CipherLab
User Guide

1662 L/1664 BT Barcode Scanner

Setup barcodes included.

Version 2.00

Copyright © 2011~2012 CIPHERLAB CO., LTD.
All rights reserved

The software contains proprietary information of CIPHERLAB CO., LTD.; it is provided under a license agreement containing restrictions on use and disclosure and is also protected by copyright law. Reverse engineering of the software is prohibited.

Due to continued product development this information may change without notice. The information and intellectual property contained herein is confidential between CIPHERLAB and the client and remains the exclusive property of CIPHERLAB CO., LTD. If you find any problems in the documentation, please report them to us in writing. CIPHERLAB does not warrant that this document is error-free.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without the prior written permission of CIPHERLAB CO., LTD.

For product consultancy and technical support, please contact your local sales representative. Also, you may visit our web site for more information.

The CipherLab logo is a registered trademark of CIPHERLAB CO., LTD.

All brand, product and service, and trademark names are the property of their registered owners.

The editorial use of these names is for identification as well as to the benefit of the owners, with no intention of infringement.

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

IMPORTANT NOTICES

FOR USA

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.

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.

FOR CANADA

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of Industry Canada. 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.

Cet appareil numerique respecte les limites de bruits radioelectriques applicables aux appareils numeriques de Classe B prescrites dans la norme sur le material brouilleur: "Appareils Numeriques," NMB-003 edictee par l'Industrie.

FOR HAND-HELD PRODUCT WITH RF FUNCTIONS

The 1662 L / 1664 unit (FCC ID, 1662 L : Q3N-1662; 1664 :Q3N-1664) complies with FCC radiation exposure limits set forth for uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines in Supplement C to OET65. The unit has very low level of RF energy that it is deemed to comply without testing of specific absorption ratio (SAR).

The 3610 unit (FCC ID: Q3N-3610) 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 & body. It only operated in hand-held used. If only transfer data to the host cordless, please keep the minimum distance 20 cm between machine & body.

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.

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.
- If you shall find the scanner malfunctioning, write down the specific scenario and consult your local sales representative.

RELEASE NOTES

Version	Date	Notes
2.00	Mar. 20, 2012	Add: 1662 L model and Set Up Drivers License
1.03	Feb. 06, 2012	Add: Chapter 6 Fields of Time Stamp
1.02	Jan. 11, 2012	Modified: Specifications: Dimension and Weight description
1.01	Dec. 28, 2011	Add: 1.1.2 add delay note for activating the scanner from power off mode
1.00	Nov. 30, 2011	Initial release

CONTENTS

IMPORTANT NOTICES ..... - 2 -
For USA ..... - 3 -
For Canada ..... - 3 -
For Hand-held Product with RF Functions ..... - 4 -
For Product with Laser ..... - 4 -
Safety Precautions ..... - 4 -
Care & Maintenance ..... - 4 -
RELEASE NOTES ..... - 5 -
INTRODUCTION 1
Get Familiarized with 1662 L/1664 and 3610 2
Install the Battery into 1662 L/1664 2
Charge the Battery 3
Charge the Battery via Charger 4
Use 3610 5
Inside the Package 6
Product Highlights 6
Symbologies Supported 7
QUICK START 9
Enter Configuration Mode 11
Exit Configuration Mode 11
Default Settings 12
Save User Settings as Defaults 12
Restore User Defaults 12
Restore System Defaults 12
Read a Setup Barcode 13
Configure Parameters 13
List the Current Settings 17
Create One-Scan Setup Barcodes 19
UNDERSTANDING THE BARCODE SCANNER 23
1.1 Battery 23
1.1.1 How to Operate the Scanner 24
1.1.2 Auto Power Off & Power-Saving 25
1.2 Memory 28
1.2.1 Transmit Buffer 28
1.2.2 Memory Mode 29
1.3 LED Indicator 31
1.3.1 Good Read LED 32
1.3.2 Good Read LED Duration 32

1.4 Beeper 33
1.4.1 Beeper Volume 34
1.4.2 Good Read Beep 35
1.4.3 Low Battery Alarm 36
1.5 Vibrator 36
1.5.1 Good Read Vibrator 36
1.5.2 Good Read Vibrator Duration 36
1.6 Send "NR" to Host 37
1.7 Scan Modes 38
1.7.1 Laser Mode 39
1.7.2 Auto Off Mode 39
1.7.3 Auto Power Off Mode 39
1.7.4 Aiming Mode (1664 Only) 40
1.7.5 Multi-Barcode Mode 40
1.7.6 Continuous Mode (1662 L Only) 41
1.7.7 Alternate Mode (1662 L Only) 41
1.8 Scanning Timeout 42
1.9 Delay between Re-read 43
1.10 Read Redundancy for All Symblogies 44
1.11 Addon Security for UPC/EAN Barcodes 45
1.12 Negative Barcodes 45
1.13 Use Direct USB Cable 46
1.13.1 Direct USB Interface 46
1.13.2 Disable Direct USB Interface 46
1.14 Picklist Mode (1664 Only) 47
1.15 Pager Beep Duration 47
1.16 Time Stamp 48
1.16.1 DATE AND TIME SETTINGS 48
1.16.2 SEPARATOR FOR DATE AND TIME 50
1.16.3 DATE FORMAT 51
1.17 2D Decode Setting (1664 Only) 52
1.17.1 Aiming Pattern 52
1.17.2 Decoding Illumination 52
1.18 Hardware Reset 53
1.18.1 Restore System Defaults 53
1.18.2 Reset Connection 53
SELECTING OUTPUT INTERFACE 55
2.1 *Bluetooth*® HID 56
2.1.1 Activate *Bluetooth*® HID & Select Keyboard Type 57
2.1.2 Reset Connection 58
2.1.3 Keyboard Settings 59
2.1.4 Inter-Character Delay 66
2.1.5 Inter-Function Delay 66
2.1.6 HID Character Transmit Mode 67
2.1.7 Keypad Support for iPhone/iPad 67
2.2 *Bluetooth*® SPP Slave 68

2.2.1 Activate *Bluetooth*® SPP Slave Mode 68
2.2.2 Inter-Function Delay 68
2.2.3 ACK/NAK Timeout 69
2.3 *Bluetooth*® SPP Master 70
2.3.1 Activate *Bluetooth*® SPP Master Mode 70
2.3.2 Inter-Function Delay 72
2.3.3 ACK/NAK Timeout 73
2.3.4 Switch between Master/Slave Mode 73
2.4 USB HID via 3610 74
2.4.1 Activate USB HID & Select Keyboard Type 75
2.4.2 Keyboard Settings 76
2.4.3 Inter-Character Delay 83
2.4.4 Inter-Function Delay 83
2.4.5 HID Character Transmit Mode 84
2.5 USB Virtual COM via 3610 85
2.5.1 Activate USB Virtual COM 85
2.5.2 Inter-Function Delay 85
2.5.3 ACK/NAK Timeout 86
2.6 Direct USB HID 87
2.6.1 Activate USB HID & Select Keyboard Type 88
2.6.2 Keyboard Settings 89
2.6.3 Inter-Character Delay 96
2.6.4 Inter-Function Delay 96
2.6.5 HID Character Transmit Mode 97
2.7 Direct USB Virtual COM 98
2.7.1 Activate USB Virtual COM 98
2.7.2 Inter-Function Delay 98
2.7.3 ACK/NAK Timeout 99
SET UP A WPAN CONNECTION 101
3.1 Connecting via 3610 102
3.1.1 Connect to 3610 102
3.1.2 Change Interface 103
3.1.3 Configure Related Settings 104
3.2 Connecting via *Bluetooth*® Dongle 105
3.2.1 Change Interface 105
3.2.2 Configure Related Settings 106
3.2.3 Connect to Dongle 109
SPECIFICATIONS 117

INTRODUCTION

CipherLab's small-form-factor 1600 Series Barcode Scanners are specifically designed to answer the mobile demands. The palm-sized 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 cordless technology to small-form-factor scanners, the scanners are ideal for carrying as in pocket, and thus give workers tether-free mobility anytime anywhere and get job done more efficiently. This line of scanners deliver data over a cordless personal network at a range of up to 10 meters and a prolonged battery life to keep business running. 1662 L/1664 is a new ordering option provided for adapting a advanced scan engine to read both 1D and 2D barcodes.

Owing to the compact design, extremely low power consumption, and powerful decoding capability, the 1600 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 you to 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.

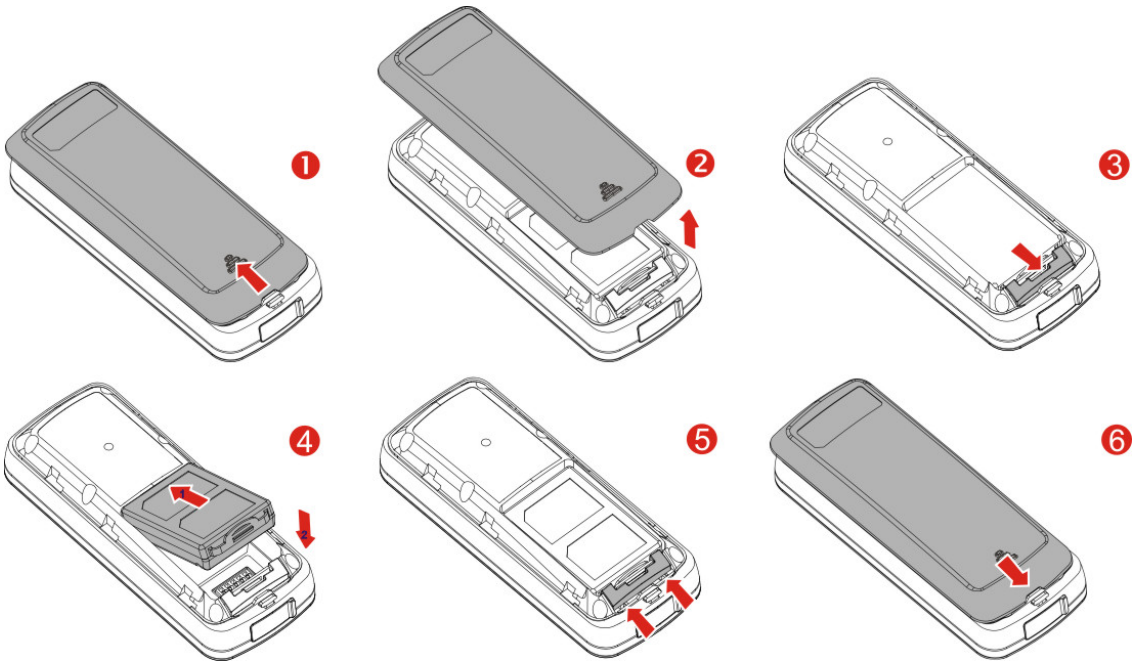
Thank you for choosing CipherLab products!

Update

GET FAMILIARIZED WITH 1662 L/1664 AND 3610

INSTALL THE BATTERY INTO 1662 L/1664

1) Hold the scanner face down in one hand, press the battery cover, and slide the battery cover.
2) Remove the battery cover.
3) Push battery lock to unlocked position.



4) Insert the battery into the battery compartment.
   - Install the supplied 3.7V/850mAh Li-ion battery into the battery compartment.
5) Push battery lock to lock the battery firmly.
6) Replace the battery cover.
7) Hold down the [Power/Delete] key for about 2 seconds to turn on the scanner.

   The scanner will respond with a long beep (high tone) and its LED indicator will become solid red and go off.

Enter Setup

Note: (1) To turn off the scanner, press the [Power/Delete] key for 2 seconds. The scanner will respond with two short beeps (high tone) and the LED will become solid red. Release the key. Otherwise, let the scanner turn off automatically in specific circumstances. Refer to settings of "Auto Power Off". (2) For shipping and storage purposes, remove the battery from the scanner. This will keep the batteries in good condition for future use.

CHARGE THE BATTERY

The battery may not be fully charged for shipment. For initial use, it is recommended to fully charge the battery before using the scanner. You can use the Direct USB cable to connect the scanner to PC for charging. It takes approximately 4 hours to fully charge the battery. Refer to 1.13 Use Direct USB Cable.

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 1662 L/1664.
2) Connect 1662 L/1664 to host computer or notebook via the USB cable.
3) The scanner LED will flash red during charging.

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

   When charging errors occur, the LED will turn solid red.

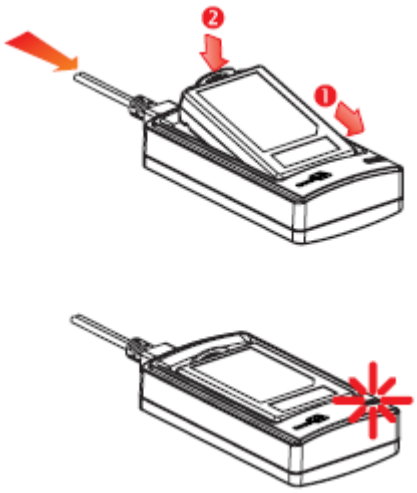
Update

CHARGE THE BATTERY VIA CHARGER

The battery charger is provided for charging the battery outside of the scanner. 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) Insert the battery.
2) Connect the power supply cord to the charger.
3) Connect the other end of the power cord to a suitable power outlet.

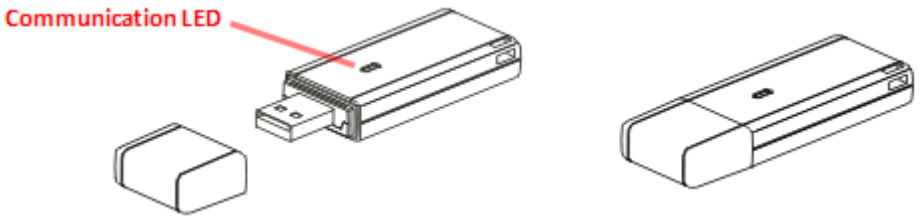


Status LED		Meaning
Red, solid	---	Charger power ON (LED on for 0.5 second)
Red, solid	---	Charging battery
---	Green, solid	Charging done
---	---	Power or battery not ready

Enter Setup

USE 3610

The CipherLab Dongle (3610) is specifically designed for the scanner to communicate with a host computer cordless. The connection between the scanners and 3610 is made easy and reliable. Refer to 3.1.1 Connect to 3610.



There is one LED indicator provided for communications status.

Communication LED		Meaning
---	Blue, solid	Initialize
Red, solid	---	Failed to establish a USB connection
Red, solid	Blue, flashing	Serial command mode with USB Virtual COM: 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

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.

- 1662 L/1664 Scanner
- CipherLab Dongle (3610) Optional
- Rechargeable Li-ion Battery Pack
- Direct USB Cable
- Wristband
- Setup Cards
- Quick Start Guide
- Product CD

Note: The CD-ROM includes this manual and Windows-based *ScanMaster* software for configuration, as well as the USB Virtual COM driver.

PRODUCT HIGHLIGHTS

- Small-form-factor and built tough to survive drop test.
- Extremely low power consumption.
- Firmware upgradeable.
- Support most popular barcode 1D/2D symbologies, including GS1-128 (EAN-128), GS1 DataBar (RSS), etc (2D is for 1664 only).
- Support negative barcodes.
- Support US driver license decode (1664 only).
- Support a variety of 2D symbologies, Time Stamp and Paging function.
- Support different scan modes, including Aiming Mode (1664 only), Alternate Mode (1662 L only) and Multi-Barcode Mode [Note].
- User feedback via LED indicator, beeper and vibrator.
- Beeping tone and duration programmable for Good Read.
- 4MB flash memory for Memory Mode operation, storing over 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 (*Bluetooth*® SPP) or as keyboard input (*Bluetooth*® HID), to a notebook computer or PDA with *Bluetooth*® wireless technology.
- Programmable parameters include data output format, editing format, symbologies.
- 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.

Enter Setup

SYMBOLOGIES SUPPORTED

Most of the popular barcode symbologies are supported, as listed below. Each can be individually enabled or disabled. The scanner will automatically discriminate and recognize all the symbologies that are enabled.

Symbologies Supported: Enable/Disable		1D Laser (1662 L)	2D (1664)
Codabar		Enabled	Enabled
Code 11		Disabled	Disabled
Code 93		Enabled	Enabled
MSI		Disabled	Disabled
Code 128	Code 128	Enabled	Enabled
	GS1-128 (EAN-128)	Enabled	Enabled
	ISBT 128	Enabled	Enabled
Code 2 of 5	Industrial 25 (Discrete 25)	Enabled	Enabled
	Interleaved 25	Enabled	Enabled
	Matrix 25		Disabled
	Chinese 25	Disabled	Disabled
Code 3 of 9	Code 39	Enabled	Enabled
	Italian Pharmacode (Code 32)	Disabled	Disabled
	Trioptic Code 39	Disabled	Disabled
EAN / UPC	EAN-8	Enabled	Enabled
	EAN-8 Addon 2	Disabled	Disabled
	EAN-8 Addon 5	Disabled	Disabled
	EAN-13	Enabled	Enabled
	EAN-13 & UPC-A Addon 2	Disabled	Disabled
	EAN-13 & UPC-A Addon 5	Disabled	Disabled
	Bookland EAN (ISBN)	Disabled	Disabled
	UPC-E0	Enabled	Enabled
	UPC-E1	Disabled	Disabled
	UPC-E Addon 2	Disabled	Disabled
	UPC-E Addon 5	Disabled	Disabled
	UPC-A	Enabled	Enabled
GS1 DataBar (RSS)	GS1 DataBar Omnidirectional (RSS-14)	Disabled	Disabled
	GS1 DataBar Truncated	Disabled	Disabled
	GS1 DataBar Stacked		Disabled

Update

	GS1 DataBar Stacked Omnidirectional		Disabled
	GS1 DataBar Limited (RSS Limited)	Disabled	Disabled
	GS1 DataBar Expanded (RSS Expanded)	Disabled	Disabled
	GS1 DataBar Expanded Stacked		Disabled
Composite Code	Composite CC-A/B		Disabled
	Composite CC-C		Disabled
	Composite TLC-39		Disabled
Postal Code	US Postnet		Enabled
	US Planet		Enabled
	UK Postal		Enabled
	Japan Postal		Enabled
	Australian Postal		Enabled
	Dutch Postal		Enabled
	USPS 4CB/One Code/Intelligent Mail		Disabled
	UPU FICS Postal		Disabled
2D Symbologies	PDF417		Enabled
	MicroPDF417		Disabled
	Data Matrix		Enabled
	Maxicode		Enabled
	QR Code		Enabled
	MicroQR		Enabled
	Aztec		Enabled

Enter Setup

QUICK START

The configuration of the scanner can be done by reading the setup barcodes contained in this manual or via the *ScanMaster* software.

This section describes the procedure of configuring the scanner by reading the setup barcodes and provides some examples for demonstration.

Configuration Mode

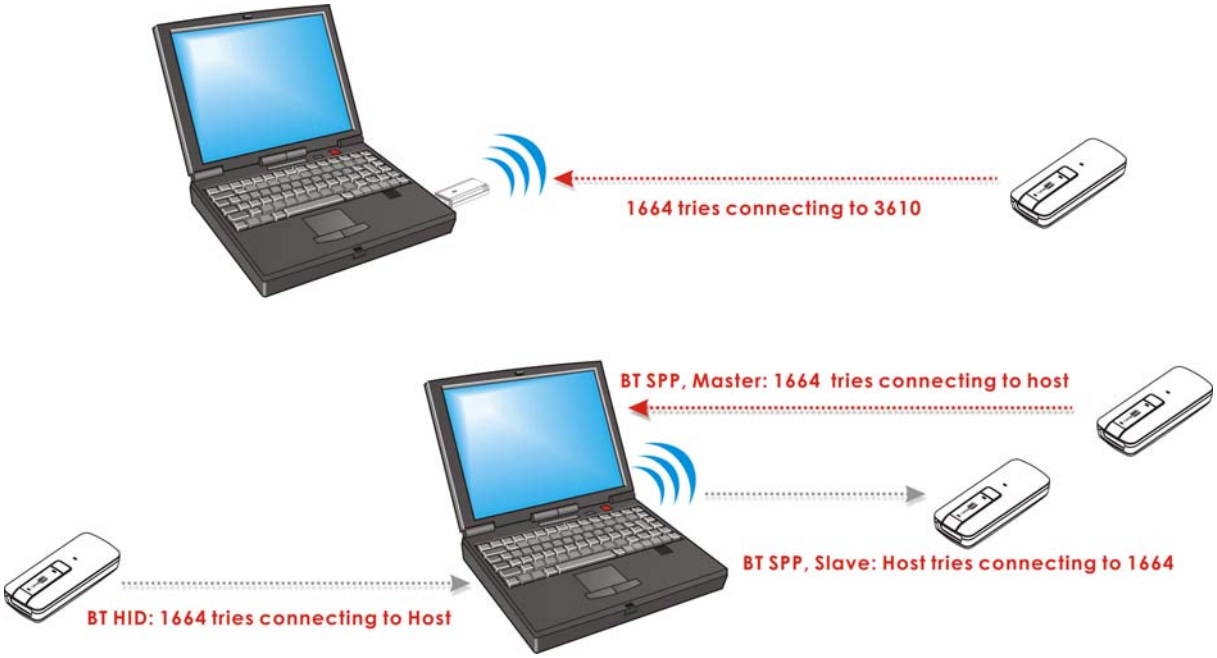
1) Hold down the [Power/Delete] key for 2 seconds to turn on the scanner. It will respond with a long beep and its LED will come on-off.
2) Read the "Enter Setup" barcode. It will respond with six beeps and its LED indicator will become flashing red after reading the barcode.
3) Read more setup barcodes… Most of the setup barcodes are normal, and the scanner will respond with two beeps (low-high tone). For special setup barcodes, it requires reading more than one setup barcode to complete the setting.
4) Read the "Update" or "Abort" barcode. It will respond with six beeps and its LED indicator will become flashing red after reading the barcode.
5) The scanner will restart automatically upon reading the "Update" or "Abort" barcode. It will respond with a long beep and its LED will come on-off.

Note: Refer to Appendix II Host Serial Commands for how to configure the 3610 dongle by having the scanner read 3610-related setup barcodes or using serial commands.

Update

Working Mode

Upon powering up, the scanner will try to establish a connection with 3610 or a computer with *Bluetooth*® wireless technology. Refer to Chapter 3 - Set up a WPAN Connection for details. The connection between the scanners and 3610 is made easy and reliable. Now, it also supports *Bluetooth*® SPP Master Mode as an alternative. Refer to 2.3 *Bluetooth*® SPP Master.



Note: If USB Virtual COM or *Bluetooth*® SPP is selected for output interface, the host can directly send serial commands to configure the scanner. For example, run HyperTerminal.exe and type the 6-digit command located under each setup barcode.

Enter Setup

ENTER CONFIGURATION MODE

For the scanner to enter the configuration mode, read the "Enter Setup" barcode, which can be located at the bottom of almost every even page of this manual.

- The scanner will respond with six beeps and its LED indicator will become flashing red after reading the barcode.

Enter Setup

For configuring scanner parameters, see “Read a Setup Barcode” below.

EXIT CONFIGURATION MODE

For the scanner to save settings and exit the configuration mode, read the “Update” barcode, which can be located at the bottom of almost every odd page of this manual. Exit the configuration mode without saving any changes; read the “Abort” barcode instead.

- Just like reading the “Enter Setup” barcode, the scanner will respond with six beeps and its LED indicator will become flashing red after reading the barcode. Wait for a few seconds for the scanner to restart itself.

Update

Abort

Update

DEFAULT SETTINGS

SAVE USER SETTINGS AS DEFAULTS

For the scanner to keep the customized settings as user defaults, you must read the "Save as User Defaults" barcode. This is a normal setup barcode, and the scanner will respond with two beeps (low-high tone).

- After reading the "Update" barcode, the current settings will be saved as user defaults.

Save as User Defaults

RESTORE USER DEFAULTS

For the scanner to restore the user defaults, which you have saved earlier, you must read the "Restore User Defaults" barcode. This is a normal setup barcode, and the scanner will respond with two beeps (low-high tone).

- After reading the "Update" barcode, all the parameters of the scanner will return to their customized values.

Restore User Defaults

RESTORE SYSTEM DEFAULTS

For the scanner to restore the factory defaults, read the "Restore System Defaults" barcode. This is a normal setup barcode, and the scanner will respond with two beeps (low-high tone). After reading the "Update" barcode, all the parameters of the scanner will return to their default values. The current connection record will be cleared as well. Refer to 1.18.1 Restore System Defaults for the key combination used to restore defaults during operation.

For 3610 to restore factory defaults, refer to 錯誤! 找不到參照來源。.

Restore System Defaults

Note: The system default value (if there is one) for each setting is indicated by an asterisk "*".

Enter Setup

READ A SETUP BARCODE

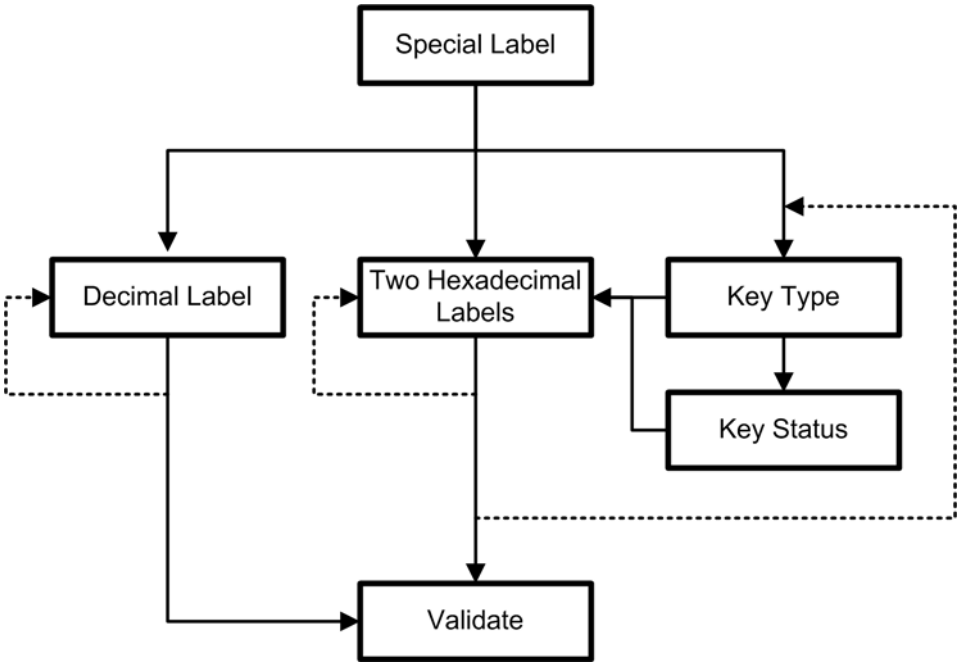
CONFIGURE PARAMETERS

For most of the scanner parameters, only one read is required to set them to new values. The scanner will respond with two beeps (low-high tone) when each parameter is set successfully. Refer to Create One-Scan Setup Barcodes.

But for a number of special parameters, multiple reads are required to complete the setting. In this case, the scanner will respond with a short beep to indicate it needs to read more setup barcodes. These special parameters may require reading one or more setup barcodes, such as

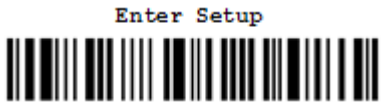
- Numeric barcodes, say, for keyboard type, inter-character delay, length qualification
- Hexadecimal barcodes, say, for character strings as prefix, suffix, etc.
- When "*Bluetooth*® HID" or "USB HID" is configured for interface, Key Type and Key Status will then become applicable. Decide whether to change key status when "Normal Key" is selected for Key Type.

To complete the configuration of these special parameters, it requires reading the "Validate" barcode, and the scanner will respond with two beeps (low-high tone) to indicate the input values are validated.



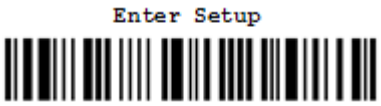
Update

The example below shows how to save your settings as “User Default” so that you may restore user defaults at a later time:

Steps	Action	User Feedback if Successful
1)	Power on the scanner…	The scanner will respond with a long beep (high tone) and its LED indicator will become solid red and go off.
2)	Enter the Configuration Mode… 	The scanner will respond with six beeps (high-low tone repeats three times), and its LED indicator will be flashing red.
3)	Read a Setup barcode… For example,	The scanner will respond with two beeps (low-high tone) if reading a normal setup barcode.
4)	Exit the Configuration Mode…	Same as for *Enter the Configuration Mode*.
5)	The scanner will automatically restart itself…	Same as for *Power on the scanner*.
*	When any configuration error occurs…	The scanner will respond with one long beep (low tone).

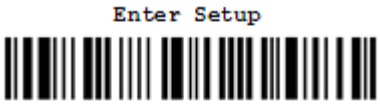
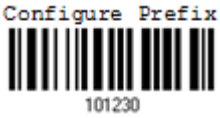
Enter Setup

The example below shows how to set numeric parameters:

Steps	Action	User Feedback if Successful
1)	Power on the scanner…	The scanner will respond with a long beep (high tone) and its LED indicator will become solid red and go off.
2)	Enter the Configuration Mode… 	The scanner will respond with six beeps (high-low tone repeats three times), and its LED indicator will become flashing red.
3)	Read a Setup barcode… For example, **Normal setup barcode** **Normal setup barcode** **Special setup barcode** **Decimal barcodes**	Read the “Decimal Value” barcode(s). The scanner will respond with two beeps (low-high tone) when the input values are validated.
4)	Exit the Configuration Mode…	Same as for *Enter the Configuration Mode*.
5)	The scanner will automatically restart itself…	Same as for *Power on the scanner*.

Update

The example below shows how to set string parameters:

Steps	Action	User Feedback if Successful
1)	Power on the scanner…	The scanner will respond with a long beep (high tone) and its LED indicator will become solid red and go off.
2)	Enter the Configuration Mode… 	The scanner will respond with six beeps (high-low tone repeats three times), and its LED indicator will become flashing red.
3)	Read a Setup barcode… For example,	The scanner will respond with one short beep if reading a special setup barcode such as “Prefix Code”, indicating the setup requires reading more barcodes.
Special setup barcodes		
		When “*Bluetooth*® HID” or “USB HID” is configured for interface, Key Type and Key Status will then become applicable. You may decide whether or not to change key status when “Normal Key” is selected for Key Type.
Hexadecimal barcodes		Read the “Hexadecimal Value” barcodes for the desired character string. For example, read “2” and “B” for the scanner to prefix the character “+”.
		The scanner will respond with two beeps (low-high tone) when the input values are validated.
4)	Exit the Configuration Mode…	Same as for *Enter the Configuration Mode*.
5)	The scanner will automatically restart itself…	Same as for *Power on the scanner*.

Enter Setup

LIST THE CURRENT SETTINGS

The current settings of all scanner parameters can be sent to the host computer for user inspection. The listing includes pages as shown below. You can select the page of interest by having the scanner read the “List Page x” barcode. The scanner will respond with two beeps (low-high tone) and send the selected page to the host immediately.

List settings regarding Firmware Version, Serial Number, Interface, Buzzer, and Other Scanner Parameters	**List Page 1**	109950
List settings regarding Prefix, Suffix, and Length Code Setting (1/2)	**List Page 2**	109951
List settings regarding Prefix, Suffix, and Length Code Setting (2/2)	**List Page 3**	109952
List settings regarding Code ID	**List Page 4**	109953
List settings regarding Readable Symbologies (1/2)	**List Page 5**	109954
List settings regarding Readable Symbologies (2/2)	**List Page 6**	109955
List settings regarding Symbology Parameters (1/3)	**List Page 7**	109956
List settings regarding Symbology Parameters (2/3)	**List Page 8**	109957
List settings regarding Symbology Parameters (3/3)	**List Page 9**	109958

Update

Reserved	**List Page 10**	109959
List settings regarding Editing Format 1 (1/2)	**List Page 11**	109937
List settings regarding Editing Format 1 (2/2)	**List Page 12**	109938
List settings regarding Editing Format 2 (1/2)	**List Page 13**	109939
List settings regarding Editing Format 2 (2/2)	**List Page 14**	109940
List settings regarding Editing Format 3 (1/2)	**List Page 15**	109941
List settings regarding Editing Format 3 (2/2)	**List Page 16**	109942
List settings regarding Editing Format 4 (1/2)	**List Page 17**	109943
List settings regarding Editing Format 4 (2/2)	**List Page 18**	109944
List settings regarding Editing Format 5 (1/2)	**List Page 19**	109945
List settings regarding Editing Format 5 (2/2)	**List Page 20**	109946
List current settings	**List Page 21**	109947

Enter Setup

List information regarding Driver License **List Page 22**

CREATE ONE-SCAN SETUP BARCODES

The fact is most of the scanner parameters require only one read for setting new values. To facilitate configuring the scanner, you may create One-Scan setup barcodes for use.

The requirements of a One-Scan setup barcode are:

- a prefix of the "#@" characters
- the six digits of command parameters
- a suffix of the "#"character

For example, the scanner needs the reading of three setup barcodes for the command parameter "109952" to take effect:

Enter Setup

List Page 3

Update

Update

Now, it requires only one read:

One-Scan Setup Barcode for 109952

Note: The scanner will restart automatically upon reading the One-Scan setup barcode for (1) changing the interface or (2) setting memory mode, enable or disable. It will respond with a long beep and its LED will come on-off.

Enter Setup

Update

Chapter 1

UNDERSTANDING THE BARCODE SCANNER

This chapter explains the features and usage of the barcode scanner.

IN THIS CHAPTER

1.1 Battery 23
1.2 Memory 28
1.3 LED Indicator 31
1.4 Beeper 33
1.5 Vibrator 36
1.6 Send “NR” to Host 37
1.7 Scan Modes 38
1.8 Scanning Timeout 42
1.9 Delay between Re-read 43
1.10 Read Redundancy for All Symblogies 44
1.11 Addon Security for UPC/EAN Barcodes 45
1.12 Negative Barcodes 45
1.13 Use Direct USB Cable 46
1.14 Picklist Mode 47
1.15 Pager Beep Duration 47
1.16 Time Stamp 48
1.17 2D Decode Setting 52
1.18 Hardware Reset 53

1.1 BATTERY

The scanner is battery-powered: Use a rechargeable 3.7 V/850 mAh Li-ion battery. For intensive data collection, please prepare spare battery or batteries for non-stop operation.

Note: (1) The rechargeable battery for 1662 L/1664 may not be fully charged when shipped. We suggest charging it to full before use.
(2) The scanner can be configured to save battery power. Refer to settings of “Auto Power Off & Power-Saving”, “Sniff Mode”, as well as “Low Battery Alarm”.

Update

1.1.1 HOW TO OPERATE THE SCANNER

Turn on the scanner…

Press the [Power/Delete] key for 2 seconds. The scanner will respond with a long beep (high tone), and its LED indicator will become solid red and go off.

Turn off the scanner…

Press the [Power/Delete] key for 2 seconds. The scanner will respond with two short beeps (high tone) and the LED will become solid red. Release the key then. Otherwise, let the scanner turn off automatically in specific circumstances.

Delete the last collected data when in memory mode …

Press the [Power/Delete] key. The scanner will respond with two short beeps (high tone) and the LED will become solid red. Before the LED goes off (within 1 second), press the [Power/Delete] key again to confirm the deletion.

Enter Setup

1.1.2 AUTO POWER OFF & POWER-SAVING

The scanner will stay active at power-on, which may be followed by a transition from full CPU speed to low CPU speed (Power-Saving) to auto shutdown (Auto Power Off).

- Power-Saving (1~254 min.; 0= Disable): By default, it is set to stand by at full-speed for 2 minutes before it enters low-speed mode. If this feature is not desired, set it to 0.
- Auto Power Off (1~254 min.; 0= Disable): By default, it is set to automatically shut down after 10 minutes. If this feature is not desired, set it to 0.

Note: 1. The Power-Saving setting will still take effect once a connection has been established successfully, via *Bluetooth*® HID or SPP. 2. There will be a time delay to reactivate 2D scan engine when scanner comes back from power off mode.

Before establishing a WPAN connection successfully…

1) The scanner will stay active for a specified period of time (2 minutes by default) for the following scenarios. Its CPU is running at full speed, and the LED is flashing blue (On/Off ratio 0.5 s: 0.5 s).

   (a) waiting for a connection request from the host (*Bluetooth*® SPP Slave Mode)

   (b) trying to connect to the host (*Bluetooth*® HID or *Bluetooth*® SPP Master Mode)

   (c) trying to connect to 3610

2) If it fails to connect within 2 minutes, the scanner will become inactive to save power for the remaining period of time (the specified value minus 2 minutes). Its CPU is running at low speed, and the LED is flashing red (On/Off ratio 0.3 s: 2.5 s).

   Press the [Trigger] key to wake up the scanner when it becomes inactive, and the scanner will stay active again.

3) If it fails to connect again and again, and finally stays inactive until the specified time interval for Auto Power Off has elapsed, the scanner will automatically turn off in order to conserve battery power.

   Hold down the [Power/Delete] key for 2 seconds to turn it on.

Note: For scenarios (a) and (b) in step 1, on your computer you may need to search for the scanner again.

Update

After establishing a WPAN connection successfully...

1) Once a WPAN connection is established successfully, the scanner will stay active for a specified period of time (2 minutes by default) for data transmission. Its CPU is running at full speed, and the LED is flashing blue (On/Off ratio 0.02 s: 3 s).

2) If it is idle within 2 minutes, the scanner will become inactive to save power for the remaining period of time (the specified value minus 2 minutes). Its CPU is running at low speed, and the LED is flashing red (On/Off ratio 0.3 s: 2.5 s).

   Press the [Trigger] key to wake up the scanner when it becomes inactive, and the scanner will stay active again.

3) If it is idle and finally stays inactive until the specified time interval for Auto Power Off has elapsed, the scanner will automatically turn off in order to conserve battery power. The three short beeps will ring out, tone descending from high to low.

   Hold down the [Power/Delete] key for 2 seconds to turn it on.

   - For *Bluetooth*® HID, the scanner will resume connection with the host upon powering on again, as long as the host application is running. The three short beeps will ring out, tone ascending from low to high. If the scanner fails to resume connection, it will try every 5 seconds to re-connect to the host unless the “Reset Connection” barcode has been scanned.
   - For *Bluetooth*® SPP Slave Mode, the scanner must wait for the host to re-connect.
   - For *Bluetooth*® SPP Master Mode, the scanner will resume connection with the host upon powering on again, as long as the host application is running. The three short beeps will ring out, tone ascending from low to high. If the scanner fails to resume connection, it will try every 5 seconds to re-connect to the host unless the “Reset Connection” or “Restore System Defaults” barcode has been scanned.
   - With the use of 3610, the scanner will try re-connecting to 3610 whilst the scanner is active.

Enter Setup

Auto Off after 0~254 min. (*10)

1) Read the barcode above to specify the time interval in minutes before the scanner automatically turns off.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。. For example, read "1" and "5" for the scanner to automatically turn off after being idle for 15 minutes.
3) Read the "Validate" barcode on the same page to complete this setting.

Note: Auto Power Off will not take effect when the scanner is in the configuration mode.

Power-Saving after 0~254 min. (*2)

1) Read the barcode above to specify the time interval in minutes before the scanner enters low-speed mode.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。. For example, read "5" for the scanner to enter low-speed mode after being idle for 5 minutes.
3) Read the "Validate" barcode on the same page to complete this setting.

Note: Power-Saving will not take effect when one of the following conditions is met:
(1) The scanner is in the configuration mode.
(2) The Power-Saving value is set to 0.
(3) The scan mode is set to Continuous or Alternate Mode.
(4) The setting value of Power-Saving is greater than that of Auto Power Off.

Update

1.2 MEMORY

The scanned data can be sent to a host computer immediately via the WPAN connection or stored in flash memory when the scanner is set to Memory mode.

1.2.1 TRANSMIT BUFFER

By default, the transmit buffer is enabled and ready for use when the scanner is out of range. Upon reading a barcode successfully within range, the scanner responds with one short beep (high tone) and its LED indicator becomes solid green and goes off. However, the host computer may not receive the data immediately if the scanner is out of range. With the 10 KB transmit buffer, the scanner can ignore the transmission status and keep on reading barcodes until the buffer is full.

When transmit buffer is enabled...

If the scanner is out of range, it will respond with two short beeps, high-low tone, upon reading a barcode successfully.

When transmit buffer is full, the scanner will respond with one long beep (low tone) and its LED indicator will become solid red and go off. You are advised to get back into range.

When transmit buffer is disabled...

If the scanner is out of range, it will respond with one long beep (low tone) and its LED indicator will become solid red and go off. You are advised to get back into range.

***Enable**

Disable

Note: The 10 KB transmit buffer on the scanner can hold as many as 640 scans based on EAN-13 barcodes. Data will be cleared out once the scanner is turned off or running out of battery power!

Enter Setup

1.2.2 MEMORY MODE

When the scanner is in memory mode, it means any real-time connection established with the host is disabled. 1662 L/1664 scanner keeps 4MB flash memory for memory mode operation, which can store over 240,000 scans based on EAN-13 barcodes.

Enable

***Disable**

Warning: No real-time connection is allowed unless the memory mode is disabled.

Memory Data Delay

You may set a delay between each data record while transmitting data back to the host.

***None**

250 ms

500 ms

1 sec

2 sec

3 sec

5 sec

Update

8 sec

100245

Send Data

When the memory is used up, the scanner will respond with two short beeps (high-low tone) as a warning. It is advised to send data to the host immediately by having the scanner read the "Send Data" barcode below.

1662 L/1664 can send data via "Direct USB" interface once the computer has found the USB connection. Refer to 1.13 Use Direct USB Cable. Because the time-out value is set to 0 by default, connect the cable before having the scanner read the "Send Data" barcode. Otherwise, the scanner will try to temporarily resume the previous WPAN connection with the host, if there is any.

During transmission of data collected in memory mode, if the transmission fails, the scanner will flash red (On/Off ratio 0.2 s: 0.2 s) after responding with two short beeps (high-low tone) and go back to previous working mode. Press trigger or power key to stop flashing.

Send Data

109918

Send Data Time-out

If a time-out value other than zero is given, it will first try to send data via "Direct USB" interface within the specified period of time. Connect the cable before it times out. When the attempt fails, it will try to temporarily resume the previous WPAN connection with the host, if there is any.

If 1662 L/1664 has never been connected to the host cordless, it will not be able to send data until it is connected using the Direct USB cable!

Send Data Time-Out after 0~15 sec. (*0)

101024

Clear Data & Confirm

Even though data has been sent to the host, the flash memory is still occupied unless you erase the memory by reading two barcodes – "Clear Data" and "Confirm".

1) Read the "Clear Data" barcode to clear the flash memory.

2) Read the "Confirm" barcode to confirm the action.

Clear Data

109916

Confirm

109917

Enter Setup

1.3 LED INDICATOR

The triple-color LED on top of the scanner is used to provide user feedback. For example, the LED becomes solid red and goes off upon powering on or running out of transmit buffer. You may tell the difference by the beeps – you will hear a long beep of high tone when powering on the scanner, and a long beep of low tone when the transmit buffer becomes full.

Scanner LED			Meaning
Red, on-off	---	---	▸ Power on, with one long beep (high tone, LED on for 1 second) ▸ Data saved to buffer when transmit buffer is enabled and the scanner is out of range, with two short beeps (high-low tone) ▸ Transmit buffer full, with one long beep (low tone) ▸ Transmit buffer disabled, with one long beep (low tone) ▸ Delete the last collected data in memory mode, with two short beeps (high tone, LED on for 1 second) ▸ Memory full in memory mode, with two short beeps (high-low tone)
Red, flashing	---	---	▸ Flashing red (On/Off ratio 0.3 s: 2.5 s) indicates the scanner is inactive and its CPU running at low speed to save power (because no WPAN connection is established after waiting for two minutes) ▸ Configuration Mode (On/Off ratio 0.5 s: 0.5 s)
---	---	Green, on-off	Good Read, with one short beep (high tone) and beeper pitch and duration programmable
---	Blue, flashing	---	First, flashing blue (On/Off ratio 0.5 s: 0.5 s) for two minutes indicates the scanner is waiting for connection, and goes off if no connection is established, then flashing red (On/Off ratio 0.3 s: 2.5 s) indicates the scanner is inactive. It is ready for connection only while the LED is flashing blue — ▸ SPP Slave: waiting host to connect ▸ HID or SPP Master: trying to connect to host ▸ Using 3610: trying to connect to 3610
---	Blue, flashing	---	Flashing blue (On/Off ratio 0.1 s: 0.1 s) indicates the scanner receives a PIN code request from host (flashing more quickly than waiting connection).
---	Blue, flashing	---	Flashing blue (On/Off ratio 0.02 s: 3 s) indicates the scanner has established a WPAN connection successfully.
---	Blue, flashing	Green, flashing	Flashing blue and green (On/Off ratio 0.1 s: 0.1 s) indicates an error occurs while entering the PIN code. Press the [Trigger] key to try and re-connect.
Red, flashing	---	---	Flashing red (On/Off ratio 0.2 s: 0.2 s) indicates the scanner has failed to transmit data stored in memory. Press any key to stop flashing.

1.3.1 GOOD READ LED

***Enable Good Read LED**

Disable Good Read LED

1.3.2 GOOD READ LED DURATION

By default, the Good Read LED stays on for 40 milliseconds. Specify a value, ranging from 1 to 254 in units of 10 milliseconds.

Good Read LED Time-out after 0.01~2.54 sec. (*40 ms)

1) Read the barcode above to specify the time interval before the Good Read LED goes off.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。. For example, read "1" and "5" for the LED to go off after 150 milliseconds.
3) Read the "Validate" barcode on the same page to complete this setting.

Enter Setup

1.4 BEEPER

The scanner has a buzzer to provide user feedback in various operating conditions.

Beeping	Meaning
One long beep, high tone	Power on, with red LED on (1 second) and off quickly
One long beep, low tone	▸ Transmit buffer full, with red LED on-off ▸ Transmit buffer disabled, with red LED on-off ▸ Configuration error (Wrong barcode…) ▸ PIN code input error ▸ Reject random PIN request ▸ Failed to send data in memory mode
One short beep, high tone ▸ Programmable, default to 4 KHz	Good Read, with green LED on-off
One short beep, high tone	▸ More setup barcodes required ▸ Input PIN code ▸ Clear PIN code
One short beep, low tone	More barcodes required to complete the “output sequence” requirements of Multi-Barcode Editor, with green LED on-off (Upon completion, same as Good Read.)
Six short beeps ▸ High-low tone repeats three times	▸ Enter Configuration Mode, with red LED flashing ▸ Exit Configuration Mode
Two short beeps, low-high tone	Setup barcode read successfully
Two short beeps, high tone	▸ Low Battery Alarm ▸ Power off, with red LED on (until the key is released) ▸ Delete the last collected data in memory mode, with red LED on (1 second) and off ▸ Wake up the scanner depends on the paging setting value until the power key is pressed or the sleeping time out is reached
Two short beeps, high-low tone	▸ Data saved to buffer when transmit buffer is enabled and the scanner is out of range, with red LED on-off ▸ Memory Mode – Memory full, with red LED on-off ▸ Memory Mode – Transmission failed, with red LED flashing
Two long beeps, high-low tone	Multi-Barcode Mode – Buffer full
Three short beeps, tone ascending from high to low	WPAN connection out of range or suspended
Three short beeps, tone ascending from low to high	▸ WPAN connection established, with blue LED flashing ▸ WPAN connection resumed, with blue LED flashing

Update

1.4.1 BEEPER VOLUME

Mute

Minimum Volume

Medium Volume

***Maximum Volume**

Enter Setup

1.4.2 GOOD READ BEEP

Frequency

8 kHz

***4 kHz**

2 kHz

1 kHz

Duration

***Shortest**

Shorter

Longer

Longest

Update

1.4.3 LOW BATTERY ALARM

By default, the built-in battery alarm will sound when the battery charge gets low. In order to prevent data loss, it is advised to replace the battery immediately when hearing two short beeps (high tone).

Disable

***Enable**

1.5 VIBRATOR

1.5.1 GOOD READ VIBRATOR

Enable Good Read Vibrator

***Disable Good Read Vibrator**

1.5.2 GOOD READ VIBRATOR DURATION

By default, the Good Read Vibrator stays on for 1 second. Specify a value, ranging from 1 to 254 in units of 100 milliseconds.

Good Read Vibrator Time-out after 0.1~25.4 sec. (*1 s)

1) Read the barcode above to specify the time interval, in tenths of seconds before the Good Read Vibrator goes off.
2) Read the "Decimal Value" barcode on page **錯誤! 尚未定義書籤。**. For example, read "1" and "5" for the vibrator to vibrate after 1.5 seconds good read.

Enter Setup

3) Read the “Validate” barcode on the same page to complete this setting.

Update

1.6 SEND “NR” TO HOST

The scanner can send a “NR” string to the host to notify a No Read event.

Enable

***Disable**

Enter Setup

1.7 SCAN MODES

Different scan modes are supported – select the scan mode that best suits the requirements of a specific application. Refer to the comparison table below.

Scan Mode	Start to Scan				Stop Scanning			
	Always	Press trigger once	Hold trigger	Press trigger twice	Release trigger	Press trigger once	Barcode being read	Timeout
Laser mode			✓		✓		✓	✓
Auto Off mode		✓					✓	✓
Auto Power Off mode		✓						✓
Aiming mode (1664 only)				✓			✓	✓
Multi-Barcode mode			✓		✓			
Continuous mode (1662 L only)	✓							
Alternate mode (1662 L only)	✓							

Note: By default, the scan mode is set to Laser mode.

Update

1.7.1 LASER MODE

The scanner will start scanning once the trigger is held down.

- The scanning won't stop until (1) a barcode is decoded, (2) the pre-set timeout expires, or (3) you release the trigger.

Note: Refer to “Scanning Timeout”.

***Laser Mode**

1.7.2 AUTO OFF MODE

The scanner will start scanning once the trigger is pressed.

- The scanning won't stop until (1) a barcode is decoded, and (2) the pre-set timeout expires.

Note: Refer to “Scanning Timeout”.

Auto Off Mode

1.7.3 AUTO POWER OFF MODE

The scanner will start scanning once the trigger is pressed.

- The scanning won't stop until the pre-set timeout expires, and, the pre-set timeout period re-counts after each successful decoding.

Note: Refer to “Delay between Re-read” and “Scanning Timeout”.

Auto Power Off Mode

Enter Setup

1.7.4 AIMING MODE (1664 ONLY)

The scanner will aim at a barcode once the trigger is pressed, and start scanning when the trigger is pressed again within one second.

- The scanning won't stop until (1) a barcode is decoded, and (2) the pre-set timeout expires.

Aiming Mode

Aiming Timeout

You can limit the aiming time interval (1~15). By default, the scanner time-out is set to 1 second.

Aiming Time-out after 1~15 sec. (*1)

1) Read the barcode above to specify the time interval in seconds before aiming ends. (It is set to 1 by default.)
2) Read the "Decimal Value" barcode on page **錯誤! 尚未定義書籤。**. For example, read "1" and "0" for the scanner to automatically shut down after being idle for 10 seconds.
3) Read the "Validate" barcode on the same page to complete this setting.

1.7.5 MULTI-BARCODE MODE

The scanner will be scanning as long as the trigger is held down, capable of decoding one single barcode, as well as multiple unique barcodes one at a time. While decoding a bunch of unique barcodes, if a barcode is decoded twice, its subsequent decoding will be ignored and the scanner is expecting another unique barcode.

- The scanning won't stop until you release the trigger.

Multi-Barcode Mode

Note: (1) A barcode is considered unique when its Code Type or data is different from others.
(2) Multi-Barcode Mode is not related to the Multi-Barcode Editor.

Update

1.7.6 CONTINUOUS MODE (1662 L ONLY)

The scanner is always scanning.

- After a successful decoding, the removal of barcode is required. It is not allowed to proceed to decode until the decoding delay time has passed.
- To decode the same barcode repeatedly, move away the barcode and put it back again and again for scanning.

Note: Refer to “Delay between Re-read”.

Continuous Mode

100201

Decoding Delay

Set the time interval between each decoding.

***Disable**

100227

0.5 sec

100228

1 sec

100229

2 sec

100230

1.7.7 ALTERNATE MODE (1662 L ONLY)

The scanner will start scanning once the trigger is pressed

- The scanning won't stop until you press the trigger again.

Alternate Mode

100203

Enter Setup

1.8 SCANNING TIMEOUT

Specify the scanning time interval (1~254 sec.; 0= Disable) when the scan mode is set to any of the following –

- Laser mode
- Auto Off mode
- Auto Power Off mode
- Aiming mode (1664 Only)

Scanner Time-out after 0~254 sec. (*10)

1) Read the barcode above to specify the time interval in seconds before the scan engine times out.
2) Read the "Decimal Value" barcode on page **錯誤! 尚未定義書籤。**. For example, read "1" and "5" for the scanner to shut down automatically after being idle for 15 seconds.
3) Read the "Validate" barcode on the same page to complete this setting.

Update

1.9 DELAY BETWEEN RE-READ

This is also referred to as the “Blocking Time”, which is used to prevent the scanner from accidentally reading the same barcode twice when the scan mode is set to any of the following –

- Auto Power Off mode
- Continuous mode (1662 L only)
- Alternate mode (1662 L only)

100 ms

200 ms

***400 ms**

800 ms

1 sec

2 sec

3 sec

5 sec

Enter Setup

1.10 READ REDUNDANCY FOR ALL SYMBLOGIES

Select the level of reading security. For example,

- If "No Redundancy" is selected, one successful decoding will make the reading valid and induce the "READER Event".
- If "Three Times" is selected, it will take a total of four consecutive successful decoding of the same barcode to make the reading valid. The higher the reading security is (that is, the more redundancy the user selects), the slower the reading speed gets.

It is obvious that the more redundancy selected, the higher the reading security is, and thus, the slower the reading speed becomes. It has to compromise between reading security and decoding speed.

***No Redundancy**

100262

One Time

100263

Two Times

100264

Three Times

100265

Update

1.11 ADDON SECURITY FOR UPC/EAN BARCODES

The scanner is capable of decoding a mix of UPC/EAN barcodes with and without addons. The read redundancy (0~30 times) allows changing the number of times to decode a UPC/EAN barcode before transmission. The more redundancy selected, the higher the reading security is, and thus, the slower the reading speed becomes.

Note: UPC/EAN Addon 2 and Addon 5 must be enabled individually for this setting to take effect.

Addon Security Level (*0~30)

1) Read the barcode above to specify the read redundancy for UPC/EAN barcodes. (It is set to 0 by default.)
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。. For example, read "1" and "2" for the scanner to re-read the barcode for 12 times.
3) Read the "Validate" barcode on the same page to complete this setting.

1.12 NEGATIVE BARCODES

Normally, barcodes are printed with the color of the bars darker than that of the spaces. But for negative barcodes, they are printed in the opposite sense just like negative films. The spaces of negative barcodes are printed with a color darker than that of the bars. Configure the scanner to be able to read negative barcodes if required.

Enable

***Disable**

Enter Setup

1.13 USE DIRECT USB CABLE

1662 L/1664 supports Direct USB interface for charging the battery and/or sending data to the host in memory mode. Refer to 1.2.2 Memory Mode.

Note: The scanner will not function when it is solely on USB power and without a battery loaded.

1.13.1 DIRECT USB INTERFACE

When it is set to Memory Mode and connected to computer via the Direct USB cable, the default output interface becomes “Direct USB Virtual COM”, change it to “Direct USB HID” if required.

For details on configuring the interface settings, refer to the following sections:

- 2.6 Direct USB HID
- 2.7 Direct USB Virtual COM

***Activate Direct USB Virtual COM**

100008

Activate Direct USB HID

100009

1.13.2 DISABLE DIRECT USB INTERFACE

When connecting the USB cable to the scanner for charging the battery, ensure the “Disable Direct USB” barcode has been scanned to avoid sending data to the host in memory mode. In this mode the USB cable function will be charging the battery only.

Disable Direct USB

100018

Update

1.14 PICKLIST MODE (1664 ONLY)

Picklist mode enables the decoder to decode only the barcodes aligned under the center of the laser aiming pattern.

Enable

***Disable**

1.15 PAGER BEEP DURATION

Paging function is only activated when 1662 L/1664 is in Power-Saving mode. 1662 L/1664 can be woken up via receiving any *Bluetooth*® status command by pressing a key on the host keyboard. The buzzer will continuously sound two short high tone beeps until the power key is pressed on the scanner or the timeout is reached, and the scanner re-enters power saving mode.

By default, the pager beep duration is 5 seconds. Specify a value, ranging from 0 to 15. (0~15 sec.; 0= Disable)

- *Bluetooth*® HID profile: Press any one of the following keys “Scroll Lock”, “Number Lock” or “Caps Lock” on the host computer to trigger the waking up of 1662 L/1664.
- *Bluetooth*® SPP Profile: Any command sent using *Bluetooth*® SPP will trigger the waking up of 1662 L/1664.

Pager Beep Duration
0~15 sec.
(*5 s)

1) Read the barcode above to specify the desired beep active time.
2) Read the “Decimal Value” barcode on page 錯誤! 尚未定義書籤。. For example, read “1” and “5” for the pager beep function to be activated each 15 seconds after entering Power-Saving mode.
3) Read the “Validate” barcode on the same page to complete this setting.

Enter Setup

1.16 TIME STAMP

Specify time stamp format added to the prefix or suffix of a data. Up to three settings can be configured:

- No Time Stamp
- Add Time Stamp in front of data
- Add Time Stamp to the end of data

If added in front of data, it means prior to the prefix field. Alternatively, to the end of data.

No Time Stamp
***Disable**

101315

Add Time Stamp
in front of Data

101316

Add Time Stamp
to the end of Data

101317

1.16.1 DATE AND TIME SETTINGS

Read the barcode below to enable/disable Date and Time function.

Year Output
***Enable**

101321

Year Output
Disable

101322

Month Output
***Enable**

101323

Month Output
Disable

101324

Update

Date Output
***Enable**

Date Output
Disable

Hour Output
***Enable**

Hour Output
Diable

Minute Output
***Enable**

Minute Output
Disalbe

Second Output
***Enable**

Second Output
Diable

Enter Setup

Decoding Data and Time

Year Setup

Date Setup

Time Setup

1) Read the barcode above to apply time or date code separately, and follow steps 2~3.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。 for the desired character string. For example:

   Year: Read "2", "0", "1", "1" for the year setting as year=2011.

   Date: Read "1", "1", "2", "0" for the date setting as date=Nov.20.

   Time: Read "1", "8", "5", "9" for the time setting as time=18:59.
3) Read the "Validate" barcode for each setting on the same page.

1.16.2 SEPARATOR FOR DATE AND TIME

The Date and Time can be split with a pre-selected separator, for example, "/" as YYYY/MM/DD or ":" as HH:MM:SS

Separator for Date/Time
***"-"**

Separator for Month/Date
***"/"**

Separator for Hour/Minute
***":"**

1) Read the barcode above to apply separator to date or time separately, and follow steps 2~3.
2) Read the "Hexadecimal Value" barcode on page 錯誤! 尚未定義書籤。 for the desired character string. For example, read "3" and "A" for the separator to split the data with character [:].

Update

3) Read the “Validate” barcode on the same page to complete this setting.

1.16.3 DATE FORMAT

The date format includes year, month and day. There are three kinds of combinations can be configured to specify Year, Month and Day:

- Year/Month/Day (YYYY/MM/DD) or (YY/MM/DD)
- Month/Day/Year (MM/DD/YYYY) or (MM/DD/YY)
- Day/Month/Year (DD/MM/YYYY) or (DD/MM/YY)

***Year/Month/Day**

Month/Day/Year

Day/Month/Year

About Year Format:

Year format can be pre-selected as 2-digit or 4-digit. For example, if year format is YYYY, the output year is 2011 for 4-digit, alternatively is 11 for 2-digit.

***Year for 4-digit**

Year for 2-digit

Enter Setup

1.17 2D DECODE SETTING (1664 ONLY)

1.17.1 AIMING PATTERN

Enable/Disable the aiming pattern during scanning.

***Enable**

Disable

1.17.2 DECODING ILLUMINATION

Enable/Disable illumination during scanning.

- Enabling illumination usually results in superior images. The effectiveness of the illumination decreases as the distance to the target increases.

***Enable**

Disable

Update

1.18 HARDWARE RESET

1.18.1 RESTORE SYSTEM DEFAULTS

In addition to using the “Restore System Defaults” barcode, the following procedure using key combinations, can be used to restore the system defaults during operation.

1) Hold down the [Power/Delete] key.
2) When the scanner responds with two short beeps (high tone), press the [Trigger] key for 5 seconds. The scanner LED indicator becomes solid red and then goes off.
3) When the scanner responds with a long beep (high tone), release the keys. Its LED indicator becomes solid red and goes off.

Note: The scanner will restart itself automatically.

1.18.2 RESET CONNECTION

When the output interface is *Bluetooth*® HID or *Bluetooth*® SPP Master, the scanner will attempt to maintain an established connection. To stop such re-connection, read the “Reset Connection” or “Restore System Defaults” barcode to clear the current connection record. Alternatively, use the key combination as described below to reset connection during operation.

1) Hold down the [Trigger] key, and then press the [Power/Delete] key for at least 5 seconds.
2) The scanner will respond with two short beeps (high tone). Wait until the scanner responds with a long beep (high tone), release the keys.

Note: After reset connection by hardware, the scanner will not restart itself automatically. It will resume to its previous operation except no connection.

Enter Setup

Update

Chapter 2

SELECTING OUTPUT INTERFACE

In order to establish a proper connection between host computer and the scanner, we suggest following these instructions –

1) Install battery and hold down the [Power/Delete] key for 2 seconds to turn on the scanner.
2) Read the “Enter Setup” barcode to enter the configuration mode.
3) Read the associated barcodes to activate the desired interface.

   See the following sections for output interfaces supported.
4) Read the barcodes for related settings.
5) Read the “Update” barcode to exit the configuration mode.
6) Turn on host computer or laptop and establish a WPAN connection with the scanner.

   Refer to Chapter 3 – Setting up a WPAN Connection.

Note: (1) By default, the output interface is set to “*Bluetooth*® HID”.
(2) When set to Memory Mode and connected to computer via the Direct USB cable, the default output interface becomes “Direct USB Virtual COM”.

IN THIS CHAPTER

2.1 *Bluetooth*® HID 56
2.2 *Bluetooth*® SPP Slave 68
2.3 *Bluetooth*® SPP Master 70
2.4 USB HID via 3610 74
2.5 USB Virtual COM via 3610 85
2.6 Direct USB HID 87
2.7 Direct USB Virtual COM 98

Update

2.1 *BLUETOOTH*® HID

For *Bluetooth*® HID, refer to Chapter 3 – Setting up a WPAN Connection for related connection settings. The scanned data will be transmitted to the computer. To capture the data run any text editor on your computer.

HID Settings	Defaults
Keyboard Type	PCAT (US)
Alphabet Layout	Normal
Numeric Layout	Normal
Capital Lock Type	Normal
Capital Lock State	Off
Alphabet Transmission	Case-sensitive
Numeric Transmission	Alphanumeric keypad
Kanji Transmission	Disable
Inter-Character Delay	0 (ms)
Inter-Function Delay	0 (ms)

Enter Setup

2.1.1 ACTIVATE *BLUETOOTH*® HID & SELECT KEYBOARD TYPE

When *Bluetooth*® HID interface is activated, you will have to select a keyboard type to complete this setting. By default, *Bluetooth*® HID is activated on the scanner, and the keyboard type is set to PCAT (US).

Activate *Bluetooth*® HID & Select Keyboard Type…

1) Read the barcode above to activate *Bluetooth*® HID and select a keyboard type.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。. Refer to the table below for the number of desired keyboard type.
3) Read the "Validate" barcode on the same page to complete this setting.

Bluetooth® HID

The following keyboard types are supported —

No.	Keyboard Type	No.	Keyboard Type
64	PCAT (US)	71	PCAT (Belgium)
65	PCAT (French)	72	PCAT (Spanish)
66	PCAT (German)	73	PCAT (Portuguese)
67	PCAT (Italy)	74	PS55 A01-2 (Japanese)
68	PCAT (Swedish)	75	User-defined table
69	PCAT (Norwegian)	76	PCAT (Turkish)
70	PCAT (UK)	77	PCAT (Hungarian)

Update

2.1.2 RESET CONNECTION

For *Bluetooth*® HID, you can only have the scanner connected to one computer at a time. If you want to connect the scanner to another host, you must read the "Reset Connection" barcode so that the current connection record will be cleared. Then, the scanner will restart itself automatically. Go through the process in 3.2.3 Connect to Dongle to establish a new connection.

Refer to 1.18 Hardware Reset.

Reset Connection

Note: The "Restore System Defaults" barcode will also clear the current connection record.

Enter Setup

2.1.3 KEYBOARD SETTINGS

- Alphabet Layout
- Numeric Layout
- Capital Lock Type
- Capital Lock Setting
- Alphabet Transmission
- Numeric Transmission
- Kanji Transmission

Note: *Bluetooth*® HID does not support these functions on PDAs – (1) Capital Lock Setting: Auto Detection (2) Numeric Transmission: Numeric Keys

Alphabet Layout

By default, the alphabet layout is set to normal mode, also known as the standard English layout. Select French or German keyboard layout if necessary. The scanner will make adjustments when sending the "A", "Q", "W", "Z", "Y", and "M" characters according to this setting.

***Normal**

AZERTY

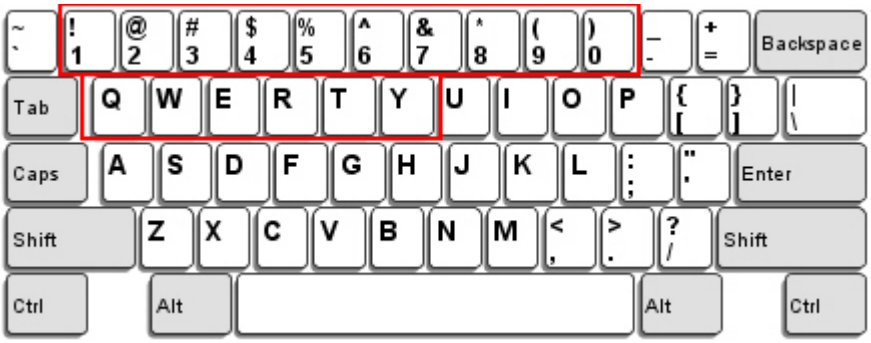
QWERTZ

Note: This setting only works when the keyboard type selected is US keyboard, such as PCAT (US). The Alphabet Layout and Numeric Layout setting must match your keyboard.

Update

US Keyboard Style - Normal

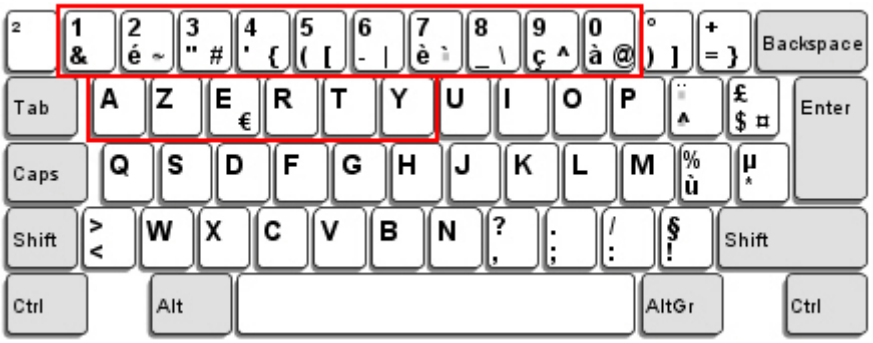
QWERTY layout, which is normally used in western countries.



- Select “Lower Row” for the “Numeric Layout” setting for the upper row is for special characters.

French Keyboard Style - AZERTY

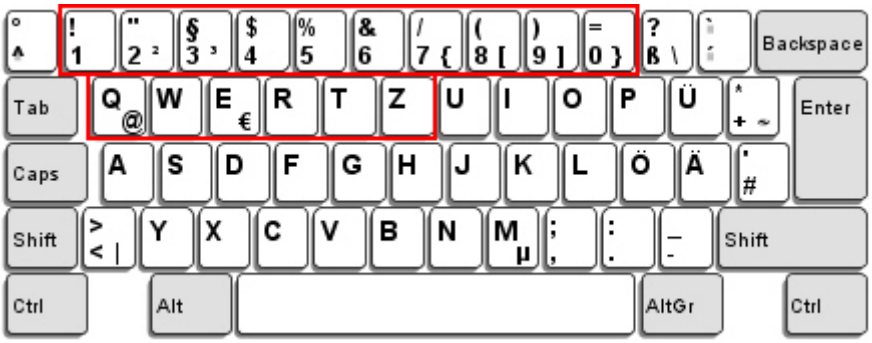
French layout; see below for French Keyboard Style.



- Select “Upper Row” for the “Numeric Layout” setting for the lower row is for special characters.

German Keyboard Layout - QWERTZ

German layout; see below for German Keyboard Style.



- Select “Lower Row” for the “Numeric Layout” setting for the upper row is for special characters.

Numeric Layout

Select a proper layout that matches the alphabet layout. The scanner will make adjustments according to this setting.

Options	Description
Normal	Depends on the [Shift] key or [Shift Lock] setting
Lower Row	For QWERTY or QWERTZ keyboard
Upper Row	For AZERTY keyboard

***Normal**

Upper Row

Lower Row

Note: This setting is to be used with the Character Substitution setting when support for certain keyboard types (languages) is unavailable but required.

Update

Capital Lock Type & Setting

In order to send the alphabet with correct case, the scanner needs to know the status of Caps Lock on the keyboard. Incorrect settings may result in reversed case of the alphabet being transmitted.

Cap Lock Type	Description
Normal	Normal type
Capital Lock	When enabled, the keys of alphabetic characters will be interpreted as capital letters. However, this does not affect the number or punctuation keys.
Shift Lock	When enabled, the keys of alphabetic characters will be interpreted as capital letters. In addition, this affects the number or punctuation keys.

***Normal**

100042

Shift Lock

100045

Capital Lock

100044

Capital Lock State	Description
Capital Lock OFF	Assuming that the status of Caps Lock on the keyboard is OFF, transmitted characters are exactly the same as in the barcode (when "case-sensitive" is selected for Alphabet Transmission).
Capital Lock ON	Assuming that the status of Caps Lock on the keyboard is ON, transmitted characters are exactly the same as in the barcode (when "case-sensitive" is selected for Alphabet Transmission). ▸ Refer to the Capital Lock Type above.
Auto Detection (Suggested use for most applications)	The scanner will automatically detect the status of Caps Lock on the keyboard before data is transmitted; transmitted characters are exactly the same as in the barcode (when "case-sensitive" is selected for Alphabet Transmission). ▸ This setting is not supported on PDAs.

Auto Detect

100054

Capital Lock ON

100053

Enter Setup

***Capital Lock OFF**

Update

Alphabet Transmission

By default, the alphabet transmission is case-sensitive, meaning that the alphabet will be transmitted according to the original case, the status of Caps Lock on the keyboard, as well as the Capital Lock setting. Select [Ignore Case] to have alphabet transmitted according to the status of Caps Lock on the keyboard only.

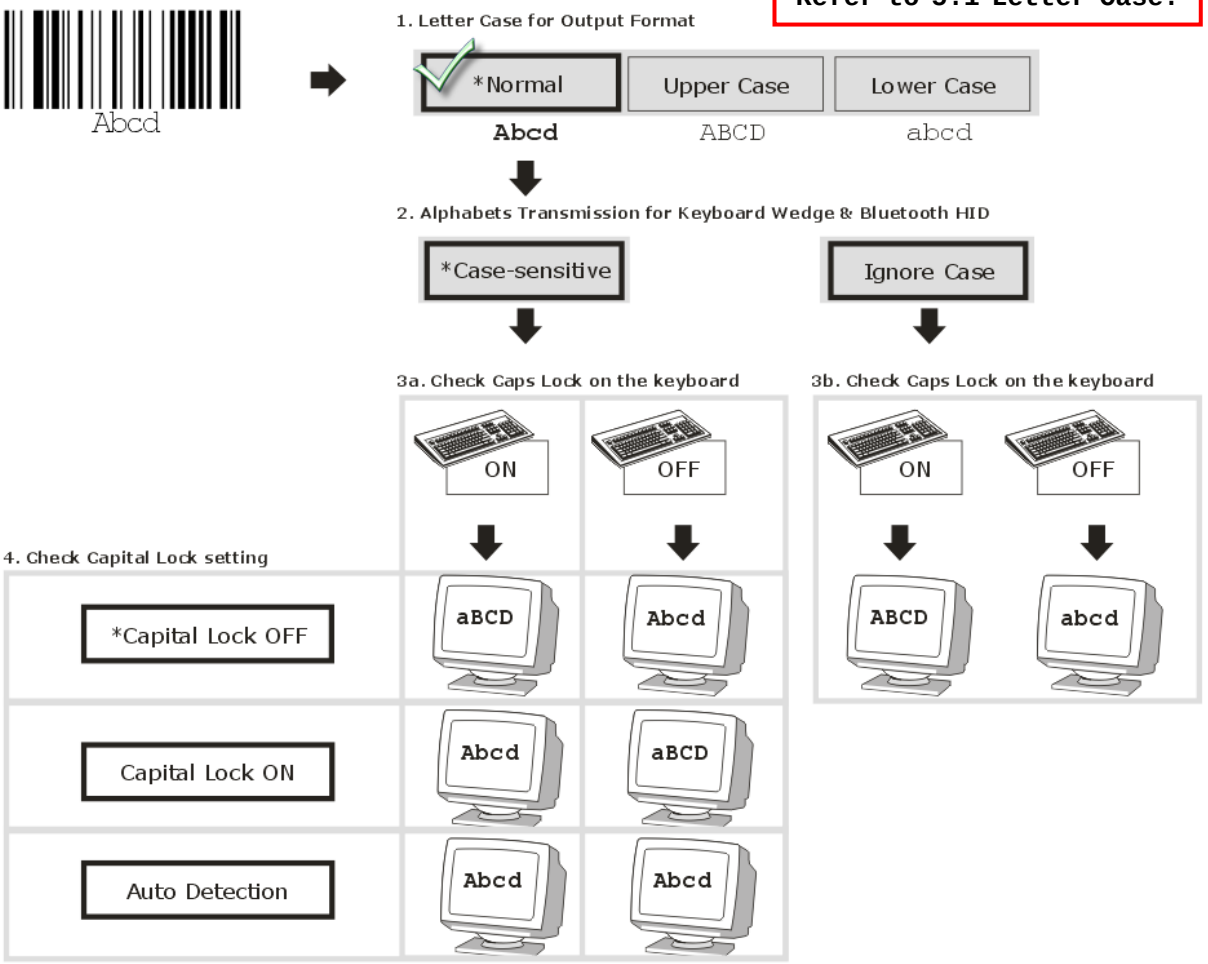
Ignore Case

100051

***Case-sensitive**

100050

Refer to 5.1 Letter Case.



Enter Setup

Numeric Transmission

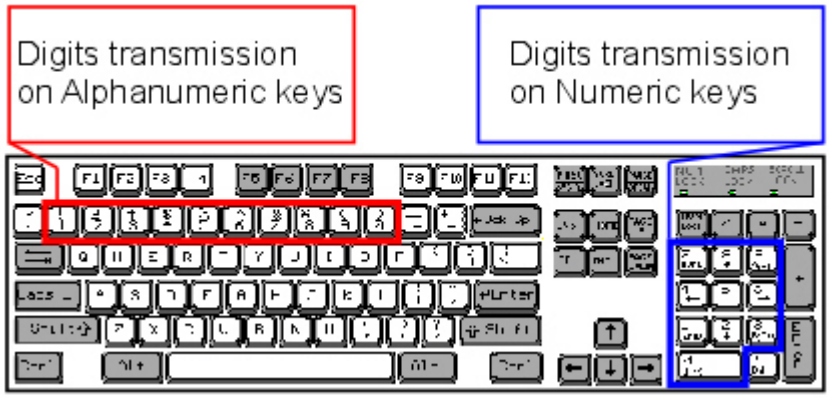
By default, the alphanumeric keypad is used for transmitting digits. Select “Numeric Keypad” if you wish to use the keys on the numeric keypad.

Numeric Key

100041

***Alphanumeric Key**

100040



Note: If you select “Numeric Keypad”, the Num Lock status of the physical keyboard should be “ON”. This setting is not supported on PDAs.

Kanji Transmission

Kanji Transmission is supported by the scanner when either *Bluetooth*® HID or USB HID is selected for the output interface. By Kanji Transmission, when the host computer is running on Japanese Windows O.S., the scanner is able to transmit Japanese characters including the Chinese characters used in modern Japanese writing system.

Kanji Transmission is disabled by default. Enable/disable scanner’s Kanji Transmission by reading the following barcodes:

Enable

100067

***Disable**

100066

Update

2.1.4 INTER-CHARACTER DELAY

By default, the inter-character delay is set to zero. Specify a value, ranging from 0 to 254 in units of milliseconds, to match the computer response time of the keyboard interface. Such delay time is inserted between every character being transmitted. The longer the delay time is, the slower the transmission speed will be.

Inter-Character Delay… (*0~254)

1) Read the barcode above to specify the inter-character delay.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。 for the desired inter-character delay (in milliseconds).
3) Read the "Validate" barcode on the same page to complete this setting.

2.1.5 INTER-FUNCTION DELAY

By default, the inter-function delay is set to zero. Specify a value, ranging from 0 to 254 in units of milliseconds, to match the computer response time of the keyboard interface. Such delay time is inserted between every function code (0x01 ~ 0x1F) being transmitted. The longer the delay time is, the slower the transmission speed will be.

Inter-Function Delay… (*0~254)

1) Read the barcode above to specify the inter-function delay.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。 for the desired inter-function delay (in milliseconds).
3) Read the "Validate" barcode on the same page to complete this setting.

Enter Setup

2.1.6 HID CHARACTER TRANSMIT MODE

By default, HID interface sends data to the host in batch. You may read the "By Character" barcode to process data one character at a time.

***Batch Processing**

By Character

Note: "By Character" transmit mode is required when working with iPhone or iPad.

2.1.7 KEYPAD SUPPORT FOR IPHONE/IPAD

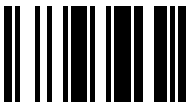
When the scanner has been successfully connected to iPhone or iPad for data collection, the onscreen keypad of iPhone or iPad will disappear. Read the "Use POWER Key to Show or Hide Keypad" barcode in advance. Then, it will allow pressing the [Power/Delete] key to show or hide the onscreen keypad.

***Normal**

Use POWER Key to Show or Hide Keypad

In addition to using the [Power/Delete] key, you may also show or hide the keypay by reading the following barcode.

Show or Hide Keypad



Note: This function only works for
(1) iPhone 4 and 3GS version 4.1 or later, and (2) iPad version 4.2 or later.

Update

2.2 *BLUETOOTH*® SPP SLAVE

For *Bluetooth*® SPP Slave, refer to Chapter 3 – Setting up a WPAN Connection for related connection settings.

2.2.1 ACTIVATE *BLUETOOTH*® SPP SLAVE MODE

This is SPP Slave Mode.

Activate *Bluetooth*® SPP, Slave Mode

2.2.2 INTER-FUNCTION DELAY

By default, the inter-function delay is set to zero. Specify a value, ranging from 0 to 254 in units of milliseconds, to match the computer response time of the keyboard interface. Such delay time is inserted between every function code (0x01 ~ 0x1F) being transmitted. The longer the delay time is, the slower the transmission speed will be.

Inter-Function Delay… (*0~254)

1) Read the barcode above to specify the inter-function delay.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。 for the desired inter-function delay (in milliseconds).
3) Read the "Validate" barcode on the same page to complete this setting.

Enter Setup

2.2.3 ACK/NAK TIMEOUT

By default, the scanner sends data to the host without waiting for an ACK/NAK response before sending more data. Specify a value, ranging from 1 to 99 in units of 0.1 second. If no response within the specified period of time, the scanner will attempt to send the same data two more times. If all three attempts fail without any notification, data loss will occur.

ACK/NAK Time-out after … (*0~99)

1) Read the barcode above to specify the time interval for the scanner to send data and wait for a response from the host.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。. For example, read "1" and "0" for the scanner to automatically shut down after being idle for 1 second.
3) Read the "Validate" barcode on the same page to complete this setting.

ACK/NAK Error Beep

Enable Error Beep

***Disable Error Beep**

Note: We suggest enabling the error beep so that you will be notified of such data loss and have the scanner re-read data.

Update

2.3 *BLUETOOTH*® SPP MASTER

As a SPP master device, the scanner will be able to resume connection with the host upon powering on again, as long as the host application is running. If the scanner fails to resume connection, it will try every 5 seconds to re-connect to the host unless you read the "Reset Connection" or "Restore System Defaults" barcode.

For *Bluetooth*® SPP Master, refer 3.2.2 Configure Related Settings for related connection settings.

Note: In SPP Master Mode, scanner has to connect within the specified period of time (2 minutes by default). During the connection, the scanner will enter into idle mode to save power. It will automatically turn off when the time is up. Refer to 1.1.2 Auto Power Off & Power-Saving.

2.3.1 ACTIVATE *BLUETOOTH*® SPP MASTER MODE

This is SPP Master Mode.

Activate *Bluetooth*® SPP, Master Mode

How to connect with the target device?

Produce two setup barcodes for the target SPP slave device, just like what we do for 3610.

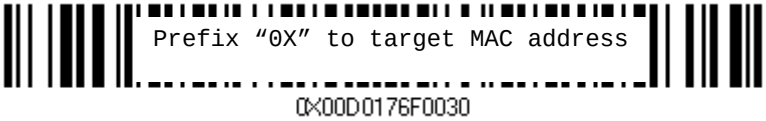
- "Set Connection"
- "MAC ID"

Note: The "MAC ID" barcode must have a prefix of two characters, either "0x" or "0X", followed by the real MAC address of the target device.

Usage:

1) Read the "Activate *Bluetooth*® SPP, Master Mode" barcode above and barcodes for connection settings, such as authentication and preset PIN. Skip this step if no connection settings are desired.
2) Read the "Set Connection" and "MAC ID" barcodes. The scanner will respond with one beep upon reading each of the barcodes.

Set Connection



Enter Setup

Note: Read the “Set Connection” barcode first, and then the “MAC ID” barcode within 10 seconds.

Instead of producing the “MAC ID” barcode, you may read the setup barcodes for entering the MAC address.

- Read the “Abort” barcode to cancel the operation at any time while reading setup barcodes for the MAC address. If the MAC address has not been completed yet, reading the “Validate” barcode can cancel the operation as well.

Enter MAC ID in Hexadecimal…

Usage:

1) Read the barcode above.
2) Read the “Hexadecimal Value” barcode on page 錯誤! 尚未定義書籤。 for the desired MAC address.
3) Read the “Validate” barcode on the same page to complete this setting.

Exit SPP Master Mode

To stop such re-connection, read “Reset Connection” or “Restore System Defaults” barcode so that the current connection record (= MAC ID) will be cleared. Then, the scanner will restart itself automatically. Go through the process in 3.2.3 Connect to Dongle to establish a new WPAN connection.

Reset Connection

Update

2.3.2 INTER-FUNCTION DELAY

By default, the inter-function delay is set to zero. Specify a value, ranging from 0 to 254 in units of milliseconds, to match the computer response time of the keyboard interface. Such delay time is inserted between every function code (0x01 ~ 0x1F) being transmitted. The longer the delay time is, the slower the transmission speed will be.

Inter-Function Delay… (*0~254)

100012

1) Read the barcode above to specify the inter-function delay.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。 for the desired inter-function delay (in milliseconds).
3) Read the "Validate" barcode on the same page to complete this setting.

Enter Setup

2.3.3 ACK/NAK TIMEOUT

By default, the scanner sends data to the host without waiting for an ACK/NAK response before sending more data. Specify a value, ranging from 1 to 99 in units of 0.1 second. If no response within the specified period of time, the scanner will attempt to send the same data two more times. If all three attempts fail without any notification, data loss will occur.

ACK/NAK Time-out after … (*0~99)

1) Read the barcode above to specify the time interval for the scanner to send data and wait for a response from the host.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。. For example, read "1" and "0" for the scanner to automatically shut down after being idle for 1 second.
3) Read the "Validate" barcode on the same page to complete this setting.

ACK/NAK Error Beep

Enable Error Beep

***Disable Error Beep**

Note: We suggest enabling the error beep so that you will be notified of such data loss and have the scanner re-read data.

2.3.4 SWITCH BETWEEN MASTER/SLAVE MODE

After the scanner has established a connection as a SPP slave device, you may read the "Activate *Bluetooth*® SPP, Master Mode" setup barcode to switch to SPP Master Mode. This will result in easy and reliable re-connection, just like connecting with 3610.

Update

2.4 USB HID VIA 3610

For USB HID, connect 3610 to the USB port of PC, and then connect the scanner to 3610. The scanned data will be transmitted to the computer. To capture the data run any text editor on your computer.

HID Settings	Defaults
Keyboard Type	PCAT (US)
Numeric Layout	Normal
Capital Lock Type	Normal
Capital Lock State	Off
Alphabet Transmission	Case-sensitive
Numeric Transmission	Alphanumeric keypad
Kanji Transmission	Disable
Inter-Character Delay	0 (ms)
Inter-Function Delay	0 (ms)

Enter Setup

2.4.1 ACTIVATE USB HID & SELECT KEYBOARD TYPE

When USB HID interface is activated, you will have to select a keyboard type to complete this setting.

Activate 3610 USB HID & Select Keyboard Type…

1) Read the barcode above to activate USB HID and select a keyboard type.
2) Read the "Decimal Value" barcode on page **錯誤! 尚未定義書籤。**. Refer to the table below for the number of desired keyboard type.
3) Read the "Validate" barcode on the same page to complete this setting.

USB HID

The following keyboard types are supported —

No.	Keyboard Type	No.	Keyboard Type
64	PCAT (US)	71	PCAT (Belgium)
65	PCAT (French)	72	PCAT (Spanish)
66	PCAT (German)	73	PCAT (Portuguese)
67	PCAT (Italy)	74	PS55 A01-2 (Japanese)
68	PCAT (Swedish)	75	User-defined table
69	PCAT (Norwegian)	76	PCAT (Turkish)
70	PCAT (UK)	77	PCAT (Hungarian)

Update

2.4.2 KEYBOARD SETTINGS

- Alphabet Layout
- Numeric Layout
- Capital Lock Type
- Capital Lock Setting
- Alphabet Transmission
- Numeric Transmission
- Kanji Transmission

Alphabet Layout

By default, the alphabet layout is set to normal mode, also known as the standard English layout. Select French or German keyboard layout if necessary. The scanner will make adjustments when sending the "A", "Q", "W", "Z", "Y", and "M" characters according to this setting.

***Normal**

AZERTY

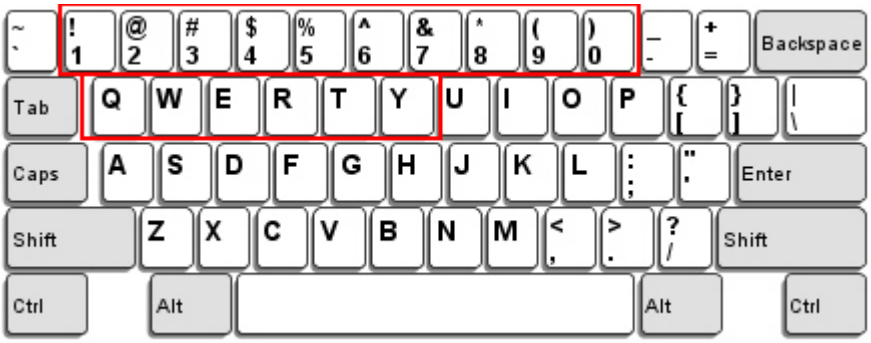
QWERTZ

Note: This setting only works when the keyboard type selected is US keyboard, such as PCAT (US). The Alphabet Layout and Numeric Layout setting must match your keyboard.

Enter Setup

US Keyboard Style - Normal

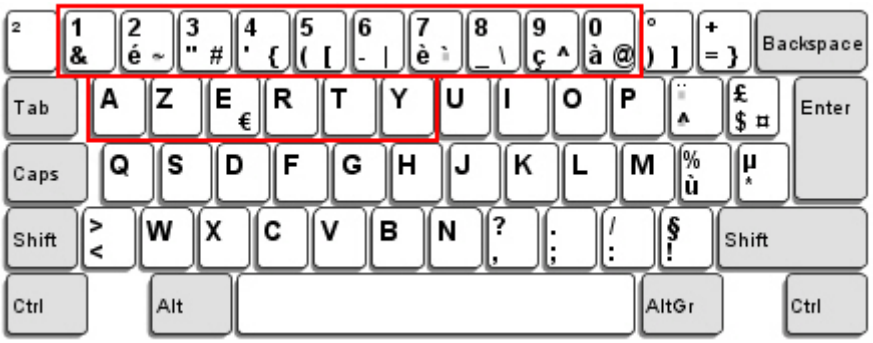
QWERTY layout, which is normally used in western countries.



- Select “Lower Row” for the “Numeric Layout” setting for the upper row is for special characters.

French Keyboard Style - AZERTY

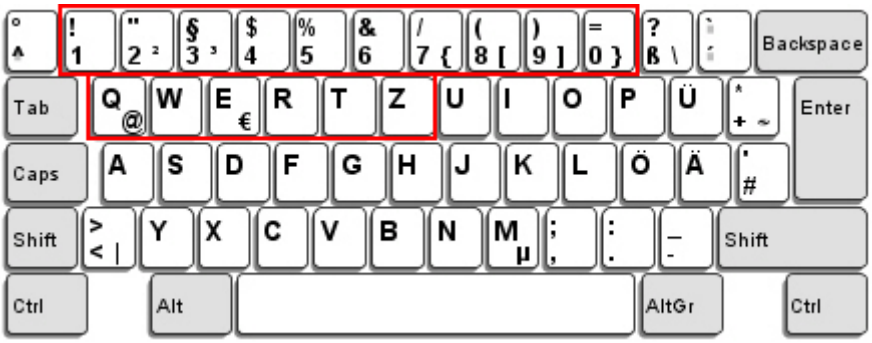
French layout; see below for French Keyboard Style.



- Select “Upper Row” for the “Numeric Layout” setting for the lower row is for special characters.

German Keyboard Layout - QWERTZ

German layout; see below for German Keyboard Style.



- Select “Lower Row” for the “Numeric Layout” setting for the upper row is for special characters.

Numeric Layout

Select a proper layout that matches the alphabet layout. The scanner will make adjustments according to this setting.

Options	Description
Normal	Depends on the [Shift] key or [Shift Lock] setting
Lower Row	For QWERTY or QWERTZ keyboard
Upper Row	For AZERTY keyboard

***Normal**

Upper Row

Lower Row

Note: This setting is to be used with the Character Substitution setting when support for certain keyboard types (languages) is unavailable but required.

Enter Setup

Capital Lock Type & Setting

In order to send the alphabet with correct case, the scanner needs to know the status of Caps Lock on the keyboard. Incorrect settings may result in reversed case of the alphabet being transmitted.

Cap Lock Type	Description
Normal	Normal type
Capital Lock	When enabled, the keys of alphabetic characters will be interpreted as capital letters. However, this does not affect the number or punctuation keys.
Shift Lock	When enabled, the keys of alphabetic characters will be interpreted as capital letters. In addition, this affects the number or punctuation keys.

***Normal**

Shift Lock

Capital Lock

Capital Lock State	Description
Capital Lock OFF	Assuming that the status of Caps Lock on the keyboard is OFF, transmitted characters are exactly the same as in the barcode (when "case-sensitive" is selected for Alphabet Transmission).
Capital Lock ON	Assuming that the status of Caps Lock on the keyboard is ON, transmitted characters are exactly the same as in the barcode (when "case-sensitive" is selected for Alphabet Transmission). ▸ Refer to the Capital Lock Type above.
Auto Detection (suggested use for most applications)	The scanner will automatically detect the status of Caps Lock on the keyboard before data is transmitted; transmitted characters are exactly the same as in the barcode (when "case-sensitive" is selected for Alphabet Transmission).

Auto Detect

Capital Lock ON

Update

***Capital Lock OFF**

Enter Setup

Alphabet Transmission

By default, the alphabet transmission is case-sensitive, meaning that the alphabet will be transmitted according to the original case, the status of Caps Lock on the keyboard, as well as the Capital Lock setting. Select [Ignore Case] to have alphabet transmitted according to the status of Caps Lock on the keyboard only.

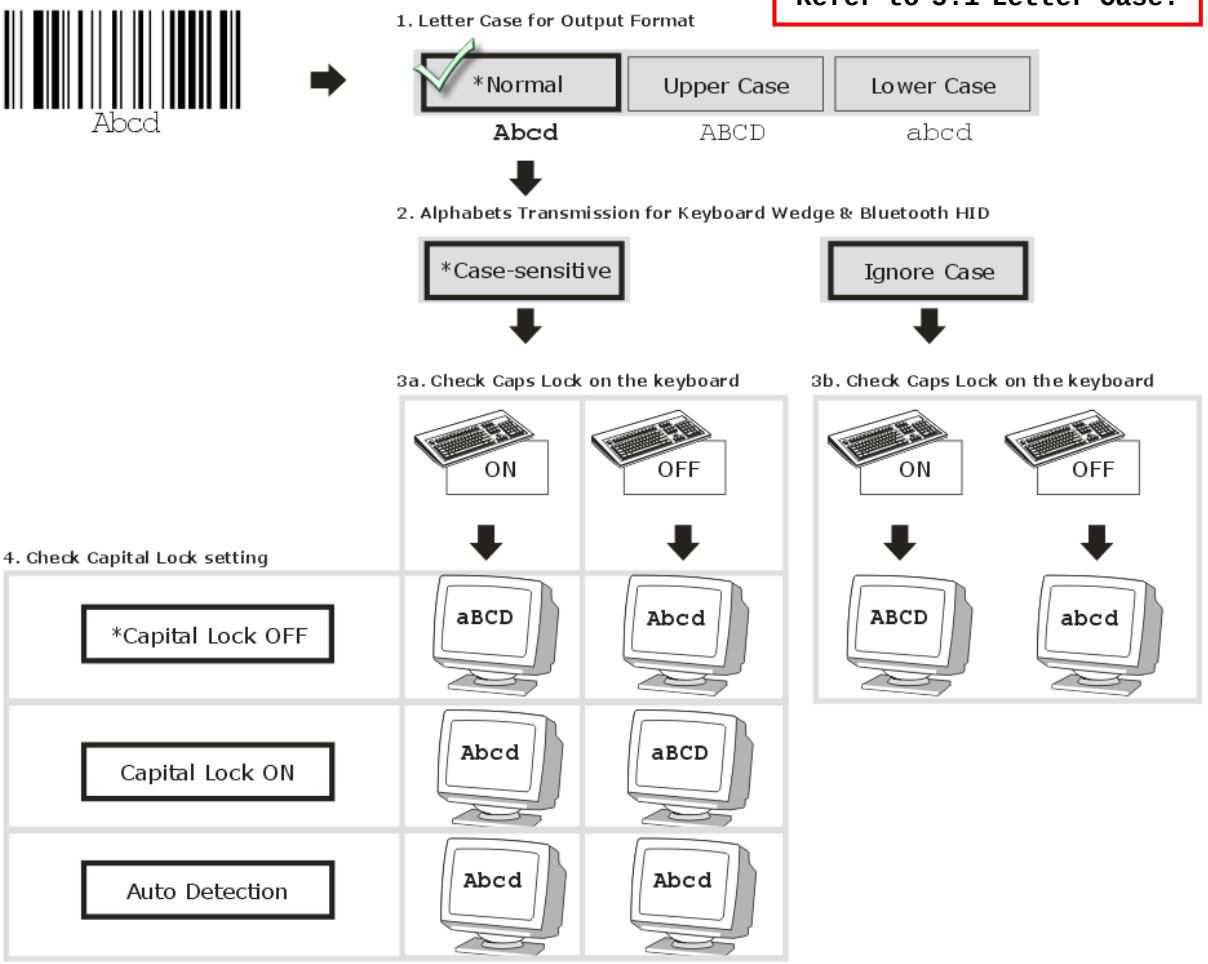
Ignore Case

100051

***Case-sensitive**

100050

Refer to 5.1 Letter Case.



Update

Numeric Transmission

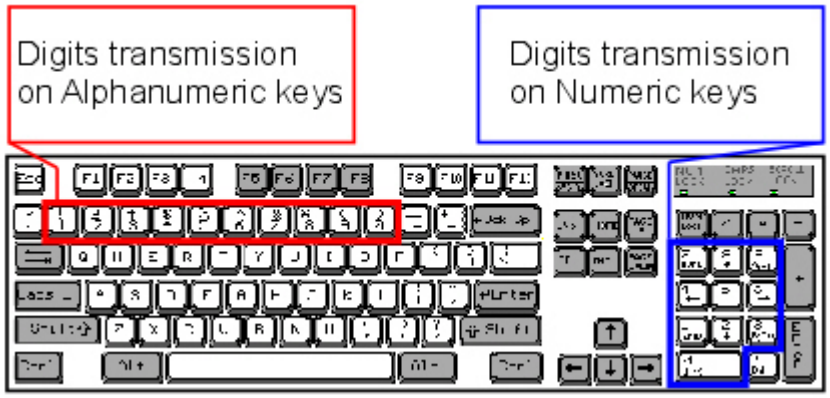
By default, the alphanumeric keypad is used for transmitting digits. Select “Numeric Keypad” if you wish to use the keys on the numeric keypad.

Numeric Key

100041

***Alphanumeric Key**

100040



Note: If you select “Numeric Keypad”, the Num Lock status of the physical keyboard should be "ON".

Kanji Transmission

Kanji Transmission is supported by the scanner when either *Bluetooth*® HID or USB HID is selected for the output interface. By Kanji Transmission, when the host computer is running on Japanese Windows O.S., the scanner is able to transmit Japanese characters including the Chinese characters used in modern Japanese writing system.

Kanji Transmission is disabled by default. Enable/disable scanner’s Kanji Transmission by reading the following barcodes:

Enable

100067

***Disable**

100066

Enter Setup

2.4.3 INTER-CHARACTER DELAY

By default, the inter-character delay is set to zero. Specify a value, ranging from 0 to 254 in units of milliseconds, to match the computer response time of the keyboard interface. Such delay time is inserted between every character being transmitted. The longer the delay time is, the slower the transmission speed will be.

Inter-Character Delay… (*0~254)

1) Read the barcode above to specify the inter-character delay.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。 for the desired inter-character delay (in milliseconds).
3) Read the "Validate" barcode on the same page to complete this setting.

2.4.4 INTER-FUNCTION DELAY

By default, the inter-function delay is set to zero. Specify a value, ranging from 0 to 254 in units of milliseconds, to match the computer response time of the keyboard interface. Such delay time is inserted between every function code (0x01 ~ 0x1F) being transmitted. The longer the delay time is, the slower the transmission speed will be.

Inter-Function Delay… (*0~254)

1) Read the barcode above to specify the inter-function delay.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。 for the desired inter-function delay (in milliseconds).
3) Read the "Validate" barcode on the same page to complete this setting.

2.4.5 HID CHARACTER TRANSMIT MODE

By default, HID interface sends data to the host in batch. Read the “By Character” barcode will send the data one character at a time.

***Batch Processing**

100064

By Character

100065

Enter Setup

2.5 USB VIRTUAL COM VIA 3610

Connect 3610 to the USB port of PC, and then connect the scanner to 3610. You may run HyperTerminal.exe on the computer to view and capture the data transmission from the scanner.

Note: If you are using USB Virtual COM for the first time, you must install its driver from the CD-ROM. Driver version 5.3 or later is required. Please remove older versions before installing new ones!

2.5.1 ACTIVATE USB VIRTUAL COM

Activate 3610 USB Virtual COM

2.5.2 INTER-FUNCTION DELAY

By default, the inter-function delay is set to zero. Specify a value, ranging from 0 to 254 in units of milliseconds, to match the computer response time of the keyboard interface. Such delay time is inserted between every function code (0x01 ~ 0x1F) being transmitted. The longer the delay time is, the slower the transmission speed will be.

Inter-Function Delay… (*0~254)

1) Read the barcode above to specify the inter-function delay.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。 for the desired inter-function delay (in milliseconds).
3) Read the "Validate" barcode on the same page to complete this setting.

Update

2.5.3 ACK/NAK TIMEOUT

By default, the scanner sends data to the host without waiting for an ACK/NAK response before sending more data. Specify a value, ranging from 1 to 99 in units of 0.1 second. If no response within the specified period of time, the scanner will attempt to send the same data two more times. If all three attempts fail without any notification, data loss will occur.

ACK/NAK Time-out after … (*0~99)

1) Read the barcode above to specify the time interval for the scanner to send data and wait for a response from the host.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。. For example, read "1" and "0" for the scanner to automatically shut down after being idle for 1 second.
3) Read the "Validate" barcode on the same page to complete this setting.

ACK/NAK Error Beep

Enable Error Beep

***Disable Error Beep**

Note: We suggest enabling the error beep so that you will be notified of such data loss and have the scanner re-read data.

Enter Setup

2.6 DIRECT USB HID

1662 L/1664 supports “Direct” USB HID interface for memory mode. Use the provided USB cable to connect 1662 L/1664 to the USB port of PC. Run any text editor on a computer to view and capture the scanned data being transmitted to the computer. Refer to 1.2.2 Memory Mode.

HID Settings	Defaults
Keyboard Type	HID PCAT (US)
Numeric Layout	Normal
Capital Lock Type	Normal
Capital Lock State	OFF
Alphabet Transmission	Case Sensitive
Numeric Transmission	Alphanumeric Keypad
Kanji Transmission	Disable
Alphabet Layout	Normal
Inter-Character Delay	0 (ms)
Inter-Function Delay	0 (ms)

2.6.1 ACTIVATE USB HID & SELECT KEYBOARD TYPE

When USB HID interface is activated, please select a keyboard type to complete this setting.

Activate Direct USB HID & Select Keyboard Type…

1) Read the barcode above to activate USB HID and select a keyboard type.
2) Read the "Decimal Value" barcode page **錯誤! 尚未定義書籤。** . Refer to the table below for the number of desired keyboard type.
3) Read the "Validate" barcode on the same page to complete this setting.

USB HID

By default, the keyboard type is set to PCAT (US). The following keyboard types are supported —

No.	Keyboard Type	No.	Keyboard Type
64	HID PCAT (US)	71	HID PCAT (Belgium)
65	HID PCAT (French)	72	HID PCAT (Spanish)
66	HID PCAT (German)	73	HID PCAT (Portuguese)
67	HID PCAT (Italy)	74	HID A01-2 (Japanese)
68	HID PCAT (Swedish)	75	User-Defined Table
69	HID PCAT (Norwegian)	76	HID PCAT (Turkish)
70	HID PCAT (UK)	77	HID PCAT (Hungarian)

Enter Setup

2.6.2 KEYBOARD SETTINGS

- Alphabet Layout
- Numeric Layout
- Capital Lock Type
- Capital Lock Setting
- Alphabet Transmission
- Numeric Transmission
- Kanji Transmission

Alphabet Layout

By default, the alphabet layout is set to normal mode, also known as the standard English layout. Select French or German keyboard layout if necessary. The scanner will make adjustments when sending the "A", "Q", "W", "Z", "Y", and "M" characters according to this setting.

***Normal**

AZERTY

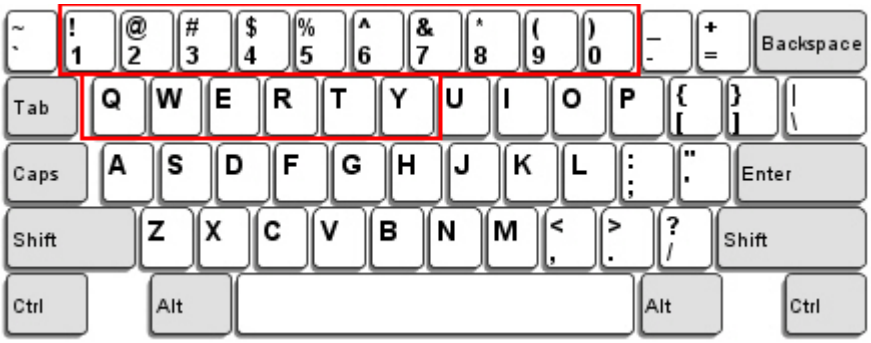
QWERTZ

Note: This setting only works when the keyboard type selected is US keyboard, such as PCAT (US). The Alphabet Layout and Numeric Layout setting must match using keyboard.

Update

US Keyboard Style - Normal

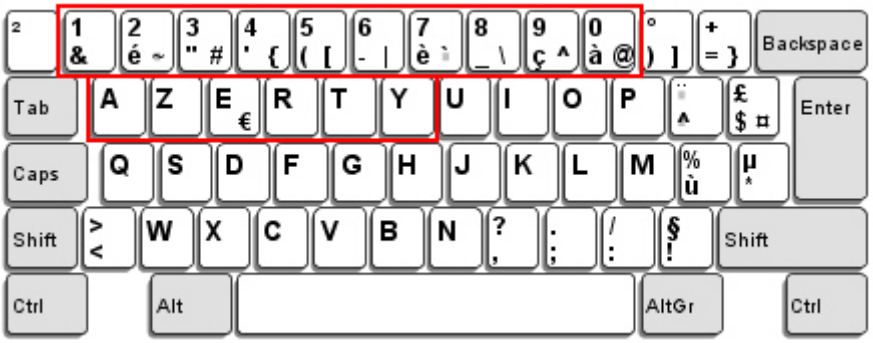
QWERTY layout, which is normally used in western countries.



- Select “Lower Row” for the “Numeric Layout” setting for the upper row is for special characters.

French Keyboard Style - AZERTY

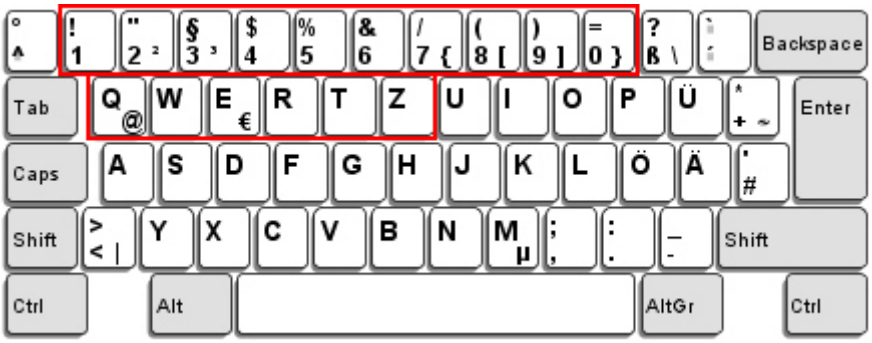
French layout; see below for French Keyboard Style.



- Select “Upper Row” for the “Numeric Layout” setting for the lower row is for special characters.

German Keyboard Layout - QWERTZ

German layout; see below for German Keyboard Style.



- Select “Lower Row” for the “Numeric Layout” setting for the upper row is for special characters.

Enter Setup

Numeric Layout

Select a proper layout that matches the alphabet layout. The scanner will make adjustments according to this setting.

Options	Description
Normal	Depends on the [Shift] key or [Shift Lock] setting
Lower Row	For QWERTY or QWERTZ keyboard
Upper Row	For AZERTY keyboard

***Normal**

Upper Row

Lower Row

Note: This setting is to be used with the Character Substitution setting when support for certain keyboard types (languages) is unavailable but required.

Update

Capital Lock Type & Setting

In order to send the alphabet with correct case, the scanner needs to know the status of Caps Lock on the keyboard. Incorrect settings may result in reversed case of the alphabet being transmitted.

Cap Lock Type	Description
Normal	Normal type
Capital Lock	When enabled, the keys of alphabetic characters will be interpreted as capital letters. However, this does not affect the number or punctuation keys.
Shift Lock	When enabled, the keys of alphabetic characters will be interpreted as capital letters. In addition, this affects the number or punctuation keys.

***Normal**

100042

Shift Lock

100045

Capital Lock

100044

Capital Lock State	Description
Capital Lock OFF	Assuming that the status of Caps Lock on the keyboard is OFF, transmitted characters are exactly the same as in the barcode (when "case-sensitive" is selected for Alphabet Transmission).
Capital Lock ON	Assuming that the status of Caps Lock on the keyboard is ON, transmitted characters are exactly the same as in the barcode (when "case-sensitive" is selected for Alphabet Transmission). ▸ Refer to the Capital Lock Type above.
Auto Detection (suggested use for most applications)	The scanner will automatically detect the status of Caps Lock on the keyboard before data is transmitted; transmitted characters are exactly the same as in the barcode (when "case-sensitive" is selected for Alphabet Transmission).

Auto Detect

100054

Capital Lock ON

100053

Enter Setup

***Capital Lock OFF**

Update

Alphabet Transmission

By default, the alphabet transmission is case-sensitive, meaning that the alphabet will be transmitted according to the original case, the status of Caps Lock on the keyboard, as well as the Capital Lock setting. Select [Ignore Case] to have alphabet transmitted according to the status of Caps Lock on the keyboard only.

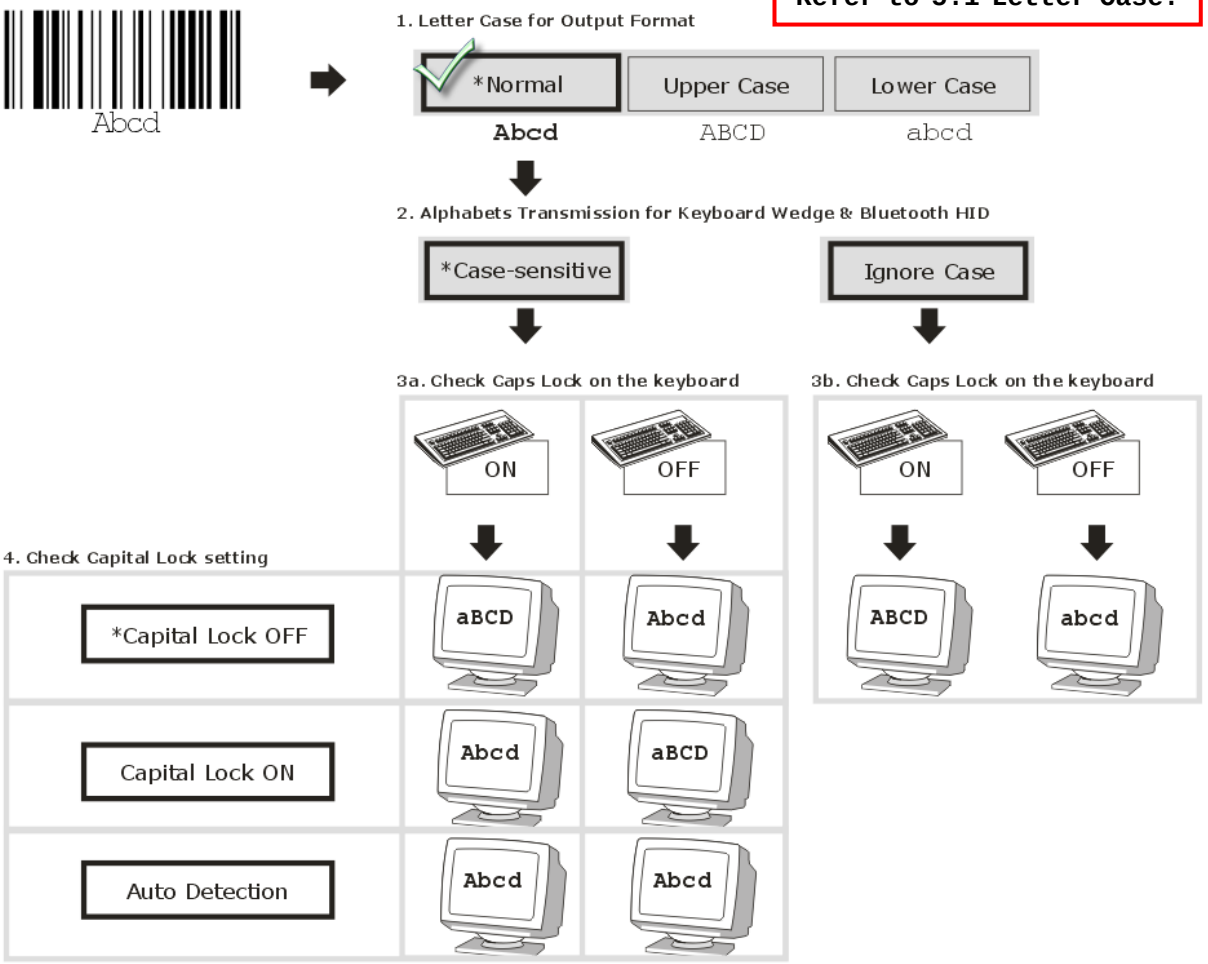
Ignore Case

100051

***Case-sensitive**

100050

Refer to 5.1 Letter Case.



Enter Setup

Numeric Transmission

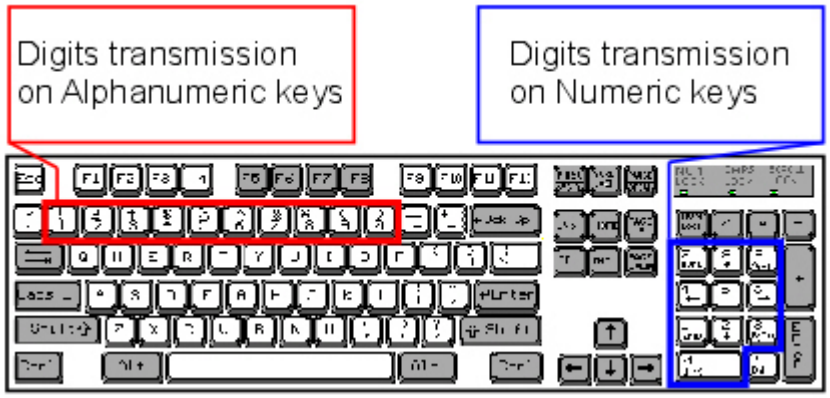
By default, the alphanumeric keypad is used for transmitting numerics. Select “Numeric Keypad” if want to use the keys on the numeric keypad.

Numeric Key

100041

***Alphanumeric Key**

100040



Note: If selecting “Numeric Keypad”, the Num Lock status of the physical keyboard should be "ON".

Kanji Transmission

Kanji Transmission is supported by the scanner when either *Bluetooth*® HID or USB HID is selected for the output interface. By Kanji Transmission, when the host computer is running on Japanese Windows O.S., the scanner is able to transmit Japanese characters including the Chinese characters used in modern Japanese writing system.

Kanji Transmission is disabled by default. Enable/disable scanner’s Kanji Transmission by reading the following barcodes:

Enable

100067

***Disable**

100066

Update

2.6.3 INTER-CHARACTER DELAY

By default, the inter-character delay is set to zero. Specify a value, ranging from 0 to 254 in units of milliseconds, to match the computer response time of the keyboard interface. Such delay time is inserted between every character being transmitted. The longer the delay time is, the slower the transmission speed will be.

Inter-Character Delay… (*0~254)

100011

1) Read the barcode above to specify the inter-character delay.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。 for the desired inter-character delay (in milliseconds).
3) Read the "Validate" barcode on the same page to complete this setting.

2.6.4 INTER-FUNCTION DELAY

By default, the inter-function delay is set to zero. Specify a value, ranging from 0 to 254 in units of milliseconds, to match the computer response time of the keyboard interface. Such delay time is inserted between every function code (0x01 ~ 0x1F) being transmitted. The longer the delay time is, the slower the transmission speed will be.

Inter-Function Delay… (*0~254)

100012

1) Read the barcode above to specify the inter-function delay.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。 for the desired inter-function delay (in milliseconds).
3) Read the "Validate" barcode on the same page to complete this setting.

Enter Setup

2.6.5 HID CHARACTER TRANSMIT MODE

By default, HID interface sends data to the host in batch, or use the scanner to read the "By Character" barcode to process data one character at a time.

***Batch Processing**

By Character

Update

2.7 DIRECT USB VIRTUAL COM

1662 L/1664 supports “Direct” USB Virtual COM interface for memory mode. Use the provided USB cable to connect 1662 L/1664 to the USB port of PC. You may run HyperTerminal.exe on a computer to view and capture the scanned data being transmitted to the computer. Refer to 1.2.2 Memory Mode.

Note: If using USB Virtual COM for the first time, install its driver from the CD-ROM. Driver version 5.3 or later is required. Please remove older versions before installing new ones!

2.7.1 ACTIVATE USB VIRTUAL COM

***Activate Direct USB Virtual COM**

2.7.2 INTER-FUNCTION DELAY

By default, the inter-function delay is set to zero. Specify a value, ranging from 0 to 254 in units of milliseconds, to match the computer response time of the keyboard interface. Such delay time is inserted between every function code (0x01 ~ 0x1F) being transmitted. The longer the delay time is, the slower the transmission speed will be.

Inter-Function Delay… (*0~254)

1) Read the barcode above to specify the inter-function delay.
2) Read the “Decimal Value” barcode on page 錯誤! 尚未定義書籤。 for the desired inter-function delay (in milliseconds).
3) Read the “Validate” barcode on the same page to complete this setting.

Enter Setup

2.7.3 ACK/NAK TIMEOUT

By default, the scanner sends data to the host without waiting for an ACK/NAK response before sending more data. Specify a value, ranging from 1 to 99 in units of 0.1 second. If no response within the specified period of time, the scanner will attempt to send the same data two more times. If all three attempts fail without any notification, data loss will occur.

ACK/NAK Time-out after … (*0~99)

1) Read the barcode above to specify the time interval for the scanner to send data and wait for a response from the host.
2) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。. For example, read "1" and "0" for the scanner to automatically shut down after being idle for 1 second.
3) Read the "Validate" barcode on the same page to complete this setting.

ACK/NAK Error Beep

Enable Error Beep

***Disable Error Beep**

Note: We suggest enabling the error beep so that data loss is notified and the scanner re-read data.

Update

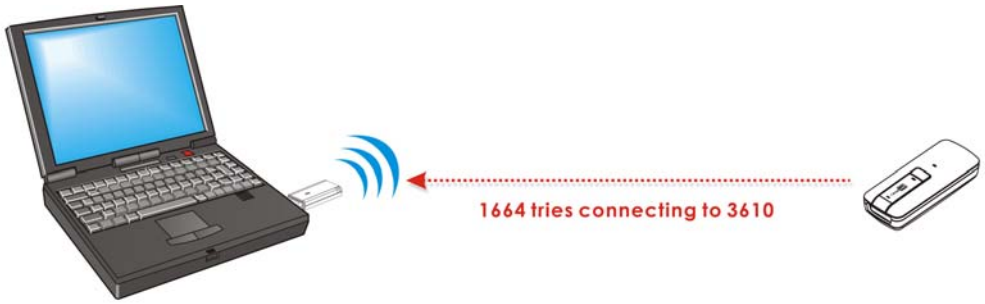
Enter Setup

Chapter 3

SET UP A WPAN CONNECTION

The scanner can be configured to send data to a host computer wirelessly via the 3610 dongle, or to a notebook computer or PDA with *Bluetooth*® wireless technology. Upon powering up, the scanner will be ready to establish a WPAN connection.

To establish a connection via 3610 after reading "Set Connection" and "Serial No." labels …



Interface Option	Reference
USB HID	2.4 USB HID via 3610
USB Virtual COM	2.5 USB Virtual COM via 3610

To establish a connection via *Bluetooth*® dongle after pairing…

Interface Option	Reference
Bluetooth® HID	2.1 *Bluetooth*® HID
Bluetooth® SPP	2.2 *Bluetooth*® SPP Slave, 2.3 *Bluetooth*® SPP Master

IN THIS CHAPTER

3.1 Connecting via 3610 102
3.2 Connecting via *Bluetooth*® Dongle 105

3.1 CONNECTING VIA 3610

By default, the interface of 3610 is set to “USB HID”. You can have up to seven scanners connected to one computer at the same time.

Note: If you are using USB Virtual COM for the first time, you must install its driver from the CD-ROM. Driver version 5.3 or later is required. Please remove older versions!

3.1.1 CONNECT TO 3610

Connect any scanner to 3610 by reading the two labels at the back of 3610. The scanner will respond with one beep upon reading each of the labels.

- “Set Connection” label
- “Serial Number” label

After reading these labels, the scanner will stay active for a specified period of time (2 minutes by default) trying to connect to the 3610 while its LED is flashing blue (On/Off ratio 0.5 s: 0.5 s). Once connected, the scanner will respond with three beeps (tone ascending from low to high), and the LED flashes blue (On/Off ratio 0.02 s: 3 s). When out of range, the scanner will respond with three short beeps (tone descending from high to low).

Read the “Set Connection” label first, and then the “Serial Number” label. If the “Set Connection” label on 3610 is illegible, try this one —

Set Connection

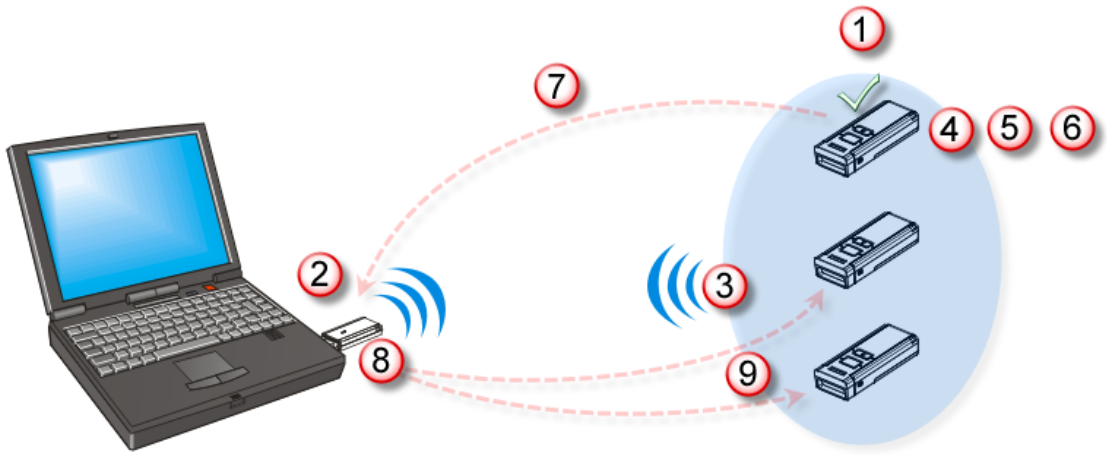
Note: The 3610 settings will overwrite the interface-related settings on the scanners that are currently connected to 3610.

Enter Setup

3.1.2 CHANGE INTERFACE

If want to change the interface 3610, use one of the connected scanners to configure the interface-related settings and it will pass the new settings to 3610, which will then initialize and pass the settings to any other connected scanners.

1) Read the “Set Connection” and “Serial Number” labels at the back of 3610.
2) Within two minutes, connect 3610 to the USB port of PC. For USB Virtual COM, you will need to install its driver first!
3) The scanners will connect to the computer via 3610.
4) Read the “Enter Setup” barcode to enter the configuration mode.
5) Read the desired interface barcode and configure its related settings –
   - “Activate USB HID & Select Keyboard Type”
   - “Activate USB Virtual COM”
6) Read the “Update” barcode to exit the configuration mode.
7) After the scanner resumes connection with 3610, it will pass the interface-related settings to 3610.
8) Upon receipt of the new settings, 3610 will initialize itself.
9) Updated with new settings, 3610 will pass the settings to other connected scanners.



Update

3.1.3 CONFIGURE RELATED SETTINGS

Sniff Mode (Power-saving)

By default, this feature is enabled, meaning the scanner will listen to the wireless network at a reduced rate.

***Enable**

100153

Disable

100152

Enter Setup

3.2 CONNECTING VIA *BLUETOOTH*® DONGLE

3.2.1 CHANGE INTERFACE

Below is the procedure to configure the scanner before establishing a WPAN connection via *Bluetooth*® dongle.

1) Read the "Enter Setup" barcode to enter the configuration mode.
2) Read the desired interface barcode –
   - "Activate *Bluetooth*® HID & Select Keyboard Type"
   - "Activate *Bluetooth*® SPP Slave Mode"
   - "Activate *Bluetooth*® SPP Master Mode"
3) Read the barcodes related to WPAN settings, such as Device Name Broadcasting, Authentication & PIN Code, etc.
4) Read the "Update" barcode to exit the configuration mode.
5) The scanner will stay active for a specified period of time (2 minutes by default) waiting for a connection request from the host (SPP Slave Mode) or trying to connect to the host (HID or SPP Master Mode). Its CPU is running at full speed, and the LED is flashing blue (On/Off ratio 0.5 s: 0.5 s).

   Once connected, when out of range, the scanner will respond with three short beeps (tone descending from high to low).

Update

3.2.2 CONFIGURE RELATED SETTINGS

Sniff Mode (Power-saving)

By default, this feature is enabled, meaning the scanner will listen to the wireless network at a reduced rate.

***Enable**

Disable

Note: When connecting more than two scanners to a notebook computer or PDA with *Bluetooth*® wireless technology, we suggest that you disable the power-saving setting for a more reliable connection.

Device Name Broadcasting

The scanner can be configured to hide itself from other devices equipped with *Bluetooth*® wireless technology. Simply disable the device name broadcasting setting so that it won't be discovered by any other computer or PDA. However, broadcasting must be enabled for establishing an initial connection with the scanner. For example, disable device name broadcasting after successfully connecting the scanner to WorkStation1. Such connection will be maintained automatically unless the scanner is removed from the paired device list (called unpairing) by WorkStation1 or any changes made to authentication and the PIN code. If you want WorkStation2 to connect to the scanner, you have to enable device name broadcasting first.

***Enable**

Disable

Note: By default, device name broadcasting is enabled (which is required for initial connection).

Enter Setup

Authentication

When any changes are made to authentication and PIN code on the scanner side, you will have to remove the scanner from the paired device list (called unpairing) and go through the whole process to re-establish the connection.

The scanner allows up to 16 characters for a PIN code and provides two options for authentication:

Enable Authentication with Preset PIN

Read the "Use preset PIN" barcode, and change the preset PIN if necessary. This means you will have to enter exactly the same string for your computer or PDA to connect to the scanner. If the PIN or passkey is incorrect, any connection attempt will be turned down by the scanner. See step 8 in 3.2.3 Connect to Dongle.

1) Read the "Use preset PIN" barcode to enable authentication with a preset PIN.

Use Preset PIN

2) Read one of the barcodes to specify the PIN code, in decimal or hexadecimal.

By default, the PIN code is set to "0000". Maximum 16 characters are allowed.

Enter PIN in Hexadecimal …

Enter PIN in Decimal…

3) Read the "Decimal Value" barcode on page 錯誤! 尚未定義書籤。 or the "Hexadecimal Value" barcode on page 錯誤! 尚未定義書籤。 for the desired digits or character string.

Read the "Clear PIN Code" barcode first if you need to re-input the PIN code.

Clear PIN Code

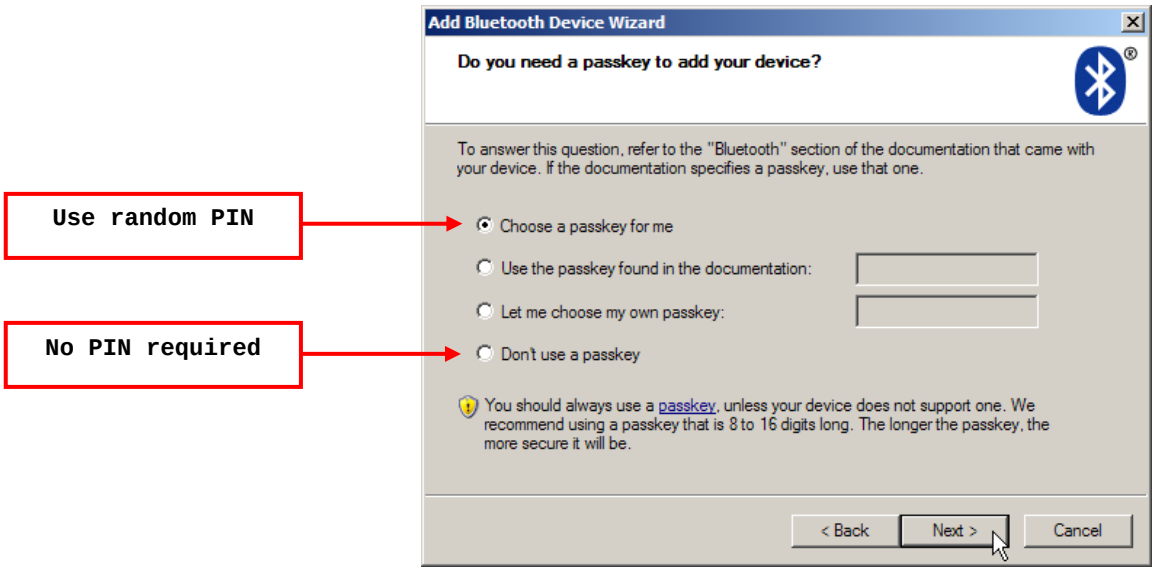
4) Read the "Validate" barcode to complete this setting.

Enable Authentication with Random PIN or No Authentication

By default, it is set to "No PIN or use random PIN", which depends on the setting of the target device. (No PIN = No authentication.)

***No PIN or use random PIN**

Update



Note: When using *Bluetooth*® HID, some device driver may not support pre-defined PIN code for authentication. In this case, make sure you have the scanner set to “No PIN or use random PIN” before pairing. While pairing, the host PIN code will be displayed on the computer screen. Have the scanner read the setup barcode “Enter PIN Code in Decimal” or “Enter PIN Code in Hexadecimal” to input the matching PIN code. Refer to 錯誤! 找不到參照來源。.

Enter Setup

3.2.3 CONNECT TO DONGLE

The procedure goes through associating devices for establishing a WPAN connection, which is pretty much the same except for the software you are using. If your computer is running Microsoft® Windows® XP (SP1 to SP3), Windows Vista® Service Pack 1 (SP1) and Windows 7, you can use the software support that Windows® includes, or you can use the driver that the device manufacturer provides. Now, let's try using the software support that Windows® XP Service Pack 2 includes.

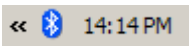
Bluetooth® HID Procedure

By default, *Bluetooth*® HID is activated on the scanner, and the keyboard type is set to PCAT (US). When *Bluetooth*® HID is re-activated, you will have to select a keyboard type to complete this setting.

The procedure is the same as for *Bluetooth*® SPP. Refer to steps 1~11 below.

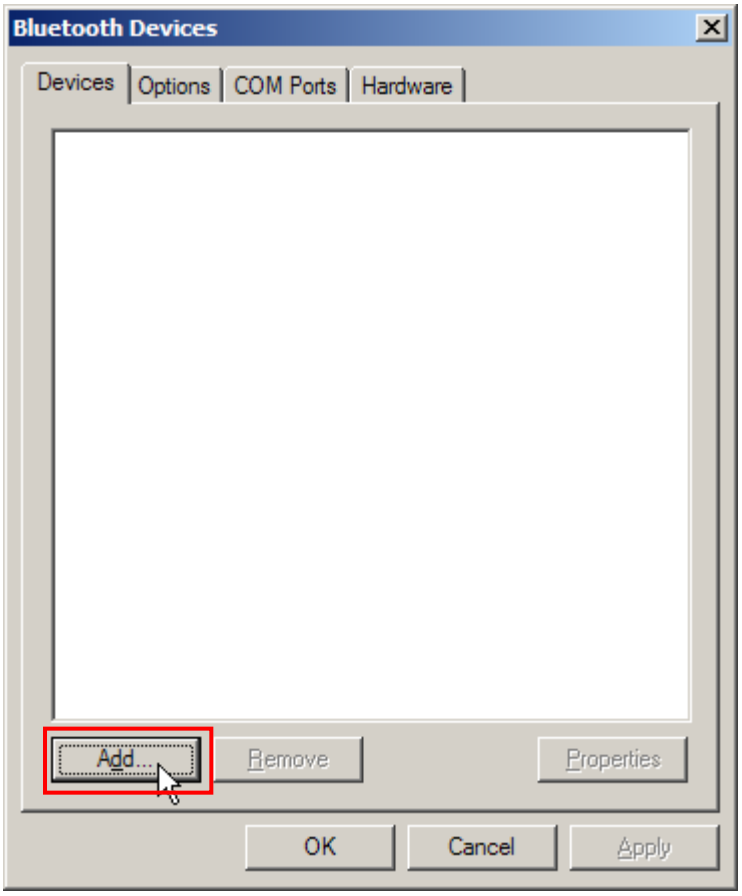
Bluetooth® SPP Procedure

1) Turn on the *Bluetooth*® function on your computer, running Windows XP SP2.

2) Double-click the *Bluetooth*® icon from the lower right of the taskbar. 

Alternatively, you may go to **Control Panel** > ***Bluetooth*** **Devices**.

3) Click [Add] to search devices nearby.



Update

4) Turn on the scanner with correct WPAN settings, such as select *Bluetooth*® SPP or *Bluetooth*® HID, broadcasting enabled, authentication enabled, and PIN code specified, etc. Select the check box of [My device is set up and ready to be found] on your computer.

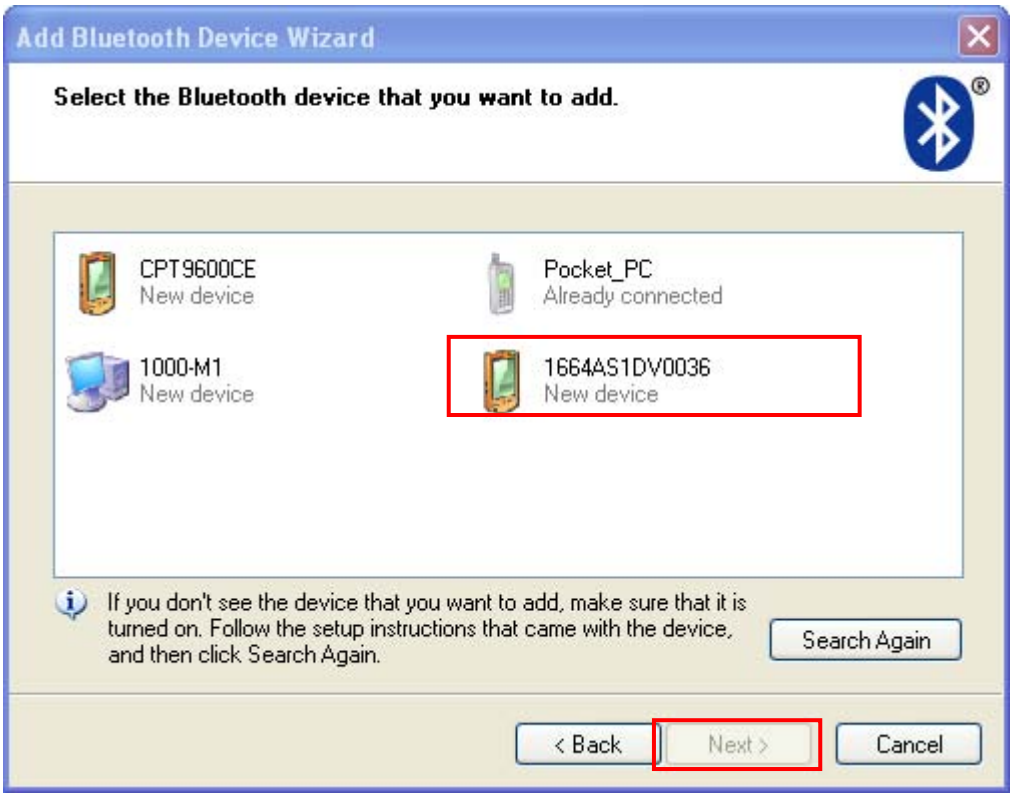
5) Click [Next].

6) Wait for a few seconds for the Wizard to search available devices nearby.

The scanner will appear with its “serial number” as the device name. You may double-check the “Serial Number” label on the scanner to ensure connecting with the correct scanner. Select the target scanner. If the target scanner does not appear on the list, click [Search Again] to refresh the list. The scanner might enter Suspend Mode now, and you can press the trigger to have it active again (=discoverable). It will then stay active for a specified period of time (2 minutes by default) and wait for PC to establish a connection.

Enter Setup

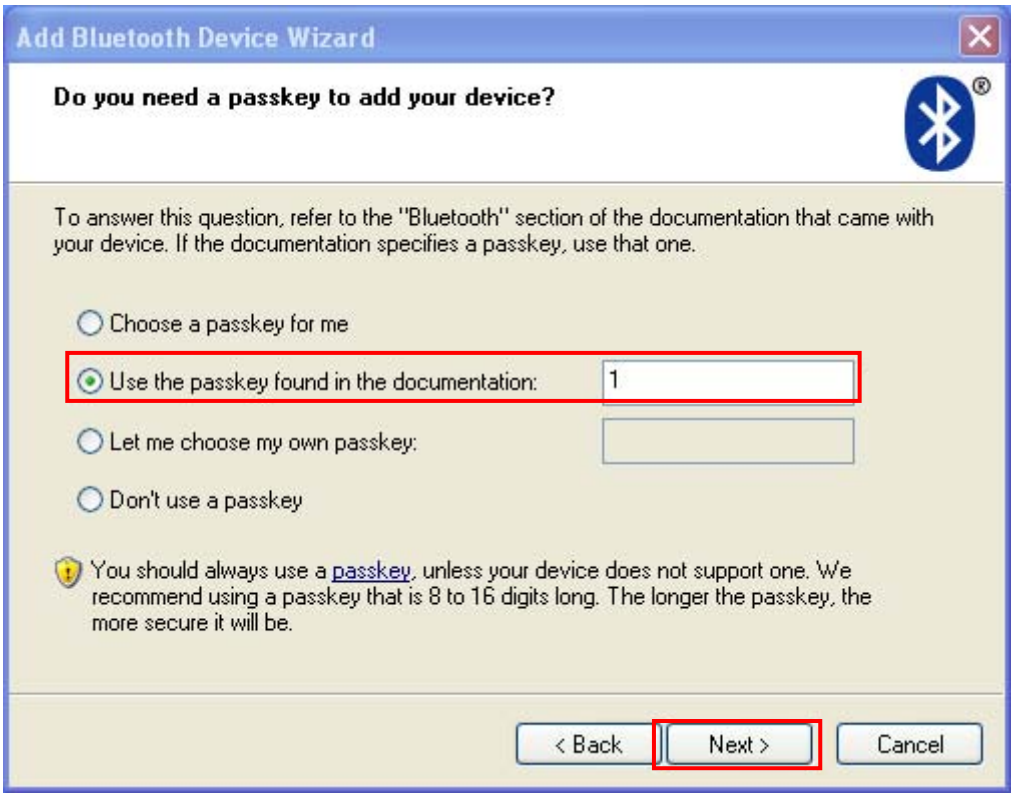
7) Click [Next].

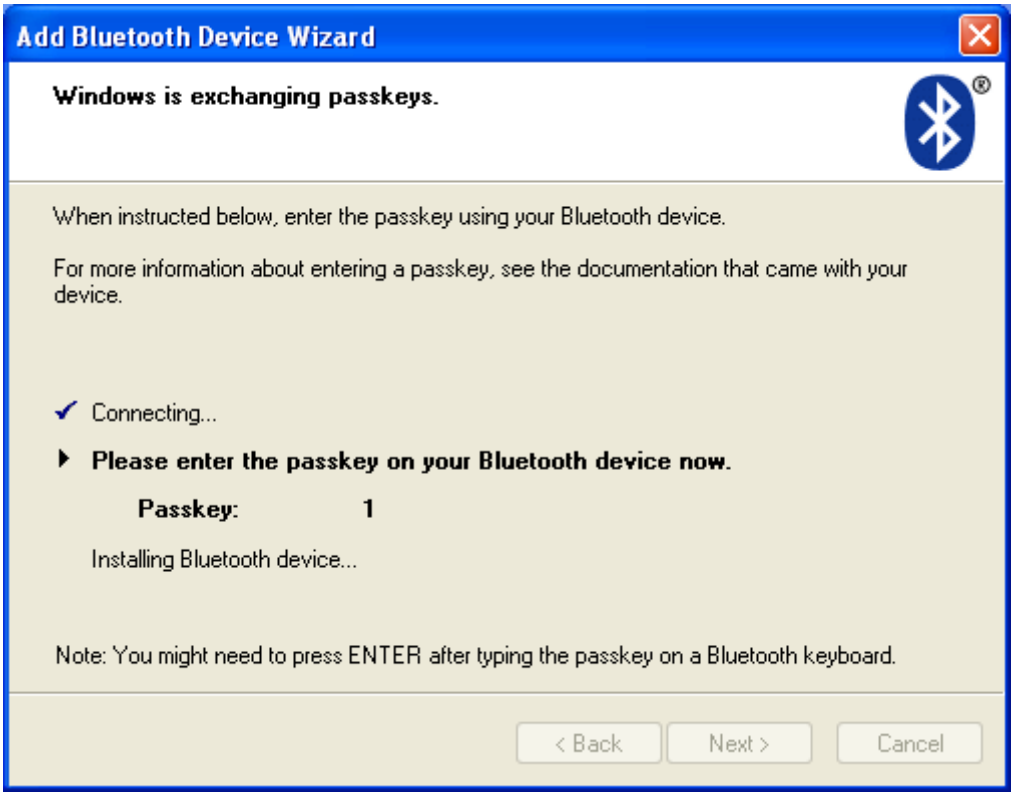


8) Enter the passkey for authentication, which must be exactly the same as configured for the scanner.

Update

9) Click [Next]. Wait for a few seconds for Windows to exchange passkeys.





Enter Setup

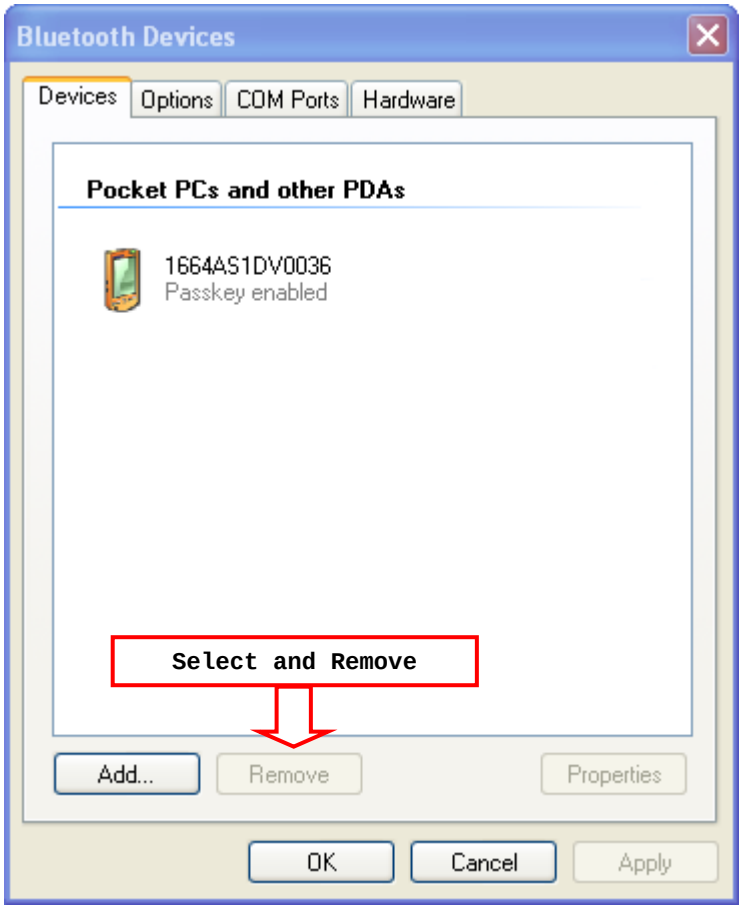
Note: When *Bluetooth* security is enabled without providing a pre-set PIN code, dynamic input of PIN code is supported.

10) Click [Finish].

Update

11) Now the target scanner will be listed as shown below.

You can have up to seven scanners connected to one computer at the same time.



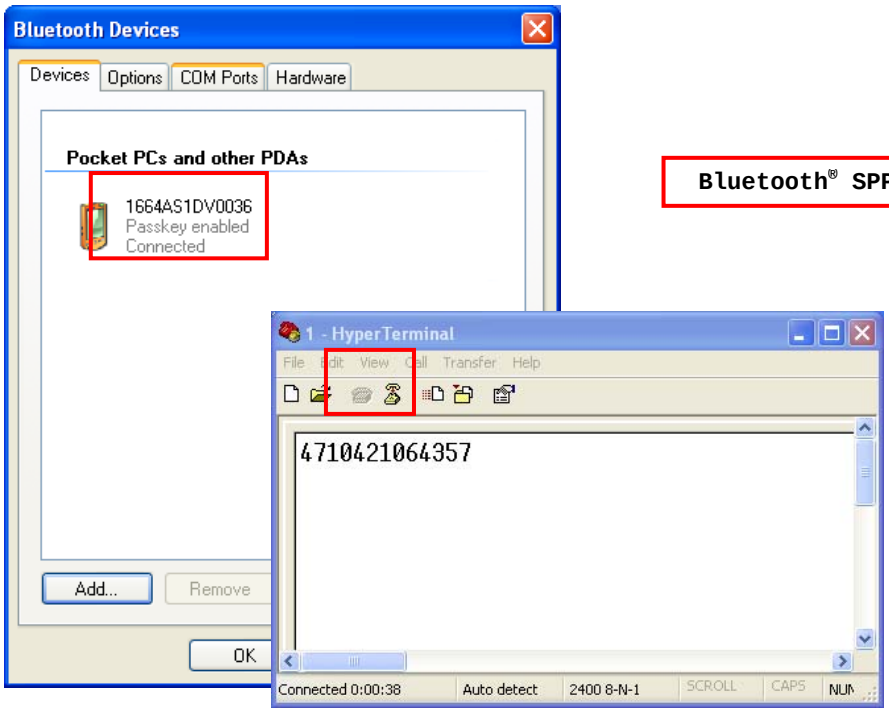
Note: When any changes are made to authentication and PIN code on the scanner side, or you want to change to use *Bluetooth*® HID, it is suggested that you remove the scanner from the paired device list (called unpairing) and go through the whole process to re-establish the connection.

12) Run the desired application on your computer, such as HyperTerminal.exe if using *Bluetooth*® SPP or Notepad.exe if using *Bluetooth*® HID.

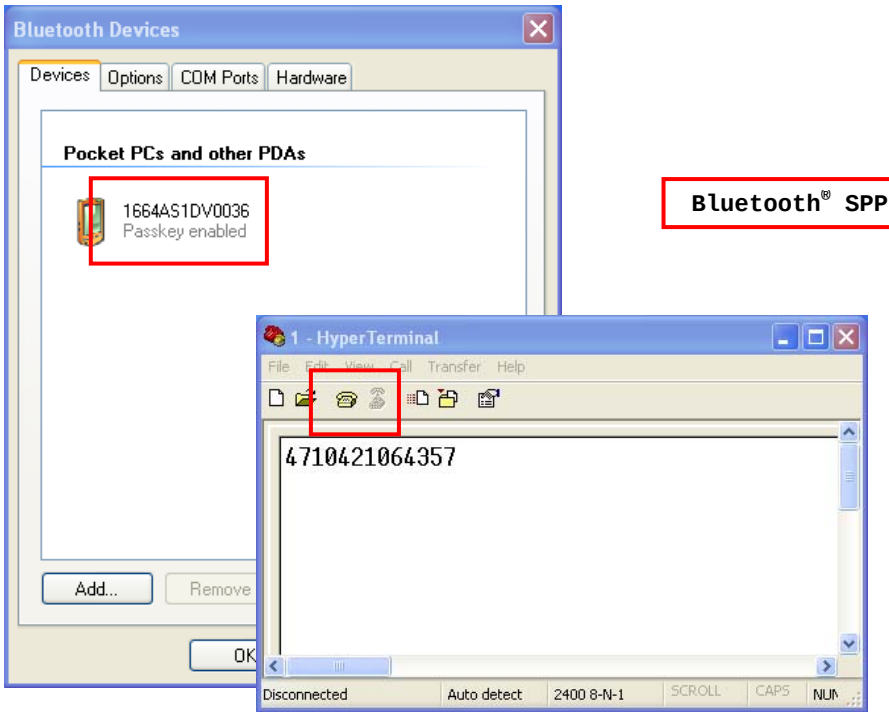
The status of the scanner listed on the device list will be updated to "Connected", indicating the WPAN connection is established successfully via the outgoing COM port if using *Bluetooth*® SPP.

Note: Even though the scanner is connected to the host with authentication disabled (= no PIN code required), the host may still request a PIN code while the application is opening COM port. Dynamic input of PIN code is supported so that you may input a matching PIN code on the scanner. Refer to 錯誤! 找不到參照來源。.

Enter Setup



Bluetooth® SPP Connected



Bluetooth® SPP Disconnected

Enter Setup

SPECIFICATIONS

Optical Characteristics	1662 L	1664
Scan Engine	1D Laser	2D Imager
Light Source	Visible Laser Diode	Visible Red LED
RF Characteristics		
WPAN Module	*Bluetooth*® Class 2 compliance	
Coverage (line-of-sight)	20 meters with 3610	
Interface Supported	▸ Serial Port Profile (*Bluetooth*® SPP) ▸ Human Interface Device Profile (*Bluetooth*® HID) ▸ 3610 ▸ Direct USB HID ▸ Direct USB Virtual COM	
Physical Characteristics		
Memory	▸ 10 KB for transmit buffer ▸ 4MB flash for memory mode	
Switch	Push-button switch for [Trigger] key, plus [Power/Delete] key	
Indication	Triple-color LED (Red/Green/Blue) and beeper	
Dimensions	113 x 44.9 x 29.9 mm	
Weight	106g (With Battery) 83g (Without Battery)	

Update

Electrical Characteristics		
Battery		Rechargeable Li-ion battery — 3.7 V, 850 mAh
Environmental Characteristics		
Temperature	Operating Storage	0 °C to 50 °C -20 °C to 60 °C
Humidity (Non-condensing)	Operating Storage	10% to 90% 5% to 95%
Resistance		
Electrostatic Discharge		± 15 kV air discharge, ± 8 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")		
CipherLab Dongle(3610)		√
Rechargeable Li-ion Battery		√
Direct USB Cable		√
Wristband		√
Protective Cover (Pouch)		√
Single Battery Charger		√

Enter Setup

Update