

by George Petersen

PRODUCT CRITIQUES AND COMMENTS

SUMMIT AUDIO EQP-200 DUAL PROGRAM EQUALIZER

What's new is what's old: vacuum-tube signal processing is back and gaining in popularity every day. While tube power amplifiers have long found favor among audiophiles and studio connoisseurs, don't hold your breath waiting for the all-tube PCM processor or digital reverb. Simpler audio circuits, such as the recent unveilings of equalizers, preamps and compressors from manufacturers like Summit Audio and Tube-Tech, have provided hand-crafted audio processors that cater to the tastes of discriminating engineers.

Let me start out by admitting that I generally disdain the use of equalizers, unless absolutely necessary. I've got a couple graphics, a terrific notch filter set in my outboard rack and 32 channels of really nice EQ on the board, but I rarely use them on a *music* session, except for a bit of parametric kick-drum shaping or perhaps some HF hiss shelving on instrument amps or noisy effects. On other sessions—audio-for-video, radio production, audio archiving/restoration and the like—I'm a lot more liberal about the use of equalization, whether for notching out a 60Hz hum, cleaning up tracks or tailoring dialog for telephone effects.

The Summit EQP-200 is a dual-channel program EQ whose hybrid design includes electronically balanced input

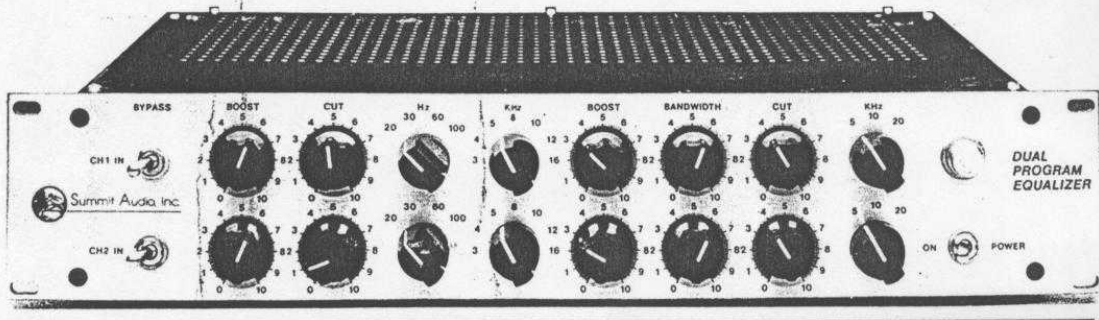
stages followed by passive equalizers. Since the latter impart a gain loss of approximately 20 dB, the EQ sections are followed by a hybrid amplifier combining 12AX7A vacuum tubes with 990 op amps (a transformer-coupled output section is optional).

The EQP-200 can be thought of as having three independent EQ sections: LF shelving (up to ± 16 dB cut or boost) at 20/30/60/100 Hz; variable bandwidth MF/HF boost (up to $+16$ dB) at 3/4/5/8/10/12/16 kHz; and -16 dB HF shelving cut at 5/10/20 kHz. Individual bypass switches for each channel are provided; I greatly appreciated these noiseless EQ in/out toggles. Not all equalizers on the market are so equipped, and an audible click when switching the device in or out of the audio pathway can be problematic in many situations.

While the operation of the unit is extremely simple, the ergonomics of the equalizer could be improved somewhat by differentiating the controls of the various bands. This could easily be achieved by color-coding the knobs or faceplate, as the controls are spaced equidistantly, and function is not immediately obvious at a glance. Speaking of improvements, a couple of LED input-clipping indicators would be a nice addition to this \$1,800 box. Perhaps Summit could consider incorporating these changes into future models.

Operationally, the unit was easy

Summit Audio
EQP-200 Dual
Program
Equalizer



and fast to use, and is capable of extremely subtle equalization changes. In fact, it is difficult to hear *any* apparent changes in the rotary controls until they are turned past 10 o'clock; after this point, changes become far more apparent. Of some interest is the fact that the LF boost and cut operate interactively. If both controls are used simultaneously, the result is a low boost and a mid cut. At the 20Hz setting, this provides a 7dB cut at about 125 Hz; with the switch at 100 Hz, a 7dB cut at 1,000 Hz is the result.

The EQP-200 is designed as a *program* equalizer. This means the unit is best-suited for the overall shaping and tailoring of entire mixes, especially in disc mastering and the preparation of masters for CD and tape replication. This is not to say that it wouldn't be at home in a studio's outboard rack, doing some subtle shaping on a vocal track, but the EQP-200 really shines as a program EQ.

I was most impressed with the EQP-200's performance on a variety of studio tasks over a month-long period, ranging from tweaking some mixes for cassette duplication masters to resurrecting and digitally archiving some early-'60s music broadcasts from transcription masters. On the latter, the EQ did a splendid job, including: reducing the hiss (max HF shelving cut at 20 kHz); rebalancing the kick and lower bass fundamentals (LF boost at 60 Hz); and restoring some "zing" in the hi-hat and cymbals (narrow-band HF boost at 12 kHz).

The blending of tubes and passive equalizers is not new, but the Summit EQP-200 has pulled it off in grand fashion, proving to be an excellent studio performer, combining ultra-clean audio specs and smooth, subtle equalization with the sweet, even-harmonic accentuation of a tube design. The EQP-200's main drawback is that its use can be addictive—and remember, I'm a guy who disdains EQ.

Summit Audio Inc., Box 1678, Los Gatos, CA 95031, (408) 395-2448.

ARSONIC SIGMA 1.2 LEVEL CONTROL UNIT

The ARSonic Sigma 1.2 is a unique device that offers a useful collection of high-quality studio tools in a single package. This German-made, dual-channel processor provides a flexible bag of tricks (including intelligent

level controllers, digital peak meters, automated faders and Dynafex® single-ended noise reduction), all of which can be tweaked and programmed into memory for immediate recall. The latter would be particularly helpful in mastering applications, where different settings could be instantly selected to suit different source materials.

The Sigma 1.2 is an extremely complex unit and somewhat cumbersome to use due to its awkward user interface. The numeric keypad buttons are shared with function keys, and the up/down scrolling of parameter values is rather slow. Fortunately, operation speeds up markedly after the user becomes accustomed to the unit. Once some frequently used setups are entered into the unit's 100 memory locations, the user interface becomes much less of a problem.

The documentation offers little help. Nearly half the manual is devoted to explaining topics such as Theory of Level Control, History of Levels, Level Measurement Techniques and Choosing an Appropriate Level. Because the unit is designed for the high-end studio and disc mastering market, these tutorials are of little use to most of the Sigma 1.2's potential customers. I have nothing against the idea of providing primer-level material in a manual, but the unit's documentation omits basic requirements such as system setup, practical applications notes and schematics. The good news is that ARSonic's U.S. distributor (Current Music Technology) has completely rewritten the manual, which should be available soon.

One of the Sigma 1.2's most impressive and useful features is its ability to control output levels without the "squashed" feel of hard limiting. Its intelligent master faders (selectable as stereo or dual-mono) detect and display level peaks and offer switchable detection times of 1 ms or 10 ms. The latter is more suited for analog work, the former for digital recording.

The action of the gain control VCAs is extremely fast and accurate, keeping peaks under 0 dB without the "pumping" and "breathing" artifacts common to many other gain controlling devices. One of the engineer's main concerns, particularly with analog recording and/or mastering, is constantly trying to maintain that fine line between tape saturation and over-

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