

# T-Patch GPS



## Owner's Manual

Please keep this manual for future reference

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## FCC Compliance Declaration

FCCID: POJTPATCH-GPSA10

This device complies with part 15 of the FCC Rules. Operation is subject to the following conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

## FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits for an uncontrolled environment. This equipment must be installed and operated with a minimum distance of 20cm between the antenna & end user for public use.

## Warning

The device contains two AA Alkaline batteries. Alkaline batteries can be disposed of safely in normal household waste. Never dispose of Alkaline batteries in a fire as they can explode.

# Precautions

## PLEASE READ CAREFULLY BEFORE PROCEEDING

Please keep this manual in a safe place for future reference.

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### WARNING

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short circuiting, damages, fire or other hazards. These precautions include, but are not limited to the following:

#### Non Serviceable

- This device does not contain any user-serviceable parts. Therefore do not open or attempt to open the device with the intent to service the device.
- If the device appears to be malfunctioning contact a certified service technician or installer as soon as possible.

#### Environmental

- The enclosure of the device is rated as an IP67 enclosure. Therefore the device is dust proof and water proof up to a depth of 1m. Damage to the enclosure will undermine the IP67 rating.
- Never open or attempt to open the device.

#### Service

- Immediately contact a certified installer or technician when one of the following problems occur:
  - The device emits unusual odours or smoke.
  - The enclosure of the device is damaged.

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## CAUTION

Always follow these basic precautions listed below to avoid the possibility of physical injury to you or others, or damage to the device or other property:

### Installation

- When installing the device be sure to fasten the device using the provided mounting tabs on the enclosure.
- Install the device on a flat surface where both of the mounting tabs can be securely fastened.
- Do not install the device onto a surface that gets extremely hot. Extreme temperatures may damage the device enclosure and electronics.
- When installing the device in a vehicle, make sure that the engine is not running.
- Take the necessary precautions against electrocution when installing the device near a live power source.

### Disclaimer

Reseller cannot be held responsible for damage caused by improper use or modification to the device.

# Introduction

The Future RF T-Patch GPS device is an active radio tag that is powered by two AA Alkaline batteries. It features a radio transceiver, a highly sensitive GPS and on-board memory, all housed in a robust ABS plastic housing. It is configurable to meet the end –user application requirements. Each device has its own unique serial number that allows it to be used for asset tracking and identification.

Please read this manual to ensure trouble free operation. Keep this manual safe for future use and reference.

## Overview of the Device

The T-Patch GPS is well suited for GPS location tracking. It is mounted inside a rugged and waterproof housing and can easily be installed in covert locations.

Some of the features include, but are not limited to:

- Internal Future RF link module and antenna
- Internal Battery \* NOTE 1
- Analogue battery voltage measurement
- Long battery life
- Internal Memory to log GPS co-ordinates
- Configurable output power of up to +11dBm
- Configurable update rate
- 915MHz and 868MHz variations
- Up to 4-years battery life depending on the parameter configuration

**\*NOTE 1:**

- The internal battery is two AA alkaline batteries.
- The internal battery cannot be replaced or charged.
- The device will be supplied with a fully charged internal battery.
- The device *requires* the internal battery for normal operating conditions.



# Connections

The T-Patch GPS has no external connections. Do not open the enclosure and attempt to connect anything to it.

# Installation

## Enclosure Installation

### Placement

- Do not install the device on or near heat sources.
- Do not install the device on or near high vibration surfaces.
- Install the device on a flat surface where both the mounting tabs can be securely fastened.

The enclosure must be fastened securely using the two mounting tabs provided. Both mounting tabs must be used to secure the enclosure. Using fewer tabs will increase the risk of the T-Patch GPS device being damaged.

# Specifications

## Electrical Characteristics

### Absolute Maximum Ratings \*

Storage Temperature Range	0°C → +45°C
Operating Temperature Range	-20°C → +70°C

### ESD Ratings:

IEC61000-4-2 (Contact Discharge)	+/- 4kV
(Air Discharge)	+/- 8kV

### Transient Ratings:

IEC61000-4-4	+/- 1kV
IEC61000-4-5	+/- 1kV

\* NOTE: Exposure to absolute maximum condition ratings may affect device reliability. Normal operation under such circumstances is not recommended.

## Electrical Characteristics

Parameter	Sym	Min	Typ	Max	Condition
<b>Setup condition:</b> Ambient Temperature $T_A = 25^\circ\text{C}$ . $V_{IN} = 3\text{V}$ . All voltages are DC.					
Supply Voltage	$V_{IN}$	2.4V	3V	3.2V	
Input current					
Quiescent current	$I_Q$		22uA	30uA	
Operating current	$I_{DD}$		TBD		
	$I_{PK}$			160mA	Peak current draw



# Dimensions

Unit outer dimensions: 109mm x 48mm x 27mm