

MX4428 PC Based Programming

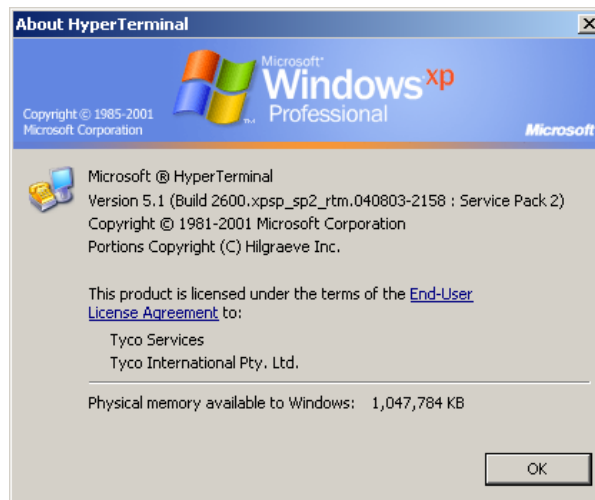
Objectives:

Configuring a PC communication program to communicate with the MX4428 c.i.e. to enable direct programming of a site database;

- Log-on to panel;
- Execute help menu;
- Suspend panel processing;
- Enter Configure System (CS) menus;
- Enter Database Configure (DC) menus;
- Ending a programming session;

Task 1 - Configure PC Software

- 1 **Software** – most terminal emulation programs such as Microsoft ® HyperTerminal can be used to establish communications with the MX4428 panel. Since HyperTerminal is a Microsoft ® product it is licensed under the terms of the End-User License Agreement installed on most Windows PCs.



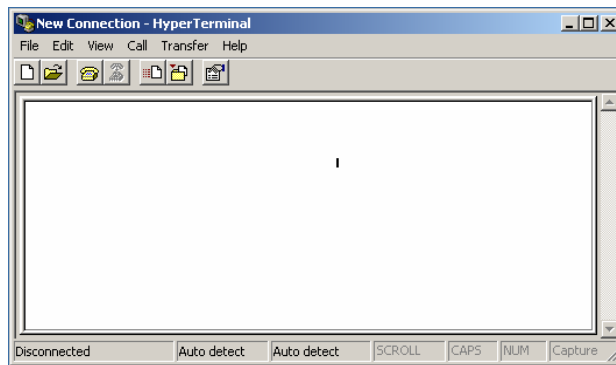
By default HyperTerminal can be located on the PC desktop by following PC path;

C:\ Program Files \ Accessories \ Communication \ HyperTerminal

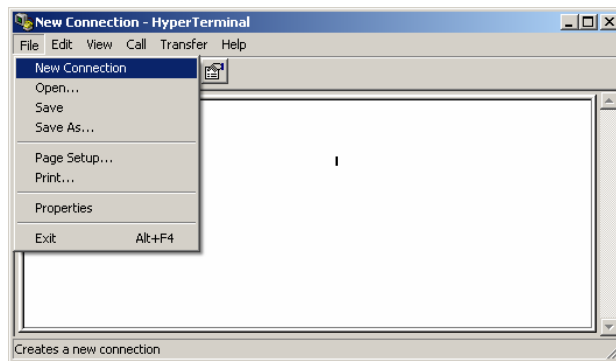
Alternatively you can use the windows file search facility to locate the executable file 'hypertrm.exe'.

Since a PC running Windows can be individually customized the exact location may vary between PCs.

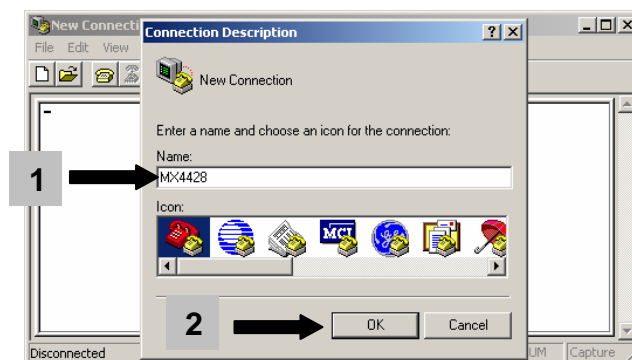
- 2 **Continued...** once the HyperTerminal program has been located click to launch. The following screen will appear;



- 3 **Continued...** select the option 'File' and select 'New Connection' as illustrated.



- 4 **Continued...**a window prompting a Connection Description will appear. Enter a description 'MX4428' then click 'OK'.

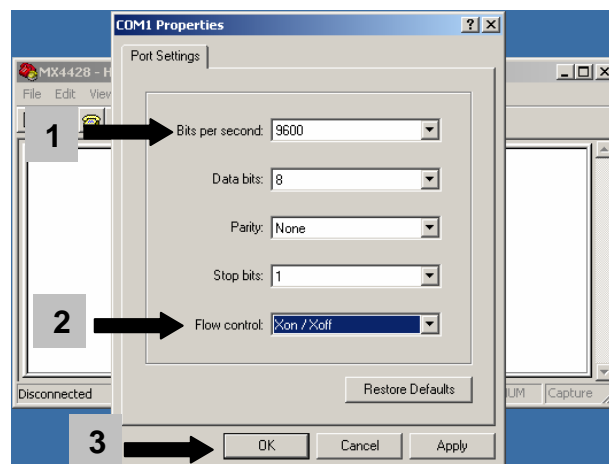


- 5 **Continued...** in the 'Connect using' field use the drop down menu and select the option 'COM1' as illustrated below.



Note – COM1 may not be the correct port selection for all PCs, but is the most common.

- 6 **Continued...** the following screen will appear. Change the communication setting baud rate - Bits per second to '9600' and Flow control to 'Xon / Xoff' as illustrated. Once entered click 'OK'.



Note – these HyperTerminal settings will enable communication with the MX4428 c.i.e.. It is recommended that these settings are saved as 'MX4428.ht' using standard windows File, Save As commands. In this way you will not have to repeat this set-up process.

Task 2 – Connect to MX4428

- 7 Panel connection** – to connect a PC to an MX4428, a connection loom is required. A connection loom part number LM0041 is available and can be purchased from any Wormald or Simplex Fire Products office.

Alternatively this loom can be fabricated from commercially available materials. It consists of a miniature DB9F socket, 1x Molex® 2139-4 housing and 3x 2578 wire crimp pins and a suitable length of 4 core screened 7/0.25 data cable.

Table 1

J8 Pin	Signal	DB9 Pin Used
1	Ground	5
2	Polarising Key	-
3	Transmit Data (TxD) from MX4428	2
4	Receive Data (RxD) to MX4428	3

Table 2

Loop DB9 Pins
1,4,6
7,8

- 8 PC Connection** – using loom LM0041, connect DB9F end direct to the serial port of the PC. PCs not equipped with serial ports will require a suitable USB to serial adapter or PCI to serial adapter.

- 9 MX4428 Connection** – connect the Molex plug end of the connection loom direct to the MX4428 programming port **J8**. Located at the bottom of the main printed circuit board.



Task 3 – Communication

- 10 MX4428 Programming** – following the instructions described in tasks 1 and 2 pressing enter on the keyboard will cause the MX4428 to request a login password.

Enter the site programming password.

IMPORTANT – passwords are designed to prevent unauthorised access to commissioned MX4428s and should be available from the building occupier / owner.

MX4428 Programming Overview

The MX4428 panel programming facility is a menu driven, full prompting system.

At command entry prompts, a two character command is entered to access any function of further menus.

Help displays are available as either lists of valid commands for a given menu, or as options in the prompts. Many error messages also attempt to explain the reason for rejection of any input.

The programming facility commands can be grouped into two main classes;

- Commands that alter the database (programmed configuration parameters of the system). Using these commands requires that processing of data must be stopped.
- Commands used for data input / output.

The programming facility uses multi-level menus for entry of database information, output of diagnostics and event management.

For operating panels the programmer facility must be left in the inactive state.

11 MX4428 HELP – following login to the panel the following prompt will display;

ENTER PROGRAMMING ACCESS COMMAND
(HE FOR HELP) ->

Type '**HE**' to view the help menu.

**** WARNING ****

When processing is suspended, the MX4428 is no longer able to act on alarms. Whilst processing is suspended the MX4428 also de-energises the STANDBY RELAY to indicate that the panel is not operational.

It is recommended that;

- **the MX4428 be isolated from alarm signaling equipment before processing is stopped.**
- **that the processing be suspended for the shortest possible time since the panel can not process fire alarms.**

12 CS command – to enter the CS (configure system) menu, type '**CS**' at the following prompt;

ENTER PROGRAMMING ACCESS COMMAND
(HE FOR HELP) ->

If the following message displays;

ERROR DATABASE NOT WRITE ENABLED

Then the database protection link was in the PROTECT position, this must be placed into the DATABASE WRITE position.

This link is located on the main printed circuit board as illustrated.



The panel will provide the following error message;

ERROR PROCESSING MUST BE SUSPENDED FOR THIS COMMAND

PROCESSING IS CURRENTLY ACTIVE

ENTER S TO SUSPEND

Q TO CANCEL COMMAND

Type '**S**' to suspend.

To exit a menu at any time, typing '**Q**' (Quit). Some menus may require you to type '**Q**' multiple times.

13 DC command – to enter the DC (Database Configure) menu, type '**DC**' at the following prompt;

ENTER PROGRAMMING ACCESS COMMAND
(HE FOR HELP) ->

To exit this menu at any time, type '**Q**' (Quit). Some menus may require you to type '**Q**' multiple times.

IMPORTANT –In all cases where changes are made using CS or DC commands, these changes will result in a change to the database - programmed configuration parameters of the commissioned fire system and will require system verification of changes as specified in AS 1670.1

- 14** **Ending a programming session** – after all changes have been made the in the CS / DC menus processing **must be** restarted. The MX4428 will prompt you to restart the processing, type '**S**'.

ENTER PROGRAMMING ACCESS COMMAND
(HE FOR HELP) ->Q

ERROR RESTART PROCESSING BEFORE EXITING

PROCESSING IS CURRENTLY SUSPENDED
ENTER **S** TO START
Q TO CANCEL COMMAND

>**S**
CALCULATING CRC

Once the following prompt appears, refit the database write protect link to WRITE PROTECT position.

PROGRAMMING SESSION FINISHING
RECONNECT PRINTER WITHIN 20 SECONDS

IMPORTANT –It is recommended that after conducting the required system verification of changes made (as specified in AS 1670.1); that a copy of the MX4428 database is uploaded from the panel, use the 'UP' command.

Summary

The above steps enabled you to configure PC communications software; connect to a loom from a PC serial port to the MX4428 programming port; log-on to a panel; stop processing; enter programming menus and restart processing on an MX4428 panel.

To assist users of the MX4428 Appendix A is provided to describe the main HELP menus and Appendix B is provided to show typical sequences of programming commands to perform site specific modifications as follows;

- change the site name displayed on the LCD
- change the zone text displayed on the LCD
- remove an addressable device connected to the system
- add an addressable device to the system

Appendix A – MAIN HELP MENUS

MX4428 HELP MENU displayed after logon prompt;

VALID COMMANDS:
CS CONFIGURE SYSTEM
DC DATABASE CONFIG
DG DIAGNOSTICS
HI HISTORY LOG
IN DATABASE INFORMATION
PC PROCESSING CONTROL
RS RE-INITIALISE SYSTEM
TI TIME/DATE
UP UPLOAD DATABASE
Q QUIT MENU

CS HELP MENU displayed after processing suspended and typing HE;

VALID COMMANDS:

AB AUTOTEST BEGINS	LP NUMBER LINES PER PAGE
AC ALERTING CONFIGURATION	MZ MAX ZONES
AD AUTOTEST DATES	ND NUMBER DISPLAYS
AG ANALOG GLOBALS SETUP	NR NUMBER RZDUS
AS CONFIG ANCILLARY SUPERVISION	NZ NEW ZEALAND MODE
AT AUTOTEST TEST-FIRE	PE CONFIG PRINTER EVENTS
AZ ANCILLARY ZONE CONFIGURATION	PP PRINTER PORT
BT LCD BRIGADE TEST KEY CONFIG	PS CONFIG POWER SUPPLY
CP CONFIG SPARE PORT/NETWORK	PW CONFIG PASSWORDS
DL DOWNLOAD DATABASE	RK CONFIG RZDU KEYS
DP DETECTOR LED PULSING	RO RESPONDER OPERATION
DT CONFIG DISPLAYS TYPE	RP CONFIG RZDU COMMS PROTOCOL
ED CONFIG EXTENDED DATABASE	TC TIME CONTROL
FC FFCIF MODE CONFIG	TS TEXT STRINGS
FD FLOWSWITCH DELAY	ZA ZONE ALARM TYPE TEXTS

DC MENU HELP displayed after processing suspended and typing HE;

VALID COMMANDS:
AP CONFIG ANALOG POINTS
CC CONFIG CIRCUIT
CR CONFIG RESPONDER
CZ CONFIG ZONE/ANCILLARY
DR DELETE RESPONDER
MC MAP CIRCUIT/ZONE
MM MAP MANUAL CALL POINT
OL OUTPUT LOGIC
RM RESERVE MEMORY
Q QUIT MENU

Appendix B – Programming Command Sequences

Typical CS command sequence after processing suspended to;

Change site name text to display on MX4428 LCD
CS, TS then type in new site name...

After changes you must exit programming as described in step 14 of this document and perform system verification of changes.

Typical DC command sequence after processing suspended to;

Change zone description text to display on MX4428 LCD;

DC, CZ; locate relevant zone, type in new zone name...

After changes you must exit programming as described in step 14 of this document and perform system verification of changes.

Remove an addressable device connected to the system;

DC, AP; locate relevant device, then type **T** then **X** to delete

After changes you must exit programming as described in step 14 of this document and perform system verification of changes.

Add an additional addressable device connected to the system;

DC, AP, T; select the type of device from the displayed list by typing the number next to the description

After changes you must exit programming as described in step 14 of this document and perform system verification of changes.

IMPORTANT –It is recommended that after conducting the required system verification of changes made (as specified in AS 1670.1); that a copy of the MX4428 database is uploaded from the panel, use the 'UP' command.