SITA200plus

FIRE DETECTION SYSTEM

Sita Diagnostic – V2.300

Loop Communications Diagnostic Tool

Software Operating Instructions

(TO BE RETAINED BY THE COMMISSIONING ENGINEER)

26-0434 Issue 6

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Introduction

Sita DIAGNOSTIC is the name given to the software package written to interpret loop data information from the Sita200plus fire alarm system. The program is 'MS Windows' based for compatibility with today's PCs.

Getting Started

System Requirements

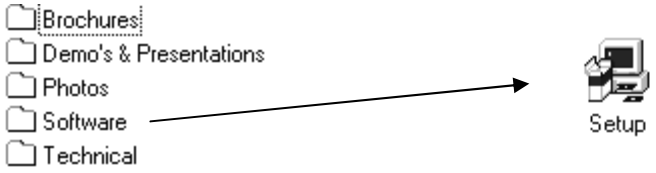
The Sita DIAGNOSTIC software tool is provided on CD and requires a serial interface lead in order to run the program. You will require a personal computer or a laptop running Windows 95, 98, 2000 or XP operating system with CD drive to enable installation and a COM port to connect the serial interface lead to.

Physical Connections

The Serial Interface cable uses Com Port 1 (may be configured to Com Port 2 if required), and connects to the control panel at the R+ / R- / SCRN terminals, but does not require the SCRN connection. Should a longer lead be required, then only this section of cable should be extended between the module and the control panel, and not the 'module to PC' section of cable.

Software Installation

In order to commence installation, insert the Sita DIAGNOSTIC disc in your disc drive. The Sita Diagnostic software will be found within the directory labelled, 'software'.



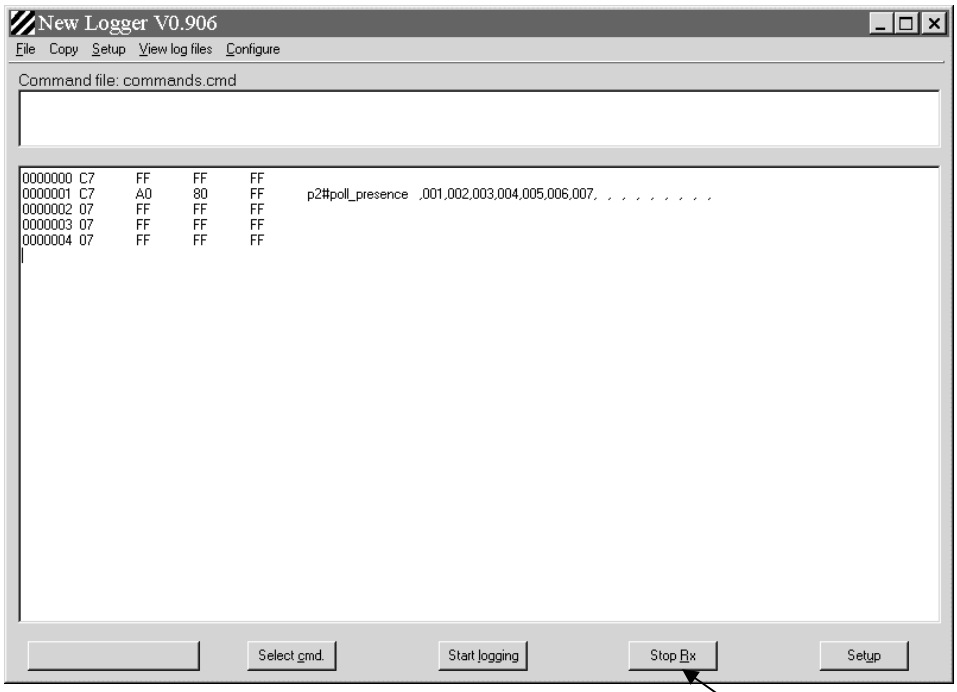
Open this directory and double click on the 'Setup.exe' file. The installation will now commence.

A shortcut will be automatically created in your start menu.

General Operation

Running the Software

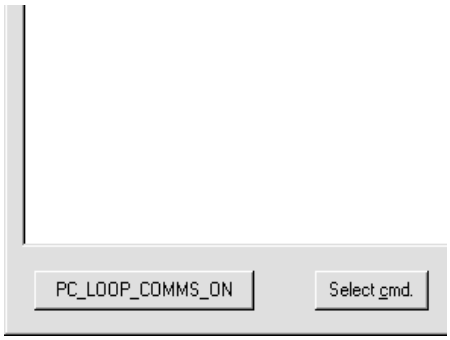
Open the software using the Sita Diagnostic prompt found within the 'Start Menu'. You will see the following screen (presuming that your PC is correctly connected to the control panel and that the loop is running correctly);



If the data in the main window is not running with the loop then try clicking 'Stop Rx' / 'Start Rx' a few times. Should this not cause the data screen to activate then check the system settings as detailed below.

You will not be able to run Sita OSP and Sita DIAGNOSTIC at the same time, and you will need to re-set the remote port (located at the control panel) if Sita OSP has been operated most recently.

Click on the Select_cmd button and select the PC_LOOP_COMS_ON command. This will enable the command button with the PC_LOOP_COMS_ON command. You will also need to enable the repeat command setting located within the settings screen (and disable after). Clicking on the PC_LOOP_COMS_ON command will result in data transfer, which will then be seen on the screen.



Data Interpretation

The onscreen data may be read as follows;

```
0000001 C7      A0      80      FF      p2#poll_presence  ,001,002,003,004,005,006,007, , , , , , , ,
```

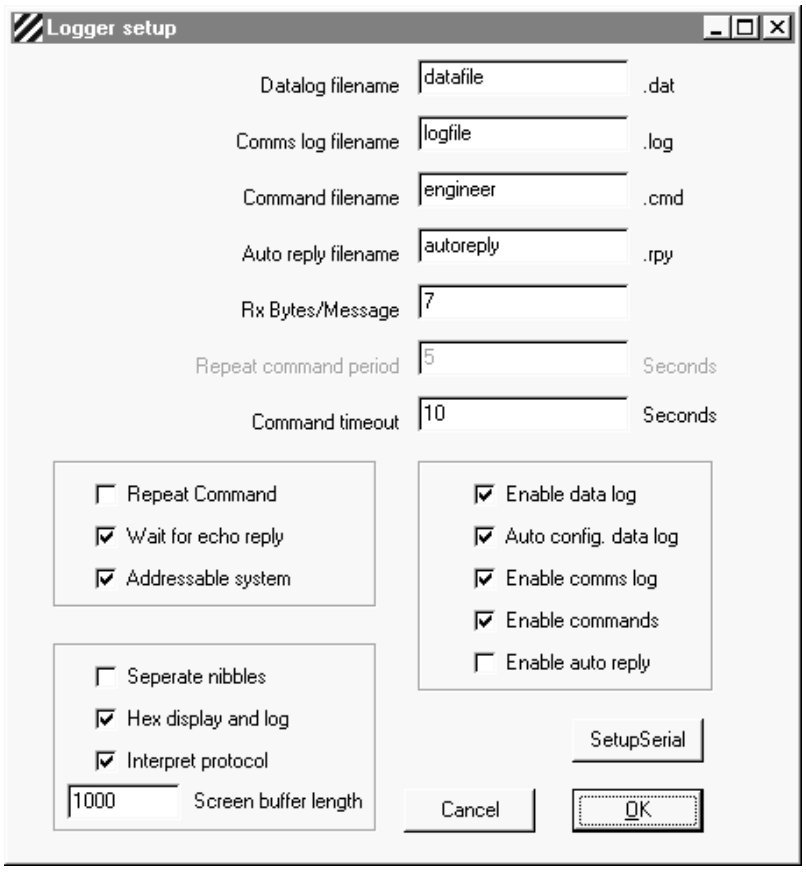
This means that seven devices are operating correctly running from circuit end one only. The set of three double digit numbers (A0 80 FF) represent the data at circuit end one of the loop, and the single poll presence message indicates that a complete loop is present.

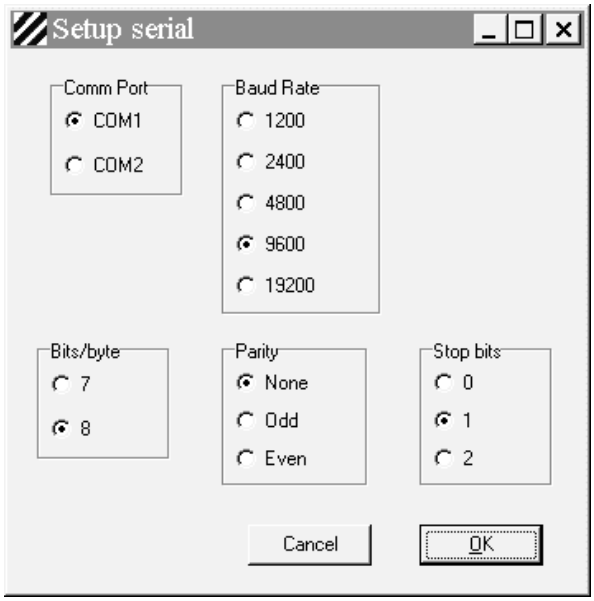
```
0001473 C3      A0      87      FF      A0      FC      FF      p2#poll_presence  ,001,002,003,004, , , , , , , , , , , ,  p2#poll_presence , , , , , ,006,007, , , , , ,
```

This means that four devices are operating from circuit end one only, one is missing and two are running from circuit end two. The second set of three double digits (A0 FC FF) at the start of the line indicate that circuit end two is in operation. This would suggest a cable break and or missing device.

System Settings

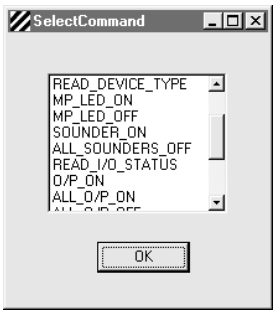
The system settings are accessed by clicking on the ‘setup’ button above, and need to be set as follows;

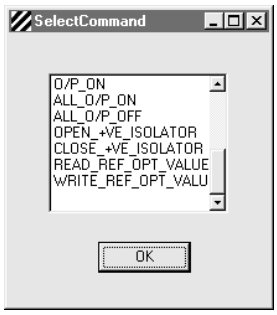




Additional Commands

Additional commands are available under the 'select_cmd' button as follows.





PC_INITIALISE

This command will enable the loop initialisation to be started from the PC. You will need to set the 'Repeat Command' to ON under the set-up section, and switch it off when finished.

PC_START_LOOP

This allows you to run the start loop facility from the PC. You will need to set the 'Repeat Command' to ON under the set-up section, and switch it off when finished.

PC_STOP_LOOP

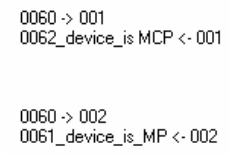
This allows you to run the stop loop facility from the PC. You will need to set the 'Repeat Command' to OFF under the set-up section.

PC_LOOP_COMMS_ON

This function will allow you to restart the Sita DIAGNOSTIC communications after Sita OSP has taken control of the remote port. You will need to set the 'Repeat Command' to ON under the set-up section, and switch it off when finished.

READ_DEVICE_TYPE.

With this command you may interrogate a device to find out its type. You will see a reply similar to the one shown here, indicating which type of device it is.



MCP	-	Manual Call Point
MP	-	Multipoint Detector

You will need to set the 'Repeat Command' to OFF under the set-up section.

MP_LED_ON and MP_LED_OFF

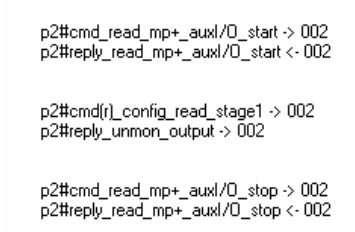
These commands enable detector LEDs to be turned on and off remotely. This may be useful to confirm a device location. You will need to set the 'Repeat Command' to OFF under the set-up section.

SOUNDER_ON and SOUNDERS_OFF

These commands enable sounders to be turned on and off remotely to their Alarm Stage 3 setting. This may be useful to locate a device. The SOUNDERS_OFF command is a global command, switching all sounders off in one operation. You will need to set the 'Repeat Command' to OFF under the set-up section.

READ_I/O_STATUS

This will enable the reading of the status programmed into a multipoint detector for the auxiliary input or output. A typical example is shown here where the status of device 2 was read, and the device replied with 'unmon_output'.



I/O_is_off	-	not configured
unmon_output	-	unmonitored output (remote LED only)
mon_input_device	-	monitored input to device
mon_input_zone	-	monitored input to zone
mon_input_auxiliary	-	monitored input to auxiliary zone
mon_output_device	-	monitored output from device activation
mon_output_sector	-	monitored output from sector activation
mon_output_auxiliary	-	monitored output from auxiliary sector activation

You will need to set the 'Repeat Command' to OFF under the set-up section.

O/P_ON, ALL_O/P_ON and ALL_O/P_OFF

These commands allow system outputs located on the addressable loop to be switched on or off as required. You will need to set the 'Repeat Command' to OFF under the set-up section.

OPEN_+VE_ ISOLATOR and CLOSE_+VE_ ISOLATOR

These commands should not be touched unless at the direction of Fike technical support. Severe damage to equipment could ensue if used in the wrong manner.

READ_REF_OPT_VALUE and WRITE_REF_OPT_VALUE

These commands should not be touched unless at the direction of Fike technical support. Severe damage to equipment could ensue if used in the wrong manner.

Reading Optical and Heat Values

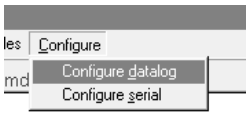
The optical and heat values may be logged and viewed with the Sita DIAGNOSTIC software if required. This is not needed for general maintenance but may prove useful in identifying contaminated optical chambers in certain instances.

It is important to note that this does not take the place of routine testing. A smoke detector can only be correctly tested for operation by simulating a fire condition with suitable smoke test equipment.

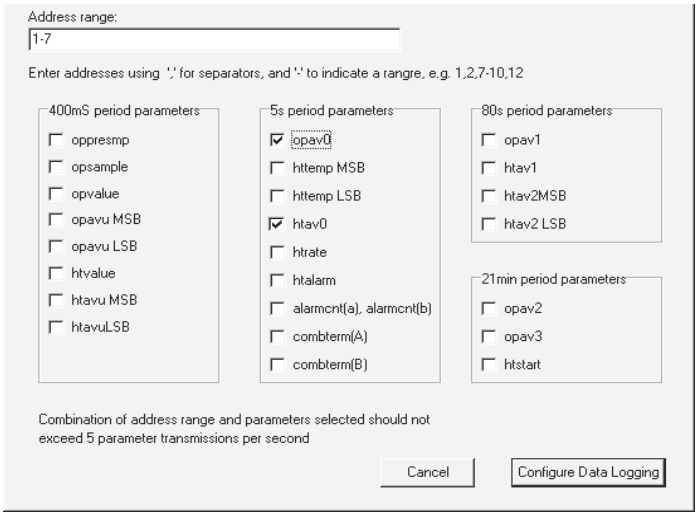
Follow the 3 steps for reading optical and heat values, as detailed below;

1. Configure Datalog

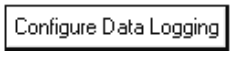
From the menu tab marked ‘Configure’ select the option ‘Configure Datalog’.



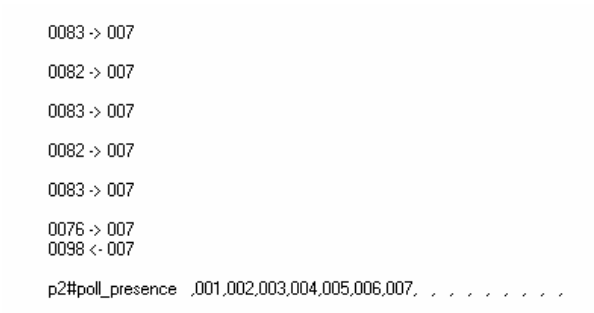
This will produce the following drop down menu where you may enter the address range of the devices that you wish to investigate. The only value that it is required to read is the ‘opav0’ for optical values, and ‘htav0’ for heat values, so tick that box and ensure all other boxes are un-ticked.



Finally, click on the ‘Configure Data Logging’ button, as shown below;



You will then see a stream of data on the screen. Simply leave this to finish until the poll presence count returns to normal as shown below;



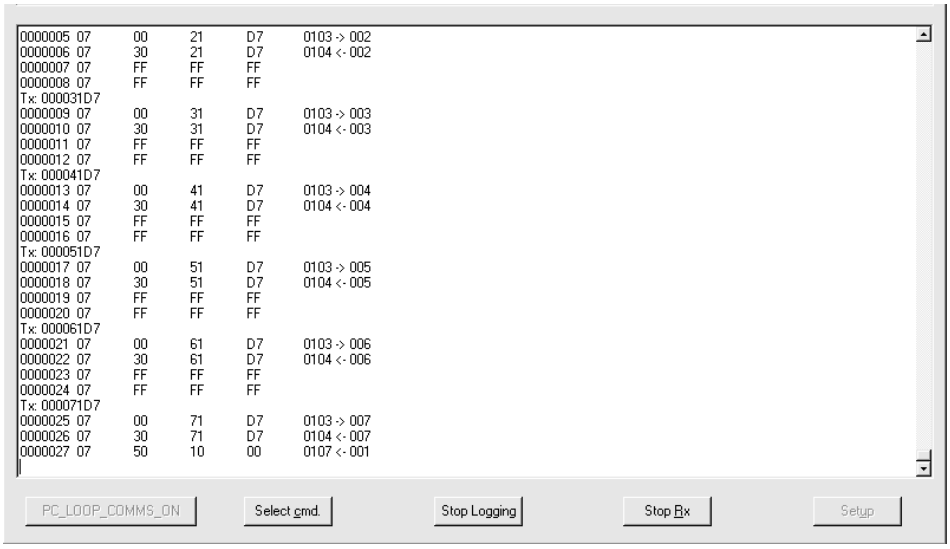
You have now set up the chosen devices to be monitored for their optical and heat values.

2. Log Data

Click on the button at the bottom of the screen marked ‘Start Logging’.

You will then see a flow of data representing the Sita DIAGNOSTIC software asking those devices to send their optical and heat values to the panel, followed by the device responding. These replies may not be in order, but has no ill affect. Leave the system running as long as you wish but 2 or 3 replies are usually adequate.

The section of screen shown below show the request to devices 2, 3, 4, 5, 6 and 7, and then the 1st reply from device 1.

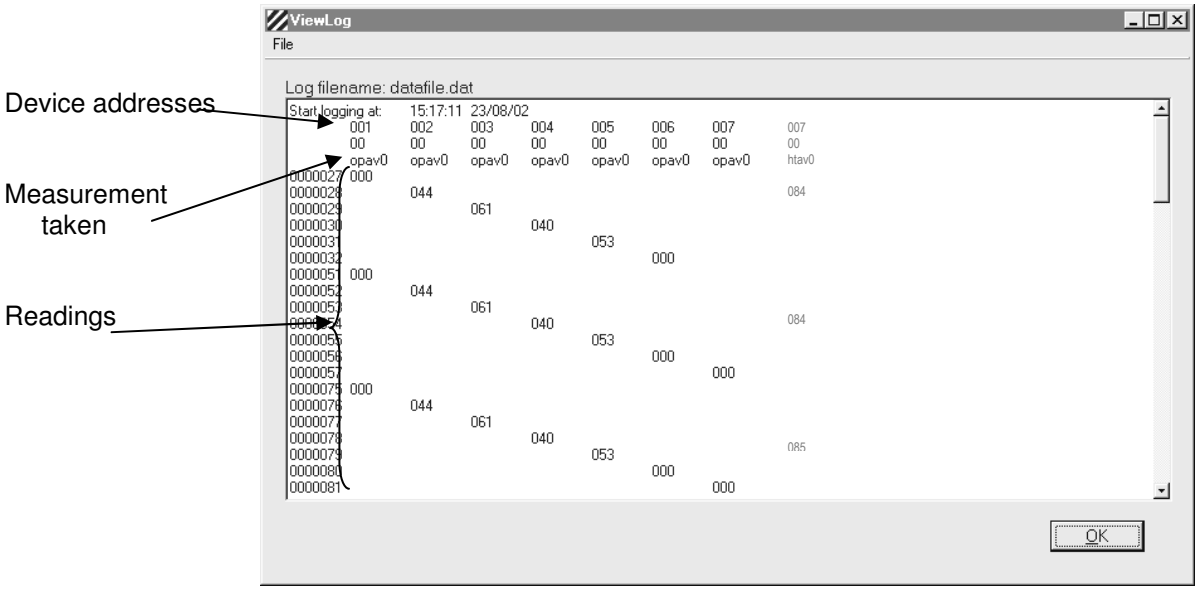


When enough data has been gathered, click on the button marked ‘Stop Logging’. You have now read optical chamber and heat level data into the data log.

3. View Data

From the menu tab marked 'View Log Files' select the option 'Datalog File'.

This will then give the following display.



These optical reading may be interpreted by comparing them with the following scale;

Opav0 Reading	Condition Generated	Notes
0	Optical signal low	Probably a Manual Call Point
50	Optical signal healthy	Very Clean
110	Optical signal healthy	Clean – any higher level will require maintenance
140	High level optical warning	General warning – maintenance optional
180	High level optical fault	Fault – replace optical chamber with new
210	Fire condition imminent	Fire
255	Maximum optical level	Fire

It is important to be aware that these figures are a rough guide only, as the state of the detector depends on many parameters. For general use these values will give an acceptable indication of the contamination of the optical chamber.

The heat level may be interpreted by as follows:

Temperature (^{o}C) = (htav0 – 50) / 2

Ie, if htav0 = 84, then

Temperature = (84 – 50) / 2 = 34 / 2 = 17 ^{o}C

It is important to be aware that these figures are a rough guide only as the state of the detector depends on many parameters. These parameters may be monitored over a significant period of time, ie throughout a test on that detector, in order to interrogate the response.

Technical Support

For further technical support please contact your distributor.

Do not call the Fike Safety Technology technical support department unless your distributor has first given their advice and attempted to rectify the issue. Technical support will not be available if the instruction manual has not been read and understood. Please have this instruction manual available whenever you call for technical support. Due to the complexity and inherent importance of a life risk type system then training on this equipment is essential, and commissioning should only be carried out by competent persons.

Your Notes