X32

32-Channel, 16-Bus, 40-Bit Digital Mixing Console with Programmable MIDAS-Designed Preamps, Motorized Faders, 32-Channel Audio Interface and iPad* Remote Control

Features

- 32-channel digital mixer with 16 mix buses, 6 mute and 8 DCA groups
- MIDAS-designed, fully programmable mic preamps for audiophile sound quality
- 40-Bit floating-point DSP features "unlimited" dynamic range with no internal overload and near-zero overall latency
- Fully automated motorized 100 mm faders allow for instant overview, powerful scene management and DAW control
- 32 x 32 channel audio interface over FireWire and USB 2.0, with DAW remote control emulating HUI* and Mackie Control*
- Powerful scene management for convenient handling of complex productions
- iPad* app for professional remote operation available free of charge—no host PC required
- High-resolution 7" day-viewable Color TFT for easy viewing of workflow components and parameters
- Individual and dynamic LCD Scribble Strips on all channels and buses creating easy assignment and intuitive channel distinction
- Main LCR, 6 matrix buses and all 16 mix buses each featuring inserts, 6-band parametric EQ's and full dynamics processing
- Virtual FX rack featuring 8 true-stereo FX slots include high-end simulations such as Lexicon 480L* and PCM70*, EMT250* and Quantec QRS* etc.

- Future firmware updates, incl. new FX "Plug Ins", downloadable from behringer.com free of charge
- 16 analog XLR outputs plus 6 additional line in/outputs, 2 phones connectors and a talkback section with integrated or external mic
- 48-channel Digital Snake ready** via AES50 ports, featuring KLARK TEKNIK's SuperMAC networking capability for ultra-low jitter and latency
- USB type-A connector providing file storage and uncompressed stereo recordings plus show presets and system updates
- Dedicated and easy-to-use channel strip section with direct access controls and graphic user interface for intuitive workflow
- Additional user-definable control section allows for on-the-fly adjustments of your favorite parameters
- ULTRANET connectivity for BEHRINGER's P-16 Personal Monitoring System** plus AES/EBU stereo digital output and MIDI
- Networked remote control for show setups with on-screen software editor via Ethernet
- Built-in expansion port for audio interface cards or digital networking bridges
- Conceived and designed by BEHRINGER Germany

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Product Overview

The X32 is the fully-integrated centerpiece of BEHRINGER's digital mixing, audio networking and processing ecosystem. It combines a control surface with streamlined workflow, extensive I/O and signal processing into a compact desktop form factor. Employing motorized faders and rotary encoders along with a daylight-viewable TFT screen, the control surface is designed to allow immediate access to critical functions with total and automatic recall of settings. Extensive on-board I/O includes 40 A/D and 24 D/A Cirrus Logic converters, 96 bidirectional channels over SuperMAC AES50, stereo AES/EBU out, 16 channels of BEHRINGER's Ultranet personal monitoring and 32×32 channels for recording over Firewire or USB.

Abundant analog connectivity is provided via 32 digitally controllable microphone preamps designed by MIDAS, 6 line-level auxiliary inputs and outputs, 16 XLR outputs, stereo monitoring outs on XLR/TRS and dual phones outputs. Each of the 32 microphone inputs can accept balanced or unbalanced mic or line-level level signals and include switchable phantom power, 72 dB gain range and max +23 dBu level before clip. A separate external mic input and the internal talkback mic allow communication to various destinations.

Dual AES50 Ethernet jacks that employ KLARK TEKNIK SuperMAC technology contribute 96×96 signals to the total count of 168×168 accessible sources and destinations. Motorized faders, recallable mic preamps, programmable routing and the ability to save and recall entire scenes make set or program changes quick and simple. A top panel USB connector enables system data to be stored or a board mix to be recorded directly to external flash or hard drives.

The Input section is home for 16 high-resolution 100 mm motorized faders, providing control over channels 1-16, 17-32, Aux inputs / USB playback / FX returns. A separate section of 8 motorized faders controls DCA groups 1-8, bus masters 1-8 and 9-16 as well as matrices 1-6. The master "X-channel" section allows instant editing of the currently selected channel's gain, dynamics, EQ and other functions.

A custom assignable section allows certain control functions to be mapped directly to a set of dedicated knobs and buttons.

A main 7"-wide, high-contrast color display provides information for editing pertinent parameters of the active function or effect. Relevant parameters are quickly recalled to the display for editing via "view" buttons in each sub-section. Each channel also features a small, customizable LCD screen for track name, number, color and source graphic.

A virtual FX rack offers 8 true-stereo (16 mono) multi-effects processors, with 37 FX models that eliminate the need for any additional outboard gear. 4 high-quality effects such as delay, chorus and reverb can run concurrently with 8 channels of 31-band graphic equalization.

The built-in XUF USB 2.0/FireWire 400 interface card enables streaming of up to 32 tracks to and from a computer for recording, mixing and mastering purposes.

The X32 integrates seamlessly with other X32 consoles, the S16 digital stage box and the P-16 personal monitoring system for complete live, studio and installed sound solutions. Control the mixer from a distance with the free iPad app or with editing and remote control software connected via Ethernet. The X32's ease of use, intuitive workflow, diverse feature set and integration with other equipment make it an ideal centerpiece for installed and production sound in any setting.

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Technical Specifications

Processing

Number of input processing channels	32 input channels, 8 aux channels, 8 fx return channels
Internal effects engines, true-stereo / mono	8/16
Internal total recall scenes (incl. preamp and fader)	100
Signal processing	40-bit floating point
A/D-D/A conversion	24-bit @ 44.1 / 48 kHz, 114 dB dynamic range
I/O latency (console input to output)	< 1 ms
Network latency (stagebox in > console > stagebox out)	< 2 ms

Connectors

XLR inputs, programmable mic preamp	32
Talkback mic input, XLR	1
RCA inputs/outputs	2/2
XLR outputs	16
Monitoring outputs XLR / ¼" TRS balanced	2/2
Aux inputs/outputs, ¼" TRS balanced	6/6
Phones outputs, ¼" TRS	2
Digital AES/EBU output, XLR	1
AES50 ports, Supermac	2
Expansion card	32 channel audio input/output, various standards
P-16 connector, Ultranet (no power supplied)	1
MIDI inputs / outputs	1/1
USB Type A, top panel, for audio and data export/import	1
USB Type B, rear panel, for remote control	1
Ethernet, RJ45, rear panel, for remote control	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
Input impedance TRS Jack, unbal. / bal.	20 kΩ / 40 kΩ
Non clip maximum input level, TRS	+16 dBu
Nominal output level, TRS	+4 dBu / +16 dBu
Output impedance, TRS, unbal. / bal.	150 Ω / 300 Ω
Phones output impedance / level	40 Ω / +25 dBm (stereo)
Residual noise level, XLR and TRS	-87 dBu A-weighted

Display

Main screen	7", 800 x 480, 262k color TFT
Channel LCD screen	128 x 64, LCD with RGB color backlight

Power

Switch-mode power supply	Autorange 100-240 V (50/60 Hz)
Power consumption	120 W

Physical

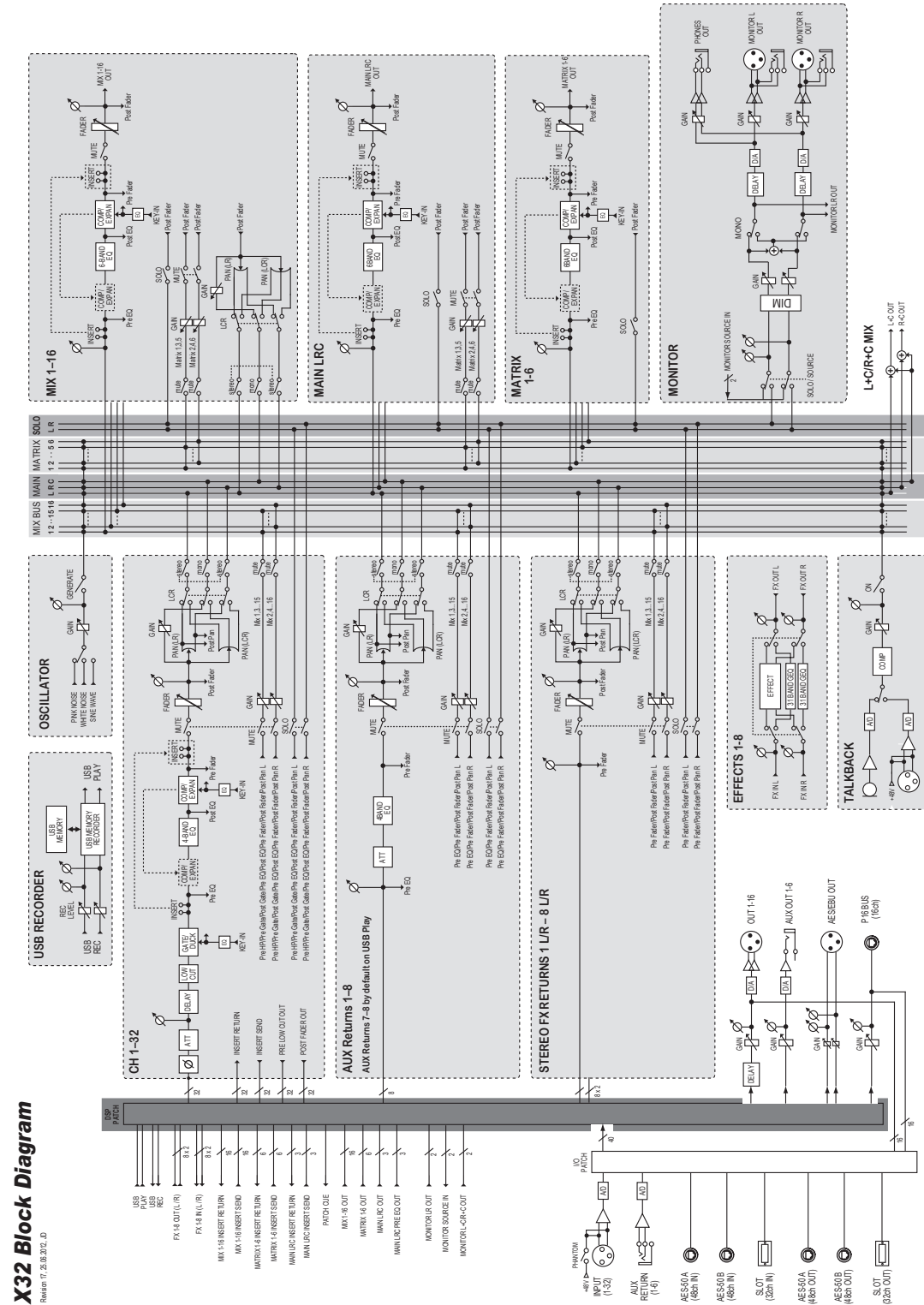|	
Dimensions	35.4 x 20.8 x 7.9"/ 900 x 528 x 200 mm
Weight	45.4 lbs / 20.6 kg

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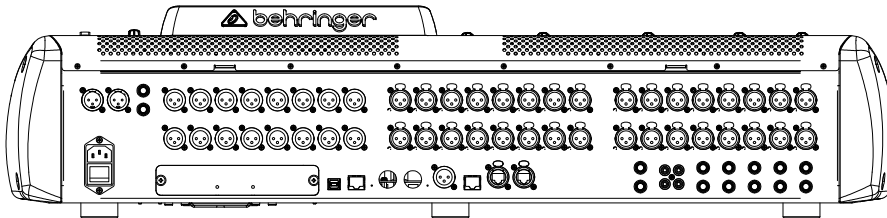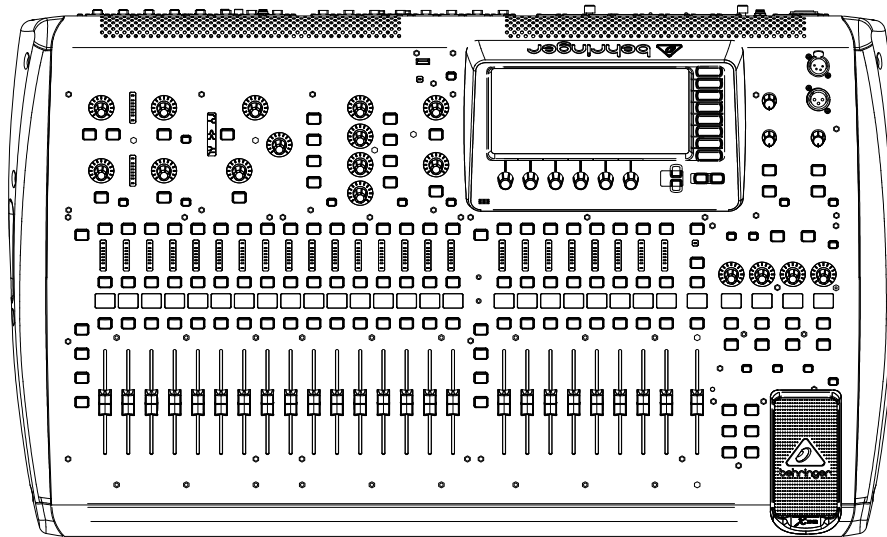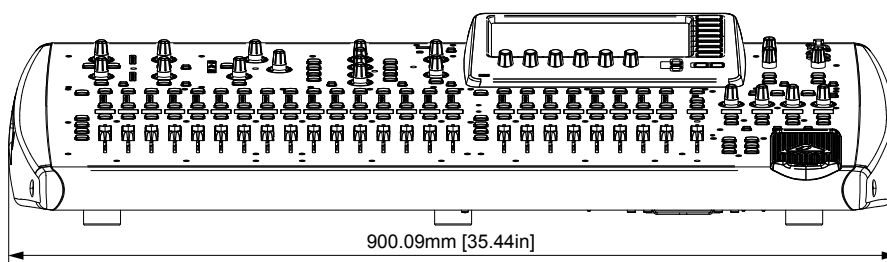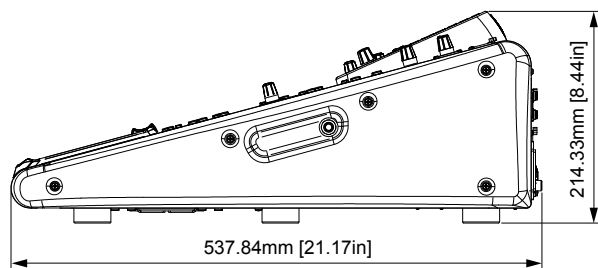
Block Diagram

X32 Block Diagram

Revision 17, 25.09.2012, JD

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Dimensional Drawings

REAR

TOP

900.09mm [35.44in]

FRONT

214.33mm [8.44in]

537.84mm [21.17in]

SIDE

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