CipherLab
User Guide

2560 Bluetooth Scanner
2500 BT BASE Bluetooth Scanner Cradle

Version 1.00

CIPHER LAB

CIPHERLAB CO., LTD.
Website: http://www.cipherlab.com

IMPORTANT NOTICES

FCC 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 or more 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.

FCC Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. 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.

Caution!

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CANADA STATEMENT

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:
(1) This device may not cause interference; and
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
(1) l'appareil ne doit pas produire de brouillage;
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

Le dispositif rencontre l'exemption des limites courantes d'évaluation dans la section 2.5 de RSS 102 et la conformité à l'exposition de RSS-102 rf, utilisateurs peut obtenir l'information canadienne sur l'exposition et la conformité de rf.

FOR HAND-HELD PRODUCT WITH RF FUNCTIONS

The 2560 unit (FCC ID: Q3N-2560) complies with FCC radiation exposure limits set forth for uncontrolled environment.

The 2500 BT BASE unit (FCC ID: Q3N-25BTBASE) complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body. It only operated in hand-held used. If you only transfer data to the host wirelessly, please keep the minimum distance 20 cm between machine & your body.

This transmitter (5121A-25BTBASE) must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.
Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.

FOR PRODUCT WITH LASER

CAUTION

This laser component emits FDA / IEC Class 2 laser light at the exit port. Do not stare into beam.

SAFETY PRECAUTIONS

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

▶ The use of any batteries or charging devices, which are not originally sold or manufactured by CipherLab, will void your warranty and may cause damage to human body or the product itself.

▶ DO NOT disassemble, incinerate or short circuit the battery.

▶ DO NOT expose the scanner or the battery to any flammable sources.

▶ For green-environment issue, it's important that batteries should be recycled in a proper way.

▶ Under no circumstances, internal components are self-serviceable.

▶ The charging device uses an AC power adaptor. A socket outlet shall be installed near the equipment and shall be easily accessible. Make sure there is stable power supply for the scanner or its peripherals to operate properly.

CARE & MAINTENANCE

▶ Use a clean cloth to wipe dust off the scanning window and the body of the scanner as well as the charging device. DO NOT use/mix any bleach or cleaner.

▶ If you want to put away the scanner for a period of time, download the collected data to a host computer when in the memory mode, and then take out the battery. Store the scanner and battery separately.

- ▶ When the scanner resumes its work, make sure the battery is fully charged before use.
- ▶ Keep the scanner away from any magnets and magnetic fields to prevent the laser engine from malfunctioning.
- ▶ If you shall find the scanner malfunctioning, write down the specific scenario and consult your local sales representative.

RELEASE NOTES

Version	Date	Notes
1.00	Jul. 27, 2016	Initial release

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INTRODUCTION

CipherLab's 2560 Series Barcode Scanners are specifically designed to answer your mobile demands. The versatile scanners are designed to help accelerate productivity while lowering the total cost of ownership. Intensive data collection jobs are made easier with fast, accurate barcode scanning in various working environments, especially in small businesses. Integrating short-distance wireless technology to small-form-factor scanners, the 2560 scanners are ideal for carrying around, and thus give workers tether-free mobility anytime anywhere and get job done more efficiently. This line of scanners deliver data over a wireless personal network at a range of up to 100 meters and a prolonged battery life to keep business running.

Owing to the slim, ergonomic design, extremely low power consumption, and powerful decoding capability, the 2560 Series Barcode Scanners are the best choice for the following applications –

▶ Receiving in Retail
▶ Product labeling & Tracking
▶ Shelf Product Replenishment
▶ Mobile Point of Sale (POS)
▶ Mobile Inventory Management
▶ Order Picking & Staging
▶ Work-In-Process Tracking
▶ Material Flow Control
▶ Transportation & Distribution
▶ Warehousing
▶ Asset Management

This manual contains information on operating the scanner and using its features. We recommend that you keep one copy of the manual at hand for quick reference or maintenance purposes. To avoid any improper disposal or operation, please read the manual thoroughly before use.

Thank you for choosing CipherLab products!

GETTING FAMILIARIZED WITH THE SCANNER AND THE CRADLE

INSTALLING THE BATTERY TO THE SCANNER

When you first receive the package, the rechargeable battery is stored separately from the scanner. Insert the battery into the scanner first so that it can be charged when sitting in the cradle.

Note: Any improper handling may reduce the battery life.

1) Insert the battery into the battery compartment and close the battery cap.

2) Use a coin or flat-blade screw driver to rotate the battery cap clockwise until snug.

3) Hold down the trigger about 2 seconds to turn on the scanner.

4) The scanner will respond with a long beep and its LED will come on-off shortly.
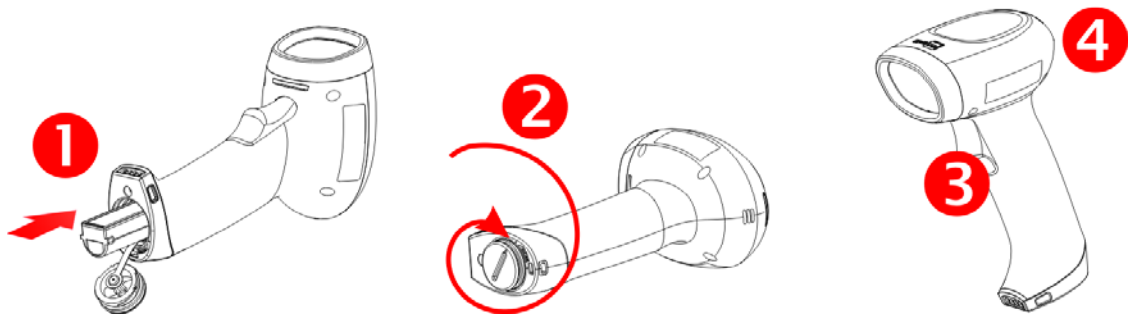

Note: (1) To turn off the scanner, remove the battery.
(2) For shipping and storage purposes, save the scanner and the battery separately. This will keep the battery in good condition for future use.
(3) When the battery charge becomes low, you will find the scanner cannot emit scan beam and its power-on beep sounds differently.

SETTING UP THE CRADLE

Capable of charging the scanner, the cradle is specifically designed for the scanner to communicate with a host computer wirelessly. The connection between the scanners and the cradle is made easy and reliable.

Communication LED
Power LED

Interface Cable   Power Adaptor Cable
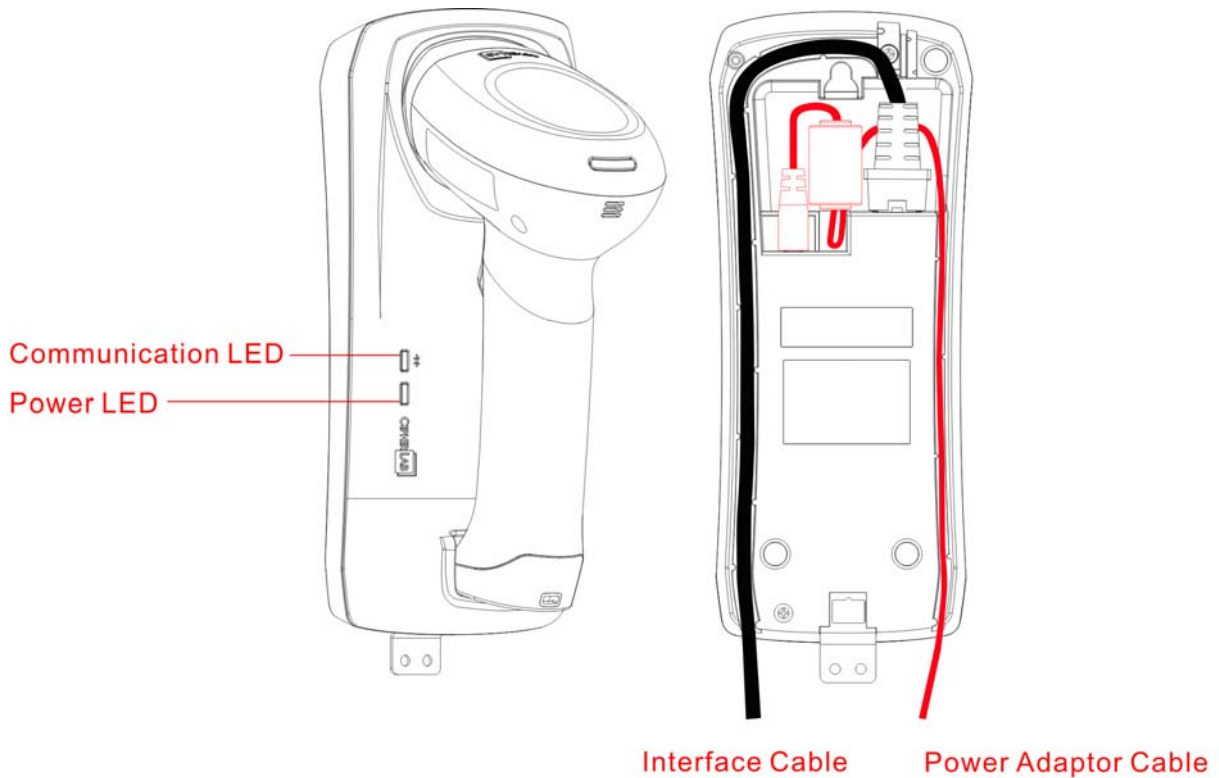
Two LED indicators are provided for power and communications status.

Power LED		Meaning
Red, solid	---	Charging error
Red, flashing		Charging (On/Off ratio 0.5:0.5 seconds)
---	---	Power OFF

Communication LED		Meaning
---	Blue, solid	Initializing
Red, solid	---	Failed to establish a USB connection
Red, solid	Blue, flashing	Serial command mode with USB Virtual COM or RS-232: wait 3 seconds for starting a serial command
Red, flashing	Blue, flashing	Serial command mode with USB HID: wait 3 seconds for pressing [Num Lock] or [Caps Lock] 5 times via keyboard

| ---	Blue, flashing	Wait for connection request from the scanner (Slow flash at 0.5 Hz)
---	Blue, flashing	Connected with the scanner (Fast flash at 1 Hz)
Red, solid	Blue, flashing	Failed to send data to host via USB Virtual COM (Fast flash at 1 Hz)
Red, flashing	---	Enter Download Mode

CHARGING THE BATTERY VIA THE CRADLE

The battery may not be charged to full for shipment. When you first receive the package, you will need to charge the battery to full before using the scanner. When using the RS-232 cable, it takes approximately 5 hours to charge the battery to full (from the power adaptor).

Note: Battery charging stops when the temperature drops below 0°C or exceeds 40°C. It is recommended to charge the battery at room temperature (18°C to 25°C) for optimal performance.

1) Install the battery to the scanner.

2) Seat the scanner in the cradle.

3) Connect the cradle to your computer or notebook via the USB or RS-232 cable.

4) Connect the power supply cord from the cradle to a proper power outlet.

Warning: RS-232/USB interface both require connecting the power supply cord. When the cradle is solely on USB power, the current may be insufficient for it to function normally. You must connect the power supply cord.
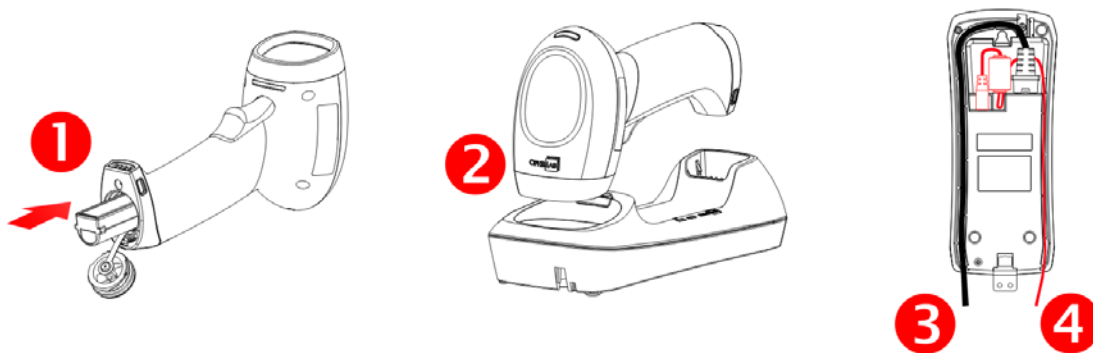
5) The LED for power indication on the cradle will become solid red.

6) The scanner LED will be flashing red during charging.

When the charging is done, the LED will turn off.

When charging error occurs, the LED will turn solid red.

7) The LED for communications on the cradle will first become solid blue while initializing. Refer to the table above for details on different stage of communications.

CHARGING THE BATTERY VIA CHARGER

The battery charger is provided for charging the battery only. You may purchase the charger separately. It takes approximately 3 hours to charge the battery to full.
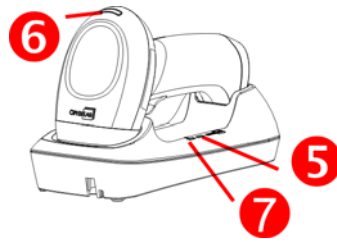
Note: Battery charging stops when the temperature drops below 0°C or exceeds 40°C. It is recommended to charge the battery at room temperature (18°C to 25°C) for optimal performance.

1) Slide the battery smoothly until the latch rises to secure it.
2) Connect the power supply cord to the charger.
3) Connect the other end of the power cord to a suitable power outlet.

Insert the battery

Press the latch to remove the battery
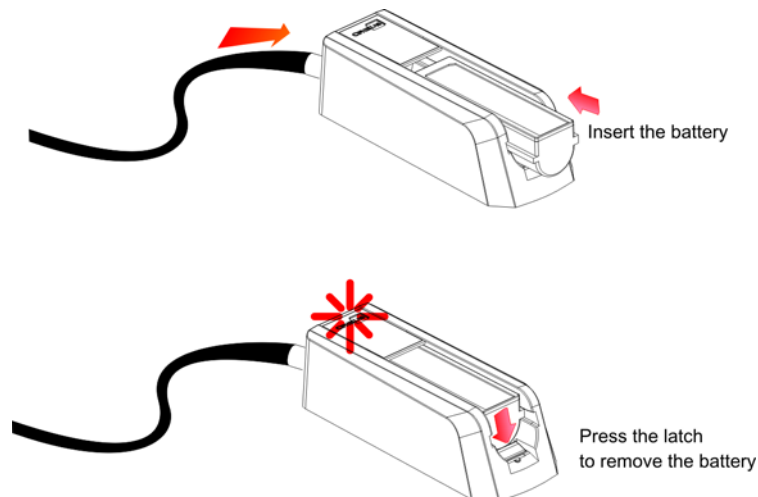
Status LED		Meaning
Red, solid	---	Charger power ON without battery inserted (LED on for 0.5 second)
Red, solid	---	Charging battery
---	Green, solid	Charging done
Red, solid	Green, solid	Pre-charging when battery voltage under 3V (Typical)
---	---	Power or battery not ready

INSIDE THE PACKAGE

The items included in the package may be different, depending on your order. Save the box and packaging material for future use in case you need to store or ship the scanner.

▶ Barcode Scanner
▶ BT Base
▶ Rechargeable Li-ion battery

PRODUCT HIGHLIGHTS

▶ Small-form-factor and built tough to survive drop test
▶ Extremely low power consumption
▶ Firmware upgradeable
▶ Supports most popular barcode symbologies, including GS1-128 (EAN-128), GS1 DataBar (RSS), etc.
▶ Supports negative barcodes
▶ Supports different scan modes, including Aiming Mode and Multi-Barcode Mode
▶ User feedback via LED indicator and beeper
▶ Beeping tone and duration programmable for Good Read
▶ 4MB flash memory for Memory Mode operation, storing up to 240,000 scans based on EAN-13 barcodes
▶ Provides up to 10 KB SRAM for reserve buffer while getting out of range over a wireless personal area network (WPAN), storing up to 640 scans based on EAN-13 barcodes
▶ Capable of transmitting scanned data, emulating a serial cable (BT SPP) or as keyboard input (BT HID), to a notebook computer or PDA with *Bluetooth*® wireless technology
▶ Programmable parameters include data output format, editing format, symbologies, etc.
▶ Easy configuration through ScanMaster
▶ Easy connection through CipherConnect, available via online marketplace for mobile devices running on Android 2.x, BlackBerry 5.x, or Windows Mobile 6.x

SPECIFICATIONS

Optical Characteristics	2560
Scan Engine	Non-contact type
Optical Sensor	CCD
Light Source	Visible red LED
RF Characteristics	
WPAN Module	Wireless PAN BT Class 2 compliance
Coverage (line-of-sight)	100 meters with the cradle
Interface Supported	▶ Serial Port Profile (BT SPP) ▶ Human Interface Device Profile (BT HID) ▶ Cradle
Physical Characteristics	
Memory	▶ 10 KB for transmit buffer ▶ 4 MB flash for memory mode
Switch	Tactile switch
Indication	Triple-color LED (Red/Green/Blue) and beeper
Weight	Approx. 185 g (battery included)

Electrical Characteristics	
Battery	Rechargeable Li-ion battery – 3.7 V, 800 mAh

Power Adaptor	
Input	AC 100~240 V, 50/60 Hz
Output	DC 5V, 1A (Cradle) DC 5V 1A (Battery Charger)
Operating Temperature	0 °C to 40 °C

Environmental Characteristics		
Temperature	Operating	0 °C to 50 °C
	Storage	-20 °C to 60 °C
Humidity (Non-condensing)	Operating	10% to 90%
	Storage	5% to 95%

Resistance	
Impact Resistance	1.8 m, 5 drops per 6 sides
Splash / Dust Resistance	IP 54
Electrostatic Discharge	± 20 kV air discharge, ± 10 kV contact discharge

Programming Support	
Configuration via Setup Barcodes	Use setup barcodes or host serial commands.
Software	Windows®-based ScanMaster
Firmware upgradeable	Download firmware updates via the download utility.

Accessories (√ means "supported")	
Rechargeable Li-ion Battery	√
Battery Charger	√
Cradle	√
USB Cable	√
RS-232 Cable	√
Keyboard Wedge Cable	√