Aranet Radio Site Survey Ping-Pong Kit

USER MANUAL

The signal strength sensor is designed to indicate the Aranet radio packet signal strength between two locations.

Typical usage

1. Insert the batteries into both sensors. The red LED on each sensor should start blinking at a period of two seconds.

2. Place one sensor upright in a fixed location.

3. Take the second sensor and move to the location you would like to test.

4. Test the signal strength at that location by pressing the button at the bottom of the sensor. The red LED illuminates brightly once to indicate that the test has commenced.

5. The signal strength between the two sensor locations is indicated by corresponding flashes of the green LED on both sensors.

6. Repeat the test in different locations as necessary.

The operation and role of each sensor is identical, it is not important which sensor is left stationary.

Signal strength RSSI indication

Sensors indicate the strength of the received Aranet radio packet with the green LED as follows:

RSSI (dBm)		LED Indication Pattern
RSSI > -40	Excellet	1 Long Flash
-60 < RSSI <= -40	Very good	4 Short Flashes
-80 < RSSI <= -60	Good	3 Short Flashes
-100 < RSSI <= -80	Acceptable	2 Short Flashes
RSSI <= -100[1]	Weak	1 Short Flash

[1] The sensor is not expected to respond to packets with a signal strength of < –120 dBm

The duration of long and short flashes is approximately 1 second and 0.1 seconds respectively.

Holding the sensor

The user shouldn't cover the antenna (located at the opposite end to the button) when testing RSSI.

Operational modes

Run mode:
Run mode is the default setting when the sensor is powered on. In run mode, the sensor can send and receive Aranet radio packets, as described in typical usage. In run mode, the red LED blinks briefly every two seconds.

Sleep mode:
Sleep mode is used to preserve battery life. In sleep mode, the sensor does not respond to received Aranet radio packets. To enter sleep mode, hold the sensor's button down for more than three seconds. The green and red LEDs will fade from bright to dull to indicate the transition between run and sleep modes.

Sleep mode can be left by pressing the button on the end of the sensor. The sensor responds with a dull to bright indication of both the red and green LEDs.
Sleep mode is also entered automatically if the sensor has been idle for more than 30 minutes. Any button press or packet reception resets the sleep mode timeout.

Low battery indication

On low battery the sensor replaces the two second red LED indication with a strobe effect as described below:

Case	Indication
Low battery on local sensor	Red LED strobe effect every two seconds
Low battery on remote sensor	Green LED strobe effect evvery two seconds
Low battery on both sensors	Strobe effect on both LEDs every two seconds

Low battery indication is activated when the battery level falls to 20% of full capacity. The sensor automatically shuts down when the battery level falls below 5%.

Replacing the battery

When replacing the battery, it is recommended to remove the old battery for at least 10 seconds before inserting the new one.

Part number: TDSKPP02 (EU), TDSKPPU2 (NA), TDSKPPR2 (RU)

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