



# AWS $\delta$ elta

SuperAnalogue™ Console with SSL  $\delta$ elta and DAW Control

# Digital Control for Analogue Souls

The AWS (Analogue Workstation System) was SSL's first 'hybrid workflow' console, combining SSL SuperAnalogue™ technology with comprehensive DAW control hardware in a single work surface. Hundreds of consoles later the AWS is used by leading international recording artists, producers and engineers and has shaped expectations for session workflow. The new AWS  $\delta$  introduces SSL's unique 'delta Ctrl' system that enables console automation to be driven from within your DAW like a plug-in.

Designed for mid-scale commercial recording and production facilities, the AWS  $\delta$  is available with 16 inputs (AWS 916), 24 inputs (AWS 924) or 48 inputs (AWS 948) within a compact 24 fader frame. The AWS 916 has 16 mic pre's, the 924 & 948 have 24. The 916 & 924 have mono channel strips, the 948 has stereo/dual mono strips that offer a second line level input per channel to provide 48 summing channels. All models deliver pristine SuperAnalogue™ summing, classic SSL dual curve EQ on every channel, two assignable SSL Dynamics channels, legendary Stereo Buss Compressor, TotalRecall™ and full 5.1 monitoring.

AWS  $\delta$  consoles feature Ethernet connectivity for streamlined hardware control over your entire DAW environment. All models feature SSL's new 'delta control' system that combines the very best of SSL console automation in the analogue domain with DAW

## Key features

- Combination of **SuperAnalogue™ console** and advanced **DAW controller**
- **NEW!  $\delta$**  control automates your console within your DAW like a plug-in
- SSL **SuperAnalogue mix bus** provides pristine audio foundations
- SSL **SuperAnalogue mic pre's** provide transparent record path
- Innovative **Dual Path Channel** with three versatile operating modes (948 only)
- **48 inputs on AWS 948;**
  - IN-LINE TRACKING = 1 mic + 1 line input per channel
  - IN-LINE MIX = 2 x mono line inputs per channel
  - STEREO MIX = 1 x stereo line input per channel

based automation workflow. AWS  $\delta$  delivers elegant, ergonomic physical control with dedicated heavy duty DAW transport, V-Pot multifunction encoders with position indicating LED's, Digital Scribble Strips, DAW fader mode, global and channel routing control and built-in TFT display for advanced plug-in editing. Project Session Management is kept simple through SSL's proprietary Logictivity interface.

The AWS is an SSL SuperAnalogue™ console, featuring the audio performance specifications that have established the benchmark by which other manufacturers are measured. Exceptionally low THD, noise floor & crosstalk levels keep your audio absolutely pristine, while our legendary headroom carries every nuance of your audio and allows engineers to mix 'hotter' without distortion.

- Versatile **Channel EQ**, assignable **Dynamics** and SSL **Master Bus Compressor**
- **4-Band EQ** design with independent E/G curve switching of HF/LF (Stereo on 948 only)
- **5.1 Surround monitoring** and Monitor calibration including Bass management
- **MIDI over Ethernet multi layer DAW** workstation control
- **Digital Scribble Strips** for console and DAW data
- Elegant project setup via SSL **Logictivity Remote Browser** and **SD card storage**
- SSL's unique trademarked **TOTAL RECALL™** system with **'TR Autoscan'**
- Responsible **'green'** manufacturing and reduced power consumption
- Compact frame ideal for small control rooms

Since the launch of the original AWS 900, hundreds of private and commercial studios have chosen to install the console, here are comments from just a few AWS owners:

*"When SSL came along with this compact design, it was all my dreams come true in one box. With the AWS's analogue inputs and my favourite gear, it really is incredibly powerful and gives me the best of both worlds. The console is just fabulous. The way it interfaces with Pro Tools™ demonstrates its great design. It's just great - really, really great."*

**David Tickle, Producer**

*"First and foremost, the AWS gives us super high-quality analogue summing. Add to this the SSL-reputable automation, control room facilities, EQs, and SuperAnalogue™ mic preamps and you have a winning package."*

**Tal Herzberg, Engineer & Mixer**

*"I love mixing analogue. For me it is an important part of getting space and all of the other things that make mixes work. The AWS has got all of that but in a compact package that sounds as good as and in some respects even better than a big mixing console."*

**Simon Gogerly, Producer & Mixer**

*"There's no competition, because there's nothing else like it."*

**Mike Elizondo, Producer**



Backstage Recording  
UK



Vision Seven  
Germany

# AWS 916 & 924 Channel

The AWS 916 & 924 continue the classic channel design of the AWS 900.

## Input

The AWS 916/924 Channel Input section features a balanced Line Input with +/- 20dB of gain and a world class SuperAnalogue™ Mic Amp featuring continuous mic gain control (+15 to +75dB), phase reverse and switchable 48V phantom power. An Instrument D.I allows for high impedance sources such as guitars. The Flip control overrides the Master Mic/Line input selection assigned globally via the console centre section.

## EQ

Taken from the legendary XL 9000 K Series console and its current successor Duality, the AWS 916/924 feature a highly flexible EQ section, switchable between a default 'E Series' operation and the characteristic 'G Series' curves and control interaction. The INS IN switch routes the channel via the balanced Insert Send and Return. PRE places the Insert before the EQ section. In conjunction with the dynamics CHIP and CHOP routing keys, the order of the EQ, INSERT and DYNAMICS blocks can be re-ordered.

- **HPF** - 18dB/Octave high-pass filter with detente bypass position
- **G-EQ Curve switch** - toggles all four bands between the default 'E-Series' and 'G-Series' tonal characteristics and control interaction
- **HF** - High frequency shelving equalizer switchable to fixed Q parametric response via the Bell switch
- **HMF** - High frequency parametric mid-band EQ section
- **LMF** - Low frequency parametric mid-band EQ
- **LF** - Low frequency shelving EQ Switchable to fixed Q parametric response via the Bell switch

## Routing & Sends

Each channel has access to 2 main Stereo Busses (RECORD and MIX) in addition to 2 Stereo Cue busses and 4 mono FX sends. Every AWS Channel features a Direct Channel Output (CH OP) and can also feed 8 independent Track Busses. SSL's unique "EFX" system is present on all channels significantly enhancing creativity by allowing free assignment of send controls.

## Pan

The AWS 916/924 feature precise L/R pan control.

## Digital Scribble Strips

When the AWS is in analogue focus mode the Digital Scribble Strips display name and parameter information for the selected analogue signal path. When the AWS is in DAW focus mode they then display DAW channel and processing parameters dependent on your chosen DAW and selected functions.

## Fader

The AWS features touch sensitive 100mm motorised faders. In analogue mode they control the analogue signal path of either the Channel input or DAW return path. In DAW mode they default to control over channel level control but can be used for other controllable DAW parameters.



# AWS 948 Channel

The AWS 948 maintains the same 24 fader footprint as the AWS 924 (and classic AWS 900) and achieves its 48 input count via a unique Dual Path Channel Strip design where each channel has a single Mic Amp and two line level inputs, a new Stereo EQ and Stereo Insert. This new channel enables three different operating modes: STEREO MIX, IN-LINE MIX and IN-LINE TRACKING. These differing modes offer a wealth of workflow options that enhance today's versatile production environments;

**IN-LINE TRACKING** is similar to the AWS 924 with either the MIC or the LINE signal providing the CHOP and Track Bus source. Normally this primary signal is level controlled by the V-Pot. However through "fader flip" it is possible to use the large fader instead. In this setup the secondary signal (DAW output/Monitor Return or the even the CHOP) goes to the Large fader.

**IN-LINE MIX** is identical in operation to the AWS 924 channel strip, but adds a secondary path that provides an additional mix input with routing to the main console mix busses or an extra mono send via the track busses or Channel Out. In this mode the Channel V-Pot acts as the second path gain control (along with the associated SOLO/CUT switches). The V-Pots level and mute status can be automated, allowing all 48 channel signal paths level and cut automation in the analogue domain. Note that it is also possible to move the Insert into the secondary path (ideal for X-Rack processing etc).

**STEREO MIX** mode provides a fully featured Stereo channel aimed primarily at stem mixing with 4 Band EQ, HPF, Stereo Insert, Balance/Width control and routing to the REC and MIX busses, the track busses, and the Stereo CUE. The FX sends and the CHOP are sourced by a mono sum of the stereo signal.

Channel configuration and Setup is accomplished via the AWS 948 onboard TFT screen and soft keys, and it is even possible to move or divide the channels processing resources (EQ, Insert etc.) between each of the dual paths.

## Input Section

The AWS 948 Channel Input section features two balanced Line Inputs with +/- 20dB of gain and a world class SuperAnalogue™ Mic Amp featuring continuous mic gain control (+15 to +75dB), phase reverse and switchable 48V phantom power. A -20dB PAD allows for high impedance sources such as guitars. The routing functionality of the Insert varies according to the three different operating modes.

## EQ Section

The Stereo EQ design featured on the AWS 948 is sonically identical to that used on the AWS 924. The 948 channel EQ has the added benefit that HF/LF and Mid Frequency bands are independently switchable between E and G series response curves and tonal characteristics.

## Routing & Sends

Each channel has access to 2 main Stereo Busses (RECORD and MIX) in addition to 2 Stereo Cue busses and 4 mono FX sends. Every AWS Channel features a Direct Channel Output (CH OP) and can also feed 8 independent Track Busses. SSL's unique "EFX" system is present on all channels significantly enhancing creativity by allowing free assignment of send controls.

## Pan/Width

In IN-LINE MIX and IN-LINE TRACKING modes the Pan control is a standard L/R pan control. In STEREO MIX mode the PAN control becomes a stereo Width control and L/R balance is controlled by the V Pot.

## Digital Scribble Strips

When the AWS is in analogue mode the Digital Scribble Strips display name and parameter information for the selected analogue signal path. When the AWS is in DAW mode they display DAW channel and processing parameters.



# Versatile Centre Section



## Stereo Bus Compressor

The AWS centre section stereo compressor is based on the legendary G Series Bus Compressor which has provided numerous hit mixes for the world's best audio engineers. It can be assigned to either the REC or MIX stereo busses. Activated, the AWS Stereo Bus Compressor instantly adds cohesion and strength to your mix without compromising clarity, bringing the classic SSL 'audio glue' to your mix with spectacular SuperAnalogue™ audio performance.

## Assignable Dynamics Processing

Two classic SSL Channel Dynamics processing strips with separate Compressor and Gate/Expander sections can be assigned to any channel. The assignable Channel Dynamics section features SSL's standard RMS compressor, switchable to Peak sensing, with hard knee characteristic via the 'PK' button. There are separate controls for the Expander/Gate section encompassing range, threshold, release and hold. Expansion is selected via the 'EXP' switch. Each processing strip includes dedicated metering, fast attack buttons & dedicated key input.

## Communications

The AWS features comprehensive talkback routing with dedicated independent communication buttons for independent foldback sends. A full compliment of GPIO connection, SLATE, the famous LMC input, and RED light activation are all standard on the AWS.

## Monitoring & Metering

The AWS offers a new level of sophistication when working with control room monitoring. The centre section affords total control over two independent 5.1 main loudspeaker outputs plus two stereo "mini" LS outputs, and a dedicated Headphone Out. Comprehensive Bass management is also included. A highly flexible external source selector section can sum, assign and route up to four 5.1 sources, and four stereo input sources to either the

control room, studio loudspeaker and headphone foldback feeds. A six channel wide monitor insert point and a separate six channel external meter output allow full interfacing with additional third party monitoring systems and 5.1 surround encoder/decoder combos.

There is a dedicated Stereo VU meter for the MIX, REC, Monitor and Solo busses, a VU Phase meter, 5.1 monitor metering, 8 individual Track Bus meters and all Cue and FX send level indication. Each channel sports a dual 12-segment meter which allows DAW Stereo track monitoring. Other features in the AWS include **AUTOCUE** functionality, **MONITOR VOLUME POT CALIBRATION**, **SOLO ISOLATE**, the ability to control two DAW's simultaneously, and the addition of **SOFT BOOT** power cycling. Above all, latency free punch in record monitoring is standard, this is analogue!

## TotalRecall™

TotalRecall™ is SSL patented technology that aids the saving and recalling of analogue console control settings for a specific Project or Session. The system takes a snapshot of current console settings and saves it via the SSL Logictivity Browser. On the AWS a graphical representation of this information can then displayed on the Centre Section TFT display to enable the operator to manually reset the controls. The AWS includes the timesaving 'TR Autoscan' feature which draws the operators attention to only those Channels that need adjustment.

## Summing Bus Injects for the CUE and FX busses

To accommodate modern production methods the AWS consoles now feature an independent Summing Input which allows additional Tracks from the DAW access to the Cue and FX send busses, therefore allowing those DAW tracks access to hardware outboard units and the creation of dedicated Cue mixes from the DAW.



# Unrivalled DAW integration

While the AWS offers a powerful large format analogue console feature set within a compact console design, it also delivers elegant hardware control over two DAW layers simultaneously. AWS provides hands-on control of important recording, routing, mixing, and editing functions in all major DAW applications including Pro Tools™, Logic Audio™, Nuendo™, Sonar™ and many others.

## DAW Mixer & Environment Control

Users can assign DAW channel levels, send levels and routing functions to individual channel V-Pots. Each V-Pot has a ring of position indicator LEDs. Digital Scribble Strips in the channel bays provide extensive channel name, function and value information. Channel and Send levels can be 'flipped' on to the main channel faders. The Centre section also features a 'DAW Control Panel' providing a collection of dedicated buttons and a rotary encoder. This panel offers a range of control options; 'Window Select Keys' allow for quick access to the most commonly used DAW windows. Dedicated ESCAPE, UNDO, SAVE and ENTER keys and a set of keyboard modifier keys remove the need for a keyboard and mouse for many DAW operations.

## DAW Transport Control

Dedicated transport buttons allow easy access to PLAY, RECORD, REWIND, FAST FORWARD and STOP. A further 10 buttons are available for various commonly shortcuts. Controls are included for simple zooming, navigation and selection of DAW objects. The jog/shuttle wheel supports scrub and track navigation functionality.

## Plug-in Control

The Centre Section DAW Control Panel includes a dedicated screen for Plug-in parameters. Physical control is via four push switch rotary encoders and four soft keys below the screen. Plug-ins can also be controlled via the faders by using the MCU protocol.

## Delta-Control (δ-Ctrl)

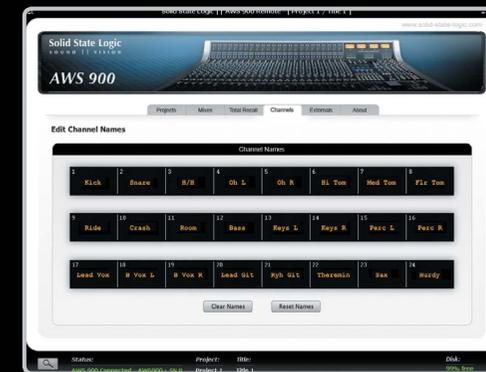
δ-Ctrl is an AAX/RTAS/AU/VST plug-in that allows automation of AWS as if it were a DAW Plug-in. The automation system in the DAW is used to record and play back control data from the faders and switches on the console, replacing the AWS legacy automation system. The δ-Ctrl plug-in is inserted into a DAW mixer audio channel. Audio on the DAW track passes through the plug-in slot unaffected. The plug-in receives and sends console control data from an assigned AWS channel, VCA or Master fader via a high speed Ethernet Network. The console Fader, mutes and relevant switches are represented as parameters in the δ-Ctrl plug-in GUI and their data is recorded to the automation lane of the selected DAW channel.

Automation data can be viewed and edited as normal plug-in data in the DAW. The Duality Fader Absolute and Trim values are saved using the same dB law as Pro Tools Fader automation so the 'Paste Special' command can be used to copy existing Pro Tools fader data into the plug-in (This feature is DAW specific and may not be available with other DAWs). δ-Ctrl retains all the key operational elements of SSL's Signature Mix System with much loved features such as JOIN, REVISE, MOTORS OFF and SNAP Override all actioned from assignable hardware buttons. The MOTORS OFF mode offers the popular full non moving fader SSL VCA mix experience. A new MOTORS OFF, Touch Write mode emulates the SSL G Series Mix system Immediate Pickup (IP) option. δ-Ctrl also works with SSL Duality Delta consoles.

# AWS

## Logictivity Browser Software

Onboard project data is saved to an SD Card. Archived console data can be treated as standard computer data and sent via email, transferred to a USB stick, etc., greatly simplifying data exchange between sessions. The AWS includes the 'Logictivity Browser' concept, first introduced on the SSL Duality console. This allows the AWS to connect to a standard computer via a simple Ethernet connection. The browser software is a Java application that runs on both Mac and PC. Currently supported functionality includes the saving, naming and restoration of **Total Recall™** and **AWSomation data**, the ability to add names to the channels' scribble strips, and a number of other studio session project management tools. Furthermore, the AWS can connect directly to SSL X-Rack outboard for integrated X-Rack Recall.



Hub II, UK



Spice, Japan



Factory Studios, UK



Volant, USA

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