

# PowerScan® 7000 2D Imager



# **Quick Reference Guide**

#### Datalogic Scanning, Inc.

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This product may be covered by one or more of the following patents: 4603262 • 4639606 • 4652750 • 4672215 • 4699447
• 4709369 • 4749879 • 4786798 • 4792666 • 4794240 • 4798943 • 4799164 • 4820911 • 4845349 • 4861972 • 4861973 •
4866257 • 4868836 • 4879456 • 4939355 • 4939356 • 4943127 • 4963719 • 4971176 • 4971177 • 4991692 • 5001406 •
5015831 • 5019697 • 5019698 • 5086879 • 5115120 • 5144118 • 5146463 • 5179270 • 5198649 • 5200597 • 5202784 •
5208449 • 5210397 • 5212371 • 5212372 • 5214270 • 5229590 • 5231293 • 5232185 • 5233169 • 5235168 • 5237161 •
5237162 • 5239165 • 5247161 • 5256864 • 5258604 • 5258699 • 5260554 • 5274219 • 5296689 • 5298728 • 5311000 •
5327451 • 5329103 • 5330370 • 5347113 • 5347121 • 5371361 • 5382783 • 5386105 • 5389917 • 5410108 • 5420410 •
5422472 • 5426507 • 5438187 • 5440110 • 5440111 • 5446271 • 5446749 • 5448050 • 5463211 • 5475206 • 5475207 •
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5565668 • 5576531 • 5581707 • 5594231 • 5594441 • 5598070 • 5602376 • 5608201 • 5608399 • 5612529 • 5629510 •
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5837988 • 5852286 • 5864129 • 5869827 • 5874722 • 5883370 • 5905249 • 5907147 • 5923023 • 5925868 • 5929421 •
5945670 • 5959284 • 5962838 • 5979769 • 6000619 • 6006991 • 6012639 • 6016135 • 6024284 • 6041374 • 6042012 •
6045044 • 6047889 • 6047894 • 6056198 • 6065676 • 6069696 • 6073849 • 6073851 • 6094288 • 6112993 • 6129279 •
6129282 • 6134039 • 6142376 • 6152368 • 6152372 • 6155488 • 6166375 • 6169614 • 6173894 • 6176429 • 6188500 •
6189784 • 6213397 • 6223986 • 6230975 • 6230976 • 6237852 • 6244510 • 6259545 • 6260763 • 6266175 • 6273336 •
6276605 • 6279829 • 6290134 • 6290135 • 6293467 • 6303927 • 6311895 • 6318634 • 6328216 • 6332576 • 6332577 •
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EP0698251 • GB2252333 • GB2284086 • GB2301691 • GB2304954 • GB2307093 • GB2308267 • GB2308678 •
GB2319103 • GB2333163 • GB2343079 • GB2344486 • GB2345568 • GB2354340 • ISR107546 • ISR118507 •
ISR118508 • JP1962823 • JP1971216 • JP2513442 • JP2732459 • JP2829331 • JP2953593 • JP2964278 • MEX185552 •
MEX187245 • RE37166 • Other Patents Pending

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# **Statement of Agency Compliance**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### FCC Class B Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or television technician for help.

### **Canadian Notice**

This equipment does not exceed the Class B limits for radio noise emissions as described in the Radio Interference Regulations of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la classe B prescrites dans le Reglement sur le brouillage radioelectrique edicte par le ministere des Communications du Canada.

## **Power Supply**

Models require either a Listed class II or class III with a Limited Power Source (LPS). For the safety certification to be valid, class III input power sources must be IEC/EN60950-1 (EN 60335-series, EN 60065 or relevant) approved. Input: 100 - 240 VAC Output: 9 - 10 VDC Max. Current: 2.0 A Max. Power: 20 W

### **Solids and Water Protection**

The Imager has an IEC rating of IP65.

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- 10.2 Upon termination of this Agreement, End User immediately shall cease using any non-embedded software

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- 11.3 <u>Waiver</u>. 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.
- 11.4 <u>Governing Law</u>; Venue: 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 Multhomah or Lane counties shall have exclusive jurisdiction over all matters regarding this Agreement, except that Datalogic shall have the right, a tits 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.
- 11.5 <u>Attorneys' Fees</u>. 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.

### **Customers Under Software Support**

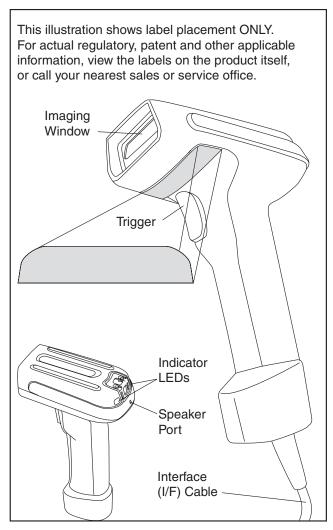
Customers that elect to subscribe to Datalogic Software Maintenance and Support Agreement will receive 30 days advance notification of: (1) the release of a new software version; and/or (2) discontinuation of any prior software version that will no longer be supported. Datalogic will provide maintenance for a fee that will assist customers in transitioning to the next software version. If a customer is currently using the software version being discontinued, the customer may elect to transition to any one of the newer versions, depending on the hardware in use.

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

# **Unpacking the Imager**

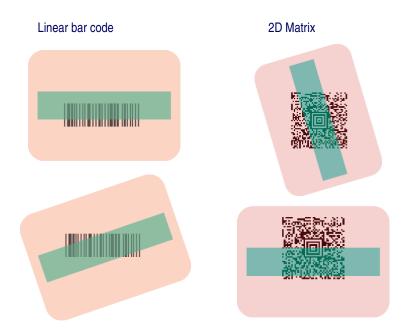
After you open the shipping carton containing the Imager, take the following steps:

- Check to make sure everything you ordered is present.
- Save the shipping container for later storage or shipping.
- Check for damage during shipment. Report damage immediately to the carrier who delivered the carton.



# **Reading Techniques**

The imager has a viewfinder that projects a bright green aiming beam that corresponds to the imager's horizontal field of view. The aiming beam should be centered over the bar code, but it can be positioned in any direction for a good read.



The aiming beam is smaller when the imager 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. To read single or multiple symbols (on a page or on an object), hold the imager at an appropriate distance from the target, pull the trigger, and center the aiming beam on the symbol. If the code being scanned is highly reflective (e.g., laminated), it may be necessary to tilt the code up 15° to 18° to prevent unwanted reflection.

# **LED and Beeper Indications**

The imager is equipped with a beeper (speaker) and two indicator LEDs; one green and one yellow. These indicators "beep" or flash when certain actions take place:



NOTE

Some LED and Beeper indications are user-configurable for volume, pitch, quantity, duration, enable/disable, etc. Those listed in the following table assume the feature is enabled. See the Product Reference Guide (PRG) for detailed programming information.

Condition	Green LED	Beeper
Powering On UKBW/RS-232 Models (using UKBW interface)	2 normal flashes and 2 fast flashes (+ 1 normal flash with Smart cable)	One Beep
Powering On UKBW/RS-232 Models (using RS-232 interface)	2 normal flashes and 1 long flash	One Beep
Powering On All Other Models	Bright Green Flash	One Beep
Good Read	1 - 9 Bright Green Flash(es) <sup>a</sup>	1 - 9 Beep(s) <sup>a</sup>
Error Indication	Green Flash	Special Beep

Condition	Yellow LED	Beeper
Ready to Operate	Yellow LED on steady until trigger is pulled	None

a. Good Read indications are synchronous. That is, if Good Read beeps are set via programming to five (for example), the Good Read LED will also flash five times.

# **Plug and Play**

Plug and Play bar codes provide instant imager set up for commonly used interfaces.



After you scan one of the codes, power cycle the host terminal to have the interface in effect.



### **Connecting the imager with an RS-232** Serial Port



NOTE

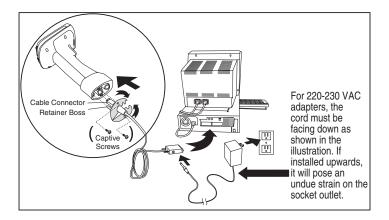
These instructions are for use with the RS-232 cable. This includes both Power Off the Terminal (P.O.T.) and external power.

- 1. Turn off power to the terminal/computer.
- 2. Connect the appropriate interface cable to the imager.



For the imager to work properly, you must have the correct cable for your type of terminal/computer.

NOTE



- 3. Plug the serial connector into the serial port on your computer. Tighten the two screws to secure the connector to the port.
- 4. If the terminal does not support Power Off the Terminal (P.O.T.) connections plug the power supply into the host connector and the AC outlet.
- 5. Once the imager has been fully connected, power up the computer.

All communication parameters between the imager and terminal must match for correct data transfer through the serial port using RS-232 protocol. Scanning the RS-232 interface bar code, programs the imager for an RS-232 interface at 115,200 baud, parity–none, 8 data bits, 1 stop bit, and adds a suffix of a CR LF.



### Connecting the imager with USB

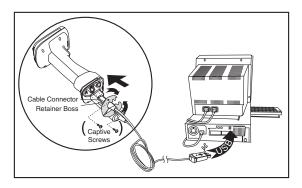


This interface applies to USB compatible models only.

NOTE

An imager can be connected to the USB port of a computer.

1. Connect the appropriate interface cable to the imager and to the computer.



- 2. The imager beeps.
- 3. Verify imager operation by scanning the part number bar code from the back cover of this manual.



The following USB "Plug and Play" codes are supported on specific models. Refer to the Product Reference Guide to determine if this interface applies to your unit.

For additional USB programming and technical information, visit the website listed on the back cover of this manual.

# **IBM SurePos**

Scan one of the following "Plug and Play" codes to program the imager for IBM SurePos (USB Hand Held imager) or IBM SurePos (USB Tabletop imager).



After scanning one of these codes, you must power cycle the cash register

NOTE



IBM SurePos (USB Hand Held imager) Interface



IBM SurePos (USB Tabletop imager) Interface Each bar code above also programs the following suffixes for each symbology:

Symbology	Suffix
EAN-8	0C
EAN-13	16
UPC-A	0D
UPC-E	0A
Code 39	00 0A 0B
Interleaved 2 of 5	00 0D 0B
Code 128	00 18 0B



The following USB "Plug and Play" codes (USB Keyboard - PC, USB Keyboard - Mac, and USB HID) are supported on specific imager models. Check your model type to determine if this interface applies to your unit.

# USB PC Keyboard or USB Macintosh Keyboard

Scan one of the following codes to program the imager for USB PC Keyboard or USB Macintosh Keyboard. Scanning these codes adds a CR and selects the terminal ID (USB PC Keyboard - 124, USB Macintosh Keyboard - 125).





# **USB HID**

Scan the following code to program the imager for USB HID bar code imagers. Scanning this code changes the terminal ID to 131.



### **USB COM Port Emulation**

Scan the following code to program the imager to emulate a regular RS-232-based COM port. If you are using a Microsoft<sup>®</sup> Windows<sup>®</sup> PC, you will need to download a driver from the website listed on the back cover of this manual. The driver will use the next available COM port number. Apple<sup>®</sup> Macintosh computers recognize the imager as a USB CDC class device and automatically use a class driver. Scanning the code below changes the terminal ID to 130.



USB COM Port Emulation



No extra configuration (e.g., baud rate) is necessary.

CTS/RTS Emulation



### ACK/NAK Mode







Reference the Product Reference Guide (PRG) for more information about keyboard support.

### Connecting the imager in Universal Keyboard Wedge mode

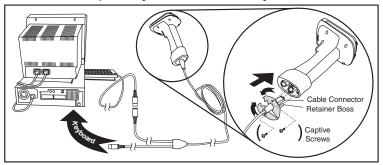
The Universal Keyboard Wedge (UKBW) model allows an RS-232 transmission or Keyboard Wedge mode according to the type of cable connected. Contact Datalogic or your dealer for cable and/or power supply part numbers.

- 1. Turn off power to the terminal/computer.
- 2. Connect the keyboard wedge interface cable to the imager.



For the imager to work properly, you must have the correct cable for your type of terminal/computer.

3. Connect one end of the Y cable to the keyboard cable and the other to the keyboard port on the host/computer.



4. Scan the following bar code to program the imager for the UKBW interface.



# **Configuring Parameters**

Configurable options are available for each interface type, which can be set using the Product Reference Guide (download from the website listed on the back cover of this manual). UKBW parameters are available exclusively in the Universal Keyboard Wedge Programming Guide, using the programming feature set provided for "PowerScan" models. This manual can also be downloaded from that website.

# **Resetting the Standard Product Defaults**

If programming settings for your scanner are in an unknown condition, factory settings can be restored by scanning the "Standard Product Default Settings" bar code below. A listing of factory default settings is available in the PRG. Settings can vary, depending upon the interface type.



Standard Product Default Settings

# Repairs

Repairs and/or upgrades are not to be performed on this product. These services are to be performed only by an authorized service center. See the Product Reference Guide for further information.

# Maintenance

The imager provides reliable and efficient operation with a minimum of care. Although specific maintenance is not required, the following periodic checks ensure dependable imager operation:

# **Cleaning the Imager's Window**

Reading performance may degrade if the imager's window is not clean. If the window is visibly dirty, or if the imager isn't operating well, clean the window with a soft cloth or lens tissue dampened with water (or a mild detergent- water solution). If a detergent solution is used, rinse with a clean lens tissue dampened with water only. The imager's housing may also be cleaned the same way.



Do not submerge the imager in water. Do not use abrasive wipes or tissues on the imager's window – abrasive wipes may scratch the window.

Never use solvents (e.g., acetone, benzene, ether, or phenol-based agents) on the housing or window – solvents may damage the finish or the window.

## **Inspecting Cords and Connectors**

Inspect the imager's interface cable and connector for wear or other signs of damage. A badly worn cable or damaged connector may interfere with imager operation. Contact your dealer for information about cable replacement. Cable replacement instructions are included below.

# Troubleshooting

The imager automatically performs self-tests whenever you turn it on. If your imager is not functioning properly, review the following Troubleshooting Guide to try to isolate the problem.

• Is the power on? Is the green aiming illumination line on?

If the green aiming illumination line isn't illuminated, check that:

- The cable is connected properly.
- The host system power is on (if external power isn't used).
- The trigger works.

# Is the imager having trouble reading your symbols?

If the imager isn't reading symbols well, check that the symbols:

- Aren't smeared, rough, scratched, or exhibiting voids.
- Aren't coated with frost or water droplets on the surface.

• Are enabled in the imager (see the Product Reference Guide for more about symbologies).

### Is the bar code displayed but not entered?

The bar code is displayed on the host device correctly, but you still have to press a key to enter it (the Enter/Return or Tab key, for example).

You need to program a suffix. Programming a suffix enables the imager to output the bar code data plus the key you need (such as "CR") to enter the data into your application. Refer to the Product Reference Guide for further information.

### Does the imager read the bar code incorrectly?

If the imager reads a bar code, but the data is not displayed correctly on the host screen:

• The imager may not be programmed for the appropriate terminal interface.

For example, you scan "12345" and the host displays "@es%."

Reprogram the imager with the correct Plug and Play or Terminal selection bar code. See Plug and Play and/or the Product Reference Guide.

The imager may not be programmed to output your bar code data properly.
For example, you scan "12345" and the host displays "A12345B."
Reprogram the imager with the proper symbology selections. See the Product Reference Guide.

### The imager won't read your bar code at all.

 Scan the part number bar code in the back of this manual or the samples from the Product Reference Guide. If the imager reads sample bar codes, check that your bar code is readable. Verify that your bar code symbology is enabled (see the Product Reference Guide). 2. If the imager still can't read the sample bar codes, scan the "All Symbologies" setting from the Product Reference Guide.

If you aren't sure what programming options have been set in the imager, or if you want the factory default settings restored, see Resetting the Standard Product Defaults on page 11.

# **Technical Support**

## **Datalogic Website Support**

The Datalogic website (www.scanning.datalogic.com) is the complete source for technical support and information for Datalogic products. The site offers the Datalogic TekForum, product support, product registration, warranty information, product manuals, product tech notes, software updates, demos, and instructions for returning products for repair.

# Datalogic Website TekForum

Search for information on the TekForum by clicking on the Support link on the Datalogic home page. Browse the TekForum to find answers to your questions about common technical issues.

# **Reseller Technical Support**

An excellent source for technical assistance and information is an authorized Datalogic reseller. A reseller is acquainted with specific types of businesses, application software, and computer systems and can provide individualized assistance.

# **Telephone Technical Support**

If you do not have internet or email access, you may contact Datalogic technical support at (541) 349-8281.

# **Standard Warranty**

Datalogic warrants to Customer that Datalogic's products will be free from defects in materials and workmanship for a period of three years from product shipment.

In order to obtain service under this Warranty, Customer must notify Datalogic of the claimed defect before the expiration of the Warranty period and obtain from Datalogic a return authorization number for return of the product to 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.

Warranty is subject to the limitations and exclusions set forth below. Warranty set forth above is in lieu of any other warranties, expressed or implied, including merchantability and fitness.

## **Exclusions**

Warranty coverage shall not apply to any claimed defect, failure or damage which Datalogic determines was caused by: improper use of product; failure to provide product maintenance, including but not limited to cleaning of the scan windows in accordance with product manual; installation or service of product by other than Datalogic representatives; use of product with any other instrument, equipment or apparatus; modification or alteration of product. External cables and replacement of scan windows due to scratching, stains or other degradation will not be covered under the Warranty. Products returned for service must be accompanied by the original external power supplies for performance of service.

# **Limitations of Liability**

Datalogic repair or replacement of defective product as set forth above is the customer's sole and exclusive remedy on account of claims of breach of warranty or product defect. Under no circumstances will Datalogic be liable to customer or any third party for any lost profits, or any incidental, consequential indirect, special or contingent damages regardless of whether Datalogic had advance notice of the possibility of such damages.

# Assignment

Customer may not assign or otherwise transfer its rights or obligations under 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.

# **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 or product being returned to Customer by Datalogic, except such loss or damage as may be caused by the negligence of Customer, its agents or employees. 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.





**DECLARATION OF CONFORMITY** 

Datalogic hereby declares that the Equipment specified below has been tested and found compliant to the following Directives and Standards:

Directives: EMC 89/336/EEC

Directives.	Low Voltage 73/23/EEC
Standards:	EN 55022-B:A2/2003 - Generic Emissions CISPR 22-B:2005 - Generic Emissions EN 55024/A2:2001 - Generic Immunity – ITE EN 60950-1:2001 - ITE Safety EN 60825-1/A2:2002 - Laser Safety EN61000-3-2:2000 – Harmonic Current EN61000-3-2:2001 - Voltage Fluctuation/Flicker
Equipment Type:	Barcode Scanning Equipment
Products:	PowerScan 7000 family
Placed into EU Service:	April 2007 under the Datalogic trademark. December 2005 under the PSC trademark.
Responsible Manufacturer:	Datalogic Scanning, Inc. 959 Terry St. Eugene, OR USA





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# DATALOGIC

### www.scanning.datalogic.com



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