JellyComet

JellySubBtw manual

An 808 bass instrument with five kinds of dirt and one jellyfish pad. A sine or a wave with more harmonics rings out like an 808 or holds under an ADSR, glides into the next key, and one puck sets how much dirt and how much chorus, flanger or phaser it gets.

Version 1.0.0. To install it, see the install steps.

Contents
Getting started
The controls
How to use it
Good to know
Troubleshooting

Contents

- Getting started
- The controls
- How to use it
- Good to know
- Troubleshooting

Getting started

Put JellySubBtw on an instrument track and play a bass line in the first two octaves. At the defaults it is a clean sine that rings out like an 808, through a low-pass at 200 Hz. Then:

- Drag the puck on the jellyfish pad to the right for dirt (DRIVE), and up for the chorus (MOD).
- Pick another kind of dirt in DIRT: Clip or Fold for a hard, buzzy bass, Tube for a warm one.
- Press a key while another is held and the note slides into it.
- Or open PRESET and try the seven built-in sounds, or roll the dice beside it.

The window runs along the signal, left to right and top to bottom: the note (WAVE), the dirt (DIRT), the effect (MOD), the pad and the level (OUT).



The controls

From the left of WAVE to OUT, along the signal.

Control	Range	Default	What it does
HARMONICS	0 to 7	0	The wave: 0 is a sine, 1 to 7 have more and more harmonics. Takes effect on the next hit.
OCTAVE	off, on	off	Keeps every key's fundamental between B0 and A♯1, wherever you play it.
ATTACK	1 ms to 2 s	1 ms	The rise to the peak. On WAVE: the peak's grip, dragged along.
DECAY	10 ms to 8 s	2.00 s	The fall to SUSTAIN. On WAVE: the knee's grip, along.
SUSTAIN	0 to 100 %	0 %	The level held while the key is. 0 rings out like an 808. On WAVE: the knee's grip, up.
RELEASE	5 ms to 4 s	60 ms	The fall after the key is let go. On WAVE: the end's grip, along.
EVERY	off, on	off	On: every note slides from the last one, not only a key pressed under a held one.
GLIDE	0 to 400 ms	60 ms	How long a slide takes; 0 jumps. Its plot's grip, along.
SHAPE	Late 100 % to Early 100 %	Straight	A slide's bend: Early rushes and settles, Late holds and swoops in. GLIDE's grip, up or down.
CUTOFF	20 Hz to 20 kHz, Off	200 Hz	The low-pass before the dirt, 24 dB an octave. Off, at the top, is no filter at all. Its grip, along.
RESO	0 to 100 %	0 %	The resonance at the cutoff, up to +17.7 dB. Its grip, up.
ENV	0 to 100 %	0 %	How far the note's envelope opens the low-pass, up to 5 octaves.
DIRT	Soft, Clip, Tube, Fold, Crush	Soft	The kind of dirt; each has a tooltip.
DRIVE	0 to 100 %	0 %	How hard the dirt is driven: the pad across, the grip in the middle of DIRT's curve, or DRIVE in the bar under the pad. 0 is the clean note.
DIRT's band	Off (20 Hz) to 20 kHz	Off	Where the dirt plays: above this edge, the clean note under it. Off is the whole bass. The round grip on DIRT's spectrum.
MOD	Chorus, Flanger, Phaser	Chorus	The effect after the dirt.
MOD (mix)	0 to 100 %	0 %	How much of the effect is heard inside its band: the pad up, or MOD in the bar under the pad. Hosts show it as Mod Mix.
MOD's band	Off (20 Hz) to 20 kHz	200 Hz	Where the effect plays: under this edge always the dry note. The round grip on MOD's display.

Control	Range	Default	What it does
SYNC	off, on	on	Each RATE snaps to the nearest of 1/8 note to 8 bars, and the sweep follows the song's position while it plays.
Chorus AMOUNT, RATE	0 to 3.4 ms; 0.05 to 5 Hz	1.85 ms; 0.51 Hz	The chorus's pad: how far its delay sweeps either way, and how fast.
Flanger DELAY TIME, FEEDBACK	0.2 to 12 ms; 0 to 95 %	1.58 ms; 50 %	The flanger's pad: the delay its sweep centres on, and the feedback.
Flanger RATE, DEPTH	0.05 to 5 Hz; 0 to 100 %	0.25 Hz; 100 %	The flanger's sweep, under its display.
Phaser FREQUENCY, FEEDBACK	50 Hz to 20 kHz; 0 to 95 %	894 Hz; 30 %	The phaser's pad: the frequency its sweep centres on, and the feedback.
Phaser RATE, DEPTH	0.05 to 5 Hz; 0 to 100 %	0.50 Hz; 100 %	The phaser's sweep, under its display.
OUT	−24 to 0 dB	0 dB	The level into the last soft clip: the tall fader, or OUT under it. The fader's thin line is the output's peak; its top lights when the clip takes some off.
SOUND (the dice)	a button		Rolls a new sound (see The dice).
PRESET	a list	Init	See Presets.
Zoom	100, 125, 150 %	100 %	The window's size, kept with the project.

Mouse: drag a value, a grip or a pad; hold Shift for fine steps; the scroll wheel steps; double-click resets to the default; right-click a value to type it (`180 ms`, `2 s`, `1.2k`, `30%`). A click anywhere on a pad moves its puck there. The host can automate every parameter.

How to use it

The note: WAVE

WAVE draws the note as your settings will make it: the chosen wave along the attack, decay, sustain and release, stage by stage, and a dot riding the curve while a note sounds. Drag its three grips to shape the envelope. With SUSTAIN at 0 the note rings out and dies on its own, the classic 808; raise SUSTAIN for a bass that holds as long as the key.

HARMONICS picks the wave. A sine (0) is the pure sub, felt more than heard on small speakers; 1 to 3 add the overtones that make a bass audible on a laptop; 5 to 7 are bright and buzzy before any dirt.

Slides

Press a key while another is held and the note slides to it over GLIDE, without a new hit. With EVERY on, every note slides from the last one, even after a gap, as many trap 808s do. SHAPE bends the slide: Late holds the old note and swoops in at the end, the typical 808 slide; Early rushes to the new note and settles.

The low-pass

CUTOFF and RESO set a 24 dB an octave low-pass before the dirt, on its own display at WAVE's right end, with the note's partials drawn behind. Lower it to darken a wave with many harmonics before it is driven; ENV opens it with each hit and closes it as the note dies, for a bass that growls on its attack. At Off the filter is out of the way entirely.

The dirt: DIRT

- **Soft:** a gentle rounding that thickens the note.
- **Clip:** hard edges, loud and buzzy, the clipped trap 808.
- **Tube:** a warm, uneven drive, like a valve.
- **Fold:** the wave folds over itself as DRIVE rises, a metallic growl.
- **Crush:** fewer bits and a slower clock, gritty and lo-fi.

DRIVE changes the tone and not the loudness: the dirt is held at the clean note's loudness, so you can judge it by ear without being fooled by a louder signal.

DIRT's band keeps the dirt off the sub. Drag its round grip on the spectrum up to 120 or 150 Hz, and the fundamental stays clean while everything above it is driven: a bass that is clean on a big system and heard on a small one. Fold in particular can take the fundamental away on the whole bass; give it a band.

The laptop check: DIRT's spectrum marks 150 Hz and 400 Hz, where a laptop and a phone speaker start, and reads how much of the note gets through to each. If the readout is low, add HARMONICS or DRIVE until it isn't.

The effect: MOD

Pick Chorus, Flanger or Phaser. Each has its own small pad, laid out as in Ableton Live 9 (the chorus's AMOUNT and RATE, the flanger's DELAY TIME and FEEDBACK, the phaser's FREQUENCY and FEEDBACK), and its response beside it, moving with the sweep. The flanger and the phaser also have RATE and DEPTH under the response.

The effect plays only above MOD's band edge, 200 Hz by default; under it the note stays dry and in the middle, so the low end is as mono as before. Moving the edge under 200 Hz widens the low end; from 100 Hz the side below 60 Hz is only 34 to 40 dB under the mid, where from 200 Hz it is 56 or more.

With SYNC on (the default) every RATE snaps to a note length, and while the song plays the sweep sits on its position, so the same bar sounds the same every time.

The jellyfish pad

One puck for the two amounts that matter most: across is DRIVE, up is MOD's mix. Press anywhere on the pad and the puck jumps there; drag it while a note plays to hear the bass go from clean to dirty to wide. DRIVE and MOD are also in the bar under the pad to drag or type.



OUT

The level into a soft clip at full scale, the last thing in the plugin: nothing passes 0 dBFS. At OUT 0 dB, the default, a note at full velocity reaches the clip's knee and it rounds the peaks a little, up to about 1.2 dB with the built-in presets. Its top lights when it does. Bring OUT down to −3 dB if you want it untouched.

Presets

The PRESET list holds Init (every default), your favourites, the seven built-in presets and then your own. The arrows step through them, the disk saves the current settings under a name, and PRESET reads `Custom` once a setting differs from every preset.

Preset	What it is
Trap Glide	The long trap 808: a sine, no filter, a little Soft on the whole bass, a slide bent late.
Clipped Sub	Clip at DRIVE 60 % above 120 Hz: the fundamental clean, the clip heard on a laptop.
Warm Tube	Tube on HARMONICS 2 through a low-pass at 900 Hz, held a little.
Fold Growl	Fold above 150 Hz, the low-pass opened by the note's envelope: it growls as it hits.
Crushed Pluck	A short crushed pluck with a flanger above 300 Hz.
Wide Chorus	Soft on HARMONICS 1, a wide chorus above 220 Hz, the sub in the middle.
Phased Hold	A held, clipped bass with a slow phaser above 180 Hz and EVERY on.



Your presets are text files in `~/.local/share/JellySubBtw/presets/`, one `id value` line a parameter, shared by every project:

```
drive 0.35
dirt soft
harmonics 0
```

A line a file doesn't have leaves its parameter alone, and a line it doesn't know is skipped.

The dice

SOUND, left of PRESET, rolls every setting that shapes the sound: the wave, the envelope, the slide, the filter, the dirt and the effect. It keeps OUT, OCTAVE, SYNC and EVERY as they are, and never starts MOD's band under 100 Hz, so the sub stays in the middle. Roll until something sounds good, then save it.

Good to know

- **No latency:** a note sounds on its own sample, and the host has nothing to compensate.
- **Light:** about 0.29 % of a CPU core at the defaults and 0.68 % with everything on, at 48 kHz. In a long silence it costs next to nothing, and it tells the host when it is silent.
- **Click-free changes:** settings glide over 20 ms, a change of DIRT crossfades over 10 ms, a change of MOD over 20 ms, so you can automate them while notes play.
- **Velocity** spans 12 dB; the pitch wheel bends ±2 semitones.
- **Mono up to MOD, stereo after it.**
- **No oversampling,** for the zero latency: hard dirt on high notes aliases a little at 44.1 kHz, under −52 dB; on bass notes, and at 48 kHz, it stays under −60 dB.

Troubleshooting

- **The plugin doesn't show up:** check that the bundle is in `~/.clap` or `/usr/lib/clap`, then rescan plugins in your DAW. It needs a CPU with AVX2.
- **The editor window stays black or doesn't open:** check that a Vulkan driver is installed. The `vulkaninfo` tool from `vulkan-tools` should list your GPU.

- **A note doesn't slide:** only a key pressed while another is held slides, unless EVERY is on; GLIDE 0 jumps.
- **The bass is thin with Fold:** on the whole bass Fold can take the fundamental away. Move DIRT's band up to 120 Hz or more.
- **The low end goes wide or thin in mono:** MOD's band reaches the sub. Keep its low edge at 200 Hz or over.
- **The fader's top lights up:** the last clip is rounding the peaks. Bring OUT down to −3 dB to keep it off.
- **The note sounds dull:** CUTOFF starts at 200 Hz. Turn it up, or all the way to Off.
- **Typing a preset's name does nothing:** some hosts keep keystrokes for themselves. Write the preset file by hand instead (see Presets).
- **A preset doesn't show up in the menu:** its file must end in `.preset`, and its name can't start with a dot or be Init's or a built-in preset's. The editor reads the folder when it opens and after a save, so reopen the editor after adding files by hand.