

CB200 Conventional Control Panel Fault Finding Guide

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GENERAL NOTE: Always check that the “Controls Active” LED is illuminated before operating the front panel buttons

IMPORTANT NOTE: *This work should only be undertaken by an experienced and suitably-trained operative. When fault finding on control panels and field wiring, never use a megger. Exercise great care when checking for earth faults.*

WARNING: *The control panel contains hazardous voltages.*

1.0 Zone Fire

This section presumes that the control panel is in an alarm condition with the control panel indicating a fire (red LEDs flashing), the Silence Alarms switch and the System Reset switch have been operated and the fire condition keeps re-indicating.

1.1 Check for fire detectors with the red LED indicator illuminated, remove the detector and replace.

Operate the Silence Alarms and System Reset switches on the control panel. If the fire condition returns, proceed to 1.2.

1.2 Check that the glass in all break glass units on the zone is intact. If one is broken replace it.

Operate the Silence Alarms and System Reset switches on the control panel. If the fire condition returns, proceed to 1.3.

1.3 If after checking 1.1 and 1.2 above the fire condition keeps re-indicating, disconnect the zone wiring from the affected zone.

Check the zone wiring with a Multimeter to ensure that no short circuits, open circuits or earth shorts are present on the zone wiring.

If no wiring faults are found, proceed to 1.4.

1.4 If after checking all the above the fire condition keeps re-indicating, disconnect the zone wiring from the control panel terminals and connect a 22uf, 35V end of line capacitor into the zone terminals.

Operate the Silence Alarms and System Reset switches on the control panel. If the fire condition returns the fire panel is faulty.

2.0 Zone Fault

This section presumes that a zone fault is indicating on the control panel, an amber zone fault LED is flashing and the internal fault buzzer is sounding.

2.1 Check that the end of line capacitor is present in the last device on the zone. If it is present, check that it is the correct value – 22uf, 35V. If the above are correct, proceed to 2.2.

2.2 Disconnect the zone wiring from the control panel terminals and connect a 22uf, 35V end of line capacitor into the zone terminals. If the fault disappears from the panel, the cause is on the zone wiring - proceed to 2.3. If fault is still present, the control panel is faulty.

2.3 Check the zone wiring with a Multimeter to ensure that no short circuits, open circuits or earth shorts are present on the zone wiring. If wiring faults are found, check the zone circuit at various points until the fault is found.

3.0 Alarm Fault

This section presumes that the Alarm Fault LED is flashing and the internal buzzer is sounding.

3.1 Check the end of line resistor is present in the last device on the alarm circuit. If it is present, check it is the correct value - 3k9. If the above are correct, proceed to 3.2.

3.2 Disconnect the alarm circuit wiring from the control panel terminals and connect a 3k9 end of line resistor into the alarm circuit terminals. If the fault disappears from the panel, the cause is on the alarm circuit wiring - proceed to 3.3. If the fault does not disappear, the control panel is faulty.

3.3 Check the alarm circuit wiring with a Multimeter to ensure that no short circuits, open circuits or earth shorts are present on the alarm circuit wiring.

If wiring faults are found, check the alarm circuit wiring at various points until the fault is found.

4.0 Power Supply Fault

This section presumes that the Supply Healthy LED is off and the internal buzzer is sounding.

4.1 Using a Multimeter, check that the correct mains input voltage is present at the mains input terminals. If this is correct, proceed to 4.2.

4.2 Check that the mains input fuse is intact and of the correct value. If this is correct, proceed to 4.3.

4.3 Check that the voltage at the terminals marked "SECONDARY AC IN" on the control board is more than 28 volts AC. If it is less than 28 volts, then the transformer is fault. If it is more than 28 volts, proceed to 4.4.

4.4 Check that the battery is drawing current from the charger by inserting a Multimeter in series with the battery. The battery should be drawing between 3 and 30mA (fully charged). If this is correct, proceed to 4.5. If not, replace the battery.

4.5 Check the voltage at the battery input terminals. This should be between 27 and 28 volts DC with battery connected. If it is less than 27 volts, adjust the charger voltage using the potentiometer provided (The control board must be removed from the plastic front plate to access the potentiometer). If the voltage is within the range, the control panel is faulty.

5.0 Earth Fault (4-8 Zone Panels Only)

This section presumes that the Earth Fault LED is flashing and the internal buzzer is sounding.

5.1 Disconnect all field wiring from the panel. If the earth fault disappears, check all field wiring with a Multimeter to ensure that no earth shorts are present on the field wiring. If an earth short is found, check the wiring on that circuit at various points until the fault is found.

6.0 Alarms Do Not Operate

This section presumes that when either a fire condition is present or the Evacuate switch is operated, the sounder devices connected to the alarm circuits do not operate.

6.1 Using a Multimeter, check that voltage is present on the alarm circuit terminals. If no voltage is present, the control panel is faulty. If voltage is present, proceed to 6.2.

6.2 Operate the Evacuate switch. The voltage at the alarm circuit terminals should reverse and measure 28 volts DC. If this is correct, then the fault is either on the field wiring or with the sounder device itself (refer to section 3).