

TROUBLESHOOTING Nos. 221, 229

TROUBLE: 1. SYSTEM APPEARS TO HAVE NO POWER.

<u>PROBABLE CAUSE</u>	<u>REMEDY</u>
A. <u>Blown fuse in power supply</u> (normally the standby battery will take over but this battery may be weak or dead).	A. Be sure wall outlet has AC power. <u>Replace blown fuse; replace standby battery if weak.</u>
B. <u>Standby battery disconnected.</u>	B. Check connections of <u>standby battery</u> to the red and black flying leads from control panel.
C. <u>Dirty contacts on clutch relay or protective circuit (sensitive) relay.</u>	C. Clean clutch relay contacts with a <u>burnishing tool and/or spray cleaner</u> (catalog Nos. 316 and 317). <u>ON CLUTCH RELAYS WHERE CONTACTS HAVE BEEN REPLACED WITH A MICRO-SWITCH, THE RELAY MUST BE REPLACED</u> (see catalog No. 90607).

TROUBLE: 2. BELL RINGS ON AC POWER FAILURE.

<u>PROBABLE CAUSE</u>	<u>REMEDY</u>
A. <u>Leads to standby battery are reversed, or standby battery is weak.</u>	A. <u>Reverse leads on standby battery and change battery if necessary</u> (remove and replace fuse on control when checking).

TROUBLE: 3. BELLS SOUNDS WHENEVER SYSTEM IS ARMED.

<u>PROBABLE CAUSE</u>	<u>REMEDY</u>
A. <u>Break in protective circuit wires, contacts, foil, or sensitive relay coil</u> (any such condition will cause the white light on the remote station to remain OFF).	A. <u>Check protective circuit as described in Part I, Section H</u> (check sensitive relay coil with an ohmmeter to determine if open in coil. If so, replace with No. 90650. See diagram for relay locations).
B. <u>Sticking latching bell relay or sensitive relay contacts</u> (see diagram for locations of relays).	B. <u>Visually inspect relay contacts for sticking condition. Clean and burnish as required</u> (use burnishing tool and/or spray cleaner, catalog Nos. 316 and 317). <u>Replace relay if cleaning fails to cure condition.</u>

TROUBLE: 4. BELLS DO NOT YIELD FULL SOUND.

<u>PROBABLE CAUSE</u>	<u>REMEDY</u>
A. <u>Panel is operating from weak standby battery (normally AC line current is used to operate panel, and the standby battery is used only in the event of a power outage).</u>	A. <u>Replace standby battery. Be sure that AC outlet is a 24 hour outlet.</u>
B. <u>Bell line run does not conform to specified procedures (see note at the end of this section; see also, Part I, Section G).</u>	B. <u>Make changes in bell wiring.</u>
C. <u>Improper bell mounting has caused clapper to jam.</u>	C. <u>Inspect mounting and bell dome position. Correct any binding or jamming.</u>
D. <u>Short circuit in bell wires (see Part I, Section G for troubleshooting bell connection).</u>	D. <u>Replace wires to bell, being careful to avoid conditions that will cause short circuits.</u>
E. <u>Defective bell (if possible, test system with new bell).</u>	E. <u>Replace bell if necessary.</u>
F. <u>Dirty or corroded bell drop relay contacts (see diagram for location).</u>	F. <u>Clean and/or burnish relay contacts with burnishing tool and spray cleaner (catalog Nos. 316 and 317).</u>

TROUBLE: 5. REMOTE STATION INDICATOR AND ALARM SYSTEM WILL NOT SWITCH FROM A DISARMED CONDITION TO AN ARMED CONDITION OR VICE VERSA.

<u>PROBABLE CAUSE</u>	<u>REMEDY</u>
A. <u>Dirty contacts on clutch relay.</u>	A. <u>Clean clutch relay contacts with a burnishing tool and/or spray cleaner (catalog Nos. 316 and 317. ON CLUTCH RELAYS WHERE CONTACT HAVE BEEN REPLACED WITH A MICRO-SWITCH, THE RELAY MUST BE REPLACED-see catalog No. 90607).</u>
B. <u>Defective remote keyswitch, remote pushbutton or open wires leading to terminals 10 and 11 of panel (use a jumper and momentarily short terminals 10 and 11 in the control to verify operation).</u>	B. <u>Replace remote switch or wiring if jumper wire test now causes relay to operate.</u>

PROBABLE CAUSE

REMEDY

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| C. <u>Defective clutch relay or panel circuitry.</u> | C. <u>Replace clutch relay</u> (use No. 90607) <u>or return panel for repair.</u> |
| D. <u>Panel is operating from weak standby battery</u> (normally AC line current is used to operate panel, and the standby battery is used only in the event of a power outage). | D. <u>Replace standby battery</u> and check power supply fuse. |
| E. <u>Jammed actuator of clutch relay.</u> | E. <u>See instructions found in Troubleshooting Section</u> for No. 330 panel-TROUBLE 5, Section G. |

TROUBLE: 6. WITH SYSTEM ARMED, BELL DOES NOT OPERATE WHEN PROTECTIVE CIRCUIT IS BROKEN.

PROBABLE CAUSE

REMEDY

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| A. <u>Stuck contact in protective circuit</u> failing to release on entry. | A. <u>Check each contact for proper operation.</u> Replace as necessary. |
| B. <u>Shorts in protective circuit</u> (with system armed, remove protective circuit wiring from terminals 4, 5, 6, and 7. If alarm activates, troubleshoot wiring). | B. <u>Repair or replace shorted wiring in protective circuit</u> (see Part I, Section H for troubleshooting information). |
| C. <u>Disconnected, broken, or shorted wiring between relay panel and bell.</u> Check wiring between terminals 1 and 2 on control panel to the bell device. | C. <u>Check wiring and repair or replace as necessary</u> (see Part I, Section G). |
| D. <u>Bound bell clapper.</u> | D. <u>Free or adjust bell clapper.</u> If necessary, replace bell. |

TROUBLE: 7. BELL CIRCUIT DOES NOT LATCH ON ALARM. THE BELL SOUNDS WHEN DOOR IS OPENED BUT STOPS WHEN DOOR IS CLOSED.

PROBABLE CAUSE

REMEDY

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| A. <u>Dirty contacts on bell drop relay</u> (see diagram for location). | A. <u>Clean relay contacts</u> with burnishing tool and/or spray (see catalog Nos. 316 and 317). |
| B. <u>Open coil winding of bell drop relay</u> (see diagram for location). | B. <u>Replace relay</u> if ohmmeter check reveals an open coil winding (see catalog No. 143 for replacement). |

TROUBLE: 8. FALSE ALARMS OCCUR DUE TO SWINGERS IN PROTECTIVE CIRCUIT.

PROBABLE CAUSE

REMEDY

A. Swinger or intermittent break in protective circuit loop.

A. Use No. 12 tester or equivalent to locate faults (see Part I, Section H for instructions).

TROUBLE: 9. NO WHITE LIGHT OR LED INDICATION THAT SYSTEM IS READY FOR ARMING. ALARM SOUNDS WHEN REMOTE BUTTON OR KEYSWITCH IS USED.

PROBABLE CAUSE

REMEDY

A. Open wiring, breaks, or shorts in protective circuit loop (remove protective circuit wiring from terminals 4, 5, 6, and 7. Install a jumper across terminals 4 and 7; install a second jumper across terminals 5 and 6. A white light "ready to be armed" indication reveals a break in the protective circuit).

A. Check protective circuit for breaks or shorts as described in Part I, Section H.

B. Problems in control panel circuitry (if white light did not come on after following above procedures AND alarm sounds when system is armed, suspect control circuitry).

B. Return control for repair.

TROUBLE: 10. REMOTE STATION LIGHT(S) DO NOT OPERATE. ALL ELSE IS NORMAL AND SYSTEM IS CAPABLE OF BEING ARMED.

PROBABLE CAUSE

REMEDY

A. Burned out lamp (does not apply to Nos. 214 and 246).

A. Replace lamp with proper type.

B. Broken wire(s) to system status indicating lamp(s).

B. Repair breaks in wires or splices (check wiring at rear of each remote station; also check wiring to terminals 8, 9, 11, and 12 of control panel).

TROUBLE: 11. BURGLAR ALARM SOUNDS AT ALL TIMES WITHOUT THE ABILITY TO BE RESET.

PROBABLE CAUSE

REMEDY

A. Short circuit in Emergency Switch wiring (check for shorts between wires to terminals 3 and 4 of panel and at Emergency Switch).

A. Repair or replace shorted wiring.

PROBABLE CAUSE

REMEDY

B. Short in tamper switch or tamper switch wiring to outside remote station (if used).

B. Use an ohmmeter to locate the short circuit. Repair or replace as required.

TROUBLE: 12. FIRE ALARM SOUNDS WITHOUT THE ABILITY TO BE RESET.

PROBABLE CAUSE

REMEDY

A. A short circuit exists in the wiring to thermostats and/or smoke detectors.

A. Repair or replace shorted wiring. Check panel connections to terminals 15 for shorts.

NOTE: Thermostats and smoke detectors must reset themselves before the panel RESET switch will work. Thermostats reset only after they have cooled; smoke detectors reset only after smoke has been cleared.

B. Defective panel RESET switch (difficulty may be experienced when resetting No. 527 smoke detectors).

B. Install a remote reset switch (e.g. No. 1206) between panel terminal no. 4 and the wire going to terminal no. 6 of the No. 527. Resetting the smoke detector will now require a momentary pushing of the new switch.

TROUBLE: 13. DEVICES ATTACHED TO DRY CONTACTS OF PANEL (DIALER, DIGITAL COMMUNICATOR, FLOODLIGHTS, REMOTE SOUNDING DEVICE) DO NOT OPERATE DURING FIRE, PANIC, OR BURGLAR ALARM.

PROBABLE CAUSE

REMEDY

A. Dirty or corroded dry contacts of fire, burglar, or panic relay (remove all devices from terminals 17 and 18).

A. Clean relay contacts as per procedure outlined below. Use a burnishing tool and/or spray cleaner (see catalog Nos. 316 and 317).

Procedure

Procedure

1. Simulate fire alarm by shorting terminals 15 together (it may be desirable to first disconnect bell or fire horn if so equipped to avoid annoyance).
2. Use an ohmmeter and measure relay contact resistance between terminals 17. Proper closure will give a resistance reading of zero ohms.

If fire alarm dry contacts measure greater than zero ohms on closure, clean as recommended above (see diagram for fire circuit relay location).

Procedure

- 3. Simulate burglary alarm by arming system and opening an entry point (it may be desired to disconnect bell first to avoid annoyance).
- 4. Use an ohmmeter and measure relay contact resistance between terminals 18. Proper closure will give a resistance reading of zero ohms.
- 5. Without removing ohmmeter leads, press emergency switch to simulate panic alarm.
- 6. Look for a zero resistance reading across terminals 18 as an indication of proper panic alarm dry closure.

Procedure

If burglar alarm dry contacts measure greater than zero ohms on closure, clean as recommended above (see diagram for burglary circuit relay location).

If panic alarm dry contacts measure greater than zero ohms on closure, clean as recommended above (see diagram for panic circuit relay location).

- B. Open or shorted wiring to the devices operating off control panel.
- C. Power supply problems or individual operating problems with attached devices (each attached device must have its own power source in good condition).

- B. Check wiring for breaks or short circuits.
- C. Check source of power and wiring terminals 17 and 18 to the attached devices. If the problem persists see the Troubleshooting Section for the units involved.

TROUBLE: 14. IN CONTROL PANELS WHERE OPTIONAL ENTRY/EXIT TIME DELAY MODULE (NO. 354) IS USED, DIFFICULTY IN OPERATION IS ENCOUNTERED.

PROBABLE CAUSE

REMEDY

- A. Incorrect wiring to No. 354.
- B. Improper operation by user.

- A. Review instructions on wiring contained in this manual.
- B. Review Installation Instructions carefully.

TROUBLE: 15. IN CONTROL PANELS WHERE OPTIONAL AUTOMATIC ALARM SHUT-OFF (NO. 357) IS USED, DIFFICULTY IN OPERATION IS ENCOUNTERED.

PROBABLE CAUSE

REMEDY

- A. Incorrect wiring to No. 357.
- B. Improper use by user.

- A. Review wiring instructions included in this manual.
- B. Review Installation Instructions carefully.

NOTE: WIRE RUNS FOR BELLS OR OTHER SOUNDING DEVICES

For runs of up to 50 feet, use 16 gauge wire. For runs between 50 and 100 feet, use 14 gauge wire, or preferably double 16 gauge wire (thus having four wires going to the sounding device).

For wire runs of over 100 feet, see Part I, Section G of this manual.