

# GLU34

A stereo bus compressor in the spirit of the classic British console bus compressor, with LOW and HIGH COLOUR after it.

**A Lab plug-in.** The Lab is where new GFX plug-ins are built in the open: they may change sound or controls between versions.



## Overview

GLU34 is the glue for a mix bus, a drum bus or a parallel chain: stepped controls, a two-stage AUTO release, a sidechain high-pass, a genuine stereo external key, parallel MIX and a VCA DRIVE that runs from clean and punchy to dense console grit.

This Lab version adds Sifon's COLOUR after the compressor. LOW adds weight below about 300 Hz and HIGH adds sheen and air above about 3 kHz; each only adds harmonics, so the bands keep their level. An OS key runs VCA DRIVE and COLOUR at 2x or 4x, and the gain-reduction meter is lit from behind in blue. With COLOUR off and OS at 1x it sounds exactly like the Stable GLU34.

DRIFT (50 % = standard, 0 = none) makes the VCA's bias breathe, lets the threshold wander by a few tenths of a dB, and lets each COLOUR band's drive breathe by about 1 dB, so the weight and the sheen move a little, as circuits do.

## Reach for it for

- Mix bus glue, with a little air on top
- Drum bus smash with low-end weight
- Parallel crush with MIX
- Vocal and piano buses
- Console grit from VCA DRIVE

## Controls

### The header

|                       |                                                                                                                                                                                                                                    |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PRESETS</b>        | Opens the preset list (with "Reset all to defaults" at the end).                                                                                                                                                                   |
| <b>◀ / ▶</b>          | Steps to the previous or next preset, wrapping round.                                                                                                                                                                              |
| <b>Preset display</b> | Shows the preset's name. Click it for the preset list too.                                                                                                                                                                         |
| <b>OS</b>             | 1x / 2x / 4x: each click moves on. VCA DRIVE and COLOUR run at that rate, so hard drive stays clean at the top. 1x is the default; 2x adds 31 samples of latency, 4x 37 (reported to REAPER). Changing it dips the sound for 5 ms. |

## COMPRESSOR

|                  |                                                                                                                    |
|------------------|--------------------------------------------------------------------------------------------------------------------|
| <b>IN</b>        | The compressor in or out (10 ms fade; VCA DRIVE and MAKEUP go with it, COLOUR stays).                              |
| <b>THRESHOLD</b> | -30 to 0 dBFS.                                                                                                     |
| <b>RATIO</b>     | 1.5, 2, 3, 4, 10, 20 : 1, each with its own knee: 2 : 1 eases in gently over 12 dB; the higher ratios bite harder. |
| <b>ATTACK</b>    | 0.1, 0.3, 1, 3, 10, 30 ms.                                                                                         |
| <b>RELEASE</b>   | 0.1, 0.3, 0.6, 1.2, 2.4 s, or A (AUTO): loud peaks let go quickly, the body of the sound recovers slowly.          |
| <b>MAKEUP</b>    | -5 to +15 dB.                                                                                                      |

|               |                                                                                                               |
|---------------|---------------------------------------------------------------------------------------------------------------|
| <b>SC HPF</b> | OFF, 40, 80, 120, 185, 250 Hz (12 dB per octave) on what the compressor hears: the lows stop pumping the mix. |
| <b>EXT SC</b> | The compressor listens to inputs 3 / 4, a stereo key.                                                         |

## GAIN REDUCTION

|                     |                                                                             |
|---------------------|-----------------------------------------------------------------------------|
| <b>Needle meter</b> | 0 to 20 dB of gain reduction on a blue backlit face, with the figure below. |
| <b>OUT</b>          | L and R bars, -48 to 0 dBFS.                                                |

## VCA

|                  |                                                                                                                                                                                           |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>VCA DRIVE</b> | 0 to 10. At 0 the VCA runs balanced: clean and punchy. Turned up, it runs unbalanced: a console's 2nd-harmonic richness that grows as it is turned up and as the compressor works harder. |
| <b>MIX</b>       | 0 to 100 %: parallel compression, the dry side in phase.                                                                                                                                  |
| <b>DRIFT</b>     | 0 to 100 % (50 % = standard): see the overview.                                                                                                                                           |

## COLOUR

|                   |                                                                                                                                                                                                                                                                                                                            |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LOW / HIGH</b> | Each band on or off (either, both or neither; switching crossfades). LOW adds weight below about 300 Hz; HIGH adds sheen, air and upper-mid edge above about 3 kHz. A band that is off is greyed.                                                                                                                          |
| <b>TEXTURE</b>    | 0 to 100 %: how hard that band is driven (up to +18 dB). HIGH's band widens down towards 1 kHz as it rises. Each band also lifts the mix a little (HIGH up to +3.1 dB from 4.7 kHz, LOW up to +1.25 dB below 300 Hz); above 50 % HIGH adds a shelf above 15 kHz and LOW a shelf below 120 Hz with a 30 Hz subsonic filter. |
| <b>WIDTH</b>      | M (the added harmonics in the centre only), C (as made, the default), S (in the sides only). Only the added harmonics move, so there are no phase problems.                                                                                                                                                                |

|                         |                                                                                                                                                                                             |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DIP 220 / DIP 3K</b> | With LOW / HIGH on: a fixed dip on that band's saturation, and a dynamic dip on the clean sound that cuts 220 Hz mud or 3 kHz harshness only while it stands out from the mix (up to 6 dB). |
| <b>SOLO</b>             | Hear only the band(s) that are on.                                                                                                                                                          |

Knobs: drag up or down (hold Shift for fine moves) or use the mouse wheel; double-click returns to the default. The stepped knobs click between their positions. A knob's name shows its value while you touch it. S / M / L set the panel size; ? shows the credits and this manual's address.

## Presets

|                       |                                                                                     |
|-----------------------|-------------------------------------------------------------------------------------|
| <b>Init</b>           | -12 dBFS, 2 : 1, 10 ms, AUTO, COLOUR off.                                           |
| <b>Mix Bus Glue</b>   | 2 : 1, slow attack, AUTO, SC HPF 80 Hz, a little VCA drive and HIGH COLOUR for air. |
| <b>Gentle Master</b>  | 1.5 : 1, 30 ms, AUTO, clean.                                                        |
| <b>Drum Bus Smash</b> | 10 : 1, fastest attack and release, VCA drive, LOW and HIGH COLOUR with DIP 220.    |
| <b>Punchy Drums</b>   | 4 : 1, 3 ms attack, fast release.                                                   |
| <b>Parallel Crush</b> | 20 : 1, fast, driven, mixed 50 % with the dry.                                      |
| <b>Vocal Bus</b>      | 3 : 1, 1 ms, SC HPF 120 Hz, HIGH COLOUR with DIP 3K.                                |
| <b>Piano and Room</b> | 2 : 1, 10 ms, 0.6 s release.                                                        |
| <b>Bass Lock</b>      | 4 : 1, 1 ms, 0.3 s, LOW COLOUR with DIP 220.                                        |
| <b>Console Grit</b>   | 4 : 1, heavy VCA drive, LOW and HIGH COLOUR at 60 %.                                |
| <b>Pumping Groove</b> | 4 : 1, slow attack, fastest release: it breathes with the beat.                     |
| <b>Clean Modern</b>   | 2 : 1, 30 ms, AUTO, clean.                                                          |

Presets set every control except EXT SC, DRIFT and OS.

---

## Tips

- Set the compressor first with COLOUR off, then bring LOW or HIGH in and use SOLO to hear what they add.
- HIGH at 20 - 35 % TEXTURE is a gentle way to open up a dull mix after compression; DIP 3K keeps it from getting harsh.
- LOW WIDTH towards M keeps the added weight in the centre with the kick and bass.
- Try OS 2x when VCA DRIVE or TEXTURE are high on bright material.

File: gfx-lab-glu34.jsfx