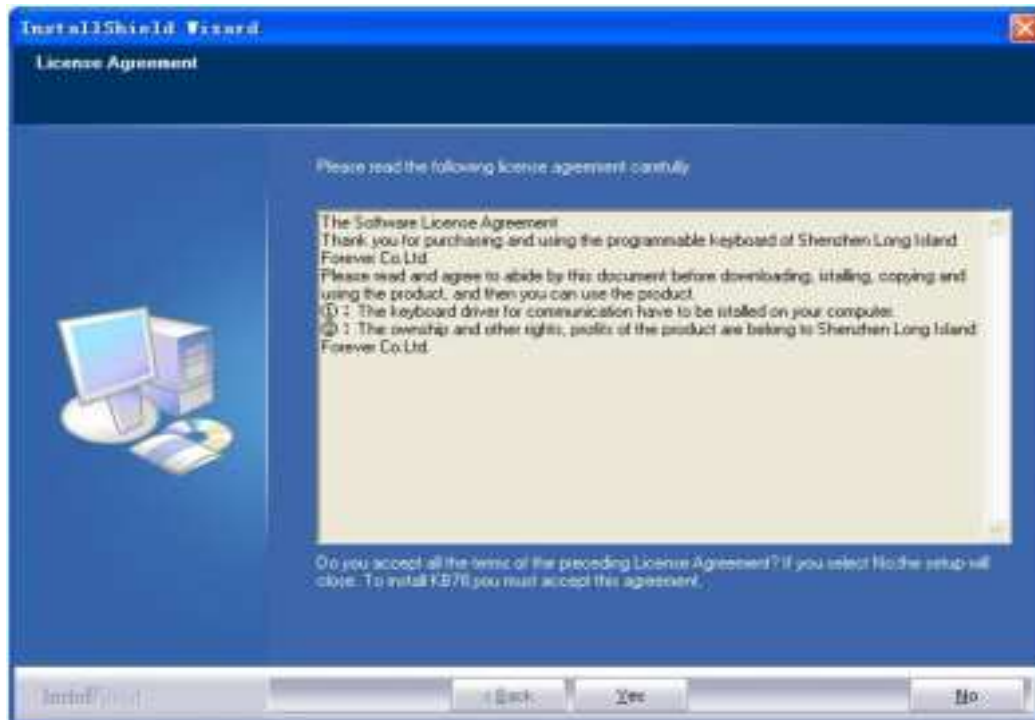# KB78 programmable keyboard

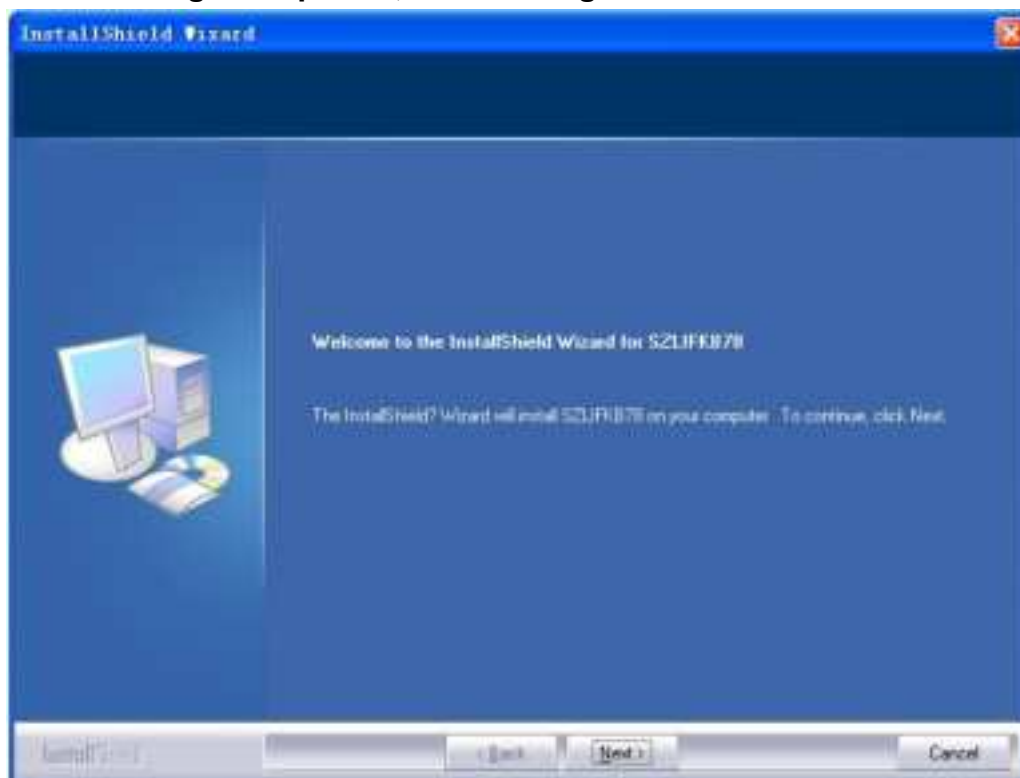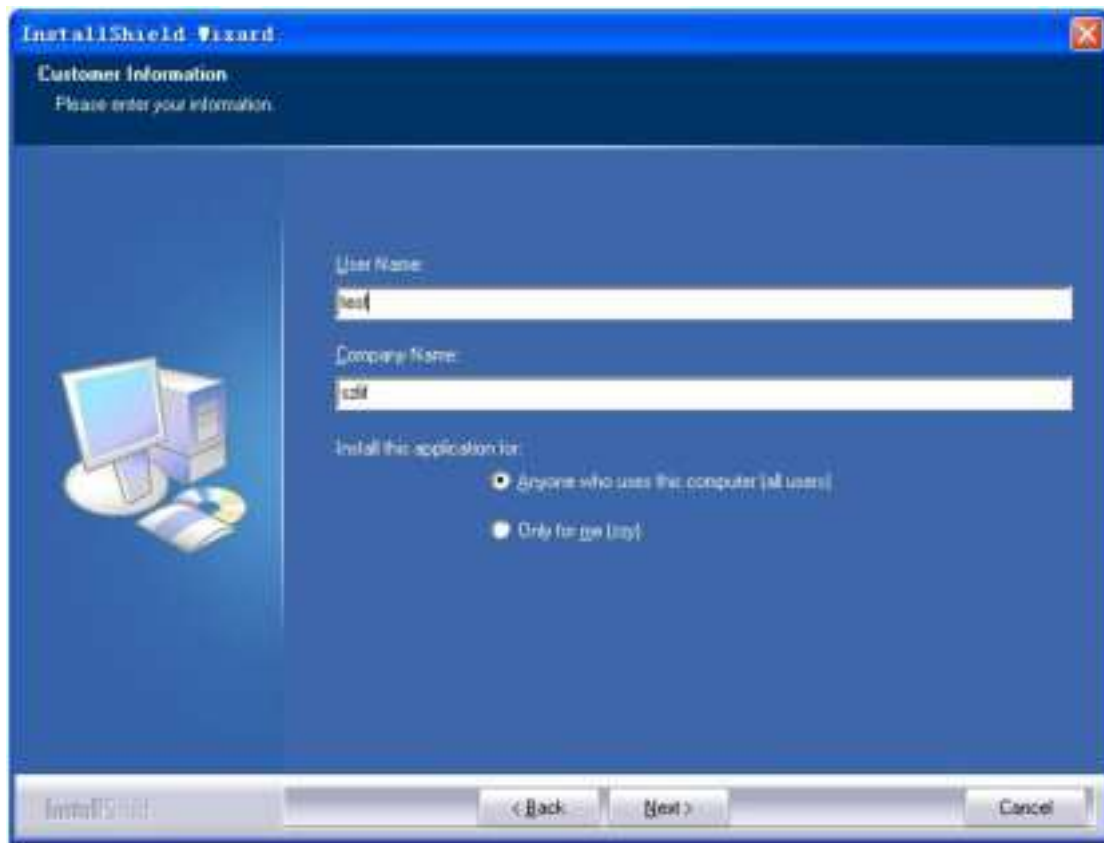# User Manual

Ⅰ. System Installation

1. If agree to the terms, then click "yes".
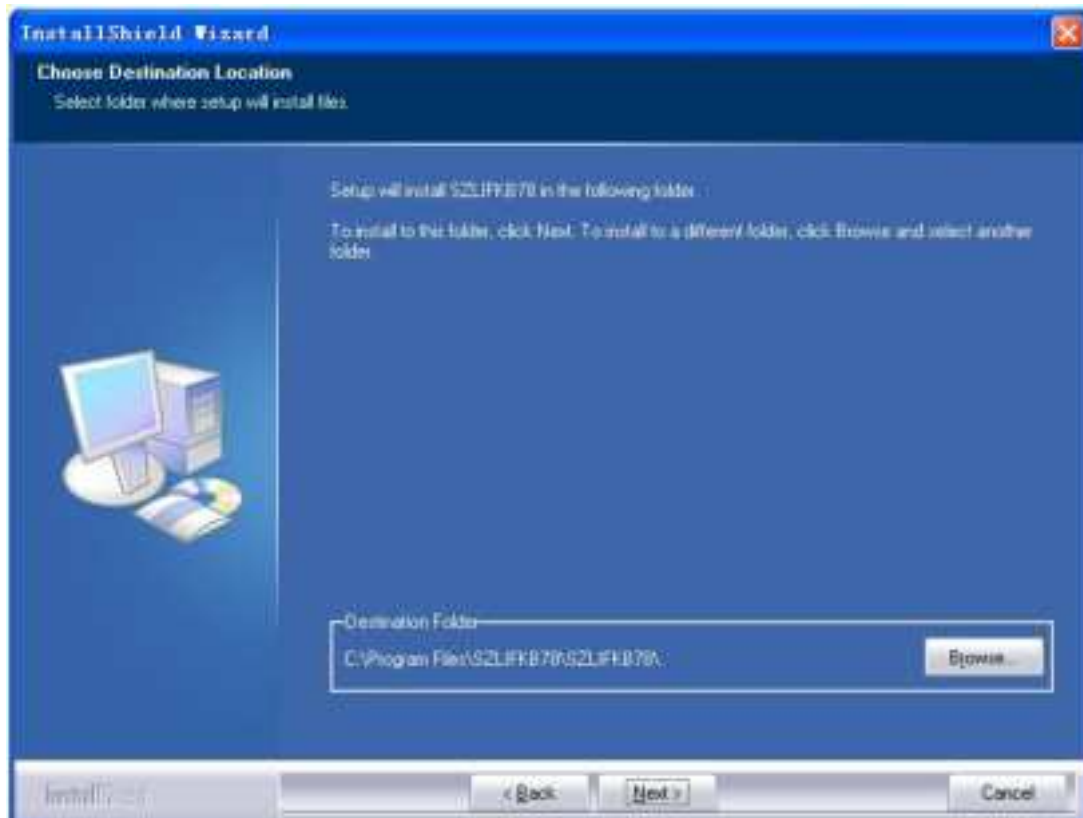

2.Running "setup.exe", and clicking "next" to continue.
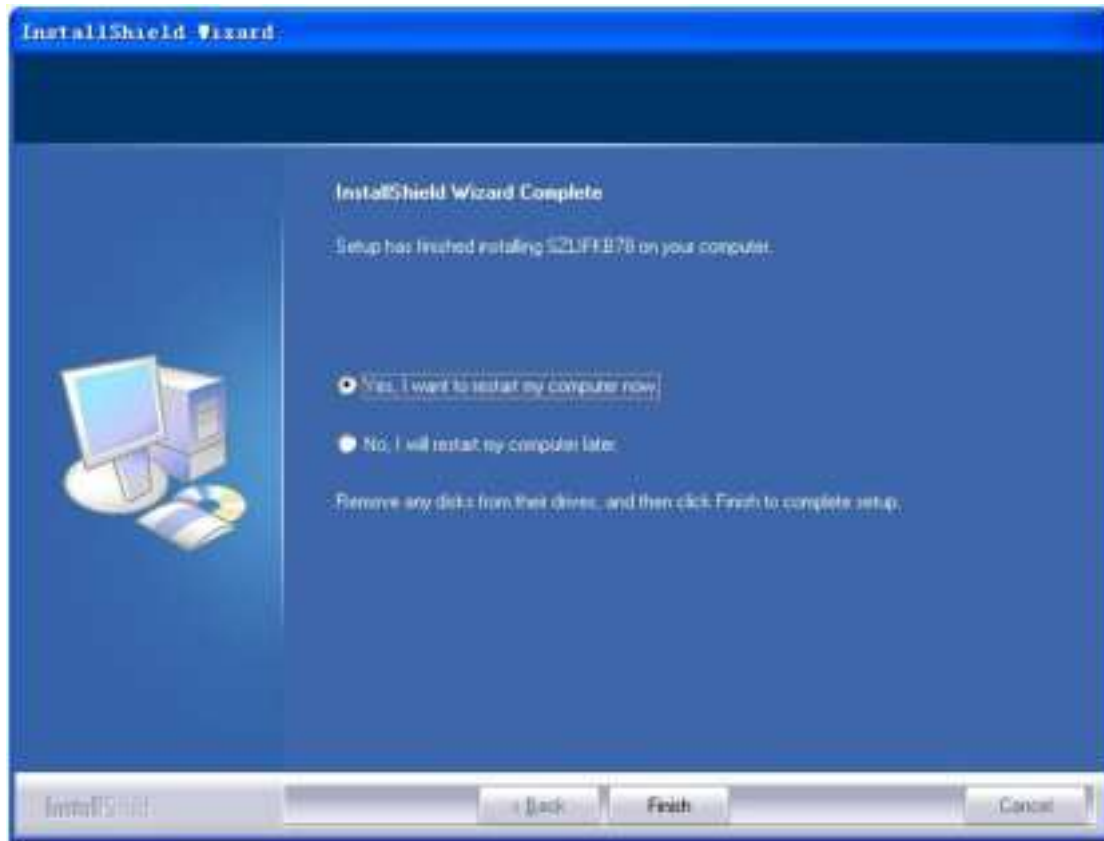
3. You should complete the "customer information" and confirm it, then click "next".

4.Choosing "target folder", then clicking "next".

5.**Clicking "finish" to restart computer and complete the installation.**

II. The programming software for the keyboard.

1. Keyboard Selection:

The following dialog will be appeared when the program is running.

First, selecting the interface; second, selecting the model of the keyboard; and then clicking "OK".

2. key code Writing

The mouse is slid to the "key", and it will turn blue and is ready for programming. There are three ways to code of the "key" when click the left mouse button: to set the definition of key by "Key Code" or "ASCII Code", and to set the key layer by "Layer Index". The function of "Clear" is reset the code of the "Key".
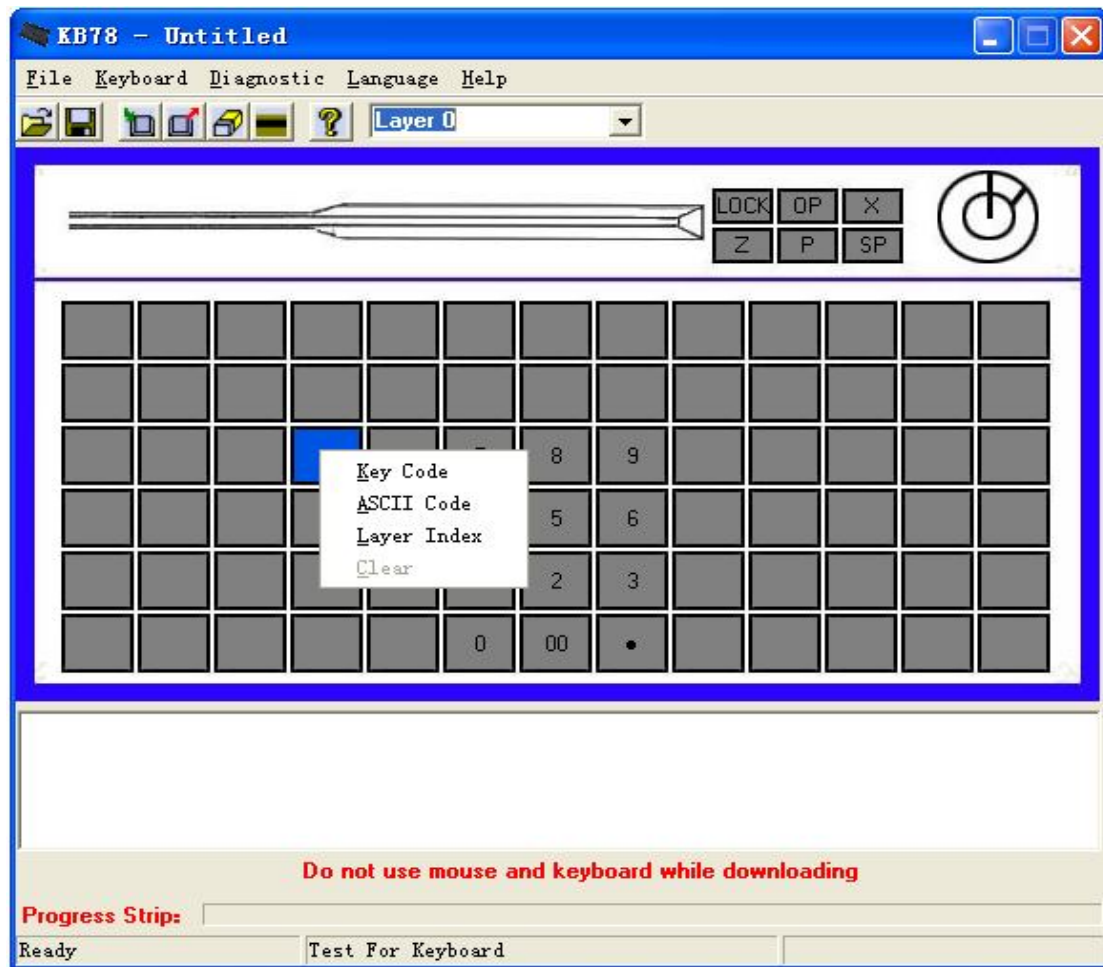
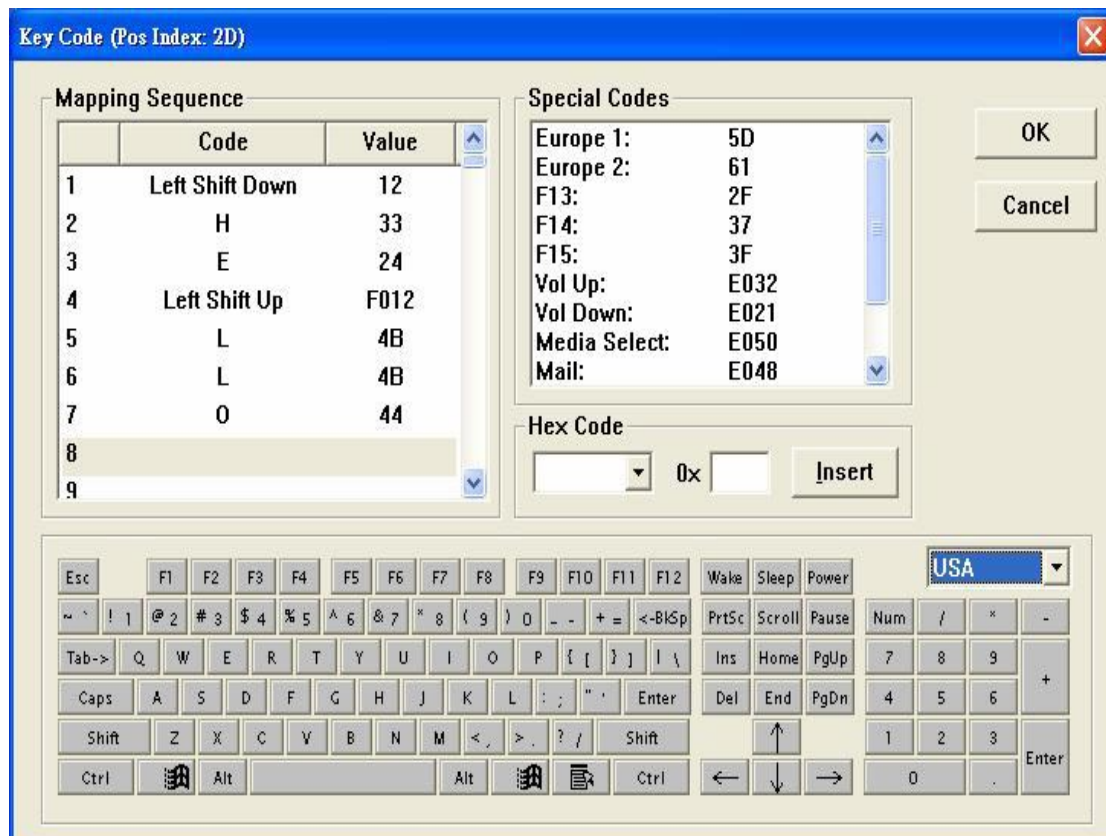## 1) Key code
In this chart, you can set any scan code to a "key"

In the above picture, the dialog displays the key code in common use and the "Special Codes" displays some special codes. Select a key from the following keyboard interface or double click on the item in the "Special Code" to add the key code to the "Mapping Sequence" index. Not every key code in the above picture is optional, but you can input a HEX code to any key in the blank marked "0x", then click "Insert".

Example:

IF you press "Shift" "H", "E", "Shift", "L","L" or "O" on the "keyboard", the menu of "Mapping Sequence" will display these key codes. After finish programming a key, if you type the key in notepad, it will display "HEllo" if the "Caps Lock" does not work, or it will display "heLLO" if the "Caps Lock" works.

IF you want to delete the value of "O" in the "Mapping Sequence", using the right mouse button to click the "O", a menu with two options will appeared, then clicking "Delete" to remove the value of "O"; clicking "Clear All" to delete all contents in the menu.

 IF you want to add a "S" before "H" in the "Mapping Sequence", you can only click "H" and then press the "S" on the keyboard. But if you want to add a new code at the end of the menu, you should be click the blank line.

Warning:

①: For Inputting the key value of the "L-Shift" to the "Mapping Sequence", you just press "L-Shift" on the keyboard. There will display the "Left Shift Down" which is correspond to 12 on the "Mapping Sequence". However, if you want to set a combination key "L-Ctrl + C", you should press "L-Ctrl" firstly and then press "C", after that loose the "L-Ctrl". As the following shows：

	Code	Value
1	Left Ctrl Down	14
2	C	21
3	Left Ctrl Up	F014
4		
5		
6		
7		
8		

The same steps can be used to "right Shift", "left Alt", "right Alt", "left Ctrl" and "right Ctrl". You should pay more attention to these combination keys, they must be released after these codes were assigned value. (the dialog will display the "Left Ctrl Up")

② The maximum of each layer of each key is 180 key codes, and the maximum of total key codes 16 layers of each key is 450.

Remark：The figures above mentioned are key codes not key. Parts of the key have 2 key codes.

2) ASCII Code

In this mention, you can assign printable ASCII characters, A-Z, a-z, 0-9, +, -, *, /, and punctuation symbol. The maximum of each key layer is 180 ASCII codes. In addition to defining the above characters, you can define some special characters in following way:

Special Characters:

Special codes	representation
Enter	\n or \N
Esc	\e or\E
Tab	\t or\T
\	\\

Example: If you want to define the "Hello\nWorld", as the following diagram:
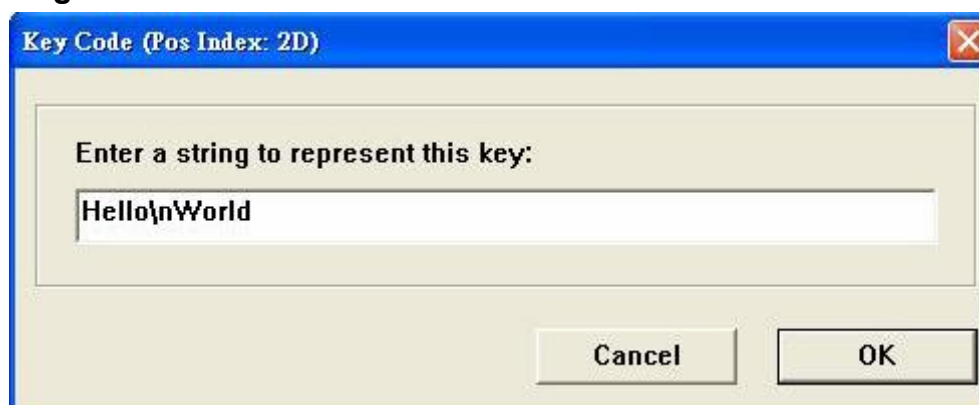
Inputting as shown in the picture, clicking "OK". Then the keyboard setting is downloaded to programmable keyboard. If you type the programmed key on the notepad, it will display as following:

Hello

World

Warning: it should be less than 180 ASCII code.

3）Layer Index

The maximum layer of the keyboard is 16 layer.You can assign a layer index to any key you like.


For instance, if you want to define the key cord on the "Layer3", you can select "Layer3" in the menu and set the key code through scan code mode. After finishing it, you need to set a toggle key of the layer by the layer index. As the following shown:
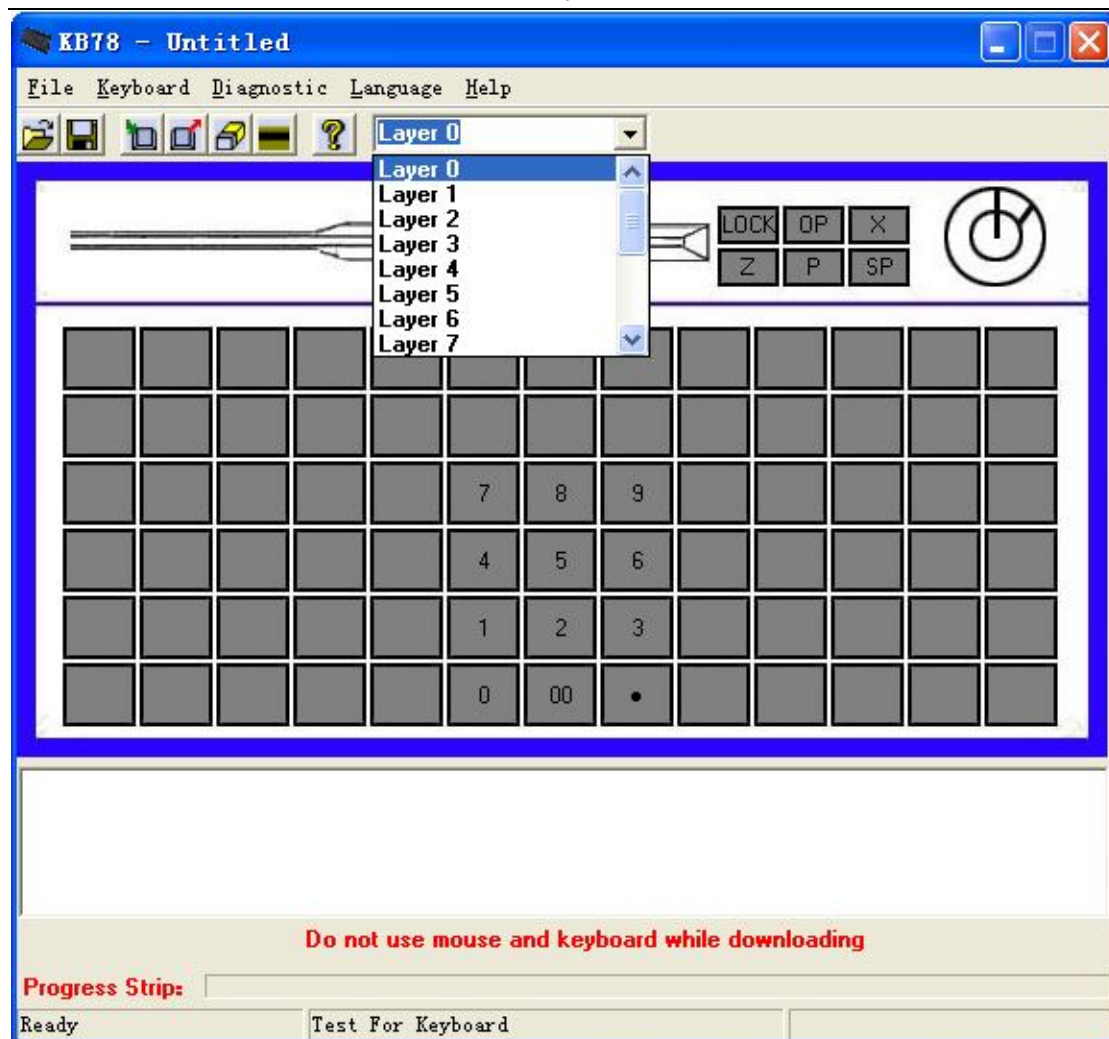
3. Keyboard setting

The following dialogue window will be appeared when you click the "keyboard", and then click the "Keyboard Setting".
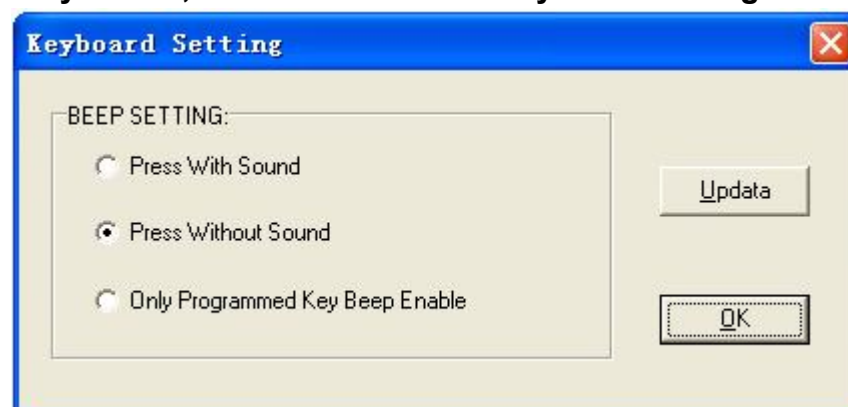

If you want to have a beep sound when pressing all keys on the keyboard, you should choose "Press With Sound".

If you don't want to a beep sound when pressing all keys on the keyboard, you should choose "Press Without Sound".

If you want to have a beep sound when pressing the key which has been programmed, you should choose "Only Programmed Key Beep Enable".

3. Magnetic card reader setting:

To set magnetic card reader, you should click the "keyboard", then click the "Magstripe Card Reader Setting" or click the , as following shows:
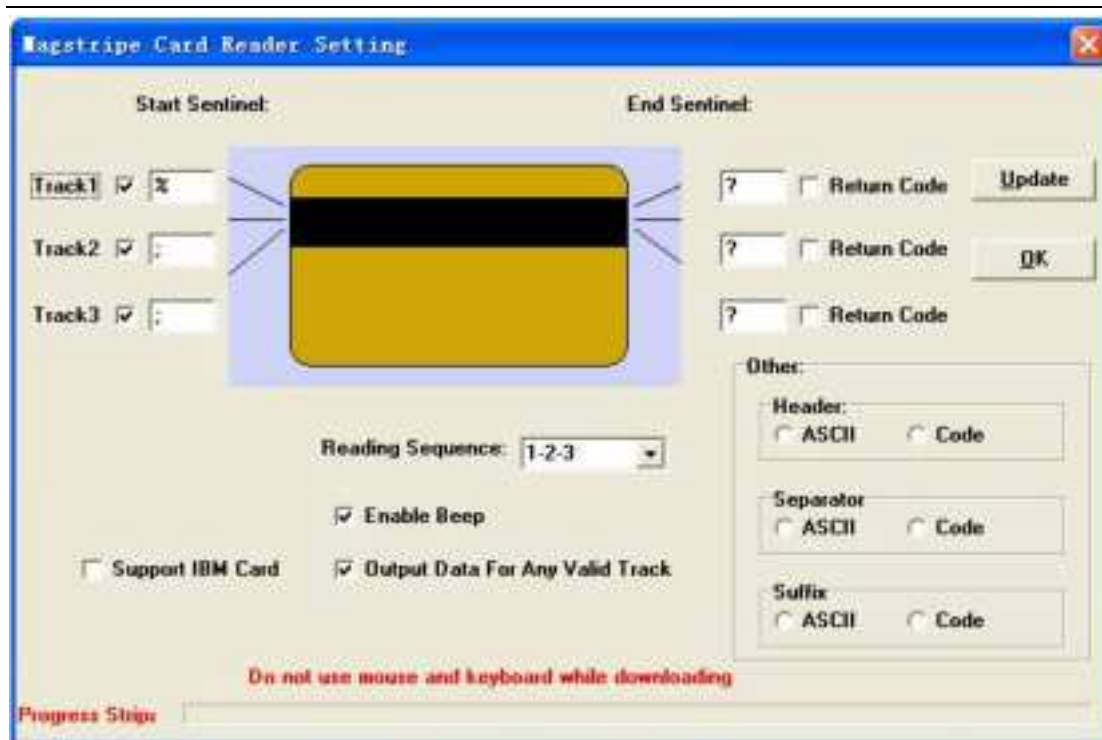
The setting dialog as above mentioned in part one "key code" and part two "ASCII" will be appeared when you select the "code" or "ASCII" in the "header"、"separator"or "suffix". The "header"、"separator"or "suffix"can be programmed in the way mentioned before.

The content what was set can be downloaded by clicking "update" after finishing setting, or was send to the program memory by clicking "OK", then the dialog will be shutdown automatically.

According to the above setting, the screen will be displayed as following after swiping:

the start code, the start sentinel of the first track, the data of the first track, the end sentinel of the first track, the separator, the start sentinel of the second track, the data of the second track, the end sentinel of the second track, the separator, the start sentinel of the third track, the data of the third track, the end sentinel of the third track, the end code.

4. Diagnostic(to check whether the keyboard is normal)

① Enter Test Mode

You can select "Enter test Mode" from the "Diagnostic". The keyboard will enter Test Mode.

After entering Test Mode successfully, the position of the key will be

shown after pressing the key.

② **Exit test mode**

You can select "Exit Test Mode" from the "Diagnostic". The keyboard will exit Test mode.

After exiting Test Mode successfully, the key cored will be displayed after pressing the key.

③**Set Default Value**

You can select "Set Default Value" from the "Diagnostic" and click "Set Default Value" to restore the default value.

④**Set "Firmware Version"**

You can select "Firmware Version" from the "Diagnostic". A dialog will be displayed the version of keyboard .

5. Download key code setting

Download the key table in following ways after assigning the key:
You should click "Keyboard" then select "Update Whole Keyboard" or click the on tools directly.

Warning: Do not use keyboard or mouse while downloading.

6. Read Keyboard Setting

To reading the program codes of keys, keyboard setting or magnetic card reader setting, you can click "keyboard" then click "retrieve keyboard" or click the directly.

Warning: Do not use keyboard or mouse while downloading.

7. Clear All

To clear all keyboard settings or magnetic card reader settings, you can click the "keyboard" then select "Clear All"or click the directly.

This action only clears the content what was remembered in the program. It does not clear the setting was remembered in the keyboard.

8. Save

To save all keyboard settings or magnetic card reader settings, you can click the "File" then select "Save" or click the directly.

9. Open File

To select file type and set keyboard or magnetic card readers, you

can click "File" then select "Open" or click the directly. If the key table format was error, the system will display an error message and set "dat" as the file format.

10. Update Firmware(only for KB78 with PS2 interface)

To Update Firmware, you can click "Update Firmware" in the

"keyboard" or click the directly. Then you should select Keyboard chip upgrade program. The file format is ".hex".

Warning: Do not use keyboard or mouse while downloading.