DIGICO SD8 – ONE YEAR ON

Digital mixing consoles have all but taken over the live scene, everyone knows that by now, but just because its digital doesn't mean it's good. So how has Digico's SD8 shaped up in the field since its release last year?

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The digital console bug hasn't gone away, nor is it likely to. This month I've mixed on a Soundcraft Vi6, Digico SD8, Yamaha LS-9, M7CL and the dinosaur DM2000, Digidesign's Profile and SC48, and even the new Allen & Heath iLive. In fact, I have only touched two analogue consoles in recent memory – one of which is a DDA in my studio, the other was a small Allen & Heath in a pub. (Yes, they still drag me out for those gigs from time to time… thanks Mark Sholtez.)

What I've concluded in recent months is that there's a place for both analogue and digital consoles both large and small. There are some jobs that simply wouldn't be possible with traditional analogue technology, of course, and many of these gigs would also be a struggle on a small format digital console. Theatre is a great medium for exploring what's possible with a modern, large format, digital production console. I had the pleasure of visiting Adam Iuston at the Sydney Theatre Company recently to discuss his preference for working on the Digico SD8 (supplied by Revolver Audio).

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PATCHED

The first thing that was obvious about his setup was how much work the Digico board was doing. All 60 (mono or stereo) inputs were being used: 20 channels of radio (headset/lapel) mics, 10 handhelds, 26 inputs from the live band, and four stereo returns from CueLab.

Of the 24 available output buses (plus a 16x12 matrix and two stereo solo buses) only five were in use: Dialogue A, Dialogue B (see the box item re A-B setup of PA systems), Handhelds, Music and Sub (FX), with all the remaining processing being done at the BSS Soundweb processors, where audio was routed to 19 different outputs (to cover the A and B system, balconies, delays, in-fills, subs and so on), all of this time aligned back to the band that were set upstage.

The layout of the Digico SD8 console is slightly different to most, offering three sections of 12 faders, with each of these sections having two layers of four banks. Straight away this changes the way you use the console. Having immediate access to 36 faders totally changes the feel from other similar digital boards that typically feature only 24. The ability to look through layers one bank at a time is also a huge benefit (the inability to do this on the Digidesign consoles for example is one of my pet hates, and in my opinion a major flaw in its operation).

But that's only half the fun. The most powerful layout feature of the SD8 is that any fader on the console can be assigned to *any* function. So for example, Fader 12 might be assigned to act as the reverb send for the radio mics, as was the case with Adam Iuston's theatre setup that day. Looking at the console configuration, Faders 1-11 were radio mics for cast, 12 was the reverb send for all those mics, 13 and 14 were the lead actors (double packed on the alt input of course – more on this later). 15 was a group of all the girls, 16 all the boys, followed by two groups of handhelds (the actual inputs were down a layer) followed by groups for each section of the band (again, the actual inputs were back down in the first bank, in a layer under the Radios). The final bank of faders had CueLab returns. This means that without changing a page or fader layer, the engineer has access to the entire show: inputs, reverb sends, groups, and effects returns. Now obviously this requires some time to configure – but for a console to offer this flexibility is amazing, and in practice it certainly sets it apart from the others.

Another excellent practical real-world feature of the Digico SD8 is that every channel can access a pre-defined second input. By flicking the 'Alt Input' button at the top of a channel strip, the input immediately – and without any audio clicks or pops – changes to a second mic input. This simple feature is a big plus for theatre, in particular, allowing main actors to be double packed (ie: wearing two radio set ups) so if there's ever a problem – from RF drop outs to physical movement of the mic, or even sweat and makeup causing it to fail – the engineer can simply select the second mic. This input will be in the same place on the console, have the same EQ, dynamics, inserts etc, and be addressed by any automation/scene changes just like the original. Not only does this design feature save a physical console channel, it also saves doubling up any outboard processing that's used on the channel, and ensures that any change to a spare will sound the same at any point of the performance – assuming the mic's the same.

DYNAMIC EQ

Every channel on the SD8 has full dynamics and EQ, and this EQ can easily be changed to *dynamic* EQ. For those of you that remember the old BSS 901, dynamic EQ is an extremely powerful tool. Think of it like a compressor that only affects certain frequencies. This means that you can make a big bottom-end cut, but only when that frequency crosses a certain threshold – perfect! Take the boom out of the radio mics when there's proximity effect or plosives, without losing all the body the rest of the time.

Thanks to the 'Stealth' digital processing (hence the 'S' in the names of the new Digico consoles rather than just the 'D') there's enough DSP on the SD8 to run all the functions *all* the time. This means you can happily run a compressor, gate and full EQ on every single channel, without the console ever feeling like its going to fall over any minute. In addition to this are the 12 graphic EQs, six built-in effects, and four-band EQ and dynamics on every Aux, Group and Matrix output.

MIRROR MODE – LOOKING GOOD

Since I've mentioned stability, it's worth noting at this juncture that the SD8 can also be run in 'mirror mode' with a laptop, meaning that if the control surface did fall over mid show for some unforeseen reason – control could be maintained from the PC. In less scary circumstances than these, this feature is also useful by allowing the engineer to wander off and sit in any seat in the house (under a balcony or in the nosebleed section perhaps) and continue working on the mix, knowing exactly how it sounds in that part of the theatre. There are also dual-redundant power supplies in both the control surface, and the input rack.

The stage rack is configurable depending on your input and output needs – while the standard is 48 mic inputs and eight outputs, there are a number of options available. Also handy is the local I/O on the surface itself. This gives the user easy access points in and out of the console at the control point, without the need for another rack at the FOH position like some others demand. The main stage rack is connected to the console via a MADI cable (a 100-metre cable is supplied as standard with the console) so the need for a multicore is completely removed. There is also a second set of MADI I/O at the surface for the connection of a recording system of your choice so the show can be easily multi-tracked (and/or 'virtual soundchecked') if that's what you require or prefer.

While a lot of these features are standard in digital technology these days – and there are countless more not covered here in this brief user report (see issue 65 for more on the SD8) – it does seem that Digico really listened well to users during the design phase, adding some compelling features, as well some that I always expected from digitals but never seemed to get! Nice work Digico.

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A-B PA SYSTEMS

It's a common technique in theatre mixing to use what's now known as an A-B system. This system can avoid a lot of the phasing issues that can occur when two actors with (omni) body mics are close to each other and each picks up the other's voice. In an A-B system, each actor's mic is sent to a different bus, and that bus to different amps and speakers (though usually the same components, and hanging next to each other). Now that the electronic paths are separate, phasing is significantly reduced. Rumour has it that this setup was discovered by Martin Levan in 1988 on *Carrie* and was, in fact, an accidental discovery that came about because he was using separate PAs for the 'boys' and 'girls'.