

Wrist Tag Instruction Manual and Specs Sheet

FCC Compliance

The FCC Wants You to Know

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 tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

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

FCC Warning

Modifications not expressly approved by manufacturer could void the user authority to operate the equipment under FCC rules.

IR and RF Wrist Tag

P/N: PWB00901 (433.92 MHz)



IR/RF Wrist Tag

Description

A small, wrist-worn portable tag, capable of transmitting ID-coded IR beams, and in addition, RF signals in the frequency of 433.92 MHz. The tag is used for the purpose of locating patients in enclosed environments.

General

Electrical power source	One 3-Volt lithium battery
Data rate	19,200 bits per second
Message protocol	4 bytes proprietary format
Message duration	2.08 ms
Battery type	CR 2032 Renata
Battery life	One year, assuming movement 12 hr / day
Battery status indication	Battery status transmitted with every RF and IR message.
Badge ID	Unique factory programmed (ID code, transmit rate, motion sensor activation and deactivation, etc.)
Button press	4 transmissions (200 ms apart) at 0.4 sec intervals with the motion bit on (B1 indicates button press)
Dimensions	47 x 37.1 x 14.7 mm. Height from band holders - 17.6 mm
Weight (including battery)	25 gram.
Temperature: Operating	-10 to 70°C
Temperature: Storage	-20 to 60°C

Humidity: Operating	5 to 95% RH @ 70° C
Humidity: Storage	5 to 95% RH @ 85° C
Water resistance	Waterproof
Accessories	One disposable hospital band (included)

IR Transmission

Modulation	ASK (Amplitude Shift Keying of IR carrier)
Peak optical transmitted power	500mW
Peak transmission wavelength	880nm
Peak radiant intensity	120 mW/Sr
Frequency of transmission	Carrier at 455 KHz
Transmission rate	Motionless: IR is transmitted on every 3 rd RF transmission, (RF is transmitted 200ms after IR). In Motion: every 4sec (200 ms apart)
Transmission angle	360° badge plane. ±60° to badge perpendicular axis.

RF Transmission

	RF 433.92 MHz
Modulation	ASK (Amplitude Shift Keying of 433.92 MHz carrier)
Average effective radiated power	In motion: less than -35 dbm. Motionless: less than -45 dbm
Stability	+ / - 20ppm
Peak ERP	-15 dbm (max)
Transmission pattern	Omnidirectional
FCC and CE compliance	FCC Part 15.231 Level C
I-ETS	300 220-1

Using the Wrist Tag

The following is a set of procedures to ensure proper use of the Wrist Tag.

To use the Wrist Tag:

1. Attach the strap of the Wrist Tag around the patient's wrist.
2. Keep the IR transmission area clear.
3. Press button to activate it.
4. The RDRs within the facility pick up the signals.

Battery Replacement

The battery is located inside the Wrist Tag. In order to replace the battery, you need to open the back side of the Wrist Tag with a Phillips screwdriver (preferably an electric one) with point size "0". For example, the APEX #4910. A new battery can then be inserted, after which the screws must be replaced.