Wireless Pocket CCD Scanner

User's Manual

Revision History

Changes to the original manual are listed below:

Version	Date	Description of Version
1.0	September. 20, 2010	Initial release

Important Notice

No warranty of any kind is made in regard to this material, including, but not limited to, implied warranties of merchantability or fitness for a particular purpose. We are not liable for any errors contained herein or incidental or consequential damages in connection with furnishing, performance or use of this material.

We have taken reasonable measures to provide information in this manual that is complete and accurate. However, the material in this guide is for information only; we reserve the right to make changes in product design without reservation and without prior notification. For the latest revision please contact your distributor.

This manual is in A6 format. Please check your printer setting before printing it out.

The use of a high-resolution laser printer is highly recommended for the best scan result when printing barcodes for programming.

Radio Notice

This equipment generates uses and can radiate radio frequency energy. If not installed and used in accordance with the instructions in this manual, it may cause interference to radio communications. The equipment has been tested and found to comply with the limits for a Class A computing device pursuant to EN55022 and 47 CFR, Part 2 and Part 15 of the FCC rules. These specifications are designed to provide reasonable protection against interference when operated in a commercial environment..

Radio and Television Interference

Operation of this equipment in a residential area can cause interference to radio or television reception. This 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 the receiving antenna.
- Relocate the device with respect to the receiver.
- Move the device away from the receiver.
- Plug the device into a different outlet so that the device and the receiver are on different branch circuits.

If necessary the user may consult the manufacturer, and authorized dealer, or experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, DC 20402 U.S.A., Stock No. 004000003454.

For CE-countries

This scanner is in conformity with CE standards. Please note that an approved, CE-marked power supply unit should be used in order to maintain CE conformance.

Table of Contents

Introduction

The wireless pocket CCD scanner is one of the most versatile and flexible wireless barcode scanners available today. It combines the power of barcode scanning with the convenience of Bluetooth® wireless technology so you can collect data without being tied to your computer. Compact, lightweight, and ergonomically designed to fit comfortably in a hand, the wireless pocket CCD scanner is ideal for high volume data collection applications.

Key Features

- Bluetooth® Class 2
- 25,000 times scanning with 2 AAA alkaline batteries
- IP54 standard
- Made with antibacterial materials
- The best solution for logistics, market research and more

System Compatibility

Windows 7, Vista, XP:

- Bluetooth® required
- Bluetooth® application software (Usually included with OS)

For PDA phone use:

- Bluetooth® required
- PDA phone Bluetooth® application software required (Please contact your distributor for details)

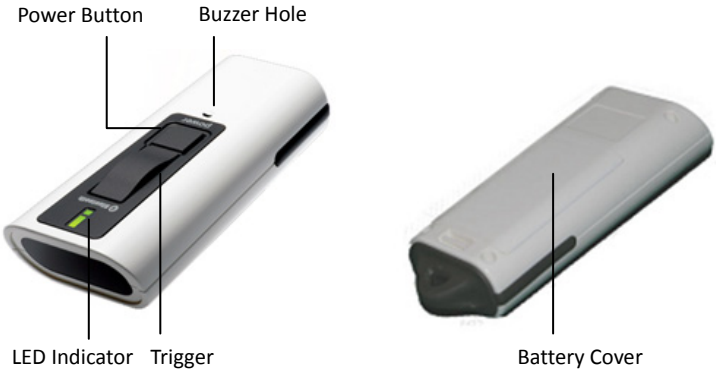
Package Contents

The following contents are included with the package.

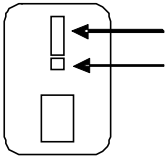
- Wireless Pocket CCD Scanner
- AAA Alkaline Battery x 2
- User's Manual

Overview

Scanner Parts



LED Indicator



Good Read LED: Flashes once on a good read.
Connecting LED:

- Fast Blinking: Not connected.
- Slow Blinking: Connected.

Installing Batteries

The wireless pocket CCD scanner uses 2 AAA alkaline batteries. The Connecting LED blinks red when the scanner is low in battery. Replace the batteries immediately to ensure optimal performance.

To install batteries:

1. Remove the batter cover from the scanner.
2. Check the battery polarity and insert 2 AAA alkaline batteries.
3. Replace the battery cover.

Maintaining the Scanner

The scanner is designed for long-term trouble-free operation and rarely requires any maintenance. Only an occasional cleaning of the scanner window is necessary in order to remove dirt and fingerprints.

Wipe the scan window with a soft lint-free cloth and a non-abrasive cleaner to avoid scratching and damaging the scan window. The scan window may be cleaned while the scanner is running.

Using the Scanner

Power Button

- Press and hold the Power Button for 5 seconds to turn on the power and enable discovery mode. Discovery mode is used to connect Bluetooth® devices for the first time.
- Press and hold the Power Button for 1 to 4 seconds to turn on the power.
- When connected to a device, press the Power Button for more than 1 second to turn the power off.

Trigger Button

- Press once to turn on the power and connect to a device previously connected.
- Press once to scan barcodes when connected to a device.

Pairing with Devices

Initial Connection

To connect to a Bluetooth® device for the first time:

1. Enable Bluetooth® on your PC or phone.
2. Enable Bluetooth® application on your PC or phone.
3. Turn on the scanner by pressing the Power Button for 5 seconds. This also enables discovery mode.
4. Discover the scanner using your Bluetooth® application and enable pairing.
5. Input the pin code "1234" when prompted. Scanner should now be connected.
6. Initial settings are saved on the device.

Connecting to the Same Device

To connect to a Bluetooth® device after initial connection:

1. Enable Bluetooth® on your PC or phone.
2. Enable Bluetooth® application on your PC or phone.
3. Turn on the scanner by pressing the Trigger Button once. Your PC or phone detects the scanner and connection is made automatically.
4. When necessary, input the pin code "1234" to make the connection.

- Please complete the pairing process within 30 seconds.
- The instructions mentioned here may be different depending on the Bluetooth® device you use.

Scanning Barcodes

To scan barcodes:

1. Place the scanner about 5 cm to 20 cm in front of the barcode.
2. Press the Trigger Button and aim at the barcode.
3. When decoding is successful, the scanner beeps and the LED indicates green.

- It is recommended to try different angles and distance when reading barcodes.
- Press and hold the Power Button for 1 second to turn the scanner off when not in use.
- The scanner shuts down automatically after being idle for 2 minutes.

Default Parameters

Default communication settings are as follows. Devices that are connected by Client-side software (software or device) should be set according to the following communication.

Scanner setting

- Bluetooth® Host: SPP Master
- Radio protocol timeout: 1sec
- Power off timeout: 2 minutes

Communication setting

- Baud rate:115,200
- Parity: Even
- Data Bits: 8
- Stop Bit: 1
- Flow control: Xon/Xoff
- Header: <STX> (*)
- Terminator: <ETX> (*)
- Communication protocol: ACK/NAK (*)

Specification

Operational	
Light Source	617nm visible LED; bright laser-imitated scanning line
Optical System	2,500 pixels CCD
Depth of Field	14-174mm(CODABAR: 0.25 mm)
Scan Angle	40°
Scan Rate	100 scans/sec
Minimum Bar Width	0.12 mm (PCS=90%)
Print Contrast	60% or more
Interface	Bluetooth® Class 2 (10 m) (Serial Port Profile Master)
Physical	
Height	26 mm
Depth	109 mm
Width	43 mm
Weight	60 g (Without battery)
Power	
Main Battery	2 ea. 1.5V AAA alkaline batteries
Battery Life	35 hr (1 scan/ 5 sec continuous reading)
Environmental	
Operating Temperature	5°C ~ 50°C (23°F ~ 122°F)
Humidity	-10°C ~ 60°C (14°F ~ 140°F)
Light Levels	Max. 400,000 Lux (fluorescence)
Shock	Designed to withstand 1.2 m drops
International Protection	IP54
Decoding Capability	
1D Barcodes	UPC/EAN/JAN, UPC/EAN with supplementary, JAN 8 & JAN 13, Code 39, Codabar (NM-7), Code 128, Code 93, Interleaved 2 of 5 (ITF)

Programming Guide

Scanning a series of programming bar code labels can configure the scanner. This allows decoding options and interface protocols to be tailored to a specific application. The configuration is stored in non-volatile memory and will not be lost by removing power from the scanner.
The scanner must be properly powered before programming.
See the Default Parameter section for all the programmable parameters. The default settings will be restored whenever the "Reset" programming label is scanned.

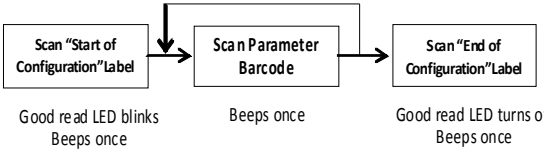
- Please note that the setting change cannot be done while the scanner is not connected with PC or PDA phone.
- Default setting is marked with "☆".

Programming Procedure

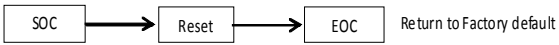
Below is the programming procedure for using barcodes in this guide.

1. Power up the scanner and connect it to a Bluetooth® device.
2. Scan the Start of Configuration barcode.
3. Scan the barcode for the desired feature. Multiple features can be enabled/disabled before scanning the End of Configuration barcode.
4. Scan the End of Configuration barcode and save the new configuration.

Setting Method



Initialization



Start of Configuration	Reset(return to ☆)	End of Configuration

System Function Setting

Start of Configuration	End of Configuration

【Good Read Beeper】

	Disable	
	Enable	☆

【Identifier Code】

The following character is added ahead of the bar code data.

Code	Char	Code	Char
JAN-13/EAN-13	0	Code93	6
JAN-8/EAN-8	1	Code128	7
UPC-A	2	Interleaved2of5	9
UPC-E	3	ITF-6	A
CODABAR	4	ITF-14	B
Code39	5	ITF-16	C

	Disable	☆
	Enable	

Start of Configuration	End of Configuration
	

【Power saving time-out】

This is time setting of auto power off.

	Disable	
	1minute	
	2 minutes	☆
	5 minutes	
	15 minutes	

【Connecting time-out】

This is a time setting of an Inquiry (Discovery).

	30 seconds	☆
	60 seconds	
	120 seconds	
	180 seconds	

Start of Configuration	End of Configuration
	

【Power saving time-out】

This is time setting of auto power off.

	Disable	
	1minute	
	2 minutes	☆
	5 minutes	
	15 minutes	

【Connecting time-out】

This is a time setting of an Inquiry (Discovery).

	30 seconds	☆
	60 seconds	
	120 seconds	
	180 seconds	

Start of Configuration	End of Configuration

【Handshaking Protocol】

	None handshaking with CR	
	None handshaking with CR/LF	
	None handshaking with STX/ETX	
	ACK/NAK with CR	
	ACK/NAK with CR/LF	
	ACK/NAK with STX/ETX	☆

The Symbologies Setting

JAN/EAN/UPC Parameter Setting

Start of Configuration	End of Configuration

【Decode】

	Disable	
	Enable	☆

【UPC-A Format】

	Force UPC-A to EAN-13 Disable	
	Force UPC-A to EAN-13 Enable	☆

【UPC-E Format】

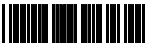
	Force UPC-E to EAN-8 Disable	☆
	Force UPC-E to EAN-8 Enable	
	Force UPC-E to UPC-A Enable	

【JAN add-on】

	JAN+add-on Disable	☆
	Only JAN+add-on Enable	
	JAN and JAN+add-on Enable *	

There is a possibility that the scanner will output only JAN code without the add-on code when using this setting.

CODABAR Parameter Setting

Start of Configuration	End of Configuration
	

【Decode】

	Disable	
	Enable	☆

【Check digit(7 check)】

	No check character	☆
	Calculate but without transmit	
	Calculate and transmit	

【START/STOP Character】

	No transmission	
	Transmission (Small letter)	☆
	Transmission (Capital letter)	

ITF (Interleaved2of5) Parameter Setting

Start of Configuration	End of Configuration
	

【Decode】

	Disable	
	Enable as Interleaved2of5	☆
	Enable as ITF-16,14,6	

【Check digit(Modulo 10/3Weight)】

	No check character	☆
	Calculate but without transmit	
	Calculate and transmit	

Code39 Parameter Setting

Start of Configuration	End of Configuration
	

【Decode】

	Disable	
	Enable	☆

【Check digit(Modulo 43)】

	No check character	☆
	Calculate but without transmit	
	Calculate and transmit	

【START/STOP Character】

	No transmission	☆
	Transmission	

Code93 Parameter Setting

Start of Configuration	End of Configuration
	

【Decode】

	Disable	
	Enable	☆

Code128 Parameter Setting

Start of Configuration	End of Configuration
	

【Decode】

	Disable	
	Enable	☆

Note

Note

P/N: 590-33130E-200