

## Notebook Details

Fill in the details of your notebook for quick reference:

Model Description : RM Mobile One

Part Number (see rear of notebook): .....

Serial Number (see rear of notebook): WO/TO.....

Customer Account Number (see despatch note): .....

📞 RM Support: 08709 200 200

RM website: [www.rm.com](http://www.rm.com)



## RM Mobile One User Manual

RM Mobile One User Manual Edition 1  
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Because our policy is to improve our products and services continually, we may make changes without notice. We have tried to keep the information in this manual completely accurate, but we cannot be held responsible for the consequences of any errors or omissions.

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## Glossary



# Introduction

Welcome to the RM Mobile One User Manual. This manual provides you with most of the information you need to use your RM Mobile One notebook.

This manual includes:

- \_ familiarising yourself with your RM Mobile One
- \_ upgrading your notebook by fitting extra options
- \_ troubleshooting, if things go wrong
- \_ technical information about your notebook
- \_ glossary, which explains all the technical terms used in this manual.

We do not expect you to read every chapter in this manual before you start using your notebook. However, we suggest you read through this introduction, Chapter 1:- Getting Started and Chapter 2:-System Description.

Refer to this manual whenever you need further information on how to operate your notebook.

## 1 Introduction

### Safety

Please read the information on this and the following pages. It is important for your safety.

**WARNING:** Electricity is dangerous - it is vital to earth all mains-powered equipment that is designed to be earthed. This includes the notebook and any peripheral devices you may be using. Even if a piece of equipment operates correctly, this is no guarantee of electrical safety. If in any doubt, consult a qualified electrician. Hazardous voltages are exposed if the cover of the notebook is removed.

This notebook is designed to meet EN60950, BS7002 and IEC950 safety standards, which apply to information technology equipment, including electrical business equipment.

RM products comply fully with the  
European Electromagnetic Compatibility  
Directive (89/336/EEC)

The relevant standards are EN50082-1 and EN55022 and these refer to:

- \_ Protection from spurious mains power interference
- \_ Immunity from external radio frequency interference
- \_ Safeguards against static discharges (ESD)
- \_ Reduced radio frequency emission from PCs

### Plugs and Sockets

The mains cable provided with your notebook comes with a sealed moulded plug so no wiring is required.

Always use the mains cable plug provided, *inserted into a standard 3-pin power socket only*. Sockets should be earthed through the wiring system of the building and must be easily accessible.

### Cables

Check the condition of all cables - and particularly mains cables - regularly. If any are damaged, replace them immediately.

Place the notebook near to the socket to avoid trailing cables.

If you use an extension lead, make sure it is three-core and safely earthed. Incorrect wiring can be fatal.

## Fuses

Always use a 5A fuse that conforms to BS1362 and is approved by ASTA for your RM Mobile One notebook. Always keep the fuse cover on.

**WARNING:** Never replace a blown fuse with one of a higher rating than the correct fuse.

## Ventilation and Dust Protection

Your RM Mobile One notebook has a cooling fan outlet on the base of the notebook. Always make sure that all the ventilation outlets are not obstructed, to prevent your notebook from overheating.

Unused expansion slots and unused disk drive bays should always be covered with the supplied blanking plates. This will ensure the correct airflow inside your notebook and keep dust out. Keeping the blanking plates in place will also prevent electromagnetic interference occurring between your notebook and other equipment.



## Introduction

Note that, while hard disk drives are sealed against dust, CD-ROM drives cannot be protected in the same way and they may be damaged if you keep your notebook in an area that is very dusty.

## Other Precautions

**WARNING:** Before adding or removing any adapter card or peripheral, be sure to turn the notebook off and disconnect it from the mains supply. Failure to do so could cause serious damage to the notebook and associated components, and may cause injury to yourself or others. Warranty claims made for defects arising from failure to comply with this instruction will not be entertained by RM or their suppliers of third party components.

- \_ Do not tamper with the power supply unit.
- \_ Do not move the notebook while it is switched on. If you want to move the notebook, always switch it off and wait for a minute to allow the hard disk(s) to stop rotating.
- \_ Keep the notebook cover screwed on when in use. Always replace the cover when you have finished working within the notebook and before you switch it back on.

## Conventions

Throughout this manual, the following conventions are used:

- |         |  |
|---------|--|
| <Enter> | Press the appropriate key on the keyboard. In this example, you should press the <Enter> key (⏏).                          |
| <Alt/S> | Slashes separate keys. In this example, press the <Alt> key and hold it down as you press <S>. Release both keys together. |
| < > < > | These are the right, left, up and down arrow keys.   |
| < > < > | These keys are on the right of your keyboard.  |

This chapter outlines the steps to follow and the jobs you need to complete before you can really start to use the notebook for work.

1. Before you start.
2. Disks and manuals.
3. Setting up your notebook taking into account security and the environment.

### Before you Start

- Serial Number

The serial number label can be found on the base of the notebook. The serial number is of the form of either T0123456/78 or W0123456/O1. It is important to make a note of the serial number on the inside front cover of this manual (or another suitable place) as you will use this number when you contact RM about this product. It can also be found on the bottom right side side of your RM Mobile One wallpaper.

- Part Number

The part number label can be found on the base of the notebook. The part number is a combination of six letters or numbers, for example OAB-123. Together with the Serial Number, this number uniquely identifies every machine.

- Customer Account Number

The despatch note has your customer account number printed on it. You will need this number if you ever need to call RM. Make a note of the number on the inside front cover of this manual (or another suitable place).

- Licence Agreements

Make sure all licence agreements are kept in a safe place as they may be required if you wish to upgrade the software on your notebook. These may also be required if you need to demonstrate you are using correctly licensed software.

## Disks and Manuals

### \_ Making backups

You may be required to make a set of backup disks using a utility provided on your system.

Always use copies of master disks rather than using the originals. If you damage the copy you can make a new copy from the original. Also make copies of important files. If you then delete files accidentally, or your notebook fails, you will have a copy that you can use.

### \_ Operating system manuals

They explain how to use the operating system software (e.g. Windows) supplied with your notebook. Master disks or CDs may be supplied depending on the model.

### \_ On-line documentation

The operating system software has its own on-line help files and any additional software such as Microsoft Office also has its own on-line tutorial help.

### \_ Network documentation

If your notebook is being used as a network station, the accompanying network documentation tells you how to use your notebook as part of a network.

### \_ Technical manuals

Apart from this user manual your notebook may be supplied with additional technical manuals for specific parts fitted into the notebook, e.g. System Board User's Manual or Graphics card Manual.

#### Note:

Further information regarding the RM Mobile One PC and the components within can be found on-line at [www.rm.com/support](http://www.rm.com/support)

Things to consider before you start:-

### Security Considerations

Theft of notebooks or components is becoming more common so RM recommend you implement all secure practices.

RM have a security screw that stops the optical drive from being easily removed.

RM supply an optional Kensington lock for their notebooks which contains the following:

- \_ Kensington Lock
- \_ Lock keys

The RM Mobile One has specifically been designed with a internal steel plated Kensington lock.

For more information contact Education Sales Desk on 0870 200 200. Our sales advisors will be happy to discuss any aspect of notebook security with you. There are products to suit any security need and budget; many are available on a next-day delivery via RM Direct!.

## 1.1: Getting Started

The RM Mobile One comes with the option of “always on wireless”. To enable this, turn the wireless on using Fn + F2 and then go into the BIOS settings as the notebook is booting by pressing F2. From this menu select “Advanced”, and then “Wireless On/Off Toggle Button”. Press “Enter” and select “Disable”. This will then prevent anyone from turning the Wireless LAN off.

## 1.2: Passwords

Your notebook has a password feature, which allows you to guard against unauthorised access. This feature is set to ‘setup’ as default with a password already installed. We advise you change the password from the default (usually RM) as soon as possible. Keep a note of the password in a safe place.

## 1.3: Environment Considerations

### Power Supply

If using the notebook with the power supply provided, place the notebook near to a power point to avoid trailing cables. If you do use an extension lead make sure it is three-core and safely earthed.

Avoid connecting the notebook to a power supply that is shared with heavy-duty equipment (such as hydraulic lifts, vacuum cleaners and lathes) or portable tools. This sometimes causes irregularities in the power supply.

If possible, plug your notebook and all attached equipment into the same mains outlet by using a multi-block connector - but take care not to overload the circuit.

The RM Mobile One also comes with an anti-trip cable. RM strongly advise that if the notebook is being used plugged in, then the anti-trip cable is also used. This will help protect against damage to the notebook if the power cable is caught.

### Surface

Operate your notebook only if it is securely placed on a flat surface. Do not use it on its side or upside down.

Avoid placing your notebook in an environment that is damp or dusty as this will shorten the working life of the notebook.

### Temperature

Do not place the notebook where it will have prolonged exposure to direct sunlight.

Avoid extremes of temperature (below 5°C and above 35°C). If you move your notebook from a cold place into a warm room, allow some time for it to warm up before you switch it on so that it is at the correct operating temperature.

RM recommend keeping the room less than 25°C for optimal operation of the RM Mobile One system

Always make sure that all ventilation outlets are not obstructed, to prevent overheating. Do not place your notebook where warm air might blow into the ventilation outlets. You should leave about 10cm (4 inches) between the rear cover of the RM Mobile One and any other vertical surface

## Looking after Yourself

- \_ Make sure that you have enough space for all your paperwork and manuals. A document holder may help to avoid awkward neck movements.
- \_ Adjust your chair and monitor so that you find the most comfortable position.
- \_ Check that there are no reflections from windows or bright lights; if this is unavoidable, adjust curtains and blinds or buy an anti-glare cover for your monitor.
- \_ Make sure you have enough space underneath your desk to move your legs freely. Try to avoid excessive pressure on the backs of your legs and knees. A footrest may be helpful.
- \_ The angle of your keyboard and screen can be adjusted to suit your preference and a space in front is helpful for resting your hands and wrists while typing.
- \_ Don't sit for long periods in the same position, change your posture as often as practicable. Short breaks away from the notebook will help.

## Starting Up

Unpack your notebook carefully.

Connect up mouse as shown on the Quick Start Guide.

The power LED on the front of the notebook will light blue when the notebook is switched on.

Wait for a few moments while the notebook starts up, your notebook will boot either from the hard disk or network (if connected).

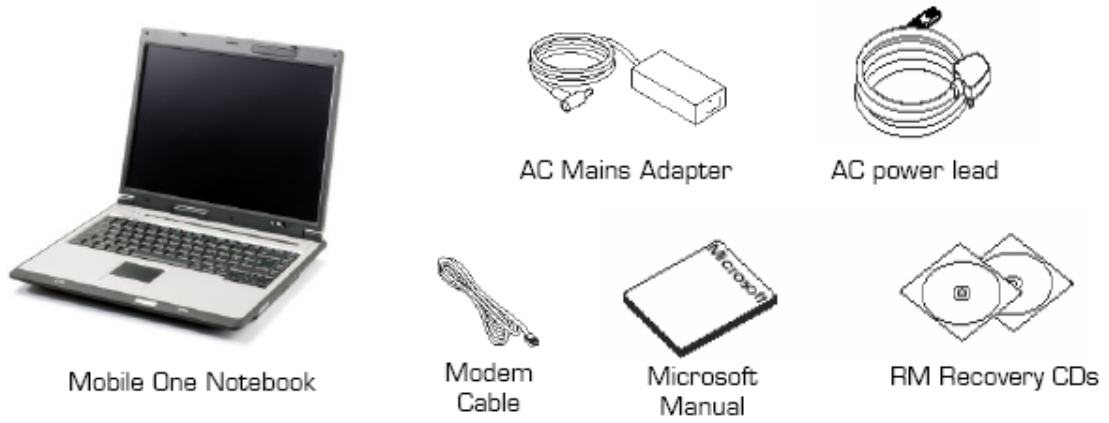
Warning: The first boot of a new notebook (Setup procedure) must not be interrupted. If the system is accidentally turned on, do not switch it off until you reach a suitable point. If you cannot see the display, wait until disk activity (indicated by the HDD LED) has finished before turning it off.

## Chapter 2 System Description

This chapter describes various aspects of your RM Mobile One notebook. It covers:

- \_ the exterior of the notebook
- \_ using the hard disk and CD-ROM drives
- \_ Instant keys

## Check Content



## 2.1 The Front of the RM Mobile One





## 2.2 Side of RM Mobile One



## Rear of RM Mobile One



## 2.3: General Summary

### Power button (Incorporating Power On Indicator)

Pressing the Power Button immediately turns the notebook on. If you switch the notebook off wait about five seconds before switching on again. When the RM Mobile One is switched on, the power button will be surrounded by a ring of blue light. This light flashes when the RM Mobile One is in standby mode.

Caution: Think before you press the power switch. Restarting your notebook means you lose all un-saved work. If possible, save your work and quit from any applications, which you are running.

### Hard Disk Activity Indicator

This illuminates when the notebook is accessing the hard disk. You should avoid moving the RM Mobile One when this indicator is lit as you may damage the hard disk.

### Multimedia Functions

The RM Mobile One is equipped with several easily accessible multimedia functions. The Microphone socket allows you to attach a standard PC microphone for recording voice and sounds, or using dictation software. The Headphone socket allows you to attach a set of stereo headphones for listening to sounds without disturbing others.

You can use the USB and Firewire sockets to connect any USB powered external device such as a USB memory pen or digital camera. Some more power hungry devices such as external CD writer drives may require an external power source.

Closing the lid of the notebook allows you to switch off the screen without switching off the whole system. This is useful in a classroom environment when attention should be focussed on the teacher, not the RM Mobile One!

## 2.4: Special Keyboard Functions

The following defines the coloured hot keys found on the RM Mobile One. The hot keys can only be activated when the Fn (Function) key is held

Fn+F1 = "Zz" Icon (F1): Places the RM Mobile One in suspend mode

Fn+F2 = "Radio" Icon (F2): Toggles the internal wireless on and off

Fn+F5 = Filled Sun Icon (F5): Decreases display brightness

- Fn+F6 = Open Sun Icon (F6): Increase display brightness
- Fn+F7 = LCD Icon (F7): Toggles the display panel On and Off
- Fn+F8 = Monitor Icon(F8): Toggles between display/ external monitor
- Fn+F10 = Speaker Icon (F10): Toggles the speakers on and off
- Fn+F11 = Speaker Down (F11): Decreases the speaker volume
- Fn+F12 = Speaker Up (F12): Increases the speaker volume
- Fn+Ins = Numlock (Ins): Toggles on/off Numlock
- Fn+Del = Scr Lock (Del) = Toggles on/off scroll lock

## 2.5 Instant Launch Keys

The RM Mobile One is fitted with Instant Launch keys



### Internet Launch Key

- ☞ Pressing this button will launch your Internet browser

### Email Launch Key

- ☞ Pressing this button will launch your Email application

### Touchpad Disable

- ☞ Pressing this button will lock your touchpad and preventing you from accidentally moving the cursor whilst typing

### Power Management Button

- ☞ The power management button toggles the power savings between various power saving modes

Taskbar Icons								
Mode Names	Super Performance	High Performance	Game Performance	DVD Movie Performance	Email/Office Performance	Presentation Performance	Audio Listening Performance	Battery-Saving Performance
Power Segment	AC	AC/DC	AC/DC	DC	DC	DC	DC	DC

## 2.6 Status Indicators



### Drive Activity Indicator

 Indicates that the RM Mobile One is accessing a drive such as the hard drive


### Number Lock

 Indicates that the number lock is activated when lit

### Capital Lock

 Indicates that CapsLock is activated


### Scroll Lock

 Indicates that Scroll Lock is activated. This allows some of the letters to be used as directional buttons.


## Status Indicators (Front)



### Power Indicator

 The green LED light indicates that the RM Mobile One is turned On. If flashing, this indicates that the notebook is in standby mode

### Battery Charge Indicator


 Battery charge indicator shows the status of the RM Mobile One battery as the following;

ON: The RM Mobile One battery is charging when connected to the AC adapter

OFF: The RM Mobile One battery is charged or completely drained

Flashing: The RM Mobile One battery is at less than 10% of its capacity

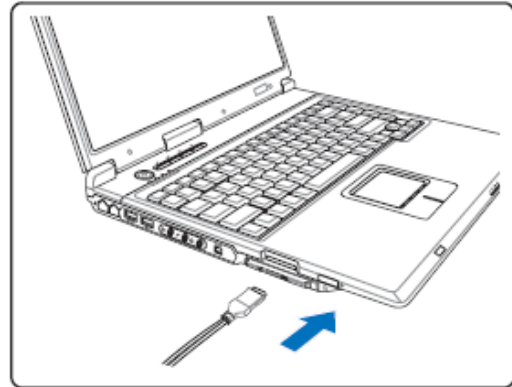
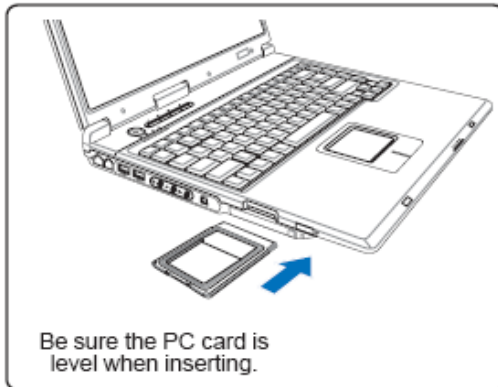
### Email Indicator

 Flashes when there is 1 or more new email in your inbox

### Wireless LAN Indicator

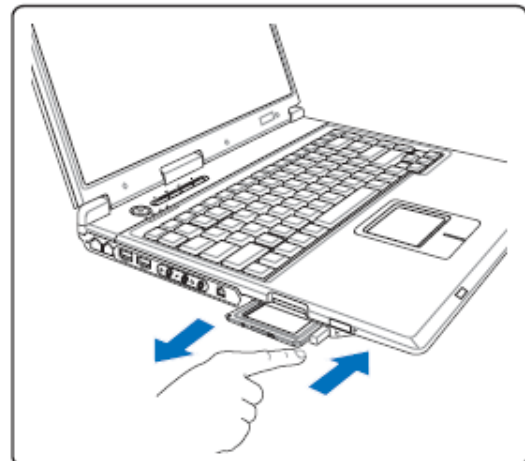
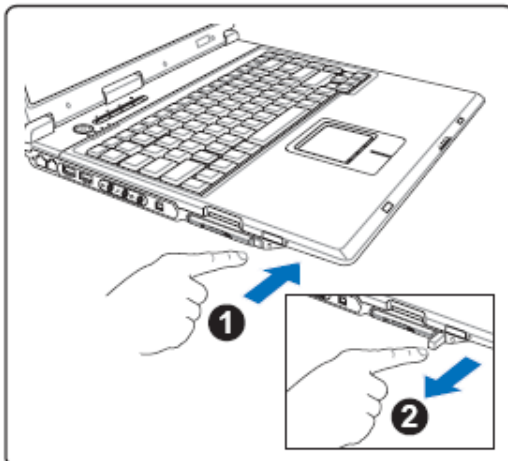
 When the internal Wireless LAN is activated, this will flash

## 2.7 Inserting a PCMCIA Card



1. Insert the PC card with the connector side first and label up. Standard PC cards will be flush with the RM Mobile One when fully inserted
2. Carefully connect any cables or adapters needed by the PC card.

## Removing a PC Card



1. Press in the toggle eject button and release. The recessed spring loaded toggle will extend when pushed and released.
2. Press the extended button again to eject the PC Card

## 2.8: Optical Drive

### Activity Indicator

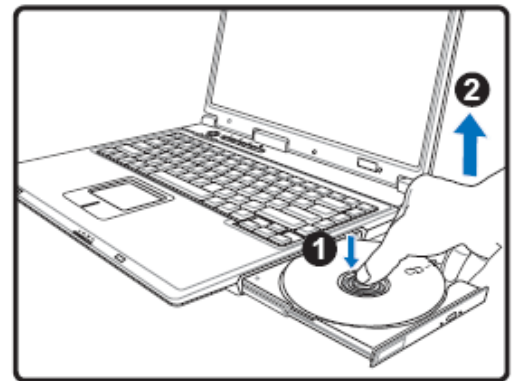
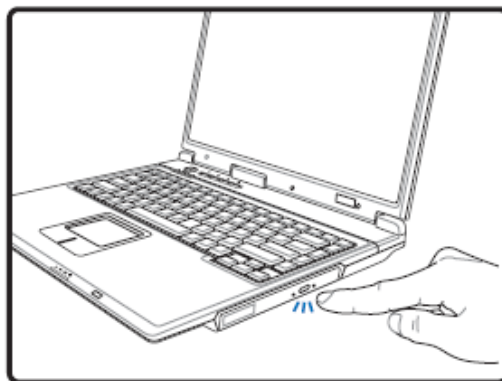
This is lit when the notebook is accessing the disk in the optical drive.

### Eject button

To eject a disk, simply press the disk eject button. Do not eject a disk if the CD activity indicator is lit, since the notebook is reading from or writing to the disk.

### Optical Drive

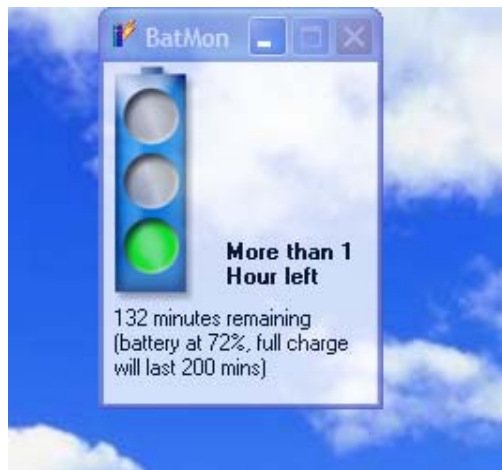
The RM Mobile One can be fitted with several optical devices including CD-ROM, CD Rewriter, DVD-ROM, DVD Rewriter and DVD/CD Rewriter combo drives. The front panel of all these devices houses an activity indicator and eject button.



1. While the RM Mobile One is turned on, press the eject button and the optical drive will partially eject
2. Gently pry the CD from the holder and place back into its storage case. Gently close the optical drive

## 2.9 RM Battery Management System

The BatMon utility is a Windows XP system tray applet that monitors and predicts the remaining time available from the battery. It employs a simple 'traffic light' graphic pop-up window to show teachers and pupils if there is enough remaining battery charge at the start of a lesson. BatMon also gives an audible and visual warning when less than 15 minutes of battery charge remains. Through the use of this utility, a teacher can quickly determine at the start of a lesson if they need to change any of the pupils batteries or notebooks, rather than disrupt a lesson once in progress.



## Chapter 3 Fitting Hardware Options

Several hardware options can be fitted in your notebook. Fitting additional options upgrades the performance of the notebook and can increase its capabilities. This chapter covers the following topics:

- \_ How to fit and remove memory modules.
- \_ How to fit and remove optical drives.

### Selecting options

A full list of the options that can be purchased from RM is given in the RM Systems price list. Before buying an upgrade from a manufacturer other than RM, we advise you to contact RM to ensure that the option you intend to buy is suitable for use with your notebook.

### Fitting options

Some hardware options can be fitted by you; others must be fitted by RM. If you buy an RM upgrade, which can be fitted by you, the upgrade is supplied with its own fitting instructions, which you should follow. However, if you buy an upgrade from another manufacturer (such as additional memory), it may have no instructions and you may be directed to the notebook manufacturer's information (i.e. this chapter).

### Replacing Damaged keyboards

RM can directly supply new keyboards to replace damaged ones. For more information contact Education Sales Desk on 0870 200 200.



## Protecting Against Static Electricity

**STATIC WARNING:** Before handling any of the components in the notebook, take precautions against damage caused by static electricity on your body.

If you have an earthing wristband, attach it to the power supply unit. Make sure that it is connected to a metal part of the power supply unit and not to a label.

If you are using an earthing wristband with a crocodile clip, attach it to an unpainted section on the rear panel.

If you do not have an earthing wristband, always discharge any static electricity which may have built up on your body before touching any components. To do this, touch the unpainted metal rear panel of the notebook near the mains inlet.

If you take a break from working inside the notebook, repeat the above procedure before you restart. You need to discharge new static, which may have built up on your body.

### 3.1: Fitting Hardware Options

#### DIMMs

Your notebook may use Dual In-line Memory Modules (DIMM) to provide random access memory (RAM).

All RM Mobile One notebooks are supplied with a minimum 128MB of RAM. The system board in your notebook can be upgraded using the additional sockets available.

See the RM Systems price list for details on memory upgrade kits.

Depending on the model, there may be a number of DIMM sockets on the system board. Memory modules can be fitted in these sockets in certain arrangements only. Do not use other combinations. If you do so, your notebook may not operate correctly.

The different memory module combinations and sockets are specific to each model of RM notebook. Refer to the System Board User's manual (if supplied) or contact RM for details of allowed combinations.

## 3.2: Fitting Hardware Options - Memory

### Fitting a DIMM

These instructions refer to fitting a DIMM.

N.B. The retention mechanism on the sockets may vary from those illustrated.

1. Remove the cover (see page 29).
2. Hold the DIMM at a 90° angle to the empty socket with the notches on the DIMM aligned with the notches on the empty socket.

Note: The DIMM has a polarising notch slightly off centre so that it cannot be fitted incorrectly.

3. Keeping the DIMM at this angle, slide it between the slots at each end of the DIMM socket. Press the DIMM firmly into the socket, the retaining clips will 'click' into place, securing the DIMM at each end of the socket. Make sure that both of these clips are in the vertical position.
4. Replace the cover of the notebook and reconnect your system as shown on the Quick Start Guide.
5. When you switch on your notebook, the system automatically detects the extra memory and updates the CMOS memory.

### Removing a DIMM

1. Remove the cover.
2. Using your fingers, push the plastic retaining clips down and away from the DIMM to release it from the socket. The released DIMM can then be lifted up and out of the slots at either end of the DIMM socket. Take care not to damage the socket when removing the DIMM.
3. Replace the cover of the notebook and reconnect your system as shown on the Quick Start Guide.
4. When you switch on your notebook, the system automatically detects the removal of the memory and updates the CMOS memory.

### 3.3: Fitting Hardware Options – Optical Drives

#### Drive Upgrades

Your RM Mobile One notebook can have a number of different drive upgrades. Your model may have a CDROM drive already fitted.

Specific fitting instructions are provided with all drive upgrades.

#### Fitting a Drive

1. Unscrew the 2 screws attaching the drive under the notebook.
2. Remove the optical drive from the notebook.
3. Slide the new drive into the bay and replace the two screws.

Specific fitting instructions are provided with all drive upgrades.

An optical drive upgrade may need extra software installed in the form of a drivers disk.

## Chapter 4 Maintenance, Service and Troubleshooting

This chapter covers the following:

- \_ looking after the notebook
- \_ moving and re-packing the notebook
- \_ returning the notebook for service
- \_ Problem solving - if things go wrong and you cannot sort out the problem contact RM Customer Support.

There is a current list of phone numbers in RM System Help.

## 4.1 Looking After Your Notebook

If you do not use the notebook for a while, protect it with a dust cover.

### General Maintenance

Always make sure that the notebook is switched off before you attempt to do any cleaning.

Clean your notebook regularly. Dust the keyboard, monitor casing and notebook. Use a damp cloth to remove stubborn grime.

The RM Mobile One screen is made of toughened acrylic. Use special monitor wipes which are available from all notebook stores. Do not use glass cleaner on the screen. A cleaning kit for your RM Mobile One can be purchased from the Education Sales Desk on 0870 200 200.

Make sure that no liquid seeps into any of the equipment especially the inside of the notebook or keyboard, so keep food and liquids away. Avoid using aerosols or strong cleaning agents. Do not use a damp cloth to clean floppy disks.

Do not attempt to clean the interior of the notebook. This service should only be performed by a fully qualified RM technician.

## 4.2 Re-packing the Notebook

When moving your notebook RM advise the following:

1. Switch off your notebook, and any other equipment attached to it.
2. Disconnect any equipment from your notebook and disconnect the notebook from the mains.
3. Prepare the new surface to put your notebook on. It should be flat, firm and dry.
4. Reconnect your system as shown on the Quick Start Guide. Remember, if you move your notebook from a cold room to a warm Mobile One, allow the notebook to warm to room temperature before switching it on.

#### 4.3: Servicing

Switch off the notebook and contact RM Customer Support if any of the following occurs:

- liquid gets into the notebook
- the notebook has been dropped or suffered a severe jolt
- electrical fuses 'blow' repeatedly
- the mains lead appears frayed or damaged
- the notebook behaves abnormally

If you need to return the notebook to RM, make a new backup of all the contents on the hard disk and keep these copies in a safe place. Do not overwrite any recent backups of the hard disk. Pack the notebook back into its original packing.

There is help on obtaining a service call number in RM System Help.

## 4.4 Problem Solving

Keep a note of what happens when you carry out the checks in this chapter.

### Notebook

The blue power light does not come on when you switch on the notebook.

- \_ Is your notebook set up as shown on the Quick Start Guide?
- \_ Is your notebook switched on at the mains and at the notebook?
- \_ Is the fuse in the plug blown? Replace the fuse.
- \_ Does the mains supply work? Try another item of equipment in the same socket.

**WARNING:** A blown fuse can be a sign that a connection, or the wiring in the plug is incorrect. A fuse can also blow if the notebook overheats: check that nothing covers the ventilation holes on the back panel.

The blue LED is flashing or has changed colour and/or there is no display.

- This will probably mean that your notebook is in sleep mode.

### Mouse

The mouse does not work.

- Check the mouse is plugged into the correct port.
- Check you have the correct mouse drivers loaded if required.
- Check that the ball of the mouse is free to rotate.

## Peripherals

(Printers and other Input/Output devices)

Equipment connected to your notebook does not work.

- \_ Do you have the correct cable?
- \_ Has the equipment been set up correctly according to the manufacturers setup guide?
- \_ Has the equipment been started up correctly?
- \_ Have any switches on the inside or the outside of the equipment been incorrectly set?
- \_ Has your notebook been set up to recognise the equipment?
- \_ Has your software been configured to use the equipment? If it needs a special driver, has the driver been installed correctly?
- \_\_\_ Does the equipment work on another notebook, which has been configured exactly the same?
- \_ Is the brightness turned up, and other controls adjusted correctly?
- \_ If initially OK but when you re-boot it is unreadable, the refresh rate or resolution has been setup incorrectly by the system software. Try setting to a lower resolution.

The screen "freezes" and you cannot enter information.

- \_ Is the application waiting for a particular action or command?
- \_ Is the application looking for something - such as a disk, which has not been inserted in the floppy disk drive?
- \_ Does the same software function work on another notebook?
- \_ Resetting your notebook. If you cannot "unlock" the screen, press <Ctrl/Alt/Del> twice in succession. If this does not work, press, and hold, the power switch for five seconds. Depress the power switch again to restart the system. However, work that you have not saved will be lost.



## Software

You cannot locate a file.

- \_ Have you typed the correct filename? Do you need a particular filename extension (for example, .DOC or .PIC)? Do you need to specify a path (a drive and/or a directory)?
- \_ Try using the Find command, which can be found from the Start menu on the bottom of the Windows desktop.
- \_ Verify the contents of the disk by using the SCANDISK utility. See your operating system manual for further information.
- \_ If the file is on a floppy disk, is the disk properly inserted in the floppy disk drive? Check that the shutter on the floppy disk moves freely (3½ inch only).
- \_ If something is stuck in the drive (such as a floppy disk label) pull it out gently if you can. Do not insert a screwdriver or anything similar into a disk drive. If you have a problem, contact a qualified service engineer for advice.
- \_ If you have another notebook with the same application installed, copy the file from one notebook to the other and try again.

You cannot save a file.

- \_ Are you working on a network and trying to save the file to a location to which you have no "write" access?
- \_ Are you trying to save a file that is read only. See your operating system manual for further information.

## Forgotten Passwords

If you forget your password, you will need to ring the RM helpline or return your notebook to RM to be reset. This reset is not covered by your warranty agreement.

**CHOOSE A PASSWORD THAT YOU WILL REMEMBER.**

Since RM will need to ensure you are the owner, you may need to provide some further identification, to prevent unauthorised access to your notebook.

## Hard Disk Problems

This section provides some guidance on investigating problems with the hard disk. You should make sure when trying to solve hard disk problems that you do not erase important files unnecessarily.

Note: Make regular backups of files on the hard disk and keep backup disks of applications.

The notebook appears to be operating slower than normal and with prolonged periods of disk access.

- \_ The hard disk may be nearly full or have errors. Check using the CHKDSK utility (see the operating system manual ). If full, try emptying the recycle bin or deleting any unnecessary files to free up some space on the hard disk (e.g. old files or files with .BAK, .CHK or .TMP extensions).
- \_ The files on the disk may have become fragmented. Check by using the disk defragmenter utility (see the operating system manual).

You cannot boot up using the hard disk.

- \_ Does the hard disk LED flash during start-up? Run the FDISK command (see the operating system manual) and check for an active partition.

Beware: FDISK can destroy the information held on your hard disk if you re-partition.

- \_ Check to see whether the BIOS System Configuration screen (displayed during start-up) reports a hard disk is present.

Note: Some viruses can change the BIOS configuration so check by running a virus checking program.

- \_ Run the Setup program and ensure that the hard disk type is correct.
- \_ Is it possible to start up the system using a boot disk and then read the information on the hard disk? If so, see the problem explanation below.
- \_ If you cannot access any of the information on the hard disk, contact RM.

## Error Messages During Start-up

If a non-fatal error is detected during start-up (i.e. an error which does not prevent the system from starting up), an error message is displayed on your screen. Note the error message and then press <F1> to continue. This section lists some of the error messages which are displayed and suggests how to correct the error using the Setup program. There may also be some error message codes in the System board User Manual (if supplied).

If an error message is displayed on the screen, which is not listed, contact RM for further information on the error which has been detected.

If the POST (Power On Self Tests) detect a fatal error during start-up (i.e. an error which will not allow the system to continue the start-up procedure), your notebook has developed a serious problem and you should contact RM for assistance. Fatal errors are usually communicated through a series of audible beeps. Note, however, that some notebooks always beep when the BIOS System Configuration screen is displayed to signal that the POST routines are finished.

Cache Memory Bad, Do Not Enable Cache!

The external cache memory is defective.

### CMOS Battery State Low

The battery in your system, which provides power to CMOS to store the system settings, is low in power and needs to be changed or recharged (depending on the battery type). Leave the notebook switched on for 48 hours to recharge the battery.

### CMOS Checksum Failure

When you save changes made in Setup and exit the Setup program, a checksum value is generated. This value is stored and used for error checking. If this stored value is different from the value determined by the POST routines during start-up, the CMOS Checksum Failure error message is displayed. Change the Setup to the optimal settings then change any additional variances according to the model of notebook (see page 61 for details on the Setup program). If this error message is displayed frequently, you may have a hardware problem and should contact RM.

Note: Some viruses can change the BIOS configuration and cause a checksum failure. Check by running a virus checking program.

#### CMOS System Options Not Set

The system settings stored in Setup are either corrupt or non-existent. Run the Setup program and make any necessary changes. If the password options have been corrupted, the password reverts to the default password.

#### Keyboard Error

There is an error with the keyboard connector or a key is being held down. Check that the keyboard connector is plugged into the rear of the notebook correctly.

#### CMOS Memory Size Mismatch

The BIOS has detected a difference between the amount of RAM in the system and the amount stored in the Setup program. Press <F2> or <DEL> to run Setup. The correct memory size is recorded automatically.

#### FDD Controller Failure

The BIOS is unable to communicate with the floppy disk drive controller. Switch off the system and then check all the connections going to the floppy disk drive, also check the connections to where the cables go to on the cards. If this error message returns when you switch on again, you may have a hardware problem and should contact RM.

#### HDD Controller Failure

The BIOS is unable to communicate with the hard disk. Switch off the system and then check the power and interface cables to the drive. If this error message returns when you switch on again, you may have a hardware problem and should contact RM.

#### C: Drive Error D: Drive Error

The BIOS is not receiving a response from either hard disk drive C or D. Check the type of hard disk selected in Setup. Re-run the auto-detect function in the Setup program.

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### C: Drive Failure D: Drive Failure

The BIOS is unable to obtain any response from either hard disk drive C or D. You may have a serious problem with your hard disk and should contact RM.

### CMOS Time & Date Not Set

The time and/or date are not set. Run the Setup and set the date and time.

### Diskette Boot Failure

Check the power and interface cables to the floppy disk drive. Alternatively, the floppy disk is corrupt and cannot be used to start up (boot) the system. Use another boot disk and follow the instructions on the screen. Also check for viruses on your hard disk.

### Invalid Boot Diskette

The BIOS can read the floppy disk but the disk cannot be used to start up (boot) the system. Use another boot disk and follow the instructions on the screen. Also check for viruses on your hard disk.

## Technical Information

### Before you Ring for Help

If you have tried the suggestions on the previous pages and the problem remains, contact either RM or your supplier for help.

1. Make sure you can provide full details of your system. If you have not already done so, fill in the form on the inside front cover of this manual so that you can give a quick reply to questions asked about your notebook.

Make sure you know the serial number and part number of your notebook when you ring RM. You should also have your Service Call Number with you when you ring.

There is help on obtaining a service call number in RM System Help.

2. Find out as much as you can about the problem and its effects so that you can describe it clearly. If you can reproduce the problem, note how you did it before calling.
3. Make a careful note of the circumstances that led up to your problem.
  - \_ What software was loaded?
  - \_ What happened when you tried the suggestions given on the previous pages?
  - \_ Have you changed any settings in the Setup program?If possible, ring RM with your notebook in front of you so that you can try out any suggestions given to you.

Please note: Drivers, manuals, some applications, Bios updates, Frequently Asked Questions(FAQ) and technical support is provided free of charge on our website at [www.rm.com](http://www.rm.com) .

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### Chapter 5 Technical Information

This chapter provides detailed information about your RM Mobile One notebook.

#### Battery Care

Here is a quick list of Do's and Don'ts for the care of your Li-On batteries.

##### Do's

- When you receive a new NoteBook or Tablet PC, leave the battery to fully charge overnight.
- Condition a new battery by using it until it is fully discharged, and then re-charge it fully. Doing this once a month will help to accurately calibrate your battery.
- Always ensure the battery is recharged as soon as possible after it becomes fully discharged. A battery will be permanently damaged if left for an extended length of time in a fully discharged state.
- Remember that a Lithium-Ion battery will slowly deteriorate; a new battery will always perform better than one that is 6-months old.
- Remember that the battery half-life is rated for a certain total number of charge/discharge cycles (see your User Manual or Quick Start Guide for the rating). For example, a battery that is rated for 3 hours and 500 charge/discharge cycles, will still be considered as within specification, even if it only lasts for 1 hour 45 minutes after 500 charge/discharge cycles.
- Heat is the worst enemy of a battery. Allow plenty of air to circulate around the Notebook/Tablet PC, so that the battery is kept as cool as possible when charging and also when in use. If provided, use the integrated 'legs' under the Notebook to raise the notebook and improve air circulation.
- Remove the battery if stored for several months (the battery should be at approximately 50% charge or higher).
- If you use a NoteBus or if charging your Notebooks or Tablet PCs in a confined space, allow for adequate ventilation in order to keep the batteries as cool as possible.

## Don'ts

- Do Not expose the battery to excessive heat or cold (i.e. outside the range of 10-35 degrees Centigrade ambient).
- Do Not store the battery in a fully charged state (store batteries with about 50% charge).
- Do Not allow a nearly flat battery to be unused for more than a month or so. The battery will slowly discharge until it becomes fully discharged and this will permanently damage the battery cells.
- Do Not charge your Notebook/Tablet PC inside a carry case - the battery may overheat.
- Do Not charge your Notebook/Tablet PC when stacked on top of each other - the battery may overheat.
- Do Not place the AC adaptor on top of, or underneath, the Notebook/Tablet PC (especially when using a Trolley or NoteBus).

Remember: Your battery is slowly degrading all the time, even if it is not used. Keeping your battery as cool as possible will slow down this degradation considerably

## Safety

This product complies with EN60950 and IEC 950 standards for the safety of information technology equipment, including electrical business equipment.

## Ergonomics

The system hardware complies with the EEC directive 90/270/EEC and the British Standards BSEN29241 (part 3) and BS7179 (part 4) for ease and comfort of use.

### Electro-Magnetic Compatibility (EMC)

RM products comply fully with the Electromagnetic Compatibility Directive (89/336/EEC).

The relevant standards are EN50082-1 and EN55022 and these require:

- \_ Protection from spurious mains power interference
- \_ Immunity from external radio frequency interference
- \_ Safeguards against static discharges (ESD)
- \_ Reduced radio frequency emission from PCs



## Environmental Factors

Recommended working ambient temperature range: 5 - 35°C.  
Humidity conditions of between 20% and 80% (non-condensing).  
Recommended maximum elevation above sea level for operation:  
3,300 metres.

The notebook should not be subjected to vibration or shock.  
Always transport your notebook in its original packing material.

## USB Connector

The mainboard provides a Universal Host Controller Interface Universal Serial Bus root for attaching USB devices like keyboard, mouse, etc. You can plug the USB device directly to this connector.

PIN	Signal
1	VCC
2	-Data
3	GND
4	+Data

## System Setup (CMOS) Program

The BIOS has a built in setup program which allow the user to modify the notebook's basic system parameters. This information is stored in the battery backed CMOS memory. Your notebook has been set up by RM and is ready to use. Use the CMOS Setup program to change the system settings if:

- \_ you change the amount of memory in your notebook
- \_ you add or change a disk drive
- \_ you want to change the password
- \_ you want to set up special features.

Caution: Do not attempt to run Setup and change the system settings unless you understand what you are doing. You can experience serious problems when using your notebook if you select incorrect settings in Setup.

Full details on entering, changing the system settings and saving changes and exiting are in the System Board User's Manual (if supplied).

Important: Before changing any system settings make a record of all current settings first.

### Changing the password

Password protection can be used to keep your data secure by preventing unauthorised access to the system and Setup program. By default, the Setup program is protected by a password.

The password can be a maximum of eight characters, i.e. you can use any letter or number. The password may be case sensitive. Be very careful to choose a password that you will not forget and others will not be able to guess.

Caution: You should change the default password as soon as you receive your notebook. If YOU do not change the default password, someone else may change it for you and prevent you from accessing the system. If you forget your password, you will need to ring the RM helpline, or return your notebook to RM to be reset. This reset is not covered by your warranty agreement. REMEMBER THIS BEFORE YOU CHANGE YOUR PASSWORD - CHOOSE A PASSWORD THAT YOU WILL REMEMBER.

The first time you change the password

The first time you select this option, you will need to enter the default password. The default password is the password that has been set up by Research Machines for use until you change the password.

The default password is RM

When you have entered the default password correctly, the system prompts you to enter the new password. You will have to enter the new password twice for confirmation.

## Glossary

Below is a list of terms with notes on their meaning in the context of this manual.

16-bit	The number of bits of information which can be dealt with by the hardware at one time.
application	A particular set of tasks, or a program designed to carry them out.
backup	Copy information for safekeeping, normally from one disk to another.
baud rate	The rate of information transmission through a serial interface.
BIOS	Basic Input Output System - the interface software between the hardware and the operating system.
bus	A component which carries signals from one part of the notebook to another (see also PCI and local bus).
cache memory	High speed RAM hardware which speeds up memory operations. Newer models have cache internally in the CPU.
CD-ROM drive	A compact disc providing read only information.
chip	A flake of crystalline silicon (enclosed in a casing with metal pins) on which circuits are engraved to carry, store or process electrical signals representing data within the notebook.
CMOS	CMOS memory (Complementary Metal Oxide Semiconductor) stores the system parameters, such as the number and types of disk drives, options for password protection and other special features.
compatibility	The ability of a notebook or item of hardware to deal with information or hardware produced for another.

communication parameters	Baud rate, word length, parity and number of stop bits: settings which must be the same for serial devices sending data to each other.
configuration	The selection of items of equipment used by your notebook and the way they are set up for use.
CPU (Central Processing Unit)	The chip, which performs the central operations, needed to carry out a program.
data	Information sent to or received from the notebook.
device driver	Software which controls a device such as a printer or a mouse.
disk	A medium on which programs and data can be magnetically encoded for storage and future use.
disk capacity	The amount of information, which can be stored on a disk, expressed in megabytes (MB) or kilobytes (KB).
disk drive	A piece of hardware fitted to your notebook, which allows programs and data to be transferred between RAM and a disk.
double-density disk	See low-density disk.
drive name	The name used to identify a disk drive or another storage device; for example, the drive name A is used by the operating system to identify the first floppy disk drive.
driver	See device driver.
error messages	Messages which the notebook displays on the screen if the software discovers something wrong when it tries to process a command or program.
Ethernet	A commonly used networking standard.
file	A collection of related information stored on a disk and referred to by a filename.
fixed disk	See hard disk.

floppy disk	A disk which can store information and which is inserted in a floppy disk drive for use.
format	Prepare a disk for use by a particular operating system.
graphics adapter	An adapter which enables the notebook to display text and graphics on a monitor.
graphics mode	A screen mode based on individual pixels rather than complete characters.
hard disk	A fixed disk fitted inside a notebook; it can store large amounts of information. Sometimes referred to as a "fixed" or "Winchester" disk.
hardware	Components that make up the notebook and associated devices.
IDE	Integrated Drive Electronics. A standard hard disk drive interface.
industry-standard	The hardware and software most commonly used by IBM-compatible micronotebooks.
interface	The means of communication between different pieces of equipment - for example, the circuitry that enables two pieces of equipment such as a notebook and a printer to communicate with each other.
ISA	Industry Standard Architecture. A type of bus used as standard, available on all IBM compatible PCs (see bus).
KB	A measure of information (1 KB = 1024 bytes), sometimes written as K, KByte or Kilobyte.
LAN	Local area network; see network.
language	A set of vocabulary and grammatical rules used to write programs.
load	Enter a program into RAM.
local bus	A high speed bus connected to the processor to provide improved performance

for graphics, hard disk and other adapters.

LPT1	The device name used by the system to identify the parallel printer port.
MB	An amount of information (1 MB = 1024 x 1024 bytes), sometimes written as M, MByte or Megabyte.
mainboard	See system board.
memory	Internal storage of a notebook, usually measured in MB or KB; see RAM and ROM.
mode	The way or format in which something works; many RM notebooks can use IBM Mode or PC-186 Mode, and they all offer a variety of screen modes.
monitor	The component of a notebook system on which information is displayed; also known as a Visual Display Unit (VDU), a screen, or a display.
mouse	A desk-based device which can be moved on a flat surface to move a pointer on the screen, with buttons to press to select objects on the screen.
MS-DOS	A basic form of operating system produced by Microsoft.
network	A group of notebooks linked together so as to share devices (such as printers) and information.
operating system	A set of programs that translates commands given directly or through an application so that a notebook and devices attached to it can carry them out.
parallel interface	an interface which deals with several signals sent "in parallel" (at the same time).
parity	Usually one "bit" of a byte used to check that the byte has been transmitted and received correctly.

park	Secure the heads of a hard disk so that they are not damaged if the disk is moved - the hard disk fitted in your notebook has self-parking heads.
PCI bus	Peripheral Component Interconnect, a type of local bus (see local bus).
pixel	The smallest entity which can be displayed on a monitor when in a graphics mode. Sometimes referred to as a dot.
port	A plug, connector, socket or interface.
power supply unit (PSU)	The unit which supplies power to the notebook.
processor chip	See CPU.
program	A complete set of instructions written in a notebook language for handling a particular task.
PSU	See power supply unit.
RAM	Random access memory, also known as user or program memory, which stores programs and data loaded from disk ready for processing.
real-time clock (RTC)	A clock inside a notebook which keeps time whether the notebook is switched on or off.
reboot	See reset.
refresh rate	The number of times per second the graphics adapter sends an image to the monitor.
reset	Clear the memory of a notebook and reload the operating system usually done by pressing the reset button or <CTRL/ALT/DEL>.
ROM	Read-only memory. This type of memory can only be read from.
screen mode	The format (including resolution and number of colours) in which information is presented

	on the screen.
serial interface	An interface which transmits or receives signals one piece at a time.
serial number	The unique number assigned to a notebook (or a component); on RM notebooks, the serial number is on the rear of the notebook e.g. MO12345678.
server	A notebook which controls the activities of a network.
SIMM/DIMM	Single Inline Memory Module/Dual Inline Memory Module; A small plug-in board containing DRAM chips. SIMMs provide your notebook's memory.
software	Programs such as operating systems, applications or languages.
standalone	A notebook used on its own rather than linked into a network.
stop bit	A serial communications parameter used to make sure that transmitting and receiving equipment are in step with one another.
system board	The main printed circuit board inside a notebook on which the processor and RAM are attached.
text editor	A program which allows you to create and edit batch files and other text files.
utility	A program used by the operating system to organise and control files, disks and devices.
VESA	Video Electronics Standards Association. An association originally formed to produce standards for super VGA display adapters and which was responsible for defining the VL-bus.
VGA	A video graphics adapter and standard providing a selection of screen modes.
VL-bus	VESA local bus (see local bus)



Windows 3.11	A set of programs which extends the MS-DOS operating system. It provides a graphical user interface (GUI) based on windows, icons, menus and the use of a mouse.
Windows 95 or Windows NT	Newer versions of Windows 3.11 which supports Plug and play and greater security and power management.
word length	Serial communications parameter defining the length of one character of information to be transmitted or received.
write protect	The mechanism provided on a floppy disk to prevent the information on it from being changed.
ZIF	Zero Insertion Force. A type of socket that uses a lever to lock and release the component in the socket.