STUDER

Digital
Broadcast
Console

Studer Vista 6

Digital Mixing Console Operation takes a Quantum Leap

The Studer Vista 6 live broadcast mixer combines an unparalleled operating concept with Studer's renowned technology and processing algorithms.

VISTA 6
DIGITAL MIXING SYSTEM

Vistonics® – quick and easy operation
Ergonomic console surface – increased productivity
Perfect Overview – safe operation
The Studer sound – renowned audio quality
Proven reliability – peace of mind
Resilient system – specifically designed for broadcast

The Studer Vista 6 is a digital mixing system for live broadcasting applications that reaches far beyond the limitations of existing designs. It is the first live broadcast digital mixer incorporating a unique ergonomic operating concept that extends throughout the whole console. The unique and revolutionary Vistonics® (pat. pend.) user interface provides instant overview as well as immediate access to critical controls, making operation quick, easy and safe.

When familiarizing yourself with the Studer Vista 6, you'll soon discover that you already know how to operate this console. Even freelance hired engineers will quickly find their way among the numerous exciting new features. In general, operators in live transmission will work with full confidence since the user interface reduces the risk for human errors to an absolute minimum.

The Studer Vista 6 fits the requirements of any live broadcasting environment. The new mixer's flexibility, reliability and sound quality are based on Studer's well-proven digital technology.

Vistonics® - the Key to Efficient Console Operation

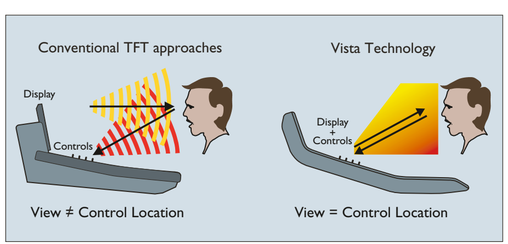
The Studer Vista 6 incorporates the unique Vistonics® user interface which ensures quick and easy console operation – the key to trouble-free live transmission.

In high pressure live situations sound engineers depend on a mixing console which allows a fluent working process. Furthermore, a broadcast facility with numerous engineers and freelancers or one which is open to external production teams must provide an easy-to-learn mixing console.

Control of the digital mixing console is therefore a major issue. Today's practice of arranging controls around or below a TFT flat screen display has obvious ergonomic limitations. Audio parameters are displayed on the screen but their relevant controls are located elsewhere. Operators must therefore go through a mental translating process countless times throughout the day which makes live production fatiguing and the working process prone to errors, especially in high pressure situations.

This is where the unique Vistonics® (pat. pend.) operating concept of the Studer Vista 6 comes in. It includes the patented technology for integrating rotary controls and buttons within a flat screen display to finally bring visualization and operation into immediate proximity.

Vistonics allows the colour and shape of controls to be varied according to good ergonomic practice. A given audio function is always associated with the same colour and a parameter is always associated with the same icon displaying values graphically – just as intuitive as an analog console – or even more so.



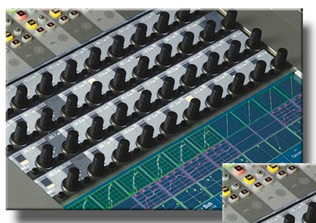
Channel controls on the Studer Vista 6 consist of a TFT screen with buttons and rotary controls mounted on it with a touch-screen area immediately below. Other channel specific controls such as the fader, mute, on/off buttons, etc., are arranged above and below the screen to provide an instant and perfect overview, rapid familiarization and confident operation. The Studer Vista 6 is the only live broadcast digital mixer which tells you exactly what it's doing.

Channel Bay

The operating desk consists of one Control Bay (see page 8) as well as between two and seven Channel Bays incorporating 20 to 70 physical faders on the console. Each Channel Bay accommodates 10 faders (100 mm), the unique Vistonics graphical operating unit, additional assignable rotary encoders at the top of the channels, as well as additional buttons and controls. Each channel includes a high resolution dual bar graph meter with additional gain reduction display for the compressor/limiter and expander/gate at the same time.

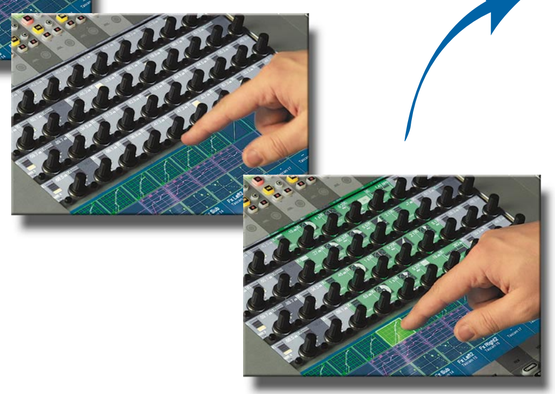
Overview

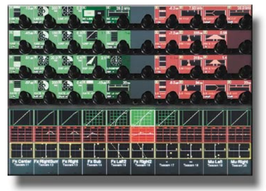
Every channel displays its settings of dynamics (green), equalizer (red) and panorama (yellow) in the Vistonics® touch area allowing instant overview of the entire console. By pressing one button on the Global View area, the four Vistonics® rotary controls on each channel change their function throughout the console, displaying the four most important parameters of the chosen audio function. Global View buttons can be found on each Channel Bay, permitting access from wherever the operator is sitting.



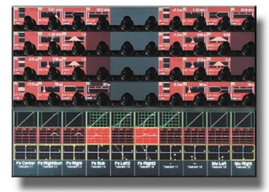
Vistonics®: Operation

A simple touch on the desired function of the chosen channel opens up the complete function onto Vistonics. The operator can immediately adjust values and close the selected view afterwards.



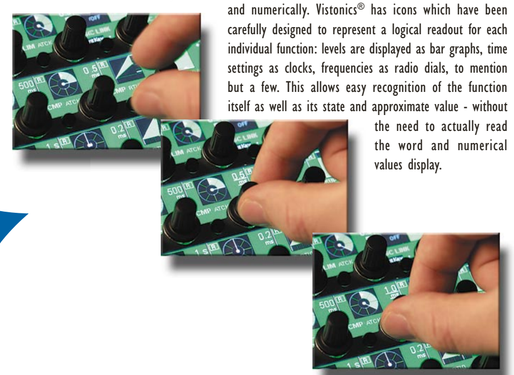


Functions have their dedicated colour: Equalizers and Filters are red on Vistonics as well as on all related buttons. The same applies to the dynamics (green) and the panorama (yellow).



By touching, for example, the equalizer and the dynamics on the same channel, they both will open up onto Vistonics® with their complete set of functions. The operator can immediately and easily adjust one function in relation to the other by adjusting, for example, the equalizer and the compressor simultaneously.

By simply turning the rotary control, the chosen value can be adjusted and the changing value is immediately displayed, graphically and numerically. Vistonics® has icons which have been carefully designed to represent a logical readout for each individual function: levels are displayed as bar graphs, time settings as clocks, frequencies as radio dials, to mention but a few. This allows easy recognition of the function itself as well as its state and approximate value - without the need to actually read the word and numerical values display.



Pressing the physical button next to the rotary control on the Vistonics® activates a part of the function. The push button allows additional settings such as switching individual bands on/off, setting slopes etc.

Operation of the Studer Vista 6 resembles that of an analog console but is even more intuitive. Established ergonomic practice blends with modern technology to increase operating comfort and ensure trouble free operation in live environments.

The Studer Vista 6 is **The Return of the Human Interface.**

Consistent Operation throughout the Console

No efforts have been spared to improve and simplify the operation of the Studer Vista 6. Vistonics® is part of a comprehensive and unique operating concept, enhanced by the clear philosophy of a few simple rules which can be combined and remain unchanged throughout the console.

Touch'n'Access

The Vistonics patented technology for integrating rotary controls and buttons within a flat screen display brings visualization and operation into immediate proximity. The operator touches the desired function overview and is given immediate access to all available controls (see pages 4 to 6). There are no submenus – every parameter is just one button-press away, an essential feature in live situations.

Fast Copy/Paste and Half-Lit Keys

The console incorporates dedicated copy/paste keys for each audio function including EQ, dynamics, panorama and delay. A simple button-press in the original channel and another in the target channel copies the settings across. Copy/Paste is guided up by the half-lit buttons: if one button has been pressed and the desk is awaiting a second button-press, all available target buttons illuminate at half brightness until one of them has been selected. Also, complete channels can be cloned to one or many target channels. Setting up the Studer Vista 6 for a production becomes a quick and easy task. Preparation time is reduced considerably.

Scrolling

DSP channels not visible on the physical desk are accessed by scrolling the channels available in the DSP core. The channel order is freely assignable: channels can be grouped or even shown repeatedly on the surface. This ensures physical orientation on the desk so that the operator is always clearly informed as to what is happening. Channel Bays with, for example, the master channels can also be locked in place.

Momentary/Latching Activation of all Buttons

The console recognizes and senses the button-push duration and responds accordingly. The buttons therefore act momentarily or latchingly depending on how they were pressed (pressed-and-held or briefly tapped). In addition to Talkback, PFL, EQ on/off, etc., the functions affected include those accessed by the touch-screen – such as viewing of an audio function – as well as the monitoring source selectors. This is extremely intuitive and dramatically reduces the number of thought processes in normal console operation, freeing the mind for the job at hand – the audio.

Ganging

The ganging function in the mixer allows the operator to quickly apply functions to multiple channel strips because channels within the gang act as one. This can be used, for example, for Mute, faders, Copy/Paste, Bus assign and much more to increase speed and comfort in operation. Creating a gang over the console makes the set-up quick and easy.

Your Live Transmission - Totally under Control

The ease of operation in the Channel Bays is replicated in the centralized functions. Despite the vast amount of functionality, operation of the Control Bay remains straightforward, quick and easy.

Control Bay

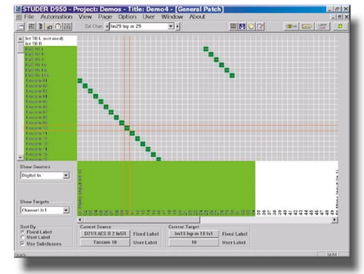
The Control Bay houses all general and global controls as well as a set of 8 freely assignable high resolution dual bar graph meters including a dual dynamics readout. Each one of the meters can independently be switched to display monitored sources, PFL and Solo. A wide range of optional third party and Studer meters can be fitted into the meter section instead of the standard meters. Dual motorized joysticks can also be fitted as an option. The operation principle in the Control Bay as well as the whole console is "one control per function" – no paging and no hidden functions. This provides instant overview as well as immediate access to critical controls to make operation quick and safe.

Graphic Controller

The Graphic Controller (GC) provides the operator with quick and easy access to a vast array of console functions and facilities which need only occasional operation, e.g. project and system management, snapshot management, router control and assignment. The GC's large TFT flat panel colour display is used mainly to display information during normal operation. The Strip Setup window displays an overview of all available channels with their labels, including Mute and Level Present/Clipping information. Channels can be freely arranged on the physical surface by drag and drop on the GC making console preparation an easy task. A VGA input is provided in order to switch the built in TFT flat screen to display any external video signal for easy integration of e.g. external routing systems or workstations.

Input and Output Routing

Integral within the DSP core of the mixer is an extensive routing matrix, providing complete easy-to-patch facilities that eliminate the need for an outboard patch bay or front-end router. Any signal-inputs, direct outs, insert sends and bus outs – may be routed in any combination to any console channel, insert return or physical output of the Studer Vista 6 system, with sample rate conversion if necessary. The whole patching of external equipment and sources can be done with one simple button-press. This results in reduced set-up time and tremendous flexibility.



Monitoring and Talkback

Control room monitoring supports standards from LR, LCR to LCRS and 5.1 (optionally up to 7.1 and Dolby EX). The monitor source selector provides access to a large number of sources which can be accessed either directly via the push-buttons or via a pop-up menu on the GC. Two studio areas can be fed independently with the required monitoring sources. An LED array provides visual feedback of the signalisation status of both studios. An extensive talkback system is provided on the Vista 6 with dedicated TB buttons on each channel strip in addition to a global switch in the control bay. GPIOs are available as an option for controlling external equipment and signalisation

Customisable Keys

For added convenience and flexibility 16 customisable keys are available for customer use. These buttons provide latching or toggling functionality and are wired directly to open collector outputs for controlling external devices.

Dedicated for Broadcast

In addition to the standard functionality, the input channels provide several broadcast specific features. Dedicated controls for extensive snapshot filtering are available to deal with the most complex live productions. Dedicated buttons for talkback (e.g. to Direct Out, N-1 etc) and for user programmable functions provide more flexibility and ease during live operation. In addition, up to two channel bays (out of the maximum 7 channel bays) incorporating 10 or 20 faders can be ordered as Remote Fader Bays. This allows operation of all of the Channel functions of the Vista 6 up to a distance of 400m from the main console.

Proven Reliability for Live Transmission

The unparalleled operating concept of the Studer Vista 6 is completed by Studer's renowned technology incorporating an excellent reliability record.

The design and implemetation of the Studer Vista 6 provides a high level of reliability and remarkable resilience in operation.

Redundancy

The redundancy concept includes all parts of the Vista 6. Redundant Power supplies are available throughout all parts of the system, including a UPS option for the control surface. The DSP core can be equipped with redundant DSP cards that take over the audio signals in the case a DSP card fails. The faulty may can even be replaced during operation (hot-plugged). Redundant MADI inputs/ outputs is also available. The control system is fitted with a Disk array and redundant power supplies as standard for peace of mind.

Maintenance

The channel bay as well as the control bay hinges up for quick and easy maintenance. A real time System Surveyor with log file is provided as part of the GC to firstly act as a confidence check for the operator and secondly, to assist with maintenance. All connections to the operating desk can be accessed from the front – an essential requirement for installations in places with limited access, such as OB trucks.

Studer Original Equipment – Made in Switzerland

In the world of professional audio, the Studer name has always been associated with quality and reliability, together with advanced technology, innovation and premium sound.

For over 50 years Studer's commitment to continuous investment in R&D has been rewarded with its maintained position as a world leader in audio technology as well as the award of numerous technology patents. More importantly, this dedication to investment in research gives Studer's engineering and design teams an unmatched knowledge base from which to develop the innovative and often unique products which customers value so highly.

Whether the requirements are for technical proposals, ergonomics solutions, new operational paradigms, innovative installation ideas or future-proof planning, Studer can provide them. Everything our customers need is here – developed and manufactured in Switzerland

Perfect Tools for Surround Production

Studer's unique Virtual Surround Panning (VSP) fits the Studer Vista 6 console perfectly. It allows the operator to create a realistic 5.1 sound field modelled around a few simple parameters.

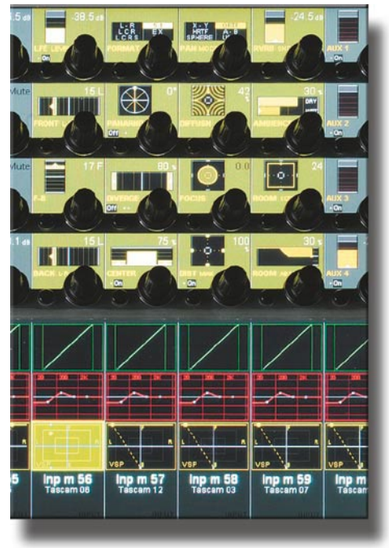
Studer's VSP system, unique to the Vista series consoles and the D950 M2, provides the operator with creative possibilities unavailable with any other console. With VSP's time delay panning and created reflections, even the most complex surround production will result in a quality mix which is second to none. With VSP, mono sources can be positioned to produce highly convincing surround sound without employing time-consuming and often unsatisfactory external processing.

When few or no sources of multi-channel sound elements are available, operators must attempt to create surround from purely mono sources using delays and reverb devices. Thus, the creation of an impressive and satisfying surround mix takes much time and effort, and the results are often disappointing.

Virtual Surround Panning simulates a defined acoustic space and positions the sound source within this space using the channel pan control. Surround impression is guaranteed by generating early reflections with the appropriate directionality and time delays on all speakers.

These reflections, which are absent with normal panning, are the key to localizing the mono source within the surround field. VSP also gives better directional imaging by adding phase and frequency spectrum information to the existing amplitude difference between channels, if the operator wishes to do so. In addition, VSP may provide late reverberation to the panned signal. Up to eight reverberation systems can also be utilized even standalone, adding another unique feature to the Studer Vista 6.

The results – which must be heard to be believed – are very impressive and offer an enhanced experience in surround sound unachievable with any other console system.



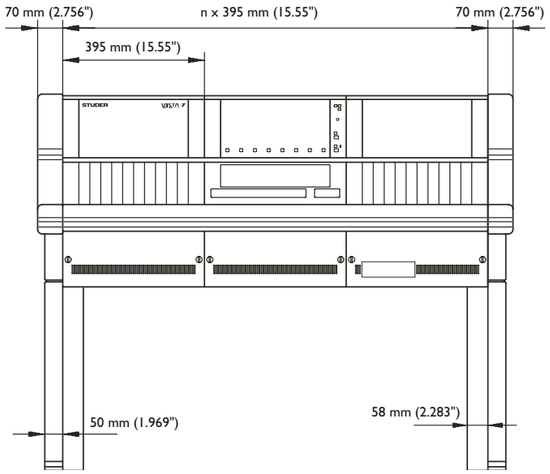
Visual information and operation of Virtual Surround Panning

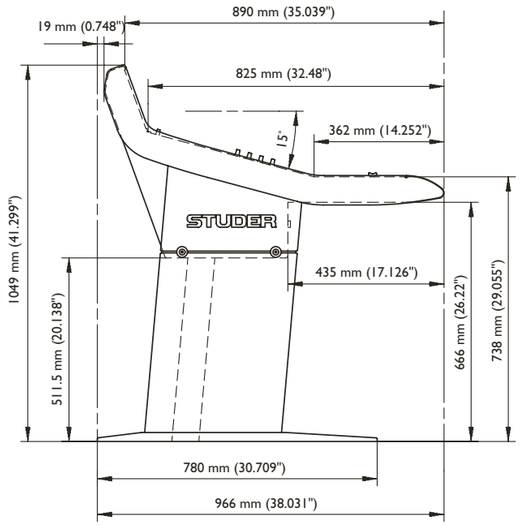
STUDER VSP
VIRTUAL SURROUND PANNING

Dual motorized and touch-sensitive joysticks (option) in the Control Bay

Technical Data

The console consists of one Control Bay as well as between two and seven Channel Bays incorporating 20, 30, 40, 50, 60 or 70 faders.
The optional Empty Bay adds another 395 mm (15.55") to the total width. This Bay may contain a 15" TFT flat screen display with VGA input.





Total Faders	20	30	40	50	60	70
Console width in mm*	1325	1720	2115	2510	2905	3300
Console width in inches*	52.17	67.72	83.27	98.82	114.37	129.92

* = Total width including Control Bay and side panels

Studer Vista 6 I/O Frames

The D19m audio interfaces offer full 24-bit resolution. This provides a dynamic range and a resolution well able to cope with any audio signal. Two standard Input/Output frames of the D19m series are available and can be combined to complement the AES/EBU interfaces on the DSP. In addition MADI I/O is available as an option. Customised input/output frames (including stageboxes) are also available to perfectly fit into specific requirements.

Example Frames

I/O Frame "Analog"
32 ADC Line In, 24 DAC Line Out
optional: 1U Frame with 16 Mic Preamps

I/O Frame "Mic & Analog"
32 ADC(8 with Mic Preamps), 16 DAC Line Out

An example of customised stageboxes

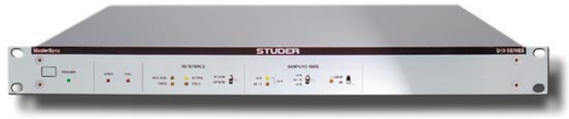
Studer Vista 6 Monitoring Frame

The monitoring rack includes Stereo, LCR, LCRS and 5.1 monitoring for the control room as standard.

Main features:
- 3 separate speaker group outputs (up to 7.1 as option)
- 2 independent Studio Monitoring Outputs available
- talkback to 2 external locations
- producer talkback microphone support
- talkback to all channel outputs
- separate PFL / Talkback speaker output
- seamless integration with 3rd party intercom systems

Mastersync Generator

As a standard the Vista 6 console can be synchronised via any AES/EBU signal. As an option, the Studer Mastersync Generator allows the console to be synchronised to any other format such as black burst video, wordclock etc.



Studer Vista 6 DSP-Core Configuration

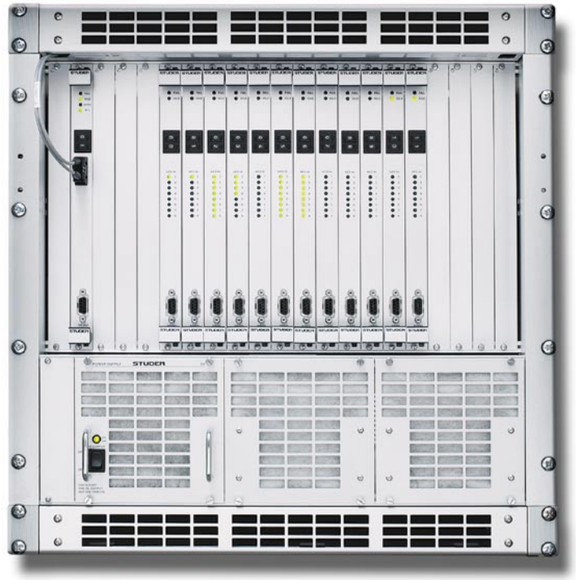
The DSP core of the Studer Vista 6 builds on Studer's well-proven digital technology. It incorporates an excellent reliability record and inspires a high degree of confidence enjoyed by the numerous users operating systems in mission-critical applications. The DSP core uses parallel processing architecture with integrated floating point circuitry and an internal word length of 40 bits. No overloads will ever occur within the console, since floating point architecture is even used in the summing busses. The system can be used in 48 kHz or 96 kHz mode.

The more DSP cards that have been fitted in the core, the more DSP power and AES/EBU interface will become available. Each card hosts eight AES/EBU inputs (two with SFC) and eight AES/EBU outputs. The core sizes below give an example of possible configurations.

Core A – 5 DSP cards, 40 AES/EBU Inputs and Outputs:
e.g. a 48 channel stereo mixer

Core C – 12 DSP cards, 96 AES/EBU Inputs and Outputs:
e.g. a 118 channel stereo mixer or an 82 to 104 channel surround mixer

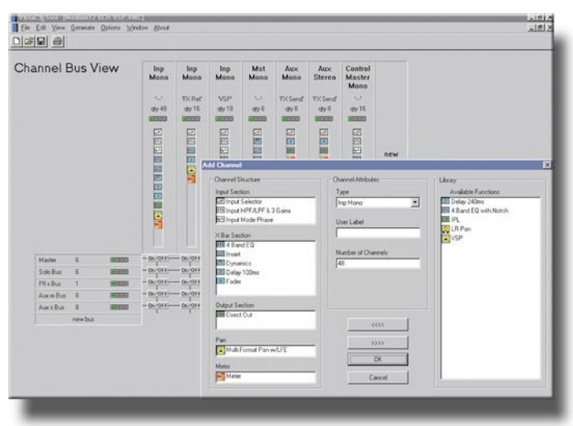
All the above mentioned core types include aux, master etc.
The available number of channels in a surround system depends on the chosen channel type (Standard or with Virtual Surround Panning VSP).



Studer Vista 6 DSP core: Type "C", incorporating 12 DSP cards

Configuration Editor

With the optional Configuration Editing Software the functionality of the console configurations can be altered. This includes the Processing within the channels, interconnections and the number of buses. Extensive import functions allows the user to adapt existing configurations to meet changing needs.



STUDER
professional audio equipment

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