XAP IR Remote Control

Installation & Operation Manual

ClearOne®
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XAP IR Remote Control Installation and Operation Manual
ClearOne Part No. 800-170-050 June 2002 (Rev. 2.0)

Introduction

The XAP™ IR Remote Control system is designed to allow easy operation of XAP products from your desk or conference table, rather than from the front panel or G-Ware™ software of your ClearOne audio conferencing products or an expensive external controller.

It consists of two components: the handheld infrared transmitter (remote control) and the base station infrared receiver. The remote control is used to operate or customize certain features of the XAP system, such as connect, disconnect, dial a telephone number, redial, activate speed dial, hook flash, adjust volume, and mute the microphones.

The XAP IR Remote functions with various XAP stand-alone or combined systems. The remote's default programming can be easily customized to fit your needs by using G-Ware, the XAP system's configuration software. In the event of a power outage, the new programming will be stored in the receiver's memory and will not be lost or altered. The remote also provides positive feedback for the Mute LED and In Use LED by actively monitoring the response of the controlled unit(s) and indicating the correct status of each function.

Professional Services Group

For additional help on how to install, set up, or operate the XAP IR Remote, please contact ClearOne Technical Services Group at the number at the bottom of the page. We welcome your comments so we can continue to improve our products and serve your needs.

ClearOne Communications ~ 1825 Research Way ~ Salt Lake City, UT 84119

Technical Services

Telephone:	1.800.283.5936 (USA) or 1.801.974.3760
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Sales and Customer Service

Telephone: 1.800.945.7730 (USA) or 1.801.975.7200
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Product Registration

Please register your XAP IR Remote online by visiting **www.clearone.com**. When your product is properly registered, ClearOne Communications is better able to serve you should you require technical assistance. Registration information is also used to notify you of upgrades and new product information.

Product Returns

If you need to return your XAP IR Remote unit to ClearOne for service, please call the Technical Services Group to obtain a return authorization number.

Unpacking

You should have received the following items with your XAP IR Remote Control.
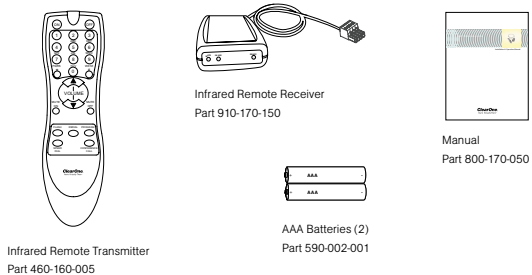

Infrared Remote Transmitter
Part 460-160-005

Infrared Remote Receiver
Part 910-170-150

AAA Batteries (2)
Part 590-002-001

Manual
Part 800-170-050

Figure 1. XAP IR Remote Control System

Installation

XAP IR Remote Receiver

Installation is simple. Plug the XAP IR Remote Receiver into the RS-485 Remote Panel A or Remote Panel B connector located on the back of the ClearOne unit.
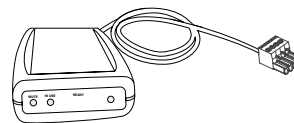

Figure 2. XAP IR Remote Control Receiver

Alternatively, you can connect the receiver to a network of ClearOne Control Panels which are connected to one of the RS-485 ports on the rear of the ClearOne unit. **In this case, connect the IR receiver as the last device in the daisy chain.** Up to five control panels and one IR receiver can be connected to an RS-485 port.

Refer to the table below for maximum cable runs. The distances indicated are for category five twisted-pair cable.

# of Remote Devices	Maximum Distance
1	3,000 ft/914 meters
2	2,500 ft/762 meters
3	1,600 ft/488 meters
4	1,200 ft/366 meters
5	1,000 ft/305 meters
6	800 ft/244 meters

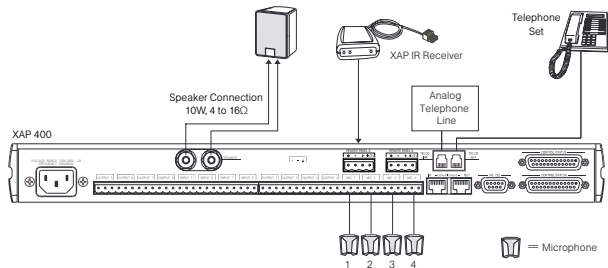**Figure 3. Category five cable run distances**

Figure 4. Typical XAP IR Remote Receiver installation

DIP switch configuration

Located on the rear of the receiver are five DIP switches. These switches are default programmed at the factory to allow the receiver to operate without adjustment when it is connected to one of the RS-485 Remote Panel ports on the rear of the ClearOne conferencing unit.

If you are connecting the IR Remote receiver to a network of ClearOne Control Panels (which are connected to one of the Remote Panel ports), **ensure that DIP switch 5 is set to on**; this serves as the termination of the daisy chain, since the IR Remote is always connected as the last device in the chain. Set DIP switches 1–4 according to the table in Figure 5.

As an example, if you have three Control Panels connected to Remote Panel A and you want to connect an IR Remote receiver to the daisy chain, the receiver would be number 3 (the Control Panels being numbers 0, 1, and 2). Therefore, the DIP switch settings for the IR receiver would be 1=Off, 2=Off, 3=On, 4=On, and 5=On.

	DIP Switch				
	1	2	3	4	5
0	On	On	On	On	**On**
1	Off	On	On	On	**On**
2	On	Off	On	On	**On**
3	Off	Off	On	On	**On**
4	On	On	Off	On	**On**
5	Off	On	Off	On	**On**
6	On	Off	Off	On	**On**
7	Off	Off	Off	On	**On**
8	On	On	On	Off	**On**
9	Off	On	On	Off	**On**
10	On	Off	On	Off	**On**
11	Off	Off	On	Off	**On**

IR Remote Receiver Number

Figure 5. DIP switch settings

✍ Always connect the IR Remote receiver to the last Control Panel when connecting to a daisy chain of Control Panels. Only the last device in a daisy chain should have the last DIP switch set to On (to terminate the chain).

Front Panel LEDs

There are three LEDs on the front of the XAP IR Remote—Mute, In Use, and Ready.

- **Mute.** The Mute LED flashes red when microphones are muted (default). You can program this LED to illuminate to another command in the Remote Builder window of G-Ware. See Configuration (below) for more information.
- **In Use.** The In Use LED glows red whenever a phone participant is on the line. The programming of this LED cannot be changed.
- **Ready**. The Ready LED glows red when the receiver is connected to a XAP or PSR1212 product, indicating the system is ready for a valid command. The programming of this LED cannot be changed.

When a button is pressed, the Ready LED flashes, indicating a command has been received.

Configuration

Programming Functions

The XAP IR Remote Control is programmed by default to operate a single XAP 400 with an amplifier and speaker connected to Output 8; however, it is easy to customize should you require different specifications. If you want to use the factory defaults, proceed to Operation on page 12. Below are instructions for setting up the remote control in ClearOne G-Ware software, the user interface for XAP products.

XAP IR Remote system defaults

The XAP IR Remote is programmed by default to operate the XAP 400/TH2 Telephone Interface as follows: The On, Off, 0-9, *, #, Flash, Redial, Speed Dial, and Conference Call keys activate any XAP 400/TH2 on the expansion bus network regardless of its type and device ID. This is because of the default ** programming, which allows the selection of any device on the network.

✍ Buttons programmable in G-Ware are illustrated in Figure 12 (page 12).

Configuring G-Ware Remote Builder

1. Open the Remote Builder window in G-Ware by clicking the Remote Builder
   Flow Screen button or Remote Builder toolbar button.

**Figure 6. Remote
Builder Flow Screen
button**

**Figure 7. Remote
Builder toolbar button**

Figure 8. Remote Builder window

2. Select a remote ID number from the **Select Remote ID** list and IR Remote
   from the **Select Remote Type** drop-down lists. Note that the Select Remote
   ID must correspond to the ID you established with the DIP switches (see
   page 4).

3. Click **Change Name** to create a more descriptive name for the remote which
   is displayed in addition to the remote ID number (limit 20 characters).

4. In the Telephone Interface section, select the **Device Type** and **ID** of the unit
   (XAP 400 or XAP TH2) that you want the XAP IR remote to use when mak-
   ing and receiving calls. The default settings are ** which will select any telco
   device found on the network. If you have multiple telco devices in your net-
   work, you must specify which unit will be used to make and receive calls so
   that multiple telco devices won't be activated.

5. Select the button or LED you want to program from the **Select Button/LED**
   list. You can also select the button or LED by clicking directly on the picture
   of the remote. (Selectable buttons are colored white.)

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6. Click the **Active Command** or **Inactive Command** button to set the com-
   mand for operation when the button is active or inactive.

7. Select the **Device Type**, **ID**, and **Command** from their respective lists. When
   you select a command, a description of it appears in the Command
   Description box.

Device	Type	ID
PSR1212	4	0–7
XAP 800	5	0–7
XAP TH2	6	0–F
XAP 400	7	0–7

8. Select the command parameters from the argument lists. The parameters that
   are available depend on the command selected. When you select an argument,
   a description of it appears in the Argument Description box.

9. Click the **Apply** button to apply the command to the selected Active or
   Inactive Command button. Or, click **Clear** to reset the command to default
   settings.

   Repeat steps 5-9 for each additional button you want to configure.

10. Click **Close** to exit the Remote Builder.

Speed dial

The XAP IR Remote Control system supports 10 speed dial numbers. Each number
can be 40 digits long and can have a 20-character name. These numbers and labels
are stored in non-volatile memory of the XAP conferencing unit and each number
can be called by a single command. Any valid touch-tone digit and the pause charac-
ter (comma) can be stored. All speed dial numbers are empty except for Speed Dial
9, which is programmed with ClearOne's technical support number, and Speed Dial
10, which is programmed with the conference calling services number. See pages
14-15 for information about using speed dial numbers.

To configure speed dial numbers

1. Click the **Dial** button in the G-Ware Flow Screen. The Dial window opens.

2. Click **Edit** in the Speed Dial section. This opens the Speed Dial Edit window.

3. Enter the name and number to dial in the appropriate fields.

4. Click **Save** to save changes and exit.

Figure 9. Dial button

Programming Example A

This example illustrates how to configure the remote control to adjust the speaker output (output 9) of a XAP 400.

To program volume control of output 9

1. Open the Remote Builder window in G-Ware by clicking the **Remote Builder Flow Screen** button or Remote Builder toolbar button.
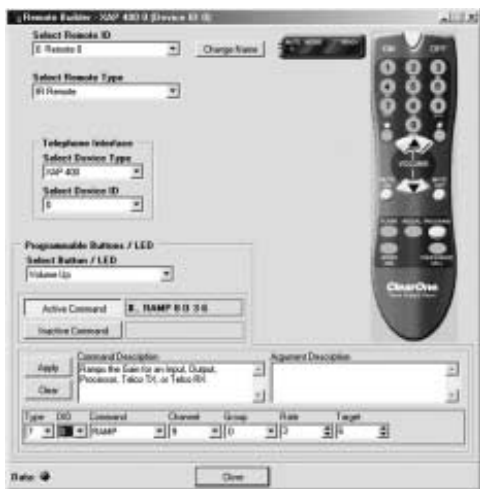

Figure 10. Remote Builder screen with Volume Up button configuration

2. Select the remote ID number of the remote you want to program from the **Select Remote ID** list and IR Remote from the **Select Remote Type** drop-down lists.

3. Select the Volume Up button from the **Select Button/LED** list. You can also select the button by clicking directly on the **Volume Up** button in the remote control depiction.

4. Click the **Active Command** button to set the command for operation when the button is active.

5. Select 7 (for XAP 400) for the device Type from the **Type** drop-down list.

6. Select the appropriate ID of the unit from the **DID** list.

Device	Type	ID
PSR1212	4	0–7
XAP 800	5	0–7
XAP TH2	6	0–F
XAP 400	7	0–7

7. Select RAMP from the **Command** drop-down list.

8. Select channel 9 from the **Channel** list.

9. Configure the Group, Rate, and Target lists. The Group list indicates the location of the XAP 400 in a network. The Rate list indicates the number of dB per second that the volume ramps up. The Target list indicates the target dB increase, which is 6dB (a decibel level selected for purposes of this example).

10. Click the Apply button to apply the command to the selected **Active Command** button.

To configure the Volume Down button, follow the same procedure, except in Step 3, select the Volume Down button, and in Step 9, select -6 (dB) in the Target list. You would select -6 because you want the Volume Down button to decrease the volume to -6dB. This means the Volume Up/Volume Down range is 12dB.

Click **Close** to exit the Remote Builder.

Programming Example B

This example illustrates how to configure the remote control to mute all mics on multiple connected units (in this case, a XAP 400 with a device ID of 0 and a XAP 800). In this example, the XAP IR Remote receiver is connected to the XAP 400.

To mute multiple units

Figure 11. Remote Builder screen with Mute LED configuration

1. Create two macros (one to mute, one to unmute) to mute all microphone inputs on all connected units. This is accomplished using the Macro Editor in G-Ware. See the respective XAP 400 or XAP 800 manual for details about using the Macro Editor.

   The mute macro has the following command lines:

   For the XAP 400: 7 * Mute * M 1, where 7=Type (XAP 400), *=DID (Device ID), Mute=command, *=Channel, M=(Mic) Group, and 1=Mute Mode (on).

Device	Type	ID
PSR1212	4	0–7
XAP 800	5	0–7
XAP TH2	6	0–F
XAP 400	7	0–7

For the XAP 800: 5 * Mute * M 1

   The unmute macro has the following command lines:

   For the XAP 400: 7 * Mute * M 0

   For the XAP 800: 5 * Mute * M 0

2. After you have created and saved the macros, open the Remote Builder screen in G-Ware and select the appropriate remote ID number from the **Select Remote ID** drop-down list and IR Remote from the **Select Remote Type** drop-down list.

3. Select the **Mute On** button from the Select Button/LED list. You can also select the button by clicking the Mute On button in the remote control depiction.

4. Click the **Active Command** button to set the command for operation when the button is active.

5. Select 7 (for the XAP 400) for the device Type from the **Type** drop-down list.

6. Select 0 for the device ID from the **DID** list.

7. Select MACRO from the **Command** drop-down list.

8. Select the macro number of the "mute on" macro you created from the **Macro** list. The Macro Label field will reflect the name you have given the macro.

9. Click the **Apply** button to apply the command to the selected Active Command button.

To configure the Mute Off button, follow the same procedure, except in Step 3, select the **Mute Off** button, and in Step 8, select the macro number of the "mute off" macro you created.

When you are finished, click **Close** to exit the Remote Builder.

Operation

Getting Started

Once your remote is connected to your XAP system, you have configured it, and the Ready LED is lit, you can start using your remote control.

Operation is easy and straightforward. Please consult the diagram on the following page to learn how each button on your remote works.
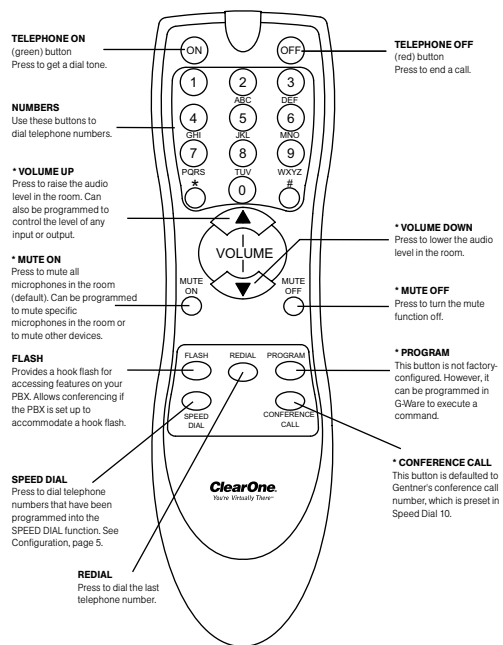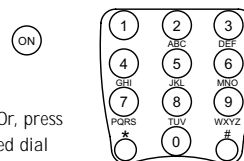
TELEPHONE ON
(green) button
Press to get a dial tone.

NUMBERS
Use these buttons to
dial telephone numbers.

* VOLUME UP
Press to raise the audio
level in the room. Can
also be programmed to
control the level of any
input or output.

* MUTE ON
Press to mute all
microphones in the room
(default). Can be programmed
to mute specific
microphones in the room or
to mute other devices.

FLASH
Provides a hook flash for
accessing features on your
PBX. Allows conferencing if
the PBX is set up to
accommodate a hook flash.

SPEED DIAL
Press to dial telephone
numbers that have been
programmed into the
SPEED DIAL function. See
Configuration, page 5.

REDIAL
Press to dial the last
telephone number.

TELEPHONE OFF
(red) button
Press to end a call.

* VOLUME DOWN
Press to lower the audio
level in the room.

* MUTE OFF
Press to turn the mute
function off.

* PROGRAM
This button is not factory-
configured. However, it
can be programmed in
G-Ware to execute a
command.

* CONFERENCE CALL
This button is defaulted to
Gentner's conference call
number, which is preset in
Speed Dial 10.

* Programmable button in G-Ware software.

Figure 12. XAP IR Remote Control button descriptions

Remote Control Buttons

While within 25–40 feet of the receiver, point the remote control toward the receiver and press the buttons to operate.

To place a call

1. Press Telephone On (green) button. The In Use LED illuminates.
2. Wait to hear dial tone.
3. Dial telephone number using dial pad. Or, press **Speed Dial** and the location of the speed dial number.

To end a call

· Press Telephone **Off** (red) button. The In Use LED extinguishes.

To adjust the volume in the room

· Press the **Volume Up** button to raise the volume.

– or –

· Press the **Volume Down** button to lower the volume.

To mute microphones

· Press the **Mute On** button.

Mute LED will flash on receiver when the Mute function is active. This function mutes all microphones in the room.

To turn off mute

· Press the **Mute Off** button.

Mute LED on receiver will turn off when mute function is off.

To access features from a PBX

· Press the **Flash** button.

Please consult your PBX owner's manual for specific requirements of your individual phone system. G-Ware can be used to adjust the hook flash duration to match your PBX. This setting is located in the Telco Config window in G-Ware.

To redial the last telephone number dialed

·   Press the **Redial** button.

REDIAL

To dial a number stored in speed dial

·   Press the **Speed Dial** button. Select location (0-9) of the speed dial number with the appropriate numeral button. Speed dial memories 1-9 correspond to buttons 1-9; speed dial 10 uses button 0.

SPEED DIAL

In order for the Speed Dial function to work, a telephone number must be programmed into the XAP product. Please see Speed Dial on page 7.

To change the button programming of your XAP IR Remote

The **Program** button is not factory-configured. However, it can be programmed in G-Ware to execute a command.

PROGRAM

To dial a conference call center

The Conference Call button is defaulted to dial ClearOne's Conference Call services (stored in Speed Dial 10, which uses the 0 button).

CONFERENCE CALL

Specifications

Transmitter	Receiver	System
Dimensions (LxWxH): 8" x 2.125" x 1.19" 20.3 x 5.4 x 3 cm	Dimensions (LxWxH): 5" x 2.75" x 1" 12.7 x 7 x 2.54 cm	Range: 25–40 feet (7.5–12 meters) from transmitter to receiver
Battery type: 2 AAA	Power: Powered by the XAP or PSR1212 system	Angle of acceptance: 90°–120°
Battery life: Approximately 1 year	Cable length: 6'/1.8 m	Operating temperature: 32°F to 122°F/0°C to 50°C
		Compliance approvals: FCC, Industry Canada, and CE

Warranty

ClearOne Communications, Inc. (Manufacturer) warrants that this product is free of defects in both materials and workmanship. Should any part of this product be defective, the Manufacturer agrees, at its option, to:

A. Repair or replace any defective part free of charge (except transportation charges) for a period of one year from the date of installation for the end-user, provided the owner returns the product to the Manufacturer at the address set forth below. No charge will be made for parts or labor during this period;

B. Furnish replacement for any defective parts in the product for a period of one year from the date of original purchase. Replacement parts shall be furnished without charge, except labor and transportation.

This Warranty excludes assembled products not manufactured by the Manufacturer whether or not they are incorporated in a Manufacturer product or sold under a Manufacturer part or model number.

This warranty is void if:

A. The product has been damaged by negligence, accident, act of God, or mishandling, or has not been operated in accordance with the procedures described in the operating and technical instructions; or,

B. The product has been altered or repaired by other than the Manufacturer or an authorized service representative of the Manufacturer; or,

C. Adaptations or accessories other than those manufactured or provided by the Manufacturer have been made or attached to the product which, in the determination of the Manufacturer, shall have affected the performance, safety or reliability of the product; or,

D. The product's original serial number has been modified or removed.

NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MER-
CHANTABILITY OR FITNESS FOR ANY PARTICULAR USE, APPLIES TO THE PROD-
UCT. MANUFACTURER'S MAXIMUM LIABILITY HEREUNDER SHALL BE THE
AMOUNT PAID BY THE END-USER FOR THE PRODUCT. No person or entity authorized to
assume any obligation or other liability in connection with the products. No action, regardless
of form, arising out of or relating to the product or this Warranty, may be brought by end-user
more than one (1) year after the cause of action has accrued.

Manufacturer shall not be liable for punitive, consequential, or incidental damages, expenses,
or loss of revenue or property, inconvenience, or interruption in operation experienced by the
end user due to a malfunction in the purchased product. No warranty service performed on any
product shall extend the applicable warranty period.

In case of unsatisfactory operation, the end-user shall promptly notify the Manufacturer at the
address set forth below in writing, giving full particulars as to the defects or unsatisfactory
operation. Upon receipt of such notice, the Manufacturer will give instructions respecting the
shipment of the product, or such other matters as it elects to honor this warranty as above pro-
vided. This warranty does not cover damage to the product during shipping and the
Manufacturer assumes no responsibility for such damage. All shipping costs shall be paid by
the customer.

This warranty extends only to the original end user and is not assignable or transferable. This
Warranty is governed by the laws of the State of Utah, without regard to the conflicts of inter-
ests provisions thereof.

ClearOne Communications, Inc.
1825 Research Way
Salt Lake City, Utah 84119

Compliance

FCC Part 15 compliance

This equipment has been tested and found to comply with the limits for a Class B digital
device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable
protection against harmful interference when the equipment is operated in a commercial envi-
ronment. This equipment generates, uses, and can radiate radio frequency energy and, if not
installed and used in accordance with the instruction manual, may cause harmful interference
to radio communications. Operation of this equipment in a residential area is likely to cause
harmful interference, in which case the user will be required to correct the interference at
his/her own expense.

Changes or modifications not expressly approved by ClearOne Communications, Inc. could void
the user's authority to operate the equipment.

Safety Information

CAUTION: Users should not attempt to make such connections themselves, but should contact
the appropriate electrical inspection authority, or electrician, as appropriate.

European Compliance

This equipment has been approved in accordance with Council Directive 1999/5/EC "Radio
Equipment and Telecommunications Equipment."

CE Conformity of the equipment with the guidelines below is attested by the CE mark.

EC Declaration of Conformity

Application of Council Directive(s):	1999/5/EC Radio equipment and Telecommunications Terminal Equipment (R&TTE) Directive
Manufacturer's Name:	ClearOne Communications, Inc.
Manufacturer's Address:	1825 West Research Way
	Salt Lake City, Utah 84119 U.S.A.
Model No.:	XAP IR Remote Control

Standard(s) to which Conformity is declared:

89/336/EEC "Electromagnetic Compatibility (EMC) Directive":

EN 55022: 1994 (Emissions)	Specification for limits and methods of measure ment of radio interference characteristics of information technology equipment.
EN 55024: 1998 (Immunity)	Information technology equipment – Immunity characteristics – Limits and methods of measurement.
EN 61000-4-2: 1995/A1:1998	Electrostatic Discharge
EN 61000-4-3: 1996/A1:1998	Radiated RF Immunity
EN 61000-4-4: 1995	Electrical Fast Transients

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