CADI SmartSense
SmartTag

STG-821 User Manual

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Regulatory Information

For customers in U.S.A and Canada
Federal Communications Commission (FCC) Statement
15.21
You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

15.105(b)
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
1) This device may not cause interference and
2) This device must accept any interference, including interference that may cause undesired operation of the device.

FCC RF Radiation Exposure Statement:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

For customers in Europe
This equipment has been tested and found to comply with the limits set out in the R&TTE Directive.

Where you see this symbol on any of our electrical products or packaging in Europe, it means that at end of life the product or battery must be disposed of in accordance with any applicable laws or requirements for the separate disposal of electrical equipment or batteries.

PRECAUTIONS
- Keep batteries away from children.
- Do not swallow batteries.
- Do not throw batteries into water.
- Do not throw batteries into fire.
- Do not short-circuit batteries. Battery must be fit into tag in correct orientation.
- Do not replace battery with incorrect type. Incorrect type of battery replacement may cause risk of exposure.
- Battery should be dispose according to the instructions

Product Information
- Product model: STG-821
- Product name: SmartTag
- Manufacturing site: 31 Ubi Road 1, #07-01A Aztech Building, Singapore 408694

Version Information
- This version is subject to change or upgrade without notice
- Version: A01
- Issue date: 30 Sep 2016

Declaration
Cadi Scientific Pte Ltd reserves the right to change the product described in this Operator's Manual. All information contained in this Operator's Manual is subject to change without notice.

1. Introduction

The STG-821 is a battery rechargeable personnel tag. The STG-821 transmits LF signal continuously to trigger close proximity communication between tags. Leveraging on this unique tag-to-tag proximity detection technology, the STG-821 can also be configured for contact tracing applications to help organizations accurately track, trace and monitor personnel, including staff, visitors and patients, coming into proximity contact with each other.

When the tags pass-by a location LF exciter, it will receive the location ID transmitted from the exciter. When there is a change of status or location, the tag will transmit RF signal to RF receiver to update status and location.

The 2 buttons on the tag allow for several configuration possibilities ie. staff assistance, panic / duress alert, alert acknowledgment etc.

2. Specifications

1	Power	Rechargeable Lithium Ion Polymer Battery 3.7V
	Rechargeable Power	5V 200mA via micro USB connector
2	Dimension	75(L) x 47(W) x7.5(H) mm
	Weight	20g
3	Operating temperature	-10°C - 50°C
4	Storage & Transport temperature range	0°C - 30°C
5	RF (Transmit and Receive)	CE: 868.4 MHz FCC: 919.8 MHz , 925.0 MHz
	Transmission Rate	At periodical interval set (30 sec) or Upon change of status.
6	LF (Transmit and Receive)	125Khz
	Transmission Rate	Every 5 sec
8	Interfaces	2 x buttons 2 x Bi-Colour LEDs (Red and Green) 1 x Buzzer.
9	Sensors	• Accelerometer Sensor
10	Compliance	CE • EN 60950 • EN 300220 • EN 300330 • EN 301489

3. Battery charging instruction

1. The tag is powered by a rechargeable Li-ion polymer battery. Use only approved chargers to charge the tag.
2. A fully discharged battery recharges fully in approximately 2 hours.
3. Plug the micro USB head into the power Interface connector jack on the tag .
4. Connect the other end of the micro-USB cable into 5V power supply.
5. When charging, the charging LED will show RED.
6. When charging done, the charging LED will show GREEN.
7. When charging is finished, remove the micro USB from the power interface connector jack on the tag.

1. Battery charging status indicator;
   GREEN means fully charged.
2. **RED** means charging

5V Micro-USB cable
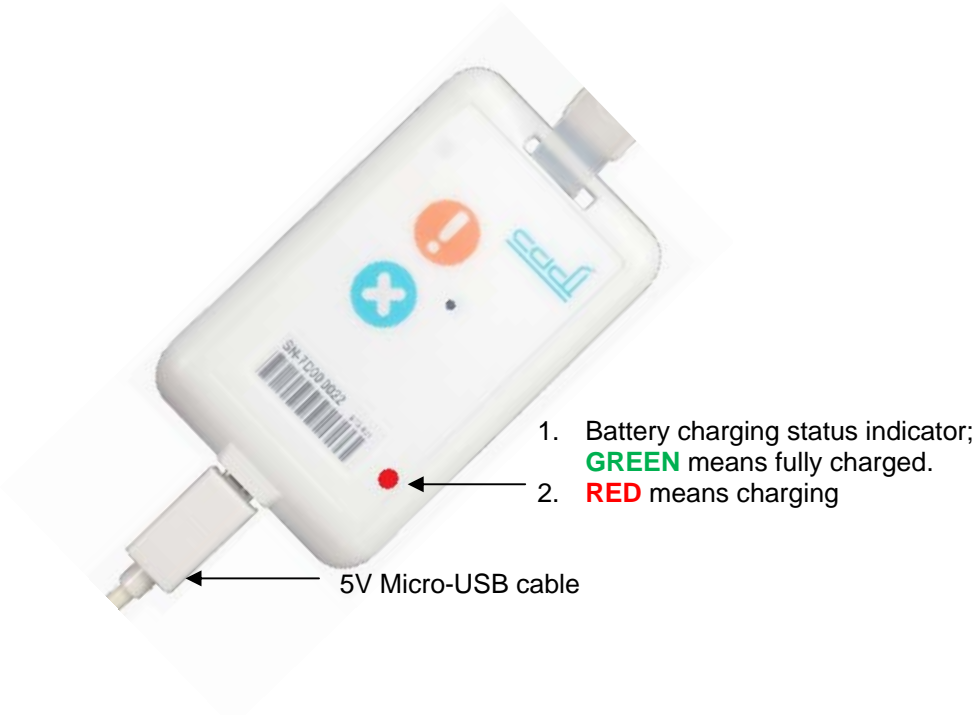
4. Tag Cleaning Instructions

1. Disinfect the tags by wiping with an alcohol sanitizer.

2. Dry the tag with a clean cloth.

   Caution: The tag cannot withstand for autoclave sterilization. It may cause tag damage.
   Caution: The tag is not water-proof; do not immerse the tag into water.

5. Battery Status Indicator

Blink RED LED at every 10 seconds interval when battery strength is low

Battery Strength Weak

1. The tag will continuously blink RED LED at every 10 seconds interval if its battery strength detected is weak.
2. Once the micro-USB connector is removed from the tag, the tag will blink RED LED with few beeping sound if battery strength detected is weak else it will blink GREEN LED with single beep only if it is normal.
3. If the battery strength is too low, the tag might keep restarting and output beeping sound.

6. Buttons

Duress call button

Unauthorized-Exit alert neutralization button

1. When the button is pressed, the tag will be triggered to send RF signal to receiver.
2. Duress signal will be triggered if the button is pressed and hold until a beep sound generated. (approximately 3 seconds)
3. Unauthorized Exit alert neutralization signal will be triggered once the button is pressed.

7. Tag off Mode

3. Observe that there is blinking RED LED triggered to indicate the tag is turned off successfully

2. Press and hold both buttons together

1. Charge the tag

1. The tag can be turn-off by following the steps as described above.
2. Once the tag is off, the tag only can be turn-on by charging the tag.