

# RAV™

## RAV 600 and 900 Premium Conferencing Systems

A higher-quality alternative to conference phones. RAV delivers significantly improved sound quality for standalone audio conferencing, and connects to popular rich-media devices such as video and web conferencing systems for enhanced audio performance.

**ClearOne®**



## A REVOLUTIONARY AUDIO CONFERENCEING SYSTEM

### RAV APPLICATIONS

Board Rooms

Conference Rooms

Executive Offices

Use with Rich-Media Systems

- + Video conferencing
- + Web conferencing
- + IP telephony
- + Personal computer

In-Room Sound Amplification

### RAV ADVANTAGES

Superior Audio Performance

- + Sound quality exceeds any conference phone
- + ClearEffect™ provides natural, full-sounding audio without requiring wideband on both ends
- + Distributed Echo Cancellation® effectively eliminates echo
- + Noise cancellation removes background noises from fans or HVAC systems
- + Full-duplex sound enables participants to speak and listen at the same time without cutting in and out
- + Automatic level controls keep participants' audio balanced and consistent
- + First-mic priority eliminates hollow "tunnel" sound by activating only the microphone closest to the person speaking
- + Three microphones per pod provide 360° audio pickup

Rich Media Ready

- + Interfaces with any video or web conferencing system, providing a superior alternative to the existing audio setup

Ease of Use and Installation

- + Dial pad resembles a standard phone
- + Built-in web server enables remote access
- + RAV-Ware™ software provides simple user interface for system configuration
- + Plug and play setup – conference in minutes

Flexibility

- + Place mixer on tabletop, credenza, or in rack
- + Multiple speaker options: wall-mount, ceiling-mount, or custom
- + Position microphone pods, speakers, and controller in optimal locations
- + Wireless or wired controller option

Remote System Management

- + Configure, monitor, and control single or multiple RAV systems via LAN or WAN

Investment Protection

- + Remote firmware upgrade capabilities for future product enhancements
- + For evolving conference room needs - use audio now, add video or web later

## > COMPONENTS



### AUDIO MIXER

Provides advanced audio processing for superior sound quality. Can be placed on a tabletop, credenza, or in a standard equipment rack.

- + ClearOne audio technologies: Distributed Echo Cancellation\*, Noise Cancellation, First Mic Priority, Look-Ahead Gating, ClearEffect™, Adaptive Modeling
- + AV control system compatibility: Easily integrates with AMX or Crestron control systems
- + Camera control: Camera presets triggered by microphone activation with video conferencing



### TABLETOP CONTROLLER

Wireless or wired controller provides intuitive interface that emulates a telephone keypad.



### MICROPHONE PODS

RAV 600 – two pods. RAV 900 – three pods. Each pod features three voice-activated mic elements for 360-degree audio pickup.



### BOSE® LOUDSPEAKERS

Ceiling or wall-mount options provide premium sound. Also available without speakers for custom speaker options.



### RAV-WARE SOFTWARE

Customize the audio settings and configure system via the built-in USB or Ethernet connection with drag-and-drop user interface.

- + Device Toolbox: Pre-configured audio settings for common auxiliary devices
- + System Check: Verify RAV components
- + Event Logging: Track system events
- + Network Find: Connect to other RAV units
- + Firmware Upgrades: Update RAV remotely

## > SPECIFICATIONS

### AUDIO PERFORMANCE

Conditions: Unless otherwise specified, all measurements are performed with a 22 Hz to 15 kHz BW limit (no weighting)

#### Audio Mixer

AEC tail time: 128 ms  
Adaptive noise cancellation: (6 – 18 dB)  
Gating: Adaptive ambient, 1st mic priority, look-ahead gating, NOM attenuation  
Audio bandwidth: 16 kHz with videoconferencing or other full-band networks

#### Microphone Pod

Coverage: 360 degrees  
Connection: RJ-45 with Cat. 5, Link In/Out Ports  
Maximum Distance from Base Mixer: 50' (RAV 900), 75' (RAV 600)  
Frequency Response: 60 Hz – 14 kHz (+/-1 dB)  
THD+N: < 0.08% (-45 dBu input @ 1 kHz)  
Sensitivity: -45 dBu  
Input Level: -6 dBu for 1 kHz 94 dB SPL microphone input  
Dynamic Range: > 65 dB

#### Line Input

Connection: Unbalanced RCA  
Gain: -10 dBu nominal, adjustable from -14 dB to +18 dB  
Nominal Level: -10 dBu  
Maximum Level: +9 dBu  
Impedance: > 10 kOhm

#### Line Output

Connection: Unbalanced RCA  
Nominal Level: -10 dBu, adjustable from -14 dB to +18 dB  
Maximum Level: +9 dBu  
Frequency Response: 40 Hz – 15 kHz (+/-1 dB)  
Dynamic Range: > 80 dB  
THD+N: < 0.02% (+6 dBu input @ 1 kHz)

### Playback/Record Input

Connection: Unbalanced RCA  
Gain: -10 dBu nominal, adjustable from -14 dB to +18 dB  
Nominal Level: -10 dBu  
Maximum Level: +9 dBu  
Impedance: > 10 kOhm

### Playback/Record Output

Connection: Unbalanced RCA  
Nominal Level: -10 dBu, adjustable from -14 dB to +18 dB  
Maximum Level: +9 dBu  
Frequency Response: 40 Hz – 15 kHz (+/-1 dB)  
Dynamic Range: > 80 dB  
THD+N: < 0.02% (+6 dBu input @ 1 kHz)

### Loudspeaker

Connection: Left and right push terminals  
Power: 10 Watts into 8 Ohm load  
Impedance: 8 Ohm  
Frequency Response: 60 Hz – 15 kHz (+/-1 dB)  
Dynamic Range: > 80 dB  
THD+N: < 0.5% (+5 dBu line input @ 1 kHz)  
Output Level: 90 dB SPL output @ 1 meter

### TELEPHONE INTERFACE

Conditions: All measurements taken with ALC disabled.

Connection: RJ-11 (Set and Line jacks)  
Tail Time: 30 ms  
Frequency Response: 250 Hz to 3.3 kHz (+/-1 dB)  
THD+N: < 0.2% (+7 dBu line input @ 1 kHz)  
Dynamic Range: > 60 dB

### RS-232 Control Port

DB9 female  
9,600/19,200/38,400/57,600 (default)/115,200  
Baud rate: 8 bits, 1 stop, no parity  
Hardware flow control on (default)/off

### Communication I/O

10/100 Ethernet Control Port:  
RJ-45 with LED indicators for link, duplex and activity status.

### USB 1.1 Configuration Port

Slave port

### Power Supply

Primary Voltage: 100 to 240 VAC  
Auto-Sensing, 50-60 Hz

### VISCA Camera Port

DIN, 9600 baud, no Flow Control

### Dimensions (W x D x H)

Mixer: 17" x 7.5" x 2"  
(43.2 cm x 19.1 cm x 5.1 cm)  
RF Controller: 10.5" x 4.5" x 2.75"  
(26.7 cm x 11.4 cm x 6.9 cm)  
Mic Pod Diameter: 7" (17.8 cm),  
Height: 1.5" (3.8 cm)

### Weight

Mixer: 4.5 lb (2 kg)  
RF Controller: 2.0 lb (.9 kg)  
Mic Pod: 1.1 lb (.5 kg)

### Environmental

Operating Temp: 32-122° F (0-50° C)

### Optional Accessories

Go to [www.clearone.com](http://www.clearone.com) to find out more regarding other conferencing products:

- Wired Controller
- Remote Antenna
- Custom Furniture
- Document Cameras
- Roll-About Carts

### RAV with Wireless Controller Part Numbers

- 910-153-100 RAV 600 No Speakers
- 910-153-101 RAV 600 Ceiling Speakers
- 910-153-102 RAV 600 Wall-Mount Speakers
- 910-153-300 RAV 900 No Speakers
- 910-153-301 RAV 900 Ceiling Speakers
- 910-153-302 RAV 900 Wall-Mount Speakers

### RAV with Wired Controller Part Numbers

- 910-153-112 RAV 600 No Speakers
- 910-153-113 RAV 600 Ceiling Speakers
- 910-153-114 RAV 600 Wall-Mount Speakers
- 910-153-313 RAV 900 No Speakers
- 910-153-314 RAV 900 Ceiling Speakers
- 910-153-315 RAV 900 Wall-Mount Speakers

### RAV Accessory Part Numbers

- 910-153-025 RAV Wired Controller
- 910-153-050 RAV Remote Antennae  
Accessory Kit

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