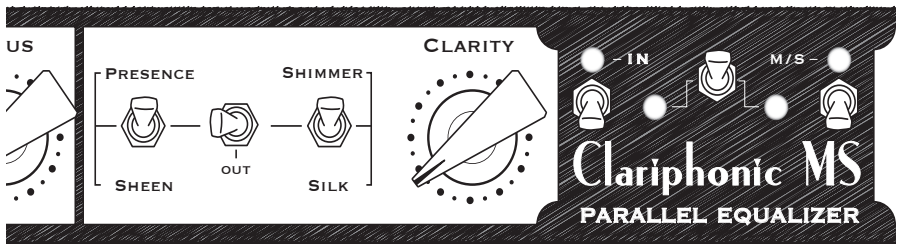




Clariphonic MS

PARALLEL MID-SIDE EQUALIZER



OPERATOR'S MANUAL



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THE CLARIPHONIC M/S

EXPLAINED



The original Clariphonic was the world's first two channel, fully parallel dual high-shelving equalizer. It was also Kush's first completely original product design, and a desert island mix bus eq for everyone from top-level pros to passionate bedroom warriors. Clariphonic's magic can be heard on countless radio and dance floor hits, broadcast radio programs, and television shows around the world.

Parallel equalization may be new to you, but the underlying process is old hat: if you've ever bussed your drums to a compressor, smashed them into artful submission, then blended the result back in with your dry, pre-compressed drums, you know parallel processing. The Clariphonic gets its special mojo from a series of clever routing tricks applied to equalization rather than compression, but all of the bussing and blending happens internally so you don't need to sweat multiple signal paths, latency issues, or any of the other small headaches that accompany parallel processing in the era of hybrid analog & digital studios.

The Clariphonic can subtly enhance or powerfully reshape the presence, sparkle, and air frequencies from 800hz – 38k, producing a form of treble control that's almost holographic in its depth and realism. It's the kind of sound that everyone wants but few could traditionally afford to obtain. And with the brand-new mid/side mode and a host of other new features, Clariphonic is not only more flexible than ever, it also extends the functionality of ever other piece of gear in your rack .

A WARNING **(OF SORTS)**

It takes time to become truly sensitive to the extreme High Frequency detail and articulation this unit brings to the table.

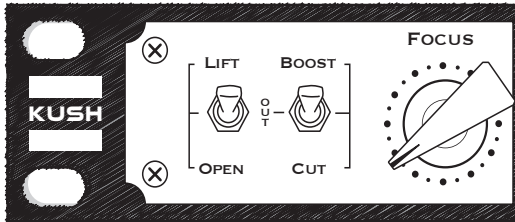
What may happen as you get to know the Clariphonic is that you'll frequently realize you've gone too far, so you'll start backing off to get it to sound balanced, and you'll keep backing it off in steps, over and over, until you realize that you actually went way overboard with what was needed. This is partly because the Clariphonic does what it does so effortlessly that many of us have no experience or reference point to guide us, and this is partly because this eq tends to work on frequencies that are much higher than more traditional designs, without grabbing the hash you don't want. Continually turning it up can be seductive, because it rarely offends.

When in doubt, take what you think is a sensible amount of boost (or cut) and reduce it by half. Even then, you may find yourself coming back the next day and realizing you can dial it back even more. It really is that sneaky, that addictive.

You've been warned!

THE FOCUS ENGINE

EXPLAINED



The Focus Engine packs a tremendous amount of equalization power into two switches and a knob. The primary thinking behind this engine was to provide a seriously transformative pair of wide bells that reach deep down into the midrange to allow for broad adjustments to the timbre and raw energy of the sound, and begin to taper off somewhere in the neighborhood of 14k. The corners were deliberately tuned to grab all of the high frequencies from the ultrasonics down through the telephonics (Lift), or to do the same but leave the telephonics alone (Open).

The controls map out as such:

- Lift ——— Lowest Band, mids (~800Hz) and up
- Open ——— Next Band, upper mids (~3kHz) and up

- Boost ——— Boosts the selected frequency
- Out ——— Focus Engine Bypass
- Cut ——— Cuts the selected frequency

— LIFT —

Lift is crack... literally. It brings out the 'crack' in the midrange, and just as noticeably it lifts the entire spectra north of those mids upwards and forwards... Hence the reason for its name.

Lift is the lowest of the 6 available shelves, and it is the only band on the Clariphonic which actually grabs any meaningful amount of the quintessential midrange, the 800 - 2.5k stuff that our ears are the most sensitive to. This band is absolutely amazing for breaking open the mids and top on sources that are too low-mid heavy or boomy to coexist in a mix with other harmonically rich sounds; boosting the top 2/3 of the sound with Lift provides an appealing alternative to hacking apart your precious warmth frequencies, allowing you to maintain the phase coherence of a blooming low end while wiping away the mud from the whole picture.

Perhaps more than any of the Clariphonic's bands, Lift has the power to completely transform the energy and attitude of a recorded sound, and it can get very aggressive very fast. On sounds that already have a lot of bite, this is almost certainly not what you want; but on sleepy sounds that obstinately remain hidden behind the mix no matter where you land the fader, Lift can pull them forward and infuse them with life without sounding like any effect was applied at all.

Listen to what Lift does to a sidestick snare sound in the overheads, or a vocal that's too boxy in the 200-400hz zone and/or scooped in the 1k-2k area, or on a whole mix that's having trouble reaching out of the speakers . As with all the filters on the Clariphonic, it's tempting to fall into the trap of turning it up more and more to hear the goodness, but it really is crazy how little of this boost you actually need in order to bring about meaningful change.

— OPEN —

Open is the 'snap' band, turn it up on a snare and you'll immediately know what I mean.

Open got its name from its ability to pop the lid off a sound and let the upper half reach for the heavens while keeping the bottom half anchored in place. It leaves the telephonics relatively untouched and begins to grab more in the 'Abbey Road Presence' range, like 3k and upwards.

While it lives higher than Lift, Open is still part of the Focus Engine which means it's still nipping and enhancing harmonic energy that is part of the 'note value' of the sound. At the same time, the tone of both Focus bands is something akin to what I would call 'white hot', so use it sensibly. Again, a kiss of gain with this engine can be extremely meaningful, and even a modest amount can stretch a sound into a very different shape than its original form.

And as with Lift, the real power of Open lays in using it as a 'first-stage' filter in conjunction with the Clarity Engine. The parallel nature of the Clariphonic allows for a tiny amount of gain on both engines to cause serious shifts in the perceived high frequency content of the program while adding very little actual equalized sound to the internal mix buss. This architecture is at the heart of why this eq sounds as natural and unaffected as it does.

———— **BOOST / CUT** ————

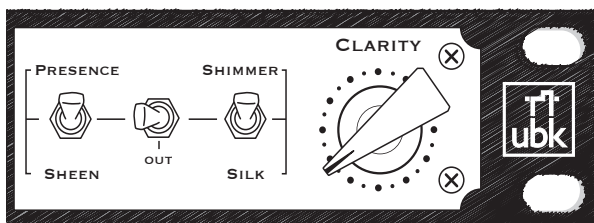
The original Clariphonic was a boost-only eq, due to the complexity and novelty of the internal routing architecture. But after several years of banging our collective design heads against the wall, a genius on the Kush design team figured out how to invert the additive nature of the Focus band's multiple summing stages, and the result blew us away.

With Focus band in Cut mode, the Clariphonic creates an effect not unlike that of analog tape, gently smoothing out and softening the most aggressive frequencies in the audible band. The resulting darkened sound is the perfect setup for even more aggressive boosts from the Clarity band.

These diametrically opposed movements on the upper registers of sound produce a tone shaping experience that is very similar to the classic push-pull technique on vintage Pultec EQ's, and gives the Clariphonic a distinctly classic-modern vibe that is soft & rich like the old, and beautifully detailed like the new.

THE CLARITY ENGINE

EXPLAINED



The whole point of the Clarity Engine was to give engineers access to the kinds of ultrasmooth, pristinely analog high frequencies normally found only in very expensive and coveted equalizers. Units like Massenburg's 8200, the venerable Sontec, Cranesong's amazing IBIS... most of us will never have the privilege of gracing our racks with any of these stunning processors, which is a shame, because they offer something up top that almost everyone wants.

Your days of wanting are over. The controls, in a nutshell:

- Presence ——— Bite, Cutting Through (~4kHz and up)
- Sheen ——— Old Fashioned Treble (~8kHz and up)
- Out ——— Clarity Engine Bypass
- Shimmer ——— Electricity (~18kHz and up)
- Silk ——— Pure Air (rise to ~34kHz and beyond)

— PRESENCE —

Presence is a very special band that almost deserves its own engine, because it doesn't possess the harmonically dense power of the Focus bands, nor is it nearly as subtle or rarefied as the rest of the Clarity 9 bands. But it lives in the Clarity Engine because it layers well with a touch of boosted Lift or Open from the Focus Engine, and creates some pretty incredible results with a cut of the same.

What sets Presence apart from all the other bands on the Clariphonic is its ability to radically alter how audible a sound is in a mix without actually pulling it upwards. Instead, it pulls things straight towards you; it makes elements more present by enhancing their ability to cut through the mix without changing the underlying, fundamental timbre. This is a potent weapon in the fight for space in a harmonically dense mix.

When you want your snare or hats to have more bite, when you want acoustic guitars to cut through even while tucking them deep into the mix, this band may be a magic bullet for you. Likewise, Presence is the ultimate eq for vocals that have beautiful tone and texture but are simply too 'soft' to make it to the front of the mix without overwhelming the song. Try it on a vocal tracked through a 58, the transformation is crazy.

On the flipside, in our almost-universally-digital world of recordings, Presence is the most risky filter to engage, because if your 4k-6k region has any harshness or brittleness whatsoever, this band will let you know in no uncertain terms. If you like what this shelf does to your sound's behavior but don't like the way it draws out aspects of the tone that are less than stellar, my advice is to follow up with some frequency dependent compression. Fast attack, fast release, sidechain keyed to the area that's giving you trouble; 1-3dB reduction should be more than enough to mitigate the issue, and if you use a softening comp like an opto/tube flavor (or anything that saturates nicely) you may even like the mellower results better than the initial sound.

— SHEEN —

Sheen is gloss, it is vintage air and a light coat of polish.

In my opinion, Sheen is the first band you run into that hits the sort of sound that is generally associated with Expensive. This is also the one I tend to reach for when I want to take a Large Diaphragm Condenser with a modest amount of top and add just a touch of the vintage Neumann sparkle.

If you've tracked in a small 10x10 room where the low mids are boxy, or the midrange has an aggressive, papery sound, you'll probably find that even when you tame the low end below 250Hz and scoop out some of the hash between 400Hz-2kHz, you still have a tone that feels a little flat and lifeless. That's where a touch of Sheen can wake things up in a gentle, unobtrusive way.

When it comes to processing the whole mix, Sheen is the highest band on the Clariphonic that's likely to affect any of the frequencies people hear when listening on lesser consumer systems, boomboxes, cheap earbuds, and computer speakers; so if you're referencing your mix on a system like that and it seems to lack the polish of more commercial mixes, this is probably the one to reach for. If your mix just seems flat out dull, you may need Presence; but if it's mostly there and just wants some of that 'special sauce', Sheen can be just what the doctor ordered.

— SELECT/OUT —

Nothing fancy here, just flip this switch to the left for your Presence or Sheen selection, Right for your Shimmer or Silk selection, or in the center on "out" to bypass the Clarity engine altogether.

— SHIMMER & SILK —

Shimmer & Silk give you the top, the whole top, and nothing but the top. I group them together in this manual because they are the only filters that will not grab any harmonically musical information at all, they just hook the edge of the treble and put it wherever you want it. The shimmering wash of a ride cymbal, the brush of a thumb on acoustic guitar strings, the air in the back of a vocalist's mouth... this is intimacy, gentle and easy as she goes.

These filters are the very essence of smooth, it is nearly impossible to cull an offensive frequency out of them. While it is possible to go too far, to make things entirely too bright, it's unlikely you will ever cringe from the particular spectra they energize.

Shimmer has a quality that I would describe as electric. It is extremely airy, but still has some density and substance compared to Silk.

Silk, to my ears, is rarefied air and it is as seductive as it is exotic. It is supremely soft and gentle, and extraordinarily high; I have heard nothing else like it on the planet.

Both of these filters can transform a hand-held dynamic mic into an expensive sounding Large-Diaphragm Condenser. They can take a mix that is plenty bright and kiss of something almost invisible that, when taken away, is immediately missed. You can use these filters as you would any great effect, such that you're not really hearing it, but it's essential to the vibe of the production nonetheless.

If Shimmer & Silk were the only bands on the Clariphonic, it would still be worth the money... they're that sweet.

MID-SIDE MODE

EXPLAINED



See that switch just right of center, next to the power switch? The one that says M/S? That right there is the brand-new beating heart of the Clariphonic M/S. When this mode is activated, the Clariphonic transforms into a uniquely powerful Mid-Side encoder/decoder and holographically transparent high frequency eq. Like Parallel Equalization, Mid-Side Processing might be new to you. If it is, we'll get you there, but first let's dig into what happens when you flip that switch and the light turns green...

- The **Left** Focus/Clarity pair now affects the 'Mid' signal.
- The **Right** Focus/Clarity pair now affects the 'Side' signal.
- If anything is inserted into **Insert Mid**, the inserted effect/chain now functions as a pre-EQ signal processor for the 'Mid' signal.
- If anything is inserted into **Insert Side**, the inserted effect/chain now functions as a pre-EQ signal processor for the 'Side' signal.
- Your artistic life will now make a swift change for the better. Don't forget to take frequent breaks for sunlight and healthy snacks.

— MID / SIDE —

Mid/Side (M/S) processing has become incredibly popular lately, and for good reason: it allows the engineer to separate the sounds at the edges of the stereo panorama from the sounds in the middle, and process them differently.

Clariphonic has a built-in M/S encoder and decoder that allows you to do this at the flick of a switch. Your incoming stereo signal is automatically converted to M/S, sent to the EQ for the treatment of your choosing, then converted back to stereo at the outputs of the unit. The whole process is invisible and effortless.

In M/S mode, the Left channel of the Clariphonic processes the Mid information, and the Right channel processes the Side information.

You could now, for instance, use Open on the Mid channel to boost the presence of your snare and vocals only at the center of your mix, while cutting Open and boosting Shimmer on the Side channel to soften and widen the cymbals and backing vocals that live at the edges of the mix.

— M/S INSERTS —

The processing power of the Clariphonic MS extends not only to the eq filters that live inside its chassis: with the Mid/Side inserts on the rear of the unit, you can use any stereo effect processor in your racks as a pre-EQ Mid-Side processor as well.

This means that, with the flick of Clariphonic's M/S switch, every other compressor, eq, effect, and color box of choice can harness the uniquely deep sound-sculpting possibilities of Mid/Side.

– The Mid and Side Inserts on the rear panel require “TRS Insert” cables, with the TRS connector of one end plugged into the Clariphonic, and the XLR M & F connectors hooked into whatever external processors you desire.

– You are not in any way obligated to insert the same thing into both Mid and Side, either. Use a Compressor on the Mid and a parametric EQ on the Sides. Or a short bright slap delay on the Mid and a long dark plate on the Side.

– Use a pair of preamps, with the Mid driven into dirt and restored to unity gain, and the Side run clean but with a gain boost. The dirt in the middle will add glue and vibe, the gain boost on the sides will make the mix sound wider and more open.

– If you do use a stereo or dual-mono effect on the inserts, experiment with mis-matched settings. Have your Mid compressor slow and transparent, the Side fast and pumping. Experiment with everything and anything you can think of – you never know what can happen!

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 Clariphonic 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 Clariphonic — the name, front panel design, and bizarre switching matrix interface — were designed by yours truly, Gregory Scott aka 'ubk'.

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

And, best for last, the heart of the Clariphonic — the electronic implementation, the component choices, etc — were designed by my good friend and tone guru Kevin Hogan, with generous help from John Petrucelli. Sadly, John had to leave the party early at the beginning of 2017, the same year this new version of the Clariphonic was released. He will be sorely missed.

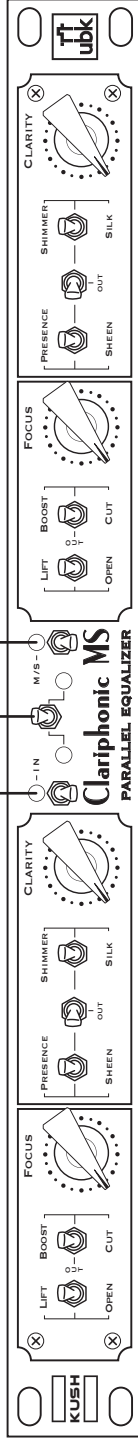
This one's for you, JP.

FRONT PANEL LEGEND

Activates (Up) or Bypasses (Down) the Clariphonic MS

Power On (Up) or Off (Down)

Activate Mid-Side Mode (Up) or Stereo Mode (Down)



Lift — Mids (~800Hz) and up

Open — Upper mids (~3kHz) and up

Boost — Boosts the selected frequency

Out — Focus Engine Bypass

Cut — Cuts the selected frequency

Presence — Bite, Cutting Through (~4kHz and up)

Sheen — Old Fashioned Treble (~8kHz and up)

Out — Clarity Engine Bypass

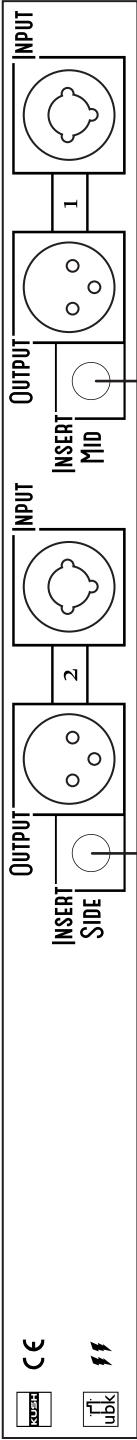
Shimmer — Electricity (~18kHz and up)

Silk — Pure Air (rise to ~34kHz and beyond)

REAR PANEL LEGEND

Output – Balanced XLR Output
Outputs for channel 1 and 2 are XLR Only

Input – Balanced XLR/TRS Combo Jack
Inputs for channel 1 and 2 are TRS/XLR combos



Insert Side – 1/4" TRS Insert
Insert for pre-eq Side processor

Insert Mid – 1/4" TRS Insert
Insert for pre-eq Mid processor

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: 420K – _ _ _ _

Purchased on: _ _ / _ _ / _ _ _ _

Purchased From: _____

Email analog@thehouseofkush.com if you ever run into trouble, and we'll help you out!

high end
JUST GOT
HIGHER