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The Rolling Stones had a silver one in their mobile truck, The Beatles had two green ones at Apple Studios and 10cc had a red one at their Strawberry Studios. What was it? It's the legendary Helios mixing desk, an often overlooked and forgotten "musician's console" used to record many seminal hit records by the British Invasion bands of the '60's and '70's. The consoles also enjoyed a short-lived success in a few studios in the U.S. Designed by the late Dick Swettenham, who convinced his employers at the legendary Olympic Studios he could build a desk that was more musical than anything at that time, Helios consoles were an immediate hit with the likes of Jimi Hendrix, Alvin Lee, Steve Marriott, Led Zepplin, John Entwistle, Eric Clapton, Paul McCartney, Steve Winwood, The Who, and Ron Wood.

After Helios Electronics Ltd. closed down in 1979, Tony Arnold of Courthouse Facility--who had been servicing the consoles--bought the company and started reissuing what's considered the best-sounding of the four different Helios module iterations: the Type 69 microphone preamp/EQ channel strip. Today, American distributor Vintage King sells it in two versions: single-channel modules that plug into a four- or eight-slot "lunchbox" and the subject of this review--a 1U, 2-channel unit with self-contained power supply.

INSIDE THE BOX

The 1r (\$4,500 list; \$3,500 street) is built in an aluminum case and has a glossy black front

panel with white silk-screened labeling. The unit is well constructed and neatly wired using all discrete components (no chips). It runs on a 32-volt rail supplied from an internal OEM switching power supply. The mic preamp uses a Sowter Type 8666X input transformer based on the highly desirable Lustraphone (Olympic Sound Studios) transformer model. Input impedance is 1,200 ohms. A separate switchable secondary winding provides for -20 dB of mic attenuation.

Front panel controls for each channel start on the left side with the mic/line gain switching and a small output-level clip LED. A toggle switch selects between mic, -20dB mic attenuation and the 10k-ohm line input. A seven-position Elma rotary switch doubles as both line input and mic input gain control. There are -5dB and 0dB line gain positions. The five mic gain positions start at 20 dB and go to 70 dB in 10dB steps. Other toggle switches include phase (polarity) flip, EQ cut, mic phantom powering on/off and the ATT switch, where you can engage a small front panel trim pot for a small range of input level adjustment.

The 3-band passive equalizer section uses a combination of RC and LC tone circuits, starting with an RC-based, 10kHz, 6dB-per-octave shelving filter with +/- 10dB range. The LC-based midrange equalizer has a surprising number of frequency choices on a single knob. They are: 0.7, 1, 1.4, 2, 2.8, 3.5, 4.5, 6 and 16 kHz. There is a Peak and Trough toggle switch. (Trough is Brit-speak for cut.) Up to 15 dB of boost/cut is available on the unmarked +/- control. The starting Q for the midrange is a wide three octaves at 700 Hz; then, by 6 kHz, it narrows to two octaves. Q is proportionate: The more boost/cut, the higher the Q.

The LC-based bass section allows up to 15dB boost/cut, and when the control is fully counterclockwise, the bass EQ section is switched out of the signal path. This is good for keeping things ultra-clean. Another rotary Elma switch selects 30, 80, 120, 240 and 400 Hz for the bass peaking section. The same switch rotates to a 6dB-per-octave shelving filter mode that's fixed at 70 Hz with 3, 6, 9, 12 or 15 dB of roll-off. If you like to boost bass and roll-off at the same time, then use the peaking section and select another 12dB-per-octave roll-off filter at 40 or 80 Hz.

The output section is unbalanced and uses an emitter follower circuit and a Philips/BEC electrolytic coupling capacitor, much like what's in the original Helios design. Swettenham found that the engineers at Olympic Studios preferred the sound of this circuit compared to the best output transformers.

INSIDE THE STUDIO

I recorded drums, vocals, acoustic and electric guitars, and room mics with the Helios. In a word, the sound was sweet. I found that the unit has its own distinct and unique musical sound and, as hard as I tried, is not comparable to any other mic signal chain. Vocals (40dB gain and a Neumann U87) using only the mic preamp section sounded big, full and open. The equalizer, especially the bass section, is a wondrous tone control: It accurately shapes without any downside. The 16kHz position of the midrange EQ section is magical icing on the finished

sound.

Good drum sounds are easy to achieve with this very forgiving equalizer. You'll see the clip LED light up with extreme boost, just the way it should. The clip brightly glows when the unit overloads, signaling problematic distortion.

My acoustic guitar (40dB gain with AKG C-452 EB) recording was excellent--full, transparent and rich-sounding--even without equalization or external compression. Carving the mids out took me right to the guitar sound on 10cc's super-hit "I'm Not in Love."

BACK TO THE FUTURE

As a piece of audio recording history, the Helios 1r is its own animal with a unique '70s sonic footprint. With its re-introduction long overdue, the 1r puts Helios back where it rightfully belongs: in the pantheon of classic English mic pre/EQ designs, alongside those from Neve and Trident.

Thanks to Larry Goetz and James Bennett at [The Lair Studios](#) in L.A. for helping me go through this great unit.

Helios at www.helios-electronics.com is distributed in the U.S. by Vintage King at: 248-591-9276 or www.vintageking.com.

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