



# PRESS INFORMATION

Sinclair Research Ltd,  
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Cambridge,  
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Telephone: (0223) 312919.

# sinclair

July 1980

## SINCLAIR PERSONAL COMPUTER

### TECHNICAL INFORMATION

1. The Sinclair personal computer employs the Z80A microprocessor chip supplied by the Nippon Electric Company (NEC).
2. The Sinclair BASIC interpreter provides some important advantages. Examples include:-
  - Single stroke key word entry. In most computers it is necessary to type out any key word in full, ie P R I N T when print is required. Only that key with the word "PRINT" above it need be hit with the ZX80, and no shift is required since the machine anticipates a key word knowing that it follows a line number. This feature eliminates much tiresome typing.
  - Powerful edit facilities.
  - Every statement line is syntax checked as it is entered and only syntactically correct lines can be added to the program list. The line being typed in appears at the bottom of the screen and only joins those lines at the top if it is free of syntax errors. If there is a syntax error then a marker identifies it, so that it may be eliminated. This unique feature helps ensure the production of an error-free program and is of particular value for beginners.

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- The BASIC has good string handling capability. There can be up to a maximum of 26 string variables and the strings can be of any length. All relational tests may be used on the strings so that, for example, strings may be compared. The machine has string input so that the computer can request a line of text (string) when necessary. Strings do not need to be dimensioned, which is an unusual benefit, and up to a maximum of twenty-six single dimension arrays are possible.

Nesting for loops is also permitted up to a maximum of twenty-six. Integer variables may be of any length. The BASIC is capable of handling full Boolean arithmetic, conditional expressions, etc.

- Built-in functions are:-

CHR \$

STR \$

TL \$

PEEK

CODE

RND

USR

ABS

- The randomise function is of particular value for games and secret codes etc., as well as being powerful in more serious applications.
- A timer is available under program control.
- PEEK and POKE enable the entry of machine code instructions and USR causes a jump to a users machine language sub-routine.

3. The computer has a complete alpha-numeric keyboard using the standard "typewriter" configuration.
4. It has high resolution graphics with 24 standard graphic symbols being available. Any alpha-numeric or graphic symbol may be reversed. The display consists of 24 lines of 32 characters each.
5. An expansion bus available at the back by edge connectors brings out all lines including address and data lines so that there is no restriction on the extension of the machine. Plug in boards are available to increase the memory capacity. Memory expansion boards, which take up to 3K bytes, are £12.00 each and RAM memory chips of standard 1K bytes capacity are £16.00.

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Wednesday, February 18, 1981

## SINCLAIR FLAT SCREEN TV TUBE - TECHNICAL BACKGROUND

The Sinclair tube measuring approx. 4 x 2 x 3/4 in., is three times brighter, requires between one quarter and one tenth the power, and is half the volume of a conventional CRT with the same size screen.

It is assembled from just two sheets of glass, a flat front plate and a vacuum-formed backing plate. The phosphor screen is coated on the interior of the backing plate and is viewed through the front face from the same side that the electrons strike. As a result, the brightness is more than double that of a conventional CRT with the same beam energy.

The electron gun is set to one side of the screen with its axis parallel to the screen. Two sets of electrostatic deflection plates in the gun assembly provide horizontal and vertical scanning, and a third set between the phosphor screen and front face bends the electron beam toward the screen. Without this additional focusing field, the angle of beam incidence would vary across the screen, spreading the beam spot into an ellipse. The focusing electrode is formed on the front face by a transparent tin-oxide coating.

If uncorrected, folding the electron optics would distort the raster scan to produce a keystone-shaped frame, in which the vertical edges are curved and the horizontal edges form the

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SR/39

sides of a trapezium. Both electronic and optical techniques are used to correct for this distortion.

First, the screen height is reduced by as much as half but the width kept constant. This narrows the angle subtended by the electron beam onto the screen, reducing both the distortion and the deflection power. The picture height is restored optically by means of a Fresnel lens, which can be inexpensively formed in a flat plastic faceplate. The trapezium distortion is eliminated by applying a correcting modulation to the vertical plates.

The tube assembly lends itself to low-cost mass production and has significantly fewer components than a conventional CRT.

Connections to the electron gun and deflection assembly, are screen-printed onto the faceplate, and the assembly is attached in a single operation by a conductive frit.

This basic tube can be easily modified for projection TV systems. Both for cost and for optical reasons, a projection tube should ideally be as small as possible yet must be driven hard to achieve a bright projected image. The cooling problems to prevent phosphor damage are severe in a conventional tube, but since with the Sinclair's CRT the image is viewed from the side of the phosphor that the electrons strike, the other side of the screen can be connected directly to a heat sink.

The high brightness attainable with the thin CRTs makes them ideal for use in projection systems, and Sinclair foresees a three-tube projection TV with a 50 inch diagonal full-colour display. The optics and electronics could fit into a shoe-box-sized unit projecting onto a wall-mounted screen.

In April, Clive Sinclair will be presenting a paper on the development of the Sinclair tube to The Society for Information Display (SID) in the USA.

No further details are currently available.

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Wednesday, 18th February, 1981

### SINCLAIR FLAT SCREEN TV MANUFACTURE FOR DUNDEE - £5 MILLION INVESTMENT - 1000 NEW JOBS

A £5 million, four year capital investment programme for production of the Sinclair Research (SRL) flat screen tube and Microvision pocket TV in Scotland was announced today by the company's founder, Clive Sinclair.

Manufacture of this unique tube and television has been contracted to the Timex Corporation in Dundee, where it will create 250 new jobs in 1982. At the end of this first, £1.25 million phase, the capacity will exist to produce tubes at a rate of 1,000,000 per year.

Phases 2 and 3 will be completed over the following three years and, by 1985, it is planned that around 1,000 people will be employed on the project. Production capacities for these phases are not being revealed.

Flat screen tubes will be incorporated initially into a multi-standard Sinclair Microvision pocket TV with FM radio which will be assembled alongside the tube production line. Designed to retail at around £50, this new portable TV will measure approx. 6 x 4 x 1 in. and weigh just a few ounces. It will be able to receive transmissions almost anywhere in the world and already a major USA retail chain has plans to order 1/3 million units during the first year of production.

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SR39a

The manufacturing agreement is the culmination of a 5 year, £1 million plus, part NRDC-backed research and development project, to perfect not only the technical aspects of the flat screen cathode ray tube (CRT) but also the techniques and methods for automating its production.

The new investment is funded by Sinclair Research supported by industry grants. SEPD - the Scottish Economic Planning Department - is to provide £1.5 million and there will be a regional development grant of £1.1 million, 22% of the capital employed - both spread over the 4 year period.

Sinclair Research, which will own all equipment and fund its contribution from profits deriving from its successful personal computer business, has an exclusive licence from the NRDC, and attains total ownership of the tube technology after certain payments have been made. There will be no equity participation by external investors.

A number of important technical breakthroughs have been achieved in the development of the flat screen TV tube, including perfection of a new method of vacuum forming glassware; a volume reduction of 2½ times over a conventional CRT; and a power requirement reduction 5 times better than previously achieved.

A £100,000 plus pilot production plant at SRL's St Ives, Cambridge research and development facility has been producing flat screen tubes for the past 18 months at rates of up to 50 per day.

The SRL decision to select a UK-based sub-contractor for volume production was taken after exhaustive appraisal of the international alternatives, particularly an in-depth examination of facilities and finance in Hong Kong.

According to Clive Sinclair, Timex was awarded the contract because of its renowned ability to design and make automatic production machinery and its eminence in precision engineering.

Sinclair Research is a private company, based in Cambridge and 95% owned by Mr Clive Sinclair, age 40. Branch offices have also been opened in Boston, USA, Munich and Paris. The company was formed in July 1979 to conceive and develop new products and currently employs 25 people.

In February 1980 it launched the Sinclair ZX80 personal computer through its associate company, Science of Cambridge. Over 50,000 were sold in its first 9 months, over 50% abroad. Company turnover in this period totalled £3,184,000 and profits £774,000.

The ZX80 is currently being produced at a rate of 10,000 units per month, 70% of which are being exported.

In addition to continuing work on personal computer and peripheral product development, SRL is progressing research in the electric vehicle field.

Issued on behalf of Sinclair Research Limited, 6 King's Parade, Cambridge CB2 1SN. Telephone: 0223 312919.

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Additional Media Contacts

Roy Easson, National Research Development Corporation, Kingsgate House, 66 Victoria Street, London SW1. Tel: 01-828 3400.

David Dolan, Timex Corporation, Camperdown Factory, Harrison Road, Dundee. Tel: 0382 819211.

Walter Dixon, Scottish Economic Planning Department, Alhambra House, 45 Waterloo Street, Glasgow G2. Tel: 041-221 5296.



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# SCOTTISH OFFICE PRESS NOTICE

SINCLAIR RESEARCH LIMITED

Welcome by Secretary of State for Scotland

Mr George Younger MP, Secretary of State for Scotland, today welcomed the plans announced by Sinclair Research Limited of Cambridge to produce a revolutionary pocket size television set. This will be manufactured on behalf of Sinclair Research Limited by Timex Limited at Dundee and is expected to create at least 1,000 new jobs there by 1985.

Commenting on the announcement, Mr Younger said:-

"On behalf of the Government, I take great pleasure in welcoming this project to Dundee. Apart from the contribution which it will make to employment prospects locally, it will also exploit the wealth of skills which are available at Timex for intricate engineering and assembly work.

The project represents a successful outcome to many years of intensive research within the United Kingdom by a British Company into the development of a low cost miniature flat TV tube. The pioneer work in this field has been ably supported by the National Research Development Corporation. The Company are now poised to exploit their ideas commercially by moving quickly into large scale production.

I am pleased that the Scottish Office was able to offer selective financial assistance under S7 of the Industry Act 1972 to Sinclair Research Limited towards the substantial investment costs involved. The Sinclair Company considered a number of alternative locations, including overseas, and their final choice was greatly influenced by this offer of help.

Timex's close involvement in the manufacturing arrangements again reflects the high standing of both management and workforce at Dundee. The continuing success of the Timex Company in supplementing its worldwide reputation as a watchmaker by attracting high technology mobile enterprises to Scotland is to be applauded.

I congratulate everyone concerned and wish the project every success."

February 18, 1981

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Thursday March 5, 1981

NEW SINCLAIR PERSONAL COMPUTER BREAKS £70  
NEW PRINTER, NEW SOFTWARE ALSO ANNOUNCED

A new, full facility, personal computer from Sinclair Research is priced at only £69.95 inc VAT and is now in production at the Timex factory in Dundee. Based around an innovative four-chip design, the Sinclair ZX81 also sells in kit form at £49.95.inc VAT.

Export of this highly portable computer, measuring 6 x 6½ x 1½ in (167 x 175 x 40 mm) and weighing 12 oz (350 gm), will commence this summer.

At a London press conference today, March 5, Clive Sinclair also announced availability of a new range of cassette-based software and gave advance information on a new £50 printer, both developed by Sinclair Research in Cambridge.

He also claimed that his company's ZX80 was now outselling all other personal computers put together in the UK and he confidently predicted that by the end of 1981 Sinclair Research will considerably exceed the production volume of any other personal computer manufacturer in the world.

Key design achievement in the Sinclair ZX81, which is constructed in durable, black ABS plastic, is a new master-chip custom-built in the UK by Ferranti. It replaces 18 chips in the ZX80

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and adds important new circuitry. Incorporating a Z80A microprocessor, the ZX81 has a powerful 8K BASIC ROM as the 'trained intelligence' of the machine which enables it to operate in floating-point arithmetic and give full scientific functions.

The new computer embodies all the important features of its predecessor, the internationally successful Sinclair ZX80 computer, these include:

- single stroke key word entry
- powerful edit facilities
- automatic syntax checking of every statement line
- a display consisting of 24 lines of 32 characters

Significant new, advanced features, in addition to a print-drive facility, include the ZX81's ability to operate in two software selectable modes, FAST and NORMAL, FAST being four times the speed of NORMAL. In NORMAL the Sinclair ZX81 will both compute and display simultaneously which allows continuously moving, flicker-free graphics.

A 40-key touch sensitive membrane keyboard gives the equivalent of 91 keys using function mode and single-press key-word system. Graphics mode enables an additional 20 graphical and 54 inverse video characters to be entered directly from the keyboard. The graphics display can also be divided into 64 x 44 pixels, each of which may be 'blackened' in using PLOT and 'whited' out using UNPLOT under program control.

Programs can be loaded and saved on a conventional home cassette player and reselected from the computer keyboard. The cassette interface facility has been improved and programs are given names, and the ZX81 will search through a tape for the required program.

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Numbers in the Sinclair ZX81 are stored in 5 bytes in floating-point binary form providing a range of  $\pm 3 \times 10^{-39}$  to  $\pm 7 \times 10^{38}$  and accurate to  $9\frac{1}{2}$  decimal digits. The new computer also features full log, trig and their inverse functions and handles multi-dimensional numerical and string arrays.

A comprehensive 200 page instruction manual is provided with the Sinclair ZX81 and includes a new course in BASIC programming - the increasingly 'standard' high level language for personal computers.

For flexibility of use, the ZX81 has been built without a dedicated VDU (Visual Display Unit), but with the facility to be plugged directly into the aerial socket of any domestic colour or black and white TV. This also enables screens with a variety of sizes to be used.

The Sinclair ZX81 is available, ready-assembled, with mains adaptor and instruction manual, at £69.95 inc VAT. It is available in kit-form at £49.95, including the instruction manual, with mains adaptor separate at £8.95.

#### Accessories

The new 8K BASIC ROM used in the ZX81 will shortly be available to ZX80 users as a drop-in replacement chip, supplied with new keyboard template and operating manual. It will enable the ZX80 to offer all ZX81 features except flicker-free graphics. Price £19.95 inc VAT.

As an accessory compatible with both ZX80 and ZX81, the 16K BYTE RAM pack at £49.95 inc VAT is a high-value module designed to provide substantial add-on memory capacity. It can be used for program storage or as a database, but requires no additional power.

Full technical specification of the Sinclair ZX81 personal computer and associated products are given on a new data sheet, published in March 1981 and available from Sinclair Research, Freepost 7, Cambridge CB2 1YY.

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Thursday, March 5, 1981

## NEW SINCLAIR PRINTER AND CASSETTE-BASED SOFTWARE

The Sinclair ZX Printer has been designed especially for use with Sinclair personal computers - the ZX81 and ZX80 with retrofit 8K BASIC ROM and will be available in June 1981 for around £50. It offers full alphanumerics across 32 columns plus sophisticated graphics. Special features include COPY, which prints out exactly what is on the TV screen, without further instructions.

Cassette-Based Software - Four cassettes are immediately available at £3.95 each. The first is operational with 1K RAM, the others requiring 16K RAM.

They are 'Games', containing six dynamic graphics games including the famous Game of Life; 'Junior Education', containing seven programs designed to teach 7-11 year olds maths and spelling; 'Business and Household' with programs including a telephone address book and bank account; and a further 'Games' cassette containing six programs.

Two more cassettes, 'Junior Education' (operational 1K RAM) and the 'Z80 Assembler' (16K RAM), for those interested in writing Z80 machine code, will be available by the end of March.

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## PRESS

Two further items will be available during April-May. The first will be 'Learning Lab', a book and six or eight cassettes in a complete storage/presentation case aimed at the novice in the computer field. The second, 'Language Learning', developed in co-operation with Western-Language Centre, will offer a suite of programs to teach modern languages.

### NEW SINCLAIR PRINTERS AND CASSETTE-BASED SOFTWARE

Future owners of the ZX81 will be welcome to submit programs for evaluation and possible publication. Royalties will be paid.

Further information is not available at present.

Issued on behalf of Sinclair Research Ltd., 6 King's Parade, Cambridge CB2 1SN. Telephone: 0223 312919.

Cassette-Based Software - Four cassettes are immediately available at £1.95 each. The first is operational with the ZX81, the others requiring 16K RAM.

They are 'Games', containing six dynamic graphics games including the famous Game of Life; 'Junior Education', containing seven programs designed to teach 7-11 year olds maths and spelling; 'Business and Household' with programs including a telephone address book and bank account; and a further 'Games' cassette containing six programs.

Two more cassettes, 'Junior Education' (operational in RAM) and the '280 Assembler' (16K RAM), for those interested in writing 280 machine code, will be available by the end of March.

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Thursday, March 5, 1981

## SINCLAIR RESEARCH - BACKGROUND INFORMATION

Sinclair Research is a private company, based in Cambridge and 95% owned by Mr Clive Sinclair, 40. Branch offices have also been opened in Boston USA, Munich and Paris. The company was formed in July 1979 to conceive and develop new products and currently employs 25 people.

In February 1980, it launched the Sinclair ZX80 personal computer through its associate company, Science of Cambridge. Over 50,000 were sold in its first nine months, over 50% abroad. Company turnover in this period totalled £3,184,000 and profits £774,000. From March 1, 1981 all the trading activities for Science of Cambridge Ltd and Sinclair Research Ltd are amalgamated under the name of Sinclair Research.

The ZX80 is currently being produced at the rate of 10,000 units per month, 70% of which are being exported. Manufacture of the new ZX81 personal computer commenced in early March at the Timex factory in Dundee, Scotland.

Last month Sinclair announced a £5 million, four-year capital investment programme for production of the Sinclair Research (SRL) flat screen tube and Microvision pocket TV, also at Timex. At the end of the first £1.25m phase in 1982 the capacity will exist to produce tubes at the rate of 1,000,000 per year.

In addition to working on personal computers, peripheral products and flat screen CRTs, SRL is progressing research in the electric vehicle field.

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April 6, 1981

# sinclair

## MICROCOMPUTERS FOR SCHOOLS - SINCLAIR TO LAUNCH ALTERNATIVE SCHEME AT LESS THAN HALF COST

Clive Sinclair, Britain's leading producer of personal computers, today welcomed the Government's new initiative in offering to assist schools in their purchase of computers. However, he regretted the fact that his own company, Sinclair Research Ltd., was not asked for its views on the Government's proposed scheme nor given the opportunity to tender.

Mr Sinclair said today: "The scheme seems to be a direct consequence of the concepts I and others have been advocating for several years, but as advertised, it suffers from having been put together too hastily and without adequate attention having been paid to the needs of schools. Nor has a full enough review been conducted of the latest products available through British technology to allow schools a choice of the most modern equipment available - at the most economical price.

"As a company, we have several hundred computers in use in schools even today and they were purchased for less than is being asked by the Government under their new scheme. And we have monitored their progress and now know more clearly the needs of the future.

"Our scheme will offer equivalent computers for less than half the cost of those recommended by the Government and the BBC. More

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than that, ours will offer the addition of a printer - essential when pupils' capabilities are to be checked under examination conditions.



"The basic pack without printer will be offered to schools with a Sinclair subsidy of half the full price, leaving the school to pay only about £60 as compared with the minimum of £130 under the cheapest Government/BBC scheme.

"And with the printer the product will be offered at about £90. It is impossible to compare prices on this because the rivals do not offer such a facility. Our products, like the others on offer are British made."

Sinclair Research is now claimed to be producing more computers per day than any other company worldwide. The Sinclair ZX80 personal computer is currently being produced at a rate of 10,000 units per month, more than 70% of which are being exported. Manufacture of the new ZX81, which commenced in early March at the Timex factory in Dundee, is running at a similar level.

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"As a company, we have several hundred computers in use in schools even today and they were purchased for less than are being asked by the Government under their new scheme. And we have monitored their progress and now know more clearly the needs of the future.

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21 May 1981

## SINCLAIR ANNOUNCES LOW COST SCHOOL COMPUTER SCHEME

Sinclair Research Ltd. (SRL), in association with Griffin & George Ltd., is offering UK secondary schools a low cost subsidised computer package. For £65 schools can obtain the Sinclair ZX81 personal computer, the add-on memory 16K RAM pack and the ZX81 Basic manual. The package would normally retail at £119.90 inc. VAT.

Each school will be entitled to one subsidised package under the scheme, which will be administered by Griffin & George Ltd., SRL's official educational distributor. All UK secondary schools, state and private, will be eligible. This marks an extension on the government scheme which is currently open only to those schools without a microcomputer. SRL's scheme is not, at this time, being offered to primary or middle schools, or to other educational establishments, nor will the ZX81 and the 16K RAM pack separately be available at subsidised prices.

Announcing the scheme today, Clive Sinclair, Chairman of SRL, commented "as a company we are strongly committed to the development of computer skills in education and welcomed the government's initiative in offering schools assistance with computer purchase. We felt however that the scheme failed properly to assess school needs and to review the available equipment which could have provided schools with a wide and economic choice.

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"At £65, about half the cost to schools of the reported price of the cheapest government recommended computer, we are offering a full facility computer with a proven track record - some 15,000 ZX81s are already in use. We believe that it meets principal teaching requirements, and can provide many school students with practical hands-on experience, at a very low cost.

"Our experience suggests that the ZX81 is a valuable tool for school computing courses, notably with its syntax check, single touch keyword and moving graphics facilities. The ZX81 uses a powerful version of Basic which, originally intended for beginners, is now the most widely-used computer language in the world."

The scheme will be open to orders received by Griffin & George Ltd. between 1st June and the 31st July 1981 inclusive. Schools ordering the initial package will be offered the new ZX Printer at a special subsidised price in the autumn. The Printer will be particularly valuable for school examinations. Griffin & George will monitor the scheme closely and review its progress with Sinclair Research after this offer closes. The initial Sinclair package is available at £65 exclusive of VAT, which is reclaimable by most schools.

#### NOTE TO EDITORS

Sinclair Research Ltd. (SRL) is a private company, based in Cambridge and 95% owned by Mr Clive Sinclair, 40. The company was first formed in 1977 to conceive and develop new products. SRLs total microcomputer production is now running at over 20,000 per month and the company is claimed to be producing more units per day than any other company worldwide. The Sinclair ZX81 was launched in March 1981 and to date over 25,000 units have been sold. In the UK the ZX81 has replaced the ZX80 and will be available overseas from September. Sales of the ZX80, first launched in February 1980, are in excess of 70,000 worldwide.

Griffin & George Ltd. has supplied science equipment to the educational sector since the turn of the century. It has been

selling computers since 1978 and first linked with Sinclair Research last year. Griffin & George's head office is at: Ealing Road, Wembley HA0 1HJ. Tel: 01-997 7977. Telex: 21126.

#### SINCLAIR ZX81 AND ACCESSORIES: BACKGROUND

The Sinclair ZX81 is a highly portable computer which measures 6 x 6½ x 1½in (167 x 175 x 40mm) and weighs 12oz (350gm). Key design achievement in the Sinclair ZX81, which is constructed in durable, black, ABS plastic, is a new master-chip designed by Sinclair and custom-built in the UK by Ferranti. Incorporating a Z80A microprocessor, the ZX81 has a powerful 8K Basic ROM as the 'trained intelligence' of the machine which enables it to operate in floating-point arithmetic and give full scientific functions.

Programs can be loaded and saved on a conventional home cassette player and reselected from the computer keyboard. The cassette interface facility enables programs to be named and easily retrieved. For flexibility of use, the ZX81 has been built without a dedicated VDU (Visual Display Unit), but with the facility to be plugged directly into the aerial socket of any domestic colour or black and white TV. The Sinclair ZX81 normally retails at £69.95 inc. VAT and at £49.95 in kit form.

The Sinclair ZX Printer, designed especially for use with Sinclair personal computer,<sup>s</sup> the ZX81 (and ZX80 with retrofit 8K Basic ROM) will be available in early June 1981 for around £50, normal retail price. It offers full alphanumeric across 32 columns plus sophisticated graphics. Special features include COPY which prints out exactly what is on the TV screen, without further instructions.

As an accessory compatible with both ZX80 and ZX81, the 16K BYTE pack is a high-value module designed to provide substantial add-on memory capacity. It can be used for program storage or as a database, but requires no additional power. It normally retails at £49.95 inc. VAT.

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## PRESS INFORMATION

**sinclair**  
**BROWNE**

18 June 1981

NEW PUBLISHING COMPANY, SINCLAIR BROWNE, FORMED

Clive Sinclair, chairman of Sinclair Research, and Patrick Browne, the Cambridge bookseller, announced today the formation of a new publishing company, Sinclair Browne, at an inaugural press conference in London.

Sinclair Browne will initially publish about 20 books a year, fiction and non-fiction, 10 in the spring and 10 in the autumn. In September the company will launch a Translation Book Club, which will draw on already published material and concentrate on important contemporary works.

Explaining the new company's approach to publishing Patrick Browne commented: "We believe that there exist a number of market sectors which are at present covered inadequately or which offer major opportunities for the future. We aim to reach the audience of concerned, intelligent laymen and we intend that in general all the books on our lists, fiction and non-fiction, should reflect a progressive approach to the problems of contemporary society."

"Clive and I very much view the new company as a long-term venture and are prepared to put substantial capital into it. We shall aim always to maintain a high standard for quality." Clive Sinclair, who is the new company's chairman, and Patrick Browne, the managing director, will hold equal shares in the new partnership.

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SR54A FOR FURTHER INFORMATION PLEASE CONTACT BILL NICHOLS OR  
MIKE MORLEY ON 01-723 3444

Sinclair Browne aims to be represented and distributed by a leading publisher so that their books will be available in all leading bookshops and easily accessible to booksellers. Production will be handled by one of the comprehensive service specialists in the field. In most cases publication will be simultaneous in hardback and paperback.

Where appropriate Sinclair Browne will make use of consulting editors and is in the process of commissioning a number of books. Advertising and promotion will be the company's own responsibility.

On its non-fiction list Sinclair Browne will publish, and in some cases commission books of contemporary political and social interest which take an unprejudiced look at British traditions and institutions.

Sinclair Browne intends that new British novels published on the fiction list will demonstrate a similar critical and reformist concern. The new £5000 "Sinclair Prize for Fiction" announced today aims to encourage this type of writing.

Sinclair Browne will also actively seek out and publish translations of important foreign novels on its fiction list. The company believes that there exists a major neglected area in modern translation publishing between the very popular and the avant-garde.

The new Translation Book Club will follow the rules laid down for bookclubs by the Publishers Association and Sinclair Browne believes that its activities should help to promote sales of translated books in the bookshops. Members will be offered already published translations and forthcoming items at a 40% discount on published prices. It is anticipated that the Club will be launched in September. Sinclair Browne welcomes approaches from publishers who have suitable material for the Club.

Sinclair Browne/3

## PRESS INFORMATION

sinclair  
BROWNE

From time to time Sinclair Browne proposes to publish specialist books on the life and work of painters and sculptors at present unrepresented on English language lists. The company is also interested in publishing, on an ad hoc basis, paperback editions of existing books and reprints of interesting books now out of print.

Further details are available from Sinclair Browne Ltd., 10 Archway Close, London N19 3TD. Tel: 01-263 3438/9.

Clive Sinclair, chairman of Sinclair Research, and Patrick Browne, the Cambridge bookseller, announced today the formation of a new publishing company, Sinclair Browne, at an inaugural press conference in London.

- Ends -

Sinclair Browne will initially publish about 20 books a year, fiction and non-fiction, 10 in the spring and 10 in the autumn. In September the company will launch a Translation Book Club, which will draw on already published material and concentrate on important contemporary works.

Explaining the new company's approach to publishing Patrick Browne commented: "We believe that there exist a number of market sectors which are at present covered inadequately or which offer major opportunities for the future. We aim to reach the audience of concerned, intelligent laymen and we intend that in general all the books on our lists, fiction and non-fiction, should reflect a progressive approach to the problems of contemporary society."

"Clive and I very much view the new company as a long-term venture and are prepared to put substantial capital into it. We shall aim always to maintain a high standard for quality." Clive Sinclair, who is the new company's chairman, and Patrick Browne, the managing director, will hold equal shares in the new partnership.

## PRESS INFORMATION

**sinclair**  
**BROWNE**

18 June 1981

### CLIVE SINCLAIR AND PATRICK BROWNE - BACKGROUND INFORMATION

Clive Sinclair, 40, chairman of Sinclair Browne, began his career in publishing and worked as a technical journalist before founding his first company, Sinclair Radionics, in 1962.

Beginning with radio and amplifier kits he has developed a reputation as a pioneer in the field of consumer electronics and has achieved two 'world-firsts', the 'Executive' pocket calculator in 1972 and the 'Microvision' pocket TV in 1977. In 1975 Sinclair won the Queen's Award to Industry for both export achievement and technological innovation.

Sinclair Research, Clive Sinclair's present company, has designed and developed the highly successful ZX80 and ZX81 personal computers. The company is currently producing around 20,000 computers per month with sales running at an annualised level of £20,000,000. In February 1981 Sinclair Research announced a £5,000,000, four-year capital investment programme for production of the new Sinclair flat-screen tube and Microvision pocket TV.

Clive Sinclair, who is married with three children, lives in Cambridge within walking distance of his office. Outside electronics his interests include the theatre, poetry, music and mathematics. He is a trustee of the Cambridge Symphony Orchestra and a sponsor of the Cambridge Poetry Festival.

From: DANIEL J. EDELMAN LIMITED · Public Relations  
STANHOPE HOUSE · STANHOPE PLACE · LONDON W2 2HH · TEL 01-723 3444

Patrick Browne, 46, managing director of Sinclair Browne, was educated at Eton and Magdalene College, Cambridge where he took French, Italian and Social Anthropology. A strong linguist, he studied Russian at the School of Slavonic Studies in London and Norwegian during a year in Norway.

Following Cambridge and service in the Royal Navy he worked as a freelance journalist in London. From 1963-1976 he taught English as a foreign language both in Cambridge and abroad in Italy and Saudi Arabia.

Patrick Browne opened the now well-established Browne's Bookshop in Cambridge in partnership with his wife in 1976. Outside books and bookselling his interests include squash, skiing, languages and politics.

Beginning with radio and amplifier kits he has developed a reputation as a pioneer in the field of consumer electronics and has achieved two 'world-firsts', the 'Executive' pocket calculator in 1972 and the 'Microvision' pocket TV in 1977. In 1975 Sinclair won the Queen's Award to Industry for both export achievement and technological innovation.

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Press

Release

President: The Lord Goodman CH

**National Book League**

Book House  
45 East Hill  
Wandsworth  
London SW18 2QZ  
Tel: 01-870 9055

18 June 1981

THE SINCLAIR PRIZE FOR FICTION - RULES

1. THE PRIZE

- a. The Prize is worth £5,000. It will be awarded to the author of the best full-length novel, in the opinion of the judges, that is eligible for the Prize. Only in exceptional circumstances, and then only with the prior approval of Sinclair Research Ltd, may the Prize be split between two authors.
- b. The panel of judges will be chosen by the National Book League in conjunction with Sinclair Research Ltd, and the Prize administered by the National Book League.
- c. The Prize will be given to a novel which is not only of great literary merit but also of social and political significance.

2. SUBMISSIONS

- a. Three copies of the manuscript, including a top copy, should be submitted. Entries must be typewritten in double spacing on one side of A4 paper only. They must be not less than 60,000 words in length and must have been written originally in the English language.

contd.... /

Director:  
Martyn Goff OBE

- b The manuscript must be previously unpublished and must be submitted by the author.
- c The author's name must not appear on the typescript. The name, address and telephone number of the author, together with a brief biographical note, should be set out on the entry form and attached to the manuscript.
- d The decision of the judges as to whether a manuscript is eligible is binding.
- e The closing date for entries will be June 30 1982. The results will be announced in November 1982.
- f No manuscripts will be returned unless the author includes a large stamped addressed envelope.

3. PUBLICATION

- a Sinclair Browne Ltd retain the option to first publish the winning novel and/or any other novel submitted for the Prize.
- b All rights on any novel to be published by Sinclair Browne will be the subject of negotiation between Sinclair Browne and the author.

2. SUBMISSIONS

FOR FURTHER INFORMATION PLEASE CONTACT BARBARA BUCKLEY  
ON 01-870 9055

Entries must be typewritten in double spacing on one side of A4 paper only. They must be not less than 40,000 words in length and must have been written originally in the English language.

# PRESS INFORMATION

Sinclair Research Ltd,  
6 King's Parade,  
Cambridge,  
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England  
Telephone: (0223) 312919

# sinclair

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21 July 1981

## YOUR OWN CHRISTMAS COMPUTER - THANKS TO SINCLAIR

The world of computer technology is now in reach of almost any home, thanks to consumer electronics pioneer, Clive Sinclair. Easy to use and understand Sinclair's new high-performance, full-facility ZX81 personal computer costs less than £70.

At a time of growing public awareness of the rapid changes brought about by microelectronics the Sinclair ZX81 brings the benefits and knowledge of microchip technology into the home at very low cost.

Sinclair's own inventions have marked the speed of change. His world-first pocket calculator cost more than the ZX81 - a then 'revolutionary' £79, just nine years ago.

With an accompanying range of accessories and software, the ZX81 makes an ideal introduction to computing for any member of the family, and is a powerful tool for the experienced user.

Extremely portable, the ZX81 measures 6 x 6½ x 1½ in (167 x 175 x 40 mm) and weighs 12 oz (350 gm).

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From: **DANIEL J. EDELMAN LIMITED · Public Relations**  
STANHOPE HOUSE · STANHOPE PLACE · LONDON W2 2HH · TEL 01-723 3444

FOR FURTHER INFORMATION PLEASE CONTACT BILL NICHOLS ON 01-723 3444  
SR/59A

For maximum flexibility of use, the ZX81 has been built without an integrated video display unit. Instead it may be plugged directly into the aerial socket of any domestic colour or black and white TV. Programs can be loaded and saved on a conventional home cassette player.

A comprehensive 200 page instruction manual is provided with the Sinclair ZX81 and includes a new course in BASIC programming - the increasingly 'standard' high level language for personal computers.

The ZX81, launched in March 1981, embodies all the important features of its predecessor, the internationally successful Sinclair ZX80 computer, including:

- touch sensitive, typewriter configuration, alpha-numeric keyboard
- single stroke key word entry
- powerful edit facilities
- automatic syntax checking of every statement line
- a display consisting of 24 lines of 32 characters

Significant new, advanced features, in addition to a print-drive facility, include the ZX81's ability to operate in two software selectable modes, FAST and NORMAL, FAST being four times the speed of NORMAL. In NORMAL the Sinclair ZX81 will both compute and display simultaneously which allows continuously moving, flicker-free graphics.

Key design achievement in the Sinclair ZX81, which is constructed in durable, black ABS plastic, is a new master-chip, designed by Sinclair and custom-built in the UK by Ferranti. It replaces 18 chips in the ZX80 and adds important new circuitry.

The Sinclair ZX81 is available, ready-assembled, with mains adaptor and instruction manual, at £69.95 and in kit-form at £49.95. Both prices include VAT.

Accesories and Software for the ZX81

Sinclair Research is now developing a range of accessories and software for use with the ZX81 personal computer. To date these include add-on memory, a printer and a number of cassette programmes.

The Sinclair ZX Printer has been designed especially for use with Sinclair personal computers - the ZX81 (and ZX80 with retrofit 8K BASIC ROM). Available shortly for around £50 it offers full alphanumerics across 32 columns plus sophisticated graphics. Special features include COPY, which prints out exactly what is on the TV screen, without further instructions.

The 16K BYTE RAM pack at £49.95 inc VAT is designed to provide substantial add-on memory capacity. It can be used for program storage or as a database, but requires no additional power.

Cassette-Based Software - Five cassettes are currently available, at £3.95 each. The first two are operational with 1K RAM; the others require 16K RAM. They are 'Junior Education' and 'Games', containing six dynamic graphics games including the famous Game of Life; a further 'Junior Education', containing seven programs designed to teach 7-11 year old maths and spelling; 'Business and Household' with programs including a telephone address book and bank account; and another 'Games' cassette containing six programs.

- Ends -

NOTE TO EDITORS

Sinclair Research was founded by Clive Sinclair, 40, in July 1979 to conceive and develop new products in the consumer electronics field. The company is currently selling 20,000

Contd.../

Sinclair Research Ltd.  
6 King's Parade,  
Cambridge,  
CB2 1SN

- 4 -

computers per month with annualised sales turnover running at the rate of £20,000,000. In addition to working on personal computers and computer peripherals, Sinclair announced in February a £5,000,000 four-year capital investment programme for production of the Sinclair Research flat-screen tube and Microvision pocket TV and is progressing research in the electric vehicle field.

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With an accompanying range of accessories and software, the ZX81 rates as ideal introduction to computing for any member of the family, and is a powerful tool for the experienced user.

Extremely portable, the ZX81 measures 6 x 6 1/2 x 1 1/2 in (167 x 175 x 40 mm) and weighs 12 oz (350 gm).

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From DANIEL J. EDelman LIMITED, Public Relations  
Specialists in the field of computer products

FOR FURTHER INFORMATION PLEASE CONTACT BILL NICHOLS ON 01-723 3444  
SB/S9A

## PRESS INFORMATION

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# sinclair

21 July 1981

### SINCLAIR SELLS 100,000 COMPUTERS

Sinclair Research recently delivered its 100,00th computer. The machine, a ZX81, accompanied by a bottle of champagne, went to West London dental surgeon, Malcolm Gould, 55.

The sale came just 15 months after Clive Sinclair launched his breakthrough in the personal computer market, the low-cost, high-performance ZX80 in February 1980. Since then sales of the ZX80 have exceeded 70,000 worldwide. Orders for the new ZX81, launched in March this year, are approaching 50,000 in the UK alone.

But what does a dentist want with a computer? "I've an enquiring mind and have been looking for ways to solve my paperwork problems. I want to set up programmes for my financial records and client data-sheets."

And why the ZX81? "Price and appearance were very attractive and I also checked out a major review of its capabilities before buying. For me, at under £70, it's an ideal and very cost-effective learning tool for getting to understand computer applications."

Mr Gould was born in Leeds and saw service with the Army Dental Corps before moving to South Africa. He returned to London and set up his practice in 1974.

Contd.../

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SR/63

Sinclair Research Ltd,  
6 King's Parade,  
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CB2 1SN  
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NOTE TO EDITORS

Sinclair Research was founded by Clive Sinclair, 40, in July 1979 to conceive and develop new products in the consumer electronics field. The company is currently selling 20,000 computers per month with annualised sales turnover running at the rate of £20,000,000. In addition to working on personal computers and computer peripherals, Sinclair announced in February a £5,000,000 four-year capital investment programme for production of the Sinclair Research flat-screen tube and Microvision pocket TV, and is progressing research in the electric vehicle field.

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- Ends -

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Mr Gould was born in Leeds and saw service with the Army Dental Corps before moving to South Africa. He returned to London and set up his practice in 1974.

Contd.../

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# sinclair

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1 September 1981

SINCLAIR TO SELL ZX 81 RETAIL - NEW AGREEMENT WITH W H SMITH'S SIGNED

Sinclair Research has signed an exclusive trial agreement to sell its highly-successful ZX 81 personal computer retail through over 100 W H Smith high-street stores.

"Both parties view the agreement as an experiment," commented Clive Sinclair, Chairman of Sinclair Research. "We accepted Smith's approach because they have clearly researched the subject carefully and take the new operation very seriously."

Under the initial five-month sales contract, Smith's are setting up new computer departments in each store to sell only the Sinclair range. 300 staff have been specially trained to demonstrate the ZX 81 and to provide an after-sales information service to customers.

Smith's has decided to move into the personal computer market following their success over the past year with a range of general computer books and magazines. "We approached Sinclair", explained John Roland, Smith's Market Development Manager, "as the only company both with a proven product available in the right quantities and an established UK sales record with over 100,000 computers sold in the past 12 months."

From: **DANIEL J. EDELMAN LIMITED** · Public Relations  
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SR/42

Sinclair will continue to sell the whole ZX range mail order. The company sees the new agreement as a development of marketing strategy which will bring the ZX 81 to a larger market, particularly among people who would not normally consider purchase by mail order.

Sinclair products will sell in shops at normal rates, the ready-assembled ZX 81 at £69.95, the 16K add-on memory RAM pack at £49.95 and the range of cassette programs at £3.95 each, all prices inclusive of VAT. The new ZX Printer and the kit form ZX 81 will not be available in Smith's for the time being.

- ends -

#### NOTE TO EDITORS

The Sinclair ZX 81 personal computer, designed and developed by Sinclair Research, was launched in March 1981. To date, sales of the ZX 81 exceed 60,000.

Constructed in durable black ABS plastic, the computer is highly portable, measuring 6" X 6½" X 1½" (167 X 175 X 40mm) and weighing 12 oz (350 gm). Key design achievement is a new master-chip, designed by Sinclair, and custom-built in the UK by Ferranti which permits an innovative four-chip design.

Sinclair Research was founded by Clive Sinclair, 40, in July 1979 to conceive and develop new products in the consumer electronics field. The company is currently selling 20,000 computers per month with annualised sales turnover running at the rate of £20,000,000 per annum.

In addition to working on personal computers and computer peripherals, Sinclair announced in February a £5,000,000 four-year capital investment programme for production of the Sinclair Research flat-screen tube and Microvision pocket TV, and is progressing research in the electric vehicle field.



# WHSMITH News release

L12 to Smith's file - let me know if  
PC please.

## Computer Know How

W H Smith - the first retailer to sell Sinclair computers in the High Street.

Two great British companies have got together to bring the Sinclair ZX81 computer to the High Street.

W H Smith's decision to offer an home computer into some of its larger outlets throughout the country followed the success of sales in computer magazine and other relevant printed material which clearly demonstrated an increase in consumer interest in this field. The retailer selected Sinclair on its proven sales record the company having sold over 100,000 units through mail-order in the past 12 months. The price of £69.95 for the assembled ZX81 was felt to be within the right price range for current W H Smith customers, about the only computer offered at under £100.

Sinclair's acceptance to a 5 month trial period of supply of this model through retail was helped by W H Smith's professional approach. The training programme organised at the retailer's own training centre at Milton Hill introduces the ZX81 and all its ancillary components to staff at all 112 selected outlets which will be carrying the product. For in-store there has been a specially produced display unit into which the computer is situated in working demonstration in juxtaposition to relevant book and software merchandise

Sinclair Research Ltd. have no plans to discontinue their mail-order operation of this model and see room for a continuation of sales success through this means.

The launch of the Sinclair ZX81 through W H Smith will be supported by a national press campaign designed to break on the 21st September.

For further information please contact either John Rowlands or Bob Clark at W.H. Smith & Son Ltd., Strand House, 10 New Fetter Lane, London EC4A 1AD.

- telephone:- 01-353 0277.

## PRESS INFORMATION

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# sinclair

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4 September 1981

### SINCLAIR LAUNCHES THE ZX PRINTER

Sinclair Research has introduced a new Printer to complement its existing ZX range of personal computers and software. The ZX Printer is only available from Sinclair, mail order, at £49.95 inc VAT.

Designed by Sinclair exclusively for use with the ZX 81 personal computer, and the ZX 80 with retrofit 8K ROM, the new Printer features full alphanumerics and sophisticated high resolution graphics. It will be given its first public demonstration at the PCW show at the Cunard Hotel on 10-12 September.

ZX Users who write and edit their own programs will find the Printer of special value. They will be able to obtain hard copy of their listings and a permanent record of their computations and results.

Special features include COPY, which prints out exactly what is on the TV screen without further instructions. The operation is complete in 14 seconds at an effective cost of less than 1p. L LIST instructs the Printer to produce an entire completed program, and L PRINT to print copy out on the Printer and not the screen.

(Contd...)

**From: DANIEL J. EDELMAN LIMITED · Public Relations**  
STANHOPE HOUSE · STANHOPE PLACE · LONDON W2 2HH · TEL 01-723 3444

FOR FURTHER INFORMATION PLEASE CONTACT BILL NICHOLS ON 01-723 3444  
SR/81

The ZX Printer has 32 characters to the line, 9 lines to the vertical inch and a printing speed of 50 characters per second. For operation it is attached to the rear of the computer by a stackable connector which allows the 16K RAM pack to be used at the same time.

The Printer is supplied with a 65-foot roll of special aluminized paper, enough for over 250 full screens of text. Additional rolls are available from Sinclair in packs of five at £11.95.

- ends -

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## PRESS INFORMATION

# SINCLAIR

1 October 1981

### OVER 2300 SCHOOLS BUY THE SINCLAIR ZX81

Microcomputers are at work, in many cases for the first time, in more than 2300 British secondary schools this autumn. The schools are providing their students with practical 'hands-on' experience in computer skills using Sinclair Research's ZX81 personal computer.

Sinclair, in association with educational distributor Griffin & George, introduced a special low-cost offer to schools for the purchase of the ZX81 in May. The scheme, now closed, aimed to provide a wider and more economic choice of equipment than was available under the government-assisted scheme for the purchase of computers.

Commenting on the results Clive Sinclair, chairman of Sinclair Research, said: "Although welcoming the government initiative we felt that it did not fully account for the needs of all schools. We believe that the success of our scheme in bringing microcomputers to so many schools vindicates our approach as both practical and economic."

Under the scheme schools which ordered during June and July were each allowed one package at £65 (against a normal retail price of £119.90 inc. VAT) containing the ZX81 personal computer, the add-on memory 16K RAM pack and the ZX81 BASIC manual. Schools taking advantage of the scheme are each being offered special purchase arrangements for one of the newly introduced ZX Printers.

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SR/84

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NOTE TO EDITORS

Sinclair Research is a private company, based in Cambridge and 95% owned by Mr Clive Sinclair, 41. First formed in 1979 to conceive and develop new products in the consumer electronics field, Sinclair's total microcomputer production is now running at 28,000 units per month and the company is claimed to be producing more units per day than any other company worldwide. The Sinclair ZX81 was launched in March 1981 and to date over 100,000 units have been sold.

- Ends -

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100, Abchurch Lane, London EC4N 3DF

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# sinclair

12 October 1981

## SINCLAIR ANNOUNCES THE ZX LEARNING LAB

To enable ZX81 users to learn programming 'hands-on', Sinclair Research has introduced the ZX Learning Lab. Developed to meet a widespread requirement amongst users the Lab offers a practically-based alternative to the text-only method of the ZX81 BASIC manual.

The new package comprises 8 cassettes and a 160-page manual. 20 programs, each demonstrating a particular aspect of ZX81 programming, are spread over six cassettes. The remaining two are blank for practice.

With over 100,000 ZX81s already in the field, Sinclair believes the Lab can play a valuable role in computer-skills training, both amongst general users and in formal education. The Lab extends the company's existing range of cassettes and forms part of a continuing programme of software development.

The Lab is available mail-order from Sinclair at £19.95 inc VAT and postage and packaging.

- Ends -

### NOTE TO EDITORS

Sinclair Research is a private company, based in Cambridge, and 95% owned by Mr Clive Sinclair, 41. Formed in 1979 to conceive

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SR/25

and develop new products in the consumer electronics field the company's production of ZX81 personal computers is now running at 28,000 per month. Sinclair is claimed to be producing more units per day than any other company worldwide. Five other individual cassettes are currently available, including games, junior education and business and household programmes.

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The Lab is available mail-order from Sinclair at £15.95 inc VAT and postage and packaging.

- Ends -

#### NOTE TO EDITORS

Sinclair Research is a private company, based in Cambridge, and 95% owned by Mr Clive Sinclair, its Founder in 1979 and Executive

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# sinclair

22 October, 1981

## MITSUI TO SELL SINCLAIR ZX81 IN JAPAN

In a significant trading deal, shipments of the Sinclair ZX81 personal computer to Japan will start later this month, following an agreement, announced today, October 22, between Clive Sinclair, head of Sinclair Research, and Mitsui & Co, the giant Japanese trading company.

Clive Sinclair welcomed the deal as 'a major breakthrough which will demonstrate that British products and technology can compete in one of the world's toughest markets. It further expands Sinclair's export effort with the ZX81 and follows recent launches in France, West Germany, the United States and more than 20 other countries around the world.'

For Mitsui, the agreement is part of a worldwide expansion of its computer and information technology business and the new partners are now discussing the formation of a new joint marketing company in Japan.

"We expect to bring Sinclair products to many Japanese homes before Christmas", said Mr Hiroshi Shimizu who, as manager of Mitsui Computers - part of Mitsui Machinery Sales (UK) Limited - played a leading role in negotiations, "and to capture at least £3/4 million sales in Japan's booming home computer market with this world leading British design within the first year."

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**From: DANIEL J. EDELMAN LIMITED · Public Relations**  
STANHOPE HOUSE · STANHOPE PLACE · LONDON W2 2HH · TEL 01-723 3444

FOR FURTHER INFORMATION PLEASE CONTACT BILL NICHOLS ON 01-723 3444  
SR/85 (PHOTOGRAPHS AVAILABLE) OR MIKE EAST ON 01-278 9426

In Japan the ZX81, together with the add-on memory 16K RAM pack, will sell both mail-order and through selected dealers to the key student market. Mitsui has provided local power units and a specially written Japanese version of the ZX81 BASIC manual. Export of the new ZX Printer will follow at a later date.

Mitsui & Co - who already import many leading British products to Japan, including Jaguar cars and Burberry coats, are actively seeking other bi-lateral trade opportunities in Britain and the rest of Europe. Japan is expected to have a visible trade surplus totalling some £1600 million this year so, according to Mitsui, the opportunities for the right kind of British products in Japan "have never been better."

- Ends -

Further information from:

Sinclair Research Ltd  
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Cambridge CB2 1SN

Tel: 0223 311488

More from:

Mitsui Computers  
Oakcroft Road  
Chessington  
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# sinclair

22 October, 1981

## SINCLAIR RESEARCH AND THE ZX81 - BACKGROUND AND SALES

Sinclair Research is a private company, based in Cambridge and 95% owned by Mr Clive Sinclair, 41. The company was founded in July 1979 to conceive and develop new products in the consumer electronics field.

Sinclair launched the ZX81 in March 1981 and to date has sold over 100,000 units. Production is now running at 40,000 ZX81s per month and the company is producing more computers per day than any other manufacturer worldwide.

Total Sinclair sales of personal computers, including the ZX81s predecessor the ZX80, now exceed 200,000, and the company's turnover is currently running at the rate of £20,000,000 per annum.

Constructed in black ABS plastic the ZX81 measures 6" x 6½" x ½" and weighs 12oz. Key to its innovative four chip design is a new master-chip, designed by Sinclair, and custom-built by Ferranti. It replaces 18 chips in the ZX80.

The ZX81 sells for £69.95 ready assembled, and for £49.95 in kit-form. It is complemented by an add-on memory 16K RAM pack, selling for £49.95, and by the new ZX Printer at the same price (all prices include VAT). Sinclair has also

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SR/85B

Sinclair Research Ltd  
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Cambridge.

developed a range of cassette-based software with six cassette programs and the new Learning Lab currently available.

Apart from work on personal computers and computer peripherals Sinclair has announced a £5,000,000, four-year capital investment programme for production of the Sinclair Research flat-screen tube and Microvision pocket TV.

SINCLAIR RESEARCH AND THE ZX81 - BACKGROUND AND SALES

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Total Sinclair sales of personal computers, including the ZX81 predecessor the ZX80, now exceed 100,000, and the company's turnover is currently running at the rate of £20,000,000 per annum.

Constructed in black ABS plastic the ZX81 measures 9" x 14" x 4" and weighs 1.10kg. Key to its innovative four chip design is a new master-chip, designed by Sinclair, and custom-built by Ferranti. It replaces 18 chips in the ZX80.

The ZX81 sells for £89.95 ready assembled, and for £69.95 in kit-form. It is complemented by an add-on memory 16K RAM pack, selling for £27.95, and by the new ZX Printer at the same price (all prices include VAT). Sinclair has also

FROM: DANIEL J. EDELMAN LIMITED, Public Relations  
100, Abchurch Lane, London EC4N 3DF

MITSUI COMPUTERS

MITSUI COMPUTERS, part of Mitsui & Co Ltd, the 70-billion dollar Tokyo-based Japanese trading company, was formed to combine all its high technology information and data processing expertise and products into a single marketing unit.

Manager of the UK computer and electronics business is Mr Hiroshi Shimizu who is responsible for the marketing of a range of the latest state-of-the-art systems for the electronic office market, including OCR equipment for message and data entry, facsimile devices and computer peripherals, including eight-inch Winchester disk drives and printers.

One of the latest products to be introduced is a desk-top OCR machine that 'reads' typed pages and converts the text into a form that can be accepted by word processors, electronic mail systems, printing terminals and computers.

Exclusive distributorships from such companies as Casio, Alps and Totec, together with franchises from other leading Japanese computer electronics companies, enable Mitsui Computers to offer a total range of compatible systems to meet modern business needs.

- ends -

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302 Pentonville Road  
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Tel: 01-278 9426

More from H Shimizu  
Mitsui Computers  
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# sinclair

13 November 1981

### SINCLAIR SPONSORS EDUCATIONAL SOFTWARE AWARD SCHEME

To help meet the urgent need for more ZX81 educational software, Sinclair Research is sponsoring a special award scheme, offering six ZX Printers as prizes for the best programs accepted into the MUSE software library by the end of March 1982.

With over 100,000 ZX81s sold, and with sales to more than 2300 secondary schools under the company's recent subsidised purchase scheme, Sinclair is keen to support wherever appropriate the development of educational software. "We have a very strong commitment to expanding computer applications in schools", commented Clive Sinclair, chairman of Sinclair Research.

MUSE, the teachers' organisation for computer users in schools and the Educational ZX80/81 Users Group (EZUG), are to administer the scheme and in consultation with Sinclair, judge submissions in the following categories: primary maths and science; other primary; secondary maths, science and computing; other secondary and special education.

Entries and inquiries should be sent to Eric Deeson, EZUG organiser, Highgate School, Birmingham B12 9DS. Closing date is February 27.

- Ends -

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**PRESS**

NOTE TO EDITORS

Sinclair Research is a private company, based in Cambridge and 95% owned by Clive Sinclair, 41. Formed in 1979 to conceive and develop new products in the consumer electronics field, the company launched the ZX80 and subsequently the ZX81 personal computer in March 1981, and is now producing 50,000 ZX81s per month, more units than any other computer manufacturer in the world. To date more than 125,000 have been sold.

MUSE is a national organisation for co-ordinating activity in primary and secondary schools, teacher training institutions, colleges and other establishments with an interest in the use of mini and microcomputers in any subject area of education.

EZUG, the Educational ZX80/81 Users Group, was formed on behalf of MUSE to co-ordinate and promote educational computing activity using the ZX80 and ZX81.

MUSE, the teachers' organisation for computer users in schools and the Educational ZX80/81 Users Group (EZUG), are to administer the scheme and in consultation with Sinclair, judge submissions in the following categories: primary maths and science; upper primary; secondary maths, science and computing; other secondary and special education.

Entries and inquiries should be sent to Eric Dawson, EZUG organiser, Highgate School, Birmingham B12 9DE. Closing date is February 27.

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# sinclair

7 December 1981

SINCLAIR ZX81 SALES PASS 250,000  
- NEW DEVELOPMENTS ANNOUNCED WITH ICL

Coinciding with ICL's announcement of major new developments employing Sinclair technology and Sinclair BASIC, Sinclair Research reported today, December 7, that worldwide sales of its best-selling ZX81 computer now exceed 250,000.

With ZX81 monthly production currently running at 50,000 units, over 60% for export, Sinclair has more units installed than any other personal computer manufacturer worldwide, firmly establishing Sinclair BASIC as the most widely-used micro-computer programming language.

Commented Clive Sinclair, chairman of Sinclair Research: "Together these figures and new developments complete a very successful year for us. With so many units in the field, supported by a large number of new projects using Sinclair BASIC, we believe our language now merits serious consideration by the industry as the 'standard', if confusion, particularly in the educational field, is to be avoided in the future."

ICL has announced a new range of ZX81 software with orders for more than 100,000 packages already received from W H Smith's, the only licensed ZX81 retailer, and is to develop further software in support of both the ZX81 and future products using Sinclair BASIC.

Contd.../

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PRESS  
INFORMATION

- 2 -

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ICL is also in advanced discussion with Sinclair to develop an ultra low cost integrated terminal/digital phone work-station employing Sinclair's flat tube technology and Sinclair BASIC. Dubbed the 'One Per Desk IT Work Station' the project is targetted as a future peripheral to ICL's recently announced DNX 2000 digital PABX, and, pending final agreement, production is scheduled for 1983.

- Ends -

NOTE TO EDITORS

Sinclair Research is a private company, based in Cambridge and 95% owned by Clive Sinclair, 41. Formed in 1979 to conceive and develop new products in the consumer electronics field, the company launched the ZX81 personal computer in March 1981. Ready-assembled the ZX81 is available mail order and through certain W H Smith's stores at £69.95 inc VAT.

In addition to working on personal computers and computer peripherals, Sinclair announced in February a £5,000,000 four-year capital research programme for production of its flat-screen tube and Microvision pocket TV, and is progressing research in the electric vehicle field. Sinclair annualised sales turnover is currently running at the rate of £20,000,000 per annum.

ICL has announced a new range of ZX81 software with orders for more than 100,000 packages already received from W H Smith's, the only licensed ZX81 retailer, and is to develop further software in support of both the ZX81 and future products using Sinclair BASIC.

Contd...

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# PRESS INFORMATION

from Press Office, ICL House, Putney, London SW15 1SW

7th December 1981

## INTERNATIONAL COMPUTERS ANNOUNCES SIGNING OF FUJITSU DEAL AND NEW COLLABORATIVE ARRANGEMENTS

At a press conference in London today, Monday 7th December, International Computers announced the signing of the full formal Agreements covering the collaboration with Fujitsu which the Company first announced in early October.

At the same time, ICL announced that collaborative arrangements with two British companies were at an advanced stage, one with Sinclair Research Limited of Cambridge, believed to be the world's highest volume personal computer manufacturer. ICL and Sinclair are planning to develop jointly a very low-cost integrated terminal/digital phone workstation using Sinclair's flat tube technology and the easy to use Sinclair Basic computer language.

ICL also announced today its intention to manufacture and market a personal computer designed by RAIR Limited of London. This new product is designed for very small business use and will be sold primarily through outlets established as part of ICL's new Trader Point initiative. ICL will also manufacture the product on behalf of RAIR Limited.

For further information, please contact:

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Putney, London SW15

S W Frith

Director of Corporate Communication

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Telex 22971

**International  
Computers  
Limited**



# PRESS INFORMATION

from Press Office, ICL House, Putney, London SW15 1SW

7th December 1981

## ICL AND FUJITSU SIGN FORMAL AGREEMENTS

### "SIGNIFICANT MILESTONE IN OUR RECOVERY PLAN", SAYS ICL'S CHAIRMAN

International Computers Limited today announced the formal signing of the ICL-Fujitsu Agreement.

The Agreement was signed in London by the Chairmen of the two companies, Mr. C.C.F. Laidlaw and Mr. T. Kobayashi. In announcing the signing of the Agreement, Mr. Christophor Laidlaw, ICL's Chairman, said, 'This is a very significant milestone in the history of ICL and a keystone in our recovery plan.' Fujitsu's Chairman, Mr. Kobayashi, said he wished ICL all success in the development and sale of its new mainframes designed and built in England with the help of Fujitsu technology, and believed that Fujitsu's newest collaboration would prove to be its best in an industry where new systems have far surpassed previous performance.

The early access to Fujitsu mainframe chip technology will allow ICL to develop highly competitive mainframe products without massive investments in in-house specialist chip technology, allowing development efforts to be focussed on creating ICL's Networked Product Line. The new mainframes are being designed at ICL's West Gorton development centre and will be produced in the Ashton and Kidsgrove production centres, with chips supplied by Fujitsu.

contd/...

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The new Estriel 2900 will represent a breakthrough for ICL when it is available in 1984. It is a seven MIP (MIP = millions of instructions per second, a measure of computing power) air cooled mainframe which will be upgradeable to 25 MIP and will use the same chip technology which has already been proven in Fujitsu's largest mainframes.

W.H. Smith, one of the first customers to evaluate fully ICL's plans in this area, has already committed to Estriel as its upgrade path in the mid 1980s, with the 2966 and the newly announced 2988 as its medium term product path.

The Estriel has clearly demonstrated ICL's commitment to maintain its position as a world-class mainframe supplier, with the stable VME 2900 operating system representing a fully virtual operating environment with features that others in the industry are still searching for.

Since the initial Fujitsu announcement in October, the order intake rate for the tremendously successful 2966 has allowed ICL to increase significantly the planned production rate of mainframes at its Ashton, Manchester, factory. Of equal significance, the Fujitsu collaboration will provide chips for the planned distributed mainframe, DM/1, a mainframe small enough to fit under a desk, which represents the opportunity for users to move work out from the central D.P. centre, running the VME operating system into regional and divisional organisations without rewriting applications software. At the same time, DM/1 provides a growth path for buyers of the highly successful ME29, running the TME operating system, which has now passed the 1,000 installed base level.

ICL plans to support its new hardware strategy with equally significant contributions in standard applications packages, for both stand-alone computers and Networked Applications. Early use of such applications within ICL will be a key feature of this new thrust.

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The terms of the Agreement also include the marketing by ICL under its own label of the very large Facom 380 mainframes developed and built by Fujitsu.

These new initiatives will enable ICL to offer a complete Networked Product Line to the very largest D.P. users, ranging from the largest machines on the market, through distributed mainframes, to mini-computers and micro-computers which support IBM communication protocols as well as the International Standard Protocols used by ICL.

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# PRESS INFORMATION

from Press Office, ICL House, Putney, London SW15 1SW

7th December 1981

## ICL ANNOUNCES TWO NEW COLLABORATIONS

Mr Robb Wilmot, ICL's Managing Director, today announced the basis of new collaborative agreements in information technology (I.T.) with two British companies.

### SINCLAIR RESEARCH LIMITED

ICL is in advanced discussion with Sinclair Research Limited, believed to be the world's highest volume personal computer manufacturer. The two companies are planning to develop jointly an extremely low-cost integrated terminal/digital phone workstation using Sinclair's flat tube technology and Sinclair Basic computer language.

This new project, dubbed the 'one per desk' I.T. workstation, is planned to be a future peripheral to ICL's recently announced DNX 2000 digital PABX and will contribute strongly to the UK's competitive position in Information Technology. ICL is in discussion with Mitel Corporation regarding supply of the 'one per desk' I.T. workstation under the terms of the recent collaboration agreement between the two companies.

ICL also announced that, following its successful development of packaged software for the Sinclair ZX 81, with orders for over 100,000 software packages now received from W.H. Smith, ICL's software publishing unit will initiate development of further packaged software in support of the ZX 81 as well as future products using the easy to learn Sinclair Basic.

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This initiative, started in the UK, will shortly be expanded to Europe and takes ICL into a prominent position in the personal computer software publishing industry. This is a market segment which has experienced rapid growth in the USA in recent months.

Ownership of the ZX 81 is currently growing at over 50,000 a month, and shipments to Japan have only recently started.

#### THE ICL PERSONAL COMPUTER

ICL also announced today its intention to manufacture and market a personal computer designed by RAIR Limited of London. ICL will also manufacture the product on behalf of RAIR Limited.

The ICL Personal Computer uses an Intel microprocessor and the CP/M operating system with 80 character display - a combination emerging as the de facto standard for small business applications of personal computers - with access to a tremendous base of existing and proven software.

With an integrated 6 Mbytes 5¼ inch Winchester disc, a 5 Mbytes 5¼ inch floppy disc and 64 Kbytes of RAM expandable to 5 Mbytes - ICL will be offering a fully configured product to the European market while its major American competitors are adding capacity to satisfy the explosive growth in the US created by the emergence of the industry standard small business personal computer.

Languages supported will include Microfocus COBOL and Microsoft BASIC - also emerging as the de facto standard for software houses writing small business application packages. These languages are compatible with those supported on ICL's recently announced DRS 20 family of networked multi-micros, giving ICL's personal computer users a future growth path into the world of considerably more powerful distributed computing. This synergy will make the ICL Personal Computer particularly attractive to marketing outlets and distributors established under ICL's new Trader Point initiative - and it is expected that this will form the primary distribution method for the product.

contd/...

The ICL Personal Computer will be manufactured under licence in the U.K. and high volume production will commence in the first quarter of 1982.

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ICL is a strategic alliance with Sinclair Research Limited, believed to be the world's highest volume personal computer manufacturer. The companies are planning to develop jointly an extremely low-cost computer workstation, based on Intel's 8088 microprocessor and Sinclair's Basic operating language.

This new product, dubbed the 'one per desk' I.T. workstation, is planned to be a direct competitor to IBM's recently announced DSK 1000 digital desk and will contribute strongly to the UK's competitive position in Information Technology. ICL is in discussion with Intel Corporation regarding supply of the 'one per desk' I.T. workstation under the terms of the recent collaboration agreement between the two companies.

ICL also announced that it will continue successful development of packaged software for the Sinclair ZX series. To date, over 100,000 software packages have been developed for W.J.L. Smith. ICL's software publishing unit will contribute development of further packaged software in support of the ZX series as well as future products using the easy-to-learn Sinclair Basic.

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# sinclair

6 January 1982

## £1000 PRIZE OFFERED FOR SINCLAIR ZX81/PRESTEL ADAPTOR

British Telecom's Prestel world viewdata service is offering a £1000 prize to the designer of the best Prestel adaptor for the top-selling Sinclair ZX81 personal computer.

Sinclair Research, which is to provide one of the judges, strongly supports the competition and believes that a successful design will offer its established 150,000 UK users a valuable new application. Although a number of micro-computers can already receive Prestel, these numbers would mark a very significant service extension for British Telecom.

Telesoftware - computer programs distributed via teletext or viewdata to computers in schools, homes and offices - is now a major Prestel growth area, and many program publishers are becoming active and establishing libraries that can hold up to 1,000 pages following the Department of Industry's initiative in funding the Educational Telesoftware Project.

The prize will be awarded to the adaptor which best combines 'low price, elegant design and practical robustness', and the working design submitted must be capable of being modified to receive approval for attachment to the telephone network.

Closing date is March 14th, 1982, and further details, specification and entry forms are available from Tony Sweet, Prestel Headquarters, Telephone House, Temple Avenue, London EC4 0HL.  
Tel: 01-583 9811.

**From: DANIEL J. EDELMAN LIMITED · Public Relations**  
STANHOPE HOUSE · STANHOPE PLACE · LONDON W2 2HH · TEL 01-723 3444

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## NOTE TO EDITORS

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# sinclair

28 January 1982

### MICHAEL PYE APPOINTED TO HEAD NEW SINCLAIR DIVISION

Michael Pye, 37, has been appointed head of communications development for Sinclair Research. He is to head a new research and development division, based in the Southampton area, working on 'state-of-the-art' solid state technology.

Michael joins Sinclair from Honeywell Control Systems (UK), where he was director of engineering. His previous positions include spells with Gillette, as director of electronics development, based in Boston, USA, and with Sinclair Radionics, first as technical director and later in 1978-79 as managing director.

- Ends -

### NOTE TO EDITORS

Sinclair Research is a private company, based in Cambridge, and 95% owned by Clive Sinclair, 41. Formed in 1979 to conceive and develop new products in the consumer electronics field, the company launched its ZX81 personal computer in March 1982 and has to date sold over 250,000 units worldwide. Sinclair's annualised sales turnover is currently running at a rate of £20,000,000 per annum.

In addition to working on personal computers and computer peripherals, Sinclair announced in February 1981 a £5,000,000 four-year capital research programme for production of its flat-screen tube and Microvision pocket TV, and is progressing research in the electric vehicle field.

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SR/107 FOR FURTHER INFORMATION PLEASE CONTACT BILL NICHOLS OR LIZ WALKER ON 01-723-3444. PHOTOGRAPHS AVAILABLE.

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# sinclair

12 February 1982

MAJOR NEW MARKETING AGREEMENT FOR SINCLAIR IN NORTH AMERICA  
- ORGANISATION CHANGES ANNOUNCED AS ZX81 SALES PASS 300,000

A significant new marketing agreement announced in London, today, February 12, by Clive Sinclair of Sinclair Research, licenses Timex to use Sinclair's technology and name to manufacture and market personal computers, computer peripherals and software throughout North America. Timex expects to introduce the Sinclair range, using both the Sinclair and Timex names, during mid-1982.

Sinclair is to receive a royalty payment on all sales under the contract which covers current and future Sinclair personal computer products, and Timex's own developments of Sinclair computer technology. It also includes, under a special clause, the use of Sinclair's own increasingly 'standard' version of the BASIC programming language.

Sinclair believes that Timex' acknowledged marketing expertise will lead to a further significant penetration for its products in the key North American market. With a high technology background, ranging from cameras to gyroscopes, Timex is confident that it will rapidly become a viable competitor in the personal computer field.

For the present Sinclair's Boston-based US subsidiary will continue to sell the ZX81 mail order until Timex's own sales

Contd.../

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SR/113

reach agreed levels. Thereafter the company will concentrate on marketing Sinclair's new flat-screen TV, which is not covered by the new contract, and which is expected to be available during the last quarter of 1982.

Commenting that the new Timex agreement 'maintained Sinclair's 1981 pattern of rapid growth into 1982' Clive Sinclair also revealed that his company's turnover was now running at an annualised level of £30 million against last year's £4.65 million.

Sinclair success is built on very high volume sales for the ZX81 worldwide, totalling more than 300,000 units at the end of January. To meet this demand, production at the Timex plant in Dundee is currently running at 60,000 units per month, two-thirds for export. Sinclair's add-on 16K RAM pack and ZX Printer now each average unit sales of 10,000 per month, and a steady rise in volume is projected during 1982.

The new brief for the US subsidiary forms part of an overall reorganisation, designed to support and develop Sinclair's rapid sales growth, to service the major new agreements with Timex and ICL, and to facilitate current research work.

Sinclair has concentrated the computer business into a new division, based in Cambridge and lead by Nigel Searle, the former head of Sinclair USA. He is supported on the marketing side by Jane Boothroyd, who joins Sinclair with a background in consumer product brand management. The company also expects shortly to appoint a new quality control specialist.

Under business and finance, Rose Lockwood joins Sinclair from the Gibbs Consulting Group in New York as a systems and investment manager, and for research and development, Mike Pye has joined Sinclair from Honeywell as head of a new research division, based in Winchester.

NOTE TO EDITORS

Sinclair Research is a private company, based in Cambridge and 95% owned by Clive Sinclair, 41. Formed in 1979 to conceive and develop new products in the consumer electronics field, the company launched its ZX81 personal computer in March 1981.

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# sinclair

23 March 1982

## CAMBRIDGE FESTIVAL HALF-MARATHON TO BE SPONSORED BY SINCLAIR

The 1982 Cambridge Festival is to include for the first time amongst its events a special half-marathon, sponsored for £5000 by locally-based Sinclair Research.

Scheduled for Sunday 18 July, the race is expected to attract a number of top-class runners to the city. Clive Sinclair himself will be among an expected 2000 competitors following a three-lap course through the city's historic streets. Starting in King's Parade, close to Sinclair's offices, it includes a riverside stretch along Chesterton Lane, the 'Backs', and finishes in the Market Square at the Guildhall Steps.

Co-organised for the Festival by Cambridge City's recreation department and the Cambridge and Coleridge Athletic Club, the event is open both to club-based runners and general enthusiasts. Entries have already been received from as far afield as Wales and Durham.

Sinclair has had considerable success in the consumer electronics field, notably with the ZX81 personal computer, since it was established in Cambridge in 1979. It sees its sponsorship of the marathon as part of its commitment to supporting and developing cultural life of the city. It is also sponsoring, as part of the Festival, a concert in King's College on July 31.

Further information is available from Brian Allinson, Amenities and Recreation Department, Cambridge City Council, Kett House, Station Road, Cambridge CB1 2JX. Tel: 0223-358977 ext. 489.

From: DANIEL J. EDELMAN LIMITED · Public Relations  
STANHOPE HOUSE · STANHOPE PLACE · LONDON W2 2HH · TEL 01-723 3444

FOR FURTHER INFORMATION PLEASE CONTACT BILL NICHOLS OR LIZ WALKER  
SR/122 ON 01-723-3444



## NEWS RELEASE

For Immediate Release

FROM: Bernie Mogelever/Carl Folta  
RUDER FINN & ROTMAN, INC.  
110 East 59th Street  
New York, NY 10022  
(212) 593-6432

FOR: TIMEX COMPUTER CORPORATION

TIMEX CORPORATION TO MANUFACTURE AND MARKET  
THE FIRST PERSONAL COMPUTER PRICED UNDER \$100

NEW YORK, April 20 -- The Timex Computer Corporation today announced that it will manufacture and market the first personal computer to break the \$100 price barrier.

The compact, lightweight, fully-assembled computer, named the Timex Sinclair 1000, will have a suggested retail price in the United States of \$99.95. The computer and a range of peripherals and software for home, educational, business and entertainment use will be available to retailers beginning in July, according to Daniel D. Ross, Vice President of Timex Computer Corporation, an affiliate of Timex Corporation.

"For the first time, a fully programmable computer is within the reach of most American budgets," Mr. Ross stated. He added that Timex Computer Corporation, using one of the most respected brand names of all consumer products, will distribute a family of computer products through its more than 100,000 retail outlets, including computer stores, department stores and chains, and consumer electronics, jewelry and drug stores.

- more -

## Timex Personal Computer/2

He noted that the U.S. market for personal computers has been estimated at over 90,000,000 consumers.

Mr. Ross also announced a recent agreement with Sinclair Research Ltd., a British-based personal computer company, which will give Timex Computer Corporation rights to sell personal computers using Sinclair's technical expertise. The agreement further calls for the current mail order sales of the Sinclair ZX81 to be phased out as Timex Computer Corporation begins its marketing program.

### Enhanced Capabilities For Under \$100

The Timex Sinclair 1000 is an enhanced version of the world's largest selling personal computer, the Sinclair ZX81, which Timex Corporation currently manufactures in Dundee, Scotland.

The Timex Sinclair 1000 is based on an innovative four-chip design and will offer all the features of the popular ZX81 personal computer, including cassette-loaded programs and convenient monitor capability through any black and white or color television. Additionally, the Timex Sinclair 1000 will feature an expanded 2K byte static memory and a step-by-step instruction manual custom-written for the first-time computer user. The instruction book also includes a course in fundamental programming -- enabling users to develop custom programs in BASIC, the standard language of personal computers.

### Timex Personal Computer/3

The company will also offer software -- from business and personal financial management to education and entertainment programs. It is expected the price of these programs will range from \$9.95 and \$19.95. The Timex Sinclair 1000 system will also have a 32-column printer and a telephone modem, enabling direct tie-in with large computer data services. In addition, a 16K RAM memory expansion module will allow users to extend the computer's memory to 16K Bytes for use in program storage or as a data base. Each of these peripherals will have a suggested retail price of less than \$100.

A complete marketing program will be aimed at the first-time computer customer, the educational market and at computer buffs, as well. It will include instructional point-of-purchase displays and an expanded marketing force trained in selling computers. The company also plans to back up retailers with an extensive service network, a 90-day guarantee and a national advertising campaign beginning in August.

Mr. Ross said that Timex Corporation has long been a silent force in high technology manufacturing. "Although Timex Corporation is best known as one of the world's largest producers of timepieces, Timex Corporation also manufactures the ZX81 personal computer for Sinclair, as well as a wide range of high technology, precision products including gyroscopes and fuses for defense and aerospace industries, computer components for major manufacturers and the recently-introduced Nimslo three-dimensional 35mm camera. Timex formerly manufactured Land cameras for Polaroid Corporation."

# PRESS INFORMATION

Sinclair Research Ltd,  
6 King's Parade,  
Cambridge,  
CB2 1SN  
England  
Telephone: (0223) 311488

# sinclair

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April 23 1982

## SINCLAIR LAUNCHES NEW COLOUR ZX SPECTRUM AT COMPUTER FAIR - NEW MICRODRIVE ALSO ANNOUNCED

Now showing publicly for the first time at the Earls Court Computer Fair, the ZX Spectrum, a new advanced personal computer, designed and developed by Sinclair Research, was announced today, April 23, by Clive Sinclair, head of Sinclair Research, at a press conference in London.

With features comparable to personal computers costing up to three times as much, the new computer significantly extends the Sinclair range, and is available in two versions, with 16K RAM memory capacity at £125 and with 48K at £175, both prices inc VAT. An optional upgrade from 16K to 48K will also be offered by Sinclair for about £60.

Measuring just 8½" X 5" X 1" (233 X 144 X 30mm) the ZX Spectrum is designed for a wide range of home, business and educational applications. Special features include easy-to-use high-resolution colour graphics, designed for economic use of memory, an enhanced version of the Sinclair BASIC programming language, a sound generator and a standard typewriter-size 40-moving key ASCII keyboard.

Cont....

From: **DANIEL J. EDELMAN LIMITED · Public Relations**  
STANHOPE HOUSE · STANHOPE PLACE · LONDON W2 2HH · TEL 01-723 3444

FOR FURTHER INFORMATION PLEASE CONTACT BILL NICHOLS ON 01-723 3444  
SR/119a

Incorporating a powerful 16K ROM operating system the ZX Spectrum uses a Z80A microprocessor, and is based around an advanced 14-chip Sinclair design with a new ULA master-chip. It is in production at the Timex factory in Dundee, Scotland, where it will involve a total workforce of more than 100 people over the next year.

Speaking at the launch, Clive Sinclair explained that the new computer 'would build on the success of our best-selling ZX81 personal computer, which has to date sold over 350,000 units worldwide. The ZX Spectrum is the first in a series of planned developments which will create a fully comprehensive range of Sinclair personal computers, applicable to a wide variety of markets and users.

'We expect the ZX81 to continue to make considerable inroads into new markets particularly amongst first-time users and overseas, and to support growth in this area we are also announcing today a large range of new cassette-based ZX81 office, educational and games software.'

Initially the ZX Spectrum is to sell mail-order only in the UK. Export is expected to commence at the year-end, depending on UK sales volume and production.

For ease of use the ZX Spectrum will be supplied without a dedicated VDU (Visual Display Unit) but may be plugged directly into the aerial socket of most domestic UHF TVs.

Programs can be loaded and saved on a conventional home cassette recorder, and reselected from the computer keyboard. An advanced new cassette interface design permits information transmission at six times the speed of the ZX81.

A 'tone leader' has also been incorporated to overcome recording level fluctuations. All saved information, including programs, datafiles and blocks of code, can be titled and verified for checking and retrieval.

A special expansion port permits the ZX Spectrum to be linked with the existing Sinclair ZX Printer, and it will be possible at a later stage to operate other printers via an RS232 interface. A network interface will permit large numbers of ZX Spectrums to be linked together in a computerised office or school environment, and they may also be rendered teletext compatible.

The port is also intended to support several ZX Microdrives. Planned for launch later this year the ZX Microdrive will provide compact data storage on microfloppies. A range of cassette-based software for the ZX Spectrum is also in preparation.

The ZX Spectrum is supplied complete with a comprehensive instruction manual, including a full course in Sinclair BASIC, and a special booklet introducing the world of personal computers and programming.

- ends -

#### NOTE TO EDITORS

Sinclair Research is a private company, based in Cambridge and 95% owned by Clive Sinclair, 41. Formed in 1979 to conceive and develop new products in the consumer electronics field, the company launched its ZX81 personal computer in March 1981.

In addition to working on personal computers and computer peripherals, Sinclair announced in February 1981 a £5,000,000 four-year capital research programme for production of its flat-screen tube and Microvision pocket TV, and is progressing research in the electric vehicle field.

# PRESS INFORMATION

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# sinclair

April 23 1982

## SINCLAIR ZX SPECTRUM - ADDITIONAL TECHNICAL INFORMATION

Incorporating many features of the highly-successful Sinclair ZX81 personal computer the ZX Spectrum uses a Z80A micro-processor operating at 3.5 MHz.

Its advanced 14-chip Sinclair design includes a new super 16K ROM which contains the BASIC interpreter, character set, operating system and monitor. Two versions, with 16K and 48K RAM capacity, are available and the 16K version may be upgraded to 48K via an internal expansion board.

Capable of supporting up to 52 user-definable functions, the ZX Spectrum has a full typewriter-size 40 moving-key ASCII keyboard, with auto repeat, offering full upper and lower case and capitals lock. All BASIC commands and functions, the 16 graphics characters, 20 colour control codes and 21 user definable graphics characters are obtainable from single keys.

The ZX Spectrum's operational mode combines the capabilities of the two ZX81' modes, the speed of FAST, and the steady display of NORMAL.

Its high-resolution colour graphics display is divided into 256 X 176 pixels, addressable by PLOT, DRAW and CIRCLE commands.

contd...

**From: DANIEL J. EDELMAN LIMITED · Public Relations**  
STANHOPE HOUSE · STANHOPE PLACE · LONDON W2 2HH · TEL 01-723 3444

FOR FURTHER INFORMATION PLEASE CONTACT BILL NICHOLS ON 01-723-3444  
SR/119b

The colour graphics display is also memory-mapped in the RAM. One attributes byte of RAM is dedicated to each character square (8 X 8 pixels), and defines eight foreground and eight background colours, normal or extra brightness and flashing or steady mode.

Eight colours, black, blue, red, magenta, cyan, green, yellow and white are provided and they may also be used for the screen borders.

On screen the ZX Spectrum supports 24 32-character lines of text, with the bottom two lines available for editing and checking. Text can be freely mixed with graphics.

As part of the Sinclair ZX range the ZX Spectrum is compatible with the ZX Printer but not with the add-on memory 16K RAM pack. ZX81 programs may be typed into the Spectrum with minor changes.

ZX81 BASIC is essentially a subset of ZX Spectrum BASIC which includes all its important features, such as single stroke keyword entry, powerful edit facilities, good string handling capability and a randomise function. Significant new features include:-

- BEEP, operating more than 10 octaves of sound through an internal loudspeaker, with output via the jack sockets.
- INK, PAPER, BRIGHT, FLASH, OVER and INVERSE commands to control, globally or locally, foreground and background colours, brightness and flashing, cover and inverse video printing and plotting. Colour graphics codes may be inserted into program or text with no effect on execution.
- VERIFY, enabling user to check complete storage of data, and MERGE, which combines existing programs in the computer's memory with programs on cassette.
- BORDER command for border colour.

- Multistatement lines.
- A full DATA mechanism, using the commands READ, DATA and RESTORE, is also available and a real-time clock obtainable from the system variables with quartz crystal accuracy.
- User definable functions, established by DEF FN and called by FN, may take up to 26 numeric and 26 string arguments, yielding string or numeric results.

Numbers in the Sinclair ZX Spectrum are stored as five bytes of floating binary-form with a range of  $+3 \times 10^{-39}$  to  $+7 \times 10^{38}$ , and accurate to  $9\frac{1}{2}$  decimal digits. Binary numbers may be entered directly with the BIN function.

- ends -

# PRESS INFORMATION

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Telephone: (0223) 311488

# sinclair

April 23 1982

## SINCLAIR ANNOUNCES NEW RANGE OF ZX81 SOFTWARE - NEW PRICING FOR ZX COMPUTER PERIPHERALS

Coinciding with its launch of the new ZX Spectrum, Sinclair Research has also announced today, April 23, a range of cassette-based software for its top-selling ZX81 personal computer.

Developed partly by ICL and partly by specialist software house, Psion, Sinclair has introduced the range in response to a widespread demand for suitable ZX81 office, educational and games software. It also believes that software increasingly holds the key to achieving continuing high sales levels.

Mail order sales of the new cassettes will begin in the UK during May and shortly afterwards in export markets. Part of the Sinclair range will also be available in May through W.H. Smith's, and the remainder in the autumn.

From ICL Sinclair has initially drawn nineteen cassettes for which it holds, under certain conditions, exclusive worldwide marketing rights.

Eight cassettes together form the 'Fun to Learn' series and are each available at £6.95, inc VAT: English Literature I and II, Geography, History, Mathematics, Inventions, Spelling and Music.

contd.....

SR/119c FOR FURTHER INFORMATION PLEASE CONTACT BILL NICHOLS  
OR LIZ WALKER ON 01-723-3444.

A further eight cassettes, retailing at £4.95 each inc VAT, form the 'Super Programs' series, which contains games, quiz, conversion and household programs.

ICL's Collectors Pack provides a comprehensive program enabling collectors, of for example stamps or coins, to hold a maximum of 400 records of up to six items on one cassette. The Club Record Controller is specially written to hold the personal records of 100 people. Readily updateable both are available at £9.95 inc VAT.

The final cassette, available at £6.95 inc VAT, offers an explanation of Biorhythms in the form of a special program, written to both identify an individual's physical, emotional and intellectual peaks, and to prepare a complete personal chart.

Seven Psion-originated cassettes are offered by Sinclair, ranging in price from £3.95 to £7.95 inc VAT. They include a full feature Backgammon game; a six-level ability Chess program; VU-CALC, which constructs, generates and calculates large tables for applications such as final analysis, budget sheets and projections; VU-FILE, for general purpose filing and information retrieval; Flight Simulation, creating the situation of an aircraft pilot with instantaneous responses between the user controls, the instrument panel and the outside world, and two further games cassettes, Space Raiders and Bombers and Fantasy Games.

All the new cassettes require the use of the add-on 16K RAM pack with the exception of five of the ICL 'Super Programs' series, which require 1K only.

Sinclair Research has also announced, with immediate effect, changes in the prices of the 16K RAM pack and of the ZX Printer. Due to a major reduction in chip costs it has been able to reduce the price of the RAM pack from £49.95 to £29.95 inc VAT. However, rising production costs for the Printer have necessitated an increase from £49.95 to £59.95 inc VAT.

# PRESS INFORMATION

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# sinclair

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28 May 1982

NEW BUSINESS AND GAMES CASSETTES FROM SINCLAIR -  
W H SMITH ORDERS 30,000

Seven full capability Sinclair ZX81 business and games cassette programs, including Flight Simulation, Vu-Calc and Backgammon, are now available by mail-order from Sinclair Research, ranging in price from £3.95 to £7.95 each inc VAT.

Also available from W H Smith's, which has initially ordered 30,000 cassettes, the new programs form part of a major planned expansion of the Sinclair ZX81 software range. Each is supplied complete with detailed instructions in an attractive full-colour sleeve.

Developed by the software house, Psion, each program utilises advanced machine code to exploit the maximum capacity of the ZX81 and its add-on memory 16K RAM pack. Psion and Sinclair have taken special care to ensure the highest standards of manufacturing quality, particularly in regard to reproduction.

Perhaps the most spectacular of the new cassettes, Flight Simulation, challenges the home computer 'pilot' to use principal navigational aids to land an aircraft with the right speed, altitude and descent angle. This specially written Psion program has many authentic details, including a complete and constantly changing runway landing-light display.

Contd.../

Two new business cassettes are offered; Vu-Calc, which constructs, generates and calculates large tables for applications such as financial analysis, budget sheets and projections, and Vu-File, designed for general purpose filing and information retrieval.

The other new cassettes are a full feature Backgammon game, a taxing six-level Chess program and two games programs, Space Raiders and Bombers and Fantasy Games.

- ends -

NOTE TO EDITORS

Sinclair Research is a private company, 95% owned by Clive Sinclair with its head office in Cambridge and branch offices in London, Boston USA, Munich and Paris. Founded to conceive and develop new products in the consumer electronics field, Sinclair Research is now working principally on personal computers, computer peripherals and flat-screen TVs.

Provisional estimated figures for the company's second full financial year to 31st March 1982 show turnover at £27,000,000 (1981 £4,656,000) with pre-tax profits at £10,000,000 (1981 £1,122,000).

Issued by: Sinclair Research Ltd., Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649.  
Contact: Bill Nichols.

RECEIVED 17 JUN 1982

**PRESS  
INFORMATION**

**sinclair**

15 June 1982

**RON PICKERING TO START SINCLAIR CAMBRIDGE FESTIVAL  
HALF-MARATHON**

BBC 'Superstars' presenter and athletics commentator, Ron Pickering, is to start the first Cambridge Festival Half-Marathon on Sunday 19 July.

Mr Pickering, who coached Britain's Olympic long-jump gold-medallist Lynn Davies, will also present the prizes, including Sinclair ZX Spectrum personal computers, worth £125 each, to the first male and female athletes and a set of five ZX81 computers to the winning school in the junior category.

The half-marathon also includes veteran, team and individual junior classes and is open to both club and enthusiast runners. Around 1000 competitors including Clive Sinclair, head of Cambridge-based sponsors Sinclair Research, and Joyce Smith, winner of the women's section in the first two London marathons, will follow a three-lap course through the city's historic streets.

Funds raised by the event will go towards a new track centre and headquarters for the Cambridge and Coleridge Athletic Club, who are the coorganisers with Cambridge City Council. A number of individual charity sponsorships are also being undertaken.

Further information is available from Brian Allinson, Amenities and Recreation Department, Cambridge City Council, Kett House, Station Road, Cambridge CB1 2JX. Tel: 0223-358977 ext. 489.

- ends -

Contact: Bill Nichols

From:  
Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

NOTE TO EDITORS

Clive Sinclair founded Sinclair Research in July 1979 to conceive and develop new products in the consumer electronics field. Sinclair Research is currently working on personal computers, computer peripherals and flat-screen TVs, and progressing research on electric vehicles and 'state-of-the-art' solid state technology.

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Further information is available from Dr. M. ...  
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**PRESS  
INFORMATION**



18 June 1982

**AMERICAN EXPRESS BOOSTS SALES OF THE ZX81**

American Express has received over 25,000 orders in the last three weeks for the Sinclair ZX81 personal computer, following an initial direct mail offer to two million American Express US cardholders at the end of May.

In a very positive initial response 2,000 orders alone were received by noon the day after the mailing, and American Express is projecting total sales from the offer of at least 50,000 units.

The agreement between Sinclair Research and American Express for the offer followed a successful test market for the ZX81, at the latter's request, at the end of 1981.

**NOTE TO EDITORS**

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Provisional estimated figures for the company's second full financial year to 31st March 1982 show turnover at £27,000,000 (1981 £4,656,000) with pre-tax profits at £10,000,000 (1981 £1,122,000).

- ends -

**PRESS  
INFORMATION**

**sinclair**

1 July 1982

**MUSE ZX81 EDUCATIONAL SOFTWARE AWARDS ANNOUNCED**

Final awards have now been made in the special ZX81 software award scheme, organised last November by MUSE, the educational computing association, to encourage the production of learning programs, and sponsored by Sinclair Research.

Well over 100 entries - "a most gratifying response", according to the organisers - were received. Many have been accepted into the ZX81 section of the MUSE software library, which with nearly 50 programs is now the largest section.

Eric Deeson, Educational ZX User Group organiser, and MUSE software librarian, Charles Sweeten, eventually decided to award prizes in only five of the six possible categories, "reflecting", said Eric, "less poor quality than an over-preponderance of science and maths material".

Prizes of Sinclair ZX Printers went to Dave Fisher of Coventry in the primary maths/science section for 'Bomber'; to Charles Rowbotham of Manchester under other primary for 'Sentry'; under secondary maths/science to John McMullan of Stechford for 'Forensic'; under other secondary to Richard Marriot of Kenilworth for 'Bigspell', and under other to Ian Souter of Tunbridge Wells for 'TLOG'. No award was made in the administration category.

Announcing the results Eric Deeson expressed MUSE's thanks "to Sinclair for making the awards and covering the costs of the exercise, and to the assessors for their always considerate and definitive reports".

NOTE TO EDITORS

Sinclair Research is a private company, 95% owned by Clive Sinclair, with its head office in Cambridge and branch offices in London, Boston USA, Munich and Paris. Founded by Clive Sinclair in July 1979 to conceive and develop new products in the consumer electronics field, Sinclair Research is currently working on personal computers, computer peripherals and flat-screen TVs. It is also progressing research on electric vehicles and 'state-of-the-art' solid state technology.

MUSE is a national organisation for co-ordinating activity in primary and secondary schools, teacher training institutions, colleges and other establishments with an interest in the use of mini and microcomputers in any subject area of education. For further information on MUSE please contact Bob Trigger, MUSE Freepost, Bromsgrove B61 0JT, Worcs.

**PRESS  
INFORMATION**

**sinclair**

8 July 1982

**MICROSCENE BRUM '82 BRINGS HOME COMPUTERS TO BIRMINGHAM**

Birmingham's Bingley Hall exhibition centre is to host Microscene Brum '82, the first Midlands exhibition for users of Sinclair personal computers, on Saturday 11 September.

Many local firms will be among the exhibitors showing the latest programs and electronic add-ons for the Sinclair ZX81 and ZX Spectrum computers. Visitors will also be able to explore the wide range of supporting popular magazines and books and to meet others with the same interests.

Microscene to some extent follows a well-established 'microfair' format which has drawn many thousands of visitors to similar shows in London and on the Continent. London's first Microfair last November reportedly attracted queues of up to two miles long.

The Birmingham show is organised by a group of computer hobbyists and specialists, founded by local teacher, Eric Deeson. Widely-known for his educational work in computing, Eric is the organiser of EZUG, an independent association established to support and develop the use of Sinclair computers in schools.

Microscene is built around the success of Sinclair's pioneering range of low-cost, high performance home computers. First introduced in 1980 more than 500,000 units have been sold worldwide in the last two years.

Further information about Microscene is available from  
6 Battenhall Road, Birmingham 17. Tel: 021-426 6762.

Contact: Bill Nichols

From:  
Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

NOTE TO EDITORS

Midlands companies exhibiting at Microscene include:

- Compusound (Redditch)      hobbyist hardware
- Microware (Leicester)      retail outlet
- AVC Software (Birmingham)      learning programs
- Memotech (Oxford)      extra memory
- Rose Cassettes (Solihull)      learning programs
- Macronics (Knowle)      games, disc system
- Axis Software (Loughborough)      games
- Redditch Electronics (Redditch)      hobbyist and technical hardware
- Shiva Publishing (Nantwich)      books
- Scisoft (Notts)      learning programs
- Video Software (Halesowen)      games, business programs
- University Computers (Cambridge)      technical hardware
- Simon Software (Redditch)      learning programs
- Computer Training Consultants (Leicester)      technical training programs

Sinclair Research is a private company, 95% owned by Clive Sinclair, with its head office in Cambridge and branch offices in London, Boston USA, Munich and Paris. Founded by Clive Sinclair in July 1979 to conceive and develop new products in the consumer electronics field, Sinclair Research is currently working on personal computers, computer peripherals and flat screen TVs. It is also progressing research on electric vehicles and 'state-of-the-art' solid state technology.

SR183

**PRESS  
INFORMATION**

**sinclair**

9 July 1982

**CAMBRIDGE FESTIVAL HALF-MARATHON - BACKGROUND**

The 1982 Sinclair Cambridge Festival Half-Marathon takes place on Sunday 18 July. It is the first to be included in the festival diary and the organisers are confident that it will become an annual event.

More than 1300 runners, ranging from international athletes to veteran enthusiasts, will compete over a three-lap course through the city's historic streets, beginning in King's Parade and including a riverside stretch along Chesterton Lane and the 'Backs' before finishing in the Market Square at the Guildhall Steps.

The event is sponsored for £5000 by Cambridge-based Sinclair Research, and the company's chairman, Clive Sinclair, a competitor in the last two New York Marathons, will be joining the runners.

Among the favourites are Ian Thompson, the current UK marathon record holder and winner of this year's Paris Marathon, and in the women's section, Joyce Smith, winner of the first two London Marathons and holder of the women's world marathon record.

BBC 'Superstars' presenter and athletics commentator, Ron Pickering is to start the race and will make the presentations to the winners. Prizes, also donated by Sinclair Research, include Sinclair ZX Spectrum personal computers, for the first male and female athletes, and a set of five Sinclair ZX81 computers for the winning school in the junior category.

Cambridge City Council  
Clacknash Road, Clacknash  
CO15 6DZ  
424266  
Mr. R. G. Smith  
Headmaster

The event is coorganised for the festival by Cambridge City Council's recreation department and the Cambridge and Coleridge Athletic Club, and funds raised will go towards a new track centre and headquarters for the athletic club. A number of individual charity sponsorships are also being undertaken.

Sinclair Research is a private company, 95% owned by Clive Sinclair, with its head office in Cambridge and branch offices in London, Boston USA, Munich and Paris. Founded by Clive Sinclair in July 1979 to conceive and develop new products in the consumer electronics field. Sinclair Research is currently working on personal computers, computer peripherals and flat-screen TVs. It is also progressing research on electric vehicles and 'state-of-the art' solid state technology.

Sinclair sees its sponsorship of the marathon as part of its commitment to supporting and developing the cultural life of Cambridge. It is also sponsoring, as part of the festival, a concert at Kings College on July 31.

- ends -

Further information is available from:

Brian Allinson  
Amenities and Recreation Department  
Cambridge City Council  
Kett House  
Station Road  
Cambridge CB1 2JX

Bill Nichols  
Sinclair Research Ltd  
23 Motcomb Street  
London SW1X 8LB

Tel: 0223 358977 ext. 489

Tel: 01-235 9649

Any journalists attending the event itself who require further information should contact Bill Nichols at 6 King's Parade, Cambridge CB2 1SN, Tel: 0223 353204, between 11.00am and 15.00pm on Sunday 18 July.



## PRESS INFORMATION

MENSA AT CAMBRIDGE 27th July~1st August 1982

13 July 1982

ANNUAL MENSA SYMPOSIUM TO EXPLORE 'THE GOLDEN AGES' AS BRITISH  
MENSA REPORTS RAPID GROWTH

The 1982 Mensa symposium, an exploration of The Golden Ages in history, is to be held in Queen's College, Cambridge, from July 27 to August 1.

The Golden Ages, the third in an annual Mensa series dedicated to significant topics of general interest, follows The Eighties, led by Arthur C. Clarke, and The Leading Edge, which concentrated on contemporary developments in science and technology.

Speakers will examine the factors and trends underlying the achievements of great cultures in science, technology, trade and the arts, and seek to relate their findings to Man's current situation.

Among the contributors Clive Sinclair, chairman of British Mensa and head of Sinclair Research, will argue that, contrary to today's fashionable pessimism, Man is entering a new golden era inspired by the advance of technology.

In contrast, conservative minister and former co-editor of the Black Papers on education, Dr. Rhodes Boyson, will explore the impact of educational methods and attitudes on the rise and decline of golden ages, using as his example British 'stagnation' over the period 1870-1970.

On a central Mensa theme Professor Richard Lynn, recently at the centre of considerable controversy over his findings that average Japanese IQ exceeded that of the West by some 11 points, will

argue for a direct link between mean intelligence and national achievement.

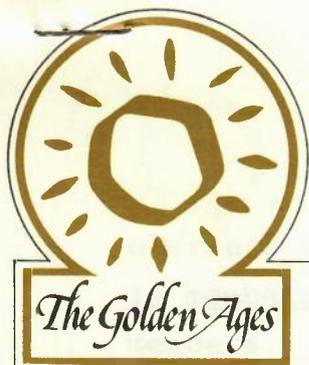
Overall the British symposium, which now has annual counterparts in Boston USA, Cologne and Oslo, is designed to further Mensa's aim of bringing together intelligent people worldwide. Many overseas visitors will be present confirming the rapid growth in membership of the society, which now has more than 60,000 members.

According to Victor Serebriakoff, newly-appointed president of World Mensa and former secretary of British Mensa, the growth has been most noticeable in Britain: "Our numbers here have multiplied fourfold in four years to 8500, and we have received some 500 applications per week over the last few months. Starting with this year's symposium we plan to expand much further and shall be actively taking Mensa out to people".

- ends -

Further information is available from Bill Nichols, Public Relations Department, Sinclair Research, 23 Motcomb Street, London, SW1.  
Tel: 01- 235-9649

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## PRESS INFORMATION

MENSA AT CAMBRIDGE 27th July~1st August 1982

13 July 1982

ANNUAL MENSA AT CAMBRIDGE SYMPOSIUM TO EXPLORE THE GOLDEN AGES

Cambridge is again to host the British Mensa society's annual symposium, devoted this year to an exploration of The Golden Ages in history, at Queen's College from July 27 to August 1.

Following The Eighties and The Leading Edge, The Golden Ages is the third in an annual Mensa series dedicated to significant topics of general interest. Speakers will examine the factors underlying the achievements of great cultures, and seek to relate their findings to Man's current situation.

Among the contributors Clive Sinclair, chairman of British Mensa and head of Sinclair Research, will argue that, contrary to today's fashionable pessimism, Man is entering a new golden era inspired by the advance of technology.

In contrast, conservative minister and former co-editor of the Black Papers on education, Dr. Rhodes Boyson, will explore the impact of educational methods and attitudes on the rise and decline of golden ages, using as his example British 'stagnation' over the period 1870-1970.

On a central Mensa theme Professor Richard Lynn, recently at the centre of considerable controversy over his finding that average Japanese IQ exceeded that of the West by some 11 points, will argue for a direct link between mean intelligence and national achievement.

Overall the British symposium, which now has annual counterparts in Boston USA, Cologne and Oslo, is designed to further Mensa's aim of bringing together intelligent people worldwide. Many

PRESS INFORMATION

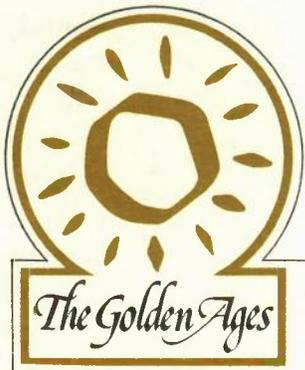
overseas visitors will be present confirming the rapid growth in membership of the society, which now has more than 60,000 members.

- ends -

Further information is available from Bill Nichols, Public Relations Department, Sinclair Research, 23 Motcomb Street, London SW1.

Tel: 01-235 9649

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## PRESS INFORMATION

MENSA AT CAMBRIDGE 27th July~1st August 1982

15 July 1982

### MENSA CHALLENGES CAMBRIDGE

Mensa, the fast growing international society for the intelligent is challenging the Cambridge public to an on-the-spot personal IQ test, on Saturday 31 July.

The society has arranged for people to 'walk-in' to a special centre at the Blue Boar Hotel, Restaurant Annexe, Trinity Street, Cambridge. For a reduced fee of £5 they can discover their own IQ in a 1½ hour series of tests, which will begin at 10.30 am, with the last session at 3.00 pm.

Papers will be marked on the same day in complete confidentiality, and those reaching Mensa's required level invited to join.

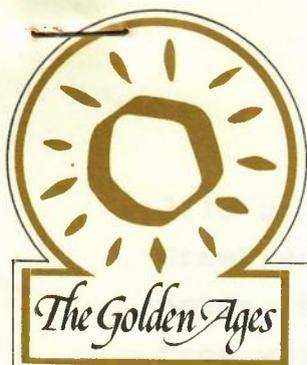
Mensa's challenge, coinciding with its annual Cambridge symposium devoted this year to The Golden Ages, is the first stage in a major recruitment drive by the society during which it will visit several major cities.

Victor Serebriakoff, Mensa's world president, explained: "UK membership has risen fourfold to 8500 in the past four years and we are poised for major expansion - in theory one million people should be qualified to join in Britain. Our aim in bringing them together is to promote contact amongst intelligent people across all barriers of politics, religion, occupation and ideology".

- ends -

Further information is available from Bill Nichols, Public Relations Department, Sinclair Research Ltd., 23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649.

MC 3



## PRESS INFORMATION

MENSA AT CAMBRIDGE 27th July~1st August 1982

13 July 1982

MENSA AT CAMBRIDGE SYMPOSIUM ON THE GOLDEN AGES - TIMETABLE,  
SYNOPSIS AND SHORT BIOGRAPHIES

Synopses of Papers

Wednesday 28 July:

9.30 am; Clive Sinclair opens the symposium with a keynote speech, The Most Golden Age of All? He will oppose the prevailing pessimism of today and argue that the world is entering perhaps its greatest golden era, based on the very rapid post-war advance in technology.

2.15 pm; Turning to the possible determinants of a Golden Age Professor Richard Lynn will explore The Role of IQ in the Rise and Fall of Nations, and will develop the thesis that just as intelligence is a determinant of intellectual and economic advancement among individuals so may it determine the achievements of nations.

Thursday 29 July:

9.30 am; Professor Madsen Pirie, in The Historians as Detectives, explores the golden ages of human culture and intellectual achievement in an attempt to trace both causes and preconditions. The periods are examined for factors and clues much as a detective examines the scene of a crime, and, in comparing the detail, an attempt is made to solve this major historical problem.

2.15 pm; Thomas Braun, Dean of Merton College, Oxford, explores Greek and Roman attitudes to the concept of the Golden Age. He notes that the Greeks inherited a belief in a past Golden Age from which mankind had since degenerated and that only at significant moments did people depart from a general pessimism and hope for the return of a Golden Age.

Friday 30 July:

9.30 am; Turning from science and arts Professor Stanislaw Andreski argues that science has only progressed in societies where the status of the merchants was high.

2.15 pm; Professor Zangwill will explore the rise and decline of a Golden Age in a particular discipline, experimental psychology, during the second half of the nineteenth-century. He will contrast the emergence of today's more unified and empirical psychology from developments in engineering, computer science and artificial intelligence, and argue in conclusion that, if man survives, a new and more realistic Golden Age may be on the horizon through his understanding of himself.

Saturday 31 July:

9.30 am; Looking at the impact of education on the rise and decline of the Golden Ages, Dr. Rhodes Boyson will present 1870-1970 The Advance and Stagnation of British Popular Academic, Intellectual and Cultural Activity.

3.00 pm: Victor Serebriakoff will chair a final 'Open Forum' inviting all lecturers and members of the colloquium to contribute to a general discussion on the Golden Ages theme.

Short Biographies:

Clive Sinclair, 41, is the head of Sinclair Research, one of Britain's leading consumer electronics companies, and chairman of the British Mensa. He was born in 1940, and began his career as a technical journalist before founding his first company, Sinclair Radionics in 1962. Among his many innovations have

been the 'Executive' (1972), the world's first pocket calculator, the Microvision TV (1977), and the ZX80, the world's first computer to sell for less than £100. He is married with three children, and lives in Cambridge.

Richard Lynn, 52, is currently professor of psychology at the New University of Ulster and the author of many books and articles in the field. A graduate of King's College Cambridge, he has also been research fellow at Princeton's Neuro-Psychiatric Research Institute and professor of psychology at the Dublin Economic and Social Research Institute.

Dr. Madsen Pirie, 41, is president of the Adam Smith Institute. He was previously professor of philosophy at Hillsdale College, and is the author of 'Trial and Error and the Idea of Progress', and 'The Logic of Economics', as well as co-editor of 'Economy and Local Government'. His work at the institute has included proposals on quangos, privatisation, mass transit and freeports.

Stanislav Andreski, 63, has been professor of sociology at the University of Reading since 1964. The author of numerous books and articles on sociological and anthropological themes he has also been visiting professor at the City University of New York and the Simon Fraser University of Canada.

O L Zangwill, recently retired after nearly 30 years as professor of experimental psychology at Cambridge and a life fellow of King's College. A son of Israel Zangwill, the Jewish novelist and playwright, he worked part-time for many years at the National Hospital, London, of which he is now an honorary research fellow.

Dr. Rhodes Boyson, MP for Brent North, has been Parliamentary Under Secretary of State for Education and Science since 1979 and has ministerial responsibility for schools. He was an opposition spokesman on education 1976-1979. A former headmaster, Dr. Boyson is a practising historian and author of numerous books. He is perhaps best known as co-editor of the Black Papers on Education.

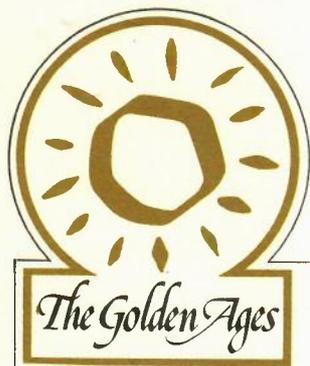
Victor Serebriakoff is the recently appointed president of the World Mensa Society. An early member of Mensa he became secretary in 1952 when the society was at a low ebb, and was a prime mover in its subsequent growth worldwide as international chairman from 1970. A former industrialist and inventor Victor is also the author of many books and articles.

- ends -

Further information is available from Bill Nichols, Public Relations Department, Sinclair Research, 23 Motcomb Street, London SW1.

Tel: 01-235 9649

MC4



## PRESS INFORMATION

MENSA AT CAMBRIDGE 27th July ~ 1st August 1982

13 July 1982

### THE MENSA SOCIETY - BACKGROUND

Originally founded in 1946, the Mensa Society is today a worldwide organisation with some 60,000 members in over 60 countries. Its UK membership alone now totals 8500 and some 500 new applications are received each week.

Mensa is an international uncommitted undogmatic forum of intelligent people from all nations, of all opinions, religions, ideologies and political news, and from all social and occupational classes.

It is dedicated to promoting increased contacts and mutual understanding between intelligent people, operating across disciplines and opposing the growth of sectional interests. As its members have all opinions Mensa itself can have no collective opinion.

The society selects its members solely on the criterion of intelligence and without bias as regards background or viewpoint. Applicants are required only to take a special IQ test.

Mensa operates through a variety of international, national and local groups joining together to share mutual interests and activities. It has a very flexible structure which enables members to exploit the opportunities of the society to the full.

Further details on the society are available from the British Mensa Society, Bond House, St. John's Square, Wolverhampton, WV2 4AH.

- ends -

Further information is available from Bill Nichols, Public Relations Department, Sinclair Research, 23 Motcomb Street, London. SW1  
Tel: 01-235 9649 MC5

**PRESS  
INFORMATION**

**sinclair**

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16 July 1982

ZX SPECTRUM SELECTED FOR 'MICROS IN PRIMARY SCHOOLS SCHEME'

The Sinclair ZX Spectrum has been selected as one of three microcomputers for the Department of Industry's new primary schools' scheme.

Welcoming the announcement Clive Sinclair, head of Sinclair Research, commented: "We are delighted to participate in this major extension of the Government's microcomputers in schools' scheme, and to support an educational project of great significance.

"It is now a matter of urgent concern that we increase the pace of computer familiarisation at all levels of education, if as a nation we are to prosper in an increasingly electronic age. We believe that the ZX Spectrum is an ideal machine to contribute to this training process."

The complete Sinclair package comprises the ZX Spectrum (48K version), together with colour or monochrome monitor, cassette recorder, RS232 Interface and custom-built tray to house the equipment. Other computers in the scheme are the BBC Acorn Model B and the Research Machines 480Z.

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**PRESS  
INFORMATION**

**sinclair**

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19 July 1982

**IAN THOMPSON WINS CAMBRIDGE HALF-MARATHON**

- OVER 1300 TAKE PART

Ian Thompson the UK marathon record holder, won Sunday's inaugural Sinclair Cambridge Festival half-marathon, staged over a three-lap course through the city's historic streets.

Ian led home more than 1300 top athletes, veterans, and enthusiasts to cross the winning line at the Guildhall Steps in 1:05:17. He was closely followed by Bob Treadwell in 1:05:30, with the winning veteran, 1970 Mexico Olympics star Tim Johnson, in fourth place, in 1:07:37.

The first lady home, Carol Gould, crossed the winning line some ten minutes later in 1:17:36, while the team prize went to co-organisers Cambridge and Coleridge AC with three runners in the first ten.

Presentations to the winners were made by the BBC 'Superstars' athletics commentator Ron Pickering, who also started the race in King's Parade. Prizes included personal computers, donated by locally-based Sinclair Research, who acted as overall sponsors for the first marathon event to be included in the Cambridge Festival calendar.

A large contingent of Sinclair employees took part in the race, and they were led home by the company's head Clive Sinclair in 1:51:41.

Cambridge City Council, in association with the local athletics club, organised the race on behalf of the Festival. For the council Brian Allinson commented "the turn-out of runners for the half-marathon exceeded our expectations, and we were particularly delighted at the very festive crowd which gathered around the course and in the market square for the finish. We are confident that the race can become a regular annual feature of the Festival."

-ends-

SR122d

Photographs available on request.

The first lady hike, Carol Gould, crossing the starting line some ten minutes later in 1986, with the race prize won by Cambridge and Faculty AC with their runners in the first ten.

Presentations to the winners were made by the SAC Superstore athletics consultant, Bob Pickering, who also started the race in King's Parade. Prizes included personal computers, donated by locally based Sir John Rowland, who acted as overall sponsor for the first marathon event to be included in the Cambridge Festival calendar.

A large contingent of Social employees took part in the race and they were led back by the company's head Clive Suckler in 1986.



## PRESS INFORMATION

MENSA AT CAMBRIDGE 27th July~1st August 1982

28 July 1982

### THE MOST GOLDEN AGE OF THEM ALL?

Extracts from a speech given by Clive Sinclair, head of Sinclair Research and chairman of British Mensa, at Mensa's "Golden Ages" symposium, Cambridge, Wednesday 28 July, 1982.

I intend arguing today that the most Golden Age of man's history may well lie before us, if we can only move in the right direction.

Looking back historians identify some 20 great civilisations, and each perhaps had its Golden Age. But why were certain periods so golden? From a non-academic stance I intend discussing two great plateaus, Graeco Roman and the Renaissance.... Each of these periods, together with Augustan Rome, Elizabethan England and the France of the Sun King Louis Quartorze showed a number of common characteristics which served to define the Golden Age.

- 1) Peace, secured by superiority of arms and technology, enable individuals to walk freely about the streets, apparently a simple freedom but one sadly very rare in our history,
- 2) a surplus of labour, beyond the need to maintain the necessities of life and beyond that a surplus of time for the thinkers,
- 3) a broadly shared philosophy of life,
- 4) national leadership and objectives, and a belief in the education of people,
- 5) "frontiers" in the widest sense,

6) availability of wealth.

Finally a Golden Age may need a golden trigger, some surprising event or injection of technology so one may point to the invention of writing at the beginning of Egyptian Sumerian civilisation, and similarly the invention of moving-type for the Renaissance.

Both of these developments reduce the cost of data transmission by a factor of 100 (interestingly one may also note that the later development took 22 years to reach England which is some measure of the time's rate of technology diffusion).

Given all these elements the body of men arises which can turn its attention to matters other than necessities. Thus wealthy patrons produce the great flowerings of arts which are a feature of the Golden Ages. Equally the Golden Ages are often marked by one great individual, a type of philosopher-prints, eg Pericles, Augustus, Lorenzo de Medici, Elizabeth I and Louis Quatorze.

Returning to our own time we can begin to identify some of these features in our present circumstances, which may place us on the threshold of a Golden Age.

Is there a trigger? It so happens that another hundred-fold reduction in the cost of data publication and transmission is about to occur. A single 12" diameter optical disk, currently under development for use with TV, can, remarkably enough contain the information of 10,000 books and that disk will cost not much more than a few books - almost in fact a thousand-fold reduction in costs.

Another change is of equal importance. We have for some time been passing through a great industrial age in which the economic basis of society has demanded the bringing together of people in great numbers, many thousands per factory, many millions per city. I believe that these positions are inimical to the human spirit, and that our move away from this type of organisation will restore the potential of the individual.

Another Golden Age requirement is an abundant supply of patrons. We have a well educated population, a society which reveres the arts, and have become a world centre for music and for the written word.

We have potential artists partly for the sad reason that we have 3 million unemployed, this is not a passing phase of recession, but a trend which will last until the end of the century, during which I expect the manufacturing industry to shed a further 7 million jobs and for the proportion employed in manufacturing to decline from some 42% of the population to less than 10%. This will occur as automated systems are now radically cheaper than manual costs.

We can no longer see the manufacturing industry as a major employer of this country and greatly need to adapt. We must change the pattern of expectation - no longer to prepare people for a life times work in major organisations but to give them the self reliance for a broader role in smaller groups.

Many, if not most, of today's young people will always work for small organisations and indeed must found them. We must encourage people to follow this route if we are to create future employment - whether in high technology, in a revival of a class, or in service industries.

I hope and believe that these trends will lead to a new flourishing of creative endeavour. As once we supplied the world with manufactured goods there is no reason why we should not now be the source of creative materials "products of the mind" no longer steel but software.

Of course, not all can be artists others will be artisans and work in the service industries. We have tended too much to see manufacturing as the well creating sector of the economy, but wealth is created when one man provides what another man wants.

Because we no longer need to devote the bulk of our time to the production of objects I can see the plateau of a Golden Age before us. Certainly we

PRESS INFORMATION

may need inspiration and leadership, great buildings, a bridge over rather than a tunnel under the channel.

Early in the next century we will have made intelligent machines, true robots ending for all time the pattern of drudgery - with them we can start the exploration of the universe. It may be that Western civilisation, seeded in seventh century Ireland is only just about to flower.

-ends-

Further information is available from Bill Nichols, Public Relations Department, Sinclair Research, 23 Motcomb Street, London SW1.  
Tel:01-235-9649

Looking back through history to the great civilisations, we can perhaps find the seeds of the future. But why were certain periods so fertile from a civilisation point of view? In this series, discussing the great systems, Greek Rome and the Renaissance, each of these periods, together with Aquarian Rome, Elizabethan England and the France of the Sun King Louis XIV, we shall see a number of common characteristics which served to define the Golden Age.

- 1) Power, secured by superiority of arms and technology, which individuals to walk freely about the streets, apparently a simple freedom but one which was rare in our history.
- 2) a surplus of leisure, beyond the need to maintain the necessities of life and beyond that a surplus of time for the intellect.
- 3) a broadly shared philosophy of life.
- 4) national grandeur and objectives, and a belief in the education of people.
- 5) "frontiers" in the widest sense.



## PRESS INFORMATION

MENSA AT CAMBRIDGE 27th July~1st August 1982

EXTRACT FROM THE SPEECH OF PROFESSOR LYNN  
TO THE MENSA AT CAMBRIDGE SYMPOSIUM ON THE GOLDEN AGES  
WEDNESDAY JULY 28, 1982

### 'THE ROLE OF IQ IN DETERMINING THE GOLDEN AGES'

The rise and decline of societies from the Golden Ages is one of the most challenging topics available to us. My own approach to the problem is that of the social and biological scientist, not that of the historian.

I intend particularly to examine the possible role of the rise and decline of intelligence of a population as a cause of the decline of its culture. To approach the subject I will review the work of two Cambridge scholars, Francis Dalton and Ronald Fisher.

Francis Dalton discussed these problems in his book 'Hereditary Genius', which appeared in 1869. He argued that a culture's achievements are created largely by a rather small minority of highly intelligent people - further that a civilisation required a generally high average IQ to secure a large proportion of such highly intelligent people, and that civilisations could be ranked in terms of the intelligence levels of the population.

I have examined Dalton's thesis with modern intelligence tests over the period since mid-1970's. My first area of study was the British Isles which I divided into thirteen sub-populations and obtained data for the average or mean IQ in each area. I discovered that the mean IQ is highest in London and surrounding areas and falls off by one IQ point for every one hundred miles as you move away from London. Thus London's mean IQ of 102

Contd.../

declines to 97.3 in Scotland and 96 in the Irish Republic. These apparently trivial differences actually have major effects on the numbers of highly intelligent people produced by the populations. In approximate terms as you raise the mean IQ of a population three IQ points so the number of people with IQ's over 130 roughly doubles.

I tested this argument with two criteria of achievement, number of Fellows of the Royal Society (intellectual output), and average earnings (economic output). The results in both cases correlate closely with the IQ data. (Professor Lynn then gave comparative data for France and the USA on the same point before turning to Dalton's second contribution in this area regarding the extinction of elites. In brief Dalton argues that evidence suggested that many highly intelligent English families in each age had become childless and ultimately extinct. Professor Lynn then turned to the work of Ronald Fisher).

In his book 'Genetical Theory of Natural Selection', Fisher elaborated Dalton's second argument into a general theory of the collapse of civilisations. Over this theory I must place a question mark. However, a number of other noteworthy factors operating today, some of them more important than those Ronald Fisher emphasised.

Firstly, western civilisation has been characterised for three or four generations by diseugenic birth rate - that is birth rates where more intelligent people are having fewer children. Many people believe, including myself, that this must lead to a reduction in the genetic component of intelligence.

Why the trend? On the one hand, it is probable that more intelligent people actually want less children than do less intelligent people, so that a conscious preference is expressed. Equally, intelligent people are probably better at planning efficiently. In a Princeton study it is suggested that contraceptive failure by less intelligent people was probably a more important factor.

A second reason for the decline in IQ in the contemporary western world is probably selective emigration. My research suggests this is the chief factor accounting for the unequal distribution of intelligence which I earlier demonstrated in the British Isles and in France. What has happened here is that over the centuries intelligent people in the provinces have moved to the centre. Their families have raised further families there, and of course intelligence is to a very great extent transmitted to the family through genetic mechanisms and through environmental mechanisms. These two mechanisms reinforce each other.

In brief then, Dalton and Fisher have laid down an interesting but incomplete theory as an approach to this problem.

(Professor Lynn then examined the selective migration hypothesis in greater detail, against the example of modern Scotland since the 18th century and the decline of Germany as a great scientific nation since the beginning of this century).

Let us now consider a nation in the early stages of becoming a high level culture, Japan. No-one can fail to have been impressed by the outstanding achievements, particularly in the economic and technological fields, of Japan since its recovery from 1945/46. One by one they have entered industries dominated by the west and destroyed them, for example the British motorcycle and shipbuilding industries and subsequently radios. The extraordinary success of the Japanese can be indexed by their economic growth rate which as you will all know has been outstandingly successful as compared with those of any other nation.

Turning to intellectual achievement, I have taken 27 readings of the mean IQ in Japan. When these tests are completed and we look at this Japanese sample we observe two things; first the Japanese always score higher than any of the western caucasian populations, and secondly that initially they score about four points higher at 104. However, this reflects the IQ of people

in their forties or above but the IQ of the younger generation is even higher. For young Japanese of about 20 the mean IQ is about 111. Here again, therefore, we see another example of the achievements of a nation running parallel to the mean IQ.

(Professor Lynn concluded his speech with a review of the mechanisms transferring high IQ into economic performance).

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For further information please contact, Bill Nichols, Sinclair Research Ltd., 23 Motcomb Street, London SW1X 8LB.  
Tel: 01-235 9649.



## PRESS INFORMATION

MENSA AT CAMBRIDGE 27th July~1st August 1982

EDITED EXTRACTS FROM THE SPEECH BY PROFESSOR MADSEN PIRIE  
TO THE MENSA AT CAMBRIDGE SYMPOSIUM  
THURSDAY JULY 29, 1982

### 'THE HISTORIAN AS DETECTIVE'

I am going to pose the question "What caused the Golden Ages?", those periods in which there were sudden outpourings of genius. And just as the detective begins with the scene of the crime, so too the historian must begin with the evidence of the Golden Ages.

It is unsubtle to look at common factors, and to say that these are causes. We might more subtly ask, "What does an answer look like?". To say what caused the Golden Ages is to presuppose some association in our minds, and our hidden motive is perhaps that we are trying somehow to influence future developments and maybe to produce, sustain or to prevent another Golden Age. Karl Popper says that, in answering the question of causes, we need two things - a covering law and the appropriate initial conditions. In history we look for the initial condition "x" which occurs whenever there is a Golden Age of cultural and intellectual achievement, and for the covering law to satisfy ourselves that everything we call a Golden Age comes under this heading.

How do we get hold of this covering law? The answer is by experience, and we must approach it as the detective.

Now we want to fill in the blank "x", and we must start with the

Contd.../

clues, as does Sherlock Holmes. What do they have in common? We must certainly avoid the trap of treating historical ages and cultures as living organisms, as does Toynbee, or as a wheel. These are the tricks and traps of hindsight. We must also avoid certain things that interest us, as for example, democracy, feminism, or anti-slavery. That equally is a trick of perspective.

I shall now push all these cautions to one side and give you my answer. It derives to some extent from Karl Marx who produced one of those acid generalisations to which we all appeal when we look at history. He pointed out that the changes in production methods, which society uses, gradually reflect themselves in the whole of its organisation. Thus you will expect its institutions, its religion, its art and its literature to reflect that change, and ultimately as Marx has said, we find the cause of the changes in that original shift in production. This is economic determinism.

I once embarked on a Phd in History, designed to prove that it was as a result of the expansion of trade that cultural Golden Ages arose. I examined the Athenian Silver Empire, the Italian Merchant Princes, and the Scottish enlightenment. In each case a massive increase in trade was followed within thirty years by one of those great cultural explosions, a Golden Age. I believed that all I had to do was to document in each case how the rise in trade and its attendant prosperity filtered through into the hands first of all to the patrons and then to the artists, writers, sculptors and thinkers. Eventually I abandoned my thesis because the available evidence simply did not fit.

Finally, therefore, I would like to turn to possible psychological factors which can be added to the possible economic ones, and to refer to Turner's 'The Frontiers in American History', which in many ways is as influential for historians as Karl Marx. He asked "What caused the Americans to be American? Why were they not like Europeans?"

His answer was the frontier, which he believed changed the individual. The basis is practicality and that exists to this day.

And now finally I propose a "rack" for the Golden Ages, based on some sort of psychological equivalent. All Golden Ages have in common a comparatively isolated society, which is suddenly thrown into sustained contact with others - often through trade. The new contact brings the society new ideas, and ultimately leads to a re-examination of its own. I am now viewing a Golden Age in psychological and intellectual terms and seeing them as proverbs of comparison and criticism. In other words creativity develops against this background of contrast, comparison and criticism.

In essence then I am arguing that we may be looking at something very abstract and psychological. If we are to say what caused the Golden Ages, my answer would be intellectual ferment - a ferment brought about by sudden contact with other cultures and other regions by previously isolated society.

If we wish to produce this for ourselves, the answer is very prosaic. Avoid habit. Let us always seek out, as Clive Sinclair has said, the new frontiers, the new ideas. Let us foster a climate of criticism, and therefore hope to achieve creativity.

When I look at our society today I agree with him that because of the way we have established the conditions for intellectual ferment, we seem to be expanding rather than the reverse. I see the coming age as quite possibly being a golden one, and I am with Clive in thinking perhaps a golden one which is more golden and perhaps more long lasting than any previous ones we have looked at.

- ends -

For further information please contact Bill Nichols at Sinclair Research Ltd., 23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649.

**PRESS  
INFORMATION**

**sinclair**

3 August 1982

**CHILDREN GO COMPUTERCAMPING - COURTESY OF  
BEAUMONT AND SINCLAIR**

Thousands of children are escaping this summer's boredom trap in a series of day and residential 'computercamps', offering the unusual combination of sports' activities and the chance to learn about computers.

The combination is the brainchild of Stuart Wiley, head of Beaumont Summer Camps, who introduced it to Britain from the US last summer. This year his organisation is running throughout July and August a residential adventure camp in the Lake District, where Beaumont is using the Sinclair range of ZX81 and ZX Spectrum personal computers which are particularly effective low-cost full-facility introductions to the world of computing.

Each day children choose between some 30 sports from archery to horse-riding, and if they wish can also learn, with experienced instructors, the practical skills of computing, 'hands-on'.

Stuart sees the camps as a 'unique blend of pleasure and learning', and adds that 'often the children get most enjoyment from the computers!'

'Parents who send children to us can be sure that they are always happily, and usefully occupied. There is no compulsion - we let them learn at their own pace working directly with the computers, and usually have difficulty in dragging them away'.

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Further information about the camps is available from Stuart Wiley, Beaumont Summer Camps, 100 New Kings Road, London SW6 4LX. Tel; 01 736-3272.

**SR192**

Contact: Bill Nichols

From:  
Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

**PRESS  
INFORMATION**

**sinclair**

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6 August 1982

**SINCLAIR ZX81 BREAKS THE £50 BARRIER FOR PERSONAL COMPUTERS  
- NEW RETAIL OUTLETS ANNOUNCED**

In significant new moves designed to broaden still further its consumer market base, Sinclair Research is reducing, effective from Monday 9 August, the price of the Sinclair ZX81, from £69.95 to £49.95 inc VAT, and expanding its range of retail outlets.

Boots and Greens, a subsidiary of Debenhams, will start selling the full ZX81 product range through selected stores during August, and discussions are at an advanced stage with a number of other leading retailers.

Prism Microproducts is also shortly to begin selling the ZX81, as wholesaler, through High Street computer stores.

Clive Sinclair, head of Sinclair Research, explained that 'the new strategy matched the company's belief that the marketplace is now moving into a maturer second phase. The personal computer is no longer the preserve of the hobbyist but rapidly becoming as much a household item as the TV or Hi-Fi'.

Sinclair will continue to sell the ZX81 mail order and through branches of the W H Smith High Street chain. To date the ZX81 has sold over 450,000 units worldwide and is being produced at the rate of 60,000 units per month.

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NOTE TO EDITORS

Sinclair Research is a private company, 95% owned by Clive Sinclair with its head office in Cambridge and branch offices in London, Boston USA, Munich and Paris. Founded by Clive Sinclair in July 1979 to conceive and develop new products in the consumer electronics field. Sinclair Research is currently working on personal computers, computer peripherals and flat-screen TVs. It is also progressing research on electric vehicles and 'state-of-the-art' solid state technology.

Prism Microproducts is based at 30/31 Islington Green, London N1 8BJ. Tel: 01-359 7481. Contact: Bob Denton.

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**PRESS  
INFORMATION**

**sinclair**

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9 September 1982

NEW SENIOR MANAGEMENT APPOINTMENT AT SINCLAIR RESEARCH

Sinclair Research of Cambridge has appointed Bill Matthews, 43, as General Manager responsible for finance, administration and sales.

Bill joins Sinclair from the Hoerbiger Group, where he was executive vice-president based in Houston. Prior to that he spent eight years as a management consultant with Price Waterhouse Associates in Toronto. He began his career as a product group accountant with ICI and subsequently became financial controller at Sony UK.

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SR199

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Contact: Bill Nichols

From:  
Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

**PRESS  
INFORMATION**

**sinclair**

9 September 1982

SINCLAIR LAUNCHES FIRST RANGE OF SPECTRUM SOFTWARE AT  
PERSONAL COMPUTER WORLD SHOW

Sinclair Research marked its appearance at the 1982 Personal Computer World Show by announcing today, September 9, its own first range of twenty-one office, educational and games cassettes for the new Sinclair ZX Spectrum personal computer.

With over 40,000 Spectrums already sold since launch in April, and worldwide sales of 400,000 predicted in the next year, the new software is the first step in Sinclair's planned development of a complete library of professional and general Spectrum programs. The first series has been developed for Sinclair by ICL and Psion.

From Psion come two full-feature games cassettes, Space Raiders and Planetoids, the latter including 'Missile', both priced at £4.95; the subtle and amusing cartoon-style Hungry Horace at £5.95; two substantial business programs, Vu-File and Vu-Calc, both at £8.95; Vu-3D, a graphics program for design applications at £9.95; a ten-level ability Chess cassette, and an enhanced version of the popular ZX81 Flight Simulation program, both at £7.95.

ICL's 'Games' series contains five cassettes, each at £4.95, ranging from the variety of Games 2, with Galactic Invasion, Drop a Brick, Silhouette Colour Doodle and Train Race, to the powerful Star Trail program which occupies Games 5.

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Eight further ICL cassettes complete the new range; five - English Literature, Inventions, Music, History and Geography - forming the 'Fun to Learn' series, each at £6.95; two, the 'Pastimes' series, both at £4.95; and lastly a Biorhythms program, at £6.95, which enables the preparation of a complete personal chart of an individual's physical, emotional and intellectual peaks.

All prices are inclusive of VAT and all cassettes can be used with both 16K and 48K Spectrums, except Flight Simulation, Chess and Games 5 which require the full 48K. All the new cassettes, excepting Vu-3D, Pastimes 1 and Flight Simulation, which will all be released at the end of September, are immediately available by mail order only from Sinclair Research, Stanhope Road, Camberley, Surrey.

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NOTE TO EDITORS

Journalists who would like individual demonstrations of the new cassettes during the Personal Computer World Show, should contact Bill Nichols or Jane Boothroyd on the Sinclair stand, No. 252.

Further general information is available from Bill Nichols or Liz Walker, who will be pleased to supply whole or part sets for review. Tel: 01-235 9649.

**PRESS  
INFORMATION**

**sinclair**

9 September 1982

FIVEFOLD SALES INCREASE AS ZX81 PASSES 500,000 MARK

- NEW RETAILERS ANNOUNCED

UK sales of the best-selling Sinclair ZX81 personal computer rose fivefold during August helping total worldwide sales to pass 500,000 at the end of the month.

The increase followed last month's price reduction from £69.95 to £49.95 inc VAT, and the expansion in Sinclair's range of retail outlets to include Boots, Greens - a subsidiary of Debenhams - and, as wholesaler to High Street computer stores, Prism Microproducts.

To consolidate its growing presence in the consumer marketplace, Sinclair has now concluded agreements with three further leading retailers, John Menzies, Rank Xerox and Wigfalls. With this base it is confident that the higher sales levels will be maintained and improved.

In the US the ZX81 is now selling at record levels. Some 45,000 units will be shipped during September, and it is expected that final sales from the recent American Express mailing will total at least 80,000.

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NOTE TO EDITORS

Sinclair Research was founded by Clive Sinclair in July 1979 to conceive and develop new products in the consumer electronics field. It is based in Cambridge and there are

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branch offices in London, Boston USA, Munich and Paris.

With total unit sales now in excess of 600,000, Sinclair is established as the largest volume (but not turnover) manufacturer of personal computers world-wide. In addition to its current work on computers, computer peripherals and flat-screen TVs, Sinclair is also progressing research on electric vehicles and 'state-of-the-art' solid state technology.

**PRESS  
INFORMATION**

**sinclair**

9 September 1982

INTRODUCING SINCLAIR RESEARCH AND THE ZX SPECTRUM AND  
ZX81 PERSONAL COMPUTERS

Sinclair Research is now established as one of the world's leading personal computer manufacturers, and with sales approaching 700,000 units, as the largest in volume terms.

For its third appearance at the annual Personal Computer World Show Sinclair Research is showing its full range of personal computers, both the ZX Spectrum and the ZX81, and computer peripherals. 'Pride of place' on the Sinclair stand goes to the new ZX Spectrum, which was launched in April, and designed for a wide variety of home, office and educational applications.

Available at only £125, with 16K RAM memory capacity, and in a second 48K RAM version at £175, both prices inc VAT, it offers facilities comparable to personal computers costing up to three times as much. More than 40,000 have already been sold.

Measuring 8½" x 5" x 1" (233 x 144 x 30mm), the ZX Spectrum is based around an advanced 14-chip Sinclair design and features a new ULA master-chip as the 'trained intelligence' of the machine.

Special features include easy-to-use high-resolution colour graphics, designed for economic use of memory, an enhanced version of the Sinclair BASIC programming language, a sound-generator and a standard typewriter-size 40 moving-key ASCII keyboard.

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The ZX Spectrum is currently available in the UK by mail-order only from Sinclair, with export expected to commence at the year-end, dependent on UK sales volume and production.

Since its launch in March 1981, the Sinclair ZX81 has become established as the world's best-selling personal computer, with more than 500,000 units sold worldwide.

Priced in the UK at only £49.95, inc VAT, the ZX81 measures just 6" x 6½" x ½" (167 x 175 x 40mm) and weighs 12oz (350gm).

For flexibility of use both the ZX Spectrum and ZX81 have been built without a dedicated VDU (visual display unit), but with the facility to be plugged directly into the aerial socket of most domestic UHF colour or black and white TVs. This also enables screens with a variety of sizes to be used.

Programs on both can be loaded and saved on a conventional home cassette recorder, and reselected from the computer keyboard. For the ZX Spectrum, an advanced new cassette interface design permits information transmission at six times the speed of the ZX81.

To support its personal computers Sinclair Research has developed a wide and expanding range of computer peripherals and software. It believes that future microcomputer sales will increasingly depend on flexibility of use and application.

Currently available are the ZX Printer, at £59.95 inc VAT, and the 16K add-on memory RAM pack, at £29.95 inc VAT, the latter for use only with the ZX81. For the Spectrum alone, Sinclair is preparing the ZX Microdrive, to provide low-cost bulk storage, and RS232 and net interfaces.

In addition to its current work on personal computers, computer peripherals and flat-screen TVs, Sinclair is also

progressing research on electric vehicles and 'state-of-the-art' solid state technology.

The company was founded by Clive Sinclair in July 1979 to conceive and develop new products in the consumer electronics field. It is based in Cambridge and there are branch offices in London, Boston USA, Munich and Paris.

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**Sinclair Research Limited**

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**PRESS  
INFORMATION**

**sinclair**

16 September 1982

**£15 MILLION MICROCOMPUTER SCHEME FOR SCHOOLS ANNOUNCED BY  
SINCLAIR - EXPANDED COMMITMENT TO EDUCATION**

Britain's 27,000 primary schools are to benefit from a major £15 million microcomputer scheme, announced today, September 16, by Clive Sinclair, head of Sinclair Research.

The scheme significantly extends the Department of Industry's new £9 million 'Micros in Primaries' project, and is part of Sinclair's continuing commitment to education.

Schools ordering Sinclair's ZX Spectrum personal computer under the government scheme will also each receive a free Sinclair ZX Printer, a free copy of the LOGO computer language, and ten special discount vouchers, valid until the end of 1984.

One voucher may be returned with each further order for a 48K Spectrum. Schools may opt to use the voucher either to obtain a £45 discount from the Spectrum's normal price (£175), or to pay the full price and receive with their order a free ZX Printer, worth £59.95, both prices inc VAT. In total Sinclair's contribution is worth up to £15 million.

Speaking at a London press conference, Clive Sinclair explained: "We were delighted to participate in the Department's scheme, and fully share its declared objective, 'to give all young pupils experience with technology'.

"Believing that one micro per school is inadequate, our scheme seeks to make computers available at low-cost to

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*Peter Smith  
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WC1H 0RX*

provide sufficient numbers for all pupils to have practical 'hands-on' experience".

The new offer is part of a comprehensive Sinclair package, covering equipment, software, personnel and technical support, which will further the development of microcomputing in primary schools.

Provision of LOGO and, at a later date, PROLOG will make available two of the most popular computing languages for junior education. At the same time, recognising schools' urgent requirement for software packages, Sinclair is cooperating with educational specialists to expand its own range alongside the government scheme's 150-program library.

To increase its direct support to schools Sinclair has appointed E J Arnold & Sons, to act alongside its existing distributor, Griffin & George. It is also in advanced negotiation with other leading educational distributors.

For the general promotion of microcomputing in schools Sinclair is producing, in association with the Educational Foundation for Visual Aids, a special videocassette which will be made widely available to local education authorities and institutions.

Finally to coordinate its increased activity in the education sector Sinclair has appointed David Park, who was with Sinclair between 1969-79, as educational marketing manager, and John Wright as educational consultant. A former primary school headmaster, John has been widely active in the promotion of schools' microcomputing.

The Sinclair ZX Spectrum was launched in April 1982, and designed for a wide variety of home, office and educational applications. It is commercially available at only £175 with 48K memory capacity and in a second 16K RAM version at £125, both prices inc VAT, and offers facilities comparable to other colour computers costing up to three times as much.

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Its special features include eight colours, easy-to-use high-resolution graphics, an enhanced version of the increasingly 'standard' Sinclair BASIC programming language, a sound-generator and a standard typewriter-size 40 moving-key ASCII keyboard.

Further details of the Sinclair scheme are available from the offices of Sinclair Research, Griffin & George and E J Arnold & Sons.

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#### NOTE TO EDITORS

The Department of Industry's 'Microsin-Primaries' scheme was announced by the Prime Minister on July 16. It is estimated to be worth up to £9 million, and will operate from October 1 to the end of 1984. 27,000 primary schools in the maintained and independent sectors are eligible for 'pound-for-pound support' and should apply through their local education authorities.

The scheme offers packages based on three microcomputers; Sinclair ZX Spectrum (48K memory version), BBC Model B and Research Machine's 480Z. The Spectrum package comes complete with 'Horizons' welcome tape to introduce the computer, RS232 interface board, cassette recorder, Microvitec colour monitor or black and white TV, custom-built tray to house the equipment, manuals and leads.

Sinclair Research was founded by Clive Sinclair in July 1979 to conceive and develop new products in the consumer electronics field. It is based in Cambridge and there are branch offices in London, Boston USA, Munich and Paris.

With total sales now in excess of 600,000 units Sinclair is established as the largest volume manufacturer of

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personal computers worldwide. In addition to its current work on computers, computer peripherals and flat screen TVs, Sinclair is also progressing research on electric vehicles and 'state-of-the-art' solid state technology.

A simple example ~~has~~ ~~to~~ ~~do~~ ~~with~~ ~~the~~ ~~following~~:-

The answer ~~is~~ ~~in~~ ~~Greece~~, 5.

**PRESS  
INFORMATION**

**sinclair**

8 October 1982

BRITAIN IN THE 1990s

(Clive Sinclair's lecture on the BBC2 'Futures' programme,  
7 October, 1982)

I believe the next 15 years will be among the most momentous  
in our economic history - a major turning point. The 1990s will  
differ from the 1970s as profoundly as the 19th century from  
the 18th.

Prolonged industrial progress has been so steady that we  
have come to rely on extrapolating the future from the past  
and the present. Suddenly that won't do. We are on the edge  
of the most sweeping and rapid changes we have ever  
experienced.

Life in the '90s can be like this - we shall have jobs,  
virtually all of us, and they will be generally more  
interesting and satisfying. Many of these jobs don't yet  
exist and can only be guessed at, working hours will have  
shortened - but only slightly, as most people will choose to  
work them.

The numbers in manufacturing will be very few, and no-one  
will work in a group of more than a few hundred. Leisure  
opportunities will have improved - shops and bars will open  
much longer with far less regulation than now, children will  
be educated until at least 18 with most going on to some  
form of further education, and they will all be taught  
broadly, covering the arts and sciences.

Contd../

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The coming years will see deflation rather than inflation, with prices steadily falling, and this is likely to start within the next year and lead to some government stimulus of the economy. By the '90s Trade Unions will have withered, their purpose complete.

Why should these changes occur?

To start with we are facing continued depression if the 50 year cycle in economics runs true. The Russian economist Kondratiev first observed this repeating cycle of growth and retraction in capitalism, and one plausible reason for these cycles is the birth, exploitation and stagnation of inventions that lead to industry. In a time of depression we invent; the exploitation of these inventions leads to new industry and so a boom. Invention tends to cease during the boom resulting in a gradual loss of growth, and so the start of a new depression. This cycle repeats itself. The industries that have grown since the war - and fuelled the economic miracle of the west - include transport, planes and cars, the telephone, television, electric power generation. All these are over half a century old.

Such new inventions as the computer and the silicon chip have yet to produce many products which individuals could aspire to, and if this aspiration dies so does demand and so growth, hence depression. On top of this cheap transport and relatively free world trade lead to production in the cheapest area - which is seldom Britain. Also it is suddenly cheaper to employ automation or robots than people because of the revolution in electronics.

By the end of the century, if not before, this will lead to the displacement of most assembly labour in Britain. So manufacturing employment in Britain will decline - not

slightly-drastically. We now have 29% of our working people in manufacturing industry and this will fall to less than 10% by the end of the next decade. Not only must we find jobs for the three million now unemployed but for a further four million - 7 million jobs in total.

Daunting this may be, disastrous not.

The 29% in production contribute only 23% of our GNP, and so are, in some way, less productive than the rest. If people in manufacturing can be moved into the more productive sector, our GNP should rise. The idea that we need a manufacturing industry, to pay for the rest is a fallacy.

Whatever a man produces, that another chooses to pay to consume, creates wealth - whether a tin-can or a ride at the fair. It's true, we need to export manufactured goods. These have long been a declining portion of our exports, and this will continue. Even without oil, our balance of payments position would be enviable. Incidentally, we must be the only country where a large group, including the CBI and the Labour Party consider the currency overvalued, despite a massive balance of payments surplus.

But we do not need a manufacturing industry to be wealthy. The truth is that Britain is in the wrong part of the world to make conventional goods. I believe any products with a strong creative content can be made here profitably. As soon as a product becomes standardised, by evolution, as most cars have, it is best made in less sophisticated, and so cheaper countries to our mutual benefit - the benefit will be ours since the product will be cheaper. And they will benefit with increased opportunities for employment, profit and export.

We now import virtually all our motor-cycles. And sad as it may seem it's hard to argue that they're not far cheaper and better than the bikes we used to make.

In the next decades, China and India should become the great producing nations

By the '90s those companies offering products rather than services must think and plan on a world scale to survive, and market world-wide to achieve the necessary economies of scale. And they may produce the latest innovative products locally but the more mature items will be made in the cheaper labour areas.

This process has already led us to import most of our radios and most of our television sets. It's leading us to import almost all our cars, and to do so these cars will cost us less. There can be little future in the production of standard cars in Britain; but rather for radical or chic models such as Lotus or as Rolls-Royce make.

You might think co-ordination is the answer to continued production in Britain. But even automation may not bring profitable mass-production back to this country.

How though, can we find 7 million jobs?

I think Britain curiously well-placed to benefit from the opportunities. We are particularly creative people and live in an exceptionally free society, with a tax system, which though not perfect, is far better disposed towards business than many and with well-established and efficient banking and education systems.

But by the 1990s we must turn from the products of the material to products of the mind; books, video-tapes, TV programmes, computer programs, design services, consultancy of all forms. Where others produce we can design. Hong Kong manufacturers are ready to employ our best freelance industrial designers.

Education and health should provide many opportunities, if we learn to package these services and sell them to third world countries, who lack our substructure of culture and education, and so are less able to provide them for themselves.

British publishers can exploit the new opportunities provided by Viewdata, Teletext, and above all the video-disc and sell these products to the sophisticated nations of the world, such as the United States and Germany who for all their ability are behind us in exploiting these fields.

But only by the formation of many new firms can change occur. Old companies seldom innovate, and will continue to see their best chance of increased profit coming from greater efficiency and applying reduced employment.

Contrary to belief, Britain is an excellent place to start a business and most new ventures succeed because the British environment, both fiscal and social, is actually so conducive to success. Only new companies will generate employment and explore new opportunities on any scale.

Now, company births and deaths are about in balance. The births must rise fast. There have been some tax incentives to help this, but more are needed. From the tax point of view, it is still more attractive to invest money into houses or pensions than it is into business. It is now easier to put money into companies but still very difficult to take it out unless the company goes public. Recent tax changes would have helped if they had made it as easy to benefit from the profit of the business, as it is to open the profit on a house or a pension fund. In both cases the profits are tax free. In the case of unearned income drawn from the business the tax rate can be as high as 75%. It is clear to see what form of investment a sensible man would prefer. A much lower rate of tax on unearned income would help. Needed too, is more help from the banks. Some have

very much improved, but local managers are still too often, quite out of their depth with new firms. In Cambridge, where business specialists have been appointed by Barclays, for example, there has been a great flourishing of new businesses.

In no way can we tell in advance where the fresh jobs will come from, any more than 20 years ago we would have anticipated digital watches as a large volume business. New business opportunities will arise in many unsuspected areas, as a necessity of other invention, but great hopes lie with computers as they lead inevitably to intelligent machines and robots, bio-technology, solar energy and thermal power sources, theme parks, health aids, and finally the development of space.

Government must take a truly laissez-faire approach to new business, and not treat them the same as the more mature industries, such as steel and ship-building which inevitably become the responsibility of Government whether nationalised or not.

The Government can help most by creating the right tax environment and by encouragement. It should not interfere with new firms, avoiding the temptation to be helpful. The greater the freedom we have, the greater the chances. The new industries are likely to be environmentally attractive and there is little chance of employees being exploited by rapacious capitalists, so the controls imposed in the 19th century will not be required.

We need the greatest possible freedom for the market to find the best possible solution. If the Government feels a stimulus must be given to the economy, it should allow shops to open as often and as long as they please - boosting both employment and consumption. Similarly, it is no part of a Government's duty to tell us when we may drink in public. Pubs open all day and later into the night would again increase employment and enjoyment.

We have lived for so long with inflation that it now seems the natural order, but the inflation we have been experiencing was caused, I believe, by Government spending increasing as a proportion of the GNP. As this is reversed and the proportion of the Government's spending declines we will see the opposite of inflation - deflation - and this could start within the next year and continue for some time to come, leading possibly to a call for keynesian reflation.

The Government must confine any 'make work' programs to very short term palliatives - so as not to inhibit the pressures which cause change. Some aspiring programme such as a magnificent Channel Bridge would be timely then.

Because of the widespread introduction of automation, and because of the nature of the new companies that will be formed, we will see the end of people working in very vast numbers under one roof by the turn of the century. Where thousands are now massed, only a few hundred or so may be needed. This will greatly reduce, almost eliminate, strikes and remove the need for most unions, so union power will wither.

If all this seems implausible, remember what happened with farming. We once employed 60% of our workforce on the land, and this declined by half in the early decades of the industrial revolution. The whole industry of the future may resemble the farming industry today, which, producing most of our food, employs less than two per cent of our workforce, with steadily increasing efficiency. Our farms are often owner managed, highly capital-intensive, and usually employ only a handful of people, despite having high output levels.

This is how I see industry developing. Just as today we import most of our lamb, so it is to our best advantage to import most of our cars. A similarly small workforce will account for our manufactured goods in the future. Service industries, in particular the labour section, will

employ many more.

We must think more carefully about Education in our Society. Schools have prepared their pupils for life in large organisations. They should now reverse this. With a small organisation as the likely employer, students will need to be more adaptable and self-reliant, their education broader.

It is our educational system after all that has made us possibly the most cultured nation on the Earth, and fostered our creative talents. We must resist the pressures to make it too vocational. No one should be without a grounding in the Sciences and the Arts, and more emphasis on the Art of Living is needed. Sixth-form Colleges or their equivalent may need to become the norm.

We must now face great change, as we adapt to the world to come. There is a tendency for people and politicians to resist such change, and to imagine that they can bring about the future by planning it. But, really, it can only happen with the free operation of the market place. Anything that impedes that change will delay the benefits. While the change occurs, unemployment will remain high. But that period will end, and relatively high employment return by the 1990's, if political attempts to intervene are avoided.

Thereafter we should face a Golden Age, as fully intelligent machines appear, bringing immense new wealth. In the decades following the '90's, individual wealth could rival that of a Roman Emperor. We will see, if war can be avoided, the most Golden Age Man has ever known.

**PRESS  
INFORMATION**

**sinclair**

16 November 1982

**SINCLAIR UNVEILS NEW PROTOTYPE PERIPHERALS AT COMPEC**

On its first appearance at COMPEC, (London November 16-19), Sinclair Research unveiled a new range of prototype computer peripherals which it expects to launch commercially in Spring 1983.

Designed for use with Sinclair's ZX Spectrum personal computer, the new ZX Microdrive, RS232 and network interfaces, and Prestel adaptor combine low-cost and high performance. Together they substantially expand the ZX Spectrum's capability for home, educational and business use.

Expected to retail for about £50, the ZX Microdrive offers 100K bytes of storage capacity, data transfer at up to 16K bytes per second and an average access time of 3.5 seconds. Up to eight microdrives can be supported by the ZX Spectrum.

The ZX Microdrive's controlling electronics, together with the RS232 and network interfaces will be presented in one complete package, priced at about £30.

The RS232 serial interface enables the ZX Spectrum to drive other peripherals, such as full-size printers, and to communicate with other computers. The network interface permits several Spectrums to be linked, with a transfer rate of 100,000 bits per second.

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Priced at under £100, the new Prestel adaptor will transform the ZX Spectrum into a full alphanumeric Prestel station, enabling the user to access the Prestel database from the keyboard and to downline load telesoftware programs into the computer.

Sinclair is also developing new ranges of ZX81 and ZX Spectrum software. At COMPEC it is showing a pre-release version of a special proportional spacing program which enables the Spectrum to be used as a full 62-character per line word-processor.

The new Sinclair products together with the established ranges of ZX81 and ZX Spectrum personal computers, computer peripherals and software are showing on Stands 6205/6209/5210.

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#### NOTE TO EDITORS

Journalists visiting the exhibition who require further information on Sinclair Research and its products should contact Bill Nichols or Liz Walker on the Sinclair stand.

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**PRESS  
INFORMATION**

**sinclair**

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16 November 1982

SINCLAIR RESEARCH AND THE ZX SPECTRUM AND ZX81 PERSONAL  
COMPUTERS - SALES AND TECHNICAL BACKGROUND

With sales in excess of 800,000 units (excluding the TS1000), Sinclair Research is now established as the world's largest volume manufacturer of personal computers.

The company's range of personal computers, computer peripherals and software is led by the new ZX Spectrum. Launched in April 1982 and designed for a wide range of home, business and educational applications, it has already achieved UK mail-order sales of more than 60,000 units.

To meet continuing high demand Sinclair has now increased Spectrum production to 40,000 units per month, and expects to commence UK retail and export sales by the end of first quarter 1983.

Available at only £125, with 16K RAM memory capacity, and in a second 48K RAM version at £175, both prices inc VAT, the ZX Spectrum offers facilities comparable to personal computers costing up to three times as much.

Measuring 8½" x 5" x 1" (233 x 144 x 30mm), it is based around an advanced 14-chip Sinclair design and features a new ULA master-chip as the 'trained intelligence' of the machine.

Special features include easy-to-use high-resolution colour graphics, designed for economic use of memory, an enhanced

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version of the Sinclair BASIC programming language, a sound-generator and a standard typewriter-size 40 moving-key ASCII keyboard.

Alongside the Spectrum Sinclair is also showing at COMPEC its established best-selling ZX81 personal computer. First launched in March 1981 the ZX81 has now sold more than 700,000 units worldwide.

Under a special manufacturing and marketing agreement with the Timex Corporation, the ZX81 is also now available in North America in an enhanced 2K version, the TS1000.

Priced in the UK at only £49.95 inc VAT, the ZX81 measures just 6" x 6½" x ½" (167 x 175 x 40mm) and weighs 12oz (350gm).

For flexibility of use both the ZX Spectrum and ZX81 have been built without a dedicated VDU (visual display unit), but with the facility to be plugged directly into the aerial socket of most domestic UHF colour or black and white TVs. This also enables screens with a variety of sizes to be used.

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In addition to its current work on personal computers, computer peripherals and flat-screen TVs, Sinclair is also progressing research on electric vehicles and 'state-of-the-art' solid state technology.

The company was founded by Clive Sinclair in July 1979 to conceive, develop and market new products principally in the consumer electronics field. Sinclair Research is based in Cambridge and there are branch offices in London, Boston USA, Munich and Paris.

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**PRESS  
INFORMATION**

**sinclair**

25 November 1982

IN RESPONSE TO TODAY'S POLITICAL INITIATIVE BY THE BRITISH MICROCOMPUTER MANUFACTURERS GROUP (BMMG), SINCLAIR RESEARCH HAS ISSUED THE FOLLOWING PRESS STATEMENT BY CLIVE SINCLAIR.

"The BMMG announced today that it is seeking new government regulations - principally a full import embargo for at least 12 months - and a review of public-sector purchasing policy to help resist 'unfair' foreign competition from US and Japanese microcomputer imports."

"As a BMMG member Sinclair fully understands the current difficulties faced by many other UK microcomputer companies and the fear of job losses."

"However, we do not believe that the BMMG package represents the most helpful way forward. Essentially it seeks to solve problems - caused by regulations - with new regulations. It would be preferable, and in keeping with the spirit of the present government, to dismantle existing controls which inhibit initiative and growth. In this context we suggest three courses of action."

"Certainly the present outdated and inflexible government procurement policy should be reviewed to ensure equal opportunity and encouragement for UK microcomputers. Where this happens we are confident that UK expertise will win."

"Beyond this we would urge the government to reduce substantially the 17% duty on many imported electronics components which artificially raises our costs above that of our competitors and discourages UK manufacture. In contrast the 6-8% levy on most fully-assembled products actively encourages imports."

Contact: Bill Nichols

From: Cont.../  
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"Equally the government should exert maximum diplomatic pressure to remove hidden controls on our exports. Many governments regularly breach EEC or GATT international trade regulations."

"To introduce import controls now would be a short-term and potentially damaging expedient which might lead to serious retaliatory action. It would not solve the fundamental problems."

"The present government has given considerable financial and moral support to the UK microcomputer industry. We believe the message now to the government should be - give us freedom and equal opportunity at home and abroad so that it can continue to develop as a major source of jobs and wealth."

- ENDS -

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ATTENTION: LITERARY EDITORS

**PRESS  
INFORMATION**

**sinclair**

26 November 1982

'DEATH IS PART OF THE PROCESS' WINS FIRST SINCLAIR PRIZE

Hilda Bernstein, the South African womens' and black rights' campaigner, has won the first annual £5000 Sinclair Prize for Fiction for her novel, 'Death is Part of the Process'.

Making the awards at an evening reception in London, <sup>yesterday</sup> ~~today~~, November 25, Clive Sinclair, head of sponsors, Sinclair Research, also presented a £2000 second prize to London-based teacher, Gill Edmonds for 'The Common'.

At the recommendation of the judges, Frank Kermode, David Caute, Richard Hoggart, Mervyn Jones and Polly Toynbee, joint £500 third prizes went to Philip Latham for 'Sarah Singing' and Aviott John for 'Chasing Cursors'.

'We are delighted to make these three additional awards in the prize's inaugural year' explained Clive Sinclair, 'because authors responded so well to our purpose of encouraging new writing on critical issues.'

'In particular Hilda Bernstein's winning novel completely fulfilled the prize's criteria for <sup>a previously unpublished novel of</sup> high literary merit combined with contemporary social and political relevance.'

To be published in the New Year by Sinclair Browne, 'Death is Part of the Process' is based on Ms. Bernstein's own experience of political conflict in South Africa. An inside view of people and organisations that plan and carry out acts of sabotage, it deals with the tensions of actual events and the complex moral dilemmas they provoke.

Contact: Bill Nichols

From:  
Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

Part of Sinclair Research's programme of arts sponsorship, the Sinclair Prize was designed to fulfill a major unmet need amongst existing prizes.

Based on the first year's success both the company and the Prize's administrators, the National Book League, are confident that it will become a major feature of the literary scene.

Further information on the Sinclair Prize <sup>is available from</sup> ~~and the winning~~ authors <sup>See Nielsen 0-01-235 9649.</sup> ~~is contained in the accompanying leaflet.~~

~~Additional photographs of the winners are available on request.~~

-ends-

NOTE TO EDITORS

~~Sinclair Research was founded by Clive Sinclair, 42, in July 1979, to conceive, develop and market new products principally in the consumer electronics field. It is currently working on personal computers, computer peripherals, flat screen TV's and 'state-of-the-art' solid state technology and also progressing research on electric vehicles.~~

~~In the personal computer market where it is probably best-known for the Sinclair ZX81, the company is established as a world-leader. Its production volume now considerably exceeds that of any other personal computer manufacturer worldwide, and it has achieved cumulative sales of more than 800,000 units.~~

9  
~~The Sinclair Browne publishing house was founded by Clive Sinclair and Patrick Browne in June 1981. With the same central concerns as the Sinclair Prize, it is providing an outlet for new fiction and non-fiction with a fresh and radical approach to the problems of modern society.~~



# WHSMITH News release

Immediate release

7 December 1982

## SPECTRUM AT W H SMITH

Britain's fastest-selling home computer, the ZX Spectrum, is now available at larger branches of W H Smith - the only High Street outlet for the new computer.

The 16K Spectrum will sell at £125 and 48K version at £175 including VAT.

An extensive range of compatible software, including a value-for-money

W H Smith own-brand range is already available in larger branches together

with a new W H Smith Computer Carry Console at £14.95. A comprehensive range of computer books and magazines is also available in the store's Computer Know-How departments.

The Spectrum comes from Britain's largest home computer manufacturer, Sinclair Research Limited, and features include eight colours, full-size moving keyboard, sound, high resolution, Sinclair-extended BASIC and high-speed Load and Save.

The ZX Spectrum Home Computer is available at the following branches of W H Smith:

### London and the Home Counties:

Bromley  
Brent Cross  
Canterbury  
Croydon  
Ealing Broadway  
Guildford  
Hammersmith  
High Wycombe  
Holborn Circus  
Ilford  
Kensington  
Kingston-upon-Thames

Kingsway  
Lewisham  
Luton  
Oxford Street (Bournes)  
Romford  
Sloane Square  
Slough  
Southend  
Watford  
Wood Green  
Woolwich

continued...

Outside London and the Home Counties:

Bedford  
Birmingham  
Brighton  
Bristol Broadmead  
Blackpool  
Bradford (Broadway)  
Bradford (Kirkgate)  
Bolton  
Cambridge (Lion Yard)  
Cardiff  
Carlisle  
Cheltenham  
Chester  
Coventry  
Derby  
Doncaster  
Edinburgh  
Exeter  
Glasgow  
Hanley  
Hull

Leeds  
Leicester  
Liverpool  
Manchester  
Middlesborough  
Newcastle  
Northampton  
Norwich  
Nottingham (Listergate)  
Nottingham (Victoria)  
Oxford  
Peterborough  
Plymouth  
Portsmouth  
Reading  
Sheffield  
Solihull  
Southampton  
Sunderland  
Swindon  
Wolverhampton  
York

- ENDS -

For further information please contact: Trisha Booth  
Consumer Affairs Press Officer  
W H Smith & Son Limited  
Strand House  
10 New Fetter Lane  
London EC4A 1AD  
  
Telephone: 01-353 0277  
Extension: 3455

8 December 1982

NEW SINCLAIR SOFTWARE ANNOUNCED -

THE HOBBIT INTRODUCED FOR SPECTRUM - ZX TOOLKIT ENHANCES ZX81

The Hobbit, a full-colour adventure simulation based on J R R Tolkein's fantasy land, takes 'pride of place' amongst new software for the Sinclair ZX Spectrum and ZX81 personal computers announced today, December 8, by Sinclair Research.

Priced from £2.95-£14.95<sup>inc VAT.</sup> the ~~eighteen~~<sup>18</sup> cassettes complement Sinclair's existing range of business, educational and games software and have been specially written by Melbourne House, Games of Skill, Artic, Psion and ICL.

In The Hobbit the player assumes the role of Bilbo and undertakes a series of fascinating adventures in which he will meet and interact with all the novel's other leading characters. Depending on his decisions each game will develop differently.

Designed to use the full potential of the 48K Spectrum The Hobbit's special features include original artist-designed graphics and a built-in 500 word 'inglish' vocabulary to instruct the computer. The Melbourne House package comes complete with a copy of the novel.

Sinclair is also offering four Spectrum Adventure programs, Inca Curse, Ship of Doom and Espionage Island (all 48K) and Planet of Death (16K/48K). In the last the user must find his captured space ship and overcome many hazards to escape from an alien world.

Contd.../

As a contrast to the fantasy Adventure programs Sinclair is providing three further Spectrum cassettes; Reversi, or Othello (16K), a modern version of the late nineteenth-century board game which offers nine levels of difficulty; Collectors Pack (48K), enabling collectors to hold a minimum of six hundred records of up to nine items on one cassette, and Club Record Controller (48K).

For the experienced ZX81 owner Sinclair has introduced the new <sup>ZX81</sup> functions; renumber, delete, MEM, dump, find, replace, save, append and remkill.

new  
2x Toolkit.  
Developed  
by Artic  
it provides  
nine

Also available for the ZX81 are versions of Reversi and the four Adventure programs (all ZX81 with 16K RAM pack), a new ZX81 Chess (1K), a Games Pack (1K) with eleven different items, Thro' the Wall/Scramble (16K), and two realtime interactive games written in machine code, Super Gloopier/Frogs (16K).

All eighteen cassettes are immediately available by mail order from Sinclair Research, Stanhope Road, Camberley, Surrey and through selected retail stockists.

Further information and review sets of the new software are available from Bill Nichols at Sinclair Research on 01-235 9649.

- ends -

NOTE TO EDITORS

Sinclair Research was founded by Clive Sinclair, 42, in July 1979, to conceive, develop and market new products principally in the consumer electronics field. It is currently working on personal computers, computer peripherals, flat screen TVs and 'state-of-the-art' solid state technology and also progressing research on electric vehicles.

Contd.../

In the personal computer market the company is established as a world-leader. Its production volume now considerably exceeds that of any other personal computer manufacturer worldwide, and it has achieved cumulative sales of more than 800,000 units.

The new cassette ranges:-

ZX SPECTRUM

TITLE	SOURCE	RSP
The Hobbit	Melbourne House	£14.95
Adventure A: Planet of Death	Artic	£6.95
Adventure B: Inca Curse	Artic	£6.95
Adventure C: Ship of Doom	Artic	£6.95
Adventure D: Espionage Island	Artic	£6.95
Reversi (also known as Othello)	Games of Skill	£7.95
Club Record Controller	ICL	£9.95
Collectors Pack	ICL	£9.95

ZX81

Adventure A: Planet of Death	Artic	£5.95
Adventure B: Inca Curse	Artic	£5.95
Adventure C: Ship of Doom	Artic	£5.95
Adventure D: Espionage Island	Artic	£5.95
Toolkit	Artic	£5.95
1K ZX Chess	Artic	£2.95
1K Games Pack	Artic	£6.00
Thro' the Wall and Scramble	Psion/Microgen	£4.95
Super Glooper and Frogs	Psion/Microgen	£4.95
Reversi (also known as Othello)	Games of Skill	£6.95

**PRESS  
INFORMATION**

**sinclair**

7 January 1983

**HORACE GOES SKIING AND THE HOBBIT AMONGST NEW SINCLAIR  
SOFTWARE AT THE LONDON HOME COMPUTER FAIR**

For its appearance at the annual London Home Computer Fair (January 7-9) Sinclair Research was showing publicly for the first time its latest range of software for the ZX Spectrum and ZX81 personal computers.

Prominent amongst the new cassettes were Horace Goes Skiing, a full feature Spectrum adventure using the character popularised by Sinclair's Hungry Horace program, and The Hobbit, an adventure simulation based on J R R Tolkien's fantasy land.

In The Hobbit the player assumes the role of Bilbo and undertakes a series of fascinating adventures in which he will meet and interact with all the novel's other leading characters. Depending on his decisions each game will develop differently.

Designed to use the full potential of the 48K Spectrum The Hobbit's special features include original artist-designed graphics and a built-in 500 word 'inglish' vocabulary to instruct the computer. The Melbourne House package comes complete with a copy of the novel.

Sinclair is also offering four Spectrum Adventure programs, Inca Curse, Ship of Doom and Espionage Island (all 48K) and Planet of Death (16K/48K). In the last the user must find his captured space ship and overcome many hazards to escape from an alien world.

As a contrast to the fantasy Adventure programs Sinclair is providing three further Spectrum cassettes; Reversi, or Othello (16K), a modern version of the late nineteenth-century board game which offers nine levels of difficulty; Collectors Pack (48K), enabling collectors to hold a minimum of six hundred records of up to nine items on one cassette, and Club Record Controller (48K).

For the experienced ZX81 owner Sinclair has introduced the new ZX Toolkit. Developed by Artic it provides nine new ZX81 functions; renumber, delete, MEM, dump, find, replace, save and append and remkill.

Also available for the ZX81 are versions of Reversi and the four Adventure programs (all ZX81 with 16K RAM pack), a new ZX81 Chess (1K), a Games Pack (1K) with eleven different items, Thro' the Wall/Scramble (16K), and two realtime interactive games written in machine code, Super Gloop/Frogs (16K).

The new cassettes have been introduced by Sinclair Research, now the world's largest volume manufacturer of personal computers, to complement its existing range of business, educational and games programs for the ZX Spectrum and ZX81. They have been specially written by Melbourne House, Games of Skill, Artic, Psion and ICL.

Priced from £2.95 - £14.95 inc VAT all nineteen cassettes are immediately available by mail order from Sinclair Research, Stanhope Road, Camberley, Surrey and through selected retail stockists.

#### NOTE TO EDITORS

Sinclair Research was founded by Clive Sinclair, 42, in July 1979, to conceive, develop and market new products principally in the consumer electronics field. It is currently working on personal computers, computer peripherals, flat screen TVs and 'state-of-the-art' solid state technology and also progressing research on electric vehicles.

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Adventure D: Espionage Island	Artic	£6.95
Reversi (also known as Othello)	Games of Skill	£7.95
Club Record Controller	ICL	£9.95
Collectors Pack	ICL	£9.95
Horace Goes Skiing	Psion	£5.95

ZX81

Adventure A: Planet of Death	Artic	£5.95
Adventure B: Inca Curse	Artic	£5.95
Adventure C: Ship of Doom	Artic	£5.95
Adventure D: Espionage Island	Artic	£5.95
Toolkit	Artic	£5.95
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Thro' the Wall and Scramble	Psion/Microgen	£4.95
Super Gloopper and Frogs	Psion/Microgen	£4.95
Reversi (also known as Othello)	Games of Skill	£6.95

**PRESS  
INFORMATION**

**sinclair**

12 January 1983

PRESS STATEMENT FROM SINCLAIR RESEARCH

Following this morning's decision which we understand was taken by the employees of Timex at Dundee to take strike action if the management imposes compulsory redundancies, Sinclair Research has issued the following statement by its Chairman, Clive Sinclair:-

"As a major client of Timex, six hundred of whose employees are engaged in the manufacture of our personal computer products at Dundee, it is important that we clarify our current position in the interests of both Timex and its employees and our customers and suppliers.

"If the threat of strike action is not removed in discussions between management and unions, and a full strike appears inevitable, which affects our production, we will move our business elsewhere, probably permanently.

"This withdrawal would also affect future products which we had planned to manufacture at Dundee and which would have provided considerable additional employment.

"We would take this decision with great regret in view of the excellent relationship developed with Timex over the past two years and the high quality and high levels of production achieved by its employees.

"However in a rapid growth business such as ours we cannot afford any disruption to our production which would affect our position in highly-competitive world markets.

Contact: Bill Nichols

From:  
Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

"Accordingly we have identified alternative sources of supply which will ensure complete continuity of current production levels and enable us to guarantee supplies to all our customers.

"We very much hope that a strike can be avoided as it can only be to the detriment of the employees."

- ends -

RSE CHECK.

✓ AM KEEPING

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17 January 1983

PRESS STATEMENT FROM SINCLAIR RESEARCH

In response to the weekend press speculation regarding its future manufacturing plans at the Timex-Dundee factory, Sinclair Research has issued today, January 17, the following statement by its chairman, Clive Sinclair:-

"As previously stated Sinclair Research will not withdraw its manufacturing contract from Timex-Dundee unless major strike action occurs.

"Suggestions that we now plan to switch our current production to the Fralsen factory at Besancon in France, and that I intend joining the board of that company are completely unfounded. Neither have we any intention of contracting production of our forthcoming computer peripheral, the Sinclair ZX Microdrive, to Besancon.

On the contrary, if no disruption occurs at Dundee, we would expect to increase both production and job opportunities over the coming years."

- ends -

21 January 1983

SINCLAIR RESEARCH 10% PLACEMENT VALUES COMPANY AT £135.9  
MILLION - £14 MILLION PRE-TAX PROFITS FORECAST FOR 1982-1983

The successful private placement of 400,000 Sinclair Research shares, 10% of its equity, at £34 per share, has raised £13.6 million gross and capitalises the company at £135.9 million, it was announced today, January 21.

The sale, by N M Rothschild & Sons Limited acting on Sinclair's behalf, to a group of institutional investors, follows a recent presentation at which the company's chairman, Clive Sinclair, outlined future plans and prospects. As a guideline to investors he forecast Sinclair Research pre-tax profits in the year to 31 March 1983 of not less than £14 million (1982 - £9.8 million).

The £12.7 million realised by Clive Sinclair personally will be devoted to Sinclair's electric vehicle project which now requires significant additional funding.

'I believed it inappropriate for Sinclair Research, which is completely self-financing, to fund this project further because of its long-term nature, and so have acquired the rights to it as a separate undertaking', he explained.

It is intended that Sinclair Research should seek a listing for its Ordinary Shares in the reasonably near future, although the timing will depend on the company's progress and the state of the stock market.

- ends -



# Adam Smith Institute

PRESS RELEASE PRESS RELEASE PRESS RELEASE PRESS RELEASE

Embargo until 0001 hrs  
FRIDAY, January 28th

further information from  
Dr.Madsen Pirie,  
Adam Smith Institute (01)-222-4995

## FREEPORT WOULD BRING NEW JOBS SAYS RESEARCH GROUP

In evidence submitted today to the Chancellor's working party on Freeports, the Adam Smith Institute expresses the view that "several thousand" new jobs would be created if freeports were to be established. The Institute, whose 1981 paper on freeports launched the idea in Britain, has suggested that several designated areas should be duty-free zones, treated as foreign territory for customs purposes. To encourage the establishment of manufacturing within the freeports, the ASI has proposed that there should be major exemptions from taxes and regulation, in addition to the duty-free status.

The Adam Smith Institute refutes the claim that there would be no advantage in Britain having freeports. It cites the case of Clive Sinclair, who pays 17% duty on major components for computers, yet sees finished goods coming in with a duty of only 6-8%. Sinclair strongly supports the establishment of freeports in Britain, predicting that they will pave the way for expansion in Britain by electronics firms, and lead to the creation of many jobs in Britain which would otherwise be done abroad.

The Institute's submission also quotes the firm of Rush and Tompkins, one which has experience of operating a freeport in the US. Having seen at first hand the advantages which a freeport brings, Rush and Tompkins favour the establishment of British freeports, and consider it would be unfortunate if Britain were left out of a worldwide trend for increased trade to be channelled through freeports.

The American experience is cited by the Adam Smith Institute to dispose of the argument sometimes advanced by Customs and Excise that freeports would

(MORE)

would/

involve "an explosion of paperwork." The Institute points out that modern technology applied at the Miami freeport keeps electronic records. Goods are computer-controlled at entry and exit, giving customs authorities instant access to information concerning their quantity and status. The Institute sees "every reason to suppose that equally modern methods in Britain would achieve huge savings in paperwork."

The argument that EEC regulations would not permit the establishment of a worthwhile freeport in Britain is dealt with in the Institute's evidence in two ways. Firstly, the ASI points out that the EEC's attitude is changing. With freeports already in existence at Shannon, Hamburg, Rotterdam, Copenhagen, and others planned for EEC members, the EEC Commission is moving towards a position of recognizing that equality is more likely to be achieved by all member states having freeports.

In the second place, the Adam Smith Institute points out that EEC regulations change under pressure from member states. While the Commission might try to impose some limitations, such as limiting manufacturing to firms of under 200 employees, the Institute considers it inevitable that countries will press for more relaxations for their own freeports. Without a freeport, Britain will have little input into that process, and no gains from the successful results.

The Institute cites the fact that reliable estimates expect 20% of international trade to be routed through freeports within two years as further reason why Britain should not be left out. "Instead of working to stop imports," the Adam Smith Institute report suggests, "it makes sense to devise circumstances under which local labour can be used as much as possible to add value to incoming goods, and to maximise the proportion of work which it can do. The establishment of freeports would, without question, make a major contribution to those circumstances."

The evidence concludes by noting that there are several suitable sites, and considerable local enthusiasm to tap in the drive to make freeports successful. The Institute has no doubt that the establishment of freeports in Britain would lead to the creation of "several thousand" new jobs.

\* \* \* \* \*

END

Adam Smith Institute, P.O.Box 316, London SW1P 3DJ.

**PRESS  
INFORMATION**

**sinclair**

2 February 1983

**NEW BOARD APPOINTMENTS AT SINCLAIR RESEARCH**

Sinclair Research of Cambridge has appointed Chris Fawkes, 39, as marketing director, and Kenneth Dick CBE, FCA, a non-executive director.

Mr Fawkes was previously with the Primary Contact advertising agency where for ten years, as chairman, he was personally responsible for all Sinclair advertising. Mr Dick is chairman of New Court Trust plc and a non-executive director of N M Rothschild & Sons Ltd.

Also newly-appointed at Sinclair is Chris Cowsley, 40, who joins the company as head of computer manufacturing after 12 years in various positions at International Computers Limited, ICL, most recently as programmes manager for office systems products.

- ends -

**NOTE TO EDITORS**

Sinclair Research was founded by Clive Sinclair in July 1979 to conceive, develop and market new products, principally in the consumer electronics field. In addition to the personal computer market, where it is now the world's largest volume manufacturer and has sold more than 900,000 units, it is also working on computer peripherals, flat-screen TVs and 'state-of-the-art' solid state technology.

**PRESS  
INFORMATION**

**sinclair**

2 February 1983

**NEW CORPORATE STRUCTURE AT SINCLAIR RESEARCH - NEW BOARD  
APPOINTMENTS ALSO ANNOUNCED**

As a platform for continued growth, Sinclair Research has announced today, February 2, a new corporate structure, headed by an enlarged board of directors and organised operationally into current and advance products' divisions.

As chairman and chief executive, Clive Sinclair, retains overall control of all company activities in both areas. He will also personally supervise the advance products division which is concentrating on the development of the company's forthcoming flat-screen Microvision pocket TV, now under pre-production testing at the Timex plant in Dundee.

It is also researching, at its St Ives and Winchester facilities, future consumer and business applications of the flat-screen and new solid state technologies.

The current products division, under managing director Nigel Searle, will be responsible for marketing the company's existing personal computer range and the continuing development programme for new personal computers, computer peripherals and software. Entirely new products, once launched, will also be transferred to this division.

"The new structure will enable a more effective allocation of management resources, particularly for research and development, business planning and marketing, and support a major expansion of our product range and markets during 1983-84", explained Nigel Searle.

Contd../

Contact: Bill Nichols

SR226b

From:  
Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

He added that Sinclair Research had strengthened significantly its senior management and engineering personnel in recent months - latterly recruiting Chris Fawkes, 39, the chairman of its advertising agency, Primary Contact, as marketing director, and Chris Cowsley, 40, formerly programmes manager for office systems products at International Computers Limited, ICL, as head of computer manufacturing.

Joining Clive Sinclair, Nigel Searle and Chris Fawkes on the board are finance director Bill Matthews, production director Dave Chatten, and newly-appointed research and development directors, Jim Westwood and David Southward.

Kenneth Dick CBE, FCA, chairman of New Court Trust plc and a non-executive director of N M Rothschild & Sons Limited, has also been appointed to the board as a non-executive director.

- ends -

#### NOTE TO EDITORS

Sinclair Research was founded by Clive Sinclair in July 1979 to conceive, develop and market new products, principally in the consumer electronics field. In addition to the personal computer market, where it is now the world's largest volume manufacturer and has sold more than 900,000 units, it is also working on computer peripherals, flat-screen TVs and 'state-of-the-art' solid state technology.

**PRESS  
INFORMATION**

**sinclair**

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10 February 1983

**SINCLAIR ANNOUNCES NEW SPECTRUM RETAILERS AS SALES APPROACH  
200,000**

Many more high-street outlets are to stock Britain's best-selling home computer, the Sinclair ZX Spectrum, it was announced today, February 10.

Joining W H Smith's, which is currently selling several thousand Spectrums per week, are selected branches of Boots, Currys, Greens - Debenham's in-store subsidiary - and John Menzies.

At the same time John Lewis, House of Fraser, Rank Xerox and many smaller retailers and computer stores will be supplied by Sinclair's UK distributor, Prism Microproducts.

Sinclair believes the significant increase in retail activity will consolidate Spectrum's dominant position in the UK personal computer market. "We have sold nearly 200,000, mail-order and retail, in the last nine months, and by Easter expect to be selling 12-15,000 Spectrums per week in the UK", commented Sinclair's managing director, Nigel Searle.

Sinclair Research has already enjoyed considerable retail success with its low-cost home computer, the ZX81 - now selling 30,000 units per month in the UK - and is confident of even higher sales with Spectrum. "Overall we believe we can maintain a 60% volume share of 1983's much enlarged UK market", added Searle.

Contd../

Sinclair's ZX Spectrum is available, with 16K RAM, at £125, and in a second 48K RAM version at £175. The ZX81 is offered at £49.95, all prices include VAT. Current monthly production of the ZX Spectrum is running at over 50,000 units, and rising sharply. Sinclair is also producing 60,000 ZX81s per month.

- ends -

#### NOTE TO EDITORS

Sinclair Research was founded by Clive Sinclair in July 1979 to conceive, develop and market new products, principally in the consumer electronics fields. In addition to the personal computer market, where it is now the world's largest manufacturer and has sold more than 900,000 units, it is also working on computer peripherals, flat-screen TVs and 'state-of-the-art' solid state technology.

**PRESS  
INFORMATION**

**sinclair**

16 February 1983

**BRITAIN'S SINCLAIR THE FIRST TO SELL A MILLION HOME COMPUTERS**

Britain's Sinclair Research has become the first company worldwide to sell a million home computers\* - just three years after it launched the world's first under £100, the Sinclair ZX80, it was announced today, February 16.

In reaching this figure, according to founder and chairman, Clive Sinclair, it has created nearly 2000 new UK jobs - principally in component manufacture, final assembly and distribution - and contributed significantly to UK trade by exporting around 60% of all production.

One computer every four seconds is now produced for Sinclair by the Timex-Dundee plant, its principal UK manufacturing site, and it has delivered in total some 130,000 ZX80s, over 750,000 ZX81s and nearly 200,000 ZX Spectrums.

In addition to its own million a further 600,000 Sinclair computers have been manufactured under licence by Timex for sale in the North American market.

'These figures are a magnificent achievement for all concerned', added Clive Sinclair, 'and, with the ZX81 entering its third year of production, demonstrate, beyond doubt, the long-term viability of the computer as a consumer product.

'Yet historically it may only be a beginning. Although Britain has more computers per head than any other country, even now only 5% of homes possess one'.

cont.../

Sinclair believes that its success also demonstrates the potential for new businesses in the UK - a potential fulfilled by the 'mushroom' growth of add-on manufacturers and software houses to service the Sinclair market, almost one every 36 hours in the last 18 months according to the former editor of ZX Computing, Tim Hartnell.

- ends -

#### NOTE TO EDITORS

Sinclair Research was founded by Clive Sinclair in July 1979 to conceive, develop and market new products, principally in the consumer electronic field. In addition to the personal computer market, where it is now the world's largest volume manufacturer and has sold more than 1,000,000 units, it is also working on computer peripherals, flat-screen TVs and 'state-of-the-art' solid state technology.

\* Defined by Sinclair as computers selling under £200. Figures quoted represent actual deliveries to customers. They include UK sales in January and early February which accounts for the excess over one million. Export sales for this period are not yet available.

**PRESS  
INFORMATION**

**sinclair**

10 March 1983

**NEW £750,000 COMPUTER CENTRE FOR SINCLAIR RESEARCH**

Sinclair Research's new £750,000 computer centre - a radical conversion and extension of a former Victorian mineral water factory - was opened today, March 10.

Sited in Willis Road and purpose-planned for Sinclair by architects Lyster Grillet & Harding (LGH), the building combines Cambridge traditions with major innovations in architectural design, interior furnishing and environmental control systems.

LGH has restored the main L-shaped building containing private offices and research laboratories, to its original appearance - at the same time completely remodelling the former outhouses as a general office area and finishing their exterior in stainless steel panelling.

The yard, between building and outhouses, has been transformed into an enclosed atrium - housing entrance, display areas and the reception, which is completed by a fine bronze sculpture 'Double Torso II', by Helaine Blumenfeld.

The new centre also features an integrated environmental control system. As a basis Sinclair has used an original well which, together with a new second bore hole, supplies water all year round at a constant 12°C.

Supported by a solar energy facility in the atrium, the whole microprocessor controlled system will select

Contd.../

automatically the most cost effective and energy efficient heating method - switching between electric heat machine/thermal store and gas boiler. The system also controls all lighting.

Sinclair's new centre combines all elements of its computer business operation and was first acquired in late 1981. Work commenced in February 1982 and was substantially complete by the year-end.

Apart from LGH, principal contractors were builders Johnson & Bailey; interior designers, SLS Environetics; consultant engineers - the Brian Warwicker partnership and quantity surveyors Davis, Belfield & Everest.

- ends -

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Sinclair Research was founded by Clive Sinclair in July 1979 to conceive, develop and market new products, principally in the consumer electronics field. In addition to the personal computer market, where it is now the world's largest volume manufacturer and has sold more than 1,000,000 units, it is also working on computer peripherals, flat-screen TV's and 'state-of-the-art' solid state technology.

**PRESS  
INFORMATION**

**sinclair**

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10 March 1983

**SINCLAIR'S SPECTRUM FOR EXPORT - UK SPECTRUM UPGRADE  
ANNOUNCED - ONE MILLIONTH PSION CASSETTE SOLD**

With UK sales running at 50,000 units per month, Britain's fastest-selling home computer, the Sinclair ZX Spectrum, is to be launched in over 30 countries worldwide during March and April.

"We anticipate initial sales of 15,000 per month rising sharply through the remainder of the year," commented Sinclair's managing director, Nigel Searle, "and plan to increase Spectrum production significantly to meet overseas demand".

While it is concentrating at first on European markets, Sinclair Research has also received large advance orders from its agents in South America and the Far East, and is strengthening its export team to open up new markets in the Middle East and the Third World.

For UK owners of the 16K Spectrum Sinclair has also now announced availability of a 32K upgrade, priced at £60 inclusive of all labour and postage costs. Owners who opt to purchase the upgrade are also being offered a free Sinclair 48K cassette program of their choice and the chance to buy Sinclair's ZX Printer at the special inclusive price of £39.95 (normally £59.95).

Cont'd.. /

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Contact: Bill Nichols

From:  
Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

..cont'd

To ensure fair treatment Sinclair is making the upgrade available in sequence of purchase and mailing its customers in batches. No orders can be taken at this stage from more recent buyers.

Sinclair has also reached another landmark with the sale of the one millionth Psion cassette for the ZX81 and ZX Spectrum. Psion reports that its best seller by far has been the 'Flight Simulation' program, available for both computers, closely followed by applications software such as 'Vu-File' and 'Vu-Calc'.

- ends -

#### NOTE TO EDITORS

Sinclair Research was founded by Clive Sinclair in July 1979 to conceive, develop and market new products, principally in the consumer electronics field. In addition to the personal computer market, where it is now the world's largest volume manufacturer and has sold more than 1,000,000 units, it is also working on computer peripherals, flat-screen TV's and 'state-of-the-art' solid state technology.

**PRESS  
INFORMATION**

**sinclair**

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10 March 1983

1983 SINCLAIR PRIZE FOR FICTION ANNOUNCED

The £5000 Sinclair Prize for Fiction will again be sponsored in 1983 by Sinclair Research of Cambridge as the main element in its arts sponsorship programme, it was announced today, March 10.

First awarded in 1982, the Prize is designated for a previously unpublished novel. "Essentially we are seeking a novel which combines high literary merit, a strong story line and a contemporary social or political setting, as an antidote to the often introspective quality of much contemporary literature", explained Sinclair's founder and chairman, Clive Sinclair.

Novelist and playwright David Caute, will be chairman of the judges for 1983. He is joined by the literary editor of the Daily Mirror, George Thaw, author Fay Weldon - whose novel 'Praxis' was shortlisted for the 1979 Booker Prize - , actress Joanna Lumley and Robert Woof, reader in English Literature at Newcastle University and a member of the Arts Council of Great Britain.

It is intended that the announcement and publication of the 1983 prize winning novel should be simultaneous in Spring 1984.

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Further information and entry forms are available from the National Book League which will again administer the Sinclair Prize. Contact Barbara Buckley at Book House, 45 East Hill, Wandsworth, LONDON SW18 2Q2 Tel: 01-870-9055

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NOTE TO EDITORS

Sinclair Research was founded by Clive Sinclair in July 1979 to conceive, develop and market new products, principally in the consumer electronics field. In addition to the personal computer market, where it is now the world's largest volume manufacturer and has sold more than 1,000,000 units, it is also working on computer peripherals, flat-screen TV's and 'state-of-the-art' solid state technology.

The 1982 Sinclair Prize for Fiction was awarded to Hilda Bernstein for 'Death is Part of the Process'. It will be published in June by the Sinclair Browne publishing house, part-owned by Clive Sinclair.

## PRESS RELEASE

GUARDIAN YOUNG BUSINESSMAN OF THE YEAR:

MR CLIVE SINCLAIR

CLIVE SINCLAIR, Founder and Chairman of Sinclair Research, has been named The Guardian Young Businessman of the Year. The award, made this year for the thirteenth time, celebrates a significant contribution to business at a personal, company and national level.

Mr Sinclair, who is 42, founded Sinclair Research in 1979, aiming to conceive, develop and market new products, chiefly in the consumer electronic field. In 1980 the Sinclair ZX80 (the world's first computer costing under £100) was launched, followed in 1981 by the ZX81, and later the ZX Spectrum.

Sinclair Research has recently become probably the first company worldwide to achieve sales of over a million home computers. The company has created almost 2000 new UK jobs, and has made a strong contribution to UK trade by exporting approximately 60% of all its products.

The selection panel included: Sir Terence Beckett, Director-General of the Confederation of British Industry; Roy Close, Director-General of the British Institute of Management; Walter Goldsmith, Director-General of the Institute of Directors, and Peter Gibbings, Chairman of The Guardian and Manchester Evening News plc.

The specially designed trophy will be presented by the Rt Hon. Norman Tebbit, MP, at a Mansion House luncheon on Wednesday 23 March, in the presence of leading personalities from industry and commerce.

For further information contact

Anne Groves, The Guardian, 278 2332 x3152  
or Bill Nicholls, Sinclair Research, 235 9649

**PRESS  
INFORMATION**

**sinclair**

7 April 1983

**JULY CAMBRIDGE HALF-MARATHON AGAIN SPONSORED BY SINCLAIR**

Cambridge's second annual Festival Half-Marathon, sponsored by Sinclair Research for £5,000 is to be held on Sunday, 17 July - with up to 2,000 athletes, veterans and enthusiasts expected to participate.

Starting at 10.00am from Parkers Piece, competitors will follow a two-lap course around the city by way of Fen Causeway, Grantchester and Trumpington.

Co-promoters Cambridge City Council and local athletic club Cambridge and Coleridge (C & C) hope to build on the success of last year's inaugural half-marathon won by U.K. Marathon record-holder, Ian Thompson, in 1:05:17. Funds raised from the event will be used to develop C & C's new track and field headquarters.

The Cambridge Festival itself begins on Saturday, 16 July, and part of the first day's carnival - including the real ale tent - will remain in place at Parkers Piece for the half-marathon.

Further information and entry forms are available from Brian Allinson, Box A & R, Cambridge City Council, Kett House, Station Road, Cambridge CB1 2JX. Tel: 0223-358977.

- ends -

NOTE TO EDITORS

Based in Cambridge, Sinclair Research was founded by Clive Sinclair in July 1979 to conceive, develop and market new products, principally in the consumer electronics field. In addition to the personal computer market, where it is now the world's largest volume manufacturer and has sold more than 1,000,000 units, it is also working on computer peripherals, flat-screen TVs and 'state-of-the-art' solid state technology.

28 April 1983

SINCLAIR CUTS HOME COMPUTING COSTS AS SPECTRUM BREAKS £100  
BARRIER - ZX PRINTER ALSO REDUCED

In a major reduction of home computing costs, Sinclair Research is cutting the price of its best-selling 16K ZX Spectrum from £125 to £99.95 - the price at which it launched its original black-and-white 1K ZX80, just three years ago.

Sinclair, which earlier this year announced its one millionth computer sale, has also reduced the larger 48K Spectrum from £175 to £129.95 and will now sell its ZX Printer at £39.95 against £59.95 previously, all prices inc VAT and effective May 1.

Sinclair's managing director, Nigel Searle, attributed the company's ability to cut the price to high-volume production and the rapid progress of technology. "For the same price as three years ago we can now offer, for example, a much more powerful operating system, 16-times more memory, eight-colour high resolution graphics (as opposed to black-and-white) and a six-times faster tape interface".

Combining price and performance, Searle is confident that in the next 12 months Sinclair will more than double its first-year Spectrum sales of over 300,000 units worldwide, and reinforce its dominant position in the UK market.

Cont.../

Sinclair's ZX Spectrum is available mail order from Sinclair Research, Stanhope Road, Camberley, Surrey, tel: 0276 685311 and retail from major branches of W H Smiths, Boots, John Lewis Partnership, House of Fraser , John Menzies and Greens, and from other leading chains and computer stores.

- ends -

#### NOTE TO EDITORS

Sinclair Research was established to conceive, develop and market new consumer electronics products. Founded by its chairman and chief executive, Clive Sinclair, in July 1979 it is now the world's largest volume manufacturer of personal computers, with total sales in excess of 1,000,000 units and monthly production of over 100,000 units.

Current Sinclair Research projects include a new range of personal computers, computer peripherals, flat-screen TVs and consumer applications of solid state technology.

28 April 1983

BRITAIN'S HOME COMPUTER MARKET BOOMS AS SINCLAIR CUTS THE  
COST - ONE MILLION SALES PROJECTED FOR 1983

Home computer sales, Britain's fastest-growing consumer market, should be boosted further by today's reduction in the price of the market's best-seller, the Sinclair 16K Spectrum from £125 to £99.95.

Already more than one million Britons own a microcomputer, over 50% Sinclair, according to a recent Observer survey, and industry experts expect ownership to double in 1983 alone, and to spread to one-in-ten UK homes by 1985.

Commenting on the boom and his company's success today, April 28, Sinclair's managing director, Nigel Searle, pointed to the great range of off-the-shelf software now available - offering the owner an immediate and wide variety of uses - and to the major cost-reductions achieved by high-volume production and rapidly-advancing technology.

"For less than £100 we can now offer an advanced full-facility computer which three years ago would have cost between £500-£1000. Together price, performance and applications have made the home-computer a useful and desirable object for almost every family".

Sinclair, which earlier this year announced the sale of its own one-millionth computer worldwide, has also reduced the price of its larger-memory 48K Spectrum from £175 to £129.95, and will now sell its ZX Printer at £39.95 against £59.95 previously, all prices inc VAT and effective May 1.

Contd../

Sinclair's ZX Spectrum is available mail-order from Sinclair Research, Stanhope Road, Camberley, Surrey, tel: 0276 685311 and retail from major branches of W H Smiths, Boots, John Lewis Partnership, House of Fraser, John Menzies and Greens, and from other leading chains and computer stores.

- ends -

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Current Sinclair Research projects include a new range of personal computers, computer peripherals, flat-screen TVs and consumer applications of solid state technology.

28 April 1983

NEW ZX81/SPECTRUM SOFTWARE ANNOUNCED - 'FORTH' INTRODUCED  
- FURTHER ADVENTURE FOR 'HORACE'

In a further expansion of its ZX81 and ZX Spectrum software library, Sinclair Research has launched nine new cassette programs, including an additional language, FORTH, an advanced chess program and another adventure for computer 'cult-figure', Horace.

For ZX81 and Spectrum users with programming interests the new FORTH program offers a language combining BASIC's simplicity with the speed of machine code. FORTH is extendable by user-defined commands, and its compiled code occupies less than a quarter of the equivalent BASIC program, yet runs up to ten times as fast.

A major challenge for the games enthusiast is the new eight-level Cyrus-IS-Chess (for Spectrum only, by Intelligent Software). Based on the 'Cyrus' program, which won the second European Microcomputer Chess Championship, and was also the first to defeat the Cray-1's chess program at speed chess, its features include cursor movement of pieces, replay and 'take-back' facilities and the ability to function as a normal two-player game-board.

Three further Spectrum games' programs are also available; a new Horace adventure with The Spiders, an over 10,000-word Scrabble and a full-feature Backgammon. For the ZX81 Sinclair has introduced two new adventure games, Sabotage and City Patrol.

Contd../

Finally the growing demand for business software is met by the new Small Business Accounts program (48K Spectrum only), which provides balance sheet and profit and loss information together with VAT returns.

Ranging in price from £4.95 to £15.95 inc VAT, all the new cassettes will be available in the next two weeks mail order from Sinclair Research, Stanhope Road, Camberley, Surrey, tel; 0276 685311; and shortly from major branches of W H Smiths, Boots, Currys, John Lewis Partnership, House of Fraser, John Menzies and Greens, and other leading chains and computer stores.

- ends -

#### NOTE TO EDITORS

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Current Sinclair Research projects include a new range of personal computers, computer peripherals, flat-screen TVs and consumer applications of solid state technology.

#### New Software:-

Title/Requirement	Source	RSP (£)
Backgammon (Sp)	Psion	5.95
Cyrus-IS-Chess (Sp)	Intelligent Software	9.95
Horace and the Spiders (Sp)	Psion/Melbourne House	5.95
Scrabble (Sp48 only)	Psion/Speares	15.95
Forth (Sp48 only)	Artic	14.95
Forth (ZX81+16K)	Artic	14.95
Sabotage (ZX81+16K)	Macronics	4.95
City Patrol (ZX81+16K)	Macronics	4.95
Small Business Accounts (Sp48 only)	Willden Services	12.95

**PRESS  
INFORMATION**

**sinclair**

25 May 1983

**SINCLAIR METALAB ANNOUNCED FOR ADVANCE RESEARCH -  
£2 MILLION INVESTMENT PLANNED**

Sinclair Research is to invest over £2 million in establishing MetaLab, its new advance research centre, to explore revolutionary and high risk ideas and develop new products in high technology, it was announced today, May 25.

The company has recruited Richard Cutting, current managing director of Cambridge Consultants (CCL). He will be responsible for the centre together with Sinclair Research directors David Southward and Jim Westwood.

"MetaLab will act as an incubator, fostering new products from initial idea to commercial launch," said Clive Sinclair, company founder and chairman. "Not only will MetaLab complement research work underway in existing computer and television divisions - it will also open up totally new fields ranging from battery technology to robotics".

Sinclair believes MetaLab will provide a challenging 'think-tank' atmosphere for a highly-motivated, multidisciplinary and creative scientific team which it is now seeking to expand.

"We believe it represents a new R&D concept for the UK," said Cutting, "and will offer tremendous possibilities to Sinclair and individually to those involved".

Sinclair is currently negotiating to purchase a suitable site in Cambridge for MetaLab, which it plans to open in the Autumn.

- ends -

NOTE TO EDITORS

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Current Sinclair Research products include a new range of personal computers, computer peripherals, flat-screen TVs and consumer applications of solid state technology.

RICHARD CUTTING BIOGRAPHICAL NOTE

Richard Cutting became managing director of Cambridge Consultants in 1979. The following year he organised the firm's merger with Arthur D Little - as an autonomous subsidiary. The company has since become one of the foremost Contract R&D organisations in the UK.

As a member of the European Directorate of Arthur D Little, Cutting was particularly involved with the growth area of technology strategic management both in Europe and the US.

Cutting holds a Cambridge MA in Natural and Electrical Sciences and in 1981 attended the Advanced Management Programme at Harvard Business School. He has lectured on R&D management and the fostering of creativity, and is the author of several articles on advances in microelectronic technology.

METALAB QUESTIONS AND ANSWERS

Release date:  
25 May 1983

Q: What is the exact site in Cambridge that you're considering?

A: We'll be announcing that as soon as our negotiations are far enough along to discuss it publicly.

Q: Does this mean that you're closing the plant at St. Ives?

A: We have no immediate plans to ~~close~~ close any Sinclair facilities. What MetaLab will do is bring together a lot of engineering and design people who have been scattered in different locations around the company.

Q: How many people is Sinclair looking for to work at MetaLab?

A: Initially, we're looking for ten very senior people to form a core MetaLab team. There is a great deal of room for expansion.

Q: How exactly will the work that goes on at MetaLab differ from what's underway in your existing labs?

A: The MetaLab team will be able to explore wide ranging fields, without the pressure of necessarily producing a viable product under a defined timetable. If the people, say, at the computer lab come up with something interesting that they haven't the time to explore - they can send it over to MetaLab for further study.

**PRESS  
INFORMATION**

**sinclair**

SINCLAIR RESEARCH DISPLAYS NEW SOFTWARE -  
SEES SOFTWARE DEVELOPMENT AS VITAL IN FUTURE

16 June 1983

Sinclair Research, underlining its commitment to new software development, is displaying a selection of new ZX81 and ZX Spectrum cassette programs at The Computer Fair being held in London, June 16-18 (stand no.327).

The applications include an additional language - FORTH - an advanced chess program and another escapade for Horace, the hero of Sinclair adventure games.

"We cannot over-estimate the importance of publishing good quality software" said Nigel Searle, managing director of Sinclair. "Our new applications will attempt to take full advantage of the computer's graphic and storage capabilities".

For ZX81 and Spectrum users with programming interests, the new FORTH program offers a language combining BASIC's simplicity with the speed of machine code. FORTH is extendable by user-defined commands, and its compiled code occupies less than a quarter of the equivalent BASIC program, yet runs up to ten times as fast.

A major challenge for the games enthusiast is the new eight-level Cyrus-Is-Chess (for Spectrum only), based on the 'Cyrus' program, which won the second European microcomputer chess championship. Its features include cursor movement of pieces, replay and 'take-back' facilities and the ability to function as a normal two-player game-board.

Contd.../

Three further Spectrum games' programs are also available: a new Horace adventure with the Spiders, Scrabble, featuring a 10,000-word dictionary of possible plays, and Backgammon. For the ZX81 Sinclair has introduced two new adventure games, Sabotage and City Patrol.

Finally the growing demand for business software is met by the new Small Business Accounts program (48K Spectrum only) which provides balance sheet and profit and loss information together with VAT returns.

Ranging in price from £4.95 to £15.95 inc VAT, all the new cassettes are available mail order from Sinclair Research, Stanhope Road, Camberley, Surrey, tel; 0276 685311; and will soon be stocked at major branches of W H Smiths, Boots Curry's, John Lewis Partnership, House of Frazer, John Menzies and Greens, and other leading chains and computer stores.

- ends -

New Software:-

Title/Requirement	Source	RSP (£)
Backgammon (Sp)	Psion	5.95
Cyrus-Is-Chess (Sp)	Intelligent Software	9.95
Horace and the Spiders (Sp)	Psion/Melbourne House	5.95
Scrabble (Sp48)	Psion/Speares/Little Genius	15.95
Forth (Sp48)	Artic	14.95
Forth (ZX81+16K)	Artic	14.95
Sabotage (ZX81+16K)	Macronics	4.95
City Patrol (ZX81+16K)	Macronics	4.95
Small Business Accounts (Sp48)	Willden Services	12.95

**PRESS  
INFORMATION**

**sinclair**

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16 June 1983

SINCLAIR VEHICLE PROJECT - CURRENT STATUS

The Sinclair Vehicle Project (SVP) team is at present carrying out a broad research and development programme exploring the potential applications of electric vehicle technology. The project is wholly-owned by Clive Sinclair and forms no part of Sinclair Research Limited.

The SVP team continues to work towards unveiling a new electric vehicle, designed for town-use, which it is confident will offer radical solutions to problems of design, materials and power. Initial work on this project began in 1973 and major development commenced in 1981.

The SVP team is also carrying out a detailed analysis of the potential for electrically-assisted bicycles. At this stage the work is purely exploratory and no final commitment has been made to the project.

Since early 1983 the SVP team under its head, Barrie Wills, has been undertaking a complete review of the engineering requirements and manufacturing options for these and other longer-term projects. No final decisions have been taken in any area.

Further information from: Bill Nichols or Mary Reinman on  
01-235 9649

- ends -

**Sinclair Vehicle Project**

23 Motcomb Street, London, SW1X 8LB, England  
Telephone 01-235 9649 Telex 918966

**PRESS  
INFORMATION**

**sinclair**

20 June 1983, 9.00 am

SINCLAIR VEHICLE PROJECT - PRESS STATEMENT

Following this weekend's press comment by the Sunday Telegraph Clive Sinclair confirms that he has purchased from the joint receivers, Sir Kenneth Cork and Mr Paul Shewell, an option to acquire a major portion of the assets of the Dunmurry car-assembly plant in Northern Ireland.

Through his Sinclair Vehicle Project (SVP) team he has also, since late-February 1983, held a series of discussions with the Industrial Development Board of Northern Ireland regarding the potential use of the Dunmurry facility. These discussions are expected to continue for several months before any commitment can be made and no early utilisation of the plant is anticipated.

At the present time the SVP team is concerned to maintain intact the medium-volume composite plastics facility at Dunmurry which is considered to be among the most advanced in Europe.

Clive Sinclair also confirms that he has held exploratory talks with Guinness Mahon, who are acting on behalf of Group Lotus plc, in regard to a possible investment by himself in that company. No further discussions are planned at present.

The Sinclair Vehicle Project is wholly-owned by Clive Sinclair and currently concentrating on applications of electric vehicle technology. It forms no part of Sinclair Research Limited which is not a party to these discussions, nor affected by them in any way.

Further information from: Bill Nichols or Mary Reinman on  
01-235 9649

- ends -

**PRESS  
INFORMATION**

**sinclair**

23 June 1983

**NEW EDUCATIONAL SOFTWARE RANGE PLANNED  
BY SINCLAIR AND MACMILLAN**

A major new range of educational programs, written specially for 5-11 year olds, is to be launched this autumn by Macmillan Education and Sinclair Research, (it was announced today, June 23).

Planned as a 'comprehensive and imaginative exploitation of the computer's potential as a teaching medium', the software will first cater for principle learning areas such as reading, mathematics and science. It is designed for both home and school use with Sinclair's best-selling ZX Spectrum microcomputer.

The two companies believe their joint expertise provides an ideal combination to meet the growing demand for high quality educational software. "As leaders in educational publishing we see this collaboration as a natural development of our long experience in schools", said Tony Feldman, publishing director of Macmillan Education.

"The future of computers in education depends on each pupil having easy access to a machine. The Spectrum's value for money, portability, and penetration of the home market makes it the obvious choice and Sinclair the ideal partner for us"

Contd.../

Nigel Searle, managing director of Sinclair Research said, "We have already sold 400,000 Spectrums and are anxious to meet the urgent need for educational software which is stimulating and fun to use. By working with Macmillan Education we can ensure that the software is also based on sound educational principles".

The programs will be designed for use either on their own or alongside the best-selling Macmillan publications from which they derive. The first cassettes are expected to be available, under a joint Sinclair/Macmillan label, during the last quarter of 1983 with further titles appearing throughout 1984.

Further information from: Paul Lewis of Macmillan Education  
on: 0256 29242

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#### NOTE TO EDITORS

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Current Sinclair Research projects include a new range of personal computers, computer peripherals, flat-screen TVs and consumer applications of solid state technology.

Macmillan Education is the school publishing company of the family-owned Macmillan publishing group. It is one of the leading educational publishers in the UK, providing courses, texts, reference books and a variety of other educational materials for primary/secondary schools and colleges of further education. Through its specialist overseas publishing division and associated companies throughout the world, Macmillan Education is well placed to develop and market educational software internationally.

**PRESS  
INFORMATION**

**sinclair**

30 June 1983

MEP SOFTWARE OFFERED BY SINCLAIR

Sinclair Research is offering the new MEP (Microelectronics Educational Programme) range of computer programs direct to the consumer for the first time.

Suitable for 5-15 year olds, they include mathematics, reading, language development and problem solving.

The range was specially commissioned by the Department of Education and Science for use with the three computers - BBC Model B, Research Machines 480Z and Sinclair ZX Spectrum - recommended under the Government's 'Micros in Primaries' scheme.

Sinclair believes that children still have only limited access to computers in schools, despite the success of the Government scheme, and that the MEP range needs to be commercially available if children are to reap the full benefits.

"By making the MEP software generally available for the Spectrum, children can complete their work at home using the lowest cost alternative of the scheme's computers" commented Nigel Searle, Sinclair's managing director.

MEP software for the ZX Spectrum is to be sold in four packs, each priced at £24.95 inc VAT and each comprising two cassettes and full documentation.

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Offered on general release only by Sinclair Research, the first Sinclair MEP packs will be available during July from Sinclair Research, Educational Division, Stanhope Road, Camberley, Surrey GU15 3PS.

PRESS INFORMATION



- ends -

NOTE TO EDITORS

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Current Sinclair Research projects include a new range of personal computers, computer peripherals, flat screen TVs and consumer applications of solid state technology.

Sinclair believes that children still have only a limited access to computers in schools, despite the success of the Government scheme, and that the real need is to make computers available to all children in their own homes.

By using the MEP packs, parents can help their children to learn about computers at home using the simple and affordable MEP packs. The packs are available in a range of subjects and are designed to be used in conjunction with the school's computer system.

MEP software for the ZX Spectrum is sold in four packs, each priced at £24.95 inc VAT and each comprising two cassettes and full documentation.

Contact: S. Nicholls  
From: Sinclair Research Ltd, Educational Division, Stanhope Road, Camberley, Surrey GU15 3PS

**PRESS  
INFORMATION**

**sinclair**

5 July 1983

**SINCLAIR RESEARCH PURCHASES MILTON HALL FOR METALAB - FORMER  
ELECTRICITY BOARD OFFICES TO UNDERGO CONVERSION**

MetaLab, Sinclair Research's £2m facility for new high technology product research is to be sited at Milton Hall in Cambridge, (it was announced today, July 5).

Bought from the Eastern Electricity Board, Milton Hall will be extensively refurbished before its opening in the Autumn. It offers some 16,000 square feet of work space for Sinclair's team of creative scientists which is now being actively expanded by a major recruitment campaign.

"The spacious landscape of Milton Hall makes a superb environment for the research we will be doing", said Clive Sinclair, company founder and chairman.

Originally built as a private house in 1772, with two modern wings added later, Milton Hall is set in six acres of land. It was used by the Eastern Electricity Board for office and research purposes from 1950 to 1982, at which time department relocations left the building vacant.

Cambridge architects, Lyster Grillet and Harding are acting as project managers for the refurbishment. They were previously responsible for Sinclair Research's new computer division headquarters, completed last year at Willis Road, Cambridge.

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Current Sinclair Research projects include a new range of personal computers, computer peripherals, flat screen TVs and consumer applications of solid state technology.

The creation of MetaLab as a new centre for Sinclair Research's advance products division was announced in May 1983. It will be administered jointly by Richard Cutting, formerly managing director of Cambridge Consultants who joins Sinclair Research on July 1, and by Sinclair directors, Jim Westwood and David Southward.

COMMENT ON KNIGHTHOOD BY CLIVE SINCLAIR

Quincy D. H.

'The award of a knighthood is a truly great honour and one I value very highly. It was completely unexpected and a wonderful surprise. More than ever I feel committed to achieving succes here in and for Britain.'

8 July 1983

2,000 RUNNERS TRAINING FOR SECOND ANNUAL  
SINCLAIR CAMBRIDGE FESTIVAL HALF MARATHON

With entries up over 60% on 1982, 2,000 runners will challenge defending champion Ian Thompson in the second annual Sinclair Cambridge Festival Half Marathon on Sunday July 17. Ron Pickering, BBC sports commentator, will fire the starter's pistol on Parker's Piece, Cambridge at 10 am.

"We're highly delighted with the response to this year's race," said its administrator Brian Allinson, " It provides a chance for people to actually participate in the Cambridge Festival, and should give the whole fortnight of events a rousing start".

The competitors will run a two-lap course round the city via Fen Causeway, Grantchester and Trumpington and spectators are encouraged to choose a good vantage point along the route early.

Funds raised from the race will be put towards a new track and field headquarters for the local Cambridge and Coleridge athletic club.

Further information and entry forms are still available from Brian Allinson, Box A & R, Cambridge City Council, Kett House, Station Road, Cambridge CB1 2JX. Tel: 0223 358977

/Mary Reinman

CAPTION

July 1983

"SAY, AREN'T YOU ..." Twin brothers Graham and Grenville Tuck of the Aldershot Farnham and District Club are training to confuse the competition in the second annual Sinclair Cambridge Festival Half Marathon on Sunday, July 17. The Tucks, aged 32, are former members of the Cambridge and Coleridge Athletic Club and represented England in the World Cross Country Championships between 1970-76. They will join a field of over 2,000 runners including defending champion Ian Thompson and inventor Clive Sinclair. Sinclair Research is sponsor of the 13 mile run as part of the 1983 Cambridge Festival.

Issued by:

Sinclair Research Ltd  
23 Motcomb Street  
London SW1

Contact: Mary Reinman  
Tel: 01-235 9649

MEDIA ADVISORY

MEDIA ADVISORY

MEDIA ADVISORY

**PRESS  
INFORMATION**

**sinclair**

OVER 2000 READY TO RUN IN

SINCLAIR CAMBRIDGE FESTIVAL HALF-MARATHON

- WHAT:** The second annual Sinclair Cambridge Festival Half-Marathon.  
Course length 13 miles, 192 yards.  
Winning time in 1982: 1:05:17 run by Ian Thompson.
- WHEN:** 10 AM, Sunday 17 July  
First finisher expected at approximately 11:05 AM  
Prize presentation at 1 PM
- WHERE:** Race begins and ends on Parker's Piece. Runners will run two laps of a circuit leading from the Piece, via Fen Causeway to Coton Road and Granchester, returning to Cambridge via the Trumpington Road.  
  
Best vantage points at Parker's Piece, and the Green Man pub in Granchester. Excellent photo opportunities.
- WHO:** A field of over 2000 runners, including defending champion Ian Thompson, Helsinki Olympic Medalist John Disley, former England team members Graham and Greville Tuck, and women marathoners Joyce Smith and Carol Gould.
- CONTACT:** Mary Reinman, Sinclair Research 01 235 9649  
Brian Allison, Cambridge City Council 0223 358 977

13/7/83

19 July, 1983

BOB TREADWELL WINS CAMBRIDGE HALF-MARATHON -  
OVER 1400 TAKE PART

Recording the fast time of 1:04:36, Bob Treadwell won Sunday's second annual Sinclair Cambridge Festival Half-Marathon - so avenging his 1982 second-place behind UK marathon record-holder Ian Thompson.

Despite heatwave conditions over 1,400 competitors took part in the race which was advanced from 10.00 to 7.30 a.m. on medical advice. Willing local residents helped cool the runners with garden hosepipes and buckets of water.

The first woman home was UK marathon team member Joyce Smith in 1:13:53, while the team prize went to West Suffolk AC. Former Olympian Tim Johnson and Ron Franklin took the top veteran places in the over 40 and under 50 divisions respectively.

Prizes, including personal computers and software donated by sponsors, Cambridge-based Sinclair Research, were presented by Mr Ron Pickering, the BBC 'Superstars' commentator, who started the race on Parker's Piece.

A sizeable contingent from Sinclair Research in the UK and US completed the course, including chairman and founder Clive Sinclair who recorded a time of 1:47:43.

The Half-Marathon is organized by the Cambridge City Council, in conjunction with the Cambridge and Coleridge Athletic Club. Race administrator Brian Allinson said, "We're delighted with the large turnout despite the early start, and with the enthusiasm shown by Cambridge people along the route. It was a great day for the city".

CAPTION

A view of the reception are

CAPTION

Clive Sinclair competing in the Sinclair Cambridge Festival Half Marathon run Sunday, July 17. Sinclair, whose company Sinclair Research Ltd sponsors the event, completed the 13 mile, 192 yard course in 1:47:43. Over 1,400 runners braved the unusually warm weather to compete in the second-annual event, held in Cambridge, where Sinclair Research is headquartered. The top finisher was Bob Treadwell, who lived up to his surname by finishing the race in 1:04:36. The first woman home was UK marathon team member Joyce Smith, in 1:13:53.

Issued by:  
Sinclair Research Ltd  
23 Motcomb Street  
London SW1X 8LB  
Contact: Mary Reinman  
Tel: 01-235 9649

**PRESS  
INFORMATION**

**sinclair**

28 July 1983

**NEW SINCLAIR PERSONAL COMPUTER BREAKTHROUGH ANNOUNCED**

- ZX MICRODRIVE SYSTEM FOR UNDER £50
- NEW EXPANSION INTERFACE ALSO ANNOUNCED

A major breakthrough in personal computing, the new £49.95 Sinclair ZX Microdrive, for the first time offers home, business and educational users the full benefits of fast access mass storage at extremely low cost.

Now available for Sinclair Research's best-selling ZX Spectrum, it increases dramatically the computer's power and speed for all programming and data handling applications, it was claimed today, July 28.

At a fraction of the price of comparable devices and based on a Sinclair designed, Ferranti custom-built chip, the compact ZX Microdrive stores a minimum of 85K bytes of information on a magnetic cartridge. The cartridges, which are removeable, are priced separately at £4.95 each.

The ZX Microdrive is controlled by the multi-purpose ZX Interface 1, which supports up to eight microdrives, giving a total of 680K bytes. Interface 1 also incorporates an RS232 interface - permitting the Spectrum to be linked to other computers and peripherals - and a local area network linking up to 64 Spectrums. It is available with microdrives at £29.95, or separately at £49.95, all prices include VAT.

Launching the new peripherals at a London press conference, Sinclair's managing director, Nigel Searle, also announced plans

Contd.../

to introduce later this year a ZX Interface 2 which will enable the Spectrum to support ROM cartridge software and joysticks.

Searle commented that together the new items 'represented not only a major expansion of Spectrum's potential but of the concept of low cost personal computing itself'.

Sinclair Research is encouraging wide spread development of Microdrive applications software. It will be supplying leading independent software houses with Microdrives and making blank cartridges available in bulk on an OEM basis.

The new peripherals are already in production at Thorn EMI Datatech's facility. Timex-Dundee, where Spectrums are manufactured, is being considered as a second source.

Sinclair Research has established a strict priority sales' system for the ZX Microdrive. In sequence of purchase each Spectrum owner will be offered the opportunity to purchase ZX Microdrives, at £49.95 each, including a free cartridge containing demonstration programs and ZX Interface 1 at £29.95 (£49.95 if purchased separately). Blank cartridges are offered at £4.95 each, all prices include VAT.

Spectrum owners who purchased mail-order have been sent information and in the case of the earliest purchasers, order forms. Retail purchasers who wish to be added to the mailing-list should send their name and address only on a postcard to Sinclair Research Limited, Department M, FREEPOST, Camberley, Surrey GU15 3BR.

The ZX Microdrive/Interface 1 manual is immediately available to all customers as a separate item at £5 inclusive of VAT and post and packing.

- ends -

PHOTOGRAPHS AVAILABLE ON REQUEST

NOTE TO EDITORS

Sinclair Research was established to conceive, develop and market new consumer electronics products. Founded by its chairman and chief executive Clive Sinclair in July 1979, it is now the world's largest volume manufacturer of personal computers with total sales in excess of 1,500,000 units and monthly production of over 100,000 units.

Current Sinclair Research <sup>projects</sup> ~~products~~ includes a new range of personal computers, computer peripherals, (flat screen TVs) and consumer applications of solid state technology.

It is 85% owned by its chairman and chief executive, Clive Sinclair, who founded the company in July 1979. A further 10% has been held since February 1983 by a group of institutional investors who <sup>at that time</sup> subscribed £13.6 million <sup>by private placement</sup> ~~gains~~, capitalising the company at £135.9 million.

Established in July 1979 to conceive, develop and market new consumer electronics products, Sinclair Research is 85% owned by its founder and chairman, Clive Sinclair.

A further 10% is held by a group of institutional investors who in February 1983 subscribed £13.6 million <sup>gains</sup> ~~by private placement~~ capitalising the company at £135.9 million.

Sinclair Research has now sold over 1,500,000 personal computers worldwide and produces in excess of 100,000 units each month. Current projects include.

**PRESS  
INFORMATION**

**sinclair**

28 July 1983

**ZX MICRODRIVE/ZX INTERFACE - TECHNICAL AND GENERAL INFORMATION**

Incorporating revolutionary media and circuit design features, the Sinclair ZX Microdrive enables storage of programs, blocks of code, screens, arrays and data files on removeable cartridges each with at least 85K bytes capacity.

Each cartridge may contain up to 50 files which can be individually identified, sorted automatically, and displayed in alphabetical order or deleted - with typical access times of 3.5 seconds.

The Microdrive controller, contained within ZX Interface 1, expands Sinclair BASIC to include file-handling and communications facilities, and introduces BASIC as an operating system as well as a programming language. Up to eight Microdrives may be used by a single Spectrum and Interface 1, giving a total of 680K bytes capacity.

The Microdrive makes the Spectrum an extremely powerful tool, particularly for educational and business applications such as stock control, word processing, financial modelling and accounting.

Other key features include:-

- Loading a typical 48K program in as little as 3.5 seconds
- Easy use of SAVE, LOAD and VERIFY commands
- 'FORMAT' to initialise the cartridge
- 'CAT' enables the contents to be read, displays the cartridge name, up to 50 files in alphabetical order, and the free space in kilobytes.

- Powered by Spectrum's power-supply
- Red light to indicate when running

Also incorporating an RS 232 interface and local network, the ZX Interface 1 attaches to the underside of the Spectrum and duplicates the computer's peripheral port.

The RS 232 industry standard serial interface enables the Spectrum the drive full-size printers and to communicate with other computers having the same interface. It also permits transmission of data over telephone lines via modems.

Interface 1 operates at all standard baud rates up to 19,200, with speed software-selectable, and a special RS 232 lead is separately available from Sinclair Research at £14.95.

The local area network is a high speed communications link between up to 64 Spectrums, transmitting at 100 kilobaud. A full screen can be transferred in 3 seconds and protocols allow transmitting and receiving stations to be specified by one another, or the data may be broadcast over the network to any open Spectrum.

Sinclair Spectrums can act as printer servers to other Spectrums on the network driving either a ZX Printer or any other printer using the RS 232 interface. They may also be dedicated as file-servers, exchanging files from their Microdrives with other Spectrums in the network.

The ZX Network opens up a wide range of possibilities for the user from advanced multi-player games of fun and skill to serious use in the classroom and office.

**PRESS  
INFORMATION**

**sinclair**

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28 July 1983

NEW LOW COST INTRODUCTION TO PERSONAL COMPUTING

- £45 SINCLAIR 'STARTER PACK' OFFERED.

Sinclair Research is launching (on August 1) a special introductory £45 Starter Pack containing its best-selling ZX81, a 16K RAM Pack and one software cassette.

Saving £30 on current retail prices Sinclair sees the special pack as ideal for the new user. It will be on sale initially for two months only and the company is also offering five free rolls of printer paper, worth £11.95 with every ZX Printer purchased at the usual price of £39.95 during the period.

The Sinclair 'Starter Pack' is available from most leading Sinclair stockists, including Boots and John Menzies. All prices quoted are inclusive of VAT.

- ends -

NOTE TO EDITORS

PR  
INFORMATION



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Current Sinclair Research products include a new range of personal computers, computer peripherals, flat screen TVs and consumer applications of solid state technology.

Normally priced at £39.95 the Sinclair ZX81, designed and developed by Sinclair Research, was first launched in March 1981. Based around an innovative four-chip design the ZX81 is highly portable measuring only 6" x 6.5" x 1.5" (167 x 175 x 44mm), and weighing 12 oz (350 gms). Sinclair's memory 16K RAM pack normally retails for £29.95, both prices include VAT.

**PRESS  
INFORMATION**

**sinclair**

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28 July 1983

NEW LOW-COST INTRODUCTION TO HOME COMPUTING  
- £45 'STARTER PACK' OFFERED BY SINCLAIR RESEARCH

A new low-cost introduction to the world of home computing is now available, thanks to a special £45 'Starter Pack' offer from Sinclair Research.

Saving £30 on current retail prices the pack contains Sinclair's best selling ZX81 home computer - more than 900,000 sold worldwide - a 16K RAM pack for substantial extra memory and one software cassette.

The company, which helped pioneer low-cost home computing and has since sold more units worldwide than any other manufacturer sees the special pack as ideal for the new user.

Sinclair is also offering five free rolls of printer paper, worth £11.95, with every ZX Printer purchased at the normal price of £39.95 .

Both offers begin on August 1 and initially will run for two months. The Sinclair 'Starter Pack' is available from most leading Sinclair stockists, including Boots and John Menzies. All prices inclusive of VAT.

- ends -

NOTE TO EDITORS

PRESS  
INFORMATION



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**Sinclair Vehicle Project**

23 Motcomb Street, London, SW1X 8LB, England  
Telephone 01-235 9649 Telex 918966

**PRESS  
INFORMATION**

**sinclair**

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31 August 1983

OPTION EXTENDED BY SINCLAIR VEHICLE PROJECT

The Sinclair Vehicle Project (SVP) announced today (August 31) that it had extended its option to acquire from the joint-receivers a major portion of the assets of the Dunmurry car-assembly plant in Northern Ireland.

The extension is to allow for clarification of certain issues with the receivers and a continuation of the separate discussions with the Industrial Development Board of Northern Ireland regarding the potential use of the Dunmurry facility.

- ends -

NOTE TO EDITORS

The Sinclair Vehicle Project is wholly-owned by Sir Clive Sinclair and currently concentrating on applications of electric vehicle technology. It forms no part of Sinclair Research Limited which is not a party to these discussions, nor affected by them in any way.

Further information from: Bill Nichols, Sinclair Vehicle Project, 23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649.

**PRESS  
INFORMATION**

**sinclair**

5 September 1983

SINCLAIR RESEARCH 1982/83 PRE-TAX PROFITS UP SHARPLY  
AT £14.03 MILLION - TURNOVER DOUBLES TO £54.53 MILLION

Sinclair Research Limited has announced today, September 5, sharply increased profits before taxation and exceptional item of £14.03 (£8.55) million, for the year ended 31 March 1983.

Company turnover doubled to £54.53 (£27.17) million and earnings per share were 207p against 106p previously.

Writing in Sinclair's annual report company chairman, Clive Sinclair, called the figures 'encouraging', and noted that Sinclair's ZX Spectrum personal computer, introduced in 1982, "had become easily the best selling machine in the UK and in a number of overseas markets".

Attributing Sinclair's "strong position in the personal computer market to its technical and marketing leadership", he added that "there remains much scope for innovation in the field and I believe we will continue to lead the world with future products.

"Because we will never be free from competition we plan to introduce products in new market areas to expand the company and maintain our margins. In particular we expect to be leaders in the flat screen television field where we are confident that we have the best technology."

Sinclair Research's 1983 Annual General Meeting will take place in London on September 23.

- ends -

NOTE TO EDITORS

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Attributing Sinclair's 'strong position in the personal computer market to its technical and marketing leadership', he added that 'there remains much scope for innovation in the field and I believe we will continue to lead the world with future products'.

'Because we will never be free from competition we plan to introduce products in new market areas to expand the company and maintain our way of life. In particular we expect to be leaders in the flat screen television field where we are confident that we have the best technology.'

Sinclair Research's 1983 annual General Meeting will take place in London on September 23.

Sinclair Research Limited

23 Motcomb Street, London SW1X 8LB, England

01 235 9649 Telex 918966

TV5

**sinclair**

5 September 1983

Dear

I have great pleasure in inviting you to attend a press conference, given by Clive Sinclair, to launch Sinclair Research's new flat-screen pocket television.

It will take place on Friday 16 September, 11.45 for 12 noon prompt, at the Holiday Inn (Chelsea), Sloane Street, London SW1. A check-in desk will be sited in the main foyer.

A buffet luncheon will follow the conference, and there will be an opportunity to meet senior members of the development team to discuss the project in detail.

I do hope that you, or your representative, will be able to attend, and would be grateful for your RSVP either by returning the enclosed reply-paid card or by telephoning Liz Walker at this office.

Yours sincerely

Bill Nichols

PLEASE NOTE: The information contained in this invitation is confidential and embargoed until noon, September 16.

**PRESS  
INFORMATION**

**sinclair**

6 September 1983

SIX NEW PROGRAMS ANNOUNCED FOR THE ZX81 AND SPECTRUM PERSONAL COMPUTERS

Sinclair Research has expanded its software range with six new cassette applications for its ZX81 and ZX Spectrum. The new offerings include arcade games, machine code writing aids, a fascinating new logic puzzle and an at-home IQ Test.

"With the number of Spectrum owners now over half a million the demand for well-written applications is very high and software development is a major priority at Sinclair" said managing director, Nigel Searle.

Monitor and Disassembler translates machine code into comprehensible assembly language instructions allowing the user to examine the BASIC ROM, investigate the workings of the Spectrum, or analyse original machine code routines. 16k & 40k

A second programming aid, Zeus Assembler, is designed to simplify the process of producing machine code programs. 40k

The Cattell IQ Test developed for Sinclair by Victor Serebriakoff, International President of Mensa, enables the 48K Spectrum to test for IQ. The test is timed and marked by the computer, which then standardises against the user's age. 40k

A new puzzle for fans of the Rubik cube, Flippit requires the combination of nine pieces into a magic square sequence. 16 40k

Cont/...

Contact: Bill Nichols

From:  
Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

PRESS  
INFORMATION

sinclair

✓ PC

ZX81  
16K

Finally, Chequered Flag for the Spectrum emulates the fast action of a Grand Prix driving course and Mothership offers a three-dimensional space adventure for ZX81 users.

Ranging in price from £4.95 to £12.95 inc VAT, all the new cassettes are available mail order from Sinclair Research Limited, Stanhope Road, Camberley, Surrey, tel: 0276 685311; and will soon be stocked at major branches of WH Smiths, Boots, Curry's, John Lewis Partnership, House of Frazer, John Menzies and Greens, and other leading chains and computer stores.

- ends -

NOTE TO EDITORS

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Sinclair Research has now sold over 1,500,000 personal computers worldwide and produces in excess of 100,000 units each month. Current projects include flat screen TVs, a new range of personal computers, computer peripherals and consumer applications of solid state technology.

Embargoed until  
September 12, 11.45am

**PRESS  
INFORMATION**

**sinclair**

12 September 1983

INNOVATION IN SMALL COMPANIES

(Following is the text of a speech by Clive Sinclair, chairman and chief executive of Sinclair Research Limited, to the seminar on 'Science, Technology and Industry', chaired by the Prime Minister, at Lancaster House, St James's on Monday, 12 September 1983).

We have grown used to change. But the nature of change itself can be variable and so it is that the roads which led to economic growth in the decades after the war no longer carry us there. Then the pursuit of more of what we had, more cars, more 'fridges, more TVs, brought profit to our great companies. Now the Western World is more sated with these goods and, open to supply from all corners, offers less to the producer. Now is a time when the rewards are to the innovator, large or small. Through innovation will come the new products to restore demand and growth to our economies.

Young companies now have a particular advantage. Because they have no large capital investment in a particular technology they have little to fear and much to gain from trying a new course. This is why so much that is new comes from such firms. Older firms with large capital investments are wise to let young companies explore the frontiers following them swiftly once a successful path has been found.

So the new firms may serve the old. In turn they depend upon them and a nation's growth requires strong established firms

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Contact: Bill Nichols /Mary Reinman

SR276

From:  
Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

as well vigorous young ones. For the latter can often only produce innovative products by drawing on the universities which provide both raw ideas and the source of staff. Britain has produced so many computer firms largely because the universities have produced so many able computer scientists and partly because large firms have been available to provide key components and assembly capacity.

We depend then on vital new companies for much of our innovation but they depend on the strengths of the older companies and the universities. And here lie some problems. Innovation always builds on existing technology and usually on some capital intensive technology inevitably in the hands of large firms. So almost all electronic innovation depends on silicon integrated circuitry and increasingly that has to be imported. In some types of circuit, memory chips, for example, Japan leads the world. She will readily supply us with standard parts but once she develops new types of her own we will find that these are kept for Japanese companies. For this reason we cannot afford to leave the key technologies to other nations. Semiconductors are as crucial to this new industrial revolution as metal foundries were to the last. We just have time to right this position but the window is closing fast.

Education may have served the new firms well, but not as well as it might. It is surely time that everyone received a technical education as well as a literary one, not science archaically divided into physics, chemistry and biology, but technology, the understanding of how things work. It is also time that business studies were made more general at University. Cambridge trains scores of economists to feed the City and not one MBA.

Young firms are much better placed than they were to attract talented staff. Largely, sad to say, because of unemployment. Young people who once were drawn into the then glamorous industries of atomic power and aircraft now find the small firm appealing.

Older people with their valuable experiences are less easy to recruit usually because they would lose pension rights. This could and should be solved by making all pensions portable by law.

The attitude of the banks and recent budget changes have transformed the financing of new companies but some changes are still needed. It is now much easier to invest in a new company but it is not easy to profit from that investment unless the company goes public. An end to the illogical discrimination against unearned income would help and so, greatly, would the proposed change in the taxing of staff share options whereby gain would be taxed at the capital gains tax rate. Wouldn't life be simpler though if we just had one flat rate for income no matter how acquired?

It will be years before the new fields explored by young firms regenerate demand sufficiently to restore 'full' employment. Come what may, mature firms will continue to shed staff. Only a plethora of new firms can explore all the opportunities and discover the future. They will exist and flourish if schools and universities provide the right education, if large firms supply the key technologies and if government provides the right fiscal environment.

- ends -

Young companies have a particular advantage. Because they have no large capital investments in a particular technology they have little to fear and much to gain from trying a new course. This is why so much that is new comes from such firms. Older firms with large capital investments are wise to let young companies explore the frontiers following them safely once a successful path has been found.

So the small firm is the lifeblood of the economy. In turn they depend upon the large established firms for the technology and capital they need.

Continued

**PRESS  
INFORMATION**

**sinclair**

16 September 1983

SINCLAIR 2" MULTI-STANDARD FLAT-SCREEN TV INTRODUCED FOR  
JUST £79.95 - FIRST TV TO USE A SINGLE CHIP

The Sinclair 2" flat-screen TV, the first TV with a single chip for circuitry, was introduced today, September 16, after a six year £4,000,000 development programme.

Just £79.95 inc VAT, and less than one-third the price of its nearest competitor, the new multi-standard slimline pocket TV goes on public show tomorrow at London's Great Home Entertainment Spectacular (Olympia, September 17-26).

Smaller than an average paperback the highly portable TV measures just 5½" x 3½" x 1½" (14 x 9 x 3cms) and weighs only 9½ ounces (280 gms).

Featuring high-quality video reception and extremely low power consumption it is also very simple to use - there are just two controls, on-off/volume and tuner. A special Polaroid flat-battery provides 15 hours of life, up to six times that of its nearest competitor.

The multi-standard TV is also the first to feature automatic standard switching for reception of most UHF transmissions around the world except France.

In all it represents "a major breakthrough", Sinclair's founder and chairman, Sir Clive Sinclair, told a London press conference. "I believe it, and its successors, can achieve for television what the transistor radio did for wireless, and create a new one-per-person product".

Contd../

Contact: Bill Nichols

/Mary Reinman

From:

Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

Key design elements in the new TV are Sinclair's revolutionary flat-screen cathode-ray tube (CRT) and its single integrated circuit (IC) designed by Sinclair Research with Ferranti Limited, which handles almost all circuitry requirements. For manufacture, component numbers have been reduced by a factor of at least two against any other TV.

The Sinclair flat-screen CRT provides up to three times the brightness, uses between one quarter and one-tenth the power and, by positioning the electron gun to the side and not the rear, eliminates most of the depth of a conventional CRT. The screen is recessed to aid brightness and contrast.

Manufacture of the tube is subcontracted to the Timex facility in Dundee using a Sinclair-designed and owned automatic plant.

Employing Ferranti's extremely advanced FAB2 CDI process, the single IC uses innovative digital techniques to monitor automatically video and audio inputs and to adjust the receiver circuitry for local broadcast standards.

Special features of the IC include integrated sound selectivity, video innovations to eliminate image problems in the UHF channel and an advanced synthesised scan generator to control the complex waveforms needed to scan the flat CRT. It runs a check 50 times per second to ensure picture 'hold'.

Sinclair has also designed a specially sensitive tuner, with up to 90% power savings. Uniquely small it measures just 31 x 23 x 11 mm and is manufactured with hybrid micro-miniature components using advanced surface mounting technology.

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Shortly to enter full production the new TV will be available at first by mail order only. Sinclair cautions that initial supplies will be limited, as production builds up progressively to 10,000 units per month by the end of the year.

Contd../

UK retail and export sales are planned for the first half of 1984. Sinclair is confident of selling up to one million sets per year worldwide leading to the creation of hundreds of new UK jobs in component production and final assembly.

Complete with foldaway aerial, a personal earphone, soft-carrying case and battery, the new Sinclair TV is priced at £79.95. Polaroid 6v Lithium batteries are available separately at £9.95 for a pack of three, and a mains adaptor is also offered at £7.95, all prices inclusive of VAT, postage and packing.

No money should however be sent at present. Potential customers will be offered the chance to purchase a TV, in strict order of their applications, as and when stocks permit.

Application forms will be available at the Great Home Entertainment Spectacular and on request from TV Division, Sinclair Research Limited, Stanhope Road, Camberley, Surrey GU15 3PS. Tel: 0276 62111.

**PRESS  
INFORMATION**

**sinclair**

16 September 1983

TECHNICAL INFORMATION 1 - THE SINCLAIR FLAT-SCREEN TV TUBE

The Sinclair tube measuring  $4\frac{1}{4}''$  x  $1\frac{3}{4}''$  x  $\frac{3}{4}''$ , is three times brighter, requires between one quarter and one tenth the power, and is half the volume of a conventional CRT with the same size screen.

It is the subject of a revolutionary process, designed and developed by Sinclair Research and implemented by its subcontractor, Timex in Dundee, for automatic low cost high-volume manufacture. A major technical breakthrough has been the perfection of a new method of vacuum forming glassware.

The tube itself is assembled from just two sheets of glass, a flat front plate and a vacuum-formed backing plate. The phosphor screen is coated on the interior of the backing plate and is viewed through the front face from the same side that the electrons strike. As a result, the brightness is up to three times that of a conventional CRT with the same beam energy.

The electron gun is set to one side of the screen with its axis parallel to the screen. Two sets of electrostatic deflection plates in the gun assembly provide horizontal and vertical scanning, and a third set between the phosphor screen and front face bends the electron beam toward the screen.

Without this additional focusing field, the angle of beam incidence would vary across the screen, spreading the beam

Contact: Bill Nichols

From:

Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

Cont.../

spot into an ellipse. The focusing electrode is formed on the front face by a transparent tin-oxide coating.

If uncorrected, folding the electron optics would distort the raster scan to produce a keystone-shaped frame, in which the vertical edges are curved and the horizontal edges form the side of a trapezium. Both electronic and optical techniques are used to correct for this distortion.

First, the screen height is reduced by two-thirds but the width kept constant. This narrows the angle subtended by the electron beam onto the screen, reducing both the distortion and the deflection power. The picture height is restored optically by means of a Fresnel lens, which can be inexpensively formed in a flat plastic faceplate. The trapezium distortion is eliminated by applying a correcting modulation to the vertical plates.

The tube assembly lends itself to low cost mass production and has significantly fewer components than a conventional CRT.

Connections to the electron gun and deflection assembly are screen-printed onto the faceplate, and the assembly is attached in a single operation by a conductive frit.

The cooling problems to prevent phosphor damage are severe in a conventional tube, but since with the Sinclair CRT the image is viewed from the side of the phosphor that the electrons strike, the other side of the screen can be connected to a heat sink.

**PRESS  
INFORMATION**

**sinclair**

16 September 1983

TECHNICAL INFORMATION 2 - THE FLAT SCREEN TV IC

The first TV to use a single chip for its circuitry requirements the new Sinclair flat-screen TV contains a single LSI integrated circuit (IC) performing the majority of signal processing functions within the set.

Designed by Sinclair Research and produced by Ferranti Limited - using its FAB2 CDI process - it is a complex linear/digital circuit with a number of original advanced features which are subjects of patent application.

The chip's principal function (see also block diagram) is to take the IF output from the tuner, recover the video and sound signals and feed them to the cathode-ray tube (CRT) and speaker respectively.

Additionally information is extracted from the video signal to synchronise a multi-standard line and field scan field system which generates signals enabling correct picture display on the CRT. The system synthesises scan waveforms digitally and accounts for the majority of the IC's logic.

Among the IC's principal innovations are:-

1. Multi-standard capability:

The Sinclair system caters for all 625 line systems (with an FM intercarrier sound frequency of 6.0 or 5.5 MHz) and the 525 line system.

Contd../

A digital countdown circuit is employed using a high-frequency VCO locked to a multiple of received line sync pulses. Slaved from the line oscillator, an identical VCO provides a local oscillator for the sound channel.

Timing components are contained on the IC, and VCO centre frequency is derived from a single external resistor. The VCO is counted down to field rate and on-chip logic determines reception of a 625 or 525 line signal - adjusting count number and VCO centre frequency accordingly.

Additional logic improves the noise immunity of line and field lock.

## 2. Synthesised scan generator:

To display an orthogonal picture on the flat CRT the field scan must be modulated by a correction waveform at line rate. Both correction signal and field sweeps are generated digitally using digital to analog (DAC) converters whose inputs are derived from the countdown system.

The use of DACs has eliminated the need for set-up components and adjustments in generating the complex waveform.

A further line rate DAC generates a control signal for the line-scan output stage.

## 3. Video:

The vision IF signal emerges from the tuner at the unusually high frequency of 230 MHz - chosen to eliminate image problems in the UHF band.

After amplification in a 4-stage AGC controlled amplifier the signal is fed to a novel low-level envelope detector

with the recovered video going to a DC restorer for sync separation and an external amplifier to drive the CRT.

4. Sound channel:

An intercarrier sound signal, retrieved from the detector, is fed via a high pass filter and converted to a 250 KHz 2nd IF. Subsequently it is passed through an AC coupled limiting amplifier to a product detector for sound recovery.

All coupling, decoupling and phase shift network components are integrated on the chip, providing integrated sound selectivity. The sound local oscillator frequency is set to 5.75 MHz for 625 lines and 4.75 MHz for 525 lines, enabling demodulation of 4.5 MHz, 5.5 MHz and 6.0 MHz intercarrier sound without external switching. The audio signal is fed via the volume control to an on-chip audio amplifier.

- ends -

**Sinclair Research Limited**

25 Willis Road, Cambridge CB1 2AQ, England  
Telephone (0223) 353204

**PRESS  
INFORMATION**

**sinclair**

16 September 1983

SINCLAIR RESEARCH LIMITED - BACKGROUND INFORMATION

Sinclair Research was founded by its chairman, Sir Clive Sinclair, in July 1979, to conceive, develop and market new consumer electronics products.

In four years the company has established itself as the world's largest volume manufacturer of personal computers, with total sales in excess of 1,700,000 units and monthly production of over 100,000 units, and Sinclair is now opening a second major market area by launching its flat-screen TV.

The company is 85% owned by Sir Clive and a further 10% is held by a group of institutional investors who in February 1983 subscribed £13.6 million gross by private placement - capitalising the company at £135.9 million.

Company turnover doubled to £54.53 million in 1983 while profits before taxation and exceptional item were £14.03 (£8.55) million.

Sinclair Research concentrates itself on R & D and marketing and subcontracts all production. Current Sinclair Research projects include a new range of personal computers, computer peripherals, the flat screen TV and consumer applications of solid state technology.

Based in Cambridge, Sinclair Research has branch offices in London and Boston USA, and additional research laboratories in Winchester and St Ives, Cambs.

- ends -

Contact: Bill Nichols

/Mary Reinman

From:

Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

**PRESS  
INFORMATION**

**sinclair**

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28 September 1983

**NEW SINCLAIR ZX INTERFACE 2 PROVIDES ROM CARTRIDGE AND  
JOYSTICK FACILITIES**

**FIRST SHOWING AT 1983 PERSONAL COMPUTER WORLD SHOW**

Sinclair ZX Spectrum owners can now use fast-loading ROM cartridge software and attach standard joysticks for quick-reflex games - thanks to the new Sinclair ZX Interface 2 - on show for the first time at the 1983 Personal Computer World Show (Barbican, September 29 - October 2).

Priced at £19.95 inc VAT, ZX Interface 2 plugs directly into the Spectrum rear expansion port or ZX Interface 1. The top of the interface includes a 'porthole' for ROM cartridges and two joystick ports accepting standard 9-way D plugs.

"Interface 2 complements the recently-introduced ZX Interface 1 and Microdrive", said Nigel Searle, Sinclair's managing director, "so the user can now develop a complete home computing system, based on the Spectrum, at a very economical cost.

ROM cartridge software offers the advantages of convenience and speed in loading. In addition, all ROM cartridges will work with a 16K Spectrum, even if the equivalent title on cassette requires a 48K computer.

Cont/...

Ten programs, each priced at £14.95 inc VAT, are initially available on ROM cartridge, including six - Space Raiders, Planetoids, Hungry Horace, Horace and the Spiders, Chess and Backgammon - already available on cassette.

A further four adventure games - Psst', Jet Pac, Cookie and Tranz Am - are offered for the first time in ROM cartridge form, and more will be issued over the next few weeks.

No extra interface is needed to match the joystick to the Spectrum or software, and, once connected, the joystick controls will work with either ROM cartridge, cassette or Microdrive programs.

A separate expansion port is provided at the rear of Interface 2 for the ZX Printer.

The new ZX Interface 2 and ROM cartridges are initially available by mail order only from Sinclair Research, Stanhope Road, Camberley, Surrey, GU15 3PS. Tel: 0276-685311.

- ends -

"Interface 2 complements the recently-introduced ZX Interface 1 and Microdrive", said Nigel Searis, Sinclair's managing director, "so the user can now develop a complete home computing system, based on the Spectrum, at a very economical cost."

ROM cartridge software offers the advantages of convenience and speed in loading. In addition, all ROM cartridges will work with a hot spectrum, even if the equivalent title on cassette requires a hot computer.

Cont/...

**PRESS  
INFORMATION**

**sinclair**

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27 October 1983

**NEW £220,000 WAREHOUSING FACILITY QUADRUPLES DISTRIBUTION  
CAPACITY FOR SINCLAIR RESEARCH - JOBS BOOST AS GSI EXPANDS  
AT FRIMLEY**

With its worldwide computer sales approaching 2,000,000 and further product range expansion planned, a new 32,500 sq ft warehousing centre has been opened for Sinclair Research at Frimley, Surrey, by its sole UK distributor, GSI (UK) Limited.

As a result GSI now employs up to 145 staff at any one time on Sinclair work - a 130% increase over the last 12 months - and prospects for further growth in 1984 were confirmed by Sinclair's managing director, Nigel Searle, when he opened the centre today, October 27.

The new £220,000 facility more than quadruples GSI's existing capacity to provide retail distribution, mail order and computer services for Sinclair. Available pallet storage rises from 28 to 2,000 units and there are eight packaging production lines against two previously.

On a basic one-shift day GSI can now handle up to 250,000 hardware products, 300,000 phone calls and 100,000 letters - monthly, according to GSI's managing director, Tony Cavender.

"Opening larger premises was vital both for expansion and streamlining" commented Searle. "They give us faster stock turnaround, cut unit distribution costs and enable us to further enhance the quality control function at GSI".

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Contact: Bill Nichols /Mary Reinman

CD52

From:  
Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

For GSI the new facility marks a further stage in its own expansion which has seen UK turnover grow in just four years to £8 million, 35% of it attributable to Sinclair. In total some 300 people are now employed at Camberley and Frimley.

Layout and conversion of the two-unit site was carried out by local architect, Michael Craig, and completed in just under two months - 'one of the tightest deadlines I've ever met' he said.

- ends -

#### NOTE TO EDITORS

Sinclair Research was founded by its chairman, Sir Clive Sinclair, in July 1979, to conceive, develop and market new consumer electronics products.

In four years established as the world's largest volume manufacturer of personal computers, with total sales in excess of 1,800,000 units and monthly production of over 100,000 units, Sinclair has recently opened a second major market area by launching its flat-screen pocket TV.

Current Sinclair Research projects include a new range of personal computers, computer peripherals, flat-screen TVs and consumer applications of solid state technology.

GSI (UK) Limited is a wholly-owned subsidiary of the French-based General de Service Informatique (GSI), a specialist in computer services with outlets throughout Europe. In 1981 it acquired the Camberley-based Jaserve.

Michael Craig has worked locally for 13 years forming his own company, David James Contracts, in 1982. His work includes design and construction of small local housing estates; office and light industry developments, and specialist country-house restoration.

10 November 1983

### SINCLAIR RESEARCH LINKS WITH MACMILLAN FOR NEW EDUCATIONAL SOFTWARE

Macmillan Education, one of the world's leading textbook publishers, and Sinclair Research Limited, designers of Britain's number one-selling ZX Spectrum personal computer, have introduced a range of jointly-produced educational software for children aged 5-12 years.

The nine initial programs were launched at a London press conference today, November 10, by Sir Clive Sinclair together with the Rt Hon Harold Macmillan O.M.

Five programs, forming the 'Learn to Read' series, derive from Macmillan's widely-used primary school reading course entitled 'Gay Way'. The four 'Science Horizons' programs explain key scientific ideas using graphic displays.

"Since my Grandfather founded the business in Cambridge in the 1840's, it has been our primary concern to ensure that the finest educational and instructional books and material are available to the young people of this country", said Mr Macmillan.

"I am pleased that in my 90th year my family business continues this worthy tradition by joining Sir Clive Sinclair in this great technological advance".

Cont/...

"We're proud of our association with Macmillan Education and the software which has resulted from it" said Sir Clive Sinclair. "The programs combine fun and work to attract and hold the children's attention - while at the same time explaining complex ideas".

The Learn to Read series takes an early reader, aged 5-7 years, from letter recognition to positional language - actively demonstrating words and phrases like 'in front of' or 'inside'.

Friendly animal characters and lively games teach reading and the alphabet, while an attractive 'reward' system enables children to see their achievements grow.

Science Horizons teaches science concepts to 8-12 year olds, through real-life simulations. In Glider, for example, the "pilot" must take into account the time of day, cloud cover and terrain below as he seeks to keep the glider airborne for as long as possible.

Survival models the natural world of hazards that wild animals face in their struggle to stay alive, while Magnets is an exciting board-game teaching the forces of magnetic attraction and repulsion.

Finally Cargo simulates the problems facing a cargo ship captain as he plans his itinerary. Plimsoll line principles are learned as the child balances the load to avoid capsizing or sinking.

Cont/...

The new programs will be available in time for Christmas from major software retailers and are obtainable now by mail order from Sinclair Research Limited, Stanhope Road, Camberley, Surrey, GU15 3PS. Tel 0276 685311. They are priced at £9.95 each inc VAT. Schools should order through their usual suppliers or direct from Macmillan Education, Houndsmill, Basingstoke, Hants. RG21 2XS

- ends -

Photos available on request from Sinclair Research.

For further information, please contact:

Bill Nichols/Mary Reinman	or	Paul Lewis
Sinclair Research Limited		Macmillan Education

01 235 9649	0256 29242
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NOTE TO EDITORS

Sinclair Research was established to conceive, develop and market new consumer electronics products. Founded by its chairman and chief executive Clive Sinclair in July 1979, the company has now sold over 1,800,000 personal computers worldwide and monthly production is over 100,000 units.

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Macmillan Education is the school publishing company of the family-owned Macmillan Publishing Group. It is one of the world's leading educational publishers, providing course books, texts, reference books and a variety of other educational materials for schools and colleges. Through its specialist overseas publishing division and associated companies throughout the world, Macmillan Education is well placed to develop and market educational software internationally.

**PRESS  
INFORMATION**

**sinclair**

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10 November 1983

**SINCLAIR EXPANDS ZX SPECTRUM EDUCATIONAL FEATURES  
WITH MICRO-PROLOG SOFTWARE**

Micro-PROLOG, a version of the advanced logic programming language PROLOG, developed for Sinclair Research by Logic Programming Associates, is now available for the Sinclair ZX Spectrum.

The first PROLOG adaption for micros, micro-PROLOG employs simple "English" phrases as the basis for a dialogue between computer and user. It is extremely flexible and offers significant potential for educational uses.

"PROLOG is the language used by the Japanese in sophisticated artificial intelligence machines and we think it sets a standard for future computer languages," said Alison Maguire, software development manager for Sinclair.

While traditional computer languages consist of sequences of instructions to the computer, micro-PROLOG communicates directly, using familiar concepts and ideas. One of the sample programs, called SIMPLE, enables new students of micro-PROLOG to learn and understand the language quickly.

The information used in micro-PROLOG applications is stored in a database, which can be extended to answer increasingly complex questions as the user becomes more advanced.

Micro-PROLOG is available in cassette form with user manual and a copy of the micro-PROLOG Primer at £24.95 inc VAT. A separate reference manual for advanced micro-PROLOG users is in preparation.

Cont/...

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Contact: Bill Nichols /Mary Reinman

From:  
Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

The program is initially available by mail order only from Sinclair Research Limited, Stanhope Road, Camberley, Surrey, GU15 3BR. Tel: 0276-685311.

- ends -

#### NOTE TO EDITORS

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**PRESS  
INFORMATION**

**sinclair**

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10 November 1983

BLACKBOARD SOFTWARE SPELLING AND PUNCTUATION PROGRAMS  
FOR THE SINCLAIR ZX SPECTRUM

Sinclair Research has launched six new spelling and punctuation programs developed by Blackboard Software to entertain children and at the same time teach basic writing skills.

"Until recently most educational software was rarely more effective than the written word". said Alison Maguire, Sinclair's software development manager. "These six programs are very different - they incorporate moving graphics with changing characters which hold a child's attention and make learning fun".

Each program features a step-by-step example section and allows for vocabulary changes to keep pace with individual progress.

After each group of exercises is successfully completed an instructive game follows, providing useful practice in letter recognition and increased familiarity with the keyboard of the Sinclair ZX Spectrum computer.

The programs include Early Punctuation, Speech Marks and The Apostrophe in which animated men and animals drop the correct punctuation into place at the user's suggestion. In Capital Letters correctly identifying words for capitalisation makes apples grow on trees.

Cont/...

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Contact: Bill Nichols  
/Mary Reinman

CD49c

From:  
Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

Castle Spellerous is a spelling game with ten levels of vocabulary. Correct answers enable the child with his band of ten soldiers to attempt recovery of a Princess who has been captured and imprisoned in the castle.

Finally, Alphabet Games includes three games of letter recognition to help children learn the alphabet while simultaneously familiarising themselves with the computer keyboard.

All the Blackboard Software is designed for both home and classroom use by 5-12 year olds on a Sinclair 48K Spectrum computer. Priced at £7.95 each, inc VAT, the programs are now available by mail order from Sinclair Research Stanhope Road, Camberley, Surrey, tel: 0276 685311 and shortly from major software retailers.

- ends -

#### NOTE TO EDITORS

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**PRESS  
INFORMATION**

**sinclair**

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15 November 1983

**SINCLAIR RESEARCH SETS ITS SIGHTS ON THE INTERNATIONAL  
COMPUTER MARKET**

With nearly 40 per cent of its personal computers now produced for export sales, Sinclair Research Limited, long the computer market leader in the UK, is concentrating on strengthening its presence in the developing European market where some £1.5 billion industry-wide computer sales are anticipated this year.

To support its activity, Sinclair recently gathered 54 overseas distributors in Cambridge for a three day conference on sales and marketing tactics, and subsequently staged a five-city press conference tour in October to launch the ZX Microdrive in major European capitals.

"We place tremendous importance on exploring new markets for Sinclair products" said Nigel Searle, Sinclair's managing director. "The UK now holds the number one position in per capita ownership of personal computers, and our experiences at home can and will be utilized in export markets which are now beginning to accept the personal computer as a home product".

In keeping with the corporate policy of subcontracting wherever possible, Sinclair exports are handled entirely by independent distributors with local expertise.

The first annual Sinclair Overseas Conference attracted distributors from 35 export markets as different as France and Sri Lanka and as distant as Australia and South America.

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Contact: Bill Nichols

From:

Sinclair Research Limited, Public Relations Department,  
23 Motcomb Street, London SW1X 8LB. Tel: 01-235 9649

Sinclair management gave presentations on such topics as retailing, public relations, tapping the educational market and the state-of-the-industry in the US, while distributors offered case histories explaining their approach to topics as varied as customised foreign language keyboards and selling successfully in under developed countries.

"The major benefit of the Conference was the opportunity it presented for our distributors to meet each other and exchange ideas and solutions applicable to many markets", said Charles Cotton, overseas business manager for Sinclair.

The distributor event was followed by a European press conference tour with stops in Paris, Munich, Stockholm, Milan and Madrid. The ZX Interface 1 and ZX Microdrive, utilised to expand the Spectrum personal computer system were unveiled, along with marketing details for the specific countries visited.

In Paris Sinclair showed a special interface designed to enable use of the Spectrum with the unique French SECAM television system. By contrast the Swedish event featured a new keyboard incorporating the extra letters in the Swedish alphabet, made possible by a specially developed ROM.

In Italy, where Sinclair already enjoys a 64% market share, over 120 media attended the press conference, many demonstrating a keen interest in the Spectrum's educational uses for schools.

Europe and its other international markets will continue to be a priority area for Sinclair's attention. Added Cotton, "there are 300 million people living in Europe and we want to make our products attractive and available to a great percentage of them".

- ends -

#### NOTE TO EDITORS

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6 December 1983

NEW MANAGEMENT APPOINTMENTS AT SINCLAIR RESEARCH

Sinclair Research of Cambridge has appointed Jeremy Brown as software product manager and Nigel Brown as mail order and direct mail manager (computer products).

Jeremy, 27, joins Sinclair from Business Press International, where he worked as a marketing executive concentrating on new journal development. Holder of a BA (Hons) in Economics and Politics from York, he will be responsible for the development and marketing of Sinclair-published software titles.

Nigel, 25, has been product manager for all mail order sales at GSI in Camberley, Surrey, handling the Sinclair account among others. At Sinclair, he will manage all mail order as well as direct mail sales campaigns.

- ends -

NOTE TO EDITORS

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*For further information contact:*

SR226

**Sinclair Research Limited** *London*  
23 Motcomb Street · London · SW1X 8LB  
Telephone 01-235 9649 · Telex 918966

12 January 1984

NEW SINCLAIR QL LAUNCHED WITH COMPREHENSIVE SOFTWARE SUITE -  
MORE THAN HALVES PROFESSIONAL COMPUTING COSTS

A 'quantum leap' in computing performance, the new Sinclair QL is designed for the serious home, business or educational user.

'Uniquely versatile', and at £399 inc VAT, less than half the cost of any comparable machine, Sinclair claims its launch, today, January 12, will dramatically expand the market for professional computers.

The QL is supplied complete with its own powerful and integrated software suite, written by - and licensed from - Psion. Designed to be immediately useful to the non-specialist in either home or office, its four state-of-the-art programs cover wordprocessing, planning, information handling and graphics. They draw on all of the computer's advanced design features.

These include high resolution colour graphics; 128K RAM memory (expandable via a 0.5Mb RAM pack to 640K); two built-in 100K QL Microdrives for mass storage and a full-size 65-key professional QWERTY keyboard.

Many of its advanced capabilities, such as multi-tasking and -window display, are normally available "only on machines costing several thousands of pounds", according to Sir Clive Sinclair.

Contd../

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For further information contact:

Bill Nichols or  
Liz Walker

**Sinclair Research Limited London**  
23 Motcomb Street · London · SW1X 8LB  
Telephone 01-235 9649 · Telex 918966

Describing the QL as "Sinclair's most important contribution to personal computing since breaking the £100 barrier with the ZX80", he added "it should set new industry standards for value, performance, quality and, central to its design philosophy, user-friendliness".

Measuring 5 $\frac{1}{8}$ " x 1 $\frac{1}{4}$ " x 18 $\frac{3}{8}$ " and weighing just over 3 lbs the QL offers, via rear peripheral ports, full networking, dual joystick and ROM cartridge expansion capabilities.

Industry standard RS-232-C communications facilities for other computers, printers and modems are available, and RGB monitor and TV ports provided for use with either colour or monochrome monitors and TVs.

Using the microdrive expansion slot up to six QL Microdrives can be stacked externally - giving 800K maximum storage.

Based on four Sinclair-designed semi-custom ICs the QL's specification incorporates a powerful 32K 'Super' ROM - containing newly-written Sinclair QDOS operating system and the Sinclair SuperBASIC programming language, a radical enhancement of Spectrum BASIC.

Potential expansion for other peripherals including, say, a memory manager, is almost unlimited due to the QL's advanced Motorola 68008 32-bit processor with its one megabyte (empty) linear address capability.

Sinclair foresees the QL as the nucleus of an extremely powerful system and is already developing a series of major peripherals and enhancements, including:

- 0.5Mb memory expansion board,
- PASCAL compiler,
- 68000 assembler,

Contd../

- terminal emulator,
- analog/digital interface,
- hard disk (Winchester) interface,
- modem,
- parallel printer interface with multi-channel sound-generator,
- IEEE-488 interface.

The company plans to market the QL progressively to the serious home user, and professional and executive users, and aims to attract orders from small and large businesses and higher educational establishments.

Extensive testing and quality control programmes for the QL are now underway at Thorn EMI Datatech's Feltham facility where production is scheduled to reach 20,000 units per month by summer. Sinclair anticipates introducing a second source during the latter part of 1984.

QL advertising begins immediately with first UK mail-order deliveries expected at end-February. UK retail and US and European export sales are planned provisionally for the third quarter.

\*\*\*\*

Priced at just £399 inc VAT the Sinclair QL is supplied complete with 1.8 amp power supply, manual (containing a full course in Sinclair SuperBASIC), software suite on microdrive cartridges and four blank microdrive cartridges.

Orders and customer enquiries should be directed to Sinclair Research Limited, Stanhope Road, Camberley, Surrey GU15 3PS. Tel: 0276 685311 (orders only); 0276 686100 (enquiries only).

- ends -

Contd../

## NOTE TO EDITORS

For Sinclair media enquiries please contact Bill Nichols,  
Sinclair Research Limited, 23 Motcomb Street, London SW1X 8LB.  
Tel: 01-235 9649.

## Additional telephone numbers:

Motorola (Robin Saxby) - 01 902 8836.

Psion, Technical enquiries (Peter Norman) - 01 723 6919/9408.

Psion, Media enquiries (Robin Kinnear) - 01 580 5432.

• 12 January 1984

SINCLAIR QL - TECHNICAL BACKGROUND, HARDWARE SPECIFICATION  
AND EXPANSION

The Sinclair QL incorporates four Sinclair-designed semi-custom ICs. The first, dual-sourced by Plessey and Synertek, controls display and memory; the second, dual-sourced by NCR and Synertek, other major functions including Microdrives, local area network and RS-232-C transmission; the third and fourth, from Ferranti, provide analog functions required by the Microdrives.

For the QL's CPU Sinclair selected the Motorola 68008 processor as being 'the most advanced on the market and a likely future industry standard'. Principal advantages include high speed 32-bit architecture (as opposed to current 8- or 16-bit standards), and a comprehensive instruction set.

Perhaps most important its one megabyte of available non-segmented address space makes possible a wide family of peripherals and enhancements.

Specification

Dimensions: 138 x 46 x 472mm (5 $\frac{3}{8}$ " x 1 $\frac{3}{4}$ " x 18 $\frac{3}{4}$ ").

Weight: 1388 gms (3.055 lbs).

Price: £399 inc VAT.

Contd../

For further information contact: Bill Nichols

CD35c

**Sinclair Research Limited London**  
23 Motcomb Street · London · SW1X 8LB  
Telephone 01-235 9649 · Telex 918966

- RAM: 128K, expandable externally to 640K.  
(32K dedicated for screen bit map).
- ROM: 32K, contains Sinclair SuperBASIC and  
Sinclair QDOS operating system.  
(Expandable via ROM cartridge to 64K).
- CPU: Motorola 68008, running at 7.5MHz, for  
all principal functions. (Architecturally  
the 68008 is a 32-bit processor with an  
8-bit data bus. One megabyte of non-  
segmented address space is available.)
- A second processor (Intel 8049) controls  
keyboard, sound, RS-232-C receive and  
real-time clock functions.
- Operating system: QDOS, developed by Sinclair. Key features  
include;
- single-user multiple tasking,
  - time sliced priority job scheduler,
  - display handling for multiple screen  
windows,
  - device-independent input-output.
- Language: Sinclair SuperBASIC, a radical enhancement  
of Spectrum BASIC, with principal  
advantages;
- procedure structuring,
  - extendability (including syntax),
  - interpretation speed independent of  
program size,
  - clean machine-code interface,
  - operating system facilities accessible  
from SuperBASIC,

- equal capability for strings and arrays,
- full-screen BASIC editor,
- full error-handling facilities.

Video: High-resolution graphics capability with colour/monochrome monitor (or TV) in two modes; 512 x 256 pixels (4-colour), 256 x 256 pixels (8-colour).

Normal character display format up to 85 x 25 with choice of character sets available; TV format up to 40 to 60 columns depending on software.

Keyboard: Full-size 65-key QWERTY keyboard featuring space bar; left- and right-hand shift keys; five function keys, four cursor-control keys.

Microdrives: The QL incorporates twin QL microdrives, with a minimum 100K bytes capacity each, 3.5 seconds average access time and loading of programs or data into internal RAM at up to 15K bytes per second.

Power supply: 9v DC at 1.8 amps, 15.6v AC at 0.2 amps.

#### Expansion

Excluding RGB monitor and power sockets and the TV port, nine peripheral/expansion ports are provided; internal expansion (1), microdrive expansion (1), ROM cartridge (1), serial (2), local area network (LAN) (2), joysticks (2).

Contd../

- Internal: One megabyte of address-space is available providing almost unlimited potential for expansion.
- Microdrive: Enables a further six QL Microdrives to be attached. ZX Microdrives are incompatible although blank cartridges are interchangeable after reformatting. Four blank cartridges are supplied with each QL.
- ROM cartridge: Accepts one QL ROM cartridge up to 32K - does not accept ZX ROM cartridges.
- Serial: Two standard RS-232-C communications interfaces for printers, modems etc. Transmission at rates from 75-19200 baud or full duplex transmit/receive at seven rates up to 9600 baud.  
(Note: a parallel printer interface is planned as an optional extra.)
- LAN: For up to 64 Sinclair QL or ZX Spectrum computers; data transmission over the net at 100K baud.
- Joysticks: Provision for one or two for games or cursor control.

- ends -

12 January 1984

COMPREHENSIVE QL SOFTWARE SUITE ANNOUNCED - INTRODUCING  
QL ABACUS, ARCHIVE, EASEL AND QUILL  
NEW-STYLE QL USERS BUREAU ESTABLISHED

Each Sinclair QL is supplied complete with a powerful immediately useful and integrated software system with applications programs and full supporting documentation.

Equally valuable in the home or office the suite contains QL Abacus for spreadsheet analysis, Archive for database management, Easel for graphics and Quill for wordprocessing.

Written by, and licensed from, Psion the fully-interactive packages are based on the concepts of 'Inform and Decide', 'Do and See' and 'What You See is What You Get' (WYSIWYG).

Psion's managing director, David Potter, said that "the fundamental quality of the software - which has taken 18 months to develop - is its useability. Each program is more powerful and functional than existing products for desk-top computers costing up to £5000.

Yet it is designed to be used with no prior training or computer knowledge. The software understands the user rather than the user having to understand the software".

All four programs incorporate state-of-the-art developments in each subject area, share a common style and have been designed, above all, for ease-of-use. With direct entry

Contd../

*For further information contact:*

Bill Nichols

CD35d

**Sinclair Research Limited** London  
23 Motcomb Street · London · SW1X 8LB  
Telephone 01-235 9649 · Telex 918966

available to the most regularly required features every owner can be operational at a basic but useful level within a few moments.

Thereafter as his experience grows he can move through each program's pyramidal structure progressively taking control of more sophisticated functions.

Eliminating the delays of batch-processing, most results are displayed immediately, in real-time, and in the same format as they will be printed.

Throughout operation full information is displayed on current status and command availability. HELP is always available - even during input - and, after consultation, will return the user to exactly the same place in the original work.

As an invaluable aid to say, report writing or planning development, data can be transferred from program to program within the suite using IMPORT and EXPORT commands, and modified at the destination point before return.

An important and innovative new service to users is the Sinclair QL Users Bureau (QLUB) which will automatically supply software updates free to members. In addition Psion will provide written response to technical queries on software. QLUB will also mail six free newsletters each year containing technical tips, applications suggestions and latest news on Sinclair QL hardware, software and peripherals. Membership is £35 per year.

- ends -

Contacts for further information:-

Sinclair press enquiries (Bill Nichols) - 01 235 9649.

Psion technical queries (Peter Norman) - 01 723 6919/9408.

Psion press enquiries (Robin Kinnear) 01 580 5432.

• 12 January 1984

SINCLAIR RESEARCH LIMITED - BACKGROUND INFORMATION

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Sinclair Research is 85% owned by Sir Clive and a further 10% is held by a group of institutional investors who in February 1983 subscribed £13.6 million gross by private placement - capitalising the company at £135.9 million.

Company turnover doubled to £54.53 (£27.17) million in the year to March 1983 while profits before taxation and exceptional item were £14.03 (£8.55) million.

Sinclair Research concentrates itself on R & D and marketing and subcontracts all production. Current Sinclair Research projects include a new range of personal computers, computer peripherals, flat-screen TV developments and consumer applications of solid state technology.

Based in Cambridge, Sinclair Research has branch offices in London and Boston USA, and additional research laboratories in Winchester and St Ives, Cambs.

- ends -

*For further information contact:*

Bill Nichols or  
Liz Walker

**Sinclair Research Limited** London  
23 Motcomb Street · London · SW1X 8LB  
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CD35f

12 January 1984

SINCLAIR QL COMPUTER - APPLICATIONS SOFTWARE

Background information

After a major 18-month development programme Psion has written a comprehensive software system with applications programs designed to turn micro-computers into useful machines for non-specialist people both in their work and at home.

Under an agreement Psion and Sinclair Research are supplying these powerful business tools on the Sinclair QL to every customer.

The applications programs provide a comprehensive word-processing, planning, information handling and graphics capability and are integrated in style, structure, design and in the sharing of information

QL QUILL - wordprocessor

QL ABACUS - spreadsheet

QL ARCHIVE - database

QL EASEL - graphics

Each program is more powerful and functional than existing equivalent products of desktop computers up to £5,000 (such as the IBM PC) and as such represents 'state-of-the-art' software.

The fundamental quality of the software is its usability. The software has been designed to make these powerful tools available and usable by a mass market with no prior training or pre knowledge. The software understands the user, rather than the user having to understand the software. This has been achieved by the use of a number of concepts

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CD35g

"Pyramidal"

"Do and See"

"Inform and Decide"

All have a pyramidal structure that takes the user directly to the most commonly used facilities, enabling even the most inexperienced person to perform useful tasks immediately. As an individual becomes more experienced control of more parameters is possible and the most expert can achieve the very high levels of sophistication built into the software.

At all times a totally interactive approach is used. The usual effect and reward to any user action is immediate. The output is always displayed on the screen in the format it will be printed or plotted - for example there are no special control characters to indicate various type fonts. The type font itself is shown.

The software is self-documented. Throughout the programs comprehensive information on the current status and on what actions are available are displayed in full English. Continuous prompting is directed at the current action being pursued. In addition a comprehensive HELP function is available in all the packages and at all times. No matter where the user is in the software, even in the middle of a complex input, simply pressing function key 1 will help call up the full HELP screen of relevant information. Further HELP pages can be followed or the user may return precisely to where he was in the program through the ESCAPE key.

Details of QUILL, ABACUS, ARCHIVE and EASEL follow.

Sinclair QL Computer - Software

## QL QUILL - WORD PROCESSING

Word processors are the most common business application of micro-computers and yet often require substantial training in their use. QUILL is designed to provide all the necessary information on the screen as the document is created.

The comprehensive command and control panel at the top of the screen details which actions are available, and constantly updates to provide relevant information. The status panel at the bottom of the screen gives current status.

In common with the other programs QUILL is fully interactive with real time margin variation, justification, page formatting etc. Whatever course of action is taken produces immediate visual results. The natural corollary of this is the adoption of the What You See Is What You Get format with the various font styles shown directly on the screen as bold, superscript, subscript and underline.

QUILL exhibits an intelligent attitude in the implementation of its many functions. For example, when inserting text in the middle of existing text, automatic justification takes place unless more than one word is typed when the line splits to allow more insertions without the distracting continuous justification. There is also a command, Glossary, which saves or recalls passages of text and format instructions with just two keystrokes, taking the tedium out of typing standard formats or letters.

QUILL has all the features of a modern word processor - erase, copy, move, search and replace, tabs, headers, footers - plus some more unusual ones such as Viewing a wide document to check for overall layout and format, Glossary and the Import of data, tables and graphs from the rest of the applications software suite. Further details can be found in the user manual.

## KEY FEATURES OF QUILL

WYSIWYG approach with screen representation formatted like a printed page in real time - truly interactive including real time margin variation, justification, page formatting etc.

Font style shown on screen directly as bold, superscript, subscript and underline.

Page formatting, page number in different styles, headers and footers.

Glossary commands, saves or recalls passages of text and format instructions.

Tabs with comprehensive formats including left tabs, right tabs, centre tabs and decimal tabs.

Horizontal scrolling for large documents.

View command or bird's eye view for large documents.

Automatic insert and delete mode with automatic split of text for large insert entry.

Comprehensive prompting with "inform and decide" and not simply menus.

Help function key available at all times with automatic call-up of relevant pages.

Erase and copy blocks of text.

Search and replace.

Import of files for making lists from ARCHIVE, tables from ABACUS and graphics from EASEL.

FOR FURTHER INFORMATION CONTACT: Peter Norman, Psion Limited,  
22 Dorset Square, London NW1. Tel: 01-723 9408/6919

**QL ABACUS - SPREADSHEET**

ABACUS is uniquely powerful as a worksheet in many respects.

ABACUS eliminates the grappling with row and column co-ordinates and replication of formulae over rows and columns required by existing worksheets with two major innovations:

**Labels** - ABACUS will use the existing text as sufficient reference for whole rows or columns or individual cells, eg "sales" or "February" or "sales.February" or "Feb.sa".

**Row/Column Operations** - ABACUS will automatically apply the rules or formulae entered to whole rows, columns or blocks of cells without recourse to any complex command structure. Eg "Row = 100" will put 100 in each cell in the current row, or more powerfully, one can set up the row "profit" as "profit = sales - costs" and ABACUS will put in the formula to subtract the row "costs" from the row "sales".

ABACUS is an "intelligent" worksheet because it uses 'everyday' labels, because it always prompts with the most likely choice of parameters required and because it always informs and guides the user in the entry of data and in the decisions which must be made. The software is self-documented and includes comprehensive Help files which can be accessed at any time.

ABACUS is also hugely powerful with an enormous range of in-built functions for operating on text as well as numbers. These commands include the joining of worksheets, the use of multiple windows, the variation of widths and justification of text, the use of different units including monetary, integer, percentage, decimal and exponential form, and the ability to prompt the operator for the input of data as part of the worksheet. ABACUS is also significantly faster than other worksheets and utilises memory in a more efficient manner, thus increasing its capacity.

A comprehensive list of commands and functions available in ABACUS can be found in the reference section of the user manual.

## KEY FEATURES OF ABACUS

Data, text and formulae entry is direct into cells or whole rows or columns with ranges automatically prompted by ABACUS.

Rows, columns and cells are referred to by user-defined names or variables automatically from text entries. Eg the column January in a budget may be referred to as January or Jan. etc, and the relevant cell as Jan. sales or jan. sa or sal. JA. etc.

Size 256 rows x 64 columns with more than 16,000 cells.

Accuracy to 16 significant figures.

Memory efficient 2 to 3 times as efficient as last-generation spreadsheets.

Speed substantially faster than last-generation spreadsheet.

Windows: horizontal or vertical with joint or individual scrolling.

Input line editor with cursor motion, insert, delete and recall of previous entry.

Screen formats automatic switch-in software for 80, 64 or 40 column screens.

Units - integer, decimal, exponent, percentage, monetary with arbitrary symbols, positive and negative numbers or brackets for accounting.

Consolidation joining or merging of two or more spreadsheets.

Ordering or sorting of columns or rows.

Variable grid variable column widths and insertion and deletion of rows and columns.

Justification - left, right or centre of text and numbers.

/7

(Abacus contd..)

Prompting for user with information and suggestions and not just menus. Automatic choice and prompting of parameter commands.

Transmission of files through export and import of mail to other QL applications software.

Comprehensive numeric functions including full trigonometric functions (sine, arcsine, log, etc), average, maximum, minimum, internal rate of return, net present value, angles, date and time.

Comprehensive text functions including logical if, ascii code to character and character to code, string concatenation, lower and upper case conversion, repeat function etc.

Input functions on execute to prompt the user with data or text queries for repeated use.

Help key for user information - comprehensive and available at all stages throughout the software.

FOR FURTHER INFORMATION CONTACT: Peter Norman, Psion Limited,  
22 Dorset Square, London NW1. Tel: 01-723 9408/6919

**QL ARCHIVE - DATABASE**

Database programs are by their nature more complex to operate than other general business applications software. ARCHIVE has been designed to reduce this degree of difficulty and at the same time offer a sophisticated multifile relational database.

In common with the other programs in the suite, ARCHIVE can be used immediately, utilising a database structure provided with the program - a simple but powerful card index. Thus one can explore and make practical use of the flexible searching, selecting and matching facilities that allow retrieval of data from any angle.

ARCHIVE is language based and can be used to construct comprehensive multifile relational databases with the minimum of experience. The language is similar in operation to SUPERBASIC and utilises procedures constructed from some eighty commands, allowing the most sophisticated data handling to be performed all within the framework of the familiar information prompting and Help facilities.

Fields and records are defined with variable lengths, being both efficient in memory usage and much more flexible for the user - it is often very difficult to accurately predict data length requirements when first constructing a database. Records can be displayed in any format, and the powerful language allows output to be printed in a preferred style.

Multifile searching and cross-reference is available, and one can even Import data from ABACUS or export data, with the field names as labels, back to ABACUS or on to EASEL and QUILL.

A comprehensive summary of the commands and functions available on ARCHIVE can be found in the reference section of the user manual.

## KEY FEATURES OF ARCHIVE

Multifile relational database arbitrary number of files with true multifile capability. (Not just a subsidiary file.)

Language-based using syntax similar to SUPERBASIC for user familiarity.

Variable length fields and records for efficient use of memory and disk.

Sorting is extremely rapid for large files from microcassette due to the use of a memory based index technique.

Up to 256 fields per record of numeric or text type.

84 command words available including if - else - endif construct, all, endall, do while etc.

Comprehensive numerical functions including all standard mathematical functions (sine, arcsine, log, etc), average, maximum, date and time, etc.

Comprehensive text functions including string slicing, upper and lower case conversion, code to character, etc.

Comprehensive database functions including field types, record number, count, eof, free memory etc.

Powerful SELECT functions including find, search "expression", and SELECT "expression".

Interpretive or run mode.

Procedures in a similar style to LOGO.

/10

(Archive contd..)

In-line editor, procedure editor and screen editor.

Screen formatting and report formatting editor in the saving and loading of screen formats.

Input and output through screen entry or prompt entry.

Print, tab, input command words with ink and paper colours for colour monitors.

Export and import of files to the other QL applications software, QUILL, ABACUS and EASEL, and to SUPERBASIC and other programs.

Designed for direct use by end users for simple applications such as card indices or through procedures for sophisticated multfile data processing.

FOR FURTHER INFORMATION CONTACT: Peter Norman, Psion Limited,  
22 Dorset Square, London NW1. Tel: 01-723 9408/6919

Sinclair QL Computer - Software

QL EASEL - GRAPHICS

EASEL is a spectacular graph creating program that provides the most dramatic and effective way of communicating a series of numbers.

EASEL is totally interactive and leads the user straight into graph creation without ever having to construct a table of values or face a barrage of questions before seeing any results. The familiar pyramidal structure allows deeper 'digging' to various levels of user design, even to the extent of defining the colour of the graph "paper" and of the text and axes.

There are a series of eight pre-set formats which can be called with a single keystroke, giving bar graphs of different colours and styles, such as stacked bars, overlapping bars plus line graphs and pie charts. Any of these formats can be altered to suit the user's requirements, and throughout the program choice can always be made by example ie EASEL will illustrate the various options available.

Text can be input anywhere on the screen using cross-wires for positioning, and it can be subsequently moved if required. In fact EASEL behaves intelligently in homing in the cross-wires on the nearest piece of text, or the Key, or the axis labels.

However, EASEL is more than just a means of plotting data, it can manipulate and evaluate expressions and has a series of mathematical functions. Thus a graph of "profits" can be calculated and displayed simply by typing "profits = sales - costs", and similarly logarithmic and trigonometric expressions can be utilised.

EASEL is designed to handle data entry, manipulation, display and printout in a totally self contained manner, while at the same time is capable of receiving data from ABACUS or ARCHIVE (and exporting it back) or sending graphs to QUILL for inclusion in a document.

/12

(Easel contd..)

A more detailed description of EASEL's facilities can be found in the user manual

#### KEY FEATURES

Fully interactive entry is always directly in graphics mode with each action producing the immediate visual result.

Data and format are logically separate so that the same set of data can be observed in innumerable different styles.

Includes bars, lines, filled lines, pie charts, mixed lines and bars, stacked bars, side-by-side bars, overlapping bars.

Highlighting of special bars or pie slices.

Text - entry at arbitrary positions with titles, axes and keys.

Pick up and move text, keys and titles.

Horizontal and vertical representations.

Standard formats and user defined formats are available down to smallest detail.

Use of formulae with common maths functions for the creation, analysis and manipulation of data sets eg profit = sales - costs, or  $a = \sin(\text{col}(\ ))$ .

Help pages facility available through software at any stage with call-up of relevant pages.

Automatic vertical and horizontal scaling.

Editing with crosswires.

Export of graphics pictures to QUILL word processor and data to or from ARCHIVE and ABACUS.

FOR FURTHER INFORMATION CONTACT: Peter Norman, Psion Limited, 22 Dorset Square, London NW1. Tel: 01-723 9408/6919

16 January 1984

NEW MANAGEMENT APPOINTMENT AT SINCLAIR RESEARCH

Sinclair Research of Cambridge has appointed Anton Boyes as Retail Business Manager.

Anton, 33 joins Sinclair from Boots Company plc where he was latterly Assistant Merchandise Controller and was instrumental in establishing Boots as a major retailer of home computers.

He will be responsible for the development of closer relationships with retailers.

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NOTE TO EDITORS

Sinclair Research was established to conceive, develop and market new consumer electronics products. Founded by its chairman and chief executive, Clive Sinclair in July 1979, the company has now sold over 2,300,000 personal computers worldwide and monthly production is over 100,000 units.

Current Sinclair Research projects include a new range of personal computers, computer peripherals, flat-screen TV's and consumer applications of solid state technology.

**PRESS  
INFORMATION**

**sinclair**

24 February 1984

SINCLAIR VEHICLE PROJECT CONFIRMS NEGOTIATIONS WITH  
HOOVER PLC

Sinclair Vehicle Project (SVP) confirmed today, February 24, that it is in advanced negotiations with Hoover plc regarding the assembly under subcontract of its first electric vehicle at Hoover's Merthyr Tydfil facility.

Conceived by Sir Clive Sinclair as the first of a 'family' the new vehicle is planned for launch in late 1984 or early 1985.

"Hoover's advanced high-volume assembly capacity and considerable experience with electrical and electronic products are ideal for this project", commented Barrie Wills, head of SVP.

The SVP's proposed contract with Hoover does not affect its continuing negotiations to purchase a major portion of the assets of the Dunmurry car-assembly plant in Northern Ireland, nor its separate discussions with the Industrial Development Board of Northern Ireland regarding the potential use of Dunmurry.

Wholly-owned by Sir Clive Sinclair, the Sinclair Vehicle Project forms no part of Sinclair Research Limited which is not a party to the proposed contract or negotiations, nor affected by them in any way.

No further information is available.

- ends -

Contact: Bill Nichols on 01-235 9649.

SVP7

• 7 March 1984

SAMSUNG TO ASSEMBLE AND SELL SINCLAIR COMPUTERS IN  
SOUTH KOREA

Britain's best-selling Sinclair ZX81 and ZX Spectrum home computers will shortly be available in South Korea - following a major new agreement which licenses Samsung Electronics for local assembly and distribution.

"The link gives us access to a market of considerable potential and the comprehensive support of a powerful and highly-experienced partner", commented Sinclair Research's chairman and chief executive, Sir Clive Sinclair, at a formal signing ceremony with Samsung's President Chung in London today, March 7.

The new agreement comes into force immediately with first product expected to be on sale in Korea later this year. Sinclair Research will itself directly supply Samsung with components for assembly.

Both the Sinclair ZX81 and ZX Spectrum have achieved one million sales each worldwide. Now available in more than 50 countries they are established world-leaders in the home computer market.

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## NOTE TO EDITORS

Sinclair Research Limited was founded by its chairman, Sir Clive Sinclair, in July 1979, to conceive, develop and market new consumer electronics products.

An established world-leader in the personal computer market with total sales in excess of 2,300,000 units and monthly production of over 100,000 units, the company recently entered a second market area with its flat-screen TV.

Current Sinclair Research projects include personal computers, computer peripherals, flat-screen TV developments and consumer applications of solid state technology.

Based in South Korea Samsung Electronics is one of the world's leading manufacturers in consumer and industrial electronics, with export turnover alone valued at US\$500 million in 1983. The company has introduced various electronics products into world markets including TVs, audio systems, home appliances, microwave ovens, computers and monitors.

**Sinclair Vehicle Project**

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**PRESS  
INFORMATION**

**sinclair**

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14 March 1984

NEW HEADQUARTERS FOR SINCLAIR VEHICLES LIMITED AT  
WARWICK SCIENCE PARK

Sir Clive Sinclair's recently formed Sinclair Vehicles Limited (SVL) is moving to new headquarters on the University of Warwick Science Park, it was announced today, March 14.

Based in the 'Venture Centre', opened just three weeks ago by the Prime Minister, its senior management and engineering team, headed by managing director, Barrie Wills, will concentrate on the design, development and marketing of a 'family' of vehicles - planned for introduction over the next three to five years.

SVL plans to launch its first electric vehicle, for low-cost town and commuter use, in late 1984 or early 1985. It is currently in advanced negotiations for its assembly under sub-contract by Hoover plc at Merthyr Tydfil.

"The Science Park is an ideal location for the various research and development facilities in the Midlands", Wills explained. "It also enables us at the same time to draw on the University's expertise in manufacturing, automotive engineering and electric traction.

"Although only a small number of staff will be based at Warwick, we anticipate placing a number of parts' contracts with Midlands firms".

SVL was also attracted by the Science Park's expansion potential and at a later date expects to move into one of

Contd../

the larger technology units. Created as a commercial investment by West Midlands County Council these are designed specifically for 'high-growth research and marketing-oriented companies'.

Science Park director David Rowe commented: "I can think of no better project for the Warwick Science Park. The University has an outstanding history of involvement in the automotive industry and Sinclair's style of operation makes it eminently suitable for the Science Park".

- ends -

For further information please contact:-

Bill Nichols on 01-235 9649, for Sinclair Vehicles Limited.

David Rowe on 0203 24011, University of Warwick Science Park.

#### NOTE TO EDITORS

1. Sinclair Vehicles Limited (SVL) was established in February 1984 to design, develop and market a range of new electric vehicles. Wholly-owned by Sir Clive Sinclair, SVL is managing the Sinclair Vehicle Project (founded 1981) on his behalf. It forms no part of Sinclair Research Limited.
2. The Barclays Venture Centre was opened on February 24 by the Prime Minister. Just three weeks from its hand over by the builder, eleven companies had taken up residence including Computervision, Automatix, Imbucon and Istel (formerly BL Systems Ltd), making Warwick the fastest start-up amongst UK Science Parks.
3. The University of Warwick Science Park is promoted jointly by the University, Coventry City Council, the West Midlands County Council and the Warwickshire County Council, and is managed by the University of Warwick Science Park Company, which has as its share-

Contd../

holders the four founding partners. Mr David Rowe, the director of the Science Park, is responsible to the Board of the Company for the day to day management and the development of the Science Park. It has a green field 24-acre site adjoining the 450-acre University campus and the Cannon Park Shopping Centre, with potential for further expansion.

The Science Park aims to encourage innovation and the exploitation of technological advances by attracting high technology firms and companies to establish themselves on the Science Park. A close relationship with the University of Warwick and other higher education institutions such as the Coventry (Lanchester) Polytechnic, offers full access to their scientific and other resources.

19 March 1984

SINCLAIR ZX MICRODRIVE TO GO RETAIL IN APRIL

Sinclair Research's Spectrum peripherals, the ZX Microdrive and ZX Interface 1, are to be made available through retail outlets - including Smiths, Boots, Menzies, other major stockists and via wholesale distributor Prism Microproducts - during April.

Initial shipments for both of 20,000 units per month are planned, and Sinclair will undertake a retail support advertising campaign from end-April.

Storing a minimum of 85K bytes' information on magnetic cartridge, the ZX Microdrive offers home, business and educational users the full benefits of fast access mass storage at extremely low cost.

It is controlled by the multi-purpose ZX Interface 1, which supports up to eight microdrives giving a total of 680K bytes capacity. Interface 1 also incorporates an RS232 interface - permitting Spectrum to be linked to other computers and peripherals (eg full sized printers) - and a local area network facility which will link up to 64 Spectrums.

Both ZX Microdrive and ZX Interface 1 are priced at £49.95 each. Cartridges are separately available at £4.95 each, all prices include VAT.

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Cont/...

For further information contact: Lise Hutcheon

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NOTE TO EDITORS

Sinclair Research Limited was founded by its chairman, Sir Clive Sinclair in July 1979, to conceive, develop and market new consumer electronics products.

Its principal activities are in the computer market where it is an established world-leader in the personal sector. Total sales exceed 2,300,000 units (end 1983) and monthly production is over 100,000 units.

Sinclair has also entered a second major market with its flat-screen pocket TV and other current developments include further computers, computer peripherals and consumer applications of solid state technology.

Starting in 1984, the ZX Spectrum offers home, business and educational users the full benefits of fast access mass storage at extremely low cost.

It is controlled by the multi-purpose ZX Interface 1, which supports up to eight harddrives giving a total of 4096 bytes capacity. Interface 1 also incorporates an RS232C interface - permitting Spectrum to be linked to other computers and peripherals (eg high speed printers) - and a local area network facility which will link up to 25 Spectrums.

Both the harddrive and ZX Interface 1 are priced at £49.95 each. Cartridges are separately available at £9.95 each, all prices include VAT.

Cont/...

28 March 1984

SINCLAIR APPOINTS WEBSTERS FOR SOFTWARE DISTRIBUTION  
- AIMS TO INCREASE MARKET SHARE

As part of a general expansion of its distribution network, Sinclair Research has appointed Websters Software as a non-exclusive UK wholesale distributor - for existing ZX81, ZX Spectrum and future software ranges.

Providing a comprehensive merchandising service to multiples and computer stores, Websters expects to make its first shipments at the beginning of April.

"We wanted to improve the availability of our own-brand software, and to give retailers a choice of distributors", commented Sinclair's retail sales manager, Anton Boyes.

"Software represents an increasingly significant proportion of our business - around 8% against 2% two years ago - and we aim to increase considerably our own share of the Spectrum software market during the next year".

Websters Software Limited is part of the Websters Group which also includes Bookwise one of Europe's largest distributors of Books, Books for Students, Felix Learning Systems and Websters Book Shops.

Prism Microproducts continue to be distributors of Sinclair hardware and software products, and have recently been appointed as a distributor for the QL computer when retail sales commence. Sinclair expects to begin retail sales later this year.

*For further information contact:*

- ends -

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## *The Sinclair Prize for Fiction* *Press Information* ■

EMBARGOED UNTIL APRIL 4, 7.00 PM

EDWARD FENTON'S "SCORCHED EARTH" WINS 1983/84 SINCLAIR PRIZE FOR FICTION

Scorched Earth by 24 year old Londoner, Edward Fenton, has won the 1983/84 £5,000 Sinclair Prize for Fiction.

Described by the chairman of the judges, David Caute, as "a beautifully observed novel of our time", Scorched Earth gives a witty account of ten days in the lives of four unemployed young people sharing a flat in London - as they search for work, participate in protests and attack the Establishment.

The award was presented at an evening reception in London today, April 4, by Sir Clive Sinclair, chairman of sponsors, Sinclair Research Limited (SRL), who said 'it fulfilled admirably the prize's criteria for a previously unpublished novel of high literary merit combined with contemporary social and political relevance.'

Three other novels - Death City by Irish-born, Linda Anderson, Glaswegian James Kelman's The Bus Conductor Hines and The Marriage of Anna Maye Potts by American, Dewitt P Henry - were also shortlisted for the prize.

Cont/...

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01 870 9055 ■*



Administered by the National Book League as part of SRL's arts sponsorship programme, the prize is now becoming a major feature of the literary scene, building on the success of the inaugural 1982/83 prize winner, Death is Part of the Process by Hilda Bernstein.

Scorched Earth is published in hardback by Sinclair Browne Ltd at £7.95, and will be on sale in major London Bookshops from April 5.

- ends -

For further information, please contact:

Lise Hutcheon, Sinclair Research Limited  
tel: 01 235 9649

## NOTES TO EDITORS

Two of the other shortlisted authors have found publishers for their work. Death City by Linda Anderson is to be published by The Bodley Head on May 10 under the title To Stay Alive. Ms Anderson now lives in North London.

The Busconductor Hines was published on February 29 by Polygon Books, Edinburgh. The author, James Kelman had a collection of his short stories published last year. He lives in Glasgow.

The Marriage of Anna Maye Potts does not, as yet, have a publisher. Its author DeWitt P Henry is an associate professor at Emerson College, Boston, Massachusetts.

Sinclair Research Limited was founded by its chairman, Sir Clive Sinclair in July 1979, to conceive, develop and market new consumer electronics products.

Its principal activities are in the computer market where it is an established world-leader in the personal sector. Total sales exceed 2,300,000 units (end 1983) and monthly production is over 100,000 units.

Sinclair has also entered a second major market with its flat-screen pocket TV and other current developments include further computers, computer peripherals and consumer applications of solid state technology.

The National Book League (NBL) is a charitable trust for the promotion of books and reading. Many book awards are administered by the NBL including the Booker McConnell Prize for Fiction. For further information and membership details, write to Sue Bennett at the National Book League.



## *The Sinclair Prize for Fiction* *Press Information*

EDWARD FENTON : BIOGRAPHY  
(April 1984)

Edward Fenton, winner of the 1983/84 Sinclair Prize for Fiction for 'Scorched Earth', wrote his first novel at the age of 12.

Scorched Earth his third, was written in the first half of 1983 "to regain my sanity while on the dole" says Edward.

While reading history at Cambridge University, he also edited the student newspaper, 'Stop Press'. After graduation in 1980, Edward decided to travel abroad and flew to the United States to hitch across the country. Despite being attacked and robbed on his first day in San Francisco, he fell in love with the city, decided to stay, and survived by taking a series of factory jobs.

During his stay in San Francisco, he wrote for the city's leading music magazine 'Damage' and soon became an established staff-writer -- without pay.

He returned to England in March 1981 to find unemployment figures running at three million, and for the next two months, he says, "hounded the local Job Centre twice a day", until he found work as a box-office clerk.

Cont/...

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"I left this job in order to gain additional journalistic experience by working on a local newspaper. Again I was not paid.

"Subsequently I faced another two years of living on the dole, interspersed with periods of freelance work for 'New Musical Express' and more factory work.

To counter the repetitiveness and boredom of "no-work-and-no-money", Edward did voluntary work for the magazine 'Undercurrents', and it was during this period he wrote his winning novel 'Scorched Earth'. When completed he quickly forwarded it to two publishers and, as promptly, was rejected.

Finally, in November 1983 he was offered the post of editorial assistant at Spastics International Medical Publications.

Three weeks later he learned he had won the Sinclair Prize for Fiction. "It was overwhelming", said Edward. "My luck changed so quickly. Most important of all to me someone had listened and understood my view of life on the dole."

- ends -



## *The Sinclair Prize for Fiction* *Press Information* ■

SIR CLIVE SINCLAIR - BACKGROUND  
(April 1984)

Sir Clive Sinclair, 43, chairman and chief executive of Sinclair Research Limited, began his career in publishing and worked as a technical journalist for four years before founding his first company, Sinclair Radionics, in 1962.

Beginning with radio and amplifier kits he rapidly developed a reputation as a pioneer in the field of consumer electronics and has achieved a number of 'world-firsts' including the 'Executive' pocket calculator (1972), and the 'Microvision' pocket TV in 1977.

His present company Sinclair Research (founded 1979) has designed and developed a highly successful range of personal computers - the ZX80, ZX81, ZX Spectrum and most recently the QL. Both the ZX81 and ZX Spectrum have achieved sales over one-million units worldwide.

In late 1983 it also introduced a revolutionary flat-screen pocket TV.

In early 1983 he was named both as 'The Guardian Young Businessman of the Year' and as 'Computing Person of the Decade'. Later in June he received the major honour of a knighthood in the Queen's Birthday Honours List.

Cont/...

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Motcomb Street, London SW1X  
SLB ■ Telephone 01 235 9649 ■*

*Administered by the National Book  
League, Book House, 45 East Hill,  
London SW18 2QZ ■ Telephone  
01 870 9055 ■*



Sir Clive now divides his time between Cambridge and London. Outside electronics his interests include the theatre, poetry, music - he is a trustee of the Cambridge Symphony Orchestra - mathematics and running. He is the current chairman of the British Mensa Society.

- ends -



## *The Sinclair Prize for Fiction* *Press Information*

April 1984

### SINCLAIR BROWNE LIMITED - BACKGROUND

Sinclair Browne Limited (SBL) was established in June 1981 by Cambridge bookseller, Patrick Browne, and Sir Clive Sinclair, chairman of Sinclair Research Limited.

Requiring that all books on its major lists - fiction and non-fiction should reflect a 'progressive approach to the problems of contemporary society', Sinclair Browne is publishing about 20 books a year.

It has also launched a Translation Book Club which draws on already published contemporary material and is preparing a series of 'computerguides'.

Patrick Browne, SBL's managing director was educated at Eton and Magdalene College, Cambridge, where he took French, Italian and Social Anthropology. A strong linguist, he also studied Russian at the School of Slavonic Studies in London and Norwegian during a year in Norway.

After service in the Royal Navy, he worked as a freelance journalist in London. From 1963/1976 he taught English as a foreign language both in Cambridge and abroad in Italy and Saudi Arabia.

Cont/...

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01 870 9055*



He opened the now well established, 'Browne's Bookshop' in Cambridge in partnership with his wife in 1976. His interests include squash, skiing, language and politics.

- ends -

2 May 1984

FIVE NEW ZX SPECTRUM ARCADE GAMES FROM SINCLAIR RESEARCH

Five new arcade-style programs are now available from Sinclair Research for its ZX Spectrum computer.

Specially written to test users' reflexes and speed of action, they involve exciting contests of skill and chance with a variety of determined and 'fiendish' adversaries.

The programs are 'Eric and the Floaters', 'Stop the Express', 'Bubble Buster', 'Driller Tanks', and 'Zipper Flipper'. The first four were produced by Tokyo based, Hudson Soft, the last by R.E.D./Sunshine.

In 'Eric and the Floaters', the relics of a lost civilisation, hidden deep beneath piles of dust and rubble wait to be discovered and Eric aims to find them by blasting away the rubble with his bombs, but he must also overcome the deadly 'Floaters' who live among the debris.

To 'Stop the Express', the player must run the length of a twenty-carriage train to find the key which will allow him to stop the train. On route he is chased by gangsters determined to prevent him from reaching his destination.

The only way to avoid being squashed by bouncing bubbles in 'Bubble Buster' is to fire at them with a ray gun. However, once hit, the bubbles split in half, and will divide again if shot at a second time. Only when they have been split for a third time, does the player succeed in bursting them.

*For further information contact:*

Lise Hutcheon  
CD74b

**Sinclair Research Limited** London  
23 Motcomb Street · London · SW1X 8LB  
Telephone 01-235 9649 · Telex 918966

In 'Driller Tanks' fire breathing Mammutts and their accomplices, the Skorks, try to invade the summer palace and only the tanks can stop them. The tanks must drill through a tunnel complex beneath the palace and then overpower the deadly creatures by freezing and crushing them.

'Zipper Flipper' is a fast moving pinball and fruit machine game in which winning on the fruit machine will greatly boost the pinball score.

All the games have full-colour, high-resolution graphics with sound. Priced at £5.95 each, inc. VAT, and supplied in cassette-form, they are available from: Sinclair Research Limited, Stanhope Road, Camberley, Surrey. Tel: 0276 685311, and selected retail stores.

- ends -



NOTE TO EDITORS

Sinclair Research Limited was founded by its chairman, Sir Clive Sinclair in July 1979, to conceive, develop and market new consumer electronics products.

Its principal activities are in the computer market where it is an established world-leader in the personal sector. Total sales exceed 2,300,000 units (end 1983) and monthly production is over 100,000 units.

Sinclair has also entered a second major market with its flat-screen pocket TV and other current developments include further computers, computer peripherals and consumer applications of solid state technology.

In 'Zinc and the Flinters', the ruins of a lost civilization hide deep beneath piles of dust and rubble wait to be discovered and the hero is to find them by blasting away the rubble with his bombs, but he must also overcome the deadly 'Flinters' who live among the debris.

To 'Stop the Express' the player must run the length of a two-way-carriage train to find the key which will allow him to stop the train. On route he is chased by gangsters determined to prevent him from reaching his destination.

The only way to avoid being squashed by bouncing bubbles in 'Bubble Buster' is to fire at them with a ray gun. However, once hit, the bubbles split in half, and will divide again if shot at a second time. Only when they have been split for a third time, does the player succeed in catching them.

2 May 1984

EASY-TO-USE, TAX-CALCULATOR SOFTWARE NOW AVAILABLE  
FOR THE SINCLAIR ZX SPECTRUM

Sinclair Research has introduced a personal tax program, the 'Which? Tax Calculator', for its ZX Spectrum computer.

Developed by the consumer association it will reckon accurately and automatically the true amount of personal tax owed for 1983-84 tax year. Users are taken step-by-step through the annual tax form and will find the task greatly simplified as a result.

Specially written to include all relevant basic UK tax rates and allowances, the program is divided into three sections.

The first defines personal circumstances and job earnings, including such items as overtime payments and fringe benefits. Section two contains questions about additional income such as pensions, social security benefits and investment income.

The last covers personal allowances and outgoings - for example mortgages, maintenance and covenant payments. Once all this information has been typed in, the user's true tax rate is calculated automatically.

Priced at £12.95 inc VAT and supplied in cassette form complete with a 59 page reference manual, 'Which? Tax' is available by mail order from Sinclair Research Limited, Stanhope Road, Camberley Surrey. Tel: 0276 685311 and through selected retail outlets.

- ends -

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• 11 June 1984

LIGHTNING TO DISTRIBUTE SINCLAIR SOFTWARE

London-based Lightning is to begin UK wholesale distribution of Sinclair Research's own brand software from mid-June.

The new non-exclusive agreement marks a further expansion of Sinclair's software distribution network, and follows the appointment of Websters Software in March 1984.

"We are anxious to increase our UK market penetration and we are confident that the addition of Lightning to our distribution network will help us to achieve this objective", commented Sinclair's retail business manager, Anton Boyes.

Lightning currently supplies independent computer dealers, book shops, and record, video, radio and electrical outlets, offering a 24 hour delivery service.

Sinclair's existing distribution agreements with national retail accounts and, on a wholesale basis, with Prism Microproducts and Websters Software, are unaffected by the new appointment.

- ends -

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*For further information contact:*

Bill Nichols, Julian Goldsmith  
CD79

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12 June 1984

SINCLAIR MAINTAINS LEADERSHIP OF UK PERSONAL COMPUTER MARKET AS GROWTH CONTINUES - 43% SHARE REPORTED FOR FIRST QUARTER 1984

Britain's Sinclair Research continued to dominate the UK personal computer market during first quarter 1984, achieving 43% of unit sales - according to independent market research organisation, Audits of Great Britain Ltd (AGB), who sampled 25,000 households.

Reporting total quarterly unit sales through all outlets of 215,000, up sharply from 129,000 (Q1, 1983), AGB gave second and third places to Commodore (28%) and Acorn (10%). Sinclair's ZX Spectrum remained the most popular model with an individual 36% share, up 2% from fourth quarter 1983.

AGB's findings are paralleled by the latest Gallup Marketing Direction quarterly survey of the trends in the personal computer market, based on a representative sample of over 10,000 people, aged 16 plus, throughout the UK. Cumulatively to mid-February 1984 it reports Sinclair's share of the total UK installed base as 43% against an estimated 21% for Commodore.

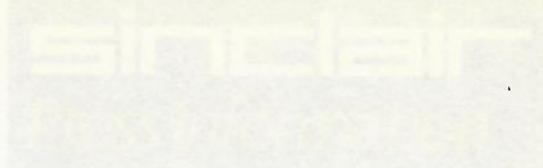
According to Gallup Marketing Direction, the total base now stands at 2.35 million units, representing 10.7% household penetration, and up by more than half a million from its mid-November 1983 estimate of 1.75 million. This rapid growth pattern is supported by AGB's sales figure for the year ending March 1984 of 1,206,000 (y/e March 1983 - 397,000).

For further information contact:

- ends -

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Bill Nichols  
CD73



NOTE TO EDITORS

Sinclair Research Limited was founded by its chairman, Sir Clive Sinclair in July 1979, to conceive, develop and market new consumer electronics products.

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Sinclair has also entered a second major market with its flat-screen pocket TV and other current developments include further computers, computer peripherals and consumer applications of solid state technology.

Reported total quarterly sales cover the period of 21st 1980, up through 30th 1981. The first quarter and third quarter of 1981 saw a record for Sinclair's ZX Spectrum, the best selling model with an individual 10% share in the fourth quarter 1981.

AGB's findings are paralleled by the latest Gallup Marketing Director's quarterly survey of the trends in the personal computer market, based on a representative sample of over 10,000 people, aged 16 plus, throughout the UK. Similar to the mid-February 1984 report, Sinclair's share of the total UK installed base is set against an estimated 21% for Commodore.

According to Gallup Marketing Director, the total base now stands at 1.14 million units, representing 10.7% household penetration, and up by more than half a million from the mid-November 1983 estimate of 0.75 million. This rapid growth pattern is supported by AGP's sales figures for the year ending March 1984 of 1,000,000 units (March 1983 - 327,000).

22 June 1984

'MATCH POINT' ANNOUNCED BY SINCLAIR FOR ZX SPECTRUM (48K)

With its "Centre Court" atmosphere, Match Point, Sinclair Research's new tennis program is now available on the eve of Wimbledon fortnight.

Launched to the public today (June 22) at the Pro-Celebrity Tennis Tournament, at London's Royal Albert Hall - a fund-raising event in aid of the Muscular Dystrophy Duchenne Appeal - Match Point was developed by Psion for Sinclair. It is designed exclusively for the Sinclair ZX Spectrum (48K).

One of six new programs for the ZX Spectrum, Match Point can be played against the computer, a friend or watched as an exhibition game. Suitable for joystick or keyboard control, Match Point follows all the scoring and rules of lawn tennis.

Realistic screens feature ball boys waiting on call and retrieving balls, backhand and forehand shots, lobs, volleys and a scoreboard. Even the multi-coloured crowds' heads move to and fro. Players warm up on a one-set game progressing through quarter- and semi-finals to the ultimate Centre Court final challenge.

"In the shops the week before Wimbledon, "Match Point" has major topical appeal and we expect it to be 'number one' seed in the best seller charts", commented Jane Boothroyd, Sinclair's UK Sales and Marketing Manager.

More/.....

Priced at £7.95 inc VAT, Match Point is now available nationally through W.H. Smith's computer stores, larger branches of Boots, John Menzies, Greens and leading software stockists.

- ends -

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*[Faint, illegible text, likely bleed-through from the reverse side of the page]*

Page 1 of 1

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"MATCH POINT" PHOTOCALL NOTICE

Friday 22nd June - the eve of Wimbledon - marks the date of a very special tennis tournament which is being held at The Royal Albert Hall in aid of the Muscular Dystrophy Duchenne Appeal.

From 9.30 a.m. - 10.00 a.m. one of the tournament's star players, Vijay Amritraj will be warming up in a somewhat novel way. Vijay and his opponent, 17 year-old Muscular Dystrophy Duchenne sufferer, Ian Sage, will be battling it out on the Sinclair ZX Spectrum home computer's very own 'Centre Court' screen. Assisting Ian will be John McEnroe's doubles partner, Peter Fleming, who will be at hand to advise Ian on match tactics.

This event marks the launch of this all-action tennis programme 'Match Point' - a game designed for all ZX Spectrum users.

Commenting on the game will be Jimmy Hill, BBC's 'Match of the Day' presenter.

Date: Friday 22nd June  
Time: 9.30 a.m. - 10.00 a.m.  
Venue: Auditorium Tennis Court, Royal Albert Hall, SW7  
via Entrance 1

For further information contact, Julian Goldsmith,  
Sinclair Research Ltd.

CD81b

**Directors:** Sir Clive Sinclair *Chairman* · Nigel Searle *Managing Director*  
David Chatten · Richard Cutting · William Matthews · Michael Pye  
David Southward · James Westwood · **Non-Executive:** Ronald Cohen  
Kenneth Dick CBE · Christopher Fawkes · Lady Sinclair

**Registered Office:** 25 Willis Road · Cambridge · CB1 2AQ  
*Registered No. 1135105 · VAT Registration No. 385 9895 67*

• 25 June 1984

OLYMPIC RUNNER JOINS RECORD ENTRY FOR CAMBRIDGE  
FESTIVAL HALF-MARATHON

British Olympic marathon runner, Joyce Smith, has joined a record 2,500 nationwide entry for the third annual Cambridge Festival Half-Marathon which takes place on Sunday 15 July. It will be her last race prior to the Los Angeles Games.

Other leading runners to enter include last year's men's winner, Bob Treadwell, and Bernie Ford. A substantial foreign contingent is also expected, including one entrant from the Falkland Islands.

The half-marathon is again sponsored by Cambridge-based Sinclair Research and a number of the company's staff are taking part, including chairman, Sir Clive Sinclair, and managing director, Nigel Searle.

Commented Eddie Sharp, Cambridge City Council's race administrator: "Once again we have achieved an increase in the number of participants and attracted a strong entry both from serious athletes and from enthusiasts. It is clear that our half-marathon is now a well-established part of the athletics calendar."

Beginning at 8.30am the Sinclair Cambridge Festival Half-Marathon takes place on Sunday 15 July, starting in the centre of Cambridge at Parkers Piece and following a course through Fen Causeway, Grantchester and Trumpington.

More/...

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*For further information contact:*

Julian Goldsmith  
HM3b

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Anyone still wishing to enter should contact Eddie Sharp at Cambridge City Council on (0223) 358977.

- ends -

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Half-Marathon takes place on Sunday 13 July, starting in the centre of Cambridge at 9.30am and following a route through the city, to the railway station and back to the city.

The Sinclair logo is displayed in a bold, white, sans-serif font against a solid black rectangular background in the top right corner of the page.

**Sinclair Research Limited** *London*  
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Telephone 01-235 9649 · Telex 918966

26 June 1984

LOGO

As you may have heard, Sinclair Research has just announced its new LOGO implementation for the ZX Spectrum and full details together with a review sample are enclosed.

I hope you will find them interesting and would be happy to answer any questions as and when they arise during your review.

Perhaps you would be kind enough in due course to return the sample to Jenny Fuller at Sinclair Research PR, Stanhope Road, Camberley, Surrey.

With best wishes.

Yours sincerely,

Julian Goldsmith

**Directors:** Sir Clive Sinclair *Chairman* · Nigel Searle *Managing Director*  
David Chatten · Richard Cutting · William Matthews · Michael Pye  
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26 June 1984

LOGO 'TURTLE GRAPHICS' COMPUTER LANGUAGE LAUNCHED FOR  
SINCLAIR ZX SPECTRUM (48K)

LOGO, the famous 'turtle graphics' computer language generally acknowledged as the best for beginners, is now available from Sinclair Research for its best-selling ZX Spectrum (48K).

Priced at just £39.95 inc VAT, its introduction "brings an important language within the range of hundreds of thousands of computer users for the first time", according to Alison Maguire, Sinclair's software development manager. "Although designed for children it is equally valuable to all ages and levels of experience".

LOGO adopts a 'learning through experience' approach to education, encouraging curiosity and avoiding restrictions. Thus, it will interpret, rather than reject, a 'bad' instruction - often a difficulty with computer skills learning in more rigid languages.

Central to LOGO is the 'graphic turtle', a moving turtle-shaped screen cursor, controlled directly by the user. Through simple commands the user constructs programs which, with the turtle, produce visual results immediately.

For instance, FORWARD 10, RIGHT 90, BACK RIGHT 5, moves the turtle forward ten steps, turns it 90 degrees right, and then moves it back five steps.

More/.....

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CD45 Julian Goldsmith

*For further information contact:*

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LOGO is almost unlimited in its capacity to grow with a user as he draws, writes, calculates or simply plays games. For higher levels the language's 'primitives' (its built-in commands) can be used to create more complex concepts which are in turn the basis of more sophisticated programs.

For Sinclair Research, LOGO is a major addition to its growing range of educational programs. In particular it complements the microPROLOG language launched earlier this year.

ZX Sinclair LOGO is an implementation of the original LOGO developed by Logo Computer Systems Inc. in association with Seymour Papert, the language's designer.

It is supplied by Sinclair Research in a specially-designed box case, complete with two comprehensive books of documentation. These include a full introduction to the use of LOGO turtle graphics, programming reference manual on LOGO's list processing capabilities and a reference list of 'primitives'. The latter are also summarised on a pocket card for easy use.

Priced at £39.95 inc VAT, the program is available from selected high street retail outlets and computer stores; via Sinclair's educational distributors; and by mail order from Sinclair Research Limited, Stanhope Road, Camberley, Surrey GU15 3BR. Telephone 0276 685311.

- ends -

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... approach to education, encouraging curiosity and avoiding restriction. This is well illustrated, rather than reject a 'bad' introduction to the world of computers, while learning is still a possibility.

Central to the 'graphic file' is a moving target, shaped screen cursor, controlled directly by the user. Through simple commands the user constructs programs which, with the file, produce visual results immediately.

... 12, RIGHT-10, DOWN-10, ... the angle forward for steps, turn it 30 degrees right, and then work it back five steps.



# *The Sinclair Prize for Fiction* *Press Information* ■

28 June 1984

RECORD ENTRY EXPECTED FOR 1984/85 SINCLAIR PRIZE  
- JUDGES PANEL ANNOUNCED

With over 90 manuscripts already received, a record entry is expected for the 1984/85 £5000 Sinclair Prize for Fiction - awarded this past year to Edward Fenton for "Scorched Earth".

The judging process is under way and this year's new panel includes: David Caute (Chair) writer, playwright, journalist and broadcaster; Dr. Terry Eagleton, writer, critic and tutor in English at Wadham College, Oxford; Hugh Stephenson, editor of New Statesman; Fay Weldon, novelist, playwright and critic; Marina Warner, novelist, children's author, biographer and historian.

Entries to date have come from Australia, New Zealand, Luxemburg, Switzerland and India, as well as many from the UK and USA. However, none have so far been received from H M Prisons as in previous years.

Now in its third year, the Prize is sponsored by Sinclair Research of Cambridge and awarded to an unpublished novel combining strong literary content with social or political significance. In addition to receiving £5000 the winning author has his/her work published by Sinclair Browne Limited.

Cont/....

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League, Book House, 45 East Hill,  
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01 870 9055*

SB11a



The Sinclair Prize is administered by the National Book League from whom full details and entry forms are available. Closing date for submissions is July 31.

Contact: Sue Bennett, Publicity Officer, National Book League, Book House, 45 East Hill, SW18 2QZ, Tel: 01-870 9055; or Julian Goldsmith, Sinclair Research Limited, 23 Motcomb Street, London SW1X 8LB, Tel: 01-235 9649.

- ends -

NOTE TO EDITORS

Sinclair Research Limited was founded by Sir Clive Sinclair in 1979 to conceive, develop and market new products in the consumer electronics field. It is an established world leader in the personal computer market.

Scorched Earth by Edward Fenton, is "a witty account of ten days in the lives of four young unemployed people in London". It is published by Sinclair Browne at £7.95.

16 July 1984

SINCLAIR RESEARCH ANNOUNCES ZX SPECTRUM CONTRACT FOR CHINA

Sinclair Research has completed negotiations to sell an initial 600 48K ZX Spectrum computers to the computing and automation department of China's North East Technical College.

The contract was arranged on Sinclair's behalf by Shanghai, Peking and London-based China trade consultants, Wogen Engineering.

The computers will be used by the department's graduate researchers as an effective low-cost means of learning BASIC programming skills.

Commented Charles Cotton, head of Sinclair Research's export department: "China is a very important potential market for us, and one in which we are investing considerable time and effort. This deal represents an important stepping stone to further opportunities".

Sinclair is also supplying an introductory library of ZX Spectrum software programs including the advanced microPROLOG and LOGO programming languages.

Through Wogen's offices in Beijing and Shanghai, demonstration facilities are now available for potential buyers interested in Sinclair's computer product range.

- ends -

*For further information contact:*

Julian Goldsmith

CD50a

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Wogen Engineering Ltd

Wogen Engineering has 30 years of experience in trading with China, specialising mainly in high-technology.

In addition to dealing in metals, the company handles counter-purchase and barter deals and generally advises on trade with China.

- ends -

19 July 1984

"YEAR 2000" BACK OF PACK PROMOTION LAUNCHED BY  
SINCLAIR AND KELLOGG

"Year 2000", the Kellogg Company's first major back-of-pack computer promotion will appear shortly on Kellogg's Corn Flakes featuring Sinclair Research's best-selling ZX Spectrum (48K).

Designed to appeal equally to would-be purchasers, Spectrum owners and those without computer knowledge, the promotion runs for a three month period from the end of July. It will be carried on some 30 million packs and reach an estimated eight million UK households.

As a central feature, 100 ZX Spectrums - each with a maximum selling retail price of £129.95 - are offered as prizes in a competition, to predict the status of a number of athletics world-records in the year 2000. Entrants can base their estimates on the 1936, 1952, 1968 and current 1984 figures.

Categories include the men's one-mile, marathon and pole vault and women's 800 metres, high jump and 400 metres freestyle swimming.

Existing owners can obtain a special £5 discount on any three programs bought directly from Sinclair's software catalogue, which includes a wide range of games, business and education programs.

Those still to decide about the purchase of a home computer can obtain more information from a specially written free introductory book, prepared for Sinclair and Kellogg by Pan.

*For further information contact:*

**Sinclair Research Limited** *London*  
23 Motcomb Street · London · SW1X 8LB  
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Entitled "What You Always Wanted To Know About Home Computers But Never Dared Ask", it is written in a deliberately simple style and avoids the perils of jargon. The book can be obtained for three pack-top tokens.

Commented Sinclair Research's sales and marketing manager, Jane Boothroyd, "over the last two years, we have steadily expanded the range of our promotional activity, seeking always to reach new audiences for our computer products. We're very confident that this latest major activity event with Kellogg will have a significant impact on the market".

The Kellogg promotion finishes on 30 November 1984, and the competition will be judged by an independent panel of experts. Further information from: Julian Goldsmith, Sinclair Research Limited, 01-235 9649, or Derek Hughes, Kellogg, 01-262 5077

-- ends --

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26 July 1984

MAJOR INCREASE IN MANUFACTURING CAPACITY ANNOUNCED BY SINCLAIR  
- ZX SPECTRUM PRODUCTION TO EXCEED 200,000 UNITS MONTHLY -  
AB AND SAMSUNG APPOINTED

Plans to increase manufacturing capacity substantially for all major products - including a doubling of ZX Spectrum production to more than 200,000 units per month by the end of 1984 - were announced today, July 26, by Sinclair Research.

Monthly production of Sinclair's new QL computer will also rise sharply to 50,000 units and assembly of its flat-screen pocket TV to 20,000 units.

Sinclair's managing director, Nigel Searle, commented that the increased volumes would "help meet anticipated high levels of demand, particularly for the ZX Spectrum, in the 1984 Christmas quarter and enable us to exploit major opportunities for all products in the UK and export markets during late 1984 and 1985".

#### ZX Spectrum

For ZX Spectrum assembly Sinclair has appointed two new subcontractors, South Wales-based AB Electronics and Samsung Electronics of Korea. Both expect to ship first product in September.

Contd../

For further information contact: Bill Nichols  
Julian Goldsmith

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At Timex in Dundee ZX Spectrum production is planned to almost double during the last quarter of the year.

QL

Thorn EMI Datatech is continuing the build up of QL production at Feltham. Discussions to establish a second QL assembly source are now at an advanced stage.

TV

Assembly of the flat-screen TV at Thorn Ferguson is now rising sharply, and Sinclair has supported its expansion plans by appointing Timex as a second source. First product from Timex has just been shipped.

- ends -

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Sinclair has also entered a second major market with its flat-screen pocket TV and other current developments include further computers, computer peripherals and consumer applications of solid state technology.

All Sinclair Research's manufacturing and final assembly requirements are fulfilled on a subcontracting basis. When

Contd../

the new programme is complete the flat-screen TV will be assembled by both Timex and Thorn Ferguson; the ZX Spectrum by Timex, AB and Samsung; and the QL by Thorn EMI Datatech and a second source to be announced. Detailed breakdowns of production volumes from individual suppliers are not available.

Earlier this year Sinclair Research signed a separate agreement with Samsung Electronics licensing the latter for local assembly and distribution of both the ZX81 and ZX Spectrum in the Republic of Korea.

26 July 1984

SINCLAIR QL COMPUTER AND FLAT-SCREEN TV TO GO RETAIL IN SEPTEMBER  
- "SPECTRUM SIX PACK" AND "EXPANSION SYSTEM" LAUNCHED -  
£ 4 MILLION CHRISTMAS ADVERTISING CAMPAIGN ANNOUNCED

Sinclair Research is mounting its largest ever UK advertising campaign this autumn. Worth £4 million and for the first time including TV coverage, it will principally promote sales of Sinclair's UK home computer market leader, the ZX Spectrum.

The campaign also includes support for Sinclair's new QL computer and flat-screen pocket TV, both of which will be launched on a retail basis during September, it was announced today, July 26.

Part of a comprehensive retail sales and advertising strategy for the latter part of 1984, the Spectrum campaign opens with a new 'Spectrum Six Pack' software offer. Worth £56.70 and supplied free with every 48K Spectrum, it will be made available progressively through Spectrum stockists nationwide from August 8.

Sinclair's campaign emphasises the high-level of the ZX Spectrum's usable memory, 41.5K, greater than that of computers costing up to three times as much. The point is underlined by the pack's inclusion of six of Sinclair's best-selling titles - Chequered Flag, Scrabble, Survival, Chess, Make-a-Chip and Horace Goes Skiing.

Sinclair software packs will also be introduced shortly in export markets. The total worldwide retail sales' value of the packs is in excess of £25 million.

*For further information contact:*

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As an ideal Christmas gift for existing ZX Spectrum owners Sinclair is introducing from mid-September a new 'Expansion System' package, priced at £99.95. It contains one Sinclair ZX Microdrive, one ZX Interface 1, and a wallet of four Microdrive cartridges.

Programs on the cartridges include 'Tasword II' (Tasman Software) for word processing, 'Masterfile' (Campbell Systems) for information handling, two entertainment packages, written by Quicksilver, '3D Ant Attack' and 'Games Designer', as well as Microdrive demonstration and utility programs.

Commenting on the strategy at a major trade presentation in London, Sinclair's managing director, Nigel Searle, was confident of achieving a further significant impact for all products. "In particular we expect to exceed by a considerable margin the record sales' figures obtained for the ZX Spectrum in the 1983 Autumn and Christmas periods and to establish a substantial user base for the QL".

He cautioned however that initial retail supplies of both the QL and flat-screen TV would be limited. "While production volumes for both are building up fast, we anticipate that demand will inevitably outstrip supply. We will be working carefully to ensure the fairest possible distribution".

All prices quoted throughout are inclusive of VAT. 'The Six Pack' offer will run while stocks last.

- ends -

#### NOTE TO EDITORS

Sinclair Research Limited was founded by its chairman, Sir Clive Sinclair in July 1979, to conceive, develop and market new consumer electronics products.

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Its principal activities are in the computer market where it is an established world leader in the personal sector. Total sales exceed 3,000,000 units and monthly production is now over 150,000 units.

Sinclair has also entered a second major market with its flat-screen pocket TV and other current developments include further computers, computer peripherals and consumer applications of solid state technology.

## PRODUCT BACKGROUND

Supplied complete with its own powerful and integrated professional software suite, the Sinclair QL is priced at £399 and has been available by mail order only in the UK since launch in January 1984.

Launched in April 1982, the ZX Spectrum is available at £99.95, with 16K RAM memory capacity and in a second 48K RAM version at £129.95. Over 1.5 million have been sold worldwide.

The ZX Microdrive is a fast access mass storage device which stores a minimum of 85K bytes of information on a magnetic cartridge. The ZX Interface 1 supports up to eight Microdrives, giving a total of 680K bytes. It incorporates an RS232 interface - permitting Spectrum to be linked to other computers and peripherals - and a local area network linking up to 64 Spectrums. Both products have previously been sold separately at £49.95 each.

The Sinclair 2" Flat-Screen Pocket TV, will retail for £99.95.

All prices quoted are inclusive of VAT.

• 15 August 1984

SECOND UK HARDWARE DISTRIBUTOR FOR SINCLAIR

Sinclair Research has appointed Terry Blood Distribution (Computers) Ltd as non-exclusive UK national distributor for its range of personal computers, hardware peripherals and software programs.

Following Sinclair's recent announcement of increased production for all its major products, this appointment will further increase the company's distribution capabilities throughout the UK.

With many years experience in the distribution of consumer products, TBD will handle all Sinclair computers including the new QL professional computer and the ZX Spectrum, the UK's number one selling model.

Prism Computer Products Ltd will continue to distribute both Sinclair hardware and software products, while Websters Software and Lightning will continue to handle software only.

Comments Sinclair's retail business manager Anton Boyes, "with substantially increased Spectrum production and the QL shortly available retail this expansion of our distributor arrangements will further consolidate our position as UK market leader".

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• 27 August 1984

SINCLAIR OPENS SOUTH EAST ASIA OFFICE IN SINGAPORE  
- NEW MANAGER APPOINTED

Continuing its international expansion Sinclair Research has opened a new office in Singapore to service the South East Asia market, including the major Asian countries and Hong Kong. John Durnford, 28, has been appointed South East Asia Manager.

Permanently based in Singapore, John will be principally responsible for local business and marketing strategy; and for the introduction of Sinclair's new QL computer with local language capabilities.

Commenting, John says that "... one of my first priorities will be to establish a framework in which I can give both tactical and more importantly, strategic guidance to the Sinclair operation". He will also seek to develop further Sinclair's close links with British embassies, consulates and the British Council.

Formerly employed by Commodore (UK) Limited, John was responsible for marketing planning and the establishment of distributor networks in the Middle East, Africa and Southern Europe.

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• 10 January 1985

SIR CLIVE SINCLAIR'S C5 LAUNCHES A 'REVOLUTION' IN PERSONAL TRANSPORT - IMMEDIATELY AVAILABLE ELECTRIC SINGLE-SEATER IS HIGHLY STYLED, EASY TO USE - 1000 MILES FOR THE PRICE OF A GALLON OF PETROL

Introducing a completely new form of practical personal transport for all the family the Sinclair C5 electric vehicle, another world-first for Sir Clive Sinclair, was launched today.

Immediately available at a highly competitive £399 inc VAT, the smartly styled and highly manoeuvrable single-seater can be driven by anybody over 14 without licence or road tax. Entirely pollution free, its range of up to 20 miles (40 miles with an optional second battery) makes it ideal for all types of local journey.

To drive, C5 is both extremely economic - 1000 miles' running for the average price of a gallon of petrol - and easy to use. The driver needs only press a button to start and squeeze a lever to stop, while overnight recharging is done via a specially-developed 'clever' charger from a mains socket.

The public will be able to test drive C5 for themselves at a special launch show at Alexandra Pavilion this weekend, January 12-13. It is also on display at over 100 Electricity Board showrooms nationwide.

Designed by Sinclair and developed and tested by Lotus Cars, C5 has been in production under subcontract at Hoover's Merthyr Tydfil facility since early November. Sinclair expects to produce well in excess of 100,000 vehicles in 1985 creating some 200 new jobs, not including component suppliers.

For further information contact:

Bill Nichols  
01 499 2666

Sinclair Vehicles *Public Relations*

Running at the speed of an Olympic sprinter, C5's range and built-in boot make it ideal, SVL believes, for a wide variety of practical and leisure uses. It should appeal equally, for example, to short journey commuters; the housewife for local shopping; and the younger generation as a safer alternative than conventional motorised two-wheelers.

Sir Clive is confident that C5 "will radically reshape and expand the market for practical, personal transport. All else apart" he adds "the vast majority of our test-drivers have found C5 an exhilarating experience to drive".

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Incorporating a number of technological 'firsts' in vehicle design, C5 is founded on new 1983 legislation for 'electrically-assisted cycles'. It comfortably exceeds most of the standards laid down by those regulations and in other areas of the design Sinclair has pioneered its own high standards.

A highly efficient, purpose designed lead-acid battery and electric motor drive a revolutionary new body whose advanced aerodynamic shape is both lightweight and yet strong and resilient.

C5's shell, the largest injection moulded polypropylene assembly ever mass produced, is mounted on a new steel backbone chassis, developed in conjunction with Lotus Cars. The chassis is specially coated to prevent rust.

Drawing on the expertise and facilities of organisations such as Lotus and MIRA, the final design has been exhaustively tested and refined to maximise both performance and safety. SVL has also carried out a comprehensive consultative programme with all major UK road safety organisations including ROSPA - who have produced a special 'Guide to Safer C5 Driving' - Department of Transport, AA and RAC.

The result has been welcomed as a major advance for road safety and its positive road stability and comfort compared favourably with bicycles or conventional motorised 2-wheelers. C5 is also much more conspicuous yet occupies no more road width than a bicycle, while the average driver's eye-level is the same as in an Austin Mini.

The main control is a steering bar - located parallel to the seat where the driver's hands fall most naturally - a new arrangement which test-users have found easy and convenient. The power is activated from a simple push switch on the left side of the steeringbar and powerful front and rear brakes are operated by cycle type brake levers.

There are no foot controls although C5 is supplied with pedals, another legislative requirement. These can increase range and performance and get the driver home should he inadvertently run the battery flat.

C5 is fully-equipped as standard with lamps, all round reflectors, and for security, a key operated ignition switch to prevent it being driven away. Small LED microprocessor operated display units monitor the motor, the driving load and the battery condition.

Sinclair is also introducing a wide range of accessories including mirrors, indicators, horn and seat cushions, together with special designer-styled weather protection equipment.

The majority of the main component suppliers for C5 are British: the battery is by Oldham, the polypropylene body mouldings by Linpac, and the electronic display unit and control box by AB Automotive Electronics, which is also working on instrumentation for the new Jaguar.

Over 2,000 vehicles have already been built. Mail-order sales commence immediately and as supplies build up Sinclair Vehicles expects to begin sales through high-street retail chains by summer. Export sales will commence shortly afterwards and the company has already identified a number of markets with high potential including France, Italy, Germany and Holland.

Sinclair is very confident of C5s success. SVL's managing director, Barrie Wills, stresses its advantages: "inexpensive to run as well as to buy, quiet and pollution free, comfortable and, above all, safe".

Yet it is only a beginning. By the early 1990s Sir Clive foresees a complete range of traffic-compatible, quiet and economical family vehicles.

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Priced at £399 inc VAT, plus £29 packing and delivery, C5 will initially be sold by mail-order via three strategically-placed warehouses. It is inclusive of 12 month guarantee, rechargeable 12 volt battery and charger, and courier delivery within 14-28 days.

Also supplied is a complete owner's pack containing owner's handbook, accessory catalogue and ROSPA's 'Guide to Safer C5 Driving'. Details of comprehensive insurance will be made available. For the young or first time drivers a number of major road safety organisations are planning road awareness courses around the country.

C5 can be ordered from Sinclair Vehicles Limited, FREEPOST, Camberley, Surrey GU15 3BR. Tel: 0276 686262.

- ends -

10 January 1985

SINCLAIR C5 - DEVELOPMENT OF A CONCEPT

Today's launch of the Sinclair C5 electric vehicle is the result of over 10 years' research and development by Sir Clive Sinclair in the field of electric vehicles. It is also a very significant beginning since Sir Clive foresees the creation of a complete range of family vehicles by the early 1990's.

Supported by an in-house engineering team, originally based in Exeter, Sir Clive's work on electric vehicles began in 1973. A comprehensive design programme commenced in 1981.

Subsequently in 1983, the vehicle programme was acquired by Sir Clive from Sinclair Research Limited (SRL) and established as a separate and private undertaking, the Sinclair Vehicle Project (SVP). The SVP is now managed on Sir Clive's behalf by his wholly-owned Sinclair Vehicles Limited (SVL), founded in 1984.

During the late 1970s and early 1980s the vehicle team designed and built several different prototype concepts. These helped to clarify the profile of a planned 'family' of vehicles which SVL expects to introduce over the remainder of this decade.

From the outset the vehicle team sought radical solutions to the problems of design, materials and power which, according to Sir Clive, "have confounded past electric vehicle programmes."

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Sinclair Vehicles *Public Relations*

"Typically," he says "designers have worked with the conventional automobile as a given starting-point. They have then sought, and failed to find, a major breakthrough in the battery field to power it successfully. By reversing the process, accepting current battery technology as given, and designing outwards, there opens up a wide range of completely different and very attractive options."

Within these general design parameters, the specific creation of the new C5 vehicle, the first member of SVL's family, was facilitated by new 1983 legislation. This permitted the use of 'electrically-assisted cycles' by anyone aged 14 or over - without licence, tax, compulsory insurance or helmet.

The law also defined clear restrictions on such areas as performance - the maximum power-assisted speed is 15 mph - and weight. A vehicle in this category may weigh only up to 60kg.

Sir Clive believed this offered a major technical and marketing opportunity perceiving that almost all existing transport options in the marketplace below the Austin Mini - from bicycles to motorcycles - had major demerits on grounds of safety stability, convenience, pollution, noise and, very often, cost.

Users clearly required an attractive and flexible alternative other than the high and often damaging cost of using a conventional car.

Sinclair's researchers discovered that a three-wheeled vehicle, with one small lead acid battery, could achieve a traffic-compatible running range of up to 20 miles between charges. An ideal solution for all types of local journey, this clearly met the opportunity very effectively and very economically. Calculations suggested a running cost equivalent to a gallon of petrol per 1000 miles.

In development Sinclair worked extensively to maximise ease of use and safety. It also concentrated on design appearance - appreciating that smart styling was vital to achieve real pleasure of ownership - and, fundamentally cost. From the outset, in common with all Sinclair products, Sir Clive aimed at high levels of sales volume.

The resulting vehicle according to Sir Clive is at once "technically advanced, extremely attractive and, in its design simplicity, ideal for the company in terms of mass production and for the customer in terms of ease of maintenance."

- ends -

• 10 January 1985

#### SINCLAIR C5 - TECHNICAL BACKGROUND

For C5, Sinclair Vehicles has drawn on the resources of a wide range of major suppliers - each a leader in its field - and has collaborated with them to achieve significant technical advances in a number of areas.

For power, C5's battery was developed jointly by SVL and Oldham as a supremely efficient version of conventional lead acid technology. Extremely lightweight (only 15kg), with a capacity of 35Ah, it is packaged in a compact polypropylene case. Crucially it has been designed to withstand the 'deep cycling' effect (continual discharge of most of the capacity followed by recharge) which is required to power C5 effectively.

C5's drive motor is one of the few non-British components, supplied by the Italian firm of Polymotor, a subsidiary of Philips, and manufacturer of electric motors for avionic and marine applications including gyros, torpedoes and fast response actuators. The C5 motor is compact and lightweight and has been specifically designed and developed to tailor it for the vehicle application.

The drive to the Torrington-made tubular step-swaged rear axle is taken through an epicyclic reduction gearbox, manufactured by Mikron UK, which incorporates glass reinforced nylon gears and connects directly to the nose of the motor. Drive transfer is by toothed belt to ensure minimal noise and to avoid the need for expensive lubrication systems. Only one wheel is driven, the other being free to rotate relative to the axle.

For further information contact:

Sinclair Vehicles *Public Relations*

Bill Nichols  
01 499 2666  
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C5's control system is relatively simple, not least because there is no regenerative braking requirement; when the motor is not energised, the vehicle free-wheels. The system is based on a printed circuit board by AB Electronics, using an advanced customised Ferranti uncommitted logic array (ULA) chip and an Ital Amec relay. It includes automatic protection against motor overheating, and an additional system which will trip the drive if too much time is inadvertently spent drawing very high currents.

AB also supplied the driver information system in the form of an LED instrumentation pod which monitors motor, driving load and battery condition.

For the driver vehicle control is also simple. A steering bar runs parallel to the driver's seat where the hands fall most naturally and links forward to a control arm located on the front fork assembly. Exhaustive research showed this system to offer the best ergonomics.

Motor control is by means of a left-hand push-switch. The front wheel and the undriven rear wheel are braked, with separate lever controls, one on each end of the steeringbar in orthodox cycle style. A conventional chain drive links the driver's pedals to the driven axle, the fixed gear ratio corresponding to about 3 metres of vehicle movement for every complete turn of the pedals.

C5's body assembly consists of two large polypropylene injection mouldings by Linpac from ICI material. These are joined together by applying conductive tape to the joint and passing an electric current which causes local melting of the plastic and a permanent weld to create the largest ever mass produced polypropylene moulded assembly.

Both construction method and the vehicle's advanced aerodynamic shape - the result of exhaustive testing and refining with wind tunnel and other techniques - are utilised to optimum effect in achieving C5's final stylish design appearance.

Styled by Guy Desbarats, a young graduate of the Royal College of Art industrial design course, the final design incorporates a comfortable seat, rear lockable boot, front and rear lamps, reflectors and optional second battery housing. It also provides for the installation of the key operated security lock and weather protection equipment which are available as accessories.

C5's steel backbone chassis has been developed in conjunction with design-award winning Lotus Cars, who have applied their considerable automotive expertise to all aspects of the vehicle's safety handling and stability. Lotus concentrated not only on proving performance but also on developing the steering geometry, chassis compliance and tyre design and pressures to ensure predictable handling characteristics. The steering geometry has considerable castor angle and a small amount of castor trail and provides consistent feel and good response.

The wheels have been specially designed for Sinclair, moulded from glass-reinforced nylon. The front has a 12½" diameter and the rear wheels 16". The use of relatively large wheels improves the ride and lowers tyre rolling resistance. The turning circle is about two-thirds that of an Austin Mini.

Lotus has also carried out extensive component durability testing on specially-designed rigs, supported by test work at MIRA, British Aerospace and the Prescott Hill Climb Course. In addition, all stages of prototype, pre-production, pilot-build and saleable-production vehicles have been subjected to continuous durability running on specially constructed test tracks at Lotus.

These have simulated a comprehensive range of road conditions, to help build up service experience prior to launch. Further road systems' testing has been undertaken using the facilities of the Transport and Road Research Laboratory (TRRL).

All tests have shown that C5 is exceptionally easy to control. No test subject has experienced any problem in driving the vehicle once the control layout is understood. Almost without exception all have commented not only on ease of driving but also on the sense of enjoyment which C5 affords.

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Throughout the development of C5 there has been great concern for safety. In its definitive form the vehicle is highly conspicuous to other road users - thanks to its deliberately light body colour, supplemented by the incorporation of high-intensity reflective tape, produced by 3M and the provision of large lamps and reflectors front and rear. A further enhancement, in the form of a rear mounted 'high-visibility mast' is available from SVL as an accessory.

C5 is also designed for easy evacuation in emergency and the steering control bar is positioned so as to avoid driver obstruction.

Other safety aspects include C5's braking performance, which exceeds the legal standard laid down for this class of vehicle. Particular care has been taken to avoid locking of the front brake to ensure straight-line braking in all conditions. All electrical circuits are fully protected.

In finalising these aspects SVL has undertaken a comprehensive consultative programme with all major UK road safety organisations including the Department of Transport, ROSPA - which has produced a 'Guide to Safer C5 Driving' - the AA and the RAC. The overall response had been most positive and Sinclair is confident that C5 represents a major advance in road safety - meeting many recent calls for a vehicle, similar to the French voiturette concept, which would be safer than conventional 2-wheeled motorised vehicles. Many observers have pointed to C5's clear benefits in this respect - particularly in terms of lower speed, stability and conspicuity.

Finally, care has been taken to ensure that C5 achieves a long service life. The chassis frame is paint finished internally and externally (by Hoover) to a specification similar to that used for appliance shells (which have to survive an environment which makes road-going vehicles appear to have an easy life).

Specifically, the frame withstood the British standard 96-hour salt spray test. The body, being polypropylene plastic, is proof against corrosion. The battery is designed to last through at least 300 severe deep charging cycles though, in normal use, its life will significantly exceed this target and is guaranteed by its manufacturers for 12 months' trouble-free use.



10 January 1985

SINCLAIR VEHICLES LIMITED - COMPANY AND PERSONNEL BACKGROUND

Sinclair Vehicles Limited (SVL) was established in February 1984 to design, develop and market a range of new electric vehicles. Based at the University of Warwick Science Park, it forms no part of Sinclair Research Limited (SRL).

SVL selected Warwick as an ideal location to draw on the various vehicle research and development facilities in the Midlands - most immediately the University's expertise in manufacturing, automotive engineering and electric traction.

It was particularly attracted by potential for expansion at the Science Park and in December 1984 moved into one of the larger technology units, designed specifically for 'high growth research and marketing-orientated companies'.

Now employing 25 staff, SVL has rapidly expanded its senior management and engineering teams, headed by managing director Barrie Wills (see further below), and has now located all R & D and marketing facilities on site.

For the future SVL is developing an extensive range of vehicles. It expects to subcontract all these products for final assembly.

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SVL19D

Sinclair Vehicles *Public Relations*

### Senior Personnel

Sir Clive Sinclair, 44, chairman and chief executive of Sinclair Vehicles Limited, began his career in publishing and worked as a technical journalist for four years before founding his first company, Sinclair Radionics, in 1962.

Beginning with radio and amplifier kits he rapidly developed a reputation as a pioneer in the field of consumer electronics and has achieved a number of 'world-firsts' including the 'Executive' pocket calculator (1972), and the 'Microvision' pocket TV (1977).

In 1979 he founded Sinclair Research Limited which has designed and developed a highly successful range of personal computers - the ZX80, ZX81, ZX Spectrum and most recently the QL and ZX Spectrum+. Both the ZX81 and ZX Spectrum have achieved sales of over one-million units worldwide.

In late 1983 Sir Clive was named both as 'The Guardian Young Business Man of the Year' and as 'Computing Person of the Decade'. Later in June he received the major honour of a knighthood in the Queen's Birthday Honours List.

Barrie Wills, 42, managing director of Sinclair Vehicles Limited. Commenced his career with Jaguar Cars Limited as an apprentice in 1959 rising to chief buyer before leaving that company in 1969. Held the position of supplies manager of Leyland Bus prior to joining Reliant Motor Company in 1972, initially as head of supplies, and from 1976 as assistant managing director. He moved to Belfast in late 1978 as purchasing director of the UK end of De Lorean Motors, acting as chief executive during the 1982/3 receivership period. In March 1983, he became head of the Sinclair Vehicle Project Team.

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SVL's senior management team is completed by director of finance and administration, Michael Walsh; director of manufacturing operations, Harry Steadman; director of sales and marketing, Terry Shurwood; commercial director, Nick Sutton; and director of product engineering, Peter Milner.

- ends -



• 10 JANUARY 1984

£3 MILLION ADVERTISING CAMPAIGN FOR C5 ORDER LAUNCH -  
RETAIL INTRODUCTION PLANNED BY SUMMER - AFTER SALES VEHICLE  
SERVICING FRANCHISED TO HOOVER - 300 OUTLETS TO HANDLE  
BATTERY SERVICE

Sinclair's new C5 electric vehicle is the subject of a massive 3-month, £3 million mail order launch advertising campaign, handled by Primary Contact, under the theme 'A new power in personal transport'.

First TV advertising appears tonight (January 10) and will be supported by extensive placements in national and colour supplement media. Targetted broadly at the family audience, Sinclair believes C5 will appeal equally to the younger generation - notably as a safer alternative to conventional, motorised 2-wheelers - and to adults for activities such as urban commuting, shopping and getting to the railway station.

"Fundamentally", says Sir Clive, "with this form of personal transport we're selling a completely new concept, one as revolutionary in its own terms as calculators in the early '70s or home computers in the early 1980s, and one that will create an entirely new and very substantial market. We anticipate 6-figure sales in 1985 alone".

As the cornerstone of its mass marketing strategy, Sinclair aims to maximise initial product awareness amongst the public and has selected mail order deliberately to achieve that goal.

"In the crucial early stages", comments Sir Clive, "we take the risk, have control over demand and supply and, most important, can reinvest the higher sales' margins directly into advertising so providing the best possible platform for C5's retail introduction. Past experience shows that for every one mail order purchaser, a further ten are prepared to purchase immediately on retail availability as a result of the initial campaign".

Sinclair anticipates C5's UK retail introduction by summer. It expects to distribute principally via high street retail chains which will sell the product, a comprehensive range of Sinclair accessories and replacement parts for routine owner maintenance.

The company's mail order and retail marketing plans are supported by a series of major innovations in vehicle' after sales and service techniques. These dispense with the need for a conventional car-dealer and service workshop infrastructure.

C5 servicing is franchised to the Hoover service organisation which has completed an exhaustive training programme for its service engineers, building on its established electrical and electronic expertise. 19 Hoover service offices nationwide, which between them employ over 400 engineers, have been specially equipped to undertake vehicle maintenance on a call-out, door-to-door basis. Sinclair Vehicles is recommending regular 6-monthly services for each C5.

For customers preferring to undertake their own routine maintenance, comprehensive instructions are provided in the C5 owners' handbook and a 'hot line' technical advisory service is available at Sinclair's Camberley distribution centre.

300 Sinclair Battery Centres have been established on a nationwide basis. Comet Group stores and service shops, supplemented by a number of Woolworths stores, are already equipped to provide additional and replacement batteries, installation kits and extra C5 battery chargers. They will also handle customer warranty matters, on behalf of Oldham Batteries Limited, manufacturers of the unique C5 battery.

- 3 -

During the mail order phase, distribution and door-to-door delivery is to be handled by United Parcels from three strategically located warehouses. Sinclair's Camberley distribution centre will deal with order handling and processing.

- ends -

• 28 February 1985

SINCLAIR'S C5 IN NATIONWIDE RETAIL LAUNCH  
- RAPID SALES GROWTH ANTICIPATED

In a major nationwide launch more than 400 leading electrical retail outlets are to sell Sir Clive Sinclair's revolutionary new C5 electric vehicle from tomorrow (March 1).

Initially more than 200 Comet Group stores and selected Woolworths' stores, featuring the new 'Electronics World' departments, will handle C5.

They are joined by the leading central and northern group Wigfalls; by Leeds-based Vallances, concentrating in the Midlands and Yorkshire; and, in the south, by Rayfords through its 'Supreme Discount Stores'. Many of the stores plan to offer regular testdrives and demonstrations for the public.

The new moves follow C5's highly successful mail-order advertising campaign - more than 5000 orders were taken in the first four weeks alone - and introduce the second phase of a broad UK sales' programme.

"Initial marketing has proved highly effective both to generate strong sales and to develop a high level of enthusiastic awareness amongst consumers and retailers alike", commented Sir Clive Sinclair, chairman of Sinclair Vehicles Limited. "We anticipate further substantial success through retail sales and have chosen retailers very carefully to support that objective.

"We believe they demonstrate not only successful experience of retailing electrical and electronic products but also strong entrepreneurial flair to handle and effectively promote a radical new product concept".

For Comet managing director Jerry Mason, added "We see C5 as a very significant step towards the introduction of a wide range of electric vehicles which will have considerable environmental and economic advantages for the public. In sales terms C5 opens a new direction for Comet and we believe this product together with future Sinclair vehicles which are currently in development will have a very positive impact on our growth. The initial response from our stores around the country has been extremely good".

Sinclair is now in advanced negotiations with a number of other national retailers and is to supply smaller chains and other outlets through its appointed wholesale distributors, Teamdale and Lightning.

In all it expects to be supplying over 1000 stores nationally by the summer. Lightning reports an 'overwhelming response' and expects to be supporting more than 500 outlets alone.

Sinclair will support its Spring and Summer retail sales programme with extensive promotional activities including national advertising, regional exhibitions and demonstrations and national and local newspaper competitions and publicity activities.

It also plans a set-piece first ever 'Lands End to John O'Groats' charity run for the C5

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Priced at £399 inc VAT, further customer information regarding C5 is available from Sinclair Vehicles Ltd,

FREEPOST, Camberley, Surrey GU15 3PS. Tel: 0276 686262.

The price is inclusive of 12 month guarantee, rechargeable 12 volt battery and charger and high-vis mast.

Further editorial information from Bill Nichols or Liz Walker on 01-499 2666.

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NOTE TO EDITORS

Sinclair Vehicles Ltd (SVL) was established in February 1984 to design, develop and market a range of new electric vehicles. Based at the University of Warwick Science Park it forms no part of Sinclair Research Limited (SRL).

The company's first product, the Sinclair C5, is a smartly styled and highly manoeuvrable single-seater. It is entirely pollution free and has a range of up to 20 miles (40 miles with an optional second battery) which makes it ideal for all types of local journey by all members of the family.

Wigfalls (Henry Wigfall & Sons plc) now has some 100 stores in an area from Swindon to Scarborough and from Kidderminster to Peterborough.

Leeds-based Vallances, which is currently celebrating its golden jubilee, has 30 shops and superstores in Yorkshire and the Midlands. Principal locations include York, Birmingham, Liverpool, Sheffield, Hull, Coventry, Derby and Leicester.

Rayfords Supreme Holdings plc, trading principally as Supreme Discount Stores, has over 30 stores in the south in an area bordered by Plymouth, Gloucester, Watford and Hastings.

Comet Group now operates a national chain of more than 200 discount warehouses, high street outlets and service stores.

# You can see the **SINCLAIR C5** at these Electricity Board showrooms

## London Electricity Board

**Battersea**  
Electric House  
204 Lavender Hill

**Beckenham**  
44 High Street

**Fulham**  
587/591 Fulham Road

**Hackney**  
18/24 Lower Clapton Road

**Hampstead**  
245/247 Finchley Road

**Kensington**  
91 Pelham Street

**Shepherds Bush**  
154 Uxbridge Road

**Streatham**  
1/3 Astoria Parade  
Streatham High Road

**Victoria**  
102 Victoria Street

**Wimbledon**  
12/14 Wimbledon Bridge

## Southern Electricity Board

**Aldershot**  
32 The Wellington Centre  
Victoria Road

**Basingstoke**  
3/5 Loddon Wall

**Oxford**  
37 George Street

**Poole**  
74/75 Arndale Centre

**Portsmouth**  
22/30 Fratton Road

**Reading**  
9/10 Market Place

**Slough**  
10/11 Queensmere

**Southampton**  
West Bargate

**Swindon**  
1 Brunel Plaza  
Brunel Centre

## Eastern Electricity Board

**Basildon**  
33 Town Square

**Bedford**  
27 Midlands Road

**Bury St Edmunds**  
4 Cornhill

**Cambridge**  
4 Market Hill

**Enfield**  
40 Church Street

**Hatfield**  
19 Town Centre

**Ipswich**  
23-25 Carr Street

**Lowestoft**  
London Road North

**Luton**  
142 Arndale Centre

**Norwich**  
21 The Walk

**St Albans**  
St Peter's Street

**Stevenage**  
30 Queensway

**Wood Green**  
Unit 31 Shopping City

## South Western Electricity Board

**Bath**  
13/14 Stall Street

**Bristol**  
Electricity House  
Colston Avenue

**Exeter**  
3 Bedford Street

**Plymouth**  
55/57 New George Street

**St. Austell**  
9 Fore Street

**Taunton**  
Electricity House  
The Parade

**Torquay**  
75 Union Street

**Truro**  
32 Boscowan Street

**Weston-Super-Mare**  
19 Waterloo Street

## South Eastern Electricity Board

**Brighton**  
166/168 Western Road

**Chatham**  
41/43 The Pentagon Centre

**Crawley**  
50/52 The Broadway

**Croydon**  
115/116 Whitgift Centre

**Guildford**  
28/30 High Street

**Herne Bay**  
125 Mortimer Street

**Kingston**  
2/4 Alderman Judge Malls

**Orpington**  
286 High Street

## East Midlands Electricity Board

**Coventry**  
14 The Precinct

**Leamington Spa**  
11/13 The Parade

**Leicester**  
25 Horsefair Street

**Milton Keynes**  
Unit 5  
Silbury Gate West

**Nottingham**  
Broadmarsh Centre  
Listergate Square

**Stamford**  
9/10 St. John's Street

## Midlands Electricity Board

**Birmingham**  
Birmingham Shopping Centre  
73/75 West Court

**Gloucester**  
5 Kings Square

**Redditch**  
5/6 New Walk

**Stoke-on-Trent**  
Stafford Street  
Hanley

**Telford**  
3 The Mall  
Mallinsee

**Walsall**  
Digbeth

**West Bromwich**  
49 Queens Square  
Sandwell Centre

**Wolverhampton**  
26-32 Central Arcade  
Mander Centre

**Worcester**  
5-6 New Walk  
Redditch

## South Wales Electricity Board

**Cardiff**  
The Hayes

**Merthyr Tydfil**  
19 Market Square

**Newport**  
138 Commercial Street

**Swansea**  
The Quadrant  
20 Whitewalls

## Merseyside and North Wales Electricity Board

**Birkenhead**  
32-36 Milton Pavement  
Shopping Precinct

**Bootle**  
121 Mariners Way  
New Strand

**Chester**  
22 Northgate Street

**Crewe**  
44 Victoria Street

**Liverpool**  
56/57 St. Johns Precinct

**Wrexham**  
7-8 Queen Street

## Yorkshire Electricity Board

**Barnsley**  
Shambles Street

**Bradford**  
Forster Square

**Doncaster**  
Silver Street

**Grimsby**  
26 Victoria Street

**Halifax**  
12/16 Market Street

**Huddersfield**  
Victoria Lane

**Hull**  
Ferensway

**Leeds**  
The Merrion Centre  
20/24 Woodhouse Lane

**Sheffield**  
1/11 Arundel Gate

**Sheffield**  
102-104 The Moor

## North Eastern Electricity Board

**Middlesbrough**  
Centre Mall  
Cleveland Centre

**Newcastle-upon-Tyne**  
Eldon Centre  
2-3 Sidgate

**Sunderland**  
27 Fawcett Street

**York**  
14 Parliament Street

## North Western Electricity Board

**Blackburn**  
18 Market Way

**Blackpool**  
19 Victoria Street

**Bolton**  
3 Exchange Street

**Carlisle**  
46 Castle Street

**Manchester**  
96/98 Market Street

**Middleton**  
24 Arndale Centre

**Preston**  
19 Friargate

**Stockport**  
Merseyway

**Wigan**  
68/72 Standishgate

**Wilmslow**  
13 Water Lane

## South of Scotland Electricity Board

**Ayr**  
220 High Street

**Edinburgh**  
130 George Street

**Glasgow**  
199 Sauchiehall Street

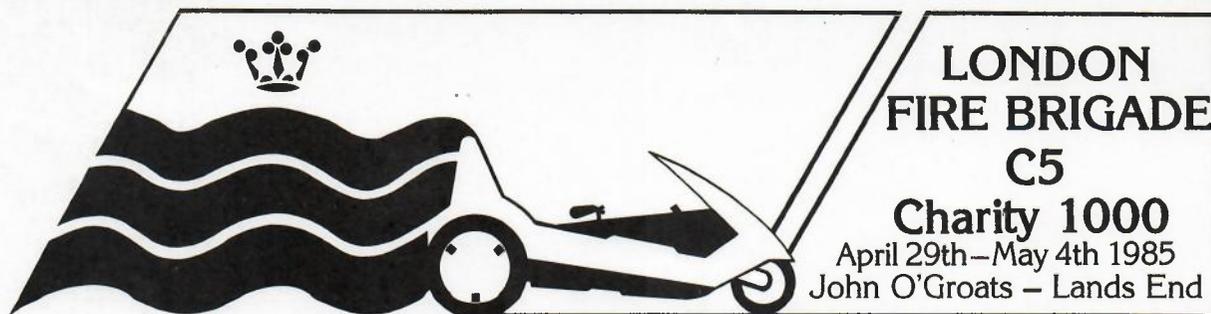
**Paisley**  
35-39 Central Way

## North of Scotland Hydro-Electric Board

**Aberdeen**  
156 Union Street

**Dundee**  
3 Whitehall Street

# GOELECTRIC



17 April 1985

Public Relations  
Nichols MacOmish & Associates  
5th Floor  
45 Albemarle Street  
London W1X 3FE · Telephone 01-409 3137

LONDON FIRE BRIGADE IN FIRST EVER "JOHN O'GROATS TO LANDS END" WITH SINCLAIR C5 - CANCER RESEARCH AND ROYAL MARSDEN HOSPITAL TO BENEFIT FROM "CHARITY 1000".

The 10-man "Red Watch" crew from London's Chingford Fire Station is to undertake the first ever "John O'Groats to Lands End" charity marathon using a Sinclair C5 electrically assisted cycle, and commencing April 29.

Travelling from John O'Groats via London they plan to drive and cycle the C5 more than 1000 miles in an estimated six days operating a continuous rota system. The team expects to arrive at Lands End around midday on May 4.

Principal beneficiaries from the sponsored run will be the Cancer Research Campaign and the Royal Marsden Hospital's current appeal to raise 1,000,000 for an advanced NMR (Nuclear Magnetic Resonance Scanner). The NMR is a completely new concept with substantial potential for enhancing the prospects of successful treatment and research.

"Red Watch" has been in training for the event for the last three months. Fireman Ian Hinton, who has been responsible for planning and organising the event, says: "We were looking for both an original and challenging way to do the Lands End run for charity. The Sinclair C5 seemed to fit the requirement in every way.

Contd.... /

"As a post-graduate teaching hospital which makes a very significant contribution in this area backing the Royal Marsden seemed a particularly effective and specific way of supporting cancer research."

Donations from the proceeds of the "C5 Charity 1000" will also be made to Westminster Childrens Hospital, the Victim Support Fund and the National Fire Services Benevolent Fund.

Leaving John O'Groats at 7.30am on April 29, the team's route will take them via Sinclair's Bay to Wick and then down through Inverness and Stirling to Carlisle. From Preston they go via Warrington, Birmingham and Banbury to reach London on May 2, where a reception will be held at County Hall.

After a call at the Royal Marsden they head south west via Basingstoke and Salisbury to Exeter, and finally Penzance before reaching Lands End on May 4.

"In all we expect to achieve 180-200 miles per day", says Ian Hinton.

Sinclair Vehicles Limited, manufacturers of the C5, are providing technical support for the marathon and have also made a major contribution to the costs of publicity and administration.

FURTHER INFORMATION

London Fire Brigade C5 Charity Fund: publicity officer,  
Julia Gamble on 01 409 3137.

Royal Marsden Hospital: PRO, Tom West on 01-724 0123

Sinclair Vehicles Limited: Bill Nichols on 01-499  
2666.

NOTES TO EDITORS

"Red Watch" is a 10-man crew, based at London's  
Chingford Fire Station. The members regularly  
participate in charity events. Recently money has  
been raised by pram races, raft races and open days at  
the Fire Station.

Sinclair Vehicles Limited was established in February  
1984 to design, develop and market a range of new  
electric vehicles. Based at the University of Warwick  
Science Park it forms no part of Sinclair Research  
Limited.

Its first product, the 399 Sinclair C5 electrically  
assisted cycle (as defined by new 1983 regulations) was  
launched in the UK in January 1985. A "smartly styled  
and highly manoeuvrable" single-seater tricycle it is  
entirely pollution free and has a range of up to 20  
miles (40 with an optional second battery). It has a  
maximum speed of 15 mph.

Additional information on the Royal Marsden Hospital is provided in a separate accompanying release, together with a list of key locations visited. A background sheet on the history of previous Lands End runs is also enclosed.

Queries regarding media contacts and opportunities during the marathon to Julia Gamble on 01-409 3137. Photographs available on request.

DONATIONS TO THE CHARITIES may be made to Ian Hinton, Chingford Fire Brigade, 34 The Ridgeway, Chingford, London E4 or at any Midland Bank, London Fire Brigade Sinclair C5 Charity Fund, Sorting Code 40-46-10, Account number 61065351. Raffle tickets are also available from Ian Hinton at the Chingford Fire Station.

LONDON FIRE BRIGADE C5 CHARITY 1000

PLANNED ROUTE AND TARGET DATES

John O'Groats  
Inverness

April 29th

Stirling  
Carlisle

April 30th

Preston  
Warrington  
Newcastle under Lyme  
Birmingham  
Banbury

May 1st

London

May 2nd

Basingstoke  
Salisbury  
Exeter

May 3rd

Penzance  
Lands End

May 4th

17 April 1985

#### JOHN O'GROATS TO LANDS END - BACKGROUND

Lands End became accessible to everyone when the London to Penzance railway opened in 1859.

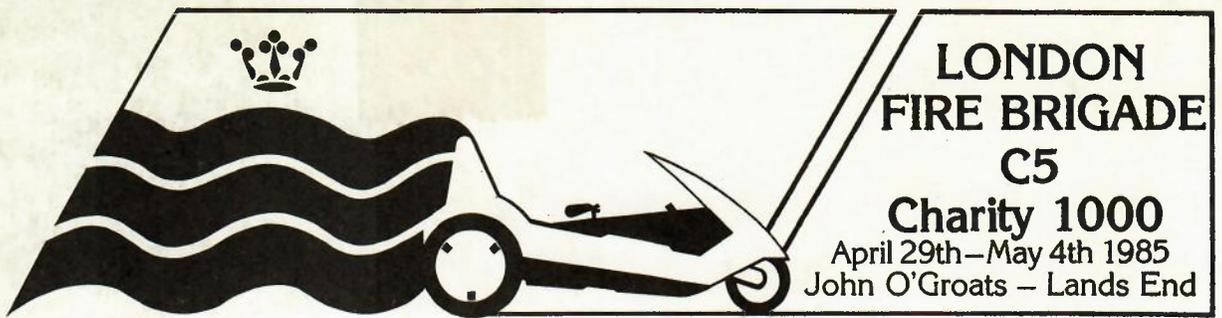
During Victorian times it was a popular destination with parties making their way from Penzance by horse-drawn omnibus stopping at the historical first and last house for refreshments.

The first recorded journey between John O'Groats and Lands End was by an American lady Eliuh Burritt in 1875.

The advent of the motor car lead to the first John O'Groats to Lands End marathon. Written records are no longer kept to discourage speeding but the journey has been made in under 11 hours in a motor car.

Jimmy Saville is one of the many famous people who have walked the 874 miles for charity. At the height of the season, more than six people per week arrive at the finishing post at Lands End having completed the journey.

It is estimated that over six million pounds has been raised in post war years by charities who have organised and carried out the journey between the two points, John O'Groats and Lands End.



Public Relations  
Nichols MacOmish & Associates  
5th Floor  
45 Albemarle Street  
London W1X 3FE · Telephone 01-409 3137

CAPTION

9 MAY 1985

"Red Watch (from London's Chingford Fire Station) celebrates the successful completion of the first ever John O'Groats to Lands End run in a Sinclair C5 electric vehicle. In all, the team covered 1000 miles in five and half days arriving 15 minutes ahead of schedule at Lands End on the morning of May 4. The team carried out the run to raise funds for the Cancer Research Campaign and for the Royal Marsden Hospital's NMR Scanner Appeal. Equipment and technical support was provided by Sinclair Vehicles Limited.

Issued by NMA

On behalf of London Fire  
Brigade Sinclair C5  
Charity Fund

Contact: Julia Gamble  
Tel: 409 3137

# Sinclair QL Preservation Project (SQPP)



On January 12<sup>th</sup> 1984 Sir Clive Sinclair presented the Sinclair QL Professional Computer in a typical Sinclair-extravaganza type launch event at the Intercontinental Hotel, Hyde Park Corner, London. This was exactly 12 days earlier than Steve Jobs presented the Apple Macintosh.

The QL is a very good example of an innovative, stylish, powerful and overall underestimated product and ecosystem. On one hand it failed in the market but on the other hand it influenced many developments which ended in many of today's computing devices.



Check out the website <http://sinclairql.net/> – The semi-official website related to the Sinclair QL Professional Computer. **QL forever!**

Urs König (aka QLvsJAGUAR)

[http://sinclairql.net/about\\_urs.html](http://sinclairql.net/about_urs.html)

<https://www.youtube.com/QLvsJAGUAR>

<https://plus.google.com/+QLvsJAGUAR>

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## Document details

Topic: Bill's Papers - The Sinclair Press Releases

Notes: Those unique papers are from the personal archive of Bill Nichols. They were in a folder. Bill sent this to me in early 2014. Finally I took a day off to scan them. It took about 10 hours to scan and generated 968 data.

Number of pages (including SQPP cover and back pages): 349

Scanned: 2018-06-12 on a HP M477fdw

Check out the website <http://sinclairql.net/> – The semi-official website related to the Sinclair QL Professional Computer. **QL forever!**

Urs König (aka QLvsJAGUAR)

[http://sinclairql.net/about\\_urs.html](http://sinclairql.net/about_urs.html)

<https://www.youtube.com/QLvsJAGUAR>

<https://plus.google.com/+QLvsJAGUAR>