EMS

FirePoint

5000

5-7941

EIGHT WAY CONTACT OPERATED HALF-WATT TRANSMITTER

INSTALLATION AND PROGRAMMING INSTRUCTIONS

EMS 5000 FIREPOINT

Table of Contents

Section	Page No

EMS 5000 FIREPOINT

1. Introduction

1.1 The eight input UHF transmitter has been designed to operate in conjunction with the EMS 5000 FirePoint Control Panel. The transmitter unit is a 12 or 24 volt operated device and comprises of a 500mW transmitter, fitted with an additional printed circuit board allowing the activation of up to eight opto isolated inputs. Each of the inputs can be separately programmed into the system 5000. This allows individual identification via text descriptions. The inputs themselves, can also be programmed to operate either normally open, or normally closed. The transmitted data from the input, can be selected from Fire Alarm, Fault, Tamper, Low Battery or Mains fail.

1.2 As each input is opto isolated, a negative is required to be applied to one side of the input and to trigger the input a positive voltage should be applied if the contact is programmed as normally open or removed if normally closed (see Figure 3 on page 18 for details). On an input activation a signal will be transmitted to the receiver and displayed in the format programmed i.e. Fire Alarm: Zone Area 1 for an input that has been set as an Alarm input and programmed with the text description Zone Area 1.

2. Tools & Test Equipment

2.1 Only standard hand tools are required to install the transmitter unit. The transmitter is supplied with the inputs factory set as follows:-

INPUT NUMBER	TYPE	INPUT ORIENTATION
1	Alarm (Fire)	Normally Open
2	Fault	Normally Open
3	Alarm (Fire)	Normally Open
4	Fault	Normally Open
5	Alarm (Fire)	Normally Open
6	Fault	Normally Open
7	Alarm (Fire)	Normally Open
8	Fault	Normally Open

If an inputs orientation requires alteration, Windows HyperTerminal with a serial a lead will be required.

3. Equipment Required

5-7941 Eight Input Transmitter
53-5000 Radio Fire controller
Power Supply Units
53-5428 UHF remote receiver with no checksum (V0.12)
Windows HyperTerminal programme with a serial lead if programming changes are required.

EMS 5000 FIREPOINT

3.1 Remote devices and high gain aerials may also be required depending upon the customers specification and requirements. Please note both the eight input transmitter will require an external power supply. Figure 1 shows a typical system layout:
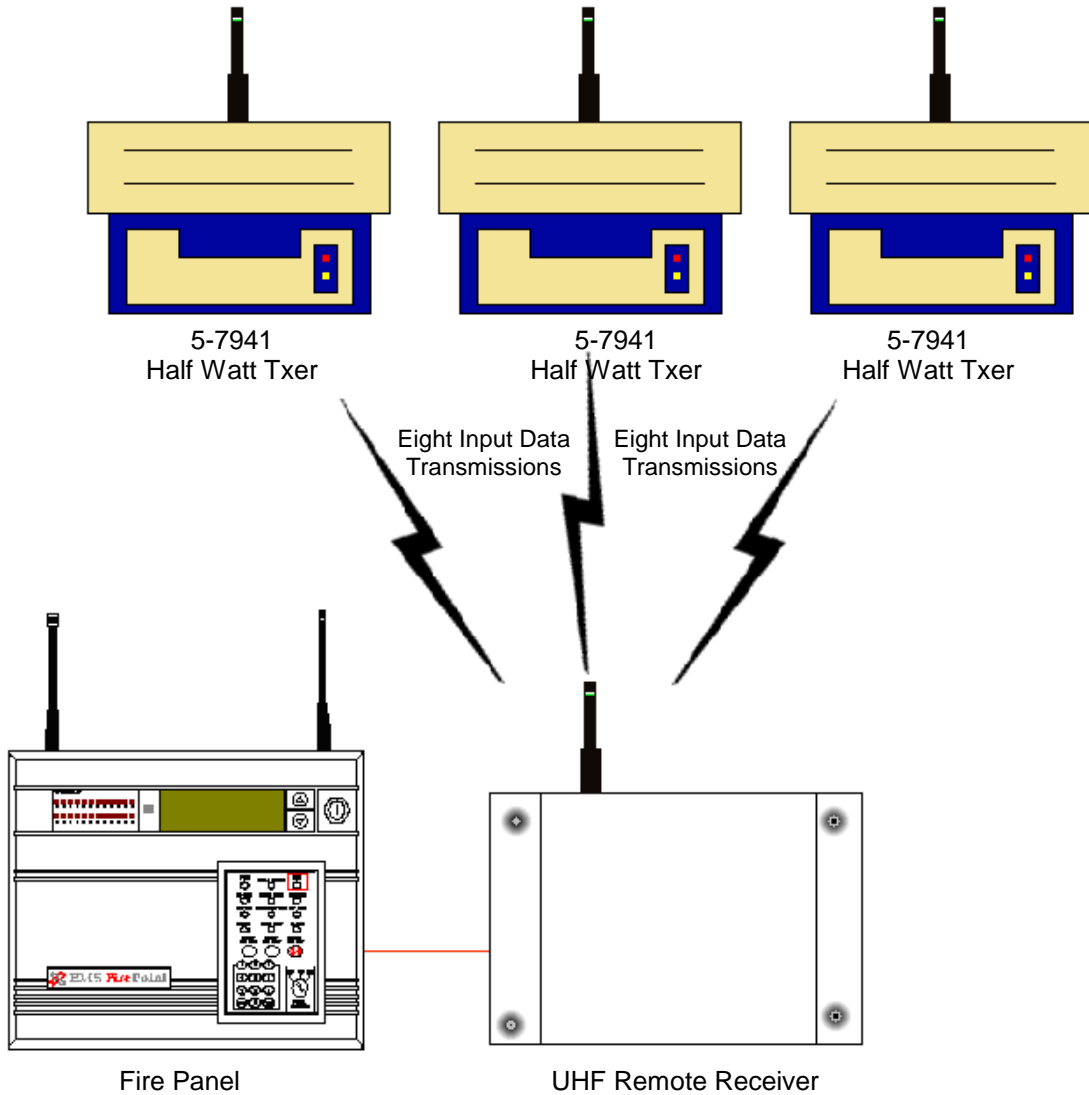

5-7941
Half Watt Txer

5-7941
Half Watt Txer

5-7941
Half Watt Txer

Eight Input Data
Transmissions

Eight Input Data
Transmissions

Fire Panel

UHF Remote Receiver

Figure 1

EMS 5000 FIREPOINT

4. Programming Connection Details

4.1   The computer to transmitter physical connection details are as follows:-

      COMPUTER   **ISOLATED RS 232 PORT**

      PIN 2 --------------------------------- TX OUT
      PIN 3 --------------------------------- RX IN
      PIN 5 --------------------------------- COMMON CONNECT

4.2   All Computer to HyperTerminal connections are shown below in Figure 2.

Figure 2

EMS 5000 FIREPOINT

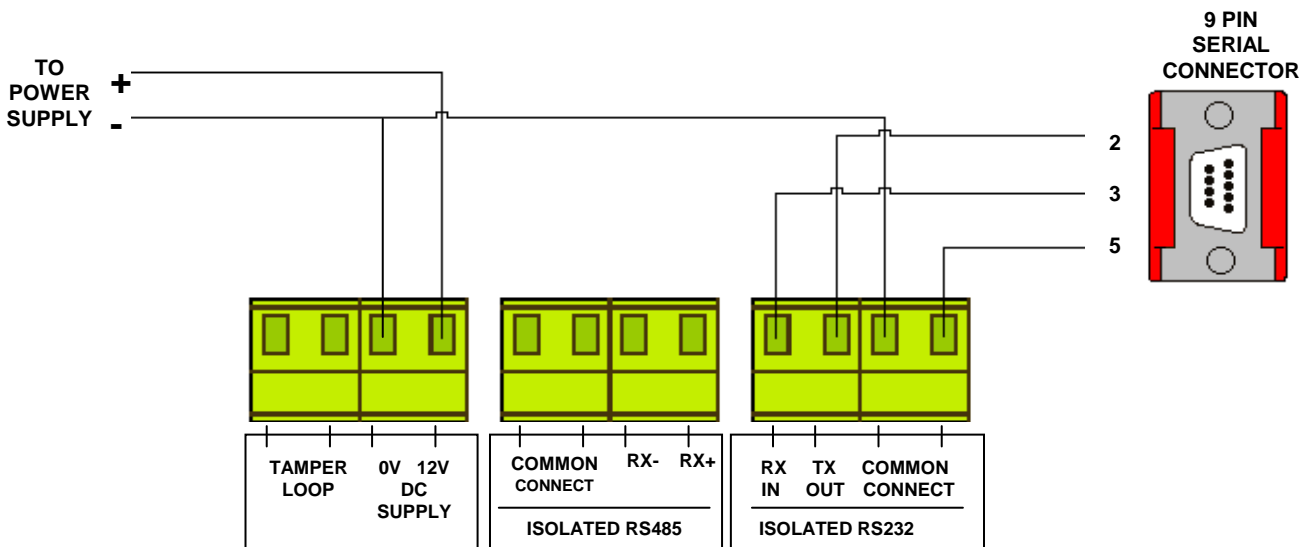## 5. Input Programming

5.1 The transmitter unit has the facility of allowing each of its inputs to be individually configured. The settings for each input are as follows with the menu commands required shown in brackets: - Inputs unique identification code (ID). Orientation of the input to normally open or normally closed (CON). Inputs transmitted data on activation, which ranges from Alarm, Fault, Low Battery, Mains Fail, Tamper and Not Used (TYPE). A full explanation of all input settings and the operation of the inputs if selected are described in more detail in the following paragraphs under their menu commands headings.

5.2 The inputs have their settings defaulted to the following parameters:-

            Inputs 1-8..............   ID: A0001-A0008
                                          Con: Normally Open
                                          Type: Alarm
                                          Mode: Current State
5.3 To allow access into the programming menu the computer should be set up using windows HyperTerminal:-

PLEASE NOTE: Examples shown below are from Windows XP. Other versions of Windows may vary.

To start a new HyperTerminal session, click on the 'Start' button.

Then select 'Programs' and then 'Accessories'.

Now select 'Communications', then 'HyperTerminal'.

You will then be presented with the following screen: -
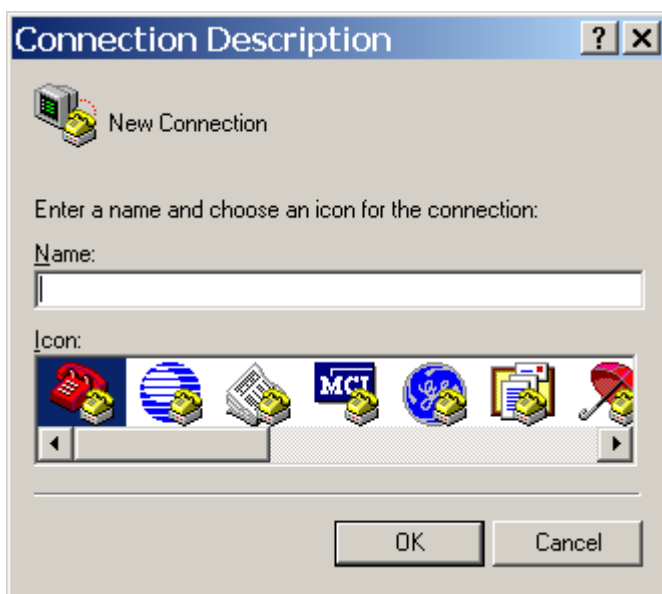
EMS 5000 FIREPOINT

Now enter your desired connection description:-

Then click on the 'OK' button, and the screen will change to the following:-
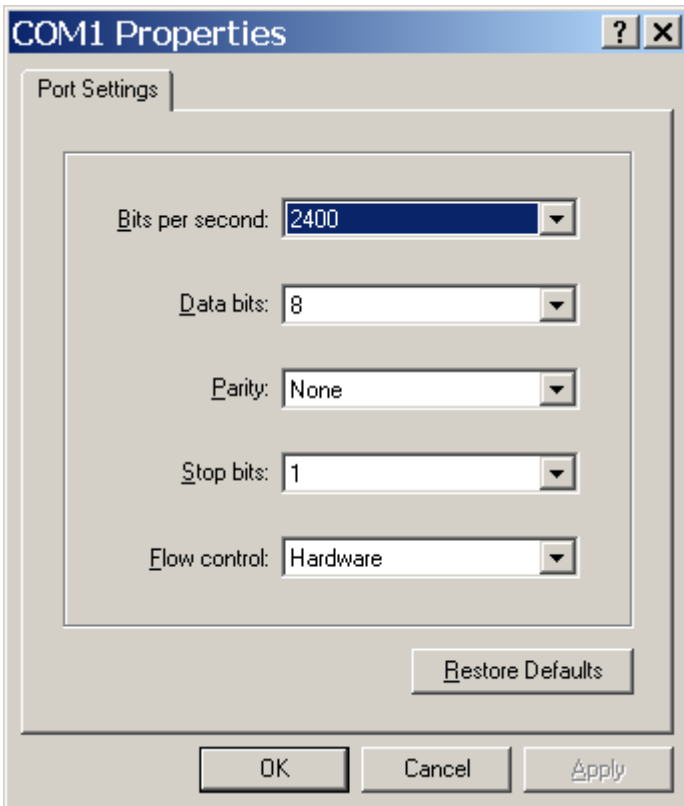
EMS 5000 FIREPOINT

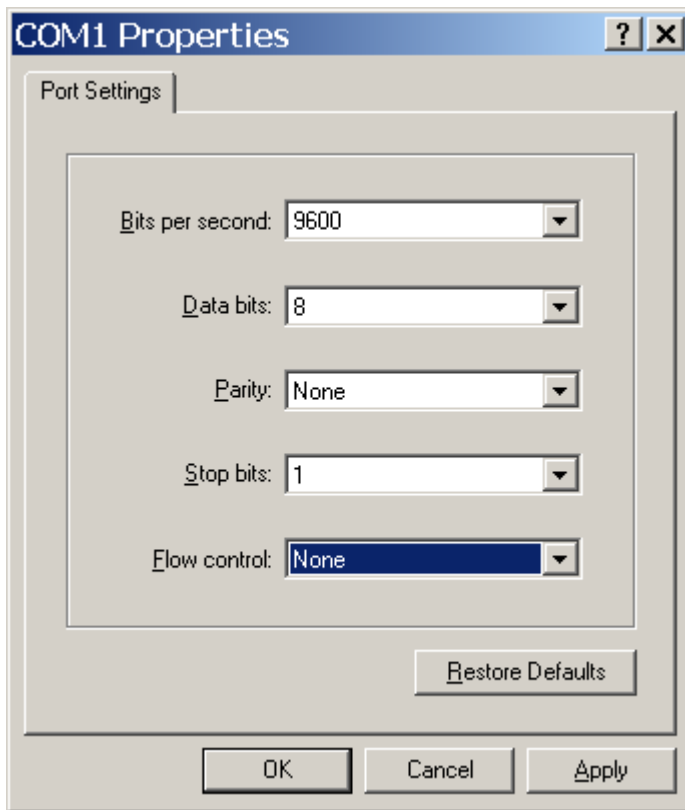Now select the Comm Port required as below: -

Connect To dialog:
- Half Watt
- Enter details for the phone number that you want to dial:
- Country/region: United Kingdom (44)
- Area code: 01227
- Phone number:
- Connect using: COM1
- [OK] [Cancel]

Then click on the 'OK' button, and the screen will change to the following screen: -

COM1 Properties
- Port Settings
- Bits per second: 2400
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: Hardware
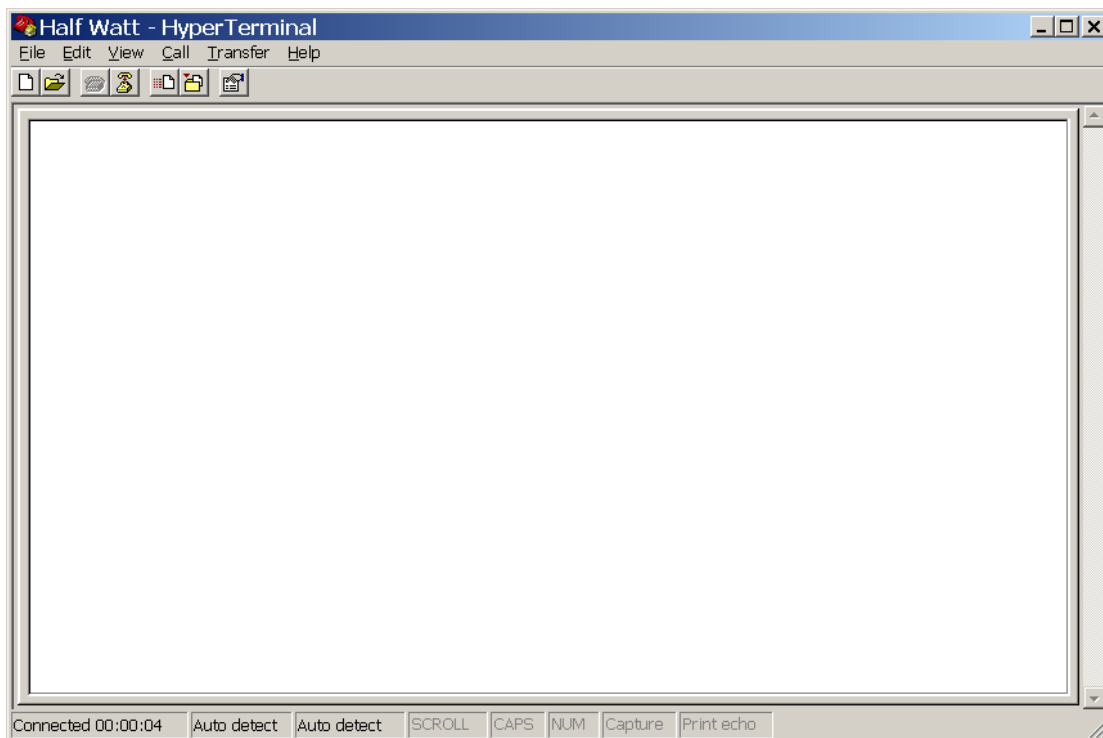- [Restore Defaults]
- [OK] [Cancel] [Apply]

EMS 5000 FIREPOINT

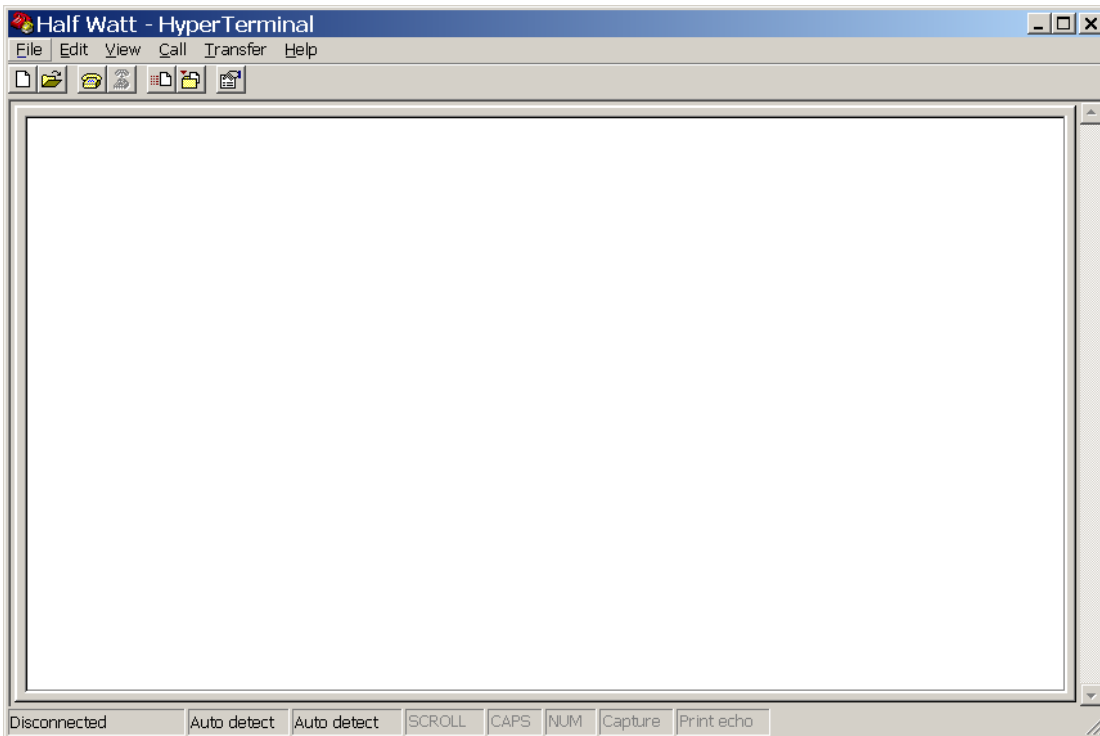Now select the following settings: -

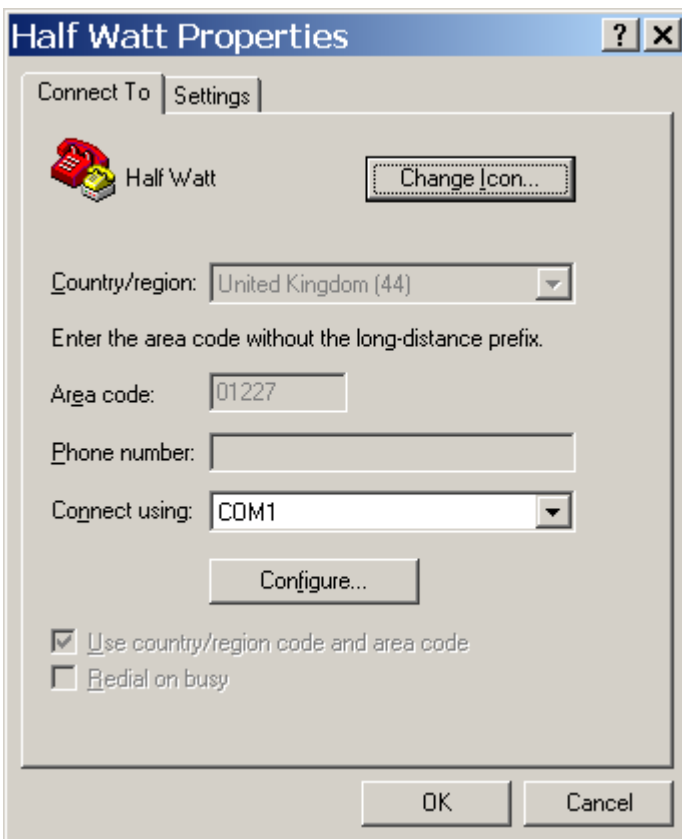Once completed, click on the 'Apply' button and then the 'OK' button. The screen will change to display: -

EMS 5000 FIREPOINT

Now select 'Call' and 'Disconnect and the screen will change to display:-

Now select 'File' and 'Properties'. The screen will change to display-

EMS 5000 FIREPOINT

Now select the 'Settings' tab and the screen will change as below:-
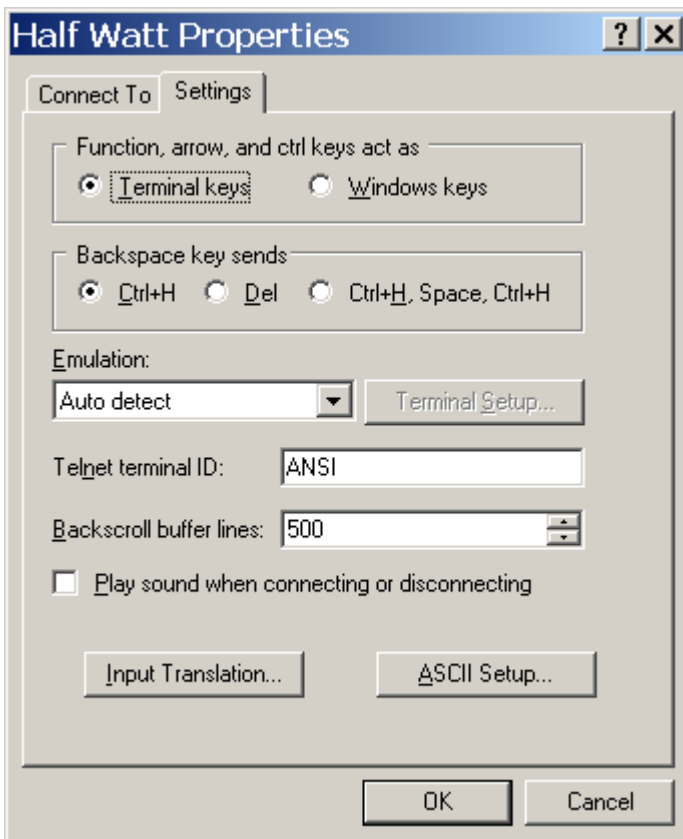
The Settings should be set as follows:-
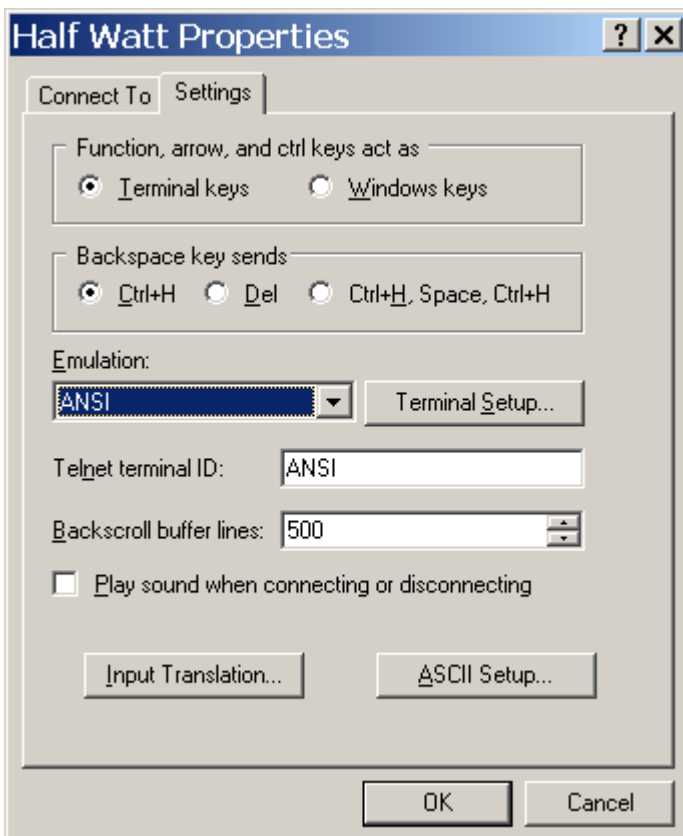
EMS 5000 FIREPOINT

Once the settings are as above, click on the 'ASCII Setup' button and check that the settings are as follows:-
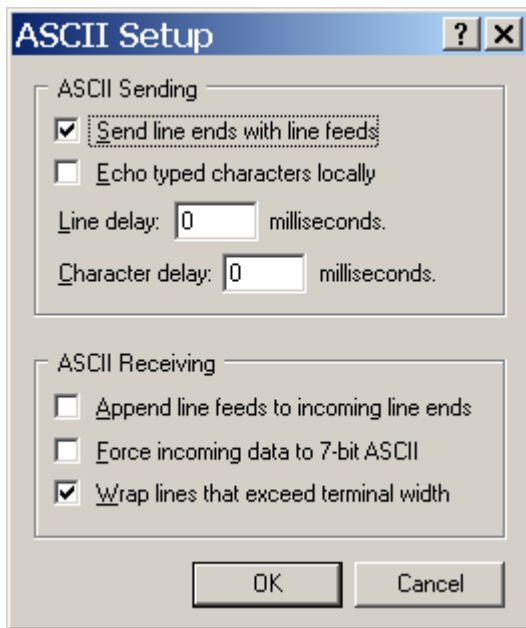
Once the settings are as above, click on the 'OK' button then on the next window click on the 'OK'. We can now establish a connection by selecting 'Call' and 'Call' as below: -
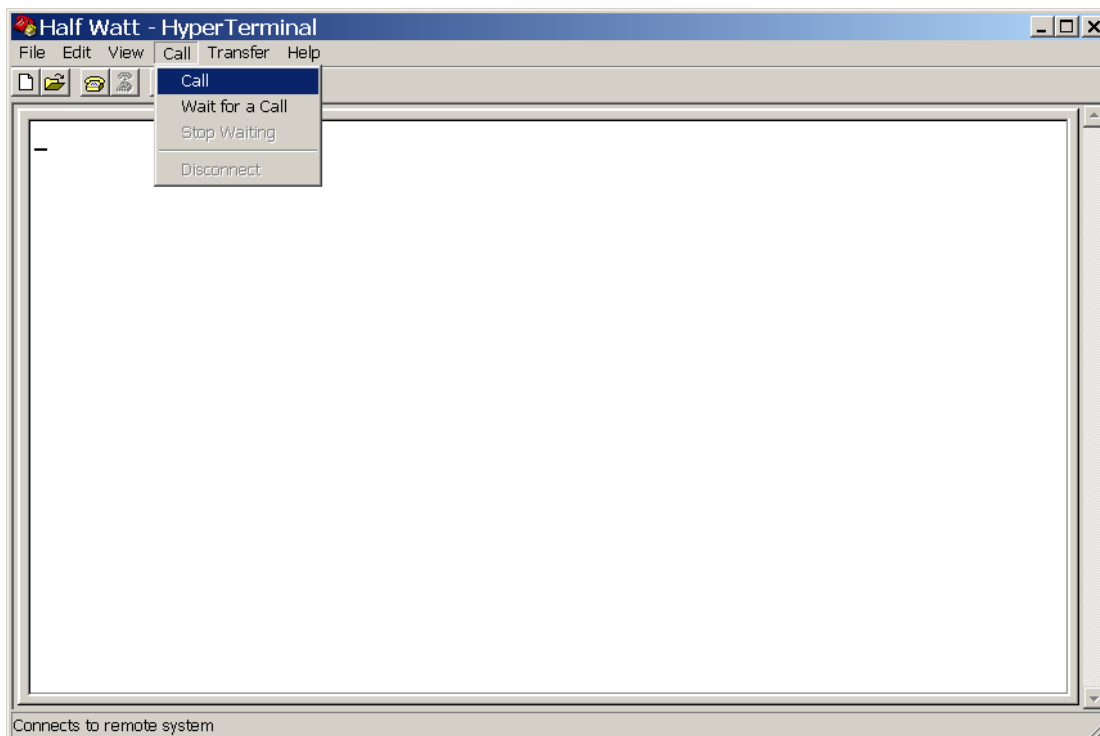
Once completed, HyperTerminal is configured.

Please Note: To prevent future reconfiguration, the HyperTerminal session can be saved for future use.

5.4 To gain access to command menu press the enter key 3 times, the terminal display should change to: -

>   **COMMAND: con, type, mode**
>   **txd, erase, quit >**

6. ID

6.1 Each of the transmitter's inputs have their individual programmable identification numbers. These identification numbers can be set from the COMMAND menu. This allows the input to be added into the System 5000 Control Panel with a unique number. The identification numbers for inputs 1-8 are factory set. Please Note; under normal circumstances this menu should not require changing.

6.2 The only time the default settings will require changing is if additional transmitter units have been added to an existing installation. If this is the case a print out should be taken from the System 5000 control panel and the transmitter ID settings checked. The new transmitter can then be added to the system ensuring that the new inputs id's do NOT correspond with any already programmed into the Control Panel.

6.3 To change the inputs identification number, from the command menu type id? and press enter. The display will then show:-

Input No: 1
ID code (hex) is A0001
Change Y/N?

To skip to the next input, press enter. Otherwise, to change the ID press Y and then the enter key, the display will now show:

New ID Code (hex)

Enter the new ID code and press enter. The display will change to show the next input, eg:

Input No: 2
ID code (hex) is
Change Y/N?

Repeat for all inputs until all changes are complete, and the display returns to:

>   **COMMAND: con, type, mode**
>   **txd, erase, quit >**

7. CON

7.1 Each of the transmitters inputs can be programmed to operate via a normally open connection or normally closed configuration. The default setting for all of the inputs is to normally open. If this requires changing, from the command menu type **con** and press the enter key. The display will then show:

Input Number 1 is N/O
Change Y/N

To skip to the next input, press enter. Otherwise, to change the ID press Y and then the enter key, the display will now show the next input, eg:

Input Number 2 is N/O
Change Y/N

Repeat for all inputs until all changes are complete, and the display returns to:

COMMAND: con, type, mode
txd, erase, quit >

8. TYPE

8.1 Each of the transmitters inputs have a **type** setting, which sets the kind of alarm data that is transmitted to the System 5000 control panel. The setting is defaulted to alarm for each of the inputs, but can be changed to one of the following depending on the overall systems requirements: -

8.2 **NU = NOT USED: -** If selected no output transmission will be generated when triggered and no call in's signals from the input will be transmitted.

8.3 **MAINS: -** If selected on triggering this input the System 5000 Control Panel will display a mains fail event.

8.4 **LOW BATTERY: -** If selected on triggering this input a low battery alarm transmission would be sent to the 5000 controller.

8.5 **TAMPER: -** If selected on triggering this input a tamper alarm transmission would be sent to the 5000 controller.

8.6 **FAULT: -** If selected on triggering this input a Fault transmission will be sent to the 5000 controller.

8.7 **ALARM: -** If selected on triggering this input a Fire alarm transmission will be sent to the 5000 controller.

8.8 If the type requires changing, from the command menu, type **type** and press the enter key. The display will then show:
Input Number 1 is Alarm
Change Y/N?

To skip to the next input press the enter key. Otherwise, to change press the Y key and then the enter key. The display will then change to the following:

Enter new type 0 = NU, 1 = MAINS
2 = LOWBAT, 3 = TAMPER, 4 = FAULT, 5 = ALARM

Enter the required number and press enter. The display will now show:

Input Number 1 is NNNNNN (Where N is the new option chosen)

Input Number 2 is Fault
Change Y/N?

Repeat for all inputs until all changes are complete, and the display returns to:

COMMAND: con, type, mode
txd, erase, quit >

9. MODE

9.1 Each of the transmitters inputs have a **mode** setting, which sets the operation of the input. The unit has two modes, clear automatic or current state. Clear automatic, automatically sends a clear signal irrespective of the input's state. Current state, requires the input's state to change back to clear, before a clear signal is sent. The default for all inputs is set to current state.

9.2 If the mode requires changing, from the command menu type **mode** and press the enter key. The display will then show:

Input Number 1 is CLEAR AUTOMATIC
Change to CURRENT STATE. Y/N?

To skip to the next input press enter. Otherwise, to change it's state, press the Y key and then the enter key. The display will then change to the following:

Input Number 1 is CURRENT STATE

Input Number 2 is CLEAR AUTOMATIC
Change to CURRENT STATE Y/N?

Repeat for all inputs until all changes are complete, and the display returns to:
COMMAND: con, type, mode
txd, erase, quit >

10. TXD

10.1 The txd function when entered causes each of the inputs being used to transmit three bursts of call in data. To enter this function type **txd** from the command menu and press the enter key. The display will then show:-

Transmit Call Ins
Call in 00A0000
Call in 00A0000
Call in 00A0000
Call in 00A0001 }
Call in 00A0001 } This is call in data for input 1
Call in 00A0001 }

This is then repeated for all active inputs showing each of the inputs ID's in three transmitting bursts. Once completed it will carry on repeating the above sequence. To exit this function press the enter key 3 times.

11. QUIT

11.1 To update any information changed and exit the programming mode **quit** must be typed followed by pressing the enter key. The program mode is then exited. The display will then show any transmissions from the transmitter in the following format:

Transmitting Data: (hex transmission and ID code shown)

12. LOAD DEFAULT VALUES

12.1 This command is not actually shown on the menu but can be used to default all of the systems inputs. Default values for the inputs are as follows:

> Inputs 1-8.............. ID   A0001-A0008
> Con   Normally Open
> Type Alarm
> Mode current state

12.2 To change all of the inputs to their default settings type **load defaults** and press the enter key. The display will now show:

 Load Default Values Y/N?

Press the Y key and then enter the display will then change to show:
Please Wait.....
The system will then return to the command menu.

13. Internal Input Wiring
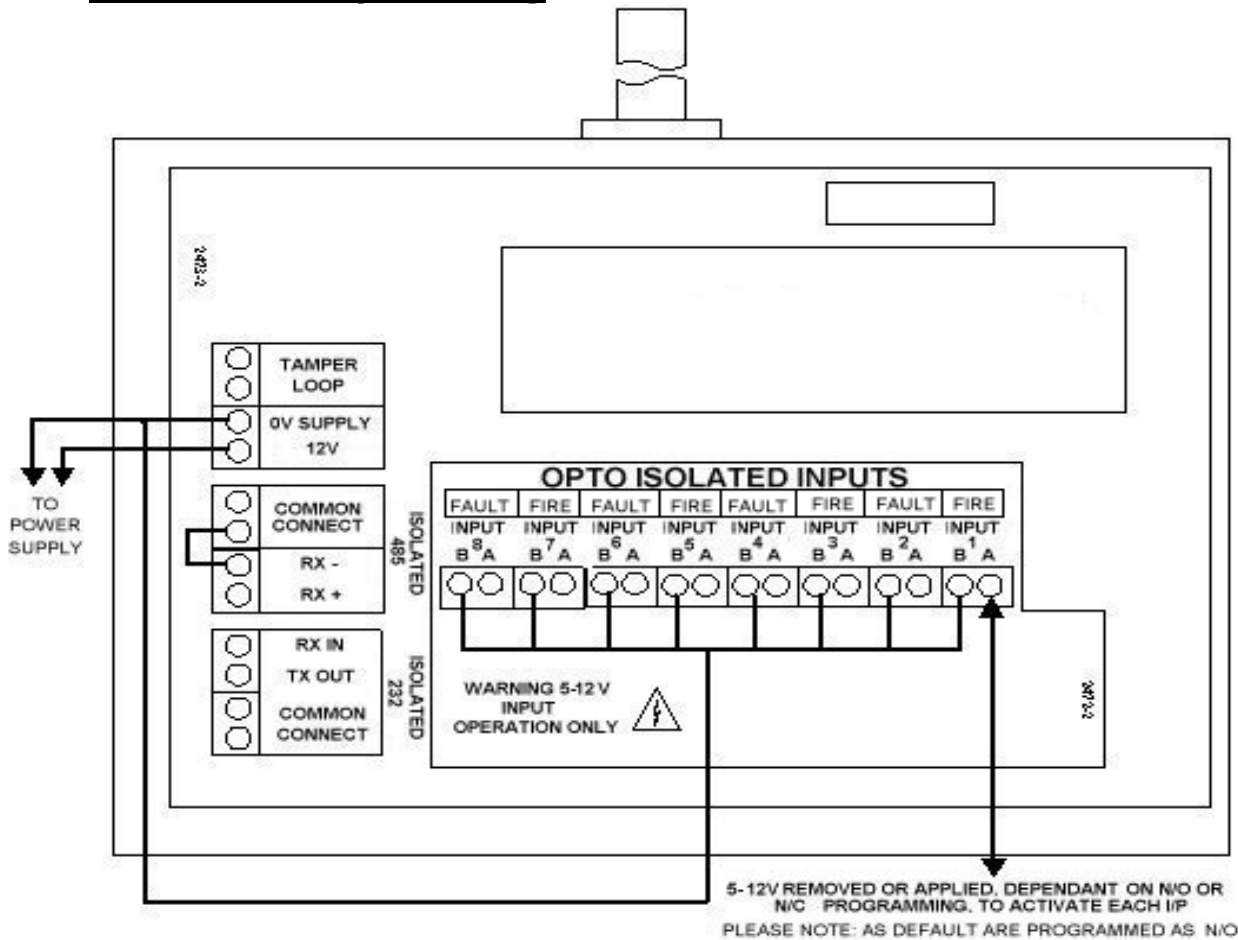
Figure 3

Note 1: 24V and 12V versions of this device are available and the inputs will be labelled accordingly. Do not attempt to connect incorrect voltage to the device, as damage to the circuitry will occur, which will invalidate the warranty.

Note 2: To ensure an earth fault is not generated when connected to other control panels ensure that the caseworks are not joined in any way i.e. via glands etc. If the units are to be connected then ensure plastic glands are used.

14. Adding Contact Operated Transmitter onto The 5000 FirePoint Controller

14.1 Introduction
   The following instructions show in a step by step guide format how to log all of the device variants onto the System 5000 control panel. The engineer should be ideally equipped with a pager receiver if logging on is to be carried out away from the control panel, although this is not essential. Messages will be paged to aid the logging on procedure and a text description will also be shown on the panel's display to confirm the devices have been added successfully.

14.2 Control Panel Log On Requirements
   To log any device onto the control panel, the Log On Devices setting must be enabled. To achieve this the following steps must be taken:

> EMS FIRE SYSTEMS LTD
> System Clear
> Mon Jan 01   12:34

14.3 With the display as shown above turn the Panel Control key to the ON position, then press the 0 key. The display will now change to show;

> | ***   Options   **** |
> > Passwords   <
> | Time and Date |
> YES = Select   12:34

Note: The display may not show the above items in the same order. The order the items are displayed is a programmable function.

14.4 Using the ⋏ and ⋎ keys position **Passwords** between the > and < characters on the display. Press the YES key. The display will now change to show;

> | * PIN's and Access * |
> >   User Log On   <
> | View Users |
> YES = Select   12:34

14.5 With **User Log On** between the > and < characters on the display and press the YES key. The display will now change to show;

> Enter Your PIN
> to Log On > _
> Then Press YES
>   12:34

14.6 Enter your PIN number **(Engineering default = 221100)** and press the YES key. The display will change to show;

```
****************************
        Welcome Engineer
****************************
Push Any Key          12:34
```

14.7 Press any key and the display will change to show;

```
|  ***   Options   ****   |
>   Passwords            <
|   Time and Date         |
YES = Select        12:34
```

14.8 Scroll through the Options Menu using the ⋀ or ⋁ keys until **Fire System Opts** appears between the > and < characters. Press YES, the display will change to show;

```
|  **    Fire System  **  |
>  Dev. Disable/Test    <
|   Net. Disable/Test     |
YES = Select        12:34
```

14.9 Using the ⋀ or ⋁ keys scroll through the Fire System Menu, until **Engineers Config** appears between the > and < characters. Press YES, the display will change to show;

```
|  **   Eng. Config   **  |
>   Device DataBase     <
|   Sounder Options       |
YES = Select        12:34
```

14.10 Scroll through the Eng Config Menu using the ⋀ or ⋁ keys until **Log On Devices** appears between the > and < characters. Press YES, the display will change to show;

```
Logon  DISABLED (000)
Push YES to change
Push NO to escape
Push YES/NO        12:34
```

14.11 Press the YES key, the display will change to show;

```
|  **    Logon Options **  |
>  Logon Slot : AUTO     <
|   Slot is : FREE        |
YES = Select        12:34
```

EMS 5000 FIREPOINT

Note: The text of the Logon Menu appears on the display three lines at a time, above the YES = Select and time data in the following order;

> **Logon Options**
> Logon Slot: AUTO, 005 – 256
> Slot is: FREE, IN USE
> Logon is: DISABLED, ENABLED, REPLACE

14.12 If the new device is required to be added into the next available slot on the system, with AUTO shown press the ⩔ key to position **Logon is: DISABLED** between the > and < characters on the display. Press the YES key. The display will now change to show;

```
|   Slot is: FREE          |
 > Logon is: ENABLED   <
| ^^^^^^^^^^^^^^^^^^^^ |
YES = Select            12:34
```

14.13 The system is now open and will log on the device.

IMPORTANT NOTE: **ONCE LOGGING ON HAS BEEN COMPLETED REMEMBER TO RETURN TO THIS FUNCTION AND CHANGE THE 'LOGON IS ENABLED' SETTING TO DISABLED.**

14.14 If the new device is required to be added into a particular slot on the system, with **Logon Slot AUTO** shown between the > and < characters on the display press the YES key to increment the device slots by one or for quick programming access press the 0 key. The display will now change to show;

```
Enter Device
(Numbers 1 -256).
Number  > _
YES = Finish        12:34
```

```
Enter Device
(Numbers 1 -256).
Number  > _

NO = ESC  ⩔ = DEL   12:34
```

14.15 Enter the required slot number in which the new device is to be added and press the YES key. The display will now change directly to the number required and show;

```
|  **    Logon Options **   |
 >  Logon Slot : 102          <
|   Slot is : FREE            |

YES = SELECT     12:34
```

> *Note: The above example display shows the slot number for the new device selected was 102. The display also shows that the slot is currently free and therefore unoccupied. If the slot was shown as IN USE this means the slot is currently occupied with a known device. Another device number can be selected if required by pressing the 0 key and re-entering another number. Alternatively if the purpose of logging on the device was to replace a current device this can be achieved by changing the Logon Disabled prompt to Logon Replace. This is shown in section 2.17.*

14.16 Press the ⊻ key until **Logon is: DISABLED** is positioned between the > and < characters on the display. Press the YES key. The display will now change to show;

```
|   Slot is: FREE          |
>  Logon is: ENABLED     <
|^^^^^^^^^^^^^^^^^^ |

YES = SELECT        12:34
```

14.17 The system is now open and will log on the device.

IMPORTANT NOTE: ONCE LOGGING ON HAS BEEN COMPLETED REMEMBER TO RETURN TO THIS FUNCTION AND CHANGE THE 'LOGON IS ENABLED' SETTING TO DISABLED.

14.18 If the new device is required to replace an existing device on the system, with **Logon Slot AUTO** shown between the > and < characters on the display press the 0 key. The display will now change to show;

```
Enter Device
(Numbers 1 -256).
Number > _

YES = FINISH       12:34
```

```
Enter Device
(Numbers 1 -256).
Number > _

NO = ESC ⊻= DEL  12:34
```

14.19 Enter the required slot number for which the new device is to replace the existing and press the YES key. The display will now change directly to the number required and show;

```
|   ** Logon Options **      |
>  Logon Slot: 102           <
|  Slot is: IN USE

YES = SELECT        12:34
```

> *Note: The above example display shows the slot number for the new device selected was 102. The display also shows that the slot is currently in use free and therefore occupied.*

14.20 Press the ⋎ key until **Logon is: DISABLED** is positioned between the > and < characters on the display. Press the YES key. The display will now change to show;

```
|   Slot is: FREE          |
>  Logon is: ENABLED    <
|^^^^^^^^^^^^^^^^^^ |

YES = SELECT      12:34
```

14.21 Press the YES key again. The display will now change to show:

```
|   Slot is: FREE          |
>  Logon is: REPLACE    <
|^^^^^^^^^^^^^^^^^    |

YES = SELECT
```

Note: By selecting this function the existing device will be removed from the system and replaced with the new unit. The new unit will automatically take all text and zone details from the old device slot so no further programming is necessary.

14.22 The system is now open and will log on the device.

IMPORTANT NOTE: **ONCE LOGGING ON HAS BEEN COMPLETED REMEMBER TO RETURN TO THIS FUNCTION AND CHANGE THE 'LOGON IS REPLACE' SETTING TO DISABLED.**

15. Logging on 5-7941 Contact Transmitters

15.1 Ensure the Logging On function on the control panel has been set to either Enabled or Replace (see section 2 for details).

15.2 The device is now ready to be logged on. If a pager receiver is available this should now be switched on and be in ready to receive message mode.

15.3 Ensure switch 0ne is in the on position on the transmitter, operate the contact input to be added. The message **Log On Default Device XXX** (Where XXX is the device number on the system), will be displayed on the pager. If a pager is not available the text **Logon Default Device XXX** will be shown on the panels display.

15.4 The message **Default Device XXX added** will be displayed on the pager. If a pager is not available the text **Added Default Device XXX** will be shown on the panels display.

15.5 To check the device is logged on, operate the contact input.

15.6 **Default Device XXX** will be displayed on the pager receiver and on the control panel's display.

15.7 The input is now logged on and fully operational. The control panel should be silenced and reset and switch one on the transmitter must be turned to the off position, to enable the transmitter to become operational.

> **Note: If the switch is not returned fault events transmitted from the unit will be sent as processor reset messages.**