



7GHz Tags

7GHz Tags

User Manual



© 2016 ZIH Corp. and/or its affiliates. All rights reserved. Zebra and the stylized Zebra head are trademarks of ZIH Corp., registered in many jurisdictions worldwide. All other trademarks are the property of their respective owners.

The copyrights in this document and the software and/or firmware in the products described therein are owned by ZIH Corp. and Zebra's licensors. Unauthorized reproduction of this manual or the software and/or firmware in the products may result in imprisonment of up to one year and fines of up to \$10,000 (17 U.S.C.506). Copyright violators may be subject to civil liability.

DartTags, Sapphire, and all product names and/or numbers are trademarks of Zebra. All rights reserved worldwide.

All other brand names, product names, or trademarks belong to their respective holders.

Proprietary Statement This manual contains proprietary information of Zebra Technologies Corporation and its subsidiaries ("Zebra Technologies"). It is intended solely for the information and use of parties operating and maintaining the equipment described herein. Such proprietary information may not be used, reproduced, or disclosed to any other parties for any other purpose without the express, written permission of Zebra Technologies.

Product Improvements Continuous improvement of products is a policy of Zebra Technologies. All specifications and designs are subject to change without notice.

Liability Disclaimer Zebra Technologies takes steps to ensure that its published Engineering specifications and manuals are correct; however, errors do occur. Zebra Technologies reserves the right to correct any such errors and disclaims liability resulting therefrom.

Limitation of Liability In no event shall Zebra Technologies or anyone else involved in the creation, production, or delivery of the accompanying product (including hardware and software) be liable for any damages whatsoever (including, without limitation, consequential damages including loss of business profits, business interruption, or loss of business information) arising out of the use of, the results of use of, or inability to use such product, even if Zebra Technologies has been advised of the possibility of such damages. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Caution

- No modifications to the tag allowed. This includes any type of modification to the case, such as adding metal foils, holes, disassembly, or modifications to the PCB assembly, antenna, battery, or modifications to the product labels, etc.
- Prior to installation, carefully inspect the tag, looking for crack, puncture, or any other breach of the plastic case. Damaged tags must not be used. Properly dispose of any damaged tag.
- Never dispose of the tag in a fire.
- Deactivate the tag when not in use. It is mandatory to deactivate the tag prior to shipment by airplanes.
- Follow limitations of use as set forth by any applicable regulatory bodies.
- Do not attempt to open the tag and modify the battery due to fire, explosion, and severe burn hazard. Do not recharge, short circuit, crush, disassemble, heat above 100 °C (212 °F), incinerate, or expose contents of the battery to water.
- Do not dispose the tag or its lithium batteries in unsorted municipal waste. In most countries, recycling programs are available through non-profit organization, mandated by local government or organized on a voluntary basis. Contact your local government for disposal practices in your area.
- When not in use, the tag should be stored in dry and cool conditions at a temperature exceeding 30 °C (86 °F).

Contents

Caution.....	3
1 Introduction.....	5
2 Installation and Operation	5
3 7GHz Tags	6
3.1 UWT-7020	6
3.2 UWT-7010	6
4 Adjustment.....	6
5 Regulatory.....	7

1 Introduction

Zebra's Ultra-WideBand (UWB) 7GHz Tags (Models UWT-7020, and UWT-7010) are small battery-operated tags designed for use in sports applications. The UWT-7020 is only used attached to the bladder of a football, and when enabled will track the real time location of that ball on the field. The UWT-7010 is attached to people or assets to track their location in real time. Tags have a unique ID and emit UWB pulses that are received by Zebra's UWB 7GHz Receivers. Receivers report detected tag events to the Zebra Hub running Zebra's UWB real-time locating system (RTLS) software where tag location information is computed and reported.

2 Installation and Operation

7GHz Tags are shipped with the transmitter off. The tags can be turned on/off using a Zebra configuration tool or a Zebra WherePort. To meet regulatory requirements and increase battery life, Tags are only turned on for specific periods of time, and under specific conditions, for example, the length of an NFL football game. To further their battery life, Tags also slow down their blink rates when idle.

3 7GHz Tags

3.1 UWT-7020

The UWT-7020 is made only to be installed to the bladder of a football by the football manufacturer. It is a small, lightweight, battery-operated tag with no external interfaces. The tag is configured at the factory and shipped with the Tx function turned off. The Tag Tx function can be turned on/off with a Zebra installation tool or a WherePort magnetic exciter.

3.2 UWT-7010

The UWT-7010 tag is a small, rugged, battery-operated tag that is made to be installed under the shoulder pads of a football player or used to track other mobile personnel or equipment. The tag is configured at the factory and shipped with the Tx function turned off. The Tag Tx function can be turned on/off with a Zebra installation tool or a WherePort magnetic exciter.

4 Adjustment

No adjustment is necessary once a tag is activated

5 Regulatory

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

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class A 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 equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.