

# **User's Manual**

Mini Personal Data Collector





#### **Revision History**

Changes to the original manual are listed below:

Version	Date	Description of Version
1.0	November. 01, 2012	Initial release
1.1	March 2, 2018	Added battery information

# **Important Notice**

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## **Battery Information**

- Use only a ZEBEX approved batteries.
- Using any other type of battery and charging equipment may damage the device and invalidate the warranty.
- Store batteries at half of full charge in a dry, cool place, removed from the equipment to prevent loss of capacity, rusting of metallic parts and electrolyte leakage.
- When batteries are stored over six (6) months, some irreversible deterioration in overall battery quality may occur.
- When storing batteries for over a year, the charge level should be verified at least once every 6 months and charged to half of full charge.

## **Battery Safety**

- The area in which the units are charged should be clear of debris and combustible materials or chemicals. Particular care should be taken where the device is charged in a non -commercial environment.
- Follow battery usage, storage, and charging guidelines found in the user guide.
- Improper battery use may result in a fire, explosion, or other hazard.
- To charge the device battery, the battery and charger temperature must be between  $0^\circ\!\!C^{\,\sim}\!\!+\!45^\circ\!\!C$
- Do not use incompatible batteries and chargers. Use of an incompatible battery or charger may present a risk of fire, explosion, leakage, or the hazard.
- 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 terminals.
- Do not modify or remanufacture, attempt to insert foreign objects into the battery, 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 battery into a microwave oven or dryer.
- Battery usage by children should be supervised.
- Please follow local regulations to promptly dispose of used re-chargeable batteries.
- Do not dispose of batteries 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.
- Do not short the battery terminals. The battery could overheat.
- Do not attempt to split or peel the outer casing.

## **Battery Maintenance**

These are recommendations to extend the life of the battery pack:

- When charging the battery for the first time, charge for at least 12 hours prior to use.
- Remove the battery if the device is not going to be used for a long time. If the battery is left unused for more than 3 months, you need to charge the battery before use.
- If the battery is not installed, recharge the battery every 6 months to prevent damage to the battery cells.
- The battery capacity is reduced at temperature extremes, high and low.

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Guidance for Printing This manual is in A5 size. Please double check your printer setting before printing it.

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# Introduction

Congratulations on your purchase of the super compact Mini Pocket Sized Data Collector. Along with superior portability and visually safe scanning LED, the data collector features a real-time clock, a buzzer, a dual-color status LED, and a UART port for direct connection to external equipment. The on-board 64K EEPROM provides a robust, stable, programmable memory space. Some of this non-volatile memory is dedicated to storing scanned data. The PDC can retain more than 6000 records.

The Mini Personal Data Collector comes already programmed with a basic data collection program, called Free Task, which can scan and store barcodes, and do simple edits on the stored data. Data can be uploaded to a PC through the USB or RS-232 link cable.

#### Features

- Ultra small, ultra portable form factor.
- Battery life up to 6,000 scans.
- Superior scanning performance.

### **PC System Requirement**

- Windows XP Service Pack 2 or above.
- Microsoft Internet Explorer 5.01 or later.
- Microsoft Framework 2.0.
- Disk Space Requirements: 280 MB (x86), 610 MB (x64).

## **Package Contents**

Items contain in the package may vary depending on the model of the data collector.



### **Overview**

Refer to the following illustrations to familiarize yourself with the data collector.



Description	Function
Scan Window	Emits a red beam for barcode reading
LCD Screen	Display various data when a program is being run
Scan Key	The trigger of barcode reading
Down Key	Navigation key for menu selections or entering data
Eunction Kov	Function key for menu selection and for turning the
Function Rey	power off
Communication Port	Connect to charge the power or communicate with
Communication Fort	PC
LED Lamp	Lights up when charging or when a barcode is
	scanned
Up Кеу	Navigation key for menu selection or entering data
Strap Hole	For attaching the neck strap

# **Getting Started**

Refer to the following illustrations to learn the basics of the data collector in this section.

## **Attaching Neck Strap**

The included neck strap may prevent potential damage to the device if dropped.

- 1. Insert the small thin cord of the strap to the strap hole of the device.
- 2. Loop the thick cord of the strap through the thin loop.
- 3. Pull the strap tight.

## **Charging the Device**

The Z-1160 runs on a build-in rechargeable battery and can scan more than 6,000 barcodes between charges and data downloads to a host device.

- 1. Connect the USB cable to device.
- 2. Connect the other end of the USB cable to your PC. The LED should light up red indicating the charge had started.
- 3. Charge the batteries until the LED indicator turns off.

## Power ON/OFF the Device

Press the M and  $\overline{M}$  keys together to turn on the device. To turn off the device, press and hold  $\overline{FN}$  at the boot screen.



Power ON

## **Connecting to PC**

To use the software supplied with the data collector, it must be connected to a PC.

#### **Connecting via RS-232**

RS-232 connection is required when updating the firmware. To connect the data collector to a PC via RS-232 port:

- 1. Connect the mini USB end of the RS-232 cable to the communication port of the data collector.
- 2. Connect the other end of the cable to a RS-232 serial port on the computer.



3. Make sure the unit is turned on after the cable is connected.

#### **Connecting via USB**

To connect the data collector to a PC using the USB cable:

- 1. Connect the mini USB end of the USB cable to the communication port of the data collector.
- 2. Connect the other end of the USB cable to the USB port on the computer.



3. Make sure the unit is turned on after the cable is connected.

#### Running WinTaskGen

- 1. Install and run WinTaskGen on your PC.
- 2. For USB connections, please install and run the virtual COM port driver.
- 3. Check "Define comport long parameters" checkbox on top if necessary. Extra options appear as shown below when you check this option.

── Define comport lor	ig parameters					
СОМ : СОМ1 💌	Baudrate : 115200	Parity : None	DataBits : 8	3 🔽 Sto	pBits : One	*

- 4. Select the options from the dropdown menu. When you define communication protocols, you must set the same value with the device.
  - COM options: Select the COM port the device is connected to. (Look for the Virtual COM port connection in the Device Manager on your PC)

- Baudrate options: 4800,9600,19200,38400,57600,115200.
- Parity options: Even, Mark, None, Odd, Space.
- DataBits options: 8,7.
- StopBits options: None, One, OnePointFive, Two.
- 5. After the parameters are set, the device is automatically detected.

#### Setting the Device on PC

- 1. Follow the previous instructions to connect the data collector.
- 2. Select the "Remote Settings" tab on the Main Menu. Click the "Device Settings" to obtain the device status.

Procedure Task Editor Free Task Editor Remote Settings				
E Device Settings				
Forms     State     Forms     State     Forms     State     Forms     F	Device Settings Beep Volume : Load Aub Dower Off : 15 mins      Power Up Scan : OH Date Format : MM(DD/YYYY      Back Light : OFF     Saccesses -			

Select the options from the dropdown menus in "Device Settings."

- Set beep volume options: Quiet, Low, Medium, Loud.
- Set auto power off options: Disable, 10mins, 15mins, 20mins, 30 mins.
- Set power up scan options: OFF/ON.
- Set date format options: MM/DD/YY, DD/MM/YY, MM/DD/YYYY, DD/MM/YYYY.
- Set back light options: OFF/ON.
- Follow PC Time: Check this option to obtain time from your PC or adjust the time manually using the up and down arrow.
- Get Device Time: Obtain device now date and time.
- Set Device Time: Set up device date and time.

*Note*: For other settings or usage please see the WinTaskGen User's Manual for more details.

# **Using the Data Collector**

The data collector comes already programmed with a basic data collection program, Free Task, which can read and store barcodes, do simple edits, and upload data to a PC through the communication cable..

## **Menu Operation**

- 1. Press the vand keys together to turn on the power.
- 2. Press the FN key to bring up the boot screen.

Z-1160 VER. 1.00 SCAN key to Menu Free Mem: 64K 11/05/03 05:04PM

Boot screen

3. Press the SCAN key to open the Main Menu.

1.Run Task
2.Delete Data
3.Setup
4. Upload Data

Main Menu

4. The menu items show on LCD and the highlighted item indicates current selection. Use the v and A keys to change the item selection and confirm by pressing the SCAN key. You can also press the FN key at any time to exit the current screen.

#### Menu tree list

Menu	Description
Pup Tack	Select this option to start recording data. You can
NULLIASK	scan barcodes or enter the data manually.
Delete Data	Select this option to delete recorded data.
	Select this option for:
	1. LCD Contrast
	2. Beep Volume
Setup	3. System Clock
	4. Barcode Set
	5. Communication
	6. Auto Power Off
Upload	Select this option to upload recorded data.

Select the Run Task under Main Menu. The LCD shows <Rec>, for record number, and is ready to scan and collect data.



Free Task (Input) screen

#### Scanning the Barcode Data

Follow the steps below to scan a barcode.

- 1. Press the n and keys together to turn on the power.
- 2. At the Free Task screen, press the SCAN key and sweep the red light vertically across the barcode. You will hear a short beep on a successful scan and LED will flash green.



## **Data Management**

#### **Data Entry**

When requiring to key in data manually, there are two modes of data entry.

#### Mode One:

1. At the Free Task screen press the  $\frac{1}{2}$  key once to start the entry.

Rec	1 Field 1
Fn:Exit Dn:View	

- 2. Each time you press the A key the number will go up by 1. The number will restart when it reaches 9. Continue to press the A key until the number you want is reached.
- 3. Press the key to move to the next digit and press the key again to select your number. Continue this process until the numeric data you want to enter is completed.



4. Press the Scan key to input the data or the FN key to disregard the data.

#### Mode Two:

- 1. At the Free Task screen press and hold the  $\overline{\square}$  key to start the entry. The number will advance rapidly until the  $\overline{\square}$  key is released.
- Press the and A keys to adjust the number. Will increase the number by 1 and key will decrease the number by 1.
- 3. Press the Scan key to confirm the inputted data or press the FN key to go to mode one to edit the data.

#### **Data Storage**

The data collector can retain more than 2,000 records.

- To review stored data, press the A key.
- To end review of stored data, press the FN key.
- To exit scanning mode, press the FN key.

To view scanned data:

Press the key in input mode to start viewing data. The last recorded data will appear.



- Use the  $\Lambda$  key to move to the previous record.
- Use the  $\overline{V}$  keys move to next record.
- Use the Scan +  $\Lambda$  keys to edit field data and FN to exit.
- Press the Scan + W keys for 2 seconds to delete the recorded data.
- Press the FN key to exit to input mode.

#### **Uploading Data**

Two modes are available to upload the data: USB Virtual COM and USB HID Mode. Once a communication device is set up (please refer to Device Setup, Communication), the device will automatically detect its readiness before starting uploading data.

#### **Deleting Data**

Select Delete Data at the Main Menu and use the M and  $\Lambda$  keys to commend Y (yes) or N (no) to delete data. Press the Scan key to confirm.

#### **Resetting Device**

Press and hold the Scan key for 2 seconds when the device is off. As soon as the green LED lit-up, press the FN key. Press the Scan key to confirm reset at the reset screen.

## **Device Setup**

Select Setup at the Main Menu and select the following options to setup the device:

#### **LCD Contrast**

• Use the M and A keys to adjust LCD contrast from 1 to 20. Press the Scan key to confirm.

#### **Beep Volume**

• Use the v and A keys to select volume from Low, Medium, Loud and Quiet. Press the Scan key to confirm.

#### System Clock

- Use the A key to adjust the number and use the key to move to the next digit. Continue the process until you finish entering the month, date, and year in MMDDYY format. Press the Scan key to confirm.
- Use the A key to adjust the number and use the key to move to the next digit. Continue the process until you finish entering the hour, minute, and second in HHMMSS format. Press the Scan key to confirm.

#### **Barcode Setup**

 Use the v and keys to select On or Off for different types of barcodes and press the Scan key to confirm: EAN/UPC, Code 39, F ASCII Code 39, Codabar, ITF 25, Code 128, Code 11, Code 93, MSI Code, RSS14 Standard, RSS14 Limited, and RSS14 Expanded.

#### Communication

- Use the Mand A keys to select USB Virtual Com or USB HID Mode.
  - USB Virtual COM simulates the USB connection as a wired RS232 interface. Use the M and A keys to select Enable or "Disable" at Online Send Record and Yes or No at Protocol Setting and press the Scan key to confirm.
  - USB HID Mode acts the same as USB keyboard and can easily adapt to any host computer like a standard keyboard.

To set the USB HID Mode:

- 1. Use the M and A keys to select "Enable" or "Disable" at Online Send Record and ALT Mode. Press the Scan key to confirm.
- 2. Use the M and A keys to select USA, German, French, SPANISH, or Japanese at HID Language. Press the Scan key to confirm.
- To adjust the Delay Setup, use the A key to adjust the number and use the key to move to the next digit. Press the Scan key to confirm.
- 4. Use the M and A keys to select LF, H Tab, EOT, None, CR/LF, CR, or LF as the Data Terminator. Press the Scan key to confirm.

#### **Auto Power Off**

• Use the M and A keys to select Disable, 30 mins, 10 mins, 5 mins, 3 mins, or 1 mins as the auto power off time. Press the Scan key to confirm.

#### Set Password

You can set a password to the Setup to prevent others from changing the settings.

- 1. Use the M and A keys to enter a numeric password. Press the Scan key to confirm. The system prompts you to enter the password again.
- 2. Enter the password again at the Re-Confirm screen and press the Scan key to confirm.

## **Specifications**

SYSTEM		
CPU	32-bit C-MOS microprocessor	
EEPROM	64KB non-volatile memory	
Display	FSTN, 96 x 32 dots graphic LCD (4 x 16 characters)	
Keypads & Buttons	"SCAN", up, down, and "FN" keys	
Indicators (LED)	Two-color LED (green & red)	
Beeper Operation	Programmable tone & beep time	
Interface	USB interface	
Software & Development	(a) Support the TaskGen software (application	
	generator)	
	(b) SDK to support IAR/GNU C (freeware) Compiler	
POWER		
Main Battery	3.7 V, 150 mAH, Li-Poly rechargeable battery	
Battery Life	Up to 6,000 scans (by battery spec.)	
INPUT DEVICE		
Light Source	617 nm visible LED	
Optical System	Linear CCD array	
Scan Rate	330 scans per second	
Print Contrast	30% @ UPC/EAN 100%	
Depth of Field	20-300 mm	
PHYSICAL		
Dimensions	(L)69.8 x (W)44.4 x (H)23.3 mm	
Weight	43.5 g (including battery)	
ENVIRONMENTAL		
Operating Temperature	0°C ~ 50°C (32°F ~ 122°F)	
Storage Temperature	-10°C ~ 60°C (14°F ~ 140°F)	
Operating Humidity	10% ~ 70% RH, non-condensing	
Storage Humidity	5% ~ 70% RH, non-condensing	
REGULATORY		
EMC	CE & FCC Part 15B	