DATALOGIC

# Gryphon™ I GBT4400

General Purpose Handheld
Area Imager Bar Code Reader
with Bluetooth® Wireless Technology


## Quick Reference Guide

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

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**- END -**

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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.

# Gryphon™ I GBT4400

## Description

With rich feature sets and extensive options, the Gryphon™ product series from Datalogic represents the premium level of data collection equipment for general purpose applications. The Gryphon GBT4400 readers have enhanced optics with improved motion tolerance allowing codes placed on fast moving objects to be easily and quickly captured, creating the ideal reader for tasks requiring high throughput like those found in retail and light industrial environments.

| | |
|---|---|
| **Omni-Directional Operation** | To read a symbol or capture an image, simply aim the reader and pull the trigger. The Gryphon™ I GBT4400 is a powerful omni-directional reader, so the orientation of the symbol is not important. Datalogic's exclusive patented 'Green Spot' for good-read feedback helps to improve productivity in noisy environments or in situations where silence is required. When using the product with the cradle at a 45° position, the Green Spot can work as an aiming system to aid in positioning the bar code for quick and intuitive reading. |
| **Decoding** | Reliably decodes all standard 1D (linear) and 2D bar codes, including GS1 DataBar™ linear codes, Postal Codes (China Post), Stacked Codes (such as GS1 DataBar Expanded Stacked, GS1 DataBar Stacked, GS1 DataBar, Stacked Omnidirectional). The data stream — acquired from decoding a symbol — is rapidly sent to the host. The reader is immediately available to read another symbol. |
| **Imaging** | The Gryphon™ I GBT4400 can also function as a camera by capturing entire images or image portions of labels, signatures, and other items. |

# Setting Up the Reader

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

1. Configure the Base Station starting on this page.
2. Charge the Batteries (see page 14).
3. Link to the Base Station (see page 20).
4. Select the Interface Type (see page 21).
5. Configure the Reader starting on page 33 (optional, depends on settings needed).

NOTE

**According to recent modification of Regulation for shipping Li-Ion based battery packs, the products and their spare battery packs parts are shipped with a very low residual charge (low state of charge).**
**Hence the needs**
*** that a new product must be fully recharged before starting to use it.**
**and**
*** that battery packs of the stocked products GBT/GM44 and spare battery pack parts must be periodically recharged : for instance by using a BC40xx cradle powered up with a 12V Datalogic AC/DC adapter (cod.8-0935) for at least 30 minutes each 3 months.**

# Positioning the Base Station

The base station/charger may be set up in desk application to hold the reader in three different positions, either a horizontal or standing or vertical position, in order to provide the most comfortable use depending on the needs.

### Base Station Positions and related clips to be used

**Figure 1- Horizontal Position**

This position is preferred, unless a different specific positioning is required, for its outmost ease of insertion as well as the minimum effort and attention required to customer when docking the scanner.

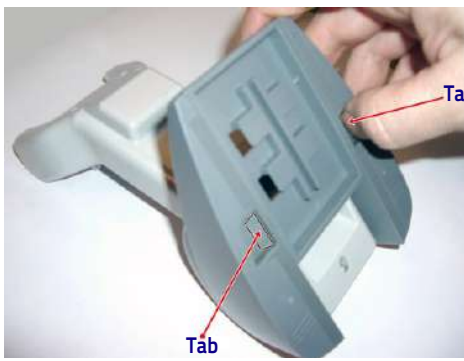
**Figure 2- Standing Position**

This position is preferred if the scanner is to be used in stand mode and not needed to be often removed from base station.

**Figure 3 - Vertical Position**

This position is preferred when lack of room on the desktop recommends the scanner to be left vertical during recharging.

1. Insert the appropriate parts for the desired base station position.
2. Using your thumbs, push open the plastic tabs on the bottom of the base to free the wing holders.



**To ensure best contact and performance, do not intermix the parts of the two different mount sets.**

**CAUTION**

3. The stand can now be repositioned in either horizontal or standing position.

# Connecting the Base Station

Figure 4 on page 6 shows how to connect the Base Station to a terminal, PC or other host device. Turn off the host before connection and consult the manual for that equipment (if necessary) before proceeding. Connect the interface cable before applying power to the Base Station.

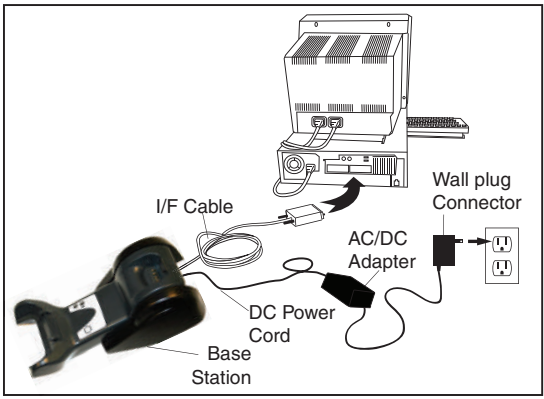
**NOTE**

**The Gryphon GBT44XX can also be Powered by the Terminal. When powered by the Terminal, the battery charger is automatically set as Slow charge.**

**For some specific interfaces or hosts or lengths of cable, the use of an external power supply may be recommended for full recharging capability (see "Technical Specifications" on page 39 for more details).**

**Base Station Connection and Routing —** Fully insert the Power Cable and Interface (I/F) Cable connectors into their respective ports in the underside of the Base Station (see Figure 4). Then connect to an AC Adapter, and plug the AC power cord into the (wall) outlet.

**Figure 4. Connecting the Base Station**

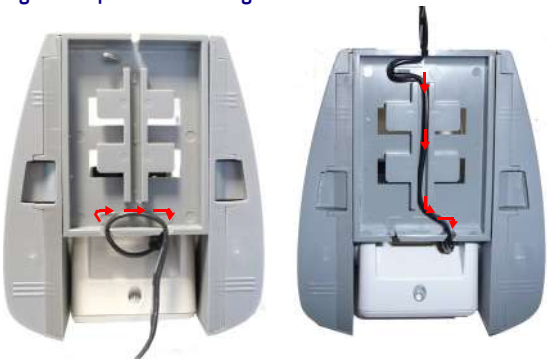



## Securing the DC Power Cord (Optional)

The DC power cord for the adapter can be secured to the bottom of the base in order to maximize the mechanical retention of the cable itself. The routing of the power cord can be changed to accommodate base station positioning: horizon-

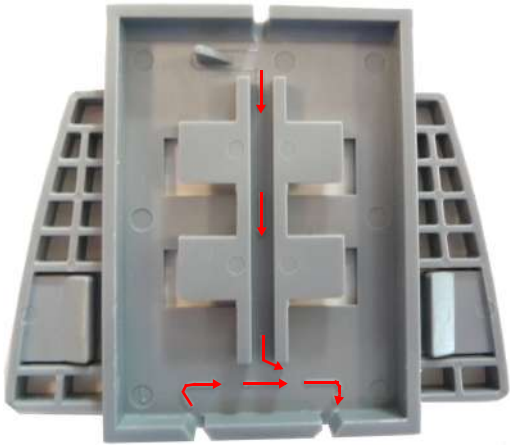
tal, stand or wall mount. The cables can be looped around to the front of the Base Station, or fed directly out the back of the Base Station, as shown in Figure 5.

**Figure 5. Options for routing the DC cord**



Please refer to the arrows depicted on the bottom of the base when placing the cables, detailed in Figure 6.

**Figure 6. Arrows showing routing**



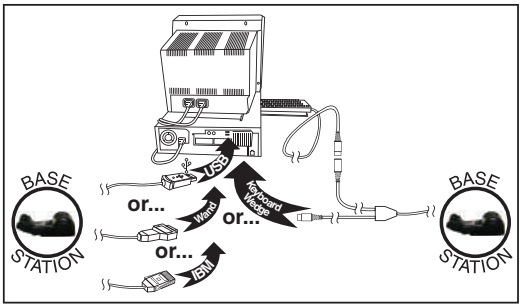
**Host Connection —** Verify before connection that the reader's cable type is compatible with your host equipment.

NOTE

**The Gryphon I GBT4400 can be set up to require a PIN code when connecting to the host. If you are adding new equipment to a system that uses a custom security PIN, please see the PRG for information before proceeding.**

Most connections plug directly into the host device as shown in Figure 7. Keyboard Wedge interface cables have a 'Y' connection where its female end mates with the male end of the cable from the keyboard and the remaining end at the keyboard port on the terminal/PC.

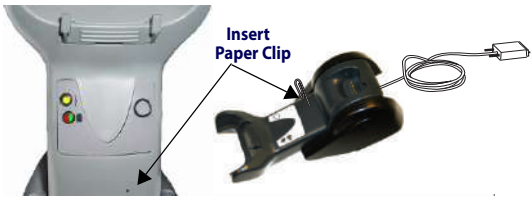
**Figure 7. Connecting to the Host**




**Power Connection —** Plug the AC Adapter into an approved AC wall socket with the cable facing downwards (as shown in Figure 4) to prevent undue strain on the socket.

**Disconnecting the Cable —** To detach the cable, insert a paper clip or similar object into the hole on the base, as shown.

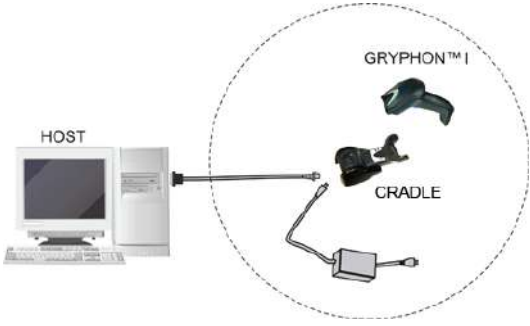
**Figure 8. Disconnecting the Cable**



# System and Network Layout

## Typical Setup with Cradle and Host

**Figure 9. Reader Layout**



# Using the BC40xx™ Radio Base

## Radio Base LEDs

LEDs on the Gryphon Base provide information about the Base as well as battery charging status, as shown in Figure 10.

**Figure 10. Gryphon Base LEDs**


**Table 1. Radio Base LEDs**

| | LED | STATUS |
|---|---|---|
| ϟ | Power on / Data | Yellow On = Base is powered<br>Yellow Blinking = Base receives data and commands from the Host or the Reader. |
| ▬ | Charging | Red On = the Battery is charging. |
| ▬ | Charge completed | Green On = the Battery is completely charged. |
| ▬ | Charging + Charge completed | Red and Green LEDs Off = the Reader is not correctly placed onto the Base or charging error. |

The button can be used to force device connection via the Datalogic Aladdin Software tool, to force a BT disconnect, and for paging the scanner when it is activated. Refer to the Gryphon I GBT4400 Product Reference Guide (PRG) for a more detailed explanation.

# Cleaning Procedure

Proper cleaning is needed on the external plastic surfaces, output window and electrical contacts to guarantee reliable scanning and charging of the battery.

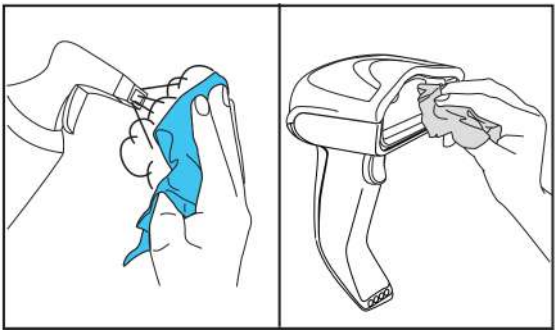
A regular cleaning routine will remove the dust and dirt that may accumulate on the product over time. The maintenance activity may be repeated more frequently depending on the severity of the environment in which the scanner is used.

A periodic deeper cleaning is suggested once per month.

## Cleaning plastic surfaces

Exterior plastic 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 the plastic surfaces with a soft cloth moistened with a diluted non-aggressive cleaning solution or isopropyl alcohol (minimum 70%).



Recommended cleaners for standard plastics are:

Formula 409® glass and surface cleaner, dish soap and water, Windex® Original (Blue).

Recommended cleaners for Health care plastics:

CaviWipes™ , diluted Clorox® bleach,Hepacide Quat® II,Sani-Cloth®,Virex® II 256.

**CAUTION**

**Do not use abrasive or aggressive cleansing agents or abrasive pads to clean scan windows, contacts or plastics.**
**Do not spray or pour liquids directly onto the unit. DO NOT use aerosols nor solvents.**
**Be sure to turn off power and unplug the device from electrical outlet before cleaning.**
**Be sure to dry up the device before powering it up.**
**Cleaner and liquids may be harsh on metal contacts. They are recommended for use only on enclosures.**
**DO NOT use solutions in their concentrated form.**
**DO NOT use paper towels or rough cloths to clean windows.**

## Cleaning electrical contact surfaces

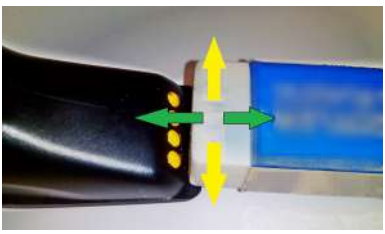
Regular cleaning of electrical contacts is needed to guarantee a correct recharging of the battery. Both scanner and cradle contacts should be cleaned.

In case spills, smudges or debris accumulate on the cradle and/or the scanner, proper operation could be affected and a periodical cleaning is recommended as follows.

Avoid the use of brushes or any other hard tool to remove grime from electrical contacts, since these may damage or scratch the contact's plating.

### Scanner Contacts

- Use a soft dry cloth to clean the contact area and the plastic surface around the contacts.
- Be sure to remove dust, dirt and any cloth residue.
- If the level of grime is significant, it is suggested the use of a soft white or pink pencil eraser to gently rub the contacts. Motion can be along both the green and yellow directions.



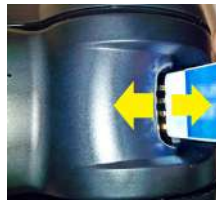
- Be sure to remove the rubber residuals by gently blowing them off with clean compressed air.

CAUTION

**Be careful when using compressed air: protect yourself with goggles and point the nozzle far from eyes and not too close to the scanner surface. Read previously the warning label on the spray can.**

## Cleaning cradle contacts

- Use a soft dry cloth to clean the contact area and the plastic surface around the contacts .
- Particular attention must be paid to remove dust, dirt and any cloth residue. Do not allow this material to fall again onto the contacts.
- It is suggested the use of a soft white or pink pencil eraser to gently rub the contacts. Cradle contacts should be cleaned with a motion along the yellow direction.



- Be sure to remove the rubber residuals by gently blowing them off with clean compressed air.

### Scanner and cradle deep cleaning

In case some hard grime, grease or liquid residual are present on electrical contacts, a deeper cleaning may be needed. If the above procedure is not enough to guarantee proper working of the system, the use of isopropyl alcohol is suggested (minimum 70%).

In this case it is suggested to use a cotton tipped applicator with isopropyl alcohol, gently wiping along the pins of the electrical connection. Be sure that cotton residue is not left on any pin of the electrical contacts.

NOTE

**Remove power before initiating the deep cleaning routine.**
**After completion of the deep cleaning routine allow the system to dry completely before reconnecting to power. Depending on the environmental conditions wait at least 30 minutes or, if possible, leave the system unpowered overnight.**

# Charging the Batteries

To charge the battery, simply insert the Gryphon into the base. When the scanner is fully seated in the cradle, it will sound a 'chirp" to indicate that the cradle has detected the scanner connection.

The LEDs on the base (shown in Table 1) will indicate the status of the battery.

NOTE

**Before using the Battery, read "Battery Safety" in the following section. Datalogic recommends annual replacement of rechargeable battery packs to ensure maximum performance.**

## Battery Safety

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

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 listed on the following page.**

WARNING

- **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.**

**CAUTION**

**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.**

**CAUTION**

**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.**

**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 battery types, 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.

**CAUTION**

**Storage of batteries for long time at fully charged status or at fully discharged status should be avoided.**

**CAUTION**

**Only in case of long storage, to avoid deep discharge of the battery it is recommended to partially recharge the battery every three months to keep the charge status at a medium level.**
**As a reference, run a fast recharge for 20 minutes every three months on unused products to avoid any performance deterioration of the cell.**

The useful life of LI batteries depends 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 showing excessive loss of capacity, it should be properly recycled / disposed of and replaced.

Collect and recycle waste batteries separately from the device to 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 other laws and regulations about the environment.

# Replacing the Batteries

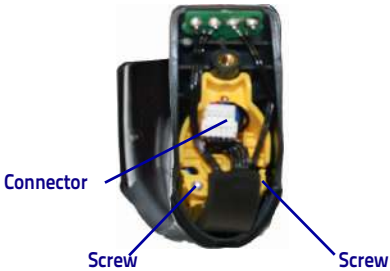
**NOTE**

**Before proceeding, read "Battery Safety" on the preceding pages. Datalogic recommends annual replacement of rechargeable battery packs to ensure maximum performance.**

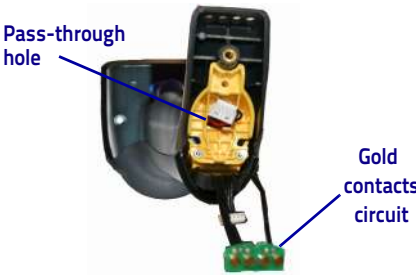
Use the following procedure to change the reader's battery:

1. With a screwdriver, unscrew the battery cover screw.

2. Unplug the white connector, and remove the two screws securing the battery holder.




3. Carefully lift out the gold contacts circuit, and remove the battery holder cap while letting the white connector pass through the hole in the battery holder (as shown below).



4. Remove the old battery from its place (if present), and insert the new battery in the same position.
5. Replace the battery holder cap, plug in the connector and return the contacts circuit to its previous location.

**NOTE**

**When inserting the new battery into the handle, take care to position the battery and the connector as described above.**

6. Insert the cover in the handle and screw it back into place.

# Using the Gryphon™ I GBT4400

The Gryphon™ I GBT4400 normally functions by capturing and decoding 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:

**Aiming System**

**Relative Size and Location of Aiming System Pattern**

Linear bar code

2D Matrix symbol

A red beam illuminates the label. 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 aiming system is centered and 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 Gryphon I GBT4400 Product Reference Guide (PRG) or Datalogic Aladdin configuration software (both available on the Datalogic website) for more information about this feature and other programmable settings.

# Linking the Reader

## Link Datalogic RF Devices to Base

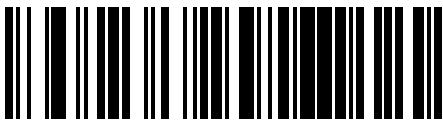
For RF devices, before configuring the interface it is necessary to link the handheld with the base.

To link the handheld and the base, either press the trigger to wake it, or simply mount into the base to wake up for operation. If the reader was previously linked to another base, you must first scan the **Unlink** bar code before re-linking to the new base.

Unlink

## Link Scanner to Bluetooth Adapter

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

**NOTE**

**The Gryphon I GBT4400 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.**

# Power Off

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

PowerOff

# 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

Each reader version will support one of the following sets of host interfaces:

**General Purpose Versions —** RS-232, RS-232 OPOS, USB, Keyboard Wedge, Wand.

**Retail Point of Sale Versions —** RS-232, RS-232 OPOS, USB, IBM 46XX.

Information and programming options for each interface type are provided in this section. For defaults and additional information associated with each interface, proceed to the corresponding chapter in the Gryphon™ 4400 PRG.

### Configuring the Interface

Scan the programming bar code which selects the appropriate interface type for the system the reader will be connected to.

**NOTE**

**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<br>  <br>Select RS232-STD |
| RS-232 Wincor-Nixdorf<br>  <br>Select RS232-WN |
| RS-232 for use with OPOS/UPOS/JavaPOS<br>  <br>Select RS-232 OPOS |
| USB COM to simulate RS-232 standard interface<br>  <br>Select USB-COM-STD[a] |
| a. Download the correct USB COM driver from www.datalogic.com |

| IBM |
| --- |
| IBM-46xx Port 5B reader interface<br>  <br>Select IBM-P5B |
| IBM-46xx Port 9B reader interface<br>  <br>Select IBM-P9B |
| **USB-OEM** |
| USB-OEM<br>(can be used for OPOS/UPOS/JavaPOS)<br>  <br>Select USB-OEM |

## Keyboard Interface

Use the programming bar codes to select options for USB Keyboard and Wedge Interfaces.

| KEYBOARD |
| --- |
| AT, PS/2 25-286, 30-286, 50, 50Z, 60, 70, 80, 90 & 95 w/ Standard Key Encoding<br>  <br>Select KBD-AT |
| Keyboard Wedge for IBM AT PS2 with standard key encoding but without external keyboard<br>  <br>Select KBD-AT-NK |
| AT, PS/2 25-286, 30-286, 50, 50Z, 60, 70, 80, 90 & 95 w/Alternate Key<br>  <br>Select KBD-AT-ALT |
| Keyboard Wedge for IBM AT PS2 with alternate key encoding but without external keyboard<br>  <br>Select KBD-AT-ALT-NK |

| KEYBOARD (continued) |
| --- |
| PC/XT w/Standard Key Encoding<br>  <br>Select KBD-XT |
| Keyboard Wedge for IBM Terminal 3153<br>  <br>Select KBD-IBM-3153 |
| Keyboard Wedge for IBM Terminals 31xx, 32xx, 34xx, 37xx make only keyboard<br>  <br>Select KBD-IBM-M |
| Keyboard Wedge for IBM Terminals 31xx, 32xx, 34xx, 37xx make break keyboard<br>  <br>Select KBD-IBM-MB |
| USB Keyboard with alternate key encoding<br>  <br>Select USB Alternate Keyboard |
| USB Keyboard for Apple computers<br>  <br>Select USB-KBD-APPLE |

| KEYBOARD (continued) |
| --- |
| Keyboard Wedge for DIGITAL Terminals VT2xx, VT3xx, VT4xx<br>  <br>Select KBD-DIG-VT |
| USB Keyboard with standard key encoding<br>  <br>Select USB Keyboard |
| **WAND EMULATION** |
| Wand Emulation<br>  <br>Select WAND |

## Scancode Tables

Reference the Gryphon™ PRG for information about control character emulation which applies to keyboard interfaces.

## Country Mode

This feature specifies the country/language supported by the keyboard. Only these interfaces support ALL Country Modes:

- USB Keyboard (without alternate key encoding)
- AT, PS/2 25-286, 30-286, 50, 50Z, 60, 70, 80, 90 & 95 w/ Std Key Encoding
- Keyboard Wedge for IBM AT PS2 with standard key encoding but without external keyboard
- AT, PS/2 25-286, 30-286, 50, 50Z, 60, 70, 80, 90 & 95 without Alternate Key
- Keyboard Wedge for IBM AT PS2 without alternate key encoding but without external keyboard

All other interfaces support ONLY the following Country Modes: U.S., Belgium, Britain, France, Germany, Italy, Spain, Sweden.

| COUNTRY MODE |
| --- |
|  <br>ENTER/EXIT PROGRAMMING MODE |
|  <br>Country Mode = U.S. |
|  <br>Country Mode = Belgium |
|  <br>Country Mode = Britain |
|  <br>Country Mode = Croatia* |

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

| COUNTRY MODE (continued) |
| --- |
|  <br>Country Mode = Czech* |
|  <br>Country Mode = Denmark* |
|  <br>Country Mode = France |
|  <br>Country Mode = Germany |
|  <br>Country Mode = Hungary* |
|  <br>Country Mode = Italy |

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

| COUNTRY MODE (continued) |
| --- |
|  <br>Country Mode = Japanese 106-key* |
|  <br>Country Mode = Norway* |
|  <br>Country Mode = Poland* |
|  <br>Country Mode = Portugal* |
|  <br>Country Mode = Romania* |
|  <br>Country Mode = Spain |

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

| COUNTRY MODE (continued) |
| --- |
|  <br>Country Mode = Sweden |
|  <br>Country Mode = Slovakia* |
|  <br>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.

| CAPS LOCK STATE |
| --- |
|  <br>ENTER/EXIT PROGRAMMING MODE |
|  <br>Caps Lock State = Caps Lock OFF |
|  <br>Caps Lock State = Caps Lock ON |
|  <br>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.

| NUMLOCK |
| --- |
|  <br>ENTER/EXIT PROGRAMMING MODE |
|  <br>Numlock = Numlock key unchanged |
|  <br>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 Product Reference Guide (PRG). Check the corresponding features section for your interface, and also the Data Editing and Symbologies chapters.

## Using Programming Bar Codes

This manual contains bar codes which allow you to reconfigure your reader. Some programming bar code labels, like the "Standard Product Default Settings" on page 33, 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 Standard Product Defaults

Reference the PRG for a listing of standard factory settings. If you aren't sure what programming options are in your reader, or you've changed some options and want the factory settings restored, scan the **Standard Product Default Settings** bar code below to copy the factory configuration for the currently active interface to the current configuration.

**NOTE**

**Factory defaults are based on the interface type. Configure the reader for the correct interface before scanning this label.**

Standard Product Default Settings

# Reading Parameters

Point the reader at the target and pull the trigger to enable the aiming system and the illuminator (red beam) to capture and decode the image. The aiming system will briefly switch off during 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.

## Aiming System Control

A number of options for customizing control of the Aiming System are available. See the PRG for more information and programming bar codes.

# Good Read Green Spot Duration

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

| GOOD READ GREEN SPOT DURATION |
| --- |
|  <br>ENTER/EXIT PROGRAMMING MODE |
|  <br>Green Spot Duration = Disable (Green Spot is Off) |
|  <br>♦ Green Spot Duration = Short (300 msec) |
|  <br>Green Spot Duration = Medium (500 msec) |
|  <br>Green Spot Duration = Long (800 msec) |

# Scan Modes

The imager can operate in one of several scanning modes.

**Trigger Single —** When the trigger is pulled, scanning is activated until one of the following occurs:

- a programmable duration[1] has elapsed
- a label has been read
- the trigger is released

This mode is associated with typical handheld reader operation.

**Trigger Hold Multiple —** When the trigger is pulled, scanning starts and the product scans until the trigger is released or a programmable duration[1] has elapsed. Reading a label does not disable scanning. Double Read Timeout[1] prevents undesired multiple reads while 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 Timeout[1] prevents undesired multiple reads while in this mode.

**Flashing —** The reader flashes[1] 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 Mode. Double Read Timeout[1] prevents undesired multiple reads while in this mode.

**Stand Mode —** No trigger pull is required to read a bar code. Scanning is turned on automatically when an item is placed in reader's field of view. If the trigger is pulled, the reader acts as if it is in Single Read mode. Double Read Timeout[1] prevents undesired multiple reads while in this mode.

**NOTE**

**Reference the PRG for more information.**

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

| SCAN MODE |
| --- |
|  <br>ENTER/EXIT PROGRAMMING MODE |
|  <br>♦ Scan Mode = Trigger Single |
|  <br>Scan Mode = Trigger Hold Multiple |
|  <br>Scan Mode = Trigger Pulse Multiple |
|  <br>Scan Mode = Flashing |
|  <br>Scan Mode = Always On |
|  <br>Scan Mode = Stand Mode |

# 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 while the scanner is 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.**

| PICK MODE |
| --- |
| ENTER/EXIT PROGRAMMING MODE |
| ♦ Pick Mode = Disable |
| Pick Mode = Enable |

## Multiple Labels in a Volume

Enables/disables the ability of scanner to decode multiple labels in the same image. Several programming options are available for this feature, see the PRG for more information.

# Technical Specifications

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

| | |
|---|---|
| **Physical Characteristics** | |
| Color | White/Gray<br>Black/Gray |
| Dimensions | Height 7.1"/181 mm<br>Length 3.9"/100 mm<br>Width 2.8"/71 mm |
| Weight (without cable) | Approximately<br>8.7 ounces/246 g (reader)<br>8.7 ounces/246 g (base charger) |
| **Electrical Characteristics** | |
| Battery Type | Li-Ion battery pack |
| Typical charge time for full charge from full discharge | 4 hours with 12V external power supply adapter[a] |
| | Max 22 hours with Host power (in this case no supply adapter is needed)[a] |
| Operating autonomy (continuous reading) | 50,000 reads (typical) |
| Cradle consumption and DC input supply range | Volt 4.75-14 VDC; Power <8W[b];<br>Max 500mA when in host/bus powered mode[b]. |
| **Performance Characteristics** | |
| Light Source | LEDs |
| Roll (Tilt) Angle[c] | Up to ± 180° |
| Pitch Angle[c.] | ± 40° |
| Skew (Yaw) Angle[c.] | ± 40° |
| Field of View | 40° H x 26° V |

a. Charge Times are much lower when battery is within daily typical operating condition.

b. Typical input current measured under factory default configuration.

c. Based on ISO 15423 specifications

| Depth of Field (Typical)[a] | | |
|---|---|---|
| **Symbology** | **SR:** | **HD:** |
| Code 39 | 5mil: 1.6" -7.5" (4.0 -19cm)<br>10mil: 0.4" - 11.8" (1.0 - 30cm)<br>20mil: up to 17.7" (up to 45cm) | 3mil: 0.9" - 3.6" (2.4 - 9.1cm)<br>5 mil: 0.3" - 4.5" (0.8 - 11.3cm) |
| EAN | 7.5mil: 0.5" - 10.6" (2.0 - 27cm)<br>13mil: 0.6" - 15.7" (1.5 - 40cm) | 7.5mil: 0" - 5" (0 - 12.7cm)<br>13mil: 4.3" - 6.8" (1.1- 17.2cm) |
| PDF-417 | 6.6mil: 1.0" - 5.9" (2.5 - 15cm)<br>10mil: 0.2" - 8.6" (0.5 - 22cm)<br>15mil: 0.6" - 13.4" (1.5 - 34cm) | 4mil: 0.7" - 2.7" (1.8 - 6.8cm)<br>6.6mil: 0.1" - 4.4" (0.1 - 11.2cm)<br>10mil: 0" - 5.6" (0 - 14.3cm) |
| DataMatrix | 10mil: 0.8" to 6.3" (2.0 - 16cm)<br>15mil: 0" to 9.3" (0 - 23.6cm) | 5mil: 1.1" - 2.4" (2.8-6.1cm) |
| QR Code | 10mil: 1.2" to 4.9" (3.0 - 12.5cm)<br>15mil: 0.4" to 7.5" (1.0 - 19cm) | 6.7mil: 0.8" - 1.7" (2.1 - 4.2cm) |
| Minimum Element Width | **Standard Range:**<br>1D Min. Resolution = 4 mil<br>PDF-417 Min.Resolution = 5 mil<br>Datamatrix Min. Resolution = 7 mil | **High Density:**<br>1D Min. Resolution = 2.5 mil<br>PDF-417 Min. Resolution = 4 mil<br>Datamatrix Min. Resolution = 5 mil |
| Print Contrast Minimum | 25% minimum reflectance | |

a. 13 mils DOF based on EAN. All other 1D codes are Code 39. All labels grade A, typical environmental light, 20°C, label inclination 10°

## Decode Capability

### 1D Bar Codes

UPC/EAN/JAN (A, E, 13, 8); UPC/EAN/JAN (including P2 /P5); UPC/EAN/JAN (including; ISBN / Bookland & ISSN); UPC/EAN Coupons; Code 39 (including full ASCII); Code 39 Trioptic; Code39 CIP (French Pharmaceutical); LOGMARS (Code 39 w/ standard check digit enabled); Danish PPT; Code 32 (Italian Pharmacode 39); Code 128; Code 128 ISBT; Interleaved 2 of 5; Standard 2 of 5; Interleaved 2 of 5 CIP (HR); Industrial 2 of 5; Discrete 2 of 5; Datalogic 2 of 5 (China Post Code/Chinese 2 of 5); IATA 2of5 Air cargo code; Code 11; Codabar; Codabar (NW7); ABC Codabar; Code 93; MSI; PZN; Plessey; Anker Plessey; Follet 2 of 5; GS1 DataBar Omnidirectional; GS1 DataBar Limited; GS1 DataBar Expanded; GS1 DataBar Truncated; DATABAR Expanded Coupon.

### 2D / Stacked Codes

The Gryphon I GBT4400 scanner is capable of decoding the following symbologies using multiple frames (i.e. Multi-Frame Decoding):
PDF-417; QR Code; Aztec; Datamatrix; Inverse Datamatrix; Datamatrix is configurable for the following parameters:; Normal or Inverted; Square or Rectangular Style; Data length (1 - 3600 characters); Maxicode; QR Codes (QR, Micro QR and Multiple QR Codes); Aztec; Postal Codes; Australian Post; Japanese Post; KIX Post; Planet Code; Postnet; Royal Mail Code (RM45CC); Intelligent Mail Bar Code (IMB); Sweden Post; Portugal Post; LaPoste A/R 39; 4-State Canada; PDF-417; MacroPDF; Micro PDF417; GS1 Composites (1 - 12); Codablock F; French CIP13[a]; GS1 DataBar Stacked; GS1 DataBar Stacked Omnidirectional; GS1 DataBar Expanded Stacked; GSI Databar Composites; Chinese Sensible Code; Inverted 2D codes.
Note: The reader can apply the Normal/Reverse Decoding Control to the following symbologies: Datamatrix, QR, Micro QR, Aztec and Chinese Sensible Code.

### Interfaces Supported[b]

RS-232 Std, RS-232 Wincor-Nixdorf, RS-232 OPOS, IBM 46xx (ports5B and 9B), USB Com Std., USB Keyboard, USB Alternate Keyboard, USB OEM, Keyboard Wedge (AT with or w/o Alternate Key, IBM AT PS2 with or w/o Alternate Key, PC-XT, IBM 3153, IBM Terminals 31xx, 32xx,34xx, 37xx make only and make break keyboard, Digital Terminals VT2x, VT3xx, VT4xx, and Apple) and Wand Emulation.

## User Environment

| | |
|---|---|
| Operating Temperature | 32° to 122° F (0° to 50° C) |
| Charging Temperature[c] | 32° to 104° F (0° to 40° C) |
| Storage Temperature | -4° to 158° F (-20° to 70° C) |
| Humidity | Operating: 5% to 90% relative humidity, non-condensing |
| Drop Specifications | Scanner withstands 18 drops from 1.8 meters (5.9 feet) to concrete |

| | |
|---|---|
| Ambient Light Immunity | Up to 100,000 Lux |
| Contaminants Spray/ rain Dust/particulates | IEC 529-IP52 (scanner only) |
| ESD Level | 16 KV |
| **Regulatory** | |
| See the Regulatory Addendum for details. | |
| **Radio Features** | |
| Frequency Range | 2400 to 2483.5 MHz |
| Range (in open air) | 30 m |

a. It is acceptable to handle this with ULE

b. See "Interface Selection" on page 21 for a listing of available interface sets by version type.

c. Close to the limits of the working temperature range battery charge performance might have some slight degradation.

# 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.

| 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 for this indication is configurable via the feature 'Good Read: When to Indicate" (see the PRG for information.) | The reader will beep once at current frequency, volume, mono/bitonal setting and duration upon a successful label scan. |
| 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 when the IBM or USB interface is enabled. | N/A | Reader 'chirps' six times at the highest frequency and current volume. |
| Reader Active Mode | The reader is active and ready to scan. | The LED is lit steadily[a] | N/A |
| Reader Disabled | The reader has been disabled by the host. | The LED blinks continuously | N/A |
| Green Spot[a] flashes momentarily | Upon successful read of a label, the software shall turn the green spot on for the time specified by the configured value. | N/A | N/A |
| Image Capture | When ready to capture image | Blue light flashes 2 times when updating | N/A |

a 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 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. |
| 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. |

# Base Station Indications

| Indication | LEDS |
|---|---|
| Power-up Complete | Yellow LED on |
| Reader Disabled by the HOST or the communication with HOST is not established | Yellow LED blinking ~1Hz |
| Data/labels are transmitted to the HOST | Yellow LEDs turned off for 100mSec |
| Programming Mode | Yellow LED blinks quickly |
| Battery charger in progress | Red LED on |
| Battery charger complete | Green LED on |
| Battery charger error or suspended | Red and Green LEDs off |
| No HH is placed on the cradle | Red and Green LEDs off |

# 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 (1) 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

**CAUTION**

**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** and click on the **SUPPORT** > **GENERAL DUTY HANDHELD SCANNERS** category link. From this page you can select your product model from the dropdown list which gives you access to:

**Downloads** including Data Sheets, Manuals, Software & Utilities, and Drawings;

**Repair Program** for On-Line Return Material Authorizations (RMAs) plus Repair Center contact information;

**Service Program** containing details about Maintenance Agreements;

**Technical Support** through email or phone.

# NOTES

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DATALOGIC

**www.datalogic.com**



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