

Appendix D: Troubleshooting Guide

Testing:

- Power up system
- Program options as required (See Programming Section)
- Violate, then restore zones
- Verify correct **Reporting Codes** are sent to the Central Station

Troubleshooting:

LCD Programmable-Message Keypad

- Press **[*][2]** to view a trouble condition.
- The trouble light will flash and the LCD will display the first trouble condition present.
- Use the arrow keys to scroll through all trouble conditions present.

NOTE: When additional information is available for a specific trouble condition a **[*]** will appear on the display.

Press the **[*]** key to view the additional information

LED Keypads, LCD Fixed Message Keypads

- Press **[*][2]** to view a trouble condition.
- The trouble light will flash.
- Refer to the **Trouble Summary** chart below to determine the trouble condition(s) present.

Trouble Summary:

Light [1][*] Service Required - Press [1] for more information

- [1] Low Battery
- [2] Bell Circuit
- [3] General System Trouble
- [4] General system Tamper
- [5] Module Supervision
- [6] RF Jam Detected
- [7] PC5204 Low Battery
- [8] PC5204 AC Failure

Light [2] AC Trouble

Light [3] Telephone Line Trouble

Light [4] Failure to Communicate

Light [5][*] Zone Fault -Press [5] for more information

Light [6][*] Zone Tamper - Press [6] for more information

Light [7][*] Wireless Device Low Battery - Press [7] for more information

Light [8] Loss of Time or Date

Trouble	Cause	Troubleshooting
Trouble [1] Service Required		Press [1] to determine specific trouble
[1] Low Battery	Main panel battery less than 11.1VDC <i>NOTE: This trouble condition will not clear until the battery voltage is 12.5VDC min., under load.</i>	<i>NOTE: If battery is new allow 1 hour for battery to charge.</i> <ul style="list-style-type: none"> • Verify voltage measured across AC terminals is 16-18 VAC. Replace transformer if required • Disconnect battery wire leads <ul style="list-style-type: none"> - Verify battery charging voltage measured across battery leads = 13.70 - 13.80 VDC. • Connect battery, remove AC power <ul style="list-style-type: none"> - Verify measured voltage across battery terminals is 12.5VDC min.
[2] Bell Circuit	Bell+, Bell-...Open Circuit	<ul style="list-style-type: none"> • Disconnect Bell-/Bell+ wire leads, measure resistance of wire leads. <ul style="list-style-type: none"> - Open circuit indicates break in wiring or defective siren/bell • Jumper Bell+, Bell- with 1K resistor (Brown, Black, Red) - Verify trouble clears
[3] General System Trouble	PC5204 Output#1 Open Circuit	<ul style="list-style-type: none"> • If Output #1 is unused: Ensure that terminals O1, AUX are jumpered with 1K resistor (Brown, Black, Red) • If Output #1 is used: Disconnect wire leads from O1, AUX terminals, measure the resistance of the wire leads <ul style="list-style-type: none"> - Open circuit indicates a break in the wiring
	PC5204 AUX	<ul style="list-style-type: none"> • Verify voltage measured across AC input terminals is 16-18VAC. • Disconnect all connections to PC5204 AUX terminal. <ul style="list-style-type: none"> - Verify AUX voltage is 13.70 - 13.80 VDC.
	Printer connected to PC5400 offline	Verify printer operation (out of paper, paper jam etc.)
	T-Link Network Fault present T-Link Receiver Trouble present T-Link Interface Trouble present	Refer to the TL/GS Installation Manual for details.
[4] General System Tamper	Tamper input on module(s) open circuit	Short tamper terminal to COM terminal on unused modules connected to KEYBUS (PC5100, PC5108, PC5200, PC5204, PC5208, PC5320, PC5400, PC5700).
[5] Module Supervision	Panel does not communicate with module(s) on KEYBUS Keypad assigned to incorrect slot.	Modules are immediately enrolled and supervised when detected on the KEYBUS. If a module has been removed, or if the slot assignment of a keypad has been changed, module supervision must be reset. <ul style="list-style-type: none"> • View the event buffer (via DLS or LCD5500 keypad) to identify the specific module(s) in trouble • To reset module supervision: <ul style="list-style-type: none"> - Enter Program Section [902]. - Press [#] (wait 1 minute for panel to scan KEYBUS). • Enter Program Section [903] to identify modules connected to the KEYBUS.
[6] RF Jam Detected	Wireless Receiver - excessive noise detected.	Check for external 433MHZ signal sources To disable RF Jam: enable Option [7] in program section [804] subsection [90].
[7] PC5204 Low Battery	PC5204 battery less than 11.5VDC <i>NOTE: This trouble condition will not clear until the battery voltage is 12.5VDC min., under load.</i>	See [1] Low Battery above
[8] PC5204 AC Failure	No AC at PC5204 AC inputs	Verify voltage measured across AC terminals is 16-18VAC. Replace transformer if required.

Trouble	Cause	Troubleshooting
Trouble [2] AC Failure		
	No AC at panel AC input terminals	Verify voltage measured across AC terminals is 16-18VAC. Replace transformer if required.
Trouble [3] Telephone Line Trouble		
	Phone Line Voltage at TIP, RING on main panel less than 3VDC	<ul style="list-style-type: none"> • Measure the voltage across TIP and RING on the panel: No phone off-hook – 50VDC (approx) Any phone off-hook – 5VDC (approx) • Wire incoming line directly to TIP and RING. • If trouble clears, check wiring or the RJ-31 phone jack.
Trouble [4] Failure to Communicate		
	Panel fails to communicate one or more events to central station	<p>Connect a handset to TIP and RING of the control panel. Monitor for the following conditions:</p> <ul style="list-style-type: none"> • Continuous dial tone <ul style="list-style-type: none"> - Reverse TIP and RING • Recorded operator message comes on <ul style="list-style-type: none"> - Verify correct phone number is programmed - Dial the number programmed using a regular telephone to determine if a [9] must be dialed or if 800 service is blocked. • Panel does not respond to handshakes. <ul style="list-style-type: none"> - Verify the format programmed is supported by the central station. • Panel transmits data multiple times without receiving a handshake <ul style="list-style-type: none"> - Verify that the account number and reporting codes are correctly programmed. • Contact ID and Pulse formats <ul style="list-style-type: none"> - Program a HEX [A] to transmit a digit [0] • SIA format <ul style="list-style-type: none"> - Program a digit [0] to transmit a digit [0]
Trouble [5] Zone Fault		
Press [5] to determine specific zones with a fault trouble		
	Open circuit is present on one or more fire zones on the main panel or zone expander	<ul style="list-style-type: none"> • Ensure fire zones have a 5.6K resistor (Green, Blue, Red) connected. • Remove the wire leads from Z and COM terminals and measure the resistance of the wire leads. <ul style="list-style-type: none"> - An open circuit indicates a break in the wiring or resistor not connected. • Connect a 5.6K resistor (Green, Blue, Red) across the Z and COM terminals. Verify the trouble condition clears.
	An open circuit is present on PGM2 being used as a 2-wire smoke detector input	<ul style="list-style-type: none"> • Ensure the correct 2.2K end-of-line resistor is connected (Red, Red, Red). • Remove the wire leads from PGM2 and AUX+ terminals and measure the resistance of the wire leads. <ul style="list-style-type: none"> - An open circuit indicates a break in the wiring or no resistor connected. • Connect a 2.2K resistor (Red, Red, Red) across the PGM2 and AUX+ terminals. Verify the trouble condition clears.
	One or more wireless devices have not checked in within the programmed time	<ul style="list-style-type: none"> • If the trouble occurs immediately, a conflict with a hard wired zone exists: <ul style="list-style-type: none"> - The zone being used is already assigned to a PC5108 zone expander - The zone being used is assigned as a keypad zone • Perform a Module Placement Test – Program Section [904] and verify the wireless device is in a good location. <ul style="list-style-type: none"> - If bad test results occur, test the wireless device in another location - If the wireless device now tests good, the original mounting location is bad - If the wireless device continues to give bad test results replace the wireless device
	A short circuit is present on one or more zones with double end-of-line resistors enabled	<ul style="list-style-type: none"> • Remove the wire leads from Z and COM terminals and measure the resistance of the wire leads. <ul style="list-style-type: none"> - A short circuit indicates a short in the wiring. • Connect a 5.6K resistor (Green, Blue, Red) across the Z and COM terminals. <ul style="list-style-type: none"> - Verify the trouble condition clears.

Trouble	Cause	Troubleshooting
Trouble [6] Zone Tamper Press [6] to determine specific zones with a tamper trouble		
	A tamper condition is present on one or more wireless devices	<ul style="list-style-type: none"> Perform a Module Placement Test –Section [904] Violate, then restore the tamper: <ul style="list-style-type: none"> If no test result then replace wireless device
	An open circuit is present on one or more zones with double end-of-line resistors enabled	<ul style="list-style-type: none"> Remove the wire leads from Z and COM terminals. Measure the resistance of the wire leads. <ul style="list-style-type: none"> Open circuit indicates a break in the wiring. Connect a 5.6K resistor (Green, Blue, Red) across the Z and COM terminals. <ul style="list-style-type: none"> Verify the trouble condition clears.
Trouble [7] Wireless Device Low Battery Press [7] to toggle through specific devices with low battery trouble		
1st press – Wireless Zones 2nd press – Handheld Keypads 3rd press – Wireless Keys	One or more wireless devices has a low battery <i>NOTE: The event will not be logged to the event buffer until the wireless device low battery delay time expires</i> Program Section [377] Opt 9	<ul style="list-style-type: none"> Replace battery <i>NOTE: Replacing batteries will cause a tamper. Replacing cover will restore the tamper causing the associated reporting codes to be sent to the Central Station.</i>
Trouble [8] Loss of Clock/Date		
	The main panel internal clock is not set	To program the time and date: <ul style="list-style-type: none"> Enter [*][6][Master Code] then Press [1] Enter the time and date (in military) using the following format: HH:MM MM/DD/YY Example. For 6:00 pm, June 29, 2010 Enter: [18] [00] [06] [29] [10]

IMPORTANT!

Ensure you have the following information available before contacting Customer Support

- Control Panel Type and Version, (e.g., PC1864 v4.6)

NOTE: Version number can be accessed by entering [*][Installer Code][900] on any LCD keypad. This information is also located on a sticker on the Printed Circuit Board.

- List of modules connected to Control Panel, (e.g., PC5100, PC5204 etc.)