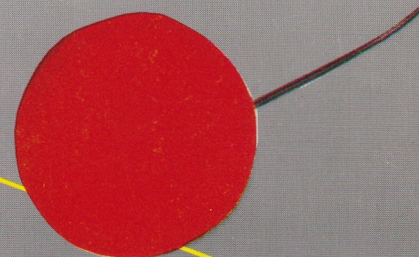
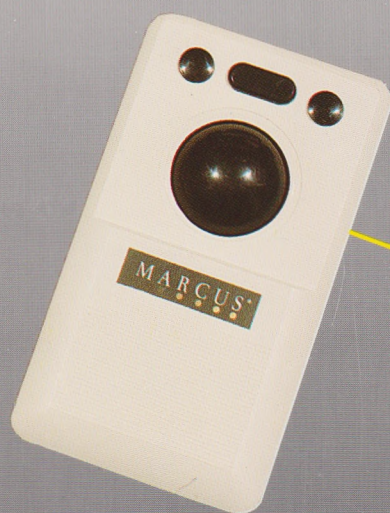
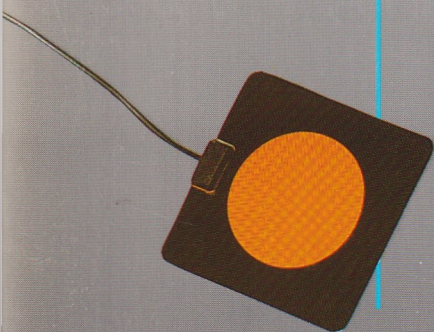
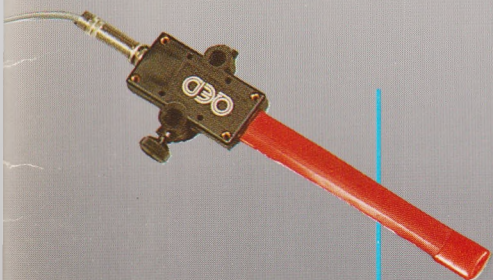
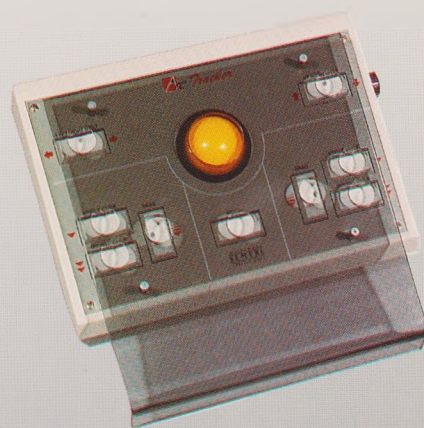
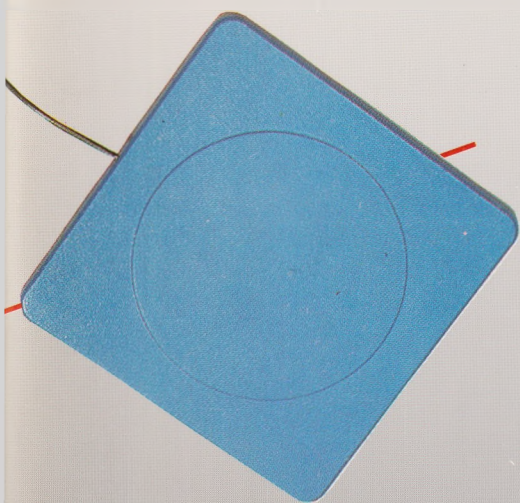


A-Z of Special Needs for Acorn Computers



Northwest SEMERC - Northern ACE Centre

A to Z of Special Needs for Acorn Computers

Northwest SEMERC
&
The Northern ACE Centre

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.....and Special Educational Needs

These four words occasionally seem to be added to curriculum documents, Government White papers, and computer advertising copy as an afterthought. It is not always so. This handbook, the second in this series, is evidence that Acorn Computers is one of the companies who have Special Needs as a priority. They are right to do so. The *National Curriculum* is the statutory right of *every* learner: learning resources (e.g. computers and computer software) which only work for a majority of learners are out-of-date.

Besides, Special Needs folk have a good track record of selling computers by producing computer learning resources for *all* learners. The *Concept Keyboard* (the original overlay keyboard), *Touch Explorer*, *Stylus*, *Moving In*, *Phases#2* and *My World*, all began as Special Needs resources before finding a place in almost every primary classroom.

Learners with Special Needs do not want to have *special* resources. They would rather use what every one else is using - providing it is accessible to them. The Archimedes range of computers has brought this one stage nearer by supporting multi-tasking. Many learners with Special Needs can now use standard software with a utility which makes it accessible to them (by, say, supporting the use of switches). Others can gain access to this software by adaptations to the mouse and keyboard or by teacher-specified adaptation to the content and difficulty of the software in a *framework program*.

.....and Special Educational Needs

Many of the submissions for the Product Guide - the second half of this book - contained phrases like "early years and special educational needs", "Key Stage 1 and special educational needs" or "we have nothing for special educational needs". Wrong. Learners with special educational needs include undergraduates with a physical handicap and sixth-form students who are deaf, as well as people of all ages with learning difficulties: Special Needs includes the whole curriculum at every level of difficulty. Every educational manufacturer and publisher must be sure that what they produce is accessible to as many learners as possible.

There are some devices which are of particular interest to learners with special needs and some of these may be unexpected. Hard discs are essential if your physical problems prevent the independent use of floppies; laptop battery chargers are important if your laptop is your only means of recording or communication; spellcheckers and speech utilities may be a boon if you have dyslexia.

Acorn A to Z of Special Educational Needs

This handbook was written to provide a store of current information for those using the Archimedes range with people who have Special Needs.

Both Information Technology and Special Educational Needs are fields where the diversity of information tends to frustrate attempts at categorisation. The first part of our book adopts a simple A to Z format and we invite the reader to look at the index to refer to any section.

A to Z Product Guide

The second section consists of information supplied by companies. This is their information expressed in their words. Provided you realise this (particularly when considering resources provided by Northwest SEMERC!), the second section provides useful information on the increasing range of hardware and software available to Special Needs users of the Archimedes range.

The handbook has been written as a joint effort by Northwest SEMERC (Paul Nuttall, Trish Hornsey, Jenny Taylor and myself) and the Northern ACE Centre (Roger Bates). I would also like to acknowledge the help received from Tina Detheridge and her team at the National Council for Educational Technology (NCET), Krys Boughey, Vorn Hancock and Teresa Downey at Acorn, and to my Office Manager, Patti-Ann Finnegan, who worked on this handbook for many hours in a windowless students' kitchen at Warwick University during the recent NCET *Access to Learning* Conference.

Martin Littler

Director: Northwest SEMERC

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4Mation Educational Resources

14 Castle Park Road
Whidden Valley
Barnstaple
EX32 8PA 0271 25353

4th Dimension

1 Percy Street
Sheffield
S3 8AU 0742 769950

Acorn Computers Limited

Fulbourn Road, Cherry Hinton
Cambridge
CB1 4JN 0223 245200

Acorn User

101 Bayham Street
London NW1 0AG 071 331 8000

Akom Ltd.

51 Manor Lane, London
SE13 5QW 081 852 4575

Aleph One Ltd.

Bottisham, Cambridge
CB5 9BA 0223 811679

Appian Way Software Ltd.

Old Corporative Building
Langley Park, Durham
DH7 9XE 091 373 1389

Archimedes World

Argus House, Boundary Way
Hemel Hempstead
Herts, HP2 7ST 0442 66551

Archive

Norwich Computer Services
96a Vauxhall Street, Norwich
NR2 2SD 0603 766592

AVP

School Hill Centre, Chepstow
Gwent NP6 5PH 0291 629671

Basing Educational Software

6 Long Street, Gerton, Bethesda
Gwynedd.
LL57 3SY 0248 602402

Brilliant Computing

PO Box 142, Bradford
BD9 5NF 0274 497617

Burden Neurological Institute

Stoke Lane, Stapleton, Bristol
BS16 1QT 0272 567444

Calligraph

53 Panton Street, Cambridge
CB2 1HL 0223 461143

Cambridge Adaptive Communication

24 Fulbrooke Road, Cambridge
CB3 9EE 0223 312194

Cambridge Micro Software

Edinburgh Building Shaftesbury Rd
Cambridge CB2 2RU 0223 312393

Cambridgeshire Software House

7 Free Church Passage
St Ives, Huntingdon
PE17 4AY 0480 679455

Canon (UK) Ltd

Unit C, 63/64 Barwell Bus. Park
Leatherhead Road, Chessington
Surrey KT9 2QJ 081 974 2434

C D Computing

Thorpe Lea, Greenacres
Rawmarsh, Rotherham
S62 6LD 0709 526833

Chalksoft Ltd

Unit 9 Benner Road Industrial Est.
Pinchbeck, Spalding
PE11 3TZ 0775 769518

Clares Micro Supplies

99 Middlewich Road, Rudheath,
Northwich, Cheshire
CW9 7DA 0606 48511

Cleveland Ed. Computing Centre

Prissick Base
Marton Road, Middlesbrough
Cleveland TS3 4RZ 0642 325417

Collins Educational

Freepost, Glasgow
G4 0ND 041 772 3200

Colton Software

No. 2 Signet Court, Swanns Road
Cambridge
CB5 8LA 0223 311881

Commotion

Redburn House
Stockingswater Lane, Enfield
EN3 7TD 081 804 1378

Computer Concepts Ltd

Gaddesden Place
Hemel Hempstead
Herts HP2 6EX 0442 63933

Concept Keyboard Company

Unit 6 Moorside Road
Winnall Ind. Est. Winchester
SO23 7RX 0962 843322

Cumana Ltd

Pines Trading Estate
Broad Street, Guildford
Surrey GU3 3BH 0483 503121

Daco Software

463 Warwick Road, Tyseley
Birmingham
B11 2JP 021 706 8933

Dolphin Systems for the Disabled

Unit 96c, Blackpole Trading Estate
Worcester
WR1 2RN 0905 754577

DT Software

8 Coton Road, Granchester,
Cambridge CB3 9NH 0223 841099

Easiads Ltd

5 Woodcote Park Ave, Punley
Surrey CR8 3NH 081 648 4186

Educational Computing/Technology

20-26 Brunswick Place
London N1 6DJ 071 490 1444

Education Today

Datateam Publishing
Datateam House
Tovil Hill, Maidstone
Kent ME15 6QS 0622 687031

Electromusic Research Ltd.

14 Mount Close, Wickford
Essex SS11 8HG 0702 335747

Electronic Font Foundry

Grandville House
50/52 Upper Village Rd, Ascot
Berks. SL5 7AQ 0344 872923

esm (LDA Living & Learning)

Duke Street, Wisbech
Cambridge PE13 2AE 0945 63444

E.S.P.

Holly Tree Cottage
Strelley Village, Nottingham
NG8 6PD 0602 295019

Europress Software Limited

Europa House, Adlington Park
Macclesfield, Cheshire
SK10 4NP 0625 859333

A to Z Addresses

**Foundation for Communication
for the Disabled (FCD)**

25 High Street
Woking
Surrey GU21 1BW 0483 727848

Freedom Technology

31 Maidenhall
Highnam, Gloucester
GL2 8DJ 0452 415778

GEC Plessey Semiconductor

Carholme Road, Lincoln
LN1 1SG 0522 510500

Hampshire Microtechnology Centre

Connaught Lane, Paulsgrove
Portsmouth
PO6 4SJ 0705 378266

Hands on Midi Software Ltd.

3 Bell Road, Cosham
Portsmouth, Hampshire
PO6 3NX 0705 221162

HCCS Associates Ltd

575 - 583 Durham Road
Low Fell, Gateshead
Tyne and Wear
NE9 5JJ 091 487 0760

Honormead Software Solutions

Admin House
The Grange, Hospital Lane
Mickleover, Derby
DE3 5DR 0332 510951

H S Software

Hendrefoilan Avenue
Sketty, Swansea
West Glamorgan SA2 7NB

Hugh Steeper Ltd

Queen Mary's University Hospital
Roehampton Disability Centre
Roehampton Lane, London
SW15 5PL 081 788 8165

Hybrid Technology

88 Butt Lane, Milton
Cambridge CB4 6DG 0223 861522

ICS

1 Kington Road
Westby, Wirral
L48 5ET 051 625 1006

Icom Design Ltd

Long Leys Road, Lincoln
LN1 1EH 0522 512276

iibit Education Products Limited

578 Kingston Road, London
SW20 8DR 081 540 2333

Information Technology Service

Finsall Centre
Stoke Road, Bromsgrove
Worcs. B60 3EN 0527 570566

Integrex Limited

Portwood Ind. Estate
Church Gresley, Swadlincote
Derbyshire DE119PT 0283 550880

Interface Designs

12 East Meads
Onslow Village, Guildford
Surrey GU2 5SP 0483 32909

Iota Software Ltd

St. John's Innovation Centre
Cowley Road, Cambridge
CB4 4WS 0223 421542

Irlam Instruments Ltd

133 London Rd, Staines
Mddx TW18 4NH 0895 811401

Keyboard Technology Ltd.

Unit 3, Gordon Road
Meadow Lane Industrial Estate
Loughborough
Leics LE11 1JX 0509 610706

Jordanhill College of Education

76 Southbrae Drive, Jordanhill
Glasgow G13 1PP

L'Ensouleiado Software

Old Brackenlands, Wigton
Cumbria CA7 9LA 0228 401281

Le Computer

1 Willows Green Cottages
Willows Green, Chelmsford
Essex CM3 1QB 0245 362225

Liberator Ltd

Whitegates, Swinstead
Lincs NG33 4PA 0476 84391

Lindis International Limited

Wood Farm
Linstead Magna, Halesworth
Suffolk IP19 0DU 0986 85476

Longman Logotron Ltd

124 Cambridge Science Park
Milton Road, Cambridge
CB4 4ZS 0223 425558

Mardis

Lancaster University
Bailrigg
Lancaster LA1 4YW 0524 65201

Micro User

Database Publications
Europa House, Adlington Park
Macclesfield
SK10 4NP 0625 878888

Microvitec plc

Bolling Road
Bradford BD4 7TU 0274 390011

Minerva Software

Minerva House, Bering Crescent
Exeter EX1 1TL 0392 437756

Morley Electronics Ltd

Morley House
West Chirton Industrial Estate
Tyne and Wear
NE29 7TY 091 257 6355

NCET

Unit 6, Sir William Lyons Road
Science Park
University of Warwick
Coventry CV4 7SZ 0203 416994

Newman Software

Newman College
Genners Lane, Bartley Green
Birmingham
B32 3NT 021 476 1181

Nordis Industries

Cornhill Close
Lodge Farm Industrial Estate
Northampton
NN5 7UB 0604 54358

Northern Micromedia (NORRIC)

Coach Lane Campus
Newcastle Polytechnic
Coach Lane
Newcastle upon Tyne
NE7 7XA 091 270 0424

NSNSU

Resource, Exeter Road
Wheatly, Doncaster
DN2 4PY 0302 340331

Oak Solutions

Suite 25 Robin Enterprise Centre
Leeds Road, Idle, West Yorkshire
BD10 9TE 0274 620423

A to Z Addresses

PAGEsoft

17 Pagefield Crescent
Clitheroe
Lancs. 0200 26103

Panda Discs

Four Season
Tinkers Lane, Brewood
Stafford ST19 9DE

Panthera

5 Cedar Avenue
Beeston, Nottingham
NG9 2HA 0602-256309

PEP Associates

34 Tiverton Way
Cambridge
CB1 3TU 0223 212251

Phobox Electronics

Unit 1, Brocklands Farm
West Meon, Petersfield
Hants. GU32 1JN 0730 829016

Porters Primary Software

138a Harvey Clough Road
Sheffield
S8 8PG

Primary Technology

26a Old Street
Upton on Seven
Worcester
WR8 0HW 0684 592671

Prime Resources

6 Sunbury Avenue, Jesmond
Newcastle Upon Tyne
NE2 3HE 091 281 1831

Quest Educational Designs (QED)

1 Prince Alfred Street
Gosport
Hants PO12 1QH 0705 581179

RCEVH

School of Education
P.O. Box 363 Birmingham
B15 2TT 021 414 6733

Resource

Exeter Road, Wheatly
Doncaster DN2 4PY 0302 340331

RiscUser

Beebug Ltd
117 Hatfield Road, St Albans
Herts AL1 4JS 0727 40303

Scetlander Ltd.

74 Victoria Crescent Road
Glasgow
G12 9JN 041 357 1659

Selective Software

64 Brooks Road
Street, Somerset
BA16 0PP 0458 43079

Sharbrook Systems

18 The Crescent
Taunton, Devon TA1 4EB

Sherston Software

Swan Barton, Sherston
Nr. Malmesbury, Wiltshire
SN16 0LH 0666 840433

Sigma Press

1 South Oak Lane, Wilmslow,
Cheshire SK9 6AR 0625 531035

Silica Software Systems.

Mallards, Lower Hardres
Canterbury
Kent CT4 5NU 0227 70279

Simnett Computers Limited

19 Progress Way, Croydon
Surrey CR0 4XD 081 680 3830

SNACMA Ltd

Swiss Centre
10 Wardour Street
London W1V 3HG

SPA

PO Box 59
Leamington Spa, Warwickshire.
CV31 3QA. 0926 22959

Special

Hobsons Publishing
Bateman Street, Cambridge
CB2 1LZ 0223 354551

Special Access Systems

33 Gloucester Place
Witney, Oxon 0865 56154

SRS Systems

Units 6/8 Benacre Drive
off Fazeley Street, Birmingham
B5 5RF 021 643 2877

Superior Software

PO Box 6 Brigg
South Humberside
DN20 9NH 0652 658585

TAG-Invicta Software

Edit, 48-50 Junction Road
London N19 5RD 0926 885303

Technomatic

Techno House, 468 Church Lane
London NW9 8UF 081 205 9558

TGW Software

Kinder School, Ward 7
Bassetlaw Hospital, Worksop
Notts. S81 0BD 0909 472831

Toucan (Communication Aids)

Unit 21, Third Avenue
Crewe Industrial Estate
Crewe CW1 1XU 0270 588039

TFH - Toys for the Handicapped

76 Barracks Road
Sandy Lane Industrial Estate
Stourport-on-Severn
Worcestershire
DY13 9QB 0299 827820

Topologika Software

P.O. Box 39, Stilton
Peterborough
PE7 3RL 0733 244682

Unilab Ltd.

The Science Park, Hutton Street
Furthergate
Blackburn
BB1 3BT 0254 681222

Voltmace

Unit 9, Bondor Business Centre
London Road
Baldock, Herts
SG7 6HP 0462 894410

Widgit Software

102 Radford Road
Leamington Spa
Warwicks
CV31 1LF 0926 885303

Wild Vision

15 Witney Way
Boldon Business Park
Boldon Colliery, Tyne and Wear
NE35 9PE 091 519 1455

Xavier Educational Software Ltd.

Dept. of Psychology
UCNW, Bangor
Gwynedd
LL57 2DG 0248 351151

Access

The computer has many benefits for children with physical handicaps. By providing them with a method of recording work and allowing them access to a wide range of learning experiences it can help them achieve their full potential. The availability of a range of special input devices means that most physically handicapped children can be provided with a means of interacting with a computer.

The choice of an appropriate access method for an individual child will require consideration of physical and cognitive factors. It is important to adopt a team approach and include any professionals working with the child. A poor choice of access method could cause physical harm, for example by causing the child to adopt a poor posture. It is also important to use software that the child can easily understand when trying out access methods.

Although specialised software is available for operation by switches and other input devices it is desirable to try to provide access to standard software and input methods in order to provide the child with as wide a choice as possible.

Before trying any access device or method, ensure that the child is properly seated and supported and that the computer keyboard and monitor are correctly positioned, using an adjustable trolley (Atkinson Engineering) if required. An occupational therapist or physiotherapist can advise on seating and posture. Proper seating can have a dramatic effect on the degree of physical control available.

Keyboard Modifications

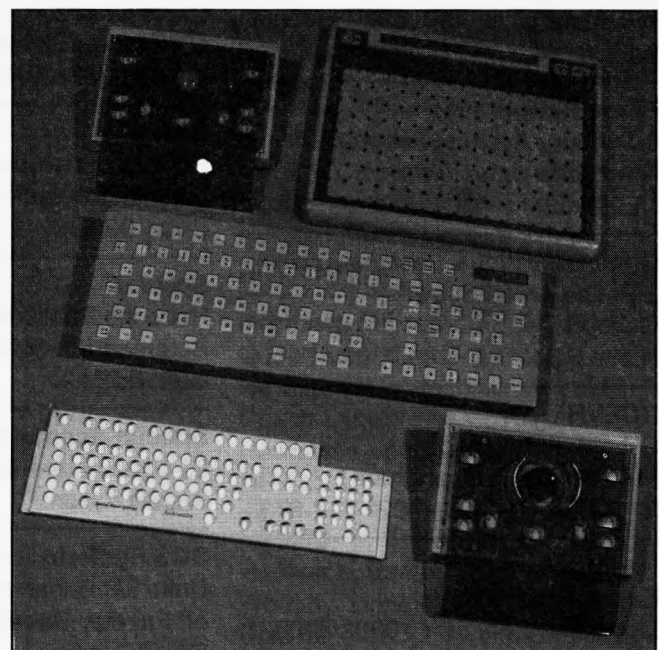
The standard keyboard can be modified in a variety of ways to improve and assist access. The utility on the special access disc *!SpecialKB* allows the response of the keys to be adjusted to cater for a range of physical difficulties. Single finger control also makes it possible to use a mouthstick or headpointer. Help may be provided by using a keyguard (Special Access Systems, NW SEMERC) to help eliminate accidental keypresses. A wrist rest (INMAC) or arm rest (QED) can be used to provide additional support to the arms and hands when typing. If it proves impossible to adapt the standard keyboard then an expanded keyboard (Special Access Systems, NW SEMERC) may be required.

Mouse Modifications

Mouse control can present problems to those with physical handicaps. Before considering the use of an alternative such as an *Arctracker Trackball* or *Arctracker Joystick* (NW SEMERC) or other joystick or tracker ball it may be possible to modify the mouse to make it easier to hold. *!Special KB* allows mouse operations to be carried out from the keyboard providing yet another alternative. Using a pointing device such as a mouse, trackball or joystick in conjunction with an on screen keyboard such as that provided by ASP or Le Computer can provide an alternative to using the keyboard for text input.

Expectations

When using any alternative device to help users with physical difficulties it should be remembered that their rate of work may be slow and the effort required considerable. They should be given time to work but should not be expected to spend too long using a computer. Alternative methods of recording may be required. The desk top environment may also present problems as children with physical handicaps often have problems with spatial awareness.



A Range of Access Devices

ACE Centres

The Oxford ACE (Aids to Communication in Education) Centre was established in May 1984 to provide a focus of information and experience in the use of microelectronics as aids to communication. It now provides a wide variety of services and facilities ranging from in-depth assessments of the communication needs of individual children, to software development work. Northern England is covered by the Northern ACE Centre, which was set up in September 1984 and is based in Oldham. The two Centres work closely together and share the same advisory committee. Both centres are staffed by a multidisciplinary team.



Assessment of Individual Children

The ACE Centres welcome direct approaches from anyone associated with children or students who have communication difficulties. If the Centres can be of help, these children, accompanied by their parents, teachers and therapists, are seen by a multi-disciplinary team for assessment at one of the Centres. Alternatively, a team may visit the child at school. Demand for these services is so great that appointments are currently being made up to six months ahead. If appropriate, local coordinators may handle the arrangement and follow-up of assessments. In some cases a Centre may not have direct contact with the child, but may act closely with those involved in a consultancy capacity. If the child can benefit from the microtechnology available, assessments can sometimes be backed up by the offer of suitable loan equipment. There is no charge for an ACE Centre assessment.

There is a danger that technology can be seen as a 'magic' single solution to all communication problems. For the non-speaking child especially, technology alone is never a complete solution and the ACE Centres assess and advise on the combination of other approaches, such as signing, the use of symbols, gesture and eye-pointing, often in conjunction with the use of electronic aids.

Training

Although knowledge of the potential of communication aids is growing, there is still a lack of awareness of what is involved in implementation. The ACE Centres are heavily concerned with training professionals and parents in a variety of ways:

Both centres offer a variety of multi-disciplinary training. In addition to centre based courses they offer school and LEA based training.

Training for professionals may be provided in the form of INSET days, 1-2 week secondments, and the NCET Residential Course which is run jointly by the Oxford and Northern ACE Centres. In addition, the staff of the Centres partake in exhibitions, conferences (both national and international) and run external workshops for LEAs.

Information Services

Another important aspect of the Centres' work is the gathering and dissemination of information about aids to communication, and the surveying and evaluating of products and software.

The Centres offer advice and a telephone help line for those having difficulty with hardware or software.

Research and Development

The Centres are involved in the development of new software. The ACE Centres also work with several microtechnology companies and manufacturers of aids for the disabled by advising on the special needs of communication impaired children.

The Ace Centre, Oxford 0865 63508

The Northern ACE Centre, Oldham 061 627 1358

Access to Learning

This is the NCET annual three day residential conference for about 150 delegates experienced in Special Needs and/or IT. The Conference takes place in July at the University of Warwick. There is an extensive programme of seminars and workshops with as many as sixty speakers. The conference is sponsored by NASEN and Northwest SEMERC.

Black & White Printers

Normally with printers you get what you pay for. There has always been a large quality gap between the print quality of a dot matrix printer and a laser printer. However the outline font system of the Archimedes range of computers allows even the most basic dot matrix printers to produce good quality results.

Before purchasing any printer you will need to check if you have a suitable Printer Driver or indeed if one is available. A number of these are provided on the Applications discs supplied with the computer and they cover the majority of printers. If you don't have a suitable driver for your printer you will need to purchase one.

If you already own a printer you will find virtually all printers will work with the Archimedes range of computers, probably only needing a new printer lead.

Dot Matrix Printers

These printers print both pictures and text by producing a series of dots. They are available as either 9 pin or 24 pin versions. The 24 pin versions have a higher quality of print and tend to be faster, but they are more expensive. The quality of printing is not as good as from other types of printers. However they still produce excellent results compared with other makes of computers not using outline fonts. Most users will find the dot matrix printer will meet their needs.

Advantages These printers are cheap to buy and run. The ribbons are low cost and will continue working until you decide the quality is no longer acceptable and decide to replace the ribbon. The printers will usually accept a wide variety of paper, single sheets and tractor feed computer paper.

Disadvantages Slow at printing, compared with other types of printer. Dot matrix printers tend to be noisy in operation. Type is not as black or crisp as bubble jet or laser printers.

Ink/Desk Jet

These printers are now very popular, due to their low cost and high quality print. The desk jet printers work by having an array of small nozzles, (usually

64). The print head sprays a minute bubble of ink on to the paper. The result is very high quality print (up to 360 dots per inch). A number of models are very light and compact and take up very little desk space. They are ideal for home use.

Advantages The printers are almost silent in operation. The initial cost is low for a high quality of printing. These printers will print on paper or envelopes in near laser quality (and sometimes better depending on the make-up of the pages being printed). There are very compact models available.

Disadvantages Ink cartridges can be expensive. There is no warning that the cartridge is running out, therefore, spare cartridges need to be purchased.

The ink remains wet for a few seconds after the page has been printed.

The ink does not permanently fix to paper. If water splashes on the paper the ink will run. (It is best to create masters for photocopying). Output is slow compared to laser printers.

Canon BJ-10ex

This is a low cost portable printer, which is very popular and excellent print quality. The printer is A4 in size and thin. On a desk it stands on its edge taking up very little space. A clip on sheet feeder is available which is useful for printing large documents. The printer can be battery powered, which with its small size makes it ideal for use with portable computers.

<i>Canon BJ-10ex</i>	<i>£199.00 ex-VAT</i>
<i>Sheet feeder</i>	<i>£48.00 ex-VAT</i>
<i>Battery</i>	<i>£32.00 ex-VAT</i>

Computer Concepts produce a package consisting of the BJ-10e lead and Turbo driver (this gives better and much faster printing) for £249.00 ex-VAT.

Acorn JP-150

This is the Acorn bubble jet printer. It is small and compact and offers excellent print quality. It can be purchased as part of the Learning Curve package for an extra £235.00.

Catalogues

Hewlett Packard Deskjet 500

Very popular in education. This larger deskjet printer is far more robust than the previously mentioned printers and incorporates a sheet feed/ paper tray that holds 100 sheets. It is suited to higher volume printing with a speed of 1 page per minute.

Price £300.00 (colour version also available)

Laser Printers

These produce the highest quality print and use plain paper or envelopes. They are ideal for desktop publishing. If purchasing a laser printer, the Archimedes controlled lasers (Laser Direct, Arc Laser) offer incredibly fast printing of text and graphics and are to be recommended over standard laser printers which are slow. Even complex text and graphics print within seconds and speed is only usually limited by the speed of the laser printer engine.

Advantages The print out is high quality 300 or even 600 dots per inch and is almost silent in operation. Archimedes controlled printers are fast giving between 4 and 8 pages per minute.

Disadvantages Expensive to buy and cannot be used with tractor fed paper. Large size.

Laser Direct by Computer Concepts

This range of lasers uses a card in the computer to drive the printer 5 times faster than conventional laser printers. Printing resolution is from 300 dots per inch to 600. The printers come with printer driver and will print with any programs that use RiscOs drivers. Needs 2mb RAM to work.

ArcLaser by Calligraph

This range of laser printers are driven by Arc laser card in the Archimedes, and are very fast 5 to 15 times faster than conventional laser printers. Printing resolution is 300 dots per inch to 600dpi. Each printer supplied comes with a printer driver that includes Epson emulation, allowing all Archimedes programs to print.

The Acorn Product Directory and Acorn Education Directory are valuable sources of information about current software and peripherals available for Acorn computers and should be available for browsing at your local Teachers' Centre or Acorn Dealer. Most software companies produce their own catalogues and will send you one on request. **Exhibitions** such as BETT, Micros for Special Needs Exhibition, RESOURCE Conference etc. are good places to pick up catalogues and evaluate the software and hardware for yourself. Before committing yourself to any purchases, consider the needs of users. Will a particular program or add-on be appropriate for that person? Is the conceptual or skill level appropriate? Never underestimate the users. If in doubt seek advice. Many useful addresses and telephone numbers are listed at the beginning of this handbook. Here are a few names that we feel are especially worth contacting for a catalogue: 4Mation, Brilliant Computing, esm, Honormead Software Solutions, Keyboard Technology, Longman Logotron, NCET, Northwest SEMERC, NSNSU, Sherston Software and Widgit Software.



Laser printed image - Cumana Special Resources CD-ROM

Colour Printers

Colour printers are now becoming a reasonably priced option. The range of colours and the high quality of graphics packages and programs able to work in 256 colours have made colour printers highly desirable.

When it comes to colour printers you get what you pay for. As the cost of the printer increases the quality improves. The most important factor to consider though is not the cost or quality but if it meets requirements. For many users a colour ribbon printer will be adequate. Others will require high resolution ink jet printers. An important factor is the running cost of the printer.

Ribbon Printers

Colour ribbon printers rely on a multi-coloured printer ribbon (black, red, blue, yellow) with ordinary dot matrix print head. The printer is controlled by software which moves the ribbon up and down so that the printer can print in one colour, move back to the start of the line and print in another colour, gradually building up a picture.

Advantages The printers are cheap and use low cost ribbons (approx. £8.00 ex-VAT). Ribbons can be replaced when the printout is no longer acceptable. These printers can function as a black & white printer if a black ribbon is fitted.

Disadvantages The colours are pale compared with those produced by ink jet printers. The ribbons become discoloured because the printer heads move from colour to colour. Beware of old ribbon printers requiring expensive and hard to obtain ribbons.

Ink/Desk Jet Printers

This printer fires little spots of ink onto the paper from two cartridges, one black and one coloured containing red, blue and yellow ink bags.

Advantages Bright clear colours (using special paper for this printer). No deterioration in print quality. Almost silent in operation.

Disadvantages Cost of the printer. Ink cartridges are expensive and if one colour runs out they have to be replaced. For best results these printers require special paper.

Colour Laser Printers

High costs and lack of software support limit these to specialist work.

Star LC200C Colour Printer

This is a 9 pin ribbon printer, which is a fairly recent model and represents excellent value for money. It can also use a standard Star black ribbon if the printer is to be used for black text printing for any period. Used as a text printer it offers a variety of print styles. Any school about to buy a printer should seriously consider this printer instead of a black and white printer.

<i>Star LC200C Colour Printer</i>	<i>£171.00 ex-VAT</i>
<i>Colour Ribbon</i>	<i>£ 8.00 ex-VAT</i>

Integrex Colour Jet 132

This is an Ink Jet colour printer (compatibility with BBC Model B and Master 128 computers make this a good choice if the printer is to be shared between a few computers). The printout is good quality and in the past this printer has become the standard Ink Jet colour printer for use with the BBC and Archimedes computers.

<i>Integrex Colour Jet 132</i>	<i>£495.00 ex-VAT</i>
<i>Paper roll</i>	<i>£ 6.00 ex-VAT</i>
<i>Colour cartridge</i>	<i>£ 14.00 ex-VAT</i>
<i>Black cartridge</i>	<i>£ 8.00 ex-VAT</i>

Hewlett Packard Paintjet

This is a colour ink jet printer, which is also a very fast text printer at 167 characters per second for near letter quality text. The colour cartridges will print approx. 180 pages of colour graphics. Paper is tractor fed fanfold. This printer is particularly suited for use with the Archimedes range of computers.

<i>Hewlett Packard Paintjet</i>	<i>£480.00 ex-VAT</i>
<i>Paper 250 sheets</i>	<i>£ 18.00 ex-VAT</i>
<i>Colour cartridge</i>	<i>£ 35.00 ex-VAT</i>
<i>Black cartridge</i>	<i>£ 28.00 ex-VAT</i>

Hewlett Packard Deskjet 500C

High quality desk jet printer which tries to combine top quality black and white and colour printing. This is an excellent robust printer which uses A4 paper. A built in sheet feeder holds 100 sheets. The user can select either a black cartridge or a colour cartridge containing red, blue and yellow.

Communication

In the majority of cases a computer system cannot provide an alternative to a portable electronic communication aid as, in order to be effective, a communication aid needs to be available at all times and in all situations. However computers can provide a way for people with communication handicaps to interact with others. They can help them to communicate ideas through writing, design and music. By providing exciting and enjoyable activities they can stimulate communication and language development when children work in groups or with adults. Computer work can also provide learning experiences to help users develop the switch control and timing skills needed to operate electronic communication aids. Graphics software and associated picture libraries are useful sources of picture and symbol materials which the user can help produce and choose for their Communication book or chart.

Communication Aids Advice

Recent developments in micro-technology, software, and input devices have meant that there is a greater hope that we can provide something to assist in overcoming the communication difficulties of even the most severely disabled. This page contains information about centres in England, Wales and Northern Ireland which offer expert assessment of a communication difficulty and advise as to an appropriate aid. Most of the centres considered are sources of advice, expertise, and information. The actual provision of the aid recommended and day-to-day support of its use will, in most cases, not be undertaken by the centre itself.

ACE Centre

Ormerod School, Waynflete Rd.,
Headington,
Oxford OX3 8DD 0865 63508

Northern ACE Centre

Park Dean School,
St. Martin's Rd.,
Fitton Hill,
Oldham OL8 2PY 061 627 1358

Cardiff CAC

Rookwood Hospital,
Llandaff,
Cardiff CF5 2YN 0222 566281

Charing Cross CAC

Speech Therapy Dept.,
Charing Cross Hospital, Fulham Palace Rd.,
London W6 8RF. 071 748 2040

Bristol CAC

Speech Therapy Department,
Frenchay Hospital, Frenchay,
Bristol BS16 1LE 0272 565656

Communicate

Dene Centre,
Castle Farm Rd.,
Newcastle NE3 1PH 091 284 0480

Centre for Human Communication

Oak Tree Lane Centre
Oak Tree Lane, Selly Oak,
Birmingham B29 6JA 021 627 8235

Wolfson CAC

Institute of Child Health,
The Wolfson Centre,
Mecklenburgh Square
London WC1N 2AP. 071 837 7618

CENMAC

Charlton Park School,
Charlton Park Rd.,
London SE7 8HY 081 316 7589

The National Access Centre

(contact for info. on Regional Access Centres)
Hereward College of F.E.,
Bramston Crescent,
Coventry CV4 9SW 0203 461231 x 244

The CALL Centre

4 Buccleuch Place,
Edinburgh EH8 9LW 031 667 1438

Scottish Centre of Technology for the Communication Impaired

Victoria Infirmary,
Glasgow G42 9TY 041 649 4545

Communication Advice Centre

Musgrave Park Hospital,
Stockman's Lane,
Belfast BT9 7JB 0232 669501

FACCT

Buckhaven High School,
Methilhaven Road, Buckhaven,
Leven,
Fife KY8 1HL 0592 713691

Dealers with an interest in Special Needs

AVON

CJ Computing
57 Westbury Hill
Westbury-on-Trym
Bristol
BS9 3AD 0272 624553

BERKSHIRE

Dyad Business Systems Limited
165 Oxford Road
Reading
Berks
RG1 7UZ 0734 503330

BUCKINGHAMSHIRE

Depson Business Systems
65 Aylesbury Street
Bletchley
Milton Keynes
Bucks MK2 2BJ 0908 271500

CAMBRIDGESHIRE

Cambridge Micro Surgery
Unit 4
377b Cherry Hinton Road
Cambridge
CB1 4DH 0223 410234

Micro Studio Limited
22 Churchgate Street
Soham
Ely
Cams CB7 5DS 0353 720433

Newton & Brewer
Unit 16 Sedgeway Business Park
Common Road
Witchford
Ely
Cams CB6 2HY 0353 666011

CHESHIRE

3SL Limited
Brook House
501-511 Crewe Road
Wheelock, Sandbach
Cheshire
CW11 0QX 0270 761516

BDB Corporate Computer Supplies
The Waterloo Centre
Waterloo Road
Widnes, Cheshire
WA8 0PR 051 495 1977

LMR
17a Marsland Road
Sale, Cheshire
M33 3HP 061 962 8872

CLEVELAND

Yarm Computers
Winpenny House
137 The High Street
Yarm
Cleveland
TS15 9AY 0642 786922

CORNWALL

Microtest Limited
Technology House
18 Normandy Way
Bodmin
Cornwall PL31 1EX 0208 73171

CUMBRIA

Cumbria Software Systems
3a Townfoot Industrial Estate
Brampton
Cumbria CA8 1SW 0697 73779

DERBYSHIRE

Selective Computer Services
8 Old Gate Avenue
Weston-on-Trent
Derby DE7 2BZ 0332 690691

Honormead Software Solutions
Admin House
The Grange Hospital Lane
Mickleover
Derby DE3 5DR 0332 512848

DEVON

Micro Services
36 Crockwells Road
Exminster
Exeter EX6 8DQ 0392 832179

ESSEX

Datathorn Systems Limited
George House
50 Spring Grove
Loughton, Essex
IG10 4QD 081 508 4904

Le Computer
PO Box 29
Chelmsford
Essex CM3 1QS 0245 362225

GLOUCESTERSHIRE

AJL Electronics
49 Calton Road, Gloucester
GL1 5DZ 0452 311031

HAMPSHIRE

Alsystems
47 Winchester Road
Four Marks, Alton
Hants GU34 5HG 0420 561111

Absolute Business Centre
112 East Street
Southampton
Hants SO1 1HD 0703 224703

HERTFORDSHIRE

Watford Electronics
250 Lower High Street
Watford
Herts WD1 2AN 0923 237774

KENT

Computereyes
16 Starnes Court
Union Street, Maidstone
Kent ME14 1EB 0622 751096

Sensitive Data Systems
Anson Close
Pysons Road Industrial Estate
Broadstairs
Kent CT10 2YB 0843 602822



LANCASHIRE

Computer Systems

22 Glynne Street
Farnworth
Bolton
Lancs BL4 7DY 0204 794090

LEICESTERSHIRE

DA Computers Limited

105 London Road
Leicester LE2 0PF 0533 549407

LINCOLNSHIRE

Circuitronics

10 St Catherine's Road
Grantham
Lincs NG31 6TS 0476 72555

LONDON

Automatic Services

217 Wood Street
Walthamstow
London E17 3NT 081 521 1784

Mascot Limited

1 Beckwith Road, Dulwich
London SE24 9LH 071 978 8582

MANCHESTER

Dabhand

5 Victoria Lane
Whitefield
Manchester
M25 6AL 061 766 8423

Resource Facilities

Clifton Technology Park
Wynne Avenue, Swinton
Manchester
M27 2HB 061 727 8313

MERSEYSIDE

Data Exchange Limited

Exchange House
62 Wood Street
Port Sunlight
Wirral
Merseyside
L62 4UZ 051 644 7770

NOTTINGHAM

Nottingham Rehab

Ludlow Hill Road
West Bridgeford
Nottingham
NG2 6HD 0602 452345

SHROPSHIRE

Technology Supplies Limited

Pheonix Bank
Market Drayton
Shropshire
TF9 1JS 0630 658184

SUFFOLK

Lindis UK

Wood Farm
Linstead Magna
Halesworth
Suffolk
IP19 0DU 098 685 476

SURREY

Calancraft Limited

96 High Road
Byfleet
Surrey
KT14 7QT 09323 42137

Simnetts Computers Limited

19 Progress Way
Croydon
Surrey
CR0 4XD 081 680 3830

TYNE & WEAR

HCCS Limited

Engine Lane
575/583 Durham Road
Low Fell Gateshead
Tyne & Wear
NE9 5JJ 091 487 0760

Morley Electronics

Morley House
West Chirton
North Shields
Tyne & Wear
NE29 7TY 091 257 6355

WEST MIDLANDS

Daco Software

463 Warwick Road
Tyseley
Birmingham
B11 2JP 021 706 8933

Mauden Sales

1st Floor Crescent Arcade
Wollaston
Stourbridge
West Midlands
DY8 3NY Fax: 0384 441655

WEST YORKSHIRE

Brilliant Computing

PO Box 142
Bradford
BD9 5NF 0274 497617

Micro Power Limited

Northwood House
North Street
Leeds
LS7 2AA 0532 458800

SCOTLAND

K Computers

11 Lint Riggs
Falkirk
SK1 1DG 0324 36555

K Computers

10 Baker Street
Stirling
FK8 1BJ 0786 72313

Portobello Trading Company

298-302 Portobello High
South Edinburgh
Lothian
EH15 2AS 031 657 3941

NORTHERN IRELAND

Microcare (NI) Limited

Unit 3c
6 West Bank Drive
Harbour Ind Estate
Belfast
BT3 9LA 0232 777032

Dyslexia and SpLD

There exist a number of users who have a serious difficulty in processing written language. Such users will have difficulty with some, but not all of the following: reading, spelling, sequencing, left and right visual discrimination, auditory discrimination, pronunciation, memory, organisation of thought and self. Equally some users may have difficulties in some of these areas, but they are part of a more general learning difficulty, or associated with other identifiable problems such as cerebral palsy or lack of educational opportunity. Information technology can provide considerable support for users with reading/writing/spelling difficulties, whatever the reason for these difficulties.

Word processing

The use of a word processor such as *Phases* (Northwest SEMERC), *Pendown* (Longman Logotron) or *Impression Junior* (Computer Concepts) can be of considerable help. Poor handwriting or spelling skills may have “blocked” the writing process, inhibiting the “thinking” elements of writing. A wordprocessor can help to remove this block and allow thought to be put onto paper. The writer has an opportunity to amend writing, re-think what they want to say, correct errors etc. before printing a final copy.

There is a great deal of evidence that this increases the motivation to write - if the subject is of sufficient interest. The writer is allowed to see themselves as a successful writer, perhaps after several years of failure.

The use of an **overlay keyboard** can enhance writing for many. The user does not have to rely as heavily on memory for words, or on “lower” skills of letter formation or letter sequencing. He or she will look at the words on the overlay in order to write, which should help in remembering these words.

The use of a spellchecker can help with spelling difficulties by highlighting words it does not recognise. The writer can then check the words. The software may also offer alternative suggestions for a word. Writers with consistent errors soon get tired of the machine “beeping” at them for the same words and often begin to learn the correct spelling. *Pendown* (Longman Logotron), *Impression Junior*

and *Impression 2* (Computer Concepts) have spellcheckers built into them. *Impression Junior* and *Impression 2* allow you to build a user dictionary for the spellchecker - perhaps one of problem words or subject vocabulary.

Other utilities such as *Clickword* allow you to have a window on the screen containing vocabulary. Clicking on a word or phrase will place that text at the caret in your word processor. All of these facilities are designed to enable the writing process - to allow a user to be a successful writer, and so increase motivation to write. Within all word processors for Acorn machines there are a choice of fonts and display. Some users find that sans serif typefaces such as *Homerton* (Acorn), *Jotter* (Northwest SEMERC) or *Primary* are easier to read.

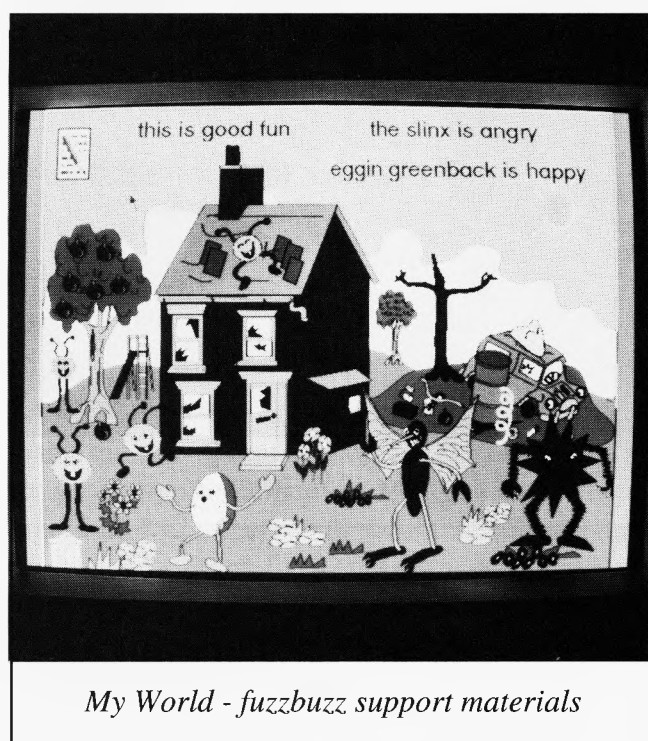
On the Archimedes range of computers it is easy to alter the colour of the text or background within word processors. Some users find that different colour combinations affect them and that certain combinations enable them to spot mistakes more easily and to work for longer without getting tired. Most word processors on Acorn machines allow different sizes of text to be displayed and printed. This is useful not only for those with a visual impairment, but also for those people who find it easier if they only have to focus on a small amount of text.

Speech can be of considerable help to a person with a reading or writing difficulty. Software speech such as *Speech* (Superior Software) can be used to read back writing and highlight errors. Tape recorded story books have long been recognised as a support for reading. This is also now possible on an Acorn computer using a program such as *Genesis* (Oak Solutions), *Magpie* (Longman Logotron) or *Optima* (Northwest SEMERC). Recorded speech and sound effects can easily be added to pictures or text, making an interesting and motivating activity for those learning literacy skills.

Specific skills training.

Although it is not essential to be a fluent typist in order to use a word processor, increased speed and efficiency can be motivating and make the writing process more interesting and pleasing. For some people, the pattern of letters on the keyboard or screen can act as a “trigger” to correct spelling.

Several letter formations, word building and spelling practice programs exist for the Archimedes range of computers. For example, Chalksoft and Xavier Educational Software produce a range of such programs. Some of these programs are fixed in content and others allow you to select word/letter combinations for the users to practice. Some people believe that drill and practice can be useful, while others believe that the best way forward is by writing meaningful and relevant material with support where appropriate. A package which follows the latter belief is *From Pictures to Words* (Widgit Software). This is a **framework program** which uses symbols to support a range of reading, writing and spelling activities. Words can be used which are appropriate to the user - not those chosen by a programmer. Activities lead on to free writing with or without the continuing support of the symbols.



National Curriculum

Many of the recent National Curriculum documents make reference to the use of information technology by learners with reading/writing/spelling difficulties:

English for Ages 5/16 (DES, June 1989) 12.10

“Pupils with specific learning difficulties (dyslexia) should, given appropriate help, achieve as well as pupils without special educational needs they may benefit particularly from using word processors, including spelling checkers”.

English Attainment Target 4 Spelling

“At each level of attainment the use of technological aids by pupils who depend on them to produce their written work is acceptable”.

A Curriculum for All

(National Curriculum Council, Sept. 1989)

Planning Schemes of Work.

“Teachers will need to find ways to help those pupils who have specific learning difficulties in reading and writing to make use of their oral strengths (for example, use of tape recorder and word processor) and to ensure that evaluation and feedback on work are not dominated by hand-written product”.

Using Technological Aids

“Word processors may be the only means of undertaking written work for a few pupils with severe physical disabilities. For many pupils with special educational needs they can provide an excellent means of enhancing self-esteem when their writing is included in presentation or display of work. For pupils with specific learning difficulties, word processors may provide a major means of displaying the strengths in the content of their work without being constantly frustrated by difficulties in handwriting and spelling”.

Early Switch Users

The use of simple and direct input devices such as switches, Touch Screen and Touch Windows provide an ideal way for young children to interact with the computer. For children with severe physical difficulties these input devices may be their only way of controlling and interacting with their environment. Children with severe learning difficulties benefit from the simplicity of control and the bright and stimulating range of rewards.

The use of switches is often introduced through toy-play activities using easily adapted battery toys which may provide a more concrete activity than the computer screen. For other children the computer screen can provide an introduction to switch activity.

When using switches it is useful to have the computer system arranged so that the screen and input switch are as close as possible so helping the child to develop an awareness of the cause and effect relationship between their switch presses and what is taking place on the screen. For some children it is important that there is a minimum of visual and tactile distractions between them and the screen. A small extension loudspeaker may be needed to bring the sound output close to the screen to avoid confusing the child. This can be very important when working with visually impaired children.

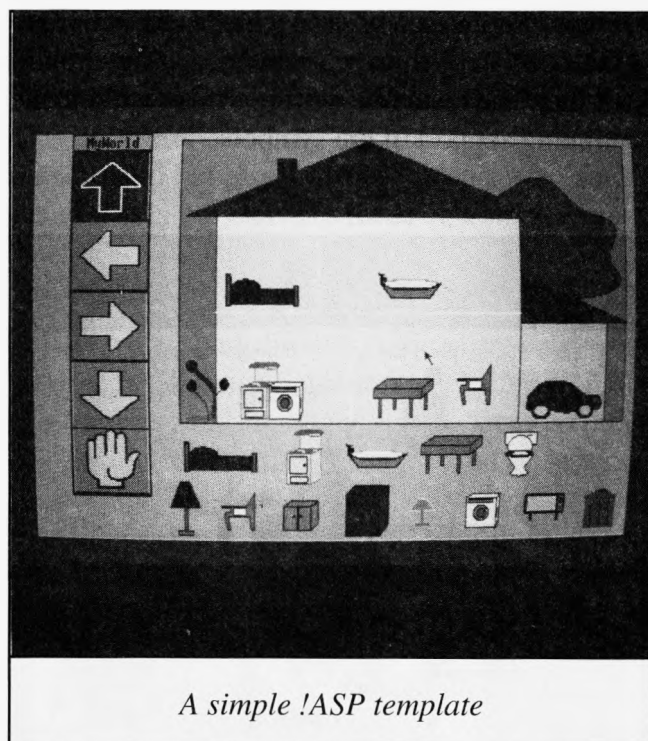
Early software should offer bright and stimulating visual and auditory rewards. *Switch on Travel* (Brilliant Computing) is an ideal example of what is required from early switch awareness software. When young children are working with switch software care should be taken to ensure that they do not develop a habit of switch “bashing” by frequently having an adult working with them to encourage them to observe the effect of each press. These activities provide excellent opportunities for language development. Printouts (colour if possible) of screen displays can extend the work away from the computer and provide some permanency to what otherwise can be a transitory experience.

Switch activities can be extended further with software such as *Screen Play* and *Gridit* from Widgit. As these are **framework programs** they provide an opportunity to create activities at a range of levels.

Emulators

Keyboard emulators allow a method of working for people who can only operate the computer via switches. An emulator will provide a picture of the keyboard which the child, by operating switches, can scan. Whenever they select a character from the on-screen keyboard this has the same effect as if they have pressed the keyboard itself. By using an emulator it is possible for a switch or alternative input user to access standard software. Emulators can either be provided by a hardware addition or by software which can provide an on-screen emulator. For Archimedes computers emulation can be provided by the *!ASP* program from the *Special Access Disc*.

Le Computer also provide an on-screen emulator program.



A simple !ASP template

Exhibitions

Exhibitions are an efficient way of finding what is available for those wanting to use computers with special needs users. At one exhibition you can see children and their teachers actually using the new technology and ask them how effective it is.

BETT

The British Education Technology and Training Exhibition is the largest educational technology "show" of the year and is organised by EMAP International. It contains a special needs exhibition organised by Northwest SEMERC. There is a two day programme of special needs seminars provided by the National Council for Education Technology (NCET). BETT has now moved to Olympia in London. The exhibition attracts over 13000 visitors and lasts for four days (Wed to Sat) each January. Admission to the Exhibition and Seminars is free.

The Education Show

This is a general education exhibition organised by EMAP International which contains a number of hardware and software companies involved in special needs and has a publishers' village, again with some emphasis on special needs. The exhibition is at the NEC in Birmingham normally during April.

Special Needs North

This is mainly special needs books but with some software and hardware companies present. It is organised jointly by the National Association for Special Educational Needs (NASEN) and the Publishers Association. Admission is free. Seminars should be booked in advance with NASEN and cost £5 each.

Micros for Special Needs Exhibition

Around 2,500 professionals and some parents travel to this three day event in Oldham each October. The forty exhibitors include up to eight large stands organised by learners with special needs and their teachers. In 1991 and 1992 the event was sponsored by Acorn Computers and a programme of special needs seminars selected and sponsored by NCET runs for the full three days.

Special Needs Exhibition

This is the largest Special Needs book exhibition, and is run jointly by NASEN and the Publishers Association. There is an increasing amount of computer related material at the event. The exhibition is held each November at the Cumberland Hotel in London. There is a bookable Seminar programme provided by NASEN.

Resource Conference

This is an annual two day event held at Doncaster Race Course in October or November. The exhibition's focus is the use of computers in primary education and special needs. The event is normally sponsored by NCET and has a free seminar programme.

NAIDEX

NAIDEX exhibitions are held three times a year: Glasgow in March, Manchester or NEC (alternate years) in May, and Wembley in September. The focus of the exhibitions is primarily on equipment for disabled people, but firms such as Acorn are normally present as are some specialist software and computer equipment suppliers.

<i>Emap International</i>	071 404 4844
<i>NAIDEX</i>	0892 544027
<i>NASEN</i>	0203 362414
<i>NCET</i>	0203 416994
<i>Northwest SEMERC</i>	061 627 4469
<i>Publishers' Association</i>	071 580 6321
<i>Resource</i>	0302 340331

Framework Programs

Framework Programs allow teachers to cover any area of the curriculum at a level which matches the ability of the teaching group or of the individual. Framework software is often associated with **overlay keyboards** as teachers can create pictorial or text overlays to support work being covered in class and to provide the vocabulary required both for the topic and for the learners concerned.

A framework is provided by the computer itself which will allow exploration (*Touch Explorer*, *Phases#4*) or database or DTP work.

Graphics - art and design

One of the strengths of the Archimedes range of computers is the ability to produce and manipulate pictures, shapes and colours. For people with special needs, or indeed anyone, it can be a very powerful tool to allow them to produce effects, experiment with colour and shape and to “draw” or “paint”.

Some people question the use of computer graphics, maintaining that learners should use concrete materials, use real paint, draw on real paper etc.

Besides reinforcing and extending normal work in art, the computer does have some advantages for particular users with special needs:

- some users may be physically unable to manipulate concrete materials, yet can use an input device on a computer;

- users can experiment easily with colour, seeing what effect a change in colour or palette has on an object or pattern. This is difficult with traditional media;

- many Graphics programs have an “undo” facility - something traditional media do not easily allow;

- learners with limited ability can easily produce a colourful effect on the screen using direct input with a Touch Screen or Touch Window, or another input device such as the mouse or trackerball.

The following are just a few of the many Graphics programs for the Archimedes computers with comments on their suitability for use by users with special needs.

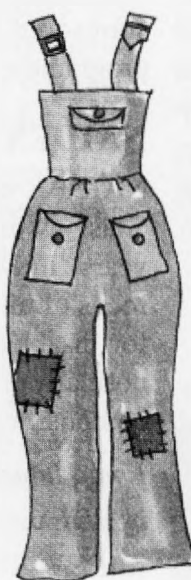
Scribble (Honormead Software) Probably one of the simplest packages to use. It can be easily set up with very few options available for the user. You can then gradually introduce more features. One big advantage for some users is that all three mouse buttons act as “Select”: it doesn’t matter if you press the wrong button! A range of tools and colours can be made available (or not) and “stamps” can also be used. The brush can be latched so that “drag” does not have to be used to paint. Pictures are easily saved or imported. Scribble works well with a Touch

Window. Its simplicity makes it very useful for people with moderate or severe learning difficulties.

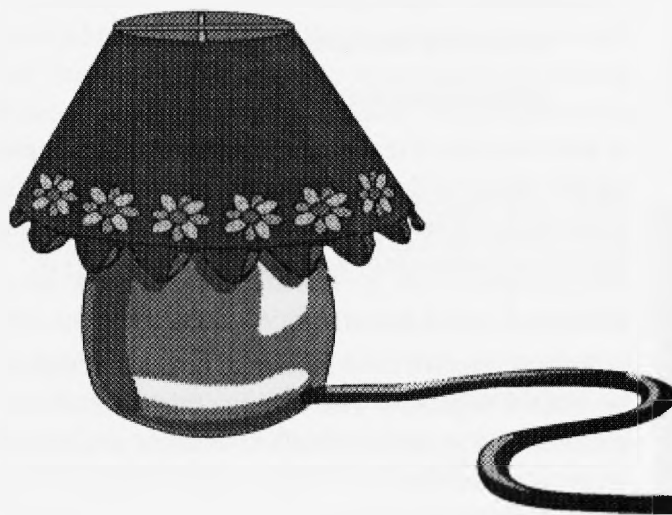
Early Bird 1 - The Painting Program (Hereford and Worcester Education Department) was devised as part of their project for using the Archimedes range with Nursery children. It is a simple painting package with 12 colours, 3 pen sizes and simple drawing tools. The mouse buttons have identical functions, so it doesn’t matter if you press the wrong one by mistake. Some functions, square, circle and fill, have to be accessed from the function keys.

Easel2 (NCET Blue File, Northwest SEMERC) Another simple introductory graphics program, with paint, fill and spray tools. Its big advantage is its price - £5 and freely copiable. However the settings cannot be modified for different users, and it cannot be operated with a Touch Screen or Touch Window, nor is it accessible to switch users.

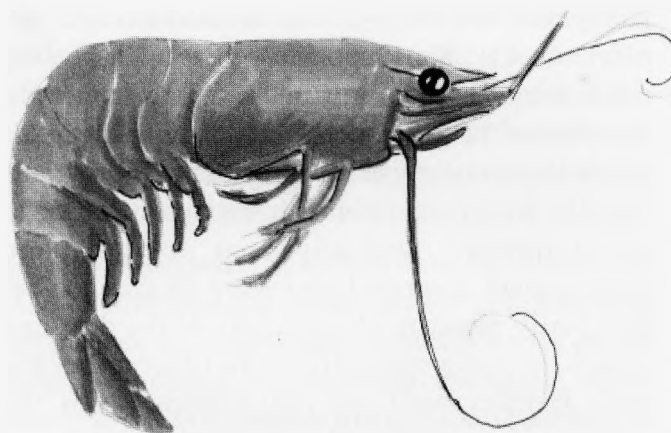
1st Paint (Keyboard Technology, Northwest SEMERC) This is one of the few Graphics packages to use windows. It is easily configurable from the menu, simply by switching facilities on or off. At its simplest level, a user can have one brush, one colour and a screen to paint on. With all the tools available it is a far more sophisticated package, allowing different shapes and sizes of brushes; drawing tools for lines and shapes; fill and spray tools; a range of colours, patterned fills and stamps. DRAW files and sprites can easily be imported. The user does not need to use the menu, all tools and options are available from the screen. It is also possible to switch off the menu so that a user does not get confused by pressing the wrong mouse button. It works well with the Touch Window, and because it works in **windows**, is accessible to switch users by means of a switch template such as !Asp.



PrimeArt (Minerva Software). During the development of this package, Minerva consulted with the special needs community and arrived at a sophisticated art package with added features to make it useable by a wide range of learners. It is fully configurable, so that features can be added as required by a user. The program allows you to set “sticky” menus which will stay on the screen and not keep disappearing. It is possible to latch brushes, so that a press will allow you to paint until you press again. This makes life considerably easier for a user who finds the “drag” function of a mouse difficult, or for a trackerball user. Menus can be accessed by means of an **overlay keyboard**. An overlay can be printed out with the options the professional or user have decided to configure, and the program will automatically detect that an overlay keyboard is fitted. It works with a Touch Window.



Draw is the object oriented drawing package that comes on the Applications disc supplied with Archimedes computers. It is a complex program which can be used at a professional level. However it has features which make it accessible to some people with special educational needs. The grid and gridlock make it easier for a user to draw straight lines and regular shapes. The zoom facility can make it easier to use for someone with a visual impairment. The special access utilities such as *BigPointer*, *!Asp*, *SpecialKB* etc. work with Draw.



Picture It (Appian Way) This is a program which allows children to build up scenes using sets of simple pictures. The pictures are Draw files rather than Sprites, and it is possible (using Draw) to create your own pictures to build into a scene within

Picture It. Appian Way produce several topic packs to support the program which are linked to specific topics, eg Geography, Science, History. *Picture It* is mouse driven, but will support the use of a Touch Window.

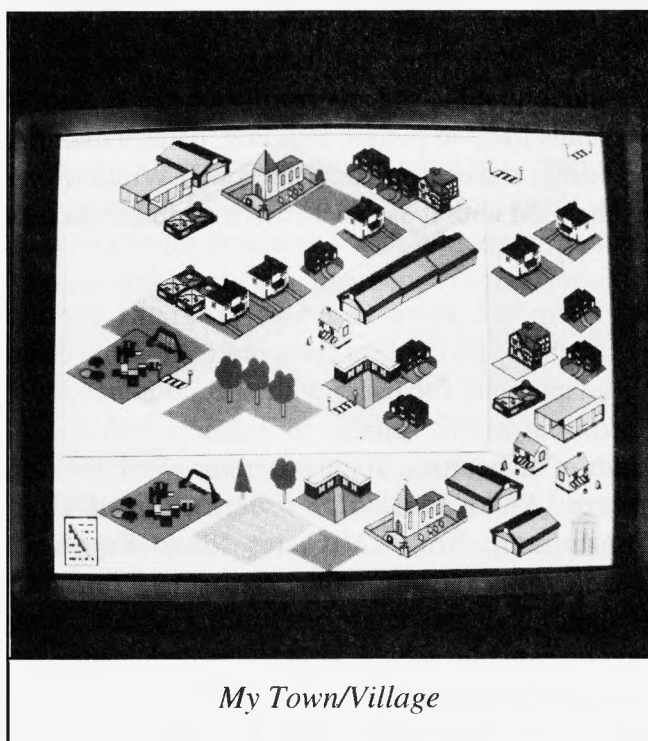
My World, (Northwest SEMERC) This popular package from Derbyshire is not a painting or drawing package but it does allow learners to move graphic objects readily on the screen. It lends itself to picture building, pattern making, tiling, tessellation etc. The Touch Window can be used with it as can a switch template such as *!Asp*.

There are more Graphics programs for the Archimedes range of computers. Most have had no adaptations for users with special educational needs, but will be suitable for learners with certain kinds of difficulties. Some programs worth looking at are: *Flare* (Silica Software), *Arcol* (Tap Consortium), *Artisan2* (Clares Micro Supplies), *Revelation2* (Longman Logotron), *Imagine* (Topologika).

Hearing Impairment

Computers are largely a visual medium and can offer considerable support to people with hearing difficulties. Hearing impaired children frequently experience "language delay" and the opportunities offered by group use of the computer with programs like *My World* can provide a setting for language development. The approach to language development described elsewhere in this booklet was partly pioneered by teachers of the deaf and speech therapists spurred on by the benefits they felt their learners were gaining. Group use of the computer for activities like cooperative writing are a good idea for all children but particularly important for learners with hearing problems. Use of the programs mentioned can also be used as a stimulus to language use between a user and their teacher or therapist.

A series of publications detailing each National Curriculum Attainment Target in English, Science, Mathematics and Technology with the approaches and resources (including computers) needed by Hearing Impaired pupils is currently being prepared for publication by Northwest SEMERC.



HyperMedia

Hypermedia programs allow designers to cross-link information from a variety of sources. This can be text, sound or graphics generated by the Archimedes computer itself or in some cases sound from the CD audio disc or moving pictures from a video.

Hypermedia applications may run automatically - like a slideshow at an exhibition or a talking book, turning the pages itself. Usually the user can explore the information via "hot-spots" or buttons, pointing and clicking with a mouse or touching a screen. More sophisticated applications allow for a great deal of interaction through the keyboard, employing text search facilities, asking the users name, waiting for a correct answer before continuing and so on.

The programs we mention here have all been used at a simple classroom level for

- talking stories and flash cards.
- tree-structure databases.
- displaying students work.
- information display.

A well motivated teacher or learner can usually pick up the skills to do this quickly. But to use the full capabilities of these programs is exciting, demanding and time-consuming, achieved by a select few.

Genesis II (Oak Solutions) £129.95 ex-VAT

Allows screens of information to be created that can be linked together. The screens can contain text, pictures and graphics. Ideal for creating multimedia applications. Files created can be run without having the Genesis program.

Magpie (Longman Logotron) £54.00

Allows pages of information to be linked together to create an information base. The pages can contain graphics text and sound. Uses the outline font manager for high quality printout. Makes use of standard printer drivers. Although you can backup the program, you are required to insert the original disc to start.

But also see sound, art and music programs.

Integration

It is generally accepted that wherever possible learners with Special Educational Needs should be taught alongside their “mainstream classmates”. Computers can aid integration by offering, through **framework programs**, the same curriculum content graded to the needs of each learner within the teaching group. Problems of physical or sensory access to the computer can also be overcome by means of special add-ons, e.g. keyguards, speech synthesizers, special keyboards and screen magnifying and enhancing software.

This approach is greatly to be preferred to the provision of special software for particular groups as this differentiates the learning of some children and can deny them access to mainstream software which, because of the size of the market is likely to be of better quality and more versatile.

An exception to this general rule is the additional help computers can give to young learners with a physical handicap. Often the computer can replicate early learning experiences such as counting, causing effect or producing speech which would otherwise be unavailable to the learner.

Occasionally, some of these materials also offer re-inforcement activities which can be useful to all learners in a mainstream setting. An example of this is *Count with Blob* (Widgit) which was originally designed to make counting activities accessible to learners with a physical handicap. This program can be used to re-inforce the counting concepts of all children and this can also have a positive effect on the integration of the handicapped child as all children can be involved in the same activity.

Keyboard Alternatives

The keyboard is the most efficient means of accessing the computer but can present problems for learners with a physical handicap. It is important to overcome these difficulties wherever possible so that learners with a physical handicap can enjoy the same learning experiences as their classmates.

Separate Keyboards: such as those found with the A5000 computer can offer a choice of positioning for the user e.g. wheelchair mounted or used on the floor. Something as simple as this could allow access to someone unable to use the keyboard on an A3000.

Expanded keyboards which can plug into a normal classroom computer can allow access to learners with a relatively severe handicap. These keyboards allow support for the hand or foot while a finger or toe can be used to press an individual key. Expanded keyboards also normally offer a “sticky keys” feature so that those using a mouthstick, headpointer or single finger or toe can perform multiple key press operations such as typing a capital letter.

A major advantage on the use of an expanded keyboard when compared to the various forms of keyboard emulation is that it offers no restriction on the range of software which can be used, nor is any part of the computer screen obscured by keyboard emulation windows.

Some learners may not require the full facilities of an expanded keyboard. Indeed it is worth trying the additional support given by a keyguard first as this is a very much cheaper solution.

Keyguards are perforated metal or perspex covers for a standard computer keyboard. Their purpose is to support the user's hand while a key is being pressed. There are keyguards available for the whole Acorn range of computers. They can often be an inexpensive solution for those considering the purchase of an expanded keyboard.

*Northwest SEMERC
Special Access Systems*

*061 627 4469
0865 56154*

Language and Literacy

Most people using computers with learners acknowledge the power of the machine as a focus for language development. Anyone who observes a group of, for example, children working together around a computer screen cannot fail to notice the amount of discussion that is taking place.

The capability of Acorn machines for displaying graphics and allowing easy manipulation of objects on the screen make it a powerful tool for language development. Most programs, used effectively will be a source of stimulus for language development.

For example, when learners are writing together they will discuss the content, spelling and punctuation of their work - and learning will take place within a meaningful context. Students working together on a graphics program will talk about their picture and make decisions together. Programs such as *My World* (Northwest SEMERC) and its many support packs allow easy manipulation of graphics and/or text.

For example you can build a weather map and label it, or design your own plan of a village, or put words together to form sentences. Text can be put in from a keyboard or an overlay keyboard and it is possible to use a utility such as *!Asp* to allow switch users access to the program.

Adventure programs and simulations such as *Little Red Riding Hood* (Selective Software) or *Teachers' Cupboard* (Sherston Software) will generate discussion and allow problem solving.

Viewpoints (Sherston Software) allows children to explore a habitat, take "photographs" of the creatures, use a database and develop mapping skills.

Early literacy skills can be effectively developed using the ability of the machine to combine pictures and text. Programs such as *First Words and Pictures* (Chalksoft) encourage the reading of early vocabulary, using graphics and animation on the screen to encourage and motivate learners. In this program 80 first reading words have been selected. It is fixed in content so you cannot add your own words or pictures, but the vocabulary has been selected by experienced teachers with early reading skills in mind. *My World* allows alterations to be made very easily, and as a **framework program** it is very easy to set up screens of interest and relevance

to individuals. The French (*Le Monde à Moi*) and German version (*Meine Welt*) allow development of speaking and writing in French and German.

From Pictures to Words (Widgit Software) is another useful package for developing early literacy skills. This allows the use of symbols to support reading and writing. Again, as a framework program it allows activities to be tailored for individuals. Most word processing packages allow the combination of pictures and text on the screen. This can make writing a more interesting task for many learners. *Phases#3* (Northwest SEMERC) has a built in page designer which allows you to create a set page, perhaps with a picture background, for learners to write on.

This has two effects: firstly the page is much more interesting than a blank piece of paper (or screen), and secondly (if the writing areas are not too large) success can be achieved easily. A reluctant/poor writer can complete a page very easily without having to write too much, and can have an impressive printout of their work.

Phases#4 will allow text to be entered by clicking on a word or letter within the notepad. It will also allow text or pictures to be sent to the notepad via an overlay keyboard (like *Touch Explorer Plus*). It also contains a speech module (Superior Software's *Speech*) so that your writing can be spoken.

Other utilities exist for entering text from a window, for example *Clickword* (CEC Cleveland) or *!Chars* (Acorn). These will run alongside most word processors, and each have different features. *!Chars* only allows single characters to be entered, but is an easy way to put in accented letters for foreign language work. *Clickword* will allow you to put a letter, word, phrase or sentence into your wordprocessor with a single click of a mouse button.

Because of the multi-tasking nature of Archimedes machines, extra utilities can be run alongside most software. For example an overlay keyboard driver such as *Conform* (Northwest SEMERC) or *Concept Designer* (Longman Logotron) can be used to add letters, words, phrases etc. into the document. Or a switch user can have access to writing using a utility such as *!Asp*. Almost any program on Acorn machines can be used to develop language and literacy skills. The screens are generally interesting and the combination of graphics, text and (sometimes) sound appeal to people of all ages.

Maths

There are numerous ways in which computers can support work in Mathematics.

Early Counting Programs

Programs such as *Count with Blob* from Widgit can provide counting experiences which would otherwise be unavailable to some physically handicapped children and adults. This program is also used in mainstream classes to reinforce counting activities. Physically handicapped people can also “use” Dienes place value apparatus with the *My World* program.

Number Work

There have always been number reinforcement (drill and practice) programs which test arithmetic and often offer on screen help or explanation. This is rather an expensive way to provide drills which are done as well or better by traditional means, but a group of people working together may develop some useful mathematical language using this type of software.

Spreadsheets

If you equate number reinforcement programs to the spelling programs used in language work, then spreadsheets are the “wordprocessors” of number work. Excellent work has been done with children with moderate learning difficulties and emotional and behavioural difficulties using this type of software. The key is to find a topic which is important to the children and work from there. Spreadsheets can be accessible to people with a physical handicap. The keypresses needed to get an impressive piece of work are many fewer than for, say, wordprocessing. This software can be a useful and satisfying way for a child to explore a mathematical topic.

Mathematical Adventure Games

There are adventure games with a mathematical or problem-solving theme. While these programs may not offer a thorough or systematic exploration of mathematics, groups of users can usefully develop mathematical language through group problem solving.

Mouse problems

Mouse control with buttons to click, double-click or drag can present physical and conceptual difficulties. Hardware and software options are now available which can help.

The Marconi Trackerball allows the user to move a ball rather than the mouse. This can be very useful for someone with limited hand movement. Voltmace produce a *Delta-Cat* which is a bit like a trackerball but has a joystick instead of the ball.

ArcTracker. This device is a trackerball, but has a combination of buttons to aid access. One button gives a single click, another gives a double-click with one press, while a third button operates like drag attaching an object to the pointer until the button is pressed again. Two more buttons assist navigation through menus. When one is pressed the pointer will only move vertically (no matter which way the ball is moved), while the second button will only allow horizontal movement of the pointer. The ArcTracker is supplied with either a ball or a joystick.

The Special Access Disc has several utilities on it which can enhance access to the Archimedes for a range of learners.

!ASP will allow you to set up scanning windows on the screen so that a switch user can have access to software which uses windows. *!ASP* can be set up to emulate mouse actions for the switch user.

!SpecialKB is a utility which allows the user to use the numeric keyboard to emulate the mouse. As with *!ASP*, you can make the settings on this program suit a particular user. There is also the facility to set “sticky” keys so that a two press operation can be sequenced.

AID Set (Le Computer) has similar features to *!SpecialKB*, allowing keyboard emulation of the mouse functions. It is easy to configure for a particular user. The program comes as part of a suite of access applications

<i>ArcTracker</i> (Northwest SEMERC)	£269.00
<i>ArcTracker Joystick</i> (ditto)	£375.00
<i>Marconi Trackerball</i> (Technomatic)	£30.00
<i>Delta-Cat</i> (Voltmace)	£34.94
<i>AID set</i> (Le Computer)	£26.00

Music

Music comes in all sorts of forms on the Archimedes - a short snatch as a reward for a correct answer, an accompaniment to an arcade game, an essential element in single switch tasks or an integral part of a listening skills task. There are also dedicated music making programs which play your own scores or compositions.

If music or sound is an important element in your software, you will need some external amplification. A small pair of powered speakers form a high street chain store can give good quality stereo output. The more powerful programs will also output to a MIDI keyboard, via a MIDI interface on the back of your computer.

Once you have a set-up with some external amplification there are lots of possibilities for early activities in the music curriculum.

Hypermedia programs, such as *Genesis*, *Magpie* or *Optima*, lend themselves to games where children match sounds to pictures or can hear linked sounds for themselves.

Compose gives a delightful way into composition - pictures represent full phrases of music. These can be organised into tunes, ordered, listened to, thought about and manipulated. This gives opportunities for developing critical listening skills and composition skills without having to start with individual notes or conventional notation. *Compose* has been used in a variety of contexts - with learners with severe learning difficulties composing their own tunes, structured listening games and to compose theme music and sound effects for junior dance and drama. *Touching Sound* is another program which allows users to experiment with sound and create their own works. This program was designed to be used with touch screen, but can also be used with a single switch or a joystick.

People wanting to create their own music and sound for programs on the Archimedes can do this in two distinct ways - with synthesised (computer) sound or digitised (real) sound. Synthesised sound is generated by the computer itself - the Archimedes has it's own small selection of hard beeps, soft beeps and bangs. You can test them for yourself on the

Archimedes configuration program, Applications Disc 1. Some programs use these sounds on the eight channels to play tunes and create harmonies. *Maestro* - one of the programs that comes on Applications Disc 2, lets the user create tunes by placing notes on a stave. These can be played back or dropped into hypermedia programs such as *Genesis*. *Notate* works in a similar way but is considerably more sophisticated. There is a chord facility, so that tunes can be entered as a single melody line with chords - giving some super results form relatively little effort. The package comes with lots of ready-made tunes from rap to Bach and a large folder of new voices including brass, choirs and percussion. The scores can be printed out as single line voices - fine for recorder players and singers but not piano players. The music can also be exported as *Maestro* files for use in other programs or as MIDI files. *Rhapsody* will allow scores to be entered from a MIDI keyboard and is part of a suite of programs for dedicated composers and performers.

The files for tunes played like this do not take up much memory whereas....

Digitised sound sounds real and takes up lots of memory, and the better quality it is the more memory it takes. So the "real" speech and instrument sounds that you hear will tend to be short snatches. You can capture sounds and noises, notes and speech quite cheaply & easily with an *Oak Recorder* which plugs into the printer port at the back of your computer. This is fine for everyday school use. *Armadeus* is a better quality system at a higher price.

<i>Rhapsody II (Clares Micro Supplies)</i>	£61.95
<i>Touching Sound (NCET)</i>	£15.00
<i>Compose (ESP)</i>	£48.00
<i>Notate (Longman Logotron)</i>	£59.00
<i>Maestro</i>	(free with the A3000)
<i>Armadeus (Clares Micro Supplies)</i>	£80
<i>Digitising board - inc software (Clares)</i>	£200
<i>Oak Recorder (Oak Solutions)</i>	£29.95
<i>Genesis II (Oak Solutions)</i>	£129.95
<i>Magpie (Longman Logotron)</i>	£59.00

National Curriculum

All of the National Curriculum documents refer to the use of Information Technology (IT). The main focus for this is in the Technology document which refers to the development of IT Capability across the curriculum.

Information Technology is concerned with storing, processing and presenting information by electronic means.

Pupils need to use IT in school:

to enhance and extend learning

to gain confidence and the capability to use IT in later life

Pupils who possess IT capability will have:

knowledge about applications of IT and about IT tools such as wordprocessors, databases, spreadsheets and software for processing sound and images

the skill to use appropriate IT tools effectively
an understanding of the new opportunities IT provides

knowledge of the effects and limitations of IT

Pupils should be able to use IT across the whole curriculum. The programme of study is the minimum entitlement for all pupils.

(Non-Statutory guidance for IT capability)

The Technology document refers to five strands of Information Technology Capability. The first four concern using the computer as a tool to do a job (communicating information; handling information; modelling; measurement and control) the fifth is about considering the advantages and disadvantages of using IT as a tool, both within the classroom and wider uses in the world around us.

One of the main underlying principles of the National Curriculum is that each pupil should have a broad and balanced curriculum which is relevant to his or her particular needs. This principle of entitlement is now established in law, and includes all pupils unless complex procedures have been implemented to disapply or modify the curriculum.

Pupils with special educational needs have the same rights to develop IT capability as anyone else. In addition to this right, as many professionals are aware, the use of IT can enhance learning for many SEN pupils. Indeed for many it can help to give them access to the curriculum.

Users with reading or writing difficulties can achieve success using a word processor, perhaps with an **overlay keyboard**, a spellchecker or thesaurus.

A pupil with severe learning difficulties can begin to have an effect on the environment around them by pressing a switch to make a picture appear. This may then develop into making choices and the beginnings of communication.

Visually impaired pupils can use a large print display to wordprocess, perhaps with the screen colours set up to maximise their residual vision, or perhaps with speech, so that they can “hear” their writing.

The use of an **overlay keyboard** can be developed to allow different children access to the same activity at a level appropriate to their ability.

For some users, particularly the physically disabled, the computer can be their main means of access to many aspects of the curriculum. This is particularly true when it comes to “communicating information” - the first strand of IT Capability. The computer may be a pupil’s only means of writing or drawing.

The computer is a powerful tool for language development (just listen to a group of children working together around a computer screen).

In all these cases the computer is being used as an enabling tool, removing “blocking” restrictions on pupils and allowing them to demonstrate and develop their learning.

NCET

The Special Need team at the National Council for Educational Technology work with a range of organisations and individuals to look at the best ways of improving access for learners with physical, sensory or learning disabilities.

They evaluate new and existing computer applications and identify how these can provide not just access but also enhance the curriculum.

NCET fund the development of resources and produce information sheets, publications and classroom materials.

They support events organised by special needs groups and run specialist training events and conferences of their own.

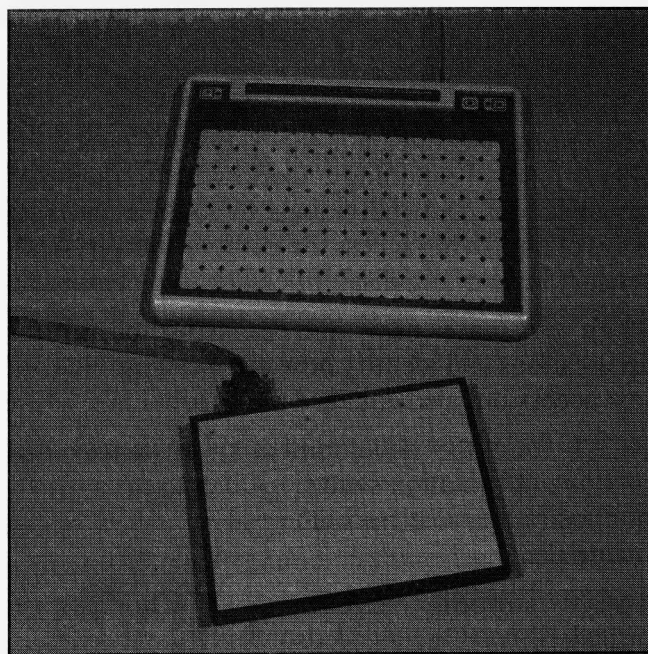


Overlay Keyboards

The first overlay keyboard, the A4 sized *Concept Keyboard* appeared in 1983 followed shortly afterwards by the A3 *Concept Keyboard*. Since then 85,000 of these keyboards have gone into schools in the UK. Today the A3 size accounts for about 65% of sales the reverse of the situation three years ago.

An overlay keyboard is a touch sensitive panel connected to a computer. Today's popular models have 128 hidden "keys" or cells, each of which can send different messages to the computer. An overlay, a piece of paper, is placed on the keyboard. The overlay can depict anything (three dimensional overlays have been produced) or can contain a collection of words or symbols. Because of this versatility, teachers can achieve a close match to the abilities of a particular child in any area of the curriculum. Classroom applications vary from a learner making a simple choice with the overlay keyboard, being divided into two large areas to a wordbank with children being able to enter difficult words with a single keypress. The keyboards have also been used to access layers of information hidden in a picture and to steer computer controlled turtles around the floor using simple subsets of LOGO.

In the past (on the Acorn BBC model B and Master 128 computers) each program had to be specially written to allow the overlay keyboard to be used.



A4 Concept Keyboard and A3 Oldham Overlay Keyboard

Many of these programs contained editors which allowed teachers and other professionals to design their own learning materials within the framework provided by the program. Over 200 of these programs existed for the BBC model B alone. With each editing method working differently it was difficult for teachers to use a wide range of software.

With modern computers which can do more than one thing at once (multi-tasking) the most popular software can be used with an overlay keyboard by means of a separate overlay keyboard editor which can be set up by teachers and professionals themselves, or form part of a support pack for a popular program. Editors are available which program a single level for each overlay (*Conform* from Northwest SEMERC) or which can program many levels (*Concept Designer* from Longman Logotron).

To connect an overlay keyboard to the Archimedes range of computers will need a User Port or interface. For parallel connection (by far the most popular way) or a populated serial port (a serial port with a chip in it) for connection of serial overlay keyboard.

A3 and A4 overlay keyboards are available in parallel and serial format from The Concept Keyboard Company in both A3 and A4 sizes. A compatible A3 keyboard, the *Oldham Overlay Keyboard*, with a parallel connection and some additional features (a switch interface and 16 extra protected keys) is available at £125 in A3 size only from Northwest SEMERC, Simnett, and Eltec. *Concept Keyboards* now cost £99.00 for A3 and £96.00 for A4.

The *Toucan Learning Tray* (Dolphin Systems) can allow switch users to access overlay keyboard software. This device has scanning lights controlled by switches. The child can use switches to stop the light wherever they choose on the learning tray. This has the same effect on the software as pressing the overlay keyboard. In order to handle this input device the user will have to cope with two displays; the computer screen and the Learning Tray itself.

<i>The Concept Keyboard Company</i>	0962 843322
<i>Dolphin Systems for the Disabled</i>	0905 754557
<i>Eltec Computers</i>	0274 309999
<i>Longman Logotron</i>	0223 323656
<i>Northwest SEMERC</i>	061 627 4469
<i>Simnett Computers</i>	081 680 3830

Profound & multiple disabilities

Finding activities to engage people with profound learning difficulties can be hard work. Often micro-electronics can provide the “added value” or extra-reinforcement that these students need.

If a person makes any movement or sound, voluntary or involuntary, switching is usually easy to establish. This is to say that within the space of one teaching session lasting twenty minutes the rate of unprompted switch pressing will rise significantly, given an appropriate switch system and reward.

That was the easy bit!

The ability to make something happen with a switch will make no difference to users unless it is put into a coherent context. The real challenge is for parents and carers to work out how this can be used to enhance daily activities and personal development.

This apparently simple activity can be part of:

contingency learning - learning that a particular action will have a particular consequence;

independent occupation - It is really difficult to find constructive activities for people, if they enjoy using the computer, this may be something that they enjoy doing on their own;

reinforcement of a particular action - for many people ease of access is crucial to establish intentional switching. This may cause concern by reinforcing poor posture or movements that should be discouraged. If this is the only way to access the computer then the trade-off has to be calculated;

building concentration - Because computers produce such well timed strong rewards, people often manage to concentrate on them for longer periods than staff and parents would predict. People may even work for quite minimal computer rewards, apparently enjoying the sense of control and predictability;

auditory training - The sound from the computer can be played through speakers close to the user or through headphones if people are happy using them. The pitch and volume can be adjusted to suit the user and incorporate regular tapes or “real” computer sound. Some programs give a stereophonic output allowing the sound to “move” from one side to the other.

reinforcing eye-tracking skills - Many programs display moving graphics in response to a switch press. Programs on the new generation of school and home computers allow for activities to be designed around specific people, so we could choose particular pictures, specific colours and particular patterns of movement to provide sequential developmental activities in a particular area. Computer screens are particularly useful for people with visual disabilities as the light is emitted from them rather than reflected, as from a piece of paper. Brightness and colour contrast can be altered according to the user;

switch use for communication - to make the connection between the choice of a particular picture or sound and a response from another person;

switch use for environmental control - using one or more switches to turn on electrical apparatus, anything from a battery powered toy to a full disco set-up;

a valued and age-appropriate activity - if we see people with profound disabilities using highly valued equipment, with sound and graphics that would be interesting to their peers we are more likely to see them in a positive light and interact with them more.

reward assessment - once someone is consistently switching to gain a reward of some sort, we can see what works for them.

Recommended programs

<i>Switch On (Brilliant Computing)</i>	£20.00
<i>Switch On Travel (Brilliant)</i>	£20.00
<i>Switch on Actions (Brilliant)</i>	£20.00
<i>Touch Games 1&2 (Brilliant)</i>	£15.00 each.
<i>Touch Fun Fair (Brilliant)</i>	£17.25.
<i>Movies (Northwest SEMERC)</i>	£12.00
<i>Switch 2 (Northwest SEMERC)</i>	£9.00
<i>ScreenPlay (Widgit Software)</i>	£35.00
<i>Touching Sound (NCET)</i>	£25.00
<i>Genesis II (Oak Solutions)</i>	£129.95
<i>Count with Blob (Widgit Software)</i>	£20.00.
<i>Blob 1, Widgit Software</i>	£18.00
<i>Blob 2, Widgit Software</i>	£18.00
<i>Where's Blob?, Widgit Software</i>	£15.00.

Publications

Acorn User

News, education, question and answers, hardware/software reviews, along with a variety of articles. *Acorn User* is widely available from newsagents.

Archimedes World

Specialising on covering the Archimedes range. Excellent publication, which is particularly strong in its education articles. Regular items on art, music, programming, games and public domain software. Difficult to find in the newsagents. Includes disc with programs and demos of a high standard.

Copy

Northwest SEMERC's news letter, published three times a year. Covers all aspects of the use of computers with special needs. Articles cover curriculum issues, current developments, technical information and hardware/software reviews. Free to SEMERC members and visitors to the Micros for Special Needs Exhibitions in Oldham and London.

Educational Computing and Technology

This magazine covers all aspects of computing and technology across the curriculum. This is a magazine for those involved in education and tends to reflect the wide diversity of hardware and software in schools. The magazine's coverage of special needs is good. Many of the articles in the publication have been written by teachers and give practical advice.

Education Today

Information about all aspects of equipment in schools. Free to schools, subscriptions available.

Micro User

Covers the entire range of Acorn computers including Archimedes range. News, education, hardware and software reviews. This publication is particularly suited to those new to computing with tutorial articles and articles for younger users. Widely available from newsagents.

Special

This magazine is produced by the National Association for Special Educational Needs and covers all aspects of special needs including the use of computers.

Special Solutions

A quarterly publication from the Acorn Special Needs Department. Available free on request.

Archive

Magazine specialising in Archimedes computers, excellent publication for those wanting to know more about the Archimedes. In depth hardware and software reviews plus news. The magazine is only available through subscription, subscribers are offered special prices for hardware and software.

RiscUser

Specialises in the Archimedes. Publication for those wanting to know more about the Archimedes/A series. Hardware and software reviews plus news. The magazine is only available through subscription, subscribers are offered special prices for hardware and software.

Contact details in A to Z Addresses

Scanners

These devices allow pictures and graphics to be transferred from paper (books, magazines or photographs) into images that can then be saved to disc and used in desktop publishers or any program that can import pictures.

Scanners come in various shapes and sizes, from A6 to A4 allowing pictures from postcard size to full pages to be scanned.

Black and White Scanners

The simplest scanners are the A6 hand scanners. This is simply a device that is slowly dragged over the picture. Early versions of the A6 scanners could only scan a limited range of greys. The latest models will scan 256 grey scales.

Flatbed scanners are more expensive - these allow a sheet of paper or a book to be placed on the scanner leading to a much better scan.

Scanlight Junior (Computer Concepts) £129.00

Consists of podule to fit in computer, A6 black and white scanner and disc of software. Excellent support and regularly updated software.

Scavenger (Beebug) £169.00 & £339.00

Consists of podule to fit in the computer and A6 or A4 hand-held scanners. The software to operate the scanner is built into the scanner podule making it very easy to use.

Scanlight 256 (Computer Concepts) £199.00

High specification grey scale scanner capable of scanning 256 grey scales at 100, 200, 300 and 400 dots per inch. Excellent for scanning photographs.

Computer Concepts A4 £849.00

A 256 grey scale flatbed scanner, capable of scanning up to 400 dots per inch. A4 size scanning area flat.

Colour Scanners

These scanners allow full colour pictures to be scanned with 256 colours. Most can also double as 256 grey scale black and white scanners. Results can be stunning although, you need to be aware if an A4 picture is scanned at 400 dots per inch, the resulting image files produced will be extremely large.

Spectra (Beebug)

£649.00

This is an A5 full colour scanner, with podule and software. The scanner is simply placed over the picture to be scanned. The scanning area is see-through allowing very accurate positioning. Preview function in the software allows quick scan to allow the scanning area to be selected from software. Excellent colour images.

Pro-Image (Irlam)

£999.00

This is a pack based on the excellent Epsom GT6000 A4 flatbed colour scanner and consists of podule, software and scanner. Scanner software allows for preview. Produces high quality colour images.

Colour/Black and White Scanners

Image Scanner (Iota)

This is an overhead scanner which uses an innovative new reading system that combines a rotating mirror, with high quality lenses and CCD technology, all mounted in the scanning head.

There are two versions of the Image Scanner, a black and white version (£399) and a full colour version. There is also a colour upgrade kit (£241) available if you decide you want to start with the black and white and switch to colour later. The overhead nature of the scanner makes it ideal for scanning 3D objects. You simply place the item on the base and then start it scanning. To scan a page of text for instance, you can just open a book and lay it on the base. There is no contact required, which means you can scan delicate objects, or artwork without damaging them. The scanner has a mono resolution of 300 dpi, with an A4 size base that has a scanning area of 196mm by 281mm.

Beebug

0727 40303

Computer Concepts Ltd

0442 63933

Iota

0223 421542

Irlam Instruments Ltd

0895 811401

Severe Learning Difficulties

Within schools for pupils with severe learning difficulties there is likely to be found a very wide range of abilities and educational needs. Some schools will cater for pupils from age 2 to 19 whilst others may be phased. The schools are normally small often with only 15-20 pupils in any one key stage ranging between those with profound and multiple learning difficulties and those who will expect to attain a degree of independence in adult life, and who will certainly acquire basic literacy, numeracy and information skills. The tasks for the teacher in this small class of such wide range is not easy. IT can provide a very useful tool for that teacher as well as for the pupil.

IT as a Learning Tool:

There are several different purposes that IT can fulfil. For the purposes of this discussion these have been formed into four groups:

Stimulation and early cognitive development

Sensory awareness (through micro electronically controlled environments) - cause and effect, switch control - attention - concentration - hand-eye co-ordination - physical control - tracking - turn taking and co-operative behaviour - colour matching - shape - recognition - choice/decision making.

Communication and language development

At pre-reading levels - picture recognition - symbol recognition - letter recognition - labelling and naming - communication - informing, requesting - understanding - decision making - vocabulary development - conversational opportunities.

Written communication with symbols or words - reading - writing - recording information - making diaries - weather reports - self expression - creative writing - stories - poems - word processing - using whole word inputs.

Learning support

data collecting - counting, measuring and recording the results - information handling - reviewing, comparing, making block graph-control technology - developing thinking skills - turtles and robots - symbolic work cards - recipe books, etc. - adventure games and decision making activities.

Recording achievement and self profiling

Recording achievements on work cards - with symbols - self profiling - video - reviewing one's own activity, sense of time and place.

Not all of these aspects of IT will be appropriate for all pupils, of course, but the teacher will need to have a good overview of these purposes and the means to implement them so that they can make the right choices for each pupil.

Increasing amounts of information are being produced on this area of educational technology and it is not difficult to find guidance from published sources.

The National Curriculum Council Curriculum Guidance No. 9 - The National Curriculum and Pupils with Severe Learning Difficulties, not only identifies a few areas where IT can make a valuable contribution, but also clearly identifies learning situations where the teacher can introduce IT with good effect, NCET also publishes material on IT and pupils with severe learning difficulties.

Practical experience however, may be less easy. This will depend very much on the levels of experience and confidence of the schools and colleges with which you are associated and INSET opportunities are generally reducing, and teachers are finding it more difficult to increase their own capabilities. In some authorities there are advisory teachers with a responsibility for IT and special needs. It is well worth making contact with these for sources of local information and help. In some areas there are also IT centres who are able to offer useful guidance.

Computers have been used very successfully with many pupils with severe or profound learning difficulties over the past 10 years, and yet it is still an area of growth. The new technologies with more powerful machines that are beginning to reach schools are creating unimagined opportunities. These are translating into genuinely enhanced learning that demonstrates the capabilities of our students.

Speech

It is possible to make the Archimedes speak. This can be useful with users with learning difficulties as it can give extra support and motivation. For those with severe learning difficulties speech can give access to text based material. Visually impaired users who find reading the screen difficult or impossible can also benefit. We can use both synthesized speech and digitised speech.

Synthesized Speech

This is artificial speech created from a wide range of speech sounds that are placed together to create words. Speech can be synthesized though hardware speech synthesizers, that connect to either the serial or parallel port or through software. The speed, memory and multi-tasking abilities of the Archimedes allow programs to synthesize speech to a standard not far off the hardware synthesizers, but at a fraction of the cost. Some programs have speech synthesis built in such as *Phases # 3*, while others will recognise the speech program in memory and use it to make the program speak.

Advantages Speech software is low cost at around £20.00 - allows any word, phrase or sentence to be spoken - takes very little memory.

Disadvantages Speech can sound artificial - certain words that do not follow normal patterns are mispronounced - hardware synthesizers are expensive and poorly supported by software.

ARCTiculate (Fourth Dimension) £24.95 inc VAT
Reads text and wordprocessor files. You can alter the pitch, speed, volume and voice. Choice of voices either male, female, alien or droid. Voices can appear as faces talking to you.

Speech! (Superior Software) £16.98 (ex. VAT)
Unlimited vocabulary speech program which translates English words into phonemes. Can speak words you type or text files. Comes with a spelling program that speaks. Pitch, speed, voice and volume are variable and it is possible to alter the program's dictionary to overcome mispronounced words.

DT-Talk (DT Software) £14.95
Allophone based speech synthesizer, unlimited vocabulary.

Speech System (PEP Associates) £25.00 inc. VAT
This program will speech text as it is typed in and read text files. This is a fully *RiscOs* compliant program that loads on the icon bar. Options include screen reading menus and text. However the program is let down by poorer quality speech than rival systems.

Digitised Speech

This is real speech that has been sampled and stored on disc.

Advantages clear real speech - can have a wide variety of voices

Disadvantages words and phrases take large amounts of memory - difficult to put the individual words together to make new sentences - can only say words that have been digitised

Oak Recorder (Oak Solutions) £29.95 ex-VAT
This is a low cost easy to use sound digitiser, consistency of a microphone which plugs into the printer port and software. The software allows you to listen to and edit the sound. Once digitised the sounds can be saved to disc and then used with other programs such as *Genesis*, *Magpie* or *Optima*.

Touch Type (Iota Software) £43.44
This is a typing tutor program with built in digitised speech. The program has a range of exercises to practice. You can select to have a voice call out the letters for you, making it suitable for visually impaired users.

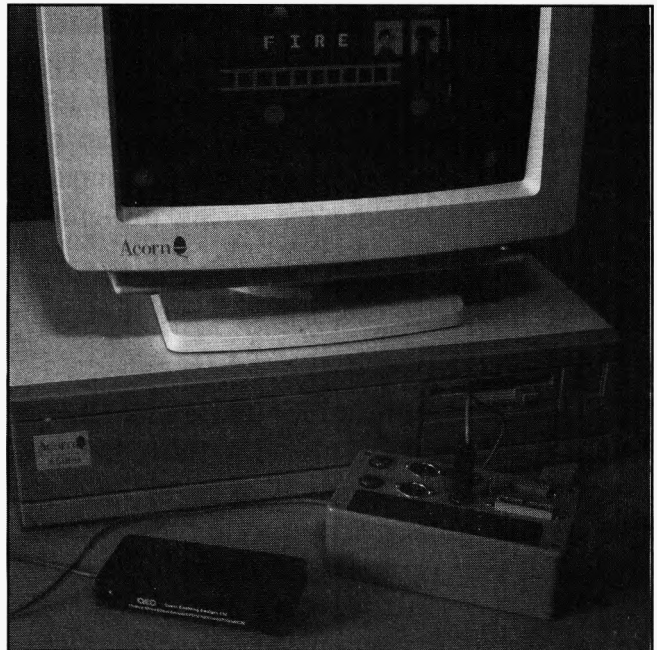
<i>DT Software</i>	0223 841099
<i>Iota software</i>	0283 215432
<i>Fourth Dimension</i>	0742 700661
<i>Oak Solutions</i>	0274 620423
<i>PEP Associates</i>	0223 212251
<i>Superior Software</i>	0652 658585

Switches

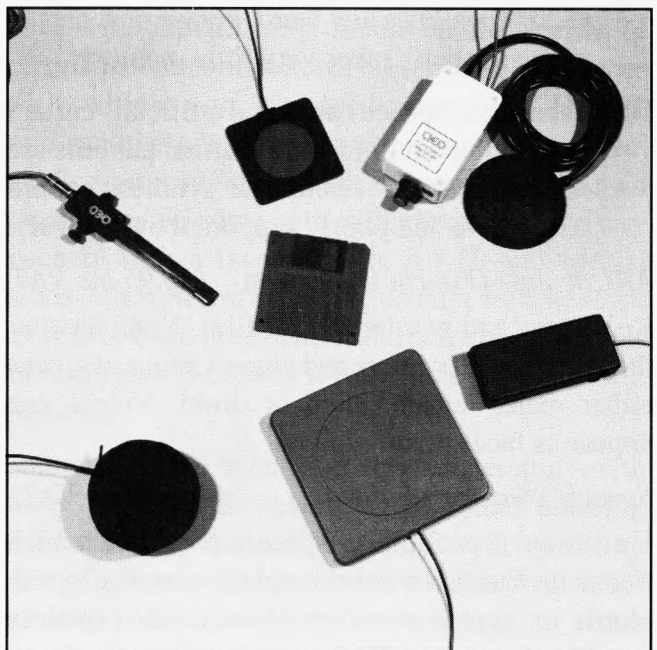
The use of simple and direct input devices such as Switches, Touch Screens and Touch Windows provide an ideal way for young and/or physically disabled users to interact with the computer. For a child with severe physical handicaps the same switch could be used to build a simple picture or operate a word processor. Choosing a suitable switch should involve a full consideration of the user's physical and cognitive abilities. When operating the switch the user should be seated comfortably and able to see the computer screen. Work with toys and early software will enable a child to develop a concept of cause and effect.

Using programs such as *Switch on Travel*, *Movies*, etc. the user can relate his/her switch press to an activity on the screen. It is important at this early stage to ensure that the user does not develop a habit of switch bashing but rather is encouraged to press and look at the screen to observe the effect of each switch press. At the same time it may be important that the user works alongside an adult who can use the software to encourage language development by talking about what is taking place. Once the concept of cause and effect is developed it should be possible to move on to software that allows the user to make choices. For example choosing the colour of "Blob" (Widgit Software). At the other extreme the user may be able to use the switch with a keyboard emulator such as ASP to operate a word processing program.

Switches can be connected to the computer using a variety of interface boxes. Most software now allows the user to choose from a range of suitable input devices. The choice of switch depends on the degree of physical control available. Users have worked switches with their hands, head, feet and elbows. What is needed is a reliable, repeatable and comfortable movement. A wide range of different switches can be bought from various suppliers such as QED. It has been found that successful switch operation can more often arise from the choice of appropriate software and activities rather than a frantic search for another type of switch.



Switch Access Box



A selection of switches

Touch Screens

A Touch Screen is a device that fits onto the front of a monitor and allows the user to control the computer by simply touching the screen. This has advantages for some users with special needs as it is the most direct and simple way of interacting with the computer.

With the Archimedes range of computers using windows, icons, menu and pointer interfaces there is renewed interest in Touch Screens. Why use a mouse if you can use your finger?

There are two types of Touch Screens, infra-red and membrane.

The infra-red screen consists of a frame that fixes onto the front of the monitor. The frame then sends a pattern of invisible infra-red beams across the front of the screen. Any object (finger, pointer etc.) breaking the beam will be detected and there will be a response. Infra-red screens do not need any pressure and are more robust.

Membrane screens consists of a frame with a sheet of clear plastic that is velcroed on the front of the screen. Touching the plastic membrane causes the computer to respond. These screens are far more accurate than infra-red screens and more suitable for mouse emulation. Touch Windows can fit a range of monitors but are fragile and prone to scratches.

Mouse emulation is a little misleading. The three button mouse has seven possible presses (with double clicks and drags on two of the buttons) so you need a mouse emulation window with the seven options. The user needs to know the program well enough to select the right option and may have to change option often when using the program.

Infra-red screens

Touchtech 3000 (Microvitec) £299.00

This is a version of the original 501 Model which plugs into the serial port of the Archimedes range (A3000 standard computers require a serial upgrade). It has its own power supply and works in the same way as the 501.

Microvitec 0274 390011
Brilliant Computing 0274 578239

Access 2000 (Hybrid) £188.00

This is a new generation of Touch Screen, using infra-red. It consists of a plastic frame which pushes over the front of a monitor. The screen plugs into the printer port of the computer allowing it to connect to any Archimedes. It works in the same way as the Touchtech allowing existing Touch Screen software to be used. Hybrid have also included mouse emulation so you can use your finger as a mouse. The pack also includes a special enlarged version of the !Paint program. The real advantage of this screen is its price.

Hybrid Technology 0223 861522

Membrane Screens

A large number of companies are selling Touch Windows. To our knowledge all these screens are Edmark Touch Windows imported from the US and supplied with different leads and software by the respective UK suppliers.

Edmark Touch Window

This is a plastic frame with a clear plastic, touch sensitive membrane. The screen requires a power supply and is plugged into the computers printer port. The membrane allows a much higher resolution than the infra-red screens and is suitable for much finer work, allowing very accurate pointing. The screen is fixed onto the monitor by using Velcro, this means it can be fixed to a wide range of monitors. Fixing is not always easy due to the range of shapes and sizes.

Touch Window (Lindis) £229.00

This is a version for the Archimedes range of computers. It is the Edmark screen supplied with a serial lead (for the A3000 computer you will need a serial upgrade), and mouse emulating software.

Lindis UK 0986 85477
Brilliant Computing 0274 578239

Touch Window (Keyboard Technology) £244.00

Again this is the Edmark screen, but it can be supplied with a range of connectors and software. Keyboard Technology sell the Basic Touch Window and then a pack to allow it to be used with your computer. The Touch Window is available with packs for: the Archimedes range, BBC Model B and Master 128 computers at £25 each.

Keyboard Technology 0509 610706

User ports

The user port was the expansion socket that gave the BBC Model B and Master 128 computers a tremendous advantage over their rivals in the 1980's. The user port allowed for a range of devices that connected to the computer to be developed: overlay keyboards, switch boxes, control boxes, turtles etc.

With the Archimedes range of computers Acorn decided to only provide the user port as an upgrade people could select if they needed it. If you want to use overlay keyboards or any of the devices above you will need to fit a user port.

Special Access System

This is an A3000 based system specially upgraded for the special needs market, having both a serial chip upgrade and the Morley Electronics User/Analogue port. This system has the advantage of being ready to use with most special needs add-ons.

A3000 User Ports

The user port fits into the internal expansion socket. There are two types of user port, either User/Midi or User/Analogue. The User/ Midi has a user port and three Midi sockets allowing the computer to be connected to midi compatible music equipment. A User/ Analogue port has the same user port with an Analogue socket like that on the BBC Model B / Master 128 computers. The analogue socket allows you to connect the Micromike, temperature probes and control equipment, switch boxes and switched joysticks.

Acorn User/Midi upgrade £49.00

User port upgrade that also contains a Midi three sockets in, through, out and is useful if you wish to use the computer with other Midi equipment.

EMR MultiInterface internal expansion card

The MultiInterface internal expansion card is designed for the A3000 computers internal expansion slot. It provides a 32 channel MIDI port (2 MIDI out and 1 MIDI in), an 8bit sound sampler and analogue and User ports. Both the analogue and User ports are constructed to the Acorn specification and will provide the necessary switch control for Special Needs and Analogue interface for remote control projects.

User/Analogue Upgrade (HCCS) £45.00

User/Analogue Upgrade (Morley) £69.00

User Analogue Upgrade (Watford) £42.00

User Analogue Upgrade (Oak Solutions) £45.00

User/Analogue/Disc Buffer (Oak) £54.00

The disc buffer allows additional external disc drives to be connected to the A3000.

20mb IDE drive with user port (Beebug) £199.00

40mb IDE drive with user port (Beebug) £368.00

These are podules that fits inside the A3000 and contain either a 20mb or 40mb hard disc and a standard user port. This is very useful if you do not need the Analogue or Midi sockets but do need a neat internally fitted hard drive. The drawback with the user port is that some devices (overlay keyboards) need an external power supply to be connected.

SCSI card with User Port (Technomatic) £79.00

This is an internally fitted card, with a full user port and a SCSI card. SCSI allows external devices such as hard drives and CDROM drives to be connected to your computer.

A5000 and 400/300 User Port

Input/Output podule (Acorn) £75.00

This is the only option for the A5000 and 400/300 series computers. This is a full length podule which takes two of the four podule slots and contains User port, Analogue port, 2mhz Bus connector and can be upgraded to Midi. (not on the A5000)

Visually Impaired Users

Since their introduction into schools computers have been found to have many benefits for children with visual impairments. For very young users the bright monitor display can help stimulate them and encourage them to make effective use of their vision. Touch Screens have proved particularly useful to motivate young visually impaired children to explore their environment. Software such as Touch Games (Brilliant Computers) encourage this exploration by providing a visual reward wherever the child touches on the screen.

The ability to control the display on the monitor by making it larger or by choosing different colour combinations can help the visually impaired learner access standard software. The addition of speech synthesis will provide extra feedback and can even enable a totally blind child to use a word processor.

Consideration of simple practical issues such as the positioning of the monitor in the classroom to avoid reflections on the screen are often overlooked. It should also be remembered that making something bigger does not always help the visually impaired person to make sense of it. For example Text can be enlarged to the point where it becomes unreadable by losing its context. It should also be stressed that people working with visually impaired learners should seek advice from local services for the visually impaired.

The Acorn special access disc contains a number of utilities designed to assist the visually impaired user. These can have an unpredictable effect on the screen layout. However, the utility big pointer has proved particularly useful especially in conjunction with *My World* or graphic software.

Windows

Archimedes computers use a windows environment on the screen. This has a lot of advantages for most users. For example, several programs can be running at the same time and a user can easily switch between them. Pictures or text can easily be cut and pasted between programs, instructions can be given to the computer easily by pointing at a picture (icon) and clicking a button on the mouse.

One of the main advantages of a windows environment is the consistency of programs. Once you have learned how to load a program and to use windows then you can very easily learn to use other programs - they follow the same kind of structure. For some learners with special needs this environment may cause problems, but it can also have some advantages. Some users may conceptually be confused by windows. They may inadvertently close a window, or scroll across a window without realising it. The menu system of the windows environment may also cause difficulties for some users.

A physically disabled user may have problems of access or of controlling a mouse through a menu system. Menus also require the ability to conceptually understand a tree structure for finding where you want to be.

Visually impaired users may have difficulty viewing the menu options. These difficulties can be overcome for a large number of users, giving them access to the advantages windows can give. In fact it is the very nature of windows that allows us to give access to the software to a wide range of learners.

The multi-tasking feature of windows means that utilities such as switch drivers, overlay keyboard drivers or special screen viewers can run alongside other programs. For some learners the advantages of windows may be not required and may even be confusing. So some programs for early learning avoid the use of windows altogether, for example "cause and effect" switch programs. Other programs allow you to configure choices in or out for different learners, for example Scribble (Honormead Software) and 1st Paint (Keyboard Technology).

A - Z Product Directory

information provided by suppliers

1st Paint (Keyboard Technology) £35.00

Designed for younger children. As the teacher can select what functions the children explore it can be used at a very basic level, but has the potential to satisfy the more able.

1st Paint uses large clear screen icons for everything from painting tools to routines such as saving and printing pictures which makes it suitable for use by the pupil with limited fine motor control. It is fully Touch Window compatible and allows the user to concentrate on the creative aspect of computer graphics rather than the technology.

Special features include: paint mixing; simple animation; easy-to-configure option settings; example files to colour in and selection of patterns and stamps to paint with.

1st Paint will accept *!Paint* and *!Draw* files. *RiscOs* compliant (put your paintings into *Pendown*, *Phases* etc). Compatible with *Touch Window* and overlay keyboard.



A3000 Guide (Hampshire) £15.00

Designed to provide support to those new to the A3000. The guides provide simple explanations and illustrations to support in-service training aimed at introducing the A3000 to new users.

Adventure Board (Jordanhill College) £50.00

An alternative input device originally conceived for *Fantasy Islands*, but developed for a number of activities. An A3 base with 8 push-to-make switches into the user port. User guide, and sample programs. Needs user port - *RiscOs* compliant.

Adventurous English (H S Software) £8.47

This program helps children to gain an understanding of prepositions ("on", "under", etc.) and develop their problem solving skills with this graphical adventure game. Children who successfully complete the adventure can write to H S Software for a special certificate. *RiscOs* compliant.

Aid-Set (Le Computer) £26.00

This suite of programs makes all mouse functions easily available from the keyboard - latching, dragging, selecting from menus and adjusting the mouse speed. It allows instant access to all window icons by just one key press. The keys are configurable. *RiscOs* compliant.

Akross (Akom) £49.79

From the author of the *Times Computer Crosswords*, Akross is a crossword compiler and editor designed for use in schools and colleges. The package consists of two programs *Make* and *Akross*. *Make* is a Crossword/Word pattern designer. Facilities include: Create, Load, Edit, Display, Print and Save. *Akross* is the crossword user program. There are two modes - Team or Solo. The aim is to complete the puzzle, drawing on assistance only when needed. Included are spelling checks, markers and letter prompts to sharpen mental reflexes and enhance spelling and knowledge. *RiscOs* compliant.

Alan Nixon Keyboard Programs (SEMERC) £4.80

Eleven programs designed to use the keyboard or overlay keyboard for input. They range from number and letter-recognition games to snap games and simple mazes and puzzles. Facility to create new versions of the game.

Alan Nixon Single Input Programs (SEMERC) £4.00

Thirteen programs that require only a single input from the keyboard, Micromike, or a switch. They range from building and animating pictures by successive inputs through various matching games to playing 'odd-one-out'. Needs user port.

All About Me (Northern Micromedia) £14.00

The program can be used to make the child's own information/reading book with her/his name and personal details. It is intended to form part of a project on "myself" and integrate into the infant curriculum. Uses 6502 Emulator.

All About Us (Northern Micromedia) £17.00

The program *All About Us* introduces the concept of a database to pupils and allows them to search and display the information in simple graphical form. Suitable for age 5-7. Uses 6502 Emulator.

Allows! (L'Ensouleiado Software) £18.00

Follow up to *Salut!* comprising these discs covering finding the way, transport, time, date, seasons, shops, money and weights. Available in French with Spanish, German, Italian and English and Latin. *RiscOs* compliant.

Alphadog (AVP Computing) £32.50

This is a game for all ages with four skill levels. A dog, controlled by the cursor keys, is sent to hunt the letters of the alphabet lost in the snow. He must then collect them in order whilst being timed. The first skill level provides help, while the fourth level adds obstacles. *RiscOs* compliant.

Amazing Animals (Honormead Software) £12.95

This program is designed to help with visual recognition skills and also, if required, counting from 1-4.

The program operates in several stages: animals only - find me a dog; colour only - find me a red animal; animals and numbers - find me two cats, etc.

Animated Alphabet (Sherston Software) £21.50

The alphabet illustrated and animated in various activities. Matching letters on screen with the letters on the keyboard, identify the initial sound of an object and matching this with the correct letter. Three levels of difficulty and full teacher control. Overlay keyboard compatible, requires user port.

Animated Numbers (Sherston Software) £21.50

The numbers from 1 - 10 illustrated and animated in three activities (ladders, pictures, links). Can be adjusted by the teacher and are designed to teach young children number concepts. Overlay keyboard compatible, requires user port.

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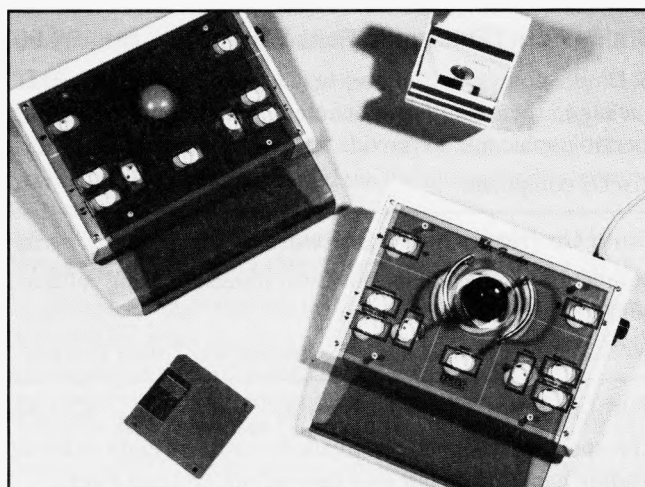
information provided by suppliers

ArcTracker Joystick (NW SEMERC) £350.00

Replaces the standard mouse on the Archimedes range giving access to almost everyone. Double click can be selected with a single press. Drag can be turned on and off - no need to hold down a button. Other buttons allow up-down only or left-right only movement of the mouse pointer making menu selection easier for many users. Other features include a pointer speed control, a removable guard and a switch interface for the left and right mouse buttons.

ArcTracker Trackerball (NW SEMERC) £269.00

As above but with a large trackerball.



B Beaver Control Kit (Unilab) £P.O.A.

Motors, lamps and electromagnets can help to bring a device to life, especially when they are controlled by sensors which respond to events. The Beaver Control Card in this kit has four inputs, two of which have quick connectors allowing simple bare wire connections to be made.

Beaver Sensing Kit (Unilab) £P.O.A.

The Beaver Sensing Kit has been designed as the simplest possible, low-cost introduction for primary and lower secondary students to the world of computer sensing.

The Beaver Kit is a simple computer sensing package; sensors; leads and support material in a carrying case; simple connections - "plug in and go!"

Bengali and Punjabi Fonts (Hampshire) £20.00

Bengali and Punjabi Language Fonts are now available for the Archimedes computer. Users can now access these languages using any programme which uses !Fonts. This includes programs such as *Pendown*, *Poster*, *Impression*, *!Draw* or *Genesis*.

Blob 1 (Widgit Software) £18.00

Blob 1 contains simple activities to introduce children to a computer using keyboard or other switch and input devices. Graphics are clear and attractive and animation is used to attract attention. Games have various levels of play to allow progression.

The program is suitable for children with special needs or infant and nursery classes in mainstream.

RiscOs compliant.

Blob 2 (Widgit Software) £18.00

Blob 2 is a continuation of *Blob 1* with activities at a slightly higher level. There is emphasis on skills relate to directional manipulation, visual discrimination, matching and two stage selection. The games have several levels of play to allow for progression. *RiscOs* compliant.

Body Mapper (TAG-Invicta Software) £44.95

Body Mapper supports the familiar topic of "ourselves" and helps children to learn about their body. *Body Mapper* not only presents pictorial and factual information but encourages children to express their ideas, to collect, collate and compare data about themselves and their friends. *RiscOs* compliant.

BookMaker and BookWorm (Resource) £49.95

BookMaker - DTP program that allows children or teachers to produce storybooks. It has all the features needed to manipulate graphics and text within the program. As the teacher can quickly select what functions the children can explore it can be used at a basic level, but can satisfy the more able.

Bookworm - allows books to be replayed either a page at a time or as an animated sequence. Both *RiscOs* compliant.

Bookstore (ESM) £39.50

Bookstore makes it easy for pupils of all ages and abilities to record and retrieve reviews of books they have read. *Bookstore* makes writing book reviews a simple and enjoyable activity, using a ready-made review master which they just complete and print out.

Pupils learn how to classify a book, pick out favourite characters and describe what they felt about the book. They can look up reviews written by other pupils, helping them to decide which book to read next. Searching the database by author, title or type of book is easy, giving pupils real confidence in data handling. *RiscOs* compliant.

Box of Delights (Unilab) £P.O.A.

Box of Delights is based on a simple sensor - the Sensor Box - which plugs directly into the computer. It is designed to look at materials using whatever light is available.

An example of the practical use of Information Technology in Science; computer based data capture made easy; a host of simple investigations and measurements; supported by specially written software, work sheets and user guide; this product was developed in collaboration with the Education and Micro Technology Unit of Sandwell LEA.

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Braille Font (Electronic Font Foundry) £6.00

A Braille font which allows text to be set using any DTP package, the resulting document can be printed using thermographic ink, to provide documents for the blind.

RiscOs compliant.

Build Up (Honoramead Software) £14.95

Similar to switch patterns, however, instead of using patterns, bold colourful pictures are used.

Works with keyboard, switches, mouse and *Touch Window*.

Bumper Pack 1 (H S Software) £20.38

This specially designed compilation consists of eight different reading games from our four best selling *Reading Packs*.

These games have been designed by a team of teachers and psychologists to help children develop their reading and spelling skills in an enjoyable and entertaining way.

RiscOs compliant.

Bumper Pack 2 (H S Software) £20.38

Bumper Pack 2 contains the following selection:

Entertaining English: Two English games to help children learn about verbs and adverbs.

Carry, Add and Bert Boot: Three number games covering addition/subtraction (with/without carrying), multiplication/division.

Crosswords: Programs for making/solving/printing crosswords.

RiscOs compliant.



Choices (Widgit Software) £35.00

Choices allows students to make choices by selecting one or more of a number of graphics. Exercises range from simple odd-one out, through pelmanism to making simple picture sentences. *RiscOs* compliant.

Christmas Library (Widgit Software) £10.00

This is an extra library for *From Pictures to Words* and has pictures relating to Christmas. There are over 260 words in the library. Half of these are 'core' vocabulary and half relate to Christmas.

Chroma 150 Pal Encoder (Wild Vision) £185.00

The encoder allows the output of the computer to be displayed on several screens at once. Two PAL, two RGB and one UHF or even more by "daisy-chaining."

Having PAL outputs also means that the computer's output can be recorded to video.

Cloze Program (AVP Computing) £38.50

Using context clues to predict a missing word is much more than a gap-filling exercise. Cloze procedure has many exciting possibilities for individual work or for starting constructive discussion in groups.

CoCo (Communication Technology) £49.95

The *Commotion Control* software has been developed over the last eight years to provide a friendly environment for exploration and control work. Suitable for all key stages this program provides the basis for cross curricular work and offers full progression using logical command words. The software can be purchased for use with most 8 input/output control boxes (included as standard in the *Commotion Control* packages).

Needs user/analogue port, control interface. *RiscOs* compliant.

Cognitive Rehabilitation Suite (Burden) £3.00

These programs have been developed for cognitive rehabilitation of the head injured. The patients use these to try to improve their memory, concentration, logic and so on. Each of these programs is aimed at one or more of the cognitive processes that are often disrupted by brain damage. There are several important features common to all of the programs: they are generally enjoyable to use, robust, easy to operate and include adequate instructions. All of the performance measures are available monitoring and storage using any of our control systems. Additionally all of the more recent programs are automatically adaptable to the patients current performance over quite a wide range of abilities.

Although the material was written for head injury survivors, it has been used successfully in other centres with stroke patients, children with and without learning disability, and Alzheimers sufferers. *RiscOs* compliant.

Complete Rebus Glossary (Widgit) £20.00

These are three libraries covering the Rebus glossary (from LDA) arranged in alphabetical order. Teachers will need to use these to make their own topic libraries. Note: this is not a complete set of pictures from Widgit's other discs. It is suitable for those requiring extra resources for *From Pictures to Words*.

Complete Speller (Northern Micromedia) £17.00

A program which reinforces spelling. Five word blanks are provided and more can be added. A speech option is available for use with a speech synthesiser. Uses a 6502 Emulator.

Complete the Picture (Honoramead) £14.95

The child is presented with two identical pictures, one of which has between one and three pieces missing. The child is then given each of the pieces one at a time and must position them on the picture using a mouse or *Touch Window*.

Complete Wordsearch (AVP Computing) £38.50

Word-square program which may be used as a teaching aid. The wordsearch consists of a 20 x 20 letter grid. Words of up to 20 letters are first entered. A difficulty level, determining which directions may be used is selected before the wordsearch is assembled, either on the screen as you watch, or hidden from view. Once the wordsearch has been created, it may be converted into a *Puzzlesearch*. *RiscOs* compliant.

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Contact Keyboard (Keyboard Technology) £44.95

Simply clips in place over the existing QWERTY keyboard, taking up no extra space. The pupil gets the sensory feedback of pressing a real keyboard. The Matchbox range of keyboards have user definable keys so a card can be inserted under a clear ABS cover. Depending on the program the card could be graphics, symbols, pictures, words, letters, or simply colours. Card inserts supplied with some programs are double sided so that they can be easily changed from pictures to words. The clear covers can be removed and replaced with colour keycaps (£3.60) or Money keycaps (£6.00) which have a recess ready to accept real coins for the Money Box series of programs.

Con-Text (Hampshire) £22.00

Con-Text is a program with which to create overlay keyboard overlays for the Archimedes. All operations take place in the Archimedes "desk top" environment.

RiscOs compliant.

Con-Verse (Hampshire) £75.00

Con-Verse is a program which puts sound on overlay keyboard overlays for the Archimedes. Con-Verse lets you create overlay keyboard overlays which speak.

Concept Designer (Longman Logotron) £24.00

Concept Designer is a utility program developed in conjunction with the Concept Keyboard company and NCET. If you wish to use any *RiscOs* application with an overlay keyboard, then *Concept Designer* will make it work. The software allows you to create and use overlays for all types of overlay keyboard. It can be used effectively with *Pendown*, *Magpie* and *Numerator*.

RiscOs compliant.

Conform (NW SEMERC) £18.00

A program to make and print overlay keyboard overlays for the Archimedes. Using this program you can create overlay files which can be saved to disc and then used with other programs, eg *Phases#2*, *Pendown*, *Datasweet*, etc. Once you have saved your overlay you can change the text style and font, drop *!Paint* or *!Draw* files onto the overlay and then print it out in either A3 or A4 format (in colour if you wish). *RiscOs* compliant.

Connections (Sherston Software) £27.50

Connections supports maths and numbers work. Built around the concept of connections, children have to alter the contents of each window to make the connections true. Full teacher control. For children aged between 5 and 8 years. Overlay keyboard compatible requires 1Mb memory and user port.

Count with Blob (Widgit Software) £20.00

A range of early number activities dealing with numbers 1-9. Attractive graphics and images are also suitable for older children with learning difficulties. Activities include learning to count, numbers in groups and sets, multiples of objects and memory. *RiscOs* compliant.

Crossword+ (H S Software) £16.97

Crossword+ is a comprehensive suite of applications that makes compiling, printing and solving crosswords simplicity itself. The program makes full use of the mouse and menu system, and data can be entered via the mouse or direct from the keyboard. *RiscOs* compliant.

Crossword Call-up 2 (Northern Micromedia) £20.00

Creates crosswords that can be used on Screen or printed out. Designed around a database which holds clues and answers, it is content free so can be used by all ages and abilities.

Cumana AC Traveller (Cumana) £62.00

Cumana's AC Traveller allows laptops like the new Acorn A4 to be recharged whilst on the road. The unit is fitted with a standard 13 amp mains socket and simply plugs into a vehicle's cigarette lighter to produce 140 watts of AC power.

Cumana CD Rom Drives (Cumana)

Cumana offer two models of CD Rom. drive - the 400 series and the higher performance 500 series. Both models support Acorn's Risc based machines by running CD ROM software running under *RiscOs* or the Acorn PC Emulator.

Cumana Floppy Disc Drives (Cumana) £80-£180

A selection from Cumana's range of BBC Master compatible drives can be added to the Archimedes range using a simple interface. Drives include CS354 and CD358 (3.5") CS400S and CD800S (5.25") or the CCD 2000S (3.5" and 5.25").

Cumana Memory Upgrades (Cumana)

1Mb and 4Mb RAM upgrades for the A3000. Either upgrade will fit onto the RAM expansion slot on the A3000 motherboard. The 2Mb RAM upgrade for the A5000 fits horizontally into the RAM expansion slot on the A5000 motherboard.

Cumana SCSI Hard Drive Podules 40mb £299.00

Drive incorporates the Cumana 16 bit SCSI/CDFS interface plus SCSI Manager. Simple 'low power plug-in and-go' solution does not need a power supply or cooling fan.

Cumana SCSI Hard Drive Podules 80mb £449.00

Cumana SCSI Hard Drives (Cumana) £199-£599

Cumana's hard disc drives range in capacity from 40Mb up to 210Mb and are available either as an internal (Archimedes only) or external unit for any of Acorn's Risc based computers. All Cumana hard drives require a SCSI interface.

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D Data Frame (Prime Resources) £22.00
This program which works rather like a simple spreadsheet is structured as an empty framework to allow children to build up a table of their own information. Data frame allows you produce totals and averages will sort and search for date and will generate pie charts and bar graphs and print them out. *RiscOs* compliant.

Data Monitoring Software (Burden Neurological Institute) £50.00

Part of the cognitive rehabilitation system developed to assist people recovering from the effects of head injury. This component of the system is concerned with monitoring patient performance and controlling their rehabilitation programme. Minimum 2Mb of RAM with a hard disc. *RiscOs* compliant.

Delta 3B Single (Voltmace) £14.43

A spring return to centre analogue joystick as required for BBC Basic DUAL commands. Requires analogue port.

Delta Cat (Voltmace) £29.74

The Delta Cat plugs into a mouse port and is a joystick which can control the mouse cursor at a speed roughly proportional to the deflection. When released the joystick springs to the off position leaving the mouse pointer at the set place.

Desktop Folio (1992 Edition) (ESM) £97.50

Brings simplicity to word processing and desktop publishing for users of all ages and abilities. Short menus and easy to understand screens allow teachers and children to create documents quickly and easily. *Desktop Folio* can be used with an overlay keyboard and a sample overlay gets you started.

Desktop Folio includes a separate program called Simple Screen Folio, a word processor with pictures which looks and feels like the BBC *Folio* children know already. They choose a ready-made layout for their writing activity such as a poster layout, add their words and pictures (supplied) and print out. Curriculum Theme Packs support *Desktop Folio* with extra pages designs and pictures. Choose from Christmas, Maths, Space, World War II and Editor's themes. Winner of 1992 Educational Technology Awards Gold prize. *RiscOs* compliant.

DTP on the Archimedes (Sigma Press) £12.95

An introduction to DTP, starting from basics for those who have not designed a document before. Text preparation to printing the finished document described in detail.

Dreamtime (Sherston Software) £23.00

Two complete adventures for infants *The Lost Box* and *The Lost Toy*. Children face a variety of problems as they explore the magical world of *Dreamtime*. It is designed to encourage problem solving skills and logical thinking in children aged between 5 and 7 years.

Overlay keyboard compatible requires one megabyte memory and user port.

E Early Bird 1 (Information Technology Service) £25.00

A very simple painting program - 12 colours, 3 pen sizes, lines, rectangles, circles, undo, save and print functions. Pictures can be exported to other applications.

Early Bird - V H Version (Information Technology Service) £25.00

Simple painting program - 12 colours, 3 pen sizes, lines, rectangles, circles, undo, save and print. Enlarged pointer and white background for use with the visually handicapped.

Early Years Graphics Library (Honorhead Software) £25.00

Six disks of bright, interesting and colourful sprites suitable for early years. Can be loaded into other programs such as *My World*, *Genesis*, *Phases*, *!Paint*, *!Draw*, etc.

Easel 2 (NW SEMERC) £6.00

A 256 colour painting program suitable for use in schools with all age groups. Allows for the use of spray, fill and brush the size of each can be varied. A simple menu allows colours to be selected and mixed using a palette, up to six mixed colours can be stored. Screens can be loaded and saved as *!Paint* sprites.

Easel 3 (Hampshire Microtechnology Centre) £25.00

Easel 3 is designed to produce 256 colour mode pictures, i.e. modes 13 and 15, but works best in mode 13. *Easel 3* requires 470K of memory. This means that on a one megabyte machine you may not be able to run *Easel 3* alongside some applications.

Eautun (Information Technology Service) £65.00

A substantial package of resources to assist the delivery of French. Overlay keyboard based (26 overlays), plus database files, *My World* screen, and follow up and extension resources. For Keystage 3 and 4. Needs user port and overlay keyboard.

Eureka (Longman Logotron) £119.00

A powerful and innovative spreadsheet. Eureka offers full support for outline fonts, variable row heights and column widths, multiple lined worksheets, import and export of data (Lotus 123, DIF, text and CSV formats), user-defined functions and macros, graphics layer for circles, arrows, boxes etc. More than 120 built-in functions. Advanced matrix data allows all functions to accept and return multiple results. *RiscOs* compliant.

Everyday Signs (Brilliant Computing) £20.00

The program presents social sight vocabulary in theme related lists for multiple choice matching. Difficulty can vary through number of items to choose from and time to make choice. Gives the user opportunity to input lists of words of their own interest e.g. Pop stars, football teams etc. These can be saved on disc for future use. *RiscOs* compliant.

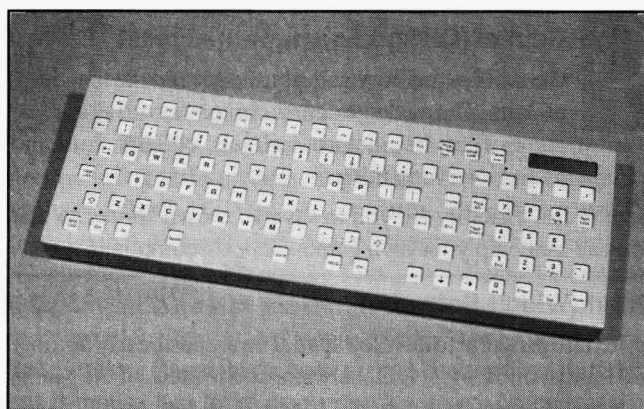
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Expanded Keyboard (NW SEMERC) £475.00

An enlarged version of the standard keyboard with extra features which allow access to the computer to users who find the standard keyboard awkward or impossible.

Users can rest their hands or feet on the steel case and press a key without the frustration of unwanted key presses. Those using toe, mouthstick, headpointer or single finger can perform two or three key operations such as "Ctrl-G" etc with single presses. An LCD panel enables delays and sounds to be set from the keyboard itself.



F Fantasy Islands (Jordanhill College) £70.00

Designed for 4 -7 year olds. A series of islands are created; the inhabitants and their way of life are the centre of a truly cross curricular approach. *RiscOs* compliant.

Fims - Food Information Management System (Northern Micromedia) £15.00

A home economic support program, consisting of a food and E-Number database together with a shopping facility.

First Steps (Brilliant Computing) £20.00

Designed to introduce switch use to profoundly handicapped people. Pressing the switch produces intrusive sound and spectacular effects on the monitor. A stepping stone towards *Switch On*. Works with switches, spacebar, mouse buttons, Touch Window and *Touch Screen*. *RiscOs* compliant.

First Steps (AVP Computing) £38.50

Four programs for the nursery or infant child. They can also be used by young disabled or handicapped children. They cover numeracy - number recognition and simple addition, telling the time and hand/eye coordination. *RiscOs* compliant.

First Words and Pictures (Chalksoft) £23.00

Match from a set of 80 "early vocabulary" words - carefully chosen - to clear bright pictures in one of ten screen pictures. Teacher chosen options allow concentration on a few words. *RiscOs* compliant.

Fonts (The Electronic Font Foundry)

Fonts for all European languages, Cyrillic, Hebrew, Greek, Vietnamese, plus a range of symbolic fonts for maths, physics, cartography, music, etc. *RiscOs* compliant.

Food Energy Series (SNACMA) £14.03

The Food Energy pack provides three inter-related programs aimed at encouraging children to find out how to keep healthy through exercise and eating a balanced diet. The three programs are *Food for Energy*; *The Energy Balance*; and *The Foodstore Database*. They can be used individually or in conjunction with each other and allow for print out of information. First two programs also run with an overlay keyboard. *RiscOs* compliant.

Fred's Adventure (Topologika) £19.95

Freddy Teddy is off on an adventure in the woods. An invitation, nuts, honey and a special clock are all necessary if you are to join the picnic. There are lots of puzzles and traps for those who try to cheat, while the over cautious may find it impossible to picnic in the dark.

French (Hampshire Microtechnology Centre) £30.00

This set of three discs introduces children to the spoken French language through a series of multiple choice exercises. The program uses the powerful sound sampling facilities of the Archimedes. *RiscOs* compliant.

From Pictures to Words (Widgit Software) £35.00

Nine language development activities relating to the English National Curriculum levels 1-3. Activities range from initial letter matching to Free writing using words and pictures. The pack has two libraries each with about 270 line drawing pictures. *RiscOs* compliant.

Fun and Games (H S Software) £16.97

3 National Curriculum games related to Attainment Targets in Maths/English for ages 5-9. The games make the most of Archimedes sound and graphics, with extensive sampled speech, digitised pictures and animations. *RiscOs* compliant.

Fun School 3 (Europress Software) £24.99

Six programs including Treasure Search, Sentences, Word Search, Robot Draw, Planetary Maths and Data Base.

Fun School 4 (Europress Software) £24.99

Six new games in three age groups, including maths, geography, number and word skills and history problems.

Funfair (Northern Micromedia) £22.00

Funfair is a simulation of a visit to the fair. Pupils are given pocket money and encouraged to explore the map of the fairground. Each stall is priced and a mathematical or language problem has to be solved.

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information provided by suppliers

G **Gemini (CHS)** £29.95
Gemini is a memory game based around the matching of pairs. The package comes complete with a series of games files that include, animals, colours, fruit and vegetables and everyday things.

Gemini has a facility for you to save your own sprites so that you can make up your own games. *RiscOs* compliant.

Gridit (Widgit Software) £30.00

A flexible program to develop spatial awareness, early number and logical thinking. It is closely mapped to areas of the Maths National Curriculum Levels 1 and 2. It allows for easy progression and discrimination to suit individual needs.

RiscOs compliant.

Graphics Library (Honormead Software) £25.00

Six disks of full colour sprites covering many topics. These graphics can be loaded into other packages such as *!Paint*, *!Draw*, *My World* and *Phases*, etc. *RiscOs* compliant.

H **Hawk V9 Real Time Colour Digitiser (Wild Vision)** £199.00

The Digitiser enables still images to be "grabbed" from any composite video source. Fun can be had importing these into art packages, or they can be incorporated into any application requiring "Photograph-Style" images in *RiscOs* sprite format.

I **Indic Fonts (The Electronic Font Foundry)** £60.00

Font for use with most Indian languages e.g. Punjabi, Gujarati, Devanagari, Tamil and Bengali etc. These fonts can be used on any *RiscOs* package that uses the outline font manager. *RiscOs* compliant.

Infant Disc (NW SEMERC) £7.80

Collection of programs from the MEP Infant Pack, modified for use with or without an overlay keyboard. The programs include *Toyshop*, *Play Train*, *Bricks*, *Mosaics* and *Jumbo*.

Insight (Longman Logotron) £69.00

Insight is a new datalogging package for the Archimedes. It comprised two programs *!Analogue* and *!Digital*. This simplifies projects as varied as the measurement of the rate of temperature loss or measuring the velocity and acceleration of a moving object. Data can be manipulated by displaying graphs, large digits or formulae. All graphs can be printed through standard *RiscOs* printer drivers. The software supports Key Stages 2, 3 and 4 in the National Curriculum for Technology, Science and Maths, and Scottish 5-14 Environment Studies Level D+.

RiscOs compliant.

J **Job Search Viewdata (Panda Discs)** £19.95

Provides viewdata - style material appropriate to special needs work preparation groups. Linked to student worksheets. Other curriculum databases available. *RiscOs* compliant.

Joystick Games 1 (Brilliant Computing) £20.00

Introduces the concept of a joystick in stages. The first activity involves operating the joystick at the right time the second involves the up and down movement and then the four directions are introduced. There is a drawing program on the disc.

Uses cursor keys, joystick, 4 switches, user port, Touch Window and overlay keyboard. *RiscOs* compliant.

Junior Pinpoint (Longman Logotron) £24.00

Junior Pinpoint's user interface is well designed and robust and the imaginative *Pinpoint* concept removes the unfriendliness of the traditional database. Children simply design a questionnaire using intuitive tools and the program creates the database automatically. *RiscOs* compliant.

Junior Windows (Porters Primary Software) £20.00

Extension of *Infant Windows* which allows children to produce wordprocessed text and design on-screen graphics, then compose newspaper pages with up to 30 frames containing pictures, text and headlines in a variety of fonts.

RiscOs compliant.

K **Key Census Starter Pack (Northern Micromedia)** £8.00

Starter pack for the creation of census files with the *Key* data handling package. The creation of these files containing local census data allows students to test hypotheses and develop problem solving skills. Requires *Key* package

Key Graveyard Data Starter Pack (Northern Micromedia) £5.00

A history resource pack used with *Key* for the input of local data from the survey of grave memorials. The pack contains a data file complete with field variables, sample files and a useful teacher guide. Requires *Key* package.

Keyboard Overlays (C D Computing) £12.50

A range of A3 and A4 overlays designed by teachers to support the National Curriculum Keystage 1 and 2.

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L **Le Monde à Moi (NW SEMERC) £18.00**
Derbyshire's *My World* with French menus and error messages. The program comes with a range of French examples ideal for lower school French or special needs. This is a full version of *My World* and *My World* support packs can be used with the program. *RiscOs* compliant.

Learning to use the Arc. 1 (Honormead) £14.95
Designed for adults who have no previous experience wishing to start using the Archimedes range of computers. It assumes the user has no previous knowledge of computers and explains everything in a non-technical way.

Learning to Use the Arc. 2 (Honormead) £14.95
This program is intended to follow on from part one. More advanced techniques are explained, such as double clicking the mouse and dragging objects across the screen.

Learning to Use the Desktop 1 (Honormead) £14.95
This program shows the user what the desktop is and how to use it. Common techniques are explained such as opening and closing windows, bringing up menus etc.
Users with no experience can start with learning to use the Archimedes part one and work their way up to this level.

Letters and Pictures (Chalksoft) £20.00
Introduces word building skills in a simple format for the infant classroom, or the home. It provides enjoyable practice with initial and final consonants and middle vowel sounds. Using only 2 keys (Space and Return), the child selects the letters to match clear and colourful pictures (and vice-versa). *RiscOs* compliant.

Lists (NW SEMERC) £4.80
A 'jargon-free' database program from the BBC Computers which encourages children (of all ages) to collect and examine information on any topic. Prompts such as 'Please give me a word to look for' and frequent opportunities to check and correct input make the program immediately usable.

Little Red Riding Hood (Selective Software) £15.00
This program is a two part adventure following the story of Red Riding Hood. Many problems are set requiring number skills, simple money and logic. Maximum number size can be selected to allow for various skill levels. Comprehensive A4 manual with resource sheets.

LogoBox (Keyboard Technology) £20.00
Designed to help explore the world of Turtle graphics by inputting common Logo commands with a single keystroke on the *Contact Keyboard*.
Level 1 drives the turtle from the *Contact Keyboard*.
Level 2 constructs simple procedures which can be used in other procedures.
Needs *Logotron Logo*. *RiscOs* compliant.

M **Magpie (Longman Logotron) £59.00**
A multimedia application for building all kinds of on-screen information systems, using the powerful *RiscOs* environment, without requiring any programming skills on the part of the user. It is easy enough for primary school children yet powerful enough to use for professional presentations. Magpie pages can hold sprite or *!Draw* files, text, with outline fonts, sound effects, (created with standard hardware and software), and now Acorn *Replay* moving video files too. A Magpie "binder" can be presented in a carousel format or interactively using "buttons" activated by either mouse, key press or overlay keyboard. Magpie can be used to create talking books, compressed graphic and data files, simple DTP, branching stories, presentations, rolling demos, training/support materials and CD ROM publishing. *RiscOs* compliant.

Marconi Trackerball (Technomatic) £30.00
Provides rapid point to point movement of cursor around screen with a sensitivity which allows cursor control to single pixel precision. Cursor movement, long or short, is made in any direction in one sweep of the ball - eliminating the need to move the entire unit.

Maths Pack 1 (H S Software) £11.02
Matching (easy and difficult), Counting (forwards and backwards) and sequencing numbers to 10. *RiscOs* compliant.

Meine Welt (NW SEMERC) £18.00
Derbyshire's *My World* in German with German menus and error messages. The program comes with a range of German examples ideal for lower school German or special needs. This is a full version of *My World* and *My World* support packs can be used with the program. *RiscOs* compliant.

MoneyBox (Keyboard Technology) £19.95 ea.
This range of programs takes the pupil on a shopping trip, *KT's Special Sweet Shop* promotes coin recognition with the pupil matching the coin shown on the screen to the real coin on the *Contact Keyboard*. The second section show how coin values are made up when the pupil purchases a sweet, and reinforces number bonds and equivalent values.

KT's Sweet Shop follows on, developing addition skills as the pupil buys up to 3 sweets at a price range set by the teacher. *KT's Corner Shop* continues the theme of addition with the pupil purchasing from a wide range of everyday goods. *KT's Grocers Shop* develops multiplication skills with the pupil counting the items to be purchased and multiplying them by the price.

KT's Take-Away deals with the subject of estimation and subtraction. The pupil has to select the coins they would use to make a purchase, then calculate the change they would expect to receive.

Touch Window and Matchbox Keyboard compatible.
RiscOs compliant.

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Monster Maths (AVP Computing) £32.50

In this package there are five programs linked by a menu. There are also nine difficulty levels and the facility to control speed. *Monster Maths* encourages high speed mental arithmetic over a wide range of difficulty: *Times-Tables* has four option choices: times table in order (1-12) in random order, tables of users choice tables from 13-24: *Arithmetic* covers addition, subtraction, multiplication, division and a mixture of these. *Mystery Numbers* generates a mystery number and a set of numbers from which the mystery number can be produced allowing addition, subtraction and multiplication.

RiscOs compliant.

More About Me (Northern Micromedia) £17.00

The program *More about Me* asks the user questions about family, friends, favourite foods, pets, toys etc. Pupils can then print out and produce a booklet with information about themselves. Suitable for children between the ages of 5 and 7.

Mouse Port Splitter Box (Voltmace) £16.98

A small box with two mouse port sockets and a switch which can select one or the other socket. Useful as it avoids lifting the A3000 up to change an item in the mouse port.

Movaword (Chalksoft) £20.00

Detailed and colourful screen pictures of a garden, a house, a beach, etc, each have ten words available. The teacher chooses which of these to use. They appear individually in large print, and the child moves the word around the picture until it rests on the object it names. When complete, the scene 'comes alive'. Screens can be printed out of Epson-type printers. RiscOs compliant.

Movies (NW SEMERC) £12.00

Alan Nixon's new switch software written for the Archimedes. A series of 5 progressive switch tracking and training exercises. The strength of the package is the numerous ways it can be adapted to the needs and abilities of the user. The program will allow the use of a range of switch inputs, keyboard, overlay keyboard and *Micromike*.

Moving In (NW SEMERC) £7.20

The child is offered an empty house with the front removed and is allowed to place furniture, household objects, and people in any of the five rooms shown. The child types in the instructions and the room scene changes accordingly. There is an option of overlay keyboard input at two levels of difficulty. A completed scene can be printed out or saved to disc.

Multable (AVP Computing) £32.50

Allows the user to check and learn multiplication tables using a 10 x 10 multiplication square. The age of the calculator and computer has not lessened the need for mental arithmetic as basic as this. RiscOs compliant.

My First Words (CHS) £29.95

My First Words is content free and was developed to help children learning to read. It will also help people with slight dyslexia problems. Being mouse driven, whole words can be 'typed' in at one go, which is a very useful feature for some users with special needs. RiscOs compliant.

My World (NW SEMERC) £18.00

Derbyshire's award winning framework program. The pack comes with a range of files showing the use of *My World* across the curriculum including, simple patterns, weather map, sentence building and picture building. Work can be saved in *Draw* format or printed. Works in either full screen or desktop mode, in desktop mode *ASP* program allows switched access. RiscOs compliant.

My World - Alphabet (NW SEMERC) £9.00

Set of *My World* screens based on the alphabet, children can build jigsaw puzzles linked to letters of the alphabet and write about the picture using overlay keyboard or keyboard. Supplied with 3 graded overlays in both A3 and A4. Needs *My World* Program. RiscOs compliant.

My World - Christmas Disc (NW SEMERC) £9.00

Selection of *My World* screens on a Christmas theme. Allows students to produce Christmas card and scenes. Needs *My World* program. RiscOs compliant.

My World - Design (NW SEMERC) £9.00

Wide range of *My World* screens on the theme of design. Design a football strip, an electric circuit, a summer outfit or a new road system or town plan. Needs *My World* program. RiscOs compliant.

My World - fuzzbuzz (NW SEMERC) £12.00

Set of *My World* screens to support the *fuzzbuzz* reading scheme from Oxford University Press. This pack consists of two discs full screens and overlays in A3 and A4. Needs *My World* program. RiscOs compliant.

My World - Geography KS1 (NW SEMERC) £9.00

Allows pupils to build simple maps and plans. Towns can be built with children making decisions on placing buildings, similar exercises can be carried out looking at the area from high tower or with a birds-eye view. Map exercises are also included putting together a jigsaw of the UK and labelling activities, major cities, mountain ranges and rivers, work on compass points is also included. Needs *My World* program. RiscOs compliant.

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My World - I'm Special (NW SEMERC) £9.00

My World screens to support *Myself* theme, in infant and junior schools including simple block graphs. Labelling body parts, writing about favourite food, TV program, likes and dislikes.

Needs *My World* program. *RiscOs* compliant.

My World - Maths (NW SEMERC) £9.00

My World screens covering mathematical themes, number patterns, tessellations, attributes and number games.

Needs *My World* program. *RiscOs* compliant.

My World - Nursery (NW SEMERC) £9.00

Designed especially for nursery classes/reception work. Screens cover a wide range of areas, sorting, matching, size and food. Needs *My World* program. *RiscOs* compliant.

My World - Patterns (NW SEMERC) £9.00

My World screens which help to design patterns. Using the screen a range of pattern and mosaics can be produced.

Needs *My World* program. *RiscOs* compliant.

My World - Pipes and Fittings (NW SEMERC) £9.00

Pipes consists of screens of coloured pipes with start and finish sections indicated on the screen. The child must connect the right sections together in order to complete the pipe. Completed pipes are included as a photocopyable master, which can be cut out and used by children away from the computer.

Fittings consists of screens with coloured tiles which fit together to fill the screen. Some of the screens are difficult and the solution to each screen is given as a draw file that can be printed out.

Needs *My World* program. *RiscOs* compliant.

My World - Simple Stuff (NW SEMERC) £9.00

Seventeen screens to run in the application *My World*. Seventeen sample screens for younger users.

Needs *My World* program. *RiscOs* compliant.

My World - Skeletons (NW SEMERC) £9.00

Dissect or build the human body on screen. Using the screens a human skeleton can be built and labelled. Range of screens focus on all parts of the skeleton. Each screen comes in this version, one with clues to help beginners the other with no help. The *!Draw* files can be used with other programs to produce worksheets etc.

Needs *My World* program. *RiscOs* compliant.

My World - Village/Town (NW SEMERC) £9.00

Set of *My World* screens that allow you to build houses, flats, churches etc. A number of the screens have net versions as the finished building and can be printed, cut out and built into a 3D model. Screens also cover town planning allowing you to produce maps and plans of towns or villages.

Needs *My World* program. *RiscOs* compliant.

N Nature Park Adventure (Sherston) £27.50

Nature, maths and language adventure based around a nature park, where some rare butterflies have disappeared. Children have to rescue the butterflies, while solving various problems and meeting some friendly and unfriendly animals along the way. Overlay keyboard compatible requires one megabyte memory and user port.

News Extra (NW SEMERC) £6.00

A simulation of the flow of news in a newsroom. It is intended to be used with groups of children who manipulate and present news in various forms.

Notate (Longman Logotron) £59.00

A music composition program which enables users at all levels to create scores from the simplest melody line up to eight parts. Using the sound processing power of the Archimedes, *Notate* is able to render any stave of the score in a range of voices, including sampled sounds. Will output and input through a midi keyboard. *RiscOs* compliant.

Note Invaders (Chalksoft) £20.00

Choose bass or treble clef, set the difficulty, then start. Sounded notes run along the screen staff. Press the correct note name before the note reaches the end of its run. *RiscOs* compliant.

NStore Version 3.0 (H S Software) £25.48

For storing and reporting detailed National Curriculum records. Holds records on all the statements of attainment from Levels 1 to 10 in core subjects for up to 432 children, 432 topics.

RiscOs compliant.

No 62 Honeypot Lane (Resource) £29.95

An ordinary house - an extraordinary program. It takes less than a minute to learn how to use it, but hours before you want to put it away. Experience and discover what goes on at No 62 over a whole year. No 62 can be used in so many different ways - language development, understanding time, weather, seasons, family relationships and habits. *RiscOs* compliant.

Numbers and Pictures (Chalksoft) £20.00

Number learning set which offers structured number activities of three kinds: simple number recognition, counting to 9 and counting back from 9. Choose 1 to 5 or 1 to 9, and match numbers to the pictures on the screen. An overlay keyboard version is also on the disc. *RiscOs* compliant.

Numerator (Longman Logotron) £69.00

A highly visual mathematical construction kit. It does for the young mathematician what Lego does for budding engineers. It provides an easy to use environment for exploration, experimentation and discovery and could be described as a cross between a flow chart and a spreadsheet. *Numerator* fits well into the National Curriculum for maths and Scottish 5-14, as it can be used to model a variety of mathematical processes. *RiscOs* compliant.

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Oak Recorder (Oak Solutions) £30.00

Sound sampling involves converting the signal from a microphone or other analogue source into a digital representation of that signal. This is done by 'sampling' the waveform at regular intervals and storing the instantaneous values of the signal.

Oldham Overlay Keyboard (NW SEMERC) £125.00

A3 overlay keyboard build to the specification of NW SEMERC and the Northern ACE centre.

This lightweight and robust overlay keyboard is compatible with existing overlay keyboard software and connects to the computer via a user port. The board has both audible and visual indication that a key is pressed. The overlay keyboard can also function as a single switch interface box, allowing access to a wide range of switch software. The Overlay keyboard is supplied with *The Overlay Keyboard Book* which will help you to get the most from your overlay keyboard.

Optima (NW SEMERC) £28.00

A new database linking pictures, text and sounds. Children can create their own (talking) books with a picture of a turned up page to turn the pages. The linking allows branching stories, adventures and view data systems to be created.

Both text and pictures (!Paint and !Draw) can be placed on the screen, moved around or resized. The emphasis is ease of use.

Pictures can be dragged onto the page from disc or straight into a picture bank.. Pictures are compressed in the picture bank and the same picture can be used many times without using up extra memory. Pictures can be saved to disc from the picture bank making Optima ideal for storing pictures.

Digitised sounds can be linked to pictures or text. Clicking on the object will replay the sound.

Optima can be used in edit mode to allow you to create pages or change pages. If you switch to click mode you can then use the pages created.



Paint with Splodge (Honoramead) £12.95

This simple program aims to introduce children to the world of colour by using large pictures to colour in. There are optional tests to check for colour recognition.

Works with standard keyboard, also mouse, switches, Keyboard Technology *Contact Keyboard*.

PenDown (Longman Logotron) £54.00

An educational wordprocessor which has been designed specifically with children and the classroom in mind. *Pendown* is easy to get to know, yet has the potential for the more confident user to explore further. It can be configured for a variety of different levels, takes full advantage of *RiscOs* and comes with a variety of utilities including special fonts (including Morse, Braille), and a highly original work list and spell checker. Word processing is central to computer use in many schools: *PenDown* helps children make the most of it. *RiscOs* compliant.

Pendown Plus (Longman Logotron) £79.00

"Adult" wordprocessor to follow the classroom package *Pendown*. There are two brand new utilities: *Pendown Mail List Manager* and *Pendown Table Editor*; and features include - mail merge, headers and footers, master pages and chapters, automatic page numbering, page based or continuous scrolling, document models, auto-scrolling selection, insert one document into another, save or print a selection, printer paper limit display on page, spelling checker enhancements and dictionary to support foreign language work.

RiscOs compliant.

People Match (Honoramead Software) £14.95

This program involves matching the head, body and legs of a character with often humorous results.

Works with standard keyboard and switches, mouse, Touch Window.

Phases#3 (NW SEMERC) £18.00

A replacement for the award winning *Phases#2* introductory wordprocessing and desktop publishing package.

Combines graphics such as pictures and borders with six sizes of text. The program lets you drop pictures in either !Draw or !Paint format onto your writing. The picture can be moved and sized and the text will automatically format around your picture. The program allows you to use outline fonts and six are supplied. The standard font is "Jotter", this is similar to the printed font in early reading books. A *Designer* option allows teachers to fix aspects of the program e.g. text sizes, illustrations or borders, number of columns etc. so that the program can work in the same way as *CAPTION* or *FRONT PAGE EXTRA*. A growing number of curriculum and graphics support disks make up the *Phases* family of programs.

New features

Block Move - text can be marked, cut, copied or pasted to another part of the writing or the notepad.

Find and Replace - words and phrases can now be searched for and replaced with other words.

Improved Notepad - enlarged notepad using the Jotter font allows six font sizes and colour of text and paper to be changed.

File compatible with Phases#4. This means that you can use files including cloze procedure and Touch Explorer type activities developed on *Phases#4*.

RiscOs compliant and compatible with *Phases#4*.

Phases#4 (NW SEMERC) £28.00

The full *Phases* program.

Phases#4 has all the features of *Phases#3* plus:

Cloze Procedure - *Phases* now allows cloze procedure exercises to be constructed, headstarts, vowels etc. are provided for allowing *Phases* to be used like *Tray*.

Ruler - allows left and right margins to be set.

Speech - facilities built into the program allow speech to be

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turned on or off. Text can be spoken as you type either as words or letters, you can say all text and cue and review text. Actions are also spoken such as changing letter size, font, centring text, etc.

Wordbank, this feature allows any word on the notepad to be typed on the writing page simply by clicking on the word. New wordlists can be dropped onto the wordbank from disc. Word lists can be created using *Phases* or *Edit*.

Touch Explorer-type facilities. An overlay keyboard can be used to send messages or pictures to the notepad or to change the overlay layer. A picture can be dragged from the notepad onto the main writing page, or (using the wordbank) text can be transferred from the notepad to the page.

RiscOs compliant

Phases Borders Disc 1 (NW SEMERC) £9.00

Fourteen borders which can be "dropped" on to your written work. Alternatively the border can come first to provide a work page. A booklet explains how to make your own borders from the kit of parts provided. Needs *Phases*.

RiscOs compliant.

Phases Borders Disc 2 (NW SEMERC) £9.00

Fourteen more borders for *Phases*. These attractive borders can be either loaded into *Phases* to create a writing screen or dropped onto existing work. *RiscOs* compliant.

Phases Christmas Disc (NW SEMERC) £9.00

Picture writing screens and Christmas artwork and language activities. Children can design and print their own Christmas cards, letters to Father Christmas, Christmas stories, thank-you letters etc. Needs *Phases*. *RiscOs* compliant.

Phases Clip Art (NW SEMERC) £9.00

47 arrows, 28 flags, 12 maps and 12 pictures to illustrate your writing. Just drag the *!Paint* and *!Draw* icons on to you work and alter the size and position of the resulting picture to suit your layout. You can also edit any of the clip art.

RiscOs compliant.

Phases Extras Disc (NW SEMERC) £9.00

This disc contains a range of utilities and extras to enhance *Phases#2* or *Phases#3*. Extra fonts - an underline font and Braille font. Three Borders plus a file to remove borders from work. A range of example files show further uses of the *Designer* for letter writing and even producing family trees.

A utility program on the disc will also convert all copies of *Phases#2* to latest version (1.4) this is ideal if you have a number of work discs which need updating. *RiscOs* compliant.

Phases - Hungry Caterpillar (NW SEMERC) £9.00

A series of *Phases* picture writing screens and overlay keyboard overlays. The pack is designed to support the early reading book *The Very Hungry Caterpillar* by Eric Carle (published in hardback by Hamish Hamilton and in *Picture Puffin* by Viking Penguin). Needs *Phases#2* or *#3*. *RiscOs* compliant.

Picture It! (Appian Way Software) £29.50

A drawing package designed to enable users to create complex, topic-related scenes on the computer by accessing topic libraries or simple pictures. A range of topic discs are available. "Picture It!" is compatible with *!Draw* and *My World*.

RiscOs compliant.

Picture Store - Out and About (SEMERC) £18.00

A simple sequencing and matching program, using pictures, text and the overlay keyboard. An overlay designer allows creation of overlay files. The overlays can contain pictures, words, or both. The overlay can be used to match or sequence pictures, words or both on the screen.

Picture Store - Animals (NW SEMERC) £12.00

Animals files/overlays and pictures with a run time version of the *Picture Store* program. The existing files can be modified but to add new pictures you will need the full version of *Picture Store (Out and About)*. Needs overlay keyboard.

Picture Store - Christmas (NW SEMERC) £12.00

Christmas files/overlays and pictures with a run time version of the *Picture Store* program. The existing files can be modified but to add new pictures you will need the full version of *Picture Store (Out and About)*. Needs overlay keyboard.

Picture Store - Fruit and Veg. (NW SEMERC) £12.00

Fruit and Veg. files/overlays and pictures with a run time version of the *Picture Store* program. The existing files can be modified but to add new pictures you will need the full version of *Picture Store (Out and About)*. Needs overlay keyboard.

Picture Store - Numbers (NW SEMERC) £12.00

Numbers files/overlays and pictures with a run time version of the *Picture Store* program. The existing files can be modified but to add new pictures you will need the full version of *Picture Store (Out and About)*. Needs overlay keyboard.

Picture Store - Prepositions (NW SEMERC) £12.00

Preposition files/overlays and pictures with a run time version of the *Picture Store* program. The existing files can be modified but to add new pictures you will need the full version of *Picture Store (Out and About)*. Needs overlay keyboard.

Pigeon Hole (Northern Micromedia) £17.00

An introductory spreadsheet which makes use of elementary functions and graphs. Key stage 2 and 3.

Pinpoint (Longman Logotron) £99.00

Database designed to link with the data handling elements of Key Stages 3 and 4 of the National Curriculum for mathematics.. *Pinpoint* demystifies databases, aids analysis, simplifies statistics and positively promotes presentation. *Point's* question fields cope with all forms of information in a much deeper and more natural way than old-style databases and the formatting capabilities are extensive and simple to use. *RiscOs* compliant.

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Pip Goes to the Moon

(Northern Micromedia) £15.00

An adventure program which takes an infant through some simple decision making exercises in the form of basic mathematics, language and matching skills.

Pip Investigates Dinosaurs

(Northern Micromedia) £27.50

Guide Pip around the land of dinosaurs collecting pieces to solve a puzzle. Hazards are overcome by identifying through use of a database which dinosaur will aid Pip in his quest.

Pips Island Adventure

(Northern Micromedia) £22.00

The adventure takes children to a mysterious island to rescue Pip, hazards encountered on the way require the use of simple language and number skills to eventually rescue Pip. The pack also includes activity sheets and curriculum ideas.

Pirate (Chalksoft) £23.00

Adventure set in the days of the Pirates. In part 1 children become the Pirate Captain, steering their ship around an uncharted ocean, coping with problems, exploring islands and trying to capture passing ships. Logic, strategic thinking and map making help solve the puzzle. Positions may be saved to the disc at any time. Eventually the captain reaches Part 2 - an unknown island. *RiscOs* compliant.

Playground (Topologika) £29.95

Freddy Teddy can move around the playground using logo-like commands. *The Playground* encourages, sequencing, direction, counting, forward planning and conversation skills. The built-in sound effects and use of graphics encourage children to develop skills.

POD - Phobox Overlay Designer (Phobox) £20.00

POD is in two Parts:

!Designer provides mouse driven overlay design. Any area of the overlay keyboard can be assigned text or function keys.

!Concept runs the keyboard when installed. Overlays may be selected from a menu. Needs user port and overlay keyboard

Primary Collection

(Porters Primary Software) £7.00

Twenty two programs, originally written for the BBC microcomputer and converted to run on the Archimedes, mainly designed to develop a range of basic reading and mathematical skills.

Primary Font

(The Electronic Font Foundry) £19.00-£22.00

A specially designed font with simplified characters, designed to match the writing that young children are taught at school. The font is available in all Latin languages. *RiscOs* compliant.

Princess Rebecca (Le Computer) £20.00

This simple adventure program promotes discussion, reasoning, group decision making and co-operative planning as well as promoting problem solving skills. It can be used as the starting point for topics in mathematics and science, art, drama, P.E. and music.

RiscOs compliant.

Prof for the Archimedes (Unilab) £8.35

Designed for use with the *Fischertechnik* Interface. Uses the mouse to move and select commands. The interface can be connected to any 300/400 series Archimedes fitted with an I/O Podule and the MFA Archimedes Adapter or to the A3000 using Unilab's I/O Box 3000.

Programming in Ansi Standard C (Sigma Press) £16.95

This book takes a novice with some knowledge of BASIC up to a good working knowledge of the C language using the standards of the ANSI version 3 dialect to ensure maximum portability. Over 100 programs are used to illustrate each feature of the C language.

Puncman 1 and 2 (Chalksoft) £20.00

Puncman 1 covers full stops and capitals (only) - the first steps. Puncman 2 covers commas, question marks, capitals and full stops.

RiscOs compliant.

Puncman 3 and 4 (Chalksoft) £20.00

Puncman 3 covers speech marks and exclamation marks.

Puncman 4 covers all the marks from 1, 2, and 3.

RiscOs compliant.

!Punctuate (Xavier) £32.00

With three levels of presentation, users can progress from work on the basic principles of punctuation - from full stops to colons and dashes - to formats which test their knowledge in different ways.

!Punctuate can also be used for reading practice, encouraging the advanced skills of skim reading in the faster-timed settings.

Puzzle Program (Honoramead Software) £14.95

Involves building up pictures from segments. It has two sections: two part puzzle and four part. The two part requires the child to identify the other half from the alternatives offered.

The four part has a picture which is taken apart by the computer and which the child has to put together again.

Works with standard keyboard but also with mouse, switches and *Touch Window*.

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R **Reading Pack 2A (H S Software)** £11.02
Contains two arcade style reading games.
Soundsport (Word endings: "st", "ck", etc) has an Olympic flavour, with the players' sportsmen competing against the clock and each other in four events.
Scarechase (Vowel consonant diagraphs "or", "er", "ar") has an exhilarating skateboard chase. *RiscOs* compliant.

Reading Pack 3A (H S Software) £11.02
Monsterhunt (silent letters) Help the spaceman to search out the gruesome silent letter monsters and round them up.
Surfari ("-ti", "-si", "-ci") Has an heroic surfer braving crocodiles, monster waves and the cruel sea. *RiscOs* compliant.

Revelation (Longman Logotron) £76.00
Revelation is a complete painting and drawing system with full *RiscOs* multi-tasking capability, including multiple images and cut and paste between windows, with short, clear tear-off menus which allow easy combination of tools and powerful colour control and filter facilities which allow separation of colours and modification of colour balance and contrast. It was extensively tested in schools by Homerton and fits well with key stage 2, 3 and 4 of the National Curriculum and Scottish 5-14 Expressive Arts Levels C-E.
RiscOs compliant.

Revelation 2 (Longman Logotron) £119.00
Revelation 2 is an enhanced version of *Revelation*, offering extended colour misting, more powerful colour procession, graduated fills (linear and radial), comprehensive drawing tools (triangles parallelograms, polygons, and curves), improved pattern capability for selected and/or tessellated designs, and additional image effects (sharpening and dithering with selected colours). *RiscOs* compliant.

Revelation ImagePro (Longman Logotron) £119.00
Fully featured version of paint/image processing program aimed at the power and professional user. Enhanced tools and colour processing and special effects enable easy production of colour separations for the serious designer.
RiscOs compliant.

Reversals (Chalksoft) £20.00
Using a format similar to the *Puncman* programs, two seagulls help children get over reversing problems with letters such as d/b, p/q etc., displayed in a series of sentences with varying levels of vocabulary complexity. *RiscOs* compliant.

Roamer Maths (Northern Micromedia) £5.00
Materials for use with pupils who have special educational needs to introduce them to logo type activities through the use of Valiant *Roamer*. The pack includes a disc of many of the *Roamer* activities for screen logo.

S **Salut! (L'Ensouleiado Software)** £15.00
Suite of four discs for less able beginners covering colours, numbers, weather, time, clothes, body, town, market, cafe, damp months. Available in French, German, Spanish, Italian and English.

School Census (Northern Micromedia) £10.00
For the creation of school census files with *Key* data handling packages to correspond to questionnaires in printed/text file format. Needs *Key* package. Uses overlay keyboard.

Screenplay (Widgit Software) £35.00
Enables design and replay of animated sequences with a story added. Mainstream children can do this themselves. A wide range of teacher (or provided) activities can be used for special needs and infants, including visual stimulation, finding targets, understanding prepositions. *RiscOs* compliant.

Scribble (Honormead Software) £29.95
Easy to use art package. Can be tailored to meet individual needs and abilities. Features include: full range of tools, brush latching, save, load and print, user defined icons.

Sellardore Tales (Sherston Software) £24.00
Easy-to-read adventure consisting of *The Curse of Zorin*, an illustrated book which introduces children to the main characters and the *Black River Quest* computer adventure.

Sid and Mike (NW SEMERC) £4.80
A set of five programs which use the *Micromike*. The programs are intended to encourage vocal experimentation by very young children or to motivate children who are reluctant to vocalise.

Single Switch Trainer & Wiper (NW SEMERC) £4.80
Two programs for children with very severe learning difficulties. They help to reinforce the concept of cause and effect and help with early language development. The first is controlled by a *Micromike*, joystick or switch, the second by switches.

Snowflake (Hampshire Microtech. Centre) £30.00
The first of a small suite of programs developed to support learners explore rotation and reflection.

Soapbox (Xavier Educational Software) £35.00
Aims to help learning by emphasising the relationship between the spelling pattern and the vowel sound. Each word is pronounced, the consonant pattern is emphasised by highlighting, and contrasts are made between words with short and long vowel sounds. 400 words to get you started.

Social Sight Libraries (Widgit Software) £20.00ea.
Three extra libraries for *From Pictures to Words*. Each library has over 260 pictures with half the pictures 'core pictures', and half based around a theme. The three themes are: *Outdoor World*, *Cooking and Shopping* and *Health and Hygiene*.

A - Z Product Directory

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Speech System (PEP Associates) £25.00

Software speech synthesiser. Reads aloud plain English text from desktop applications (e.g. word processors), text entered at the keyboard and desktop text. Fully configurable. Has a SW1 interface to enable development of speech based applications. *RiscOs* compliant.

Spelling Week by Week (Chalksoft) £23.00

2000 words structured into six levels of spelling difficulty. Every week the computer sets between 12 and 20 graded words to learn: the following week it tests them. *RiscOs* compliant.

Spot on Games (Brilliant Computing) £20.00

Spot on Games introduces the idea of playing a game by pressing a switch. Six games on disc. *RiscOs* compliant.

Streetwise (Brilliant Computing) £20.00

Provides opportunity to do a number of activities based on realistic looking social sight signs. Designed as a resource for other related activities. *RiscOs* compliant.

Stylus II (Prime Resources) £24.00

A simple, uncluttered first entry word processor with an excellent overlay keyboard editor. A speech option allows children's stories to be spoken back to them and a word list feature allows children to select words from word list window. An overlay keyboard is optional. *RiscOs* compliant.

SUM thing (Resource) £19.95

Good graphics accompany the range of activities which include addition, subtraction, multiplication and division. The pupil can help the polar bear jump to the iceberg which is divisible by the chosen number. Other activities include putting numbers in order, number sentences, reading numbers, digital roots and problem solving, using maths in real life situations.

RiscOs compliant.

Switch 2 (NW SEMERC) £9.00

Simple 2 switch trainer program, uses moving pictures and digitised sounds to encourage the use of switches. Picture size and speed of movement can be changed. *RiscOs* compliant.

Switch On (Brilliant Computing) £20.00

Designed to develop awareness of cause and effect. There are Picture Matching and Reaction Timing activities on the disc. Works with switches, *Touch Screen*, *Touch Window*, keyboard and mouse buttons. *RiscOs* compliant.

Switch on Travel (Brilliant Computing) £20.00

As for *Switch On* but having police car, fire engines, phones etc. as rewards. *RiscOs* compliant.

Switch Patterns (Honormead Software) £10.95

Designed to help young children become familiar with using a switch on the computer. The child can build up a variety of patterns by simply pressing a switch.

Teachers Cupboard (Sherston) £27.50

Containing two adventures: *The Apple* and *The Crown*, children have to complete simple tasks and puzzles to help teacher. Visual discrimination, sequencing and a simple cloze procedure using pictures. Comes with an illustrated Story Book and Work Cards.

Overlay keyboard compatible, requires user port.

Teddy Bears Picnic (Sherston) £25.00

Maths and language activities based around the theme of the *Teddy Bears Picnic*, with *Post Bear*, *Sandwiches*, *Teatime*, *A Walk in the Woods*, *The Oak Tree* and *Edward Bear's Practice*.

Overlay keyboard compatible, requires user port.

Ted's Adventures (Brilliant Computing) £20.00

A very simple adventure/storybook activity. Ted (who can be a bear or a male or female character) goes to the park where he meets some characters and can make some decisions about which path he follows. There will be different things at the same location in successive uses. *RiscOs* compliant.

!Thinklink £30.00

(Xavier Educational Software)

To facilitate a number of language and cognitive skills: reading, memory, classification and sequence. By means of different exercises, all these skills may be given specific practice, while reading may be reinforced through any of the program tasks.

Time-It

(Communication Technology Supplies) £42.95

Enables pupils to time the speed of moving objects using the computer to process and display the results. Consists of two electronic timing gates similar to those used by downhill ski racers. These gates, which plug directly in the computer, can be positioned at varying distances to record the start and finish times of almost any moving object. It is ideal for the timing of buggies. Set the gates to the ready position, press the space bar and leave the computer to do the rest. Results are displayed and can be, saved, sorted and printed out.

Needs serial upgrade if using an A3000. *RiscOs* compliant.

Tiny Logo/Draw (Topologika) £29.95

Tiny Logo - An introduction to on screen control. Children click on icons that represent distances and directions to move an arrow leaving a trail. They can change colour and rub out mistakes. Later they can learn to build procedures.

Tiny Draw - An introductory painting package using lines, shapes and colour fills. Mistakes can be erased and there is an 'undo facility'.

Both programs allow saving and printing.

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information provided by suppliers

Tree (NW SEMERC) £12.00

Tree is a binary branching database (classification database). The program stores information by classifying objects and dividing them into subsets in the form of logical trees.

A list of objects is typed in as a list and the program asks for a question to subdivide the list with a yes or no answer. A diagram of the branching structure can be displayed.

Once an object is found there is an option to show a picture of the object. A find option allows you to go to any of the objects instantly. Movement up and down the tree structure allows children to investigate the tree.

Toby at the Seaside (Sherston) £25.00

Children enjoy a day at the Seaside with Punch, Judy and Toby the dog. Activities include Judy's Shop - numbers/money. Fun and Games - maths/Science. Ship Ahoy - floating/sinking and language work with Punch and Judy.

Overlay keyboard compatible, requires user port.

Touch and Learn (Panda Discs) £14.95

Content-free framework package for an overlay keyboard. Designed to allow both teachers and students with learning difficulties to design their own files.

Touch and Learn offers both database and question files, which can link with each other.

Touch Explorer (RESOURCE) £32.00

The Archimedes *Touch Explorer* takes the idea of text explorations even further: messages in selection of outline font, size, colour, from overlay or program; main functions from mouse, overlay keyboard and computer keyboard; longer messages, more levels - more possibilities; your own word processor is the "notepad", TE+ knows it is there. Longman Logotron/CKDriver supplied. Supports all overlay keyboards and speech synthesis. Needs overlay keyboard and user port. *RiscOs* compliant.

Touch Games 1 (Brilliant Computing) £20.00

Introduces user to using a touch input e.g. *Touch Window* or Microvitec *Touch Screen* or to using a mouse. There are six programs ranging from very simple touch or point activities to complex memory and sorting activities. *RiscOs* compliant.

Touch Games 2 (Brilliant Computing) £20.00

Five activities similar to those on *Touch Game 1* from simple touch or point to putting the right items in the right place on a picture - e.g. getting dressed. *RiscOs* compliant.

Touch 'n' Learn (Honormead Software) £15.95

A collection of programs which aim to introduce the user to the *Touch Window*.

Touch Window (Keyboard Technology) £244.00

Serial Link Kit £ 25.00

The *Touch Window* is a touch sensitive screen which is easily attached to your normal monitor, and can be easily removed for use as a graphics tablet similar to a concept keyboard.

The *Touch Window* is ideal for use with graphics and paint packages, multimedia presentations, as well as a wide range of education, and special needs software.

On the Archimedes range it can be used with all RISC OS compliant software in addition to a number of compatible programs which work off the desktop. The software driver developed exclusively by Keyboard Technology emulates all mouse functions with a light touch on the screen and has some novel features for ease of use.

RiscOs compliant

Touch Window (Lindis UK) £235.00

Touch Window is a pressure sensitive Touchscreen which is attached to a monitor or detached and used flat as a Graphics Tablet or alternative keyboard with overlay sheets. Works with *RiscOs* compliant software, includes overlay keyboard emulation. Serial upgrade needed for A3000 users.

Turtle Driver and One Key Logo

(Phobox Electronics) £9.95

One Key Logo provides one key logo commands to enable the youngest pupils to begin to explore logo.

Turtle Driver provides extra primitives to control a Jessop turtle from within Archimedes logo.

Needs user port and Jessop turtle on power supply.



Viewpoints (Sherston Software) £39.95

Viewpoints is an interactive environment for children to explore. Locations can be investigated in detail and photographs taken can be incorporated into the *Viewpoints* database or used as sprites in other applications.

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W **Weather Mapper (TAG-Invicta) £44.95**
Weathermapper provides lots of information about climate, weather systems, charts and folklore. Users are encouraged to add their own ideas to the growing class database and to draw and print their own weather maps, charts and graphs. *RiscOs* compliant (best if over 2Mb).

Weatherman (H S Software) £8.46
 Designed to help children develop a range of skills in Maths, Science and Geography, by creating weather forecasts that look just like the real ones on the television. *RiscOs* compliant.

What's It To You (Northern Micromedia) £15.00
 A content free program with applications across the whole humanities curriculum. The program allows teachers to create situations for pupils to explore, where attitudes and opinions will effect individual decision.

Wizard's Revenge (Sherston Software) £17.00
 Children face a variety of mathematical and language challenges, when they try to rescue the Dragon King. Areas covered include decision making, planning, logical thinking and teamwork. Complete with illustrated children's book.

Wizard's Return (Sherston Software) £21.00
 Sequel to the Wizard's Revenge. Once again children are required to save the Dragon King and face a series of mathematical problems based around the adventure, including multiples, angles/degrees, patterns, symmetry and tables.

Word Games (AVP Computing) £38.50
Snap, Memory and *Wordspace*: three games in the *Six French Games* series, but here they are user programmable. The package include a utility which makes up and prints out a wordsearch puzzle in seconds. Up to 20 words can be included and a separate set of clues e.g. the meanings of the hidden words, may be listed.
RiscOs compliant.

Word Puzzle (NW SEMERC) £12.00
 Allows wordsearches, worklinks anagrams and various other word puzzles to be quickly created. The files can be saved as wordpuzzle files for reloading and editing later or printed using standard printer drivers and outline font. The files can also be saved as !Draw files allowing used with other programs.
RiscOs compliant.

Words and Pictures (Chalksoft) £23.00
 Forty-seven important "early" words, Children match each word to one of four large, clear pictures in a bright, simple game format. The word is presented alone, or in a simple sentence, and success (after 10 words) earns a cartoon version of "Five Little Speckled Frogs". Performance record option and volume control.
RiscOs compliant.

Stop Press

Price and product news from the Concept Keyboard Company

Concept Keyboard A4-128 (Concept Keyboard Company) £96.00
 Concept membrane keyboards when used with the vast range of software written for them have applications throughout the National Curriculum at all age and ability levels, adding to or replacing other keyboards they give skilled or less skilled people easy use of computers.

Parallel version needs a user port or a CKAI interface. Serial version needs a serial port.

Concept Keyboard A3-128 (Concept Keyboard Company) £99.00
 As the A4 but bigger!

Concept Universal 2010 in A3 or A4 (Concept Keyboard Company) £TBA
 A combined serial and parallel Concept Keyboard. Operates as all previous models with extra features of Touch Windows; data compatibility; fully programmable keys or blocks. Further functions extending performance of previous models. Works with any port.

CKAI Interface (Concept Keyboard Company) £29.00
 A budget priced user port for the Archimedes range of computers and the Concept Keyboard where no user port has been fitted as standard.

