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because we care

MS912+ Wireless Barcode Scanner
Quick Guide

For more detailed scanner setting, please go to www.ute.com to download the user manual and scanner configuration manager utility.

Version 1.6

FCC WARNING STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one 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.

CANADIAN DOC STATEMENT

This digital apparatus does not exceed the Class B limits for radio noise for digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de las classe B prescrites dans le Réglement sur le brouillage radioélectrique édicté par les ministère des Communications du Canada.

CE MARKING AND EUROPEAN UNION COMPLIANCE

Testing for compliance to CE requirements was performed by an independent laboratory. The unit under test was found compliant with all the applicable Directives, 2004/108/EC and 2006/95/EC.

WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT

The WEEE directive places an obligation on all EU-based manufacturers and importers to take-back electronic products at the end of their useful life.

ROHS STATEMENT OF COMPLIANCE

This product is compliant to Directive 2002/95/EC.

NON-MODIFICATION STATEMENT

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

CE FC RoHS

WARNING AND CAUTION

🚫	1. Take any metals into contact with the terminals in connectors. 2. Use the scanner where any inflammable gases.
❗	If following condition occur, immediately power off the host computer, disconnect the interface cable, and contact your nearest dealer. 1. Smoke, abnormal odors or noises come from the scanner. 2. Drop the scanner so as to affect the operation or damage its housing.
🚫 Do Not	Do not do behavior below. 1. Put the scanner in places excessively high temperatures such as expose under direct sunlight. 2. Use the scanner in extremely humid area or drastic temperature changes. 3. Place the scanner in oily smoke or steam environment such as cooking range. 4. Be covered or wrapped up the scanner in bad-ventilated area such as under cloth or blanket. 5. Insert or drop foreign materials or water into scanning window or vents. 6. Using the scanner while hand is wet or damp. 7. Use the scanner with anti-slip gloves containing plasticizer and chemicals or organic solvents such as benzene, thinner, insecticide etc to clean the housing. Otherwise, it could not result fire and electrical shock but housing may be broken and injured. 8. Scratch or modify the scanner and bend, twist, pull or heat its interface cable. 9. Put heavy objects on interface cable. Do not stare the light source from the scanning window or do not point the scanning window at other people's eyes or eyesight may be damaged by direct exposure under the light.
🚫	Do not put the scanner on an unstable or inclined plane. The scanner may drop, creating injuries.
❗	Once the interface cable is damaged such as exposed or broken copper wires, stop using immediately and contact your dealer. Otherwise, it could result fire or electrical shock.

OUT OF THE BOX

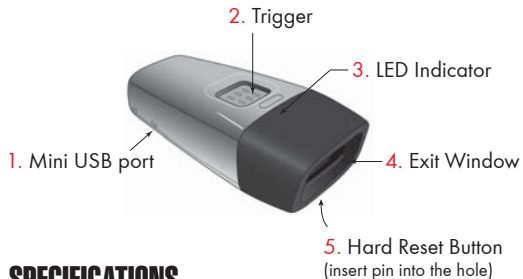Mini Wireless
Barcode Reader

Quick Guide

Quick Connection Card

USB Charger Cable

Hand Strap

INTRODUCTION

2. Trigger

3. LED Indicator

1. Mini USB port

4. Exit Window

5. Hard Reset Button
(insert pin into the hole)

SPECIFICATIONS

Light source	625nm visible red LED
Scan rate	650 scans/sec
Sensor	Linear CMOS sensor
Resolution	4mil/ 0.1mm
PCS	30%
Housing	Plastic(PC+ABS)
Profile	SPP, HID
Battery Life	6000 scans (1 scan/ 5 sec)
Charge Time	2 hours (fully charged)
Coverage	10M/33ft. (line of sight)
Operating Temp	0 to 50°C (32°F to 122°F)
Symbologies	All major 1D barcodes incl. GS1 Databar

GETTING STARTED

☑
☑
☒
☒

To scan a barcode, make sure the aiming beam crosses every bar and space of the barcode.

CHARGING THE BATTERY
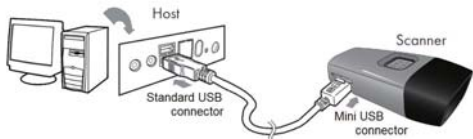
1. Flip open the mini USB on the scanner.
2. Insert the mini USB connector into the port on the scanner and USB A connector into a USB port on the host PC.

BEEPER INDICATION

Single long beep	Power up
Single beep	Good read
Single short beep	The scanner reads a Code39 of ASCII in configuration procedure
Two beeps	i. Wireless connection
	ii. The scanner successfully reads a configuration barcode
Two short beeps	Good read (Auto mode)
Four beeps (Hi-Lo-Hi-Lo)	Out of range/Poor connection
Five beeps	Low power
Three beeps	Wireless disconnection
Three short beeps	i. The scanner reads a barcodes while disconnected.
	ii. The scanner reads an unexpected barcode during configuration procedure. (scan [ABORT] to abort and start over)
Several short beeps	The scanner switches from one communication mode to another

LED INDICATION

Off	Standby or Power off
Flashing Green	Disconnected or Discoverable
Green for 2 sec	Good Read
Flashing Red	Low power
Solid Red	Charging

INTERFACE SELECTION

```
. E043$
```
BT HID

```
. E042$
```
BT SPP

```
. C035$
```
Batch Mode
(MS912M+ only)

```
. C008$
```
USB HID

```
. C006$
```
USB VCP

INTERFACE SELECTION

There are 5 interfaces for data transmission/collection:

1. **BT HID** - Emulates a **Bluetooth HID keyboard** that transmits each barcode data to the host after decode. This interface is recommended for Bluetooth connection. (See page 9 for details)
2. **BT SPP** - Emulates a **Bluetooth SPP device** that transmits each barcode data to the host after decode. (See page 9 for details)
3. **Batch Mode** - Emulates a **USB mass storage device** that saves each barcode data during off-line data collection (See page 25)
4. **USB HID** - Emulates a **USB keyboard** that transmits each barcode data to the host after decode. This interface is recommended for tethered connection.
5. **USB VCP** - Emulates a **USB virtual com device** that transmit each barcode data to the host after decode.

GETTING CONNECTED 📶

There are two modes of wireless communication:

. E043$

(Recommended)
BT mode - HID

1. Press and hold the trigger for 1 second to activate the scanner.
2. Scan [**DISCONNECT**]
3. Scan [**BT mode - HID**]; the scanner will emit several 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.

. E042$

BT mode - SPP

1. Press and hold the trigger for 1 second to activate the scanner.
2. Scan [**DISCONNECT**]
3. Scan [**BT mode - SPP**]; the scanner will emit several 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.

. E031$

Disconnect

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$

NUMERIC BARCODES

|||||||||||||| **1**

|||||||||||||| **2**

|||||||||||||| **3**

|||||||||||||| **4**

|||||||||||||| **5**

6 ||||||||||||||

7 ||||||||||||||

8 ||||||||||||||

9 ||||||||||||||

0 ||||||||||||||

POWER OFF TIMEOUT

The period of inactivity before auto power-off.

Variable Timeout

. B030$

SET MINUTE
(Range: 00 ~ 60)

. B029$

SET SECOND
(Range: 00 ~ 60)

The default timeout is 3 minutes 0 second.

For example, to set the timeout as 5 minutes 30 seconds:

1. Scan [Set Minute]
2. Scan [0] & [5] on page 11 & 12.
3. Scan [Set Minute]
4. Scan [Set Second]
5. Scan [3] & [0] on page 11 & 12.
6. Scan [Set Second]

No Timeout (Scanner Always On)

. B021$

DISABLE
TIMEOUT

SMARTPHONE CONNECTION

Getting Connected - iOS & Android

Simply follow instruction in [**BT mode - HID**] (page 9) ,in which step
5 can be skipped since iOS & Android will not require pin-code
for connection.

Touch Keyboard - iOS

. E047$



ENABLE iOS HOTKEY

After enabling iOS Hotkey(disabled by default), you may simply
<u>double-click the trigger</u> to toggle the iPhone/iPad Touch Keyboard.

Touch Keyboard - Android

Please follow below steps to toggle Android virtual keybaord:
1. Enter "Settings"
2. Enter "Language & input"
3. In Keyboard & input window, tap "Default" to continue.
4. Turn off "Physical keyboard", or Turn on "On-screen keyboard"
   and the Touch Keyboard will function properly again.

Choose input method	
Hardware Physical keyboard	ON
English (US) ASUS Keyboard	
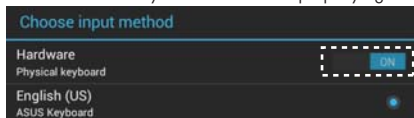
Slide to
turn off

GENERAL SETTINGS

`. A001$`	DEFAULT
`. P023$`	ABORT
`. A007$`	CHECK VERSION

BEEPER

`. F012$`	BEEP OFF
`. F018$`	**BEEP ON**

TERMINATOR

`. D012$`	**CR**
`. D011$`	LF
`. D013$`	CR + LF
`. D010$`	NONE
`. D015$`	SPACE
`. D014$`	TAB

KEYBOARD LAYOUT

`.C010$`	**ENGLISH (USA)**	JAPAN (106 key)	`.C009$`
`.C018$`	ENGLISH (UK)	CANADIAN (FRENCH)	`.C025$`
`.C012$`	FRENCH	CANADIAN (TRADITIONAL)	`.C034$`
`.C011$`	GERMAN	NORWEGIAN	`.C029$`
`.C014$`	ITALIAN	SWEDISH	`.C026$`
`.C013$`	SPANISH	PORTUGUESE	`.C031$`

KEYBOARD LAYOUT

. C017$

CZECH
(QWERTY)

. C022$

CZECH
(QWERTZ)

. C021$

HUNGARIAN
(QWERTZ)

. C024$

HUNGARIAN
(101 KEY)

. C016$

SWISS
(GERMAN)

. C023$

SWISS
(FRENCH)

BELGIAN
(AZERTY)

. C030$

DUTCH

. C028$

DANISH

. C027$

SLOVAK

. C032$

BRAZILIAN
(PORTUGUESE)

. C033$

ALT CODE

. C015$

ENABLE SYMBOLOGIES

. A002$

ENABLE ALL CODE

. G010$

CODE 93

. K010$

CODE 32

IATA

. N017$

. L010$

UK PLESSEY

TELEPEN

. L014$

. L001$

MSI

GS1 DATABAR

. N032$

. N001$

INDUSTRIAL 2 OF 5

GS1 DATABAR LIMITED

. N010$

. M010$

MATRIX 2 OF 5

GS1 DATABAR EXPANDED

. N026$

BINARY CHECK CHARACTER

. E029$

ENABLE

. E030$

DISABLE

Once enabled, a checksum will be added to the end of each data to conduct Xor calculation. For Bluetooth SPP & USB-VCP, the BCC is 1 byte. For Bluetooth HID, the BCC are 2 bytes.

Example:
The barcode data is "TEST" with terminator <CR><LF>

1. Bluetooth SPP & USB-VCP:
Data Format = <T> + <E> + <S> + <T> + <CR> + <LF> + <BCC>.
BCC = 54h ^ 45h ^ 53h ^ 54h ^ 0Dh ^ 0Ah = 11h

2. Bluetooth HID:
Data Format = <T> + <E> + <S> + <T> + <Enter> + <BCC>
BCC = 54h ^ 45h ^ 53h ^ 54h ^ E7h = F1h

However, since control character cannot be displayed in Bluetooth HID, BCC will be converted into 2 bytes of characters. As a result, the data will be: TEST + <Enter> + F + 1

AUTO MODE

For MS912M+ only

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: Auto Mode will not function when Batch Mode is enabled, or no connection is made beforehand.

BATCH MODE ▣

For MS912M+ only

The following pages only apply to the batch version mini wireless scanner, MS912M+ (P/N: MS912-FUBB00-SG/TG), which can be easily distinguished by an "M" mark on the rear of the scanner.

BATCH MODE

. C035$

BATCH MODE

After scanning the above barcode, the scanner will be able to collect barcode data off-line. The barcode data will be stored in the format of:
< **Date** >, < **Time** >, < **Barcode Data** > < **CR** >

To retrieve stored data, please connect the scanner to the host with cable, access removable storage device "**MiniScan**" from which you may open or copy the file "**BARCODE.txt**" to your computer.

To delete ONE stored data, please scan below barcode :

. R005$

DELETE LAST DATA

To delete ALL stored data, simply delete the file "**BARCODE.txt**" in the removable storage device "**MiniScan**" until you hear two beeps.

- 25 -

DATA FORMAT

. R011$

DATA FORMAT

The default Data Format is <Date>, <Time>, <Barcode Data> below are all items available for display and their codes:

Code	Item	Code	Item
2	Date	4	Barcode Data
3	Time	5	Quantity

Example:
To change Data Format to <Barcode Data>, <Quantity>, <Date>, <Time>
1. Scan [Data Format]
2. Scan [4], [5], [2], [3] on page 11.
3. Scan [Data Format]

. R010$

FIELD SEPARATOR

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

Example: To change Field Separator to Semicolon (;)
1. Scan [Field Separator]
2. Scan [;] from the full ASCII table.
3. Scan [Field Separator]

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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	Format	Code	Format
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 11.
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	Format	Code	Format
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 11 & 12
3. Scan [TimeFormat]

. 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 11 & 12.
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 11 & 12.
3. Scan [Set Time]

> * To avoid Time and Date being reset to factory default due to running low on battery, please fully charge the scanner for at least 2 hours before use.

. R017$

ENABLE QUANTITY INPUT

Once you enable quantity input, the operation procedure under batch mode will be as follows:

1. Scan [BATCH MODE] (page 25)
2. Set DATA FORMAT (page 26) as appropriate. For example, your data format is <Barcode Data>, <Quantity>.
3. Scan a random barcode; it will be stored as <Barcode Data>.
4. Scan [SET QUANTITY] (page 30)
5. Scan the numeric barcodes on page 11 &12 as desired (ranges from 1 to 99999); it will be stored as <Quantity>.
6. Scan [SET QUANTITY] (page 30) again.
7. Scan [SAVE DATA] (page 30)
8. Repeat Step 3 – 7 to complete your task.
9. Retrieve batch data (refer to instruction on page 25)

. R015$

SET QUANTITY

. R016$

SAVE DATA

QUANTITY

For MS912M+ only

. R018$

DISABLE QUANTITY INPUT

Once quantity input is disabled, the operation procedure under batch mode will resume normal procedure as follows:

1. Scan [BATCH MODE] (page 25)
2. Set DATA FORMAT (page 26) as appropriate. For example, your data format is <Barcode Data>, <Quantity>.
3. Scan a random barcode; it will be stored as <Barcode Data>
4. Repeat Step 3 to complete your task.
5. Retrieve batch data (refer to instruction on page 25)

   <Barcode Data 1>
   <Barcode Data 2>
   <Barcode Data 3>
   ....
   ....

   * Quantity setting is available on firmware "SM3-c-3.02.BTA. MEM-UT" or later version.

TEST BARCODES

Code 39

CODE-39 TEST

Interleaved 2 of 5

9876543210

Code 128

12345678

EAN

4 716415 942052