SSL Matrix

Given the popularity of the Wachowski brothers' Matrix franchise and the careless way we all refer to 'router matrices', it's interesting that the principle OED definition of the word 'matrix' is 'a place or medium where something is grown or developed'. In view of the potential of SSL's new baby console ROB JAMES says this seems entirely apposite.

A new SSL console is always an event but when the asking price is a mere UK£12,500 (+ VAT) a lot of ears prick up. The headline features belie the price; a SuperAnalogue 16-channel, 40-input mixing console with master and cue buses, four effects buses and inbuilt signal router with multi-layer digital workstation control. If it sounds a bit too good to be true, maybe it is.

First impressions can be misleading. With its silver surround and bright chrome fader knobs I initially thought the Matrix looked plasticky and rather cheap, an image swiftly dispelled once it was out of the box. This is a commendably low-profile control surface at only 230mm high at the top of the meterbridge. It has been designed with integration in mind and to this end there is a lip on the front and sides to enable it to be dropped into a suitable aperture in custom furniture. An alarming sign of terrorist infiltration is to be found on the front panel. A 3.5mm monitor input, dubbed 'iJack'. I'll get me coat.

The front arm rest is rather shallow and, on this early sample, the larger square buttons are a very tight fit in the panel which gives them a tendency to stick. But that is the end of the bad news. The Alps faders, despite the garish knobs, are smooth and recessed into the surface. The buttons and knobs would not disgrace a big-gun console and the transport controls and jog wheel are pleasantly chunky.

In order to understand where this console is coming from it is necessary to appreciate what is not included as well as what is. There are no mic amps, no built in dynamic automation and no channel or bus EQ or dynamics.

What you do get is, in many ways, archetypal SSL: 16 analogue channels, with dual line inputs, balanced insert sends and returns and a dedicated direct output. Channel level control uses the same high resolution Digital Controlled Attenuator as in the AWS 900+ and Duality consoles. However, the Matrix has a trick up its sleeve, the channel DCAs can be remote controlled via MIDI, which means that with a suitable DAW, MIDI tracks can be used to provide full dynamic automation control of analogue levels.

The eponymous insert Matrix enables any of 16 'Devices' to be patched into any of the 16 Channel Inserts. Up to six Devices may be chained and added to a single channel. All this is mono so a stereo effect will take up two Devices. Assignments are made, saved and recalled via the 'Matrix Remote' software.

For monitoring there are independent Main and Mini (nearfield) monitor outputs, an Artist Monitor output with independent EQ and source selection, and three external monitor inputs, all of which can be summed. Although there are four effects buses, and the channels can send to any of them, each channel is limited to sending to two at a time. Matrix has one digital I-O pair. This can be fed from the Rec bus, Mix bus or the Pre Monitor pot signal.

SSL Total Recall is also in evidence with indicator LEDs on most of the analogue controls. This is extremely effective, if a tad time-consuming, but nobody has come up with a better idea short of a full-on DCA console. Up to four SSL X-Rack units can be connected for Total Recall with their TR data saved as part of the Matrix session.

In typical SSL fashion the Matrix has immensely versatile signal routing which, to the uninitiated, can seem more than a little arcane, but this will pose no problems to the illuminati. Central to Matrix operation is the Master Channel strip. All 16 channels share the Master Channel which can affect individual channels, groups of channels or all of them at once. The Master Fader's Focus mode can be switched independently. Thus it can control the analogue mixing channels or any DAW channel, no matter which focus mode the other faders and the rest of the console are in.

DAW control obviously figures prominently and SSL has built on the experience gained with the AWS 900 and Duality. Possibly the most significant Matrix button is the prominent Focus key. This is lit green in analogue and unlit in DAW focus. Four DAW control layers can be programmed for specific workstations, MIDI instruments, etc. MIDI is carried over IP Ethernet and keyboard commands via USB. Matrix supports two protocols, Mackie HUI and MCU, and there is also the possibility of mapping your own via MIDI Continuous Controllers. Although the protocols are supported by Pro Tools, Nuendo and Logic they are still no substitute for full native control and there are a lot of other workstations out there. I tried using Pyramix in HUI emulation mode with some limited success, but this is a pale shadow of what could be achieved.

Mac or PC, the Java application Matrix Remote gives access to many routing and housekeeping functions. The only potential installation drama arises if you don't have Java on the machine. Even if you don't, on a PC with a web connection, this installs automatically. Matrix Remote is a modern, tabbed application with pages for Projects, Total Recall, Channels, Insert Matrix and DAW.

Matrix is most likely to be used in this manner. The first channel input will take the output of a mic pre, an instrument or DI box. The second input takes the return from the DAW. The Channel direct output, CHOP, will normally feed the pre-fader signal to a DAW track. When overdubbing there is an automatic switching mode, Auto Mon, which will switch between

channel inputs depending on the track record status. Working in conjunction with the transport controls the SuperCue function can be used to control the headphone feed to the talent. It sums the channel send and DAW return in Play, and automatically mutes the DAW return in Record providing zero latency record monitoring. At mixdown both channel inputs can be pressed into service for 32 channels into 2. There are devious ways of increasing this number to 40. Effects, either for record, record monitor or mixdown, will be inserted in channels via the Matrix and into Mix, Rec and Cue buses via their separate inserts.

The Matrix is aimed at a group of people with specific ways of working. For a start it is resolutely stereo only. There isn't even a nod towards surround. It presumes you already have (or are prepared to purchase) a pile of outboard including a bunch of 'boutique' mic pres and external A-D and D-A convertors. You'll also need a computer or two and a DAW. It also presumes you will do all your EQ and dynamics either in analogue outboard or in the DAW and, while the Matrix can control plug-ins, it is probably easier in many cases to simply use the GUI although it does work well with plug-in instruments.

I have no idea how many people are currently working with a cobbled together mass of outboard and a DAW without a console but I hope for SSL's sake there are plenty of them with UK£12,500 plus VAT lying around in loose change. Assuming there are, then the Matrix could make a lot of sense as the hub of a project studio. You don't pay for mic amps, EQ and dynamics you won't be using (because your favourite outboard takes on that role) and you can sum outside the DAW in analogue, which for some unfathomable reason, has become very trendy. Matrix is a potential spearhead of a new age, demonstrating some interesting possibilities. ■

PROS The price — for an SSL; usual SSL virtues; a new dawn?

CONS Not an all-in-one solution; DAW control is something of a compromise; requires a change of mind-set.

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Details, details...

Power supply is external and comes in an alloy case with a wire retainer for the IEC power input, a positive switch and a captive one meter baby elephant's trunk of a cable to the control surface.

To the left of the surface are two banks of 8 faders and strips. Above the motorised faders are Select, Solo and Cut keys plus a V-Pot with switch. Next up is the bright orange two-line digital scribble strip. Above this, Select and Track keys are followed by centre-detented Pan, three pots with on/off switches when pressed for the Cue and Effects sends, centre-detented Stereo Cue, Pan and CHOP (Channel Output) level pots and, at the top of the strip, Insert and phase reverse buttons and the centre-detented Channel Input gain.

The Master Channel strip has buttons for: Master Input Flip, Auto Monitor and DAW Monitor, CHOP Source, Cue Stereo Source and SuperCue, Set, All, FX 1/3 Source, FX3, FX2/4 Source, FX4 and Bus Record and Mix with the big Focus button. At the bottom are a fader, V-pot, Select, Solo and Cut keys while to the right is the Talkback level pot and mic. Below in the monitor section are AFL, Dim, Mini and Main monitor level pots, Dim and Cut keys and on their right the monitor select buttons for Solo Clear, ∑ (sum), Ext1 (iJack), Ext2, Digital, Rec, Mix and three further buttons for phase reverse left, mono and mini.

The next column deals with Main VU Select and Artist Monitor. VU -10dB is provided for those normalised DAW tracks that weld the needle to the end stop and there are Mono, Record and Mix buttons. Artist Monitor has ∑ (sum), Ext1 (iJack), Digital, Cue, Mon and Mix together with HF and LF EQ pots, an on/off switch and level pot. Below this comes the Headphone section with level pot and From Artist key.

The Mix Bus section has a centre-detented +/-20dB level pot and keys for Insert and ∑ (sum). The Rec bus section is the same but adds a To Mix button. Cue Stereo is the same again but adds an AFL button. Dig I-O has a single button that toggles between Mix, Rec and Mon. Each of the four Fx Send buses gets a centre detented pot, infinity to +10dB, and an AFL key. The four Stereo Returns each have Mix, Rec, and Cue Stereo routing buttons. Mono sums the signals and there is a balance/pan pot. The Level pot has an infinity to +6dB range and there is an AFL button.

Bottom right is the Transport panel with the usual controls, the Talkback button and a chunky jog wheel, mode and cursor keys, and 20 further DAW keys including bank and channel nudge. In the panel above there are another 16 DAW keys and above and below the display strip 8 soft keys for a total of 16. These are used for Matrix setup and DAW control.

In the meterbridge each channel has two 12-segment LED bargraphs. In analogue mode the right-hand meter is blank. In DAW mode it is used to display the right-hand leg of stereo DAW channels from DAWs that support the relevant HUI mode. Above the bargraphs, Sel, Rec and Edit LEDs indicate DAW track status and below further LEDs indicate automation status and Total Recall in analogue mode and Automation status in DAW mode. The channel meters usually follow the Focus mode but can be locked to analogue or DAW. Above the centre section, two large analogue VU meters dominate with a further 12 bargraphs for Mix and Rec buses, Monitor, Stereo Cue and the four effects buses.

The Auto lights below each meter are used for automation and Total Recall in Analogue Focus, and HUI DAW Automation status in DAW Focus. The channel meters follow the desk Focus mode but they can be locked to Analogue or DAW metering regardless of Focus mode.

Most connections are on 17 25-pin Sub-Ds in Tascam pinout. Digital I-O is on XLRs in AES-EBU format or Toslink SPDIF. An SD card slot provides for storage. Network is RJ-45 and there is a 4-pin USB. A button switches the output level between +18dB and +24dB. Two footswitch jacks, the locking DC power connector and a 9-pin Sub-D for X-Rack connection complete the picture.