

Allen & Heath

GS-R24 / M | from £5,549

As analogue consoles become popular again, integration with the digital world is key. **Stuart Bruce** investigates one British manufacturer's latest offering in the merging of two cultures

WHAT IS IT?

A comprehensive studio mixer with FireWire/ADAT digital audio interfaces and DAW MIDI control.

CONTACT

Who: Allen & Heath Ltd
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HIGHLIGHTS

- 1 Seamless DAW integration
- 2 Great sounding mic pre's and EQs
- 3 Excellent build quality

PRICING

GS-R24 VCA Faders
£5,549

GS-R24M Motorised Faders
£6,244

Analogue Interface Card
£247

FireWire/ADAT Interface Card
£ 645

Power Supply
£1,082

Allen & Heath have been around for a very long time. Back in the '70s they were famous for custom mixers

for bands like Pink Floyd and lots of small compact devices for live, broadcast and studio. More recently, they've found favour amongst the DJ fraternity with their excellent Xone range, but the GS-R24 finds them firmly back in the studio.

This 24-channel studio recording mixer looks like a pretty traditional analogue mixer, and in many ways it is, but under the hood there are a lot of

extra features that will place it right at the heart of any project or small studio.

Layout

There are 24 mono channels, two stereo, four mono groups, and a stereo and a mono output, all with their own long throw faders. The M version just means that the 24 channel faders are motorised, the standard version coming with VCAs. All audio connections are on the rear of the meter bridge and are pretty much all 1/4-inch balanced jacks with the exception of the mic inputs which are

XLRs, as is the main stereo out. Every channel, group and output also has a dedicated insert so connection possibilities are very comprehensive.

There are six aux sends, 1-4 can be switched pre or post for foldback mixes and 5 and 6 are post for reverbs. Each channel and group has a mute switch and a solo that can be in place, PFL or AFL. There is also a master solo defeat.

Overall, the channel layout is very well thought out. It's easy to see what everything does and it's all where you'd expect it to be. The centre section is very well featured but here we would



question the layout a little. At the bottom sits a jogwheel, with a five-button L/R/Up/Down/Centre configuration above it, but on top of that are eight assignable buttons topped off with the DAW transport controls. Most of the action will be jogwheel and transport but you can't nudge and play without lifting your hand off and that becomes annoying after a while. Further up are the 12 rotary and two MIDI continuous controllers, which is fine, but above them is the headphone out socket. This can leave the headphone cable trailing over the desk – a bit of a pet hate – but fortunately it's duplicated on the back panel, so plug it in there and any potential problem is solved.

The rest of the centre section has the usual vertical row of knobs and switches for selecting monitor sources, main and secondary monitors and talkback. There's also a recessed switch that allows the interface returns 25-30

to be used as 5.1 outputs. When activated the control room monitor pot switches to surround mode and 25-30 go to six dedicated monitor outputs on the rear panel. Very neat.

Low to mid-priced consoles can sound pretty thin, so it's great to find one that sounds good and solid

To the left of these are the very comprehensive Studio 1 and 2 foldback feeds. These allow a huge amount of control over what you send to the headphones and initially are a bit confusing. Personally, we just want the possibility of sending the main stereo out or a balance from the aux, but they certainly give you the option of building very sophisticated headphone mixes from multiple sources and, once you get your head around them, you do start to appreciate the flexibility. To the left of these are the two valve channels, which are essentially mic/line inputs with a valve stage incorporating a drive control to add controlled distortion.

Finally, there's a separate 2U rack-mounted PSU that connects to the desk via a multi-pin cable. Both the desk and the PSU are very well constructed and extremely solid. The whole package looks and feels well built and certainly gives the impression that it's going to last.

Channels

Starting with the mono channels at the top of the strip you have a mic/line gain and four switches handling mic/line switching, polarity (phase), 48V on/off and a high pass filter. Below comes a

25-26 and 27-28 the stereo channels, 29-30 the Valve channels and 31-32 the master stereo out. As you're routing in your DAW you don't need a patchbay or to move cables on the back panel to crosspatch. Choose an input and assign it, choose an output and route to it. The really clever bit lies

in the four DAW routing buttons on the mono channels. Instead of just giving you one way of sending to and from the DAW, each channel can be set up differently: pick up the signal straight after the mic pre while monitoring direct, come out after the EQ still monitoring direct, or

even come out of the pre, process in the DAW and return the processed signal back into the channel path. When mixing or bouncing you can return the signal into the full channel path, go straight to the mix buss via the pan pot, or even route out through the insert and EQ path and back in.

DAW Routing

The GS-R24 has a slot on the back that allows you to add an analogue or digital interface board to connect with your DAW. The digital board comes with FireWire and ADAT connections and provides you with 32 ins and outs or get the analogue board and use your own own converters. Whichever method you choose, the DAW interfaces the same way. Inputs and outputs 1-24 on your DAW connect



very flexible four-band EQ section. Bottom and top are shelved at 12k and 80Hz respectively and the two fully parametric mid bands cover from 18Hz to 18kHz between them. They cross

over between 400Hz and 1kHz so there's plenty of scope to sculpt the mid-range. Below these are the six aux and the pan pot. Underneath the pan come four

switches for stereo, mono and buss assigns and below them are the DAW routing buttons. These lie at the heart of what makes the GS-R24 a very different beast to most 24-channel consoles, so we've explained their functions in the *DAW Routing* box.

The stereo channels have discrete line inputs and a simpler four-band EQ with fixed frequencies. All the aux sends are available and you can choose input from the line source or DAW.

The valve channels have a mic, line/instrument input or act as a DAW return. Like the mono channel, you have switchable phantom power for microphones and a polarity switch but there is also a boost instrument switch. This kicks in a bit of extra gain when a low level instrument is plugged into the line input. Output routing, like a mono channel, goes to L&R, Mono or the groups. There's no EQ but the interesting bit here is the Drive control that adds in a bit of warm second-harmonic distortion to whatever's coming in.

The four mono groups can be routed to the stereo out and the mono out, and simply have a pan pot, mute and solo button. That's nice and simple and gives you the flexibility of being able to

SPECS

Operating levels

Channel Mic input: -6 to -60dBu for nominal (+14dBu max)

Channel Line input: +14 to -40dBu (+34dBu max)

Insert Point: 0dBu nominal +21dBu max

Main Output L R: +4dBu nominal +27dBu max

Headroom

Analogue headroom from nominal (0Vu): 21dB
Analogue headroom at mix summing amplifier: 23dB

Frequency response

Mic in to Mix L/R out, 10dB gain: +/- 1dB 10Hz to 130kHz

Mic in to Mix L/R out, 50dB gain: +/- 1dB 20Hz to 80kHz

Line in to Mix L/R out, 0dB gain: +/- 0.5dB 20Hz to 20kHz

THD+n

Mic in to Mix L/R out, 10dB gain 1kHz +10dBu out (DC to 22kHz): 0.0015%

Mic in to Mix L/R out, 50dB gain 1kHz (DC to 22kHz): 0.0035%

Line in to Mix L/R out, 0dB gain 1kHz (DC to 22kHz): 0.002%

Noise

Mix noise 24 channels routed, Ref +4dB, 22-22kHz: -89dB (-85dBu)
Mono Channel Mic Pre EIN @60dB gain 150R input Z 22-22kHz: -128.5dBu

Dimensions:

1,125 x 616 x 192mm

Weight:

GS-R24M (Motorised)

32kg

GS-R24

30kg

ALTERNATIVES



Solid State Logic AWS

From £30,000

The original analogue console with DAW control. Second-hand they hover around the £30,000 mark but then it is an SSL.

www.solidstatellogic.com



Audient ASP 4816

From £10,740

No direct DAW interface or MIDI control but this is an excellent, fully featured small footprint analogue console. It's in-line, so has 32 input channels and those excellent Audient mic pres and EQs.

www.audient.com



PreSonus StudioLive 24.4.2

£3,269

With 24 mic/line inputs, this digital mixer will interface with most DAW setups via FireWire. If you prefer to keep it 'in the box' but want more hands-on control of the mixing process, this may be worth checking out.

www.preonus.com



individually pan the left and right components of a stereo group.

Sound

Ultimately, any mixer lives or dies on its sound and the GS-R24 certainly wins in this department, too. On acoustic sources the mic pres sound very good. Using a selection of condenser mics, instruments like acoustic guitar, percussion and voice sound full and rich. The mic amps are clear and very

sound pretty thin, it's great to find one that sounds good and solid.

Bass guitar is often the instrument that will show a console's weak side but the GS-R24 passes that test with flying colours. Straight into the line input of a mono channel, bass sounds warm and fat right the way down to the bottom of the neck with plenty of tonal variation from the EQ too.

The big surprise is the valve channel. It has a distinctive warmth to

The low end from the EQ sounds balanced and round, and the mid and highs bring the details forward without undue harshness. There's plenty of headroom and it seems happy to be driven hard. If anything, pushing it a bit makes it sound even better.

Conclusion

For quite a while now there's been a growing feeling that the studio console is dead – a thing of the past – but with

the rise in use of summing mixers and a switch in production techniques to more live sources, lots of producers and artists have started to

The distortion added is very subtle and comes out more as harmonic richness than edge

clean with good depth and transient response. The EQs are particularly good in the mid-range which, let's face it, is where the music is, and if I had to define the sound it's traditionally British. Hardly a surprise given its pedigree but in the current climate, where low- to mid-priced consoles often

it and even when dialling in a lot of drive, the lows still sound fat and solid. In fact, the valve channel works great on most sources. The distortion added is very subtle and comes out more as harmonic richness than edge.

Running a complete track through it with lots of synths it also impresses.

re-evaluate the role of the studio console and begin to appreciate the flexibility it gives to a recording setup.

The GS-R24 does a very good job of connecting DAW culture with more traditional ways of recording, adding flexibility on both sides. Quick assignment of inputs and outputs, plenty of channels for acoustic and hardware sources, highly flexible and latency-free monitoring capabilities, and a very solid sonic performance, should find favour with all kinds of music makers. Add to that excellent build quality, simple automation and the ability to upgrade that interface board to whatever standard comes along next – Thunderbolt for example – and you have plenty of reasons why the GS-R24 could be the centrepiece of lots of studios for many years to come. **FM**

MIDI and Automation

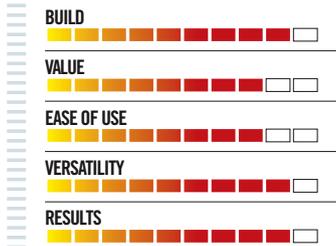
With mix automation, dedicated MIDI controllers and switching options, Allen & Heath have wisely produced downloadable

resource packs for Logic, Cubase, Pro Tools, Reaper and Sonar. These give you all the info and templates you need to get connected

quickly and with the minimum of fuss. The jogwheel and transport controls work exactly as you'd expect, and fader automation is very straightforward. Our test desk had motorised faders and we found it very easy to program mix moves. The faders have a very quick response and passed our most extreme mix moves test with flying colours. Channel solo buttons can be set as track arming buttons or even DAW channel mutes, and the dedicated MIDI controllers give you plenty of options for controlling other DAW functions. Download the user guide from the website for the full MIDI spec and setup notes for your DAW.



FutureMusic VERDICT



An excellent desk packed with powerful features. A genuine bit of British ingenuity.