

**IBM ENHANCED KEYBOARD FOR THE PERSONAL COMPUTER**

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[Announcement Letter Number ZG86-4008 dated April 18, 1986](#)

[Europe Middle East Africa - Last Revised on April 18, 1986](#)

**Brief Description of Announcement, Charges, and Availability.****Customer Letter Section**

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\* IBM HARDWARE PRODUCT INFORMATION April 86 \* \* \*

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ZG86-4008

**IBM ENHANCED KEYBOARD FOR THE PERSONAL COMPUTER**

The Enhanced Keyboard represents an advance in keyboard design for the IBM Personal Computer family. It is designed to meet the needs of the personal computer user, the office system user, and the user

that communicates and interacts with larger computer systems.

This keyboard is designed to conform to ISO standards.

The Enhanced Keyboard is provided in a 101 key version for the U.S. user and 102 key versions for the European users.

Both versions are recappable, as detailed in Highlights, so the key tops may be changed for applications requiring special keys.

It is designed to be used with the PC Personal Computer AT Expanded and with the Personal Computer XT 'S' models and is not supported on other IBM System Units. IBM provides no guarantee that it will work in conjunction with other system units.

The keyboard is attached to the system unit with a nine foot pluggable coiled cable, permitting the computers adaptation to a variety of workspace configurations. The Keyboard height can be adjusted to two different positions for typing comfort. With an adjustable typing angle it offers commonly used data and word processing functions, along with separate numeric functions and cursor keypads.

The keyboard layout can be divided into four (4) sections:

1. Typing Section
2. Numeric Pad
3. Cursor/Screen Controls
4. Function Keys

The 101 key U.S. keyboard and the 102 key European keyboards differ only in the typing section of the keyboard. The U.S. keyboard is arranged similar to the Selectric (TM) keyboard layout but with 47 graphic character keys. The tab, capslock, shift, enter, and backspace keys have a larger striking area and are located in their familiar Selectric (TM) locations. One control (Ctrl) and one alternate (Alt) key is placed on each side of the space bar. The typing section and the numeric pad have home row identifiers for the touch typist.

The typing section for the European keyboard has a layout which meets the International Standards Organization (ISO) standard. It has 48 graphic character keys and a vertical enter key. An alternate graphic (AltGr) key on the right side of the space bar provides additional graphic characters.

The cursor and screen control keys have been separated from the numeric pad and therefore the numeric pad can be dedicated to

numeric input. A division sign key has been added to the numeric pad so that the four arithmetic operators as well as an additional enter key may be easily accessed. Like the current Personal Computer keyboards, the numeric pad may also be used for cursor and screen control when not in numlock mode.

The cursor control keys are arranged in the inverted T arrangement. Insert, delete, home, end, page up and page down keys are separated from the numeric pad and located above the dedicated cursor control keys.

The function keys are located across the top of the keyboard spaced in groups of four. The escape key (ESC) is isolated at the upper left of the keyboard. Two additional function keys are provided (F11 and F12) for a total of twelve. Dedicated Print Screen/SysRq, Scroll Lock, and Pause/Break keys are provided for commonly used functions.

Indicator lights, located at the upper right corner of the Keyboard (not in the keyboard for the Personal Computer XT 'S' models), indicate the status of the Num lock, Caps lock and Scroll lock keys.

A microprocessor in the keyboard handles the system unit interface protocol, scan code generation and command processing.

#### HIGHLIGHTS

- o 101 Key U.S. and Israel Version ; 102 Key WTC Versions
- o Recappable keytop capability (93 unit size keys, plus four one and a half sized keys : Alt, AltGr, Ctrl's)
- o Selectric (TM) Typing Section for U.S. Version
- o ISO Typing Section for European Version
- o Dedicated Numeric Pad
- o Dedicated Cursor and Screen Controls
- o Twelve Function Keys
- o Status lights for Num Lock, Caps Lock and Scroll Lock (Not in the Enhanced Keyboard for the XT 'S' models)
- o Nine Foot Cable
- o Language Support:
  - US English, UK English, French, German, Italian, Spanish, Danish, Norwegian, Portuguese, Swedish/Finnish, Swiss, Belgian, and Hebrew.

#### TECHNICAL DATA

- o 101 Keys for US
- o 102 Keys for Europe
- o Serial Interface
- o Status Lights for Caps Lock, Num Lock and Scroll Lock (Not in the Keyboard for the XT 'S' models)
- o Dimensions
  - Length - 492 mm (19.37')
  - Length - 492 mm (19.37')
  - Depth - 210 mm (8.27')
  - Depth - 210 mm (8.27')
  - Height - 58 mm (2.28') Legs Extended, 50.2 mm Retracted.
  - Height - 58 mm (2.28') Legs Extended, 50.2 mm Retracted.
- o Weight: 2.25 Kg (5 pounds).

The keyboard layout IDs and the related supported codepages are represented in Table 1.

TABLE 1

KEYBOARDS IDS AND CODEPAGES

COUNTRIES	KEYBOARD ID	CODEPAGE
U.K.	116	437
Germany	129	437
France	189	437
Italy	141	437
Spain	172	437
Denmark	159	437 Nordic
Norway	155	437 Nordic
Sweden /	153	437
Finland		

Switzerland	150F/G	437	
+-----+	+-----+	+-----+	+-----+
Portugal	163	437	
		Portuguese	
+-----+	+-----+	+-----+	+-----+
Belgium	120	437	
+-----+	+-----+	+-----+	+-----+
Israel	212	437 Hebrew	
+-----+	+-----+	+-----+	+-----+
U.S.	103P	437	
+-----+	+-----+	+-----+	+-----+

#### PREREQUISITES.

The keyboard is not included with the system unit and has to be ordered.

Keyboard software support for other than US English is required and is provided via:

- o Updating DOS Package for France, Germany, Italy, Spain and U.K.
- o National Language Supplement for the other countries.

#### SPECIAL CHARACTERS

Most micro computers have different internal code structures from those used in mainframe computers. The IBM Personal Computer uses an internal ASCII based code structure as opposed to an EBCDIC internal code which is used in IBM host computers.

To improve the capability of the IBM Personal Computer to communicate with interconnected IBM systems, including mainframes, IBM has now restructured the user interface to accommodate these differences. This has resulted in an inconsistency in representation of the unbroken vertical bar special character. On certain country keyboards when the key showing an unbroken vertical bar is depressed a broken vertical bar is displayed. (Note, however, that where appropriate communications software is in use the unbroken vertical bar is correctly transmitted.)

Users with keyboards exhibiting this inconsistency who wish, for cosmetic reasons, to change the keytop engraved with an unbroken vertical bar to one with an engraving of a broken vertical bar may obtain a replacement keycap at no charge from the party providing this keyboard (the IBM Authorized Dealer or the IBM Branch Office). Details about ordering them are contained in a separate announcement

letter.

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