



## THE CLARIPHONIC EXPLAINED

The Clariphonic™ is the world's first and only two channel, fully parallel dual high-shelving equalizer. Parallel equalization is probably 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, uncompressed drum tracks, you understand parallel processing. What makes the Clariphonic so special is that it performs the same trick with equalization rather than compression, and it does all of the bussing and blending 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 recording studios.

When you couple this unique parallel architecture with the starkly minimal, mastering grade signal path and marry it all with the inimitable UBK™ interface, the result is an approach to high frequency equalization unlike any other in existence. The ability to sculpt every aspect of the upper registers from 800hz – 38k gives you a form of treble control never seen or heard before, with an effect on the sound that is almost holographic in its depth and realism.

The Clariphonic produces a presence, sparkle, and air that everyone wants but few could traditionally afford to obtain.

Congratulations, you've just obtained it.

## FULL FREQUENCY MATRIX

When your signal enters a channel on the Clariphonic, it is split across 3 parallel paths, like 3 channels on a console. 1 of those channels, your Full Frequency (FF) signal, goes directly to an internal summing buss and are never processed or altered in any way. Each of the other 4 channels is filtered thru its own equalization circuit, and the resulting eq'd sounds are blended in with the dry FF signal via the Focus and Clarity gain controls.

As with most console-style architectures, you can mute any of the channels and listen to only the signal paths you wish to hear.

- FF: pressing this switch down mutes the Full Frequency signal from the mix buss and lets you hear only the eq'd signals for that channel
- Out: the center position of the switches marked Out mutes the relevant engines from the mix buss

If you want to hear the original Full Frequency signal with no equalization applied, set all appropriate switches to the Out position.

If you want to hear the eq'd signal by itself, either to monitor what the band is affecting or to pass the wet signal along to other devices for further processing, depress the FF switch for the appropriate channel(s).

Try this: mute the Full Frequency signals and, having now solo'd the pristine top end of this box, feed it to your favorite sweetening compressors and saturators, thicken it up, then blend it back in parallel on your own console or DAW. Mmmm, tasty top end!

## A WARNING, OF SORTS

*It takes time to become truly sensitive to the extreme hf 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 and *cut it in 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 shelves that reach deep down into the midrange to allow for broad adjustments to the timbre and raw energy of the sound. 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 (~3k) and up
- Tight -----|---- Bell curve
- Out -----|---- Engine Bypass
- Diffuse -----|---- Shelving plateau

## 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.

## TIGHT & DIFFUSE

Simply put, Tight bends the Focus Engine's bands into a gigantic Bell shape, and Diffuse leaves them in a Shelving plateau.

When you switch to Tight, the lower frequency of the band remains unchanged, but rather than rise up to a maximum level and stay there, the curve begins to gently fall off again somewhere in the neighborhood of 14k. This means that the difference between the two modes is subtle, but once you learn

to hear it you'll develop your own sense of which to use and when.

This control got its names from the effect it has on hi-hats coming thru the overheads. With Diffuse engaged, the cymbals take on a softer, more spread quality as the shelf keeps on lifting all the way up past what we can hear. But when you switch to Tight, the hats come more into focus as the emphasis shifts away from the air and more towards the presence. They actually sound tighter.

The center position on this switch, labeled Out, is a killswitch for the entire Focus Engine. It allows you to essentially 'mute' the eq'd signal from the internal mix buss.



## 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 thru (~5k)

Sheen -----|---- Old fashioned treble (~9k)

Out -----|---- Engine bypass

Shimmer -----|---- Electricity (~19k)

Silk -----|---- Pure air (~39k)

### 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 rarified as the rest of the Clarity bands. But I placed it in the Clarity

Engine because it layers well with a touch of Lift or Open from the Focus Engine.

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 thru 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 thru 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.

Sheen is the first band that I'd say gives you a sound that is generally associated with 'expensive'. This is also the one I tend to reach for when I want to take an LDC with a modest amount of top and add just a touch of the vintage Neumann

sparkle. If you've tracked in a small room where the low mids are boxy and/or the midrange has a very aggressive, papery sound, you'll probably find that even when you tame the low end below 250 and scoop out some of the hash between 400-2k, you still have a tone that feels a little flat and lifeless. 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.

## **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 handheld dynamic mic into an expensive sounding LDC. 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.

## THE BALANCED/UNBALANCED SWITCH

(Rear Panel)

On the rear of the Clariphonic you'll find two switches, one per channel, labeled *Bal/Unbal*.

This switch is fairly self-explanatory. If you're experiencing any sort of distortion, clipping, or headroom issues, odds are this switch is in the wrong position.

## CREDIT WHERE CREDIT IS DUE

The heart of the Clariphonic --- the circuit itself, the component choices, and the pcb layout --- were designed by my good friend and tone guru Kevin Hogan.

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

To see more of KuSh Audio's left of center products, videos, and general aesthetic eccentricities, come on over to [www.kushaudio.com](http://www.kushaudio.com).

If you ever have any questions, issues, or ideas you'd like to share with me, hit me up anytime at [ubk@kushaudio.com](mailto:ubk@kushaudio.com).

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