



# SignalPoint



**83-7941/P**

## **INSTALLATION INSTRUCTIONS**

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## **Introduction**

The eight input UHF transmitter has been designed to operate in conjunction with the SignalPoint Control Panel. The transmitter unit is a mains powered 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. 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.

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 (Figure 3 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.

## **Tools & Test Equipment**

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

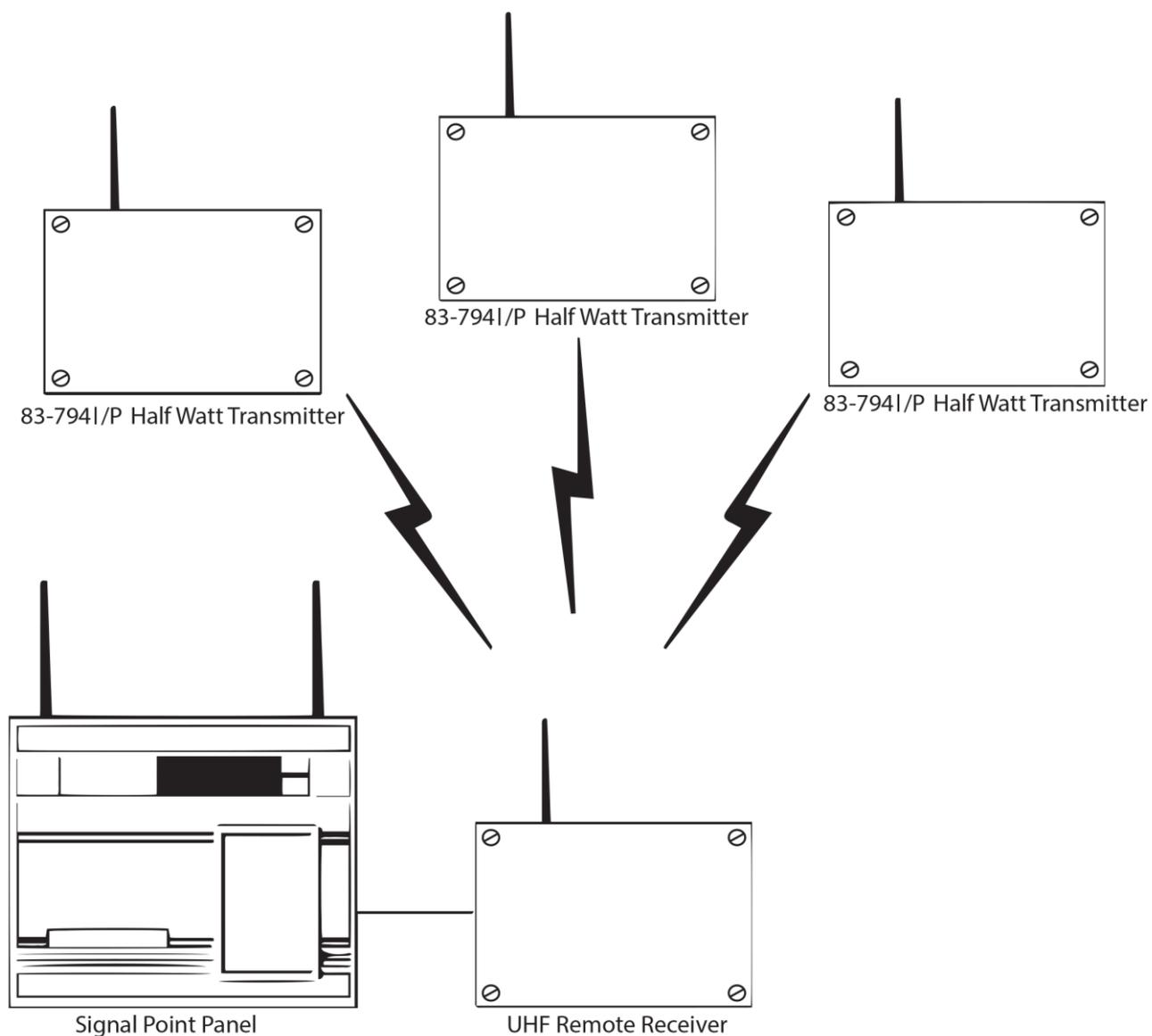
<b>INPUT NUMBER</b>	<b>TYPE</b>	<b>INPUT ORIENTATION</b>
1	Alarm (Fire)	Normally Open
2	Fault	Normally Open
3	Alarm (Fire)	Normally Open
4	Fault	Normally Open
5	Alarm (Fire)	Normally Open
6	Fault	Normally Open
7	Alarm (Fire)	Normally Open
8	Fault	Normally Open

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

## **Equipment Required**

83-7941/P Eight Input Transmitter  
 83-5023 or 83-5024 Radio Fire controller  
 Power Supply Units  
 83-5428 UHF remote receiver  
 Windows HyperTerminal programme with a serial lead if programming changes are required.

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:



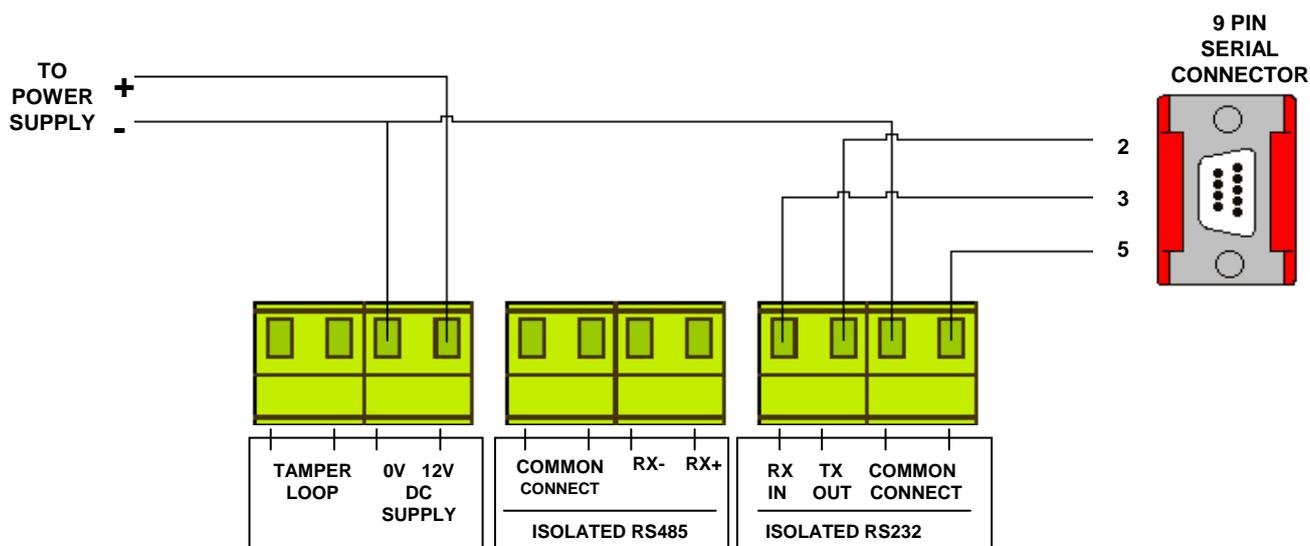
**Figure 1**

## Programming Connection Details

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

<b>COMPUTER</b>	-----	<b>ISOLATED RS 232 PORT</b>
PIN 2	-----	TX OUT
PIN 3	-----	RX IN
PIN 5	-----	COMMON CONNECT

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



**Figure 2**

## **Input Programming**

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.

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

Inputs 1-8.....	ID: A0001-A0008
	Con: Normally Open
	Type: Alarm
	Mode: Current State

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.

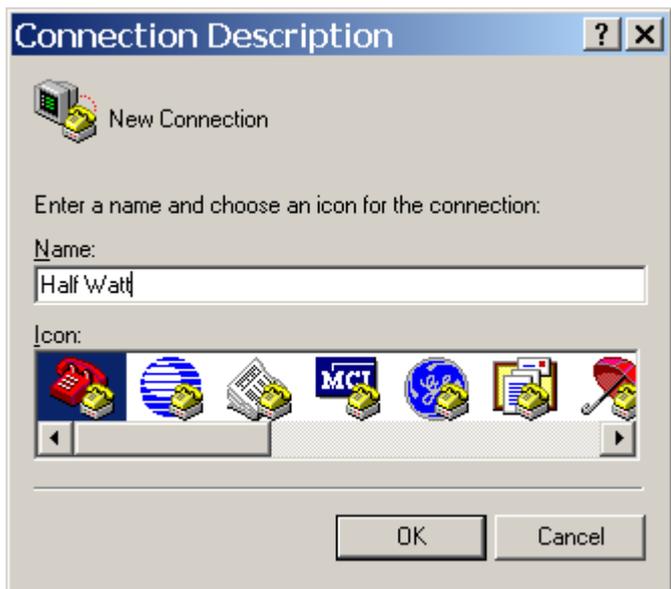
Then select 'Programs' and then 'Accessories'.

Now select 'Communications', then 'HyperTerminal'.

You will then be presented with the following screen: -



Now enter your desired connection description:-



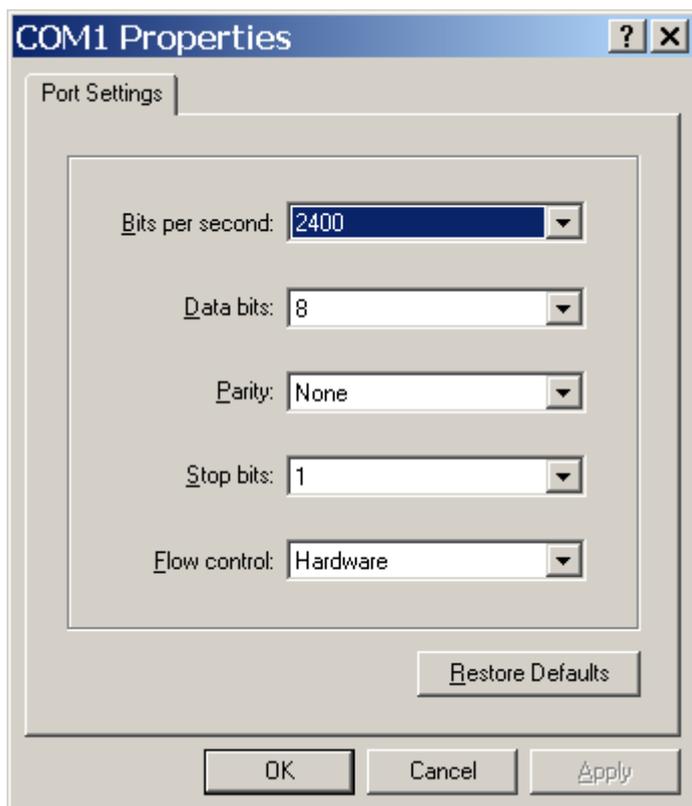
Then click on the 'OK' button, and the screen will change to the following:-



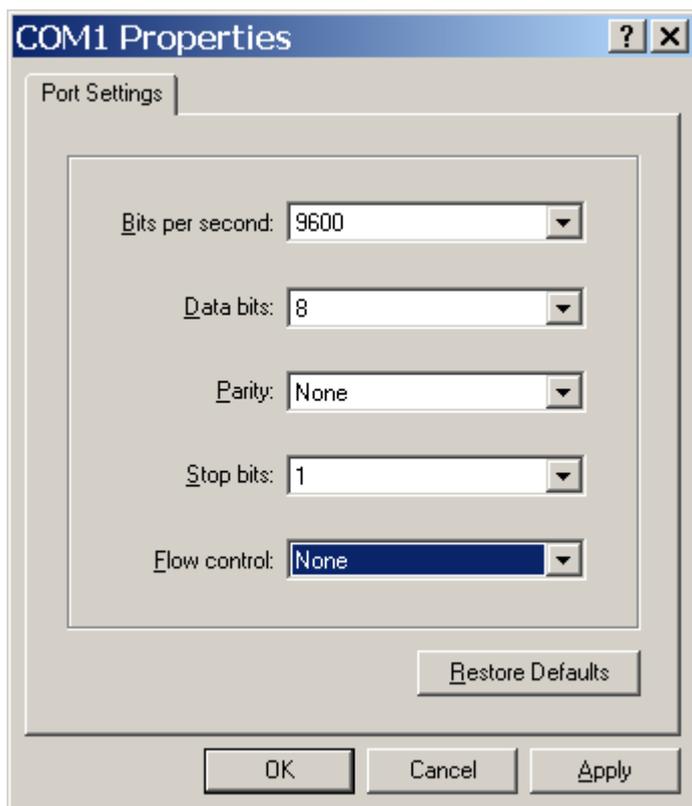
Now select the Comm Port required as below: -



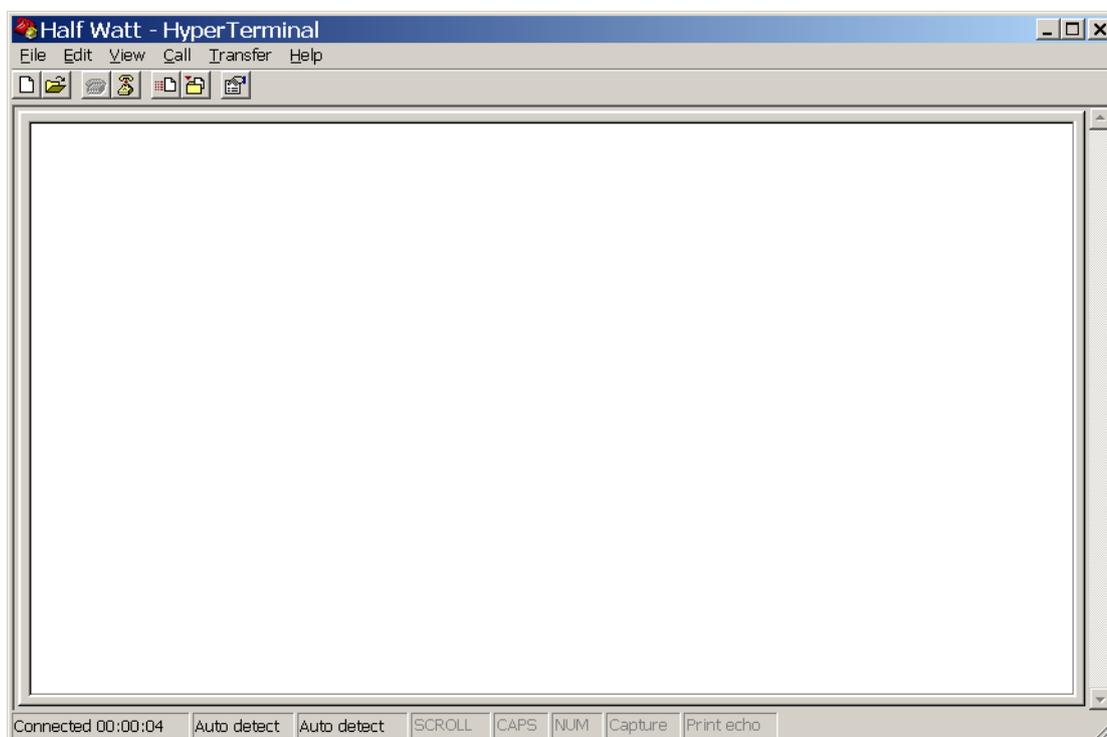
Then click on the 'OK' button, and the screen will change to the following screen: -



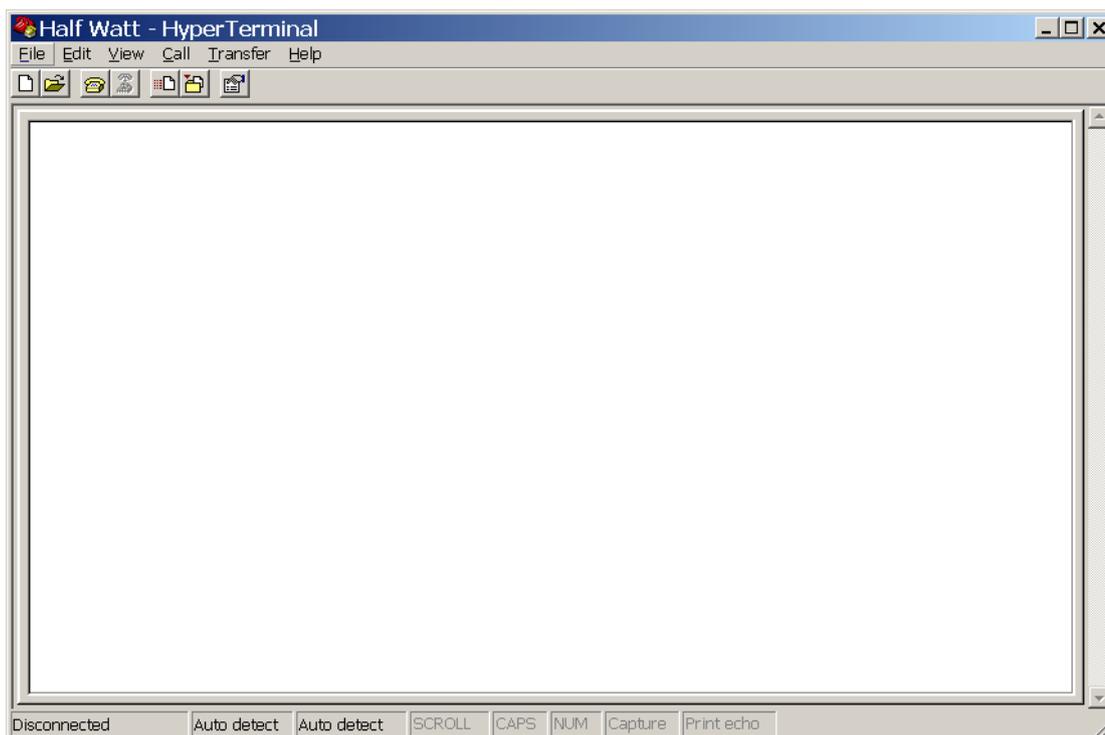
Now select the following settings: -



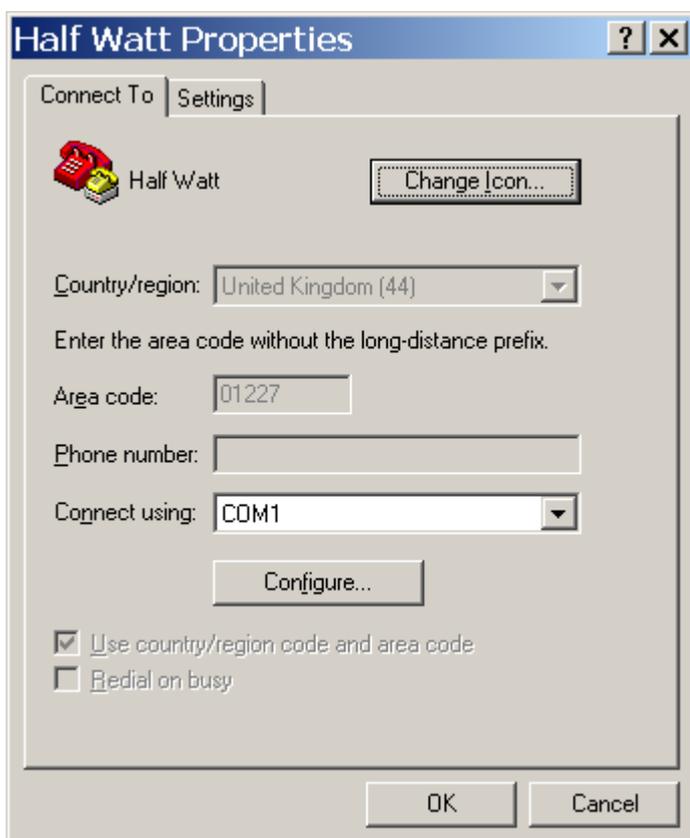
Once completed, click on the 'Apply' button and then the 'OK' button. The screen will change to display: -



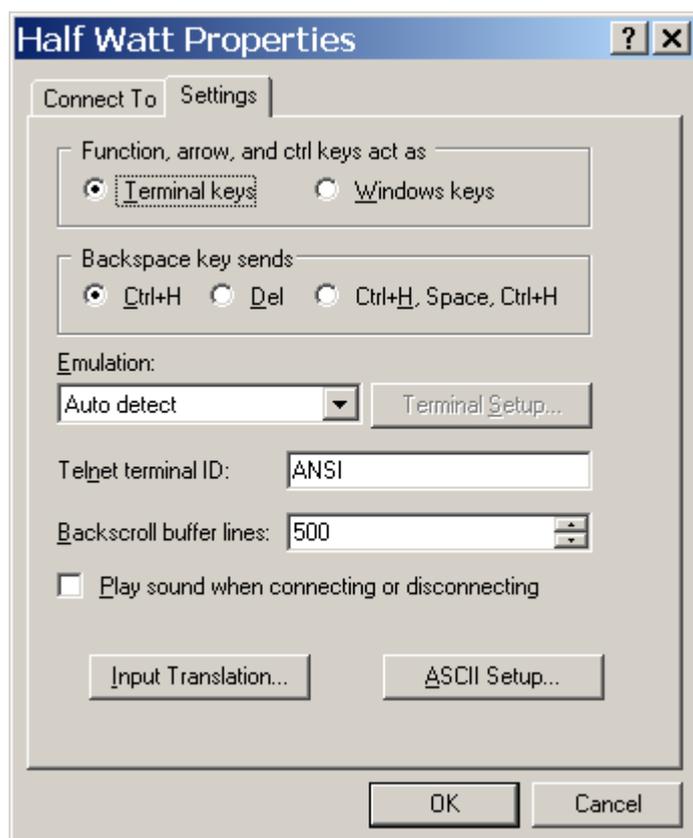
Now select 'Call' and 'Disconnect' and the screen will change to display:-



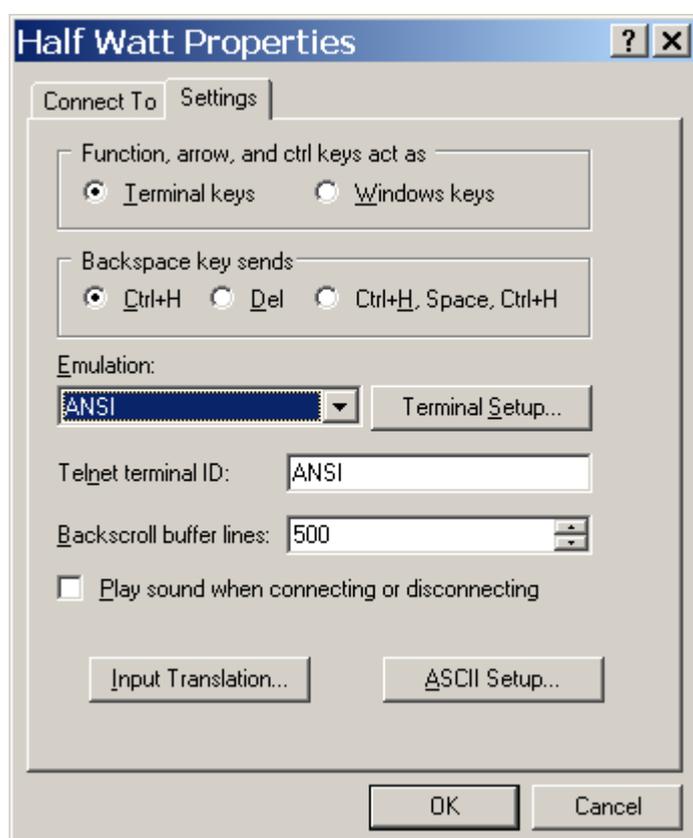
Now select 'File' and 'Properties'. The screen will change to display-



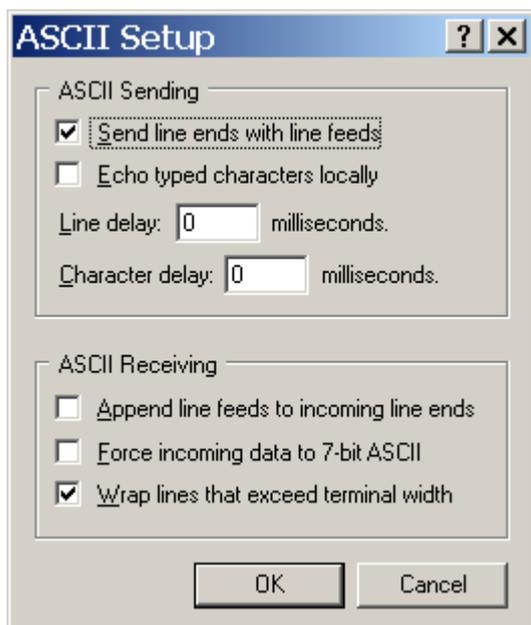
Now select the 'Settings' tab and the screen will change as below:-



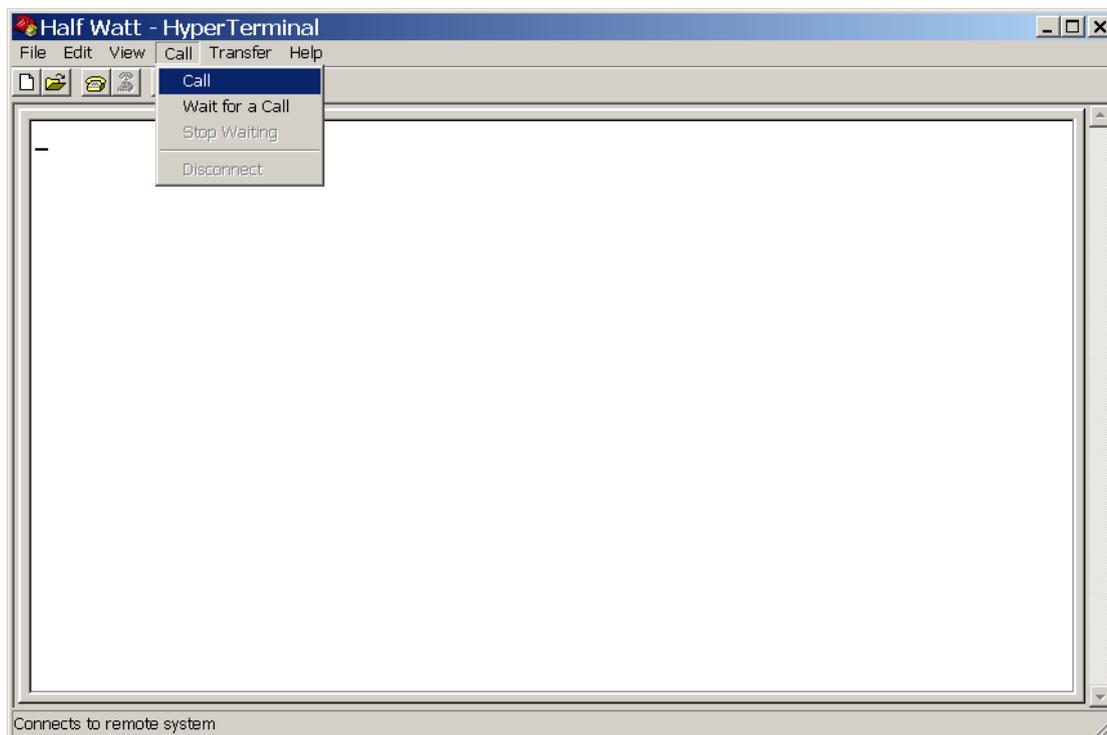
The Settings should be set as follows:-



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.**

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 >**

## **ID**

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 Signal Point 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.

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 Signal Point 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.

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 >**

**CON**

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 >**

**TYPE**

Each of the transmitters inputs have a **type** setting, which sets the kind of alarm data that is transmitted to the Signal Point 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: -

**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.

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

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

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

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

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

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 >**

## **MODE**

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.

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 >**

**TXD**

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.

**QUIT**

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)****LOAD DEFAULT VALUES**

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

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:

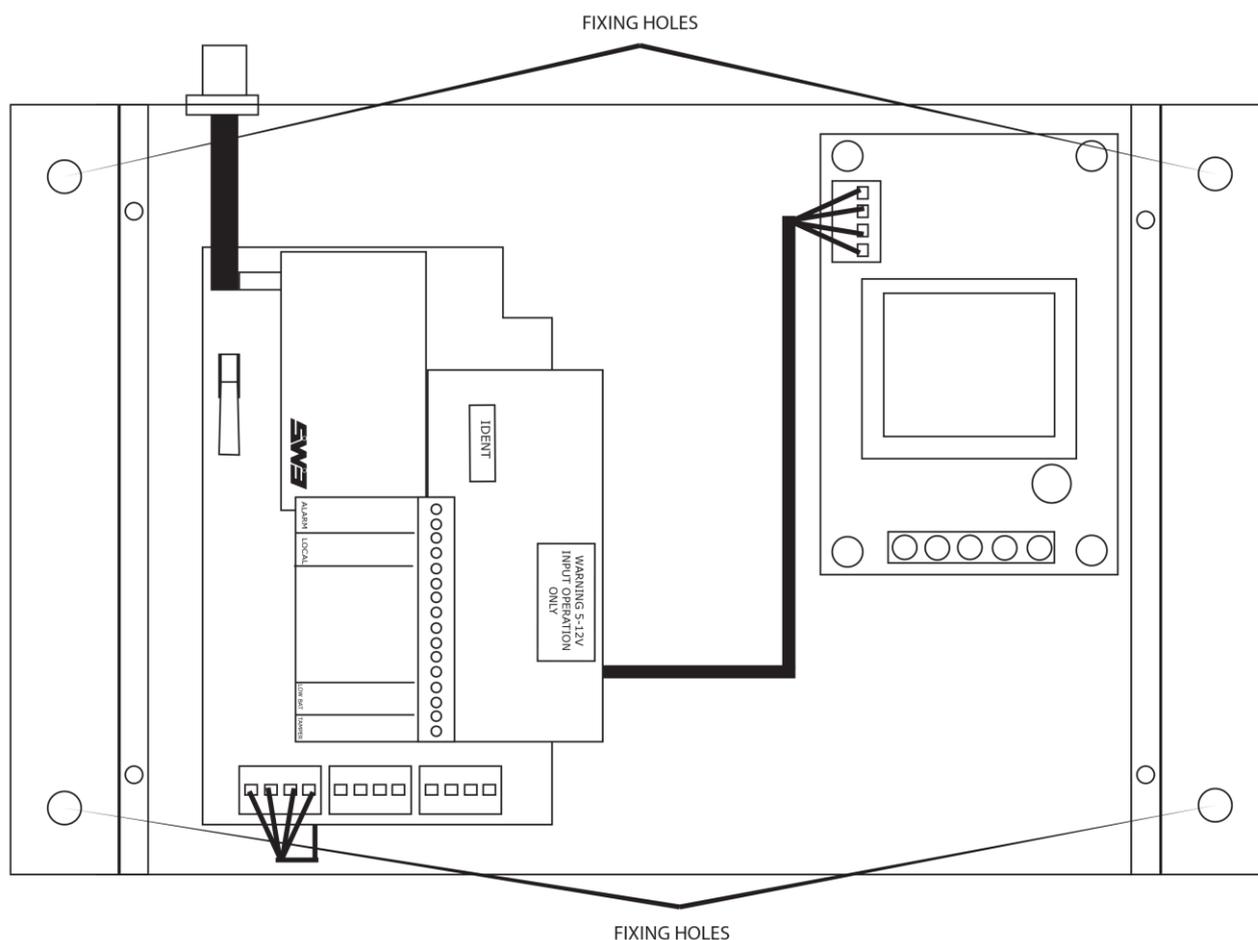
**Please Wait.....**

The system will then return to the command menu.

## **Unit Installation**

Ensure that all Half Watt Transmitters are sited in accordance with the survey and design details.

Remove of the four lid retaining screws situated on the front cover. The front section of the unit can now be removed exposing the inside of the device. See Figure 2.

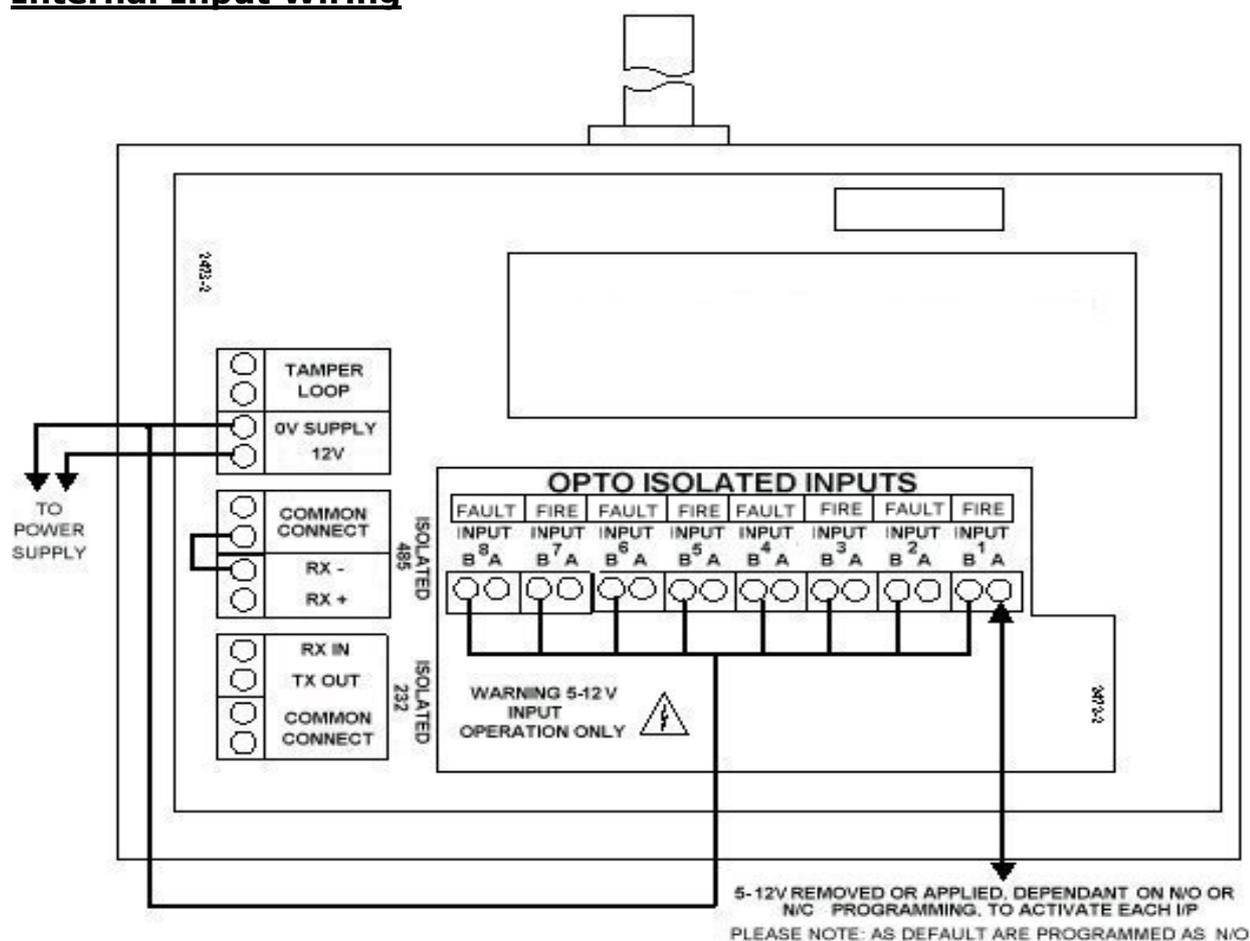


**Figure 2**

Offer the unit up to the wall and using the back plate as a template mark out the four fixing holes. The unit can be fixed to the wall and all external wiring connections made.

When all connections have been made to the unit the lid can be re-fixed.

## Internal Input Wiring



**Figure 3**

**Note 1:** 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.

## Adding Contact Operated Transmitter onto the SignalPoint Controller

The following instructions show in a step by step guide format how to log all of the device variants onto the SignalPoint 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.

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
```

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.*

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
```

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
```

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
```

Press any key and the display will change to show;

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

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
```

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
```

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
```

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

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





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.*

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.**

## **Logging on 83-7941/P Contact Transmitters**

Ensure the Logging On function on the control panel has been set to either Enabled or Replace (see 'Adding Contact Operated Transmitter onto the SignalPoint Controller' section for details).

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.

Ensure switch One 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.

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.

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

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

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.**



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