Honeywell

IS220

OEM Scan Engine

User's Guide

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Patents

For patent information, please refer to www.honeywellaidc.com/patents.

Table of Contents

Customer Support

Introduction

The IS220 is a dual optic bench scanning engine with scan lines optimized for orthogonal orientation of 1D bar codes. IS220 is a completely self-contained scan engine.

Base Kit

Part Number	Description
IS220-16	IS220 OEM Engine (RS232)
00-02029	IS220 Installation and User's Guide *
00-02407	MetroSelect® Configuration Guide *
* Guides also available for download at www.honeywelladic.com.	

Optional Accessories

Part Number	Description
52-52548	Communication/Power Cable 110 Volt
52-52547	Communication/Power Cable 220 Volt

Other items may be ordered for the specific protocol being used. To order additional items, contact the dealer, distributor or call the customer service department.
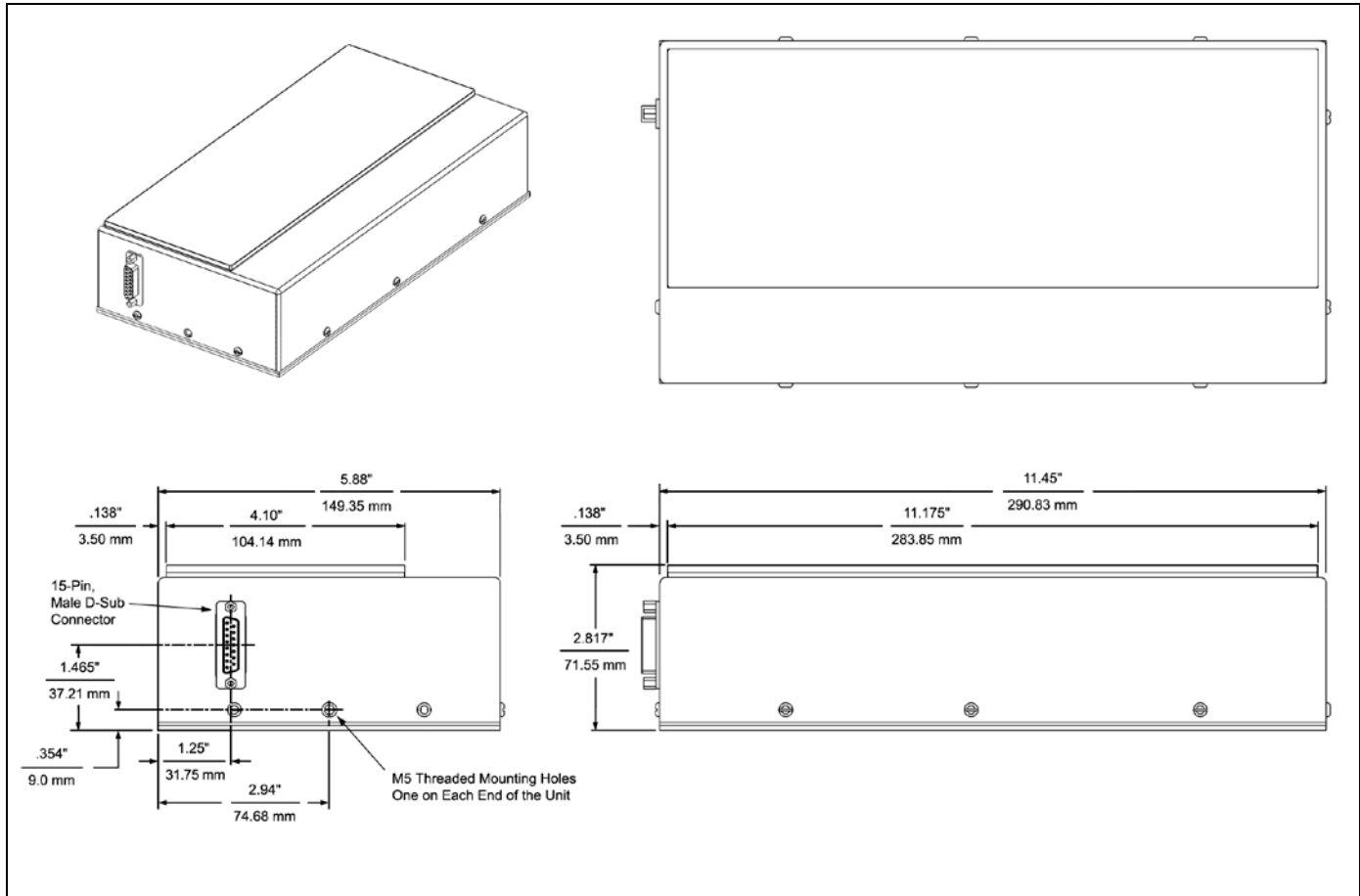
Case Dimensions

Figure 1. Case Dimensions

Specifications subject to change without notice.

Maintenance

Smudges and dirt on the unit's window can interfere with the unit's performance. If the horizontal or vertical output windows require cleaning, use only a mild glass cleaner containing no ammonia. When cleaning the window, spray the cleaner onto a lint free, non-abrasive cleaning cloth then gently wipe the window clean.

If the unit's case requires cleaning, use a mild cleaning agent that does not contain strong oxidizing chemicals. Strong cleaning agents may discolor or damage the unit's exterior.

Scanner Components
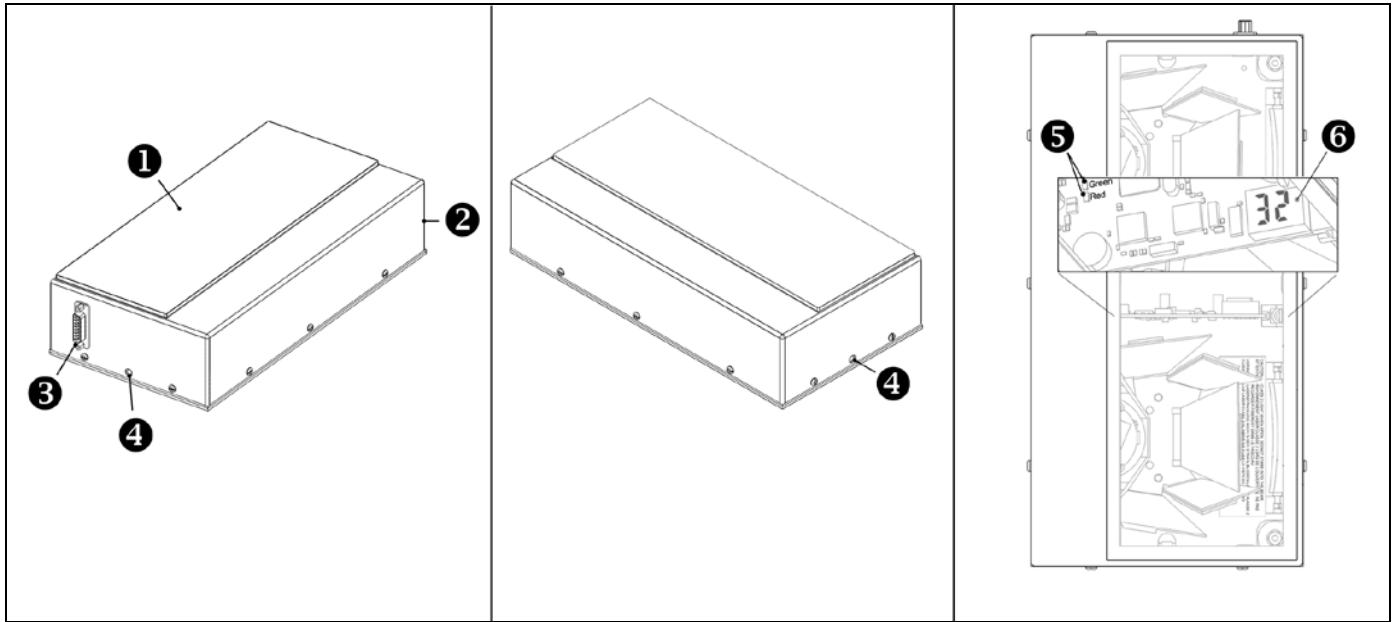
Figure 2. Scanner Components

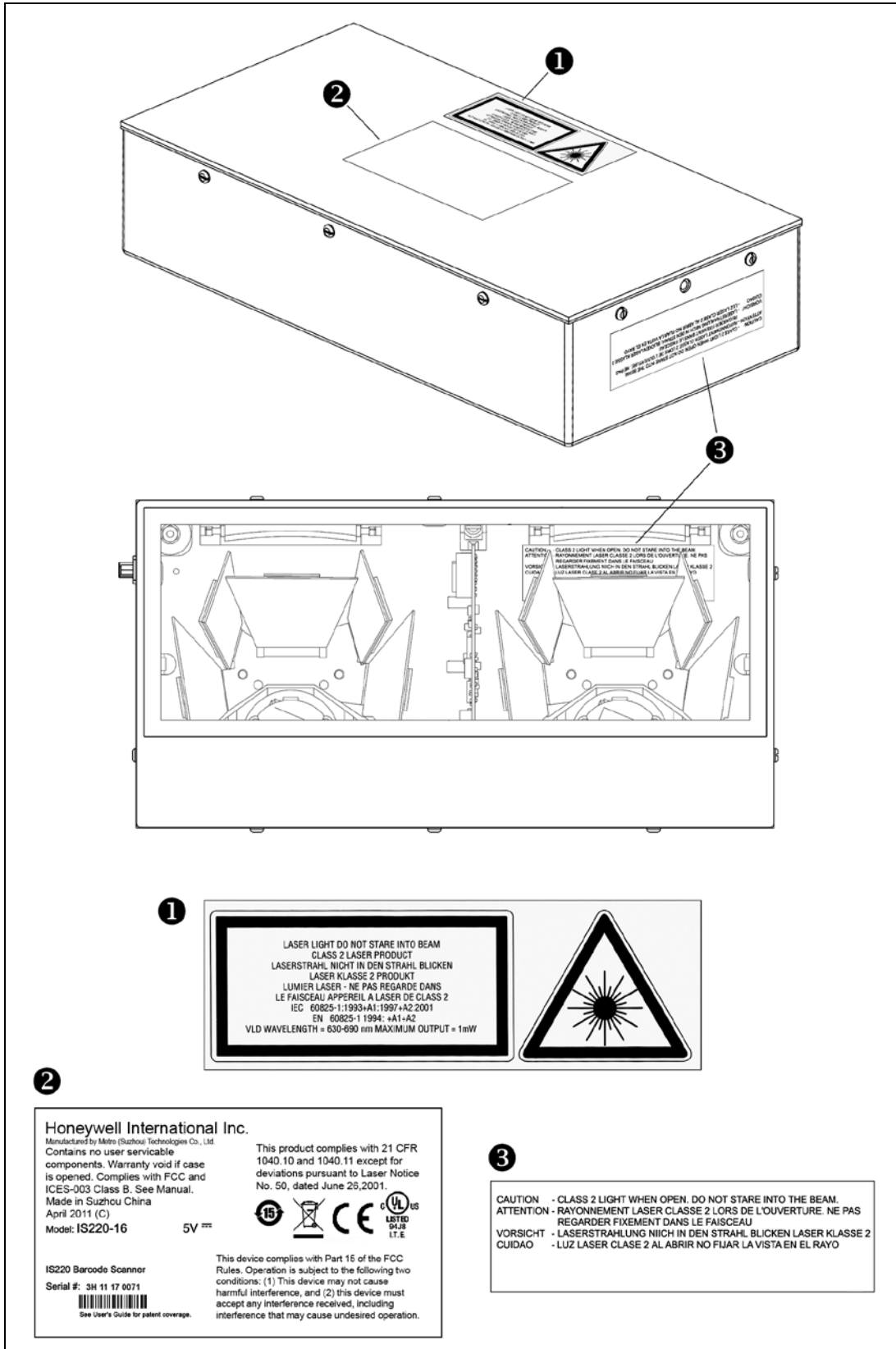| No.	Description
❶	Hardened Glass Window (Laser Aperture)
❷	Black Metal Housing
❸	15-pin, Male D-Sub Connector for Communication/Power Cable Connection
❹	Two, PEM B-M5-2 Mounting Holes Provided
❺	Red and Green LED
❻	Diagnostic Indicator Display (Two-Digit Error Code Display)

Labels

Figure 3. Label Locations and Examples

Indicators

Audible Indicators

When the IS220 is in operation, it provides audible feedback. These sounds indicate the status of the scan engine.

One Beep

The scan engine will beep once when it first receives power, the red LED will flash and the scanner will beep once. The red LED will remain on for the duration of the beep. The scan engine is ready to scan.

When the scanner successfully reads a bar code, the red LED will flash and the scanner beeps once (if configured to do so). If the LED does not flash, then the bar code has not been successfully read.

Razzberry Tone

This is a failure indicator. Refer to Failure Indicators on the next page.

Two Beeps - On Power Up

When a Flash ROM upgrade is needed, the scanner will beep twice followed by alternating flashes of the red and green LEDs.

Three Beeps - During Operation

When the scan engine enters configuration mode, the red LED will flash and the unit will simultaneously beep three times. The green and red LEDs will continue to flash while in configuration mode. Upon exiting configuration mode the scanner will beep three times and the LEDs will stop flashing.

When configured, three beeps can also indicate a communications timeout during normal scanning mode.

When using one-code programming, the scanner will beep three times (in the current selected tone), followed by a short pause then by a high tone and a low tone. This indicates the single configuration bar code has successfully configured the scan engine.

Three Beeps - On Power Up

This is a failure indicator. Refer to Failure Indicators on the next page.

Visual Indicators

Steady Green

When the laser is active the green LED is illuminated. The green LED will remain illuminated until the laser is deactivated.

During the power save mode, the laser will turn on and turn off. During this period, the green LED will remain illuminated.

Steady Green and a Single Red Flash

When the scanner successfully reads a bar code, the red LED will flash and the scanner will beep once. If the red LED does not flash or the scanner does not beep once, then the bar code has not been successfully read (default mode).

Steady Green and Steady Red

After a successful scan the scanner transmits the data to the host device. Some communication modes require that the host inform the scanner when data is ready to be received. If the host is not ready to accept the information, the scanner's red LED will remain on until the data can be transmitted.

Steady Green and Flashing Red

This indicates that the scan engine is in configuration mode.

Figure 4. Green and Red LEDs

Steady Red, Green Off

This indicates that the laser is off and the scan engine is waiting for communication from the host.

Failure Indicators

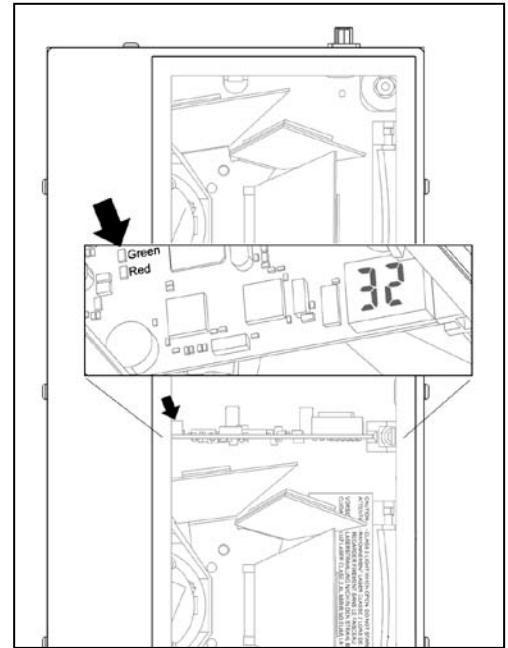### Flashing Green and One Razzberry Tone

This indicates that the scanner has experienced a laser subsystem failure. The scanner will try up to 3 times to correct the failure condition. If the laser subsystem continues to fail, that subsystem (left or right) will be shut down and an error indication will be shown on the Diagnostic Indicator Display. This error stays on the display until corrected. If the remaining subsystem is still operational, scanning will continue using the operational components.

Flashing Green and Red and Two Razzberry Tones

This indicates that the scanner has experienced a motor subsystem failure. The scanner will try up to 3 times to correct the failure condition. If the motor subsystem continues to fail, that subsystem (left or right) will be shut down and an error indication will be shown on the Diagnostic Indicator Display. This error stays on the display until corrected. If the remaining subsystem is still operational, scanning will continue using the still operational components.

Continuous Razzberry Tone with Both LEDs Off

If, upon power up, the scanner emits a continuous razzberry tone, then the scanner has an electronic failure. Return the unit for repair at an authorized service center.

Three Beeps - On Power Up

If the scanner beeps 3 times on power up then, the nonvolatile memory that holds the scanner configuration has failed. Return the unit for repair at an authorized service center.

Diagnostic Indicator Display

There is a two-digit error code display located on the center printed circuit board (see illustration below). The following is a list of possible error codes and their meanings. Some errors will require immediate scanner maintenance.

Error Code	Description
01	Reserved
02	RAM ERROR – The scanner's Random Access Memory (RAM) is tested as faulty. Return the unit for repair at an authorized service center.
03	PROGRAM ERROR – The scanner's software program is failing. Return the unit for repair.
05	CONFIGURATION ERROR – The non-volatile configuration memory did not agree with the data last saved. Default configuration data is then used and the scanner continues operating. This error is also accompanied by 3 beeps. This error will remain during operation as a reminder that this power cycle is scanning against a default-generated configuration.
06	COMMUNICATION ERROR - The RS232 data line is being held active. This causes the scanner to read a "break" signal constantly and continuous attempts are made to enter MetroSet configuration mode. A short on the RX Data line can cause this condition. It can also be the result of a laptop in power save mode. The scanner will abort attempts to enter configuration mode after a short timeout. The scanner can automatically recover from this condition once the short in the RX Data line is corrected.
21	LASER #1 (left) ERROR – The laser in the left scanning subsystem denotes a failure. The scanner will try three times to correct the laser operation. If the laser error persists, the left scanning subsystem will be shut down and error code 21 will remain on the *diagnostic indicator display*. If the right scanning subsystem is still healthy, it will remain active and scanning until the unit can be scheduled for repair at an authorized service center.
22	LASER #2 (right) ERROR – The laser in the right scanning subsystem denotes a failure. The scanner will try three times to correct the laser operation. If the laser error persists, the right scanning subsystem will be shut down and error code 22 will remain on the *diagnostic indicator display*. If the left scanning subsystem is still healthy, it will remain active and scanning until the unit can be scheduled for repair at an authorized service center.

Figure 5. Diagnostic Indicator Display

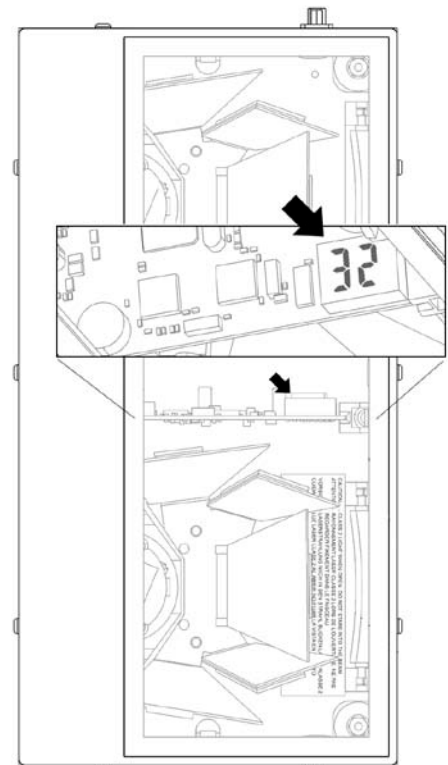|	
31	MOTOR #1 (left) ERROR – The motor in the left scanning subsystem denotes a failure. The scanner will try three times to correct the motor operation. If the motor error persists, the left scanning subsystem will be shut down and error code 31 will remain on the *diagnostic indicator display*. If the right scanning subsystem is still healthy, it will remain active and scanning until the unit can be scheduled for repair at an authorized service center.
32	MOTOR #2 (right) ERROR – The motor in the right scanning subsystem denotes a failure. The scanner will try three times to correct the motor operation. If the motor error persists, the right scanning subsystem will be shut down and error code 32 will remain on the *diagnostic indicator display*. If the left scanning subsystem is still healthy, it will remain active and scanning until the unit can be scheduled for repair at an authorized service center.

Depth of Field
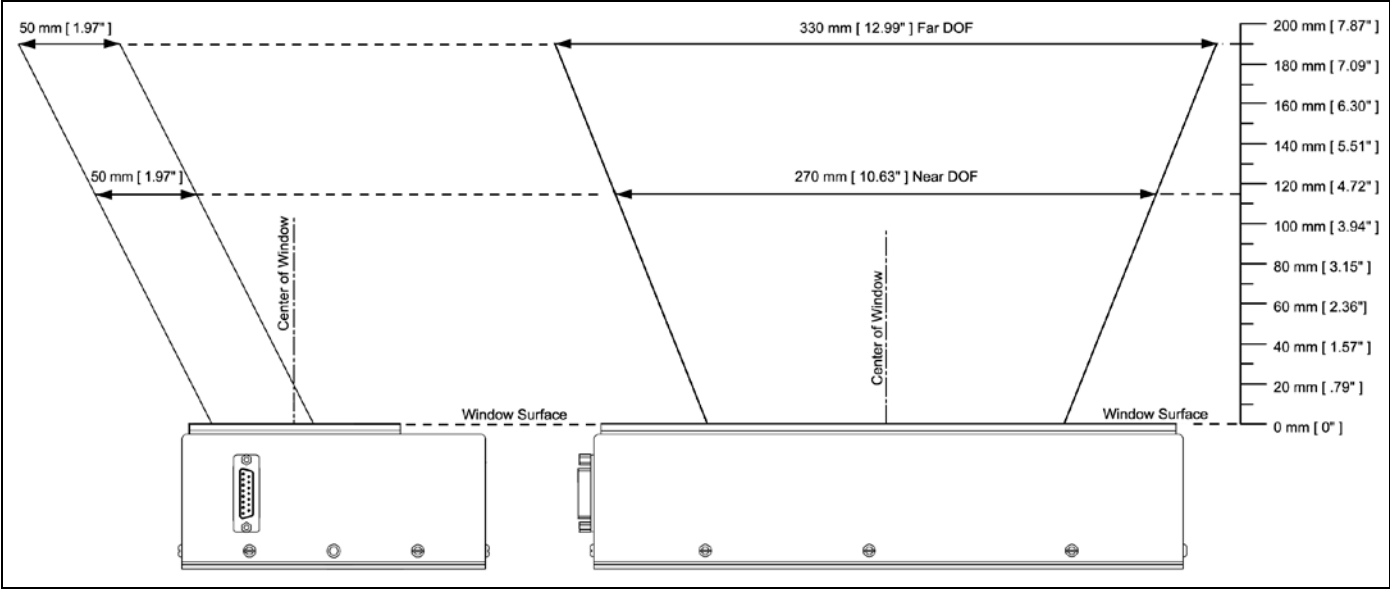
Figure 6. Depth of Field

Specifications subject to change without notice.

Troubleshooting Guide

The following guide is for reference purposes only. Contact a customer service representative to preserve the limited warranty terms.

SYMPTOMS	POSSIBLE CAUSE(S)	SOLUTION
No LEDs, No beep or No motor spin.	No power is being supplied to the scanner.	Check the transformer, outlet and power strip. Make sure the cable is plugged into the scanner.
No LEDs, No beep.	No power is being supplied to the scanner from host.	Some host systems cannot supply enough current to power an IS220. Use the power supply included with the scanner.
The unit beeps 3 times on power up.	There has been a Non-volatile RAM failure.	Contact a service representative if the unit will not hold the programmed configuration.
The unit razzes continuously on power up.	There has been a diagnostic failure.	Contact a service representative if the unit will not function.
At power up, there is a Razz tone and the green LED flashes.	There has been a VLD failure.	Contact a service representative.
At power up, there is a Razz tone and both LEDs flash.	There has been a scanner motor failure.	Contact a service representative.
There are multiple scans upon presentation of a bar code.	The same symbol timeout is set too short.	Adjust the same symbol timeout for a longer time.
The unit powers up, but does not beep.	The beeper is disabled.	Enable the beeper.

SYMPTOMS	POSSIBLE CAUSE(S)	SOLUTION
The unit powers up, but does not scan and/or beep.	The unit is scanning a particular symbology that is not enabled.	UPC/EAN is enabled by default. Verify that the type of bar code being read has been enabled.
	The scanner has been configured for a character length lock, or a minimum length and the bar code being scanned does not satisfy the configured criteria.	Verify that the bar code being scanned falls into the configured criteria. *Typical of Non-UPC/EAN codes. The scanner defaults to a minimum of 4 character bar code.*
The unit scans a bar code, but locks up after the first scan (the red LED stays on).	The scanner is configured to support some form of host handshaking but is not receiving the signal.	If the scanner is setup to support ACK/NAK, RTS/CTS, XON/XOFF or D/E, verify that the host cable and host are supporting the handshaking properly.
The unit scans, but the data transmitted to the host is incorrect.	The scanner's data format does not match the host system requirements.	Verify that the scanner's data format matches the host systems requirements. Make sure that the scanner is connected to the proper host port.
The unit beeps for some bar codes and NOT for others of the same bar code symbology.	The print quality of the bar code is suspect.	Check the print mode. The type of printer could be the problem. Change print settings. For example change the print mode to econo or high speed.
	Check the character length lock.	
	The aspect ratio of the bar code is out of tolerance.	

SYMPTOMS	POSSIBLE CAUSE(S)	SOLUTION
The unit beeps for some bar codes and NOT for others of the same bar code symbology.	The bar code may have been printed incorrectly.	Check if it is a check digit/character/or border problem.
	The scanner is not configured correctly for the type of bar code.	Check if the check digits are set properly.
	The minimum symbol length setting does not work with the bar code.	Check if the correct minimum symbol length is set.
The unit is not transmitting each character.	The configuration is not set correctly.	Increase the interscan code delay setting. Adjust if the F0 break is transmitted. It may be necessary to try this in both settings.
Alpha characters show as lower case.	The computer is in Caps Lock mode.	Enable the *Caps Lock detect* setting of the scanner to detect whether the PC is operating in Caps Lock.
Power-up OK and scans OK but does not communicate properly to the host.	Com port at the host is not working or configured properly.	Check to make sure that the baud rate and parity of the scanner and the communication port match and the program is looking for "RS-232" data.
	Com port not operating properly.	
	Cable is not connected to the proper com port.	
The host is receiving data but the data does not look correct.	The scanner and host may not be configured for the same interface font.	Check that the scanner and the host are configured for the same interface font.
Characters are being dropped.	Intercharacter delay needs to be added to the transmitted output.	Add some intercharacter delay to the transmitted output by using the MetroSelect Configuration Guide (MLPN 00-02407).

Design Specifications

Operational

Light Source:	Two, Visible Laser Diodes @ 650 nm
Laser Power:	1 mW per VLD
Scan Pattern:	10 fields of 4 parallel lines (for ladder and picket fence)
Number of Scan Lines:	40
Scan Speed:	4000 scan lines per second +/- 5%
Depth of Scan Field, Near:	115 mm (4.5") from window surface, pattern offset
Depth of Scan Field, Far:	190 mm (7.5") from window surface, pattern offset
Minimum Bar Width:	0.2 mm (8.0 mil)
Decode Capability:	Autodiscriminates all standard 1-D barcodes.
System Interface:	RS232
Print Contrast:	35% minimum reflectance difference
Number of Characters Read:	Up to 80 data characters. The maximum number will vary based on symbology and density.
Audible Indicators:	Internal beeper
Visual Indicators *(Default Settings)*:	Green LED = Laser on, ready to scan
	Red LED = Good read, decoding

Mechanical

Length:	295 mm
Width:	150 mm
Depth:	75 mm
Weight:	2.5 Kg maximum excluding cable
Termination:	15-pin, Male D-sub connector with screw locks
Mounting:	Two, M5 tapped holes are provided for mounting purposes

Electrical

Input Voltage:	5VDC ± 0.25V
Operating Power:	6.25W typical @ 5VDC
Operating Current:	1.25A typical
DC Transformers:	Class II; 5VDC @1.5A
Laser Class 2:	IEC 60825-1:1993+A1:1997+A2:2001
EMC:	FCC, ICES-003 & EN 55022 Class B

Environmental

Temperature:	Operating = 0°C to 40°C (32°F to 104°F)
	Storage = -40°C to 60°C (-40°F to 140°F)
Humidity:	5% to 95% relative humidity , non-condensing
Contaminants:	Sealed to resist airborne particulate contaminants
Ventilation:	None required

Specifications subject to change without notice.

Upgrading the Flash ROM Firmware

The IS220 is part of Honeywell's line of scanners with flash upgradeable firmware. The upgrade process requires, a new firmware file supplied to the customer by a customer service representative and MetroSet2 software♦. A personal computer running Windows 95 or greater with an available RS232 serial or USB port is required to complete the upgrade.

To upgrade the firmware in the IS220:

1. Plug the scanner into a serial communication port on the host system.
2. Start the MetroSet2 software.
3. Click on the plus sign (+) next to *Industrial Scanners* to expand the supported scanner list.
4. Choose the *IS220* from the list.
5. Click on the *Configure IS220 Scanner* button.
6. Choose *Utility, Flash Main Processor* from the options list located on the left side of the screen.
7. Click on the *Open File* button in the Flash Utility window.
8. Locate and open the flash upgrade file.
9. Select the COM port that the scanner is connected to on the host system.
10. Verify the settings listed in the Flash Utility window.
11. Click on the *Flash Scanner* button to begin the flash upgrade.
12. A message will appear on the screen when the upgrade is complete.

♦   MetroSet2 is available for download, at no additional cost, from www.honeywellaidc.com.

Default Settings

Communication Parameters

Many functions of the scanner can be "configured" - that is, enabled or disabled. The scanner is shipped from the factory configured to a set of default conditions. The default parameter of the scanner has an asterisk (*) in the charts on the following pages. If an asterisk is not in the default column then the default setting is Off or Disabled. Every interface does not support every parameter. If the interface supports a parameter listed in the charts on the following pages, a check mark will appear.

Parameter	Default	RS232
UPC/EAN	*	✓
Code 128		✓
Code 93		✓
Codabar		✓
Interleaved 2 of 5 (ITF)		✓
MOD 10 Check on ITF		✓
Code 11		✓
Code 39		✓
Full ASCII Code 39		✓
MOD 43 CD on Code 39		✓
Transmit Mode 43 CD		✓
Paraff		✓
Paraff Lead "A"		✓
Allow Paraff Failures		✓
French PC Terminal		✓
MSI-Plessey		✓
Airline (15 digit) 2 of 5		✓
Airline (13 digit) 2 of 5		✓
Matrix 2 of 5		✓
Telepen		✓
UK Plessey		✓
STD 2 of 5		✓
MSI-Plessey 10/10 Check Digit		✓
MSI-Plessey MOD 10 Check Digit		✓
ITF Symbol Lengths	Variable	✓
ITF Minimum Symbol Length	6	✓
Symbol Length Lock	None	✓
Minimum Symbol Length	4	✓
Trioptic		✓
GS1 DataBar Enable		✓

Parameter	Default	RS232
GS1 DataBar ID "]e0"	*	✓
GS1 DataBar App ID "01"	*	✓
GS1 DataBar Check Digit	*	✓
GS1 DataBar Expanded Enable		✓
Expanded ID "]e0"	*	✓
GS1 DataBar Limited Enable		✓
GS1 DataBar Limited ID "]e0"	*	✓
GS1 DataBar Limited App ID "01"	*	✓
GS1 DataBar Limited Check Digit	*	✓
Beeper Tone	Normal	✓
Beep Transmit Sequence	Before Transmit	✓
Beeper Volume	Loudest	✓
Communication Timeout	None	✓
Razzberry Tone on Timeout		✓
Three Beeps on Timeout		✓
No Beeps on Timeout	*	✓
Fast Beep		✓
Beep Twice on Supplements		✓
No Beeps on Timeout	*	✓
5 Retries Before Timeout		✓
Timeout In …	2 secs.	✓
Laser Off Between Records		✓
Variable Laser Off Delay	5 - 635 msec	✓
Flash LED on Good Scan	*	✓
Reverse LED Convention		✓
Flash LED on Good Scan	*	✓
Enter Power Save Mode	10 mins.	✓
Blink Power Save Mode	*	✓
Laser OFF Power Save Mode		✓
Laser & Motor OFF Power Save Mode		✓
Dual Action Power Save Mode #1		✓
Dual Action Power Save Mode #2		✓
Same Symbol Rescan Timeout: 500 msecs Programmable in 50 msec steps (MAX 6.35 seconds)	*	✓
Intercharacter Delay Programmable in 1 msec steps (MAX 255 msecs)	1 msecs	✓
Number of Scan Buffers	1	✓
UPC GTIN-14 Format		✓
EAN-8 Enable	*	✓
Transmit EAN-8 Check Digit	*	✓

Parameter	Default	RS232
Convert EAN-8 to EAN-13		✓
EAN-13 Enable	*	✓
Transmit EAN-13 Check Digit	*	✓
UPC-A Enable	*	✓
Convert UPC-A to EAN-13		✓
Transmit UPC-A Check Digit	*	✓
Transmit UPC-A Number System	*	✓
Transmit UPC-A Manufacturers ID.	*	✓
Transmit UPC-A Item ID	*	✓
UPC-E Enable	*	✓
Empand UPC-E		✓
Transmit UPC-E Lead '0'	*	✓
Transmit UPC-E Check Digit		✓
Disable UPC-E Auto Redundancy	*	✓
Transmit Codabar Start/Stop Characters		✓
Codabar CLSI		✓
Dual Field Codabar		✓
Tab Between Dual field Codabar		✓
Codabar CLSI Check Digit		✓
Codabar 7-Check Check Digit		✓
Codabar Mod-16 Check Digit		✓
Transmit MSI Plessey Check Digits		✓
Number of MSI Plessey Check Digits	0	✓
UK Plessey A to X Convert		✓
UK Plessey Special 12 Character Format		✓
Transmit UK Plessey Check Digit		✓
EAN 128 Enable		✓
Enable French Pharma		✓
Enable Matrix 2 of 5 Check Digit		✓
Enable Hong Kong 2 of 5		✓
Enable Alpha Telepen		✓
Telepen Convert Lead '^L' to 'E'		✓
Enable Code 11 Check Digit		✓
Parity	Space	✓
Baud Rate	19200	✓
8 Data Bits		✓
7 Data Bits	*	✓
Stop Bits	2	✓
RTS / CTS Enabled		✓

Parameter	Default	RS232
Message RTS		✓
Character RTS	*	✓
ACK / NAK		✓
O / N Handshaking		✓
Host Bell / Cancel		✓
Xon / Xoff		✓
No Transmit Without DTR Present		✓
French PC Terminal Emulation		✓
"D/E" Disable Command		✓
"Z/R" Disable Command		✓
"F/L" Laser Command	*	✓
"M/O" Motor Enable Commands		✓
Beep on Bell		✓
Razz on 'z'		✓
Activate on DTR		✓
Activate on DC2 Character		✓
Xmit No Read Message on DC2 Timeout		✓
No Transmit LED During No Read Message		✓
Programmable "No Read" Message		✓
Recv "I" = Transmit "METROLOGIC"		✓
Recv "i" = Transmit Scanner ID Byte		✓
STX Prefix		✓
TAB Prefix		✓
Metrologic Prefix		✓
UPC Prefix		✓
ETX Suffix		✓
TAB Suffix		✓
Carriage Return Suffix	*	✓
Line Feed Suffix	*	✓
UPC Suffix		✓
Transmit LRC		✓
Start LRC on 1st Byte		✓
Start LRC on 2nd Byte		✓
'c' Prefix for UPC		✓
'$' Prefix for UPC		✓
Programmable Prefix Characters	10 avail	✓
Programmable Suffix Characters	10 avail	✓
Predefined Code ID Sets	Multiple Selections	✓
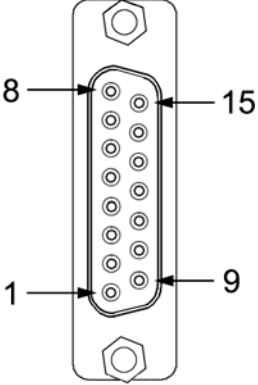
Parameter	Default	RS232
Programmable Prefix for Code Types		✓
Programmable Suffix for Code Types		✓
Programmable Code Lengths	7 avail	✓
Code Selects	7 avail	✓
Code Select Timeout 0.1 to 25.5 seconds	5 sec	✓
Replace 1 Character in Transmission		✓
Razz on Code Select Timeout	*	✓
Japan Dual Field Code Selects		✓
EAN-13 Only in Japan Dual Field		✓
Two Digit Supplements		✓
Five Digit Supplements		✓
Require Supplements		✓
Remote Supplement Support		✓
Two Digit Redundancy		✓
Five Digit Redundancy		✓
Enable Coupon Code 128		✓
Transmit Coupon ']C1'	*	✓
Group Separator	*	✓
Coupon Code Can Begin with '4'		✓
Enable EAN-99 Coupon Code		✓
Bookland		✓
Convert Bookland to ISBN		✓
Reformat ISBN		✓
Transmit ISBN Check Digit		✓
Bookland 977 2-Digit Supp Required		✓
378 / 379 Supplements		✓
414 / 419 Supplements		✓
434 / 439 Supplements		✓
Number System 2 Enables Supplements		✓
Number System 5 Enables Supplements		✓
100 msec to Find Supplement (100 - 800 msec)	*	✓
Allow Code ID's with Supplements		✓
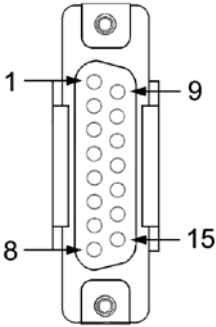
Scanner and Cable Terminations
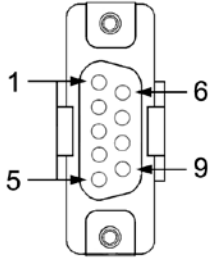
Scanner Pinout Connections

Standard 15-pin, Male D-Sub	
Pin / **Function**	

Pin	Function
1	Shield GND
2	TXD
3	RXD
4	DTR
5	GND
6	DSR
7	CTS
8	RTS
9	External LED
10	+5V
11	+5V
12	GND
13	GND
14	Earth Ground
15	External Beeper

Cable Connector Configurations

52-52548 and 52-52547 Communication/Power Cable

Standard 15-pin, Female D-Sub		Standard 9-pin, Female D-Sub	
Pin	Function	Pin	Function
1	Shield GND	1	N/C
2	TXD	2	TXD
3	RXD	3	RXD
4	DTR	4	DTR
5	GND	5	GND
6	DSR	6	DSR
7	CTS	7	CTS
8	RTS	8	RTS
9	N/C	9	N/C
10	+5V		
11	+5V		
12	GND		
13	GND		
14	Lug		
15	N/C		

Limited Warranty

Honeywell International Inc. ("HII") warrants its products and optional accessories to be free from defects in materials and workmanship and to conform to HII's published specifications applicable to the products purchased at the time of shipment. This warranty does not cover any HII product which is (i) improperly installed or used; (ii) damaged by accident or negligence, including failure to follow the proper maintenance, service, and cleaning schedule; or (iii) damaged as a result of (A) modification or alteration by the purchaser or other party, (B) excessive voltage or current supplied to or drawn from the interface connections, (C) static electricity or electro-static discharge, (D) operation under conditions beyond the specified operating parameters, or (E) repair or service of the product by anyone other than HII or its authorized representatives.

This warranty shall extend from the time of shipment for the duration published by HII for the product at the time of purchase ("Warranty Period"). Any defective product must be returned (at purchaser's expense) during the Warranty Period to HII factory or authorized service center for inspection. No product will be accepted by HII without a Return Materials Authorization, which may be obtained by contacting HII. In the event that the product is returned to HII or its authorized service center within the Warranty Period and HII determines to its satisfaction that the product is defective due to defects in materials or workmanship, HII, at its sole option, will either repair or replace the product without charge, except for return shipping to HII.

EXCEPT AS MAY BE OTHERWISE PROVIDED BY APPLICABLE LAW, THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER COVENANTS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, ORAL OR WRITTEN, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT.

HII'S RESPONSIBILITY AND PURCHASER'S EXCLUSIVE REMEDY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT WITH NEW OR REFURBISHED PARTS. IN NO EVENT SHALL HII BE LIABLE FOR INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, AND, IN NO EVENT, SHALL ANY LIABILITY OF HII ARISING IN CONNECTION WITH ANY PRODUCT SOLD HEREUNDER (WHETHER SUCH LIABILITY ARISES FROM A CLAIM BASED ON CONTRACT, WARRANTY, TORT, OR OTHERWISE) EXCEED THE ACTUAL AMOUNT PAID TO HII FOR THE PRODUCT. THESE LIMITATIONS ON LIABILITY SHALL REMAIN IN FULL FORCE AND EFFECT EVEN WHEN HII MAY HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH INJURIES, LOSSES, OR DAMAGES. SOME STATES, PROVINCES, OR COUNTRIES DO NOT ALLOW THE EXCLUSION OR LIMITATIONS OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

All provisions of this Limited Warranty are separate and severable, which means that if any provision is held invalid and unenforceable, such determination shall not affect the validity of enforceability of the other provisions hereof. Use of any peripherals not provided by the manufacturer may result in damage not covered by this warranty. This includes but is not limited to: cables, power supplies, cradles, and docking stations. HII extends these warranties only to the first end-users of the products. These warranties are non-transferable.

The duration of the limited warranty for the IS220 is two (2) year(s). The accessories have a 90 day limited warranty from the date of manufacture.

Laser and Product Safety

Cautions

⚠ Caution

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure. Under no circumstances should the customer attempt to service the laser scanner. Never attempt to look at the laser beam, even if the scanner appears to be nonfunctional. Never open the scanner in an attempt to look into the device. Doing so could result in hazardous laser light exposure. The use of optical instruments with the laser equipment will increase eye hazard.

⚠ Atención

La modificación de los procedimientos, o la utilización de controles o ajustes distintos de los especificados aquí, pueden provocar una luz de láser peligrosa. Bajo ninguna circunstancia el usuario deberá realizar el mantenimiento del láser del escáner. Ni intentar mirar al haz del láser incluso cuando este no esté operativo. Tampoco deberá abrir el escáner para examinar el aparato. El hacerlo puede conllevar una exposición peligrosa a la luz de láser. El uso de instrumentos ópticos con el equipo láser puede incrementar el riesgo para la vista.

⚠ Attention

L'emploi de commandes, réglages ou procédés autres que ceux décrits ici peut entraîner de graves irradiations. Le client ne doit en aucun cas essayer d'entretenir lui-même le scanner ou le laser. Ne regardez jamais directement le rayon laser, même si vous croyez que le scanner est inactif. N'ouvrez jamais le scanner pour regarder dans l'appareil. Ce faisant, vous vous exposez à une rayonnement laser qú êst hazardous. L'emploi d'appareils optiques avec cet équipement laser augmente le risque d'endommagement de la vision.

⚠ Achtung

Die Verwendung anderer als der hier beschriebenen Steuerungen, Einstellungen oder Verfahren kann eine gefährliche Laserstrahlung hervorrufen. Der Kunde sollte unter keinen Umständen versuchen, den Laser-Scanner selbst zu warten. Sehen Sie niemals in den Laserstrahl, selbst wenn Sie glauben, daß der Scanner nicht aktiv ist. Öffnen Sie niemals den Scanner, um in das Gerät hineinzusehen. Wenn Sie dies tun, können Sie sich einer gefährlichen Laserstrahlung aussetzen. Der Einsatz optischer Geräte mit dieser Laserausrüstung erhöht das Risiko einer Sehschädigung.

⚠ Attenzione

L'utilizzo di sistemi di controllo, di regolazioni o di procedimenti diversi da quelli descritti nel presente Manuale può provocare delle esposizioni a raggi laser rischiose. Il cliente non deve assolutamente tentare di riparare egli stesso lo scanner laser. Non guardate mai il raggio laser, anche se credete che lo scanner non sia attivo. Non aprite mai lo scanner per guardare dentro l'apparecchio. Facendolo potete esporVi ad una esposizione laser rischiosa.   L'uso di apparecchi ottici, equipaggiati con raggi laser, aumenta il rischio di danni alla vista.

Class 2 Laser Product
Laser Klasse 2 Produkt
Appareil A Laser De Classe 2

Notices

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.

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/TV technician for help

Notice
This Class B digital apparatus complies with Canadian ICES-003.

Avertissement
Cet appareil numérique de la class B est conforme à la norme NMB-003.

Index

Customer Support

Technical Assistance

If you need assistance installing or troubleshooting your device, please call your distributor or the nearest technical support office:

North America/Canada

Telephone: (800) 782-4263
E-mail: hsmnasupport@honeywell.com

Latin America

Telephone: (803) 835-8000
Telephone: (800) 782-4263
E-mail: hsmlasupport@honeywell.com

Brazil

Telephone: +55 (21) 3535-9100
Fax: +55 (21) 3535-9105
E-mail: brsuporte@honeywell.com

Mexico

Telephone: 01-800-HONEYWELL (01-800-466-3993)
E-mail: soporte.hsm@honeywell.com

Europe, Middle East, and Africa

Telephone: +31 (0) 40 7999 393
Fax: +31 (0) 40 2425 672
E-mail: hsmeurosupport@honeywell.com

Hong Kong

Telephone: +852-29536436
Fax: +851-2511-3557
E-mail: aptechsupport@honeywell.com

Singapore

Telephone: +65-6842-7155
Fax: +65-6842-7166
E-mail: aptechsupport@honeywell.com

China

Telephone: +86 800 828 2803
Fax: +86-512-6762-2560
E-mail: aptechsupport@honeywell.com

Japan

Telephone: +81-3-6730-7344
Fax: +81-3-6730-7222
E-mail: aptechsupport@honeywell.com

Online Technical Assistance

You can also access technical assistance online at www.honeywellaidc.com.

Product Service and Repair

Honeywell International Inc. provides service for all its products through service centers throughout the world. To obtain warranty or non-warranty service, contact the appropriate location below to obtain a Return Material Authorization number (RMA #) before returning the product.

North America

Telephone: (800) 782-4263
E-mail: hsmnaservice@honeywell.com

Latin America

Telephone: (803) 835-8000
Telephone: (800) 782-4263
Fax: (239) 263-9689
E-mail: laservice@honeywell.com

Brazil

Telephone: +55 (21) 3535-9100
Fax: +55 (21) 3535-9105
E-mail: brservice@honeywell.com

Mexico

Telephone: 01-800-HONEYWELL (01-800-466-3993)
Fax: +52 (55) 5531-3672
E-mail: mxservice@honeywell.com

Europe, Middle East, and Africa

Telephone: +31 (0) 40 2901 633
Fax: +31 (0) 40 2901 631
E-mail: euroservice@honeywell.com

Hong Kong

Telephone: +852-29536436
Fax: +851-2511-3557
E-mail: apservice@honeywell.com

Singapore

Telephone: +65-6842-7155
Fax: +65-6842-7166
E-mail: apservice@honeywell.com

China

Telephone: +86 800 828 2803
Fax: +86-512-6762-2560
E-mail: apservice@honeywell.com

Japan

Telephone: +81-3-6730-7344
Fax: +81-3-6730-7222
E-mail: apservice@honeywell.com

Online Product Service and Repair Assistance

You can also access product service and repair assistance online at www.honeywellaidc.com.

Honeywell Scanning & Mobility

9680 Old Bailes Road
Fort Mill, SC 29707
www.honeywellaidc.com