

UBK-2

In 2012, Kush dropped the UBK-1 into a world where nobody expected plugin compressors to have any kind of special or interesting vibe. Built on faithful models of the strange and aggressive curves Gregory Scott developed for the enigmatic UBK Fatso hardware, UBK-1 was the first plugin to give ITB mixers a movement-and-groove-based tool that encouraged blind turning of a few knobs to quickly get at sounds and textures that tended to be as surprising and novel as they were useful.

UBK-2 takes all of the things that made the original special — one big knob for more-or-less compression tuning, rapid switching thru preset attack-release-knee-ratio curves, analog-voiced saturation — and leaves them all intact, you can use UBK-2 the same way you used UBK-1.

Alternatively, you can dive deeper and exert a degree of control over nearly every aspect of the UBK-2's functions. 3 new compression presets enable styles of compression of not possible with UBK-1, including the very gentle low-ratio Cream for delicate jobs like the mix buss., All 8 compression curves can have their baseline attack and release times adjusted faster or slower, and all feature tight Gain Reduction matching between them, so you can freely switch between them while keeping gain reduction and overall gains consistent.

UBK-2 flanks the updated compressor section with two newly-tuned saturation engines, one pre- and one post-compression, each voiced to suit the types of transients it's likely to be presented with. An old school. pre-everything 4 band EQ leverages Kush's new, Magpha-based equalizer algorithms. And all of these linear and non-linear processes can now be monitored via Kush's signature 'Tri-Meter' display, first introduced in the dirt-loving Silika compressor. This VU meter allows for effortless, at-a-glance monitoring of Input and Output levels, Gain Reduction, or all three at once. The ability to dial saturation and compression while seeing the impact this has on the movement of the output signal vs. the input signal, and level-match them with ease... Tri-Meter is a deceptively powerful workflow enhancement, consider getting to know it.

We hope that UBK-2 represents a massive leap forward from the original, while still retaining the character and ease of use that make the original such a popular and beloved plugin that still holds its own 12 years after its release.

INPUT / OUTPUT STAGES



INPUT Input is one of the most critical controls on this plugin. If you want to get the most out of everything UBK-2 has to offer, you need to take 30 seconds and gain-stage this creature the old school analog way, by adjusting (aka 'trimming') your Input level so that all of the processors are operating in their sweet spot.

This is how that looks:

1. Make sure the main VU meter is in Tri or IO mode (you need to see the In and Out needles bouncing)

2. Select 'Trimmed' on the Trim/Untrim switch next to the Input control

3. Adjust the Input knob until the VU is peaking generally between -7dB and -5dB for drums, percussive, and transient-heavy sounds, or between -1dB and +1dB for guitars, vocals, synths, mixes etc... It's ok to have occasional peaks above and below, these are just target ranges you want to see more peaks hitting than not.

4. Select 'Untrimmed' on the Trim/Untrim switch, so you can now use Output to level match with the unprocessed input signal.

5. Go to town



HEADROOM Another unsexy knob that qualifies as the unsung hero of this plugin, the Headroom control allows you to adjust the intensity of both Sats and the Smash comp, simultaneously. In effect, it's like turning the Input knob in one direction while turning the Output knob in the other direction, something that's easily done in analog but is typically not possible with plugins.

In the everyday world, having less headroom means you're more likely to bang your skull into whatever is above you, and more headroom means you're freer to jump around without risking a concussion. Likewise, in a circuit, the less headroom you have, the closer your signal is to hitting that circuit's ceiling and, as a result, distorting. More headroom = more room for big peaks and heavy transients to pass through without anything breaking up.

In the case of UBK-2, decrease Headroom to hit the ceiling harder and generate more distortion and compression; or, increase Headroom to relax the whole plugin and produce a cleaner, less cooked sound. This is very different than using Blend to inject unprocessed Dry signal into the Output, and offers a quick, brainless way to globally adjust the intensity of an otherwise complex and delicately balanced signal flow.

INPUT / OUTPUT STAGES



BLEND / BLEND MODE Blend is a Wet/Dry control with two completely distinct operational modes. One mode is obvious, the other is a bit trickier, so maybe refill your coffee or re-up your Adderall before digging into it.

Clean: A classic Wet/Dry control, pre-Output gain. Dry is your untouched input signal, Wet is everything prior to the Output knob. No alarms, no surprises (please).

Dirty: This sneaky Blend mode relocates the entire Blend circuit to the output of the Compressor, just after the makeup gain and just before Sat Out. This mode enables parallel compression while retaining 100% of the color and effects from the EQ into both Saturators. Put another way, in Dirty mode, Dry vs. Wet becomes "UBK-2 without Compression" vs. "UBK-2 with Compression".

Both modes have distinct sounds and excel at very different things. Clean is simple and works well when you want to just beat up a sound a little or a lot, then Blend in a little or a lot of the original, untouched sound. Dirty is preferable if you want the color and vibe of the Baseline EQ and Saturators to stay consistent, but would like to have the ability to Blend in a compressed version of those processors as well. Don't overthink it; as with most of UBK-2, a quick flip of the switch will generally tell you all you need to know.



OUTPUT GAIN The Output Gain knob on the right side of the plugin adjusts the levels as they leave the plugin, after all processing has been applied. (Including wet/dry Blend).

VU TRIM / UNTRIM Untrim connects the main VU's Input needle to your unprocessed input signal, so you see exactly what level is coming into the UBK-2 from your DAW. Trim inserts the Input knob into that equation, so you can quickly gainstage the UBK-2 and get the internal operating levels where the plugin generally



BASELINE EQUALIZER



4 fixed bands with varying gain ranges

The first processor your signal hits in the UBK-2 (after Input gain) is the Baseline EQ. Simple and powerful, it has 4 fixed bands utilizing the ultra-smooth Magpha algorithms. The frequencies and q values (bandwidth) were chosen and tailored to emphasize, de-emphasize, or even exaggerate the parts of a signal that are most likely to impact, and be impacted by, the saturation and compression circuits. This EQ is more of a problem-solver than most general purpose program EQ's, and more of a general purpose program EQ than most problem-solving EQ's. We wanted a bit of a Goldilocks, something equally comfortable shaping a track, a group, or a full mix, with an effect that's obvious enough to quickly reveal what works and what doesn't.

BASELINE EQUALIZER

BASS

55Hz Bell, q 0.28, +/-16dB 55Hz is a gorgeous middle-of-the-subs frequency, faster and more impactful than the rumble of 40Hz, weightier and less boomy than the thump of 80Hz. That said, the generously wide Q will easily grab 'all things bass' and keep them connected to the low mids, preserving those relationships while skewing things towards the heavy.

LO MID

130Hz Bell, q 0.60, +/- 12dB 130Hz is either warm and woolly, or it's loose and blurry, which means it's something you either want more of or less of on almost any given source. On the wide/tight/narrow spectrum, the bandwidth is right on the border where wide meets tight, striking a balance that serves a few different aims. On the one hand, Lo Mid is tight enough to cut mud while preserving any deeper boosts done with the Bass control (and vice-versa), producing a more modern and focused version of the push-pull technique that makes a Pultec so useful. On the other hand, it's wide enough to fatten up tracks like snare, guitars, or deeper vocals where the warmth and weight live a bit higher in the bass spectrum.

HI MID

632Hz Shelf, +/-6dB Yes yes, we put a shelf on the hi mid band. If that seems unorthodox, it probably is, but only in terms of "gear design." In terms of "the real world" we find that it's not only very useful, it's common practice to have a shelf somewhere in the middle of the spectrum and peak/bells above that. You probably do this more than you realize, if not within a given EQ, then with another EQ further down the chain.

On raw tracks, you can usually get away with a lot of boost with this band, a way to start waking up a sound and prepping it to sit in a mix. In the other direction, small cuts are effective at blunting the edge of a source before sharpening it again with distortion and compression.

TOP

13kHz Bell, q 0.60, +/-12dB 13k is a lovely way to add airy push for a modern vocal, or lay the top back for a more classic, 6-8k focused voice. Extra geek points if you noticed that 13k is 2 decades up from Lo Mid's 130Hz, which means these two bands can be adjusted and neither has much of an impact on the perception of the other. Contrast this with, say, a cut at 250Hz, which will tend to make 2.5kHz, one decade higher, sound more pronounced. And 840Hz affects our perception of 4.7kHz... some day there will be a Kush After Hours episode on all of this on YouTube, I swear!

THE "SMASH" COMPRESSOR



SMASH UBK-2's compressor section offers 8 "variablepreset" compression modes, each with its own unique attack, release, knee, and ratio characteristics. To switch between them, you can 'slide' the rocker switches around, or you can click directly on any curve's name. The big knob adjusts the Threshold .

The rocker switches set the compression mode, and the knob adjusts the intensity of the compression from Mild (none at all) to Intense (smashed to

oblivion). Gain Reduction is roughly maintained between each Smash Mode, but more critically we focused on the 'feel' of the compression as much as the level, so the main differences

you'll hear from one to the next are the differences in the shape and speed of the various curves.

ATTACK & RELEASE MODS Range: 0.5x to 3x.

HPF

Each Smash Mode preset has its own unique attack and release timings which are set automatically when a given preset curve is selected. From there, UBK-2's Attack Mod and Release Mod controls behave similarly to standard attack and release controls: counter-clockwise for faster timings, clockwise for slower timing. But there is a critical distinction with UBK-2's Mod controls: they are modifiers of a baseline value,



rather than determinants of a fixed value. As such, the 1x position will represent (e.g.) 3ms on one curve, but 6ms on another, etc. This preserves the feel of UBK-1 for those who are familiar with it, while enabling a degree of flexibility and range of control not possible with the original's preset-dominated workflow.

SC HI-PASS FILTER *Range: Off to 300Hz.* Inserts a 12dB/octave high pass (low cut) filter into the sidechain signal feeding the compressor's detector circuit. This has the effect of reducing the compressor's "reactivity" to low frequency energy, allowing more bass transients and energy to get past the compressor. Use to shape the amount of 'pumping', or whenever you want more glue or density without choking the track.

MAKEUP GAIN Adjusts the level of your signal as it leaves the compressor but BEFORE it hits the Output Sat Stage. Use this control to compensate for any gain reduction coming from the compressor to ensure the Sat Out stage reacts roughly the same as the Sat In. Also, if Blend Mode is set to 'Dirty', setting Makeup to restore gain lost via compression allows for consistent output gain across the full 'Wet to Dry' range of the Blend control.



SATURATION STAGES



SAT IN

Range: Minimum-Maximum, or Off via Switch

Sat In is a pre-compression saturation and harmonic distortion generator. Given its pre-compressor position in the signal flow, it is specifically tuned to round out and smooth the most intense and unruly transients, which makes the compressor's job easier and the resulting compression tighter and more consistent. Tonally, it leans a bit into the 'midrange excitement' vibe of the first transistorbased consoles of the late 1960's.

Be warned: even with minimal activity on the Sat In's Meter, the effect can be quite meaningful if your ears are sensitive to transient texture (and if you're fortunate enough that your monitoring allows you to hear such subtleties).

Be warned again: turning the Sat knob all the way down does not turn Sat off, it just sets it to minimum. If you want to bypass the Sat In stage entirely, use the pushbutton just above the Sat knob to activate its local bypass. The Sat In Meter will go dark to confirm that no processing is taking place in this section..



SAT OUT

Range: Minimum-Maximum, or Off via Switch

Sat Out is a post-compression saturation and harmonic distortion generator. Given that it comes after the Smash Compressor in the signal flow, it is tuned to thicken the lows and low mids while softening the sharpness of the upper mids, making it a great antidote to some of the less desirable artifacts of compression. Tonally, this Sat stage is in the darker, heavier family of second-gen transistor-based consoles that took over studios in the mid- to late 1970's.

As with Sat In, the effect of Sat Out can be meaningful even at the mildest setting. Likewise, if you want to bypass the Sat Out stage entirely, use the pushbutton just above the knob to activate its local bypass, and verify that he Sat Out Meter goes dark to confirm that no processing is taking place.

TIPS & TRICKS

TIP:

Surf thru the presets and you'll find examples of one of more controls (an EQ band, a compressor threshold) extremely exaggerated, aggressively shaping things via distortion and/or compression, then blended in parallel. This approach — exaggerate something until it sounds extreme or even wrong, then blending it modestly or even subliminally — is one of the more powerful techniques in audio engineering, and worth the effort to get into your toolkit. When in doubt, lean on a powerful rule of thumb: if you can hear it, it's too much. Turn it down slowly, bit by bit, until you're no longer sure you can hear it, then take it away completely. If you don't notice when it's there but miss it when it's gone, you've nailed it.

TIP:

If you're new to hearing compression, try setting both Saturators to minimum, Blend to 100%, HPF off, all EQ flat. Adjust Input until your peaks are between -5dB and OdB on the VU. Now set Attack and Release to UBK-1 defaults (1x), then crank 'Smash Intensity' high enough to get at least 10dB of gain reduction happening on the Tri-Meter. Now toggle between the 8 preset Smash Modes and pay attention to things like the attack vs. ring of the snare, the click vs. boom of the kick, the overall amount of low frequencies vs. high frequencies, the texture of vocal sibilants and fricatives (esses and tees and effs), the front to back placement of the vocal, the pluck and sustain of a bass track, the flatness vs. bounce of the groove... A compressor is a hydra, it affects every single aspect of every sound that passes through it. It can take years or even decades to become sensitized to all the variables and nuances. For an in-depth primer on how to hear attack and release in particular, check out Kush After Hours on Youtube, and search the channel for "How to Hear Compression". Currently at over a half million views and >99% Like, it's arguably the most comprehensive and comprehensible compression tutorials around.

TIP:

For every move you make with Bass, try doing the opposite with Top. E.g., a +3 dB Bass boost is met with a -3dB Top cut. Give it a shot, the results may surprise you!

PRESET MANAGEMENT



BANK Banks are handy ways to organize groups of presets into categories you create. To select a bank, click directly on the current bank name and a drop-down list will appear. Select New to add a new bank to this list. Select Rename to rename the current bank, editing directly on the name itself. Select Delete to delete the current bank. WARNING deleting a bank deletes ALL of the presets within that bank, and cannot be undone. A warning dialog will appear to confirm you wish to do this, please choose carefully!

PRESET A preset stores the state of every knob and switch on the main GUI, as well as the state of the Sidechain select, Polarity switch, and detector Link. Use this to save and recall your favorite settings, trade settings with other UBK-2 users, and import new banks from UBK whenever he can remember to do such things.

To select a preset, click directly on the current preset name and a drop-down list will appear. Select Save As to create a new preset in the current bank. Select Save to overwrite the current preset.

STATUS LED This light indicates whether the current state of UBK-2's controls is identical to the settings in the currently active preset. Green indicates that the UBK-2's settings and the preset are identical, Red indicates that controls have been changed since the preset was loaded. WARNING If you load a different preset when the Status LED is Red, you will lose the changes you've made to the current preset.

PRESET MANAGEMENT TIP It's common practice to organize presets by Instrument type, such as Drums, Guitars, Mix Bus. But consider organizing some by tone, attitude, or theme. This allows you to explore textures regardless of what instrument you're focusing on, and can promote a different state of mind when mixing, namely one that thinks in terms of color and personality, rather than instrument-specific paradigms alone.

DSP / AUXILIARY CONTROLS



BYPASS Bypasses UBK-2 (Who Knew?!)

PARAMETER DISPLAY (#) Toggles UBK-2's parameter display on or off. ON shows the precise values of each control and allows for direct input of the values. OFF removes the visual clutter and lets you mix with your ears instead of your math skills.

POLARITY (ø) Toggle this switch to invert the polarity (aka "flip the phase") of the UBK-2 Output.

HELP Press this button to go directly to this manual page at thehouseofkush.com, where you can find links for downloading updates, contacting support, and more!

WHAT'S NEXT?

GOT QUESTIONS?

We've got answers! Head to www.thehouseofkush.com/support for all your plugin support needs.

INTO ANALOG?

Ready to pull the trigger on some of Kush's Analog options? Head to <u>www.thehouseofkush.com/analog</u> to read up on all the latest Kush has to offer. Watch videos, hear demos, and drool over the fantastic warmth and detail only Analog can bring to your sound.