STUDER by HARMAN

Studer Professional Audio GmbH,
Riedthofstrasse 214,
CH-8105 Regensdorf,
Switzerland.

Phone: +41 44 870 75 11
Fax: +41 44 870 71 34

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VISTA 1

DIGITAL MIXING CONSOLE

Quality you can afford and rely on

STUDER by HARMAN

VISTA 1
DIGITAL MIXING CONSOLE

Photo shows 22-fader version on optional floorstand.

Cover photograph shows 32-fader version.

Studer sound and ease of use

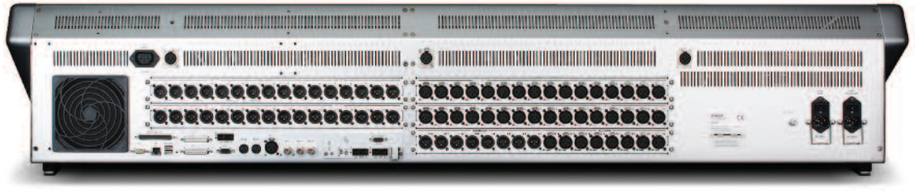
Now more accessible than ever

The Studer Vista 1 is a transportable digital mixing console for broadcast, live and production use. For the first time with a Vista, all you need is contained within the console – the control surface, I/O system, DSP and power supplies are all in one unit.

This makes Vista 1 the ideal choice when space is restricted, such as in OB and ENG vans, small studios, or for applications where the console needs to be moved with ease.

Thanks to the patented Vistonics™ user interface with 40 on-screen rotary knobs, its look and feel is identical to that of its larger and more sophisticated sisters. Anyone who is already used to the intuitive Vista surface will immediately be familiar with the Vista 1.

And anyone new to Vista will be amazed at how simple it is to learn.



The Vista 1 console comes in a standard configuration comprising:

- 32 or 22 motorized faders, with Studer FaderGlow™
- 96 DSP channels, including 5.1 surround channels
- Powerful integrated Lexicon FX
- True broadcast monitoring, talkback, red light control and eight general-purpose control inputs/outputs (GPIO)
- Input level and gain reduction LED bargraph meter in every fader strip
- 6 high-resolution VFD master level meters
- Full mix-minus (n–x) system for live two way operations
- Vista data format compatibility for easy transfer of console snapshots between different Vista consoles
- Integrated jingle player for immediate playback of eight different station identifier clips, background FX or other audio files from a jingle stick/USB memory device
- Studer Virtual Vista Online/offline editor
- Snapshot automation
- Support for the new Studer® Vista Compact Remote Bay over Ethernet or even WLAN
- Harman HiQnet® support for controlling other devices such as power amplifiers or wireless microphone receivers from the Harman Professional family of brands
- Ember and Pro-Bel protocol support for use with broadcast/ newsroom automation systems
- Redundant PSU
- Standard I/O comprises
  - 32 high-quality mic/line inputs with phantom power and low cut filter
  - 32 analogue line outputs
  - 8 AES/EBU pairs input (with sample rate converters),
  - 8 AES/EBU pairs output
  - Desk operator headphone
  - USB jingle player socket
  - Integral 64x64 optical MADI port
  - Slots for additional D21m I/O cards (one double-width or two single-width cards), such as AoIP (Axia Livewire™), MADI, AES/EBU, ADAT, TDIF, CobraNet®, Aviom A-Net®, Dolby® E/Digital, SDI, etc.
- The system can be extended by using additional Studer D21m I/O frames accepting cards from the comprehensive D21m I/O system programme
- Studer's RELINK input/output sharing system allows sharing inputs and outputs with other Studer Vista and OnAir consoles
- Support for the whole Studer stagebox range via a MADI link, such as the 4U Studer Compact Stagebox

Studer® Vista Compact Remote

Full desk control from a portable Vistonics™ controller

The Vista Compact Remote Bay has been designed for users seeking a slave or secondary desk to work in parallel with their Vista console. Typical applications are theatre or live sound installations where it is desired to control the sound balance from the auditorium.

It provides full control and monitoring functionality and can be used with all types of Vista consoles, running software V4.8 and up.

The unit is foldable, similar to a laptop computer. It consists of a control surface section with 12 high-quality, motorised Penny&Giles faders, 40 channel rotary controls, a touch pad and a slide-in keyboard. The 19" touch screen can be folded down, thus protecting both screen and control hardware during transport and, at the same time, considerably reducing the unit's size.

All navigation and control buttons available with the Virtual Vista application can be operated via the touch screen, instead of using a track ball or a mouse. The number of physical control elements is therefore reduced to the most important ones, such as faders, rotary controls, MUTE and PFL keys.

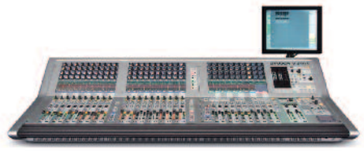
The console is available in 22 and 32-fader versions. The 32-fader desk consists of 20 channel strips, optimised for input channel operation, and 12 additional versatile strips for operating output and input channels. By using the standard Vistonics screen, up to 52 outputs are under immediate control. A total of up to 96 channels can be accessed from the desk and laid out in any order, with the Vistonics system giving instant control over all related channel functions.

The 22-fader version delivers Vista mixing power in applications such as OB trucks where space is at a premium.

The Vista 1 incorporates all the channel and bus processing you are likely to need, including parametric EQ and dynamics on input channels and busses, with 30-band graphic equalisers also available on the busses.

The Vista 1 offers all the surround capabilities a user can dream of. Formats include 2CH stereo, LCR, LCRS and 5.1. The internal 5.1-to-stereo downmix function allows for simultaneous live productions in both formats. The Vista 1 also includes Studer's world-famous 'Virtual Surround Panning' (VSP™), using not only amplitude, but also time delay and frequency response panning.

The Vista 1 is based on the well known and widely praised Vista 5 console which has found its home in all kinds of broadcast and theatre production facilities around the world.



Vistonics™

Free your mind to mix

The operation of the Studer Vista 1 truly resembles that of an analogue console

The Vista 1 incorporates the unique and patented Studer Vistonics™ user interface which ensures quick and easy console operation - the key to a smooth workflow, short production time, and trouble-free live transmission.

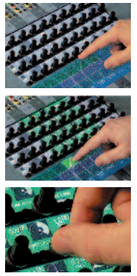
In high pressure live situations, sound engineers depend on a mixing console which allows a fluent working process. Furthermore, a broadcast production facility with numerous engineers and freelancers (or one which is open to external production teams) must provide an easy-to-learn mixing console.

Vistonics is a patented technology for integrating rotary controls and buttons within a flat screen display, bringing 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 analogue console, or even more so.

Every channel displays its settings of dynamics, equalizer and pan 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.



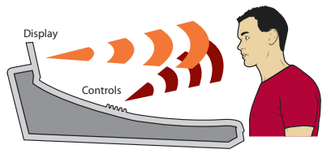
Operation

A simple touch on the desired function of the chosen channel opens up the complete function onto Vistonics. The operator can immediately adjust values by simply turning the rotary control and the changing value is immediately displayed graphically and numerically.

Vistonics icons are carefully designed and colour coded to represent a logical identifier and 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. Functions have their dedicated colour : Equalisers and Filters are red, dynamics green and the pan yellow.

Pressing the physical button next to the rotary control activates additional settings such as switching individual bands on/off, setting slopes etc.

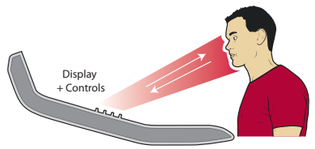
Conventional Console Approaches



View = Control location

View and control locations different

Vista Technology



View = Control location

View and control locations identical

Vistonics™ Free your mind to mix

Multi-tasking

By touching the equaliser and the dynamics on the same channel, for example, they will both 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.

It is also possible to adjust, for example, the EQ for two different channels at the same time.

There are no submenus – every parameter is just one button-press away, an essential feature in live situations.

Fast Copy/Paste

The console incorporates dedicated copy/paste keys for each audio function including high and low pass filters, EQ, dynamics, pan 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.

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. 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.

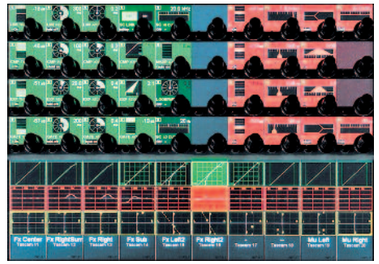
Fader bays with, for example, the master channels, may also be locked in place.

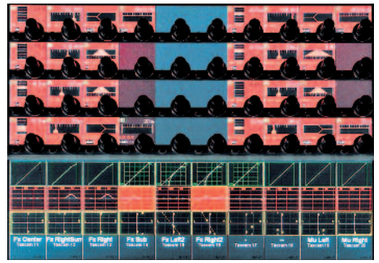
Momentary/Latching Activation of all Buttons

The console recognizes and senses the button push duration and responds accordingly, and these can be set to act as momentary or latching depending on how they were pressed for which function (pressed-and-held or briefly tapped), for example Talkback, PFL, EQ on/off, etc.

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.





Future-proof

The real advantage of Vistonics is that new features and functions (such as the recently introduced VistaMix system) can be easily integrated into the screen and controls, without the need to add extra hardware buttons. This helps protect your investment in Studer products.

FaderGlow™ Lighting the way to intuitive mixing

Supplementing the Vistonics user interface is Studer's patented FaderGlow system, where faders are illuminated in different colours according to their function.

For example, if the settings of the graphic equalizer are copied to the console faders, these faders becoming red.

During a hectic live production, FaderGlow provides the operator with an instant overview of the console status by illuminating each fader in one of eight, freely-assignable colours. Suddenly it's easy to see exactly where your channel groups are, dramatically improving reaction time and reducing the stress of mixing in an environment where there is no second chance.

The Strip Setup feature helps you to deal with such fast-changing situations and effortlessly handles the channel layout on the desk - before and during production.

Now the operator can mark individual,important channels such as presenters, main talents and other 'must-never-lose-their-signal' channels. Once the important channel is marked, it can be found within a fraction of a second, even after mixing on a different layer and coming back to a channel layout which may not have been on the surface for some time.

Virtual Vista Training, setup or live control

Virtual Vista is a powerful offline and online editor, allowing system setup and/or live control of a Vista console from a PC.

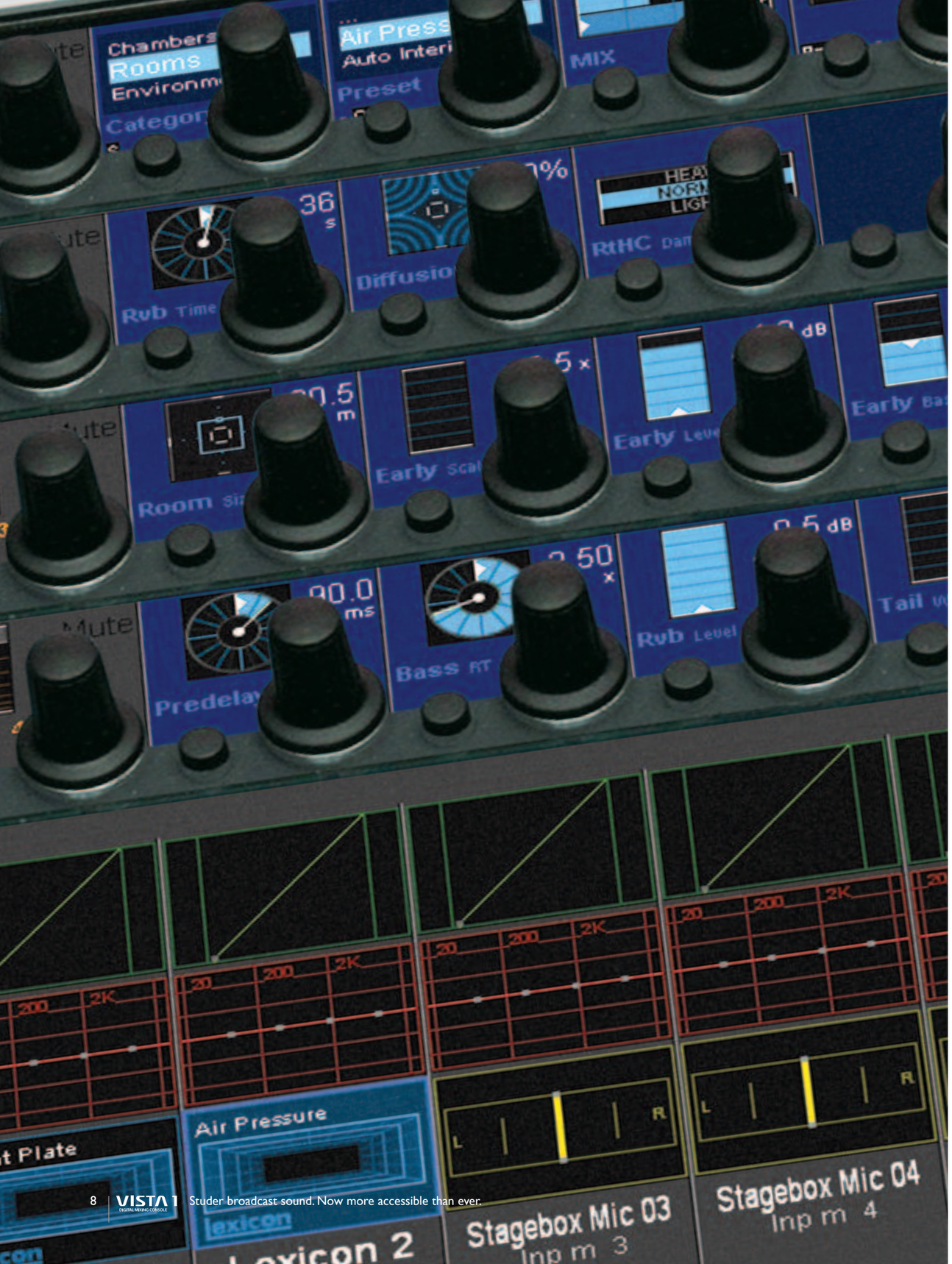
An indicator on all fader and control bay screens shows whether the editor is currently offline or online (i.e. connected to a desk/core system or to a core only). The latter option can be thought of as an alternative remote control, or as a failsafe should power to the desk be lost.

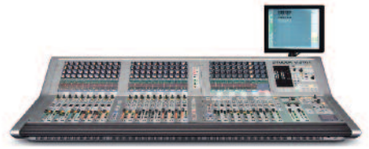
Virtual Vista is used to set up or change shows remotely from an actual console. All parameters for the desk may be controlled. Virtual Vista can be used as an alternate control device next to the console while the console is powered on and running, in which case the two devices then run in parallel. All changes made on one device are reflected on the other immediately.

This powerful tool also allows operators to become familiar with a Vista console prior to actually seeing the desk, as well as prepare shows offline for download to the console via USB or direct connection.

Virtual Vista can also run on a wireless Tablet PC, so that the operator can walk away from the console and adjust parameters as he walks around the venue.

Virtual Vista is available via the Studer website.





VISTA FX

Powerful effects, right at your fingertips

Integrated into the Vista 1's DSP core is Vista FX, a suite of effects processing engines capable of providing high-quality world-renowned Lexicon effects without resorting to external hardware and cabling.

No less than 8 FX processors are available to be patched or inserted onto channels or groups, and these may be assigned by the user to provide mono, stereo or four-channel effects processors. The latter four-channel mode is especially useful on surround signals where effects may be applied to the four surround channels L/R/Ls/Rs.

These FX engines are powered by the console's standard DSP hardware, and may be utilised without loss of mix processing power or I/O capacity.

Since the processing is all within the DSP, control and adjustment of the effects is made through standard Vistonics operations, in just the same way as the external Vista FX units work with the larger Vista consoles. Assignment to a channel or bus is made in the patching windows, using the Channel Insert Point. Touching the FX icon opens up the FX parameter view on the Vistonics area ready for effect selection and parameter adjustment.

Available Lexicon FX types are:

Reverbs – Hall/Plate/Chamber/Room
Chorus/Flanger
Delay
Resonance
Reverse
Pitch Shift/Pitch Effects

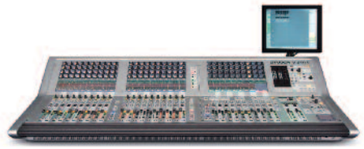
Hundreds of different presets are available with up to 16 adjustable parameters per preset.

All FX parameters may be copied/pasted between channels and into and out of the Clipboard Library, and are stored as part of the snapshot/cue automation system so can be recalled quickly when needed.

Vista FX operation modes:

2 powerful FX Engines
Each Engine can run independently as:

- 4x Mono Machines (Quad Mono)
- 2x Stereo Machines (Dual Stereo)
- 1x 2In-4Out Surround Machine
- 1x 4In-4Out Surround Machine



Productivity

Supercharged

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 are essential, but it is often the contributing channels to the master that are important to the user.

Usually level control of the contributing channels is handled via the input channel strips. The Control Bay offers a unique and revolutionary operational concept for controlling outputs, housing a Vistonics screen with 40 rotaries and switches and 12 faders, 10 of which line up with the Vistonics rotaries as in the fader bays. Any channel can be assigned to these faders but they are most useful for output channels such as VCA Masters or Group masters. In fact, the 10 faders have a separate 4 bank navigation system to the fader bays.

The rotaries on the Vistonics screen are equivalent to an additional 40 faders with 40 real time meters. 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'.

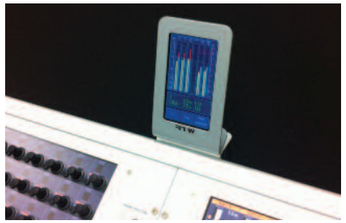
A particularly important function of the rotaries is to call up all of the level controls of the contributing channels of any of the masters displayed on the faders below. A 'Contribution' button above each fader provides reverse bus interrogation, 'pulling' all of the faders of the contributing channels to the rotaries above with channel name and of course real time meter.

The user can even assign further channels to the masters from the Vistonics screen directly. This reverse way of working offers the user incredible speed of operation for making small balance changes without having to go to input faders.

Comprehensive metering

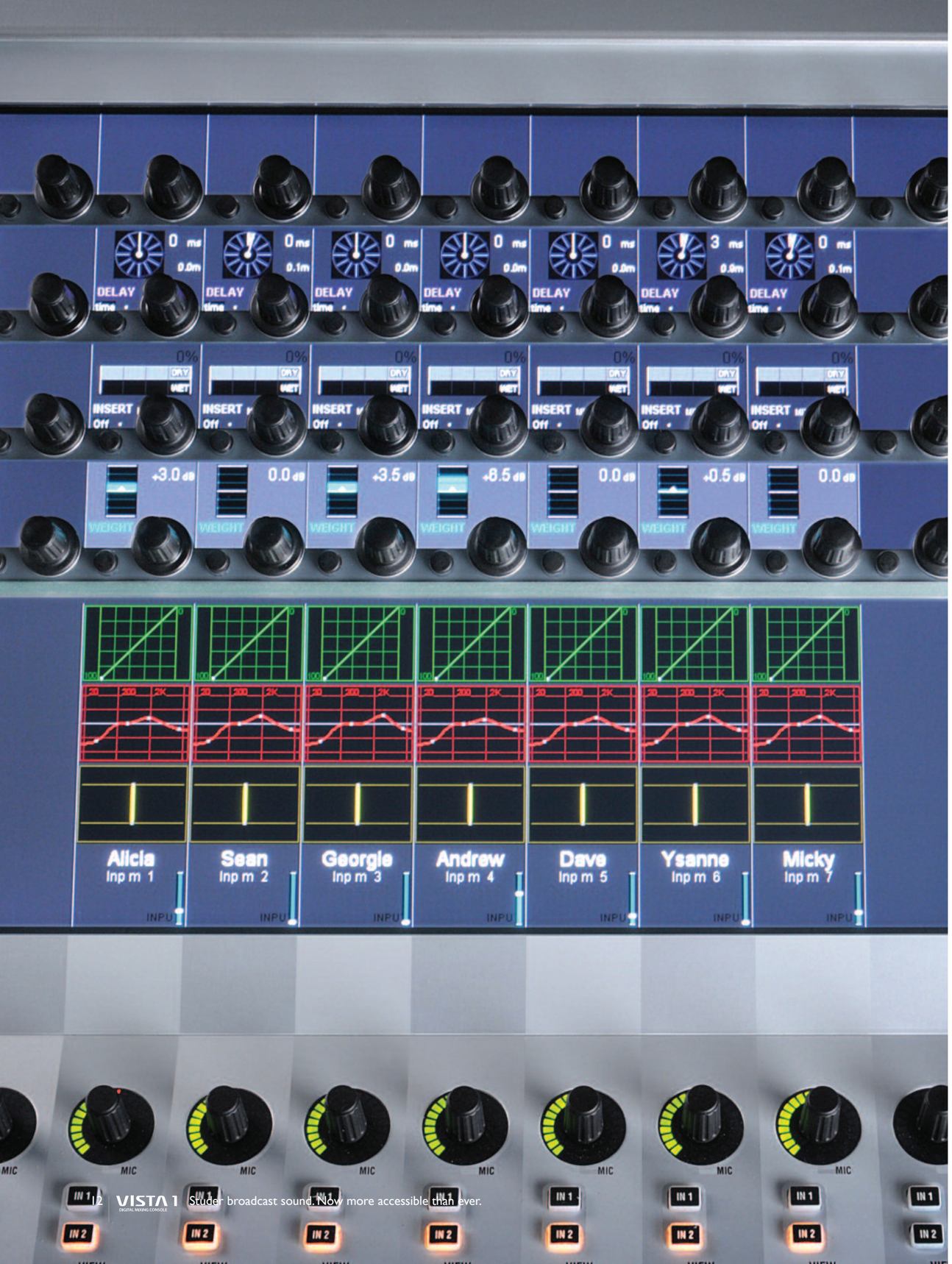
The Vista 1 provides several important metering possibilities. Each channel strip has a 20 segment stereo bargraph meter and secondary meters for Gain Reduction and N-1 output level , with a 6-channel master meter freely assignable to read almost any buss signal using the assign buttons below it.

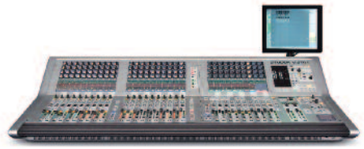
To help comply with the recent Loudness directives, external loudness metering is available as an option in the form of the RTW TM3 meter, which fits onto the Vista Meterbridge and picks up the feeds from the monitor outputs.



System Integration

Using a number of protocols including Pro-Bel and EMBER, the Vista 1 can be perfectly integrated with router, vision control and newsroom automation systems, for example to allow remote interfacing of the router to third-party control systems in order to set or clear switcher crosspoints and for source label transfer. Ember connectivity enables the external equipment to transfer signal labels and to control many channel parameters such as gains, faders, mutes, PFL of input channels, groups, masters, N–X and AUXes, plus the ability to save and recall desk settings.





Studer® VistaMix

Automate your microphone mixing

Automatic Microphone Mixing

Live multi-microphone unscripted events such as talk-shows, game-shows and discussion panels, all suffer from microphone-spill and background noise from equipment.

Each active microphone added to the mix makes the overall sound quality deteriorate. Room ambience is destroyed and feedback is more likely.

The outcome is decreased intelligibility and unpleasant comb-filter effects (phase distortions).

Without VistaMix automatic mixing, an operator must manually adjust all the faders all of the time, leaving microphones of talking participants open, while closing the microphones of silent participants in order to reduce spill and background noise.

The reaction time of a human operator is such that this often results in audible fade-ins of people who suddenly start talking unexpectedly. Also, changes in fader positions can quickly lead to disturbing changes of total ambience and noise level in the mix.

VistaMix offers the solution

Mimicking the action of a human operator, but acting much more quickly, VistaMix increases gain for 'talking' mics and reduces gain for all others, keeping the amount of total gain at a constant level to deliver a clean live mix.

Normally only one VistaMix is used at a time but several instances of VistaMix masters may be configured in a setup. VistaMix masters are available with 8 to 20 source channels.

The result is a cleaner mix, fewer missed cues and fade-ups, increased clarity and speech intelligibility, a more natural room ambience and less possibility of feedback. And all faster than a human operator could mix it.

Outside Broadcast

The perfect console for the perfect OB truck

Outside broadcast vehicles present a series of challenges to equipment providers. As well as the inherent audio functionality required, consoles in particular need to be robust and reliable, have suitable redundancy, be very space efficient as audio space is always a premium in OB vans, and be flexible enough to handle different types of production very easily.

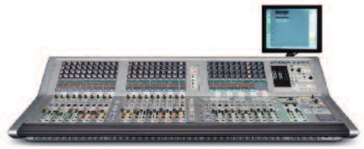
Studer's history in OB vehicle installations is well known. Not only does the Vista 1 fit perfectly into small spaces, but it is easily expanded through the D21m I/O and stageboxes. Integral MADI connectivity allows huge reductions in analogue patching systems.

The console itself offers all the functionality that may be required of it for OB:

- full surround source management with up and down-mixing for sports events,
- mix minus feeds,
- audio-follows-video which can be tied to camera feeds and VT sources using several protocols, including Probel,
- Multitrack capabilities for music events
- Dynamic automation for live mixdown of multitrack audio.
- Integral audio router which saves on further external equipment, with control possible from video switchers
- Remote stagebox systems using environment-proof fibre-based MADI connectivity

With the existing popularity of Studer Vista consoles in fixed and mobile broadcast facilities, most engineers will already be familiar with the operation of the console, but new users will find themselves easily assimilating the Vistonics user interface.

With its compact footprint, The Vista 1 is fully-equipped to handle large numbers of sources and feeds, along with full surround management, integral interfacing capabilities to numerous source formats including SDI, Dolby D/E, AES, MADI, CobraNet, Axia Livewire and more. The integral audio router functionality means that systems may be much more closely integrated and controlled than ever before.



Surround sound
Made easy

Studer's unique Virtual Surround Panning (VSP II) fits the Vista 1 perfectly. It allows the operator to take mono sources and create a realistic sound field (stereo up to 5.1) modelled around a few simple parameters.

When few or no sources of multi-channel sound elements are available, operators must attempt to create a surround mix out of multiple mono sources. Creation of an impressive and satisfying surround mix takes a lot of time and effort, and the results are often disappointing. Conventional amplitude panning as known from traditional consoles shows its limitations in multichannel mixing even more than in stereo.

With VSP II, mono sources can be positioned within a stereo or multichannel environment to produce a highly convincing surround panorama.

Creating directional imaging by adding phase and frequency spectrum information to commonly known amplitude panning, VSPII gives the operator a creative tool to position a source within a sound field by using the channel's pan control. The panning to the surround mix is achieved by generating the appropriate directionality and time delays on all speakers. Furthermore, the operator has the choice of different microphone simulation modes, which let him chose the characteristics of how every single mono source gets added to the surround image.

Of course all these settings are captured in the consoles internal snapshot automation system.

Virtual Surround Panning allows the operator to create a realistic 5.1 sound field modelled around a few simple parameters.

Simple handling of surround channels

If you're making Multicast 5.1 and stereo broadcasts, and need 3G SDI and Dolby E audio distribution, the Studer Vista 1 will empower you for multichannel surround broadcasting now.

Option cards from the Studer D21m I/O system include a dual-channel Dolby E decoder, and a 3G SDI de-embedder/embedder in which up to 16 channels of audio can be extracted from the video signal (including Dolby E signals) and patched to the console. After processing, signals can be re-embedded onto the SDI stream. Using such cards reduces weight and space in critical installations such as OB vehicles.

The Dolby E card accepts any AES/EBU stream encoded with Dolby E or Dolby Digital, decodes the stream within the input stage and then provides up to two sets of 8 channels to the console.

The 3G SDI card accepts the embedded SDI signal via a standard coax BNC connector, and also has a 'Through' BNC connector for passing the original SDI signal unaltered. Once de-embedded, the audio may be processed by the console and then returned to the I/O system to be re-embedded into the SDI stream for onward transmission via either or both of two BNC outputs.

A new approach to surround

With the Studer 5.1 input channel, the engineer is able to have Input, EQ, Dynamics and Panning sections totally designed for premixed 5.1 input sources. The main goal is that he can adjust the most important parameters directly via touch on the Vistonics™ screen without the need to 'spill' single mono or stereo channels to additional faders, where other important sources would be hidden and become unavailable. This is realised by introducing complete new parameters to 'balance' the 5.1 signal using the Vistonics™ encoders.

This way, engineers can maintain the perfect arrangement of 'one fader for one source' on their mixing console, and maintain a good overview while fast access to every single source parameter is provided.

Bus assign

With the now industry-accepted surround channel order of 'L R C Lfe Ls Rs ' Studer has changed the bus order in Vista consoles to reflect this ITU standard. The newly introduced labeling of the busses in the Vistonics touch area allows a better overview and secure and quick assignment. However, in daily broadcast work it is found that still not all 5.1 sources are delivered in the standard format. An input order selector has been included, comparable to the '2CH mode' (L to both, R to both, swapped, mono) in stereo channels. Input order is a very fast way to detangle different standard surround material, so that once it is on the 5.1 fader, everything is in 'L R C Lfe Ls Rs'.

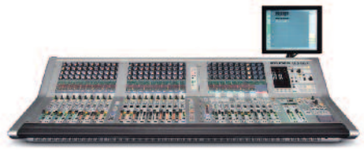
Balancing the 5.1 signal

Studer has designed an innovative method to adjust a 5.1 signal to the requirements of the actual surround mix. New parameters have been created in order to give the engineer the most effective tools to balance the surround signal.

Once the balance is set, the 5.1 input channel can be handled in the same way as a mono or stereo input channel. Most importantly the signal is brought into the mix with one single fader and all the necessary adjustments can be made on one single channel strip. When EQ is needed it can be applied via EQ master parameters which are accessible again in the same way as on mono or stereo inputs. EQ is then applied to all of the surround signal legs except for the Lfe. Dynamics processing is handled in the same way. Working with these most important controls is what we expect to be about 95% of the surround engineers work.

To complete this functionality, a new surround panning module is also available for stereo channels. Since there are still a significant number of stereo sources used in a typical surround production, engineers also need to bring these into the 5.1 format . Studer has now implemented a way to pan such stereo signals also to the surround mix, providing the possibility to 'wrap' a simple stereo signal to a surround sound field.

Every stereo channel can be equipped with the 'upmix' panner. This works in three modes : normal LR, 5.1, and 5.1 width mode, the most interesting mode being the 5.1 width mode where a revolutionary algorithm (using Harman intellectual property) basically also extends the stereo width control to the surround speakers. LR mode is normal stereo panning; 5.1 mode simply uses "standard" panning where e.g. the Left channel is also sent to the Ls speaker etc.



Live production

Workflow optimised

In addition to the standard functionality, the input channels provide several broadcast live production 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. Dedicated Matrix busses can be configured which suits the fixed install application but can also offer a fast and easy method of handling complex headphone feeds in a broadcast environment. 16 dedicated Mute Groups are also available.

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. 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 source wants to hear while waiting to go on-air. The Vista 1 offers a dedicated switch per channel that automatically sends the outside source and alternative signal to the n-1 whilst the outside source is not on-air.

When the outside source is put out on-air (fader opened), the correct n-1 feed is automatically switched to the outside source without the user having to disable the switch manually. In addition, any number of outside sources are able to talk off line together in a conference mode (MPX), with the outside source automatically removed from the conference and sent the correct n-1 feed when put on-air.

On the spot playout

For ease of use, the Vista 1 contains an integrated jingle/spot player, which accepts a variety of audio formats from a USB memory device, which may be triggered from 8 dedicated buttons on the surface.

DAW interfacing

Studer Vista consoles interface with the major DAW systems available on the market. Many DAW functions can now be directly controlled from the console, where innovative operating concepts such as StripSetup and Ganging bring DAW integration to a new level and greatly enhance the production workflow. Editing is faster, customers are happier.

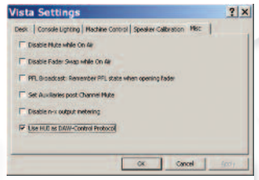
Simple configuration screens within the Vista system allow the operator to select the DAW control interface and enable it. Then, you can mix and match DAW channels alongside Vista channels.

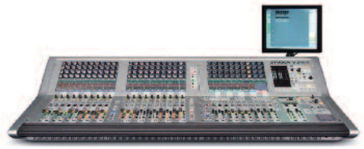
Directly at the channel fader, tracks may be armed ready for record using console buttons. Additionally, the DAW gains features of the Vista consoles such as ganging.

No additional hardware is required and connection is made through a simple Ethernet link rather than multiple MIDI cables typically found in other systems.

DAW systems currently supported by Vista are:

- ProTools
- Sadie
- Apple Logic Pro
- Steinberg Cubase
- Steinberg Nuendo
- Magix Sequoia
- Merging Technologies Pyramix
- Samplitude





Performing Arts

The mix without the drama

Theatre sound designers and console operators make some of the highest demands when it comes to efficient workflow 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 standard Vista Software which is available for the whole range of Studer Vista consoles. Together with the Vista's already extensive facilities which suit Theatre sound, such as high input/output capacity, the acclaimed Vistonics™ user interface, very compact footprint and outstanding sonic performance, the Studer Vista series of consoles is the perfect choice for world class theatres.

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.

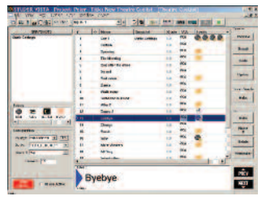
Cues can also fire MIDI/MMC events, for example for SFX playback, where the MIDI ports can be muted for cue list navigation. Most importantly the enhanced cue list now provides a large display of the current cue, as well as an indication of whether a snapshot is masked or not made clearly visible in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

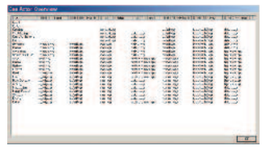
Character/Actor Library Event handling

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 temporary or permanent adjustment 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 Vistonics 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.





RELINK

I/O sharing

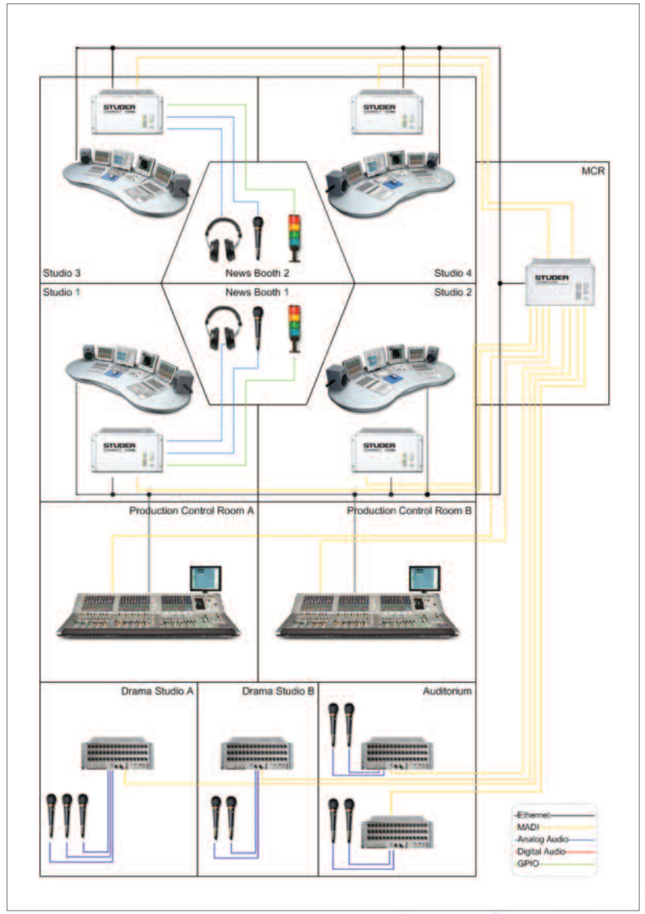
The Vista 1 can be integrated easily within the Studer RELINK (Resource Linking) managed I/O sharing system, which can link numerous Studer consoles in various locations of a broadcast facility to allow audio input and output sharing across a wide network.

One of the benefits of the Studer RELINK system in comparison to others is that it is based totally on Studer's existing SCore platform which is an integral part of the Studer console architecture, so no additional hardware or breakout boxes are required to complete the network. Communicating over TCP/IP with each other, any combination of Studer Vista and OnAir consoles, as well as Route 6000 can connect via RELINK.

RELINK is seamless, scaleable, flexible, and can start with a simple connection between two Studer consoles, right through to multi-console systems using a two-step topology where all signals are matrixed through a central device, e.g. the Studer Route 6000 system.

Source selection is transparent, and signal labels are automatically transferred to the consuming locations, so the operator always knows what source is connected. Signal takeover between studios is seamless, so RELINK is well-suited for live transmission switchover. A resilient mic take-over mechanism ensures that mic control parameters such as analogue gain, phantom voltage, etc. are not unintentionally changed but require concious take-over confirmation.

This example shows a (radio-) broadcast house where production studios and control rooms are located, in addition to the on-air studios in the same building. The production studios (Drama A, Drama B and Auditorium) are equipped with D21m stageboxes connected to the Route 6000 in the MCR. In this way, not only the two Vista 1 consoles in the production control rooms can use mic signals from the stageboxes, but also the four OnAir consoles can use these signals and, if necessary, also get control of the mic parameters.



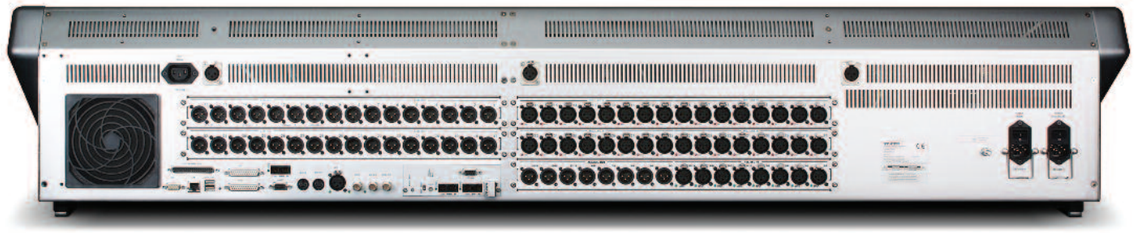
RELINK - Example (radio-) broadcast house

Studer RELINK offers probably the most integrated, comprehensive and optimised I/O sharing management available to Broadcasters today.

To utilise Studer RELINK, consoles must be running at least the following software versions – V4.1 for Vista, V3.1 for OnAir systems and V2.0 for Route 6000 systems.

Flexible I/O

Options



Vista 1 32-fader rear view

System Expandability

The Vista 1 provides a simple and easy connection with its integral I/O consisting of 32 mic/line inputs, 32 line outputs, one 64ch optical MADI input and output port, and 8 stereo AES inputs & outputs.

By adding a MADI card to the Vista 1, any of the Studer Stagebox range may be connected to the desk to expand the pool of input and output formats that may be mixed on the surface, supplementing the console's integral I/O.

Pristine sound quality is assured in all Studer staeboxes by a combination of ultra low noise microphone amps and Studer advanced 40-bit floating point digital audio processing. All input channels can have direct outputs in addition to their internal routing to Group/Aux/Matrix busses, and to the main 5.1, LCR, LR or mono busses.

The Vista series consoles use the Studer D21m I/O system which provides a flexible and expandable high density 24-bit 96kHz capable audio interface.

Available D21m I/O expansion cards (optional):
- Axia Livewire™ AoIP
- 4-channel D-type Mic/Line In with 4 Direct Outputs
- 8-channel D-type Line In
- 8-channel D-type Line Out
- 8-channel D-type AES/EBU In/Out *
- MADI (RJ45 or optical SC), max. 64 channels of I/O *
- 16-channel ADAT In/Out (optical)
- 16-channel TDIF In/Out (D-type) *
- 8 to 16-channel SDIF (SD/HD/3G) In or I/O on BNC sockets
- 8 or 16-channel Dolby® E/Digital In on BNC sockets
- CobraNet® 32-channel In/Out on RJ45 sockets
- Aviom A-Net® 16-channel Out on RJ45 sockets
- Ethersound® 64-channel In/Out on RJ45 sockets *

* double-width cards

The Studer Compact Stagebox

The Compact Stagebox adds a cost-effective expansion option, offering a high density of I/O connections in only 4U of rack space. The modular unit is fully configurable but is offered with a standard configuration of 32 mic/line inputs and 16 line outputs. It is possible to equip the Compact Stagebox with an additional 16 mic/line input module instead of the output module, then providing 48 inputs. In this case, analogue or AES/EBU outputs can still be obtained on D-Type connectors via D21m cards fitted to the expansion slots.

The expansion slots for standard Studer D21m I/O cards may be used for interfaces connecting to most popular digital formats, including CobraNet® or Aviom A-Net® 16, Ethersound, ADAT, TDIF, SDI (SD/HD/3G), Dolby® E and Dolby® Digital. A MADI recording interface can be fitted to the expansion slots as well.

The unit comes complete with twin redundant power supplies, thermostatically-controlled fan cooling and full LED status monitoring. An 8-channel GPIO interface is also provided.

Technical specifications

HQ Mic / Line Input Module	Conditions / Details	Value
General Conditions:	***Gain Setting 15 dBu 0 dBFS unless otherwise noted.***	
Input Impedance	(electronically balanced)	3.6 kΩ
Gain	for 0 dB_{FS} (adjustable in steps of 1 dB)	–11 to +75 dB
Maximum Input Level	–11 dB gain, Rsource = 600 Ω	+26 dBu
	0 dB gain, R_{source} = 150 Ω	+15 dBu
Frequency Response	20 Hz to 20 kHz, 40 dB gain	+0 / –0.9 dB
	30 Hz to 20 kHz, 40 dB gain	+0 / –0.6 dB
THD + Noise	1 kHz, –1 dB_{FS}	< –87 dB
	1 kHz, –9 dB_{FS} (nominal level)	< –94 dB
	20 Hz to 20 kHz, –30 dB_{FS}	< –102 dB_{FS}
Equivalent Input Noise / Noise Figure (NF)	Ri = 200 Ω, gain = 60 dB	–127.6 dBu / NF = 2
Crosstalk	1 kHz	< –100 dB
Input Delay		12 samples 250 µs @ 48 kHz
Common Mode Rejection Ratio (CMRR)	30 Hz to 20 kHz, all gain settings	> 46 dB
	1 kHz, –11 dB to +26 dB gain	60 dB typ.

Line Output Module	Conditions / Details	Value
Output Impedance	(electronically balanced)	50 Ω
Frequency Response	20 Hz to 20 kHz	+0 dB / –0.3 dB
THD + Noise	–1 dBFS, 1 kHz	–90 dB
	–30 dBFS, 20 Hz to 20 kHz	–103 dB
Crosstalk	1 kHz	–115 dB
Output Level	RL = 600 Ω; globally adjustable with hardware switches (steps: +24, +22, +20, +18, +15, +12, +9, +6 dBu)	+6 to +24 dBm for 0 dB_{FS}
Output Delay		10.4 samples 217 µs @ 48 kHz

AES / EBU Input / Output Module	Conditions / Details	Value
Input/Output Impedance		110 Ω
Input Sensitivity		min. 0.2 V_{RMS}
Ouptut Level	into 110 Ω	4.0 V_{RMS}
THD + Noise		max. –115 dB
SRC Range		22-108 kHz

Power Supply	Conditions / Details	Value
Primary Input Voltage Range	Power supply auto-ranging, with power factor correction (PFC); EN/UL approved	100 to 240 V AC ± 10% 50 to 60 Hz
Power Consumption, Studer Vista 1	22-fader version, incl. GC screen	190 W typ., 250 W peak
	32-fader version, incl. GC screen	220 W typ., 300 W peak

Ambient Conditions	Details	Value
Operating Temperature Range		–5 to 45 °C / 23 to 113 °F
Relative Humidity	non-condensing	95%

Weights (approx.)		Value
Studer Vista 1	22-fader version, incl. GC screen	55 kg / 121 lbs
	32-fader version, incl. GC screen	59 kg / 130 lbs

DSP configurations

Correct at time of going to press. Subject to change without notice.

1. MONO

Path Type	Mono Input	Stereo Input	5.1 Input	Mono Group	Stereo Group	5.1 Group	Mono Master	Stereo Master	5.1 Master	Mono AUX	Stereo AUX	Control Group	Down-mix	N–X Bus	VistaMix
Qty	105	-	-	8	-	-	-	2	-	16	-	10	-	-	2 VMX-16
Processing Blocks	ALL	-	-	GEQ DYN	-	-	-	DYN	-	GEQ	-	-	-	-	ALL

2. STEREO

Path Type	Mono Input	Stereo Input	5.1 Input	Mono Group	Stereo Group	5.1 Group	Mono Master	Stereo Master	5.1 Master	Mono AUX	Stereo AUX	Control Group	Down-mix	N–X Bus	VistaMix
Qty	60	24	-	-	8	-	-	4	-	8	4	10	-	8	2 VMX-12
Processing Blocks	ALL	ALL	-	-	ALL	-	-	DYN	-	GEQ	-	-	-	-	ALL

3. SURROUND

Path Type	Mono Input	Stereo Input	5.1 Input	Mono Group	Stereo Group	5.1 Group	Mono Master	Stereo Master	5.1 Master	Mono AUX	Stereo AUX	Control Group	Down-mix	N–X Bus	VistaMix
Qty	32	8	6	2	-	4	-	-	2	6	4	10	6	6	2 VMX-12
Processing Blocks	ALL	ALL	ALL	ALL	-	ALL	-	-	DYN	PAR. EQ	-	-	-	-	ALL

4. FOH

Path Type	Mono Input	Stereo Input	5.1 Input	Mono Group	Stereo Group	5.1 Group	Mono Master	Stereo Master	5.1 Master	Mono AUX	Stereo AUX	Control Group	Down-mix	N–X Bus	VistaMix
Qty	145	10	-	-	-	-	4	6	-	10	-	32	-	-	2 VMX-20
Processing Blocks	EQ DEL INS	EQ DEL INS	-	-	-	-	ALL	ALL	-	GEQ DEL	-	-	-	-	ALL

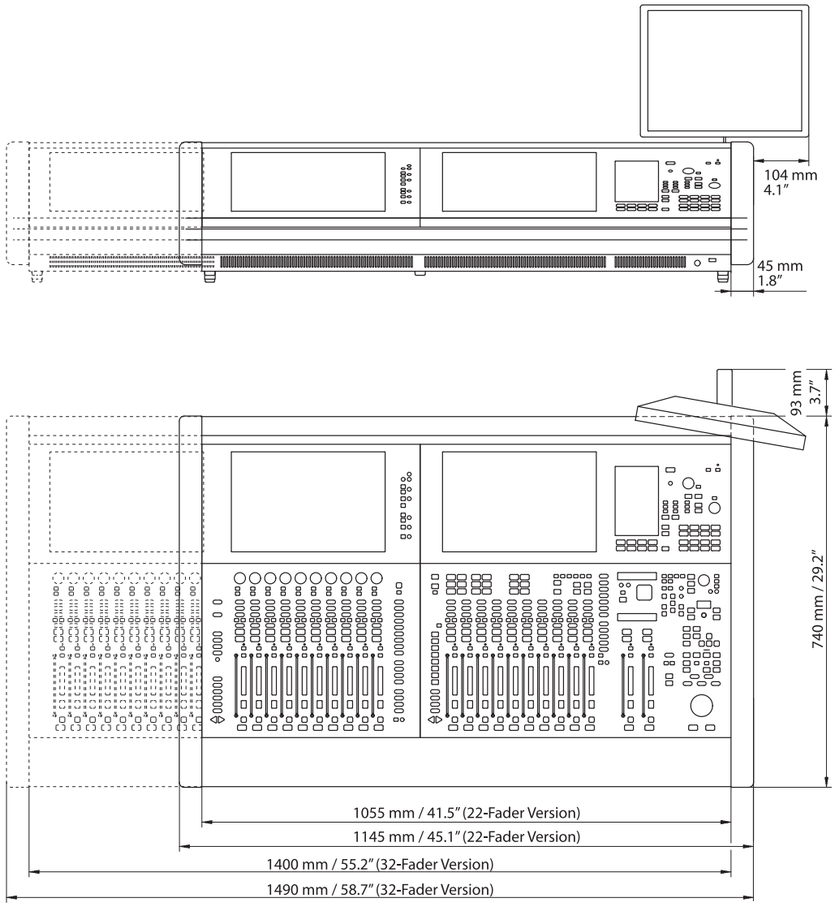
5. MONITOR

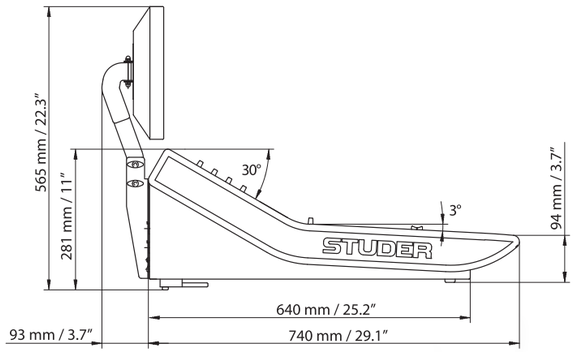
Path Type	Mono Input	Stereo Input	5.1 Input	Mono Group	Stereo Group	5.1 Group	Mono Master	Stereo Master	5.1 Master	Mono AUX	Stereo AUX	Control Group	Down-mix	N–X Bus	VistaMix
Qty	85	10	-	-	-	-	10	-	-	15	15	30	-	-	-
Processing Blocks	ALL	ALL	-	-	-	-	INS	-	-	GEQ	GEQ	-	-	-	-

Monitoring and TB I/O

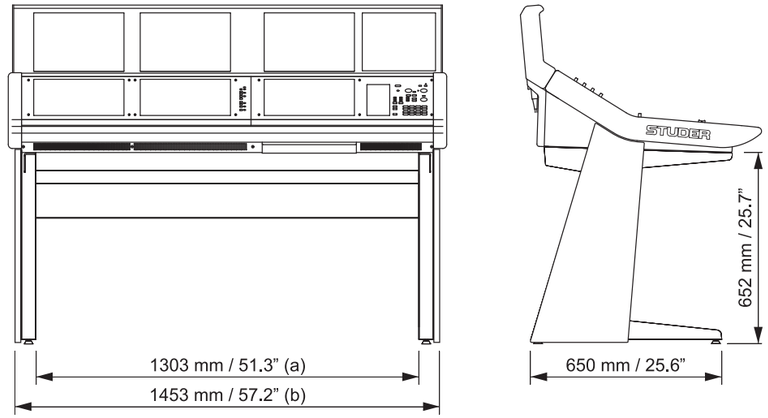
The requirements for monitoring and talkback inputs/outputs are different, depending on which configuration is used.
Therefore these inputs and outputs are automatically allocated to the rear-panel connectors in a reasonable way when selecting a con-figuration.

Dimensions





Optional floorstand dimensions



Frame sizes

Vista 1 32 Fader Console

Vista 1 22 Fader Console