Syncro

Modem Communications Module

Installation and Commissioning Manual

Man-1068   Issue 03 October 2009

Telephone
Line

Communications
Module

24V DC

To J5 on front panel
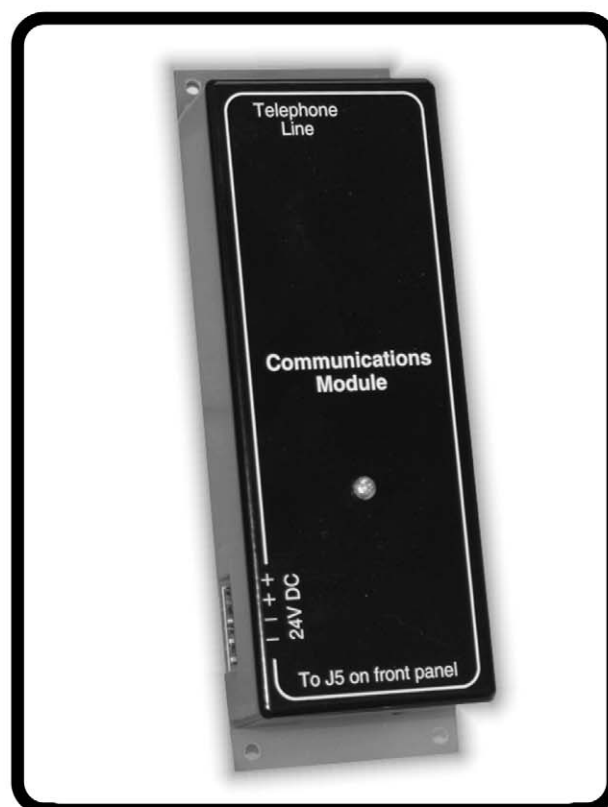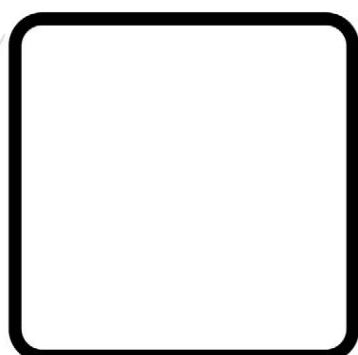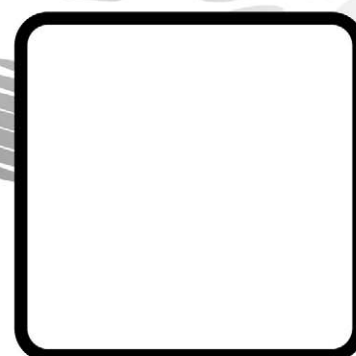
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1. General description

The Syncro fire alarm system modem communications module, allows the fire alarm control panel to be interrogated from a remote location via a dial up telephone connection. This allows the status of the control panel to be viewed and the configuration data, analogue values and event log to be uploaded to a PC.

To enable modem configuration and connection, the user **must** be in possession of registered and dongle protected Loop Explorer software at version **V3.0** or higher.

The modem module fits inside the Syncro control panel in the space allocated for an I/O module and requires a 24V DC supply which can be taken from the adjacent AUX 24V connections.

A telephone connection socket (type RJ11) is fitted at the top of the module to allow connection to a telephone point.

The modem should only be connected to a direct telephone line and will not work through a PABX line.

2. Fitting the modem module

Before fitting the modem module, the mains and battery power should be disconnected from the control panel.

The modem module is supplied complete with a ribbon cable and ribbon cable clips. The ribbon cable must be connected to socket J5 on the Syncro front panel PCB and clipped into place as shown on the following drawings.

Standoffs are already fitted to the control panel to accept the module, which simply pushes on to these.

A 5 metre RJ11 to telephone socket lead is supplied for connection to a local telephone socket. This can be extended if the telephone socket is greater than 5 metres from the control panel using any proprietary telephone extension lead.

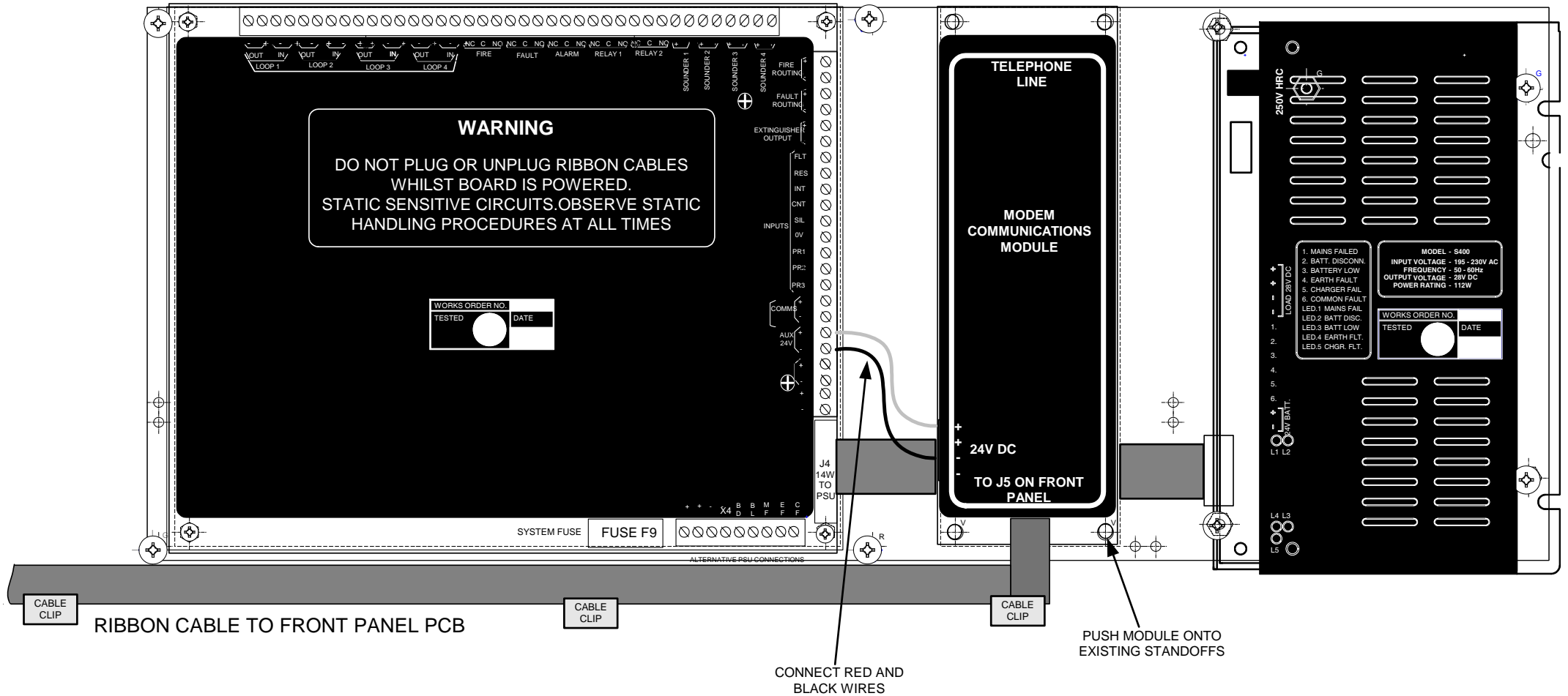The red and black wires from the 24V connection on the modem module connect to the AUX 24V terminals on the Syncro.
The red wire should be connected to the + terminal and the black wire connected to the − terminal.
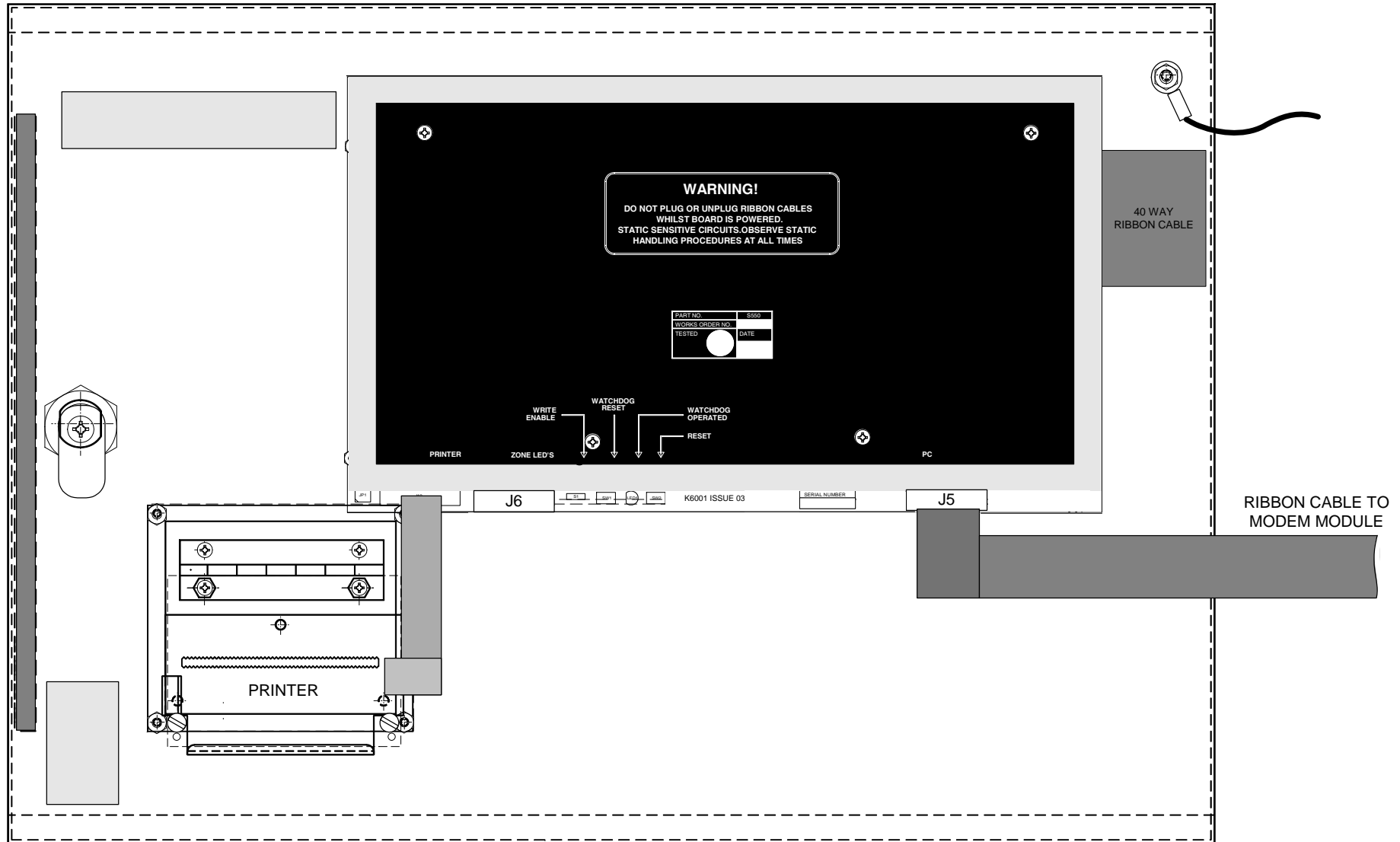
If the AUX 24V supply is already in use, care must be taken to ensure that the total load on this supply does not exceed 500mA.

It is essential that the telephone number of the line is now noted to enable testing.

2.1 Fitting the modem communications module to the enclosure

WARNING

DO NOT PLUG OR UNPLUG RIBBON CABLES
WHILST BOARD IS POWERED.
STATIC SENSITIVE CIRCUITS. OBSERVE STATIC
HANDLING PROCEDURES AT ALL TIMES

TELEPHONE
LINE

MODEM
COMMUNICATIONS
MODULE

24V DC

TO J5 ON FRONT
PANEL

RIBBON CABLE TO FRONT PANEL PCB

CABLE CLIP

CONNECT RED AND
BLACK WIRES

PUSH MODULE ONTO
EXISTING STANDOFFS

SYSTEM FUSE   FUSE F9

ALTERNATIVE PSU CONNECTIONS

J4
14W
TO
PSU

COMMS

AUX
24V

INPUTS

FLT
RES
INT
CNT
SIL
0V
PR1
PR2
PR3

FIRE
ROUTING

FAULT
ROUTING

EXTINGUISHER
OUTPUT

WORKS ORDER NO.
TESTED   DATE

1. MAINS FAILED
2. BATT. DISCONN.
3. BATTERY LOW
4. EARTH FAULT
5. CHARGER FAIL
6. COMMON FAULT
LED.1 MAINS FAIL
LED.2 BATT DISC.
LED.3 BATT LOW
LED.4 EARTH FLT.
LED.5 CHGR. FLT.

MODEL - S400
INPUT VOLTAGE - 195 - 230V AC
FREQUENCY - 50 - 60Hz
OUTPUT VOLTAGE - 28V DC
POWER RATING - 112W

250V HRC

WORKS ORDER NO.
TESTED   DATE

2.2 Connecting ribbon cable to front panel board

WARNING!

DO NOT PLUG OR UNPLUG RIBBON CABLES
WHILST BOARD IS POWERED.
STATIC SENSITIVE CIRCUITS.OBSERVE STATIC
HANDLING PROCEDURES AT ALL TIMES

PART NO.	S550
WORKS ORDER NO.	
TESTED	DATE

WRITE
ENABLE

WATCHDOG
RESET

WATCHDOG
OPERATED

RESET

PRINTER

ZONE LED'S

PC

JP1

J6

S1

SW1

K6001 ISSUE 03

SERIAL NUMBER

J5

40 WAY
RIBBON CABLE

RIBBON CABLE TO
MODEM MODULE

PRINTER

3. Configuration

The control panel needs to know that a modem is fitted. If the modem is fitted and correctly wired as shown on the installation drawings, then performing an autolearn will tell the panel that the modem is fitted.
It is also possible to add the modem as an access level 3 menu command.

This method may not be convenient however on a system that is already installed and configured because performing an autolearn will reset all parameters to their default settings.
In this case, the Loop Explorer configuration programme should be used.

For security reasons, Loop Explorer requires that the dongle supplied with the software is fitted. If the dongle is not fitted then the Loop Explorer software will function as normal Loop Explorer software (i.e. no modem and dial up configuration available).

First, transfer the configuration file from the panel to the PC in the normal manner. Select the control panel to which the modem is connected and right click it to edit its settings. Check the box marked MODEM FITTED. Save the configuration file and then transfer the file from the PC back into the panel.
The panel will now expect to see a modem fitted and will signal a fault condition if the modem is removed.

4. Testing

Ensure that the PC is connected to a telephone line other than the line to which the control panel is connected.
Open the site configuration file with Loop Explorer and the dongle fitted to the PC. Right click on the panel icon in the left windowpane and select "edit settings".
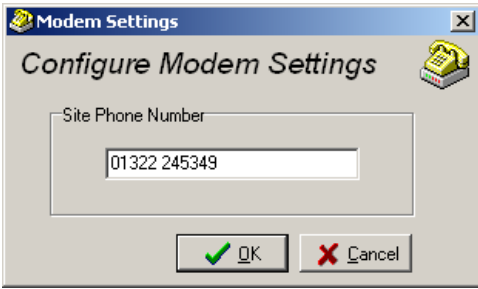Check the "Modem fitted" box. Click OK and save the file.
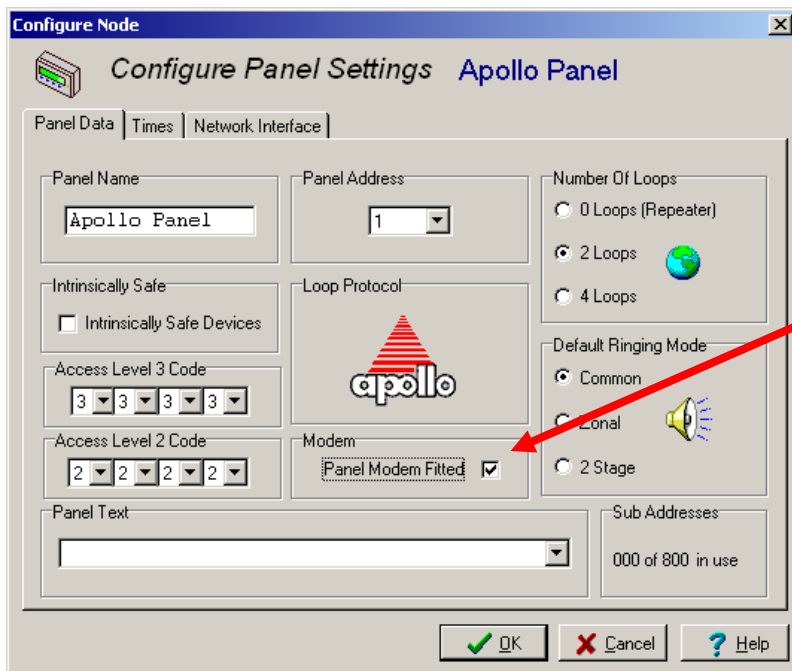
Modem fitted check box

The telephone number of the control panel can now be entered by expanding the control panel and then double clicking the telephone icon.
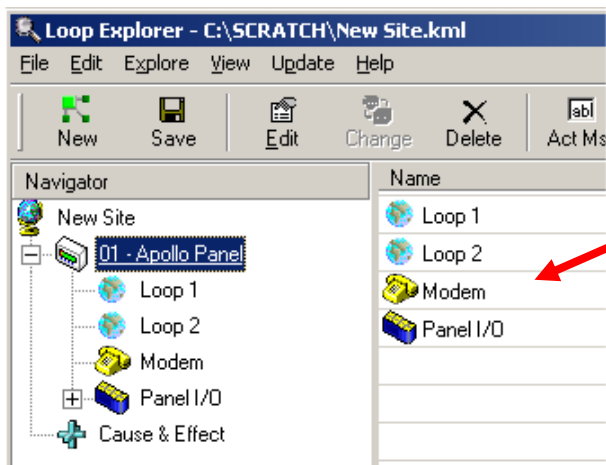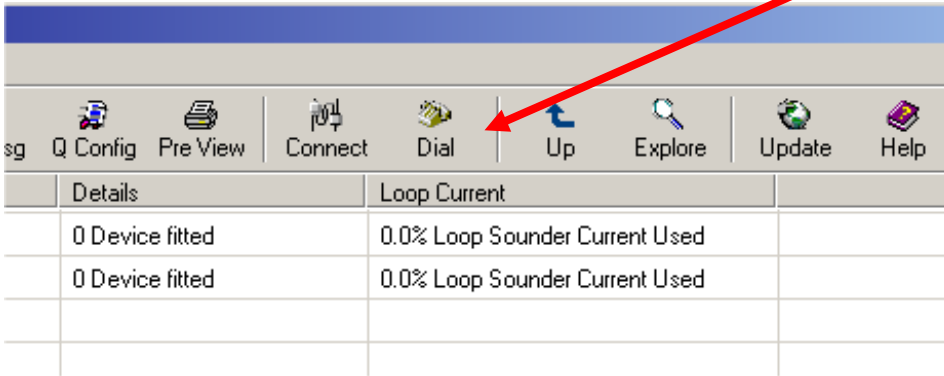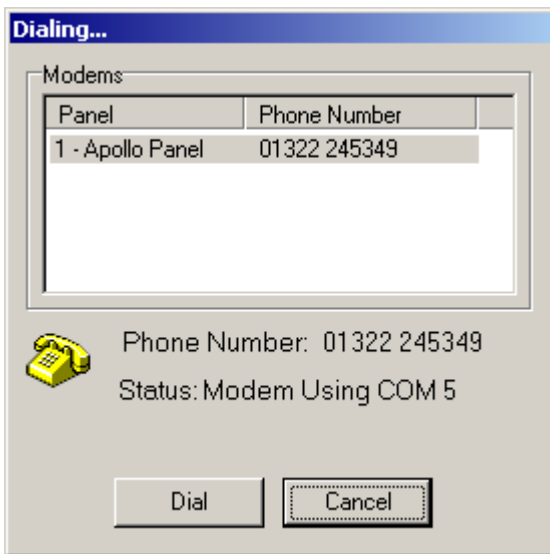

Click Telephone

After the number has been entered, click OK and then save the file.

The control panel can now be called by clicking the Dial icon on the toolbar.

Dial Icon

Press the dial button to connect to the panel.

Once the connection has established, a window will appear and will show any panels found (there may be more than one panel on a networked system).

Select the virtual panel tab and then drop down list of panels next to the start button. Select the panel you wish to connect to and press start.

The panel controls and display are now available as they would be if you were at the control panel.

Using the menus, check that the number of devices fitted matches the configuration file.
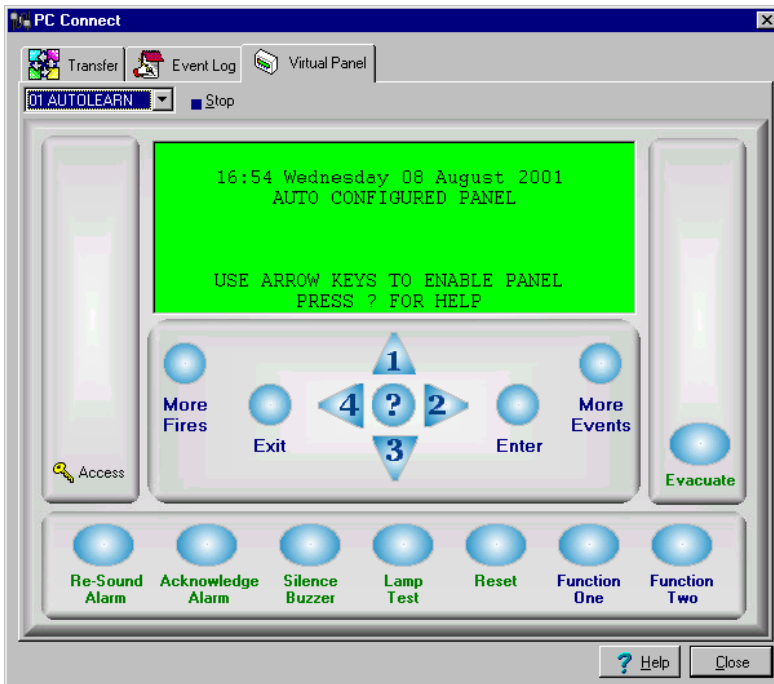
Click on the event log tab, select the panel to connect to from the drop down list and then press fetch to get the event log from the panel. These tests should suffice to establish that the modem is connected and configured correctly.

For a detailed description of the control panel operation, refer to the Syncro operation and maintenance manual.

# 5. Using the dial up connection

The ability to dial into the control panel and to check its status has many benefits for both the maintainer of the system and for the end user.

Detector contamination

Detectors are automatically re-calibrated every 24 hours and adjustments are made to compensate for the contamination, which inevitably builds up over time.
Eventually, a point will be reached, where the detector can no longer compensate for the contamination and the detector will announce a maintenance fault.
Before a maintenance fault is announced however, the Syncro control panel will identify any devices, which are over 80% of their calibration limits and put them into an easy to view list. This enables maintenance visits to be scheduled to replace contaminated devices before a fault warning is generated.
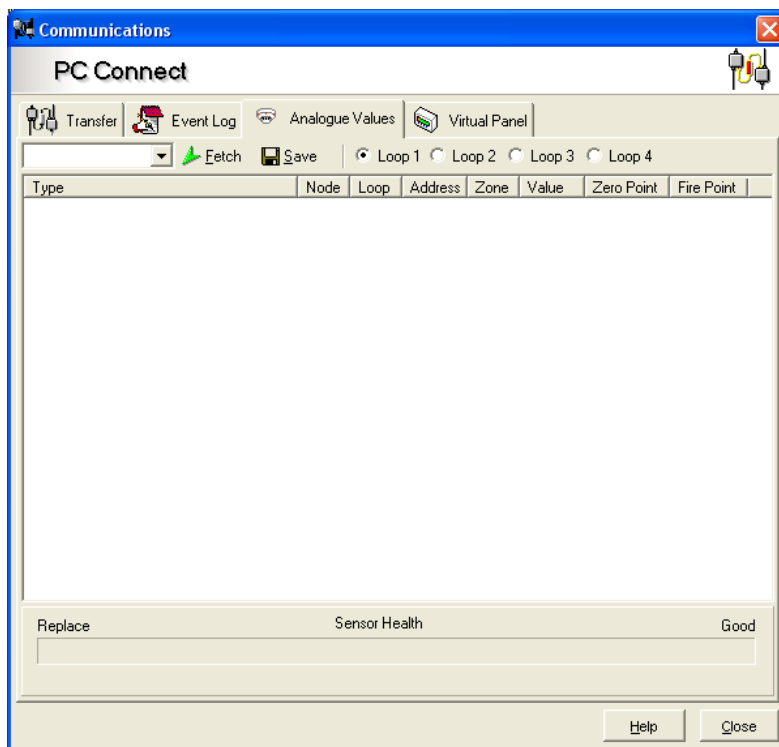
A list of the analogue values of all devices can be downloaded and saved to the PC for analysis offline if required.

Fault diagnosis

When the fire alarm system develops a fault, the information received by the engineer is often sketchy to say the least. The report is often made by the end user who (understandably), sometimes has difficulty in conveying the nature of the problem.

The ability to dial into the control panel and view the display as if you were at the panel can provide valuable diagnostic information and prevent wasted site visits or ensure that an engineer attends equipped with the right parts.

Configuration problems

Although the Loop Explorer configuration programme is simple to use, some more complex configuration problems may require assistance from a more experienced engineer or the equipment manufacturer.
The dial up connection allows the configuration data to be extracted from the control panel for close analysis. This allows speedy resolution of problems, which may otherwise necessitate return visits to site.

Configuration verification

With the correct level 2 and level 3 passwords, it is possible for a system configuration to be changed via the front panel controls of the panel.

The maintainer of the system can upload and compare the control panel configuration at will to ensure that the system is configured and operating as records show that it should be.
This gives added confidence to the maintainer and end user that the fire alarm system is working as intended.

6. Using a mobile phone to dial the panel

It is generally more convenient for testing purposes, to use a mobile telephone to dial into the control panel rather than a landline.
When using a mobile telephone, the testing can be done right at the panel and the changes on the display can be witnessed.

To use a mobile telephone for this purpose, the telephone service provider must be contacted and data/fax communication enabled for the phone in question. Service providers do not normally make any charge for this.

Once data/fax services are enabled for the mobile telephone, a connection lead and some software will be required for the PC.

The lead connects to the PCs serial port and to the utility socket on the mobile phone. There are many types of mobile phone connectors and it is essential to get the correct one.
The software is a GSM terminal adapter, which acts as a "software modem".