

ClearOne.

Converge 560/590

USER'S MANUAL



TECHNICAL SUPPORT

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MAX WIRELESS INSTALLATION AND OPERATION MANUAL

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TABLE OF CONTENTS

INTRODUCTION	5
The Converge 560/590	5
Product Overview	7
Basic Room Design	10
Installation Overview	11
CONNECTING THE CONVERGE	13
Basic connections	13
Auxiliary devices	17
RAV-WARE SOFTWARE CONFIGURATION	23
Getting started with RAV-Ware	23
RAV-Ware overview	24
RAV-Ware connections	25
RAV-Ware files	26
Network find	27
Configuring system settings	28
Customizing Converge components	32
Microphone configurations	41
Line input and output	42
Record and playback	44
Camera controls	46
Dialer and phonebook usage	48
Advanced features	51
USING THE CONVERGE	55
Using the controller	55
Programming phone preferences	57

TABLE OF CONTENTS (CONTINUED)

WEB INTERFACE 71

 Accessing the web interface 71

 Dial 72

 Event log 74

 System check 75

APPENDIX 77

 Maintenance 77

 Troubleshooting 77

 Camera pinouts 80

 Specifications 81

 Serial commands 83

 Compliance 136

 Index 141

INTRODUCTION

THE CONVERGE 560/590

The Converge product line is the first room audio conferencing solution with the sound quality and flexibility of a professionally installed system. The Converge includes an audio conferencing mixer that uses distributed acoustical echo-cancelling technology to provide the most intelligible full-duplex audio conference experience possible. Features include:

- Audio mixer for high-quality audio performance in all acoustical environments.
- RF (radio frequency) controller or wired controller with call controls including auto-answer, flash duration adjustment, ringer adjustment and phonebook with speed dial capabilities.
- Internal telephone hybrid with touch-tone dialing capability.
- Microphone breakout box that enables a set of up to three microphones to be connected to the Converge--these microphones can be table mics, portable mics, or whatever type of microphone would be most suitable for the situation at hand. The Converge 560 includes two breakout boxes connected together and the Converge 590 has three breakout boxes connected together.

SERVICE AND SUPPORT

If you need additional information on how to install, set up or operate your Converge 560/590, please contact us. We welcome and encourage your comments so we can continue to improve our products and serve your needs.

TECHNICAL SUPPORT

Tel: 1-800-283-5936(USA) or 1-801-974-3760

Fax: 1-801-977-0087

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E-mail: sales@clearone.com

PRODUCT RETURNS

All product returns require a return materials authorization (RMA) number. Please contact ClearOne Technical Support before attempting to return your product. Make sure you return all the items that shipped with your product and include a brief description of how the product was being used when the problem occurred.

UNPACKING

Carefully remove all components of the Converge system from the packaging. Ensure that you received the following items:

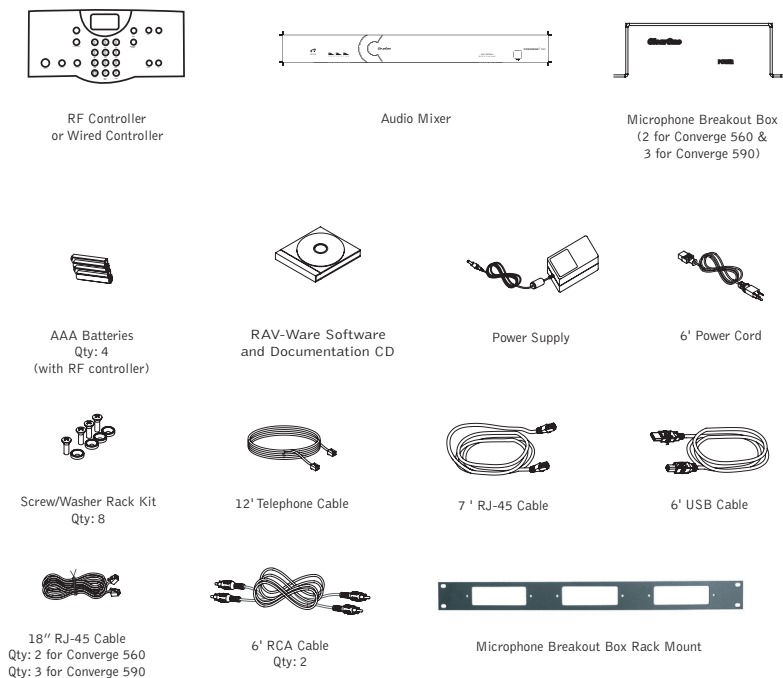


FIGURE 1.1 Converge unpacking

- > **Note:** Rack mount ears are attached to the Mixer box. Refer to Chapter 2 of this manual for installation instructions.

If any parts are missing, please call the Technical Support Group at 1-800-283-5936 (USA) or 1-801-974-3760.

- > **Note:** ClearOne is not responsible for product damage incurred during shipment. You must make claims directly with the carrier. Inspect your shipment carefully for obvious signs of damage. If the shipment appears damaged, retain the original boxes and packing material for inspection by the carrier. Contact your carrier immediately.

PRODUCT OVERVIEW

The following paragraphs give an overview of the Converge 560/590's components.

RF (RADIO FREQUENCY) CONTROLLER/WIRED CONTROLLER

The RF controller/wired controller allows you to manage all calls, program user preferences and adjust settings for your Converge.

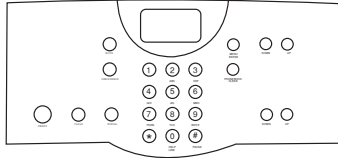


FIGURE 1.2 Converge controller

KEY FUNCTIONS












LCD Icon	Function
 ANTENNA SIGNAL	Indicates commands are received and acknowledged by base unit and represents the signal strength from the base unit to the RF controller.
 BATTERY	Indicates battery level (RF controller only)
Key	Function
 ON/OFF	Press to activate the phone and access the dial tone. Press again to hang up the phone.
 FLASH	Press to use call forwarding, access call waiting, or make a three-way conference call (if supported by your telephone service).
 MUTE	Press once to mute all microphones during a call. Press again to unmute.
 STATUS	Press and hold for two seconds to display the status of the Converge. (RF controller only)
 REDIAL	Press once to dial the last number called.
 MENU ENTER	Press once to access the controller programming menu. Once you are in the Menu, this key serves as the Enter key.
 PHONEBOOK CLEAR	Press once to dial stored numbers. When you are in the Phonebook, use this key to delete characters or to go back to the previous screen.
 DOWN UP	Press down or up to navigate through the menu and phonebook.
 VOLUME	Press while on a call to adjust call volume.

FIGURE 1.3 Converge controller keypad functions

MIXER (FRONT)

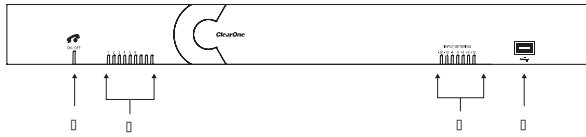


FIGURE 1.4 Converge mixer (front)

- A. **Telephone LED.** This indicator lights red when the Converge is powered, but the telco is on hook (not in use). The indicator lights green when the telco is off hook (in use) and flashes green during an incoming call.
- B. **Microphone status LEDs.** Nine indicators (Converge 590) or six indicators (Converge 560) indicate the activation status of the mic elements. When a mic element is gated, the corresponding LED lights green. When mics are muted, the LEDs for the corresponding mics turn red.
- C. **Meter LEDs.** These LEDs represents audio from all inputs.
- D. **USB port.** This port enables USB connection to a PC.

MIXER (BACK)

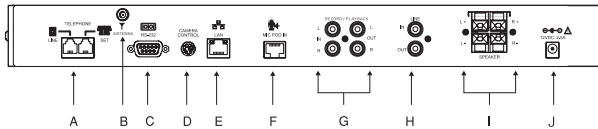


FIGURE 1.5 Converge mixer (back)

- A. **Telephone Set, Line.** RJ-11 connection to an analog telephone jack and an analog telephone set.
- B. **RF antenna connector (RF controller).** Connect the external RF antenna to this port.
- C. **RS-232.** RS-232 control port for connection to a control system such as AMX or Crestron or to a computer.
- D. **Camera Control.** VISCA camera control port. This connection enables microphone activation to trigger camera presets (voice tracking).
- E. **LAN.** This is a 10/100 BaseT auto-detecting Ethernet port for system control through a data network.
- F. **Mic Pod In.** Use a Cat. 5 cable with RJ-45 connectors to connect the microphone breakout boxes.
- G. **Playback In/Record Out.** RCA connection to record/playback devices such as a VCR.
- H. **Line In/Out.** RCA connection to a codec, amplifier or sound card.
- I. **Speaker Output.** Use speaker wire to connect these push terminals to the speakers.
- J. **Power 12 VDC.** Power supply.

MICROPHONE BREAKOUT BOX

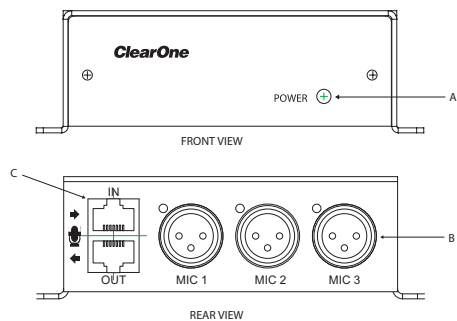


FIGURE 1.6 Converge breakout box

- A. **Power Indicator.** Indicates whether the breakout box is powered on or not--a green light indicates ON.
- B. **Microphone Connectors.** You can connect up to three mics--the mics can be tabletop mics, button mics, portable mics, etc.
- C. **Link Connectors.** Connect the link line to the IN connector using RJ-45 cable. Connect the breakout box to the mixer using RJ-45 cable and connect the breakout box's OUT connector to the mixer's IN connector.

BASIC ROOM DESIGN

To ensure best microphone and loudspeaker placement (ceiling- or wall-mount), please use the manufacturer's guidelines for the microphones and loudspeakers you choose to use with your Converge system. For more information on Room Design, or to view the Converge online training course, visit www.clearone.com.

MICROPHONES

Mic pick-up range depends on room conditions. Background noise, reflective hard surfaces and the number of participants may affect the pick-up range. Take all of these factors into account when determining the best placement of the microphones in your Converge system and then adjust for your specific room conditions.

CEILING-MOUNT LOUDSPEAKERS

For best performance, ceiling loudspeakers should be installed as recommended by the manufacturer, depending on the kind of microphone being used. For example, if you are using ClearOne delta mics, then it is recommended that the ceiling loudspeakers be installed directly above the microphones. For example, if you have a Converge 590 with three ClearOne delta mics, you would install the ceiling loudspeakers above the first and third mics.

WALL-MOUNT LOUDSPEAKERS

For best performance, place the left channel loudspeaker on the left side of the room and the right channel loudspeaker on the right and make sure the back of each loudspeaker is parallel to the front wall. (Refer to the manufacturer's specifications and instructions for ideal loudspeaker placement.)

FOR BEST RF CONTROLLER PERFORMANCE

- Do not install the Converge mixer in a metal cabinet unless you are using the remote antenna accessory. Part number 910-153-050.
- Keep the mixer within line of sight of the RF controller, such as on the top of a credenza.
- Ensure antenna is connected to the back of the mixer and is pointed up.
- If installing the mixer in an equipment rack, make sure it is placed at or near the top of the rack.

FOR BEST AUDIO PERFORMANCE

- Use the provided cables.
- Do not move microphones while on a call.
- Speak at a normal conversation level and direct your voice toward the microphones.
- Do not place microphones next to fans, projectors or computers.

INSTALLATION OVERVIEW

Carefully consider the following items in order to ensure yourself of a smooth installation process.

READ THE USER MANUAL

Please read through this manual to familiarize yourself with the Converge system. Refer to the Help file in RAV-Ware for information on the software. Read through all requirements and safety information to be sure you set up and configure your Converge correctly.

MAKE SURE YOUR NETWORK IS READY

Review all system requirements. Then check with your network administrator to be sure your network meets all the Converge requirements.

CONNECT CABLES

Connect cables. If you are planning on using the Converge for web or videoconferencing, you'll need to connect peripheral equipment. See Chapter 2, Connecting the Converge.

INSTALL SOFTWARE

Install RAV-Ware and then use to adjust sound levels and to configure settings for additional equipment such as a video codec or a recording device. See Chapter 3, RAV-Ware Software Configuration.

BEGIN USING

Use the controller to answer and make calls. See Chapter 4, Using the Converge.

SYSTEM REQUIREMENTS FOR RAV-WARE

Component	Requirement
Operating System and RAM	Windows 2000 256 MB RAM
	Windows XP 256 MB RAM
Processor	300 MHz Pentium III or better
Monitor	1024 x 768 SVGA (16 bit) high color
Video Card	SVGA 1024 x 768 minimum
Free Hard Disk Space	20 MB minimum
RS-232 COM port	Up to 115,200 baud rate
USB port	USB 1.1–2.0
Flash Support	Macromedia Flash Player 7.0

> **Note:** Using a USB-to-serial adapter is not recommended.

NETWORK INFORMATION

To use Converge over a local area network (LAN), you need to know if the LAN uses Dynamic Host Configuration Protocol (DHCP) or if you need a static IP address.

If the LAN uses DHCP, there is no need to make any network adjustments. If the LAN does not use DHCP, gather the following information prior to LAN setup:

- The IP address to be assigned to the Converge.
- The subnet mask.
- The IP address of the default gateway.
- The network name to be assigned to Converge.