RTW TouchMonitor TM7/TM9

Metering retains an element of personal preference but recent industry moves look set to standardise what we should see if not how we see it. ROB JAMES is not scared to touch…

Metering is one of those slightly geeky elements in sound folks' lives that we often take for granted. Through a process of recursion, whatever you grew up with gradually makes sense, most of the time. Anyone who learned their trade working in European broadcasting wouldn't give you a thank you for a VU while most US mixers (and a fair few music and film mixers elsewhere) were staunch advocates of the VU. Peaks are important in analogue broadcasting, both for compliance and, in early days, to prevent possible damage. In analogue music and film, the recording medium acted as a soft limiter and you could afford to rely on what you heard without worrying overmuch about peaks until it came to mastering. Neither VU nor peak told you anything much about subjective loudness.

Over the past year or so, loudness metering has finally come to prominence in Europe and elsewhere thanks mainly to the efforts of the EBU Ploud group which has resulted in wide adoption of the recommendation paper EBU R128 based on ITU-R BS.1770. There is also an ATSC specification, A/85. The EBU has additionally published a Loudness Metering specification, EBU Tech 3341. These recommendations have been widely adopted by broadcasters across the world and as a result there is renewed interest in meters, both hardware and plug-in, and something of an opportunity for manufacturers.

RTW is a long established player in the metering and monitoring market. Recent examples are essentially computers driving LCD screens with suitable I-O and control electronics. This is an excellent way of ensuring that the devices have a long life since new measuring 'instruments' or standards can be introduced without obsolescing the hardware. It also means that you can purchase the options you need now and add others later if they become necessary. The new TM7 and TM9 series introduce another dimension, touchscreen control in 7-inch and 9-inch

widescreen flavours, as the names imply.

Both units are available in table-top form in very smart and robust cases, or as OEM modules for installation into other equipment such as a mixing console. The table-top unit is one of the most attractive I've seen with a thick alloy panel surrounding the screen folded back at an angle at the bottom. The box behind the front panel tapers to the rear so that at normal viewing angles all you see is the front. The weight reassures that over enthusiastic screen prodding will not tip it off the bridge when there are heavy cables attached to the rear. There is a good degree of tilt adjustment and the friction hinge is stiff enough to hold whatever position is chosen. The clean appearance is thanks to the lack of buttons on the front panel.

Conventional, non touchscreen versions use a matrix of buttons to access menus and functions which, with the TouchMonitor, are available by simply touching the screen. Around the back, all versions are equipped with two USB ports, an RJ-45 socket for Ethernet, an RJ-11 socket for GPIO in the future, a 15-pin mini D-Sub for an external VGA monitor and a four-pin locking Binder socket for 24V DC. Audio I-O options range from two 25-pin D-Subs for 8 channels of analogue I-O and 8 channels of AES3 I-O or 16 channels of analogue or AES3 to one 25-pin D-Sub for analogue and 8 BNCs for AES3id or no D-Subs and 16 BNCs for AES3id. There is also a 3G SDI option for the TM9 that adds two further BNCs. When the SDI input is used up to 32 input channels can be displayed simultaneously.

As for the instruments themselves, all models come with basic 2-channel Stereo PPM software: Peak, True Peak and phasemeter. To these any or all of the following can be added at extra cost: Multichannel Mode, Loudness (ATSC A/85, EBU R128, ITU) and SPL, RTA — Real Time Analyzer, SSA — Surround Sound Analyzer, Radar Display and lastly a Premium PPM plus Vectorscope.

The USB sockets enable a mouse or Wacom tablet to be used instead of the touchscreen. Licences and updates are installed via USB memory sticks.

Remembering that the TouchMonitor is a computer, start up is far from instant since it has to boot. Not a criticism per se, just something to be aware of. Once booted the machine restores the state it was in when turned off. This is important since the layout of instruments on screen is highly flexible and there are a large number of adjustable parameters.

Operation via the touchscreen is positive and reasonably intuitive. If you hate touchscreens there are the mouse and tablet options to consider. Each instrument can be sized and positioned on screen with just enough freedom of choice but not so much as to produce unreadable displays.

Of the Instruments themselves the most noteworthy are the Surround Sound Analyzer and the Loudness. Also worth a nod is the optional Radar loudness display, which is essentially the same as the TC Electronic version.

Display of surround sound parameters is an area of sharply defined difference between manufacturers. RTW approaches this from a trapezoidal perspective which should work well for broadcasters and others seeking to identify troublesome anomalies rapidly. To this end it displays several aspects of a surround mix in parallel, for example balance between front and rear channels and between the LCR channels with a display of either phantom sound sources or phase correlators or both. It also indicates total volume and dominant events. The display is such that, with practice, anomalies likely to cause trouble in the broadcast chain are immediately obvious.

The Loudness displays are all relative. I couldn't find an absolute option. The individual loudness and True Peak channel bargraphs are part of the PPM instrument while the numeric ML, SL, IL and LRA is a separate instrument as is the ML, SL and IL bargraph. There is currently no ML/SL Chart recorder and no means of exporting logging data. The optional Radar instrument provides a means of displaying the equivalent of a chart recorder though.

Overall, the initial impression of the TouchMonitor is a good one. The displays are easy on the eye over long periods and massively configurable to suit individual tastes. Audio interface options should cater for most current applications. I do think it is missing a few tricks currently though. Despite the presence of Ethernet and GPI sockets, neither does anything useful — yet. Loading firmware and presets using USB sticks should be the alternative option these days, secondary to an embedded IP server for configuration and preset and licence management.

The RTW TouchMonitors are worthy of close examination now and will be even more desirable when their potential is fulfilled.. ∎

PROS Beautiful build and desk-top enclosure; easy on the eye over long periods; the unique surround display.

CONS No loudness logging; GPIs not enabled; Ethernet not enabled.

EXTRAS Version 2 software for the TouchMonitor includes LRA, the new loudness range measurement tool. Unlike the measurement of a traditional loudness bargraph, which shows loudness over a pre-defined period, LRA gives an easy-to-read, all-in-one indicator of a programme's dynamic range and loudness. In addition, a moving coil, emulating broadcast PPMs, is included. LRA will also be available in the 31900, 31960 and 11900 surround control and monitoring products.

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