



Without great sound,  
it's just another performance

**STUDER**<sup>®</sup>  
by HARMAN

# The Key Issues in Theatre

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There are many more considerations to be made when choosing an audio console for fixed installation in a live production environment than for pure studio work: Reliability, flexibility and a live related feature set are at the top of the list.

Secondly, the physical space requirement is also one of the major issues. Saving seats in the theatre is always a big plus. Digital consoles offer sophisticated functionality with a smaller control surface. The challenge for all manufacturers is to offer a more ergonomic and faster-to-operate user interface than an analogue console but in a much smaller space. Is this really possible though? We will come back to that in the following pages!

A venue typically needs to be able to handle different kinds of productions, whether it is a theatre play, a musical, or any other event requiring PA. The ideal desk should provide perfect functionality for all of the differing applications without compromise. This market needs the desk to be incredibly ergonomic and user friendly, as this is imperative for acceptance from the live venue engineering community. They will only be comfortable with the desk if the user interface design gives them fast, clear, confident and easy operation. Is it asking the impossible to find a desk that offers the flexibility described above but keeps the control surface simple and intuitive to operate?

In the case of a live venue, the system integration is important. By design, a digital audio console also has an integrated audio router, as well as the possibility to have remote stageboxes over fibre, and in case of the Vista series, extensive MIDI and HiQnet connectivity. In a totally integrated system concept, the router can be utilised distributed as many times as required to any number of channels and/or outputs. In combination with the powerful configuration software you can build up virtually any number and combination of channels with different feature sets, masters of any kind, matrices with or without processing and distribution of any channel and output needed. The flexibility is almost limitless!



HiQnet™

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Other system integration considerations include the decision whether or not to use stageboxes with optical MADI connections or continue to use long analogue multicore cable runs. The advantage of using the optical solution is that all earth loop issues are removed and cable duct requirements are minimised.

In summary, the key issues to consider when choosing the perfect console are:

- Reliability and robustness
- Physical space
- Flexibility to handle different applications
- Live/theatre production feature set
- User-friendly and ergonomic user interface for the operators
- System integration capabilities



# Studer Vista Series — 'The Perfect Choice'

For more than 60 years, Studer has carried the original philosophies that Willi Studer first embraced in the company. His trademark was to provide state of the art, robust audio products that would withstand the toughest of handling and environments. Studer has made the leap in the last 15 years from being the leading tape machine manufacturer to leading the market in digital console design. The Studer Vista 8 and 9 Live Production consoles are Studer's flagship products. With over 500 Vista consoles and over 160 D950 consoles in daily use in live production and broadcast, Studer is the leading manufacturer of large-scale digital consoles in its field.

## Robust and Reliable

One of the main issues when choosing a console for a live venue is the products track record of reliability. It is easy for the manufacturer to say that a product is reliable but the truth lies in the product reference list.

Already more than 50 Studer Vista large-scale digital consoles are installed in the fixed install market and in the region of a further 500 consoles are working in live daily Broadcast worldwide.



## Copenhagen Opera, Copenhagen, Denmark



The building was designed by Danish architect Henning Larsen, with acoustic design by Arup Acoustics. Entirely funded by charitable foundations chaired by Sir Mærsk McKinney Møller, the shipping tycoon, the Opera House has been gifted to the nation to be the new opera and musical performance home of Det Kongelige Teater (the Royal Theatre).

The main auditorium seats 1500 people and the performance space has been cleverly planned to allow for considerable acoustic flexibility – the orchestra pit providing for differing sizes of orchestra, which in turn allows for the auditorium seating capacity to be adjusted accordingly. The auditorium follows the horseshoe form that has historically proved to be acoustically and theatrically appropriate for opera. A special lightweight Vista 8 system is designed for this venue making it extremely versatile and flexible. With fibre connections both in the auditorium and sound booth the console can be set up to cover virtually any show and rehearsal requirement.

# Redundancy

In any equipment designed for Live Production, redundancy is essential to ensure guaranteed operation. The Vista series offers comprehensive redundancy options covering all parts of the system, as well as a continuous surveying system that will inform you of any problem or potential problem. These include:

- Redundant Power Supplies
- Complete Redundant Control System (option for Vista 8, standard for Vista 9)
- DSP Core Redundancy
- Control Surface Redundancy
- Redundant control from Virtual Vista application
- Redundant MADI connections

In summary, the Studer Vista series offers comprehensive redundancy options covering all parts of the system thus ensuring the highest resilience and robustness. This makes the Vista consoles the 'Perfect Choice' for the variable fixed install environments.



## Power Supplies

Without exception, throughout the entire system, redundant power supplies that automatically switch in case of failure of the primary supply are available. This includes:

- Control Surface
- DSP Core
- Monitoring
- All I/O Frames
- Control System

## Control System

The control System is central to the communication and control of the different parts of the system. For this reason, redundant power supplies are available and Raid 0 mirrored hard drives are fitted as standard.

Unique to the Vista 8 and 9, and for 100% peace of mind, a second fully equipped control system is available which in Vista 8 is fitted underneath the console, attached to the existing

hardware. In Vista 9 it's fitted internally as standard.

The engineer can quickly switch to the redundant control system in an emergency. The data is backed up and automatically accessed by the redundant system when the emergency switch is activated so that the operator returns immediately to the current desk settings when the switch is made.

In summary, a switch to a complete second system can be made with no interruption of audio and with return of control within 25 seconds to the current settings of the desk maintained. This is the full 100% redundancy that is unique to the Vista 8 and 9 consoles.

## DSP Core

The DSP Core is the audio heart of any digital mixing console and therefore if a problem occurs in this part of the system, it will usually

result in some audible problems. It is therefore important that some redundancy is available to ensure continuous and seamless audio even in the event of failure of part of the DSP Core.

The Studer Vista Series DSP core is based on mature technology successfully employed on over 700 broadcast consoles worldwide utilising the DSP core in round-the-clock use. The design of the DSP core provides seamless audio flow with no disruption to the operator in the case of a DSP Card failure. Both the physical design and DSP architecture means that, assuming a redundant card is available in the DSP Core, the redundant card will instantly take the role of a failed card.

A failed card may then be physically replaced with a new card in a hot-pluggable manner, again once installed assuming the role of a redundant card. The replaced DSP

card is auto detected in the system with no need for reboot of any part of the system.

It should also be noted that the DSP core configuration is stored within the DSP core itself. This means that in the rare event of a problem with the control system, audio will pass through the DSP core. In fact, the control system need not be running at all for audio to pass through the DSP core.

The other advantage of this is that audio passes through the DSP core in a matter of seconds from DSP core power up.

### **Control Surface**

The control surface is made up of a number of modular fader bays. Should one of these bays fail, all other bays will continue as normal. The design topology allows totally free allocation of DSP channels to physical channel strips. In this instance, the user can quickly and easily re-arrange the strip layout in the Graphical Controller of the control system to re-assign the channels that were represented on the failed bay. In addition, the navigation philosophy allows scrolling of the virtual desk in front of the user. This also provides very fast navigation in such events.

### **Redundant control using the Virtual Vista application**

Full control of the console parameters can be handled by the Virtual Vista application, which can be installed on any computer that is connected to the console over IP. This can then be a redundant operation of the console in the rare event of a problem with the Control System or application. The online editor can be used to continue the session. This is an additional failsafe scenario. In such a case, the yellow CONNECT TO CORE button can be

used for taking over direct control of the core. However, the online editor has no access to monitoring facilities, with the exception of PFL/Solo. The operator can press PFL or Solo on a channel in the online editor, and the selected signal is then fed to the PFL output of the desk.

### **MADI Links**

Every I/O frame with a MADI Link has a redundant MADI link (AUX) available which will switch automatically if an invalid MADI signal is received.

### **Physical Space Issues**

With space at a premium, the Vista series offers one of the most compact I/O and DSP systems on the market. A single 3U I/O frame can handle up to 192 Inputs and Outputs. The minimum system (consisting of DSP frame incl. I/O frame, and monitoring frame (for Vista 8 only) takes 9U of rack space. Minimum for Vista 5 and 9 are 6U.

In addition, 44 mic/line inputs with 8 Line Outputs returns (including converters and redundant power supplies) can be housed in a 5U stagebox with Optical connectors and XLR breakouts.

The SCore Live system occupies just 6U rack space, provides for up to 9 DSP cards and can also hold up to 12 I/O slots of various audio formats, plus additional GPIO.



## **'West Side Story' and Studer Vista 5 Hit Broadway To Great Acclaim**



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. The iconic production makes its return to Broadway after a 29-year absence and sound designer Dan Moses Schreier and his associates selected the Vista 5 for its extensive capabilities and outstanding audio quality.

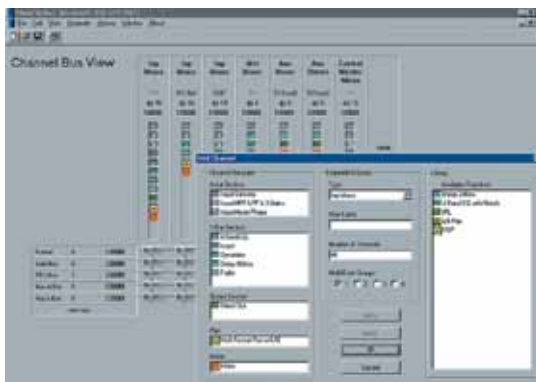
Schreier comments on the decision to deploy the Studer console. "The Vistonics™ interface was a huge factor in selecting the console. Many digital consoles feel like you are mixing off a computer monitor and what is terrific about the Vistonics interface is that it feels more like an analog console in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

# Flexibility to handle different sound designs

We have already seen that the requirements of a fixed install production console may differ on a week-by-week, day-by-day or even hour-by-hour basis. The need for a flexible audio console that can deal with productions as diverse as any show type is essential. The channel and bus structure requirements for different applications mean that the ideal desk will allow a user to custom design the structure of the desk dependent on the type of production that the venue is currently being used for. This in essence means the console must have a flexible DSP Core that with the same hardware allows the DSP configuration to be changed. The Studer Vista series allows just this flexibility.

## Configuration editor

An offline tool is included with the console that allows an experienced user to define and build their own console in terms of channels, busses and processing functions. This is not to say that every time a user comes to the console they must make a new DSP configuration. Like all other consoles, users tend to work with templates that have been predefined and tailored to particular applications i.e. a musical template with many input channels and a suitable number of AUX and MATRIX busses and sophisticated multiformat distribution to multiple loudspeaker arrays and foldback outputs. Or for example a music concert template with a normal stereo speaker setup, but



here also a suitable number of foldback auxes and even the possibility to do a simultaneous multitrack recording during the live performance. This is highly flexible and means that the console can be tailored to fit the exact requirements of a particular production. This flexibility means that the console will handle any application no matter how complex. The problem with a fixed configuration is that it may serve the purposes of 90% of the productions today, but what will the requirements of the console be in the future? The configurable DSP feature of the Vista series DSP core means that we are also providing a future proof philosophy for your investment.

## Remote Bay

Another great asset is the possibility to add faders via a Remote Bay or simply order your console 'split' to be able to move either a part of it, or the whole console to other locations in the venue.

During rehearsals you can for example move around in the auditorium, balancing your sound from different locations whilst storing any number of favourite channel or part channel settings and of course full or part snapshots. During the show you may have to move back to your sound booth, which we all know may not be the best place for fine tuning your sound. Some of our customers are also using the RemoteBay for the actual show, thus taking up the minimum number of seats compared with moving a larger console into the auditorium. This is possible as a 10 fader Remote Bay can access up to 60 inputs or outputs and a 20 fader twice this quantity. Another great advantage is that you only have to connect a fibre and power lead for the Remote Bay instead of multiple copper snakes.



# Virtual Vista

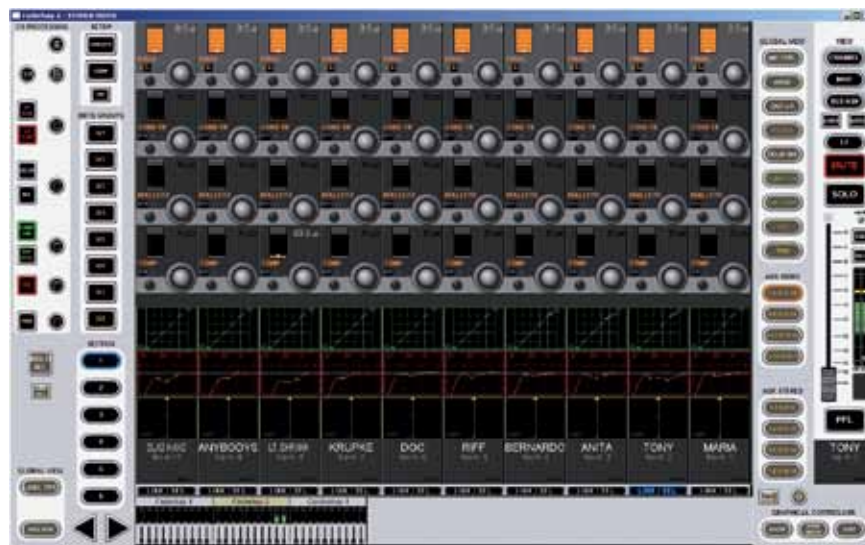
Virtual Vista is both an offline and online editor, allowing system setup and live control of a Vista console. An indicator visible on all fader and control bay screens shows whether the editor is currently offline or online (i.e. connected to a desk/core system or to a core only). The latter option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

The offline editor is used to set up or change shows remote from the actual console. All parameters can be controlled. The online editor can be used as an alternate control device next to the console while the console is powered on and running. The two devices then run in parallel.

All changes made on one device are reflected on the other immediately.



The online editor 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. All parameters can be controlled.



## National Theatre, Tokyo, Japan



The National Theatre of Japan has installed a D950 and two Studer Vista 6 digital production consoles to provide an all-digital surround sound system in its Tokyo auditorium. Both Vista consoles have identical output configurations, providing 16 group outputs and 16 mono auxiliary outputs, and each console feeds a 32 x 32 digital matrix which provides level control and delay facilities. The outputs from these two matrices then feed a 64 x 64 matrix with EQ and level control. This complex matrix facility is provided by a D950 M2 console fitted with a central assignment section and 8 faders.

## Trøndelag Teater, Trondheim, Norway



The Trøndelag Teater has five stages, each with its own special characteristics. The theatre puts on its own productions and stage performances. The Studer Vista 8 console was installed for the main stage in the Trøndelag Teater, seating 524 people. Approximately 110,000 people visit the Trøndelag Teater every year, which is one of the cultural nerve centres in mid-Norway.

# The most intuitive console on the market – the Vistonics™ user interface.

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It goes without saying that any console to be used for live production must be easy and fast to use to ensure fault free productions or broadcasts. For a live venue, this is even more important as quite often freelance engineers are hired for particular productions and therefore the console must be extremely fast to learn and easy to understand and operate. Historically this has been the problem with digital consoles - where operators would need to know an operational philosophy before being able to do the simplest things on the console.



Ease of operation is the major strength of the Studer Vista series and it has won industry acclaim and awards worldwide for its Vistonics™ user Interface. The most prestigious includes a 'Top Innovation Award' at NAB show in Las Vegas.

The Vistonics operating concept is built around a patented technology for integrating rotary controls and buttons within a flat screen display. This gives the advantage of utilising a graphical user interface (colours, icons and text) whilst also offering the user a 'where you look is where you control' philosophy. The operating concept is based on channel strip operation with a one action to access rule – any function if not already shown takes only one button push to access it!

The use of colours and icons help with navigation, instant identification and provide a fantastic console overview. It is an operating concept that is incredibly intuitive, fast to operate, gives unmatched visual feedback and can be learnt in a matter of minutes.



The unique philosophy of the Control Bay of the Vista 8 and 9 not only gives constant and direct access to 52 channels faders but also includes real-time metering with each of these channels – all in 19.5 inches width. In addition, the unique contribution feature offers the fastest way to access contributing channels to a particular master without having to go to input faders.

Typically, working with the desk during setup of a show and whilst running a live show slightly differ. Whilst setting up, the operator tends to be thinking about all things to do with the input channels i.e. make a bus assign, set the input gain, EQ and Compress the signal, etc. When it comes to being live on-air, the operator is thinking differently. He is mainly working with masters, i.e. VCA, groups, Aux, and main outputs.

Of course it is important to have direct control and metering of these masters. In addition, the contributing channels to a particular master are of high importance. This is the same as thinking about the bus assign in reverse. Which channels are currently assigned



to a particular master and contributing level? If there is a problem with a mix of a master, the operators mind then turns to the inputs. The issue is that these contributing channels need to be found on the desk and the user has to navigate around the desk to access them. It would be extremely elegant if the user could still think in terms of masters but 'pull' the fader controls of all contributing channels directly to the Control Bay Vistonics™ to make any mix adjustments. In this way they would not have to care where the contributing channels are on the desk layout and therefore would not have to navigate around the desk to find them; a 'clean' view of only the channel faders that are assigned to a chosen master! This is exactly the concept behind the unique and powerful 'Contribution' feature of the Vista 8.

Each of the 10 main faders of the Control Bay has a corresponding 'Contribution' button above the fader. If the 'Contribution' button is selected from a fader showing a master, then the Vistonics™ rotaries above temporarily show the currently contributing channels to that selected master. The user then has direct level control and metering of the contributions. In the case of a group, master or VCA, the Vistonics™ rotaries are the faders of the corresponding channels. There is no need to physically go to the channel



strip of the contributing channel, just adjust the fader levels on the rotaries!

Imagine you are making a complex music and entertainment show. You probably will have some VCAs on the control bay faders. One for the drums, strings, horns, backing vocals etc. Once you have set up the drums in the rehearsal, you tend to only need to tweak fader balances during the live show. With a single push of the contribution button above the drums VCA master, the drum faders are directly displayed on the Control bay Vistonics™ and you have instant level control with real-time meters of those inputs! No thought, bank switching or moving required! Think about this for a second. Do I really need a large number of physical faders even for the most complex of shows when I can access channels as fast as this? A smaller desk not only reduces cost but also takes up less physical space!

General comment after installation of the console is that, both the house engineers and the freelance community has given high praise to the Studer Vista 8. For an operator, it quite simply is a pleasure to use. You know the situation very well: Rehearsals in five minutes and everything is happening at once. The wireless needs tweaking, both EQ and dynamics, the monitoring feeds must be set to the right levels, the director has changed the cues and on top of that you really need a sound check of the band! It is at times like these that you need the console to work

## The National Grand Theatre, Beijing, China



The National Grand Theatre, completed in 2006, is located to the west of the 'Great Hall of the People' in central Beijing. The whole project covers 118,930 sq metres and houses three performance areas, a 2,416 seat Opera House, a 2,017 seat Concert Hall, and a 1,040 seat Theatre; all of which are enclosed by the half-ellipsoid exterior shell. This shell is over 46 metres high and made mostly from Titanium panels with glass panels in the mid-section.

As the main PA console, each of the three performance venues has 42 fader Vista 8 consoles, plus an additional 10 fader Remote bay. The Remote bays will be fully portable but will also have a position set-up in the main auditorium with a remote GC screen, so that during rehearsals the engineers can control the whole console from this position. In addition to the three Vista 8 consoles, there is also a 30 fader Vista 6 installed in NGT's Production studio.

for you as much as possible and this is where the Vista 8 console comes into it's own.

Don't just take our word for it, ask around our clients and freelance engineers who have had the Vista experience.



# Continual Improvement

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Studer works with its customers to continually develop and improve its products. By listening to our users, we can add features or functions, even to suit new applications.

Not only enhancements but also completely new features are expected from modern professional audio equipment. However, limits may occur due to the hardware, be it inside the product or the controls on the surface not allowing access to new functions. Manufacturers are therefore tempted to build surfaces with very generic hardware panels. Buttons and rotaries are labelled by using LCDs in order to be “future proof” for any upcoming changes.

While such an approach is definitely future proof, it largely lacks the ergonomic aspects of operation. Manufacturers therefore find themselves in a dilemma between flexibility and ergonomics. With the introduction of the Vistonics™ operating system Studer has found a way to unify both interests with hardly any compromise. Generic hardware controls can not only change their name, but virtually their appearance by the use of graphics and colours right next to them. This gives us a great opportunity to move on with new functionality by releasing new software.

In the course of specifying and implementing new features it is important to follow a roadmap. Not only is this important in order to focus our resources but also for the customer. This is finally the most important point when talking about future proof investments in today’s fast changing world.

With the release of Version 3.5 all the way to 4.2, software for the Vista series one of these routes becomes obvious. While keeping up serving our traditional broadcast market Studer has seen that customers in premier live PA applications benefit from a lot of typical broadcast features. Probably the two key interests of both markets being:

- fast access to the console parameters
- reliability.

Studer consoles have always found their way into fixed install PA installations during the course of our history. With the release of software updates, the traditional broadcast console Vista series has now become the first choice for large theatre applications as well.

It all began with software 3.3. At that time we introduced one of the most powerful snapshot filtering systems. Not only did it become possible to easily protect single parameters within channels against snapshot recalls, but also we were able to protect a whole bus by one single button press. This feature has subsequently been enhanced by the option to update the console snapshots based on the console parameter protection. The sound engineer has the choice whether his changes made during the course of a performance should be stored within the snapshots or forgotten after one run.

After that we released Version 3.4. This version allows the user to configure matrix outputs and mute groups within the system, a must for all PA applications. Specific to our matrices is that they can be sourced from any type of master and input channel, making it a complete mixer within the mixer!

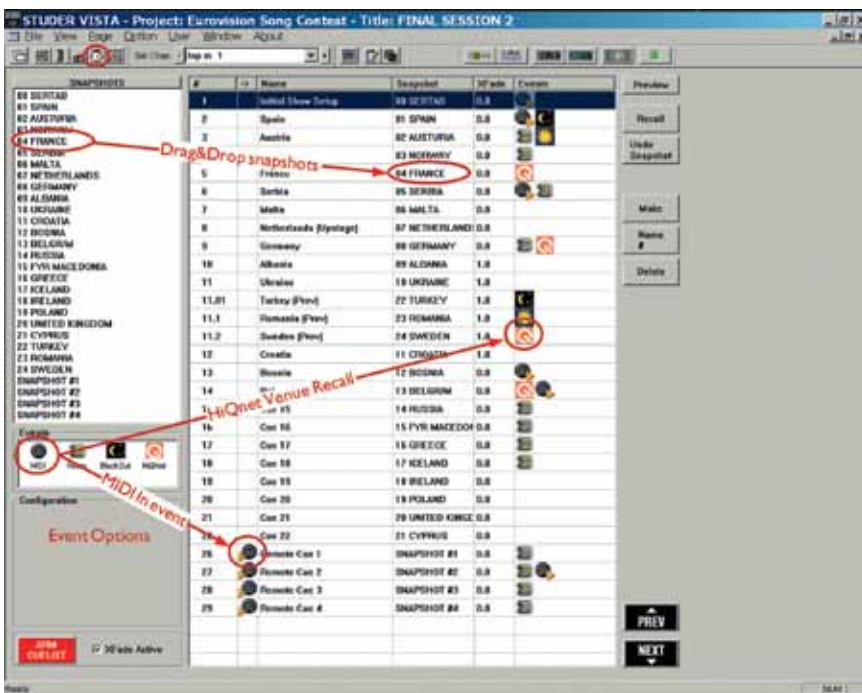
Version 3.5 introduced the ability to create cue lists. This feature allows sorting of snapshots while attaching various events to them. Such events (e.g. MIDI) may be sent out of the console at the time of recalling a cue or be received by the console and trigger a cue. But even the consoles cue list functions such as NEXT or PREVIOUS are controllable by third party equipment using "MIDI show control" commands. Finally the cue list has the ability to fire off HiQnet commands, allowing the control of all Harman HiQnet compliant devices such as AKG microphones, DBX and BSS signal processors, Crown amplifiers, or JBL loudspeakers.

HiQnet was first introduced in January 2005 and Vista 8 is the first console incorporating this interface. (For more details see [www.harmanpro.com/hiqnet](http://www.harmanpro.com/hiqnet)).

With v.4.2 this list functionality is further enhanced, below is a summary. The earlier cue list has been extended by additional areas, such as the Snapshots, Events and Configuration areas at its left.

The Snapshots area shows the currently available console snapshots; they can be dragged-and-dropped into the desired cue row of the cue list's # column. The Events area allows dragging-and-dropping the desired events into the cue list's Events column. If one of the events is selected, the Configuration area shows the settings and options useful for the current event.

A click on the Library Entries button opens the cue actor overview window that gives a comprehensive overview of all library events. At the bottom of the theatre cue list window, the name of the current cue (and snapshot, if appropriate) is indicated in large characters so that it may be clearly read even from a certain distance. The last and the next cue's names are displayed as well at the upper or lower border of this indication field in small characters. Any desired cue from the list can be recalled either by double-clicking on its name or by using the PREV or NEXT buttons.



## National Theatre & Concert Hall, Taipei, Taiwan



Studer has supplied two digital Vista 8 digital audio production consoles to the leading cultural institutions of Taiwan, one each to the National Theatre and the National Concert Hall.



Both auditoriums were renewing their front-of-house control consoles, replacing Studer analogue 900 consoles, which have been in place since the facilities were built in 1990. Studer 900 desks are being retained in two other auditoriums, the Experimental Theatre and the Recital Hall. "They have been using Studer consoles since the day they opened," says Linfair's Steven Cheng. "There have been so few problems that some of the spare parts they ordered in the beginning have never been opened. This has created a good deal of trust in Studer and also in Linfair, which has been responsible for maintenance of the equipment since 1990."

According to Cheng, the Vista 8 is the ideal product to ensure a smooth adoption of digital technologies by these two leading arts centres. "The Vistonics interface will give them an easy transition in operational terms. The consoles are equipped with fully redundant power supply, redundant DSP and redundant control system, so nobody has to worry about a system crash."

## LIBRARY EVENTS

### 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 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.

Cue-based theatre productions need a large number of parameter changes

per channel, usually for a number of subsequent cues.

Example: In scene 3, the character Jasbo Brown played by Daniel wears a wide-brimmed hat, changing the sound of his lavalier microphone due to reflections. The solution is to modify the EQ of his channel in order to make up for the different microphone response. This is valid for cues 3, 4, 8...10, etc., ('Hat EQ'). For cues 5...7, the original EQ settings have to be applied, while cue 11 demands for a flat EQ.

This can easily be achieved with Library Events. They may be adjusted while running the show, without the need to update the cue settings that are ahead of the current cue.

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### MIDI/MMC Events

The MIDI/MMC (MIDI machine control) event type can either be used for automatically sending MIDI commands if the symbol has been entered into the Events column (such as Program, Note On, Controller, MMC and Sysex), or for triggering the associated cue on arrival of the command if the symbol has been entered into the column (such as Program, Note On or Controller). MMC commands are a subset of the MIDI Sysex ('system exclusive') command set that are used for triggering transport commands for external playback equipment, such as Stop, Play, Locate, etc.; 'Deferred Play' is a Play command that is executed after

the playback transport has found the desired cue position.

A MIDI command is entered either by dragging it from the Events area and dropping it into the Events column of the selected cue, or by a rightclick into the Events column of the selected cue and selecting the desired event from the dropdown list. It can be configured in the Configuration area or deleted if highlighted by a click and either pressing Del on the keyboard or clicking on the Cue Delete button. If MIDI input control signals are used, a MIDI input symbol is inserted into the column of the cue list.

## Deutsches Schauspielhaus Hamburg, Germany



The theatre has been honoured many times as the 'theatre of the year' in Germany. It was built in 1900 and has 1831 seats. In summer 2004 the sound engineers from the Deutsches Schauspielhaus Hamburg intensively began to intensively look around the market for a theatre-suited digital console.

After initial pre-selection, four manufacturers had the possibility to provide a console for testing in Hamburg. The goal of the Tonmeisters was to find out which console had the shortest learning curve and the right feature set. After comparison of all systems the choice fell unanimously in favour of the Vista 8. This was the only console where both the freelancers and the house Tonmeisters agreed that the operation was far superior to the others.



During the holiday break in 2005 the console was installed in parallel with a new sound reinforcement system. The Vista 8 has 30+10+2 Fader and a RemoteBay with decentralized operation of the control system. For this purpose a special Bay was designed, which possesses a drawer for the mouse, keyboard and a headphone amplifier. The Remote control system, RemoteBay and audio for the integrated headphone amplifier are connected over fibre to the main desk. The RemoteBay can be operated in different positions in the house.

## TIMED EVENTS

For a timed event, the time until the next cue is recalled as well as the number of the next recalled cue can be set. When clicking into the corresponding entry field, the recall time can also be adjusted by moving the mouse or the trackball up/down (range: 0...60 seconds). A progress bar is shown in the large cue area while the timer is running.

### Dynamic Automation Events

With dynamic automation events, automated parameter changes can be inserted into a cue, such as fades, cross-fades, pans or Aux/matrix level changes. Programming such events is extraordinarily convenient and easy. After a click on the Dyn Auto icon in the cue list it is highlighted (blue background), and the Configuration area shows the controls used for the dynamic automation.

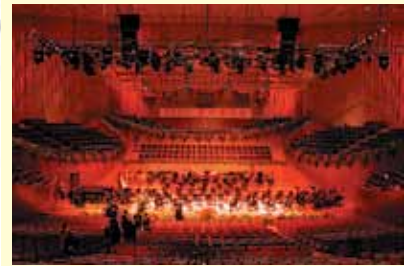
For recording, e.g., a fade-in, just click on the record button. The automation system switches to record-pause mode, the record button's color changes to red, and the play button is replaced by pause. All mix passes are saved, and if the operator is unhappy with the last one (or several of them), he just uses the Kill Pass x button in order to delete as many of the mix passes as desired.

### VCA/Mute Events

Particularly in large, cue-based musicals, assigning channels to VCA masters provides the basis for the mixing console cue list. It is very easy just to use a small number of VCA masters during the show, reassigning slave channels from cue to cue, instead of working on a very large number of input channels directly. One of the main tasks when setting up a cue list for a production is assigning the appropriate channels to VCA masters on every single cue. With VCA/mute events this is achieved very easily.

After a double-click on the desired VCA/mute event in the cue list, the VCA details window opens (see next page). All channels currently muted are indicated in red. The ones being part of a VCA group have the group number in their upper part. When right-clicking on one of the channels, a list with all group assignment possibilities pops up; a channel can also be muted or un-muted without an assignment to a VCA group

## Shanghai Oriental Arts Centre, Shanghai, China



At a cost of nearly \$100 million, Shanghai's gigantic new cultural epicentre opened at the end of 2004. With three Studer Vista 8 audio mixing consoles specified for the main performance areas and a Vista 7 for the central control room, the Shanghai Oriental Arts Centre will showcase Studer's digital technology at the highest level in the Far East.

Enclosed under a stunning glass roof resembling a butterfly orchid are three halls, a 2000-seat symphony hall, an 1100-seat opera hall and a 300-seat auditorium. The building, which covers 23,000 square metres, has been designed by the leading French architect Paul Andreu, celebrated for the Grande Arche de la Defense in Paris.

## Staatstheater Darmstadt, Darmstadt, Germany



The 'Grosses Haus' of the national theatre Darmstadt has undergone a complete refurbishment. In this context, the house has been re-equipped with the most modern technology. The Tonmeisters decided on a Vista 8 console after thorough investigation of the market. The Vista 8 has 40+10+2 Fader and Remote Bays for decentralized operation of the control system. The system was installed in spring 2006.

# Perfect Tools for Surround

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

Studer's VSP system, unique to the Vista series consoles and the D950 M2, provides the operator with creative possibilities. With VSP's amplitude, phase and time delay panning, even the most complex surround production will result in a quality mix which is second to none. With VSP, mono sources can be positioned to produce highly convincing surround sound without employing time-consuming and often unsatisfactory external processing. With few or no sources of multi-channel sound elements available, operators must attempt to create surround from purely mono sources using delays and reverberation



devices. Thus, the creation of an impressive and satisfying surround mix takes much time and effort, and the results are often disappointing. Virtual Surround Panning positions the sound source within the space created. Surround impression is guaranteed by generating time delays on all speakers. VSP also gives better directional imaging by adding phase and frequency spectrum information to the existing amplitude difference between channels, if the operator wishes to do so. The results - which must be heard to be believed - are very impressive and offer an enhanced experience in surround sound!

## VST plug ins option

Studer follows a clear roadmap and protects customer investments by providing upgrades to its products. Buying Studer means buying an insurance for your future. A dedicated plug-in engine can work in

tandem with the console to allow the use of your favourite plug-in devices.



## National Theatre, London, UK



When the Broadway blockbuster *Fela!* transferred to London's National Theatre on the South Bank, Tony Award-winning sound designer Robert Kaplowitz took advantage of the auditorium's vastly different form to rework his original soundscape, with a Studer Vista 5 digital console at the control centre.

"I had hoped to have used this desk for the Broadway production--but for various reasons it didn't happen," said Kaplowitz. Of the advanced feature set offered by the Vista 5, the highlight — as far as this show is concerned — is the Virtual Sound Panning (VSP) feature. Offering phase and time delay, this is assigned to the 11-piece band (over 25 channels), to provide panning and a wide stereo image without level shifts.

As a result, the band audio image moves subtly. "They are on moving trucks which go back and forward and we can psycho-acoustically connect the image of the band without sacrificing gain in the whole room. It's a big bonus having the VSP as we missed a lot of this on Broadway."

# The Studer Vista Series

## – ‘The perfect consoles for the perfect live performances’

Choosing the perfect console for the perfect live performance is never an easy task but there are some key issues that form the starting point.

A cost-effective, reliable, flexible, easy to use, and future proof console would be the ideal choice.

The Studer Vista series offers just that with its award winning user interface. The mature and proven system design that has over 500 Vista consoles in live use every day with ultimate system flexibility makes the Vista series an extremely cost-effective package.

Quite simply the Vista series consoles are ‘the perfect consoles for the perfect live performances’.

If you have a need for an audio console for a new or existing project, then please contact Studer to organise a personal on-site demo of the Studer Vista series on your premises.



Studer Vista 5



Studer Vista 5SR



Studer Vista 8



Studer Vista 9

### Royal Opera House, London, England



One of the world's most famous cultural venues, the Royal Opera House in Covent Garden, London, has decided to take control of its own artistic output in terms of broadcasting. The House is currently building technical facilities that will allow it to develop a comprehensive archive of its productions, with full recording and broadcast capabilities that can also act as a core facility for third-party broadcasters. A Studer Vista 8 is at the heart of the system.

### Other references from the broadcast world (an excerpt):

BBC, France 3, ORF, NRK, SVT, RAI, RTL, RSR, RTSI, TSR, SBS, MBS, CBC, TVE, SRTV and many others.

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