

## Wireless CCD Scanner

- MS912 -



## User's Manual

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Version 1.1



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### Overview

#### **Introducing the MS912**

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The MS912 scanner combines miniaturized barcode scan engine and wireless technology to provide the best value in a wireless handheld scanner. Featuring lightweight and ease-of-use, the MS912 scanner ensures the productivity and mobility of your business application.

The MS912 is the smallest wireless scanners in the market and is compatible with all major OS on the nowadays popular smartphones and tablet PCs via both HID and SPP profiles.

Enjoy the benefits of accelerated productivity, lower cost of ownership, and freedom of movement. The MS912 is a multipurpose scanner from a partner you can trust.

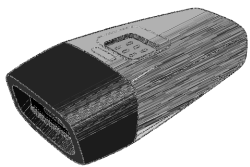





Thank you for choosing Unitech products.

#### Application:

- ✓ Warehouse
- ✓ Pharmacy
- ✓ Healthcare Services
- ✓ Retail
- ✓ Point of Sale (POS)
- ✓ Inventory Management
- ✓ Smartphone & Tablet PC

## Package Contents

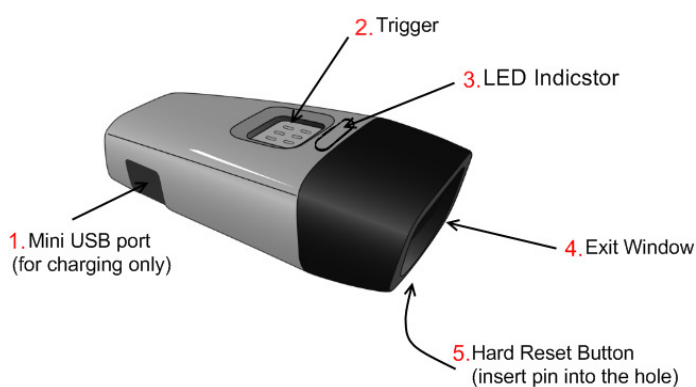
Please make sure the following contents are in the MS912 box. If something is missing or damaged, please contact your Unitech representative.

		
MS912 scanner	Product Resource CD	Quick Guide
		
USB Charging Cable	Hand Strap	Quick Connection Card

Note:

1. The scanner's default power off (idle mode) time is 3 minutes.
2. Please charge scanner for at least 2 hours prior to initial use.

[Scanner Detail]



1	Mini USB port	4	Exit Window
2	Trigger	5	Hard Reset Button
3	LED Indicator		

## Chapter 2

### Installation and Connection

#### Connecting (Pairing) the Scanner to a Host PC

Please make sure your PC or Smartphone has a built-in wireless adaptor; the MS912 supports both HID and SPP wireless profiles. If you are connecting it to an iOS (Apple) smartphone, please follow the instruction of “Connecting via Human Interface Device (HID) Mode”; if you are connecting it to an Android smartphone, please follow the instruction of “Connecting via Serial Port Profile (SPP) Mode” or the instruction of “Human Interface Device (HID) Mode”.

*Note: Android 2.x devices can work with MS912 in the SPP mode ONLY. The SPP mode or/and the HID mode are not definitely compatible with each version of Android OS, and thus depends on the Android-based hardware specifications defined by the Android device manufacturers.*

#### Connecting via Human Interface Device (HID) Mode (Recommended)

1. Turn on the wireless device on your host (PC, Smartphone, or Tablet).
2. Press the scanner trigger for 1 second to activate the scanner.
3. Scan the [Disconnect] barcode.



4. Press the trigger for 1 second to activate the scanner.
5. Scan the [HID] barcode below:



6. The scanner will emit several short beeps and then stop beeping. The green LED light will flash continually during the pairing process.
7. On your host device, in the settings section where you can see Bluetooth settings and manage your connections.
  - a. You will see the MS912 listed as [Wireless Scanner] under Bluetooth devices.
  - b. You will see a message under that [Pair with this device].
  - c. Select this device on your host and begin to pair.
8. Your Host device will ask you to type in a pin code.
  - a. Use your host device keypad to enter this pin code.
  - b. The pin code can be any set of numbers.

- c. We suggest using 4 numbers.
9. Once you have entered the pin code on the Host device, you need to set up the pin code on the MS912 to match.
- a. With the MS912, scan the Pincode Start barcode below.



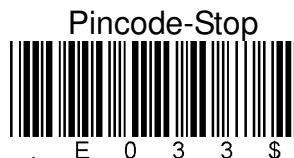
- b. Refer to the barcode table below, and scan the same numbers that you used as the pin code on your Host device. For example, if your pin code is "241657", scan [2] – [4] – [1] – [6] – [5] – [7] in sequential order:



- c. Scan the [Enter] barcode below:



- d. Scan the [Pincode-Stop] barcode:



10. On your Host device you will see the message under [Wireless Scanner] saying [connecting...].
11. Once that message turns to [Paired and Connected], the scanner will beep twice to verify a successful connection, and you are ready to start scanning bar code data into your Host device.
- a. To do a test, open up Word or Note Pad or even a new E-mail [anything that will allow

- you to type in data].
- b. Scan a number bar code from this manual.
  - c. That number should appear on your Host device in the application you opened.
  - d. If not, please scan [Disconnect] barcode below and repeat steps 1 to 9 above.

Note. To disconnect the scanner from the host or to switch the wireless profile from one to another, please scan the [Disconnect] barcode:



After scanning the [Disconnect] barcode, the MS912 will emit 3 beeps.



## Connecting via Human Interface Device (HID) Mode (Non-Pincode)

1. Press the trigger for 1 second to activate the scanner.
2. Scan [DISCONNECT]



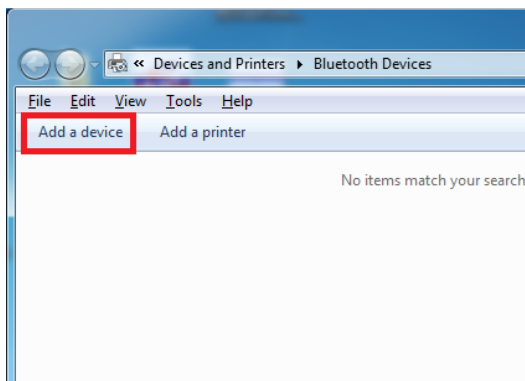
3. Scan [BT mode - HID non-pincode]; the scanner will emit 8 beeps.  
BT mode - HID non-pincode



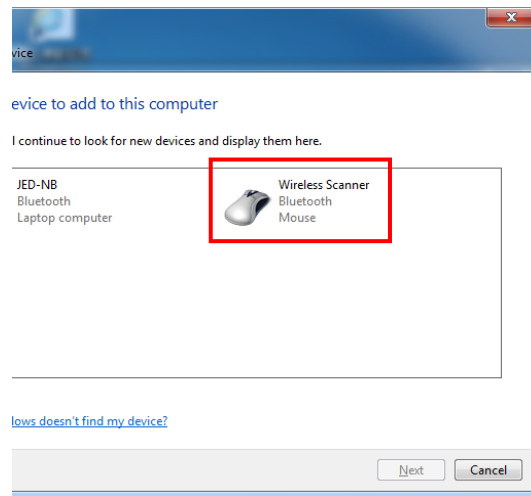
4. Search for the scanner nearby around by using the Bluetooth module of your host PC.



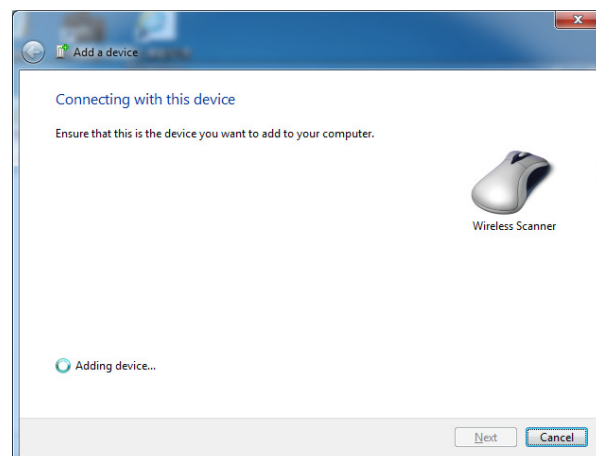
5. Click **Add a device** to search for a wireless scanner nearby around.



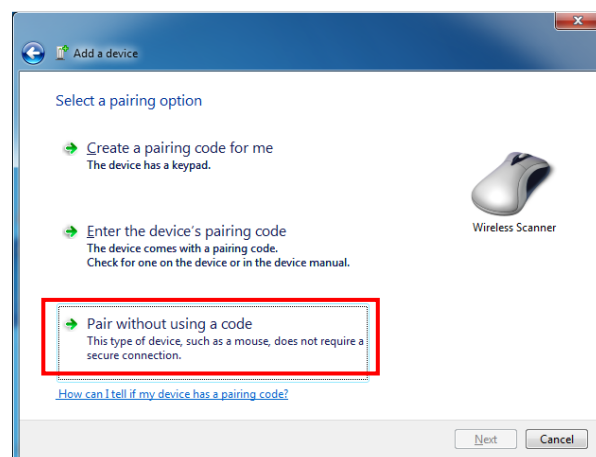
6. Click **Wireless Scanner** to add to the computer. Then, click **Next**.



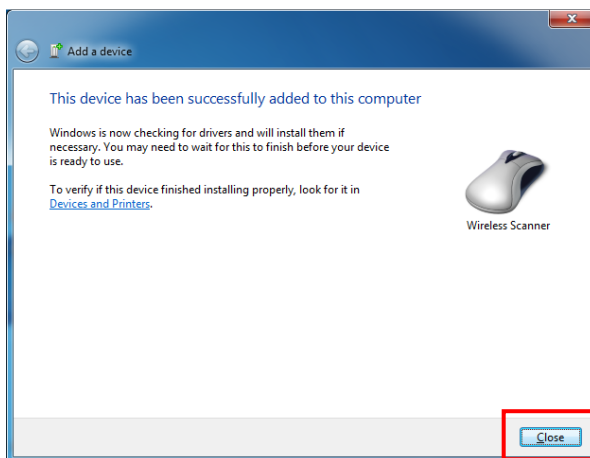
7. In this step, the computer is connecting the wireless scanner. When it connects, click **Next**.



8. Click **Pair without using a code**. Then, click **Next**.



9. Then, click **Close**.



10. You will see a message telling that the device driver software is installed successfully.



11. The scanner will beep twice to verify the connection.

\*Note:

In this mode, the scanner is recognized by the host as a mouse (pointing device). If your host fails to find it, please try [Connecting via Human Interface Device (HID) Mode] instead.

## Connecting via Serial Port Profile (SPP) Mode

1. Turn on the wireless device on your host (PC, Smartphone, or Tablet).
2. Press the scanner trigger for 1 second to activate the scanner.
3. Scan [Disconnect] barcode.



4. Scan the [SPP] barcode below:



5. The scanner will emit several beeps.
6. Conduct a search for the MS912 on your host. Select "Wireless Scanner" from discovered device list and the scanner will beep twice.
7. Enter pincode, which is "1234" by default.
8. Open serial communication software with a COM port (see Device Manager) properly set up.
9. The scanner will beep twice and the indicator LED will turn off to verify the successful connection.

## Smartphone Connection (Android)

1. Pair with the scanner via [SPP]; see the topic: *Connecting via Serial Port Profile (SPP)*

Mode.

2. Install Bluetooth Connect.apk, which is available on CD.

*Note: Before installation, enable 'Unknown Sources' in Android Authority.*

3. Enable [BluetoothConnect] in the Language & Keyboard setting window and choose [BluetoothConnect] as Input Method.
4. Click [Connect] and you will be able to connect the scanner.

**Note:** BluetoothConnect needs to be installed only when you have NO wireless input application on your Android device. *Android 2.x devices can work with MS912 in the SPP mode ONLY. The SPP mode or/and the HID mode are not definitely compatible with each version of Android OS, and thus depends on the Android-based hardware specifications defined by the Android device manufacturers.*

To get the detailed example of SPP setting, refer to Appendix 2.



## Smartphone/ Tablet PC Connection (iOS)

1. Pair with the scanner via [HID]; see topic "Connecting via Human Interface Device (HID) Mode".
2. Scan the numeric barcode according to the pincode generated by the Bluetooth application.
3. The scanner will beep twice to verify the successful connection.

**Note:** No special application needs to be installed when the scanner is connected to iOS smartphone/ tablet PC via HID mode.



To get the detailed example of HID setting, refer to Appendix 2.

## Set Bluetooth Device ID

To customize your own Bluetooth device (MS912) name for the wireless scanner, please follow below steps:

### STEP 1

Scan the **Default Wireless ID** barcode. .B022\$



## STEP 2

Scan the **Set Wireless ID** barcode. .B023\$



## STEP 3

Scan 7 alphanumeric characters from **Full ASCII Chart** of Appendix A.

## STEP 4

Scan the **Set Wireless ID** barcode. .B023\$



## STEP 5

Scan a desired BT mode barcode (SPP or HID) to connect.

\*Note:

1. If you have connected the scanner with the host BEFORE customizing your Bluetooth device name, please remove the device and create a new connection to make sure device name is refreshed. For PC, it is recommended to restart the Bluetooth adaptor in order to refresh device name.
2. At Step 3, the scanner will beep three times as an alert that more than 7 characters are entered.

## Power Management

When not being used, the scanner will enter idle mode to conserve battery power. Scan the appropriate barcode below to set the time it takes the scanner to enter idle mode after any scanning activity.

1 Minute



\*.B017\$\*

3 Minute (Default)



\*.B018\$\*

Idle Mode Disable



\*.B021\$\*

5 Minute



\*.B019\$\*

10 Minute



\*.B020\$\*

BT Immediately off ( Disable connection first, keep pairing record, power off

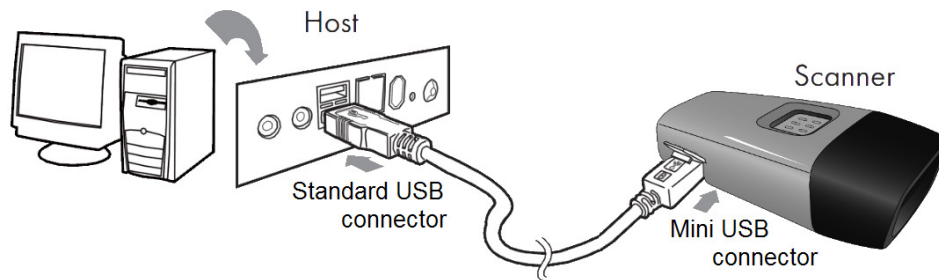


\*.E255\$\*

## Scanner LED & Beeper Indication

Scanner LED & Beeper Indication					
		Green LED	Red LED	Beeper	Remark
Scanner	Power Off or Standby	-	-	-	See Power Off Timeout
	Charging	-	Solid	-	-
	Disconnected or Discoverable	Flash	-	-	-
	Initializing	Flash	Flash	1 long beep	-
	Power Up	-	-	1 long beep	-
	Barcode scanning w/o proper connection	Flash	-	1 beep	-
	Successful barcode scan	1 Flash	-	1 beep	-
	Successful Connection	-	-	2 beeps	-
	Unsuccessful Pincode Setup	-	Flash	3 short beeps	Scan [Pincode Stop] and retry
	Low Power	-	Flash	5 beeps	-
	Out of range	1 Flash	-	4 beeps (high-low-high-low)	Move closer to the host.

## Charging the Battery



1. Flip open the mini USB port on the scanner.
2. Insert the mini USB connector into the port on the scanner and USB A connector into a USB port on the host PC.
3. Please charge the scanner for at least 2 hours (until the LED indicator turns off).





## Specification

<b>MS912</b>	
<b>Performance/Optical</b>	
Image Sensor	Linear CMOS sensor
Light Source	625nm Visible Red LED
Max. Resolution	5 mil (0.127mm)
Scan Rate	240 scans/second
Printing Contrast Scale	30% Minimum
<b>Depth of Field</b>	
Reading Distance (DOF PCS=90%)	Code 39, 5mil: 15mm (near) / 60mm (far) Code 39, 13mil: 30mm (near) / 140mm (far) Code 39, 20mil: 35mm (near) / 185mm (far)
<b>Functionality</b>	
Symbologies	UPC-A/UPC-E, EAN-8/EAN-13, Industrial 2of 5, Codabar, Matrix 2 of 5, Code 11, Code93, Code 32, Code 128, Standard Code 39, Full ASCII Code 39, Interleaved 2 of 5, ChinaPostal Code, MSI Plessey Code, UK PlesseyCode, EAN/UCC 128, Telepen Code, IATA Code, GS1 Databar.
Configuration Method	Configuration barcodes
<b>Electrical</b>	
Operation Voltage	3.7VDC $\pm$ 5%
Battery Type	Lithium-Ion
Current Consumption	Operation mode:<150mA; Standby mode:<65mA
Battery Duration	5000 reads/charge
<b>Environmental</b>	
ESD Protection	Functional after 4KV Contact and 8KV Air

Operating Temperature	0°C to 50 °C
Storage Temperature	-20 °C to 60 °C
Relative Humidity	20% to 85% non-condensing
Drop Test	1.5M
<b>Communication</b>	
Range	10M (line of sight)
Host Interface supported	Mini USB
Interface/Profile	SPP, HID
Wireless Class	Wireless Class 2
<b>Mechanical</b>	
Housing Material	ABS
Dimensions	L65 x W24 x H18mm / 2.6 x 0.9 x 0.7in
Weight	24.6g / 0.9oz
<b>Regulation Approvals</b>	
FCC Class B, CE	
<b>Accessories</b>	
Mini USB cable, Hand Strap, Tools CD	

## User Preferences

### Setup Procedures

This chapter describes the user-configurable settings for the MS912 and provides the programming bar codes for selecting these features for the scanner. To configure your MS912 scanner:

1. Locate the appropriate feature setting listed in the following pages.
2. Set feature values by scanning single barcodes or short barcode sequences.
3. The MS912 will beep to confirm a successful scan and will store the new setting in the scanner's memory.

Min. Length / Max. Length

Step 1: Scan MIN LENGTH or MAX LENGTH.

Step 2: Scan two digits from Full ASCII Chart of Appendix A.

Step 3: Scan MIN LENGTH or MAX LENGTH.

### NOTES:

1. If the scanner beeps three times, it is an alert that a setting update is incomplete.
2. If you make a mistake in attempting to update a scanner setting, such as accidentally scanning the wrong barcode or forgetting a step, scan the [Reset] barcode below to start the process over.

Reset



. P 0 2 3 \$

3. If you want to restore the scanner back to factory settings, please scan the [Default] barcode below.

Default



. A 0 0 1 \$

### Bar Code Length Setting

The following examples illustrate how to set up Code 39 with a minimum length of 5 and a maximum length of 20, respectively.

➤ Minimum length of 5

1. Go To "Group 4".
2. Scan "MIN LENGTH" to enter minimum length setting.
3. Scan "0" and "5" to select length S. (Full ASCII Chart of Appendix A)
4. Scan "MIN LENGTH" to end minimum length setting.

- Maximum length of 20
- 1. Go To "Group 4"
- 2. Scan "MAX LENGTH" to enter maximum length setting.
- 3. Scan "2" and "0" to select length 20. (Full ASCII Chart of Appendix A)
- 4. Scan "MAX LENGTH" to end maximum Length Setting.

## Code ID Setting

Each bar code symbology supported by the scanner has a default ID character defined as below:



### CODE ID IDENTIFIER

SYMBOLOGES	Factory ID	SYMBOLOGES ID	Factory ID
MSI	O	CODABAR	N
EAN 8	S	UKPLESSY	P
UPC -E	E	FULL ASCII Code 39	D
UPC -A	A	STANDARD Code 39	M
EAN 13	F	IATA 2of5	R
Code 93	L	INTERLEAVED 2 of 5	I
Code 11	J	INDUSTRIAL 2 of S (Code 2 of 5)	V
TELEPEN	U		
EAN 128	T	China Post Code	H
Code 128	K	Code 32	B

## Preamble (prefix) and Postamble (Surffix):

PREAMBLE & POSTAMBLE (PREFIX AND SUFFIX)

**Clear Preamble Postamble**



**Preamble(16)**



**Postamble(16)**



### EXAMPLE:

Set PREAMBLE String as "##"

POSTAMBLE String as " \$\$ "

## SETTING PROCEDURE:

STEP 1: Scan: PREAMBLE.

STEP 2: Scan: " # " twice from Full ASCII Chart of Appendix A.

STEP 3: Scan: PREAMBLE.

STEP 4: Scan: POSTAMBLE.

STEP 5: Scan: " \$" twice from Full ASCII Chart of Appendix A.

STEP 6: Scan: POSTAMBLE.

## ACCURACY ADJUSTMENT



## ACCURACY ADJUSTMENT

Accuracy Adjustment assures a more reliable decoded output. Enabling the feature and setting a number from 1 to 9 subjects the decoded output a higher standard of accuracy. The higher the number, the greater the accuracy.

## SETTING PROCEDURE:

1. Scan ACCURACY ADJUSTMENT.
2. Scan one digit (1~9) from barcode menu above.
3. Scan ACCURACY ADJUSTMENT.



## RESET

### NOTES:

1. The scanner will beep three times as reminder that a setting is not yet complete.
2. If you make a mistake, forget a step, etc., scan RESET to start again.

### FORMAT:

{Preamble} {Code ID}{Bar Code }{Postamble}

### NOTES:

1. A PREAMBLE is a string of up to 16 characters added to the beginning of a scanned barcode.
2. A POSTAMBLE is a string of up to 16 characters added to the end of a scanned bar code.
3. Default value for either: None.

### Quick Setup

Appendix A has a quick setup chart, which gives you one label or one function for quick customization of the scanner. To set up the scanner, locate the label with the function you want and scan that label.

### Batch Setup

If you need to configure more than one scanner, you can duplicate the settings of one scanner (master) and quickly deploy these settings to the others. You can do this by producing a set of custom setup labels derived from the master scanner. Then simply scan these labels to configure the other scanners.

The following label is called the "Dump Settings" label. Before you scan the label, please open a text editor application (such as Notepad or Microsoft Word) on the host PC. When you scan the [Dump Settings] barcode, the settings of the scanner will appear within the text editor application as one or several ASCII string(s). Use any barcode printing software, select the Code 39 symbology, and use the string(s) to generate bar code labels. Use the batch setup labels to duplicate these settings to the other scanners.



### EXAMPLE:

1. PROJECT ASSIGNMENTS:

- 1.1 Beep tune: BEEP LOW -- HIGH
- 1.2 Caps Lock Mode: CAPSLOCK ON (FIXED).
- 1.3 Reading Mode: CONTINUOUS AUTO OFF.
2. SETTING PROCEDURE:
  - 1.1 Scan BEEP LOW – HIGH. (GROUP 3).
  - 1.2 Scan CAPSLOCK ON (FIXED). (GROUP 3)
  - 1.3 Scan CONTINUOUS AUTO OFF. (GROUP 2)
3. All parameters will be converted to alphanumeric characters and shown on the monitor.

A017\$  
...0604  
5A025F04



- Print the results shown on the monitor as bar codes with a bar code printer. The bar codes should be in the Code 39 symbology.

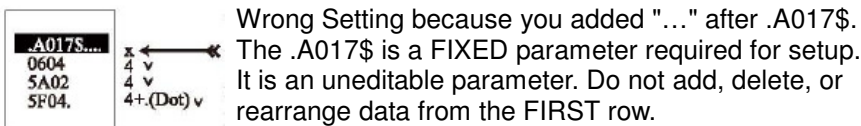
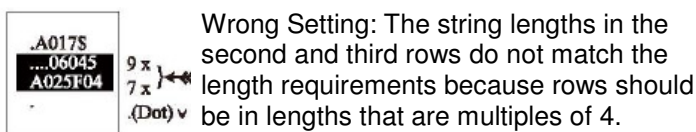
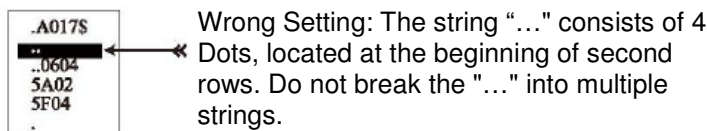


- Scan these labels with any of the scanners you wish to configure similarly to the master. Be sure to scan from the first row to the second row and so on sequentially, top to bottom.

## CORRECT SETTING

.A017\$	4	.A017\$	12
...0604	4	...06045A02	4+.(Dot)
SA02	4		
5F04	4	5F04.	
.	.(Dot)		

## WRONG SETTING



- Only the settings that are different from the default values will be dumped.
- The settings can be dumped to either a PC or terminal, if the Device Types of the PC or terminal match that of the scanner. The previous example of "Keyboardless Wedge" as Device Type is equivalent to a PC/AT interface, so you cannot dump the scanner settings to a system that does not support a PC/AT keyboard interface. The following label dumps the settings to a PC/AT regardless of the type of device that has been chosen on the scanner.

## Dump Settings on PC\_AT





- ✧ You can adjust the length of the dumped strings by combining multiple strings into one or breaking one string into multiple strings. The following strings have the same effect as the dumped string listed above:

```
... I800C06D51DJ8080  
80A007C005354415254.
```

You cannot delete any character from or add any character to the strings and the first three characters ("...") must be present in the first string.

- ✧ All characters in dumped strings are uppercase. If you see lowercase characters in dumped strings, change them to uppercase.



## Chapter 5

### Features of Memory Version

. A007\$



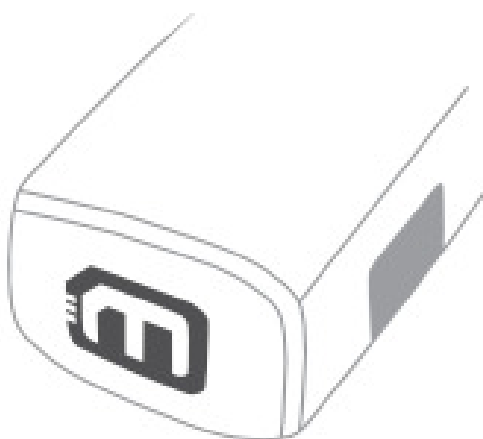
#### CHECK VERSION

#### BATCH MODE

Being out of range, the scanner will temporarily keep scanned data in its memory buffer (2K RAM) until the buffer is full. The scanner will send all stored data back to the host after getting in range.

\*Note: Batch Mode will not function when Memory Mode is enabled, or no connection is made beforehand.

The following pages only apply to the memory version mini wireless scanner, MS912M (P/N: MS912-5UBB00-SG), which can be easily distinguished by an “M” mark on the rear of the scanner.



## MEMORY MODE

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. R001\$



ENABLE MEMORY

. R002\$



DISABLE MEMORY

Once enabled, the scanner will stop sending data via Bluetooth and start storing data into the internal flash disk. (2MB)

## Delete Last Record/Clear All Record

---

. R005\$



DELETE LAST RECORD

. R004\$



CLEAR ALL RECORD

## OUTPUT DATA

---

. R003\$



OUTPUT DATA

## Data Output Method

. R014\$



WIRELESS

. R013\$



USB-VCP

To output stored data via Wireless, please do the following:

1. Scan [**WIRELESS**]
2. Scan [**OUTPUT DATA**]

To output stored data via USB-VCP, please do the following:

1. Install VCP driver (available on CD)
2. Connect the scanner & host with USB cable
3. Scan [**USB-VCP**]
4. Save data as \* .csv by "Covert to CSV.exe" (available on CD)

## DATA FORMAT

. R011\$



DATA FORMAT

The default Data Format is <Item No.>, <Date>, <Time>, <Barcode Data> below are items and their setup codes:

Code	Item	Code	Item
1	Item No.	3	Time
2	Date	4	Barcode Data

Example:

To change Data Format to <Item No.>, <Barcode Data>, <Date>, <Time>

1. Scan [**Data Format**]
2. Scan [1], [4], [2], [3] on page 39.
3. Scan [**Data Format**]

. R011\$



FIELD SEPARATOR

Default is comma ( , ) . You may replace it with any alphanumeric characters from the full ASCII table in User's Manual (on CD).

Example: To change Field Separator to Semicolon ( ; )

1. Scan [**Field Separator**]
2. Scan [ ; ] from the full ASCII table.
3. Scan [**Field Separator**]



## DATE & TIME SETUP

---

. R006\$



SET DATE

Example: To set Date to 2012-08-01 (Year-Month-Day):

1. Scan [**Set Date**]
2. Scan [1], [2], [0], [8], [0], [1] on page 39.
3. Scan [**Set Date**]

. R007\$



SET TIME

Example: To set Time to 08:10:30 am (Hr:Min:Sec)

1. Scan [**Set Time**]
2. Scan [0], [8], [1], [0], [3], [0] on page 39.
3. Scan [**Set Time**]

\* To avoid Time and Date being reset to factory default due to running out of battery, please fully charge the scanner for at least 3 hours before use.

## DATE FORMAT

---

. R008\$



DATE FORMAT

The default Date Format is DD/MM/YYYY (Code = 09), below is full list of available formats and their setup codes:

Code	Item	Code	Item
01	DD-MM-YYYY	09	DD/MM/YYYY
02	MM-DD-YYYY	10	MM/DD/YYYY
03	DD-MM-YY	11	DD/MM/YY
04	MM-DD-YY	12	MM/DD/YY
05	YYYY-MM-DD	13	YYYY/MM/DD
06	YY-MM-DD	14	YY/MM/DD
07	DD-MM	15	DD/MM
08	MM-DD	16	MM/DD

Example:

To set Date Format to MM/DD/YY (Code =12)

1. Scan [**Date Format**]
2. Scan [1], [2] on page 39.
3. Scan [**Date Format**]

## TIME FORMAT

. R009\$



TIME FORMAT

The default Time Format is HH:MM:SS (Code = 01), below are available formats and their setup codes:

Code	Item	Code	Item
01	HH:MM:SS	02	HH:MM

Example:

To set Time Format to HH:MM (Code = 02)

1. Scan [**Time Format**]
2. Scan [0], [2] on page 39.
3. Scan [**Time Format**]



## Setup Chart

### Quick Setup Sheet

#### Scanner Mode

.F002\$



Trigger

.F001\$



Flash

.F005\$



CONTINUOUS MODE

.F006\$



CONTINUOUS AUTO OFF

#### UPC-E

.H010\$



Cut Leading Digit

.H011\$



Send Check Digit

.H053\$



UPC-A Conversion

#### Beep

.F012\$



None

.F018\$



Medium

#### Terminator

.D013\$



Enter

#### Scan Code

.C010\$



U.S.

.C015\$



Alt Key

\$TQ



Cursor Right

\$TV



Back Tab

\$TP



Cursor Left

\$TW



Esc

\$TQ



Cursor Up

\$TX



Enter

\$TR



Cursor Down

\$TY



BS

\$TS



Page Up

\$TZ



Ins

\$TT



Page Down

\$T%K



Del

\$TU



Tab

## Beeps and Delays Group 1 Interblock Delay

Beep Tone  
2.7KHz

.F019\$



BEEP HIGH

.F021\$



BEEP HIGH – LOW

.F018\$



BEEP MEDIUM

.F020\$



BEEP LOW – HIGH

.F022\$



BEEP LOW

2.1KHz

.F012\$



BEEP OFF

.F014\$



BEEP HIGH

.F016\$



BEEP HIGH--LOW

.F013\$



BEEP MEDIUM

.F015\$



BEEP LOW--HIGH

.F017\$



BEEP LOW

.B001\$



0 ms

.B002\$



10 ms

.B003\$



50 ms

.B004\$



100 ms

.B005\$



200 ms

.B006\$



500 ms

Intercharacter  
Delay

.B010\$



140 uS

.B011\$



500 uS

.B012\$



1 mS

.B013\$



4 mS

.B014\$



16 mS

Scanner Beep Tone  
(Application specific  
workplace)  
Beep Tone-Standard



Beep Tone  
(Only warning tone)



Beep Tone  
(Mute)



The beep tone (Only warning tone) still keep setting error, connection quality bad, low battery power, voltage too low, forced shutdown warning tone.

## Keyboard Wedge Settings Group 2

Language(For PC/XT,AT)

Function Code



USA



UK



Off



Swiss



Spanish



ON



Italian



German



Caps-Lock



French



Alt Key Mode



Auto Trace(PC/XT, AT)



Japanese(106 key)



HUNGARIAN



Lower Case



CZECHCQWERTY



Upper Case



CZECH

Use number keypad digits



Disable



Enable

## Scanner Port: Group 3

### Terminator



**Enter**



**Return**  
(on digits keypad)



**None**

### Code ID



**0-disable**



**Enable**

### Label Type



**0-Positive**



**1-Positive and Negative**

### Scanning Mode



**Flashing wait 10 Sec**



**Trigger**



**One Press One Scan**



**Test Mode**



**Continuous**



**Multiscan**



**Default**



**Enable All Code**



**Disable All Code**



**Caplock On**



**Caplock Off**



**Caplock Auto**



**Check Version**



**Factory ID On**



**Disable Code ID**



**Double Verification**

### Data Length (Two Dgths) Send



**Disable**



**Enable**

### Preamble /postamble



**Preamble**



**Postamble**

Scan "PP/00" for  
Pre/Postamble. Scan characters  
from Full ASCII char or  
Function

## Define Code ID Group 3

### Define Code ID

.P008\$



Full ASCII Code 39 Set ID

.P006\$



Interleaved 2 of 5 Set ID

.P014\$



MSI Code Set ID

.P005\$



CODE 39 Set ID

.P007\$



Codabar Set ID

.P016\$



EAN 128 Set ID

.P001\$



EAN 13 Set ID

.P010\$



Code 128 Set ID

.P011\$



Code 32 Set ID (Italian hamacy)

.P004\$



UPC A Set ID

.P013\$



Code 93 Set ID

.P015\$



UK Plessey Set ID

.P002\$



EAN 8 Set ID

.P021\$



Standard 2 of 5 Set ID

.P009\$



Code 11 Set ID(Special)

.P003\$



UPC E Set ID

.P012\$



China Post code  
(Toshiba Code)  
Set ID

## Code 39 / Full ASCII Code Group 4

.G009\$



Disable

.G001\$



Full ASCII  
Code 39 Enable

.G004\$



Check Digit(CD)  
Calculate & Send

.G003\$



CD not Calculate

.G015\$



No Send

.G006\$



Min Length (1)

.G008\$



Enable

.G002\$



Full ASCII  
Code 39 Disable

.G005\$



CD Calculate,  
Not Send.

.G014\$



Send

.G017\$



Double labels  
decoding off

.G018\$



DL Separator  
for Double  
Code 39

.K007\$



Max Length (48)



## 2 of 5 Group 5

I 2of5 (ITF)

.J002\$



**Disable**

.J004\$



Check Digit (CD)  
Calculate & Send

.G003\$



**CD not Calculate**

.J009\$



Last Digit  
Suppressed

.J006\$



Min Length (6)

.J001\$



Enable

.G005\$



CD Calculate,  
Not Send.

.J008\$



First Digit  
Suppressed

.J014\$



Not Suppressed

.J007\$



Max Length (48)

## 2 of 5 / Code 32 Group 6

S 2of5 / China Postal  
Code (Toshiba Code)

.K002\$



Disable

.K001\$



Enable

.K004\$



Check Digit(CD)  
Calculate & Send

.K005\$



CD Calculate,  
not send

.K003\$



CD not Calculate

.K006\$



Min Length (11)

.K007\$



Max Length (48)

Code 32  
(Italian Pharmacy)

.K011\$



Disable

.K010\$



Enable

.K012\$



Leading Character Send

.K013\$



Leading Character  
No Send

.K014\$



Tailing Character Send

.K015\$



Tailing Character  
No Send

## EAN 128 Group 7

Telepen

.L015\$



**Disable**

.L014\$



**Enable**

.L020\$



**Standard**

.L021\$



**Numeric set**

Define the EAN 128  
Fields Separator

.M007\$



**Define the EAN 128  
Fields separator**

Scan a ASCII code in full  
ASCII code chart to select a  
new fields separator

UCC / EAN 128

.M002\$



**Disable**

.M001\$



**Enable**

.M004\$



**Code ID Disable**

.M003\$



**Code ID Enable**

Note: If EAN 128 be disabled,  
the EAN 128 labels will be  
decoded as Code 128

## Code 128/ Code 93 / MSI Code Group 8

Code 128

.J011\$



Disable

.J010\$



Enable

.J012\$



Min Length (5)

.J013\$



Max Length (48)

Code 93

.G011\$



Disable

.G010\$



Enable

.G012\$



Min Length (6)

.G013\$



Max Length 48

MSI / Plessey Code

.L002\$



Disable

.L001\$



Enable

.L004\$



Check Digit Send

.L003\$



Check Digit No Send

.L007\$



Check Digit Double  
Module 10

.L008\$



Check Digit Module  
11 plus 10

.L009\$



Check Digit Single  
Module 10

.L005\$



Min Length (6)

.L006\$



Max Length (48)

## Numeric Barcode



0



1



2



3



4



5



6



7



8



9

## SETTING PROCEDURE

### MIN / MAX LENGTH

STEP 1 - Scan: MIN LENGTH/ MAX LENGTH

STEP 2 - Scan: Two digits from Appendix.

STEP 3 - Scan: MIN LENGTH/ MAX LENGTH

Please note that when Min Length and / or Max Length are enabled, the scanner will only read bar codes that fall into those length parameters. Bar codes shorter or longer than specified will not be read. The default lengths for these are indicated in parentheses under the Min and Max bar codes for each symbology.

## Code 11 / Codabar Group 9

Code 11

.I011\$



**Disable**

.I010\$



**Enable**

.I042\$



**One Check Digit**

.I043\$



**Two Check Digit**

.I013\$



**Check Send**

.I014\$



**No Send**

.I015\$



**Min Length (6)**

.I016\$



**Max Length (48)**

.I003\$



**Start & Stop Send**

.I004\$



**Start & Stop No Send**

.I006\$



**Check Digit  
Calculate & Send**

.I007\$



**Check Digit Calculate  
but not Send**

.I005\$



**Check Digit  
Not Calculate**

.I027\$



**CLSI Format On**

.I028\$



**CLSI Format Off**

.I008\$



**Min Length (6)**

.I009\$



**Max Length 48**

Codabar

.I002\$



**Disable**

.I001\$



**Enable**

## UPC / EAN Code Group 10

### UPC-A

.H002\$



**Disable**

.H001\$



**Enable**

.H003\$



**Leading Digit Send**

.H004\$



**Leading Digit No Send**

.H005\$



**Check Digit Send**

.H006\$



**Check Digit No Send**

### UPC-E

.H008\$



**Disable**

.H007\$



**Enable**

.H009\$



**Leading Digit Send**

.H010\$



**Leading Digit No Send**

.H011\$



**Check Digit Send**

.H012\$



**Check Digit No Send**

.H053\$



**Zero Expansion On**

.H054\$



**Zero Expansion Off**

.H066\$



**Disable NSC=1**

.H065\$



**Enable NSC=1**

## UPC / EAN Code Group 11

EAN-13

.H014\$



Disable

.H013\$



Enable

.H015\$



Leading Digit Send

.H016\$



Leading Digit No Send

.H017\$



Check Digit Send

.H018\$



Check Digit No Send

.H049\$



ISBN Enable

.H050\$



ISBN Disable

EAN-8

.H020\$



Disable

.H019\$



Enable

.H021\$



Leading Digit Send

.H022\$



Leading Digit No Send

.H023\$



Check Digit Send

.H024\$



Check Digit No Send



**Supplement Code Group 12  
MATRIX 2 Of 5 Group 13**

Supplement  
Code

.H028\$



**Two Supplement  
Code Off**

.H026\$



**Five Supplement  
Code Off**

.H057\$



**Transmitted if Present**

.H041\$



**Space Separator  
Inserted**

.H027\$



**Two Supplement  
Code On**

.H025\$



**Five Supplement  
Code On**

.H058\$



**Must Present**

.H042\$



**Space Separator  
Not Inserted**

. M010\$



**ENABLE**

. M011\$



**DISABLE**

. M012\$



**DISABLE CDV**

. M013\$



**CDV & SEND CD**

. M014\$



**CDV & NOT SEND CD**

. M015\$



**MIN LENGTH ( 6 )**

. M016\$



**MAX LENGTH ( 48 )**

## ATA Group 14 UK PLESSY CODE GROUP 15

.N017\$



ENABLE

.N018\$



DISABLE

.N019\$



DISABLE CDV

.N020\$



CDV & SEND CD

.N021\$



CDV & NOT SEND CDV

.N022\$



MIN LENGTH ( 6 )

.N023\$



MAX LENGTH ( 48 )

.L010\$



ENABLE

.L011\$



DISABLE

.L012\$



CDV & SEND CD

.L013\$



CDV & NOT SEND CD

## Full ASCII Chart

(Characters in parentheses represent Code 39 bar code printing)



NUL(%U)



BS(\$H)



DLE(\$P)



ETB(\$W)



SOH(\$A)



HT(\$I)



DC1(\$Q)



CAN(\$X)



STX(\$B)



LF(\$J)



DC2(\$R)



EM(\$Y)



ETX(\$C)



VT(\$K)



DC3(%S)



SUB(%Z)



EOT(\$D)



FF(\$L)



DC4(\$T)



ESC(%A)



ENQ(\$E)



CR(\$M)



NAK(\$U)



FS(%B)



ACK(\$F)



SO(\$N)



SYN(\$V)



GS(%C)



BEL(\$G)



SI(\$O)



RS(%D)



) (/I)



4



? (%J)



US(%E)



\*/(J)



5



@ (%V)



SP



+



6



A



!(/A)



,(L)



7



B



”(/B)



-



8



C



#(/C)



.



9



D



\$



/



: (/Z)



E



%



0



; (%F)



F



&(/F)



1



< (%G)



G



’(/G)



2



= (%H)



H



( (/H)



3



> (%I)



I



\(%W)



+(+A)



b(+B)



c(+C)



d(+D)



e(+E)



f(+F)



g(+G)



h(+H)



i(+I)



j(+J)



k(+K)



l(+L)



m(+M)



n(+N)



o(+O)



p(+P)



q(+Q)



r(+R)



s(+S)



t(+T)



u(+U)



v(+V)



w(+W)



x(+X)



y(+Y)



z(+Z)



{ (%P)



| (%Q)



} (%R)



~ (%S)



DEL(%T)

## Function Codes for PC



F1



F2



F3



F4



F5



F6



F7



F8



F9



F10



F11



F12



Home



End



Cursor Right



Cursor Up



Page Up



Tab



Back Tab



Esc



BS



Del



Cursor Left



Cursor Down



Page Down



Enter



Ins



Alt (Left) make\*1



Win (Right) break



Shift (Left) make \*2



Alt (Right) make



Alt (Left) break



Shift (Right) make



App



Alt (Right) break



Win (Left) make



Shift (Left) break



Enter (Numeric Key)



Win (Right) make



Shift (Right) break



Ctrl (Left) break



Ctrl (Left) make \*3



Win (Left) break



Ctrl (Right) break



Ctrl (Right) make

For UK Keyboard Special Character



⏏



£

## Note:

- \*1 "Alt(left)Make" is programmed. Please scan "Alt(left)Break" to resume barcode setting.
- \*2. "Shift(left)Make" is programmed. Please scan "Shift(left)Break" to resume barcode setting.
- \*3. "Ctrl(left)Make" is programmed. Please scan "Ctrl(left)Break" to resume barcode setting.

## Barcode Chart

**EAN-13**



**EAN-8**



**UPC-A**



**UPC-E**



**ISBN 957-630-239-0**



**Interleaved 2 of 5**



**Code 39**



**Code 39 with C/D**



**EAN 128**



**Code 128**



**Codabar**



**MSI Code**





. A007\$



**CHECK VERSION**

## **MEMORY MODE**

---

. R001\$



**ENABLE MEMORY**

. R002\$



**DISABLE MEMORY**

## **Delete Last Record/Clear All Record**

---

. R005\$



**DELETE LAST RECORD**

. R004\$



**CLEAR ALL RECORD**

## OUTPUT DATA

---

. R003\$



OUTPUT DATA

## Data Output Method

. R014\$



WIRELESS

. R013\$



USB-VCP

. R011\$



FIELD SEPARATOR

## DATE & TIME SETUP

---

. R006\$



SET DATE

. R007\$



SET TIME

## DATE FORMAT

---

. R008\$



DATE FORMAT

## TIME FORMAT

---

. R009\$



TIME FORMAT

## Appendix B

### Examples of Connection to Android and iOS Smartphones

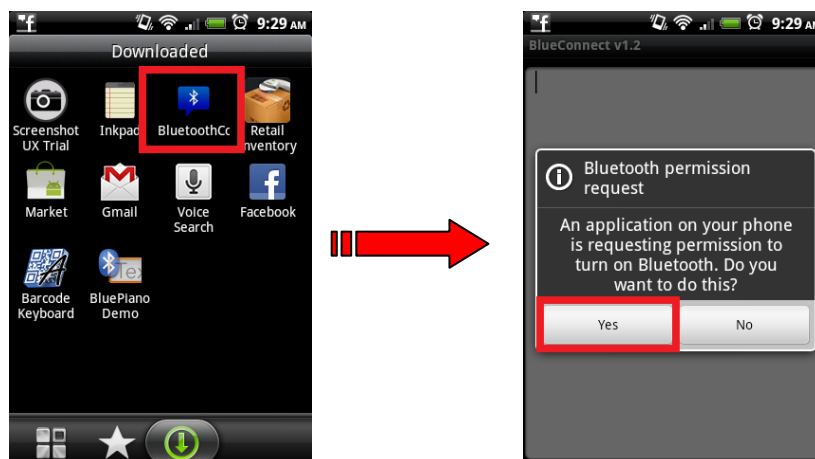
BluetoothConnect needs to be installed only when you have NO wireless input application on your Android device. *Android 2.x devices can work with MS912 in the SPP mode ONLY. The SPP mode or/and the HID mode are not definitely compatible with each version of Android OS, and thus depends on the Android-based hardware specifications defined by the Android device manufacturers.*

#### Smartphone Connection (Android)

1. Before connection between the scanner and your mobile device, pair with the scanner via [SPP]; see the topic: *Connecting via Serial Port Profile (SPP) Mode*.
2. Install [BluetoothConnect.apk](#) (available on CD) onto your mobile device and enter the program.

*Note: Before installation, enable 'Unknown Sources' in Android Authority.*

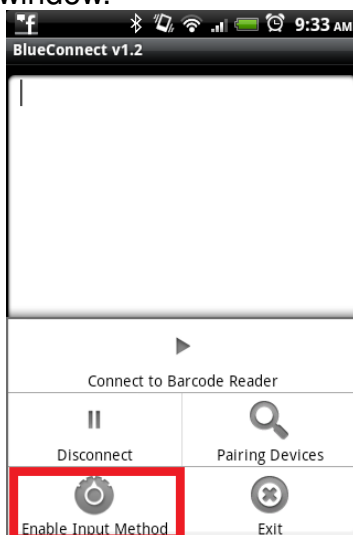
3. Once you enter the BluetoothConnect, the application may ask you to enable Bluetooth connection, and then click [Yes].



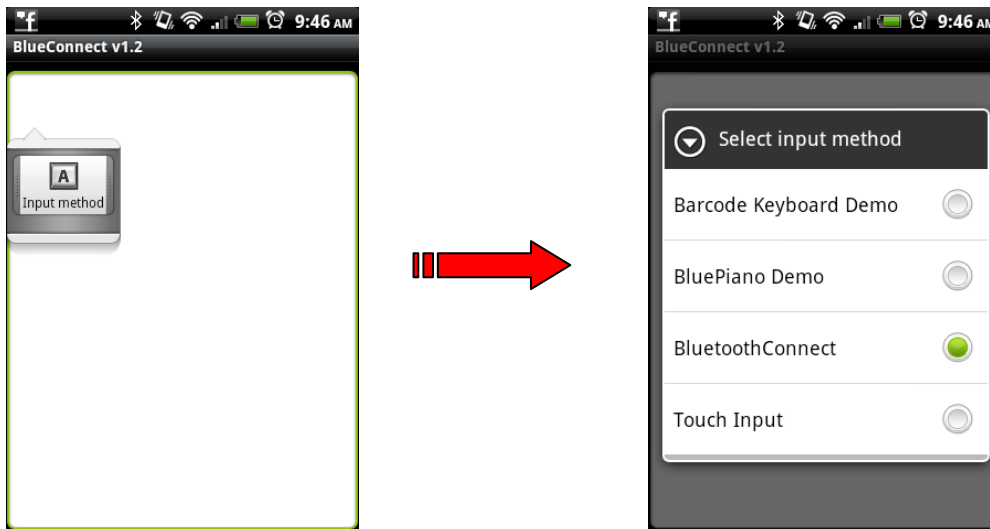
- Click the Menu button to enable the settings menu.



- Click [Enable Input Method] and enable [BluetoothConnect] in the Language & Keyboard setting window.



- Press and hold the “Input method” icon on the panel to enable Input method menu and select BluetoothConnect.




- Now enable your wireless scanner by pressing the button for 2 seconds until a long beep.
- Scan [BT mode - SPP] configuration barcode. It can be found on the quick start guide or quick connection card.

### GETTING CONNECTED

There are two modes of wireless communication:


**. E042\$**



**BT mode - SPP**

- Press the trigger for 1 second to activate the scanner.
- Scan [DISCONNECT]
- Scan [BT mode - SPP]; the scanner will emit 10 beeps.
- Select “Wireless Scanner” from discovered device list. The default pincode is “1234”.
- Open serial communication software with com port (see Device Manager) properly set up.
- The scanner will beep twice to verify the connection.


**. E043\$**



**BT mode - HID**

- Press the trigger for 1 second to activate the scanner.
- Scan [DISCONNECT]
- Scan [BT mode - HID]; the scanner will emit 11 beeps.
- Select “Wireless Scanner” from discovered device list.
- The Bluetooth application may prompt you to scan a pincode (see PINCODE SETUP section) it generated.
- The scanner will beep twice to verify the connection.

**. E031\$**



**Disconnect**


- 7 -

### PINCODE SETUP

**STEP 1**

**Pincode Start**

**. E032\$**




**STEP 2**

Scan numeric barcodes (see **NUMERIC BARCODES** section on the next pages) based on the pincode generated by the Bluetooth application.

**STEP 3**

**Enter**


**\$TX**



**STEP 4**

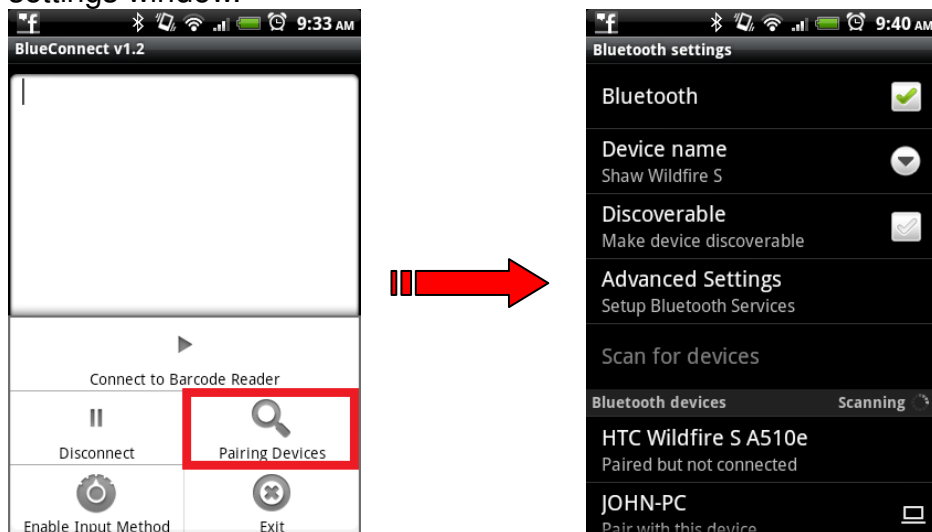
**Pincode Stop**

**. E033\$**

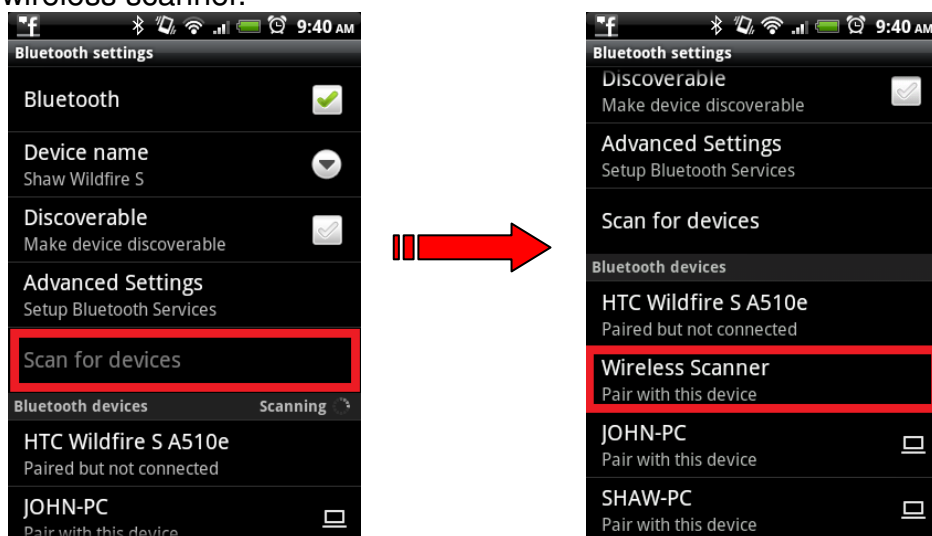


- 8 -

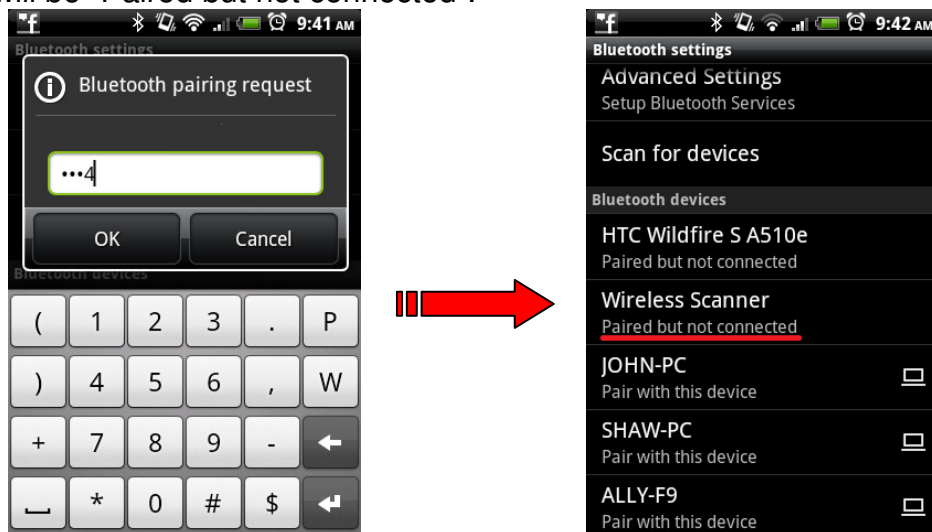
9. Click [Pairing Devices] on the setting menu and the device will prompt you to enter the Bluetooth settings window.



10. Click [Scan for devices] on the Bluetooth settings window. Click [Wireless Scanner] to pair with your wireless scanner.



11. The default pairing code is 1234. After successful pairing, the description under Wireless Scanner will be "Paired but not connected".



12. Get back to BluetoothConnect, enable setting menu and click [Connect to Barcode Reader]. The scanner will beep twice to verify the successful connection.





13. Now you will be able to transfer barcode data onto your mobile device.



## Smartphone/ Tablet PC Connection (iOS)

1. Press the scanner until a long beep sound to activate the scanner.
2. Scan [BT mode - HID] configuration barcode. It can be found on the quick start guide or quick connection card.

### GETTING CONNECTED

There are two modes of wireless communication:

**BT mode - HID**

1. Press the trigger for 1 second to activate the scanner.

2. Scan [DISCONNECT]

3. Scan [BT mode - SPP]; the scanner will emit 10 beeps.

4. Select "Wireless Scanner" from discovered device list. The default pincode is "1234".

5. Open serial communication software with com port (see Device Manager) properly set up.

6. The scanner will beep twice to verify the connection.

**BT mode - SPP**

2. Scan [DISCONNECT]

3. Scan [BT mode - HID]; the scanner will emit 11 beeps.

4. Select "Wireless Scanner" from discovered device list.

5. The Bluetooth application may prompt you to scan a pincode (see PINCODE SETUP section) it generated.

6. The scanner will beep twice to verify the connection.

**Disconnect**

### PINCODE SETUP

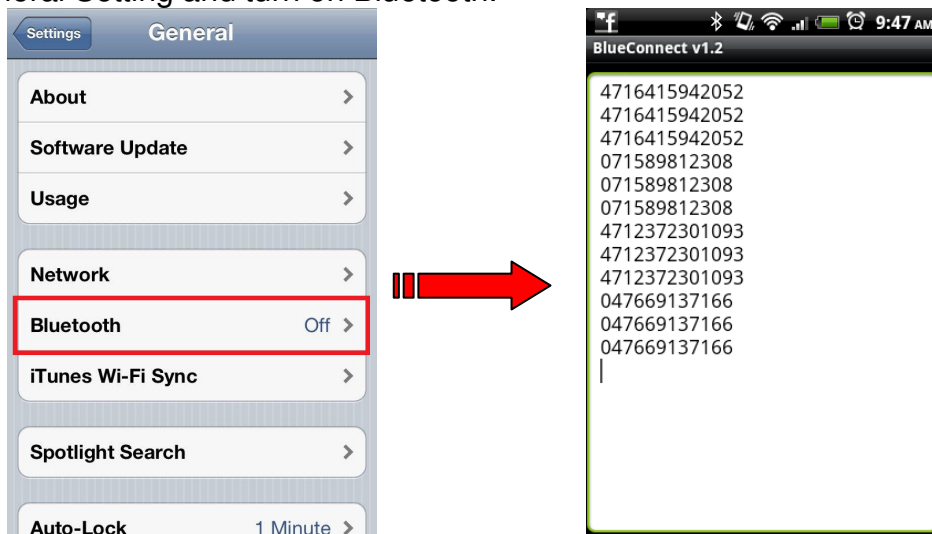
**STEP 1** Pincode Start

**STEP 2** Scan numeric barcodes (see NUMERIC BARCODES section on the back page) based on the pincode generated by the Bluetooth application.

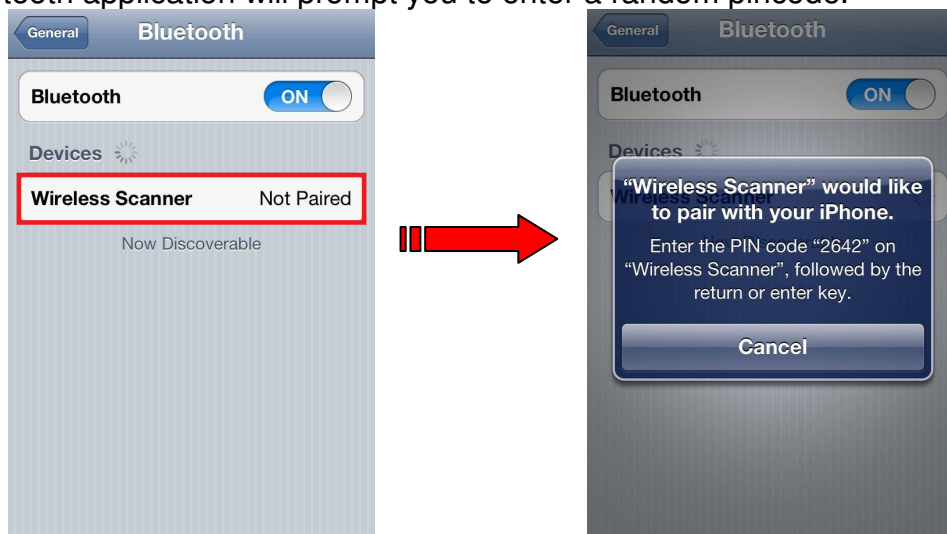
**STEP 3** Enter

**STEP 4** Pincode Stop

3. Go to General Setting and turn on Bluetooth.



4. On the discovered device list, click [Wireless Scanner] to pair with your wireless scanner. The Bluetooth application will prompt you to enter a random pincode.



- Please enter the pincode according to the procedures in the Pincode Setup section on the quick start guide or quick connection card.

**PINCODE SETUP**

STEP 1

Pincode Start

ED32\$

STEP 2

Scan numeric barcodes (see **NUMERIC BARCODES** section on the back page) based on the pincode generated by the Bluetooth application.

STEP 3

Enter

\$TX

STEP 4

Pincode Stop

ED32\$

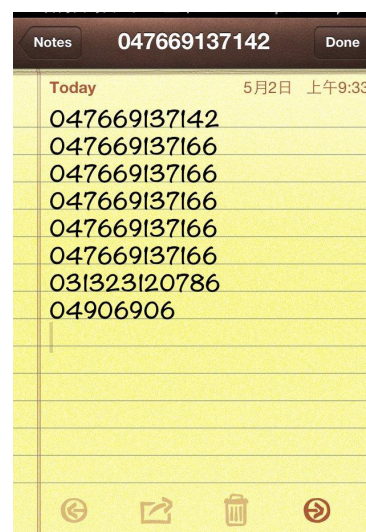
**NUMERIC BARCODES**

	1	6	
	2	7	
	3	8	
	4	9	
	5	0	

6. The scanner will beep twice to verify the successful connection. And on the discovered device list, it will show the scanner is "connected".



7. Now you can input any scanned barcode data onto your Note or other applications.



## Getting Connected without Pincode

Secure Simple Pairing (SSP), supported by Bluetooth 2.1 or above, allows you to pair with iOS without pincode.

Please scan [**Enable SSP**], as shown left, before entering the pairing procedure of [BT mode - HID].

.E049\$

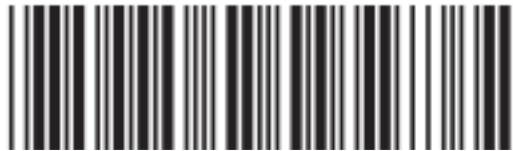


## Touch Keyboard

To toggle iPhone/iPad Touch Keyboard, please either scan below barcode or simply double-click the trigger.

### ENABLE iOS HOTKEY

.E047\$



### DISABLE iOS HOTKEY

.E048



\$

## Appendix C

### Worldwide Support

Unitech's professional support team is available to quickly answer questions or technical-related issues. Should an equipment problem occur, please contact the nearest Unitech regional service representative. For complete contact information please visit the Web sites listed below:

Region	Web Site
Global Operation Center	<a href="http://www.ute.com">http://www.ute.com</a>
Unitech Taiwan	<a href="http://tw.ute.com">http://tw.ute.com</a>
Unitech Asia Pacific & Middle East	<a href="http://apac.ute.com">http://apac.ute.com</a> ; <a href="http://india.ute.com">http://india.ute.com</a>
Greater China Division	<a href="http://cn.ute.com">http://cn.ute.com</a>
Unitech Japan	<a href="http://jp.ute.com">http://jp.ute.com</a>
Unitech America	<a href="http://us.ute.com">http://us.ute.com</a> ; <a href="http://can.ute.com">http://can.ute.com</a>
Unitech Latin America	<a href="http://latin.ute.com">http://latin.ute.com</a>
Unitech Europe	<a href="http://eu.ute.com">http://eu.ute.com</a>