

IntelliPath™ Series Communicator

LTE-CFV
LTE-CFA

Commercial Fire Panel Internet and Cellular Communicator

Installation and Setup Guide

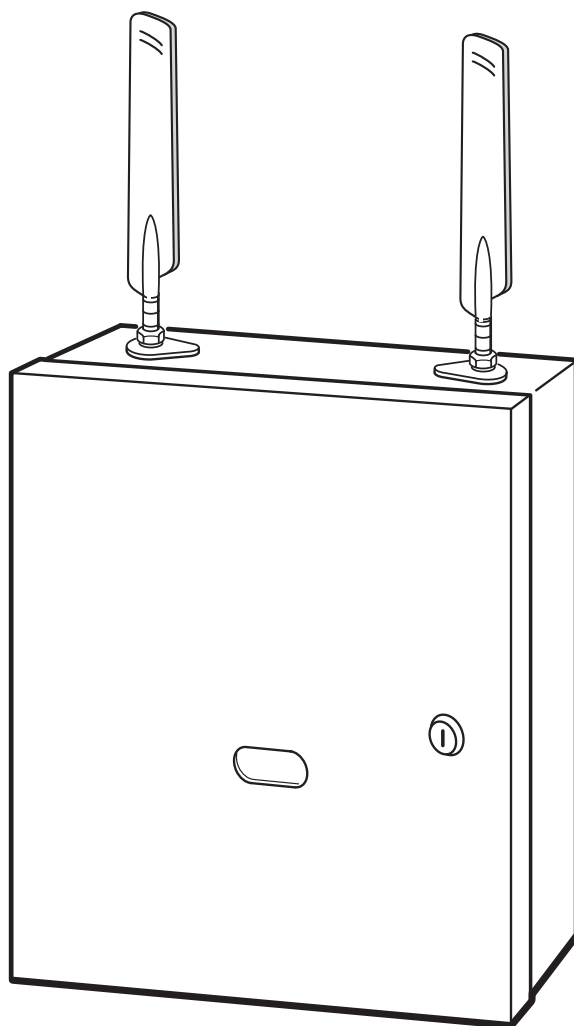


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General Information

System Overview

Introduction

Congratulations on your purchase of Honeywell's LTE-CFV/LTE-CFA Commercial Fire Panel Internet and LTE Communicator (henceforth referred to as LTE-CF). It represents the latest and most innovative communication technology for the security industry and uses the most sophisticated encryption to ensure the highest level of security for your customer.

The new cellular connectivity brings faster cellular data transfers with lower latency (response time); together it results in speedier data transfers.

This communicator uses the Internet as its primary reporting path, and switches to cell service (secondary path as backup) when the Internet is not available.



The communicator requires an AlarmNet-i account. For new installations, please obtain the account information from the central station prior to programming this communicator. For detailed information about enrolling the communicator and replacing communicators, refer to the *AlarmNet 360 Online Help Guide*.

In addition to alarm reporting, the communicator provides upload/downloading capability of Honeywell's control panel data over the Internet, using cellular technology.

UL

When performing remote downloading, a technician must be on-site to test the system after any programming is changed.

General Information

The LTE-CF communicates via the Internet (when service is available) and switches to cellular (here-in known as "cell") service when the Internet is not available.

In normal operation (with Internet connectivity), the LTE-CF communicates from your customer's network connection to the Honeywell Network Operations Center, (NOC) via the AlarmNet-i network. The NOC receives data and routes the information to the Central Station of your choice, based on the account number you assign to the communicator. Note that your Central Station needs to give you the account number. The same account number is used for both Internet and cell transmissions. If your current Central Station is capable of receiving signals from the Honeywell NOC, they are capable of receiving signals from the communicator.

If, for some reason, Internet connectivity is not available, (for example, your customer's ISP is off line or disconnected), the communicator will transmit signals via the cellular network. These transmissions are sent to the Honeywell NOC and then forwarded to your Central Station exactly the same way as if they were received via the Internet.

If the Internet and Cell network are both unavailable (fail), the message will not be sent from this communicator.



For maximum reliability, it is recommended the device be operated in dual path mode with Internet and Cell both enabled and connected.

System Features

Basic features include:

- Supports dynamic or static IP addressing, and installs behind firewalls without compromising network security.
- Quick connection to compatible Honeywell series control panels.
- Simple programming using a 7720P programming tool.
- Reports fire and status messages via the Internet.
- Reports messages via the Internet and uses Cellular as backup.
- Allows uploading and downloading of control panel data over the Internet.
(UL: A technician must be on-site to test the system after any programming is changed.)

About AlarmNet-i Internet Application

AlarmNet-i is a fully encrypted, secure method of delivering alarm messages from a protected premise to an AlarmNet equipped central station. The internet communicator transmits status, supervisory, and alarm messages to the AlarmNet Control Center using a broadband Internet connection.

The AlarmNet Control Center identifies, validates, and forwards the messages to the appropriate AlarmNet central station. AlarmNet-i has an unlimited account capacity.

Encryption

The communicator uses 256 bit AES (Rijndael) encryption (which is required for certain government installations). The AlarmNet-i AES Encryption Software Module Version 1.0 contained in the Honeywell products has NIST approval. Listings for this approval can be found at <https://csrc.nist.gov/projects/cryptographic-algorithm-validation-program/validation/validation-list/aes> and search for "Certification number 979."

UL

The IP and Cell signaling paths are suitable for encrypted line security. The system configurations are not suitable as a Dual Line Signal transmission system.

Operation

The communicator interfaces with the control panel using Honeywell's ECP bus.

- Used with any UL Listed control panel that supports ECP communication.
- The communicator connects to the control panel's keypad terminals and provides 2-way communication with the control panel using ECP messaging.
- The control panel treats the communicator as an ECP device, so ensure to program the control panel with the communicator's device address.
- Reports are sent in Contact ID format.

Supervision Features

The communicator provides the following types of supervision and fault detection:

- Network communication failure: In the event the AlarmNet network does not hear a supervisory message from the communicator within a specified time, AlarmNet notifies the central station of a communication failure.
- Communication path failure: In the event the module detects a communication path failure, both the Central Station and the control panel can be notified of the trouble condition. Both failures are considered true faults when their fault times have expired. If the Internet **or** Cell communications path fails, a message is reported.
- Primary power loss and low battery conditions (detected by the control panel, and may be reported via the communicator if programmed to do so).

Specifications

Mechanical:	Dimensions: 15.0"H x 12.75" W x 3.0" D Weight: 10 lbs.						
Input Power:	12VDC supplied by the Control Panel.						
Current Drain:	90mA (rms) standby, 105mA (rms) active						
Ethernet:	Network Standard: IEEE 802.3u compliant Data Rate: 10Base-T / 100Base-T with auto detect Ethernet Cable: Cat. 5 (min), MDI / MDI-X auto crossover						
Environmental:	Operating temperature: 0°C to +49°C Storage temperature: -40° to +70°C Humidity: 0 to 85% relative humidity, non-condensing Altitude: to 10,000 ft. operating, to 40,000 ft. storage						
Frequency Bands							
	LTE Band 2	LTE Band 4	LTE Band 5	LTE Band 12	LTE Band 13	WCDMA Band II	WCDMA Band V
LTE-CFV	X	X			X		
LTE-CFA	X	X	X	X	X	X	X
Output Power							
LTE,	Class 3	23dBm					
WCDMA	Class 3	24dBm					

Compatibility

UL – Compatible Control Panels	
VISTA-32FB	FA1670C (First Alert)
VISTA-32FBT	FA1670CT (First Alert)
VISTA-128FBP	FA1700C (First Alert)
VISTA-128FBPT	FA1700CT (First Alert)
VISTA-250FBP	
VISTA-250BPT	

UL – Compatible Receivers	
7810iR-ENT	Must be the primary alarm receiver.
8810iR	Must be the primary alarm receiver.
MX8000	Can be used for supplemental reporting in ECP mode when connected to model 7810iR-ENT.
Ademco 685	Can be used for supplemental reporting in ECP mode when connected to model 7810iR-ENT.
7810PC	Must be the primary alarm receiver

UL The Automation System must be UL1981 listed.

Compliance

To meet UL864/NFPA, ensure the following:

- It must be installed in accordance with NFPA (National Fire Protection Association) standards 70 and 72.
- It must be mounted in the same room and within 20 feet of the fire panel.
- Conduit is required for all interconnections between the Fire Panel and communicator.
- All equipment used for the IP connection (such as the router, hub, modem, etc.) shall be listed, must be powered from an un-switched branch circuit, and be provided with appropriate standby power.

Mounting and Wiring

Determine the Signal Quality and Select a Location

The communicator must be mounted indoors within the protected premises. When choosing a suitable mounting location, understand that signal strength is very important for proper operation. For most installations using the supplied antenna, mounting the unit as high as practical, and avoiding large metal components provides adequate signal strength for proper operation.

In this procedure, you will use the communicator to determine signal strength to find a suitable mounting location.

RF Exposure

Warning – The internal or external antenna(s) used with this product must be installed to provide a separation distance of at least 7.8 in. (20 cm) from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.

*** LTE-CF Initial Power Up:** Upon initial power up, the communicator LEDs blink in repeated sequence from top to bottom indicating network initialization.

Green (REG) → Yellow (TX/RX) → Red (FAULT)

This sequence may take up to 15 minutes. **Do not reset power during this time.**

When initialization is complete, the Signal Quality display LEDs will light and the yellow and red LEDs may blink (per their respective functions).

After initial network setup, subsequent resets or power ups can take up to 90 seconds.

1. For this procedure, you will need a fully charged 6V battery.
2. Attach the two Antenna Mounting Adapters, two RF cable, and two Antennas. Remove the top knockout if necessary. Refer to the Wiring Diagram on the inside of the back cover for wiring and component identification.
3. Temporarily connect the battery to the communicator (Jumper wire between TB1 pins 2 and 3, Battery Positive on TB1 pin 3, and Battery Negative on TB1 pin 4). Wait about one minute for the communicator to initialize.
4. Position the assembly near a suitable mounting position and observe the signal quality display. Choose a location with the **best signal strength** by observing the signal quality bar graph (refer to *Appendix A* for information about signal quality and status indications).
Signal quality should be within 2-5 bars lit solid. For optimal performance 4 or 5 bars are better. The best signal strength is usually found at the highest point in the building, near a window.
5. Verify the signal strength remains steady for a few minutes, then mark that mounting position. Disconnect the battery.

Mount the Communicator

This communicator comes fully assembled with all the components mounted except the external Antenna, and Antenna Mounting Adapter.

Refer to the Wiring Diagram on the inside of the back cover for wiring and component identification.

- For UL compliant installations, refer to the topic on *Compliance* in Section 1 of this manual.
- For Dry/Indoor use only.
- Unless otherwise specified, use 18AWG.
- Installation must be in accordance with the National Fire Alarm and Signaling Code, ANSI / NFPA 72.

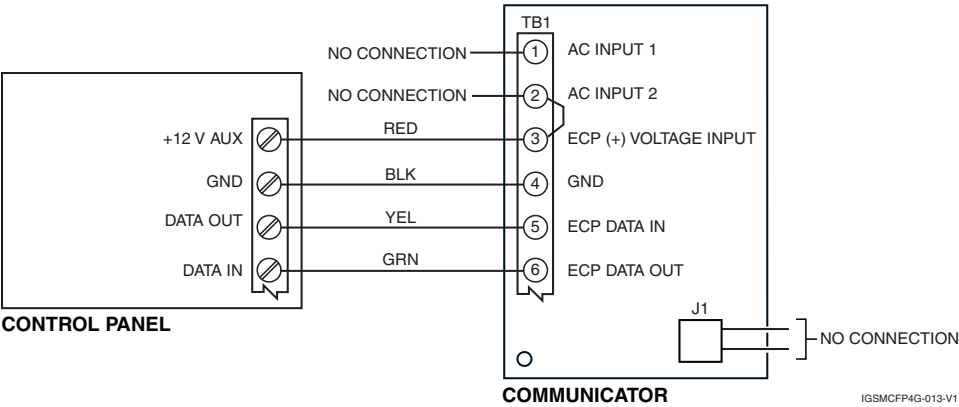
1. Remove knockouts from cabinet to accommodate the wiring to the control panel, and internet connection to a router. Then mount the cabinet securely to the wall using 4 screws or bolts. Use mounting screws or bolts that are suitable for the material being anchored to.
2. Ensure the cabinet door lock is installed.
3. Connect and route 16AWG (minimum) insulated wire from facility power ground (typically a cold-water pipe) to the cabinet's ground post. Ensure all ground connections are tight.
4. Ensure the following:
 - All wiring terminals and connectors are tight.
 - All wiring has been completed and secured with cable ties.
5. When the communicator wiring and programming (next section) is complete, lock the cabinet.

Wire the Communicator

- UL**
- Installation must be in accordance with; the National Electrical Code.
 - The communicator must be connected to a UL Listed compatible control panel.
 - All interconnecting wires between the UL Listed control panel and the communicator must be less than 20 feet in length contained in the same room. All interconnecting wiring must be installed in rigid metal conduit or EMT (Electrical Metallic Tubing) where exposed on interior walls; or in flexible metal tubing if run in the walls or ceiling.
 - All equipment used for the IP connection (such as the router, hub, modem, etc.) shall be listed, must be powered from an un-switched branch circuit, and be provided with appropriate standby power.
 - A UL listed control panel must monitor the radio fault output of the communicator.

Most Honeywell control panels support ECP data communication. Check the Installation and Setup Guide for the control panel you are using to see if it supports ECP communication.

The communicator's ECP wiring will be in parallel with keypads and other peripheral devices such as RF receiver, etc., of the control panel. Wire length/gauge limitations are the same for the communicator as they are for keypads and other peripheral devices. To wire the communicator, see the figure below and make the following connections:



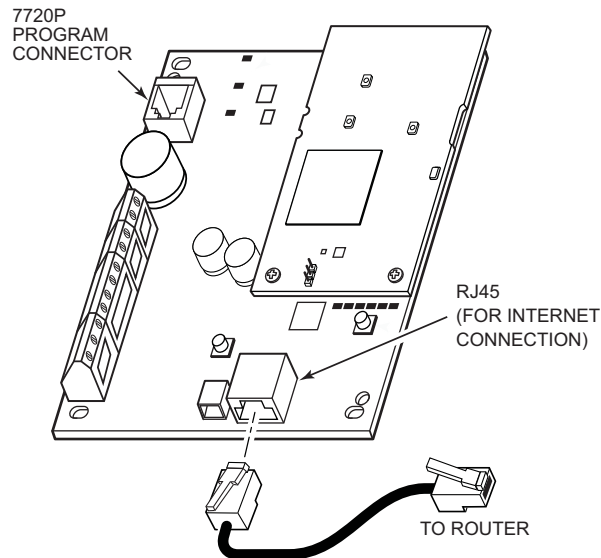
Item	Notes
Wiring	UL: Use minimum 18AWG wire.
Power	The communicator is powered from the control panel. Ensure a jumper is installed between TB1 pins 2 and 3.
ECP data	The control panel treats the communicator as an ECP device, so ensure to program the control panel with the communicator's device address.

Wire the Internet Connection

UL

- For UL installations, the Ethernet connection between the communicator and the router cannot exceed 20 feet with both the communicator and the router located within the same room.
- All equipment used for the IP connection (such as the router, hub, modem, etc.) shall be listed, must be powered from an un-switched branch circuit, and be provided with appropriate standby power.

Connect one end of the Ethernet cable to the communicator's RJ45 Ethernet connector and the other end to the cable/DSL router as shown in the figure below.



LTE-CF-001-V1

Power Up the Communicator

Power up the control panel. (Initially, all communicator programming options are set to the factory default settings.)

Programming the Communicator

General Information

The communicator is designed to deliver alarms via the Internet to an AlarmNet central station or via the cellular network when the Internet is not available.

NOTE: Out of the box, all communicator programming options are set to the factory default settings.



The communicator requires an AlarmNet-I account. For new installations, please obtain the account information from the central station prior to programming this communicator. For replacement installations, the AlarmNet-i account is created automatically when the communicator is registered.

You can program a communicator by one of the following methods:

- Through the AlarmNet 360 website
(**UL:** A technician must be on-site to test the system after any programming is changed.)
- Through use of a 7720P Programming Tool
- Through a programming mode in the control panel, on panels that support this option

Programming the Control Panel to work with the LTE-CF

For Commercial control panels, there are certain programming field settings that must be adhered to for using the communicator. (For programming information, please refer to the appropriate control panel guides.) Ensure the following programming fields are set:

COMMERCIAL Control Panels	
UL: For compatible control panels, refer to the “ <i>Compatibility</i> ” topic in section 1.	
Programming Field	Setting
*32 Primary Subscriber's Acct No.	nnnn (Required for the communicator to report.)
*56 Dynamic Signaling Delay	00 (Dialer and LRR reports go out at the same time.)
*57 Dynamic Signaling Priority	1 (Communicator, as first reporting.)
*58 Comm Central Station #1 Category Enable	111111 (All events will be reported to the primary Central Station.)
*59 Comm Central Station #2 Category Enable	000000 (If Central Station #2 is not used.) 111111 (If Central Station #2 is used.)
#93 Menu Mode	Zone programming – set Zone 803 for Type 05. Device programming – set Address 03 for Type 06 (LRR).

Programming for UL864 Compliance

This communicator provides a programmable supervision feature that allows the system to meet the UL864 Commercial Fire requirements. These requirements are in the following table.

NOTICE TO USERS, INSTALLERS, AUTHORITIES HAVING JURISDICTION AND OTHER INVOLVED PARTIES				
This product incorporates field programmable software. In order 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 settings or not used at all as indicated below.				
Selected Com. Path	Supervision Interval	IP Fault Time	Cell Fault Time	UL864 Compliant?
2010 Cell	5 minutes	N/A	5 minutes	Y*
2010 IP	5 minutes	5 minutes	N/A	Y*
2010 IP & Cell	24 hours	1 hour	1 hour	Y*
2013 Cell	1 hour	N/A	1 hour	N
2013 IP	1 hour	1 hour	N/A	N
2013 IP & Cell	6 hours	1 hour	1 hour	N

* Only the indicated setting is compliant. Any other value in this field will not meet UL864 Commercial Fire requirements.

Using the AlarmNet 360 Website

To program the communicator via the website (if you are already signed up for this service), go to: www.alarmnet60.com

UL

When performing remote downloading, a technician must be on-site to test the system after any programming is changed.

Log in and follow the on-screen prompts.

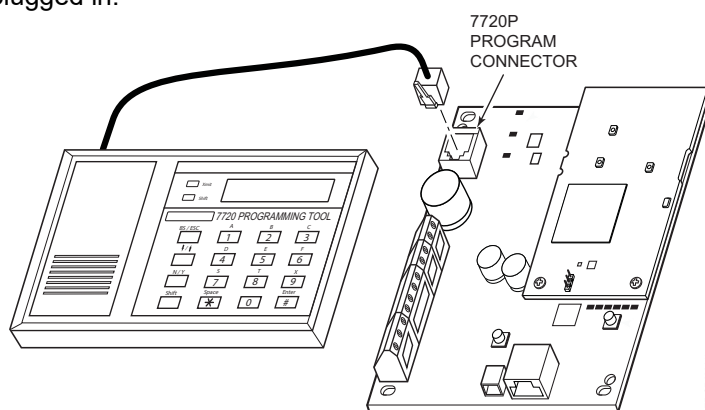
Please have the following information available when programming the communicator:

1. Primary City ID (two-digit number)
2. Primary Central Station ID (two-digit hexadecimal number)
3. Primary Subscriber ID (four-digit number)
4. MAC ID and MAC CRC number (located on the box and inside the communicator)

After programming is complete, you must transfer the data to the communicator and the communicator must be registered. Refer to *Section 4: Registration*, for further instructions.

Using a 7720P Programming Tool

Connect the 7720P Programming Tool as shown below. The communicator powers the 7720P Programming Tool via the programming jack, and automatically senses the presence of the 7720P when it is plugged in.



7720P Programming Tool Connection

Each key of the 7720P has two possible functions: a normal function and a Shift function.

To perform a normal key function, simply press the desired key.

To perform a Shift function, press the [shift] key, and then press the appropriate key.

The prompts in this document reflect use of the 7720P Programming Tool. The table below lists each normal and shift key function.

7720P Normal and Shift Key (shift LED lit) Functions

KEY	NORMAL KEY FUNCTION	SHIFT KEY FUNCTION
BS/ESC	[BS]: Press to delete entry	[ESC]: Press to quit program mode; also can reset programming defaults*
↓/↑	[↓]: Scroll down programming	[↑]: Scroll up programming
N/Y	[N]: Press for "NO" answer	[Y]: Press SHIFT-Y for "YES" answer
SHIFT	Press before pressing a SHIFT key function. Will light SHIFT LED. LED goes out once a key is pressed. Press again for each SHIFT function desired.	
1/A	[1]: For entering the number 1	[A]: For entering letter A
2/B	[2]: For entering the number 2	[B]: For entering letter B
3/C	[3]: For entering the number 3	[C]: For entering letter C
4/D	[4]: For entering the number 4	[D]: For entering letter D
5/E	[5]: For entering the number 5	[E]: For entering letter E
6/F	[6]: For entering the number 6	[F]: For entering letter F
7/S	[7]: For entering the number 7	[S]: For entering letter S
8/T	[8]: For entering the number 8	[T]: For entering letter T
9/X	[9]: For entering the number 9	[X]: For entering letter X
SPACE	[SPACE]: For scrolling option list	No SHIFT function
0	[0]: For entering the number 0	No SHIFT function
#/ENTER	[#/ENTER]: Starts programming mode; Press to accept entries	No SHIFT function

* Active only when the "Exit Programming Mode" prompt is displayed.

Using the Control Panel Programming Mode

Most control panels support programming of the communicator through the control panel programming mode (refer to the control panel's installation guide). If programming through the control panel, only the ECP Mode programming options are available. The "mode" prompts will not be displayed, and the mode cannot be changed. For a description of key functions on the control panel keypad, and how they map to the 7720P Programming tool, refer to the control panel's Programming Guide.

Programming Conventions

Programming is accomplished by answering a series of prompts. Most prompts require only a [Y]es or [N]o response, while others require a numerical response (ID numbers, etc.).

The current value is displayed on the second line in parentheses (). A "?" indicates an invalid entry.

Use the [ENTER] key to accept the current entry and proceed to the next prompt. If the entered value is invalid, pressing [ENTER] re-displays the prompt; the next prompt is not displayed until a valid answer is entered.

Use the up/down arrow keys to scroll through the programming prompts without changing any values. Press the [ESC] key to go to the end of the list of prompts.

Programming

The communicator supports ECP messaging via the control panel's ECP bus. These messages are in Contact ID format. (Not all control panels support the ECP bus, so be sure to check the control panel's Installation and Setup Guide to see if it supports this feature.)

Press the [ENTER] key to begin programming.

NOTE: The central station can remotely block access to local device programming. If this has been done, the following prompt appears:

**Access to Prog
Mode Denied**

Programming the communicator

	PROMPTS	OPTIONS	DESCRIPTION
1	Strt Prog Mode? (Y/N)_	[Y], [N]	Enters programming mode.
2	Enter Password:	[0-9, A-F, N, S, T, X, Y]	If a password has been previously assigned, this prompt appears. Enter a 4-digit password (0-9, A-F, N, S, T, X, Y). The next prompt appears.
3	Program Device? (Y/N)_	[Y], [N]	To begin programming the communicator, press [Y] and go to Prompt 10: "Device Mode." To create a password if none has been assigned, press [N] and go to Prompt 4: "Create Password." To change an existing password, press [N] and go to Prompt 5: "Change Password."
4	Create Password? (Y/N)_	[Y], [N]	Passwords can be used to protect account and programming information. If no password has been assigned, this prompt appears after pressing [N] at the "Program Device?" prompt. If a password is desired, press [Y] and go to "Enter Password."
5	Change Password? (Y/N)_	[Y], [N]	If a password has already been assigned, this prompt appears after pressing [N] at the "Program Device?" prompt. Press [Y] if you want to change the password. NOTE: To clear an existing password, without entering a new one, answer [Y] to the "Change Password?" prompt, then press the [Enter] key when prompted for the new password and its confirmation.
6	Enter Password	[0-9, A-F, N, S, T, X, Y]	This prompt is displayed if [Y] was pressed in Prompt 4 or 5. Enter a 4-digit password (0-9, A-F, N, S, T, X, Y).
7	Verify Password	[0-9, A-F, N, S, T, X, Y]	Re-enter the password as confirmation. If the password doesn't match the first entry, the following is displayed followed by the "Exit Prog. Mode?" prompt: Verify Not OK PSWD not created Otherwise, the "Exit Prog. Mode?" prompt is displayed directly.

	PROMPTS	OPTIONS	DESCRIPTION																												
8	Exit Prog. Mode? (Y/N)_	[Y], [N] [ESC]	Exits program mode. Press [N] to go back to Prompt 3. Press [ESC] to load factory defaults. Refer to the Exiting Programming Mode paragraph in this section.																												
9	Comm Path Choice (2010 IP & Cell)_	2010 IP & Cell 2013 IP 2013 Cell 2013 IP & Cell 2010 IP 2010 Cell	The Comm Path Choice option is a dual-purposed option. The selection sets the Comm Paths available to the communicator as well as the supervision interval and fault times necessary to comply with the selected edition of the NFPA72 standard. The two editions of the standard are 2010 and 2013. The AlarmNet network must hear at least one message from the device during this supervision period; otherwise, AlarmNet notifies the central station that a communication failure occurred. This interval cannot be changed.																												
The settings that correspond to the choices are:																															
<table> <tr> <th><u>Choice</u></th><th><u>Supervision Interval</u></th><th><u>IP Fault Time</u></th><th><u>Cell Fault Time</u></th></tr> <tr> <td>2010 IP & Cell</td><td>24 hours</td><td>1 hour</td><td>1 hour</td></tr> <tr> <td>2013 IP</td><td>1 hour</td><td>1 hour</td><td>- - -</td></tr> <tr> <td>2013 Cell</td><td>1 hour</td><td>- - -</td><td>1 hour</td></tr> <tr> <td>2013 IP & Cell</td><td>6 hours</td><td>1 hour</td><td>1 hour</td></tr> <tr> <td>2010 IP</td><td>5 minutes</td><td>5 minutes</td><td>- - -</td></tr> <tr> <td>2010 Cell</td><td>5 minutes</td><td>- - -</td><td>5 minutes</td></tr> </table>				<u>Choice</u>	<u>Supervision Interval</u>	<u>IP Fault Time</u>	<u>Cell Fault Time</u>	2010 IP & Cell	24 hours	1 hour	1 hour	2013 IP	1 hour	1 hour	- - -	2013 Cell	1 hour	- - -	1 hour	2013 IP & Cell	6 hours	1 hour	1 hour	2010 IP	5 minutes	5 minutes	- - -	2010 Cell	5 minutes	- - -	5 minutes
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2010 IP	5 minutes	5 minutes	- - -																												
2010 Cell	5 minutes	- - -	5 minutes																												
NOTE: Account information is provided by the central station administrator. (Prompts 10-12)																															
10	Primary City ID (??)_	[01-99]	Enter the 2-digit primary city ID, 01-99 (decimal).																												
11	Primary CS ID (??)	[01-FE]	Enter the 2-digit primary central station ID number, 01-FE (HEX).																												
12	Primary Sub ID (????)	[0001-9999]	Enter the 4-digit subscriber account number, 0001-9999 (decimal).																												
NOTE: Prompts 13 through 17 only appear if the Comm Path Choice is IP, or IP&Cell.																															
13	IP Flt Time (60 mins)	[00-60]	This prompt appears only if comm. path includes IP&Cell or IP. Enter the time delay (1 – 60) in minutes before the communicator notifies the control there is a communication path failure over cell. If the panel has an alternate communication path, a secondary path loss message is sent to the central station.																												
	NOTE: Refer to table above for correct default values.																														

	PROMPTS	OPTIONS	DESCRIPTION
14	Cell Flt Time (60 mins)	[00-60]	This prompt appears only if comm. path includes IP&Cell or Cell. Enter the time delay (1 – 60) in minutes before the communicator notifies the control panel that there is a communication path failure to AlarmNet over the hard-wired Ethernet connection. If the panel has an alternate communication path, a primary path loss message is sent to the central station.
	NOTE: Refer to table above for correct default values.		
	NOTES: - Changing the IP and Cell comm. path choice defaults the value according to the table in prompt 5. - The control is notified of the failure after the Cell and/or IP fault times expire.		
15	Use DHCP Y/N (Y)_	[Y], [N]	Dynamically allocates the IP addresses (recommended). If [N], uses fixed IP addresses.
16	NIC IP Address: 255.255.255.255_	12 digit: xxx.xxx.xxx.xxx	Enter the 4-part address for this device. The 4 parts of the address must be separated by spaces (displayed as periods in Review mode).
17	Subnet Mask: 255.255.255.255_	12 digit: xxx.xxx.xxx.xxx	Enter the 32-bit address mask used to indicate the portion (bits) of the IP address that is being used for the subnet address. The 4 parts of the address must be separated by spaces (displayed as periods in Review mode).
18	Gateway IP Addr: 255.255.255.255_	12 digit: xxx.xxx.xxx.xxx	Enter the 4-part address assigned to the Gateway. The 4 parts of the address must be separated by spaces (displayed as periods in Review mode).
19	DNS Serv IP Addr: 255.255.255.255_	12 digit: xxx.xxx.xxx.xxx	Enter the 4-part IP address assigned to the DNS (Domain Name System) server. The 4 parts of the address must be separated by spaces (displayed as periods in Review mode).
20	Review? Y/N	[Y] = review [N] = exit	Reviewing Programming Mode Entries To review the programming options (to ensure that the correct entries have been made), press [Y]. The programming prompts are displayed again. Use the up/down arrow keys to scroll through the program fields without changing any of the values. If a value requires change, simply type in the correct value. When the last field is displayed, the "REVIEW?" prompt again appears. To exit the programming mode , press [N] in response to the "REVIEW?" prompt, and refer to <i>Exiting Programming Mode</i> at the end of this section.

Exiting Programming Mode

To exit the programming mode, press [N] in response to the "REVIEW?" prompt. Then press [Y] to the "Exit Prog Mode?" prompt. Upon exiting, the root file is updated to log the changes made. A message is displayed telling the user that this step is being executed. When complete, the message "DONE" is displayed to indicate the file was successfully uploaded.



If critical configuration changes were made, such as the mode of operation, the communicator will reset to ensure that the programming features are enabled.

If the file is not successfully uploaded, one of the following prompts will be displayed. Follow the steps shown below until the upload is successful.

Display	Description	What to do
Cannot Upload Try Again? Y/N_	Communicator is not yet initialized.	Wait for RSSI LEDs to be lit. Press [Y].
Failed to Update Root File!	Network problem, or you answered "N" to "Cannot Upload Try Again?" prompt.	Initiate the Force Server Update Command by pressing the [0] key; refer to <i>Section 5: Programmer Keyboard Commands</i> .

Setting Factory Defaults

To reset the programming options to factory-default values, press [ESC] at the "Exit Prog Mode?" prompt.

Set Default?
Y/N_

Press [Y] to reset factory default values.

Press [N] to cancel this function.

If you press [Y], all programmed values are reset to the original factory settings. PLEASE NOTE THAT THIS WILL ERASE ANY PASSWORD THAT MAY HAVE BEEN ENTERED. After pressing [Y], the Create Password prompt appears (see Prompt 4).

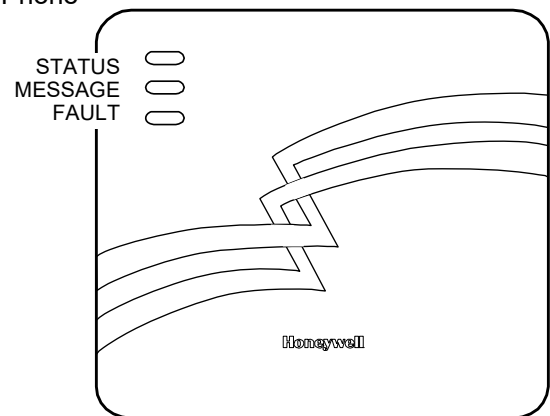
Registration

Registering the Communicator

Once you have programmed the communicator, it must be registered to enable the AlarmNet account. Registering the communicator activates the account with AlarmNet and enables the security system's control panel to send reports. You can register by using one of the following methods:

- AlarmNet 360 website
- 7720P Programming Tool
- Test Message/Registration switch
- Phone

LED	DESCRIPTION
STATUS (green)	ON – Is NOT registered with AlarmNet. OFF – Is registered with AlarmNet.
MESSAGE (yellow)	ON – Message transmission pending. QUICK PERIODIC BLINK - Normal SLOW BLINK – In unison with green LED, Registration in progress.
FAULT (red)	OFF – No fault present.



You can monitor the registration process by viewing the display LEDs. The TX/RX (yellow) LED and the REG (green) LED will blink slowly in unison while registration is in progress.

When the registration successfully completes, the communicator enters a normal operating mode; the REG (green) LED goes out and the TX/RX (yellow) LED is lit to indicate that the power-on / reset message is waiting to be sent. This message will appear at the receiving station as "E339 803". The description may read "Trouble – Exp. Mod. Reset". If registration is not validated within 90 seconds, the communicator times out, and the REG (green) LED will be lit solid.

Registering through the AlarmNet 360 Website

To register the communicator via the website, go to: AlarmNet360.com
Log in and follow the on-screen prompts.

Please have the following information available:

- Primary City ID (two-digit number).
- Primary Central Station ID (two-digit hexadecimal number).
- Primary Subscriber ID (four-digit number).
- MAC ID and MAC CRC number (located on the box and inside the communicator).

After the communicator is registered, you may log out of the AlarmNet 360 website.

Register using the TEST/REGISTRATION Switch

Initiate the registration sequence by clicking the TEST/REGISTRATION switch three times.

You can monitor the registration process by viewing the Status Display. The Message (yellow) LED and the Status (green) LED will blink slowly in unison while registration is in progress.

Once the registration has been completed successfully, the communicator enters normal operating mode; the Status (green) LED goes out and the Message (yellow) LED is lit to indicate that the Power On / Reset message is waiting to be sent. This message will appear at the receiving station as "E339 C08xx", where "xx" is the ECP device address. The description may read "Trouble – Exp. Mod. Reset". If registration is not validated within 90 seconds, the communicator times out, and the (green) LED will be lit (solid).

If repeated registration attempts time out, check your Internet connection and RSSI level, and verify the account information has been entered correctly.

Register using the Programming Tool

The interactive registration feature allows the installer to register the communicator through a series of keyboard commands on the 7720P Programming Tool. This method of registration lets the installer monitor the registration process.

Registering ...

Once the installation is complete, press the [Shift] and the up arrow [↑] key on the 7720P. The registration message is sent and the unit waits for the acknowledgment.

Registration
SUCCESS

If this is a new installation and the city, central station, and customer numbers have been correctly entered, the communicator is registered and this message is displayed. The communicator is now in full service and available for alarm reporting to the central station.

Possible Errors

Registration BAD
Timed Out

Displayed if no response to the registration request is received.

Registration BAD
Pri Sub ID BAD

Indicates the city, central station, or customer number for the labeled account(s) is not accepted. The ID information was either entered incorrectly, or the central station failed to pre-authorize programmed ID numbers with AlarmNet customer service.

Registration BAD
Pri ID – Need PIN

Displayed if this is a repair/replacement, or an error was made in programming the Primary account information of the communicator for an existing account. This prompt appears for 2 seconds. See the *Replacing an existing communicator* section below for further displays.

Replacing an existing communicator

Enter PIN#

This prompt appears after pressing the [Shift] and down arrow [↓] on the 7720P.

NOTE: If it is necessary to exit registration mode, press ESC from the 7720P programming tool.

Enter a 4-digit alphanumeric PIN number provided by your central station, your dealer or an authorized AlarmNet representative.

Press the [Enter] key.

Registering ...

The registration message is sent and the unit waits for acknowledgement.

Registration
SUCCESS

If the PIN is valid, the new communicator is registered and the old unit unregistered. Additionally, AlarmNet sends a substitution alarm to the central station.

Registration BAD

If you entered an invalid PIN, the appropriate message is displayed depending on which account number is being replaced (see above for exact wording). The registration process is repeated.

NOTE: Each attempt causes a substitution alarm to be sent to the central station.

Register by Phone

You can register the communicator by calling the AlarmNet Technical Assistance Center (TAC) at 1-800-222-6525. You will need the following information:

- MAC number (found on the label).
- Subscriber information (provided by the central station), including a city code, CSID, and a subscriber ID.
- When instructed to do so, triple-click the TEST/REGISTRATION switch to complete the registration.

Programmer Keyboard Commands

Programmer keyboard commands can be used to quickly view your connectivity settings and options. Most commands require you to press the [Shift] key and then the designated command key. (See the keys designated in red on the 7720P Programming Tool.)

[A]	LTE-CFV x.x.xx mm/dd/yy	Software Revision "x.x.xx" indicates the installed software Revision. "mm/dd/yy" indicates month, day and year of the revision.
[A]	LTE-CFA x.x.xx mm/dd/yy	Software Revision "x.x.xx" indicates the installed software Revision. "mm/dd/yy" indicates month, day and year of the revision.

Identification Displays

[B]	MAC xxxxxxxxxxxx MAC CRC yyyy	MAC Address "xxxxxxxxxxxx" indicates the communicator's unique identification number. "yyyy" indicates the MAC CRC number. This number is found on the box and inside the communicator. Press the [Space] key to go to the next field <u>if Cell is one of the comm path choices</u> . Otherwise the display will remain unchanged. Press the backspace [BS] key to go to the IMEI display <u>if Cell is one of the comm path choices</u> . Otherwise the display will remain unchanged.
NOTE: The SCID and IMEI are only displayed if the Comm Path Choice is "IP&Cell" or "Cell".		
	SCID xxxxx xxxxx xxxxx xxxxx	SCID Display Displays the identification number assigned to the SIM card (SCID) in this device. Press the [Space] key to go to the next field. Press the backspace [BS] key to go to the previous field.
	IMEI xxxxxxxx xxxxxx x	IMEI Display Displays the identification number assigned to the Cell module in this communicator. Press the [Space] key to get the MAC Address. Press the backspace [BS] key to go to the previous field.
[C]	Mon 01 Jan 2011 05:48:39 am	Time Retrieves the current date and time from the AlarmNet network in Greenwich Mean Time (GMT). This display confirms the communicator is in sync with network.
[D]	NOTE: The Physical Link and NIC IP Address is only displayed if the Comm Path Choice is "IP&Cell" or "IP".	
	Physical Link Good/Bad	Network Diagnostics Display Indicates whether the device has detected a physical connection to the internet. Press the [Space] key to go to the next field.

NIC IP Address xxx.xxx.xxx.xxx	IP Information Display Displays the IP address assigned to this device. Press the [Space] key to go to the next field.
NOTE: The Subnet Mask, Gateway IP Addr, DSN Serv IP and DHCP are only displayed if the Comm Path Choice is "IP&Cell" or "IP".	
Subnet Mask xxx.xxx.xxx.xxx	Displays the 32-bit address mask used to indicate the portion (bits) of the IP address that is being used for the subnet address. Press the [Space] key to go to the next field. Press the backspace [BS] key to go to the previous field.
Gateway IP Addr xxx.xxx.xxx.xxx	Displays the IP address assigned to the Gateway. Press the [Space] key to go to the next field. Press the backspace [BS] key to go to the previous field.
DNS Serv IP xxx.xxx.xxx.xxx	Displays the IP address assigned to the DNS (Domain Name System) server. Press the [Space] key to go to the next field. Press the backspace [BS] key to go to the previous field.
Encryption Test AES Passed!	Performs a self-test of the AES encryption algorithm. Press the [Space] key to go to the next field. Press the backspace [BS] key to go to the previous field.
DHCP OK	DHCP (Dynamic Host Configuration Protocol) indicates server is performing satisfactorily. Press the [Space] key to go to the Physical Link display.

Cell Status Displays

NOTE: The Status Displays are available only if the Comm Path Choice is "IP&Cell" or "Cell".

[E] Operating with Cellular Service

RAT	SigQual	REG
LTE/3G	*****	x

Cellular Status Display Screen 1

RAT – Radio Access Technology. – LTE or 3G

SigQual – Signal Quality (1-5 “*”)

REG – Registration status where “x” can be:

N – Not Registered

H – Registered Home

S – Searching

D – Registration Denied

R – Registered Roaming

? – Unknown Registration State

If the RAT is LTE, the number of stars is derived from received power (RSRP) and the received quality (RSRQ). The lower number of stars of the two ratings is what is displayed as overall quality.

NOTE: For adequate signal strength, must be 2 stars or more.

Press the [space] key to go to the next screen.

RSRP:

Greater than -85dBm = 5 stars

-86dBm to -95dBm = 4 stars

-96dBm to -105dBm = 3 stars

-106dBm to -115dBm = 2 stars

-116dBm and lower = 1 star

RSRQ:

Greater than -10dB = 5 stars

-11dB to -12dB = 4 stars

-13dB to -14dB = 3 stars

-15dB to -16dB = 2 stars

-17dB and lower = 1 star

Press the [backspace] key to go to the last screen.

LTE Displays

RAT	RSRP	RSRQ
LTE	xxxx	xxxx

Signal Display for LTE

RAT – Radio Access Technology.

RSRP – Reference Signal Received Power

RSRQ – Reference Signal Received Quality

Press the [space] key to get to the next screen.

Press the [backspace] key to go to the previous field.

RSRP	MIN	MAX
xxxx	xxxx	xxxx

Min/Max Signal Display for LTE

RSRP – Current Reference Signal Received Power

MIN – Minimum Receive Signal Level

MAX – Maximum Receive Signal Level

Press the [space] key to get to the next screen.

Press the [backspace] key to go to the previous field.

RSRQ	MIN	MAX
xxxx	xxxx	xxxx

Min/Max Signal Quality Display for LTE

RSRQ – Current Reference Signal Received Quality

MIN – Minimum Receive Signal Quality

MAX – Maximum Receive Signal Quality

Press the [space] key to get to the next screen.

Press the [backspace] key to go to the previous field.

Cntry	Netw	TAC
xxx	xxx	xxxxx

Location Display for LTE

Cntry – Country Code

Netw – Network Code

TAC – Tracking area code

Press the [space] key to get to the next screen.

Press the [backspace] key to go to the previous field.

GCell	Chan
xxxxxx	xxxx

Cell Display for LTE

GCell – Global Cell ID

Chan – RF Channel number (EURFCN)

Press the [space] key to go to the next screen.

Press the [backspace] key to go to the previous field.

Band	Mode
xxx	xxxx

LTE Status Display Screen 5

Band – LTE Band Number

Mode – LTE Mode either FDD or TDD

Press the [space] key to go to Status Display Screen 1.

Press the [backspace] key to go to the previous field.

[E]

Operating with 3G Service

RAT	RSCP	EC/No
3G	-xxx	-xxxxxx

Signal Display for 3G

RAT – Radio Access Technology.

RSCP – Received Signal Code Power

Ec/No – Carrier Noise Ratio (CNR)

Press the [space] key to get to the next screen.

Press the [backspace] key to go to the previous field.

RSCP	MIN	MAX
xxxx	xxxx	xxxx

Min/Max Signal Display for LTE

RSRP – Current Reference Signal Received Power

MIN – Minimum Receive Signal Level

MAX – Maximum Receive Signal Level

Press the [space] key to get to the next screen.

Press the [backspace] key to go to the previous field.

Cntry	Netw	LAC
xxx	xxx	xxxxx

Location Display for 3G

Cntry – Country Code

Netw – Network Code

LAC – Local area code

Press the [space] key to get to the next screen.

Press the [backspace] key to go to the previous field.

Cell	Chan	PSC
xxxxxx	xxxx	xxx

Cell Display for 3G

Cell – Global Cell ID

Chan – Control Channel in use

PSC – Primary Sync Code

Press the [space] key to go to the next screen.

Press the [backspace] key to go to the previous field.

Second Site	RSSI
Available	

3G Status Display Screen 5

Secondary Site RSSI availability. Available or Not Available will be displayed.

Press the [space] key to go to Status Display Screen 1.

Press the [backspace] key to go to the previous field.

[F]

NOTE: The Network Diagnostic Test is available only if the Comm Path Choice is "IP&Cell" or "IP".

Testing Gateway
Redir 1

Run Network Diagnostic TestPerforms a set of network diagnostics that tests the integrity of the links between the communicator and the various connection points (Redirs) to AlarmNet. Refer to Section 6: *Network Diagnostics*.

System Status Display

[S]	ECP Flt OK	ECP Mode Displays the system status. Flt – Represents radio faults: OK = Normal ; No fault I – No network connectivity over IP and fault time has expired i – No network connectivity over IP and fault time has NOT yet expired. G = No network connectivity over Cell and fault time has expired. g = No network connectivity over Cell and fault time has NOT yet expired.
[T]	Test Msg Sent	Test Alarm Sends a Test alarm to AlarmNet. Functional for a <i>registered</i> communicator only. If the device is not registered, a message is displayed indicating that the command cannot be executed.
[X]	Reset CPU Y/N	Reset the Communicator. Pressing [N] returns to diagnostic mode (blank screen = enter next command or escape). Pressing [Y] resets the communicator (blank screen = reset complete).
[↑] (UP arrow)	Registering ...	Registration Registers a programmed communicator with AlarmNet.
[↓] (DN arrow)	Enter PIN#	Registration with PIN for Replacement Communicator Registers a replacement communicator with AlarmNet, once programmed, using the existing PIN #.
[0]	Force Server Update? Y/N	Force Upload of Configuration File to Server Pressing [Y] will force the device to upload its entire configuration file to the server. Pressing [N] cancels the operation. NOTE: If the internet is not available, and the communicator is not initialized when you enter this command, the following screen will be displayed: Cannot Upload Try Later! _ Wait for the Signal Quality LEDs to light, indicating the communicator has completed its initialization, and try again.
[ENTER]	Strt Prog Mode? Y/N_	Enter Program Mode Press [Y] to enter program mode; otherwise, press [N].

Network Diagnostics

Running Network Diagnostics

The network diagnostic process tests the integrity of the links between the communicator and the various connection points of AlarmNet Control that are known as "REDIRECTORS" (Redirs or RDR).

To initiate the network diagnostics, press the [F] key on the 7720P Programming Tool.

NOTES:

- The Network Diagnostics is available only if the Comm Path Choice is "IP&Cell" or "IP".
- The test is performed ONLY if a physical link is detected. If no physical link is detected, the test is aborted and the following is displayed:

NO PHYSICAL LINK

If a physical link is detected, the diagnostics are performed. The following shows the progression of the test:

Testing Redir 1

The first step of the test traces the connection to Redir 1 at AlarmNet Control.

Testing Redir 2
Reached Gateway

A successful trace to Redir 1 is indicated here. See below for possible errors that may occur at this stage of testing.

Redir 1
Service OK

The service at AlarmNet Control on Redir 1 is functioning. See below for possible errors that may occur at this stage of testing.

Testing Redir 2

The first step of the test traces the connection to Redir 2 at AlarmNet Control.

Redir 2
Service OK

The service at AlarmNet Control on Redir 2 is functioning. See below for possible errors that may occur at this stage of testing.

Testing Redir 3

The first step of the test traces the connection to Redir 3 at AlarmNet Control.

Redir 3
Service OK

The service at AlarmNet Control on Redir 3 is functioning. See below for possible errors that may occur at this stage of testing.

RDR1 RDR2 RDR3
OK OK OK

A summary of the tests is displayed after Redir 3 is tested. The example shows that the tests of all three connection points, or Redirs, were successful. If an error occurred at any point, the summary will display "FAIL" under the faulty Redir.

Possible Errors Running Network Diagnostics

Errors may occur either while tracing the connection to a given Redir or while testing the service at a given Redir. The following list highlights the most common errors. Please contact the AlarmNet Technical Assistance Center (TAC) for help regarding any errors NOT listed below:

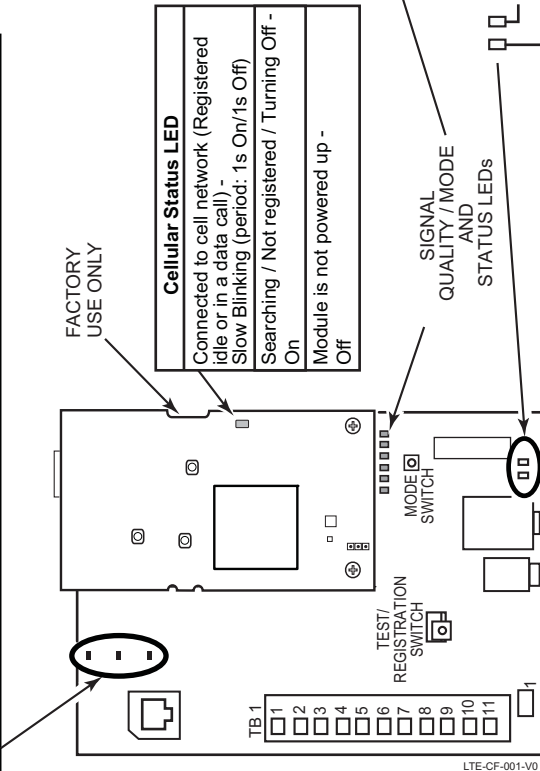
Possible Errors

Testing Redir x FAIL before Gtwy	While tracing the connection to Redir x, the trace fails before ever reaching the local gateway (router).
Testing Redir x FAIL at Gtwy	While tracing the connection to Redir x, the trace fails after reaching the local gateway (router).
Testing Redir x FAIL at Pvt IP	While tracing the connection to Redir x, the trace fails after reaching the private IP.
Testing Redir x FAIL on IP Addr	While tracing the connection to Redir x, the trace fails after reaching the public IP.
Redir x ERR:Proxy 18	After a successful trace to Redir x, the test of the network service timed out without a response.

Appendix A: Summary of LED Operation

Note: If all LEDs FAST BLINK in unison with the Signal Quality LEDs this indicates a Hardware Error.

GRN	ON – NOT registered with AlarmNet. OFF – Registered with AlarmNet. FAST BLINK – Download session with Compass in progress. SLOW BLINK – In unison with yellow LED, registration in progress.
YEL	ON – Message transmission pending. QUICK PERIODIC BLINK – Normal. FAST BLINK – Message waiting for network ACK. SLOW BLINK – Idle power abnormal. SLOW BLINK – In unison with green LED, registration in progress.
RED	ON – No contact with network. OFF – Normal. SLOW BLINK – Loss of communication with the panel (ECP fault). FAST BLINK – No network contact AND loss of communication with the panel.



MODULE'S SIGNAL QUALITY When the Mode Switch is NOT depressed, LED 1 will illuminate red. The remaining LEDs indicate signal quality.			
MODULE'S OPERATION MODE When the Mode Switch IS depressed, LED 1 will be OFF. LEDs 2 and 3 indicate the module's communication mode with the control panel.		Mode	LED 2 (yellow)
ECP			LED 3 (green)
OFF			OFF
MODULE'S STATUS When the Mode Switch IS depressed, LED 1 will be OFF. LEDs 4, 5, and 6 indicate the module's Status.		LED 4 (green)	LED 5 (green)
ON - Connected to Internet.		ON - Cell service available.	ON - Module registered, no second site available.
OFF - Not connected to Internet.		OFF - No Cell service available.	OFF - Module not registered with network carrier.
		FAST BLINK - Cell in use.	SLOW BLINK - Module registered, second site available, and low signal strength.
			NORMAL BLINK - Module registered, second site available, acceptable signal strength.
			FAST BLINK - Module registered, second site available, excellent signal quality.

Ethernet Link/Activity GREEN	ON – Link detected. OFF – No link detected. BLINKS – Network activity.
Link Speed GREEN	ON – 100 MB/S link to Internet. OFF – 10 MB/S link to Internet.

Appendix B: Central Station Messages

Alarm Condition	ECP Mode	
	Alarm Code	Restore Code
Power On / Reset	E339 C08xx*	
ECP Supervision (Possible Compromise Indication)	E355 C0000	R355 C0000
Primary Comm Path Supervision	E350 C0951	R350 C0951
Secondary Comm Path Supervision	E350 C0952	R350 C0952
Periodic Cell Comm Test Failure	E358 C0803	
Application Code Update	E903 C08xx	R903 C08xx (success)
Application Code Update Failure	E904 C08xx	
Module Firmware Update	E365 C08xx	R365 C08xx (success)
Module Firmware Update Failure	E366 C08xx	
Test	5555 5555 9	
Specific to COMMERCIAL Control Panels (Such as the VISTA-128/250 series.)		
Communicator Trouble (ECP bus, network) (Possible Compromise Indication)	E333 C08xx* ‡	R333 C08xx* ‡
Radio Loss of Signal (Possible Compromise Indication)	E357 0 8xx* †	R357 0 8xx* ‡ or R380 0 8xx* ‡
Radio Fault (ECP Bus)	E333 0 8xx* ‡	R333 0 8xx* ‡
AlarmNet Messages		
Communication failure. (Possible Compromise Indication)	E359 0 C950	R359 0 C950
Authorized Radio Substitution	00D0 010C 0	
Unauthorized Radio Substitution Attempt	00D0 010E 0	
Service Termination	00D0 020E 0	

* xx = Communicator Device Address

† = Message is sent by dialer only.

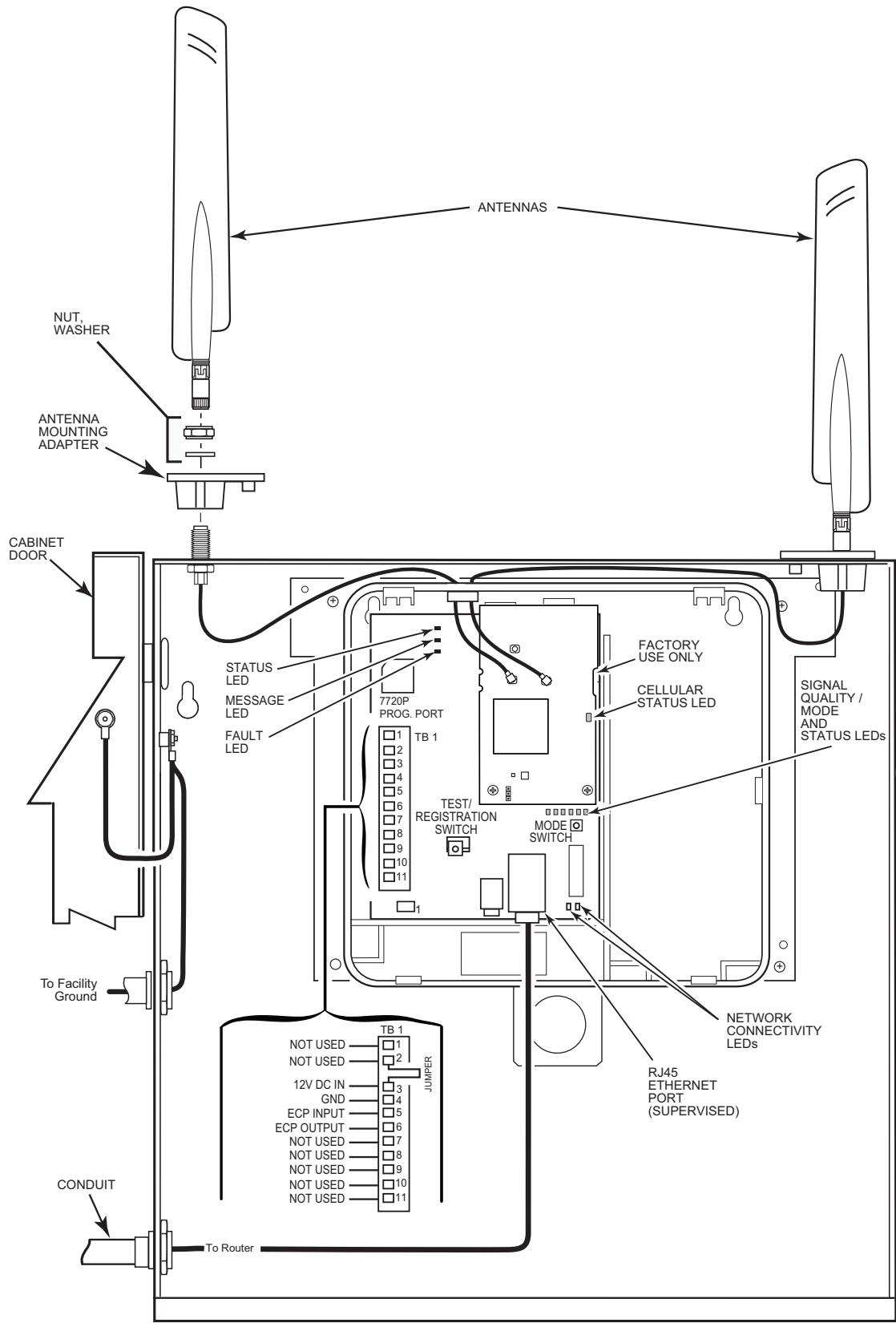
‡ = Message is sent by dialer and radio.

◇ = Message is sent by dialer only, or dialer and radio, depending on failure.

Appendix C: Glossary

4G LTE	Refers to the fourth generation of cellular wireless standards. It is a successor to 3G and 2G families of standards. 4G provides up to 10 times the data transfer speeds of 3G.
AES	Advanced Encryption Standard
DACT	Digital Automated Communications Terminal
DHCP	Dynamic Host Configuration Protocol, which provides a mechanism for allocating IP addresses dynamically so that addresses can be reused when hosts no longer need them.
DNS	Domain Name System, which is a distributed hierarchical naming system used to resolve domain names (e.g., www.yahoo.com) into numerical IP addresses (e.g., 204.17.25.1.).
DSL	Digital Subscriber Line.
ECP	Enhanced Console Protocol, which is a proprietary bus used in Honeywell control panels to communicate with keypads and peripheral devices. It uses four wires; power, ground, data in, data out.
Gateway IP Address	A gateway (sometimes called a router) is a computer and/or software used to connect two or more networks (including incompatible networks) and translates information from one network to the other. The Gateway IP address is the IP address for the gateway.
IMEI	International Mobile Equipment Identity number.
IP	Internet Protocol.
IP Address	A unique number consisting of four parts separated by periods (for example: 204.17.29.11). An IP Address can be fixed or "static", or "dynamic," where the IP Address is assigned via DHCP at every startup.
ISDN	Integrated Services Digital Network.
ISP	Internet Service Provider.
LAN	Local Area Network.
LRR	Long Range Radio, an older term now referred to as communicator. A broader term communications module or communications device may also be used.
MAC ID	Media Access Code, this is a unique address assigned to every network communications device. This is located on the box, and inside the communicator.
Subnet Mask	A Subnet is a portion of a network that shares a network address with other portions of the network, and is distinguished by a subnet number. The Subnet Mask is a 32-bit address mask used in IP to indicate the bits of an IP address that are being used for the subnet address.
TCP/IP	Transmission Control Protocol / Internet protocol.

Wiring Diagram



LTE-CF-004-V0

NOTE: All circuits are power limited.

FEDERAL COMMUNICATIONS COMMISSION STATEMENTS

The user shall not make any changes or modifications to the equipment unless authorized by the Installation Instructions or User's Manual. Unauthorized changes or modifications could void the user's authority to operate the equipment.

CLASS B DIGITAL DEVICE STATEMENT

This equipment has been tested to FCC requirements and has been found acceptable for use. The FCC requires the following statement for your information:

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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:

- If using an indoor antenna, have a quality outdoor antenna installed.
- Reorient the receiving antenna until interference is reduced or eliminated.
- Move the radio or television receiver away from the receiver/control.
- Move the antenna leads away from any wire runs to the receiver/control.
- Plug the receiver/control into a different outlet so that it and the radio or television receiver are on different branch circuits.
- Consult the dealer or an experienced radio/TV technician for help.

FCC STATEMENT

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.

Responsible Party / Issuer of Supplier's Declaration of Conformity: Honeywell International, 2 Corporate Center Drive., Melville, NY 11747, Ph: 516-577-2000

RF Exposure

Warning – The internal or external antenna(s) used with this product must be installed to provide a separation distance of at least 7.8 in. (20 cm) from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.

IMPORTANT NOTE ABOUT EXTERNAL ANTENNAS

Antenna may only be installed or replaced ONLY by a professional installer.

TO THE INSTALLER

LTE-CFA: The external antenna gain shall not exceed 6.63 dBi for 700 MHz and 850MHz, 6.00 dBi for 1700 MHz, and 8.51 dBi for 1900 MHz. Under no conditions may an antenna gain be used that would exceed the ERP and EIRP power limits as specified in FCC Parts 22H, 24E and 27.

LTE-CFV: The external antenna gain shall not exceed 6.94 dBi for 700 MHz 6.00 dBi for 1700 MHz, and 9.01 dBi for 1900 MHz. Under no conditions may an antenna gain be used that would exceed the ERP and EIRP power limits as specified in FCC Parts 22H, 24E and 27.

SUPPORT, WARRANTY, & PATENT INFORMATION

For the latest documentation and online support information, please go to:
<https://mywebtech.honeywellhome.com/>

For the latest warranty information, please go to:
www.honeywell.com/security/hsc/resources/wa.

For patent information, see www.honeywell.com/patents



MyWebTech



Warranty



Patents



800-24454 9/18 Rev A

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