Installation & Operations Manual

SmartPhone VI Detailed Programming

2 YEAR WARRANTY

Thank you for purchasing a RATH® SmartPhone VI. 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.
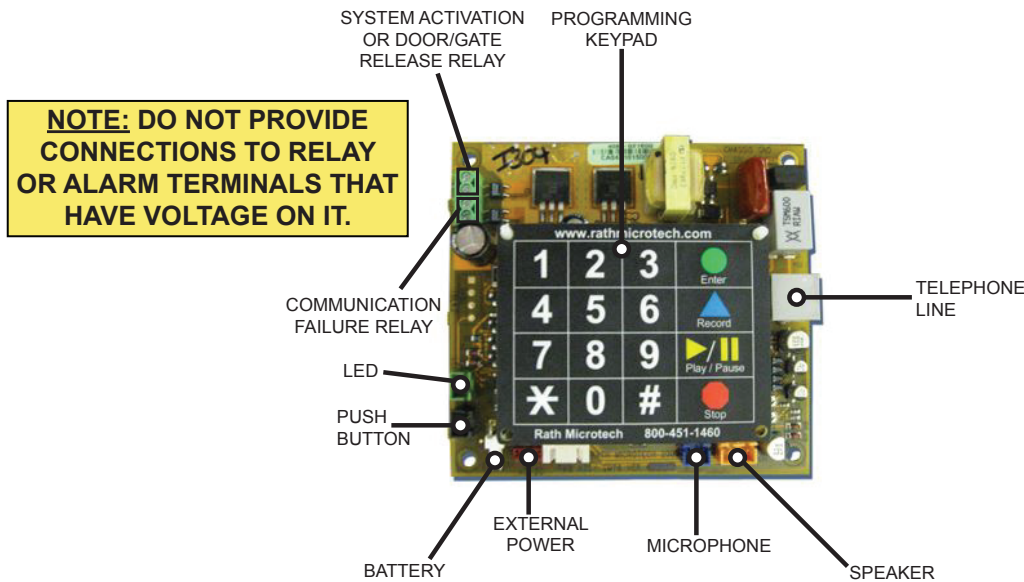
Thank you for your business,

The RATH® Team

Table of Contents

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.

NOTE: DO NOT PROVIDE CONNECTIONS TO RELAY OR ALARM TERMINALS THAT HAVE VOLTAGE ON IT.

(Diagram labels: SYSTEM ACTIVATION OR DOOR/GATE RELEASE RELAY, PROGRAMMING KEYPAD, COMMUNICATION FAILURE RELAY, LED, PUSH BUTTON, BATTERY, EXTERNAL POWER, MICROPHONE, SPEAKER, TELEPHONE LINE)

Line Connection:
Connect a dedicated phone line to the RJ11 jack on the side of the SmartPhone board labeled TEL LINE using one of the following recommended methods:
1. Crimp phone line on to a standard RJ11 jack and plug into LINE input on SmartPhone
2. Connect phone line to a female RJ11 jack and use a standard phone line cord to connect the female jack to the LINE input on the SmartPhone
3. Connect incoming 2 or 4 wire phone line to biscuit jack (not included) terminal jacks and then the RATH® mod to mod phone harnesses in the RJ11 jack on the phone and on the biscuit jack

RATH® phones use the center pins of the RJ11 (red and green) for the outside phone line. The phone is not polarity sensitive. Do not cut end off phone line cord and splice phone line directly on to the line cord. If using with a SmartRescue, also wire up to pins 1 and 4 (yellow and black) for the intercom pair.

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 possible interference.

Power Connection:
Using the supplied wiring harness, connect 12vac/vdc or 24vac/vdc to the input power connector on the SmartPhone board. The SmartPhone is labeled with the input power connector indicating if the board is a 12v or 24v model. The SmartPhone is not polarity sensitive.
Note: Some elevator manufacturers may have power alternately wired. Follow their guidelines for connecting power to the SmartPhone.

Plug the backup battery into the white BATTERY connector on the SmartPhone board.

Quick Set-Up

There are two ways to program the a RATH® SmartPhone. You can either program locally using the onboard keypad or remotely by calling into the phone number that the SmartPhone is installed on (a landline is recommended for remote programming). Local programming is preferred.

Quick Set-Up from Onboard Keypad:

1. Program Number
   a. Press **ENTER**
   b. Press **1, ENTER,** the number you want the phone to dial, **STOP**
2. Program Message
   a. Press **1, 3, Enter, 2** for message to play twice
   b. Press **6, RECORD,** after the "beep" speak message, press **STOP** when finished
3. Press **6, PLAY/PAUSE,** message will playback
4. Press and hold **STOP** for 3 seconds to exit programming

Quick Set-Up using Remote Programming:

1. Program Number
   a. Call the phone number that the SmartPhone is installed on
   b. After the first simulated ring, press **#, #** and wait for a confirmation tone
   c. Key in the security code (default is **1, 1, 1, 1**) and wait for a confirmation tone
   d. Press **1, *, (phone number), *, #** and wait for a confirmation tone
2. Program Message
   a. Press **1, 3, *, 2** for message to play twice and wait for a confirmation tone
   b. Press **6, *,** after the "beep" speak location message, press **#** and wait for a confirmation tone
3. Press **6, #** to play message back
4. Press ***, # , 0** to exit programming and wait for a confirmation tone
5. Press ***, #** to hang up the phone

Detailed Programming

Programming Primary Phone Number using Onboard Keypad:

1. Press **ENTER** on the keypad to begin programming
2. Press **1, ENTER,** the number you want the phone to dial, **STOP**
3. Press and hold **STOP** for 3 seconds to exit programming

Note: In situations where a delay is needed, such as needing an 8 or 9 to dial out, use the **PLAY/PAUSE** button on the keypad. The button can be pressed multiple times for a longer delay. One **PAUSE** = 1 second.

Programming Primary Phone Number using Remote Programming:

1. Call the phone number that the SmartPhone is installed on
2. After the first simulated ring, press **#, #** and wait for a confirmation tone
3. Key in the security code (default is **1, 1, 1, 1**) and wait for a confirmation tone
4. Press **1, *, (phone number),* , #** and wait for a confirmation tone
5. Press ***, #, 0** to exit programming and wait for confirmation tone
6. Press ***, #** to hang up the phone

Note: In situations where a delay is needed, such as needing an 8 or 9 to dial out, use **#, *** for a pause. **#, *** can be pressed multiple times for a longer delay. One **PAUSE** = 1 second.

Programming Secondary Phone Numbers using Onboard Keypad:

1. Press **ENTER** on the keypad to begin programming
2. Press **2, ENTER,** the number you want the phone to dial, **STOP**

Note: SmartPhones can call up to 5 numbers. Repeat the steps above for subsequent numbers. Substitute 2 with 3, 4, or 5 depending on the order you want the numbers to be dialed.
Example: For the third number to be dialed, it would be **3, ENTER,** phone number, **STOP**.

3. Press and hold **STOP** for 3 seconds to exit programming

Programming Secondary Phone Numbers using Remote Programming:

1. Call the phone number that the SmartPhone is installed on
2. After the first simulated ring, press **#, #** and wait for a confirmation tone
3. Key in the security code (default is **1, 1, 1, 1**) and wait for a confirmation tone
4. Press **2, *, (phone number), *, #** and wait for a confirmation tone

Note: SmartPhones can call up to 5 numbers. Repeat the steps above for subsequent numbers. Substitute 2 with 3, 4, or 5 depending on the order you want the numbers to be dialed.
Example: For the third number to be dialed, it would be **3, *, phone number, *, #.**

5. Press ***, #, 0** to exit programming and wait for a confirmation tone
6. Press ***, #** to hang up the phone

Programming for Ring Down Phone Lines using Onboard Keypad:

In Ring Down Mode, the phone will not dial any programmed numbers. The phone will go off-hook and the phone line itself will connect to a monitoring location. Programming phone to Ring Down Mode will automatically set the Talk Time to 3 minutes.

1. Press **ENTER** on the keypad to begin programming
2. Press **1, 9, ENTER, 2**
3. Press and hold **STOP** for 3 seconds to exit programming

Note: If the phone is inadvertently put into Ring Down Mode, press **1, 9, ENTER, 1** while in programming to put the phone back into Standard Mode.

Programming for Ring Down Phone Lines using Remote Programming:

1. Call the phone number that the SmartPhone is installed on
2. After the first simulated ring, press **#, #** and wait for a confirmation tone
3. Key in the security code (default is **1, 1, 1, 1**) and wait for a confirmation tone
4. Press **1, 9, *, 2** and wait for a confirmation tone
5. Press ***, #, 0** to exit programming and wait for a confirmation tone
6. Press ***, #** to hang up the phone

Note: If the phone is inadvertently put into Ring Down Mode, press **1, 9, *, 1** while in programming to put the phone back into Standard Mode.

Programming Location Message using Onboard Keypad:

SmartPhones 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 steps below to program the location message feature.

1. Press **ENTER** to begin programming
2. Press **1, 3, ENTER, (1, 2, or 3)** (1 will play message once, 2 will play twice, 3 will play message on a loop until operator presses *****)
3. Press **6, RECORD,** wait for the "beep", speak location message, **STOP**
4. Press **6, PLAY/PAUSE** to play message back
5. Press and hold **STOP** for 3 seconds to exit programming

To turn location message off, press **ENTER, 1, 3, ENTER, 0,** press and hold **STOP** for 3 seconds.
Note: Party can replay message by pressing ***, ***.

Programming Location Message using Remote Programming:

1. Call the phone number that the SmartPhone is installed on
2. After the first simulated ring, press **#, #** and wait for a confirmation tone
3. Key in the security code (default is **1, 1, 1, 1**) and wait for a confirmation tone
4. Press **1, 3, *, (1, 2, or 3)** and wait for a confirmation tone (1 will play message once, 2 will play message twice, 3 will play message on a loop until operator presses *****)
5. Press **6 , *,** wait for the "beep", speak location message, **#**
6. Press **6, #** to play message back
7. Press ***, #, 0** to exit programming and wait for a confirmation tone
8. Press ***, #** to hang up the phone

To turn off location message, press **1, 3, *, 0** while in programming.
Note: Party can replay the message by pressing ***, ***.

Programming Phone Line Check:

SmartPhones have a built-in phone line check. When the phone detects either a loss of dial tone or operating voltage, the line relay labeled "ALARM" on the phone will go from open to closed. This feature is turned on by default and set to check the phone line every 10 minutes.

Note: If the phone is installed on a Ring Down style phone line, it may cause "ghost dials" due to the phone going off hook to check the line. Please use one of the following options to modify this feature.

Change Frequency of Phone Line Check using Onboard Keypad:

1. Press **ENTER** to begin programming
2. Press **3, 4, ENTER,** 4 digit number in HH:MM
Example: 0020 = 20 minutes, 2300 = 23 hours
Note: The longest line check is once every 23 hours. The shortest is every 10 mins.
3. Press and hold **STOP** for 3 seconds to exit programming

Change Frequency of Phone Line Check using Remote Programming:

1. Call the phone number that the SmartPhone is installed on
2. After the first simulated ring, press **#, #** and wait for a confirmation tone
3. Key in the security code (default is **1, 1, 1, 1**) and wait for a confirmation tone
4. Press **3, 4, *,** 4 digit number in HH:MM
Example: 0020 = 20 minutes, 2259 = 22 hours, 59 mins
Note: The longest line check can be set remotely is once every 22 hours and 59 mins. The shortest is every 10 mins.
5. Press ***, #, 0** to exit programming and wait for a confirmation tone
6. Press ***, #** to hang up the phone

Turn Phone Line Check OFF using Onboard Keypad:

1. Press **ENTER** to begin programming
2. Press **2, 3, ENTER, 3** (confirmation tone)
3. Press **2, 3, ENTER, 7, 2, 8, 4** (confirmation tone)
4. Press **1, 1, ENTER 2** (confirmation tone)
5. Press and hold **STOP** for 3 seconds
Note: If the phone line check is turned off on the phone, the ALARM relay automatically turns off and stays normally closed. If Communication Failure is being used, the alarm and LED will always be activated.

Turn Phone Line Check OFF using Remote Programming:

1. Call the phone number that the SmartPhone is installed on
2. After the first simulated ring, press **#, #** and wait for a confirmation tone
3. Key in the security code (default is **1, 1, 1, 1**) and wait for a confirmation tone
4. Press **2, 3, *, 3** and wait for a confirmation tone
5. Press **2, 3, *, 7, 2, 8, 4** and wait for a confirmation tone
6. Press **1, 1, *, 2** and wait for a confirmation tone
7. Press ***, #, 0** to exit programming and wait for a confirmation tone
8. Press ***, #** to hang up the phone

Turn Phone Line Check ON using Onboard Keypad:

1. Press **ENTER** to begin programming
2. Press **2, 3, ENTER, 3** (confirmation tone)
3. Press **2, 3, ENTER, 7, 2, 8, 4** (confirmation tone)
4. Press **1, 1, ENTER, 1** (confirmation tone)
5. Press and hold **STOP** for 3 seconds

Turn Phone Line Check ON using Remote Programming:

1. Call the phone number that the SmartPhone is installed on
2. After the first simulated ring, press **#, #** and wait for a confirmation tone
3. Key in the security code (default is **1, 1, 1, 1**) and wait for a confirmation tone
4. Press **2, 3, *, 3** and wait for a confirmation tone
5. Press **2, 3, *, 7, 2, 8, 4** and wait for a confirmation tone
6. Press **1, 1, *, 1** and wait for a confirmation tone
7. Press ***, #, 0** to exit programming and wait for a confirmation tone
8. Press ***, #** to hang up the phone

Reset:

SmartPhones can be reset by performing the following steps:
1. Press **ENTER** to begin programming
2. Press **2, 3, ENTER, 3** (confirmation tone)
3. Press **2, 3, ENTER, 7, 2, 8, 4** (confirmation tone)
4. Press **2, 0, ENTER, 1** (confirmation tone)
5. Press **1, 9, ENTER, 1** (confirmation tone)
6. Press and hold **STOP** for 3 seconds
Note: Reset will not clear any programmed numbers or messages.

Programming Talk Timer using Onboard Keypad:

"Talk Time" is the amount of time that two-way communication will occur after a call is answered. When Talk Time is about to expire, the phone will prompt the called party to press "0" to extend the time for 3 more minutes. The default Talk Time is 5 minutes.

1. Press **ENTER** to begin programming
2. Press **8, ENTER,** 3 digit number in minutes
Example: 3 minutes = 003, 20 minutes = 020
3. Press and hold **STOP** for 3 seconds to exit programming

Note: The shortest Talk Time can be is 1 minute. The longest is 999 minutes.

Programming Talk Timer using Remote Programming:

1. Call the phone number that SmartPhone is installed on
2. After the first simulated ring, press **#, #** and wait for a confirmation tone
3. Key in the security code (default is **1, 1, 1, 1**) and wait for a confirmation tone
4. Press **8, *,** 3 digit number in minutes and wait for a confirmation tone
Example: 3 minutes = 003, 20 minutes = 020
5. Press ***, #, 0** to exit programming and wait for a confirmation tone
Note: The shortest Talk Time can be is 1 minute. The longest is 999 minutes.

Consolidator Mode:

SmartPhones have a built-in Consolidator Feature that allows up to 10 phones to be installed on a single phone line. If multiple SmartPhones are sharing a single phone line, Consolidator Mode must be programmed on the phones so the monitoring location can toggle between them from an outside call. This feature can only be programmed locally using the onboard keypad.

1. Press **ENTER** to begin programming
2. Press **7, ENTER**
3. Press ***, 1-5** for corresponding elevator 1-5 (**Car 1** = *, 1, **Car 2** = *, 2, etc.)
4. Press **7, ENTER**
5. Press **#, 1-5** for corresponding elevator 6-10 (**Car 6** = #, 1, **Car 7** = #, 2, etc.)
6. Press and hold **STOP** for 3 seconds to exit programming

Operation:

1. Dial the phone number connected to the SmartPhones and all phones will answer
2. Once all phones answer, individual calls can be selected by pressing one of the following:

*, 1 (Phone 1)	**#, 1** (Phone 6)
*, 2 (Phone 2)	**#, 2** (Phone 7)
*, 3 (Phone 3)	**#, 3** (Phone 8)
*, 4 (Phone 4)	**#, 4** (Phone 9)
*, 5 (Phone 5)	**#, 5** (Phone 10)
*, 0 (All Cars)	

**3.** Press ***, #** to hang up all calls

Volume Adjustment:

Adjusting the Speaker

If the voice of the person you call is not loud enough in the phone speaker, increase the volume by adjusting VR1 clockwise (requires a small Phillips screwdriver). If volume is too loud, speaker can be turned down by adjusting VR1 counterclockwise.


Adjusting the Microphone

If the person you are calling reports your voice is not loud enough, increase the Microphone Sensitivity by adjusting VR2 clockwise (requires a small Phillips screwdriver). Microphone can be turned down by adjusting VR2 counterclockwise.
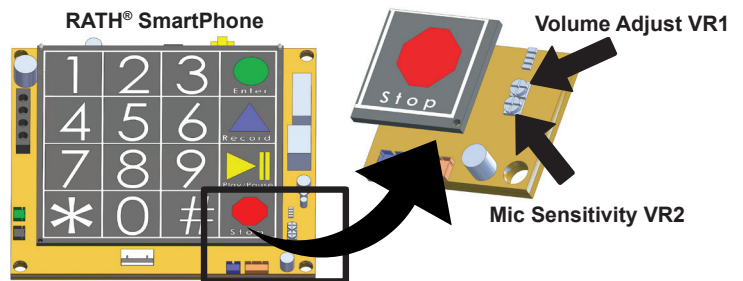
Annunciator Board:

The Annunciator Board is a supplementary board included with some SmartPhone models. There is no programming needed. The Annunciator Board is used to:

1. Play an external audio source through the SmartPhone speaker
2. Drive a 24v LED or lighted push button
3. Provide additional system activation relays
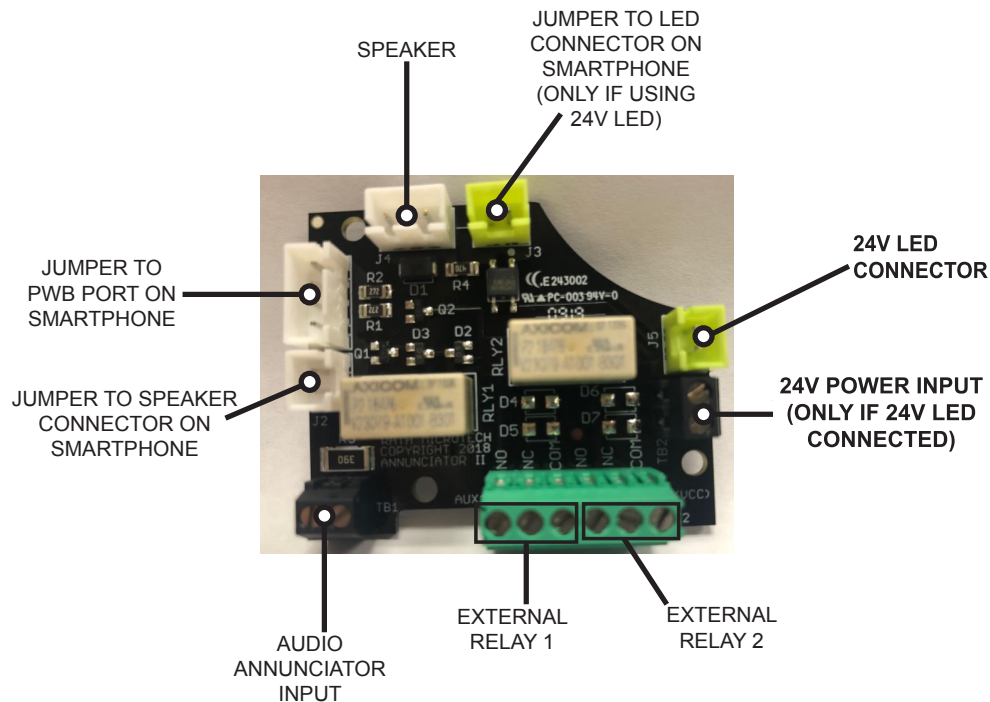
Troubleshooting

SmartPhone is dead. It won't call out or program:
• Verify external power on the red connector plugged into the SmartPhone board. 24v boards must have 24v and 12v boards must have 12v. See the "System Requirements" section for voltage thresholds.
• Verify phone line connected to the SmartPhone is not shorted out. If SmartPhone is stuck off-hook it will not operate properly.

SmartPhone won't call out:
• Verify voltage and dial tone on the phone line. Phone lines can have voltage but no dial tone. The SmartPhone must have a dial tone or a valid ring down circuit to call out properly.
• Remove the push button from the black "SWITCH" connector on the circuit board. Use a small piece of wire or small screwdriver to short 2 pins inside of the connector on the circuit board. If the phone calls out after shorting the pins, there is a problem with the push button.
• Double check the number being programmed into the SmartPhone. Verify the phone line doesn't require an access digit such as an 8 or 9 to dial out or have any line restrictions like a long distance or toll restriction.
• Verify the phone line going into the SmartPhone is dedicated. SmartPhones cannot share a phone line with anything other than another SmartPhone.

SmartPhone won't hang up:
• SmartPhones require either a CPC or open-loop disconnect signal provided by the phone line to properly disconnect. This is a setting on the phone line that the phone provider should be able to supply.
• Before the receiving party hangs up the call, they can press ***, #** to disconnect the SmartPhone.
• Shorten the "Talk Time" on the phone. This will not make the phone hang up instantly, but it will decrease the amount of time the phone will stay off hook. See the "Detailed Programming" section for programming steps.

SmartPhone hangs up after the call is answered:
• SmartPhone may be in the wrong mode. Verify the phone is in Standard Mode. See the "Reset" section to reset the phones.
• There may be excessive noise on the phone line. Connect an analog phone to the line and place a call. After placing a call, listen for any interference (buzzing, humming, etc.). If interference is heard, the phone line must be cleaned up.
• Verify the phone line going into the SmartPhone is dedicated. SmartPhones cannot share a phone line with anything other than another SmartPhone.

SmartPhone doesn't operate when the external elevator power is killed:
• Verify that the backup battery has at least 7.3vdc on it. When batteries are fully charged, they will have up to 9.2vdc.
• Check "Replace By" date on the sticker wrapped around the battery cord. Batteries should be replaced every 3 years.

SmartPhone has poor two-way communication:
• Speaker and mic may be turned up too high. Adjust VR1 and VR2 on the board counterclockwise to decrease.
• Speaker may not be aligned with the holes on the panel. Verify speaker is mounted so it lines up with the panel.
• Microphone may not be aligned with the holes on the panel. Verify microphone is mounted so that it lines up with the panel. If using a SmartPhone where the microphone is mounted in a mounting bracket below the board, pull microphone out so it doesn't sit as far into the mounting bracket.
• Verify nothing is blocking or covering the holes on the panel.

SmartPhone starts buzzing as soon as input power is connected:
• Backup battery needs to be connected.
• Wrong input power is connected to the board. 24v boards will buzz when 12v is connected, 12v boards will buzz when 24v is connected.
• Speaker and microphone may be feeding back into one another. VR1 and VR2 may need to be adjusted down. See "Volume Adjustment" section for location of VR1 and VR2.

SmartPhone keeps "ghost dialing" the monitoring location:
• Phone may be installed on a Ring Down style phone line and the Line Check on the phone is turned on. See "Detailed Programming" section to modify this feature.
• Call wasn't hung up properly. Verify that the operator is pressing ***, #** when the call is complete or that there is a disconnect signal on the phone line.
• Another device is sharing the phone line with the SmartPhone.
• The button connected to the phone may be shorted or wired incorrectly.

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

System Requirements

TELCO Voltage: 23-27vdc on a PBX LINE or 48-52vdc on an analog/digital line with at least 25mA of line current and valid dial tone or ring down circuit. Line must be dedicated for the SmartPhone.

EXTERNAL Voltage: 10.7-13.2vdc/vac for 12v boards or 22.2-27.5vdc/vac for 24v board isolated from earth ground.