



# Yamaha 02R96

Filling the shoes of an industry standard is never an easy task but sooner or later Yamaha had to do it. That it chose to do so in the manner shown tells us much about its understanding of what is required.

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**T**HE ORIGINAL 02R IS ONE of 'those' rare products that appear out of a clear blue sky and change the way you think and work. Love it or hate it, you have to admit it has been a huge success in a wide variety of fields. Such a success that it has attracted several imitators. While some of these have been worthy enough in their way, none of the pretenders to this throne has had quite the same spark or offered any really worthwhile improvements. Perhaps this is why it has taken so long for Yamaha to unveil the 02R96.

Even with the optional meter bridge and solid wooden side cheeks, the 02R96 has a more industrial air than its bigger brother, the DM2000. As many facilities have demonstrated with the old 02R, this utilitarian feel can be mitigated by clever joinery design especially if a leather armrest is incorporated. The good news is the 02R96 has exactly the same footprint as its predecessor, so it is a drop-in replacement in expensive custom furniture.

Despite the name, this console has far more in common with the recently released DM2000 than its 02R forebear. It shares the same hardware and

software base and projects begun on an 02R96 can be completed on a DM2000. The similarities go much further than this. Key conventions and general layout follow the same pattern. If you can drive a DM2000 you already know how to drive the 02R96. They both have a far more 'hands on' feel than the old 02R. The blue LCD screen will be immediately familiar, but here it is used more to inform than as the heart of the control system. Pertinent information is displayed about whatever you are doing at the time. Equalisers and dynamics have hardware controls, there is a joystick surround panner and the whole surface feels far more logical than before.

The headline features are; 56 input channels, 20 analogue with 16 mic amps, 8 buses, 8 auxes, 4 effects, 25 touch-sensitive faders and full input and output patching.

Although all the faders are 256 step, the law chosen for the channel inputs means big (5dB) steps at greater than 50dB attenuation. This makes smooth 'fades to black' difficult or impossible to achieve. Fortunately, there are a couple of workarounds for those occasions when you need this sort of fade. The

law is different on the bus faders and smooth fade-outs are easily achieved.

There is a choice of two EQ algorithms. Type I is the same as the O series consoles. Type II is new and also found on the DM2000. The difference is subtle and at its most noticeable when two or more bands interact. Type II is less clinical and more musical. I look forward to further variants in future software versions.

Dynamics can be pre EQ or pre or post fader. I always found the 02R's lack of post fader dynamics rather limiting.

02R96 follows the familiar layered fader and assignable control paradigm. Here, there are four layers. Three of which deal with physical input channels 1 - 56 and the masters. The fourth layer is labelled Remote. This is primarily intended to be used with an external DAW but can be used with any suitable MIDI device. A comprehensive template is included for Pro Tools. A template is being developed for Nuendo and others. With patience it is possible to roll your own.

02R96 has comprehensive patching of inputs and outputs and horizontal or vertical pairing of stereo

sources plus M & S decoding. The downside of this flexibility is it's easier to get lost, but a bit of planning will avoid too many of those head scratching, 'I wonder where the hell it's gone' moments.

The Studio Manager application is almost essential. Automation and set-up data can be saved or loaded to and from the PC or Mac. Studio Manager also keeps track of what is going on via graphic representations of

channel strips and the surround panner. Set-up becomes a far more pleasurable task and can be performed off-line, on the beach if you like. However, Studio Manager still lacks a page to allow you to see what is going on in more than one hidden layer at a time.

All four of the on-board effects 'units' are full 24-bit, 96kHz. The first of these can be used for surround effects including reverb and multichannel dynamics. Unfortunately, you get owt for nowt and a single 5.1 reverb uses all four processors.

Surround modes are restricted to 3.1 or 5.1 although the on-screen graphics make me suspect this may be extended in the future to 6.1 or even 7.1. A pink noise generator aids setting up the surround monitoring. Bass management, downmixing, level trim, and delay functions are all included. With control surface real estate at something of a premium, most of this is screen-controlled although the user-defined keys can be used to good effect.

For my purposes the layout of the optional meter bridge is more useful than 'big brother', DM2000. Twenty-four bargraphs show input channel, aux send and bus send levels. Input levels can be metered pre-EQ, prefader or postfader. Layer switching either follows the fader layers or can be manually set with four keys. The big stereo pair of bargraphs looks at stereo out or control room out. But the best bit is the eight dedicated bargraphs for the bus outputs, again these can be switched to look at pre-EQ, prefader or postfader. Altogether this bridge is a clearer design than the DM2000. The one omission is the lack of a time counter display anywhere on the console or the bridge. The only way to check where you are is on screen.

If you've been salivating over the DM2000 but cannot wear the cost and/or real estate that 'big

## Surface

This is a busy surface, which manages to avoid feeling overcrowded. Fader pitch is narrow but the low profile knobs and graphics help to identify the one(s) you want. There are three touch-sense options. Fader touch can select the channel or not, and fader movements can either be registered regardless of touch or only when flesh contacts them. This is useful for setting a level with a fingernail or pen then touching the knob to cut to the new value.

The surface is divided into logical function blocks. Diamond-shaped keys are always used for display. To the left of the screen are 16 display keys and each functional grouping also has a key.

Each of the 24 channel strips has On, Solo and Select keys plus an Auto key. The rotary encoders are not touch-sensitive but incorporate switches that punch the selected parameter in and out of automation write.

The Selected Channel area has sub-sections for Routing, Pan/Surround, Dynamics and EQ. The equaliser section uses two encoders and a numeric display with three indicator LEDs per band. One encoder adjusts the gain and the other does frequency and Q. Pressing the encoder knob switches between the two. The display defaults to displaying Frequency or Q. Gain is only displayed when adjusted. I would prefer gain as default.

In the Dynamics section, five encoders control parameters of compression or gating. In the Pan/Surround block the joystick quickly becomes the obvious intuitive choice for panning and positioning.

The Plug-ins area controls either the internal effects, one or two Waves Y56K cards, or user-defined plug-ins on an external DAW. Four encoders under the screen together with function and page keys help make operation quick and intuitive. In the bottom right hand corner lie the jog/shuttle wheel, Cursor, Increment, Decrement and Enter keys. The jog/shuttle and parameter wheel is a pale shadow of the wonderfully smooth polished aluminium specimen found on the DM2000 but does the job.

External machine control is limited to MMC with illuminated Stop, Play, Fast Forward, Rewind and Record keys. Locator functions amount to eight locations with dedicated keys and a Set key.



brother' demands, or simply do not need everything it offers, the O2R96 may well provide the answer. In many ways I actually prefer it to its sibling. For a start it's less of a stretch to the further reaches of the surface. In the absence of a direct comparison, it sounds just as good and this means significantly better than the previous generation.

There are obvious and less obvious sacrifices to

consider. Apart from the loss of input channels (56 against 96) there are four less aux buses and only four interface card slots. There are no graphic equalisers and half the number of effects processors. The output matrix has also disappeared. Analogue insert send and returns are unbalanced and there is no 9-pin machine control.

Surface space is tight so something had to give. There are no dedicated automation control keys or

record arming keys, no smart media slot for automation memory, and the expensive and useful electronic channel strip is missing as are the aux/matrix send encoders. Sixteen user keys offer some consolation for the loss of dedicated keys.

The seminal O2R was always going to be a hard act to follow. Fortunately, Yamaha had the sense to wait until it could produce something this impressive rather than a simple incremental upgrade.

The original O2R had a number of compromises that many were prepared to overlook given its virtues. The conversion and effects didn't stand up to close scrutiny and it wasn't the easiest console to learn or, even once learnt, to keep track of. All that changed with the DM2000 and is continued in the O2R96. It is fully 96kHz, 24-bit capable. You don't lose half the console when working at the higher sampling rates, the facilities are the same regardless. The effects have come a very long way since the O2R and are well up to the standards of standalone units.

Most importantly, with new convertors and preamps, sound quality is back where it belongs - at the top of the agenda. Yamaha has done it again and moved the goal posts so far they're almost on the next pitch. ■

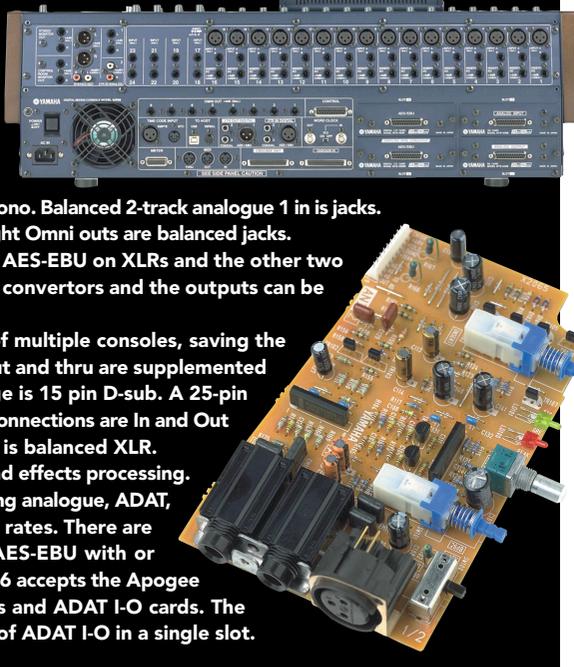
## The ins and outs

The first 16 channels are all equipped with XLR and jack inputs at mic or line level plus an unbalanced jack insert send and return. The remaining eight analogue inputs are line only on jacks. Control room monitor and Studio monitor stereo outputs are balanced jack. The two stereo analogue outputs are balanced XLR and unbalanced phono. Balanced 2-track analogue 1 in is jacks. Unbalanced 2-track analogue 2 in is on phonos. The eight Omni outs are balanced jacks.

There are three stereo digital ins and outs. One is AES-EBU on XLRs and the other two are SPDIF on phonos. All the digital inputs have rate convertors and the outputs can be dithered.

Two high-density 64-pin sub-Ds allow cascading of multiple consoles, saving the cost of cards and leaving all the slots free. MIDI in, out and thru are supplemented by USB and serial 'to host' connections. Meter bridge is 15 pin D-sub. A 25-pin D-sub gives access to GPI functions. BNC word clock connections are In and Out plus a termination switch. MTC input is DIN and LTC is balanced XLR.

Four mini YGDAI slots provide for additional I-O and effects processing. Yamaha produces a comprehensive list of cards covering analogue, ADAT, TDIF and AES-EBU formats at conventional sampling rates. There are four 96kHz cards, analogue in, analogue out and AES-EBU with or without SRC. There is also an MLAN option. The O2R96 accepts the Apogee I-O cards and one or two of the Waves Y56K effects and ADAT I-O cards. The latest card is the MY16-AT, which gives 16 channels of ADAT I-O in a single slot.



**PROS** O2R on steroids; sounds better too; meter bridge

**CONS** Short on machine control; utilitarian appearance

### Contact

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