FirePoint

5000

VHF & UHF
REMOTE RECEIVERS

INSTALLATION AND PROGRAMMING INSTRUCTIONS

MODEL NUMBERS
53 -5414 & 53 –5428

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1. Introduction

The Remote Receivers used for connection to the EMS 5000 FirePoint Control Panel are detailed in the following instructions. Two types of remote receiver can be used with the system, both of which are hardwired to the Control Panel via 2 core screened cable.

The Model 53-5428 is a UHF remote receiver capable of receiving UHF signals from a number of transponder units on site. The transponder units are wireless devices, which receive information from detectors and then re-transmit this information to the UHF remote receiver, thus improving the overall range coverage of the system. This information is then sent to the control panel via cable (FP200). A maximum of 28 remote receivers can be connected to the Control Panel. A block diagram of a system using the UHF remote receiver is shown in Figure 1.

The Model 53-5414 is a VHF remote receiver capable of receiving VHF signals directly from all types of detectors, thus improving the overall range coverage of the system. This information is then sent to the control panel via cable (FP200). A maximum of 28 remote receivers can be connected to the Control Panel. A block diagram of a system using the VHF remote receiver is shown in Figure 2.

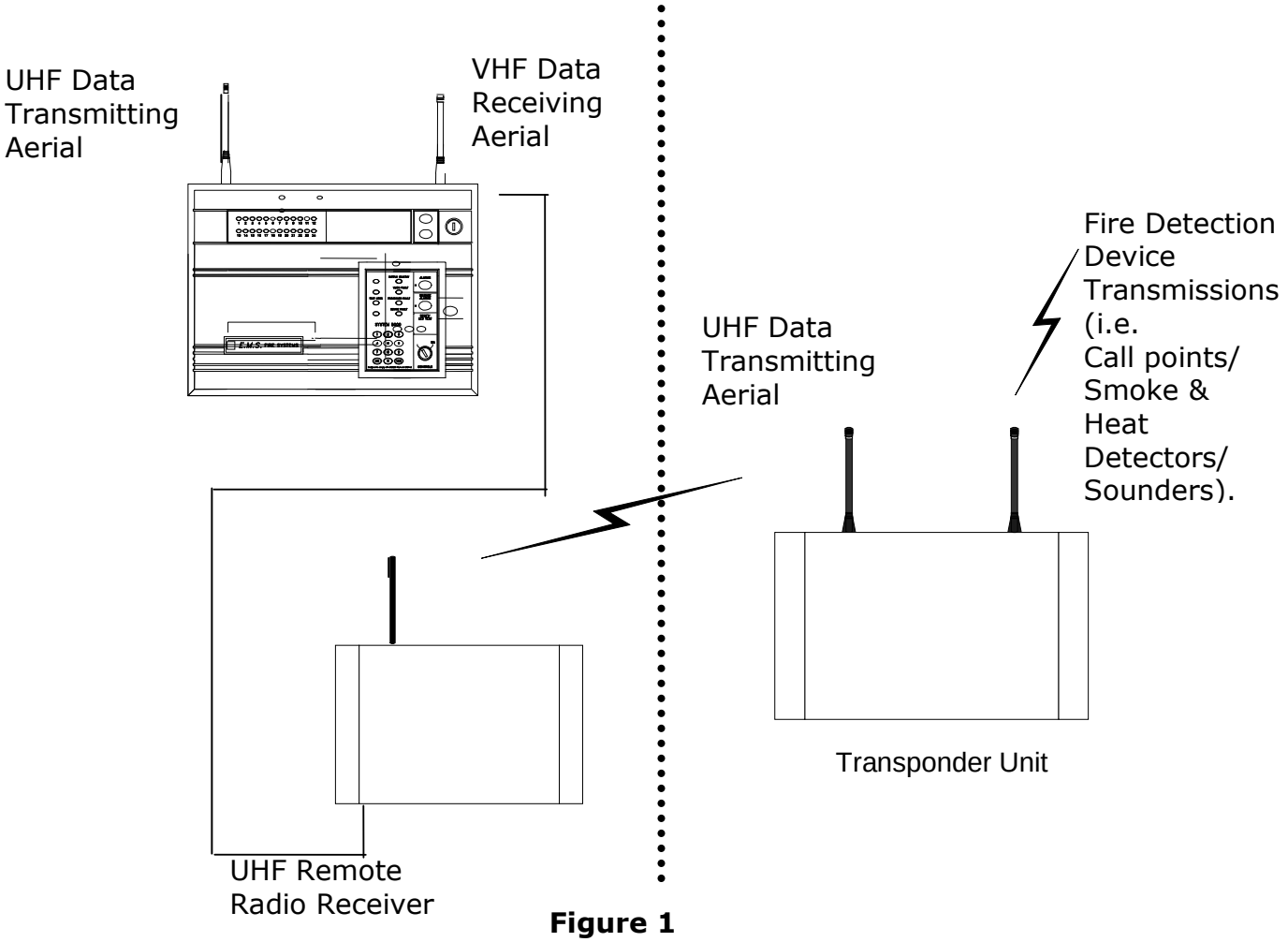


Figure 1

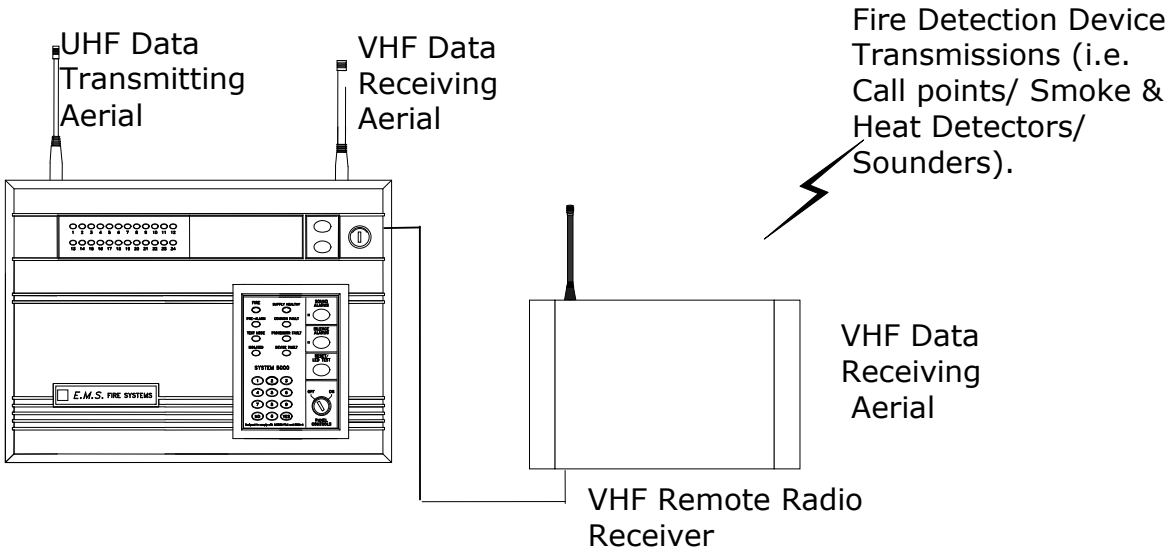


Figure 2

2. Tools & Test Equipment

Only standard hand tools are required to install the Remote radio receiver system. No special test equipment is needed when installing the receiver, although signals from devices can be seen if a computer with a terminal programme is connected to the system.

This gives a visual indication that the remote receivers are passing device data to the main control panel.

3. Receiver Position

The maximum range between remote receiver and any device is dependant upon the environment in which the system is operating. The actual range achieved is determined by local site conditions. For range improvements high gain aerials can be attached to the remote receivers. The table below indicates relevant aerials:-

4. UHF Remote Receiver Relevant high gain aerials

5-5501/High gain aerial c/w 3 metres of cable and bracket.

5-5501/BP10/High gain aerial c/w 10 metres of cable, wall mounting bracket and extension pole.

5-5501/BP20/High gain aerial c/w 20 metres of low loss cable, wall mounting bracket and extension pole.

5-5501/BP30/High gain aerial c/w 30 metres of low loss cable, wall mounting bracket and extension pole.

5. VHF Remote Receiver Relevant high gain aerials

5-5500/Dipole aerial c/w 10 metres of cable and bracket.

5-5500/10 High gain external aerial c/w 10 metres of cable, wall mounting bracket and extension pole.

5-5500/20 High gain external aerial c/w 20 metres of low loss cable, wall mounting bracket and extension pole.

When selecting a site for the receiver, the installing engineer should be aware that the aerial should be as far away from other electrical / electronic equipment as possible and a minimum of 3 metres from any such equipment. Locating the receiver closer than this will affect the systems performance. Metal objects such as filing cabinets, pipe work, radiators and air conditioning ducts will also adversely affect the performance of the system if they are too near the receiver antenna.

6. Electrical Installation

6.1 UHF Remote Receiver

The UHF remote receiver 53-5428, should be wired as shown in the supplied drawing PO3045.

The following paragraphs outline the installation in a step by step format.

Remove the four lid retaining screws situated on the front cover. The front section of the unit can now be removed.

Four fixing holes are available for the unit's installation. These are clearly visible on the outside of the casing.

Offer the back box up to the wall and check that the rear tamper switch operates. Should the microswitch not operate, remove the unit from the wall and carefully adjust the microswitch arm. Once the microswitch operates correctly the unit can be fixed to the wall and all external wiring connections made.

The diagram PO3045 shows the wiring connections required for the remote receiver. Only those cables needed to make the remote receiver function should be routed into the case. The Remote Receiver must NOT be used as a junction box or cable termination point as this will adversely affect the performance of the system.

When all connections have been made to the remote receiver the battery can be connected, the lid can be re-fixed and mains voltage can then be applied.

6.2 VHF Remote Receiver

The VHF remote receiver 53-5414 should be wired as shown in the supplied drawing P03077. The following paragraphs outline the installation in a step by step format.

Remove the four lid retaining screws situated on the front cover. The front section of the unit can now be removed.

Four fixing holes are available for the unit's installation. These are clearly on the outside of the casing.

Offer the back box up to the wall and check that the rear tamper switch operates. Should the microswitch not operate, remove the unit from the wall and carefully adjust the microswitch arm. Once the microswitch operates correctly the unit can be fixed to the wall and all external wiring connections made.

The diagram P03077 shows the wiring connections required for the remote receiver. Only those cables needed to make the remote receiver function should be routed into the case. The Remote Receiver must NOT be used as a junction box or cable termination point as this will adversely affect the performance of the system.

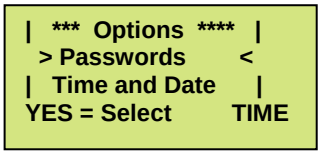
When all connections have been made to the remote receiver the battery can be connected, the lid can be re-fixed and mains voltage can then be applied.

7. Software Configuration

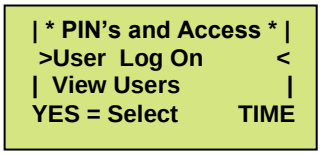
To allow the Control Panel and remote receivers to work together, some software configuration will be necessary, the following instructions detail in a step by step format how the configuration should take place for reliable communication. The menu structure indicated at the end of this section locates the menus, which require entering.

1 With the key the "ON" position, the screen will now display:

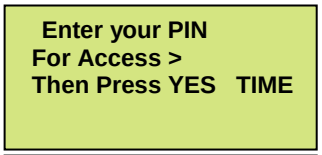
2 Press the "0" key. The screen will now display:



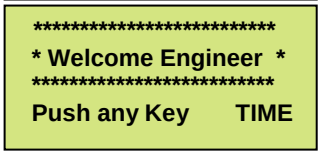
3 Press the "YES" key. The screen will now display:



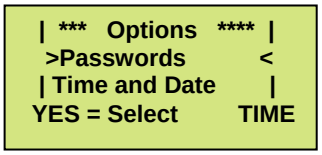
4 Press the "YES" key. The screen will now display:



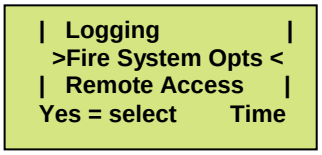
5 Enter your PIN number (Engineering default = 221100) and press the "YES" key. The screen will now display:



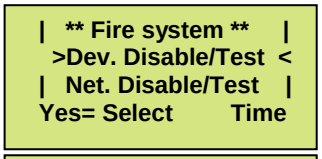
6 Press any key and the screen will display:



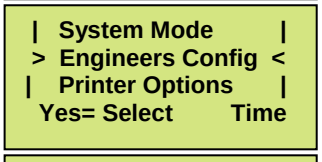
7 Press the "∇" key, until 'the screen displays:



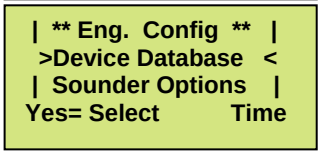
8 Press the "YES" button and the screen will display.



9 Press the "∇" key, until 'the screen displays:



10 Press the "YES" key and the screen will display:



11 Press the "∇" key, until 'the screen displays:

```
| Reset Security      |
 >Reset System      <
| Lan Options         |
 Yes= Select      Time
```

12 Press the "YES" key followed by the "0" key on the keypad the screen will now display:

```
|  **  Main Menu **   |
 >Pins & Access     <
| System Support     |
 Yes= Select      Time
```

13 Press the "∇" key, until 'the screen displays:

```
| System Support     |
> Serial Comms       <
| Pager Setup         |
 Yes= Select      Time
```

14 Press the "YES" button and the screen will display:

```
| ** Serial Comms ** |
 >Device Table       <
| Re-start Bus        |
 YES = Select     TIME
```

15 Press the "∇" key, until 'the screen displays:

```
|  Re-online Device   |
> Bus Master Setup <
|  Bus Remote Setup |
 Yes= Select      Time
```

16 Press the "YES" button and the screen will display:

```
|  ** Master Setup**  |
 >Polling Baudrate  <
| Auto Re-online      |
 YES = Select     TIME
```

17 Press the "∇" key, until 'the screen displays:

```
|  Auto Re-online     |
 > Port to use       <
|  ^^^^^^^^^^^^^     |
Yes= Select       Time
```

18 Press the "YES" button and the screen will display:

```
 Master Port = 0
 0 = Off, 1 = RS485
 2 = PAGER 232 > _
 YES = Finish    TIME
```

19 Press the "1" key followed by the "YES" key and the screen will display:

```
|  Auto Re-online     |
 > Port to use       <
|  ^^^^^^^^^^^^^     |
Yes= Select       Time
```

20 Press the "NO" key once and the screen will display:

```
|  Re-online Device   |
> Bus Master Setup <
|  Bus Remote Setup |
 Yes= Select      Time
```

21 Press the "Δ" key until the screen displays:

```
| Device Table        |
 >Re-start Bus       <
| Re-Online Device    |
 YES = Select     TIME
```

22 Press the "YES" button and the screen will display:

```
Re-initialising Bus
Please wait....* *
Push any key    TIME
```

23 Once completed the screen will display:

```
Re-initialising Bus
Please wait....*Done*
Push any key    TIME
```

24 Push any key and the screen will display:

```
| Device Table          |
 >Re-start Bus          <
| Re-Online Device      |
YES = Select       TIME
```

25 Press the "∇" key, until 'the screen displays:

```
| Printer Redirect      |
 >Monitor Comms     <
| Delete Device         |
YES = Select       TIME
```

26 Push any key and the screen will display:

```
HEAP00  AUX=00  PGR=00
REM000  MAS010  T00-00
 I00   L00   R00   S00   C00
Push any Key       TIME
```

The above display can be used to check how many remote receivers are communicating with the Control Panel. For each remote receiver that is connected, the MAS number shown will increase by 10. I.e. if one is connected the MAS will show MAS010 if two receivers are connected the MAS will show MAS020.

27 Press the "No" key twice. The screen will change to display:

```
| System Support      |
> Serial Comms        <
| Pager Setup         |
Yes= Select        Time
```

28 Press the "∇" key, until 'the screen displays:

```
| Logging             |
 >Remote Rxers       <
| Ext. Comms          |
Yes= Select        Time
```

29 Press the "YES" button and the screen will display:

```
|* Remote Receivers *|
 >Receivers Found    <
| Enable Receiver     |
Yes= Select        Time
```

30 Press the "∇" key, until 'the screen displays:

```
| Enable Receiver     |
 >Enable Collector   <
| Monitor Traffic     |
Yes= Select        Time
```

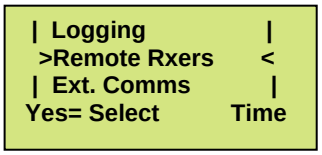
31 Press the "YES" button and the screen will display:

```
Collector: ENABLED
Push Yes to change
Push No to escape
Yes= Select        Time
```

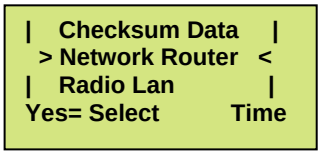
32 The collector should be set to "ENABLED", press the "YES" key to change its status. Once set to "Enabled" press the "NO" key. The screen will display:

```
| Enable Receiver     |
 >Enable Collector   <
| Monitor Traffic     |
Yes= Select        Time
```

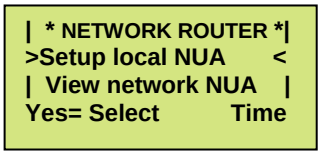
33 Press the "NO" key once and the screen will display:



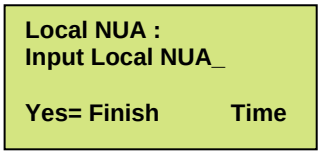
34 Press the "∇" key, until 'the screen displays:



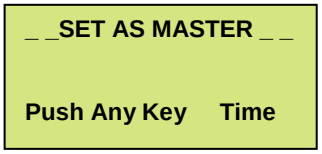
35 Press the "YES" button and the screen will display:



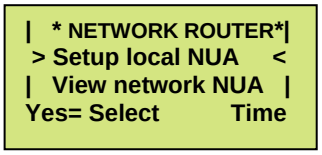
36 Press the "YES" button and the screen will display:



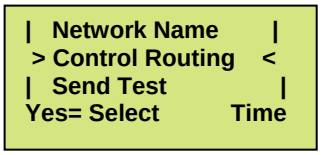
37 Enter "00" followed by the "YES" key. The screen will display:



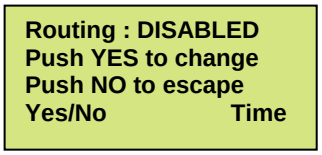
38 Push any key and the screen will display:



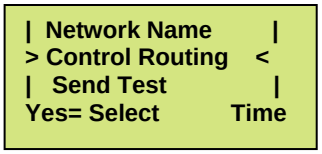
39 Press the "∇" key, until 'the screen displays:



40 Press the "YES" button and the screen will display:

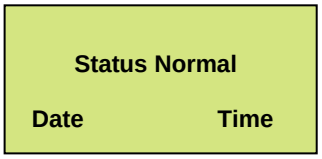


41 The router should be set to "ENABLED", press the "YES" key to change its status. Once set to "Enabled" press the "NO" key. The screen will display:



42 Press the "NO" key twice and the screen will display:

43 Now turn the control keyswitch to the "OFF" position and the screen will display: The Remote Receiver is now programmed to the System.



8. Main Control Panel Engineers Menu Structure

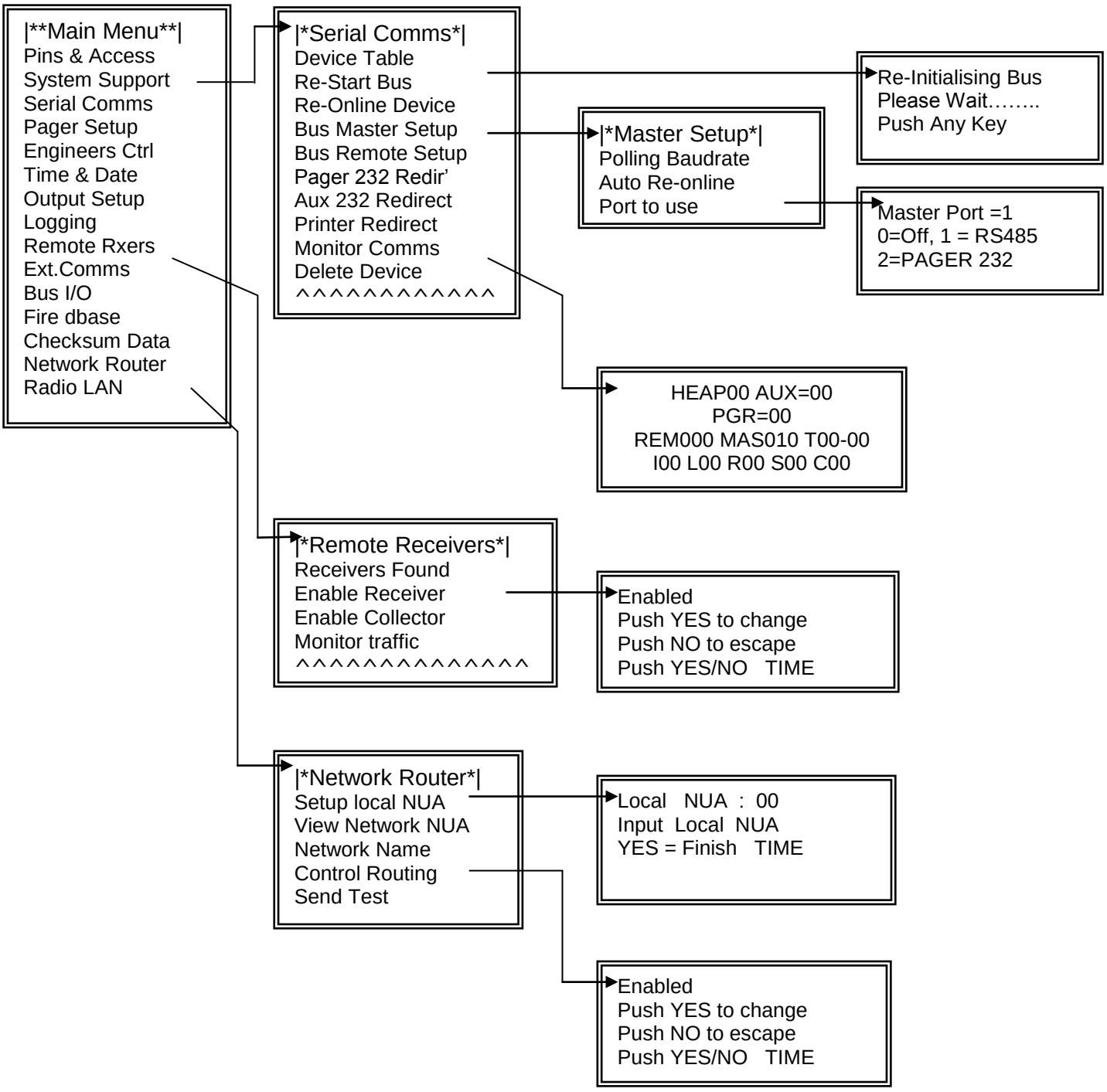


Figure 3

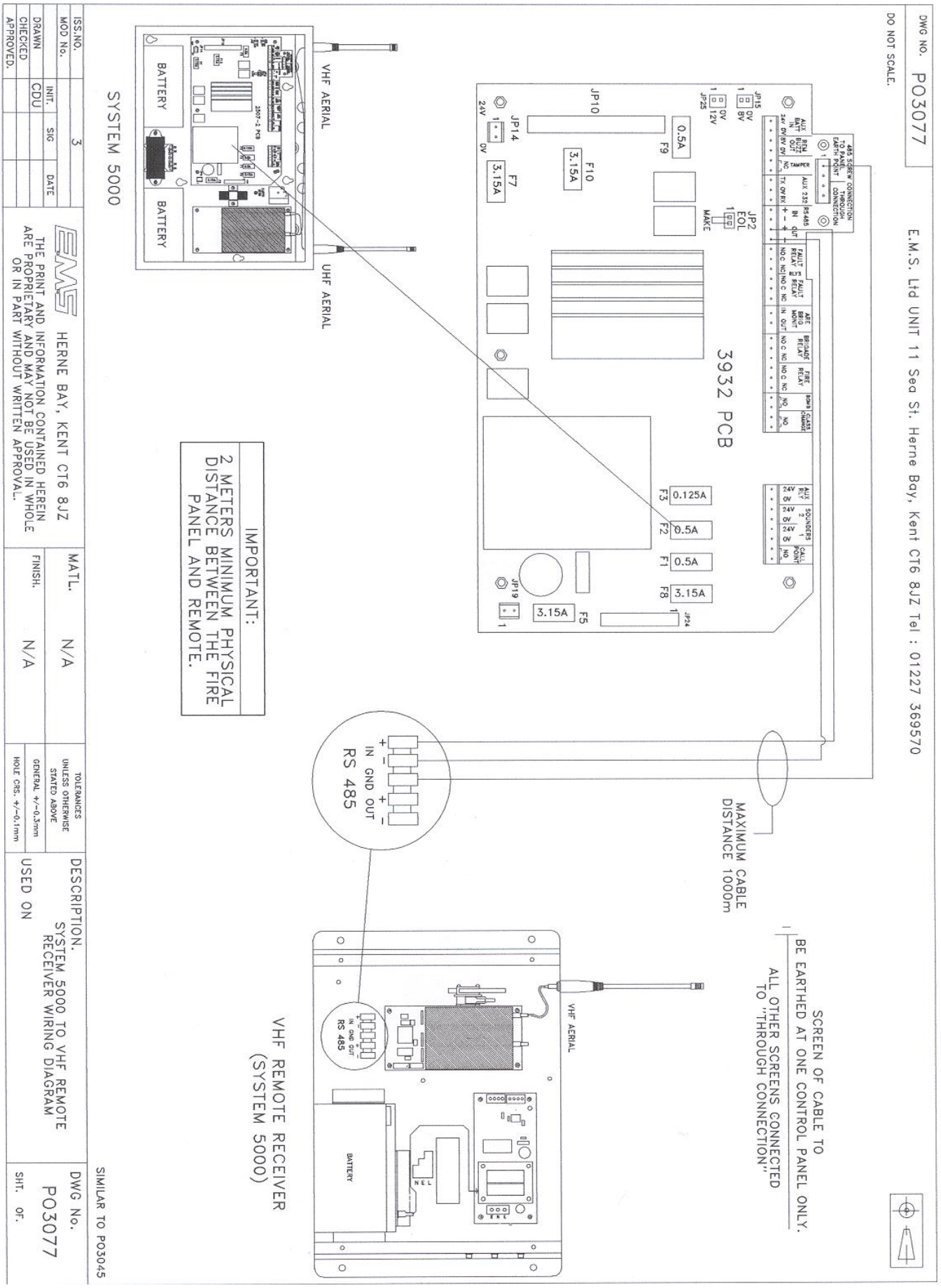
9. Testing The System

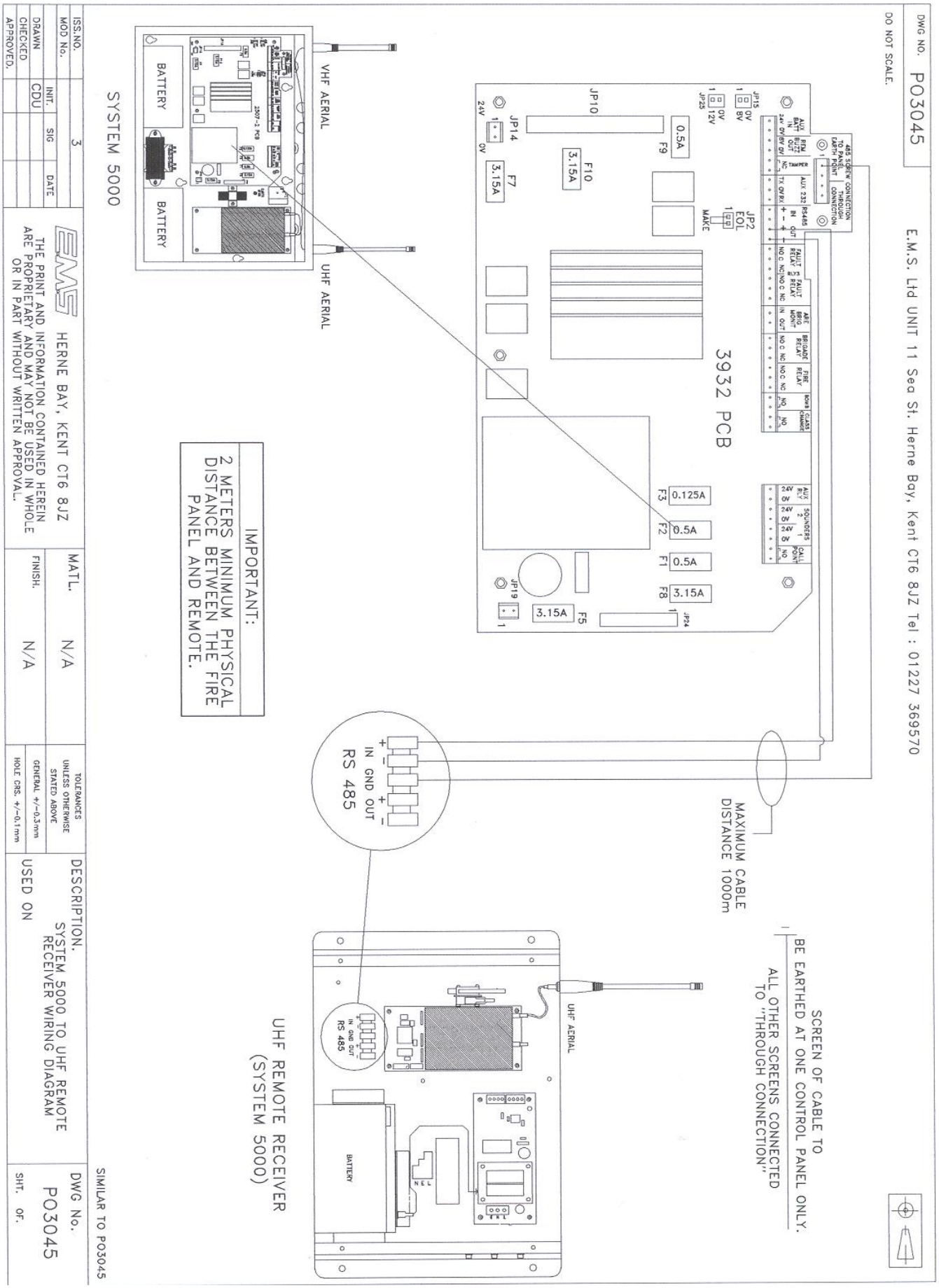
If the system is not performing as expected in terms of range, monitoring the Comms between the main and remote receivers may well indicate the cause of the problem (see Figure 3).

For example, a large number of Time-outs by a particular remote indicates a poor connection, poor screening, or the cable passing near enough to a data cable to introduce interference onto the bus.

Once VHF Remote units have been installed and are communicating with the Control Panel, devices should now be tested from their fixed positions.

Once UHF Remote units have been installed and are communicating with the Control Panel, the transponder units which will send device information to the remote receiver should be installed (see transponder installation instructions for details).





10. Controller Information

TECHNICAL INFORMATION FOR THE UHF Remote Receiver

Dimensions:	390mm x 320mm x 80mm
Operating Frequencies:	UHF 458.5 – 459.5 MHz (Receiver)
Operating Temperature:	-10 to +55 degrees C
Humidity:	Up to 75% non-condensing.
Channel Spacing:	25 kHz
Supply:	230v 50Hz
Current Consumption:	154mA in standby
Battery space:	1 x 12volt 7Ah batteries (supplied) EMS only recommend: Yucel Model No: NP7-12 or a battery of equivalent specification
Recommended battery replacement intervals:	5 years

TECHNICAL INFORMATION FOR THE VHF Remote Receiver

Dimensions:	390mm x 320mm x 80mm
Operating Frequencies:	VHF 173.2 – 173.5 MHz (Receiver)
Operating Temperature:	-10 to +55 degrees C
Humidity:	Up to 75% non-condensing.
Channel Spacing:	25 kHz
Supply:	230v 50Hz
Current Consumption:	154mA in standby
Battery space:	1 x 12volt 7Ah batteries (supplied) EMS only recommend: Yucel Model No: NP7-12 or a battery of equivalent specification
Recommended battery replacement intervals:	5 years

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