

CHAMELEON LABS 7603 & 7603 XMOD Microphone Preamps & EQ

When Event Opal designer, Marcelo Vercelli, took over Chameleon Labs, he immediately started tinkering under the hood of its Neve-inspired preamps.

Review: Greg Walker



▶ Since the early 2000s Chameleon Labs has carved out quite a niche for itself in the middle ground of the audio market. Its products are neither bargain basement nor pricey, and have always offered users great feature sets and a taste of what lies further up the audio food chain. With renowned engineer Marcelo Vercelli (Mackie, Event Opal, RCF) taking over the company in 2014, Chameleon Labs has undertaken several years of research and development resulting in the release of the 7603 and 7603 Xmod preamps. These are the first in a new generation of products that promise to see Chameleon Labs up the ante in its area of the

market. I was keen to take them for a drive in the studio and play them up against my vintage Neve 1272-based preamps to see how the new Chameleon Labs' sounds stacked up.

AMPING UP

Unpacking the two preamp boxes, it was immediately clear these are serious rack units with a fair heft to each of them and a high quality build. Dispensing with the silver faceplates and controls of the earlier product line, these units scale up the style with a matte black, anodised steel chassis, black aluminium faceplates, and tasteful blue, gold and silver milled aluminium

knobs that are super smooth to the touch with centre-detents for easy resetting. Laser etched legending and small silver toggle switches round out the faceplate layout. The look and feel of these units is definitely pro and they sat in my racks looking very comfortable alongside units worth twice and three times their price. Speaking of racks, the width of the 7603 and 7603 Xmod chassis behind the rack ears is at the absolute maximum so if you've got home-made racks (as I do) you need to make sure they are wide enough to accommodate these units. I managed to just sneak the Chameleon Labs units into my rack with a bit of finagling.

PRICE
7603: \$1299
7603 XMod: \$1799

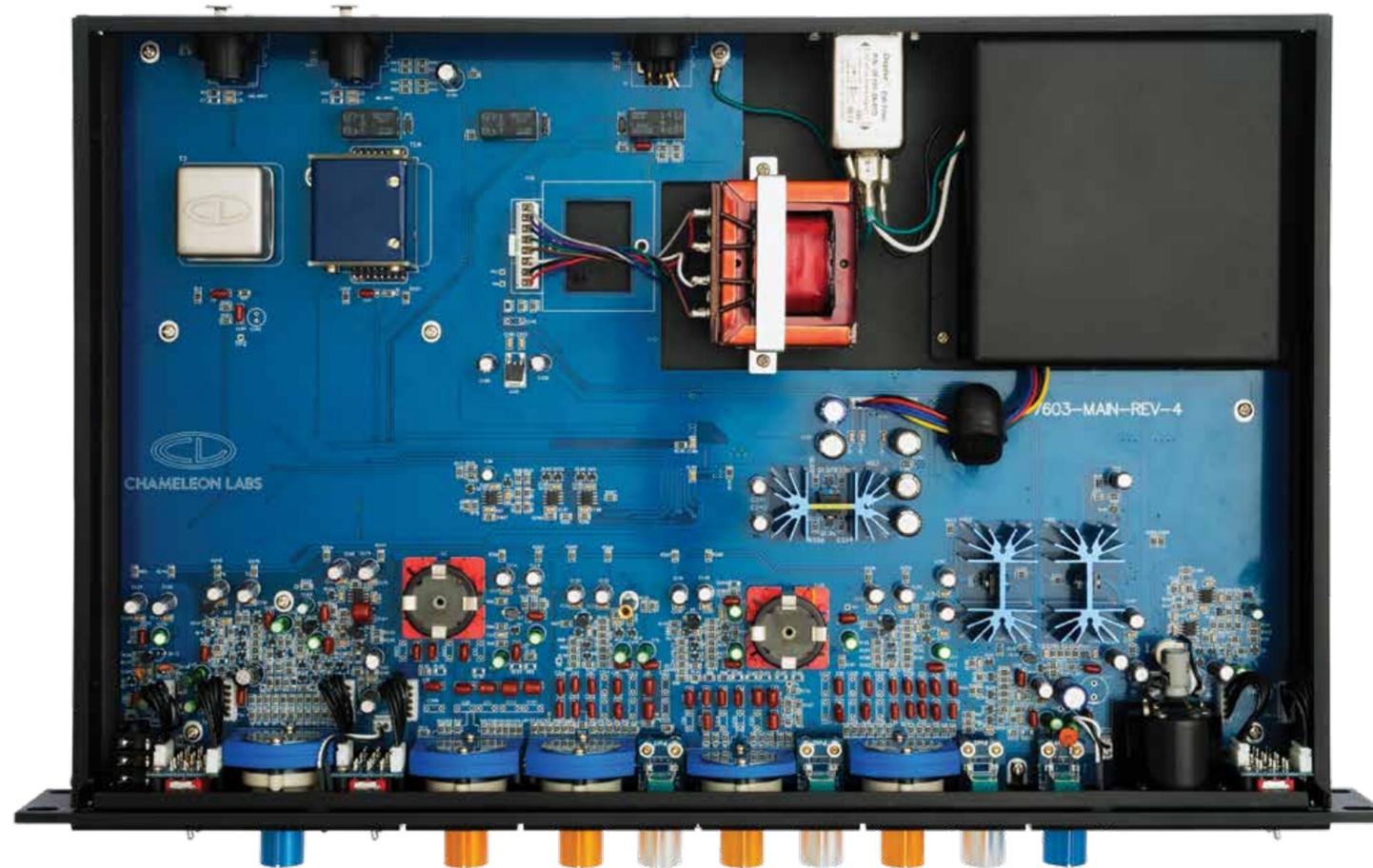
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PROS
Great design & feature set
Plenty of Neve-style mojo in the sound
Great EQ
Switchable mic impedance & metering options
Affordable but looks & feels pro

CONS
May be too harmonically coloured for some tastes

SUMMARY

Whether you get the in-house transformer or Carnhill-equipped version of the 7603, prepare for a bold mid range and plenty of ways to harmonically colour your sound. You'll also have to 'make do' with great build quality and a huge feature set for a great price. The clone wars are heating up.



NUMBERS GAME

Like its predecessor, the silver 7602, the 7603 is very much a tribute to 'revered classic preamps of the past', which is to say the solid-state, discrete Neve 1073 preamp specifically. While the 7602 was also based on the 1073 design and layout, Chameleon Labs has raised the circuit design bar with several major design changes implemented in the 7603. Most notably there are new proprietary microphone and line-level input transformers that feature custom-made nickel laminations and bobbin assemblies. These 'in-house' manufactured transformers deliver high bandwidth and low distortion specs and are very musical in their implementation. The second main point of difference from previous designs is the new discrete audio input gain stage. All of the 7603's operational amplifiers used in the unit are based on this new topology. Finally, Chameleon Labs utilises a new set of custom designed and manufactured inductors in the EQ circuits, further enhancing what was a popular feature of the earlier 7602 model.

Overall, the 7603 offers a lot of features for a 1RU device. Apart from the input and output gain and EQ controls, there are nine toggle switches on the unit. On the left are three that select line/microphone source, Hi-Z DI input and 300/1200Ω mic impedance (handy for optimising lower output ribbons, etc), while on the other side of the stepped input gain control another three switches select EQ in/bypass, phase and phantom power settings.

Over on the right hand side, the last three switches accompany a rather nifty circular VU meter. These switches select power on/off, input/output metering and metering dB range (normal and -20dB for gauging lower levels accurately). Amongst all these switches is a high pass filter rolling off 15dB/octave below 40Hz, 80Hz, 160Hz or 320Hz and three bands of inductor-based EQ that utilise the classic Neve EQ steps as well as adding more options in the mid and high frequency bands. Each band offers ±15dB of gain via continuously variable pots and the EQ bands as well as the filter can be individually bypassed to keep the signal clean when particular bands aren't required. While the 7603 does offer a tremendous amount of control and fine-tuning of sounds, the front panel doesn't feel at all crowded or confusing. Controls are easy to reach and a pleasure to use with the choice of smaller toggle switches doubtless keeping things manageable from an ergonomic point of view.

TESTING TIMES

My first tests of the 7603 were driving a Soyuz SU-017 valve condenser as a drum room mic on a couple of sessions. My initial impressions were of a nicely balanced sound with plenty of character and I was happy with the straight preamp tone leaving the EQ section bypassed for this application. At higher input gain settings I was getting some nice soft-saturation flavour with a noticeable compression characteristic in the recorded

waveforms. The room mic sound worked extremely well and I ended up using a good percentage of this mixed with a dash of the close mics for the overall drum sound. Amplifying a ribbon mic for percussion duties and electric guitar tracking as well as a trusty SM57 dynamic microphone for close-miked acoustic and electric parts showed the 7603 could shine in a range of applications. Further uses of the 7603 cemented my impression of the 7603 as a versatile preamp with a nice character. Where I used the unit to overdub new parts onto existing recordings, the sounds blended in beautifully and I was really pleased with the tonal qualities the preamp imparted to stacked tracks.

EQUAL BILLING

Patching the preamp into my console's channel insert gave me a good opportunity to really explore the 7603's EQ and it certainly didn't disappoint. From the get-go I was favourably impressed by the EQ's power and flexibility, with the overlap in the upper two bands complemented by the interplay of the high pass filter and low band giving the user some serious sound-shaping tools. On snare, the 7603 EQ allowed me to dial in a variety of valid snare tones; from tough and deep via generous doses of 60Hz or 110Hz to high and airy courtesy of boosts at the 12kHz or 16kHz steps. Vocals and guitars came to life vividly using the high pass filter and various combinations of midrange boost and cut while adding air and clarity to the top

end. The character of the EQ is quite Neveish in its way, and this can be emphasised via the saturation effects available when driving the input gain harder into the EQ circuits and backing off the output correspondingly. Even at more extreme settings the highs are nice and airy and the bass frequencies solid and convincing while midrange tonal shaping is very effective under both boosts and cuts.

The overall sound of the 7603 is definitely thick in a Neveish kind of way while delivering detail and wallop in equal measure. Exactly how 'Neveish' I was about to find out when I lined up the 7603, the 7603 Xmod and my own vintage 1272-based preamp for a proper shootout.

HIGH NOON AT THE NEVE CORRAL

Before we launch into the shootout, a word about the other two preamps involved. The 7603 Xmod is essentially the exact same preamp as the 7603 but with the new Chameleon Labs input and output transformers swapped out for more historically accurate and expensive-to-obtain Carnhill transformers — favourites with Neve cloners who want to get as close to the original Neve sound as possible with their recreations. All other controls and functions on the 7603 Xmod are identical to the basic 7603. As for the 1272-based preamp, it is not in point of fact a 1073, but uses an original Neve 1272 line amplifier module that goes a long way towards generating the 1073 sound with an additional custom gain stage to generate the desired output levels. The 1272 amplifiers were integral to the 1073 sound, and have been sought after for many years by the electronically inclined as building blocks for either bespoke Neve mixers or preamps. If you've heard the new Jen Cloher record on the radio of late you're listening to this very preamp and its sister unit on Jen and Courtney Barnett's electric guitars. These are my go-to preamps for thick creamy guitar sounds and larger than life snares and they never disappoint.

But I digress... back to the shootout. I left the EQ sections of both the Chameleon Labs units bypassed to better assess each preamp's character and started by returning to my original mono drum room mic setup. An identically played simple rock beat was the raw musical material here and the results were intriguing. The 7603 again sounded very nice with its smoothed out slightly compressed character to the fore, the 7603 Xmod seemed a little more aggressive in the mids but had a pretty similar overall flavour (which spoke well for the 7603's in-house transformers as a comparison), and the 1272 sounded, if anything, more polite and a little less compressed by comparison. More careful listening and balancing of gain structures revealed a certain amount of harmonic build-up around several key frequencies in both the CL preamps while the 1272 seemed more open and less inflected in this way. I liked the sound of all of them in different ways, with the CL preamps both delivering a slightly more mid-range focussed attitude and the 1272 a little more sweetness in the top end, a tad more low end 'thunk' and a slightly more even tonal balance. It certainly wasn't chalk and cheese though, and all three gave valid and very musical images of the

simple but gutsy drum sounds on offer. The next stop was strummed acoustic guitar close miked with an SM57 where, again, all three preamps performed well. The 7603 Xmod seemed to lock onto the heart of the sound in a subtly superior manner to the stock 7603, while the 1272 again had a slightly sweeter top end and seemed to add a fraction less of its own 'colour' to the sound while also not compressing the transients quite as much as the other two. The 1272 delivered the most realistic sound and the 7603s added a pleasing colouration of their own. My conclusions were again quite similar when miking loud clean and distorted electrics with SM57s as close mics as well as using ribbons for amp room mics. All three preamps delivered extremely musical pictures of these sounds with the 7603s exhibiting a pleasing and slightly bolder midrange along with some useful dynamic smoothing, while the 1272 stayed a little more transparent both tonally and dynamically.

PRECONCEIVED NEVE

It was interesting to compare these units and, to be honest, the results were in some ways opposite to what I was expecting. Subtle and super-musical harmonic saturation and larger than life low end are what Neve's classic preamps are renowned for, and while my vintage 1272-based unit delivered these characteristics, they were overshadowed by the bolder midrange colouration of the 7603 and 7603 Xmod. The extra dynamic control these units delivered at higher input settings was quite a surprise, while the added harmonics in the midrange could be a plus or minus depending on the source material and the context of the other sounds around them in a mix.

WASH UP TOSS UP

My overall impressions of the 7603 duo were of capable pro level preamps with plenty of character and great EQ at a very tasty price point. The difference between the stock transformers and the Carnhills is happily less than one might think, and for the money the stock 7603 in particular is a real winner. My one caveat regarding both these preamps is that their overt colouration may be a tad much for some applications and for large amounts of stacked tracks. When complemented by more transparent preamp options (such as those found in many digital interfaces) they will, no doubt, steal the show in many a mix. When used on key instruments such as snare, guitar and vocals, the 7603 and its Xmod sibling can be absolute winners for mojo-fuelled tracking as well as being extremely versatile equalisation tools come mix time.

QUITE THE CHAMELEON

Chameleon Labs has upped the ante with the new 7603 range, adding custom transformers and inductors to an already feature-rich design complemented by pro build quality and audio performance. The Xmod model adds Carnhill transformer mojo and the EQ in both models is an absolute joy to use making the 7603 siblings great value. ■

