

SSL Nucleus

| £3,525



socket, four USB sockets for keyboards/mice/hubs, optical S/PDIF I/O, an RS-232 terminal (for SSL only – do not touch!), a quarter-inch TRS footswitch jack (for play/record), an SD card socket for set-up storage and an Ethernet socket for the controller data linkage.

A multi-DAW controller, soundcard, monitoring path and dual preamp in one. **Robbie Stamp** investigates

WHAT IS IT?

Ethernet DAW controller and USB soundcard with analogue monitoring and dual preamps

CONTACT

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HIGHLIGHTS

- 1 The Little Phatty engine at reduced cost
- 2 Very portable
- 3 USB MIDI compatibility

SSL have successfully implemented comprehensive multi-DAW control across their range of analogue consoles, and with the Nucleus they've taken one step further into the project studio world by combining a 16-channel controller with an analogue monitoring path, two preamps and a USB soundcard. Of course, this is SSL – so the preamps and monitor amplification use the SuperAnalogue signal paths (like the Duality and AWS consoles), the control is networkable to switch between three different DAWs, the preamps have balanced inserts and the soundcard offers up to 192kHz sample rates.

The Nucleus looks and feels much like its bigger siblings, from the faders and knobs to the jog wheel and transport controls. The control surface has two eight-channel sections flanking a centre section that houses the transport controls, utility function buttons and preamp/monitor controls. Each channel comprises a fader, rotary

pot, backlit buttons for cut/mute, solo and channel select, and a 10-segment level meter at the top. The two channel sections also feature a row of eight buttons for assignable functions.

The analogue I/O at the rear is accompanied by the soundcard USB

Networker

The DAW control uses Ethernet-based ipMIDI to connect to up to three workstations, which the user can switch between using two buttons in the centre section (DAW 2 and DAW 3) – a function suited to post production studios, for example. USB ports at the rear of the Nucleus allow a keyboard, mouse, memory stick and dongle, for example, to be routed to the recipient workstation without the need for duplication – though a USB switcher is necessary to re-route the Nucleus to each DAW. For a single workstation, a direct Ethernet crossover cable between

Protocols To Go

The Nucleus offers three protocols for DAW control: HUI, MCU and MIDI CC. The first two were created by Mackie, with HUI used by Pro Tools. The MCU protocol is incorporated into Logic and Nuendo/Cubase with slightly differing command sets, and this is what you'll find in the Logic and Nuendo templates.

For DAWs that don't support these two, there's MIDI CC protocol. Though



this sounds like total freedom, it does require a lot of mapping in the DAW, and the Nucleus manual doesn't give a

control map – using a MIDI monitor inside the DAW while moving the controls will allow you to make your own, though!





the Nucleus and the computer is the simplest and most effective method.

So which DAWs can be controlled via the Nucleus? Any that allows remote control via HUI, MCU or MIDI CC protocols (see Protocols To Go). The unit ships with base set-ups for Pro Tools, Logic and Nuendo/Cubase, as well as a MIDI CC set-up. These can be copied and customised via the Nucleus Remote interface and stored on the supplied SD card for transportation.

For this review I used the Nuendo template for my DAW, as well as creating a custom MIDI CC set-up,

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which was also used to control synths. From the Nucleus Remote utility, the basic template can be quickly loaded to the unit and – provided your DAW is ready for remote control – work can begin. Like any new control surface, it takes a little time to get oriented, but after a couple of hours' work I was familiar enough to start customising the control layout.



Scribbler

The main channel controls (Fader, Channel Select, Solo and Cut) aren't directly editable, and neither are the Bank/Channel navigation, Layer/User Toggle and Cursor buttons, but everything else is fair game. Right off the bat, 75% of my editing/mixing needs were met, still leaving over 32 controls available for assignment. This is made possible by the upper row of eight buttons (V-Sel switches) on each side and the rows of push-button pots (V-Pots) beneath them. In the base mode the V-Pots function as Pan

Strip. The possibilities are further expanded with a 'Menu' option for the V-Sel switches, allowing you to select a sub-set of functions for the eight V-Pots beneath, permitting 64 possible commands per row of V-Sel/Pots. Obviously that could take some time to program, but key command set-ups and working practices evolve with time, and this way the Nucleus stands a good chance of keeping up.

Panner

The quality of the physical control interface is excellent, making the

Nucleus easy and responsive to work with. The motorised faders use a pitchbend MIDI assignment that has over 16,000 increments, so

mixer level changes are smooth and accurate. The pan pots have 11 LED position markers around them, with a single red LED to indicate the centre position. Eight Channel controllers are no doubt useful, but having 16 channels at hand reduces navigation movements, allowing more time for hands-on mixing. The big backlit transport controls and the weighty jog wheel are real highlights, in particular the navigation and scrubbing accuracy made possible by the latter. Because the V-Pots are continuous rotary controls, manual panning sweeps can be wayward, but the Flip switch swaps the faders and V-Pots, and panning can be approached like the cross-fader when scratching.

The audio side of the Nucleus-DAW relationship is carried via the USB connection. Alongside the two mic/line/instrument preamps (with balanced inserts), there's optical S/PDIF I/O, two headphone outputs, a balanced stereo line input, monitor outputs on balanced XLR and unbalanced RCA, and a mini-jack input for iPods and the like. As previously mentioned, the preamps and monitor signal path use SSL's SuperAnalogue circuitry, so the sound quality available here is high. Plenty of

SPECS

- System Requirements:**
- Mac:** OS X 10.5.8 or greater (Leopard or Snow Leopard), 1.2GHz or faster (Intel only), free USB2.0 and Ethernet connection
- PC:** Windows XP SP3, Vista SP1 or higher, Windows 7 (32-bit & 64-bit), 1GHz or faster CPU, free USB2.0 and Ethernet connection
- Compatible DAWs:** Any that can be remotely controlled via either MCU, HUI or MIDI CC protocols (supplied with Logic, Cubase/Nuendo and Pro Tools control templates)
- Preamp Input:** 2x XLR combo jack socket (Mic/Line on XLR, Line/Instrument on ¼" TRS/TS)
- Preamp Output:** 2x XLR (parallel with Insert send, i.e. preamp only)
- Insert:** 4x ¼" TRS (balanced) for two sends and two returns for preamp channels
- External Input:** 2x XLR
- Monitor Outputs:** 2x XLR (balanced +4dBu) and 2x RCA phono (unbalanced -10dBV)
- Headphone Outputs:** 2x ¼" TRS jack sockets (~75)
- Jack Input:** 1x 3.5mm TRS jack socket
- Footswitch:** 1x ¼" TRS jack socket for two circuits
- Faders:** 100mm throw, motorised
- Network Connection:** RJ-45 (8P8c), 100bT, Cat5
- USB Connections:** 1x Type-B socket (for soundcard function), 4x Type-A sockets (for keyboards, mice, hubs, etc.)
- Memory Backup:** SD card slot (card supplied)
- Dimensions:** 730 x 385 x 120mm
- Weight:** 7.5kg

ALTERNATIVES



Mackie Control Universal Pro and Expander

around £2,000

The original MCU protocol machine is expandable and can communicate with most known DAWs via USB or MIDI. Controller only – no audio capabilities.

mackie.com



M-Audio ProjectMix I/O

£1,215

At a third of the price, this eight-channel (with master fader!) controller talks HUI and MCU, as well as to Ableton Live 5. There's also an 18x14 FireWire audio interface and eight mic/line inputs.

m-audio.com



Sonar V-Studio 700

£3,879

A product similar in price, but not in flexibility – this is Sonar only. If that's your DAW, you get nine motorised faders, eight preamps, 19-in/24-out interface, Roland Fantom VS synth, onboard DSP and expandable I/O.

cakewalk.com

clean gain (75dB) from the preamps is coupled with a full and unfettered response to mics and instruments.

The balanced inserts are a real boon for hitting outboard gear at proper levels. These also work on the final mix output, when the Mixdown button is engaged, so that the processed signal can be recorded as a DAW input. The

preamp metering switch control the external sources (iJack and line input) and preamp mono/stereo position while monitoring. The main monitor level knob goes up to 11, and to its right is the preamp/DAW mix Blend knob, headphone level and aforementioned Mixdown button. In Mixdown mode the Blend knob is redundant, but when

the USB soundcard function is useful and of a high quality (ranging up to 192kHz) it is the controller side of things that really impresses.

At this price you'd want to be making use of the preamps and monitoring, and the equivalent individual units would cost about the same in total – without a DAW

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controller. The multi-DAW network functionality is a unique aspect that will prick up a few ears, but the fact that it integrates with all platforms without any overt

preamp controls offer the usual +48v, pad, Hi-Z instrument switching, phase invert, 80Hz HPF and insert switching on two rows of buttons beneath the Gain pots.

Arranged below and to the left of these are the monitoring controls. A row of backlit buttons beneath the output/

tracking, it proves a simple way to create a monitor mix.

Winner?

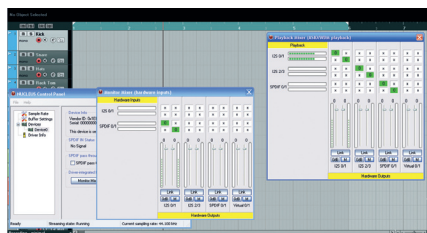
The Nucleus is a well-designed unit that offers an all-in-one solution for a variety of DAW needs, from dubbing to project studio recording and mixing. Although

favouritism makes it a real standout.

To add value to the package, SSL are also offering two free Duende Native plug-ins with the Nucleus: the EQ & Dynamics Channel and the Stereo Bus Compressor. It may not be a cheap option, but looking at the competition, it's probably the best option if you have a need for all of its main features. This is a pleasing, easy-to-use unit that has true pro quality, making something you'd want to add to, not improve. Just add DAW and speakers. **FM**

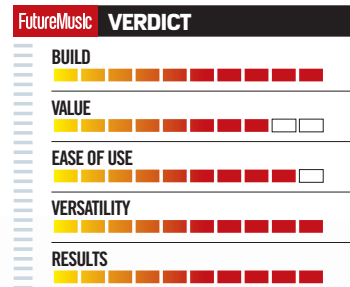
USB and the Ins and Outs

The Nucleus' USB soundcard offers 24-bit 44.1kHz to 192kHz AD/DA for two stereo inputs (two preamp channels and S/PDIF) and two stereo outputs (stereo monitor/mixdown channel and S/PDIF). Not only does the S/PDIF provide an extra pair of ins and outs, it also functions as a source for sending and receiving sample rate clocking. The Nucleus Control Panel soundcard utility is simple, covering the basic sample



rate and clocking settings, as well as standard matrix routing. The Mac version features the four input and output channels, while the Windows ASIO/WDM driver gives an extra

pair of inputs and two extra pairs of outs – but there's no explanation of what they are for and they didn't actually do anything that I could find an output signal for.



A high-quality DAW controller and soundcard that requires investment but will pay back in productivity.

