The DiGiCo Broadcast Series
Purpose built for broadcast with engineering and feature sets
DiGiCo Broadcast Series

World class broadcast mixing, with exceptional versatility.

DiGiCo Broadcast Series digital mixing systems bring a powerful new combination of abilities to the world of broadcast sound engineering. Rich and flexible feature sets, designed for broadcast, are blended with the unique audio engineering and intuitive user interface that have won DiGiCo consoles countless awards during a decade of innovation in the live music, corporate event and theatre sound markets.

At the heart of every DiGiCo console is high density digital processing, incorporating the exclusive Stealth Digital Processing™ engine, based on the latest incarnation of Super FPGA (Field Programmable Gate Array) technology. Allied to the power of dedicated SHARC® effects and control processors, with exceptional I/O capacity and routing flexibility, the SD7B and SD10B offer broadcast audio facilities and engineers rich, precise and uncoloured sonic quality combined with a tremendous amount of mixing control, despite both console’s compact frame sizes.

At every step in the design, attention to detail sets DiGiCo consoles apart from the norm. A giant 15” TFT LCD touch screen provides instant access to levels of control that sometimes lie beneath layers of menus. The comprehensive system design allows up to five redundant - engined consoles to share up to 14 racks with 448 I/Os across a fibre optic network. The masterfully intuitive worksurface layout with its ultra-durable backlit polycarbonate finish, provide precision automated faders and a snapshot system that makes sorting and recalling the most complex audio production as fast and precise as it is creative.

Welcome to DiGiCo Broadcast Series. And a brand new perspective on broadcast sound mixing.
In a ‘world first’ for broadcast audio engineering, both consoles will also offer the option of an integrated Waves Soundgrid, bringing the same plug-in technology that has revolutionised the recording industry with broadcast-dedicated plug-ins to allow you to greatly expand the already well-specified onboard digital effects and processors. Meaning a choice of two consoles that are already future-proof as well as being powerfully equipped today. Where the two consoles differ principally is in the number of touchscreens, faders, bus architecture and processing power.

The DiGiCo Broadcast Series offers a choice of two console worksurfaces, the compact SD10B with a single central multifunction touch screen and its larger companion, the SD7B, designed for multi-engineer operation with three touch screens and dual redundant processor engines. Both are engineered to combine portability with versatility in terms of I/O and audio network configurability. Both feature identical Stealth Digital Processing™ engines for pristine audio quality. Both provide a complete 5.1 monitoring matrix with 48 x 6 source to monitor selection, user-defined stem order selection and multi-channel folding.

The net result is that the SD10B lends itself perfectly to any single operator project, whilst the SD7B can handle the largest productions, including those that require multiple engineers. The SD10B delivers a high level of performance and facilities at a price point that brings the full benefits of digital audio engineering and audio networking to a wider audience within the broadcast industry. The larger SD7B raises the bar significantly to handle larger productions with ease. The SD10B and SD7B: two new visions of digital broadcast audio control.
**Standard Features:**

- Standard input channel processing includes Channel Delay; Single and Multi Channel presets; HPF and LPF with an industry leading 24db per Octave; four bands of parametric EQ with band curve selection; Compressor and Gate; Dual inserts points and access to all bussing.
- Complete 5.1 monitoring matrix with a 48 by 6 source to speaker selection.
- Multi channel folding.
- User defined stem order selection.
- Mix Minus buses, one per Mono Channel.
- Back stop PFL (over press) and Auto PFL.
- Audio Follow video implementation for up to 32 cameras.
- Standard input channel processing includes Output delay; eight bands of parametric EQ, compressor and gate; dual insert points; groups with buss to buss routing; and Auxes that have direct talk to output with dim control.
- Standard output channel processing includes Output delay; eight bands of parametric EQ, compressor and gate; dual insert points; groups with buss to buss routing; and Auxes that have direct talk to output with dim control.
- Dual Solo Busses for PFL and On Air soloing in Mono, Stereo, LCRS and 5.1.
- Integrated Waves Soundgrid plug in option.
- Smart Key Macros.
- 16 GPI for external triggering of any console function or functions (Expansion option to 32).
- 16 GPO for machine start, fader start and relay control (Expansion option to 32).
- Remote control and offline software.
- Optocore™ Optic Connection option for up to 14 SD or D-Rack IDs with 448 audio channels on a single redundant optical loop.
- Redundant cabling.
- Overview VGA output allowing external monitoring of all channels and buses.

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Interfacing Heaven:

- SD10B packs the power and purity of Stealth Digital Processing™, with the smoothness, accuracy and dynamic range of the latest generation Super FPGA technology with floating point processing.

- A wealth of interfacing options including MADI, Optocore, Dante and analogue connectivity also offers massive flexibility, plus 16 GPI (expandable to 32) and 16 GPO controls (expandable to 32), with the ability to connect up to 14 racks and five redundant-engined consoles on an optical loop.

The DiGiCo SD10B provides a potent blend of features, performance, flexibility and sonic clarity, at a price point that brings advanced digital technology to a wider broadcast market than ever before.

Many of the SD10B’s technologies are also to be found in its larger sibling, the SD7B, instantly distinguishing it from other brands at this price point. It also features a host of broadcast-specific features that’s perfect for live to air broadcast.

When you’re working with large numbers of inputs and outputs, the SD10B will readily accommodate you.

Facilities include 96 channels with full processing, 12 of which are Flexi Channels that can be configured as mono or stereo, with full processing available in either mode, 48 assignable busses that offer multiple configurations, plus a stereo, LCR or 5.1 master buss and a complete 5.1 monitoring matrix with a 48 x 6 source to speaker selection.

For exemplary sound quality and transparency the SD10B works with the next generation of I/O, in the shape of the DiGiCo SD-Rack which delivers up to 192kHz high resolution analogue conversion.

That’s complemented by the powerful option of a fully integrated Waves Sound Grid, for a wealth of world-class, ultra-low-latency broadcast-specific effects.

All of this comes in a form factor that is simple to work within the tightest OB truck or studio, which makes the SB10B system readily shippable as a fly pack.
The ultimate in intuitive user interfaces provides clear and fast access to the console’s powerful audio control.
At DiGiCo, intuitive, creative, fluid mixing is at the heart of our user interface design.
At DiGiCo, intuitive, creative, fluid mixing is at the heart of our user interface design. The work surface is constructed from anodised aluminium, overlaid with polycarbonate panels to provide clear and concise user feedback, while a giant 15 inch, digitally driven, full colour TFT LCD touch sensitive screen provides you with plentiful feedback as well as fast control of all the main parameters.

The touch screen eliminates complex menu-driven interfaces, with nothing ever further than one touch away. Your mix is created on a bank of 37 full-length motorised faders with accompanying high resolution bar graph meters to allow fast access to the large number of channels and outputs that can be assigned across the surface.

A dedicated VGA port allows connection of an external Overview screen, providing a clear view of all channels, busses, metering, fader positions and other key features.

The SD10B's snapshot flexibility provides a wealth of facilities including global scope and snapshot specific recall, with the unique ability to crossfade no less than eight specific parameters within a snapshot – panning parameters, for example, or the ability to create a smooth 'morph' between EQ settings; the creative possibilities of the feature are virtually limitless.

It also provides the facility to take the console offline, enabling snapshot editing without affecting audio. Smart Key Macros are positioned on the right hand side of the SD10B's surface, with an expanded configuration of four layers of ten RGB backlit smart keys for a total of 40 Macros. The user can program these to control any simple, or complex, functions they want to be able to recall at the push of a button.

Effects, dynamics and equalisation can be summoned up for each channel in a split second, with no hunting through multiple menus, via the 15" TFT LCD touch screen.

40 user-defined Macros provide fast access to key parameters and, in conjunction with the snapshot facilities, open an exciting new realm of possibilities.

Every button is backlit for clarity in the dimmest working conditions (you can adjust the overall brightness of the interface to suit the ambient light) yet the touch screen remains clear even under bright daylight.

Take a clearer look at your mix

Intuitive, creative, fluid mixing is at the heart of our design.
The SD10B - channels and busses

SD10B provides the power to deliver with large numbers of inputs.

96 channels with full processing head the specifications, 12 of which can be configured as full Flexi Channels, allowing stereo channels to be created without losing resource – unlike other consoles on the market. All inputs are equipped with dual mono inputs for fast ‘Main’ and ‘Alt’ channel switching.

Using DiGiCo’s Flexi Channel feature up to 108 simultaneous inputs are available. Each of the Flexi Channels audio input faders can be selected to handle either mono or full stereo channels, or main and alternative inputs, ideal for shows with large numbers of stereo inputs, each with its own full EQ and dynamics.

With the ability to assign and unassign any Channel or buss to any fader, you can easily build custom fader banks – making the entire worksurface fully customisable. For example, you can set up the desk so that no matter what fader bank you’re working with, a presenter, for example, can always be on the same fader.

Standard input channel processing includes Channel Delay; Single and Multi Channel presets; switchable filtering for HPF and LPF with an industry leading 24dB per octave slope for maximum accuracy; four bands of parametric EQ with band curve selection; Compressor and Gate; Dual insert points; and access to all bussing.

Standard output channel processing includes Output Delay; eight bands of parametric EQ, Compressor and Gate; Dual insert points; Groups with Buss to Buss routing; and Auxes that have direct talk-to-output with Dim control.

The ability of the SD10B to provide folding and unfolding of 5.1 mixes delivers exceptional flexibility at this price point. It’s a matter of single button press to fold a complete mix onto one fader, and another to unfold it again onto six so that individual channels, such as dialogue or effects, can be adjusted within the mix and then re-folded to a single fader again.

10 Dynamic EQ processors are available simultaneously, while multi-band compressors can be assigned to any input or output channel, perfect for managing complex in-ear monitoring or difficult input channels.

The 48 assignable busses can be configured as mono, stereo, LCR or 5.1 groups, or as auxiliary busses. Adding to this already substantial bussing resource are an additional stereo, LCR, LCRS or 5.1 Master buss and a complete 5.1 monitoring matrix with 48 x 6 source to speaker selection.

The master section incorporates 24 32-band gangable graphic equalisers with centre-detent faders for fast system set-up, along with 12 control groups. And the snapshot facilities allow you to switch between complete configurations during rehearsal, system setup or the show in an instant.
Versatile and efficient: the SD10B’s intuitive ergonomic design provides instant access to all 96 channels with full processing, including 12 Flexi Channels.

Console buss linking via the Optocore fibre optic network allows any console to pick up any audio input on the network. Additionally linking two consoles via a Cat5 communications network allows multiple operator/multi worksurface working on up to 74 faders and, if desired, processing redundancy.

10 Dynamic EQ processors provide both expansion and compression on all four bands of the parametric EQ. Up to 10 of these powerful processors can be assigned to any of the input or output channels, whether they are mono, stereo, LCR or 5.1.
The SD10B system: networking by design.

The SD10B has been developed with flexible networking capabilities as an integral aspect of its design. Local I/O, positioned on the rear of the console, consists of eight Mic inputs, eight Line outputs, eight Mono AES I/O, two MADI connections with redundant cabling connections, 16 GPI and GPO connections – with the option to expand to 32 GPI and GPO, with Wordclock for synchronisation with external devices.

An optional HD-SDI module accepts standard or high def video on BNC with up to 16 audio channels embedded. Eight can be stripped out, mix them in the console and re-embed them back with the video stream.

Like all DiGiCo consoles, the SD10B software will run on a standard PC or Intel based Mac to allow offline preparation of sessions or remote control of the console; all console functions are also available on the PC, and the software interface is identical.

In the same way as an SD10B can be remote controlled by a PC, one SD10B can be linked to another using a standard CAT5 crossover cable. The two consoles are then both available simultaneously, providing 74 faders for control. In this configuration, the audio engine of the first SD10B will also provide complete redundancy for the other.

Five redundant consoles can share all inputs from the stage racks, and outputs on the system can be assigned in blocks of eight. Taking a typical outside broadcast system as an example, a single rack can provide 56 inputs to both consoles, with 40 of the outputs assigned to the OB van console and the other 16 used by another engineer for an external mix. The system also allows one console to directly route outputs to another console on the loop, for convenient tie lines.

Also connectivity to the outside world isn't restricted to just the D-Rack and SD-Rack. The SD10B comes with different I/O options because tailored DiGiCo systems and complex set-ups are completely user configurable. You also get dual hot-swappable, switch mode power supply units as standard.

The dual BNC MADI connections are the key to another key aspect of the package – allowing your SD10B to interface directly with external devices and digital recording systems. While one MADI can be used for a local rack, the other can route all 56 inputs to any MADI compatible recording system.

Hook up a laptop running Logic, Cubase, Nuendo, Samplitude, Reaper, Pro Tools or any other leading multitrack recording software to the dedicated MADI port and you're in business with a low cost, studio quality 56 track recording and playback set-up. Perfect, too, for fine-tuning scenes and settings at your leisure.
Second-generation Optocore optical connections allow you to connect to your SD10B with up to 14 SD or D-Rack IDs with 448 audio channels on a single redundant optical loop.

The SD10B’s worksurface incorporates a convenient flat area at top left to hold a laptop or production script – with sturdy steel locating pegs to keep it in place.

The DiGiCo D-Rack, SD-Rack, SD7B and SD10B can all operate together at 96kHz. The audio advantage here is very clear, and the speed means just over 1ms of latency when routing an input through a channel and buss with processing back to a monitor output.
Interfacing Heaven:

- Touch screens have always been part of the DiGiCo worksurface experience. On the SD7B they’ve leapt ahead of current standards.
- Intuitive touches such as electronic scribble strips and labellable buttons are also here, matched to full-colour backlit control knob collars and RGB HTL (Hidden Till Lit) context-sensitive indicators that appear just when they’re needed.
- With DiGiCo VNL (Video Network Link) you can communicate visually via a video feed from any location you select – such as a stage, studio floor, TX feed, control room or OB van.

DiGiCo SD7B
True power for complex productions.

The DiGiCo SD7B has the routing capacity, processing ability and a generous user interface to form the heart of the most complex broadcast audio productions.

Multiple operator engineering is made easy by the provision of three giant 15” TFT LCD touch screens, each of which sits above a bank of 12 faders. Adding EX-007 Expander Units takes the active physical fader count to 100 without any need to access input channel banks.

Either way you’ll see your complete signal flow laid out with unprecedented clarity, with the worksurface handling up to 996 simultaneous optical plus 224 MADI, 24 analogue and AES/EBU connections on an SD7B system, along with 128 busses (each with full processing in mono, stereo, LCR or 5.1), 32 matrix busses and 32, 32-band graphic equalisers.

The 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.

Two new-generation Tiger SHARC® chips provide an awesome array of high quality reverbs and effects, and you have the option to specify an integral Waves® Soundgrid, with its own dedicated processing engine, for access to ultra low-latency broadcast-specific plug-ins that take no resources from the console’s main processing engine.

You have the reassurance of two complete redundant, hot-swappable processing engines fitted as standard within the console.

With unique, innovative touches like built-in VNL video monitoring, IDM (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 master been so literally at your fingertips.
The DiGiCo SD7B has the routing capacity, processing ability and a generous user interface to form the heart of the most complex broadcast audio productions.
The SD7B’s feature set has been created to handle extensive and challenging work. When it comes to creating live to air mixes that have to be right first time, the SD7B comes into its own.

Up to 256 Processing Channels are available, in any combination of Input Channels, Auxes, Group and Solo Busses, plus mix minus busses, along with up to 128 Auxilliary / Group busses with full processing, each of which can be selected as mono, stereo, LCR or 5.1. Complementing these are 36 Control Groups (VCA style). Backstop PFL is available on every channel.

256 Dynamic EQ processors are available on any input or output whether mono, stereo, LCRS or 5.1, as are 256 Multi Band Compressors, also available on any input or output whether mono, stereo, LCRS or 5.1. 48 simultaneous internal Stealth digital effects are also at your disposal, from a palette of 33 – expandable, if you wish, via the optional Waves Soundgrid with broadcast-specific effects and processing.

Whatever tool you're reaching for, the SD7B’s colour coordinated halo rings, scribble strips, screens and modules give you instant recognition of operation modes. They're complemented by Interactive Dynamic Metering which brings a new

Powerful control right at your fingertips

Created to handle extensive and challenging work. Get it right, first time.
dimension to displaying signal levels. The SD7B's backlit, high resolution, high contrast TFT-LCD meter bridge display, recessed against glare behind tough black polycarbonate, gives you an unprecedented insight into exactly what your signals are doing, and where.

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, metering is always exactly where you need it, when you need it.

Underpinning all of this is the security of dual redundant internal removable processing engines, and dual hot-swappable power supplies, for complete peace of mind.

Under each of the three 15” touch screens are 12 100mm touch-sensitive, motorised faders with a further assignable pair and 14 60mm touch-sensitive, motorised faders with a further assignable pair under the central screen which are instantly assignable to a host of functions.

The SD7B 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.

32, 32-band graphic equalisers are fully recallable, and equipped with centre-detented faders. They're in addition to the channel EQ that can be selected as either 4 band parametric or 4 band dynamic EQ at the touch of a button.
The SD7B is a supremely well connected console. Four MADI ins and outs on BNC connectors provide full redundancy options for 224 duplicate connections to DiGiCo rack frames or any MADI multitrack recorder.

On console I/O is well specified, with every module having 12 analogue mic/line inputs and line outs plus 12 AES/EBU I/Os, and the desk can run two high speed Optocore loops, with any combination of 448 inputs and outputs on each loop. That’s a total of 996 optical connections and 224 MADI connections running simultaneously on the console. The local I/O connections, meanwhile, are great for fast outside broadcast setup before setting up the racks.

Networking and interfacing
MADI, Optical, Redundancy, AES, Dante. It’s all there.

» Local I/O comprises 12 Mic/Line Inputs, 12 Line Outputs, 12 Mono AES I/O and 4 MADI interfaces

» 256 Digitube emulators are available on every processing path
The EX-007 is designed to substantially increase the number of available faders and the number of channels controllable at any one time on an SD7B - and from a distance of up to 100 metres via a cost-effective Cat5 cable connection.

You can augment an SD7B with up to two EX-007’s, each acting as a control panel to provide 24 faders and two additional touch screens, as well as metering and other standard functions, transforming the already impressive SD7B into a 100-fader mixing console.

The EX-007 comes with the assurance that it will work with not only the SD7B but future products in the SD7B family too.

The EX-007 networks to the SD7B, has its own power supply and its own PC. As well expanding an SD7B, the EX-007 can also be used to control every function on the main desk from multiple locations up to 100m away.

It also has the benefit of being substantially smaller than the SD7B.
The power of Stealth® Digital Effects & Waves® SoundGrid. 

The SD10B & SD7B have been developed with flexible networking capabilities as an integral aspect.

The SD10B & SD7B come as standard with a powerful, sonically smooth set of insertable effects and graphics, powered by a dedicated Stealth digital effects engine, allowing their full capabilities to be used without drawing on the main console engine’s resources. These can be routed, controlled, stored and recalled in snapshots, for the most complex audio production.

The 32 or 24 graphic equalisers can easily be inserted and controlled from the work surface faders and touch screen while 48 or 10 Stealth stereo effects units can be configured at any time from the palette of 33 Stealth effects, including reverbs, choruses, pitch shifters and delays.

All Stealth effects are fully automatable, enabling their user-set parameters to be stored as individual presets which can then be triggered from within snapshots. Effect type, parameters and routing can all be stored in the user presets.

If you want even more processing and effects, the option of a fully integrated Waves Sound Grid - with broadcast-specific plug-ins to complement the huge range of plug-ins already available for recording and live music applications - opens up a whole world of choice.

Using Super FPGA (Field Programmable Gate Array) technology with an ultra-short signal path for minimal latency (just over 1mS), the DiGiCo Waves SoundGrid module places the legendary lineup of powerful Waves plugins at your fingertips. These include the hugely popular bundles such as Mercury, SSL 4000 Collection, GTR3, JJP Analog Legends, Studio Classics Collection, The API Collection and Gold. Popular plugins you can now enjoy with your DiGiCo console’s crystalline sound include L2 Ultramaximizer and C4 Multiband.

And if your need is to create a recording of the master with all the internal and Waves effects together, it’s a breeze for DiGiCo’s MADI-based multitrack recording I/O - a fully integrated solution all round.
The choice doesn’t only extend to the range of Waves effects - DiGiCo takes the concept of Waves integration even further than the norm. Unlike all other Sound Grid platforms, DiGiCo provides complete control of plug-in parameters, as well as recall of snapshots, simple loading and saving directly from the consoles’ surface.

Console-based MultiRack software allows you to set up, control, recall, snapshot and save Waves plugin configurations as an integral part of your overall mix setup, while the processing power of the dedicated SoundGrid module allows the SD10B’s & SD7B’s own processing power remains dedicated to the task of driving the console and its worksurface.

The DiGiCo Waves setup gives you instant access to up to 16 fully integrated, low latency Waves stereo processor racks, on an SD10 and 32 on an SD7, with up to eight plug-ins in each rack. Waves TDM plugins collections can be used too.

Bundles and existing Waves plugins available online at www.waveslive.com or from Waves dealer/distributor.
Expand your horizons

The DiGiCo SD-Rack and D-Rack perfect partners for the SD-7B and SD-10B.

SD-Rack, the world’s first intelligent I/O rack, is the natural partner for the Broadcast Series.

Based on the same Stealth FPGA technology as the SD7B and SD10B, it offers multiple synchronous I/O and up to 448 physical I/Os on a redundant loop at 96kHz.

Versatile sample rate conversion means that while the SD7B provides 256 processing paths of 96kHz I/O, you can also select other sample rate options for specific outputs – MADI at 48kHz, for example, or 192kHz.

In conjunction with a DiGiCo console, the SD-Rack will serve as a multi-sample rate signal splitter that also allow the ultra-smooth DiGiCo microphone preamps to replace the standard mic preamps of an analogue or other digital console.

Digico HD-SDI cards will also allow you to de-embed and re-embed any combination of up to 4 of the available 8 AES3-compatible streams per I/O module.

Then there’s the versatility of Gain Tracking™ and splitting. Gain Tracking™ allows another console to take any of an SD-Rack’s AES, analogue or MADI stream outputs at a stable output level, irrespective of the microphone preamp settings on the SD10B or SD7B, covering a signal level range of +/-40dB.

Gain Tracking is also provided on the SD-Rack’s analogue outputs, allowing you to split the input signals directly out to, for example, an analogue monitor console.

These facilities have become increasingly in demand for complex productions requiring a combination of digital and analogue consoles. The Gain Tracking feature – switchable per I/O card – simply allows an audio team to select whether or not individual outputs should follow the console’s microphone preamp settings or not.
Not only is the SD-Rack unique in allowing multiple sample rates, all these connections have the ability to be Gain Tracked, so that even if a SD10B or SD7B is connected to a non-DiGiCo console, the feed will be unchanged regardless of the gain settings of the preamp.

Connections to the console are completed by a dual MADI pod with six BNC connectors, providing a MADI main and a MADI auxiliary. These can be switched to allow for running at 96KHz, or to provide redundancy at 48KHz on the splits.

The dual MADI pod also provides for a main and aux split, which again can be switched to run at either 48KHz or 96KHz. Further enhancing flexibility, these can be running at a different sample rate to the optic loop.

The latest I/O card options include an 8-in/8-out DANTE (Audinate) module, allowing your SD10B or SD7B to be fully integrated into networked audio systems via a CAT-5 cable. Remote setup and monitoring of all SD-Rack settings can be performed with a PC or Apple Mac, thanks to the SD-Rack USB Port feature.

A compact I/O rack option, the D-Rack, is ideal for when your I/O requirements may be divided between multiple I/O locations. The DiGiCo D-Rack, with its fixed architecture and optical I/O running at 96kHz, is the perfect cost-effective partner for your main SD-Rack.
DiGiCo's Fibre implementation is ideally suited to Multi-Room Broadcast facilities, as it provides the ability to connect up to 14 SD or D Racks and 5 redundant engine consoles. The fibre-loop system allows for flexible configurations that can be easily reconfigured to suit the task, while offering full redundant operation.

Implementing 2 loops on the SD7B, allows a capacity of 448 I/O's per loop and up to 350m between each connected device. The fibre loops have plenty of capacity to cope with the requirements of a large multi-room facility.

In this example, a number of studio areas are linked to multiple control rooms using a single fibre loop. Each of the control rooms house a redundant SD Console (either the flagship SD7B, or a pair of redundant SD10Bs); each of these consoles can receive inputs from any of the studio racks and output to any rack on a card by card basis. Once configured, the fibre system can be locked, preventing accidental reconfiguration of the system during broadcast operation.
The above system is a real example of a simultaneous live broadcast and sound reinforcement system. With 300m between consoles, an integrated solution like this was made possible utilising DiGiCo’s implementation of fibre.

This system allows multiple redundant consoles to share a large number of inputs from a stage; each redundant console is able to operate independently, for example, providing Front of House, Monitor or Broadcast mixes. The use of shared SD or D Racks and Gain Tracking™ means any of the consoles can take control, leaving the other operators to mix the show.

The SD Rack outputs can be freely allocated to any console on the optical loop, providing convenient audio distribution and routing from each of the SD consoles. Additional console to console routing via the fibre loop allows sub-mixes and local audio sources to be shared and distributed.

Simultaneous Live Broadcast & Sound Reinforcement

Example Application
DiGiCo SD10B

Detailed Product Specifications

General Specifications

- **Faders**: 37 x 100mm Touch-sensitive, motorised
- **Screens**: 1 x 15”(38cm) LCD high - resolution touch screen
- **Meters**: 38 x 20-Segment LED bargraph
- **Input Channels**: 96 channels Mono or Stereo (with 12 Flexi Channels, 108 Channels total)
- **Buses**: Up to 48 Aux / Group buses with full processing
- **Solo buses**: 2 Mono or Stereo or Surround
- **Matrix**: 16 x 12 Matrix (additional to buses above)
- **Control Groups**: 12, Selectable for VCA-style, Moving Fader, Mute Group
- **Graphic Eq**: 24 x 32-band, Gain +/- 12dB
- **Internal Processing**: Up to 40-bit, floating point
- **GPO**: 16 as Standard
- **GPI**: 16 as Standard
- **Headphone**: TRS unbalanced / 8-600 ohms 1/4 inch Jack
- **Ext Sync**: Word Clock, MADI, AES
- **Light connection**: (2) XLR3 1.2 – 12V
- **USB ports**: (3) USB 2
- **VGA port**: DB-15 mini-female (1024 x 768 resolution)
- **MIDI interface**: In / Out / Thru
- **MADI interface**: 2 x 75 ohm Redundant BNC connectivity
- **Local I/O**: 8 x Mic/line I/O, 4 x AES/EBU I/O (mono)
- **Input Channels**: 96 channels Mono or Stereo (with 12 Flexi Channels, 108 Channels total)
- **Meters**: 38 x 20-Segment LED bargraph
- **Screens**: 1 x 15” (38cm) LCD high - resolution touch screen
- **Faders**: 37 x 100mm Touch-sensitive, motorised
- **Digital Trim**: -40 to +40dB
- **Delay**: <1.3 sec (@ 48kHz (coarse & fine control))
- **LPF**: 20 – 20kHz, 24dB / Oct
- **HPF**: 20 – 20kHz, 24dB / Oct
- **Insert A**: (pre Eq/Dyn) On/Off
- **Insert B**: (post Eq/Dyn) On/Off
- **Equalisation**: 4 band EQ: Parametric or Dynamic
- **Gain**: +/- 10dB
- **Frequency response**: 20 – 20kHz
- **HPF**: 20 – 20kHz, 24dB / Oct
- **LPF**: 20 – 20kHz, 24dB / Oct
- **Mute Channel mute / hard mute
- **Channel Safe**: Input, aux, pan, fader/mute, inserts, buss, direct, full safe
- **Output Routing**: Buss, Insert A, Insert B, FX
- **Direct**: on/off, pre-mute / pre-fade / post-fade, level +/- 16dB
- **Fader**: 100mm Motorised fader — to +10dB

Audio Specification

- **Sample rate**: 96kHz / 48kHz
- **Processing delay**: 1ms Typical channel, 50 Rack input through L-R bus to stage output @1kHz
- **Internal processing**: Up to 40-bit, floating point
- **A>B or D>A**: 24-bit Converter Bit Depths
- **Frequency response**: +/- 0.6dB (20Hz – 20kHz)
- **THD**: <0.005% at unity gain, 100dB input @1kHz
- **Channel Separation**: Better than 90dB (40Hz – 15kHz)
- **Residual output noise**: <190dBa Typical (20Hz - 20kHz)
- **Microphone Input**: Better than -126dB Equivalent Noise
- **Maximum Output Level**: +22dBu
- **Maximum Input Level**: +22dBu

Processing Channel Specification: - Input Channel

<table>
<thead>
<tr>
<th>Name</th>
<th>User-defined / Presets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Channel Selection</td>
<td>Mono / Stereo</td>
</tr>
<tr>
<td>Input Routing</td>
<td>Main &amp; Alternate Input</td>
</tr>
<tr>
<td>Analogue Gain</td>
<td>-20 to +60dB</td>
</tr>
<tr>
<td>Phase</td>
<td>Normal / Reverse</td>
</tr>
<tr>
<td>Digital Trim</td>
<td>-40 to +40dB</td>
</tr>
<tr>
<td>Delay</td>
<td>&lt;1.3 sec (@ 48kHz (coarse &amp; fine control))</td>
</tr>
<tr>
<td>LPF</td>
<td>20 – 20kHz, 24dB / Oct</td>
</tr>
<tr>
<td>HPF</td>
<td>20 – 20kHz, 24dB / Oct</td>
</tr>
<tr>
<td>Insert A</td>
<td>(pre Eq/Dyn) On/Off</td>
</tr>
<tr>
<td>Insert B</td>
<td>(post Eq/Dyn) On/Off</td>
</tr>
<tr>
<td>Equalisation</td>
<td>4 band EQ: Parametric or Dynamic</td>
</tr>
<tr>
<td>Gain</td>
<td>+/- 10dB</td>
</tr>
<tr>
<td>Frequency</td>
<td>20 – 20kHz</td>
</tr>
<tr>
<td>HPF</td>
<td>20 – 20kHz</td>
</tr>
<tr>
<td>LPF</td>
<td>20 – 20kHz</td>
</tr>
<tr>
<td>Insert A</td>
<td>(pre Eq/Dyn) On/Off</td>
</tr>
<tr>
<td>Insert B</td>
<td>(post Eq/Dyn) On/Off</td>
</tr>
<tr>
<td>Equalisation</td>
<td>4 band EQ: Parametric or Dynamic</td>
</tr>
<tr>
<td>Gain</td>
<td>+/- 10dB</td>
</tr>
<tr>
<td>Frequency</td>
<td>20 – 20kHz</td>
</tr>
</tbody>
</table>

Processing Channel Specification: - Aux / Group / Matrix Output

<table>
<thead>
<tr>
<th>Name</th>
<th>User-defined / Presets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase</td>
<td>Normal / Reverse</td>
</tr>
<tr>
<td>Digital Trim</td>
<td>-20 to +60dB</td>
</tr>
<tr>
<td>Delay</td>
<td>&lt;1.3 sec (@ 48kHz (coarse &amp; fine control))</td>
</tr>
<tr>
<td>LPF</td>
<td>20 – 20kHz, 24dB / Oct</td>
</tr>
<tr>
<td>HPF</td>
<td>20 – 20kHz, 24dB / Oct</td>
</tr>
<tr>
<td>Insert A</td>
<td>(pre Eq/Dyn) On/Off</td>
</tr>
<tr>
<td>Insert B</td>
<td>(post Eq/Dyn) On/Off</td>
</tr>
<tr>
<td>Equalisation</td>
<td>4 band EQ: Parametric or Dynamic</td>
</tr>
<tr>
<td>Gain</td>
<td>+/- 10dB</td>
</tr>
<tr>
<td>Frequency</td>
<td>20 – 20kHz</td>
</tr>
</tbody>
</table>

Physical

- **Dimensions**: 1398mm (w) x 818mm (d) x 285mm (h)
- **Weight**: 60Kg/132lbs (112Kg/264lbs)
- **Redundancy**: Internal PSU x 2
- **Input Channels**: 96 channels Mono or Stereo (with 12 Flexi Channels, 108 Channels total)
- **Output Routing**: Aux / Group / Matrix Output
- **Channel Safe**: Input, aux, pan, fader/mute, inserts, buss, direct, full safe
- **Output Routing**: Buss, Insert A, Insert B, FX
- **Direct**: on/off, pre-mute / pre-fade / post-fade, level +/- 16dB

Audio Specification

- **Sample rate**: 96kHz / 48kHz
- **Processing delay**: 1ms Typical channel, 50 Rack input through L-R bus to stage output @1kHz
- **Internal processing**: Up to 40-bit, floating point
- **A>B or D>A**: 24-bit Converter Bit Depths
- **Frequency response**: +/- 0.6dB (20Hz – 20kHz)
- **THD**: <0.005% at unity gain, 100dB input @1kHz
- **Channel Separation**: Better than 90dB (40Hz – 15kHz)
- **Residual output noise**: <190dBa Typical (20Hz - 20kHz)
- **Microphone Input**: Better than -126dB Equivalent Noise
- **Maximum Output Level**: +22dBu
- **Maximum Input Level**: +22dBu
DiGiCo SD7B

Detailed Product Specifications

General Specifications

- **Faders**: 38 x 100mm touch-sensitive, motorised
- **14 x 60mm touch-sensitive, motorised**
- **Screen**: 3 x 15” LCD high-resolution touch screens
- **Meterbridge**: 3 x Custom Mounted LCD high-resolution TFT-LCD screens
- **Redundancy**: Internal removable engine x 2
- **Processing Channels**: Up to 256 (combination of Input Channels / Aux / Solo Group Busses)
- **Bus**: Up to 128 Aux / Group busses with full processing
- **Matrix**: Up to 36, selectable for VCA-style, Moving fader, Plane Group
- **Graphic Eq**: 32 x 2-band, Gain +/- 12dB
- **Internal FX**: A multitude of Reverbs / Delays / Other Effects to choose from
- **MIDI Interface**: 4 redundant interfaces, BNC connectivity
- **Local I/O**: 12 x mic/line I/O, 12 x AES I/O
- **Audio Specification**
  - **Power Requirements**: 90V-260V, 50-60Hz, 600VA
  - **Weight**: 107Kg (267Kg with flightcase)
  - **Dimensions**: 1496mm (w) x 875mm (d) x 503mm (h)

Audio Specification

- **Sample rate**: 96kHz / 48kHz
- **Processing delay**: 1ms Typical (channel, SD Rack input through L-R bus to stage output @96kHz)
- **Input Routing Main & Alternate Input**
- **Output Routing Outputs, Insert A, Insert B, FX**
- **EQ/Dyn order**: EQ/Dyn or Dyn/EQ
- **Gain**: 0 to +40dB with Autogain option
- **Hi crossover**: 20Hz – 20kHz
- **Lo crossover**: 20Hz – 20kHz
- **Link**: any channel / buss
- **Gain**: 0 to +40dB with Autogain option
- **Gate on/off**
- **Gain**: 0 to +40dB
- **Stereo / Mono / LCR / 5.1**
- **Input Safe**: Input, eq, dyn, aux, pan, fader/mute, inserts, buss, direct, safe
- **Output Safe**: Buss, insert A, insert B, FX
- **Fader**: 100mm motorised fader == t+ 10dB

Processing Channel Specification:  
- **Input Channel**
  - **Name**: User-defined / Presets
  - **Channel Selection**: Mono / Stereo / Multi
  - **Input Routing**: Main & Alternate Input
  - **Analogue Gain**: -20 to +60dB
  - **Phase**: Normal / Reverse
  - **Digital Trim**: -40 to +40dB
  - **Delay**: >1 sec (source & line control)
  - **LPF**: 20 – 20kHz, 24dB / Oct
  - **HPF**: 20 – 20kHz, 24dB / Oct
  - **Insert A**: (pre eq/dyn) On/off
  - **Equalisation**: 4 band EQ: Parametric or Dynamic (low/lowshelf, lower-mid/lowshelf, upper-mid/highshelf, hi/highshelf) on/off
  - **Freq/width**: 20 – 20kHz
  - **Gain**: +/- 18dB
  - **Threshold**: -60 – 0dB
  - **Attack**: 50us – 100ms
  - **Release**: 5ms – 5s
  - **Hold**: 2ms – 2s
  - **Band on/off**
  - **Over/under**
  - **Gain**: 0 to +12dB
  - **Ratio**: 1:1 – 50:1
  - **Gate on/off**
  - **Attack**: 50ms – 100ms
  - **Release**: 10ms – 10s
  - **Ratio**: 1:1 – 50:1
  - **Gain**: 0 to +12dB
  - **Threshold**: -60 – 0dB
  - **Attack**: 50ms – 100ms
  - **Release**: 10ms – 10s
  - **Ratio**: 1:1 – 50:1
  - **Gate on/off**
  - **Attack**: 50ms – 100ms
  - **Release**: 10ms – 10s
  - **Ratio**: 1:1 – 50:1
  - **Gain**: 0 to +12dB
  - **Threshold**: -60 – 0dB
  - **Gate on/off**
  - **Attack**: 50ms – 100ms
  - **Release**: 10ms – 10s
  - **Ratio**: 1:1 – 50:1
  - **Gain**: 0 to +12dB
  - **Threshold**: -60 – 0dB

Processing Channel Specification:  
- **Aux / Group / Matrix Output**
  - **Name**: User-defined / Presets
  - **Phase**: Normal / Reverse
  - **Digital Trim**: -20 to +60dB
  - **Delay**: >1 sec (source & line control)
  - **LPF**: 20 – 20kHz, 24dB / Oct
  - **HPF**: 20 – 20kHz, 24dB / Oct
  - **Insert A**: (pre eq/dyn) On/off
  - **Equalisation**: 4 band EQ: Parametric or Dynamic (low/lowshelf, lower-mid/lowshelf, upper-mid/highshelf, hi/highshelf) on/off
  - **Freq/width**: 20 – 20kHz
  - **Gain**: +/- 18dB
  - **Threshold**: -60 – 0dB
  - **Attack**: 50us – 100ms
  - **Release**: 5ms – 5s
  - **Hold**: 2ms – 2s
  - **Band on/off**
  - **Over/under**
  - **Gain**: 0 to +12dB
  - **Ratio**: 1:1 – 50:1
  - **Gate on/off**
  - **Attack**: 50ms – 100ms
  - **Release**: 10ms – 10s
  - **Ratio**: 1:1 – 50:1

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Technical Specifications
SD10B and SD7B measurements
Technical Specifications
SD-Rack and D-Rack measurements
Several years of research and development led to the introduction in 2001 of the revolutionary DiGiCo D Series digital mixing systems. After breaking the mould of digital live performance mixing, these consoles, and the second generation SD Series which saw the introduction of Super FPGA and Stealth Digital Processing™ technologies, became the console of choice for many of the world’s biggest touring artists.

Theatre-specific versions of the D and SD Series then saw these compact but powerful consoles become the number one choice from the West End to Broadway. Meanwhile, many broadcasters around the globe had begun working with DiGiCo consoles, adapting their operational methods in order to enjoy the sonic purity and intuitive operation they provide.

Now, with the new Broadcast Series, DiGiCo eliminates the need to compromise by introducing broadcast-specific consoles and dedicated audio networking systems, ready for any type of broadcast from studio control rooms to outside broadcast trucks. With the reassurance of a decade of proven, reliable, durable performance that delivers under the most demanding circumstances.

No need to compromise...

Broadcast-specific consoles and dedicated networking systems
The Broadcast Series

DiGiCo