

RISC OS 3 software upgrade fitting instructions

Contents

	Page number
Introduction	2
Packing list	2
An overview of the software upgrade procedure	4
Identifying your upgrade	4
Upgrading your computers hardware	5
Equipment required	5
Removing the computer's cover	6
Where to go next	7
Upgrading instructions for Archimedes 305, 310, 440 and R140 computers	8
Upgrading instructions for Archimedes 410/1, 420/1 and 440/1 computers	13
Upgrading instructions for Archimedes 540 and 8260 computers	18
Upgrading instructions for A3000 computers	24
Upgrading instructions for A5000 computers	30
Restarting the computer	35
Configuring the computer	35
Updating the RISC OS Applications Suite	35
Appendix A Main PCB Link settings for RISC OS 3 4Mb ROMs	37
Appendix B Main PCB Link settings for RISC OS 2 1Mb ROM/EPROM	39

Introduction

These instructions describe how to upgrade your machine to the new Acorn operating system, RISC OS 3, by fitting new ROMs in your machine. ROM is an acronym for *Read Only Memory*; it is a chip which fits inside the computer on its main printed circuit board (PCB). The ROM contains the new operating system.

Before you begin this upgrade, please read all of these instructions carefully. If you do not feel confident to carry out this upgrade, please take the upgrade kit and your computer to an Acorn Dealer, who will install it for you: The dealer may make a charge for installing it — such a charge shall be entirely at the discretion of the dealer: If you decide to carry out this upgrade yourself, you carry it out entirely at your own risk:

A3000 computers

Some early A3000 computers should only be upgraded by Acorn Computers authorised dealers: See page 24 for more information.

Hardware upgrades

Your computer may first require a hardware upgrade, to enable it to be upgraded to RISC OS 3: Hardware upgrade kits are available for these computers: This kit comes with its own set of installation instructions: For more information turn to page 5.

Packing list

There are three types of software upgrade kit:

- RISC OS 3 software upgrade kit (ALA 31)
- RISC OS 3 bulk software upgrade kit (ALA 331)
- RISC OS 3 A5000 software upgrade kit (ALA 34)

RISC OS 3 software upgrade kit (ALA 31)

The upgrade kit for all 32 bit Acorn computers except A5000 consists of

- four RISC OS 3 ROMs

- two Applications floppy discs
- one Support floppy disc
- RISC OS 3 User Guide & Applications Guide
- RISC OS 3 Release Note
- audio tape "Welcome to RISC OS 3"
- registration form
- RISC OS 3 software upgrade fitting instructions (this leaflet).

RISC OS 3 bulk software upgrade kit (ALA 33)

The bulk upgrade kit for all 32 bit Acorn computers except A5000 consists of

- ten sets of four RISC OS 3 ROMs
- two Applications floppy discs
- one Support floppy disc
- RISC OS 3 User Guide & Applications Guide
- RISC OS 3 Release Note
- one audio tape "Welcome to RISC OS 3"
- registration form
- RISC OS 3 software upgrade fitting instructions (this leaflet)
- End-User Licence:

RISC OS 3 A5000 software upgrade kit (ALA 34)

The upgrade kit for an A5000 computer consists of:

- four RISC OS 3 ROMs
- one Applications floppy disc
- one Support floppy disc
- RISC OS 3 Release Note
- End-User Licence
- registration form
- RISC OS 3 software upgrade fitting instructions (this leaflet).

An overview of the software upgrade procedure

The procedure to fit the software upgrade consists of the following stages:

- 1 Switch off the machine
- 2 Remove the top cover
- 3 Perform the hardware upgrade if necessary for your machine (see table below)
- 4 Remove the existing ROMs
- 5 Make a note of the existing link settings.
- 6 Change the link settings:
- 7 install the new ROMs:
- 8 Replace the top cover:
- 9 Restart the machine:

Identifying your upgrade

The type of machine that you have determines how much you have to change when upgrading to the R1SC OS 3 operating system: Some older machines need a hardware as well as a software upgrade, whilst the more recent Acorn computers require little change to make the upgrade: The table below describes the correct procedure for your machine:

Machine	Hardware upgrade	Change links	Replace ROMs
Archimedes 305	yes	yes	yes
Archimedes 310	yes	yes	yes
Archimedes 440	yes	yes	yes
Archimedes 410/1	no	yes	yes
Archimedes 420/1	no	yes	yes

Machine	Hardware upgrade	Change links	Replace ROMs
Archimedes 440/1	no	yes	yes
Archimedes 540	no	yes	yes
R140	yes	yes	yes
R260	no	yes	yes
A3000	no	yes	yes
A5000	no	no	yes

Upgrading your computer's hardware

The hardware upgrade involves soldering and, in some cases, track cutting on the main PCB: If the table shows that your computer needs a hardware upgrade, it is essential that the upgrade be undertaken by a recommended Acorn Dealer or Service Agent. A charge may be levied for installing the upgrade, which is at the discretion of your Dealer or Service Agent. Do not follow the instructions in the rest of this leaflet until your hardware upgrade has been fitted. Details on how to perform the hardware upgrade are given in the *RISC OS 3 hardware upgrade fitting instructions*.

Some third-party expansion products may allow Archimedes 300 and 400 series computers to be upgraded without a hardware upgrade: Contact the third-party manufacturer for information.

Equipment required

You will need the following equipment to perform the software upgrade:

- a small cross-head screwdriver (to remove the top cover)
- an EPROM extractor or flat-bladed screwdriver:

Removing the computer's cover

Fitting an upgrade involves removing the top cover of the computer:
The warning below applies to all Acorn computers.



DANGER
Dangerous voltages are exposed inside the case when the cover is removed.
Before removing the 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. If you are not sure what to do, ask your supplier or Acorn Service Centre.

Static electricity

IMPORTANT: Most electronic devices can be damaged by static electricity: To reduce the possible adverse effects of static electricity note the following points 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 metalwork of the case while performing the upgrade to ensure that you and the computer are at an equal electrical potential.
- Keep the chip(s) in anti-static foam until fitted.
- Avoid touching the pins of the chip(s) during fitting.

Where to go next

The following table shows you which page to turn to for upgrading instructions specific to your particular computer model.

If you are upgrading an:

Machine	Turn to page number
Archimedes 305	8
Archimedes 310	8
Archimedes 440	8
Archimedes 410/1	13
Archimedes 420/1	13
Archimedes 440/1	13
Archimedes 540	18
R140	8
R260	18
A3000	24
A5000	30

Upgrading instructions for Archimedes 305, 310, 440 and R140 computers

WarnIng: These computers require a hardware upgrade: Refer to the section entitled *Upgrading your computer's hardware* on page 5.

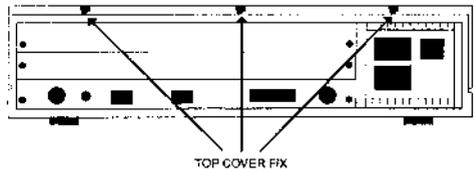
Archimedes 305 computers must be upgraded to 1 MB of memory.

The following instructions assume that the hardware upgrade has already been fitted.

Removing the top cover

To remove the top cover of the computer, proceed as follows:

- 1 Switch off the computer at the rear and disconnect it from the mains supply by unplugging the power supply cable from the wall socket: Unplug any peripherals that are attached and remove them from the computer completely:
- 2 Locate the screws holding the top case in place as shown in the figure below. Remove the three screws at the top rear of the unit, then remove the single screw located on each side of the unit, towards the front:



- 3 Once you have removed the three rear screws and the two side screws, slide the lid of the unit to the rear of the machine, then remove it completely: Slightly spring the sides of the lid outwards, if necessary, to make it easier to slide:

Removing the existing ROMs

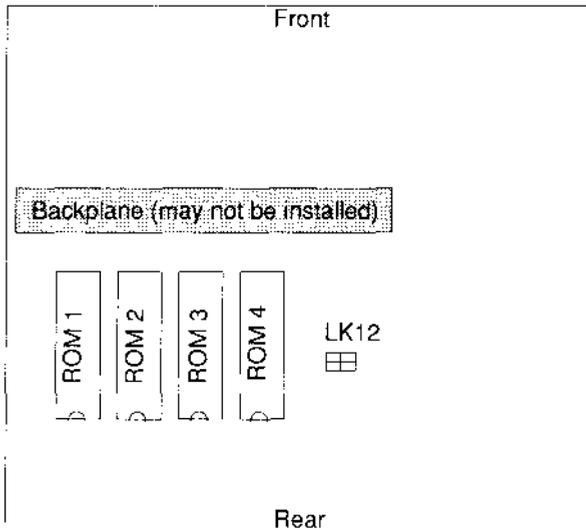
Before you insert the new ROMs you need to locate and remove the existing chips (from the daughter board). Refer to the following diagram to find the position of the ROMs in your computer:

It is important that you remove the ROM chips extremely gently, otherwise you may bend the pins or damage the sockets.

Remove the existing ROM chips from their sockets with an IC extraction tool: Put the ROM chips to one side, and be careful not to confuse them with the new set of ROM chips: Alternatively you can use a small flat-bladed screwdriver to lift up each end of the chip in turn, then, when the chip is released from the socket, pull it out by hand: Take care not to damage the surface of the circuit board with the screwdriver:

Locating link LK12 and the ROM positions

Note: You have to remove any expansion cards that you have fitted before you can replace the ROMs: Issue A boards do not contain a link LK12:



Installing the new ROMs

You can now insert the new ROMs into the sockets on the upgrade daughter board:

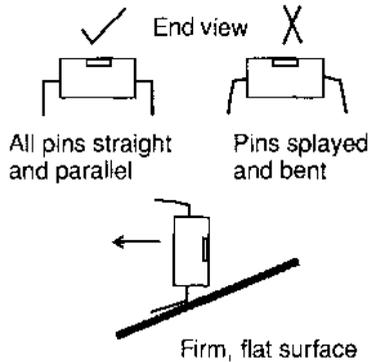
- 1 Identify the ROM chips according to the following table:

ROM	Markings
1	0296,041 -xx
2	0296,042-xx
3	0296,043-xx
4	0296,044-xx

(where xx is a 2-digit number corresponding to the issue number).

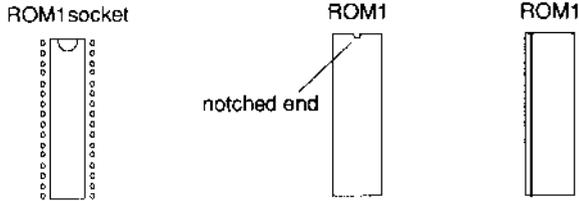
Each socket on the daughter board is labelled ROM1 to ROM4:

- 2 Check that all pins on the ROMs are parallel and straight: If any appear crooked or splayed, you will need to realign them. Hold the chip sideways on and press the pins on one side gently against a firm flat surface: Straighten the other row of pins if necessary:



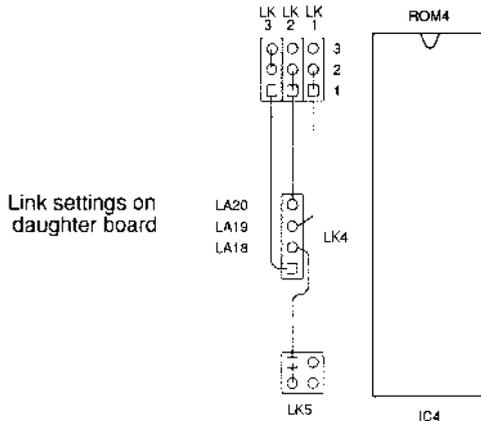
- 3 Take the chip that you have identified as ROM I and, holding it by its plastic case, align it with socket ROM 1 as described in the following steps:

- 4 Each of the RISC OS 3 **4Mb** ROMs has a semi-circular notch at one end. When inserting a chip, position this end towards the notched end drawn on the markings of the socket of the daughter board, as shown below.



socket for ROM1 on daughter board fitted 4Mb ROM (alternative marking)

- 5 When you are sure that the chip is positioned correctly and that the pins are straight and placed properly in their sockets, apply firm pressure to the chip to press it home: Don't force the chip, as when it is in place it should be slightly raised from its socket:
- 6 Insert the other ROMs into sockets ROM2, ROM3 and ROM4.
- 7 The only link that you may need to change is LK 1 2: Remove the shunts from LK12 on the mother board. This link tells the computer that the ROM size has changed: See the diagram on page 9 for the location of link LK12:
- 8 You now need to fit the plastic shunts to the daughter board as shown below:



It is important to set the link correctly, as fitting ROMs with incorrectly set links may damage them (links or ROMs). If in doubt, contact your dealer:

Reassembling the computer

Before reassembling the computer check that

- the links are correct
- ROMS are in the right way around (notch pointing the same way as other chips)
- all the pins are in the sockets:

Reassemble the computer using the same procedures used in disassembly:

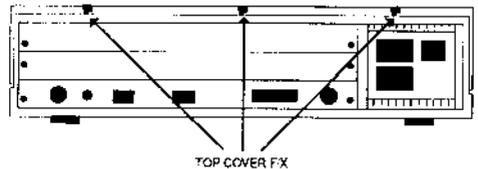
You should now read the instructions on resetting and restarting your computer on page 35

Upgrading instructions for Archimedes 410/1, 420/1 and 440/1 computers

Removing the top cover

To remove the top cover of the computer, proceed as follows:

- 1 Switch off the computer at the rear and disconnect it from the mains supply by unplugging the power supply cable from the wall socket: Unplug any peripherals that are attached and remove them from the computer completely.
- 2 Locate the screws holding the top case in place as shown in the figure below: Remove the three screws at the top rear of the unit, then remove the single screw located on each side of the unit, towards the front:



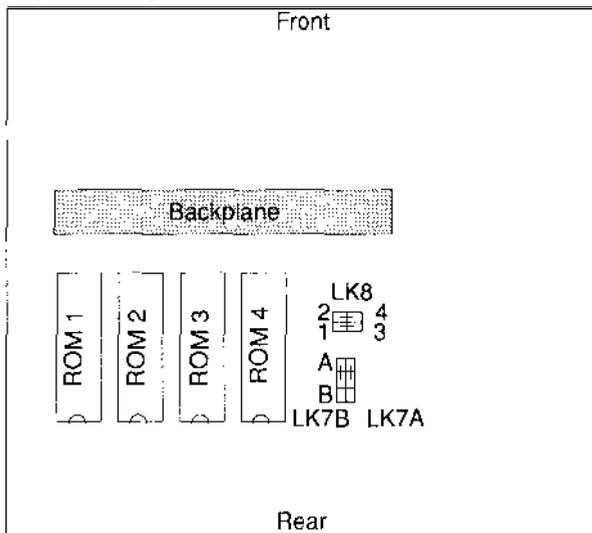
- 3 Once you have removed the three rear screws and the two side screws, slide the lid of the unit to the rear of the machine, then remove it completely: Slightly spring the sides of the lid outwards, if necessary, to make it easier to slide.

Locating and removing the existing ROMs

Before you insert the new ROMs you need to locate and remove the existing chips: Refer to the following diagram to find the position of the ROMs in your computer: It is important that you remove the ROM chips extremely gently, otherwise you may bend the pins or damage the sockets:

Remove the existing ROM chips from their sockets with an 1C extraction tool. Put the ROM chips to one side, and be careful not to confuse them with the new set of ROM chips: Alternatively you can use a small flat-bladed screwdriver to lift up each end of the chip in turn, then, when the chip is released from the socket, pull it out by hand: Take care not to damage the surface of the circuit board with the screwdriver:

Note: You have to remove any expansion cards that you have fitted before you can replace the ROMs:



Installing the new ROMs

You can now insert the new ROMs into the sockets:

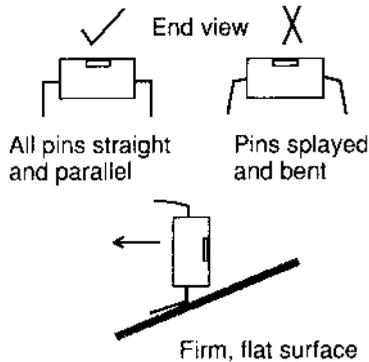
- 1 Identify the ROM chips according to the following table:

ROM	Markings
1	0296,041-xx
2	0296,042-xx
3	0296,043-xx
4	0296,044-xx

(where xx is a 2-digit number corresponding to the issue number):

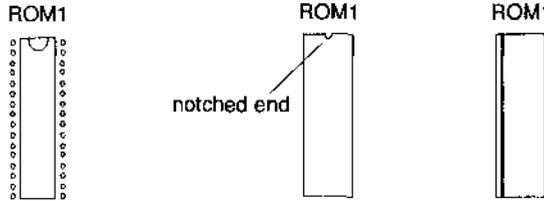
The sockets for ROM1 and ROM4 are marked on the board:

- 2 Check that all pins on the ROMs are parallel and straight. If any appear crooked or splayed, you will need to realign them. Hold the chip sideways on and press the pins on one side gently against a firm flat surface: Straighten the other row of pins if necessary:



- 3 Take the chip that you have identified as ROM1 and, holding it by its plastic case, align it with the ROM I socket as described in the following steps:

- 4 Each of the RISC OS 3 **4Mb** ROMs has a semi-circular notch at one end: When inserting a chip, position this end towards the notched end drawn on the socket outline on the board, as shown below.



socket for ROM1

fitted 4Mb ROM (alternative marking)

- 5 When you are sure that the chip is positioned correctly and that the pins are straight and placed properly in their sockets, apply firm pressure to the chip to press it home: Don't force the chip, as when it is in place it should be slightly raised from its socket.
- 6 Insert the remaining ROMs into the sockets ROM2, ROM3 and ROM4.

Changing the link settings on the main board

Make a note of the existing link settings for LK7A, LK7B and LK8.

Link LK7A and LK7B should be changed so that the A side of the links is connected: These change the ROM size selection.

Link LK8 should be changed so that position I is linked to position 3 and position 2 linked to position 4. These change the ROM type selection:

Refer to the diagram on page 14 for more information:

Reassembling the computer

Before reassembling the computer check that

- the links are correct
- ROMS are in the right way around (notch pointing the same way as other chips)
- all the pins are in the sockets:

Reassemble the computer using the same procedures used in disassembly.

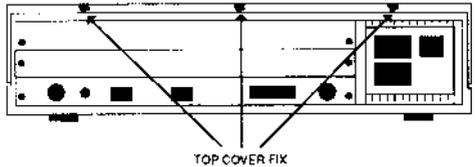
You should now read the instructions on resetting and restarting your computer on page 35:

Upgrading instructions for Archimedes 540 and R260 computers

Removing the top cover

To remove the top cover of the computer, proceed as follows:

- 1 Switch off the computer at the rear and disconnect it from the mains supply by unplugging the power supply cable from the wall socket. Unplug any peripherals that are attached and remove them from the computer completely.
- 2 Locate the screws holding the top case in place as shown in the figure below: Remove the three screws at the top rear of the unit, then remove the single screw located on each side of the unit, towards the front:



- 3 Once you have removed the three rear screws and the two side screws, slide the lid of the unit to the rear of the machine, then remove it completely: Slightly spring the sides of the lid outwards, if necessary, to make it easier to slide:

Locating and removing the existing ROMs

Before you insert the new ROMs you need to locate and remove the existing chips. Refer to the following diagram to find the position of the ROMs in your computer:

Warning: This installation is quite complicated: To fit the ROMs you have to partially disassemble your computer: If you are not confident that you can perform the upgrade yourself, contact your Acorn Dealer or Service Agent:

Disassembling the computer

This is an overview of how to remove some of the internal components of the computer so that you can locate, remove and replace the ROMs:

- 1 Remove all expansion cards: When removing the SCSI expansion card, remember to detach the cable from the hard disc:
- 2 Remove any memory cards you may have:
- 3 Remove the backplane. As you remove the backplane, be careful not to catch the backplane on the processor card.
- 4 Remove the processor card:
- 5 Detach the power lead connection from the hard disc.
- 6 Unscrew the two hard disc housing screws. Be careful not to drop the screws into the computer: Using a magnetised screwdriver allows the screws to remain attached to the screwdriver as you lift it out.
- 7 Gently lift up the hard disc and rest it on the front of the case: Be careful not to pull on the disc drive light cable.

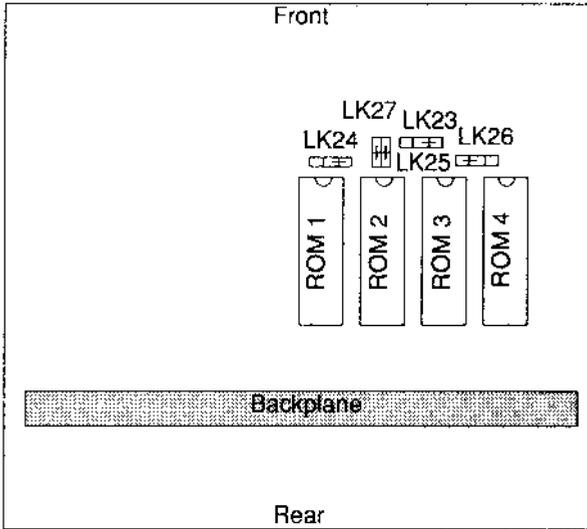
You can now remove and replace the ROMs.

For more information about the internal layout of this computer you should read the 8260 R225 A540 *Installation Guide, Appendix A: Hardware components and connectors*:

Removing the ROMs

It is important that you remove the ROM chips extremely gently, otherwise you may bend the pins or damage the sockets.

Remove the existing ROM chips from their sockets with an IC extraction tool: Put the ROM chips to one side, and be careful not to confuse them with the new set of ROM chips. Alternatively you can use a small flat-bladed screwdriver to lift up each end of the chip in turn, then, when the chip is released from the socket, pull it out by hand. Take care not to damage the surface of the circuit board with the screwdriver:



Installing the new ROMs

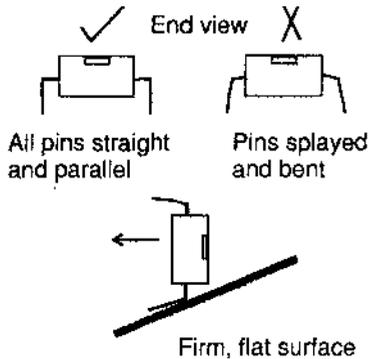
You can now insert the new ROMs into the sockets:

I Identify the ROM chips according to the following table:

ROM	Markings
	0296,041-xx
2	0296,042-xx
3	0296,043-xx
4	0296,044-xx

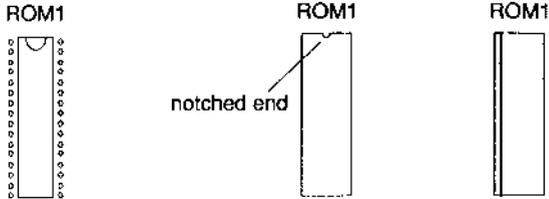
(where xx is a 2-digit number corresponding to the issue number). The ROM sockets are labelled ROM I to ROM4:

- Check that all pins on the ROMs are parallel and straight. If any appear crooked or splayed, you will need to realign them: Hold the chip sideways on and press the pins on one side gently against a firm flat surface: Straighten the other row of pins if necessary.



- Take the chip that you have identified as ROM I and, holding it by its plastic case, align it with the socket as described in the following steps:

- Each of the R1SC OS 3 **4Mb** ROMs has a semi-circular notch at one end: When inserting a chip, position this end towards the notched end drawn on the socket outline on the board, as shown below:



socket for ROM1

fitted 4Mb ROM (alternative marking)

- When you are sure that the chip is positioned correctly and that the pins are straight and placed properly in their sockets, apply firm pressure to the chip to press it home: Don't force the chip, as when it is in place it should be slightly raised from its socket.
- Insert the remaining ROMs into the sockets ROM2, ROM3 and ROM4:

Changing the link settings on the main board

Make a note of the existing link settings for LK23, LK24, LK25, LK26 and LK27:

Link LK23 should be changed so that position I is linked to position 2:
Link LK24 should be changed so that position I is linked to position 2:
Link LK26 should be placed so that position 3 is linked to position 2:
These change the ROM size selection:

Link LK25 position I should be changed so that it is linked to position I on Link LK27. Link LK25 position 2 should be changed so that it is linked to position 2 on Link LK27. These change the ROM size selection:

Refer to the diagram on page 20 for more information:

Reassembling the computer

Before reassembling the computer check that

- ROMS are in the right way around (notch pointing the same way as other chips)
- all the pins are in the sockets.

Reassemble the computer using the same procedures used in disassembly.

You should now read the instructions on resetting and restarting your computer on page 35.

Upgrading instructions for A3000 computers

Warning: Some A3000 computers were fitted with cardboard covers over the power supply. These computers are not suitable for user upgrading. It is therefore essential that the upgrade be undertaken by a recommended Acorn Dealer or Service Agent: A charge may be levied for installing the upgrade – such a charge shall be entirely at the discretion of your Dealer or Service Agent.

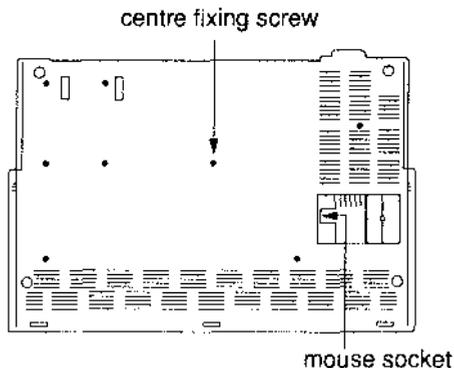
You may upgrade your computer if it has the prefix 01-AKBOI followed by a number greater than 1079467 or the prefix 25-AKB01 followed by a number greater than 1010000:

Serial numbers prior to these must be upgraded by an Acorn Dealer or Service Agent:

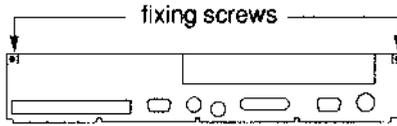
You may upgrade all computers with the serial numbers starting AKB16.

Removing the top cover

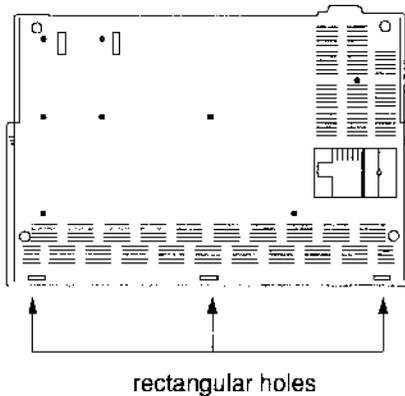
- 1 Switch off the computer and disconnect it from the mains supply by unplugging the power supply cable from the wall socket. Unplug any peripherals that are attached and remove them from the computer completely. Unplug the mouse connector from the underside of the computer:
- 2 Remove the centre fixing screw on the underside of the case.



- 3 Remove the two screws from the clips at the rear of the computer:



- 4 Unhook the two clips and slightly lift up the back of the cover, pivoting on the front.
- 5 Locate the three rectangular holes on the front underside of the case: Insert a screwdriver into the rear edge of each of these holes in turn: Push and twist until the catch comes free of the lower case.



- 6 Repeat this procedure for the other two holes until the front of the cover lifts clear: Turn the case the right way up and remove the cover

Removing the keyboard

The ROMs are located underneath the keyboard, which you must remove before following the rest of these instructions: Unplug the keyboard connector, and lift the keyboard out from the lower case.

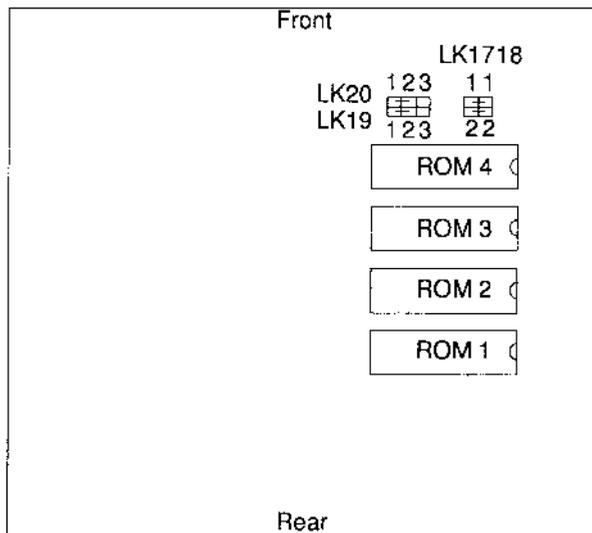
Warning: Note that the keyboard connector can be damaged by incorrect handling. Hold it by the white plastic strengthening strip only: Do not touch the track faces or apply pressure to the cable.

Locating and removing the existing ROMs

Before you insert the new ROMs you need to locate and remove the existing chips. Refer to the following diagram to find the position of the ROMs in your computer:

It is important that you remove the ROM chips extremely gently, otherwise you may bend the pins or damage the sockets:

Remove the existing ROM chips from their sockets with an IC extraction tool: Put the ROM chips to one side, and be careful not to confuse them with the new set of ROM chips. Alternatively you can use a small plastic implement to lift up each end of the chip in turn, then, when the chip is released from the socket, pull it out by hand. Take care not to damage the surface of the circuit board with the tool:



Warning: Do not use a screwdriver or a metal instrument to take out the existing ROMs as this could catch on the battery and short the machine (the battery is positioned nearby without a plastic shield): Use a plastic instrument instead, such as the top of a ballpoint pen.

Installing the new ROMs

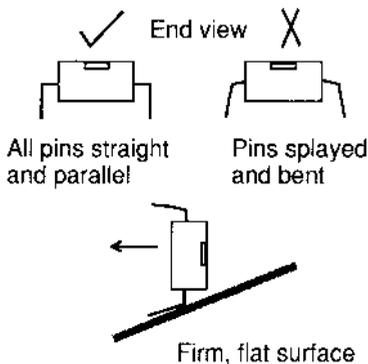
You can now insert the new ROMs:

I Identify the ROM chips according to the following table:

ROM	Markings
1	0296,041-xx
2	0296,042-xx
3	0296,043-xx
4	0296,044-xx

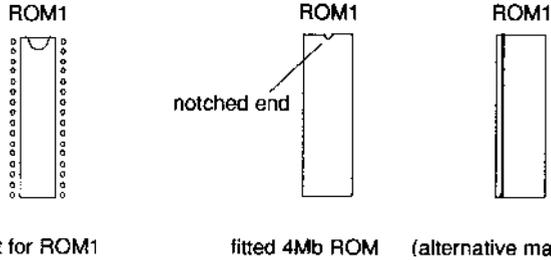
(where xx is a 2-digit number corresponding to the issue number): The ROM sockets are labelled ROM I to ROM4.

2 Check that all pins on the ROMs are parallel and straight: If any appear crooked or splayed, you will need to realign them: Hold the chip sideways on and press the pins on one side gently against a firm flat surface: Straighten the other row of pins if necessary.



3 Take the chip that you have identified as ROM I and, holding it by its plastic case, align it with the socket as described in the following steps:

- Each of the RISC OS 3 **4Mb** ROMs has a semi-circular notch at one end: When inserting a chip, position this end towards the notched end drawn on the socket outline on the board, as shown below.



- When you are sure that the chip is positioned correctly and that the pins are straight and placed properly in their sockets, apply firm pressure to the chip to press it home. Don't force the chip, as when it is in place it should be slightly raised from its socket.
- Insert the remaining ROMs into the sockets ROM2, ROM3 and ROM4

Changing the link settings on the main board

Make a note of the existing link settings for LK17, LK18, LK19 and LK20.

Link LK19 should be changed so that position 1 is linked to position 2:
Link LK20 should be changed so that position 1 is linked to position 2:
These change the ROM size selection:

Link LK17 position 1 should be changed so that it is linked to position 1 on Link LK18: Link LK17 position 2 should be changed so that it is linked to position 2 on Link LK18. These change the ROM size selection:

Refer to the diagram on page 26 for more information:

Reassembling the computer

Before reassembling the computer check that

- the links are correct
- ROMS are in the right way around (notch pointing the same way as other chips)
- all the pins are in the sockets.

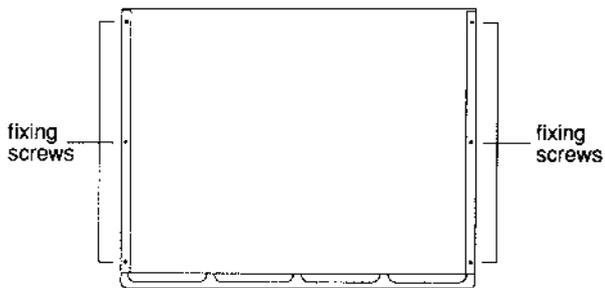
Reassemble the computer using the same procedures used in disassembly:

You should now read the instructions on resetting and restarting your computer on page 35.

Upgrading instructions for A5000 computers

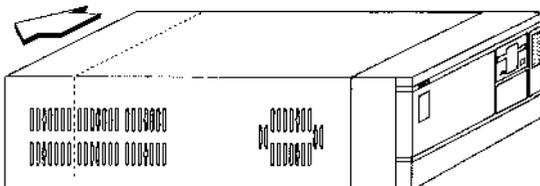
Removing the top cover

- 1 Switch off the computer and disconnect it from the mains supply by unplugging the power supply cable from the wall socket: Unplug any peripherals that are attached and remove them from the computer completely.
- 2 Place the main unit on a work surface with a clean, soft covering (such as blanket) and turn it over so that it rests on its top cover:
- 3 Remove the six fixing screws on the underside of the main unit:

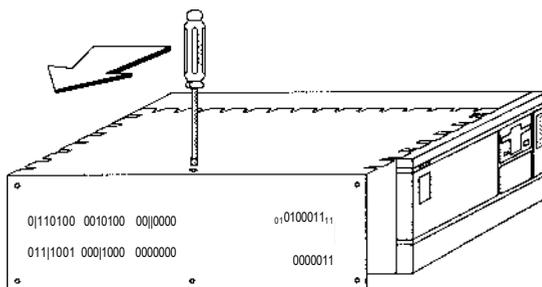


front of computer

- 4 Rest the main unit on its base again and slide the cover backwards to the rear of the unit. Remove the cover completely.



- 5 Some models of the A5000 have an EMC case shield which fits over the case. To remove this shield, unscrew the five fixing screws on the righthand side of the unit, as seen from the rear: The shield has interleaved tabs which fit into the edges of the case. Slide the shield off the main unit carefully; there is a hole on the top to help you slide the shield off by inserting a screwdriver:

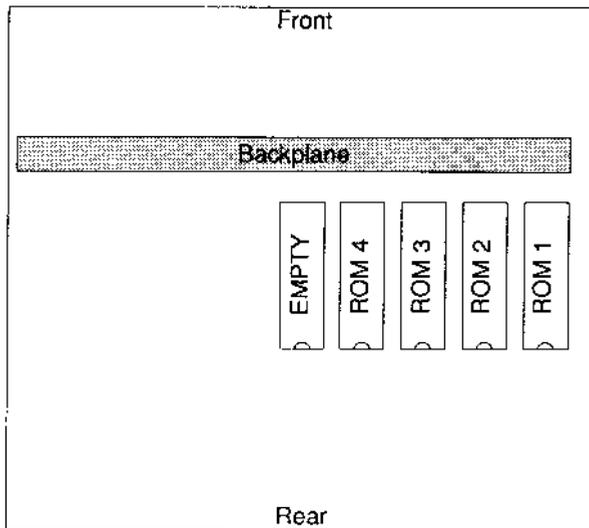


Locating and removing the existing ROMs

Before you insert the new ROMs you need to locate and remove the existing chips. Refer to the following diagram to find the position of the ROMs in your computer:

It is important that you remove the ROM chips extremely gently, otherwise you may bend the pins or damage the sockets.

Remove the existing ROM chips from their sockets with an IC extraction tool: Put the ROM chips to one side, and be careful not to confuse them with the new set of ROM chips: Alternatively you can use a small flat-bladed screwdriver to lift up each end of the chip in turn, then, when the chip is released from the socket, pull it out by hand: Take care not to damage the surface of the circuit board with the screwdriver:



Installing the new ROMs

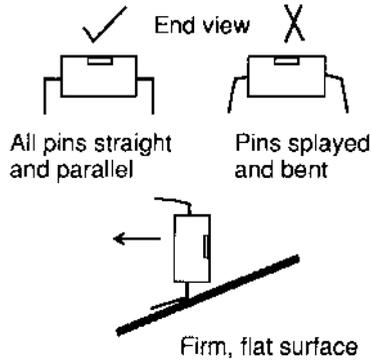
You can now insert the new ROMs into the sockets:

- 1 Identify the ROM chips according to the following table:

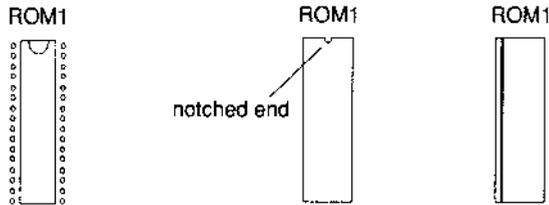
ROM	Markings
	0296,041-xx
2	0296,042-xx
3	0296,043-xx
4	0296,044-xx

(where xx is a 2-digit number corresponding to the issue number):
Each socket is marked with a ROM number and its socket number:
The ROM sockets are labelled ROM I to ROM4.

- 2 Check that all pins on the ROMs are parallel and straight: If any appear crooked or splayed, you will need to realign them. Hold the chip sideways on and press the pins on one side gently against a firm flat surface: Straighten the other row of pins if necessary:



- 3 Take the chip that you have identified as ROM I and, holding it by its plastic case, align it with the socket as described in the following steps:
- 4 Each of the RISC OS 3 **4Mb** ROMs has a semi-circular notch at one end. When inserting a chip, position this end towards the notched end drawn on the socket outline on the board, as shown below.



- 5 When you are sure that the chip is positioned correctly and that the pins are straight and placed properly in their sockets, apply firm pressure to the chip to press it home: Don't force the chip, as when it is in place it should be slightly raised from its socket:

- 6 Insert the remaining ROMs into the sockets ROM2, ROM3 and ROM4:

Changing the link settings on the main board

The A5000 does not require any link changes.

Reassembling the computer

Before reassembling the computer check that

- ROMS are in the right way around
- all the pins are in the sockets.

Reassemble the computer using the same procedures used in disassembly:

You should now read the instructions on resetting and restarting your computer on this page:

Restarting the computer

Switch on the machine **while holding the Delete key down** until the power on self-test has completed.

Configuring the computer

Once your computer is displaying the desktop you can start to reconfigure your computer: The **!Configure** application in the Apps directory allows you to change most of the settings that affect RISC OS configuration: With !Configure you can change the configuration of

- the type and number of hard and floppy discs
- networks operation and printing options
- sound generation and screen display
- window operation and memory utilisation
- mouse and keyboard response
- applications and fonts:

To start Configure, double-click on its icon in the Apps directory display: Full information about the Configure application is given in the chapter *Setting the configuration* in the *RISC OS 3 User Guide*.

Configuring your computer's Econet station number

If your computer has an Econet network attached to it, the Econet station number will need updating: Contact your network manager for more information.

Updating the RISC OS Applications Suite

Along with the new ROMs, there is a new set of RISC OS 3 applications contained on the floppy discs supplied with the upgrade kit:

These new applications should replace any existing Applications Suite applications you are currently using. Hard disc users should back up their old Applications Suite to floppy disc, and then delete them from the hard disc: A5000 users should upgrade to the new set of applications.

For more information on the programs contained in the Applications Suite refer to the RISC OS 3 User *Guide* and RISC OS 3 *Applications Guide*:

Appendix A: Main PCB Link settings for RISC OS 3 4Mb ROMs

Archimedes 300 & 400 series hardware upgrade board

Link function	Link name	Link positions
ROM size selection	LK3	3-2
	LK2	2-1
	LK1	2-1
ROM type selection	LK5	see hardware u/g instructions

Archimedes 400/1 series

Link function	Link name	Link positions
ROM size selection	LK7a	A
	LK7b	A
ROM type selection	LK8	1-3 2-4

A3000

Link function	Link name	Link positions
ROM size selection	LK19	1-2
	LK20	1-2
ROM type selection	LK17, LK18	1-1 2-2

Archimedes 540/R260

Link function	Link name	Link positions
ROM size selection	LK23	1-2
	LK24	1-2
	LK26	3-2
ROM type selection	LK25, LK27	1-1 2-2

Appendix B: Main PCB Link settings for RISC OS 2 1Mb ROM/EPROM

Archimedes 300 & 400 series hardware upgrade board

Link function	Link name	Link positions
ROM size selection	LK3	3-2
	LK2	3-2
	LK1	3-2
ROM type selection	LK5	see hardware u/g instructions

Archimedes 400/1 series

Link function	Link name	Link positions
ROM size selection	LK7a	B
	LK7b	B
ROM type selection	LK8	1-2 3-4

A3000

Link function	Link name	Link positions
ROM size selection	LK19	3-2
	LK20	3-2
ROM type selection	LK17	1-2
	LK1 8	1 —2

Archimedes 540/R225/R260*

Link function	Link name	Link positions
ROM size selection	LK23	3-2
	LK24	3-2
	LK26	3-2
ROM type selection	LK25	1-2
	LK27	1-2

* A wide variety of EPROMs have been used. Make a note of your particular original settings: