

KB6000 SERIES
102 - KEY & QWERTY
PROGRAMMABLE KEYBOARD
USER'S MANUAL

Rev. : Original





SOME IMPORTANT NOTES

FCC NOTES

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with limits for a Class A digital device pursuant to subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures to correct the interference.

WARRANTY LIMITS

Warranty will terminate automatically when the machine is opened by any person other than the authorized technicians. The user should consult his/her dealer for the problem happened. Warranty voids if the user does not follow the instructions in application of this merchandise. The manufacturer is by no means responsible for any damage or hazard caused by improper application.

ABOUT THIS MANUAL

This manual is written in an attempt with full strength to assist the user to utilize the powerful programmable keyboard KB-6000 series which is constructed of a 6 by 17 matrix of press keys which provides excellent tactile click when pressed. The KB-6000 series not only is capable of being programmed to transmit whatever code a standard PS2 keyboard can deliver, but also provides a great variety of programmability such that contains all capabilities of the most modern programmable keyboards.

The manufacturer of this product heartily apologizes to the user for reserving the right to change or to modify this manual without notice due to the rapid and constant progress and improvement on science and technology.

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P/N: 19160900010

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I. OVERVIEW

A. SCOPE

The KB6000 series is a very useful programmable keyboard suitable for application in PS2 keyboard port of a PC or compatible system and is particularly recommended for use in a Posiflex touch terminal such as a TP7000 system. It is programmable under DOS, or Windows98/NT/2000/XP environment. The KB6000 series is structured in a 6 by 17 matrix and supports basically 2 types of the key layout. The model KB6000 provides a numerical keypad in right side of the keyboard and 1 horizontal double key under it. All the rest parts remain in form of single keys preserving the flexibility to convert into double keys or blank keys for best presence in application. The KB6200xx models provide in the lower part a “QWERTY” keyboard that resembles the standard PC keyboard and at the top a row of 17 locations for freely programming purpose. In addition to this, there are 2 more programmable keys within the “QWERTY” region. The “QWERTY” region is available for layout of various countries. Should there be any further question, please visit our web site. (<http://www.posiflex.com.tw>)

B. FEATURES

- Provide either matrix layout programmable keys with numerical keypad or QWERTY layout with 19 programmable keys
- Provide powerful programmability (programming under DOS, off-line programming under DOS, programming under Windows, multiple level, whole range key content, time delay, etc.)
- Total memory size for keys to be programmed: 8 KB
- Base structure of a 6 by 17 matrix
- 100% true spill-proof construction
- Reliable and pleasant key click
- Extension keyboard connector
- Comfortable key size
- Alternative double key

II. INSTALLATION

A. CABLE CONNECTION

Take the interface cable out from the accessory bag. This cable has a 6 pin DIN male plug (big head) at one end and a mini DIN PS/2 male plug (small head) at the other. Connect the big head of the cable to the 6 pin DIN female connector at the left of the bottom of the programmable keyboard. Connect the other end (6 pin mini DIN male plug) to the PS/2 keyboard port of a PC or compatible system. This connection between the programmable keyboard and the host system must be done before system power up for the application under some operating systems. Connect the PS/2 keyboard or any other PS/2 keyboard wedged input device such as a CCD scanner to the 6 pin mini DIN female connector at the bottom of the programmable keyboard if such connection is required.

B. INSTALLATION ON TP7000 SERIES

Please follow instructions in TP7000 manual to fix the fixation tags to the base of TP7000 for holding KB6000 series keyboard. Align the cavities on bottom of KB6000 series to the fixation tags on TP7000 to hold the KB6000 in place after the cable connection completed.



C. UTILITY INSTALLATION

There are in total three methods to program the programmable keys in KB6000 series keyboard: “RWM.EXE” the straightforward direct read/write programming utility under DOS or Windows DOS box; “KBM.EXE” the normal programming utility under DOS or Windows

DOS box and “KBW.EXE” the normal programming utility under Windows.

In the utility diskette or in subdirectory \Drivers\KB\KB6000 of the CD, there is a file named “INSTALL.EXE” for installation of all the utilities into any operating system among Windows 95/98, Windows 3.1 and DOS. The user may install the programming utility by following the step by step instructions from this executable program. Both “KBM.EXE” and “RWM.EXE” will be installed after completion. Please select the right model when entering the “KBM.EXE” program. The user may refer to the information on our web site for a preview of this program.

A programming utility that is referred to as “KBW.EXE” in this manual is developed particularly for the Windows 98/NT/2000/XP environment. Please find in the utility diskette or in folder \Drivers\KB\KB6000 of the CD and double click the “Setup” program to install the whole utility. After completion of the “Setup”, there will be a program group “Posiflex Tools” in the program files. Clicking the program “Posiflex Programmable Keyboard” in this group will activate the KBW.EXE for the KB6000 series. Please select the right model when entering the program.

D. PROGRAMMING SETUP

Before using either “KBM.EXE” or “KBW.EXE” to program a KB6000 series programmable keyboard, a PS/2 keyboard has to be connected to the 6 pin mini DIN female connector at the bottom of the KB6000 series for data entry purpose.

III. PROGRAMMING THE KEYBOARD

A. PROGRAMMING UTILITY (KBM.EXE)

1. QUICK REFERENCE GUIDE

Please refer to our web site for every detail in programming these programmable keyboards. The following simplified guide serves as a concise tool for instant application.


Keys To Program	How to Program Them
Esc, F1 - F12, Back Space, Shift, Ctrl, Alt, Insert, Delete, End, Page Up, Page Down, Print Scrn, Scroll Lock, Break, and all Arrow Functions	Press: (Alt-N), Esc, “Desired Key”, Down Arrow
A - Z, 0 - 9, ~ ` ! @ # \$ % ^ & * () - _ = + } { [] \ ' ; " : / . , < > ?	Press: Enter, “Desired Key or Keys”, Down Arrow
Tab, Enter	Press: (Alt-N), “Desired Key”, Down Arrow
Caps Lock	Press: Enter, (Alt-C), Down Arrow
Multishift	Press: (Alt-N), (Alt-M), Down Arrow - - - - Press (Alt-M) as many times as needed.
Seperator	In Between Any Text, Press (Alt-S)

2. HARDWARE LIMITATION

In case of “multiple combination key” application which means pressing three or more keys at the same time to obtain certain data output from the keyboard, there could be some limitations inherent from the nature of keyboard structure. The CPU of keyboard detects the contact

between the “horizontal” and “vertical” lines for each key press, recognizes which key is pressed and sends correspondent data to the host computer. When there are many keys pressed at the same time, and the pattern of the contacts coincides with some special relationship, there are chances that the CPU of keyboard be confused about exactly which keys are pressed. The user may change the locations of the key-definition to prevent this once such confusion happens.

B. PROGRAMMING UTILITY (KBW.EXE)

This utility programs the programmable keyboard as KBM.EXE does but using Windows application interface. Please use on - line help to program the programmable keyboard. Use the connected PS/2 keyboard for data entry of usual characters. Use mouse right click or the “” key on keyboard for data input of some special codes.

C. SHORTCUT UTILITY (RWM.EXE)

The feature of this RWM.EXE is designed mainly for the off-line programming purpose and is very useful in quick reproduction of the preprogrammed contents of the programmable keyboard. In such application, the user should have either the preprogrammed keyboard or the preprogrammed file with “.tpl” extension name which is the result of the keyboard programming. The user may use RWM.EXE to directly transfer the programmed result of the programmable keyboard to a “.tpl” file or directly transfer a prestored “.tpl” file to a programmable keyboard without entering the utility “KBM.EXE” or “KBW.EXE” which may take more keystrokes. For instance, the user wants to transfer a file “XXX.tpl”, which was saved before, to the programmable keyboard, he/she should type in following command in subdirectory “POSIFLEX.D”:

```
RWM XXX.tpl          (enter)
```

This operation is quite recommended to be performed on a daily basis to ensure the system stability.

On the other hand, when the user wants to save the contents of a programmed keyboard, e.g. when he/she newly receives a programmable keyboard, to a file named “YYY.tpl”, he/she should type in following command in subdirectory “POSIFLEX.D”:

```
RWM -r YYY.tpl      (enter)
```

In this application, the user must be careful on the housekeeping of these template files and **never mix** such files with those originated from other programmable keyboard. In other words, transferring a file generated from other programmable keyboard to KB6000 series could mess up the data format inside KB6000 series, and vice versa.



IV. APPLICATION

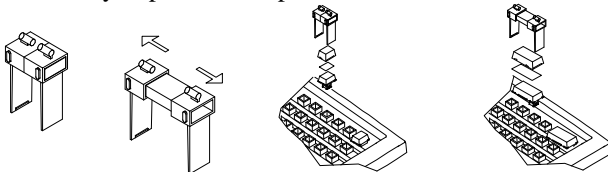
A. KEYBOARD CONSTRUCTION

On top of the keyboard surface is the push key switch area constructed in a 17 x 6 matrix providing a possibility of maximum 102 key positions available. However, the lower 5 rows in KB6200xx models are organized in “QWERTY” format that is country dependent and possesses about 60 more alphanumeric keys as the layout dictates, 12 keys of numerical keypad and 2 programmable keys. So there will never be a total number of the maximum possible 102 keys for any country throughout the KB6200xx models. In model KB6000, there are 12 keys preprogrammed to form a numerical key pad. The marking on the “QWERTY” keys and the numerical keys is non-erasable. Beneath the key pad, a double key is provided in horizontal orientation. Therefore making total key count in KB6000 one less from 102.

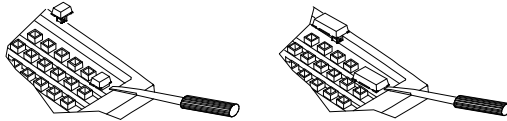
The structure of KB6000 series allows free replacement of the key tops. The user may purchase single keys, double keys and blank keys in number required to arrange as wish the appearance of the programmable key area. The technique to replace key tops is explained later.

B. KEY TOP LABELING

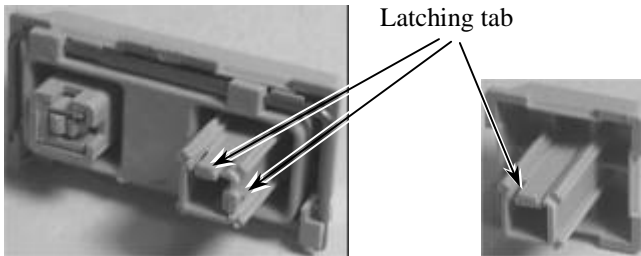
For identification of the keys with programmed contents, please print appropriate information on the legend sheet of appropriate color from the accessory and place it in between the transparent key cap and the key top. In this way the marking on the programmable key is well protected from wear. To remove a transparent key cap, please find at the bottom of the programmable keyboard an adjustable key clip. The two “feet” of the key clip should be pulled wide for use with double key.



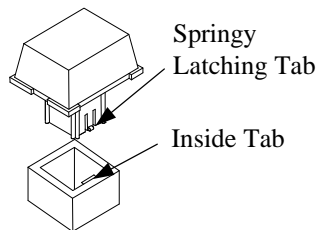
C. KEY TOP REPLACEMENT



Please always use a flat bladed screwdriver (never use the key clip that is designed for key cap) to remove the key tops in replacement operation. Before inserting any key top (single, double or blank) back into the keyboard frame, it is absolutely important to orientate the key tops correctly. **Failure to do this could result in permanent damage.** Please examine the bottom square stem of a key top for a springy latching tab as in pictures below. Please note that there are two possible directions for a double key.



Now please look into the guide hole on the keyboard frame. There is a tab inside the bottom side wall as indicated in drawing at right. When any key top is to be inserted onto the keyboard frame, the tab on the inside wall of the key top guide hole **must** mate a corresponding springy latching tab.



In this way, the matching stem of a double key must be either at the bottom when the double key is “vertically” aligned or at the right of the key coverage area when the double key is “horizontally” aligned. The location for the key-definition to be programmed for the double key shall then be the bottom or the right position accordingly.

V. SPECIFICATIONS

CONSTRUCTION: 100% true spill-proof structure, state of the art top notch solid design with water drainage system, 6 x 17 matrix structure with a numerical keypad and 1 horizontal double keys or a qwerty layout keyboard + 19 programmable keys

KEY SWITCH TYPE: membrane plus rubber dome

KEY STROKE TRAVEL: 3.2 mm

KEY TOP SIZE: 18 x 18 mm for individual key except the numerical key pad or qwerty portion

PREPRINTED KEYS: Qwerty keys + Numeric keys

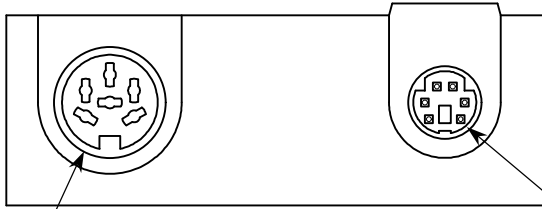
KEY CAP: 18 x 18 mm transparent

PROGRAMMABILITY:

- **METHOD:** Software programming under DOS, Windows 3.1, Win95, Win98, Win NT, WIN2000 or Win XP without TSR program
- **COVERAGE:** 89 keys for KB6000, 19 keys for KB6200xx
- **CODE TYPE:** ASCII or scan codes
- **LANGUAGE:** English or European, software configured
- **CONTENTS LENGTH:**
1 - 255 byte(s)/key
- **MULTILEVEL:** 8 levels max.
- **MEMORY:** Non-volatile memory 8KB
- **INTERCHARACTOR OUTPUT SPEED FOR KB:**
programmable 0 - 140 msec
- **COMMANDED TIME DELAY:**
programmable 0 - 240 sec

OUTPUT INTERFACE:

- **6 pin DIN female connector:** connects to host computer
- **6 pin mini DIN female connector:** connects to input PS2 keyboard



Connects to PC through CCBLA-055-2 or CCBLA-055-1

Connects to PS2 keyboard

POWER CONSUMPTION:

Voltage..... 5VDC±10%

Current..... 150 mA max.

MECHANICAL:

Dimension in mm (inches)... 358 mm x 147 mm x 65 mm
(14.1" x 5.8" x 2.6")
(W x D x H)

ENVIRONMENTAL:

Operating temperature..... 0°C to + 50°C

Storage temperature..... -20°C to + 70°C

Relative humidity..... 90%, non-condensing

Vibration..... 4G

Shock..... 40G

RELIABILITY INFORMATION:

- **Push key switch:** 15,000,000 strokes min.
- **Memory:** 100 years min.

APPLICABLE CONFORMITY:

CE, FCC CLASS A