Heft

A stereo VCA bus compressor with twin preamps in front of it: the lows and the highs each driven through their own preamp model, then a tilt EQ.

> **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

Heft is a stereo VCA bus compressor in the spirit of the famous American stereo bus compressor with the stepped controls and the side-chain filter switch (the sound is designed from scratch). This Lab version puts TWIN PREAMPS in front of it: the signal splits at SPLIT into a low and a high band, and each band runs through its own preamp model with its own DRIVE. So you can thicken the bottom with iron while the top gets a little valve sheen, or crunch the lows with a transistor and keep the top clean.

After the preamps, TILT (Benthick's seesaw EQ) leans the sound darker or brighter. It sits before the compressor, so it changes what the compressor reacts to as well as what you hear. With both preamps out and TILT at 0 it is the Stable Heft.

Reach for it for

- Mix bus glue with a touch of iron weight
- Drum buses: punch from the compressor, grit from the preamps
- Parallel smash with MIX
- Bass-heavy mixes: PUSH keeps the lows from driving the compressor
- Vocal and instrument buses that need a little sheen on top

Controls

The header

BYPASS	Crossfades (15 ms) to the untouched input, kept in time with the latency. Lit = bypassed; the VU lamps dim.
OS	Oversampling for the preamps: click to cycle 1x / 2x / 4x (default 1x, as the Stable Heft: no latency). Use 2x or 4x when you drive the preamps hard. Latency 0 / 31 / 37 samples, reported.
PRESETS	Opens the preset list (with "Reset all to defaults" at the end).
◀ / ▶	Steps to the previous or next preset, wrapping round.
Preset display	Shows the preset's name. Click it for the preset list too.

COMPRESSOR

THRESHOLD	-40 to 0 dB: where it starts working.
ATTACK	.03 / .1 / .3 / 1 / 3 / 10 / 30 ms.
RATIO	1.5 / 2 / 3 / 4 / 6 / 10 / INF : 1.
RELEASE	.05 / .1 / .2 / .5 / 1 / 2 s, or VAR.
VAR	The release time when RELEASE is on VAR: 0.05 to 3 s.
KNEE	HARD, MED (6 dB) or SOFT (12 dB).
PUSH	What the detector hears: NORM (flat), MED (the lows count less) or LOUD (the lows count much less and the highs more).

	The bass drives the compressor less, so mixes stay big and punchy.
NEW / OLD	NEW: feed-forward, precise and firm. OLD: feedback, softer and more forgiving, the vintage feel.
MAKEUP	-10 to +20 dB.
IN	The compressor in or out.

STEREO

VU meters	Gain reduction (GR) or output level (OUT) for left and right.
LINK	IND (each side on its own) to 100 (both sides share one gain).
LINK FILTER	What the link shares: OFF, HP (the lows are left out) or BP (only the mids).
METER	Switches the VUs between GR and OUT.
MIX	Parallel compression: the preamps' sound against its compressed copy.

PREAMPS

LOW / HIGH	LED push buttons: each switches its band's preamp in (amber LED lit) or out, crossfaded. With both out, nothing is split.
DRIVE	0 to 100 %: how hard that band's preamp works. It adds harmonics, not level.
MODEL	Click for the menu: IRON, TRANSISTOR, SOLID STATE or VALVE. A change fades that band out for 5 ms, swaps and fades back.

The four models

IRON	A transformer core: soft, mostly 3rd harmonic. Weight and a firmer bottom. Tone: +2.5 dB low shelf from about 120 Hz.
TRANSISTOR	A single-ended discrete stage: lop-sided (2nd harmonic), the highs drive it harder. A forward edge. Tone: +2 dB around 1.5

	kHz.
SOLID STATE	An op-amp stage: clean until it nears the rails, then a firm, even knee (odd harmonics). Tone: +2.5 dB high shelf from about 7 kHz.
VALVE	A biased triode: soft and asymmetric. Tone: -2 dB around 660 Hz.

TILT

SPLIT	Where the low and high bands divide: 110 Hz to 1.1 kHz in 110 Hz steps (220 Hz by default), shown in the box under it. A 24 dB/oct crossover whose bands add back flat.
TILT	±6 dB seesaw round 660 Hz: turn right for brighter (lows down, highs up), left for darker.
DRIFT	0 to 100 % (50 % = standard). Preamp heat: each model in use drifts its own way (the valve warms up after loading and its bias wanders, with sag on loud passages; the iron's saturation point wanders; the transistor's bias creeps up as it heats; the solid-state rails sag on peaks). Comp timing: attack and release sit slightly off nominal and wander.

Knobs: drag up or down (hold Shift for fine moves) or use the mouse wheel; double-click returns to the default. Values show while you hover. S / M / L set the panel size; ? shows the credits and this manual's address.

Presets

Every preset except Bus Limiter uses the preamps, most of them only subtly. The first ten are the Stable Heft's, level-matched to their Stable versions.

Mix Bus Glue	2:1, soft knee; IRON 25 % low, VALVE 15 % high.
Big Mix (loud)	4:1, LOUD push; IRON 40 % low, SOLID STATE 30 % high, a little brighter.
Drum Bus Punch	6:1, hard knee; TRANSISTOR 35 % low, SOLID STATE 25 % high, split 330 Hz.

Drum Smash (parallel)	10:1, fastest attack, MIX 40 %; VALVE 60 % low, TRANSISTOR 50 % high.
Vintage Feedback	OLD (feedback), VAR release; IRON 35 % low, VALVE 35 % high, a little darker.
Vocal Bus	4:1; VALVE 25 % on the highs only, split 440 Hz, a little brighter.
Wide Stereo (independent)	LINK IND, OLD; SOLID STATE 15 % on the highs.
Bus Limiter	INF : 1, clean.
Bass Control	4:1; IRON 35 % on the lows only.
Room Pump	6:1, MIX 60 %; TRANSISTOR 30 % low, VALVE 40 % high, split 440 Hz.
Iron Weight	Heavier IRON on the lows (55 %), VALVE highs, a touch darker.
Drum Bus Grit	TRANSISTOR 50 % low, SOLID STATE 45 % high, split 330 Hz.
Bright Air	VALVE lows, SOLID STATE 40 % highs, TILT +2 dB.

Tips

- Start with DRIVE low: at 20 - 30 % the preamps add colour you feel more than hear.
- Move SPLIT up to put more of the mix through the LOW preamp: 220 Hz is just the bass, 660 Hz and up takes in the low mids.
- TILT before the compressor works with PUSH: tilt darker and the compressor works harder on the lows; tilt brighter and it rides the top.
- Use OS 2x or 4x when the preamps are driven hard on bright material.

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