

## THE MALTRON - BBC MICRO.



### A TYPICAL MALTRON - BBC MICRO SYSTEM

Specially shaped to fit hands, the MALTRON offers a new level of keyboard comfort and accuracy. Comfort implies a freedom from postural stress and this in turn means reduced fatigue. The typewriter keyboard requires the hands to be held together with the wrists turned outwards. This action, almost unconsciously, causes the shoulders to be slightly raised and it is this sustained tension, needed to maintain the typing position, which causes the shoulder and neck aches and pains experienced by so many typists & other keyboard operators.

By dividing the keys into two well separated groups, the MALTRON allows wrists to be quite straight and so removes the prime cause of trouble. This change frees space in the centre of the keyboard so that keys can now be allocated to the thumbs which are strong and versatile. The right and left thumbs operate Space & Return, and E & . (stop) as their prime allocations, but are now able to control the cursor keys as well. For the BBC Micro we have positioned the cursor keys so that the Right and Down arrows are on the right, and the Left and Up arrows are on the left.

Perhaps the most interesting innovation is the positioning of the DEL key (Backspace delete) immediately above the right thumb space key. The idea is that if a mistake is made, it can be removed and then corrected with hardly a pause in the smooth flow of keystrokes, since it will not have been this digit that made the mistake & it is immediately available to remove it.

The improved accuracy obtained by Operators using the MALTRON ( a 10 : 1 drop in error rate has been demonstrated by a retrained skilled Qwerty operator.) comes partly from the very efficient new letter layout which greatly reduces hand movement, but mostly from the way in which the keys fit the shape of the fingers. From the tactile information received through the finger ends, the position of the hand is known. There is no possibility of it being displaced one row sideways without the operator knowing. Allocation of the Return key to the right thumb also removes the long little finger stretch to reach it in the usual position.

As illustrated, the MALTRON is connected to the BBC Micro by a flat tape cable which connects to a cable socket attached to the Micro's keyboard. The MALTRON can be disconnected at any time. The fitting of a MALTRON does not in any way interfere with the use of the BBC Micro's own keyboard, other than the need to enter the reversion command if it is required.

Two MALTRON training manuals have been prepared. The first is for Executives who aim to do their own composing at the keyboard and intend to develop speeds up to 50 wpm., and the second is a longer and more detailed course for Professional and Secretarial operators who are aiming at 80 wpm. or more. Both courses include audio cassette instructions.

The attachment of a Maltron keyboard to the BBC Micro involves a small modification by way of fitting a tape cable connection to the underside of the BBC keyboard. There are 3 ways in which this can be done.

- 1) Arrange to deliver the machine to PCD Maltron for a few days after notification that the keyboard is ready. The cable will be fitted & the complete unit tested. Notification is then given that the machine is ready for collection.
- 2) Detach the keyboard from the BBC Micro & post it to PCD Maltron when required. The modification is carried out & returned with the Maltron keyboard by post. There will be an extra charge for postage & packing.
- 3) PCD Maltron supply the necessary materials & fitting instructions for the work to be carried out by the customer. It involves making careful soldered connections to the underside of the BBC keyboard. This can be done easily by an electronics technician.

In both options 2 & 3 the keyboard conversion ROM is supplied for fitting by the customer. The procedure for doing this is the same as that for fitting other language or word processing ROMS to the machine.

#### MALTRON KEYBOARD

for the  
BBC MICRO.

BBC/ED PAM08.



For those concerned with providing for the needs of the disabled, the recent development of a new mouth, head, or single finger keyboard for the BBC Micro will be of interest. This complements our Single Handed keyboards to give 4 plug compatible options for a single machine, i.e. the Two handed model, Left & Right single handed, and now the Mouth Stick. Thus one machine can be used to meet the needs of several disabilities.



Designed with a curved front to match head movement, this unit may be mounted on an articulated arm for head or mouth stick operation, or it can be placed on a table for single finger or stick use.

A feature of this keyboard is the specially developed letter layout designed to reduce movement. It is based on the concept of a circular motion, starting and ending with the Space key at the bottom centre position. This also applies to the number row which is split to give the most used numbers 1 & 0 either side of Space.

As for other BBC models, the complete set, including the Function and Copy keys, is provided so that there is no restriction on the full use of the machine.

The new MSK, together with the Two handed keyboard, & left & right Single Handed keyboards for the Maltron modified BBC Micro are offered at a lower price than others mentioned below because they connect to the keyboard matrix lines of the computer & do not have internal electronics.



Other models of Maltron keyboards are available which contain full electronics to operate other computers, or a printer to give a "Typewriter" with a loose keyboard. Depending on the equipment, this operation can be direct, or through an interface unit. Further details of these items are separately available. Prices are listed overleaf.

**PCD MALTRON ERGONOMIC KEYBOARD & ACCESSORIES - PRICE LIST**

Maltron Keyboard - Type KBBC - including ROM & fitting to BBC Micro	£175.00
Maltron Single Handed Keyboards - Type KRB or KLB for BBC Micro	£175.00
Maltron Mouth or Head Stick Keyboard - Type MSKB for BBC Micro	£175.00
Maltron Maltron Keyboard - Type KPP - & System Disk for the Pied Piper	£175.00
Maltron Dual Layout Keyboard - Type KPPQ - & 2 System Disks for the Pied Piper	£220.00
<b><u>Keyboards with internal electronics for computers or printers.</u></b>	
Maltron Keyboard - Type KBA (64 Keys. Additional keys approx £3 ea.)	£295.00
Maltron Single Handed Keyboard - Type KRA for Right Hand or Type KLA for Left Hand Operation	£295.00
Single Handed Keyboards Type KRO or KLO for Right or Left Hand operation with Function Keys for Olympia Printer, including DC-DC Converter	£328.00
Maltron Keyboard - Type MSK for Mouth or Head Stick operation	£295.00
Type MSK to suit Olympia Printer, including DC-DC Converter	£328.00
Articulated arm, Table clamp and Keyboard support for MSK Keyboards	£ 73.00
Interface Unit for Olympia Printer - Type K7B, including DC-DC Converter	£ 89.00
Parallel/Serial Interface Type KB5B. RS232 Output (transmit) only 1200 Baud	£ 95.00
Clicker Unit (fitted in Keyboard to give audible click on key closure)	£ 32.00
DC - DC Converter (fitted in keyboard to enable operation from 5V supply)	£ 18.00
Olympia ESW 100 R.O. Printer fitted with correcting ribbon and end of line "Bell" modification	£690.00
Connecting Cable - Type CCO1 - Maltron Keyboard to R.M.Ltd. 380Z Computer	£ 15.00
Keyboard Buffer - Type K8A for Apple II & II+	£ 25.00
Maltron Executive Self Teaching Training Course with Audio Tapes	£ 35.00
Maltron Profession* Secretarial Self Teaching Training Course with Audio Tapes	£ 35.00
Luxo Superholder Model 601 with table clamp	£ 25.00
All prices Ex Works Ex V.A.T.	
Overseas orders:- Air parcel post, packing & insurance per Keyboard	£ 25.00

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