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STUDER®

by HARMAN



VISTA 5™
DIGITAL MIXING SYSTEM **SR**
Live Sound Reinforcement

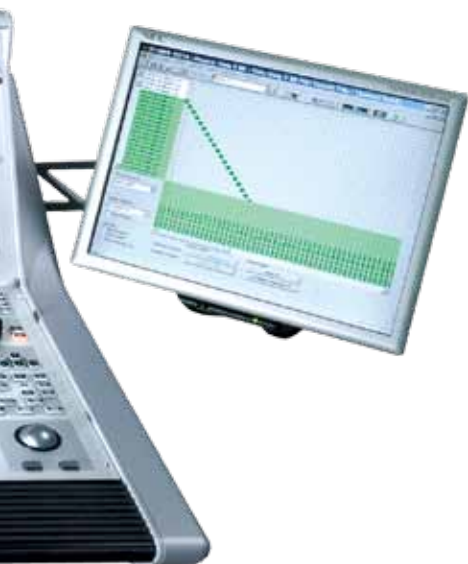


Engineered for the Road

Continuing the successes of the Vista 5, 6, 7 and 8 in the broadcast and fixed install markets, Studer now brings this failsafe and intuitive technology to the tour sound market.

While retaining the renowned qualities of the Vista 5, the Vista 5 SR is the result of careful re-engineering to provide a road-ready, robust package.

Most obviously a steeper angle of the Vistonics™ screens has been introduced. This provides a more direct viewing angle when operating in a standing position particularly in daylight. In addition to this, we have introduced a new temperature control system – an industry first when applied to the redundant layout of control system cooling – making the Vista 5 SR completely reliable in the very broad temperature ranges of its sound reinforcement applications.



Furthermore, console illumination being integrated into the desk and ultra-bright LED buttons means the console can be operated equally well in dark as well as bright environments. Proven flash memory is used instead of hard disc drives, and redundant power supplies as well as optional redundant audio and control links make the Vista 5 SR a heavy duty system engineered for the road.

STUDER proven technology

Studer is renowned for its Broadcast installations, but in fact many live sound installations around the world already rely on Studer technology for dependable 24/7 operation. Whether in opera houses or theatres, TV and radio stations or OB trucks, sound engineers count on the reliability of Vista mixing consoles and are producing seamless live shows day after day. And now with the introduction of the Vista 5 SR, live sound becomes even easier!

Compact System – easy to setup and transport

We understand that it's very important in tour sound to have a compact mixing system that can be set up within the shortest possible timeframe. Other high-end mixing systems can be quite time consuming to set up, connect and configure. The SR is designed to be fast and easy. The Vista 5 SR desk surface has a very small footprint (150x76cm, 59x30") and weighs only 65kg (143lbs)

including redundant power supplies which are built into the desk. The local Core and I/O, which is one single rack, is then connected with only two Cat5 cables. In addition to this, the stagebox rack is connected to the local rack with optical MADI connections – and the system is ready to use.



Vistonics™

Our patented Vistonics screen technology used in all the Vista systems has been received incredibly well by the broadcast and live sound industry over the past 6 years. This highly praised 3rd generation user interface is of course part of the Vista 5 SR.

Vistonics fully integrates rotary controls and buttons with flat screen displays to bring visualisation and operation into immediate proximity. 40 rotary controls and buttons on the upper two thirds of the screen and a touch sensitive area on the lower third of the screen make up one whole Vistonics screen which is used to control and visualise ten mixing console channels.

Being able to use the TFT screens to display coloured icons right next to the rotary controls means the operator understands immediately what he is about to control and when

he changes values he gets an optical feedback right at the position of the control. This makes working on a Vista console as easy as working on an analogue console – “where you look is where you control”.

At the same time the lower third of the screen provides all channel relevant information – nicely displayed in coloured graphical charts. This area is very important for the engineer – here he can see what’s happening in every single channel, at a glance.

It’s as simple as touching a channel setting chart (e.g. a dynamics curve) – and the associated rotary controls immediately represent this channel EQ giving access to the colour coded icons that is just as easily recognisable as the potentiometers on an analogue console. No menus – no paging – just direct and fast access!





Efficient and consistent operation throughout the console

Fast access :

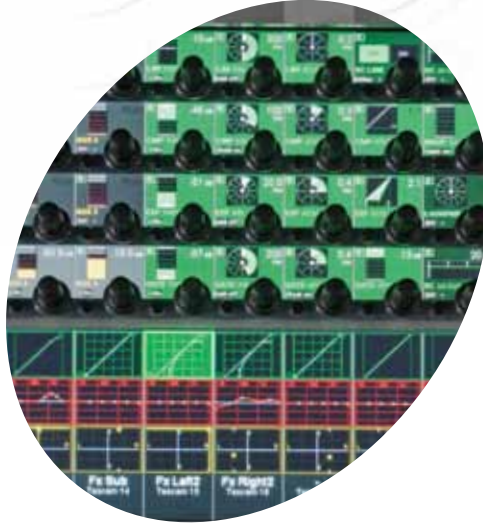
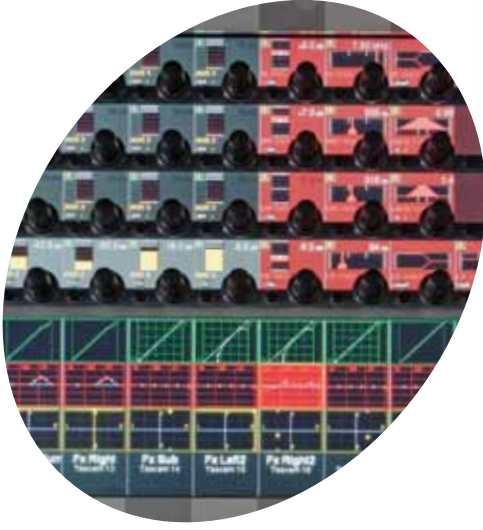
The Engineer touches the desired function overview and is given immediate access to all available controls. Every parameter is just one button-press away.

Sections/Layers :

The channel order is freely assignable. All mixing console channels can be placed within six sections, where

the corresponding six direct access buttons provide fast navigation.

A graphical tool is used to assign the channels to the physical faders, and even allows sorting and adding channels during the live mix. In addition each fader can be individually flipped to a second layer for immediate access to emergency channels such as backup microphones. Uniquely, all second layer channel labels, each with a small real-time level 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 how long they are pressed (pressed-and-held or tapped briefly).

In addition to Talkback, PFL, EQ on/off, etc., the functions include those accessed by the touch-screen – such as viewing an audio function – as well as 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 Vistronics will automatically switch back to the

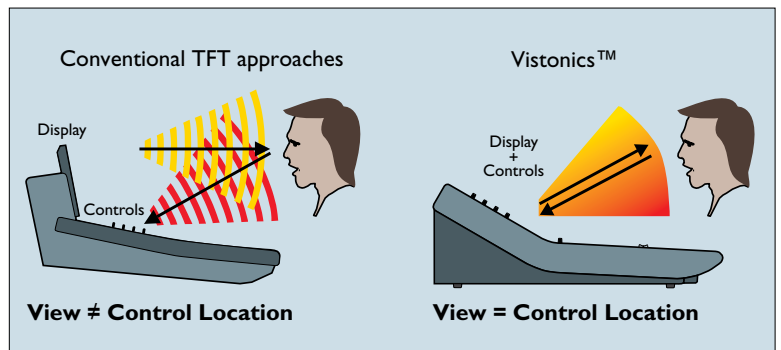
previous view. The operator doesn't have to remember where he was prior to making an adjustment on a channel setting. This is extremely intuitive and dramatically reduces the number of thought processes in normal console operation freeing the mind for the job at hand – the mix.

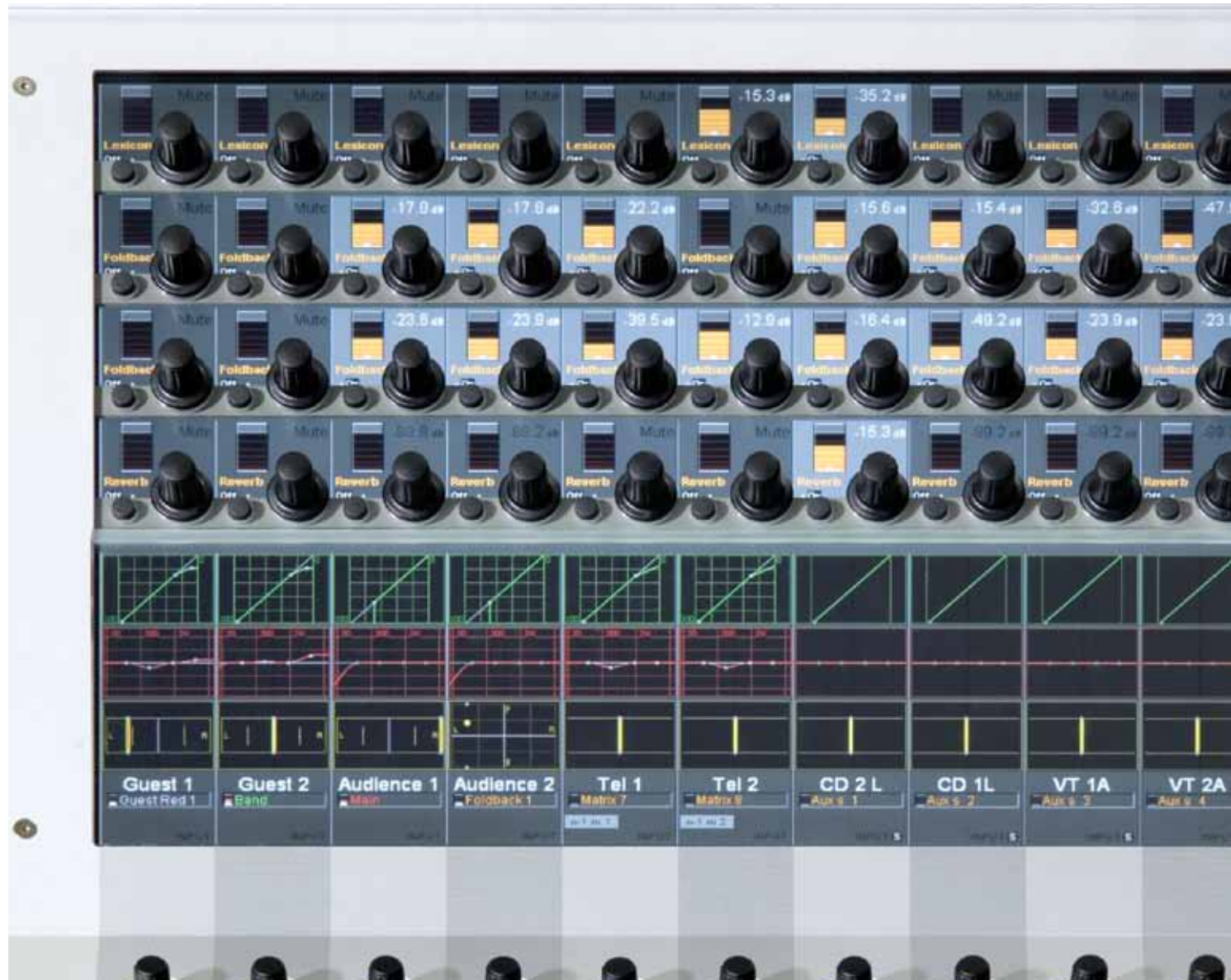
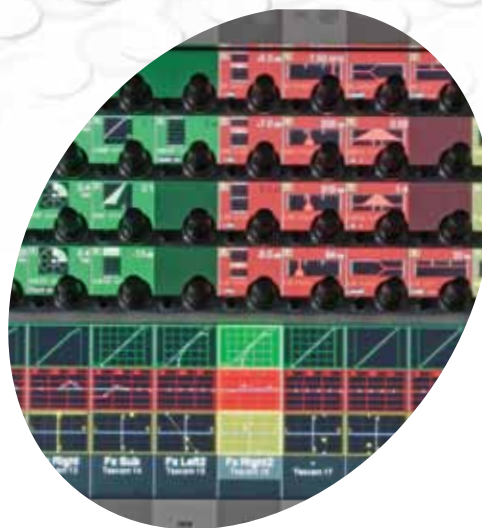
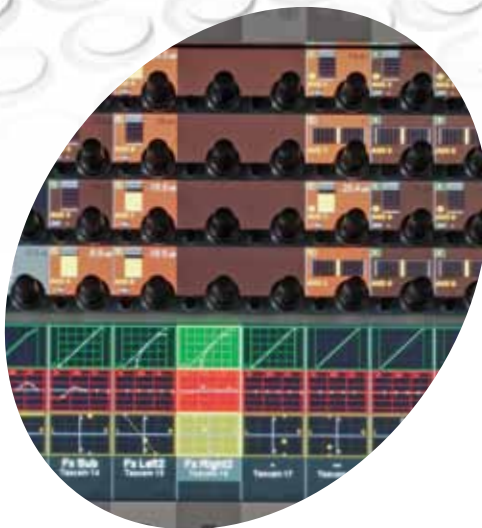
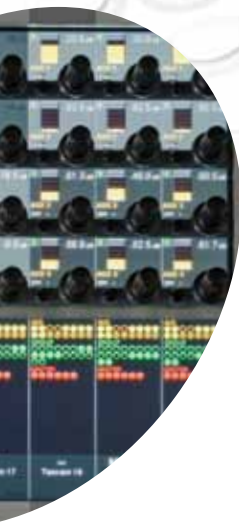
Ganging :

The ganging function allows the operator to quickly adjust common functions across multiple channel strips, e.g. Mute, Fader Movements, Copy/Paste and Bus Assign. 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.

Ultra fast Copy/Paste with channel settings library :

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. Also, complete channels can be cloned to one or many target channels. Furthermore, all of these channel settings can be stored in a central library and the engineer can take his favourite collection of settings on his memory stick. Setting up the Vista 5 SR for a production becomes a quick and easy task. Preparation time is reduced considerably.





That Studer Sound

Our intuitive user interface sets us apart from the rest of the audio console crowd, but going back over our 50 year history, Studer sound quality has always placed us at the front of the race. Great pride is attached to our audio quality – our R&D team in Switzerland continually refines well-evolved circuitry and develops new and innovative audio algorithms to ensure ‘a Studer always sounds best’ audio quality.

The Vista 5 SR uses the Studer mic preamp technology that produces unsurpassed audio quality e.g. very low noise floor, high CMRR and virtually no distortion while a high input impedance makes it invisible for parallel connected equipment.

The converters are high precision 24 bit, and on the mic/line card a softclip limiter can be engaged to prevent the signal from clipping the converter.

All the signal processing takes place in floating point arithmetic – thereby delivering a huge dynamic range. No overloads will ever occur within the mixing console, even on the summing busses where 40 bit floating point architecture is used.

Clocking a digital audio system is crucial for perfect sound quality. The Vista 5 SR uses the SCore Live equipped with a dedicated audio sync board. It uses an internal low jitter clock generator but can also be synchronised from an external signal – be it wordclock, AES or Videoreference. In case of the loss of such an external reference signal the board automatically switches to the internal generator.



High-end Channel Processing

For signal processing only high quality algorithms are used. When setting up the console for a specific production, input and output channels can be equipped with different kinds of processing blocks – free to the choice of the user.

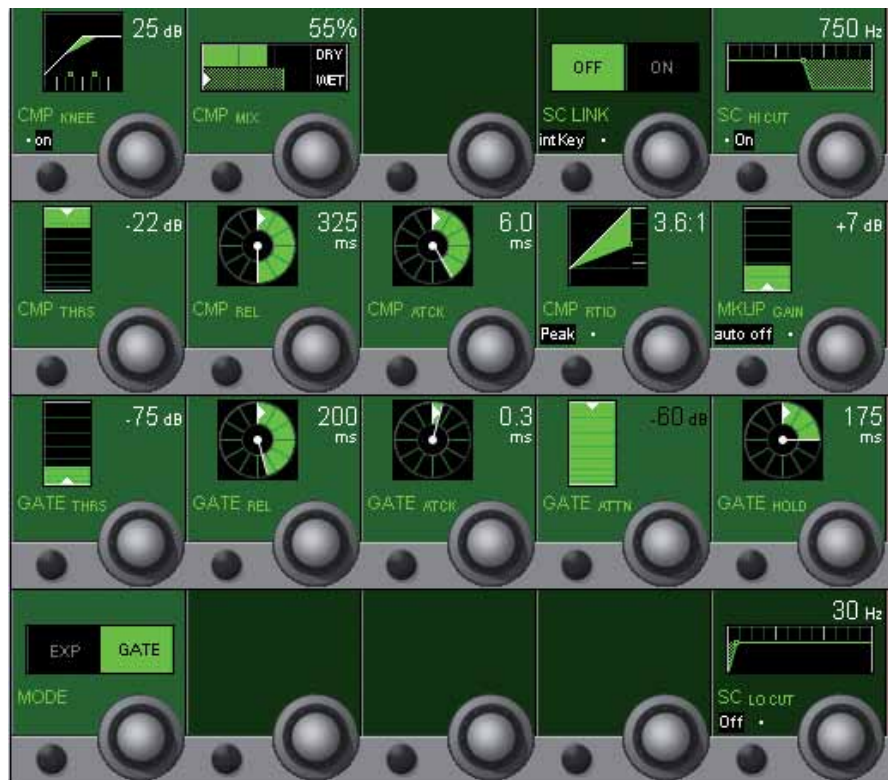
For EQ we make use of highly sophisticated algorithms where, when dynamically changed, the calculated audio is carefully crossfaded in order not to introduce any unpleasant artifacts.

Dynamics processing is as extensive as, for example, introducing a ‘look forward time parameter’ for the limiter stage.

Complementing the standard dynamics package is the ‘Vintage Dynamics’ processing block. The Compressor section of the ‘Vintage Dynamics’ section is flexible enough to permit different types of sound colouration, and can be used to produce quite extreme effects. Compressor settings include soft-knee width and peak or rms detection to allow the compressor to be set-up to cater for a wide range of tastes.

Another very special function is the ‘wet/dry’ blending control, which opens up a whole range of new possibilities. For example, “parallel compression” or “upward

compression” is available without the need for any complicated or extensive routing and also without the need for delay compensation.



Configurable DSP and I/O

The more DSP cards that are fitted in the core, the more channels and busses 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 scalable system to easily exceed a channel

count of 200 on the Vista 5 SR 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 the whole console.





The Vista 5 SR 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 MAD1, fibre or CAT 5 connections, enabling large numbers of microphone sources on stage to be connected to the console. Full I/O channel count, even at 96 kHz, is ensured when using the second 'redundant' MAD1 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 MAD1 Input and Output

- 32 Channel digital CobraNet Input and Output
- 64 Channel digital EtherSound Input and Output
- 16 Channel digital Aviom A-Net Output

Suggested FOH and MON configurations

Vista 5 SR systems are delivered with an I/O count that is sufficient for most large tours and live productions. The standard system is equipped with 84 mic/line inputs, 8 line outputs and 8 AES I/O on the stagebox – and 16 line inputs/48 line outputs, 16 AES I/O and 4 MAD1 ports in the local rack.

The system is also delivered with two optimised channel/bus configurations, one being for Front Of House and one optimized for Monitor mixing applications.

(for more details see Specifications on page 23)



Unique Output Control



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 SR offers a unique and revolutionary operational concept for controlling outputs. The Control

Bay houses a Vistronics screen with 40 rotaries and switches and 12 faders, 10 of which line up with the Vistronics 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 Vistronics 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 engineer's reaction is completely intuitive – 'where you look is where you control!'





Contribution Mode

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 master 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, Vista 5 SR and Vista 8 and offers the user incredible speed of operation for making small balance changes without having to go to input faders.



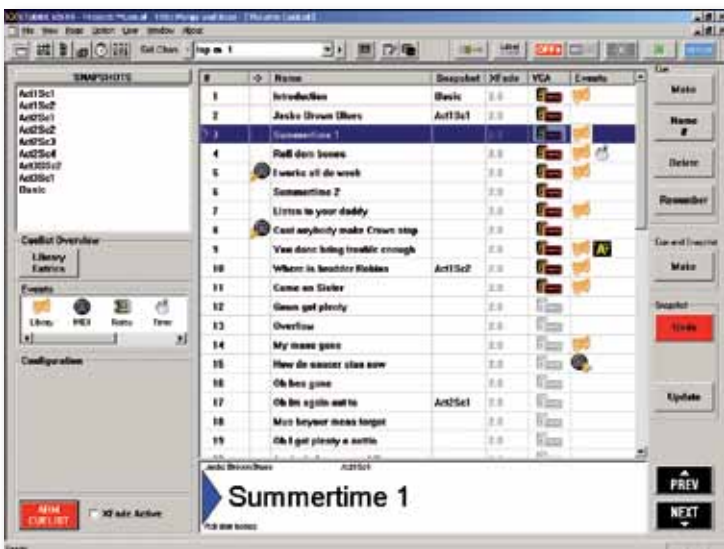
Outstanding Static Automation



After soundchecks have been completed and snapshots stored on the console, very often there is the need to protect a certain area of the console against being overwritten from previous stored settings. The Vista 5 SR goes as far as providing a very intuitive way of selecting any or all mixing console parameters to be part of a so called snapshot filter mask. This enables the operator to selectively update settings and snapshots.

Cuelist with MIDI and HiQnet™ integration

The Vista 5 SR 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 SR also allows the control of external MIDI devices as well as having its cue list slaved to an external show control system (MIDI Show Control).





Virtual Surround Panning for Live



STUDER VIRTUAL SURROUND PANNING



Initially developed for the Studer Vista 7 and Vista 8 consoles, Virtual Surround Panning (VSP) is now in its second generation as VSPII with specific features introduced for live sound production. It enables the live sound engineer to use the creative panning tool without fear of having different levels at different speaker positions (e.g. rhythm guitar louder in the left PA side than in the right PA side only because of amplitude panning). The A-B panning mode of VSPII makes use of time delaying a source on one side in respect to the other to achieve a directional perception from the audience – whereas with simple amplitude panning only signal levels would be used and therefore levels would be different in different areas of the audience.

There are many more creative panning modes within VSPII that can be used in multichannel surround sound PA productions.

Since the Vista 5 SR is completely flexible in bus structure configuration, any kind of surround production is possible.



Theatre workflow and performance functionality

Theatre sound designers and console operators have some of the highest demands when it comes to efficient work on the heart of their audio system. Nothing must go wrong, while everything needs to be changed quickly! To enhance workflow processes from offline programming, rehearsals, through to daily performances, Studer has developed special software which makes Vista consoles the ideal choice for cue-based theatre productions.

Sound designers now have a complete toolkit provided with the Vista 5 SR.

Together with the Vista's already extensive facilities which suit Theatre sound, such as high input/output capacity, DSP configurability, the acclaimed Vistonics™ user interface, distributable I/O systems, control surface configurability, very compact footprint and outstanding sonic performance, the Studer Vista series of consoles is the perfect choice for world class theatres.



Offline/Online remote editing and control

Virtual Vista is a PC software suite which allows not only offline set-up of shows (for example channel labels, routing, VCA assignments and main cues to script), but also direct online control of the Vista so that the sound engineers can position themselves at critical locations within a theatre and make adjustments to delay, equalisation etc.

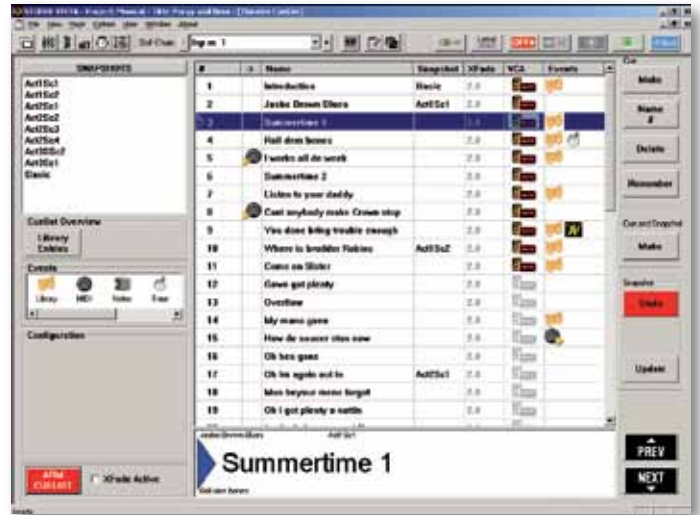
This can also function as a console control back-up, working in parallel with the desk.



Enhanced Theatre Cue-lists

To aid in rehearsal and show build, cues containing a snapshot can now be created with a single button press, cues can be comprehensively inserted and re-numbered, and cues can be automatically recalled via a precisely timed event to give the engineer an extra pair of hands.

Cues can also fire MIDI/MMC events, for example for SFX playback, where the MIDI ports can be muted for cue-list navigation. Most importantly the enhanced cue-list now provides a large display of the current cue, as well as an indication of whether a snapshot is masked or not made clearly visible in the cue-list.

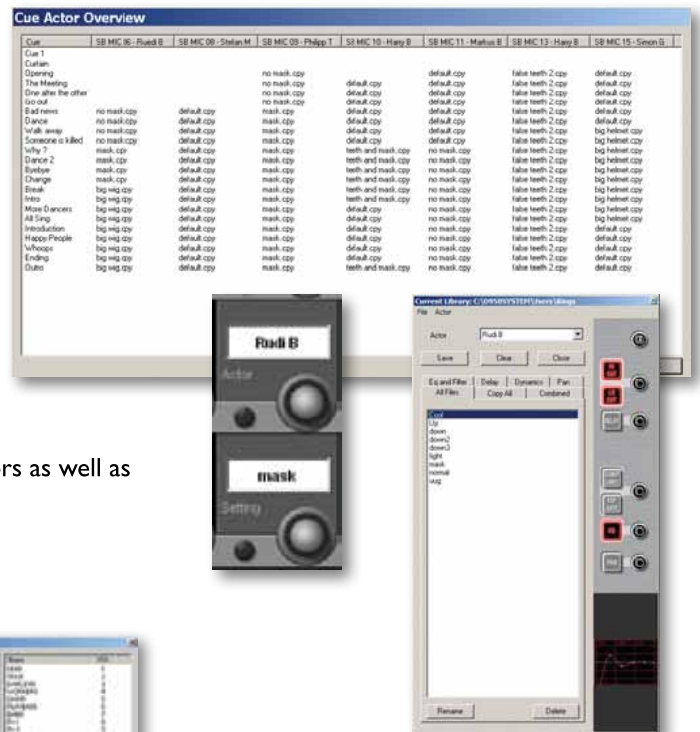


Character/Actor Library Event handling

Characters in a production can be given any desired library entry (for example, a special EQ setting) on a cue by cue basis. This allows easy adjustment, either temporary or permanent, of these library settings, as well as a very straightforward way to replace the settings of an actor with replacement-actor or understudy settings.

There are two ways of applying library events to Characters, firstly by using the two new Viconics controls on the actual channel, and secondly the large overview window where a list of all cues and all Characters is provided.

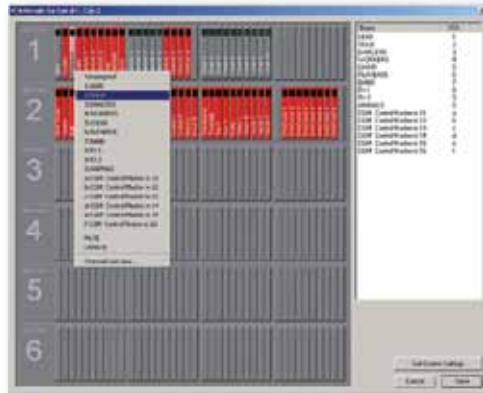
The Library window itself enables selection of the different actors as well as very easy creation of understudy actors.



VCA/Mute Events

VCA assigns and muting of channels can now be entered on a cue by cue basis, without the use of snapshots, for a more comprehensive and easier way of building a show.

The new VCA/Mute events are now automatically created with every cue, where again a dedicated overview window clearly shows all input channels to allow for easy VCA assigning and muting/unmuting of the channels, on a cue by cue basis!



Also in this window, naming of the VCA masters is performed where intelligent naming history makes it possible to label the masters for every cue in record time.

Your own choice of effects



The optional plug-in engine for the Vista console allows a free choice of standard VST plug-ins to be used with the desk, allowing engineers complete freedom of choice over the effect, graphic EQs or other processing they wish to use, especially if they already own plug-in licenses.

This means that a Vista console can be personally tailored by an engineer when he configures the console, typically using an iLok 'dongle' to authenticate his own favourite plug-ins. The engine is fitted into the existing local equipment rack (space permitting), and comes equipped as standard with world-class reverb, delays and graphic equalisers. Control of the plug-ins is via switching the main graphical controller screen to the plug-in manager screen, and setting as required. Control continues through the existing mouse and keyboard on the console. MIDI audio interlinks allow channels to be patched to the plug-in inputs and outputs, so that effects can be inserted directly into channels or busses where required.

The power of the plug-in engine can be expanded through installing a DAW system, for example, to allow multitrack recording via MADI of the console signals, which can easily be selected in the general patch window.

The plug-in engine responds to MIDI commands, so that cues can trigger different plug-in settings; thus linking the recall of the preprogrammed effect settings with the snapshots of the console.



Engineered for Performance

STUDER brings proven failsafe technology to tour sound

With any live desk, fail-safe operation and redundancy are essential features to ensure reliable operation. Studer's redundancy philosophy extends to all hardware parts of the Vista 5 SR. Redundant Power Supplies are available throughout the system, while the DSP core can be equipped with redundant cards, for communication with the desk as well as for audio processing. Redundant DSP cards take over immediately in the case that any other card fails, with hardly any audio interruption and no interaction from the operator. The MAD I input/output cards host redundant connectors as a standard. The control system comes with a flash drive instead of

mechanical hard disc drives. Backups of mixer settings can also be copied on to a memory stick via the USB port on the front panel.

To cope with the large temperature range often encountered on tour productions and outdoor festivals, the Vista 5 SR desk surface has been equipped with a temperature controlled cooling system. There is even a backup to this system that would take over in an emergency if the primary system should fail. Also the DSP core and I/O frames are cooled with large surface ventilation systems, fitted with dust filters that are very easy to replace.



Used around the world



WORLDWIDE **Celine Dion world tour**

Two Vista 5 SR desks handle front-of-house and stage monitor duties throughout the Canadian songstress' entire 2008/2009 world tour.

Dion's FOH engineer, Francois 'Frankie' Desjardins, explains his reasons for selecting the digital Studer Vista 5 SR consoles: "All of the systems we considered sound good and offer similar features. But, for me, the top three reasons for going with the Vista 5 SR were easy. Number one, it is very compact and light. Since we will be taking the console with us throughout the tour weight is very important. And its small footprint means that we can place it within the audience without taking up valuable seating space.

"Secondly the Vista 5 SR produces very little heat. When touring Australia in February, for example, the local temperatures can cause major reliability problems with equipment that runs hot.

"Finally, we need a design that can handle FOH and monitors equally efficiently. Our operators will be out on the road for perhaps two years, so we may need to swap between mix positions; having to learn two console systems just wasn't viable for us."

USA **West Side Story**

The highly anticipated production of *West Side Story* opened at the Palace Theatre on Broadway with a Studer Vista 5 digital console providing outstanding audio quality and versatility to the production.

Sound designer Dan Moses Schreier comments on the decision to deploy the Studer console: "The Vistonics™ interface was a huge factor in selecting the console. Many digital consoles feel like you are mixing off a computer monitor and what is terrific about the Vistonics interface is that it feels more like an analog console in the sense that you always see what you need to see at the channel strip."



WORLDWIDE **Billy Joel World Tour**

When looking for a sound console for both FOH and the monitor positions on the Billy Joel tour, Clair Showco turned to the Studer Vista 5 SR for its portability, ease of use and sound quality.

"The Vista 5 SR is capable of handling a lot of inputs," said FOH engineer Brian Ruggles. "We've tried different digital desks before but I wasn't really thrilled at the way they sounded – until this one came along. The Vista 5 SR is by far the best sounding digital desk I've heard because it's closest to the sound of an analog desk."

Specifications

84 Mic/Line Inputs (Stagebox)
 8 Line Outputs (Stagebox)
 8 AES/EBU Pairs SFC Inputs (Stagebox)
 8 AES/EBU Pairs Outputs (Stagebox)
 8 Mic/Line Inputs (Local Rack)
 16 Line Inputs (Local Rack)
 48 Line Outputs (Local Rack)
 16 AES/EBU Pairs SFC Inputs (Local Rack)
 16 AES/EBU Pairs Outputs (Local Rack)
 2 MAD1 Ports for Stageboxes (Local Rack)
 2 MAD1 Ports for Customer use (Local Rack)
 1 MAD1 Port for Desk Monitoring (PFL, Head-
 phone, Nearfield, Wedge, InEar)

Weight

Desk : 68 kg / 150 lb
 Optional Desk Flightcase : 90 kg / 198 lb
 Local Rack DSP and I/O Frames : 56 kg / 123 lb
 Optional Local Rack Flightcase : 103 kg / 227 lb
 Stagebox Rack I/O Frames : 26 kg / 57 lb
 Optional Stagebox Rack Flightcase : 67 kg / 148 lb

Power Consumption

Desk : 350 Watts
 Local Rack : 400 Watts
 Stagebox Rack : 300 Watts

All weights are approximate.

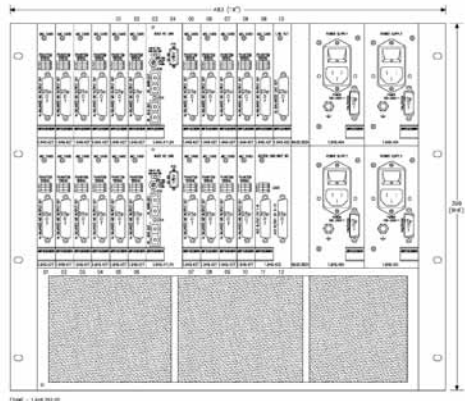
FOH Configuration

84 Mono Input Channels
 20 Stereo Input Channels
 8 Stereo Group Channels
 10 Mono Aux Sends
 10 Stereo Aux Sends
 5 Mono Matrix Feeds
 5 Stereo Matrix Feeds
 16 Control Group Masters
 3 Mono Master Channels
 68 Mix Busses in total

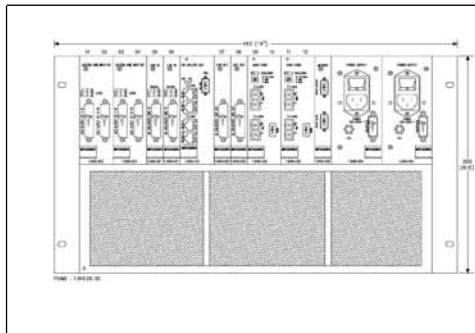
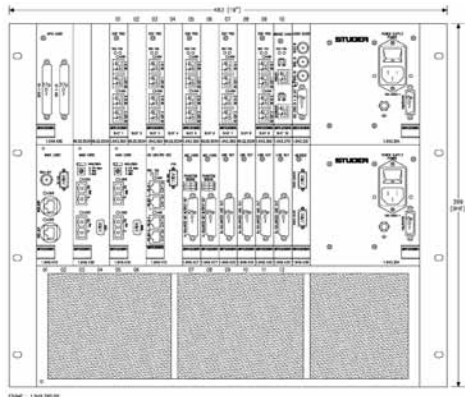
MON Configuration

84 Mono Input Channels
 20 Stereo Input Channels
 10 Mono Aux Sends
 24 Stereo Aux Sends
 16 Control Group Masters
 4 Mono Master Channels
 66 Mix Busses in total

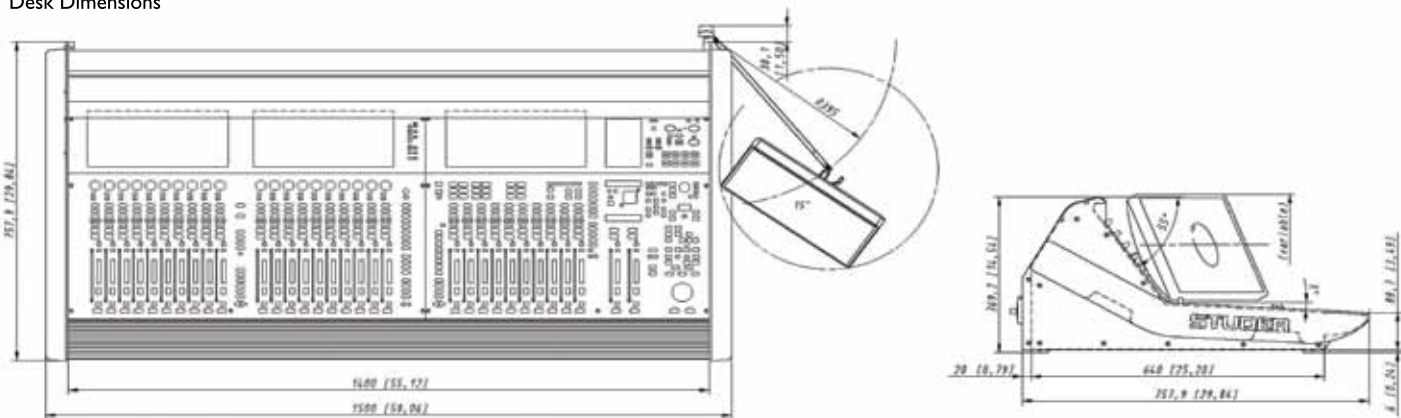
Stagebox Rack Frames



Local Rack Frames



Desk Dimensions



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