

marson

MR11A7
Mobile UHF RFID Reader

User's Manual

V 2.0

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1. Introduction

The MR11A7 is a Wireless UHF RFID Reader that uses Bluetooth as the communication interface. It can quickly connect mobile devices such as computers, mobile phones, tablets, etc. through the HID (Human Interface Device) interface, without installing additional device drivers, and can complete an array of operations by integrating its Apps with the Cloud. With a streamlined contemporary styling and a fresh, simple, two color design, it is ergonomic and easily fits in one hand. With a 1.5 meters Drop-protection rating, it is also suitable for outdoors use in various harsh environments. The MR11A7 has an 1100mAh internal battery and 2MB of internal memory, enough for 6,000 online/offline scans.

1-1. Product Features

Light and Easy to Carry

Using Bluetooth as the communication interface, the MR11A7 avoids wiring limitations and enables users to transfer and sync data without changing their work style. Weighing in at just 106g, the product is easily held in one hand and is shaped ergonomically.

Novel Exterior Design

The two-color exterior design is fresh, simple and clean. The plastic shell is curved, fashionably shaped, and in harmony with mobile phones and tablet usage.

Industry Level Protection

The MR11A7 is a Wireless UHF RFID Reader featuring a 1.5 meters drop protection rating. It is suitable for outdoorsy use in extremely harsh environments.

High Performance Reading

The MR11A7 can read multiple UHF RFID tags at the same time. The 100 cm Read Distance also enhances its mobility and practicality.

Excellent Compatibility

Featuring Secure Simple Pairing (SSP), the MR11A7 is compatible with the various mobile phones and tablets in the market. User simply taps on the screen to connect devices via Bluetooth HID interface while no pin-code is required.

Long Battery Life

The 1100mA internal lithium battery powers up to 6,000 scans on a full charge, eliminating the need for frequent battery changes, ensuring employee efficiency.

Human Centered Design

Streamlined, simple button and light indicator design saves users from spending time fumbling. The unique light indicator and vibrator communicates read status to the user even in noisy surroundings. A detachable hand strap is also included, so the device may be tied to the waist or hung on the neck, making it easy to reach for anytime use, and hard to lose.

1-2. Package Contents

Each MR11A7 package includes the following items:

1. One (1) MR11A7 Wireless UHF RFID Reader
2. One (1) Hand Strap
3. One (1) Quick Guide
4. One (1) Battery
5. One (1) Micro USB cable

1-3. Product Characteristics and Specifications

1-3-1. RFID Tag Supported by the MR11A7

The MR11A7 can support the EPC protocols Generation 2 of RFID tags. Both EPC Code and TID data of GS1 standard are readable.

1-3-2. MR11A7 Product Specifications

Performance	
Frequency	902MHz ~ 928 MHz (US) 865MHz ~ 868 MHz (EU) (Factory Configured)
Standard	EPC Generation-2, ISO 180000-6C
Memory	2 MB
Read Mode	Single-tag Read Multiple-tag Read
Reading Distance	100 cm (Depends on the tag and environment)
Physical Characteristics	
Dimension	W51.4×L109.3×H28.1 mm
Weight	106g (with Battery)
Color	White
Material	PC
Cable	1.5 M (Micro USB cable)
Button	Trigger Button, Function Button
Indicator	Buzzer, LED, Vibrator
Power	
Operation Voltage	3.7 VDC
Working Current	< 450mA
Standby Current	< 120mA
Battery	3.7V, 1150mAh, Lithium Battery
Number of Scan (per full charge)	6,000 scans (1 scan/ 5 sec, Bluetooth connected)
Connectivity	
Radio	Bluetooth 2.1 + EDR (Class2)
Range	10M (line of sight)
Interface/ Profile	BT HID BT SPP USB HID USB VCP Memory
User Environment	
Operating Temperature	-10~55°C
Storage Temperature	-20~65°C
Humidity	0%~95%RH (Non-condensing)
Drop Durability	1.5M
Sealing	IP42
Regulatory	
ESD	Functional after 4KV contact, 8KV air discharge
EMC	CE EN55024/32, EN301489-1-17, EN302208-2 FCC Part15B
RF	CE EN300328 V2.1.1, SAR FCC Part15C, SAR
Safety	EN/IEC60950-1
Environmental	WEEE, RoHS 2.0

Table 1-1: MR11A7 Specifications

1-3-3. MR11A7 Indicator LED and Buzzer

MR11A7's LED indicators use three colors: blue, green and red, as per Figure 1-1. In combination with the buzzer they indicate different conditions in Configuration Mode.

Status	Blue LED	Green LED	Red LED	Buzzer
Power up			lit 1 second	1 long beep
Good Read		lit 1 second		1 short beep*
Bluetooth Disconnected (Discoverable)	flashing			
Bluetooth Connected		2 flashes		2 short beeps
Deletes Memory Data		lit 1 second		2 short beeps
Deletes Pairing Record		3 flashes		3 short beeps
Data Transfer Failure (Offline)		lit 1 second		3 short beeps
Data Storage Failure (Memory Full)		1 flash		3 short beeps
Data Transfer Failure (Poor Connection Quality**)		lit 1 second		4 short beeps (Hi-Lo-Hi-Lo)
Enters Configuration Mode (BT Disconnected/USB/Memory Mode)		stay on		2 short beeps
Enters Configuration Mode (BT Connected)		stay on		3 short beeps
Exits Configuration Mode				2 short beeps
Low Power			flashing	

Table 1-2: MR11A7's LED Indicators and Buzzer

*Please refer to **5-9-2. Beep Time** for beep length configuration.

**It can be that an obstacle between MR11A7 and host device has interfered with the data transmission, or MR11A7 is too far away from the host device. To fix this, please get back in effective transmission range.

1-4. Operating Instructions

1-4-1. Power Up

Press the Trigger Button for 2 seconds without releasing, as per Figure 1-1. MR11A7 will emit one long beep and light the LED red. When the sound then stops and the light goes off, the reader successfully powers up.

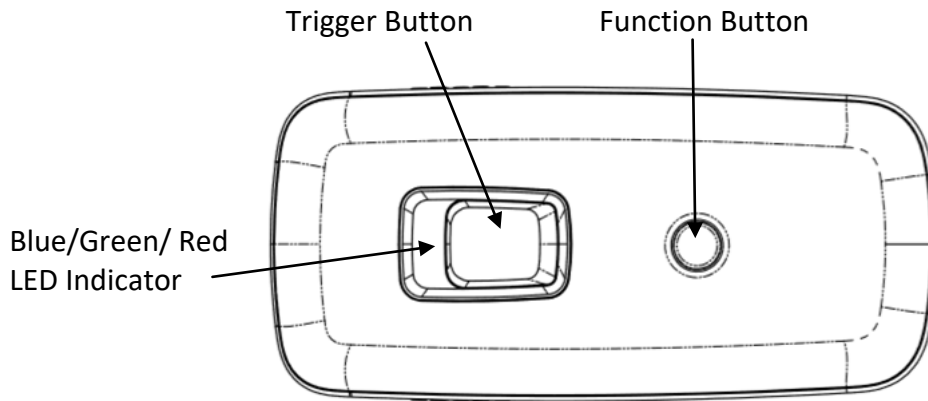


Figure 1-1: Trigger Button and Function Button

1-4-2. Shut Down

Method 1:

By default, MR11A7 shuts down automatically after 5 minutes of inactivity. To adjust the auto power-off timeout, please refer to Chapter 5-8. **Enter Sleep Mode / Timer**

Method 2:

Using a needle or paper clip, press the Reset Button located at the bottom of the MR11A7 once, as per Figure 1-2. This will force a shut down.

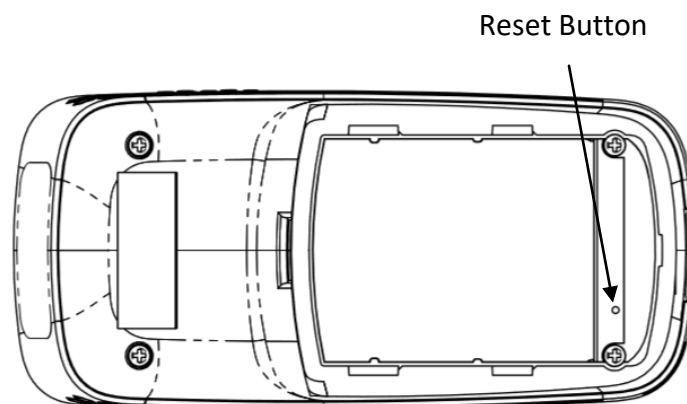


Figure 1-2: Reset Button

1-4-3. Quickly Switching Between BT HID and BT SPP

When in BT HID or BT SPP mode, do the following:

1. Press and release Function Button once
2. Press and release Trigger Button once
3. Quickly repeat 1 and 2 for 5 cycles

Afterwards the LED indicators of MR11A7 will be blinking in either of the below 2 colors, each representing different result:

1. Blue LED blinks 12 times - MR11A7 enters BT HID mode
2. Green LED blinks 12 times - MR11A7 enters BT SPP mode

1-4-4. Connecting to a PC/ Notebook

Step 1:

Press and hold the Trigger Button for 2 seconds to power up MR11A7, after that the blue indicator LED will flash continuously. (If the blue LED does not flash, it means MR11A7 is not currently in Bluetooth Mode. Please refer to Section **5-3. Communication Interface**, and change the Communication Interface to BT-HID.)

Step 2:

Enter the PC/Notebook Bluetooth application, as per Figure 1-3, and click *Add a Device*.

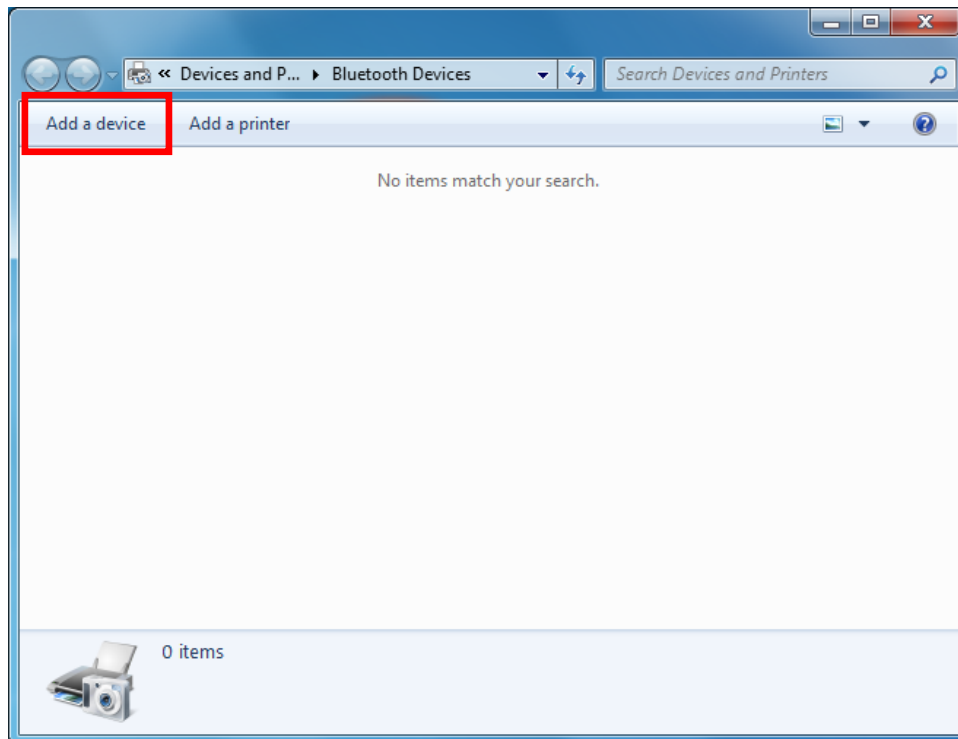


Figure 1-3: PC/Notebook Bluetooth application Main Window

Step 3:

In the Add a device window, double click **UHF RFID Reader** to connect, as per Figure 1-4.

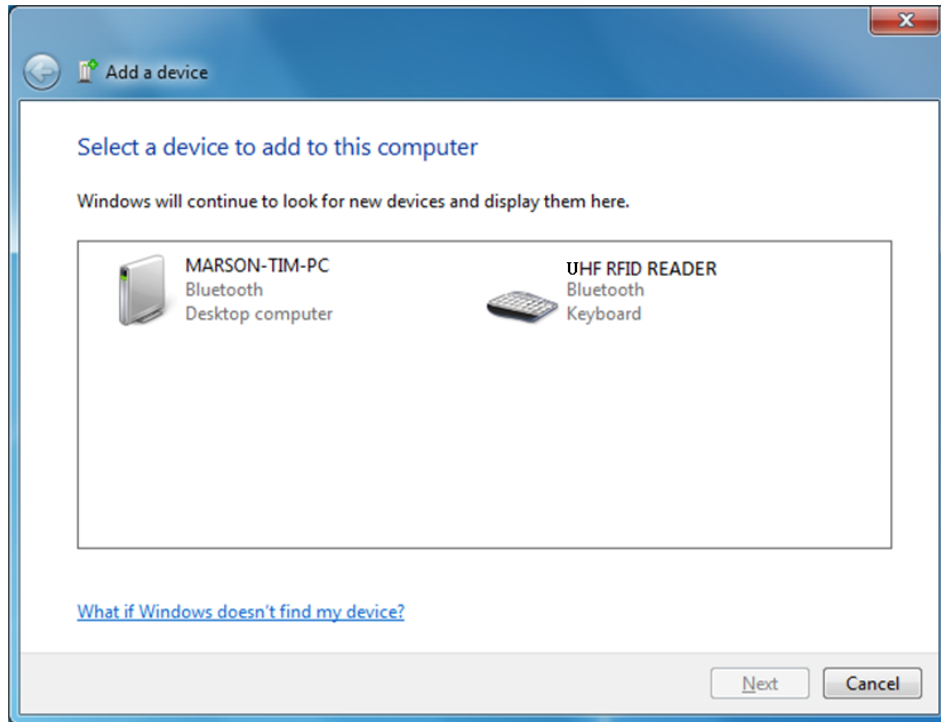


Figure 1-4: Select Bluetooth Device

Step 4:

When successfully connected the MR11A7 will emit two short beeps and turn off its blue LED indicator. The PC/Notebook will show a Successful Connection message as in Figure 1-5, and after clicking *Close* the PC/Notebook Bluetooth application Main Window will show **UHF RFID Reader** as a connected device, as per Figure 1-6.

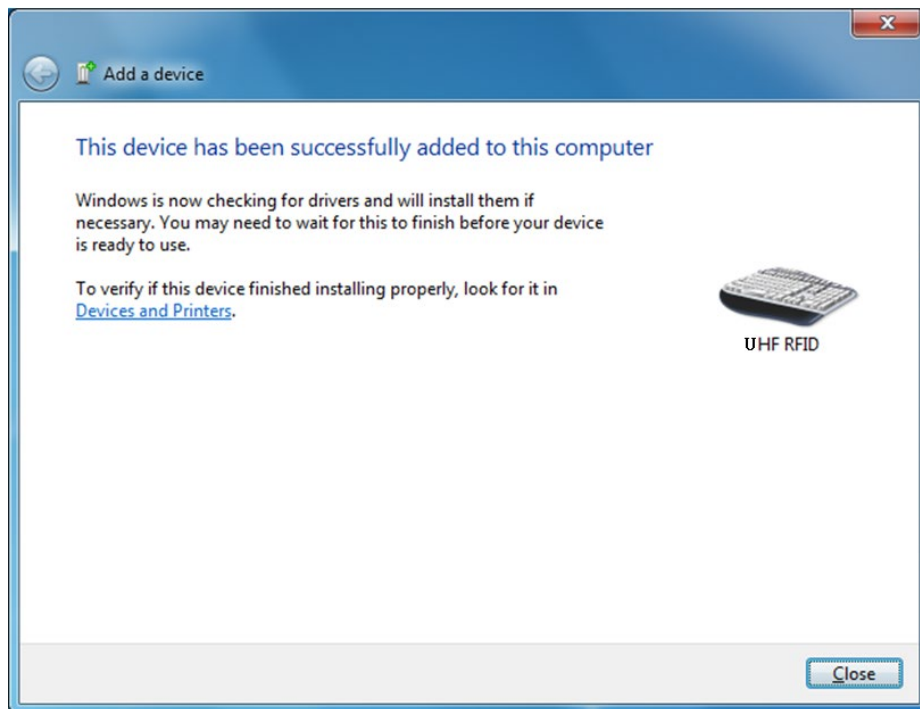


Figure 1-5: Successful Connection message

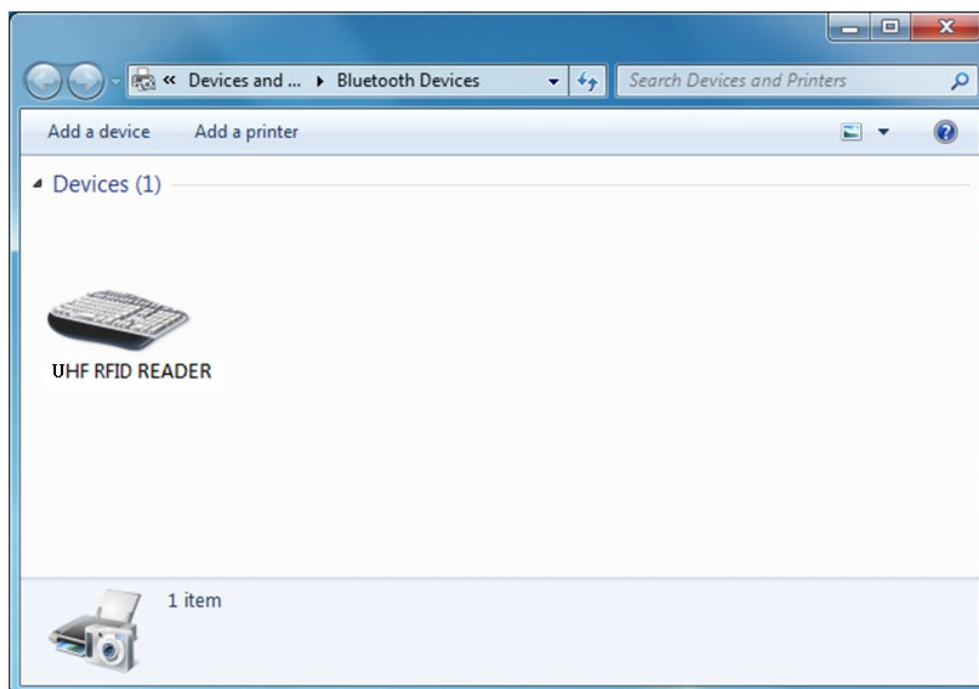


Figure 1-6: PC/Notebook Bluetooth application Main Window

Step 5:

Launch an application program that can accept HID keyboard input, such as Word. RFID Tag data read by the MR11A7 will output to that application program as per Figure .

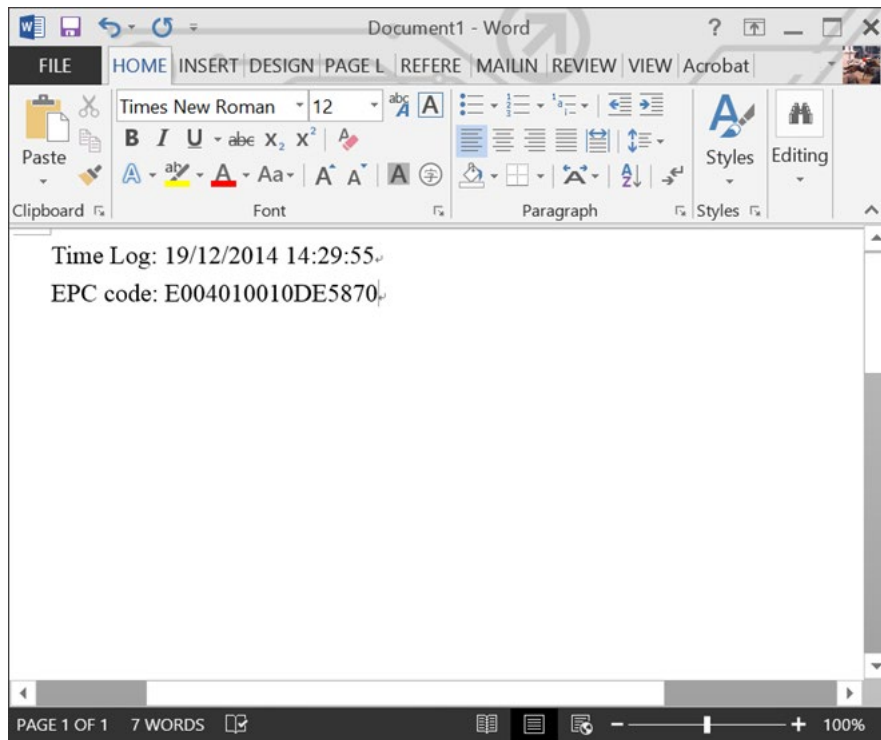


Figure 1-7: RFID Tag data

1-4-5. Connecting to an Apple iOS Device

Step 1:

Press and hold the Trigger Button for 2 seconds to power up MR11A7, after that the blue LED indicator will flash continuously. (If the blue LED indicator does not flash, it means MR11A7 is not currently in Bluetooth Mode. Please refer to Section **5-3. Communication Interface**, and change the Communication Interface to **BT-HID**.)

Step 2:

On the Apple iOS device, go to **Settings > Bluetooth**, and turn on Bluetooth, as per Figure 1-8.



Figure 1-8: Bluetooth Settings screen

Step 3:

In the discoverable devices list, select **UHF RFID Reader**, as per Figure 1-9



Figure 1-9: Select UHF RFID Reader

Step 4:

Upon establishing connection the MR11A7 will emit two short beeps and turn off its blue LED indicator. Also, the UHF RFID Reader in the Apple iOS device's Bluetooth devices list will list as "Connected", as per Figure 1-10.



Figure 1-10: The UHF RFID Reader now lists as "Connected"

Step 5:

Launch an app that can accept HID keyboard input, such as Notes. RFID Tag data read by MR11A7 will output to that app, as per Figure 1-11.

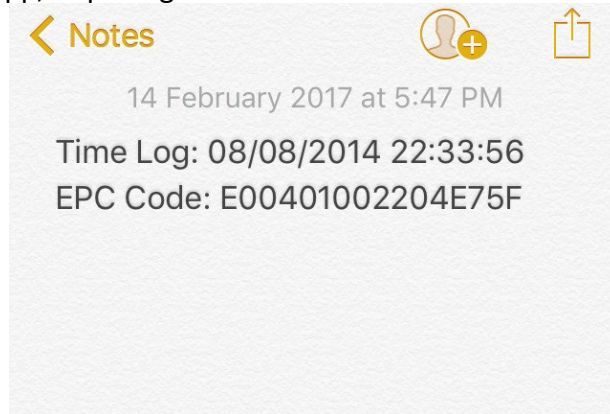


Figure 1-11: RFID Tag data

Step 6:

If a virtual keyboard is required, please press the Function Button once. At this moment the MR11A7 will emit one short beep, and the Apple iOS device's virtual keyboard will pop out as per Figure 1-12.

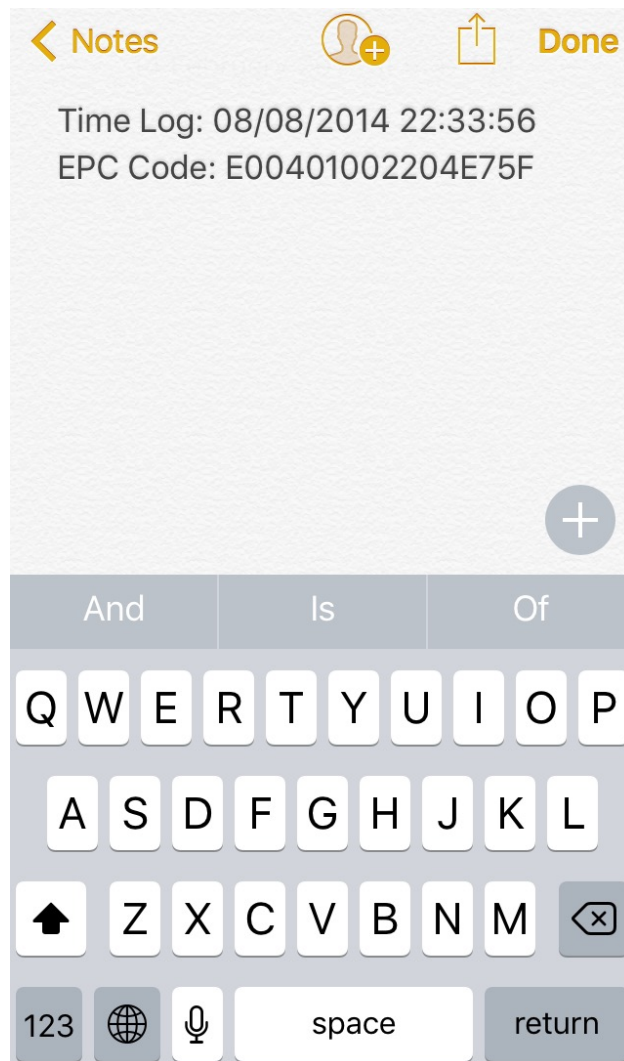


Figure 1-12: iOS Virtual Keyboard

1-4-6. Connecting to an Android Device

Step 1:

Press and hold the Trigger Button for 2 seconds to power up MR11A7, after that the blue LED indicator will flash continuously. (If the blue LED does not flash, it means MR11A7 is not currently in Bluetooth Mode. Please refer to Section 5-3. **Communication Interface**, and change the Communication Interface to **BT-HID**.)

Step 2:

On the Android device, go to **Settings > Bluetooth**, and turn on Bluetooth, as per Figure 1-13.

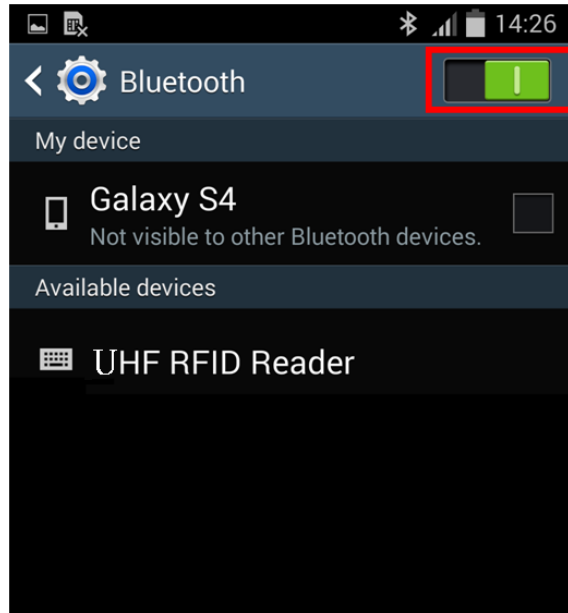


Figure 1-13: Bluetooth Settings screen

Step 3:

In the available devices list, select UHF RFID Reader, as per Figure 1-14.

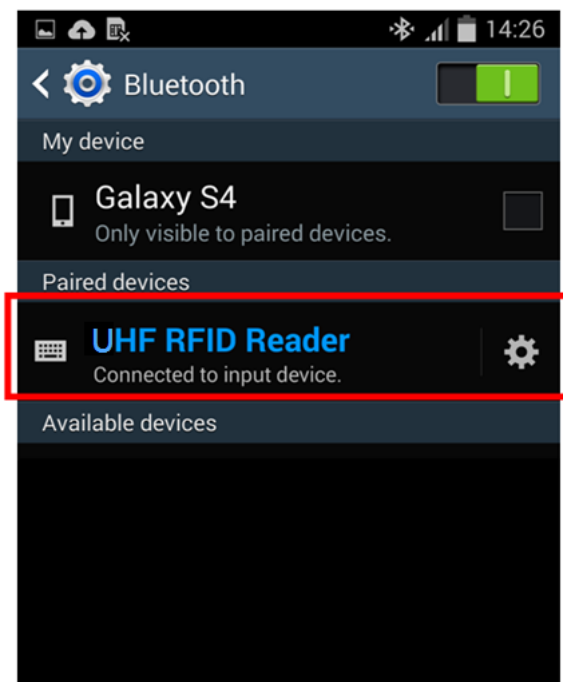


Figure 1-14: Select UHF RFID Reader

Step 4:

Upon establishing connection the MR11A7 will emit two short beeps and turn off its blue LED indicator. Also, the UHF RFID Reader in the Android device's Bluetooth devices list will list as "Connected", as per Figure 1-15.

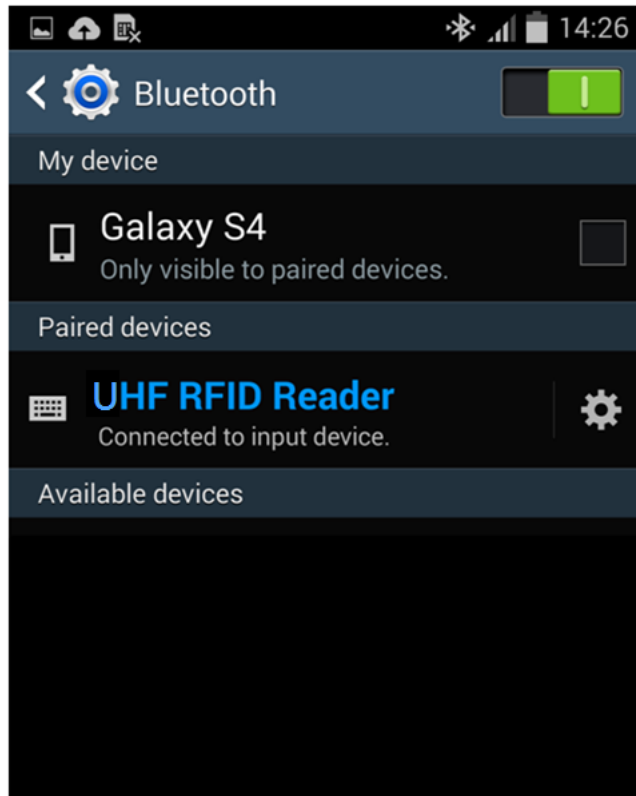


Figure 1-15: The UHF RFID Reader now lists as "Connected"

Step 5:

Launch an app that can accept HID keyboard input, such as ColorNote. RFID Tag data read by the MR11A7 will output to that app, as shown in Figure 1-16.

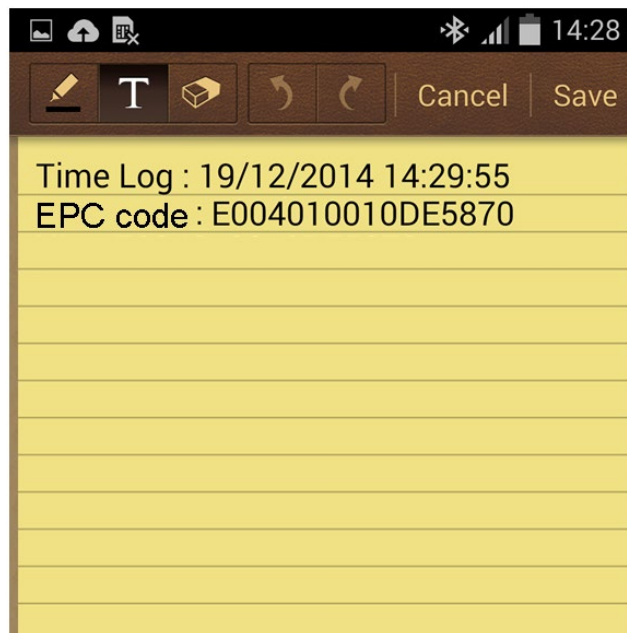


Figure 1-16: RFID Tag data

Step 6:

If a virtual keyboard is required, please go to **Settings > Language and Input > Default**, and turn off the physical keyboard (or in some cases, turn on the on-screen keyboard) in the Select Input Method screen, as shown in Figure 1-17. At this time the virtual keyboard will resume normal operation.



Figure 1-17: Turn on the on-screen keyboard.

1-4-7. Reading RFID Tags

MR11A7's RFID antenna is located at its front (as per Figure 1-18). When reading, hold the unit, aim at the RFID tag (as per Figure 1-19), and press the Trigger button. If reading is successful (Good Read), the MR11A7 will emit one beep and the green LED indicator will simultaneously lit for one second. Reading Distance varies based on RFID tag's specifications and the different placement of tags. RF output power

ver

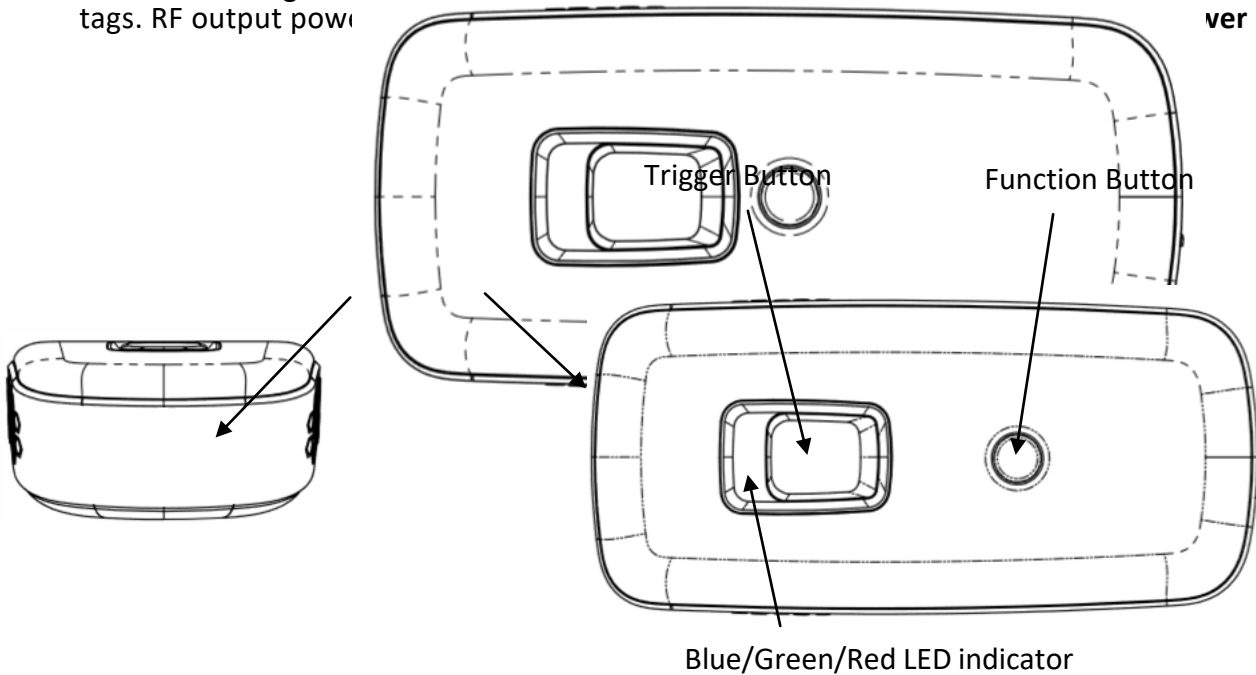


Figure 1-18: Antenna, LED Indicator, Trigger Button and Function Button

MR11A7

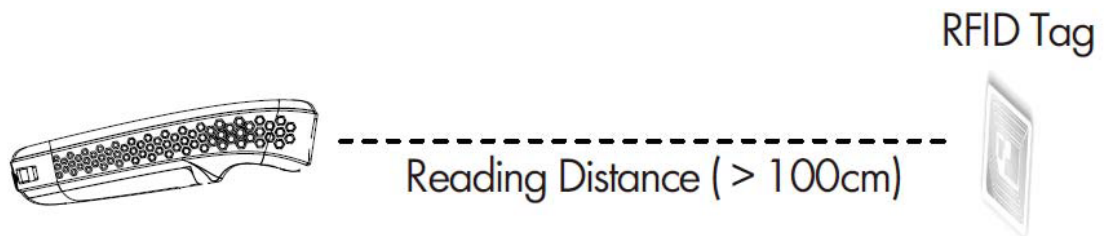


Figure 1-19: Aiming at a RFID Tag and Reading Distance

CAUTION ! Reading distance may be impacted by the type of tag and environmental conditions. Figure 1-19 is based on Alien 964X Higgs-3 tag and tested in an office environment (25°C).

1-4-8. Clearing the Bluetooth Pairing Record

The MR11A7 will save its Bluetooth pairing records and, when disconnected, will automatically attempt to restore previous connections. The following methods will clear MR11A7's Bluetooth pairing record in order to facilitate new connections. After clearing its Bluetooth pairing record the MR11A7 will break off all Bluetooth connections, entering Bluetooth Disconnected status.

Step 1:

To clear the pairing record from Host device, please enter Settings > Bluetooth application, and remove/forget the "UHF RFID reader" in the device list.

Step 2:

To clear the pairing record from MR11A7, Press and hold the MR11A7's Function button without releasing for about 5 seconds and the MR11A7 will emit 3 short beeps and its Blue LED will start flashing as confirmation that it has cleared its Bluetooth pairing record.

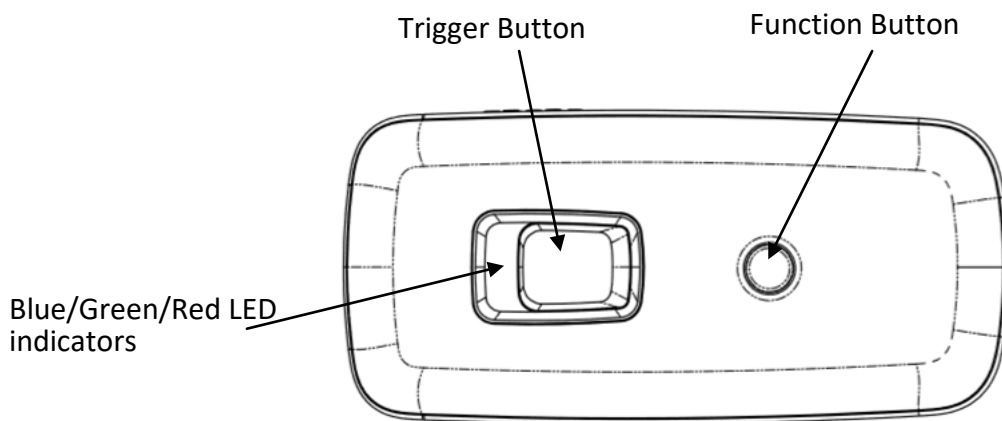


Figure 1-20: Trigger Button and Function Button

CAUTION !

1. Please make sure both Step 1 & 2 are done as instructed before establishing new connection with MR11A7 from the new/old Host device. If either of Step 1 or 2 is skipped, your new connection with MR11A7 might be requested for a pincode, which is unable to be input from MR11A7 (as it does not have a numeric keypad). To fix this, redo Step 1 & 2, restart your Host device and try establishing new connection with MR11A7 again.
2. After clearing the Bluetooth connection record the MR11A7 will enter Bluetooth Disconnected status and continuously flash its blue LED indicator. If the blue LED indicator does not flash, it means MR11A7's Communication Interface is not in Bluetooth Mode. Please refer to **5-3. Communication Interface**.

1-4-9. Retrieving/Importing/Deleting Memory Data

When the Communication Interface is set to Memory (refer to Section 5-3. **Communication Interface**), RFID tag data read will be stored in MR11A7's memory, which can be retrieved/imported/deleted with the following steps.

A. Retrieving the Data in Memory

Step 1:

After completing an RFID Tag read operation, use a micro USB cable and connect the MR11A7 to a PC/Notebook.

Step 2

Open the *My Computer* window and enter the removable storage device "MiniScan", as per Figure 1-21.

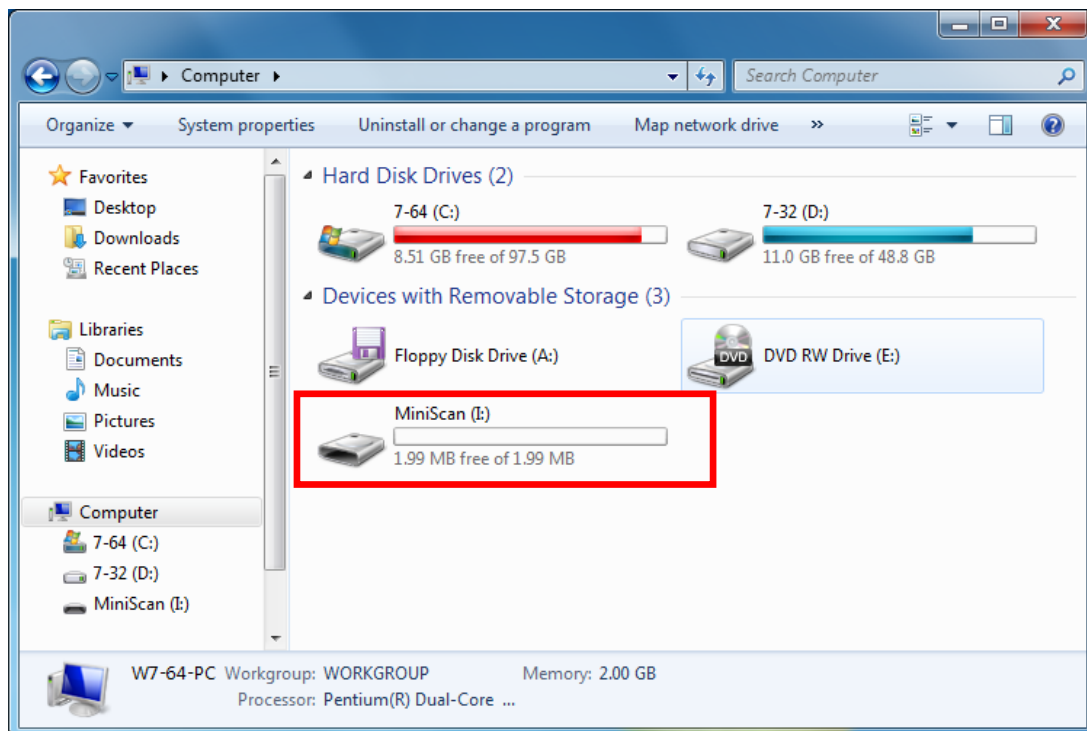


Figure 1-21: Entering the removable storage device "MiniScan" through *My Computer*.

Step 3:

Copy the file TAGDATA.TXT, found in the removable storage device “MiniScan”, to the PC/Notebook, as per Figure 1-22.

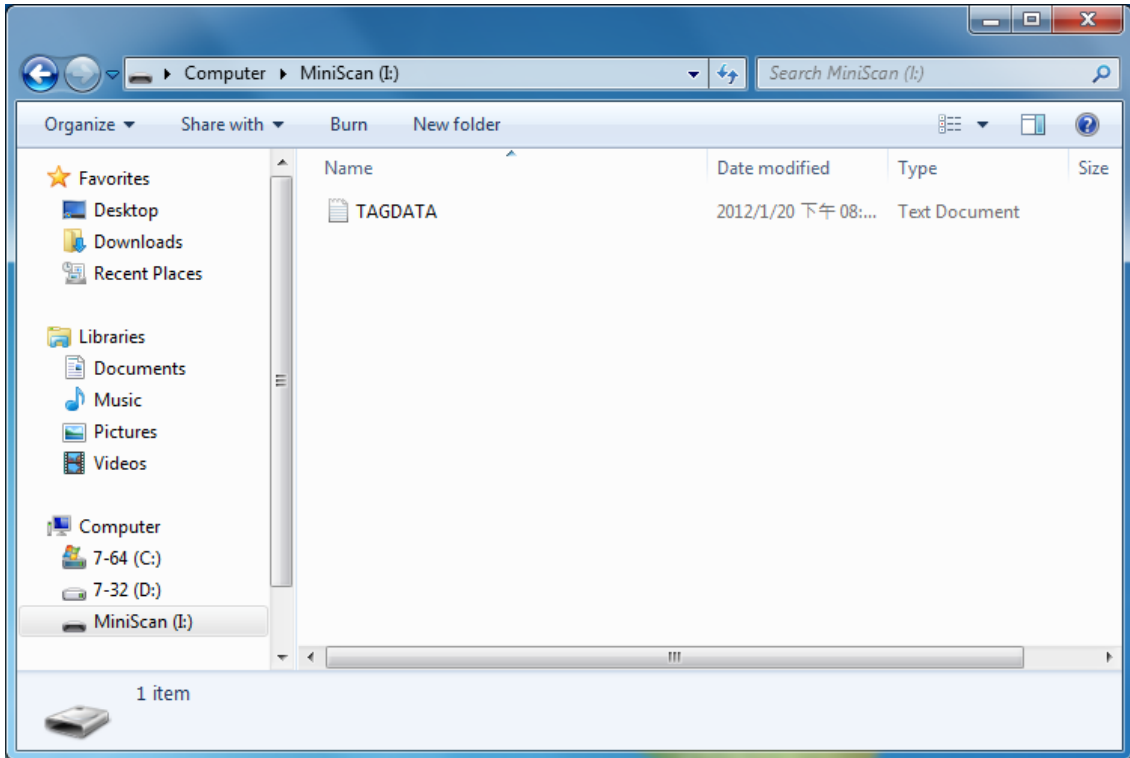


Figure 1-22: Copy the file TAGDATA.TXT to the PC/Notebook.

B. Importing Memory Data into Excel

Step 1:

Open TAGDATA.TXT using Excel.

In the *Text Import Wizard, Step 1 of 3* dialogue box, choose *Delimited*, and click *Next*, as per Figure 1-23.

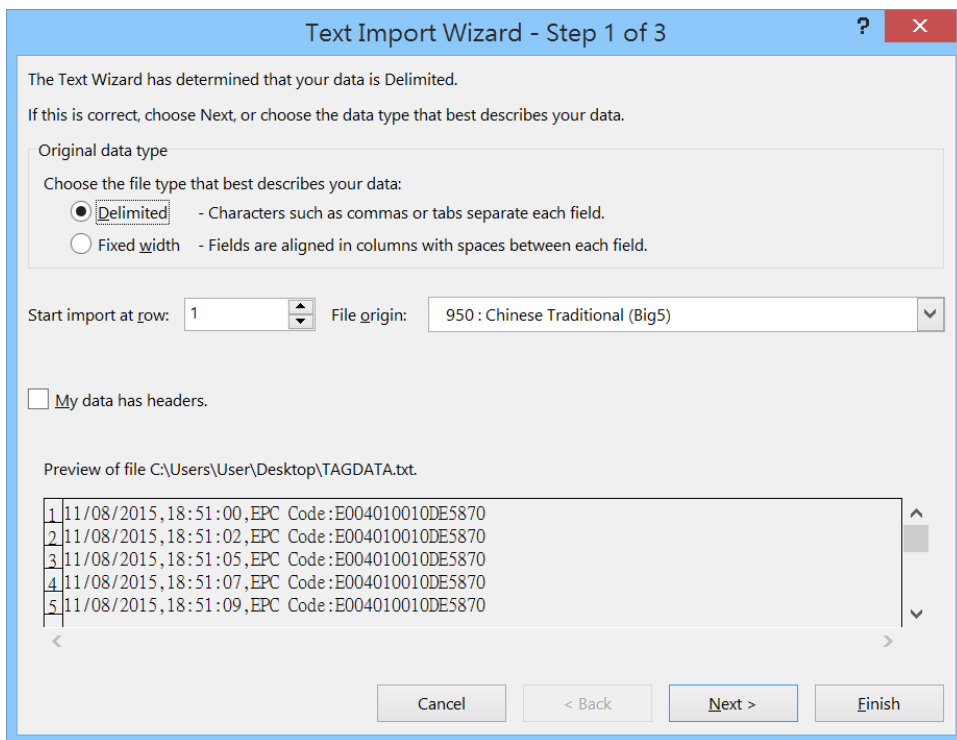


Figure 1-23: *Text Import Wizard, Step 1 of 3* dialogue box.

Step 2:

In the *Text Import Wizard - Step 2 of 3* dialogue box, select your pre-set Delimiter which is Comma by default (please refer to **5-4-1. Delimiter**) and click *Next*, as per Figure 1-24.

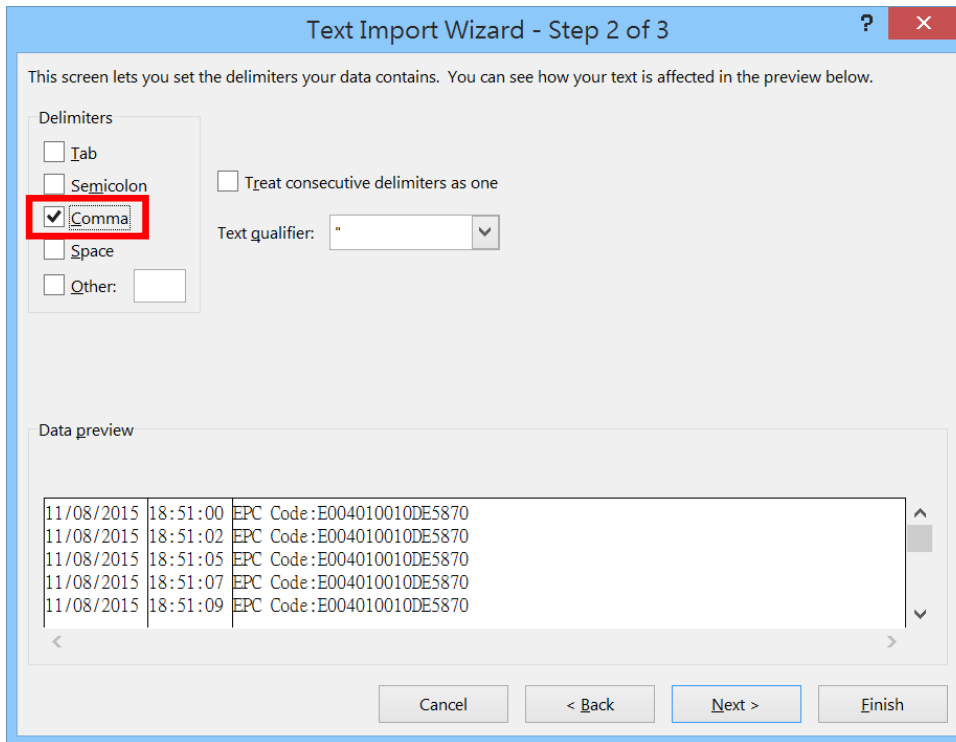


Figure 1-24: *Text Import Wizard - Step 2 of 3* dialogue box

Step 3:

In the *Text Import Wizard - Step 3 of 3* dialogue box, if there are no special requirements, directly click *Finish*, as per Figure 1-25.

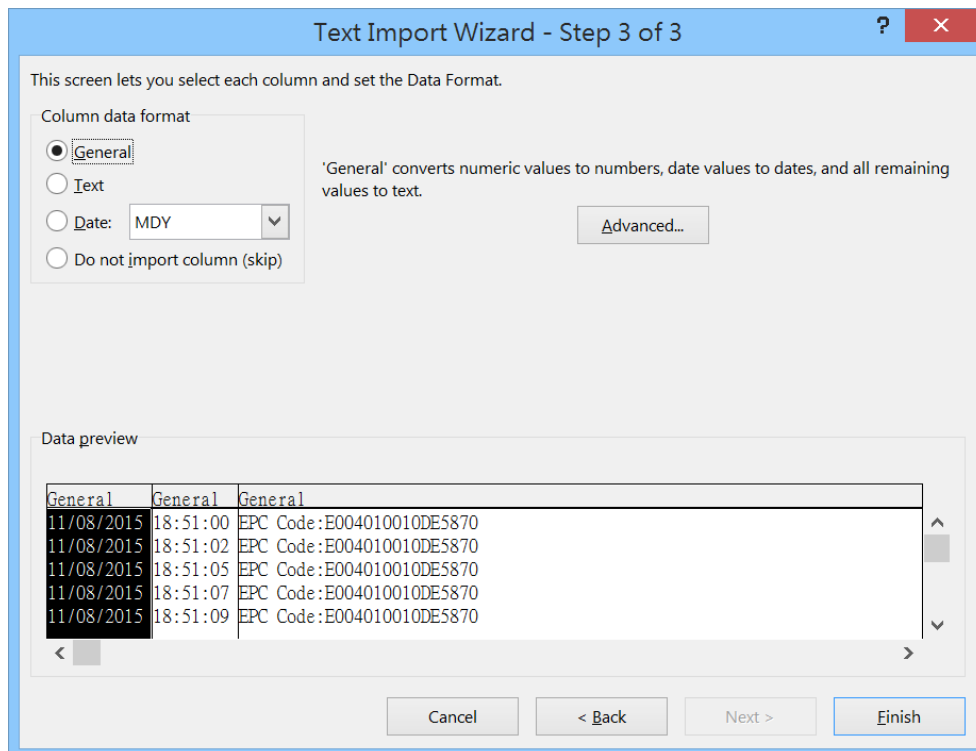


Figure 1-25: *Text Import Wizard - Step 3 of 3* dialogue

Step 4:

The Memory data will appear in the form of an Excel spreadsheet, as per Figure 1-26.

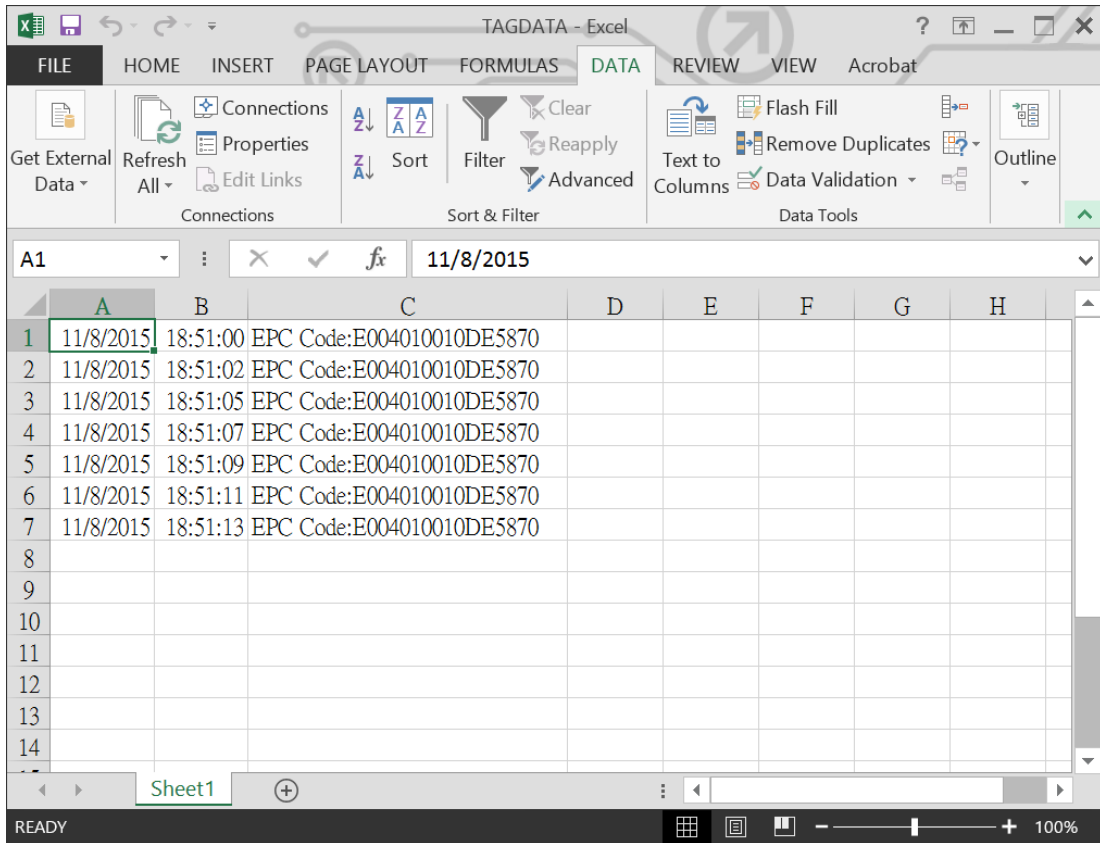


Figure 1-26: Memory data, as shown in an Excel table.

C. Deleting the Data in Memory

To delete the data on MR11A7’s Memory, please directly delete the file TAGDATA.TXT in the removable storage device “MiniScan”, as per Figure 1-27. In about 5 seconds the MR11A7 will emit 2 short beeps, indicating a successful delete.

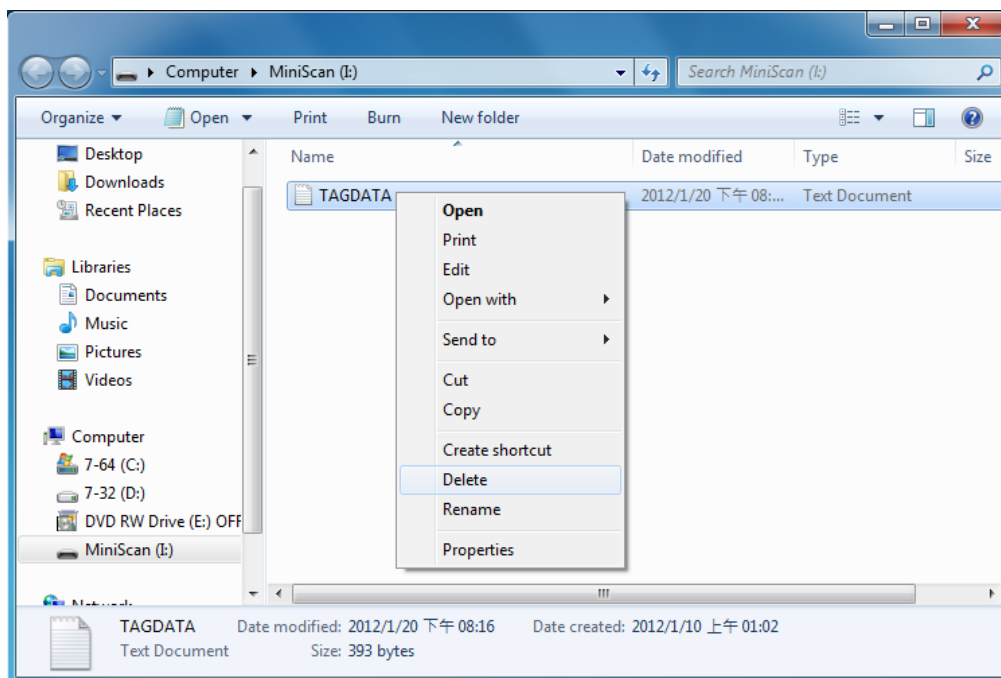


Figure 1-27: Deleting the file TAGDATA.TXT

2. Configuration Mode

2-1. Entering Configuration Mode

Under normal circumstances, the MR11A7 enters the Normal Operation Mode upon power-up. The following steps will switch the MR11A7 to Configuration Mode and connect it to the MARSON RFID Utility on Host device.

Step 1:

Use a micro USB cable and connect the MR11A7 to the Host PC.

Step 2:

Press and hold MR11A7's Function button first without releasing, then press and hold the Trigger button, as per Figure 2-1. After pressing both buttons for about 5 seconds, the MR11A7 will emit two short beeps, turn on Green LED indicator, and enter Configuration Mode. At the same time it will switch its Communication Interface to USB Virtual COM.

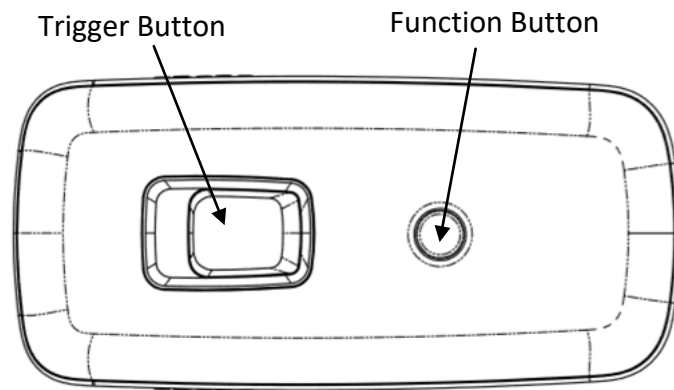


Figure 2-1: Press both buttons on the MR11A7.

Step 3:

Check the Host device's Device Manager window to see if the USB Virtual COM device has been detected, as per Figure 2-2.

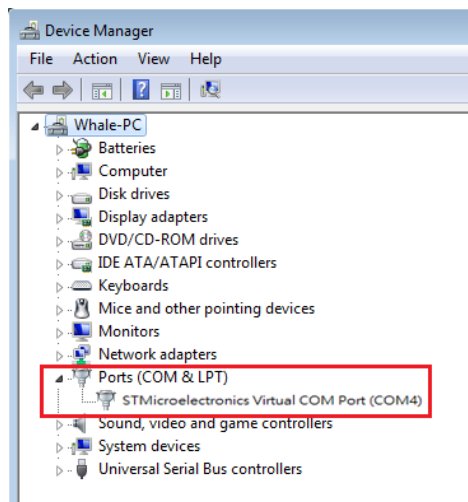
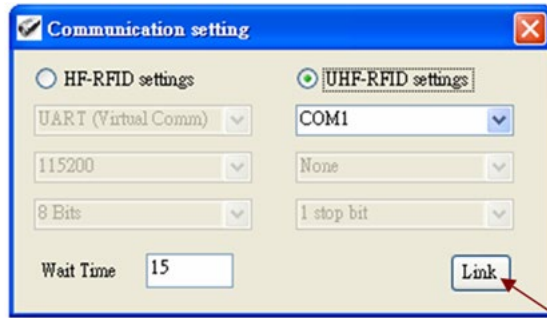


Figure 2-2: Check Device Manager

Step 4:

Open the MARSON RFID Utility on the Host device and complete the connection, as per Figure 2-3.



Make Connection

Figure 2-3: Select

the COM port to connect

The above steps will switch the MR11A7 to Configuration Mode and connect it to the Marson RFID Utility on Host device. User may begin setting parameters of the MR11A7. For details refer to Sections 4. **RFID Parameters Setup** and 5. **Other Parameters Setup**.

2-2. Canceling / Exiting Configuration Mode

Once the MR11A7 enters Configuration Mode, if there are no communications instructions with the Host PC within the Wait Time, or if **Exit** is selected on the MARSON RFID Utility, it will automatically exit Configuration Mode and return to Normal Operation Mode. Please refer to **6-1. System**. When the MR11A7 exits Configuration Mode it will emit 2 short beeps and turn off the Green LED indicator.

While within Wait Time, pressing MR11A7's Function button and then the Trigger button, holding both buttons for about 5 seconds, will also exit Configuration Mode. For full details refer to **5-11. Wait Time**.

CAUTION ! Prior to entering Configuration Mode, the MR11A7 will record the Communication Interface in use. Therefore if the Communication Interface was BT-HID prior to entering Configuration Mode, upon exiting Configuration Mode the Communication Interface will be restored to BT-HID; if the Communication Interface setting gets changed while in Configuration Mode, for example changed to USB-HID, then upon exiting Configuration Mode the Communication Interface will become the newly designated one, in this case USB-HID. For more details of MR11A7's Communication Interface, see **5-3. Communication Interface**.

3. Operating the MARSON RFID Utility



Execute MARSON RFID Utility RFID Utility.exe and enter the program; choose the COM port to connect with, and click the “Link” button, as per Figure 3-1, to make connection. Once connected, you will enter the Program’s Operation Main Window, as per Figure 3-2.

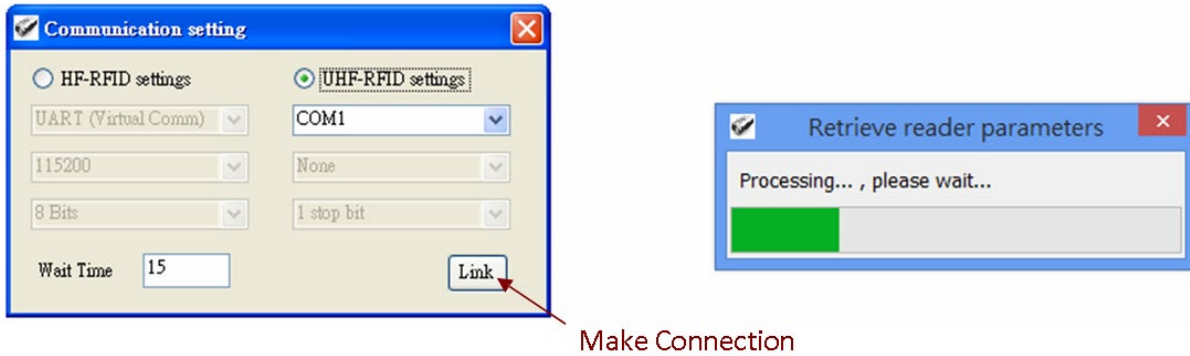


Figure 3-1: Choosing the COM port to connect

3-1. Introduction to Operation Main Window

Once connected, enter the Program Operation main window, as shown in Figure 3-2 and explained below.

- (1) Title Bar (upper-most area) shows the firmware version of the connected MR11A7.
- (2) Additional Functions area:



Communication: Disconnect or change the COM port.




Retrieve: Read MR11A7’s operation parameters.



Update: Upload presently configured operation data, etc.

For full details please refer to **6. Additional Functions of MARSON RFID Utility**

- (3) Settings Window: provides System Parameters and Settings.
For full details please refer to **4. RFID Parameters Setup, and 5. Other Parameters Setup**
- (4) Notification Window: Shows currently selected parameters and simple explanations.
- (5) Connection Status (lower-most area): Shows MR11A7’s current connection status.
- (6)  Exit Icon: Exit from the MARSON RFID Utility and inform MR11A7 as to the program termination. The MR11A7 will return to Normal Operation Mode.

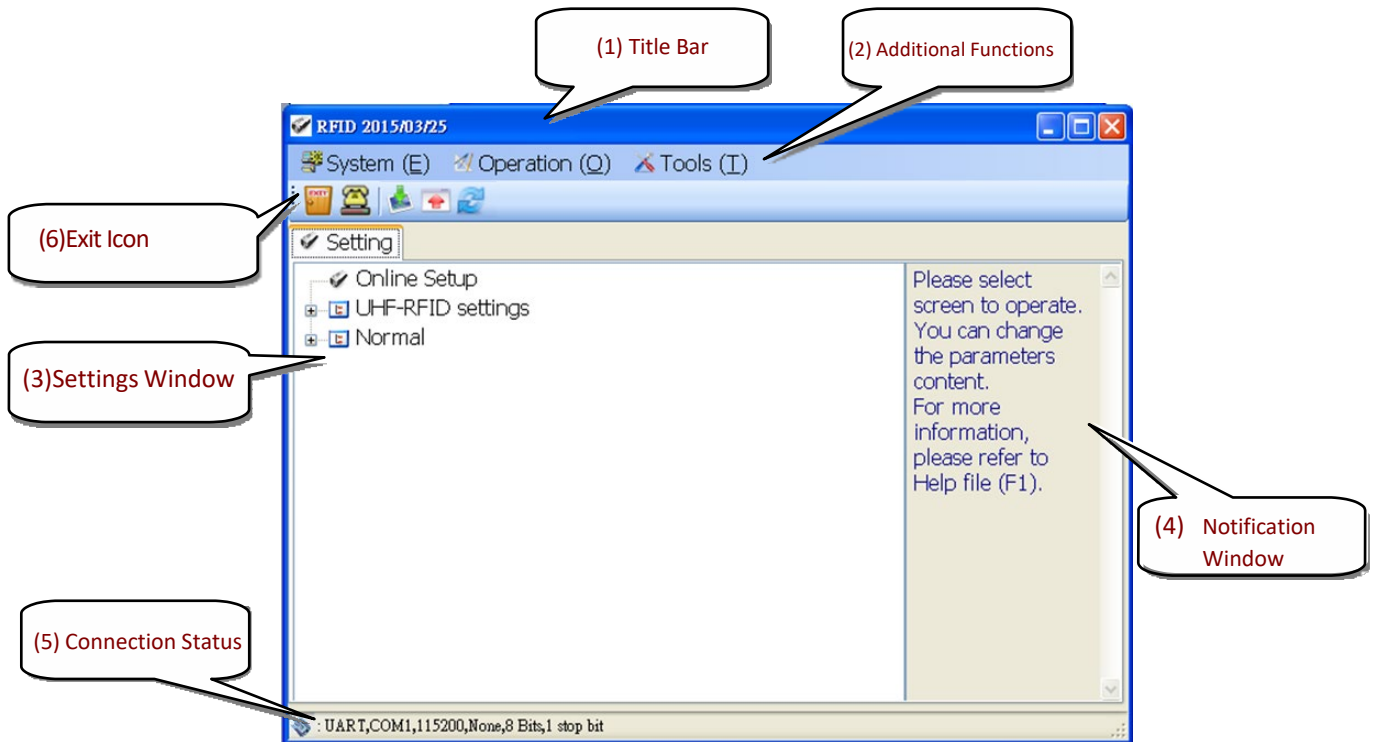


Figure 3-2: Program Operation Main Window

4. RFID Settings

Figure 4-1 shows all options of RFID parameters and data output format setup and their default values. Choose the item to configure, then double click the left mouse button or press *Enter* to enter the desired parameters setting window.

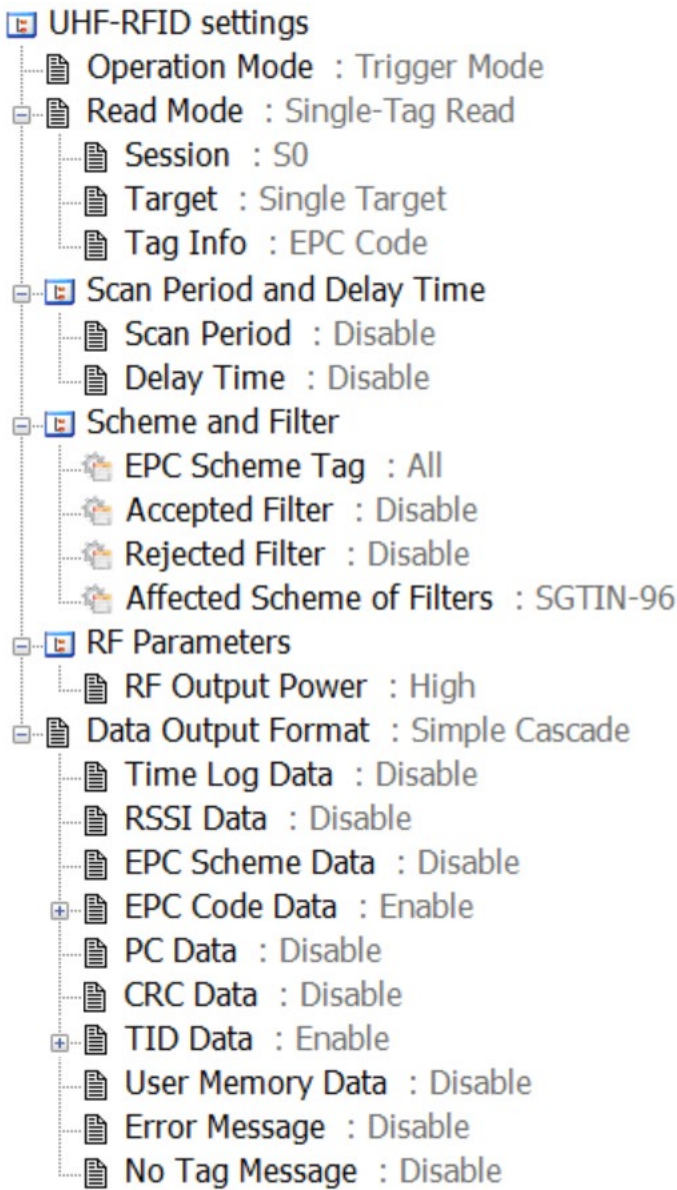
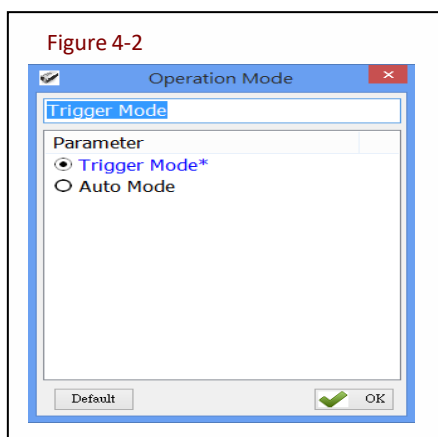



Figure 4-1 RFID Settings

4-1. Operation Mode



MR11A7 supports two operation modes, Trigger Mode or Auto Mode.

Configuration Method:

Select one of the two options then click  to send the new parameter to the MR11A7.

Default Setting: Trigger Mode

Detailed explanations of the operation of Trigger Mode and Auto Mode are as following:

(1) Trigger Mode:

- <A> Press the Trigger button to start a tag scan operation. Upon successful tag scan (Good Read) the scan operation will stop.
- In Single-Tag Read mode, if the Trigger button is pressed but no successful tag scan occurred within the Scan Period, the scan operation will terminate. In any case, releasing the Trigger button will terminate the scan operation. Please refer to **4-2. Read Mode**.
- <C> In Multi-Tag Read mode, If the Trigger button is pressed but the number of tags read is smaller than Tag-List Counter within the Scan Period, the scan operation will be paused. Pressing the Trigger button again will continue the scan operation. In any case, releasing the Trigger button will pause the scan operation. Please refer to **4-2. Read Mode**.
- <D> In Sleep Mode, pressing the Trigger button will automatically reactivate Trigger Mode. For Sleep Mode settings, please see **5-8. Sleep Mode / Timer**.

(2) Auto Mode:

- <A> The Auto Mode follows the same rules of operation method as the Trigger Mode, except that scan operation start automatically, without pressing the Trigger button.
- Scan operation is repeated and do not terminate unless the MR11A7 enters Sleep Mode.
- <C> In Sleep Mode, Pressing the Trigger button will automatically reactivate Auto Mode.

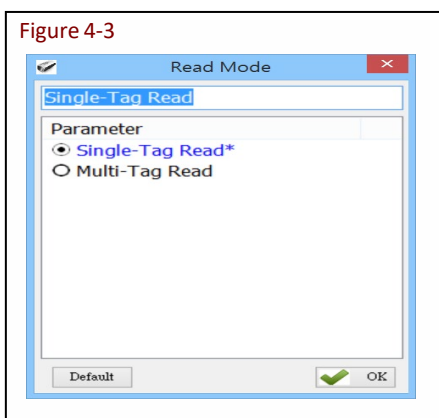
CAUTION ! Auto Mode is more power-consuming.

4-2. Read Mode


MR11A7 supports Single-Tag Read mode or Multi-Tag Read mode. Different Memory Bank can be read according to Read mode selected. Session and Target can be set for determining how often a tag will respond to a query from MR11A7.

4-2-1. Single-Tag Read or Multi-Tag Read

Configure the Read Mode for either **Single-Tag Read** mode or **Multi-Tag Read** mode.



Configuration Method:

Select one of the two options then click  to send the new parameter to the MR11A7.

Default Setting: Single-Tag Read

Detailed explanations of Read Tag Modes are as following:

(1) Single-Tag Read Mode:

In Single-Tag Read mode, only one tag will be read within the Scan Period.

(2) Multiple-Tag Read Mode:

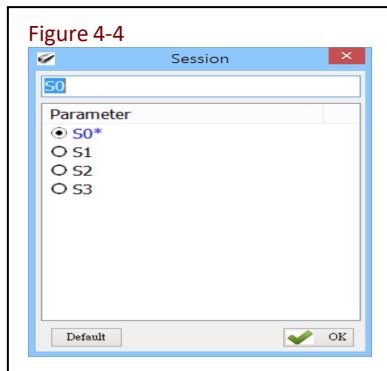
In Multiple-Tag Read mode, the EPC Code or TID data of multiple tags can be read, with each tag being read once within the Scan Period. Please refer to **4-2-6. Tag-List Counter**.


4-2-2. Sessions and Target:

Session and Target can be set for determining how often a tag will respond to a query from the reader and allowing for multiple readers to conduct independent inventories.

4-2-2-1. Session

There are four Sessions, S0, S1, S2 and S3 can be selected. Different sessions decide different Persistence Time of tag. For more information please refer to **EPCglobal Gen2 Specification**.

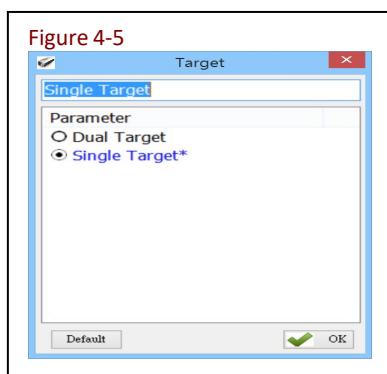


Configuration Method: Select one of the Sessions, then click  to send the new parameter to the MR11A7.

Default Setting: S0

4-2-2-2. Target

There are two Targets: Single Target and Dual Target. MR11A7 will read flag A if Single Target is selected, and will read A first then read B if Dual Target is selected.

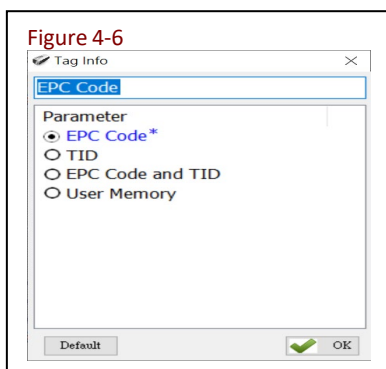


Configuration Method: Select one of the Targets, then click  to send the new parameter to the MR11A7.


Default Setting: Single Target

4-2-3. Tag Info - Memory Banks in Single-Tag Read mode:

In Single-Tag Read mode, all Memory Bank can be read at the same time.



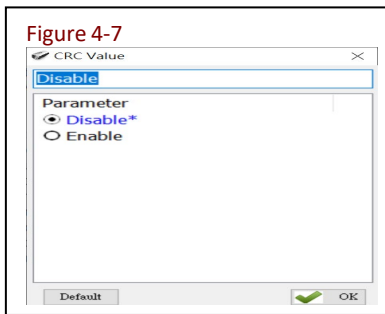
Memory Bank in Single-Tag Read:

Configuration Method: Multiple Memory Bank can be selected, once confirmed then click  to send the new parameter to the MR11A7.

Default Setting: EPC Code

4-2-4. CRC Value

In Single-Tag Read mode and only EPC Code of tag's Memory Bank to be read, CRC Value can be enabled.



Configuration Method:

Select Enable or Disable, then click  to send the new parameter to the MR11A7.

Default Setting: Disable

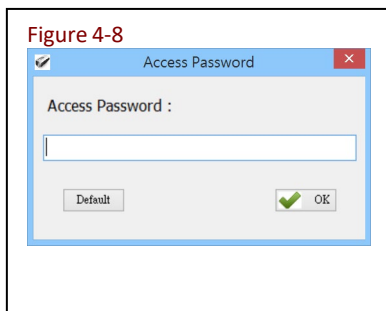
In Multi-Tag Read mode, Multiple tags will be read simultaneously and the Tag-List Counter will decide how many tags can be read within the Scan Period. The same tag data will be only outputted once within one Scan Period.


4-2-5. User Memory - Memory Bank in Single-Tag Read mode:

In Single-Tag Read mode, Access Password, Starting Pointer and Data Length must be set when User Memory is selected.

4-2-5-1. Access Password

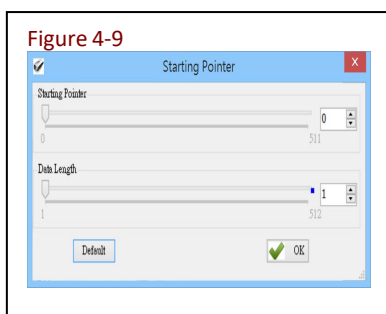
Up to 8 digits of hexadecimal value can be entered if Access Password is required.




Configuration Method: set Access Password, once confirmed then click  to send the new parameter to the MR11A7.

Default Setting: None

4-2-5-2. Starting Pointer and Data Length



Configuration Method: set Starting Pointer and Data Length , once confirmed then click  to send the new parameter to the MR11A7.

Default Setting:

The maximum Data Length is 256 words when Starting Pointer is set to 0.

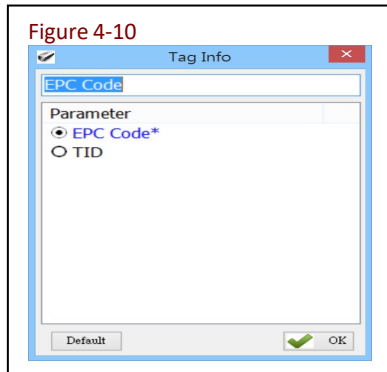
Starting Pointer: 0~255,default: 0

Data Length (words): 1~256, default: 1

- CAUTION !**
1. Only the Block 0 of File 0 of User Memory is supported.
 2. Invalid parameters of User Memory may cause an Error Message. Please see **4-6-10. Error Message.**

4-2-6. Tag Info - Memory Bank in Multi-Tag Read mode:

In Multi-Tag Read mode, Either EPC Code or TID data of tag's Memory Bank can be read.



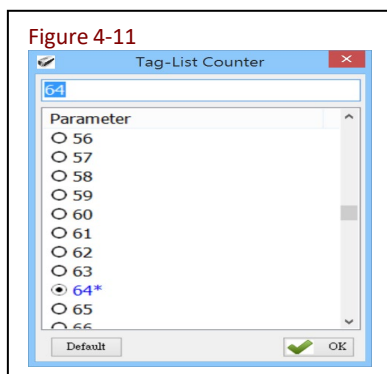
Memory Bank in Multi-Tag Read:

Configuration Method: Select one of the Memory Banks, then click OK to send the new parameter to the MR11A7.

Default Setting: EPC Code

4-2-7. Tag-List Counter

In Multi-Tag Read mode, the Tag-List Counter will decide how many tags can be read within the Scan Period.



Configuration Method:

Select one of the numbers (1~ 128), then click OK to send the new parameter to the MR11A7.

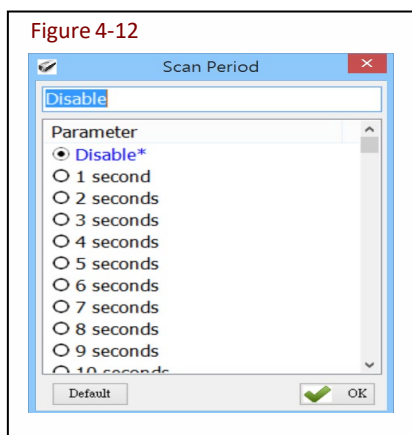
Default Setting: 64

CAUTION ! The result of Multi-Tag Read mode operation will vary because of the different placement of tags as well as the type of tags.

4-3. Scan Period and Delay Time

Sets the Scan Period and the Delay Time between tags scan.

4-3-1. Scan Period

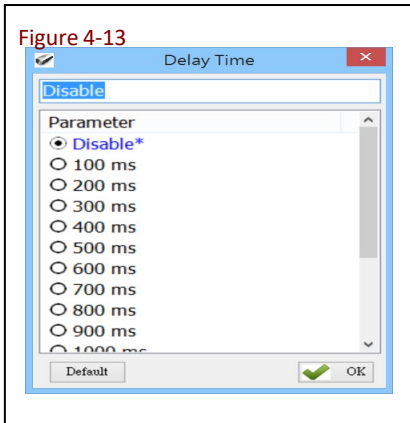


In Trigger Mode, if the Trigger button is pressed and no successful tag scan is completed within the Scan Period, the scan operation terminates. This feature may be disabled by setting Scan Period to Disabled.

Configuration Method: Select a value (0~255 seconds) then click OK to send the new parameter value to the MR11A7.


Default Setting: Disable

4-3-2. Delay Time



The Delay Time between every successful scan can be set. This feature may be disabled by setting Delay Time to 0 (Disabled).

Configuration Method:

Select a value (0 ~ 1500ms) then click  to transfer the new parameter value to the MR11A7.

Default Setting: Disable


4-4. Scheme and Filter

Scheme and Filter is effective only when EPC Code of Tag Info is selected.

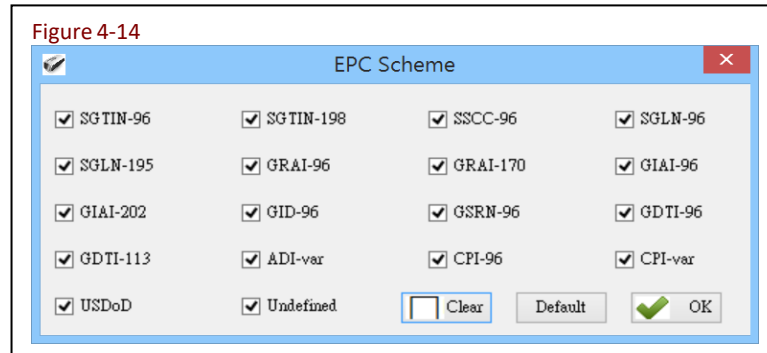
4-4-1. EPC Scheme

This function will define which kind of tags can be read according to the EPC Scheme of tags.

Configuration Method: Multiple types of EPC Scheme can be selected. Once confirmed, click

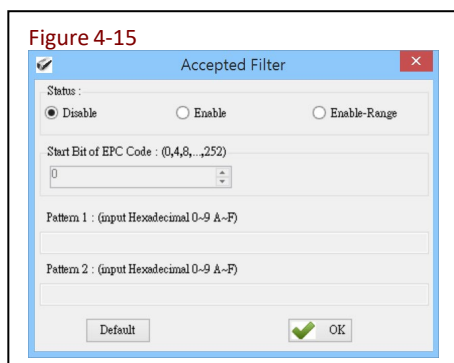
 to send the new parameter values to the MR11A7.


Default Setting: All Schemes including Undefined are selected.



4-4-2. Accepted Filter

Accepted Filter defines a pattern or a range (2 patterns) of EPC Code. A Tag can be **accepted** if the selected part of its EPC Code is equal to Pattern 1 or Pattern 1 \leq the selected part of its EPC code \leq Pattern 2.



Configuration Method: Enable or Disable Included Filter. Input the Start Bit of EPC Code by 4 bits (0,4,8...) and the pattern string of Accepted Filter in hexadecimal then click  to send the new parameter values to the MR11A7.

Default Setting: Disable

Start Bit of EPC Code: 0

Pattern 1 : ""

Pattern 2 : ""

Status:

Enable or Disable the Accepted Filter function. Pattern 1 must be defined if Enable is selected while two patterns (Pattern 1 and Pattern 2) must be defined if Enable-Range is selected.

Start Bit of EPC Code:

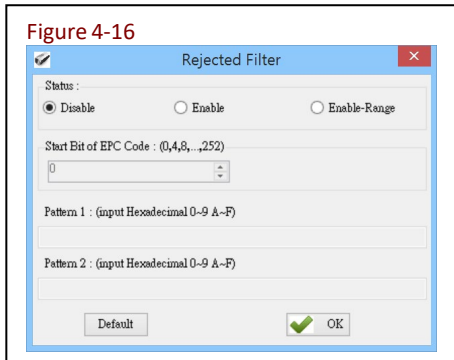
The start point (by 4 bits, from 0,4,8... to 248) of EPC Code to be compared.

Pattern 1 or Pattern 2:

the pattern string of Accepted Filter in hexadecimal. The length of Pattern 1 and Pattern 2 must be same and equal to the length of those numbers of EPC code to be compared.

4-4-3. Rejected Filter

Rejected Filter defines a pattern or a range (2 patterns) of EPC Code. A Tag can be **Rejected** if the selected part of its EPC Code is equal to Pattern 1 or Pattern 1 \leq the selected part of its EPC code \leq Pattern 2.



Configuration Method: Enable or Disable Rejected Filter. Input the Start Bit of EPC Code by 4 bits (0,4,8...) and the pattern string of Rejected Filter in hexadecimal then click to send the new parameter values to the MR11A7.

Default Setting: Disable

Start Bit of EPC Code: 0

Pattern 1 : ""

Pattern 2 : ""

Status:

Enable or Disable the Rejected Filter function. Pattern 1 must be defined if Enable is selected while two patterns (Pattern 1 and Pattern 2) must be defined if Enable-Range is selected.

Start Bit of EPC Code:

The start point (by 4 bits, from 0,4,8... to 248) of EPC Code to be compared.

Pattern 1 or Pattern 2:

the pattern string of Rejected Filter in hexadecimal. The length of Pattern 1 and Pattern 2 must be same and equal to the length of those numbers of EPC code to be compared.

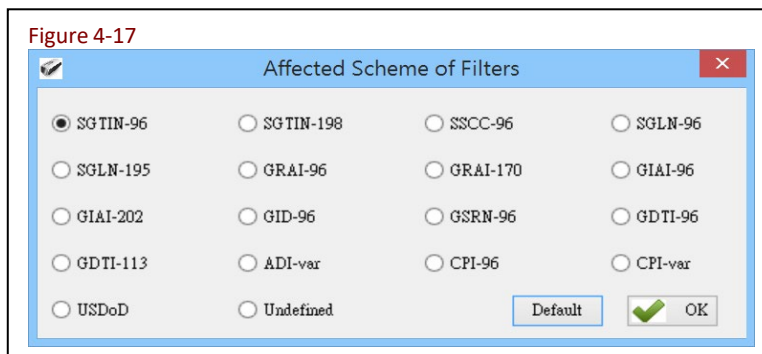
NOTE: The Accepted Filter will be processed first when both Accepted Filter and Rejected Filter are enabled at the same time.

4-4-4. Affected Scheme of Filters

This function will define which kind of tags can will be affected by Accepted Filter and Rejected Filter according to the EPC Scheme of tags.

Configuration Method: Select one EPC Scheme then click to send the new parameter value to the MR11A7.

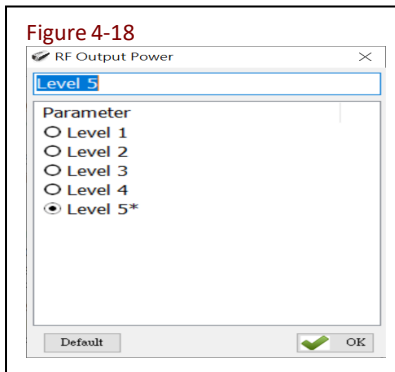
Default Setting: SGTIN-96




4-5. RF Parameters

4-5-1. RF Output Power

This function will set the RF output power of MR11A7. Lower output power will result in shorter reading distance as well as more power saving.



Configuration Method: Select one RF output power level then click  to send the new parameter value to the MR11A7.

Default Setting: Level 5 (Max)

4-6. Data Output Format

The Data Output Format options include settings for Time Log, RSSI, EPC Scheme, EPC Code, PC (Protocol Control), CRC (Cyclic Redundancy Check) and TID data as well as their captions. Figure 4-15 shows all options of Data Output Format and their default values.

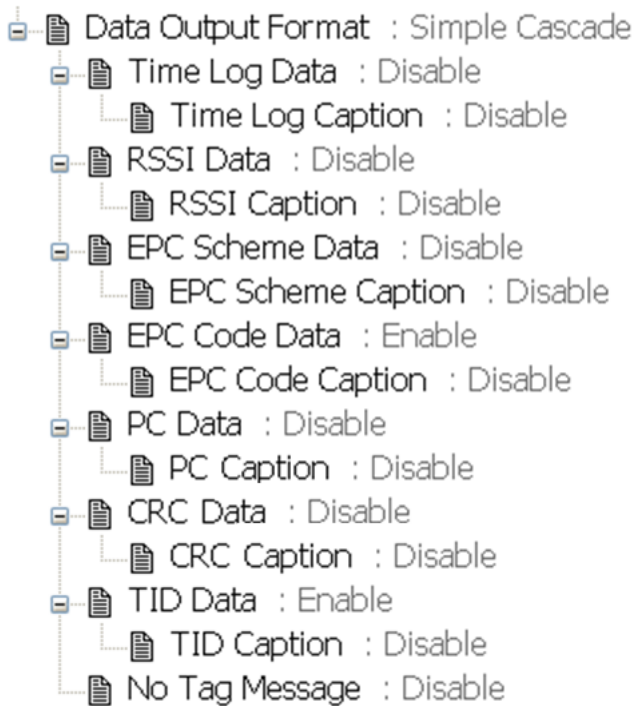



Figure 4-19: Setting the Data Output Format

The Data Output Format options include settings for Time Log, RSSI, EPC Scheme, EPC Code, PC (Protocol Control), CRC (Cyclic Redundancy Check) and TID data.

Each parameter of data output can be set and simply choose one of either Disable or Enable then click  to send the new parameter values to the MR11A7.

There are two output formats available, one Full Description another Simple Cascade. In Simple Cascade format, the caption is neglected even it is enabled. For example:

Full Description Format:

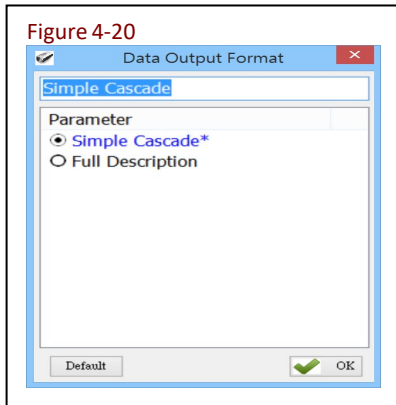
Time Log: 2014/12/19 12:30:59
RSSI:3A
EPC Scheme:STGIN-96
EPC Code:301122334455667788990011
PC: 3000
CRC: ABCD
TID: 123456789012

Simple Cascade Format: (TID is disabled in this example)

2014/12/19 12:30:59,3A,STGIN-96,301122334455667788990011,3000,ABCD

4-6-1. Output Format

Select the Simple Cascade format or Full Description format.

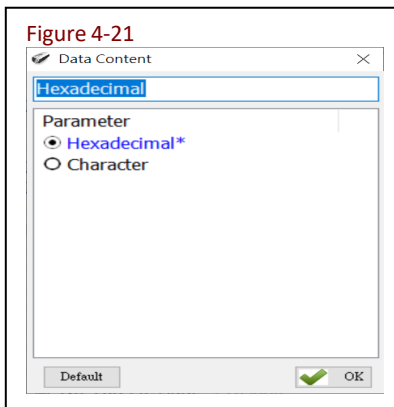


Configuration Method: Choose one of the two formats then click OK to send the new parameter values to the MR11A7.

Default Setting: Simple Cascade Format

4-6-2. Data Content

Whether to output UHF tag data in hexadecimal format or character format.



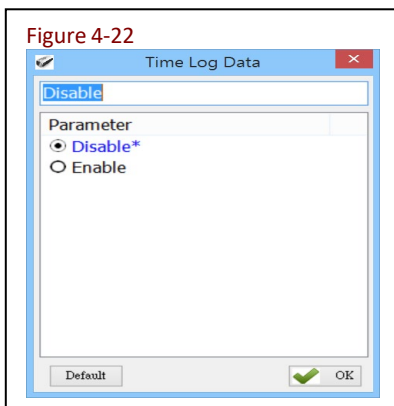
Configuration Method: Choose one of the two formats then click OK to send the new parameter values to the MR11A7.

Default Setting: Hexadecimal

*Note: Please note that the Character conversion is only applicable for data ranging from 0x20 (space) to 0x7F (delete). The other data, from 0x00 (NUL) to 0x1F (US), and from 0x80 (Undefined) to 0xFF (ÿ), will simply not show up in the output result.

4-6-3. Time Log

Whether to output the Time Log for tag scanned. For date and time formats please refer to 5-1. Date Format and 5-2. Time Format.

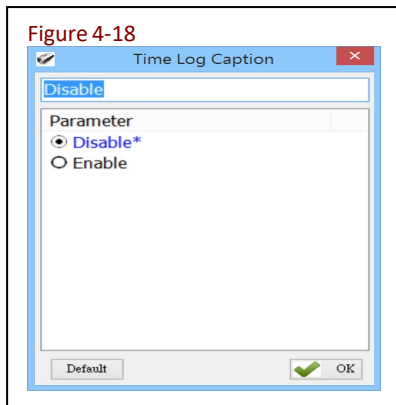


Configuration Method: Choose Disable or Enable.

Default Setting: Disable

If Output Time Log is enabled, the following may also be configured:

4-6-3-1. Output Time Log's caption "Time Log:"

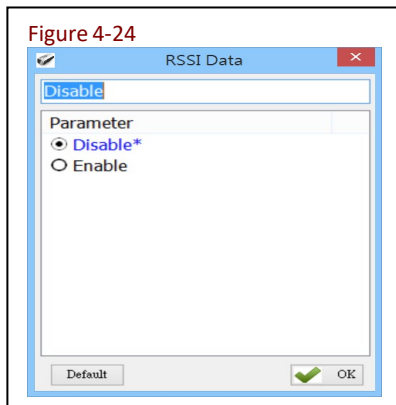


Configuration Method: Choose Disable or Enable.

Default Setting: Disable

4-6-4. RSSI (Received Signal Strength Indicator)

Whether to output tag's RSSI value.

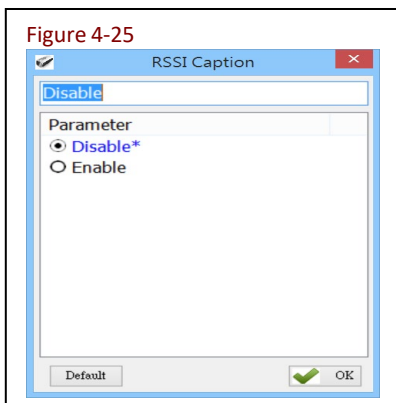


Configuration Method: Choose Disable or Enable.

Default Setting: Disable

If Output RSSI is enabled, the following may also be configured:

4-6-4-1. Output RSSI 's caption "RSSI: "

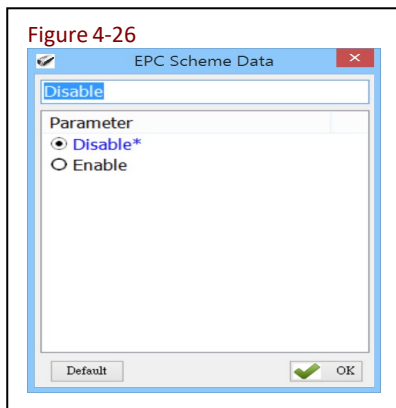


Configuration Method: Choose Disable or Enable.

Default Setting: Disable

4-6-5. EPC Scheme

Whether to output EPC Scheme. This function is available when the EPC Code of Tag Info is selected. Please see **4-2-3** and **4-2-5 Tag Info**.

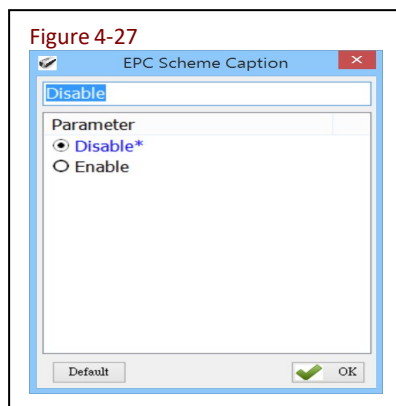


Configuration Method: Choose Disable or Enable.

Default Setting: Disable

If Output EPC Scheme is enabled, the following may also be configured:

4-6-5-1. Output EPC Scheme caption "EPC Scheme:"

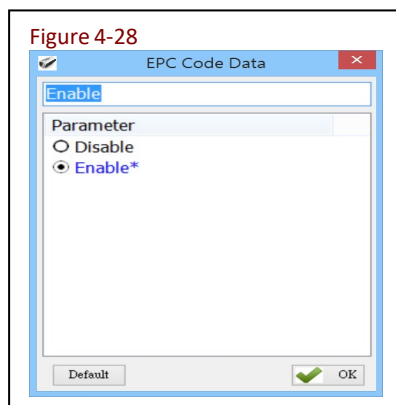


Configuration Method: Choose Disable or Enable.

Default Setting: Disable

4-6-6. EPC Code

Whether to output EPC Code. This function is available when the EPC Code of Tag Info is selected. Please see **4-2-3** and **4-2-5 Tag Info**.

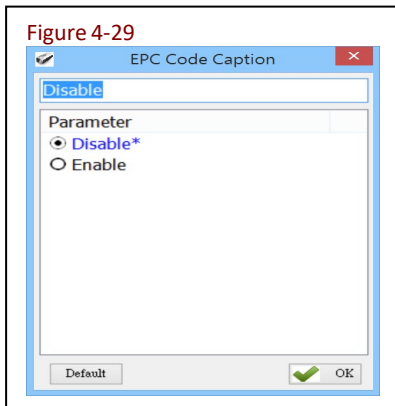


Configuration Method: Choose Disable or Enable.

Default Setting: Enable

If Output EPC Code is enabled, the following may also be configured:

4-6-6-1. Output EPC Code's caption "EPC Code:"

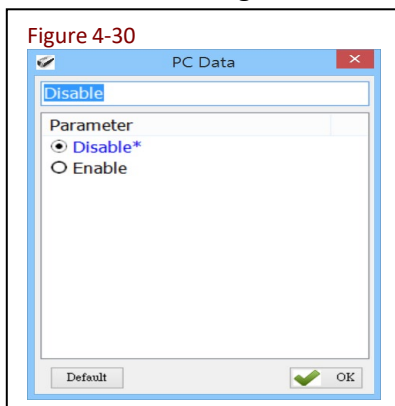


Configuration Method: Choose Disable or Enable.

Default Setting: Disable

4-6-7. PC (Protocol Control)

Whether to output tags' PC data. This function is available when the EPC Code of Tag Info is selected. Please see **4-2-3** and **4-2-5 Tag Info**.

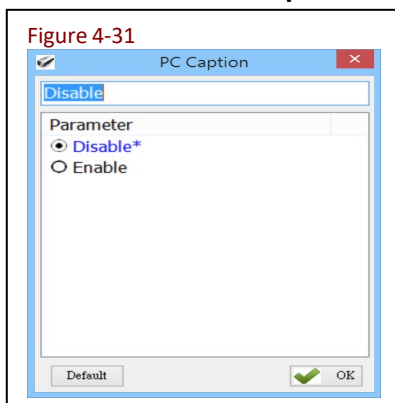


Configuration Method: Choose Disable or Enable.

Default Setting: Disable

If Output PC data is enabled, the following may also be configured:

4-6-7-1. Output PC data's caption "PC:"

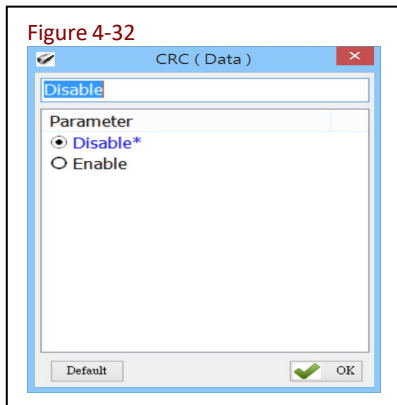


Configuration Method: Choose Disable or Enable.

Default Setting: Disable

4-6-8. CRC (Cyclic Redundancy Check)

Whether to output tags' CRC value. This function is available when the EPC Code of Tag Info is selected. Please see **4-2-4 CRC Value**.

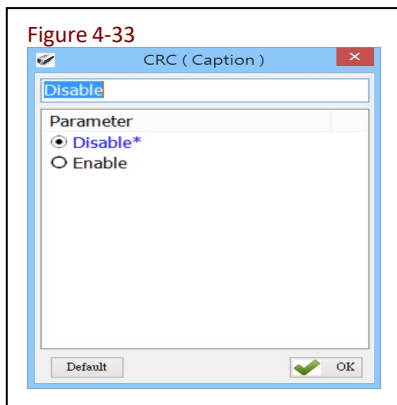


Configuration Method: Choose Disable or Enable.

Default Setting: Disable

If Output CRC value is enabled, the following may also be configured:

4-6-8-1. Output CRC value's caption "CRC:"

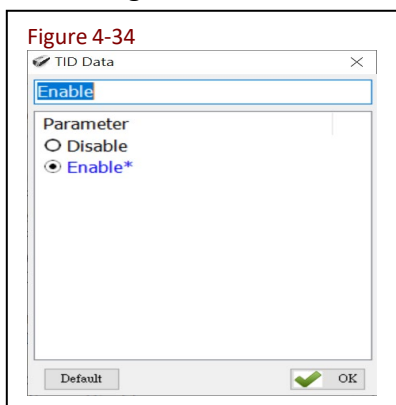


Configuration Method: Choose Disable or Enable.

Default Setting: Disable

4-6-9. TID data

Whether to output tag's TID data. This function is available when the TID data of Tag Info is selected. Please see **4-2-3 and 4-2-5 Tag Info**.

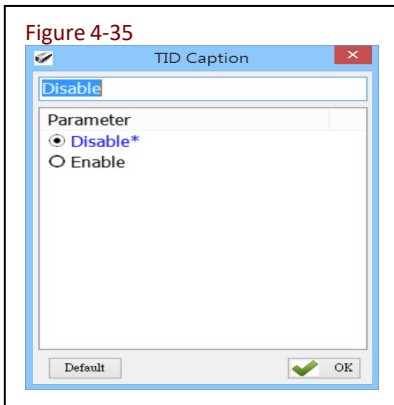


Configuration Method: Choose Disable or Enable.

Default Setting: Enable

If output TID data is enabled, the following may also be configured:

4-6-9-1. Output TID data's caption "TID:"

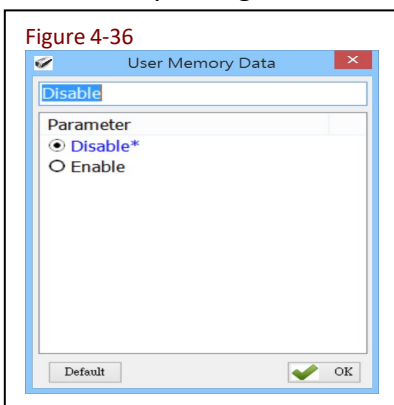


Configuration Method: Choose Disable or Enable.

Default Setting: Disable

4-6-10. User Memory

Whether to output tag's User memory. This function is available when the User memory of Tag Info is selected. Please see **4-2-3 Tag Info**.

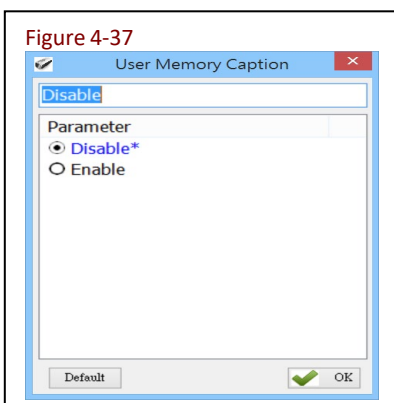


Configuration Method: Choose Disable or Enable.

Default Setting: Disable

If output User memory is enabled, the following may also be configured:

4-6-10-1. Output User Memory 's caption "User Memory:"



Configuration Method: Choose Disable or Enable.

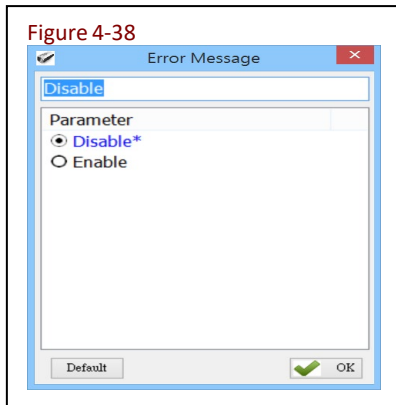
Default Setting: Disable

4-6-11. Error Message

Whether to output Error-Message. Error-Message is displayed when there is an error encountered during a scan operation. An Error-Message will be followed by an Error-Code. For Example:

‘ The tag has only 32 words of user memory ! ’

Error Message is applicable only for Trigger Mode and Single-Tag Read Mode. Please see 4-1 Operation Mode and 4-2 Read Mode.



Configuration Method: Choose Disable or Enable.

Default Setting: Disable

4-6-12. No Tag Message

Whether to output No-Tag-Message. No Tag Message is a preset message such as “No Tag” that displays when no Tag could be read successfully upon terminating a scan operation. No-Tag-Message is applicable only for Trigger Mode and Single-Tag Read Mode. Please see 4-1 Operation Mode and 4-2 Read Mode.



Configuration Method: Choose Disable or Enable.

Default Setting: Disable

5. Other Parameters Setup

MR11A7 has other parameters not related to RFID tag, such as Date Format, Time Format, Communication Interface, Sleep Mode etc. Figure 5-1 shows all options and their default values.

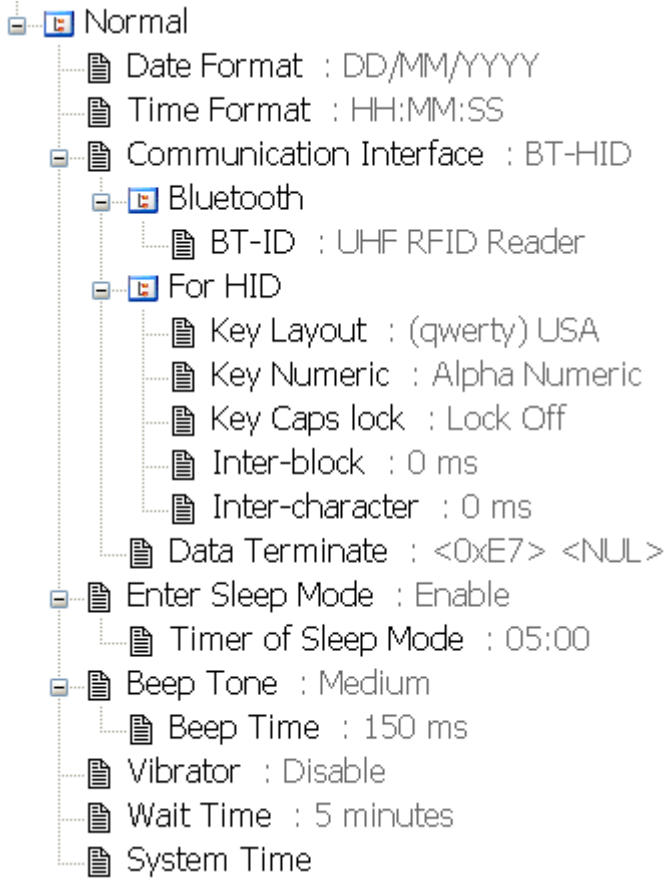
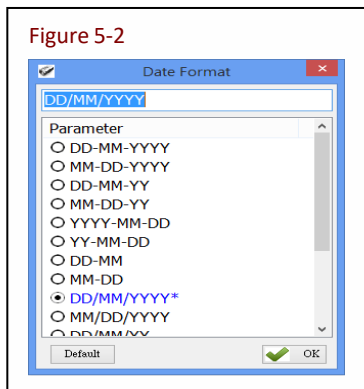


Figure 5-1: Other parameters not related to RFID.

5-1. Date Format



Date format of memory data's date mark.

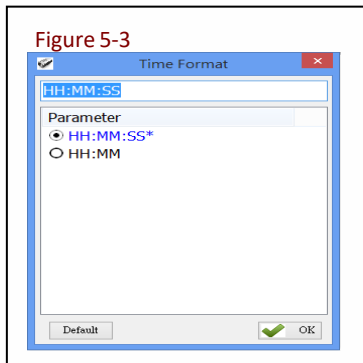
Set how date format is arranged: D means Date, M means Month, Y means Year. 16 options are available.

Configuration Method:

Choose one among the 16 then click OK to transfer the parameter setting to the MR11A7.

Default Setting: DD/MM/YYYY

5-2. Time Format



Time format of memory data's time mark.

Set how time format is arranged: H means Hour, M means Minute, S means Second. 2 options are available.

Configuration Method:

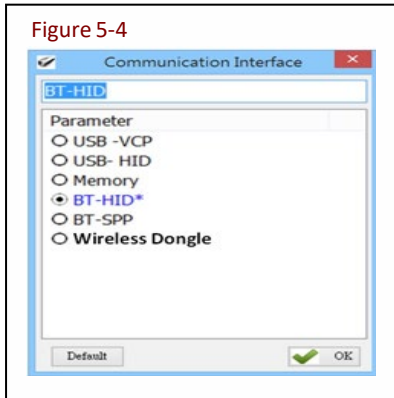
Choose one of the two then click



to transfer the parameter value to the MR11A7.

Default Setting: HH:MM:SS

5-3. Communication Interface



Set the communication interface between the MR11A7 and the Host PC, meaning the communication interface for MR11A7's data output.

Five options are available.

Configuration Method:

Choose one of the five then click



to transfer parameter values to the MR11A7.

Default Setting: BT-HID

Each Communication Interface is described in details as below:

(1) USB-VCP

Use USB Virtual COM as communication interface.

(2) USB-HID

Use USB HID Keyboard as communication interface.

(3) Memory

When using Memory as the communication interface, the MR11A7 will not output tag data scanned and store them within its internal memory as a file (about 2MB in size). To access that file, a connection with the Host PC is required.

(4) BT-HID

Use Bluetooth HID Keyboard as communication interface.

(5) BT-SPP

Use the Bluetooth SPP (BT Virtual COM) as communication interface. During BT-SPP connection, MR11A7 can be programmed via command strings sent from the Host. The details are described in the MR11A7 BT SPP Command Manual.

(6) Wireless Dongle

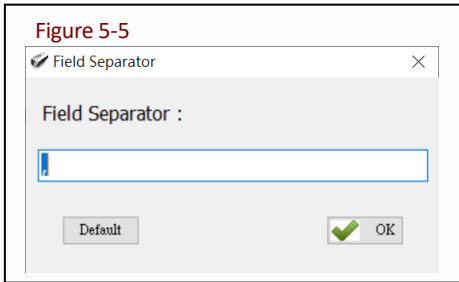
Uses the Marson Wireless Dongle (MT600) as communication interface.

For more information on Marson Wireless Dongle (MT600), please visit www.marson.com.tw

5-4. Memory Communication Interface


When the Memory Communication Interface is chosen, each scanned data is marked with date and time, and then stored in the internal memory. When the memory is full with data, Tag reading will elicit a warning signal in the form of 3 short beeps and a one second lighting of the red LED indicator, and no scanning will actually occur. Only when the data inside the memory has been received and deleted by the Host PC may the scan operation resume. Choosing Memory as the Communication Interface enables the Field Separator and Storage Sequence configuration options.

5-4-1. Field Separator



Set the delimiter used to separate each field of data formatting.

Configuration Method:

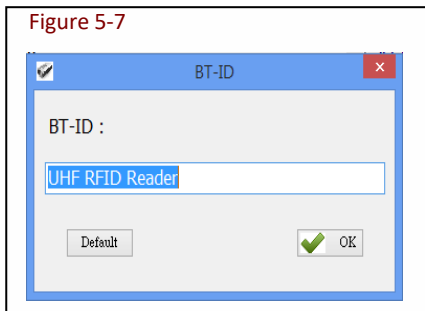
Directly input the symbol, maximum 1 Byte in size then click  to transfer the parameter value to the MR11A7.

Default Setting: Comma (,)

5-5. BT-HID and BT-SPP Communication Interface


When BT-HID or BT-SPP is selected as the Communication Interface, the BT-ID and BT-Pin-Code options become available.

5-5-1. BT-ID



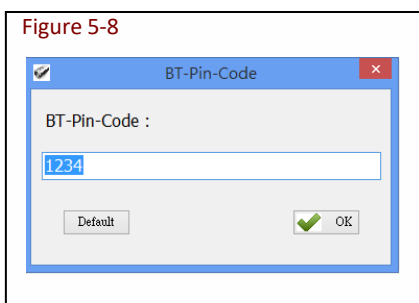
Set the Bluetooth-ID for the name displayed on Host device's discoverable device list.

Configuration Method:

Select a desired phrase, maximum 16 Bytes. Once chosen, click  to transfer the parameter value to the MR11A7.


Default Setting: UHF RFID Reader

5-5-2. BT-Pin-Code



Set the Pin-Code if requested by the Host device in BT-SPP profile.

Configuration Method:

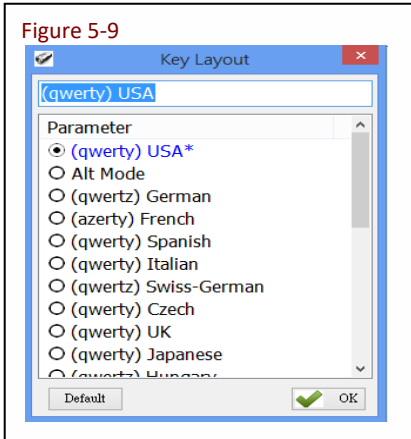
Enter the Pin-Code value, maximum 8 Bytes. Once selected, click  to transfer the parameter value to the MR11A7.

Default Setting: 1234

5-6. USB-HID and BT-HID Communication Interface

When USB-HID or BT-HID are chosen as the Communication Interface, additional options become available. These include Key Layout, Key Numeric, Key Caps lock, Inter-block, and Inter-character.

5-6-1. Keyboard Layout



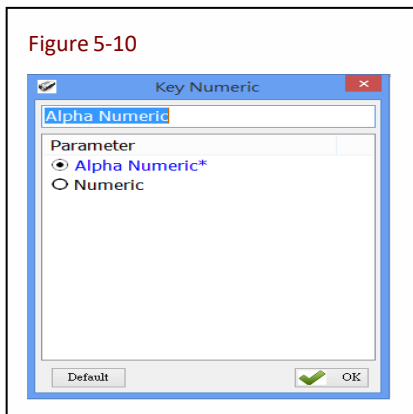
Set the keyboard layout used for MR11A7's data output to the Host device. 24 options are available.

Configuration Method:

Select one of 24, then click OK to transfer the parameter setting to the MR11A7.

Default Setting: (qwerty) USA

5-6-2. Key Numeric



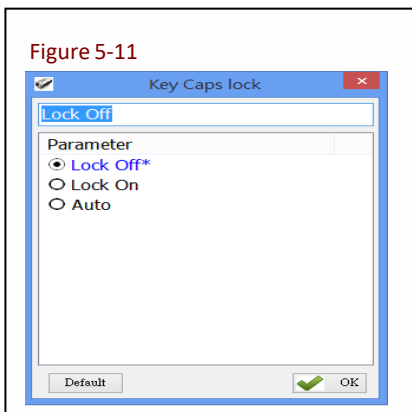
Set the Host device's keyboard scan code used for numeric input from MR11A7.

Configuration Method:

Select one, then click OK to transfer the parameter setting to the MR11A7.

Default Setting: Alpha Numeric

5-6-3. Key Caps Lock



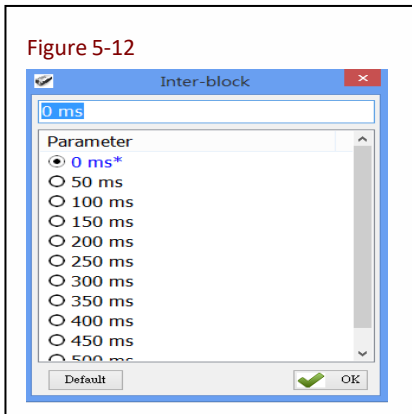
Set the Host device's keyboard Caps Lock state to On, Off or Auto.

Configuration Method:

Select one, then click OK to transfer the parameter setting to the MR11A7.

Default Setting: Lock Off

5-6-4. Inter-block Interval Time



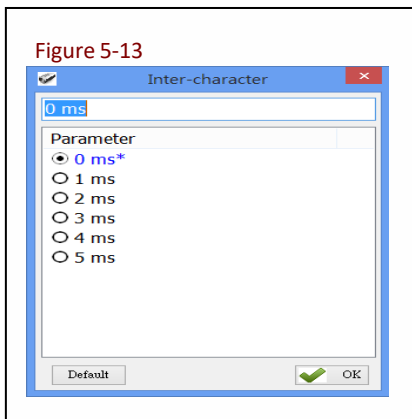
Set the Interval Time between each tag data (including the Field Separator) and the next.

Configuration Method:

Select one (value range 0 ~ 500 ms), then click to transfer the parameter setting to the MR11A7.

Default Setting: 0 ms

5-6-5. Inter-character Interval Time



Set the Interval Time between one character and the next within each tag data.

Configuration Method:

Select one, then click to transfer the parameter value to the MR11A7.

Default Setting: 0 ms

5-7. Data Terminator

Set the terminator symbol used when uploading MR11A7's data to the Host device.

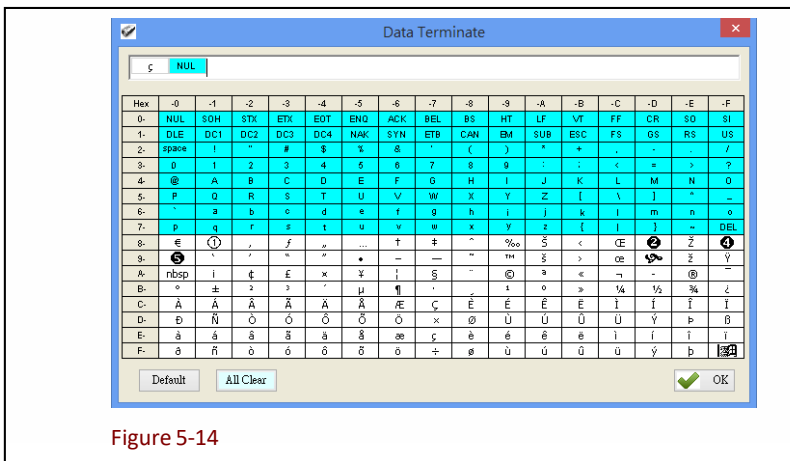


Figure 5-14

Configuration Method:

Click or type in a symbol using the on-screen keyboard shown in Figure 5-14. Then click to transfer the parameter value to MR11A7.

The default value of Data Terminator will vary based on different interface selected:

(1) USB-HID / BT-HID interface:

Default: (<0x07><0x00>). Totals 2 Bytes.

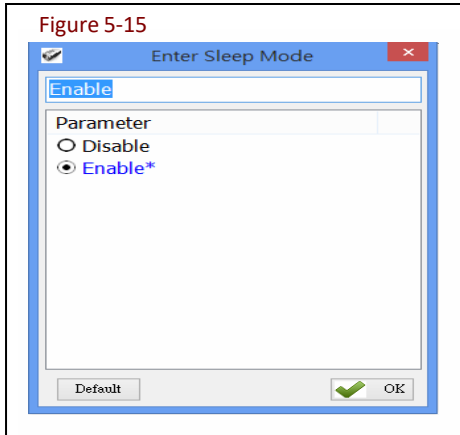
(2) USB-VCP / BT-SPP interface:

Default: (<0x0D><0x0A>). Totals 2 Bytes.

5-8. Sleep Mode / Timer

The MR11A7 will enter Sleep Mode to conserve power if Enter Sleep Mode is enabled and no successful tag scanned after a period of time.


Once Enter Sleep Mode is enabled, Timer of Sleep Mode must be defined.



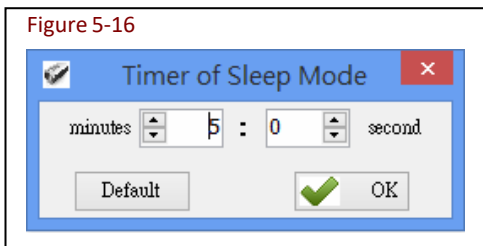
5-8-1. Enter Sleep Mode

Set whether to activate Sleep Mode.

Configuration Method:

Select one, then click  to transfer the parameter setting to the MR11A7.


Default Setting: Enable (activate)



5-8-2. Timer of Sleep Mode

Set the waiting time for entering Sleep Mode.

Configuration Method:

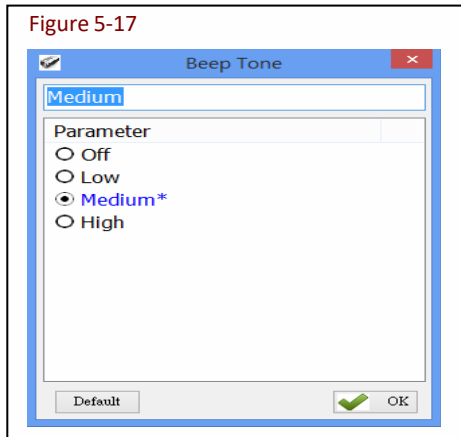
Select a value (range 00:10 ~ 60:00 mm:ss), then click  to transfer the parameter value to the MR11A7.

Default Setting: 05:00


5-9. Buzzer

Beep tones serve as an indication of operation status. For example, one short beep signifies a Good Read within a Scan Period and 3 short beeps warn a failure. Please refer to **1-3-3. MR11A7 Indicator LED and Buzzer**.

5-9-1. Beep Tone

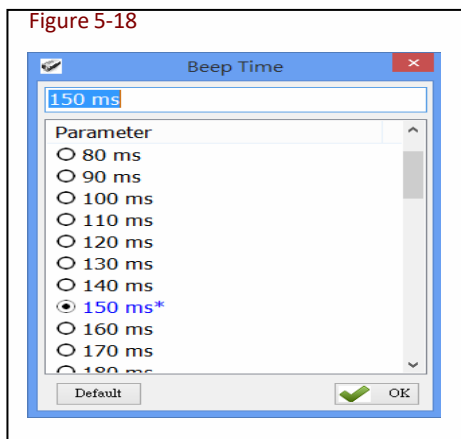


Set the beep volume or disables beeping.

Configuration Method:
Select one, then click  to transfer the parameter setting to the MR11A7.


Default Setting: Medium

5-9-2. Beep Time



Set the beep length for the short beep used to signify a Good Read.

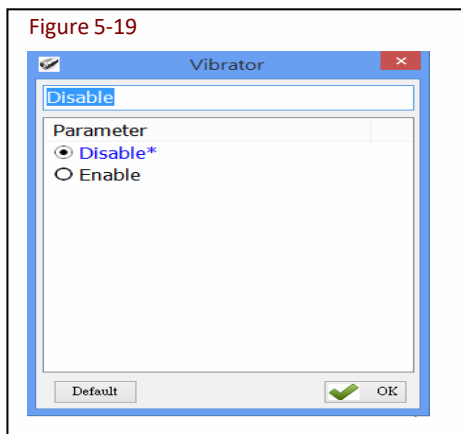
Configuration Method:
Select a value between 50 ~ 500 ms.


Then click  to transfer the parameter value to the MR11A7.

Default Setting: 150 ms

5-10. Vibrator

Enable or Disable the Vibrator which is to signify a Good Read.



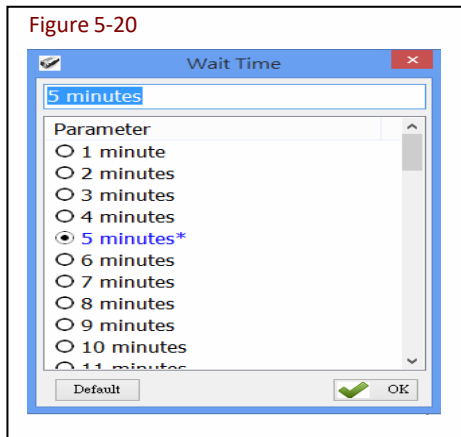
Configuration Method:
Select one of the options, then click  to transfer the parameter setting to the MR11A7.


Default Setting: Disable (deactivated)

NOTE: The duration of vibration is fixed at 200 ms.

5-11. Wait Time

MR11A7 will automatically exit Configuration Mode and return to Normal Operation Mode when the Wait Time expired, if there are no communication instructions between MR11A7 and the Host device.



Configuration Method:
Select a value between 1 ~ 60 minutes.
Then click  to transfer the parameter value to the MR11A7.

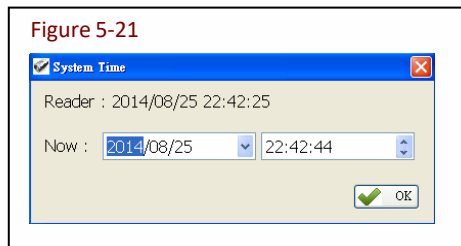
Default Setting: 5 minutes


5-12. System Time

MR11A7 has a real time clock which keeps MR11A7's System Time up to date.

Date format: Year (4 digits), Month (2 digits), Date (2 digits). e.g. Date: 2014/12/19

Time format: Hour (2 digits), Minute (2 digits), Second (2 digits). e.g. Time: 09:50:30



Configuration Method:
Input the Year, Month, Day, Hour, Minute, Second within their respective value ranges. Then click  to transfer the parameter values to the MR11A7.

Default Setting: Host device's System Time

CAUTION ! Removal of battery or full drain of battery may cause the MR11A7's System Time to stop.

6. Additional Functions

There are three Additional Functions on Program Operation Main Window including System, Operation and Tools, as per Figure 6-1

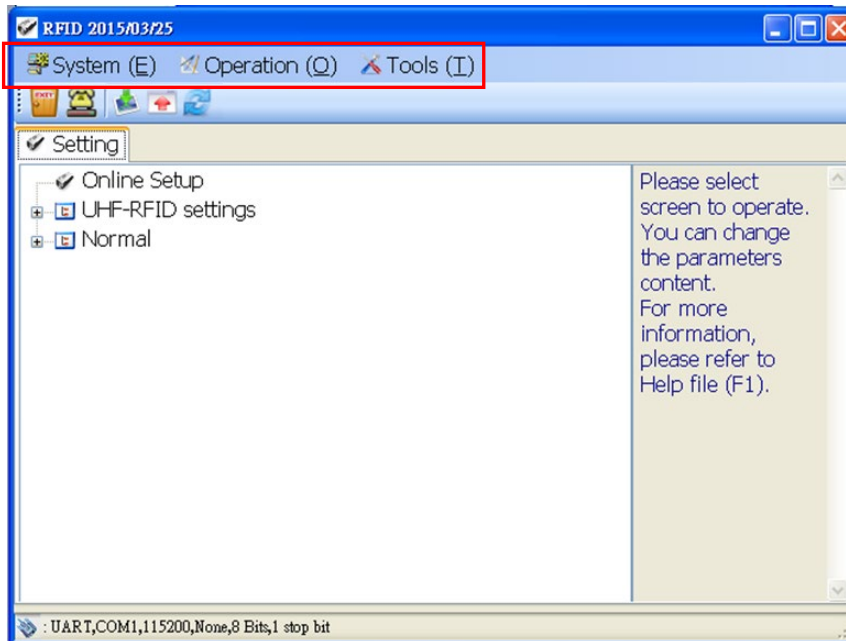
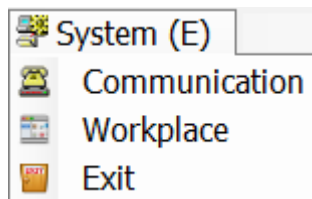



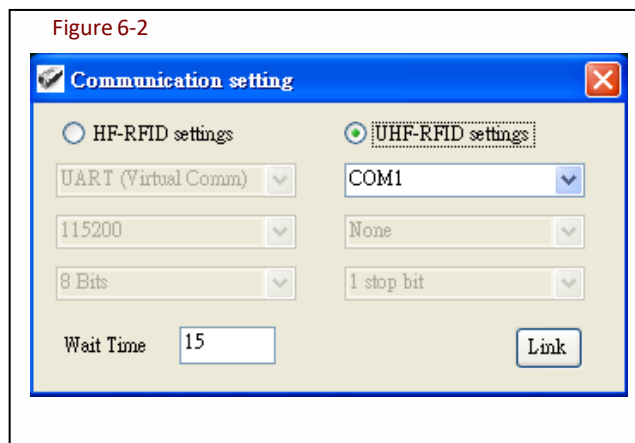
Figure 6-1 : Additional Functions on Program Operation Main Window


6-1. System

System menu contains Communication, Workplace and Exit options.



<A>  Communication: Select COM port and click “Link” to make connection or “Stop” to terminate connection.



-  Workplace: Edit Default Workplace, Usualness Fone, Window-Width and Window-Height.
 Default Workplace: Restores window size, font type and font size.
 Usualness Font: Adjusts fonts for the MARSON RFID Utility.
 Window-Width, Height: Adjusts window size only for the Program Operation Main Window.

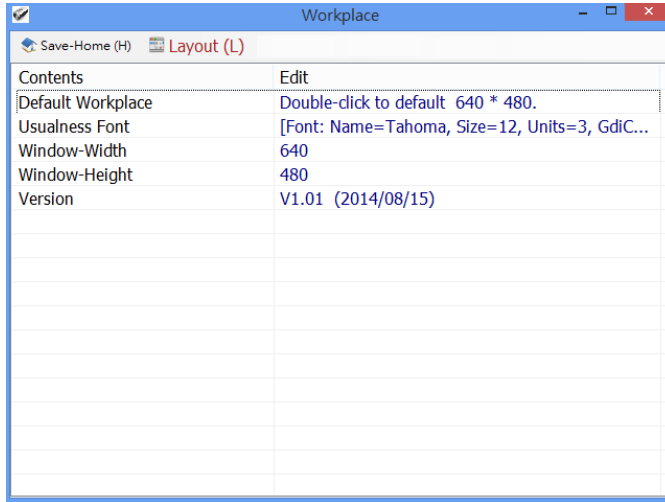



Figure 6-3

Configuration Method:

Select the item you wish to adjust then double-click on it or press ENTER key to start adjusting.

Default Setting:

- (1) Default Workplace: Restores all defaults, including window size, font style, font size, etc.
- (2) Usualness Font: Mostly used for adjusting fonts for the Main Menu. The user determines its use.
- (3) Window-Width, Height: Adjusts window size only for the Main Window.

- <C>  Exit: The system will ask whether to terminate configuration operation when exiting from the MARSON RFID Utility.

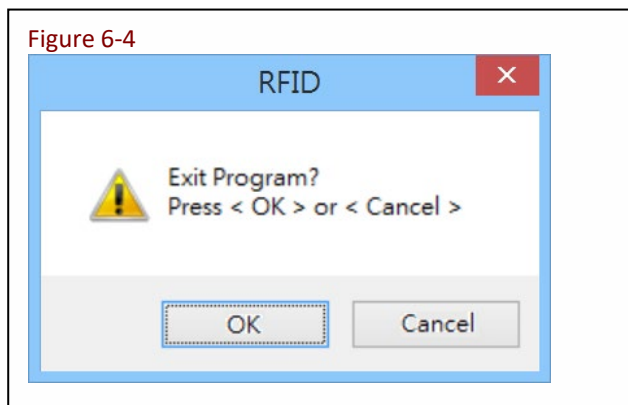


Figure 6-4

6-2. Operation

Operation menu contains Retrieve, Update and Reset. These functions can be used when an MR11A7 is connected to the MARSON RFID Utility.

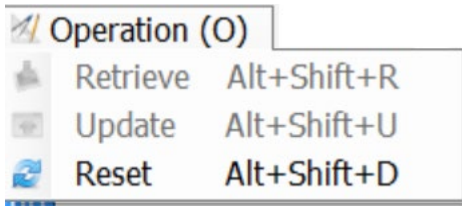




Figure 6-5

<A>  Retrieve: Read parameter values from the connected MR11A7.

  Update: Update the current parameter values to the connected MR11A7.

<C>  Reset: Restore all parameters on MR11A7 to their Default settings.

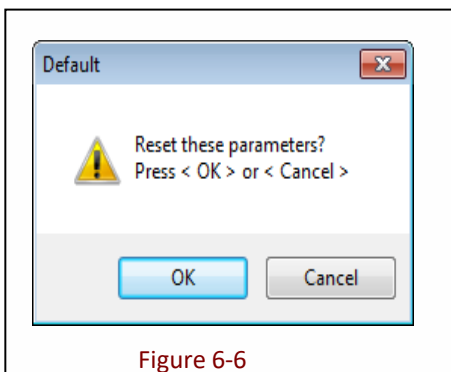


Figure 6-6

CAUTION ! MR11A7 Communication Interface and the Memory Data saved in TAGDATA.txt will not be affected by Reset. To configure Communication Interface, please follow instruction of Section 5-3. **Communication Interface**; to delete Memory Data, please refer to Section 1-4-8. **Retrieving/Importing/Deleting Memory Data..**

6-3. Tools

Tools menu contains Language, Firmware Upgrade and Help.

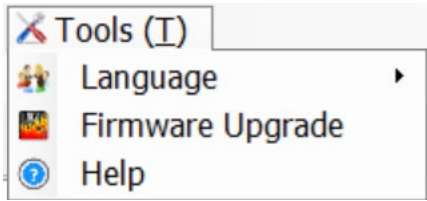



Figure 6-7

<A>  Language: Set the language of MARSON RFID Utility.

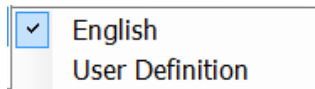




Figure 6-8

  Firmware Upgrade: Update the firmware on MR11A7.
Please refer to **7. Updating Firmware on MR11A7.**

<C>  Help: Full user's manual of MR11A7 and MARSON RFID Utility.

7. Updating Firmware on MR11A7

7-1. Entering Firmware Update Mode

Under normal circumstances, the MR11A7 boots into the Normal Operation Mode. The following steps will move the MR11A7 to Firmware Update Mode to facilitate firmware upgrade through USB Virtual COM communication. Steps are as following:

Step1:

Make sure that the MR11A7 is disconnected from the Host PC.

Connect the MR11A7 to the Host PC using the Micro USB Cable.

Step 2:

Press the Function button and the Trigger button on the MR11A7, as per Figure 7-1. Hold both buttons, do not release, and use a pin or a straightened paperclip to press the Reset button on the bottom, as per Figure 7-2. The MR11A7 will enter the Firmware Update Mode.

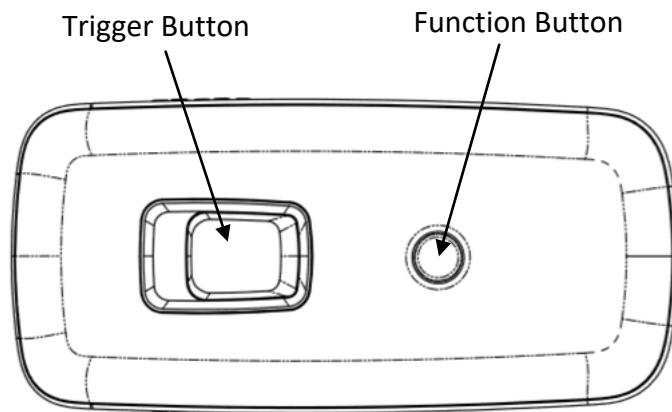


Figure 7-1: Press both buttons on the MR11A7 simultaneously.

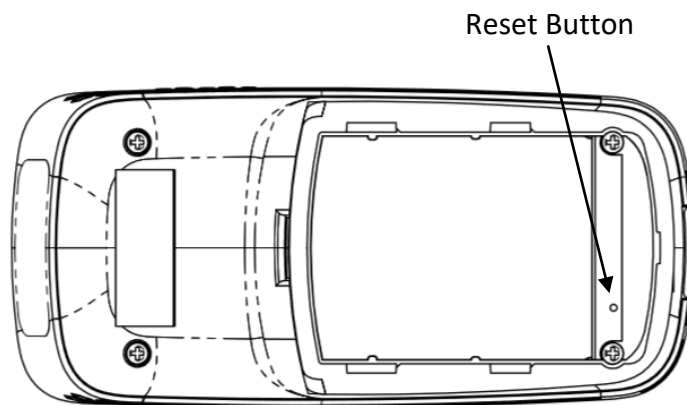


Figure 7-2: Press the Reset button

Step 3:

Still holding down the Function button and Trigger button, check the Device Manager on the Host PC to see if a USB Virtual COM has appeared, as per Figure 7-3. Now release the Function button and the Trigger button. The MR11A7 will automatically change its Communication Interface to USB Virtual COM.

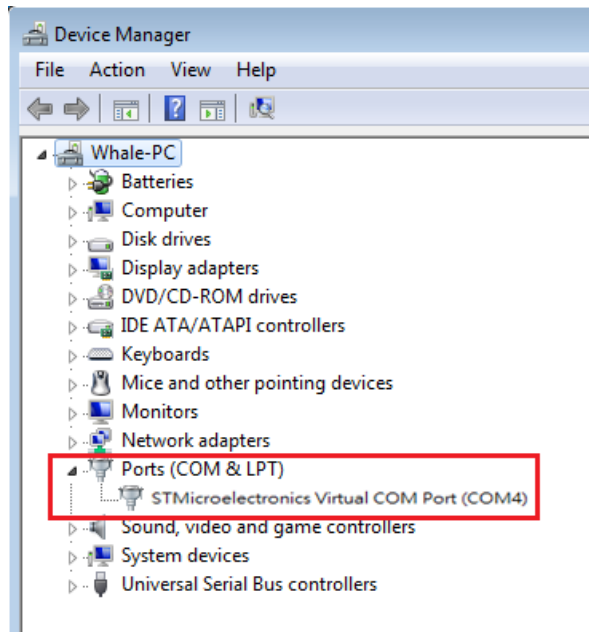


Figure 7-3: Check the Host-PC to see if it has detected the USB Virtual COM.

7-2. Executing Firmware Update

Step 1:



Execute the RFID Utility.exe program. Do not click Link.

Press to cancel the connection process and enter the program, as per Figure 7-4.

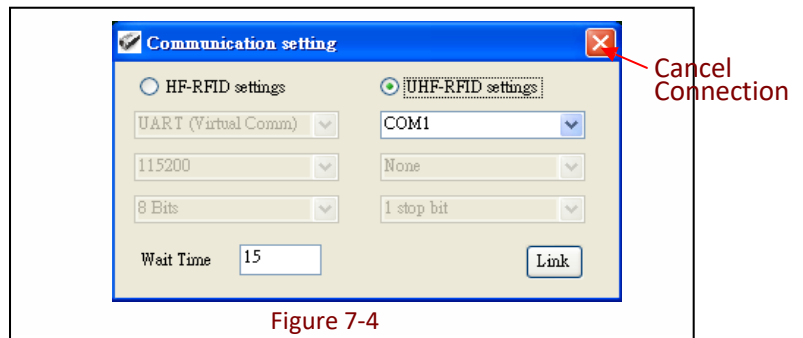


Figure 7-4

Step 2:

Select Tools (T) and execute Firmware Upgrade. Please refer to 6-3. Tools

Step 3:

Select the COM port and click folder icon, as per Figure 7-5.

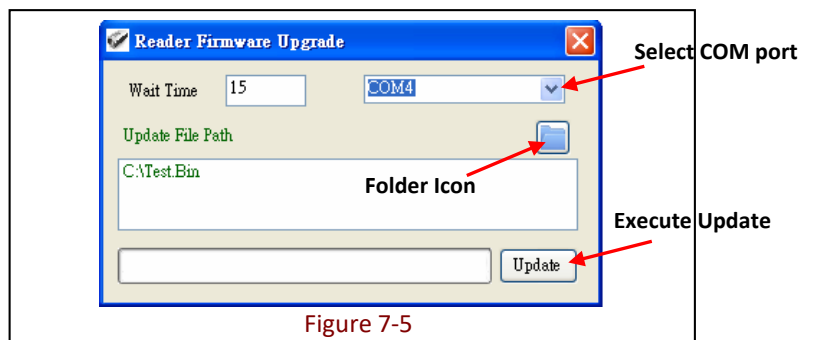

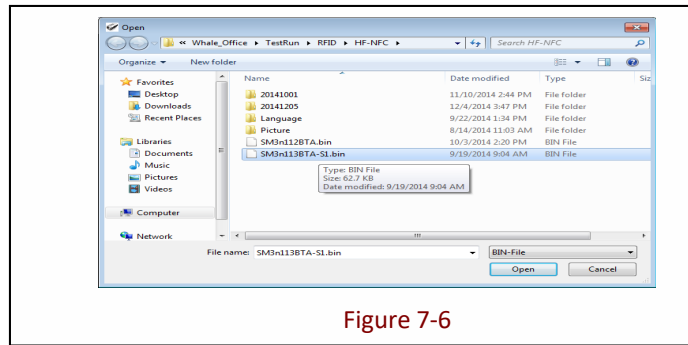



Figure 7-5

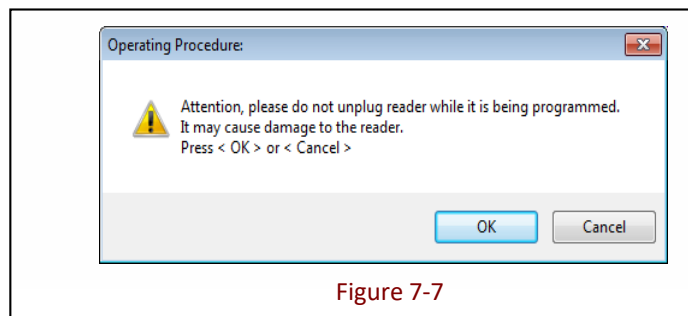
Step 4:

Click  to browse the bin file in the folder, as per 7-6.

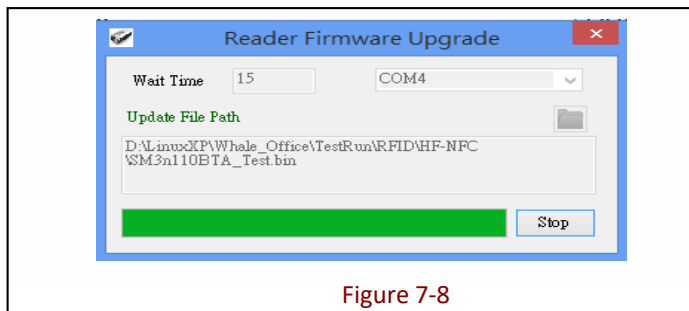


Step 5:

Click  to execute firmware upgrade, as per Figure 7-5. The system will ask whether to confirm execution, as per Figure 7-7.



CAUTION ! While the **MR11A7** is **updating its firmware** (Figure 7-8), please avoid unnecessary errors and do not unplug the cable. Incomplete firmware update may cause damage to MR11A7.



Step 6:

When update is complete, click "OK" to finish the update program, as per Figure 7-9. The MR11A7 will reboot and return to Normal Operation Mode automatically.

