

■ Studer D950

Digital Mixing System



STUDER
professional audio equipment

Studer D950: Digital Mixing System sets New Frontiers.



With the D950, Studer introduces a product that sets new frontiers in digital audio. This product uses the newest technology and highly flexible DSP power distribution to satisfy all needs of the professional audio industry. The console can be easily reconfigured to suit the specific needs of various applications, all within a few seconds. The **investor** profits by getting a flexible and versatile product with a clear upgrade path. The operating desk presents itself to the **operator** in a clearly laid out, simple to learn «analog» design, still allowing an intuitive access to all the fine details of its digital signal processing capabilities. Reliability and highest audio quality as well as the use of industry's standard audio formats are a bonus to the **maintenance engineer**.

Studer D950:

The Leading Edge of Technology.

The D950 console is available in 2 versions: the D950B stereo version and the D950S surround version. Both versions use the industry's most advanced technology. This has the advantage of having vast amounts of available processing power and fast system response to every operator's command. In addition, the space requirements and the power consumption are minimised. The flexible desk surface of the D950 mixer has been built for the rigours of day-to-day work, especially taking into account the live situation. Access to all functions is quick and intuitive. ■



The familiar feel

The surface of the D950 can be used very much like an analogue console. Each fader strip contains the controls for all parameters of the channel it serves. Through its modularity, the size and physical layout

of the console can be specified to exactly match studio's requirements. The labelling and the inscriptions of the individual parameters are self explanatory. There is great similarity to conventional consoles, so the learning curve can be kept to a minimum. ■

User definable channel strip setup

With the D950 it is possible to take the conventional or the layered approach. If you prefer to work like on a traditional analogue console, we offer full functionality and display of parameters on every channel strip and you can have as many physical channel strips as you like.

If you prefer to have a smaller desk surface you have

up to 10 layers, with instant access to two layers on each fader strip. The layers are organized in five banks each consisting of two layers. In practice a desk with only 16 channel strips gives you control over a console with 160 channels. As a matter of fact, the desk surface is so flexible that every engineer working with it can configure his or her favoured setup and recall it at any time. ■

Graphic Controller

The Graphic Controller (GC) puts the enhanced functions of the D950 at the disposal of the engineer. It features flexible, individually definable control panels for ease of operation. The GC is used to access functions that go beyond the traditional mixing console features: Snapshot Control, Patch Control, Bookkeeping and Project Management, Strip Assignment, Cue Management and AutoTouch Automation Control Panel. ■



Snapshot Automation

The snapshot automation of the D950 allows you to store and recall previously stored settings of the console. You can save an unlimited number of snapshots in the system. The console takes an instant to fully reset the audio parameters when a snapshot is recalled. ■

Clipboard

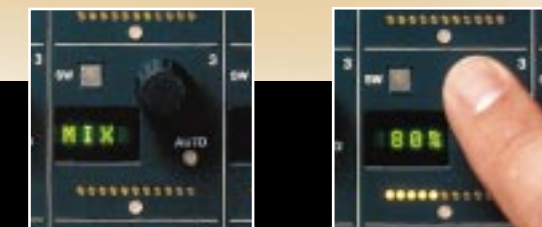
The system supports copy and paste of some or all channel settings to one or more other channels. This greatly facilitates setting up the console if you are starting from scratch. ■

Swap Function

The swap function allows the engineer to adjust the sound of any channel while sitting in the «sweet spot» of the control room and then send it back to its normal position on the console in a very simple way: by simply swapping the required channel's controls with the ones of the channel closest to the centre section. ■

The AutoTouch Dynamic Automation System (option)

The D950's AutoTouch Dynamic Automation gives you the possibility to automate any console audio parameter against timecode. The operation is quite simple: All knobs and faders of the D950 are touch sensitive. You do not have to go into complex menus or use switches to automate a parameter on a knob: If you are in automation mode the touch and release of a knob will record and playback the required motion. ■



Touch sensitive shaft encoders

The multifunctionality of the operating surface is achieved by utilizing a simple and intuitive solution: The displays next to the assignable high-resolution shaft encoders describe the assigned function. Once touched, label changes to display the actual value. An intuitive «analogue» value is always displayed on a LED-bar below the knob. ■

The D950 concept is simple and ambitious at the same time: the clear advantages of digital are used to the fullest to allow a rich palette of processing functions. This functionality is presented to the operator in a simple and intuitive fashion: ease of operation combined with powerful audio processing capabilities.

Powerful features, transparent operation.

Channel layout

The layout of each channel is almost identical to a traditional analogue strip. Important functions such as the routing information, input selection, Aux Control and processing selection are clearly and generously laid out to allow easy navigation and instant feedback for all channel strips at a glance.

Processing functions can be assigned to the four touch-sensitive rotary encoders which are used to alter the processing parameters.

Above the fader, two labelling strips are located. They display the channels available in the two layers of the current bank. ■

Channel Types

There are two basic types of channels, Mono channels and Stereo channels. The number and strip setup of the channels are defined in the Session Configuration. The individual signal flow of each channel can be displayed and altered in a channel Patch page on the Graphic Controller. Displaying the channel in this form is a comfortable way to control and set up the individual requirements for the application. ■

IPL In Place Listening:

This unique function behaves like a Solo but it allows listening to the following sources within a channel's signal path:

- Post input
- Post EQ
- Insert return
- Post side chain
- Post dynamics

The IPL function is an excellent tool to make sure that the signals after each individual processing stage are what you would like them to be.

Channel Inputs

The digital Routing Matrix is situated between the physical inputs of the console and the actual channels. This means that the physical analogue and digital inputs can be assigned to any channel

of the console via a Patch Page on the Graphic Controller. The Patch setup is part of each individual snapshot and can be saved, updated and recalled within the snapshot system. ■



Channel Outputs

The same concept as with the inputs applies to the outputs. On the Patch Page, each channel's output can be picked up and sent to any analogue or digital output destination. ■

Equaliser

Four fully parametric bands are at your disposal. Each of these bands works between 20 Hz to 20 kHz and has a +/- 18 dB gain range. The EQ has a psychoacoustically corrected frequency response for high frequencies, similar to the well known analogue EQ designs and the two mid-bands can be switched between constant-Q and constant-range modes. The High and Low bands can be switched to Shelve mode. In addition, a notch filter can be specified. ■

Filters

Highpass and Lowpass filters which work between 20 Hz and 20 kHz and include a variable slope are available. ■

Dynamics

Two different types of dynamics are available for the D950.

Output Limiter: specifically developed processing block containing a high precision output limiter.

Full Dynamics: consists of compressor/limiter/expander/gate processing block. The Dynamics feature high sampling rate transient detection to avoid pumping and modulation. The distortion artifacts are minimised through the selectable automatic program-dependent Attack and Release time settings. The dynamics can be linked for stereo or surround use and have a Side-chain input. The Side-chain input is additionally featured with a high and low pass filter, e.g. for deessing. ■

Auxiliaries

The number of Stereo or Mono Aux sends is configurable. The user can specify in the configuration how many Aux sends of which kind he would like to use. The Auxiliary master channel can be equipped with the same selection of processing blocks such as equaliser, dynamics, delay and more. ■

Clean-feeds N-1

Clean-feeds or N-1 busses can be stereo or mono and are configurable in number. ■

Multitrack Routing

Full multitrack routing is available. The destinations selected are displayed in LED back-lit numbers below the bargraph of each channel. This gives a continuous overview of the whole console routing. ■

Solo Modes

Each channel features a Solo/PFL Switch. Depending on the mode selected in the centre section, a variety of functions can be achieved: Standard Solo, Solo-In-Place, Standard PFL, Broadcast PFL, etc. ■

Central Assign Panel

For assignment of masters, groups, auxiliaries, multitrack busses and mix-minus feeds. ■



Monitoring

The control room monitoring section can be stereo or surround, and features control of up to three different speaker pairs and a configurable number of source selectors. Analogue or digital, internal or external sources can be assigned to any of the source selector keys.

The studio monitor is configurable in the same way as the CR monitor section. In addition to the selectors on the main console the studio can have remote volume control. ■

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Talkback

An extensive Talkback system is implemented in the D950. The talkback source can be the built-in mic or an external one. Several destinations such as multitrack bus, direct output, auxiliaries, groups and master outputs are available. In addition, each channel is fitted with a talkback button which activates talkback to the direct output of the corresponding channel. The talkback return signal can be monitored on a little speaker built into the bridge of the console. ■


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Multi-Machine Control (Option)

Machine control supports 9-pin ports and synchroniser control. A dedicated machine control panel can be fitted into the desk. ■





Studer D950 S Surround version *Virtual Surround™ Panning*

Surround, or «**Multiformat Sound**» as it is more generally known, has played an important role in the film and TV feature film for some time. With the advent of DVD, more and more projects will be done in a variety of surround formats. In addition, old stereo releases are being remixed for surround in preparation for DVD releases. The general trend is to utilize the enhanced spatial experience that is made possible by using more than two loudspeakers for sound reproduction, now that the appropriate medium is available.

Obviously, more reproduction channels impose new requirements on the mixing console used for surround productions. The Studer D950S Digital Mixing System takes care of all the aspects of surround production in a **modular and advanced fashion.**

The D950S can be equipped with a variety of panning and monitoring components. Panning, Monitoring, Machine Control, REC/PB and TAPE/BUS control, as well as sophisticated Bus assignment all play a part in the Surround production console.

The Components of a D950 Surround Production Console

The Multiformat World

The following is a list of current formats used in various Surround applications (only main formats are listed):

Type	CH	Channels	Total	Application
mono	1		1	St / TV / F
stereo	2		2	St / TV / F / DVD
Dolby Stereo	2 (matrixed)	L/C/R/S	4	F
Dolby Surround	2 (matrixed)	L/C/R/S	4	TV
DTS Stereo	2 (matrixed)	L/C/R/S	4	F
Dolby Digital SR. D	5.1	L/C/R/Ls/Rs/SUB	6	F
DTS	5.1	L/C/R/Ls/Rs/SUB	6	F
Proposal HDTV 1	5	L/C/R/Ls/Rs	5	TV
Proposal HDTV 2	5.1	L/C/R/Ls/Rs/SUB	6	TV
Proposal DVD 1	5.1	L/C/R/Ls/Rs/SUB	6	TV, DVD
Proposal DVD 2	7.1	L/Lc/C/Rc/Ls/Rs/SUB	8	TV, DVD
SDDS	7.1	L/Lc/C/Rc/Ls/Rs/SUB	8	F
IMAX	6	L/C/R/Tc/Ls/Rs	6	F

St = Stereo DVD = General DVD Application
 TV = Television SUB = Low frequency Channel, also called LFE
 F = Film (low frequency enhanced)

The Configurability

A great variety of surround formats exists. There is a solid chance of new formats being added to this list, so the D950S Multiformat Monitoring and Panning is configurable, in order to allow for easy future expansion. This is the natural consequence of the Session Configuration and Scalability concepts of the D950. ■

Panning

With the VirtualSurround™ Panning (VSP), a revolutionary Tool for 3-dimensional audio source positioning, Studer crosses the Virtual Reality barrier for digital mixing consoles. Owing to the exceptionally flexible DSP Platform of Studer's new D950 Digital Mixing System, it is now possible to introduce a library of software panning functions that allow the operator to easily and naturally place sound sources in virtual 3-D rooms. The positioning is calculated within the DSP of the D950 using newly developed algorithms (Patent Pending) and is optimised for all current surround formats. The operator will find at his or her disposal all the usual intensity panning functions such as L-C-R Pan, Front/Back Pan, Ls-Rs Pan, Divergence, etc., but the package includes some really exciting new functions:

Frequency Dependent PanPot

Variable Panning filters allow intensity-based and delay-based panning. In this way it is possible to position a conventionally recorded source as though it were recorded with a special stereo or surround microphone. So even old stereo recordings can conveniently be remixed for DVD. ■

VSP: Automatic Echo Generation

An adjustable number of discrete realistic echoes can be produced and routed as non-correlated, diffuse signals to the surround loudspeakers from any console channel. The echoes are controlled using a number of perceptive adjustments such as Ambiance, Source Distance and Room Size. This allows natural reproduction of audio sources from various distances and positions within a virtual room, without the need to revert to external effect processors. Special dynamic effects, such as gradual disappearing of a near sound object into the diffuse room, can be easily achieved by accentuating the spatial components of the sound. In addition, all the VSP parameters are dynamically automated within the console's AutoTouch automation system. ■

In order to facilitate the panning itself, the D950S can be equipped with one more Multiformat Panning Units (MPU). The MPU features two motorised and automated joysticks that can be assigned to any of the D950's channels. Although the channel strips themselves contain the necessary Rotary Encoders and switches to operate all the Surround features, it is much more convenient to use the joysticks for the panning. From stereo to 8-channel with free format selection per channel, and additional functions such as Frequency dependent Panning, Ambiance, Distance or Room Size, the engineer is now equipped with enhanced and creative tools for surround work. ■



The MPU



The MMU

Multiformat Monitoring

The Multiformat Monitoring Unit (MMU) is a software-aided monitor controller.

The features of the MMU include:

- monitor format selection with loudspeaker designation display
- pre/post decoder monitoring
- meter-to-monitor switch
- additive mode selector

Depending on the format selected, the displays show the names of the loudspeaker channels. Loudspeakers are turned on automatically with the format selection. Each speaker output can be SOLOed or MUTed individually. The loudspeaker outputs can be calibrated (usually used in Film mixing), and the dot matrix display can show the volume level in dB.

Assignable source selection keys with associated displays enhance the MMU's capabilities. Since it is reconfigurable, the source keys may be labelled to show which sources are



The RCU

currently assigned to the keys. The number of source selector keys can be varied, depending on the application. ■

Stem Control

For Film style mixing, bits and pieces of film sound are put together from a variety of Surround formats ranging from mono to 8-channels. Very often, there may be hundreds of audio sources that need to be mixed together and put into the right spatial image. To bring some order to such a vast number of sources and formats, the concept of Stems is often used.

A Stem is a group of sounds (i.e. audio summing busses) that belong together. Stems can be 1-channel to 8-channel wide. For example, a console may be configured to have:

- 2 stereo stems for music
- 3 LCR stems for simple effects
- 1 5.1 stem for spatial effects
- 1 stereo stem for dialogue, etc.
- 2 8-CH stems for effects
- 2 Dolby Surround (4-CH) stems for predubs

Since the Stems often need to be reconfigured as different sound sources are processed, the D950S features extensive Stem Control facilities. In this way, Stems may be configured and reconfigured as the need arises. There is no restriction to the stem number, width or name, except the number of available Group and Track busses at any time (total 96). ■

Machine Control

Most studios working in Surround use a number of playback and record machines on which source material and the final product are played back or recorded. Such setups may be simple, two or three machine arrangements, but can also involve several dozen machines, as is the case in large film mixing studios. The D950S features a modular machine control system that may be expanded and adapted to match the application requirements.

A simple, one machine control interface is basically included in the AutoTouch Dynamic Automation system. As an alternative, an expandable multimachine control system can be specified. ■

Film-Style Monitor Features

Film mixing studios generally require a complex multimachine setup to cater for all the sound sources and predubs usually used in a large Film production. As an option, the D950S can be equipped with the Record/Monitor Control Unit (RCU). The RCU allows direct access to important machine and monitoring functions.

The RCU works in conjunction with the machine control system and in fact controls recorder track arming as well as the record status of each machine track. Up to 64 machine tracks can be interfaced to the panel and controlled individually or in groups using the grouping facility of the RCU.

In addition, the RCU is equipped with switches for control of the monitoring paths and allows easy switching between console's sends (Bus) and recorder returns (PB), so it is also interfaced to the D950's monitoring system. Up to 4 RCU's can be defined in a system, in order to allow multi-operator arrangements that are common in Film mixing.

In the film industry, BUS is also sometimes called DIR for direct console signal. PB is sometimes called PEC, which stands for Photo Electric Cell and is related to the return of the optical film machines which were traditionally used as players in film dubbing stages, so very often the BUS/PB function is referred to as the PEC/DIRECT function.

The D950S is a sophisticated Surround Production and Postproduction console. Due to the modularity of the components and the configurability of the DSP core, the D950S can be used in any Music, Production or Postproduction application that involves Surround sound. Innovative Panning and Stem Setup features put enormous power at the fingertips of the operator, allowing the operator to fully concentrate on creativity and the production at hand.

For Film mixing, the D950S operating desk can be configured in a Multi-Operator fashion, where each operator has his or her RCU, AutoTouch Automation control and up to 10 assignable desk layers. Such specially designed features for Film use, together with the D950's scaleable DSP power allow a degree of freedom in Film mixing that is difficult to match. ■

Studer D950: the Technology behind the Scenes.

Some of the most important features of the Studer D950 console only became possible due to the fully new concept of the DSP Core. Without this revolutionary development, the high degree of configurability, flexibility and reliability would not have been possible.



Scaleable DSP Engine

The DSP core of the D950 console consists of DSP processing boards. Each of these DSP boards contains six Floating Point processors. DSP boards can also be equipped with 8 AES/EBU inputs and 8 AES/EBU outputs. In a maximum configuration of the core, 20 of these boards can be fitted into the core rack, next to the MADI Boards and Communication Boards. The fully fitted DSP core delivers the processing power for more than 256 audio channels.

Internal Digital Router

A fully integrated Digital Router replacing any external patch bay is part of each D950 system.

Safety and Reliability

The DSP core is the centre of any digital mixing console. It can therefore become critical if an error or a defect occurs in this part of the system.

The D950 console is exemplary in this aspect. In co-operation with the leading Swiss Federal Institute of Technology's Electronics department, we developed a self-healing system. This intelligent system supervises the itself continuously. If a software or hardware error is detected, measures are automatically taken to avoid any losses of audio or functionality. Processing will automatically be directed to an optional redundant DSP board. In such a case the Graphic Controller will simply inform the engineer about the failure and the faulty system part can now be replaced without interrupting the session.

As a matter of fact, the DSP cards can even be hot-swapped!

Sonic Quality

The D-950 uses floating point digital processing. The console works with an extended internal word length of 40 bits. Using such a high processing resolution results in a vast dynamic range of the D950 console. Any channel type can be equipped with some or all of the processing blocks, allowing full tailoring of the console to the specific application.

Audio Interfaces

Digital audio connections are made directly to the DSP frame onto the on-board MADI and AES/EBU I/O's. In this way the audio wiring is simple and cost-effective. High quality A/D and D/A converters and Mic Preamps from the D19 Series are used for interfacing with the analogue world.

Extensive audio interfacing is available from the D19m Series modules which can be located at a distance from the mixing console. The connection to the core is done via fibre optics. The modules can be linked and stacked to build a variety of stage-box designs.

The Technological Quantum Leap

The flexibility and the configurability of the DSP Core, as well as the total amount of processing power needed for a large digital mixing console require an exceptionally intelligent computing platform. Not only have the individual DSP-processors to be utilised to the maximum of their power, but a large number of processors also have to be well coordinated to work together even in the largest configuration.

To this end, a fully new architecture for parallel computing was developed in co-operation with the leading Swiss Federal Institute of Technology's Electronics Department. A team of supercomputing specialists led by Prof. Anton Gunzinger, the winner of the Seymour Cray Prize, joined Studer in a common effort to fulfill the strict design goals.

The results can really be described as a quantum leap.



High-Tech is Teamwork.

Behind the scenes of the D950, there is a team of highly skilled development and support engineers. For every functional part of the system a number of specialists participated in the development process, bringing in their technical know how and audio expertise.

The D950 team is at the disposal of our customers:

Our specialists are involved in the projects from the configuration phase to the stringent quality and functionality tests before the consoles are delivered. The product support, of course, takes over and helps our users with applicational and technical support throughout the life of the product.

You are welcome to request a D950 demonstration from one of our specialists. You will be amazed. ■

You invest in more than one console when you invest in the D950...

The Session Configuration

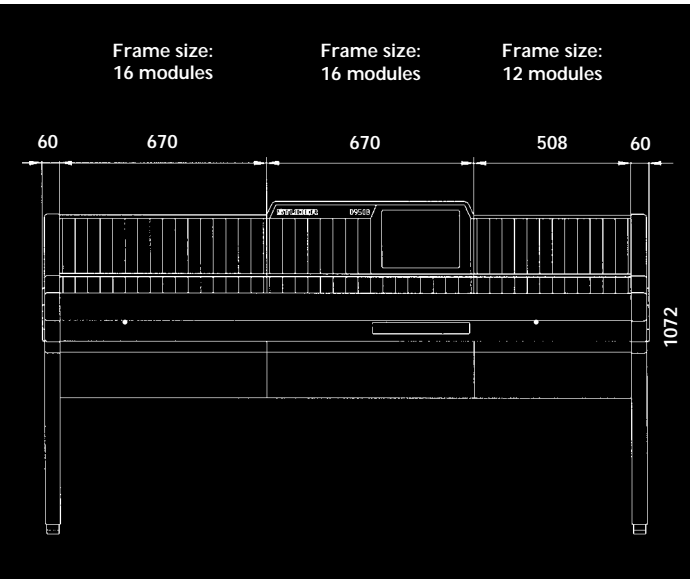
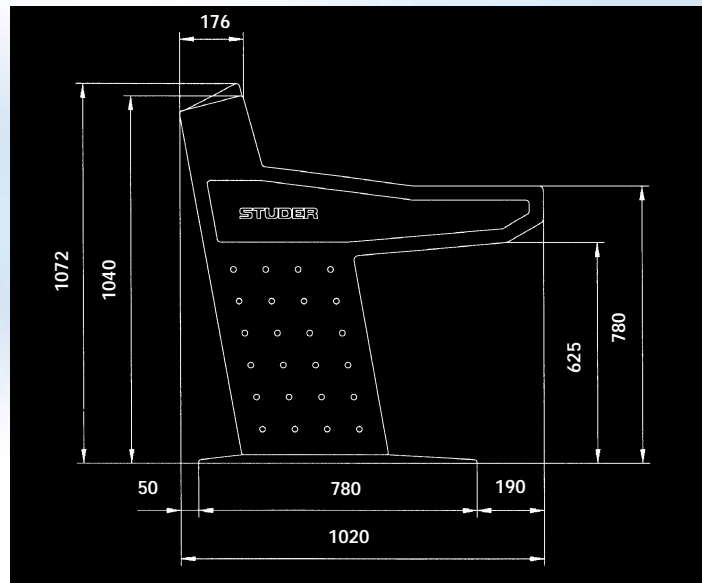
One of the main advantages of digital mixers is the resetability of all the parameters and settings of the console. With the concept of the D950 we have gone beyond just resetting of console parameters. The flexibility of the system core allows to create many completely different mixers. You are now able to choose the ideal mixer for the task you want to work on. For this, the Session Configurations can be loaded and the console is reconfigured in matter of seconds:

Day 1 Live Broadcast configuration	Day 2 Multitrack Recording configuration	Day 3 Mixdown configuration
48 Mono Input Channels with - EQ - Delay	48 Inline Channels with - EQ in monitor path - Comp/Lim/Exp/Gate in input path - Delay	96 Mono Input Channels with - EQ - Delay - Comp/Lim/Exp/Gate - IPL
24 Stereo Input Channels with - EQ	4 Stereo Input Channels with - EQ	4 Stereo Input Channels with - EQ
0 Routing busses	48 Routing busses	8 Routing busses
8 Groups with - EQ	0 Groups	16 Groups
2 Master Outputs with - Output Limiter - EQ	4 Master Outputs	8 Master Outputs
8 Mono Auxiliaries 2 Stereo Auxiliaries	4 Mono Auxiliaries 4 Stereo Auxiliaries	12 Mono Auxiliaries 4 Stereo Auxiliaries
12 Clean feed busses	0 Clean feed busses	0 Clean feed busses

Another plus of the Studer D950: Multi-desk functionality

Up to four individual operating desks can access the same DSP Core. Each of these desks can have a separate Monitor section, PFL busses, Solo busses, and a set of outputs. The four desks can work on individual tasks in different studios, but they share the available DSP power of the core and the AutoTouch automation. It is also possible that any or all four desks access the same audio channels. Using the built-in digital router, audio resources such as input converters can also be shared among the studios. This allows to have up to four operators in four different locations working on the same project or to have four highly independent mixing consoles working on four separate projects.

Studer D950 Digital Mixing System - Basic Technical Data



■ Versions

The D950 console is available in two basic versions:

- D950B: Stereo Version
- D950S: Surround Version

■ Specification

The Studer D950 Digital Mixing Console can be configured in many ways. The number of channels, the processing blocks of any channel, the number of buses, the number and type of audio I/O interfaces, the number of fader strips, etc., can be specified to best suit the application.

Please contact Studer for a detailed Product Information and a proposal for your application.

Input/Output Interfaces

Configurable modular interfacing from a selection of the following interfaces:

■ remote controlled 8-channel microphone/line preamp Studer D19 MicAD

- 20 bit delta-sigma converter
- remote control mic/line in 1-dB steps
- input impedance, mic in 1 k Ω , balanced, floating
- input impedance, line in 11 k Ω , balanced, floating
- input level, mic in -58 to +11 dBu @ 9 dB Headroom
- input level, line in -14 to +15 dBu @ 9 dB Headroom
- signal to noise ratio, A/D converter > 106 dB_{FS}, CCIR 468-3

■ analog line input D19M C4AD

- 4 inputs per card
- 20 bit delta-sigma converter
- input impedance >10 k Ω , balanced, floating
- input level, @ 0 dB_{FS} +16 dBu or +22 dBu fixed, or 0 ... + 26 dBu adjustable
- frequency response, - 0,2 dB 20 Hz ... 20 kHz
- THD + N, @ 1k Hz, -30 dB_{FS} < -103 dB_{FS}
- Crosstalk @ 1kHz < -110 dB
- sampling frequency range 28 ... 55 kHz

■ AES/EBU input on DSP Card

- 8 AES/EBU balanced inputs per DSP card, two inputs with SFC

AES/EBU input on D19M AESI Card

- 2 AES/EBU balanced inputs per card compliant to AES3-1992 (ANSI S4.40-1992)
- Optional: D19m AESI Card with Sampling Frequency Converter

■ MADI input

- fibre optic MADI input on SC connectors compliant to AES10-1991 (ANSI S4.43-1991)

MADI output

- fibre optic MADI output on SC connectors compliant to AES10-1991 (ANSI S4.43-1991)

■ analog output on D19 MultiDAC

- 8 outputs per unit
- 23 bit delta-sigma converter
- output impedance Typ. < 40 Ω , balanced, floating
- output level +4 ... + 24 dBu calibrated, or +4 ... + 24 dBu adjustable
- frequency response, -0,1 dB 20 Hz ... 20 kHz
- signal to noise ratio, Auto Mute OFF > 115 dB, @+24 dBu_{FS}
- signal to noise ratio, Auto Mute ON > 119 dB, @+24 dBu_{FS}
- THD + N, @ 1kHz, -30 dB_{FS} < -110 dB_{FS}
- Crosstalk @ 1kHz < -110 dB

■ analog output on D19m C4DA Card

- 4 outputs per card
- 22 bit delta-sigma converter
- output impedance < 40 Ω , balanced
- output level, @ 0 dB_{FS} +16 dBu or +22 dBu fixed, or 0 ... + 26 dBu adjustable
- frequency response, -0,2 dB 20 Hz ... 20 kHz
- THD + N, @ 1k Hz, -30 dB_{FS} < -105 dB_{FS}
- Crosstalk @ 1kHz < -110 dB
- sampling frequency range 28 ... 55 kHz

■ AES/EBU output on DSP Card

- 8 AES/EBU balanced outputs per card compliant to AES3-1992 (ANSI S4.40-1992)

AES/EBU output on D19m AESO Card

- 2 AES/EBU balanced outputs per card compliant to AES3-1992 (ANSI S4.40-1992)

■ Modular floating-point DSP Core

Hot-plug in cards:

MemNet Control Card, PE/AES DSP Card, PE DSP Card, Dual MADI I/O Card.

Available Channel Processing Blocks:

Input Selector, Input Processing & Filters, InputMode, 4-Band EQ, 4-Band EQ with Notch, Insert, Delay, C/L/E/G Dynamics, Output Limiter, PAN, Stereo PAN, Multiformat PAN, Direct Out, IPL

The functions and features described herein cover the software version V1.0, unless otherwise stated.
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