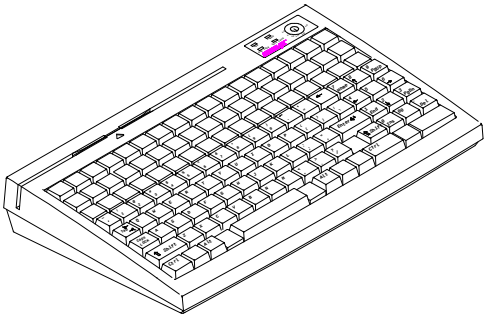
POSIFLEX™

KB3200 SERIES

136 - KEY QWERTY
PROGRAMMABLE KEYBOARD

USER'S MANUAL

Rev. : A1



POSIFLEX™

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-3200 series which consists of a 6 positioned electronic control key and 136 press keys which provides excellent tactile click when pressed, and an optional magnetic stripe reader for either ISO or JIS standards. The KB-3200 series not only is capable of being programmed to transmit whatever code a standard PC or 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.

TRADE MARKS AND SERVICE MARKS

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I. OVERVIEW

A. SCOPE

The KB3200 series is a powerful programmable keyboard suitable for application in both IBM PC compatible system and PS2 compatible system. It is programmable without TSR under DOS, Windows 3.1 and also Windows95/98/NT environment. This series possesses a 6 position control key which is capable of sending answer back codes according to the position of the key. The KB3200 series provides in the lower part a "QWERTY" keyboard that resembles the standard PC keyboard and at the top a matrix of 3 by 17 locations for freely programming purpose. Nevertheless, 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

- A 6 position control key to provide security lock, multiple page controller and answer back code control
- Provided in lower 5 rows of the matrix are "QWERTY" keyboard, numerical keypad and 2 programmable keys for each country
- Provided in upper 3 rows of the matrix with powerful programmability (hot key programming, programming under DOS, off-line programming under DOS, programming under Windows, multiple page, multiple level, whole range key content, time delay, position sense answer back code, etc.)
- Total memory for keys to be programmed: 8 KB
- Base structure of a 8 by 17 matrix
- 100% true spill-proof construction
- Reliable and pleasant key click
- Extension keyboard connector
- Comfortable key size
- Alternative double key

- Optional MSR (Magnetic Stripe Reader), soft dust cover
- Indication LED's includes Power, MSR, Cap-Lock and Num-Lock
- Wear resistant Laser marked numeric and QWERTY keys

C. MODEL NUMBERS

- KB3200xx Basic model, non-volatile memory 8 KB
- KB3200xxM2 with MSR (ISO tracks 1 & 2)
- KB3200xxM2/3 with MSR (ISO tracks 2 & 3)
- KB3200xxM3 with MSR (ISO tracks 1, 2 & 3)
- KB3200xxMJ with MSR (JIS I track 2 + JIS II)

In the above, "xx" represent one of the following 2-character codes which means the variety in the QWERTY portion for different languages.

xx	**Language**
FR	French
GR	Germany
IT	Italy
NL	Netherlands
PO	Portugal
SP	Spain
SV	Sweden/Finland
UK	United Kingdom
US	United States

NOTE: PS/II or PC interface selectable.

D. ACCESSORIES

- Cable CCBLA-055-2 x 1 for AT KB interface or
  Cable CCBLA-055-1 x 1 for PS/2 KB interface
- Legend sheet x 4
- Double key cap x 1
- Single key cap x 52
- Blank key x 2
- Control keys 4 pcs per set
- Utility software diskette x 1
- User's manual x 1
- Key clip x 1 (mounted at bottom)

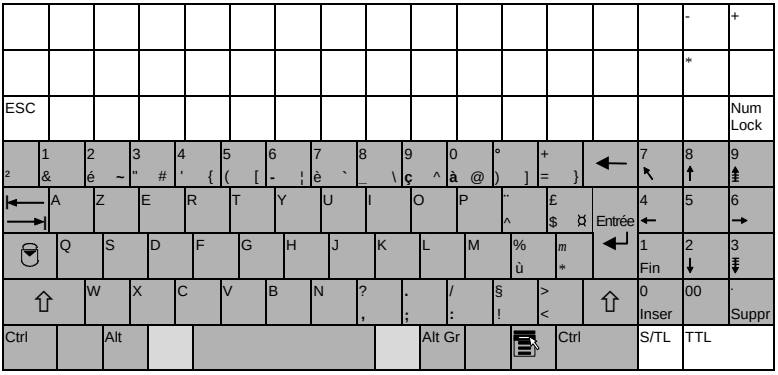
E. OPTIONS

- MSR (ISO track 1 & 2, ISO track 2 & 3, ISO track 1, 2 &3, or JIS I track 2 + JIS II) / pc
- Double key / pc
- Blank key / pc
- Single key top & key cap / set
- Off centered single key top & key cap / set

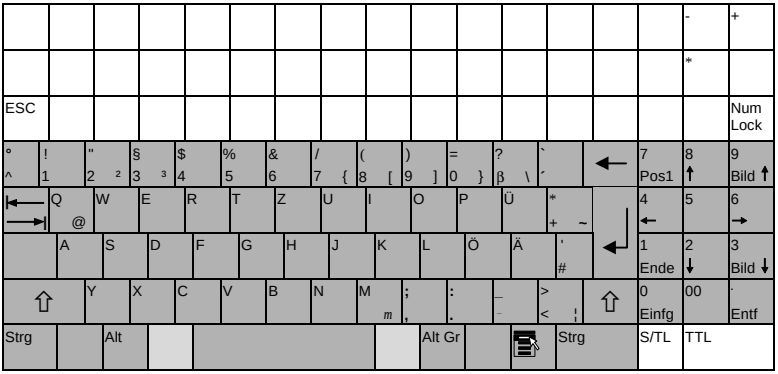
II. STANDARD LAYOUTS for QWERTY REGION

- FRANCE
- GERMANY
- ITALY
- NETHERLANDS
- PORTUGAL
- SPAIN
- SWEDEN/FINLAND
- UNITED KINGDOM
- UNITED STATES

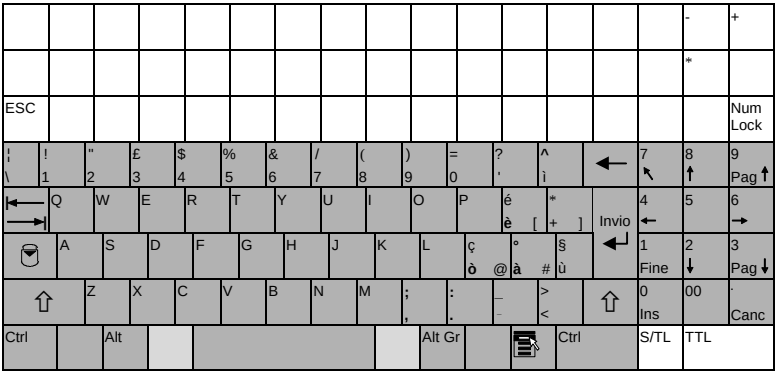
A. FRANCE



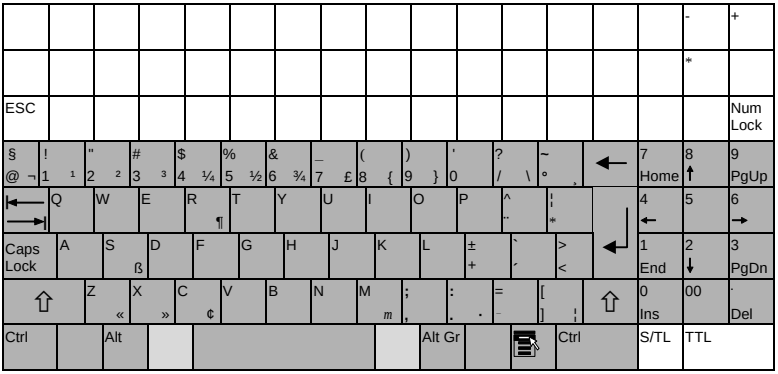
B. GERMANY



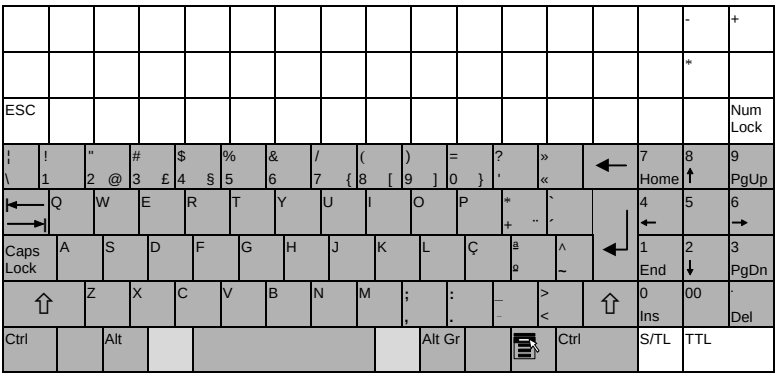
C. ITALY



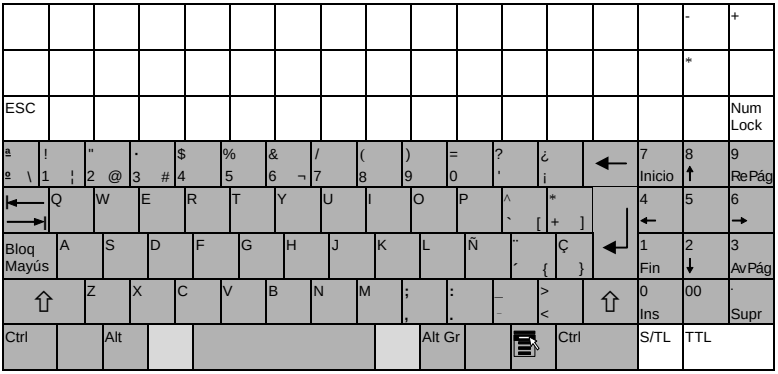
D. NETHERLANDS



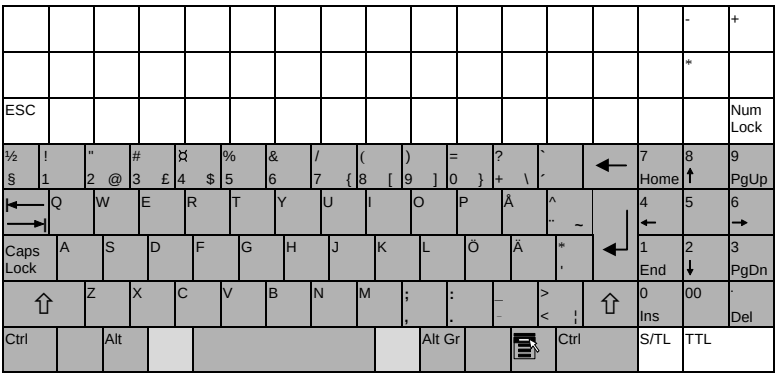
E. PORTUGAL



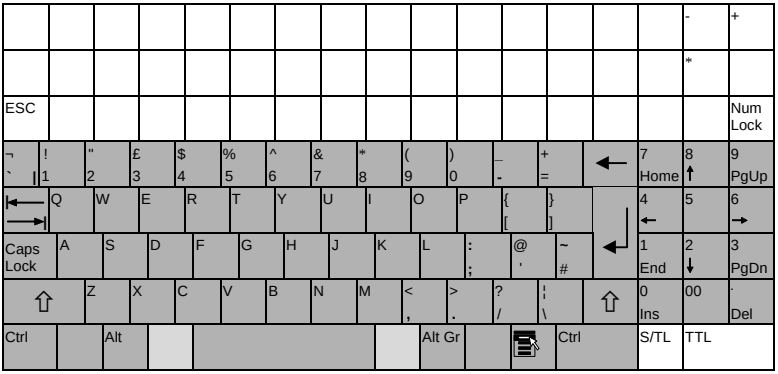
F. SPAIN



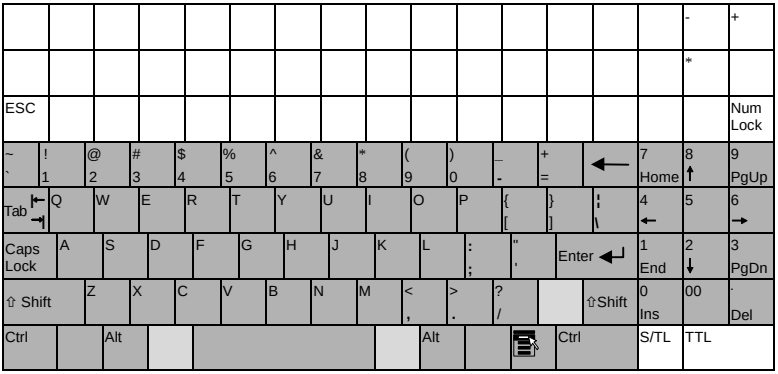
G. SWEDEN/FINLAND



H. UNITED KINGDOM



I. UNITED STATES

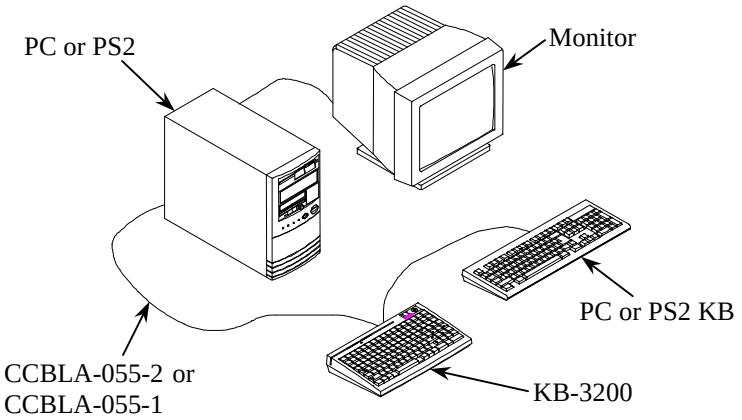


III. INSTALLATION

A. CABLE CONNECTION

Take the cable CCBLA-055-2 out of the accessory bag. Connect the 6 pin DIN male plug of the cable to the 6 pin DIN female connector at the left of the bottom of the programmable keyboard. Connect the other end (5 pin DIN male plug) to the PC or a compatible system. Connect the PC keyboard or any other keyboard wedged input device such as a CCD scanner to the 5 pin DIN female connector at the bottom of the programmable keyboard if such connection is required.

For installation in a PS2 or a compatible system with a PS2 interface type KB3200, the cable in the accessory bag should be CCBLA-055-1. Connect the mini DIN 6 male plug of the cable to the PS2 or a compatible system. Do all the rest just like that for PC.



B. UTILITY INSTALLATION

There are in total three methods to program the programmable keys in KB3200 series keyboard: “RWM.EXE” the straightforward direct read/write programming utility; “KBM.EXE” the normal programming utility and the “Hot Key Programming” most suitable to modify the key contents of one or two keys. Installation procedures are required for utilities “KBM.EXE” and “RWM.EXE”.

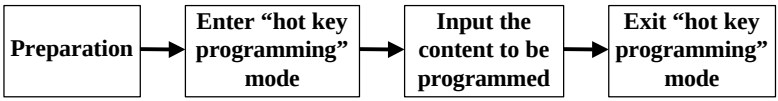
In the utility diskette, there is a file named “INSTALL.EXE” for installation of all the utilities into any operating system among Windows 95/98/NT, Windows 3.1 and DOS. The user may install the programming utility by following the step by step instructions from this executable program. The user may refer to the information on our web site for a preview of this program.

A new programming utility that is referred to as “KBW.EXE” in this manual is developed particularly for the Windows 95/98/NT environment. If the KB3200 series is delivered with the new programming utility, please copy the files to a suitable subdirectory of the system and double click the “Setup” program to install the whole utility. After completion of the “Setup”, there will be a program group “Posiflex KB Utility for Win 95&98&NT” in the program files. There will be 2 programs “Posiflex Keyboard Utility KBM” and “Posiflex Keyboard Utility KBW” in this group. The “Posiflex Keyboard Utility KBM” is referred to as the KBM.EXE in this manual and the “Posiflex Keyboard Utility KBW” is referred to as the KBW.EXE in this manual. The KBM programs the keyboard in a more well known direct method while the KBW programs the keyboard in a Windows approach.

IV. PROGRAMMING THE KEYBOARD

A. HOT KEY PROGRAMMING

The KB3200 series programmable keyboard, when connected with a standard PC or PS/2 keyboard, supportS the “hot key programming” method which is most useful in instant modification of a few keys in a preprogrammed keyboard without entering the more sophisticated programming utility. Of course, the user may also use this feature to program through out all programmable keys by 5 pages (LP and L1 to L4) on KB3200 series at will. The whole process of “hot key programming” contains 4 steps for each key to be programmed and is illustrated as following:



1. PREPARATION

To enable “hot key programming” feature of the programmable keyboard, a standard **PC or PS/2 keyboard <u>must</u> be connected** to the external KB connector of the programmable keyboard before entering “hot key programming” mode. The user shall then decide which key of which page is to be programmed and turn the 6 position control key to the proper position before entering the “hot key programming” mode. Please note that the 2 programmable keys in the numerical keypad in KB3200 series and the answer back codes of the position control key in both series are not covered by the “hot key programming” feature.

2. ENTER "HOT KEY PROGRAMMING" MODE

To enter the "hot key programming" mode, the user must input the "**hot key**" and identify the key on the programmable keyboard to be programmed. The so-called "**hot key**" is a special combination of keys pressed on the standard PC or PS-2 keyboard. In KB3200 series, the "hot key" is defined as pressing and holding the **left "Alt"** key while pressing the **"PRT SC"** ("Print Screen") key on the PC or PS-2 keyboard. And by doing so, the programmable keyboard will give 2 beeps to notify that it is ready to receive the identification of which key to be programmed. Right after the "**hot key**" is released, the user shall press the key to be programmed on the programmable keyboard once to identify which key to be programmed. If the "**hot key**" is pressed for the second time or the "**Esc**" key is pressed prior to the press of the key on the programmable keyboard, this mode will be aborted immediately. The user should not enter the "hot key programming" mode when the programmable keyboard is already fully loaded (no more free memory for further programming) by the key contents previously programmed.

3. INPUT THE CONTENT TO BE PROGRAMMED

Once the programmable keyboard enters the "hot key programming" mode with the key to be programmed identified, what the user types on the standard PC or PS-2 keyboard will be taken for the content to be programmed into that key of the programmable keyboard till the user exits the "hot key programming" mode.

The legal input in this mode includes all **alphabetical letters** (including both upper and lower cases), **numerical digits** (applicable only for keys at the area above the alphabetical keys and excluding those on the numerical keypad), **symbols** (such as `!"#$ and excluding those arithmetic signs in the numerical keypad) and the "**enter**" key. The "**shift**" key, the "**caps lock**" key and the "**back space**" key are also accepted in this mode to serve an editing purpose (for example, pressing "back space" will erase the last character of the input instead of being treated as a character for input). Pressing the "**Esc**" key in this mode will abort the "hot key programming" mode immediately. All the rest keys

such as the "**Ctrl**", "**Alt**", "**Home**", any function key or arrow key or any key in the numerical keypad) on the standard PC or PS-2 keyboard are illegal inputs in this mode. The maximum number of key presses acceptable to any key by "hot key programming" is 32.

All the input from the standard PC or PS-2 keyboard in this mode will also be sent to the host computer. Any key press from the predefined programmable keyboard for data input in "hot key programming" is prohibited.

4. EXIT "HOT KEY PROGRAMMING" MODE

After the intended content of the key is completely entered, the user shall press the "**hot key**" again to notify the end of "hot key programming". The programmable keyboard will give one beep to signify the normal exit of the "hot key programming" mode. Should there be any illegal entry in the content of the key or any other improper operation during the programming stage, the programmable keyboard will give three beeps to signify the failure of "hot key programming" and the key content is not changed. If the user pressed the "**Esc**" key to abort "hot key programming", the programmable keyboard will also give three beeps immediately as a response to signify the abort.

B. 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 severs 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)
Different Pages	**Press:** Page Up or Page Down - - - - You'll see an indicator on the bottom left, indicating to what page you are on.

2. ANSWER BACK CODE

Programming the answer back codes of the 6 position electronic key-lock is also very easy as they are included in the keyboard

programming with the locations coded as “KLP”, “KL0”, “KL1”, “KL2”, “KL3” and “KL4” in the key-layout map of page L1. The programmable keyboard will issue an answer back code to PC whenever the 6 position electronic key is switched to a new position or when the keyboard receives an “enquiry” code (E7h) from the host computer system. A time delay as determined in the configuration of the keyboard programming utility is adjustable by “r” and “t” key presses, this time delay is useful to give only the answer back code of the last position of control key when it is turned across several positions. Here are some examples of sending this “enquiry” code in different languages:

Language	Syntax
C	outp (0x60, 0xE7)
BASIC	out &H60, &H0E7
DEBUG	o 60 E7

3. 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.

C. 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.

D. 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" 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":

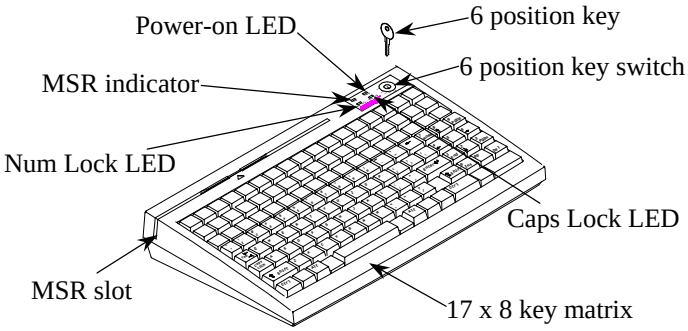
RWM –r YYY.tpl (enter)

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 KB3200 series could mess up the data format inside KB3200 series, and vice versa.

V. APPLICATION

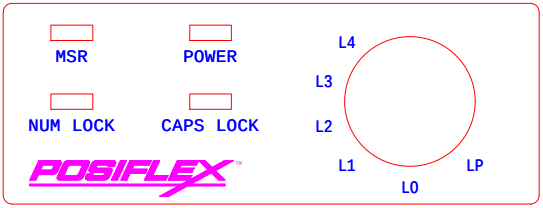
A. KEYBOARD CONSTRUCTION

The programmable keyboard is constructed of three parts on the top surface. A 6 position turning key switch area with LED's is at the upper right corner, a push key switch area occupies most of the top surface and a left-right slot near the upper edge is designed for the Magnetic Stripe Reader options.



B. LED's

In the rectangular area at upper right corner there are one 6 position electronic key switch and four LED's. They are arranged as in drawing below.



The top left LED is for MSR reading indication, the top right LED is the power-on indicator, the bottom right LED is the Cap-Lock

indicator for the "QWERTY" keyboard and the bottom left LED is the Num-Lock indicator of the numerical keypad.

For the "**Caps Lock**" or "**Num Lock**" LED at the bottom, the function as of a normal standard PC or PS/2 keyboard applies if the KB3200 series is operating alone without an external PC or PS/2 keyboard connected. When an external PC or PS/2 keyboard is connected, pressing the "**Caps Lock**" key or the "**Num Lock**" key on the PC or PS/2 keyboard will have both the correspondent LED's on KB3200 series and PC or PS/2 keyboard change status accordingly. Yet, if it is the "**Caps Lock**" key or the "**Num Lock**" key on KB3200 series pressed, only the correspondent LED on KB3200 series will change while the LED on PC or PS/2 keyboard remain unchanged.

C. 6 POSITION KEY-LOCK

The programmable keyboard has a six position key switch which may also be programmed so that as the position of the key switch is changed with a key, the key switch reports its own position (adjustable inter-position time delays are programmed in). Further more, an enquiry code from the host will cause the key switch to report its current position.

This 6 position key switch effectively provides a multi-layer capability to the keyboard. each position of the key can define separate key sequence for each programmable key. This gives rise to the concept of pages, so that KB3200 can be said to have 5 pages of 51 key definitions per page and additional 2 programmable keys in numerical keypad area. Therefor, there are in total 257 possible key definitions programmable.

There are 4 keys supplied with each keyboard and the lock is so designed that certain keys may only be turned to certain positions. This architecture is similar to that found in many high end ECR systems, so it is not surprising that the naming conventions have been borrowed as well.

The keys are named: PRG, REG, Z, GT.

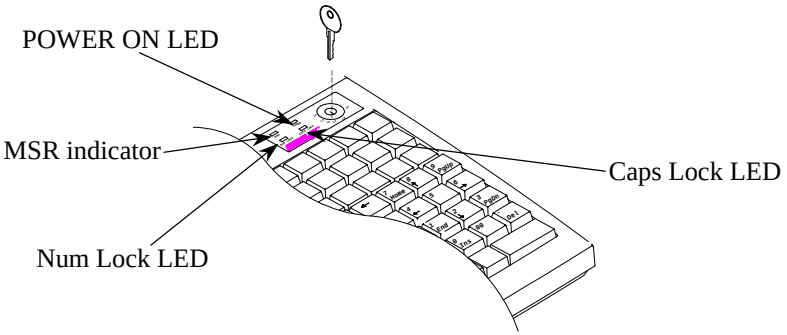
The switch positions are named: LP, L0, L1, L2, L3, L4. Among these, the position L0 could also be referred to as "" which represents

a lock. The available positions for each key type are listed in the table below.

O = access X = no access

	PRG	REG	Z	GT
LP	O	X	X	X
L0	O	O	O	O
L1	O	O	O	O
L2	O	O	O	O
L3	O	X	O	O
L4	X	X	X	O

The position L0 is designed to provide a “Security Lock-Off” function. Keys may only be removed from positions **L0** and **L1**.



D. PUSH KEY SWITCH AREA

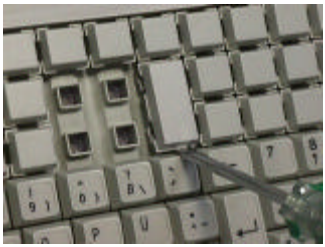
The major part on the keyboard surface is the push key switch area. This area is basically constructed in a 17 x 8 matrix providing a possibility of maximum 136 key positions available. However, the upper 17 x 3 matrix part remains in matrix and page dependent while the lower part is organized in “QWERTY” format. This “QWERTY” format portion, occupying an area of 5 whole rows, is country dependent and

page independent and possesses about 61 or 62 alphanumerical 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 136 keys for any country throughout the KB3200 series.

The numerical keypad portion will function as arrow keys and "Home", "End", "Ins" etc. like the numerical keypad on a standard PC or PS/2 keyboard does if the "Num Lock" status is OFF. The marking on the "QWERTY" keys and the numerical keys is non-erasable.

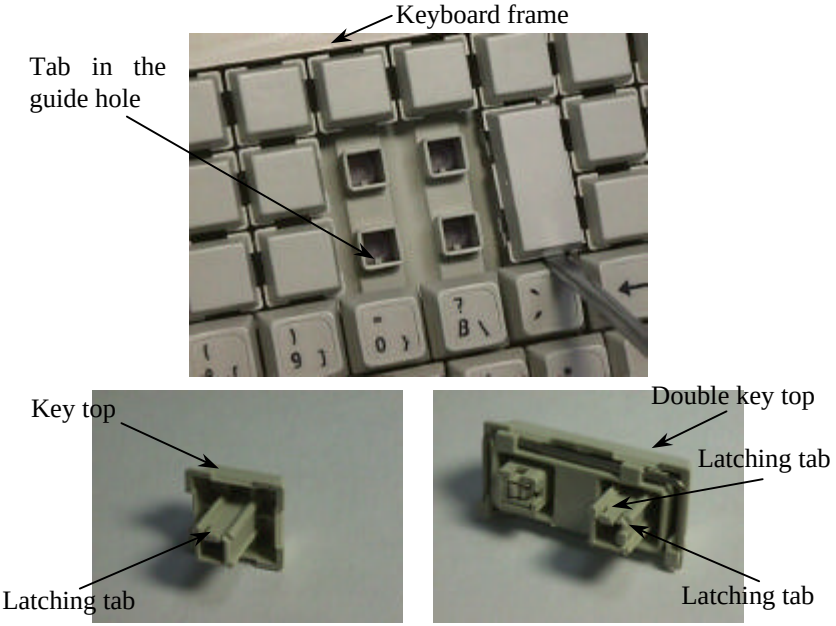
E. KEY TOP REPLACEMENT

In the push key switch matrix area, there are 17 by 3 programmable keys. Yet, there are chances that the user may want to compromise some number of programmable keys for a larger key for ease of operation. In such occasions, the user may purchase the double key option, remove the single keys and insert the double key and sometimes remove the double key for other arrangement. The user may use a flat bladed screwdriver to remove the key tops. Please note that there are two possible directions for a double key.



It is very important to correctly orientate the key tops before they are inserted into the keyboard frame. **Failure to do this could result in**

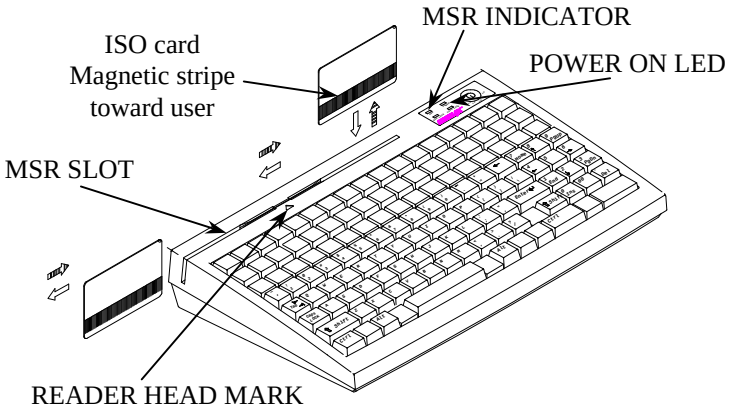
permanent damage. Looking into the guide hole on the keyboard frame, there is a tab inside the bottom side wall. Examining the bottom square stem of a single key top, there is a springy latching tab on one side. Checking the bottom of a double key top, there are two sides of the matching stem (besides the patented balancing mechanism) constructed with the springy latching tab.



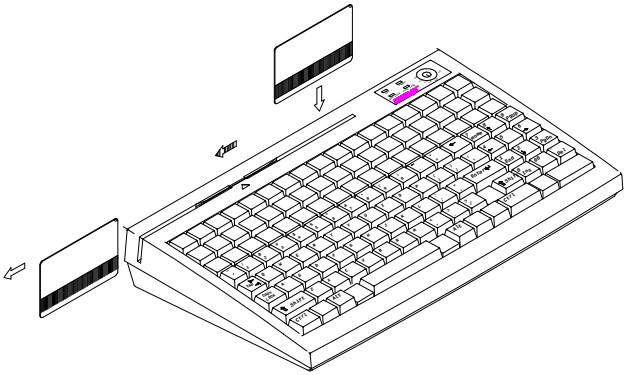
When any key top is to be inserted onto the keyboard frame, the tab on the inside wall of the key top guide hole **must** mate a corresponding springy latching tab as illustrated above. In this way, the matching stem of a double key must be either at the bottom when the double key is "vertically" aligned 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.

F. MAGNETIC STRIPE READER SLOT

The MSR slot is near the upper edge of the Programmable Keyboard. The MSR indicator LED is located at the upper left corner of the block containing the electronic key. There are in total four choices of the reader types – two types of ISO dual tracks, ISO triple tracks and JIS types. For card reading, be sure to insert the card to the bottom with magnetic stripe of ISO card or JIS I track 2 facing down. The movement of an ISO card can be either inserting the card from the top surface at the right end then sliding the card to the left out of the slot, or sliding the card from the left of the slot till it reaches the right end of the slot. Yet the movement of a JIS card is limited to the leftward movement, i.e. inserting the card from the top surface at the right end then sliding the card to the left out of the slot. The reverse movement of a JIS card is not readable. The MSR indicator will light up in green when the MSR is ready to read, blink during reading, and then give a green light if the reading is successful. The MSR indicator will turn to be red if the reading fails due to improper sliding or poor magnetic intensity of the magnetic stripe, the MSR indicator will then turn back to green when the MSR is again ready to read.



Reading magnetic stripe cards of ISO standard



Reading magnetic stripe cards of JIS standard

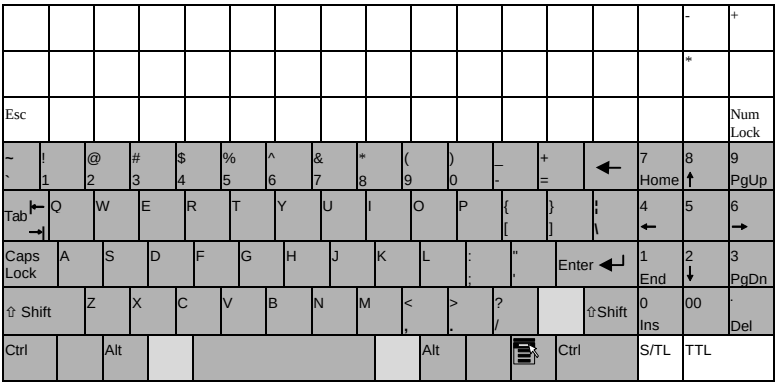
G. PRELOADED PATTERN

This keyboard is preloaded with some data in the “LP” page of the programmable area as indicated below to help the user’s application at the moment he/she receives this programmable keyboard.

									Insert	Home	PgUp		↑		-	+
									Delete	End	PgDn	←	↓	→	*	
Esc	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	Print Screen	Scroll Lock	Pause	Num Lock
~ `	! 1	@ 2	# 3	$ 4	% 5	^ 6	& 7	* 8	(9	) 0	_ -	+ =	←	7 Home	8 ↑	9 PgUp
Tab ⇤ ⇥	Q	W	E	R	T	Y	U	I	O	P	{ [	}]	| \	4 ←	5	6 →
Caps Lock	A	S	D	F	G	H	J	K	L	: ;	" '	Enter ↵		1 End	2 ↓	3 PgDn
⇧ Shift	Z	X	C	V	B	N	M	< ,	> .	? /	⇧Shift			0 Ins	00	. Del
Ctrl		Alt							Alt			Ctrl		S/TL	TTL	

The preloaded pattern in pages “L1” to “L4” is as below. Please note that the key definitions in the clear area can be reprogrammed by the user at will. The user may reprogram these keys and create a label to stick on such keys and cover it with the transparent key cap if he/she

wants to alter the contents of these Laser marked programmable keys. The contents of S/TL and TTL keys remain empty because the internal codes for these function are different per application programs.



H. WIN NT APPLICATION

A preprogrammed Posiflex programmable keyboard can be used normally under Win NT without any modification. In case of any problem confronted by our Win NT user, the user is suggested to turn off the PC, connect a PC/PS2 keyboard to the Posiflex programmable keyboard and restart the system. Please then download a system file "I8042PRT.SYS" from our web site download page:

www.posiflex.com.tw/english/download.htm under the category of "PROGRAMMABLE KEYBOARD DRIVERS". After a successful download, please then rename the current system file I8042PRT.SYS in subdirectory C:\WINNT\System32\Drivers\ into I8042PRT.BAK and copy the downloaded file to this subdirectory and restart the system.

To program the Posiflex programmable keyboard in Win NT, the customer is suggested to visit our web site:

http://www.posiflex.com.tw or go directly to the download page as above for a most up-to-date software.

VI. SPECIFICATIONS

CONSTRUCTION: 100% true spill-proof structure, state of the art top notch solid design with water drainage system, 8 x 17 matrix structure with a qwerty layout keyboard + 53 programmable keys + 6 position programmable control key

CASE MATERIALS: ABS

LED COLOR: Power on - Green
MSR - Green & Red
Caps Lock - Green
Num Lock - Green

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 qwerty portion

PREPRINTED KEYS: Qwerty keys + Numeric keys + Basic function keys

KEY CAP: 18 x 18 mm transparent

PROGRAMMABILITY:

- **METHOD:** Software programming under DOS, WINDOWS 3.1, WIN95, WIN98 or WIN NT without TSR program

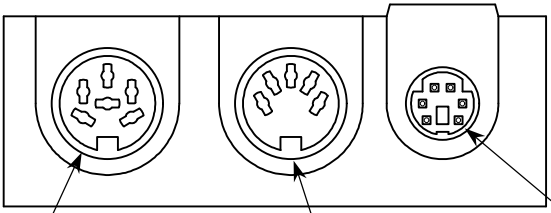
- **COVERAGE:** 53 keys by 5 pages + one keylock, total 6 position control answer back codes
- **CODE TYPE:** ASCII or scan codes
- **LANGUAGE:** English or European, software configured
- **CONTENTS LENGTH:** 1 - 255 byte(s)/key
- **MULTILEVEL:** 8 levels max.
- **MEMORY:** Non-volatile memory 8KB
- **INTERCHARACTOR OUTPUT SPEED FOR KB:** programmable 0 - 140 msec
- **COMMANDED TIME DELAY:** programmable 0 - 240 sec
- **ANSWER BACK DELAY TIME:** programmable 0 - 2 sec.
- **CONTROL KEY:** 6 positions with position change answer back function

POSITION CONTROL KEY:

- 6 positions (LP, L0, L1, L2, L3, L4), key extractable at L0 and L1
- Hardware lock off all keyboard data output after answer back code sent at L0
- Capable of giving programmable answer back code on position change of the key
- Capable of giving programmable answer back code of each position on receiving a specific code inquiry (E7h) from host computer

OUTPUT INTERFACE:

- **6 pin DIN female connector:** connects to host computer
- **5 pin DIN female connector:** connects to input PC keyboard or Daisy Chain devices
- **6 pin mini DIN female connector:** connects to input PS2 keyboard



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

Connects to PC keyboard or Daisy Chain devices

Connects to PS2 keyboard

MAGNETIC STRIPE READER: (Models KB3200xxM2, KB3200xxM3, KB3200xxM2/3, KB3200xxMJ)

- **Decoder & interface..** Built-in keyboard wedge interface
- **Tracks.....** ISO7811/2 tracks 1 & 2 (KB3200xxM2)
  or ISO7811/2 tracks 2 & 3 (KB3200xxM2/3)
  or ISO7811/2 tracks 1, 2 & 3 (KB3200xxM3)
  or JIS I/II (KB3100xxMJ for JIS X 6302)
- **Start/end sentinels.....** Can be disabled by hardware jumper on ISO7811/2 MSR

a) Reader application

Applicable card type	ISO 7811/2	JIS X 6302
Card feed method	Manual	Manual
Card feed direction	Bi-direction	Uni-direction
Read / write function	Read only	Read only
Card feed speed	5 to 55 inches/sec.	100 ~ 1200 mm/sec.
Error rate	Less than 0.5%	Less than 0.1%

b) Card data format

Card standard	IATA	ABA	THRIFT	JIS I	JIS II
Track used	Track 1	Track 2	Track 3	Track 2	Rear side
Recording method	F^2F (FM)	F^2F (FM)	F^2F (FM)	F^2F (FM)	F^2F (FM)
Recording density	210 BPI	75 BPI	210 BPI	75 BPI	210 BPI
Recording capacity characters / bits	79 / 7	40 / 5	107 / 5	40 / 5	72 / 7

POWER CONSUMPTION:

Voltage..... 5VDC±10%

Current..... 150 mA max. (Model KB3200xx)
200 mA max. (Models KB3200xxM2, KB3200xxM3, KB3200xxMJ)

MECHANICAL:

Dimension in mm (inches)... 346 mm x 210 mm x 57 mm
(13.6") x (8.3") x (2.2")
(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.
- **MSR head life: .....….** 300,000 passes min.

APPLICABLE CONFORMITY:

CE, FCC CLASS A