

XAP®

XAP 400 Professional Conferencing System

ClearOne®

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



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

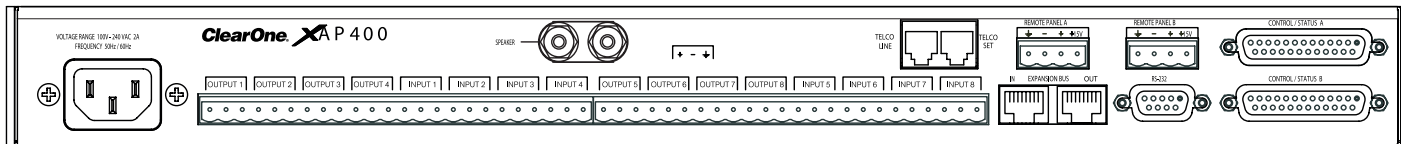
Ease of Use & Control

- + 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, $R_s=150 \Omega$
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 Ω
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 Ω
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 k Ω 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

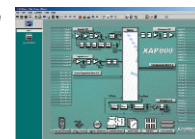
DB-25 female A/B (2)
Inputs A/B: active low (pull to ground)
Outputs A/B: open collector, 40 VDC max, 40 mA each
+5 VDC pins (2) (300 mA over-current protected)

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

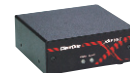
32 to 100° F/0 to 38° C

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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