

MALTRON SINGLE HANDED KEYBOARDS.

Dear Maltron User,

Congratulations on your choice of the single handed MALTRON keyboard.

It has been designed for users who wish to, or can use only one hand to operate a keyboard. You will find that this keyboard is easy to learn and that it will make it possible for you to achieve a good speed with accuracy. (Speeds of 60 wpm have been achieved)

The reasons for ease of learning and speed of keying may be of interest to you. Because of its ergonomic shape, your fingers will very quickly learn to feel when they are on the 'home' row, that is the row on which they should rest. This row is Sp (space) for the thumb, and A T E H for the fingers.

Why not put your fingers on those keys now? Note the feeling of the way they fit on the keys. They will also very quickly feel when they are not on those keys. The shape of the keyboard tells them. Try moving your fingers about. Could you feel that they were away from the 'home' row? Relax your hand.

The most commonly used letters are right on that home row, and the other letters of the alphabet have been placed so that finger movements to and from the home row are the easiest that could be arranged. This helps with learning where each key is located, and makes keying easy and fast. The online training exercises have also been especially designed to imprint the letter positions. Do them carefully and you will learn to use all the letters of the alphabet equally easily.

There is a hidden advantage to having a single handed keyboard. Because you will be using only one hand, you will also be using only one side of your brain. This makes learning easier because messages from one side of the brain to the other sometimes get confused and this results in keying errors.

Now let's talk about the online training exercises on our web site at www.maltron.com. Because of the letter layout, it would have been possible to give you words and phrases to key without any fingering exercises. We've tried that road, and we found that it slowed down learning rates and keying was not as accurate. So take especial care to do those well. If you are pressed for time and have to learn to use the keyboard in the least possible time, then do the fingering and the common word exercises in each unit, rather than the words and phrases. But remember that there is a trade off in doing that. It will take a longer time to develop a worthwhile speed and you will not type as accurately as you could.

Here are some instructions about how you should place your keyboard and how you should sit. Because you will be keying with only one hand, it is very important that you should do everything possible to avoid tiring that hand. So these instructions are most important.

The keyboard has a very small downward tilt to one side. This is to avoid wrist ache. You should arrange the keyboard so that the corner where the thumb keys are, touches the

nearer edge of the table and the front edge of the keyboard slants at 35° upward, away from you.

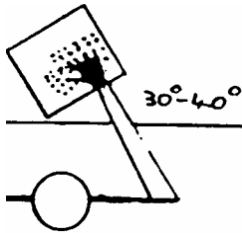


Fig. 1 shows you the keyboard position.



Fig. 2 shows your position.

Now let's talk about your position, the way you should be seated. The main thing is to have four right angles. 1) at your elbow, 2) at your hip joints, 3) at your knees, 4) at your ankles. This means that your back, thighs and calves will be in straight lines, and your feet should be flat on the floor.

Your chair should have a backrest which supports your back and it should be height adjustable. You need to sit high enough at your table so that you can maintain that 90° right angle at your elbow. If you have a chair with arms it will help to reduce strain if you can comfortably rest just the tip of your elbow on the arm. Then your arm could slope down about 10° to the finger tip position on the 'home' row. Do not rest any other part of your arm, only just the tip of the elbow. If you maintain this posture you will be able to key for long periods of time without feeling undue physical strain.

To be sure to avoid any strain at all, relax your keying arm frequently. Here's how to do that. Just drop your arm to your side and shake right from the shoulder blades through the arm and elbow, down into the wrist and the fingers. Make sure that the blood really gets moved around right to the finger tips.

It's never a good thing to risk over-tiring the keying arm. Tired muscles take a long time to recover. So at first limit your keying to about two hours at a time. But you can spend long periods with your fingers on the keyboard just moving them lightly on to keys without depressing the keys at all. That will help to imprint the positions into the pathways that you need to develop from your eyes to your finger tips.

There are two things we ask you NOT to do while you learn to use this keyboard. FIRST, please do not try to correct any errors that you make. If you do stop, you will break the pattern of your keying, so just carry on. Of course try to key correctly. SECOND. Do not look at your fingers or the keyboard while you are keying. You may glance now and again if you need to, but if you studiously keep your eyes on the copy, you'll soon be in the habit of not looking at all.

We hope you enjoy working through the training exercises and that you will quickly begin to enjoy the freedom that comes with easy keying.

Setting up

As you will have seen, the cable from the keyboard ends with an appropriate multi-way

plug. The plug is polarised to ensure that it makes the right connections when it is mated with the keyboard socket of the computer. Carefully connect the plug and socket. Arrange the spare cable from the keyboard to suit your preferred keyboard position.

NB. The power should be turned off before connecting the keyboard to the computer. A green light will appear at power-on.

Operation

As mentioned previously, the table and chair height should be low enough so that the body is positioned with right angles at ankles, knees, back and elbow. The keyboard should be placed on the desk or table so that the thumb group is directly in front of the operator and then turned to give a 20 - 40 degree angle between the table edge and the front line of the keyboard. The thumb corner should be just above the table edge. Above all the wrist should be straight and thumb movement between the Space and Shift keys should not require wrist movement. Hold the palm of the hand 1-2 cms above the resting pad when keying but drop it back onto the pad to relax the hand and arm whenever you stop for 'thinking' time. Leave the fingers lightly resting on the keys

The operating posture must be comfortable, since this indicates a position of minimum static muscle tension and therefore longest freedom from fatigue. Be sure to relax the hand and arm frequently. Go to the online training course at www.maltron.com for more information on the correct use of each finger, plus training exercises. Follow the instructions carefully to ensure that in learning the keyboard you achieve the greatest speed and accuracy with the least amount of effort.

Letter Keys

The letter allocation to the keys is based on a careful analysis of finger movement and sequential operation to minimise the successive use of one finger. Such use slows down keying speed, since a definite time of approximately 0.15 - 0.2 of a second is needed for a finger nerve pathway bio-chemically to reset before the next operating instruction from the brain can be acted upon. Thus as far as possible the letter layout has been arranged so that frequently used letter sequences call for the use of different fingers and the allocation also takes into account the work load imposed on them.

Sticky Keys

To initiate Sticky keys depress the Left Shift Key 5 times, you will hear a bleep and then a pop up window will appear. Press OK to activate. Sticky keys can be deactivated by depressing Left Shift 5 times or CTRL and ALT.

Notes relating to IBM PC/AT compatibles.

UK/US Keyboard Note

For use in the UK the MALTRON keyboard is fitted with a special microchip which keeps the key designation positions the same as for a MALTRON USA keyboard (to establish a common key layout for as many countries as possible).

However, since the screen display and the printer output is determined also by software in the computer and printer, the position of the UK pound £, the At sign @, and Ditto symbol ", may not correspond to the MALTRON position. If this is so, please experiment to determine its location and make a note of this.

The MALTRON keyboard is equivalent to a 102 key IBM style enhanced keyboard.

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NUMBER ENTRY FACILITY

Summary

Select Verr Numé for number entry. The green LED will signify if you are in Num data mode.

Ease of Use

To make the number option as easy as possible to use, some of the keys around the number group have been given different symbols or functions. Enter, Space, Delete & Back-space delete are all shown on the diagram, although not on the keys as this would become too confusing during normal use. These keys have been positioned as ergonomically as possible for use by the four fingers. The upper case symbols above the Ir numbers are also available in the number mode as shown on the diagram.

Other options

Please let us know if you have any special needs concerning key positions, since it might well be possible to produce a special layout to meet your preferences or a special keyboard if you have a reasonable quantity requirement

Letter Usage.

For interesting information on letter and word usage please see the page, www.maltron.com/maltron-advantages.html. and click on 'Frequency of use Analysis'

STATIC AND YOUR KEYBOARD

Static electricity in your office is very erratic and will change from day to day with the weather, with the central heating and with ventilation. It also changes with the clothes worn by people in the office (nylon is one of the worst) and the number and types of VDUs you use. It often collects on objects such as curtains, light switches and VDU's - depending on air circulation. You need to know this so that you can identify if any factors in your office are causing a build up of static.

Static shocks are usually noticed when you hear crackling (try wiping a dusty TV or VDU screen after it has been on for a while). However, "small" static shocks of 50 or 100volts go largely unnoticed by humans, but if this hits digital electronic equipment, then the equipment often cannot cope and becomes unreliable.

Like any piece of electronics, the Maltron keyboard does not like being hit with static. However unlike most other pieces of electronic equipment, it is touched every day by people who move around picking up static charges from computer VDUs, curtains, chairs and carpets. Even just taking off a coat with a nylon lining or getting up from a chair, can charge a person up several 1000 volts. If the charged person then touches the keyboard immediately, its electronic brain gets a shock. To avoid this particular problem, always touch an earthed body before the keyboard when starting work, and do not have your hand on the keyboard when getting up from your chair.

To some extent we protect against such shocks with good screening of signal lines and using insulating plastic, but inevitably some gets through. If your keyboard is working most of the time, but occasionally resets or beeps or just goes crazy, then static is the first suspect. This is particularly true when the keyboard's performance changes from day to day for no obvious reason.

Solving the static problem is usually quite easy.

The best way to solve the problem is at source. To do this you have to find where the problems are coming from. For example, it could be when you operate the blinds in the office, or rise from your chair, or walk across the carpet and sit down. Then you should be careful not to touch the keyboard until after you have touched something that is well earthed such as the metal case of the computer.

Another example - it could be that you have to move an office fan to point away from your desk. In general, these options need experiment and whilst they are the cheapest, they need more patience.

The most popular way of solving the problem is with antistatic mats which are wired to the computer case, water pipes, or some other well grounded metal. There are mats for the floor, or alternatively there are mats you can use on your desk under the computer and keyboard.

Another way to solve the static problem is to use an anti-static spray. This can be sprayed lightly over the surface and will help to carry static away from the area. One spraying usually lasts a few weeks and is easy to apply. This can benefit in another way in that it

reduces static problems experienced with VDUs causing charged dust to be blown into the face of the user, too little to notice, but enough to dry out skin and tire the eyes. This is not usually a problem with flat screens.

Spraying your keyboard

We suggest an anti-static spray such as Johnson's Sparkle or another anti-static polish. First use a soft brush (such as a new 25mm paint brush) to loosen any dust down between the keys and then hold the keyboard up and give it a good blow to remove any trapped dust. This ensures that a sticky deposit does not build up between the keys which could stop the keys working. Next, spray the keyboard all over the top surface to dampen it slightly. Then use the brush to spread the fluid down among the keys and all over the surface. Allow the spray to dry off completely before using the keyboard (ten minutes or so). Keep the spray and brush together in a bag and repeat the application every 3 or 4 weeks, or whenever a static problem occurs.

This will also help keep your keyboard clean. Anti-static wipes can be used about once a week to rub over the front surfaces and key tops. After wiping the keyboard also wipe the VDU and the surrounding plastic frame.

If your keyboard seizes up or becomes erratic while in use, turn the keyboard on end so that no keys are pressed, and press the black reset button in the round hole in the base of the keyboard. If the problem persists, due to serious internal damage, contact us directly, quoting keyboard type and chip number. A new microchip, which can be fitted by you or us, may be necessary to solve the problem.

FCC STATEMENT

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- 1) this device may not cause harmful interference, and
- 2) this device must accept any interference received, including interference that may cause undesired operation.

Class B Digital Device. This equipment has been tested and found to comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an experienced radio/TV technician for help.

Caution to the user: The Federal Communications Commission warns the users that changes or modifications of the unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Identification Code

FCC ID MCADGICD

Maltron keyboards also meet E.C. requirements regarding emission of electromagnetic radiation and susceptibility to interference from such radiation.

OUTPUT

The output cable terminates in a standard 6 pin PS2 Plug. The keyboard requires a 5v. DC supply at 30 ma. approx. Many adaptors are available for when a USB connection is required. We have found however that some adaptors work much better than others. Please contact us if you need assistance.

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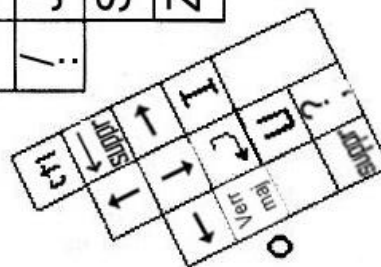
U. K.

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IBM 102 TOUCHE COMPATIBLE

