VoIP Command Center
Thank you for purchasing a RATH® VoIP Command Center. We are the largest Emergency Communication Manufacturer in North America and have been in business for over 35 years.

We take great pride in our products, service, and support. Our Emergency Products are of the highest quality. Our experienced customer support teams are available to remotely assist with site preparation, installation, and maintenance. It is our sincere hope that your experience with us has and will continue to surpass your expectations.

Thank you for your business,

The RATH® Team

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**Items Needed**

**Included**
- Command Center Phone (will be mounted in a cabinet or include a desk mount stand for desk mount)
- Distribution Module
- System wiring (power cord, 2 Ethernet cables)
- 1/8” Hex Allen Wrench (cabinet mount only)

**Not Included**
- Network switch (POE+ recommended)
- Router
- Windows laptop
- 120vac power
- Multimeter
- Analog phone (recommended for troubleshooting)
- Analog or digital phone line (only if the system needs to call out)
- Small Phillips screwdriver
- Mounting hardware
- Power supply with battery backup (sold separately, RATH® part # RP7700104 or RP7701500)
- RATH® 2100 Series IP Emergency Phone(s) (sold separately)

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**Typical System Layout**

[Diagram of system layout showing the relationships between Command Center, Distribution Module, Power Supply with UPS, Router, POE Switch, and IP Emergency Phones]
Installation Steps

1. Mount the Distribution Module and power supply with battery backup in an appropriate location (network closet recommended).

2. Plug the power supply with battery backup into a standard 120v wall outlet.  
   **Note:** System is to be powered by a grounded 120v, 60Hz, AC outlet protected by a 15A maximum circuit breaker.

3. Using the provided power cord, plug male barrel connector into “DC 12V” port on the Distribution Module. Plug the male 3-prong plug of the power cable into any of the open outlets on the back of the power supply with battery backup.

4. Install the Command Center phone:  
   **Desk Mount:** Install the foot stand on the back of the Command Center phone and choose location per owner’s specifications. Connect line cord from “EXT” port on the back of the Command Center to the “Ext ->” on the back of the button console. If more than one button console, connect line cord from “EXT <-” on the first button console to the “EXT ->” on the second button console. Repeat until all button consoles are connected.

   **Cabinet Mount:** Use the provided Allen Wrench to remove the back box or back plate from the cabinet. Remove any applicable knockouts. Mount the back box or plate in location per owner’s specifications using appropriate mounting hardware. Reassemble the cabinet.

5. Run an Ethernet cable from the LAN port on the back of Command Center phone to a POE port on the Network Switch (do not exceed 320’ maximum wire run length).
Connecting System to Network

6. Connect an Ethernet cable from the LAN port on the back of the Distribution Module to the router.

7. Connect Emergency Phones to the system:
   **IP Phones:**
   a. Connect the Ethernet cable from the POE port on the Emergency Phone to the POE+ switch.
   b. CAT5e or CAT6 is recommended.
   c. Do not exceed the maximum wire run length of 320’.
   **Elevator Phones (Analog Phones with IP Interface):**
   a. Connect the Ethernet cable from the IP Interface to a Network Switch (do not exceed the 320’ maximum wire run length).
   b. Connect the two-wire line cord from the LINE output on the IP Interface to the phone line input on the Elevator Phone board.
   c. CAT5e is the minimum standard cable for the system (please check with your local AHJ to ensure compliance with state and/or local codes).

Network Programming

**Note:** If network information is provided to RATH® at the time of purchase, no additional network information needs to be entered into the system. If network information is NOT provided, the following needs to be performed:

8. Connect Windows laptop to same network switch as the Distribution Module using an Ethernet cable.

9. Change the IP address of the laptop’s Network Interface Card
   a. Navigate to Control Panel
   b. Click on Network and Sharing Center
   c. Click Change Adapter Settings
   d. Right click on Ethernet/Local Area Connection
   e. Click Properties
   f. Double click on Internet Protocol Version 4
   g. Click circle next to Use the Following IP Address:
      1. Change IP to the default IP address range of the Distribution Module (192.168.1.200 is recommended)
      2. Change Subnet Mask (default is 255.255.255.0)
   h. Turn off the wireless card of the laptop (if applicable)

10. Log into the Distribution Module
    a. Enter 192.168.1.99 into the web browser (Google Chrome or Firefox is recommended)
    b. Log in as admin and enter password Rath7284!
11. Change WAN port IP Address
   a. Click arrow next to System Settings in left side menu
   b. Click Network Settings
   c. Enter desired IP Address, Subnet Mask, and Gateway
   d. Click Save (unit will reboot)

12. Changing Authentication Information (Optional)
   Authentication information is setup by RATH® and does not need to be changed unless network administrator requires it to be. Follow steps below for changing authentication on system:
   a. Log back into Distribution Module using new WAN port IP address
   b. Click on drop down arrow next to Extension/Trunk in left side menu
   c. Click Extensions
   d. Click paper and pencil icon next to desired extension
   e. Enter desired Authentication ID in “AuthID:”
   f. Enter desired Authentication Password in “SIP/IAX Password:”
   g. Click Save
Command Center Network Settings

13. Change Command Center IP Address
   a. Enter **192.168.1.98** into the web browser (Google Chrome or Firefox is recommended)
   b. Log in as admin and enter password **Rath7284!**
   c. Click on **Basic Settings** from left side menu
   d. Enter desired **IP Address, Subnet Mask, and Gateway**
   e. Click **Save** in top right corner, then **Apply**

![Command Center Network Settings](image)

14. Set date and time on Command Center (if no NTP server connected to network)
   a. On Command Center keypad, press circle button within navigation arrows
   b. Use navigation arrows to select **“Preferences”**, press circle button
   c. Use navigation arrows to scroll down to **“Date and Time”**, press circle button
   d. Enter desired date and time
   e. Press **SAVE** button on screen

Registering Emergency Phones

If network information is provided to RATH® at the time of purchase, phones will already have the registration information entered. If information is not provided, or Emergency Phones were ordered after the system, follow instructions provided with the Emergency Phones to register the to the system.

After all Emergency Phones are connected, verify that all of them show up on the system and show registered. Log into the Distribution Module and click the drop down arrow next to **Extension/Trunk** in left side menu. Click **Extensions**, this will allow you to see all connected devices. If any device shows Not Registered/Unavailable, the information entered into the Distribution Module does not match what was entered in the Emergency Phone, or they cannot see one another over the network. This needs to be corrected. See Troubleshooting Section on page 10 for more info.
Connecting Phone Line to System (Optional)
The system has the ability to call off-site if the call isn’t answered at the Command Center. An analog or digital line is needed for this capability.

15. Connect phone line to FXO on the back of the Distribution Module using the center pins (red and green) of an RJ11 line cord.

16. Set number phone will call out to on Command Center.
   a. Dial * , 9 , 2 on keypad of Command Center phone
   b. Dial the external number that the system is to call out to
   c. Press green OK button on bottom of screen to save
      1. To turn OFF call forwarding, dial * , 9 , 3

Emergency Phone Programming

Phones should be programmed for Memory Location 1 to dial 3931 to call the Command Center first.
1. Press ENTER to enter Programming Mode
2. Press 1, ENTER, 3931, STOP
3. Press and hold STOP for 3 seconds to exit Programming Mode

You can program or modify the location message for the phone. All phones come with a default location message. Message must be changed or disabled on all phones.
1. Press ENTER to enter Programming Mode.
2. Press 1, 3, ENTER, 3.
3. Press 6, RECORD key, after the beep speak message adding “For two-way communication, press * at any time” to the end, STOP.
4. Press 6, Play/Pause to play message back.
5. Press and hold STOP for 3 seconds to exit Programming Mode.
   Note: For no message, press ENTER to enter Programming Mode, 1, 3, ENTER, 0, then press and hold STOP for 3 seconds.
Command Center Operating Instructions

Indicator Status:
Red LED Flashing: Emergency Phone Active (Emergency Phone not connected, or ringing base)
Green LED Light: Active call
Green LED Flashing: Call on hold

Answering Call at Command Center:
1. Lift the handset to answer the first incoming call. The Command Center must ring before the call can be answered.
2. If multiple calls are coming in, press the red LED light next to the desired call (this will place the original call on hold).
   Note: The phone may be in the process of playing the location message when the call is answered at the Command Center. Follow the prompts in the location message to stop the message and establish two-way communication.

Disconnecting Calls:
1. While on the call, press End Call button on bottom left of screen to end call.
2. Each call must be disconnected individually.
3. If you hang up the handset before disconnecting each call, the LED(s) will remain illuminated. Lift the handset, press the Join/Barge, enter the extension number, #, then End Call button. To disconnect, hang up the handset. Repeat for each illuminated LED.

Joining a Call Already in Progress:
1. Pick up the handset, press Join/Barge, enter the extension number, #.
2. You will be in a three-way conversation with the outside party and location.

Calling a Location:
1. Pick up the handset and press the button for desired location.

Calling Back Into System:
1. Make note of the extension while on the emergency call and dial that extension after prompted.

Sub-Master Phones
A RATH® Command Center System comes with a single base station phone. It can accommodate additional base station phones which connect from the LAN port on the back of the phone to a POE Port on the network. If Sub-Master was ordered separately, or after the system, please contact RATH® Technical Support for configuration assistance.
### Troubleshooting

<table>
<thead>
<tr>
<th>Problem</th>
<th>Possible Cause &amp; Solutions</th>
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| Command Center won't power on:        | • Make sure network cable is connected to POE Switch.  
• Make sure wiring from Command Center to Switch doesn’t exceed 320 feet.  
• Make sure port on Switch is POE, or a POE injector is being used.  
• Verify no ports blocked on network (system by default uses 5060). |
| Phones won’t register:                | • Verify the SIP Extension settings on the Distribution Module match the Emergency Phones’. If authentication information was changed on Distribution Module from defaults, Emergency Phones need to be reprogrammed to match.  
• Verify the authentication password meets system complexity requirements.  
• Verify nothing else on the network shares the IP address assigned to the phone.  
• Make sure the IP address of the Emergency Phone is in the same network as the SIP Server.  
• Verify Network Switch does not have an energy save mode and shut off ports.  
• Verify no ports are blocked on network (system by default uses 5060). |
| Phones won’t call the Command Center: | • Verify the Command Center is fully booted/registered and displays 3001 on the screen.  
• Verify Emergency Phones are programmed to dial 3931.  
• Verify Emergency Phones are registered (see page 7 for instructions). |
| Calls won’t forward out:              | • Verify call forwarding has been set up on the Command Center.  
• Verify the Command Center can place a call out by lifting the handset and dialing a phone number.  
• Verify the phone line is connected to the FXO port and using the center pins of the RJ11 connector.  
• Verify dialing string for forwarding number. |
| Phones won’t hang up:                 | • RATH® 2100 Series IP Phones require an open-loop disconnect signal to properly hang up. This setting should be pre-programmed into the phones but may need to be increased.  
• The operator at the Command Center or monitoring location can press *, # before they hang up to force the Emergency Phone to hang up. |
| Insufficient volume on phones:        | • Adjust the local volume potentiometer (VR1) on the Emergency Phone.  
• Verify nothing is blocking the speaker or microphone holes on the front of the Emergency Phones.  
• Verify network traffic isn’t slow. |