Installation & Operations Manual

2400 Series Line Powered Phone Detailed Programming

2 YEAR WARRANTY

Thank you for purchasing a RATH® 2400 Series Phone. 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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System Requirements

TELCO Voltage: 48-52vdc on an analog line with at least 25mA of line current and valid dial tone. Line must be dedicated for a 2400 Series phone.

Getting Started

Carefully open the shipping box and remove contents. Inspect the phones for damage. If there is any damage, call 800-451-1460 immediately to arrange corrective action.

FRONT OF BOARD   BACK OF BOARD
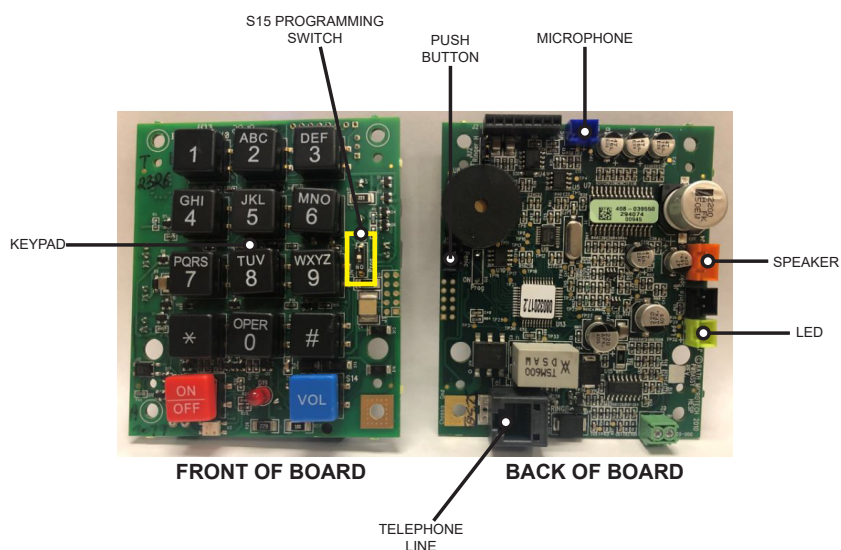
Line Connection:
Connect a dedicated phone line to the RJ11 jack on the back of the 2400 Series phone board labeled TEL LINE using one of the following recommended methods:
1. Crimp the phone line on to the center pins of a standard RJ11 jack and plug into TEL LINE input on the back of the 2400 Series phone.
2. Connect the phone line to a female RJ11 jack then take the phone line cord provided with the 2400 Series phone from the jack to the TEL LINE input on the 2400 series phone.
3. Connect the phone line to a biscuit jack style connector. Screw the phone line onto red and green terminals on the back of the biscuit jack. Take the phone line cord provided with the 2400 Series phone from the biscuit jack to the TEL LINE input on the back of the 2400 Series phone.

RATH® phones use the center pins of the RJ11 (red and green) for the outside phone line. Phone is not polarity sensitive.
Note: Do not cut off the end of the phone line cord and splice the phone line directly onto the line cord.

It is recommended that the wiring used inside the traveling cable or horizontal cabling is a 20 - 22 AWG twisted shielded pair with the shield grounded at the elevator controller end only. This will help reduce or eliminate any possible interference.

The phone line can be checked through the 2400 Series phone by pressing the **ON/OFF** button on the keypad. After pushing the **ON/OFF** button, the phone should have dial tone. Once the phone has dial tone, use the keypad to dial a number. Verify that the call connects and has two-way communication. Press the **ON/OFF** button again to end the call.

Quick Set-Up

RATH® 2400 Series phones can only be programmed using the onboard keypad. When programming 2400 Series phones, it is imperative to move quickly through the programming due to many Telco systems providing limited off-hook time.

Program Number
1. Press the **ON/OFF** button (phone should give a dial tone)
2. Slide the S15 switch down into "ON/PROGRAM" position
3. Press **1, *,** the number you want the phone to dial, blue **VOL** key

Program Message
1. Press **7, *, 2** for message to play twice
2. Press **4, *** (phone will start beeping), speak message when beep ends, press blue **VOL** key when finished speaking (message will playback automatically)
3. Slide S15 switch back up into "1" position
4. Press the **ON/OFF** button to turn the phone off

Detailed Programming

Programming Primary Phone Number:
1. Press the **ON/OFF** button (phone should give a dial tone)
2. Slide the S15 switch down into "ON/PROGRAM" position
3. Press **1, *,** the number you want the phone to dial, blue **VOL** key
4. Slide the S15 switch back up into "1" position
5. Press the **ON/OFF** button to turn the phone off
Note: In situations where a delay is needed, such as needing an 8 or 9 to dial out, use the **ON/OFF** button on the keypad for a pause. The button can be pressed multiple times for more of a delay. One PAUSE = 1 second.

Programming Secondary Phone Number:
1. Press the **ON/OFF** button (phone should give a dial tone)
2. Slide the S15 switch down into "ON/PROGRAM" position
3. Press **2, *,** the number you want the phone to dial, blue **VOL** key
4. Slide the S15 switch back up into "1" position
5. Press the ON/OFF button to turn the phone off
Note: In situations where a delay is needed, such as needing an 8 or 9 to dial out, use the **ON/OFF** button on the keypad for a pause. The button can be pressed multiple times for more of a delay. One PAUSE = 1 second.

Programming Location Message:
RATH® phones can play a location message when the call is answered. This feature is used when the phone is calling a phone number that cannot identify where the call is coming from by caller ID, or needs more location information than caller ID can provide. This feature is turned on by default. Perform the following steps to program the location message feature.

Turning Location Message ON:
1. Press the **ON/OFF** button (phone should give a dial tone)
2. Slide the S15 switch down into "ON/PROGRAM" position
3. Press **7, *, (1, 2, or 3)** (1 will play message once, 2 will play message twice, 3 will play message on a loop until the operator presses the **#** key 4 times)
4. Press **4, *** (phone will start beeping), speak message when beep ends, press blue **VOL** key when finished speaking (message will playback automatically)
5. Slide S15 switch back up into "1" position
6. Press the **ON/OFF** button to turn the phone off

Turning Location Message OFF:

1. Press the **ON/OFF** button (phone should give a dial tone)
2. Slide the S15 switch down into "ON/PROGRAM" position
3. Press **7, *, 0**
4. Slide the S15 switch back up into "1" position
5. Press the **ON/OFF** button to turn the phone off
Note: The answering party can replay the message anytime by pressing ***, ***.

Resetting the Phone:

The phone can be reset by performing the following steps:
1. Press the **ON/OFF** button (phone should give a dial tone)
2. Slide the S15 switch down into "ON/PROGRAM" position
3. Press **9, *, 7, 2, 8, 4**
4. Press **5, *, 1**
5. Slide the S15 switch back up into "1" position
6. Press the **ON/OFF** button to turn the phone off
Note: Resetting the phone will not clear out any programmed numbers or messages.

Programming Talk Timer:

Talk Time is the amount of time that two-way communication will occur after a call is answered. When Talk Time expires, the phone will hang up and the button on the phone will need to be pushed again to re-establish a call.
1. Press the **ON/OFF** button (phone should give a dial tone)
2. Slide the S15 switch down into "ON/PROGRAM" position
3. Press **6, *,** 3 digit number in minutes (3 minutes = 003, 20 minutes = 020)
4. Slide the S15 switch back up into "1" position
5. Press the **ON/OFF** button to turn the phone off
Note: The lowest Talk Time can be set to is 1 minute. The longest is 999 minutes.

Programming Auto Answer:

Auto Answer allows the 2400 Series phone to answer if called without someone needing to push the call button. This feature is required by code. By default, all 2400 Series phones are manufactured with Auto Answer enabled. This feature should only be turned off in a home or private elevator application.
1. Press the **ON/OFF** button (phone should give a dial tone)
2. Slide the S15 switch down into "ON/PROGRAM" position
3. Press **8, *, 1 or 2** (1 is ON, 2 is OFF)
4. Slide the S15 switch back up into "1" position
5. Press the **ON/OFF** button to turn the phone off

Volume Adjustment:

If the voice of the person you call is not loud enough in the phone speaker, increase the volume by pressing the **ON/OFF** button. When the phone has dial tone, press the blue **VOL** button. Each time you push the VOL button, the volume will go up or down one level. 2400 Series phones have three volume levels: high, medium, and low. When desired volume level is reached, push the **ON/OFF** button to save the change.

Troubleshooting

Phone will not let you get through programming:
- Program the phone while it is on an active call:
    1. Press the **ON/OFF** button
    2. Call your cell phone number and answer the call
    3. Slide the S15 switch down to "ON/PROGRAM" position
    4. Perform the desired programming steps on the 2400 Series phone keypad
    5. Slide the S15 switch back to "1" position
    6. Press the **ON/OFF** button on the 2400 Series phone (this will also hang up the call on your cell phone)
- Verify the voltage on the phone line meets the minimum needed for the phone. See the "System Requirements" section for voltage range.
- Exit programming mode and re-enter. Attempt programming steps again.

Phone does not call out:
- Verify the voltage on phone line and dial tone. Phone lines can have voltage but no dial tone. 2400 Series phones must have dial tone or a valid ring down circuit to call out properly.
- Verify the push button is connected to the "PANIC" connector on the back of the circuit board.
- Remove the push button from the black "PANIC" connector on the circuit board. Use a small piece of wire or a small screwdriver to short 2 pins inside of the connector on the circuit board. If the phone calls out after shorting pins on the circuit board, there is a problem with the push button.
- Double check the number being programmed into the 2400 Series phone. Verify the phone line doesn't require an access digit such as an 8 or 9 to dial out or have any line restrictions such as long distance or toll restriction.
- Verify the phone line going into the 2400 Series phone is dedicated. 2400 Series phones cannot share a phone line with anything other than another 2400 Series phone.
- Verify phone is in Standard Mode. See "Resetting the Phone" section for instructions.

Phone does not hang up:
- 2400 Series phones require either a CPC or Open-Loop Disconnect Signal provided by the phone line to properly disconnect. This is a setting on the line that the phone provider should be able to supply.
- Before the receiving party hangs up the call, they can press ***, #** to disconnect.
- Lower the Talk Time on the phone. This will not hang up the phone instantly, but it will lower the amount of time the phone will stay off-hook. See the "Detailed Programming" section for instructions.

Phone hangs up after the call is answered:
- Phone may be in the wrong mode. Verify the phone is in Standard Mode. See "Resetting the Phone" section for instructions.
- There may be excessive noise on the phone line. Connect an analog phone to the line and place a call out. Listen for any interference (buzzing, humming, etc.) on the line. If any noise is heard, the phone line must be cleaned up.
- Verify the phone line going into the 2400 Series phone is dedicated. 2400 Series phones cannot share a phone line with anything other than another 2400 Series phone.

Phone volume is too low:
- The volume level on the phone may need to be increased. See the "Volume Adjustment" section for instructions.
- Line voltage and line current on the phone may be too low. See the "System Requirements" section for the appropriate range.
- Verify the speaker is lined up with the holes on the panel and is not blocked.
- Verify the microphone is lined up with the holes on the panel and is not blocked.

If you have any questions regarding installation or operation, call RATH® Technical Support at 800-451-1460, 7:30am-4:00pm CST, Monday-Friday.