THANK YOU FOR VOTING TEXECOM

INSTALLATION MANUAL

Premier RP9

Radio-Pad

Issue 1

CE

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Contents

1. Overview

Introduction

This guide describes how to perform a Paknet Secure+ installation. It contains guidance on what you should do before, during and after an installation and offers an approach which should make installing as simple as possible. All the procedures in the guide are covered in far greater detail on the installation training course offered by Vodafone Packet Radio Service. It is highly recommended that anyone who installs a Paknet Radio Pad attends such a course. Details of courses may be obtained by telephoning Vodafone Packet Radio Service on 08700 700 600.

Criteria for a Successful Installation

Vodafone Packet Radio Service operates using a unique national network of Radio Base Stations arranged to offer local coverage in much the same way as a mobile phone network.

However, Vodafone Packet Radio Service is a data-only network and cannot be used for voice transmission. To use the network successfully, it is important that a good installation and commissioning procedure is followed for each installation:

Prior to a site survey
Check area for Coverage using Postcode check.

Prior to installation
Ensure that a comprehensive site survey is carried out using the proper test equipment.

During installation
The aerial is correctly installed and connected to the Paknet Radio-Pad.

After installation
A low Bit Error Rate (BER) is obtained.

The Paknet Secure+ Tariff

Vodafone Packet Radio Service's Paknet Secure+ Tariff includes a Paknet Radio-Pad and a dipole aerial which is attached to 8m of co-axial cable. The aerial has an integral mounting bracket which enables it to be secured permanently to either flat or rounded surfaces. Note that the Paknet Secure+ aerial should be used for every installation except for locations where radio signal reception needs to be enhanced. In these instances, an alternative aerial may be required (e.g. KITAN base loaded whip). Each Paknet Secure+ Radio-Pad can make up to 150 free calls per month, enabling basic opening and closing signals to be sent to the Alarm Receiving Centre and/or uploading and downloading data to be sent across the network.

Important DOs and DON'Ts

DO

Check that Vodafone Packet Radio Service coverage is available by doing a postcode check using the Vmap View software (CD available on request) the internet (www.vodafone.co.uk) or by calling Customer Services on 08700 700 600.

Use the Radio Test Set (RTS) available from Vodafone Packet Radio Service.

Find the best practical aerial location that gives the highest possible Forward (FSSI) and Reverse (RSSI) Signal Strengths combined with the lowest possible Bit Error Rate (BER).

Mount the aerial in a vertical position within the protected premises unless otherwise agreed by the insurance company.

Re-register the Paknet Radio-Pad at each installation and also on maintenance visits in order to take advantage of any new Base Stations that have been installed by Vodafone Packet Radio Service.

Make sure that the Radio-Pad is correctly connected to the alarm panel and that alarm channel activations are monitored at the Alarm Receiving Centre.

Use TNC connectors and 50ohms (RG58) co-axial cable when extending the aerial cable.

DON'T

- ✗ Mount the aerial in a vulnerable position such as outside the building in exposed areas or directly on or behind a window where it could be attacked from outside.
- ✗ Position the aerial within 2 meters of any electronic equipment such as extractor fans, air conditioning units etc.
- ✗ Damage or over-bend the aerial cable or cause any tight kinks to appear.
- ✗ Use any aerial other than the one supplied with the Radio-Pad, unless insufficient signal strength warrants a high gain aerial (KITAN base loaded whip).

2. How to Install a Paknet Radio-Pad

Introduction

You should always follow the following procedures for every installation:

Step 1 Check Coverage
Make sure the intended premises are in an area of Vodafone Packet Radio Service coverage.

Step 2 Perform a Site Survey
Using suitable test equipment, find the best aerial position at the site. This can usually be done when surveying the site to determine which sensors, detectors, etc. are required.

Step 3 Installation
Install the aerial and connect the Radio-Pad to the control panel.

Step 4 Commissioning and Testing
Commission and fully test the system.

Check Coverage

Before going to a site to perform an installation, a coverage prediction should be obtained by one of the following methods:

- Using the Vmap View software (CD available on request from Vodafone)
- Using the internet by going to www.vodafone.co.uk and then clicking on the **Services** button, followed by **Coverage**. Click on the Map of the UK, select the required service i.e. Paknet, enter the Postcode for the area being checked and then click on **Go**
- Telephone Vodafone Customer Services on 08700 700 600

Performing a Site Survey

Site surveys are necessary to determine that sufficient Radio Signal Strength is present at the protected premises and to determine the best possible position for the aerial. Site surveys should be performed using a **Radio Test Set (RTS)** to find the aerial position which yields the highest possible Forward Signal Strength (**FSSI**).

Generally the higher up on a building that an aerial is located the stronger the signal will be (the use of different types of aerials may improve signal strength). Usually there will be very little signal beneath ground level such as in cellars or basements. To improve the signal received simply move the aerial to different locations in the vicinity of the installation until the highest signal strength reading is found.

In some circumstances local ambient RF noise can reduce the quality of the signal. However, simple preventative measures can lower the chances of this occurring. These include keeping the aerial at least 2 meters away from electronic equipment such as extractor fans, air conditioning units etc. and ensuring that the aerial is on a vibration free surface.

Once the best aerial position has been found, it is essential to test that there is sufficient Reverse Signal Strength (RSSI) and a low Bit Error Rate (BER) i.e. the power and quality of the radio path from the Paknet Radio-Pad to the base station. This requires using any one of following simple procedures:

- Telephone Customer Services on 08700 700 600 and perform a signal strength check
- Use Vodafone Packet Radio Service's Radio Test Set (RTS)

Installation

Aerial Installation

If a thorough site survey has been performed then the installation should be straightforward. The survey will have determined the best aerial position, however additional signal strength checks should always be performed during an installation with the aerial in position, before it is fixed permanently. This can be done using a Radio Test Set (RTS) or by calling Customer Services. The RSSI value should be the highest value possible with the lowest possible Bit Error Rate (BER).

Paknet Secure+ aerials are supplied complete with 8 meters of RG58 co-axial cable allowing greater flexibility of installation. However, if necessary, TNC connectors and 50ohms (RG58) co-axial cable can be used to extend the aerial cable.

Never extend the aerial cable by more than 20 metres.

Run the cable away from the aerial to the Paknet Radio-Pad ensuring that there are no kinks in the cable and that no tight bends have appeared. Typically the bend radius should not be tighter than 10 times the outer diameter of the co-axial cable, i.e. a radius of 60 mm. Ensure that the cable is routed tidily, not exposed to damage, and not clipped or tied to heavy current-carrying cables. Connect the aerial cable to the Paknet Radio-Pad by screwing the TNC male connector into the TNC socket on the Paknet Radio-Pad.

Ensure that although it is a tight fit the thread is not crossed or over-tightened.

Radio-Pad Installation

Before connecting the Radio-Pad, isolate ALL power from the control panel (AC mains and battery), do not continue if there is still power present on the control panel.

To install the Radio-Pad onto the control panel:

- Connect the 7-Way connector of the *RPD-Com* lead to Com2 on the control panel
- Connect the 25-Way D-Type connector of the *RPD-Com* to the Radio-Pad
- Locate the power lead connector into the socket at the bottom of the Radio-Pad
- Connect the Black lead to the DC- terminal on the control panel
- Connect the lead with the White stripe to the DC+ terminal on the control panel
- Follow the procedure for **Registering the Radio-Pad**

Registering the Radio-Pad

Whenever a Paknet Radio-Pad is installed or moved, it must be **registered** onto the network. To do this:

- Press and hold the test button on the front of the Paknet Radio-Pad
- With the test button still pressed, connect power to the control panel and wait for the yellow service light on the Radio-Pad to flash
- Release the test button

Within 2 minutes the yellow service light should stop flashing and remain steady. This means that the Paknet Radio-Pad has now selected and locked on to the Base Station with the strongest signal.

Commissioning and Testing

Programming the Radio-Pad

Once the Paknet Radio-Pad and aerial have been installed and registered, the following should be done to ensure that the Radio-Pad operates correctly:

1. Enter into the Engineers Menu (1) (2abc) (3def) (4ghi).
2. Select the **UDL/Digi Options** menu (7pqrs) and press (Yes).
3. Select the **Com Port Setup** menu (8tuv) and press (Yes).
   - Select Com2 and select Radio-Pad
   - Press (0) to view the Com2 Monitor Screen
   - Press (Reset) to reset Com2
4. Exit from the **Com Port Setup** menu by pressing (Menu).
5. Select the **Program Digi** menu (3def) and press (Yes).
   - Program the plug-on communicator as normal (if required)
   - Enable the Radio-Pad in the Config. (R)
6. Exit from the **Program Digi** menu by pressing (Menu).
7. Select the **Radio/SMS Options** menu (7pqrs) and press (Yes).
   - Program the Radio-Pad dial up numbers for the required Alarm Receiving Centre
   - Program the number of Radio-Pad dialing attempts
   - Make a note of the Radio-Pads Serial and ESN numbers for future reference
   - Check the Reverse Signal Strength (RSSI)
   - Check the Forward Signal Strength (FSSI)
   - Check the Bit Error Rate (BER)
8. Exit from the **Radio/SMS Options** menu by pressing (Menu).

Testing the Radio-Pad

Once programming has been completed:

1. Select the **Test Digicom** menu (2abc) and press (Yes).
   - Initiate a test call to the Alarm Receiving Centre by pressing (0_)
   - The display will show the status of the call
   - Ensure that the Alarm Receiving Centre receives the test call
2. Exit from the **Test Digicom** menu by pressing (Menu).
3. Exit from the **UDL/Digi Options** menu by pressing (Menu).
4. Press (0_) followed by (Yes) to exit from the Engineer Menu.
5. Test the alarm system and ensure that the Alarm Receiving Centre receives all signals.
6. **Installation is now complete.**

Re-registering the Radio-Pad

The Paknet Radio-Pad should be re-registered on every site visit, this is to ensure that any new Vodafone Packet Radio Service Base Stations in the vicinity are recorded by the Paknet Radio-Pad.

NOTE Should you have any difficulties with installation, registration or commissioning, you can call Texecom Technical Support on 01706 234833 or Vodafone Customer Services on 08700 700 600.

Customer Services (Direct Check)

An interactive telephone service is also available. This is a quick and accessible way of finding out the strength and quality of the Paknet Radio-Pad signal. This service can be controlled using a touch tone phone or simply through voice commands.

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