Acorn A7000
Welcome Guide

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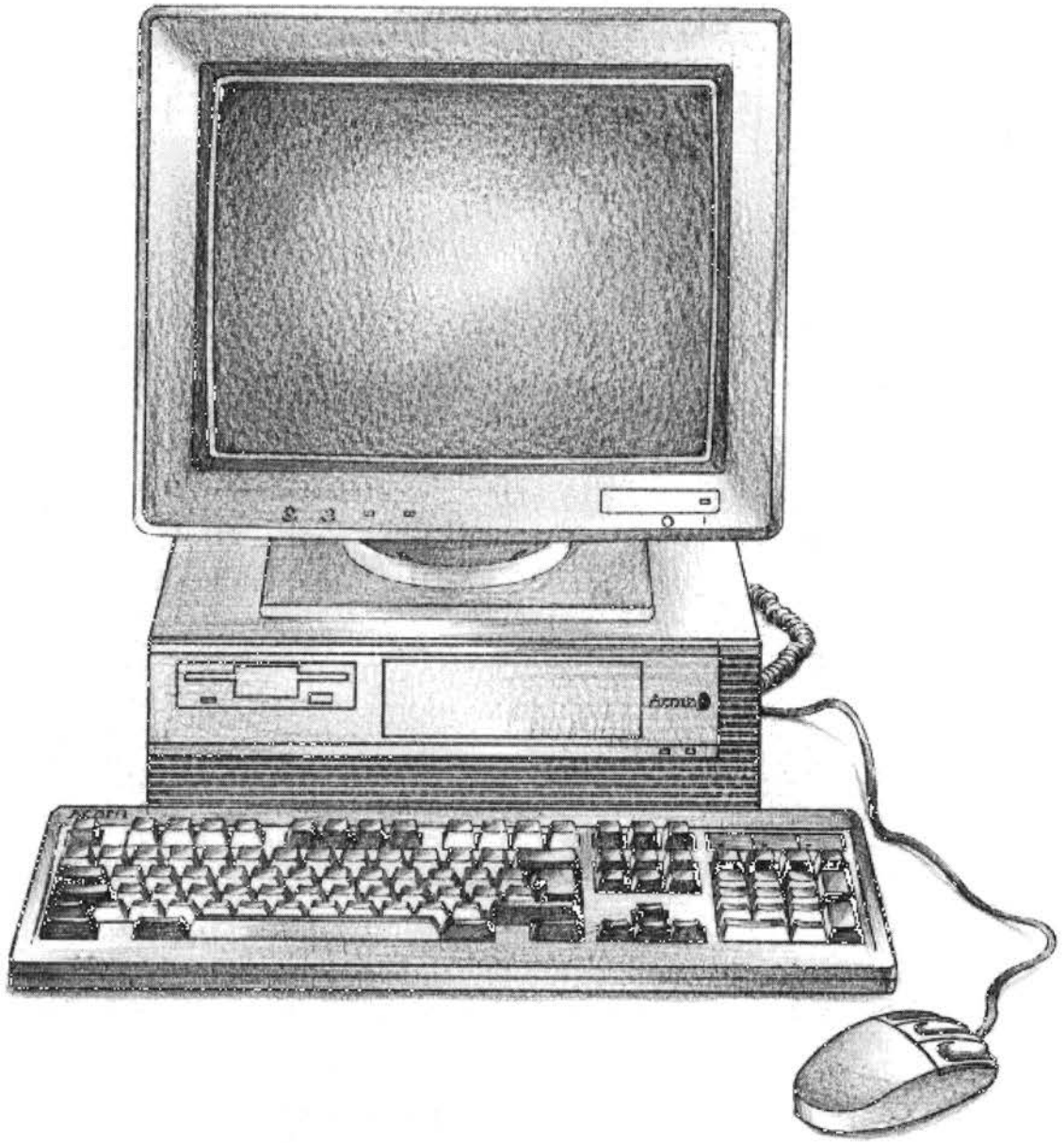

Welcome to the Acorn A7000 range of computers!

The Acorn A7000 is the latest in the new generation of Acorn computers. It is the result of a lengthy research and development investment program by Acorn, and offers superb performance at an affordable price. In addition, we've dramatically improved the display capabilities.

The computer also shows our continuing commitment to flexibility. It is available in a number of different configurations, including a CD-ROM drive, and network connections. In addition, the wide range of Acorn monitors available means that you can purchase the computer which is most suited to your needs and budget. As with other Acorn computers, many standard upgrades are available from your supplier.

Your new computer is made to the high standards of quality and reliability that existing Acorn users have come to expect.

We value your comments and feedback, so please let your supplier know of any suggestions you have as to how we might improve our service to you – the Acorn A7000 incorporates many such suggestions. Your supplier will also assist you should you ever feel dissatisfied with any aspect of our product or service – Acorn suppliers have full support from Acorn itself.

To help us provide you with the best service, please complete and return the enclosed Owner Registration Form. This enables us to keep our valued and growing family of users informed about new developments. You are not of course obliged to answer all the questions, should you prefer to leave any of them blank.

The first part of this guide, *Getting started*, introduces the computer; it explains how to connect it together and how to start using it. It doesn't matter if you've never used a computer before, the system is easy to use, and you need learn only a few simple techniques to get going. You can pick up the details as you go along.

The *Hardware reference* section and the *Appendices* give you advice about looking after your computer, along with more detailed information which you may need to refer to when you want to add things like expansion cards, network cards or more memory.

Once you have set everything up and mastered the basic techniques described in this guide, the RISC OS 3 *User Guide*, also supplied, will help you to get the best out of your computer and answer many other questions you may have about how the computer works.

Sam Wauchope

Managing Director
Acorn Computers Limited

Published by Acorn Computers Technical Publications Department.

The product described in this manual and products for use with it are subject to continuous development and improvement. All information of a technical nature and particulars of the product and its use (including the information and particulars in this manual) are given by Acorn Computers Limited in good faith. However, Acorn Computers Limited cannot accept any liability for any loss or damage arising from the use of any information or particulars in this manual, or any incorrect use of the products. All maintenance and service on the product must be carried out by Acorn Computers' authorised dealers or Approved Service Centres. Acorn Computers Limited can accept no liability whatsoever for any loss or damage caused by service, maintenance or repair by unauthorised personnel.

If you have any comments on this manual, please complete the form at the back of the manual, and send it to the address given there.

Acorn supplies its products through an international distribution network. Your supplier is available to help resolve any queries you may have.

Within this publication, the term 'BBC' is used as an abbreviation for 'British Broadcasting Corporation'.

Note: Various third party monitors and other peripheral equipment are depicted or described in this Guide. The illustration or description of these or any other third party equipment does not imply any recommendation or endorsement by Acorn Computers Limited, and users must satisfy themselves as to the suitability of any peripheral equipment (including monitors) on advice from the equipment supplier.

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Guidelines for safe operation

GB

This product is not intended for use as a critical component in life support devices or any system in which failure could be expected to result in personal injury.

The equipment described in this guide is designed and manufactured to comply with international safety standard EN60950 and is intended for use only as a personal computer. It must not be used for other purposes. It is most important that installation and operation are carried out in accordance with the instructions given in this guide. In the interests of continued safe and reliable operation, observe the following guidelines:

Electrical safety

- **This equipment must be earthed (grounded) to prevent electrical shock hazard.**
- The equipment should be installed near a readily available power outlet.
- If the plug supplied is not suitable for the power supply in your country, please consult your supplier.
- Do not attempt to open any display or monitor, whether supplied with the equipment or not.
- Do not exceed the following maximum current/voltage ratings:

Mouse interface	80mA	
Keyboard interface	300mA	
Monitor interface	250mA	
Network card	600mA	
Expansion card	1A	+5V
	250mA	+12V
	10mA	-5V

- Do not operate this equipment if any cables are damaged.
- Switch off and unplug the equipment and any accessories before opening the unit (e.g. to install an upgrade).
- Switch off and unplug the equipment if you're not going to use it for a few days.

Installation

- This equipment is for indoor use only (in a dry and dust-free environment).
- Do not expose the equipment to sudden extremes in temperature, direct sunlight or other heat sources.
- You should position the computer so as to ensure that the ventilation slots are not obstructed.
- Stand equipment on a hard level surface, allowing enough space for air to circulate when in use.
- Locate the equipment in such a way that it does not present a hazard or interfere with other equipment.
- Do not stand equipment weighing more than 16kg (35lbs) on top of this equipment. It is recommended that heavier monitors are placed directly on the work surface.
- Ensure that any wires and cables are routed sensibly so that they cannot be snagged or tripped over. Don't tug or twist any wires or cables, or use them to hang or lift any of the units.
- The equipment should only be operated with the covers secured.
- Keep the machine at a room temperature of +5°C to +35°C (+41° to +95° Fahrenheit) and a relative humidity of 10% to 80% (non-condensing).
- Keep the plastic bags used in the packaging away from children and animals.
- Keep the original packaging in case you need to transport the computer.
- The computer is designed for desktop use only.

Precautions in use

- Do not spill liquid on the equipment. If you do, turn the equipment off immediately and take it to your supplier for assessment.
- Do not drop the equipment or subject it to excessive bumping and jarring.
- Do not obstruct or cover the equipment, or poke objects into it.

UK information

As the colours of the cores in the AC power lead of this equipment may not correspond to the coloured markings identifying the terminals in your plug, proceed as follows:

- The core which is coloured **green and yellow** must be connected to the terminal in the plug coloured green and yellow, or marked by the letter E or by the earth symbol ⏚.
- The core which is coloured **blue** must be connected to the terminal coloured black or marked with the letter N.
- The core which is coloured **brown** must be connected to the terminal coloured red or marked with the letter L.

The mains lead supplied with the power supply unit is already fitted with a moulded plug incorporating a 5A fuse. If it does not fit your socket-outlet, the plug should be removed from the mains lead **and safely disposed of**. The flexible cord insulation should then be stripped back as appropriate. A suitable alternative plug should then be fitted. If the replacement plug is intended to take a fuse, then a 5A fuse must be used.

Warning! The moulded plug, when removed, presents an electrical shock hazard. It should **never** be inserted in a 13A socket outlet elsewhere in the house, since there is an extreme danger of electrical shock.

If you need to replace the fuse in the mains plug supplied, then you must use a 5A fuse, ASTA-approved to BS1362.

Never use mains plugs with the fuse carrier omitted. If you lose the fuse carrier, either replace it with a carrier of the same type and manufacturer or replace the moulded plug with another mains plug, wired as detailed above.

Information for Australia and New Zealand

This equipment should be fitted with a plug that complies with the requirements of AS3112-1990 and NZ SS 198-1967. If the plug fitted does not fit your socket outlet, it should be removed and disposed of. A suitable alternative plug should then be fitted, following the instructions provided with it.

Warning! The moulded plug, when removed, presents an electrical shock hazard. It should **never** be inserted in a socket outlet elsewhere in the house, since there is an extreme danger of electrical shock.

As the colours of the cores in the mains cord of this equipment may not correspond to the coloured markings identifying the terminals in your plug, proceed as follows:

- The core which is coloured **green and yellow** must be connected to the terminal in the plug which is marked E or GREEN or coloured green.
- The core which is coloured **blue** must be connected to the terminal which is marked N.
- The core which is coloured **brown** must be connected to the terminal which is marked P or A.

Never use an unapproved mains plug. In the event of damage to the mains plug, replace it with another approved to the above national standards (or one approved for your socket outlet) and wired as detailed above.

If in any doubt, please contact a qualified electrician able to complete the task for you.

Regeln zur Betriebssicherheit (Guidelines for safe operation)

D

Dieses Produkt ist nicht zur Verwendung als entscheidendes Bauteil in Lebenserhaltungsgeräten oder in Systemen, in denen ein Versagen zu Körperverletzungen führen könnte, gedacht.

Konstruktion und Verarbeitung des hier beschriebenen Geräts erfüllen die internationalen Sicherheitsnormen EN60950. Das Gerät ist ausschließlich zur Verwendung als Personalcomputer vorgesehen und darf zu keinem anderen Zweck eingesetzt werden. Bei Installation und Betrieb ist sorgfältig nach den hier gegebenen Anleitungen vorzugehen. Im Interesse eines dauerhaft sicheren und zuverlässigen Betriebs sind folgende Punkte zu beachten:

Elektrische Sicherheit

- **Zum Ausschluß der Stromschlaggefahr das Gerät erden.**
- Gerät in der Nähe einer gut zugänglichen Steckdose aufstellen.
- Den Händler benachrichtigen, falls der mitgelieferte Stecker nicht der nationalen Norm entspricht.
- Niemals einen Monitor oder ein Anzeigegerät zu öffnen versuchen.
- Folgende Nennstromstärken nicht überschreiten:

Mausschnittstelle	80mA	
Tastaturschnittstelle	300mA	
Monitorschnittstelle	250mA	
Netzkarte	600mA	
Erweiterungskarte	1A	+5V
	250mA	+12V
	10mA	-5V

- Nicht mit dem Gerät arbeiten, wenn ein Kabel beschädigt ist.
- Vor dem Öffnen des Gehäuses (z. B. beim Installieren eines Upgrades) den Computer und alle Peripheriegeräte ausschalten und den Netzstecker ziehen.
- Gerät ausschalten und den Netzstecker ziehen, wenn es einige Tage lang nicht benutzt wird.

Installation

- Gerät nur in geschlossenen (trockenen und staubfreien) Räumen verwenden.
- Gerät nicht plötzlichen starken Temperaturschwankungen, der direkten Sonneneinstrahlung oder anderen Hitzequellen aussetzen.
- Bei der Aufstellung des Computers darauf achten, daß die Lüftungsöffnungen nicht blockiert werden.
- Gerät auf einer harten, ebenen Unterlage aufstellen und genügend Raum für die Luftzirkulation während des Betriebs lassen.
- Gerät so aufstellen, daß es keine Gefahr darstellt und andere Geräte nicht stört.
- Keine über 16kg schweren Systemteile auf dieses Gerät setzen. Schwerere Monitore werden am besten direkt auf die Arbeitsfläche gestellt.
- Anschlußkabel und Leitungen so führen, daß man an ihnen nicht hängenbleiben oder über sie stolpern kann. An Kabeln und Leitungen nicht reißen oder ziehen oder mit ihnen Teile hochheben.
- Beim Arbeiten mit dem Gerät müssen die Gehäuseabdeckungen stets ordnungsgemäß festgeschraubt sein.
- Die Raumtemperatur muß sich zwischen +5°C und +35°C und die relative Luftfeuchtigkeit zwischen 10% und 80% (nicht kondensierend) bewegen.
- Plastikhüllen des Verpackungsmaterials von Kindern und Tieren fernhalten.
- Originalverpackung für einen eventuellen späteren Transport des Computers aufbewahren.
- Dieser Computer ist ausschließlich für den Einsatz als Tischcomputer gebaut.

Vorsichtsmaßnahmen bei der Verwendung

- Keine Flüssigkeiten mit dem Gerät in Berührung kommen lassen. Wenn Flüssigkeit verschüttet wird, Gerät sofort ausschalten und den Schaden vom Händler begutachten lassen.
- Gerät nicht fallenlassen und keinen übermäßigen Stößen und Erschütterungen aussetzen.
- Gerät nicht blockieren oder zudecken. Keine Gegenstände hineinstecken.

Instructions de sécurité (Guidelines for safe operation)

F

Ce produit n'a pas été conçu pour être utilisé comme composant fondamental d'équipement d'assistance médicale ou de tout système où un défaut pourrait être prévisible et occasionner des dommages physiques.

L'appareil décrit dans ce guide est conçu et fabriqué conformément aux normes de sécurité internationales EN60950 pour faire l'objet d'un usage personnel. Il ne doit en aucun cas être utilisé à d'autres fins. Il est important de suivre les instructions d'installation et de fonctionnement données dans ce guide. Pour des raisons de fiabilité et de sécurité, respectez les instructions suivantes:

Sécurité électrique

- **Cet appareil doit être mis à la terre afin d'éviter d'éventuels risques de chocs électriques.**
- Cet appareil doit être installé près d'une prise de courant facile d'accès.
- Si la prise fournie ne convient pas à l'alimentation électrique de votre pays, veuillez consulter votre fournisseur.
- Ne tentez pas d'ouvrir écrans ou moniteurs fournis ou pas avec l'appareil.
- Ne dépassez pas les caractéristiques suivantes:

Interface souris	80mA	
Interface clavier	300mA	
Interface moniteur	250mA	
Carte réseau	600mA	
Carte d'extension	1A	+5V
	250mA	+12V
	10mA	-5V

- N'utilisez pas cet équipement si les câbles sont défectueux.
- Eteignez et débranchez votre appareil ainsi que tout accessoire avant d'ouvrir l'unité (pour installer une version plus puissante, par exemple).
- Eteignez et débranchez votre appareil si vous ne pensez pas l'utiliser pendant quelques jours.

Installation

- N'utilisez cet appareil que dans une salle (à l'abri de l'humidité et de la poussière).
- N'exposez pas cet appareil à des changements de température extrêmes, à la lumière directe ou autres sources de chaleur.
- Veillez à placer l'ordinateur de telle façon que les évents ne soient pas obstrués.
- Posez l'appareil sur une surface stable et prévoyez suffisamment de place pour que l'air puisse circuler librement lorsque l'appareil fonctionne.
- Placez l'appareil de façon à ce qu'il ne présente aucun risque ou ne perturbe pas le fonctionnement d'autres appareils.
- Ne posez pas d'appareils de plus de 16kg sur cet appareil. Placez les moniteurs encombrants directement sur la surface de travail.
- Assurez-vous que les fils et câbles sont soigneusement installés afin d'écarter tout danger de trébuchement. Ne tirez pas ou ne tordez pas ou n'utilisez pas les fils ou câbles pour accrocher ou soulever les unités.
- L'appareil ne doit fonctionner qu'avec les panneaux fixés.
- Gardez cet appareil à température ambiante variant entre +5°C et +35°C et une humidité relative de 10% à 80% (sans condensation).
- Placez les sachets plastiques d'emballage hors de portée des enfants et des animaux.
- Gardez l'emballage d'origine au cas où vous devriez transporter l'appareil.
- Cet ordinateur est conçu pour être utilisé uniquement comme ordinateur de bureau.

Précautions d'emploi

- Ne versez pas de liquide sur l'appareil, et si malencontreusement c'était le cas, faites le vérifier par votre fournisseur.
- Ne faites pas tomber l'appareil ou ne le soumettez pas à des chocs ou des secousses intempestives.
- N'obstruez pas, ne couvrez pas ou n'insérez pas d'objets dans l'appareil.

Istruzioni per la sicurezza delle operazioni (Guidelines for safe operation)

I

Questo prodotto non è predisposto all'uso come componente fondamentale di dispositivi per la sopravvivenza o di qualsiasi sistema in cui si potrebbe avere un guasto con il risultato di un danno fisico.

L'apparecchiatura descritta in questa guida è ideata e prodotta in conformità con gli standard di sicurezza internazionale EN60950 ed è predisposta all'uso solo come personal computer. Non deve essere utilizzata per altri scopi. È molto importante che l'installazione e l'operazione siano condotte secondo le istruzioni fornite in questa guida. Per un funzionamento continuo, sicuro e attendibile, osservare le seguenti direttive:

Sicurezza elettrica

- **Questa apparecchiatura deve essere messa a terra per evitare pericolo di scosse elettriche.**
- L'apparecchiatura deve essere installata vicino all1a presa di corrente, che deve essere accessibile.
- Se la spina fornita non è adatta all'alimentazione nel proprio paese, consultare il fornitore.
- Non provare ad aprire il display o il monitor sia che venga fornito con l'apparecchiatura o meno.
- Non superare le seguenti tensioni:

Interfaccia del mouse	80mA	
Interfaccia della tastiera	300mA	
Interfaccia del monitor	250mA	
Scheda rete	600mA	
Schede di espansione	1A	+5V
	250mA	+12V
	10mA	-5V

- Non utilizzare questa apparecchiatura se uno dei cavi è danneggiato.
- Spegnere e staccare l'apparecchiatura e gli accessori prima di aprire l'unità (per esempio per installare un aggiornamento).
- Spegnare e staccare l'apparecchiatura, se non si desidera utilizzarla per qualche giorno.

Installazione

- Questa apparecchiatura è solo per uso interno (in un ambiente asciutto e privo di polvere).
- Non esporre l'apparecchiatura ad improvvise ed estreme temperature, luce solare diretta o altre fonti di calore.
- Posizionare il computer in modo da non ostruire gli slot per la ventilazione.
- Collocare l'apparecchiatura su una superficie piana dura, con spazio sufficiente alla circolazione dell'aria durante l'utilizzo.
- Posizionare l'apparecchiatura in modo tale che non presenti pericolo o che non interferisca con un'altra apparecchiatura.
- Non collocare un'apparecchiatura che pesa più di 16kg sull'apparecchiatura. Si consiglia di collocare monitor più pesanti direttamente sulla superficie di lavoro.
- Accertarsi che i fili e i cavi siano indirizzati adeguatamente in modo tale che non possano essere di ostacolo e intralcio. Non tirare o attorcigliare i fili o i cavi e non utilizzarli per appendere o sollevare una delle unità.
- L'apparecchiatura deve essere fatta funzionare solo con i coperchi fissati.
- Tenere il computer a temperatura ambiente da +5°C a +35°C (+41° a +95° Fahrenheit) a un'umidità relativa dal 10% all'80% (senza condensa).
- Tenere i sacchetti di plastica utilizzati nella confezione lontani da bambini e animali.
- Conservare la confezione originale in caso di trasporto del computer.
- Questa apparecchiatura è ideata per essere utilizzata esclusivamente come computer da tavolo.

Precauzioni dell'uso

- Non versare liquidi sull'apparecchiatura. Nel caso in cui ciò avvenga, spegnere immediatamente l'apparecchiatura e portarla al fornitore per controllo.
- Non fare cadere l'apparecchiatura e non sottoporla a urti eccessivi.
- Non ostruire, non coprire l'apparecchiatura e non infilarvi oggetti.

Normas de seguridad de manejo (Guidelines for safe operation)

E

Este producto no está concebido para su empleo como elemento integrante crítico de dispositivos médicos de vigilancia intensiva ni de ningún otro sistema cuyo fallo pudiera comportar lesiones físicas.

El equipo descrito en esta guía está diseñado y manufacturado de acuerdo con las normas internacionales EN60950 y ha sido concebido exclusivamente para su empleo como ordenador personal. No debe usarse para ningún otro propósito. Es sumamente importante que la instalación y funcionamiento se lleven a cabo de acuerdo con las instrucciones dadas en esta guía. En el interés de un funcionamiento continuado y seguro, aténgase a las normas siguientes:

Seguridad eléctrica

- **Este equipo tiene que estar conectado a una toma de tierra para así prevenir la posibilidad de choque eléctrico.**
- Este equipo ha de instalarse cerca de la salida de corriente, que será de fácil acceso.
- Si el enchufe provisto no es el que corresponde al suministro de corriente del país en que se va a instalar el equipo, consulte con su distribuidor.
- No abra ninguna pantalla o monitor, independientemente de si es el suministrado con el equipo o no.
- No exceda la corriente máxima indicada:

Interfaz del ratón	80mA	
Interfaz del teclado	300mA	
Interfaz del monitor	250mA	
Tarjeta de red	600mA	
Tarjetas de expansión	1A	+5v
	250mA	+12V
	10mA	-5V

- No utilice este equipo si los cables han sufrido desperfectos.
- Apague y desenchufe el equipo y todos sus accesorios antes de abrir la unidad (por ejemplo, para instalar una actualización).
- Apague y desenchufe el equipo si no se va a utilizar durante varios días.

Instalación

- Este equipo está concebido para su uso en interiores exclusivamente (en lugares secos y sin polvo).
- No exponga el equipo a cambios bruscos de temperatura, a la luz directa del sol ni a otras fuentes de calor.
- Es sumamente importante colocar el ordenador de modo que no se obstruyan las ranuras de ventilación.
- Coloque el equipo en una superficie dura y nivelada, dejando suficiente espacio para la circulación del aire durante su funcionamiento.
- Coloque el equipo de manera tal que no constituya un peligro ni interfiera con otro equipo.
- No coloque encima ningún otro equipo cuyo peso supere los 16kg. Se recomienda que los monitores que superen este peso se coloquen directamente sobre la superficie de trabajo.
- Extienda los cables de forma que no se enganche ni tropiece nadie con ellos. No tire de ellos ni los tuerza o use para colgar o levantar las unidades.
- El equipo debe utilizarse exclusivamente con la cubierta bien cerrada.
- Mantenga la máquina a una temperatura ambiente comprendida entre +5°C y +35°C y a una humedad relativa del 10% al 80% (sin condensación).
- Mantenga fuera del alcance de niños y animales las bolsas de plástico utilizadas en el envase.
- Guarde el envase original para transportar el ordenador en caso de que fuera preciso.
- Este aparato está diseñado para su uso exclusivo como ordenador de escritorio.

Precauciones de manejo

- No derrame líquidos sobre el equipo. En caso de derrame, apague el equipo inmediatamente y llévelo a su distribuidor para su revisión.
- No deje caer el equipo ni lo exponga a golpes o sacudidas.
- No obstruya, cubra o introduzca objetos en el equipo.

Guarantee (valid in UK only)

This equipment is guaranteed by Acorn Computers Limited ("ACORN") against mechanical and electrical defects subject to the conditions set out below.

Note

Items which by their nature or design only have a restricted life are not guaranteed beyond such life.

Period of validity

This guarantee shall be valid for a period of twelve (12) months from the date of purchase.

Other conditions

1. This guarantee is personal to the original purchaser, is not transferable and shall not be valid unless the equipment was purchased from ACORN or from an approved ACORN supplier.
2. This guarantee will be invalidated if the equipment is misused or damaged or is modified in any way without the written consent of ACORN or if any original component or accessory has been replaced by any component or accessory of a type not recommended or approved by ACORN, or if operated other than in accordance with the *Welcome Guide*, and RISC OS 3 *User Guide*.
3. Any claims made under this guarantee must whenever possible be made through the supplier from whom the equipment was originally purchased. If this is not possible a claim may be made to any other approved ACORN supplier appointed by ACORN to service the equipment (a list of whom can be supplied on application). This guarantee together with proof of the date of purchase must be produced when any claim is made. Any costs of carriage to and from the supplier must be paid by the purchaser.
4. If ACORN agrees with the supplier that the equipment should be forwarded to ACORN for repair then ACORN will arrange for collection and return of the equipment at no charge. In all other cases the supplier will be responsible for effecting any necessary repairs in accordance with ACORN's service policy. Any repairs under this guarantee will be carried out at no cost to the original purchaser.
5. If any equipment returned is found to comply with its original specification ACORN reserves the right to charge a reasonable fee for testing the equipment and for return carriage.
6. The liability of ACORN under this guarantee shall be limited to the cost of repair or complete replacement (at ACORN's discretion) of equipment which proves to be defective.
7. ACORN does not accept liability for any loss or damage during transit to or from the supplier or ACORN, but every effort will be made to investigate claims of loss or damage if these arise.

THIS GUARANTEE DOES NOT AFFECT OR PREJUDICE THE PURCHASER'S STATUTORY RIGHTS.

Guarantee procedure

To claim under this guarantee, proof of date of purchase is required. This is provided by your copy of the invoice from the supplier from whom the equipment was originally purchased. Keep the invoice safe and produce it to support any claim you may make under this guarantee.

You may find it useful to make a note in the box below of the serial number, date of purchase and details of any upgrades you fit, and quote them in any correspondence.

Serial Number _____ Date of purchase _____

Upgrades _____

_____

_____

Working with your computer

Working with a computer is like working with many other types of special equipment. You, and your body, have to get used to working in a way that is initially quite different from the way you worked previously. Working with a computer requires

- concentration
- close visual working with the screen
- frequent eye movements between screen and work papers
- sitting still for long periods in an unnatural position
- typing for long periods which can cause stress of hands, wrists and fingers.

The following section is to help you alleviate all of these possible causes of discomfort and stress. Follow the instructions in the next few pages and you'll always be working comfortably.

Positioning yourself and the computer

Always make sure you're comfortable when you work at the computer. It's important that your seating position is correct in relation to the computer screen and keyboard.

Sitting properly

If possible, use an adjustable chair that gives support to the lower back. You should adjust the chair so that you are sitting with a straight back, with your upper legs horizontal and with your feet flat on the floor.

Adjust the backrest height so that your buttocks fit into the space between the backrest and the seat. The backrest should support you in the hollow of the back; adjust its tilt to give firm support in this area.

Your shoulder and upper arm should also make a right-angle with your forearm and hands.

If you find that you need to raise your chair to get the correct posture you can use a foot rest to make up the gap between your feet and the floor. You may also be able to lower the desk height.

Give yourself room

Give yourself enough room to use the computer, keyboard and mouse comfortably. Place your work items where you can view them easily but not where they interfere with the keyboard or mouse. You might want to use a document stand to hold your papers.

Arranging the computer monitor

Your monitor should be positioned so that the top of the screen is at eye level when you are sitting at the keyboard. Don't allow your head to hunch forward; keep your neck relaxed. You should view the screen from a distance of about 50 to 70 centimetres.

Reduce reflections

Position the monitor – the base 'tilts' and 'swivels' – so that any glare and reflection from lights and windows is minimised. You might want to move the light sources about the room until you find the positions that give least glare. Closing the window curtains partially may also help.

Cleaning your screen regularly also helps reduce reflections.

You might also find that adjusting the brightness (☼) and contrast (◑) controls on the monitor helps; read the documentation that comes with your monitor for more information.

Eyestrain

When you use a computer, your eyes are continually focused on the monitor for a long time. This makes the eye muscles work harder, so it is important to have frequent short rest breaks and to look at distant objects from time to time to give your eye muscles a change and a rest.

If you wear contact lenses, they may feel dry; this is because you tend to blink less often when staring at the screen. Counteract this by blinking often.

If you suffer from eyestrain you may want to have an eyesight test; some people who don't normally wear glasses may need them for computer work.

Arranging the keyboard and mouse

If you are not a touch typist you may find it easier if you position your keyboard in from the edge of the desk so that you have enough room to rest your forearms. You might also try a keyboard wrist mat; this allows you to rest your wrists at the same level as the keyboard while you type.

Always try to use a light touch when typing; the keyboard keys respond to a very light pressure. A light touch will also help you keep your hands and wrists relaxed which will in turn reduce tension and fatigue.

Put the mouse where you can easily reach it; normally just to the side of the keyboard. Leave plenty of space so that you can make unimpeded mouse movements easily. Make sure that you use the mouse on a surface on which it rolls easily; if your desk is very smooth you may find that using a mouse mat alleviates the problem of the mouse slipping.

Take a break

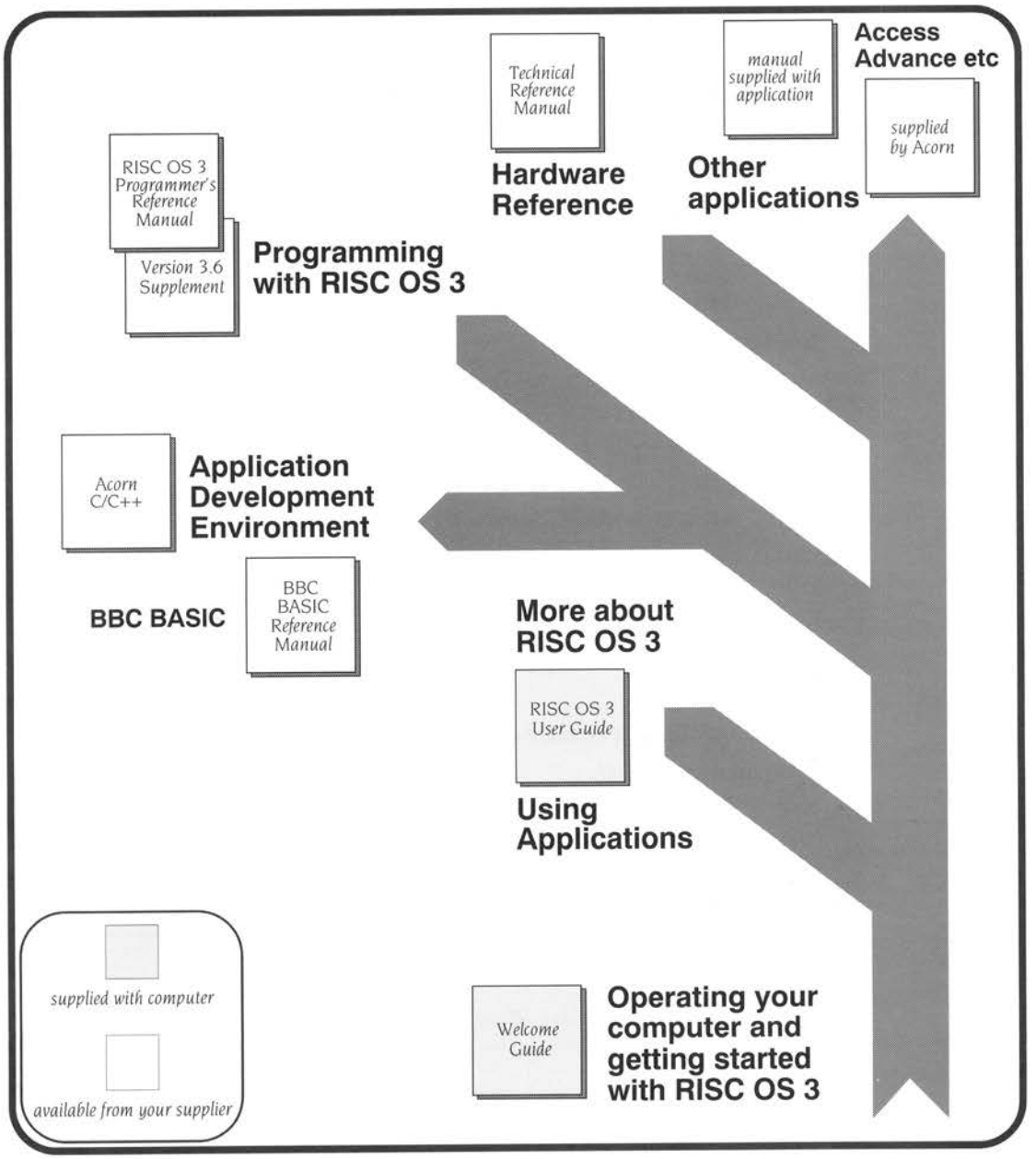
After you've been working for a while, it's important that you take a break or do something else. This gives your body the chance to relieve any muscular tensions that may have built up. Stand up and move about or have a short walk. Frequent short breaks help reduce tiredness and stress.

If you have any problems

If you develop any discomfort or pain in your hands, wrists, arms or back, you should always consult your doctor.

Documentation roadmap

This roadmap will help you decide which tools and manuals you will need as you start to use your Acorn computer and develop your skills.



Contents

Part 2 - Hardware reference

This part contains technical information and more detailed installation instructions, along with some advice on looking after your computer. It also shows you how to expand your computer by adding internal expansion options.

Appendices

Glossary 121

Defines computer jargon used in this guide. Terms explained in the Glossary are printed in italics the first time they appear in the guide.

Unpacking and setting up

This chapter tells you about unpacking and setting up your Acorn A7000. *It also gives some hints on where to set it up.*

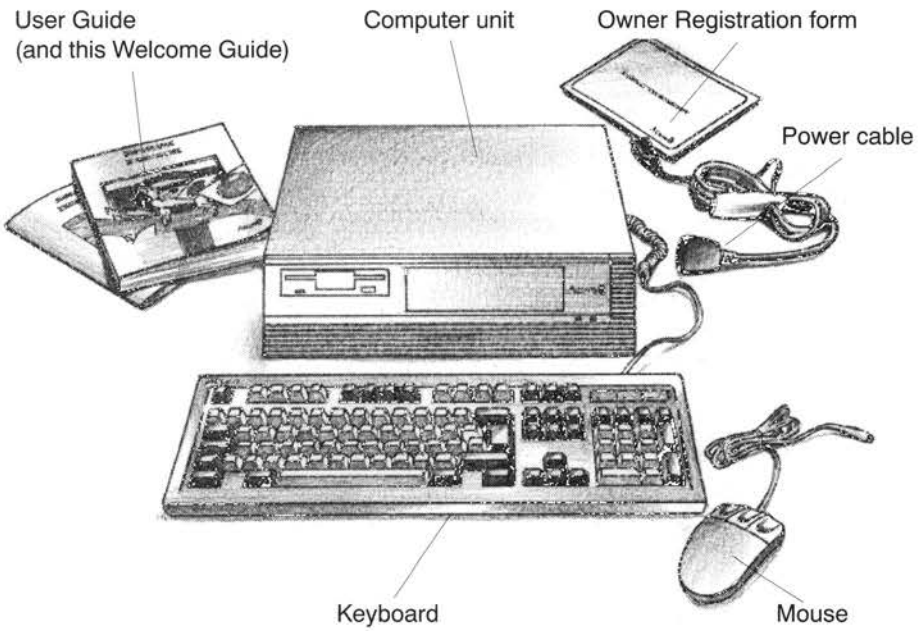
Unpacking

Unpack your computer on a flat surface – either on the floor, or on a large table where there's plenty of room for the boxes as well as for the computer. Take everything out of the boxes, making sure you don't break the packaging material, as you may need this later.

Warning: The packaging contains plastic bags which can be dangerous to young children and animals. Please keep them out of their reach.

Checklist

Check that you have received all the items shown below. If you don't have all of these items, or if any of them appears damaged, notify your supplier immediately.



You'll probably also have a *monitor* (with mains lead and connecting cable). It is supplied in a separate box.

If you have bought any *peripheral* equipment to attach to your computer, such as a *printer*, check that your supplier has provided the correct cables (see the chapter entitled *Adding external devices* on page 79 if you're not sure).

Complete the Owner Registration Form and post it back to Acorn (purchasers outside the UK should send it to their local supplier or national distributor). This will enable us to inform you of new products and upgrades to your computer as they become available.

Put all the packaging back into the box and put it away somewhere safe. If you ever want to transport your computer, it is best to use the box, even if you only take it a short distance in a car. If you ever have to take it back to your supplier you must pack it back into the original box.

Choosing where to set up your computer

Bear the following points in mind when deciding exactly where to place your computer:

- You'll need a firm, flat surface with enough space at one side to move the mouse around, and space at the other side for manuals and papers you may be working on.
- You'll need space nearby for any peripheral equipment (such as a printer).
- You'll need at least one easily-accessible power point within 1.5 metres of the computer, plus extra power points for any peripherals you want to connect to the computer.
- Don't place the computer where it will be exposed to direct sunlight, or any other source of heat, such as a radiator.
- Sunlight or reflections from a window will make it difficult to see things on the screen properly, so position your computer so that you can see the screen comfortably.
- Make sure the keyboard is at a comfortable height and position for you to type for long periods (see page xiv for details).
- Make sure that any adjacent monitors are at least 50cm apart.

For more information, refer to *Positioning yourself and the computer* on page xii.

Setting up the computer

This section describes how to connect the components of the computer together and set it up ready for use. Before you start, please read the *Guidelines for safe operation* in the front of this guide.

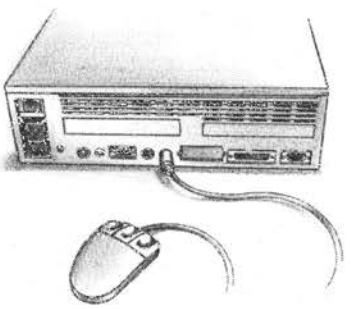
To connect the cables, look for the socket on the back of the computer with the *icon* matching that shown in each section.

Connect mouse to computer

The plug on the end of the *mouse* goes into the socket on the back of the computer. This socket is labelled with the mouse icon.

The plug has an arrow moulded into it; this should be uppermost when you push it in. The plug won't go in any other way, so don't try to force it. Make sure you push the plug all the way in so that the metal part is completely hidden.

Place the mouse by the side of the computer.

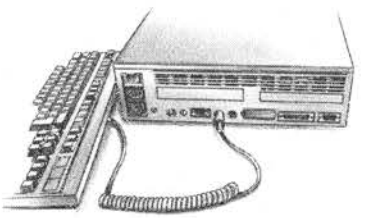


Connect keyboard to computer

Insert the plug on the end of the keyboard cable into the socket on the rear of the computer unit labelled with the keyboard icon.

The plug has an arrow moulded into it; this should be uppermost when you push it in. The plug won't go in any other way, so don't try to force it. Make sure you push the plug all the way in so that the metal part is completely hidden.

Place the keyboard in front of the computer.



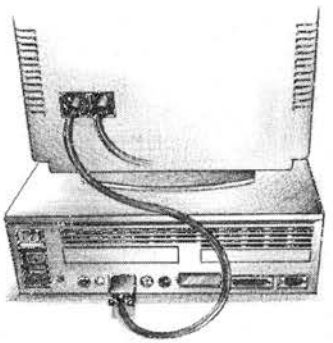
Connect monitor to computer

You'll have two cables with the monitor:

- a signal cable (allows the computer and the monitor to 'talk' to each other)
- a power cable.

Connect monitor signal cable to computer

Put the monitor on top of the computer (unless you have a monitor which weighs over 16kg (35lb), for example an AKF85, in which case place it alongside the computer unit).



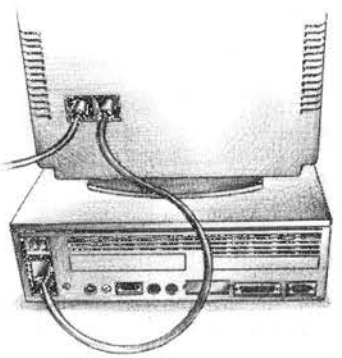
If the signal cable is not permanently attached, push its **socket** end into the back of your monitor. If you are using an Acorn-supplied monitor, the signal cable will probably be permanently attached to the monitor.

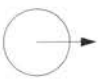
Push the **plug** end of the signal cable into the socket on the back of the computer labelled with the monitor icon. Secure the plug by tightening the securing screws.

If you don't have a monitor cable, or if you have trouble fitting it, check in *Monitor configuration* on page 111 – you may need an adaptor cable for your particular monitor.

Connect monitor to power supply (but don't switch on yet)

Monitor end: If you are using an Acorn AKF60 monitor, the power cable is permanently attached to the monitor. If you are using a different monitor, the power cable for your monitor has a socket on one end (like the type you connect to a kettle). Plug this into the power connector on the back of the monitor.





Computer end: If your monitor has an IEC-type power cable (with a **plug** on the end) plug this into the power outlet (marked ⏚) on the back of the computer. (There may be some types of monitor which cannot be connected to this power outlet. If in doubt, check with your supplier.)

Notes:

- The power outlet on the back of the computer is **ONLY** suitable for monitors.
- Your monitor's power cable may have a standard power plug. If so, plug it into the power outlet on the wall.

Configuring the computer for your monitor

If you have an Acorn AKF60 monitor, your computer is already configured to give optimum performance. If you're using a different type of Acorn monitor, this may not be the case. After you've finished setting up your computer you should read *Monitor configuration* on page 111. This shows you how to check and, if necessary, change your monitor configuration.

Connect printer to computer

If you have a parallel printer such as an Acorn JP150, connect it to the parallel port at the rear of the computer. This port is denoted by the printer icon. Most types of printer connect to the parallel port, although some connect to the serial port. Make sure that your printer is set up to use a parallel or serial connection, as appropriate. (Check your printer documentation if you are unsure.)

Connect other peripherals

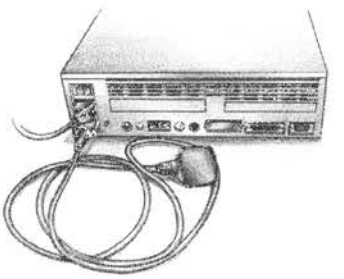
Connect any other peripherals you have **before** you switch on the power. The chapter entitled *Adding external devices* on page 79 gives you some advice on connecting other types of peripheral. You might wish to add an expansion card or a network card to the computer; see *Internal expansion* on page 91.

Connect the power cables for any other peripherals to power outlets on the wall **(but don't switch on yet)**.

Connect computer to power supply

Finally, plug the connector on the computer power cable (the one that looks like the type you plug into a kettle) into the socket marked ⏀ on the back of the computer unit. Plug the other end into the power supply outlet on the wall.

Don't switch on the power supply yet: follow the instructions in the next chapter.



Switching on

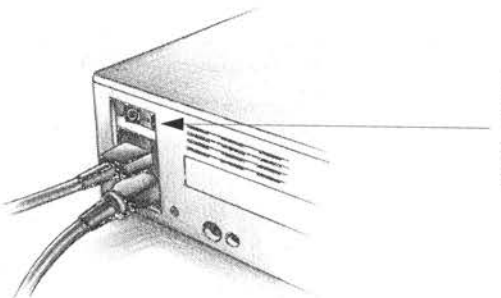
This chapter tells you how to power up your computer for the first time, and describes what you see on the screen when you do.

Equipment check

First check that you have connected all parts of the computer together properly, as described in the previous chapter.

Before switching on the mains supply

Before you start, check that the monitor, printer (if you have one) and computer On/Off switches are set to **Off**. The On/Off rocker switch for the computer is on the top lefthand side of the rear of the computer.



Make sure that the On/Off switch is **Off**. The end of the switch marked with an 'O' should be flush with the surface of the case.

Switching on

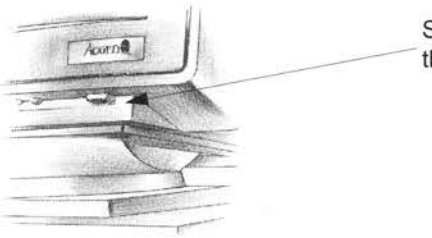
Check that the mains leads for the system are correctly connected.

Switch **on** the mains supply for the

- computer (at the power outlet on the wall)
- monitor (if its power cable is not plugged into the back of the computer)
- printer (if you have one).

Switch on the monitor and printer

The monitor has a separate switch. The manual for your monitor explains how to turn it on and, if necessary, adjust the brightness.



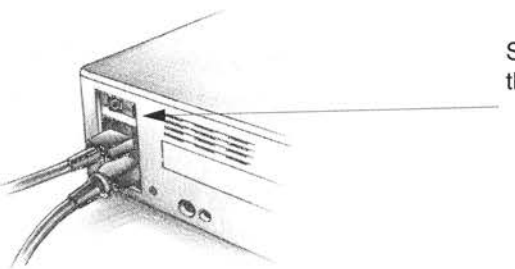
The On/Off switch for the Acorn AKF60 monitor is underneath the front righthand side.

If your monitor's power cable is plugged into the back of the computer, pressing this switch won't have any effect until you switch on the computer.

The manual for your printer explains how to switch it on.

Switch on the computer

Switch the computer **On**, by pressing the On/Off rocker switch at the rear of the computer. As the computer starts, the green light on the righthand side of the computer lights up and the orange hard disc light flashes.



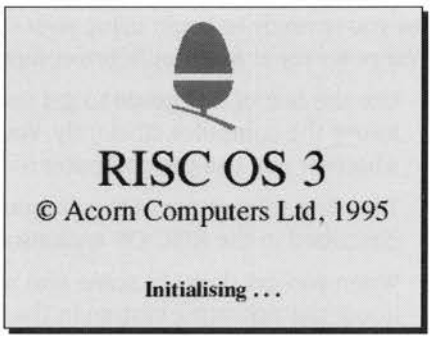
If your monitor has warmed up sufficiently, you will see the screen change colour while the computer performs some *self-tests*. The light on the *floppy disc drive* will also flash once when the drive is being checked.

Switch on any other peripherals

Switch on any peripherals that you have connected.

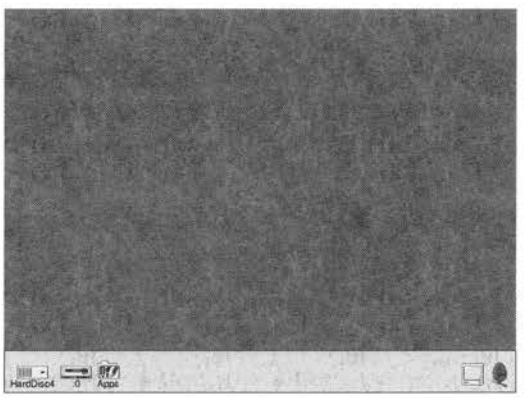
The desktop

Now you will see the RISC OS introductory screen:



The VProtect program, amongst others, is initialised at this point. Your computer is protected against most types of known RISC OS computer virus. For more information about Virus protection for your computer, refer to *Virus protection* on page 117.

After a few seconds, you should see this on your screen:



If the display does not look similar to that shown above (or if the floppy disc drive light flashes more than once) see *If things go wrong* on page 67.

Note: it is quite possible that the screen may look a little different if

- you are using a computer that has been set up by somebody else, or
- you have other peripherals installed (such as a CD-ROM drive), or
- you are connected to a network.

What now?

Scenic route (for first-time users)

Now you're ready to begin using your computer. If this is the first time you've used a computer (or at least an Acorn computer) take the following route:

1 Use the rest of this guide to get used to the RISC OS *desktop*, and to learn how to use the computer efficiently. You'll need to know the basics explained here, whatever you use the computer for later.

2 Try using some more of the programs supplied with your computer – they're described in the RISC OS *applications* section of the RISC OS 3 *User Guide*.

3 When you get down to some real work you'll find more detailed information about the operating system in the RISC OS 3 *User Guide*.

4 Ask your supplier what other *applications* are available to suit your particular purpose.

If you want to stop for the moment, you can just switch off at the On/Off switch (and switch off any peripherals too). Later on, when you've been using your computer a while, you'll find that it's better to follow the instructions in *Switching off the computer* on page 65.

Motorway route (for the more experienced)

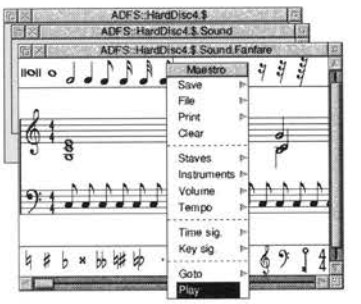
If you're familiar with computers, mice, discs and so on, and you want to start doing something right away, start by trying out some of the computer's own *applications*. For example, play a tune with Maestro:

1 Click on the hard disc icon on the icon bar.

2 Double-click on the **Sound** directory.

3 Double-click on one of the Maestro files (Fanfare, for example).

4 Click Menu (middle mouse button) over Fanfare's window to display a menu. Click Select on the **Play** option to start. Choose **Play** again to stop!



Don't despair if this description sounds like it's written in a foreign language – just take the scenic route instead, and you'll pick up the jargon as you go.

Similarly, if your computer is not fitted with a hard disc and you cannot follow the instructions above, take the scenic route.

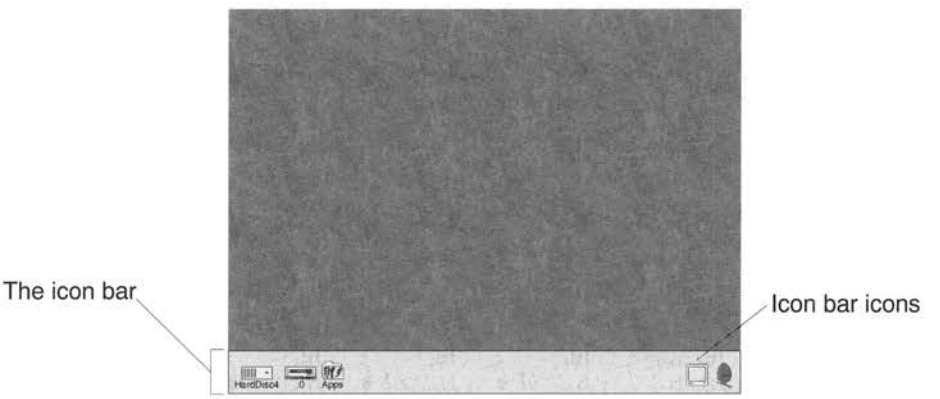
The RISC OS desktop

An introduction to the desktop environment of RISC OS.

What is the RISC OS desktop?

RISC OS is the name of the *operating system* of your computer. It controls the way the computer screen appears, and how the computer performs various actions and tasks. The RISC OS 3 *User Guide* describes the operating system in more detail, and you should refer to it when you have finished working your way through the introduction in this manual.

By now, you should be able to see the RISC OS *desktop* on your screen.



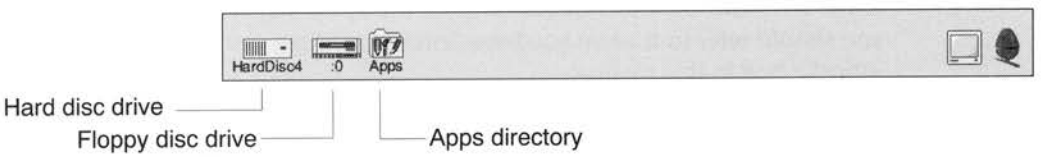
The desktop is your working area. At first it is clear, except for the bar across the bottom of the screen. As you perform tasks and use applications, things will be added to the desktop. You can move them around, change their size, hide and remove them to make room for others.

Icons

The pictures at the bottom of the screen represent the tools, applications and *storage devices* available. The pictures are called *icons*. The area they occupy is called the *icon bar*.

Device icons

The icons on the left of the icon bar represent the *devices* which are available – that is, the discs and other places where you can load information from, and save it to:



You will see a combination of the following icons, depending on which devices are available on your computer.

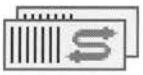
Hard disc drive. The *hard disc* drive, if one is fitted, is where you can store all of your work. There is more about hard discs in *Discs and disc drives* on page 35.

Floppy disc drive. The computer uses 3.5 inch *floppy discs*, which you put into the slot in the front of the computer. Floppy discs are described in *Discs and disc drives* on page 35.

Apps. Gives you quick access to some useful applications which are stored on the computer.

CD-ROM drive. If your computer is fitted with a CD-ROM *drive*, you will see the icon shown on the left. This gives you access to information on any CD-ROMs placed in the drive. There is more information about this in *Using a* CD-ROM *Drive* on page 103.

If your computer is fitted with a *network* interface, there will also be a **Net** icon or **Access** icon. This lets you share information or equipment connected to other computers on the network. You'll find more information about networking in the RISC OS 3 *User Guide* and any specific documentation supplied with your computer.

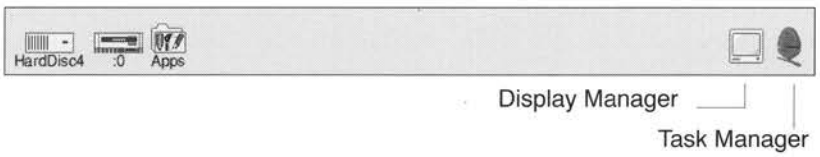


Access icon

Network icon

Application icons

On the righthand side are the *application icons*. These represent things you can do, such as word-processing and drawing programs. Initially there are only two:



Display Manager. This enables you to change the screen resolution (the amount of data you can display) and the numbers of colours or grey scales displayed on the screen. The RISC OS 3 *User Guide* gives you more information about this.

Task Manager. This enables you to look at and control your computer's memory, amongst other things. More information on this is given in the RISC OS 3 *User Guide* in the chapter entitled *Managing the desktop*. You don't need to worry about this for now.

Any other applications which you load will normally be represented by icons displayed on the righthand side of the icon bar.

The pointer

The arrow on the screen is the *pointer*. It is used to point at things you want to use or move. You move the pointer across the screen by moving the mouse. The pointer can have a number of different shapes, which you will come across as you become more familiar with your computer.

Using the mouse

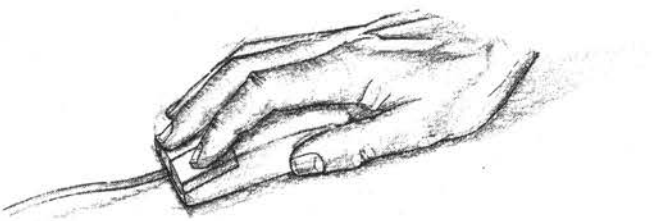
This chapter tells you how to use the mouse to select and move things displayed on the screen.

What is a mouse?

The mouse is the main way of interacting with the computer, apart from the keyboard. (See page 43 for an introduction to the keyboard.) As you move the mouse on a flat surface, so the pointer moves around on the screen. Using the mouse and its three buttons you control what the computer does.

Holding the mouse

Hold the mouse with the cable away from you so that your fingers rest easily on the three buttons. For example, if you are right-handed, you should hold it like this:



Move the mouse around and watch the pointer move around the screen. If you run out of space to move the mouse, lift it up and put it down again in a more convenient position. While the mouse is lifted, the pointer will not move, and when you put it down again you can carry on where you left off.

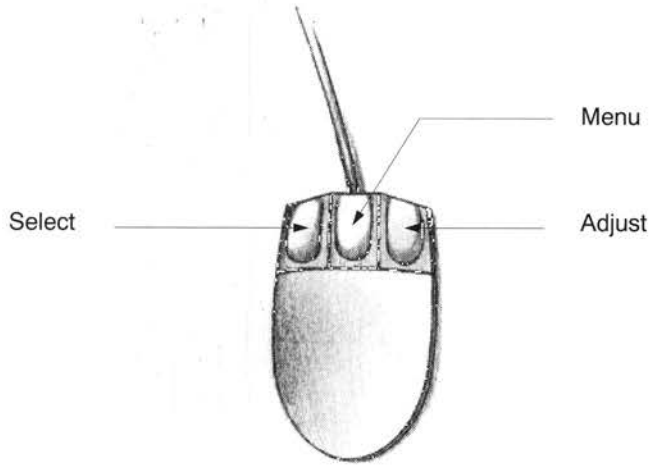
Use the mouse on a smooth but non-slippery surface. A mouse mat (available from your supplier) is ideal. Other surfaces on which the mouse works well are wood and coarse paper.

The mouse will not work well on painted metal or highly polished surfaces.

Note: To avoid damage to the mouse, do not bang it down sharply on the tabletop.

The mouse buttons

The mouse has three buttons, known as *Select*, *Menu* and *Adjust*:



You use the **Select** button to select and move icons displayed on the screen, or to choose from *menus*.

You use the **Menu** button to make a menu appear. Menus are described in *Menus and dialogue boxes* on page 29.

The **Adjust** button does a variety of things. It is most often used to choose from menus without removing the menu from the screen. *Keeping a menu on the screen* on page 31 includes one instance, and the RISC OS 3 *User Guide* describes many more. The Adjust button is also sometimes used to perform the opposite action to the Select button. See *Practising scrolling* on page 25 for an example of this.

Basic mouse techniques

The following mouse techniques are all you need to know to start using your computer:

clicking – pressing the mouse button just once and then releasing it immediately.

double-clicking – pressing and releasing twice in quick succession. This is most commonly used to load an application.

dragging – moving an object from one place to another whilst holding down the Select (or Adjust) mouse button.

Clicking and dragging techniques are summarised on the following pages. You can try out the examples in *italic text*.

Clicking

This is used, for example, to choose a menu option, select an object, or open an application window.

1 Point at the object

Move the mouse so that the pointer is over the object you want to select.

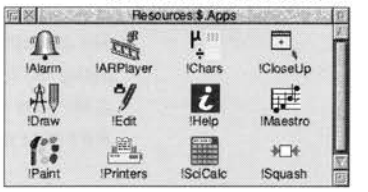
For example, point at the Apps icon on the icon bar.

Move the pointer over this icon and click

2 Click Select

Press and release the Select (lefthand) button of the mouse.

The Apps directory display will appear.



Note: from now on, 'clicking' means clicking with the Select button, unless otherwise stated.

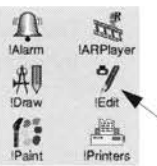
Double-clicking

You usually use double-clicking to initiate an action, such as loading an application.

1 Point at the object

Move the mouse so that the pointer is over the object you want to double-click on.

For example, point at the !Edit icon in the Apps directory display.



Move the pointer over this icon

2 Double-click on the object

Press and release the Select (lefthand) mouse button twice in quick succession.

You have to make the second click while the second little arrow (the *double-click arrow*) which appears on the pointer after the first click, is still visible. If the item is highlighted but nothing else happens, try again, but double-click a little faster. Try not to move the mouse while you're doing this.

Double-click on the !Edit icon. The Edit icon will appear on the icon bar, showing that the Edit application has been loaded ready for use.

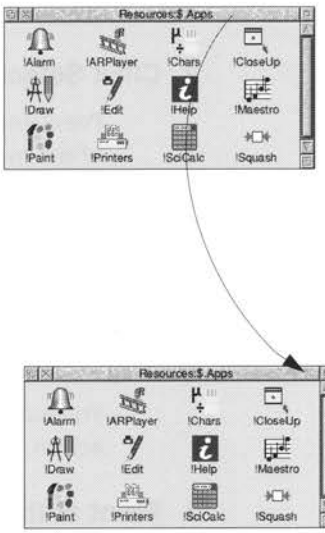
Dragging

You usually use dragging to move an object to a different place on the screen.

1 Point at the object

Move the mouse so that the pointer is over the object you want to move.

For example, to move a window, point at the title bar along the top of the Apps directory display. (The title bar is the part of the directory display containing the words `Resources:$.Apps`)



2 Select it with the mouse

Press **and hold down** the Select (lefthand) button of the mouse.

3 Move the mouse and drag the object

Move the mouse to drag the object across the screen. Release the Select button when the object is where you want it to be.

Drag the Apps directory display to a different position on the desktop.

Windows

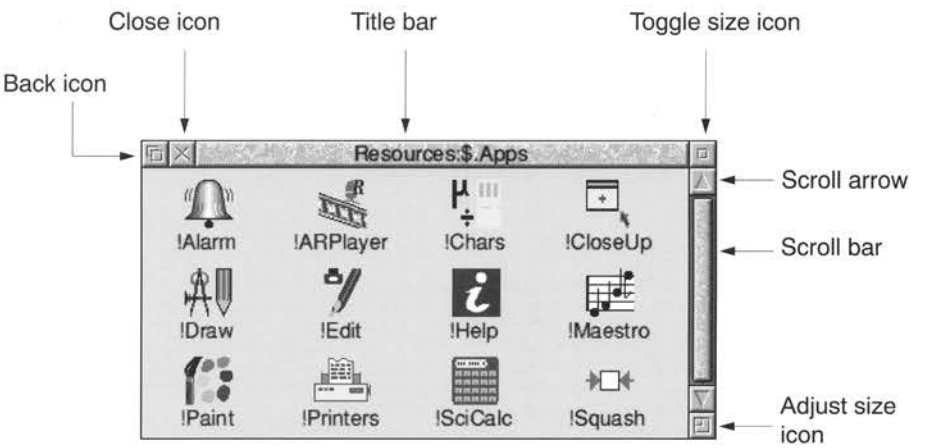
This chapter describes windows and explains how you can move, resize, hide and close them. It also describes how to move through the contents of a document too large to display in one window all at once.

What is a window?

A *window* is an area of the screen displaying an activity or application. An example of a window you have seen so far is the Apps directory display, which appears when you click on the Apps icon on the icon bar.

Features of windows

You can move windows around the screen, hide them behind other windows, close them to a small icon on the desktop, or close them completely. Icons on the window borders allow you to do these things. Most windows also have icons which allow you to change their size.



Title bar

The *title bar* displays the title of a window. This may be the name of an application, directory, or a document you're editing. Here's the title bar from the Apps directory display, which you can get by clicking on the Apps icon on the icon bar:

Back icon

Clicking on the *back icon* has the effect of putting a window to the back of the pile of windows on the screen. If you click on this, the window will be hidden behind any windows which overlap the area it occupies.

Close icon

Clicking on the *Close icon* closes a window. If you click on this, the window will be removed from the screen.

Toggle size icon

Clicking on the *Toggle size icon* switches a window between full size and the last non-full size displayed. (Full size is either large enough to display everything in the window, or such that the window fills the whole screen.)

This alternating action is called *toggling*.

Adjust size icon

Dragging the *Adjust size icon* lets you alter the size and shape of a window. Clicking the Select button on it also brings a window to the front of a stack of windows.

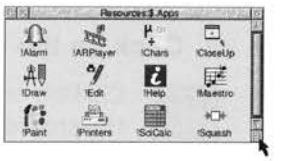
Practising manipulating windows

Practise using the window icons to do the things described on the following pages. You can use the Apps directory display to practise most of this.

Changing a window's size

1 Point at the adjust size icon

Move the pointer to the adjust size icon.

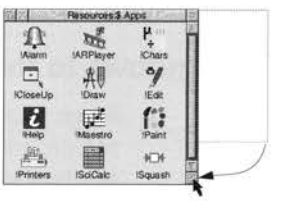


2 Drag the adjust size icon

Press and hold down the Select button. Move the mouse and drag the icon to change the size of the window.

3 Release the mouse button

Release the button when the window is the size you want it to be.

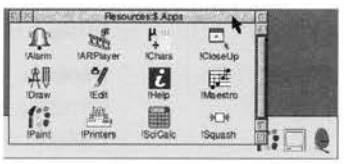


Moving a window

You move a window by dragging its title bar – follow the steps in *Dragging* on page 18.

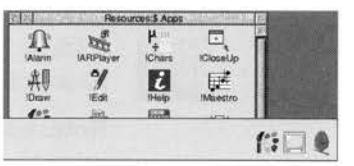
Off the screen

You can drag windows almost off the screen if you want to. Be careful if you do this – you can forget that you've dragged a window off screen, and think you've "lost" it.



Over the icon bar

If you've dragged a window so that it obscures the icon bar, hold down either of the ⇧ (Shift) keys on the keyboard and press the F12 key. This will bring the icon bar to the front. (Press the same key combination again to send it to the back – this is another instance of toggling).

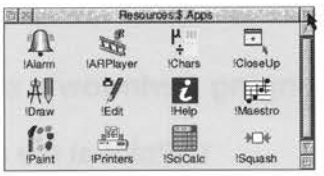


Toggling window size

1 Click on the Toggle size icon

Move the pointer over the Toggle size icon and click the Select button.

The window size will snap to nearly the width of the screen.



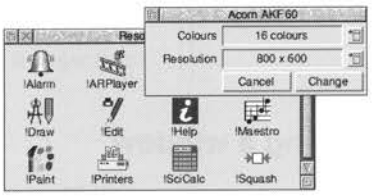
2 Click on the Toggle size icon again

Clicking on the icon again will reverse the process (note the changing toggle size icon).

Bringing windows to the front

When you have a stack of windows on the screen, you can get at the one you want by sending windows to the back or bringing them to the front.

First, click on the Display manager icon on the icon bar to bring up another window. Drag it on top of the Apps directory display.



Bring a window to the front

Click on the title bar (or the Adjust size icon) to bring a window to the front.

(**Note**: if you want to drag a window without bringing it to the front of a stack, use Adjust instead of Select.)

Send a window to the back

Click on the Back icon to send a window to the back again.

Note: not all windows have Adjust size or Back icons (for instance, the Display Manager window shown on the right).

Closing windows

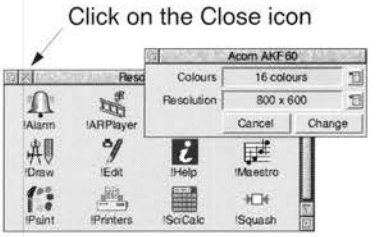
Click on the Close icon

Position the pointer on the Close icon and click Select.

For example, close the Apps directory display.

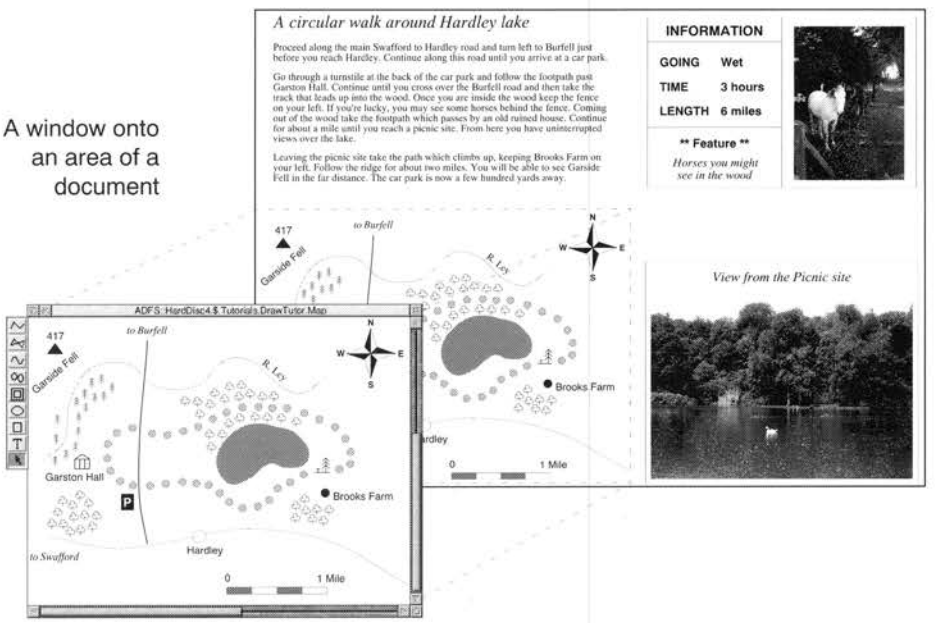
The window will disappear from the screen.

When you start using applications, you will find that most of them will ask you if you want to save your changes if you close a window containing unsaved work. *Saving a file* on page 53 tells you more about this.



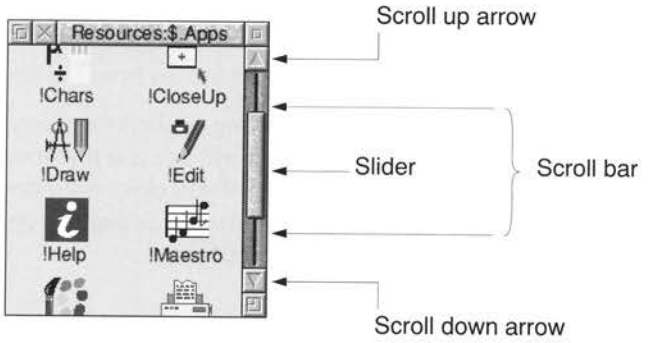
Scrolling

A window is so named because it allows you to see all or part of a file, application or whatever you've displayed on the screen. If a file is too large to display all at once, the window will only show a section of it. The proportion of the file visible depends on the size and shape of the window. The part of the file you can see alters as you move the window around the file:



The technique of moving around a large display inside a window is called *scrolling*. Try out the techniques on the following pages, and you'll soon get used to doing this.

Windows usually have scroll bars and scroll arrows to enable you to move around a display:



Scroll bars

The *scroll bars* allow you to scroll the window over the file, directory or picture you are viewing.

Slider

The size of the *slider* shows what proportion of the file is visible: if the slider occupies half the length of the scroll bar, half the file is visible. To display a different area of the file, drag the slider along the scroll bar. This technique is useful for moving quickly around a large file.

Scroll arrows

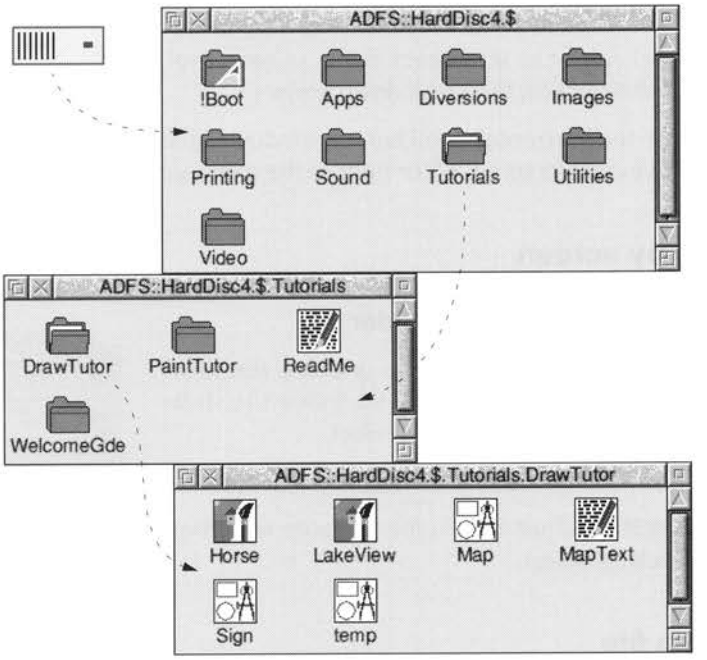
The *scroll arrows* are at each end of the scroll bar. Click on the arrow showing the direction you want to move the window in – left, right, up or down. This technique allows you a finer control over scrolling than dragging the slider.

Some windows (like the one above) only have vertical scroll bars, sliders and scroll arrows. Others have horizontal scroll bars, sliders and scroll arrows as well (they're along the bottom edge of the window).

Practising scrolling

In the examples in the rest of this chapter you are going to use the `Map` example file. The instructions below assume you have a hard disc fitted to your computer; if you do not, you should find out the location of this file from your network manager.

To find the file, click on the hard disc icon; this displays the contents of the hard disc. Double-click on the `Tutorials` directory; this displays the contents of the directory. Now double-click on the `DrawTutor` directory.



When the directory contents are displayed, double-click on the `Map` icon, and a window with scroll bars appears, containing some drawings and text.

If you are having problems with clicking and double-clicking, go back to page 16 and review your mouse techniques first, then come back to this point.

There are three main ways of scrolling around a window:

- Using the scroll arrows to scroll step by step.
- Using the scroll bars to scroll by a screenful at a time.
- Using the slider to move directly to a position in the window.

These techniques are described in the rest of this chapter so that you can practise them.

Scrolling step by step

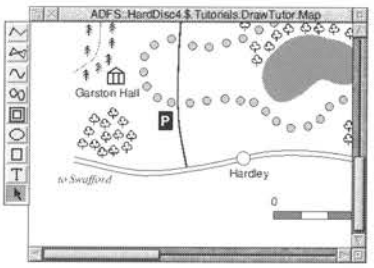
Click on the scroll arrow

Position the pointer on the scroll up arrow and click the Select (lefthand) button to scroll by small steps at a time.

Keep the Select button held down to continue scrolling.

Click Adjust to scroll back down. (Alternatively, click Select on the scroll down arrow.)

Use the horizontal scroll bar (on windows which have one) to scroll left or right in the same way.



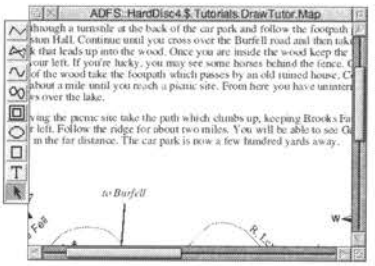
Scrolling screen by screen

Click above or below the slider

Position the pointer above or below the slider (above the slider to scroll up, below the slider to scroll down) and click Select.

The next screen of the document will appear.

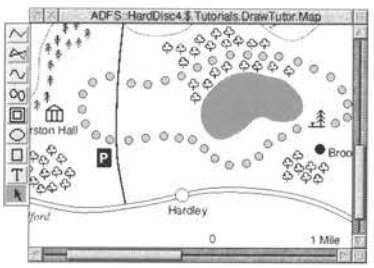
Clicking Adjust scrolls the opposite way from clicking Select.



Moving through a file

1 Select the slider

Position the pointer on the slider, press Select **and keep it pressed down**.

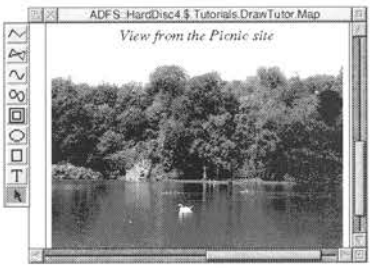


2 Drag the slider

Drag the slider to display the part of the file you want to view.

Move from one **side** of a document to the other by using the horizontal scroll bar (if the window has one).

Note: If you drag either slider with Adjust, you can move both from side to side and up and down at the same time. The pointer disappears while you're dragging then reappears when you release Adjust.



Menus and dialogue boxes

This chapter tells you what menus and dialogue boxes are, how to display them and choose things from them, and how to supply information when the computer asks you to be more specific about what you want.

What is a menu?

A menu on the desktop is similar to a menu in a restaurant: it's a list of things to choose from. In a foreign restaurant, if you can't actually speak the language, you can point at the menu with your finger to tell the waiter which dish you want (assuming that you know what the menu means!). On the computer, you move the mouse to point at your choice from the menu. This is the main way of doing things on the RISC OS desktop.

Menu options shown in grey (like **Clear selection** above) are not available at that time. Often you must perform another action before the option becomes available.

Using menus

To display a menu, click the Menu (middle) mouse button over a window, over an icon on the icon bar, or over a blank area of the desktop (the latter will display the Pinboard menu – see the section entitled *Pinboard* on page 57).

The menu displayed will depend on where the pointer is on the screen at the time, whether you have previously selected an icon, and on the application you're using.

Cancelling an unwanted menu

If you press Menu by mistake, or decide you don't want a particular menu after all, you can make a menu disappear by clicking on a blank area of the desktop or icon bar.

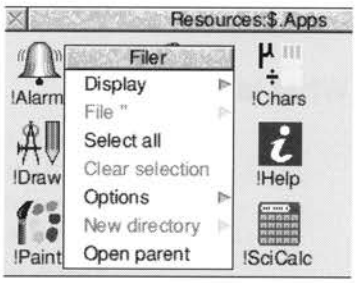
Displaying a menu

1 Point to the relevant icon

Move the pointer over the window or icon you're interested in.

For example, click on the Apps icon on the icon bar and move the pointer over the Apps directory display.

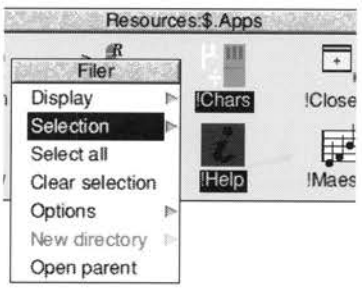
2 Click Menu



A menu will be displayed (*in this example, the Filer menu*).

If the pointer is over a file icon when you click the Menu button (or if you had previously selected an icon by clicking on it) the menu will apply to that individual file.

You can make the menu apply to more than one icon in a window by clicking on each icon in turn with Adjust (not Select) before you bring the menu up. Use Adjust to deselect icons, too.



You can make the menu apply to all the icons in a window by choosing **Select all** from the menu – see below.

Choosing from a menu

With a menu displayed, click on the option you want (notice that menu options are highlighted as you move the pointer over them).

For example, on the Filer menu you displayed above, point at the **Select all** *option and click Select. All the file icons in the directory display will be highlighted and the menu will disappear.*

To reverse this, repeat the above process, choosing **Clear selection** *instead. Alternatively, click on a blank area of the directory display.*

Keeping a menu on the screen

You'll notice that after you click Select to choose a menu option, the menu disappears.

If you click with Adjust instead of Select, the menu will stay on the screen, and you can choose another option.

Choosing from a submenu

1 Highlight the main menu item

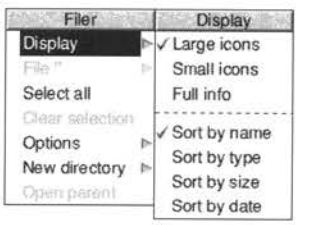
Move the pointer onto a main menu item with an arrow. An arrow to the right indicates that a *submenu* is available.

For example, point at the **Display** *option on the Filer menu.*

2 Display the submenu

Move the pointer onto the arrow.

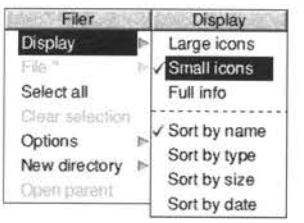
The **Display** *submenu will appear on the screen.*



3 Click on the submenu item

Highlight and make your submenu choice by moving the pointer over it and clicking on it.

Click on **Small icons**. *The icons in the directory display will change size.*



Note: If a menu is on the righthand side of the screen, it may become partially obscured by a submenu. To prevent this, move the menu towards the left of the screen by dragging on its title bar **before** displaying the submenu.

What is a dialogue box?

A *dialogue box* is a window which contains a number of related options from which you can make choices. You can think of it as like filling out a form – you need to supply answers to the questions being put to you. Once you have done that, applying your choices will perform an appropriate action. Dialogue boxes can appear in two circumstances:

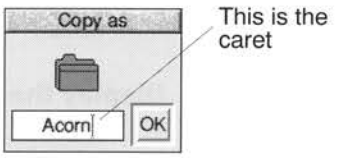
- Instead of a submenu, you will sometimes see a dialogue box.
- If you choose a menu item whose name ends in an ellipsis (...), you will see a dialogue box.

Icons in dialogue boxes

Here are the different icons you'll come across:

Writable menu option

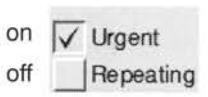
This is a field, containing a *caret*. A caret shows where you can enter text. Some fields are blank. Others include a default name, which you can change if you want.



To erase the default name, press Delete until it has gone. (A quicker way is to hold down the Ctrl key and press U.)

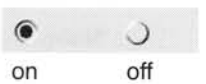
Option icon

This is a 'switch' that can either be on or off. You may have more than one switch on at once.



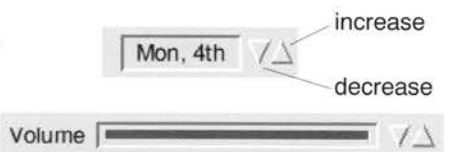
Radio icon

This is one of a group of 'buttons', only **one** of which may be selected at once (like the waveband selection buttons on a radio).



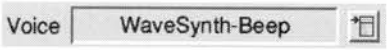
Arrow icon

This is an arrow you click on to increase or decrease any progressive series, such as numeric values, dates, or sliders.



Menu icon

This is an icon which displays a menu list when you click on it. Choose an option from the menu list and the choice is reflected in the dialogue box.



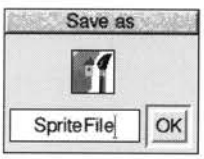
Applying the changes you've made

The way you apply the changes you've specified depends on the type of dialogue box. Some dialogue boxes have one or more buttons at the bottom for you to click on (such as **Save** and **Cancel**); others take effect as soon as you click on an arrow or radio icon.

Dialogue boxes with several buttons may have a *default action button*. This is a button with a thicker border (like the **Save** button shown above), and can usually be found in the bottom righthand side of the dialogue box. As well as clicking on this button, you can apply the changes you've made by pressing ↵ (Return) on the keyboard.

Some dialogue boxes (usually **Save as** boxes) have a writable menu option which you should type in (to supply a filename, for instance). There are three ways of applying the name you supply in such a dialogue box:

- press ↵ (Return)
- click on **OK**
- drag the file's icon from the dialogue box to a directory display.



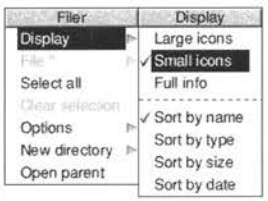
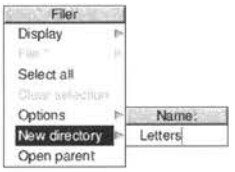
You'll find out more about this in *Files and directories* on page 51.

Cancelling a dialogue box

You can cancel a dialogue box by clicking on the Close icon (if it has one) or the **Cancel** button. Any choices you made in the dialogue box prior to cancelling it will be ignored.

Choosing menu options – conventions in this Guide

Now that you know about menus, here are the conventions we'll use in the rest of this Guide to tell you how to choose menu options and fill in writable menu boxes.

What the manual says	What you actually do	
Move the pointer over the Tutorials directory display, click Menu and choose **Display/Small icons**.	1 Move the pointer over the Tutorial directory display. 2 Click the Menu (middle) button. 3 Move the pointer to the right of the **Display** option. This opens the **Display** submenu. 4 Move the pointer over the **Small icons** option. 5 Click Select to choose the **Small icons** option.	
Move the pointer over the directory display, click Menu and enter `Letters` into the **New directory/Name:** writable menu box.	1 Move the pointer over the directory display. 2 Click the Menu (middle) button. 3 Move the pointer to the right of the **New directory** option. 4 Use the Delete key to erase any existing default name. 5 Type in the name `Letters` for your new directory. 6 Click Select over the **New directory** writable menu box (or press ↵) to enter the name.	

Discs and disc drives

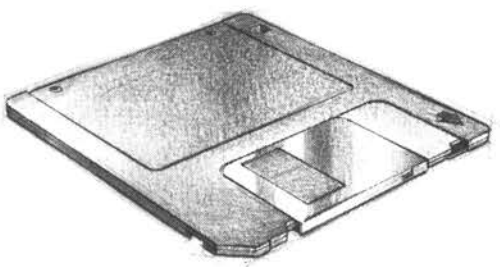
This chapter tells you how to use and take care of your discs and disc drives, and how to format and make backup copies of discs.

Floppy discs and hard discs

You can store information and programs on hard or floppy discs. If a CD-ROM drive is fitted to your computer, you can also access data and programs on CD-ROMs. See *Using a* CD-ROM *Drive* on page 103 for more information.

Floppy discs

Your computer uses 3.5 inch floppy discs which look like this:



You can obtain floppy discs from your computer supplier. *Floppy disc storage sizes* on page 37 tells you which discs to ask for. Before you use them, you'll have to *format* them (see *Formatting a floppy disc* on page 38).

You put the discs into the floppy disc drive (see *Inserting and ejecting floppy discs* on page 36). The drive can only take one disc at a time.

The floppy disc icon is on the lefthand side of the icon bar.

Hard disc

A hard disc may be fitted to your computer. The amber light on the front panel of the computer will come on when the hard disc is active.

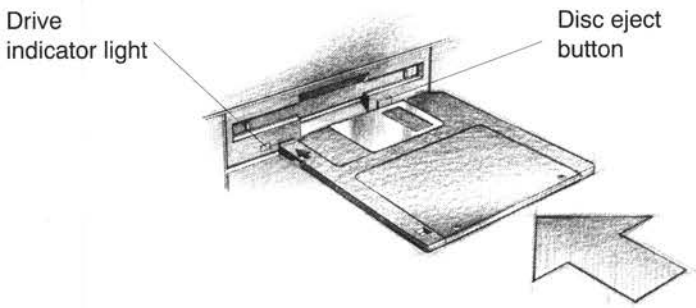
A hard disc can hold a lot more information than a floppy disc, and the computer can find information on it a lot faster.

The hard disc icon is on the lefthand side of the icon bar.

Inserting and ejecting floppy discs

The floppy disc drive is on the front of the computer at the left. There's a picture of the front of the computer on page 75.

Insert the disc into the floppy disc drive like this, with the label uppermost:



The disc clicks into place when it is fully inserted.

To *eject* (remove) a floppy disc from the drive, press the *disc eject button* below the disc slot, but only when the *drive indicator light* is off. Don't try to eject a disc when the drive indicator light is on unless instructed by the computer to do so; it indicates that the drive is still running.

Looking after floppy discs

You will build up a collection of discs as time passes. Label them so that you always know which one holds the information you need. Store them carefully and keep them away from

- extremes of temperature
- strong magnetic fields (e.g. TVs or loudspeakers)
- dust, dirt, drinks, pets etc.

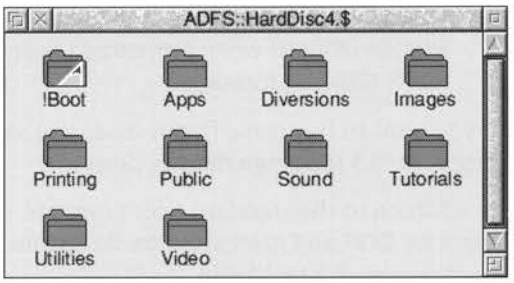
Don't open the metal shutter on the disc, as the disc surface is easily contaminated by dust and small particles. For this reason, it's not a good idea to write on the labels in pencil: small pieces of pencil lead can easily get onto the disc surface.

Accessing information on discs

To see what's on a floppy disc, insert it into the floppy disc drive and click on the floppy disc drive icon on the icon bar.

To see what's on a hard disc, click on the hard disc icon on the icon bar.

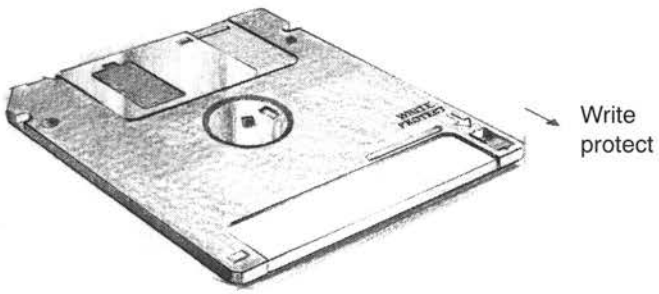
When you click on a hard or floppy disc icon, the contents of the disc will be shown in a directory display similar to the example shown below:



Write-protecting a floppy disc

If you *write-protect* a floppy disc, it means that you cannot change anything on the disc, delete anything by mistake, or save any new files to the disc. You should write-protect discs containing any information you don't want to lose (and don't want to change at present).

To write-protect a disc, move the plastic tab (on the underside of the disc) towards the edge of the disc with your finger nail:



Remove write-protection by moving the tab back again.

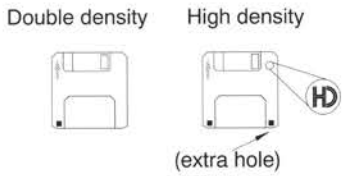
Floppy disc storage sizes

Floppy discs are a bit like audio cassettes – they both store (or record) information. Some audio cassettes hold more information than others (for instance, a C90 holds more than a C60) even though they look the same physical size.

This is the same for floppy discs – the 3.5 inch discs your computer uses are available in different **storage** sizes.

You can use the following sizes of floppy disc with your computer:

- *High density* floppy discs, holding up to 1.6 *megabytes* (1.6MB) when formatted (Acorn ADFS 1.6M format).
- *Double density* floppy discs, holding up to 800 *kilobytes* (800KB) when formatted (Acorn ADFS 800K (E) format).



If you want to buy some floppy discs you should ask for "3.5 inch double density discs" or "3.5 inch high density discs".

In addition to the standard Acorn formats, your computer can also format and use discs for DOS and Atari systems. To ensure reliability only format discs in accordance with this table.

Filing system	Formatted size of disc	Disc density required	
RISC OS	1.6MB	high	HD
RISC OS	800KB	double	DD
DOS	1.44MB	high	HD
DOS	720KB	double	DD
Atari	720KB	double	DD
Atari	360KB	double	DD

You can use DOS and Atari formatted discs to transfer data and information between these types of computer and your Acorn computer. You cannot run Atari applications or programs on your computer. You can only run DOS programs if you have PC Soft or a PC hardware expansion card. See your supplier for more details.

Formatting a floppy disc

Before you can use a new floppy disc, you need to *format* it. Formatting a disc prepares it so that you can store information on it. This is rather like drawing straight lines on a blank piece of paper before you start writing on it. It tells the computer where to put the information – it writes along the lines (called *tracks*). Formatting also tells the computer how much information a floppy disc can hold.

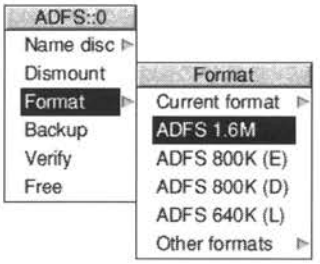
Warning! When you format a disc, any information that was previously stored on it is permanently lost. So, don't reformat a disc unless you are certain that you no longer require the data stored on it.

1 Make sure the disc is NOT write-protected

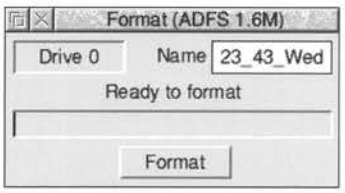
2 Insert the disc in the floppy disc drive

3 Display the Format dialogue box

Move the pointer over the floppy disc drive icon on the icon bar, and click Menu.



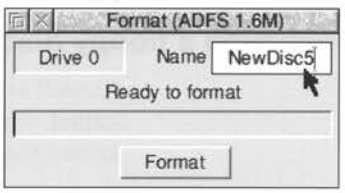
Choose **Format/ADFS 800K (E)** (or **Format/ADFS 1.6M**, if you've got a high density disc). The Format dialogue box will appear.



Important note: you should only choose **Format/ADFS 1.6M** if you have a high density disc.

4 Decide on a name for your disc

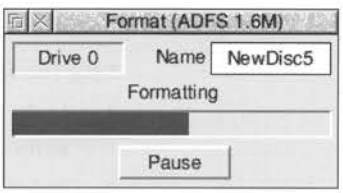
Move the pointer over the **Name** box and click, then hold down the Ctrl key and press U to delete the default disc name. Then type in the name you've decided on.



If you don't supply a name the computer will give the disc a name based on the date and time. See *Renaming a floppy disc* on page 40 for information about disc names allowed.

5 Format the disc

If you're sure you want to format the disc, click on **Format**.



Remember, this will remove any information that may already be on the disc.

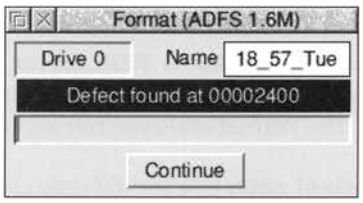
If you don't want to format the disc after all, simply click on the Close icon of the dialogue box to abandon the operation.

During formatting, an indication of the progress of the operation is displayed. First of all, the disc is formatted (the progress is indicated by a red bar), and then it is *verified* (the progress is indicated by a green bar). A disc is always verified after formatting, to make sure that the operation has completed successfully. When you see the message **Disc formatted**, click on **OK**.

Using floppy and hard discs in the RISC OS 3 *User Guide* has more information about formatting discs. When you've formatted a disc, it's a good idea to stick a label on it and write on a name – something to help you remember what is on the disc.

Disc errors

If, while formatting is in progress, you get a message that looks like this



then the chances are your floppy disc is faulty. If you click on **Continue**, the computer will attempt to 'map out' any defects (no information will be stored on the faulty parts of the disc). You can use a disc with such defects, but there's always the chance it may prove faulty in the future. So if you can afford to, it's best if you throw the disc away and use a new one.

Renaming a floppy disc

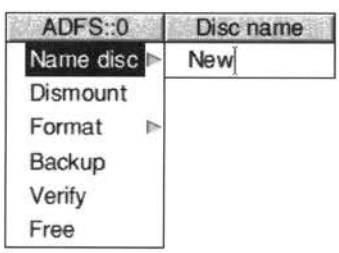
As well as writing the disc's name on a sticky label so that **you** know what it's called, you can use the computer to name the disc electronically (so the **computer** knows the disc's name too).

If you don't choose names for your floppy discs when you format them, the computer will give them default names of the form `12_43_Tues`. It's a good idea to give your floppy discs names which will help you remember what's on them (like `BankLetter` or `Some_Pics`).

Take the following steps to rename a floppy disc:

1. Make sure the disc you want to rename isn't write-protected.
2. Put the disc into the floppy disc drive.
3. Move the pointer over the floppy disc drive icon and click Menu.
4. Type the new disc name in the **Name disc/Disc name** menu option.

   Note: the name must be at least 2 characters up to a maximum of 10, but you can't use any spaces, or the characters $ & % @ \ ^ : . # * " |.



5 Click on the name, or press ↵ (Return).

The disc now has a new name. To see it, click on the floppy disc drive icon on the icon bar. A directory display will appear, with the new name in the title bar. Remember to write the disc's name on its label.

Note: Always try to make disc names unique. You won't then get confused if the computer asks to see a particular disc. Also, make the name you physically write on the disc similar to (or the same as) the electronic name you type in when you rename a disc.

Making backup copies

It is a good idea to make a *backup* copy of any valuable files or floppy discs from time to time, in case a disc is damaged or a file is accidentally deleted. RISC OS applications are supplied ready installed on the hard disc, and you will run them from there. When you buy other applications, you should copy them to your hard disc for use, and keep the original discs safe.

Backing up a floppy disc

You'll need a blank formatted disc (known as the *destination disc*) on which to make the backup copy. You can either use a brand new disc, or an old one which contains information you no longer need. You'll need to format a new disc before you can use it as a backup disc. It must be the same format as the *source disc*.

Take the following steps to make a backup copy of a floppy disc:

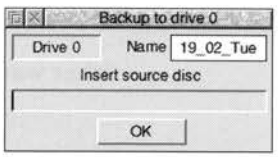
1 Write-protect the source disc (containing your valuable information) but not the destination (empty) disc.

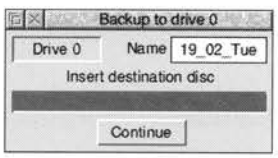
2 Put the source disc into the floppy disc drive.

3 Click Menu on the floppy disc drive icon on the icon bar and choose **Backup**. You'll see the Backup dialogue box.

4 Click on **OK** to start the backup. The computer will read the source disc.

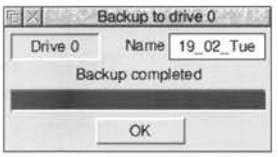
5 Follow the rest of the instructions until backing up is complete – the computer will ask you to swap the source disc and destination disc while it transfers information between them (click on **Continue** each time you've done it).





6 Click on **OK** when the backup is complete (a message will appear in the Backup dialogue box telling you the backup has finished).

7 Choose an appropriate name for the disc and write it on the disc's label.



For more information on backing up floppy discs, and for quicker ways of doing it, see *Using floppy and hard discs* in the RISC OS 3 *User Guide*.

Backing up files from a hard disc

If you have any files on your hard disc that you can't afford to lose, it's a good idea to keep backup copies of them on a floppy disc, in case you delete them by mistake.

Copying individual files and applications to a floppy disc

Format a blank floppy disc, and copy any important files from your hard disc onto it (see *Copying a file to another directory* on page 55). Then rename your floppy disc to remind you what's on it.

You can increase the amount of data that can be stored on a disc by compressing it using the Squash application. Refer to the *Squash* chapter in the RISC OS 3 *User Guide* for more details.

Backing up your hard disc to floppy discs

You can back up parts of your hard disc onto floppy discs using the backup procedure explained in the *Using floppy and hard discs* chapter of the RISC OS 3 *User Guide*. This method will not work for any files which are bigger than the size of a single floppy disc, however (about 1.6MB).

Other ways

It is possible to purchase specialist backup hardware, such as tape drives and additional disc drives. Contact your supplier for more information.

Using the keyboard

This chapter describes the keyboard and its functions.

A quick tour of the keyboard

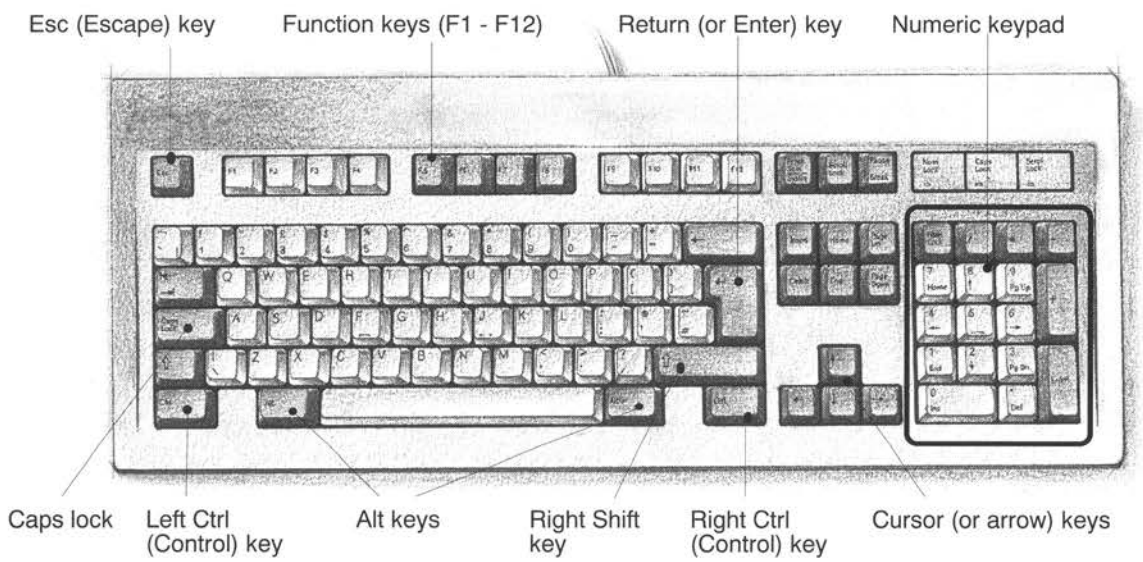
The illustration on this page shows how the keys are laid out on the keyboard. This chapter describes the main features of the keyboard, and tells you how to use the different groups of keys.

The keyboard is divided into the following major blocks:

The *typewriter keys* are in the main block, and are similar to a typewriter keyboard.

The *function keys* (marked F1 to F12) are in a row above the typewriter keys. The function of these keys in a particular piece of software is often marked on a card supplied with the software. You don't need to use these keys at the moment.

The *numeric keypad* is at the far right, laid out like a calculator. These keys can be used either to type numbers (when the **NumLock** key is on) or to perform special functions, depending on the program or application you are using.



The computer control keys

The *computer control keys* are those keys which do not produce visible characters when pressed. They therefore exclude most of the typewriter keys, and the numeric keypad, but they include all the function keys. Computer control keys sometimes have different functions, depending on the software they are being used with, although some of the more common keys are used as follows:

Esc (*Escape*) — at the top left of the keyboard cancels an operation (e.g. printing).

F1, F2, ..., F12 (*Function keys*) — as mentioned above, the function of these keys in a particular piece of software is often marked beside a menu option, or on a keycard.

Delete — deletes a character to the left of the caret (e.g. in Edit) or deletes a selected object (e.g. in Draw).

↵ (*Return*) — completes a line, either starting a new line of text, or sending a name or instruction to the computer.

← (*Backspace*) — above the ↵ key has the same function as the Delete key, but is often in a more convenient position.

Caps Lock — (when on) makes everything you type appear in capitals. If you don't want this, press the key once.

⇧ (*Shift*) — changes the meaning of a key, when held down while that key is pressed. For example, holding down ⇧ (Shift) and pressing a letter causes that letter to appear in upper case (there are two of these keys).

Ctrl (*Control*) — changes the meaning of a key, when held down while that key is pressed (there are two of these keys).

Alt — changes the meaning of a key, when held down while that key is pressed (there are two of these keys, the right key is labelled **Alt Gr**).

End — copies a selected object (e.g. in Draw) or deletes a character to the right of the caret (e.g. in Edit).

Print Scrn — normally displays the print option box when used in conjunction with an application.

Break — used in conjunction with the Ctrl key to force the computer to restart itself. **All unsaved work is lost when you do this.**

↑, ↓, ←, → (*Cursor keys*) — move the cursor (when it is visible) around the screen in the direction of the arrow on the key. These are also known as arrow keys.

Special key combinations

Sometimes you need to press more than one key. In such cases:

1 Press **and hold down** all except the last key in the sequence.

2 Press and release the last key in the sequence.

3 Release all the other keys.

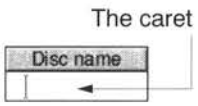
For example:

- 'Press Shift F12' means press and hold down the ⇧ (Shift) key, then press and release F12, then release Shift.
- 'Press Ctrl Shift F12' means press and hold down the Ctrl and ⇧ (Shift) keys, then press and release F12, then release Ctrl and Shift.

When to use the keyboard

You will need to use the keyboard for many tasks, such as

- supplying answers to questions the computer asks in writable menu boxes (including giving names for files and documents you create)
- using a word processor, or a text editor like Edit (for an example of this, see *Using applications* on page 47)
- choosing some menu options using keyboard shortcuts (for example pressing F3 from many applications to **Save** a file)
- entering data in a spreadsheet or database.



Whenever you need to use the keyboard within the desktop, a vertical bar appears. This is called a caret. Any characters you type will appear to the left of the caret, which will move to the right. The caret may only appear when you click in a window.

Moving around a document

Some other keys allow you to move around long documents. Try these out when you are using an Edit document.

Home moves the caret to the start of the document

Page up moves to the previous 'windowful' of the document

Page down moves to the next 'windowful' of the document

These keys have no effect in some applications (Paint or Draw, for example).

You can, of course, also use the scroll bars and cursor keys to move around the document.

Typing special characters

Sometimes you need to be able to type special characters that are not apparently on the keyboard, such as accented characters, or symbols like ©. You can in fact get at lots of extra characters using the Alt key. The keyboard map at the bottom of this page shows the standard character set. Here's how to type them:

Typing accented characters

Some of the keys on the figure below are marked with a black area in the lower right corner. These keys allow you to type accent characters. The accent in each case is the character nearest the black area of the key.

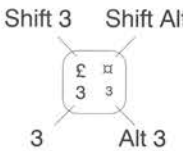
For example, to type an 'e' with an acute accent (é):

1 Whilst holding down the Alt key, press and release the | key.

2 Release the Alt key.

3 Press and release the E key.

Typing other special characters



You can type the other special characters shown in the keyboard map using the instructions shown on the left.

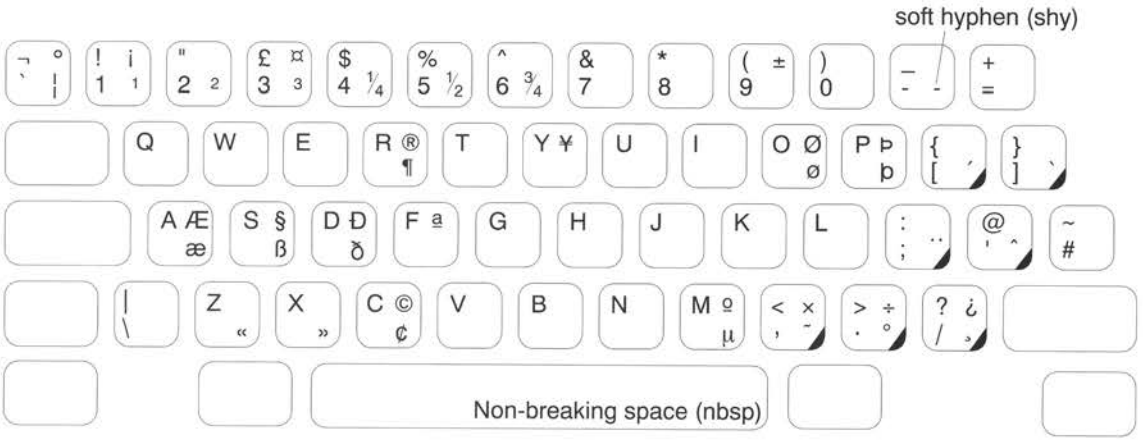
For example, to type a ¤ symbol:

1 Hold down the ⇧ (Shift) and Alt keys, press and release the 3 key.

2 Release the ⇧ (Shift) and Alt keys.

The application Chars also lets you insert many special characters and symbols into your document. For more information, refer to the RISC OS 3 *User Guide*.

Special Characters: Keyboard Map



Using applications

This chapter tells you how to load and run applications on your computer. It uses the application Edit *as an example.*

What are applications?

Applications, like Edit or Draw, are the tools that you use to produce your letters, drawings, music and so on. Application names always start with an exclamation mark (!) – for example, !Draw.

Some applications (such as Edit) are provided in the Apps directory on the icon bar. There are other applications on the hard disc, if fitted. Many other applications and games are available from your supplier.

Starting an application

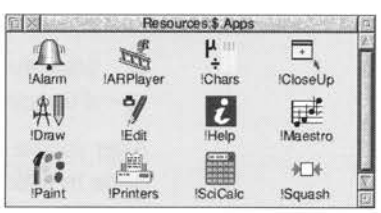
There are three main ways you can start an application:

- Double-clicking – move the pointer over the application's icon, and double-click.
- Dragging – move the pointer over the application's icon, then drag it onto the icon bar, and release.
- Double-clicking on an associated file – e.g. double-click on a Draw file to start Draw. This only works if the computer knows where to find the application (i.e. if it is in the Apps directory, like Draw or Edit, or if the directory containing its icon has been displayed since you last switched on).

1 Open the directory display containing the application directory

To use an application that is on a floppy disc, put the disc in the floppy drive and click on the floppy disc drive icon. This will open the *root directory* display for the disc.

To use one of the computer's own applications, like Edit, click on the Apps icon on the icon bar to show the Apps directory display.



Try this now as an example.

2 Start the application

Double-click on the application's icon. It will appear on the righthand side of the icon bar, ready for you to use.

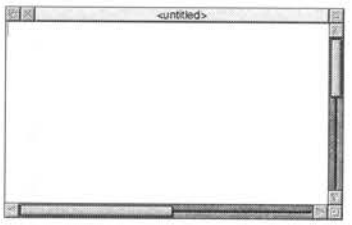
For example, double click on !Edit. *Its icon will appear on the icon bar, indicating that it has been loaded into the computer's memory, and is waiting for you to use it.*

Some applications (like Chars) or games open a window as soon as you double-click on their icon, instead of appearing on the icon bar.

Using applications

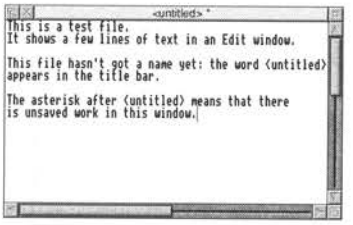
Once you have started an application, you can usually begin using it by clicking on its icon on the icon bar. An *application window* will open on the desktop.

To use Edit, *click on its icon on the icon bar: an empty* Edit *window will appear, ready for you to start writing.*



Type in some text. Any text you type using the keyboard appears in the window. Text appears to the left of the vertical bar – the caret. The caret moves to the right, to make room for the text.

Press ↵ (Return) *to start a new line, and press it again to leave a blank line.*



Once you have typed a few lines of text, move the caret around the text by moving the pointer with the mouse and clicking Select *– the caret will jump to the position of the pointer. You can insert (or delete) text at the new position.*

If you aren't sure what the different keys on the keyboard are for, refer to Using the keyboard on page 43. *A couple of points to note:*

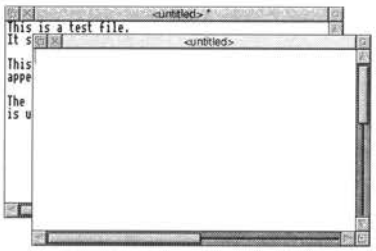
- *The* Caps Lock *key light may be on when you start, indicating that all letters you type will be capitals. Press this to get all lower-case letters.*
- *When the* Caps Lock *is off, hold down the* ⇧ (Shift) *key to type an upper-case letter (or one of the upper characters on the number keys).*

After you've finished using an application, you will need to *save* any work you've done in a *file* on a disc (otherwise your work will be lost when you switch the computer off). The next chapter, *Files and directories*, tells you how to save the Edit file you've just created, so you can leave its window on the screen for now.

Using more than one application window

Often you'll have more than one application window open on the desktop. You can only enter information (e.g. write some text, or draw a picture) in one window at a time. To change the window you are working in, move the pointer over your chosen window and click Select. You'll notice that the title bar will change to a light shade of yellow, indicating that it is now active, and you can type into it.

For example, click on Edit's icon on the icon bar to bring up a second Edit window. The second window will be active.



Now click on some text in the first Edit window to make it active.

Close the second (empty) window. You don't need it now.

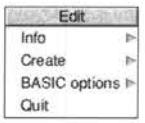
Quitting applications

When you've finished using an application, you'll usually want to *quit* it. To quit an application:

1 Display the application's icon bar menu

Click Menu over the application's icon on the icon bar.

For example, try this on Edit's icon.

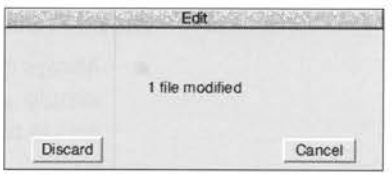


2 Choose Quit

Click on the **Quit** option.

If you've already saved everything you've done in the application, its icon will disappear from the icon bar.

If you've forgotten to save any work, the computer will remind you, and ask if you really want to quit, discarding any changes.



In this case, you have not yet saved your work in Edit. So, click on **Cancel** *to leave Edit running. You'll find out how to save your work in the next chapter.*

The Boot application

If you were writing a letter by hand, you would need to know where to find the *resources* to write it (paper, envelope, pen etc). The computer uses different types of resources, and also needs to know where to find them. They are contained in the *system application* !Boot (or, if you are using a network, !ShareBoot or !ArmBoot, kept on the network fileserver).

Normally you just ignore the !Boot application; it just resides in the main directory and controls the applications and the fonts that you use.

As well as looking after the system, !Boot also controls the way your computer behaves as it starts up. It enables you to start up certain applications automatically and perform tasks each time the computer is switched on.

The !Boot application also lets you

- set a password so that other users cannot write to the hard disc
- set the number of discs in the system
- set the default network file server (if you are connected to a network)
- set mouse, keyboard and memory parameters
- set the behaviour of the desktop windows
- add more fonts to those already used in the computer.

The chapters *Changing the computer's configuration* and *Customising the desktop startup procedure* in the RISC OS 3 *User Guide* describe how to use !Boot in detail.

Note: Never try to delete !Boot. !Boot is one of the most important applications on your computer; without it your computer will not operate correctly. You should make sure that you save a copy of !Boot on the hard disc (with a different name) before you start changing any configuration parameters within !Boot.

Saving Memory

Managing memory in the RISC OS 3 *User Guide* gives you some hints on how to get the most out of the memory available on your machine. For instance:

- Always quit applications if you're not using them – they take up memory. A simple way to make sure there is no memory 'tied up' by an application you've quit is to restart the computer – see *Switching off the computer* on page 65.
- Choose a low resolution screen display that doesn't use much memory. *The desktop* in the RISC OS 3 *User Guide* gives you some hints to follow.

Files and directories

This chapter explains how you can store information in an organised way, copy it, and delete it when you no longer need it.

What are files and directories?

Everything you create using an application can be saved as a file, whether it consists of text, graphics or a program. Each file has a name – you have to provide one when you save a new file.

File icons have a square box around them, but what's in the box depends on what sort of file it is. Double-clicking on a file's icon will load the file (if the application to display it is available).

Files are stored in *directories*. A directory can contain many files, and also other directories (*subdirectories*) and applications. Directory icons usually look like folders, to indicate that they can contain files or other directories.

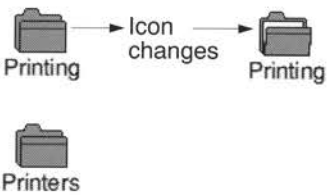
There is a special sort of directory called an *application directory*. Its name always begins with a '!', and it contains an application, such as a word-processor, or a drawing package. Applications usually have their own individual icons; the icon shown here is the icon for !Draw. There is more about applications in the previous chapter and in the RISC OS 3 *User Guide*.

Opening directory displays

1 Open a directory display

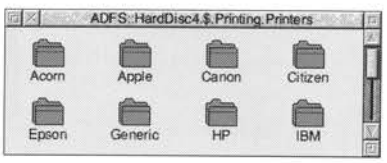
For example, double-clicking on the Printing *directory opens the directory and the* Printing *directory icon changes to the open directory icon.*

The resulting directory display shows various applications, including a directory called Printers.



2 Open a subdirectory

Double-click on the Printers *directory, and the* Printers *directory display will appear. This contains files (in this case, printer definitions used with the* Printers *application).*



Double-clicking on an application

Double-clicking on an **application** directory loads the application, usually onto the icon bar ready for use. See the previous chapter for more on this.

Three refinements you might find useful later on:

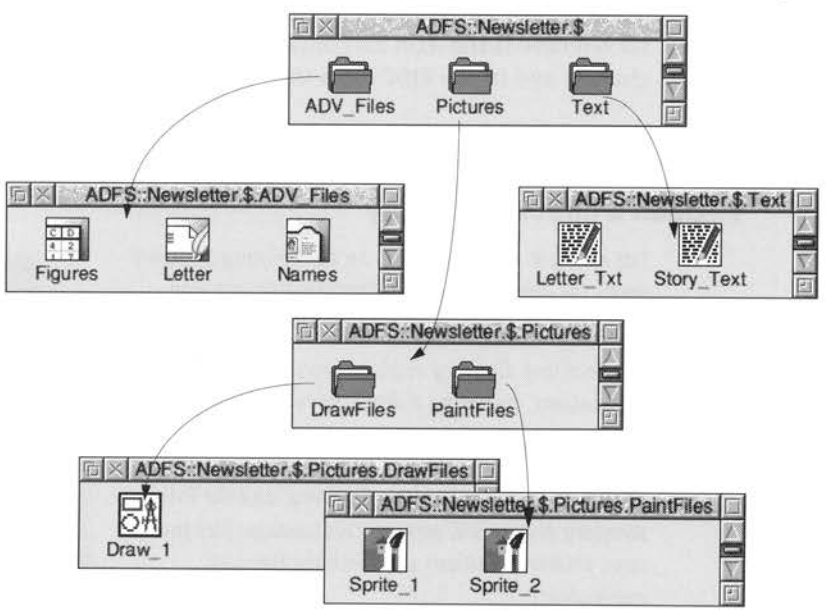
- Double-clicking Adjust on a sub-directory icon opens the sub-directory display and simultaneously closes the directory display it came from (the *parent*). This can help to reduce the number of windows that will gather on the desktop during a work session.
- Double-clicking Adjust on an application icon will simultaneously load the application and close its directory display.
- Clicking Adjust on the close icon closes a directory display and simultaneously opens its parent directory.

See RISC OS *applications* in the RISC OS 3 *User Guide* for more examples of this.

Building a file structure

You need to organise your files carefully. If you leave them all in the root directory on the disc, it will soon become large and unwieldy. You are usually also limited to having no more than 77 files, directories and applications in a directory.

Build up a file structure with files of similar types grouped in directories. For instance, the file structure of a disc for a newsletter might look something like this:



To create a structure like this, you'll need to create directories, and save, copy or move files into them. You'll be able to do this by creating a new directory on the hard disc and saving your files there.

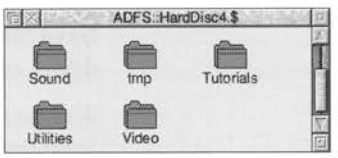
A fuller description of the *filing system* is given in the RISC OS 3 *User Guide*.

Creating a new directory

1 Open a directory display

Decide where you want to create the new directory, and open a directory display.

For example, click on the hard disc icon on the icon bar.



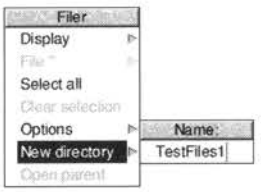
2 Enter a name for your new directory

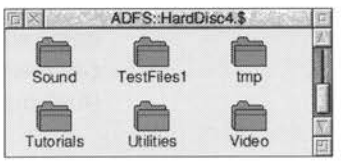
Move the pointer over the directory display and click Menu to display the Filer menu.

Type in a name for your new directory in the **New directory/Name** writable menu box and click on it (or press ↵).

Call it `TestFiles1`*, for example.*

An icon for the new directory will appear in the directory display.



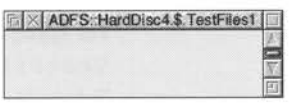


Saving a file

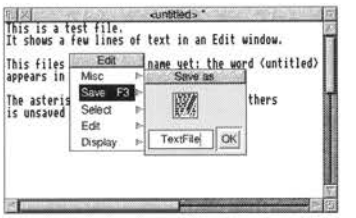
1 Open the directory display

Decide on the directory in which you want to save your file, and double-click on its icon to open a display for it.

For example, double-click on the `TestFiles1` *directory you've just created.*



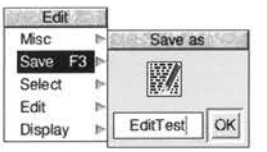
2 Give your file a name



Move the pointer over the work you want to save and press Menu to display the application menu. Enter a name in the **Save as** dialogue box.

For example, try this on the Edit file you created in the last chapter.

Click Menu and enter the name `EditTest` *in the* **Save/Save as** *dialogue box (you'll need to erase the default name* `TextFile` *using Delete).*

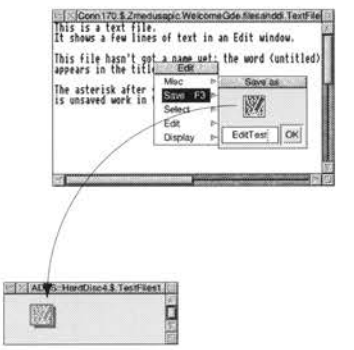


Filenames and directory names on disc can have between one and ten characters, but **not** blank spaces or the characters $ & % @ \ ^ : . # * " |.

You can use upper-case (capitals) and lower-case letters wherever you like in the name – the computer makes no distinction between them. The only reason for calling your file `EditTest` instead of `edittest` is that it's easier for you to read.

If you've saved this file before (the correct file name will appear on the box if you have) you can miss out the next step – just press ↵ (Return).

3 Save your file



To save your file, drag the file icon in the dialogue box into the directory display and release the Select button.

For example, save your file `EditTest` *in your* `TestFiles1` *directory. Then quit the file* `EditTest` *(click on the Close icon).*

Loading a file

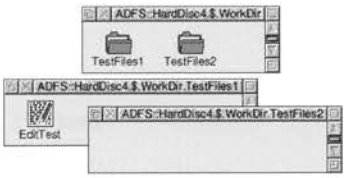
You can **load** a file by double-clicking on its icon, as long as the relevant application is either in the Apps directory, or the application icon has been displayed on the screen since you last switched on the computer (the application has been 'seen').

Copying a file to another directory

1 Open the destination directory display

If you haven't already done it, open the directory you want to copy the file into.

For example, create another new directory called `TestFiles2` *(follow the instructions in Creating a new directory* on page 53*). Open the new directory, so both* `TestFiles1` *and* `TestFiles2` *are displayed.*



2 Select the file to be copied

Click on the icon of the file you want to copy.

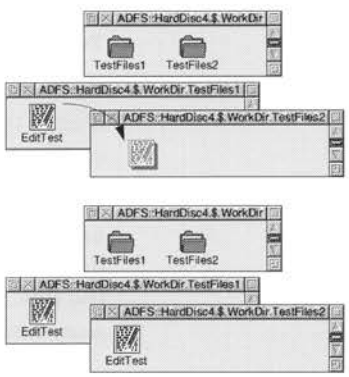
You can select two or more files in the same directory display by clicking on their icons with Adjust (or by choosing **Select all** from the menu). Use Adjust to deselect icons, too.

3 Copy the file to the new directory

Drag the file's icon into the new directory display.

For example, drag the file `EditTest` *onto the directory* `TestFiles2`.

The file will be copied into the new directory. A copy of the icon will appear in the directory display when this has been done.



Moving a file

To *move* a file (so that the original is not retained in its original location), repeat the steps in the previous section, but hold down ⇧ (Shift) during steps 2 and 3.

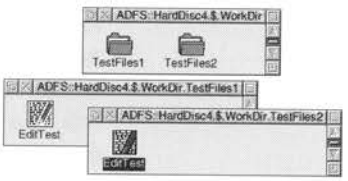
Deleting files and directories

Warning: once you have deleted a file or directory, you can't get it back again, so use this option with caution!

1 Select the file or directory to be deleted

Click on the icon of the file you want to delete.

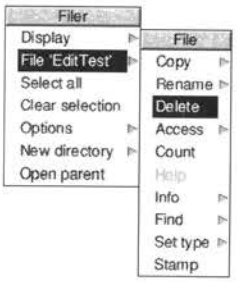
For example, select the copy of `EditTest` *in directory* `TestFiles2`.



(You can select multiple files by clicking on their icons with Adjust, or by choosing **Select all** from the Filer menu.)

2 Delete the file or directory

Keeping the pointer over the same directory display, click Menu to display the Filer menu and choose the **File/Delete** option (this might be **App**, **Dir** or **Selection** instead of **File**, depending on what you've selected).



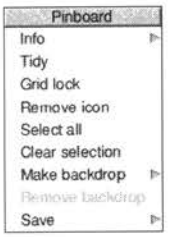
Delete the copy of file `EditTest` *from the* `TestFiles2` *directory.*

Note: deleting a directory also deletes all the files in that directory, so use this option with caution!

If any files (or directories) have been *locked* against deletion, they will not, in fact, be deleted. See the chapter entitled *The desktop* in the RISC OS 3 *User Guide* for information on *file access* and removing *file locks*.

Pinboard

If you click Menu over an empty area of the desktop, you will see a menu called **Pinboard**.



Don't worry too much about the Pinboard at the moment. It's explained in the RISC OS 3 *User Guide*, and enables you to do things like

- changing the whole background of the desktop into a picture
- leaving file or application icons 'stuck' to the desktop background, so you can see and use them, even when the directory they came from is closed
- closing a window down to an icon on the background.

You might come across one use of the Pinboard when you are dragging files (for example) from one directory to another. If you let go of the Select button accidentally while the file you are dragging is over a blank portion of the desktop, its icon will stay on the background.

You can remove the 'dropped' icon from the background as follows:

1 Display the Pinboard menu

Move the pointer over the dropped icon and click Menu.

2 Remove the icon

Choose **Remove icon** from the menu. If that option is greyed out, it means that the pointer wasn't quite over the icon when you clicked Menu. Try again.

This action does **not** delete the file itself – the icon stuck on the pinboard is merely a 'pointer' to the real file on your disc.

Printing

This chapter gives you an introduction to printing a file from your computer. It uses an Acorn JP-150 printer as an example.

Once you've used an application to produce some work, you'll probably want to print out what you've done. This chapter takes you through each stage involved in printing a file, from setting up the computer to producing a printed page.

This chapter assumes that you have already

- connected your printer to the computer (using the parallel port, in the case of the Acorn JP-150) using the correct cable (see *Setting up the computer* on page 3 and *Adding external devices* on page 79)

  Note: printer cables longer than about 5m exceed the Centronics parallel port specification and can cause problems.
- set any options on the printer itself (check in the manual supplied with the printer whether you need to change any settings)
- switched the printer and computer on. If you haven't, you can find out how to do this in *Switching on* on page 7
- put some paper in the printer.

Follow the instructions in this chapter carefully, and you shouldn't have any trouble printing your work. If you do get into difficulties, see *Problems with printing* on page 64 or check with your supplier.

Setting up

Before you can print anything, you need to make sure that the computer knows what sort of printer it is connected to. These are the steps involved:


!Printers


JP-150

- Loading the *printer manager* application (Printers). This is an application which controls the printing process.
- Loading a suitable *printer definition file*. This is a program which tells the computer what type of printer you're using.
- Setting the correct Configure and Connection options using Printers.
- Activating the printer (though this is not always necessary).
- Saving the printer options.

The following pages take you through this setting up process in detail.

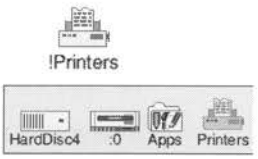
1 Display the applications directory

Printers is stored in the Apps directory display. Click on the Apps icon on the icon bar.

2 Load !Printers

Load Printers by double-clicking on its icon.

After a few seconds its icon will appear on the lefthand side of the icon bar, ready to use.



3 Load a printer definition file

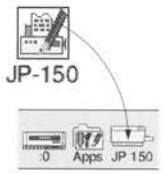
Click on the hard disc icon on the icon bar.

Open the directory called **Printers** in the directory display.

Open the subdirectory which corresponds to the make of your printer (*in this case, Acorn*).

You'll then see a directory display containing all the available printer definitions.

Decide which printer definition suits your printer. Load it by dragging its icon onto the printer icon on the icon bar. This loads the printer. (If you can't see a printer definition that matches your printer, see *Problems with printing* on page 64).



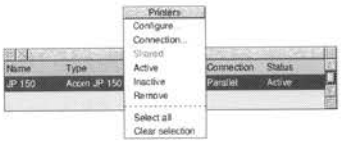
In this case, load the definition called JP-150, *which is specifically for the Acorn* JP-150 *printer.*

The Printer control window shows details of the printer definition you've just loaded, and so does the icon on the icon bar. To display the Printer control window, click Menu over the printer icon on the icon bar, and choose **Printer control...**.

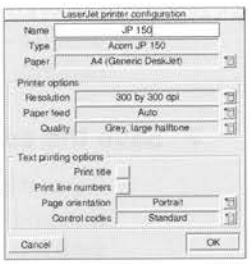
Note: If the text underneath the Printers icon is not `Printers`, a printer definition has already been loaded and is active. Please refer to the chapter entitled *Setting up printers* in the RISC OS 3 *User Guide* for instructions on how to load printer definition files, since you will not be able to use the method described above.

4 Set the printer configuration options

Click Select on the printer's name in the Printer control window (if it is not already selected) then click Menu. This will display the Printers menu.



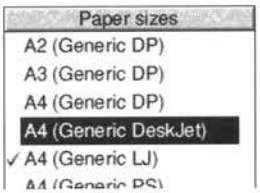
Choose **Configure...** to display the configuration dialogue box.



No matter what printer definition you loaded, you will find that a sensible default configuration has been supplied. If you wish to change any of these options, refer to the manual supplied with your printer.

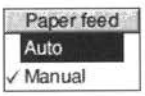
The only options you'll need to worry about for now in this window are **Paper**, **Resolution**, **Paper feed**, and **Quality**.

For an Acorn JP-150 printer, **Paper** should be set to A4 (Generic DeskJet). If it is not, set it by clicking on the menu icon to the right of the box and choosing **A4 (Generic DeskJet)** from the list.



By default the printer **Resolution** for the JP-150 is set to 300 × 300 dpi. This gives better quality printed output. If your computer only has 2MB of memory, you may want to consider setting this to a lower value.

If your printer has a sheet feeder you should leave the **Paper** feed choice set to **Auto**.



When the settings are correct, click on **OK**.

5 Set the Connection options

Click Menu on the printer name in the Printer control window to display the Printers menu again. This time choose **Connection...**; you'll see the Connections window displayed.

Click on the button to the left of the connection that your printer uses.

In the case of the JP-150 *choose* **Parallel**.

Click on **OK**. The details in the Printer control window will change to reflect your choice.

6 Activate the printer (if necessary)

Choose **Active** from the Printers menu (you'll only need to do this if you drag **more** than one printer definition onto the Printer control window – the first printer is set to active by default).

7 Save the settings

It's worth saving the printer configuration so that you don't have to set it up every time you switch on the computer.

Click Menu over the printer icon on the icon bar and choose **Save choices**. Next time you load Printers it will automatically start up with this saved configuration.

Printing a file using the Print Scrn key on the keyboard

1 Load the application

If it's not loaded already, load the application you used to create the file.

2 Open the file you want to print

Double-click on a file to open it.

If it's not open already, open the `TestFiles1` *directory that you created in the previous chapter. Open the file* `EditTest`.

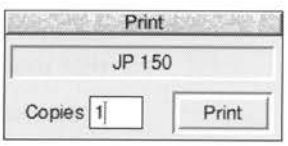

EditTest

3 Press the Print Scrn key on the keyboard

Some applications (like Edit) will print a file straight away at this point (others will display a Print dialogue box – click on **OK** or **Print** to print one copy).

Your Edit file should print out fairly quickly – you won't see a dialogue box.

A typical Print dialogue box



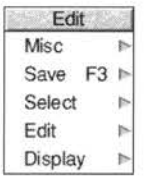
Most files should print using this method. If yours doesn't you will have to print it using the **Print** option on the application's menu: see below.

Printing a file using the Print option

1 Display the application menu

Click Menu inside the file's window.

Do this in the window for `EditTest`.

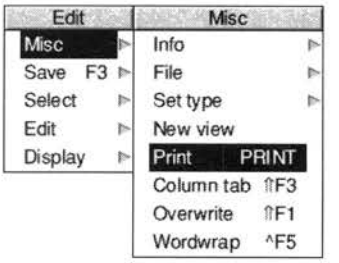


2 Choose the Print option

The **Print** option is not always in the top-level menu of an application. You may have to search through the submenus to find it.

Again, you might see a Print dialogue box, or your file might print straight away, depending on the application.

In this case, choose **Misc/Print**. *Your file should print out, but if things don't appear to be working, try some of the hints at the end of this chapter.*



Another way of printing

You can often print a file by dragging its icon and dropping it on the printer icon bar icon.

1 Load the application

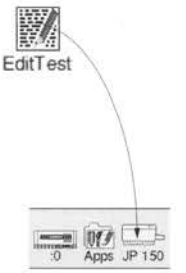
If it's not loaded already, load the application you used to create the file.

2 Display the file's icon

Open the directory containing the file you want to print.

3 Print the file

Drag the file's icon over the printer icon on the icon bar and release the mouse button. Your file will print out.



Try this with the file `EditTest`.

Not all applications allow you to print this way, however. Check either in the RISC OS 3 *User Guide*, or the manual supplied with the application.

Problems with printing

The most common problems with printing occur in the setup stage. If your computer thinks it is connected to the wrong printer, you will have trouble. Take care with the following when you set up:

- Make sure that you're using the correct cable, and that it's not too long.
  You might get problems if the cable is longer than about 5m. This can sometimes cause spurious characters to be printed.
- Make sure you use the correct printer definition.
  If there isn't one that matches your printer, you'll probably still be able to print – most printers have an Epson- or IBM-compatible mode. Check in the printer's manual if this is the case, and then choose one of the Epson or IBM printer definition files.
- Make sure that the configuration that you've chosen can actually be used by the printer. If in doubt, try a lower resolution.
- Make sure that you have set the options correctly in the **Printers** menu and the Connections and Configuration windows.
- Make sure the printer is on-line ready to be used (not all printers have this option – check in your printer's manual) and hasn't run out of paper.

If you want to know what all the options in the **Printers** menu are for, or anything else about printing, see the chapters entitled *Printing your files* and *Setting up printers* in the RISC OS 3 *User Guide*.

Switching off the computer

This chapter describes the correct procedure to follow before switching off your computer. Do this at the end of the day, or if you're not intending to use the computer for a few days.

Normal shutdown procedure

When you've been doing some work on the computer and want to switch it off, it is generally inadvisable to simply switch off using the On/Off switch on the front rear of the computer: you will lose any unsaved work this way, and you **may** cause damage to your hard disc.

By following the instructions in this chapter, you can switch off the computer more 'gracefully'. This will ensure that you don't lose any work, because the computer is in a state which makes it OK to turn off at the switch.

1 Save your work

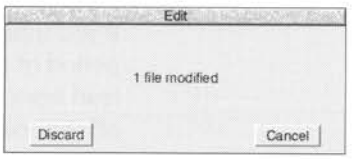
Make sure that you save any work you have been doing, or you might lose it (see *Files and directories* on page 51).

2 Shut the computer down

Move the pointer over the Task manager icon (the Acorn) and click Menu.

Choose **Shutdown** from the menu.

The computer checks to see whether you have left any work unsaved. If you have, a window will appear, asking you if you really want to quit the relevant application.



If you're sure you want to quit, click on **Discard** (to discard any changes). If you want to save your work before you switch off, click on **Cancel**, save the work, then choose **Shutdown** again.

The computer will perform any 'tidying-up' operations necessary, such as quitting any applications, logging off any networks to which you may be connected, and parking the hard disc drive heads.

A window will appear when this has happened, telling you that the computer is ready to be switched off.

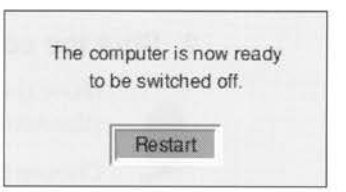
(If you now decided not to switch off, you could restart the computer. Click on **Restart** to do this).

3 Switch off the computer and peripherals

Remove any floppy discs from the disc drive. Switch off the computer at the On/Off switch at the rear.

Switch the monitor off (unless it was plugged into the power outlet on the back of the computer and switched off with the computer). If you have any other peripherals connected to your computer, check in the manuals supplied with them to see whether they will switch off automatically every time you switch off the computer. If any do not, switch them off now.

Note: when the window appears telling you shutdown has completed, you can restart the computer instead of switching off.



Click on **Restart** to do this, or hold down the Ctrl key and press the Break key.

Hint: Some applications do not give up all of the computer's memory they've used when you quit them. This is a good way of 'reclaiming' that memory.

If you intend to leave your computer for a long period of time, you should unplug the mains lead from the wall socket, as well as switching off the computer using the On/Off switch at the rear.

If things go wrong

This chapter offers solutions to some problems you might encounter while you are getting started with your computer.

If the information in this chapter doesn't help, and your computer is still under warranty, consult your On-Site Service and Hotline Support, as described on your guarantee card. Otherwise, consult your supplier.

You should also refer to *Troubleshooting* in the RISC OS 3 *User Guide* for more information.

No picture

Check that

- the screen has not simply gone dark because the screen blanker is on; if it is, move the mouse or press the Alt key to restore the display (the screen blanker helps to conserve power by switching off the display when you leave your computer for a while – see *Changing the computer's configuration* in the RISC OS 3 *User Guide*)
- the computer and monitor are connected to the mains supply
- the monitor is connected to the computer, using the correct cable, the right way round
- the computer is turned on; the power on light on the right of the computer should be lit
- the monitor is turned on; the power on light on the monitor should be lit
- the brightness control on the monitor is not turned down.

Check that the connectors between the monitor and the computer are tight. Switch off both the computer and the monitor, and push in the connectors firmly. Tighten the screws of the connector to the computer back panel with a small flat-bladed screwdriver.

Different screen display

If the computer starts up with a different display, or other unexpected things occur while you are using it, you (or someone else) may have set up the system configuration in a different way. You may need to change the *Monitor Type*. To do this, see *Monitor configuration* on page 111.

Flashing floppy drive light

If the floppy drive indicator light flashes more than once when you switch on, and the computer doesn't power up properly (you can't see the RISC OS desktop after a few seconds) consult your supplier.

If the light only flashes once, this is normal. It should happen every time you switch on or reset the computer.

Pointer won't move

If moving the mouse does not move the pointer, check that

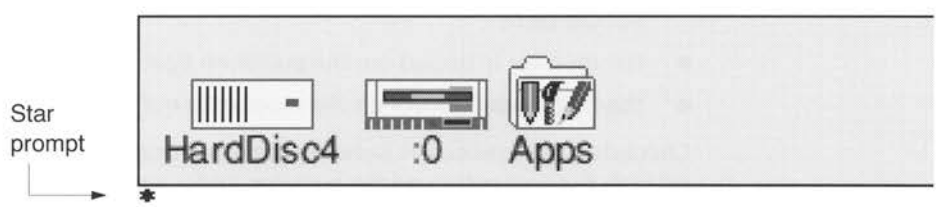
- the mouse is firmly connected to the socket on the back of the computer
- the surface you are using the mouse on is firm enough to allow the mouse ball to move; move the ball with your fingers to check that the mouse works.

You might need to clean the mouse ball. See *Cleaning the mouse* on page 71.

If all this fails, try restarting the machine: hold down the Ctrl key and press the Break key.

The pointer is not visible on the RISC OS desktop

If the pointer is not visible at all, check whether the command line (with * *prompt*) is at the bottom of the screen (you might have accidentally pressed F12):



If it is, press ↵ (Return) to get back to the Desktop.

If the computer powers up in Supervisor mode

If the computer powers up in Supervisor mode (the word `SUPERVISOR` will appear near the top of a black screen) type `Desktop` at the prompt, then press ↵ (Return). If this happens every time you switch your machine on, ask your supplier for help.

The desktop disappears

You may have chosen **Exit** from the Task Manager menu and exited from the desktop completely. Type `Desktop` and press ↵ (Return). The desktop will return, but you will have lost any unsaved work. It's best to restart the computer by holding down Ctrl and pressing Break.

The computer 'forgets' its configuration

If the computer frequently forgets its configuration settings, or the clock consistently loses time, it may be that you haven't used the computer for a long time and the computer's internal CMOS RAM support battery may need recharging. Leave the computer switched on for a couple of hours, then try again.

If you have saved your configuration settings on disc, you can easily reload them. See *Changing the computer's configuration* in the RISC OS 3 *User Guide* for full details. Alternatively, performing a **Delete power on** (switching the computer on while holding down the Delete key) will restore the configuration settings to their default values.

If this doesn't cure the problem, the computer's internal CMOS RAM support battery may be faulty. Take the computer to your Acorn supplier, who will investigate.

The self-test does not complete properly

If you do not see a message *similar* to the following when the self-test is performed:

```
RISC OS 4M
Acorn ADFS
```

or if the self-test does not complete properly (the screen may stay red or dark grey after you switch on, and the floppy drive indicator light may flash on and off a few times), then contact your Hotline Support or supplier. There may be a fault with the computer's hardware.

Important: in order to see this message, your monitor should already be switched on and warmed up when you switch on your computer.

Note: the number in the above message (4M) indicates memory size and may vary according to your model of computer.

There are unexpected icons on the otherwise empty desktop

You might have dragged a file or application towards the icon bar, but accidentally let go too soon. See *Pinboard* on page 57.

If somebody else has been using your computer, they may have set it up so that it loads some files and applications automatically.

An application won't load

There may not be enough memory to load the application. Depending on how much memory your computer has, you will need to quit one or more of the applications that are already loaded into its memory. Move the pointer over an icon on the icon bar and press Menu; choose **Quit** to remove the application from the computer's memory. Now try loading the application you want to use. If there still isn't enough space, quit another application you don't need.

Maintaining your computer

This chapter tells you more about looking after your computer and its internal battery. It describes how to clean the computer and the mouse.

Cleaning the computer, monitor and keyboard

First, remember to follow the *Guidelines for safe operation* at the very beginning of this guide. In particular, switch off and unplug the computer and any peripherals from the mains supply.

You can clean the computer case by wiping it gently with a soft, slightly damp cloth. Clean the keyboard with a clean, dry paintbrush. For advice on cleaning the monitor, refer to the manual accompanying it.

Cleaning the mouse

You should use the mouse on a surface that is as clean and as dust-free as possible. However, dust does sometimes get caught up in the ball on the underside of the mouse.

Clean the mouse occasionally to keep it running smoothly. To clean the mouse, you need the following items:

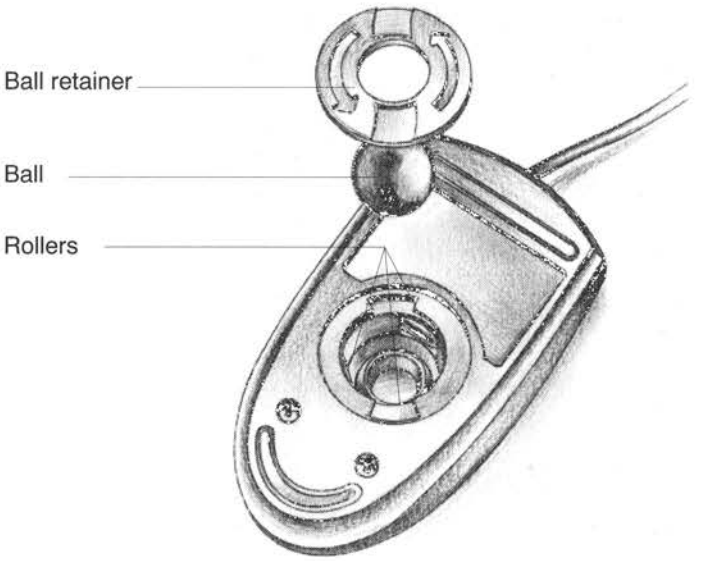
- some tape head cleaner
- a cotton swab
- a lint-free, dry cloth

To remove the ball and clean the mouse, take the following steps:

1. Unplug the mouse and turn it upside down.
2. Unlock the ball retainer by twisting it in the direction of the arrows by a quarter of a turn (see the diagram overleaf).
3. Hold one hand over the ball and retainer and turn the mouse right side up, allowing the ball and retainer to drop into your hand. Set them aside in a safe place.
4. Locate the three plastic rollers as shown in the drawing overleaf.

5 Lightly moisten the cotton swab with tape head cleaner and apply it gently to the rollers. Rotate the rollers, carefully cleaning off any dust or dirt that may be clinging to them.

6 Make sure the inside of the mouse is free from dust.



7 Wipe the ball with the clean, dry cloth. Do not use a cloth which may leave lint, and do not use cleaning liquid on the ball.

To replace the ball and retainer, take the following steps:

1 Turn the mouse upside down and place the ball back in the case.

2 Return the retainer to its original position (lock it in place by twisting it clockwise by a quarter of a turn).

The internal battery

While it is switched off, the computer 'remembers' the time and other useful information such as its 'configuration' (features like how fast the pointer moves when you move the mouse). For more information on configuring your computer, see the RISC OS 3 *User Guide*.

To support this memory, the computer uses an internal battery which is charged while the computer is switched on. Ideally, to maintain the battery at full charge, the machine should be switched on for at least one hour in each five-day period. However, the battery does not need to be fully charged in order to work, and should in fact maintain the computer's clock and configuration for as long as six months while the computer is not being used. If your computer is switched off for this long, leave it on for a few hours the next time you use it.

In the course of time (after a few years) the battery, like a car battery, may run down. You can tell when this has happened by the fact that the computer will frequently 'forget' its configuration and the computer's clock will show the wrong time. You should then take the computer to your Acorn supplier, who will install a new battery.

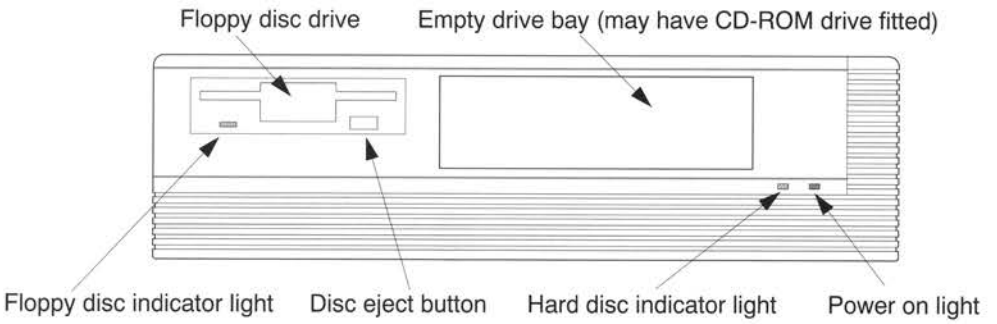
In the event of your configuration settings being forgotten, it is recommended that you save a copy on hard or floppy disc. You can then reload them just by double-clicking on this file. For full details on how to do this, refer to *Changing the computer's configuration* in the RISC OS 3 *User Guide*.

Exploring your computer hardware

This chapter describes the hardware components of the computer, and gives details about the connections of the different sockets.

The front of the computer

The drawing below shows the front of the computer.



Power on light

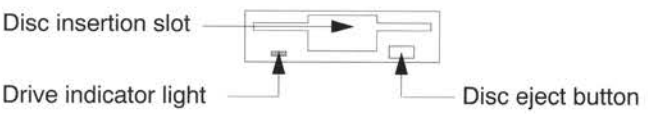
This green light comes on when you turn the computer on.

Hard disc indicator light

The amber light only comes on when the internal hard disc drive is being accessed by the system.

Floppy disc drive

The floppy disc drive is located on the lefthand side of the front panel. It consists of a slot into which you insert the floppy disc, a drive indicator light that lights whenever the disc is being accessed, and a disc eject button that you press to remove the disc.



WARNING: When the floppy disc drive indicator light is on, the computer is actually reading or writing data. Do not remove the floppy disc or turn off the computer while the light is on, unless instructed by the computer to do so.

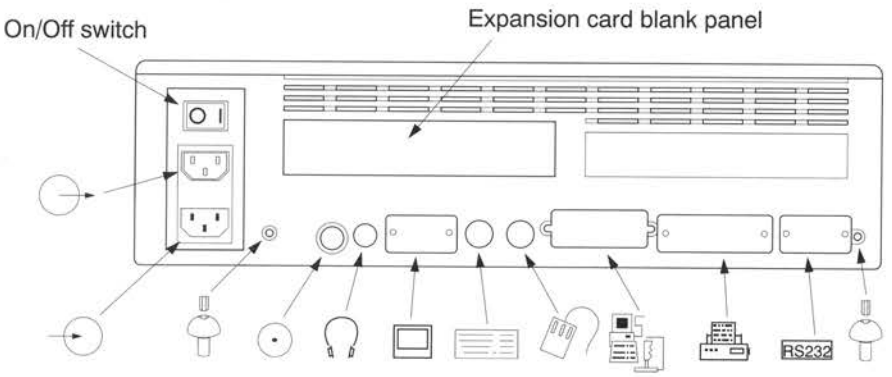
Empty drive bay

To the right of the floppy disc drive is an empty bay. You may already have a CD-ROM drive fitted in here. If this bay is empty, and you do not have an expansion card fitted to your computer (other than a network or joystick expansion card), you can install a CD-ROM drive and a fan in this bay: see your Acorn dealer for details.

Note: if you have a drive installed in this drive bay, you cannot fit an expansion card to your system using the expansion card back panel.

The back of the computer

The drawing below shows a typical view of the back of the computer.



The following subsections describe the connectors and so on that you'll find on the back of the computer:

On/Off switch

This is the computer's power switch. When you switch it on, the computer starts operating and the Power On light on the front of the computer comes on

Monitor power outlet

You can attach the power cable of **most** types of monitor to this outlet (check with your supplier). Its output is controlled by the On/Off switch on the rear of the computer. The maximum continuous rating for this outlet is 1A @ 220–240V AC.

Note: this outlet is intended for connecting monitors ONLY.

Computer power connector

Use this three-pin connector to connect the computer to a standard power outlet.

Fixing screws

Undo these screws when you want to remove the back panel and top cover of the computer. See *Opening the computer* on page 85 for full instructions.

Reset button

Use the Reset button as a last resort to restart the computer without turning it off at the On/Off switch. Refer to the RISC OS 3 *User Guide* for more information about resetting your computer.

Warning: You'll lose any unsaved work when you do this.

Headphones

The standard 32 ohms headphones socket allows you to connect stereo headphones to the computer's sound system. The headphones must have a 3.5mm stereo jack plug. When you plug in the headphones, the internal speaker is disconnected.

Video

The video socket is used to connect your monitor to the computer. If you have a non-standard monitor you may need an adaptor – refer to your Acorn dealer.

Keyboard connector

The keyboard cable connects to the mini-DIN socket on the back of the computer.

Mouse connector

The mouse cable connects to the mini-DIN socket on the back of the computer (the other end of the cable is permanently fixed to the mouse).

Network/joystick

The network/joystick connector is only present if you have added either a network expansion interface card or a joystick interface expansion card to your computer. Networking allows you to connect the computer to other computers on a *local area network* (LAN). There are two network cards available from your dealer:

An **Econet network card** connects the computer with other Acorn computers on an Econet local area network.

An **Ethernet network card** connects the computer to an Ethernet network. It allows connection to a thin-Ethernet cable.

A **joystick interface card** allows you to connect a digital or analogue joystick to your computer.

Note: You can only add **one** of these cards to your computer.

Parallel printer

Use this 25-way socket to connect a parallel printer to your computer. Parallel and serial printers are discussed in the chapter entitled *Adding external devices* on page 79.

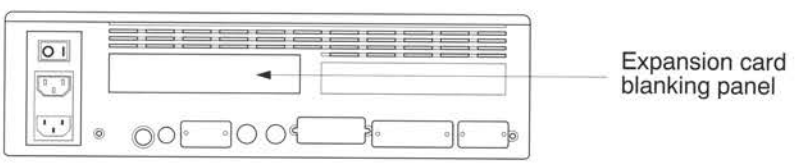
Serial port

RS232

The serial port on the back of the computer is a 9-way plug. If you want to connect a serial device, it needs a 9-way D-type socket on the end of its lead. Refer to the documentation accompanying your particular package for information on how to wire the lead to be used with the serial port. There is also some information in the chapter entitled *Adding external devices* on page 79.

Expansion card blanking panel

The blanking panel covers the expansion card slot if it is not in use. It's not a good idea to operate the computer with this removed.



Note: If you fit an expansion card to your computer, you cannot fit an extra drive (such as a CD-ROM drive) in the empty drive bay.

Expansion cards allow you to add functionality to your computer. Your Acorn dealer can provide you with details about which expansion cards are available for your computer.

Adding external devices

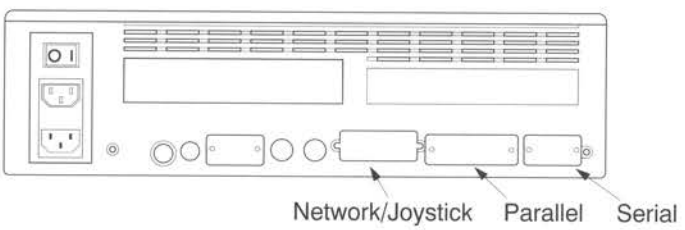
This appendix gives you advice on attaching different devices to your computer.

Introduction

There are a number of peripheral devices that you can attach to your computer to expand its capabilities – for example, printers and modems.

This chapter offers some general guidelines for connecting peripherals to your computer. Some examples are given for attaching specific peripheral devices, but often you'll need to use the general information provided to help you decide how to connect a device. For example, the signal connection diagrams that are given for each hardware connection act as guidelines which will work with most hardware; you must first check the manual accompanying the peripheral device that you are connecting.

There are three ports on your system that you can use to attach peripheral devices: the Serial port, the Parallel port and the Network/Joystick port.



The characteristics of each of the above ports are described in the following sections, along with information about the types of devices that can be connected to them.

Serial port

RS232

The serial port is by far the most versatile and sometimes the most complicated port to use. It is mainly used to connect your computer to other computers, printers and modems, or to connect a serial pointing device (such as a serial mouse).

When you connect peripherals to the serial port

- ensure that screened cabling is used to connect up the peripheral, and that the screening is connected to the shell of the connector
- consult the peripheral manufacturer's instructions for pin connections.

The serial port supports two different types of peripheral equipment:

- Data Terminal Equipment (or DTE – for example printers and computers).
- Data Circuit-terminating Equipment (or DCE – for example modems).

You will need different cables, depending upon which type of peripheral (DTE or DCE) you are connecting to your machine. The computer itself is DTE. Your Acorn dealer should be able to supply you with the necessary cables.

Connecting printers to the serial port

Hardware connection

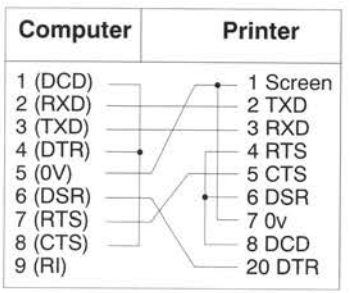
Flow control is the process by which the printer communicates its readiness to transmit or receive data to or from your computer. There are a number of different protocols which are used to achieve this.

You should check carefully which protocols your printer uses, and if possible set it to use the XOFF/XON protocol. Some printers have alternative flow control mechanisms involving ETX/ACK (different control characters from XOFF/XON, transmitted under slightly different circumstances), or RTS/CTS (signals on additional wires on the interface cable).

An example

The diagram (right) shows the serial port signals used to connect to an Apple LaserWriter laser printer.

Your supplier may be able to supply you with a ready-made cable. Note that the cable is not reversible.



Software connection

For information on how to set up the software side of things, see *Printing* on page 59. You'll also find more information in *Setting up printers* in the RISC OS 3 *User Guide*.

Connecting modems to the serial port

A modem is a device used to transmit data over the telephone system. It is usually connected up differently from a printer. This is because a modem is a DCE device; printers are DTE devices. The main difference is that the connections are 'straight through', in that the modem expects to *receive* data on the 'transmitted data' line, and vice versa, whereas when connecting terminal to computer or computer to computer the connections have to be crossed over.

Hardware connection

Your supplier should be able to supply you with a ready-made cable which will work with your communications package.

If this is not possible, you may need to make an adaptor cable to connect a modem or other standard RS232 DCE device. The wiring guide for connecting to a standard RS232 25-way D-type connector is shown on the right.

Computer	Modem
1 (DCD)	8 (DCD)
2 (RXD)	3 (RXD)
3 (TXD)	2 (TXD)
4 (DTR)	20 (DTR)
5 (0V)	7 (0V)
6 (DSR)	6 (DSR)
7 (RTS)	4 (RTS)
8 (CTS)	5 (CTS)
9 (RI)	22 (RI)

In practice you may leave out RI, as it is not often used. If the modem doesn't provide a CTS signal, leave it out and instead connect CTS to RTS at the computer end.

If you are connecting a different type of modem from the one illustrated, the differences will be in which signals the modem looks at and can supply. You can configure some modems to use or ignore the various control signals, by means of their DIP (Dual In-line Package) switch settings or by sending commands.

Software connection

For information on how to set up the software, it's best if you check with your supplier, who will be able to tell you the communications package to use that best suits your modem and cable.

Connecting a mouse to the serial port

If you have a three-button serial mouse, you can connect this to the serial port and use this instead of the standard Acorn-supplied mouse. It has to be either a Microsoft- or Mouse Systems-compatible serial mouse. You can also connect other serial pointing devices such as tracker balls and Special Needs keyboards.

You will also need to configure your system software to use these devices. See *Changing the computer's configuration* in the RISC OS 3 *User Guide* for more information.

There is a diagram of the serial port pinout in *Connector pin-outs* on page 119.

Parallel port

The parallel port is commonly used to connect a printer, or to send and receive data to and from another device.

There is a diagram of the parallel port pinout in *Connector pin-outs* on page 119.

Printers on the parallel port

Hardware connection

You need a 25-way D-type connector to connect a parallel printer to the computer. Often, the cable supplied with your printer will be suitable. If not, the table below gives an example of how the pins on the computer's parallel port map onto a 36-way Centronics-type Delta 57 connector.

The mapping is not one to one. The signals you need will depend on the type of printer, and the settings of any switches on the printer. As a general guide, most printers will work without the optional signals shown at the bottom of the table.

In the first instance, ask your supplier to make sure he gives you the correct cable. Check the printer's documentation for more information.

Computer	Printer
1 ($\overline{\text{STROBE}}$)	1
2 (DATA0)	2
3 (DATA1)	3
4 (DATA2)	4
5 (DATA3)	5
6 (DATA4)	6
7 (DATA5)	7
8 (DATA6)	8
9 (DATA7)	9
10 ($\overline{\text{ACK}}$)	10
11 (BUSY)	11
18 to 25 — GND	19 to 30
Optional	
12 (PE)	12
13 ($\overline{\text{SLCT}}$)	13
14 ($\overline{\text{AUTO FD XT}}$)	14
15 ($\overline{\text{ERROR}}$)	32
16 ($\overline{\text{INIT}}$)	31
17 ($\overline{\text{SLCT IN}}$)	36

Software connection

Printing on page 59 tells you how to configure your computer to use a Acorn JP-150 printer. You'll find more information in *Setting up printers* in the RISC OS 3 *User Guide* and the manual supplied with your printer.

Network/joystick port

You can purchase special Econet, Ethernet or joystick hardware that is fitted internally and connects directly to special connectors inside the computer. If one of these is fitted, it provides you with a Network/joystick port with which to connect to the outside world.

Econet connection

If you have an Econet network card fitted to your computer, you can directly connect your computer to an Econet network. You will need a 15-way D-type to 5-pin DIN cable. The 5-pin DIN cable connects directly to your standard Econet wall socket.

Ethernet connection

If you have an Ethernet network card fitted to your computer, you can connect your computer to your Ethernet local area network.

Refer to the instructions that accompany your network card to find out how to connect your computer to your Ethernet network. You may need a converter box to convert the signal from the network port to that required by the Ethernet interface.

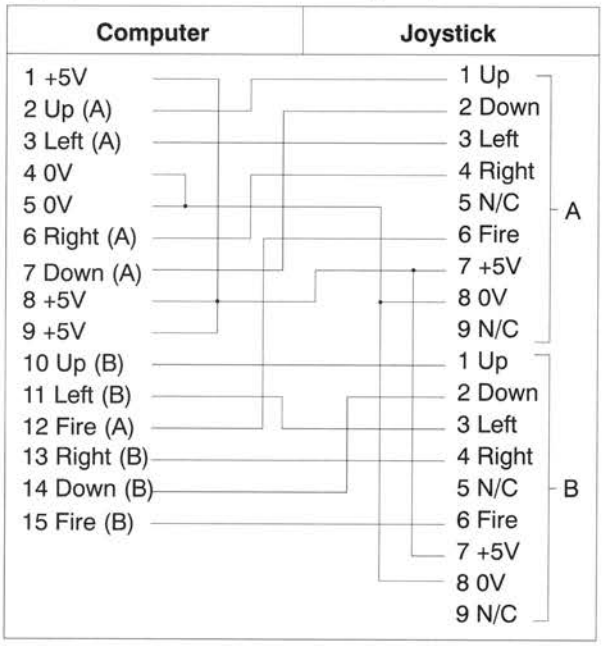
Joystick connection

If you have a joystick card fitted to your computer, you can connect a joystick directly to it. You choose between either a digital or an analogue joystick.

The diagram on the right shows the signals for an analogue joystick. Note that two joysticks may be connected to your computer by using a splitter cable, although they must both be either digital or analogue.

Computer	Joystick
1 +5V	1 +5V
2 Button 1 (A)	2 Button 1 (A)
3 X Co-ord (A)	3 X Co-ord (A)
4 0V	4 0V
5 0V	5 0V
6 Y Co-ord (A)	6 Y Co-ord (A)
7 Button 2 (A)	7 Button 2 (A)
8 +5V	8 +5V
9 +5V	9 +5V
10 Button 1 (B)	10 Button 1 (B)
11 X Co-ord (B)	11 X Co-ord (B)
12 N/C	12 N/C
13 Y Co-ord (B)	13 Y Co-ord (B)
14 Button 2 (B)	14 Button 2 (B)
15 N/C	15 N/C

The diagram below shows the signals for a digital joystick. Note that a splitter cable is required, such that the 15-pin socket in the computer connects to two identical 9-pin plugs (marked A and B in the diagram).



Opening the computer

This chapter shows you how to take the cover off the computer, and how to remove its major components.

When you buy a hardware upgrade from your supplier you should receive fitting instructions for it. However, to be able to fit it, you first need to know how to open the computer's cover and what to look for inside. This chapter tells you how to take the top cover off and how to dismantle the computer case sufficiently to be able to install standard hardware upgrades.

Before removing the top plastic cover of the computer

1 switch off the computer

2 remove the power lead from the wall socket.

Do not reconnect the power lead to the wall socket until you have replaced the cover of the computer.

Do not make any adjustments inside the computer while the power lead is connected to the wall socket.

Acorn Computers Limited cannot accept any liability for damage done to the product during the installation of internal upgrades whether or not carried out in accordance with the instructions in this chapter. If you don't feel confident about carrying out any of the instructions in this chapter, ask your supplier to fit upgrades for you (a charge may be levied by the supplier for installing any upgrades; such a charge shall be entirely at the discretion of the supplier concerned).

Important note: During normal operation of the computer, the power supply unit will become hot. If you open the computer, be very careful not to touch this unit if you have recently had the computer switched on.

Before you start

You'll need a firm, flat, non-slippery surface to work on. For example, cover a table with inert, non-synthetic material such as newspaper or cardboard (a synthetic cover could cause a static electrical discharge which would damage the computer). If you have an expansion card in your computer, you will also need a small cross-head screwdriver.

Make a note of everything that you disconnect or take apart so that you can put it back together again easily when you have finished your modifications.

1 Shut down and switch off the computer and any peripherals connected to it following the instructions in *Switching off the computer* on page 65.

2 Remove the computer power cable from the power outlet on the wall.

3 Remove the monitor power cable from the power outlet on the computer.

4 Remove all other cable connections from the back of the computer. Make a note of where they connect to so that you can replace them easily. If you need help refer to the setting up information starting on page 3.

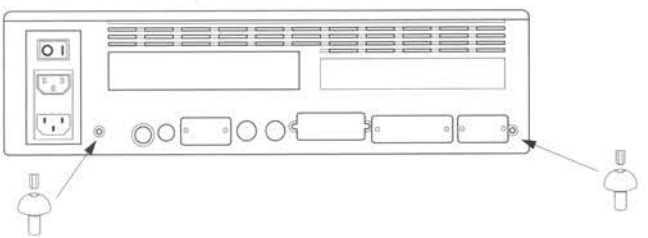
5 Make sure you have easy access to all parts of the computer. If you need to move it to give yourself better access, you should carefully disconnect any peripherals connected to the computer. Keep a note of how the peripherals connect to the computer.

Removing the back panel and top cover

To remove the back panel and top cover follow this procedure:

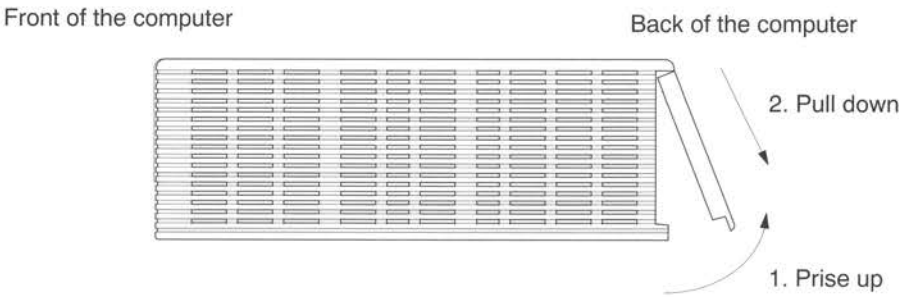
1 Position the computer so that you are looking at the back of it.
It is helpful if you can put it on the edge of a table, so that the rear of the computer (but not the feet) extends over the edge.

2 Undo the two fixing screws located on either side of the back panel, as shown below.



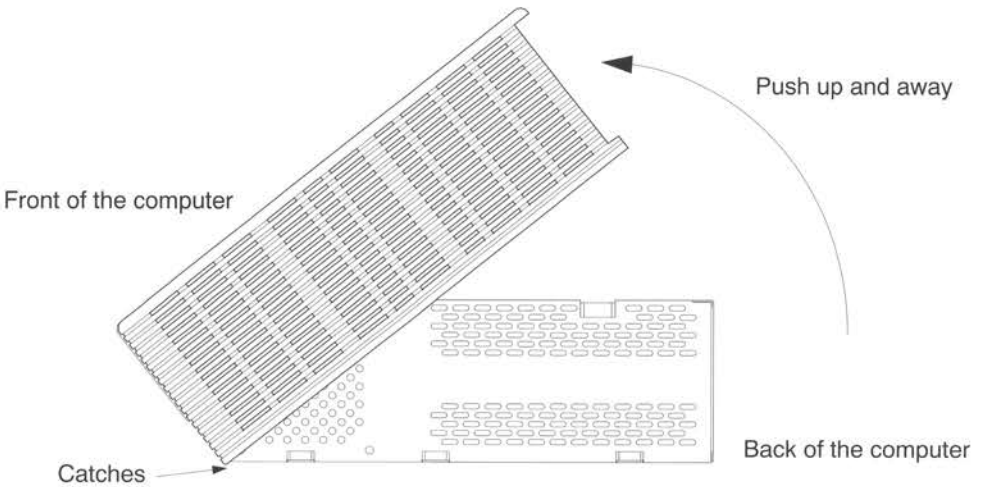
3 Grip the rear of the computer with both hands, so that your thumbs are on the bottom edge of the back panel, and your fingers are pressing down on the top cover.

4 Using your thumbs, gently lever the bottom edge of the back panel up and towards you.



5 When you have prised the back panel away from the computer by a small amount (as shown above), pull down gently on it and it will come away from the computer completely.

6 To remove the top cover, hold it gently on both sides, and push upwards and away from you.



There are some catches on the bottom of the metal case at the front of the computer which the top cover hooks into, and these will act as a hinge until the top cover comes away completely.

Replacing the back panel and top cover

Reassembly of the back panel and top cover of your computer is the opposite of disassembly. See the instructions above for more details.

Inside the computer

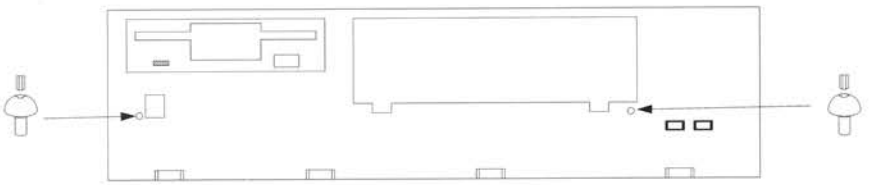
Removing the drive tray

Important note: Make sure that all power to the computer and any peripherals is switched off before attempting this operation. Failure to do so could result in loss of data from your hard disc drive.

If you install an extra memory module, you will need to remove the drive tray from your computer. This is the metal tray that houses the floppy and hard disc drives, and the CD-ROM drive if you have one fitted. The drive tray is removed as follows:

1 Turn the computer so that the front is facing towards you.

2 Undo the two fixing screws on the front of the metal case, as shown in the diagram below.



3 A bar across the rear of the drive tray clips onto the sides of the metal case: lift this bar to free the drive tray from the metal case.

4 You should now be able to remove the drive tray from the computer. Making sure you support the rear of the drive tray, pull it towards the rear of the computer by a small amount, so as to free the front of the floppy disc drive (and the CD-ROM drive if you have one fitted), and then lift it up and away from the metal case. Sit the drive tray so that its front is resting on the table and its rear is resting on the front of the metal case.

The drive tray is now removed sufficiently from the computer to allow you to perform the upgrade.

Replacing the drive tray

Replace the drive tray as follows:

1 Making sure you support the back of the drive tray with one hand, gently insert it back into the metal case, so that the floppy disc drive protrudes through the aperture in the front of the case.

2 Secure the drive tray by clipping the bar on the rear of the drive tray onto the sides of the metal case.

3 Replace the two fixing screws at the front.

4 Check all of the connectors for the ribbon cables which connect the floppy and hard disc drives to the main circuit board are still firmly attached, by pushing them in carefully.

Internal expansion

This chapter shows you how to add expansion options to your computer.

In this chapter you'll find instructions on how to install

- an additional DRAM memory module
- an *expansion card*
- a network interface
- a joystick interface.

Other hardware upgrades are supplied with their own installation instructions.

Before removing the top plastic cover of the computer

1 switch off the computer

2 remove the power lead from the wall socket.

Do not reconnect the power lead to the wall socket until you have replaced the cover of the computer.

Do not make any adjustments inside the computer while the power lead is connected to the wall socket.

Acorn Computers Limited cannot accept any liability for damage done to the product during the installation of internal upgrades whether or not carried out in accordance with the instructions in this chapter. If you don't feel confident about carrying out any of the instructions in this chapter, ask your supplier to fit upgrades for you (a charge may be levied by the supplier for installing any upgrades; such a charge shall be entirely at the discretion of the supplier concerned).

Important note: During normal operation of the computer, the power supply unit will become hot. If you open the computer, be very careful not to touch this unit if you have recently had the computer switched on.

Static electricity

Important: Most electronic devices can be damaged by static electricity. To reduce the possible adverse effects of static electricity, note the following when installing any component(s) or upgrade:

- avoid working in areas where there are man-made fibres, such as nylon carpets and nylon clothing
- after the computer is disconnected from the mains, touch the inside of the plastic case while performing the upgrade to ensure that you and the computer are at an equal potential
- avoid touching the pins of ICs or connectors during fitting.

Additional DRAM memory modules

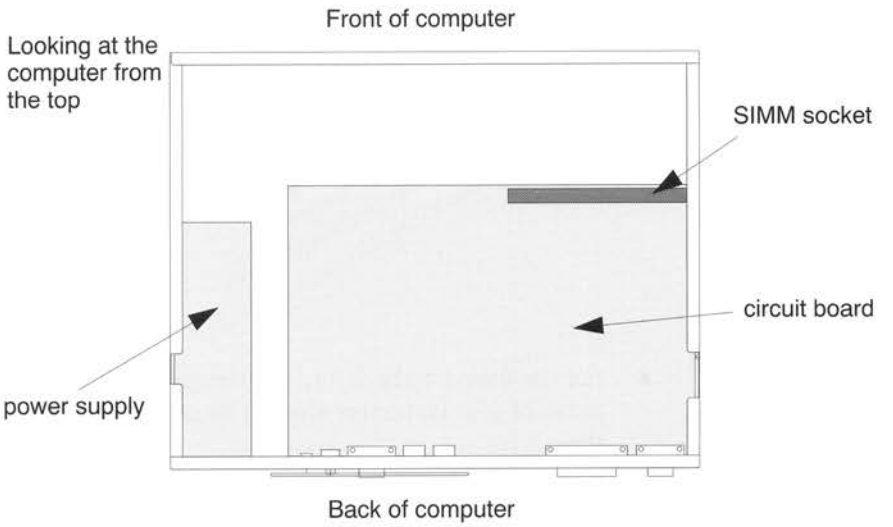
Your computer can have a SIMM (Single-In-Line Memory Module) fitted to supplement the DRAM (Dynamic RAM) that is already installed in it. Any suitable 32-bit SIMM can be fitted to the SIMM socket inside your computer.

Before purchasing and fitting a SIMM, you should ensure that it agrees with the specifications listed in *Guidelines for choosing* SIMMs on page 94.

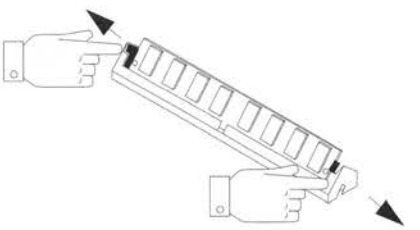
Upgrading DRAM memory modules

1. Shut down and switch off your computer and any peripherals connected to it following the instructions in *Switching off the computer* on page 65.
2. Remove the power lead from the wall socket.
3. Follow the instructions on how to open the top cover of the computer given in *Opening the computer* on page 85.
4. Remove the drive tray, as described in *Opening the computer* on page 85.

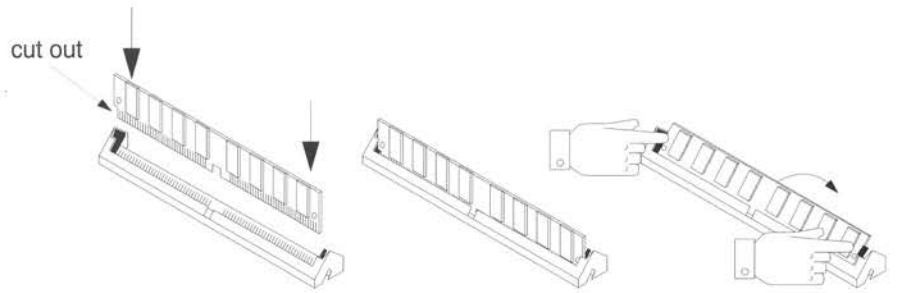
5 Position the computer with its back towards you. The SIMM socket is then on the righthand side of the computer, at the front of the circuit board.



6 If the SIMM socket is already occupied, you should remove the existing SIMM. Push the small metal spring clips on each side of the SIMM socket sideways. Gently pivot the SIMM away from you at the same time and it will click out of the socket.



7 Fit the new SIMM by pushing it into the socket at an angle of about 45°. Ensure that it is level and then push the top edge gently backwards. The spring clips will lock into place.



8 Put the drive tray back into the computer. Replace the top cover and back panel of your computer. *Opening the computer* on page 85 shows you how to do this.

9 Test that the memory change has taken effect by checking the total memory size given by the Task Manager.

You have now finished upgrading the memory module.

Guidelines for choosing SIMMs

Your Acorn dealer will be able to supply you with a list of SIMMs which are approved by Acorn for use in your computer. You are strongly recommended to use only the SIMMs supplied on this list.

Should you decide to use another SIMM, note that there are some which cannot be fitted to your computer. Before purchasing, you should ensure that the following specifications are met:

- The maximum physical size of the SIMM is 108mm long, 25.4mm wide and 9.4mm thick
- The SIMM must have a 72-pin connector with 32-bit data (36-bit DRAM devices must not be used as they may exceed the bus loading)
- The SIMM must not have more than 16 devices (DRAM chips) on board
- SIMMs must be rated 70ns or faster (50ns or 60ns is acceptable, but 80ns is not)
- Devices on the SIMM must be square array (that is, the same number of bits for both row and column address)
- SIMMs must support "Fast Page Mode" and "CAS before RAS refresh"

SIMMs with more than 16 devices (i.e. 8 on each side) will be unsuitable as these will put too great a load on the computer. The exact limits are given below:

Address Bus	max 128pF
WE	max 140pF
RAS / CAS	max 59pF
Data Bus I/O	max 29pF

You should draw these figures to the attention of your supplier if in any doubt.

For 16 and 32MB SIMMs only, 2048 refresh cycles are required.

Pins 11, 46, 48, 66, and 71 are unconnected. The ID code on pins 67, 68, 69 & 70 is not used and therefore irrelevant. However, non-standard SIMMs with five or more ID pins should not be used. Pin 29 (unconnected on some SIMMs) carries address bit 11 and a module may only use this for address bit 11.

Adding expansion cards

Expansion cards enable you to add to the capabilities of your computer. They usually consist of two elements; a hardware card that fits into the expansion card slot at the back of the computer and one or more software applications and utilities that enable you to use and control your expansion card's features.

Please read the instructions in this section in conjunction with the instructions that accompany your expansion card; you may have to alter some links or settings on the card itself.

Note: you cannot install an expansion card in your computer if you already have an extra drive (such as a CD-ROM drive) installed in the empty drive bay.

Installing an expansion card consists of three stages:

- installing a *backplane*
- installing a fan
- attaching the expansion card to the backplane.

Important note: if you attach an expansion card to your computer, you **must** also install a fan to prevent overheating, and to ensure reliability of the computer.

Refer to your Acorn dealer for details about purchasing a backplane and a fan. You must ensure you have these before you can install and use an expansion card.

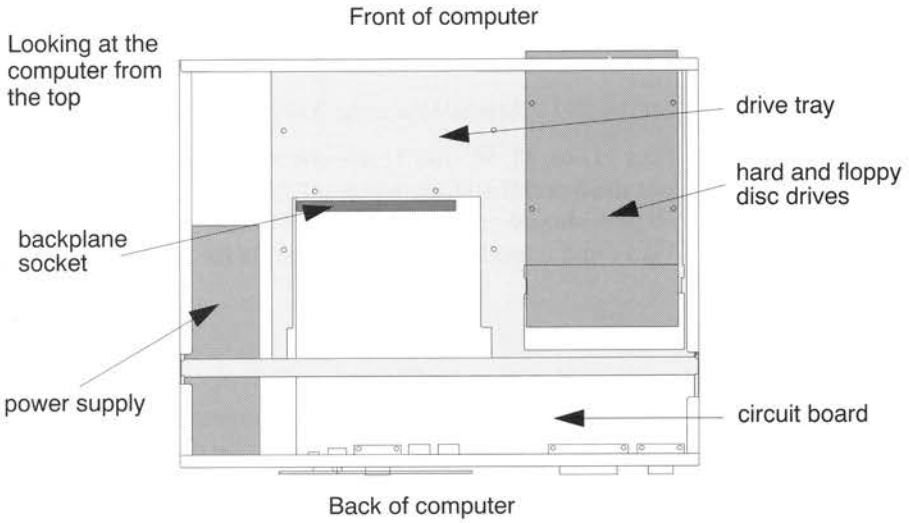
Installing a backplane

1 Shut down and switch off your computer and any peripherals connected to it following the instructions in *Switching off the computer* on page 65.

2 Remove the power lead from the wall socket.

3 Remove the back panel and top cover of the computer, as described in the chapter entitled *Opening the computer* on page 85.

4 Identify where the backplane socket is on the main circuit board, as shown in the diagram below.



5 Push the backplane firmly into the backplane socket, so that the socket on the backplane itself is facing the rear of the computer, ready to accept the expansion card. The backplane connector is designed in such a way that you cannot install it the wrong way round.

6 Fix the backplane to the drive tray using the two screws provided.

7 If you are not installing a fan or an expansion card immediately, replace the top cover and back panel of your computer. *Opening the computer* on page 85 shows you how to do this.

Note: it is perfectly safe to use your computer with a backplane installed, but no expansion card attached.

Installing a fan

Important note: if you intend to use an expansion card in your computer, you **must** install a fan first to prevent overheating, and to ensure reliability of the computer.

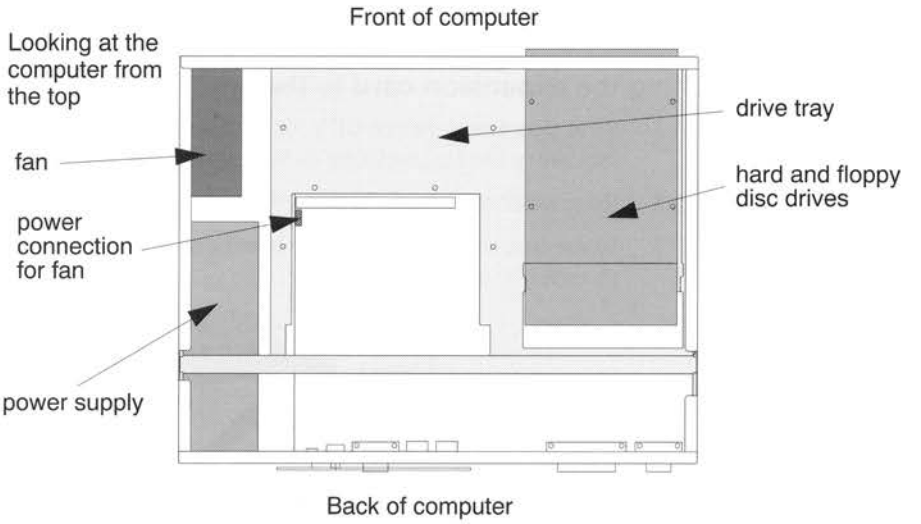
To install a fan in your computer, follow the procedure below:

1 Shut down and switch off your computer and any peripherals connected to it following the instructions in *Switching off the computer* on page 65.

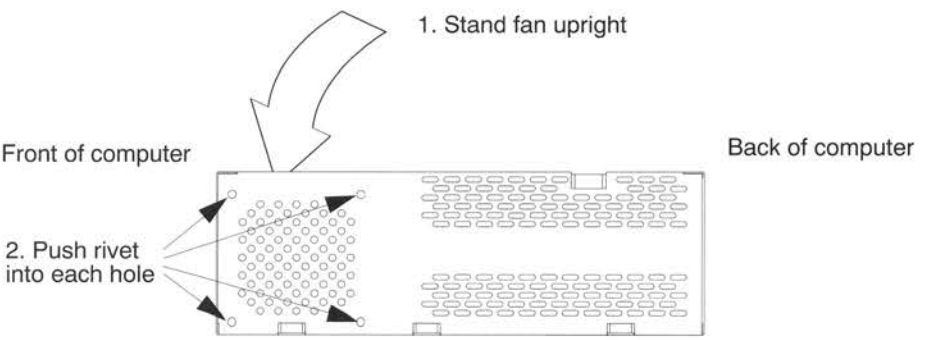
2 Remove the power lead from the wall socket.

3 Remove the back panel and top cover of the computer, as described in the chapter entitled *Opening the computer* on page 85.

4 Identify where the fan is to be installed, as shown in the diagram below.



5 Stand the fan upright inside the metal case, at the front right of the computer. Make sure that the four holes in the side of the fan align with the holes in the side of the metal case, and that **the arrow on top of the fan points towards the inside of the computer**. Fix the fan to the side of the metal case using the four plastic rivets supplied. Push each rivet firmly through one of the holes in the side of the metal case, as shown below. The rivets must be flush with the case, to ensure the fan is anchored properly.



6 Push the end of the power cable from the fan onto the power connection on the circuit board. This is situated just behind the backplane socket, as shown in the diagram above.

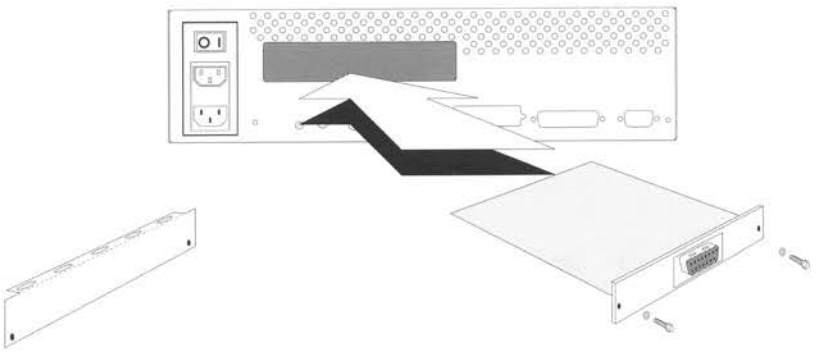
7 If you are not installing an expansion card immediately, replace the top cover and back panel of your computer. *Opening the computer* on page 85 shows you how to do this.

Attaching the expansion card to the backplane

1 Shut down and switch off your computer and any peripherals connected to it following the instructions in *Switching off the computer* on page 65.

2 Remove the power lead from the wall socket.

3 Make sure that you have easy access to the expansion card area. You may have to move your computer.



4 Remove the top cover and back panel to give you better access to the expansion card area. This is described in the chapter entitled *Opening the computer* on page 85.

5 Unscrew the metal expansion card blanking panel from the rear of the metal case. Keep the screws as you'll need them to secure your expansion card.

6 Loosen the two screws connecting the backplane to the drive tray, to allow the backplane some room for movement, if necessary.

7 Press the expansion card home firmly so that the expansion card connector fits firmly into the socket on the backplane.

8 Screw the expansion card into place on the metal case using the screws that secured the blanking panel.

9 Push the backplane towards the rear of the metal case, to make sure that the fit between the expansion card and the backplane is snug. Then tighten the screws connecting the backplane to the drive tray.

10 Replace the top cover and back panel as described in the chapter entitled *Opening the computer* on page 85.

11 Refer to the documentation that came with the expansion card to see if there are any further installation instructions. You may need to install some additional software onto your hard disc that controls the expansion card.

Removing the expansion card

If you have an expansion card in your computer, you may want to remove it (for instance, if you need to remove the drive tray). To do this you should use the following procedure:

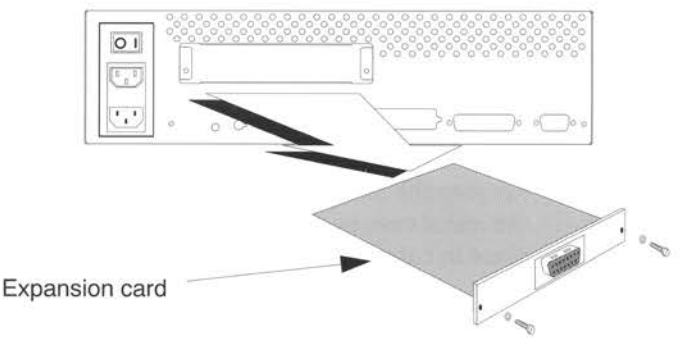
1 Shut down and switch off your computer and any peripherals connected to it following the instructions in *Switching off the computer* on page 65.

2 Remove the power lead from the wall socket.

3 Remove the back panel and top cover of the computer, as described in the chapter entitled *Opening the computer* on page 85.

4 Unscrew the expansion card from the metal case.

5 Holding both the expansion card and the backplane firmly, ease the expansion card connector out of the backplane socket. Make sure you pull the card out in a straight line so as not to bend any of the connectors.



6 If you do not intend to refit the expansion card before reassembling your computer, make sure you screw the metal expansion card blanking panel back onto the back panel using the screws which held the expansion card in place.

Adding a network or joystick card

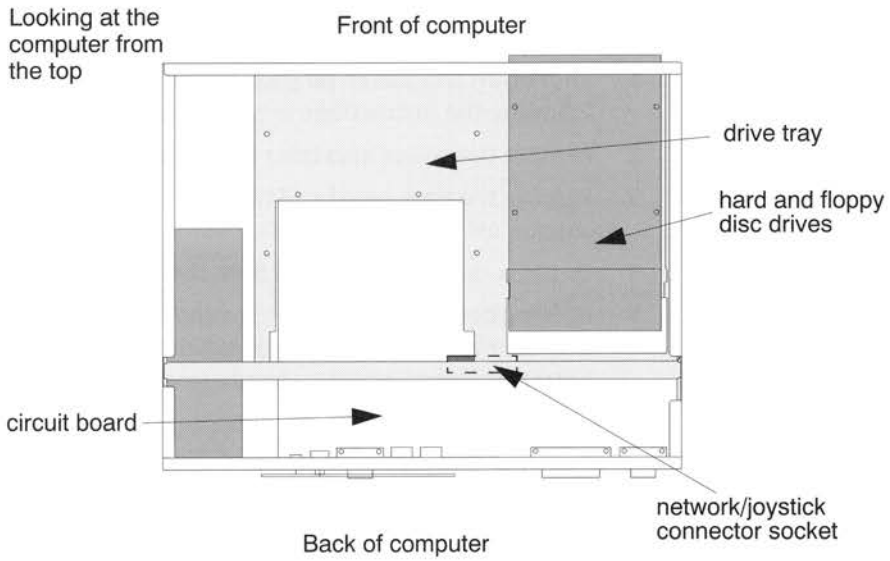
Important note: it is not possible to install both a network card and a joystick card together on your computer.

1 Shut down and switch off your computer and any peripherals connected to it following the instructions in *Switching off the computer* on page 65.

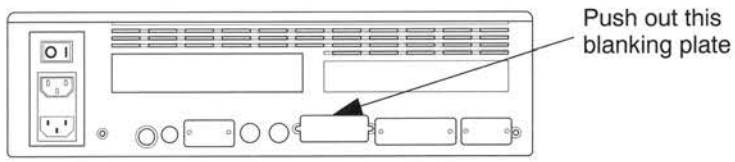
2 Remove the power lead from the wall socket.

3 Follow the instructions in *Opening the computer* on page 85. Remove both the top cover and the back panel.

4 Identify where the network/joystick connector socket is in the case. You will find it on the main circuit board, partially obscured by the drive tray, which sits above it, as you can see from the diagram below.

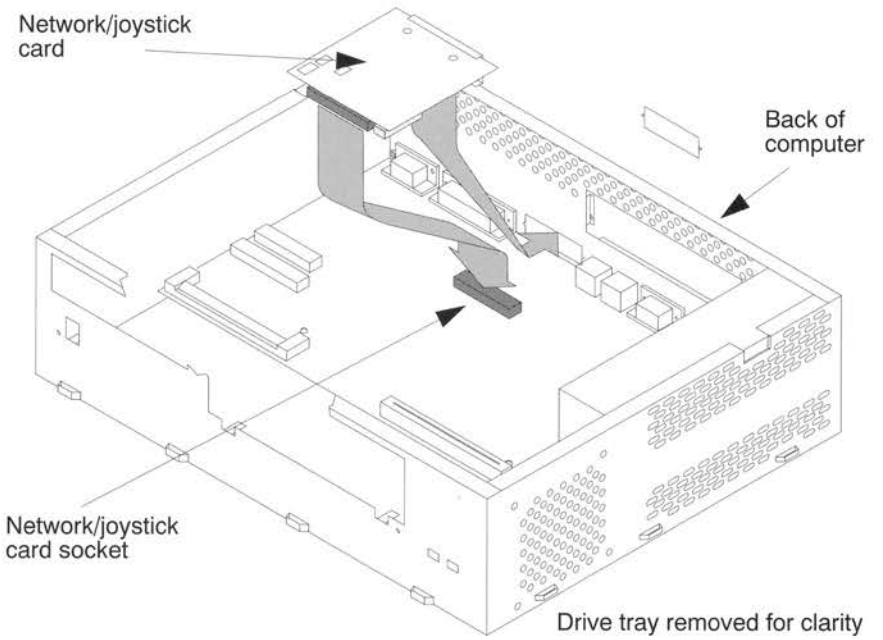


5 Remove the blanking plate covering the network/joystick connector socket on the metal case by gently pressing it outwards from the inside. Keep it in a safe place in case you ever need to replace it.



6 If you are installing a joystick card, it can be used with either digital or analogue joysticks. Make sure that the connections are set appropriately for your model of joystick. Refer to the instructions that came with the joystick card for details.

7 Align the card so that its external connector fits in the empty network/joystick connector socket in the rear of the metal case.



8 Push the card connector (underneath the card) firmly into the network/joystick connector socket on the main board. This can be a little tricky, since the socket lies below the bar on the rear of the drive tray (which has been removed from the diagram above for clarity). If you have any difficulty, remove the drive tray as described in *Opening the computer* on page 85.

9 Screw the connector to the back of the metal case using the screws supplied.

10 Stick the network or joystick connector label on the back panel, in the space provided above the hole for the external connector.

11 Replace the top cover and back panel. The chapter entitled *Opening the computer* on page 85 shows you how to do this.

You have now finished installing the network or joystick card.

Appendix A: Using a CD-ROM Drive

Your computer may have been supplied with a CD-ROM *drive fitted, or you may have fitted one yourself. This appendix gives you basic instructions on how to operate it.*

This appendix provides information on

- using a CD-ROM drive and associated software
- care and maintenance of your CD-ROM drive and CD-ROMs.

If you do not have a CD-ROM drive, it is possible to fit one yourself. Consult your Acorn dealer for more information about the type of drives which you can use. If you do fit your own CD-ROM drive you may find that specific details differ from the information given here, depending on the model you have fitted.

Important note: If you fit a CD-ROM drive yourself, you must install a fan to prevent overheating.

Configuring your CD-ROM drive

The software supplied with your computer allows you to view the contents of any CD placed in the drive, from within RISC OS.

If your computer was supplied with a CD-ROM drive already fitted, the software will already be configured so that you can use it straight away. If you have fitted a CD-ROM drive yourself, you may need to change the configuration. See the RISC OS 3 *User Guide* for details.

Accessing information on CD-ROM

If you have a CD-ROM drive fitted to your computer, a CD icon will appear on the icon bar when you switch the computer on. Click on this icon to view the contents of any CD-ROM, in exactly the same way as you use the floppy disc icon to see what is on a floppy disc. The main difference is that CD-ROMs are read only: you cannot change or add to the information stored on a CD-ROM.

To view the contents of a CD-ROM:

1. Press the Load/Eject button on the front of the CD-ROM drive. The drive door will open.
2. Place the CD in the tray with the disc label facing upwards.

3 Press the Load/Eject button, or push the drive door in gently. The CD-ROM will be loaded into the drive, and will now be available for access.

4 Click Select on the CD icon on the icon bar to open a directory display on the contents the CD-ROM.

To remove the CD-ROM:

1 Click Menu on the CD icon on the icon bar, and choose **Dismount** from the menu.

2 Press the Load/Eject button and the CD-ROM will be ejected from the drive.

Playing audio CDs using CDPlayer

You can play audio CDs through headphones connected to the headphone socket on the CD-ROM drive using the CDPlayer application, which you will find in the `Utilities` directory on your hard disc.

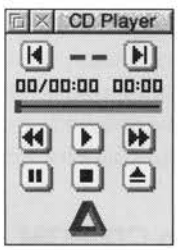
To play an audio CD:

1 Plug your headphones into the headphone socket on the CD-ROM drive.

2 Place the CD in the CD-ROM drive and close the drive door.

3 Double-click on the CDPlayer icon in the `Utilities` directory. The CDPlayer application will load and its icon will be displayed on the icon bar.

4 Click on the CDPlayer icon on the icon bar. The main CDPlayer window will be displayed.



This window gives you a set of controls similar to the ones you will find on a conventional CD player.

5 Use the controls in the main CDPlayer window to play the tracks on your CD.

6 To adjust the volume, click Menu over the CD icon on the icon bar and choose **Volume...** to display the CD colume control window.

For full details about the CDPlayer application, refer to the RISC OS 3 *User Guide*.

Loading PhotoCD images using PhotoView

PhotoCD discs are CD-ROMs which contain images (such as photographs). It is possible to have your own snapshots developed and placed on a PhotoCD disc. If you own PhotoCD discs, you need to use the PhotoView application to view them on your computer. You will find this in the `Utilities` directory.

To view images on a PhotoCD disc:

1. Place the PhotoCD disc in your CD-ROM drive.
2. Load the PhotoView application by double-clicking on its icon in the Utilities directory.
3. Click on the PhotoView icon on the icon bar. This will open the contact sheet for the PhotoCD in your CD-ROM drive.
4. Click on any image on the contact sheet to view it.

For full details about the PhotoView application, refer to the RISC OS 3 *User Guide*.

Looking after CDs

The following precautions should be observed when handling CDs:

- Hold your CDs by the edges: do not touch the surface.
- Use a clean, soft, dry cloth to remove any dust or fingerprints from the surface.
- Do not write on the surface of your CDs.
- Do not stick paper to the surface of your CDs.
- Do not store CDs in high temperatures.
- Do not use benzine, thinners, or similar solvents to clean the surface of CDs.
- Do not make the centre hole larger or bend your CDs.
- Do not drop CDs, or subject them to shock.
- Always keep CDs in their cases when not in use.

Care of your CD-ROM drive

To avoid careless damage to your CD-ROM drive, there are a few basic procedures you should follow:

- Do not insert any foreign objects into the disc tray.
- Except in an emergency (see below), do not force the tray to open manually.
- When the drive is not in use, keep the tray closed to prevent dust and dirt damaging it.
- Make sure there are no heavy weights placed on top of the drive bay, since this could result in damage to the drive.

Ejecting a CD manually

If for any reason a CD becomes stuck in the drive (i.e. the drive door does not open when you press the Load/Eject button), you can eject it manually as follows:

1. Shut down and switch off your computer and any peripherals connected to it following the instructions in *Switching off the computer* on page 65.
2. Remove the power lead from the wall socket.
3. Find a straight piece of strong wire, at least 5cm in length and 1-2mm in diameter. (An unfolded paper clip is ideal for this purpose.)
4. Push the end of this wire into the emergency eject hole on the front of the CD-ROM drive and press firmly.

The drive door will then open, and you can switch the power back on and continue as normal.

Appendix B: Protecting your hard disc

Your computer can be protected against unauthorised tampering using the following methods:

- Protecting the disc file system against unwanted changes.
- Protecting the system configuration memory (CMOS) against unwanted changes and resets.

Before removing the top plastic cover of the computer

1 switch off the computer

2 remove the power lead from the wall socket.

Do not reconnect the power lead to the wall socket until you have replaced the cover of the computer.

Do not make any adjustments inside the computer while the power lead is connected to the wall socket.

Acorn Computers Limited cannot accept any liability for damage done to the product during the installation of internal upgrades whether or not carried out in accordance with the instructions in this chapter. If you don't feel confident about carrying out any of the instructions in this chapter, ask your supplier to fit upgrades for you (a charge may be levied by the supplier for installing any upgrades; such a charge shall be entirely at the discretion of the supplier concerned).

Important note: During normal operation of the computer, the power supply unit will become hot. If you open the computer, be very careful not to touch this unit if you have recently had the computer switched on.

Protecting the disc file system

The hard disc contents and system configuration can be protected from unauthorised tampering by using the special locking software incorporated into the **Lock** screen of the **!Boot** Configuration window. This locking software protects the hard disc against any changes to its contents.

The locking software also protects the computer's software configuration against unauthorised tampering.

Note: you can create a special directory (named **Public**) that can be used normally, even though the rest of the disc is locked.

There is more information about using the **Lock** screen in the chapter entitled *Changing the computer's configuration* in the RISC OS 3 *User Guide*.

Protecting the system configuration against unauthorised resets

Even if you have used Lock, it is still possible for a user to reset your computer back to the configuration supplied when it was delivered. A reset also loses your Lock configuration, leaving your filing system open to unauthorised access again. However, it is possible to protect your computer against a reset and so protect your filing system.

The Configuration protection connector

You can protect your computer against these types of resets by using the Configuration protection connector. When this connector is set correctly, resets cannot take place (the system just reboots). (There is more information about Reset options in the RISC OS 3 *User Guide*.)

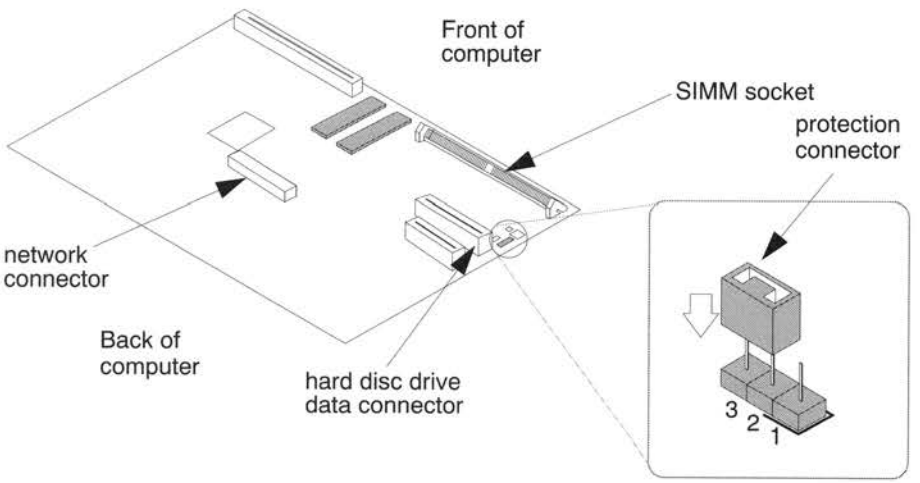
Setting the Configuration protection connector

1 Shut down and switch off your computer and any peripherals connected to it following the instructions in *Switching off the computer* on page 65.

2 Remove the power lead from the wall socket.

3 Follow the instructions in *Opening the computer* on page 85. Remove both the top cover and the back panel.

4 Locate the Configuration protection connector using this diagram.



Looking from the back of the computer to the front; the connector is one of the group of four small components on the right hand side of the circuit board, between the SIMM socket and the hard disc drive data connector. It is labelled NVM Lock. The connector is quite small. When the computer is delivered, the protection connector is over pins 1 and 2. This is the unprotected position.

5 Remove the protection connector by gripping it between your fingers and pulling firmly upwards and off the pins.

6 Place the connector so that it is over pin 2 and pin 3 and then push the connector firmly down. This is the protected position.

The computer is now locked against configuration resets. You will now need to move this connector back again before you can reset the computer.

Appendix C: Monitor configuration

This appendix tells you how to set up different types of monitor so that they operate correctly with your computer.

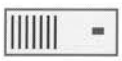
If you are using the Acorn AKF60 monitor you should not need to refer to this appendix as your computer is always set up to work with these monitors. Information about connecting up the monitor is given on page 3.

If you are using one of the other types of monitor supplied by Acorn (the AKF50, AKF52, AKF53 or AKF85 monitors), you may need to change the monitor type used by the computer. You only need to do this once and then the computer will remember the monitor type.

If you want to use other types of monitor refer to *Using non-Acorn monitors* on page 113.

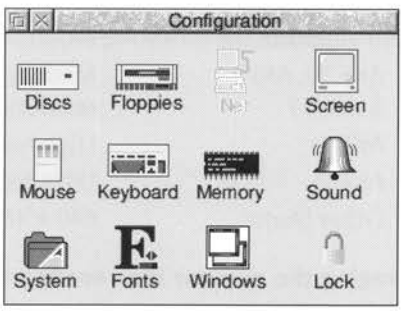
Changing the monitor setup configuration

If you are not using the standard Acorn monitor supplied with your computer then you may need to change the monitor setup definition stored in the computer. This definition is changed using the Screen option in the !Boot configuration screen.

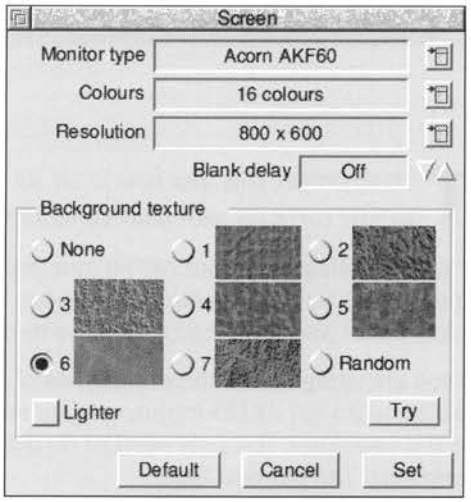


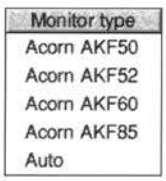
1 Click on the hard disc icon on the icon bar.

2 Double-click on the !Boot icon in the directory display window.
This displays the **Configuration** window.



3 Click on the **Screen** option in the Configuration window.





4 Click on the **Monitor type** menu icon to display the list of monitor types available.

5 Click on the option that corresponds to your monitor type. If you are still not sure which monitor type to use, choose **Auto** and then contact your dealer for more information.

6 You can now, if you wish, set the Resolution and Colours. For more information refer to the chapter *Changing the computer's configuration* in the RISC OS 3 *User Guide*.

7 Click on **Set**.

Acorn monitor types

Acorn supports the following monitors:

AKF 50, AKF52 & AKF53	Medium resolution SVGA with TV standard resolution.
AKF60	High resolution SVGA.
AKF85	Ultra high resolution.
Other (Auto)	640 x 480 resolution only.

Changing the monitor type configuration

In the unlikely event that you choose a monitor type that is completely incompatible with your monitor type, you may not get a picture on the monitor.

To return to a screen combination that is usable, you must use **Delete power on** to reset all the CMOS bytes. This also has the effect of changing the Monitor type, Colours and Resolution to **Auto**. This should be usable on all VGA types of monitor. Once you have a usable desktop you should select a Monitor type more suitable for your monitor.

To perform a Delete power on, follow this procedure:

1 Switch your computer off.

2 Hold down the Delete key and keep it held down while switching on the computer.

Keep it held down until the power-on sequence has completed.

3 The Desktop screen will now be displayed, go back to previous section *Changing the monitor setup configuration* and begin the configuration procedure again.

You may have to reset the hardware protection connector before this procedure works correctly; see *Protecting your hard disc* on page 107 for more information.

Using non-Acorn monitors

If you want to use a monitor that is not listed in the standard monitors menu list you should contact your supplier for advice. In general, the monitor must be capable of displaying at least 640 × 480dpi (dots per inch) – VGA standard. Your supplier should be able to provide you with a suitable monitor definition file – this is a file which is placed inside the !Boot application and allows your computer to recognise the monitor which is connected.

Take the following steps to get a picture on your monitor:

1 Use the information in this section to check

- whether your monitor was supplied with the correct cable (if it wasn't, refer back to your supplier)
- whether your monitor needs an adaptor, and the right one was supplied
- whether the computer's monitor configuration is suited to your monitor.

2 If your monitor needs an adaptor that isn't supplied, make one (or ask your supplier to make one for you) using the information in *Cables and adaptors*.

3 Connect the monitor to your computer, using the correct cable.

4 Follow the instructions in *Switching on* on page 7 to get a picture on the monitor.

5 If necessary, change the monitor setup configuration. You can probably use the **Auto** monitor description file to give you a picture. Contact your supplier for advice.

Cables and adaptors

This section gives you the pinouts on standard cables supplied with monitors, and tells you how to make adaptors if they are required. The pinout of the video connector on the back of the computer is illustrated in *Video* on page 120.

Although the cables and adaptors detailed in this chapter work correctly with the computer hardware, you still need to obtain the correct software monitor definition file for your monitor; contact your supplier for more information.

Cable type A

This cable is supplied with most VGA, Super VGA and Multiscan monitors and is terminated at the computer end with a 15-way VGA style D-type plug.

The table below shows the typical pinout for the computer end of this type of cable. You can use this cable without modification.

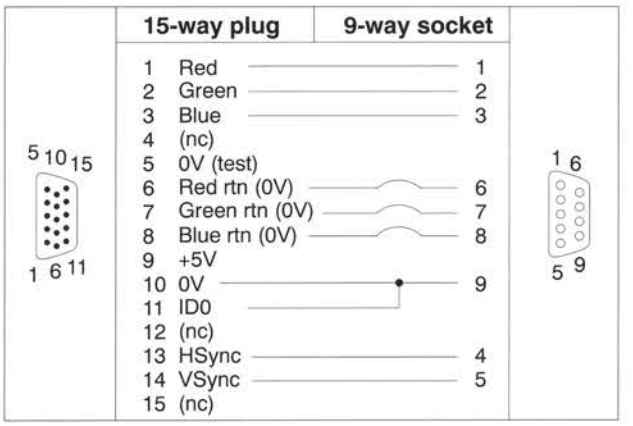
Pin	VGA and Multiscan	Multiscan
1	Red	Red
2	Green	Green
3	Blue	Blue
4	Not Connected	0V (See Note)
5	0V (or test)	0V (or test)
6	Red Rtn (0V)	Red Rtn (0V)
7	Green Rtn (0V)	Green Rtn (0V)
8	Blue Rtn (0V)	Blue Rtn (0V)
9	Not Connected	Not Connected
10	0V	0V
11	0V (See note)	0V (See note)
12	Not Connected	Not Connected
13	HSync	HSync
14	VSync	VSync
15	Not Connected	Not Connected

Note: normally linked to pin 10 (0V) in the cable or in the monitor.

Adaptor plugs

15-way to 9-way adaptor for separate sync monitors

The cable supplied with some Multiscan monitors is terminated at the computer end with a 9-way D-type plug. You need a standard 15-way plug to 9-way socket adaptor:

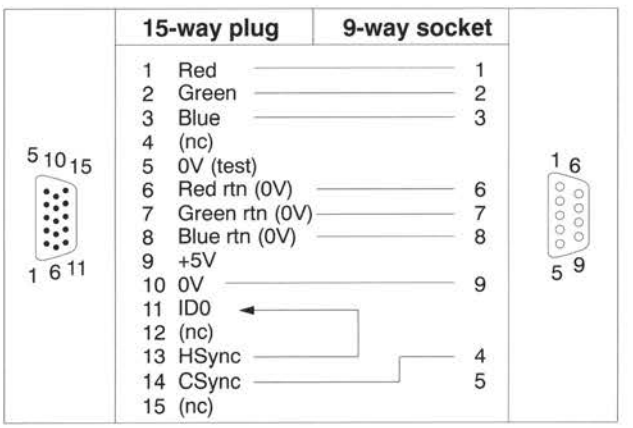


Note: the ID0 to 0V connection will make the computer generate separate sync signals.

Most Multiscan monitors are now being designed to be VGA-compatible and will work satisfactorily when driven with separate horizontal and vertical sync signals. The ID0 to 0V connection makes the computer generate separate sync signals.

15-way to 9-way adaptor for composite sync monitors

The cable supplied with some monitors is terminated at the computer end with a 9 pin D-type plug. You need a 15-way plug to 9-way socket adaptor:

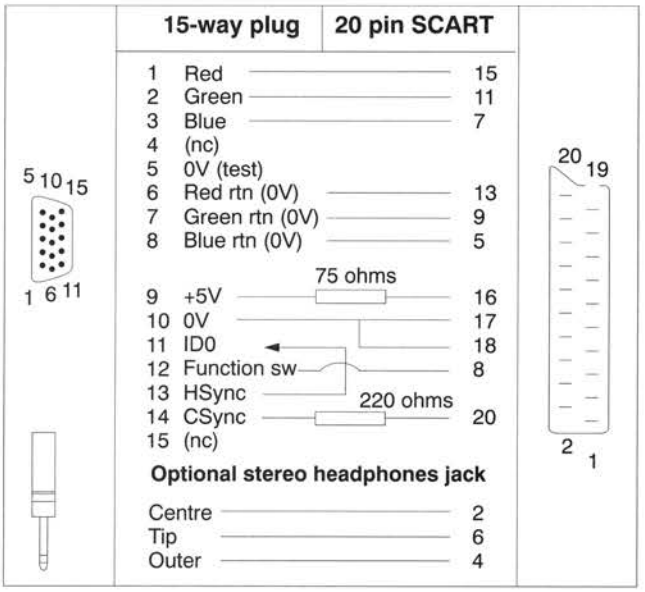


Note: HSync (pin 13) linked back into ID0 (pin 11) tells the computer that composite (rather than separate) sync is required, and that only modes compatible with a TV standard monitor can be displayed.

HSYNC to ID0 connection makes the computer generate a composite sync signal.

15-way to SCART input socket

You need to make this cable (if it's not supplied) for use with televisions and monitors using a SCART input socket:



Note 1: HSync (pin 13) linked back to ID0 (pin 11) tells the computer that composite (rather than vertical) sync is required, and that only modes compatible with a TV standard monitor can be displayed.

Note 2: on some TVs you might have to switch the TV manually into SCART mode (check how to do this in the TV's manual).

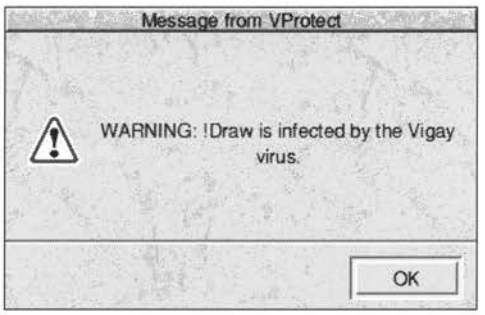
Connecting the stereo headphones jack will automatically cut off the sound to the computer's internal speaker.

Appendix D: Virus protection

Your computer is protected against infection by computer viruses by a special program that watches out for viruses.

This program, VProtect (by Pineapple Software) loads automatically whenever you switch on your computer.

Normally, you will not notice the virus protection. However, if you were about to inadvertently load a virus VProtect stops the action from proceeding and displays a warning such as that shown here:



Warning: The virus will not enter your computer, but will still be on the floppy disc (or other media). Additional software is required to remove a virus; you should not attempt this yourself because there may be malicious side-effects triggered by deleting the files.

If you discover a virus which VProtect fails to detect, or need to obtain software to remove an existing virus, contact Pineapple Software using the details on the leaflet enclosed in the computer's packaging.

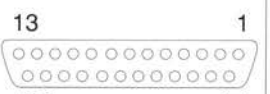
Appendix E: Connector pin-outs

This appendix gives the pin positions of most of the connectors on the back panel of the computer. These are intended to help you if you wish to construct your own cables.

Parallel port

The pins on the 25-way D-type socket on the back of the computer are as follows:

Pin	Signal	I/O	Pin	Signal	I/O
1	$\overline{\text{STROBE}}$	I/O	2	D0	I/O
3	D1	I/O	4	D2	I/O
5	D3	I/O	6	D4	I/O
7	D5	I/O	8	D6	I/O
9	D7	I/O	10	$\overline{\text{ACKNOWLEDGE}}$	I
11	BUSY	I	12	PAPER ERROR	I
13	SELECT	I	14	$\overline{\text{AUTO FEED}}$	O
15	$\overline{\text{ERROR}}$	I	16	$\overline{\text{INIT}}$ (see Note)	O
17	$\overline{\text{SELECT IN}}$	O	18	0V	N/A
19	0V	N/A	20	0V	N/A
21	0V	N/A	22	0V	N/A
23	0V	N/A	24	0V	N/A
25	0V	N/A			



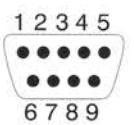
Note: may also be referred to as $\overline{\text{RESET}}$

Serial port

RS232

The pins on the 9-way D-type plug on the back of the computer are as follows:

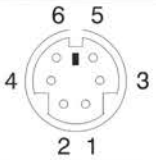
Pin	Signal	Pin	Signal
1	DCD I/P	2	RXD I/P
3	TXD O/P	4	DTR O/P
5	0V	6	DSR I/P
7	RTS O/P	8	CTS I/P
9	RI I/P		



Keyboard connector

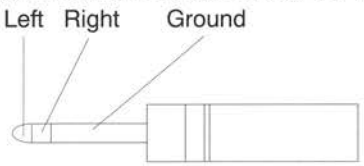
The pins on the mini-DIN socket on the back of the computer are wired as follows:

Pin	Signal	Pin	Signal
1	Kdata	2	No connection
3	0V	4	5V
5	Kclk	6	No connection



Headphones

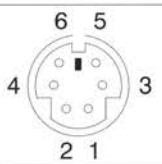
The 3.5mm stereo jack plug (32 ohms impedance) is wired as shown.



Mouse connector

The pins on the mini-DIN socket on the back of the computer are wired as follows:

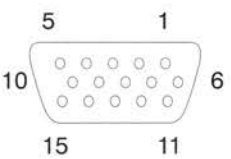
Pin	Signal	Pin	Signal
1	Mdata	2	No connection
3	0V	4	5V
5	Mclk	6	No connection



Video

The pins on the 15-way D-type socket are as follows:

Pin	Signal	Pin	Signal
1	RED	2	GREEN
3	BLUE	4	(n/c)
5	TEST (0V)	6	R return (0V)
7	G return (0V)	8	B return (0V)
9	+5V	10	0V
11	ID0	12	SCART Function switch
13	HSYNC	14	VSYNC/CSYNC
15	(n/c)		



Glossary

This glossary defines any new terms that you may have come across in the guide. Terms in italics have their own definitions in this glossary.

ADFS — **A**dvanced **D**isc **F**iling **S**ystem (see the RISC OS 3 *User Guide* for more information).

adjust button — Righthand *mouse* button.

adjust size icon — *Icon* in the bottom righthand corner of some *windows*. *Drag* this to change the size of a window.

application — A program you use to perform tasks (such as word processing) or play games on the computer.

application directory — Similar to an ordinary *directory*, in that it contains other *files* or directories. Its name starts with an exclamation mark (!). *Double-clicking* on an application directory starts the *application* (rather than just opening the directory). Double-clicking while holding down the ⇧ (Shift) key opens the application directory allowing you to view its contents.

application icon — Icon that appears on the *icon bar* when you start an application.

application window — The *window* or windows in which the application is displayed.

arrow icon — Icon that appears in a *dialogue box*. Click on it to increase or decrease a progressive series such as dates, or a sequence of numbers.

Apps icon — An *icon* that is always present on the lefthand side of the *icon bar*. *Clicking* on this will give you access to the main *applications* stored in the computer such as Draw and Paint.

auto-start — You can configure the computer so that particular applications will automatically start every time you switch on.

back icon — *Click* on this to send a *window* to the back of a pile of windows on the screen. Click on the *title bar* or the *Adjust size icon* to bring it to the front again.

backplane — A small printed circuit board (PCB) sticking out vertically from the main PCB. You plug *expansion cards* into the backplane.

backup — A copy of an important *file* (or *directory*, or even a whole disc).

bit — A unit of storage – a binary digit. One is circuit on, zero is circuit off.

byte — A unit of storage, which consists of eight bits (ones or zeros) of information.

Caps Lock key — Key at the lefthand side of the *keyboard*. When the Caps Lock light is ON, anything you type into the computer will be in upper case.

caret — A vertical bar in a *file* or *writable menu option*. Text you type in appears to the left of the caret.

CD-ROM — A CD on which information can be stored. CD-ROMs are read-only, so you cannot write information on them yourself. Your computer may be fitted with a CD-ROM drive, allowing you to access the information stored on CD-ROMs.

clicking — Pressing and releasing one of the *mouse* buttons once (normally the Select button, unless otherwise stated).

clicking on — Pointing at with the mouse pointer and clicking Select.

close icon — Click *Select* on this to close a *window* or *directory display*. Click *Adjust* to close the window and simultaneously open its *parent*. Press ⇧ (Shift) and click Select on this to close a window and leave its *icon* on the *Pinboard* (Double-click on the *Pinboard* icon to open it again). Press ⇧ (Shift) and click Adjust to open the parent without closing the window.

computer control keys — These include the following keys: Ctrl, ⇧ (Shift), CapsLock, Alt, ↵ (*Return*), the arrow keys, *Delete*, Insert, Home, End, Page Up and Page Down.

default — A standard setting or option, which the computer uses unless you tell it to do something else.

default action button — a button in a dialogue box with a thicker border. This button is the *default* action for the dialogue box: you can press the ↵ key on the keyboard rather than clicking in this button.

Delete key — The function of this key depends on what *application* you are using. For instance, in Edit (or a *writable menu option*) press this key to delete a character to the left of the *caret*. In Draw, press this key to delete a selected object.

desktop — Area of the screen display where you run *applications*, open *windows* and so on.

destination disc — When making a *backup*, you copy information **from** an original *source* disc **to** a blank, formatted destination disc.

devices and device icons — Devices really means storage devices – places where information (*files*, *directories* or programs) is kept. *Click* on the device icon (on the lefthand side of the *icon bar*) to see what is stored on the associated device.

dialogue box — A window in which you can set multiple options and supply file names in *writable menu options* before the computer performs a task or operation.

directory — Storage area – like a folder – in which you can keep *files* or *subdirectories*.

directory display — *Window* that displays the contents of a *directory* or storage *device*. *Double-click* on a directory to see its directory display.

disc — See *floppy disc*.

disc eject button — The small button to the right of the floppy disc drive used to remove a disc from the disc drive. Make sure the *drive indicator light* is out before you press this to *eject* a *floppy disc*.

double-clicking — Pressing and releasing the *Select* or *Adjust button* twice in quick succession.

double-click arrow — When you double-click on an object, the *pointer* will change to a double-click arrow just after the first click. You have to make the second click before the pointer reverts to its normal shape.

double density floppy discs — Floppy discs capable of holding 800KB of information when formatted under ADFS (720KB when formatted under DOS).

drag — Press and hold down the *Select* or *Adjust button* and move the *mouse*, whilst the *pointer* is over the object you want to drag.

drive indicator light — This is an LED that lights when the disc drive is being used by the computer. There is one for the hard disc drive and one for the floppy drive.

Econet — This is a means of connecting two or more computers together so that they can communicate with each other and share information. It is a type of Local Area Network (LAN) produced by Acorn. Contact your supplier for details.

eject — Press the *disc eject button* to eject a *floppy disc*.

Ethernet — Another type of LAN, developed by Xerox Corporation.

expansion card — An extra circuit board fitted to your computer that will make it more versatile and powerful. Expansion cards are available from your supplier.

file — A collection of information bundled together and given a name to identify it. For instance, a letter written on a word processor, a program, a *printer definition file*.

file access — Controls who else can look at or change any of your *files* if your computer is connected to a network (like *Econet* or *Ethernet*).

file locks — Prohibit other users on a network from looking at or changing your files, and prevent you from accidentally deleting files you have protected.

Filer menu — *Menu* displayed when you click Menu over a directory display.

filing system — (e.g. ADFS) – A logical and structured way of storing and manipulating *files*. See the RISC OS 3 *User Guide* for more information.

floppy disc — Removable disc for storing information. Your computer uses 3.5 inch floppy discs.

font — A typeface that the computer uses (e.g. Homerton, Trinity). Some are permanently stored in the computer's ROM, and some are in !Fonts. You can buy extra fonts.

format — Formatting a disc prepares it to receive information from the computer.

function keys — Set of keys along the top of the keyboard. What they do depends on which *application* you are using.

hard disc — A storage device fitted permanently inside the computer. Can hold much more information than a *floppy disc*.

high density floppy disc — Floppy disc capable of holding 1600KB of information when formatted under ADFS (1440KB under DOS).

icon bar — Strip along the lower edge of the *desktop* showing *icons* for *devices* and *applications* currently accessible from the computer's memory.

icons — Small pictures representing *applications*, *devices*, *files*, *directories* and so on.

input focus — When the input focus is on a particular file's *window*, you can alter that file (type in text, add graphics etc). The title bar and other icons on the window will change colour.

keyboard — Built in or attached to computer by a cable. You use it to input information to the computer.

keyboard map — The layout of the keys on the keyboard. This includes all the special and accented characters. Read the chapter *Using the keyboard* for more information.

kilobyte (KB) — Unit of size relating to storage space in a computer. There are 2^{10} (1024) *bytes* in a kilobyte. A formatted high density *floppy disc* can hold about 1600KB. A *hard disc* can hold much more.

LED — **L**ight **E**mitting **D**iode. The lights on the front of the computer are LEDs.

letterbox — A type of *screen mode*, much wider than it is high. Used to display old type screen modes for backward compatibility purposes.

local area network (LAN) — A general term for a network like Econet or Ethernet.

megabyte (MB) — There are 2^{10} (1024) *kilobytes* in a megabyte.

memory — The computer's information storage areas (see also RAM). If you try to run too many applications at once, you may run out of computer memory and have to quit some of the applications you are not using.

menu — List of actions you can choose from to perform on (or within) *files*, *directories*, *applications* and so on.

Menu button — Middle *mouse* button. *Click* it to display a *menu*.

menu option — See *menu*.

modem — Short for **Mo**dulator-**Dem**odulator. A device that allows the computer to send and receive electronic signals via the telephone system.

monitor — Screen unit (like a TV set) used to display communications from the computer. Monitors can be colour or monochrome (black and white). Also known as a Visual Display Unit (VDU).

MonitorType — A computer variable that determines which *screen modes* your *monitor* can display.

mouse — Small plastic box with three buttons on top and a cable attaching it to the computer. Hold it in your right hand, if you're right handed. Moving it moves the pointer on the screen.

network — Computers may be connected to one another on a network, allowing them to share information and equipment. *Econet* and *Ethernet* are examples of networks.

move — Press ⇧ (Shift) while *dragging* a file to move (rather than just copy) a file from one *directory* to another.

numeric keypad — Group of keys on the righthand end of the *keyboard*. When the NumLock key is on, the keys enter the numbers marked on them. With NumLock off, they may behave differently, depending on the *application*.

operating system — Actions you tell the computer to perform via the *desktop* are translated by the operating system into instructions that the computer can understand.

option icon — Icon that appears in a *dialogue box*. Click on it to toggle (switch) an option on or off.

parent directory — A parent *directory* contains *subdirectories* and *files*. The files and subdirectories you see in a *directory display* are "children" of this parent directory.

peripheral — An item of hardware, e.g. a *printer, monitor* or *modem*.

Pinboard — *Application* that makes use of the blank areas of the *desktop*. You can *drag icons* onto the desktop itself and they will 'stick' there (still in the computer's memory, just not open on the desktop).

pointer — Arrow displayed on the *desktop*. It moves when you move the mouse. Use it to *move*, change or select items on the desktop.

pop-up menu icon — Icon that appears in a *dialogue box*. Click on it to display a submenu.

printer — *Peripheral* which prints *files* or documents onto paper.

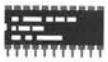
printer definition file — A program which tells the computer what type of printer it is connected to.

printer manager — Application that oversees the printing process.

prompt — Signifies that you need to type in a command or supply information (e.g. the * prompt that appears when you press F12).

quit — To close a *file* or *application*, and remove its *windows* from the screen.

radio icon — One of a group of buttons that appears in a *dialogue box*, only one of which may be selected at once.



RAM — Random Access Memory – part of the computer information storage system which is accessible for storing or retrieving information without using *discs*. Information in RAM is lost when the computer is switched off.

resources — The means with which your computer runs programs and *applications*.

Return (↵) key — Key on the *keyboard* that you press to signify the end of an instruction to the computer (e.g. when you've finished typing in a *file* name in a *writable menu box*) or to start a new line in an Edit file.

RISC OS — Stands for: **R**educed **I**nstruction **S**et **C**omputer **O**perating **S**ystem. See also *operating system*.

ROM — Read Only Memory – similar to RAM, but ROM doesn't lose its contents when you switch the computer off. The *operating system* and several applications and fonts are permanently present in ROM.

root directory ($) — The top-level *directory* in a filing system (all other *files*, *subdirectories* etc are contained in it).

save — Keep a permanent copy of a *file* in its current state (including any changes made since the last save).

SCART — Type of connector used to connect some types of monitor or TV to the computer. Gives better picture and sound quality than using an ordinary coaxial aerial cable.

screen mode — Governs the physical appearance of the *desktop* on your display or *monitor*.

scroll arrows — Arrows at either end of the *scroll bars* of a *window* that is not large enough to show all of a *file*.

scroll bar — Shaded bar along the righthand (and sometimes lower) edge of a *window*.

scrolling — Moving around a large *file* using the *scroll bars* and *scroll arrows*.

Select button — Lefthand *mouse* button. Used to select items, choose *menu* options, *drag icons*.

self-tests — A series of tests performed by the computer when you switch on.

Shutdown — Menu option on the *task manager icon bar menu*. Choose this before you switch off the computer – it ensures that the computer shuts down 'gracefully'.

slider — Box within *scroll bar*. *Drag* it to move around a *file*.

source disc — See *destination disc*.

storage device — See *devices*.

subdirectory — *Directory* in a *parent* directory.

submenu — *Menu* accessed by moving the *pointer* over an arrow on a main menu.

system application — Contains some of the *resources* that are common to all *applications*.

system disc — Floppy disc containing *system applications*.

Task manager — Icon on righthand side of *icon bar*. Use it to control how the computer uses its memory.

title bar — Area of a *window* in which the name of the *file*, *application* or *directory* appears.

toggle size icon — *Icon* in the top righthand corner of a *window*. *Clicking* on this toggles between full size and the last size at which a window was displayed.

toggling — Switching alternately between two states, usually by clicking Select (e.g. clicking repeatedly on the Toggle size icon of a window, or an option icon in a dialogue box).

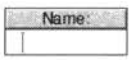
track — An area defined on a disc when you *format* it, on which the computer stores data.

typewriter keys — Block of keys on the *keyboard* which resemble those on a typewriter.

verify — After a *floppy disc* is *formatted*, the computer will verify it, to make sure that the operation has completed successfully.

window — Area of the screen designated for a particular activity or display – e.g. an Edit window (used to create a text file) or a *directory display*.

work disc — Floppy disc containing an application, !Scrap and a work directory.



writable menu option — A *submenu* option or part of a larger *dialogue box*. Either it already has a *caret* in it, or the *pointer* changes to a caret when it is over the option, indicating that you need to click in it and type in something (e.g. a file name).

write-protect — To lock a *floppy disc* so that the information on it cannot be changed.

Reader's Comment Form

Acorn A7000 Range Welcome Guide
Part number 1402,050

We would greatly appreciate your comments about this Manual, which will be taken into account for the next issue:

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