

Programmable Keyboard

SERIES 8031 U

Operation Manual

Version 1.0



This equipment has been tested and found to comply with the limits for Class A 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 if not installed and used in accordance with the instructions may cause harmful 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 correct interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help. This booklet is available from the U.S. government Printing Office, Washington, DC 20402, Stock NO.004-000-00345-4.

CAUTION: Any changes of modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received including interference that may cause undesired operation.

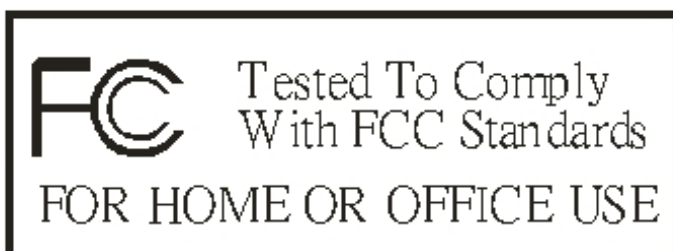


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Chapter 1 Specification Introduction

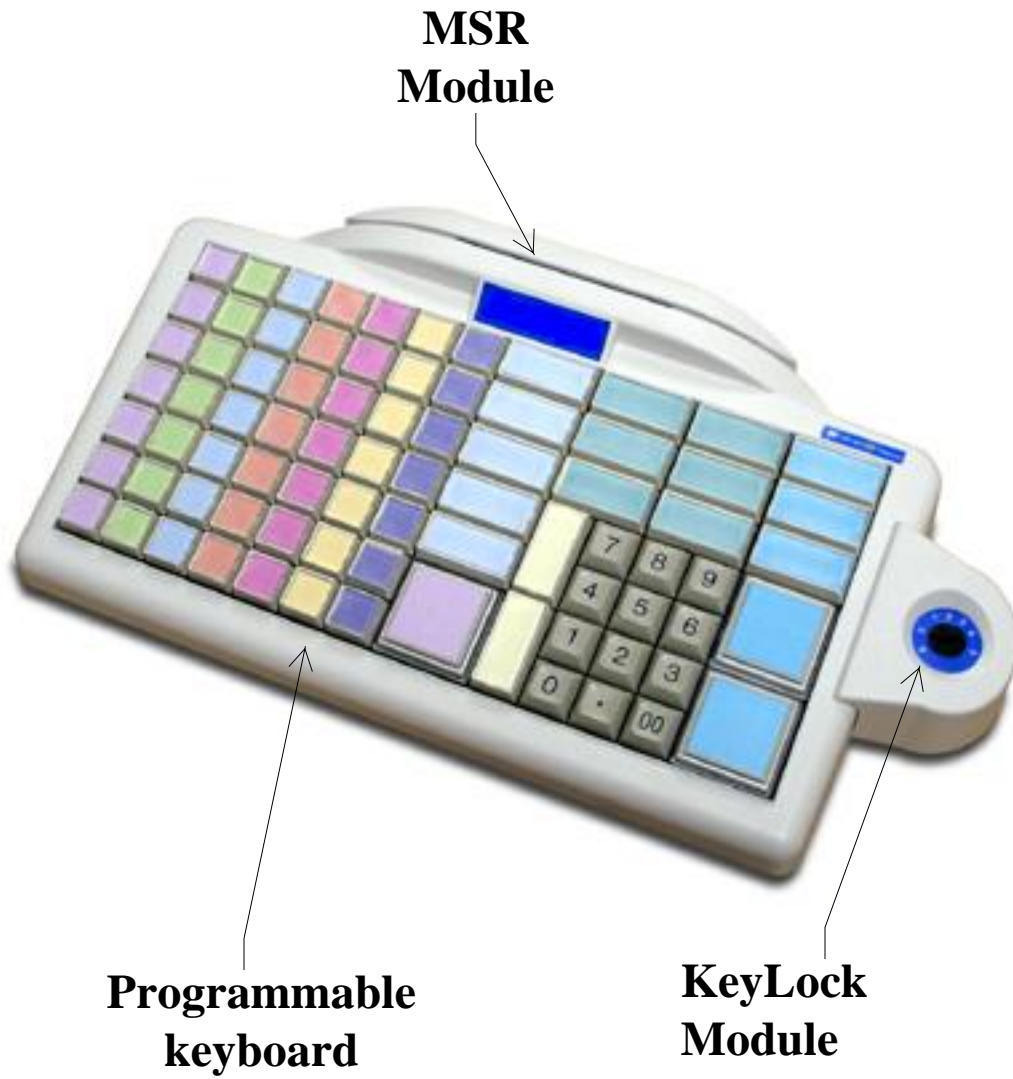
The 8031 programmable keyboards have been specially designed for use with personal computers or terminals in point-of-sale and industrial applications. This manual describes how to connect the keyboard to your system, how to design a keyboard layout which meets your special requirements, and how to install your keyboard layout into the keyboard. There are two model of 8031.

One is a tactile keyboard with seven rows and fifteen columns for a maximum of 105 keys; another emulates for QWERTY keyboard layout. Both of them are with single, double, and quadruple key caps. For the keyboard layout, key function and key data strings are completely programmable.

Each keyboard is capable of two concurrent keyboard maps with switching between the maps controlled by one designated key. Go to Appendix I for picture reviewing.

JP-8031 is set simulation the windows standard keyboard, connected to the usb port without driver. AUX KB port can connect standard PS/2 keyboard, and AUX RS232 port can connect any external RS232 devices (e.g., bar code scanner) and transmitting that data to a host computer via either the keyboard wedge or an RS232 interface.

Chapter 2 **Appearance**



Chapter 3 Hardware Installation

Connect keyboard to computer:

Please connect 8031 usb cable computer usb port.
(Diagram 3.1)

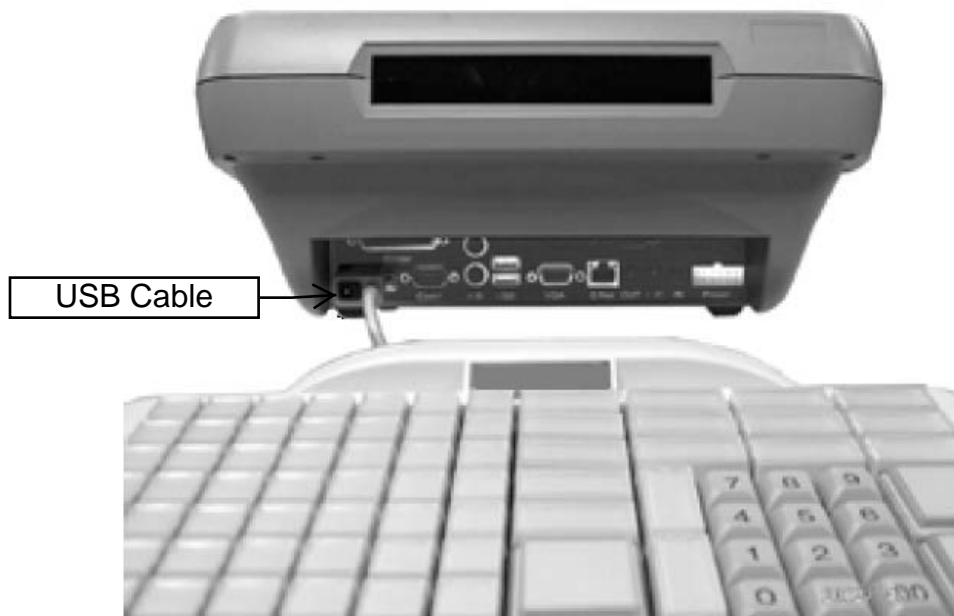


Diagram 3.1

Chapter 4

Programming Tool Installation

4-1 Software Installation

Step 1.

Insert CD-ROM and select "8031USB.exe" to installation.



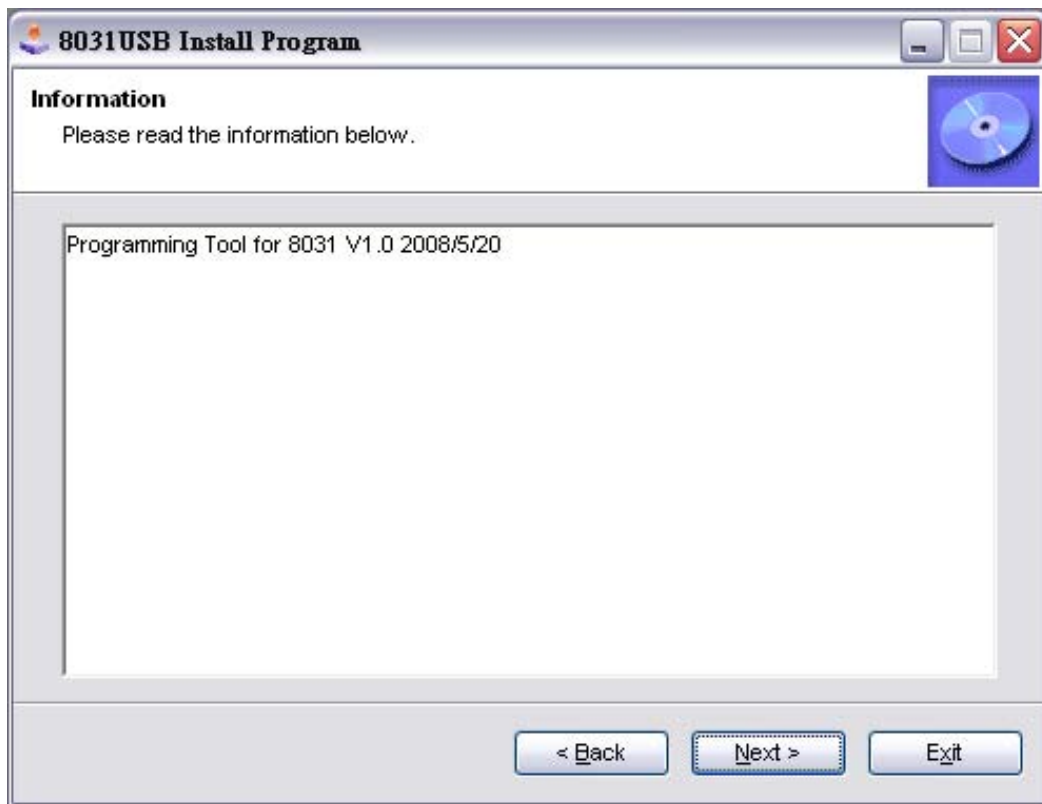
Step 2.

When the setup screen appears then to select "Next" step.

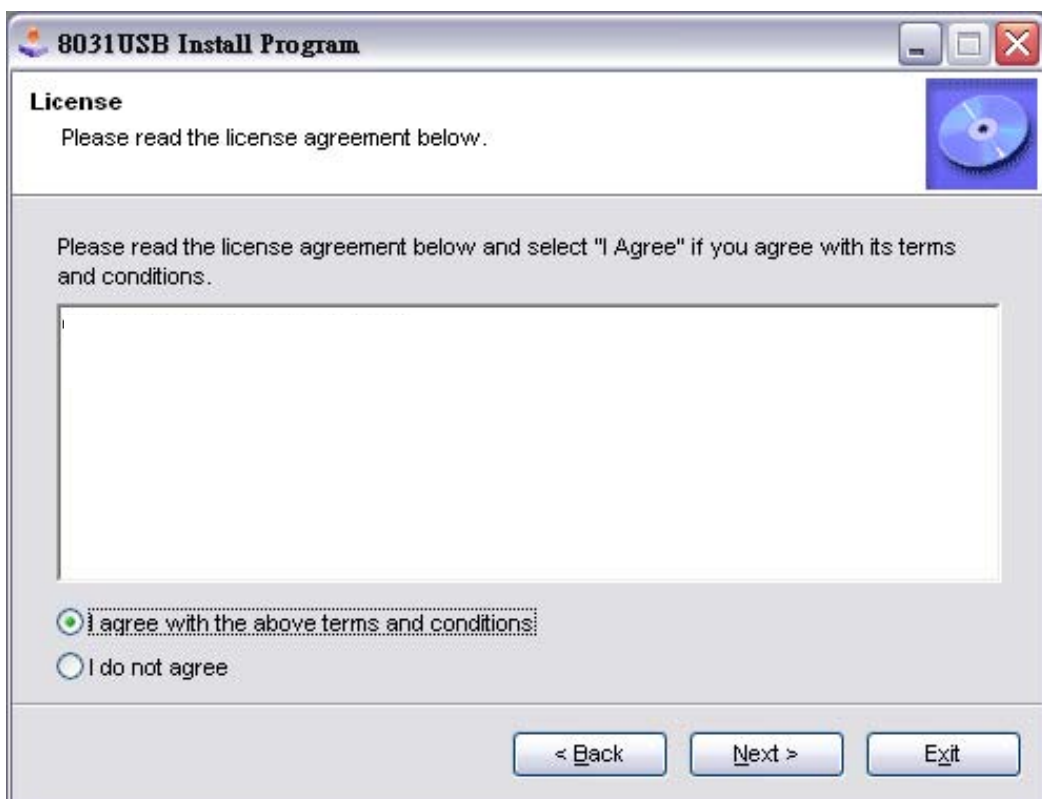


Step 3.

When the setup screen appears then to select "Next" step.

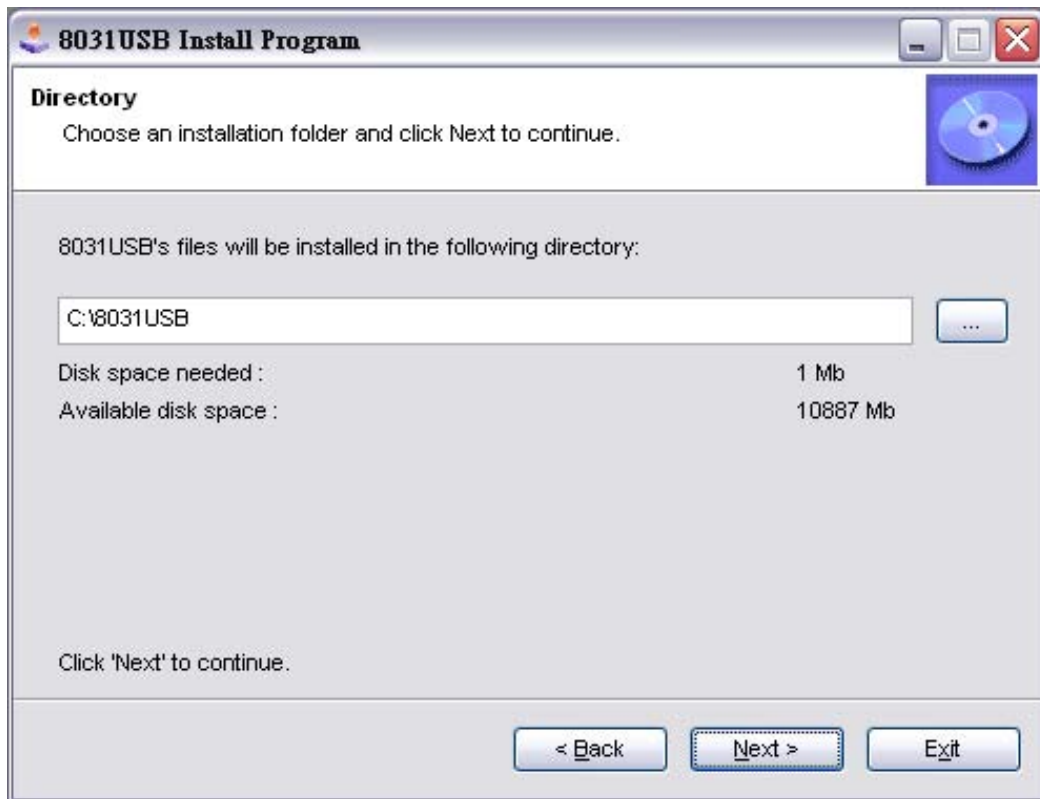
**Step 4.**

When the setup screen appears please select "I agree.."" then to select "Next" step.



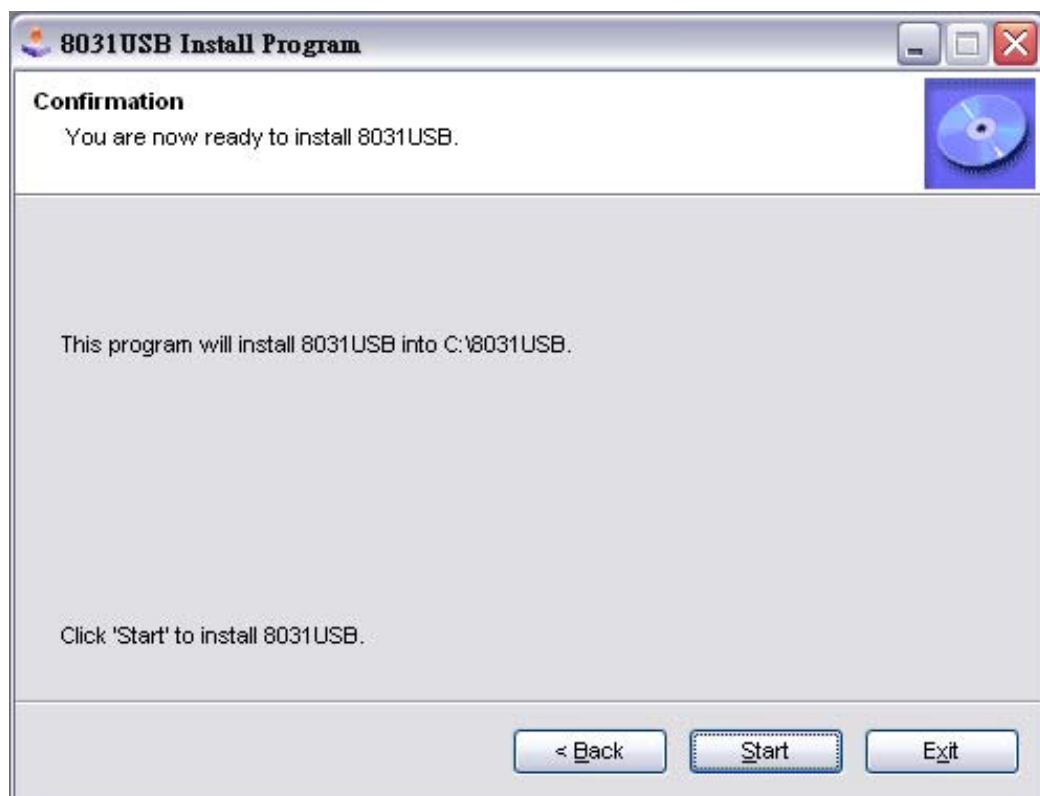
Step 5.

When the setup screen appears then to select "Next" step.



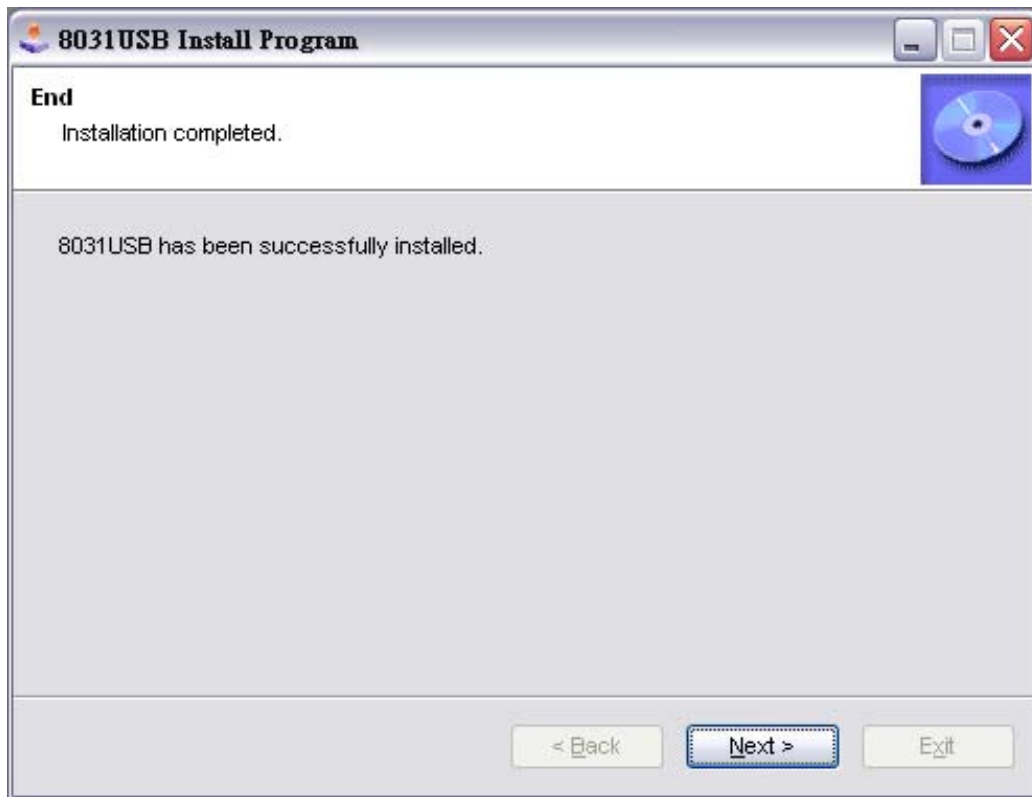
Step 6.

When the setup screen appears then to select "Start" step.

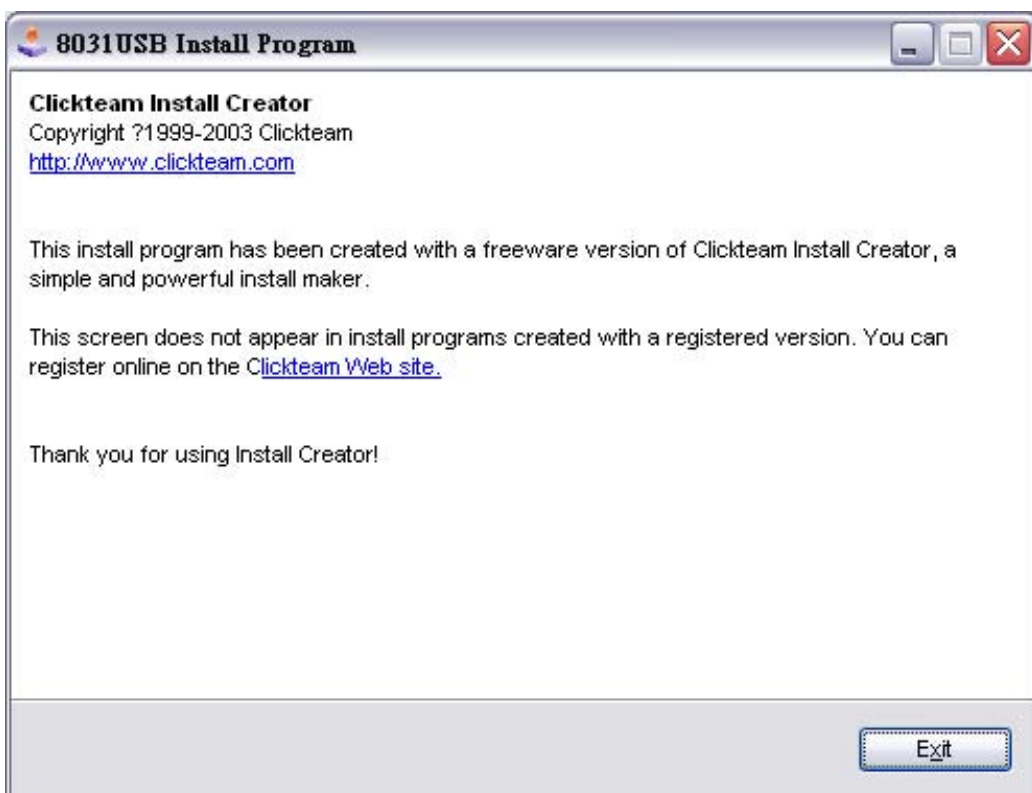


Step 7.

When the setup screen appears then to select "Next" step.

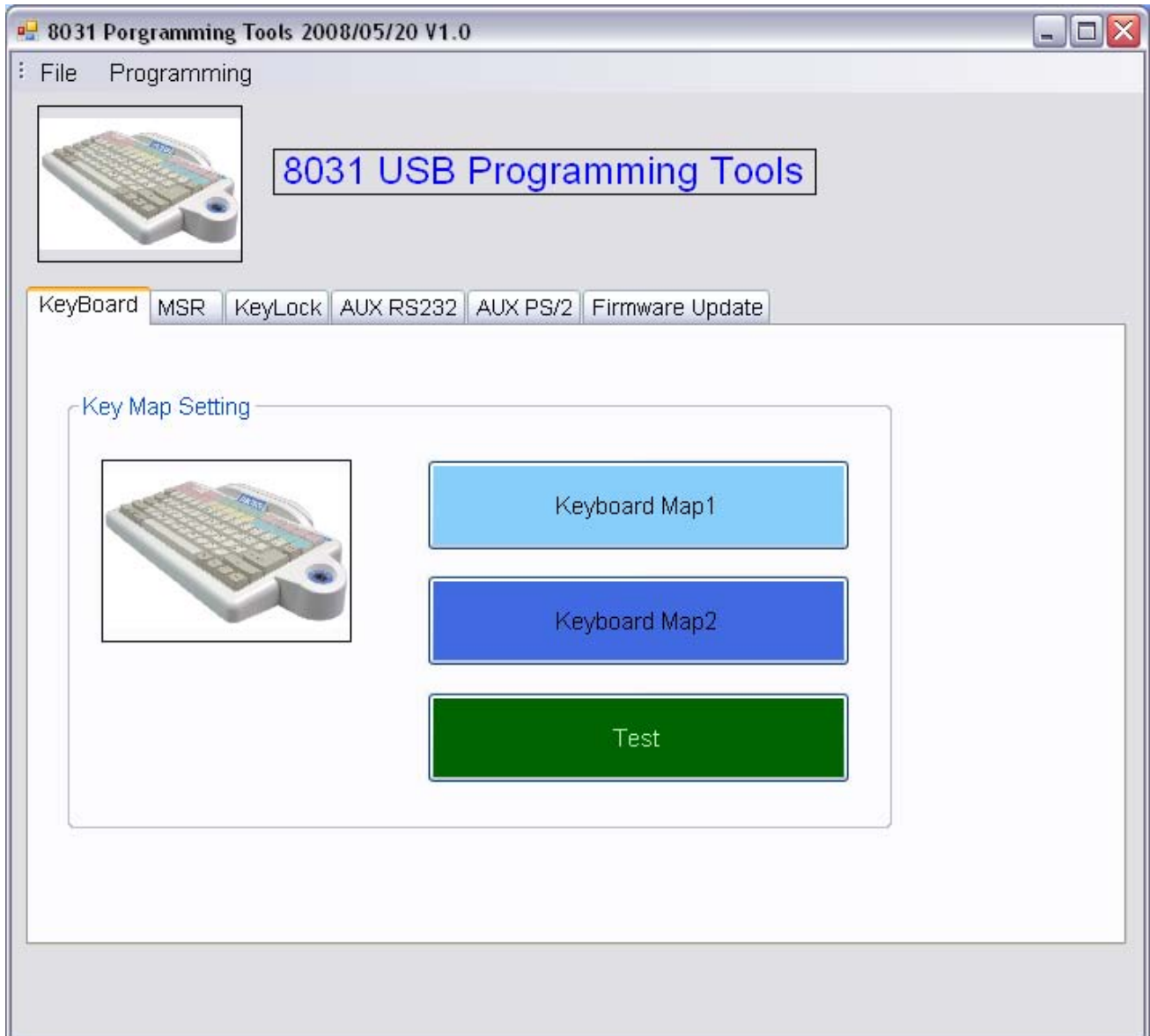
**Step 8.**

When the setup screen appears then to select "Exit".



4-2 Main Screen

After the opening program will appear under the plan is the main screen. The next steps will introduce you to use various functions.

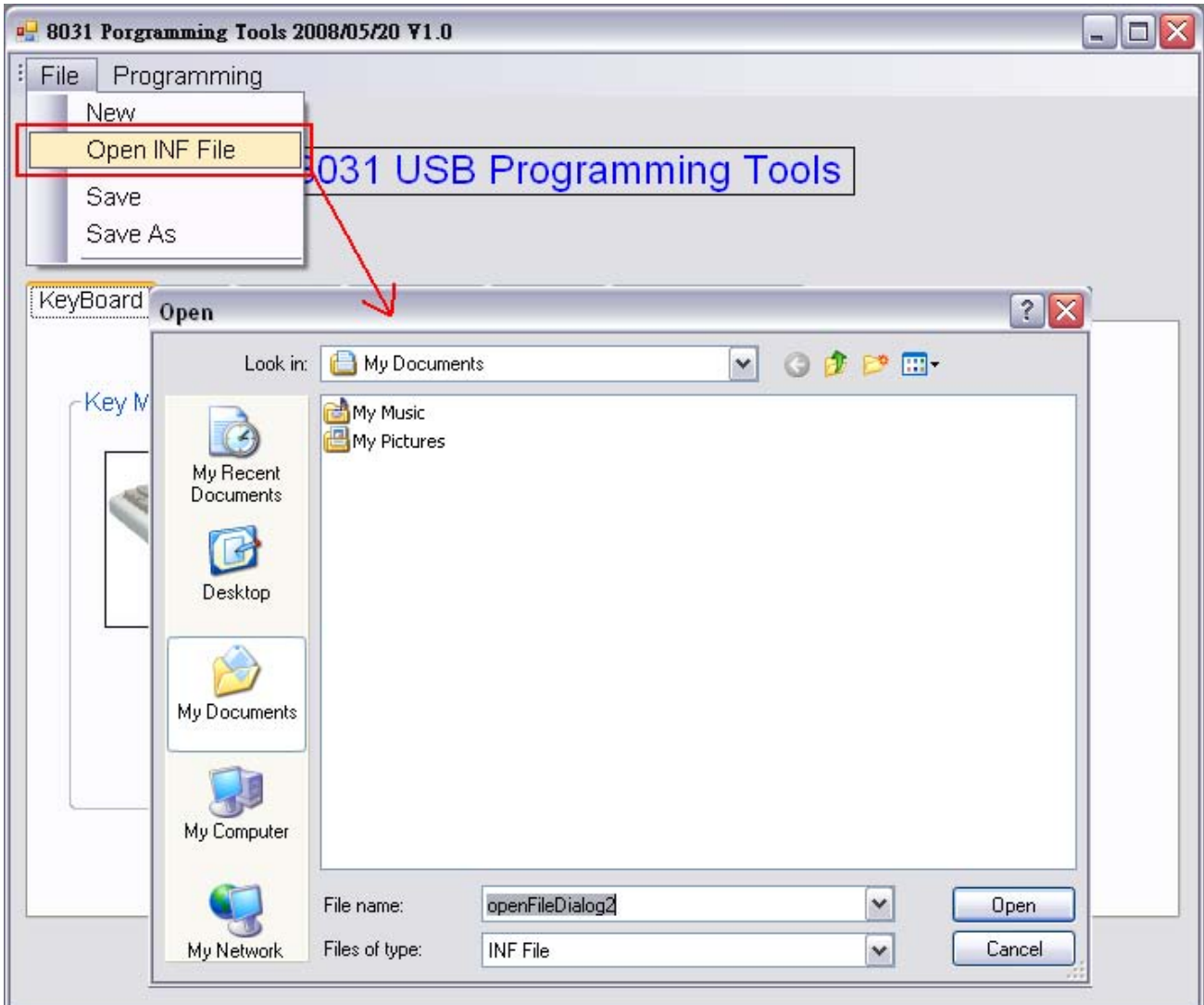


4-3 Tool Bars

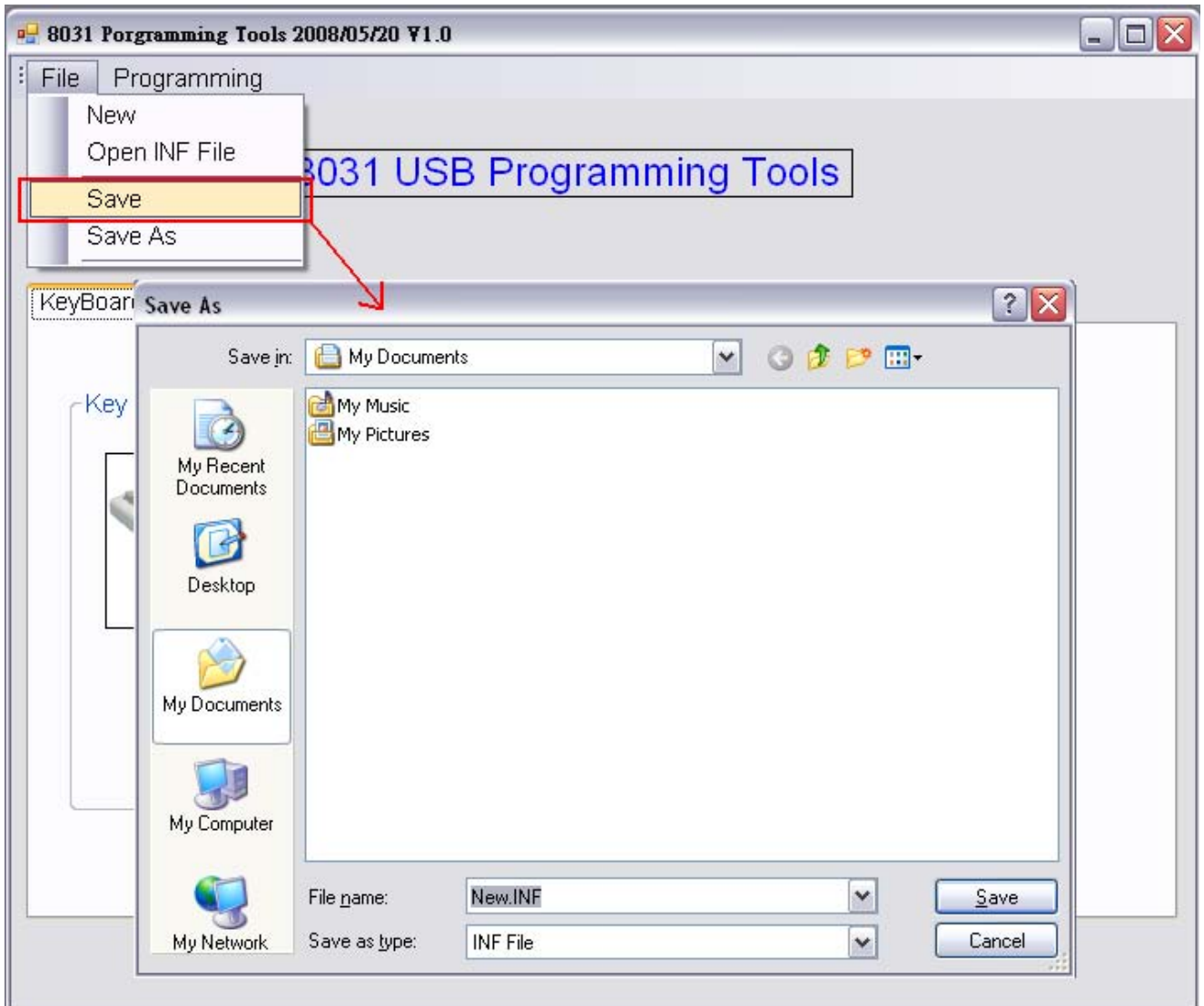
New: This project can create a new INF file.



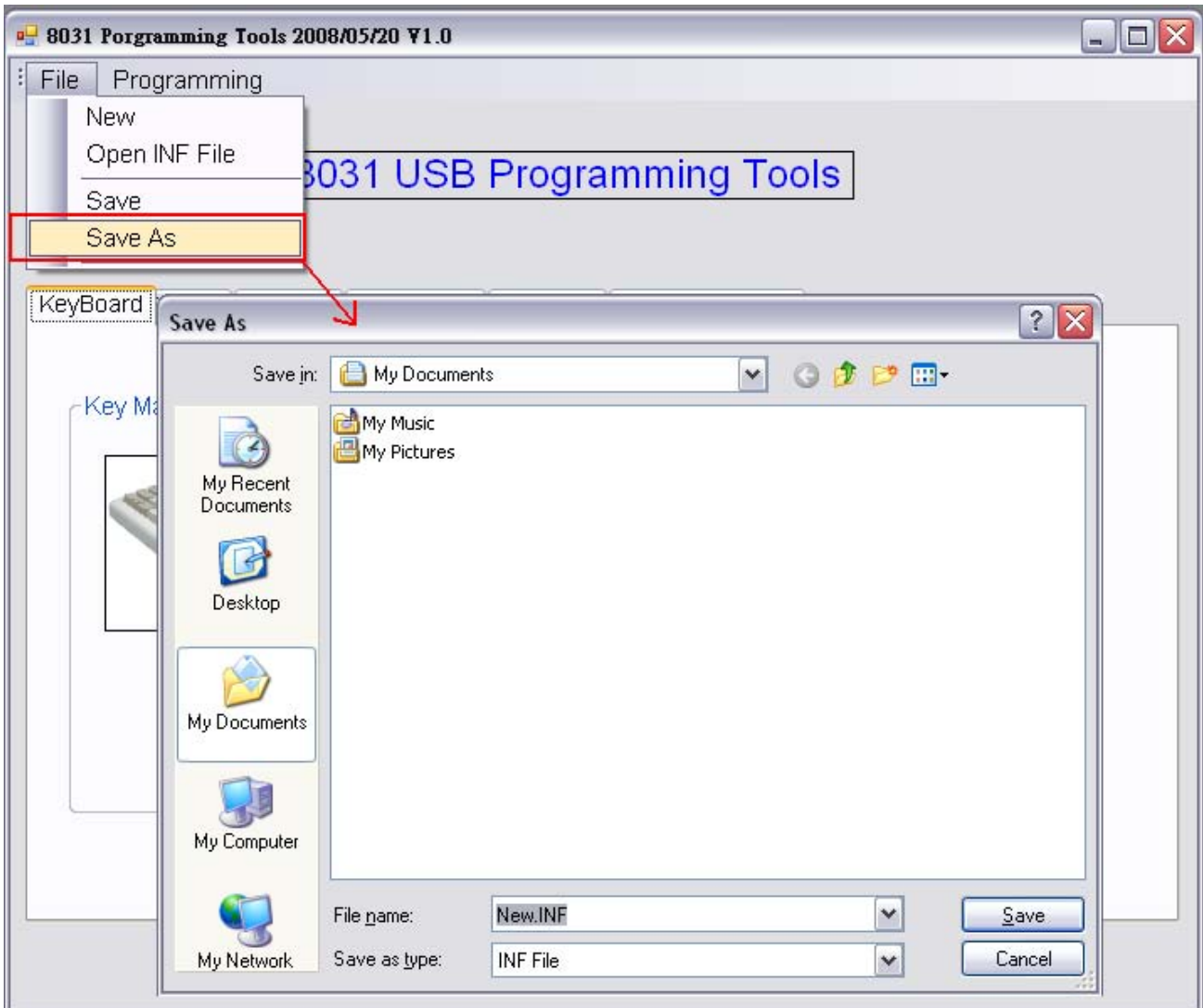
Open INF File: This project can open your choice of INF file.



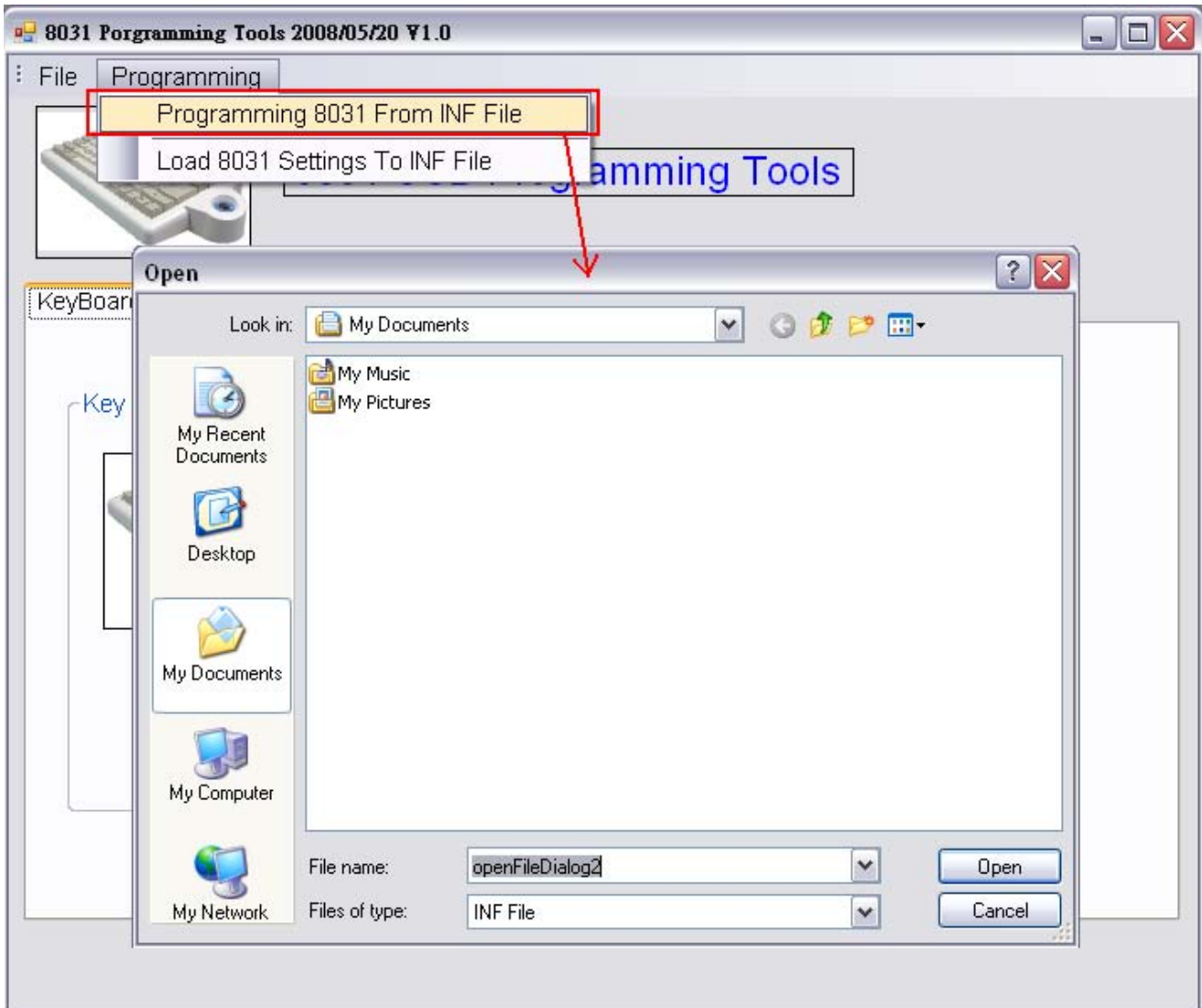
Save : This project can save your settings to INF file.



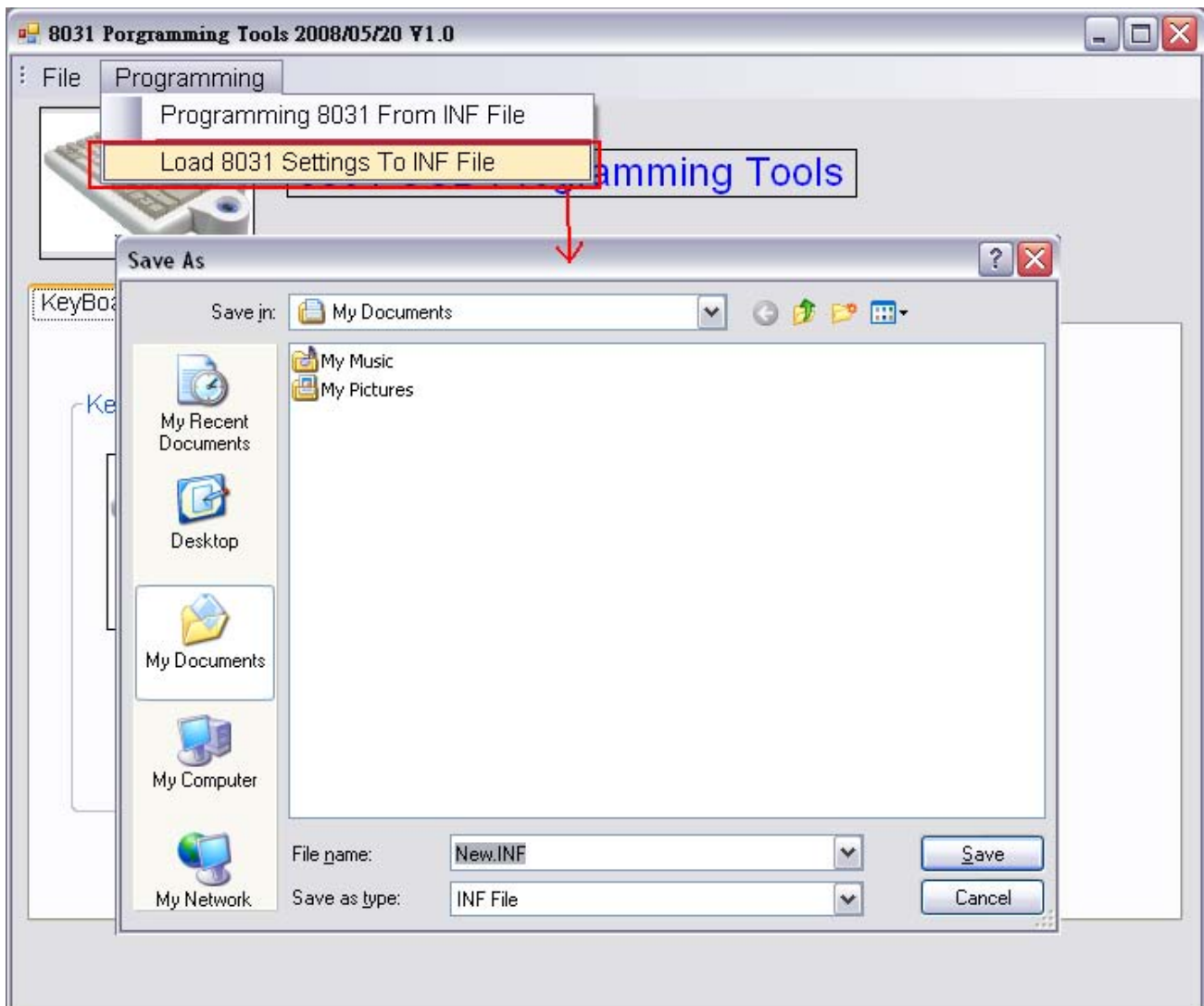
Save As : This project can save as your settings to new INF file.



Programming 8031 From INF File: This project can programming 8031 from INF file.

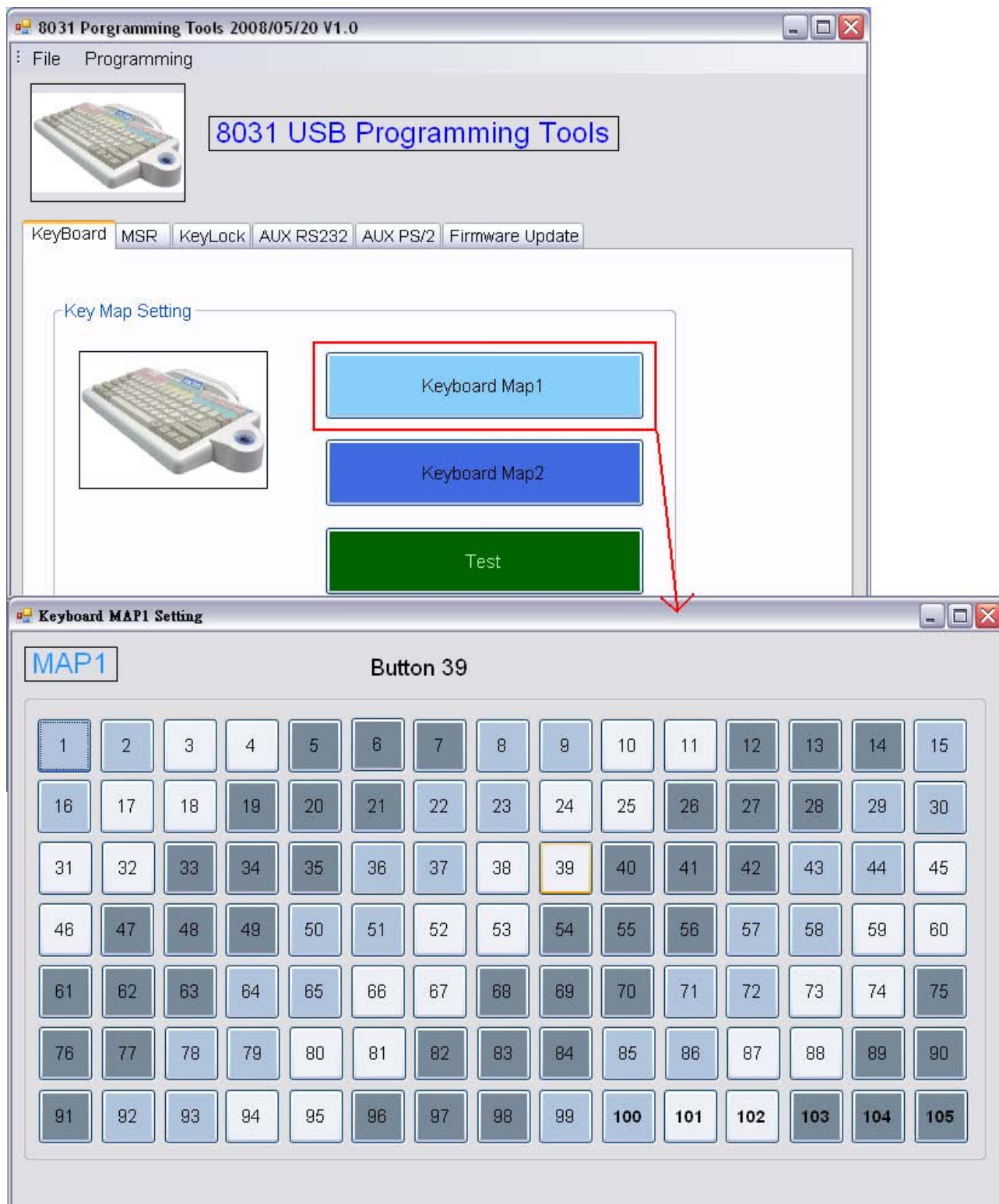


Load 8031 Setting To INF File: This project can load 8031 settings to INF file.



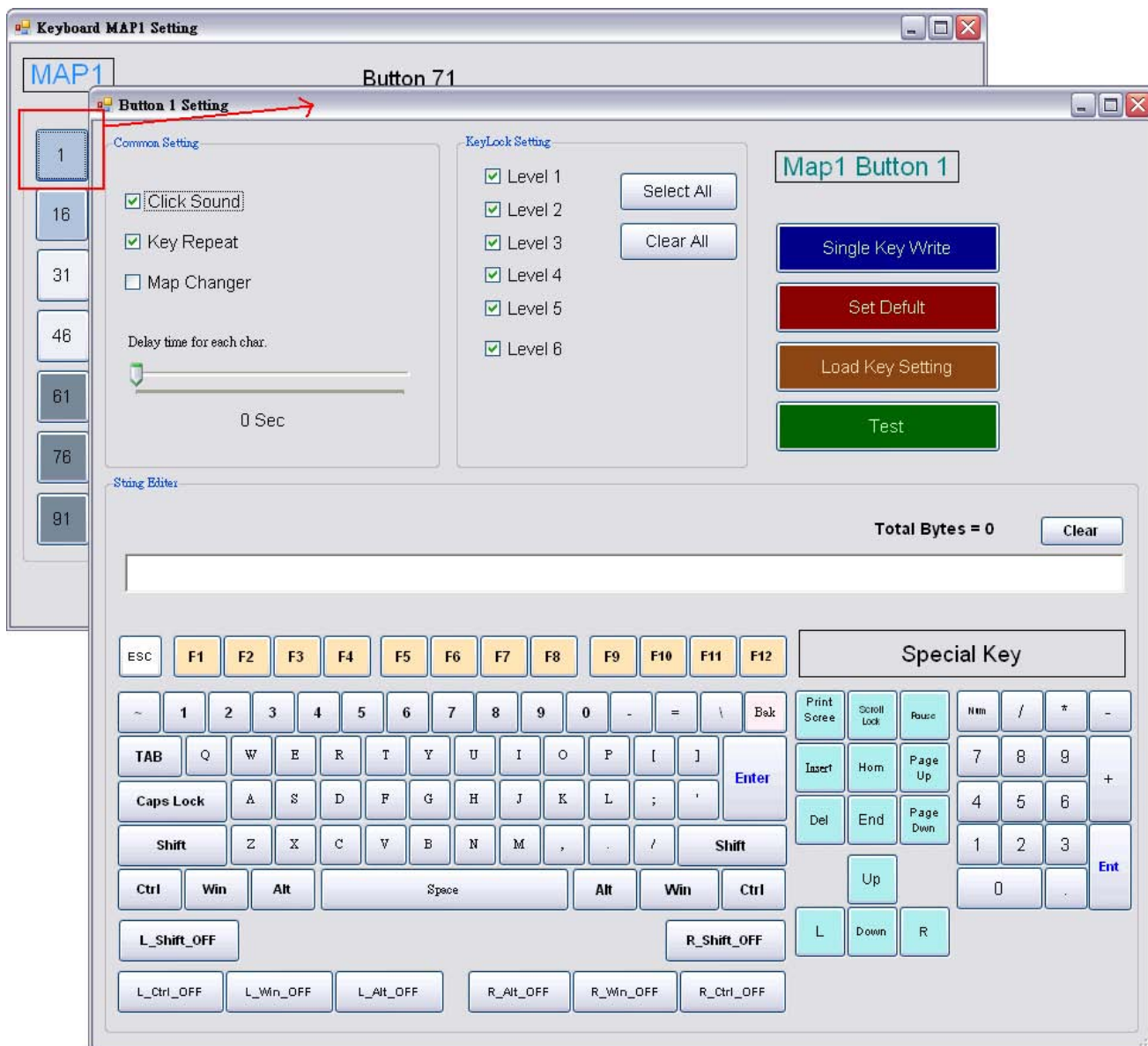
4-4 Keyboard Key Map Setting

Click the Map 1 button on keyboard page's Key Map Setting , will present map1 105 pressed key set.



4-4-1 Key Map Button Setting

Click the button will enter the internal settings.



4-4-2 Common Setting

Click Sound:

This setting allows user enable click sound of keys.

Key Repeat:

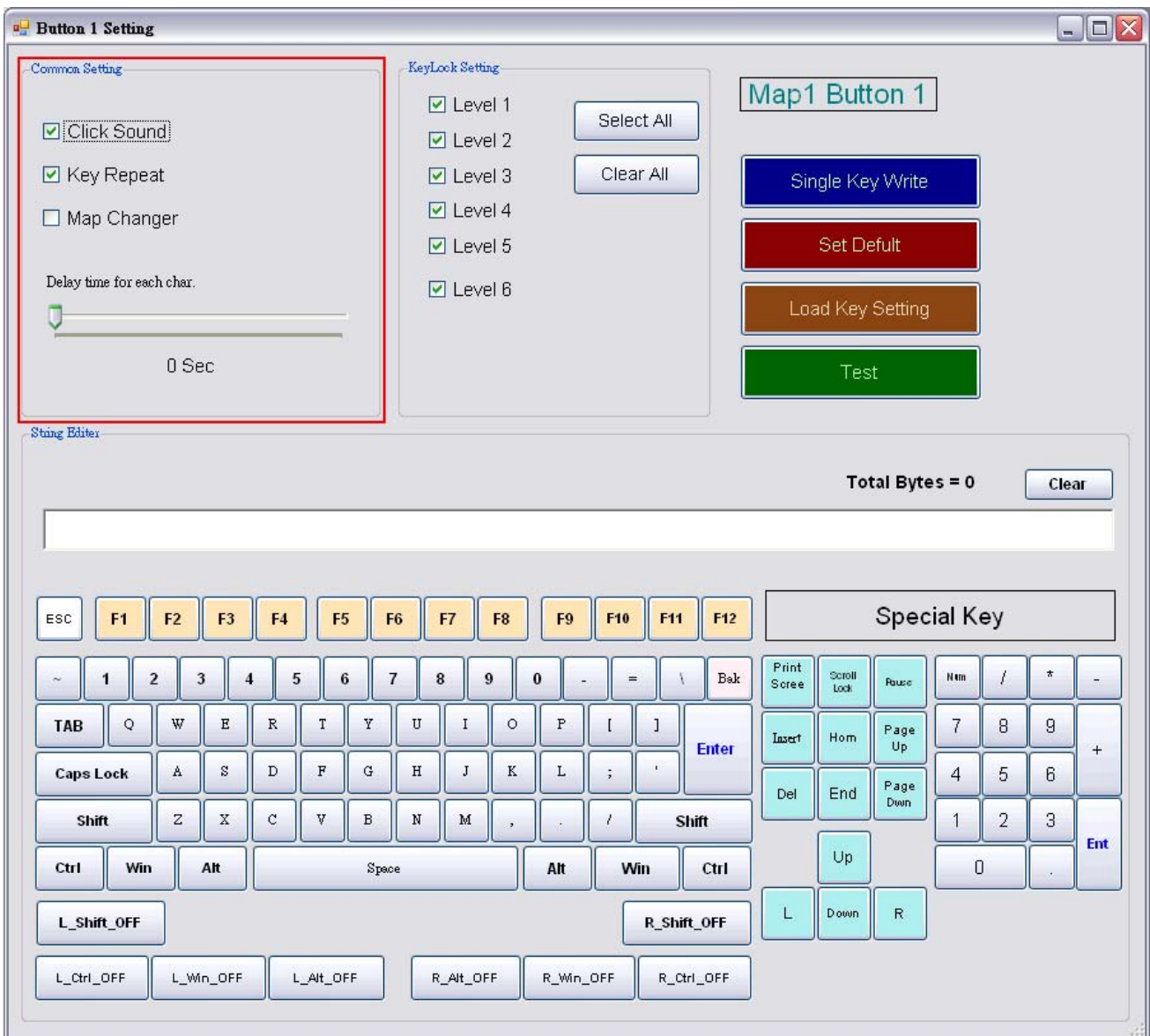
This setting allows user enable keys repeating speed.

Map Change:

The 8031 has two maps for designs. This keyboard allows use defining a key to switch maps; once a key be enabled for map changing function, then, the keyboard map will be changed from map1 to map2 when press this key.

Delay time for each char:

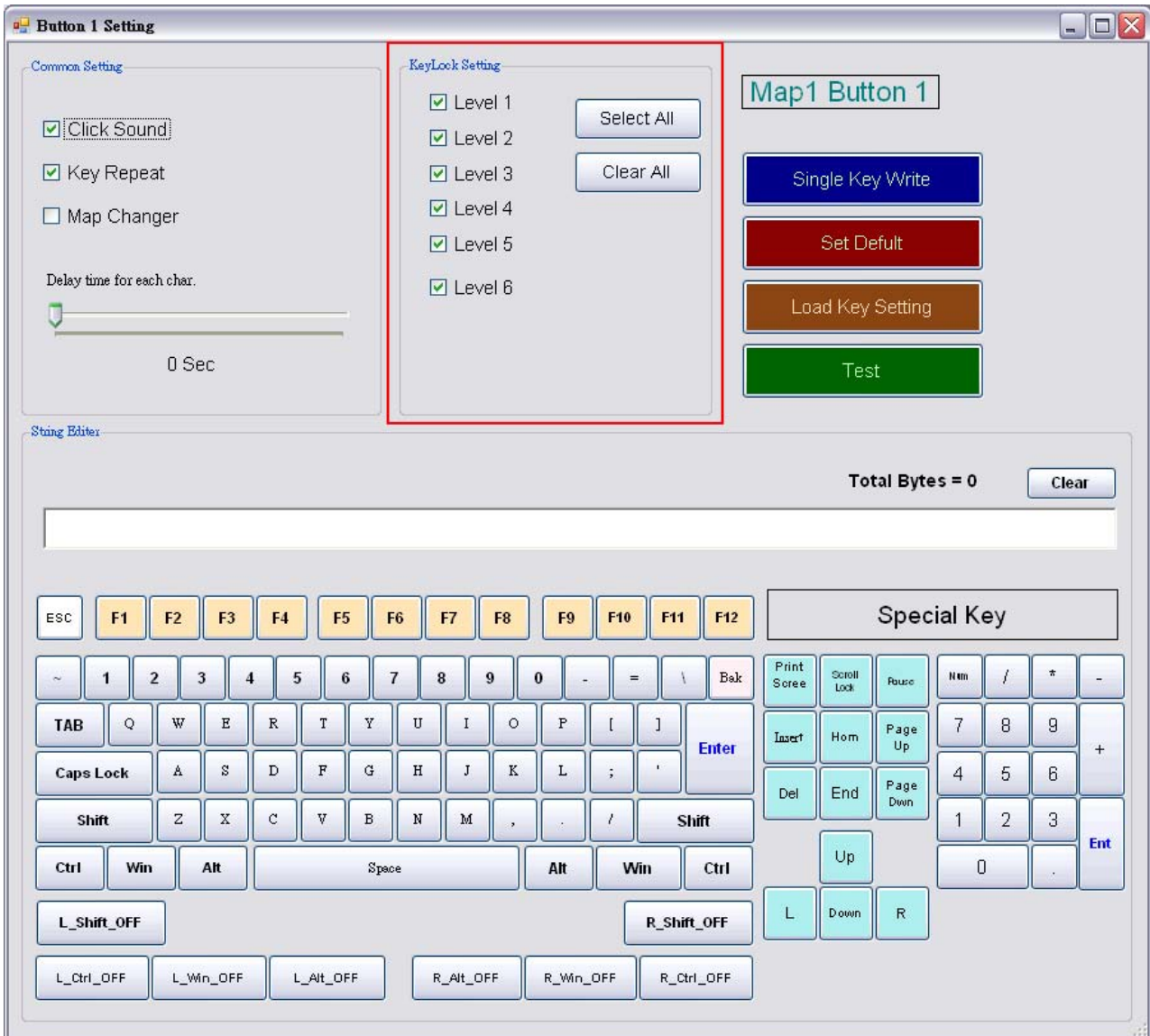
When user scrolling the scale, the key string output speed between characters.(0 ~ 2.55 Sec.).



4-4-3 KeyLock Level Setting

When the optional KeyLock Module be installed, this setting allows user define key lock's level. i.e. when you set key #1 to be level 1 and level 2, then the key#1 can only be used when the keylock be set to level 1 or level 2 by user's key.

Note: JP-8031 allow user to set keylock level for 6 levels.



4-4-4 The right side button function

Single Key Write:

This Button is for write the current single key settings to 8031 USB.

Set Default:

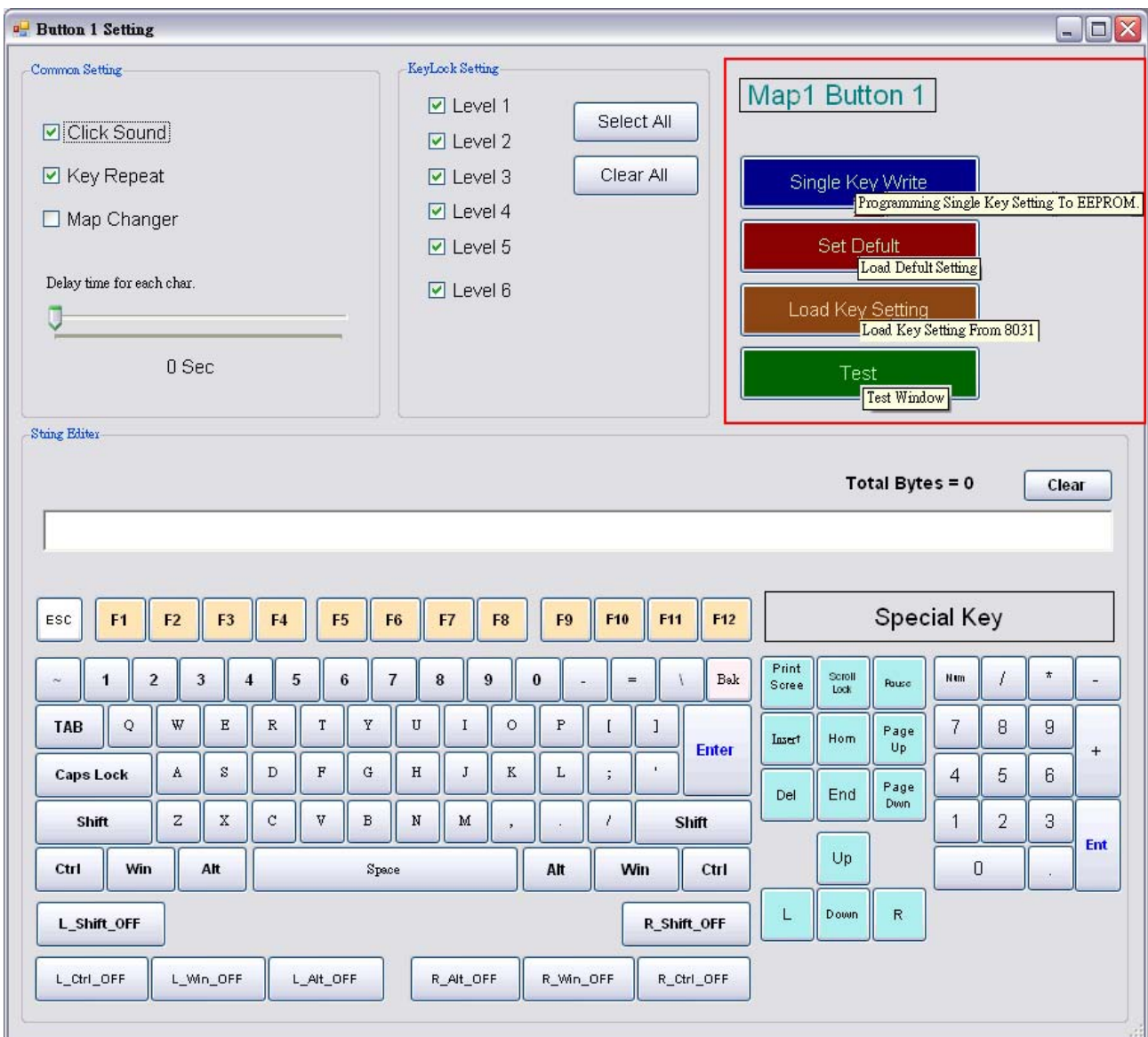
This Button is for set the current single key to default.

Load Key Setting:

This Button is for load key settings from 8031.

Test:

This button is for show test window.



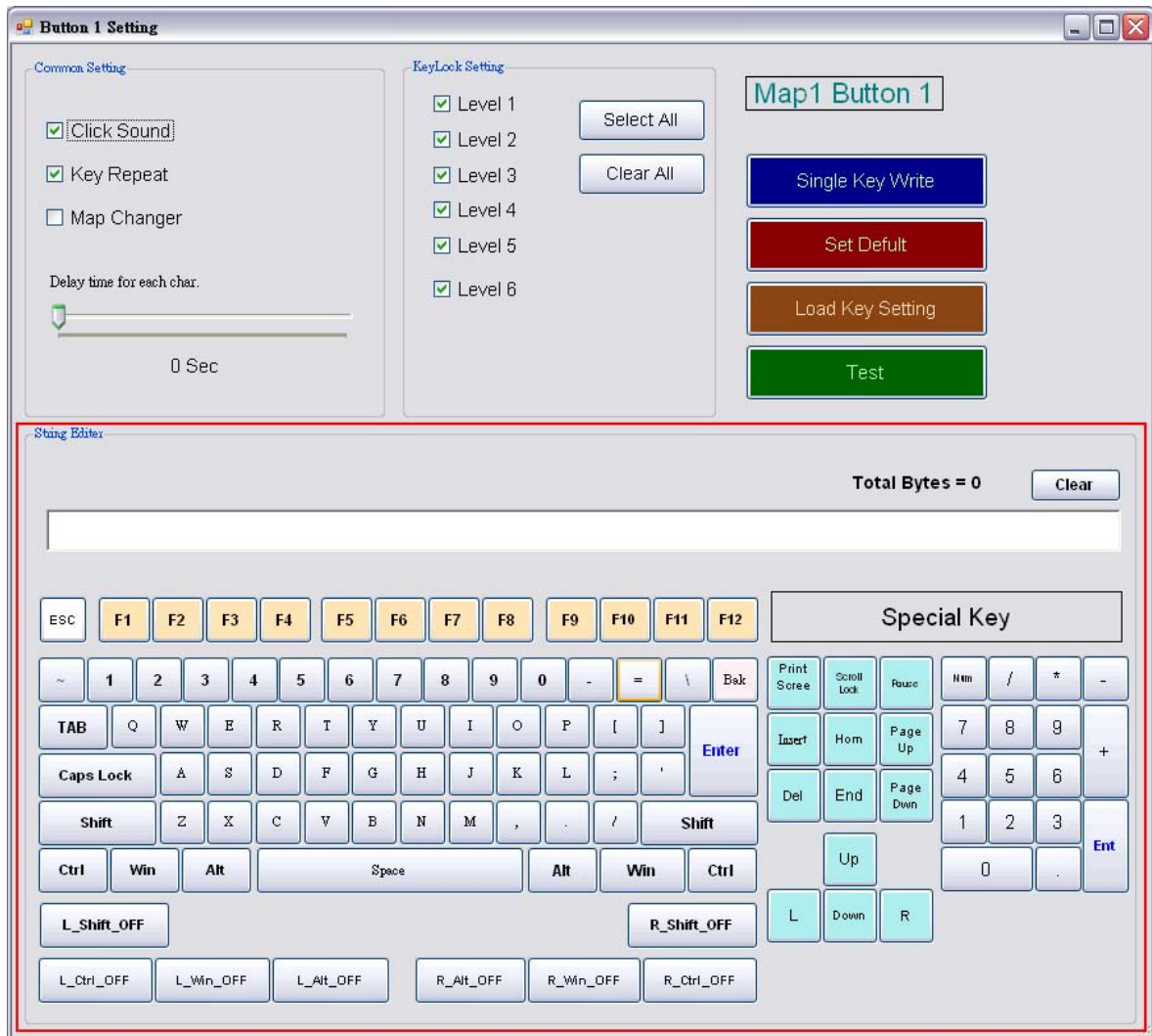
4-4-5 String Editor

The field allows users to define string for one single key. i.e. when you set key #1 as "Welcome to the Web Site", then the output will be " **WELCOME TO THE WEB SITE**" after pressed key #1.

Above buttons of the "String Editor" field in the picture are tools for editing key contents. You may use them to edit string or characters.

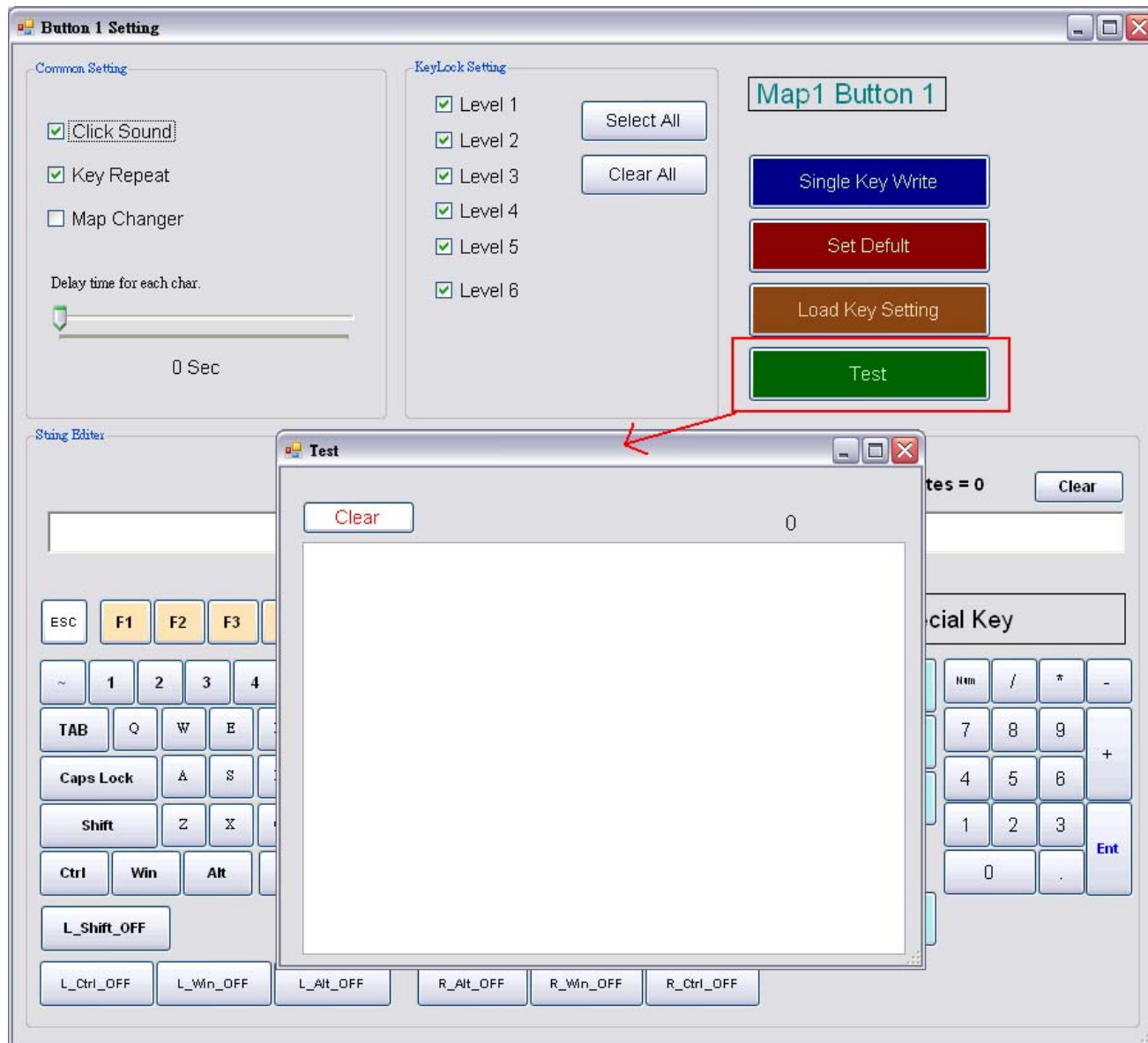
The "Special key" is as bellow, which is designed for "special function", you may use the "special key " to define each key as picture's below. i.e. In your key #1 setting field, click <F1> from the special key and add it to your "current string property", after you write it to map(you may use "single key program" to write data of a key), press key #1. the <F1> function appears as QWERTY PC keyboard behavior.

You may also set "ALT" and "Shift" functions key On/Off to fit your expect. In keyboard mode, the capital characters cannot be type on the field, and you may click "Shift ON" before the string to set them on, i.e: <shift-on> 1234<shift-off>5678, The result will be : **!@#\$5678**



4-4-6 Key Map Test Window

This window can provide users for testing.



4-5 MSR Setting

4-5-1 Main Setting

Error Beep Sound:

Enable / disable sound when MSR reading error.

Prefix / Suffix:

Enable or disable prefix / suffix for MSR data

When the check box on, you can edit the prefix / suffix, every fields in up to 7 characters.

Note: The format of output data is:

[MSR Prefix] [Track1 data] [Track2 data] [Track3 data] [MSR Suffix]

Track 2 Shows Credit Card Number Only:

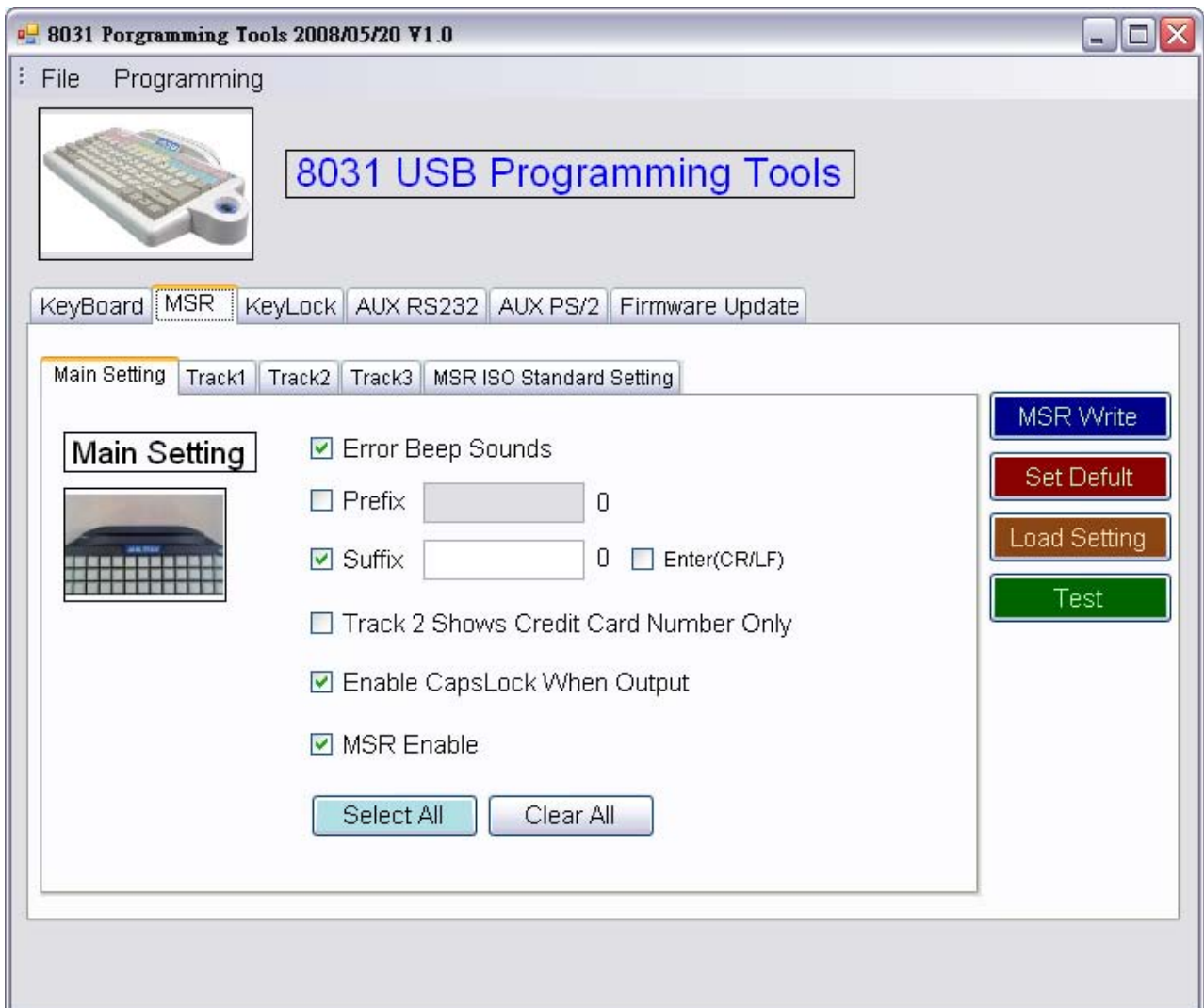
Enable or disable Track 2 Shows Credit Card Number Only.

Enable Caps lock When Output:

Enable or disable the Caps Lock fix to on when the MSR data outputting.

MSR Enable:

Enable or disable MSR Function.



4-5-2 MSR right side button function

MSR Write:

This Button is for write the data settings to 8031 MSR.

Set Default:

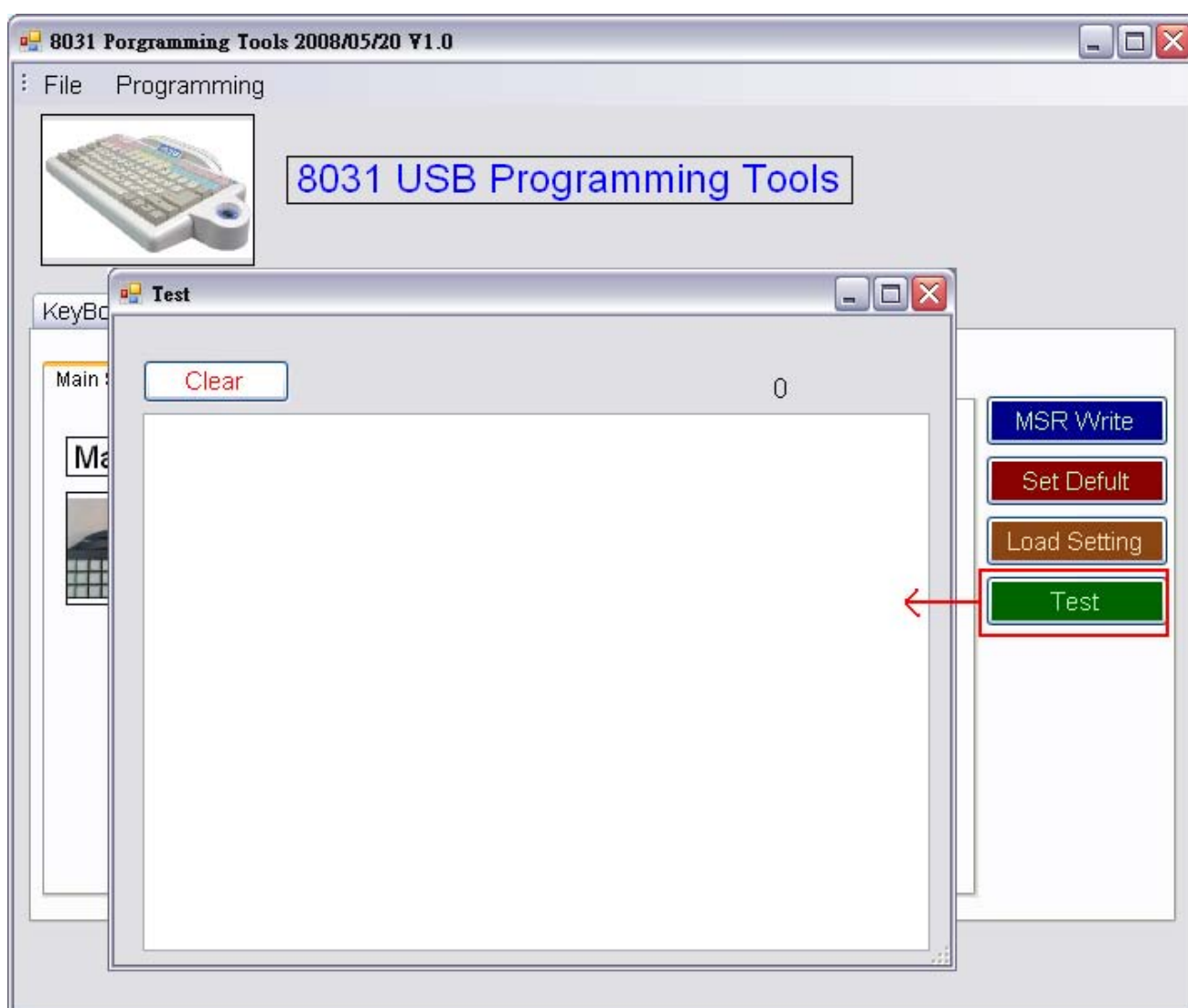
This Button is for set the data to default.

Load Key Setting:

This Button is for load the setting from MSR device.

Test:

This button is for show test window.



4-5-3 Track1~3 Setting

Beep Sound

Enable / disable sound when MSR reads the data of card track.

Prefix / Suffix

Enable or disable prefix / suffix for the data of card track.

Start Sentinel

Enable / Disable track start sentinel

(Track 1 start sentinel is “% “, Track 2 / 3 start sentinel is “; “)

End sentinel

Enable / Disable track end sentinel

(The end sentinel is “? “ for all tracks)

LRC sentinel

Enable / Disable the LRC sentinel is the checksum character for the data of card track.

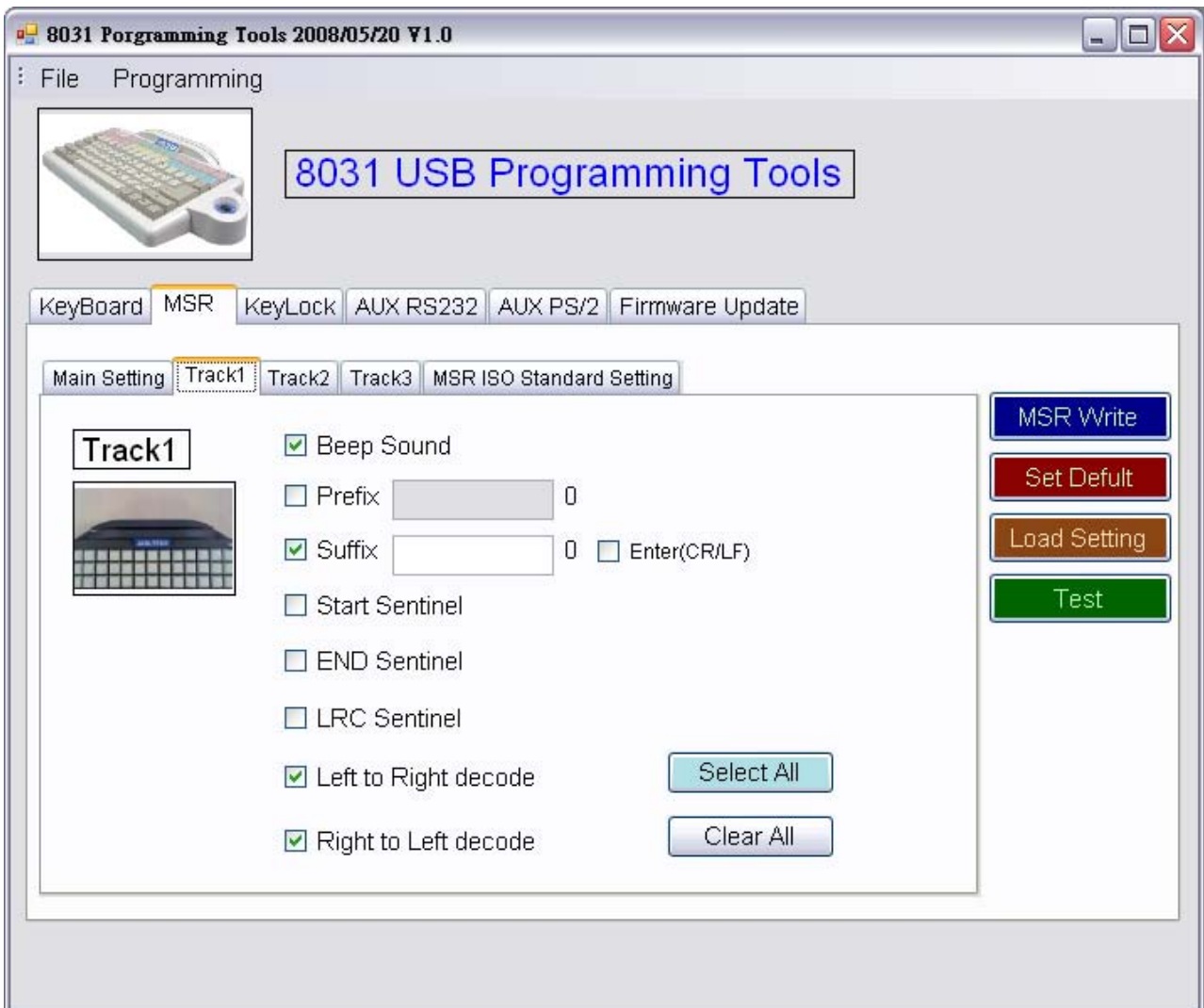
Left to Right decode and Right to Left decode

You can make choice to decide the user to swipe card and read data only from left to right or from right to left or both ways

i.e: Track1 data output.

[Track1 Prefix][Start][Track1 Data][END][LRC][Track1 Suffix]

Track2 & Track3 so on..



4-5-4 MSR ISO Standard Setting

For the ISO standard field settings, you need to set the check box of "Field Splitting Enable" for ON, then the data of card track will be outputted and follow the ISO standard fields.

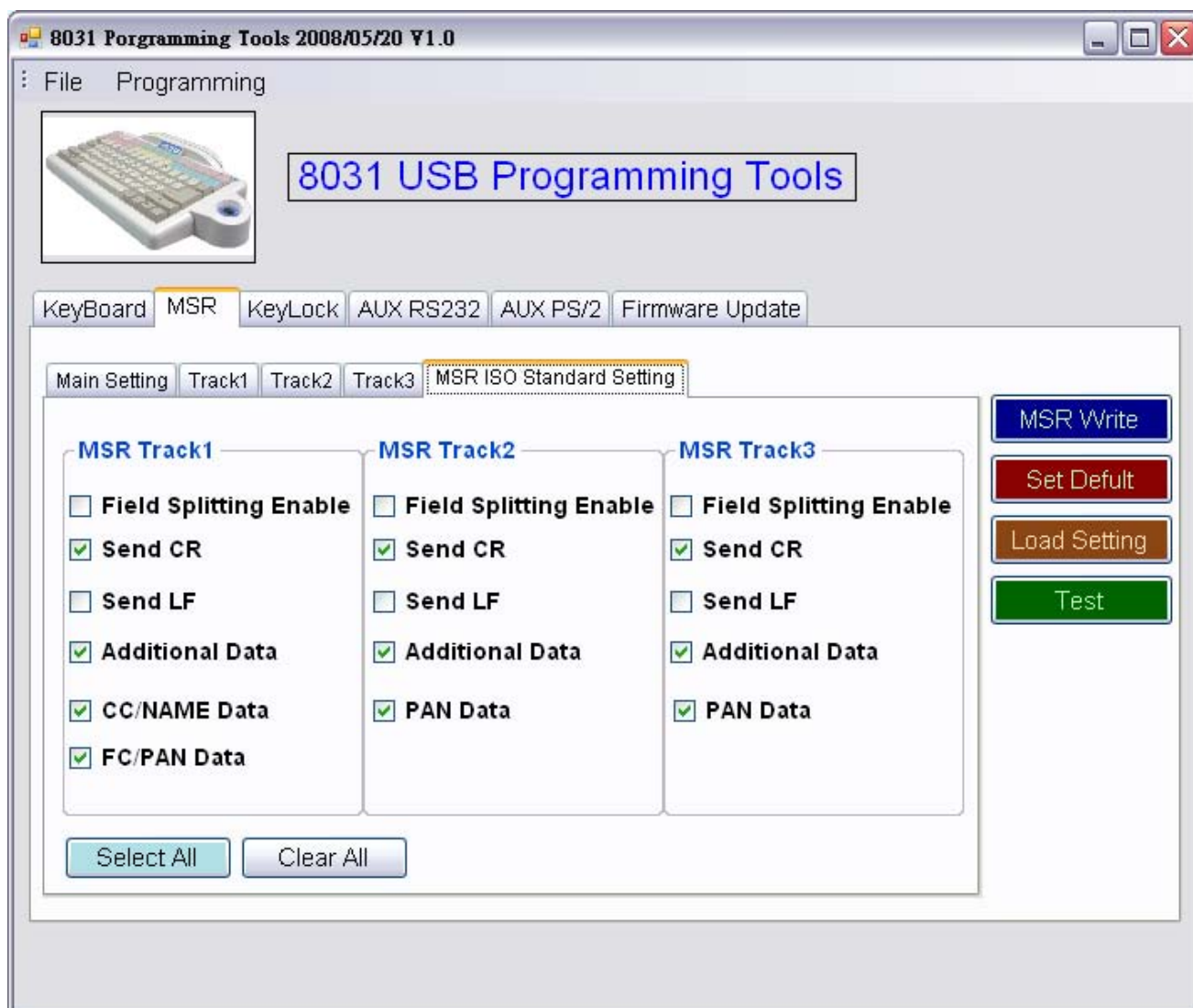
You can set the "Send CR" or/and "Send LF" for every ISO fields.

Block Format

i.e: Track1 data output when ISO Field Splitting Enable.

[Additional Data][CC/NAME Data][FC/PAN Data][CR][LF]

Track2 &Track3 so on..



4-6 KeyLock Setting

4-6-1 Main Setting

Beep Sound

Enable / disable sound when turn key.

Prefix / Suffix

Enable or disable prefix / suffix for KeyLock module.

Auto response key level when turn key

Enable or disable when turn key will auto response key level.

Enable

Enable or Disable KeyLock.



4-6-2 KeyLock Right Side Button

KeyLock Write:

This Button is for write the settings to keylock.

Set Default:

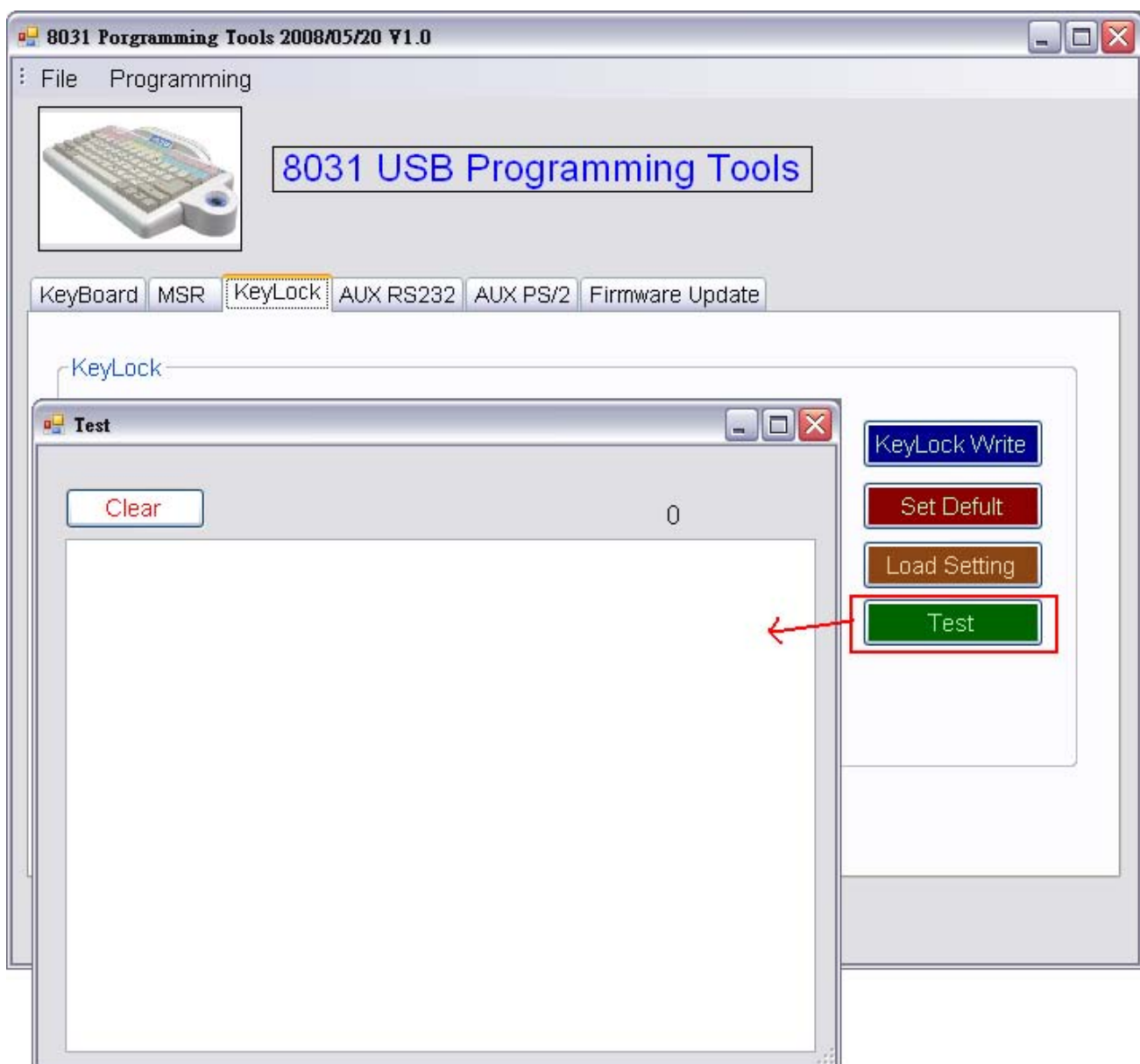
This Button is for set the data to default.

Load Setting:

This Button is for load the setting from device.

Test:

This button is for show test window.



4-7 AUX RS232 Setting

4-7-1 Main Setting

Buffer Full Warning Sounds

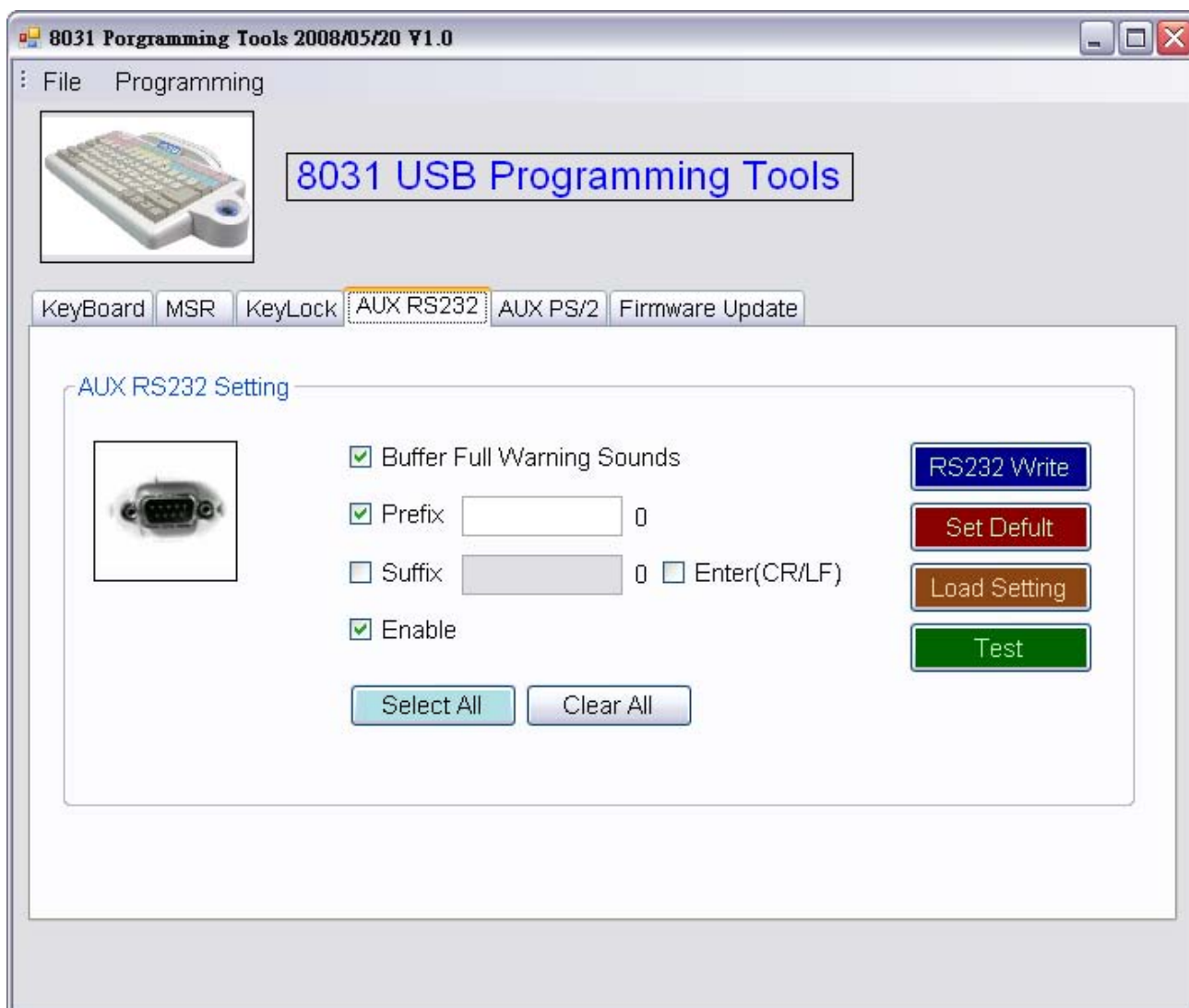
Enable / disable sound when buffer full warning.

Prefix / Suffix

Enable or disable prefix / suffix .

Enable

Enable or Disable AUX RS232.



4-7-2 AUX RS232 Right Side Button Function

RS232 Write:

This Button is for write the settings to AUX RS232.

Set Default:

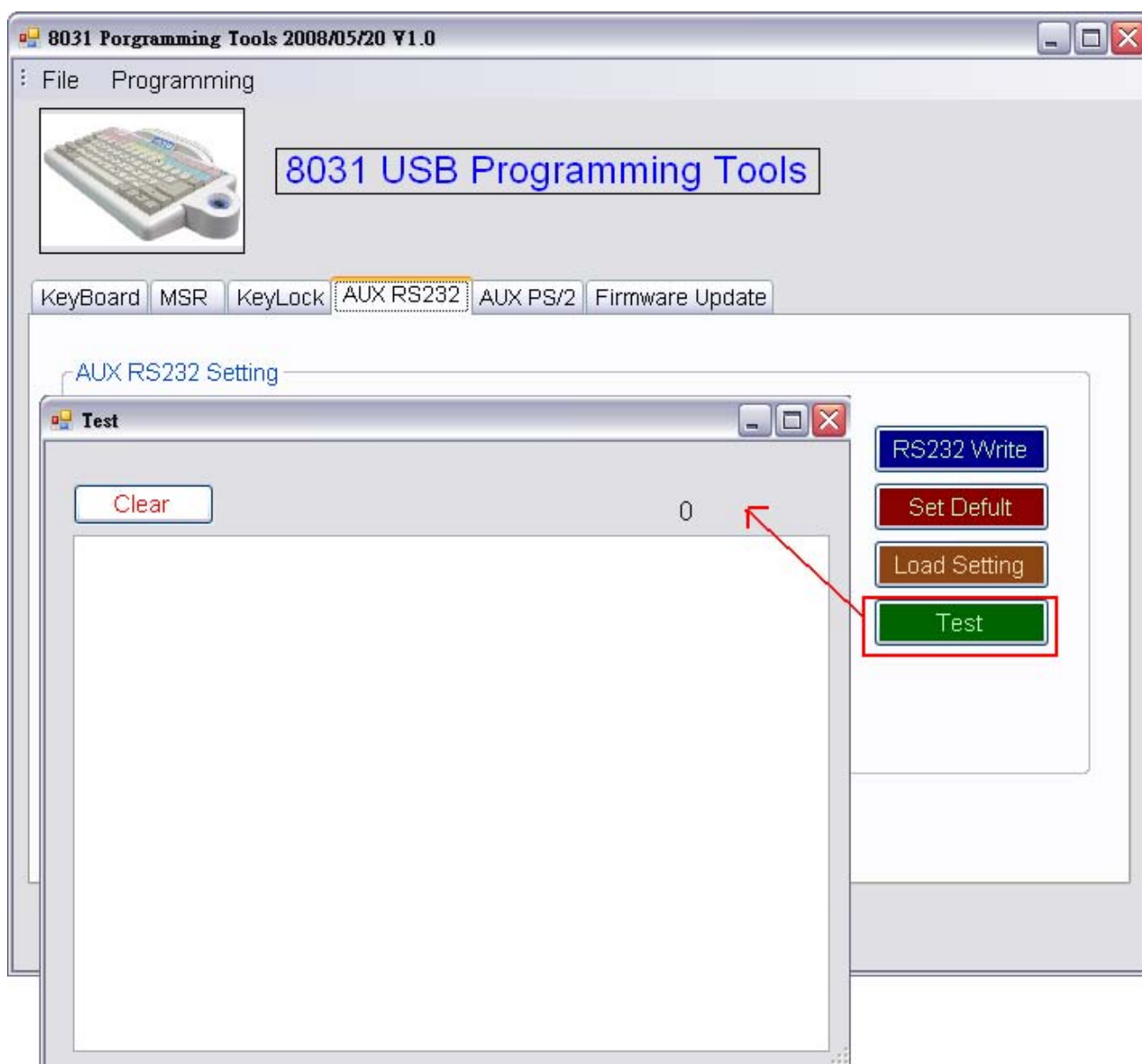
This Button is for set the data to default.

Load Setting:

This Button is for load the setting from device.

Test:

This button is for show test window.



4-8 AUX PS/2 Setting

4-8-1 Main Setting

Buffer Full Warning Sounds

Enable / disable sound when buffer full warning.

Prefix / Suffix

Enable or disable prefix / suffix.

Enable

Enable or Disable AUX PS/2.



4-8-2 AUX PS/2 Right Side Button Function

PS/2 Write:

This Button is for write the settings to AUX PS/2.

Set Default:

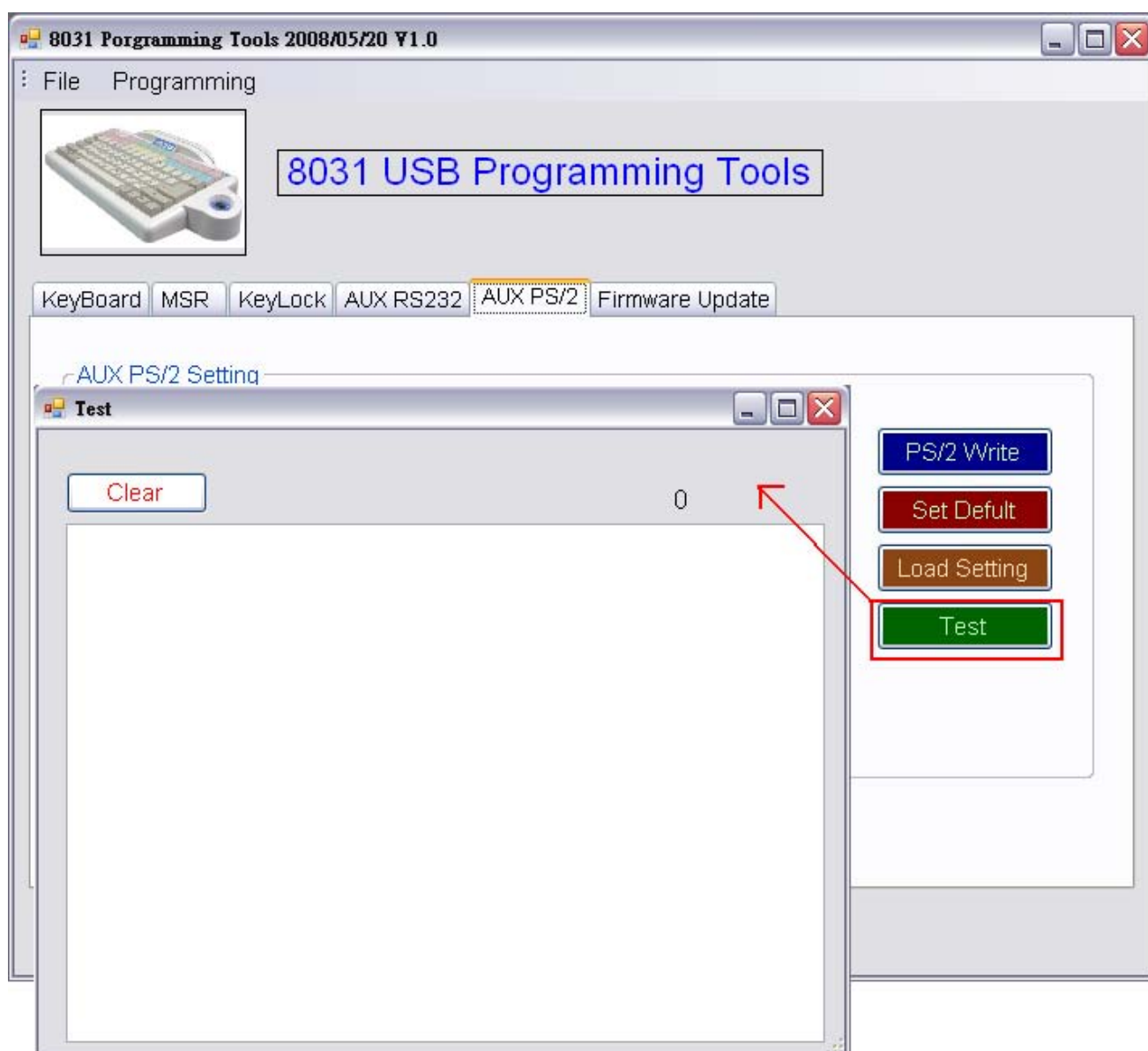
This Button is for set the data to default.

Load Setting:

This Button is for load the setting from device.

Test:

This button is for show test window.



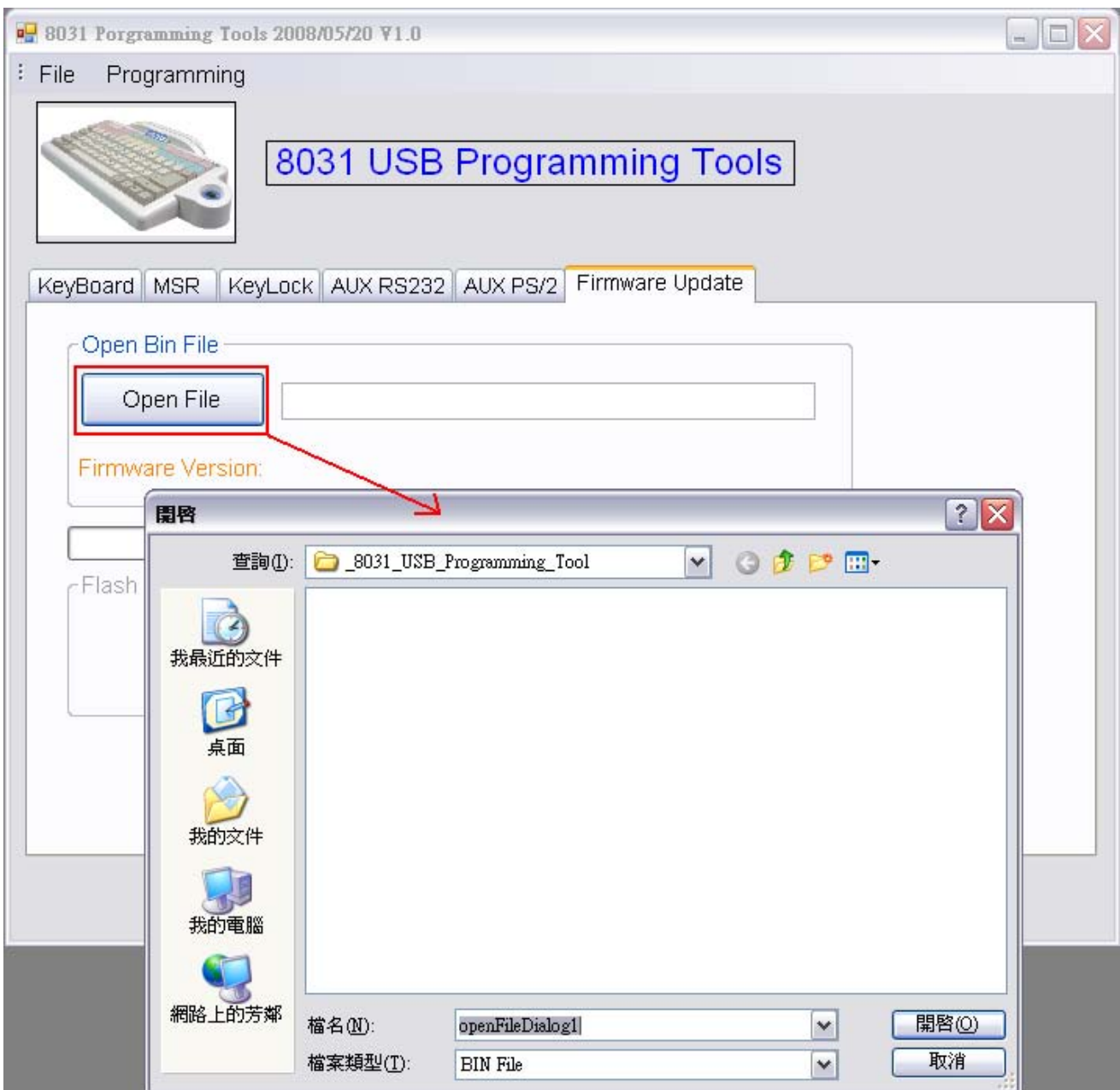
4-9 Firmware Update

Special Note:

The 8031 usb provides new features update or modification from the programming tool.

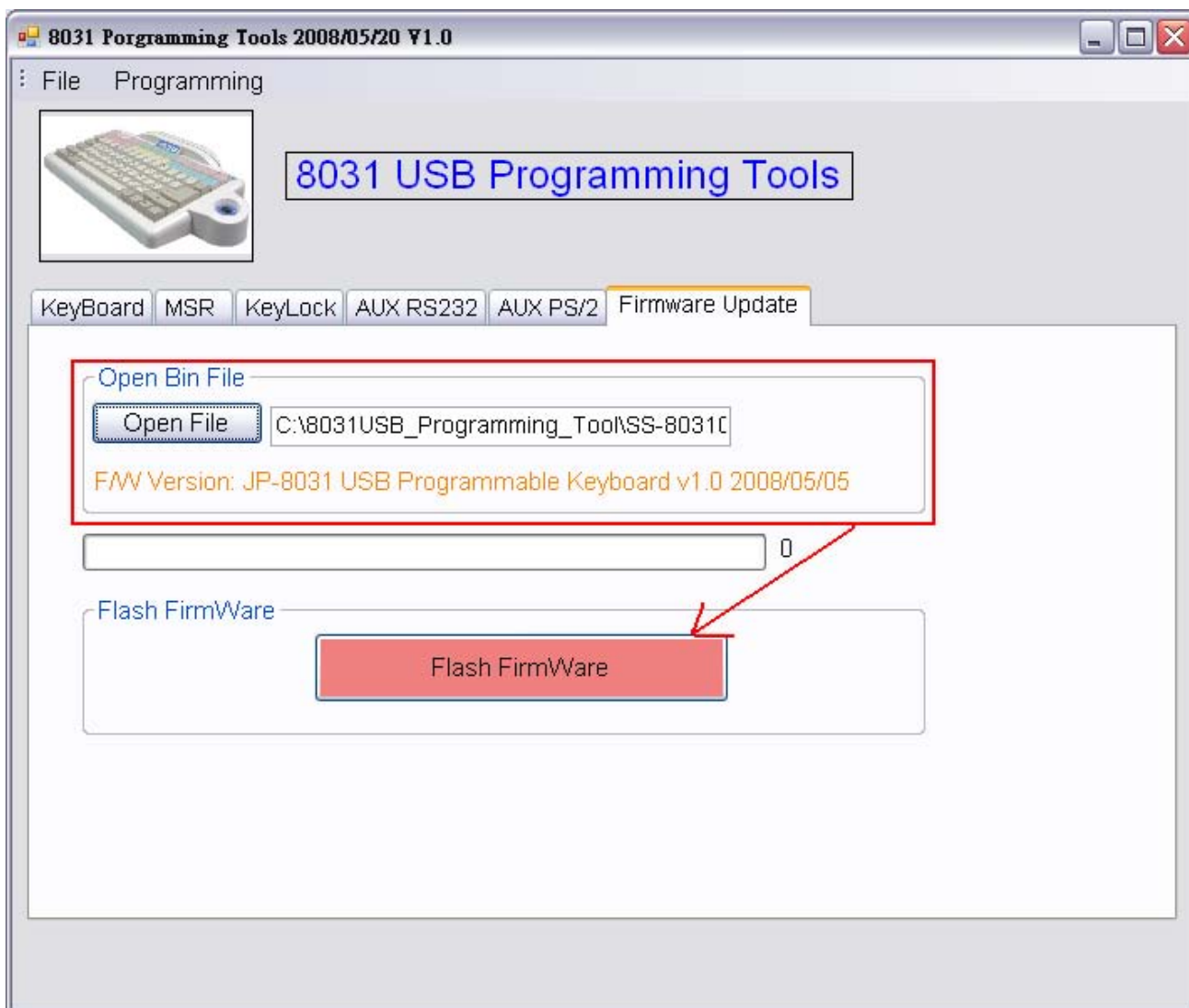
Step 1.

When you click "Open File" button will pop up the window, select the BIN file then click "Open".(Picture on the "SS-8031001-00.bin" is an example)



Step 2.

When the picture show on F/W Version after the press "Flash Firmware" button to update.

**Note:**

Please do not power off the 8031 or removal the usb cable when updating firmware.

Appendix I Specifications

NO	Item	Descriptions
1	Model 8031 Keyboard	<ul style="list-style-type: none"> • Tactile keyboard • 7 rows x 15 columns • Cherry keyswitch • ABS plastic key caps • Single, dual and quadruple key caps available • User-definable key layout
2	Power Requirements	<ul style="list-style-type: none"> • USB interface: +5V DC from host computer usb port
3	Physical	<ul style="list-style-type: none"> • Dimensions: 330mm (L) x 195mm (W) x 55mm (H) • Weight: 1170g
4	Communication Ports	<ul style="list-style-type: none"> • One USB port
5	LED indicator	<ul style="list-style-type: none"> • LED1 Green -- Power ON -- MAP1 ON • LED2 Red -- MAP2 ON • LED2 Green -- Caps Lock ON

Appendix II Troubleshooting

1. Q : Why is there a period of blank time before the "beep" indication of successful programming?

A : The software has to initialize the download data to keyboard during this period, so please wait some seconds.

2. Q : Why we can not program this 8031 keyboard through the USB port?

A : 1. Check if your connection of hardware is correct.
2. Check if your setting in 8031 programming tool is correct.

3. Q : How to program a guard key correctly?

A : For Programming a quad key, please program one of the four keys with data only and disable the other three keys. The double-key is set by the same method, Or
to programming a double key or quad key with same data for every keys.