CipherLab
User Guide

1166 / 1266 Barcode Scanner

Setup barcodes included.

Version 3.04

CIPHER LAB

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 1166/1266 unit (FCC ID: Q3N-11662) 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 3666 unit (FCC ID: Q3N-36662) complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body. It only operated in hand-held used. If you only transfer data to Host wirelessly, please keep the minimum distance 20 cm between machine & your 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.

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

CARE & MAINTENANCE

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

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

▸ When the scanner resumes its work, make sure the battery is fully charged before use.

▸ Keep the scanner away from any magnets and magnetic fields to prevent the laser engine from malfunctioning.

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

RELEASE NOTES

Version	Date	Notes
3.04	Jul. 24, 2015	▸ New: **4.3.5 Quiet Zone**
3.03	Jun. 11, 2014	▸ Modified: **Care & Maintenance** – "Keep the scanner away from any magnets and magnetic fields to prevent the laser engine from malfunctioning." Added
		▸ New: **1.10 Addon Security for UPC/EAN Barcodes** (0344)
3.02	May 02, 2012	▸ Modified: Firmware Upgrade — Baud rate
3.01	Jul. 13, 2011	▸ Modified: Specifications — Power Adaptor
3.00	Jan. 04, 2011	New Layout
		▸ Modified: Introduction, Symbologies Supported — add support of more RSS symbologies
		▸ Modified: 4.15 GS1 DataBar (RSS Family)
		▸ Modified: 4.15.2 GS1 DataBar Omnidirectional (RSS-14)
		▸ Modified: 4.15.3 GS1 DataBar Expanded (RSS Expanded)
		▸ Modified: Specifications — remove power consumption

CONTENTS

INTRODUCTION

CipherLab BT Barcode Scanners are specifically designed to answer your mobile demands. The versatile scanners are designed to help accelerate productivity while lowering the total cost of ownership. Intensive data collection jobs are made easier with fast, accurate barcode scanning in various working environments, especially in small businesses. Integrating short-distance wireless technology to handheld scanners, they are made ideal for carrying around, and thus give workers tether-free mobility anytime anywhere and get job done more efficiently. This line of scanners deliver data over a wireless personal network at a range of up to 100 meters and a prolonged battery life to keep business running — over 45 hours or over 32,000 scans for 1166, and over 36 hours or 26,000 scans for 1266.

Owing to the compact design, extremely low power consumption, and powerful decoding capability, CipherLab BT 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

GETTING FAMILIARIZED WITH 1166/1166 AND 3666

INSTALLING THE BATTERY TO 1166/1266

When you first receive the package, the rechargeable battery is stored separately from the scanner. Unless you have 3666 for charging the battery directly, you will have to insert the battery into the scanner first.

Note: Any improper handling may reduce the battery life.

1) Hold the scanner still and insert the battery into the battery compartment at the bottom of the scanner.

2) Slide the battery latch to lock the battery in the compartment.

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

Push up to lock the battery

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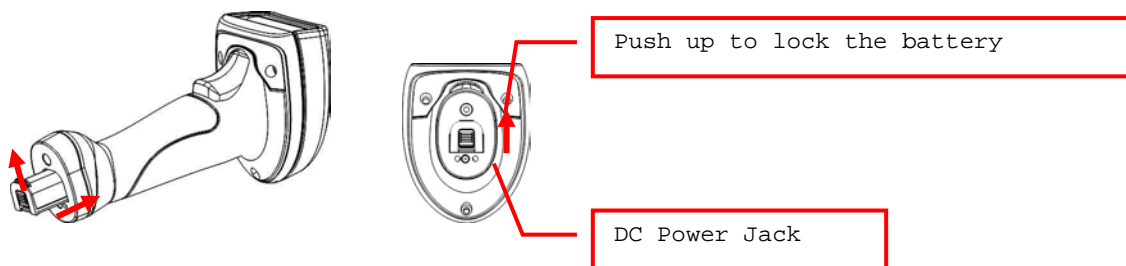
Note: (1) To turn off the scanner, remove the battery. Refer to settings of "Auto Power Off & Power-Saving".
(2) For shipping and storage purposes, save the scanner and the battery separately. This will keep the battery in good condition for future use.
(3) When the battery charge becomes low, you will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

Enter Setup

SETTING UP 3666

Capable of charging 1166/1266 as well as one spare battery, the 3666 base is specifically designed for the scanner to communicate with a host computer wirelessly. The connection between the scanners and 3666 is made easy and reliable. Refer to 3.1.1 Connect to 3666.


```
LED Indicators
```

```
DB-15 port
```
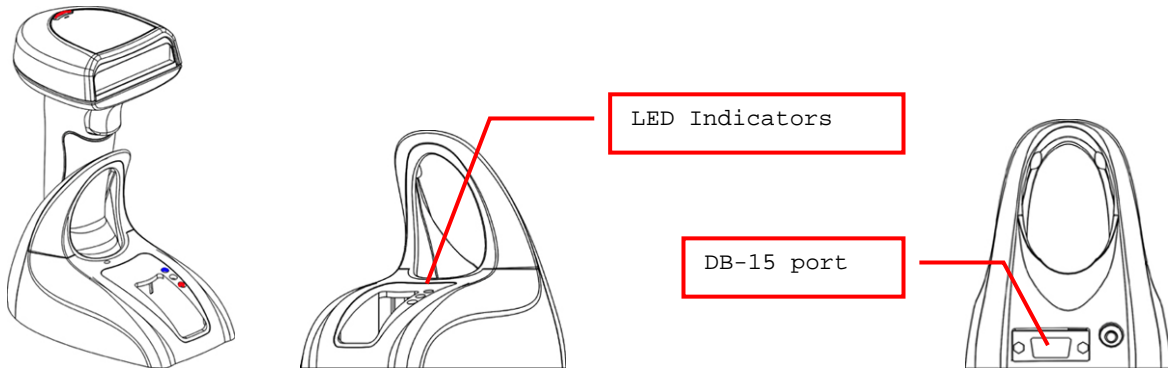
Three LED indicators are provided for communications, spare battery charging, and power status (from top to down).

Communication LED		Meaning
Red, flashing	---	▶ Keyboard Wedge disconnected ▶ Interface set to Keyboard Wedge
Red, solid	---	Wait for connection request from the scanner
---	Blue, flashing	Connected with the scanner

Charging LED		Meaning
Red, solid	---	Charging spare battery
---	Green, solid	Charging done
---	---	Spare battery not ready

Power LED		Meaning
Red, solid	---	Power on
---	---	No power

Update

DIRECT CHARGING

The battery may not be charged to full for shipment. When you first receive the package, you will need to charge the battery to full before using the scanner.

Note: (1) It is recommended that the charging devices be operated at room temperature (18°C to 25°C) for optimal performance.
(2) The charging devices will not charge the battery when the temperature drops below 0°C or exceeds 40°C.

If you do not have 3666 for charging, all you need to do is —

1) Install the battery to the scanner.

2) Connect one end of the power supply cord to the DC power jack at the bottom of the scanner.

3) Connect the other end of the power supply cord to a suitable power outlet.

4) The scanner LED will be flashing red during charging. When the charging is done, the LED will turn solid red.

CHARGING & COMMUNICATIONS VIA 3666

1) Install the battery to the scanner.

2) Seat the scanner in the 3666 base.

3) Connect one end of the power supply cord to the DC power jack at the back of 3666.

4) Connect the other end of the power supply cord to a suitable power outlet.

5) Connect 3666 to your computer or notebook via the interface cable.

6) The LED for power indication on 3666 will become solid red.

7) The scanner LED will be flashing red during charging. When the charging is done, the LED will turn solid red.

8) The LED for communications on 3666 will first become solid red while attempting to connect with the scanner. Refer to the table above for details.

Install a spare battery for charging if necessary.
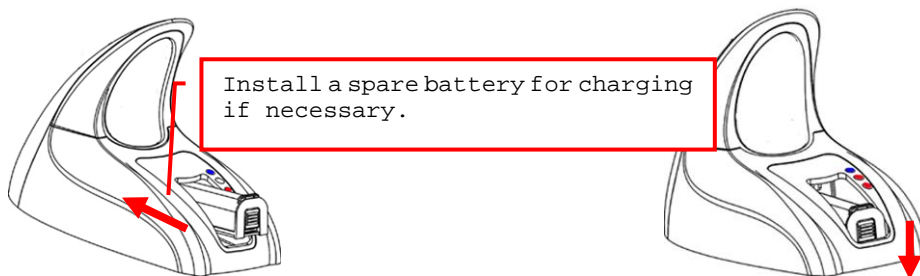
Note: It takes approximately 2 hours to charge the battery to full. However, it takes approximately 4 hours to charge the spare battery.

Enter Setup

INSIDE THE PACKAGE

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

▶ Barcode Scanner (1166 or 1266)
▶ BT Base (3666)
▶ Rechargeable Li-ion battery

Note: (1) For model designation, please see the label on the scanner.

INTERFACE OPTIONS

Rich choices of output interface are available for 3666:

▶ Keyboard Wedge Cable
▶ RS-232 Cable
▶ USB HID Cable (307)
▶ IBM 4683/4694 Cable (346)

PRODUCT HIGHLIGHTS

▶ Ergonomic design and built tough to survive drop test.
▶ Extremely low power consumption
▶ Firmware upgradeable
▶ Supports most popular barcode symbologies, including GS1-128 (EAN-128), GS1 DataBar (RSS), etc.
▶ Supports negative barcodes
▶ Supports eight different scan modes
▶ User feedback includes dual-color LED indicator and beeper
▶ Beeping tone programmable for Good Read
▶ 128 KB flash memory for Memory Mode operation, storing up to 8,192 scans based on EAN-13 barcodes
▶ Provides up to 4 KB SRAM for reserve buffer while getting out of range over a wireless personal area network (WPAN), storing up to 256 scans based on EAN-13 barcodes
▶ Capable of transmitting scanned data, emulating a serial cable (BT SPP) or as keyboard input (BT HID), to a notebook computer or PDA with *Bluetooth*® wireless technology
▶ Programmable parameters include data output format, editing format, symbologies, etc.

Update

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. Refer to Chapter 4 Changing Symbology Settings for details of each symbology.

Symbologies Supported: Enable/Disable		Default	
Codabar		Enabled	
Code 93		Enabled	
MSI			Disabled
Plessey			Disabled
Telepen			Disabled
Code 128	Code 128	Enabled	
	GS1-128 (EAN-128)		Disabled
Code 2 of 5	Industrial 25	Enabled	
	Interleaved 25	Enabled	
	Matrix 25		Disabled
Code 3 of 9	Code 39	Enabled	
	Italian Pharmacode		Disabled
	French Pharmacode		Disabled
EAN/UPC	EAN-8	Enabled	
	EAN-8 Addon 2		Disabled
	EAN-8 Addon 5		Disabled
	EAN-13	Enabled	
	EAN-13 & UPC-A Addon 2		Disabled
	EAN-13 & UPC-A Addon 5		Disabled
	ISBN		Disabled
	UPC-E0	Enabled	
	UPC-E1		Disabled
	UPC-E Addon 2		Disabled
	UPC-E Addon 5		Disabled
	UPC-A	Enabled	

Enter Setup

GS1 DataBar (RSS)	GS1 DataBar Omnidirectional (RSS-14)		Disabled
	GS1 DataBar Truncated		Disabled
	GS1 DataBar Stacked		Disabled
	GS1 DataBar Stacked Omnidirectional		Disabled
	GS1 DataBar Limited (RSS Limited)		Disabled
	GS1 DataBar Expanded (RSS Expanded)		Disabled
	GS1 DataBar Expanded Stacked		Disabled

Update

Enter Setup

QUICK START

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

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

Configuration Mode

1. Install the battery to the scanner, and the scanner will turn on automatically. It will respond with a long beep and its LED will come on and off shortly.

2. Have the scanner read the "Enter Setup" barcode. It will respond with six beeps and its LED indicator will become solid blue after reading the barcode.

3. Have the scanner read more setup barcodes… Most of the setup barcodes are normal. The scanner will respond with two beeps (high-low tone). For special setup barcodes, it requires reading more than one setup barcode to complete the setting.

4. Have the scanner read the "Update" or "Abort" barcode. It will respond with six beeps and its LED indicator will become solid blue 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 and off shortly.
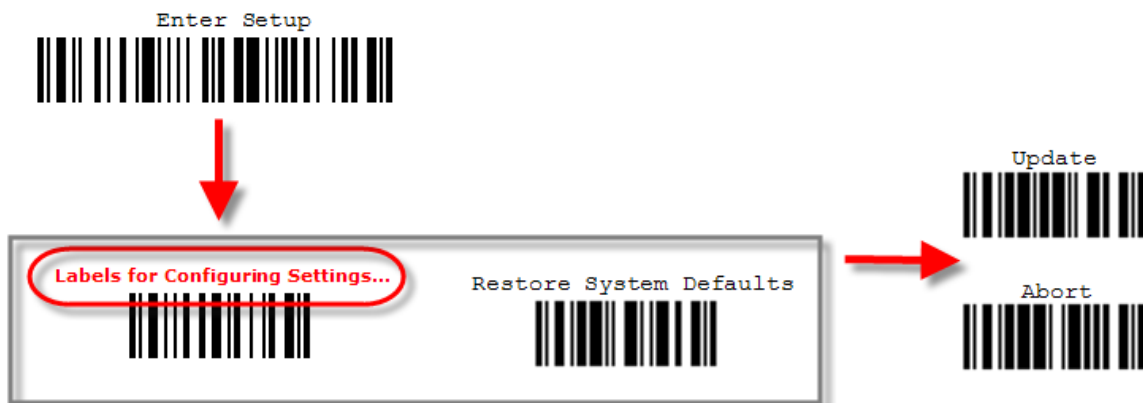
Note: Refer to Appendix II Host Serial Commands for how to configure the 3666 base by having the scanner read 3666-related setup barcodes or using serial commands.

Update

Working Mode

Upon powering up, the scanner will try to establish a connection with 3666 or a computer with *Bluetooth*® wireless technology. Refer to Chapter 3 – Setting up a WPAN Connection for details. The connection between the scanners and 3666 is made easy and reliable.
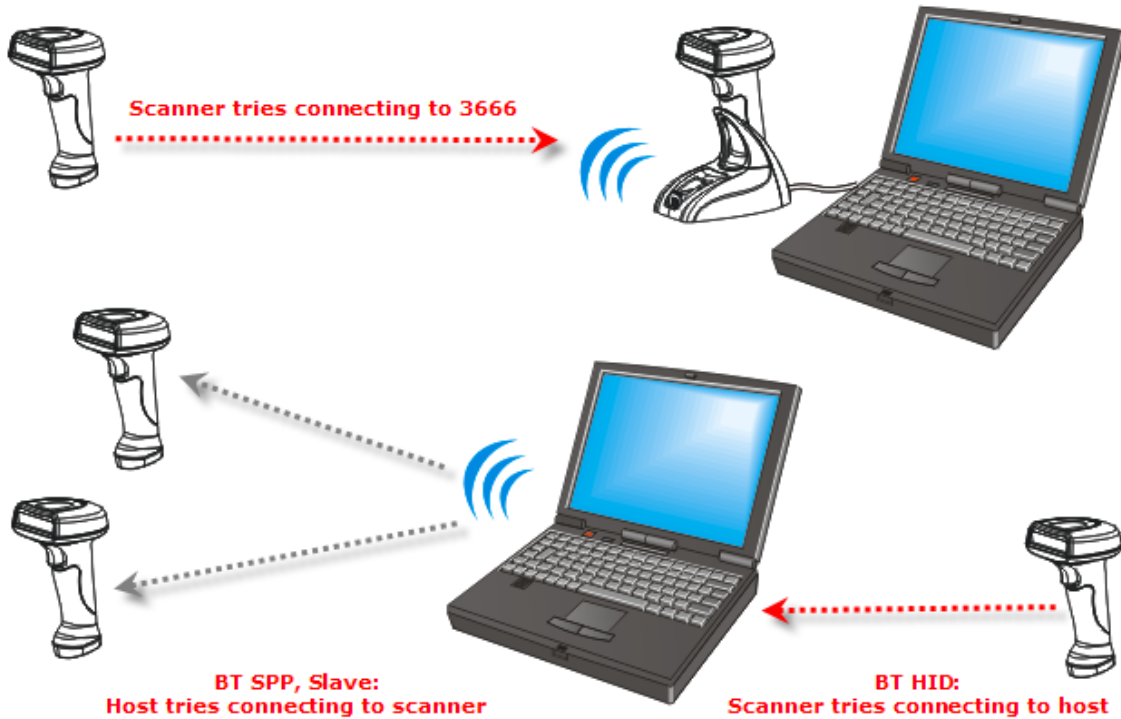
Note: If RS-232 or BT SPP is selected for output interface, the host can directly send serial commands to configure the scanner. For example, run HyperTerminal.exe and type the 4-digit command located under each setup barcode. Refer to Appendix II Host Serial Commands.

Enter Setup

ENTER CONFIGURATION MODE

For the scanner to enter the configuration mode, you must have it 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 solid blue 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, you must have it read the "Update" barcode, which can be located at the bottom of almost every odd page of this manual. If you want to exit the configuration mode without saving any changes, have the scanner read the "Abort" barcode instead.

▶ Just like reading the "Enter Setup" barcode, the scanner will respond with six beeps and its LED indicator will go off after reading the barcode. Wait for a few seconds for the scanner to restart itself.

Update ‖‖‖‖‖‖‖‖‖‖‖‖‖‖
9999

Abort ‖‖‖‖‖‖‖‖‖‖‖‖‖‖
9998

‖‖‖‖‖‖‖‖‖‖‖‖‖‖ Update

DEFAULT SETTINGS

RESTORE SYSTEM DEFAULTS

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

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

Restore System Defaults

9993

Note: The system default value (if there is) 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 (high-low tone) when each parameter is set successfully.

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 "BT HID", "USB HID" or "Keyboard Wedge" 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.

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

Update
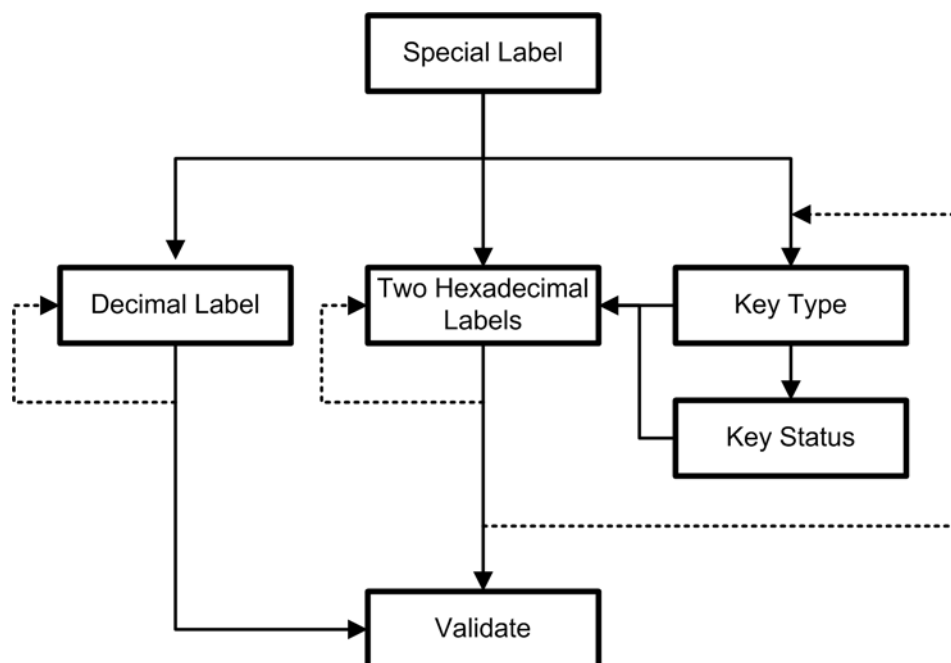
The example below shows how to enable a specific symbology, say, Interleaved 25:

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 quickly.
2	Enter the Configuration Mode...	The scanner will respond with six beeps (high-low tone repeats three times), and its LED indicator will become solid blue.

<div align="center">

‖‖‖‖‖‖‖‖‖‖‖‖‖‖
Enter Setup

</div>

Steps	Action	User Feedback if Successful
3	Read a Setup barcode... For example,	The scanner will respond with two beeps (high-low tone) if reading a normal setup barcode.

<div align="center">

‖‖‖‖‖‖‖‖‖‖
Enable Interleaved 25

</div>

Steps	Action	User Feedback if Successful
4	Exit the Configuration Mode...	Same as for *Enter the Configuration Mode*.

<div align="center">

‖‖‖‖‖‖‖‖   ‖‖‖‖‖‖‖‖
Update   OR   Abort

</div>

Steps	Action	User Feedback if Successful
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).

<div align="center">

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖   Enter Setup

</div>

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 quickly.
2	Enter the Configuration Mode…	The scanner will respond with six beeps (high-low tone repeats three times), and its LED indicator will become solid blue.

Enter Setup

3	Read a Setup barcode…	The scanner will respond with two beeps (high-low tone) if reading a normal setup barcode.
	For example,	

Normal setup barcode

Enable Interleaved 25

Normal setup barcode

Select Max./Min. Length Qualification

Special setup barcode

Max. Length

The scanner will respond with one short beep if reading a special setup barcode such as "Max. Length", indicating the setup requires reading more barcodes.

Decimal barcodes

1

Read the "Decimal Value" barcode(s).

▸ Refer to Appendix IV "Decimal System"

5

Validate

The scanner will respond with two beeps (high-low tone) when the input values are validated.

| 4 | Exit the Configuration Mode… | Same as for *Enter the Configuration Mode*. |

Update   OR   Abort

| 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 quickly.
2	Enter the Configuration Mode…	The scanner will respond with six beeps (high-low tone repeats three times), and its LED indicator will become solid blue.

<div align="center">

‖‖‖‖‖‖‖‖‖‖‖

Enter Setup
</div>

Steps	Action	User Feedback if Successful
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

<div align="center">

‖‖‖‖‖‖‖‖‖‖

Prefix Code
</div>

<div align="center">

‖‖‖‖‖‖‖‖‖‖

<Normal>

‖‖‖‖‖‖‖‖‖‖

Add Left Alt
</div>

When "BT HID", "USB HID" or "Keyboard Wedge" 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.

▶ Refer to Appendix III

Hexadecimal barcodes

<div align="center">

‖‖‖‖‖‖‖‖‖‖

2

‖‖‖‖‖‖‖‖‖‖

B

‖‖‖‖‖‖‖‖‖‖

Validate
</div>

Read the "Hexadecimal Value" barcodes for the desired character string. For example, read "2" and "B" for the scanner to prefix the character "+".

▶ Refer to Appendix IV "Hexadecimal System"

The scanner will respond with two beeps (high-low tone) when the input values are validated.

Steps	Action	User Feedback if Successful
4	Exit the Configuration Mode…	Same as for *Enter the Configuration Mode*.

<div align="center">

‖‖‖‖‖‖‖‖   ‖‖‖‖‖‖‖‖

Update   OR   Abort
</div>

Steps	Action	User Feedback if Successful
5	The scanner will automatically restart itself…	Same as for *Power on the scanner*.

<div align="center">

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Enter Setup
</div>

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 (high-low tone) and send the selected page to the host immediately.

List settings regarding Interface, Buzzer, and Other Scanner Parameters

List Page 1

9950

List settings regarding Prefix, Suffix, and Length Code Setting

List Page 2

9951

List settings regarding Code ID

List Page 3

9952

List settings regarding: Readable Symbologies

List Page 4

9953

List settings regarding Symbology Parameters (1/3)

List Page 5

9954

List settings regarding Symbology Parameters (2/3)

List Page 6

9955

List settings regarding Symbology Parameters (3/3)

List Page 7

9956

List settings regarding Editing Format 1

List Page 8

9957

List settings regarding Editing Format 2

List Page 9

9958

List settings regarding Editing Format 3

List Page 10

9959

Update

Enter Setup

UNDERSTANDING THE BARCODE SCANNER

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

IN THIS CHAPTER

1.1 BATTERY

The scanner is powered by a rechargeable 3.7 V/700 mAh Li-ion battery, and it takes approximately 2 hours to charge the battery to full (from the power adaptor). However, the charging time may vary by working condition. For intensive data collection, you may purchase a spare battery for non-stop operation.

During normal operation, the 1166 scanner can work for over 45 hours or 32,000 scans (based on EAN-13 barcodes), and the 1266 scanner can work for over 36 hours or 26,000 scans (based on EAN-13 barcodes).

Note: The scanner can be configured to save battery power. Refer to settings of "Auto Power Off & Power-Saving" and "Sniff Mode".

1.1.1 HOW TO OPERATE THE SCANNER

Turn on the scanner...
After installing the battery, the scanner will respond with a long beep (high tone), and its LED will become solid red and go off quickly.

Turn off the scanner...
Remove the battery directly.

Update

1.1.2 POWER-SAVING & RF AUTO-SHUTDOWN

There are two settings for saving battery power —

▶ Power-Saving: The scanner will stay active at power-on for 1 minute. When the scanner fails to connect in the interval, it will enter power-saving mode automatically.

▶ RF Auto-Shutdown (1~255 min.; 0= Disable): By default, when the scanner is connected via 3666 and found idle for 10 minutes, it will automatically stop RF connectivity. If this feature is not desired, set it to 0.

Before establishing a WPAN connection successfully...

1. The scanner will stay active for a preset period of time (1 minute) for the following scenarios. Its LED is flashing blue (On/Off ratio 1:1).

    (a) waiting for a connection request from the host (BT SPP Slave Mode)

    (b) trying to connect to the host (BT HID)

    (c) trying to connect to 3666

2. If it fails to connect within 1 minute, the scanner will become inactive to save power, and its LED will turn off.

    Press the trigger to wake up the scanner when it becomes inactive, and the scanner will stay active again.

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

After establishing a WPAN connection successfully...

1. Once a WPAN connection is established successfully, the scanner will stay active for data transmission. Its LED is flashing blue (On/Off ratio 1:6).

2. With the use of 3666, the scanner will automatically stop RF connectivity when it is idle for the specified time interval for RF Auto-Shutdown. You will hear three short beeps, tone descending from high to low, and its LED will turn off.

    Press the trigger to wake up the scanner when it becomes inactive, and the scanner will stay active again.

    ▶ For BT HID or SPP, there is no implementation of RF Auto-Shutdown.

```
RF Auto-Shutdown
after 0~255 min.
          (*10)
```

0445

1) Read the barcode above to specify the time interval before the scanner enters low-speed mode.

2) Read the "Decimal Value" barcode on page 165. 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.

Enter Setup

1.2 MEMORY

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

1.2.1 TRANSMIT BUFFER

You may enable transmit buffer 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 red and goes off quickly. However, the host computer may not receive the data immediately if getting out of range. With the 4 KB transmit buffer, the scanner can ignore the transmission status and keep on reading barcodes until the buffer is full.

▶ When out of range, the scanner will respond with three short beeps, tone descending from high to low. You are advised to get back to range.

▶ When transmit buffer is full, the scanner will respond with three short beeps (low tone) as a warning. You are advised to get back to range.

Enable

0386

*Disable

0387
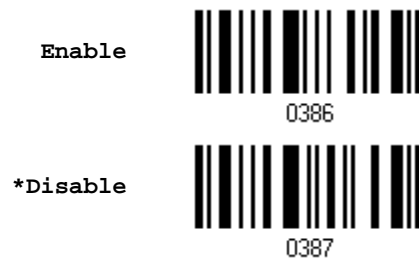
Note: The 4 KB transmit buffer on the scanner can hold as many as 256 scans based on EAN-13 barcodes. Data will be cleared out once the scanner is turned off or running out of battery power!

Update

1.2.2 MEMORY MODE

The scanner keeps 128 KB flash memory for memory mode operation. When the scanner is in memory mode, it means a WPAN connection is disabled.

Enable

0321

*Disable

0320

Warning: No WPAN 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 server.

*None

0322

250 ms

0323

500 ms

0324

1 sec

0325

2 sec

0326

3 sec

0327

5 sec

0328

Enter Setup

8 sec

0329

Send Data

The 128 KB flash memory on the scanner can store up to 8,192 scans based on EAN-13 barcodes. When it is used up, the scanner will respond with three short beeps (low tone) as a warning. You are advised to send data to the server immediately by having the scanner read the barcode below.

1.   Read the setup barcode to resume connection with host. (= disable Memory Mode)

2.   Read the "Send Data" barcode.

*Disable

0320

Send Data

9918

Clear Data & Confirm

Even though data has been sent back to the server, the flash memory is still occupied unless you erase the memory by having the scanner read 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

9916

Confirm

9917

Update

1.3 LED INDICATOR

The dual-color LED on top of the scanner is used to provide user feedback. For example, the LED becomes solid red and goes off quickly upon powering on or reading a barcode successfully. You may tell the difference by the beeps – you will hear a long beep when powering on the scanner, and a short beep (pitch programmable) when it reads a barcode successfully.

Scanner LED		Meaning
Red, flashing	---	Charging
Red, solid	---	Charging done
Red, on-off	---	▶ Power on, with one long beep (high tone, LED on for 1 second) ▶ Good Read, with one short beep (high tone) and beeper pitch programmable
---	Blue, flashing	First, flashing blue (On/Off ratio 1:1) for one minute indicates the scanner is waiting for connection, and goes off if no connection is established and then enters suspend mode (Refer to 1.1.2 Power-Saving & RF Auto-Shutdown.) It is ready for connection only while the LED is flashing blue — ▶ SPP Slave: waiting host to connect ▶ HID: trying to connect to host ▶ Using 3666: trying to connect to 3666
---	Blue, flashing	Flashing blue (On/Off ratio 1:6) indicates the scanner has established a WPAN connection successfully.
---	Blue, solid	Configuration Mode

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 short beep, high tone ▶ Programmable, default to 4 KHz	Good Read, with red LED on and off quickly
Six short beeps ▶ High-low tone repeats three times	▶ Enter Configuration Mode, with blue LED on ▶ Exit Configuration Mode
Two beeps, high-low tone	Setup barcode read successfully
One short beep, high tone	More setup barcode required
One long beep, low tone	Configuration error (Wrong barcode…)
Three short beeps, tone ascending from low to high	▶ WPAN connection established, with blue LED flashing (On/Off ratio 1:6) ▶ WPAN connection resumed, with blue LED flashing (On/Off ratio 1:6)
Three short beeps, tone ascending from high to low	▶ WPAN connection out of range ▶ WPAN connection suspended for RF Auto-Shutdown (via 3666 only)
Three short beeps, low tone	▶ No WPAN connection ▶ Transmit buffer full ▶ Memory Mode – Memory full

Update

1.4.1 GOOD READ BEEP

*Enable Buzzer

0318

Disable Buzzer

0319

1.4.2 FREQUENCY

8 kHz

0046

*4 kHz

0047

2 kHz

0048

1 kHz

0049

Enter Setup

1.5 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
Continuous mode	✓							
Test mode	✓							
Laser mode			✓		✓		✓	✓
Auto Off mode		✓					✓	✓
Auto Power Off mode		✓						✓
Alternate mode		✓				✓		
Repeat mode	✓							
Momentary mode			✓		✓			

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

Update

1.5.1 CONTINUOUS MODE

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 preset 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

```
0067
```

1.5.2 TEST MODE

The scanner is always scanning.

▶ Capable of decoding the same barcode repeatedly without removing it, for testing purpose.

Test Mode

```
0073
```

1.5.3 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

```
0072
```

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

Enter Setup

1.5.4 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

||||||| || ||| ||||
0066

1.5.5 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

|||||| || | || ||||
0068

1.5.6 ALTERNATE MODE

The scanner will start scanning once the trigger is pressed

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

Alternate Mode

||||||| | || |||
0069

|||||||| ||| ||| Update

1.5.7 REPEAT MODE

Like the Continuous Mode, the scanner is always scanning. But now the scan trigger acts like a "re-transmission" button when being pressed within one second after a successful reading, which will re-transmit the same data without actually reading the barcode again. This scan mode is most useful when the same barcode is to be read many times.

▶ Capable of re-transmitting barcode data if triggering within one second after a successful decoding.

▶ Such re-transmission can be activated as many times as needed, as long as the time interval between each triggering does not exceed one second.

Repeat Mode

0071

1.5.8 MOMENTARY MODE

The scanner will be scanning as long as the trigger is hold down.

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

Momentary Mode

0070

Enter Setup

1.6 SCANNING TIMEOUT

Specify the scanning time interval (1~255 sec.; 0= Disable) when the scan mode is set to any of the following –

▸ Laser mode
▸ Auto Off mode
▸ Auto Power Off mode

Scanner Time-out
after 0~255 sec.
(*10)

1) Read the barcode above to specify the time interval before the scan engine times out.

2) Read the "Decimal Value" barcode on page 165. For example, read "1" and "5" for the scanner to automatically shut down after being idle for 15 seconds.

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

Update

1.7 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 –

▶ Continuous mode

▶ Auto Power Off mode

▶ Alternate mode

▶ Momentary mode

100 ms ‖‖‖‖‖‖‖‖‖‖
0336

200 ms ‖‖‖‖‖‖‖‖‖‖
0337

*400 ms ‖‖‖‖‖‖‖‖‖‖
0338

800 ms ‖‖‖‖‖‖‖‖‖‖
0339

1 sec ‖‖‖‖‖‖‖‖‖‖
0340

2 sec ‖‖‖‖‖‖‖‖‖‖
0341

3 sec ‖‖‖‖‖‖‖‖‖‖
0342

5 sec ‖‖‖‖‖‖‖‖‖‖
0343

‖‖‖‖‖‖‖‖‖‖‖‖ Enter Setup

1.8 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 you select, the higher the reading security is, and thus, the slower the reading speed becomes. You will have to compromise between reading security and decoding speed.

*No Redundancy

0201

One Time

0202

Two Times

0203

Three Times

0204

Update
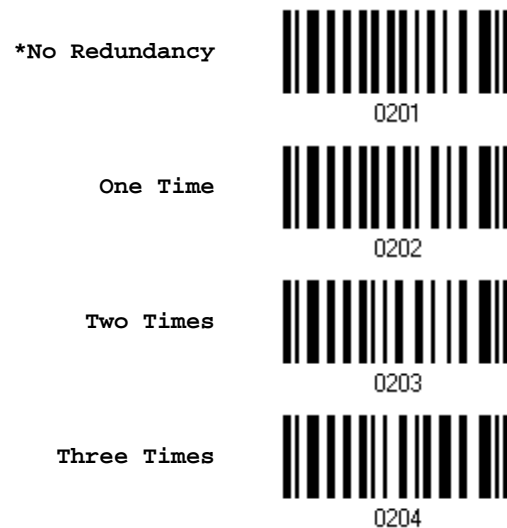
1.9 NEGATIVE BARCODES

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. You can configure the scanner to be able to read negative barcodes.

Enable

||| barcode 0199

*Disable

||| barcode 0200
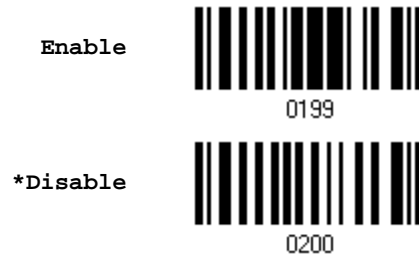
1.10 ADDON SECURITY FOR UPC/EAN BARCODES

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 you select, the higher the reading security is, and thus, the slower the reading speed becomes. You will have to compromise between reading security and decoding speed.

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

Addon Security Level

(*0~30)

||| barcode 0344

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 165. 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.

||| barcode

Enter Setup

SELECTING OUTPUT INTERFACE

In order to establish a proper connection between your computer and the scanner, we suggest that you follow these instructions –

1) Install the battery and the scanner will turn on automatically.

2) Have the scanner read the "Enter Setup" barcode to enter the configuration mode.

3) Have the scanner read the associated barcodes to activate the desired interface.

 See the following sections for output interfaces supported.

 ▸ If you are connecting the scanner with use of 3666 to the USB port of the host computer via USB HID cable (part # 307), refer to <u>2.3 Keyboard Wedge via 3666</u> for related settings.

 ▸ If you are connecting the scanner with use of 3666 to the IBM POS 4683/4694 via the converter cable (part # 346), refer to <u>2.3 Keyboard Wedge via 3666</u> for related settings.

4) Have the scanner read the barcodes for related settings.

5) Have the scanner read the "Update" barcode to exit the configuration mode.

6) Turn on your computer or laptop and establish a WPAN connection with the scanner.

 Refer to Chapter 3 – Setting up a WPAN Connection.

Note: By default, the output interface is set to "Keyboard Wedge" for 1166/1266 or 3666.

IN THIS CHAPTER

Update

2.1 BT HID

For BT HID, refer to Chapter 3 – Setting up a WPAN Connection for related connection settings. Run any text editor on your computer, and the scanned data will be transmitted to the computer.

HID Settings	Defaults
Keyboard Type	PCAT (US)
Alphabets Layout	Normal
Digits Layout	Normal
Capital Lock Type	Normal
Capital Lock State	Off
Alphabets Transmission	Case-sensitive
Digits Transmission	Alphanumeric keypad
Alternate Composing	No

2.1.1 ACTIVATE BT HID & SELECT KEYBOARD TYPE

Activate BT HID & Select Keyboard Type…

0000

1) Read the barcode above to activate BT HID and select a keyboard type.

2) Read the "Decimal Value" barcode on page 165. 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.

BT HID

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

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

Enter Setup

2.1.2 RESET CONNECTION

For BT 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 have it read the "Reset Connection" barcode so that the current connection record will be cleared. Then, the scanner will restart itself automatically. Go through the whole process in 3.2.3 Connect to Dongle to establish a new connection.

Reset Connection

9972

Note: The "Restore System Defaults" barcode will have the current connection record cleared as well.

Update

2.1.3 KEYBOARD SETTINGS

▶ Alphabets Layout
▶ Digits Layout
▶ Capital Lock Type
▶ Capital Lock Setting
▶ Alphabets Transmission
▶ Digits Transmission

Note: BT HID does not support these functions on PDAs – (1) Capital Lock Setting: Auto Detection (2) Digits Transmission: Numeric Key

Alphabets Layout

By default, the alphabets 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

0312

AZERTY

0313

QWERTZ

0314

Note: This setting only works when the keyboard type selected is US keyboard, such as PCAT (US). The Alphabets Layout and Digits 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 "Digits 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 "Digits 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 "Digits Layout" setting for the upper row is for special characters.

Update

Digits Layout

Select a proper layout that matches the alphabets 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

0007

Upper Row

0008

Lower Row

0009

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

Enter Setup

Capital Lock Type & Setting

In order to send the alphabets 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 alphabets 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

0010

Shift Lock

0011

Capital Lock

0012

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 Alphabets 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 Alphabets Transmission). ▶ Refer to the Capital Lock Type above.
Auto Detection	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 Alphabets Transmission). ▶ This setting is not supported on PDAs.

Auto Detect

0002

Capital Lock ON

0003

41

Update
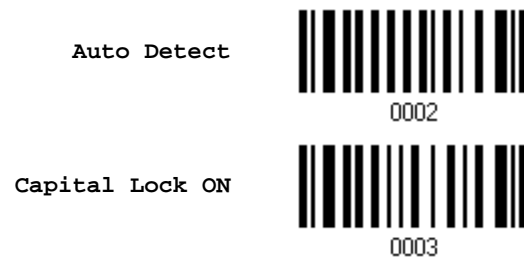
*Capital Lock OFF

```
0004
```

Enter Setup

Alphabets Transmission

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

Ignore Case

0005

*Case-sensitive

0006

1. Alphabets Transmission for Keyboard Wedge & Bluetooth HID

Update

Digits 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

‖‖‖‖‖‖‖‖‖
0013

*Alphanumeric Key

‖‖‖‖‖‖‖‖‖
0014
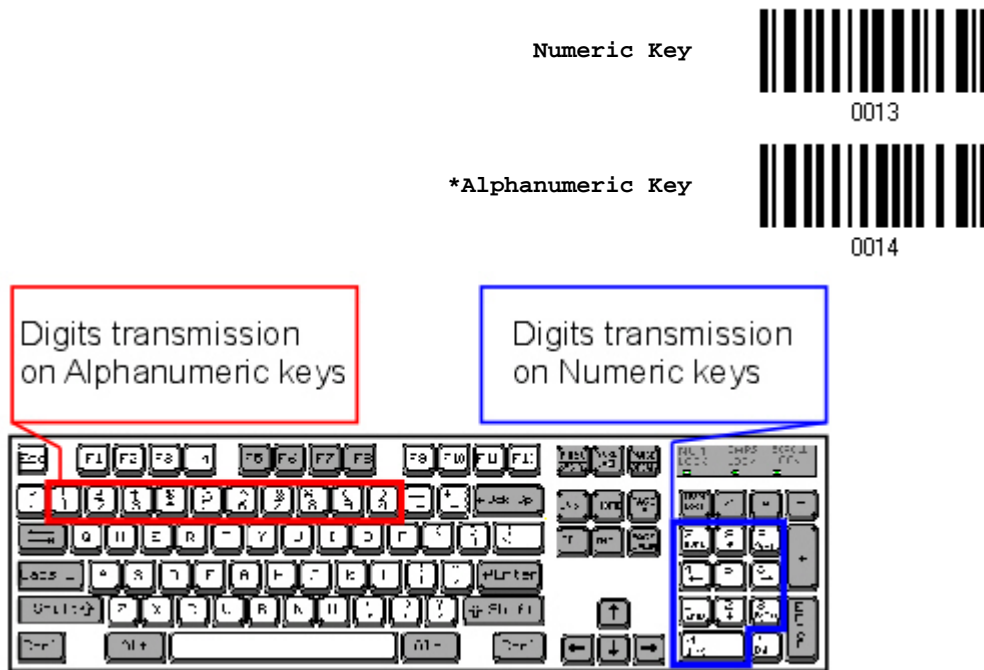
Note: If you select "Numeric Keypad", the Num Lock status of the physical keyboard should be "ON". This setting is not supported on PDAs.

‖‖‖‖‖‖‖‖‖‖‖

Enter Setup

2.1.4 HID CHARACTER TRANSMIT MODE

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

*Batch Processing

‖‖‖‖‖‖‖‖‖‖‖
0024

By Character

‖‖‖‖‖‖‖‖‖‖‖
0025

45

‖‖‖‖‖‖‖‖‖‖ Update

2.2 BT SPP SLAVE

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

2.2.1 ACTIVATE BT SPP SLAVE MODE

This is SPP Slave Mode.

Activate BT SPP, Slave Mode

‖‖‖‖‖‖‖‖‖‖‖‖‖
0453

‖‖‖‖‖‖‖‖‖‖‖‖‖
Enter Setup

2.3 KEYBOARD WEDGE VIA 3666

The Y cable allows you to connect the scanner via 3666 to the keyboard input port of PC and you may join the keyboard as well. The scanned data will be transmitted to the host keyboard port as if it is manually entered via the keyboard. For example, run a text editor on your computer to receive the data.

Keyboard Wedge Settings	Defaults
Keyboard Type	PCAT (US)
Alphabets Layout	Normal
Digits Layout	Normal
Capital Lock Type	Normal
Capital Lock State	Off
Alphabets Transmission	Case-sensitive
Digits Transmission	Alphanumeric keypad
Alternate Composing	No
Inter-Character Delay	0 (ms)
Laptop Support	Disable

2.3.1 ACTIVATE KEYBOARD WEDGE & SELECT KEYBOARD TYPE

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

Activate 3666 Keyboard Wedge & Select Keyboard Type…

0000

1) Read this barcode above to activate Keyboard Wedge and select a keyboard type.

2) Read the "Decimal Value" barcode on page 165. 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.

Update

Keyboard Wedge via 3666

By default, the keyboard type is set to PCAT (US). The following keyboard types are supported when using 3666 with the keyboard wedge cable provided —

No.	Keyboard Type	No.	Keyboard Type
1	PCAT (US)	15	PS55 001-81
2	PCAT (French)	16	PS55 001-2
3	PCAT (German)	17	PS55 001-82
4	PCAT (Italian)	18	PS55 001-3
5	PCAT (Swedish)	19	PS55 001-8A
6	PCAT (Norwegian)	20	PS55 002-1, 003-1
7	PCAT (UK)	21	PS55 002-81, 003-81
8	PCAT (Belgium)	22	PS55 002-2, 003-2
9	PCAT (Spanish)	23	PS55 002-82, 003-82
10	PCAT (Portuguese)	24	PS55 002-3, 003-3
11	PS55 A01-1	25	PS55 002-8A, 003-8A
12	PS55 A01-2 (Japanese)	26	IBM 3477 Type 4 (Japanese)
13	PS55 A01-3	27	PS2-30
14	PS55 001-1	28	IBM 34XX/319X, Memorex Telex 122 Keys

Enter Setup

2.3.2 KEYBOARD SETTINGS

Alphabets Layout

By default, the alphabets 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

0312

AZERTY

0313

QWERTZ

0314

Note: This setting only works when the keyboard type selected is US keyboard, such as PCAT (US). The Alphabets Layout and Digits 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 "Digits Layout" setting for the upper row is for special characters.
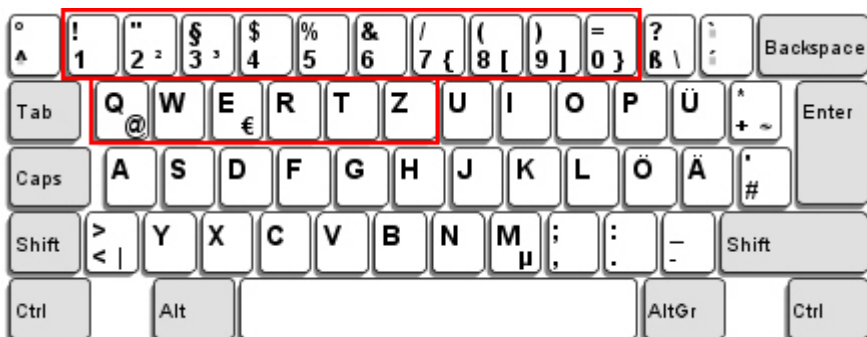
French Keyboard Style – AZERTY

French layout; see below for French Keyboard Style.

▶ Select "Upper Row" for the "Digits 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 "Digits Layout" setting for the upper row is for special characters.

Enter Setup

Digits Layout

Select a proper layout that matches the alphabets 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

‖‖‖‖‖‖‖‖‖‖
0007

Upper Row

‖‖‖‖‖‖‖‖‖‖
0008

Lower Row

‖‖‖‖‖‖‖‖‖‖
0009

Note: This setting is meant to be used with the Alphabets Layout; and perhaps with the Character Substitution setting when support to certain keyboard types (languages) is unavailable but required.

‖‖‖‖‖‖‖‖‖‖   Update

Capital Lock Type & Setting

In order to send the alphabets 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 alphabets 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

0010

Shift Lock

0011

Capital Lock

0012

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 Alphabets 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 Alphabets Transmission). ▶ Refer to the Capital Lock Type above.
Auto Detection	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 Alphabets Transmission).

Auto Detect

0002

Capital Lock ON

0003

Enter Setup

*Capital Lock OFF

||||||||||||||||||||
0004

|||||||||||||||||||| Update
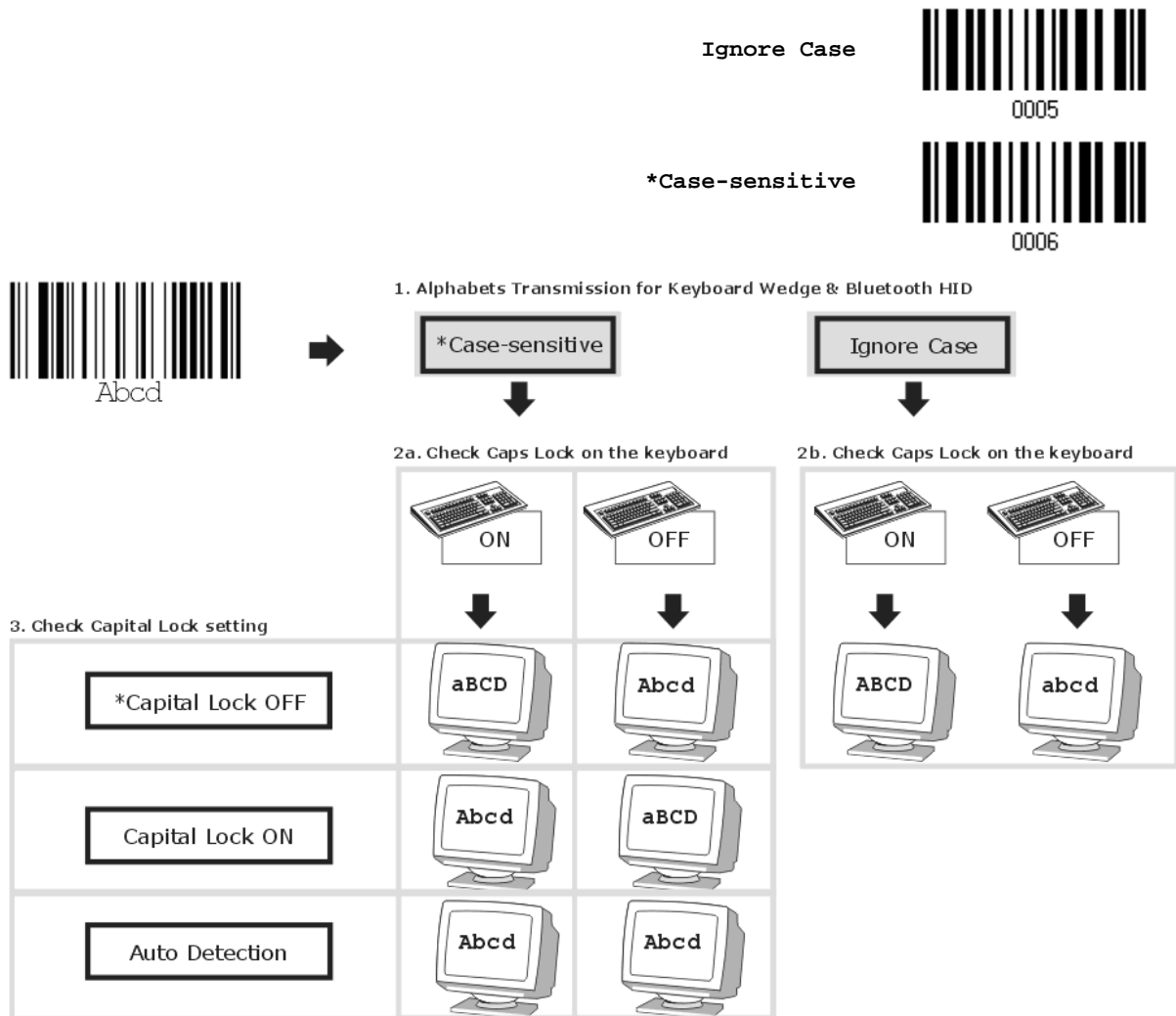
Alphabets Transmission

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

Ignore Case

0005

*Case-sensitive

0006

Enter Setup

Digits 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

‖‖‖‖‖‖‖‖‖‖‖
0013

*Alphanumeric Key

‖‖‖‖‖‖‖‖‖‖‖
0014

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

‖‖‖‖‖‖‖‖‖‖‖ Update

ALT Composing

By default, Alternate key composing is disabled. Select [Yes] to allow emulating Alternate key code of a specific keyboard character. For example, [Alt] + [065] will be sent to host for the character "A" regardless the keyboard type you are using.

*No

0334

Yes

0335

Laptop Support

By default, laptop support is disabled. It is suggested to enable this feature if you connect the wedge cable to a laptop without an external keyboard being inter-connected.

*Disable

0388

Enable

0389

Enter Setup

2.3.3 INTER-CHARACTER DELAY

By default, the inter-character delay is set to zero. Specify a value, ranging from 0 to 255 in units of millisecond, 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… (*0~255)

0015

1) Read the barcode above to specify the inter-character delay.

2) Read the "Decimal Value" barcode on page 165 for the desired inter-character delay (millisecond).

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

Update

2.4 RS-232 VIA 3666

Use the RS-232 cable to connect the scanner via 3666 to the serial port of PC, and connect the power supply cord. The associated RS-232 parameters must match those configured on the computer. You may run HyperTerminal.exe on your computer, and the scanned data will be transmitted to the computer.

RS-232 Settings	Defaults
Baud Rate, Data Bit, Parity, Stop Bit	9600 bps, 8 bits, No parity
Flow Control	None
Inter-Character Delay	0 (ms)

2.4.1 ACTIVATE RS-232 INTERFACE

**Activate 3666
RS-232 Interface**

0001

2.4.2 BAUD RATE

115200 bps

0023

38400 bps

0016

19200 bps

0017

*9600 bps

0018

4800 bps

0019

2400 bps

0020

Enter Setup

1200 bps

‖‖‖‖‖‖‖‖‖‖‖
0021

600 bps

‖‖‖‖‖‖‖‖‖‖‖
0022

Note: The option "600 bps" is available for 1200 only.

2.4.3 DATA BITS

*8 bits

‖‖‖‖‖‖‖‖‖‖‖
0034

7 bits

‖‖‖‖‖‖‖‖‖‖‖
0035

2.4.4 PARITY

*No parity

‖‖‖‖‖‖‖‖‖‖‖
0028

Even

‖‖‖‖‖‖‖‖‖‖‖
0029

Odd

‖‖‖‖‖‖‖‖‖‖‖
0030

‖‖‖‖‖‖‖‖‖‖‖ Update
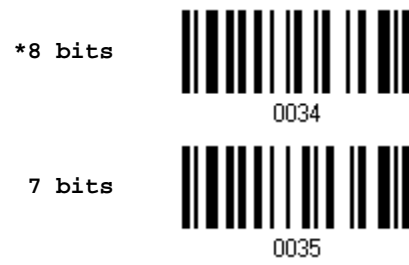
2.4.5 FLOW CONTROL

By default, there is no flow control in use. Select the flow control (handshake) method.

Options	Description
No	No flow control
Scanner Ready	The scanner will activate the RTS signal upon powering on. After each good read, the scanner will then wait for the CTS signal to become active. Data will not be sent until the CTS signal becomes active.
Data Ready	The RTS signal will be activated after each good read. The scanner will then wait for the CTS signal to become active. Data will not be sent until the CTS signal becomes active.
Inverted Data Ready	It works the same as the Data Ready flow control except that the RTS signal level is inverted.

*None

0042

Scanner Ready

0043

Data Ready

0044

Invert Data Ready

0045
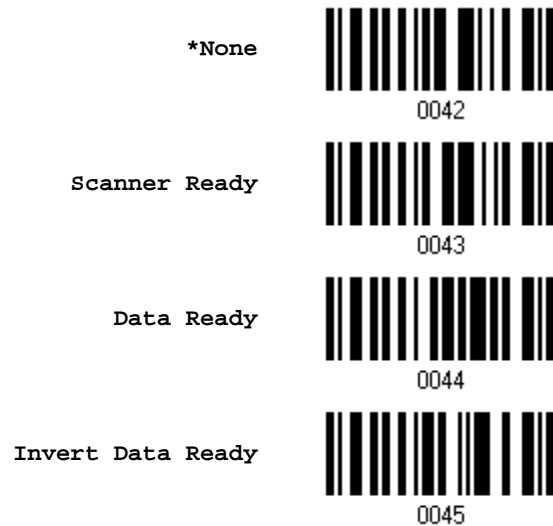
2.4.6 INTER-CHARACTER DELAY

By default, the inter-character delay is zero. Specify a value, ranging from 0 to 255 in units of millisecond, to match the computer response time. 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… (*0~255)

0015

1) Read the barcode above to specify the inter-character delay.

2) Read the "<u>Decimal Value</u>" barcode on page 165 for the desired inter-character delay (millisecond).

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

Enter Setup

Chapter 3
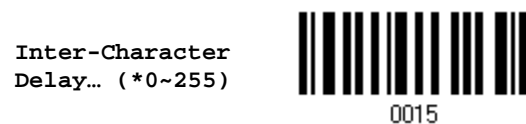
SETTING UP A WPAN CONNECTION

The scanner can be configured to send data to a host computer wirelessly via the 3666 base, or to a notebook computer or PDA with *Bluetooth*® wireless technology. Upon powering up, the scanner will be ready for establishing a WPAN connection.

To establish a connection via 3666 after reading "Set Connection" and "Serial No." labels ...

Interface Option	Reference
Keyboard Wedge	2.3 Keyboard Wedge via 3666
RS-232	2.4 RS-232 via 3666
USB HID (307)	2.3 Keyboard Wedge via 3666
IBM 4683/4694 (346)	2.3 Keyboard Wedge via 3666

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

Interface Option	Reference
BT HID	2.1 BT HID
BT SPP	2.2 BT SPP Slave

Update

IN THIS CHAPTER

3.1 CONNECTING VIA 3666

By default, the interface of 3666 is set to "Keyboard Wedge". Use the interface cable to connect the scanner via 3666 to PC. You can have up to seven scanners connected to one computer at the same time.

3.1.1 CONNECT TO 3666

You can connect any scanner to 3666 by having the scanner read the two labels at the back of 3666. The scanner will respond with one beep upon reading the first label, and two beeps (high-low tone) upon reading the second label.

▶ "Set Connection" label
▶ "Serial Number" label

After reading these labels, the scanner will stay active for a preset period of time (1 minute) trying to connect to the 3666 base while its LED is flashing blue (On/Off ratio 1:1). Once connected, the scanner will respond with three beeps (tone ascending from low to high), and the LED becomes flashing blue (On/Off ratio 1:6). When getting 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 3666 is illegible, try this one —

Set Connection

88686471166254

Note: The 3666 settings will overwrite the interface-related settings on the scanners that are currently connected to 3666.

Enter Setup

3.1.2 CHANGE INTERFACE

If you want to change the interface cable of 3666, use one of the scanners to configure the interface-related settings and it will pass the new settings to 3666, which will then initialize and pass the settings to any other connected scanners.

1) Have the scanner read the "Set Connection" and "Serial Number" labels at the back of 3666.

2) Within one minute, connect the interface cable between 3666 and your computer.

3) The scanners will connect to your computer via 3666.

4) Have one scanner read the "Enter Setup" barcode to enter the configuration mode.

5) Have the scanner read the desired interface barcode and configure its related settings –

   ‣ "Activate Keyboard Wedge & Select Keyboard Type"

   ‣ "Activate RS-232"

6) Have the scanner read the "Update" barcode to exit the configuration mode.

7) After the scanner resumes connection with 3666, it will pass the interface-related settings to 3666.

8) Upon receipt of the new settings, 3666 will initialize itself.

9) Updated with new settings, 3666 will pass the settings to other connected scanners.

‖‖‖‖‖‖‖‖‖‖‖‖‖ Update
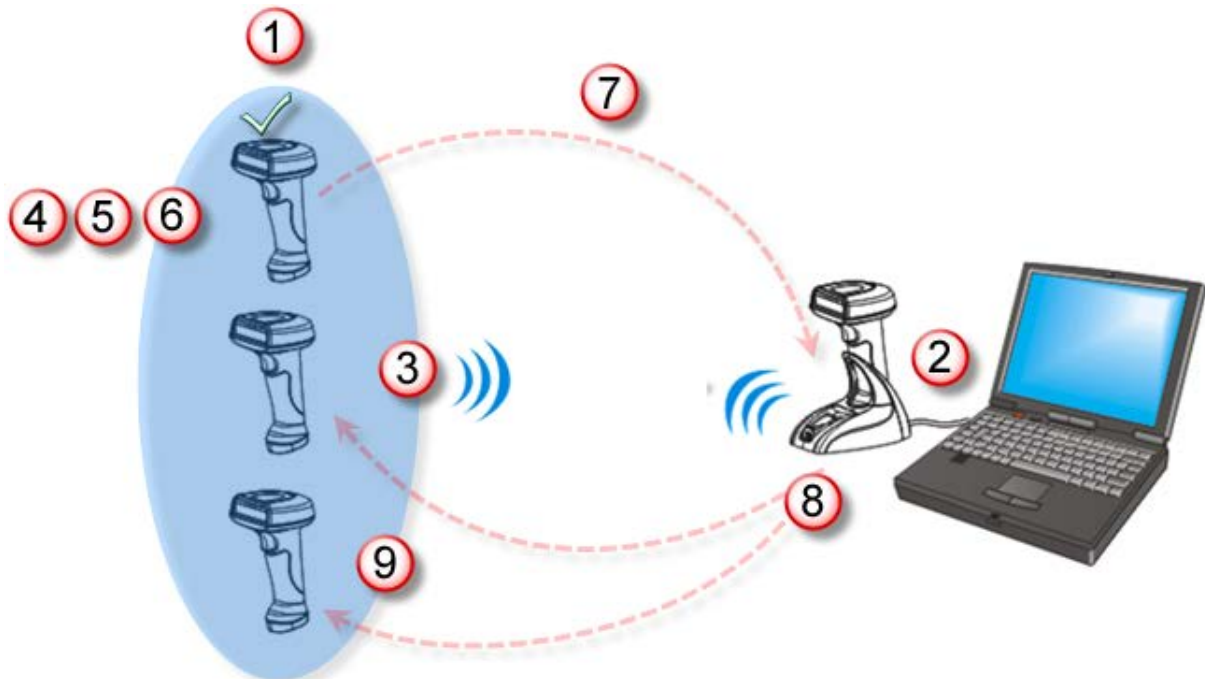
3.1.3 CONFIGURE RELATED SETTINGS

Sniff Mode (Power-saving)

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

*Enable

0458

Disable

0459

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) Have the scanner read the "Enter Setup" barcode to enter the configuration mode.

2) Have the scanner read the desired interface barcode –

   ‣ "Activate BT HID & Select Keyboard Type"

   ‣ "Activate BT SPP Slave Mode"

3) Have the scanner read the barcodes related to WPAN settings, such as Device Name Broadcasting, Authentication & PIN Code, etc.

4) Have the scanner read the "Update" barcode to exit the configuration mode.

5) The scanner will stay active for a preset period of time (1 minute) waiting for a connection request from the host (SPP Slave Mode) or trying to connect to the host (HID). Its CPU is running at full speed, and the LED is flashing blue (On/Off ratio 1:1).

   Once connected, the LED is flashing blue (On/Off ratio 1:6). When getting 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

0458

Disable

0459

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, you can 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 will have to enable device name broadcasting first.

*Enable

0450

Disable

0451

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 6 characters for a PIN code and provides two options for authentication:

Enable Authentication with Preset PIN

Have the scanner 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

```
0448
```

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

    By default, the PIN code is set to "0000". Maximum 6 characters are allowed.
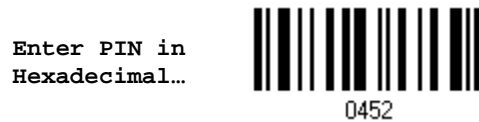
Enter PIN in Hexadecimal…

```
0452
```

3. Read the "Hexadecimal Value" barcode on page 166 for the desired digits or character string.

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

No Authentication

By default, it is set to "No PIN", which means no authentication is required.
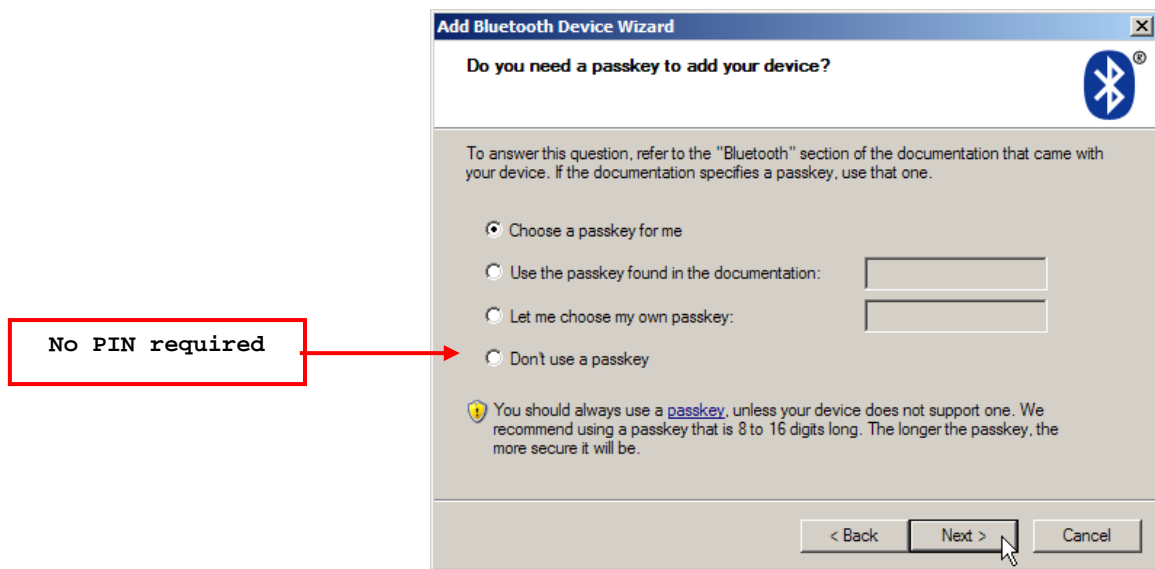
*No PIN

```
0449
```

```
Update
```

Note: When using BT HID, some device driver may not support pre-defined PIN code for authentication. In this case, we suggest applying no authentication instead.

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 Service Pack 3 (SP3) or Windows Vista® Service Pack 1 (SP1), 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.

BT HID Procedure

Have the scanner read the interface barcode for BT HID, and select a keyboard type to complete this setting. The procedure is the same as for BT SPP. Refer to steps 1~11 below.

BT 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. « 8 14:14 PM

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

3. Click [Add] to search devices nearby.

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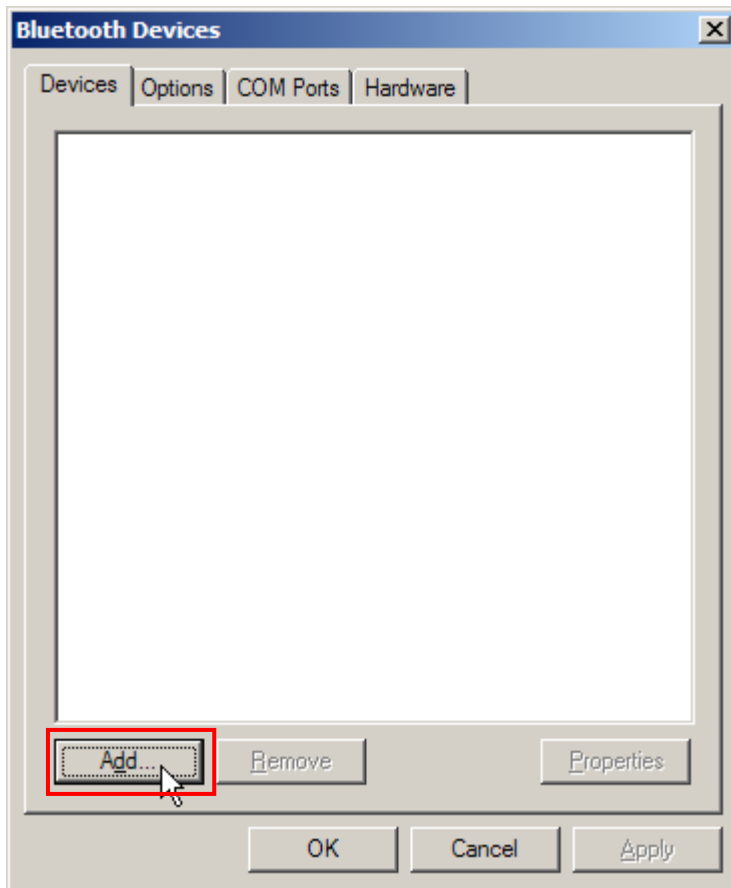
4. Turn on the scanner with correct WPAN settings, such as select BT SPP or BT HID, broadcasting enabled, authentication enabled, and PIN code specified, etc. Select the check box of [My device is set up and ready to be found] on your computer.

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
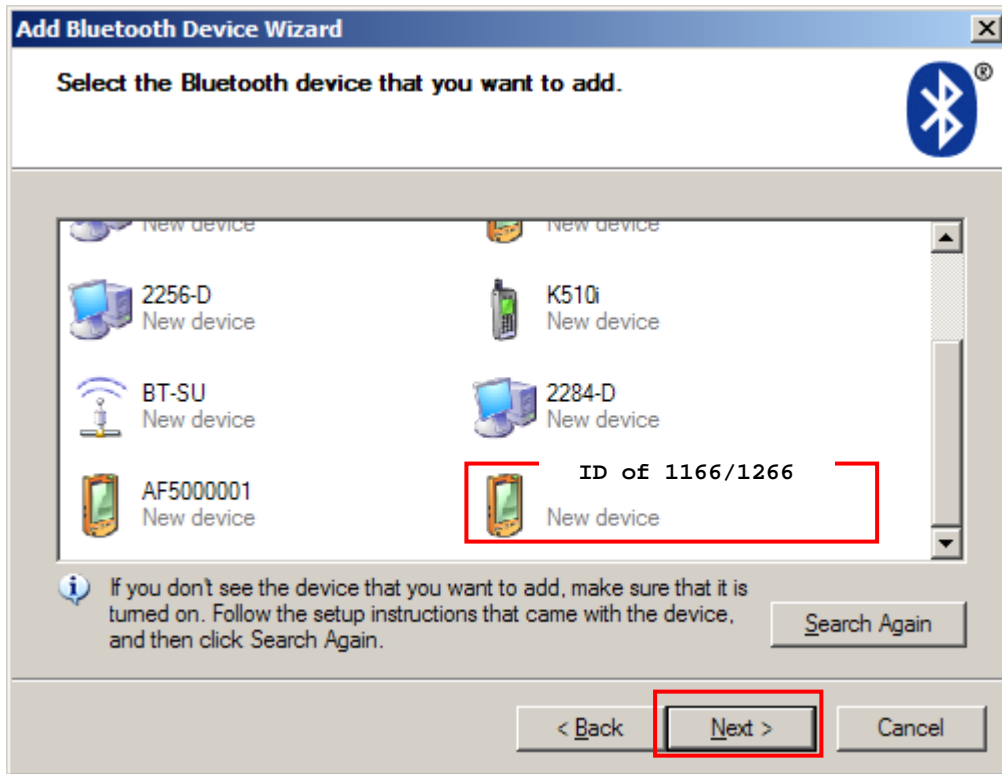
7.   Click [Next].

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

10.   Click [Finish].

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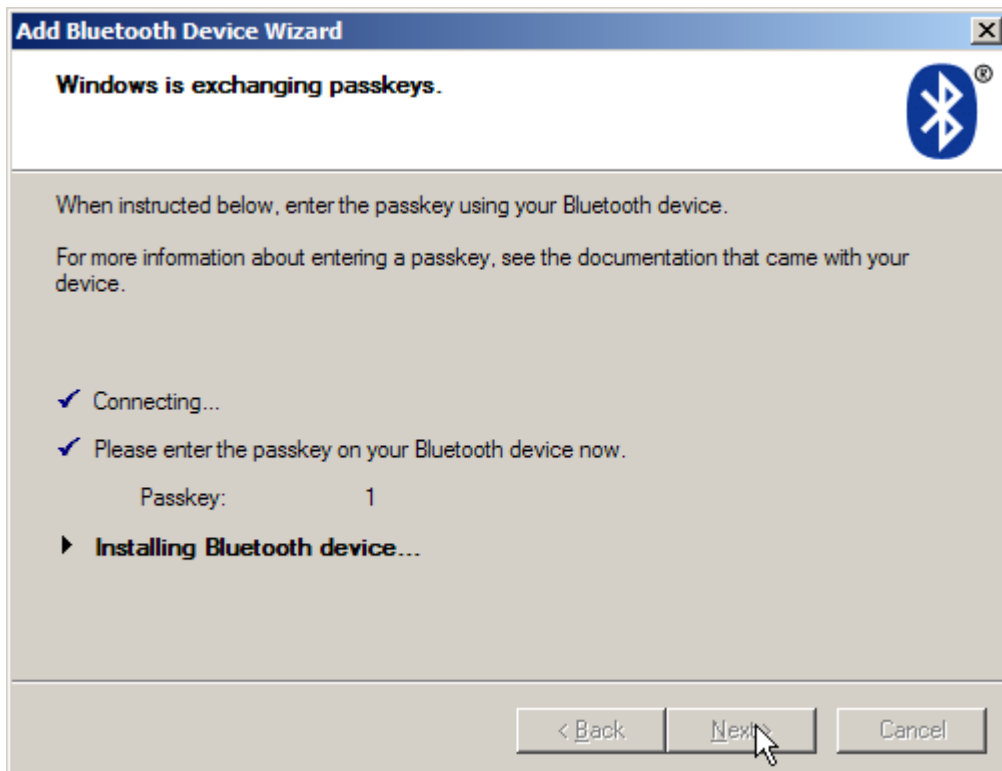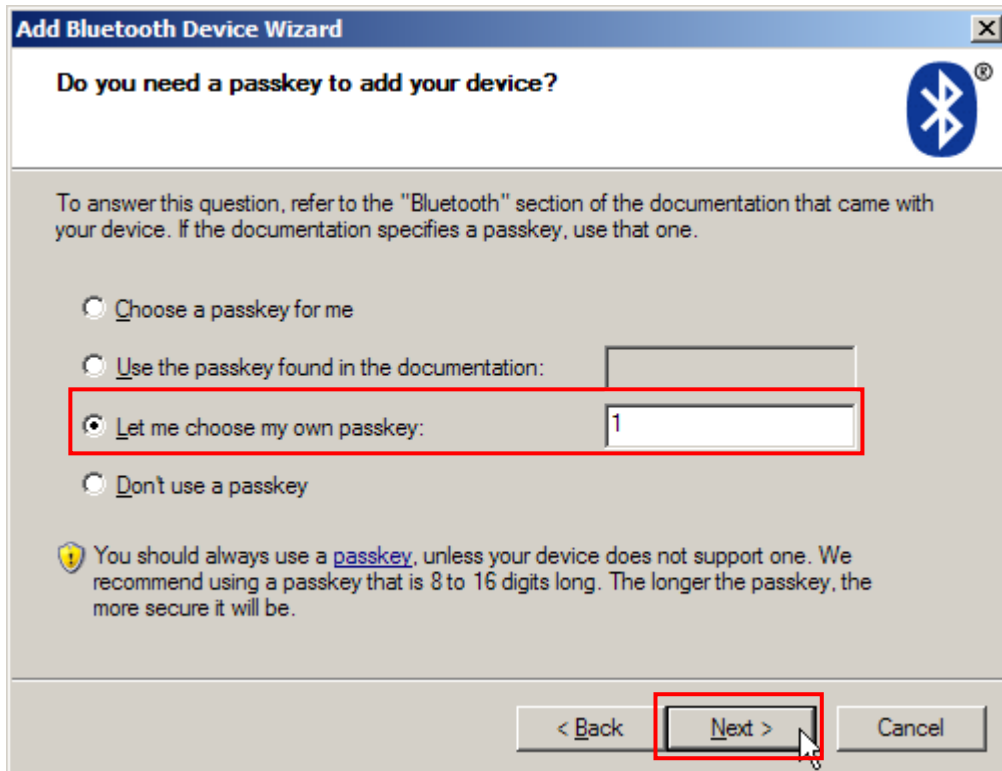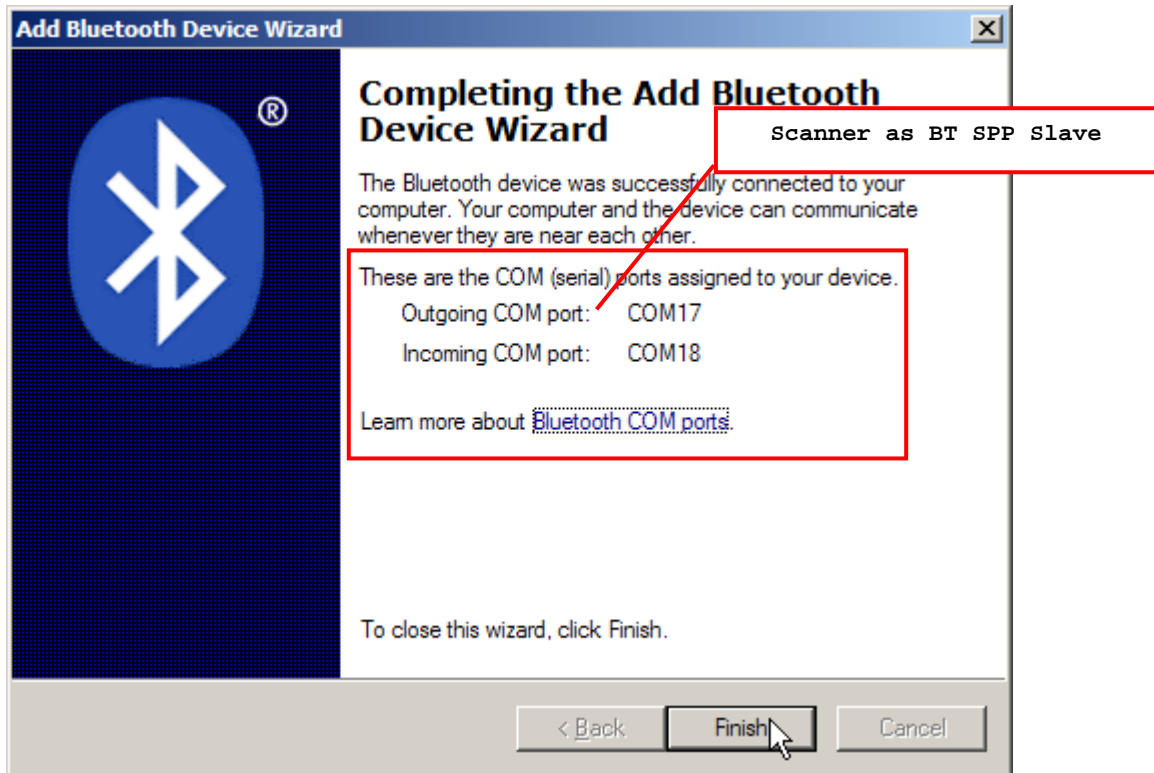
11. Now the target scanner will be listed as shown below.

You can have up to seven scanners connected to one computer at the same time.
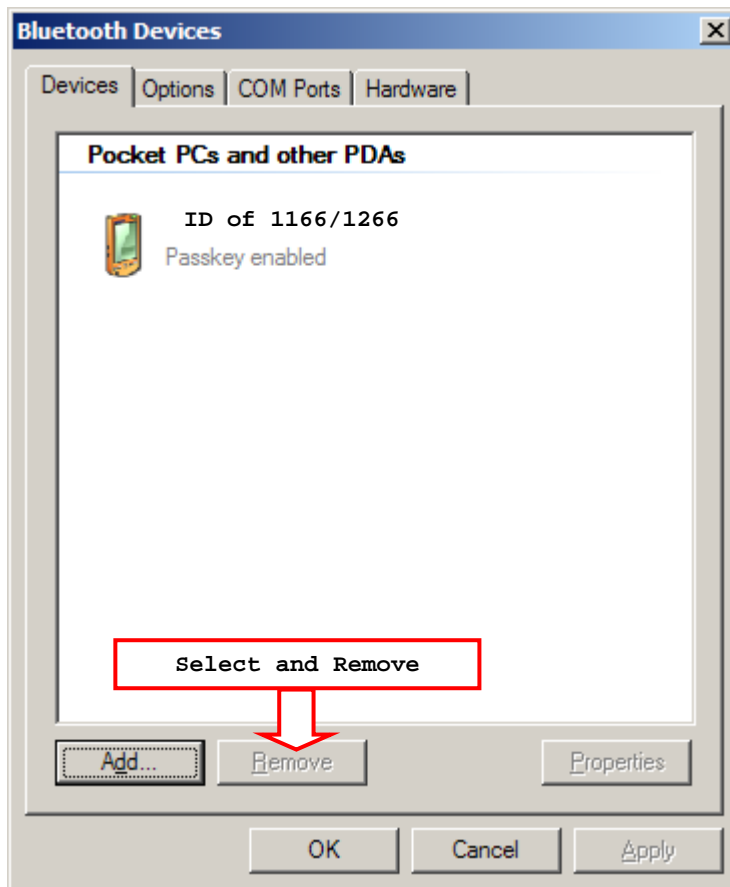
Note: When any changes are made to authentication and PIN code on the scanner side, or you want to change to use BT HID, it is suggested that you remove the scanner from the paired device list (called unpairing) and go through the whole process to re-establish the connection.

Enter Setup

12. Run the desired application on your computer, such as HyperTerminal.exe if using BT SPP or Notepad.exe if using BT 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 BT SPP.

Enter Setup
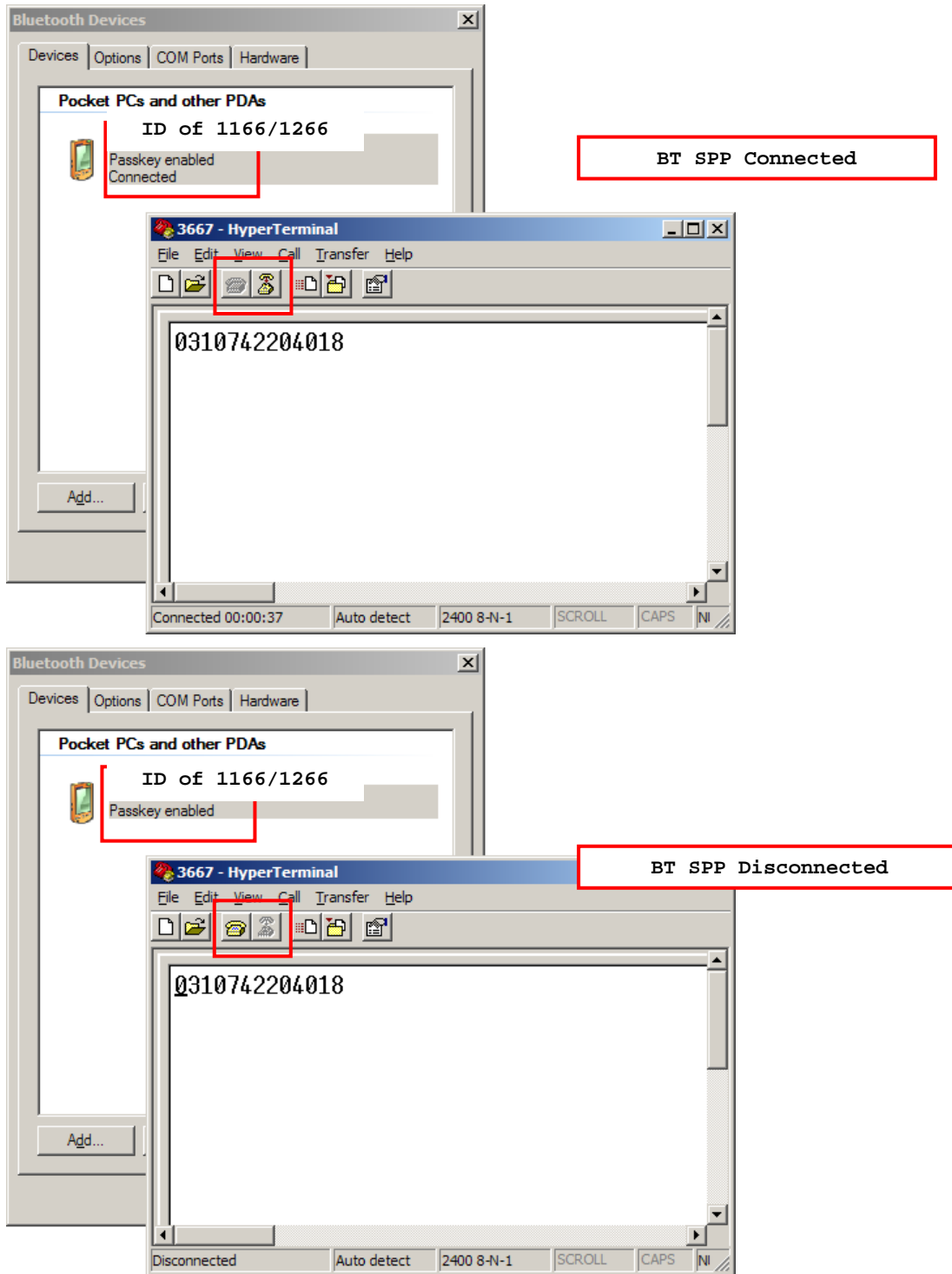
CHANGING SYMBOLOGY SETTINGS

In this chapter, a brief on the symbology settings is provided for your reference.

IN THIS CHAPTER

Update

4.1 CODABAR

*Enable

Disable

4.1.1 START/STOP CHARACTERS SELECTION

Select one of the four different start/stop character pairs —

* abcd/abcd

abcd/tn*e

ABCD/ABCD

ABCD/TN*E

Enter Setup

4.1.2 START/STOP TRANSMISSION

Decide whether to include the start/stop characters in the data being transmitted.

Transmit Start/Stop Characters

0155

*Do Not Transmit

0156
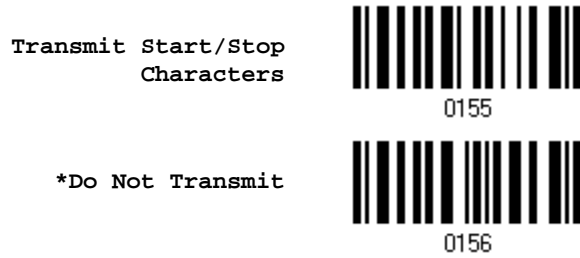
4.1.3 CLSI CONVERSION

When enabled, the CLSI editing strips the start/stop characters and inserts a space after the first, fifth, and tenth characters of a 14-character Codabar barcode.

Apply CLSI Editing

0157

*Do Not Apply

0158
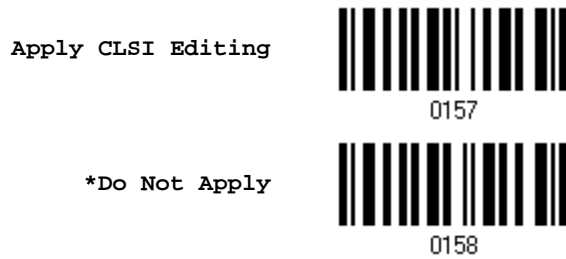
Note: The 14-character barcode length does not include start/stop characters.

Update

4.2 CODE 25 – INDUSTRIAL 25

*Enable

‖‖‖‖‖‖‖‖‖‖‖‖‖‖
0080

Disable

‖‖‖‖‖‖‖‖‖‖‖‖‖‖
0081

4.2.1 SELECT START/STOP PATTERN

This decides the readability of all 2 of 5 symbology variants. For example, flight tickets actually use an Industrial 2 of 5 barcode but with Interleaved 2 of 5 start/stop pattern. In order to read this barcode, the start/stop pattern selection parameter of Industrial 2 of 5 should set to "Interleaved 25".

***Industrial 25
Start/Stop Pattern**

‖‖‖‖‖‖‖‖‖‖‖‖‖‖
0130

**Interleaved 25
Start/Stop Pattern**

‖‖‖‖‖‖‖‖‖‖‖‖‖‖
0131

**Matrix 25
Start/Stop Pattern**

‖‖‖‖‖‖‖‖‖‖‖‖‖‖
0132

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Enter Setup

4.2.2 VERIFY CHECK DIGIT

Decide whether to verify the check digit. If incorrect, the barcode will not be accepted.

Verify Industrial 25 Check Digit

*Do Not Verify

4.2.3 TRANSMIT CHECK DIGIT

Decide whether to include the check digit in the data being transmitted.

*Transmit Industrial 25 Check Digit

Do Not Transmit

Update

4.2.4 CODE LENGTH QUALIFICATION

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length.

▸ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

▸ If "Fixed Length" is selected, up to 2 fixed lengths can be specified.

1) Read the barcode to enable either Max. /Min. Length qualification or Fixed Length(s) qualification.

*Enable Max./Min. Length (0~127)…

‖‖‖‖‖‖‖‖‖‖
0208

Enable Fixed Length(s)…

‖‖‖‖‖‖‖‖‖‖
0209

2) Read the barcode for Max. Length or Fixed Length 1, and follow steps 3~4.

Repeat steps 2~4 for Min. Length or Fixed Length 2.

Max.Length(*127)or Fixed Length 1

‖‖‖‖‖‖‖‖‖‖
0210

Min. Length (*0) or Fixed Length 2

‖‖‖‖‖‖‖‖‖‖
0211

3) Read the "Decimal Value" barcode on page 165 for the desired length.

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

‖‖‖‖‖‖‖‖‖‖‖‖‖

Enter Setup

4.3 CODE 25 – INTERLEAVED 25

*Enable

0082

Disable

0083

4.3.1 SELECT START/STOP PATTERN

This decides the readability of all 2 of 5 symbology variants. For example, flight tickets actually use an Industrial 2 of 5 barcode but with Interleaved 2 of 5 start/stop pattern. In order to read this barcode, the start/stop pattern selection parameter of Industrial 2 of 5 should set to "Interleaved 25".

Industrial 25 Start/Stop Pattern

0133

*Interleaved 25 Start/Stop Pattern

0134

Matrix 25 Start/Stop Pattern

0135

Update

4.3.2 VERIFY CHECK DIGIT

Decide whether to verify the check digit. If incorrect, the barcode will not be accepted.

Verify Interleaved 25 Check Digit

‖‖‖‖‖‖‖‖‖‖‖‖
0143

*Do Not Verify

‖‖‖‖‖‖‖‖‖‖‖‖
0144

4.3.3 TRANSMIT CHECK DIGIT

Decide whether to include the check digit in the data being transmitted.

*Transmit Interleaved 25 Check Digit

‖‖‖‖‖‖‖‖‖‖‖‖
0145

Do Not Transmit

‖‖‖‖‖‖‖‖‖‖‖‖
0146

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Enter Setup

4.3.4 CODE LENGTH QUALIFICATION

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length.

▶ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

▶ If "Fixed Length" is selected, up to 2 fixed lengths can be specified.

1) Read the barcode to enable either Max. /Min. Length qualification or Fixed Length(s) qualification.

<div align="right">

***Enable Max./Min.
Length (0~127)…**

0212

**Enable Fixed
Length(s)…**

0213

</div>

2) Read the barcode for Max. Length or Fixed Length 1, and follow steps 3~4.

   Repeat steps 2~4 for Min. Length or Fixed Length 2.

<div align="right">

**Max. Length (*127) or
Fixed Length 1**

0214

**Min. Length (*0) or
Fixed Length 2**

0215

</div>

3) Read the "Decimal Value" barcode on page 165 for the desired length.

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

Update

4.3.5 QUIET ZONE

Quiet Zone which enables the scanner to read barcode information correctly is the clear space before the start character and after the stop character of a particular barcode. Please read the barcode below to increase the quiet zones, which are set to normal by default.

High

0345

*Normal

0346

4.4 CODE 25 – MATRIX 25
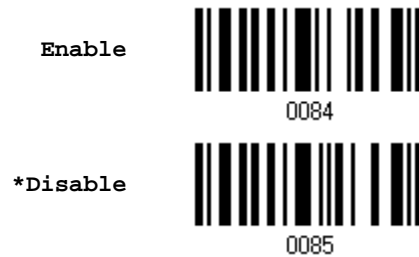
Enable

0084

*Disable

0085

4.4.1 SELECT START/STOP PATTERN

This decides the readability of all 2 of 5 symbology variants. For example, flight tickets actually use an Industrial 2 of 5 barcode but with Interleaved 2 of 5 start/stop pattern. In order to read this barcode, the start/stop pattern selection parameter of Industrial 2 of 5 should set to "Interleaved 25".

Industrial 25
Start/Stop Pattern

0136

Interleaved 25
Start/Stop Pattern

0137

*Matrix 25
Start/Stop Pattern

0138

Enter Setup
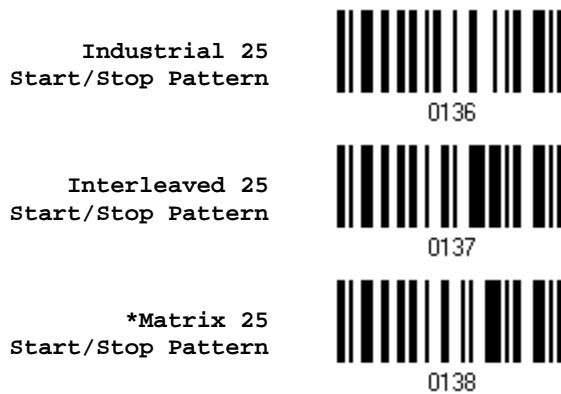
4.4.2 VERIFY CHECK DIGIT

Decide whether to verify the check digit. If incorrect, the barcode will not be accepted.

Verify Matrix 25 Check Digit

‖‖‖‖‖‖‖‖‖‖
0147

*Do Not Verify

‖‖‖‖‖‖‖‖‖‖
0148

4.4.3 TRANSMIT CHECK DIGIT

Decide whether to include the check digit in the data being transmitted.

*Transmit Matrix 25 Check Digit

‖‖‖‖‖‖‖‖‖‖
0149

Do Not Transmit

‖‖‖‖‖‖‖‖‖‖
0150

‖‖‖‖‖‖‖‖‖‖ Update

4.4.4 CODE LENGTH QUALIFICATION

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length.

▸ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

▸ If "Fixed Length" is selected, up to 2 fixed lengths can be specified.

1) Read the barcode to enable either Max. /Min. Length qualification or Fixed Length(s) qualification.

*Enable Max./Min. Length (0~127)…

0216

Enable Fixed Length(s)…

0217

2) Read the barcode for Max. Length or Fixed Length 1, and follow steps 3~4.

Repeat steps 2~4 for Min. Length or Fixed Length 2.

Max. Length (*127) or Fixed Length 1

0218

Min. Length (*0) or Fixed Length 2

0219

3) Read the "Decimal Value" barcode on page 165 for the desired length.
4) Read the "Validate" barcode on the same page to complete this setting.

Enter Setup

4.5 CODE 39

*Enable

||||||| || ||| | ||
0074

Disable

||||||| ||| || |
0075

4.5.1 TRANSMIT START/STOP CHARACTERS

Decide whether to include the start/stop characters in the data being transmitted.

Transmit Code 39 Start/Stop Characters

||||||| || || |
0116

*Do Not Transmit

||||||| || | |
0117

||||||| ||| || | Update

4.5.2 VERIFY CHECK DIGIT

Decide whether to verify the check digit. If incorrect, the barcode will not be accepted.

**Verify Code 39
Check Digit**

0118

*Do Not Verify

0119

4.5.3 TRANSMIT CHECK DIGIT

Decide whether to include the check digit in the data being transmitted.

***Transmit Code 39
Check Digit**

0120

Do Not Transmit

0121

4.5.4 STANDARD/FULL ASCII CODE 39

Decide whether to support Code 39 Full ASCII that includes all the alphanumeric and special characters.

Code 39 Full ASCII

0122

*Standard Code 39

0123

Enter Setup

4.6 CODE 93

You can only configure the scanner to read this symbology or not.

*Enable

0088

Disable

0089
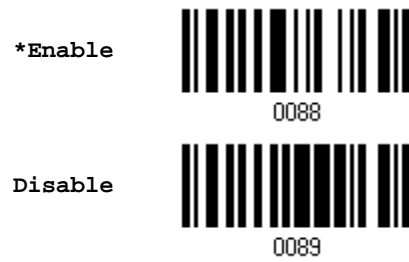
4.7 CODE 128

You can only configure the scanner to read this symbology or not.

*Enable

0090

Disable

0091

Update
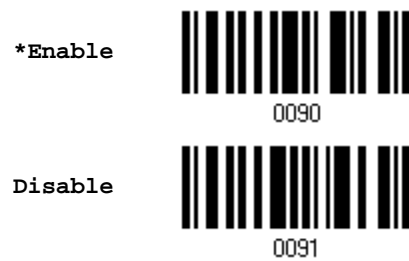
4.8 EAN-8

EAN-8

*Enable EAN-8 (No Addon)

‖‖‖‖‖‖‖‖‖‖
0098

Disable

‖‖‖‖‖‖‖‖‖‖
0099

EAN-8 Addon 2

Enable EAN-8 Addon 2

‖‖‖‖‖‖‖‖‖‖
0100

*Disable

‖‖‖‖‖‖‖‖‖‖
0101

EAN-8 Addon 5

Enable EAN-8 Addon 5

‖‖‖‖‖‖‖‖‖‖
0102

*Disable

‖‖‖‖‖‖‖‖‖‖
0103

‖‖‖‖‖‖‖‖‖‖‖‖

Enter Setup

4.8.1 CONVERT TO EAN-13

Decide whether to expand the read EAN-8 barcode, as well as its addons, into EAN-13.

▶ After conversion, the data follows EAN-13 format and is affected by EAN-13 programming selections (e.g. Check Digit).

Convert EAN-8 to EAN-13

0195

*Do Not Convert

0196

4.8.2 TRANSMIT CHECK DIGIT

Decide whether to include the check digit in the data being transmitted.

*Transmit EAN-8 Check Digit

0187

Do Not Transmit

0188

Update
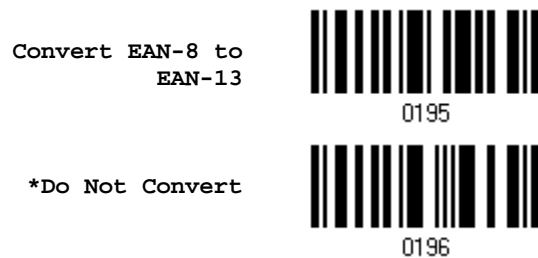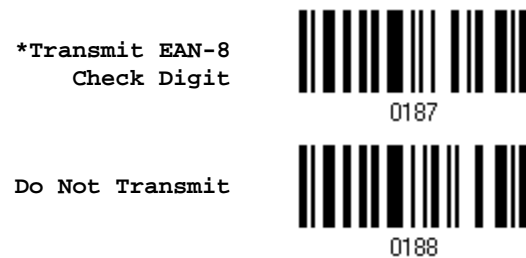
4.9 EAN-13

EAN-13

*Enable EAN-13 (No Addon)

‖‖‖‖‖‖‖‖‖
0106

Disable

‖‖‖‖‖‖‖‖‖
0107

EAN-13 Addon 2

Enable EAN-13 Addon 2

‖‖‖‖‖‖‖‖‖
0108

*Disable

‖‖‖‖‖‖‖‖‖
0109

EAN-13 Addon 5

Enable EAN-13 Addon 5

‖‖‖‖‖‖‖‖‖
0110

*Disable

‖‖‖‖‖‖‖‖‖
0111

‖‖‖‖‖‖‖‖‖
Enter Setup

4.9.1 ISBN CONVERSION

Decide whether to convert the EAN-13 barcode, starting with 978 and 979, to ISBN.

Convert EAN-13 to ISBN

‖‖‖‖‖‖‖‖‖‖
0179

*Do Not Convert

‖‖‖‖‖‖‖‖‖‖
0180

4.9.2 CONVERT TO ISSN

Decide whether to convert the EAN-13 barcode, starting with 977 to ISSN.

Convert EAN-13 to ISSN

‖‖‖‖‖‖‖‖‖‖
0181

*Do Not Convert

‖‖‖‖‖‖‖‖‖‖
0182

4.9.3 TRANSMIT CHECK DIGIT

Decide whether to include the check digit in the data being transmitted.

*Transmit EAN-13 Check Digit

‖‖‖‖‖‖‖‖‖‖
0189

Do Not Transmit

‖‖‖‖‖‖‖‖‖‖
0190

95

‖‖‖‖‖‖‖‖‖‖ Update

4.10 GS1-128 (EAN-128)

Enable

*Disable

4.10.1 TRANSMIT CODE ID

Decide whether to include the Code ID ("]C1") in the data being transmitted.

Transmit Code ID

*Do Not Transmit

4.10.2 FIELD SEPARATOR (GS CHARACTER)

Decide whether to apply a field separator (to convert the FNC1 control character to human readable character).

Enable Field Separator…

1) Read the barcode above to enable field separator.

2) Read the "Hexadecimal Value" barcode on page 166 for the desired character string.

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

Note: GS1-128 barcodes start with the FNC1 control character to distinguish themselves from other uses of Code 128. FNC1 is also used to separate data fields in the GS1-128 barcodes.

Enter Setup

4.11 MSI

Enable

||||||||||||||
0112

*Disable

||||||||||||||
0113

4.11.1 VERIFY CHECK DIGIT

Select one of the three calculations to verify check digit when decoding barcodes. If incorrect, the barcode will not be accepted.

*Single Modulo 10

||||||||||||||
0167

Double Modulo 10

||||||||||||||
0168

Modulo 10 & 11

||||||||||||||
0169

4.11.2 TRANSMIT CHECK DIGIT

Decide whether to include the check digit in the data being transmitted.

*Last Digit Not Transmitted

||||||||||||||
0170

Both Digits Transmitted

||||||||||||||
0171

Both Digits Not Transmitted

||||||||||||||
0172

97

||||||||||||||
Update

4.11.3 CODE LENGTH QUALIFICATION

To prevent the "short scan" error, define the "Length Qualification" settings to ensure that the correct barcode is read by qualifying the allowable code length.

▸ If "Max/Min Length" is selected, the maximum length and the minimum length must be specified. It only accepts those barcodes with lengths that fall between max/min lengths specified.

▸ If "Fixed Length" is selected, up to 2 fixed lengths can be specified.

1) Read the barcode to enable either Max. /Min. Length qualification or Fixed Length(s) qualification.

*Enable Max./Min. Length (0~127)…

0220

Enable Fixed Length(s)…

0221

2) Read the barcode for Max. Length or Fixed Length 1, and follow steps 3~4.

   Repeat steps 2~4 for Min. Length or Fixed Length 2.

Max. Length (*127) or Fixed Length 1

0222

Min. Length (*0) or Fixed Length 2

0223

3) Read the "Decimal Value" barcode on page 165 for the desired length.

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

Enter Setup

4.12 FRENCH PHARMACODE

Enable

‖‖‖‖‖ ‖ ‖‖ ‖ ‖‖‖
0078

*Disable

‖‖‖‖‖ ‖ ‖‖‖‖ ‖ ‖‖‖
0079

4.12.1 TRANSMIT CHECK DIGIT

Decide whether to include the check digit in the data being transmitted.

*Transmit French Pharmacode Check Digit

‖‖‖‖‖‖ ‖ ‖‖ ‖ ‖‖‖
0128

Do Not Transmit

‖‖‖‖‖‖ ‖ ‖‖ ‖ ‖‖‖
0129

99

‖‖‖‖‖‖ ‖‖ ‖‖ ‖ ‖‖‖ Update

4.13 ITALIAN PHARMACODE

Enable

*Disable

4.13.1 TRANSMIT CHECK DIGIT

Decide whether to include the check digit in the data being transmitted.

*Transmit Italian Pharmacode Check Digit

Do Not Transmit

Enter Setup

4.14 PLESSEY

Enable

0114

*Disable

0115

4.14.1 CONVERT TO UK PLESSEY

Decide whether to change each occurrence of the character 'A' to character 'X' in the decoded data.

Convert to UK Plessey

0165

*Do Not Convert

0166

4.14.2 TRANSMIT CHECK DIGIT

Decide whether to include the two check digits in the data being transmitted.

*Transmit Plessey Check Digits

0163

Do Not Transmit

0164

Update

4.15 GS1 DATABAR (RSS FAMILY)

It is categorized into three groups:

Group I — GS1 DataBar Omnidirectional (RSS-14)

This group consists of the following:	▶ GS1 DataBar Omnidirectional
	▶ GS1 DataBar Truncated
	▶ GS1 DataBar Stacked
	▶ GS1 DataBar Stacked Omnidirectional

Group II — GS1 DataBar Expanded (RSS Expanded)

| This group consists of the following: | ▶ GS1 DataBar Expanded |
| | ▶ GS1 DataBar Expanded Stacked |

Group III — GS1 DataBar Limited (RSS Limited)

| This group consists of the following: | ▶ GS1 DataBar Limited |

4.15.1 CODE ID SELECTION

Select a desired Code ID to use:

▶ "]e0"   (GS1 DataBar Code ID)

▶ "]C1"   (GS1-128 Code ID)

Use "]C1"

0432

*Use "]e0"

0433

Enter Setup

4.15.2 GS1 DATABAR OMNIDIRECTIONAL (RSS-14)

**Enable RSS-14 &
RSS Expanded
(Groups I, II)**

0412

*Disable

0413

The settings below apply to Group I symbologies only:

▶ GS1 DataBar Omnidirectional
▶ GS1 DataBar Truncated
▶ GS1 DataBar Stacked
▶ GS1 DataBar Stacked Omnidirectional

Transmit Code ID

Decide whether to include the Code ID in the data being transmitted.

***Transmit RSS-14
Code ID**

0418

Do Not Transmit

0419

Transmit Application ID

Decide whether to include the Application ID ("01") in the data being transmitted.

***Transmit RSS-14
Application ID**

0424

Do Not Transmit

0425

Update

Transmit Check Digit

Decide whether to include the check digit in the data being transmitted.

***Transmit RSS-14
Check Digit**

‖‖‖‖‖‖‖‖‖‖‖
0428

Do Not Transmit

‖‖‖‖‖‖‖‖‖‖‖
0429

‖‖‖‖‖‖‖‖‖‖‖

Enter Setup

4.15.3 GS1 DATABAR EXPANDED (RSS EXPANDED)

**Enable RSS-14 &
RSS Expanded
(Groups I, II)**

0412

***Disable**

0413

The settings below apply to Group II symbologies only:

▸ GS1 DataBar Expanded
▸ GS1 DataBar Expanded Stacked

Transmit Code ID

Decide whether to include the Code ID in the data being transmitted.

***Transmit
RSS Expanded Code ID**

0422

Do Not Transmit

0423

Update

4.15.4 GS1 DATABAR LIMITED (RSS LIMITED)

**Enable RSS Limited
(Group III)**

*Disable

Transmit Code ID

Decide whether to include the Code ID in the data being transmitted.

***Transmit
RSS Limited Code ID**

Do Not Transmit

Transmit Application ID

Decide whether to include the Application ID ("01") in the data being transmitted.

***Transmit
RSS Limited
Application ID**

Do Not Transmit

Transmit Check Digit

Decide whether to include the check digit in the data being transmitted.

***Transmit
RSS Limited
Check Digit**

Do Not Transmit

Enter Setup

4.16 TELEPEN

Enable Telepen

0436

*Disable

0437

4.16.1 TELEPEN OUTPUT – FULL ASCII/NUMERIC

Decide whether to support Telepen in full ASCII code. By default, it supports ASCII mode.

▸ AIM Telepen (Full ASCII) includes all the alphanumeric and special characters.

Original Telepen (Numeric)

0440

*AIM Telepen

0441

4.16.2 APPLY ALL 3 EDITING FORMATS TO TELEPEN

*Yes

0443

No

0444

Update

4.17 UPC-A

UPC-A

*Enable UPC-A (No Addon)

Disable

UPC-A Addon 2

Enable UPC-A Addon 2

*Disable

UPC-A Addon 5

Enable UPC-A Addon 5

*Disable

Enter Setup

4.17.1 CONVERT TO EAN-13

Decide whether to expand the read UPC-A barcode, as well as its addons, into EAN-13.

▸ After conversion, the data follows EAN-13 format and is affected by EAN-13 programming selections (e.g. Check Digit).

*Convert UPC-A to EAN-13

0177

Do Not Convert

0178
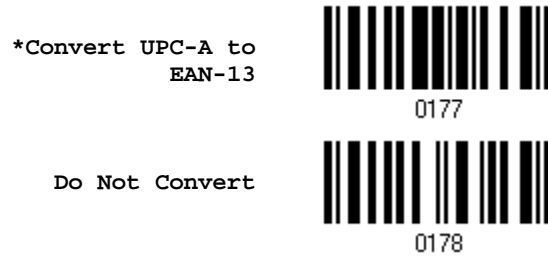
4.17.2 TRANSMIT SYSTEM NUMBER

Decide whether to include the system number in the data being transmitted.
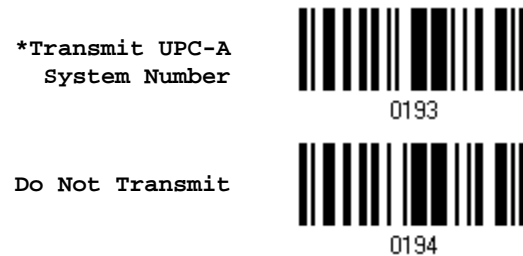
*Transmit UPC-A System Number

0193

Do Not Transmit

0194

4.17.3 TRANSMIT CHECK DIGIT

Decide whether to include the check digit in the data being transmitted.

*Transmit UPC-A Check Digit

0185

Do Not Transmit

0186

Update
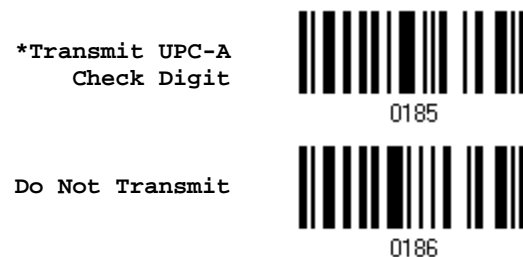
4.18 UPC-E

UPC-E

*Enable UPC-E (No Addon)

‖‖‖‖‖‖
0092

Disable

‖‖‖‖‖‖
0093

UPC-E Addon 2

Enable UPC-E Addon 2

‖‖‖‖‖‖
0094

*Disable

‖‖‖‖‖‖
0095

UPC-E Addon 5

Enable UPC-E Addon 5

‖‖‖‖‖‖
0096

*Disable

‖‖‖‖‖‖
0097

‖‖‖‖‖‖‖‖
Enter Setup

4.18.1 SYSTEM NUMBER SELECTION

Decide whether to decode the ordinary UPC-E barcodes only or both UPC-E0 and UPC-E1 barcodes.

▶ System number 0 enabled for decoding UPC-E0 barcodes.
▶ System number 1 enabled for decoding UPC-E1 barcodes.

System Number 0 & 1

0287

*System Number 0 Only

0288

Warning:　Because of the way system number 1 is encoded, if both system numbers are enabled, the user might suffer from short scanning UPC-A or EAN-13 barcodes into UPC-E1 barcodes.

4.18.2 CONVERT TO UPC-A

Decide whether to expand the read UPC-E barcode, as well as its addons, into UPC-A.

▶ After conversion, the data follows UPC-A format and is affected by UPC-A programming selections (e.g. System Number, Check Digit).

Convert UPC-E to UPC-A

0175

*Do Not Convert

0176

Update

4.18.3 SYSTEM NUMBER TRANSMISSION

Decide whether to include the system number in the data being transmitted.

**Transmit UPC-E
System Number**

0191

*Do Not Transmit

0192

4.18.4 TRANSMIT CHECK DIGIT

Decide whether to include the check digit in the data being transmitted.

***Transmit UPC-E
Check Digit**

0183

Do Not Transmit

0184

Enter Setup

DEFINING OUTPUT FORMAT

You may configure in which format the collected data will be output to the host computer. Barcode read by the scanner will be processed in the following sequence –

1) Perform character substitution on the data scanned.

2) Add Code ID and Length Code to the front of the data: `[Code ID][Length Code][Data]`

3) Process the whole data in step 2 with user formats. Data is now divided into fields by user specified rules. Refer to Chapter 6 Applying Formats for Data Editing.

4) Add Prefix Code and Suffix Code before transmission: `[Prefix Code][Processed Data][Suffix Code]`

IN THIS CHAPTER

5.1 CHARACTER SUBSTITUTION

Character substitution is performed on every occurrence of the first character specified. If only one character is specified, every occurrence of that character in the barcode will be taken away.

▶ The first character will be replaced by the second character(s).

▶ Up to three sets of character substitution can be configured.

Note: The character substitution is performed only on the barcode itself and before the processing of editing formats. It is not applicable to the Prefix/Suffix Code, Code ID, Length Code, or any Additional Field.

Update

5.1.1 SELECT A SET FOR CHARACTER SUBSTITUTION

Configure Set 1

0309

Configure Set 2

0310

Configure Set 3

0311
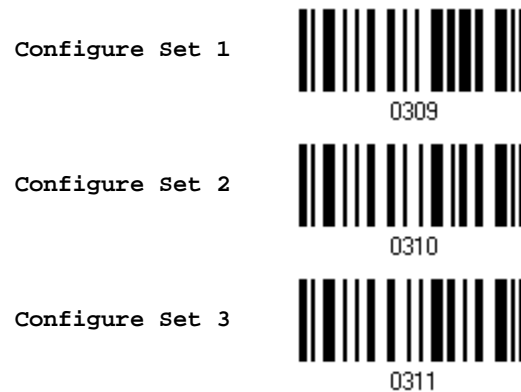
1) Read the barcode above to enable character substitution by set.

For example, have the scanner read the "Set 1" barcode to configure the first set of character substitution. The scanner will respond with one short beep, high tone, to indicate more setup barcodes are required.

2) Read the "Hexadecimal Value" barcode on page 166 for the desired character substitution. For example,

KEY TYPE = NORMAL
▶ Read "3", "0", "2", and "D" to replace the character "0" with a dash "-". ▶ Read "3", "0", "2", "D", "3", and "0" to replace the character "0" with a dash "-0".
KEY TYPE = SCAN CODE
If you want to replace the character "0" with "a" (= "1C" on the scan code table):
1.   Read "3" and "0".
2.   Read the "Scan Code" barcode.
3.   Read "1" and "C".
KEY TYPE = NORMAL + KEY STATUS = SHIFT
If you want to replace the character "0" with "!" (= "Shift" + "1" on keyboard):
1.   Read "3" and "0".
2.   Read the "Add Shift" barcode.
3.   Read "3" and "1".

3) Read the "Validate" barcode to complete this setting. (The defined set or sets will be applied to all symbologies.)

Enter Setup

5.2 PREFIX/SUFFIX CODE

By default, there is no prefix code, and [ENTER] or [CR] (Carriage Return) is configured to be suffix code. Up to 4 characters can be configured, for example, "[$][$][$][$]", and you will have four dollar signs appear in front of the barcode read, like this – "$$$$1234567890".

▶ If "BT HID", "USB HID" or "Keyboard Wedge" is configured for interface, Key Type and Key Status will then become applicable. You may decide whether or not to apply Key Status when "Normal Key" is selected for Key Type.

Key Type		Key Status
Scan Code	Up to 2 scan code values are allowed.	N/A
Normal Key	Up to 4 character strings are allowed.	▶ Add Shift ▶ Add Left Ctrl ▶ Add Left Alt ▶ Add Right Ctrl ▶ Add Right Alt Refer to Keyboard Wedge Table.

Configure Prefix

0273

Configure Suffix

0274

1) Read the barcode above to apply prefix code or suffix code separately, and follow steps 2~3. (Max. 4 characters each)

2) Read the "Hexadecimal Value" barcode on page 166 for the desired character string. For example, read "2" and "B" for the scanner to prefix or suffix the character [+].

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

Update

5.3 CODE ID

Up to two characters for Code ID can be configured for each symbology. To make the Code ID configuration easier, the scanner provides five pre-defined Code ID sets that you can select one and make necessary changes on it.

▸ If "BT HID", "USB HID" or "Keyboard Wedge" is configured for interface, Key Type and Key Status will then become applicable. You may decide whether or not to apply Key Status when "Normal Key" is selected for Key Type.

Key Type		Key Status
Scan Code	Only 1 scan code value is allowed.	N/A
Normal Key	Up to 2 character strings are allowed.	▸ Add Shift ▸ Add Left Ctrl ▸ Add Left Alt ▸ Add Right Ctrl ▸ Add Right Alt Refer to Keyboard Wedge Table.

Note: "]C1" is the Code ID of GS1-128 (EAN-128) barcodes; "]e0" is the default Code ID of GS1 DataBar (RSS) barcodes.

5.3.1 SELECT PRE-DEFINED CODE ID

Apply Code ID Set 1

9961

Apply Code ID Set 2

9962

Apply Code ID Set 3

9963

Apply Code ID Set 4

9964

Apply Code ID Set 5

9965

Enter Setup

Code ID Options	Set 1	Set 2	Set 3	Set 4	Set 5
Code 39	A	C	Y	M	A
Italian Pharmacode	A	C	Y	M	A
French Pharmacode	A	C	Y	M	A
Industrial 25	C	H	H	H	S
Interleaved 25	D	I	Z	I	S
Matrix 25	E	G	G	G	S
Codabar	F	N	X	N	F
Code 93	I	L	L	L	G
Code 128	H	K	K	K	C
ISBT 128	H	K	K	K	C
UPC-E	S	E	C	E	E
EAN-8	P	B	B	FF	E
EAN-13	M	A	A	F	E
UPC-A	J	A	A	A	E
MSI	V	V	D	P	M
Plessey	W	W	E	Q	P
Telepen	Z	---	---	---	---

Update

5.3.2 CHANGE CODE ID

1) Read the barcode below to change code ID of a specific symbology.

2) Read the "Hexadecimal Value" barcode on page 166 for the desired character string. For example, read "4" and "4" for applying the character [D] for Code ID.

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

Configure Code ID for Codabar	0262
Configure Code ID for Code 39	0256
Configure Code ID for Code 93	0263
Configure Code ID for Code 128	0264
Configure Code ID for EAN-8	0266
Configure Code ID for EAN-13	0267
Configure Code ID for French Pharmacode	0258
Configure Code ID for Italian Pharmacode	0257
Configure Code ID for Industrial 25	0259

Enter Setup

Configure Code ID for Interleaved 25

0260

Configure Code ID for Matrix 25

0261

Configure Code ID for MSI

0268

Configure Code ID for Plessey

0269

Configure Code ID for Telepen

0442

Configure Code ID for UPC-A

0270

Configure Code ID for UPC-E

0265

5.3.3 CLEAR CODE ID SETTINGS

Clear All Code ID Settings

9960

119

Update

5.4 LENGTH CODE

A two-digit code representing the length of barcode data (character count) can be inserted in front of data being transmitted. Such "Length" code can be individually enabled or disabled for each symbology.

Length Code for Codabar

Apply

‖‖‖‖‖‖‖‖‖‖‖
0236

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖‖
0237

Length Code for Code 39

Apply

‖‖‖‖‖‖‖‖‖‖‖
0224

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖‖
0225

Length Code for Code 93

Apply

‖‖‖‖‖‖‖‖‖‖‖
0238

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖‖
0239

Length Code for Code 128

Apply

‖‖‖‖‖‖‖‖‖‖‖
0240

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖‖
0241

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖
Enter Setup

Length Code for GS1-128 & GS1 DataBar

Apply

‖‖‖‖‖‖‖‖‖‖
0299

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖
0300

Length Code for EAN-8

Apply

‖‖‖‖‖‖‖‖‖‖
0244

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖
0245

Length Code for EAN-13

Apply

‖‖‖‖‖‖‖‖‖‖
0246

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖
0247

Length Code for French Pharmacode

Apply

‖‖‖‖‖‖‖‖‖‖
0228

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖
0229

Length Code for Italian Pharmacode

Apply

‖‖‖‖‖‖‖‖‖‖
0226

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖
0227

‖‖‖‖‖‖‖‖‖‖
Update

Length Code for Industrial 25

Apply

‖‖‖‖‖‖‖‖‖‖‖
0230

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖‖
0231

Length Code for Interleaved 25

Apply

‖‖‖‖‖‖‖‖‖‖‖
0232

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖‖
0233

Length Code for Matrix 25

Apply

‖‖‖‖‖‖‖‖‖‖‖
0234

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖‖
0235

Length Code for MSI

Apply

‖‖‖‖‖‖‖‖‖‖‖
0248

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖‖
0249

Length Code for Plessey

Apply

‖‖‖‖‖‖‖‖‖‖‖
0250

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖‖
0251

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖

Enter Setup

Length Code for Telepen

Apply

‖‖‖‖‖‖‖‖‖‖
0438

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖
0439

Length Code for UPC-A

Apply

‖‖‖‖‖‖‖‖‖‖
0289

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖
0290

Length Code for UPC-E

Apply

‖‖‖‖‖‖‖‖‖‖
0242

*Do Not Apply

‖‖‖‖‖‖‖‖‖‖
0243

‖‖‖‖‖‖‖‖‖‖
Update

Enter Setup

APPLYING FORMATS FOR DATA EDITING

The scanner allows advanced data editing by applying user-configured editing formats. The whole processed data can be divided into fields by user-specified rules. These fields together with the user-configurable additional fields consist of the data actually sent to the host computer.

[Prefix Code]	[Code ID]	[Length Code]	[Data]	[Suffix Code]	Additional Field(s)
None by default	None by default	None by default	Barcode itself	0x0d by default	

IN THIS CHAPTER

Update

6.1 ACTIVATING EDITING FORMATS

6.1.1 ACTIVATE EDITING FORMATS

If you have already configured any editing format before, you may directly apply the editing format. If not, you must start with configuring an editing format first, and then, activate the editing format when it is desired in use.

Editing Format 1

Enable

*Disable

Editing Format 2

Enable

*Disable

Editing Format 3

Enable

*Disable

Apply All 3 Editing Formats to Telepen

*Yes

No

End Programming Format

6.1.2 EXCLUSIVE DATA EDITING

By default, only barcodes found meeting with the criteria are processed by the editing formats. Those found not meeting with the criteria are processed normally.

When "Exclusive Data Editing" is enabled, all barcodes read by the scanner must be processed by the editing formats. If data is found excluded from all enabled editing formats (= not meeting with the specified criteria), the scanner will not accept the reading, and therefore, data will not be transmitted.

Yes |||||||||||||||||||||
0279

*No |||||||||||||||||||||
0280

||||||||||||||||||| Update

6.2 HOW TO CONFIGURE EDITING FORMATS

End Programming Format
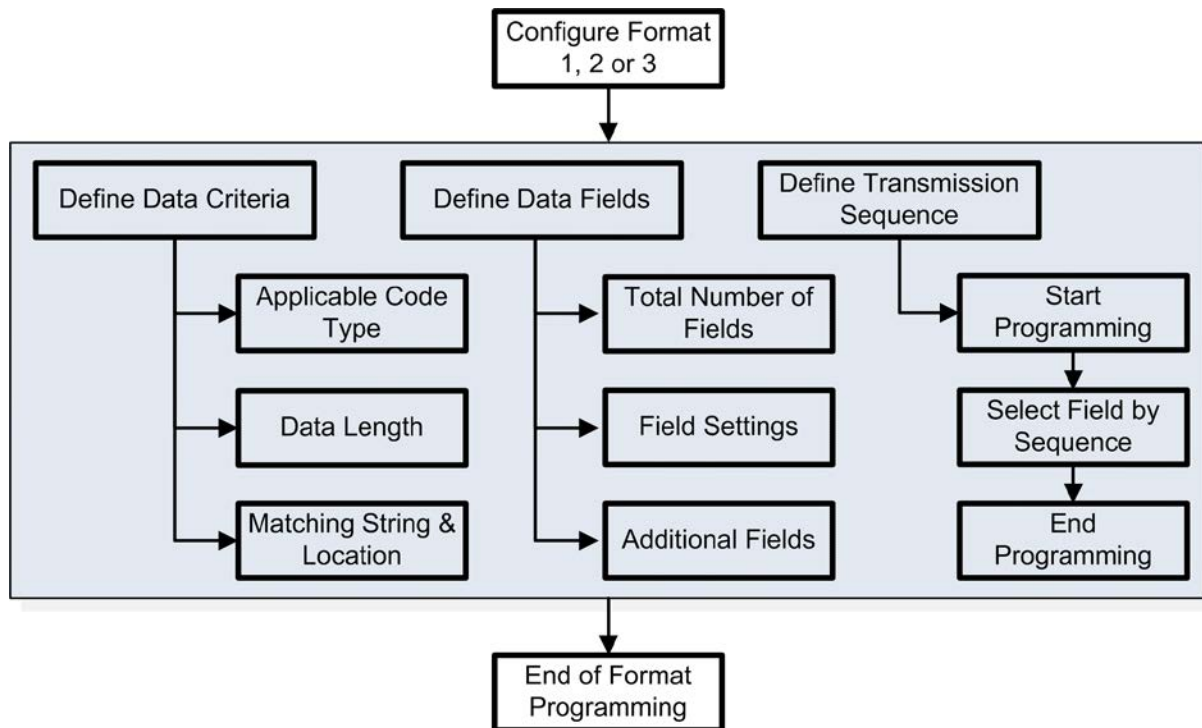
6.2.1 SELECT FORMAT TO CONFIGURE

Start Programming Format

Select one editing format (Format 1~3) and the parameters pertaining to the editing format can then be configured – applicable code type, data length, matching string & location, total number of fields, field settings (field-dividing rule), additional fields, and field transmission sequence.

▶ Up to three different formats can be specified.

Configure Format 1

9981

Configure Format 2

9982

Configure Format 3

9983

Note: Before you complete the programming of an editing format, if you have the scanner read any barcode for parameters other than those pertaining to the editing format, it will automatically abort the programming process.

End Programming Format

After having configured all the desired parameters, you must have the scanner read the "End Programming Format" barcode, which can be located at the bottom of every even page in this chapter.

End Programming Format

9980

Update

6.2.2 RESTORE DEFAULT FORMAT

You may select an existing editing format and have the defaults restored. The default settings of an editing format are listed below.

Editing format	Defaults
Applicable Code Type	All
Data Length	0 (No qualification)
Matching String	Disable
Matching String Location	None
Total Number of Fields	1
Field Setting – field-dividing rule	Not configured
Additional Fields	None
Field Transmission Sequence	F1

Restore Default Format

9990

End Programming Format

6.3 CONFIGURING FORMAT — DEFINE DATA CRITERIA

Three applicable conditions can be configured to check whether the data read by the scanner can be processed by the particular editing format.

Note: Data editing cannot be performed unless the three conditions are all met.

6.3.1 APPLICABLE CODE TYPE

By default, barcodes of all the supported symbologies will be processed by any editing format, if having been configured and enabled. For quick configuration, you may first clear all, and then select the desired symbologies.

Note: You must have at least one symbology selected.

*Apply to All

9992

Clear All

9991

Codabar

Apply

0512

Code 39

Apply

0500

Code 93

Apply

0514

Update

Code 128

Apply ‖‖‖‖‖‖‖‖‖
0516

GS1-128 & GS1 DataBar

Apply ‖‖‖‖‖‖‖‖‖
0590

EAN-8

Apply ‖‖‖‖‖‖‖‖‖
0524

EAN-8 Addon 2

Apply ‖‖‖‖‖‖‖‖‖
0526

EAN-8 Addon 5

Apply ‖‖‖‖‖‖‖‖‖
0528

EAN-13

Apply ‖‖‖‖‖‖‖‖‖
0532

EAN-13 Addon 2

Apply ‖‖‖‖‖‖‖‖‖
0534

EAN-13 Addon 5

Apply ‖‖‖‖‖‖‖‖‖
0536

‖‖‖‖‖‖‖ End Programming Format

French Pharmacode

Apply

||||||||||||||||||
0504

Italian Pharmacode

Apply

||||||||||||||||||
0502

Industrial 25

Apply

||||||||||||||||||
0506

Interleaved 25

Apply

||||||||||||||||||
0508

Matrix 25

Apply

||||||||||||||||||
0510

MSI

Apply

||||||||||||||||||
0538

Plessey

Apply

||||||||||||||||||
0540

UPC-A

Apply

||||||||||||||||||
0584

||||||||||||||||||
Update

UPC-A Addon 2

Apply

```
0586
```

UPC-A Addon 5

Apply

```
0588
```

UPC-E

Apply

```
0518
```

UPC-E Addon 2

Apply

```
0520
```

UPC-E Addon 5

Apply

```
0522
```

Note: For applying all three editing formats to Telepen, refer to 6.1.1 Activate Editing Formats.

End Programming Format

6.3.2 DATA LENGTH

The length must include prefix, suffix (0x0d by default), length code, etc. By default, barcodes of any length (character count) are eligible for data editing.

▶ You may specify a value from 0 to 255.

▶ When zero is given to both, the scanner will not perform the length qualification.

1) Read the barcode below to specify Max. Length or Min. Length separately, and follow steps 2~3.

Max. Length

0548

Min. Length

0549

2) Read the "Decimal Value" barcode on page 165 for the desired length.

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

Update

6.3.3 MATCHING STRING & LOCATION

By default, no matching string is specified, and therefore, it is disabled. You may enable this feature by specifying a matching string; up to four characters are allowed.

▸ When the Matching String Location is zero, the scanner will only check for the existence of the matching string in the barcode data.

▸ You may specify a value from 1 to 255 to indicate where the matching string starts in the barcode data.

I) Read the barcode to specify a matching string.

Matching String…

```
0550
```

2) Read the "Hexadecimal Value" barcode on page 166 for the desired character string.

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

4) Read the barcode to specify the location of the matching string.

Location of Matching String…

```
0551
```

5) Read the "Decimal Value" barcode on page 165 for the desired location.

6) Read the "Validate" barcode on the same page to complete this setting.

6.4 CONFIGURING FORMAT — DEFINE DATA FIELD

6.4.1 TOTAL NUMBER OF FIELDS

Data can be divided into at most 6 fields; each of them is numbered from F1 to F6 accordingly. However, only F1~F5 can be configured.

▸ The total number of fields must be specified correctly. If three fields are configured for the editing format, the data characters after F3 will be assigned to F4 automatically. This feature is quite useful especially when data of variable lengths is processed by editing formats.

*One Field

```
0578
```

End Programming Format

Two Fields

0579

Three Fields

0580

Four Fields

0581

Five Fields

0582

Six Fields

0583

Note: The number of configurable fields is always one less than the total number of fields specified. The extra data characters beyond the last field configured will be automatically assigned to the next field.

Update

6.4.2 FIELD SETTINGS

Data eligible for editing formats is divided into fields by user-specified rules — either using the field terminating string or specified field length.

By Terminating String
Specify the field terminating string. Up to two characters are allowed. The scanner will search for the occurrence of this particular string in the data.
▸ By default, this string will be included in the field. You may discard it.

By Length
Alternatively, you may simply specify the field length. The scanner will assign the next specified number of characters into the field.

Field 1 Setting

1. Read the barcode below to divide field 1 by a specified terminating string.

Select Field Separator to Divide Field 1…

||||| 0555

2. Read the "Hexadecimal Value" barcode on page 166 for the desired character string.

3. Read the "Validate" barcode to complete this setting.

4. Read the "Discard Separator" barcode if the field separator is not desired in the field.

*Include Separator

||||| 0552

Discard Separator

||||| 0553

If not dividing the field by a specific separator, you may divide it by a specified length.

1. Read the barcode below to divide field 1 by length.

Divide Field 1 by Length

||||| 0554

2. Read the "Decimal Value" barcode on page 165 for the desired field length.

3. Read the "Validate" barcode on the same page to complete this setting.

||||| End Programming Format

Field 2 Setting

1. Read the barcode below to divide field 2 by a specified terminating string.

**Select
Field Separator
to Divide Field 2…**

0559

2. Read the "Hexadecimal Value" barcode on page 166 for the desired character string.

3. Read the "Validate" barcode to complete this setting.

4. Read the "Discard Separator" barcode if the field separator is not desired in the field.

*Include Separator

0556

Discard Separator

0557

If not dividing the field by a specific separator, you may divide it by a specified length.

1. Read the barcode below to divide field 2 by length.

**Divide Field 2
by Length**

0558

2. Read the "Decimal Value" barcode on page 165 for the desired field length.

3. Read the "Validate" barcode on the same page to complete this setting.

Update
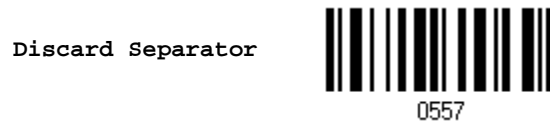
Field 3 Setting

1. Read the barcode below to divide field 3 by a specified terminating string.

**Select
Field Separator
to Divide Field 3…**

0563

2. Read the "Hexadecimal Value" barcode on page 166 for the desired character string.

3. Read the "Validate" barcode to complete this setting.

4. Read the "Discard Separator" barcode if the field separator is not desired in the field.

*Include Separator

0560

Discard Separator

0561

If not dividing the field by a specific separator, you may divide it by a specified length.

1. Read the barcode below to divide field 3 by length.

**Divide Field 3
by Length**

0562

2. Read the "Decimal Value" barcode on page 165 for the desired field length.

3. Read the "Validate" barcode on the same page to complete this setting.

End Programming Format

Field 4 Setting

1. Read the barcode below to divide field 4 by a specified terminating string.
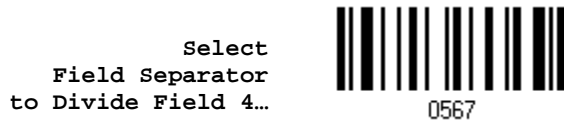
**Select
Field Separator
to Divide Field 4…**

||||||||||||||||||||
0567

2. Read the "Hexadecimal Value" barcode on page 166 for the desired character string.

3. Read the "Validate" barcode to complete this setting.

4. Read the "Discard Separator" barcode if the field separator is not desired in the field.

*Include Separator

||||||||||||||||||||
0564

Discard Separator

||||||||||||||||||||
0565

If not dividing the field by a specific separator, you may divide it by a specified length.

1. Read the barcode below to divide field 4 by length.

**Divide Field 4
by Length**

||||||||||||||||||||
0566

2. Read the "Decimal Value" barcode on page 165 for the desired field length.

3. Read the "Validate" barcode on the same page to complete this setting.

|||||||||||||||||||| Update

Field 5 Setting

1. Read the barcode below to divide field 5 by a specified terminating string.
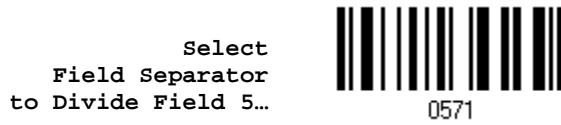
**Select
Field Separator
to Divide Field 5…**

0571

2. Read the "Hexadecimal Value" barcode on page 166 for the desired character string.

3. Read the "Validate" barcode to complete this setting.

4. Read the "Discard Separator" barcode if the field separator is not desired in the field.

*Include Separator

0568

Discard Separator

0569

If not dividing the field by a specific separator, you may divide it by a specified length.

1. Read the barcode below to divide field 5 by length.
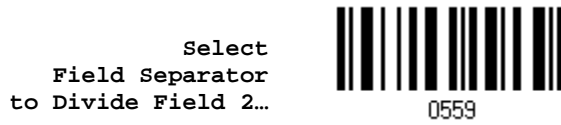
**Divide Field 5
by Length**

0570

2. Read the "Decimal Value" barcode on page 165 for the desired field length.

3. Read the "Validate" barcode on the same page to complete this setting.

End Programming Format

Additional Fields

Up to five additional fields can be created for each editing format; each of them is numbered from AF1 to AF5 accordingly.

▶ If "BT HID", "USB HID" or "Keyboard Wedge" is configured for interface, Key Type and Key Status will then become applicable. You may decide whether or not to apply Key Status when "Normal Key" is selected for Key Type.

Key Type		Key Status
Scan Code	Up to 2 scan code values are allowed.	N/A
Normal Key	Up to 4 character strings are allowed.	▶ Add Shift ▶ Add Left Ctrl ▶ Add Left Alt ▶ Add Right Ctrl ▶ Add Right Alt Refer to Keyboard Wedge Table.

1. Read the barcode below to specify an additional field, one at a time.

Additional Field 1… 0572

Additional Field 2… 0573

Additional Field 3… 0574
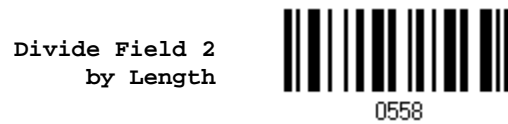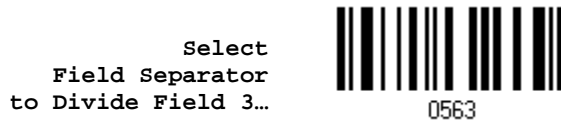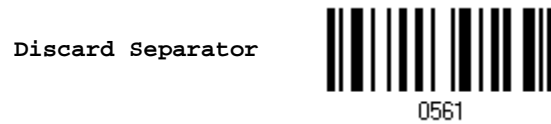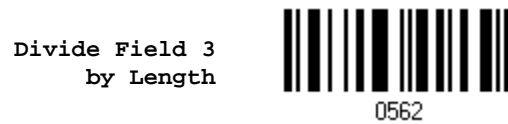
Additional Field 4… 0575

Additional Field 5… 0576

2. Read the "Hexadecimal Value" barcode on page 166 for the desired additional field.

3. Read the "Validate" barcode to complete this setting.

Update

6.5 CONFIGURING FORMAT — DEFINE TRANSMISSION SEQUENCE

After configuring the data fields and additional fields, you must now program the transmission sequence of these fields that comprise the final data. This field transmission sequence can be assigned in any desired order and fields can be assigned multiple times as well.

Note: Up to twelve fields can be assigned.

1) Read the "Start" barcode to begin with programming the field transmission sequence.

Start Programming…

0577

2) Program the transmission sequence by reading the desired fields as well as additional fields.

Field 1

9901

Field 2

9902

Field 3

9903

Field 4

9904

Field 5

9905

Field 6

9906

Additional Field 1

9907

End Programming Format

Additional Field 2

9908

Additional Field 3

9909

Additional Field 4

9910

Additional Field 5

9911

3) Read the "End" barcode to complete this setting.

End Programming…

9994

145

Update

6.6 PROGRAMMING EXAMPLES

6.6.1 EXAMPLE I

Extract data from the 10th character to the 19th character...

The editing format should be configured as follows:

1. Read the "Enter Setup" barcode to enter the Configuration Mode.

2. Read the "Configure Format 1" barcode.

3. Read the "Clear All" and "Code 128" barcodes for applicable code type.

4. Read the "Three Fields" barcode.

5. Read the "Divide Field 1 by Length" barcode, and set length to 9.

   Field 1 data starts from the 1st character to the 9th character.

6. Read the "Divide Field 2 by Length" barcode, and set length to 10.

   Field 2 data starts from the 10th character to the 19th character.

7. Read the "Start (Programming)" barcode to program the transmission sequence.

8. Read the "Field 2" barcode.

9. Read the "End" barcode to complete the transmission sequence setting.

10. Read the "End Programming Format" barcode to complete the setting of Editing Format 1.

11. Read the "Enable Format 1" barcode to apply Editing Format 1 to Code 128.

12. Read the "Update" barcode to exit the Configuration Mode.

End Programming Format

6.6.2 EXAMPLE II

Extract the date code, item number, and quantity information from barcodes.

Data in a barcode is encoded like this:

▶ From the 1st character to the 6th character is the date code.

▶ From the 7th character to the dash '-' character is the item number.

▶ After the dash '-' character is the quantity information.

Data will be transmitted like this:

▶ The item number goes first, then a TAB character, followed by the date code, then another TAB character, and finally the quantity information.

The editing format should be configured as follows:

1. Read the "Enter Setup" barcode to enter the Configuration Mode.

2. Read the "Configure Format 2" barcode.

3. Read the "Three Fields" barcode.

4. Read the "Divide Field 1 by Length" barcode, and set length to 6.

    Field 1 data starts from the 1st character to the 6th character.

5. Read the "Select Field Separator to Divide Field 2" barcode, and use a dash '-' character.

    Field 2 data starts from the 7th character until the dash '-' character is met.

6. Read the "Additional Field 1" barcode, and use a tab character for the field.

7. Read the "Start (Programming)" barcode to program the transmission sequence.

8. Read the "Field 2", "Additional Field 1", "Field 1", "Additional Field 1", "Field 3" barcodes.

9. Read the "End" barcode to complete the transmission sequence (F2 A1 F1 A1 F3) setting.

10. Read the "End Programming Format" barcode to complete the setting of Editing Format 1.

11. Read the "Enable Format 2" barcode to apply Editing Format 2 to all code types.

12. Read the "Update" barcode to exit the Configuration Mode.

Update

End Programming Format

SPECIFICATIONS

Optical Characteristics	1166	1266
Scan Engine	Non-contact type	Non-contact type
Optical Sensor	CCD, 3648 pixels	Laser
Light Source	Red LED	Visible laser diode
Wavelength	625 nm	650 nm

RF Characteristics	
WPAN Module	Wireless PAN BT Class 2 compliance
Coverage (line-of-sight)	Up to 100 meters
Interface Supported	▶ Serial Port Profile (BT SPP) ▶ Human Interface Device Profile (BT HID) ▶ 3666

Physical Characteristics		
Memory	▶ 4 KB for transmit buffer ▶ 128 KB flash for memory mode	
Switch	Micro switch	
Indication	Dual-color LED (Red/ Blue) and beeper	
Weight	Approx. 200 g	Approx. 210 g

Update

Electrical Characteristics

Battery	3.7 V 700 mAh Li-ion rechargeable battery

Power Adaptor

Input	AC 100~240 V, 50/60 Hz
Output	DC 5V, 1A
Operating Temperature	0 °C to 40 °C

Environmental Characteristics

Temperature	Operating	0 °C to 50 °C
	Storage	-20 °C to 60 °C
Humidity (Non-condensing)	Operating	10% to 90%
	Storage	5% to 95%
Impact Resistance (Multiple drops onto concrete)		1.2 m
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 ScanManager
Firmware upgradeable	Download firmware updates via the download utility.

Accessories (√ means "supported")

Rechargeable Li-ion Battery	√	√
BT Base (3666)	√	√
USB HID Cable (307)	√	√
IBM 4683/4694 Cable (346)	√	√
RS-232 Cable	√	√
Keyboard Wedge Cable	√	√

Enter Setup

FIRMWARE UPGRADE

You can only upgrade firmware of one scanner at a time. For example, you must turn off each of the rest 1166/1266 scanners when there is more than one scanner connected to your computer.

Note: In case it fails downloading due to low battery, make sure the targe scanner is loaded with good battery and the battery charge is enough.

HOW TO UPGRADE 1166/1266 FIRMWARE

USING 3666

1) Connect the RS-232 cable between 3666 and your computer.

   ‣ Connect the power supply cord from 3666 to a proper power outlet.

2) Refer to 3.1.1 Connect to 3666 for the target scanner to connect to 3666.

   Read the "Set Connection" label first, and then the "Serial Number" label. Both labels can be located at the back of 3666.

3) Read the following barcodes in sequence to configure the scanner to use RS-232 as download interface.

   Enter Setup

   Activate 3666 RS-232
   0001

   115200 bps
   0023

   Update
   9999

4) Read the following barcodes in sequence for the scanner to enter the download mode. The scanner will respond with beeps to indicate it is ready for downloading.

Update

Enter Setup

Download

9997

5) Run the download utility "ProgLoad.exe" on your computer.

Kernel + User Program	User Program Only
1x66BuildVxxx.shx	1x66Vxxx.shx
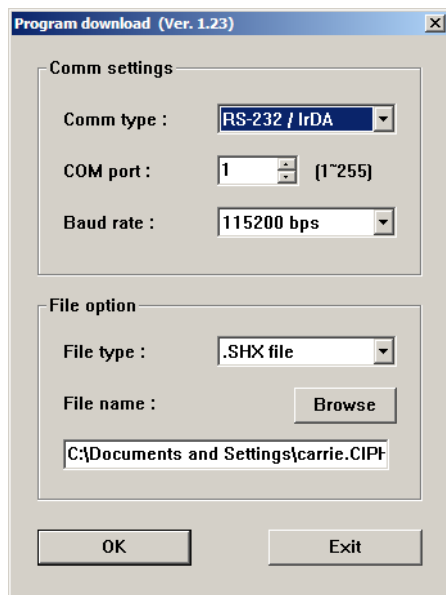
▸ For the communication settings, select "RS-232" and the correct COM port.

▸ For RS-232, select 115200 bps for baud rate.

▸ For the file option, click [Browse] to select the target file for firmware update.

▸ Click [OK].

6) After upgrading kernel, you will need to manually restart the scanner.

After upgrading the user program, the scanner will automatically restart itself once the download is completed successfully.

Note: The output interface remains unchanged as specified in step 3 (= RS-232), and the baud rate setting is still 115200 bps!

Enter Setup

USING *BLUETOOTH®* DONGLE

1) Refer to <u>3.2.3 Connect to Dongle</u> for the target scanner to accept the connection request from your computer.

2) Read the following barcodes in sequence to configure the scanner to use BT SPP as download interface.
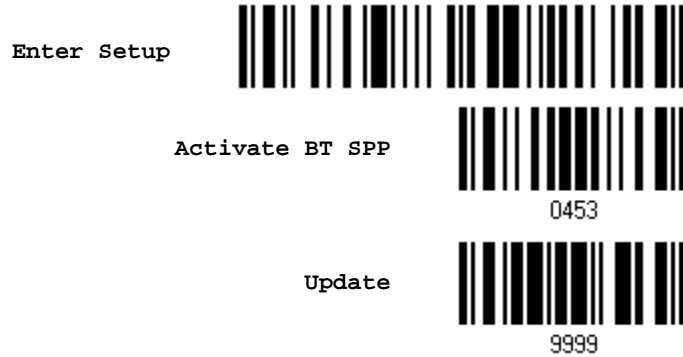
Enter Setup

Activate BT SPP

0453

Update

9999

3) Read the following barcodes in sequence for the scanner to enter the download mode.

   The scanner will respond with beeps to indicate it is ready for downloading.

Enter Setup

Download

9997

4) Run the download utility "ProgLoad.exe" on your computer.

Kernel + User Program	User Program Only
1x66BuildVxxx.shx	1x66Vxxx.shx
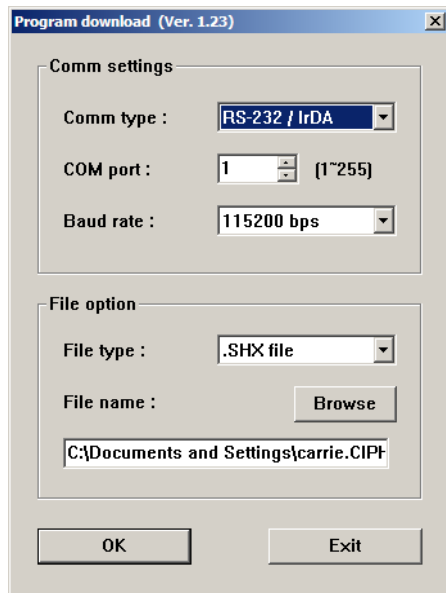
Update

▶ For the communication settings, select "RS-232" and the correct COM port for BT SPP interface, and ignore the baud rate setting.

▶ For the file option, click [Browse] to select the target file for firmware update.

▶ Click [OK].

5) After upgrading kernel, you will need to manually restart the scanner.

After upgrading the user program, the scanner will automatically restart itself once the download is completed successfully.

Note: The output interface remains unchanged as specified in step 2 (= BT SPP).
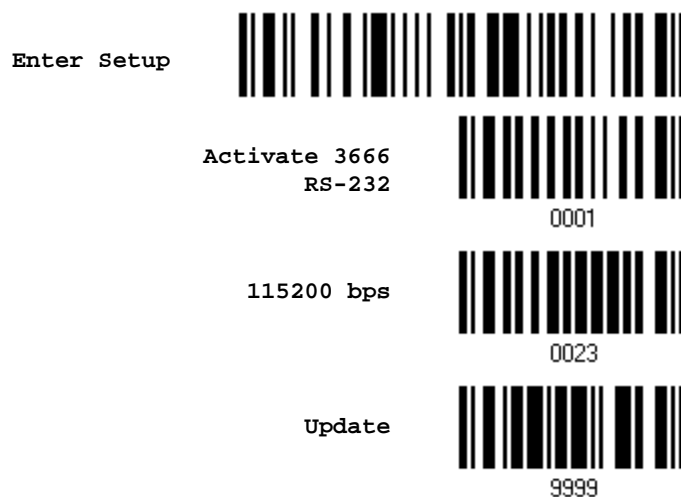
Enter Setup

HOW TO UPGRADE 3666 FIRMWARE

UPGRADING 3666 CPU FIRMWARE

1) Connect the RS-232 cable between 3666 and your computer.

2) Connect the power supply cord from 3666 to a proper power outlet.

3) Refer to 3.1.1 Connect to 3666 for the target scanner to connect to 3666.

   Read the "Set Connection" label first, and then the "Serial Number" label. Both labels can be located at the back of 3666.

4) Read the following barcodes in sequence to configure the scanner to use RS-232 as download interface.

Enter Setup

Activate 3666 RS-232

0001

38400 bps

0016

Update

9999
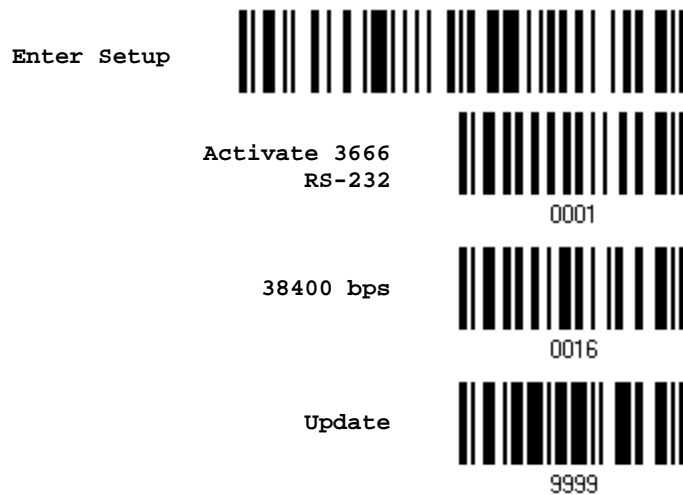
5) Read the following barcodes in sequence for 3666 to enter the download mode. The Communication LED on 3666 will be flashing red and green to indicate it is ready for downloading.

Enter Setup

Download 3666 CPU Firmware

9970

6) Run the download utility "ProgLoad.exe" on your computer.

Update

3666 Kernel + User Program	3666 User Program Only
Build366x-xxx.shx	STD366x_Vxxx.shx
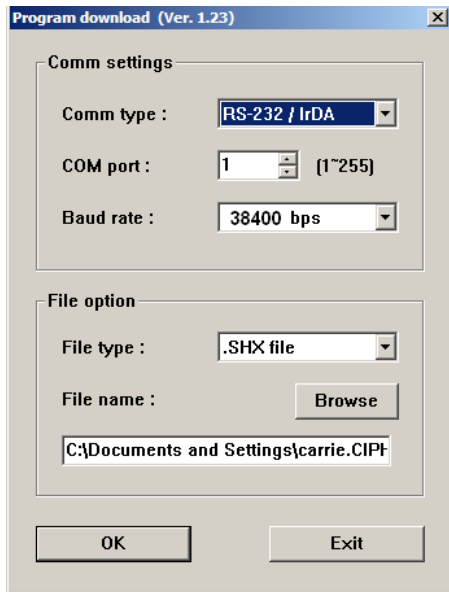
▶ For the communication settings, select "RS-232" and the correct COM port.

▶ For RS-232, select 38400 bps for baud rate.

▶ For the file option, click [Browse] to select the target file for firmware update.

▶ Click [OK].

7) The 3666 will automatically restart when upgrading firmware is completed successfully.

8) Read the "Update" barcode for the scanner to resume its operation (exit the configuration mode).

Update

9999

Enter Setup

FINDING OUT 3666 FIRMWARE VERSION

Normally, you can configure 3666 by having a connected scanner read 3666-related setup barcodes.

1) Connect the interface cable, RS-232, Keyboard Wedge or USB HID, between 3666 and your computer.

2) Connect the power supply cord from 3666 to a proper power outlet.

3) Refer to 3.1.1 Connect to 3666 for the target scanner to connect to 3666.

   Read the "Set Connection" label first, and then the "Serial Number" label. Both labels can be located at the back of 3666.

4) Read interface-related barcodes. For example, read the following barcodes in sequence to configure the scanner to use RS-232 as output interface.

   Enter Setup

   Activate 3666
   RS-232
   0001

   115200 bps
   0023

   Update
   9999
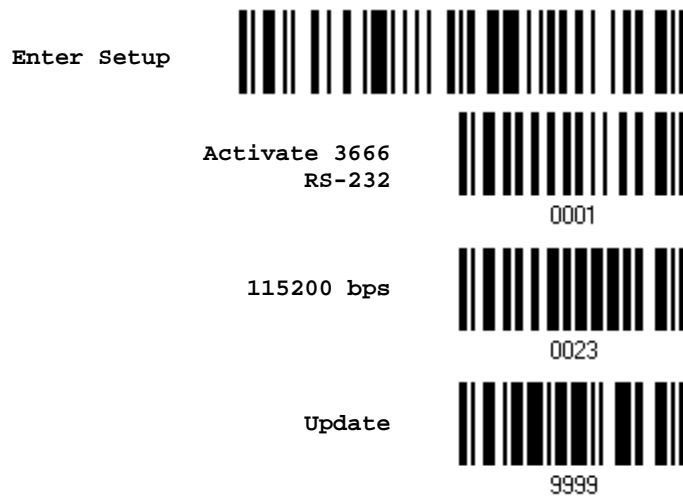
5) Run HyperTerminal.exe on your computer and read the following barcodes in sequence for the scanner to report the firmware version of 3666.

   ‣ If the output interface is RS-232, run HyperTerminal.exe on your computer to receive the information.

   ‣ If the output interface is Keyboard Wedge or USB HID, run any text editor to receive the information.

   Enter Setup

   3666 Firmware Version

   Version

6) The current version information will be displayed. For example,

   `Version = V1.06 Oct 01 2003`

Update

SN: SW3000014

7) Read the "Update" barcode for the scanner to resume its operation (exit the configuration mode).

Update

9999

Enter Setup

HOST SERIAL COMMANDS

SERIAL COMMANDS

#@ nnnn <CR>

Purpose	To configure the scanner.
Remarks	nnnn – the four digits of command parameters.
	For example, "9952" is to list the current Code ID settings.

List Page 3

9952

"0x23" + "0x40" + "0x39" + "0x39" + "0x35" + "0x32" + "0x0d"

Note: After configuring the scanner, you may send the serial command "#@9999" to save the settings.

#@ - - - -<CR>

Purpose	To halt the scanner.
Remarks	"0x23" + "0x40" + "0x2d" + "0x2d" + "0x2d" + "0x2d" + "0x0d"

#@ . . . . <CR>

Purpose	To resume operation.
Remarks	"0x23" + "0x40" + "0x2e" + "0x2e" + "0x2e" + "0x2e" + "0x0d"

#@////<CR>

Purpose	To respond with a beep.
Remarks	"0x23" + "0x40" + "0x2f" + "0x2f" + "0x2f" + "0x2f" + "0x0d"

Update

EXAMPLE

You may run HyperTerminal.exe on the host computer to send serial commands to the 1166/1266 scanner via RS-232 or BT SPP.

▶ For the scanner to turn off the beeper and save the setting –

    #@0319<CR>

    #@9999<CR>

▶ For the scanner to change the beeper frequency to 8 kHz (for Good Read Beep only) and beep –

    #@0046<CR>

    #@////<CR>

▶ For the scanner to change to Auto Power Off mode and save the setting –

    #@0068<CR>

    #@9999<CR>

Note: (1) For RS-232, you can only configure the first scanner that connects to 3666. To identify the scanner, you may send the serial command to have it respond with a beep.
(2) For BT SPP, you can configure up to seven scanners at the same time.

Enter Setup

KEYBOARD WEDGE TABLE

	0	1	2	3	4	5	6	7	8
0		F2	SP	0	@	P	`	p	⓪
1	INS	F3	!	1	A	Q	a	q	①
2	DLT	F4	"	2	B	R	b	r	②
3	Home	F5	#	3	C	S	c	s	③
4	End	F6	$	4	D	T	d	t	④
5	Up	F7	%	5	E	U	e	u	⑤
6	Down	F8	&	6	F	V	f	v	⑥
7	Left	F9	'	7	G	W	g	w	⑦
8	BS	F10	(	8	H	X	h	x	⑧
9	HT	F11	)	9	I	Y	i	y	⑨
A	LF	F12	*	:	J	Z	j	z	
B	Right	ESC	+	;	K	[	k	{	
C	PgUp	Exec	,	<	L	\	l	|	
D	CR	CR*	-	=	M	]	m	}	
E	PgDn		.	>	N	^	n	~	
F	F1		/	?	O	_	o	Dly	ENTER*

Note: (1) ⓪~⑨: Digits of numeric keypad.
(2) CR*/ENTER*: ENTER key on the numeric keypad.

Update

KEY TYPE & STATUS

KEY TYPE

If "BT HID", "USB HID" or "Keyboard Wedge" is configured for interface, Key Type and Key Status will then become applicable.

*Normal

||||||||||||||||
9926

Scan Code

||||||||||||||||
9936

KEY STATUS

Decide whether or not to change key status when "Normal Key" is selected for Key Type.

Add Shift

||||||||||||||||
9930

Add Left Ctrl

||||||||||||||||
9931

Add Right Ctrl

||||||||||||||||
9933

Add Left Alt

||||||||||||||||
9932

Add Right Alt

||||||||||||||||
9934

Enter Setup

EXAMPLE

KEY TYPE = NORMAL

For example, if you want to program the character "!" as the prefix code:

1.   Read the "Configure Prefix" barcode.

2.   Read the "Hexadecimal Value" barcode on page 166 for "2" and "1".

3.   Read the "Validate" barcode to complete this setting.

KEY TYPE = SCAN CODE

For example, if you want to program the character "a" (= "1C" on the scan code table) as the prefix code:

1.   Read the "Configure Prefix" barcode.

2.   Read the "Scan Code" barcode.

3.   Read the "Hexadecimal Value" barcode o on page 166 for "1" and "C".

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

KEY TYPE = NORMAL + KEY STATUS = SHIFT

For example, if you want to program the character "!" (= "Shift" + "1" on keyboard) as the prefix code:

1.   Read the "Configure Prefix" barcode.

2.   Read the "Add Shift" barcode.

3.   Read the "Hexadecimal Value" barcode on page 166 for "3" and "1".

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

Update

Enter Setup

NUMERAL SYSTEMS

DECIMAL SYSTEM

Decimal

0

9900

1

9901

2

9902

3

9903

4

9904

5

9905

6

9906

7

9907

8

9908

9

9909

Validate the Values

Validate

9994

Update

Abort

HEXADECIMAL SYSTEM

Hexadecimal

0

‖‖‖‖‖‖‖‖‖‖‖
9900

1

‖‖‖‖‖‖‖‖‖‖‖
9901

2

‖‖‖‖‖‖‖‖‖‖‖
9902

3

‖‖‖‖‖‖‖‖‖‖‖
9903

4

‖‖‖‖‖‖‖‖‖‖‖
9904

5

‖‖‖‖‖‖‖‖‖‖‖
9905

6

‖‖‖‖‖‖‖‖‖‖‖
9906

7

‖‖‖‖‖‖‖‖‖‖‖
9907

8

‖‖‖‖‖‖‖‖‖‖‖
9908

9

‖‖‖‖‖‖‖‖‖‖‖
9909

A

‖‖‖‖‖‖‖‖‖‖‖
9910

B

‖‖‖‖‖‖‖‖‖‖‖
9911

C

‖‖‖‖‖‖‖‖‖‖‖
9912

D

‖‖‖‖‖‖‖‖‖‖‖
9913

E

‖‖‖‖‖‖‖‖‖‖‖
9914

F

‖‖‖‖‖‖‖‖‖‖‖
9915

‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖
Enter Setup

Validate the Values

Validate

```
‖‖‖‖‖‖‖‖‖‖‖‖‖‖‖
```
9994

ASCII TABLE

	0	1	2	3	4	5	6	7	
0		DLE	SP	0	@	P	`	p	
1	SOH	DC1	!	1	A	Q	a	q	
2	STX	DC2	"	2	B	R	b	r	
3	ETX	DC3	#	3	C	S	c	s	
4	EOT	DC4	$	4	D	T	d	t	
5	ENQ	NAK	%	5	E	U	e	u	
6	ACK	SYN	&	6	F	V	f	v	
7	BEL	ETB	'	7	G	W	g	w	
8	BS	CAN	(	8	H	X	h	x	
9	HT	EM	)	9	I	Y	i	y	
A	LF	SUB	*	:	J	Z	j	z	
B	VT	ESC	+	;	K	[	k	{	
C	FF	FS	,	<	L	\	l			
D	CR	GS	-	=	M	]	m	}	
E	SO	RS	.	>	N	^	n	~	
F	SI	US	/	?	O	_	o	DEL	

Update

```
‖‖‖‖‖‖‖‖‖‖‖‖‖‖
```

Abort

```
‖‖‖‖‖‖‖‖‖‖‖‖‖‖
```

ENTERING PIN CODE FOR AUTHENTICATION

USE PRESET PIN

1) In the configuration mode, read the barcode below to use a preset PIN for authentication.

Use Preset PIN ‖‖‖‖‖‖‖‖‖‖‖‖
0448

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 6 characters are allowed.

Enter PIN in Hexadecimal… ‖‖‖‖‖‖‖‖‖‖‖‖
0452

3) Read the "Hexadecimal Value" barcode on page 166 for the desired digits or character string.

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

DISABLE AUTHENTICATION

In the configuration mode, read the barcode below to disable authentication (= No PIN).

*No PIN ‖‖‖‖‖‖‖‖‖‖‖‖
0449

Note: When using BT HID, some device driver may not support pre-defined PIN code for authentication. In this case, we suggest applying no authentication instead.

‖‖‖‖‖‖‖‖‖‖‖‖‖ Enter Setup