

# **MSR213U SERIES**

Magnetic Stripe Card Reader  
USB Interface

## **Setting AP**

### **User Guide**

**Document No.: TM072 Revision E**

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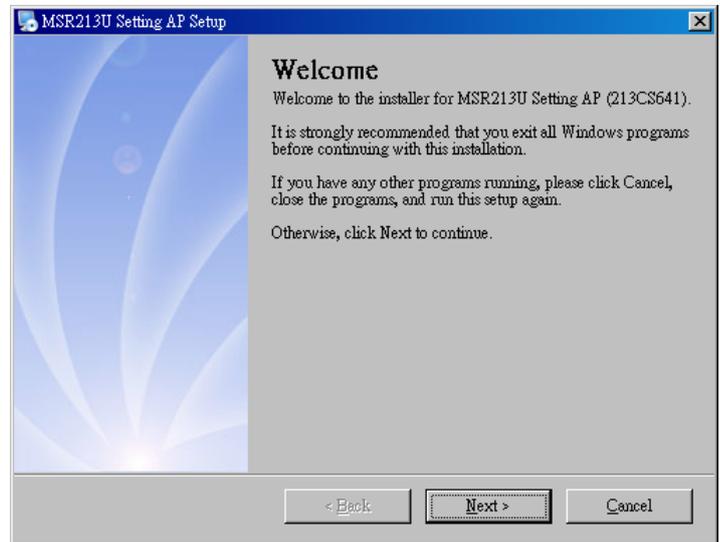


### NOTE

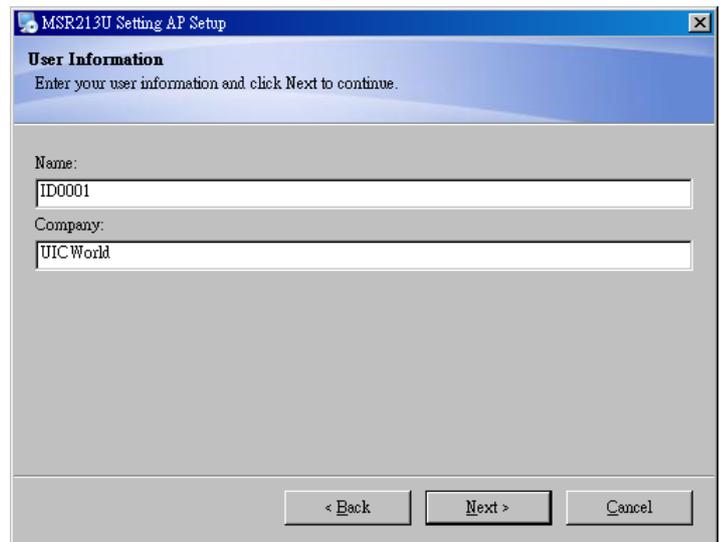
The version number of your software may be different. This is just an example.

## Section 1: Setup

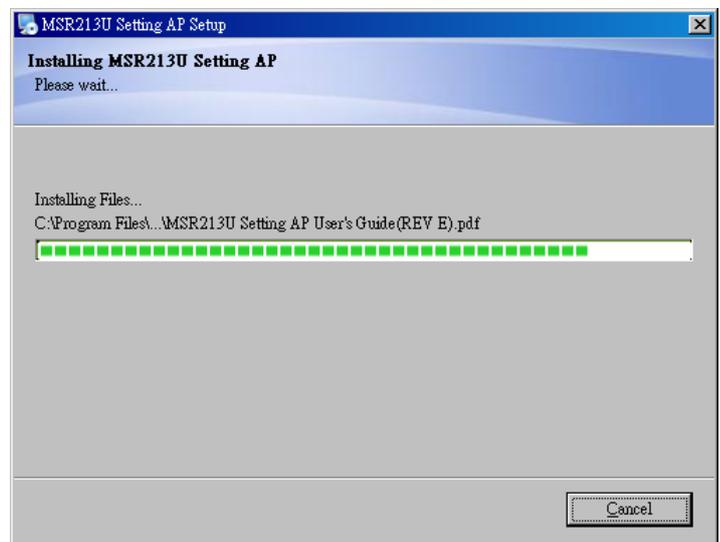
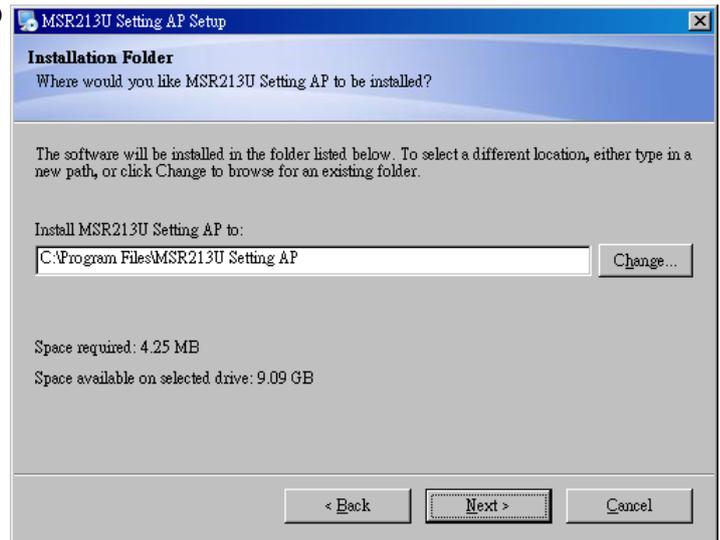
- 1) Run the setup file **213CS641.exe** to launch installation procedure.
- 2) Click on the **Next** button.



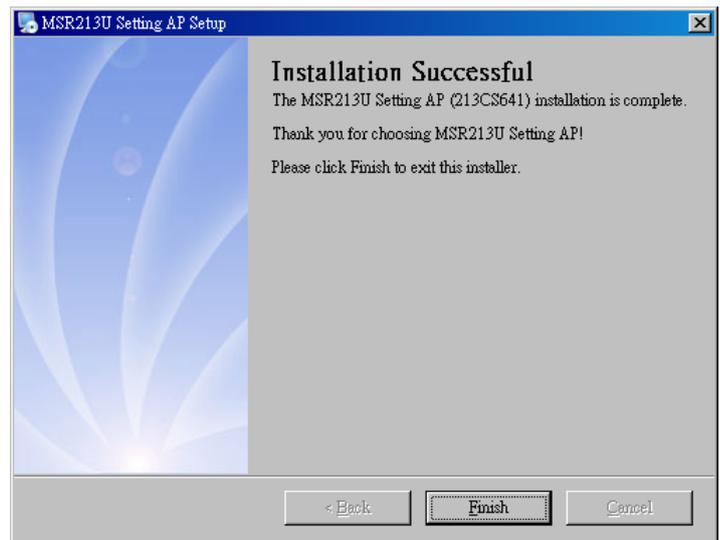
- 3) Please enter User information.



4) Choose install location then click **Next** to begin installation.



5) Click **Finish** to exit Setup.



## Section2: Using the Setting AP

**(Please note that this program doesn't support 640 x 480 screen resolution.)**

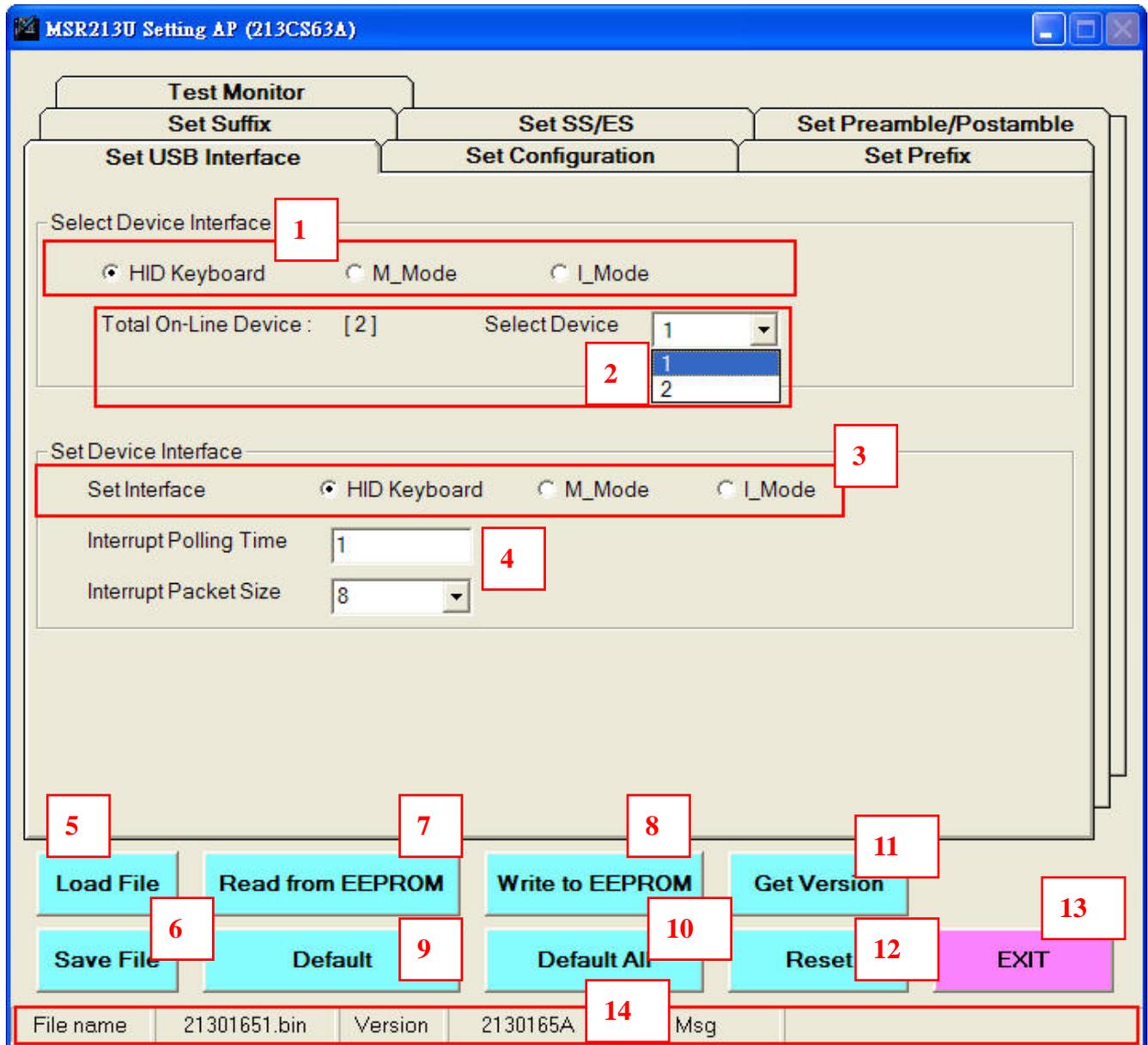
- 1) Connect the device to the host computer.
- 2) Start MSR213U Setting AP.
- 3) In the **Select Device Interface** panel, choose reader type.
- 4) You first have to **Read from EEPROM**. You'll also view the F/W version if successfully.  
**Note: Every time you run the Setting AP, the "Read from EEPROM" or "Load File" function must be executed first.**  
**Otherwise, the "Write to EEPROM" and "Save File" buttons are disabled.**
- 5) Select the items you want to modify, and then click **Write to EEPROM** to write data to the reader.
- 6) Close program then re-plug the device to have new settings take effect.

### **IMPORTANT NOTICE!**

**Once the EEPROM value is changed, please exit Setting program then re-plug the device to have new configurations take effect.**

## Section3: Program Features

### 3-1: Set USB Interface



- 1 - Chooses the appropriate type of your device, or you'll see an error message "Can't Find Device".
- 2 - Detects and lists the reader(s) connected to your computer. In the **Select Device** list, select the reader you want to operate.
- 3 - Click the reader mode you want to change.  
Once been selected, its values last time read will be loaded.
- 4 - Sets USB driver Polling Time, 1~255 ms.  
The Packet Size is only available for M\_Mode, 1~64 bytes.
- 5 - To load configurations setting that have been previously saved click **Load File**.
- 6 - Settings on the given pages can be saved to a file(\*.bin) by pressing **Save File**.
- 7 - Gets reader's current settings, along with firmware version.

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**It is recommended that perform this function whenever the device is plugged.**

- 8** - Updates the configuration settings to the reader, followed by a device reset.
- 9** - Resets **current** operating mode to default values without affecting the rest of reader modes.
- 10** - Returns **all** reader settings to factory default values.
- 11** - Reports MSR213U firmware version, for example “2130165A”.
- 12** - This function allows you to reset the currently selected device.
- 13** - Closes and quits the program.
- 14** - Status bar, which displays loaded file, reader’s firmware and operation messages.

## 3-2: Set Configuration

The screenshot shows the 'Set Configuration' window with the following settings highlighted by red numbers:

- 1**: Set Enable Tracks (TK1 & TK2 & TK3)
- 2**: Set Require Tracks (Any tracks)
- 3**: Carriage Return (Each track)
- 4**: Select Country (US)
- 5**: Track Output Order (First: Track 1, Second: Track 2, Third: Track 3)
- 6**: Field Output Order (1st: No SEND, 2nd: No SEND, 3rd: No SEND)
- 7**: Block Output Order (TK1, TK2, TK3 Block A, B, C Enable)
- 8**: Exp Date Format (YYMM)
- 9**: Transmit SS/ES (checked)
- 10**: Beep Enable (checked)
- 11**: Caps Lock (checked)
- 12**: Read ISO only (unchecked)
- 13**: Break Code Enable (checked)
- 14**: RAWdata output (unchecked)

Note: If both "START" and "END" settings fill in "0", the block output feature will not come into effect and the card track data will be all sent out.

- 1** - Use this selection if you want to enable or disable track(s).
- 2** - The data read from the required track(s) must be error-free, otherwise output nothing.
- 3** - Use this selection to control when to send a Carriage Return.
- 4** - \* Select keyboard language.
- 5** - Controls the output orders for data track.
- 6** - Used for setting Name/Account/Expire Date output order when reading credit cards.
- 7** - Specifies the data output range for different card types.

**Note that if both "Start" and "End" settings fill in "0", the block output feature will not come to effect.**

- 8** - The expiration date format for credit cards.
- 9** - Send or don't send SS/ES.
- 10** - Enable/ disable reader's beep sound.
- 11** - \* In HID Keyboard mode sends Caps Lock key before data output.
- 12** - \* If this option is checked, the reader decodes ISO format only.
- 13** - \* Sends **Break Code** enable/ disable.
- 14** - \* Enable/ disable raw data output.

\* **Select Country, Caps Lock, Break Code and RAWdata** options are for HID KB only; **Read ISO only** is for M\_Mode only.

### 3-3: Set Prefix

Sets the Prefix code for Track 1/2/3, six characters max.

**Note:** Set Prefix, Set Suffix and Set Preamble/Postamble features are not supported for M\_Mode.

#### 3-3-1: Set Prefix in HID mode

Track 1 Prefix								
Char 1	Modifier	Key	Char 2	Modifier	Key	Char 3	Modifier	Key
LShift		1	LShift		2	LShift		3
Char 4	Modifier	Key	Char 5	Modifier	Key	Char 6	Modifier	Key
Null		Null	Null		Null	Null		Null

**Modifier** key modifies the normal **Key** when the two are set in combination.

i.e. LShift (**Modifier**) + 1 (**Key**) means the “!” key.

#### 3-3-2: Set Prefix in I\_Mode

Test Monitor								
Set Suffix			Set SS/ES			Set Preamble/Postamble		
Set USB Interface			Set Configuration			Set Prefix		
Track 1 Prefix								
Char 1	Modifier	Key	Char 2	Modifier	Key	Char 3	Modifier	Key
Null		Hex(01)	Null		Hex(02) 1	Null		Hex(03) L
Char 4	Modifier	Key	Char 5	Modifier	Key	Char 6	Modifier	Key
Null		Hex(01)	Null		Hex(05)	Null		Hex(06) -
Track 2 Prefix								
Char 1	Modifier	Key	Char 2	Modifier	Key	Char 3	Modifier	Key
Null		Hex(00)	Null		Hex(00)	Null		Hex(00)

Printable Hex will be converted to ASCII character. (i.e. 73H = “s”)

## 3-4: Set Suffix

Sets the Suffix code for Track 1/2/3, six characters max.

### 3-4-1: Set Suffix in HID mode

Track 1 Suffix								
Char 1	Modifier	Key	Char 2	Modifier	Key	Char 3	Modifier	Key
Null		M	Null		S	Null		R
Char 4	Modifier	Key	Char 5	Modifier	Key	Char 6	Modifier	Key
Null		2	Null		1	Null		3

### 3-4-2: Set Suffix in I\_Mode

Track 1 Suffix								
Char 1	Modifier	Key	Char 2	Modifier	Key	Char 3	Modifier	Key
Null		Hex(FA)	Null		Hex(FB)	Null		Hex(FC)
Char 4	Modifier	Key	Char 5	Modifier	Key	Char 6	Modifier	Key
Null		Hex(FD)	Null		Hex(FE)	Null		Hex(FF)

### 3-5: Set Preamble/Postamble

Sets the start/end characters you wish to use for MSR data, nine characters maximum.

#### 3-5-1: Set Preamble/Postamble in HID mode

Set Preamble			Set Preamble			Set Preamble		
Char 1	Modifier	Key	Char 2	Modifier	Key	Char 3	Modifier	Key
Null		U	Null		N	Null		I
Char 4	Modifier	Key	Char 5	Modifier	Key	Char 6	Modifier	Key
Null		F	Null		O	Null		R
Char 7	Modifier	Key	Char 8	Modifier	Key	Char 9	Modifier	Key
Null		M	Null		Null	Null		Null

Set Postamble			Set Postamble			Set Postamble		
Char 1	Modifier	Key	Char 2	Modifier	Key	Char 3	Modifier	Key
Null		Null	Null		Null	Null		Null

#### 3-5-2: Set Preamble/Postamble in I\_Mode

Set Preamble			Set Preamble			Set Preamble		
Char 1	Modifier	Key	Char 2	Modifier	Key	Char 3	Modifier	Key
Null		Hex(FA)	Null		Hex(FB)	Null		Hex(FC)
Char 4	Modifier	Key	Char 5	Modifier	Key	Char 6	Modifier	Key
Null		Hex(FD)	Null		Hex(FE)	Null		Hex(FF)
Char 7	Modifier	Key	Char 8	Modifier	Key	Char 9	Modifier	Key
Null		Hex(00)	Null		Hex(00)	Null		Hex(00)

Set Postamble			Set Postamble			Set Postamble		
Char 1	Modifier	Key	Char 2	Modifier	Key	Char 3	Modifier	Key
Null		Null	Null		Hex(00)	Null		Hex(00)



### 3-6-2: Set SS/ES in M\_Mode/ I\_mode

Set USB Interface		Set Configuration		Set Prefix	
Test Monitor		Set SS/ES		Set Preamble/Postamble	
Set Suffix		Set SS/ES		Set Preamble/Postamble	
TK1 SS Change		Modifier	Key	Modifier	Key
ISO	<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>	AAMVA	<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>
DMV	<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>	Tradeshow	<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>
TK2 SS Change		Modifier	Key	Modifier	Key
ISO	<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>	AAMVA	<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>
DMV	<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>	Tradeshow	<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>
TK3 SS Change		Modifier	Key	Modifier	Key
ISO	<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>	AAMVA	<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>
DMV	<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>	Tradeshow	<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>
<input checked="" type="checkbox"/> Output Char If Read Error	Modifier	Key	All ES	Modifier	Key
	<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>		<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>
Change Carriage Return	Modifier	Key	Exp Date Separator	Modifier	Key
	<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>		<input type="text" value="Null"/>	<input type="text" value="Hex(00)"/>

1 - Sets the Track 1/2/3 start sentinel for specified cards.

2 - Changes the end sentinel for each track.

3 - Sends a code to indicate read error/ no data read.

**Note:** If this option is checked with no Key set(00h or Null), the default “E” character is used.

4 - Use this selection to change the CR code, the default is “Enter”.

5 - Changes the separate character for expiration date of credit cards.



## Section4: Operation Example

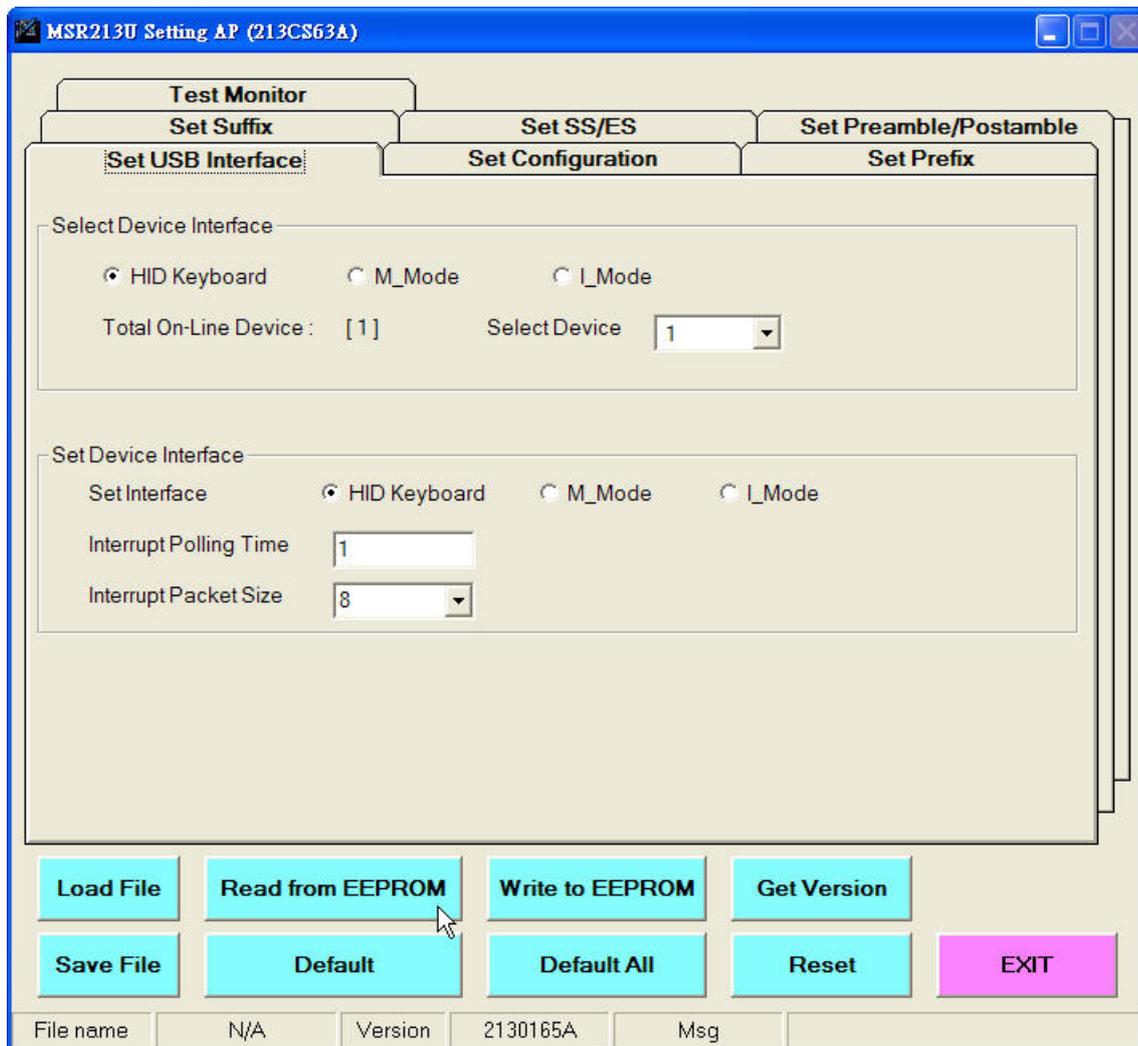
Following example demonstrates the configuration sequence for writing data to the device.

To configure a HID Keyboard reader as follows:

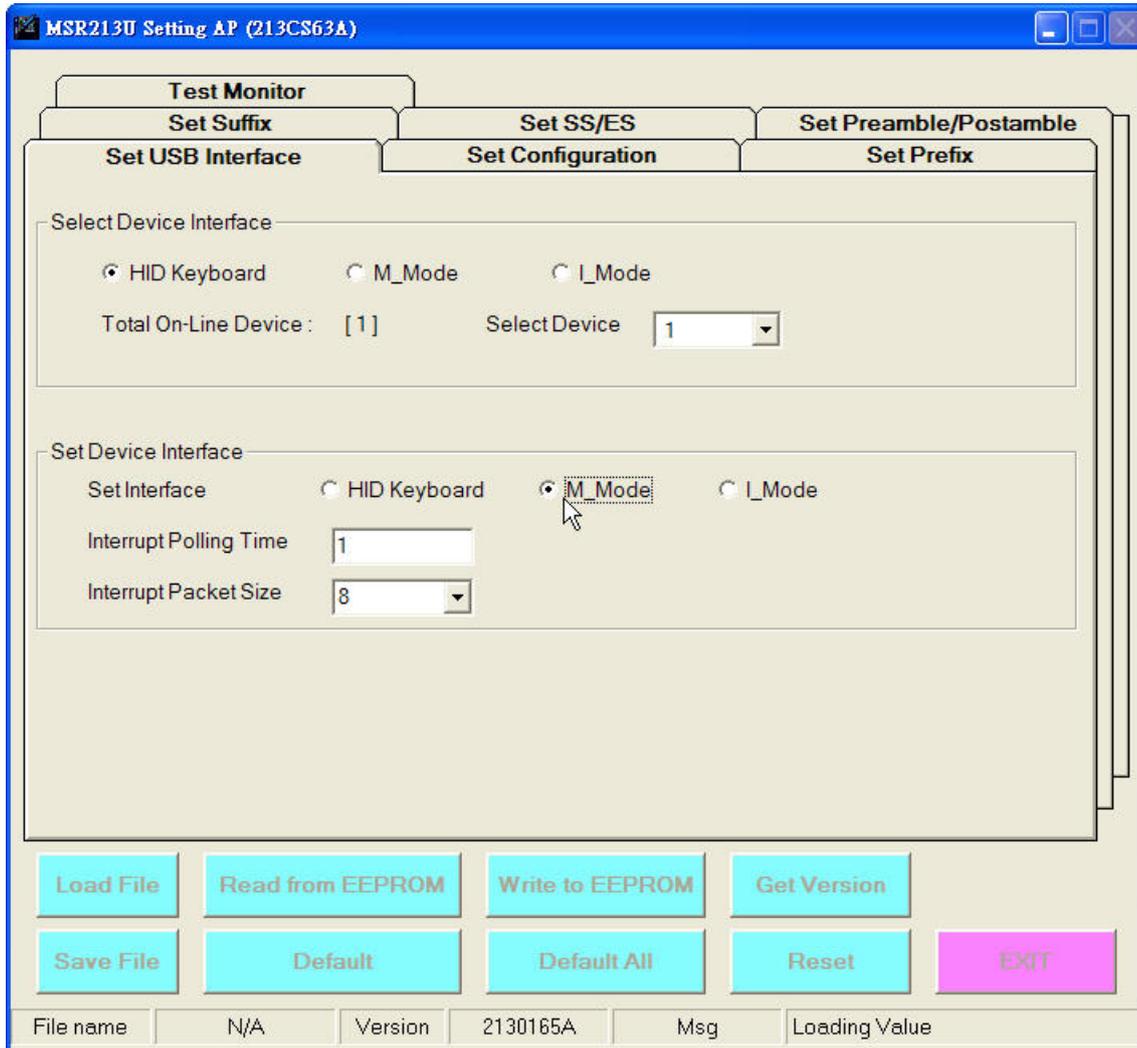
Device Mode	M mode
Polling Time	255ms
Enable Tracks	Track 1/2
Transmit SS/ES	Disable
Read ISO only	Yes

Steps:

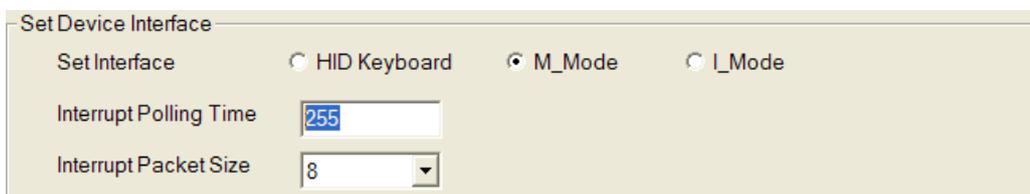
1) Run the program. Select **HID Keyboard**, and then click **Read from EEPROM**.



2) Select **M\_Mode** interface. This may take a few seconds to load M\_Mode values, which was read in Step 1.



3) Enter "255" in the **Interrupt Polling Time** text box.



4) Turn to **Set Configuration** tab. Select **TK1 & TK2**, check **Read ISO only** and un-check the **SS/ES** option.

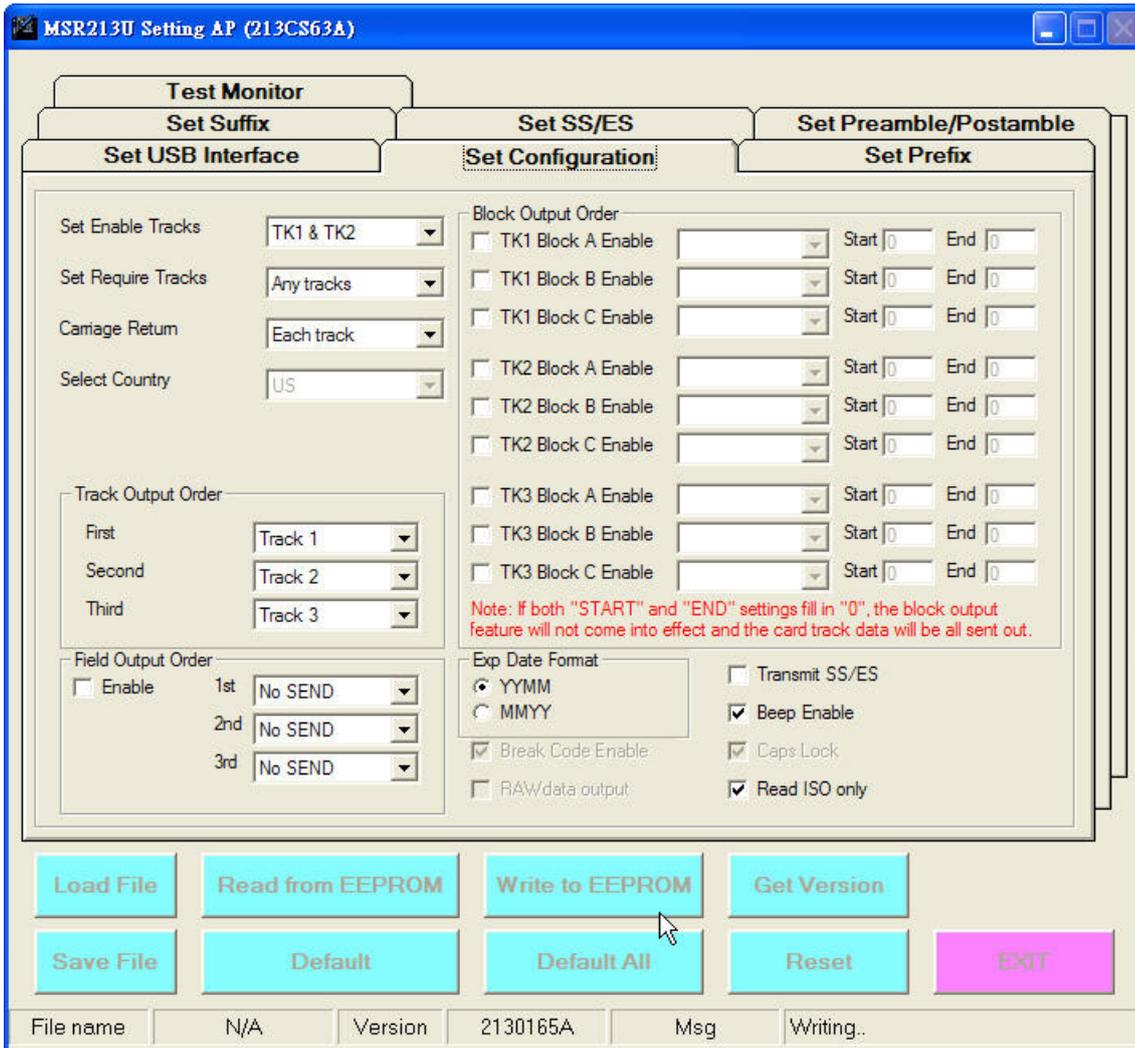
The screenshot displays the configuration interface for the MSR213U device, specifically the **Set Configuration** tab. The interface is divided into several sections:

- Set USB Interface:** Includes options for **Set Enable Tracks** (set to **TK1 & TK2**), **Set Require Tracks** (Any tracks), **Carriage Return** (Each track), and **Select Country** (US).
- Track Output Order:** A section with three dropdowns for **First** (Track 1), **Second** (Track 2), and **Third** (Track 3).
- Field Output Order:** A section with an **Enable** checkbox and three dropdowns for **1st**, **2nd**, and **3rd** (all set to **No SEND**).
- Block Output Order:** A list of checkboxes for blocks TK1, TK2, and TK3, each with sub-options for A, B, and C. Each sub-option has a **Start** and **End** field.
- Exp Date Format:** Radio buttons for **YYMM** (selected) and **MMYY**.
- Other options:** **Break Code Enable** (checked), **RAWdata output** (unchecked), **Transmit SS/ES** (unchecked), **Beep Enable** (checked), **Caps Lock** (checked), and **Read ISO only** (checked).

A red box highlights the **Set Enable Tracks** dropdown menu, and another red box highlights the **Transmit SS/ES**, **Beep Enable**, **Caps Lock**, and **Read ISO only** options.

Note: If both "START" and "END" settings fill in "0", the block output feature will not come into effect and the card track data will be all sent out.

5) When you are finished, click **Write to EEPROM**.



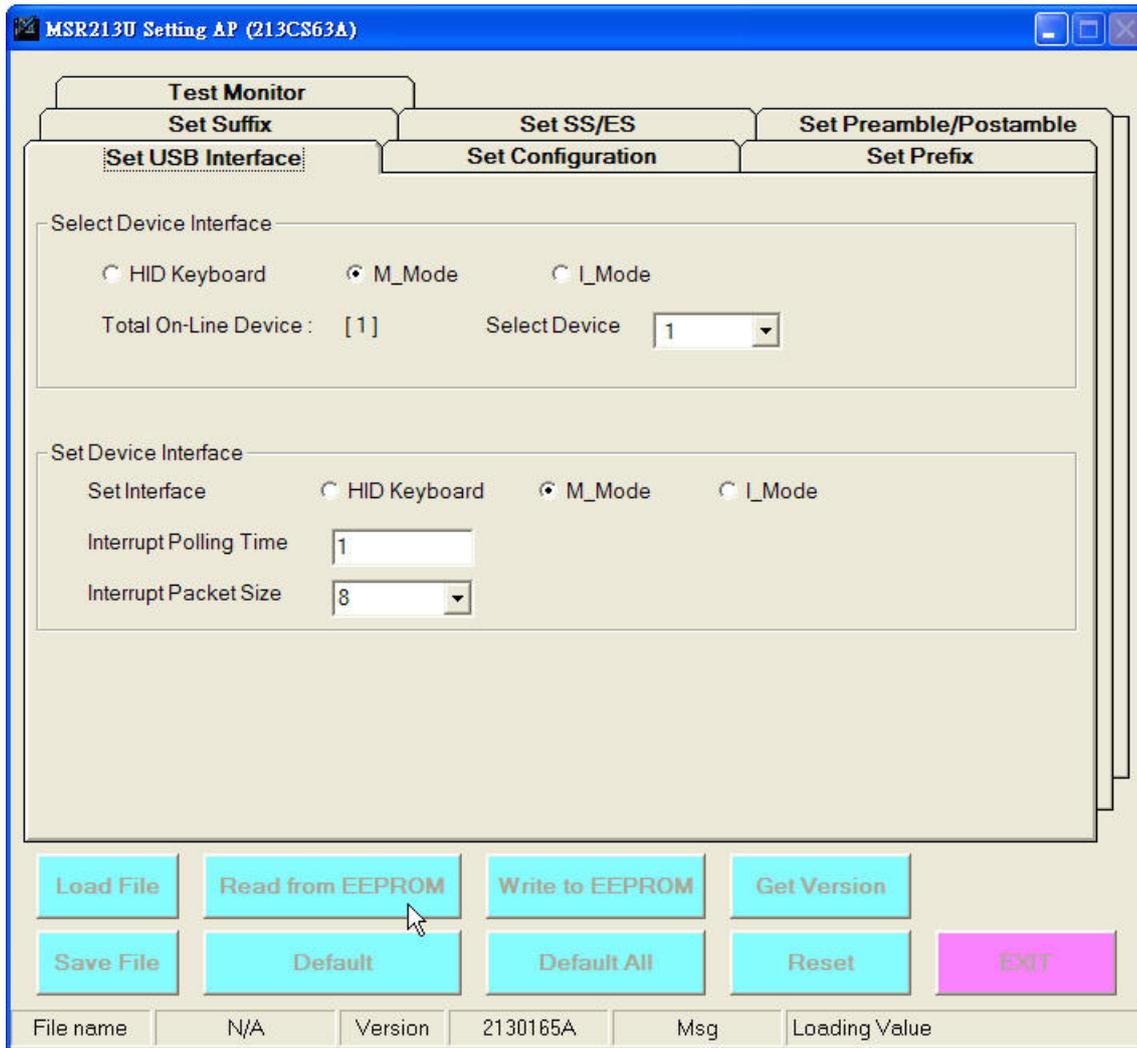
**While operation is in progress, DO NOT:**

- Disconnect the reader
- Close the program

6) When the reader resets successfully, the write procedures are completed.

7) Close the program then re-plug the device to have new configurations take effect. (Refer to **Page 4**)

- 8) Open the program again and select **M\_Mode** interface for your reader.
- 9) Don't forget to **Read from EEPROM** to check the reader settings.



- 10) Now the reader is in the M\_Mode and ready for further operation.