Appendix D: Troubleshooting Guide

Testing:

- Power up system
- Program options as required (See ***Programming Section***)

  NOTE: For advanced programming refer to the *PC1616/1832/1864 Reference Manual*

- 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
	
	NOTE: This trouble condition will not clear until the battery voltage is 12.5VDC min., under load.
		NOTE: If battery is new allow 1 Hr. for battery to charge.
		• Verify voltage measured across AC terminals is 16-18 VAC. Replace transformer if required.
		• Disconnect battery wire leads
		  • Verify battery charging voltage measured across battery leads = 13.70 - 13.80 VDC.
		• Connect battery, remove AC power
		  • Verify measured voltage across battery terminals is 12.5VDC min.

[2] Bell Circuit	Bell+, Bell-...Open Circuit	• Disconnect Bell-/Bell+ wire leads, measure resistance of wire leads.
		  • 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	• 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 • Open circuit indicates a break in the wiring
	PC5204 AUX	• Verify voltage measured across AC input terminals is 16-18VAC. • Disconnect all connections to PC5204 AUX terminal. • 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 T-Link TL150/250/350 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.
		• View the event buffer (via DLS or LCD5500 keypad) to identify the specific module(s) in trouble
		• To reset module supervision:
		  • 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 **NOTE:** This trouble condition will not clear until the battery voltage is 12.5VDC min., under load.	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	• 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	Connect a headset to TIP and RING of the control panel. Monitor for the following conditions:
		• **Continuous dial tone**
		  • Reverse TIP and RING
		• **Recorded operator message comes on**
		  • 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.**
		  • Verify the format programmed is supported by the central station.
		• **Panel transmits data multiple times without receiving a handshake**
		  • Verify that the account number and reporting codes are correctly programmed.
		NOTE:
		Contact ID and Pulse formats
		  • Program a HEX [A] to transmit a digit [0]
		SIA format
		  • 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	• 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. • 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	• 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. • 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.

Trouble	Cause	Troubleshooting
Trouble [5] Zone Fault (Cont.)		

	One or more wireless devices have not checked in within the programmed time	• If the trouble occurs immediately, a conflict with a hard wired zone exists:
		  • 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.
		  • 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	• Remove the wire leads from Z and COM terminals and measure the resistance of the wire leads.
		  • A short circuit indicates a short in the wiring.
		• Connect a 5.6K resistor (Green, Blue, Red) across the Z and COM terminals.
		  • Verify the trouble condition clears.

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	• Perform a Module Placement Test –Section [904] • Violate, then restore the tamper: • 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	• Remove the wire leads from Z and COM terminals.
		• Measure the resistance of the wire leads.
		  • Open circuit indicates a break in the wiring.
		• Connect a 5.6K resistor (Green, Blue, Red) across the Z and COM terminals.
		  • 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 **NOTE:** The event will not be logged to the event buffer until the wireless device low battery delay time expires • Program Section **[377]** Opt **9**	Replace battery **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.
Trouble [8] Loss of Clock/Date		
	The main panel internal clock is not set	**To program the time and date:** • 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, 2005 **Enter:** [18] [00] [06] [29] [05]

IMPORTANT!

Ensure you have the following information available before contacting Customer Support

- Control Panel Type and Version, (e.g., PC1864 v4.1)

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., PC5400, PC5204 etc.)