



The DiGiCo SD7. Two generations in one step.

The DiGiCo D Series invited you to step into a new world of digital mixing.

With the new SD7, we invite you to travel two generations beyond those horizons.

Experience the combined power of Stealth Digital Processing™ and a sublime user interface, that once again raise the bar for live sound engineering the world over.

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Introduction

When the professional audio world first set eyes on the DiGiCo D5 Live there was a collective sharp intake of breath. Here was the digital mixing console that gave you the best of analogue working practices and audio finesse with all the versatility and feature richness that the digital environment could offer.

Several years on, the D Series remains the standard setter and its fast, engineer friendly user interface has yet to be beaten.

To many engineers it continues to offer the optimum sonic combination of analogue smoothness and digital clarity.

But expectations continue to rise. In a world as competitive for engineers as it is for console owners, you want the best tools you can lay your hands on. You also want a console as well thought out for every major application as it is designed for the art and science of sound engineering.

Above all, you want to do *more*.

Meet the DiGiCo SD7.

The next generation but one of digital sound engineering.



12 years on and still 12 years ahead

The SD7 is deliberately named as the natural development of the legendary D Series concept. Because 12 years on from its birth, the Soundtracs/DiGiCo vision of live sound mixing is still 12 years ahead, powered by a leap of two full technology generations.

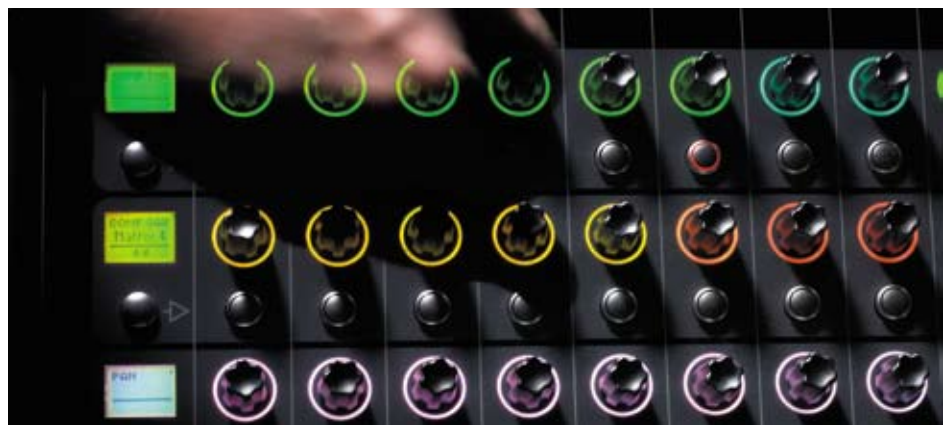
In conceiving the SD7, we set out with the objective of taking the very best in digital console concepts to an unsurpassed level – both on the groundbreaking work surface and the new technologies that lie beneath.

We've moved beyond the already powerful SHARC® processor as the heart of the console, with the stunning smoothness, accuracy and wide dynamic range that new Super FPGA technology with floating-point processing brings to the party.

Meanwhile, a Tiger SHARC® FX engine delivers the finest effects and dynamics you'll encounter in any console, live or in the studio.

All this married to an interface that makes audio power and mixing precision as effortless to use as your first console.

Now you can *really* flex your muscles.





Inspired engineering

In the five-year gestation period between original idea and finished console, countless discussions, technical debates, painstaking research and a dedicated, inspired team with open minds all contributed to the SD7's design.

Part of the inspiration came not only from studying where pro audio had been and was leading, but where other pioneering industries saw their own paths to technological development.

Among the most fascinating were the aviation, marine and automotive industries' use of new materials and techniques in challenging environments.

Just one of these was the growing use of polycarbonates in high-tech boat building, where its remarkable combination of durability, light weight, temperature and impact resistance and optical transparency has proved invaluable.

As a console work surface material it has allowed us to transform the user experience in subtle and unexpected ways – as a few minutes exploring the SD7 will show you.

And our inspiration continues. As the SD7's power grows you can keep up to date by registering at www.digico.org/especs

Taking audio processing by Stealth®

Powering the SD7 is our latest in high density digital processing, the all-new Stealth mixing and routing engine, exclusive to DiGiCo.

Based on the latest incarnation of FPGA (Field Programmable Gate Array) technology, known as Super FPGA, it's a core component of the SD7's quantum leap in console design.

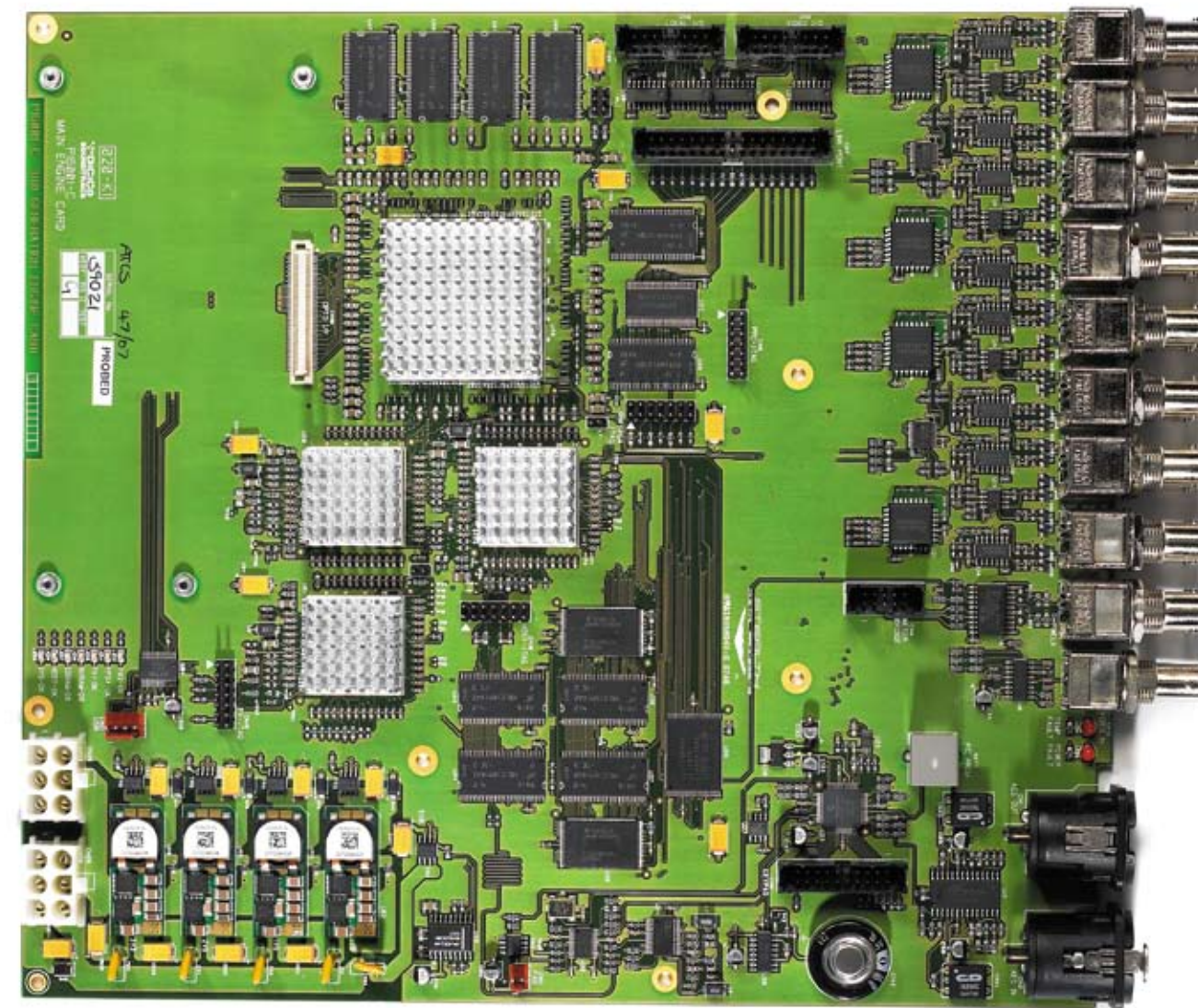
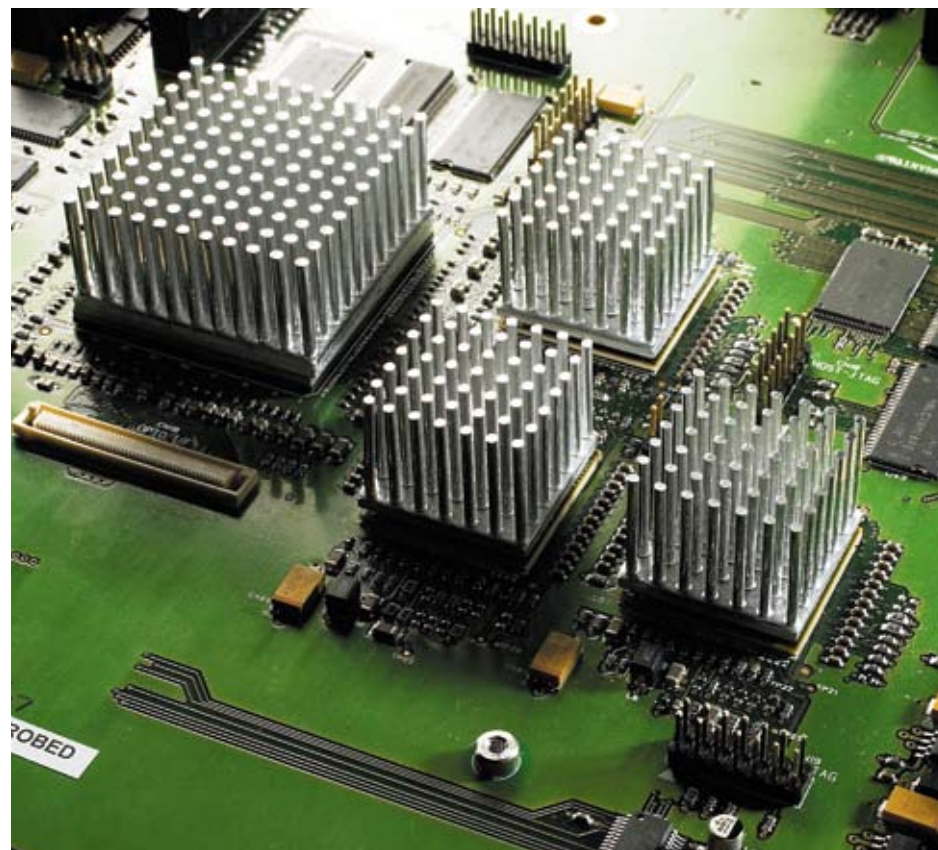
Allied to two of the latest generation of SHARC® effects, dynamics and control processors, it endows the console with a staggering eight times the overall processing power of a D5 Live.

The benefits are to be found not only in the high resolution audio processing that makes 128 simultaneous 192kHz signal paths readily achievable, or 256 at 48kHz/96kHz, but limitless flexibility too.

Make the most of 448 simultaneous optical and 224 MAD1 and 24 analogue and AES/EBU connections, plus 128 busses, 32 matrix busses and 32 graphic equalisers, to build the biggest and most complex shows.

While two new-generation Tiger SHARC® chips (each representing the power of almost a whole D5) provide an awesome array of quality reverbs and effects.

And in packing all this power into just four chips against the D Series' 39, the SD7's efficiency is dramatically increased, while space has been freed up to allow two complete redundant processing engines to be accommodated within the console.



Some consoles remind you of their analogue roots. Only DiGiCo lets you forget them

While some sound engineers have embraced wholly different working techniques in the digital era, if you're already a DiGiCo user the chances are you appreciate the logical thought processes that accompany working in the analogue idiom.

However you think, though, intuitive operation is as crucial to responsive live mixing as ever, and throughout the D Series' design it's a core philosophy that your next task should always be instantly accessible.

The massively increased processing power of the SD7 means we've been able to take this concept much further. Retaining the instant accessibility of its predecessors while adding new flexibility and sonic purity.

Routing options are more extensive than ever, while the generous provision of 32 units of graphical equalisation is more powerful still. And no analogue console has ever allowed you to instantly place input and output channels side by side.

The way these functions and more can be accessed, tweaked, stored and instantly recalled is pure digital control at its finest.

The best of both worlds. So intuitive you almost forget it's there.



20/20 vision: intuitive from the moment you start

If the word 'intuitive' seemed to have been invented for the D Series, for the SD7 our designers have exploited the intervening five years' technological developments to deliver an even more richly rewarding user experience.

You can choose to configure your SD7 for front of house, monitors, theatre or live to air, or use it as an interactive part of a multi-console system (it's fully compatible with any DiGiCo or Soundtracs console).

Either way you'll see your complete signal flow laid out with unprecedented clarity, throughout each of the 256 processing paths that link the 448 optical, 224 MADI, and 24 integrated I/Os.

The stunning backlit polycarbonate work surface with its HTL (Hidden Till Lit) indicators is both a vision of clarity in any ambient light, and a paragon of durability.

With unique, innovative touches like built-in VNL video monitoring, interactive dynamic metering and a design that will give you full dynamic equalisation on any single path simultaneously, never has so much power to design, create, fine-tune, mix and operate a show been so literally at your fingertips.



The SD7 work surface: keeping you in the picture

Touch screens have always been part of the DiGiCo work surface experience. On the SD7, as you'd expect, they've leapt ahead of current standards.

Our desire to provide larger screens than the standard 12" met our wish to provide faders in larger sections. So each of the three new 15" TFT LCD touch sensitive displays sits above a group of 12 faders for clearer, more logical operation.

In common with every other display and illuminated control on the console, the metering's light level is individually adjustable to suit everything from a festival mix tower to a Broadway theatre.

All of the D Series' intuitive touches such as electronic scribble strips and labellable buttons are also here, now greatly enhanced by new full-colour backlit control knob digital collars and the high contrast afforded by the SD7's black polycarbonate control surface.

Besides carrying all its labelling on the back, giving the ultimate in surface durability, it conceals numerous LED indicators that appear only as and when required to maximise visual clarity and minimise clutter.

Inspired by the marine industry, these 'Hidden Till Lit' (HTL) context-sensitive indicators appear just when they're needed.

Another pro audio world first from DiGiCo.





Who did we think of first? You

Many mixing consoles have promised a multi-application experience, but perhaps unsurprisingly, there have inevitably had to be compromises. The biggest being that a hardware channel strip will always be what it was originally designed to be.

For the first time, the flexibility that the sheer power of the SD7's Stealth digital engine affords has made it possible to design a console that can be instantly reconfigured, enabling its work surface to be set up for front of house, monitors, theatre, live to air and multi-console system work. Simply specify the application kit – or kits – you need and the console that's right for the moment is yours.

For the first time, a single hardware and operating system platform can be tailored precisely to different live mixing roles as effectively as if you'd invested in individually-specified consoles. Without compromise.

As a rental equipment owner, you'll find the SD7's genuine multi-mode capabilities make compelling reading.

As an engineer, you'll love the fact that when you've familiarised yourself with one incarnation of the SD7, you're nine tenths of the way to knowing them all.

First choice for front of house

If we were asked to state the DiGiCo design philosophy in one line, it would have to be that *the mix comes first*.

The SD7, like the D Series, was created not as an example of how to use digital technology to feature-pack the smallest possible mixer, but as a professional sound engineer's tool that would let you mix a live show – even a big live show – in a truly live way.

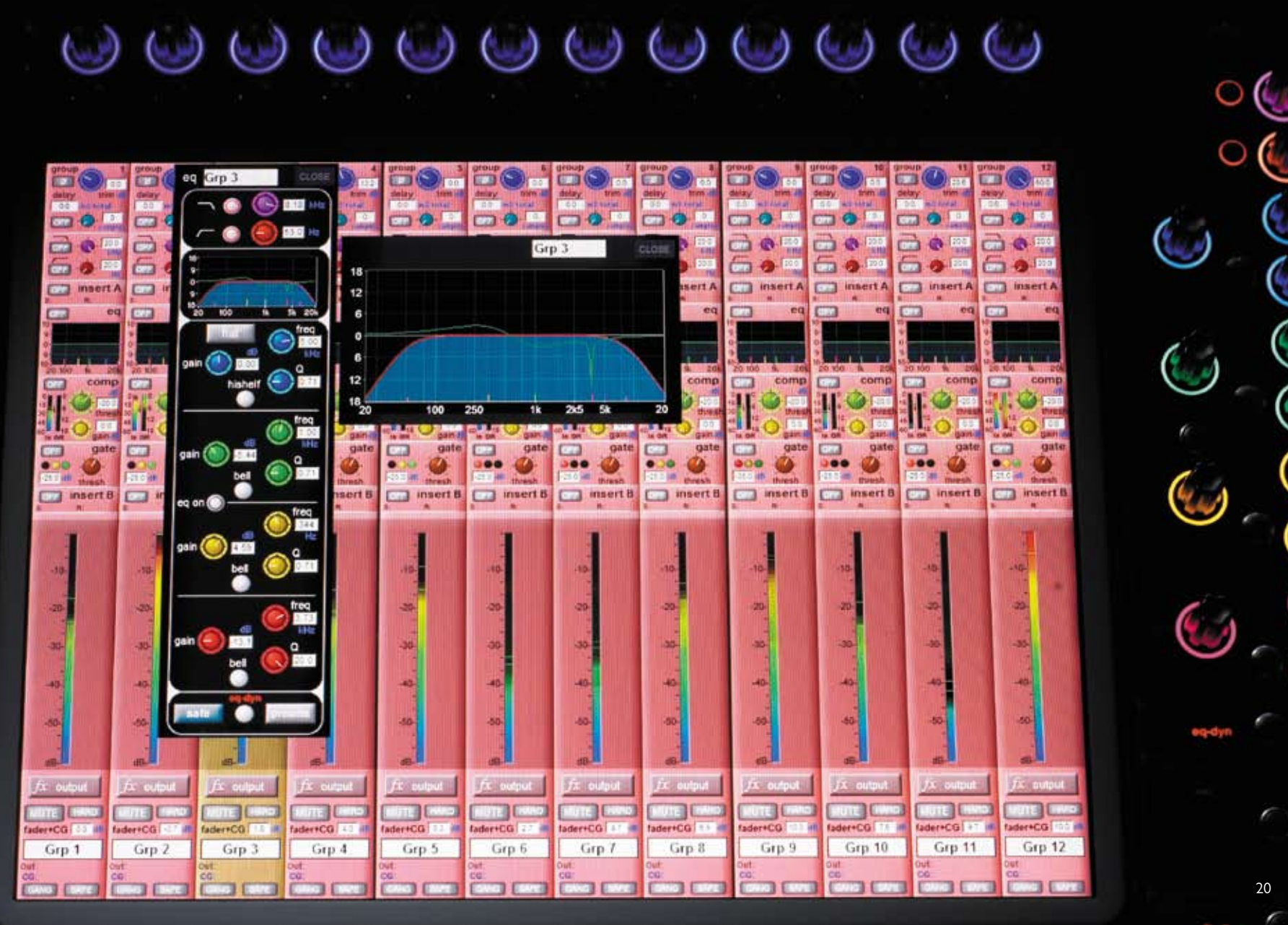
With instantly identifiable settings, signal indicators, physical, grabbable controls and tactile, responsive touch screens.

From the high resolution, context sensitive meterbridge and giant 15" LCD displays to the touch sensitive motorised faders and colour-coded electronic scribble strips, you always know exactly where you are.

All the essentials (and far more) for high end front of house engineering are here, with seemingly limitlessly flexible but always accessible routing, dynamics processing, grouping, muting, matrixing and metering.

When you move from rehearsal to first night, or from Europe to America, your entire show's settings stay with you for instant recall from your USB key.

And when it comes to recording the show itself, the 'copy optical to MAD1' function lets you simply plug in your 160 track HD system and go. Something to make the record company appreciate you even more. Maybe.



A monitor engineer's dream

Just because it's said to be the toughest job in rock'n'roll doesn't mean it shouldn't be a pleasure.

While you're suffering the slings and arrows of outraged lead vocalists, at least you'll know that with the SD7 your console has been designed specifically for you.

The attention to detail begins with the monitor spec and thus, perhaps with the rider.

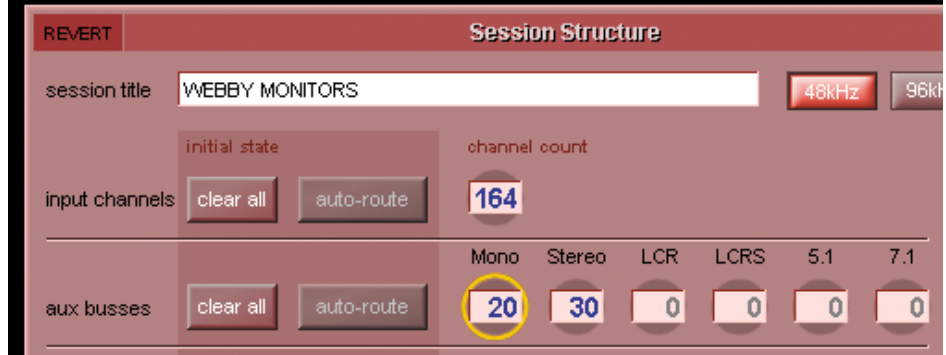
If you're mixing on Brand A wedges one day and Brand B the next, why not set up your aux send EQs on a memory scene for each type and simply press a button to call up one or the other?

Equally invaluable will be the 32 x 32-band graphic equalisers (all recallable, of course, and with centre-detented faders). They're in addition to the channel EQ that can either be 4 band parametric or 4 band dynamic EQ at the touch of a button.

128 busses with full processing, and the ability to assign a channel or buss to either or both of two solo busses, allow you to set up previously impossible monitor mix situations.

Yet the SD7's colour coordinated halo rings, scribble strips, screens and modules give you instant recognition of operation modes.

However you're working, with DiGiCo VNL (Video Network Link) you can even mix the band when they're not in direct view. And VNL, the world's smartest shout system, keeps you in visual and text touch with both front of house and broadcast.



All the world's a stage: theatre mixing remastered

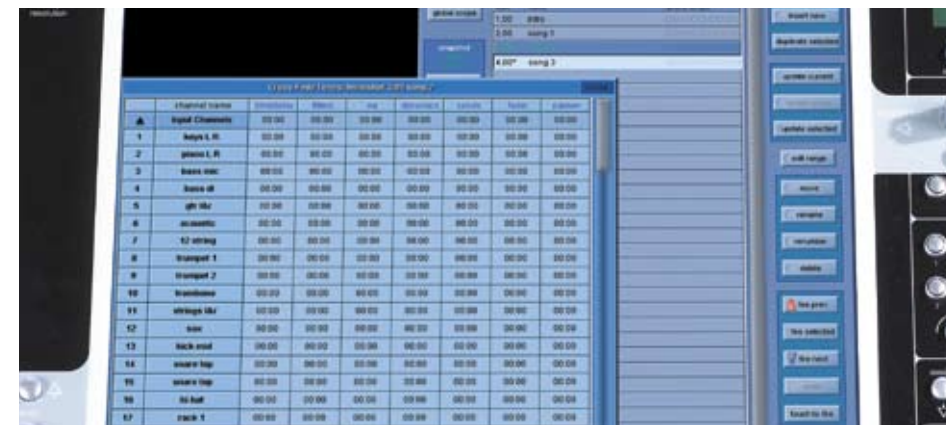
The SD7's powerful and refined hardware and Stealth engine are ready for the toughest demands of theatre audio, and with the optional SD7T (Theatre) software package the console's functionality and work surface are instantly reconfigured to make the most of it.

Start your session with SD7T software and a wealth of specialist theatre audio tools are right at your fingertips, providing an immensely versatile palette of tools for sound design, rehearsal and show operation.

The SD7's key generic benefits – including its awesome Stealth processing power and dedicated SHARC®-based effects and dynamics processing, 32x32 output matrix and 5.1 surround controls – are of course at your disposal, as are the instantly reconfigurable 12-input channel sections and 15 inch TFT screens.

Specialist theatre audio features include Live Update (to automatically save all occurrences of changes to the same source within multiple snapshots); comprehensive Cue and Scope that can now be selected by individual channel; cross-fade by channel or parameter; and Parameter Recall safe for individual channels and outputs.

Individual user defined crossfade times between parameters and a 32 x 32 Matrix (with nodal delay incorporated) make for precise dynamic scene programming [???], while the 12 VCA Master section is designed with wide fader spacing, ideal for theatre mixing.



Sleek and rock solid, live to air

As the skills of experienced live sound engineers are increasingly called upon to create live to air mixes that have to be right first time, the SD7 comes into its own.

You'll love the way the SD7B – the SD7 with the Broadcast kit installed – simplifies the task of speeding you through countless permutations of rehearsals, then quickly storing and recalling your settings – and making it easy to record that last great rehearsal take as a backup.

Broadcast specific features include mix minus busses, back stop PFL and many more.

The console's rock solid reliability and dual redundant engines give you the assurance you need on the night, and the option of fibre optic or MADI networking between all interested parties potentially makes both cable spaghetti and patch city things of the past.

Not to mention goodbye to copper snakes and all the joys – sorry, *challenges* – associated with them.

With the SD7 in a digital multi console system you're finally running in the realm of noise free, interference free, pristine signal from microphone to uplink.



In the mix: a fully flexible partner

With all these abilities, and the ability to be tailored to specific tasks with the appropriate SD7 Application Kit, your investment is as open ended as we could possibly make it.

Already operating DiGiCo D Series or Soundtracs consoles? They're ready to hook up to the same redundant optical digital loop – or MADI – as the SD7, allowing you to integrate each one into the same cohesive system.

The SD7, with its generous provision of both analogue and digital I/O, is equally at home in other systems and will readily form the hub of, for example, a house of worship system, where the requirement might call for front of house, live to air, monitors and recording.

Hook it up direct to your favourite HD multitrack system or stereo HD recorder and you're ready to start burning those CDs for post-show sales within seconds of the final curtain.

Nor do we expect you to figure it all out for yourself. DiGiCo's own technical support staff, along with our world-wide distribution and technical sales engineers, will always be on hand or on the end of a phone if you need advice with a new or unexpected situation.

We're as flexible as you are, and as the SD7 is.





Up to 192kHz of sheer quality: hearing is believing

None of the SD7's inspiring feature set would matter greatly if the audio quality for which DiGiCo is famed had been compromised.

Needless to say the complete reverse is true. The SD7 builds on the D Series' reputation for combining pristine digital sound quality and clarity with that hard-to-define quality and sheer musicality that's the hallmark of the world's finest analogue desks. (Small wonder the D5 was the world's first digital desk to confound the obvious by offering the option of a *valve/tube* microphone preamp, the DiGiCo D-Tube®.)

The SD7 is the world's first live pro audio console to offer full 192kHz processing in addition to 48kHz and 96kHz. Giving you a range of options embracing the ultimate in mix resolution and an awesome channel count.

In 192kHz mode – offering over four times the resolution of standard CD audio quality in your live mix – 128 parallel signal processing paths are available through the console. Mix at the current industry 'gold standard', 96kHz, and you'll have the full 256 signal paths at your disposal.

While at today's standard live sound digital resolution, 48kHz, you have a mixer that sonically beats all comers hands down.

As for that valve/tube input preamp option? Never has our D-Tube sounded better than it does in the new SD7.

The twelve channel input section. It's only logical

At every step the SD7's incorporation of the latest technologies redefines once again the way a digital console should work. Allowing it to follow even more precisely and logically the way you like to work, from the stage to the studio.

The new, 12 channel input section is the perfect match for our high resolution 15 inch TFT LCD screens. Each input section now houses 12 complete mono, stereo or 'multi' channel strips, instead of the eight that have traditionally been the norm.

Each of those channel strips is configurable as you wish, which makes the 12-channel section concept even more powerful and flexible. Any channel strip can be configured as mono, stereo or 'multi', allowing each section to command up to 24 input channels. Behind each section can be as many more 12-channel layers as you need, each selectable in one touch. And the Ripple function makes multiple input routing a breeze.

However you want it to work for you, you'll find the SD7's metering follows your every move. Our unique new dynamic metering technology recognises your channel configuration and instantly reconfigures the meterbridge, so you always have a clear picture of your internal levels.

As soon as you mix with it, it will seem like the way every digital console should work. You can accommodate a full drum kit in one section, easily command an orchestral section or even configure the section in seconds as a mixture of inputs, effects and groups – the choice is yours.

As we said, it's only logical.



The four band equaliser that's four band dynamics too

If there's any component that defines a console's individual sound it is, alongside the input preamplifier, the equaliser section.

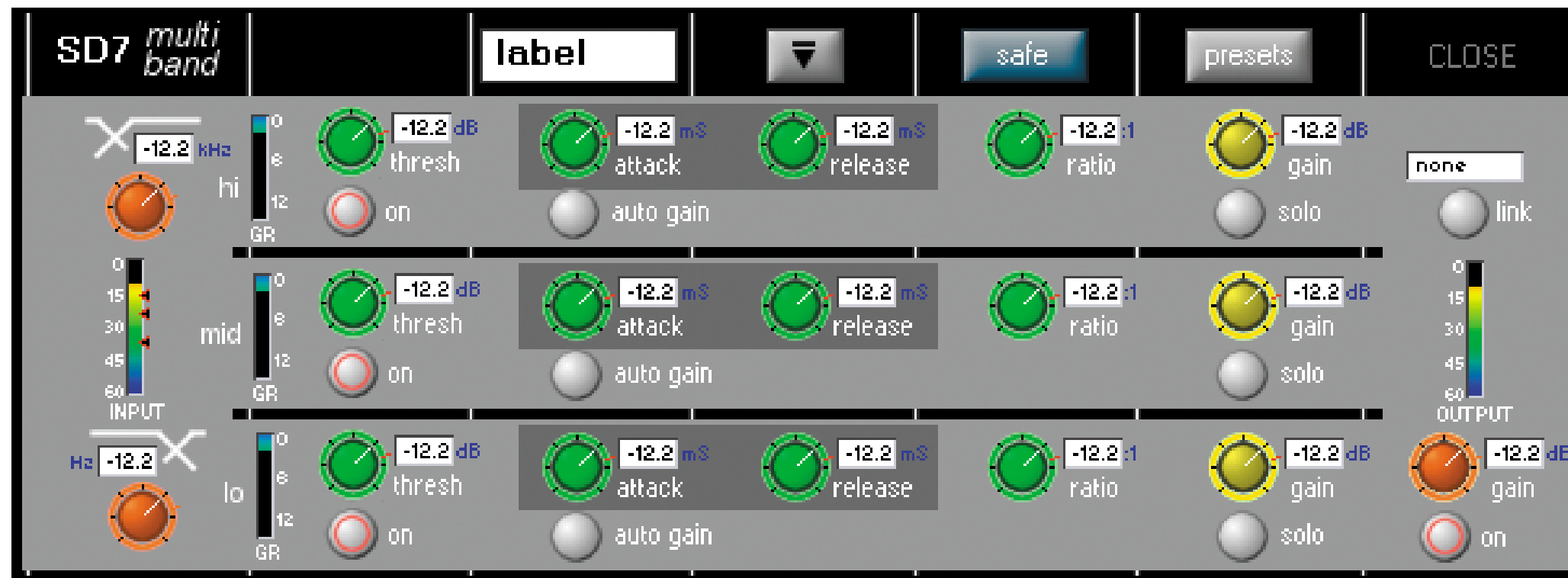
DiGiCo's equaliser exemplifies the finest in a long tradition of British-designed high-end equalisation and we have taken the opportunity to greatly extend the capabilities of that highly regarded concept.

Every channel provides as standard a four-band fully parametric equaliser of classic quality and musicality, complete with the full complement of accompanying switchable filters.

Each equaliser section can be called up for simple detailed editing on the 15 inch touch screens in an instant.

Now, for the first time, the SD7 will also allow you to alternatively select any channel's four-band parametric equaliser as a four-band *dynamic EQ* section, giving you the subtlety and finesse of dynamic equalisation that has previously been available only in high-end outboard units.

Another detail through which the SD7 gives you that powerful extra edge in the mix.



Multi band compression, wherever you want it

Perhaps you routinely appreciate the benefits of deploying a high quality, multi band compressor on a lead vocal or across a complete PA section.

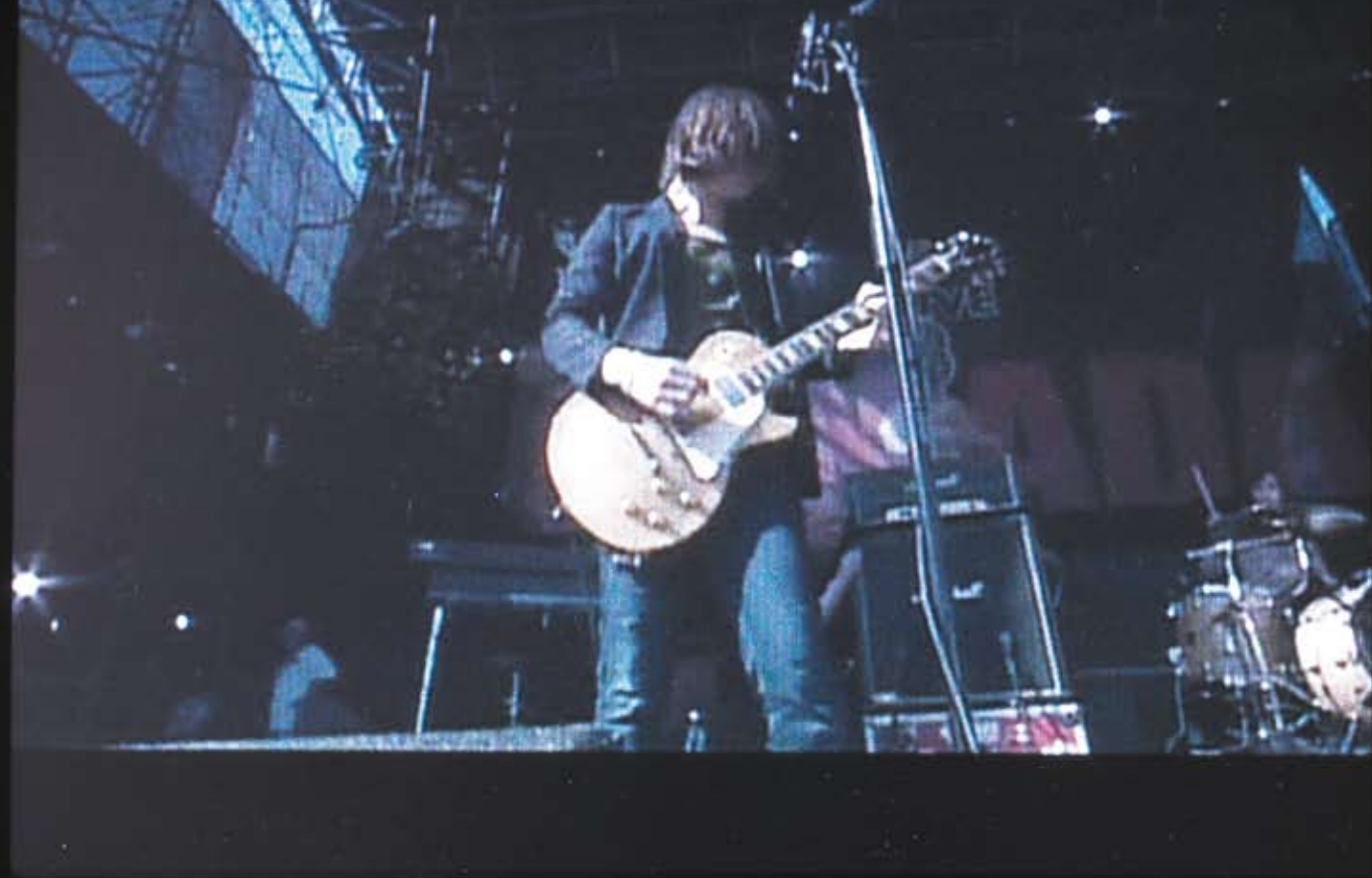
Now, imagine the luxury of being able to access the power of that tool across every single input channel or even buss at any time.

With the SD7, you've got it.

The SD7's multi band compressor is by any standards an amazing addition to a console's audio control palette.

Available whenever and wherever the situation demands, you can now tailor compression precisely to suit the needs not only of the lead vocalist, but each of the backing singers too. You can subtly adjust the dynamics of an entire chorus, in fact, should the need arise, channel by channel.

And like every other aspect of the SD7's operation, once you've set it, you can forget it. Until you need to recall it again, either on show night or the second leg of your world tour, as part of any scene snapshot – whereupon you'll find your exact settings just a single button press away.



A sound desk that's your personal vision mixer

From the moment you fire up the SD7 it offers a purposeful vision of both where you can take it and how it will work for you. And with such a wealth of powerful features instantly in view, there's an exciting promise of how it will get your creative juices flowing.

As an instant taster, and underlining our designers' attention to detail, is an innovation designed to make life at the top a touch easier: your own live inter-desk video link.

DiGiCo's VNL (Video Network Link) offers multiple SD7 engineers working on the same show live video communication. Now, front of house can not only hear comments from monitor world or the broadcast sound truck, all three can both talk and even text to and see each other. It's simply the world's smartest shout system.

Hooked up using the console's optical or MADI link, VNL allows each engineer to connect a video camera, with simple on-console video switching providing all three with quick views of whatever action they to care to display.

It's all part of the grand vision that the SD7 gives you as standard in a superlatively informative work surface.

Whichever way you look at it, no console has ever given you such a great view of everything you're listening to.



Introducing IDM: Interactive Dynamic Metering

It's black. It's dynamic. It's in your face. And it follows your every move.

SD7's unique new Interactive Dynamic Metering (IDM) brings a new dimension to the prosaic business of reporting signal levels. Rather than choose between LED bargraph, plasma or any of the other conventional options, we chose the most radical approach available.

Right across the top of console the SD7's backlit, high resolution, high contrast TFT-LCD meterbridge display, recessed against glare behind tough black polycarbonate, gives you an unprecedented insight into exactly what your signals are doing, and where.

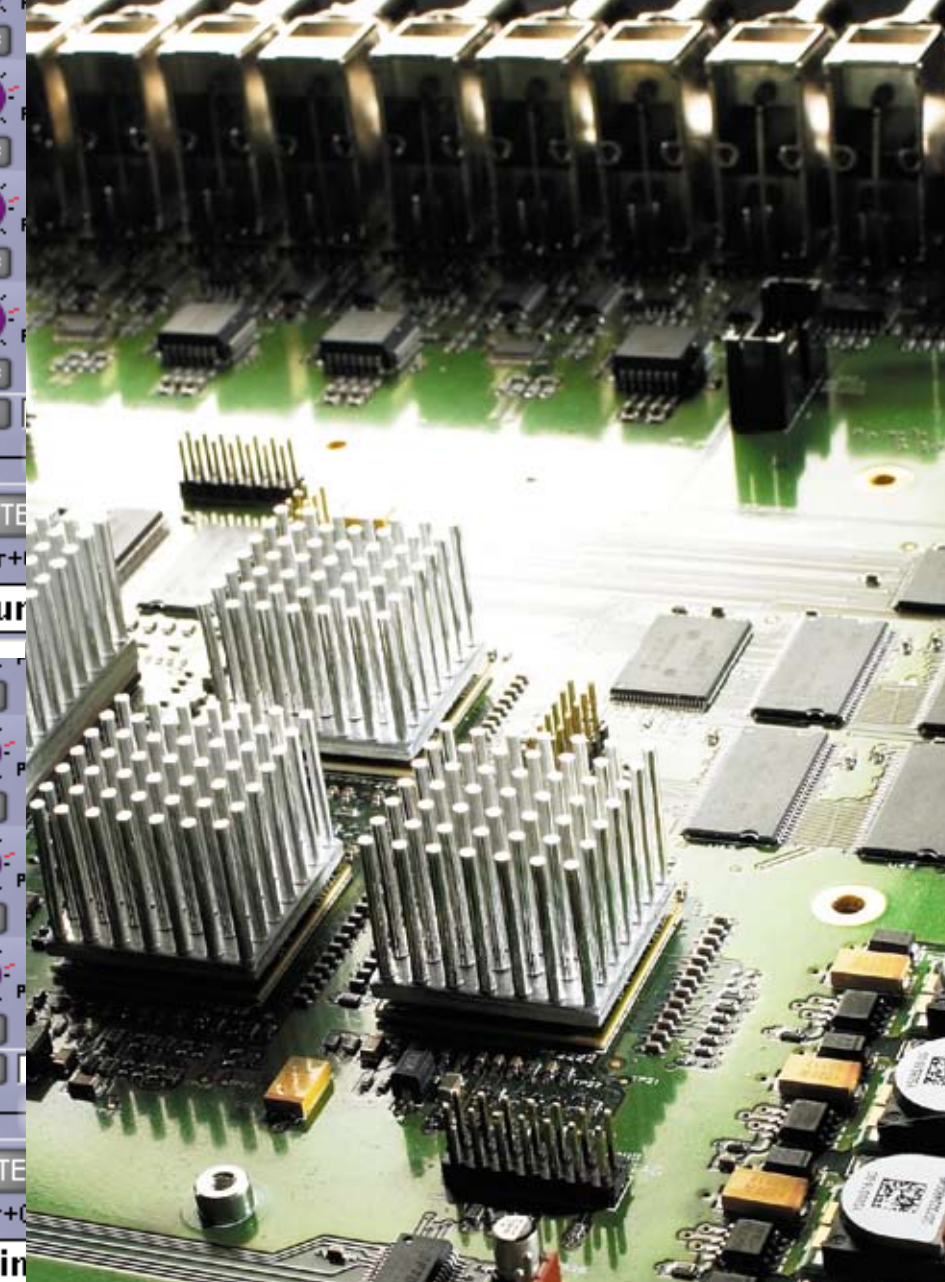
With a viewing angle of almost 180 degrees wide, everyone who's interested can see what's going on, but you alone will know why.

Select a channel path as mono and the meter above is in mono. Select it as stereo and you get a dual readout in its place. Select it as a group, or an aux, and the metering automatically follows suit, channel by individual channel.

So no matter how you have your desk set up, for front of house with mono channels, for monitoring (with a plethora of in-ears and stereo keyboards), for live to air, metering is always exactly where you need it, when you need it.

Just as you'd always wished for.





Gripping effects by Tiger SHARC®

Surrounding the SD7's FPGA based Stealth processor on the main processor board are three other key components – the latest versions of Analog Devices' SHARC DSP chips.

The new SHARC, proudly named Tiger SHARC®, is another first for DiGiCo in high end pro audio.

One serves as the controller, the console's 'brain' which runs the board's operations. The other two Tiger SHARCs, each the equivalent of 905 of a D5's central processor, are devoted *exclusively* to onboard effects.

As a benchmark the SD7's twin Tiger SHARCs can run approximately 20 high end floating point reverbs simultaneously, as well as 12 stereo studio quality effects processors.

They also feature an open platform design, which will permit third party licencees to develop plug-in effects to complement the library of studio quality classic effects emulations built in as standard to the SD7.

In total, the desk provides an I/O pool of up to 64 stereo ins and 64 stereo outs to handle the effects, the available total depending on the size of the individual effects required.

Naturally, every effect you call up can be edited, stored and recalled instantly, either individually or as part of any scene.

MADI, Optical, Redundancy, AES, D-Tube®. It's all there

The SD7 is a supremely well connected console.

For the first time on any live sound console, four MADI ins and outs provide *full redundancy* options for 224 duplicate connections to DiGiCo rack frames or any MADI multitrack recorder.

It's also ready for the world's first integrated digital 8-channel valve/tube mic preamp: D-Tube.

Developed in conjunction with TL Audio, D-Tube affords you the means to experiment with characteristics you can't otherwise get from either analogue or digital mixing consoles, in a space-saving format.



On console I/O

Again, flexibility is the key. Every module has 12 analogue mic/line inputs and line outs plus 12 AES/EBU I/Os, and the desk can run two high speed Opticore loops, each with 224 ins and 224 outs.

That's a total of 448 optical connections and 224 MADI connections running simultaneously on the board.

The local I/O connections, meanwhile, are great for setting up a desk in the warehouse, ready to take a set of speakers, a shout mic and a CD or iPod™ without having to unpack the racks.

It also means that for most FOH purposes you won't even need a local rack to get working.



Dual redundancy

No longer is full redundancy an external, costly, space consuming option: in the SD7 it's built in as standard.

Thanks to the Stealth board's compact dimensions we've accommodated two complete engines within the SD7's frame – which is itself just a few mm wider than the D5.

This provides 100% redundancy of the engine, operating system, application software and embedded hardware, without external racks or extra cabling.

For applications that demand redundant systems as standard such as live to air, theatre and classical, it's good to know that it's all been taken care of.



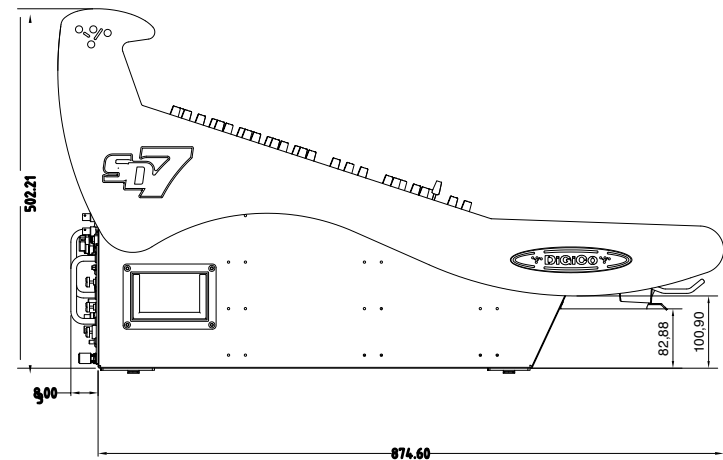
Twelve year heritage

The Soundtracs team's vision for its first digital console came to fruition 12 years ago and is still at the cutting edge.

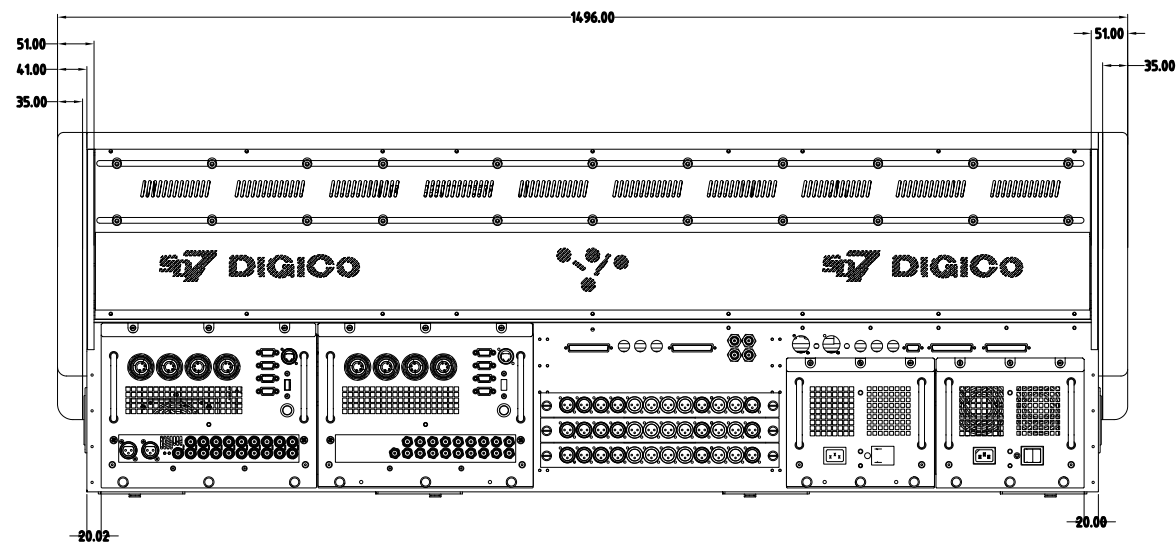
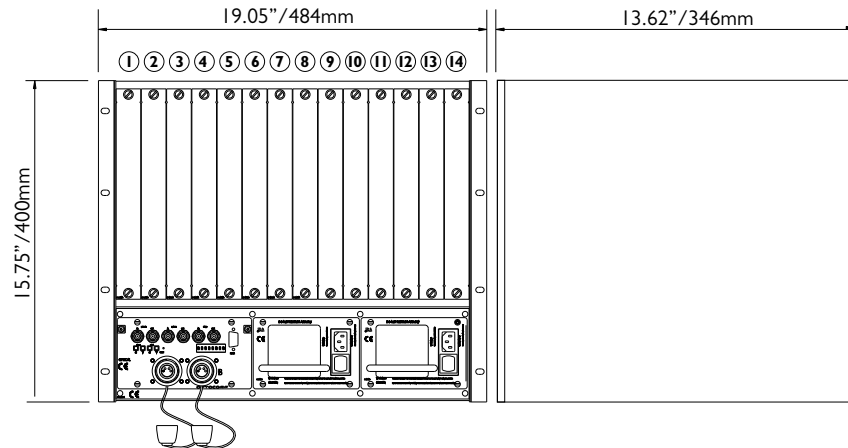
With DiGiCo's experience as the pioneer of a new combination of live sound engineering understanding melded with that incredible background of technical innovation, today's product has to be sensational to measure up to the sister companies' impressive heritage.

With the SD7 we are sure you'll see how well this aim has been met.

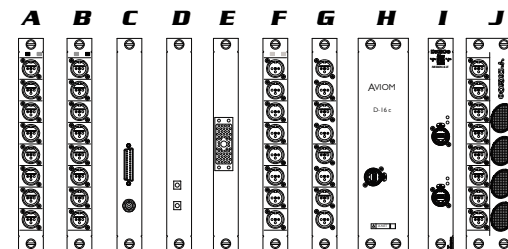
An outstanding mixing console that takes you on a whole new creative journey – and yet ensures a safe ride through the most demanding shows in the world.



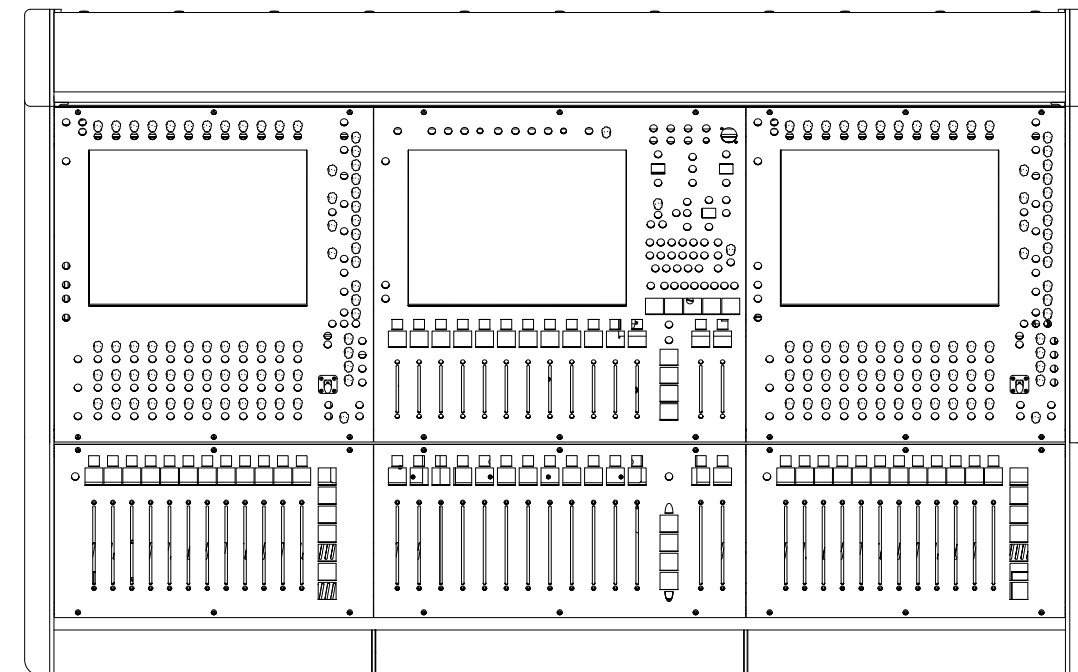
DiGiRACK
 9U 19" Rack Mount Weight (Unpacked) 36kg/80lb Weight (Packed) 56kg/124lb
 Optional Configurations (1-7 Inputs 8-14 Outputs)



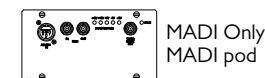
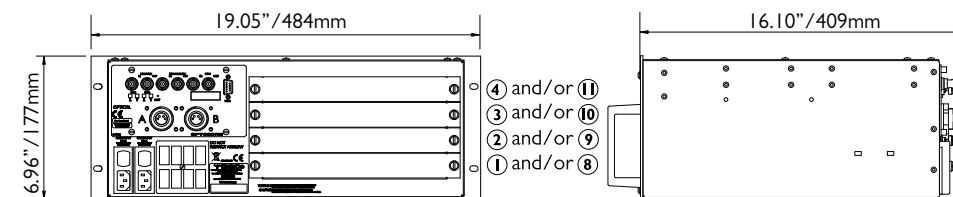
Card Options
 DiGiRack and MiNiRack



- A. Mic input card**
with 24-bit A/D on XLR connectors
- B. Line input card**
with 24-bit A/D on XLR connectors
- C. T-DIF input/output card**
with local clock output
- D. ADAT input/output card**
with optical connections
- E. Analogue input card**
with 24-bit A/D, mic & line inputs
- F. Analogue output card**
with 24-bit D/A on XLR connectors
- G. AES/EBU input/output card**
with Bi-directional sample rate conversion
- H. Aviom D-16c A-Net Card**
ultra-fast A-Net™ Pro I6 protocol connectivity
- I. Ethersound I/O Card**
8 channel input/output and control card
- J. DiGiCo D-Tube**
Remote controllable tube Mic pre amp



Mini DiGiRACK
 4U 19" Rack Mount Weight (Unpacked) 14kg/30.86lb Weight (Packed) 20kg/44.09lb
 Optional Configurations (1-4 Inputs 8-11 Outputs)



For Full Up To Date Specifications
Register At: www.digico.org/especs