Radio Site Survey Ping-Pong kit

This pair of signal strength measurement devices is designed to indicate the Aranet radio packet signal strength between two locations. Use this kit to assess the Received Signal Strength Indicator (RSSI) of the Aranet ISM band radio by surveying potential installation sites for Aranet sensors to ensure optimal wireless connection quality.

Product numbers

Product number	Radio band	To be used in
TDSKPP02	EU868	European Union
TDSKPPU2	US920	United States of America, Canada, South America, Australia, New Zealand
TDSKPPU2	AS923	BRN, KHM, HKG, IDN, LAO, TWN, THA, VNM, MYS, SGP
TDSKPPJ2	JP923	Japan
Not available	KR923	South Korea

General specifications

Ingress protection rating	IP68	
Operating temperature range	-40–60 °C	-40–140 °F
Dimensions	$\varnothing$35×120 mm	$\varnothing$1.4×4.7 in
Weight (incl. battery)	2×62 g	2×2.2 oz
Enclosure material	ASA plastic	
Power supply	1 pc AA battery for each device	
Packaging includes	2 pcs AA alkaline batteries	

Usage instructions

- Insert the batteries into both devices. The red LED on each sensor should start blinking at a two-second interval (run mode initiated, see section *Operational modes*).

- Place one device upright in a fixed location that represents the potential installation site of the Aranet PRO base station. Since both devices are identical in operation and construction, it does not matter which sensor is chosen for this role.

- Take the other device and move to a potential sensor installation site. To test the signal strength at that location, press the button at the bottom of the sensor. The red LED will illuminate brightly once to indicate that the test has commenced. During the test, do not cover the antenna part of the device (located at the opposite end from the button).

- The radio signal strength between the two sensor locations will be indicated by corresponding flashes of the green LED on both sensors. The flashing pattern corresponds to a specific Received Signal Strength Indicator (RSSI) value (see section *Signal strength indication*)

- Repeat the test in different locations as necessary. If further testing is not required, initiate sleep mode to preserve battery life (see section *Operational modes*).

Operational modes

- **Run mode** is the default setting when the sensor is powered on by inserting the batteries. In this mode, the sensor can send and receive Aranet radio packets as described in the *Usage instructions* section. The red LED blinks briefly every two seconds to indicate run mode.

- **Sleep mode** is used to preserve battery life. In this 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. Press the button again to exit sleep mode; the sensor will respond with a dull to bright indication of both LEDs and return to run mode.

- The sensor also enters **sleep mode automatically** if it has been idle for more than 30 min. Any button press or packet reception resets the 30 min timer for automatic sleep mode.

Signal strength indication

LED indication pattern	RSSI	Signal strength description
1 long green flash	Above -40 dBm	Excellent
4 short green flashes	-60 to -40 dBm	Very good
3 short green flashes	-80 to -60 dBm	Good
2 short green flashes	-100 to -80 dBm	Acceptable
1 short green flash	Below -100 dBm	Weak

Low battery indication

LED indication pattern	Battery description
Red strobe every 2 s	Low battery on local device
Green strobe every 2 s	Low battery on remote device
Red and green strobe 2 s	Low battery on both devices

• 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%.

Compliance information

CE Conformité Européenne

FC Federal Communications Commission (USA)

IC Innovation, Science and Economic Development Canada