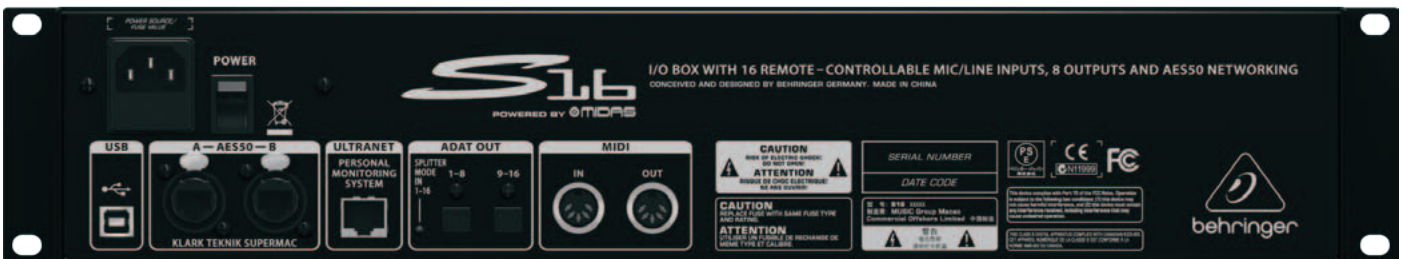


S16

I/O Box with 16 Remote-Controllable MIDAS-designed Preamps, 8 Outputs and AES50 Networking featuring KLARK TEKNIK SuperMac Technology



Features

- 16 MIDAS-designed, fully programmable mic preamps for audiophile sound quality
- 8 analog, servo-balanced XLR outputs
- AES50 network ports featuring KLARK TEKNIK's SuperMAC networking capability for ultra-low jitter and latency
- Up to 100 m networking capability via CAT-5e cable (not included)
- Dual AES50 ports for cascading S16 units—no merger or router required
- Precise LED metering plus 7-segment displays for signal control on stage
- Phones output assignable to any of the inputs/outputs for on-stage monitoring
- Connectivity for BEHRINGER's P-16 Personal Monitoring System for In-Ear applications (not included)
- Dual ADAT outputs for use in splitter mode and stand-alone digital multicore applications
- MIDI In/Out for bi-directional communication between FOH console and on-stage MIDI devices
- USB connector for system updates via PC
- "Planet Earth" switching power supply for maximum flexibility (100 - 240 V~), noise-free audio, superior transient response plus low power consumption for energy saving
- "Built like a tank" yet compact, all-steel 2U rack-mount chassis

S16

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Product Overview

The S16 Digital Snake is a 16-in, 8-out stagebox that features AES50 networking with KLARK TEKNIK SuperMac technology. Designed with multiple scenarios in mind, the S16 works equally well as a stand-alone pair for use with analog mixing consoles, or as part of the trio of BEHRINGER's digital mixing solution along with the X32 digital mixer and P16 personal monitoring system.

The 16 MIDAS-designed XLR inputs are fully programmable and remote-controllable from the X32. 8 balanced XLR outputs provide ample sends to the stage for mains and monitoring. The front panel also allows the level and phantom power to be controlled for all inputs and outputs, accompanied by an 8-LED meter and 7-segment display. The currently selected channel can be monitored in mono via 1/4" headphone jack with level control.

Dual AES50 jacks allow transmission of all audio and MIDI data to the FOH X32 with a single Ethernet cable, and also allow up to 3 S16s to be cascaded for maximum channel count. In this scenario, 48 bidirectional audio channels at 24-bit / 48 kHz can be transferred on just one CAT5 line between FOH and stage, including 48 analog inputs from stage, 24 analog outputs on stage as well as the 16 Ultranet channels, MIDI data and head amp remote control.

An additional Ultranet output provides the 16 channels for use with BEHRINGER's P16 personal monitoring system via Ethernet cable, allowing each musician to dial in their own custom mix from the stage. A pair of ADAT ports can carry additional sends to the stage beyond the 8 analog outputs, or split the 16 inputs. Lastly, a USB jack allows for future firmware updates.

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Technical Specifications

Processing

A/D-D/A conversion (Cirrus Logic A/D CS5368, D/A CS4385)	24-bit @ 44.1 / 48 kHz, 114 dB dynamic range
Networked I/O latency (stagebox in > console processing* > stagebox out)	1.1 ms

Connectors

XLR inputs, programmable mic preamps, designed by MIDAS	16
XLR outputs	8
Phones outputs, ¼" TRS	1 (mono)
AES50 ports, SuperMAC	2
P-16 connector, Ultraset (no power supplied)	1
MIDI inputs / outputs	1 / 1
ADAT Toslink outputs (2x 8 Ch)	2
USB type B, rear panel, for system updates	1

Mic Input Characteristics

Design	MIDAS
THD + noise, 20 dB gain, 0 dBu out	< 0.006% A-weighted
Input impedance XLR, unbal. / bal.	5 kΩ / 10 kΩ
Non clip maximum input level, XLR	+23 dBu
Phantom power, switchable per input	48 V
Equivalent input noise level, XLR (input shorted)	-128 dBu
CMRR, XLR, @ 20 dB gain (typical)	> 70 dB
CMRR, XLR, @ 40 dB gain	> 80 dB

Input/Output Characteristics

Frequency range, @ 48 kHz sample rate, 0 dB to -1 dB	10 Hz - 22 kHz
Dynamic range, analog in to analog out (typical)	106 dB
A/D dynamic range, preamp and converter (typical)	109 dB
D/A dynamic range, converter and output	108 dB
Cross talk rejection @ 1 kHz, adjacent channels	100 dB
Output level, XLR, nom./max.	+4 dBu / +21 dBu
Output impedance, XLR, unbal. / bal.	75 Ω / 75 Ω
Phones output impedance / level	40 Ω / +25 dBm (mono)
Residual noise level, XLR and TRS	-87 dBu A-weighted

Indicators

Display	4-digit, 7-segment, LED
Front status LEDs	AES50-A, red/green AES50-B, red/green HA Locked, red SN Master, green Splitter, orange Out +16, orange Out +8, orange
Meter	Sig, -30 dB, -18 dB, -12 dB, -9 dB, -6 dB, -3 dB, Clip
Rear panel	Splitter mode, orange

Power

Switch-mode autorange power supply	100-240 V (50/60 Hz)
Power consumption	45 W

Physical

Dimensions	19 x 8.9 x 3.5" 482 x 225 x 89 mm
Weight	10.4 lbs / 4.7 kg

S16

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Operation Mode Chart

Seq.	LED SN MASTER	sync clock	LED SPLITTER	LED OUT +16	LED OUT +8	XLR analog out 1-8	ADAT out 1-8	ADAT out 9-16	P-16 Ultranet out 1-16
1 (default)		AES50 (console)				= AES50-A ch01-ch08	= AES50-A ch17-ch24	= AES50-A ch25-ch32	= AES50-A ch33-ch48
2		AES50 (console)			on	= AES50-A ch09-ch16	= AES50-A ch17-ch24	= AES50-A ch25-ch32	= AES50-A ch33-ch48
3		AES50 (console)		on		= AES50-A ch17-ch24	= AES50-A ch17-ch24	= AES50-A ch25-ch32	= AES50-A ch33-ch48
4		AES50 (console)	on			= AES50-A ch01-ch08	= Local In 01 - 08	= Local In 09 - 16	= Local In 01 - 16
5		AES50 (console)	on		on	= AES50-A ch09-ch16	= Local In 01 - 08	= Local In 09 - 16	= Local In 01 - 16
6		AES50 (console)	on	on		= AES50-A ch17-ch24	= Local In 01 - 08	= Local In 09 - 16	= Local In 01 - 16
7	on	48 kHz (int)				= AES50-A ch01-ch08	= AES50-A ch01-ch08	= AES50-A ch09-ch16	= AES50-A ch01-ch16
8	on	44.1 kHz (int)				= AES50-A ch01-ch08	= AES50-A ch01-ch08	= AES50-A ch09-ch16	= AES50-A ch01-ch16
9	on	48 kHz (int)	on			= AES50-A ch01-ch08	= Local In 01 - 08	= Local In 09 - 16	= Local In 01 - 16
10	on	44.1 kHz (int)	on			= AES50-A ch01-ch08	= Local In 01 - 08	= Local In 09 - 16	= Local In 01 - 16

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Dimensional Drawings

