Honeywell

HF680

Hand-free Area-Imaging Scanner

User's Guide

Disclaimer

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Customer Support

Technical Assistance

If you need assistance installing or troubleshooting your device, please contacts us by using one of the methods below:
Knowledge Base: www.hasknowledgebase.com
Our knowledge Base provides thousands of immediate solutions. If the knowledge Base cannot help, our Technical Support Portal (see below) provides an easy way to report your problem or ask your question.
Technical Support Portal: www.hsmsupportportal.com
The technical Support Portal not only allows you to report your problem, but it also provides immediate solutions to your technical issues by searching our Knowledge Base. With the Portal, you can submit and track your questions online and send and receive attachments.
Web form: www.hsmcontactsupport.com
You can contact our technical support team directly by filling out our online support. Enter your contact details and the description of the question/problem.
Telephone: www.honeywellaidc.com/locations
For our latest contact information, please check our website at the link above.

Product Service and Repair

Honeywell International Inc. provides service for all of its products through service centers throughout the world. To obtain warranty or non-warranty service, please visit www.honeywellaidc.com and select **Support>Contact Service and Repair** to see your region's instructions on who to obtain a Return Material Authorization (RMA#). You should do this prior to returning the product.

Limited Warranty

Refer to www.honeywellaidc.com/warranty_information for your product's warranty information.

Send Feedback

Your feedback is crucial to the continual improvement of documentation. To provide feedback about this manual, contact the Honeywell Technical Communications department at ACSHSMTechnicalCommunications@Honeywell.com.

Getting Started

About This Manual

This User's Guide provides installation and programming instructions for the HF510 corded area-imaging scanner. Product specifications, dimensions, warranty, and customer support information are also included.

Honeywell barcode scanners are factory programmed for the most common terminal and communications settings. If you need to change these settings, programming is accomplished by scanning the bar codes in this guide.

An asterisk (*) next to an option indicates the default setting.

Unpacking Your Device

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

• Check for damage during shipment. Report damage immediately to the carrier who delivered the carton.
• Make sure the items in the carton match your order.
• Save the shipping container for later storage or shipping.

Connecting the Device

Connecting with USB

A scanner can be connected to the USB port of a computer.

1. Connect the appropriate interface cable to the device first, then to the computer.

**HF680 USB
Connection:**
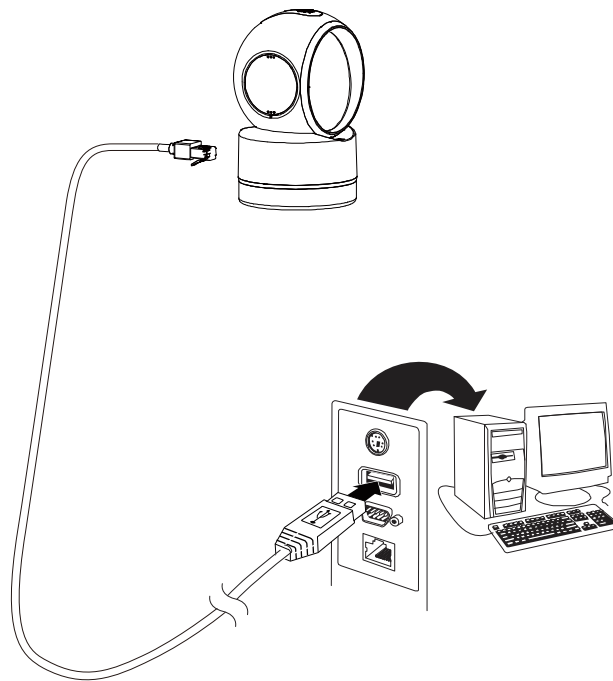
2. The scanner beeps.

3. Verify the scanner operation by scanning a barcode from the Sample Symbols in the back of this manual.

The unit defaults to a USB PC Keyboard.

Connecting with RS232 Serial Port

1. Turn off power to the terminal/computer.

2. Connect the appropriate interface cable to the device.

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

HF680
RS232 Serial Port Connection:
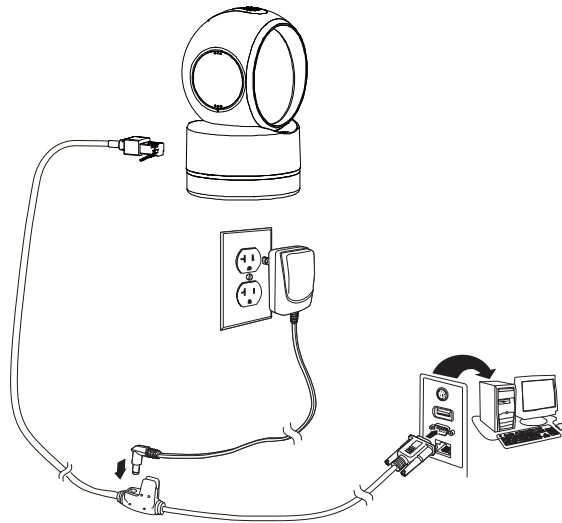
Power Adapter (if included)
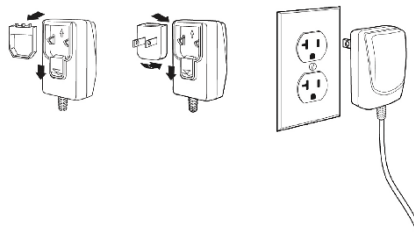
 Note: The power supply must be ordered separately, if needed.

3. Plug the serial connector into the serial port on your computer. Tighten the two screws to secure the connector to the port.

4. Once the scanner has been fully connected, power up the computer.

This interface programs 115,200 baud, 8 data bits, no parity, and 1 stop bit.

Barcode Configuration Guide

Your new scanner has been configured at the factory with a set of default communication protocol. Since many host systems have unique formats and protocol requirements, Honeywell provides a wide range of configurable features that may be selected with the use of this barcode configuration guide.

Once the configuration is completed, the scanner stores the settings into the Flash and the settings won't lose when the power is turned off.

Symbol Key	
* (asterisk)	Default Feature
~ (tilde)	Feature requires the Multi-Code Configuration Method, See section "Barcode Configuration Method".

Barcode Configuration Methods

This scanner can be barcode configured in two ways: the Single-Code Method and the Multi-Code Method.

Single-Code Method

Most features can be enabled or disabled using the Single-Code Method.
1. Power up the scanner.
2. Scan the barcode(s) for the desired feature(s).
3. Observe a multi-tones, "save setting" beep that indicates the configuration has been saved.

Multi-Code Method

All features can be enabled or disabled using the Multi-Code Method.
A features marked with a "~" requires the Multi-Code Method.
1. Power up the scanner.
2. Scan the Enter/Exit Configuration Mode barcode. [3 beeps]
3. Scan the barcode(s) for the desired feature(s). [1 beep]
4. Scan the Enter/Exit Configuration Mode barcode [3 beeps] and save new configuration.

Enter/Exit Configuration Mode

Note: To abort a configuration change, power off the scanner before scanning the Enter/Exit Configuration Mode barcode.

Factory Default Settings

⚠️ *This selection erases all your settings and resets the scanner to the original factory defaults.*

Scan the Recall Default barcode. This will erase all previous settings and return to the scanner's factory default settings.

Recall Default

Get Firmware Revision Number

Scan the following barcode, scanner will output the software revision number.

Firmware Revision

Get Product Serial Number

Scan the following barcode, scanner will output the product serial number. It's a unique number to each unit.

Product Serial Number

Operating Modes Settings

*IR Trigger Mode

Note: In this mode, the unit work with IR Trigger to detect object. When IR is trigger on, it will start to scan and decode bar code symbols. After 5 Seconds, IR trigger is trigger off, the unit will enter a power save mode and stop decoding. the Bar code data will be output in a format determined by the selected

Presentation Mode

Note: In this mode, the unit work with optical trigger & IR Trigger to detect barcode symbol. When optical trigger is trigger on, it will start to scan and decode bar code symbols. After 5 Seconds, optical trigger will trigger off, the unit will enter a power save mode and stop decoding. the Bar code data will be output in a format determined by the selected terminal interface.

Streaming Presentation Mode

*Note: In this mode, the unit will keep to scan and decode bar code symbols all the time. Bar code data will be output in a format determined by the selected terminal interface.
In the case where a menu bar code symbol is decoded, the scanner will switch operation to the respective mode.*

Programming the Interface

Introduction

This chapter describes how to program your system for the desired interface.

Currently the scanner support three kinds of communication interface, RS232, USB HID and USB Serial.

You can scan the following barcodes to switch the scanner into specific interface.

You should also change the cable after that.

(1)   RS232

RS232 Interface

(2)   USB HID

USB HID Interface

(3)   USB Serial

USB Serial Interface

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

RS232 Settings

Factory default settings of RS232 interface are in the below table.

Option	Setting
Baud Rate	115,200 bps
Data Format	8 data bits, no parity bit, 1 stop bit

1. Baud Rates

A "Baud" or "Baud Rate" is the speed at which data is transmitted. Select a Baud for the scanner that matched the host device.

*115200

57600

38400

19200

9600

4800

2400

1200

600

||| || ||||| | || ||||| ||| ||

300

2. Parity Features

A parity bit is an extra data bit used for help catch data transmission errors. The scanner's parity must match the host's parity.

||| || ||||| |||||| ||| ||

*No Parity

||| || ||||| |||| ||| | || ||

Odd Parity

||| || ||||| |||| ||| | || ||

Even Parity

3. Data/Stop Bits

Choose the number of bits transmitted for each character.

||| || ||||| | ||||| | ||| ||

7 Data Bits

||| || ||||| || ||||||| ||

*8 Data Bits

||| || ||||| |||||| ||| ||

*1 Stop Bits

||| || ||||| |||||| || || ||

2 Stop Bits

4. Hardware Handshaking

When enable this feature, scanner will output a Request to Send (RTS) signal and wait for a Clear to Send(CTS) signal before transmitting data.

Enable RTS/CTS Handshaking

*Disable RTS/CTS Handshaking

*Character RTS/CTS
Activate/Deactivate RTS
signal for each character.

Message RTS/CTS
Activate RTS before sending the first character and leave it active until after the last character has been transmitted.

Invert RTS Polarity

*Standard RTS Polarity
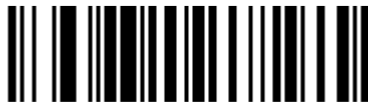
Invert CTS Polarity

*Standard CTS Polarity

Activate RTS, Do not wait for CTS.

*Activate RTS,wait for CTS

5. Software Handshaking

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Enable XON/XOFF Handshaking

The scanner will stop
transmission whenever an
XOFF(ASCII 13H) is received.
Transmission will resume after
an XON(ASCII 11H) is
received.

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*Disable XON/XOFF Handshaking

*Note: When Disabled this feature,
please do not transfer
XOFF(ASCII 13H) to the scanner.
The may cause the scanner
abnormal.
If sent, transfer DC2(ASCII 12H)
can recover the scanner.*

ACK/NAK Feature

If enable this feature, after transmitting data, wait for an ACK(06H) or a NAK(15H) response from the host.
If ACK is received, the scanner will beep 1 time and complete the communications cycle and looks for more barcodes.
If NAK is received, retransmit the last set of barcode data and waits for ACK/NAK again.

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Enable ACK/NAK

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*Disable ACK/NAK

‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Support BEL/CAN in ACK/NAK

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*Ignore BEL/CAN in ACK/NAK

If enable this feature, when BEL(07H) is received, the scanner beeps 3 times and exits the communications loop.
If a CAN(18H) is received, then the scanner will exit the communications loop silently.

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Enable 5 Retries on
ACK/NAK Time Out

Allow up to 5 NAK
Retransmissions of the data
Before dropping out of the
Communications loop.

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*Disable 5 Retries on
ACK/NAK Time Out

Do not limit retransmission
To 5 NAK cycles.

*Note: The ACK/NAK Time Out value equals to the communication time outs value.
     Please refer to the section "Communication Time Out Options".*

Input/output Settings

Illumination LED Setup

Use these codes to control illumination LED ON/OFF.

126015

*Illumination LED ON

126005

Illumination LED OFF

Illumination LED Level

Use these codes to control illumination level

229300

Low level

229310

Mid-level

229320

*High level

Illumination LED Mode

Use these codes to control illumination mode

229306

paper illumination

229316

*paper & Cellphone

229326

Pure cellphone

Illumination wakeup in Presentation

Use these codes to wakeup illumination to fast detect object, only work for presentation mode

143611

*Enable

143601

Disable

Indicate LED Mode

Use these codes to control indicate LED mode

118500

*Led always on
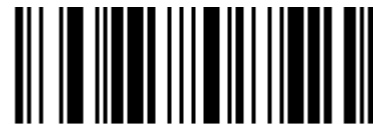
118510

Led always off

BEEPER

Use these codes to control beeper ON/OFF

318575

* Beep enable (2700HZ)

318505

Beeper disable

IR SWITCH

Use these codes to control IR ON/OFF

128400

*IR on

128410

IR off

IR interval time Outs

These numbers determine the minimal time interval between twice continued IR triggering.

829410

Interval time out 50 ms

829450

*Interval time out 250 ms

429470

Interval time out 350 ms

229420

229422

Interval time out 500 ms

229432

229430

*Interval time out 750 ms

Same Symbol Time Outs

These numbers determine the length of time before a barcode can be rescanned after it is removed from the scan field. Single code fixed settings in msecs of No, 50,100,200,750,1200(1.2 sec),2000(2.0 sec) and infinite are available. User configurable values can be set in user-configurable increments of 50 msecs to 6350 msecs (6.35 sec).

Note: This feature only take effect in Streaming Presentation Mode.

No Same Symbol Time Out

Same Symbol Time Out 100 msecs

Same Symbol Time Out 200 msecs

Same Symbol Time Out 500 msecs

* Same Symbol Time Out 750 msecs

Same Symbol Time Out 1200 msecs

Same Symbol Time Out 2000 msec

Infinite Same Symbol Time Out

The scanner will not repetitively
Scan the same barcode.

~ Variable Same Symbol
  Time Out

Using the Multi-Code Method, scan this barcode and a code byte sequence from section "Code Byte Usage" to set the same symbol time-out duration. Values range from 001 to 127(50 to 6350 msecs).

Inter-Character Data Transmission Delays

Use these codes to select the amount of delay between sending data characters and "Bar Code" records from the scanner to the host. This helps prevent the scanner from overflowing host input buffers.

*1 msec Inter-Character Delay

10 msec Inter-Character Delay

25 msec Inter-Character Delay

~ Variable msec
Inter-Character Delay

Scan this barcode and sequence of code bytes in Section "Code Byte Usage" to set the delay. Delay range can be set from 1 to 255 msecs.
Refer to the Multi-Code Configuration Method.

Note: This feature only applies for RS232 Interface.

Communication Time Out Options

Enable Communications Time Outs

*Disable Communications Time Outs

~ Variable Communications Time Out

Unit: 50 ms.

* Default Communications Time Out (2 secs)
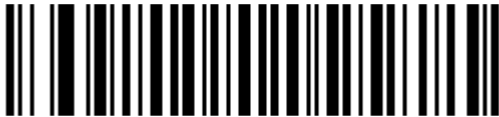
Short Communications Time Out (1 sec)

Long Communications Time Out (4 secs)

Three Beeps on Time Out

* No Beeps on Time Out

Razzberry Tone on Time Out

* No Razzberry Tone on Time Out

Data Editing

CR/LF Suffix Settings

1, CR Suffix Setting

*Enable CR Suffix   Disable CR Suffix

2, LF Suffix Settings

*Enable LF Suffix   Disable LF Suffix

3, ignore http/https

128411   128401

Enable ignore http   *Disable ignore http

Symbologies

In this section, contains all the configuration barcodes to switch each symbology on/off.

1D Barcode Type Settings

0, Disable all symbology

Disable all symbology

1, UPC/EAN

*Enable UPC/EAN

Disable UPC/EAN

*Enable UPC-A

Disable UPC-A

*Enable UPC-E

Disable UPC-E

*Enable EAN-13

Disable EAN-13

*Enable EAN-8
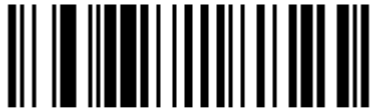
Disable EAN-8

|||| ||| ||||| |||||||| |||||

Enable EAN-UCC
Composite Codes

|||| ||| ||||| |||||||| |||||

Note: Enable this feature may cause normal EAN or UCC barcode decode fail.

2, Code128

||| ||| ||||| |||||| |||||

*Enable

||| ||| ||||| |||||| |||||

Disable

3, Coupon Code 128

||| ||| ||||| |||||| |||||

Enable

||| ||| ||||| |||||| |||||

*Disable

4, EAN99 Coupon

||| ||| ||||| |||||| |||||

Enable

||| ||| ||||| |||||| |||||

*Disable

5, Number System 4 Coupon Code 128

||| ||| ||||| |||||| |||||

Enable

||| ||| ||||| |||||| |||||

*Disable

Note: To enable this feature, you should enable coupon code 128 first.

6, Code39

||| ||| ||||| |||||| |||||

*Enable

||| ||| ||||| |||||| |||||

Disable

||| ||| ||||| |||||| |||||

Enable MOD 43
Check on Code 39

||| ||| ||||| |||||| |||||

*Disable MOD 43
Check on Code 39

||||||||||

Transmit Mode 43
Check Digit on Code 39

||||||||||

*Do Not Transmit Mode 43
Check Digit on Code 39

||||||||||

Enable Full ASCII Code 39

||||||||||

*Disable Full ASCII Code 39

||||||||||

Enable PARAF Support
(Italian Pharmaceutical Codes)

||||||||||

*Disable PARAP Support

||||||||||

*Allow PARAF Codes Only

||||||||||

Allow Non-PARAF Codes

Note: To configure this feature, you should enable code39 and enable PARAF support first.

7, Trioptic Code

||||||||||

Enable

||||||||||

*Disable

8, Interleaved 2 of 5(ITF)

||||||||||

*Enable

||||||||||

Disable

9, Standard 2 of 5

||||||||||

*Enable

||||||||||

Disable

10, Matrix 2 of 5

*Enable

Disable

*Disable checksum checking

Enable checksum checking

Enable checksum checking and strip
the checksum from the result string

11, Airline 2 of 5

Enable

*Disable

12, Codabar
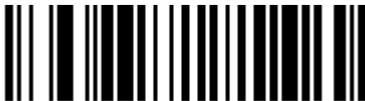
*Enable

Disable

13, Code 93

*Enable

Disable

14, Code 11

*Enable

Disable

15, Telepen

Enable

*Disable

16, MSI Plessey

Enable

*Disable

17, RSS 14

Enable

*Disable

*Transmit RSS 14
Check Digit

Do Not Transmit RSS 14
Check Digit

*Transmit RSS 14
Application ID

Do Not Transmit RSS 14
Application ID

Transmit RSS 14
Symbology ID

*Do Not Transmit RSS 14
Symbology ID

18, RSS Limited

||||||||||| (barcode)
Enable

||||||||||| (barcode)
*Disable

||||||||||| (barcode)
*Transmit RSS Limited
Check Digit

||||||||||| (barcode)
Do Not Transmit RSS Limited
Check Digit

||||||||||| (barcode)
*Transmit RSS Limited
Application ID

||||||||||| (barcode)
Do Not Transmit RSS Limited
Application ID

||||||||||| (barcode)
Transmit RSS Limited
Symbology ID

||||||||||| (barcode)
*Do Not Transmit RSS Limited
Symbology ID

19, GS1 DataBar Expanded

||||||||||| (barcode)
Enable

||||||||||| (barcode)
*Disable

||||||||||| (barcode)
Transmit RSS Expanded
Symbology ID

||||||||||| (barcode)
Do Not Transmit RSS Expanded
Symbology ID

Postal Codes Settings

Note: Only one Postal Code selection can be active at one time.

1, Hong Kong 2 of 5

Enable

*Disable

2, Australian Post

Enable

*Disable

3, British Post

Enable

*Disable

4, Canadian Post

Enable

*Disable

5, Japanese Post

Enable

*Disable

6, Korean Post

||||||||||| (barcode)

Enable

||||||||||| (barcode)

*Disable

||||||||||| (barcode)

Koread Post Reverse

||||||||||| (barcode)

*Enable

||||||||||| (barcode)

Disable

7, Netherlands Post
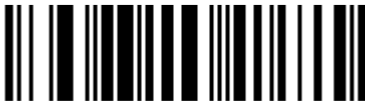
||||||||||| (barcode)

Enable

||||||||||| (barcode)

*Disable

8, Postnet Code

||||||||||| (barcode)

Enable

||||||||||| (barcode)

*Disable

9, Planet Code

||||||||||| (barcode)

Enable

||||||||||| (barcode)

*Disable

2D Barcodes Type Settings

1, PDF417

Enable

*Disable

2, Micro-PDF417

Enable

*Disable

3, Codablock A

Enable

*Disable

4, Codablock F

Enable

*Disable

5, Data Matrix

Enable

*Disable

6, Aztec Code

‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Enable

‖‖‖‖‖‖‖‖‖‖‖‖‖‖

*Disable

7, MaxiCode

‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Enable

‖‖‖‖‖‖‖‖‖‖‖‖‖‖

*Disable

8, QR Code

‖‖‖‖‖‖‖‖‖‖‖‖‖‖

*Enable

‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Disable

9, Micro QR Code

‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Enable

‖‖‖‖‖‖‖‖‖‖‖‖‖‖

*Disable

10, Dot peen DPM Code

‖‖‖‖‖‖‖‖‖‖‖‖‖‖
200910

Dot peen DPM Enable

‖‖‖‖‖‖‖‖‖‖‖‖‖‖
200900

*Disable

‖‖‖‖‖‖‖‖‖‖‖‖‖‖
200920

Reflective DPM Enable

11, Reversed barcode

*Normal barcode

Only Reverse barcode

Both Normal and reverse barcode

Product Specifications

MECHANICAL
Dimensions (L x W x H): 85 mm x 88mm x 139 mm
Weight: 278 +/-10g

ELECTRICAL
Input Voltage: 5 VDC ±0.5V
Operating Power: 2.0 W (400 mA @ 5V)
Standby Power: 0.85 W (170 mA @ 5V)
Host System Interfaces: USB, RS-232

ENVIRONMENTAL
Operating Temperature: -10° C to 40° C (14° F to 104° F)
Storage Temperature: -40° C to 60° C (-40° F to 140° F)

Humidity: 0% to 95% relative humidity, non-condensing
Drop: Designed to withstand 1 m drops
Light Levels: 100,000 Lux

SCAN PERFORMANCE
Scan Pattern: Area Image (1280 x 800 pixel array)
Motion Tolerance: 2.5 m/s for 13 mil UPC at optimal focus
Scan Angle: Horizontal: 47° ; Vertical: 30°
Print Contrast: 20% minimum reflectance difference
Pitch, Skew: 60° , 70°
Decode Capability: Reads standard 1D, PDF, 2D Symbologie (Decode capabilities dependent on kit configuration).
Warranty: 3-year factory warranty

TYPICAL PERFORMANCE*	
NARROW WIDTH	DEPTH OF FIELD
5.0 mil Code 39	0 mm – 100 mm
6.7 mil PDF	0 mm – 110 mm
10 mil DM	0 mm – 90 mm
13 mil UPC-A	0 mm – 210 mm
20 mil Code 39	0 mm – 300 mm
20mil QR	0 mm – 210 mm
GUARANTEED PERFORMANCE*	
NARROW WIDTH	DEPTH OF FIELD
5.0 mil Code 39	10 mm – 70 mm
6.7 mil PDF	0 mm – 80 mm
10 mil DM	5 mm – 80 mm
13 mil UPC-A	0 mm – 165 mm
20 mil Code 39	0 mm – 220 mm
20mil QR	0 mm – 180 mm

* Resolution: 1D: 3 mil
             2D: 6.7 mil
 * Performance may be impacted by barcode quality and environmental conditions

Standard Cable Pinouts

Note: The following pin assignments are not compatible with Youjie legacy products. Use of a cable with improper pin assignments may lead to damage to the unit. Use of any cables not provided by the manufacturer may result in damage not covered by your warranty.

Serial Output

10 Pin RJ41 Modular Plug

Pin	Signal
1	Cable shield
2	Cable select
3	Supply ground
4	Transmit data
5	Receive data - serial data to scanner
6	CTS
7	+5V power
8	RTS
9	
10	

USB

10 Pin Modular Plug

Pin	Signal
1	Cable shield
2	Cable select
3	Supply ground
4	
5	
6	
7	+5V power
8	
9	Data +
10	Data -
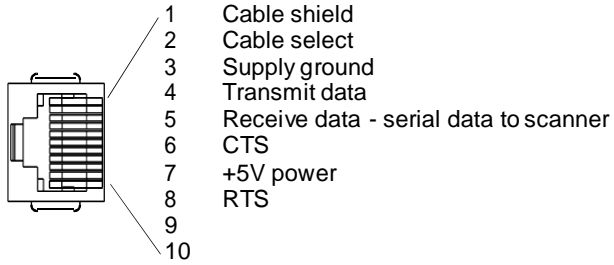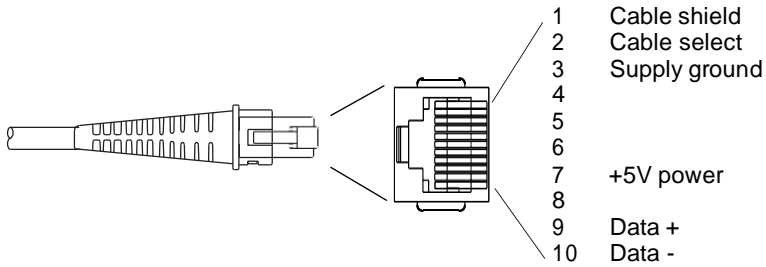
Maintenance and Troubleshooting

Repairs

Repairs and/or upgrades are not to be performed on this product. These services are to be performed only by an authorized service center (see Technical Assistance on page Customer Support).

Maintenance

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

Cleaning the Device

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

The scanner housing may also be cleaned the same way.

⚠ **Caution:**

Do not submerge the scanner in water. The scanner's housing is not watertight.

Do not use abrasive wipes or tissues on the scanner's window – abrasive wipes may scratch the window. Never use solvents (e.g., alcohol or acetone) on the housing or window – solvents may damage the finish or the window.

Inspecting Cords and Connectors

Inspect the interface cable and connector for wear or other signs of damage. A badly worn cable or damaged connector may interfere with scanner operation. Contact your distributor for information about cable replacement. Cable replacement instructions are on page Customer Support.

Replacing Cable in the Scanner

The standard interface cable is attached to the scanner with a 10-pin modular connector. When properly seated, the connector is held in the scanner by a flexible retention tab. The interface cable is designed to be field replaceable.

• Order replacement cables from Honeywell or from an authorized distributor.
• When ordering a replacement cable, specify the cable part number of the original interface cable.

Troubleshooting the Scanner

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

Is the power on?

If the white LED isn't illuminated, check that:

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

Is the scanner having trouble reading your symbols?

If the scanner isn't reading symbols well, check that the scanner window is clean and that the symbols:

- Aren't smeared, rough, scratched, or exhibiting voids.
- Aren't coated with frost or water droplets on the surface.
- Are enabled in the scanner or in the decoder to which the scanner connects.

Is the bar code displayed but not entered?

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

- You need to program a suffix. Programming a suffix enables the scanner to output the bar code data plus the key you need (such as "CR") to enter the data into your application. Refer to CR/LF Suffix Setting beginning on page 4-1 for further information.

Does the scanner read the bar code incorrectly?

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

- The scanner may not be programmed for the appropriate terminal interface.
  For example, you scan "12345" and the host displays "@es%."

Reprogram the scanner with the correct Plug and Play bar code. See Programming the Interface beginning on page 2-1.

- The scanner may not be programmed to output your bar code data properly.
  For example, you scan "12345" and the host displays "A12345B."

Reprogram the scanner with the proper symbology selections. See Chapter 5.

The scanner won't read your bar code at all.

1. Scan the sample bar codes in the back of this manual. If the scanner reads the sample bar codes, check that your bar code is readable.
   Verify that your bar code symbology is enabled (see Chapter 5).

If the scanner still can't read the sample bar codes, scan All Symbologies (see Chapter 5).

If you aren't sure what programming options have been set in the scanner, or if you want the factory default settings restored, refer to Factory Default Settings on page 1-5.

Code Byte Usage

User configurable prefixes, symbol length and other features that use these code bytes for configuration, require that the scanner be in configuration mode.
Scan the Enter/Exit Configuration Mode barcode before starting the configuration cycle.
Single code configuration mode does not work for these multi-code sequences.

Enter/Exit Configuration Mode

Example

Use configurable inter-character delays in section "Inter-Character Data Transmission Delays" can be saved into the scanner by scanning the 3 digit decimal equivalent of the ASCII character into the appropriate character location with the code byte barcodes.

To set the inter-character delay to 15ms scan the following barcodes in order:

1. Enter/Exit Configuration Mode   (3 beeps)
2. Configurable "~ Variable msec Inter-Character Delay"   (1 beep)
3. Code Byte 0   (1 beep)
4. Code Byte 1   (2 beep)
5. Code Byte 5   (3 beeps)
6. Enter/Exit Configuration Mode   (3 beeps)

Code Byte 0

Code Byte 1

Code Byte 2

Code Byte 3

Code Byte 4

Code Byte 5

Code Byte 6

Code Byte 7

Code Byte 8

Code Byte 9

A

Reference Charts

Symbology Charts

Note: "m" represents the AIM modifier character. Refer to International Technical Specification, Symbology Identifiers, for AIM modifier character details.

Prefix/Suffix entries for specific symbologies override the universal (All Symbologies, 99) entry.

Linear Symbologies

Symbology	AIM	
	ID	**Possible modifiers (*m*)**
All Symbologies		
Codabar	]F*m*	0-1
Code 11	]H3	
Code 128	]C*m*	0, 1, 2, 4
Code 32 Pharmaceutical (PARAF)	]X0	
Code 39 (supports Full ASCII mode)	]A*m*	0, 1, 3, 4, 5, 7
TCIF Linked Code 39 (TLC39)	]L2	
Code 93 and 93i	]G*m*	0-9, A-Z, a-m
EAN	]E*m*	0, 1, 3, 4
EAN-13 (including Bookland EAN)	]E0	
EAN-13 with Add-On	]E3	
EAN-13 with Extended Coupon Code	]E3	
EAN-8	]E4	
EAN-8 with Add-On	]E3	
GS1		
GS1 DataBar	]e*m*	0
GS1 DataBar Limited	]e*m*	
GS1 DataBar Expanded	]e*m*	
GS1-128	]C1	
2 of 5		
China Post (Hong Kong 2 of 5)	]X0	
Interleaved 2 of 5	]I*m*	0, 1, 3
Matrix 2 of 5	]X0	
NEC 2 of 5	]X0	
Straight 2 of 5 IATA	]R*m*	0, 1, 3
Straight 2 of 5 Industrial	]S0	
MSI	]M*m*	0, 1
UPC		0, 1, 2, 3, 8, 9, A, B, C
UPC-A	]E0	

Symbology	AIM	
	ID	Possible modifiers (*m*)
UPC-A with Add-On	]E3	
UPC-A with Extended Coupon Code	]E3	
UPC-E	]E0	
UPC-E with Add-On	]E3	
UPC-E1	]X0	

2D Symbologies

Symbology	AIM	
	ID	Possible modifiers (*m*)
All Symbologies		
Aztec Code	]z*m*	0-9, A-C
Chinese Sensible Code (Han Xin Code)	]X0	
Codablock A	]O6	0, 1, 4, 5, 6
Codablock F	]O*m*	0, 1, 4, 5, 6
Code 49	]T*m*	0, 1, 2, 4
Data Matrix	]d*m*	0-6
GS1	]e*m*	0-3
GS1 Composite	]e*m*	0-3
GS1 DataBar Omnidirectional	]e*m*	0-3
MaxiCode	]U*m*	0-3
PDF417	]L*m*	0-2
MicroPDF417	]L*m*	0-5
QR Code	]Q*m*	0-6
Micro QR Code	]Q*m*	

Postal Symbologies

Symbology	AIM	
	ID	Possible modifiers (*m*)
All Symbologies		
Australian Post	]X0	
British Post	]X0	

Symbology	AIM	
	ID	Possible modifiers (*m*)
Canadian Post	]X0	
China Post	]X0	
InfoMail	]X0	
Intelligent Mail Bar Code	]X0	
Japanese Post	]X0	
KIX (Netherlands) Post	]X0	
Korea Post	]X0	
Planet Code	]X0	
Postal-4i	]X0	
Postnet	]X0	

ASCII Conversion Chart (Code Page 1252)

In keyboard applications, ASCII Control Characters can be represented in 3 different ways, as shown below. The CTRL+X function is OS and application dependent. The following table lists some commonly used Microsoft functionality. This table applies to U.S. style keyboards. Certain characters may differ depending on your Country Code/PC regional settings.

Non-printable characters		ASCII control	Keyboard Control + ASCII (CTRL+X) Mode		
				Windows Mode Control + X Mode On (KBDCAS2)	
DEC	HEX	Char	Control + X Mode Off (KBDCAS0)	CTRL + X	CTRL + X function
0	00	NUL	Reserved	CTRL+ @	
1	01	SOH	NP Enter	CTRL+ A	Select all
2	02	STX	Caps Lock	CTRL+ B	Bold
3	03	ETX	ALT Make	CTRL+ C	Copy
4	04	EOT	ALT Break	CTRL+ D	Bookmark
5	05	ENQ	CTRL Make	CTRL+ E	Center
6	06	ACK	CTRL Break	CTRL+ F	Find
7	07	BEL	Enter / Ret	CTRL+ G	
8	08	BS	*(Apple Make)*	CTRL+ H	History
9	09	HT	Tab	CTRL+ I	Italic
10	0A	LF	*(Apple Break)*	CTRL+ J	Justify
11	0B	VT	Tab	CTRL+ K	hyperlink
12	0C	FF	Delete	CTRL+ L	list, left align
13	0D	CR	Enter / Ret	CTRL+ M	
14	0E	SO	Insert	CTRL+ N	New
15	0F	SI	ESC	CTRL+ O	Open
16	10	DLE	F11	CTRL+ P	Print
17	11	DC1	Home	CTRL+ Q	Quit
18	12	DC2	PrtScn	CTRL+ R	
19	13	DC3	Backspace	CTRL+ S	Save
20	14	DC4	Back Tab	CTRL+ T	
21	15	NAK	F12	CTRL+ U	
22	16	SYN	F1	CTRL+ V	Paste
23	17	ETB	F2	CTRL+ W	

Non-printable characters		ASCII control	Keyboard Control + ASCII (CTRL+X) Mode		
				Windows Mode Control + X Mode On (KBDCAS2)	
DEC	HEX	Char	Control + X Mode Off (KBDCAS0)	CTRL + X	CTRL + X function
24	18	CAN	F3	CTRL+ X	
25	19	EM	F4	CTRL+ Y	
26	1A	SUB	F5	CTRL+ Z	
27	1B	ESC	F6	CTRL+ [	
28	1C	FS	F7	CTRL+ \	
29	1D	GS	F8	CTRL+]	
30	1E	RS	F9	CTRL+ ^	
31	1F	US	F10	CTRL+ -	
127	7F	⌂	NP Enter		

Lower ASCII Reference Table

Note: Windows Code page 1252 and lower ASCII use the same characters.

Printable Characters								
DEC	HEX	Character	DEC	HEX	Character	DEC	HEX	Character
32	20	<SPACE>	64	40	@	96	60	`
33	21	!	65	41	A	97	61	a
34	22	"	66	42	B	98	62	b
35	23	#	67	43	C	99	63	c
36	24	$	68	44	D	100	64	d
37	25	%	69	45	E	101	65	e
38	26	&	70	46	F	102	66	f
39	27	'	71	47	G	103	67	g
40	28	(	72	48	H	104	68	h
41	29	)	73	49	I	105	69	i
42	2A	*	74	4A	J	106	6A	j
43	2B	+	75	4B	K	107	6B	k
44	2C	,	76	4C	L	108	6C	l
45	2D	-	77	4D	M	109	6D	m
46	2E	.	78	4E	N	110	6E	n
47	2F	/	79	4F	O	111	6F	o
48	30	0	80	50	P	112	70	p
49	31	1	81	51	Q	113	71	q
50	32	2	82	52	R	114	72	r
51	33	3	83	53	S	115	73	s
52	34	4	84	54	T	116	74	t
53	35	5	85	55	U	117	75	u
54	36	6	86	56	V	118	76	v
55	37	7	87	57	W	119	77	w
56	38	8	88	58	X	120	78	x
57	39	9	89	59	Y	121	79	y
58	3A	:	90	5A	Z	122	7A	z
59	3B	;	91	5B	[	123	7B	{
60	3C	<	92	5C	\	124	7C		
61	3D	=	93	5D	]	125	7D	}
62	3E	>	94	5E	^	126	7E	~
63	3F	?	95	5F	_	127	7F	⌂

				Extended ASCII Characters		
DEC	**HEX**	**CP 1252**	**ASCII**	**Alternate Extended**		**PS2 Scan Code**
128	80	€	Ç	up arrow ↑		0x48
129	81		ü	down arrow ↓		0x50
130	82	‚	é	right arrow ⟶		0x4B
131	83	ƒ	â	left arrow ⟵		0x4D
132	84	„	ä	Insert		0x52
133	85	…	à	Delete		0x53
134	86	†	å	Home		0x47
135	87	‡	ç	End		0x4F
136	88	ˆ	ê	Page Up		0x49
137	89	‰	ë	Page Down		0x51
138	8A	Š	è	Right ALT		0x38
139	8B	‹	ï	Right CTRL		0x1D
140	8C	Œ	î	Reserved		n/a
141	8D		ì	Reserved		n/a
142	8E	Ž	Ä	Numeric Keypad Enter		0x1C
143	8F		Å	Numeric Keypad /		0x35
144	90		É	F1		0x3B
145	91	‘	æ	F2		0x3C
146	92	’	Æ	F3		0x3D
147	93	“	ô	F4		0x3E
148	94	”	ö	F5		0x3F
149	95	•	ò	F6		0x40
150	96	–	û	F7		0x41
151	97	—	ù	F8		0x42
152	98	˜	ÿ	F9		0x43
153	99	™	Ö	F10		0x44
154	9A	š	Ü	F11		0x57
155	9B	›	¢	F12		0x58
156	9C	œ	£	Numeric Keypad +		0x4E
157	9D		¥	Numeric Keypad -		0x4A
158	9E	ž	Pts	Numeric Keypad *		0x37
159	9F	Ÿ	ƒ	Caps Lock		0x3A
160	A0		á	Num Lock		0x45
161	A1	¡	í	Left Alt		0x38
162	A2	¢	ó	Left Ctrl		0x1D
163	A3	£	ú	Left Shift		0x2A
164	A4	¤	ñ	Right Shift		0x36
165	A5	¥	Ñ	Print Screen		n/a
166	A6	¦	ª	Tab		0x0F
167	A7	§	º	Shift Tab		0x8F
168	A8	¨	¿	Enter		0x1C
169	A9	©	⌐	Esc		0x01
170	AA	ª	¬	Alt Make		0x36
171	AB	«	½	Alt Break		0xB6
172	AC	¬	¼	Control Make		0x1D
173	AD		¡	Control Break		0x9D
174	AE	®	«	Alt Sequence with 1 Character		0x36
175	AF	¯	»	Ctrl Sequence with 1 Character		0x1D
176	B0	°	░			
177	B1	±	▒			
178	B2	²	▓			

DEC	HEX	CP 1252	ASCII	Alternate Extended	PS2 Scan Code
179	B3	³	│		
180	B4	´	┤		
181	B5	µ	╡		
182	B6	¶	╢		
183	B7	·	╖		
184	B8	¸	╕		
185	B9	¹	╣		
186	BA	º	║		
187	BB	»	╗		
188	BC	¼	╝		
189	BD	½	╜		
190	BE	¾	╛		
191	BF	¿	┐		
192	C0	À	└		
193	C1	Á	┴		
194	C2	Â	┬		
195	C3	Ã	├		
196	C4	Ä	─		
197	C5	Å	í		
198	C6	Æ	╞		
199	C7	Ç	╟		
200	C8	È	╚		
201	C9	É	╔		
202	CA	Ê	╩		
203	CB	Ë	╦		
204	CC	Ì	╠		
205	CD	Í	=		
206	CE	Î	╬		
207	CF	Ï	╧		
208	D0	Ð	╨		
209	D1	Ñ	╤		
210	D2	Ò	╥		
211	D3	Ó	╙		
212	D4	Ô	╘		
213	D5	Õ	╒		
214	D6	Ö	╓		
215	D7	×	╫		
216	D8	Ø	╪		
217	D9	Ù	┘		
218	DA	Ú	┌		
219	DB	Û	█		
220	DC	Ü	▄		
221	DD	Ý	▌		
222	DE	Þ	▐		
223	DF	ß	▀		
224	E0	à	α		
225	E1	á	ß		
226	E2	â	Γ		
227	E3	ã	π		
228	E4	ä	Σ		
229	E5	å	σ		
230	E6	æ	µ		

DEC	HEX	CP 1252	ASCII	Alternate Extended	PS2 Scan Code
			Extended ASCII Characters (Continued)		
231	E7	ç	⊤		
232	E8	è	Φ		
233	E9	é	Θ		
234	EA	ê	Ω		
235	EB	ë	δ		
236	EC	ì	∞		
237	ED	í	φ		
238	EE	î	ε		
239	EF	ï	∩		
240	F0	ð	≡		
241	F1	ñ	±		
242	F2	ò	≥		
243	F3	ó	≤		
244	F4	ô	⌠		
245	F5	õ	⌡		
246	F6	ö	÷		
247	F7	÷	≈		
248	F8	ø	°		
249	F9	ù	·		
250	FA	ú	·		
251	FB	û	√		
252	FC	ü	ⁿ		
253	FD	ý	²		
254	FE	þ	■		
255	FF	ÿ			

ISO 2022/ISO 646 Character Replacements

Code pages define the mapping of character codes to characters. If the data received does not display with the proper characters, it may be because the bar code being scanned was created using a code page that is different from the one the host program is expecting. If this is the case, select the code page with which the bar codes were created. The data characters should then appear properly.

Code Page Selection Method/Country	Standard	Keyboard Country	Honeywell Code Page Option
United States (standard ASCII)	ISO/IEC 646-IRV	n/a	1
Automatic National Character Replacement	ISO/IEC 2022	n/a	2 (default)
Binary Code page	n/a	n/a	3
Default "Automatic National Character replacement" will select the below Honeywell Code Page options for Code128, Code 39 and Code 93.			
United States	ISO/IEC 646-06	0	1
Canada	ISO /IEC 646-121	54	95
Canada	ISO /IEC 646-122	18	96
Japan	ISO/IEC 646-14	28	98
China	ISO/IEC 646-57	92	99
Great Britain (UK)	ISO /IEC 646-04	7	87
France	ISO /IEC 646-69	3	83

Code Page Selection Method/Country	Standard	Keyboard Country	Honeywell CodePage Option
Germany	ISO/IEC646-21	4	84
Switzerland	ISO /IEC 646-CH	6	86
Sweden / Finland (extended Annex C)	ISO/IEC 646-11	2	82
Ireland	ISO /IEC 646-207	73	97
Denmark	ISO/IEC 646-08	8	88
Norway	ISO/IEC 646-60	9	94
Italy	ISO/IEC 646-15	5	85
Portugal	ISO/IEC 646-16	13	92
Spain	ISO/IEC 646-17	10	90
Spain	ISO/IEC 646-85	51	91

Dec			35	36	64	91	92	93	94	96	123	124	125	126
Hex			23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
US	0	1	#	$	@	[	\	]	^	`	{	|	}	~
CA	54	95	#	$	à	â	ç	ê	î	ô	é	ù	è	û
CA	18	96	#	$	à	â	ç	ê	É	ô	é	ù	è	û
JP	28	98	#	$	@	[	¥	]	^	`	{	|	}	·
CN	92	99	#	¥	@	[	\	]	^	`	{	|	}	·
GB	7	87	£	$	@	[	\	]	^	`	{	|	}	~
FR	3	83	£	$	à	°	ç	§	^	µ	é	ù	è	¨
DE	4	84	#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß
CH	6	86	ù	$	à	é	ç	ê	î	ô	ä	ö	ü	û
SE/FI	2	82	#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
DK	8	88	#	$	@	Æ	Ø	Å	^		æ	ø	å	~
NO	9	94	#	$	@	Æ	Ø	Å	^	`	æ	ø	å	¯
IE	73	97	£	$	Ó	É	Í	Ú	Á	ó	é	í	ú	á
IT	5	85	£	$	§	°	ç	é	^	ù	à	ò	è	ì
PT	13	92	#	$	§	Ã	Ç	Õ	^	`	ã	ç	õ	°
ES	10	90	#	$	§	¡	Ñ	¿	^	`	°	ñ	ç	~
ES	51	91	#	$	·	¡	Ñ	Ç	¿	`	´	ñ	ç	¨

COUNTRY	Country Keyboard	Honeywell CodePage	ISO / IEC 646 National Character Replacements

Sample Symbols

UPC-A
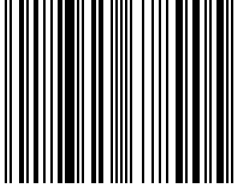
012345678905

Interleaved 2 of 5

1234567890

EAN-13

9 780330 290951

Code 128

Code 128
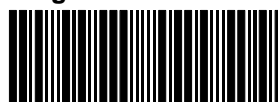
Code 39

BC321

Codabar
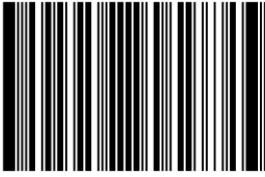
A13579B

Code 93

123456-9$

Straight 2 of 5 Industrial

123456

Matrix 2 of 5

01234567890

GS1 DataBar

(01)00123456789012

PDF417

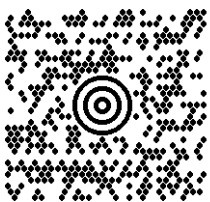Car Registration

Data Matrix

Test Symbol

QR Code

Numbers

Aztec

Package Label

MaxiCode

Test Message

Micro PDF417

Test Message

Postnet

Zip Code

4-CB (4-State Customer Bar Code)

‖ıₚ‖|ıₗ|ıₚₗₗ‖ₗ‖ıₗ|ₚ‖‖ₗ‖ₚₗ‖ₚₚₚ‖|‖ₗₚₚ‖‖ₚₚ‖‖‖ₚₚₚₗₗ|‖ₗₗ|ₚₗ‖ₗ|

01,234,567094,987654321,01234567891

ID-tag (UPU 4-State)

|ₗ|ₗ‖‖ₗ|ₗₗ|ₗ|ₗ|‖ₗₗₚₚₚₗ|ₗ|ₗ|‖‖ₗₗ|ₗ|ₚ|‖ₗₗₗ|‖ₗₚₚ‖|ₗₗ|ₗ|ₗ‖‖

J18CUSA8E6N062315014880T