

XAP[®]

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[®] 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[™] 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

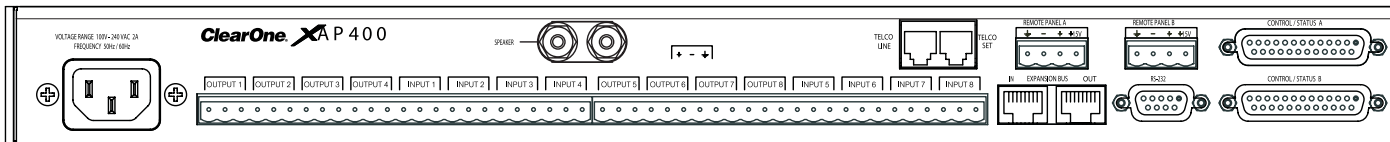
Ease of Use & Control

- + 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

> 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 Ω
 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

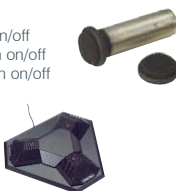
25x26 matrix
 8 analog in/out
 1 speaker out (10 W)
 12 expansion bus in/out
 4 assignable processing blocks in/out
 1 telco in/out

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 kΩ
 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 kΩ
 Nominal Level: 0 dBu
 Maximum Level: 20 dBu

Outputs 1-8

Push-on terminal block, balanced
 Impedance: 50 Ω
 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 kΩ 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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