



# ZEBRA DS8178A Handheld Digital Scanner User Guide

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**ZEBRA DS8178A Handheld Digital Scanner**



## Product Information

The DS8178A is a digital scanner manufactured by Zebra Technologies. It is a high-performance scanner designed for quick and accurate scanning of barcodes. The scanner features a scan window, scan trigger, battery LED, scan LEDs, and a beeper. It also has an aiming feature that helps users to align the scanner correctly.

## Product Usage Instructions

1. **Charging:** Before using the scanner, it is recommended to fully charge the battery/PowerCap. Use the provided power cap insertion/removal tool to insert or remove the battery/power cap. Ensure that the firmware version is CAACXS00-004-R00 or later for PowerCap usage.
2. **Cradle Insertion:** To insert the scanner into the cradle, unlock the cradle by sliding the lock switch to the unlock position. Place the scanner into the cradle and lock it by sliding the lock switch to the lock position.
3. **Cradle Cable Connection:** Connect the cradle to the host device using the appropriate cable. Insert one end of the cable into the host port on the cradle and the other end into the host port on the host device.
4. **Connect Host Interface:** Depending on your configuration, use the appropriate interface cable to connect the scanner to the host device. The cable will automatically detect the host interface type and use the default setting. If the default setting does not meet your requirements, you can scan another host bar code to change the setting.

Please refer to the complete user manual available at [www.zebra.com/support](http://www.zebra.com/support) for detailed information on product usage, troubleshooting, and maintenance.

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An implied license exists only for equipment, circuits, and subsystems contained in Zebra products.

## **Warranty**

For the complete Zebra hardware product warranty statement, go to: [www.zebra.com/warranty](http://www.zebra.com/warranty).

### **For Australia Only**

For Australia Only. This warranty is given by Zebra Technologies Asia Pacific Pte. Ltd., 71 Robinson Road, #05-02/03, Singapore 068895, Singapore. Our goods come with guarantees that cannot be excluded under the Australia Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Zebra Technologies Corporation Australia's limited warranty above is in addition to any rights and remedies you may have under the Australian Consumer Law. If you have any queries, please call Zebra Technologies Corporation at +65 6858 0722. You may also visit our website: [www.zebra.com](http://www.zebra.com) for the most updated warranty terms.

## **Service Information**

If you have a problem using the equipment, contact your facility's Technical or Systems Support. If there is a problem with the equipment, they will contact the Zebra Global Customer Support Center at: [www.zebra.com/support](http://www.zebra.com/support).

For the latest version of this guide go to: [www.zebra.com/support](http://www.zebra.com/support).

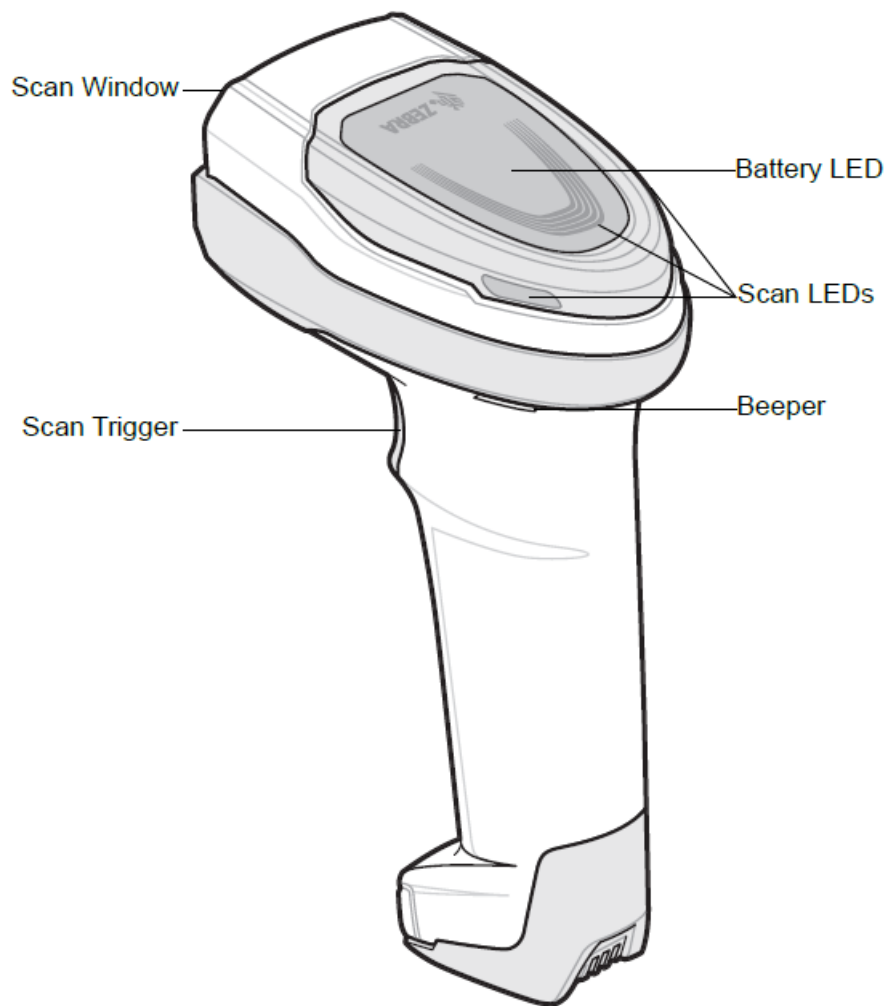
## **Patents**

For patent information, go to: <http://www.ip.zebra.com>.

## **Scanner Features**

NOTE Standard range digital scanner pictured.

Refer to the Product Reference Guide for detailed information.



### Aiming – Right/Wrong

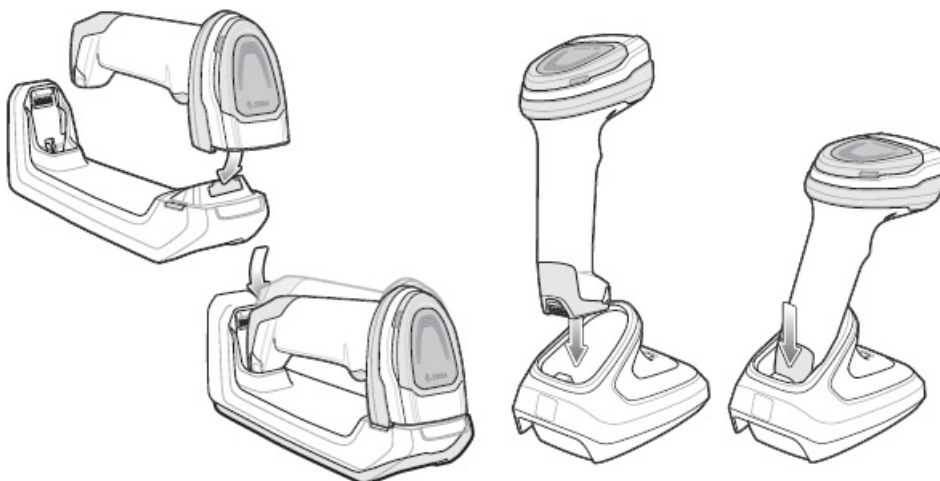


012345



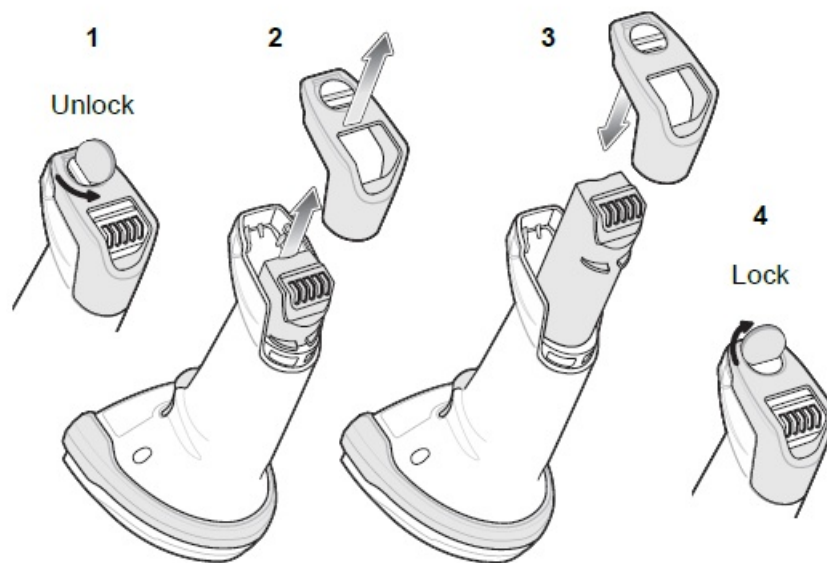
012345

### Cradle Insertion

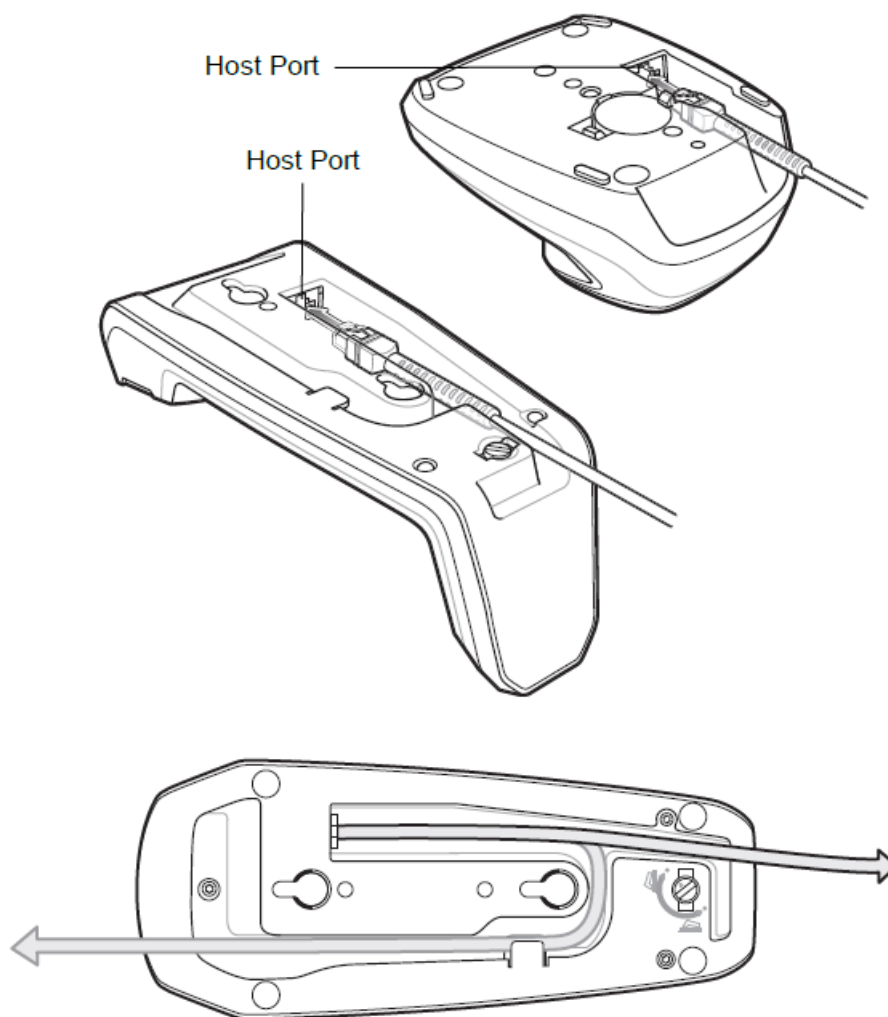


## Battery/Power Cap Insertion/Removal

- **IMPORTANT** PowerCap requires firmware version CAACXS00-004-R00 or later.
- **NOTE** It is recommended to fully charge the battery/PowerCap before use.



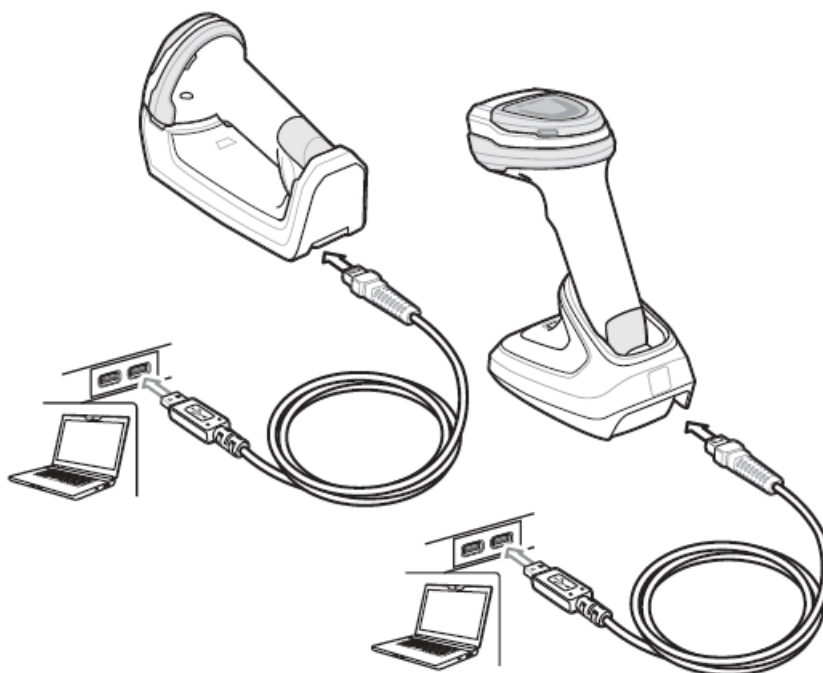
## Cradle Cable Connection



## Connect Host Interface

NOTE Cables may vary depending on configuration.

## USB



Scan ONE of the bar codes below. The interface cable automatically detects the host interface type and uses the default setting. If the default (\*) does not meet your requirements, scan another host bar code below.



**\*USB Keyboard HID**



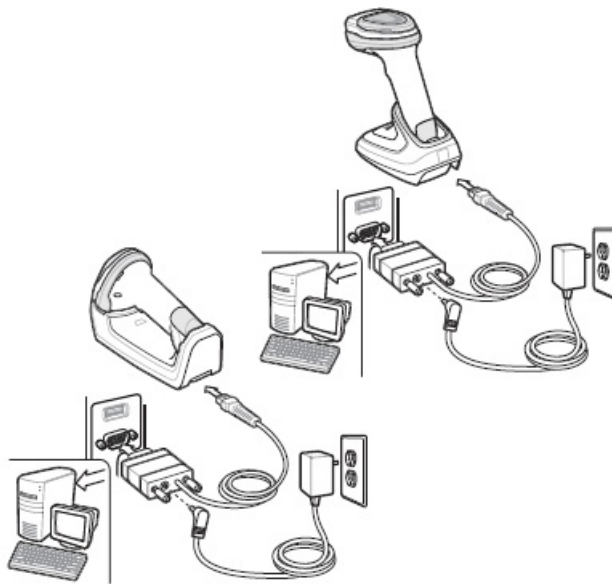
**IBM Hand-Held USB**



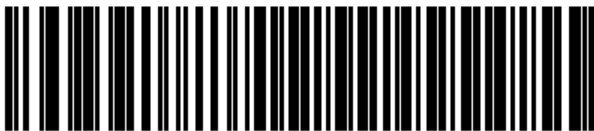
**IBM OPOS  
(IBM Hand-Held USB with Full Scan Disable)**



**SNAPi with Imaging**



Scan ONE of the bar codes below. The interface cable automatically detects the host interface type and uses the default setting. If the default (\*) does not meet your requirements, scan another host bar code below.



**\*Standard RS-232**



**ICL RS-232**



**Nixdorf RS-232 Mode A**



**Nixdorf RS-232 Mode B**

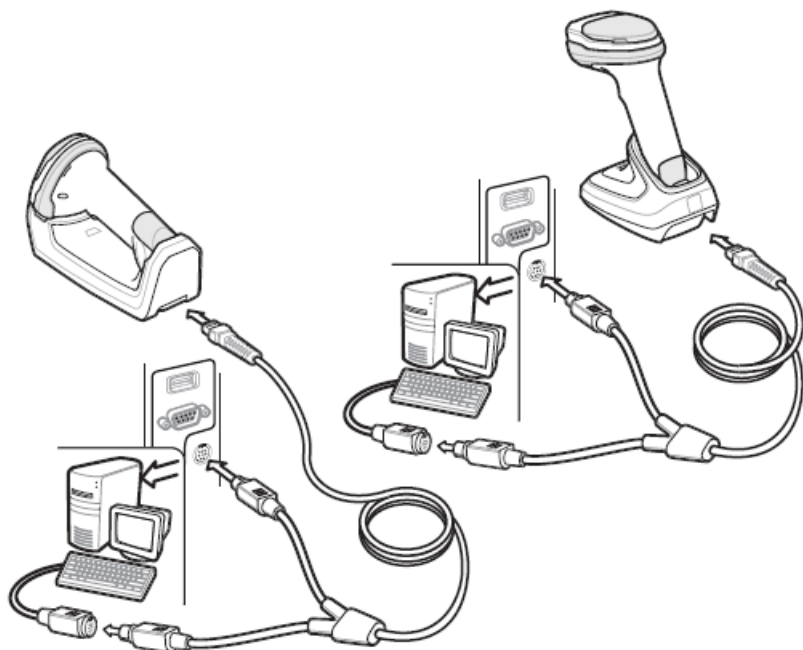


**OPOS/JPOS**



**Fujitsu RS-232**

**Keyboard Wedge**



Scan ONE of the bar codes below. The Auto-Host Detect Cable feature automatically detects the host interface type and uses the default setting. If the default (\*) does not meet your requirements, scan the IBM PC/AT and IBM PC COMPATIBLE bar code below.

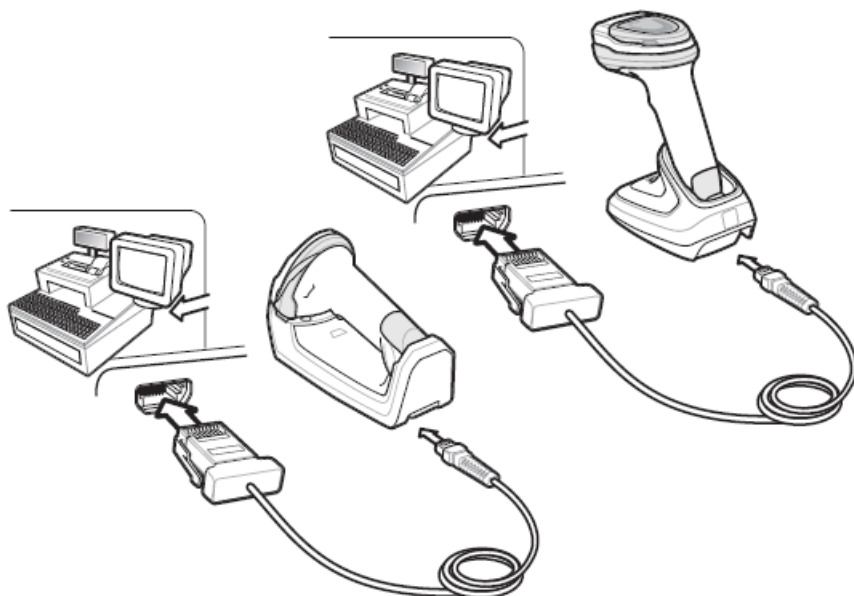


**\*IBM AT Notebook**



**IBM PC/AT & IBM PC Compatibles**

**IBM 46XX**





Scan ONE of the bar codes below. The Auto-Host Detect Cable feature automatically detects the host interface type, but there is no default setting. Scan one of the bar codes below to select the appropriate port.



**Non-IBM Scanner Emulation (Port 5B)**



**Hand-Held Scanner Emulation (Port 9B)**



**Table-Top Scanner Emulation (Port 17)**

## **Useful Bar Codes**

### **Set Defaults**



**Return to Factory Defaults**

### **Add a Tab Key**

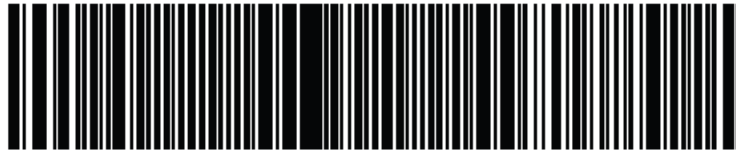
To add a Tab key after scanned data, scan the bar code below.



**Add a Tab Key**

### **Add an Enter Key**

To add an Enter key after scanned data, scan the bar code below.



**Add Enter Key (Carriage Return/Line Feed)**

## **USB Caps Lock Override**



**USB-Override Caps Lock Key  
(Enable)**



**\*USB-Do Not Override Caps Lock Key  
(Disable)**

## **Night Mode with Vibrate**

NOTE Cables may vary depending on configuration.



**Enable Night Mode Trigger**



**Disable Night Mode Trigger**



**Toggle Night Mode**

## **Beeper Indications**

Indication	Beeper Sequence
Power up	Low/medium/high beeps
Bar code decoded	Medium beep
Transmission error detected; data is ignored	4 long low beeps
Successful parameter setting	High/low/high/low beeps
Correct programming sequence performed	High/low beeps
Incorrect programming sequence, or <b>Cancel</b> bar code scanned	Long low/long high beeps
Low battery/PowerCap indication (on trigger release)	4 short high beeps

Power Gauge Indications	
Battery/PowerCap status	51-100% Green, 21-50% Amber, 0-20% Red
Battery end-of-life	51-100% Green/red alternating 21-50% Amber/red alternating 0-20% Red blinking

## LED Indications

Indication	LED Indicator
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## Hand-Held Scanning

Digital scanner is on and ready to scan, or no power to scanner	Off
Bar code is successfully decoded	Green flash
Transmission error	Red
Paging state	Blue (fast, fast-slow)

## Hands-Free (Presentation) Scanning

No power to the scanner	Off
The digital scanner is ready to scan	Green
Bar code is successfully decoded	Off momentarily
Transmission error	Red

## 123Scan

123Scan is an easy-to-use, PC-based software tool that enables rapid and easy customized setup of a scanner

via a bar code or USB cable. For more information, visit: [www.zebra.com/123Scan](http://www.zebra.com/123Scan).

## **Utility Functionality**

- Device configuration
  - Electronic programming (USB cable)
  - Programming bar code(s)
- Data view – scan log (display scanned bar code data)
- Access asset tracking information
- Upgrade firmware and view release notes
- Remote management (SMS package generation).

## **Troubleshooting**

### **The digital scanner not working**

- No power to the scanner  
Check system power; ensure battery/PowerCap is charged. If using PowerCap, ensure the firmware version is CAACXS00-004-R00 or later.
- Digital scanner disabled  
Ensure that the correct host interface cable is used.

### **Digital scanner decoding bar code, but data not transmitting to host**

- The host interface is not configured properly Scan appropriate host parameter bar codes.
- Interface cable is loose Ensure all cable connections are secure.
- Invalid ADF rule Program the correct ADF rules.
- Digital scanner not paired to cradle Scan cradle pairing bar code.

### **Digital scanner not decoding barcode**

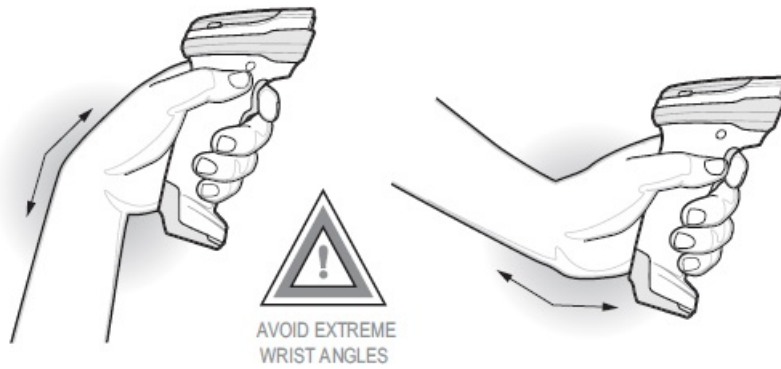
- Digital scanner not programmed for bar code type
- Ensure the scanner is programmed to read the type of bar code being scanned.
- The bar code is unreadable Ensure the bar code is not defaced; try scanning a test bar code of the same bar code type.
- Distance between scanner and bar code incorrect Move scanner closer to, or further from bar code.

### **Scanned data incorrectly displayed on host**

- Host interface is not configured properly Scan appropriate host parameter bar codes.
- Region improperly configured Select appropriate country and language encoding scheme.

## **RECOMMENDED USAGE GUIDE**

### **OPTIMUM BODY POSTURE**



## Regulatory Information

- For devices with Symbol, or Symbol Technologies Inc., etc. on the Manufacturing Label and for devices manufactured at Reynosa, or any other Zebra factory facilities:
- This device is approved under Zebra Technologies Corporation.
- This guide applies to Model Numbers: DS8178A and DS8178AA. All Zebra devices are designed to be compliant with rules and regulations in the locations where they are sold and will be labeled as required.
- Local language translations are available at the following website: [www.zebra.com/support](http://www.zebra.com/support).
- Any changes or modifications to Zebra equipment, not expressly approved by Zebra, could void the user's authority to operate the equipment.

## CAUTION

Only use Zebra-approved and UL-listed accessories, battery packs, and battery chargers. Do NOT attempt to

charge damp/wet mobile computers or batteries. All components must be dry before connecting to an external power source.

- **Declared maximum operating temperature:** 50°C

## **Health and Safety Recommendations**

### **Ergonomic Recommendations**

#### **Caution:**

In order to avoid or minimize the potential risk of ergonomic injury follow the recommendations below. Consult with your local Health and safety Manager to ensure that you are adhering to your company's safety programs to prevent employee injury.

- Reduce or eliminate repetitive motion
- Maintain a natural position
- Reduce or eliminate excessive force
- Reduce or eliminate vibration
- Perform tasks at the correct heights
- Keep objects that are used frequently within easy reach
- Reduce or eliminate direct pressure
- Provide adjustable workstations
- Provide adequate clearance
- Provide a suitable working environment
- Improve work procedures.

### **Bluetooth® Wireless Technology**

This is an approved Bluetooth® product. For more information or to view the End Product Listing, visit [www.bluetooth.org/tpg/listings.cfm](http://www.bluetooth.org/tpg/listings.cfm).

### **Wireless Device Country Approvals**

NOTE This section is only applicable to WW/WR/EU configurations.

- Regulatory markings, subject to certification, are applied to the device signifying the radio(s) is/are approved for use in the following countries: United States, Canada, Japan, China, South Korea, Australia, Europe, and the United Kingdom.
- Please refer to the Declaration of Conformity (DoC) for details of other country markings. This is available at [www.zebra.com/doc](http://www.zebra.com/doc).

#### **NOTE**

Europe includes Austria, Belgium, Bulgaria, Czech Republic, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, and Switzerland.

#### **CAUTION**

Operation of the device without regulatory approval is illegal.

### **Warnings for Use of Wireless Devices**

**CAUTION** Please observe all warning notices with regard to the usage of wireless devices.

## **Safety in Hospitals**

- Wireless devices transmit radio frequency energy and may affect medical electrical equipment.
- Wireless devices should be switched off wherever you are requested to do so in hospitals, clinics or health care facilities. These requests are designed to prevent possible interference with sensitive medical equipment.

## **Pacemakers**

Pacemaker manufacturers recommended that a minimum of 15cm (6 inches) be maintained between a handheld wireless device and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with independent research and recommendations by Wireless Technology Research.

### **Persons with Pacemakers:**

- Should ALWAYS keep the device more than 15cm (6 inches) from their pacemaker when turned ON.
- Should not carry the device in a breast pocket.
- Should use the ear furthest from the pacemaker to minimize the potential for interference
- If you have any reason to suspect that interference is taking place, turn OFF your device.

## **Other Medical Devices**

Please consult your physician or the manufacturer of the medical device, to determine if the operation of your wireless product may interfere with the medical device.

## **RF Exposure Guidelines**

### **Safety Information**

- **Reducing RF Exposure – Use Properly**

Only operate the device in accordance with the instructions supplied.

- **International**

The device complies with internationally recognized standards covering human exposure to electromagnetic fields from radio devices. For information on “International” human exposure to electromagnetic fields refer to the Zebra Declaration of Conformity (DoC) at [www.zebra.com/doc](http://www.zebra.com/doc).

For further information on the safety of RF energy from wireless devices, see

[responsibility.zebra.com/index.php/downloads/](http://responsibility.zebra.com/index.php/downloads/), which is located under Wireless Communications and Health.

- **Europe – Handheld Devices**

To comply with EU RF exposure requirements, this device must be operated in the hand with a minimum separation distance of 0 cm or more from a person’s body. Other operating configurations should be avoided.

- **US and Canada**

- Co-located Statement

To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must not be co-located or operating in conjunction with any other transmitter/antenna except those already approved in this filing.

- **Handheld Devices**

This device was tested for typical body-worn or handheld operation. Use only Zebra-tested and approved belt clips, holsters, and similar accessories to ensure FCC Compliance. The use of third-party belt clips, holsters, and similar accessories may not comply with FCC RF exposure compliance requirements and should be avoided.

### **CAUTION**

To satisfy US and Canadian RF exposure requirements, a transmitting device must operate with a minimum separation distance of 0 cm or more from a person's body.

### **LED Devices**

For LED devices that have been evaluated to IEC 62471 and comply with the Exempt Risk Group, no product labeling requirements apply. However, the following statement is required to comply with US and international regulations:

### **LED Compliance Statement:**

Classified as 'EXEMPT RISK GROUP' according to IEC 62471:2006 and EN 62471:2008. Pulse duration: Continuous mS.

### **Batteries and PowerCaps**

#### **Taiwan – Recycling**

EPA (Environmental Protection Administration) requires dry battery producing or importing firms in accordance with Article 15 of the Waste Disposal Act are required to indicate the recycling marks on the batteries used in sales, giveaways, or promotions. Contact a qualified Taiwanese recycler for proper battery disposal.

### **Battery and PowerCap Information**

### **CAUTION**

Risk of explosion if battery/PowerCap is replaced by an incorrect type. Dispose of batteries/PowerCaps according to instructions.

The model DS8178A may be used with either a rechargeable Battery Pack or a rechargeable capacitor-based PowerCap. Zebra-approved rechargeable battery packs and PowerCaps are designed and constructed to the highest standards within the industry. Use only Zebra-approved batteries or PowerCaps. Accessories that have charging capability are approved for use with the following battery and PowerCap models: Battery Part Number 82-176890-01 (3.6 Vdc, 2500 mAh); PowerCap Part Number AS-000231-01 (3.7V, 2.0A).

However, how long a battery pack or PowerCap can operate or be stored before needing replacement? Many factors affect the actual life cycle of a battery pack or PowerCap, such as heat, cold, harsh environmental conditions, and severe drops. When battery packs or PowerCaps are stored over six months, some irreversible deterioration in overall battery quality may occur. Store batteries and PowerCaps at half of the full charge in a dry, cool place, removed from the equipment to prevent loss of capacity, rusting of metallic parts, and electrolyte leakage.

When storing batteries for one year or longer, the charge level should be verified at least once a year and charged to half of the full charge. Replace the battery pack or PowerCap when a significant loss of run time is detected. The standard warranty period for all Zebra batteries and PowerCaps is 1 year, regardless if the battery or PowerCap was purchased separately or included as part of the barcode scanner. For more information on Zebra batteries, please visit [www.zebra.com/batterybasics](http://www.zebra.com/batterybasics): [www.zebra.com/batterybasics](http://www.zebra.com/batterybasics).

### **Battery and PowerCap Safety Guidelines**

The area in which the units are charged should be clear of debris and combustible materials or chemicals. Particular care should be taken when the device is charged in a noncommercial environment.



- Follow battery/PowerCap usage, storage, and charging guidelines found in the user's guide.
- Improper battery/PowerCap use may result in a/ fire, explosion, or other hazard.
- To charge the mobile device battery, the battery and charger temperatures must be between +32°F and +104°F (0°C and +40°C).
- Do not use incompatible batteries/PowerCaps and chargers. Use of an incompatible battery/PowerCap or charger may present a risk of fire, explosion, leakage, or other hazard. If you have any questions about the compatibility of a battery or a charger, contact Zebra support.
- For devices that utilize a USB port as a charging source, the device shall only be connected to products that bear the USB-IF logo or have completed the USB-IF compliance program.
- Do not disassemble or open, crush, bend or deform, puncture, or shred.
- Severe impact from dropping any battery-operated device on a hard surface could cause the battery to overheat.
- Do not short-circuit a battery or allow metallic or conductive objects to contact the battery/PowerCap terminals.
- Do not modify or remanufacture, attempt to insert foreign objects into the battery/PowerCap, immerse or expose to water or other liquids, or expose to fire, explosion, or other hazard.
- Do not leave or store the equipment in or near areas that might get very hot, such as in a parked vehicle or near a radiator or other heat source. Do not place the battery/PowerCap into a microwave oven or dryer.
- Battery/PowerCap usage by children should be supervised.
- Please follow local regulations to promptly dispose of used rechargeable batteries/PowerCaps.
- Do not dispose of batteries/PowerCaps in fire.
- Seek medical advice immediately if a battery has been swallowed.
- In the event of a battery leak, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with large amounts of water and seek medical advice.
- If you suspect damage to your equipment or battery/PowerCap, contact Zebra support to arrange for an inspection.

## Radio Frequency Interference Requirements – FCC



### Note:

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 the receiver

- Connect the equipment to 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.

### **Radio Transmitters (Part 15)**

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.

### **Radio Frequency Interference Requirements-Canada**

CAN ICES-3 (B)/NMB-3(B).

### **Radio Transmitters**

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science, and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

### **Marking and European Economic Area (EEA)**

#### **Statement of Compliance**

- Zebra hereby declares that this radio equipment is in compliance with Directives 2014/53/EU and 2011/65/EU.
- Any radio operation limitations within EEA countries are identified in Appendix A of the EU Declaration of Conformity. The full text of the EU Declaration of Conformity is available at: [www.zebra.com/doc](http://www.zebra.com/doc).
- **EU Importer:** Zebra Technologies B.V
- **Address:** Mercurius 12, 8448 GX Heerenveen, Netherlands

#### **Other Countries**

### **Brazil (UNWANTED EMISSIONS – ALL PRODUCTS)**

Regulatory declarations for DS8178A – BRAZIL For more information consult the website [www.anatel.gov.br](http://www.anatel.gov.br).

### **Eurasian Customs Union**

#### **United Kingdom Statement of Compliance**

Zebra hereby declares that this radio equipment is in compliance with the Radio Equipment Regulations 2017 and the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012.

Any radio operation limitations within the UK are identified in Appendix A of the UK Declaration of Conformity. The full text of the UK Declaration of Conformity is available at: [zebra.com/doc](http://zebra.com/doc).

- **UK Importer:** Zebra Technologies Europe Limited

- **Address:** Dukes Meadow, Millboard Rd, Bourne End, Buckinghamshire, SL8 5XF

## TURKISH WEEE Statement of Compliance

EEE Yönetmeliğine Uygundur

## Waste Electrical and Electronic Equipment (WEEE)

- **For EU Customers:** All products at the end of their life must be returned to Zebra for recycling. For information on how to return a product, please go to: [www.zebra.com/weee](http://www.zebra.com/weee).
- **For EU Customers:** All products at the end of their life must be returned to Zebra for recycling. For information on how to return a product, please go to: <http://www.zebra.com/weee>.


## Zebra Technologies Corporation, Inc.

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- [www.zebra.com](http://www.zebra.com).

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**MN-002753-04EN Revision A – November 2019**

## Documents / Resources

	<p><b><a href="#">ZEBRA DS8178A Handheld Digital Scanner</a></b> [pdf] User Guide  UZ7DS8178A, UZ7DS8178A, DS8178A, DS8178A Handheld Digital Scanner, Handheld Digital Scanner, Digital Scanner, Scanner</p>
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## References

-  [Anatel — Agência Nacional de Telecomunicações](#)
-  [Launch Studio - Listing Search](#)
-  [Patents | Zebra](#)
-  [Zebra Technologies | Visible. Connected. Optimized.](#)
-  [123Scan | Barcode Scanning Software | Zebra](#)
-  [zebra.com/batterybasics](#)
-  [Declarations of Conformity | Zebra Technologies](#)
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