Radio Sensor Site Survey Receiver

Features

- High power output
- High quality external whip antenna
- Encrypted data transmission
- Robust IP67 housing

Specification

Radio Output:	
Frequency	2.4GHz
16 channels, automatically selected	
Direct-sequence spread spectrum	
Compliance	IEEE 802.15.4-2006
Aerial Characteristics	
Gain	2.0dBi
VSWR	<2:1
Data Encryption:	AES 128
Power Output:	+10dBm
Power Supply:	Internal 12Vdc NiMH battery
Serial communications:	USB 2.0
Environmental:	
Operating:	
Temperature	-10°C to +50°C
RH	0 to 90%, non-condensing
Storage:	
Temperature	-10°C to +80°C
RH	0 to 90%, non-condensing
Country of origin:	UK

Product Codes

RF-RXSS	Radio sensor site survey receiver

Technical Overview

The site survey receiver is used in conjunction with the Sontay® **RF-PS522** site survey routers, **RF-HHT** hand-held monitor and **RF-TS911** nodes, which form a site survey kit (SSK).

Routers are used to route signals from battery powered nodes and other routers to the receiver module, where the signal strength of a direct path is not sufficient for reliable communications.

Data is transmitted back to the receiver at configurable time intervals, or on a configurable change in measured value. Each sensor retains these configurations if the battery becomes discharged or requires replacement.

The SSK receiver automatically selects which of the 16 transmission channels available gives the best radio network performance, taking into account both signal strength and interference levels from adjacent channels and equipment (such as Wi-Fi etc.)

The SSK hand-held monitor, nodes and routers automatically find the best path back to the receiver, which may be directly to the receiver or via "parent" routers.

NB Unlike an **RF-RX20** or **RF-RX40** system receiver, the SSK receiver has no analogue outputs.

Power

The SSK receiver uses an internal 12Vdc NiMH battery. Observe power connections polarity.

Installation

1. Remove all packaging from the SSK receiver
2. Note the MAC address printed on the affixed label.
3. Mount the SSK receiver in the same position as the system receiver will be mounted during the final installation.
4. Ensure the antenna is positioned in a vertical alignment.
5. Ensure that the internal battery is fully charged.
6. To power the SSK receiver, turn the On/Off switch on the housing cover so that it points downwards towards the charging socket. To switch off, turn the On/Off switch on the housing cover so that it points upwards away from the charging socket.

Battery Charging

To charge the battery in an SSK receiver, connect the correct charger to the socket mounted underneath the On/Off switch. The status LED on the charger will show red until the battery is fully charged, when the status LED will turn green.

Note that when charging SSK batteries, the battery under charge is disconnected from the rest of the device, and therefore that device will not function until charging is complete.

Battery Fitting and Replacement

NB It is recommended that only suitably trained personnel are used to replace the battery in the SSK receiver. A special tool is required to disassemble the case and the battery requires soldering.

When a battery is replaced, observe the correct polarity. **Fitting the battery incorrectly may result in permanent damage to the sensor**.

The case of the SSK receiver must be disassembled to gain access to the internal battery.

NB NiMH batteries are rechargeable, but care must be taken to use **ONLY THE CHARGER SUPPLIED IN THE SSK BY SONTAY**. Replacements or spares should be stored in a clean, cool (not exceeding +30°C), dry and ventilated area.

Disposal of Batteries - Warning! Fire, Explosion and Burn Hazard.

Do not short-circuit, crush, disassemble, heat above 100°C (212°F), incinerate, or expose the battery contents to water. Do not solder directly to the cell.

All batteries must be disposed of in accordance with EC Directive 2006/66/EC, amended by EU Directive 2008/12/EC.