Boot Toggles

Send/Return Mode

Swells has an alternate operation mode where the dry signal is muted. This is intended for when Swells is connected to an auxiliary send on a mixer, or used in any other situation where you do not want the dry signal passing through.

When Send/Return is enabled—
DRY signal is NOT passed through to the outputs.
MIX controls the **WET** level only.

FREEZE (Hold on boot)

Toggles Send/Return Mode on and off

All buttons light *RED* when Send/Return Mode is enabled.
All buttons light *GREEN* when Send/Return Mode is disabled.

Glitchy Switch Mode v1.1

Since firmware 1.1, Swells will clear audio in the buffers when switching Models (default). You can switch back to "Glitchy" Mode, where the audio buffers do not clear when switching - if you prefer that sort of thing!

BURST (Hold on boot)

Toggles Mode on and off

All buttons light *ORANGE* when Glitchy Switch Mode is enabled.
All buttons light *WHITE* when Glitchy Switch Mode is disabled.

Factory Reset

REVERSE (Hold on boot)

Resets the Global Settings to default.
The LEDs will flash *BLUE* to indicate that the settings are reset.

Firmware

It’s always best to keep your Swells module up-to-date for the latest features and fixes for those pesky, but hopefully infrequent, bugs.

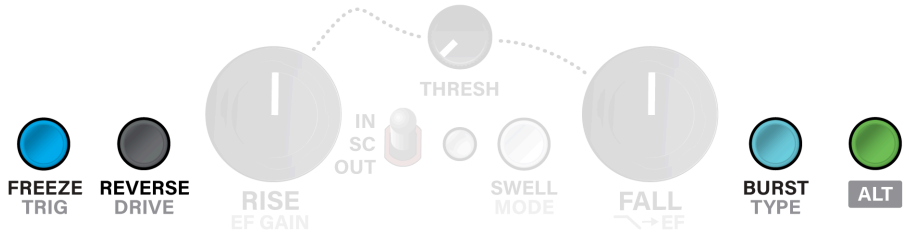
Firmware Version

When rebooting Swells, **FREEZE** (A), **REVERSE** (B), **BURST** (C), and ALT (D) buttons use colour to show the current firmware version, arranged in the format – (A).(B).(C).(D)

Colour Index—

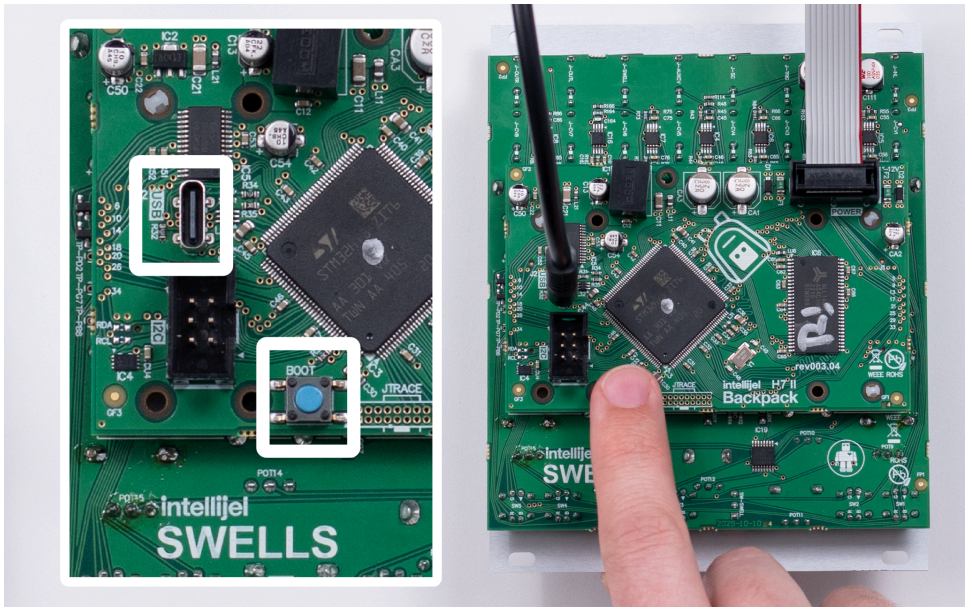
0 = BLACK/OFF	5 = *ORANGE*
1 = *BLUE*	6 = *RED*
2 = *CYAN*	7 = *MAGENTA*
3 = *GREEN*	8 = *PURPLE*
4 = *YELLOW*	9 = *WHITE*

For Example, if the firmware version is 1.0.2.3, the buttons would display:



BLUE — OFF — CYAN — GREEN

How to update



Open the Intellijel Firware Updater in your browser and follow the instructions on the page: https://intellijel.github.io/firmware/ ➜

Swells Firmware Update Instructions:

- Power off the module, but keep it connected to your module power source.
- Turn the module over so the back panel can be accessed. Place it down securely so that it’s not in contact with anything that could cause electrical shorts or damage.
- Plug a USB-C cable between the module’s USB-C port and a computer.
- Hold the Boot button while switching on the power to Swells. You can release the button as soon as the power is on.
- Open the Intellijel Web Updater, select Swells from the dropdown menu.
- Then press “Connect”, locate your device in the pop-up and press “Connect” again. It may appear in your device list as “DFU in FS Mode”.
- Press “Update”, wait until the updater dialogue says “Done!”
- Then disconnect the USB, put Swells back in the case, reboot the module, and check the firmware version using the LEDs.

Technical Stuff

Specifications

Module Width	20HP
Module Depth	30mm
Current	117mA at +12V
	0mA at +5V
	6mA at -12V