

# WIRELESS RING<sup>®</sup> SCANNER

## Quick Guide

For full user's manual, please contact  
your local distributor.



FCC WARNING STATEMENT

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

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. To maintain compliance with FCC exposure compliance requirement, please follow operation instruction as documented in this manual. Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. 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.

LASER DEVICES

Complies with 21CFR1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.

EN60825-1: 2007  
IEC60825-1 (Ed. 2.0)



WARNING AND CAUTION

|                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | 1. Take any metals into contact with the terminals in connectors.<br>2. Use the scanner where any inflammable gases.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|              | If following condition occur, immediately power off the host computer, disconnect the interface cable, and contact your nearest dealer.<br>1. Smoke, abnormal odors or noises come from the scanner.<br>2. Drop the scanner so as to affect the operation or damage its housing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <br>Do Not | Do not do behavior below.<br>1. Put the scanner in places excessively high temperatures such as expose under direct sunlight.<br>2. Use the scanner in extremely humid area or drastic temperature changes.<br>3. Place the scanner in oily smoke or steam environment such as cooking range.<br>4. Be covered or wrapped up the scanner in bad-ventilated area such as under cloth or blanket.<br>5. Insert or drop foreign materials or water into scanning window or vents.<br>6. Using the scanner while hand is wet or damp.<br>7. Use the scanner with anti-slip gloves containing plasticizer and chemicals or organic solvents such as benzene, thinner, insecticide etc to clean the housing. Otherwise, it could not result fire and electrical shock but housing may be broken and injured.<br>8. Scratch or modify the scanner and bend, twist, pull or heat its interface cable.<br>9. Put heavy objects on interface cable.<br>Do not stare the light source from the scanning window or do not point the scanning window at other people's eyes or eyesight may be damaged by direct exposure under the light. |
|            | Do not put the scanner on an unstable or inclined plane.<br>The scanner may drop, creating injuries.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|            | Once the interface cable is damaged such as exposed or broken copper wires, stop using immediately and contact your dealer. Otherwise, it could result fire or electrical shock.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## INTRODUCTION



## SPECIFICATIONS

|              |                                         |
|--------------|-----------------------------------------|
| Sensor       | Linear Image Sensor                     |
| Resolution   | 4mil/ 0.1 mm                            |
| Indicator    | LED, Buzzer                             |
| PCS          | 30%                                     |
| Housing      | Plastic(PC+ABS)                         |
| Profile      | BT HID, USB HID, USB VCP, Memory        |
| Battery Life | 6000 scans (1 scan/ 5 sec)              |
| Charge Time  | 2.5 hours (fully charged)               |
| Radio        | Bluetooth 4.1 (Class2)                  |
| Coverage     | 10M/33ft. (line of sight)               |
| Symbologies  | All major 1D barcodes incl. GS1 Databar |

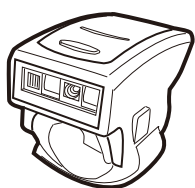
## BEEPER INDICATION

|                          |                                                                                                                                                                                              |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Single beep              | Good read                                                                                                                                                                                    |
| Single short beep        | The scanner reads a Code39 of ASCII in configuration procedure                                                                                                                               |
| Two beeps                | i. Wireless connection<br>ii. The scanner successfully reads a configuration barcode                                                                                                         |
| Three beeps              | Wireless disconnection                                                                                                                                                                       |
| Three short beeps        | i. The scanner reads a barcode while disconnected.<br>ii. The scanner reads an unexpected barcode during configuration procedure. (scan [ABORT] to abort and start over)<br>iii. Memory Full |
| Four beeps (Hi-Lo-Hi-Lo) | Out of range/Poor connection                                                                                                                                                                 |
| Five beeps               | Low power                                                                                                                                                                                    |

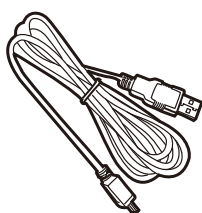
## LED INDICATION

|                 |                              |
|-----------------|------------------------------|
| Off             | Standby or Power off         |
| Flashing Blue   | Disconnected or Discoverable |
| One Green Flash | Good Read                    |
| Flashing Red    | Low power                    |
| Solid Red       | Charging                     |

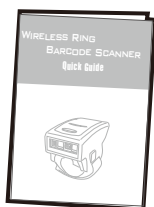
## OUT OF THE BOX



Wireless Ring  
Barcode Scanner



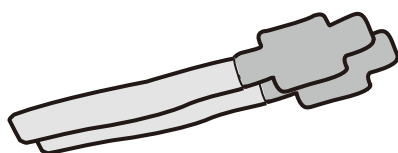
USB Charger Cable



Quick Guide

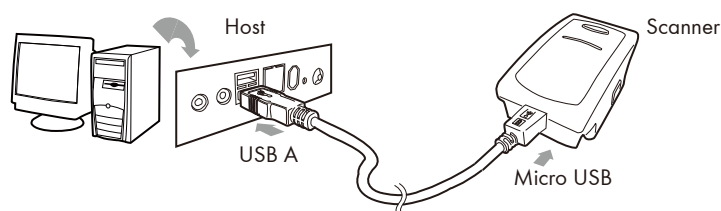


Laser Brightness  
Configuration Card



Spare Velcro Strap

## CHARGING THE BATTERY



1. Flip open the micro USB port on the scanner.
2. Insert the micro USB connector into the port on the scanner and USB A connector into a USB port on the host PC.
3. Keep charging until the red LED indicator turns off.

## STEP 1 - GETTING STARTED

---

1. Pull open the long end and insert your index finger through the loop.



2. Adjust and attach the long end for a comfortable fit.



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3. Clench your fist and use your thumb to tap the touch-activated trigger button. A gentle touch on the button will work; there is no need to press with force.



4. Aim at the barcode you wish to scan.



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## ATTENTION

1. If either your hand or the Velcro strap is soaking wet, the Laser beam may automatically light up without touch trigger. The scanner can still work well in this condition but it will waste battery power, so it is recommended to dry both your hand and the Velcro strap.
2. The following gloves have been tested to be working with the touch-activated button: latex examination glove, antistatic glove, white cotton glove (with or without latex coating), safety glove, and rubber glove. However, it is still recommended to operate with bare hand or thin glove to ensure the responsiveness of button.
3. Don't need to tighten Velcro strap too much. Just make the strap fit your finger so that the scanner will not easily move while being touched for trigger. We also suggest to release the strap from your finger for 1 minute after 2 hours of continuous use if your finger feels uncomfortable.

## STEP 2 - BUTTON PREFERENCE

Scan one of below configuration barcodes to determine which touch-sensing button to enable according to your habit:

. F064\$



Right Button Only

[ For Left-handed User ]

. F065\$



Left Button Only

[ For Right-handed User ]

. F066\$



Both Buttons

## STEP 3 - INTERFACE SELECTION

Scan one of below configuration barcodes to determine your interface:

BT HID

[ Recommended ]

. E043\$



USB HID

. C008\$



USB VCP

. C006\$



Memory Mode

. C035\$



1. **BT HID** - Emulates a **Bluetooth HID keyboard** that transmits barcode data to the host. (see page 11 - 12)
2. **USB HID** - Emulates a **USB keyboard** that transmits barcode data to the host.
3. **USB VCP** - Emulates a **USB virtual com device** that transmits barcode data to the host.
4. **Memory** - Emulates a **USB mass storage device** that saves barcodes collected off-line. (see page 24 - 28)

## BT - HID GETTING CONNECTED

1. Scan [**Disconnect**] to delete previous pairing record. Alternatively, you may long-press the function button for 5 seconds until the scanner emit two beeps.

. E031\$



**Disconnect**

2. Scan [**BT - HID**]; the scanner will emit two beeps.

. E043\$



**BT - HID**

3. Scan either one of below barcodes according to your host system.

. F068\$



**iOS/MAC/WINDOWS**

. F067\$



**ANDROID**

4. Select "Scanner XXXXXX" on the discovered device list of your Bluetooth. ("XXXXXX" are the last 6 digits of MAC address which can also be found on the product label)

5. The scanner will emit two beeps to verify the connection.

## BT - HID SMARTPHONE/TABLET TOUCH KEYBOARD

Please follow below instruction to toggle touch keyboard on smartphone/tablet.

### iOS

To toggle iOS touch keyboard, please simply press the function button.



Function Button

### Android

1. Enter "Settings"
2. Enter "Language & input"
3. In Keyboard & input window, tap "Default" to continue.
4. Turn off "Hardware - Physical keyboard", and the Touch Keyboard will function properly again.

**BT - HID  POWER OFF TIMEOUT**

The period of inactivity before auto power-off.

**Variable Timeout**

. B030\$



SET MINUTE  
(Range: 00 ~ 60)

. B029\$



SET SECOND  
(Range: 00 ~ 60)

- The default timeout is 00 minute and 30 seconds.  
For example, to set the timeout as 5 minutes 30 seconds:
- 1. Scan [Set Minute]
  - 2. Scan [0] & [5] on page 14.
  - 3. Scan [Set Minute]
  - 4. Scan [Set Second]
  - 5. Scan [3] & [0] on page 14.
  - 6. Scan [Set Second]

**No Timeout (Scanner Always On)**

. B021\$



DISABLE  
TIMEOUT

Warning! This will cause the battery to drain quickly.

**NUMERIC BARCODES**



1

6



2

7



3

8



4

9



5

0





## GENERAL SETTINGS

|                                |                  |
|--------------------------------|------------------|
| <div><div>. A001\$</div></div> | DEFAULT          |
| <div><div>. P023\$</div></div> | ABORT            |
| <div><div>. A007\$</div></div> | CHECK<br>VERSION |

## BEEPER

|                                |                       |
|--------------------------------|-----------------------|
| <div><div>. F018\$</div></div> | <b><u>BEEP ON</u></b> |
| <div><div>. F012\$</div></div> | BEEP OFF              |

## ILLUMINATION PREFERENCE

|                                                      |                                |
|------------------------------------------------------|--------------------------------|
| <b><u>LASER ALWAYS ON<br/>LED ON AFTER 1 SEC</u></b> | <div><div>. F059\$</div></div> |
| LASER ALWAYS ON<br>LED AUTO-ADAPTIVE                 | <div><div>. F049\$</div></div> |
| LASER ALWAYS ON<br>LED ALWAYS ON                     | <div><div>. F048\$</div></div> |
| LASER OFF<br>LED ALWAYS ON                           | <div><div>. F046\$</div></div> |

KEYBOARD LAYOUT

. C010\$



ENGLISH  
(USA)

. C018\$



ENGLISH  
(UK)

. C012\$



FRENCH

. C011\$



GERMAN

. C014\$



ITALIAN

. C013\$



SPANISH

. C009\$



JAPAN  
(106 key)

. C025\$



CANADIAN  
(FRENCH)

. C034\$



CANADIAN  
(TRADITIONAL)

. C029\$



NORWEGIAN

. C026\$



SWEDISH

. C031\$



PORTUGUESE

KEYBOARD LAYOUT

|              |                        |
|--------------|------------------------|
| . C017\$<br> | CZECH<br>(QWERTY)      |
| . C022\$<br> | CZECH<br>(QWERTZ)      |
| . C021\$<br> | HUNGARIAN<br>(QWERTZ)  |
| . C024\$<br> | HUNGARIAN<br>(101 KEY) |
| . C016\$<br> | SWISS<br>(GERMAN)      |
| . C023\$<br> | SWISS<br>(FRENCH)      |

|              |                           |
|--------------|---------------------------|
| . C030\$<br> | BELGIAN<br>(AZERTY)       |
| . C028\$<br> | DUTCH                     |
| . C027\$<br> | DANISH                    |
| . C032\$<br> | SLOVAK                    |
| . C033\$<br> | BRAZILIAN<br>(PORTUGUESE) |
| . C015\$<br> | ALT CODE                  |

ENABLE SYMBOLOGIES



ENABLE  
ALL CODE



CODE 32



UK PLESSEY



MSI



INDUSTRIAL  
2 OF 5



MATRIX  
2 OF 5

CODE 93



IATA



TELEPEN



GS1 DATABAR



GS1 DATABAR  
LIMITED



GS1 DATABAR  
EXPANDED



# TERMINATOR



CR



LF



CR + LF



NONE



SPACE



TAB

# MEMORY MODE

## MEMORY MODE



After scanning the above barcode, the scanner will be able to collect barcode data off-line. The barcode data will be stored in the format of:  
< **Date** >, < **Time** >, < **Barcode Data** > < **CR** >

To retrieve stored data, please connect the scanner to the host with cable, access removable storage device “**MiniScan**” from which you may open or copy the file “**BARCODE.txt**” to your computer.

To delete ONE stored data, please scan below barcode. Alternatively, you may press the function button once.

## DELETE LAST DATA



To delete ALL stored data, simply delete the file “**BARCODE.txt**” in the removable storage device “**MiniScan**” until you hear two beeps.

MEMORY MODE  DATE & TIME SETUP

. R006\$



SET DATE

- Example: To set Date to 2017-08-01 (Year-Month-Day):
- 1. Scan [Set Date]
  - 2. Scan [1], [7], [0], [8], [0], [1] on page 14.
  - 3. Scan [Set Date]

. R007\$



SET TIME

- Example: To set Time to 08:10:30 am (Hr:Min:Sec)
- 1. Scan [Set Time]
  - 2. Scan [0], [8], [1], [0], [3], [0] on page 14.
  - 3. Scan [Set Time]

\* Full drain of battery may cause the Time and Date to stop.  
To avoid this, please, please fully charge the scanner for  
at least 1 hour before use.

MEMORY MODE  DATA FORMAT

. R011\$



DATA FORMAT

The default Data Format is <Date>, <Time>, <Barcode Data> only  
below are all items available for display and their codes:

| Code | Item         | Code | Item |
|------|--------------|------|------|
| 2    | Date         | 3    | Time |
| 4    | Barcode Data |      |      |

- Example:
- To change Data Format to <Barcode Data>, <Date>, <Time>
- 1. Scan [Data Format]
  - 2. Scan [4], [2], [3] on page 14.
  - 3. Scan [Data Format]

. R010\$



FIELD SEPARATOR  
(DELIMITER)

Default is comma ( , ) You may replace it with any alphanumeric  
characters from the full ASCII table in Full User's Manual.

- Example: To change Field Separator to Semicolon ( ; )
- 1. Scan [Field Separator]
  - 2. Scan [ ; ] from the full ASCII table.
  - 3. Scan [Field Separator]

MEMORY MODE  DATE FORMAT

. R008\$  


DATE FORMAT

The default Date Format is DD/MM/YYYY (Code = 09), below is full list of available formats and their setup codes:

| Code | Format     | Code | Format     |
|------|------------|------|------------|
| 01   | DD-MM-YYYY | 09   | DD/MM/YYYY |
| 02   | MM-DD-YYYY | 10   | MM/DD/YYYY |
| 03   | DD-MM-YY   | 11   | DD/MM/YY   |
| 04   | MM-DD-YY   | 12   | MM/DD/YY   |
| 05   | YYYY-MM-DD | 13   | YYYY/MM/DD |
| 06   | YY-MM-DD   | 14   | YY/MM/DD   |
| 07   | DD-MM      | 15   | DD/MM      |
| 08   | MM-DD      | 16   | MM/DD      |

- Example:  
To set Date Format to MM/DD/YY (Code =12)  
1. Scan [Date Format]  
2. Scan [1], [2] on page 14.  
3. Scan [Date Format]

MEMORY MODE  TIME FORMAT

TIME FORMAT

. R009\$  


The default Time Format is HH:MM:SS (Code = 01), below are available formats and their setup codes:

| Code | Format   | Code | Format |
|------|----------|------|--------|
| 01   | HH:MM:SS | 02   | HH:MM  |

- Example:  
To set Time Format to HH:MM (Code = 02)  
1. Scan [Time Format]  
2. Scan [0], [2] on page 14  
3. Scan [Time Format]

## HOW TO REMOVE VELCRO STRAP

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1. Pull open the long end.



2. Pull out the long end through the slot.



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3. Pull open the short end on the other side.



4. Remove the whole Velcro strap from the scanner by pulling the long end.



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## HOW TO INSTALL VELCRO STRAP

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1. Insert the short end through the slot, with Velcro side facing upwards.



2. Attach the short end to the long end to close.



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3. Insert the long end through the other slot, with Velcro side facing upwards.



4. Attach the long end to itself to close.



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## TEST BARCODES

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### Code 39



CODE-39 TEST

### Interleaved 2 of 5



9876543210

### Code 128



12345678

### EAN



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## TROUBLESHOOTING

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### Q: Your Bluetooth is unable to detect the scanner.

- A:** (1) Make sure your Bluetooth is 4.0 or later version that supports BLE.  
(2) Restart your Bluetooth or Host device and try again, following the instruction on page 11.  
(3) Make sure the scanner is in BT-HID mode (see page 10). If the scanner is discoverable, its LED indicator will be flashing Blue.  
(4) The scanner might be powered off. By default the scanner goes to sleep after 30 seconds of inactivity. You can re-activate the scanner by touching the scan button on both sides. Alternatively, you may also increase the power off timeout (see page 13) so that the scanner will stay awake longer.

### Q: Your Bluetooth can detect the scanner, but it cannot pair with the scanner successfully.

- A:** (1) Make sure your Bluetooth is 4.0 or later version that supports BLE.  
(2) Restart your Bluetooth or Host device and try again, following the instruction on page 11.  
(3) Make sure to remove the scanner from the Bluetooth of host device that has previously paired with the scanner.  
(4) Follow the instruction on page 11 and try again.

### Q: The scanner does not read barcode instantly.

- A:** (1) Barcode print quality is too poor.  
(2) The ambient light is too weak. If that's the case, configure the LED illumination to auto-adaptive or always on (see page 16)

### Q: The scanner does not output barcode data as expected.

- A:** (1) The keyboard layout of scanner does not match that of your host device. Try configuring keyboard layout on page 17 - 20.

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