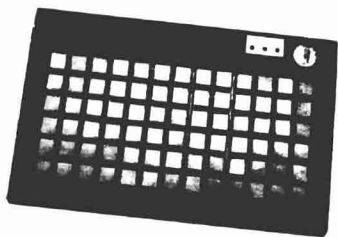
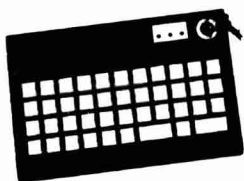


User's Manual

Programmable POS Keyboard

PKB-044/078



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1. Introduction

1.1 Unpacking

The contents may vary with different options. If there's any physical damage or missing parts, please contact your supplier immediately. Please keep all packing materials in case you need to ship back the device for service.

- PKB-044/078
- Magstripe Card Reader (Option)
- Key Lock and 3 operating keys (Option for PKB-044)
- A set of numeric key cap (Option)
- User's Manual
- Support CD

1.2 Main Features

- Membrane key switches with tactile feeling
- Mechanical stroke using full-height Cherry key switches available for PKB-078
- Operating life cycles up to 10 million strokes
- True keyboard wedge function: Key Code or ASCII Code
- Windows software programming without TSR program
- Magnetic stripe card reader available with various track combinations
- 6 positions key lock function
- Each key can be programmed up to 200 codes

1.3 Magsripe Card Reader Features (Option)

- Comply with ISO 7812, IBM standards, American Driving License
- Support programmable MSR setting for the header, tailer, separator, preamble, postamble, and track sequence
- Track 1: 210BPI with max 76 characters
- Track 2: 75BPI with max 37 characters
- Track 3: 210BPI with max 107 characters
- Card swipe speed: 10 to 100 cm/sec.
- 300,000 or 1,000,000 swipe cycles
- Various track combinations

1.4 Specifications

Models	PKB-044	PKB-078
	Physical	
Material	ABS	
Interface	PS/2	
Dimension	234L x 144W x 45H mm	290L x 175W x 45H mm
Cable Length	2800mm	
Weight	0.68Kg	1.12Kg
Color	Black or white (Option)	
Travel Distance	4±0.5mm	
Operating Life Cycles	10 million strokes	
	Electrical	
Power Supply	+5VDC±10%	
Interface	PS/2	
Current Input	≤ 100mA	
	Magstripe Card Reader (Option)	
Card Density	Track 1: 210BPI with max. 76 characters	
	Track 2: 75BPI with max. 37 characters	
	Track 3: 210BPI with max. 107 characters	
Magnetic Tracks	Track 1 or Track 2 or Track 3 or Dual Track (Track 1&2 or Track 2&3) or Three Track (Track 1&2&3)	

Models	PKB-044	PKB-078
Card Swipe Speed	10 to 100 cm/sec.	
Swipe Cycles	300,000 or 1,000,000 (Option)	
	Others	
OS	Windows 98, ME, 2000, XP, Vista 32	
Position Key Lock	6 (Option)	6
Operating Temperature	0°C~+40°C	
Storage Temperature	-20°C~+55°C	
Operating Humidity	40%~90%	

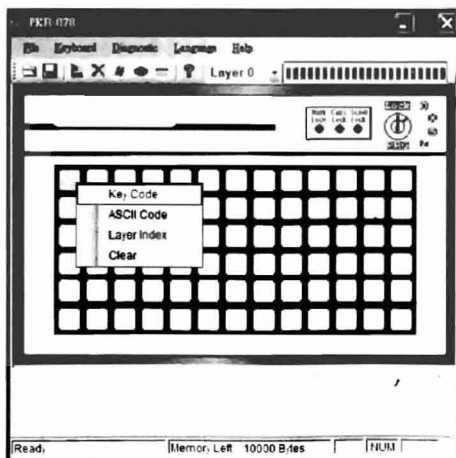
2. Get Started

Run the "PKB044Setup.exe" or "PKB078Setup.exe" file in the bundled CD accordingly to start the installation. After finishing the installation, execute Start >> All Programs >> PKB044 (or PKB078) to start the programming software.

2.1 Edit Key Map

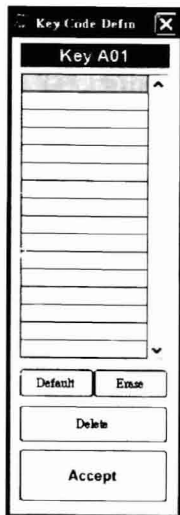
When the mouse cursor moves to a key on the key map, the key becomes light blue indicating that the key can be programmed. Click the key with the left mouse button, a menu will pop up for selecting. Two methods can be used to assign the key map; one is "Key Code" and the other is "ASCII Code".

"Layer Index" is used to assign an index to a key. "Clear" can be selected to clear the codes that have been assigned to a key.



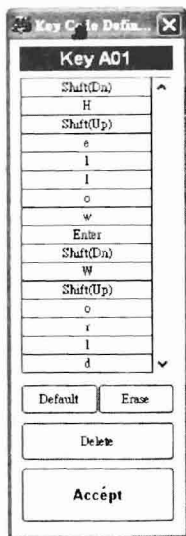
2.1.1 Key Code

In this method, you can assign key code to a key with a virtual keyboard. Double click the field on the "Key Code Definition" window. A "Keyboard Interface" window containing most popular key codes will appear for clicking. Up to 200 codes can be mapped to per key.



Example

If you want to assign a key to "Hello\n World", press "Shift", "H", "Shift", "E", "L", "L", "O", "Enter", "Shift", "W", "Shift", "O", "R", "L", "D" in sequence on the virtual keyboard. The key mapping is as shown in the window below. Then press "Accept" on the window to finish the programming.



After programming this button, if you type this button on the programmable keyboard, it will display:

Hello
World

Note

- Press "Shift" once on the virtual keyboard and the codes will change to uppercase. Press "Shift" again and the codes will change to lowercase.
- If you want to delete the codes, press the mouse left button and drag to select the codes to be deleted. Press "Erase" on the window and the selected fields will become blank for assigning new codes. Or press "Delete" and the selected fields will be deleted directly.

Mark Area

Key B01	
a	^
b	
f	
g	

Default Erase

Delete

Accept

Erase

Key B01	
a	^
b	
f	
g	

Default Erase

Delete

Accept

Delete

Key B01	
a	^
b	
f	
g	

Default Erase

Delete

Accept

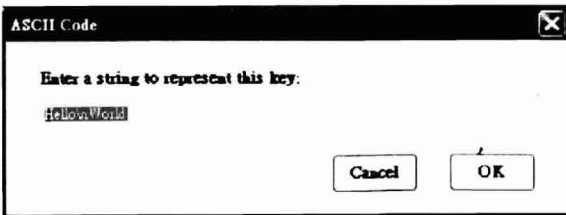
2.1.2 ASCII Code

In this method, you can assign any printable ASCII Codes, i.e. A-Z, a-z, 0-9, +, -, *, /, and punctuation symbols with a computer keyboard. Up to 200 ASCII codes can be assigned. Five special symbols can also be assigned by the following representations.

Symbol	Representation
Enter Character	\n or \N
Esc Character	\e or \E
Tab Character	\t or \T
\ Character	\\
ASCII Code	\999 where 999 must be a three digit integer

Example

Enter "Hello\nWorld" with the computer keyboard and the entered string will be shown on the "ASCII Code" window.



After programming this button, if you press this button on the programmable keyboard, it will display:

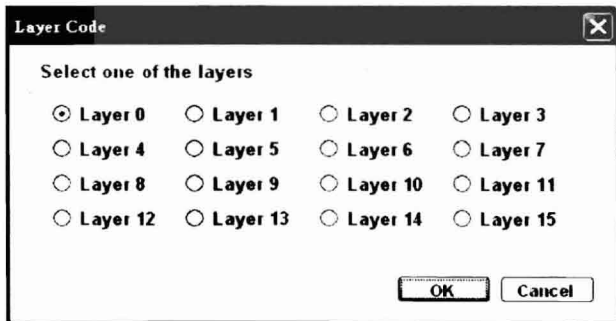
Hello
World

Note

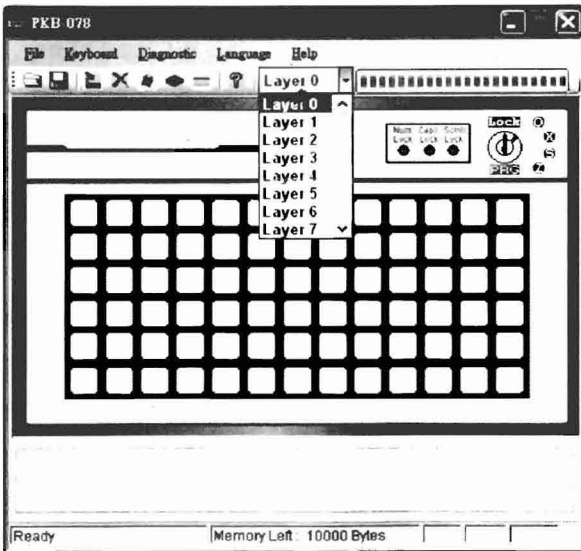
In this method, no matter Caps Lock is on or off will not change the character string. That is, the same character string will be displayed.

2.1.3 Layer Index

Depending on the category of the keyboard, the keyboard can be programmed up to 16 layers. You can assign a layer index to any key you like.




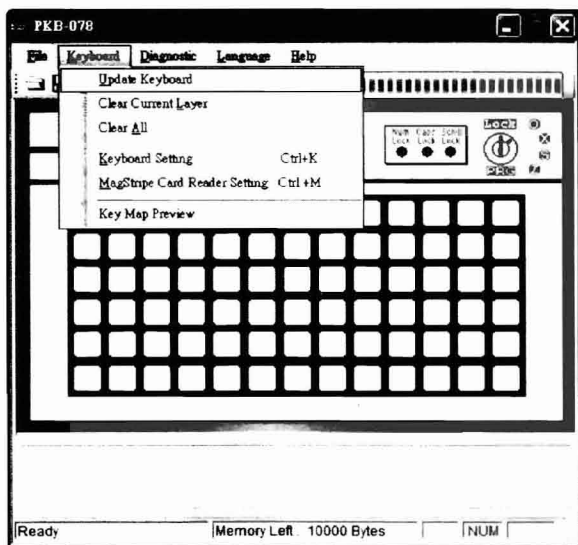
If, for example, you want to program the keyboard at the 2nd layer, choose Layer 2 in the tool bar. Then assign the key codes by "Key Code" or "ASCII Code" method. Assigning a key to Layer Index 2 is required for changing the whole key map to the 2nd layer.



2.2 Basic Settings

2.2.1 Update Keyboard

After assigning the codes to the buttons of the programmable keyboard, click "Keyboard" then "Update Key Mappings" or click  icon on the toolbar to download the key mappings to the programmable keyboard.

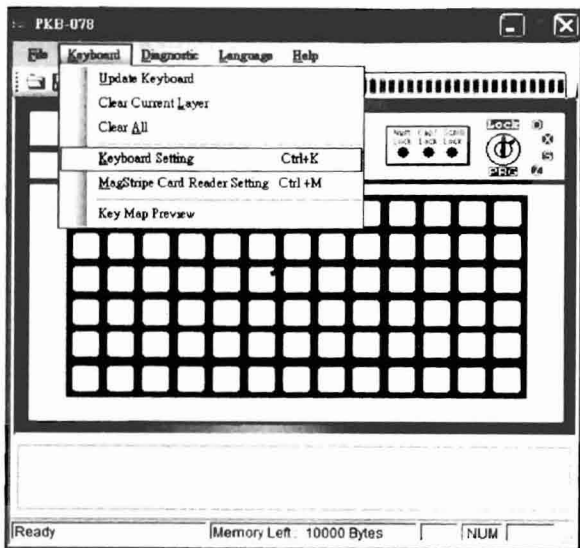


Note

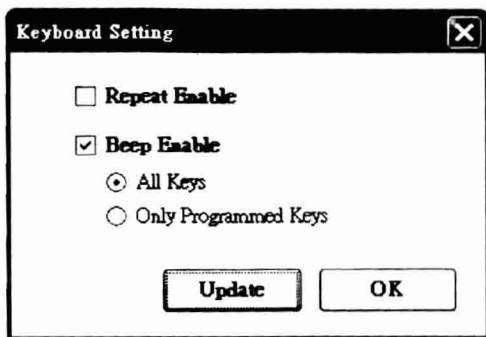
Please do not press any keys on the keyboard during updating.

2.2.2 Keyboard Setting

On the menu bar, click "Keyboard" and then "Keyboard Setting".



The following dialogue window will appear:



If you want to have a beep sound when pressing a button on the keyboard, select "Beep Enable". Then you can choose either "All Keys" or "Only Programmed Keys" option.

If you allow the key to be displayed repeatedly when pressing the button continuously, select "Repeat Enable".

After finishing the settings, press the "Update" button to send the settings to the keyboard, or press the "OK" button to save the setting in the program memory, and then the dialogue window will be automatically closed.

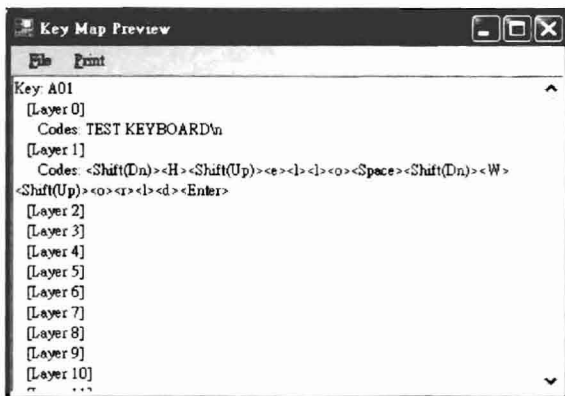
Caution

If "Repeat Enable" option is selected and no layer index for certain key lock position is assigned, for example, assigning "Hello" for key lock L. When the key is switched on L position, "Hello" will be generated repeatedly.

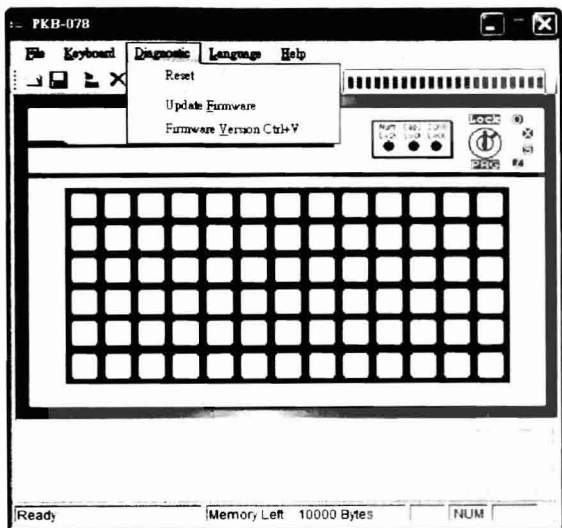
If "Beep Enable" is selected as well, you will hear a continuous beep sound. Therefore, it is recommended the key lock to be assigned to a layer index.

2.2.3 Key Map Preview

Click "Keyboard" and then "Key Map Preview" to view the whole key mapping.




2.2.4 Diagnostic



Reset

Reset the keyboard only.

Update Firmware


Click "Keyboard" and then "Update Firmware" on the menu bar, or click  icon on the toolbar, and it will ask you the location of the firmware file.

During updating, please do not press any keys on the keyboard.

Firmware Version


Get the current version of the firmware.

2.2.5 Clear All


Click "Keyboard" on the menu bar and then "Clear All" or click  icon on the toolbar to clear all key mappings and keyboard setting.

This action only clears the program memory. It does not clear the settings in the actual keyboard.

2.2.6 Save

If you want to save all key mappings, the keyboard setting or the magstripe card reader setting into a file, click "File" and then "Save" on the menu bar, or click  icon on the toolbar.

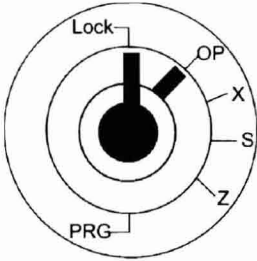
2.2.7 Open

Click "File" then "Open" on the menu bar, or click  icon on the toolbar to load the key mappings and keyboard settings from a file.

An error will occur if you choose to load a keymap file with a wrong format.

2.3. Key Lock Function (Option for PKB-044)

2.3.1 Control Keys

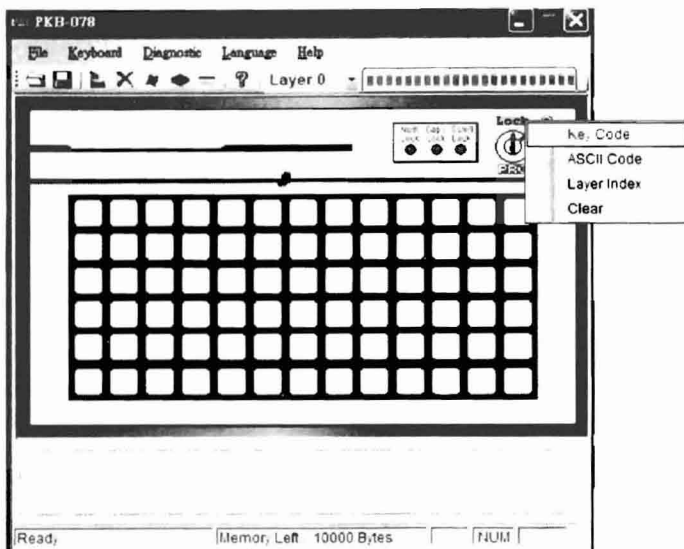


Key Position	Key Revolving Positions		
	OP	S	PRG
Lock			
OP			
X			
S			
X			
PRG			


The programmable keyboard is equipped with 3 operating keys named OP, S, and PRG. Each key can be revolved to its corresponding positions (refer to the above table), which enables different key holders to have different levels of authorization.

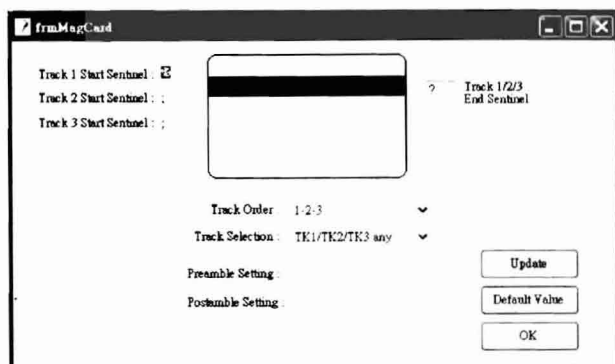
2.3.2 Key Lock Settings

The key lock has 6 positions and can be used as a key or a layer. Press the left mouse button and the menu bar will appear for setting. (Refer to 2.1.1 Key Code, 2.1.2 ASCII Code, and 2.1.3 Layer Index.)



2.4 Magstrip Card Reader Settings (Option)

On the menu bar, click "Keyboard" and then "Magstrip Card Reader Setting", or on the toolbar, click  icon, the following dialogue window will appear.



Set Preamble, Separator, and Postamble by clicking the computer keyboard. The code length for preamble and postamble string is limited to 10 only.

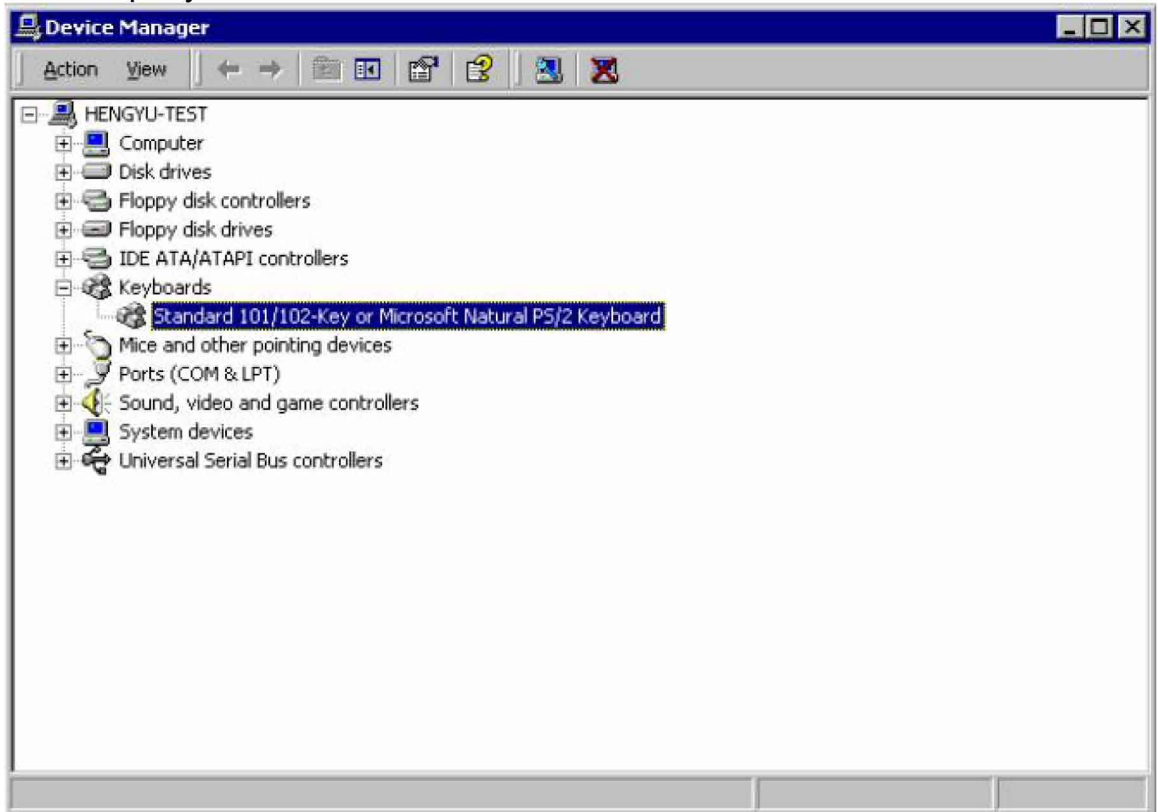
After sliding a magstrip card along the reader, it will display as follows: Preamble string, Track 1 Start Sentinel, Track 1 Data, Track 1 End Sentinel, Track 2 Start Sentinel, Track 2 Data, Track 2 End Sentinel, Track 3 Start Sentinel, Track 3 Data, Track 3 End Sentinel, Postamble string.

After finishing the settings you like, press the "Update" button to send these settings to the keyboard, or press the "OK" button to save the setting in the program memory, and then the dialogue window will be automatically closed.

PS/2 Programmable Keyboard Driver Setup

This section is only valid for Windows 2000 and Windows XP. For Windows 9X, Windows Me, no need to do the driver setup for the programmable keyboard. The following instructions are performed in Windows 2000. However, the similar instructions can also be followed in Windows XP.

1. Open the “Device Manager” from the System in Control Panel. Choose the default keyboard driver as below and then right click this driver. Click on “Property” of this driver.



2. Press “Update Driver...” in the screen below.



3. Press “Next” to prepare to upgrade the keyboard driver.



4. In the screen below, choose “Display a list of the known drivers for this device so that I can choose a specific driver” and then press “Next” to proceed.

Upgrade Device Driver Wizard

Install Hardware Device Drivers

A device driver is a software program that enables a hardware device to work with an operating system.



This wizard upgrades drivers for the following hardware device:

 Standard 101/102-Key or Microsoft Natural PS/2 Keyboard

Upgrading to a newer version of a device driver may add functionality to or improve the performance of this device.

What do you want the wizard to do?

Search for a suitable driver for my device (recommended)

Display a list of the known drivers for this device so that I can choose a specific driver


< Back Next > Cancel


5. In the screen below, select the device driver for the “Standard 101/102-key or Microsoft Natural PS/2 Keyboard” and then press “Have Disk...” to proceed.

Upgrade Device Driver Wizard

Select a Device Driver

Which driver do you want to install for this device?



 Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.

Models:

PC/AT Enhanced PS/2 Keyboard (101/102-Key)
Standard 101/102-Key or Microsoft Natural PS/2 Keyboard

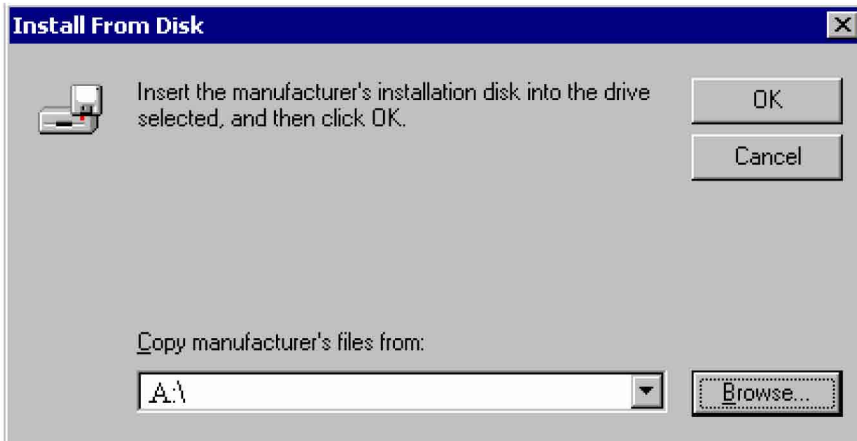
Show compatible hardware

Show all hardware of this device class

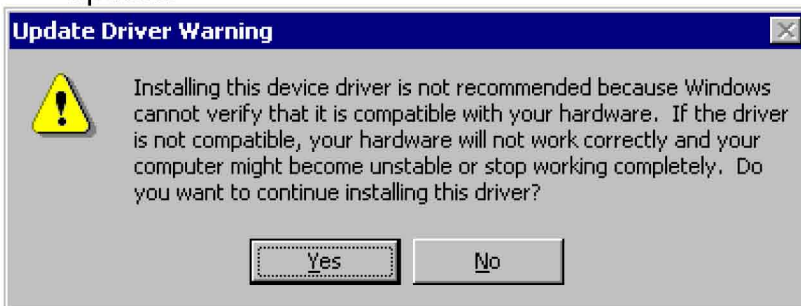
Have Disk...

< Back Next > Cancel

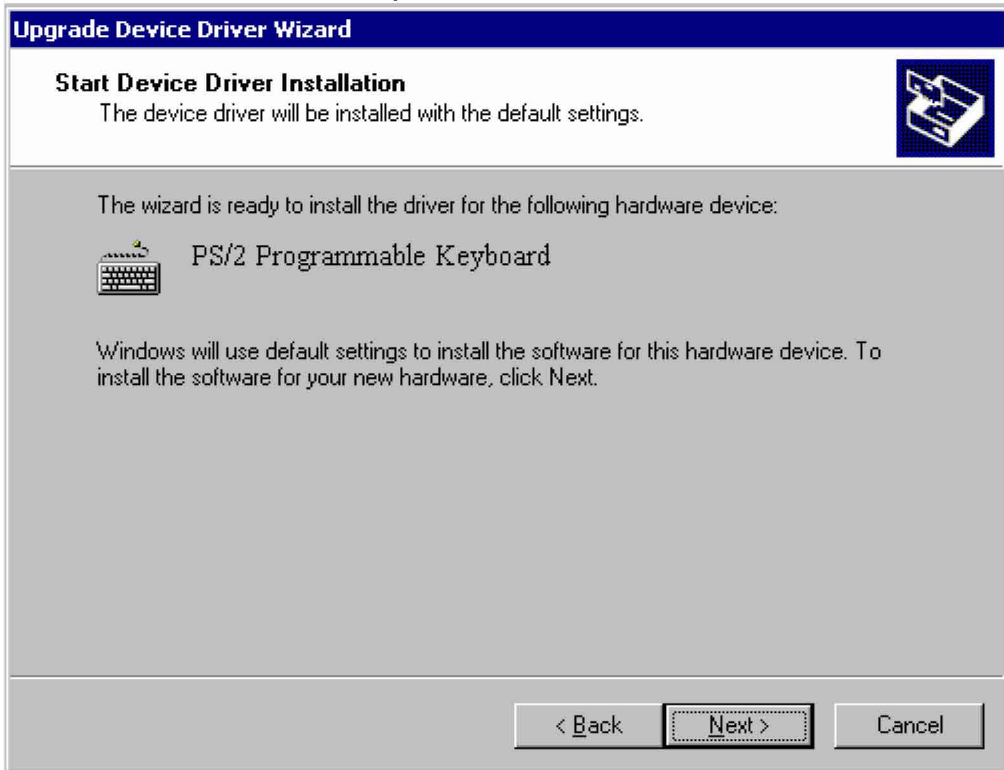
- The keyboard device driver is located in the “KB Driver” folder under the folder where the programmable keyboard application is installed. Press “Browse...” to locate this folder.



- Double click the new device driver “kbfilter.inf” and the following screen will be popped out. Ignore the Warning and press “Yes” to proceed with the driver update.



8. The device driver “PS/2 Programmable Keyboard” will be found in the screen below. Press “Next” to proceed.



9. Press “Yes” to continue the installation.



- When the driver upgrade is finished, the following screen will be come out. Press "Finish" to end the device driver upgrade. Reboot your machine and then the programmable keyboard application can run on the Windows 2000 and Windows XP.

