

EQUIPMENT REVIEW

Equipment and product reviews from professionals in the video industry

AUDIO/VIDEO MONITOR

Wohler AMP1-16-3G Monitor

by Joey Gill

In the past, when I thought of 1-RU in a broadcast facility, the first thing that came to mind was a blank filler for closing off space left over after the "important things" had been installed. If something actually did take up only 1-RU, it was usually dedicated to a single mundane task. Wohler, a leading manufacturer of audio/video monitoring systems, is helping me take my thinking to a whole new plain. The AMP1-16-3G series monitor squeezes multichannel audio and HD/SD-SDI video monitoring into a slick 1-RU package.

FEATURES

The AMP1-16-3G is 11-inches deep and weighs a hefty 10 pounds. It consumes a mere 65 Watts, and can monitor analog audio, Dolby E & D, AES/EBU, embedded audio (up to 16 channels), along with HD/SD-SDI or 3G video.

The AMP1-16-3G audio amplifier section uses Class-D digital amplifiers to drive the integrated midrange and low frequency speakers, and features three 2.4-inch OLED (organic light emitting diode) displays. Up to 16 channels of audio may be displayed on two of the screens via user-configured bar graph meter displays, and the third display can be dedicated to either video input monitoring (A or B), or metadata as selected by the user.

Audio metering can be tailored to specific needs, as ballistics and scale are easily configurable to most popular formats.

Audio signals may be routed to either the left or right speaker (or both), and all serial channels are de-embedded and available on the rear panel as eight unbalanced AES signal pairs or eight analog channels.

The front of the AMP1-16-3G is laid out with a midrange speaker on each side, and with what appears to be a bass port immediately towards the center of the unit from each speaker. There's a large volume control with pushbutton action, and also a headphone jack. The OLED screens are addressable for menu management with selector buttons along the edge of each screen. There's also provision for menu accept and delete functions.

The rear of the unit is loaded with connectors, including AC power, Ethernet, two DB-9s for both metadata in and serial data, two DB-25s for analog audio output and GPIO, additional DB-9' for both AES 1-4 out and AES 5-8 out, eight BNCs for AES unbalanced inputs 1-8, a BNC for downconverted output of 3G to HD-SD, BNCs for 3G/HD/SD-SDI inputs, and another BNC for the reclocked output of the 3G/HD/SD-SDI signal.

IN USE

The AMP1-16-3G arrived in a very nice shipping container, and was supplied with power cord and an operator's manual on a CD.

I was very anxious to hear sound from the small box, so I wasted no time

installing it in my equipment rack. Set-up was a breeze, with the unit coming to life upon connection of the power cord. I cabled up the station's HD-SDI feed and the left OLED immediately displayed the video while the other two OLEDs displayed the embedded audio channels 1-16 (eight on each display). That Sunday night, NBC was carrying a Minnesota/Carolina game with eight channels of audio present. The first six contained 5.1 content, and seven and eight served up stereo and Spanish. The mix was correct for a multi-language broadcast, as the only dialogue occurred in channels 3, 7, and 8.

As I turned up the volume where I could hear the sound, it became very obvious that a great deal of design work had gone into the little unit. The bass response was very surprising from such a small box, and the overall sound quality was much higher than I had expected. The audio level/information screens were very vivid and responsive, and the metering display looked very traditional and easy to recognize. As I started trying to navigate my way around the screens

and buttons, I soon mastered the menu "tree." The menu tabs were intuitive and labeled sufficiently to allow me once again to avoid the owner's manual and its 102 pages.

While we all know that video monitors of in this size range are intended solely for confidence viewing, the Wohler monitor's video display was clear and bright. However, the small screen size combined with a 4:3 aspect ratio precludes any enjoyment from long-term viewing. While such small OLED monitors may not be optimum for HD viewing pleasure, they do a wonderful job for confidence monitoring and displaying all 16 channels of audio metering, along with menu text and other displayed information. All metering



The Wohler AMP1-16

displays were easily seen from a distance and were equally sharp and crisp.

Metadata, dialnorm, ITU Loudness are all terms that we have come to know. I decided that it was time to change the video screen to a data screen and read my metadata.

This was easily done in a second-level menu. It was then necessary to select which data to display on the screen. Some examples included: Input Video Frame Rate, dialnorm, Dolby Digital Sample Rate, BitStream Format, AC-3 Data Rate, along with several others.

After selecting metadata as the data field I wanted to display on the left monitor, and selecting VANC as the metadata source (other menu choices included CAT552 and Serial), I backed out of the menus. Sure enough, the left video screen now had a data field displayed on it instead of video. Unfortunately, the data field was blank, indicating that I was not getting any metadata.

Next, I tried connecting serial data from my Dolby 569 encode unit directly to the AMP1-16-3G metadata port and selecting "serial" from the menu instead

FAST FACTS

Application

AV monitoring, de-embedding, data reading

Key Features

Low power consumption, complete monitoring system, small profile

Price

MSRP as tested, \$2,795, with Dolby capability, \$9,795

Contact

Wohler Technologies
888-596-4537
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of VANC. I experienced no luck with this either.

At this point, I decided to contact NBC and Wohler for a bit of information and some help.

According to NBC, they are not yet adding metadata to their stream, either VANC or CAT552, and Wohler confirmed that on the version of firmware supplied with the monitor, only the CAT 552 data is captured. Wohler says that the Serial and VANC features will be active starting with models delivered in the first quarter of 2010, precluding the display of metadata on my early production unit.

SUMMARY

While I was a bit disappointed with the inability of this early model to display metadata, every other aspect of the AMP1-16-3G was certainly a huge hit. The big sound was a surprise, and the unit is so feature-packed that it's almost impossible to list everything in this article. I used the AMP1-16-3G for several weeks and there were never any glitches or required resets, the unit appears truly broadcast reliable.

Where space is a concern and each piece of equipment must pull more than its weight, the AMP-16-3G would be most welcome.

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