

# UX8800 DIGITAL SIGNAL PROCESSOR

GUNNESS  
FOCUSING



The new UX8800 dual-mode digital signal processor extends EAW's revolutionary system alignment and engineering expertise to the world of rack-mount processors.

Long an industry leader in the field of loudspeaker and array design, EAW traditionally relied upon third-party digital signal processors to provide alignment processing for its products.

That is, until now. With the advent of groundbreaking, **Gunness Focusing™** loudspeaker processing first developed for the NT Series powered loudspeakers, it was evident that a critical link could and should be added to the drive chain of conventionally powered EAW systems.

Enter the UX8800, a digital signal processor expressly created to provide end-users with Gunness Focusing alignment and driver processing algorithms and protection technology while also serving as a comprehensive digital system processor and controller.

The UX8800 operates either as a standard system processor or, using built-in Gunness Focusing settings, as a loudspeaker-specific processor. In system processor mode, all settings and



*Advanced tailoring can be done via EAWPilot software included with the UX8800*

parameters for both inputs and outputs are user-adjustable. The processor's 4-input by 8-output architecture is custom-configured by the user to suit the particular application. In loudspeaker processor mode, the 4-input by 8-output architecture of the UX8800 is used to create up to four individual loudspeaker-specific processing units. Each processing unit contains both locked down and user-adjustable processing.

First, there are the product-specific, locked-down settings for crossover, equalization, alignment processing, and limiting. Second, there are a full complement of user-adjustable DSP parameters (EQ, level, delay and polarity) that provide the critical alignment control that are normally required for overall system alignment and adjustment.

A specific EAW loudspeaker model can be selected for each input channel. Output channels are assigned for each of the loudspeaker's separately amplified subsystems (2-way, 3-way, etc.). By entering the gain and maximum voltage ratings of the power amplifiers being driven by each output

## UX8800 Features

- **4 inputs/8 outputs**
- **Loudspeaker Processor Mode - Preset comprehensive signal processing for EAW loudspeakers provides ease of setup, consistency and interoperability between EAW products and systems**
- **System Processor Mode - Standard user-adjustable digital signal processing**
- **Gunness Focusing Capable - Superior EAW loudspeaker signal processing**
- **Advanced Limiting - Robust driver protection and better sonic performance**
- **EAW Smaart and FChart Compatible – Complete and integrated system control**
- **Intuitive Front Panel Controls - Buttons, joystick encoder, and LCD panel for quick adjustments**
- **Digital inputs - Accepts AES/EBU and EAW U-Net digital audio**
- **EAWPilot Software - Comprehensive computer control of all parameters**

**EAW**

www.eaw.com

Eastern Acoustic Works  
One Main Street  
Whitinsville, MA 01588 USA  
Tel +1 800 992 5013  
Fax +1 800 322 8251

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channel, the UX8800 calculates the correct output limiter settings. This tailors and fine-tunes the limiters to the specific parameters (such as excursion and power handling) of the individual drivers, enhancing overall loudspeaker performance and longevity. In addition, a distance and humidity-dependent air loss pre-emphasis filter can be engaged to overcome expected air losses over longer projection distances.

The result is an unprecedented degree of consistency and interoperability between EAW systems. With UX8800 processors in the rack, EAW users can be confident that cross-routed systems will all have the same starting processing settings. And because of Guinness Focusing, that starting point is phenomenal clarity and fidelity.

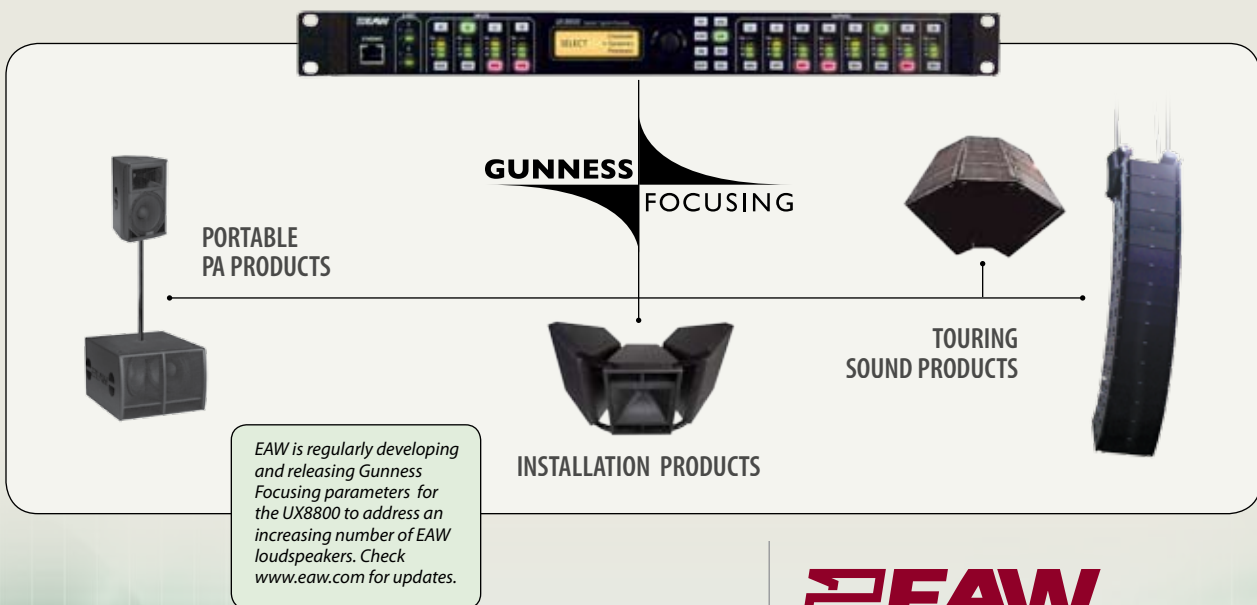
Further, in its dual role as a comprehensive digital system processor, the UX8800 is intimately linked to EAW Smaart and FChart acoustic measurement and analysis systems. This is crucial to users and engineers in that it guarantees both standard and "Grey Box" processing exactly matches the processor settings determined in the laboratory by EAW engineers.

## Operation

The front panel of the 1-rack-space UX8800 offers access to all operational, user-controllable parameters via buttons, encoders and a brightly back-lit LCD panel, eliminate need of a computer to make most adjustments. However, more advanced setup and tailoring can be done using the companion EAWPilot software and a PC running EAWPilot can be plugged in via an RJ45 Ethernet port on the front panel.

The UX8800's powerful, digital engine features state-of-the-art 24 bit/48 kHz processing. Both input and output connectors are XLR type. Inputs can be switched to accept AES/EBU digital signals as well as the coming EAW U-Net networking digital audio protocol, eliminating A/D and D/A stages.

**The bottom line:** because of the capability to utilize Guinness Focusing algorithms, no other rack-mounted digital processor on the market can approach the UX8800 in terms of dramatically advancing current and future EAW loudspeaker performance.



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