Space Mounting Battery Powered Radio Site Survey Node

Features

- High quality internal antenna
- Encrypted data transmission

Specification

Radio Output:	
Frequency	2.4GHz
16 channels, automatically selected	
Direct-sequence spread spectrum	
Compliance	IEEE 802.15.4-2006
Aerial Characteristics	
Gain	1.2dBi
VSWR	1.5:1
Data Encryption:	AES 128
Power Output:	0dBm
Temperature accuracy	±0.3°C
Battery Type:	3.7V Lithium Polymer, rechargeable 1080mAh
Housing Material:	ABS (flame retardant)
Dimensions:	85 x 85 x 23mm
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-TS-911 - Battery powered radio site survey node

Technical Overview

The site survey nodes are used in conjunction with the Sontay® **RF-RXSS** site survey receiver, **RF-HHT** hand-held monitor and **RF-PS-522** routers, 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.

The **RF-TS-911** is fitted with a high quality 10K3A1 thermistor sensing element.

Installation

1. Remove all packaging from the SSK node.
2. Ensure the battery is fully charged.
3. Enable power by setting the rocker switch mounted on the backplate to ON.
4. Mount the SSK node in a required position (normally dictated by a drawing or site specification), taking care ***not*** to site the sensor;

   - In direct sunlight or near a source of heat
   - On a cold or hot outside wall, where conducted or radiant heat may affect the accuracy
   - Behind any obstruction likely to impede the radio signal (for example, a filing cabinet)

Take care to mount the SSK node in the correct orientation, with the tamperproof screw at the bottom, to allow free flow of air over the sensor element. Ensure that the louvers in the sensor housing are clear and free from obstruction.

Battery Charging

To charge the battery in an SSK node, connect the correct charger to the socket on the back plate. 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 the SSK node battery, 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

The current battery level of an SSK node can be monitored using the **RS-HHT**. When a battery is replaced, observe the correct polarity. **Fitting the battery incorrectly may result in permanent damage to the sensor**. Switch the **RF-TS911** OFF prior to removing a battery. After fitting a battery, press and hold the reset button while replacing the power jumper to reset the hours run data.

NB Lithium Polymer 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.