Honeywell

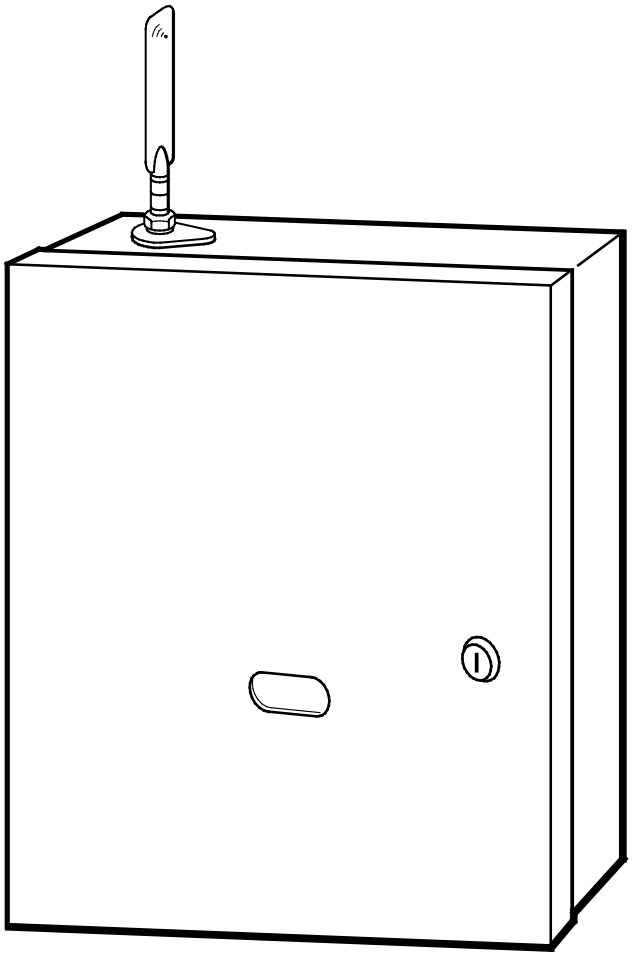
IntelliPath™ Series 4G GSM Communicator

Auto-selects Optimum GSM path – 2G, 3G, or 4G

IGSMCFP4G

Commercial Fire Panel Internet and GSM Communicator

Installation and Setup Guide



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General Information

System Overview

Introduction

Congratulations on your purchase of Honeywell's IGSMCFP4G Commercial Fire Panel Internet and GSM Communicator (henceforth referred to as IGSMCFP4G). 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 4G connectivity brings faster GSM 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 GSM 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 Direct Online Help Guide*.

In addition to alarm reporting, the communicator provides upload/downloading capability of Honeywell's control panel data over the Internet (via the AlarmNet-G network), using GSM (Global System for Mobile) technology.

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

General Information

The IGSMCFP4G communicates via the Internet (when service is available) and switches to GSM service when the Internet is not available.

In normal operation (with Internet connectivity), the IGSMCFP4G 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 GSM 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 AlarmNet-G (GSM) cellular network, which uses the GPRS (General Packet Radio Service) to complete these transmissions. 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 GPRS (part of the GSM cellular 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 GSM 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 AlarmNet-G 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 http://csrc.nist.gov/cryptval/aes/aesval.html and search for "Certification number 127."

UL The IP and GSM 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 (fixed values) have expired. If the Internet **or** GSM 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:	190mA standby, 215mA active		
RF Frequency:	2G	GSM/GPRS/EDGE	Quad Band, 850/900/1800/1900 MHz
	3G/4G	UMTS/HSPA+	Band V, Band II
RF Output Power:	2G	GPRS	+33dBm, GMSK modulation
		EDGE	+27dBm, 8-PSK modulation
	3G	UMTS	+24dBm, QPSK modulation
		WCDMA	+24dBm, QPSK modulation
	4G	HSPA+	+24dBm, 64 QAM modulation
		WCDMA	+24dBm, 64 QAM modulation
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: 0ºC to +49ºC Storage temperature: –40º to +70ºC Humidity: 0 to 85% relative humidity, non-condensing Altitude: to 10,000 ft. operating, to 40,000 ft. storage		

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	
78iR-ENT	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.

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 Strength 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.

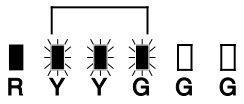
In this procedure you will use the communicator to determine signal strength in order to find a suitable mounting location.

> **NOTE:** If the SIM is already activated, the RSSI signal strength indicators will indicate signal strength.
>
> If the SIM has not been activated, the firmware in the communicator enables it to communicate with the cellular network towers (without the SIM being activated) so that signal strength measurements can be determined. In this case, you can display the signal strength by simultaneously pressing the TEST/REGISTRATION and MODE switches.
>
> Allow at least 60 seconds for a reading to establish.

> **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.

1. For this procedure you will need a fully charged 6V battery.
2. Attach the Antenna Mounting Adapter, RF cable, and Antenna. 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 RSSI display. Choose a location with the **best signal strength** by observing the signal strength (RSSI) bar graph (refer to *Appendix A for* information about signal strength and status indications).

   Signal strength should be within 3-5 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.

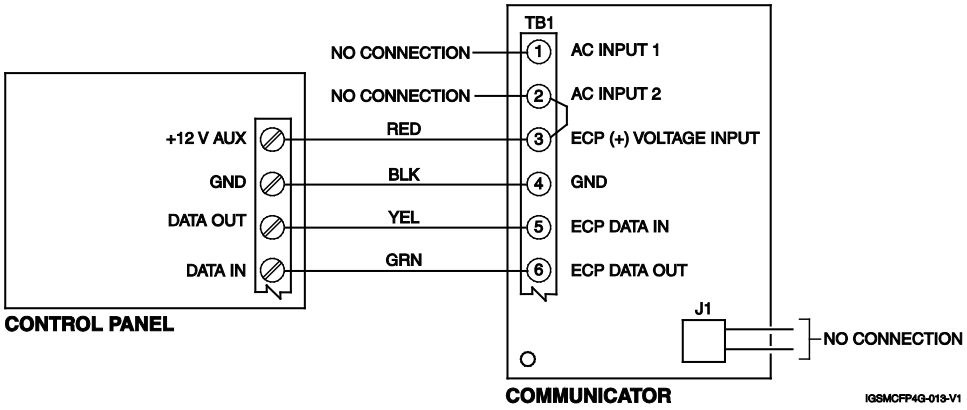
Wire the Communicator

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:



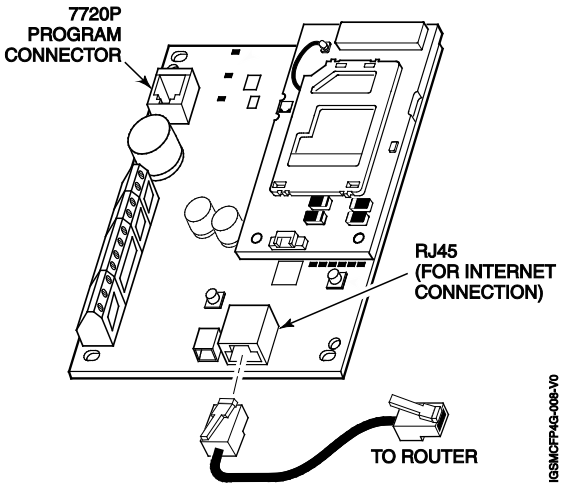
Item	Notes
Wiring	**UL:** Use minimum 18AWG wire.
Power	The communicator is powered from the control panel. Ensure a jumper is installed between TB1 pins 2 and 3.
ECP data	The control panel treats the communicator as an ECP device, so ensure to program the control panel with the communicator's device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



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 AlarmNet-G network, using GSM (Global System for Mobile) technology 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 Direct 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 IGSMCFP4G

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 "*Compatibility*" 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 JURISDIACTION 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**	**GSM Fault Time**	**UL864 Compliant?**
2010 GSM	5 minutes	N/A	5 minutes	Y
2010 IP	5 minutes	5 minutes	N/A	Y
2010 IP & GSM	24 hours	1 hour	1 hour	Y
2013 GSM	1 hour	N/A	1 hour	N
2013 IP	1 hour	1 hour	N/A	N
2013 IP & GSM	6 hours	1 hour	1 hour	N

Using the AlarmNet Direct Website

To program the communicator via the website (if you are already signed up for this service), go to: https://services.alarmnet.com/AlarmNetDirect/userlogin.aspx

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

If you are not signed up for this service, click on “Dealer Sign-Up.

Log in and follow the on-screen prompts.

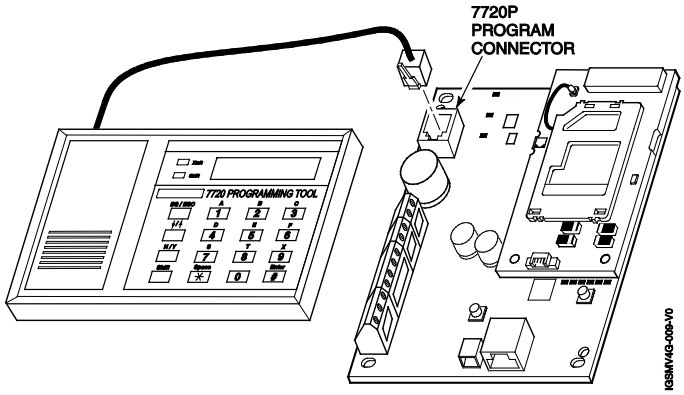
Please have the following information available when programming the communicator:

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.

	PROMPTS	OPTIONS	DESCRIPTION
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.
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 & GSM)_**	2010 IP & GSM 2013 IP 2013 GSM 2013 IP & GSM 2010 IP 2010 GSM	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:

Choice	Supervision Interval	IP Fault Time	GSM Fault Time
2010 IP & GSM	24 hours	1 hour	1 hour
2013 IP	1 hour	1 hour	- - -
2013 GSM	1 hour	- - -	1 hour
2013 IP & GSM	6 hours	1 hour	1 hour
2010 IP	5 minutes	5 minutes	- - -
2010 GSM	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&GSM.

13	**Use DHCP Y/N (Y)_**	[Y], [N]	Dynamically allocates the IP addresses (recommended); then skip to Prompt 46: "Enable Pwr Save". If [N], uses fixed IP addresses.
14	**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).
15	**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).
16	**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).

	PROMPTS	OPTIONS	DESCRIPTION
17	**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).
18	**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 *Exiting Programming Mode* 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 *Section 5: Programmer Keyboard Commands*.

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.

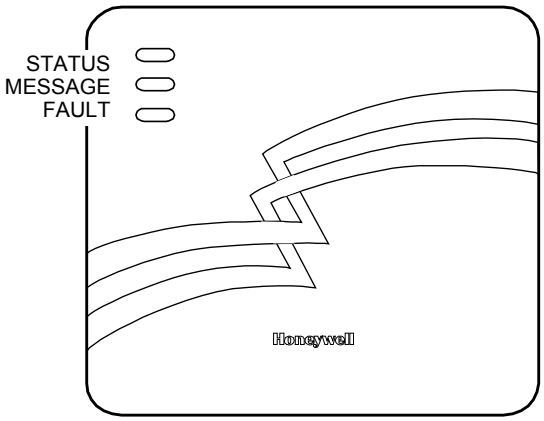
If you press [Y], all programmed values are reset to the original factory settings. PLEASE NOTE THAT THIS WILL ERASE ANY PASSWORD THAT MAY HAVE BEEN ENTERED. After pressing [Y], the Create Password prompt appears (see Prompt 4).

Registration

Registering the Communicator

Once you have initialized and programmed the communicator, it must be registered to enable the account. The registration status is indicated below:

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.



Upon completion of the registration process, the communicator transmits a registration message and receives a registration validation indicating that the account is now enabled. Wait for the "Registration Success" message to appear, regardless of which registration method used.

You can register the communicator by one of the following methods:

- Through the AlarmNet Direct website
- Through use of the TEST/REGISTRATION switch
- Through use of a 7720P Programming Tool
- By phone

Register through the AlarmNet Direct Website

The communicator can be registered through the AlarmNet Direct Website. To program the communicator via the website (if you are already signed up for this service), go to:

https://services.alarmnet.com/AlarmNetDirect/

Log in and follow the on-screen prompts.

If you are not signed up for this service, click on “Dealer Signup” from the login screen to gain access to the Honeywell web-based programming.

Dealer Sign-Up Direct Link: https://services.alarmnet.com/AlarmnetDirectP_SignUp/

You will be instructed how to proceed upon completing the sign-up form. Only one sign-up per dealer is required. Once an initial user is established, additional logins may be created by that user.

NOTE: Central Stations sign up by contacting AlarmNet Administration at 800-222-6525 option 3.

Please have the following information available when programming the device:

- 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)

Once the communicator is registered, you may log out of the AlarmNet Direct 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]

```
IGSMCFP4G
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 if GSM is one of the comm path choices. Otherwise the display will remain unchanged.

Press the backspace [BS] key to go to the IMEI display if GSM is one of the comm path choices. Otherwise the display will remain unchanged.

NOTE: The SCID and IMEI are only displayed if the Comm Path Choice is "IP&GSM" or "GSM".

```
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 GSM 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&GSM" 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&GSM" 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.

GSM Status Displays

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

[E] **Operating with 3G/4G service**

PriRSSI	3/4G	REG
-xxxdbm	stat	x

Status Display Screen 1

PriRSSI – Primary site RSSI level in dBm.

3/4G – Communicator is on the 3G/4G network where "stat" can be:

Good	RSSI	–20 to –90 dBm
OK	RSSI	–91 to –99 dBm
Marginal	RSSI	–100 to –105 dBm
Bad	RSSI	–106 to –150 dBm

REG – Registration status where "x" can be:

N – Not Registered
H – Registered Home
S – Searching
D – Registration Denied
R – Registered Roaming
? – Unknown Registration State

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

```
RAT        EC/NO
3G/4G      -xxxxx
```

Status Display Screen 2
RAT – Radio Access Technology.
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.

```
Cntry   Netw   LAC
xxx     xxx    xxxxx
```

Status Display Screen 3
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
xxxxxxx   xxxx   xxx
```

Status Display Screen 4
Cell – Base Station 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
```

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.

[E] **Operating with 2G service**

```
PriRSSI     2G    REG
-xxxdbm     stat  x
```

Status Display Screen 1
PriRSSI – Primary site level in dBm.
2G – Communicator is on the2G network where "stat" can be:

Good	RSSI	–20 to –89 dBm
OK	RSSI	–90 to –98 dBm
Marginal	RSSI	–99 to –104 dBm
Bad	RSSI	–105 to –150 dBm

REG – Registration status where "x" can be:
N – Not Registered
H – Registered Home
S – Searching
D – Registration Denied
R – Registered Roaming
? – Unknown Registration State
Press the [space] key to go to the next screen.
Press the [backspace] key to go to the last screen.

```
RAT        EC/NO
2G         NA
```

Status Display Screen 2
RAT – Radio Access Technology.
EC/NO – Carrier Noise Ratio (CNR). This is not a 2G parameter, therefore, NA is displayed.
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	**Status Display Screen 3** 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 BaseSt Chan xxxx xxxx xxx	**Status Display Screen 4** Cell – Base Station ID BaseSt – Base Station Antenna Sector Chan – Control Channel in use Press the [space] key to go to the next screen. Press the [backspace] key to go to the previous field.
	Second Site RSSI Available	**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&GSM” or “IP”.	
	Testing Gateway Redir 1	**Run Network Diagnostic Test** Performs 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 GSM and fault time has expired. **g** = No network connectivity over GSM and fault time has NOT yet expired.
[T]	Test Msg Sent	**Test Alarm** Sends a Test alarm to AlarmNet. Functional for a *registered* 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 RSSI 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&GSM” 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.

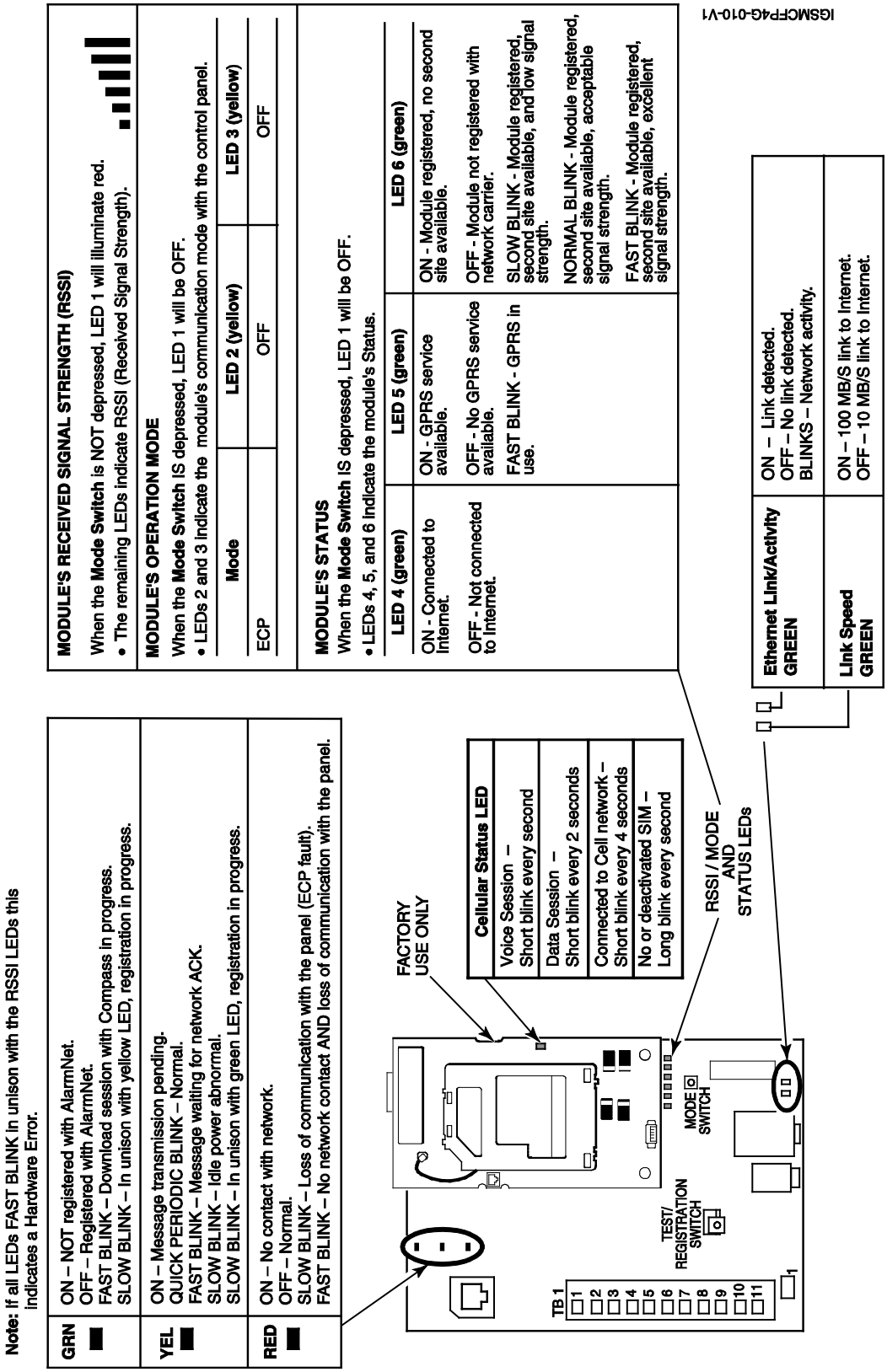
Possible Errors Running Network Diagnostics

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



Appendix B: Central Station Messages

Alarm Condition	ECP Mode	
	Alarm Code	**Restore Code**
Power On / Reset	E339 C08xx*	
ECP Supervision **(Compromise Indication)**	E355 C0000	R355 C0000
Primary Comm Path Supervision	E350 C0951	R350 C0951
Secondary Comm Path Supervision	E350 C0952	R350 C0952
Periodic GSM Comm Test Failure	E358 C0803	
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)**	5555 1555 6	5555 3555 6
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.

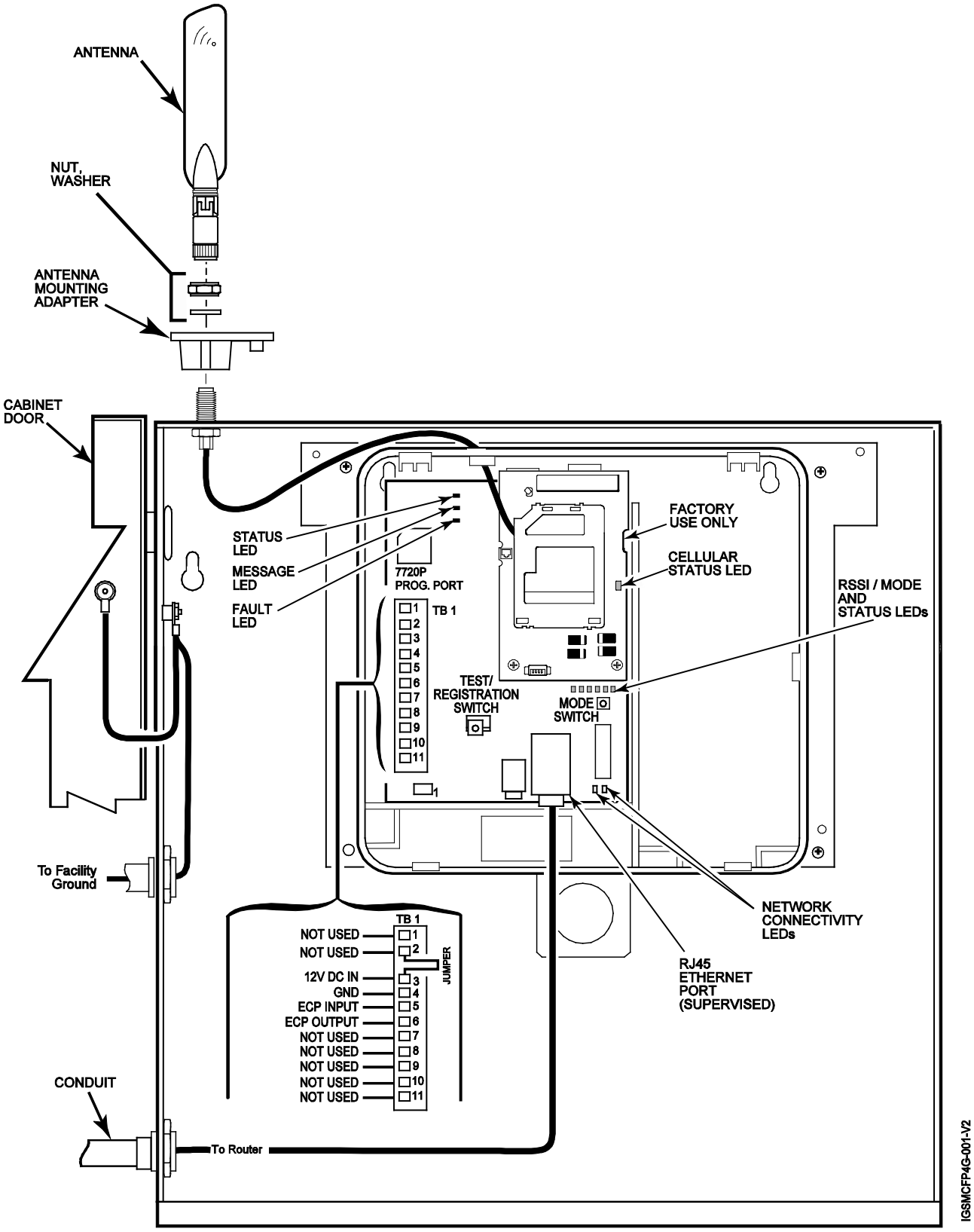
Appendix C: Glossary

4G	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.
GPRS	General Packet Radio Service.
GSM	Global System for Mobile communications, which is an international standard for digital mobile phone systems used for cellular communication.
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.

Notes

Notes

Wiring Diagram



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.

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.

DOCUMENTATION AND ONLINE SUPPORT

For the latest documentation and online support information, please go to:
http://www.security.honeywell.com/hsc/resources/MyWebTech/

WARRANTY

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

800-10951 6/13 Rev. C

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