

DESCRIPTION

The DX8 is a digital audio mixer and processor for installations such as churches, courtrooms, convention centers and hotels. Eight universal inputs and two balanced outputs allow true 8x2 mixing for stereo or dual zone applications. The DX8 includes powerful signal processing software to complement the 8x2 mixing structure. An automixing function serves applications requiring little or no human operation. Optional software and hardware further expands the DX8's capabilities for more sophisticated needs.

Each of the eight input channels can be terminated to one of two Phoenix-type detachable connectors, each optimized to accept either microphone or line-level signals. Mic preamplifiers use XDR™ technology for studio-quality audio. Phantom power (48VDC) is switchable individually on each mic input. Two auxiliary line-level inputs with trim allow analog signals to be mixed with A and B master mixes. Master outputs deliver balanced line-level signals to the Phoenix-type connectors as well as buffered unbalanced signals to RCA connectors (for recording).

The intuitive front panel interface includes dual-function LED bargraph meters for each input and output. Input meters show signal presence before signal processing (pre-fader) and output meters indicate actual level at the output (post-fader). Levels are set with UP/DOWN buttons for each input and output. A MODE button selects between Mix A and B for level adjustment to both mix outputs from the same input controls, and it also allows the user to lock front panel controls until a security code is entered.

The DX8 offers flexible interface options for control and programming purposes. Two independent RS232 connectors - one on the front panel and one on the rear - provide connection to a computer or control system. A multi-pin (DB25) connector on the rear panel allows interface between the 10 Logic Inputs and 10 Logic Outputs to switches, LEDs and other devices, enabling hardware control and indication from custom control panels. All logic inputs and outputs are programmable. A proprietary remote control bus connects optional DX8 wired remotes over a three-conductor cable. These remotes, available in volume control and four-switch versions, can be combined in any configuration.

Supplied PC software provides access to all settings and configurations. It offers Stereo and Mono mixer views, and access to the two 1/3-octave equalizers, two 5-band parametric equalizers and two compressors on the two master outputs. It also allows configuration and recall of up to 16 presets, 8 input Priority levels, 8 Mute groups and 8 Control groups. Force On and Off functions are provided with choice of Relative or Absolute changes that can be used with Priority settings to create advanced audio management systems. All settings and text labels are retained in the DX8 and stored to the computer.

The DX8 is UL and CE approved for continuous use in professional audio systems. An internal auto-ranging power supply allows connection to mains voltages from 90–240VAC at 50/60Hz without jumper or switch setting changes. A 24VDC input is provided for applications where backup battery power is required. Switchover to backup power is automatic and silent.



Features

- 32-bit DSP and 24-bit Analog/Digital Conversion
- 8 balanced XDR™ Mic/Line inputs with trim
- 2 balanced Line inputs direct to mix bus
- 2 Independent Mix Buses and balanced Outputs
- 2 unbalanced Record Outputs
- 8 unbalanced Direct Channel Outputs
- Individual Level/Peak metering on each Input and Output
- 3-band sweepable Hi/Lo shelving and a mid-peaking EQ on each Input
- 2-band sweepable shelving EQ on each Output
- 31-band Graphic EQ on each Output
- 5-band Parametric EQ on each Output
- One fully variable Compressor on each Output
- Independent Automixing function for each Output to maximize acoustic gain and prevent feedback
- 10 Programmable Logic Inputs
- 10 Programmable Logic Outputs
- 2 independent RS-232 interface ports
- 48VDC Phantom Power switch per input
- 24VDC Backup Power input
- Hardware Expansion Port accepts optional modules
- PC Software application included

Applications

- Meeting Rooms
- Houses of Worship
- Courtrooms
- Multizone Paging/
Music Systems
- Hotels
- Boardrooms
- Multi-Purpose Facilities



DX8

8X2 DIGITAL MIXER AND SIGNAL PROCESSOR

INPUTS / OUTPUTS

Inputs 1-8:	Balanced, Phoenix-type terminals
Bus A and B:	Balanced, Phoenix-type terminals, direct to Mix Buses
Master Outputs:	Balanced, Phoenix-type terminals
Record Outputs A/B:	Unbalanced, RCA
Direct Outputs 1-8:	Unbalanced on DB15 (bottom row is return)
Logic Inputs:	10 inputs on DB25
Logic Outputs:	10 open-collector outputs on DB25
Serial Ports:	2 RS-232C on DB9

CONTROLS

Input Trim:	8 Rotary potentiometers
Input Gain:	2 Pushbuttons per input
EQ:	2 Pushbuttons for low, 2 for high
Master Output Gain:	2 Pushbuttons per output
Mode Select:	1 Pushbutton
Power:	Rocker switch
Phantom Power Select:	8 DIP switches

INDICATORS

Input Levels:	12-segment LEDs per ch.
EQ Levels:	12-segment LEDs per ch.
Mode Status:	3 LEDs; A/B/LOCK
Output Levels:	12-segment LEDs per ch.
Volume Setting:	12-segment LED bar graph

ELECTRICAL

AC Power:	90-240 VAC, 50/60 Hz, 1A
DC Power:	24 VDC, 3A
Fuse Ratings:	1.6A Slo Blo, 250V

SIGNAL PROCESSING

Five, 32-bit floating point DSPs, 24-bit converters,
512k x 16 Flash, 128k x 32 SRAM (battery back-up)
Inputs:
3-band shelving/peaking EQ: 20 Hz-20 kHz, variable frequency
Automatic Level Control (ALC) Range: 0 dB to -20 dB
Automix: NOM On/Off
Gate Attenuation Depth: 0 dB to -60 dB
Gate Release Time: 0.5 s or 1.5 s
Outputs:
Automatic Level Control (ALC) Range: 0 dB to -20 dB
Automix MAC NOM: 1-8
Automix Last Mic On: None, Last, Input 1
2-band shelving EQ: 20 Hz-20 kHz, variable frequency
1/3-Octave graphic EQ
5-band parametric EQ
Compressor/limiter

AUDIO

Noise
(20 Hz-20 kHz bandwidth, Master Out, channel Trims @ unity gain, channel EQs flat, all odd channels panned left, even channels panned right, Master Level @ Unity, Channel Levels @ Unity: -82 dBu

Single Channel to Master Out: -100 dB (reference to 1% THD+N)
Total Harmonic Distortion (THD+N) (1 kHz @ +10 dBu (unity level) 20 Hz-20 kHz)
Mic in to Master Out: Below 0.005%
Crosstalk
1kHz relative to 0 dBu, 20 Hz-20 kHz bandwidth, Any line input to adjacent Direct Output, Trim to unity: Less than -90 dB
Frequency Response
Mic Input to Direct Outputs: 3 Hz-192 kHz, +/-3 dB
Mic Input to Master Outputs: 20 Hz-20 kHz, +/-0.5 dB
Equivalent Input Noise (EIN)
Mic in to Direct out, Max Gain
150 ohm Termination: -129.5 dBm unweighted
Common Mode Rejection (CMR)
Mic in to Direct out, Max gain
1kHz signal: Better than 80 dB
Maximum and Nominal Levels and Ranges
Mic Inputs: +18 dBu, +4 dBu, 0 to 60 dB gain
Line Inputs: +18 dBu, +4 dBu, -30 to +30 dB gain
Bus A/B Inputs: +18 dBu, +4 dBu, -20 to +20 dB gain
All Outputs: +18 dBu, +4 dBu
Impedances
Mic Inputs: 1.3K ohms
Line Inputs: 40K ohms
All Other Inputs: 10K ohms or greater
All Outputs: 120 ohms
Phantom Power: +48 VDC current limited to 7 mA per input channel

PHYSICAL

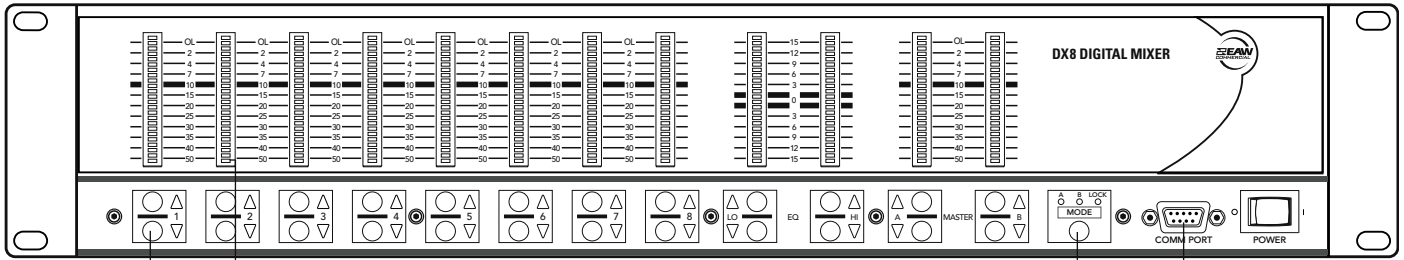
Dimensions (HxWxD): 3.5" x 19" x 13.25" (89 mm x 483 mm x 337 mm)
Net Weight: 12.5 lb (5.7 kg)

PC SYSTEM REQUIREMENTS

OS: Windows® '95, '98, NT®, 2000, XP
Processor: Pentium® or faster
RAM: 16MB minimum, 32MB recommended
Storage: 10MB free disk space
Display: 800 x 600 pixels, 256 colors minimum

LED METER VALUES

1.	Red (scale: 0L)	>-2dB full-scale (>16dBu)
2.	Yellow (scale: 2)	>-4dB full-scale (>14dBu)
3.	Yellow (scale: 4)	>-7dB full-scale (>11dBu)
4.	Yellow (scale: 7)	>-10dB full-scale (>8dBu)
5.	Green (scale: 10)	>-15dB full-scale (>3dBu)
6.	Green (scale: 15)	>-20dB full-scale (>-2dBu)
7.	Green (scale: 20)	>-25dB full-scale (>-7dBu)
8.	Green (scale: 25)	>-30dB full-scale (>-12dBu)
9.	Green (scale: 30)	>-35dB full-scale (>-17dBu)
10.	Green (scale: 35)	>-40dB full-scale (>-22dBu)
11.	Green (scale: 40)	>-50dB full-scale (>-32dBu)
12.	Green (scale: 50)	>-60dB full-scale (>-42dBu)

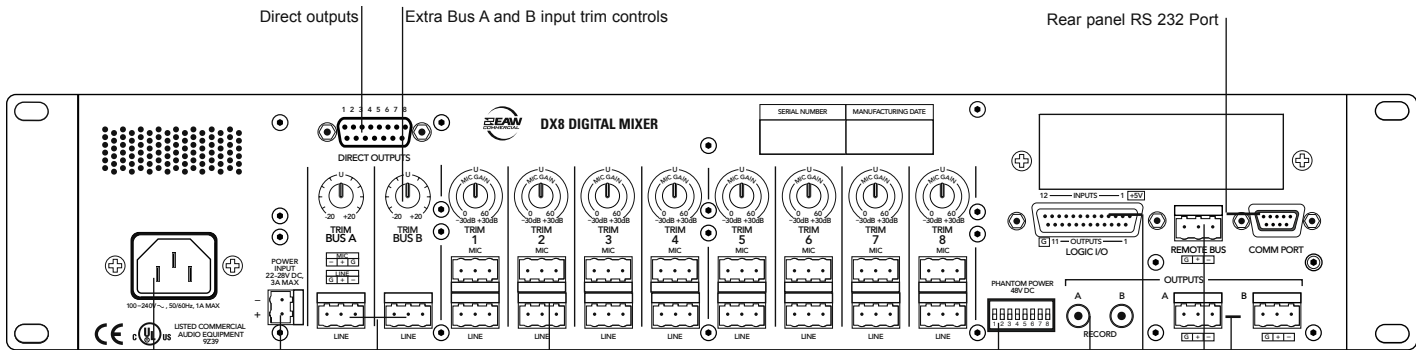


front panel manual adjustments via UP/DOWN pushbuttons

12 segment LED ladders

A/B/Lockout selector

Front panel RS232 port



Universal Power Input 90-240 volt 50/60Hz

24VDC power input

Extra inputs fed directly to Bus A and B

Input Phoenix-type terminals

Individual 48 VDC phantom power selectors for each mic input channel

Recording output from Bus A and B

Logic I/O expansion port

Remote control bus

Main Bus A & B outputs



The DX8 Mixer view offers two faders for each input

DX8 SOFTWARE FOR THE PC

The DX8 is supplied with a real-time PC software application that allows access to all of the unit's features. The user interface employs a mixer metaphor, making settings and operation clear and intuitive. Several of the mixer's elements are fixed, allowing immediate access to Master output controls, Preset selection and editing, as well as Active Device selection. Indicators for Active Logic Inputs and Mute Groups are always visible, as are the input and output signal meters. Mixer, equalizer, compressor, automix, and setup screen views are recalled from direct-select buttons.



The DX8 Automix view includes an Automatic Level Control and a Gate control



The DX8 has a full-featured Compressor for each output



The DX8 Graphic EQ view offers 31 bands of control on ISO-centered frequencies for each of the two master outputs



The DX8 Parametric EQ view includes 5 bands of control, as well as display windows that graphically represent the selected curves



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