Sonnex® Multiroom Audio Unamplified Expander, 8-Zone

> 8-Zone Sonnex® expansion with line-level outputs

> 4 zones with balanced and unbalanced line outputs

> 4 zones with SPDIF digital outputs

> All 8 zones also include Crestron Home® CAT5 balanced outputs

> Professional-quality audio performance

> Advanced DSP, mono summing, and output bussing per zone

> Single-cable interface to SWAMP-24X8 via Sonnex Link

> Plug-and-play operation

> Single-space rack mountable

The SWE-8 is an 8-zone unamplified expander for the Sonnex® Multiroom Audio System (SWAMP-24X8[1]) from Crestron®. It provides 8 zone outputs consisting of 4 analog line-level and 4 SPDIF digital outputs. All eight outputs also include Crestron Home® (CH) CAT5 balanced audio outputs for long-distance wiring applications. The SWE-8 is ideal for routing audio to AV receivers, powered subwoofers, headphone amplifiers, phone systems (for music-on-hold), and other audio equipment.

8 Zones Unamplified
The SWE-8 allows routing of any of the main SWAMP-24X8's 24 source inputs to any of its eight zone outputs. Outputs 1-4 offer balanced, unbalanced, and CH outputs. Outputs 5-8 offer SPDIF and CH outputs.

Crestron Home® CAT5 Audio Distribution
The CH CAT5 balanced outputs enable long-distance wire runs up to 500 feet (152 meters) to feed remote equipment such as powered subwoofers and AV receivers located throughout the house. The CH signal is easily converted to unbalanced line-level at each remote location using an ABAR-1 CAT5 Balanced Audio Receiver[1]. CH outputs are also compatible with other Crestron Home products such as the C2N-IADS30X24, CNX-BIPAD8, CNXRMCLV, C2N-DAP8, and certain Crestron touch screens.

AUD-EXT Audio over CAT5 Extenders
For long-distance wiring applications requiring wire runs over 500 feet, Crestron offers the AUD-EXT family of audio extenders[1]. Using inexpensive CAT5 wire, these extenders allow unbalanced audio signals to be extended up to 2000 feet (610 m), while SPDIF signal can be extended up to 600 feet (183 m).

Digital Signal Processing
Each zone features independent DSP for optimal sound quality and control in every room. Sonnex DSP capabilities include the choice of graphic or parametric 5-band EQ, dynamic range control, volume, bass, treble, balance, loudness, mute, mono summing, and five selectable tone profiles. For subwoofer applications, a choice of 2nd or 4th order active crossover filters can be set using the parametric EQ, leaving the four remaining EQ filters available for room correction and tonal enhancement.

Output Bussing
Output bussing allows multiple zones to function as one, whether fed from the SWE-8, the SWAMP-24X8, or another Sonnex Expander. Output bussing is ideal for grouping adjacent listening areas together or associating a powered subwoofer with its stereo speaker pair. Volume Offset adjustments allow for balancing the levels of each bussed zone for smooth, even coverage.

Simple, Versatile Installation
The SWE-8 can be installed along with the SWAMP-24X8 at the central equipment rack, or separately at a remote location. It interfaces with the SWAMP-24X8 via a single CAT5e shielded twisted pair (STP) cable up to 200 ft (61 m) in length[2]. This length can be increased to 2000 ft (610 m) using multimode fiber optic cable with the S-EXT1-S Sonnex Link over Fiber Extender[1]. Plug-and-play connectivity affords an extremely easy installation with full control access to all the SWE-8 functions provided through the SWAMP-24X8.

Please see the SWAMP-24X8 spec sheet for complete Sonnex system information.

SPECIFICATIONS

Audio

Input Signal Types: Sonnex® Link
Output Signal Types: Stereo analog line (unbalanced and balanced), S/PDIF coaxial (2-channel PCM only), Crestron Home® CAT5 Balanced Audio

Typical of 8 stereo zone outputs:
> **Digital-To-Analog Conversion:** 24-bit 48 kHz
> **Output Resolution/Bitrate:** 24-bit 48 kHz (digital outputs only)
> **Frequency Response:** 20 Hz to 20 kHz ±0.5 dB
> **THD+N:** <0.003% SPDIF in, <0.005% balanced or unbalanced analog in, 20 Hz to 20 kHz
> **S/N Ratio:** >106dB SPDIF in, >100dB balanced or unbalanced analog in, A-weighted
> **Stereo Separation:** >100 dB
> **Zone Separation:** >100 dB
> **Zone Volume Level Control:** -80.0 to +20.0 dB, adjustable from 0% to 100% plus mute
> **Bass Control:** ±12.0 dB
> **Treble Control:** ±12.0 dB

Loudness Compensation: On/Off

Dynamic Range Control: On/Off

Balance Control: Left/right adjustable

Mono Summing: Selectable

Tone Profiles: Flat, Classical, Jazz, Pop, Rock, Spoken Word

EQ Modes: 5-band graphic or 5-band parametric EQ

GEQ Center Frequencies: 63, 250, 1k, 4k, 16k Hz

GEQ Gain: ±12.0 dB per band

PEQ Filter Types: EQ, High Pass, Low Pass, Treble Shelf, Bass Shelf, Notch

PEQ Center Frequency: 10 to 20,000 Hz per band

PEQ Gain: ±12.0 dB per band

PEQ Bandwidth: 0.1 to 3.5 octaves per band

Bus Volume Offset: ±12.0 dB per zone for output bussing

Communications

Sonnex Link: 64-channel (48 utilized) digital audio w/embedded control, auto-discovery, auto-negotiating

Connectors

DIGITAL IN: (1) 8-wire RJ45 female, Sonnex link input;
Connects to SWAMP-24X8 Multiroom Audio System[1,2]

1 – 4 L/R (unbalanced): (4) pairs RCA female;
Unbalanced stereo line-level audio outputs[3];
Output Impedance: 100 Ohms;
Maximum Output Level: 2 Vrms

1 – 4 BALANCED L/R: (4) 5-pin 3.5mm detachable terminal blocks;
Balanced stereo line-level audio outputs[3];
Output Impedance: 200 Ohms balanced, 100 Ohms unbalanced;
Maximum Output Level: 4 Vrms balanced, 2 Vrms unbalanced

1 – 8 BALANCED (CH): (8) 8-wire RJ45 female, shielded;
"Crestron Home®" CAT5 balanced stereo audio output ports[3];
Connect to any "CH" CAT5 audio input ports or bidirectional audio ports;
Maximum Cable Length: 500 ft (152 m) per port

5 – 8 SPDIF OUT: (4) RCA female, S/PDIF coaxial digital audio outputs;
Output Impedance: 75 Ohms

24VDC 2A MAX: (1) 2.1mm barrel DC power jack;
24 Volt DC power input; PW-2420RU power supply included

G: 6-32 screw, chassis ground lug

Controls & Indicators

PWR: (1) green LED, indicates operating power supplied via power pack

HW-R: (1) recessed pushbutton for hardware reset

ZONE 1 – 8: (8) pushbuttons and green LEDs, select output zone for routing and adjustment

DIGITAL IN (rear): (1) green and (1) amber LEDs, green indicates link status and amber indicates data communication

Power Requirements

Power Pack: 2 Amps @ 24 Volts DC;
100-240 Volts AC, 50/60 Hz power pack, model PW-2420RU included

Environmental

Temperature: 41° to 104°F (5° to 40°C)

Humidity: 10% to 90% RH (non-condensing)

Heat Dissipation: 41 BTU/hr

Enclosure

Chassis: Metal with black finish, vented sides

Front Panel: Metal with black finish and polycarbonate label overlay

Mounting: Freestanding or 1U 19-inch rack-mountable (feet and rack ears included)

Dimensions

Height: 1.72 in (44 mm) without feet

Width: 19.0 in (483 mm), 17.30 in (440 mm) without rack ears

Depth: 10.19 in (259 mm)

Weight

5.0 lb (2.3 kg)

MODELS & ACCESSORIES

Available Models

SWE-8: Sonnex™ Multiroom Audio Expansion Switcher, 8-Zone

Included Accessories

PW-2420RU: Power Pack, Desktop, 24VDC, 2A (50 Watts), Regulated, US/International (Qty. 1 included)

Available Accessories

SWAMP-24X8: Sonnex® Multiroom Audio System

SWAMPI-24X8: Sonnex® Multiroom Audio System - International Version, 220-240V

DM-CBL-8G-NP: High-Performance CAT5e Shielded Twisted-Pair Cable, non-plenum

DM-CBL-8G-P: High-Performance CAT5e Shielded Twisted-Pair Cable, plenum

DM-8G-CONN: Cable Connector for DM-CBL-8G

DM-8G-CRIMP: Crimping Tool for DM-8G-CONN

DM-8G-CONN-WG: Cable Connector with Wire Guide for DM-CBL-8G

DM-8G-CRIMP-WG: Crimping Tool for DM-8G-CONN-WG

S-EXT1-S: Sonnex® Link over Fiber Extender

ABAR-1: Crestron Home® CAT5 Balanced Audio Receiver

ABARI-1: Crestron Home® CAT5 Balanced Audio Receiver - International Version, 230V

AUD-EXT: Audio over CAT5 Extenders

CBL Series: Crestron® Certified Interface Cables

Notes:

1. Item(s) sold separately.
2. For connection of the Sonnex Link between the SWE-8 and SWAMP-24X8, use Crestron DM-CBL-8G or high-quality CAT5e shielded twisted-pair cable. The maximum cable length using DM-CBL-8G or CAT5e is 200 ft (61 m). For longer distances, use the S-EXT1-S Sonnex Link over Fiber Extender.
3. All analog outputs are paralleled per zone.

This product may be purchased from an authorized Crestron dealer. To find a dealer, please contact the Crestron sales representative for your area. A list of sales representatives is available online at www.crestron.com/salesreps or by calling 800-237-2041.

The specific patents that cover Crestron products are listed online at: patents.crestron.com.

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SWE-8 – Rear View