



PowerScan™ PBT9501-AR

Industrial Cordless Handheld
Auto Range Area Imager
Bar Code Reader



Quick Reference Guide

Datalogic USA Inc.

959 Terry Street
Eugene, OR 97402
U.S.A.

Telephone: (541) 683-5700

Fax: (541) 345-7140

©2013-2019 Datalogic S.p.A. and/or its affiliates

An Unpublished Work - All rights reserved.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 Datalogic USA Inc. or its subsidiaries or affiliates ('Datalogic' or 'Datalogic USA').

Owners of Datalogic 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 Datalogic representative. Electronic versions may either be downloadable from the Datalogic website (www.datalogic.com) or provided on appropriate media. If you visit our website and would like to make comments or suggestions about this or other Datalogic publications, please let us know via the "Contact Datalogic" page.

Disclaimer

Datalogic has taken reasonable measures to provide information in this manual that is complete and accurate, however, Datalogic reserves the right to change any specification at any time without prior notice. Datalogic and the Datalogic logo are registered trademarks of Datalogic S.p.A. in many countries, including the U.S. and the E.U. PowerScan is a trademark of Datalogic S.p.A. and/or its affiliates, registered in many countries, including the U.S. and the E.U. The Bluetooth word mark and logos are owned by Bluetooth SIG, Inc. and any use of such marks by Datalogic Group companies is under license. All other trademarks and brands are property of their respective owners.

Patents

See www.patents.datalogic.com for patent list.

See the Regulatory Addendum included with your product for additional regulatory, safety and legal information.



Table of Contents

END USER SOFTWARE LICENSE AGREEMENT	iii
Software Product Policy	vi
Description	1
General Features	1
Using the PowerScan™ PBT9501-AR	2
Aiming Pointer	2
Installing the Battery Pack	3
Charging the Batteries	5
Changing the Batteries	5
Programming	6
Using Programming Bar Codes	6
Configure Other Settings	6
Resetting Product Defaults	6
Set Date and Time	7
Linking the Reader	8
Link Datalogic RF Devices to Base.....	8
Linking to a Bluetooth Adapter in Serial Port Profile (Slave) Mode	8
Linking to a Bluetooth Adapter in HID mode.....	9
Variable PIN Code	9
HID Country Mode	10
HID Caps Lock State	14
HID Alt Mode	15
Power Off	15
Operating Mode	16
Scan Mode	16
Pick Mode	18
Multiple Label Reading	18
Technical Specifications	19
LED and Beeper Indications	22
Error Codes	24
Cleaning	25
Datalogic Limited Factory Warranty	26
Ergonomic Recommendations	28
Hex-Numeric Keypad	29
For HID Variable Pin Code only.....	31

NOTES

END USER SOFTWARE LICENSE AGREEMENT

NOTICE TO END USER: BY DOWNLOADING OR INSTALLING THE SOFTWARE, OR BY USING THE DATALOGIC 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 DATALOGIC IS NOT WILLING TO LICENSE THE SOFTWARE AND THE END USER IS NOT ALLOWED TO DOWNLOAD, INSTALL OR USE THE SOFTWARE OR THE DATALOGIC PRODUCT---

This End User License Agreement ("EULA") is between Datalogic IP Tech S.r.l. having its registered office at Via San Vitalino 13, 40012 Calderara di Reno (Bologna), Italy ("Datalogic"), and you, either an individual or a single entity, ("End User or "You") who has purchased one or more Powerscan™ 95XX-AR ("Datalogic Product") subject to the terms and conditions provided in any relevant purchase or sale contract. This EULA applies to the software contained in the Datalogic Product ("Embedded Software") and to any other software, to the extent applicable, offered as optional application software ("Application Software" that together with "Embedded Software" is herein referred to as "Software"). Any Open Source used in a conjunction with the Software is subject to the Open Source licenses available at the following website: <http://www.datalogic.com/oss>.

1. Grant of License

1.1 Datalogic grants to End User, a personal, non-exclusive, non-transferable, non sub licensable, revocable, limited license to use the Software, solely on the Datalogic 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, re-export, 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 Datalogic Products; (iii) remove any proprietary notices, marks, labels, or logos from the Datalogic Products; (iv) rent or transfer all or some of the Software to any other party without Datalogic's prior written consent.

1.3. Title to the licensed Software shall be and remain with Datalogic or the third party from whom Datalogic 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 Datalogic 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 Datalogic 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, Datalogic 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 Datalogic Products).

1.6 Without prejudice of the foregoing, End User grants to Datalogic 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, Datalogic 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 Datalogic according to the terms provided for in the relevant contract for the purchase of the Datalogic Product.

3. Termination

Without prejudice to any other rights or remedies Datalogic may have, Datalogic may terminate this Agreement if End User fails to comply with the terms and conditions of this Agreement. Datalogic 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

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

Datalogic 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 Datalogic Product documentation. End User agrees that the existence of such non conformities or errors and Datalogic's inability to remedy such errors shall not constitute a breach of this Agreement.

EXCEPT AS PROVIDED IN THIS AGREEMENT, THE DATALOGIC PRODUCT IS PROVIDED "AS IS" AND DATALOGIC MAKES NO WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, WRITTEN OR ORAL, WITH RESPECT TO THE DATALOGIC 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 DATALOGIC NOR ITS LICENSORS SHALL BE LIABLE FOR ANY CLAIMS AGAINST END USER BY ANY OTHER PARTY. IN NO EVENT SHALL DATALOGIC'S LIABILITY FOR DAMAGES, IF ANY, WHETHER BASED UPON CONTRACT, TORT (INCLUDING NEGLIGENCE), PRODUCT LIABILITY, STRICT LIABILITY, WARRANTY, OR ANY OTHER BASIS, EXCEED THE PRICE OR FEE PAID BY END USER FOR THE DATALOGIC PRODUCT. UNDER NO CIRCUMSTANCES SHALL DATALOGIC 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 DATALOGIC 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 Datalogic, 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 Datalogic 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 Datalogic.

7. Support

End User may request support for Software from Datalogic at Datalogic's standard support fees and under Datalogic'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 Datalogic Product outside of the United States, End User must comply with the applicable local laws of the country in which the Datalogic 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 Datalogic 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 corresponding license of each 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. Datalogic 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 Datalogic shall be sent to the attention of Datalogic IP Tech S.r.l., Legal & IP Department, Via San Vitalino 13, 40012 Calderara di Reno (Bologna), Italy, or such other address as may be specified by Datalogic in writing.

12. General Provisions

12.1. Entire Agreement; Amendment. This document contains the entire agreement between the parties relating to use of the Datalogic 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 Datalogic Products and licensing of the Software. This Agreement may not be changed, amended, or modified except by written document signed by Datalogic.

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 Datalogic'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 Datalogic 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 Datalogic 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 ques-

tion 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

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

The only exception to this policy is when the buyer has a signed contract with Datalogic 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 Datalogic sales person.



PowerScan™ PBT9501-AR

Description

The PowerScan™ PBT9501-AR reader is a feature-rich and rugged area imager scanner with auto range reading capability, due to the implementation of autofocus system.

General Features

Omni-directional Operating	To read a symbol, you simply aim the reader and pull the trigger. Since the PowerScan™ PBT9501-AR is a powerful omni-directional reader, the orientation of the symbol is not important.
Decoding	Thanks to powerful algorithms, PowerScan™ PBT9501-AR 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.

Using the PowerScan™ PBT9501-AR

The PowerScan™ PBT9501-AR reader normally functions by capturing and decoding 1D and 2D codes. The intelligent aiming system indicates the field of view which should be positioned over the code. The reader is equipped with an aiming system which helps to aim the target.

Figure 1- Aiming System



If enabled, a partial trigger press produces a red spot, which should be aimed over the code center to get the best reading performance. By completely pressing the trigger the illumination area appears and the code scanning starts.

Aiming Pointer

Scan the following symbols to enable or disable the aiming pointer.



Aiming Pointer = disable



Aiming Pointer = enable

The field of view indicated by the aiming system and the illumination area will be smaller when the reader is closer to the 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.

Installing the Battery Pack

To install, charge and/or do any other action on the battery, follow the instructions in this manual.



NOTE

To charge the Battery Pack, See “Charging the Batteries” on page 6.

Datalogic recommends annual replacement of rechargeable battery packs to ensure maximum performance.



WARNING

Do not discharge the battery using any device except for the scanner. When the battery is used in devices other than the designated product, it may damage the battery or reduce its life expectancy. If the device causes an abnormal current to flow, it may cause the battery to become hot, explode or ignite and cause serious injury.

Lithium-ion battery packs may get hot, explode or ignite and cause serious injury if exposed to abusive conditions. Be sure to follow the safety warnings that follow:

- Do not place the battery pack in fire or heat.
- Do not connect the positive terminal and negative terminal of the battery pack to each other with any metal object (such as wire).
- Do not carry or store the battery pack together with metal objects.
- Do not pierce the battery pack with nails, strike it with a hammer, step on it or otherwise subject it to strong impacts or shocks.
- Do not solder directly onto the battery pack.
- Do not expose the battery pack to liquids, or allow the battery to get wet.
- Do not apply voltages to the battery pack contacts.



WARNING

In the event the battery pack leaks and the fluid gets into your eye, do not rub the eye. Rinse well with water and immediately seek medical care. If left untreated, the battery fluid could cause damage to the eye.



CAUTION

Always charge the battery at 32° – 104°F (0° - 40°C) temperature range.

Use only the authorized power supplies, battery pack, chargers, and docks supplied by your Datalogic reseller. The use of any other power supplies can damage the device and void your warranty.

Do not disassemble or modify the battery. The battery contains safety and protection devices, which, if damaged, may cause the battery to generate heat, explode or ignite.

Do not place the battery in or near fire, on stoves or other high temperature locations.

Do not place the battery in direct sunlight, or use or store the battery inside cars in hot weather. Doing so may cause the battery to generate heat, explode or ignite. Using the battery in this manner may also result in a loss of performance and a shortened life expectancy.

Do not place the battery in microwave ovens, high-pressure containers or on induction cookware.

Immediately discontinue use of the battery if, while using, charging or storing the battery, the battery emits an unusual smell, feels hot, changes color or shape, or appears abnormal in any other way.



CAUTION

Do not replace the battery pack when the device is turned on.

Do not remove or damage the battery pack's label.

Do not use the battery pack if it is damaged in any part.

Battery pack usage by children should be supervised.

As with other types of batteries, Lithium-Ion (LI) batteries will lose capacity over time. Capacity deterioration is noticeable after one year of service whether the battery is in use or not. It is difficult to precisely predict the finite life of a LI battery, but cell manufacturers rate them at 500 charge cycles. In other words, the batteries should be expected to take 500 full discharge / charge cycles before needing replacement. This number is higher if partial discharging / recharging is adhered to rather than full / deep discharging.

The typical manufacturer advertised useful life of LI batteries is one to three years, depending on usage and number of charges, etc., after which they should be removed from service, especially in mission critical applications. Do not continue to use a battery that is showing excessive loss of capacity, it should be properly recycled / disposed of and replaced. For most applications, batteries should be replaced after one year of service to maintain customer satisfaction and minimize safety concerns.

Collect and recycle waste batteries separately from the device in comply with European Directive 2006/66/EC, 2011/65/EU, 2002/96/EC and 2012/19/EU and subsequent modifications, US and China regulatory and others laws and regulations about the environment.

Charging the Batteries

Once the BC 90x0-BT is powered, you can charge the reader's batteries. Place the PowerScan™ PBT9501-AR into the BC 90x0-BT cradle. The Reader LED on the cradle/battery charger turns red.

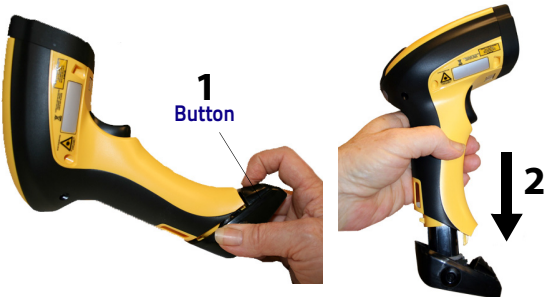
The battery is completely charged when the Reader LED on the cradle/battery charger turns green.

The battery can also be charged in the spare battery slot (BC91xx models only) or using the Multi Battery Charger accessory.



Changing the Batteries

1. Push the button at the bottom of the handle as shown to release the battery.
2. Pull down to remove the battery.



WARNING

Do not incinerate, disassemble, short terminals or expose to high temperature. Risk of fire, explosion. Use specified charger only. Risk of explosion if the battery is replaced by an incorrect type. Dispose of the batteries as required by the relevant laws in force.

Programming

The reader is factory-configured with a set of standard default features. Customize your reader through use of the programming bar codes available in the PowerScan PBT9501-AR. Check the corresponding features section for your interface, and also the Data Editing and Symbolologies chapters of the PRG.

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 6, 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 initial configuration. See the PRG for other options, and a listing of standard factory settings.



NOTE

Factory defaults are based on the interface type. Be sure your reader is configured for the correct interface before scanning this label.



Reset Default Settings

Set Date and Time

1. Scan the Enter/Exit Programming barcode below to set date and time.



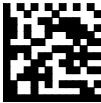
ENTER/EXIT PROGRAMMING MODE

2. Scan the Set Date barcode + six digits for Year, Month and Day (YYMMDD) from the [Hex-Numeric Keypad on page 29](#).



Set Date

3. Scan Set Time + six digits for Hours, Minutes and Seconds (HHMMSS) from the [Hex-Numeric Keypad on page 29](#).



Set Time

4. Scan the Enter/Exit Programming barcode to complete.

Linking the Reader

Link Datalogic RF Devices to Base

For RF devices, before configuring the interface it is necessary to link the handheld with the base.

To link the handheld and the base, press the trigger to wake up the handheld and mount it into the base. If the reader was previously linked to another base, you must first press and hold the button on the base (>5 seconds), then scan the **Unlink** bar code before re-linking to the new base.



Unlink

Linking to a Bluetooth Adapter in Serial Port Profile (Slave) Mode

1. Install any drivers provided with the Bluetooth adapter.
2. Scan the **Enable RF Link to Server** label below to make the scanner visible to the host computer.
3. Use the host computer's Bluetooth manager to "Discover new devices" and select "Datalogic Scanner." If you receive an error message, it may be necessary to disable security on the device.
4. Use an RS-232 terminal program to see incoming data on the port designated by the computer's Bluetooth manager.



Enable RF Link to Server

Linking to a Bluetooth Adapter in HID mode

1. Install any drivers provided with the Bluetooth adapter.
2. Scan the **Link to PC in HID** label below.
3. Use the host computer's Bluetooth manager to 'Discover new devices' and select "Datalogic Scanner." If you receive an error message, it may be necessary to disable security on the device.
4. Use a text editor to see incoming data on the port designated by the computer's Bluetooth manager.



Link to PC in HID



NOTE

The Powerscan PBT9501-AR can be set up to require a PIN code when connecting. If you want to set up a PIN, or when adding new equipment to a system that uses a custom security PIN, please see the PRG for information.

Variable PIN Code

Some Bluetooth drivers on the Host (such as WIDCOMM and BlueSoleil 8) require a Variable PIN Code. When attempting connection, the application presents a window that includes a PIN Code which is to be input using the PowerScan PBT9501-AR. Please read the bar code "Variable PIN Code" and restart the sequence from step 2 above.



Variable PIN Code






When you hear the beep and see the Green LED blinking indicating the reader is waiting for an alphanumeric entry, enter the required variable PIN Code by scanning the corresponding bar codes in the 'Hex-Numeric Keypad' section at the back of this manual for alphanumeric entry. Finish by scanning the **Exit HID Variable PIN Code** label.



Exit HID Variable PIN Code

HID Country Mode

When the Reader is connected with a Bluetooth Adapter in HID mode, you may want to set the country for which your PC is localized. In order to do that, read one of the configuration command labels below.

HID COUNTRY MODE
 ENTER/EXIT PROGRAMMING MODE
 Country Mode = U.S.
 Country Mode = Belgium
 Country Mode = Britain
 Country Mode = Croatia

HID COUNTRY MODE (continued)

Country Mode = Czech Republic



Country Mode = Denmark



Country Mode = France



Country Mode = French Canadian



Country Mode = Germany



Country Mode = Hungary

HID COUNTRY MODE (continued)



Country Mode = Italy



Country Mode = Japanese 106-key



Country Mode = Lithuanian



Country Mode = Norway



Country Mode = Poland



Country Mode = Portugal

HID COUNTRY MODE (continued)

Country Mode = Romania



Country Mode = Spain



Country Mode = Sweden







Country Mode = Slovakia



Country Mode = Switzerland

HID Caps Lock State

This option specifies the format in which the reader sends character data.

 ENTER/EXIT PROGRAMMING MODE
 ◆ Caps Lock State = Caps Lock OFF
 Caps Lock State = Caps Lock ON
 Caps Lock State = AUTO Caps Lock Enable

HID Alt Mode

Read the configuration command label below for the HID Alt Mode feature.



Power Off

Scan the bar code below to shut off power to the BT handheld until the next trigger pull.



PowerOff

Operating Mode

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) — When the trigger is pulled, scanning is activated until one of the following occurs:

- a programmable duration¹ has elapsed
- a label has been read
- the trigger is released

Trigger Hold Multiple — When the trigger is pulled, scanning starts and the product scans until the trigger is released or 'maximum scan on time"¹ has elapsed. Reading a label does not disable scanning. Double Read Timeout¹ prevents undesired multiple reads in this mode.

Trigger Pulse Multiple — When the trigger is pulled and released, scanning is activated until programmable duration¹ has elapsed or the trigger has been pulled again to transition to another state. Double Read Timeout¹ prevents undesired multiple reads while in this mode.

Flashing — The reader flashes¹ on and off regardless of the trigger status.

Always On — No trigger pull is required to read a bar code. Scanning is continually on. If the trigger is pulled, the reader acts as if it is in Trigger Single (Default) Mode. Double Read Timeout¹ prevents undesired multiple reads while in this mode.

1. See the Product Reference Guide (PRG) for more information

Operating 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

Pick Mode

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 in Trigger Single mode. If the scanner switches to a different Read Mode, Pick Mode is automatically disabled.



NOTE

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



ENTER/EXIT PROGRAMMING MODE



◆ Pick 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 tables contain Physical and Performance Characteristics, User Environment and Regulatory information.

PHYSICAL CHARACTERISTICS	
Dimensions	Height: 212 mm Length: 110 mm Width: 74 mm
Weight	460 g
ELECTRICAL CHARACTERISTICS	
Battery Type	Li-Ion battery pack
Charge time for full charge from full discharge	4,5 hours with external power supply adapter ^a
	Typical 10 hours with Host power (in this case no supply adapter is needed) ^a
Operating autonomy (continuous reading)	40,000 + reads (typical, @25° C)
Cradle consumption and DC input supply range	Volt 10-30 VDC; Power <8W ^b ; Max 500mA when in host/bus powered mode ^b .

- a. Charge Times are much lower when battery is within daily typical operating condition.
- b. Typical input current measured under factory default configuration.

PERFORMANCE CHARACTERISTICS	
Light Source	LED
Roll (Tilt) Tolerance	± 180°
Pitch Tolerance	± 80°
Skew (Yaw) Tolerance	± 60°
Field of View	14° x 10.5° up to 1m. Over 3 m: 14.4° x 10.8°
Print Contrast Minimum	15% minimum reflectance
Resolution	Max resolution 1D 3 mils Max resolution 2D 4 mils

DEPTH OF FIELD (TYPICAL)^a	
Symbology	
Code 39	10 mils: 15 - 160 cm 40 mils: 50 - 1100 cm 55 mils: 70 - 1150 cm 100 mils: up to 2300 cm
EAN 13	mag. 1: 20 - 290 cm
Code 128	15 mils: 30 - 330 cm 40 mils: 60 - 850 cm 100 mils: up to 2000 cm
DataMatrix	10 mils: 20 - 85 cm 55 mils: 30 - 550 cm 100 mils: 30 - 880 cm 200 mils: up to 2000 cm

a. All labels grade A, 300 lux ambient light, 20°C, label inclination 10°

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	
Interfaces Supported	RS-232, Keyboard Wedge, and USB.

USER ENVIRONMENT	
Operating Temperature	-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 up to 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	
See the Regulatory Addendum.	
RADIO FEATURES	
Frequency working center	2400 to 2483.5 MHz
Range (in open air)	up to 100 m
Max number of devices per base station	7

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.

Table 1. Normal Operating Indicators

INDICATION	DESCRIPTION	LED	BEEPER
Power-up Beep	The reader is in the process of powering-up.	N/A	Reader beeps four times at highest frequency and volume upon power-up.
Good Read Beep	A label has been successfully scanned by the reader.	LED behavior is configurable via the feature 'Good Read: When to Indicate' (see the PRG for information.)	The reader will beep once at current frequency, volume, tonal setting and duration upon a successful label scan.
Green Spot ^a flashes momentarily	Upon successful read of a label, the software turns the green spot on for the time specified	N/A	N/A

^a Except when in sleep mode or when a Good Read LED Duration other than 00 is selected

Table 2. Error Indicators

INDICATION	DESCRIPTION	LED	BEEPER
Link Attempt	The reader is trying to link to the base	Slow Flashes	N/A
Configuration Alignment	Reader and Base are aligning the parameters' configuration	Fast Flashes	N/A
Link	The reader has successfully linked to the base	N/A	3 beeps of ascending frequency
Unlink	The reader has unlinked from the base	N/A	3 beeps of descending frequency
ROM Failure	There is an error in the reader's software/programming	Flashes	Reader sounds one error beep at highest volume.
Limited Scanning Label Read	Indicates that a host connection is not established.	N/A	Reader 'chirps' six times at the highest frequency and current volume.
Reader Disabled	The reader has been disabled by the host.	The LED blinks continuously	N/A

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

INDICATION	DESCRIPTION	LED	BEEPER
Label Programming Mode Entry	A valid programming label has been scanned.	LED blinks continuously	Reader sounds four low frequency beeps.
Label Programming Mode Rejection of Label	A label has been rejected.	N/A	Reader sounds three times at lowest frequency and current volume.

INDICATION	DESCRIPTION	LED	BEEPER
Label Programming Mode Acceptance of Partial 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 frequency and current volume.
Label Programming Mode Acceptance of Programming	Configuration option(s) have been successfully programmed via labels and the reader has exited Programming Mode.	N/A	Reader sounds one high frequency beep and 4 low frequency beeps followed by reset beeps.
Label Programming Mode Cancel Item Entry	Cancel label has been scanned.	N/A	Reader sounds two times at low frequency and current volume.

Error Codes

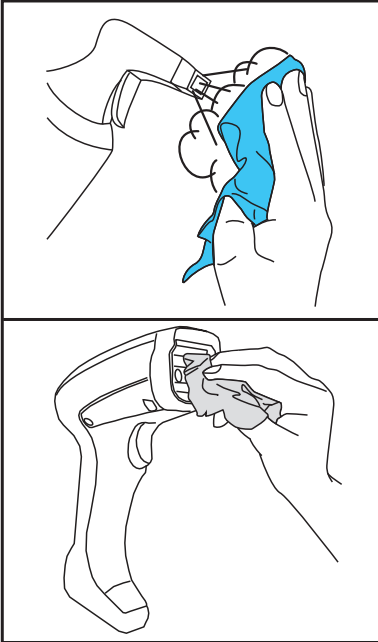
Upon startup, if the reader sounds a long tone, this means the reader has not passed its automatic Selftest and has entered FRU (Field Replaceable Unit) isolation mode. If the reader is reset, the sequence will be repeated. Press and release the trigger to hear the FRU indication code.

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.**

Datalogic Limited Factory Warranty

Warranty Coverage

Datalogic warrants to Customer that Datalogic's products will be free from defects in materials and workmanship for a period of one year from product shipment. Datalogic hardware products are warranted against defects in material and workmanship under normal and proper use. The liability of Datalogic 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 Datalogic has no obligation to modify or update products once sold.

If Datalogic determines that a product has defects in material or workmanship, Datalogic 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 Datalogic. To perform repairs, Datalogic 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 Datalogic to scrap all parts removed from the repaired product. The warranty period shall extend from the date of shipment from Datalogic for the duration published by Datalogic for the product at the time of purchase (Warranty period). Datalogic 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 Datalogic or until the expiration of the original warranty period, whichever is longer. Datalogic 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.

Warranty Claims Process

In order to obtain service under the Factory Warranty, Customer must notify Datalogic of the claimed defect before the expiration of the applicable Warranty period and obtain from Datalogic a return authorization number (RMA) for return of the product to a designated Datalogic service center. If Datalogic determines Customer's claim is valid, Datalogic 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 Datalogic service center, with shipping charges prepaid. Datalogic shall pay for the return of the product to Customer if the shipment is to a location within the country in which the Datalogic 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 Datalogic, at its sole discretion, determines are not defective or eligible for warranty repair.

Warranty Exclusions

The Datalogic Factory Warranty shall not apply to:

- (i) any product which has been damaged, modified, altered, repaired or upgraded by other than Datalogic service personnel or its authorized representatives;
- (ii) any claimed defect, failure or damage which Datalogic 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 Datalogic;
- (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 Datalogic.

DATALOGIC'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. DATALOGIC 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 DATALOGIC 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 DATALOGIC 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 Datalogic. Datalogic shall assume risk of loss or damage for product in Datalogic's possession. In the absence of specific written instructions for the return of product to Customer, Datalogic will select the carrier, but Datalogic 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.

Support Through the Website

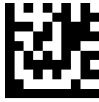
Datalogic provides several services as well as technical support through its website. Log on to www.datalogic.com.

For quick access, from the home page click on the search icon , and type in the name of the product you're looking for. This allows you access to download Data Sheets, Manuals, Software & Utilities, and Drawings.

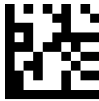
Hover over the Support & Service menu for access to Services and Technical Support.

Hex-Numeric Keypad

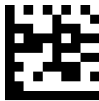
Use the barcodes that follow to enter numbers as you would select digits/characters from a keypad.



0



1



2



3



4



5

Hex-Numeric Keypad (continued)



6



7



8



9

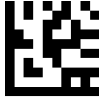


A



B

Hex-Numeric Keypad (continued)



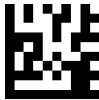
C



D



E



F

For HID Variable Pin Code only

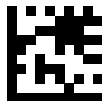
If you make a mistake, scan the **CANCEL** barcode below to abort and not save the entry string. You can then restart.



Cancel an incomplete HID Variable PIN Code

Finish by scanning the **Exit HID Variable PIN Code** label.

Exit HID Variable PIN Code



NOTES

NOTES

NOTES



www.datalogic.com

©2013-2019 Datalogic S.p.A. and/or its affiliates. All rights reserved. Datalogic and the Datalogic logo are registered trademarks of Datalogic S.p.A. in many countries, including the U.S. and the E.U.

Datalogic USA Inc.

959 Terry Street | Eugene, OR 97402 | U.S.A. |
Telephone: (541) 683-5700 |
Fax: (541) 345-7140



820112300

Rev. A

April 2019