

ACORN

Customer Service

News

- All the documents in this news-letter are available through the SID system.
- Back issues are available via the SID system and may also be obtained from Customer Services.
- Any suggestions you may have for information you would like to see in future issues should be sent to the News-letter Editor via SID Mail (ID 1000) or by post at our head office address.

Issue
2
May 1989

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Acorn 
The choice of experience.

NEWS BULLETIN

1. Please note that in Issue 1 of this News-letter, in the document 'Discontinued Spares Items' the entries relating to the Z80 and 6502 manuals should read as follows:

0408003	Service Manual	6502
0409010	User Guides	Z80

2. Hard Disc Drive Faults

Over recent months, we have noticed a steady increase in the number of Hard Disc Drive returns which, upon testing, are found to be 'No fault Found'.

All mass storage systems can, and do, regularly display 'errors'. Understandably, a user will tend to describe these drives as faulty. In fact, mechanical or electrical faults are quite rare, with the majority of errors being 'soft' errors. These may be identified by the error codes 10, 16 or 18. Errors of this nature can usually be rectified by reformatting and verifying the disc.

The requirement to reformat to correct this type of error re-emphasises the need for mass storage users to make regular backups of their data.

The reformatting of the disc allows the software to identify suspect areas of the media and 'map' them out preventing data being written to that particular area of the media.

Please note that a utility 'Mapcheck' exists under RISC OS which will allow the 'mapping out' of defects without reformatting. This will permit the soft error to be corrected without destroying all of the data on the disc.

As a final note, RISC OS uses a different format to ARTHUR 1.2. However, data backed up from ARTHUR 1.2 can be re-installed upon a RISC OS format Hard Disc.

3. RISC OS ROM Upgrade Documentation

Where Archimedes 300 Series product are supplied to you together with a RISC OS upgrade kit (AKA62), and you fit the upgrade to the product prior to supplying to your customer, ensure that:

- a) The **USER MANUAL** supplied with the original Archimedes product is **SUPPLIED WITH THE COMPUTER** to your customer.
- b) The additional two manuals supplied with the RISC OS upgrade are supplied to the customer.

The original Archimedes User Guide contains the necessary BBC BASIC information that the customer requires. As a result, the BBC BASIC Guide referred to on page 5 of the RISC OS Welcome Guide is **NOT APPLICABLE** and is therefore NOT supplied as part of the upgrade package.

MASTER SERIES 128 INTERNAL MODEM CONNECTOR CHANGE

As a result of a tool breakdown at the manufacturers, the 20 way Zero Insertion Force (ZIF) socket at position PL12, commonly called the Modem socket, was not fitted for some months. Unfortunately, the original manufacturer has decided not to remake the tool for this component, and as a result of the absence of any other supplier the following is being adopted.

Product in the serial number range 01-AMB-15-0141374 to 01-AMB-15-0147809 (a total of 7338) units do not have any socket fitted at all. During production, the through plate holes on the PCB were blanked off during soldering to allow for the retrofitting of a new connector. The date of manufacture of these units falls between 21 April 1988 and 22 September 1988.

From serial number 01-AMB-15-0147810 onwards, a 20 way, 25th" square pin header has been fitted to all machines manufactured. This new header will remain as the connector fitted at PL12 and no further change is anticipated.

To allow for the three variations of P.C.B, a modified jumper assembly kit of parts has been produced by St Cross Electronics (address below). The cable assembly in the new kit is slightly longer than before and contains two different connection systems:

Connector type one - a 20-way 0.1" pitch Socket located before the end of the cable to allow connection to the new 25th" square header pins now used in current production.

Connector type two - The end of the cable assembly after the type one connector is stripable to allow for connection to the original ZIF socket.

If neither the ZIF socket or the Header pins are fitted, no attempt should be made to solder the stripable wire ends directly to PL12. A suitable Header is available from St Cross Electronics which you must solder into position at PL12. **Note:** Not all Headers are suitable for use with this kit and any attempted substitution should conform to the following:

1. The pins should be 0.025" (0.64mm) straight square brass pins
2. The pin length of the header above it's insulating strip must be between 7.00mm and 7.87mm in length with sufficient length beneath the insulating strip to penetrate the P.C.B and allow for soldering.

When contacting St Cross Electronics, please bring to their attention any peculiarities that may be required at the user end of the assembly.

St Cross Electronics
Unit 14,
Pleasant Mount Industrial Park,
Southampton,
SO2 ()SP
Telephone (0703) 227636

PHILIPS MONITOR LOT REPAIR PROCEDURE

We have been informed by Philips that a small number of their MT333 colour monitors (Acorn product codes ADF32 and AKF11) as used by us in conjunction with both the Master Compact and the Archimedes computer systems may contain Line Output Transformers (LOT) which whilst functional, may be below the exacting standards required by both ourselves and Philips.

As a result, we are making available a central service facility (Drayton Electronics) which may be utilised should a monitor returned to a service centre prove to contain one of the above mentioned LOTs.

Whilst the LOT may well function correctly throughout the expected life of the unit, we would prefer that if such a unit is encountered, whether the LOT has failed or not, that it be returned for a replacement LOT to be installed.

Whilst this change has been instigated primarily by Philips, we have agreed to assist them in the repair or replacement of any suspect or failed units and as a result the following procedure is being adopted:

1. Monitors falling within the Acorn serial number ranges:

AKF11 1026771 to AKF11 1034735
and
ADF32 1022234 to ADF32 1023967

may contain the suspect LOT. However, prior to the despatch from Acorn of the majority of these monitors, many of them have already been identified and re-worked. These monitors may be identified since they will carry a **small white sticky label** along with a week code identifier in the form WK89xx where xx is a two digit week identifier i.e. 02 for the second week of the year 1989. This label along with the week coding will be located directly above the serial number plate on the rear of the monitor casing.If

If the monitor has already been returned from the field to the central repair site, then the identifier 'D' will be inscribed on the serial number plate itself.

If the unit carries either of the above identifiers, either the label and week code or the 'D' then no further action need be taken with respect to the LOT.

2. When a monitor falling within the above serial number range is identified which does not carry either re-work identifier, contact Acorn Spares and Warranty department (Tel: (0223) 245200) and request movement of a Philips monitor quoting your Organisations name, address, a contact name and the serial number of the unit. Upon receipt of your call they will contact the carrier and arrange for collection of the unit.

CAUTION Because of the high voltages retained within the monitor even when disconnected from the mains, no attempt should be made to remove the case or attempt a repair to a monitor unless you are fully qualified and approved and are able to test the resulting assembly to the required safety specifications (see below). Any attempt to tamper with the inside of the monitor may well result in serious injury. If, upon receipt of the monitor, Drayton Electronics discover that modifications or repairs have been attempted, they will refer the unit to Acorn who will take appropriate action.

3. The monitor should be suitably packaged and addressed (see below) and included with it **MUST** be an Acorn Service Report completed as per the enclosed example. Also included must be a label bearing your full postal address and contact name for use when returning the monitor. Failure to include a correctly completed Service Report will result in delay and may well cause the monitor to be returned without any repair work performed.

IMPORTANT NOTE: Should the monitor sustain damage in transit to Drayton Electronics due to incorrect packaging then the submitting Dealer or ASC will be liable for the cost of any necessary repairs.

Also, any monitor returned under this arrangement that does **NOT** fall within the above serial number range, or that carries one of the re-work identifiers, will be returned unrepaired. The submitting Dealer will be liable for the full cost of carriage along with a £10.00 handling charge.

4. The monitor will be delivered to Drayton Electronics who, as an authorised Philips Service Centre, will replace the LOT and repair any other components damaged as a result of an LOT failure. The expected timescale for the carriage, repair and return of the monitor is a maximum of 10 working days.

5. If the monitor was originally returned for repair as the result of a fault unrelated to the LOT, Drayton Electronics will perform the additional repair along with the replacement of the suspect LOT. This additional repair facility does **NOT** apply to all ADF32/AKF11 monitors but **ONLY** those that require the replacement of a suspect LOT.

6. Drayton Electronics will arrange for collection and return of the unit to the submitting Dealer or ASC.

7. Where a Dealer or ASC considers itself capable and has the appropriate test equipment (repairs to be tested to IEC65 (BS415) standard), they may apply to Rosemary Walker Tel: (0223) 245200 for a replacement LOT to be despatched to them to allow them to perform the repair. Please note that any repair performed by our Dealers or ASCs is on behalf of Philips and therefore the Philips repair rate of £6.00 ex. VAT applies.

NOTE: Dealers or ASCs may only carry out LOT replacements. If the failure of the LOT has resulted in damage to other components or assemblies, the monitor **MUST** be returned to Drayton Electronics for repair.

Where a Dealer or ASC carries out the repair, the faulty or suspect LOT, along with a correctly completed Acorn Service Report (see attached) must be submitted before any payment will be made. **The option to allow a dealer to perform the repair is at the sole discretion of Rosemary and is to be considered an exception rather than the rule.**

Monitors for return should be addressed as follows:

Drayton Electronic Services
Unit 8
Industrial Estate
Scotland Road
Dry Drayton
Cambridge
CB3 8AT

(REF: Acorn Computers)

International Dealers and Distributors

For those monitors which are located outside the U.K territory, separate arrangements are being made. These will provide a local solution, further details of which will be sent in the near future. If you have already encountered such monitors and require advice, please contact your Acorn representative.

Completion of Service Reports

Included with this document are two versions of the Acorn Service Report. Please note that these are exclusively for use with this exercise and should not be used for other claims. Conversely, Only these Service Reports should be used with this operation.

Do not use the two attached Reports themselves, use them as masters to make photocopies for use when returning monitors.

Acorn Computers Ltd Service Report (LOT 1)

This service report should be used where a monitor is identified which only requires the replacement of an LOT as a result of LOT failure or where the unit is functional but falls within the above mentioned range. This includes monitors with additional damage resulting from the failure of the LOT.

You need only complete the Dealer address and Customer details sections, attach a reference number if you wish and sign and date the form.

Retain a copy of the completed form for your own reference and include the original with the monitor.

Acorn Computers Ltd Service Report (LOT 2)

This form is provided where the monitor has been returned to you for repair for a fault unrelated to the LOT but where the unit will also require an LOT exchange.

As with form LOT 1, complete the Dealer and Customer details sections, add a reference number if you wish and sign and date the form. You should also complete the section **Description of Additional Fault** by including a description of the nature of the failure that prompted the return of the monitor to your workshop.

Again, keep a copy of the completed form for your own reference and include the original with the monitor.

Identification of Monitor Faults

As a general guide to help you determine whether the LOT has failed or if another fault exists, check the following:

1. Connect the monitor to the mains and switch on. If the LED on the ON/OFF switch is lit, but the screen remains completely dead, it is reasonable to assume that the problem is with the LOT. In this instance use form LOT 1.
2. If, after connection to the mains, the LED on the ON/OFF switch does not light, and the screen remains dead; check the fuse in the mains plug and if this is functional then assume that the LOT has failed and additional damage has occurred as a result of this failure. Again use form LOT 1 in this instance.
3. If the monitor powers up, and some form of image can be seen on the screen, no matter how abstract or distorted, then the LOT is probably functional and form LOT 2 should be used.

If after carrying out these checks you are still unsure, then use form LOT 1 when returning the monitor. If Drayton discover an additional fault, they will still carry out the repair as if it were returned on form LOT 2. Do not use form LOT 2 unless you are reasonably sure that an additional fault is present and some form of image can be seen on the screen.

Do NOT make any attempt at diagnosis if it involves removing the casing of the unit.



Acorn Computers Ltd Service Report (LOT 2)

Fulbourn Road,
Cherry Hinton,
CAMBRIDGE CB1 4JN.

Your reference no.	
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This section is to be completed by Dealer / Approved Service Centre. Mark only in the unshaded boxes.

Dealer / ASC name + address	
Account No	
Telephone No	
Contact Name	

Customer name	
Machine type	
Date received	
Date of repair	
Full Serial No	
Date of Purchase	
Warranty authority no. (if required)	
Copy proof of purchase enclosed	Yes <input type="checkbox"/> No <input type="checkbox"/>

Reason for return	REF: LOT 2 LOT requires exchange, additional fault present.
-------------------	---

Description of additional fault	
---------------------------------	--

Action taken	Monitor returned to Drayton Electronics for LOT exchange and repair of additional fault.
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Note: The warranty details or a warranty authorisation number must be marked above. If, on checking by Acorn Computers Ltd it is not possible to confirm that the monitor is within warranty, the service report will be returned to you for proof of purchase. It is therefore in your interest to check the warranty status carefully and enclose a copy of the customer's proof of purchase to back up this claim. Be aware that warranty may be invalidated by a customer if the unit has been mistreated. If you suspect that this is the case, contact the Engineering Services Group at Acorn before proceeding. It is in your interest to complete this form fully. Failure to complete all details will result in the Service Report being returned to you for clarification.

Declaration: I confirm that the work shown above has been carried out successfully. I understand that if the warranty cannot be confirmed by Acorn the service report may be returned to me for a customer's proof of purchase.

This form must be enclosed with the monitor, and after correctly packaging the unit, send it to Drayton Electronic Service, Unit 8, Industrial Estate, Scotland Road, Dry Drayton, Cambridge CB3 8AT (Contact Acorn Spares and Warranty Department: Tel. (0223) 245200 to arrange carriage.

Signed		Date	
Print name		Title	

Drayton Electronics use only below this line

Parts used (Defective parts to be returned with this form)									
Description									

LOT exchanged	X	
LOT and Chassis	N/A	

Labour cost	£	1	5	0	0
(Charge for additional repair only)					

Declaration: I confirm that the work detailed above has been successfully carried out. Drayton Electronic Service Ltd. Guarantees all work carried out for a period of three months from the date of repair.

Signed: Drayton Electronics		Date	
Print name		Title	

Upon completion, please return this form to Acorn Spares and Warranty Department at the above address, F.A.O Rosemary Walker.

Official use only below this line

G.I. check qty		Replacement parts ordered	
Sy Code		De Code	
		Entered	
		Passed for credit	
		Cr Code	

Appendix

The following pages consist of duplicates of those documents sent out to our Dealers and Service Centres as part of the Service News-letter in November 1988.

These documents cover the changes required under FCOs FCO2002 and FCO2003 with regard to the Serial and Parallel ports on the Archimedes Series.

We have reissued these due to a large number of requests from the field for this information since it was last despatched.

Please note that whilst this information was previously supplied in the November Service News-letter it is also available on SID as are all documents issued in Customer Services News-letters.

Service Newsletter

Archimedes Component Level Service Sites Only

Acorn Computers Limited
Fulbourn Road
Cherry Hinton
Cambridge CB1 4JN

Telephone 0223 2452(X)
Telex 817875 ACORN G
Fax No 0223 210685

November 1988

Dear Colleague,

Field Change Orders : Archimedes Serial and Parallel Ports

You are probably aware that some customers have experienced some problems associated with both the Archimedes Serial Port and the Parallel Port.

Shortly, all dealers and ASCs (including yourselves) will be circulated with information regarding how to implement modifications to overcome the the above 2 port problems.

The FCOs concerned are FCO2002 and 2003.

The SERIAL PORT solution is in 2 parts. We have found that only a small proportion of units are affected by this problem, therefore only where the patch is shown not to resolve the problem will the hardware FCO be applied. If this should prove necessary, and the existing serial chip is NOT socketted, the dealer/ASC will be asked to submit the machine/PCB to their normal component level repair site (yourself) such that the SERIAL FCO (and the parallel FCO if necessary) can be applied.

In anticipation of this, PLEASE PROCEED TO MODIFY YOUR EXISTING PCB STOCK, AND ANY PCBs/MACHINES SUBMITTED TO YOU AS FROM THIS DATE WITH FCO'S 2002 AND 2003.

Stocks of the new Serial Chip are available from Acorn as per the attached information, together with proposed credit rates and detailed modification instructions.

—The dealer circular will be issued in approximately 1 week from the date of your receipt of this pack.

Thank you for your cooperation.

Yours sincerely,



.....
Jeff Gorton

Manager, Customer Support

FIELD CHANGE ORDER

ARCHIMEDES FIELD CHANGE ORDERS

For sites that are equipped to perform work to a standard allowing component level repair of Archimedes Series Computers, Field Change Order 2003 may be carried out on boards even where 1C9 is directly soldered to the circuit board. (i.e. not socketed). In these instances the rates applied to the various field change orders are identified below:

Archimedes 305	Archimedes 310	Archimedes 440	FCOs required	Credit paJd
27-AKB10-1000001 to 27-AKB10-1001277	27-AKB15-1000001 to 27-AKB15-1001752	None	E008 E009 E011 2002 2003 (unsocket)	£45.00
27-AKB10-1001278 to 27-AKB10-1002227	27-AKB15-1001753 to 27-AKB15-1006369	None	E009 E011 2002 2003 (unsocket)	£40.00
None	None	27-AKB20-1000001 27-AKB20-1000122	E011 2000 2002 2003 (socket)	£48.00
27-AKB10-1002228 to 27-AKB10-1002432	27-AKB15-1006370 to 27-AKB15-1007532	27-AKB20-1000123 to 27-AKB20-1000242	E011 2002 2003 (socket)	£28.00
27-AKB10-1002433 to 27-AKB10-1002636	27-AKB15-1007533 to 27-AKB15-1012371	27-AKB20-1000243 to 27-AKB20-1000478	2002 2003 (socket)	£18.00
27-AKB10-1002637 to 27-AKB10-1002736	27-AKB15-1012372 to 27-AKB15-1017351	27-AKB20-1000479 to 27-AKB20-1002255	2002	£15.00

Table 1. Serial number ranges

As an alternative to the instruction sheet provided generally for FCO 2003, that provided with this package should be used instead.

Remember, that if you are perform work on a circuit board that does not have a serial number you should reserialise the board according to the standing instructions provided previous|y. If you are in doubt regarding this procedure, please contact our Warranty group.

An example service report is also included with this pack.

FIELD CHANGE ORDER

FCO 2002 Parallel Printer Port

Description

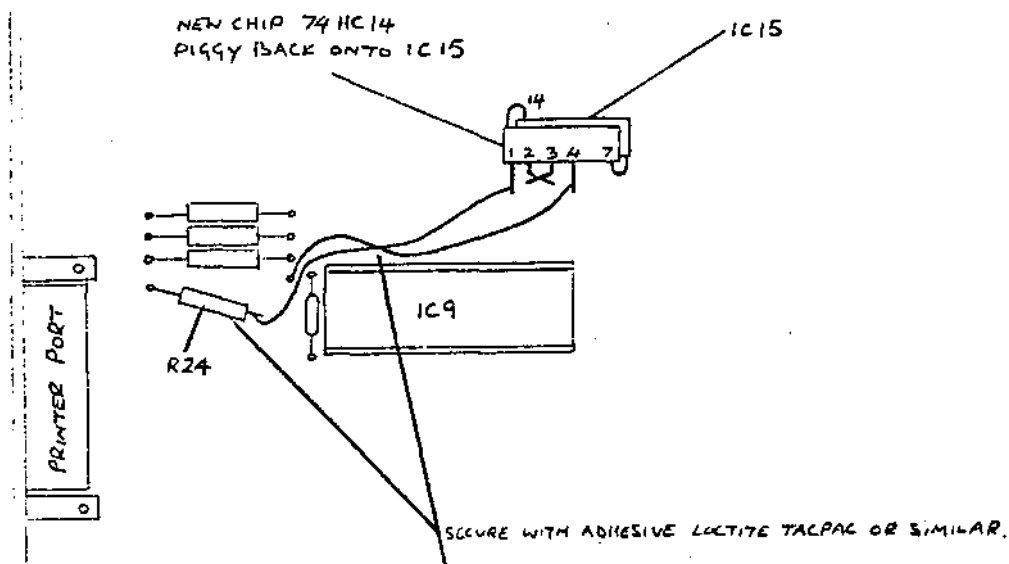
Timing problems with printer control lines have led to spurious operation of some printers. This has proved particularly noticeable when using Integrex colour printers in graphic mode while line feeding - a spurious line feed being generated.

Instruction

- 1) Remove the circuit board from the computer.
- 2) Refer to diagram 1, and identify R24. Cut the leg of R24 closest to IC9, and carefully move the free end of R24 away from the adjacent resistor. Secure R24 to the PCB with adhesive (for example Loctite TAC PAC), leaving the free end of R24 available for soldering.
- 3) Prepare new IC (74HC14) by:
 - a) Removing pins 5,6,8,9,10,11,12 and 13
 - b) Lift pins 1 and 4 ready to solder leads
 - c) Lift pins 2 and 3, and solder them together
- 4) Position new IC onto IC15 piggyback fashion so that pin 1 of the new IC is directly above pin 1 of IC15. Solder pins 7 and 14 of the new IC to pins 7 and 14 of IC15.
- 5) Solder thin insulated lead from pin 1 of the new IC to the free end of R24. Solder a second insulated lead from pin 4 of the new IC to the vacated pad of R24. Keep these leads as short as possible, and secure them to the new PCB with adhesive.
- 6) Reassemble the computer and check operation of the printer port.

The 74HC14 IC is widely available, it can be ordered from Acorn (part number 0747,014), or from Farnell (part number MM74HC14N, M74HC14B1N, PC74HC14P or SN74HC14N).

Please note that it is particularly important that the profile of this modification is kept as low as possible, to ensure that there is no fouling of the modification on any modules that may be fitted to the Computer.



FIELD CHANGE ORDER

FCO 2003 - Serial Port Description

Some G65SC51 ICs fitted to Archimedes computers may exhibit certain problems relating to Serial I/O. More recent production of these ICs have been screened to ensure that this problem does not occur.

Instruction

- 1) Identify IC9 inside the computer. If it is marked CMDG65SC51 with a date code of 8801 (1988 week 1) or later then this computer does not need modification. If, however, the date code is earlier than this date, proceed to number 2.
- 2) If this IC is socketed then remove it from the socket and proceed directly to item 6.
- 3) Remove the circuit board from the computer.
- 4) Desolder IC9, using suitable vacuum desoldering equipment, or equivalent.
- 5) Dress the vacated holes for the IC, suitable for the insertion of a new socket. Fit a new 28 pin IC socket to the component side of the circuit board, and solder this socket to the board. Inspect the soldering, and ensure that all joints are good, and that there are no bridges between adjacent pins.
- 6) Fit a new CMDG65SC51 with a date code of 8801 or later into the socket for IC9. Pin 1 should be towards the rear panel of the computer. Check to ensure that all pins in the IC are correctly in the socket.
- 7) If the circuit board had been removed, replace it in the computer.
- 8) Reassemble the computer, and test operation using either the Archimedes functional test (if available) or, alternatively, using a serial printer.

Note that the CMDG65SC51 IC should ONLY be ordered through Acorn, part number 0706,552). When you send a service report to Acorn with the removed IC9, you will be sent a further one.

It is imperative with this operation that the old G65SC51 is returned with the service report.

**Acorn Computers Ltd
Archimedes Service Report**

Fulbourn Road
Cherry Hinton
CAMBRIDGE CB1 4JN

Your reference no.	FCO 3124
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This section is to be completed by Archimedes approved vendor / Archimedes approved service centre. Mark only in the unshaded boxes.

Vendor / ASC name + address	
Fixit Computers Ltd	
1 High Street	
Anywhere	
Blanks	
Account No	123456
Telephone No	0999 998877
Contact Name	N. Engineer

Customer name + address	
Mr Jones	
Anywhere High School	
Date of repair	10th November 1988
Serial No.	2 7 A K B 1 0 1 0 0 0 5 9 7
Date of Purchase	
Warranty authority no. (if required)	

Fault description	requires FCOs E008, E009, E011, 2002 and 2003		
	Fault is (tick one)	intermittent	solid <input checked="" type="checkbox"/>

Diagnosis	

Action taken	FCOs E008, E009, E011, 2002 and 2003 carried out. Unserialised PCB reserialised as below. G65SC51 (0706,552) included with report to be replaced please.
---------------------	--

Module or Fitting replaced		or machine repaired using no parts (tick)	<input checked="" type="checkbox"/>
Serial no. of faulty module (if any)	G A 4 5 8 0 4 B 6	or Whole machine returned to Workshop (tick)	

N.B. Faulty Archimedes main PCBs should be submitted to central workshop with this service report using the pre-paid labels provided. All other faulty modules and fittings should be returned to the Spares Dept. at the address above, with this service report. Replacement Archimedes main PCBs will be supplied by return from Central Workshop. Credits will be raised when service reports are received from central workshop (main pcb) or direct from yourself.

Vendors electing to return complete machines to central workshop for repair are responsible for arranging carriage into and out of central workshop at the vendors cost and risk.

Action requested of Central Workshop (tick one box only)	Advise originator when replacement ready
Other (specify)	Send replacement by normal method

Type of action (tick one box only)	Warranty repair	Out of warranty (chargeable)
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Note: If warranty is stipulated, the warranty details or a warranty authorisation number must be marked above. If, on checking by Acorn Computers Ltd the unit is found to be out of warranty you may be charged. It is therefore in your interest to check the warranty status carefully, using SID to check if necessary. Be aware that warranty may be invalidated by a customer if the unit has been mistreated.

Machines or modules where no fault is found, or requiring only software configuration are not covered by warranty.

Declaration: I confirm that I have carried out the work shown above. I understand that if the module returned as faulty is found to have no fault on testing, I may be charged. Also, if the unit is found to be out of warranty, and I have claimed for a warranty repair, I may be charged. If the box marked 'Out of warranty (chargeable)' is ticked, I will accept a charge from the central service workshop or Acorn.

Signed		Date	11th November 1988
Print name	N. Engineer	Credit requested	4 8 0 0

Official use only below this line

G.I. check qty	packing	New module sent	Info checked / completed	Job no:	
Warranty checked	Replacements entered	Fault logged	Passed for credit	C.Code	