

# Wasp WDI7500 2D Duraline USB Barcode Scanner



**Quick Reference Guide** 

### **Wasp Barcode Technologies**

1400 10th Street Plano, Texas USA 75074 Telephone: (214) 547-4100

#### ©2014-2018 Wasp Barcode Technologies

An Unpublished Work - All rights reserved. No part of the contents of this documentation or the procedures described therein may be reproduced or transmitted in any form or by any means without prior written permission of Wasp Barcode Technologies or its subsidiaries or affiliates ("Wasp Technologies" Technologies Wasp Technologies). Owners of WaspTechnologies products are hereby granted a non-exclusive, revocable license to reproduce and transmit this documentation for the purchaser's own internal business purposes. Purchaser shall not remove or alter any proprietary notices, including copyright notices, contained in this documentation and shall ensure that all notices appear on any reproductions of the documentation.

Should future revisions of this manual be published, you can acquire printed versions by contacting your Wasp Technologies representative. Electronic versions may either be downloadable from the Wasp Technologies website (<a href="www.waspbarcode.com">www.waspbarcode.com</a>) or provided on appropriate media. If you visit our website and would like to make comments or suggestions about this or other Wasp Technologies publications, please let us know via the "Contact WaspTechnologies" page.

#### Disclaimer

Wasp Technologies has taken reasonable measures to provide informantion in this manual that is complete and accurate, however, Wasp Technologies reserves the right to change any specification at any time without prior notice. Wasp Technologies and the Wasp Technologies logo are registered trademarks of Wasp Technologies Barcode Technologies in many countries, including the U.S.A. and the E.U. Duraline is a trademark of Wasp Barcode Technologies registered in many countries, including the U.S.A. and the E.U. All other brand and product names may be trademarks of their respective owners.

#### **Patents**

This product is covered by one or more of the following patents: Design patents: AU344427, AU344428, AU344429, EP001970237, TWD159476, TWD159477, TWD160254, TWD160255, USD682277, USD702238, ZL201230284676.X

Utility patents: EP0996284B1, EP0999514B1, EP1114390B1, EP1128315B1, EP1172756B1, EP1396811B1, EP1413971B1, EP1816585B1, EP1828957B1, EP2275966B1, EP2517148B1, EP2521068, EP2649555B1, JP4435343B2, US6478224, US6512218, US6513714, US6561427, US6808114, US687664, US6997385, US7053954, US7234641, US7387246, US7721966, US8113428, US8245926, US8561906, US8743263, US8888003, US9915443, US9430689, US9482793, ZL200880132595.9, ZL200980163411.X

## **Table of Contents**

END USER SOFTWARE LICENSE AGREEMENT (EULA)	
FOR THE WASP WDI7500 iii	
Software Product Policy	vi
Description	
General Features	1
Setting Up the Reader	2
Connecting the Cable	
Using the WDI7500	4
Selecting the Interface Type	5
Interface Selection	5
Configuring the Interface	5
Scancode Tables	8
Keyboard Interface	8
Country Mode	9
Caps Lock State	13
Numlock	14
Programming	14
Using Programming Bar Codes	14
Configure Other Settings	
Resetting Product Defaults	15
Reading Parameters	16
Good Read Green Spot Duration	16
Digital Watermark Reading	17
Operating Modes	18
Scan Mode	
Motion Aiming Control	19
Pick Mode	20
Multiple Label Reading	20
Technical Specifications	21
LED and Beeper Indications	24
Error Codes	27
Cleaning	
Wasp Technologies Limited Factory Warranty	29
Ergonomic Recommendations	31

Services and Support ......31

ii WWS650

## END USER SOFTWARE LICENSE AGREEMENT (EULA) FOR THE WASP WDI7500

NOTICE TO END USER: BY DOWNLOADING OR INSTALLING THE SOFTWARE, OR BY USING THE WASP BARCODE TECHNOLOGIES PRODUCT THAT INCLUDES THIS SOFTWARE, THE END USER CONSENTS TO BE BOUND BY THIS AGREEMENT. IF THE END USER DOES NOT AGREE WITH ALL OF THE TERMS OF THIS AGREEMENT, THEN WASP IS NOT WILLING TO LICENSE THE SOFTWARE AND THE END USER IS NOT ALLOWED TO DOWNLOAD, INSTALL OR USE THE SOFTWARE OR THE WASP PRODUCT

This End User License Agreement ("EULA") is between Wasp Barcode Technologies having its registered office at 1400 10th Street, Plano, IX 75074, USA ("Wasp"), and you, either an individual or a single entity, ("End User or "You") who has purchased one or more WDI7500 ("Wasp Product") subject to the terms and conditions provided in any relevant purchase or sale contract. This EULA applies to the software contained in the Wasp Product ("Embedded Software") and to any other software, to the extent applicable, offered as optional application software ("Application Software"). Any Open Source used in a conjunction with the Software is subject to the Open Source licenses available at the following website: <a href="https://www.datalogic.com/oss">https://www.datalogic.com/oss</a>

#### 1 Grant of Licence

- 1.1 Wasp grants to End User, a personal, non-exclusive, non-transferable, non-sublicensable, revocable, limited license to use the Software, solely on the Wasp Product in which it is embedded or for which it is intended for use, in machine-readable form only, solely for End User's internal business purposes.
- 1.2 End Users shall not distribute, sublicense, rent, loan, lease, assign, export, reexport, resell, ship or divert or cause to be exported, re-exported, resold, shipped or diverted, directly or indirectly, the Software under this Agreement. End User shall not, and shall not permit others to: (i) modify, translate, decompile, reverse engineer, disassemble, or extract the inner workings of the Software, (ii) copy the functionality of the Wasp Products; (iii) remove any proprietary notices, marks, labels, or logos from the Wasp Products; (iv) rent or transfer all or some of the Software to any other party without Wasp's prior written consent.
- 1.3. Title to the licensed Software shall be and remain with Wasp or the third party from whom Wasp has obtained a license right. This Agreement does not grant to End User any intellectual property rights. As used in this Agreement the term "purchase" or its equivalent when applied to the Software shall mean "acquire under license". End User is not entitled to receipt or use of the source code of any licensed Software.
- 1.4 Portions of the Wasp Product are protected by the relevant and applicable patent and copyright laws, international treaty provisions, and other applicable laws. Therefore, End User must treat the Wasp Product like any other copyrighted material (e.g., a book or musical recording) except that End User may make one copy of the Software solely for back-up purposes. Unauthorized duplication of the Software constitutes copyright infringement.
- 1.5 Any use of the Software outside of the conditions set forth herein is strictly prohibited and will be deemed a breach of this Agreement resulting in immediate termination of this Agreement. In the event of a breach of this Agreement, Wasp will be entitled to all available remedies at law or in equity (including but not limiting to immediate termination of the license without notice, immediate injunctive relief and repossession of all Wasp Products).
- 1.6 Without prejudice of the foregoing, End User grants to Wasp and its independent accountants or consultants the right to examine End User's books, records and accounts during End User's normal business hours to verify compliance with this Agreement. In the event such audit discloses non-compliance with this Agreement, Wasp shall be entitled to immediately terminate the Agreement, request End User to promptly pay all (additional) license fees due and any further damages, if any.

#### 2. License Fee

License fees shall be due by End User to Wasp according to the terms provided for in the relevant contract for the purchase of the Wasp Product.

#### 3. Termination

Without prejudice to any other rights or remedies Wasp may have, Wasp may terminate this Agreement if End User fails to comply with the terms and conditions of this Agreement. Wasp may terminate this Agreement by offering you a superseding Agreement for the Software or any replacement or modified version of or upgrade to the Software and conditioning your continued

use of the Software or such replacement, modified or upgraded version on your acceptance of such superseding Agreement. In addition, either party may terminate this Agreement at any time. Subject to the foregoing, termination shall be effective upon notice to the other party. In the event that this Agreement terminates for any reason, End User's license to use the Software will immediately terminate, and End User must immediately stop using the Software, destroy all copies of the Software and all of its component parts, and upon request, provide an affidavit certifying your compliance with the foregoing. The provisions of Sub-sections 1.2, 1.3, 1.4, 1.5, 4, 5, 6, 8, and 12 shall survive termination of this Agreement.

#### 4. Limited Warranty

Wasp warrants that, under normal use and operation, the Software will conform substantially to the applicable Wasp Product documentation for the period specified in the same, provided that the Software is used with the Wasp Product. Wasp's entire liability and End User's sole and exclusive remedy for any breach of the foregoing limited warranty will be, at Wasp's option, the provision of a downloadable patch or replacement software.

Wasp does not warrant (i) that Software will meet End User's requirements; (ii) that Software will be uninterrupted or defect error free; (iii) any non-conformity derived from unauthorized use, and/or improper installation or repair not in compliance with Wasp Product documentation. End User agrees that the existence of such non-conformities or errors and Wasp's inability to remedy such errors shall not constitute a breach of this Agreement.

EXCEPT AS PROVIDED IN THIS AGREEMENT, THE WASP PRODUCT IS PROVIDED "AS IS" AND WASP MAKES NO WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, WRITTEN OR ORAL, WITH RESPECT TO THE WASP PRODUCT OR SOFTWARE, AND SPECIFICALLY DISCLAIMS THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

#### 5. Limitation of Liability

EXCEPT AS PROVIDED IN THIS AGREEMENT, NEITHER WASP NOR ITS LICENSORS SHALL BE LIABLE FOR ANY CLAIMS AGAINST END USER BY ANY OTHER PARTY. IN NO EVENT SHALL WASPS LIABILITY FOR DAMAGES, IF ANY, WHETHER BASED UPON CONTRACT, TORT (INCLUDING NEGLIGENCE), PRODUCT LIABILITY, STRICT LIABILITY, WARRANTY, OR ANY OTHER BASIS, EXCENTED THE PRICE OR FEE PAID BY END USER FOR THE WASP PRODUCT. UNDER NO CIRCUMSTANCES SHALL WASP OR ITS LICENSORS BE LIABLE TO END USER OR ANY THIRD PARTY FOR LOST PROFITS, LOST DATA, INTERRUPTION OF BUSINESS OR SERVICE, OR FOR ANY OTHER SPECIAL, CONSEQUENTIAL, CONTINGENT, INDIRECT, INCIDENTAL, PUNITIVE, EXEMPLARY, OR OTHER SIMILAR DAMAGES, EVEN IF WASP OR ITS LICENSORS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. END USER MUST BRING ANY ACTION UNDER THIS AGREEMENT WITHIN 12 (TWELVE) MONTHS AFTER THE CAUSE OF ACTION ARISES.

#### 6. Indemnification

To the maximum extent permitted by law, End User agrees to defend, indemnify and hold harmless Wasp, its affiliates and their respective directors, officers, employees and agents from and against any and all claims, actions, suits or proceedings, as well as any and all losses, liabilities, damages, costs and expenses (including reasonable attorney's fees) arising out of or accruing from or related to Licensee's failure to comply with the terms of this Agreement, including but not limited to (1) non-compliance with any applicable laws or regulations with Wasp product documentation, (2) unauthorized use or disclosure of Software, and (3) use of Software in combination with software, hardware, systems, or other items not provided by Wasp.

#### 7. Support

End User may request support for Software from Wasp at Wasp's standard support fees and under Wasp's standard support terms and conditions in effect at the time the support is requested.

- 8. Government Restricted Rights; International Use
- 8.1 Use, duplication, or disclosure of the Software by the U.S. Government is subject to the restrictions for computer software developed at private expense as set forth in the U.S. Federal Acquisition Regulations at FAR 52.227-14(g), or 52.227-19 or in the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013(c)(1)(ii), whichever is applicable.
- 8.2 If End User is using the Wasp Product outside of the United States, End User must comply with the applicable local laws of the country in which the Wasp Product is used and with U.S. export control laws, Without prejudice of the foregoing, the End User agrees to not export or re-export the Software, any part thereof, or any process or service that is the direct product of the Software to any country, person or entity subject to U.S. export restrictions. End User specifically agrees not to export or re-export any of the Software: (i) to

any country to which the U.S. has embargoed or restricted the export of goods or services or to any national of any such country, wherever located, who intends to transmit or transport the Software back to such country; (ii) to any person or entity who you know or have reason to know will utilize the Software in the design, development or production of nuclear, chemical or biological weapons; or (iii) to any person or entity who has been prohibited from participating in U.S. export transactions by any federal agency of the U.S. government. End User warrants and represents that neither the U.S. Commerce Department, Bureau of Export Administration nor any other U.S. federal agency has suspended, revoked or denied its export privileges.

#### 9. Third Party Software

The Wasp Product may contain one or more items of third party software which use is governed by separate third-party license, unless otherwise stated.

#### 10. Open Source Software

Portions of the Software include or operate with Open Source software ("Open Source Software").

Open Source Software is software covered by a publicly available license governed solely under Copyright law, whereas the complete terms and obligations of such license attach to a licensee solely through the act of copying, using and/or distributing the licensed software, such obligations often include one or more of attribution obligations, distribution obligations, copyleft obligations, and intellectual property encumbrances. The use of any Open Source Software is subject to the terms and conditions of this Agreement as well as the terms and conditions of the terms and conditions of the terms and conditions of this Agreement as well as this Agreement and the terms and conditions of the Open Source Software package. If there is a conflict between the terms and conditions of this Agreement and the terms and conditions of the Open Source Software license, the applicable Open Source Software license will take precedence. Wasp is required to reproduce the software licenses, acknowledgments and copyright notices as provided by the authors and owners, thus, all such information is provided in its native language form, without modification or translation. Please reference and review the above-mentioned information to identify which Open Source Software packages have source code provided or available.

#### 11. Notices

All notices required or authorized under this Agreement shall be given in writing, and shall be effective when received, with evidence of receipt. Notices to Wasp shall be sent to the attention of Wasp Barcode Technologies, 1400 10th Street, Plano TX 75074 USA, or such other address as may be specified by Wasp in writing.

#### 12. General Provisions.

- 12.1. Entire Agreement; Amendment. This document contains the entire agreement between the parties relating to use of the Wasp Products and the licensing of the Software and supersedes all prior or contemporaneous agreements, written or oral, between the parties concerning the use of the Wasp Products and licensing of the Software. This Agreement may not be changed, amended, or modified except by written document signed by Wasp.
- 12.2. Waiver. A party's failure to enforce any of the terms and conditions of this Agreement shall not prevent the party's later enforcement of such terms and conditions.
- 12.3. Governing Law; Venue: End User agrees to the application of the laws of the country in which End User obtained the license to govern, interpret, and enforce all of End User's and Wasp's respective rights, duties, and obligations arising from, or relating in any manner to, the subject matter of this Agreement, without regard to conflict of law principles. The United Nations Convention on Contracts for the International Sale of Goods does not apply.

All rights, duties, and obligations are subject to the courts of the country in which End User obtained the license. For licenses granted by Licensee who operates in the countries specified below, the following terms applies.

#### For Americas:

This Agreement is governed by the laws of the State of Oregon. This Agreement and the rights of the parties hereunder shall be governed by and construed in accordance with the laws of the State of Oregon U.S.A, without regard to the rules governing conflicts of law. The state or federal courts of the State of Oregon located in either Multnomah or Lane counties shall have exclusive jurisdiction over all matters regarding this Agreement, except that Wasp shall have the right, at its absolute discretion, to initiate proceedings in the courts of any other state, country, or territory in which End User resides, or in which any of End User's assets are located. In the event an action is brought to enforce the terms and conditions of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees, both at trial and on appeal.

For Europe, Middle East and Africa:

This Agreement is governed by the laws of Italy. This Agreement and the rights of the parties hereunder shall be governed by and construed in accordance with the laws of Italy, without regard to the rules governing conflicts of law. Italian Court of Bologna shall have exclusive jurisdiction over all matters regarding this Agreement, except that Wasp shall have the right, at its absolute discretion, to initiate proceedings in the courts of any other state, country, or territory in which End User resides, or in which any of End User's assets are located. In the event an action is brought to enforce the terms and conditions of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees, both at trial and on appeal.

For Asia-Pacific Countries:

The validity, interpretation and construction of the Agreement shall be governed by and construed in accordance with Laws of the Republic of Singapore. Parties expressly disclaim the application of the United Nations Convention for International Sale of Goods.

Any dispute arising out of or in connection with this contract, including any question regarding its existence, validity or termination, shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre ("SIAC") in accordance with the Arbitration Rules of the Singapore International Arbitration Centre ("SIAC Rules") for the time being in force, which rules are deemed to be incorporated by reference in this clause. The seat of the arbitration shall be Singapore.

The number of arbitrators will be three, with each side to the dispute being entitled to appoint one arbitrator. The two arbitrators appointed by the parties will appoint a third arbitrator who will act as chairman of the proceedings. Vacancies in the post of chairman will be filled by the president of the SIAC. Other vacancies will be filled by the respective nominating party. Proceedings will continue from the stage they were at when the vacancy occurred. If one of the parties refuses or otherwise fails to appoint an arbitrator within 30 days of the date the other party appoints its, the first appointed arbitrator will be the sole arbitrator, provided that the arbitrator was validly and properly appointed. All proceedings will be conducted, including all documents presented in such proceedings, in the English language. The English language version of these terms and conditions prevails over any other language version.

12.4. Attorneys' Fees. In the event an action is brought to enforce the terms and conditions of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees, both at trial and on appeal.

- END -

## Software Product Policy

Wasp reserves the right to ship its products with the latest version of software/firmware available. This provides our customers with the very latest in Wasp software technology.

The only exception to this policy is when the buyer has a signed contract with Wasp that clearly defines the terms and conditions for making software/firmware changes in products shipped to the buyer.

To arrange for a Software Maintenance and Support Agreement please contact your Wasp sales person.

## Wasp WDI7500

## Description

The WDI7500 is the first handheld scanners family on the market capable of reading digital watermarks, including Digimarc® Barcode. The WDI7500 is a feature-rich and rugged area imager reader. It is offered in several different models to better fit the different needs of each customer.

The table below shows the unique features of each model:

Model P/N	Optical feature	
WDI7500	Standard optic, standard and low density codes	

#### General Features

Omni-directional Operating	To read a symbol or capture an image, you simply aim the reader and pull the trigger. Since the WDI7500 is a powerful omni-directional reader, the orientation of the symbol is not important.
Decoding	Thanks to powerful algorithms, WDI7500 reliably decodes all major 1D (linear) barcodes, 2D stacked codes (such as PDF417), 2D matrix symbols (such as DataMatrix), postal codes (such as POSTNET, PLANET). The data stream—acquired from decoding a symbol—is rapidly sent to the host. The reader is immediately available to read another symbol.
Formatting and Concatenating	The string of a decoded code may be processed according to either a simple or advanced data formatting and be concatenated.
Imaging	WDI7500 can also function as a camera by capturing entire images or image portions of labels, signatures, and other items.
Autoscanning	An autoscan command causes the reader to scan continuously and to monitor the central zone of its reading area.

Flash Memory	Flash technology allows you to upgrade the WDI7500 reader as new symbologies are supported or as improved decoding algorithms become available.
USA Driver License Parsing	The reader can be set up to select and output a subset of data elements from USA Driver License PDF417 barcodes. This feature can be enabled using the barcodes in the USA Driver License Parsing Quick Reference Guide (QRG), available on the Wasp website.

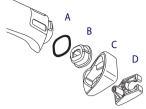
## Setting Up the Reader

Follow the steps below to connect and get your reader up and communicating with its host.

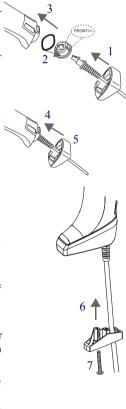
- Connect the Cable to the reader and the Host, shown on page 3.
- 2. Configure the Interface (see page 5).
- Configure the Reader starting on page 15 (optional, depends on settings needed)

Connect the WDI7500 by plugging directly into the host device as shown. The power can also be supplied through an external power supply via the Interface Cable supplied with a power jack.

## **Connecting the Cable**



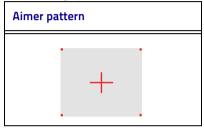
- A. Rubber gasket
- B. Cable Holder
- C. Cover
- D. Connector Holder
- 1. Slip the cable through the Cover.
- Push the Rubber Gasket onto the Cable Holder.
- Push the Cable Holder and gasket into the handle. Ensure that the 'Front" marking on the Cable Holder is facing out, with the arrow pointing towards the front of the scanner.
- Insert the end of the cable into the socket of the Cable Holder.
- Push the Cover along the cable towards the reader, and hook it over the yellow 'tooth" on the back of the handle.
- Insert the cable through the Connector Holder, and push it up into the Cover.
- Insert and tighten the screw to affix the cable assembly to the reader handle.



## Using the WDI7500

The WDI7500 normally functions by capturing and decoding bar codes. The reader is equipped with an internal Motionix™ motion-sensing function which activates the aiming system on device motion. The intelligent aiming system indicates the field of view which should be positioned over the bar code:

Table 1. Aiming System



The field of view indicated by the aiming system will be smaller when the reader is closer to the bar code and larger when it is farther from the code. Symbologies with smaller bars or elements (mil size) should be read closer to the unit. Symbologies with larger bars or elements (mil size) should be read farther from the unit.

If the entire bar code is within the aiming field, you will get a good read. Successful reading is signaled by an audible tone plus a good-read green spot LED indicator.

Reference the WDI7500 Product Reference Guide (PRG) for more information about this feature and other programmable settings.

## Selecting the Interface Type

Upon completing the physical connection between the reader and its host, proceed directly to Interface Selection below for information and programming for the interface type the reader is connected to (for example: RS-232, Keyboard Wedge, USB, etc.) and scan the appropriate bar code to select your system's correct interface type.

### Interface Selection

All models are multi-interface and support RS-232, USB and Keyboard Wedge.

Information and programming options for each interface type are provided in this section.

### Configuring the Interface

Scan the appropriate programming bar code to selects the interface type for your system.



Unlike some other programming features and options, interface selections require that you scan only one programming bar code label. DO NOT scan an ENTER/EXIT bar code prior to scanning an interface selection bar code.

Some interfaces require the scanner to start in the disabled state when powered up. If additional scanner configuration is desired while in this state, pull the trigger and hold for 5 seconds. The scanner will change to a state that allows programming with bar codes.

#### RS-232

RS-232 standard interface



RS-232

RS-232 Wincor-Nixdorf



RS232-WN

RS-232 for use with OPOS/UPOS/JavaPOS



RS-232 OPOS

#### **USB**

USB Com to simulate RS-232 standard interface



USB-COMa

### **USB** (continued)

USB-0EM (can be used for OPOS/UPOS/JavaPOS)



**USB-OEM** 

a. Download the correct USB Com driver from www.waspbarcode.com

USB Keyboard with standard key encoding



USB-KBD

USB Keyboard with alternate key encoding



USB-KBD-ALT

USB Keyboard for Apple computers



**USB-KBD-APPLE** 

### **Keyboard Interface**

#### **KEYBOARD WEDGE**

IBM AT or PS/2 PCs Standard Key Encoding



KBD-AT

IBM AT or PS/2 PCs
Standard Key Encoding without external keyboard



KBD-AT-NK

IBM AT or PS/2 PCs w/Alternate Key



**KBD-AT-ALT** 

IBM AT or PS/2 PCs
Alternate Key Encoding without external keyboard



KBD-AT-ALT-NK

#### Scancode Tables

Reference the WDI7500 PRG for information about control character emulation for keyboard interfaces.

### **Country Mode**

This feature specifies the country/language supported by the keyboard. This option is usable only with USB-KBD and Keyboard Wedge interface without the "Alternate Key" mode.

#### **COUNTRY MODE**



ENTER/EXIT PROGRAMMING MODE



Country Mode = U.S.



Country Mode = Belgium



Country Mode = Britain



Country Mode = Croatia\*

\*Supports only the interfaces listed in the Country Mode feature description

### **COUNTRY MODE (continued)**



Country Mode = Czech\*



Country Mode = Denmark\*



Country Mode = France



Country Mode = French Canadian\*



Country Mode = Germany



Country Mode = Hungary\*

\*Supports only the interfaces listed in the Country Mode feature description

### **COUNTRY MODE (continued)**



Country Mode = Italy



Country Mode = Japanese 106-key\*



Country Mode = Lithuanian\*



Country Mode = Norway\*



Country Mode = Poland\*



Country Mode = Portugal\*

\*Supports only the interfaces listed in the Country Mode feature description

### **COUNTRY MODE (continued)**



Country Mode = Romania\*



Country Mode = Spain



Country Mode = Sweden



Country Mode = Slovakia\*



Country Mode = Switzerland\*

\*Supports only the interfaces listed in the Country Mode feature description

### Caps Lock State

This option specifies the format in which the reader sends character data. This applies to keyboard wedge interfaces. This does not apply when an alternate key encoding keyboard is selected.



#### ENTER/EXIT PROGRAMMING MODE



Caps Lock State = Caps Lock OFF



Caps Lock State = Caps Lock ON



Caps Lock State = AUTO Caps Lock Enable

#### Numlock

This option specifies the setting of the Numbers Lock (Numlock) key while in keyboard wedge interface. This only applies to alternate key encoding interfaces. It does not apply to USB keyboard.



ENTER/EXIT PROGRAMMING MODE



Numlock = Numlock key unchanged



Numlock = Numlock key toggled

## **Programming**

The reader is factory-configured with a set of standard default features. After scanning the interface bar code from the Interfaces section, select other options and customize your reader through use of the programming bar codes available in the WDI750

## **Using Programming Bar Codes**

This manual contains bar codes which allow you to reconfigure your reader. Some programming bar code labels, like the "Reset Default Settings" on page 15, require only the scan of that single label to enact the change.

Other bar codes require the reader to be placed in Programming Mode prior to scanning them. Scan an ENTER/

EXIT bar code once to enter Programming Mode; scan the desired parameter settings; scan the ENTER/EXIT bar code again to accept your changes, which exits Programming Mode and returns the reader to normal operation.

## **Configure Other Settings**

Additional programming bar codes are available in the PRG to allow for customizing programming features. If your installation requires different programming than the standard factory default settings, refer to the PRG.

## **Resetting Product Defaults**

If you aren't sure what programming options are in your reader, or you've changed some options and want your custom factory settings restored, scan the bar code below to reset the reader to its initial configuration. Reference the PRG for other options, and a listing of standard factory settings.



Factory defaults are based on the interface type. Be sure your reader is configured for the correct interface before scanning this label. See "Selecting the Interface Type" on page 5 for more information.



Reset Default Settings

## **Reading Parameters**

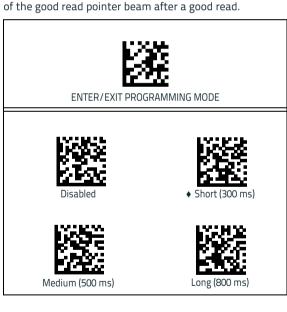
Move the reader toward the target and center the aiming pattern and illumination system to capture and decode the image. See Using the WDI7500 on page 4 for more information.

The aiming system will briefly switch off after the acquisition time, and if no code is decoded will switch on again before the next acquisition. The illuminator will remain on until the symbol is decoded.

As you read code symbols, adjust the distance at which you are holding the reader.

## **Good Read Green Spot Duration**

Successful reading can be signaled by a good read green spot. Use the bar codes that follow to specify the duration of the good read pointer beam after a good read.



## **Digital Watermark Reading**



ENTER/EXIT PROGRAMMING MODE







Enable

## **Operating Modes**

#### Scan Mode

The imager can be set to operate in one of several scanning modes. See the PRG for more information and settings for any of the options:

Trigger Single (Default) — This mode is associated with typical handheld reader operation. Motion Sense is active and if the scanner detects motion the aiming pattern is turned on. When the trigger is pulled, illumination is turned on and the scanner attempts to read a label. Scanning is activated until one of the following occurs:

- a label has been read
- the trigger is released

Trigger Pulse Multiple — Scanning begins when the trigger is pulled and continues after the trigger is released, until the trigger is pulled again or until the programmable 'maximum scan on time" has elapsed. Reading a label does not disable scanning. Double Read Timeout prevents undesired multiple reads while in this mode.

**Trigger Hold Multiple** — When the trigger is pulled, scanning starts and the product scans until the trigger is released or 'maximum scan on time" has elapsed. Reading a label does not disable scanning. Double Read Timeout prevents undesired multiple reads in this mode.

**Always On** — The illuminator is always ON and the reader is always ready for code reading. Double Read Timeout<sup>1</sup> prevents undesired multiple reads.

Flashing — The reader illuminator flashes on and off regardless of the trigger status. Code reading takes place only during the Flash On<sup>2</sup> time. Double Read Timeout<sup>1</sup> prevents undesired multiple reads.

Stand Mode — The scanner looks for changes within its field-of-view. The Aiming Pattern is always on to show the optimum reading area. If a predefined amount of movement is detected, the red illumination switches on. Scanning continues until a label is read or "maximum scan on time" is reached.

- See the Product Reference Guide (PRG) for these and other programmable features
- Controlled by Flash On Time and Flash Off Time. Use the PRG to program these options.

### Scan Mode (continued)



ENTER/EXIT PROGRAMMING MODE



◆ Scan Mode = Trigger Single



Scan Mode = Trigger Pulse Multiple



Scan Mode = Trigger Hold Multiple



Scan Mode = Flashing



Scan Mode = Always On



Scan Mode = Stand Mode

## **Motion Aiming Control**

This feature configures the ability of the scanner to Enable/Disable the Aiming system when motion is detected (Motionix™ motion-sensing technology). Scan the Enter/Exit Programming bar code above, then either of the barcodes below.



◆ Motion Aiming Control = Fnable



Motion Aiming Control = Disable

#### Pick Mode

Specifies the ability of the reader to decode labels only when they are close to the center of the aiming pattern. Pick Mode is a Decoding and Transmission process where bar codes that are not within the configurable distance from the center of the aiming pattern are not acknowledged or transmitted to the host. It is active only while the scanner is in Trigger Single mode. If the scanner switches to a different Read Mode, Pick Mode is automatically disabled.



This feature is not compatible with Multiple Labels Reading in a Volume. See the PRG for more information.



ENTER/EXIT PROGRAMMING MODE



◆ Plck Mode = Disable



Pick Mode = Enable

## Multiple Label Reading

The reader offers a number of options for multiple label reading. See the PRG or software configuration tool for descriptions of these features and programming labels.

## **Technical Specifications**

The following table contains Physical and Performance Characteristics, User Environment and Regulatory information.

Item	Description		
PHYSICAL CHARACTERISTICS			
Dimensions	Height: 212 mm Length: 110 mm Width: 74 mm		
Weight (without cable)	330 gr (without cable)		
ELECTRICAL CHARACTERISTICS			
Input Voltage	5 VDC +/- 5%		
Operating Current (typical):	335mA		
Operating Current (max):	475mA		
Idle/Standby Current (typical)	180mA		

PERFORMANCE CHARACTERISTICS			
Light Source	LED		
Roll (Tilt) Tolerance	±180°		
Pitch Tolerance	± 40°		
Skew (Yaw) Tolerance	± 40°		
Print Contrast Minimum 15% minimum reflectance			
Resolution	Max resolution 1D 4 mils Max resolution 2D 7.5 mils		
DEPTH OF FIELD (TYPICAL) <sup>A</sup>			
DEPTH OF FIELD (TYPICAL) <sup>A</sup>			
DEPTH OF FIELD (TYPICAL) <sup>A</sup> Symbology	Working Ranges		
	Working Ranges  4 mils: 6-17 cm 20 mils: 4-55 cm 40 mils: 4-85 cm		
Symbology	4 mils: 6-17 cm 20 mils: 4-55 cm		
Symbology  Code 39	4 mils: 6-17 cm 20 mils: 4-55 cm 40 mils: 4-85 cm		

a. 13 mils DOF based on EAN. All other 1D codes are Code 39. All labels grade A,300 lux ambient light,  $20^{\circ}$ C, label inclination  $10^{\circ}$ 

#### **DECODE CAPABILITY**

#### 1D BAR CODES

GS1 Databar linear codes, UPC/EAN (A,E,13,8), UPC/EAN with P2/P5 Addons, UPC/EAN Coupons, ISBN, Code128, EAN128, ISBT128, Code39, Code39 Full ASCII, Code39 CIP, Code 32, Codabar, Interleaved 2 of 5, IATA, Industrial 2 of 5, Standard 2 of 5, Code11, MSI, Plessey, Code 93, Follet 2/5

#### 2D / STACKED CODES

DataMatrix, MaxiCode and QR Codes(QR, Micro QR and Multiple QR codes), Aztec

- Postal codes including:

Australian Post, China Post, Japanese Post, KIX Post, Planet Code, Postnet, Royal Mail Code(RM45CC), IMB

- stacked codes including EAN/JAN Composites; GS1 Databar Composites, GS1 Databar Expanded Stacked; GS1 DataBar Stacked; GS1 DataBar Stacked Omnidirectional; MacroPDF; Micro PDF417; PDF417; UPC A/E Composites, French CIP13, Grid Matrix(Chinese) code

	RS-232, Keyboard Wedge, and USB.
Interfaces Supported	See page 5 for a listing of available inter-
	face options.

#### **USER ENVIRONMENT**

Operating Tempera- ture	-4° to 122° F (-20° - +50° C)
Storage Temperature	-40° to 158° F (-40° to 70° C)
Humidity	0 to 95% non-condensing
Drop Specifications	Scanner withstands >50 times 6.5' (2 m) drops to concrete
Ambient Light Immunity	100,000 Lux
Contaminants: Spray/rain, Dust/particulates	IP65

ESD Level	20 KV
Beeper/Speaker	>= 80 dB @ 10 cm
REGULATORY	
Electrical Safety	UL 60950, CSA C22.2 No. 60950, IEC 60950
EMI/RFI	See Regulatory addendum
Laser Class Safety	IEC Class 2 Radiation 1 mW Avg., Emitted wave- length 650 nm, 12ms pulse, Beam Divergence 8.4 deg x 8.1 deg

## **LED and Beeper Indications**

The reader's beeper sounds and its LED illuminates to indicate various functions or errors on the reader. An optional 'Green Spot" also performs useful functions. The following tables list these indications. One exception to the behaviors listed in the tables is that the reader's functions are programmable, and so may or may not be turned on. For example, certain indications such as the power-up beep can be disabled using programming bar code labels.

INDICATOR	DESCRIPTION	LED	BEEPER
Power-up Beep	The reader is in the process of powering-up.	N/A	Reader beeps four times at highest fre- quency and vol- ume upon power-up.

INDICATOR	DESCRIPTION	LED	BEEPER
Good Read Beep	A label has been successfully scanned by the reader.	LED behavior for this indica- tion is configu- rable via the feature 'Good Read: When to Indicate" (see the PRG for information.)	The reader will beep once at current frequency, volume, mono/bi-tonal setting and duration upon a successful label scan.
ROM Failure	There is an error in the reader's software/pro- gramming	Flashes	Reader sounds one error beep at highest vol- ume.
Limited Scan- ning Label Read	Indicates that a host connection is not established.	N/A	Reader 'chirps' six times at the highest fre- quency and cur- rent volume.
Reader Active Mode	The reader is active and ready to scan.	The LED is lit steadily <sup>a</sup>	N/A
Reader Disabled	The reader has been disabled by the host.	The LED blinks continuously	N/A
Green Spot <sup>a</sup> flashes momentarily	Upon success- ful read of a label, the soft- ware shall turn the green spot on for the time specified by the configured value.	N/A	N/A
Image Cap- ture	When ready to capture image	Blue light flashes 2 times when updating	N/A

<sup>&</sup>lt;sup>a</sup>Except when in sleep mode or when a Good Read LED Duration other than 00 is selected

**Programming Mode**-The following indications ONLY occur when the reader is in Programming Mode.

INDICATION	DESCRIPTION	LED	BEEPER
Label Pro- gramming Mode Entry	A valid program- ming label has been scanned.	LED blinks continuously	Reader sounds four low fre- quency beeps.
Label Pro- gramming Mode Rejec- tion of Label	A label has been rejected.	N/A	Reader sounds three times at lowest fre- quency and current vol- ume.
Label Pro- gramming Mode Accep- tance of Par- tial Label	In cases where multiple labels must be scanned to program one feature, this indication acknowledges each portion as it is successfully scanned.	N/A	Reader sounds one short beep at highest fre- quency and current vol- ume.
Label Pro- gramming Mode Accep- tance of Pro- gramming	Configuration option(s) have been successfully programmed via labels and the reader has exited Programming Mode.	N/A	Reader sounds one high fre- quency beep and 4 low fre- quency beeps followed by reset beeps.
Label Pro- gramming Mode Cancel Item Entry	Cancel label has been scanned.	N/A	Reader sounds two times at low frequency and current volume.

## **Error Codes**

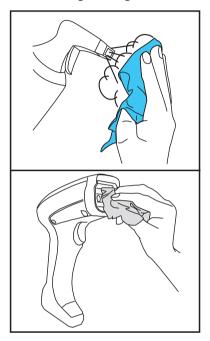
Upon startup, if the reader sounds a long tone, this means the reader has not passed its automatic Selftest and has entered FRU (Field Replaceable Unit) isolation mode. If the reader is reset, the sequence will be repeated. Press and release the trigger to hear the FRU indication code.

The following table describes the LED flashes/beep codes associated with an error found.

Number of LED Flashes/ Beeps	Error	Corrective Action	
1	Configuration	Contact Helpdesk for assistance	
2	Interface PCB		
6	Digital PCB		
11	Imager		

## Cleaning

Exterior surfaces and scan windows exposed to spills, smudges or debris require periodic cleaning to ensure best performance during scanning.



Use a soft, dry cloth to clean the product. If the product is very soiled, clean it with a soft cloth moistened with a diluted non-aggressive cleaning solution or diluted ethyl alcohol.



**CAUTION** 

Do not use abrasive or aggressive cleansing agents or abrasive pads to clean scan windows or plastics.

Do not spray or pour liquids directly onto the unit.

## Wasp Technologies Limited Factory Warranty

#### Warranty Coverage

Wasp warrants to Customer that Wasp's products will be free from defects in materials and workmanship for a period of three years from product shipment. Wasp hardware products are warranted against defects in material and workmanship under normal and proper use. The liability of Wasp under this warranty is limited to furnishing the labor and parts necessary to remedy any defect covered by this warranty and restore the product to its normal operating condition. Repair or replacement of product during the warranty does not extend the original warranty term. Products are sold on the basis of specifications applicable at the time of manufacture and Wasp has no obligation to modify or update products once sold.

If Wasp determines that a product has defects in material or workmanship, Wasp shall, at its sole option repair or replace the product without additional charge for parts and labor, or credit or refund the defective products duly returned to Wasp. To perform repairs, Wasp may use new or reconditioned parts, components, subassemblies or products that have been tested as meeting applicable specifications for equivalent new material and products. Customer will allow Wasp to scrap all parts removed from the repaired product. The warranty period shall extend from the date of shipment from Wasp for the duration published by Wasp for the product at the time of purchase (Warranty period). Wasp warrants repaired hardware devices against defects in workmanship and materials on the repaired assembly for a 90 day period starting from the date of shipment of the repaired product from Wasp or until the expiration of the original warranty period, whichever is longer. Wasp does not guarantee, and it is not responsible for, the maintenance of, damage to, or loss of configurations, data, and applications on the repaired units and at its sole discretion can return the units in the 'factory default" configuration or with any software or firmware update available at the time of the repair (other than the firmware or software installed during the manufacture of the product). Customer accepts responsibility to maintain a back up copy of its software and data.

Refer to:

http://www.waspbarcode.com/support/warranty-claims Warranty Claims:

http://www.waspbarcode.com/support/warranty-claims

#### **Warranty Claims Process**

In order to obtain service under the Factory Warranty, Customer must notify Wasp of the claimed defect before the expiration of the applicable Warranty period and obtain from Wasp a return authorization number (RMA) for return of the product to a designated Wasp service center. If Wasp determines Customer's claim is valid, Wasp will repair or replace product without additional charge for parts and labor. Customer shall be responsible for packaging and shipping the product to the designated Wasp ser-

vice center, with shipping charges prepaid. Wasp shall pay for the return of the product to Customer if the shipment is to a location within the country in which the Wasp service center is located. Customer shall be responsible for paying all shipping charges, duties, taxes, and any other charges for products returned to any other locations. Failure to follow the applicable RMA policy, may result in a processing fee. Customer shall be responsible for return shipment expenses for products which Wasp, at its sole discretion, determines are not defective or eligible for warranty repair.

#### Warranty Exclusions

The Wasp Factory Warranty shall not apply to:

- any product which has been damaged, modified, altered, repaired or upgraded by other than Wasp service personnel or its authorized representatives;
- (ii) any claimed defect, failure or damage which Wasp determines was caused by faulty operations, improper use, abuse, misuse, wear and tear, negligence, improper storage or use of parts or accessories not approved or supplied by Wasp;
- (iii) any claimed defect or damage caused by the use of product with any other instrument, equipment or apparatus;
- (iv) any claimed defect or damage caused by the failure to provide proper maintenance, including but not limited to cleaning the upper window in accordance with product manual;
- (v) any defect or damage caused by natural or man-made disaster such as but not limited to fire, water damage, floods, other natural disasters, vandalism or abusive events that would cause internal and external component damage or destruction of the whole unit, consumable items:
- (vi) any damage or malfunctioning caused by non-restoring action as for example firmware or software upgrades, software or hardware reconfigurations etc.;
- (vii) the replacement of upper window/cartridge due to scratching, stains or other degradation and/or
- (viii) any consumable or equivalent (e.g., cables, power supply, batteries, keypads, touch screen, triggers etc.).

### No Assignment

Customer may not assign or otherwise transfer its rights or obligations under this warranty except to a purchaser or transferee of product. No attempted assignment or transfer in violation of this provision shall be valid or binding upon Wasp.

WASP'S LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, ORAL OR WRITTEN, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT. WASP SHALL NOT BE LIABLE FOR ANY DAMAGES SUSTAINED BY CUSTOMER ARISING

FROM DELAYS IN THE REPLACEMENT OR REPAIR OF PRODUCTS UNDER THE ABOVE. THE REMEDY SET FORTH IN THIS WARRANTY STATEMENT IS THE CUSTOMER'S SOLE AND EXCLUSIVE REMEDY FOR WARRANTY CLAIMS. UNDER NO CIRCUMSTANCES WILL WASP BE LIABLE TO CUSTOMER OR ANY THIRD PARTY FOR ANY LOST PROFITS, OR ANY INCIDENTAL, CONSEQUENTIAL IN-DIRECT, SPECIAL OR CONTINGENT DAMAGES REGARDLESS OF WHETHER WASP HAD ADVANCE NOTICE OF THE POSSIBILITY OF SUCH DAMAGES.

#### Risk of Loss

Customer shall bear risk of loss or damage for product in transit to Wasp. Wasp shall assume risk of loss or damage for product in Wasp's possession. In the absence of specific written instructions for the return of product to Customer, Wasp will select the carrier, but Wasp shall not thereby assume any liability in connection with the return shipment.

## **Ergonomic Recommendations**



In order to avoid or minimize the potential risk of ergonomic injury follow the recommendations below. Consult with your local Health & Safety Manager to ensure that you are adhering to your company's safety programs to prevent employee injury.

- Reduce or eliminate repetitive motion
- Maintain a natural position
- Reduce or eliminate excessive force
- Keep objects that are used frequently within easy reach
- Perform tasks at correct heights
- Reduce or eliminate vibration
- Reduce or eliminate direct pressure
- Provide adjustable workstations
- Provide adequate clearance
- Provide a suitable working environment
- Improve work procedures.

## Services and Support

Wasp provides several services as well as technical support through its website. Log on to www.waspbarcode.com and click on the links indicated for further information.



### www.waspbarcode.com

©2013-2018 Wasp and its Group companies - All right reserved. Wasp Technologies and the Wasp Technologies logo are registered trademarks of Wasp Barcode Technologies in many countries, including the U.S.A. and the E.U.

#### Wasp Barcode Technologies

1400 10th Street Plano, Texas | USA 75074 Telephone: (214) 547-4100



820100714

(Rev A)

Anril 2018