

# uplink<sup>®</sup> 4555

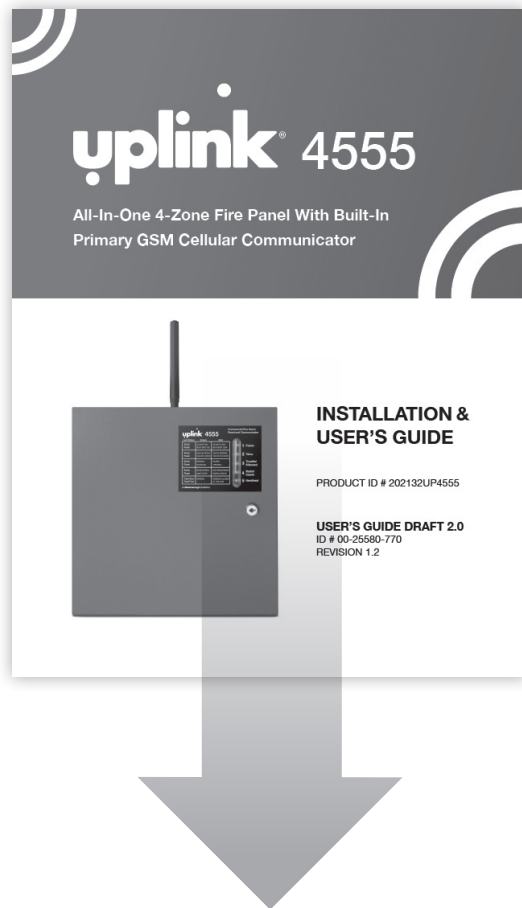
All-In-One 4-Zone Fire Panel With Built-In  
Primary GSM Cellular Communicator



## INSTALLATION & USER'S GUIDE

PRODUCT ID # 202132UP4555

**USER'S GUIDE DRAFT 2.0**  
ID # 00-25580-770  
REVISION 1.2



To download a copy of this manual go to the dealer portal on [www.uplink.com](http://www.uplink.com).

## Table of Contents

1. Introduction.....	4
2. Key Features .....	5
3. Warranty Information and Liability Waiver .....	8
TERMS and CONDITIONS.....	8
LIMITED WARRANTY .....	8
NO WARRANTY – SERVICES.....	8
INDEMNIFICATION .....	9
LIMITATIONS of LIABILITY.....	9
4. FCC and Industry Canada Regulatory Compliance.....	10
Part 15 .....	10
Part 68 .....	10
5. FCC RF Exposure Information.....	12
6. Technical Support .....	12
7. Installation.....	13
A. General Considerations .....	13
B. DIP Switch Settings .....	13
C. LEDs.....	14
D. Locating and Installing the 4555.....	18
E. Connecting The 4555 to the Monitored Equipment and Telephone Jack .....	21
F. Activating The 4555 Unit.....	26
G. Programming and Central Station Reporting.....	27
H. Completing the Installation and Testing.....	29
8. UL COMPLIANCE SECTION –Installation Recommendations .....	30
Commercial Fire (UL 864 - Category UOJZ).....	30
9. Specifications .....	33
Appendix A: Contact ID and SIA Event Codes – The following is a list of default event codes and Zones that can be sent to the central station .....	35
Appendix B: Web-configurable parameters for UL 864 compliance. ....	37

## 1. Introduction

Uplink's MODEL 4555 Fire Panel with Built-In Wireless Alarm Communicator is an Underwriters Laboratory Listed alarm and critical event primary communicator designed to interface with any event monitoring interface having switch closure characteristics. The 4555 features two independent transmission paths from the unit to the Central Station, TELCO and GSM Cellular Network. The cellular radio provides primary signaling, or secondary communications to the TELCO interface. In backup, if TELCO connection is compromised, or if no TELCO connection is present, the 4555 will automatically send any alarm information via its GSM connection, through the Uplink gateway and to the Central Station. In either case the alarm communicator transmits the alarm information to the central station receiver in either Contact ID (SIA-DC05) or SIA (SIA-DC03) format.

In addition, the 4555 uses GSM technology to receive programming and setup information.

The unit has 4 supervised inputs and 3 outputs and can be programmed to automatically send a test message at periodic intervals.

## 2. Key Features

**A. Discrete Event Reporting.** All information sent by the alarm communicator in Contact ID or SIA formats (account number, zone information, user IDs, etc.) will be sent to the central station using the telephone line or the GSM network.

**B. Telephone Line Supervision.** Features a built-in telephone line monitoring circuit designed to detect voltage (in the On-Hook state) or voltage and current (in the Off-Hook state). If insufficient voltage or current is detected, the unit will substitute the GSM cellular network for the Public Switched Telephone Network as the communications path for sending event information. A TELCO loss alarm will be generated and the on-board buzzer will annunciate, thereby providing local indication of TELCO loss.

**C. Input Signal Supervision.** Each of the 4 inputs has the ability to supervise the connection to the input source. EOL resistors assure that there is no undetected break in the input signal wiring.

**D. Zone Inputs.** There are many types of events that can be reported or mapped to a local notification appliance covering input alarms, ground faults, input troubles, AC power loss, Battery power loss, Telco troubles and GSM Network troubles. Each of these events is assigned a specific zone number by default and can be re-programmed Over-the-Air via the Support Web site.

**E. Outputs.** There are three programmable outputs. Output 1 is a Supervisory NAC - 24VDC output capable of driving up to 400mA. Output 2 is a form B relay that is normally open when energized and is configurable. Output 3 is a resettable smoke power output and, for UL compliance, may only be used as such. It is a 24VDC output capable of driving up to 160mA. Outputs 1 and 2 can be programmed Over-the-Air and in addition, can be activated on the occurrence of one or more of the following trouble or alarm conditions:

- Cellular Network Loss
- No Central Station Acknowledgment
- AC Loss
- Low or Missing Battery
- Telco Line Loss
- Loss of supervision of Input(s)
- Loss of supervision of Outputs(s)
- Activation of Input(s)
- Unit Disabled by Dealer Command
- Watchdog Circuit Activation
- Catastrophic Failure Condition
- Ground Fault Detection

**F. Power Source Monitoring (AC & Low Battery Reporting).** Reports low battery conditions to the central station when voltage drops below 20.4 VDC. Reports Low Battery Restoral. Reports No Battery if the voltage is below 1 VDC. It can also be programmed to report Loss of AC power to the central station. This occurs at 89.9 VAC and restores at 93.4 VAC.

**G. Local Annunciation.** All TROUBLES, ALARMS, and FIRE ALARMS are annunciated by an on-board buzzer, as well as visually indicated via an LED block, viewable from outside the enclosure. Alarms can be silenced with a single push of the silence/reset switch, and can be cleared with a double push of the silence/reset switch.

**H. Automated Testing.** Sends an automated test signal to the central station on a monthly, weekly or daily interval as programmed. Must be programmed for daily to be UL compliant.

**I. GSM Network Supervision.** Supervises the local GSM network. If the unit no longer locates the local GSM network, one of its output relays activates to report this trouble condition locally. The unit then automatically takes steps to restore the network connection.

**J. Status/Received Signal Strength LEDs.** The five LEDs indicate the current operational status and are visible from outside the enclosure. These LEDs can be placed into Received Signal Strength Indication mode (RSSI) to assist in selecting the optimal mounting location for transmitting and receiving cellular radio signals.

**K. UL Compliant metal enclosure.** The unit is housed in an industry accepted Red metal enclosure, complete with local audible and visual annunciators. A single push button switch can be used to silence or reset the alarms/trouble annunciators.

**L. Easy Service Initiation.** Ships with an active SIM card, with easy activations available via the Web at [www.uplink.com](http://www.uplink.com) or by calling Uplink Customer Service at 1-888-9-UPLINK (1-888-987-5465). Requires the central station receiver phone number and/or its IP address and Port number.

**M. Web-based Services.** Available at [www.uplink.com](http://www.uplink.com) and include:

- a. immediate, real-time activation
- b. history of past event transmissions
- c. initiation of a test report
- d. the ability to query the unit and receive a real-time radio report status including a Received Signal Strength reading
- e. programming inputs and other internally generated events

## All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator

### **N. UL Listed.**

The Model 4555 unit is UL Listed and conforms to UL Standard 864 for Control Units and Accessories for commercial fire alarm systems. It is perfectly suited for use in any UL certificated commercial fire alarm system that conforms to the above standard. (See the UL Compliance Section of this manual for complete details.)

### 3. Warranty Information and Liability Waiver

#### ***TERMS and CONDITIONS***

These terms and conditions are a legal contract between you and Uplink Security, LLC ("Company") and supplement (but do not supersede) the terms and conditions of any master agreement between you and "Company" governing your purchase of the Product. By using, marketing, or selling the Product, you agree to these terms and conditions. In the event of any conflict with the master agreement, the terms and conditions of the master agreement will control.

#### ***LIMITED WARRANTY***

Uplink warrants, to the party purchasing the Product directly from Uplink, i.e., to its authorized distributors and to no other parties, that for 12 months following the date of purchase, Uplink equipment will be free of defects in materials and workmanship when installed, operated, maintained, and serviced in strict accordance with Uplink's and, if applicable, the manufacturer's requirements. If Uplink equipment fails because of a defect in materials or workmanship within the warranty period, Uplink will, at its sole option and at no charge, repair or replace it. Uplink's agreement to repair (using new or reconditioned parts) or replace (with a comparable new or reconditioned Uplink unit) is the exclusive remedy with respect to the Product found to be defective in materials or workmanship; this remedy will not be deemed to have failed of its essential purpose so long as Uplink is willing and able to repair or replace the defective unit as provided above or, at Uplink's sole option, to refund the purchase price paid. A party purchasing the Product from a distributor must direct all claims to the distributor with respect to any Product claims it may have.

THE FOREGOING WARRANTY IS LIMITED AND IS THE ONLY WARRANTY OFFERED HEREUNDER. UPLINK MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, AND NON-OBSOLESCENCE. THE FOREGOING WARRANTY FURTHERMORE DOES NOT COVER UPLINK DEVICES THAT (A) HAVE BEEN IMPROPERLY INSTALLED, MAINTAINED, OR SERVICED; (B) HAVE BEEN TAMPERED WITH OR DEFACED; OR (C) HAVE BEEN SUBJECTED TO ABUSE OR A HOSTILE OPERATING ENVIRONMENT.

#### ***NO WARRANTY – SERVICES***

ALL SERVICES ASSOCIATED WITH UPLINK DEVICES INCLUDING, WITHOUT LIMITATION, NETWORK CONNECTIONS ENABLED BY UPLINK, ARE PROVIDED STRICTLY AS-IS, WITHOUT ANY WARRANTY OF ANY KIND INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, NON-OBSOLESCENCE, NON-INTERRUPTION, AND FREEDOM FROM ERROR.

Other terms and conditions and limitations of liability apply as set forth in the applicable contractual agreement with Uplink.



## All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator

### **INDEMNIFICATION**

You agree to defend, hold harmless, and indemnify the Company and its affiliates and their respective officers, directors, employees, and agents from and against any and all damages, liability, costs, and expenses (including, without limitation, reasonable attorneys' fees) arising out of or relating to (a) any claim for breach of this Agreement by you; (b) any claim for negligence, intentional misconduct, or any other act or omission on the part of you or your employees, agents, or representatives; (c) personal injury, death, or property damage allegedly or impliedly caused by you or your employees, agents, or representatives in connection with this Agreement; or (d) any claim that an application of the Product or your actions in distributing the Product or integrating it with other hardware, software, or systems infringe the intellectual property rights of a third party.

### **LIMITATIONS of LIABILITY**

THE COMPANY SHALL NOT BE LIABLE FOR ANY ACTS OR OMISSIONS OF YOU, YOUR CUSTOMERS, END USERS OF THE PRODUCT, OR ANY THIRD PARTY INCLUDING, WITHOUT LIMITATION, ANY ENTITY FURNISHING EQUIPMENT, SOFTWARE, FIRMWARE, OR SERVICES TO THE COMPANY, YOU, YOUR CUSTOMERS, OR END USERS OF THE PRODUCT, NOR SHALL THE COMPANY BE LIABLE FOR ANY DAMAGES ATTRIBUTABLE, IN WHOLE OR IN PART, TO THE FAILURE OF SAID EQUIPMENT, SOFTWARE, FIRMWARE, OR SERVICES. THE COMPANY SHALL NOT BE LIABLE FOR INTERRUPTIONS IN, OR INTERFERENCE WITH, THIRD PARTY TELECOMMUNICATIONS CARRIERS' TRANSMISSIONS OVER WHICH THE COMPANY HAS NO CONTROL, I.E., FOR INTERRUPTIONS OR INTERFERENCE CAUSED BY NETWORK CONGESTION, WEATHER CONDITIONS, TERRAIN, BUILDINGS, LOCALIZED "GAPS" IN TELECOMMUNICATIONS NETWORK COVERAGE, AND OTHER NATURAL OR ARTIFICIAL CONDITIONS OVER WHICH THE COMPANY HAS NO CONTROL. THE COMPANY SHALL NOT BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, PUNITIVE, OR CONSEQUENTIAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST REVENUES, DATA, OR PROFITS, REGARDLESS OF WHETHER THE COMPANY WAS ADVISED OF, OR COULD HAVE REASONABLY FORESEEN, THE POSSIBILITY OF SUCH DAMAGES. THE COMPANY SHALL NOT BE LIABLE IN THE EVENT THAT FUTURE TECHNOLOGICAL CHANGES IMPLEMENTED BY ANY THIRD PARTY OR GOVERNMENTAL ENTITY RENDER THE PRODUCT WHOLLY OR PARTIALLY INOPERABLE. OTHER LIMITATIONS OF LIABILITY MAY APPLY AS PROVIDED BY THE MASTER AGREEMENT, IF ANY, GOVERNING YOUR PURCHASE OF THE PRODUCT FROM THE COMPANY.

## 4. FCC and Industry Canada Regulatory Compliance

### Part 15

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced technician for help.

### Part 68

This equipment complies with Part 68 of the FCC rules and the requirements adopted by the ACTA. On the inside of the cover of the 4555 is a label that contains the product identifier, US: 3F0MO00BANYNETFDM. If requested, this number must be provided to the telephone company.

The 4555 employs one USOC RJ31X jack.

The RJ31X plug and jack used to connect this equipment to the premises wiring and telephone network must comply with the applicable FCC Part 68 rules and requirements adopted by the ACTA. A compliant telephone cord and modular plug is provided with this product. It is designed to be connected to a compatible modular jack that is also compliant.

The **Ringer Equivalence Number (REN)** is used to determine the number of devices that may be connected to a telephone line. Excessive RENs on a telephone line may result in the devices not ringing in response to an incoming call. In most but not all areas, the sum of RENs should

## All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator

not exceed five (5.0). To be certain of the number of devices that may be connected to a line, as determined by the total RENs, contact your local telephone company. The REN for this product is part of the product identifier that has the format US:AAAEQ##TXXXX. The digits represented by ## are the REN without a decimal point (e.g., 03 is a REN of 0.3).

If the 4555 causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice is not practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.

The telephone company may make changes in its facilities, equipment, operations or procedures that could affect the operation of the equipment. If this happens, the telephone company will provide advance notice in order for you to make necessary modifications to maintain uninterrupted service.

If trouble is experienced with the 4555, please contact Uplink Technical Support at 888-9-UPLINK (888-987-5465) **for Repair and Warranty service**. If the equipment is causing harm to the telephone network, the telephone company may request that you disconnect the equipment until the problem is resolved.

The 4555 is not designed to be repaired in the field by an Installer. Repairs to this unit should only be undertaken by qualified Uplink Security personnel.

The 4555 should not be used on a party line. Connection to party line service is subject to state tariffs. Contact the state public utility commission, public service commission or corporation commission for additional information.

## 5. FCC RF Exposure Information

In August 1996 the Federal Communications Commission (FCC) of the United States with its action in Report and Order FCC 96-326 adopted an updated safety standard for human exposure to radio frequency electromagnetic energy emitted by FCC regulated transmitters. Those guide-lines are consistent with the safety standard previously set by both U.S. and international standards bodies. The design of this module complies with the FCC guidelines and these international standards. The FCC ID of this unit is TWV192513384X. For more information about RF exposure, please visit the FCC website at [www.fcc.gov](http://www.fcc.gov).

The term “IC” before the certification/registration number only signifies that the Industry Canada Technical Specifications were met. The external antennas used for this module must provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

## 6. Technical Support

Technical support is available Monday through Friday, 8:00 AM to 8:00 PM ET excluding holidays. Before calling technical support please ensure to have read the installation guide completely. Technical support requires the caller to provide:

- Login name
- Password
- Serial number of the 4555

UPLINK Technical Support  
400 Interstate North Pkwy  
Suite 1350  
Atlanta, GA 30339  
888-9-Uplink (888-987-5465)  
Fax: 770-693-3501

For Customer Support, call 888-987-5465, or visit [www.uplink.com](http://www.uplink.com).

## 7. Installation and Configuration

### NOTICE TO USERS, INSTALLERS, AUTHORITIES HAVING JURISDICTION AND OTHER INVOLVED PARTIES

This product incorporates field-programmable software which can be changed over the GSM Wireless connection. In order for the product to comply with the requirements in the Standard for Control Units and Accessories for Fire Alarm Systems, UL 864, certain programming features or options must be limited to specific values.

The list of possible modifiable configuration options, as well as the proper settings to maintain UL 864 Compliance, is listed in **Appendix C: Web-configurable parameters for UL compliance.**

### **A. General Considerations**

Determine where to mount the unit. Keep the following in mind:

- a. Obtain the best transmitted and received signal strength for the cellular radio. (If a very strong cellular signal is not available, first power the unit with the AC power and turn on S4 to test for the location that provides the best signal strength.)
- b. Proximity to a non-switched Plug for the AC transformer.
- c. Proximity to the monitoring equipment and where to route the 4555 unit's relay outputs that connect other devices (These wires will need to be in conduit for a UL certificated installation. See the UL Compliance Section.)
- d. Proximity to the RJ31X Telco jack from the telephone system.

### **B. DIP Switch Settings**

The 4555 has a four-position dipswitch. The dipswitches function as follows:

<b>SWITCH NO.</b>	<b>SETTING</b>	<b>FUNCTION</b>
S1: Default	OFF	Normal Operations
Load	ON	Load defaults
S2: OTA	OFF	OTA configuration Allowed
Operation	ON	OTA configuration Blocked
S3: Buzzer	OFF	Normal Operations
Override	ON	Buzzer disabled
S4: LED	OFF	Normal Operations
Function	ON	RSSI Measurements

## Notes:

S1 can be used to set the unit back to factory defaults. ALL CONFIGURATION PARAMETERS WILL BE LOST. Turn S1 on, LEDs will flash red / green several times, then stay solid red. Unit is now defaulted – turn S1 off.

S2 can be used to 'lock down' a configuration option. However, as long as S2 is ON, NO OTA (Over-the-Air) CONFIGURATION commands will be accepted.

S3 can be used to temporarily silence the on-board buzzer. FOR UL OPERATION, this switch must be turned off.

S4 can be used to find the most optimal signal strength during installation. This switch must also be turned off for UL operation.

## **C. Local Sounder Information**

A sounder on the circuit board is included and it generates a tone of volume such that it is consistent with UL864.

The Sounder is programmable and may be turned on and off via the Local test as well as OTA. The Sounder generates three distinct tone patterns:

1. Temporal - this is where the tone is on for .5 seconds, off for .5 seconds, on for .5 seconds, off for .5 seconds, on for .5 seconds, off for 1.5 seconds and then repeats.

This is used when the alarm mapped to the ZONES 1, 2, 3, and/or 4 is allocated to a FIRE ALARM (default).

Note: This alarm, as long as it is active, takes precedence over any other sound.

2. Constant - tone is always on. If any ZONE 1-4 is configured as an ALARM other than FIRE. An example of this might be if ZONE1 is configured as an ALARM (generic). It is also used when testing the sounder.

3. Short Pulse - this is where the tone is on for .5 seconds and off for 4.5 seconds. This is used when any TROUBLE or ALARM is detected that is not due to ZONE1-4 going off-normal (e.g. ZONE1 Unsupervised or Telco Loss).

## **D. LED Information**

Normal Mode: Upon initial power up, the 5 LEDs on The 4555 will begin to function as follows:

Note: During the 3 second “settling” time after power-up, all of the LEDs will be lit to indicate the startup sequence is in progress.

## All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator

1. Power (LED 1)
  - i. AC present – **GREEN ON**. This indicates that AC power is present and able to power the logic and the radio (> 10V) but not necessarily high enough to charge the battery (>18V). If Battery voltage is low (<=20.4V) or the battery is missing, **RED ON** will be displayed. The Battery voltage must reach the minimal level (22.8V) for the LED to restore.
  - ii. Switched to battery power – **SLOW FLASH GREEN** if Battery voltage >20.4V, **SLOW FLASH RED** if <= 20.4V.
  - iii. No power - OFF
  
2. TELCO (LED 2)
  - i. Dialer on-hook, TELCO line present – **GREEN ON**
  - ii. Dialer off-hook, TELCO line present - **GREEN SLOW FLASH**
  - iii. TELCO missing or disabled – **RED ON**
  - iv. TELCO is off-hook, TELCO line present - **RED SLOW FLASH**
  - v. Dialer Trouble - if the dialer fails 8 (a programmable value) times or if the TELCO line is disconnected after the dialer goes off-hook to forward a message - alternate **RED/GREEN FLASH** and the Sounder is activated. Pressing the push-button shuts off the sounder and clears the LED **RED/GREEN FLASH**. If the external push button is not pressed, the Dialer Trouble LED2 alert is cleared when the next dialer message is successfully transmitted.

Note:  
The only way to silence the sounder is to press the push-button.
  
3. TROUBLE (Alarm) (LED 3)
  - i. All of the Zone Inputs are NORMAL and there are no Troubles - **GREEN ON**
  - ii. One or more of the Zone inputs are OFF-NORMAL - **RED ON**. This may either indicate a fire alarm, or some other kind of alarm or trouble depending on how the Zone has been mapped.
  - iii. A Trouble Event has been declared - **RED FAST FLASH**
    1. This coincides with annunciation of the on-board buzzer

iv. A Trouble has been silenced via the push-button - **RED/GREEN FLASH**

Notes:

1. If one or more inputs are set OFF NORMAL, the RED ON supersedes the TROUBLE indicator.
2. Once the OFF NORMAL has been cleared, the device must restore the TROUBLE event states until they, too, are cleared.
3. If the LED is **RED/GREEN FLASH** and a new TROUBLE is detected, the on-board buzzer will activate and the LED will transition to **RED FLASH**.

4. Wireless Communication (LED 4)

- i. Registered on the wireless network – **GREEN ON**
- ii. Communicating with the Uplink Backend – **GREEN FLASH**
- iii. Not registered on the GSM Network – **RED ON**

5. Heartbeat (LED 5) and Unit Disabled from the Web

- i. 1 second heartbeat indicating the software is operating - **GREEN FLASH** (ON 0.1 second, OFF 1.9 seconds)
- ii. If the unit is disabled from the Web - **RED FLASH**.
- iii. If unit is in the push-button initiated 5 second display Location Mode, it will be OFF.
- iv. If push-button is held for > 5 seconds, the 4555 switches to Zone Status Mode, indicated by a rapid **GREEN FLASH** of LED5.

Location Mode: At any time, after a single push button press and for a period of 5 seconds thereafter, LED1, LED2, LED3, and LED4 are temporarily re-assigned. This is to aid in diagnosing the event causing the TROUBLE/ALARM without the need to log into the Uplink website. However, more complete information will always be available on the website.

1. Input Zone Troubles are shown on LED1.
2. 24V Supervised Trouble is shown on LED2
3. GF Detection is shown on LED3
4. Any other TROUBLE is shown on LED4



## All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator

These will be either be **RED FLASH** if activated or **GREEN ON** when not activated. During this period, LED5 will be off. After the expiration of the 5 seconds, all LEDs will resume their normal functions.

RSSI Mode: When the 4555 is placed in Received Signal Strength Indicator (RSSI) Mode by turning Dipswitch S4 to ON, the five LEDs indicate the follow signal strength information:

Received Signal Strength	Appearance of LEDs (#1 thru #5)
≥ -50 dBm	●●●●● #1: green, solid; #2: green, solid; #3: green, solid; #4: green, solid; #5: green, solid
≥ -60 dBm	○●●●● #1: off; #2: green, solid; #3: green, solid; #4: green, solid; #5: green, solid
≥ -70 dBm	○○●●● #1: off; #2: off; #3: green, solid; #4: green, solid; #5: green, solid
≥ -80 dBm	○○○●● #1: off; #2: off; #3: off; #4: green, solid; #5: green, solid
≥ -90 dBm	○○○○● #1: off; #2: off; #3: off; #4: off; #5: green, solid
≥ -100 dBm	○○○○☀ #1: off, #2: off; #3: off; #4: off; #5: green, flash
≥ -110 dBm	○○○○● #1: off; #2: off; #3: off; #4: off; #5: red, solid
≤ -111 dBm	○○○○☀ #1: off, #2: off, #3: off, #4: off, #5: red, flash
No signal	○○○○○ All OFF

## **E. Locating and Installing the 4555**

The Model 4555 unit comes in a metal enclosure. The installer needs to use the supplied 16.5 VAC – 45VA transformer, and must supply two 12aH backup batteries (Recommended Battery: Powersonic PS-12120 or equivalent)

After carefully considering all issues outlined in Section A (General Considerations), proceed as follows:

1. Open the enclosure's door. Locate the four (4) mounting holes. Use the enclosure as a template to mark where to drill holes for the screws and anchors that will hold the enclosure in place on the wall.
2. Connect the antenna supplied with the 4555. The Antenna supplied may differ from the ones depicted in the figures in this manual.
3. Go to the red, 4-position Dipswitch as shown in Figure 1 and set the dipswitch as appropriate for this installation.
4. Place Dipswitch #4 (S4) in the ON position. The LEDs are now operating in RSSI Mode. Locate a good mounting position based on a good Received Signal Strength Indication (RSSI). **It is recommended that the installation location demonstrate an RSSI of at least -80 dBm (2 solid green LEDs).** The minimum acceptable RSSI is -90 dBm (1 solid green LED). If the minimum acceptable RSSI cannot be achieved with the supplied antenna at the installation location, contact customer service.

# All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator

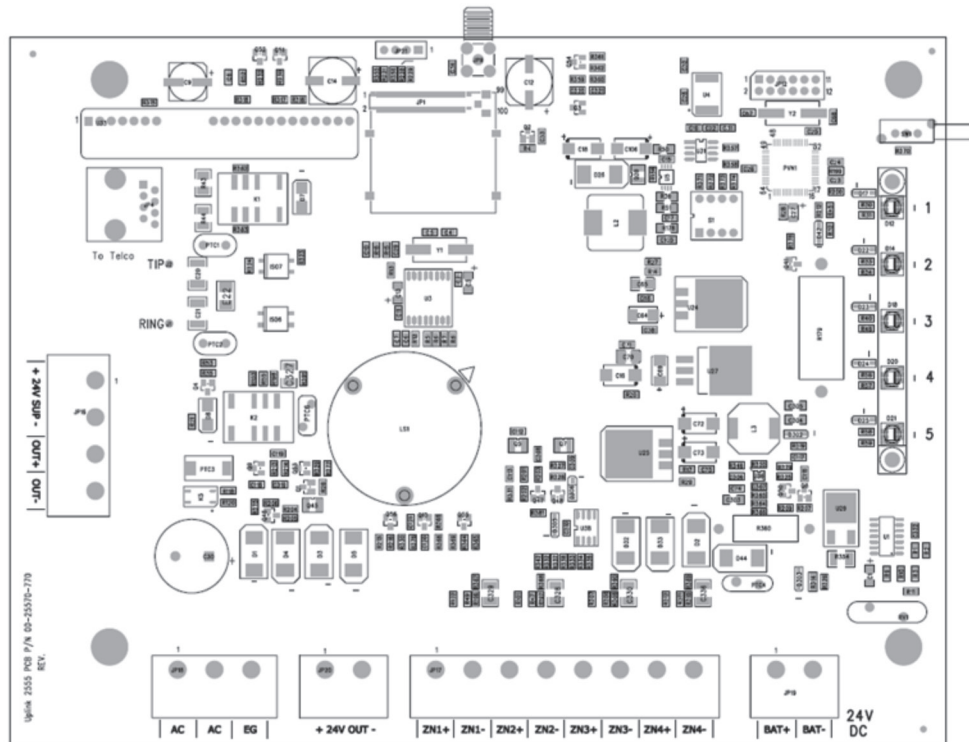


Figure 1: Parts on the 4555 PC Board

Position the bottom of the 4555 enclosure where it will be installed. Use four (4) #6 screws and mount the unit using the four holes in the enclosure's plastic bottom. The 4555 unit's dimensions are shown in Figure 2.

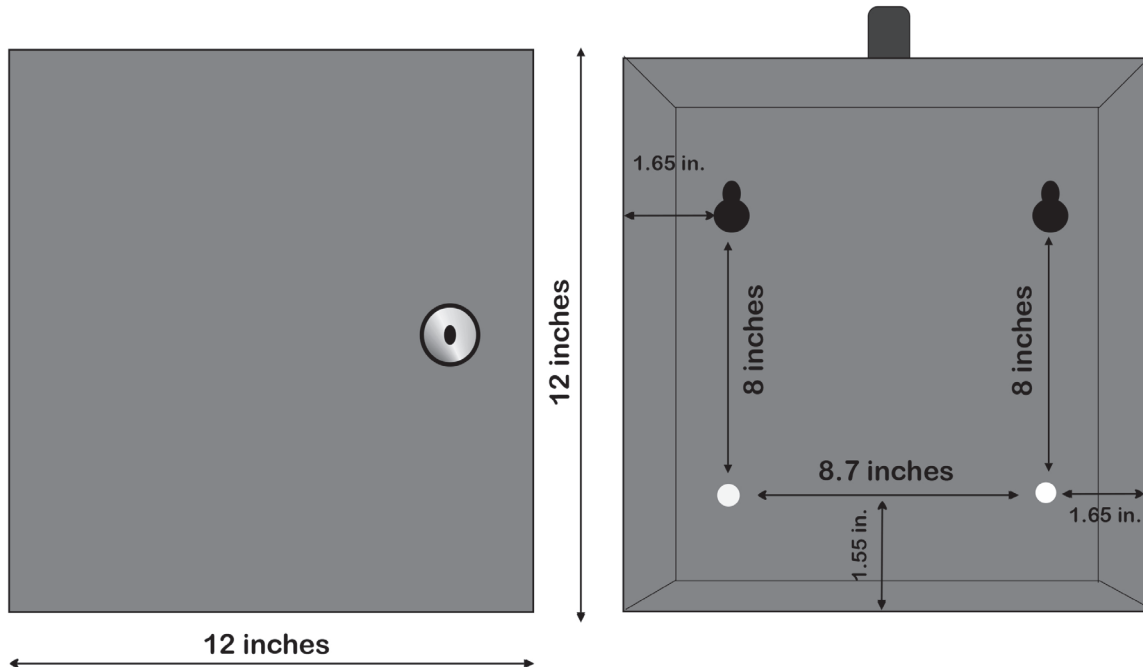


Figure 2: Inside & Outside Mounting Dimensions for the 4555

5. There are two 12 V batteries required if the internal backup battery is to be used. Place the backup batteries into their location in the bottom of the enclosure. Secure the batteries in place using the metal battery bracket and screws provided.
6. Connect the two batteries in series to form a 24 V battery. Connect the positive (+) and negative (-) leads from the series battery to the terminals labeled BAT+ and BAT- respectively on the 4555 lower right terminal strip. Use 18 to 14 gauge wire copper insulated wire. Note that these connections are not power limited, and therefore must be  $\frac{1}{4}$  inch or more from any other wires in the enclosure.
7. Connect the wires from the enclosed 120 to 16.5 VAC, 45 VA transformer to the terminal strip designated as "AC" on the unit's lower left terminal strip. Plug the transformer into a 120 VAC non-switched outlet. Use 18 to 14 gauge copper insulated wire for wire lengths of 10 to 25 feet respectively. See the UL compliance sections for additional details.

**Caution: Incorrect Connections May  
Result in Damage to the Unit**

8. Connect the unit's Earth Ground.
9. Power on the unit and double check to make sure that the RSSI is still showing a good signal strength level. Note: If you have not connected the Zone input EOL resistors, the buzzer WILL sound. Pushing the external push button switch one time will silence the alarm.
10. Before connecting the equipment being monitored and the 4555, first:
  - a. Return Dipswitch #4 (S4) to the OFF position.
  - b. Disconnect the AC transformer from its power outlet.
  - c. Disconnect the Positive and Negative connections to the battery.

**F. Connecting the 4555 to the Monitored Equipment and Telephone Jack**

**IMPORTANT:** Make all connections to the 4555 in the powered down state.  
Once all connections have been established, turn power on.

First, remove AC and battery power from the 4555, and then proceed as follows:

1. Wire Dialer & Telco Connections.
  - a. Use the dual modular plug telephone cable provided with the 4555 to connect it to the premises' RJ31X jack. On the 4555's side, one end of the cable should be plugged into Jack JP4.
  - b. The other end of the cable should be plugged into the RJ31X unit's modular jack. If local premises equipment is sharing this TELCO line it is mandatory that the 4555 can seize the line when necessary to send alarm messages. Use care in wiring to existing premises wiring. Note that some household jacks may not be wired to a true RJ31X jack, if this is the case, then the 4555 will not seize the Telco line.

**Warning:** High Voltage Present at Phone Lines. Disconnect Prior to Servicing.

## 2. Wire Inputs

### External Zones

There are 4 external ZONEs and all 4 are to be supervised using a 2.2 K ohm End-Of-Line-Resistor (EOLR). Additionally, there is a supervised input on the 24 V output to be able to monitor whether the output power device is actually present. This input is disconnected immediately before the output voltage is applied.

A ZONE may be normally open or normally closed and this is configurable. The default is Normally Opened.

A ZONE may be mapped to any event or restore from Appendix A. The default for all ZONEs is FIRE ALARM.

In general, the ZONEs are sensors with either 2.2 K ohm resistors in parallel with the sensors (Normally Open) or in series with the sensors (Normally closed). This is shown diagrammatically in Figure 3 below:

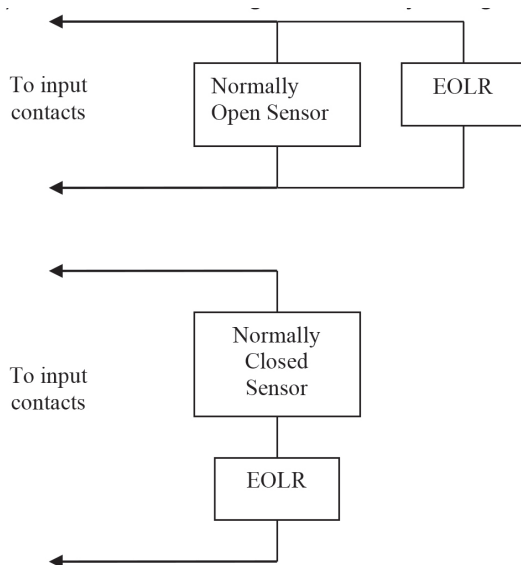


Figure 3 – Diagram of a Normally Open Sensor and a Normally Closed Sensor and the placement of the EOLR

As can be seen, a supervised ZONE has 3 unique states:

1. UNSUPERVISED
2. OPEN
3. CLOSED

An OFF-NORMAL may be declared if either the state is UNSUPERVISED OR it is in an OPEN/CLOSED state which is exactly opposite to the NORMAL (e.g. a N.O. ZONE is CLOSED).

Depending on how this ZONE is programmed, this may result in an ALARM, or a TROUBLE.

## All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator

The values in Table 1 below shows the various voltage measurements from ZONE<sub>n</sub> to ZONE<sub>n</sub> RETURN for these states:

<b>Condition</b>	<b>State</b>	<b>Voltage</b>
Normally Opened	Unsupervised	3.3 V
	Open	1.3 V
	Closed	0.4 V
Normally Closed	Unsupervised	0.4 V
	Open	3.3 V
	Closed	1.3 V

Table 1 – voltages of ZONE states

Note:

1. As has been indicated, a ZONE can only be one of 3 states and its NORMAL state is defined per Table 1 above.
2. The transition to a NORMAL state either initiates:
  - a. Clear of the ALARM (if it had been previously set as OFF NORMAL)
  - b. Clear of the TROUBLE (if it had been previously set as UNSUPERVISED)
3. The transition to an OFF NORMAL state (opposite of how it is defined) initiates an ALARM
4. The transition to an UNSUPERVISED state initiates a TROUBLE

## 2. Wire outputs (if required)

There are 3 outputs defined for the 4555:

- A. OUTPUT1 (Left side- Top) is a Supervisory NAC 24VDC output. This is generated from the 24VDC source and is limited to 400mA drive. It can be used to drive an optional external sounder or strobe, and is fully configurable.
- B. OUTPUT2 (Left side - Middle) is a simple switch closure that is limited to 120 mA (continuous), it is also fully configurable.
- C. UNSUP24 (Bottom side – Middle) is a 24VDC Smoke Power supply which is limited to 160mA. In the wiring diagram of Figure 4, this output is shown driving a smoke detector.

Output 2 will be defaulted as a “fail-safe” relay which should be normally energized, so that if it is for whatever reason de-energized (loss of power) would trip that output. This can be used as a trouble input to another panel.

The default NORMAL state of Output 1 is floating and the energized or OFF-NORMAL state is 24 V output (up to 500 mA).

This initialized value is declared the NORMAL state. The OFF-NORMAL or ALARM or TROUBLE state will then be the opposite of the NORMAL state.

For ultimate flexibility, the Outputs can be OPENED or CLOSED independently through the Uplink web portal. Any OUTPUT should first be removed from mapping to TROUBLE detections.

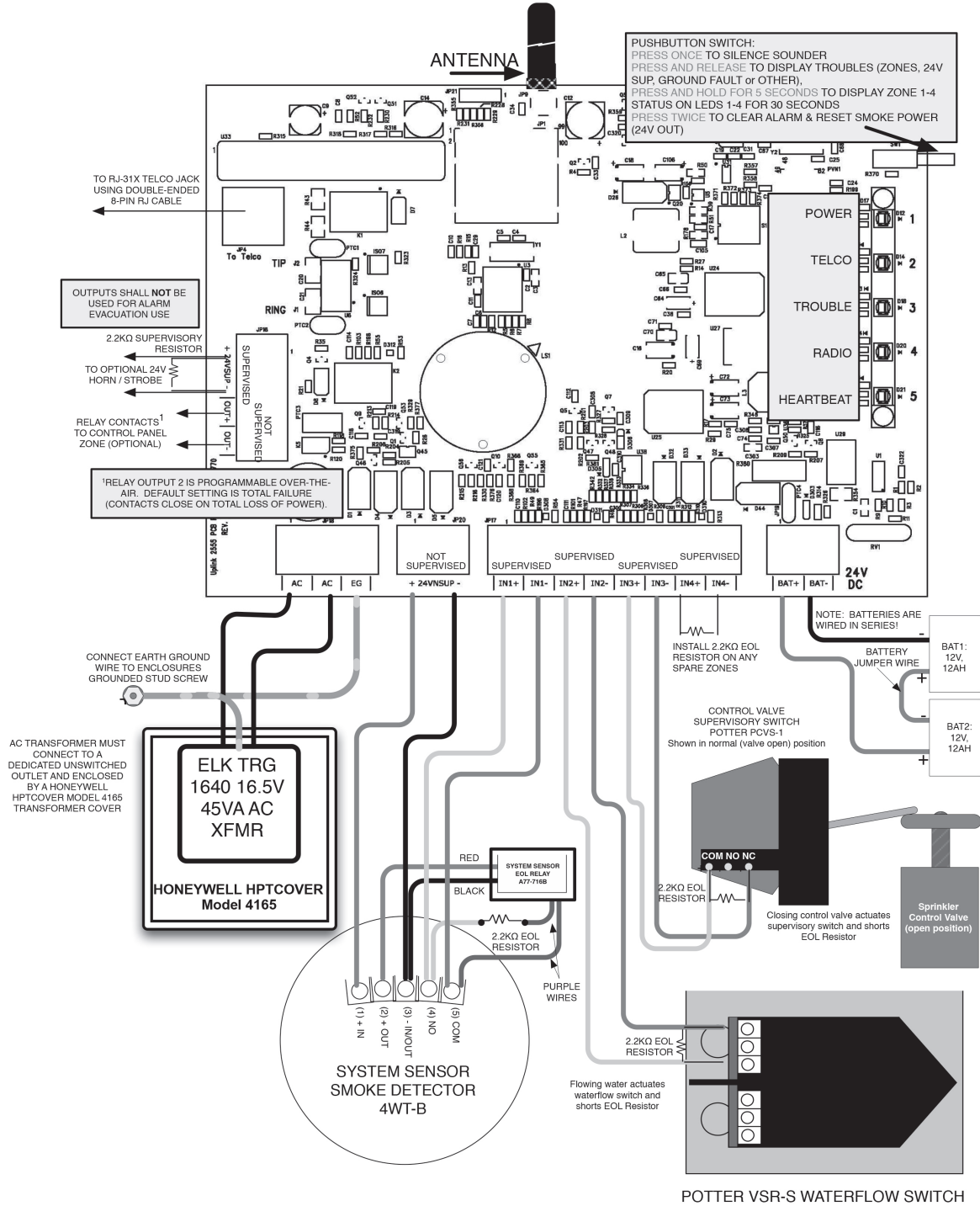
Name	Type	Default NORMAL	Control for NORMAL
OUTPUT 1	Voltage	Floating	De-energized
OUTPUT 2	N.C. (FORM B)	OPEN	Energized
OUTPUT 3	Voltage	24VDC	Energized

The 24V non-supervised output (UNSUP24) will be pulsed off when the push-button switch is activated with a “double-push.” It will remain off as long as the push-button is depressed on the second push but no more than 15 seconds.

The Output1 24 V supervised output (OUTPUT1) will also be pulsed off when the push-button switch is activated with a “double-push” but it must have been activated either OTA or through mapping. It will remain off as long as the push-button is depressed on the second push but no more than 15 seconds.



# All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator



### **G. Activating The 4555 Unit**

The 4555 is remotely programmed OTA (Over-the-Air) by dip switch 2 and accessing the Uplink Dealer web site or by calling Uplink Customer Service at 1-888-987-5465.

For UL compliance, remote programming over the air can only be accomplished by turning dip switch off.

#### **New Dealer 4555 Activation:**

For new dealers/customers, establish an account with Uplink by visiting the Uplink web site ([www.uplink.com](http://www.uplink.com)).

- a. Click on Set up a new account.
- b. Read the UPLINK Security Inc. Dealer Agreement, then click on Accept Agreement.
- c. A box will appear saying "You hereby accept the Uplink Security Dealer Agreement?" Click on OK.
- d. A box will appear saying "If you want monthly service billed to a 3rd party such as a central monitoring station then you should NOT request an account – please contact Uplink Sales at 888-987-5465." Click OK.
- e. At this point there will be a screen entitled "Step 2. Rapid Signup – please provide Login & Contact Information". Fill out this form, then click Sign Up.
- f. Go back to the Login page and use the newly created Login Name and Password to sign into the web site. **Wait about 20 seconds for the next web page to completely install.**
- g. Go to Configure.
- h. Go to Activate Unit.
- i. Put in the Unit Serial #.
- j. Choose a Service Plan.
- k. Choose an Activation Type.
- l. Click on Activate Unit.
- m. Now see "Model 4555 Serial # <ten digit number> successfully activated → Click here to configure unit".
- n. Click on Click here to configure unit.
- o. There will now be a page entitled "Send MT – Model 4555". Fill in all of the options, then click on Send All.

#### **Existing Dealer 4555 Activation:**

For dealers/customers who already have an account with Uplink, go to the Uplink web site ([www.uplink.com](http://www.uplink.com)).

- a. Enter the Login Name and Password. **Wait about 20 seconds for the next web page to completely install.**
- b. Go to Configure.

## All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator

- c. Go to *Activate Unit*.
- d. Put in the *Unit Serial #*.
- e. Choose a *Service Plan*.
- f. Choose an *Activation Type*.
- g. Click on *Activate Unit*.
- h. Now see "*Model 4555 Serial #<ten digit number> successfully activated*" → *Click here to configure unit*".
- i. Click on *Click here to configure unit*.
- j. There will now be a page entitled "*Send MT – Model 4555*". Fill in all of the options, and then click on *Send All*.

### **H. Programming and Central Station Reporting**

Programming requires entry of the telephone number of the monitoring central station's alarm receiver and the proper account code. For Event information, determine whether to use the default settings for the events or customize them by using the following:

Dealer Web Site: <https://login.uplink.com>

Use this web site to program:

- a. Whether alarms will be sent to the central station via TELCO with SMS as a fallback or either TELCO or SMS only.
- b. The telephone number of the central station receiver where all of the signals should be sent.
- c. The account number to be sent to the central station for events generated by the 4555
- d. What event codes and zone numbers should be sent for the 4 Inputs/zones (for both the alarm and restoral states)
- e. What event codes and zone numbers should be sent for Low Battery and Low Battery Restoral
- f. **Several other configuration setup parameters as listed below and in Appendix B.**

The following parameters can be configured from the Dealer Web Site;

1. Dialer Protocol Type and Fallback Option (Default Protocol for Alarm Communication is Contract ID and the Fallback option is set to TELCO as Primary with Wireless as a fallback in case the message cannot get thru on TELCO)

The 4555 normally uses its built-in Telephone Line Monitoring circuit to determine whether the unit should use the TELCO as a primary means to send any message. However, the unit can be programmed to permanently operate in TELCO only or Wireless only modes.

2. Automated and On Demand Test Signals (Default = Weekly)

The Automated Test signal interval can be changed to Daily or Weekly from the Dealer Web Site. In addition, an immediate test signal can be generated.

### 3. Activate/Deactivate Outputs

All outputs can be activated or deactivated from the Dealer Web Site. This feature allows immediate testing of the correct operation of these outputs when connected to the alarm panel.

### 4. Normal State of Outputs (Default = #1 Floating, #2 Open)

The normal state of each of the three Output Relays can be changed from the Dealer Web Site.

### 5. Normal State of Inputs (Default = All inputs N.O., reports Alarms & Troubles)

The normal state of each of the four Inputs can be programmed from the Dealer Web Site as Normally Open/Normally Closed, and whether the unit will send Alarms and Troubles, or Alarms only.

### 6. Mapping of Events to Outputs (Default = #1 Any Zone Alarm, #2 Total Unit Failure)

There are 14 Trouble states that be declared by the 4555. Each of these states can be programmed from the Dealer Web Site to activate either of the two Outputs. The 14 Trouble states are:

- AC Power Loss
- Low Battery
- Telco Loss
- Cellular Service Loss
- 24V Circuit trouble
- GPRS Network Loss
- SMS Transmit attempts Exhausted
- Watchdog Trouble
- Total Failure
- Zone 1 Alarm
- Zone 2 Alarm
- Zone 3 Alarm
- Zone 4 Alarm
- Ground Fault Trouble

7. Specific Event Reporting Enables (Default Enabled Events = Cellular Service Loss) All Trouble Conditions listed above can be programmed to report that condition (and its Restoral) to the monitoring Central Station except SMS Transmit attempts Exhausted.

8. Setting Event Codes and Zone numbers Default event codes and zone numbers for each event are set up and listed in the Dealer Web site. These codes can be changed using this site to suit a particular installation.

See **Appendix A** for a list of Contact ID format and SIA format default event codes and zones *generated by the 4555* that will be sent to the central station receiver. These codes will be used for both the TELCO direct connection to the central station and the SMS connection to the central station via the Uplink Gateway.

### ***I. Completing the Installation and Testing***

Once the physical installation is completed, the unit is activated from the Dealer Web Site, and programming changes are made, test the 4555 along with the equipment being monitored to ensure everything is functioning properly.

Test the following:

- a. Check to see that all 5 LEDs are **green**. The first 4 LEDs should be solid green, and the 5th LED should be flashing green.
- b. Disconnect the Telco Line, wait for about 2 minutes, then check to see that 1) the Telco LED (#2) has turned **solid red**, and b) a Telco Trouble condition has been reported to the monitoring central station (if this feature is active).
- c. With the Telco Line still disconnected, trip an input event. Check that the 4555 has correctly reported the event to the central monitoring station via SMS by viewing the Dealer Support Web Site and looking at “events received”.
- d. Verify that this event was correctly reported to the central station by the Uplink Gateway.
- e. If using one or more of the Outputs on the 4555, reconnect the Telco Line, then go back to the Dealer Web Site and use the Switch Output command to test each output. Make sure the controlled device properly detects the output’s change of state and responds as expected.

## 8. UL COMPLIANCE SECTION – Installation Recommendations

For installations which are intended to meet UL certification requirements, the following items must be adhered to during the installation for each stated certificate category. The Installation and Wiring requirements are in accordance with the National Electrical Code, NFPA/70.

### **Commercial Fire (UL 864 - Category UOJZ)**

1. The Model 4555 unit must be connected to equipment that also holds a current UL 864 Listing (Commercial Fire).
2. Installation of the UL Listed alarm panel must be in accordance with the manufacturer's written UL Compliance rules for the type of UL certificate to be achieved. This applies to both the physical installation requirements and the unit's programming requirements.
3. Power to the Model 4555 unit must be supplied from the enclosed 16.5 VAC – 45 VA UL Listed wall transformer.
4. The AC transformer must be plugged into an un-switched outlet.
5. Use two UL-Listed 12.0 Ampere hour rated sealed lead-acid or gel cell type rechargeable battery with the Model 4555 unit. (Recommended Battery: Powersonic PS-12120 or equivalent). All Batteries must be installed and replaced by qualified personnel. Battery replacement is recommended every three years.
6. The wiring between the Model 4555 unit and the equipment being monitored must be in conduit.
7. All power-limited wiring must be secured a minimum of ¼ inch away from all non-power-limited high voltage wiring, and all non-power-limited high voltage wiring must be routed through a different conduit than any of the power-limited wiring or cable. The only non-power limited wiring in the 4555 are the wires running to and from the battery leads, all other wiring is power-limited.
8. To obtain a Commercial Fire certificate, both the TELCO and the GSM SMS connection must be active in the mode where TELCO is primary with SMS as Fallback (Default mode). Alarm communications will be sent to the central monitoring station's UL Listed digital alarm receiver.
9. The telephone line connected to the RJ31X jack cannot be connected to a PBX system.

## All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator

10. The Model 4555 unit must be programmed to send a Test signal to the central station a minimum of once every 6 hours.

11. All connections to the base terminal block must be made with stranded copper insulated wires using the wire gauge and length recommendations below:

<u>Recommended Wire Size</u>	<u>Maximum Length</u>
18 gauge	20 ft
16 gauge	40 ft
14 gauge	60 ft

12. All connections to U/L Batteries must be made with stranded copper insulated wires using the wire gauge and length recommendations in the proceeding instruction. Additionally, connections to the battery shall be made with insulated terminal connectors with a current rating of 2A or greater. All Batteries must be installed and replaced by qualified personnel.

13. The 4555 has four EOLR supervised inputs that report to the central station when activated. These inputs are enabled in the default state but may be disabled via the Dealer Web Site. If EOL resistors are used they must be 2.2 kohms, rated at 1/6 W or greater, carbon film, through-hole resistors with insulated leads. Additionally, the resistor(s) must be fastened securely to the appropriate input, with no means to open circuit, short to an adjacent circuit or cause a risk of electric shock.

14. NS load and time. Alarm load and time. Incorporate safety margin into the calculated amp hour rating of 20%. Max normal stanby load may not exceed 250mA. Max alarm load may not exceed 500mA.

- A. OUTPUT1 (Left side- Top) is a Supervisory NAC 24VDC output. This is generated from the 24VDC source and is limited to 400mA drive. It can be used to drive an optional external sounder or strobe, and is fully configurable.
- B. OUTPUT2 (Left side - Middle) is a simple switch closure that is limited to 120 mA (continuous), it is also fully configurable.
- C. UNSUP24 (Bottom side – Middle) is a 24VDC Smoke Power supply which is limited to 160mA. In the wiring diagram of Figure 4, this output is shown driving a smoke detector.

15. This product incorporates field-programmable software which can be changed over the GSM Wireless connection. In order for the product to comply with the requirements in the Standard for Control Units and Accessories for Fire Alarm Systems, UL 864, certain programming features or options must be limited to specific values.

The list of possible modifiable configuration options, as well as the proper settings to maintain UL 864 Compliance, is listed in **Appendix B: Web-configurable parameters for UL compliance.**



## 9. Specifications

<b>Ground Fault Impedance</b>	100K Ohms
<b>TELCO Interface</b>	
- Distortion	All tones less than 2.0%
- DTMF twist accuracy	+/- 1 dB
- Panel tones	+/- 0.2%
- Receive level minimum	- 45 dBm
- Receive S/N minimum	20 dB
- Line impedance	600 ohms
- Ringer Equivalence	0.3 REN
- Mode	Loop start. 26 mA typical
<b>Output Specifications</b>	
- Number and Type	#1 Supervisory NAC – 24vdc regulated #2 Relay contact, fully programmable #3 Smoke Power – 24vdc Nominal, Special Application, Voltage range (16.3-27.1VDC)
- Voltage	#1 & #3, 24V; #2, 5V
- Max Current	400 mA
- Max Frequency	800 Hz
- Power Dissipation	400 mW
-Max Line Impedance	.16 Ohms
<b>Input Specifications</b>	
- Number and Type	4 Supervised, All Programmable, 2.2k EOL
- Voltage range	3.3V, protected to 15v
- Max Current	1mA
- Max Frequency	
- Max Line Impedance	.16 Ohms
<b>Phone Line Monitor</b>	
- On-Hook voltage	8 - 50 VDC
- Off-Hook current	≥ 10.0 mA
<b>Power</b>	
- Supply	16.5VAC 45VA or 24 VDC at 0.5 A
- Normal Current (On Hook)	125 mA
- Maximum Current (Off Hook)	600 mA
- Battery standby current	20 mA
- Battery	Two 24V, 12 AH required.
- Battery Charging System	Pulsed width modulated constant voltage. Electronic short circuit protection, Thermal protection
- Maximum Battery charging current	400mA
- Maximum full charge DC voltage	27.2V +/- 0.2V
- Maximum Ripple	20mV

- Battery Operating Temperature Range	-20° to +50° C
<b>Radio</b>	
- Frequencies	850/900/1800/1900
- Avg. Current	215-250 mA
- Peak Radio Current	1.3 – 1.5 A
- DC Voltage	3.3- 4.5 V D.C.
- Sensitivity	-106 dB (typical)
<b>Environmental</b>	
- Temperature Range	-30° to +70° C
- Humidity	0 to 95% non-condensing
<b>Physical</b>	
- Height	12.2 inches
- Width	12.2 inches
- Depth	6 inches
- Weight	15 lbs (with 2- 12aH batteries)

## Appendix A: Contact ID and SIA Event Codes –

The following is a list of default event codes and Zones that can be sent to the central station

The 4555 is defaulted to send both the Alarm/Trouble condition and the Restoral condition for all of the events listed below. Reporting of zone numbers for individual events can be modified from the Dealer Web Site.

Following is a list of the default event codes and zones sent by the 4555:

Description (shown to dealer)	SIA Event Code	Contact ID Event Code
Fire Alarm [FA/E110/0B]	FA	E110
Fire Restoral [FR/R110/0E]	FR	R110
Phone Fail [LT/E350/44]	LT	E350
Phone Restoral [LR/R350/45]	LR	R350
AC Fail [AT/E301/48]	AT	E301
AC Restoral [AR/R301/49]	AR	R301
Periodic Test [TX/E602/33]	TX	E602
Trouble (Generic) [UT/E300/11]	UT	E300
Low Battery [YT/E302/4B]	YT	E302
Trouble Restore (Generic) [UR/R300/12]	UR	R300
Low Battery Restoral [YR/R302/4C]	YR	R302
Fire Supervisory [FS/E200/11]	FS	E200
Fire Supervisory Restoral [FJ/R200/12]	FJ	R200
Telco Fail [LT/E351/44]	LT	E351
Telco Restoral [LR/R351/45]	LR	R351
Service Required [YX/E616/11]	YX	E616
Service Completed [YZ/R616/12]	YZ	R616
Radio Supervision Lost [YC/E355/11]	YC	E355
Radio Supervision Restoral [YK/R355/12]	YK	R335
Trouble, System Periph. [ET/E330/11]	ET	E330
Trouble Restoral, Periph. [ER/R330/12]	ER	R330
Fire Trouble [FT/E373/0C]	FT	E373
Fire Trouble Restoral [FJ/R373/0F]	FJ	R373
Sprinkler Supervisory [SS/E203/7C]	SS	E203
Sprinkler Super. Restoral [SR/R203/7B]	SR	R203
Sprinkler Trouble [ST/E203/7D]	ST	E203
Sprinkler Trouble Restoral [SJ/R203/7E]	SJ	R203
Waterflow [SA/E113/0B]	SA	E113

Waterflow Restoral [SH/R113/0E]	SH	R113
Ground Fault [ET/E310/11]	ET	E310
Ground Fault Restoral [ER/R310/12]	ER	R310
Bell Fault [YA/E321/11]	YA	E321
Bell Restoral [YH/R321/12]	YH	R321
Manual Test [RX/E601/33]	RX	E601
Smoke Alarm [FA/E111/0B]	FA	E111
Smoke Restore [FR/R111/0E]	FR	R111

## Appendix B: Web-configurable parameters for UL 864 compliance.

The 4555 is configurable so that all web-configurable parameters can be in compliance with UL 864. However, it may be possible to issue an MT command and change a configuration parameter such that the 4555 is no longer compliant with UL 864. To prevent such an occurrence, this table of all web-based MT commands is provided, along with all the selectable options, whether or not the command or configuration has a specific UL 864 requirement (As well as the default settings for each configuration options), and finally, the UL 864 requirement level (N/A = Not applicable/No Requirement, Yes = Minimum setting under UL 864, Allowed = Alternate setting allowed under UL 864, No = Not allowed under UL 864)

<b>NOTICE TO USERS, INSTALLERS, AUTHORITIES HAVING JURISDICTION, AND OTHER INVOLVED PARTIES</b>			
This product incorporates field-programmable software. In order for the product to comply with the requirements in the Standard for Control Units and Accessories for Fire Alarm Systems, UL 864, certain programming features or options must be limited to specific values or not used at all as indicated below.			
Program feature or option	Permitted in UL 864? (Y/N)	Possible settings	Settings permitted in UL 864
Informational	N/A	Get Status, Get Map Settings & Troubles/Alarms Status, Get Timer Settings, Get Central Station Parameters Part 1, Get Central Station Parameters Part 2, Get Central Station Parameters Part 3, Get 24V & Sounder Operational Settings	N/A
Resets and Clears	N/A	Reset Alarm Counter, Reset Flash, Re-write Counter, Clear Flash Configuration & Load Defaults, Reset Hardware	N/A
Dialer Protocol Type	Y	Contact ID (Default Value), SIA	Y
Fallback Option	Y	Telco Primary With SMS As Fallback (Default) Telco Primary, No Fallback SMS Primary, No Fallback	Y N N
Telco Monitor Threshold Voltage	N/A	8, 18 (Default), 28, 38, 48	N/A

Program feature or option	Permitted in UL 864? (Y/N)	Possible settings	Settings permitted in UL 864
# Of Consistent 10 Second Samples Before Telco State Accepted	N/A	1, 2 (Default), 3, 4, 5	N/A
Switch Output	N/A	Float Supervised Voltage Output 1, Put 24VDC On Supervised Voltage Output 1, Open Relay 2, Close Relay 2, Float Unsupervised Voltage Output 3, Put 24VDC On Unsupervised Output 3	N/A
Normal State Of Output	Y	Voltage Output 1 Floating (Default) 24VDC On Voltage Output 1 Relay 2 Open Relay 2 Closed	Y N Y Y
Return Output to Normal	N/A	Voltage 1, Relay 2	N/A
Configure Zones	Y	Zone 1 Normally Open (Default) Zone 1 Normally Closed Zone 2 Normally Open (Default) Zone 2 Normally Closed Zone 3 Normally Open (Default) Zone 3 Normally Closed Zone 4 Normally Open (Default) Zone 4 Normally Closed	Y Y Y Y Y Y Y Y
Radio Reset On Consecutive SMS Transmit Errors	N/A	None, 2, 4, 6 (Default), 8	N/A
Radio Reset On Period Of SMS Inactivity	N/A	None, 60 Minutes (Default), 120 Minutes, 240 Minutes	N/A
SMS/Dial Transmit Attempts	Y	1 2 4 8 (Default)	N N N Y
Periodic & On Demand Tests	Y	None Daily (Default) Weekly Monthly	N Y N N

## All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator

Program feature or option	Permitted in UL 864? (Y/N)	Possible settings	Settings permitted in UL 864
General Enables & Disables	N/A	Disable Unit, Enable Unit (Default)	N/A
Time Delay Between AC Loss And Turning ON Of Mapped Output	Y	5 Minutes 10 Minutes 30 Minutes 60 Minutes (Default)	N N N Y
Time Delay Between Telco Loss And Turning ON Of Mapped Output	Y	30 Seconds 60 Seconds (Default) 120 Seconds 240 Seconds 600 Seconds	N Y N N N
Time Delay Between Cellular Service Loss And Turning On Of Mapped Output	N/A	1 Minute, 2 Minutes, 4 Minutes, 10 Minutes (Default)	N/A
Time To Wait For ACK From CS	N/A	60 Seconds, 90 Seconds, 120 Seconds, 150 Seconds (Default)	N/A
Mirror Image Of Telco Report	Y	Disabled (Default) Enabled	Y N
On-board Sounder Enable & Disable (Switch S3 ON Overrides)	Y	Disabled Enabled (Default)	N Y
On-board Sounder Test	Y	Turn On Sounder Turn Off Sounder & Resume Normal Operation For Subsequent Alarms & Troubles Turn Off Sounder	Y N N
Specific Event Reporting Enables & Disables	Y	AC Loss/AC Restoral Battery Low/Battery Restoral Telco Loss/Telco Restoral Cellular Service Loss/Cellular Service Restoral (Default) GPRS Network Loss/GPRS Network Restoral 24V Circuit Trouble/24V Circuit Trouble Restoral	Y Y Y Y Y Y Y Y Y

Program feature or option	Permitted in UL 864? (Y/N)	Possible settings	Settings permitted in UL 864
		Ground Fault Trouble/Ground Fault Trouble Restoral Watchdog Trouble/Watchdog Restoral Zones 1-4 Trouble/Zones 1-4 Trouble Restoral Zone 1 Alarm/Zone 1 Alarm Restoral Zone 2 Alarm/Zone 2 Alarm Restoral Zone 3 Alarm/Zone 3 Alarm Restoral Zone 4 Alarm/Zone 4 Alarm Restoral	Y Y Y Y Y Y Y
Output Voltage 1 Mapping	Y	AC Loss Low Battery Telco Loss Cellular Service Loss GPRS Network Loss 24V Circuit Trouble Ground Fault Trouble SMS Transmit Attempts Exhausted Without CS ACK Watchdog Trouble Total Failure Zone 1 Alarm (Default) Zone 2 Alarm (Default) Zone 3 Alarm (Default) Zone 4 Alarm (Default)	Y Y Y Y Y Y Y Y Y Y Y Y Y Y
Output Relay 2 Mapping	Y	AC Loss Low Battery Telco Loss Cellular Service Loss GPRS Network Loss 24V Circuit Trouble Ground Fault Trouble SMS Transmit Attempts Exhausted Without CS ACK Watchdog Trouble Total Failure Zone 1 Alarm (Default) Zone 2 Alarm (Default) Zone 3 Alarm (Default) Zone 4 Alarm (Default)	Y Y Y Y Y Y Y Y Y Y Y Y Y Y
Output Voltage 3 Mapping	Y	24V DC ON (Default)	Y



## All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator

Informational	UL 864 Information
<input checked="" type="radio"/> Get Status	N/A
<input type="radio"/> Get Map Settings & Troubles/Alarms Status	N/A
<input type="radio"/> Get Timer Settings	N/A
<input type="radio"/> Get Central Station Parameters Part 1	N/A
<input type="radio"/> Get Central Station Parameters Part 2	N/A
<input type="radio"/> Get Central Station Parameters Part 3	N/A
<input type="radio"/> Get 24V & Sounder Operational Settings	N/A
<b>Resets &amp; Clears</b>	
<input type="radio"/> Reset Alarm Counter	N/A
<input type="radio"/> Reset Flash Re-write Counter	N/A
<input type="radio"/> Clear Flash Configuration & Reload Defaults	N/A
<input type="radio"/> Reset Hardware	N/A
<b>Dialer Protocol Type</b>	
<input type="radio"/> Use Default Value (Contact ID)	Default Value
<input type="radio"/> Contact ID	Allowed
<input type="radio"/> SIA	Allowed
<b>Fallback Option</b>	
<input type="radio"/> Telco Primary With SMS As Fallback	Default; Required for UL
<input type="radio"/> Telco Primary, No Fallback	Not Allowed for UL
<input type="radio"/> SMS Primary, No Fallback	Not Allowed for UL
<b>Telco Monitor Threshold Voltage</b>	
<input type="radio"/> 8	N/A
<input type="radio"/> 18	Default Value
<input type="radio"/> 28	N/A
<input type="radio"/> 38	N/A
<input type="radio"/> 48	N/A

<b># Of Consistent 10 Second Samples Before Telco State Accepted</b>	
<input type="radio"/> 1	N/A
<input type="radio"/> 2	Default
<input type="radio"/> 3	N/A
<input type="radio"/> 4	N/A
<input type="radio"/> 5	N/A
<b>Switch Output</b>	
<input type="radio"/> Float Supervised Voltage Output 1	N/A
<input type="radio"/> Put 24 VDC On Supervised Voltage Output 1	N/A
<input type="radio"/> Open Relay 2	N/A
<input type="radio"/> Close Relay 2	N/A
<input type="radio"/> Float Unsupervised Voltage Output 3	N/A
<input type="radio"/> Put 24 VDC On Unsupervised Voltage Output 3	N/A
<b>Normal State Of Output</b>	
<input type="radio"/> Voltage Output 1 Floating	Default
<input type="radio"/> 24 VDC On Voltage Output 1	Not Allowed
<input type="radio"/> Relay 2 Open	Default
<input type="radio"/> Relay 2 Closed	Allowed
<b>Return Output To Normal</b>	
<input type="radio"/> Voltage 1	N/A
<input type="radio"/> Relay 2	
<b>Configure Zones</b>	
<input type="radio"/> Zone 1 Normally Open	Default
<input type="radio"/> Zone 1 Normally Closed	Allowed
<input type="radio"/> Zone 2 Normally Open	Default
<input type="radio"/> Zone 2 Normally Closed	Allowed
<input type="radio"/> Zone 3 Normally Open	Default
<input type="radio"/> Zone 3 Normally Closed	Allowed
<input type="radio"/> Zone 4 Normally Open	Default
<input type="radio"/> Zone 4 Normally Closed	Allowed

## All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator

Radio Reset On Consecutive SMS Transmit Errors	
<input type="radio"/> None	N/A
<input type="radio"/> 2	N/A
<input type="radio"/> 4	N/A
<input type="radio"/> 6	Default
<input type="radio"/> 8	N/A

<b>Radio Reset On Period Of SMS Inactivity</b>	
<input type="radio"/> None	N/A
<input type="radio"/> 60 Minutes	Default
<input type="radio"/> 120 Minutes	N/A
<input type="radio"/> 240 Minutes	N/A
<b>SMS/Dial Transmit Attempts</b>	
<input type="radio"/> 1	Not Allowed
<input type="radio"/> 2	Not Allowed
<input type="radio"/> 4	Not Allowed
<input type="radio"/> 8	Default
<b>Periodic &amp; On Demand Tests</b>	
<input type="radio"/> None	Not Allowed
<input type="radio"/> Daily	Required for UL864
<input type="radio"/> Weekly	Default
<input type="radio"/> Monthly	Not Allowed
<input type="radio"/> Send Test Event Now	
<b>General Enables &amp; Disables</b>	
<input type="radio"/> Disable Unit	
<input type="radio"/> Enable Unit	Default
<b>Time Delay Between AC Loss And Turning On Of Mapped Output</b>	
<input type="radio"/> 5 Minutes	Not Allowed
<input type="radio"/> 10 Minutes	Not Allowed
<input type="radio"/> 30 Minutes	Not Allowed
<input type="radio"/> 60 Minutes	Default
<b>Time Delay Between Telco Loss And Turning On Of Mapped Output</b>	
<input type="radio"/> 30 Seconds	Not Allowed
<input type="radio"/> 60 Seconds	Default
<input type="radio"/> 120 Seconds	Not Allowed
<input type="radio"/> 240 Seconds	Not Allowed

## All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator

<input type="radio"/> 600 Seconds	Not Allowed
<b>Time Delay Between Cellular Service Loss And Turning On Of Mapped Output</b>	
<input type="radio"/> 1 Minute	
<input type="radio"/> 2 Minutes	
<input type="radio"/> 4 Minutes	
<input type="radio"/> 10 Minutes	Default

<b>Time To Wait For ACK From CS</b>	
<input type="radio"/> 60 Seconds	
<input type="radio"/> 90 Seconds	
<input type="radio"/> 120 Seconds	
<input type="radio"/> 150 Seconds	Default
<b>Mirror Image Of Telco Alarm Report</b>	
<input type="radio"/> Disabled	Default
<input type="radio"/> Enabled	Not Allowed
<b>On-board Sounder Enable &amp; Disable (Switch S3 ON Overrides)</b>	
<input type="radio"/> Disabled	Not Allowed
<input type="radio"/> Enabled	Required
<b>On-board Sounder Test</b>	
<input type="radio"/> Turn On Sounder	Required
<input type="radio"/> Turn Off Sounder & Resume Normal Operation For Subsequent Alarms & Troubles	Not allowed
<input type="radio"/> Turn Off Sounder	Not allowed
<b>Specific Event Reporting Enables &amp; Disables</b>	
<input type="checkbox"/> AC Loss/AC Restoral	<input type="checkbox"/> Allowed
<input type="checkbox"/> Battery Low/Battery Restoral	<input type="checkbox"/> Allowed
<input type="checkbox"/> Telco Loss/Telco Restoral	<input type="checkbox"/> Allowed
<input checked="" type="checkbox"/> Cellular Service Loss/Cellular Service Restoral	<input checked="" type="checkbox"/> Default
<input type="checkbox"/> GPRS Network Loss/GPRS Network Restoral	<input type="checkbox"/> Allowed
<input type="checkbox"/> 24V Circuit Trouble/24V Circuit Trouble Restoral	<input type="checkbox"/> Allowed
<input type="checkbox"/> Ground Fault Trouble/Ground Fault Trouble Restoral	<input type="checkbox"/> Allowed
<input type="checkbox"/> Watchdog Trouble/Watchdog Restoral	<input type="checkbox"/> Allowed
<input type="checkbox"/> Zones 1-4 Trouble/Zones 1-4 Trouble Restoral	<input type="checkbox"/> Allowed
<input type="checkbox"/> Zone 1 Alarm/Zone 1 Alarm Restoral	<input type="checkbox"/> Allowed
<input type="checkbox"/> Zone 2 Alarm/Zone 2 Alarm Restoral	<input type="checkbox"/> Allowed
<input type="checkbox"/> Zone 3 Alarm/Zone 3 Alarm Restoral	<input type="checkbox"/> Allowed
<input type="checkbox"/> Zone 4 Alarm/Zone 3 Alarm Restoral	Allowed

## All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator

Output Voltage 1 Mapping	
<input type="checkbox"/> AC Loss	<input type="checkbox"/> Allowed
<input type="checkbox"/> Low Battery	<input type="checkbox"/> Allowed
<input type="checkbox"/> Telco Loss	<input type="checkbox"/> Allowed
<input type="checkbox"/> Cellular Service Loss	<input type="checkbox"/> Allowed
<input type="checkbox"/> GPRS Network Loss	<input checked="" type="checkbox"/> Allowed
<input type="checkbox"/> 24V Circuit Trouble	<input type="checkbox"/> Allowed
<input type="checkbox"/> Ground Fault Trouble	<input type="checkbox"/> Allowed
<input type="checkbox"/> SMS Transmit Attempts Exhausted Without CS ACK	<input type="checkbox"/> Allowed Allowed
<input type="checkbox"/> Watchdog Trouble	<input type="checkbox"/> Allowed
<input type="checkbox"/> Total Failure	<input type="checkbox"/> Allowed
<input checked="" type="checkbox"/> Zone 1 Alarm	<input type="checkbox"/> Default
<input checked="" type="checkbox"/> Zone 2 Alarm	<input type="checkbox"/> Default
<input checked="" type="checkbox"/> Zone 3 Alarm	<input type="checkbox"/> Default
<input checked="" type="checkbox"/> Zone 4 Alarm	Default
Output Relay 2 Mapping	
<input type="checkbox"/> AC Loss	<input type="checkbox"/> Allowed
<input type="checkbox"/> Low Battery	<input type="checkbox"/> Allowed
<input type="checkbox"/> Telco Loss	<input type="checkbox"/> Allowed
<input type="checkbox"/> Cellular Service Loss	<input checked="" type="checkbox"/> Allowed
<input type="checkbox"/> GPRS Network Loss	<input type="checkbox"/> Allowed
<input type="checkbox"/> 24V Circuit Trouble	<input type="checkbox"/> Allowed
<input type="checkbox"/> Ground Fault Trouble	<input type="checkbox"/> Allowed
<input type="checkbox"/> SMS Transmit Attempts Exhausted Without CS ACK	<input type="checkbox"/> Allowed Allowed
<input type="checkbox"/> Watchdog Trouble	<input type="checkbox"/> Allowed
<input checked="" type="checkbox"/> Total Failure	<input type="checkbox"/> Default Allowed
<input type="checkbox"/> Zone 1 Alarm	<input type="checkbox"/> Allowed
<input type="checkbox"/> Zone 2 Alarm	<input type="checkbox"/> Allowed
<input type="checkbox"/> Zone 3 Alarm	<input type="checkbox"/> Allowed
<input type="checkbox"/> Zone 4 Alarm	Allowed

## Appendix C: Web-programmable User parameters for the 4555.

The 4555 is programmable via the web. The following parameters must be set up in order to use the device successfully. If the Default value is acceptable, then it need not be programmed, however, at a minimum the Central Station Phone Number and Account Number must be updated.

Function	Default Value	User Value
CS Phone # Special Dialing Chars valid chars are 0-9, P (2 sec pause), N (7- digit dialing)	<input type="text"/>	
CS Phone # format 123-456-7890	<input type="text" value="215-293-0207"/>	
CS Account # Contact ID is 4 digits, SIA 4-6	<input type="text" value="2345"/>	
Zone 1 Alarm	<input type="text" value="101"/>	
Zone 1 Alarm Restoral	<input type="text" value="101"/>	
Zone 2 Alarm	<input type="text" value="102"/>	
Zone 2 Alarm Restoral	<input type="text" value="102"/>	
Zone 3 Alarm	<input type="text" value="103"/>	
Zone 3 Alarm Restoral		
Zone 4 Alarm		
Zone 4 Alarm Restoral	<input type="text" value="104"/>	
Zone 1 Trouble	<input type="text" value="101"/>	
Zone 1 Trouble Restoral	<input type="text" value="101"/>	
Zone 2 Trouble	<input type="text" value="102"/>	
Zone 2 Trouble Restoral	<input type="text" value="102"/>	
Zone 3 Trouble	<input type="text" value="103"/>	
Zone 3 Trouble Restoral	<input type="text" value="103"/>	
Zone 4 Trouble	<input type="text" value="104"/>	
Zone 4 Trouble Restoral	<input type="text" value="104"/>	



## All-In-One 4-Zone Fire Panel With Built-In Primary GSM Cellular Communicator

Watchdog Trouble	600	
Watchdog Restoral	103	
AC Loss	104	
AC Restoral	601	
Battery Low	602	
Battery Restoral	602	
Telco Loss	300	
Telco Restoral	300	
GPRS Network Loss	301	
GPRS Network Restoral	301	
Cellular Service Loss	302	
Cellular Service Restoral	302	
Ground Fault Trouble	101	
Ground Fault Trouble Restoral	101	
24V Circuit Trouble	603	
24V Circuit Trouble Restoral	603	

## **UPLINK MODEL 4555 GSM ALARM COMMUNICATOR INSTALLATION, OPERATION AND PROGRAMMING GUIDE**

Dated 08/11/2016  
USER'S GUIDE DRAFT 2.0  
ID # 00-25580-770  
REVISION 1.2

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