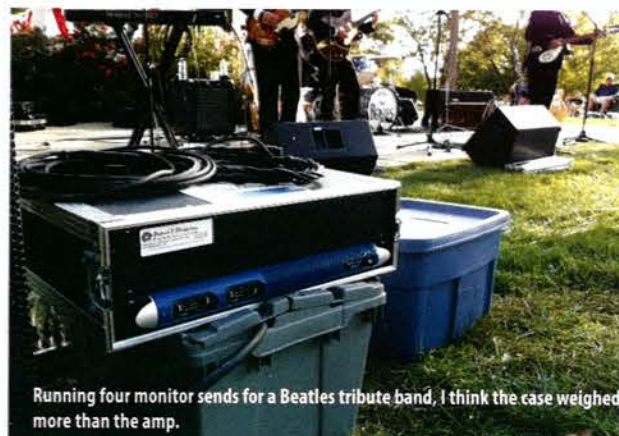


Powersoft M50Q HDSP+ETH Amplifier

By Steve Savanyu



Running four monitors sends for a Beatles tribute band, I think the case weighed more than the amp.

Power amps have come a long way since the days of the backbreaking 200-watt/50-pound behemoths of old. New Class-D technology, onboard DSP and multichannel capability results in lighter-weight amps with more power and functionality than ever before.

I recently tested Powersoft's M50Q HDSP+ETH, a 4-channel, single rackspace unit with remotely controllable onboard DSP. A mere 16 pounds, this versatile Class-D powerhouse can output 5,000 watts (into 4 ohms) in mono bridged mono mode (2 channels at 2,500 watts each). In fact, the rack case I mounted the unit in weighed as much as the amp. Although only 1U high, the unit is fairly deep — just over 14 inches. Powersoft thoughtfully incorporated rear rack mounting points to minimize front-panel torqueing when mounted in a rack.

The eye-catching blue curved perforated front panel is laid out with four slightly recessed input level controls and associated LEDs on the left and a recessed power switch on the right. Each channel has an input level control and five LEDs indicating input signal level, clipping, short-circuit protection and power reduction

mode due to high internal temperature. The balance of the perforated panel covers an air intake filter that's easily removable for cleaning.

The rear panel has XLR inputs and Speakon outputs for each channel. The 4-pin Speakons are wired so that one amp channel appears across 1+/1- and a bridged pair on the same connector 2+/2-, which enables simple wiring for bridged amplifiers without wiring to two separate output connectors. Recessed "Link" switches can connect the inputs of channels 1 and 2 or 3 and 4 in parallel. Both single-ended as well as bridge mode output configurations are possible and can be mixed, so a single 4-channel amp could drive a complete 3-way speaker stack: sub driven from bridged channels 1 and 2; mids from channel 3; and HF from channel 4.

A nice touch is the wire keeper that hooks over the standard IEC mains connector to hold the cable in. Although common on much audio gear, IEC connectors have a tendency to wiggle out at inopportune times, and the keeper eliminates that issue. Next to the mains connector is the exhaust port for the continuously variable temperature-controlled fan. Powersoft

publishes extensive environmental operating temperature specifications stating the amount of heat dissipated in BTU/h and kcal/h. Even running outdoors in the afternoon sun (in a black rack case!) the exhaust air never felt hot.

Additional controls and connectors include: remote on/off power switching, RJ-45 Ethernet and two pushbuttons and four LEDs for selecting pre-loaded DSP presets when not connected to a network. The Ethernet port allows the M50Q to connect to a standard DHCP computer network for remote control, DSP programming and amplifier operation status monitoring via Powersoft's Armonia software. Along with setting up multiple amp configurations, this Windows-based, drag and drop application lets users remotely monitor operating status (including temperature) of Powersoft DSP-based amps, making it ideal for fixed installs and larger touring applications involving multiple amplifiers.

On The Road

FOH

I used the M50Q in two different scenarios. First was to drive four sets of monitors for a Beatles tribute band at an outdoor show. The M50Q was easy to set up

and connect (I didn't use the DSP on this gig) and the wide range frequency response (10 to 30k Hz) along with the high output power per channel gave me a clean articulate sound with quite a bit of headroom. Being outside with no stage enclosure, we ran the monitors hotter than normal without any issues. Even though the amplifier output was higher than the rated capacity of the monitors, that extra amount of headroom meant I never had to push the amp. After the gig, one of the band members remarked that the monitor levels sounded "quieter than what they were used to, but he could hear more detail in the monitors." Of course, having four channels in one package was a plus for setup and connections.

Powersoft offers the Armonia software as a download on its website. This intuitive GUI-based application offers full control of the amp's DSP functions and some internal routing. After exploring the Armonia software, I configured my 3-way system using a single M50Q. Normally this system incorporates a loudspeaker processor, along with three standard 2-channel amps in a rolling rack. All told, the rack with amps, connection panels and processor tips the scales at 80 pounds, a brute compared to the 16-pound M50Q.

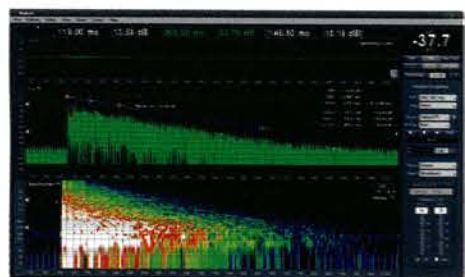
I configured channels 1/2 as bridged mono to drive the subs and channels 3 and 4 being single-ended to drive mids and highs. Armed with the tuning data from my speaker manufacturer, I used the Armonia software to set up the DSP on channels 1 and 2 for subs, channel 3 to drive the mids, and channel 4 for the HF driver. Using the DSP, I set a crossover point per the speaker manufacturer's specs and applied the speaker tuning for the mid and high channels. I saved my settings as a preset and connected the speakers. Soon I was rocking a clean-sounding, loud PA from a single 16-pound amp that drew less than 20 amps from the AC line. My back is beginning to dig it already.

The Powersoft M50Q HDSP-ETH (MSRP \$4,635) is a great-sounding, high-output amplifier that, combined with the built-in DSP and Armonia control software, is a powerful, effective solution for live sound applications. **FOH**

More details from powersoft-audio.com.

Steve Savanyu operates Buford T. Hedgehog Productions, an independent audio-video production company located in Hudson/Macedonia, OH.

+1 You have a friend request



Hello Smaart v.7

The Smaart I-O would like to be your friend.

Confirm

Ignore

Send message

Introducing the Smaart I-O™

Finally, a measurement grade 2x2 USB audio interface designed and built specifically for use with Smaart v.7 Measurement Software. Gain monitoring from within Smaart provides fast, accurate, effortless SPL calibration, even while varying measurement signal input levels.



For more information please visit us at www.rationalacoustics.com

rational acoustics