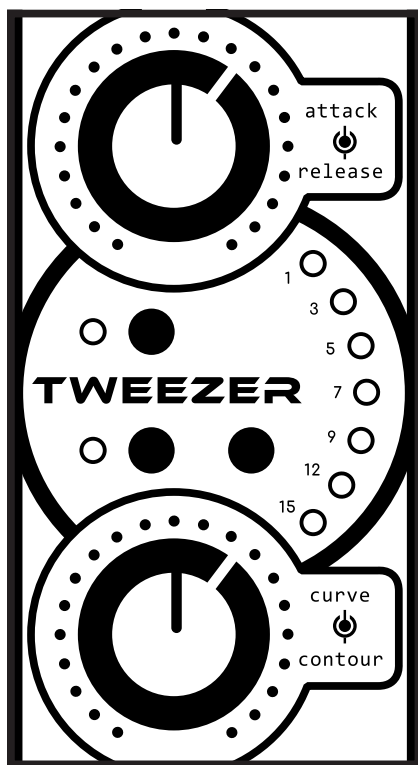


TWEEZER

CONTOURING COMPRESSOR



OPERATOR'S MANUAL

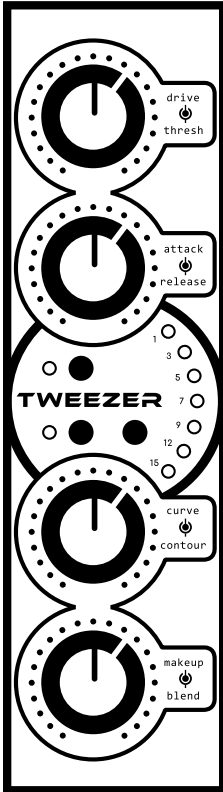
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TWEEZER 500

EXPLAINED



CONTOURING COMPRESSOR

After the enormous success of Tweaker – our 19" Rack-mount Mono Compressor – we immediately turned our attention to the next step in Kush's analog evolution: packing the versatility and tone of that groundbreaking compressor into the limited space of a 500 series module.

Enter: Tweezer. In development since the day Tweaker was released, we finally landed on a 500 series compressor that ticks all the boxes that represent the best of what this generation of Kush compression has to offer.

- A bespoke detector whose response ranges from 'lightning fast' to 'musically mellow', allowing for a wide range of compression styles, from brutal and crunchy to slow and punchy and all points in between.

- A UBK-designed Drive circuit that lets you dial in any amount of '70's-style, solid-state saturation with an emphasis on upper-midrange, odd-order harmonics.

- A 'warpable' sidechain filter, an attack that can be measured in microseconds (or as slow as 50 milliseconds), an equally flexible release, and a ratio/knee control that ranges from a 1.5:1 soft knee to a 30:1 hard knee.

With all that in place, we've created a 500 series compressor whose analog coloration is every bit as flexible and artistic as the compression itself, producing a novel and unique piece of kit whose sound is limited only by your imagination.

- Gregory Scott / UBK

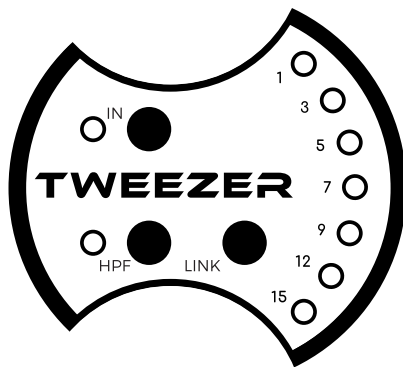
TWEEZER SPECS

JUST THE FACTS

- 500 Module Single Channel Compressor.
- Stereo-linkable with included molex link cable.
- Sidechain Contouring via Detector-Path Filtering.
 - Ultra-Responsive Gain Reduction Metering.
 - Frequency Response 10Hz - 22kHz +/- 1dB.
- Total Harmonic Distortion = 0.003% min - 10% max
(Translation: goes from squeaky clean to filthy).
 - Wet/Dry Mix for Parallel Compression.
- Makeup Gain with 18dB of gain 'in hand'.

TWEEZER CONTROLS

THE POWER CENTER



IN

This is the Master Bypass switch. When this button is depressed, the 'IN' LED lights up and Tweezer will now compress and distort your signal as desired. Press this button again and Tweezer will pass your signal through, unprocessed, at unity gain.

Tweezer has what is known as a “soft bypass,” meaning that signal always passes through its Input and Output amplifiers even when the unit is set to Out (LED is off). Running Tweezer in bypass produces a very subtle coloration typical of 70's gear running at idle.

HPF

Tweezer comes equipped with a built-in, switchable 60Hz Sidechain High-Pass Filter. With the button depressed and LED on, the filter is active. When the LED is off, the filter is off.

LINK

Any two Tweezer modules can be linked via the 4" Link Cable included with every unit. More on this later, but for now you'll want to keep in mind that if you do connect two Tweezers together, this button will activate the stereo-link functionality on each unit

GR METER

This LED arc shows Gain Reduction behavior in real-time, allowing the compressor's movement to be visualized as you listen.

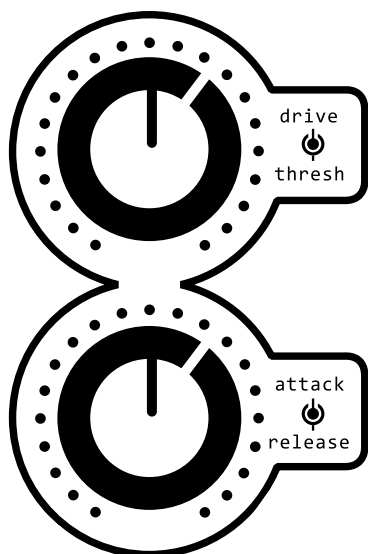
TWEEZER CONTROLS

DOUBLE-STACKED!

DRIVE

Dictates the amount of gain pushed out of the VCA, which then goes to the output amps and also feeds back into the detector. More Drive (clockwise) creates more Harmonic Distortion (aka ‘Saturation’). Less

Drive creates less. This control gets you anything from subtle, 70’s style tape saturation to gritty, crunchy, solid-state hard clipping.



THRESHOLD

Like many compressor functions, the definition of ‘threshold’ is impossible to define in a single sentence. So... We won’t try.

In practice, though, the *control* is quite simple: Want more compression? Turn it clockwise. Want less? Turn it counter-clockwise.

Given Tweezer’s flexible and unorthodox features & gain staging, we suggest starting with Threshold fully clockwise, dialing in the sound you like with the

other controls, then relaxing the control as needed (and *if* needed.)

ATTACK

The rate at which gain reduction is applied to a signal. Tweezer’s attack speeds range from an ultra-quick 20μs (microseconds) all the way to a leisurely 70ms (milliseconds).

RELEASE

The rate at which gain is restored to a gain-reduced signal. Tweezer’s release range is 20ms on the fast side and 500ms on the slow side. See “EXTRA CREDIT” on **Page 9** for some *extremely* useful tips on how to understand and get the most from this control.

TWEEZER CONTROLS

DOUBLE-STACKED!

CURVE

This unique control combines Ratio and Knee into a single knob, whose range goes from a gentle and unobtrusive 1.5:1 with a soft knee all the way to a 30:1 limiter with a hard knee.

CONTOUR

Tweezer's Secret Weapon: With one knob, you control two shelving filters moving in opposite directions on the sidechain signal, letting you get *very* tweaky about what the detector responds to and how aggressively it responds to it.

At the 12 o'clock (center) position, the sidechain is flat, producing linear compression across the frequency range. **This is considered the default position for this control.**

As Contour is turned counter-clockwise from center, Tweezer responds more to the low mids and bass and less to the upper mids and treble. Turning Contour *clockwise* from noon does the opposite, increasing Tweezer's sensitivity to

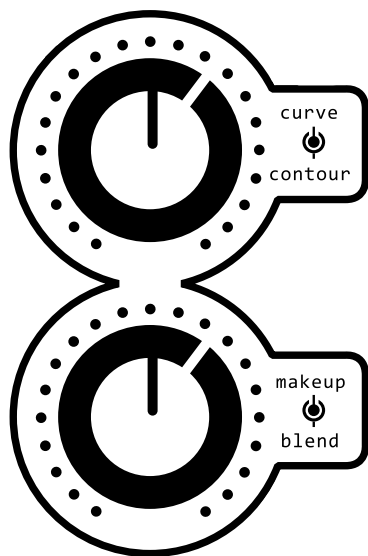
upper mids and treble while reducing reactivity to lower frequencies.

MAKEUP

Allows for up to 18dB of boost, or -70dB of attenuation of the unit's Output level. In short, this control is used to compensate for changes to your output gain as a result of your drive and threshold settings. For more, see "EXTRA CREDIT" on **Page 9** for some *extremely* useful tips on how to get the most out of makeup gain.

BLEND

On-board parallel compression control that mixes the unprocessed "Dry" signal with the post-distortion, post-compression "Wet" signal. Fully Counter-Clockwise is 100% Dry, Fully Clockwise is 100% Wet.



STEREO LINKING

GET SYNCHRONIZED!

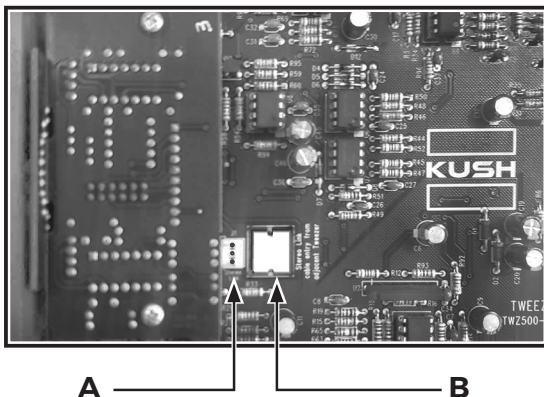
Two Tweezer 500 Modules may be stereo-linked using the included 4" Link Cable or the optional 8" Cable (available at thehouseofkush.com/store)

IMPORTANT: Linking a pair of Tweezers does not eliminate the need to adjust and match both sets of controls on linked units. We strongly advise setting the controls on each linked Tweezer independently and identically, or unpredictable results may follow.

CONNECT THE TWEEZERS!

Attach one end of the link cable to the three-pronged, white 'stereo link' connector (A) of the first Tweezer, and the other end to the same connector on the second Tweezer.

NOTE: Tweezer comes with a convenient gap in the PCB (B) through which the link cable can be threaded for easy stereo-link connection in situations where it might otherwise be difficult to reach with the included cable.



PUSH THE BUTTONS!

Once connected, the stereo-link feature is activated by setting the 'Link' buttons on the front panel of BOTH linked Tweezers to their 'IN' position. Unlinking is as simple as setting the Link buttons on both units to the 'OUT' position. It is not necessary to disconnect the link cable.

EXTRA CREDIT

GET THE MOST FROM TWEEZER

Tweezer is an extraordinarily versatile compressor. Even if you have a decent handle on what compressors do, Tweezer is different enough that it warrants some deeper explanations.

NOTES ON 'RELEASE'

Tweezer's Release runs from 20ms-500ms, but heads up: a 20ms release is *so* fast that it will likely be heard more as distortion than compression, and the faster the attack is, the more this is true.

It's especially true on bass-heavy material, so if you're hearing a lot of overt (and possibly-unpleasant) grind when compressing bass or mix buss, it's either the amount of Drive or it's the speed of the Release control (or both!).

NOTES ON 'MAKEUP'

Compressors, by definition, reduce the gain of the signal when compressing. If you're used to plugin compressors, this might be surprising, since many plugin comps automatically compensate for this difference on at least some level. Not so with analog: The more you compress, the quieter your Output becomes. The Makeup gain control allows you to restore this lost gain.

But that's not all: If you've dialed up some serious dirt by cranking the Drive control, Makeup lets you pull the output levels back as needed.

If the amount of distortion from Drive isn't enough for you, you can also use Makeup to add *even more* distortion to your signal by further clipping the Tweezer's output amps.

DON'T BE SHY!

Tweezer's unorthodox gain staging and flexible controls reward wild experimentation. You may be surprised what you can achieve with this one piece of gear, all on its own.

WARRANTY

AND OTHER INFORMATION

All Kush hardware is fully backed from the date of purchase by a one year warranty against defects, malfunction, and/or (possibly) gremlins. If your Tweezer experiences these or any other symptoms, you need only drop us a line at **analog@thehouseofkush.com** and we'll get you squared away with speed.

(Oh, and parts are guaranteed for the life of the unit, too. Almost without question. If there's an exception to this rule, we haven't found it yet.)

Operational overviews, Recall Sheets, and more of Kush's left-of-center products, plugins, videos, and more can be found at:

www.thehouseofkush.com

Finally, if you ever have any hardware-related questions, issues, or ideas you'd like to share with us, hit us up anytime at **analog@thehouseofkush.com**

Enjoy!

-ubk

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CREDIT

WHERE CREDIT IS DUE

The face of the Tweezer – the name, front panel design, and distinct versatility – were designed by yours truly, Gregory Scott aka 'ubk'.

The metalwork and PCB layout were done by my favorite Russian, Olga Gomelskaya.

The electronic design, function, and overall guts of Tweezer were designed in tandem by Kush's Tech King Kevin Hogan and our newest friend and partner in crime, Taz Bhogal.

NOTES

USEFUL INFO FOR LATER

The info below is super helpful to have on hand should you ever need support. Take it down now while it's fresh and keep the manual in an easy to reach spot in case you ever need to get in touch with us about your gear!

My Serial Number is: 420L - _ _ _ _

Purchased On: _ _ / _ _ / _ _ _ _

Email **analog@thehouseofkush.com** if you ever run into trouble. We'll help you out!