AP IR Remote Control

Installation & Operation Manual

ClearOne®

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Introduction

The AP IR Remote Control System is designed to allow easy operation of all your Audio Perfect® products from your desk or conference table, rather than from the front panel of your ClearOne audio conferencing products.

The AP IR Remote Control is made up of two components: the handheld infrared transmitter (remote control) and the base station infrared receiver. The remote control is used to operate or customize the many features of the AP system, such as: connect, disconnect, dial a telephone number, redial, store speed dial numbers, activate speed dial, hook flash, adjust volume, and mute the microphones.

The AP IR Remote functions with an AP400 stand-alone system, an AP400/AP800 combination, an AP800/AP10 combination, or a GT1524. The remote's default programming may be easily customized to fit your needs by simply pressing certain key sequences on the remote control unit. 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 and In Use LEDs by actively monitoring the response of the controlled unit(s) and indicating the correct status of each function.

Professional Services Group

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

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Product Registration

Please register your AP IR Remote Control online in the Product section at
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

All product returns require a return authorization (RA) number. Please contact the
ClearOne Technical Support before attempting to return your AP IR unit.

Unpacking

Ensure that you have received all of the items shown in Figure 1. If any items are
missing, contact ClearOne Technical Services.

AP IR Remote Transmitter
PART 460-160-005

AP IR Remote Receiver
PART 910-160-050

AAA Batteries (2)
PART 590-002-001
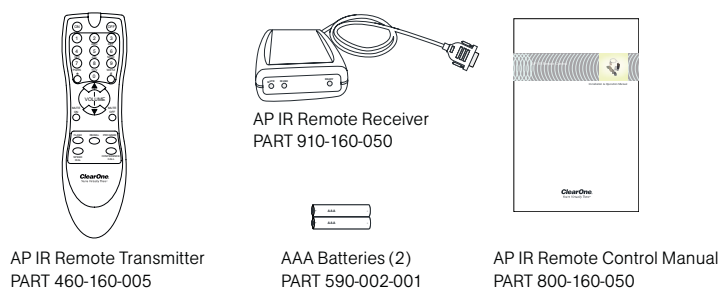
AP IR Remote Control Manual
PART 800-160-050

Figure 1. Items shipped with the AP IR Remote

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

AP IR receiver
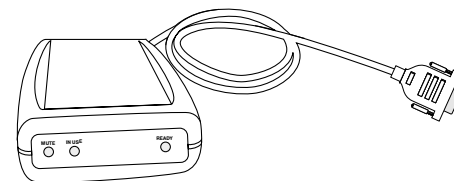
Figure 2. AP IR Remote Control receiver

The AP IR receiver cable connects to the RS-232 connector located on the back of
the AP or GT1524 unit. See Figure 3. The AP IR Receiver has three LEDs: Mute,
In Use, and Ready.

- Mute. The Mute LED flashes red when microphones are muted.
- In Use. The In Use LED glows red whenever a caller is on the line.
- Ready. The Ready LED glows red when the receiver is connected to an AP
  product, indicating the system is ready for a valid command. The Ready LED
  flashes to indicate that a command has been received.

Figure 3. An AP IR receiver connected to an AP400 system

AP IR transmitter

The AP IR transmitter is used to program and operate the AP systems and GT1524. The buttons functions are described in Figure 4, below.

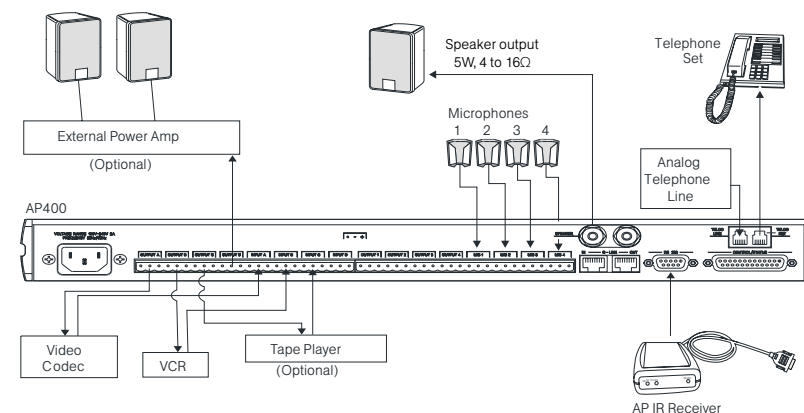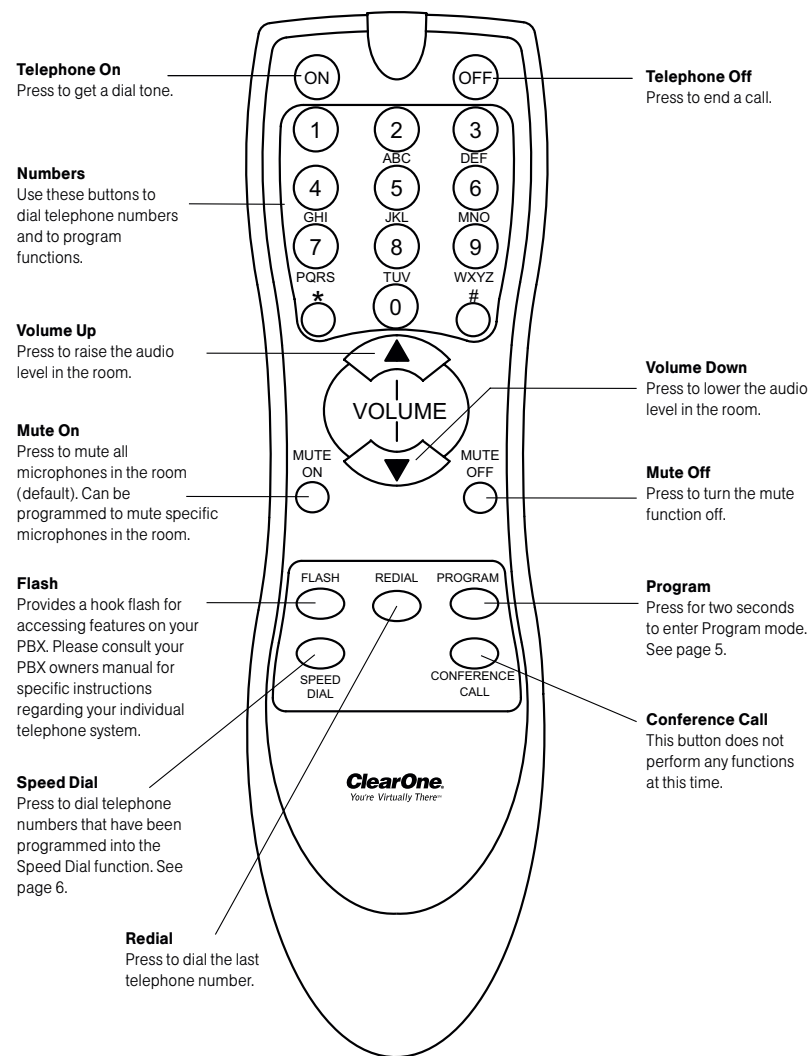**Telephone On**
Press to get a dial tone.

Telephone Off
Press to end a call.

Numbers
Use these buttons to dial telephone numbers and to program functions.

Volume Up
Press to raise the audio level in the room.

Volume Down
Press to lower the audio level in the room.

Mute On
Press to mute all microphones in the room (default). Can be programmed to mute specific microphones in the room.

Mute Off
Press to turn the mute function off.

Flash
Provides a hook flash for accessing features on your PBX. Please consult your PBX owners manual for specific instructions regarding your individual telephone system.

Program
Press for two seconds to enter Program mode. See page 5.

Conference Call
This button does not perform any functions at this time.

Speed Dial
Press to dial telephone numbers that have been programmed into the Speed Dial function. See page 6.

Redial
Press to dial the last telephone number.

Figure 4. AP IR transmitter

Programmable Functions

Your AP IR Remote Control System is designed to operate right out of the box; however, it is easy to program should you require different specifications. Select from the options below and follow the instructions for the desired function you want to customize.

> The AP IR Remote does not use flow control. If a connected AP800, AP400, or GT1524 has flow control enabled, the AP IR Remote will not operate. Disable flow control on all connected devices.

Baud Rate

In order for you AP IR Remote Control System to operate properly, the baud rate for the AP IR receiver and for the connected AP or GT1524 unit must be the same.

To program baud rate

1. Press and hold the Program button until the LEDs in the receiver flash.

2. Enter the code for the desired baud rate.
   - 22831 = 9,600bps (default)
   - 22832 = 19,200bps
   - 22833 = 38,400bps

Baud rate example

To change the baud rate of the receiver to 19,200bps, enter:

PROGRAM 2 2 8 3 2

Telephone Device Type and ID

The default dial command begins with ** which dials any AP telephone device. If more than one telephone device (AP400 or AP10) is connected to the system, you need to program the AP IR Remote with the device type and ID number of the unit it will use for dialing and answering calls.

> If there is only one telephone device in your network, or if you are using a single unit, you do not need to program the AP IR Remote with the device type and ID—the default programming will work.

> The GT1524 is a stand-alone unit which has no device ID. If you are using this unit, you do not need to program the telephone device type and ID.

To program telephone device type and ID

1. Press and hold the Program button until the LEDs in the receiver flash.
2. Press the On button.
3. Enter device type (0=device connected to, 2=AP10, 3=AP400, *=all telephone devices).
4. Enter device ID (0–7, *=all units).

Telephone device type example

To route all telco activity through AP400 unit 2, enter:

PROGRAM ON 3 2
          Device Type Device ID
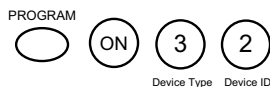
The In Use LED on the receiver will illuminate red when the telephone device is in use.

Speed Dial

The AP IR Remote Control System can store up to ten speed dial numbers for use with AP and GT1524 telephone devices.

To program speed dial

1. Press and hold the Program button until the LEDs in the receiver flash.
2. Press the Speed Dial button.
3. Select a location (0–9) on the dial pad.
4. Enter the telephone number (use the Volume Up button for a two-second pause).
5. Press the Speed Dial button to store the number.

To erase a preprogrammed location

• Press Program, Speed Dial, location (0–9), then Speed Dial.

Speed dial example

To store ClearOne's Technical Service number (1-800-283-5936) in speed dial 0, enter:

PROGRAM SPEED DIAL 0 1 8 0 0
2 8 3 5 9 3 6 SPEED DIAL
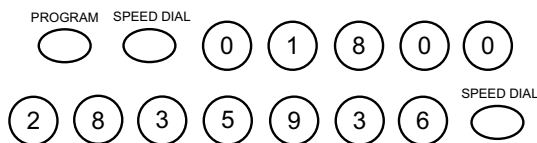
Mute

The default mute command on the AP IR Remote will mute all mic inputs on all device types and all device IDs. To change this command and to add new commands, you will need to program the mute function. The AP IR Remote allows you program up to 10 mute commands which are stored in locations 0–9. The default setting currently stores one mute command in location 0. All stored commands are executed when the Mute On or Mute Off button is pressed.

The Mute LED on the AP IR Receiver lights to indicate that the programmed channels have been muted. Please note that the AP IR Receiver references only the channel programmed in location 0 to determine whether to illuminate the LED. If location 0 is muted, the LED illuminates.

The GT1524 uses the default programming which mutes only the line and mic inputs.

To program mute commands

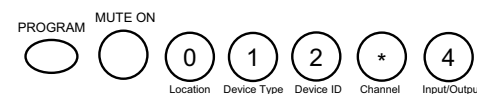| *	All Mics
01	Channel 1
02	Channel 2
03	Channel 3
04	Channel 4
05	Channel 5
06	Channel 6
07	Channel 7
08	Channel 8
11	Channel A
12	Channel B
13	Channel C
14	Channel D
15	Channel T

1. Press and hold the Program button until the LEDs in the receiver flash.
2. Press the Mute On button.
3. Select mute command location (0-9).
4. Select the device type (0=device connected to, 1=AP800, 2=AP10, 3=AP400, *=all devices).
5. Select the device ID (0–7, *=all units).
6. Select channel for muting (*, 01–08, 11–15). See table at right.
7. Select 4 for input or 6 for output.

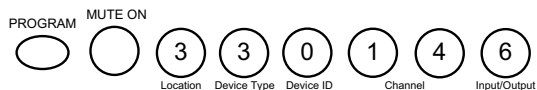**Figure 5. Mute channel codes**

To erase a programmed location

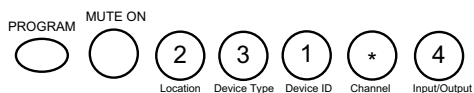• Press Program, Mute On, location (0-9), then Mute Off.

Mute examples

To store a command to mute all mics on AP800 unit 2 in location 0, enter:

PROGRAM MUTE ON 0 1 2 * 4
              Location Device Type Device ID Channel Input/Output

To store a command to mute Output D on AP400 unit 0 in location 3, enter:

PROGRAM | MUTE ON (○) | ③ | ③ | ⓪ | ① | ④ | ⑥
Location | Device Type | Device ID | Channel | Input/Output

To store a command to mute all mics on AP400 unit 1 in location 2, enter:

PROGRAM | MUTE ON (○) | ② | ③ | ① | * | ④
Location | Device Type | Device ID | Channel | Input/Output

Volume Control

☞ If you are using a GT1524, you do not need to program this function.

There are ten locations for storing volume control commands. All volume control commands are performed when the Volume Up or Volume Down button is pressed. To change the nominal level to negative, enter an asterisk before the value (e.g. *10 = -10 and 10 = +10).

To program volume control

1. Press and hold the Program button until the LEDs in the receiver flash.

2. Press the Volume Up button.

3. Select a location for volume control (0-9).

4. Select the device type (0=device connected to, 1=AP800, 2=AP10, 3=AP400, *=all devices).

5. Select the device ID (0–7, *=all units).

6. Select channel for volume control (*, 01–08, 11–15) See table to the left.

7. Select 4 for input or 6 for output.

8. Select nominal level (*=negative nominal level, 00–20).

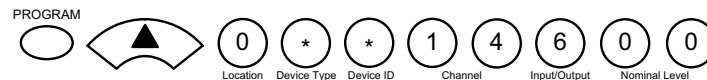| *	All Mics
01	Channel 1
02	Channel 2
03	Channel 3
04	Channel 4
05	Channel 5
06	Channel 6
07	Channel 7
08	Channel 8
11	Channel A
12	Channel B
13	Channel C
14	Channel D
15	Channel T

Figure 6. Volume control channel codes

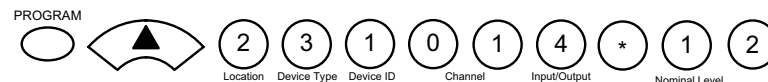### To erase a preprogrammed location

- Press Program, Volume Up, location (0–9), then Volume Down.

Volume control examples

To adjust volume of Output D on all units with a nominal level of 0 and store it in location 0 (default), enter:

PROGRAM | ▲ | ⓪ | * | * | ① | ④ | ⑥ | ⓪ | ⓪
Location | Device Type | Device ID | Channel | Input/Output | Nominal Level

To adjust volume of Mic 1 on AP400 unit 1 with nominal level of -12 and store it in location 2, enter:

PROGRAM | ▲ | ② | ③ | ① | ⓪ | ① | ④ | * | ① | ②
Location | Device Type | Device ID | Channel | Input/Output | Nominal Level

To program volume range/step size

This is a global volume setting so all volume adjustments will have the same range and step increment.

1. Press and hold the Program button until the LEDs in the receiver flash.

2. Press the Volume Down button.

3. Enter the 2 digit range of the volume (00–20).

   A range of 00 disables the adjustment of the volume from the remote control buttons.

4. Enter the step size—the number of decibels the volume will increase or decrease each time you press a volume button—by selecting 0–9.

Volume range/step size examples

To change the volume range to ±6dB with 1dB step increments (default), enter:

PROGRAM | ▼ | ⓪ | ⑥ | ①
Range | Range | Step

To change the volume range to ±10dB with 2dB step increments, enter:

PROGRAM | ▼ | ① | ⓪ | ②
Range | Range | Step

Hook Flash (AP400 and GT1524 Only)

Hook flash sends a momentary interruption in the line seizure, allowing options such as 3-way calling, call waiting, and call hold. This feature is dependent on the services offered by your telephone company.
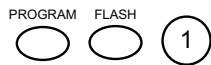
To program hook flash

1. Press and hold the Program button until the LEDs in the receiver flash.
2. Press the Flash button.
3. Press 1 for 50ms or 2 for 500ms.

This information is stored in the AP400 or GT1524 and not in the AP IR Remote.

Hook flash example

To change the hook flash duration from default (500ms) to 50ms, enter:

PROGRAM   FLASH

( )   ( )   (1)

AP IR Remote Default Settings

The AP IR Remote Control System comes pre-programmed with default settings for all of the button functions. You can restore the default settings at anytime. Please note that you will lose all customized programming if you restore the default settings.

To restore default settings

1. Press and hold the Program button until the LEDs in the receiver flash.
2. Press ****.

Restore default settings example

To restore the AP IR Remote default settings, enter:

PROGRAM

( )   (*)   (*)   (*)   (*)
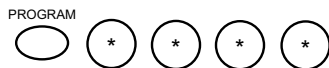
Using the AP IR Remote

Once your AP IR Receiver is connected to your Audio Perfect system or GT1524 and the Ready LED is lit, you can start using your AP IR Remote. Please consult the diagram on page 4 to understand how each button on your remote works. The remote receiver has a range of 25–40 feet. To operate, point the remote control toward the receiver and press the buttons.

If you push a button and there is no response from the system, check to ensure that both the AP device and the receiver are connected at the same baud rate. See page 5 for instructions on how to program the baud rate.

To Place a Call

1. Press the 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 the Off (red) button. The In Use LED extinguishes.

To Adjust the Volume in the Room

- Press the Volume Up and Volume Down buttons to raise and lower volume.

To Mute

- Press the Mute On button.

The Mute LED will flash on the receiver when the Mute function is active. If you have not programmed this function, the default programming will mute all microphone inputs on all devices, all units. To customize mute commands, see page 7.

Figure 7. Remote control

To Turn Off Mute

- Press the Mute Off button.

The Mute LED on the AP IR Receiver will turn off when mute function is off.
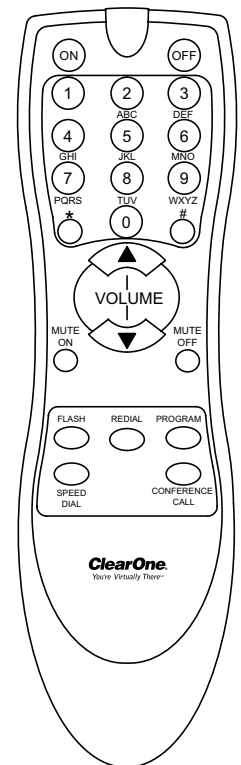
To Access Features From a PBX

• Press the Flash button.

Please consult your PBX owner's manual for specific requirements of your individual phone system.

To Redial the Last Telephone Number Dialed

• Press the Redial button.

To Dial a Number Stored in Speed Dial

1. Press the Speed Dial button.

2. Select location (0–9) of speed dial number.

In order for the speed dial function to work, a telephone number must be programmed into speed dial. See page 6.

To Customize Your AP IR Remote Control System

Follow the instructions beginning on page 5 to customize your AP IR Remote Control System to fit your specific conferencing needs.

Conference Call Button

This button does not currently support any functions.

Specifications

Remote Control System	Remote Transmitter	Remote Receiver
Range	Dimensions (LxWxH)	Dimensions (LxWxH)
25–40' (7.5–12 m)	8" x 2.125" x 1.19"	5" x 2.75" x 1"
from transmitter to receiver	20.3 cm x 5.4 cm x 3 cm	(12.7 cm x 7 cm x 2.54 cm)
Angle of acceptance	Battery type	Power
90°–120°	2 AAA	Powered by the AP system
Operating temperature	Battery life	Cable length
0–50° C (32–122°F)	Approximately 1 year	6' (1.8 m)
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
MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR USE, APPLIES TO THE
PRODUCT. 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.