Digital live mixing

console

Performance enhan

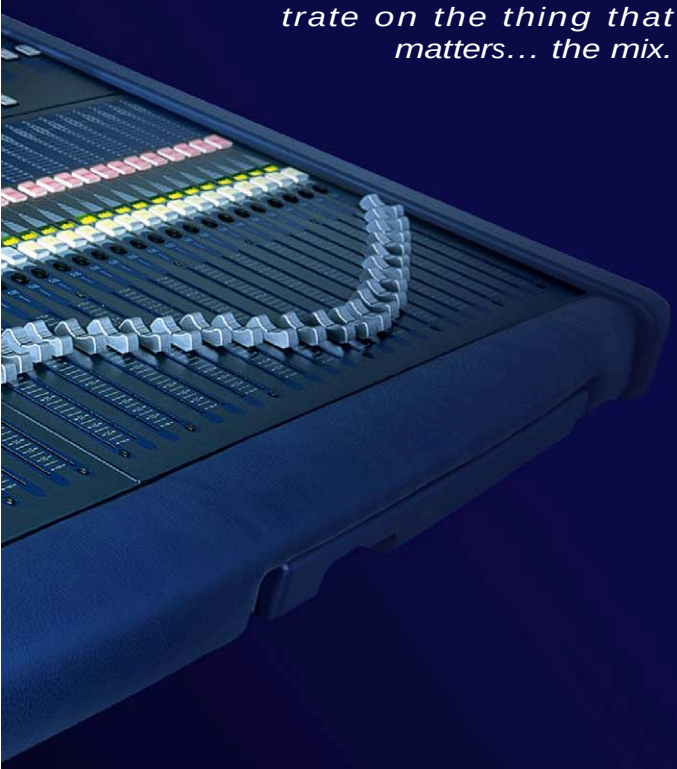
designed for You . . .

Monitor	Front Of House	Theatre	Live to Air
- Console surface designed for fast precise control - Clear view of all Aux / bus sends - Mono, Stereo or Multi-format Aux (IEM) - Full processed inputs and outputs - Routing of processed groups and aux to matrix or master - Independent panning for each of the 32 busses	- Exceptional sound quality - Flexible console configurations - I/O, XFAD, VCA, groups, matrix - Smart automation and live functions, OverRam - Multi-format mix busses - Full processing, inc. delays on outputs - Off-line programming - Small footprint, more paying customers	- Configurable for specific show layouts - XFAD for multi-format sources - Mulitiple Matrix and bus masters - Show automation: snapshot, manual or MTC synch, crossfades - Live functions inc OverRam, Relax, Off-Line - New Q/pages for display and control	- Flexible bus outputs and distribution - Multiple program masters and matrix - Signalization control - Automation and Relax functions - Exceptional audio quality - Optional external I/O DSP and stage boxes - External PSU options - Small footprint, ideal for OB applications

cing Technology

The Sy48 is the latest in a series of compact professional digital audio mixing consoles from InnovaSON.
Equally at home touring front of house or on monitors, in theatres, broadcast and houses of worship, Sy48 brings the best of digital audio technology to the art of live mixing. Compact and lightweight, Sy48 is ideal for those applications where space is at a premium but quality and reliability cannot be compromised.

Specifically designed for live mixing the Sy48 provides a straigntforward uncluttered interface to allow you to concentrate on the thing that matters... the mix.



innovaSON

Sy48 mix capacity

- *mixing for up to 64 channels*

Sy48 input and output resources

- *up to 48 local mic/line inputs*
- *16 local line inputs - for aux, inserts, bus returns*
- *16 local line outputs - for aux, inserts, bus sends*
- *routing of processed groups and aux to matrix or master*
- *up to 48 processed or non-processed analog, digital or EtherSound outputs*
- *32 busses - freely assignable as main, aux, groups or matrix*
- *2 monitor busses*
- *choose from a selection of analog, AES digital, processed or unprocessed inputs and outputs*
- *optional Local External Mix box for I/O modules and DSP*
- *optional Stage Box for remote I/O*

Sy48 control surface

- *fast, straightforward interface for immediate control*
- *48 faders - user-configurable for use as inputs, VCAs, groups, busses, aux, XFAD, matrix or crossfaders*
- *central control panel provides instant, repeatable control of input gain, pan, eq, dynamics, delay etc*
- *hi-definition 12" on-board fold flat TFT screen displays all key console parameters at a glance on-screen - everything you need to see in one place at one time*
- *independent pre/post fader and panning for each channel and bus*
- *stereo monitoring with PFL, AFL and APL (After Processing Level) listening on headphones or via allocated outputs*

Sy48 transmission

- *MC Optical comms module - coaxial and fibre optical interconnections for the optional Stage Box (digital splitter)*

software - Sensoft

- *save configurations for instant recall*
- *snapshot automation with manual, or MIDI synchronisation*
- *enhanced show software with new Q /Page display and control for theatre applications, including Relax, Off-Line and OverRam*
- *Off-Line programming for show preparation and backups*

acclaimed audio quality

- *high performance mic pre-amps*
- *short and constant latency*
- *floating point DSPs with maximum accuracy*
- *144 dB dynamic range*

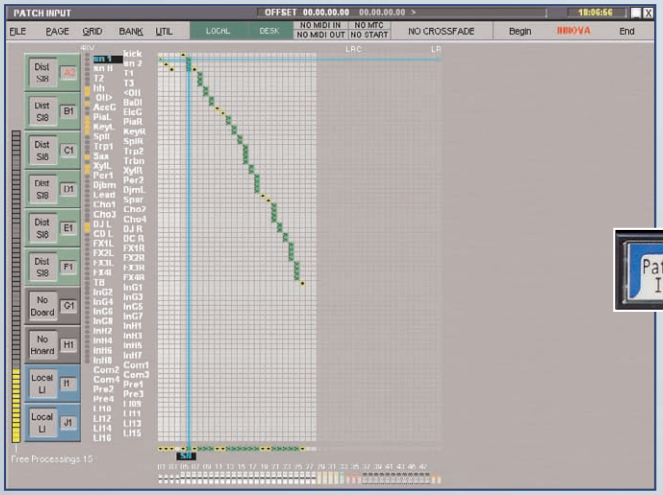
design and build

- *designed to cope with the rigours of touring*
- *proven durability and relaibility – hundreds of InnovaSON consoles in use every day worldwide*

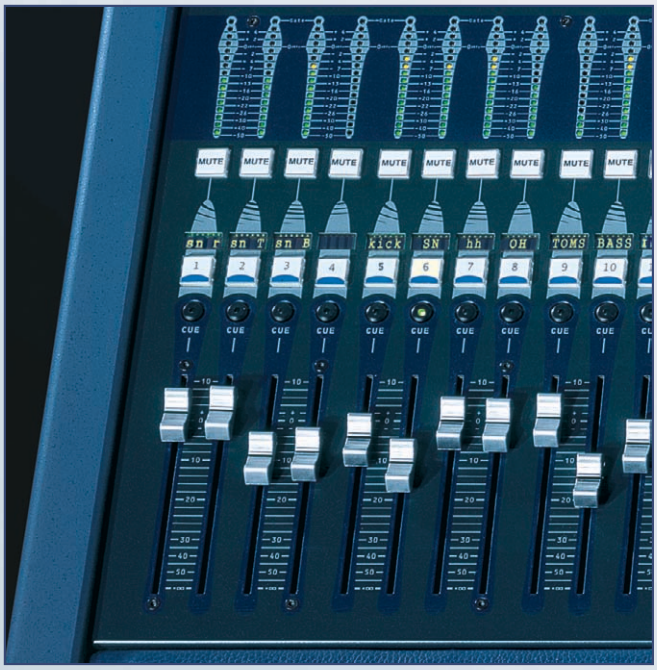
Digital live mixing
console

Input signal path

assign inputs to faders with total flexibility



To assign an input to a fader press the Patch IN key. The corresponding screen opens and displays the global assignments to inputs faders. If you want to add or change an assignment, then select an input fader, choose your physical input (distant or local) with the track ball pointer or keyboard. Press the ***OK*** *key, and the connection is made.*



For example, a drum kit (11 mics) could be managed by 5 channel faders (ch 5-9) with 4 XFAD expansion faders configured in the above example as Chs 1 - 4.

Channel 5 : kick (mono input)
Channel 6 : SN (3 mics - top, bottom, rear) as shown in the expansion zone (chs 1 - 4)
Channel 7 : hh (mono input)
Ch 8: OH (2 mics) which will appear as chs 1&2 in the expansion zone when ch8 SEL key is pressed.
Channel 9 : TOMS (4 mics, one for each tom) which will appear in the expansion zone when ch9 is selected.

Press the channel SEL key and you have direct access to the input or the group of inputs. Press again to cycle through these one by one, whilst the central Channel Control section gives you full control of their processing. Press directly on a particular input in the expansion zone to have direct access over its parameters, gain, dynamics, Eq or Pan.

Using XFAD expansion fader combinations you are able to control the mix levels and mutes of multiple sources with more efficiency and less space used on your console control surface.

fader expansion

XFAD™ *is a totally new way of controlling mix elements which provides you with the ability to configure your Sy48 the most efficient way for each show and benefit from an immediacy of control previously unavailable on live digital consoles. The console's channel faders may be used as standard mono input faders of course, but you will get the full benefit of XFAD™ using an expansion zone for multiple sources. Using XFAD, you can group several input sources for control by the same input channel, then, press an XFAD select switch, and press OK to group these inputs to this channel. At any time, you can enter or change the name of the physical input. Press Patch IN again to leave the input patch screen and return to the main mix screen. The last selected channel is now available for routing, Eq, compression, gain, etc…*

In this way selected channel faders become controllers for several 'source' mono inputs (2 for stereo, 6 for surround sources, 10 or more for instruments grouping) according to your Patch IN assignments.

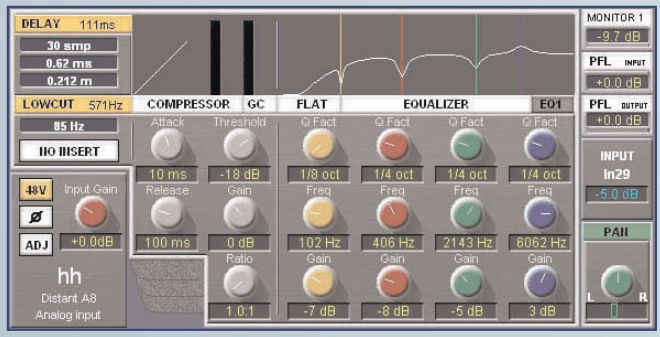
always in control

Sy48 input channels are all provided with…

- *Input Gain, Phantom and Insert*
- *Phase, Low Cut ON/OFF, sweep frequency from 30 to 500 Hz*
- *Delay up to 111 ms, (30m at 48kHz)*
- *Noise gate, Compressor, 5 parameters, ON/OFF*
- *Parametric equalizer with 4 full bands, width, frequency, level, ON/OFF*

…at all times, with no processing limitations or extra audio delay.

In fact you'll never run out of processing as there is more than enough DSP power available on the Sy48 DSP module. Select a channel, press an Eq, Gate, Compressor switch; change the values of the function and as the sound alters, the on-screen display reflects those changes… fast, safe, repeatable. With Mutes, Cues, a 16 leds comprehensive level-meter and a motorized fader for each channel, you have everything you need for a great mix.

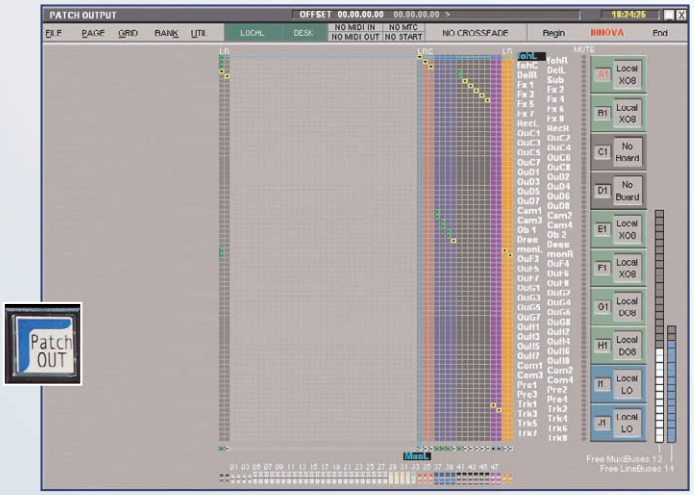


Output signal path

as easy for bus outputs

Press the Patch OUT key and the global view of all connections to the outputs is displayed. Select a mixing bus fader and then select your physical output with the track ball. Change the output name if you want for an easy-to-follow picture of the connections. Press the OK key and the connection is made. If you want a bus to be multi-channel (XFAD™ mode), select the fader(s) reserved to manage the feeds and assign them in much the same way as with XFAD inputs. Using the Patch OUT grid you can quickly set up a stereo or LCR bus output in the analog, and /or digital domain.

If you want to distribute the same bus to several outputs (analog, digital), select the next output with the track ball, hit OK and your new output is connected.



mix bus & routing

Flexible and powerful

Sy48 mix busses can be defined as any of the following, depending on your fader configuration:

- *Mono - simple configuration*
- *Stereo - using XFAD mode, Left and Right*
- *LCR - using XFAD mode Left, Centre and Right*
- *LCR+M - using XFAD mode Left, Centre, Right and Mono reduction*

This is valid for the following bus types:

Groups (blue faders), Aux (black faders) which mix inputs.
Masters (red fader) which mix Aux, Groups and inputs.
Matrix busses are only mono and are used for re-mixing Groups, Aux, Masters and direct inputs.
The Monitor bus is stereo with a mono reduction if needed.

In addition to audio busses, Sy48 can be configured with multiple VCAs which act as remote level controllers for any channel, input or bus with Mute grouping possibilities. VCA faders are assigned in the Console Configuration Screen.

Routing inputs to a bus and that bus to a higher level bus is simple. Press an input SEL key, and the console channel SEL key will illuminate on the bus to which this input is routed. To make a change, keep the SEL key pressed and, simultaneously, select or deselect it from the bus destinations using their SEL keys. The audio routing, the console keys and the on-screen console display are updated immediately.

The principle is the same for bus to bus selections. The console and the on-screen display reflect the input routings as well as bus to higher level bus routings (Master, Matrix etc).

output processing

When the Sy48 is equipped with Hyper-Drive™ output modules (XO-8D, DO-8X) either inside the console or in the Local External Mix rack, each output has a complete dynamic processing section - gate, compressor, 8-band parametric Eq, delay of up to 1.35 seconds, and output level adjustment from +10.5 dBu to +22 dBu. There is no need for external racks - just connect your amplifiers !

independent panning for each bus

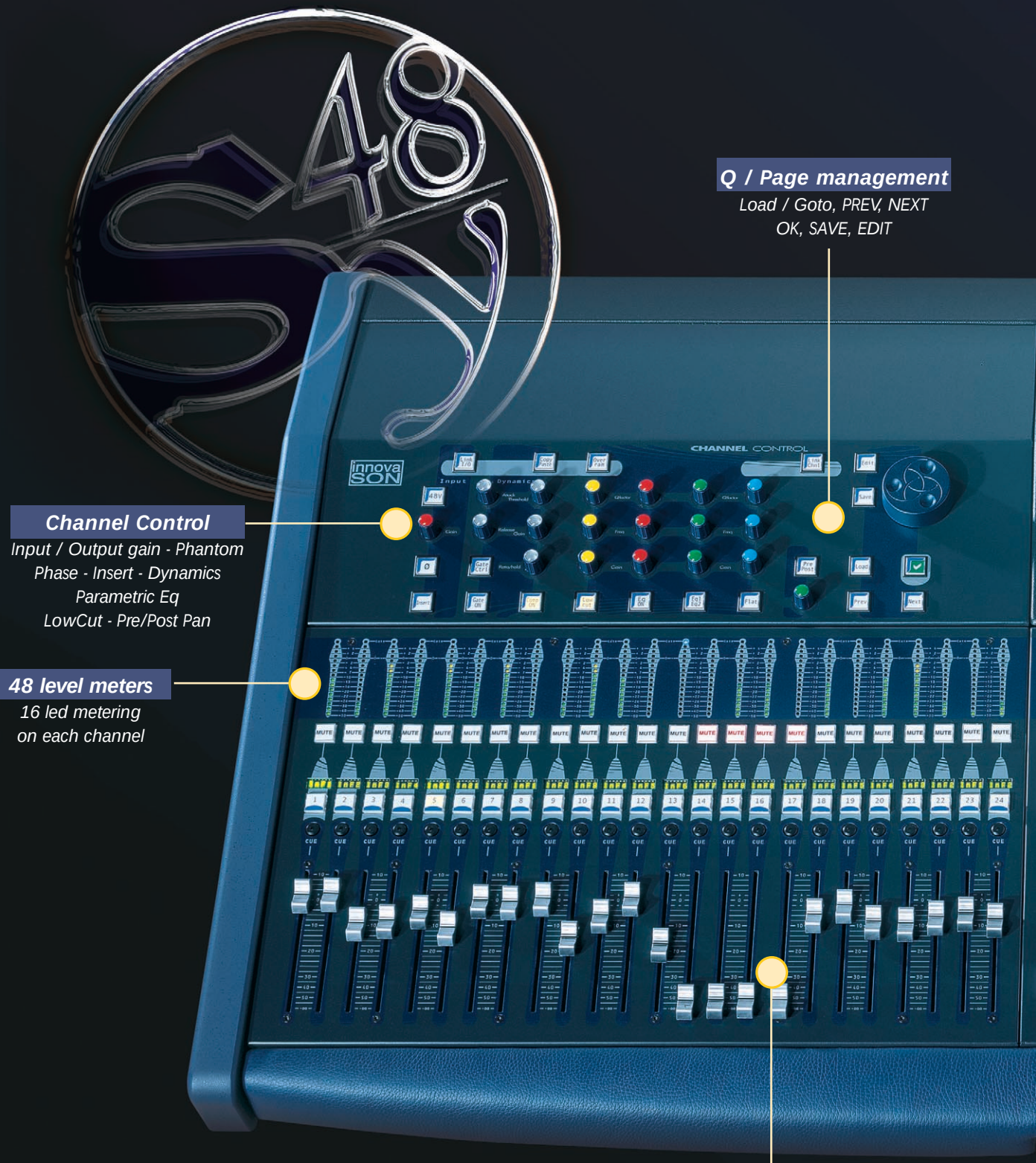
For fast PAN access, keep an input channel's SEL switch depressed, and then press the CUE switch on one of your stereo aux busses on the console. This gives you control of the input's independent panning to that bus. Press another stereo aux CUE and you're now controlling this same input panning but to a new bus. Perfect for monitors, fast for any other use.

Now press on the Pre/Post and the full Pan Screen opens. By selecting each of your busses, you have control of the corresponding pans and balances immediately, as well as a complete view of the channel panning distribution.

Access to this screen from a selected bus gives you a full view of that buss's panning distribution. There are more inputs available which you may want to alter and accessing them is simple. Press the SEL switch of the input you want to control and it becomes active immediately.

Easy and very powerful. Even sophisticated multi-point distribution becomes straightforward.

Live Mixing Console



Q / Page management
Load / Goto, PREV, NEXT
OK, SAVE, EDIT

Channel Control
Input / Output gain - Phantom
Phase - Insert - Dynamics
Parametric Eq
LowCut - Pre/Post Pan

48 level meters
16 led metering
on each channel

48 faders
freely assignable functions
Input: mono, stereo, multiple (XFAD)
Control: VCA, crossfade
Mixing Bus : group, master, aux, mono,
stereo, LCR, multiple (XFAD), output matrix

Fast, tactile control

InnovaSON has years of experience in digital live sound with hundreds of consoles in use every day around the world. The Sy48 control surface has been specifically designed for live mixing, providing fast direct performance control without the need for multiple channel strips, hundreds of pots and switches, or layers.

Just what you need when you need it... immediately

Within a few minutes you will be using the full potential of the Sy48 and will immediately appreciate its compact size, flexibility, reliability...

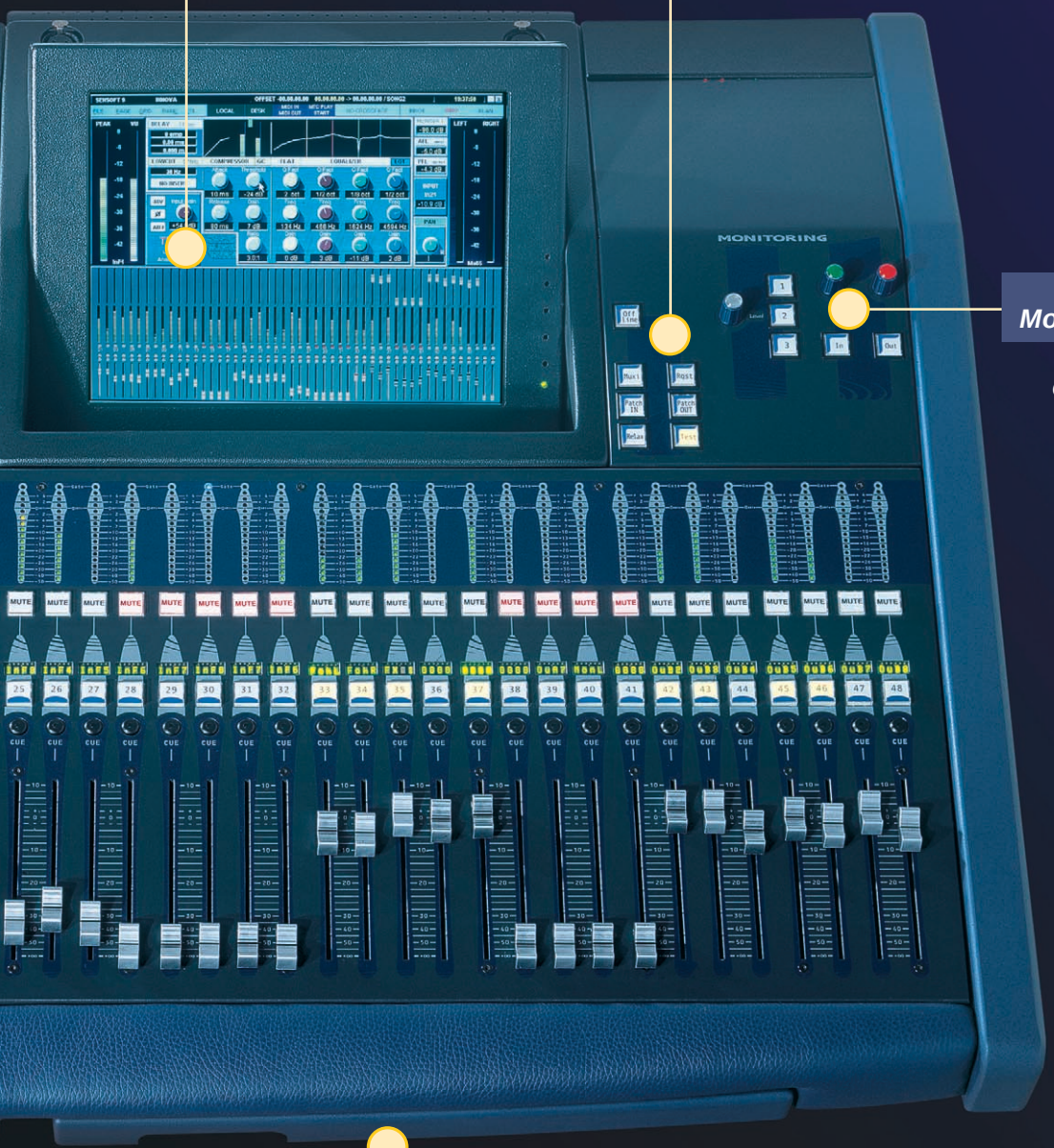
...and above all, its sound.

Assignments / patch & utilities

Off-Line, Muxi, Patch IN, Patch OUT
Relax, Test, Request

Screen TFT

12" retractable



Comprehensive Monitoring and talkback

3 Monitoring circuits
Output Cues PFL, AFL,APL
Input Cues PFL, AFL
Solo - Solo Cut
TB1, TB2, TB3

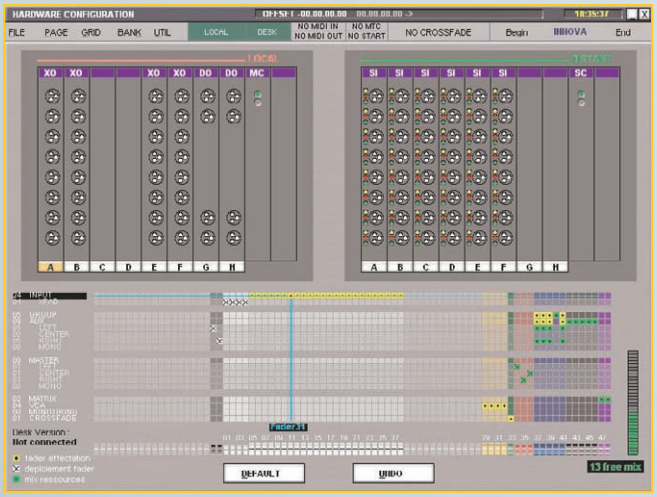
Retractable keyboard

PC keyboard & trackball
& MAGLIGHT

Digital live mixing that works for you

Maximum control

console layout



user-definable fader configurations

The Fader Configuration screen is where you define the console layout you want for the current job. For each show file, the 48 faders on the control surface can be defined as any of the following:

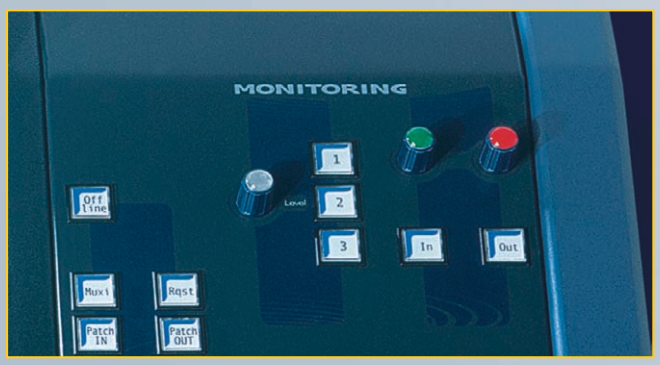
- *Input channel, expanded input for stereo or multiple XFAD*
- *VCA*
- *Group or a Sub Group, Auxilliary bus, Master bus and XFAD for mono, stereo, LCR and LCR+mono*
- *Matrix mixing bus*
- *Crossfade fader*

Once the console is configured you then have access to all the resources and controls you will need for the current show and these are saved as a show file. In this way an engineer at Front of House, on Monitors, or mixing live to air in an OB truck can lay out the Sy48 faders the way that best suits their way of working. e.g.

- Monitors will generally have multiple inputs and many aux feeds for In Ear Monitoring or wedges.

- Live broadcast for TV and Radio can prepare multiple mic inputs, machines and other sources as XFAD stems, with several mix bus outputs for programme distribution, mix-minus and comms.

powerful monitoring & solo/cue selection



comprehensive monitoring system

The Sy48 monitor bus is stereo and can be distributed to the headphone jack as well as to 3 different assignable outputs. These are selected via the Patch OUT grid and the choice of circuit in use is made on the console surface. Each of the three outputs has its own listening level. Monitoring preferences with Input / Output priority, default Master listening, Solo mode and Mono reduction give you full flexibility and total control.

*The **Cue** button on each fader sends the corresponding channel to the stereo monitor bus. **Cue** modes available are: PFL and AFL for inputs, PFL, AFL and APL (After Processing Listening) for outputs with 5 corresponding levels.*

Fast, precise, dependable monitoring for multiple applications:

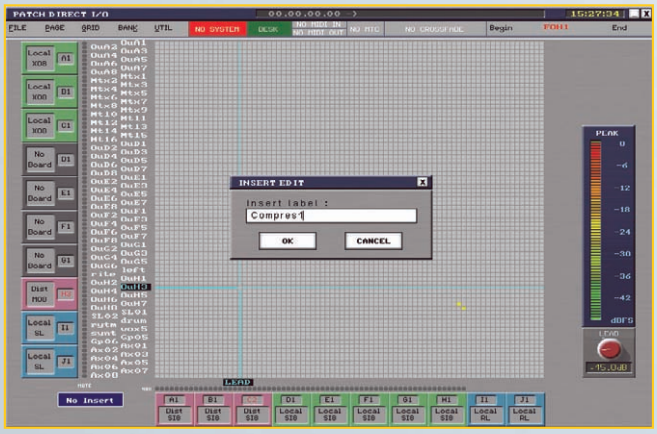
***On stage monitoring**: use the 3 output circuits for PFL/AFL control (wedges, IEM, near field). These are assignable for each of your auxiliaries. As soon as you CUE an aux, the monitoring is connected giving you immediately the same balance as the artist.*

***Front of House**: With delays available on monitoring outputs, your nearfield listening circuit can be correctly phased with the main PA, and controlling the delays or the spatial sound for multi-point amplification is simple.*

***Theatre**: From your control room or house position, you can listen to any monitor selection; even a sophisticated multi-point set up. In the venue, during rehearsals and during the show you have complete control of each audio feed.*

***Broadcast**: Near field, mid field or main monitor speakers are immediately available for monitoring your various program outputs or program return feeds. Distributed outputs make it simple to monitor differing feeds with varying levels and processing. One of the monitoring circuits can also be specified for Comms purposes.*

direct outputs



At the heart of the Sy48 console there is a powerful digital audio signal distribution, routing and splitting functionality. Accessed by the MUXI key, the I/O page displays this comprehensive switching matrix giving you access for selecting direct analog or digital outputs and providing a view of all the system outputs and their assigned processing.

- Multi-track-recording feeds, with or without output processing, simplify machine room management and improve flexibility. Fast, flexible signal distribution for clean feeds are easy to manage for those last-minute requests during a live show.

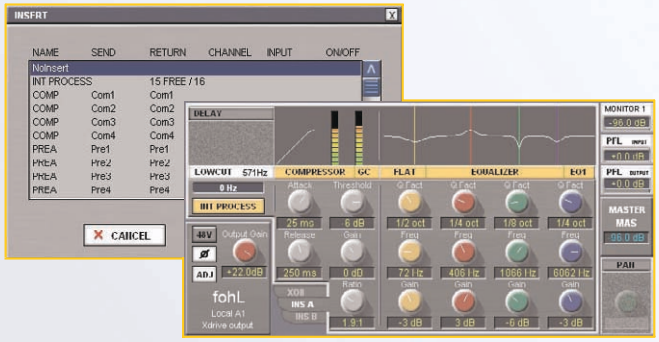
- Return lines to the stage box for mix-minus, PA loudspeakers or Comms sends are quick to program and control.

This screen can also be used to define insert I/Os for external outboard equipment. Each insert will have a name (typically the outboard equipment) and its send and return I/O definition.

Insert patch assignments are fast and easy to make and clearly visible on-screen.

bus inserts & processing

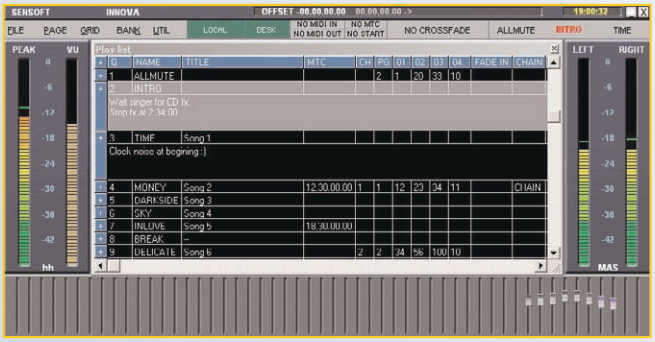
Processing can be added to a bus either using the Sy48 DSP internal processing or via external insert send and returns which are assigned to the busses via the Patch OUT window. This also displays the available remaining bus processing resource in the right hand columns. Processing inserts can be turned on and off using the insert tabs on the selected bus or output on-screen display window.



automation

Console configuration, fader definitions and general preferences are stored in a root file which will also contain any Q/pages you make for a show. Once you have a file you can run the console with only one Q/page but more likely you will want to have multiple Q/pages stored for different bands, songs, scenes or Q changes.

Up to 1000 Q/pages may be stored in the console each of which is a complete snap-shot of the console... absolutely everything. A list of the Q/pages stored can be generated, displayed and edited on the main mix screen during rehearsals allowing you to quickly build and manage your Q/page list for the show. And of course the Q list could also be built off-line or imported from another console.
During the show itself you can choose which informarion from the list you want displayed on screen eg. current and next Q/pages plus notes and Midi events.



An automation management panel on the Sy48 is used to control the page changes during a show or rehearsals. You can either make changes manually using NEXT and PREV, or automatically with Midi Program Changes and Midi Time Code from machines or sequencers. The Smart Automation and CrossFade modes allow you to segue / fade between pages whilst keeping complete control over the process. For each page, up to 16 Midi-Program-Changes can be sent to external devices such as effects, lighting and others consoles.

libraries

Store and recall your favourite sounds and processing in your personal libraries. It's simple. Press and hold the channel SEL key, then press SAVE and a new screen window opens where the current channel name is to be stored. You just need to enter the name you want for this particular processing (PhilKick, GuitaRock, Violin12, Vocomment, etc...).

Export this library to a floppy disk or USB key and you can update your own data, keeping your sound libraries with you.

To load a library sound just hold down the SEL switch on the channel to be changed and press the Load key, the menu of your library sounds opens.

Chose the sound you want and select the parameter(s) to copy.

key live functions

You're all set to go; rehearsals went well, and everything is in place; the show will start soon. Then, at the last minute, the stage manager comes up and asks for a new commentator mic or any one of the last minute things that can happen live...
Your show has 65 Q/page snap-shots and this mic needs to be added after the 3rd act...
...no problem, press Off Line.

The console is 'frozen' in its current state and the audio continues unchanged. The console software, Sensoft, now lets you change to the page to edit, add this new mic, make the necessary setting corrections and routing to the busses, and save the new modification. If necessary then OverRam the mic settings to all the pages of the show where this mic is to be used.

OverRam is the function to use when you want to update a change to one or more channels across multiple pages of the current show. OverRam can be used, off-line as we did here, or on-line during the show itself to update a new Eq or any parameter to this same channel throughout the pages where the new setting is needed. From then on those pages, scenes, will have the new parameters as well.

We're still off-line. The TFT screen displays this clearly and the console key Off Line is showing red. Press Off Line again and you come back to the console status you left and the desk is 'unfrozen' and live again.

Want to copy your channel settings on other channels? Choose the parameters to be copied and press Copy, select the destination channel and press Paste and it's done.

The Link grids give you the ability to have several channels under control at the same time. This could be for inputs, Eq and dynamics, faders, mute and outputs. You can then link channel pairs as stereo or more as groups of inputs or outputs depending on the flexibility of control you need.

Relax keeps specified channel faders in manual mode ie: not under software control. This could be for example for particularly sensitive or unpredictable inputs you need to use during a show. For each fader, you can define the parameters to keep out of the automation maintaining partial or full manual control through the different show pages.

Sy48 is controlled by Sensoft, dedicated PC compatible software that enables you to prepare or archive your console settings and libraries on your desk or off line on a laptop PC. Export and Import functions allow file transfers from console to PC and vice versa.

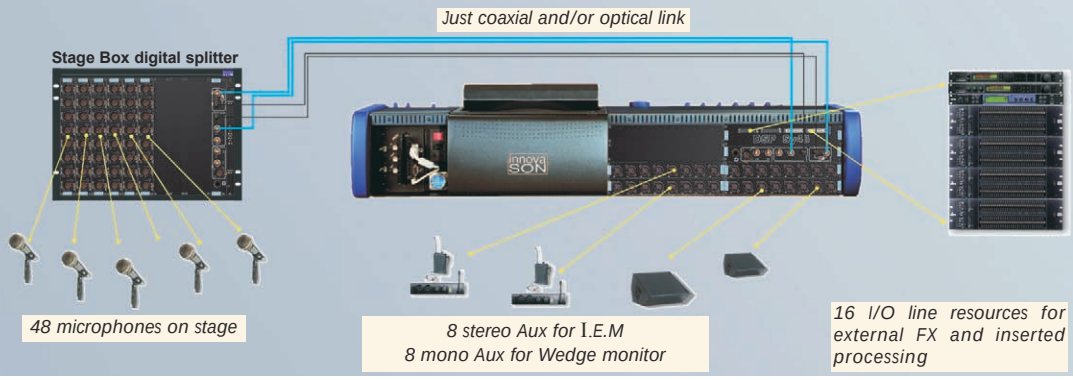
Typical

On Tour - Monitoring

- *Console surface designed for fast precise control*
- *Clear view of all Aux / bus sends*
- *Mono, Stereo or multi-format Aux*
- *Full processed Inputs and Outputs*
- *Independent panning for each of the 32 busses*
- *Intelligent monitoring - 3 configurable circuits*

Monitor console configuration example

56 inputs - 32 busses
7 banks of 8 XFAD, 5 direct assigned inputs
8 VCA - 8 stereo, 16 mono Aux - 2 XBUS
Up to 16 internal inserts - Up to 16 external inserts

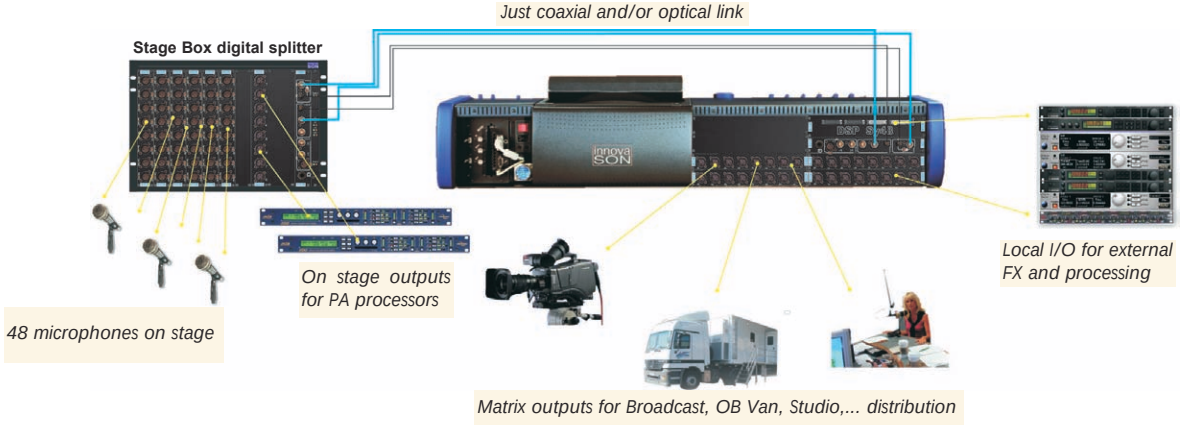


On Tour - Front of House

- *Exceptional sound quality*
- *Flexible console configuration - I/O, XFAD, VCA, groups, matrix*
- *Smart automation and Live functions*
- *Multi-format mix busses*
- *Full processing inc. delays on outputs*
- *Small footprint - more paying customers*
- *Off-Line function and Off-Line programming*

FOH console configuration example

64 inputs - 32 busses
10 banks of 10 XFAD
8 VCA - 8 mono Aux
1 Master L,R,C,M section - 8 Matrix busses
Up to 16 internal inserts - Up to 16 external inserts



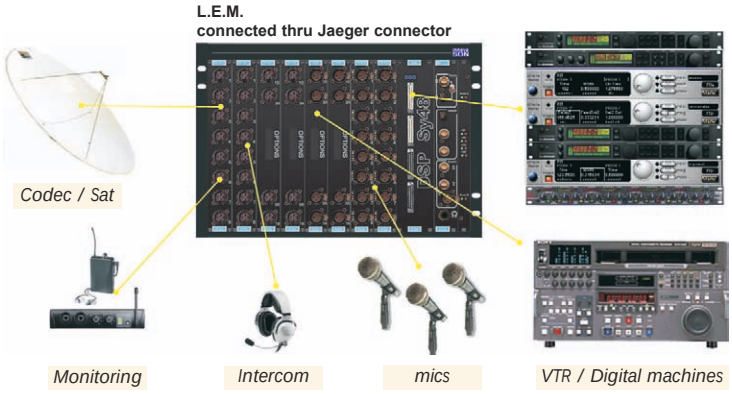
applications

On air - Live Broadcast

- *8 local audio slots using the local L.E.M.*
- *Flexible bus output and distribution*
- *Multiple program Masters*
- *Accessible Monitoring and Comms circuits*
- *Automation and Relax functions*
- *Midi fader starts and Mute control*
- *Configurable Talkback system*

Live broadcast configuration example

48 inputs - 32 busses
24 banks of 2 XFAD
4 VCA - 6 stereo groups, 4 mono Aux
3 Master L,R,C (programs) - 6 Matrix busses (Mix-minus)
16 AES I/O for digital recording
Line I/O for external processing and FX
Virtual faders for L,R,C XBUS and L,R XFAD

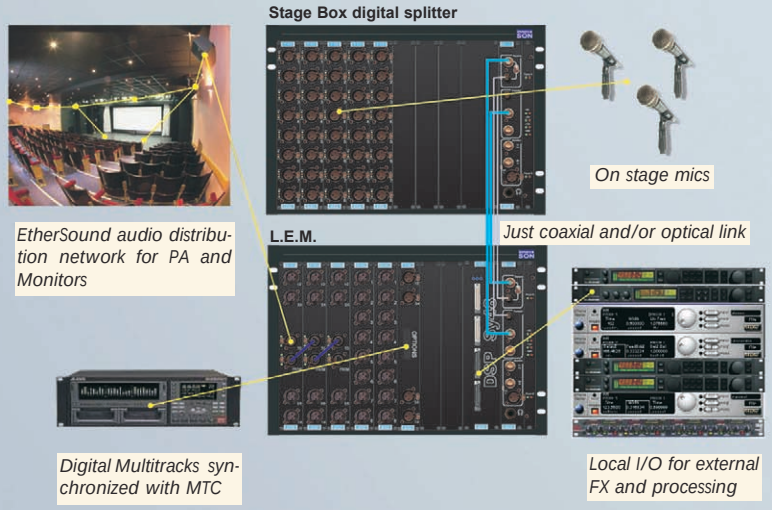


On Stage - Theatre

- *Configurable for specific show layouts*
- *XFAD for multi-format sources*
- *Matrix flexibility e.g. dressing room feeds*
- *Show automation - Play List - Preview - Snap shot, MTC, CrossFade*
- *Live functions - OverRam, Relax, Off-Line*
- *Multi Bus VCA/Group combinations for special effects*

Theatre console configuration example

64 inputs - 32 busses
8 virtual XFAD for multitracks and stereo inputs
1 Master, 16 matrix for PA distribution
4 VCA - 8 mono, 1 stereo Aux for FX
AES inputs for digital Multitracks
Line I/O for external processing and FX
24 busses gathered on one CAT5 EtherSound cable
1 monitoring level fader
1 CrossFade fader control



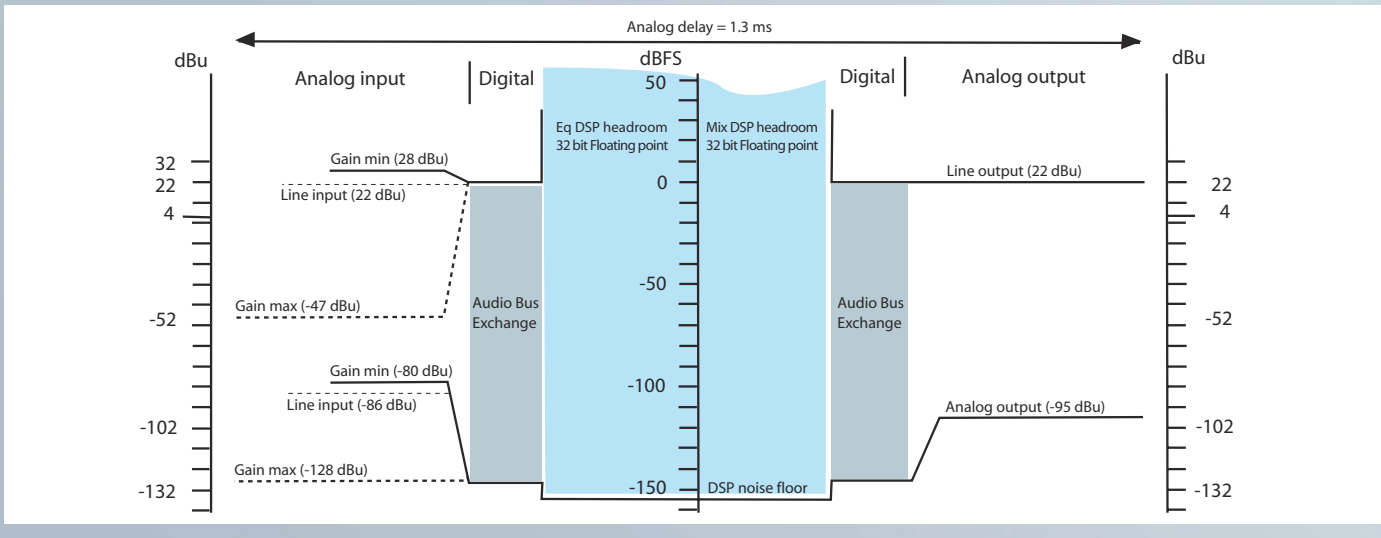
Digital live mixing
that works for you

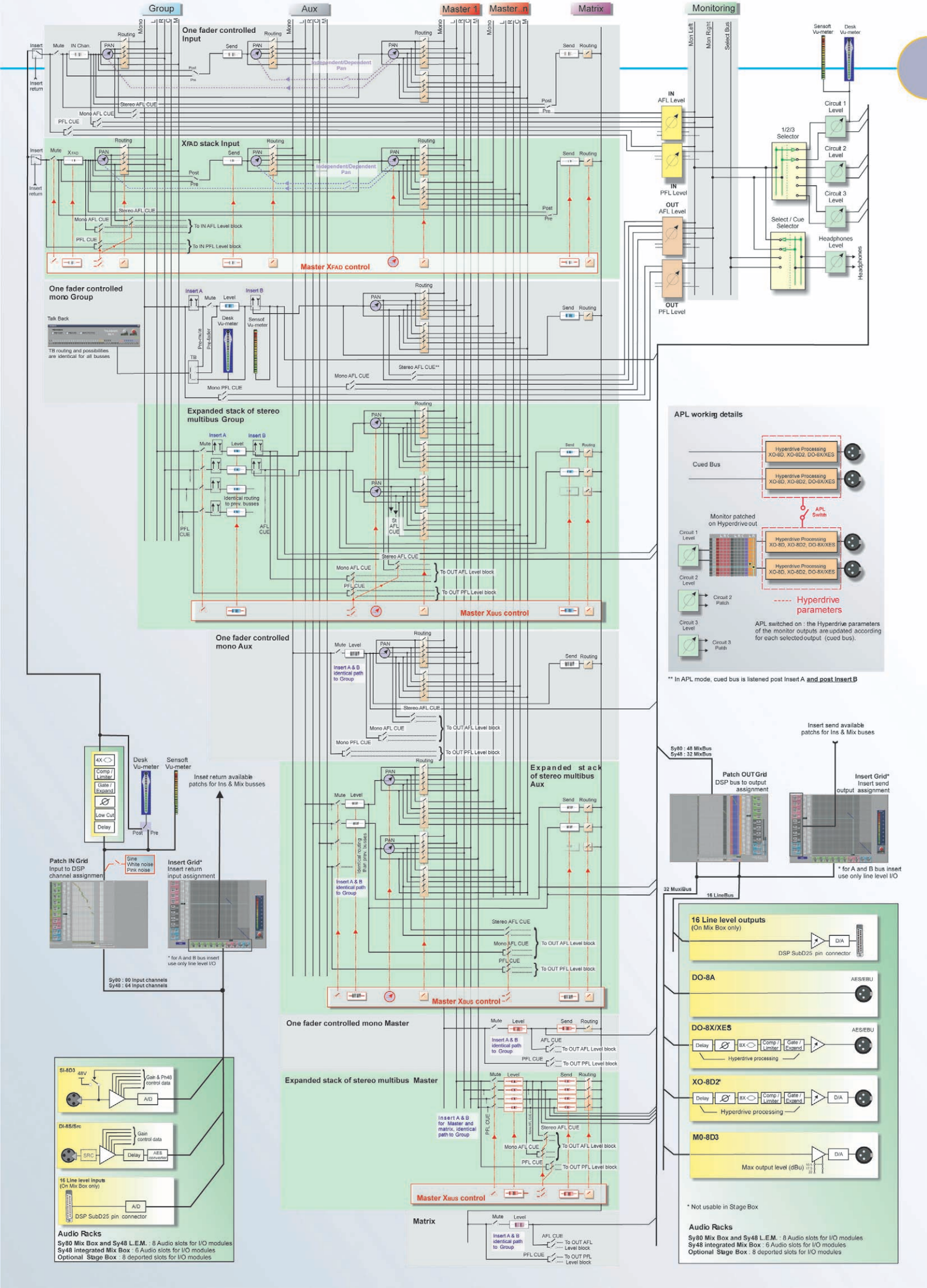
Sy48 audio specifications and block diagram

Internal sampling frequency	*48 kHz*	
External sampling frequency	*44 to 49 kHz*	*Word Clock - AES*
Internal signal processing	*32 - 40 bits*	*Floating point 760 dB Dyn range*
Audio signal path	*24 bits*	*144 dB dyn range*
Analog signal delay	*1,3 ms*	*mic in - DSP - analog Xout*
Analog bandwidth	*15 Hz.. 20 kHz*	*-3/0 dB mic in - DSP - analog Xout*
Analog input range (mic input)	*-63 to 27 dB*	*input gain in 64 steps of 1.5 dB*
Analog dynamic range	*105 dB*	*input gain 6 dB, output level +22 dBu*
Total Harmonic Distortion + noise	*-90 dB typ.*	*input gain 6 dB, output level +22 dBu*
Hum and noise	*-127 dB*	*equivalent input noise @ 60 dB gain*
Noise	*-95 dBu*	*residual output noise*
	-95 dBu	*Any bus fader at 0 dB*
Maximum voltage gain	*+73 dB*	*mic in at 63 dB, faders 0 dB, output at +22 dBu*

Digital signal delay, synchronous	*0, 5 ms*	*AES in - DSP - AES out*
Digital signal delay, asynchronous	*1,3 ..1,42 ms*	*Src AES in - DSP - AES out*
Digital Bandwidth	*5 Hz..20 kHz*	*+/- 0.1 dB AES in - DSP - AES out*
Digital dynamic range	*144 dB*	*AES in - DSP - AES out*
Digital THD + noise, synchronous	*-138 dB*	*AES in - DSP - AES out*
Digital THD + noise, asynchronous	*-122 dB*	*Src AES in - DSP - AES out*
Digital noise floor	*-155 dBFS*	

64 Input channel processing	*Input section*	*48V, Phase, programmable Insert*
	Delay	*1 to 5300 samples (110 ms @ 48kHz)*
	Filter	*Low Cut 0 to 500 Hz sweepable*
	Dynamics	*Gate/Expander, Compressor/Limiter, 12 parameters*
	Equalizer	*4 full bands 20 Hz-20 kHz +/- 15 dB + Notch*
	Panoramic	*independant for each bus, short cut and full screen*
Remote control (VCA, mute groups)	*Level and Mute*	*unlimited assignable VCA and/or modes*
32 busses, programmable functions	*Output section*	*Mute, Hyper-Drive option, internal/external inserts*
	Groups	*mono, stereo, LR, LCR, LCR+M*
	Auxilliaries	*mono, stereo, LR, LCR, LCR+M, pre/post*
	Masters	*mono, stereo, LR, LCR, LCR+M*
	Matrix	*mono, all resources (I andO) mixable*
	Monitoring	*stereo, mono, solo, priority, 3 circuits + Headphones*
	System I/O	*32 busses patchable up to 48 physical outputs, 64 with L.E.M.*
	DSP Send Line	*16 busses patchable*
8 to 48 (64 with L.E.M.) processed outputs	*Output*	*patch, output level 10 to 22 dBu (-12 to 0 dBFS)*
(XO-8D, DO-8X, DO-8XES)	*Delay*	*Adjustable up to 1365 ms @ 48 kHz*
	Dynamics	*Gate/Expander, Compressor/Limiter, 12 parameters*
	Equalizer	*8 full bands 20 Hz-20 kHz +/- 15 dB + Notch*




Group
Aux
Master 1
Master n
Matrix
Monitoring
One fader controlled Input
XFAD stack Input
Master XFAD control
One fader controlled mono Group
Talk Back
TB routing and possibilities are identical for all busses
Expanded stack of stereo multibus Group
Master XBUS control
One fader controlled mono Aux
Expanded stack of stereo multibus Aux
One fader controlled mono Master
Expanded stack of stereo multibus Master
Matrix
Independent/Dependent Pan
Stereo AFL CUE
Mono AFL CUE
PFL CUE
To IN AFL Level block
To IN PFL Level block
To OUT AFL Level block
To OUT PFL Level block
Mon Left
Mon Right
Select Bus
Sensoft Vu-meter
Desk Vu-meter
IN AFL Level
IN PFL Level
OUT AFL Level
OUT PFL Level
Circuit 1 Level
Circuit 2 Level
Circuit 3 Level
1/2/3 Selector
Select / Cue Selector
Headphones Level
Headphones
APL working details
Cued Bus
Hyperdrive Processing XO-8D, XO-8D2, DO-8X/XES
APL Switch
Monitor patched on Hyperdrive out
Circuit 1 Patch
Circuit 2 Patch
Circuit 3 Patch
Hyperdrive parameters
APL switched on : the Hyperdrive parameters of the monitor outputs are updated according for each selected output (cued bus).
** In APL mode, cued bus is listened post Insert A and post Insert B
Insert send available patchs for Ins & Mix buses
Sy80 : 48 MixBus
Sy48 : 32 MixBus
Patch OUT Grid
DSP bus to output assignment
Insert Grid*
Insert send output assignment
* for A and B bus insert use only line level I/O
32 MuxiBus
16 LineBus
Insert return available patchs for Ins & Mix busses
Patch IN Grid
Input to DSP channel assignment
Insert Grid*
Insert return input assignment
Sine
White noise
Pink noise
Sy80 : 80 Input channels
Sy48 : 64 Input channels
16 Line level outputs
(On Mix Box only)
DSP SubD25 pin connector
DO-8A
DO-8X/XES
XO-8D2
M0-8D3
Max output level (dBu)
* Not usable in Stage Box
SI-8D3
DI-8S/Src
16 Line level inputs
(On Mix Box only)
Audio Racks
Sy80 Mix Box and Sy48 L.E.M. : 8 Audio slots for I/O modules
Sy48 integrated Mix Box : 6 Audio slots for I/O modules
Optional Stage Box : 8 deported slots for I/O modules

a truly modular system

Modular in design, Sy48 can be used as a stand-alone product with all necessary I/O resources on board; with a Local External Mix box for those clients who want to run their I/O modules and DSP externally to the console control surface, eg. Outside Broadcast trucks; and / or with a remote Stage Box for distant inputs - for example on-stage mic feeds which are transmitted to the Sy48 either via coaxial or optical fibre cables. This is a complete system, combining all of the benefits that digital technology can offer…plus exceptional sound quality.

- *Sy48 stand-alone. A choice of 6 input/output modules, analog or digital, within the rear of the console.*

or

- *Sy48 with Local External Mix box. A choice of up to 8 input/output modules.*

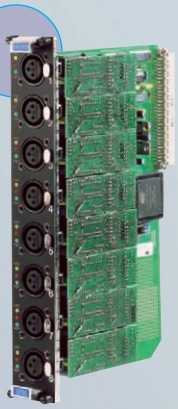
and

- *Up to 8 modules that can be placed in the Stage Box*

- *The Stage Box, acting as a digital splitter is able to send up to 64 mic/line channels to one, two or three Innova SON consoles via coaxial (up to 500 m) or fibre cables. For example, a very powerful mix system can be set up: Front-of-house + Monitoring + Recording, using the same Stage Box splitter.*

input and output modules

SI-8D



8 mic / line analog inputs

27 to 63 dB remote preamp gain and +48V phantom

24 bit 48 kHz Delta Sigma Converters
XLR-3 F balanced inputs

Leds for signal, Peak, 48V

MO-8D

8 line level analog outputs

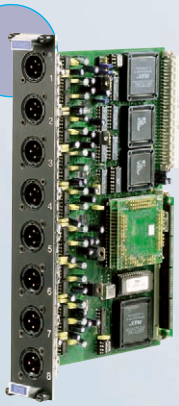
11/17/22 dBu Full scale jumpers

24 bit 48 kHz Delta Sigma converters

Remote Mute and Patch

XLR-3 M balanced outputs

XO-8D



8 line level processed analog outputs

Remote output gain control (10 to 22 dBu)

8 full-band parametric Equalizer

Dynamics processing and Delay up to 1350 ms

XLR-3 M balanced outputs

DI-8S/Src

4 AES digital inputs (8 channels)

IEC 958, 24 bit digital audio

Remote digital gain (-6 to +6 dB) and delay (0 to 5 ms)

Synchronous mode (@ system word clock)

Sample Rate Converter option 30 to 50 kHz

XLR-3 F, 110 Ohm balanced inputs

DO-8A

4 AES digital outputs 8 channels)

IEC 958, 24 bits digital audio

Remote Mute and Patch

Synchronous mode

(@ system word clock)

XLR-3 M 110 Ohm balanced outputs

DO-8X

4 AES digital processed outputs (8 channels)

Remote output gain control (10 to 22 dBu)

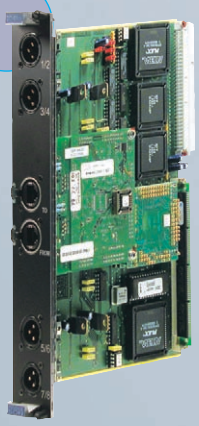
8 full-band parametric Equalizer

Dynamics processing and Delay up to 1350 ms

Synchronous mode (@ system word clock)

XLR-3 M 110 Ohm balanced outputs

DO-8XES



8 digital processed outputs sent simultaneously thru 4 AES digital XLR and EtherSound RJ45 'Ethercon' connectors

Remote output gain control (10 to 22 dBu)

8 full-band parametric Equalizer

Dynamics processing and Delay up to 1350 ms

Sample Rate Converter for all outputs

XLR-3 M 110 Ohm balanced outputs

EtherSound 'From' & 'To' Ethercon RJ45 connectors

In addition to the I/O module options the DSP Sy48 module has two Sub-D25 connectors for 16 line level inputs and 16 line level outputs.

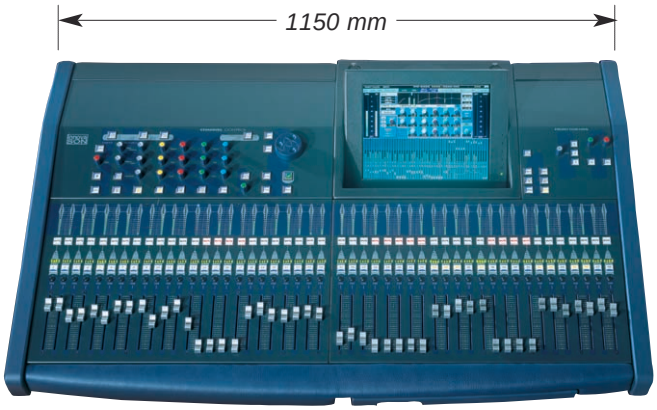
Sy48 mechanical specifications

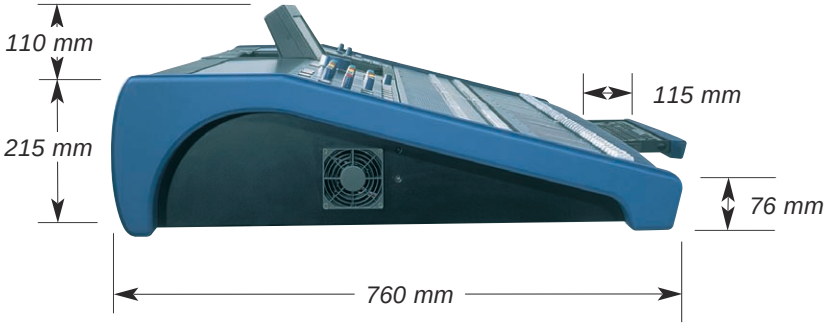
characteristics

Console

Length : 1150 mm
Height : 325 mm
Depth : 760 mm
with keyboard drawer open : 875 mm
Weight : 40 kg
1 Jaeger connector for automatic redundant power supply
100 – 240 Vac, 50/60 Hz, 6.2 A max

Folding 12" TFT screen
Embedded 800 MHz Pentium 4 CPU
128 Mb Ram,128 Mb Compact Flash memory disk
Drawer with keyboard and trackball
USB connector on the front
L.E.M. remote control Jaeger 37 pin socket (optional)
2 XLR-4 sockets for Littlite 12V-0.5A
1 talkback XLR-3 female connector on the front,
48 V Phantom, Sens = -24 dBu (-18 dBFS)
1 Jack 6.35 stereo Headphone connector,
15 dBu/ 16 Ohm





Sy48 with Jaeger connector for L.E.M.

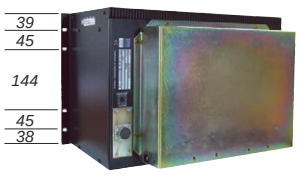
Sy48 fitted with DSP Sy48, MC Optical, 4 SI-8D and 2 XO-8D modules

Audio rack SG3100

for L.E.M. or Stage Box

Width (19" rack standard) : 485 mm
Height (7 Units) : 312 mm
Depth : 325 mm
Weight : 18 kg
2 internal auto redundant power supplies
100 – 240 Vac, 50/60 Hz, 4.1 A max

Back plane bus 11 slots
1 slot reserved for Power management module
1 slot reserved for DSP Sy48 module
1 slot reserved for MC/SC Optical comm module
8 slots available for Audio I/O modules



Optional fibre and/or coaxial cable

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