

# XAP<sup>®</sup>

## XAP 400 Professional Conferencing System

A complete conferencing system featuring the most sophisticated audio technologies available. Leveraging the rich functionality of ClearOne's flagship XAP 800 system, the XAP 400 includes a built-in telephone interface and power amplifier for standalone conferencing as well as XAP system expansion.

**ClearOne.**



### THE CLEAR CHOICE FOR PROFESSIONAL AUDIO CONFERRING

#### XAP 400 APPLICATIONS

Conference Rooms  
Boardrooms  
Courtrooms  
Distance Learning Facilities  
Convention Centers and Hotels  
Training Rooms  
Telemedicine Facilities  
Houses of Worship

#### XAP 400 ADVANTAGES

##### Superior Audio Performance

- + Distributed Echo Cancellation<sup>®</sup> on every mic input
- + Noise cancellation on each mic/line input
- + Full-duplex sound enables participants to speak and listen at the same time without cutting in and out
- + First-mic priority eliminates hollow "tunnel" sound by activating only the microphone closest to the person speaking
- + Four microphone/line inputs, with four additional line inputs
- + Eight outputs
- + 20 Hz-20 kHz bandwidth for full-range audio response
- + Automatic level control and automatic gain control
- + Four input filters on each of four mic inputs; 15 filters on each of four independent processing blocks

##### Configuration Flexibility

- + Scalable – link multiple XAP units (XAP 400, XAP 800, XAP TH2) for extensive microphone coverage and up to 16 phone lines
- + 25x26 matrix with level control (in .5 dB steps) at each cross point to simplify complex mixing operations; Clear Matrix button easily clears cross points
- + Wide variety of system control options: ClearOne IR Remote, Volume Control, Select Control, 3rd-party control systems such as AMX, Crestron
- + Configuration control through included G-Ware<sup>™</sup> software, RS-232 port
- + Enhanced expansion bus, featuring 12 bidirectional audio buses
- + Four mic gating groups allow separation of mics into individual mixer gating groups for greater configuration flexibility

##### Ease of Use & Control

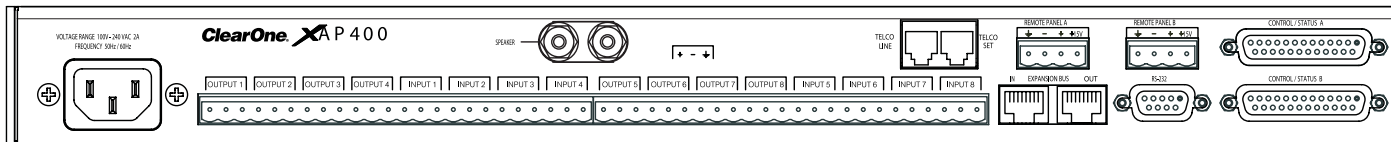
- + Labels for all inputs, outputs, macros and presets are saved within the unit
- + Front panel control of gain and mute
- + 32 presets that can be executed on-the-fly without disturbing other ongoing preset operations
- + Macro scripting language and recorder simplifies macro creation with point-and-click convenience
- + RAMP serial command for greater control over gain adjustments – no external volume card required

##### Conferencing Capability

- + Built-in telephone interface and power amplifier
- + Link with multiple XAP TH2s for up to 16-line capability
- + Also link to XAP 800 to add conferencing capability

HDCConference

> XAP 400 BACK PANEL



> SPECIFICATIONS



**Audio Performance**

Conditions: Unless otherwise specified, all measurements are performed with a 20 Hz to 20 kHz BW limit (no weighting)  
 Frequency Response: 20 Hz to 20 kHz ±1 dB  
 Noise (EIN): -126 dBu, 20 kHz BW, max gain, Rs=150  
 THD+N: <0.02%  
 SNR: 80 dB re 0 dBu (A-weighted)  
 Dynamic Range: 100 dB (A-weighted)  
 Crosstalk <-91 dB re 20 dBu @ 20 kHz channel to channel

**Auto Mixer Parameters**

Number of Open Microphones (NOM)  
 PA Adaptive Mode  
 First Mic Priority Mode  
 Last Mic Mode  
 Maximum # of Mics Mode  
 Ambient Level  
 Gate Threshold Adjust  
 Off Attenuation Adjust  
 Hold Time  
 Decay Rate

**Matrix Mixing Parameters**

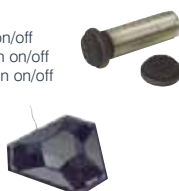
25x26 matrix  
 8 analog in/out  
 1 speaker out (10 W)  
 12 expansion bus in/out  
 4 assignable processing blocks in/out  
 1 telco in/out

**Assignable Processing Blocks**

Filters:  
 All pass  
 Low pass  
 High pass  
 Low shelving  
 High shelving  
 Parametric EQ  
 Notch  
 CD Horn  
 Crossovers:  
 Bessel  
 Butterworth  
 Linkwitz-Riley  
 Compressor: adjustable  
 Delay: adjustable up to 250 ms

**Microphone Input Configuration**

Input Gain Adjust  
 Mic or Line Level  
 Phantom Power on/off  
 Echo Cancellation on/off  
 Noise Cancellation on/off  
 Filters  
 All Pass  
 Low Pass  
 High Pass  
 Notch  
 PEQ  
 Mute on/off  
 Chairman Override on/off  
 AGC on/off  
 Speech Leveler on/off  
 Auto Gate/Manual gate  
 Adaptive Ambient on/off



**Mic/Line Inputs 1-4**

Push-on terminal block, balanced, bridging  
 Impedance: 5 k  
 Nominal Level: adjustable -55 dBu, -25 dBu, 0 dBu  
 Maximum Level: -35 dBu, -5 dBu, +20 dBu  
 Echo Cancellation: 130 ms tail time (works with 12 dB of room gain)  
 Noise Cancellation: 6-15 dB attenuation  
 Phantom Power: 24 V, selectable

**Line Inputs 5-8**

Push-on terminal block, balanced, bridging  
 Impedance: >10 k  
 Nominal Level: 0 dBu  
 Maximum Level: 20 dBu

**Outputs 1-8**

Push-on terminal block, balanced  
 Impedance: 50  
 Nominal Level: 0 dBu  
 Maximum Level: 20 dBu

**Telco Line**

RJ-11  
 POTS (plain old telephone service) or analog extension from a PBX  
 A-lead supervision provided

**Telco Set**

RJ-11  
 Connect analog telephone set  
 A-lead supervision provided

**Telephone Audio Performance**

Conditions: Unless otherwise specified, all measurements are performed with AGC disabled, referenced @ -15 dBm on/off the telephone line  
 Frequency Response: 250 Hz to 3.3 kHz ±1 dB  
 THD+N: <0.2%, 250 Hz to 3.3 kHz  
 SNR: >62 dB re max level  
 Pre-emphasis: 4 dB @ 2 kHz

**Telephone Echo Cancellation**

Tail Time: 31 ms  
 Null: >55 dB

**Telephone Noise Cancellation**

Noise Cancellation: 6-15 dB attenuation

**Expansion Bus In/Out**

Proprietary Network  
 RJ-45 (2), 115.2 kbps, 110 k impedance  
 Category five twisted-pair cable 80' (24 meters) maximum cable length between any two XAP 800s, XAP 400s, or PSR1212s

**RS-232**

DB-9 female  
 9,600/19,200/38,400(default)/57,600 baud rate;  
 8 bits, 1 stop, no parity  
 Hardware flow control on (default)/off

**Control/Status**

DB-25 female A/B (2)  
 Inputs A/B: active low (pull to ground)  
 Outputs A/B: open collector, 40 VDC max, 40 mA each  
 +5 VDC pins (2) (300 mA over-current protected)

**Remote Panels A/B**

4-pin push-on terminal block  
 RS-485 Proprietary Protocol  
 Category five twisted-pair cable 1 pair data, 1 pair power and ground  
 +15VDC (300 mA over-current protected)

**Set-up Software**

G-Ware



**Power Input Range**

Auto-adjusting  
 100-240 VAC; 50/60 Hz

**Power Consumption**

30 W typical

**Dimensions (L x D x H)**

17.25" x 10.25" x 1.75"  
 43.8 x 26 x 4.5 cm

**Weight**

9.9 lb/4.5 kg dry  
 13 lb/5.9 kg shipping

**Operating Temperature**

32 to 100° F/0 to 38° C

**Humidity**

15% to 80%, non-condensing

**Approvals**

FCC, CSA, IC, CE, NOM, ACA, SABS, JATE



**Optional Accessories**

XAP 800  
 XAP Net  
 XAP TH2  
 IR Remote Control  
 Volume Control Panel  
 Select Control Panel  
 Button Microphone – Omni-Directional  
 Button Microphone – Uni-Directional  
 Delta Microphone  
 Tabletop Microphone – Uni-Directional  
 JBL Wall-Mount Speakers  
 Digital-to-Analog Telephone Converters



**Part Number**

910-151-201 XAP 400 – 4-channel AEC Microphone Mixer with built-in telephone hybrid and amplifier

> CLEARONE LOCATIONS

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