

# Solid State Logic



SL 9000

SuperAnalogue™ Recording Console

# SL 9000 The Ultimate SuperAnalogue™ Console

Great Studios Of The World Whitfield Street, London.



## Ultimate Sound Quality

If you thought that a modern console could not surpass the sound of a vintage mixing desk, prepare to think again. The extraordinary sonic quality of the SL 9000 J Series has led the world's most respected audio engineers and producers to proclaim it the best sounding console of all time.

Engineered from the ground up in pursuit of unparalleled analogue integrity, the SL 9000 J exhibits

barely measurable distortion, with noise performance approaching theoretical limits. Remarkable phase linearity throughout the audio band provides accurate imaging while revolutionary circuit designs ensure that high frequency and transient response is optimised. Electrolytic capacitors are entirely absent within the signal path while DC coupling delivers excellent low frequency response. Audio purity is further enhanced by the use of oxygen-free cable throughout.



# SL 9000 The Ultimate SuperAnalogue™ Console

## Ultimate Compatibility

The unique approach to analogue circuit design results in the record and mix paths having a dynamic range that equals or exceeds the published specifications of all commercially available 20/24 bit analogue to digital converters, and a bandwidth that extends nearly two octaves beyond the next generation of 96kHz digital recorders.

With surround sound options extending this sonic quality to cater for the most demanding of multi-channel requirements, the SL 9000 J ensures that no matter what the future, your facility will be providing the highest quality audio from the day the console is installed.

## Ultimate Control

The SL 9000 J incorporates all the best loved ergonomic features that have long been admired by leading recording professionals and will be immediately familiar to existing Solid State Logic console users. The control surface is then combined with the highest possible audio performance and a greatly extended range of creative operational facilities. The powerful J Series computer, evolved from Solid State Logic's highly acclaimed digital production systems, uses high resolution colour graphics to create a

fast, intuitive working environment, providing automation of major console functions along with comprehensive session management facilities.

## Ultimate Commercial Advantage

Since its launch, the SL 9000 J has redefined the expectations of world class recording artists and studios. Producers, engineers and artists alike insist on the SL 9000 J for its exceptional sound quality, comprehensive automation and advanced, yet familiar, operational facilities. Studio managers enjoy a level of technical support and training unmatched by any other supplier, while owners relish the increased demand for studio time that has been created by this exceptional console.

The SL 9000 J has the power to attract international artists and producers and has proven to be a major factor in the commercial success of well over 100 new and established recording, mixing, scoring, broadcast and educational facilities around the globe.



**SL 9000**



Great Studios Of The World SARM Hook End, England.



# SL 9000 Automation

Great Studios Of The World 20th Century Fox, LA.





Central to the SL 9000 J's advanced automation system is the J Series computer. All major console functions are automated, and the computer also provides comprehensive session management facilities and fully integrated machine control systems. High resolution interactive colour graphics are used to create a familiar working environment that is both intuitive and exceptionally fast.

Enhanced versions of Ultimotion, Solid State Logic's combined moving fader and VCA automation system, and Total Recall are incorporated as standard.

A range of new and powerful automation tools is provided for creating and modifying mix data, including Trim and Absolute update modes, Snap, AutoGlide, AutoTakeover, Preview and Immediate Pickup. The Fader Status lock feature allows every fader to retain its own update statuses, further enhancing the power of the system. Offline Mix Trim and Mix Join utilities allow mixes to be modified and combined, while graphic editing tools allow automation to be modified to quarter frame accuracy.

A dedicated control panel gives immediate access to all frequently used functions.

## Automated Functions

- Master Fader.
- Large Fader.
- Large Fader Cut.
- Small Fader.
- Small Fader Cut.
- Stereo Cue send on/off.
- Mono FX sends 1-6 on/off.
- Insert in/out.
- EQ in/out.
- Left/right or front/back stereo panning.



Fader Display



Graphical Editing



Offline Join



Overview Display



Snapshots



Total Recall

# SL 9000 Automation and Centre Section

## Great Studios Of The World Avatar Studios, New York.



"The SL 9000 has become the leading console in the marketplace. We needed a great sounding console with flexibility that clients are familiar with. It will be a great addition to our facility. After a lot of research by our Board of Directors, who are all engineers and producers, we decided that the 9K was the best choice for Avatar."

Zoe Thrall - President and General Manager, Avatar Studios

## Great Studios Of The World The Enterprise, LA.



"We wanted to expand our services to include taking pre-production movie score work through the orchestral recording stage to the final mixdown of the score. To accomplish this, we equipped our studios with the ultimate analogue console, the 9000."

Craig Huxley - Director, The Enterprise

## Ultimation

A standard feature on the SL 9000 J,

Ultimation is a unique Dual Automation

Moving Fader System which can be switched

between motors on and off at any stage during

the mix process. Ultimation allows VCA-style

trim updates even with motors on, providing

all the control advantages of VCAs combined

with the instant feedback and enhanced audio

performance of a moving fader system.

Advanced creative facilities include:

- Online mix preview, review and compare facilities.
- Selective rollback and fader level match functions.
- Inter-channel data copying.
- 8 dedicated group faders.
- 32 'soft' fader and cut groups.
- 500 groups of automated switches.
- Offline editing of all automated functions, encompassing joining of mixes, trimming of fader levels and graphical editing of all automated switch and fader data.
- 'Soft' grouping of Cuts and main I/O switches.
- 20 user definable 'Macro' switches.

## Machine Control

- Parallel control of conventional open reel multitracks.
- Direct control of ATR/VTR machines via Sony 9-Pin protocol.
- Slaving to Timecode or Sony 9-Pin.
- Ability to record arm individual tracks on tape machines directly from the console.
- Interfaces with MotionWorker, an industry standard synchroniser controller.
- Events list; providing location to named points via pen, keyboard or cursor keys.
- Five timecode memories to enable auto location to cue points under computer control.
- Instant locate to automation moves via screen graphics.

## Total Recall

Solid State Logic's famous Total Recall

System is extended to include the centre section functions and now stores the settings of all console controls to within 0.25dB. The stored positions are displayed on the colour monitor, which makes console reset a simple and fast process.



Front Panel



## Centre Section

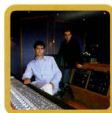
The console centre section houses the electronics for the mix and communication functions as well as comprehensive logic control of monitoring and channel status.

The centre section includes:

- Global console status controls, allowing the desk to be quickly reconfigured for a variety of operations.
- Automated Master Fader with status button and level trim.
- 4 channel compressor; identical to the popular G Series/G Plus console design.
- Stereo bus master level controls, detented at unity gain, with +10dB of gain. Post fade insert point and routing to main LCRS outputs.
- Level controls for stereo Cue and FX bus outputs, detented at unity gain with +10dB of gain.
- 4 stereo echo returns, Level, Cut, AFL, Pan and Width controls, with routing to main LCRS and foldback outputs.
- 8 master control group faders, each with Solo and Cut switches.
- Highly flexible 4 channel monitor system incorporating a monitor insert point for Dolby™ and other 4 channel matrix encoder/decoder systems.
- 2 stereo nearfield speaker outputs.
- External monitoring; a wide range of sources may be selected including 9 stereo and 3 four channel external signals. Link and Sum buttons allow up to 19 different sources to be monitored simultaneously.
- PFL, AFL and Solo In Front - controls solo modes of channel solo switches.
- AFL/PFL To Minis - routes the AFL or PFL signal to the nearfield monitors while leaving the main monitor level unaffected.

- The SL 9000 J foldback system which provides virtually unlimited flexibility in creating mixes.
- Metering selectors to display the main mix, either of the 2 external source selections or the signal currently being listened to.
- Meter mode and scale selector; toggles sources for 8 bargraphs above the centre section between stereo buses A-D, Cue/FX buses and the main meter source selector signals.
- Talkback level controls and switching.
- Oscillator; assignable to multitrack, main mix and ABCD stereo bus outputs.
- User defined options, such as Solo isolates and Small Fader to Monitor inhibits.

Great Studios Of The World  
Stanley House, London.



"The best creative workshop in town needs the best available tools. SSL's unrivalled reputation with artists and producers alike meant it was unlikely we'd accept an alternative."

Keith Finch - Commercial Manager, Stanley House

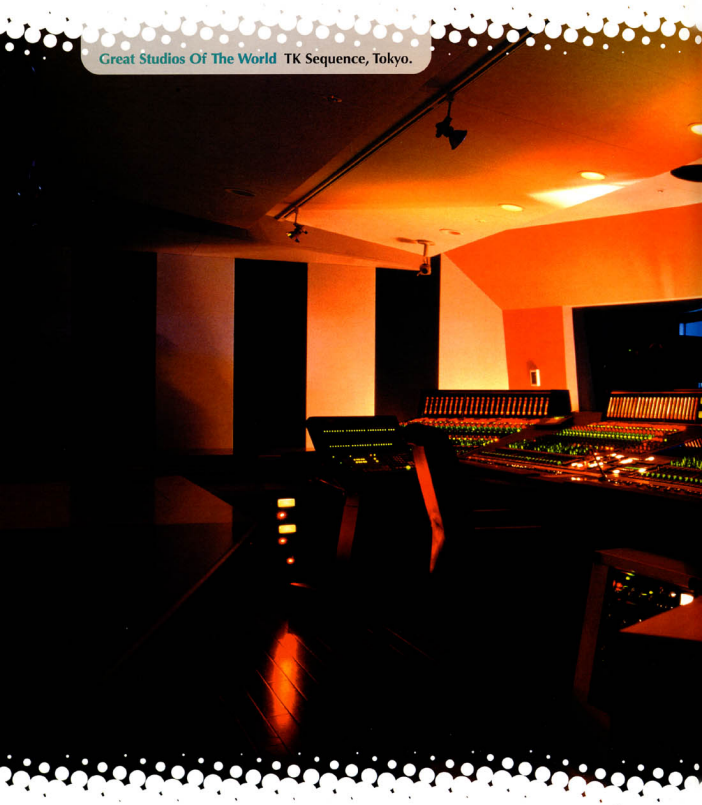


Centre Section





Great Studios Of The World TK Sequence, Tokyo.





SL 9000



# SL 9000 Operational

Great Studios Of The World Chung King, New York.



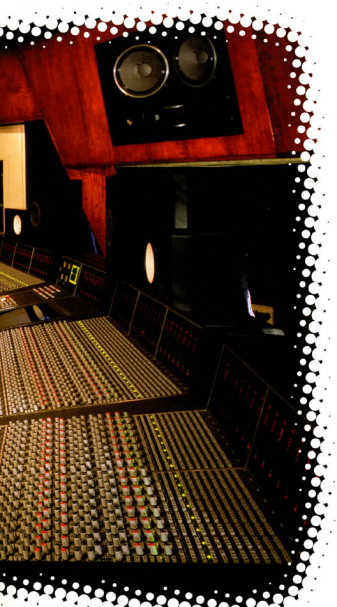
## Bus Structure

The SL 9000 J provides a large number of output buses, which can be sourced from a variety of points within the channel strip, presenting a range of new creative possibilities.

48 multitrack buses, the main stereo (optional LCR) mix bus, 4 additional stereo buses and 8 Cue/FX buses can all be fed from either signal path. Console wide status switching provides a quick way to set up the console for a particular task. Default settings can be overridden locally providing a high degree of flexibility.



SL 9000



Great Studios Of The World  
Chung King, New York.



"The primary function of the 9000 room is tracking. We are a very busy facility and we only have equipment that offers great sound. The 9K will give us that great sound while meeting the needs of clients who are requesting the console. We haven't even finished the room and already we have a waiting list. The 9K will definitely expand our client base."

John King - Owner, Chung King

## Routing

The Input/Output module routing matrix allows either signal path to route to the 48 multitrack buses, or the 4 stereo subgroup buses. Signals may also be routed to the Cue/FX buses and the main LCR bus.

## Microphone Amplifier

The widely acclaimed dual-impedance microphone amplifier utilises advanced circuit design to provide exceptional bandwidth, with noise performance approaching theoretical limits and virtually unmeasurable distortion.

## Output Amplifiers

The unique output design can drive a wide range of cable lengths and types without degradation to the signal, maintaining audio quality all the way to the mastering machine.

## Equaliser

Switchable between 'E' and 'G' Series type curves, the J Series equaliser has been widely praised for its smooth and open sound, while retaining the incisive quality that is a feature of traditional SSL equalisers.  $\pm 20\text{dB}$  of gain in all bands, combined with carefully chosen frequency ranges, make the J Series equaliser a powerful creative tool.

The equaliser is a four band parametric with swept high and low pass filters. High and low bands have swept frequency and gain. They are also switchable between bell and shelving curves. The mid bands have variable gain, frequency and Q. The equaliser 'In' switch is automated.

The high pass filter rolls off at  $-18\text{dB}$  per octave and can be swept from 15 to 500Hz. The low pass filter rolls off at 12dB per octave and can be swept from 3 to 50kHz providing control of signals that are normally considered beyond the audio band.

# SL 9000 Operational

## Dynamics

The built-in dynamics section provides sophisticated control over either the channel or the monitor signals. The compressor is switchable between RMS and peak sensing characteristics. Threshold, Release time and Ratio controls are provided. The gate section can be switched to function as an expander or a noise gate and includes Threshold, Release time, Depth and Hold controls.

The dynamics side chain may be fed from the monitor input or the channel insert return and may be filtered independently of the main signal, providing a number of ways to key the dynamics section from other signals.

## Processor Routeing

The channel strip contains a unique and highly flexible system for assigning processing elements into the signal path. The dynamics and insert point may be independently placed pre or post equaliser. The filters may be placed either before or after the EQ and Dynamics sections; or, as with the EQ, may be switched into the dynamics side chain.

## Cue/FX Sends

The SL 9000 J includes a remarkably versatile effects send and return system. 16 independent effects mixes are available while tracking and up to 64 while mixing. The stereo cue or any 2 mono sends can be re-assigned to the EFX section.

The EFX section can then be used as a source for the 4 stereo buses, the 48 multitrack buses or the channel output.

All of these options operate independent of the automated Small Fader, which may additionally be used to automate the send level or to provide a ninth FX send control.

## Solo System

The SL 9000 J provides an extremely flexible solo system. Both Large and Small Fader Solo switches can function as destructive solos, as PFL (pre fade listen) or as stereo AFL (post fade, post pan) controls. Solo In Front 'dims' the mix around the soloed signal, allowing changes to be auditioned in context with the rest of the track. Solo Clear releases all channel solo switches.





## Great Studios Of The World Electric Lady, New York.

### Great Studios Of The World Electric Lady, New York.

"The first SSL room was booked all the time and the requests to book another 9000 came as often as 30 times a week. We are very excited that Electric Lady has become an all-SSL facility."

Mary Campbell - President and Studio Manager,  
Electric Lady



## Main Output

An automated 4 channel main output fader controls the gain of the LCRS outputs. A 4 channel output compressor provides ultimate control over the mix. The compressor features Ratio, Attack and Release controls plus continuously variable Threshold and Make-up gain controls.

Channels can be routed directly to the main outputs or fed via the 4 stereo buses. A post fader insert point allows signal processing to be applied to individual sub groups before they are combined into the main mix.



# SL 9000 Operational

## Monitoring

The 4 channel monitor output system provides unparalleled flexibility and includes one 4 channel main monitor output plus two stereo mini LS outputs, Monitor Cut and Dim controls, a monitor insert point for Dolby™ (and other 4 channel matrix encoder/decoder systems) and two external source selectors.

**Great Studios Of The World** Larrabee Sound, LA.





"We just acquired another 9000 square feet of space at the Larrabee North location. Studio 440 is building the new room with the same monitoring system that I have in the other rooms at the North location, only this is surround already. We needed a console for this room and, in today's world, there is only one choice and that is the 9000 J."

Kevin Mills - Owner, Larrabee Sound



External source monitoring via two selectors (Ext1/Ext2) can be assigned to the control room and/or the studio speaker and headphone feeds. Sources available for selection include Mix, Stereo Cue, stereo buses A-D, FX bus pre-selector, as well as nine stereo and three 4 channel external signals. Link and Sum buttons allow from 1 to 19 different sources to be monitored simultaneously.

## Studio Monitoring

The foldback system enables a variety of mixes to be created. Three stereo foldback outputs, each with level control, Cut and AFL switches, can be sourced from either one of the two external source selectors or a stereo input from the patch. This is normally fed from the Stereo Cue bus, but can be overpatched at any time. Signals can be selected individually or mixed together. The external source selectors allow a further level of mixing of signals, providing almost unlimited

flexibility in creating foldback mixes. The studio loudspeaker outputs are similarly configured, the only difference being that the patch input is replaced by the main mix outputs.

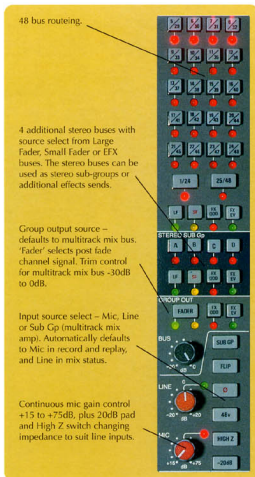
## Metering

High speed, switchable bargraph meters provide both peak and VU scales. The peak scale is a true digital peak meter, with 100µs attack time and peak hold facility providing the appropriate metering for today's digital tape machines. The 0dB point of the meter can be adjusted to match any of the current digital recording standards. Traditional VU metering is also available if preferred.

## Frame Sizes

SL 9000 J consoles may be supplied in virtually any size – up to 120 channels, which provide a massive 240 automated inputs – and in any shape. A variety of angled frame sections, remote patch bay options and custom metal work may be specified.

# SL 9000 Input and Output Module



SSL's standard RMS compressor, switchable to peak sensing, hard knee characteristic via pull switch on Ratio control.

Expander/Gate – Range, Threshold, Release and Hold controls. Expand selected via pull switch on Hold control.

Dynamics switching – to channel path pre or post EQ. Innovative new Monitor path routing enables dynamics to be placed pre or post EQ. Selecting Mon and Ch In or Ch Out places the dynamics gain element in the channel path and feeds the side chain from the monitor path (via EQ if required), allowing patch free keying of signals.

Hi and lo pass filters – hi pass 18dB per octave, lo pass 12dB per octave.

'Dyn SC' – places filters in dynamics side chain.

Bell switch – active in all EQ modes.

Insert can be switched pre or post EQ. Insert return can be used as Key input to dynamics side chain. Automated Insert In switch.

Automated EQ In switch. Filter Split and EQ to Monitor switches. EQ Type switch changes EQ curves from 'G' to 'E' type.



Great Studios Of The World  
Transcontinental, Florida.

"The 9000 is the best sounding console for mixing that is on the market today. When we first saw and heard the console, there was no question we had to have the 9000 to be considered a top notch facility."

Joe Smith - V.P., Transcontinental  
Studios & General Manager,  
Transcontinental Records





Great Studios Of The World Brandon's Way, LA.

"The sound is so open it really makes my job a lot easier. I won't work on anything but an SSL."

Jon Gass - Brandon's Way

Channel path overload indicator.

'SF' feeds Cue/FX pots from Small Fader signal.

'EFX' switches feed output of Cue or FX level controls to internal EFX bus, and hence to group output, stereo buses or multitrack routing. This allows up to 64 discrete FX mixes to be generated without using the automated Small Fader as a send.

Automated on/off controls from push/push switch on Level pots.

Pre/post fader selectors for Cue and FX sends.

Tape and Group monitor and record enable switches. Record enable can provide either relay closures or serial control to suitably equipped machines.

Small Fader pan. May be switched out of circuit via push/push switch on pot. Normally stereo, LCR available as an option.

Small Fader to mix bus switch.

Pre or post Large Fader selection for Small Fader source.

Large Fader to mix bus switch.

Solo Isolate switch for either Large or Small Fader.

Small Fader, Small Fader Solo and automated Cut switches; Small Fader automation is via VCA which is only switched into circuit when automation is in use. The Small Fader can also act as a pan control between Large and Small Fader signal paths, allowing automated stereo or front/surround panning. The Solo switch can act as a destructive solo, solo in front, PFL or stereo AFL.

Small Fader status button. Match and Play switches to edit automated channel switch data.



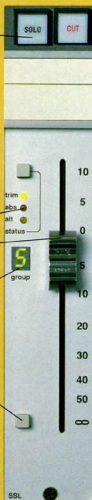
Large Fader Solo and automated Cut switches. Solo switch can act as a destructive solo, solo in front, PFL or stereo AFL.

Status switch and status LEDs for Large Fader.

Motorised fader. Audio switchable between fader track and VCA.

7 segment display shows current group assignment.

Group select switch - cycles through all 8 group positions. Group assignments stored and reset as part of project data.



# SL 9000 Surround Options

## LCR Panning

Large and Small Fader pan controls may be switched between normal 2 pan mode and discrete

Left/Center/Right panning.

## Eight Channel Monitoring

The SL 9000 J Eight Channel

Monitoring System extends the console monitoring capabilities to encompass all widely-used formats,

from Mono and Two Channel Stereo, to Dolby™ Stereo, 5.1 (DVD-V,

DVD-A, DTS, SACD) and 7.1 (SDDS).

Utilising the same design principles

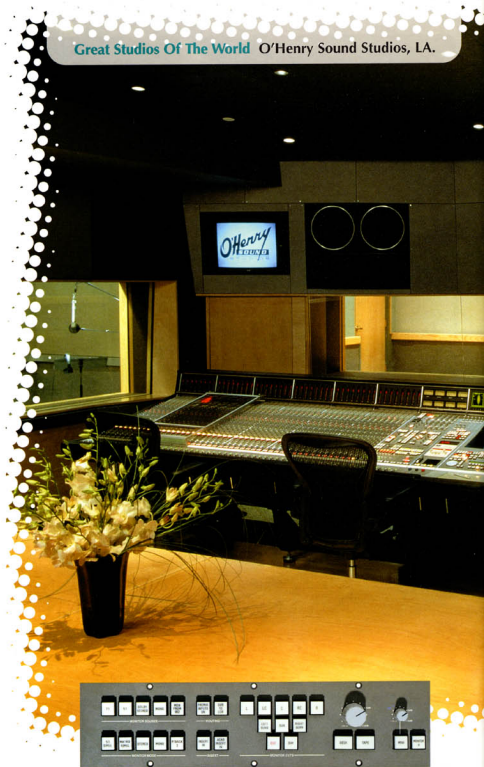
that have made the SL 9000 the

ultimate in analogue performance,

principal functions include:

- Normalised input of 8 console buses (with overpatch).
- Bus/Tape switching (with a further 8 channel tape return input).
- Premix input, decoder and academy filter insert points.
- Fold down monitoring to other formats for compatibility checking.
- Outputs for two 8 channel speaker systems.
- Output for 2 channel speaker system with automatic fold down and record output.

Great Studios Of The World O'Henry Sound Studios, LA.

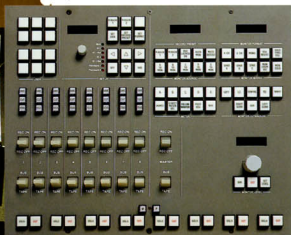


SL 9000 J Eight Channel Monitoring System

## Film Monitoring

The SL 9000 J Film Monitoring Panel was developed in conjunction with the world's leading scoring engineers. All the panel settings are stored by project in the J Series computer. Principal functions include:

- 32 into 8 monitor matrix.
- Bus/Tape switching on every input.
- Dedicated Music, Dialogue and Effects Faders.
- Input level trims.
- 2 dedicated stereo record outputs.
- Outputs for three 8 channel speaker systems.
- Assignable Bus/Tape and Record on/off traditional paddle switches.



SL 9000 J Film Monitoring Panel

# Technical Support

## Our Reputation is Your Security

Serving the professional audio community for nearly 30 years, SSL has thousands of consoles in daily use around the world. Devotees of SSL award-winning technology encompass every strand of the audio industry from the most eminent music recording artists and producers to the world's most prestigious broadcasters, film studios and post production facilities.

Located near Oxford, UK, SSL's headquarters are equipped with the latest production technology which, coupled with rigorous test and QA procedures, ensures that every component meets demanding specifications.

On-site commissioning by SSL engineers, together with a technical support hotline service and modem support for remote diagnostics, is designed to safeguard customers still further.

Complementary to the provision of on-site training, a purpose-built training school at Oxford ensures that our customers' operational and engineering staff are fully conversant with SSL's technological advantages.

SSL has a network of sales and service centres around the world comprising a number of subsidiary companies supported by authorised regional distributors – all of which provide a comprehensive programme of technical support.



### Great Studios Of The World Sound On Sound, New York.

"We have been in business since 1987 and have watched the industry dramatically change. The upgrade of Studio B with the 9K is necessary to maintain the level of clientele Sound On Sound is used to serving, while attracting new clients interested in using this console. The SL 9000 J will keep us ahead of the industry curve. From the day the 9K came out, everyone said 'you've got to hear it'. The audio path is unmatched - plain and simple, it's a better sounding board. Since word got out that we're installing the SL 9000, we've already had enquiries. As we look towards the future of the industry and Sound On Sound's place in it, the decisions we make today need to remain viable for tomorrow. The 9K comes as close to a guarantee of future business and direction as you can get."

David Amlen - Owner, Sound On Sound



SL 9000

# Solid State Logic



## Solid State Logic

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