STUDER

Compact Digital Broadcast and Live Console

Studer Vista 5™

- **Acclaimed Vistonics™ User Interface**
- **Revolutionary and unique Output Control**
- **Extensive Static Automation with Snapshot Filtering and Theatre Cue List**
- **Compact Design and easily portable**
- **Fully configurable DSP and Input/Output structure**
- **Resilient system – specifically designed for Broadcast and Live Production**
- **Full 5.1 Surround Capability**
- **Comprehensive N-1 and off-air Conferencing System**
- **Audio Follows Video**
- **HiQnet™ compatible**

VISTA 5
DIGITAL MIXING SYSTEM

A new level of Ergonomic Design

The Studer Vista 5 Digital Live Console is the most compact member of the renowned Vista family. It brings the most ergonomic user interface yet to a portable digital console.
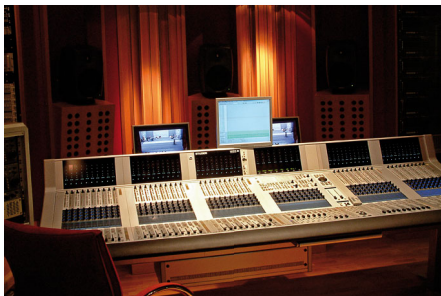
La Scala, Milan, Italy

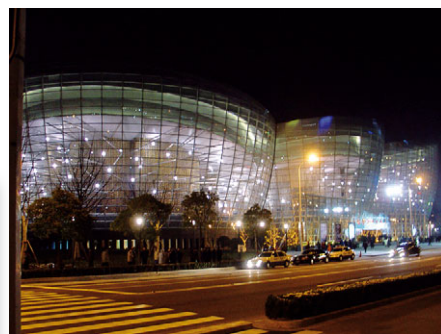Copenhagen Opera House, Denmark

Fuji TV, Tokyo, Japan

Live OB Van at NRK, Oslo, Norway

Live OB vans at AMV, New York, USA

Oriental Arts Center, Shanghai, China

Following the ongoing success of its bigger brothers, the Vista 6, Vista 7 and Vista 8; the Vista 5 is a third generation digital console by Studer.

For the first time the industry-acclaimed Vistonics user interface is available in a compact digital broadcast/live console. While the Vista 5 provides many elements of the functionality of its big brother the Vista 8, everything is packaged into a very compact format. This table-top mounted console satisfies portable applications as well as space sensitive installations and also offers an easy setup procedure with minimal cable count. Not only is set up made easy, but a new operator will find his way around the numerous exciting features in no time at all. Operation of the console is unmatched in intuitiveness and simplicity. It is a great experience to mix a live transmission or production using Vistonics and the operator works with full confidence since the user interface reduces the risk for human errors to an absolute minimum.

Numerous facilities around the world can testify to the experience of using a Vista console, whether in a traditional Broadcast Production environment such as at Fuji TV in Japan and France 3 or also in Live OB vans at AMV in the USA and Primevision in Denmark. Aditionally the Vista is in use at prestigious Live venues such as the Copenhagen Opera House, La Scala in Milan, the Shanghai Oriental Arts Center and the Royal Opera House in London.

Vistonics™ – the Key to Efficient Console Operation

The Studer Vista 5 incorporates the unique Vistonics user interface which ensures quick and easy console operation – the key to trouble-free live productions.

In high pressure live situations sound engineers depend on a mixing console to provide a seamless, smooth working process. Furthermore, a facility employing freelance engineers or one which is open to external production teams must provide a fast- and easy-to-learn mixing console.

Control of the digital mixing console is therefore a major consideration. Today's practice of arranging controls around or adjacent to 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 correlating sight lines to hand coordination which makes live production fatiguing and the working process more prone to errors, especially in high pressure situations such as live.

This is where the unique Vistonics control surface provides maximum benefit. It is a patented technology that fully integrates rotary controls and buttons with flat screen displays to finally bring visualization and operation into immediate proximity.

Channel controls on Studer Vista consoles consist of a TFT screen with buttons and rotary controls mounted on it with a touch-screen area immediately below, providing an instant overview, rapid familiarization and confident operation. Studer Vista consoles are the only live production mixers that tell you exactly what they're about to do!

The operation principles are common across Vista 5, Vista 6, Vista 7 and Vista 8. This allows operators to easily work on any Vista console as well as transferring production data between them.

Vistonics allows the colour and shape of control functions 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, or even more intuitively than an analogue console.

View ≠ Control Location | View = Control Location
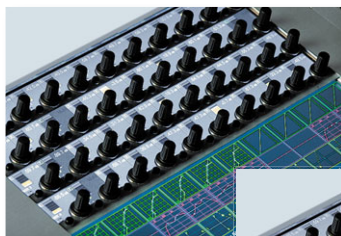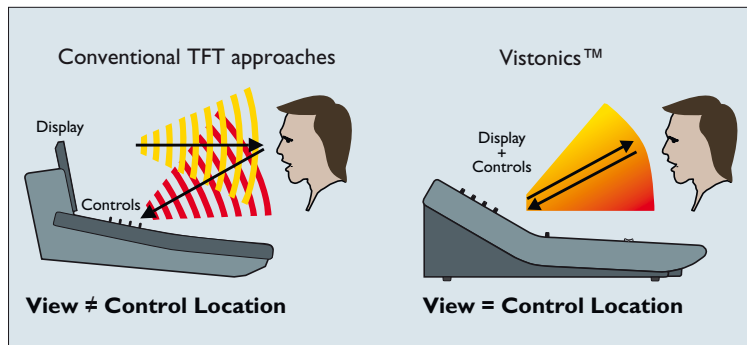
Vistonics™: Operation

A simple touch on the desired function of the chosen channel opens up the complete Vistonics parameter set of that function, be it EQ, gains, Aux sends or routing. The operator can immediately adjust values and close the selected view afterwards.

By simply turning the rotary, the chosen value can be adjusted and the changing value is dynamically displayed, graphically and numerically. Vistonics' icons have been carefully designed to represent a logical readout for each individual function: levels are displayed as bar graphs, time settings as circles, frequencies as frequency graphs, and so on. 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 on the Vistonics activates the displayed switch function. The status is indicated by "On" or "Off" in the readout as well as by the brighter colour of the display which is visible even from a distance.

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 functionality (yellow).

Vistonics also allows simultaneous adjustment of two functions. For example, by touching the equalizer and the dynamics on the same channel, they will both open up onto the Vistonics screen with their complete set of controls. The operator can immediately and easily adjust one function in relation to the other by adjusting, for example, the equalizer and the compressor simultaneously.
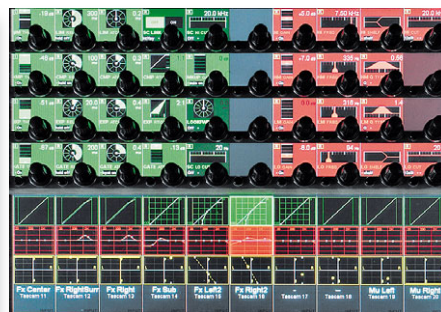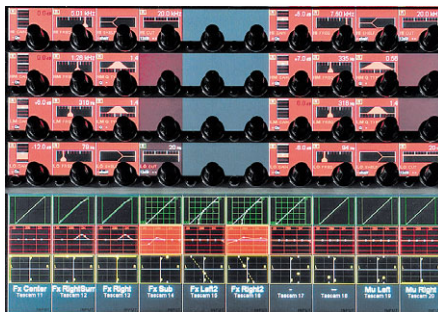
Operation of the Studer Vista 5 resembles that of an analogue console but is even more intuitive. Established ergonomic practice blends with modern technology to improve the operator experience.

Vistonics™ is **The Return of the Human Interface.**

Consistent Operation throughout the Console

No efforts have been spared and simplify the operation of the Studer Vista 5. Vistonics is part of a comprehensive and unique operating approach, enhanced by the clear philosophy of a few simple rules which can be combined and remain unchanged throughout the console.

Touch'n'Access

The operator touches the desired function overview and is given immediate access to all available controls (see pages 4 to 5). There are no sub menus — every parameter is just one button-press away; an essential feature in live situations.

Sections / Layers

Input channels not immediately visible on the physical desk are accessed by switching between six sections of channels available within the DSP core. The channel order is freely assignable: channels can be grouped or even shown repeatedly on the surface. This ensures that the layout of the channels on the console matches the setup of the system. In addition, each fader can be individually flipped to a second layer for fast and immediate access to emergency channels such as backup microphones. Uniquely, all second layer channel labels, each with a small real-time meter can be shown on the channel strip as well as the current layer channel label.

Momentary/Latching Activation of all Buttons

The console recognizes and senses the button-push duration and responds accordingly. The buttons therefore act as momentary or latching, depending on for how long they were pressed (pressed-and-held or tapped briefly). 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. An example of this is to touch-and-hold the EQ curve on the touch screen with one hand while trimming some settings with the other. When releasing the first finger, the Vistonics will automatically switch back to the previous view. The operator doesn't have to remember where he was prior to making an adjustment on a channel setting. 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 allows the operator to quickly adjust the same function on multiple channel strips. This can be used, for example, for Mute, Fader movements, Copy/Paste, Bus assign and much more to increase speed of operation. For example, to activate an EQ on multiple channels, you create a 'gang' and hit the centrally assigned EQ On/Off button once. Creating such a gang over the console makes the set-up quick and easy.
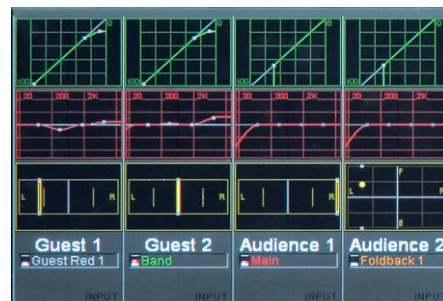
Label and metering for the second layer

The Console – Ease of Total Control

The ease of operation in the Channel Bay is replicated in the Control Bay with a unique and intuitive mode of output channel operation while retaining control of input channels on these faders too.

While the acclaimed Vistonics philosophy of 'where you look is where you control', reflects the familiar channel strip operation of analogue, the challenge for Vista 5 was to extend the concept even further.

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.

Channel Bay

The console surface consists of the Control Bay as well as the Channel Bay, incorporating a total of 32 physical faders on the console. The Channel Bay accommodates 20 faders (100 mm), the Vistonics graphical screen, dedicated input gain rotary encoders at the top of the channels, as well as additional buttons and controls. A number of centrally assigned push buttons are provided for activating processing within the channels as well as for copy/paste functions between them. Each channel includes a dual colour bar graph meter with additional gain reduction display for the compressor/limiter and expander/gate at the same time.

Unique Output Control

The control requirements for outputs differ from those for inputs in several important ways. Excellent metering and fast adjustment of the output channel levels themselves is essential. But it is often the input channels that contribute to the master that are important to the user. Usually the level control of the contributing channels is handled via the input channel strips, but the Studer Vista 5 offers a unique and revolutionary operational concept for controlling outputs.

The Control Bay houses a Vistonics screen with 40 rotaries and switches and 12 faders, 10 of which line up with the Vistonics rotaries as in the Channel Bay. Any channel, including input channels, can be assigned to these faders but they host special functionality for output channels such as VCA Masters or Group Masters. In fact, the 10 faders have a separate navigation system to the Channel Bay. This navigation is made up of 4 fader pages.

The rotary controls on the Vistonics screens can be thought of as an additional 40 faders with 40 real time meters. On these 40 rotaries, up to 40 master faders can be represented with direct access to level control of the master. As each control is immediately adjacent to its associated meter, which includes headroom and overload indication, the operator's reaction is completely intuitive — 'where you look is where you control!'

The most revolutionary and unique use of the rotaries is to call up all the level controls of the contributing channels of any of the masters faders below. A 'Contribution' button above each fader provides reverse bus interrogation, 'pulling' the control of all of the faders of the contributing channels to these rotaries with the channel name and of course real time metering. The user can even assign further channels to the masters from the Vistonics screen directly. This reverse way of working is unique to the Studer Vista 5 and Vista 8 and offers the user incredible speed of operation for making small balance changes without having to go to input faders.

In addition to the 12 faders and the Vistonics screen, the Control Bay houses all general and global controls as well as a set of 2 freely assignable high resolution dual colour bar graph meters including a dual dynamics read out. These meters can be switched to display monitored sources, PFL and Solo. A wide range of third party meters can be mounted onto the desk, mounting kits are available for selected models. A motorised joystick is an option for faster adjustment of surround panning and VSP™ (Virtual Surround Panning) operations. The operating principle in the Control Bay, as across 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.

Immediate access of up to 40 master faders with real time meters.

Graphic Controller

The Graphic Controller's (GC) colour display, which is mounted on top of the desk, provides the operator with quick and easy access to a vast array of console functions and facilities that need only occasional operation, e.g. project, system and snapshot management, patch control and strip assignment. The Strip Setup window displays all available channels with their labels, including Mute and Signal 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.

Input and Output Routing

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 5 system. Patching of external equipment and sources can be done with one simple button-press. This results in reduced set-up time and tremendous flexibility.

Router Page on Graphic Controller

Full Flexibility in Audio Functionality

With the optional Configuration Editing Software the functionality of the console and its principal signal flow capabilities can be customised by the user. This includes the number of channels and processing, and the number of busses as well as their ability to interconnect. Extensive import functions allow the user to adapt existing configurations to meet changing need while maintaining production settings.

Surround Monitoring and Talkback

Control room monitoring supports standards from LR, LCR to LCRS and 5.1. The monitor source selector provides access to up to 60 freely definable sources which can be accessed either directly via the 16 push-buttons or via a pop-up menu on the GC. Two more monitoring areas (e.g. studios) can be fed independently with the required sources. An extensive talkback system is provided on the Vista 5 with dedicated TB buttons on each channel strip (to talk to Direct Outs or N-1 busses) in addition to global switches in the control bay. An ergonomic layout of the monitoring section allows quick SOLO or MUTE of individual speakers as well as instant downmixing from 5.1 to LR format. This may be for a quick check within the monitoring path only or in order to apply the downmixer to all kinds of console surround outputs. Broadcasting in 5.1 and LR format simultaneously becomes a matter of a button push, while still allowing detailed level and phase adjustments in the downmixer in case of necessity. GPIO cards are available for insertion into local or remote I/O racks in order to control external equipment and for signalisation purposes.

Dedicated functionality for Broadcast and Live Production

In addition to their standard functionality, the input channels also provide several broadcast and live production specific features. Dedicated controls for extensive snapshot filtering, sorting and for other cue list functions deal with the most complex live productions.

Dedicated Matrix busses can be configured to suit fixed install applications but can also offer a fast and easy method of handling complex headphone feeds in a broadcast environment. Up to 16 Mute Groups are also available. Standard gooseneck lights can be attached to the console — perfect for fixed install live applications.

Stress Free Outside Source Management

In the last few minutes before the studio goes on-air or the show starts, stress is at its highest and many things are happening at once. Clear and fast console operation is essential. Problems with outside sources and reporters often induce a high stress factor; setting up the correct return feeds and talkback on-air needs to be as simple as possible. In some cases the N-1 feed may not be what the outside customer wants to hear while waiting to go on-air. The Vista 5 offers a switch per channel that automatically sends the outside source a freely definable alternative signal whilst it is off-air. When the outside source is put out on-air (fader opened), the correct N-1 feed is automatically activated without the user having to disable the switch manually. In addition, any number of outside sources are able to communicate off-air by forming a conference (MPX). Again, the outside source is automatically removed from the conference and sent the correct N-1 feed when put on-air. Outside sources made simple — stress free operation!

The System – Seamless integration and easy setup

The Studer Vista 5 is optimised for a high degree of portability. Setting up for a live event, be it a Live Performance or an outside Broadcast was never this easy. The Vista 5 provides seamless integration with other equipment, for example via Harman's HiQnet™ or 3rd party protocol for external router control.

An optional flight case provides protection during relocation of the desk. Within minutes the only two cables between the desk and the DSP rack can be connected. The presence of a remote Stagebox providing additional I/O to the one in the DSP rack is automatically detected by the system. All monitoring outputs are brought to the desk via CAT 5 cable and XLR connectors can be found on the rear of the console. If digital monitoring loudspeakers are in use they may be connected directly to the consoles AES/EBU monitoring output, providing an uninterrupted digital signal path from the console inputs all the way up to the loudspeaker. In addition, direct outputs are available for purposes such as connecting external third party meters. The console also allows encoders/decoders to be inserted into its monitoring path. Talkback returns from studios as well as a producer input are also provided. Where there is a need to control external equipment from within the console, there are 9 buttons associated with GPIOs directly within the desk. This is useful for controlling music play-out systems, telephone hybrids etc.

While the I/O and DSP power of the console is defined on a customer-by-customer basis, it can be further expanded

at any time. This allows the creation of extensive systems with well over 200 DSP channels and up to 1700 inputs and outputs (see page 11).

The extensive routing matrix within the DSP Core eliminates the need for an outboard patch bay or front-end router. In an OB truck, the integrated routing matrix can be used as the audio distribution backbone thus making expensive and large external solutions obsolete.

The console patch points may also be externally controlled via a 3rd party Router with the possibility to import source labels. An optional patch selector panel with 32 freely programmable push buttons is available to set patch points from any location within a facility. This allows flexible routing control as well as monitoring feeds to be realized for a specific installation.
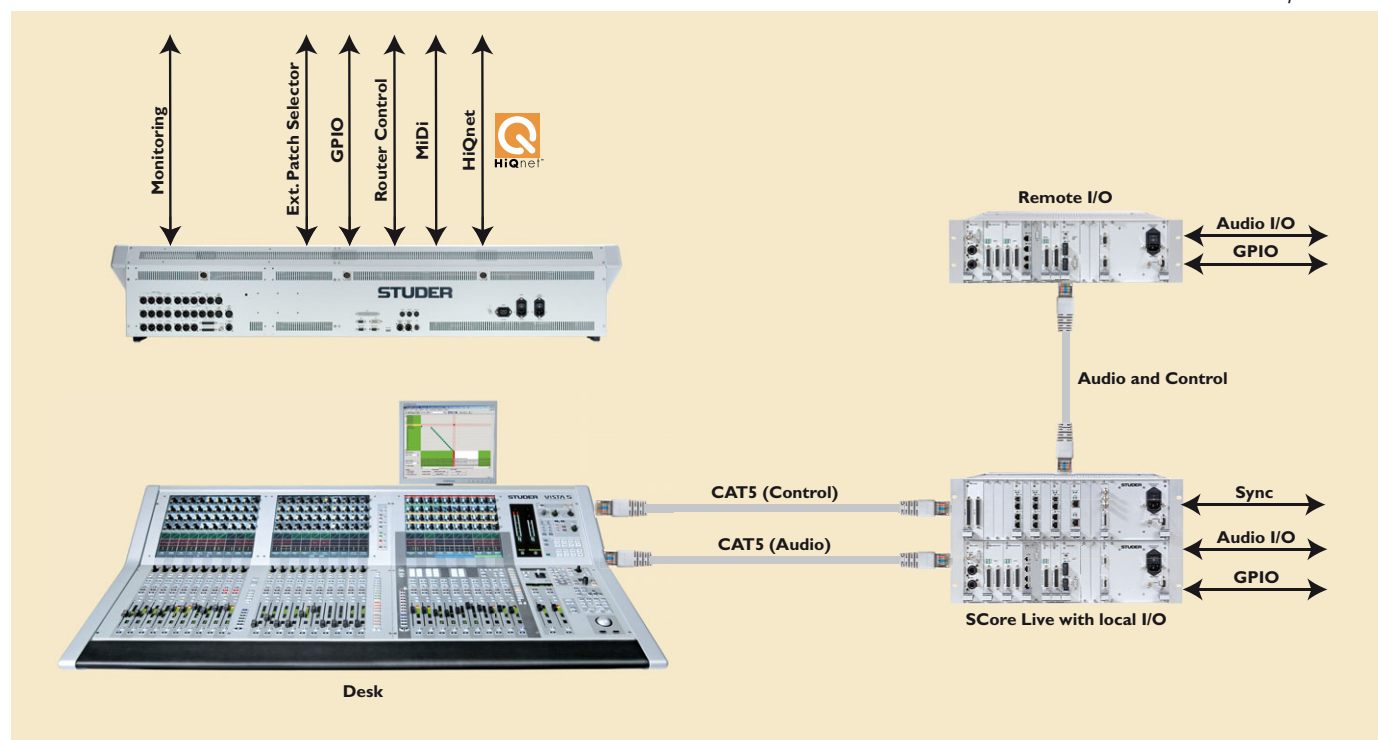
GPIO cards may be fitted into any I/O rack, making it possible to realize even complex "Audio Follows Video" installations in TV environments, where the console must automatically open and close faders upon camera switching.

The Vista 5 can create Cue Lists from console snapshots and MIDI events which can recall console settings and control external equipment. With the Integration of Harman Pro's HiQnet communications protocol, HiQnet Venue Recall commands may also be added to a Cue List, which can then be used to trigger changes in amplifier levels, loudspeaker processing EQ and routing across an entire HiQnet system. The Vista 5 also allows the control of external MIDI devices as well having its cue list slaved to an external show control system ("MIDI Show Control").

Cue List

System Overview

Desk

Remote I/O
Audio I/O
GPIO

Audio and Control

CAT5 (Control)
CAT5 (Audio)

Sync
Audio I/O
GPIO

SCore Live with local I/O

Proven Reliability for Live Transmission

Being a 3ʳᵈ generation Studer Digital Console, the Vista 5 inherits a vast amount of experience in digital engineering, and ensures confidence in reliability along with Studer's unparalleled reputation for quality.


Redundancy

With any live desk, fail-safe operation & redundancy is an essential feature to ensure constant 24/7 operation. The redundancy concept extends to all hardware parts of the Vista 5. Redundant Power supplies are available throughout the system, while the DSP core can be equipped with redundant cards, both for communication with the desk as well as for audio processing. Redundant DSP cards take over immediately in the case that another card fails, with hardly any audio interruption and no interaction from the operator. The MADI input/output cards host redundant connectors as a standard.

The control system comes with a Raid 1 disk array fitted. Backups of mixer settings can also be copied on a memory stick via the USB port on the front panel.

Maintenance

The channel bay as well as the control bay lift up for quick and easy maintenance. A real time System Surveyor with log file is provided as part of the Graphical Controller firstly to act as a confidence check for the operator and secondly, to assist with maintenance and fault finding.
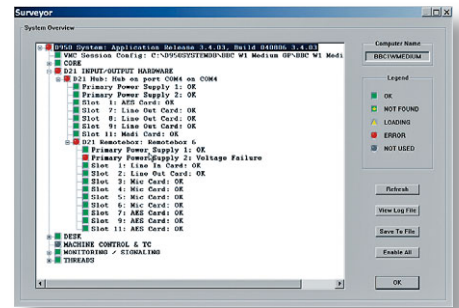
System Surveyor

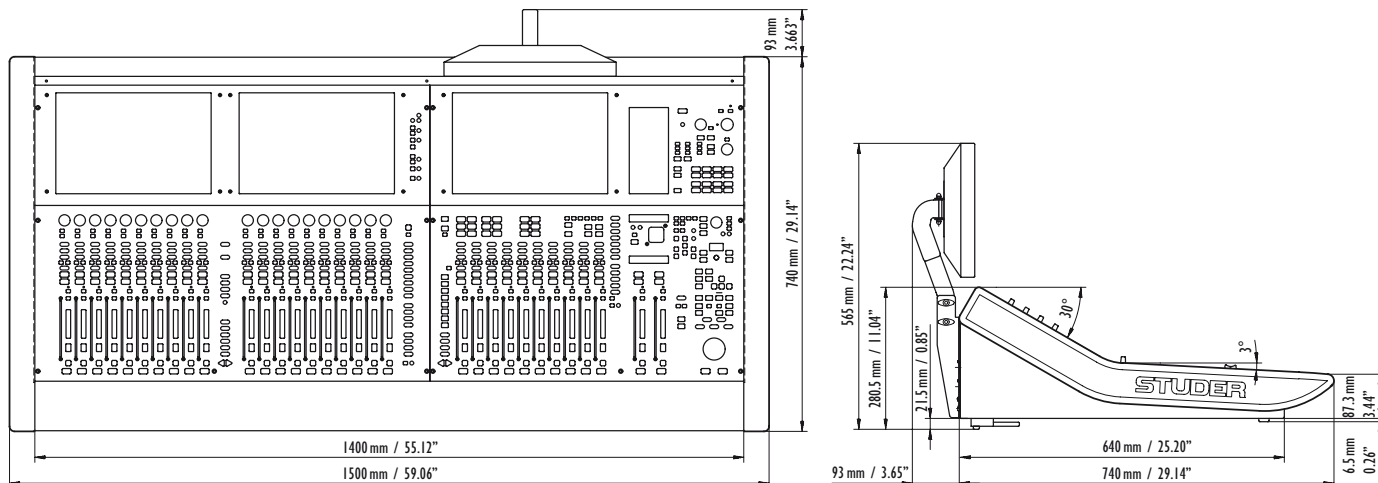## Studer Original Equipment – Made in Switzerland

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 and continuous investment in R&D has been rewarded with its continued position as a world leader in audio technology as well as with 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 you need is here — designed, engineered and manufactured in Switzerland with PCB assemblies crafted on Europe's most advanced surface-mount PCB line.

Technical Data

1400 mm / 55.12"
1500 mm / 59.06"

93 mm / 3.663"
740 mm / 29.14"

565 mm / 22.24"
280.5 mm / 11.04"
215 mm / 0.85"

640 mm / 25.20"
93 mm / 3.65"
740 mm / 29.14"
87.3 mm / 3.44"
6.5 mm / 0.26"

30°
3°
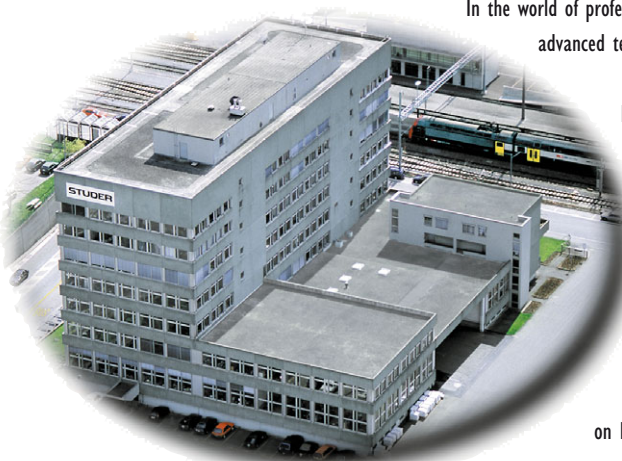
The console consists of the Control Bay as well as the Channel Bay incorporating a total of 32 faders.

The DSP core, the "SCore Live", builds on Studer's excellent reliability record and inspires a high degree of confidence enjoyed by the numerous clients operating our consoles in mission-critical applications. The SCore Live 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 44.1 kHz, 48 kHz, 88.2 kHz or 96 kHz mode. The clock source may be sourced internally, or from external WordClock, AES/EBU or Video Sync signals.

The more DSP cards that are fitted in the core, the more channels and busses will become available. The SCore Live offers up to 4,000 'timeslots' for freely routing signals within the core. These timeslots are fed by I/O card slots which hold a minimum of one bridge card (for communication with the desk) as well as up to 9 DSP cards. This allows the highly scaleable system to easily exceed a channel count of 200 on the Vista 5 with an appropriate number of busses.

By using the optional Configuration Editor Software it becomes possible to change the balance between channel and bus count and even freely define the signal flow of
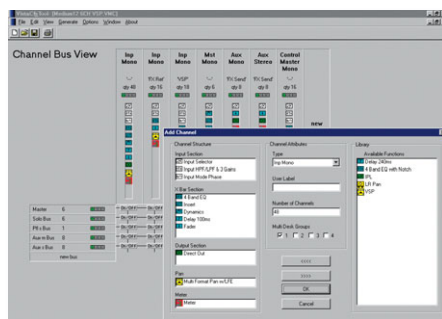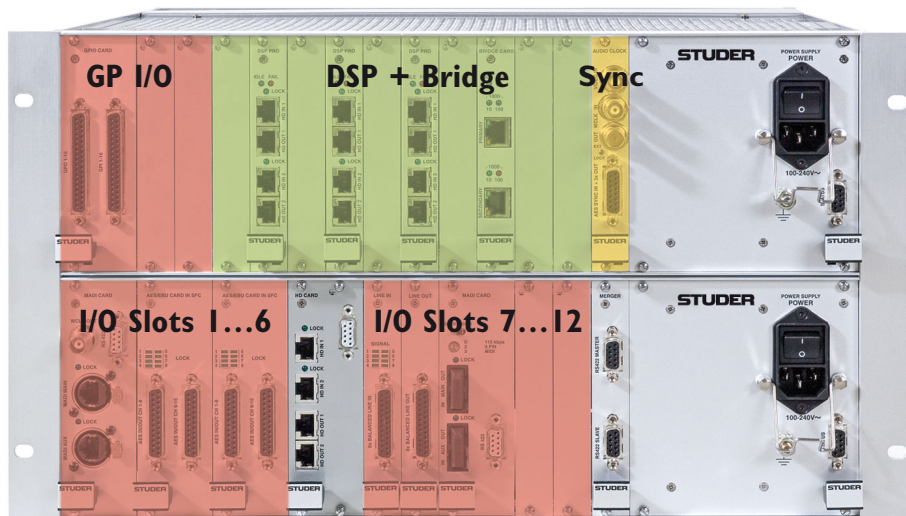

Configuration Editor Software

the whole console.

Studer D21m I/O System

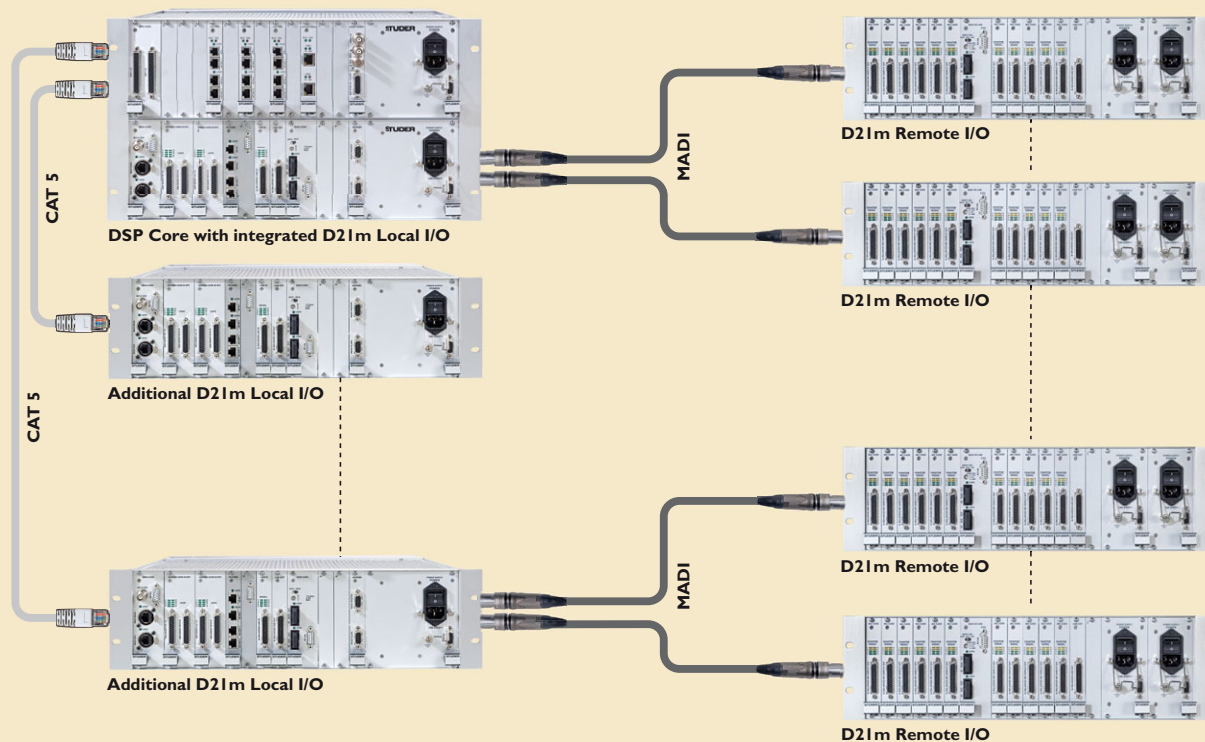The Vista 5 uses the Studer D21m I/O system which provides

a flexible and expandable high density 24-bit 96kHz capable audio interface. Up to 9 local I/O frames are connected to the DSP core, whereby the first I/O frame is already mechanically integrated into the DSP core. These local I/O frames may then connect to remote Stageboxes using MADI fibre or CAT 5 connections, enabling large numbers of microphone sources in either studios or OB locations to be connected to the console. Full I/O channel count even at 96 kHz is ensured when using the second 'redundant' MADI link for channel extensions.

All local and remote I/O frames can be fitted with a variety of I/O cards, such as:
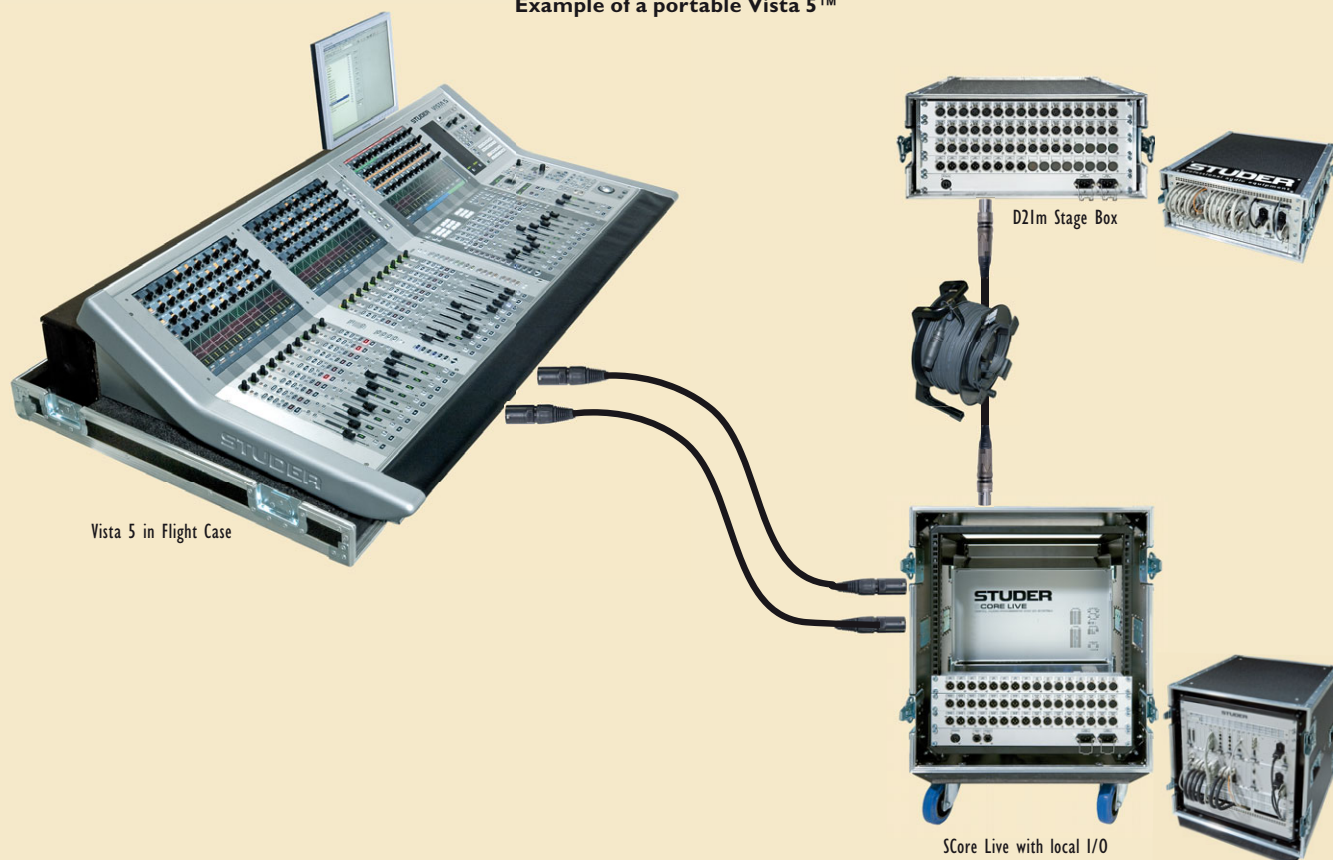
• 4 Channel analog Mic/Line Input
• 8 Channel analog Line Input
• 8 Channel analog Line Output
• 16 Channel digital AES/EBU Input and Output, with or without SRCs
• 16 Channel digital ADAT Input and Output
• 16 Channel digital TDIF Input and Output
• 8 Channel SDI Input and Output (De-Embedder and Embedder)
• 56 or 64 Channel digital MADI Input and Output

A D21m 3U stagebox can accommodate up to 48 mic inputs with analog split outputs as a standard and may be shared between multiple consoles. It may be equipped

DSP Core Structure

GP I/O DSP + Bridge Sync
I/O Slots 1…6 I/O Slots 7…12

System Expandability

CAT 5

CAT 5

DSP Core with integrated D21m Local I/O

Additional D21m Local I/O

Additional D21m Local I/O

MADI

MADI

D21m Remote I/O

D21m Remote I/O

D21m Remote I/O

D21m Remote I/O

Example of a portable Vista 5™

D21m Stage Box

Vista 5 in Flight Case

SCore Live with local I/O

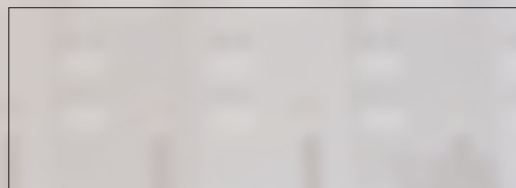Studer Vista 6 — Live Broadcasting

Studer Vista 7 — Production and Postproduction

Studer Vista 8 — Live Production and Broadcasting

STUDER
professional audio equipment

H A Harman International Company