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9. Specifications

9.1 X18/XR18 Specifications

	X18	XR18
Processing		
Number of processing channels	18 input channels, 4 FX return channels, 6 aux buses, main LR	18 input channels, 4 FX return channels, 6 aux buses, main LR
Internal effects engines	4 true stereo	4 true stereo
Signal processing	40-bit floating point	40-bit floating point
A/D-D/A conversion (Cirrus Logic A/D CS5368, D/A CS4385)	24-bit @ 44.1 / 48 kHz, 114 dB dynamic range	24-bit @ 44.1 / 48 kHz, 114 dB dynamic range
Analog I/O latency*	0.8 ms	0.8 ms
Programmable mic preamps, designed by Midas		
Line / Aux inputs, stereo	16 XLR/TRS combo jacks, balanced	16 XLR/TRS combo jacks, balanced
Main outputs	2 RCA, unbalanced	2 TRS, balanced
Aux outputs	2 XLR, balanced	2 XLR, balanced
Monitoring outputs	6 TRS, balanced impedance	6 XLR, balanced
Phones outputs	2 RCA, unbalanced	—
ULTRANET	1 TRS	1 TRS
MIDI inputs / outputs	1 RJ45	1 RJ45
Ethernet	1/1 DIN	1/1 DIN
Audio/Midi interface	1 RJ45	1 RJ45
	1 USB Type B	1 USB Type B
Preampdesign	Midas	Midas
THD + noise, 20 dB gain, 0 dBu out	< 0.005%, A-weighted	< 0.005%, A-weighted
Phantom power, switchable per input	48 V	48 V
Equivalent input noise level, XLR (input shorted)	-128 dBu, A-weighted	-128 dBu, A-weighted
CMRR, XLR, @ 20 dB gain (typical)	> 60 dB	> 60 dB
CMRR, XLR, @ 40 dB gain	> 65 dB	> 65 dB
Input/Output Characteristics		
Frequencyrange,@48 kHz sample rate, 0 dB to -1 dB	10 Hz - 22 kHz	10 Hz - 22 kHz
Dynamic range, analog in to analog out (typical)	106 dB	106 dB
A/D dynamic range, preamp to converter (typical)	109 dB	109 dB
D/A dynamic range, converter and output	108 dB	108 dB
Cross talk rejection @ 1 kHz, adjacent channels	90 dB	90 dB
Mic 1-16 Input impedance XLR jack, unbal. / bal.	5 kΩ / 10 kΩ	5 kΩ / 10 kΩ
Non clip maximum input level, XLR	+23 dBu	+23 dBu
Hi-Z 1-2 Input impedance TRS jack, unbal. / bal.	1 MΩ / 2 MΩ	1 MΩ / 2 MΩ
Line 3-16 Input impedance TRS jack, unbal. / bal.	5 kΩ / 10 kΩ	5 kΩ / 10 kΩ
Line 17-18 Input impedance, RCA / TRS	10 kΩ	10 kΩ
Non clip maximum input level, RCA / TRS	+16 dBu	+16 dBu
Output Characteristics		
Output impedance,XLR,unbal. / bal.	50 Ω / 50 Ω	50 Ω / 50 Ω
Output level, XLR, nom./max.	+4 dBu / +16 dBu	+4 dBu / +16 dBu
Output impedance, TRS, unbal. /	50 Ω / 50 Ω	50 Ω / 50 Ω
bal. Output level, TRS, nom./max.	+4 dBu / +16 dBu	+4 dBu / +16 dBu
Output impedance, RCA	1 kΩ	—
Output level, RCA, nom./max.	+4 dBu / +16 dBu	—
Phones output impedance / level	40 Ω / +35 dBm (stereo)	40 Ω / +35 dBm (stereo)
Residual noise level, XLR and TRS	-92 dBu, A-weighted	-92 dBu, A-weighted

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	X18	XR18
USB Audio/MIDI Interface		
Type	USB 2.0, type B	USB 2.0, type B
Supported operating systems	Windows 7 or higher**, Mac OS X 10.6.8 or higher, iOS 7 or higher (iPad), Linux	Windows 7 or higher**, Mac OS X 10.6.8 or higher, iOS 7 or higher (iPad), Linux
Supported sample rates	44.1 / 48 kHz	44.1 / 48 kHz
I/O audio channels	18 x 18	18 x 18
I/O MIDI channels	16 x 16 (1 port)	16 x 16 (1 port)
WLAN Module		
Antenna	Internal	External, SMA connector, 50 Ω
Access Point, number of clients	Max. 4	Max. 4
IEEE 802.11 b/g standard	2.4 GHz	2.4 GHz
Frequency Range	2,412-2,462 MHz	2,412-2,462 MHz
WLAN channels (Wifi Client, Access Point)	1-11	1-11
Max Output Power	19 dBm (802.11 b) / 18 dBm (802.11 g)	19 dBm (802.11 b) / 18 dBm (802.11 g)
Power		
Switch-mode power supply	Autorange 100-240 V, (50/60 Hz)	Autorange 100-240 V, (50/60 Hz)
Power consumption	30 W	30 W
Physical		
Standardoperating temperature range	5°C – 40°C (41°F – 104°F)	5°C – 40°C (41°F – 104°F)
Dimensions	409 x 357 x 110 mm (16.1 x 14.1 x 4.3")	333 x 149 x 140 mm (13.1 x 5.9 x 5.5")
Weight	4 kg (8.8 lbs)	3.2 kg (7.1 lbs)

* including all channel and bus processing, excluding insert effects

** Windows ASIO driver available as download from behringer.com; compatible to CoreAudio on Mac OS X and iOS

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9.2 XR16/XR12 Specifications

	XR16	XR12
Processing		
Number of processing channels	16 input channels, 1 stereo USB return channel, 4 stereo FX return channels, 6 aux buses, main LR	16 input channels, 1 stereo USB return channel, 4 stereo FX return channels, 6 aux buses, main LR
Internal effects engines	4 true stereo	4 true stereo
Signal processing	40-bit floating point	40-bit floating point
A/D-D/A conversion (Cirrus Logic A/D CS5368, D/A CS4385)	24-bit @ 44.1 / 48 kHz, 114 dB dynamic range	24-bit @ 44.1 / 48 kHz, 114 dB A/D dynamic range
Analog I/O latency*	0.8 ms	0.8 ms
Connectors		
Programmable mic preamps, designed by Midas	8 XLR/TRS combo jacks, balanced	4 XLR/TRS combo jacks, balanced
Line inputs	8 TRS, balanced	8 TRS, balanced
Main outputs	2 XLR, balanced	2 XLR, balanced
Aux outputs	4 XLR, balanced	2 TRS, balanced
Phones outputs	1 TRS	1 TRS
MIDI inputs / outputs	1/1 DIN	1/1 DIN
Ethernet	1 RJ45	1 RJ45
USB port	Type A	Type A
Mic Input Characteristics		
Preamp design	Midas	Midas
THD + noise, 20 dB gain, 0 dBu out	< 0.005%, A-weighted	< 0.005%, A-weighted
Phantom power, switchable per input	48 V	48 V
Equivalent input noise level, XLR (input shorted)	-128 dBu, A-weighted	-128 dBu, A-weighted
CMRR, XLR, @ 20 dB gain (typical)	>60 dB	>60 dB
CMRR, XLR, @ 40 dB gain	>65 dB	>65 dB
Input-Output Characteristics		
Frequency range, @ 48 kHz sample rate, 0 dB to -1 dB	10 Hz - 22 kHz	10 Hz - 22 kHz
Dynamic range, analog mic in to analog out (typical)	105 dB	104 dB
A/D dynamic range, mic preamp to converter (typical)	109 dB	109 dB
D/A dynamic range, converter and output	108 dB	108 dB
Cross talk rejection @ 1 kHz, adjacent channels	90 dB	90 dB
Mic input impedance XLR jack, unbal. / bal.	5 kΩ / 10 kΩ	5 kΩ / 10 kΩ
Non clip maximum input level, XLR	+23 dBu	+23 dBu
Hi-Z input impedance TRS jack, unbal. / bal.	1 MΩ / 2 MΩ	1 MΩ / 2 MΩ
Line input impedance TRS jack, unbal. / bal.	20 kΩ / 40 kΩ	20 kΩ / 40 kΩ
Non clip maximum input level, TRS	+21 dBu	+21 dBu
Output Characteristics		
Output impedance,XLR,unbal. / bal.	50 Ω / 50 Ω	50 Ω / 50 Ω
Output level, XLR, nom./max.	+4 dBu / +16 dBu	+4 dBu / +16 dBu
Output impedance, TRS, unbal. / bal.	50 Ω / 50 Ω	50 Ω / 50 Ω
Output level, TRS, nom./max.	+4 dBu / +16 dBu	+4 dBu / +16 dBu
Phones output impedance / level	40 Ω / +35 dBm (stereo)	40 Ω / +35 dBm (stereo)
Residual noise level, XLR and TRS	-92 dBu, A-weighted	-92 dBu, A-weighted
WLAN Module		
Antenna	External, SMA connector, 50 Ω	External, SMA connector, 50 Ω
Access Point, number of clients	Max. 4	Max. 4
IEEE 802.11 b/g standard	2.4 GHz	2.4 GHz
Frequency Range	2,412-2,462 MHz	2,412-2,462 MHz
WLAN channels (Wifi Client, Access Point)	1-11 / 1-11	1-11 / 1-11
Max Output Power	19 dBm (802.11 b) / 18 dBm (802.11 g)	19 dBm (802.11 b) / 18 dBm (802.11 g)
Power		
Switch-mode power supply	Autorange 100-240 V, (50/60 Hz)	Autorange 100-240 V, (50/60 Hz)
Power consumption	30 W	30 W
Physical		
Standardoperating temperature range	5°C – 40°C (41°F – 104°F)	5°C – 40°C (41°F – 104°F)
Dimensions	333 x 149 x 140 mm (13.1 x 5.9 x 5.5")	333 x 149 x 95 mm (13.1 x 5.9 x 3.7")
Weight	3.0 kg (6.6 lbs)	2.4 kg (5.3 lbs)

* including all channel and bus processing, excluding insert effects