LexiComm

VoxIgnis

Lexicomm228S Fault Diagnostics

How To Guide

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1 General Indication

The indications below are common for LX228 Solo panels for any fault.

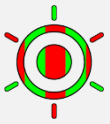
1.1 Mode LED		
Panel healthy	Accepted faults	Unaccepted faults
		

1.2 General Fault LED		
Panel healthy	Accepted faults	Unaccepted faults
		

The other indications that are on that are seen on the panels are as follows:

LED		Description
		**DC Status** Indicates the state of the battery on the panel
		**AC Status** Indicates the state of the mains supply on the panel
		**PSU Status** Used in conjunction with the DC and AC LEDs to denote any power faults on the panel
		**CPU Status** Indicates if there are any system faults on the panel
		**User** Indicates the state of the LX-228 panel, including which user is logged in, and master handset faults.
		**Line Status** Indicates the state of a given line that is connected to the panel

The LED icons that are used throughout the document denote the following:

LED off	LED illuminated a single colour	LED flashing on and off	LED flashing between two colours
			

2 Power Faults

2.1 Mains failure

Status LEDs	Description	Troubleshooting
	The panel has lost its mains AC connection and is currently running on the battery backup.	Check the mains supply is connected and healthy.

2.2 Battery open circuit

Status LEDs	Description	Troubleshooting
	The battery is being reported as open circuit.	Check the battery is connected to the panel. If it is ok, check the battery lead isn't broken.

2.3 Battery short circuit

Status LEDs	Description	Troubleshooting
	The battery is being reported as short circuit.	Check the battery lead is not shorted or replace the battery.

2.4 Battery high impedance fault

Status LEDs	Description	Troubleshooting
	The battery is being reported as high impedance.	Ensure that a 12-volt 7AH Yuasa battery is fitted to the panel, (e.g. 3.2AH is too small). If the correct battery is fitted and the fault is still present, it indicates a battery cell has failed and the battery will need to be replaced. **After replacement, press the test/reset button on the PSU.** If the problem remains, replace the PSU. **Note- If PSU firmware is version 2.1 or 2.2, refer to ViTB-011**

2.5 No status or power LEDs illuminated

Mode	User	DC	AC	PSU	CPU	General
						

Troubleshooting
Firstly, check the mains LED on the top right of the PSU. If not illuminated, then the panel isn't powered. If this LED is on, then the 5-volt rail has failed or CAT5 cable is not connected between exchange PCB and display PCB. If the CAT5 cable is connected, then see VI technical Bulletin ViTB-0013 Speak to VI technical dept for advice on required replacement PCBs.

3 Display Faults

Display faults can be identified using LED7 in the extended fault menu, which shows as green if the display is healthy.

3.1 Display – exchange communication fault		
Status LEDs	Description	Troubleshooting
 Extended fault LED 7	There has been a data communication problem between the display and exchange PCBs	Check the mains supply is connected and healthy.

3.2 Display system fault		
Status LEDs	Description	Troubleshooting
 Extended fault LED 7	There has been a system fault on the display PCB	The display PCB has previously watchdogged, accepting the fault will clear it.

3.3 Display checksum fault		
Status LEDs	Description	Troubleshooting
 Extended fault LED 7	There is a checksum fault on the display PCB.	Please contact the manufacturer or supplier. The checksum that makes sure the firmware in the display hasn't been corrupted has failed.

4 Exchange Faults

Exchange faults can be identified using LED8 in the extended fault menu, which shows as green if the exchange is healthy.

4.1 Exchange system fault		
Status LEDs	Description	Troubleshooting
 Extended fault LED 8	There has been a system fault on the exchange PCB	Accept the faults on the system, if the fault gets cleared then it means the exchange PCB has previously watchdogged. If not, then there is a checksum fault on the exchange PCB, please contact manufacturer or supplier in this case.

5 Outstation Faults

5.1 Type B Quiescent Operation

Type B LED	Description	Troubleshooting
	Normal operation, call button flashes green	Correct quiescent operation

5.2 Type B Correct Calling Operation

Type B LED	Description	Troubleshooting
	Call button pressed, indication changes from flashing green to solid red.	Correct calling operation

5.3 Type B outstation-no indication

Type B LED	Description	Troubleshooting
	The Call/Cancel button is not flashing green and doesn't come up red when pressed.	Check line cabling, generally, this means the outstation cable is connected cross polarity so reverse wiring, no damage is likely.

5.4 Type A outstation-no red call indication

Hook Switch LED	Description	Troubleshooting
	The red LED indicator on the telephone handset bracket is not illuminated	Check line cabling, generally, this means the outstation cable is connected cross polarity so reverse wiring, no damage is likely.

5.5 Fire alarm sounders near outstation

Type B LED	Description	Troubleshooting
 	Fire alarm sounders located near to Type B outstations; this will cause the sound to cut out.	This is correct the only sound heard at the master station will be the fire alarm sounders, the EVC system cannot decern between the speech and the sounder. Possible solutions replace the sounder with a VAD, a variation to the fire alarm design may be required.

6 Line Faults

6.1 Line short circuit fault

Line LED	Description	Troubleshooting
	There is a short circuit fault on the identified line.	Check the cabling for the short circuit fault. This can also occur if there is cross polarity in an assist call circuit. See 7.1 below.

6.2 Line card missing fault

Line LED	Description	Troubleshooting
 Less frequent than mode LED	There is a line card missing fault on the identified line.	If the line card isn't fitted, ensure the line monitoring is disabled using the dipswitch on the back of the display.

6.3 Line open circuit fault

Line LED	Description	Troubleshooting
 Same frequency as mode LED	There is an open circuit fault on the identified line.	Probable causes are no 10k EOL resistor fitted, or a break in the cable. If nothing is connected to the line, it should be configured as not in use.

6.4 Line Earth fault

Line LED	Description	Troubleshooting
 More frequent than mode LED	There is an Earth fault on the identified line.	Check wiring for short circuit earth to + or earth to – and correct. On older systems, a cross polarity on an assist call circuit is shown as an earth fault

7 Assist Call-Emergency Assistance Alarm Faults

7.1 Assist Call system does not go into alarm but shows short circuit.

Line card LED	Mode	User	Line Status	Troubleshooting
				Generally due to a cross polarity on the assist call circuit between the over door plate, pull cord and the cancel plate, check the wiring thereafter and correct. The line will show as a short circuit on version 5 Assist Call devices onwards. **Note the circuit is monitored for short and open circuit not cross polarity.**

8 Master Handset Faults

8.1 Master handset open circuit fault

Hook Switch LED	228 User LED	Description	Troubleshooting
		There is a master handset open circuit fault on the identified panel.	Check the curly red cable connection or grey cable connection from the hook switch to the exchange PCB.

8.2 Master handset short circuit fault

Hook Switch LED	228 User LED	Description	Troubleshooting
		There is a master handset short circuit fault on the identified panel.	Disconnect the red telephone handset, check if state changes to open circuit. If it remains in short circuit, then disconnect the hook switch cable from the exchange PCB. If the short circuit remains replace the exchange PCB.

8.3 No sound coming from red telephone handset speaker

Hook Switch LED	Mode	User	Line Status	Troubleshooting
				This is rare but may be due to a disconnected internal wire to the handset speaker. Suggest replacing the red handset.

8.4 Handset off hook, ringing sound and faint speech heard through handset speaker

Hook Switch LED	Mode	User	Line Status	Troubleshooting
				This is because the master station does not auto connect the line when the handset is lifted. Correct operation is to lift the red handset and press the line switch next to the corresponding flashing line LED

8.5 No ringing sound at the master handset

Hook Switch LED	Mode	User	Line Status	Troubleshooting
				**1st** check that the red LED in the telephone bracket is illuminated when the telephone is on hook, if the LED is not illuminated then a replacement telephone bracket or hook switch is likely to be required.

8.6 Type B activated, no activation or ringing at master station

Hook Switch LED	Mode	User	DC	AC	PSU	CPU	General
							

Description	Troubleshooting
Type B outstation operated Mode LED illuminated yellow, no buzzer, no other indication present at the master station	The mode LED being yellow indicates that the enable feature has been used, such that the Type B outstations are ignored at the master station until the fire alarm system has operated. WC Alarms and Type A outstation will operate as normal. This is commonly used in schools to prevent nuisance activation.