Clive

I've taken various papers, notes &c
which I will copy or extract from &
return asap. Hope that's OK.

A v interesting & helpful meeting.
What a project this is! Thank you
for it.

See you
Rodney

SINCLAIR RADIONICS LIMITED

BALANCE SHEET AS AT 30th APRIL 1970

1969 £				£
	CAPITAL EMPLOYED			
	SHARE CAPITAL - Authorised, Issued and Fully Paid			
100	100 Shares of £1 each			100
10,000	LOAN - C.M. Sinclair (Note 1)			10,000
22,497	PROFIT & LOSS ACCOUNT			57,874
32,597				57,974
	REPRESENTED BY:-			
	CURRENT ASSETS			
47,548	Stock (Note 2)		69,937	
494	Investment Grants Claimable		717	
23,342	Debtors & Payments in Advance		41,554	
1,185	Cash at Bank		20,884	
72,591 22	Cash in Hand		69	133,161
	Deduct: CURRENT LIABILITIES			
43,872	Creditors & Accrued Charges		44,868	
	Corporation Tax Payable			
43,872 —	1st January 1972		28,000	72,868
28,719				60,293
3,878	FIXED ASSETS (Note 3)			7,681
£32,597				£67,974

C.M. SINCLAIR)
ANN TREVOR-BRISCOE)DIRECTORS
)

REPORT OF THE AUDITORS TO THE MEMBERS OF SINCLAIR RADIONICS LTD

In our opinion the Balance Sheet and Profit and Loss Account with the notes thereon, set out on pages 2 to 5 have been properly prepared in accordance with the Companies Acts 1948 and 1967 and give respectively a true and fair view of the state of affairs of the Company at 30th April 1970 and of the profit for the year ended on that date.

11 Southampton Row,   BREWER KNOTT & CLARKSON WEBB
LONDON W.C.1.
15th July 1970   CHARTERED ACCOUNTANTS

15

INTA LOC069
FROM TIL BEDFORD 5.7.873
ATTN C M SINCLAIR SINCLAIR RADIONICS ST IVES 32250
CC DOUG NEWMAN TIL

KEY HOUSTON PERSONNEL
----

1. DAVE SIMPSON - MOS DEPT MANAGER
2. GERRY MOFFITT - MARKETING MANAGER
3. ROBERTO BUARON - INTERNATIONAL
4. CHARLES BRIXIE - CHIEF CALCULATOR SOFTWARE SPECIALIST
5. ROGER FISHER - PROGRAM MANAGER 0800
.6. GERARD JUTON - EUROPEAN PROGRAMMER

(ROBERTO HOME NUMBER 461-2159)@

BEST REGARDS
CLIVE HOGGAR MS16

SINCLAIR STIVES

10

To: Clive

From: Mike   5 July 1973

----

1)   LITRONIX

Address: 19000 Homestead Road, CUPERTINO, California 95014

Telephone: 408-257-7910

Contacts in Cupertino:

*   David Laws   - Display Marketing
    Dave Hillman   - Engineering
    Irv Cooper   - European Marketing

At the meeting with Irv Cooper and Colin Rees (Litronix UK), it
was stated that the totally monolithic display was technically
feasible and Litronix were extremely enthusiastic.

  i   No price indication given.
 ii   Marketing strategy being decided.
iii   6 months to complete development programme.
 iv   Suggestion of free development plus price advantage to
      Sinclair for worldwide rights - royalty would be better.
  v   Litronix want a sample or demonstration to convince
      their engineering and marketing groups of projection
      feasibility. They claim to have tried it in the past
      without success.
 vi   I demonstrated Jim's black box to Irv Cooper and Colin
      Rees without showing optics. I told them that it was a
      10 mil chip, but have since realised it was 25 mil.

2)   A M I

Address: 3800 Homestead Road, SANTA CLARA, California 95051

Telephone: 408-246-0330

Contacts in Santa Clara: O

*   Lee Alward   - International Marketing
  - Andrew Thompson - Director of Custom Product Engineering
    Jim Meyer   - Manager   "   "   "   Marketing
      Graham Sharrotton
AMI have estimated chip size on transcendental machine and now have
the drawings for the four function chip. They are keen to do
business with us.

AMI also have programme of LCD which is getting to an advanced
stage. Their present units are transmissive, scattering types, and
they are working on field effect units.

(UK contact - Alan Watts, Marketing Manager)

*   These people should be your first contact

Size 180 mills   36 week $50k   Contact Dave Judd 12
                          $6   *Swindon ?*

3)   Hotel in San Francisco

       Miyako Hotel (Japanese Cultural & Trade Centre)
       Post at Laguna
       SAN FRANCISCO 94119

Places to visit:

Fisherman's Wharf
The Broadway (Clubs etc)
Union Square

To Clive

From Mike   6 July 1973

T.I. HOUSTON

Address: Houston, Texas 77042

Telephone: 713-785-6906

Dave Simpson   - MOS Department Manager
Charles Brixie   - Chief Calculator Software specialist
Roberto Buaron   - International Marketing (Tel: 461-2159)
Larry Mobley   - All calculator circuit development
Roger Fisher   - Project Group Leader
Jerry Moffitt   - Marketing Manager
Gerard Juton   - European Programmer

PRODUCT	FUNCTION	AVAILABILITY
0132	Memory version of 0103	Aug 73
0600A	0700 + 64 words of ROM	4/4 73
0603	Memory and %	Nov 73
0700	Redesigned 0103	NOW
0801 (also referred to as 1920 & LPC 1)	4 function calculator	3/4 73
0803	% and add on discount	1/4 74
0804	+ = and - = keyboard Other functions to be decided	-
0900 (LPC 2)	512 word of ROM 4 registers of RAX 12 digit capability	First unit 1/4 74

Notes:

0132 is now reported to use the 0700 chip with ion implant.
     T I prepared to guarantee lower power consumption.
     Please confirm this.

0600 series has expanded ROM.

0700 series is ion implant version of 0100 series, designed
     originally as cost reduction, now prepared to guarantee
     lower power.

0800 series is the first generation low power chip.

0900 series is the second generation low power chip.

T.I. DALLAS

Address: Dallas, Texas 75222

Telephone: 214-238-6805

Contacts:

Robb Wilmot   )
Gerald Lunn   )   T.I. Bedford

have arranged a 9 am meeting for Monday 16 July to discuss I^2L
and watch programme with Dean Toombs, who is in charge of I^2L
and watches for T.I.

Meeting is regarded as of the utmost importance to get watch
programme moving and convince T.I. of our chip viability. I
told Robb that we could show a letter of intent for 1 million
devices (Bowmar) without saying from whom or where it came.

Status on Mullard chip is that the masks are due for checking
by me next week. Chip size is reported to be 100 mil square,
although I have not had this confirmed yet.

CALCULATOR PROGRAMME

| | Executive | | | Cambridge Everyman | | Leeds | Scientific | Total calcs All Chips |
	0103	0132	C550	1920	C550	1920	080X	
July	3		7		2			12
August	3		7		7			17
September	2		10		10			22
October		10		5	10			25
November		10		10	15			35
December		10		15	15			40
January		10		15	15	5		45
February		10		15	15	5	5	50
March		10		15	15	5	10	55
April		10		15	15	10	15	65
May		10		15	15	10	20	70
June		5		15	15	10	25	70
July		5		15	15	10	25	70

Type Chip	Executive Memory 0132	Cambridge C550	Scientific 080X	Everyman 1920	Leeds 1920	Total 1920 + 080X	Total Calcs All chips	
Jan	10	15	0	15	5	20	45	
Feb	10	15	5	15	5	25	50	
Mar	10	15	10	15	5	30	55	
Apr	10	15	15	15	10	40	65	
May	10	15	20	15	10	45	70	+D.P.
June	5	15	25	15	10	50	70	10
July	5	15	25	15	10	50	70	20
Aug	5	15	25	15	10	50	70	30
Sept	5	15	25	15	10	50	70	30
Oct	5	15	25	15	10	50	70	30
Nov	5	15	25	15	10	50	70	30
Dec	5	15	25	15	10	50	70	30

These plans do not take into account a new chip which Texas
Instruments have under development, known as a 'digit processor'. $4.
Samples of this are expected in January '74, with production in
the second quarter.

This chip is organized very much like a computer, and it will be
possible to programme it to perform a wide variety of functions.
I have spent a lot of time discussing the digit processor with its
designer, and I was most impressed by the concept.

It is anticipated that the chip size will be only 150 thou square,
and that it will, therefore, be lower in cost than any existing TI

chips. I think it is of the utmost importance that we recruit at
least one, and possibly two, programmers as soon as possible to
back up Nigel Searle in the programming of this or any other chip.

Versions of the digit processor, which incidentally will be low
power and require only a single voltage rail, could replace all
the chips we are using at present.

Clive Sinclair   Circulation to: Tony Rogers
                                               Mike Pye

23 July 1973

Programmable Calculator.

2 Nov. 1973

Direct addresses

Main Memory.
1 indirect arithmetic stack.
2. subroutine levels.
Variable stack
Op. stack

PRODUCTION PROGRAMME FOR CALCULATOR

| MONTH | EXECUTIVE | | | CAMBRIDGE | | | LEEDS | CHEAM | TOTAL |
	II	III	M	C550 KIT	0801	0805	0803		
Dec.	1	1	3	3	17	—	—	—	
Jan.	1	2	5	3	23				
Feb.	2	2	5	3	23				
Mar.	2	1	5	3	26	3			
Apr.		41	5	3	28	5			
May		45	5	3	*(10)(15)	12	1		
Jun.		48	5	3	20	20	1	4	3
Jul.		48	5	3	20	20	3	6	4
Aug.			5	3	10	15	3	10	7
Sep.			5	3	20	25	10	25	16
Oct.			5	3	20	25	15	50	34
Nov.			5	3	20	25	20	50	
Dec.			5	3	15	20	20	65	42
Jan.					?	25	25	85	
Feb.					?	25	25	100	
Mar.					?	25	25	100	

* Change to IFC1 & 2.

Critical Points

(1) Decision by 1st December to continue Memory Executive.
(2) Decision by 4th January to change 0801 to IFC1 & 2 in lieu of discretes.

ARWR.   16.11.73.

FLIGHT ITINERARY

CMS & MRP - VISIT TO STATES DECEMBER 1973

	DEPART	ARRIVE

SUNDAY 9 DECEMBER

LONDON TO SAN FRANCISCO: Heath Row   San Francisco
                             12.55   18.55

Time difference: Stopping at Los Angeles en route
San Francisco 8 hrs   16.00 for 1 hr approx

WEDNESDAY 12 DECEMBER

SAN FRANCISCO TO PHOENIX: San Francisco   Phoenix
                             8.20   10.25

Check in   mins before flight

Time difference: Phoenix 7 hrs

THURSDAY 13 DECEMBER

PHOENIX TO HOUSTON: Phoenix   Houston
                             9.30   14.43

Check in 10 mins before flight

Time difference: Houston 6 hrs

FRIDAY 14 DECEMBER

HOUSTON TO BOSTON: Houston   Boston
                             18.25   23.51

Check in 40 mins before flight

Time difference: Boston 5 hrs

SATURDAY 15 DECEMBER

BOSTON TO LONDON: Boston   London
                             21.00   8.15 SUNDAY AM

Check in 45 mins before flight

VISIT SCHEDULE
CMS/MRP   9/14 December 1973

                              AM   PM

MONDAY 10 DECEMBER   Litronix   A.M.I.

TUESDAY 11   National   Intel

WEDNESDAY 12   Bowmar   -

THURSDAY 13   T.I.   -

FRIDAY 14   -   T.I.   -

ADDRESSES:

Litronix: 1900 Homestead Road   Tel: 408-257-7910
            CUPERTINO   Twx: 910-338-0022
            California 95014   Contact: David Laws,
                                          Peter Johnson, Terry

A.M.I: 3800 Homestead Road   Tel: 408-246-0330
            SANTA CLARA
            California 95051   Contact: Lee Alward

National: 2900 Semiconductor Drive   Tel: 408-732-5000
            SANTA CLARA   Twx: 910-339-9240
            California 95051   Contact: Gustavo H
                                                    Cardenil

Intel: 3065 Bowers Avenue   Tel: 408-246-7501
            SANTA CLARA   Contacts: Bill Spiegel,
            California 95051   Tony Livington,
                                          Hal Feeney.

Bowmar: 850 Lawrence Drive   Tel: 805-498-2161
            NEWBURY PARK   Twx: 255-910-336-1265
            California 91320   Contact: Jim Martin

            4900 East Indian School Road Tel: 602-959-4760
            PHOENIX   Twx: 910-950-1285
            Arizona 85018   Contact: Rodney Schwartz

T.I: 3939 Ann Arbor   Tel: 713-785-6906
            HOUSTON   494-5115
            Texas 77042   Contact: Graham Tubbs

BOWMAR
NEW YORK: 450 Park Avenue   Tel: (212) 752-3250
Mr E A White N Y 10022

Home address: 215 E 68 Street   Tel: (212) 988-3950
                New York

FLIGHT/HOTEL ITINERARY

CMS & MRP   9/14 DECEMBER 1973

	DEPART	ARRIVE

SUNDAY 9 DECEMBER

LONDON TO SAN FRANCISCO: Heath Row   San Francisco
Stopping at Los Angeles en   12.55   18.55
route 16.00 for 1 hr approx

Time difference: San Francisco 8 hrs

HOTEL: FAIRMOUNT HOTEL, Sunday, Monday, Tuesday

WEDNESDAY 12 DECEMBER

SAN FRANCISCO TO PHOENIX: San Francisco   Phoenix
Check in 50 mins before flight   08.35   10.25

Time difference: Phoenix 7 hrs

HOTEL: SCOTTSDALE TOWERS, 7233 East Shoeman Lane, Phoenix
        To be met by Jim Martin

THURSDAY 13 DECEMBER

PHOENIX TO HOUSTON: Phoenix   Houston
Check in 10 mins before flight   09.30   14.43

Time difference: Houston 6 hrs

HOTEL: Graham Tubbs will arrange accommodation and meet plane

FRIDAY 14 DECEMBER

HOUSTON TO BOSTON: Houston   Boston
Check in 40 mins before flight   18.25   23.51

Time difference: Boston 5 hrs.

HOTEL: MARRIOTT HOTEL, Route 128, Newton, Mass. Hertz car to meet.

SATURDAY 15 DECEMBER

BOSTON TO LONDON: Boston   London
Check in 45 mins before flight   21.00   08.15 SUNDAY AM

BOWMAR CANADA LTD.,
1257 ALGOMA ROAD,
OTTAWA 15,
ONTARIO.

TEL: (CODE: 613) 7463100

PRESIDENT: MR JAY CLIFTON
VICE PRESIDENT: MR BILL RATCLIFFE

BOWMAR/ALI INC.,
53L MAIN STREET,
ACTON, MASS. 01720.

TEL: (617) 2637756.

PRESIDENT: MR CHARLIE KRAKAUER.   Jim White

BOWMAR INSTRUMENT CORPORATION,
8000 BLUFFTON ROAD,
FORT WAYNE,
INDIANA 46809.
     (219)
TEL: 747 3121   Ed White's Office 2127523250

ED WHITE.

HOME ADDRESS: ED WHITE.

4403 OLD MILL ROAD,
FORT WAYNE,
INDIANA 46807.

TEL: (219) 7443036

ED WHITE (APPARTMENT IN NEW YORK).

215 EAST 68 STREET,
NEW YORK.
TEL: (212) 9883950

Western Digital

Dick Davis
Fred Little   man: product marketing. Pricing.
Bill Smith   Calc. expert.
Steve Stuart   Dir. marketing.
Al Phillips   President.
Luke Drm   Chip designer.

(last 32 words separate 2 words in and out otherwise full jump.)

Flip Stik.   288 × 9 bit Rom   no subroutine but has flags.
                   (32 × 9 × 9)
1 week sample   Shift register   4 × 40 bits (10 B.C.D. blank its hardware)
Nov. delivery

Chep Stik   216 × 8 bit Rom
January Samples Shift Register 3 × 40 bits
Feb. production

Segment blanking

San Diego f.way.

Bristol St. turn to right (South)

Left on second set of lights (Baker St.)

Straight down to junction of Red Hill & Baker St.

MEMO

To: Mike Pye
         Nigel Searle

From: Clive Sinclair

24 January 1974

Alan Watts of AMI phoned and gave me the following information:

For the 4 function chip, they propose a 2 phase programme,
phase 1 comprising engineering assistance during the design stage
at a rate of $35.00 per hour plus expenses, phase 2 being a
$35,000.00 lump sum to take us to 10 prototypes.

Pricing so far is based on the I^2 process, which they consider
the cheapest for our application, and assuming a plastic pack
with up to 18 pins:

        150 thou square: $3.1

         40   "   " $2.65

         30   "   " $2.4

Division Algorithm 2nd trial

$x \div y$

Put y in A
Put x in B

1. Add contents of A into C leaving A undisturbed.
2. Shift C right
3. Shift C right
4. Add C to A (result in A)
5. Put contents of B into C leaving B undisturbed.
6. Shift C right
7. Shift C right
8. Add C to B (result in B)
9. Test for 1st ~~two~~ digits in A being zero. If not return to (1)

~~Shift C right~~
~~Shift C right~~

10. Test for 1st 4 digits in A being zero. If they are go to "END".

~~Shift C right~~
~~Shift C right~~

11. Decrement A by 1.
12. Shift C right
13. Shift C right
14. Subtract all C from B.
15. Go to (10).

Result is now in B.

23026   23
               1·00260

      ·24.   2 4
                 1·015255

2·4   2·415255.

                      7
                 1·026316

25.
     2·5922   2·41 5255
                  ·726316.

2⁵⁰

24
3
18

C	$x \leftrightarrow M$ CE $x \leftrightarrow y$		
LN 7	LOG 8	E^x 9	x^y X $x^{1/y}$
R→DMS 4	R→GRAD 5	R→DEGS. 6	x^2 ÷ $\sqrt{}$
→R	→R	→R	
SIN 1	COS 2	TAN 3	MR + MS
ARC F CHS	E+ 0 E-	FL. PT. F^{-1} .	π — 1/x

2 memory

$7,530

Check 177

THIS CHECK IS IN SETTLEMENT OF THE FOLLOWING INVOICES		
DATE		AMOUNT
TOTAL		
DISCOUNT		
NET		

IF INCORRECT PLEASE RETURN. NO RECEIPT NECESSARY

AMERICAN BANK STATIONERY CO.   M

SOC ELECTRONICS INC.
510 EAST 86TH STREET NO. 12 E
NEW YORK, N. Y.   10028

177

19___   50-985 / 214

PAY TO THE
ORDER OF _____ $ _____

_____ DOLLARS

L:I BANK *Long Island Bank*
MID-ISLAND PLAZA OFFICE   4
HICKSVILLE, N. Y. 11802

⑆ ⑈0214⑈0985⑈ ⑆0402509591⑈

Check 178

THIS CHECK IS IN SETTLEMENT OF THE FOLLOWING INVOICES		
DATE		AMOUNT
TOTAL		
DISCOUNT		
NET		

IF INCORRECT PLEASE RETURN. NO RECEIPT NECESSARY

AMERICAN BANK STATIONERY CO.   M

SOC ELECTRONICS INC.
510 EAST 86TH STREET NO. 12 E
NEW YORK, N. Y.   10028

178

19___   50-985 / 214

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ORDER OF _____ $ _____

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MID-ISLAND PLAZA OFFICE   4
HICKSVILLE, N. Y. 11802

⑆ ⑈0214⑈0985⑈ ⑆0402509591⑈

Check 179

THIS CHECK IS IN SETTLEMENT OF THE FOLLOWING INVOICES		
DATE		AMOUNT
TOTAL		
DISCOUNT		
NET		

IF INCORRECT PLEASE RETURN. NO RECEIPT NECESSARY

SOC ELECTRONICS INC.
510 EAST 86TH STREET NO. 12 E
NEW YORK, N. Y.   10028

179

19____ $\frac{50\text{-}985}{214}$

PAY TO THE
ORDER OF_____ $ _____

_____ **DOLLARS**

LI BANK *Long Island Bank*
MID-ISLAND PLAZA OFFICE   4
HICKSVILLE, N. Y. 11802

⑉ ⑈0214⑈0985⑈ ⑈040250959⑈

AMERICAN BANK STATIONERY CO.   M

Check 180

THIS CHECK IS IN SETTLEMENT OF THE FOLLOWING INVOICES		
DATE		AMOUNT
TOTAL		
DISCOUNT		
NET		

IF INCORRECT PLEASE RETURN. NO RECEIPT NECESSARY

SOC ELECTRONICS INC.
510 EAST 86TH STREET NO. 12 E
NEW YORK, N. Y.   10028

180

19____ $\frac{50\text{-}985}{214}$

PAY TO THE
ORDER OF_____ $ _____

_____ **DOLLARS**

LI BANK *Long Island Bank*
MID-ISLAND PLAZA OFFICE   4
HICKSVILLE, N. Y. 11802

⑉ ⑈0214⑈0985⑈ ⑈040250959⑈

AMERICAN BANK STATIONERY CO.   M

Check 181

THIS CHECK IS IN SETTLEMENT OF THE FOLLOWING INVOICES		
DATE		AMOUNT
TOTAL		
DISCOUNT		
NET		

IF INCORRECT PLEASE RETURN. NO RECEIPT NECESSARY

SOC ELECTRONICS INC.
510 EAST 86TH STREET NO. 12 E
NEW YORK, N. Y.   10028

181

19____ $\frac{50\text{-}985}{214}$

PAY TO THE
ORDER OF_____ $ _____

_____ **DOLLARS**

LI BANK *Long Island Bank*
MID-ISLAND PLAZA OFFICE   4
HICKSVILLE, N. Y. 11802

⑉ ⑈0214⑈0985⑈ ⑈040250959⑈

AMERICAN BANK STATIONERY CO.   M

Mensacare

Please keep those offers of help coming in! Ideally we need experts and hosts in all areas, so if you feel you can be of help, don't hesitate to write either to me, Joan Murphy, or to your nearest Area Officer. You will remain anonymous unless you wish otherwise, all we ask is that you give your services when required. Only Area Officers' names are published.

Mensacare Officer

Joan D. Murphy, Keepers Cottage, Chase Lane, Kenilworth, Warks. T: 54532 (day or night).

Area Officers

SOUTH EAST ENGLAND: Mrs D. Grice, 6 Elizabeth Court, High Street, Polegate, Sussex BN26 5EN. T: Polegate 4631.

LONDON: Dave Lally, Basement Flat, 75 Richborne Terrace, London SW8 1AT. T: 01-622 0350 and he will take a message.

[E]AST ANGLIA: Chris Langan-Fox, 34 [Pl]easant Rise, Copdeck, Ipswich IP8 [ ]. T: Needham Market 720631 x281

[NOR]TH WEST ENGLAND: Joe South-[wort]h, 84 Whitefield Road, Pen-[wortha]m, Preston, Lancs. T: 42520.

[NORT]H EAST ENGLAND: Blanche Mur-[phy,] 4 Bagdale, Whitby, Yorkshire, or: [ ] Bardon, 18 Ancrum Way, [Spring] Park, Whickham, Newcastle [upon Ty]ne NE16 5RW.

[EDIN]BURGH: Deryck de Maine [Belle]mont, 2 Lady Stairs Close, Lawn-[marke]t, Edinburgh. T: 031-225 4965.

[ ] people need help; if you live in [an a]rea and can offer any expert [knowle]dge (law, medicine, social work [or j]ust plain willingness to write to [ ] anyone sick or in distress, [ ] contact them so that they can [add your na]me [to a] list of area helpers.

[Remember]—if you, or any M or FeM [you kno]w has a problem, you or [he ca]n always contact Mensacare [for he]lp. We are not miracle [worker]s, but we promise to do our [best.]

JOAN MURPHY
Mensacare Officer

[Maryla]nd, USA, recently authorized the [issuan]ce of special licence plates with [up to] a maximum of 5 letters in place of [the u]sual letter/number combinations [to re]sidents who were willing to fork [out] an extra $25. Don Laughery, editor [of t]he local newsletter, *M-ANATION,* [claim]ed to be quickest on the draw, and [his] auto now sports bright blue and [whi]te plates reading "MENSA". *(Via In-[terl]oc)*

Tiplog

Summer bookings this year are heavier than ever before. From the 14th July to the 8th September there is scarcely a bed to spare, and several members have been disappointed by their bookings having to be refused.

Autumn bookings are light so far, but those thinking of weekend gatherings at Tiplog this autumn should get in touch with us early.

Bob Roberts and friends have made a good start on repainting the outside of the cottage, and hope to finish it before the summer. Inside painting is rather like the Forth Bridge—there is always something to be done, and any visitors who are so unfortunate as to encounter wet weather are earnestly invited to make use of the paint which is in the cottage and paint some walls or ceilings. The bedrooms are next on the list for attention.

We shall be on holiday from the 13th July until the 5th August. All those who have bookings in July and August are requested to send us their money before the 10th July—not so that we can afford a holiday, but so that we can be sure that they get a key in time for their holiday. The number of keys is necessarily limited, and at busy times a certain amount of organisation is necessary to ensure that keys are in the right hand at the right time. An increasing number of people seem not to appreciate the importance of returning keys promptly, which adds to our difficulties.

Bookings for 1974 will open on the 1st November 1973.

STOP PRESS: A cancellation has left six beds vacant from 21st to 28th July 1973. Rooms B and D, telephone now if interested.

BETH AND JOHN LISHMAN

34 Stockwell Road,
Wolverhampton WV6 9PG.
T: 752016

BMC Election

Pursuant to Article 38 of the Articles of Association, I give notice that at the next Annual General Meeting the following members of the Committee will retire:

Mr. Normal Allen
Mrs. Barbara Courtney-Wildman
Mr. John Lishman
Mrs. Joan Murphy

Mr. Philip Anley has ceased to hold office, in accordance with Article 33(c). There will therefore be five vacancies on the Committee and accordingly I call for nominations.

Any member of British Mensa Limited may nominate a member or members for election to the Committee. The nomination must be in writing, signed by the nominator and by ten other members in support, and by the candidate in token of his acceptance of nomination, and must be deposited with me by 31st August 1973.

It is the responsibility of the candidate to ensure that everyone who signs his nomination paper holds a valid membership card.

A candidate may include with his nomination, a statement of up to 200 words in support of his candidature and a black and white photograph of enprint or postcard size. These will be circulated with the ballot paper.

ANDREW HAYNES,
Secretary,
British Mensa Limited.

78 Bunns Lane,
London NW7 2DR.

sight

THE MENSA SERVICE OF INTERNATIONAL GUIDANCE AND HOSPITALITY TO TRAVELLERS

Have you ever been lonely, bored or hard-up in a strange place? Would you like to meet Ms from other groups or countries? Then this is *your* service. Area organisers handle enquiries and arrange contacts between visitors and hosts from a list of Ms willing to offer hospitality or advice.

Registering with SIGHT incurs no liability but does bring increased opportunities to meet people and make new friends. This is illustrated by the comments of an Australian M who was able to tour Britain and Europe recently by using the services:—

"From the start SIGHT worked beyond my highest hopes. Without exception the hospitality of SIGHT members and other Ms I met was incredibly warm and generous. My entire trip was made more exciting and wonderful by meeting such marvellous people... the warmth of hospitality was quite overwhelming... Never have I met people with whom I felt so instantly comfortable. SIGHT is marvellous!—it made my trip... my praise is too great to be contained. Thank you for your help and SIGHT for existing."

This up-dated list of international SIGHT organisers replaces all lists previously published. Hosts offering accommodation and intending travellers in the UK should write in the first instance to:

UK: Sandra Madmoni, 15, Amhurst Court, Amhurst Park, London N16 5AX. T: 01-802 3774.

British Members requiring contacts abroad should write direct to the SIGHT organiser in the country they intend visiting.

AUSTRALIA and NEW ZEALAND: Elizabeth Stevenson, 43 Clyde Street, Box Hill, Victoria 3129.

AUSTRIA: Robert Romich, Bockinstrasse 66/2, A-1020 Wien. T: 0222 7385955.

CANADA: David A. Bonyun, 2018 Rideau River Drive, Ottawa, Ontario K1S 1V2.

FRANCE: Mme. Evelyn Martin, 6 Allee du Grand Tulipier, 92 Ville d'Avray. T: 926.1362.

GERMANY: Adolf Feldovoss, D-600 Frankfurt 70, Bindingstrasse 12, T: 0611-618697.

JAPAN: Miss Lois Kaplan, 804 Chiyoda Mansion, 35 Ichigaya Honmura-cho, Shinjuku-ku, Tokyo 162.

NETHERLANDS: Bob van den Bosch, Catsheuvel 6, Apt. 8/2' The Hague. T: 070-547060.

USA and MEXICO: (Southern Region and Mexico) Ione S.Ferris, 1528 N. 53rd Street, Milwaukee, Wisconsin 53208.

(Eastern Region) Miss Joan H. Clymer, 405 Birdwood Avenue, Haddonfield, New Jersey 08033.

(Midwest Region) Miss Mary Lou Bischman, 3780 N. Racine Avenue, Chicago, Illinois 60613.

(New York) Arthur Wohl, 52 Clark Street, Brooklyn, N.Y. 11201. T: 212.834.8993.

(Western Region and Los Angeles) Mrs Nancy Burk, 3823 Manchester Street, Colorado Springs, Colorado 80907.

SIGHT in countries not listed above is the direct responsibility of the International Organiser:

REST OF THE WORLD: Ian Palmer, 1 Court Royal, Carlton Drive, London SW15 2BJ. T: 01-789 1050.

Please note: Travellers should always notify the National Organiser of the country they are visiting if unable to take advantage of hospitality arranged to their requests, giving as much notice as possible.

SANDRA MADMONI
UK Organiser

HOLIDAY ACCOMMODATION

YORKSHIRE COAST. Peaceful house in peaceful surroundings. Sunny secluded garden. Retire School-Mistress FeM offers self-catering a commodation to non-smokers in her hist Georgian house. Between sea and moors. I for painting, writing, walking. Pony Trekking be arranged if required. This historic area i worth a visit by overseas visitors. Blanche ton, 14 Bagdale, Whitby, Yorkshire.

NORMAN SHEPPARD

It is sad to have to record that Norman Sheppard died in May, at th of 67. He was a pioneer—in Mensa, in education and in goodwill. He Mensa in its early days, and ever since he played an active part at A Gatherings and week-end conferences whenever he could. Over the he gave many imaginative and entertaining talks about education, sonality development and human relations and ideals, always car prepared and happily delivered.

The keynote of Norman's talks was the fulfilment of individual sonality. He was passionately devoted to helping young people to learn to develop to the fullest extent of their capacity for the benefit and plea of themselves and humanity generally. He was a forthright critic of ventional, conformist educational objectives and methods. His patien tention to the individual needs and wishes of pupils and students ear him their respect. His enthusiastic advocacy of educational reforms and provements earned him the admiration of many older people, in educatio circles and in Mensa.

Norman will be remembered as a tall, smiling, kind man, an energetic, pu poseful talker and doer, especially by the many friends he made at Brazie Park and other places where Mensa members meet to try to put the worl right. His influence for greater goodness in life will be missed.

E.H.

photo: Victor Serebriakoff

LONDON SCENE

All members of Clubman's Club will, from time to time want to take a look at London's night life, and the first problem is to decide where to go for an enjoyable evening.

London is an extremely cosmopolitan city which offers countless sophisticated clubs and discotheques with a high standard of entertainment. Many of these are listed in your Directory so you have a wide selection to choose from. Several are listed below but it is impossible to mention them all. Starting with the all-in-one spots which include spectacular floor shows, dinner dancing and bars at the usual West End prices:

The BLUE ANGEL has recently been extensively altered and there is an attractive waterfall by the reception lounge. You'll find a glamorous cabaret in this now very friendly club, run by John Aziz. There is always a party atmosphere at the ASTOR which is famous for its dancing girls and for a weekly change of cabaret acts. If you want a Paris atmosphere visit CLUB BELLES DE NUIT, the club run by gorgeous girls. It boasts topless barmaids and waitresses in see-through gear who serve drinks, while clients watch the very erotic cabaret. The LATIN QUARTER in Wardour Street, is a more well-established club whose main attraction is the excellent floor shows, easily the biggest ever presented at that club and twice nightly. CHURCHILL'S deserves to be mentioned for it's chicness and

because you can dance there until 4.00 a.m. and breakfast is included in the entrance fee. Don Ward runs the NELL GWYNNE THEATRE CLUB which has continuous striptease shows from 6.00 p.m. until midnight, (last show 10.00 p.m.), and if you haven't seen enough you can reassemble in the GARGOYLE and continue watching the striptease cabaret into the early hours.

The CASINO DE PARIS was one of the first striptease clubs in the country. There are continuous shows from 2.00 p.m. and you can have drinks at your table while watching the show. There is an intimate atmosphere at LA CAPANNINA nightclub in Bateman Street, which has striptease cabaret from after midnight until the early hours. Fancy seeing a small show in intimate surroundings, visit LE REIMS the night club nearest to Piccadilly Circus. There are many dine and dance places. One of the newest is CHAMPERS (opposite Bond Street Tube Station). As the piano tinkles in the background, you can be entertained by one of the many very attractive dollies, some of whom are topless, who are there to serve and entertain you. Veli has recently opened the BLUE GARDENIA in Mill Street where you can dine and dance to swinging

Rusty Allen is currently appearing in the Latin Quarter's "High Society"

music on the organ. The CANDLE-LIGHT night club is small, intimate and expensive, but very "Mayfair". There is piano entertainment and a small dance floor. In St. James's, the GEORGIAN is unusual as drinks can be bought (before 11 p.m.) at off-licence prices or you can bring your own. If you just want to drink in a friendly atmosphere visit the NEW MANHATTEN in Woodstock Street where all Clubman's members are made very welcome. For the younger members (or the more active), there are many swinging discotheques where pop-music reverberates. One of the oldest clubs in London is

HATCHETTS. In a very intimate atmosphere you can dance to live groups and disc-jockey, and take a meal in the restaurant or a snack in London's famous Piccadilly. Visit London's exciting new disco club — accessible by lift only — or, in other words, BOTTOMS up. Inside it's like walking into the Garden of Eden. Robert Grant's Club LA PARRANDA is unique as there is a resident South American band nightly, and a steel band every Wednesday. As dawn approaches you may want to drop in at RONNIE SCOTT'S, famous for it's Jazz Scene, for a final dance and breakfast.

If your next holiday seems as far away as the last, you will welcome one of the Grand Metropolitan Hotel Mini Holidays for a break during the forthcoming Winter period. These programmes include Camelot Country Mini Holidays Stardust Merry Go Round and a series of special Christmas programmes that they are featuring in sixteen hotels both in the countryside and in London. Write to us for details. A special 7½% discount is applicable to Clubman's Club members.

CAMELOT COUNTRY MINI HOLIDAYS
Pick any few days and decide where you'd like to go. Any time between 1st October 1974 and 30th April 1975, for a minimum of two nights. Anywhere in Camelot coun-

TAKE A BREAK THIS WINTER!!

try. One payment gives you the pick of the best country hotels, full English Breakfasts and Lunch or Dinner for each day of your stay, including service and VAT. But here's the clever part. You don't have to stay in one place or one hotel. You can move as the fancy takes you. Spend your first night in Chaucer's Canterbury, move to Stratford-Upon-Avon the next day. Do whatever you like. If you require further details please fill out the coupon

STARDUST MERRY GO ROUND
Between the period of 1st October 1974 and 31st March 1975 you can have unlimited second class rail travel for any three days of the week and also a Godfrey Davis car for three days and two nights accommodation in any of the thirty-four Grand Metropolitan country hotels, including full English Breakfasts, hotel tips and VAT for the amazing price of £19.15 less, of course, your Clubman's Club discount.

You can extend your holiday for an additional £7.50 per person for each additional night and day.

XMAS PROGRAMMES
Special inclusive programmes have been arranged at fourteen county hotels and two London hotels for an inclusive price. The majority of the programmes are available from 23rd December 1974 for four nights. However, if you would like to start Christmas a little later, there are also programmes which start on 24th December 1974.

SPECIAL STARDUST LONDON CHRISTMAS PROGRAMME
Between the period of 19th December 1974 to 6th January 1975 a special

Continued over ✳ ✳ ✳ ✳

OFFERS GALORE INSIDE THIS WINTER ISSUE

NEW CLUBS

MIDLANDS

Bold and inviting, THE HEART OF THE MIDLANDS holds a commanding place in the city centre of Nottingham.

Opened in November 1973, the club, which can accommodate nearly 1,000 members is open every night — Sunday evenings 7.00 p.m. to 12 midnight, weekdays 7.30 p.m. to 2.00 a.m. Music for dancing is provided by two resident house bands and a 2½ to 3 hour cabaret is featured starring top international artists. Already the biggest names in the business have appeared at the club—DAVE ALLEN, GENE PITNEY, KEN DODD, THE DRIFTERS, FRANKIE HOWERD, LENA MARTELL, THE BARRON KNIGHTS, and in the immediate future other top liners engaged to appear are TONY CHRISTIE, LESLIE CROWTHER, MATT MUNRO NORMAN WISDOM, THE ROCKIN' BERRIES, JACKIE TRENT and TONY HATCH.

Catering facilities at the club are very good and patrons have the choice of either the four course Table d'Hote dinner (£2.25) —the cold banqueting buffet (£1.00) or the Chicken Fayre (70p).

The HEART OF THE MIDLANDS is controlled by Joe Pullen —— proprietor of the popular TALK OF THE NORTH club, Manchester, and his co-director in Nottingham is Derrick Wright, former proprietor, of the CARLTON CLUB, Chesterfield. Both Joe and Derrick are Council members of the Cabaret Clubs Federation.

ECCLES, MANCHESTER.

The TALK OF THE NORTH, which re-opens in February 1975, will also be affiliated to Clubman's Club.

WEST COUNTRY.

The YEW TREE COUNTRY CLUB (Tel. Wrington 862332) situated on the Main A38 road at Langford is delighted to bring to you first class cabaret in their licensed restaurant where you can wine, dine and dance in a truly delightful atmosphere. The Cabaret at this club changes weekly. Stars such as PETERS and LEE, KEN GOODWIN, PAT MOONEY, MIKE BURTON, etc. have appeared in the past. This club takes pride in the fact that the Restaurant is under the personal supervision of Antonis Antoniou, their Head Chef, and has received great aclaim from visitors for it's high standard of food, service and well stocked wine cellar. Ron Williams, the Club Manager, will make all members of Clubman's Club very welcome.

The RISING SUN CLUB, Lower Godney, Nr. Wells, Somerset. (Tel. Glastonbury 2071) is near impossible to find on any run-of-the-mill map. Situated in the middle of everywhere with Wells some five miles north-east and Glastonbury three miles south-east and anyway, the Sun, where you can wine, dine and dance, is right in the heart of the King Arthur Country. The Club, which is also a free house, is open at Lunchtime. Parking facilities are usually chronic by 8.30 p.m. and the use of side-lights may well be necessary. The proprietors, Mrs. Joan Emett and Ian Day cater for all tastes, but for mutal convenience, telephone booking is recommended.

Concessions for our Members

As you no doubt have appreciated a number of our nightspots are open to the general public and not strictly members only, we have included these venues where we consider our members can have an enjoyable evening. Whenever possible we will obtain special concessions/benefits, and these will in future be shown in our Directory. Two or three concessions are featured below:

SCAMPS offer superb late night entertainment for the 20's to 30's. Situated in key centres throughout the country, SCAMPS present exciting music in luxurious settings for many thousands of people, from 8 p.m. to 2 a.m., Monday to Saturday.

All SCAMPS are fully licensed with a wide selection of drinks and wines. Dining facilities provide a range of grill meals at very reasonable prices or simple snacks such as pizzas or curries. Clubman's Club members visiting SCAMPS in Bolton, Carlisle, Croydon, Hemel Hempstead, Leicester, Newport, Norwich, Southend and Sutton, have a free admission concession from Monday to Thursday inclusive. In the case of the following SCAMPS, a special entrance concession price will be applicable to Clubman's Club members, Bradford 25p, Bristol 5p, Hull 10p, Oxford 10p and Sheffield 10p.

Newcastle and Nottingham SCAMPS are membership clubs (and also Croydon, on a Sunday only). Clubman's Club members are automatically members of these clubs and the normal waiving of entrance fees from Monday to Thursday will also apply here.

THE KEVIN MORRIS GROUP has a strong foothold in Stoke and it's surroundings with a total of seven nightspots. The young at heart can have a fantastic time at THE PLACE, THE PLACEMATE(S), KORKEY and THE CHESHIRE CAT, where the food is marvellous, prices sensible, and all the latest sounds. If you want a complete night of entertainment, go to JOLLEES at Longton, Stoke-on-Trent. Top class cabaret is the main attraction, but there is also dancing to The John Simons showband or to popular records from resident compere Mel Scholes. MAXIMS a really plush discotheque for the over 20's, has recently been opened in Hanley. The decor is late nineteenth century French style, with modern surroundings. Special facilities include the latest 'quadrophonic sound', a wine and spirit bar, and smorgasbord. All Clubman's members are allowed in at the Kevin Morris venues at members priveliged rates.

CESAR'S PALACE at Luton continue to provide star studded entertainment, in comfortable surroundings and all this with the new club facilities which include additional seating for approximately 250 people, a new enlarged bar, a self-service buffet snack bar and TV lounge, make CESAR'S good value for money.

The regular members of CESAR'S PALACE, Luton, receive complementary tickets from time to time for certain of their weekly shows. This entitles a member to bring up to four guests at one time. As CESAR'S PALACE is affiliated to Clubman's Club, the management will include any Clubman's Club member living in Luton and the surrounding area on their regular mailing lists for this benefit. Members should write to the Club Secretary, Cesar's Palace, Luton, quoting their Clubman's Club membership number, name and address, if they wish to take advantage of this facility.

Xmas Hampers ~ Meat Packs

For many years now our members have ordered Xmas Hampers through Clubman's Club. It relieves you of all the worries of choosing a present for friends and relations, and also is an excellent way of showing appreciation to your staff, colleagues, and clients. Gifts of food are always acceptable and usually shared by all the household.

As some of the Xmas Hampers were delivered late last year, we have changed our supplier — we think the **enclosed details** offer the best selection Clubman's have ever produced, but please order as early as possible to ensure they arrive well in time for Xmas.

Cut Price Drinks

Clubman's Club has made its usual arrangements for the supply of wines and spirits to you during the festive season. Details of our packs will only be available up to 31st December, 1974, at these very competitive prices, delivered free of charge to your home in the U.K. — Please order as early as possible to ensure timely arrival if required for Xmas or the New Year. The enclosed brochure gives full details.

Clubmans ties, cufflinks and car badge

Distinguish yourself as a member of Clubman. The tie is in high quality crimplene yarn and the cufflinks made of polished metal on vitreous enamel. The car badge is solidly made in chromium-plated steel. All three items feature the Clubman's Club symbol in silver.
The cost is £1.50 for the tie, £1.50 for a pair of cufflinks and £1.95 for the car badge. All prices include p. & p.

DISCOUNT FISHING

In applying for a Leisure Sport Angling permit the individual, be he veteran, or rank novice, has access to a vast range and variety of waters. Course fishing on 82 lakes and 16 rivers, situated in 13 counties. There are two circuits — the Southern Circuit comprising of Bedfordshire, Berkshire, Buckinghamshire, Essex, Hampshire, Hertfordshire, Kent, Middlesex, Surrey and Sussex. The Midland Circuit comprises of Bedfordshire, Hertfordshire, Norfolk, Nottinghamshire and Suffolk. Single group and overall permits covering a variety of locations for a full season's fishing are available. These vary in price from single water permits costing £3.24 to an overall permit for all Southern and Midland waters costing £10.26 (inclusive of V.A.T.) Leisure Sport Angling is offering 15% discount to members of Clubman's Club for all of their fishing facilities in 1975.

For full details please write, giving your membership number and we will send you the 68 page guide Book.

New clubs for your Directory

We have pleasure in announcing new clubs, which we have added to our list since the last newsletter.
LONDON: Scamps (Croydon); Scamps (Sutton); La Parranda.
BIRMINGHAM: Rum Runner Club; The Midland Sporting Club; The Birmingham Sporting Club; Golden Gloves; New Garryowen; Rum Runner Casino.
BEDFORD: Stars.
BOLTON: Scamps.
BRACKNELL: Dawbourne.
BRADFORD: Scamps.
BRISTOL: Bailey's; Scamps.
CARLISLE: Scamps.
COVENTRY: The Club 100.
ECCLES: The Talk of the North (Open now Feb. 1975).
GREAT YARMOUTH: Tower Cabaret Club.
HEMEL HEMPSTEAD: Scamps.
HULL: Scamps.
LANGFORD: Yew Tree Country Club.
LEICESTER: Scamps.
LIVERPOOL: Bailey's
LOWER GODNEY: Bailey's.
LOWER GODNEY: Rising Sun Club.
NEWCASTLE: The Newcastle Sporting Club; Scamps.
NEWPORT: Scamps.
NORTHAMPTON: 101 Club; P.J.'s.
NORWICH: Scamps.
NOTTINGHAM: The Heart of the Midlands; Scamps.
OXFORD: Scamps.
READING: Harvey Wallbanger.
SHEFFIELD: The Sheffield Sporting Club; Scamps.
SOUTHAMPTON: The Ambassador Club.
SOUTHEND: Scamps.
STOCKTON - ON - TEES: The Teeside Sporting Club.
STOKE-ON-TRENT: Bailey's; Jollies; Maxims.
WATFORD: Scamps.

The following clubs should be DELETED from the Directory due to closure, non-affiliation, etc.
BARNSLEY: Monk Bretton Social Club.
BIRMINGHAM: The Gay Cosmo; Kenko-Furo; Piccadilly Disco.
BOURNEMOUTH: Adriano's.
BRISTOL: Top Cat Nite Club.
ILFORD: El Grotto.
LIVERPOOL: Grosvenor Club.
MARKET HARBOROUGH: Golden Guinea Club.
NANTWICH: The Wayfarer.
NORTHAMPTON: Society Club; The Characters Club.
PENZANCE: Barn Club.
REDCAR: Palace Casino Club.
ROWLANDS CASTLE: The Staunton Country Club.
SOUTHAMPTON: Adam & Eve Disco; Club Concorde.
WESTERHAM: Oak Lodge Country Club.
WESTON-SUPER-MARE: Glengarry Hotel.

SR 36

SCIENTIFIC CALCULATOR

Fifteen functions give this machine all that you could want from a calculator at the price. These are: $x \leftrightarrow y$, Ln, Log x, $\sqrt{x}$, sin, cos, tan, arc, y^x, e^x, (,), 1/x deg/rad, π, x^2.

A true memory is also included, using only one key for enter and recall. This is separate from the bracket facility for more flexibility. Clear, clear last entry and change sign keys supplement the normal four functions. The display is composed of large, clear LEDs and has a range of ten digits, with an exponent range of 10^{99} to 10^{-99}. The bracket facility is perhaps this machine's strongest selling point, as it increases the effectiveness of the usual "enter/roll" facility. Equations such as those below are solved logically and in the same order as you would write them. Included in the price are rechargable batteries and an ac/dc adaptor.

The bracket facility being the main feature of this machine, a couple of examples will illustrate its effectiveness:

Time Dilation

An astronaut rockets at 0.866025403 times the speed of light. His flight will last for 100 years and he is 25 years old when he is launched. How old will he be when he returns.

t_S = Space time
t_E = Earth time
$V = C (0.866025403)$
C = Speed of light 186,000 miles/sec

$$t_S = \frac{t_E}{\sqrt{1 - \left(\frac{V}{C}\right)^2}}$$

$$= \frac{t_E}{\sqrt{1 - (0.866025403)^2}}$$

Enter Figure	Depress Function Key	Read
1		1.
	−	1.
	[	0.
.866025403		0.866025403
	y^x	0.866025403
2		2.
	]	0.749999999
	=	0.250000001

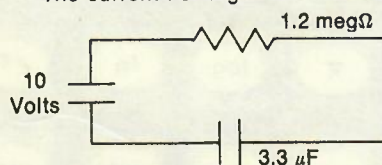|		
	$\sqrt{x}$	5.000000009-01
	$\times$	5.000000009-01
100		100.
	=	50.00000009

t_S = 50 years Therefore: 50+25 = t_E = 75 years old.

Electronics

In the RC circuit below, what is the time constant and what is:

The current flowing after 10 seconds.

T = Time Constant
V_R = Voltage Across Resistor
I = Current
R = 1.2 meg
C = 3.3 μF
T = RC
$I = \frac{V_O}{R} (I - e - t/RC)$

Solving for T

1.2			1.2
	Exp		1.2 00
6			1.2 06
	$\times$		1200000.
3.3			3.3

	Exp	3.3 00
	+/−	3.3-00
6		3.3-06
	=	3.96
	M	3.96

(T) Time Constant in Seconds

Solving for I

10		10.
	÷	10.
1.2		1.2
6	Exp	1.2 00
		1.2 06
	$\times$	8.333333333-06
	[	0.
1		1.
	−	1.
	[	0.
10		10.
	÷	10.
M		3.96
	+/−	−3.96
	]	−2.525252525
	e^x	8.00380986-02
	=	7.666349175-06

(I) Current after 10 Seconds

i.e. it really is as you write it. What could be simpler? To operate the memory keying is as follows: to enter a number push the M key after any equals sign. To recall, or carry out memory arithmetic use the M key to enter the memorised number into the equation, e.g. X+M=. Rechargeable batteries last for 4 hours, they take approximately 8 hours to charge fully. The calculator can be used whilst trickle-charging from the mains.

ONE YEAR GUARANTEE
Dimensions: 1"x3"x5"
Weight: 6 oz.

DELIVERY: ex-stock or within 10 days of receipt of order.

Made in U.K.

GREENLINE

A BRIGHT NEW LOOK IN CALCULATORS

GL986R & GL987R

. . . both with GREEN FLUORESCENT display that is

- clearer
- brighter
- larger &
- easier to read even on the brightest days.

commodore

The GL986R & GL987R have the revolutionary green fluorescent display AND common sense logic that works problems just as you would write them down.

Commodore GL986R
Outstanding Features

Features a total performance per-cent (%) key that automatically computes percentages and lets you add it to, or subtract it from, your total instantly. An exchange key is featured on the roomy key-board . . . and much more.

- Large, clear, bright GREEN FLUORESCENT display.
- Automatic credit balance indicator.
- Direct function percent key.
- 8-digit capacity.
- Automatic constant.
- Exchange key.
- Automatic floating decimal.
- Algebraic logic.

Technical Data:

- Rechargeable Ni-Cad batteries.
- AC/DC adaptor-recharger.
- Carry case.
- Solid state super large scale integration (S-LSI) components.
- One year guarantee.
- Weighs just 6 ounces.
- 5-1/2" (D) x 3-1/16" (W) x 3/4" (H)

Commodore GL987R
Outstanding Features

This calculator features a four-button memory and the most versatile percent (%) key in the industry. You can handle all per-centages directly. It also has an exchange key . . . and much more.

- Large, clear, bright GREEN FLUORESCENT display.
- Direct function percent key.
- Four-key memory.
- 8-digit capacity.
- Automatic constant.
- Exchange key.
- Automatic floating decimal.
- Automatic credit balance indicator.
- Memory signal light.
- Algebraic logic.

SLIMLINE

17852963

commodore

15895894

commodore

PORTABLE
ELECTRONIC
CALCULATORS
784D/786D

commodore

Portable Electronic Calculators for School, Home or Office

Commodore 784D
Outstanding Features

Full four-function calculator with 8-digit easy to read display. A perfect full time companion——Ideal in many situations.

- Add, subtract, multiply, divide
- Automatic floating decimal
- Automatic constant
- Display time-out increases battery life
- Automatic credit balance indicator
- Clear entry capability

Commodore 786D
Outstanding Features

Full four-function calculator with 8-digit easy to read display. This unit features a total performance Percent key that adds to, or subtracts from, a displayed total. The Exchange key reverses rolls of factors in multiplication and division allowing you to check a previous entry.

- Add, subtract, multiply, divide
- Automatic floating decimal
- Percent key
- Exchange key
- Automatic constant
- Display time-out increases battery life
- Automatic credit balance indicator
- Clear entry capability

Keith Rowley   Gladys
                 E. N. BLAIR
                 16 POLSON DRIVE
                 JOHNSTONE
                 PA5 8RU.

Sinclair Radionics Ltd
   St Ives

Dear Sirs,

         I would like some information *
on your Project 80. Can you
supply some. Even though you
have given up sales of hi-fi
equipment you must surely have
someone in your employ who
knows something about Project 80.

                    Yours sincerely

                    E Blair

* Connection of modules

Sinclair Radionics Ltd
London Rd. ST. Ives
Huntingdonshire.
PE17. 4HJ

Sinclair Radionics Ltd
London Rd. ST. Ives
Huntingdonshire.
PE17. 4HJ

37 moorlands,
Scholes
Huddersfield.
HD.7, 1.S.W,

Dear Sir
          Would you please send.
me a copy of your Project 80,
manual,

          yours faithfully
          S. Kaye.

E.W. HOWARD.
8. ELM AVE
RUSHCLIFFE EST
EAST LEAKE
LOUGHBOROUGH
LEICS
LE126QJ
25/7/77

PROJECT 60.

Dear Sir,
        I have purchased complete
one of your project 60's complete
    (230)   (STEREO 60)   (PZ5)
2. AMPS./ PREAMP/ mains supply and.
from a person who atthough purchased
new a few years ago has never got
down to wiring them.
Alas what he has not kept was
the construction manuel can you
please help me in the supply of
one
        Yours sincerley   E.W.Howard

Sinclair Radio

London Road ,

Cambs PE 17

England

← Second fold here →

Sender's name and address إسم المرسل وعنوانه

Dr. Y.E. Salman

P.O. Box 4617

Ruwi , Muscat

Sultanate of Oman .

لا يسمح وضع شيء بداخله
NO ENCLOSURE PERMITTED
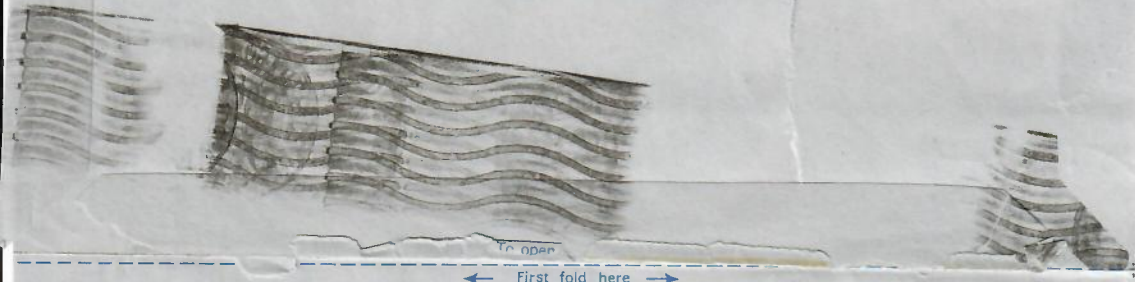
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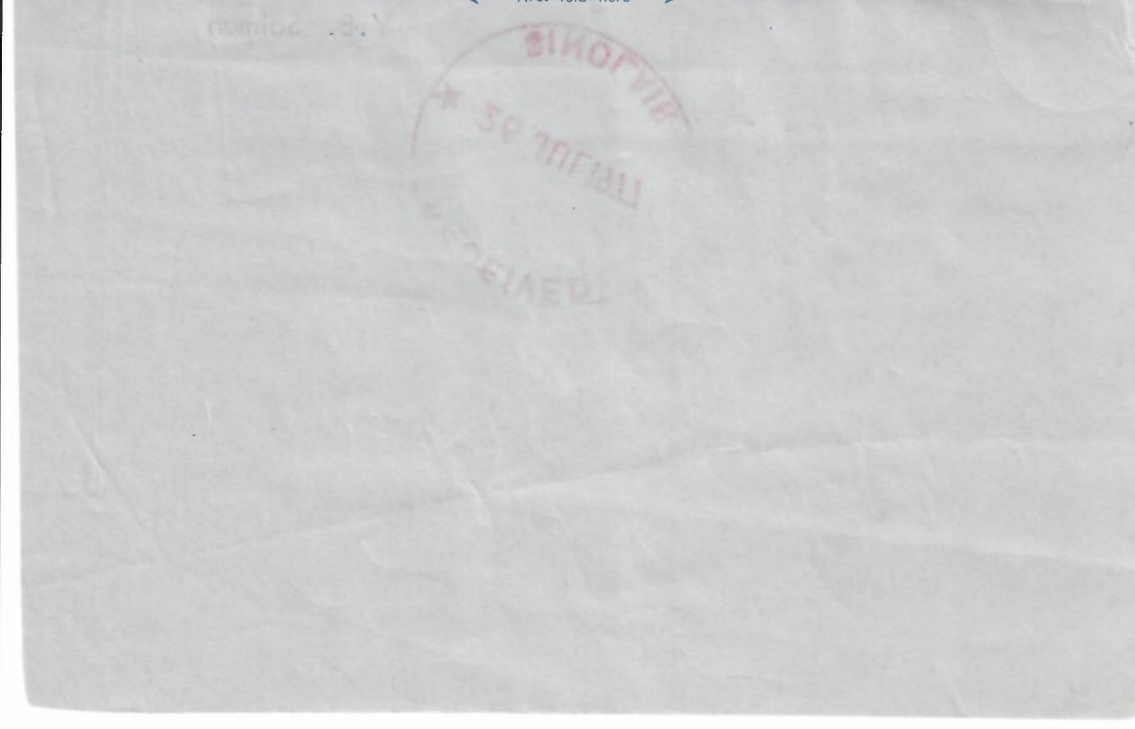
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Dr. Y.E. Salman
P.O. Box 4617
Ruwi , Muscat
Sultanate of Oman .

Sinclair Radionics Ltd.
London Road , St. Ives , Huntingdon
Cambs PE17 4HJ
England

Dear Sirs ,

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Y.E. Salman

TAKE THE TEE-TRAIN

The rhythm of the rails may have faltered elsewhere, but the brightly shining steel expressways of a united Europe form a system for the future...David Tennent explains

OUT OF 34 rail journeys of more than 200 kilometres that I have made in Europe during the past 18 months, only five arrived more than ten minutes behind schedule. Nineteen arrived on the dot and the remainder within two or three minutes of their advertised time.

Experiences such as mine are one reason Europeans are beginning to agree with the long-held opinions of a far-sighted minority of transport experts that rail travel, far from being a thing of the past, is in fact the wave of the future.

One of the greatest built-in advantages of rail over road or air systems is a deceptively simple one — they already exist. Even if not another kilometre of track were to be laid, every city and most towns of any importance in Europe would have rail communications. Moreover, improvements on existing tracks can be and are being made continually without damaging the environment — and even new lines, such as the proposed Paris-Lyons route and the system linking the Channel Tunnel portals,

will be less damaging to the surrounding countryside than equivalent motorways.

Much of the impressive growth of European rail systems is attributable to the Trans-Europ Express (TEE), a model of international cooperation with a network of 37 expresses connecting about 110 cities and major towns. Since its establishment in 1957, the brainchild of the then-Director General of the Dutch railways, Dr. H.J. den Hollander, TEE has far outstripped its original brief: to

30
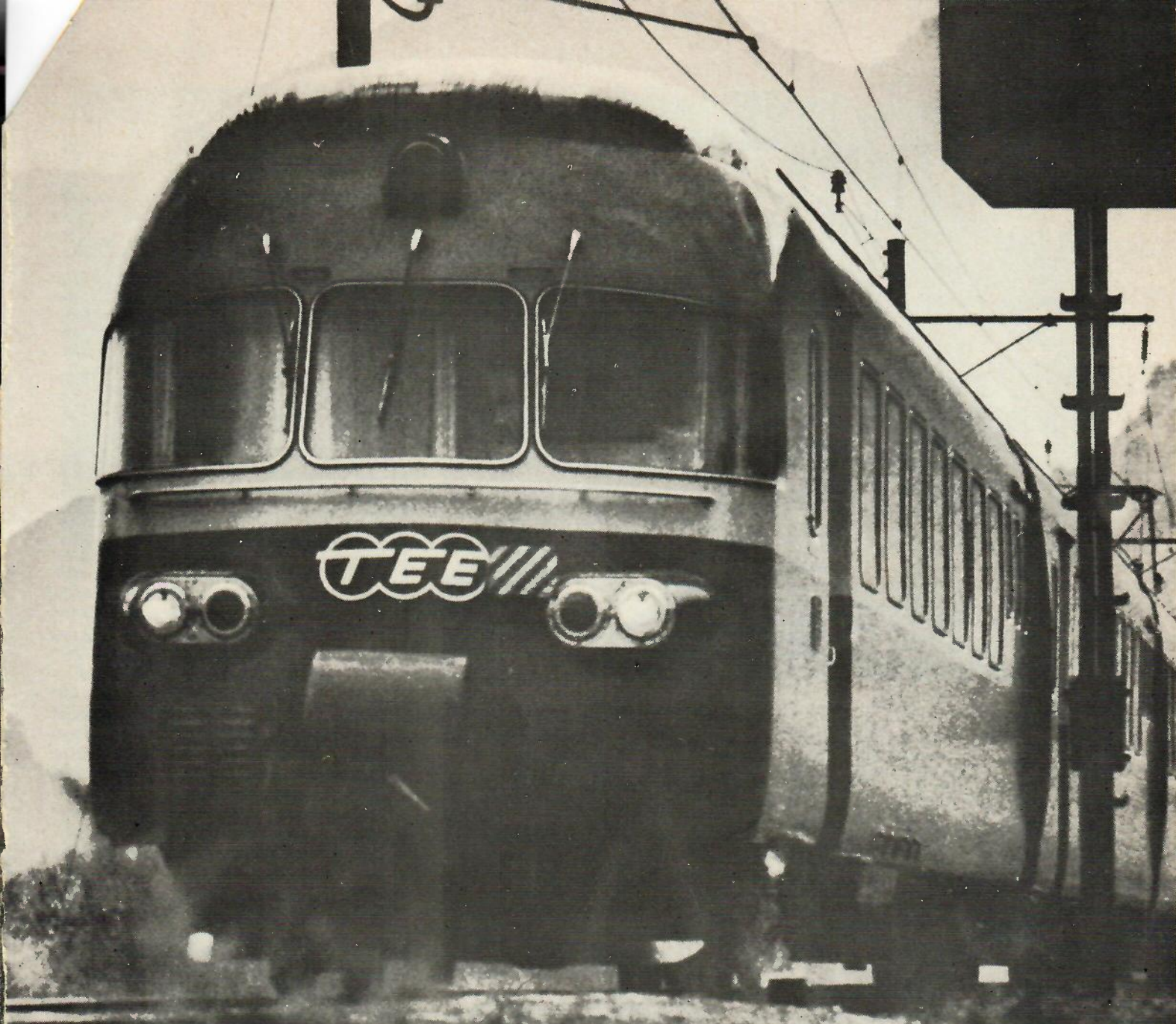
David Tennent's ten favourite European trains

MISTRAL. Depart Paris (Lyon) 1320. Dijon-Lyons-Avignon-Marseilles-Toulon-Cannes. Arrive Nice 2225. Depart Nice 1434. Arrive Paris 2335. **TEE**

Most sophisticated train in the network. Two restaurant cars (one only between Marseilles and Nice); meals also served in open saloons. Bar, bookstall and ladies' and gents' hairdressing salon.

GLACIER EXPRESS. Switzerland. Summer only. Depart Zermatt 1825. Brigue-Andermatt-Disentis-Chur. Arrive St. Moritz 1728.

One of the most scenically attractive runs in Europe, across the roof of Switzerland. Metre gauge line, part rack-and-pinion traction. Dining car for about half the trip.

RHEINGOLD. Depart Hook of Holland 0721. Amsterdam-Duisburg-Cologne-Mainz-Mannheim-Freiburg-Basel. Arrive Geneva 1849. Through coaches arrive Zurich 1716, Chur 1906, Lucerne 1700, Milan 2100. Depart Geneva 1132. Arrive Hook of Holland 2256. **TEE**

Follows Rhine Valley for much of route. Vista-dome car and bar. Restaurant. Secretarial service. Connects with Harwich/London sailings at Hook of Holland.

AQUITAINE. Depart Paris (Austerlitz) 1752. Arrive Bordeaux 2152. Depart Bordeaux 0800. Arrive Paris 1208. **TEE**

Modern "Grand Confort" coaches. Restaurant car. Fastest non-stop run in Europe. Northbound also calls at Angoulème and Poitiers. Excellent cuisine.

ROYAL HIGHLANDER. Britain. Depart London (Euston) 2015. Crewe-Preston-Perth. Arrive Inverness 0830.

The civilised way to visit the Scottish Highlands from London. Have a late dinner on the train, sleep your way north and wake to early-morning tea in the mountains.

TROLLTOG. Norway. Depart Oslo 0930. Geilo-Finse-Voss. Arrive Bergen 1910.

June to August only through some of Norway's finest scenery. Stops at Finse for lunch and sightseeing.

BLUE TRAIN. France. Depart Paris 2045. Dijon-Lyons-Avignon-Marseilles-Cannes-Nice-Monaco-Menton. Arrive Ventimiglia 0920.

A "nostalgia special" but with superb new sleeping cars. Wake up to the Mediterranean coastline. Dining car all the way and a salon-bar car, the last of its kind on regular service.

TRANSALPIN. Austria. Depart Vienna 0945. Salzburg-Innsbruck-Zurich. Arrive Basel 2023.

Another mountain spectacular. A two-class train, very comfortable, with full meal service. Reservation obligatory.

PELORITANO. Italy. Depart Rome 1215. Naples-Salerno-Reggio-Messina. Arrive Palermo 2241.

An all-first-class "rapido" which plays hide and seek with the sea along much of the beautiful Calabrian coast. Through coaches for Taormina, Catania and Syracuse. Meals served at your seat.

LIGURE. Depart Milan 0655. Cenoa-San Remo-Monaco-Nice-Cannes-Toulon-Marseilles. Arrive Avignon 1430. Depart Avignon 1547. Arrive Milan 2315. **TEE**

Route follows Mediterranean, serving both French and Italian Rivieras. Connects at Avignon with the "Catalan-Talgo". (Geneva-Barcelona). Meals at seats or in restaurant car.

31

Where to take the TEE train
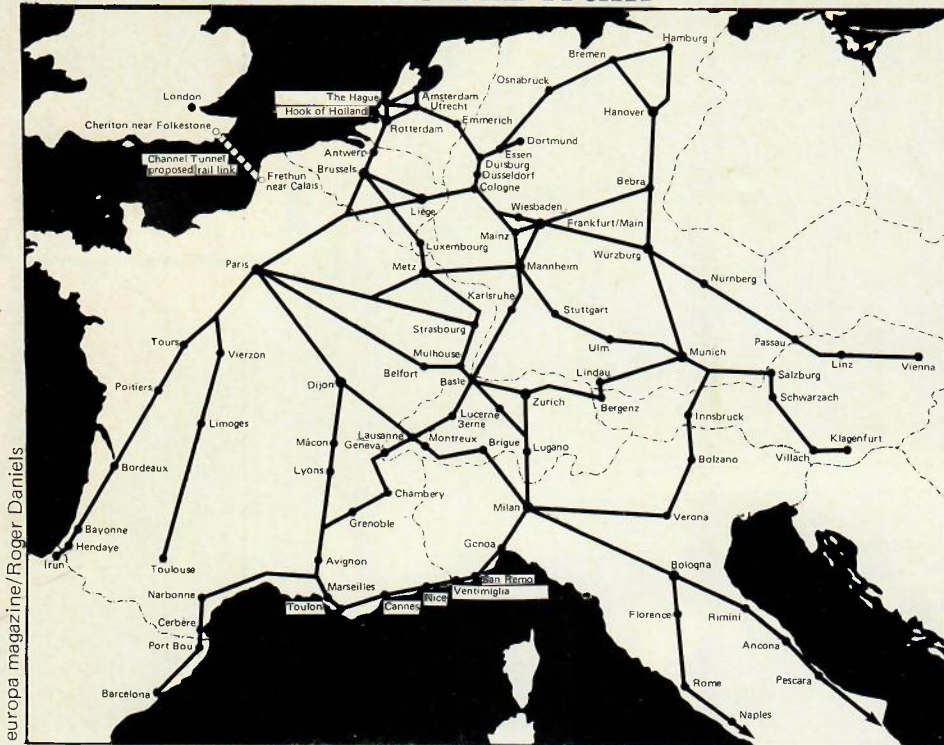
europa magazine/Roger Daniels

compete with air and road travel for distances up to 500km. using special fast expresses capable of reaching their destination in not more than half a day's travel, so that a businessman, for example, can travel TEE from Zurich to Paris in the morning, spend the afternoon working, and return to Zurich that night.

Eight types of train are in service at present, all with first-class accommodation only, air-conditioning throughout, full restaurant facilities either in dining cars or at your seat, high average speeds, luxurious furnishings and a distinctive name. With two exceptions, all are electrically hauled; and the exceptions are soon to go electric.

A couple of TEE trains, the "Rheingold" (Holland to Switzerland via the Rhine) and one of the newer routes, the "Erasmus" (The Hague to Munich), have vista-dome observation cars. Several also carry secretarial services, and the "Mistral" (Paris to Nice) has both ladies' and gents' hair dressing salons on board.

There are no overnight services. The earliest starting time is 0655 hours and the very latest arrival time about 2330 hours. A few trains run entirely within one country: the "Aquitaine" (Paris to Bordeaux) or the "Vesuvio" (Milan to Naples) are typical. Most TEE services, however, connect two or more countries, crossing frontiers with the minimum of inconvenience. The most international is the "Edelweiss," which connects Amsterdam and Zurich via Brussels, Luxembourg, Strasbourg and Basle.

All passengers must hold first-class tickets and pay a special supplement the rate of which varies according to the distance travelled and the route. The supplement also includes a seat reservation. (The trains carry no standing passengers or registered baggage.) A sample supplement fare is Zurich to Paris: Swiss-francs 19. On the majority of TEE trains prior reservation must be made, although this can be done at very short notice. A special telex network for reservations links the majority of the main cities on the route network. You can, of course, use the TEE trains for any part of their routes.

The original TEE involved the railways of France, Germany, Switzerland, Italy and the Benelux nations, with Austria and Spain joining later. Beginning with the summer timetable (May 24) the network will be further extended to bring Denmark into the system for the first time. The "Merkur," presently a German Inter-City express, will be given full TEE status and run between Stuttgart and Copenhagen via Cologne and Hamburg. A completely new train, the "Iris," made up of stock from the "Cisalpin" (which gets entirely new rolling stock), will complement the "Edelweiss" between Amsterdam and Zurich, giving two services daily over that route. And the "Cisalpin" itself, now Paris to Milan via Lausanne, will be extended to Venice — the first time the network has reached that city.

An equivalent network of freight trains, called TEEM, carries mainly perishable goods such as fruit and dairy products, with about 100 trains in the network averaging 85-100 kph.

Coordinating the technical side of European rail travel is the Union Internationale des Chemins de Fer (UIC), which was founded in 1922, representing all of Europe's railways with the exception of the U.S.S.R. and Albania. (The latter has an isolated system not linked to either of its neighbours, Yugoslavia or Greece.) The UIC maintains close contacts with the East European Railways Organisation and with counterparts in North and South America.

Future rail development in Europe is almost certain to follow the trail blazed by TEE. A new high-speed line between Florence and Rome is under construction. It is 225km. in length and speeds of up to 250kph. will be standard when it is completed in the late 1970s. In Britain, the high-speed trains are due to enter service in less than two years, with speeds of up to 200kph. An even better advanced passenger train (APT), with speeds of up to 250kph. on many existing lines and substantially more on special new tracks, is already undergoing intensive evaluation trials.

French Railways are pressing to go ahead with their own high speed line from Paris to Lyons, a distance of 420km. Turbo-electric trains travelling at up to 260kph. on this line would cut the time from three hours forty-five minutes to two hours.

In the immediate future, the railway consortium of Germany, France, Italy, Benelux, Switzerland and Austria plans to

The steam engine is a

DESPITE the progressive thrust of European rail travel, there are still a few places where steam buffs can find an old-fashioned locomotive putting in an honest day's work.

Germany: Rheine, between Bentheim and Osnabruck, on the Emden line (3); Würzburg.

Portugal: Oporto area, broad and metre gauge, shed at Contumil.

Italy: Shed at Catanzaro Lido (Calabria); elsewhere in far South.

Britain: Vale of Rheidol, Wales, 0.6 metre gauge, May-October only. (1)
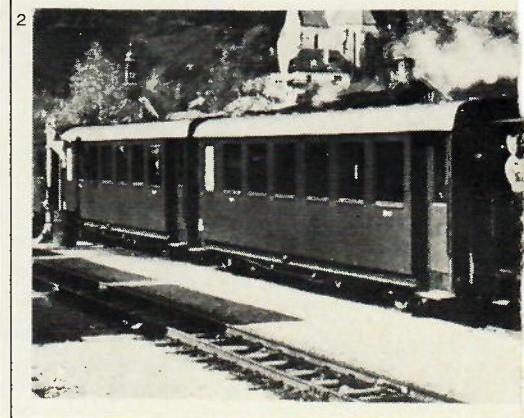
THE SEE-TRAIN: Scenery is a free bonus of European rail travel, visible at its best from a TEE Vistadome.

buy standard coaches of a new design capable of running at 200kph. It is hoped that about 500 of these will be in operation by 1976.

Advances in automatic coupling and cybernation (electronic identification) of both passenger and freight stock are promising. A uniform code for marking the rolling stock has already been agreed upon, and a standard automatic coupling will be used in at least 60 per cent of

Europe's wagons and coaches by the early 1980s.

Most ambitious of all is a mammoth plan for a high-speed, inter-city network for both passengers and freight throughout much of Europe, already drawn up and approved by the Union Internationale des Chemins de Fer. This scheme will involve the construction of about 3,500km. of new track and the upgrading of around 13,300km. of existing routes, which will be designed to give speeds of up to 290kph. The aim is to both complement and compete with road and air transport.

Included in this plan is, of course, the Channel Tunnel, approved by the French and British governments in mid-November. Barring unforeseen political pressures, it is all but certain that the Chunnel will be built and, if the designers' forecasts are correct, in use by the early 1980s.

Its influence on rail traffic patterns in western Europe and Britain will be very great indeed. On the passenger side, high-speed trains will link London and Paris or Brussels in around two-and-a-half hours. And if Britain develops certain regional lines to continental loading gauges, provincial cities in England, Scotland and Wales might have similar through trains to European cities. (Several years ago I saw a "dummy" timetable for a TEE train called the "Britannia", which would run from Manchester via London, the Channel Tunnel, Paris, Lyons, Mont Cenis to Milan in about 12 hours. At the time it looked like a pipe dream.)

And the cost of all this? A lot — perhaps around £5,000 million.

Given the recent European travel explosion (tourists in Spain alone now number more than 35 million annually), there is no doubt this money will be spent somehow. The question is whether rail travel — as against road or air transport — deserves it.

Strictly in terms of time taken to get from one point to another, the advantages of the train are increasingly evident if not conclusive. Railways are much less prone to the traffic jams that occur both on the road and in the air. And they are much less affected by bad weather than airplanes, contemporary electronic sophistication notwithstanding. Trains also run right into the heart of major cities. The frustrating delays that can occur while transferring from airport

live and well in...

Peter Baker

*Other working steam engines tend to be tourist attractions, of which one of the best is the Mur Valley Line, where a drive-it-yourself locomotive is available for hire (plus professional fireman, passenger and dining cars) in fifteen-minute segments or longer. (2) The full 90-mile trip through Austrian lowland and hill country takes two-and-a-half hours and has attracted a variety of rail buffs, including an Arab sheikh and Italian tenor Giuseppi di Stefano Queries and bookings to Harald Grafinger at the line's HQ in Murau.

Nino lo Bello

33
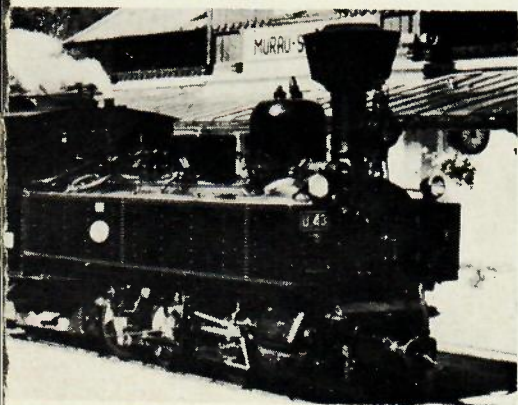
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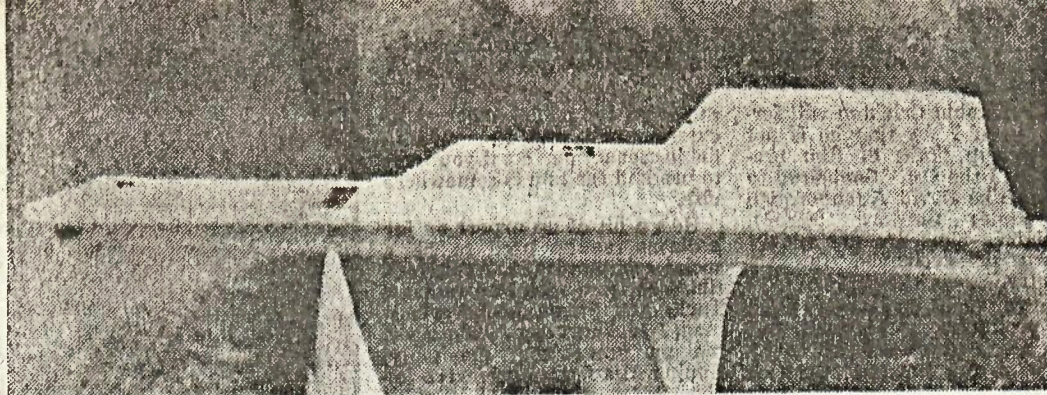
Inventor and his brain: Clive Sinclair with the £99 computer that attracted 50,000 buyers

The shrinking world of Clive Sinclair

by Roger Eglin

JUST a few years ago, a dedicated computer enthusiast would have needed something like £4,000 and a machine the size of a cocktail cabinet to equip himself with the sort of electronic power embodied in Clive Sinclair's £99 12½oz personal computer, the ZX80. But the shrinking world of 40-year-old Sinclair mirrors society's urge to go electronic.

With ZX80 sales now over 50,000, there must be many parents for whom homework is no longer a case of struggling with the new maths but helping the kids programme their computer.

Most of those parents grew up to the whistle, crack and hum of valve-driven radios. If Sinclair's plans run to schedule, next year their children will skip straight through the transistor radio era into the age of the £50, pocket-sized TV "trannie."

Sinclair made his name in the early 1970s by developing a pocket calculator much lighter than anything the American competition could offer. But for the past five years, most of his efforts have been concentrated on miniaturising the black and white TV set.

Four years ago, with the help of the National Enterprise Board, he launched the 2lb, £200 "Microvision." This was intended as a step towards an even more Lilliputian goal but the relationship with the NEB did not work out. Sinclair's original supporter, Lord Ryder, left and his successors were more interested in Sinclair's electronic instruments than in consumer products like the TV. And they were even more disenchanted by the losses involved in the build-up of the TV business. Eventually they sold that off, kept the instrument business and Sinclair went off to work on the key to the breakthrough he unveiled last week, the flat screen.

There was some funding from the NEB, and the National Research and Development Corporation chipped in with £500,000 of the £1m development cost. But with the earnings from the tiny computer, whose production rate has reached 10,000 a month, Sinclair Research, 95% owned by its namesake, has been funding the TV's development itself. The main advance on the first Microvision is the unique flat-screen. Much smaller than a conventional tube, it uses far less power and will run for around 16 hours on small, dry batteries. But Sinclair has also had to develop a new way of producing the tube glassware in a vacuum. A pilot plant near Cambridge has been turning out flat screen tubes at up to 50 a day for 18 months.

Some of Sinclair's past production experiences have been none too happy and he doesn't want
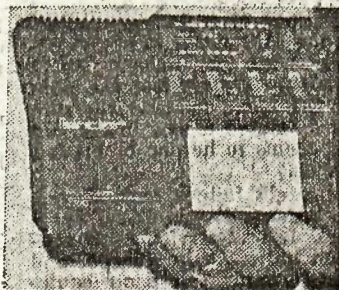
The flat-screen television

his tiny 25-strong research organisation over-burdened with the problems of a large scale manufacturer. "Never do anything you can get others to do," he says. The computers are made by a sub-contractor and this time, Timex will be handling production at its giant Dundee watch factory.

Timex is making special equipment and the first £1.25m investment through to 1982 could create 250 jobs, taking tube capacity to one million a year. By 1985, the four year, £5m investment programme could have created 1,000 jobs but this will depend on how Timex balances its labour force between watches and tubes. What Sinclair will not say is how much tube output this would entail. But with help from the Scottish Economic Planning Department and regional grants, this project is getting £2.6m in public money over four years.

Early in his career, Sinclair recognised the advantages of marketing by mail-order. Colour supplement advertisements have worked well for the ZX80 and mail order will help launch the TV set. Sinclair says this approach helps with cash flow, cuts through the problem of having to set up a sales network and provides an ideal sales technique for innovative consumer products, simultaneously selling and publicising them. "If a product's radically new and you put it in a shop window, the chances are that it will stay there," he says.

Sinclair has done some market research into sales prospects for the TV and says a major American retail chain has plans to order 300,000 units in the first year of production. But he is sure the TV will follow what he calls "the Boston Consulting Group learning curve philosophy." Put crudely this means: the lower the price, the greater the sales.

The relationship is supposed to be quite precise: halving the price should raise sales fivefold.

The ups and downs of Sinclair's venturesome business vividly illustrate the difficulty of getting high technology off the ground. The celebrated electronic Black Watch was a non-starter after the failure to get the right micro-chips. There were component quality problems with the early calculators and then the business was swamped by low cost competition.

Sinclair literally lives off his wits. When the pace of technical innovation in a product slows, competitive advantage, he admits, goes to the lowest cost producer—almost invariably the Far East. When he examined the possibilities of making the TV sets in Hong Kong, he concluded manufacturers there lacked the production know-how. But how secure is he against some unexpected technical leapfrog by the competition before sets go on sale next year? "Very," he says. "We're not pioneers by accident. We're the first in a field where lots of able people are trying and we're not standing still."

sinclair
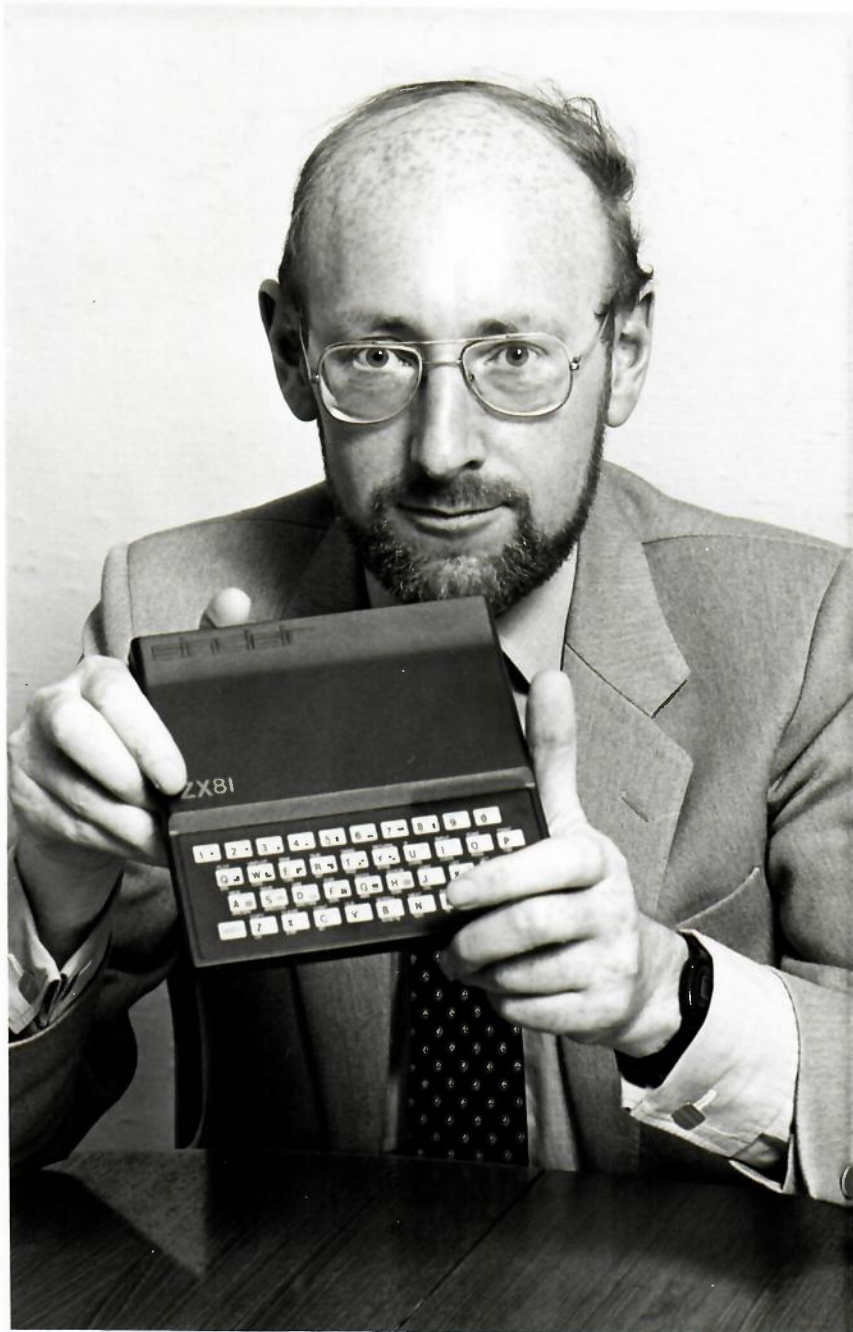
CAPTION

21 July 1981

The Sinclair ZX81 personal computer, designed and developed by Sinclair Research of Cambridge. The ZX81 is available ready-assembled at £69.95, and in kit-form at £49.95, both prices include VAT.

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

Issued by:

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Stanhope House
Stanhope Place
London W2 2HH

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70 NEXT I

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ZX PRINTER

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.

Issued for: Issued by:

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                                     Contact: Robin Kinnear
                                              or Bill Nichols

3597/82

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Country: **INDONESIA**   Continent: **S.E.ASIA**

Capital: **DJAKARTA**   Currency: **RUPIAH**

Languages: **BAHASIA INDONESIA**

————————————————————————— DATA —————————————————————————

```
Population ................... 135.4   millions
Land Area ....................  1919   thousands of square kilometres
Gross Domestic Product .......   155   U.S. dollars per capita
```

>find
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CAPTION

A screen from the QL Archive database management package,
one of the four programs from the integrated Psion-written
software suite which is supplied complete with every QL.

For further information contact:-

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10 ADET
sinclair
(5 adet ZX 81) ve (5 adet ZX Spectrum)

e OKUL BİLGİSAYARI ile

TEPUM tarafından hazırlanan

İVERSİTE ve ANADOLU LİSELERİ

Cumaya günaydın

CAN CAN

Öğle yemeğine belki her zaman olduğundan daha iştahla başlıyorsunuz. Eğer kilo almak gibi bir derdiniz yoksa, istediğiniz kadar yiyin. Eğer kilo almak istemiyorsanız, yemek miktarını da bir süre kontrol altına almaya çalışmanız gerekiyor.

BİLİM ADAMLARI KİLO İÇİN NE DİYOR?

Temple Üniversitesi'nden yedi bilim adamının sigara içenlerle yaptıkları bir çalışma gerçekten çok ilginç. Sigara tiryakileri bilim adamlarının isteği üzerine bir ay için sigarayı bırakacaklardı. Bu bir aylık döneminin başlamasından önceki sabah bütün tiryakılar tepeden tırnağa kontroldan geçirildi; testler ve tahliller yapıldı.

Sigarayı bırakmalarından sonra yapılan test ve tahlilerden alınan sonuçlar şaşırtıcıydı. Temel metabolizmanın yavaşladığı, kalp atışlarının dakikada 3, günde 4000 atışlık bir azalma gösterdiği belirlenmişti.

Uzmanlar bu arada eski tiryakilerin yemek yeme alışkanlıklarını da not ediyordu. Bu deneme süreci yaşayanlardan yalnız biri eskiye göre daha fazla yemeye başladığını söylüyordu. Aslına bakarsanız, herkesten çok kiloyu da o almıştı. Yalnız bir kişi de hiç kilo almamıştı. Çünkü bütün bir ayını spor yaparak geçirmişti.

İnsan metabolizmasıyla ilgili çalışmalar iki tür metabolik ölçü olduğunu

gösteriyor. Evet, sigara içen ve içmeyenler arasında metabolizmının işleyişi açısından farklılıklar var. Sigarayı bırakan bir insan, vücudun çok uzun süredir alıştığı bir metabolik durumundan öbürüne geçiyor. Yani arada kişi bir geçiş süreci yaşıyor.

İşte bu geçiş sürecinde kişi yeme oranında hiçbir farklılık olmasa da kilo alabiliyor. Böyle bir durumda ise, kiloyu fazla dert etmeyip daha çok sigarayı bırakma kararını uygulayabilmeyle ilginmekte yarar var. Kilo sorununu nasıl olsa çözersiniz.

Ayrıca, bu geçiş sürecinde kişi egzersiz yaparsa, hiç kilo almadan da metabolizmının yeni çalışma tarzına alışıp uyum sağlamasına yardımcı olabilir.

İLK CİDDİ SINAVI AKŞAM VERECEKSİNİZ

Özellikle akşamlar sigarayı bırakanlara tuzak kurmuş durumda. Her zamanki akşamlardan daha farklı bir şeyler yapmaya çalışın. Gene ağır yemeklerden kaçınmanız gerekiyor. çünkü insan, ağır yedikçe, sigara içme isteği de artıyor. O akşam sigara içmeyenlerle birlikte olmaya çalışın. Ellerinizi oyalayacak bir işler de bulabilirsiniz. Arada bol bol su için. Canınız sigara istiyor gibi oldukça, koşullar uygunsa çıkın dolaşın.

Bu ilk günü atlattıktan sonra, her şey çok daha kolaylaşıyor. Yalnız, özellikle akşam yemeğinden sonra Televizyoun karşısına geçerek durmadan bir şeyler yemeye alışmayın. Bu böyle sürer gider ve önünü alamazsınız.

Nice yıldönümlerine 1985'in 9 Şubat'ında birlikte yıldönümü kutlayacağız; eminiz, siz de konuğumuz olacaksınız.

BİTTİ
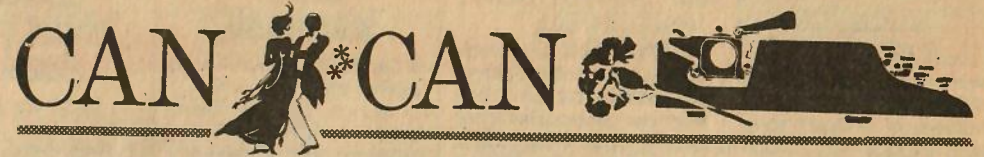
BMC mensuplarının Altınyunus çıkartması..

BMC mensupları, yorucu geçen bir yılın sonunda geç te olsa Çeşme/Altınyunus tesislerinde biraraya gelmeyi başardılar ve neşe içinde eğlendiler.Fotoğrafta; Şerif Basma, Ali Dursunöz, Barış Gökoğlu, Mehmet Özeriç, Gürer Fırat, Sadık Soykan, Ahmet İyigün, Mert Aksoy ve Esat Pakakar'ı eşleriyle birlikte neşe içinde eğlenirken görüyoruz.

Lions Kulübü Aydın Şubesi Başkanlığına Dr. Adnan Dursun getirildi

For a company that has been in business for only 5 years, Sinclair Research has a track record that few companies achieve in a life-time. In terms of design, technical achievement and marketing, Sinclair has constantly out-performed every other home computer company. From the earliest days of the ZX80 right up to our entry into the professional computer market with the QL, Sinclair has constantly been in the public spotlight. In this time we have sold over

Nigel Searle "... overseas business to dwarf UK home market."

four million computers; more than the total Japanese industry. Both the ZX Spectrum and ZX81 are million sellers.

The success of these products is a testament to the calibre of individuals who have made this happen, both in the UK and overseas. Indeed it is the expansion of our overseas activities which has been one of our most notable achievements, with over 50% of all Sinclair designed computers being sold outside the UK. From an initial export figure of £35,000 in our first year of trading in 1979 to almost £20 million in our 1982-83 financial year, this six hundred fold increase looks like growing still further.

In the space of these 5 years we have conducted business in nearly 100 different countries, achieving dominant market positions in Spain, Italy, France, Saudi Arabia, Turkey and many more. We have continued to learn a lot about these markets and the different buying habits of consumers in each country – whether they are mainly interested in games or have a bias for education software such as in Sweden or Colombia.

The accompanying chart shows the striking increase in overseas business and its growing importance to the company as a whole.

This has been achieved by a hard-working and closely knit export co-ordinating unit at Cambridge, under the control of Charles Cotton. Excellent relationships have been established with our overseas distributors and dealers as well as the ever-encouraging involvement of the overseas British embassies and consulates.

Sinclair UK/Export Sales Growth			
'82–83	35,317	19,212	54,529
'81–82	15,810	11,358	27,168
'80–81	2,856	1,768	4,624
'79–80	605	35	640
Year	UK	Export	Total
£000 turnover			

Further Opportunities

To those distributors and dealers who have been with us from the early days, I would like to thank you for your continued support and commitment to our product range. To those newer companies who have just joined us, I hope that you too will enjoy and benefit from working for what is fast becoming one of the world's best-known computer companies.

With exciting new developments in Europe, the Middle and Far East along with the enormous potential of the Eastern Bloc countries now that the COCOM restrictions have been lifted, I am confident that Sinclair's overseas operations will continue to develop rapidly. I believe that in another five years our overseas business will have grown to such an extent that it will dwarf our home market.

Good luck to you all in achieving this.

Regards....

NIGEL SEARLE

1979 Sinclair Research was founded by Sir Clive Sinclair in July.

1980 In February, Sinclair launched the ZX80 – its first home computer, which reshaped the UK market.

1981 Sinclair announce a four-year £5 million programme in February to manufacture the flat-screen TV. The job was contracted to Timex of Dundee.

In March, the ZX81 – which replaced the ZX80's 18 chips with a set of four – was launched by Sinclair, with a price tag £69.95. By this time the ZX80 was already the top selling home computer in the UK.

The Sinclair Prize for Fiction was launched in June.

In July, Sinclair announced the sale of its 100,000th computer, and in September the ZX Printer was unveiled.

October: Sinclair announced a trading deal to sell the ZX81 in Japan.

1982 Sinclair signs an agreement with Timex in February for its computer products to be sold in North America.

In March Sir Clive announced that he would be among the runners in the first Cambridge Festival Half-Marathon, sponsored by Sinclair.

April saw the launch of the ZX Spectrum – then Sinclair's most dynamic product since the formation of the company.

In July, the Department of Industry announced it had selected the ZX Spectrum for its Micros in Primary Schools Scheme.

The price of the ZX81 was cut from £69.95 to £49.95 in August.

The highlight of the Personal Computer World Show in September was the launch of the first range of Spectrum software, as sales of the ZX81 hit the 500,000th mark.

In the same month, Sinclair announced a £15 million extension to Government's Micros in Primary School Scheme.

Five Years of Ac

SINCE Sinclair Research was launched five years ago much has changed in its approach to publicity.

From the days of simple direct response advertising, shown above, to the sophisticated campaigns of today, our marketing approach has grown with the business. This development will become highly relevant to our overseas markets as they mature and require more complex marketing techniques themselves.

This summer has seen the largest personal computer promotion in the UK, with Sinclair teaming-up with the Kellogg company in a back-of-pack promotion on 30 million packets of cornflakes. As can be seen from the pack shot illustrated, 100 Spectrums can be won, with money off on software titles and a free book about home computers on offer.

Sinclair ZX Spectrum

16K or 48K RAM...
full-size moving-
key keyboard...
colour and sound...
high-resolution
graphics...
**From only
£125!**

**MORE THAN
ANY OTHER COMPUTERS
CAN OFFER.**

FOR LESS.

ZX81

ZX 16K RAM PACK
£29.95

ZX PRINTER
£39.95

**ZX SPECTRUM
48K RAM**
£129.95

**SINCLAIR
ZX SOFTWARE**

sinclair
The most popular
computers in the world.

Mentathlete

dvertising, Publicity and Promotions

In the UK, Sinclair now attends a number of the mainline computer shows and fairs wherein we generally have the largest and most prestigious stand. The PCW Show, Computer Fair and in future the "Which Computer? Show" all provide valuable face to face contact with customers and enthusiasts as well as providing an excellent showcase for our new products.

Lasting 2 months, the promotion will have reached an estimated 20 million households.

Over the 5 years, not only has the quality of the software code improved, but also the packaging. Sinclair's LOGO is a good example of this. Applauded by the press – and public – LOGO consists of a packaged set of two introductory books along with the accompanying software.

We've also come a long way promoting our software titles. "Match Point" is one of our latest software games. Based on the rules of Lawn Tennis, it had a natural seasonal appeal to a pre-Wimbledon public who responded to a number of competitions run throughout the Wimbledon fortnight of regional papers and the Mail on Sunday's YOU Magazine. In addition to this, we co-sponsored a Pro-Celebrity charity tennis match at the Royal Albert Hall. Pictured here playing the game are tennis stars Vijay Armritraj and Peter Fleming along with BBC sports commentator Jimmy Hill and James Bond 007, Sean Connery.

A number of Sinclair sponsored activities are fast becoming highly respected events in their own right. This year's Sinclair Cambridge Festival Half Marathon attracted a record 2,450 runners, with women's winner Joyce Smith going on to compete in the Los Angeles Olympics.

The Sinclair 1984/5 Prize for Fiction has also achieved another record, attracting over 300 manuscripts from all over the world.

Along with a number of smaller promotions that appear almost continually, all this adds up to Sinclair having the kind of positive high-visibility that keeps the company name in the public eye.

3

INCLAIR SUCCESS

1983 At the London Home Computer Fair, Horace – this time going skiing – made a reappearance in a batch of new software titles for the Spectrum.

In January, a 10 per cent private placement of 400,000 Sinclair Research shares raised £13.6 million gross, capitalising the company at £136.9 million. A new corporate structure was introduced shortly after the placement.

February – Sinclair became the first company in the world to sell one million home computers.

The price of the 16K Spectrum was cut from £125 to £99.95. In May, Sinclair announced its plans for a £2 million advanced research centre – MetaLab.

In July, Sinclair launched the ZX Microdrive and a new expansion interface.

In September Sinclair Research announced a doubled turnover of £54.53 million and sharply increased profits in its 1982/83 year end figures. The flat-screen TV was officially launched in September.

1984 January, the QL, Sinclair's most advanced product to date, was launched.

February, Sinclair Vehicle Project confirmed that it was negotiating with Hoover for the assembly of its first electric vehicle at Merthyr Tydfil, South Wales.

In May a number of new Spectrum software titles including, Which? Tax Calculator and several games were launched. The following month, LOGO was made available to Spectrum users.

In June, independent AGB market share figures attributed Sinclair with 43% of the UK home computer market, with Commodore (UK) Limited trailing with 28%, Acorn 10% and Atari 2%.

In July, Sinclair announced an increase in production of the QL and the Sinclair TV and its plans for a retail programme for both products – starting this autumn.

During August it was announced that Spectrum production would build up to 200,000 units per month.

...And what we're doing today

SINCLAIR'S recent UK trade presentation in July saw over 140 delegates crowd into London's prestigious Hotel Inter-Continental to discover the widest ranging sales promotion campaign that Sinclair has yet to announce.

One of the items to draw most attention was the first ever packaging of 6 top-selling Sinclair software titles – called the Sinclair "Six Pack"- This merchandising innovation will be a key feature in an extensive sales support programme for the 48K ZX Spectrum in the run-up to the highly lucrative UK Christmas period.

They enhance the perceived value of the Spectrum and will encourage retailers with the strong conviction that the Sinclair brand name is '*the*' major one to support.

Two similar promotions have been tailored specifically for our distributors overseas.

16K and 48K Overseas Version

The 16K ZX Spectrum will have a special "Six-Pack" promotion similar to that in the UK. It includes leading titles such as: Horace and the Spiders, Horace goes Skiing, Hungry Horace, Reversi, Planetoids and Space Raiders.

For the 48K Spectrum, an even mor generous "Eight-Pack" includes: Chequered Flag, Flight Simulation, Chess, Backgammon, Reversi, Jet Pac, Cookie and Pssst.

This represents enormous value for money for would-be purchasers and an extensive marketing-edge for distributors and retailers carrying the Sinclair range.

Comments overseas business manager, Charles Cotton, "... behind these very substantial promotional offerings is a deliberate and concerted intention to give distributors and retailers the greatest opportunities for maximising Sinclair's market share.

"Where we are new and emerging as a real potential force, this promotion will accelerate our status ... where we are already dominant we will be able to consolidate our position and make it even harder for the competition. The challenge is now there for you to use this promotion device to its best advantage."

Sir Clive Sinclair's "MENSA at Cambridge" Look to the Future

BY the year 2020 computers with an intelligence equivalent to the human brain could be widely available for less than the price of the average motor car.

The computers – Metacomputers – could do most of a person's rational thinking. But far from being sinister, the Metacomputer would serve rather than threaten civilisation.

That was the picture of computer technology in the next millenium presented by Sir Clive Sinclair when he spoke to a conference held by Mensa at Cambridge. The theme of the event was looking into the future as far as George Orwell did when he wrote his visionary novel "1984" 36 years ago.

Sir Clive's presentation traced the likely developments from current research into Fifth Generation computing and the potential for artificial intelligence. By examining the increase in the number of components contained in a computer over the last 25 years, together with the reduction in relative size and costs, certain conclusions could be reached about when the Metacomputer may be developed and how much it would cost, he said.

"Assuming the cost of computers continues on the same curve, as I believe it will, a machine of the complexity of the human brain, in terms of the number of components, will be achievable for ten million dollars by the year 2000," he said.

"It will cost $100,000 in the year 2010, and a mere $1,000 by the year 2020. So by that date we are looking at robots with totally human powers of intellect that might be as cheap as cars."

Sir Clive Sinclair... "Metacomputer as family member".

But despite the cheapness of the technology and the abundance of silicon, a complete new architecture would have to be created for any computer to emulate the human mind.

"The nature of the architecture is causing enormous debate. Several lines are being pursued, and we still have not seen a likely winner", he said. Highlighting the likely impact of the Metacomputer on civilisation, Sir Clive said "The back breaking toil of sawing wood, digging canals and washing clothes has long been dedicated to machines. By 2020 we will be able to say the same about mental toil".

Sir Clive said that the Metacomputer will be able to make decisions on our behalf based on data. It could serve as a "home doctor" offering advice based on its stored medical knowledge and the specific records of a complete family.

He said "The Metacomputer will come to know the family well and identify with it, just as servants once did. Jokes and reminiscences could be shared with the family".

Sir Clive also predicted that with the mere acquisition of knowledge no longer an issue for humans, the nature of teaching would change towards a more philosophical approach. "In particular I am thinking of the teaching of the enjoyment of life, of music, literature, poetry, science and mathematics", he said.

Eastern Bloc Offers New Opportunities

A VAST untapped market for manufacturers of small personal computers has been exposed by the easing of restrictions on sales to the Eastern bloc.

And Sinclair is going to be among the first to take advantage of the new opportunities, according to Charles Cotton, the company's Overseas Business Manager.

Soon after the announcement that the Co-ordinating Committee for Multi-Lateral Export Controls (COCOM) had partially lifted its ban on sales of small computers to Warsaw Pact countries, Sinclair confirmed it had appointed an East European Sales Manager.

Jan Tyzska, who speaks five languages including Russian and Polish, will head Sinclair's drive on the East European market.

"There are more than 400 million people in Eastern Europe which makes the market as big as the rest of Europe put together", said Charles.

"And we already have thousands of users in Hungary, Poland and Czechoslovakia who have bought their computers from abroad and imported them privately. There are even Sinclair user clubs in these countries, and many western computer magazines are distributed".

Sinclair Research Continues its Overseas Expansion Programme

AS part of its international expansion programme, Sinclair Research has recently appointed three new overseas managers for South East Asia, for the Middle East and for West Germany.

John Durnford, 28, has been appointed South East Asia Manager and will be permanently based in Sinclair's newly opened office in Singapore. John will be principally responsible for local business and marketing strategy and also for the introduction of Sinclair's new QL computer with local language capabilities. Formerly employed by Commodore (UK) Ltd,
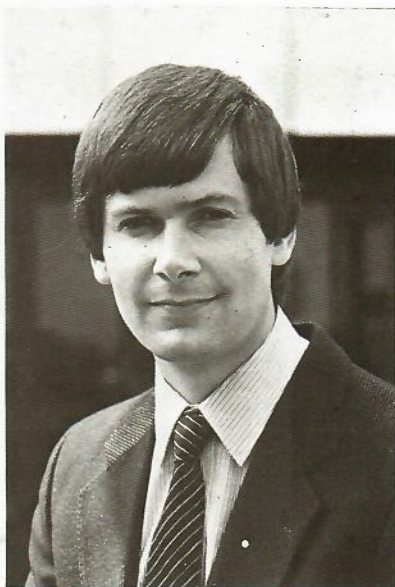
South East Asia Manager – John Durnford

John was responsible for marketing, planning and the establishment of distributor networks in the Middle East, Africa and Southern Europe.
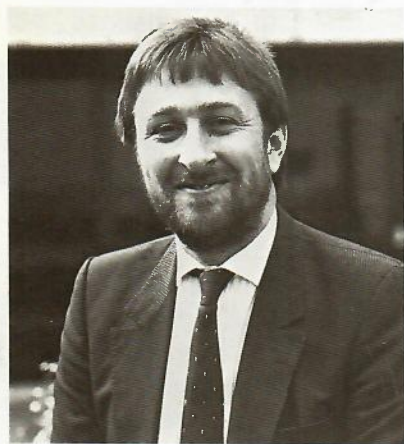
Arabic-speaking Alan Miles

34 year old, Arabic-speaking Alan Miles is Sinclair's new Middle East Manager. In his ten years in the area, Alan has worked with the media and in publishing. Before joining Sinclair he was Middle East Manager for Macmillan Publishers. Sinclair already has a considerable foothold in the Middle East with an established distributor network in place. Key markets include Saudi Arabia, Egypt and the Gulf States.

...SINCLAIR'S new German office is headed by Jorn Clausen who will be covering Germany and Austria. The office, which was opened in July, is located in Bad-Homburg near Frankfurt (more details next month)...

...In Germany, Juergen Schumpich is offering all 1,500 German Sinclair retailers the following bet: any retailers who can sell one ZX Spectrum per working day from July 1st to December 31st (this equals 144 Spectrums) will win a weekend for two in London. This original incentive scheme which was devised by Juergen himself is being coordinated with help from Sinclair's German advertising agency...

...Swiss distributor, Elcoma, recently organised a competition for visitors to the International Model Airplane meeting in Lausanne. The competition, which offered prizes of 5 ZX Spectums plus Flight Simulation programs, attracted an excellent response...

...For the first time, Sinclair Research has appointed a distributor in Yugoslavia. The company, ISKRA Commerce, is part of the largest electronics firm in Yugoslavia and is based in Ljubljana. Demand for computers is expected to reach 80–100,000 in 1984/85, and Sinclair has already shipped 2000 Spectrums, which will be sent to Yugoslavian schools for the start of the new academic year...

...On September 3rd, Sinclair Research will appoint a new distributor for Denmark, H Christensen and Son. The Copenhagen-based company will start the ball rolling by having a Sinclair stand at Denmark's office and data exhibition in October...

...SINCLAIR Research has won an order from China's North East Technical College for 600 48K Spectrum computers...

Overseas Conference Details

AS mentioned in the June issue of the Bulletin, the Second Overseas Distributors' Conference will be held at the Selsdon Park Hotel in Croydon from September 14th–16th. All delegates should by now have received an invitation for this, complete with an outline agenda for the weekend and a map showing how to get to the hotel. The conference will begin on the Friday evening with a reception at 7.30pm. There will be presentations all day Saturday as well as Sunday morning – topics to be covered will include:

- Overview of current activities
- Overseas markets
- QL Overseas launch
- Update on software and education
- Advertising and PR

There has been recent speculation about the state of the micro-computer industry in the UK as a result of well-publicised problems of other companies. Some international newspapers have printed stories saying Sinclair has stopped production at its UK factories, and that we, too, are experiencing hard times. This information is untrue and I hope that as a result of the recent statement that was sent to you, you have been able to put the press right.
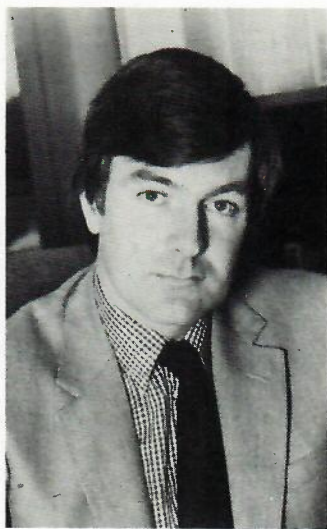
Charles Cotton...'record year for Sinclair.'

Stock

Let me explain the background to last Christmas' retail sales in the UK – many of you will probably find that something similar happened in your own country. UK retailers sold out of computers in the two weeks running up to Christmas in 1983, and this Christmas they over-compensated to prevent the same thing happening. However, they found they had large stocks of some makes of computers left on the shelves. As they are currently concentrating on getting rid of those computers which are difficult to sell, popular computers such as the Spectrum are being held back. This means of course that we have to wait for the retailers to move the excess Christmas stock before they re-order. What we can be certain of is that retailers will not make the same mistake twice, and they will be unlikely to order huge quantities of brands that are difficult to sell. This will be to Sinclair's advantage as there will be more shelf space for our product.

In spite of UK retailers being left with excess computers, 1984 was a record year for Sinclair. Both sales and profits from March–December were higher than those for the same period in 1983.

Volume

Having produced two million Spectrums by December 1984, and achieved sale of the five millionth Sinclair-designed computer in January (this includes Timex machines that were sold in the US), Sinclair is undoubtedly Europe's largest volume producer of micro-computers. We are confident that, with the international launch of the QL, these output figures will continue to rise dramatically. Throughout 1985, Sinclair will be introducing, with your involvement, local language QLs complete with adapted keyboard and foreign language software. With such a wide range of software and peripherals coming on to the market for the new computer, together with its high performance/low price ratio, we expect the QL to outsell even the Spectrum.

Success

1985 will see even higher sales for Sinclair Research, as we not only widen our geographical territories – to include the Middle East, East Europe and, once more, the United States – but also as we broaden our customer base with the QL to include professional and business users.

This will present considerable challenges for you and your teams, but challenges which we are confident represent tremendous opportunities for success and profits.

Best Regards

Charles Cotton
Overseas Business Manager

Exhibition round up

Sinclair goes to Russia

Sinclair Research exhibited at Moscow's Technobuch '85 fair in January – the company's first venture in Russia. Jan Tyszka and David Park who manned the stand, declared it "an overwhelming success". The Spectrum range and educational software were exhibited, resulting in all Spectrums on the stand being sold to the two Ministries which sponsored the fair – the Ministry of Higher Education and the Ministry of 'Enlightenment'.

Tyszka and Park hosted top officials including representatives from the Council of Ministers, the State Committee for Science and Technology and the Academy of Science. Sinclair is interested in entering into scientific and technical cooperation agreements, leading to the manufacture of Sinclair products in the USSR – subject, of course, to COCOM and UK Government approval. The fact that SRL was the only supplier present in its own right impressed the authorities and greatly improved the company's business acceptance.

As a result of the keen interest shown by the UK press in Sinclair's activities in Russia, a press briefing was held on Jan Tyszka's return from Moscow. Jan told the press of the Soviet plans to provide each one of Russia's 64,000 schools with 20 computers. Sinclair is continuing negotiations with the Russian Education Ministries regarding Spectrum sales in the schools' sector, and Tyszka is optimistic about the outcome.

The Sinclair stand at the Technobuch Fair in Moscow attracted people of all ages.

Middle East shows

The Saudi Arabian distributor, Autoram, represented Sinclair in January at the Middle East Computing Exhibition in Jeddah. From all accounts the stand was a great success, attracting many thousands of visitors during the six days. "We sold several hundred computers from the stand," said Ramez Al-Halaby, from Autoram. The QL is now being used in the entrance of all exhibitions organised by Al-Harithy (Saudi Arabia's largest exhibition organiser) to record every visitor's name and address.

Large numbers attended Photo & Cine's Sinclair stand at the Kuwait Info Exhibition.

The new Kuwaiti distributor, Photo & Cine, organised its first show for Sinclair at the Kuwait Info Exhibition on February 9th.

It was not possible to sell computers at the exhibition, but Photo & Cine were able to take orders from potential customers. At the end of the four-day show, the new distributor had taken orders orders for 50 QLs and over 200 Spectrums. Visitors to Kuwait Info who had recently bought QLs in London were keen to demonstrate their newly acquired skills at the stand – two of these computer enthusiasts have now been appointed to work in Photo & Cine's shop!

Sinclair enjoyed a successful debut in Sudan last month at the Khartoum International Fair. There was a great deal of interest in both the Spectrum+ and the QL, which led to a good first order from SRL's contact in Khartoum, Sudanese Office Machines.

Scottish University QLs

Sinclair Research has given support worth £250,000, plus more than 500 QLs to Strathclyde University in Scotland, as part of a plan to provide all 7,000 students at the University with their own computers by the end of the decade.

Director of the University project, James Alty said, "We were determined to use existing British hardware and software for the project, and when we surveyed the market, we felt that only the Sinclair QL could offer the computing power, range of applications and above all portability at a realistic price."

The Computer Board for Universities and Research Council in the UK has expressed strong support for the collaborative venture between Strathclyde University and Sinclair Research, and describes the plan as an outstanding example of the type of scheme the Board wishes to assist.

The University project will be closely monitored in its first two years by a steering committee on which SRL will be represented, and Sinclair will be kept informed of the performance of the QLs. Further information on the development of this programme will be issued in future Bulletins.

Turks delight in Sinclair computers

This month's profile focuses on Sinclair's Turkish distributor

Sinclair's distributor in Turkey is an Istanbul based company called Tepum, which currently employs 70 people – it has three branch offices in Turkey's capital.

Home computers were introduced into Turkey in 1984, and initially the average Turkish citizen suffered from lack of education regarding computers and their use. In 1984, Tepum began selling Sinclair computers into the Turkish market and achieved very nearly a 100% share. Towards the end of 1984 Sinclair still had 90% of the home computer market, despite competition from Commodore and Oric. Today, Turkey has 15,000 computers (including mainframes and professional computers) and 10,000 of these are Sinclair.

Sales

In six months Tepum has built up its dealer network from 25 to 75 and, as a result, has dramatically increased its Spectrum sales. The company will continue this rapid expansion by recruiting a further 100 dealers in the next three months.

Another factor in the recent upturn in Sinclair sales is Tepum's advertising campaign. They are currently running an image-building campaign which comprises extensive newspaper ads, posters and car stickers.

Courses

Founded in 1982, the Turkish distributor is very active in the education sector, running computer courses on the Spectrum for schoolchildren at primary (7–11 years), secondary (11–14 years) and high school level (14–17 years). They also organise courses for university students. All their computer courses are run in Tepum's three Istanbul branches –

they teach computer courses such as BASIC and COBOL, professional programming, and exam preparation for primary school children. The company recently ran a special convention for teachers and children, entitled "Computer-supported Education" which over 200 people attended. They are currently developing Turkish software for the Spectrum, including a machine code program which will allow doctors to store up to 60 patients' records on the computer.

Tepum's advertising campaign comprises newspaper ads, posters and car stickers.

Tepum's long term objectives are to sell 50,000 Sinclair computers within 2 years, and maintain an overall home computer market share of 70%. Amongst their strategies for achieving this objective, Tepum intend to introduce TV ad. campaigns and videos to increase awareness, as well as establish computer centres in major Turkish High Schools.

The Turkish Ministry of Education is showing considerable interest in using the Spectrum for a pilot project in their schools. If Sinclair is chosen for the scheme, Tepum will be able to offer an excellent support service due to its country-wide dealer network.

QL Distributor meeting

International marketing plans for Sinclair's QL computer were unveiled on January 29th at a special one-day conference at Heathrow's Skyline Hotel. The event was attended by the company's European and Middle Eastern distributors.

Sinclair personnel gave a series of presentations covering service and support, new software

Psion, who exhibited at the QL Forum, demonstrated their 3D chess software program.

packages and peripherals, promotion plans and foreign language versions. Sinclair is intending to produce twelve foreign language versions throughout 1985 covering all European languages including Greek, Portuguese, Finnish and Dutch.

The event also included a mini-exhibition of 33 software packages and 17 peripherals, currently, or soon to be available for the QL. Twenty third-party manufacturers – including Psion, Sagesoft and Quest – exhibited products, providing the overseas delegates with an exclusive preview of the latest additions to the QL.

The QL has always represented an extremely competitively priced product for the professional, educational and business markets. "With such a wide range of QL software and peripherals coming on to the market, the QL has the potential to become Sinclair's leading volume product," commented Charles Cotton.

QL update

QL Software

So far this year Sinclair has released a total of 10 QL software titles which are all in stock at the Camberley warehouse:

Title	Company
QL Assembler	GST
QL Chess	Psion
QL Tool kit	Q Jump
QL Monitor	Q Jump
QL Cash trader	Accounting Software
QL Touch 'n Go	Harcourt
QL Integrated Accounts	Sagesoft
QL Entrepreneur	Triptych
QL Project Planner	Triptych
QL Decision Maker	Triptych

The following software titles will be available for the QL in the next few months:

Title	Company
Macroassembler	GST
Home Finance	Buzzz
Flight Simulation	Psion
Fortran 77	Prospero
Logo	Terrapin USA
QL Payroll	Sagesoft

All distributors will be contacted when orders can be placed for these new programs.

Spanish QL

Sinclair launched a Spanish version of the QL, its first foreign language version, at Informat '85, the Barcelona computer exhibition, on April 16.

The new QL comes with Spanish keyboard and local language version of Psion's upgraded (Version 2.0) software packages, QL Quill, QL Easel, QL Abacus and QL Archive. A total of nine further programs have already been written or are in final development in Spanish by local software houses.

Support

"The Spanish QL is the first in a series of twelve foreign language versions which we are planning in the year ahead," commented Charles Cotton. "We regard the provision of local language products as the cornerstone of our programme to create a strong Sinclair presence in professional and business computing markets throughout the world."

Investronica is planning to introduce its own QL User Bureau, offering hotline service and support, similar to that provided by the Sinclair QLUB operating in the UK.

The Investronica-Sinclair stand at the Informat '85.

QL marketing push

The QL was featured in a £½ million UK TV and national press advertising campaign during April. An additional £250,000 has been allocated to specialist computer publications over the next four months.

Backing up the ad campaign is an intensive merchandising and sales support package. All authorised UK stockists will be visited by Sinclair merchandisers who will provide point-of-sale materials, sales training manuals, demonstration software, and membership of the Sinclair QLUB. Merchandisers will also help train shop staff and give customers demonstrations.

QL technical guide

A comprehensive technical manual for the QL is now available mail order from GSI in Camberley.

The 195-page QL Technical Guide contains detailed technical specifications on the QL's hardware and firmware, including SuperBASIC and the Qdos operating system.

This guide is a revised and expanded version of the Software Developer's Guide for the QL, which until now has only been sold to software houses. Recognising that the Guide contains a wealth of useful information for anyone writing software on the QL or developing peripherals for it, Sinclair has decided to make the improved version generally available.

Overseas visit

Leading educationalists from the USSR, China and twelve other nations, with special responsibility for introducing microcomputers into education, were guests of Sinclair Research Ltd last month as part of the British Council's 'Microcomputers in Schools' study tour.

At Sir Clive Sinclair's Cambridge home, twelve children from a school in Yorkshire demonstrated the ZX Spectrum+ capabilities to the visitors.

The Russian representatives, impressed with the educational applications of the Sinclair computer, extended their stay in Britain to continue talks with the company. Further negotiations are also planned with the Indonesian and Chinese delegates.

Children from a school in Yorkshire demonstrate the Spectrum to overseas educationalists.

New market, new management

At the beginning of April, Sinclair re-entered the North American market with a mail-order launch of the QL microcomputer through its Boston-based subsidiary, Sinclair Research Inc. The US operation is headed by Nigel Searle, who was president of the American company from 1979 to 1982.

Commenting on this initiative, Sir Clive said, 'While home sales reached record levels in 1984, exports account for a very significant proportion of our revenue. In this context it is important that we establish the company and the Sinclair brand in the world's largest market and under our own direction.'

Products

Reflecting the increasing diversification of Sinclair Research, two new UK operating divisions have been formed. TV and Communications Products are managed by Bill Jeffrey, who joined Sinclair on 1 March from Mars Electronics where he was divisional director for the Marine Electronics Division, responsible for both R&D and sales and marketing.

The Computer Division is headed by David Chatten who, as production director, managed the manufacturing of all Sinclair products since the formation of the company.

Sinclair Research has also appointed Hugo Davenport, formerly engineering manager at Solatron-Schlumberger as director of engineering for all computer products. This encompasses product development, quality control, repairs and technical support plus software acquisition.

Royal seminar

Addressing a Portuguese business forum hosted by the Overseas Trade Board on board Her Majesty's Yacht Britannia, off Lisbon on March 27, Nigel Searle affirmed the Sinclair's commitment to the introduction of microcomputers in education. He told his audience 'Sinclair Research with its low-cost, high performance computers, is ready to help get microcomputers into Portuguese schools and colleges'.

Sinclair Research was one of seven British companies taking part in the BOTB seminar, 'Britain's new technology for Portugal's tomorrow', coinciding with H.M. the Queen's state visit to Portugal from March 26 to 29.

ZX81 and Spectrum designed computers are manufactured under licence for Sinclair by Lisbon-based Timex.

Spanish Rally

This is the world's only Sinclair Spectrum vehicle – it is driven by the Spanish rally driver Angel Villanova, who has driven the 'computer' car in a number of rallies both in Spain and internationally. The car is sponsored by Investronica, Sinclair's Spanish distributor.

Promotion ideas

At our QL Forum in January, a number of distributors pointed out they would like to hear news in advance about local promotions that their counterparts are planning. So that we can feature interesting promotion ideas you are intending to implement, please send the completed form to Carole Seawert at Kinnear Ltd, 28/29 Dover Street, London W1X 3PA.

```
Name of Company:
Nature of Promotion:
Product Promoted:
Date Planned:
I enclose samples/ads/point-of-sale material
/b&w photos/further details.
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This month's promotion news is as follows:

- Drion Computers, the Belgian distributor, is planning a promotion in conjunction with a major exhibition in Brussels. Visitors have the chance to enter a daily competition (the exhibition lasts 9 days) to win Spectrum+ computers. An advertisement featuring the promotion is printed in one of Belgium's most widely distributed magazines.

- Sinclair Research in the UK organised a competition, 'The 1985 Home Computer Championship', in conjunction with Quicksilva (a software house) and the Observer, a leading UK Sunday paper. The competition, which ran in March and April, was designed to test computer skills as well as games-playing competence and strategy. The competition was open to entrants of any age and every level of ability. The 15-year-old winner received a Sinclair QL plus a trip for two to Florida.

- Direco and the French PR agency, HHCC, have run a competition in a national newspaper, Le Matin. Presentation of the prizes took place in Paris on April 25th. One of the prizewinners was a ten-year-old girl who wrote a winning software program for the Spectrum. Sinclair in France also took part in an all night TV programme on April 27th which was devoted to computers.

- Investronica has organised a back-of-pack promotion with a Spanish food company, offering prizes of 50 Spectrum+. The food company, Riera Marsa, launched a TV campaign at the end of February, which features the Sinclair computer. Investronica is hoping to undertake promotions in 1985 with Coca Cola and Polaroid Cameras.

Newsclip

- In Kuwait, the Ministry of Education's Science & Natural History Museum plans to put Sinclair computers on display. The idea is to introduce groups of visiting schoolchildren to computers through practical demonstrations – about 100 children visit the museum every day.

- A 60% retail price reduction for blank microdrive cartridges was announced in February. The price has been reduced in UK shops from £4.95 to £1.99 – similar price changes have been implemented in overseas markets.

- Alan Miles recently returned from a trip to Pakistan, where discussions took place regarding selling Spectrums into Pakistani schools.

- Ian Park is continuing negotiations in India and China about local assembly of Sinclair products in those markets. It is likely that production will be started before the end of the year.

- The Education Ministry in the Al Kharj province of Saudi Arabia awarded each of its fifty top students with a Sinclair Spectrum. Usually, medals or trophies are given to the province's best scholars, but this year, Spectrums were chosen for their educational value. The prize-giving ceremony took place on March 19th, and was attended by both press and television. Autoram, the Saudi Arabian distributor, donated 50 Arabrams for this event. (The Arabram converts the computer from English to Arabic.)

- Recent exhibitions over the past few months where Sinclair was represented included:

Technobuch '85	Russia
Frankfurter Microcomputer Show	Germany
Didacta Education Show	Germany
Kuwait Info Exhibition	Kuwait
Middle East	
Computing Exhibition	Saudi Arabia
Khartoum International Fair	Sudan
Iraq Fair	Iraq

- Columbia Marketing, SRL's Italian PR consultancy, is currently organising a computer education project in conjunction with a major education publication, Compuscuola. This comprises the development of a teacher training course for the Spectrum, which will result in a four month series of articles recording the teachers' experiences.

The Willis Road Times

Records at home and abroad

Buoyant statistics appear from all sides at Willis Road. The finance department reports that our sales figures for last month were more than twice as good as those for December '83. The most dramatic indication of this is The Biggest Cheque Ever Received by Sinclair -- for £1,751,386.76 from Dixons just before Christmas. If you want to see what it looks like, Phyllis is hoarding a photocopy of the cheque.

As their contribution to the performance, the export department shipped to Europe their first 8000 QLs in December and, on a wider front, no less than 85,000 Spectrums and 10,000 ZX81s. The home market figures are just as impressive: having logged a record number of Spectrum shipments in November, they beat that record in December and, in the three weeks preceding Christmas, sent out 100,000 Spectrums.

Comings and Goings

Tonia Butcher has joined Dave Chatten to replace Jill Salvesen who leaves us at the end of this month to go to Australia. Until then they are working in tandem. Tonia, who lives in Bury St Edmunds, worked in Mildenhall until last summer: since then she has been temping.

Heather McInroy sits at the same desk as before but with a new title and responsibilities. She is now sales support manager, which means she provides a total back-up service for the export department, communicating market information and handling forecasts, records and so on.

Ian Simpson is planning to leave soon. He is returning to the motor retail trade.

Italian design award for Sinclair

Charles Cotton reports that the QL has won an Italian design award.

New QL software at the Which Computer Show

Highlights of the Sinclair stand at the Birmingham NEC, where the Which Computer Show opens on Tuesday, are the first public demonstrations of the Spectrum Plus and of five new QL programs.

Here are some of Mike Leadbetter's notes on the new software: QL Cash Trader (computerised book keeping for the small business) has often been

demonstrated in the last few months to show what you can do with the QL if you really try. Beautiful screen design and ledger-less procedures make book keeping so simple it's almost a pleasure. Cash Trader will sell for £69.95 and will brighten the lives of all who keep invoices and petty cash receipts in shoe boxes.

QL Project Planner, says Mike, is absolutely irrelevant at Sinclair where all projects finish on time and never go over budget but there are some organisations who have trouble over this. Project Planner, from Triptych, is the first program which tackles project costs and schedules for less than £500. Due for release in March at £39.95, QL Project Planner teaches the use of planning techniques with or without a computer. An exemplary manual and a tuition program help to achieve this and a powerful applications program is provided to implement the user's newly acquired knowledge.

Also to be released in March at £39.95 is QL Decision Maker. Many decisions require much careful planning and consideration. As in project planning, there are a number of well defined techniques which can be employed to minimise the risk of serious error. These are infrequently used due to lack of understanding and, once again, Sinclair and Triptych provide the expertise, in the form of computerised tuition and an applications program which does the work. A third Sinclair/Triptych program, designed for anybody considering starting a business, is QL Entrepreneur which teaches the user how to develop a workable business plan, how to avoid making a profit and having no money and how to avoid trading unprofitably while still having money in the bank. The applications program will take the user through the steps necessary to build a sound business plan and print it out in a form likely to impress the all-important bank manager. QL Entrepreneur is also due out in March at £39.95.

The last of the QL batch to be shown off at Which Computer is QL Touch 'n Go, the well-researched and highly developed keyboard skills trainer from Harcourt Systems, this time in glorious technicolor. If you don't believe that Touch 'n Go will train you to touch type at 30 words per minute, then try it out. This one costs £24.95.

To Russia with Sinclair

Jan Tyszka and David Park are in Moscow to promote computers in education. They will be showing for SRL at the Technobuch 85 exhibition which runs from 15-23 January.

Sinclair's day-trippers

Twenty of the SRL hard core and friends sleepily boarded a coach at Willis Road before 6am on a wet Saturday before Christmas, writes Chris Clifton. On the coach, three brown-coated couriers discussed the itinerary before all were left to sleep until Dover.

The newest SNCF ferry, which sold ham and lettuce rolls that looked and tasted like bacon and anchovy, bore the party to Calais where the coach headed for the small coastal town of Wimereux, north of Boulogne. The local one-star hotel was commandeered for lunch which, in true French style, continued in civil fashion well into the afternoon punctuated

only by the increasingly frequent re-appearance of the coach bearing anxious brown-coats. Their expletives went unheeded by the contented entourage as it approached the hypermarket at St Omer. Spoils including wine, beer, cheese, coffee, mustard and Le Creuset-ware created an authentic French micro-climate on the coach in which it seemed appropriate to sample one another's reds and whites.

The oldest SNCF ferry took us from Boulogne: Folkstone was reached all too soon. UK customs quaintly insisted that all imported goodies (excluding the beer, thankfully) be carried through the hall personally. How some members in the group got away with showing their dozen-bottle excesses to HM's people without paying was remarkable.

After 19 hours of great fun we came home to bed. How about a long weekend in France?

New ads in the pipeline

Advertising starts on January 21 for the Spectrum upgrade to Spectrum Plus level. Owners of the basic ZX Spectrum are offered the choice of paying £50 for a factory conversion service (which promises a ten working day turn-round) or £30 for a do-it-yourself kit supplied within the conventional 28-day delivery time.

The QL is to be featured in a campaign in the specialist magazines. This will be a 5-page colour advertisement in newsletter format, due to

start in the March-dated monthlies although a couple of weeklies will carry it at the end of January. Above: proofs of three of the pages.

Come in Number Twenty Nine!

Charlie Coulson reports a heartening response to his charity raffle for the Addenbrooke's Children's Ward. The proceeds were £249 which bought a portable colour TV for the ward but the bad news is that the winner seems to be lost. If you think you sold green ticket number 29 to friends or relatives, jog their elbows and they may become proud owners of a Sinclair Pocket TV, thanks to the company's generosity. Charlie also wants to record his warm thanks to all those who rallied round to provide bottles as runner-up prizes.

Here at last . . .

The Sinclair C5 electric vehicle, another world-first for Clive, was launched last Thursday. Clive foresees the creation of a complete range of family vehicles by the early 1990's.

Immediately available at a highly competitive £399 inc VAT, the 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. The C5 is on display at Cambridge Electricity Board showrooms.

To drive, C5 is both 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 charger.

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. SVL expects to produce well in excess of 100,000

Will the electric trike and its four wheeled successors transform the nature of personal transport or prove an expensive flop ? The answer is that we won't know until we try. The delight of Sinclair is that unlike some companies (no names, no packdrill) which sit on mountains of cash, Sir Clive puts his money where his mouth is. He is a perpetual risk taker. This venture was considered too risky to be included in his computer company when it was floated in the City, so he created a separate company with his own money. Subject to the all important qualification about safety (which may need a speedy change of legislation if things go wrong) one can only wish him well. What Britain desperately needs is more risk takers like Sir Clive. Until his mega-research laboratory produces Sinclair clones we will have to content ourselves with the real thing and merely wonder what a more entrepreneurial Britain would look like.

THE GUARDIAN third leader, 11.1.85

vehicles in 1985 creating some 200 new jobs, not including component suppliers.

Incorporating a number of technological 'firsts' in vehicle design, C5 is founded on new 1983 legislation for 'electrically-assisted cycles'. 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.

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The Willis Road Times
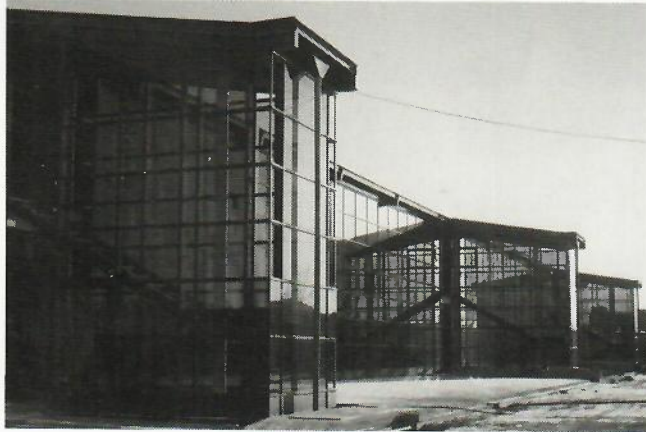
More breathing space

The next physical expansion for Sinclair is in this smokey glass
building on the Clifton Road industrial estate, off Cherry Hinton Road
at the old cattle market end. Two weeks ago, Bill Matthews signed an
agreement to lease the whole of the 36,000 sq.ft. building, which offers
accommodation on two floors. Undoubtedly a feature of major interest is
its capacity for parking 120 cars. The outside appearance will improve
as the builders tidy up and landscaping work is done. Trees are already
planted but are off-camera here.

Work is in progress to complete the interior and prepare it for our
needs and we are due to move in a few months' time. There will be two
phases: the first includes finance, UK marketing, export marketing and
software. In the second phase will be the computer lab, production and
quality control.

To find the new location, follow the twists and turns of Clifton Road as
far as you can go past all the industrial units to the Rustat Road end
of the estate. Although the Post Office lists the location as Rustat
Road, there is no access from that end.

Comings and Goings

After three years with SRL, David Fuller leaves at the end of this month
to join British Aerospace at Hatfield as product assurance manager on a
joint Anglo-German weapon system.

Hugo Davenport came from Solartron-Schlumberger to join us last month as
Director of Engineering responsible for all computer products. This
encompasses product development -- including co-ordination of those
MetaLab staff who contribute to computer development -- software
acquisition and publishing, quality control, repairs and technical
support.

Theresa Bendelow joined us at the beginning of this week as secretary to

Hugo Davenport   David Clark   John Spencer-May   Theresa Bendelow
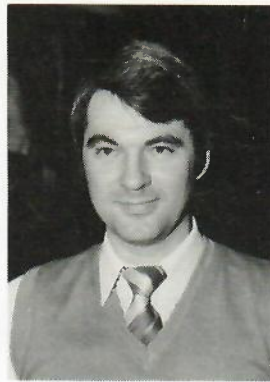
John Graham.   She comes to us from Georesources.

Sue Campbell has decided to leave us for a change of scene. She goes
next week, followed by Judith Hooper who is moving away from the area.

Nigel Brown is now product manager responsible for the Spectrum products
and the pocket TV. Jeremy Brown becomes senior product manager on QL
products; in addition to hardware, software and peripherals, this covers
QLub and any marketing activity relating to the QL. However, pending
the appointment of a product manager to assist Jeremy, Nigel will carry
on looking after QLub.

At Milton Hall, John Spencer-May arrived from STC before Christmas but
has so far eluded the camera. John is working as equipment engineer
with Peter Ward. David Clark came to Milton Hall last week as CAD
manager. He was formerly with Fairchild in Reading.

Raffle mystery solved

Charlie eventually found the winner of the pocket TV. Judith Hooper was
the lucky holder of the winning ticket.

A QL update for overseas distributors

Twenty-three distributing companies from Europe and the Middle East
attended a one-day conference at Heathrow last week. The programme was
dedicated solely to the QL, the first shipment of which was made to
Europe in December. The 39 delegates heard presentations on QL hardware
status (Hugo Davenport making his first public appearance, talking about
forthcoming peripherals), software, technical back-up and service,
promotion at home and overseas, and on the foreign language versions in
the pipeline; French, Italian, German and Spanish are due in two or
three months, to be followed by the Scandinavian languages, Portuguese
and Dutch.

The afternoon session was devoted to practical demonstrations, with
nearly 30 QLs and monitors on the go, mainly in the hands of third-party
manufacturers demonstrating their software and peripherals.

In honour of the occasion, the Sheraton Skyline offered two cocktails --
the Sinclair Slinger (new name for a tequila sunrise) and Sinclair
Swinger. The Swinger, being pure fruit juice, was outsold by the
Slinger.

Sinclair wows the Kremlin

Jan Tyszka and David Park returned from Moscow full of enthusiasm for our prospects in the Russian schools market. The only British computer manufacturers at the Technobuch exhibition, they showed sample ZX81, Spectrum and QL models. David reports: 'In true Russian fashion, the educationalists came in their pecking order. The honoured teachers and professors visited us first, to examine the new technology and then present their reports to their superiors. As the 9-day show progressed, each day brought more important people, building up to members of the Politburo. I think we met them all except Chernenko and Gorbachov. Pravda announced that the next Five-Year Economic Plan would contain provision for 1 million computers for schools. All the signs are for a massive Sinclair share in that market.'

Alan Miles returned last week from a ten-day trip to Pakistan. Other than confirming his destination, he is saying nothing about the trip.

A pixie's trampoline? Massive disc-drive? Diaphragm for Nellie the Elephant? What do you think Jeremy Brown is holding? And what for? See back page for the answer.

Which Computer? Show sorts the men from the boys

Our first exhibition outside London, at the NEC last month, was judged a huge success. Two stands stood out for the crowds around them -- ours and Apple's -- and the quality of the crowds was good; as Jane B put it 'more pinstripes and briefcases, fewer hobbyists.' Sara thought the cold and snowy weather refined the visitors and kept away the time-wasters. The QL appeared new to numerous visitors, on whom it made a good impact. The new QL software was the centre of interest; the many business people who came on the stand were enthusiastic especially about Cash Trader while the 'computer-intelligent' raved about Integrated Accounts -- they could not believe that a program so advanced could sell for as little as £89.95 (this one has yet to reach the market). Project Planner attracted attention because there was little else to compare with it in the Show and at least two visitors thought Decision Maker was the best software to be seen in the exhibition.

To celebrate the sale of five million Sinclair computers, announced during the Show, visitors were invited to drop their business cards in a box from which would be drawn the winner of the 5,000,000th -- a gold-coloured QL. One smarty-pants emptied his entire stock of cards into the box. Invigilator Sara cleared them out and the winner is yet to be announced.

These two groups show the team now looking after our PR activity at Kinnear Limited. Left to right, they are Robin Kinnear, Andy Knott Lizzie Nichols, Julian Goldsmith, Eileen Counihan and Bill Nichols. The second picture shows Judi Arundel, Susi Luss and Carole Seawert

Old and new Spectrums selling well

Following the £50 price reduction for the Spectrum Plus, retail sales have increased significantly, according to Jane Boothroyd. Retailers have been seen selling off their original basic 48K Spectrums for £99.95. New ads are currently running in the national press headlining the 'Spectrum Plus Price Breakthrough'.

As a result of production techniques and volume, the Microdrive cartridge has been reduced in price by 60 per cent. Blank cartridges are now £1.99 each including VAT.

The SRL agreement with Prism, as national distributors, has ended following Prism's receivership. A press release from Sinclair last week made it clear there would be no hiccups in supply to retailers. Meanwhile, distribution of all our hardware and software continues through Terry Blood Distribution who were appointed in mid-1984.

New names in the list of major, direct account dealers are Rumbelows, Granada TV Rental and Spectrum UK, the franchise organisation.

What Jeremy was doing . . .

. . . was holding a light reflector so that Nigel Best-to-You-Each- Morning Brown would dazzle the trade press with his MacLean's whiter- than-white smile over the successes of Sinclair's toothpaste and cornflakes promotions. In the Kelloggs competition, 31,000 contestants tried to win one of the hundred Spectrums, most of them asking for the booklet. Software catalogues were asked for by 11,000 people and there were direct sales of £17,000-worth of software. In the toothpaste competition, 40,000 people entered -- twelve times more than in any previous MacLean's competition.

Nigel denies he intends to be the new 'No fillings today' boy so dear to the viewing public. Jeremy is thinking about training PR people to jump through circus hoops.

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The Willis Road Times

Schoolkids show overseas ministry visitors the way

Ministry of education representatives from 13 countries came to the Stone
House on March 19 for a compelling demonstration of computer use in
schools staged by David Park. David brought a team of 5-9 year olds with
their headmaster from Thurcroft Junior School, Rotherham. Why Rotherham?
Because, says David, the local education authority there has a philosophy
of enabling children to learn by discovery and experience and their
manifestation of this philosophy is recognised world-wide.

The overseas delegates were taking part in a British Council education
study tour on micros in schools. The dozen children split into three

Junior demonstrators from
Rotherham show overseas
education specialists how
they handle data on
the ZX Spectrum.

groups and the five-year olds were seen using the Penman word-processing
package to write their experiences of the day ('On the bus, Johnny was
sick on my satchel') and to record the names of the delegates they
interviewed. A group of girls aged 7-8 displayed the coloured flags of
the visiting nations on their screens while the 9-year olds produced
pro-formas for the delegates to complete about their home countries and
then entered this on a Vu-File program to share on their return to school.

Widening the TV network

Chris Fox is busy recruiting a number of wholesalers in the
radio/tv/electrical field to distribute the Pocket TV to independent
retailers now that stocks are held throughout the national multiple
outlets. He reports that response to his approaches is good.

Financial staff in shuffle

A new central purchasing and invoice clearing section, involving some
financial department staff, is being created within the purchasing
department. Sharon Butcher and Maggie Smith are involved, reporting to
Andrew Gill.

Meantime, stock-taking for the year-end is in hand. This busy activity
involves something like two dozen locations. Mike Briggs is at the sharp
end of this, co-ordinating all the counts.

Nigel in Britannia demonstration

Nigel Searle was due to take part in a presentation of British Technology to Portuguese ministers and businessmen aboard the Royal Yacht Britannia last Wednesday (28th) during the Queen's State Visit.

Day trippers survive gas attack

Despite a punch-up by young British yob ambassadors in a Boulogne bar, complete with release of CS gas in a handy pocket-sized canister, the second Sinclair day-trip to France was voted a success and, indeed, an improvement on the prototype. How, we asked organiser Martin Brennan, was it improved? 'Well, more time on the beach at Wimereux,' said Martin. And what was that like? 'Bloody cold.' Other informants

Is it true, this stuff sends you to sleep? Chris first at the bar on board. The eager group before landing. Photos by courtesy of Simon Butler.

volunteered that the coach was much better, with video programmes, and everybody had a better idea of what was going to happen. As an afterthought . . . Chris Clifton didn't sleep so much. As the day wore on, forfeits were played upon anyone talking of computers and allied subjects. Since the forfeit consisted of downing a double Calva-thingummy (mustn't say Dos) it is not clear whether computer chatterbox Nick Terry was a winner or loser.

Clive's TV leap in the south

A new TV commercial on the QL had its first transmission on March 29 in the London and TV South areas. It aims to position the QL as a serious computer having at least the power of the IBM PC, Apple Macintosh and BBC 'B' but at a price lower than all the rivals. The commercial shows Clive walking in a park-like setting until he comes to four computers as big as houses. With a deep breath he runs to start his Quantum Leap over the four, which display their prices -- IBM £3324, Macintosh £2698, BBC 'B' £ 1632, Sinclair QL £698. Clive lands in slow motion, adjusts his tie, smiles and walks off. The voice-over has told us 'You are about to witness Sir Clive Sinclair's Quantum Leap. He has come up with a computer to rival these machines at a fraction of their cost . . . The Sinclair QL system. With a massive 128K memory, colour monitor and four professional software packages.' The QL screen shows sample programs.

Supporting the TV campaign are double-page spreads and whole pages in the Sunday Times and Mail on Sunday.
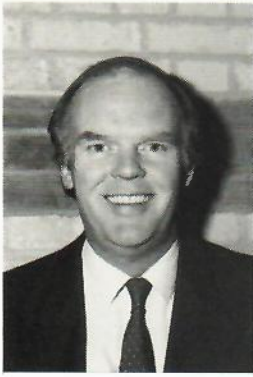
Bill Jeffrey   Debbie Chapman   Andy Kemp   Jenny Hyde   John Foggitt
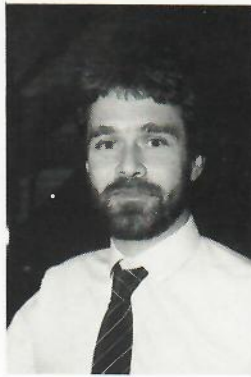
Comings and Goings

Newest addition to the Sinclair team is Andy Kemp who has brought his
journalistic talents to Willis Road from publishers Marshall Cavendish.
Andy is now technical editor, with a responsibility for the content of
brochures, QLub News and similar publications. He came on March 25.

The previous week saw the arrival of two ex-Acorn ladies. Jenny Hyde has
joined Sara and Gill in the shady gloom of the customer relations
department; she was doing similar work for the previous year at Acorn.
Between the Acorn crisis and coming to Milton Hall, Debbie Chapman
managed a month's spell at Taurus. Debbie, who was also a year at Acorn,
is one of the receptionists at MetaLab.

John Foggitt sat still for this group of pictures for the first time
since he joined Milton Hall at the beginning of February as displays
engineer, working on graphics for future generations of computer. John
was with Pericom Data Systems in Milton Keynes for more than three years
and then followed eighteen months at Durham University thinking about
research before he decided SRL looked more attractive.

Bill Jeffrey whose picture appears here, has already been introduced by
Clive's memo to all staff in February, as head of the new TV and
communications division. Bill is highly mobile but describes his base as
being 'mainly Milton Hall, with some of the time at Winchester'.

FAREWELL DRINKS FOR JUDITH HOOPER AND DAVID FULLER AT J MILLAR'S BAR

Judging by these pictures, they had mixed feelings about leaving SRL

So you think you're doing the
right thing, do you, Judith?

Well, it's too late to worry
about it now. Cheers to all!

If I'm cutting my throat, why
does Pat look so happy then?

Russian education market in view

Following his visit to Leipzig, Jan Tyszka went to Moscow with a Russian-language Spectrum Plus at the end of March. He met the Russian Academy of Science and Technology and the Ministry of Education to discuss the potential of computers in schools.

In Leipzig, Jan was with Ian and David Park for the Spring Fair. They signed a co-operation protocol with the East German computer organisation, Robotron, to investigate the possibilities of local manufacture.

Globe-trotting David Park is seen, left, with Ian and Jan at the Leipzig Fair and, right, with John Sanders (centre) and Ross at the Baghdad show

Interest high, sterling low in Baghdad

Such was the success of Iraq's first major computer exhibition in Baghdad that it went on longer than first planned. When it opened on March 2 it was scheduled to last a week but it lasted several days more. According to Ross Norman, who was there all the time, Acorn and Commodore failed to excite much interest although buyers did gather round MSX exhibits. Sinclair, however, created big interest, with ministers, ambassadors, generals all queuing with the general public to get a look in until the stand staff could spot the VIPs and take them aside.

The war with Iran, while not reducing interest in our products, has created a shortage of foreign exchange to buy them with. Ross says that there is a 'desperate need' for some thousands of computers but no means of paying for them. The war, incidentally, caused flight delays back to Europe but Ross looks no worse for it.

Looking ahead

Another of the series of planning weekends was held March 23-24 to look at products planned for next year, three and ten years ahead, and at means of using the technologies which we have developed. The group included for the first time Dr Robb Wilmot, head of the new semi-conductor company, with the rest of the board and other managers and specialists.

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The Willis Road Times

Good luck, sailor!

Ross Norman will leave us on June 1 to sail in the Whitbread Round the
World Race. He will be part of the crew of 17 in the 75ft Maxi racer
previously known as Great Britain II but which will be re-named once the
new sponsor signs on the dotted line; they hope that Guinness will be
the benefactor. The race involves seven months at sea on the route
Portsmouth-Cape Town-Auckland-Montevideo-Portsmouth. The race does not
start until September 27 but from June Ross will be in training, first
doing some healthy outdoor farm work and then sailing. He also has to
raise some money . . .

QL Printer now being introduced

Samples of a new Sinclair QL Printer are currently being shown to
retailers nationally. Made in Japan, the printer has the QL character
set, with all the foreign characters, and can offer dot matrix printing
or near-letter quality. In styling, the printer matches the QL
computer. The retail price has not yet been publicised but is expected
to be around £299. In Chris Cowsley's words 'It's worth at least £400.'
Unlike other Sinclair hardware in the past, the printer is going direct
into stockists rather than having a mail-order-only launch.

Overseas engineers gather for training

Computer service engineers from two dozen countries gathered near
Heathrow last week for a one-day QL service course organised by Tony
Wilson. His team for the day included Jonathan Oakley, Geoff Beeby,
John Munford, Trevor Shearing and Joanne Jackson, with two Thorn EMI
engineers. The visitors were drawn from distributors' own staff or from
the third-party companies they employ for service work. 'This was a
unique event,' said Tony. 'It is the first service course we have
organised and, never having had all these engineers gathered together
before, it also gave us feed-back at first hand. Not only the overseas
people, but also Sinclair, have learned a lot from this meeting.'

Nigel still active in UK

Nigel Searle, due back from Boston for the board meeting on April 29, is
due to be in Wigan on the 26th to open the Wigan Information Technology
Centre. This is one of a network of similar centres established by the
Manpower Services Commission, DTI and local authorities to provide
training opportunities for local unemployed young people in the new
technologies and also entrepreneurial experience in business. The Wigan
education authority invited Nigel because his 'rich experience would
give this important initiative a real impetus'.

C5 tricycle to attempt Lands End - John O'Groats

A spectacular proving trial for the C5 trike starts on Monday when one
of the three-wheelers leaves John O'Groats for Lands End. A team of
nine from the London Fire Brigade will pilot the vehicle in continuous
relays, aiming to reach Lands End by Saturday May 4. Batteries will
also be supplied in relays from an escort vehicle but the team intend to
pedal as much as they can to ensure the best performance. It goes
without saying that sponsorship is at the heart of the exercise and in
this case the Fireman's chosen charities are the Cancer Reseearch
Campaign and the Royal Marsden Hospital.

The C5 was the basis of a Radio 4 'Today' interview on Wednesday (April
24) when Clive is reported to have come over well in the face of 'mildly
aggressive' interviewing by John Timpson. They were talking about the
current situation now that production has resumed at Hoover's Merthyr
Tydfil plant.

New advertising agents for Sinclair

Boase Massimi Pollitt (BMP), an agency strong in fast-moving consumer
goods advertising, has been appointed as another agency to strengthen
Sinclair's marketing efforts. BMP are probably best known for their tin
androids in the Cadbury's Smash tv commercials and also for Prize Boy
yoghourt. For us they will concentrate on computer and Pocket TV
campaigns. A subsidiary of BMP called Marketing Solutions is already
working for us on below-the-line operations -- promotion other than
press advertising and TV commercials.

Primary Contact Limited, who have handled Sinclair advertising for many
years, continue to work on specialist computer press ads, business to
business ads and mail order work.

First foreign language QL launched

The first foreign language version of the QL computer is in Spanish. It
has been launched at the Barcelona computer exhibition, Informat'85. It
is supplied with Spanish keyboard and Spanish Version 2.0 software
packages, QL Quill, QL Easel, QL Abacus and QL Archive. Nine further
programs in Spanish will follow. According to Charles Cotton, the
Spanish QL is the first of twelve foreign language versions for the
coming year. Sinclair has 75 per cent of the Spanish home computer
market.

Sinclair at Bulgarian education conference

'Children in an Information Age' is the title of an international
conference and exhibition to be held in Varna, Bulgaria, May 6-9. The
Spectrum range will feature in conference workshops and papers to be
presented by the Scottish Microelectronic Development Programme (SMDP)
and the Education Computing Centre, of West Yorkshire. Jan Tyszka and
David Park will be there in a support role, showing our equipment at the
Conference exhibition. Delegates to the conference will be education
specialists and decision-makers from 40 countries.

Farewell to Nigel Searle

As the last WRT was printing, Nigel hosted a farewell party at J Millers bar which appeared to be 99 per cent occupied by Sinclair staff from Willis Road and Milton Hall. The PR team at Kinnear laid on a jeroboam of champagne which was handed over by Roger Morris. The second of our tit-for-tat presentation ceremony pictures shows Roger opening the

It's good-bye to you

and it's

good-bye to me

memento given him by Nigel. This was a framed cartoon by Barry Helms whose work appears regularly in 'Cycling'; the background to this in-joke is that Roger and Nigel were both keen cyclists once. Roger continues to read 'Cycling' and hands it to Nigel; the two of them differ on Helm's work -- Roger rates it high and Nigel thinks otherwise. Roger comments 'This was a really nice gesture. It must have taken considerable thought and trouble to get hold of an original.'

TV gets a good start in America

Marketing in the USA for the Pocket TV, FM Radio Wristwatch and the QL computer is starting via the American Express mailing list of card-holders, which is the way the ZX81 was launched there. The offer of the Pocket TV slipped out earlier than the QL and already 10,000 firm orders have come in. Amex have given forecasts of sales continuing at 10,000 per month until Christmas.

A new press release on QL Cash Trader spearheads the latest flow of arrivals of QL software which was previewed to the public at the Which Computer? Show in January (see WRT no 29). Accompanied by a 222-page manual, QL Cash Trader is for small cash-based businesses and sole traders and it needs no accountancy skill to operate while it clearly explains all new concepts as they arise. Cash Trader maintains profit and loss accounts and balance sheets, up-dating them automatically after each transaction. Preparation of VAT reports is made easy. Jeremy Brown is quoted in the release on the £69.95 QL Cash Trader, saying 'It

offers amazing cost-performance levels that no other system can match. QL Cash Trader will be the first of many QL business software titles which will challenge people's price perceptions.' This is a reference to other titles due to be available at the end of this month.

Those scheduled for April 30 availability are the more sophisticated business programs. QL Integrated Accounts is a fully-integrated sales, purchase and nominal ledger program which is the equivalent of SAGE ACCOUNTS on the IBM but with improvements including colour graphics and, at £89.95, only a quarter of the price; ninety days support comes with the program. From Triptych there is, coincidentally, a trio of programs all at £39.95. QL Entrepreneur is designed for anyone starting a business, being a valuable teaching program on how business works and how to develop a workable business plan; it comes with a 130-page manual. QL Project Planner is an aid showing critical activities within a time-scale and producing charts and work schedules. Project Planner is the first program which tackles project costs and schedules for less than £500. Third from Triptych is QL Decision Maker which is a complete problem-solving program training users in the theory of structured decision make-up; an 84-page manual is included.

QL Home Finance, to keep track of domestic expenditure and reconcile bank statements, will be available on May 1, at £24.95.

Practical programs to help exploit all the potential of the QL are already available. These include QL Monitor and QL Toolkit at £24.95 and QL Assembler at £39.95. To support these is the QL Technical Guide which is a ring-bound technical manual at £14.95. Also available is Touch'n'Go the new typing tutor which will bring you to 30 words per minute in twenty-four hours; it costs £24.95 and is also available now.

Sara Johns has issued a useful list identifying 67 software and 44 hardware producers for the QL market.

Sir Clive Sinclair

WHAM 11

January has to be the month of the C5. Not only the talking point of the nation but also regularly seen streaking around the Milton Hall test track. It's quite an eye opener to see otherwise sombre visitors to Milton transformed to enthusiastic 'Mr Toads' when given the chance of a test run. Congratulations to Gus & Perran that their work has contributed to such a successful debut of the first Sinclair Vehicle.

The TV is at last beginning to roll too, with Timex producing more than a thousand a week in January and the rate increasing all the time. Reports that Ric is working on an adaptor to permit installation of a TV on top of the C5 fairing are probably premature.

Watch this space for news of more Metalab goodies emerging in February.

Ski carefully

Richard

SITE NEWS

The seasonal weather has brought the gremlins out of the heating system with a vengeance - as you may have noticed! - and the chart recorder has been much in demand to provide irrefutable proof that things ain't what they ought to be. There appear to be two separate causes of the trouble, both of which are being dealt with by the experts whose visits seem to generate new gremlins each time! The pumps originally installed appear not to be adequate now that the Kitchen Wing has been added, and this accounts for some of the problems in the far distant reaches of the North Wing, which were in danger of becoming icy wastes. The main problem however sems to lie with the main control panel which masterminds the morning start-up sequence. The only engineer known to understand the panel's mysteries has disappeared into the depths of the Fens, and as yet other attempts have not vanquished the system - they are still trying.

Work on the exterior of the Hall has inevitably been held up by the weather,

but the interior has changed dramatically since Christmas. Most of the major structural work in the basement is now complete, and the experts are applying the waterproof render - mud-pies on a massive scale. The bar has taken its final shape, and we have decided where to put the former strong room door, but you will have to wait to find out where it will lead. The main item outstanding is the stair to the ground floor.

Elsewhere the new floors are complete, and the electrical trunking and heating pipes are being installed. The main stair from first to second floor will take shape rapidly in the next few weeks. On the second floor itself twenty men were needed to 'offer up' an RSJ which spans the South-East wall. This will enable us to add two windows overlooking the EEB training ground, and will greatly improve the light in that room.

Finally, the architects are investigating ways of soundproofing the area occupied by Malcolm's team - any suggestions?

EDITORIAL

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LIBRARY & INFORMATION SERVICE

I am always looking for ways to improve my
service; unfortunately, I lack the time
and space to implement anything grand. By
the time this is published I should have
taken delivery of a British Telecom
Business System, albeit a basic one which
I shall use for online information re-
trieval. It has been proposed that I pur-
chase a software package called an
'Information Transfer' system. Basically
this allows an inexperienced database user
to log on, choose a database and make a
search without previous knowledge. This
mean YOU can do your own literature
searches without recourse to me. I would
like to know how you feel about this;
would you use this system? Would you pre-
fer to leave it to me or perhaps have both
options? Have you any other ideas?

Did you know that the library has all
IEEE conferences for 1983 (and following
ones as they occur)? The range of subjects
covered is very wide. I suggest you come
and look or ask what I have got!

The Turing Institute has started to
publish Research Memoranda. New titles
will be announced in the current awareness
bulletins. The first five have already
been produced and we have three of them,
with all the rest to follow.

*TIRM-84-001
Jelinek, Jan and Sloboda, Fridrich
A parallel method of orthogonal projection
forsolving large sparse linear algebraic
systems December 1984

*TIRM-84-002
Sloboda, Fridrich
Smooth and sharp laplacian operators
December 1984

*TIRM-84-003
Jelinek, Jan and Mowforth, Peter
Low-level vision: away from edges
December 1984

TIRM-84-004
Nakamura, K
Associative evaluation of PROLOG programs
(Also published as a Research memorandum
MIP-R-141 from the Machine Intelligence
Research Unit, University of Edinburgh)

TIRM-84-005
Heeffer, Albrecht
Automated acquisition of concepts for the
description of middle-game positions in
chess December 1984

*The library holds these TIRMs

New Acquisitions

Welding 85 - Welding Institute Annual
  Buyers' Guide.
Machine learning: an artificial
  intelligence approach - Michalski,
  Carbonell, Mitchell
Dynamic semiconductor RAM structures: a
  patent oriented survey - Cardon &
  Fransen
Cooperative responses from a portable
  natural language database query system -
  Kaplan
Godel, Escher, Bach: an eternal golden
  braid: a metaphorical fugue on minds &
  machines in the spirit of Lewis Carroll
  - Hofstadter
New application of databases - Gardarin &
  Gelenbe
New computer architectures - Tiberghien
Handbook of artificial intelligence - Barr
  & Feigenbaum
Pascal user manual & report - Jensen &
  Wirth

Footnote

Many thanks to 'Bid' for the super-puzzle.
I hope Metalab inmates enjoy solving it.

Alison.

I DON'T SEE WHAT'S SO SPECIAL ABOUT THESE NEW JUMPERS

'MILT'

Martin Brennan's Biography (sic)

Among Martin's earliest recollections is the day he left Kirkintiloch, Scotland at the age of seven. He told his friends 'Ach England's no that bad. The schools close at 12:00 doon there'. Now at the age of 28 his friends (many can be found in Lion Yard) confirm that he remains an optimist (and liar).

Not being understood by his fellow pupils proved to be no hindrance to the young Martin for whom no schoolday was complete without a fight.

After four years watching Blue Peter Martin became well versed in the gentle ways of the English. However as his social life was blossoming an unintentional examination success promoted him to the local grammar school: Joe's Jailhouse. This tribute to Victorian engineering has reformed many of the country's luminaries including John McNulty, Stephen Brennan, John Brown and Chris Smith. Joe's Jailhouse is being pulled down even as you read this.

He immediately joined the boxing team on the grounds that being punched about the head by somebody twice his weight was preferable to standing about on a damp playground. He quickly became the Lancashire champion and remained so until the coach left to become the National Coach (not the bus company).

Practical Electronics, Electronic Computers Made Simple and a remarkable dexterity with Fairy Liquid bottles led him to design his first computer at the age of 12. He maintains that his education beyond this point was unnecessary and in any case forgotten.

Further unintentional (and spectacular) exam success took Martin to Churchill College, Cambridge. This marked the beginning of his 'blue' phase. Cambridge and Churchill College were chosen because he liked the name and because Churchill College was the mixed college closest to Blackpool.

Martin spent his spare time building unnecessarily powerful stereos, playing croquet and turning the college disco into a profit making organisation.

The seven hour weeks, 26 week years and the student life soon took their toll. Short well groomed hair, clean shaven, a tie; his tutor had seen the signs too many times before; Martin wanted a job.

When asked at his first interview 'What do you like most about our company?' he replied 'The holidays!' After a poor start he soon became quite expert at handling interviews and by Easter of his last year he had attracted 12 job offers and a similar number of free lunches.

Racal gave him his first job as a Physicist (an electronics engineer who works in a clean room). It was during these two years that he developed his 'Never say "No" to anyone' approach to life. The words 'Food fight' still bring a twinkle to his eyes. Symptomatic of this philosophy he was lured to London and higher salaries in an attempt to cure a four figure overdraft.

At this time Video Games were at their most popular, the ZX80 was on sale, and Martin owned his first computer.

Big city life did not suit Martin. Warm beaches and good food lured him to Cannes but not before meeting Nigel, Jane and John from a small company in Cambridge which had just launched the Spectrum. He joined Sinclair Research as the Parisians left Cannes on 1 September 1982.

Since then he has been part of the team which developed the microdrive and has the record for the longest and most expensive journey from Motcomb Street to Liverpool Street Station.

WSI DEPT.

F.E.A.
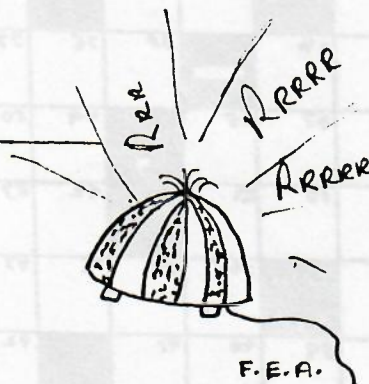
CROSS-B1D
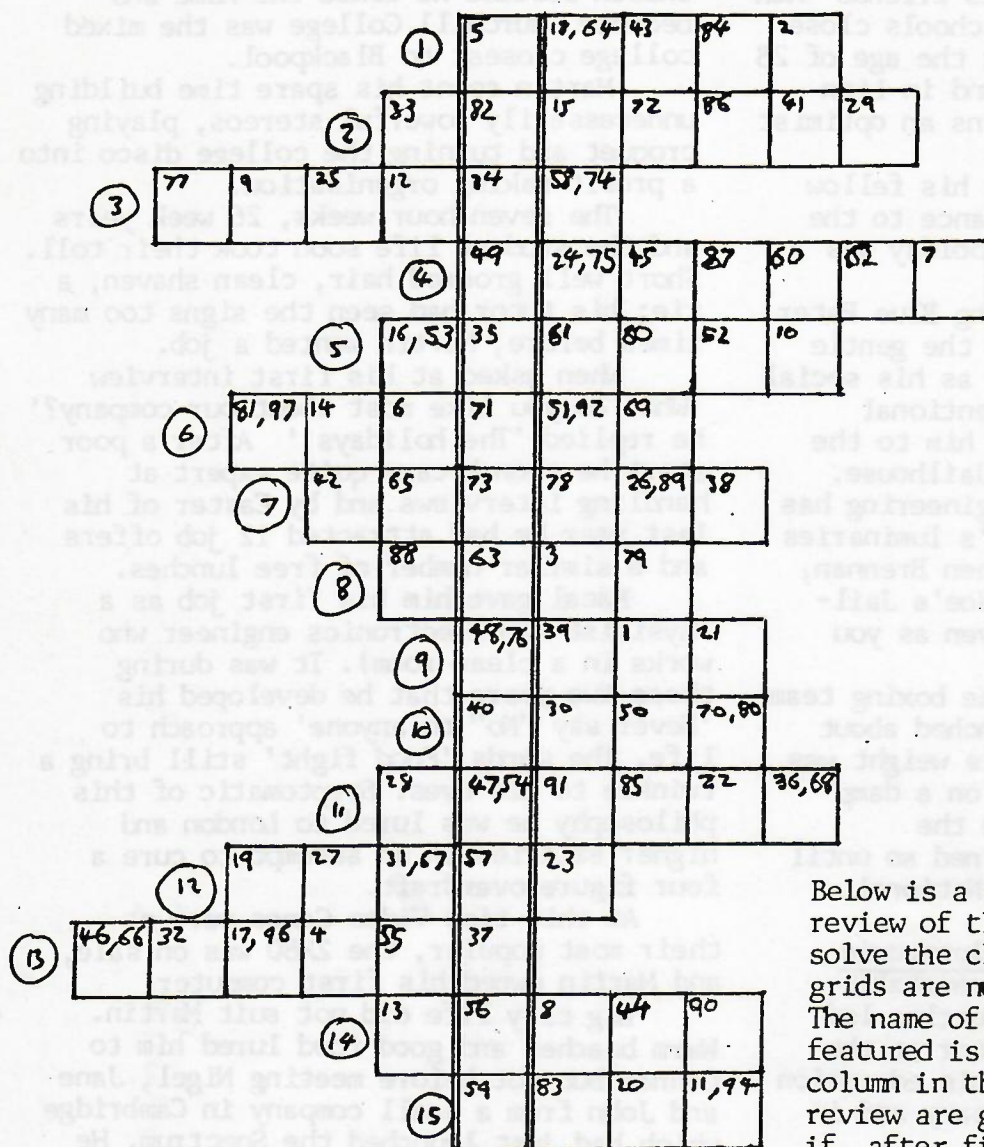
Clues

Child's C5 (5)
Black varnish (7)
Also tried (6)
Believe in 'Allah' (7)
Proverbial calf (6)
Belonging to many (6)
Cadmium (6)
By 'Jupiter' (4)
2 less than Isaac (4)
Black deposit (4)
Joining together (6)
Very low frequency (5)
Not an enemy (6)
Untidy spud (5)
Abomnible answer (4)

Below is a rather encouraging newspaper review of the C5. To fill it in you must solve the clues above. The letters in both grids are numbered for cross-referencing. The name of the paper in which the review featured is spelt out in the indicated column in the clues. Two letters in the review are given as starters, for example, if, after filling in some clues you thought the last word was 'of', you would be able to fill in letter 3 of clue 13 as 'o'. Because it is a double number square, No 17 at the bottom would also be 'o'.
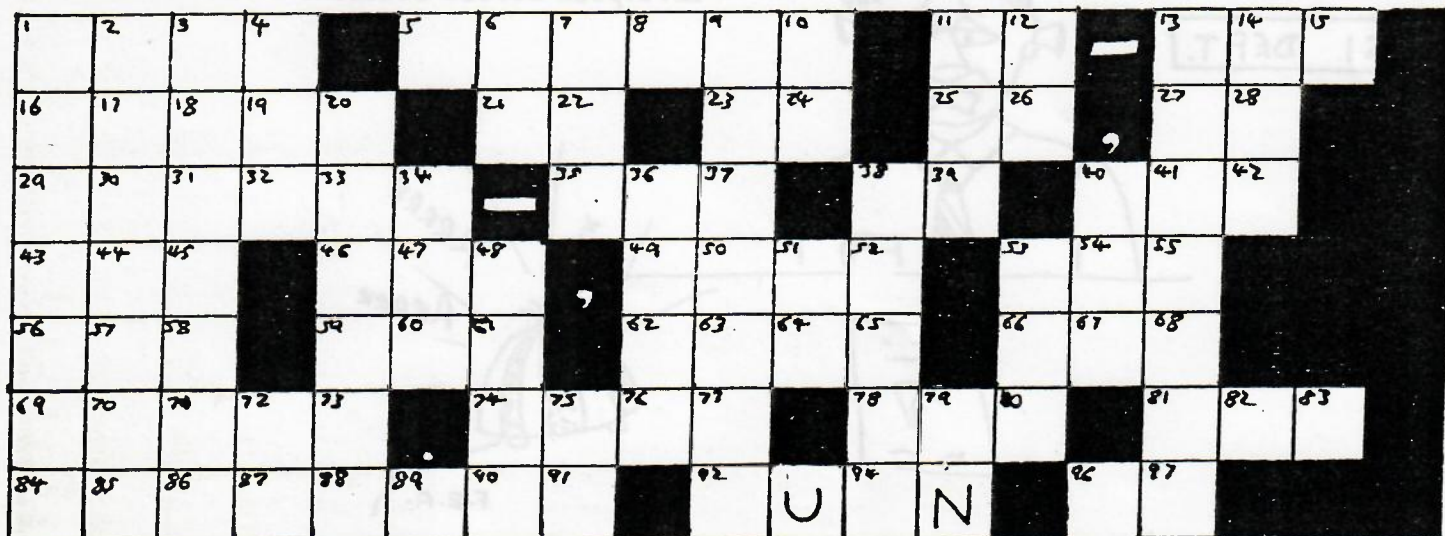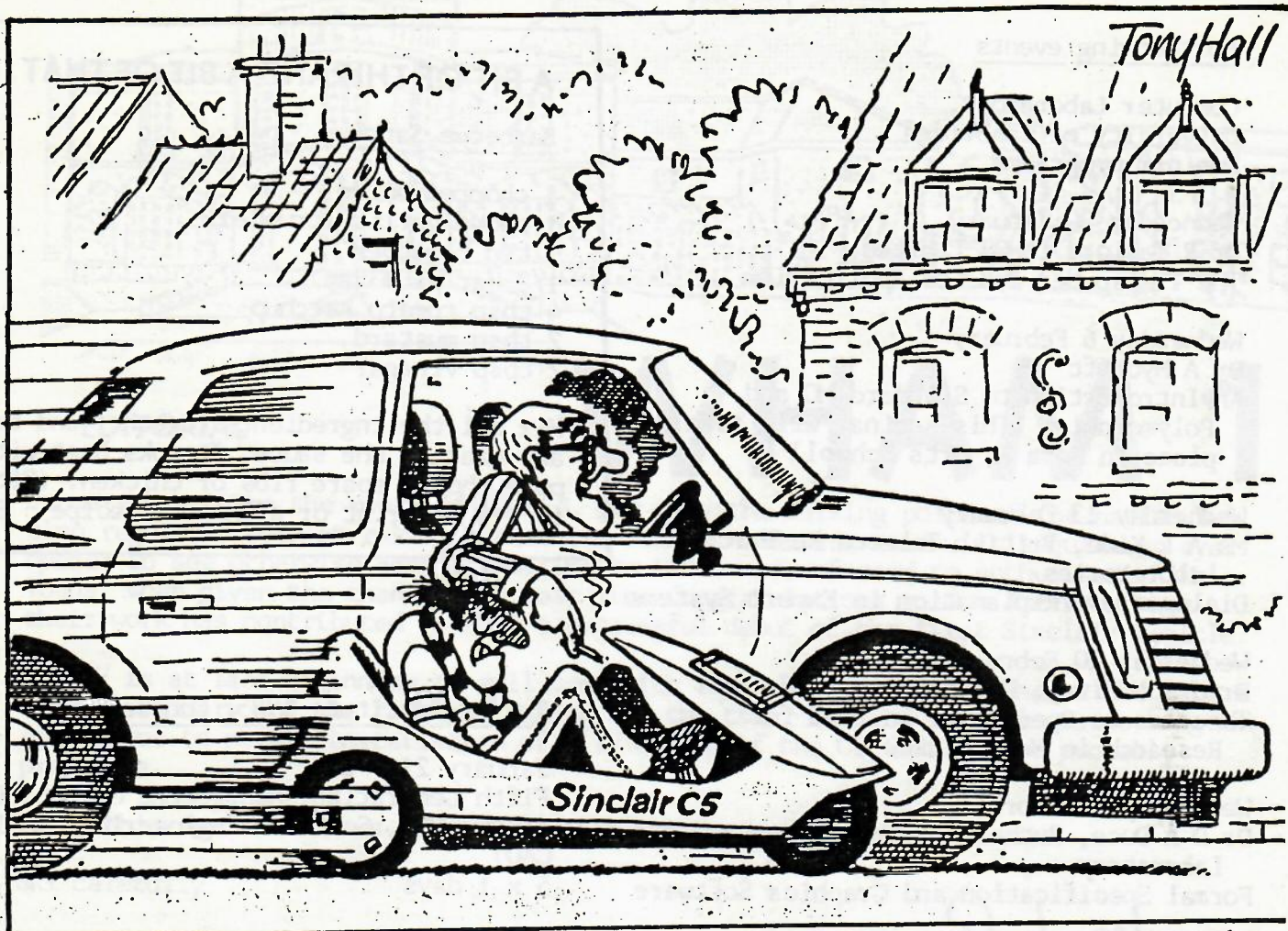
"Apparently they're marvellous, economical little vehicles — though I've yet actually to see one . . ."

Milton's C5s

As most of you know we have two C5s here at Milton Hall for general use.

They are parked in the bicycle shed next to the post room.

Should anyone require to use one please see the ladies in the post room for the keys and any assistance you might require.

The keys are kept in the top drawer of the black cabinet and anyone helping themselves should let us know they have taken them at their earliest convenience.

There are also spare batteries and chargers in the post room, so please if after using the vehicles you notice that the battery power is low, bring them into the post room and set them up for re-charging. Happy motoring.

Postscript:
Please continue to put your initials after the order number when making an order as it is easier to sort post and parcels. You will receive the goods more quickly!

Thanks

Dawn, Eileen, Michelle
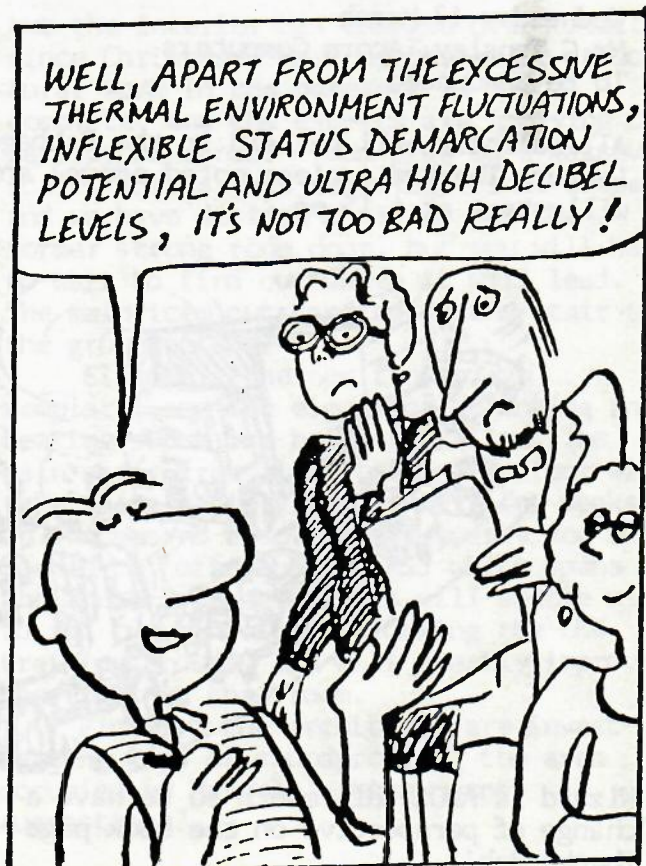
Forthcoming events

Computer Laboratory,
University of Cambridge
Seminar programme

Wednesday 30 January
Dr R Taylor, INMOS Limited
The Transputer and its Application

Wednesday 6 February
Dr A Mycroft
An Introduction to Standard MC and
    Polymorphism (This seminar will take
    place in Room A, Arts School)

Wednesday 13 February
Ms A L Kidd, British Telecom Research
    Laboratories
Dialogue and Explanation in Expert Systems

Wednesday 20 February
Dr J S N Elvey, Woerd Lodge, Oxford
Theorems as Operators: an IKBS for
    Research in Mathematics

Wednesday 27 February
Dr D A Duce, Rutherford Appleton
    Laboratory
Formal Specification and Graphics Software

Wednesday 6 March
Dr H Barringer, The University, Manchester
Compositional Temporal Logic Systems for
    Parallel Languages

Wednesday 13 March
Mr G Tansley, Acorn Computers
To be announced

All seminars will be held in the Babbage
Lecture Theatre (unless noted above) and
will start at 4.15 pm.

A BIT OF THIS AND A BIT OF THAT

Barbecue Sauce

1 chopped onion
1 clove garlic (crushed)
1 tin tomatoes
1/2 jar plum jam
4 tbsp tomato ketchup
2 tbsp mustard
2 tbsp vinegar

Mix all the ingredients together and bake
any meat in the sauce. It woks best with
pork chops, spare ribs or chicken. (Either
it's a misprint or a Chinese recipe - Ed)

Turing Institute 1985: Courses

January 21 - 25
Fifth Generation: Management Orientation
(IKBS, MMI, Software Engineering, VLSI &
CAD)
5 x 1 days

January 28 - Feb 1
Foundations of Artificial Intelligence
(Logic Programming, Expert Systems)
1 week course

February 4
Journeyman - course begins   repeated
                                  through
February 5   1985
UNIX System

For brochures see Alison
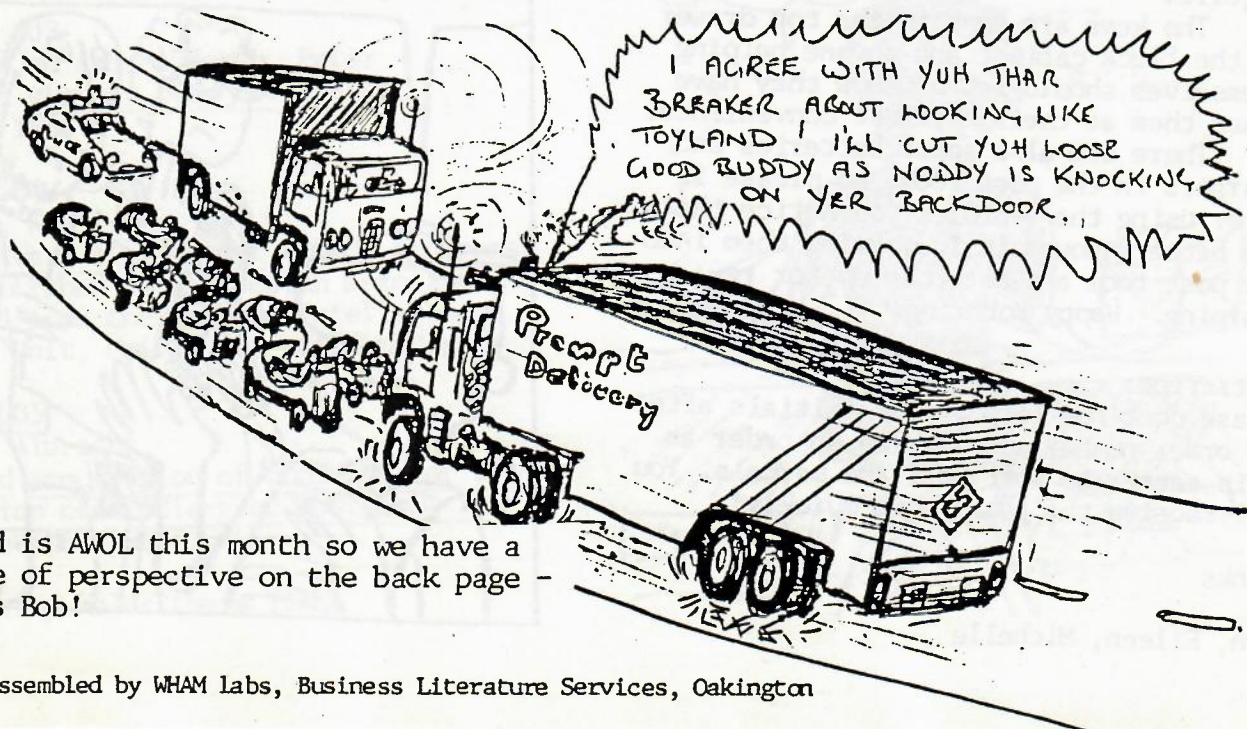
Wizard is AWOL this month so we have a
change of perspective on the back page -
Thanks Bob!
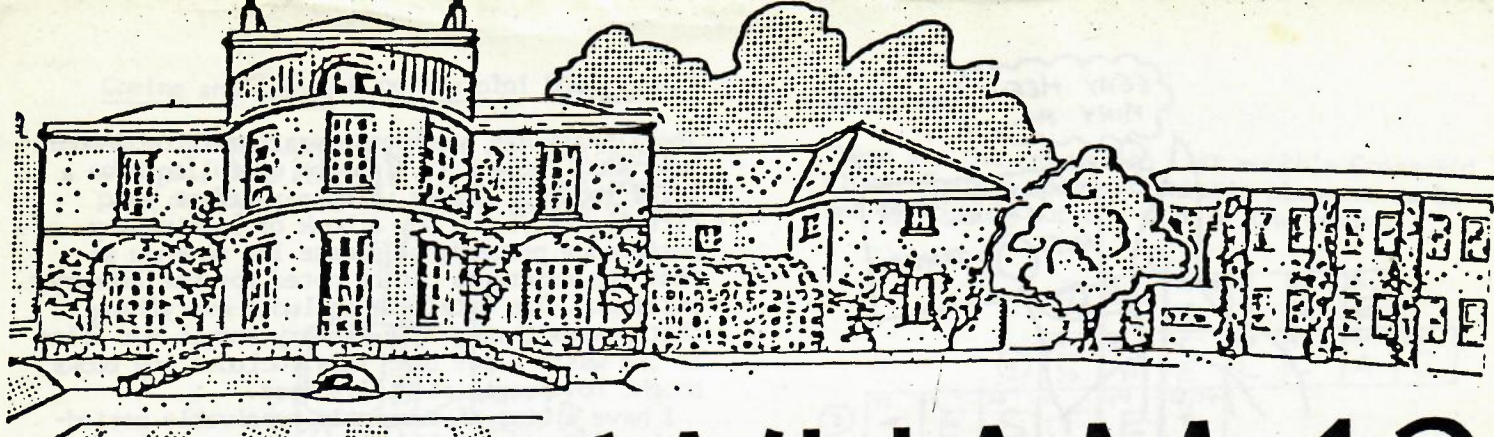
WHAM 12

EDITORIAL

February 1985 - no shortage of news about the computer industry this month! Some good and some less good.

The good news is that retail sales of our computers are strong, although the shops' confidence in all the other producers is, hardly surprisingly, pretty battered. Seeing well known names in trouble tends to cause attacks of the vapours and general shaking around of plans, and SRL has had a busy month anticipating and preparing for possible effects of this over the next few months. Hence the emphasis on being seen to perform well and limiting expenditure on non-essentials. On the production side we have asked our suppliers to reflect the changes in retailers' demands - inevitably this has immediately been reported in dramatic overstatements about 'stopping deliveries'.

With all this going on it seems logical to defer spending on externals at Milton Hall and focus on completion of the interior of the hall itself. The weather has done this for us anyway recently. J&B are at present re-working their programme, in terms of 'Hall now, Terrace etc later'.

It's long been known that Acorn were run by a robot but now they have gone the whole hog:

'Designed by a robot, stocked with computers, driven by Italians'!

Richard

SITE NEWS

When I arrived on the Monday following the latest snow fall I somehow knew what to expect - a total lack of heating. I was not disappointed. This time it was the low temperature thermostat which caused the problem. Having closed down the system because the water temperature had dropped below the acceptable level, it failed to restart it. We have since tried two other 'stats, neither of which worked, and are now trying to find either a more accurate and reliable type of 'stat, or a different method of achieving the desired end. Perhaps the ghost has taken up residence in the plant room.

Versatemp have now supplied user instructions for the office units (only a year after we moved in) and I have pinned up copies of these around the building. These describe the two situations which cause the individual units to cut out and how to re-start them - although most of you have already found out through bitter experience.

Once again there has been little progress on the exterior of the Hall, for exactly the same reason as in January - the seasonal weather. However, the interior is beginning to look almost civilised, with the plasterers about to begin. The stair to the second floor is complete, and looks very good indeed. We still lack a stair to the basement, and the waterproof rendering down there will not be complete until mid-March, but otherwise most of the internal structural work is complete. We are about to enter the long period when nothing tangible seems to happen while the plaster dries out, and the remaining mechanical and electrical services are installed.

March will hopefully see the planting of the border along the East Wing, and also the the surfacing of the area behind the North Wing.

Finally, it looks as though we are unlikely to be able to occupy the hall before the end of the summer owing to delays in the building programme, so Portacabin dwellers should prepare to swelter.

> EENY MEENY MINY MO..

VERSATEMP MASTER CONTROL
ARCTIC — TROPICAL

Visitors

There has been some concern recently about the presence of UFOs (Unescorted Friendly Outsiders) going AWOL (Around Without Obvious Labels). In response to popular demand therefore we have ordered some Visitors Lapel Badges. The receptionist will endeavour to attach every visitor to a badge which will be available in a choice of tasteful colours for the fashion-conscious visitor. Visitors without badges but with overalls are workmen.

> DON'T WORRY, AS LONG AS YOU'RE WEARING AN OVERALL YOU CAN GO ANYWHERE..

SONY
ACORN
Mr Amazed!

Milton C5s

Paul has made a 'hutch' for the battery chargers so from now on all batteries should be kept in the Cycle Shed. One can be charged in the hutch, and when the second charger reappears it can be connected to a battery outside and the flex run back into the hutch. Please place on charge any battery which is getting low in power. Please also remember to disconnect the charger at the mains before connecting-disconnecting it from the battery.
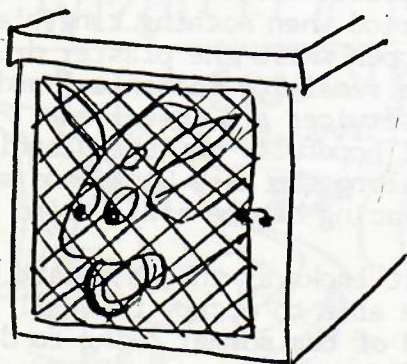
Library and Information News

The library has now been operational for a whole year so I thought it might be useful to have a brief recap of things which may affect you. Firstly, if you do buy a book or receive any conference proceedings please let me know so that its existence can be noted for the library catalogue. The catalogue includes everything that passes through the library and is not filed in the waste paper bin! This includes any books bought for people at Willis Road.

I have a list of currently receivable periodicals if you'd like to check what's available. I can also supply a list of journals that you personally receive on circulation.

The Technical Indexes system is being used but I think it can be a bit offputting particularly as you may have to look at several cassettes before you find what you want. All I can suggest is perseverence, and Tim can testify to that. If you have to ring extension 99 please remember to tell the TI staff that we have a microfilm system, and if they ask which it is it's 'Electronic Engineering'. Otherwise they will refuse to answer your enquiry.

I have at last had installed my British Telecom Merlin 'Business System' which should make literature searches quicker. We have passwords for four database hosts and can search on a range of topics spanning science and technology, company information, patents, trade marks, books, news and even meteorology! I hope that soon we will be able to access the library database of the Turing Institute. Has IT arrived in the library?!?

Library acquisitions

The Genghis Khan guide to business - Brian Warnes

Ergonomic Principles in Office Automation - Ergolab

Computing Structures for Image Processing - M J B Duff

Introduction to MOS LSI Design - Mavor, Jack & Denyer

EEC Contacts 84/85 - Jim Hogen

Code of Federal Regulations: telecommunications - US Govt

Basic Environmental Testing Procedures - BSI

Cambridgeshire Computer Register 1985

Trade Associations & Professional Bodies in the UK

Dangerous Chemicals: emergency first aid guide

Logic for Natural Language Analysis - F Pereira

Artificial Intelligence - P H Winston

Artificial Intelligence: an MIT perspective - Winston & Brown

Travel Time

Dave Forth has £100 worth of Thomas Cook vouchers which he will hand over to the highest bidder.

Coming Events

18-22 March   Jo on holiday
18-21 March   Penny on First Aid course
31 March   End of 1984-85 leave year.

Coming and Goings

Although his appearance has not noticeably changed, Dave Forth is now a fully-fledged company employee, and is working on the TV Mark I.
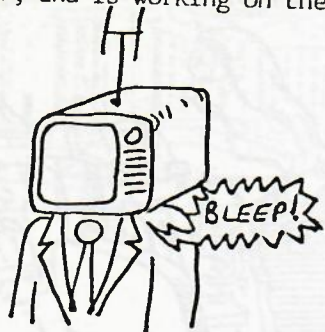
ALTHOUGH HIS APPEARANCE HAS NOT NOTICEABLY CHANGED...

Sadly, we are to lose Eileen on 8 March, after just over a year. We can't quite understand why she wants to leave, having survived the dust, noise and cramped office of the early days, but she seems to think that an afternoon snooze is more appealing than the switchboard or typewriter. We are sorry to lose her, and wish her all the very best in the future, and hope that she will come back to see us from time to time.

We hope to have found a suitable replacement for her by the time this reaches you.

A bit of this and a bit of that . . .

Curried parsnip soup

1 lb parsnips - chopped	salt and pepper
8 oz potatoes - scrubbed and roughly chopped	2 pts stock
	1/2 pt cream
4 oz onions - diced	2 oz butter
1 tsp curry powder	1 clove garlic

Peel and slice parsnip. Put the onion, parsnip, garlic and potato into a heavy pan with the butter and cook for 10 minutes slowly with the lid on. The vegetables must sweat in the butter and become soft. Then add the stock, bring to the boil and simmer until the vegetables are cooked. Blend or liquidise, return to the cleaned pan. Adjust seasoning, add the cream and serve with croutons.
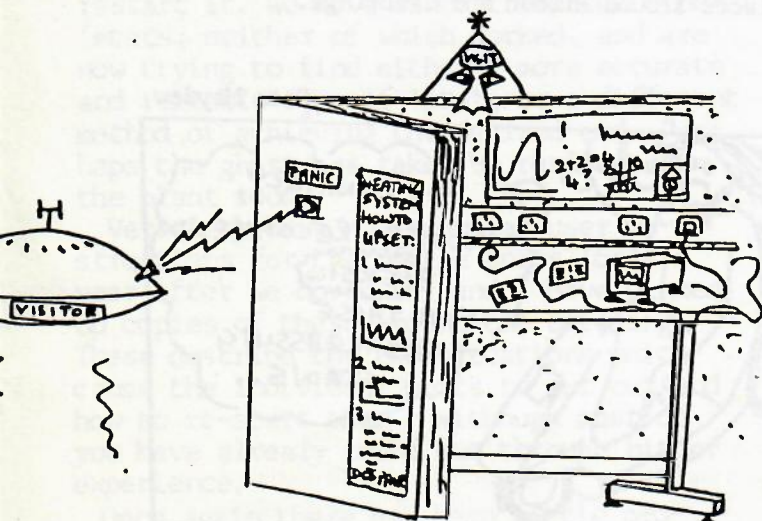
CROSS-BID

These are the answers to last month's Cross-Bid clues. There's more masochistic pleasure to be had by working out the text of the review!

THAT DOESN'T COUNT!
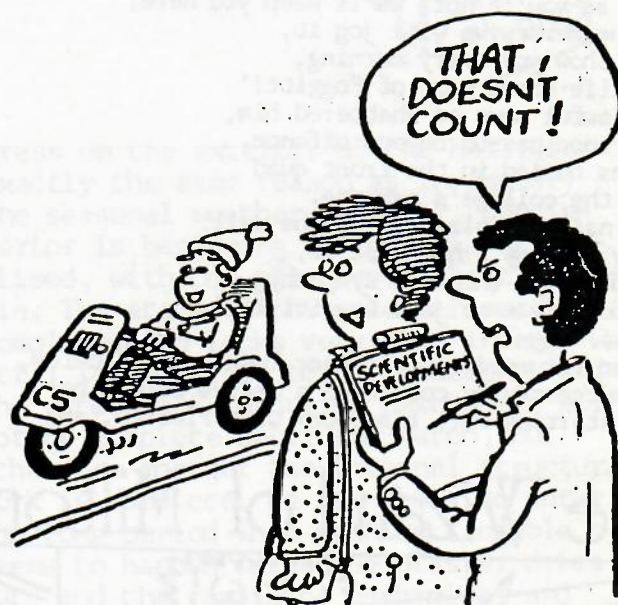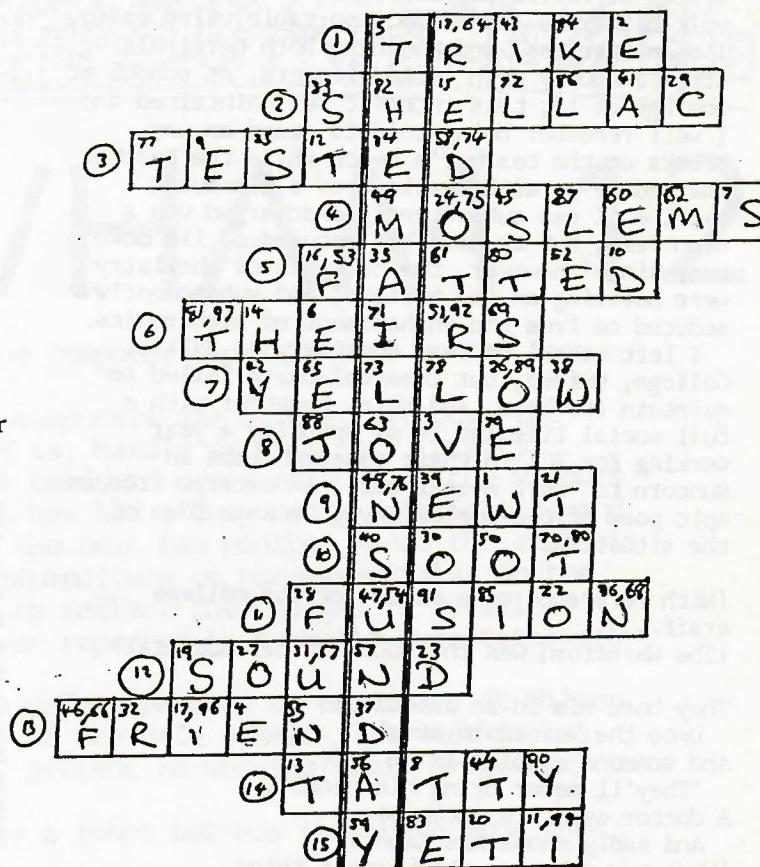
Sweater man of the month

Every month the Metalab girls will vote for the man who, in their opinion, has sported the trendiest sweater or the best range of sweaters in the past month. For the first time this new award is given to newcomer David Clark who won by one vote over Neal Macdonald. Well done David! In the coming months we hope to be able to print a photo of the winner.

Potted biography - John Foggitt

Having been born at the tender age of 0, it took 10 years for an interest in the electrical things in life to arise; initially this consisted of retrieving discarded (nearly flat) 90 volt batteries (ex daddy's portable valve radio, I mean wireless) and touching both terminals simultaneously with licked fingers. At school at the age of 12, this interest was maintained and I well remember being told to stand on wax blocks on the teacher's bench while the teacher charged me up with static from a Wimshurst machine. I was subsequently discharged via a neon lamp, but my hair has refused to lie down ever since! However, the delights of chemistry were hovering on the horizon, and subsequently seduced me from the enchantment of electronics.

I left school to read chemistry at Balliol College, Oxford, but chemical charm failed to maintain its hold, and this, together with a full social life led to my spending a year working for ICI in their research labs in Runcorn to 'sort myself out'. An excerpt from an epic poem of the period may give some idea of the situation:

(With reference to a member of the college staff...)
(The Warneford was the local mental hospital)

They bore him in an ambulance
  Unto the Warneford stack
And someone mumbled as he left,
  'They'll never bring him back!'.
A doctor eyed him piteously,
  And sadly shook his head;
'Were you a horse, the kindest thing
  Would be to shoot you dead,
'But as you're not, we'll keep you here;
  Your memory we will jog it,
'And show you every morning,
  A life-sized snap of Foggitt!'
This awful news so shattered him,
  He soon passed beyond offence.
He was buried in the front quad
  At the college's expense.
They nailed a plaque upon the wall:
  'My destiny I have met it,
  'So if you think of sympathy,
  'Too late - so just foggitt it!'

I then returned to my former love - electronics, and successfully completed a degree course before starting full time work with Plessey, and
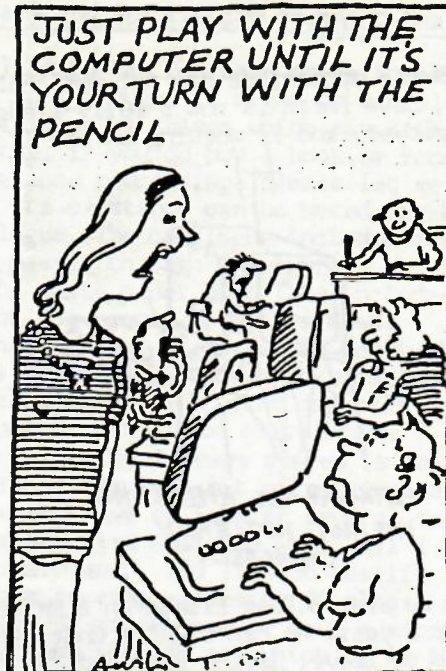
it was in those halcyon days that I met such characters as Peter Ward, Malcolm Wilkinson, Neal Macdonald, and Tony Marsh. After moving within Plessey, I decided that a smaller company would be more interesting; this, together with a newly acquired interest in microprocessors and machine code led to a job with Newport Instruments in Milton Keynes. Eighteen months later I moved on to join Pericom Data Systems as their Software Development Manager. Three and a half years on, I again had a change of scene, but a big change this time: software to hardware, industry to academe, south to north, and modern to ancient (Milton Keynes to Durham). It was in Durham where I was finally tracked down and invited to apply for a job at MetaLab, and here I am, having started work with SRL on 1 February.

My hobbies range from hi-fi (I am currently building up a Compact Disc collection) to amateur dramatics and include video (complete with camera and portable recorder), liqueur collecting, and home computing. Regarding the latter, I hate to admit that I do not own a Sinclair machine (not at the moment anyway), although I was one of the first Spectrum owners (delivered September 1982, and subsequently sold).

I am part of Malcolm Wilkinson's team, and look forward to getting to know more people and places around Milton and Cambridge.

JUST PLAY WITH THE COMPUTER UNTIL IT'S YOUR TURN WITH THE PENCIL

The Wizard of Milton

Pete Maydew
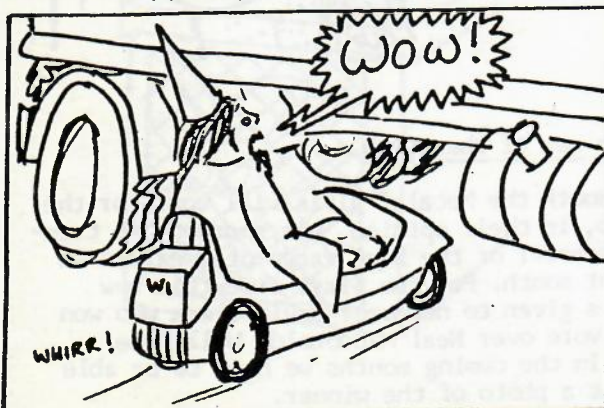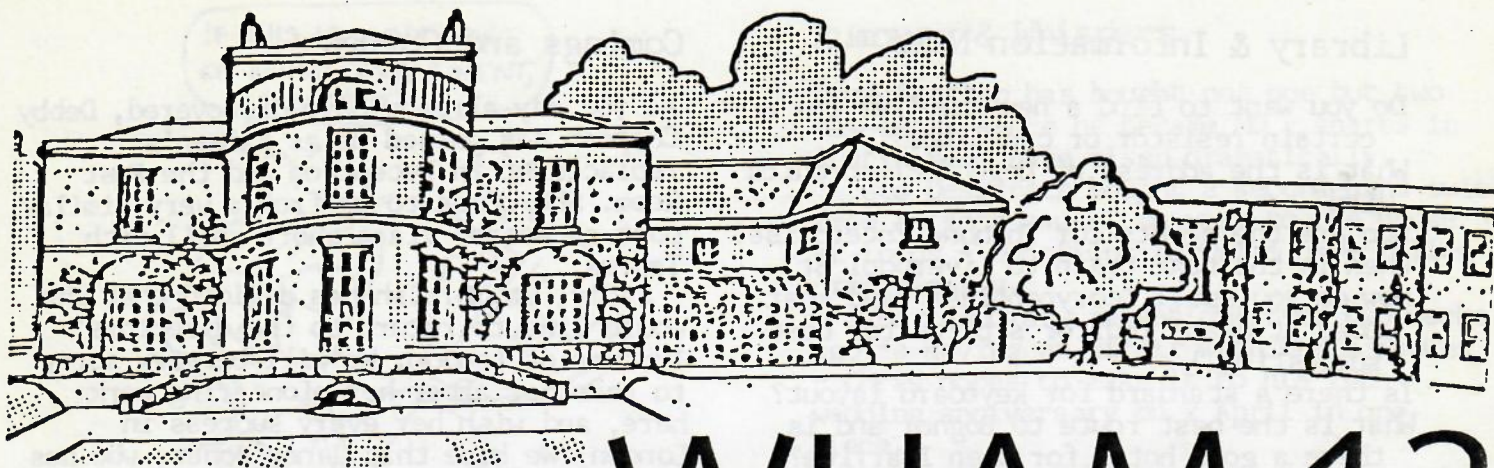
WHAM 13

EDITORIAL

The first anniversary of 'What's Happening at MetaLab', marks the end of the first full year of operations at Milton Hall. In that time the TV has emerged from being a rare, hand-made item to a widely available mass produced product, the Spectrum+ has become the company's best-selling product and wafer scale has come from obscurity to the front page of every electronics journal.

Robb Wilmot is impressed with the prospects for wafer scale and the associated process developments and is devoting a lot of energy to the process of finding substantial financial backing to allow us to go ahead. Watch this space!

With the growing range of activities at SRL, it has been agreed that these should be organised as three divisions - Computers under Dave Chatten, TV and Communications under newly arrived Bill Jeffrey and MetaLab under myself. Each of these will be cost centres through which the company will aim to maximise sales and minimise cost. Each division will have an executive committee to put this into practice, and at MetaLab this will consist of myself, Jim, David, Malcolm and Peter. This group will be meeting at least monthly and notes will be circulated immediately afterwards on actions arising.

Some new features in WHAM this month - thanks to those who hatched them up. Even at MetaLab (or especially) life has its silly side - let's see them aired in WHAM! .

Richard

SITE NEWS

Following a major tidying-up exercise by the builders, the Hall has emerged in remarkably good shape. Alison's future library is the first room to be ready for painting; we have approved some of the colour schemes, and await alternatives for others. The general approach will be to use colours appropriate to a Georgian building, while furniture and light fittings will be modern. The windows are gradually being renovated off-site, and those which are back in place now move surprisingly easily for such large frames. The two original cornices which have survived have been cleaned, which has greatly improved the sharpness of the relief. The electricians have just started on the mammoth task of wiring the building, which will hopefully provide an excess of power points against future needs.

We have reviewed the outstanding work on the Lab Wings, Plant Room and Kitchen Wing, and have asked J&B to finish the Plant Room by Easter, since it is over a year since it came into use. The faulty Versatemp thermostats have been replaced and appear to be working satisfactorily - the new thermostats are a different design which is being fitted as standard to all new units, so if you have had a cycling or overheating problem with your unit, but have not reported it recently, please let me know, since it now appears that it can be improved.

The East Wing border looks considerably brighter now that it has been planted, and the remaining plants are destined for the driveway borders. Our full-time gardener, Charles Hawes, starts on 1 April, so you will be able to satisfy any curiosity about the plants then.

Finally, a warning - the rooks are nesting again, so do not dawdle on your way to the Portacabins since you will be right in the line of fire.

Penny.

Library & Information News

Do you want to find a new supplier for a certain resistor or capacitor?

What is the address of Legend Electronics Ltd?

Who are the agents for Phihong Enterprise?

When is the next train to Liverpool St?

How do you spell 'corybantiasm' and what does it mean? (Editor's prize for best suggestion.)

Is there a standard for keyboard layout?

What is the best route to Bognor and is there a good hotel for when I arrive?

These are just a few of the types of questions I can answer for you. The resources of the library probably are not well known enough to be appreciated to their full extent, so I shall be producing a brief guide in the near future. I hope that a more 'in-depth' guide will appear after I move into the new library.

The online database searching terminal is set up and ready to use now. We have access to four 'hosts' (companies who mount the databases on their own computers and make them available online). Thus, the subject areas covered are remarkable, not only science & technology but marketing, company information, news, patents & building research to name but a few. I already have several satisfied customers!

New Titles

IEEE standard dictionary of electrical and electronics terms.

Television video transmission measurements - Marconi

A book on C - Berry & Meekings

QL machine code editor/assembler: microdrive software

The computer users' yearbook

World Radio TV handbook 1985

Anthropometrics - BSI

Software tools in Pascal - Kernighan & Plauger

Culture Vultures

There is still time to book for our night out to see

'One for the Road' by Willy Russell (Educating Rita)

on Friday 26 April at 8pm. Please sign the notice on the canteen noticeboard or let Alison know. Remember we get a reduction for 10 or more people. Last time we met for a drink/meal before hand (but this is optional).

Comings and Goings

As you may already have discovered, Debby Chapman has joined us as Eileen's replacement in Reception and the Post Room. She comes to us from a very similar post at Acorn, via a short spell with Taurus.

Sadly, Jo Morrish has decided that she would like to return to the directors' lunches of London. We will be very sorry to lose her after her pioneering work here, and wish her every success in London. We hope that Janey Jones, who has filled in during Jo's absence on several occasions and so knows us quite well, may be tempted to take on the challenge.

Finally, Charles Hawes joins us on 1 April as Gardener-in-Chief, having been with the Garden House Hotel for several years. He has also lectured at the Botanical Gardens, and run the hothouses at Sandringham, so has very wide experience of things horticultural.

Sweater Man of the Month

The winner is Aaron who made a great effort this month. The decision was difficult this month and we voted Ric and Malcolm as close second place - Ric for his skyline sweater and Malcolm for his range of smart sweaters.

"IF THIS IS SOME SORT OF ANIMAL EXPERIMENT, I LIKE IT.."

"JO'S CHOCCY CAKE"

"I PREFERRED MIKE'S SWEATER.."
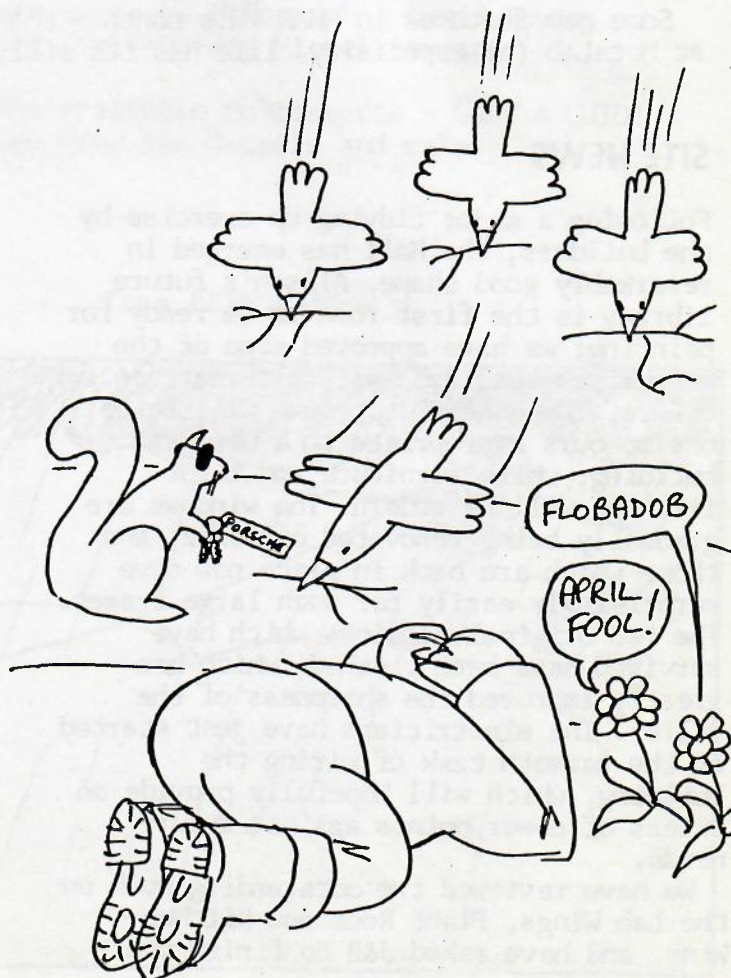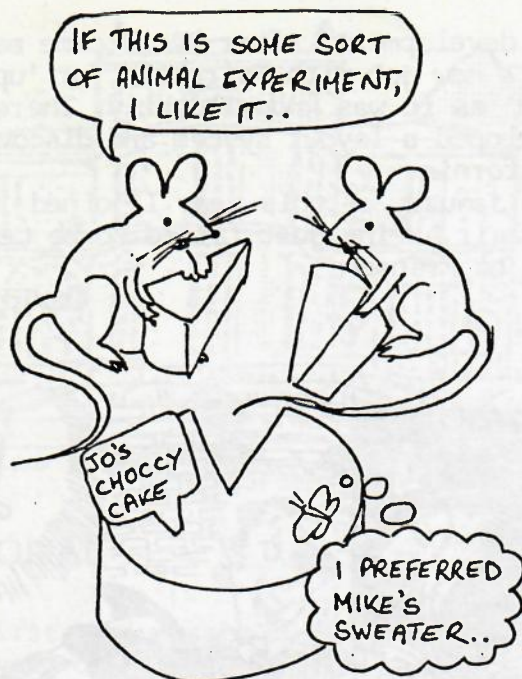
A BIT OF THIS AND A BIT OF THAT...

Chocolate Cheesecake

The ingredients needed for this will certainly go above everybody's calorie intake for a whole week!

1 greased 7-8 inch tin
Base: 3oz butter
     1oz sugar
     6oz biscuits, crushed

Melt butter, add sugar and biscuits. Press into greased tin.

Filling: 4oz chocolate
     10oz cream cheese
     3 eggs
     2oz brown sugar
     1/2 pt cream
     2oz castor sugar

Melt chocolate in a bowl over gentle heat.
Beat cheese, egg yolks, brown sugar, flour, cream and chocolate.
Whisk egg whites with castor sugar until stiff, fold into cream mixture.
Pour into base.
Bake at 325°F/gas 3 for 1 1/2 hours.
Cool with oven door closed, preferably overnight.

Topping: 8oz sugar
     1/2 pt water
     6oz plain chocolate
     2oz butter

Boil water and sugar until syrupy, then beat in chocolate and butter. Leave to cool and thicken, then top cake.

This will easily make 8 people full.

Rumours & Whispers

Dave Chatten has bought not one but two new suits since he became MD - shares in Austin Reed have risen dramatically.

Gus Desbarats bought a second-hand suit from a 'good cause' to wear to the House of Lords, - donations to Oxfam have fallen dramatically.

The temporary receptionist of two weeks ago is having an affair with Chris Fawkes - Chris hopes to make it to his 20th wedding anniversary on 2 April in one piece.

A spokesman at Milton denied there was any truth in the rumour that one of the squirrels ran over a C5 - the squirrel said he preferred Porsche 928s.

The guilty parties who ate most of Jo's delicious chocolate cake have all owned up - for their honesty they all got the recipe (see the monthly recipe).

The sweater-man-of-the-month war is hotting up, with a number of surprise entrants. Aaron's pink Snoopy sweatshirt may not count, unfortunately. Sweater watchers have been amazed to see David Southward and Mike Neale sharing the same brown V-neck - we didn't realise they knew each other, let alone shopped together. Alas, all was revealed on Friday 15 when we discovered they each had the aerated version. Pity the holes are both on the lefthand side or they could get together...

We want to brighten up WHAM so all contributions to Rumours & Whispers will be welcome - we promise complete anonymity to the contributors.

We are thinking of extending the sweater competition to ties, socks and - Perran watch out - pants!

Next month we will run a 'quotations' column - all offerings of outrageous quotes, preferably out of context, gratefully received by Alison.

'Doppelganger'

Milton C5s

Dawn is the person to contact if you find that one of the C5s is not working properly - please report any faults as soon as possible so that they can be remedied promptly.

IEE Computing & Control Division

Colloquium on 'PERSONAL AND DOMESTIC ROBOTS' to be held at Savoy Place on Wednesday 1 May 1985. Alison has a provisional program if anyone is interested.

POTTED BIOGRAPHY - David Clark

I finally managed to escape when I was 15! Until then I followed a French education dabbling in such delights as Latin, English (yes I had lessons!) and swimming in the Mediterranean. My English education started at the tender age of 7, when my grandparents started sending copies of that master of English literature - the Beano. By the age of 10 I had taught myself to read and write by associating the pictures in Beano with what the characters were probably saying. Consequently I can spell 'splat' and 'zap' but not big words like 'Metal lab'.

I finally landed in sunny Hertfordshire where my school activities included starting an electronics club. The standard test in this club for newly built projects was to plug them in, go to the other side of the lab, hide behind a bench and switch on the mains ring. A very useful procedure.

Having successfully conned my way to Durham University by discussing only the 'Cote d'Azur' at my college interview, I proceeded to have (as the college master described them) the best Three years of my life - but I wouldn't want to do them again.

By the end of my third year I had worked out how to get a free trip back to see my girlfriend by attending an interview somewhere near London.

Racal offered me my first job. I rapidly learnt the art of moving person and furniture (four moves in two years), performing as a sideline chip design and

CAD development. After Racal came marriage and a new job with Fairchild, or 'up the road' as it was known locally. There I developed a layout system and discovered California.

In January of this year I joined Sinclair having just failed to be tempted back to France.

David Clark

'Of course I was riding on the pavement, oshifer. I don't think I'd have been safe on the main road, do you?'

Advertisement

Just released:

SOMETHING IN THE AIR
By Sally Cooper, Paul Gallant, Peter Maydew
Six songs by Elton John, David Bowie, Phil Collins and Michel Legrand.

Now available on cassette - ONLY A QUID!
See Pete for details and sales

The Wizard of Milton

from PETE MAYDEW

JUST CHECKING THE TV FOR STATIC SENSITIVITY ....

ELECTRONIC UMBRELLA

sinclair ZX81
SPACE RAIDERS

ZX81
sinclair | SPACE RAIDERS | also BOMBER
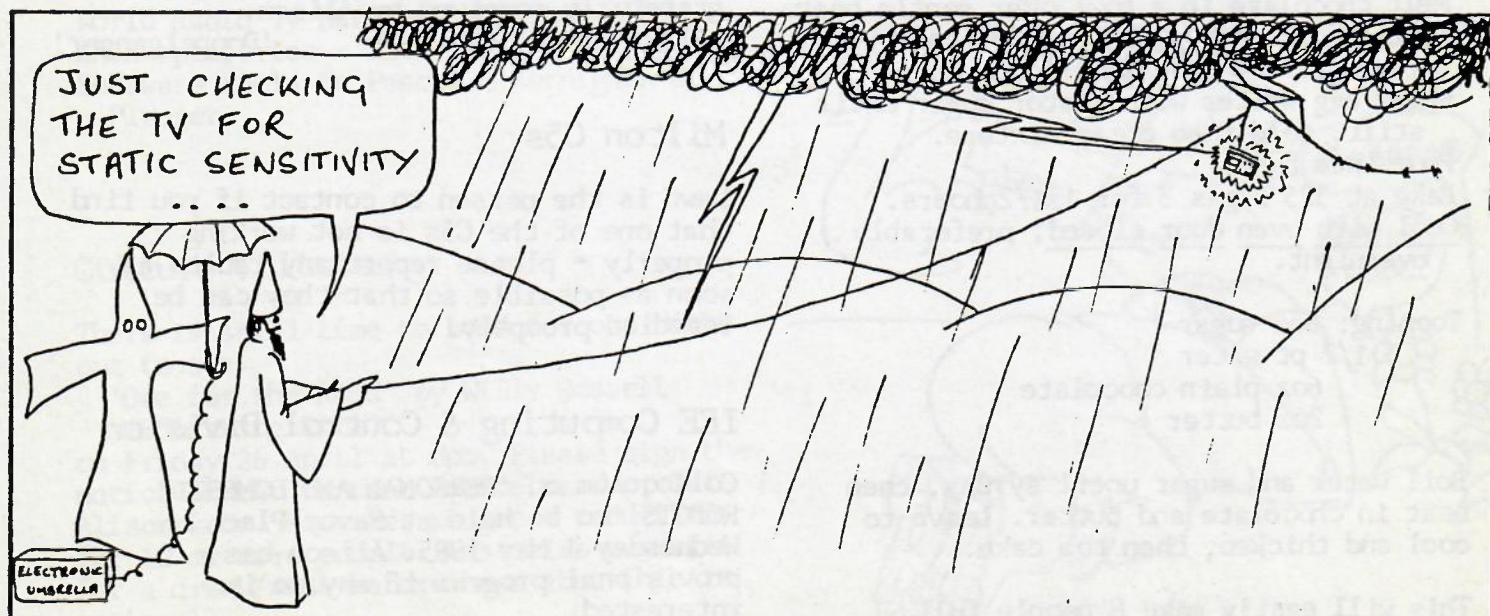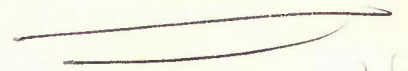
SPACE RAIDERS two fast-moving, real-time arcade games with full interactive graphics. Defend the earth from successive armies of malign aliens in **Space Raiders**. **Bomber** (side B). Use your bombs and rockets to raze a sky-scraper city to the ground before your plane crashes into a building.

G13

SOFTWARE BY **PSION** AND MICRO GEN — **16K RAM**

LOADING A PROGRAM

The procedure for loading a program is described in chapter 16 of the ZX81 manual. The steps are summarised below.

1 Connect the ear socket on your ZX81 to the ear socket on your cassette recorder.

2 Position the tape before the beginning of the program that you wish to load.

3 Turn the volume control to ¾ of maximum or to a level which you have found to be reliable on your recorder.

4 Set the tone control for maximum treble and minimum bass.

5 Type LOAD "PROGRAM NAME" but do not press NEWLINE yet. The program name is printed on the cassette.

6 Start the cassette recorder playing.

7 Press NEWLINE.

The approximate loading time is printed on the cassette. If the program has not loaded after this time, try again with a different volume setting. If you are still unable to load the program refer to chapter 16 of the manual.

3

sinclair ZX81
FANTASY GAMES

ZX81
sinclair | SORCERER'S ISLAND | also PERILOUS SWAMP

Two role-playing adventure style games for the Sinclair ZX81 with 16K RAM or the ZX80 + 8K ROM with 16K RAM. Can you survive the fearsome monsters of the PERILOUS SWAMP and rescue the Princess from the evil wizard. You will find it even harder to escape from SORCERER'S ISLAND.

SERVICE REPRESENTATIVE
MACHINE LOG BOOK
3400/3450

RANK XEROX

295115

Customer Name and Address	Responsible Operators Name
SINCLAIR RESEARCH LTD CAMBRIDGE	

SERIAL NUMBERS	PROCESSOR	SORTER	MACHINE STATUS
	2205329415		

Paper supplies:
3207
01 207 3207
A/c NO: 193376

Sales Billing:
0895 38230

CONSUMABLES/PARTS REPLACEMENT RECORD

	DEVELOPER			DEVELOPER HOUSING SHOES		DEVELOPER HOUSING FILTER		OPTICS FILTER		OZONE FILTER		TONER BOTTLE				DRUM		
	40K				40K		40K		80K		80K		80K						
	Date	Meter	Batch	Date	Meter	Date	Meter	Date	Meter	Date	Meter	Date	Meter	Date	Meter	Date	Meter	Batch
DUE																		
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3400/3450

DESIGN LIFE

CONSUMABLES/PARTS REPLACEMENT

CONSUMABLE/PART	MANDATORY	NOMINAL LIFE

Developer
Developer Housing
   — Shoes
   — Filter
	Change together at first call after **30K**	40K

Optics Filter Ozone Filter Toner Bottle	Change together at every **SECOND** Developer change	80K

MACHINE STATUS CODES

1.	**Leased - All In Pricing**
2.	**Leased - Non All In Pricing**
3.	**RX Copy Service**
4.	**Internal Own Use, Showroom Machines On Rank Xerox Premises**
5.	**Exhibition Demonstration**
6.	**Sold - Under Warranty**
7.	**Sold - FSMA**
8.	**Sold - T & M**
9.	**Sold - T & M With Own Engineer**

SPECIAL SETTINGS & APPLICATIONS		SPECIAL SETTINGS & APPLICATIONS	
Ref.	Application	Ref.	Application

3400/3450

RANK XEROX

MACHINE LOG

Part A

Customer		
SINCLAIR RESEARCH LTD.		
WILLIS RD		
CAMBRIDGE.		

Responsible Operator

Call Type Codes

CQ — Copy Quality DH — Document Handler
PH — Paper Handling SOR — Sorter
FIN — Finisher OTH — Other
RET — Retrofit KO — Key Operator

Call Management Classification

CB — Call Back
N — Normal call
EM — Extended Maintenance

Machine Serial No. 2 2 0 5 3 2 9 4 1 5 .

Installation Date/Meter Readings

| 1 | 1034 | 2 | |
| 3 | | 4 | |

Comments	Date	Service Rep	Meter Readings				Call Type	CM Class
INST AND TRAINING.	30.11.82	1990	1 1034	2	3	4	INST.	
P/JAMS. SCAN PAWL DROPOUT — ADJ ST OF SCAN.	5.1.83	1990	1 6056	2	3	4	P/H	N
SCAN RESET SPRING SNARED. BURR 2" FROM LEFT SIDE ALLOW SCAN OPTIC CABLE RETURN SHAFT, PULLEY LOOSE Pm C/O	28.4.83	1990	1 40044	2	3	4	P/H CQ BURR	EM
CQ. STAPLE IN DEV TANK.	3/5/83	1562	1 41681	2	3	4	CQ	CB
NOISE — S/ROLL SEIZED. FREED. BEARINGS TRIM C/O	31.5.83	1990	1 50535	2	3	4	OTH	N
D.H.S BELT TORN. SCREW FALLEN OFF. (ORDERED) FITTED GROT BAG. TRIM.	29/6/83	1562	1 58810	2	3	4	OTH	N
D.HS BELT.	30/6/83	1562	1 59020	2	3	4	W	
RE-COMMISION	5/9/83	1562	1 60693	2	3	4	OTH	N
NO 62% REDUCTION — POS.TION SW LOOSE. TRIM C/O	15.9.83	1990	1 63976	2	3	4	OTH	
Noise SR Bearings CLOGGED CLEAN BEARINGS TEST OK.	28/10/83	3135	1 74562	2 —	3 —	4	CQ	N

3400/3450

Category	Columns
Document Handling	DSM Informed · Document Belt · Clutch · Gear box · Registration Gate/Solenoid · Document Sensor/Switches · Wait Station/Solenoid
Paper Handling	Top Feed Belt · Bottom Feed Belt · Top Retard Roll · Bottom Retard Roll · Register Pinch Roll · Register Gate · Tray Lift Mech · Transport Belts · Motion Sensor
Optics	Optics Filter · Lens/Mirrors · Exposure Lamp · Dashpot/Rails · Clutch · Collar/Pawl · Ozone Filter · Lens Drive/Reduction Optics · Scan Cables/Pulleys · Scan Switches · Lockout Solenoids
Xerographics	Developer · Shoes · Developer Housing · Foam Roll · Disp Rate Adjustment/ADC · D.R.S/Trim Gap · Dev Box Filter · Drum · Corotrons · Bias Volts · Doctor Blade · Seal Roll/Blade · Toner Sump Bottle · Doctor Blade Solenoid
Fusing	Upper Fuser · Base Fuser · Overheat Thermostats 5 and 6 · Thermostats 2 and 10 · Feed out Rolls · Exit Rolls · Fuser Rod
Miscellaneous	Fuser PCB · Controller PCB · Driver PCB · Control Console PCB · Power Supplies/Fuses · Triacs/Relays · Covers · Sorter · Key Op training · Paper/Material Supplies
Electrometer	Vo · Vbg

Handwritten entries (by row):

Row	Paper Handling	Optics	Xerographics	Fusing
1		C C L C A A	C (Developer Housing) C (Drum)	
2	✓ ✓ ✓ X	c c L R	R R c (Developer Housing) P c (Drum)	C C
3		C C L	C (Developer Housing) P C (Drum)	C C
4		U N	J (Developer Housing) J (Drum)	
bottom		J J	J (Developer Housing) J J (Drum/Corotrons) J X X	J J

RANK XEROX

MACHINE LOG

Part A

Customer		

Responsible Operator

Machine Serial No.

Installation Date/Meter Readings

Comments	Date	Service Rep	Meter Readings				Call Type	CM Class
NOISE - AUGER SEIZED - CLEARED 2PHC/o REPLACED SUMP	10/11/83	1332	1. 89623	2	3	4	OTH	EM
DOC GOING STRIEGHT THRO - CLEAN DH8 CLUTCH. SORTER JAMS — TAPE LOWER ROLLERS NOISE — REPLACE S/R BEARINGS.	22.11.83	1990	1. 95088	2	3	4	DH	N
REPORTED GRUMBLING NOISE — NOT HEARD. FIT NEW DH8 CLUTCH & SORTER MOD 144. EXPL. LAMP.	24.11.83	1990	1. 97234	2	3	4	NOISE	
Complaint of jams in sorter and D-H.S Checked machine with customer 250+. sort. A.O.K.	25/11/83	2218	1. 97442	2	3	4	?	
CHECK TOWER LIGHT ON ALL THE TIME - REPLACED FOAM ROLLER. INTERMITTENT NO M/TRAY DRIVE — DRIVER PCB ORDERED.	16.12.83	1990	1. 106192	2	3	4	OTH.	
DRIVER BOARD FITTED + STUB SHAFTS.	21.12.83	1990	1. 109012	2	3	4	N	
Blank Copies US corotron Rewired a cleaned Corotrons Replaced Paper tray height sw.	30/1/84	2218	1. 127136	2	3	4	CQ.	N.
NOISE = NOT HEARD - SUSPECT CLEANER - STRIP & FREE Run C/o	17.2.84	1990.	1. 139382	2	3	4	NOISE	EM
P/JAMS + NOISE. STRIP CLEANER — FIT NEW MINI CLUTCH M/TRAY. 8 C/Q TRIM C/o	6.3.84	1990	1. 153477	2	3	4	P/J NOISE	N
JAMS IN SORTER REPORTED RAN 200 SORTED COPIES &100 UNSORTED H/c WAS LEFT IN JAMMED CONDITION WITH PAPER CONCENTINERD IN CATCHTRAY LONG RUNS DONE - I SUSPECT UNATTENDED - NO FAULT FOUND - HAPPENED EARLY MORNING SO COULD BE DAMP CURLY PAPER	21-3-84	1332	1. 162931	2	3	4	PH SORT	N

3400/3450

Action Codes A - Adjust L - Lubricate R - Replace/Repair Ro - Rotate
C - Clean P - Pumice/Polish X - Check/Perform W - Wash

○ **UM** Identifier

Column group headers:

| Document Handling | Paper Handling | Optics | Xerographics | Fusing | Miscellaneous | Electro-meter |

Column labels (left to right):

Document Handling: DSM Informed · Document Belt · Clutch · Gear box · Registration Gate/Solenoid · Document Sensor/Switches · Wait Station/Solenoid

Paper Handling: Top Feed Belt · Bottom Feed Belt · Top Retard Roll · Bottom Retard Roll · Register Pinch Roll · Register Gate · Tray Lift Mech · Transport Belts · Motion Sensor

Optics: Optics Filter · Lens/Mirrors · Exposure Lamp · Dashpot/Rails · Clutch · Collar/Pawl · Ozone Filter · Lens Drive/Reduction Optics · Scan Cables/Pulleys · Scan Switches · Lockout Solenoids

Xerographics: Developer · Shoes · Developer Housing · Foam Roll · Disp Rate Adjustment/ADC · D.R.S/Trim Gap · Dev Box Filter · Drum · Corotrons · Bias Volts · Doctor Blade · Seal Roll/Blade · Toner Sump Bottle · Doctor Blade Solenoid

Fusing: Upper Fuser · Base Fuser · Overheat Thermostats 2 and 10 · Thermostats 5 and 6 · Feed out Rolls · Exit Rolls · Fuser Rod

Miscellaneous: Fuser PCB · Controller PCB · Driver PCB · Control Console PCB · Power Supplies/Fuses · Triacs/Relays · Covers · Sorter · Key Op training · Paper/Material Supplies

Electro-meter: Vo · Vbg

Handwritten annotations (approximate):

- Document Handling area: "GRB STRENS" (handwritten vertical)
- Paper Handling area: "Mini switch (one way)" (handwritten vertical)
- Row marks: R, C, CC, RR, C, R, X X
- R (Document Belt), R (Optics Filter)
- Various C marks across Optics and Xerographics
- R R (Xerographics), C (Fusing)
- Blue marks row: XXXX XX CC XXC SET UP C R CC XC C
- "XR" "STUB SHAFTS."
- Row: C C RRC X RC CM/TC C
- Row: R R/XX R CL C C C
- "R/MINI CWTCH"

3400/3450

RANK XEROX

MACHINE LOG

Part A

Customer	
Responsible Operator	

Machine Serial No.

Installation Date/Meter Readings

Comments	Date	Service Rep	Meter Readings				Call Type	CM Class
			1	2	3	4		
REPORTED CONSTANT JAMS (CHECK PAPER PATH) NOT SEEN — HOWEVER REPLACE M/TRAY FEED CLUTCH. PM C/O	2.4.84	1990	167815				P/H	EM
DOCTOR BLADE RUBBER FALLEN OFF JAMMING DRUM. BOTH REPLACED. TRIM	10/4/84	1562	172608				BLANK.	
NOISE — REPLACED S/ROLL BEARINGS.	13.4.84	1990	174577				OTH	N
Black mark on copies. Found to be O/S. Doctor Blade.	18.4/84	2218	176545				CQ	N.
AS ABOVE. TRANSLATION NOT WORKING	19/4/84	1562	176689					
OVERHEAT. FUSER TRIANE TRIAC FALLEN APART. REPLACED.	27/4/84	562	179550					
WOULD NOT REDUCE? — TRAY NOT SET UP FOR REDUCTION — ADVISED TRIM.	23/5/84	1332	192818					
OP. COULD NOT CLEAR JAM — DID NOT KNOW ABOUT LATCH - HOLDING BAFFLE CLEARED BY SOMEONE ELSE BEFORE I ARRIVED BUT SMALL PIECE OF PAPER HOLDING DOWN REG SWITCH - REMOVED - 2 PM C/O	6/6/84	1332			199052		PH	EM
BLANK COPIES 2x P/CLIPS JAMMED ON DU TANK! REPLACE BEARINGS ON S/ROLL & STRIP & CLEAN M/SENSOR	7.6.84	1990			200376		CQ	N
POWER ON BUT NO GO — FUSER FUSE BLOWN — NO REASON FOUND	15/6/84	1332			204401			

3400/3450

Action Codes A - Adjust L - Lubricate R - Replace/Repair Ro - Rotate C - Clean P - Pumice/Polish X - Check/Perform W - Wash   ◯ **UM** Identifier   **Machine Log** Part B **3400/3450**

	Document Handling							Paper Handling									Optics											Xerographics														Fusing							Miscellaneous										Electro-meter	
	DSM Informed	Document Belt	Clutch	Gear box	Registration Gate/Solenoid	Document Sensor/Switches	Wait Station/Solenoid	Top Feed Belt	Bottom Feed Belt	Top Retard Roll	Bottom Retard Roll	Register Pinch Roll	Register Gate	Tray Lift Mech	Transport Belts	Motion Sensor	Optics Filter	Lens/Mirrors	Exposure Lamp	Dashpot/Rails	Clutch	Collar/Pawl	Ozone Filter	Lens Drive/Reduction Optics	Scan Cables/Pulleys	Scan Switches	Lockout Solenoids	Developer	Shoes	Developer Housing	Foam Roll	Disp Rate Adjustment/ADC	D.R.S/Trim Gap	Dev Box Filter	Drum	Corotrons	Bias Volts	Doctor Blade	Seal Roll/Blade	Toner Sump Bottle	Doctor Blade Solenoid	Upper Fuser	Base Fuser	Overheat Thermostats 2 and 10	Thermostats 5 and 6	Feed out Rolls	Exit Rolls	Fuser Rod	Fuser PCB	Controller PCB	Driver PCB	Control Console PCB	Power Supplies/Fuses	Triacs/Relays	Covers	Sorter	Key Op training	Paper/Material Supplies	Vo	Vbg
								X X X										C	L									R	R	C	x				C			C / X				C																				
																																R				R																								
																													R / Bearings.																														
	X		X X					X X X X			X X X					X	C C										X X				R / X			C X								X X			X														
	X							X X X X									C C																C			4/7					X X																	
								X X X X									C C										R R C				x			x					X X																		
										C																		R X				C																										

3400/3450

RANK XEROX

MACHINE LOG

Part A

Customer	SINCLAIR RESEARCH.
Responsible Operator	

Machine Serial No. 2 2 0 5 3 2 9 4 1 5

Installation Date/Meter Readings

Comments	Date	Service Rep	Meter Readings		Call Type	CM Class
JAM - OPS UNABLE TO CLEAR - ADVISED - TRAY INCORRECTLY LOADED - ADVISED	4/7/84	1332	212994		CR	
JAMS IN SORTER. ADD GATES & TURNED BELTS & CLEAN VARIOUS BEARINGS ECT. Q. TRIM.	16/7/84	1258	218029		CR.	
JAMS CLEAN UPPER & LOWER fuser offies replaced crot box	25/7/84	1562	226096		CR	
JAMS & SCORENING - RAN 100 UNSORTED + 100 SORTED STRAIGHT OFF - NO JAM - WAS TOLD M/C HAMMERED ON THE DAY IT HAPPENED - SUSPECT COMBINATION OF HOT M/C & DAMP PAPER 2 Pm LE.	6/8/84	1332	231274		CR	
BACKGROUND. POOR DRUM EARTH AT BELL END. ADJ.	9-8-84	090	232609		CQ	N
BACKGROUND - FAULT DISAPPEARED DURING CHECKING - REMOVED STAPLE FROM DEV TANK HOUSING - TRIM	21/8/84	1332	236776		CQ	N
NOISE - REPLACED S/ROLL DRIVE GEAR & BEARINGS. BACKGROUND AGAIN - DRUM BADLY SCORED BY PAPER CLIPS - REPLACED DRUM STAUED CLEANED - TRIM.	24/8/84	1332	237854		OTH	N
as above noise again. seal roll anger gear siezed toner all over the machine. stripped and cleaned gears and drives cleaned up. T.RIM.	29/8/84	2218.	239642.		OTH.	N,
P/JAMS CORO' FOUL WITH TONER - CLEAN AUGER & BEARINGS TAPE BAFFLE CUP.	31.8.84	1990	240567		P/H	N
LIGHTED MESSAGES + CPP. COMING UP - NO FAULT FOUND TRIM.	4/9/84	1332	241152			

3400/3450

Action Codes — **A** - Adjust **L** - Lubricate **R** - Replace/Repair **Ro** - Rotate
C - Clean **P** - Pumice/Polish **X** - Check/Perform **W** - Wash

◯ **UM** Identifier **Machine Log** Part B **3400/3450**

Column Groups

Document Handling	Paper Handling	Optics	Xerographics	Fusing	Miscellaneous	Electro-meter

Document Handling: DSM Informed · Document Belt · Clutch · Gear box · Registration Gate/Solenoid · Document Sensor/Switches · Wait Station/Solenoid

Paper Handling: Top Feed Belt · Bottom Feed Belt · Top Retard Roll · Bottom Retard Roll · Register Pinch Roll · Register Gate · Tray Lift Mech · Transport Belts · Motion Sensor

Optics: Optics Filter · Lens/Mirrors · Exposure Lamp · Dashpot/Rails · Clutch · Collar/Pawl · Ozone Filter · Lens Drive/Reduction Optics · Scan Cables/Pulleys · Scan Switches · Lockout Solenoids

Xerographics: Developer · Shoes · Developer Housing · Foam Roll · Disp Rate Adjustment/ADC · D.R.S/Trim Gap · Dev Box Filter · Drum · Corotrons · Bias Volts · Doctor Blade · Seal Roll/Blade · Toner Sump Bottle · Doctor Blade Solenoid

Fusing: Upper Fuser · Base Fuser · Overheat Thermostats 2 and 10 · Thermostats 5 and 6 · Feed out Rolls · Exit Rolls · Fuser Rod

Miscellaneous: Fuser PCB · Controller PCB · Driver PCB · Control Console PCB · Power Supplies/Fuses · Triacs/Relays · Covers · Sorter · Key Op training · Paper/Material Supplies

Electrometer: Vo · Vbg

Handwritten Entries

Row (middle): Paper Handling — X X R ; Register Pinch Roll area — C ; Clutch/Collar area — C C L ; Xerographics — R R C R ; Drum — C ; Bias Volts — X ; Doctor Blade area — X X

Row (bottom):
- Document Handling: X X
- Paper Handling: X X X X ; X C C ; R C C
- Optics: X
- Xerographics: C ; X C ; X X X
- Fusing: C C

Handwritten note:
C C C C * ordered auger a seal Roll Assy % * 225 90893.

C

RANK XEROX

MACHINE LOG

Part A

Customer		

Responsible Operator

Machine Serial No.

Installation Date/Meter Readings

1	2
3	4

Comments	Date	Service Rep	Meter Readings				Call Type	CM Class
Return, to fit seal Roll assy. as. 29.8.84. Checked & Tested A.O.K.	5/9/84	2218.	1: 241380.	2:	3:	4:		
T/S VISIT. CHECKED OPERATION of MACHINE & COPY Q. BOTH O.K. UNABLE TO SEE MADE GOODE	17/9/84	1562	1: 245912	2:	3:	4:		
AS ON HOLIDAY. PAPER ROLLING UP IN CATCHTRAY - PAPER IN MAIN TRAY CURLY - ADVISED O.K. ON RECENT PAPER - CARTRIDGE D'APEL ORIGINALS CURLING ON REG EDGE ON LATI - ADJ REG ED C ET RIM. MARKS ON COPY - SPECKLES OF SND PARE ON PLATON GLASS	2/10/84	1332	1: 252255	2:	3:	4:		
D.H.S JAMS. CLEANED ROLLERS & BELT.	4/10/84	1562	1: ~~2414000~~	2:	3: 253060	4:		
Cont Jams & Clear Paper path "ON" Pawl arm u/s replaced + Full T.R.I.M	16/10/84	2218	1: 255994	2:	3:	4:	N	PH.
OPTICS JAMS - ADJ COLLAR - NOT LATCHING IN C.P. DUCTION + 100% ADJ SCAN KNOCK OUT & LOCK OUT T.R.M.	19/10/84	1332	1: 257074	2:	3:	4:	N	PH
Jams again checked machine etc. & checked sorter. paper jam kit fitted to assist in removing pts reduced call time etc. checked and reset sorter jam detection switch. Tested A.O.K. T.R.I.M.	23/10/84	2218	1: ~~258600~~	2: 258107	3:	4:	N	PH.
Blurr on copies, found to be scan ~~~~ lamp Jumping on 42% reduction switch act. reset. A.O.K.	25/10/84	2218	1: 258609.	2:	3:	4:		CB.
ALL SCAN CABLES OFF — 3 BROKEN !!!! FULL RATE CABLE ANCOR POST SNAPPED OFF CARRIAGE — GLUED SAME.	7/11/84	3160	1:	2: 2E2966	3:	4:	N	

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Document Handling	Paper Handling	Optics	Xerographics	Fusing	Miscellaneous	Electro-meter

Column headers (left to right):

Document Handling: DSM Informed, Document Belt, Clutch, Gear box, Registration Gate/Solenoid, Document Sensor/Switches, Wait Station/Solenoid

Paper Handling: Top Feed Belt, Bottom Feed Belt, Top Retard Roll, Bottom Retard Roll, Register Pinch Roll, Register Gate, Tray Lift Mech, Transport Belts, Motion Sensor

Optics: Optics Filter, Lens/Mirrors, Exposure Lamp, Dashpot/Rails, Clutch, Collar/Pawl, Ozone Filter, Lens Drive/Reduction Optics, Scan Cables/Pulleys, Scan Switches, Lockout Solenoids

Xerographics: Developer, Shoes, Developer Housing, Foam Roll, Disp Rate Adjustment/ADC, D.R.S/Trim Gap, Dev Box Filter, Drum, Corotrons, Bias Volts, Doctor Blade, Seal Roll/Blade, Toner Sump Bottle, Doctor Blade Solenoid

Fusing: Upper Fuser, Base Fuser, Overheat Thermostats 2 and 10, Thermostats 5 and 6, Feed out Rolls, Exit Rolls, Fuser Rod

Miscellaneous: Fuser PCB, Controller PCB, Driver PCB, Control Console PCB, Power Supplies/Fuses, Triacs/Relays, Covers, Sorter, Key Op training, Paper/Material Supplies

Electro-meter: Vo, Vbg

Handwritten notes:

Row entries (Xerographics): **RR** — SEAL ROLL & AUGER ASSY REPLACED.

Paper Handling: X X X X A | Transport Belts: C | Optics Filter: CC | Developer: C | Seal Roll/Blade: R

Paper Handling: XXXX XXX | Optics Filter: CC | Developer XX C | Drum XC / X | Corotrons X | Doctor Blade XX

Paper Handling: X X C | C | CC | Developer C | Drum XC | X | CC

Document Handling: X X | Transport Belts: X | Optics Filter: OC / XX

Optics: X | A.72%.

CCR A ⓇR DASHPOT FULL RATE CABLE HALF RATE CABLE SCAN DRIVE CABLE X2

3400/3450

RANK XEROX

MACHINE LOG

Part A

Customer		Call Type Codes	CQ - Copy Quality PH - Paper Handling FIN - Finisher RET - Retrofit	DH - Document Handler SOR - Sorter OTH - Other KO - Key Operator

Call Management Classification — CB - Call Back, N - Normal call, EM - Extended Maintenance

Responsible Operator

Machine Serial No. 2 2 0 5 3 2 9 4 1 5

Installation Date/Meter Readings — 1 / 2 / 3 / 4

Comments	Date	Service Rep	Meter Readings (1 2 3 4)	Call Type	CM Class
Q ROD. U/S. REPLACED. TRIM.	29/1/84	1562	1: 270590		
Various problems checked & cleaned Machine Nº 1 PM +	11/2/85	2218	1: 249783	CQ	N
REPORTED SORTER JAMS — SORTER NOT LATCHED. PM C/o	27/2/85	3160	1: 286166	SOR	N EM.
Paper Jam in registration gate. advised customer etc T.R.I.M.	8/3/85	2218	1: 286857	PH	N.
Sorter jams! checked sorter adjusted sence switch etc. tested 20 x 15 A.O.K. TRIM.	21/3/85	2218	1: 288299	CQ	N.
NO DHS FEED — LINE TO DHS INTERLOCK SWITCH. SEVERED — REPAIRED SAME	23/4/85	3160	1: 289630	CQ	N.
REPORTED SORTER JAMS — NOT SEEN, CLEANED BIN ENTRY SENSOR — RAN 12 x 15 NO PROBLEMS.	20/5/85	3160.	1: 290383	SOR	N.
CQ — BLACK — DEV BIAS S/C — REMOVED. A PAPER CLIP & STAPLE FROM DEV TANK	24/5/85	3160	1: 291308	CQ	
Dirty Copies Checked machine Nº 1 PM Removed more clips from dev tank & area.	17/6/85	2218	1: 292028	CQ	N.
FAINT COPIES. NO TONER. DN U/S. REPLACED.	10/9/85	1562	1: 294960	CQ	

3400/3450

Column groups: Document Handling | Paper Handling | Optics | Xerographics | Fusing | Miscellaneous | Electrometer

Column headers:
- Document Handling: DSM Informed, Document Belt, Clutch, Gear box, Registration Gate/Solenoid, Document Sensor/Switches, Wait Station/Solenoid
- Paper Handling: Top Feed Belt, Bottom Feed Belt, Top Retard Roll, Bottom Retard Roll, Register Pinch Roll, Register Gate, Tray Lift Mech, Transport Belts, Motion Sensor
- Optics: Optics Filter, Lens/Mirrors, Exposure Lamp, Dashpot/Rails, Clutch, Collar/Pawl, Ozone Filter, Lens Drive/Reduction Optics, Scan Cables/Pulleys, Scan Switches, Lockout Solenoids
- Xerographics: Developer, Shoes, Developer Housing, Foam Roll, Disp Rate Adjustment/ADC, D.R.S/Trim Gap, Dev Box Filter, Drum, Corotrons, Bias Volts, Doctor Blade, Seal Roll/Blade, Toner Sump Bottle, Doctor Blade Solenoid
- Fusing: Upper Fuser, Base Fuser, Overheat Thermostats 2 and 10, Thermostats 5 and 6, Feed out Rolls, Exit Rolls, Fuser Rod
- Miscellaneous: Fuser PCB, Controller PCB, Driver PCB, Control Console PCB, Power Supplies/Fuses, Triacs/Relays, Covers, Sorter, Key Op training, Paper/Material Supplies
- Electrometer: Vo, Vbg

Handwritten entries:

Row (upper): XXXX XC   CC   (Paper Handling) ... XC X (Xerographics) ... CC C (Fusing) ... XX (Miscellaneous)

✻ SORRY NO DEV AVAILABLE ON CAR ✻

RRCxx   R   (Xerographics) ... X (Miscellaneous)

CLEANED BELTS

GR. (Document Handling) ... C ... C (Xerographics)

↳ EARTH CONTACT.

X BIN ENTRY SENSOR. (Miscellaneous)

R (Xerographics - Developer)

Bottom row: X XX XXXX XXX (Document/Paper Handling) CC (Optics) XXC XC X (Xerographics) XX X (Fusing) XX (Miscellaneous)
C (under Paper Handling)

3400/3450

RANK XEROX

MACHINE LOG

Part A

Customer		
Responsible Operator		

Machine Serial No.

Installation Date/Meter Readings

1		2	
3		4	

Comments	Date	Service Rep	Meter Readings		Call Type	CM Class
			1	2		
			3	4		
			1	2		
			3	4		
			1	2		
			3	4		
			1	2		
			3	4		
			1	2		
			3	4		
			1	2		
			3	4		
			1	2		
			3	4		
			1	2		
			3	4		
			1	2		
			3	4		
			1	2		
			3	4		

3400/3450

Machine Log Part B 3400/3450

Action Codes A - Adjust L - Lubricate R - Replace/Repair Ro - Rotate
C - Clean P - Pumice/Polish X - Check/Perform W - Wash

◯ **UM** Identifier

Column Groups

Document Handling
- DSM Informed
- Document Belt
- Clutch
- Gear box
- Registration Gate/Solenoid
- Document Sensor/Switches
- Wait Station/Solenoid

Paper Handling
- Top Feed Belt
- Bottom Feed Belt
- Top Retard Roll
- Bottom Retard Roll
- Register Pinch Roll
- Register Gate
- Tray Lift Mech
- Transport Belts
- Motion Sensor

Optics
- Optics Filter
- Lens/Mirrors
- Exposure Lamp
- Dashpot/Rails
- Clutch
- Collar/Pawl
- Ozone Filter
- Lens Drive/Reduction Optics
- Scan Cables/Pulleys
- Scan Switches
- Lockout Solenoids

Xerographics
- Developer
- Shoes
- Developer Housing
- Foam Roll
- Disp Rate Adjustment/ADC
- D.R.S/Trim Gap
- Dev Box Filter
- Drum
- Corotrons
- Bias Volts
- Doctor Blade
- Seal Roll/Blade
- Toner Sump Bottle
- Doctor Blade Solenoid

Fusing
- Upper Fuser
- Base Fuser
- Overheat Thermostats 2 and 10
- Thermostats 5 and 6
- Feed out Rolls
- Exit Rolls
- Fuser Rod

Miscellaneous
- Fuser PCB
- Controller PCB
- Driver PCB
- Control Console PCB
- Power Supplies/Fuses
- Triacs/Relays
- Covers
- Sorter
- Key Op training
- Paper/Material Supplies

Electrometer
- Vo
- Vbg

3400/3450

SORTER

JOB DONE

ENGINEER No: _____

CUSTOMER NAME & ADDRESS: _____

TODAY'S DATE _____

PRODUCT CODE

MACHINE SERIAL NUMBER

MODIFICATION STATE REPORT

001	026	051	076	101	126	151	176	201	226	251	276	301	326	351	376	401	426
002	027	052	077	102	127	152	177	202	227	252	277	302	327	352	377	402	427
003	028	053	078	103	128	153	178	203	228	253	278	303	328	353	378	403	428
004	029	054	079	104	129	154	179	204	229	254	279	304	329	354	379	404	429
005	030	055	080	105	130	155	180	205	230	255	280	305	330	355	380	405	430
006	031	056	081	106	131	156	181	206	231	256	281	306	331	356	381	406	431
007	032	057	082	107	132	157	182	207	232	257	282	307	332	357	382	407	432
008	033	058	083	108	133	158	183	208	233	258	283	308	333	358	383	408	433
009	034	059	084	109	134	159	184	209	234	259	284	309	334	359	384	409	434
010	035	060	085	110	135	160	185	210	235	260	285	310	335	360	385	410	435
011	036	061	086	111	136	161	186	211	236	261	286	311	336	361	386	411	436
012	037	062	087	112	137	162	187	212	237	262	287	312	337	362	387	412	437
013	038	063	088	113	138	163	188	213	238	263	288	313	388	363	388	413	438
014	039	064	089	114	139	164	189	214	239	264	289	314	339	364	389	414	439
015	040	065	090	115	140	165	190	215	240	265	290	315	340	365	390	415	440
016	041	066	091	116	141	166	191	216	241	266	291	316	341	366	391	416	441
017	042	067	092	117	142	167	192	217	242	267	292	317	342	367	392	417	442
018	043	068	093	118	143	168	193	218	243	268	293	318	343	368	393	418	443
019	044	069	094	119	144	169	194	219	244	269	294	319	344	369	394	419	444
020	045	070	095	120	145	170	195	220	245	270	295	320	345	370	395	420	445
021	046	071	096	121	146	171	196	221	246	271	296	321	346	371	396	421	446
022	047	072	097	122	147	172	197	222	247	272	297	322	347	372	397	422	447
023	048	073	098	123	148	173	198	223	248	273	298	323	348	373	398	423	448
024	049	074	099	124	149	174	199	224	249	274	299	324	349	374	399	424	449
025	050	075	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450

PROCESSOR

JOB DONE

ENGINEER No: _____

CUSTOMER NAME & ADDRESS: _____

TODAY'S DATE _____

PRODUCT CODE

MACHINE SERIAL NUMBER

MODIFICATION STATE REPORT

001	026	051	076	101	126	151	176	201	226	251	276	301	326	351	376	401	426
002	027	052	077	102	127	152	177	202	227	252	277	302	327	352	377	402	427
003	028	053	078	103	128	153	178	203	228	253	278	303	328	353	378	403	428
004	029	054	079	104	129	154	179	204	229	254	279	304	329	354	379	404	429
005	030	055	080	105	130	155	180	205	230	255	280	305	330	355	380	405	430
006	031	056	081	106	131	156	181	206	231	256	281	306	331	356	381	406	431
007	032	057	082	107	132	157	182	207	232	257	282	307	332	357	382	407	432
008	033	058	083	108	133	158	183	208	233	258	283	308	333	358	383	408	433
009	034	059	084	109	134	159	184	209	234	259	284	309	334	359	384	409	434
010	035	060	085	110	135	160	185	210	235	260	285	310	335	360	385	410	435
011	036	061	086	111	136	161	186	211	236	261	286	311	336	361	386	411	436
012	037	062	087	112	137	162	187	212	237	262	287	312	337	362	387	412	437
013	038	063	088	113	138	163	188	213	238	263	288	313	388	363	388	413	438
014	039	064	089	114	139	164	189	214	239	264	289	314	339	364	389	414	439
015	040	065	090	115	140	165	190	215	240	265	290	315	340	365	390	415	440
016	041	066	091	116	141	166	191	216	241	266	291	316	341	366	391	416	441
017	042	067	092	117	142	167	192	217	242	267	292	317	342	367	392	417	442
018	043	068	093	118	143	168	193	218	243	268	293	318	343	368	393	418	443
019	044	069	094	119	144	169	194	219	244	269	294	319	344	369	394	419	444
020	045	070	095	120	145	170	195	220	245	270	295	320	345	370	395	420	445
021	046	071	096	121	146	171	196	221	246	271	296	321	346	371	396	421	446
022	047	072	097	122	147	172	197	222	247	272	297	322	347	372	397	422	447
023	048	073	098	123	148	173	198	223	248	273	298	323	348	373	398	423	448
024	049	074	099	124	149	174	199	224	249	274	299	324	349	374	399	424	449
025	050	075	100	125	150	175	200	225	250	275	300	325	350	375	400	425	450

3400/3450

NEW AND IMPROVED FEATURES OF MWP 2.0 SOFTWARE

DISK UTILITIES

Duplicate whole disk
Protect a text from accidental deletion

INDEX DISPLAY

Text status (protected or not)
Disk space available

LINE FORMAT

Proportional spacing
Character count
Triple line feed

CREATE AND EDIT

Faster cursor movement
Define blocks of text from within a document
and store on disk under a normal text name
Bring into a text a named document from disk
Header and footers
Whole document search and replace

CURSOR MOVEMENT BY WORD OR BY PARAGRAPH

You may now move the cursor a word or a paragraph at a time either forward or backwards.
Use AUX followed by CURSOR LEFT or CURSOR RIGHT to move the cursor to the first letter of the preceding or following word, respectively.

Use AUX followed by CURSOR UP or CURSOR DOWN to move the cursor to the beginning of the preceding or following paragraph. The system considers a carriage return entered by the operator to be the end of paragraph.

SEARCH FACILITIES AUX K

You may need to change a section or word of text during creation or after recall from disk.

This command lets you enter a search string of up to 30 alphanumeric characters for direct matching in the text. The text is searched sequentially from the cursor position to the end of the text. In the disk version the search string must be identical to the searched text. In both cases, in accessing matching text, the system, disregards any special effects (underscore or boldface).

To enter a search string Activate the AUX K function. The message "enter search string" is displayed on the first status line. Type the search string (maximum 30 characters), which appears on the screen to the right of the message. Confirm your entry with CARRIAGE RETURN. Service codes and unallowable characters generate an acoustic signal, as does an entry of more than 30 characters. You may cancel an incorrect entry with CANCEL or BKSP + CANCEL . Activate the SRCH function to find the first match in the text . Repeat SRCH until you locate the occurence you require.

SEARCH AND REPLACE AUX R

This function lets you automatically replace a word or phrase in your text with another. You may access each occurrence of the word in sequence or you may instruct the system to perform all of the replacements in a single step. To enter the search/replace string Activate the function with AUX K and enter a search string as in a conventional search operation . As soon as you confirm the search string, the message "replace with?" is displayed on the first status line. Enter the replace string following the

same procedure you used to enter the search string. The replacement text you type will be displayed next to the search string. To activate the search and replace function select the SRCH function as in a conventional search operation. Press AUX R to activate the replace function. The display shows "automatically? Y/N   exit to stop replace" to ask if you want to

a) automatically replace all words matching the search string
b) replace only the one at the cursor position
c) abort the replacement procedure

a) Press Y while the prompts are on the display. Beginning at the cursor position, all text that matches the search string will be replaced with the replace string. The cursor does not move.

b) With the prompts on the display and the cursor on the text matching the search string, press N . Only the word or phrase at the cursor position will be replaced.

To repeat the replace operation, use the SRCH function to access the word or phrase and press AUX R again. The display again proposes the two alternatives and you may perform another replace operation.

If no matching text is located when you press N , the display shows search string not found. Cancel the prompt with CANCEL and move the cursor to the text matching the search string.

c) When the prompts are on the display, activate the EXIT function to abort the search/replace operation. The cursor position doesn't change.

To modify the search string

Since the search string remains in the memory you may use the SRCH function at any time without re-entering the search string. If you want to modify the search string, activate the AUX K function and make the necessry changes when the searchstring is displayed.

CUT/PAST/KEEP   AUX C

The cut/paste/keep function is used to cancel sections of text, shift parts of text from one place to another or enter a keep command to ensure that a given section of text is never split between two pages. It is also used to store a text block.

A series of characters, line or paragraphs that you identify with the cut/paste/keep function is called a text block.

Define the text block, following the procedure described in your manual until the message
stor=G/move=0/canc/keep=code cr/exit is displayed on the first status line.

In defining a text block, you may also use the page scroll functions.

You may store a text block with its own name so that you may later insert it in another text by selecting and recalling the text name. To store a text block   stor=G

Once you have defined a text block with the   AUX   C function, the display shows: stor=G/mov=0/canc/keep=Code cr/exit.

. Press   G. The prompt name text is displayed on the first status line.

. Enter a text name and confirm it with CARRIAGE RETURN
The system first verifies the name and the space available on the disk and then stores the text block with its line format.

If the text name is in error, it will be displayed so that you may correct it.

If the prompt   INSUFFICIENT SPACE is displayed, it indicates that the remaining disk capacity is not sufficient to store the text block. Press CANCEL which cancels the prompt and forces an exit from the cut/paste/keep environment. Cancel part of the disk or insert a new disk and begin the procedure again.

If the disk contains a text with the name you entered, the prompt 'are you sure (y/n)?' is displayed.

Press   Y   to confirm the name. The old text contents will be replaced.

Press   N   to re-display name text and enter another name.

To recall a text block   AUX   G

A text block that you have stored with G is considered a separate text with its own name that can be recalled and inserted in another text as follows:

. When the cursor is positioned at the point at which you

want to insert the stored block, press   AUX G . The
message 'name text' is displayed in the first status line.

. Type the name of the text block and press CARRIAGE RETURN.
  The system verifies that the name is stored on the disk
  and, if so, displays **retain format? Y/N**

. Press   Y   followed by **CARRIAGE RETURN** to retain the line
  format of the stored block, or press   N   followed by
  CARRIAGE RETURN to adapt the stored block to the line
  format of the text on the display. If you press Y, the
  text block is preceded and followed by a line format
  change symbol on the display.

  You may also abort the procedure by activating the   EXIT
     function.

You may also use the AUX G function to recall any stored
text for insertion in the current text. Follow the same
procedure used to recall a stored text block. If there is
no text with that name, the prompt is cancelled and an
acoustic signal is emitted.

PRINT TYPE

If your typewriter has a Print Type selector, its setting is
disregarded and the text is printed with special effects you
entered when you typed it.

To shift the line format during printing - Disk version

You may shift the line format to the right in order to adapt
your text to various paper sizes or to print a text in
columns.

After the message 'insert paper' has appeared and you have
entered, if necessary. the pitch, line feed and number of
copies:

. Press TAB The display shows: **new left margin**

. Enter the value which, when added to the value
  corresponding to the left margin on the paper bail rod,
  yields the desired position for the new left margin.
  Confirm your entry with CARRIAGE RETURN
  For example, if the left margin is at 10 and you want to
  shift it to 22   you must enter 12

  If you enter an inconsistent value, the system will emit
  an acoustic signal.   Press CANCEL to clear the error

condition and enter another value. When you press
CARRIAGE RETURN to confirm the value, the message insert
paper is displayed.

DELETION text or Whole disk

There are two procedures. One is used to delete a single
text; the other deletes all texts stored on a disk.

DELETE A TEXT

This procedure deletes a stored text and is performed in
the same way as it is in the memory version.

Refer to the procedure for naming a text for a description
of the operator prompts and error messages that can be
displayed during this procedure.

If the text is protected, an acoustic signal is emitted
when you press   Y   and the disk utilities menu is
displayed. To continue with the deletion procedure, you
must remove the protection as indicated in " Disk
Utilities".

DELETE ENTIRE DISK

This procedure is performed with the disk utilities
environment, selected from the main menu.

Once the utilities menu is on the display, select "delete
entire disk" and confirm your selection with CARRIAGE
RETURN

The message A/B? requests that you identify the drive
containing the disk to be deleted.

When you have typed the name (A or B), the message
'confirm command Y/N' is displayed.

Press   Y   to confirm the command and cancel the disk
contents.

Press   N   to abort the cancellation procedure.

(Protected texts cannot be cancelled unless the protect
designation has been removed. See "To protect or remove
protection from a text").

Once the disk contents have been deleted, the disk
utilities menu is displayed again with the cursor
positioned on delete entire disk

Activate the EXIT function to return to the main menu.

DISPLAY INDEX.

When you select this item from the main menu, the disk version displays the message A/B?. Type the drive name, either A or B.

The display shows the name and comment of each text, the text length, and whether or not it is protected (17 texts per page).

Press CARRIAGE RETURN to turn the page, if necessary.

Following the text index, the display will show the remaining disk capacity in thousands of characters.

PRINT INDEX

When you select this item from the main menu, the disk version displays the message A/B? Type the drive name, either A or B, and follow the same procedure as for the memory version.

The text index is printed, showing the name and comment of each text, its length and whether or not it is protected (17 texts per page).

Disk Utilities.

The disk utilities menu is an auxiliary program that must be loaded in the system when you want to use it. You do this by inserting the program disk, selecting disk utilities from the main menu and confirming your selection with CARRIAGE RETURN

The disk drive light remains lit while the system makes a copy of the program, after which the following disk utilities menu is displayed:

duplicate disk   Duplicate the program or data disk. The receiving disk must be initialised and any data it contains is automatically cancelled during the duplication procedure.

initialise a disk   Initialise a formatted data
or program disk.

delete entire disk   Delete all unprotected texts
from a disk

exit key-main menu   Return to the main menu

TOTAL DISK DUPLICATION (TWO DRIVES)

You may make a copy of either a program or data disk as
follows:

. With the main menu on the screen and the system disk
  inserted in one of the disk drives, select disk utilities
  and confirm your selection with CARRIAGE RETURN The disk
  utilities menu is displayed.

  This step is necessary each time you select the disk
  utilise program since the system copies the program each
  time you select it. If the system disk is not inserted,
  the prompt 'insert program disk' is displayed. The disk
  drive light remains lit while the program is being copied.

  . Select duplicate disk and confirm with CARRIAGE RETURN
    The prompt " source drive A or B" is displayed.

. Type the name of the drive (A or B) in which the original
  disk will be inserted and confirm with CARRIAGE RETURN

  The display shows" destinat. drive A/B?"

. Type the name of the drive (A or B) to contain the disk
  onto which you want to copy.

  The display shows:

  warning: procedure deletes all disk contents. confirm Y/N?

. To abort the procedure, press N . The system returns to
  the beginning of the disk duplication procedure.

. To proceed with the duplication, press   Y.
  The display shows load source disk

  Insert the source disk in the appropriate drive and press
  CARRIAGE RETURN

The display shows load destinat. disk. Insert the
receiving disk in the appropriate drive and press <u>CARRIAGE</u>
<u>RETURN</u>

At the end of the duplication procedure, the system
returns to the beginning of the disk duplication
procedure.

You may abort the procedure at any time before you press
Y by activating the <u>EXIT</u> function. The system
returns to the beginning of the disk duplication
procedure.

(If the system encounters any error condition during this
operation, an appropriate prompt is displayed).

The disk duplication procedure for a single drive unit is
the same with the following exceptions:

. Enter the same disk drive name (A) following both prompts
  (source drive A or B? and destinat. drive A/B?)

PLEASE NOW DISPLAY DOCUMENT 'SECOND' FOR MORE INFORMATION
ON RELEASE 2.0 SOFTWARE........

TO PROTECT AND REMOVE PROTECTION FROM A TEXT

You can protect against accidental text deletion, either of
a single text (delete a text) or during a disk deletion
procedure (delete entire disk).

Protected texts cannot be deleted until the protection is
removed.

If the text is protected, the text index displays a letter
P under the heading status.

To protect a text

. Select protect a text from the utilities menu and
  confirm with CARRIAGE RETURN   The display shows name
  text.

. Enter the text name and confirm it with CARRIAGE RETURN.
  (If the text name does not exist, the system returns to
  the menu.)

. The display shows: protect=Y/remove=N.

. Press Y to protect the text or N to remove
  protection from a protected text.

The system executes the procedure and then displays the menu
again.

INITIALISE A DISK

Once you have selected this item and confirmed it with
CARRIAGE RETURN , the message enter drive name A/B is
displayed. Insert the disk into disk drive A or B and type
the corresponding letter.

As soon as you press CARRIAGE RETURN to confirm the disk
drive name, the following prompt is displayed in the lower
part of the screen:
confirm command Y/N

Press Y to initialise the disk. The system
automatically checks the disk and indicates any error on the
display. If there are no disk errors, the initialisation
begins. During this procedure, a series of "+" characters
is displayed sequentially. They leave the screen when the
disk is initialised and the menu is displayed again.

If you press   N   , the system returns to the utilities
menu without performing the initialisation.

DELETE DISK CONTENTS

This procedure is described in the section entitled "Delete
entire disk" on page 141 of the Operators Manual.

HEADER/FOOTER (AUX N)

During text entry you may use the header/footer
function to set up a permanent heading or footing that will
automatically print on each page of the text. You may use
this feature, for example, to automatically print the same
title on each page of text.

To activate the function, press AUX N
Enter the values and/or phrases, pressing CARRIAGE RETURN
to confirm each one and taking care not to exceed the
allowable length. If you do the system emits an acoustic
signal.

If the values and/or phrases proposed at the cursor position
are correct, you need only press to confirm them.

L = print at left; R = print at right; C = print centered.
If you don't enter a parameter, the system selects C.

After the values and phrases have been entered, the outline
leaves the display and you may continue typing the text.

When the text prints, it will include the headers and
footers you entered.

The phrases and values you enter with AUX N for a given
text will be stored until you change them.

You may use the header or footer feature, for example, to
write "page" followed by a number that increments by one for
. each page.

a question mark

If you want progressive page numbers, type ~~an exclamation
point~~ (?) in place of the page number.

. The system operates differently according to the automatic

page number parameter enterd during line format definition and the "header/footer" entry as follows.

If you have not programmed automatic page numbering (start 0) and have not entered an exclamation point (!) in "header/footer", the pages are not numbered.

If you have not programmed page numbering (start 0) but have entered an exclamation point in "header/footer", all pages are numbered.

If you have programmed automatic page numbering (start other than 0) and have entered an exclamation point, all pages except the first are numbered. The first number to print is the number following the start entry.

. If you have programmed automatic page numbering (start other than) and have not entered an exclamation point, the system numbers all pages, including the first. The numbers are preceded and followed by a hyphen and a space (-1-).

END OF INSTRUCTIONS

If you have any problem in operating this software contact your distributor or National Account MSR training staff

Sinclair QL Preservation Project (SQPP)

On January 12th 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
https://www.youtube.com/QLvsJAGUAR
https://plus.google.com/+QLvsJAGUAR

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Document details

Topic: *The Rodney Papers – A Sinclair Story*

Notes: *Those unique papers are from the Sinclair archives. They were in a yellow portfolio. First page is a hand-written note from Rodney Dale to Clive Sinclair. I got this folder from the Tedeschi family when they sold-off Enrico's collection.*

Number of pages (including SQPP cover and back pages): _150_

Scanned: _2018-06-05_ on a _HP M477 fdw_

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
https://www.youtube.com/QLvsJAGUAR
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