DATALOGIC

BC9180-STAR

Base Station/Charger



Quick Reference Guide

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Patents

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

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

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NOTES

Using the BC9180 Base Station

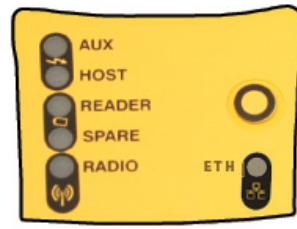
The BC9180 base station, when paired with one or more PowerScan™ PM9X00 readers, builds a Cordless Reading System for the collection, decoding and transmission of bar code data. It can be connected to a Host PC via RS232, USB, or KBD Wedge, and is suited for single-cradle layouts.

The BC9x60 models also allow multi cradle layouts through an RS-485 Network. For this network connection refer to the Programming Reference Guide.The BC91x0 models provide a spare battery charger slot. The BC9x80 models are provided with an Ethernet interface.

The label on the cradle contains LED indicators and a multi-function button. When the button is pressed, the cradle will transmit a "broadcast" message." When the broadcast is sent, all properly configured scanners (Radio RX Timeout set to keep the radio "awake") that are linked to that base and within radio range coverage will emit a beep and blink within 5 seconds. This functionality is useful to:

- verify which scanners are linked to a certain base station
- detect a scanner forgotten somewhere

The LEDs signal the BC9180 status, as shown.



LED	STATUS
Aux	Yellow On = BC9180 is powered through an external power supply.
Host	Yellow On = BC9180 is powered by the Host.
Reader	Green On = the reader battery is completely charged. Red On = the reader battery is charging. Orange Blinking = reader battery fault - replace battery. Red / Green Alternatively Blinking = charging error - see PRG. Off = reader not in the cradle or not properly inserted.
Spare (BC91x0 models only)	Green On = the spare battery is completely charged. Orange Blinking = spare battery fault - replace spare battery. Red/Green Alternatively Blinking = charging error - see PRG. Off = no spare battery in the housing or battery not fully inserted.
Radio	Yellow Blinking = radio activity.
Ethernet (Ethernet models only)	Green Blinking = Ethernet activity.

Installation

To set up your BC9180 cradle you must:

1. Physically install the cradle.
2. Make all system connections.
3. Configure the BC9180 cradle.

Mounting the BC9180 Cradle

The cradle package contains the following items:

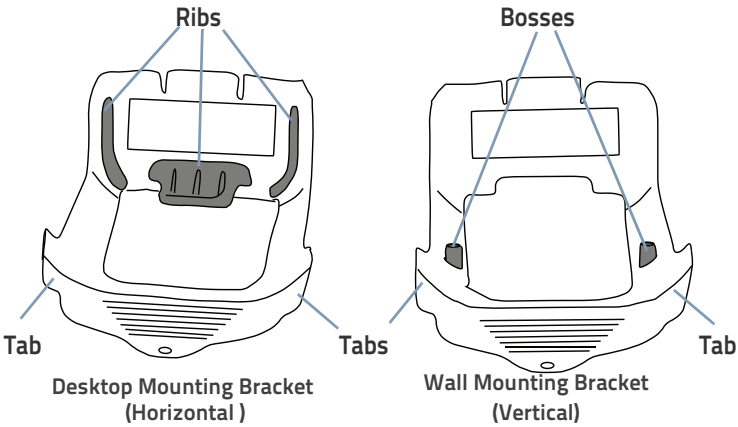
- BC9180 Base Station (with Desktop Mounting Bracket installed)
- BC9180 Quick Reference Guide (this manual)
- 1 Ferrite Clamp (Ethernet models only)
- 1 Metal Mounting plate
- 1 Wall Mounting Bracket

The cradle can be either mounted on a flat surface for desktop usage or affixed vertically to a wall.

Mounting Brackets

The cradle comes with two different mounting brackets. The appropriate bracket is used depending on whether the cradle will be mounted on a horizontal or vertical surface. When shipped, the cradle has the Desktop Mounting Bracket installed. For vertical installation, the Wall Mounting Bracket must be attached instead.

Figure 1. Mounting Brackets



- Desktop mount bracket has ribs to keep the scanner in place when the cradle is horizontal
- Wall mount bracket contains bosses to keep the scanner in place when the cradle is vertical.

To change the Bracket:

1. Remove the screw holding the Bracket in place. Retain the screw for re-use.
2. Carefully lift off the Bracket.
3. Install the other bracket by first slipping the end tab into place on the base station, then easing the tabs (shown in Figure 1 on page 2) into place on the sides.
4. Replace the screw to secure the Bracket to the Base Station.

Figure 2. Changing the Bracket

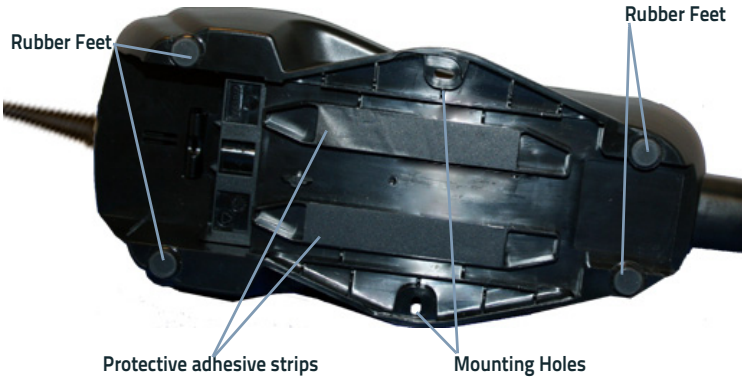


Permanent Mounting

For either desktop or wall mounting, the cradle can be fastened directly to a flat surface using screws (not included).

When mounting on drywall, the base should be screwed to a wall stud or supporting beam for additional support.

Figure 3. Base Station Bottom



Mounting for Portable Use

If portability of the cradle is required, the metal plate must be used. There are two ways this can be done: (1) by first mounting the metal plate on a flat surface so the cradle can be slid off and on, or (2) mounting the metal plate onto the back of the base station and then screwing both to the desired surface.

For additional security on wall mounting, it is strongly recommended that the cradle be secured into place using two auxiliary screws through the mounting holes on the side.

Mounting the Metal Plate

1. Affix the metal plate onto the desired mounting surface using the two center screw holes (see Figure 4 on page 5).
2. Remove the adhesive strips protecting the mounting tabs on the cradle, shown in Figure 3.
3. Slide the tabs on the back of the cradle onto the metal plate as shown in Figure 4.
4. After aligning the tabs, push up to lock into place.

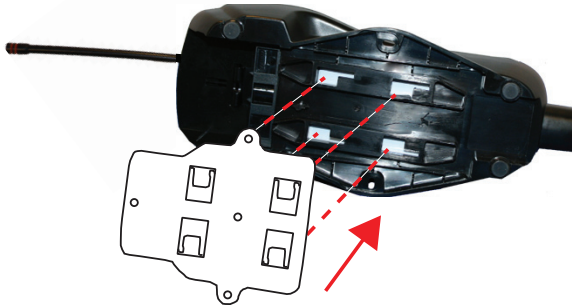
Figure 4. Mounting Plate on Wall



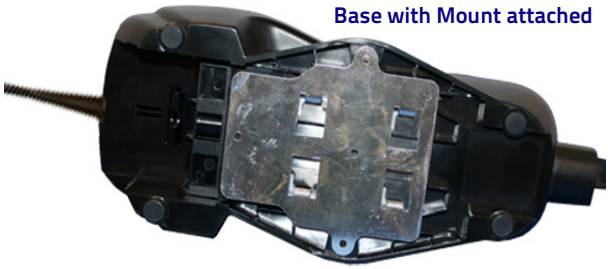
Attaching the Metal Plate to Base

Alternatively, the mount can be attached first to the base, then both can be mounted to a wall as described above.

Figure 5. Attaching Mounting Plate to Base



Base with Mount attached



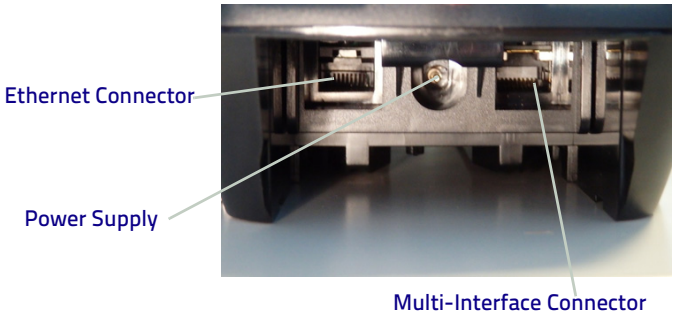
System Connections



Connections should always be made with power off!

BC9x80 models - Ethernet Connection

The BC9x80 models contain an Ethernet connector and a power supply connector. A multi-interface connector is also available **(intended for service purposes only)**.



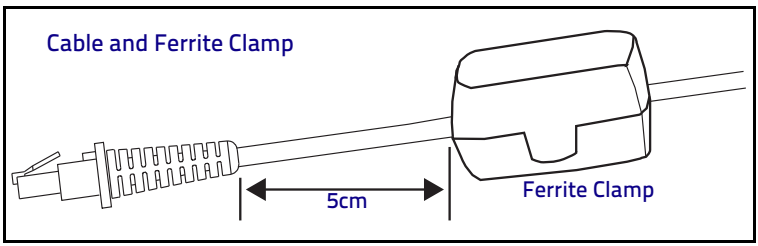


Ensure the cable is plugged into the correct connector. Forcing an Ethernet cable into the Multi-interface connector or forcing a Multi-interface cable into the Ethernet connector could damage the unit.

Ferrite Clamp Filter

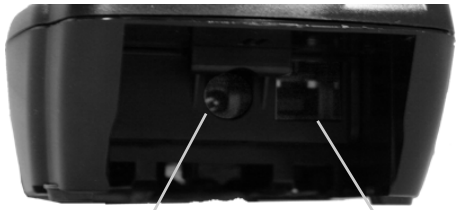


If a Ferrite Clamp filter is included in the package, mount it on the Ethernet cable as shown, about 5 cm from the plug.



Non-Ethernet Connection

The BC9180 cradle provides a multi-interface connector and a power supply connector as shown:

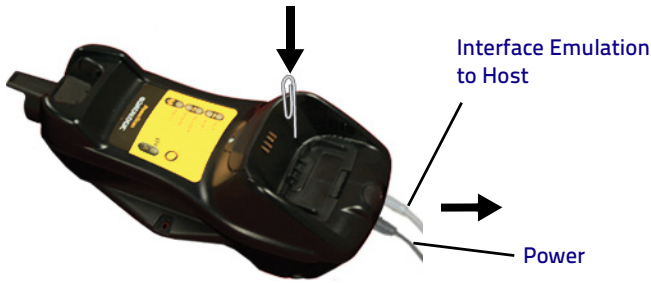


Connecting and Disconnecting the Multi-Interface Cable

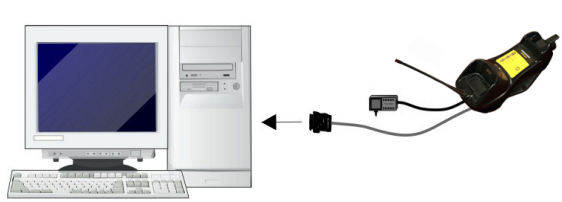
The BC9180 can be connected to a Host by means of a multi-interface cable, which must be simply plugged into the Host connector, visible on the front panel of the cradle.

To disconnect the cable, insert a paper clip or other similar object into the hole corresponding to the Host connector on the body of the cradle. Push down on the clip while unplugging the cable. Refer to the following figures:

Connecting/Disconnecting the Cable



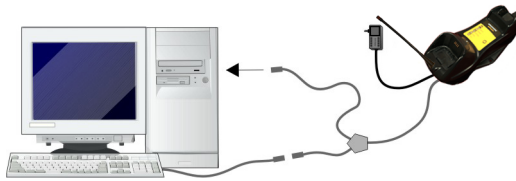
RS232



USB



WEDGE



Configuration

BC9x80 Ethernet Models

BC9x80 configuration can be performed using the Datalogic Aladdin software configuration program or by reading configuration bar codes with the PowerScan™ PM9X00 reader.

Non-Ethernet Models

The BC9180 configuration can be performed in three ways: by using the Datalogic Aladdin™ software configuration program, by sending configuration strings from the Host PC via the RS232 or USB-COM interface or by reading configuration bar codes with the PowerScan™ PM9X00 reader.

Datalogic Aladdin™

Datalogic Aladdin™ (available for free download from the Datalogic website) is a multi-platform utility program that provides a quick and user-friendly configuration method via the RS232/USB-COM or Ethernet interface. It also allows upgrading the software of the connected device (see the Datalogic Aladdin™ Help On-Line for more details).

Serial Configuration

By connecting the BC9180 to a PC through an RS232 or USB-COM interface cable it is possible to send configuration strings from the PC to BC9180.

Configuration Bar Codes

Link the cradle and the reader using the procedures described in the PowerScan™ PM9X00 Quick Reference. Once the pairing is complete, you can configure the BC9180 cradle by reading the configuration bar codes in this manual.

To configure the BC9180 using the PowerScan™ PM9X00 reader (paired to the cradle with the Bind command), follow the procedure according to the interface selected.

Selecting the Interface Type

Upon completing the physical connection between the reader and its host, scan the appropriate bar code for your system's correct interface type.

Configuring the Interface

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



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.

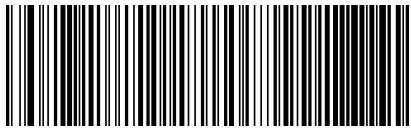
Some interfaces require the scanner to start in the disabled state when powered up. If additional scanner configuration is desired while in this state, pull the trigger and hold for 5 seconds. The scanner will change to a state that allows programming with bar codes.

Ethernet Interface (BC9x80 Models only)

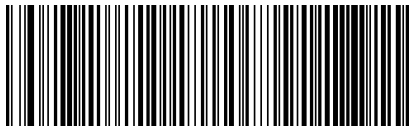
Use the programming bar codes below to program the Ethernet interface, to select between standard and Ethernet/IP and to choose between fixed IP address and DHCP.

ETHERNET
Select Standard Ethernet
Select Ethernet/IP

ETHERNET (continued)



Select Static IP Addressing[a]



Select Dynamic IP Addressing[b]

a. When Static IP Addressing is selected, 192.168.187.31 will be used as a default; this can be changed using the Datalogic Aladdin configuration program.

b. To use Dynamic IP Addressing , you must be sure that your network system supports a DHCP server.

Serial Interface

RS232

RS232 standard interface



Select RS232-STD

RS232 Wincor-Nixdorf



Select RS232-WN

RS232 for use with OPOS/UPOS/JavaPOS



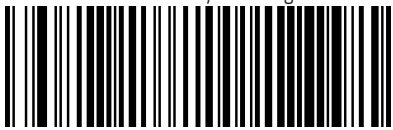
Select RS232 OPOS

USB
USB COM to simulate RS232 standard interface  USB-COM-STD[a]
USB-OEM (can be used for OPOS/UPOS/JavaPOS)  USB-OEM
USB Keyboard with standard key encoding  Select USB Keyboard
USB Keyboard with alternate key encoding  USB Alternate Keyboard

a. Download the correct USB COM driver from www.datalogic.com

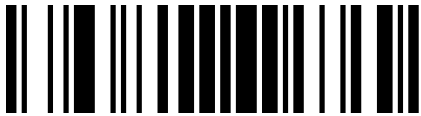
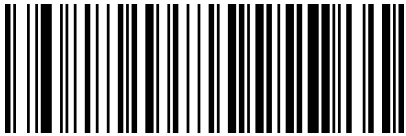
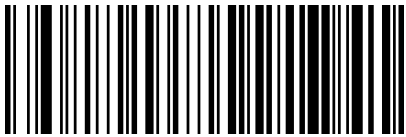
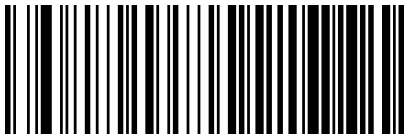
Keyboard Interface

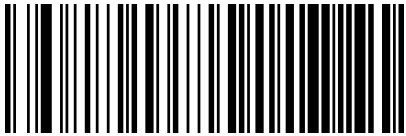
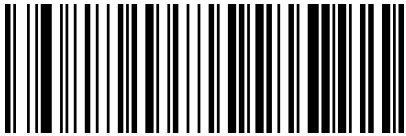
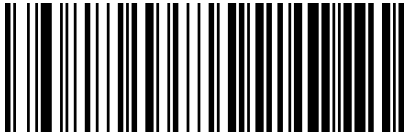
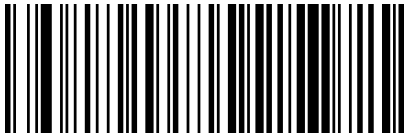
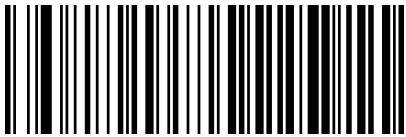
Use the programming bar codes to select options for USB Keyboard and Wedge Interfaces.

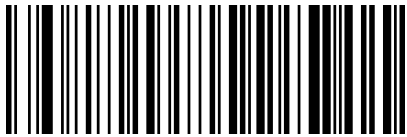
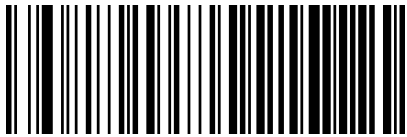
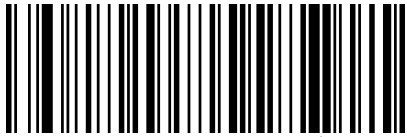
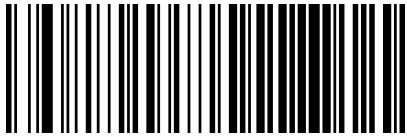
KEYBOARD
AT, PS/2 25-286, 30-286, 50, 50Z, 60, 70, 80, 90 & 95 w/ Standard Key Encoding  Select KBD-AT
Keyboard Wedge for IBM AT PS2 with standard key encoding but without external keyboard  Select KBD-AT-NK
AT, PS/2 25-286, 30-286, 50, 50Z, 60, 70, 80, 90 & 95 w/Alternate Key  Select KBD-AT-ALT
Keyboard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

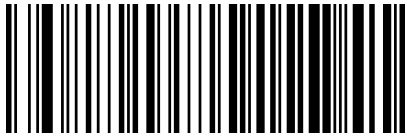
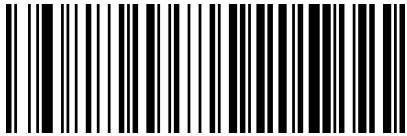
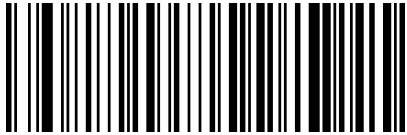
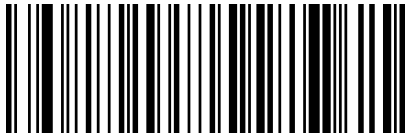
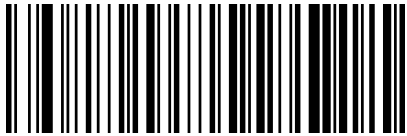
Country Mode

This feature specifies the country/language supported by the keyboard.

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

COUNTRY MODE (continued)
 Country Mode = Croatia
 Country Mode = Czech Republic
 Country Mode = Denmark
 Country Mode = France
 Country Mode = French Canadian
 Country Mode = Germany

COUNTRY MODE (continued)
 Country Mode = Hungary
 Country Mode = Italy
 Country Mode = Japanese 106-key
 Country Mode = Lithuanian
 Country Mode = Norway
 Country Mode = Poland
 Country Mode = Portugal

COUNTRY MODE (continued)
 Country Mode = Romania
 Country Mode = Spain
 Country Mode = Sweden
 Country Mode = Slovakia
 Country Mode = Switzerland

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.

It does not apply to USB keyboard.

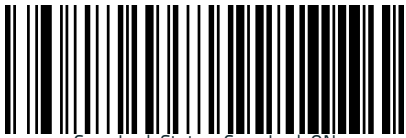
CAPS LOCK STATE



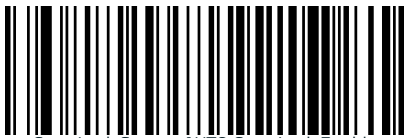
ENTER/EXIT PROGRAMMING MODE



Caps Lock State = Caps Lock OFF



Caps Lock State = Caps Lock ON



Caps Lock State = AUTO Caps Lock Enable

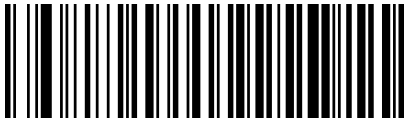
Numlock

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

NUMLOCK



ENTER/EXIT PROGRAMMING MODE



Numlock = Numlock key unchanged



Numlock = Numlock key toggled

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.



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



Standard Product Default Settings



Scanning this bar code will RESET all settings for the PowerScan™ PM9X00. Any customized settings that may have been applied to the reader will be lost.

To change the defaults refer to the PowerScan™ 9X00 PRG, or to the Datalogic Aladdin™ Configuration program, both downloadable from the Datalogic website.

Compatibility with the PowerScan™ 8000 family

The BC9180 can be programmed to operate in a mode compatible with the PowerScan™ 8000 family. For further details and for the relevant configuration strings and labels, refer to the PRG.

Technical Features

Electrical Features	
Supply Voltage External Power Host Power[a]	 10 - 30 VDC 5 VDC ±10%
Power Consumption External Power Host Power[a]	 max. 10 W (charging)[b] max. 500 mA (charging)
Indicators	Ext. Power/Data yellow LED Host Power/Data yellow LED Reader batt. state green/red LED Spare batt. state green/red LED Radio yellow LED Ethernet green LED (Ethernet models only)
Time of Recharge External Power Host Power[a]	 max. 4 hours with 2150 mAh Li-Ion battery max. 10 hours with 2150 mAh Li-Ion battery

a. Host Power not supported on Ethernet Models

b. Having a switching regulator inside, the BC9180 draws the same power, regardless of the supply voltage; i.e., as the input voltage increases the current drawn decreases

Environmental Features		
Working Temperature Radio Battery Charging	 -20° to +50 °C / -4 to +122 °F 0° to +40 °C / +32° to +104 °F	
Storage Temperature	-20° to +70 °C / -4 to +158 °F	
Humidity	90% non condensing	
Protection Class	IP40	
Mechanical Features		
Weight without metal plate	about 390 g / 13.76 oz	
Dimensions (without antenna)	235 x 108 x 80 mm	
Regulatory		
See the Regulatory Addendum for details.		
Radio Features		
Frequency working center	433MHz	910MHz
Programmable Speed	19.2 kb/s 115.2 kb/s 500 kb/s (default)	36.8 kb/s 500 kb/s (default)
Typical Range (in open air)	Refer to the scanner guide.	
Max number of devices per base station	16	

Datalogic Limited Factory Warranty

Warranty Coverage

Datalogic warranties this product against defects in workmanship and materials, for a period of 3 years from the date of shipment, provided that the product is operated under normal and proper conditions. 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** > **Industrial 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.

www.datalogic.com

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