
# Roland M-480

**There has been a surge in the output of new product from the Roland camp of late with more than a little attention paid to the mixer range. JON THORNTON climbs aboard the new flagship.**

Judging by the speed at which its range of V-Mixers has been expanded and updated over the last three years, Roland is clearly extremely serious about the digital mixer market. Not content to rest on its laurels, it has released a series of variants over the last two years, offering different form factors, channel counts and interfacing capabilities. And as it's gone through this process, the team has clearly listened carefully to end-user feedback, and where possible incorporated this into the product range.

Now its seems the attention has been turned to the largest form factor of the old range, the M-400, and updated it in the form of the M-480. And it's under the hood that the most dramatic changes have occurred, as the M-480 appears to employ the more modern underlying DSP architecture of the M-300, allowing the most serious shortcomings of the M-400 to be well and truly addressed.

But before looking at the changes, it's worth having a quick overview of the M-480 for those readers who may not be familiar with the original M-400. What you get here is an assignable digital mixer with 48 channels split across two layers. Sixteen auxiliary buses, an eight channel matrix and a master stereo bus (actually this can work as an LCR rather than straight LR bus) are available, as are dynamics and EQ on every input channel and, now, all bus and matrix outputs. The bulk of the control surface is taken up

with 24 faders with associated select, mute and solo switches with illuminated buttons — and these can be switched to show input channels 1-24, 25-48, bus and matrix master outputs or a user definable mixture of the above. In common with many digital desks, the faders can also be switched to act as aux send levels on channels — I particularly like the way that this mode is very clearly indicated by a flashing illuminated switch so that you don't forget you're in this mode!

Like all of Roland's V-Mixers, the REAC system is the key to their flexibility and application. REAC is Roland's proprietary, low latency audio over Cat5 protocol, offering up to 40 channels of audio input and output over a single Cat5 connection. With a number of REAC-capable peripherals including digital snake/stage box systems, personal monitoring systems, Ethernet switches that allow sources to be split among devices and (most recently) a dedicated hardware based multitrack recorder, there's an enormous amount of flexibility on offer in terms of building distributed audio systems for a variety of applications. This also explains why, as standard, there's only a limited amount of 'regular' connectivity on the back panel.


What you get here is eight balanced analogue inputs on XLR, which can accept microphone or line level inputs, and eight balanced analogue outputs. An SPDIF digital output (coaxial and optical) and a pair of unbalanced line inputs for a stereo source complete the line-up but importantly there are two REAC ports (plus a dedicated split/backup port) for adding a variety of I-O capability. The general purpose analogue I-O and any REAC peripherals are easily configured using a comprehensive software patchbay to assign inputs to channels and outputs from the desk to generic outputs or REAC devices.

Operation of this patchbay and a breadth of other areas is via a nice, bright colour screen, using a data wheel, soft keys underneath the display and data entry buttons. Navigating around the screens is easy enough — helped by having dedicated display buttons as shortcuts to broad functional areas, like EQ, dynamics, etc. The display itself, and a variety of illuminated buttons and rotary encoders for adjustment of common parameters (EQ, Pan, etc.) are located on an angled up-stand at the rear of the console making for a relatively compact unit that's easy to see and reach.

So, what's changed with the M-480 compared to the original M-400? Well, there are some obvious cosmetic tweaks. The M-480 has a revised dark grey colour scheme that, to my eye at least, looks a little more sophisticated (and less fatiguing on the eye) than the original's lighter colours. There's been some tweaking around of the display screens as well, not just for the addition of new features, but a general tidying up of layout and graphics. The net result isn't so different that M-400 users will get lost, but everything seems a little more consistent and solid from a visual perspective. Importantly though, this cosmetic tweaking hasn't altered the extremely well considered use of encoder layout and use of colour in the backlit buttons that makes the user interface so intuitive. Changes here are limited to the addition of some extra encoders in the EQ section (see below), an integrated data wheel/cursor control assembly and a (praise be) dedicated button for applying phantom power to a selected channel.

More fundamental changes are under the hood and a key one addresses what I felt to be a fairly serious shortcoming of the original M-400 — namely a lack of any delays on the auxiliary outputs, and neither EQ or delays on the matrix outputs. Roland has clearly taken this to heart, and the M-480 now features four-band fully parametric EQ, delay and a limiter on all auxiliary buses and matrix outputs, as well as on the main LCR bus outputs.

An underlying impression after reviewing the M-400 was that perhaps it was that little bit underpowered on the DSP front. This notion was reinforced by the fact that you could only assign a maximum of 24 dynamics processors across the 48 channels, and that the four-band EQ wasn't fully parametric — instead using shelving filters only on the lowest and highest bands. Again, these issues have been thoroughly addressed with the M-480. EQ is four-band fully parametric, with the low and high bands switchable to shelving filters or LPF/HPF if required. Dynamics processing (gate/expander and compressor) is available on all 48 channels, and the built-in effects count is up too — six stereo effects units, up from four, and twelve graphic EQs, up from six.

There have been a number of other new features implemented too a key one being the ability to use a REAC connection between two consoles to cascade them together (for those occasions when 48 channels simply isn't enough). This feature enables the main LCR buses, auxiliary buses, solo buses and matrix outputs to be cascaded from one M-480 (Cascade Slave) and summed into the corresponding buses on another M-480 (Cascade Master). In addition, key functions can be intelligently linked between the two consoles if required. For example, storing a scene memory on the master console will also store a corresponding scene on the slave console. Recalling the scene on the master will recall the appropriate scenes on both consoles. Similarly, soloing a channel on the slave will cause the Solo Clear button to flash on the master, and fader layer select switches can also be linked between the two.

Configuration is easy particularly as the REAC configuration pages include preset patch maps for cascade master and slaves, and operation is exactly as expected. The manual does warn that the inherent REAC latency may require some delaying of input signals at the master to compensate, but in practice, unless there are phase correlated signals split between the two consoles, I didn't find this necessary.

In summary, the M-480 is an evolutionary step and a good one. What is reassuring here is the fact that Roland has so clearly listened to and reacted to user feedback. The changes made to the original M-400 are well implemented and will I'm sure be well received as they haven't been made at the expense of reinventing the wheel or diluting the key strengths of the original.

**PROS** Solid, evolutionary update; improved EQ; processing on outputs; flexibility of REAC system; overall UI intuitive and quick to use.

**CONS** Still effectively a closed ecosystem — significant investment in REAC peripherals required for any application of reasonable scale.

**EXTRAS** The R-1000 48-track recorder/player is designed to work with the V-Mixing System and can be connected to any console that has MADI by using the Roland S-MADI REAC MADI Bridge. It records in BWAV and two units can be synced together or to video. Files are stored on removable hard disk or solid-state. Virtual Sound Checks are now possible when the R-1000 is integrated with a Roland V-Mixer digital console.

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