SSL Nucleus

SSL has been steadily introducing smaller and smaller consoles, and although rather larger than the X-Desk the Nucleus is definitely in the 'project studio' category.
GEORGE SHILLING delves in.

The Nucleus combines a 16-channel fader controller, arranged with eight channels on each side of a centre section, with two mic preamps feeding an onboard USB soundcard, SPDIF outputs, or analogue outputs, along with basic monitoring facilities and customisable DAW function control. The smart looking desk is wide and shallow in depth; it has a gentle rake, and everything is within easy reach. There are rather plasticky end cheeks, but the surface and controls feel solid and pleasant to use. The unit is remarkably weighty and generates a fair amount of heat.

All connections are on the rear panel, and there are many. Mains comes in via an IEC accompanied by a firmly clicking rocker switch. Combi XLR/Jack sockets provide microphone and DI inputs to the two preamps. There are direct XLR outputs, and separate balanced TRS jack sockets for Send and Return for each channel. These insert points can also be used for mix bus processing. XLRs are provided for left and right Monitor Outputs and External Input. Twin TRS Headphone jacks are provided (why not on the front?)

and then there is a second stereo monitor output pair on phonos. These run at -10dB, perfect for plugging into your hifi amp. The 'i-Jack' is next for connecting an MP3 player. Following this is the USB B-type input, usefully accompanied by four USB A-type sockets providing a hub, a useful means of sharing the keyboard and mouse between multiple DAW systems if required, and handy for plugging in USB sticks, iLoks and suchlike. Optical connectors provide SPDIF I-O. A TRS footswitch socket provides for two very useful configurable circuits, the SD Card, which stores DAW and button configuration profiles, lives in a slot here, and finally there is an Ethernet port.

Setting up the Nucleus with your DAW requires connection of both Ethernet and USB to the host computer. There are four software packages to install. Nucleus Remote is the application used for DAW control configuration, the ipMIDI driver enables communication with the DAW, and the optional Nucleus USB Soundcard driver and Control Panel packages are used for the 4-channel soundcard. I initially struggled to make the Nucleus and Mac Pro communicate with each other via Ethernet, as the second Ethernet port for my internet connection oddly prevented communication with the Nucleus. However, after some head scratching, the installation of a £20 network switch to join everything together sorted out the problem instantly. The connection uses HUI protocol for communication with Pro Tools, or MCU for Logic or Cubase. It is possible to toggle Nucleus control of up to three different DAWs on up to three different computers, with simultaneous transport control if required, using a Network Router and USB Switcher. Dedicated buttons on the console enable this. Although I don't suppose everyone will need this, a media composer running, say, Logic and Pro Tools simultaneously might be very grateful.

The 16 faders are smooth yet swift-acting and are topped off with shiny caps. Marks alongside the faders are understandably uncalibrated, although numbering might have served to aid memorising moves or acting as reference points when wishing to return to a previous position. The channel numbers (1-16) appear clearly above the faders. I would have liked multiple numbers (e.g. 17-32) as appear on my old Tascam US-2400 — with Pro Tools' channel numbers showing onscreen it's easy to work out which fader you want when banking. However, the SSL does boast a large, clear two-row, six-character scribble strip, making identification simpler. Above these numbers are Select and Solo buttons that light up in orange, and Cut buttons that light up red, and flash when activated by a Solo.

Next up are the 'V-Pots' and these rotary encoders have a smooth, lightly damped analogue feel to them. They are surrounded by 11 yellow LEDs to show roughly the setting (depending on their assigned function) plus a red one at the bottom that indicates status, for example, an exactly centred panpot. These knobs also include a push switch ('V-Sel') for various functions. Above the large scribble strip screens are Mode Switches, one on each channel. Oddly though, they do not relate to the channel where they are located. The first eight are labelled with functions — in fact the first six also have a second (MCU) function label — but 9-16 are blank. Just above these is a Record LED indicator, and above that a 10-LED channel meter with yellow LEDs and a red one at the top labelled 0.

On boot-up, the firmware/software loads, then the faders do an impressive and pretty test routine before settling back down. The orange scribble strip display lights up, as does the smart white lettering in the middle. Very classy. The Nucleus Remote software is used to determine network connection settings and also to define the DAW software to be used with the desk. This software is also used for other setup features, for example, to reassign button functions; many features on the Nucleus can be user-configured.

The ipMIDI must be configured to present two MIDI ports to the DAW software in the AudioMIDI setup, then two 8-channel HUI controllers selected using these ports in the Pro Tools Peripherals dialogue. However, much of the control comes from the USB connection identifying the Nucleus as a computer keyboard, which enables the console to emulate computer shortcuts.

Basic DAW function is fairly self-explanatory. At the bottom of the centre section are enormous transport controls that light up appropriately. These are very chunky indeed, and clearly come from a Lego tape recorder! There are dedicated Bank and Channel nudge buttons for scrolling through the channels of the DAW. The V-Pots and Mode Switches take a little more exploration to use to their full potential. The V-Pots' basic mode of operation is set using the Mode Switches 1-8 by default. These are labelled with their function, and include Pan and Sends A-E. Button 1 is labelled Default, and holding this and pushing a V-Sel sets the knob to default value, so for a Pan that would be centre, for a Send it would be 0dB. Button 2 is Mute, and when this is illuminated the V-Sel mutes the send — otherwise it switches Pre/Post. The V-Pot's accompanying red LED shows a mute or pre state as appropriate for a Send. Using the Flip button, Sends can be adjusted using the main faders, and the V-Pots become the Send's associated Pan controls. It is possible to use V-Pots to adjust plug-in parameters via HUI, but while this works quite well with some EQ plug-ins, its implementation can be a bit hit-and-miss. Only four controls are available at a time, and when paging through it can be difficult to work out what you are controlling as the scribble strip labels are necessarily curtailed and often don't line up with the relevant V-Pot.

The real fun starts when you launch Nucleus Remote software and start assigning functions to Soft Keys. To do this you need to make a copy of the standard Profile and modify that. There are some fab things to play with here, such as the Jog/Shuttle function. The lovely big wheel on the Nucleus will operate in conventional scrub mode, but always seems to freewheel out of control with any control surface. Here though, there are better options to neatly scroll by timeline format (in seconds if Min:Sec is selected in Pro Tools, bars if that is the main counter, or even Frames if Timecode is selected), scroll by Nudge value (superb!) or alternatively there is Tracks mode, which uses the wheel to bank faders on the Nucleus one-by-one. I found all three of these modes useful. The Mode Keys gain even more functionality with two bonus User banks directly accessed from dedicated buttons in the centre section. This allows all sorts of customisation of various functions to be accessed using the 16 buttons over the channels. However, you'll probably need to break out the sticky labels to remember all you have set up in the Nucleus Remote software.

Four modifier keys correspond to those on the computer keyboard, but these, along with all Transport and related buttons plus about 10 further buttons in the centre section, can be assigned to perform any function available through HUI, or any computer keyboard keystrokes or combinations. F1 and F2, which are unassigned by default, can be set to perform any frequent task, such as creating a new track or Playlist. Save, Enter, Esc and Undo buttons are provided, but are easily reassigned to other tasks if you prefer.

The Nucleus is a very smart-looking, capable, and surprisingly complex beast — the manual could have been more helpful, e.g. in two places it refers to Mode Switch 16 as being labelled 'KeybID'; it isn't! I was initially bewildered by networking issues, and later the USB soundcard software. But the more you get your head around the concepts and functions, the more the Nucleus makes sense. After a sometimes difficult familiarisation process, I eventually fell absolutely in love with the Nucleus, and it will undoubtedly become the nucleus of many working setups. ■

Analogue Functions

The small section at the top centre of the console provides basic monitoring function and mic preamp operation. Monitoring comprises a volume knob to control stereo DAW level as it passes through to the monitor outputs. However, there is more. The mic preamps' signals can be blended with the mix for zero-latency monitoring while their direct outputs are recorded. A Blend knob balances the preamps with the mix. Using the Mono-L and Mono-R buttons you can treat them as a hard-panned stereo pair, or either-or-both centred in mono. Mic preamps are SuperAnalogue with plenty of gain and all the usual features such as 48V, polarity, Hi-Z and 80Hz filter, and the insert is switchable. The External stereo input and the i-Jack share a button and are blended together, but a second button determines whether selecting these mutes or sums with the main stereo bus. Pressing the Mixdown button cleverly reassigns the inserts to source the monitor inputs as the send (instead of the preamps), sending the insert output to the monitors and to the preamp direct outputs, so you can record the mix back to the DAW post-insert. Very clever!

PROS Enjoyable to use fader controller; plenty of customisation possible; basic but useful analogue recording and monitoring tools; integrated USB soundcard.

CONS Manual could be better; monitoring section very basic.

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