TI Home Computer Users Club

WINTER/SPRING 1985

NEWS

A quarterly publication for Club Members No. 4

A letter to all our Members – from the Editor

Welcome to the latest edition of our magazine – we hope you like it.

It's terrific that so many of you still take the time to contact us – either by phone or letter. We try to print as much of the really useful information as we can – so keep on sending it in!

This is now our fourth issue. As you'll remember, production of the TI99/4A ceased very soon after this Club was set up. So we've had a few problems keeping going: mainly because all of a sudden we had no new source of Members.

Obviously, we won't be able to keep the Club going forever; it's just not economical long-term. We have, of course, honoured our obligations to our existing loyal Members who will continue to receive copies of this magazine (albeit in a revised format) for as long as their subscriptions last.

However, we will not now be renewing subscriptions or taking on any new Members – because there just aren't enough of you to make the Club viable. Our mailing lists were therefore closed at the end of December 1984.

We'd like to thank everyone for their support, and wish those of you whose subscriptions expire with this issue all the best for the future.

With best wishes,
THE EDITOR

P.S. If you were originally a TIHOME Member, your Membership will run until the end of 1985.

EDITORIAL COPY DATE
SPRING/SUMMER 1985 ISSUE:
All editorial contributions to us by 30 March 1985 please.

SEE INSIDE –
for all your favourites and lots more!
NEWS, VIEWS, REVIEWS...
from Members, for Members

The TI Home Computer Users Club News is published by the TI Home Computers Users Club Ltd., PO Box 190, Maidenhead, Berkshire SL6 1YX, telephone Maidenhead (0628) 71696. The Club is an independent organisation and is not connected to, or owned by, Texas Instruments Inc., or any of its subsidiary and associated companies.

If you have any useful tips, hints or interesting 'not too long' programs we'll be happy to consider them for inclusion on the IN-TOUCH page.

Please send any items to: IN-TOUCH, TI Club News, PO Box 190, Maidenhead, Berks SL6 1YX.

Since TI ceased production of the TI99/4A we know how difficult it is becoming to obtain both software and add-ons for the machine. We are sure most of our Members have had dealings with Arcade Hardware or Parco Electrics whose continued support for the TI is, we are sure, much appreciated by all of you.

We were therefore pleased to receive the following letter from **Howard Greenberg** of Arcade giving an account of the current position with Texas modules:

"It's now more than a year since Texas Instruments ceased production of our computer. During that time, nearly all the retailers who supplied Texas-made product have dropped their support for the machine leaving only two suppliers who are importing cartridges.

These two concerns are Parco Electrics (Devon) and Arcade Hardware (Manchester). If you don't live in either of these areas, then your choice *nearly always* must be made using the mail order system. Both concerns are determined to provide support for as long as it is possible to do so.

The situation at present is far from unhealthy. Although many items are now scarce, they can, with trouble be located, although not necessarily cheaply. Certain lines are now reaching the end of their stock availability. Ironically, it's usually the more expensive items that run out first. Extended Basic is a case in point. It has been difficult through 1984 to obtain ExBas at a sensible price. In 1985 it's going to be dearer still. There are now two companies making Extended Basic. One in Germany, the other in the USA. They'll be highly priced too, since it's (a) impossible to produce new product at the same price as older equipment was being 'dumped' at. And (b) every Extended Basic sold has to have a royalty paid to Texas, which must add to the price.

These companies may yet take on other Texas-made modules, although as yet, no plans have been drawn up.

The position with independently-made items is now looking up. Already, it's possible to buy the excellent Miner 2049'er from Tigervision. They are now modifying their other best sellers to work on the 99. Parker Brothers have a range of three modules which work on the TI99/4A, and a new company already has a range of about seven games and utilities such as the Basic Conversion Kit. More is to follow since these people are all ex-Texas staffmen.

On the hardware front, where everyone lost patience with the now bankrupt Cor-Comp failing to live up to their promises comes an old company. Nobody's fools – Myarc; they were the first people to put a Winchester disc drive on the Texas. Their range of products looks as though they've thought the customers needs through very carefully, since wherever a product matches the TI-made original, it's been improved. Two examples would be their disc control card, which can now access any combination of up to four double/single sided, double/single density disc drives. Whilst the RS232 card now provides baud rates up to double the formerly TI specified rates and now provides TRUE Centronics, which means virtually any printer can now be connected. New items in the pipeline include a 128K memory expansion and their Mini Box is now ready to ship. (It may even be in stock by the time you read this.)

So as you see, Texas may have been out of business for a year, but the 99 is far from dead. If you're chasing that elusive item and your local stockist can't provide, try the 'phone or a letter. The very worst that can happen is that you'll be no better off and if you don't try, you'll never know."

In our last issue we printed a letter from John Stocks about remote control for cassette recorders – two of our Members have responded with the following information:

"... Mr John Stocks suggests that the remote control plug on the TI connecting cable for cassette recorders does not work. Even more surprising, the same opinion seems to be held by the author of "Learning To Use The TI99/4A Computer". On page 9 he recommends "... that you disregard the 'remote wire' and use the recorder manually ...".

My own cassette recorder is a Ferguson 3T27 which works flawlessly – the computer exercising full control of the cassette motor through the 'remote' cable.

Shortly after buying my computer I wrote to TI on a minor matter. I received a prompt and courteous reply together with a bundle of literature which included a soft cover booklet entitled "Information Package".

Amongst other items, this booklet contains specimen joystick, call key and 'Memory Space Available' routines. In addition it contains lists of recommended and not recommended cassette recorders. Finally, it contains a schematic Memory Map and various diagrams of circuits and I/O connections. The latter may be of interest to Mr Paul Hook (Letters page – Autumn 1984 issue).

Perhaps other of your readers may also be interested in enquiring from TI whether further copies of the booklet referred to are available."
S. Braithwaite, Bexhill-on-Sea.

"... With reference to the letter from John Stocks about the remote control plug for cassette recorders. There is no need for anything as elaborate as a transistor interface, the simple answer is to use the polarity reversing adaptor supplied with the computer. Failing this you can either cut off the moulded-on 2.5mm plug and replace it with another with connections reversed or modify your tape recorder by reversing the connections to the 2.5mm socket. Now a word on my own modification, that is to fit a light emitting diode (with suitable current limiting resistor) in a convenient position on the recorder and connect it to the motor supply. This gives you instant indication of when the motor is running in all models."
Mike Goddard, Gwynedd.

Francesco Lama from Hove needs some help in modifying his colour TV, which has no RGB input:

"Last summer I purchased from OTV a used colour television to use it as a monitor with my computer. Unfortunately, it being an old model, it has no RGB input and a minor modification would be required to create one. I should be grateful if you could give me advice on the subject. Another problem is that there is no real RGB output from the computer, therefore even the purchase of a monitor would not solve the problem. Could you give me advice on all these matters bearing in mind that, as I work at the University of Sussex, I have easy access to most electronic facilities. Thank you for your help."

If anyone can help Mr Lama please write to him via the Club and we will forward your letters.

Norman Gleave from Warrington has achieved a really high score on Car Wars – see our Scoreboard on page 11. He thought the following advice would help others in achieving higher scores:

"When you start the game you have 2 spare cars in the middle. By clearing a screen you receive an extra car, to a maximum of 4.

Once you have 4 cars in the middle, clear as many dots as possible but make sure you crash before wiping them all out. The reason for this madness is quite simple, once you have 4 cars in the middle you do not receive an extra car for clearing the screen. However, by crashing you are given another go at the same level, clear that screen and you enter the next level with 4 cars in the middle with a much higher score. Repeat the process every time you have your maximum amount of cars and I am sure you will increase your scores."

ADVERTISING - A SERVICE TO MEMBERS

Our small ads page has again produced quite a selection of hardware and software surplus to our Members' requirements – we hope our 'advertisers' in the Autumn issue had success in selling their items and that as a result other Members were able to obtain a good bargain.

If you'd like to sell any hardware, software or literature – in fact anything connected with the TI99/4A – then complete the Small Ads Order Form below. Remember to send the appropriate remittance ... **ONLY 10p PER WORD!**

WANTED – Disc Drive control card with module. Phone Walsall 402059.

WANTED – TI99/4A Expansion Box, 32K RAM Card, Disc Card, Drive, TI Writer. Phone 04698 450.

WANTED – Extended Basic module, also TI printer. Phone 0400 72115.

FOR SALE – TI99/4A, TI Basic manual, joysticks, all leads. £60 inclusive. Phone 01-460 1157 after 7 p.m.

TI99/4A PERIPHERAL EXPANSION BOX, 32K memory cartridge, Disk Drive, Speech Synthesiser, Joysticks, Solid state software and disk software. Also EXBAS LOGO. Numerous 99'er mags. Books. Bargain £275. Phone Eastbourne 639182.

FOR SALE – Expansion Box and RS232 Card. £180. Phone 038 487 3731.

TI99/4A FOR SALE – Cassette Recorder with leads, 3 modules: Chess, Parsec, Invaders, plus books, magazines. £75 ono. D. Harding, 76 Longridings Avenue, Shenfield, Essex. Phone 0277 227438.

TI99/4A FOR SALE – also cassette cable, joysticks, Invader module – £80. Stan, Hamilton 421615.

EARLY READING MODULE with book for sale. One small but careful owner. £10. Phone 0555 893791.

TI99/4A FOR SALE includes joysticks, cassette cable, 4 modules, 3 manuals. Accept £100. Phone 021 378 1827.

TI99/4A FOR SALE – includes cassette cable, joysticks, two cassettes and manual. £105. Phone 01-387 2112.

TEXAS PROGRAM RECORDER – brand new never used, still boxed. £35. Saffron Walden (0799) 40761.

TI99/4A FOR SALE – plus five cartridge games, joysticks etc. As new. £95. Telephone 0623 31627.

EXPANSION BOX £90, RS232 Card £90, TI99/4A £50, Speech Synthesiser £30, Cassette Recorder £10, Joysticks £10, Extended Basic £55, Personal Record Keeping £15, Parsec, Munch Man, Terminal Emulator, etc. Telephone 0284 61605 evenings.

Small Ads Order Form (Prepaid)

Fill out and send to: **TI Club News (Small Ads), PO Box 190, Maidenhead, Berks. SL6 1YX**

Please enclose a cheque or P.O. made out to TI Home Computer Users Club, for 10p per word — minimum charge £1. Your ad will be placed in our next available issue.

BLOCK CAPITALS PLEASE **Membership No.** _____

No. Words ☐ Remittance enclosed £ ☐

Name _____

Address _____

_____ Phone No: _____

TEXAS INSTRUMENTS
99/4A HOME COMPUTER SYSTEM

APPOINTED DEALER

PARCO Electrics

for a free price list and further information, send s.a.e. to:

PARCO ELECTRICS, 4 DORSET PLACE, NEW STREET, HONITON, DEVON, EX14 8QS. TELEPHONE (0404) 44425

European office:

PARCO ELECTRICS, AM GASTHAUS 2, 2971. HINTE 2, LOPPERSUM, WEST GERMANY.
TELEPHONE (04925) 1773.

GROUPS

We are pleased to welcome two new Computer Clubs to our ever-growing list of groups. We have highlighted our two new Clubs below and given full details of their activities

We have condensed the information on the remaining established Groups we know about and if you live in the vicinity and would like to contact one of them to find out more, then we suggest you either telephone the Contact or write to them enclosing a stamped-addressed envelope

If you feel a Group is needed in your area then why not start one yourself? Just supply us with the following information and your Club will be featured in our next issue.

GROUP NAME
ORGANISER'S NAME
MEETING DATES, TIMES AND VENUES
ANY OTHER RELEVANT INFORMATION

BALA – Contact: Mike Goddard

Bala Computer Club, 2 Cysgod-Y-Coleg, Bala, Gwynedd, Wales. Phone: 0678 520737

The Bala Computer Club meets every Tuesday (term-time) at the Teacher Centre, Bala between 7.00p.m. – 9.30p.m. There is a free Newsletter to all Members. They run Basic classes, visits to exhibitions, etc.

BRISTOL – Contact: Mick Ellick
3 Burrington Close, Nailsea, Bristol, Avon

BRIXHAM – Contact: Andy Cory
26 Great Rea Road, Brixham, Devon TQ5 9SR

CAMBERLEY – Contact: A.G. White
11 Badgerwood Drive, Frimley, Camberley, Surrey GU16 5UD

CAMBRIDGE – Contact: Danny Widdows
14 Sherbourne Close, Cambridge CB4 1RT

EDINBURGH – Contact: Philip Thompson
11 Parkgrove Loan, Barnton, Edinburgh EH4 7QX
Phone: (031) 336 3426

GWENT – Contact: Clive Jenkins
The Abergavenny Computer Club, 'The Haven', 14 Union Road, Abergavenny, Gwent NP7 5UW Phone Abergavenny 4388

LEICESTER – Contact: Peter Richards
15 Glenfield Road, Leicester LE3 6AT Phone 0533 50417

LEYBURN – Contact: Chris Beardsmore
Coverdale Lodge, Carlton in Coverdale, Leyburn, North Yorkshire

MERSEYSIDE – Contact: Brian Bartlett
27 Kenilworth Road, Wallasey, Merseyside Phone 051-639 8078

NEWCASTLE-UPON-TYNE – Contact: Phil Coates

5 Saville Place, Newcastle-upon-Tyne.

Phil's Club meet on the first Thursday in every month at Room D103 in the Newcastle-upon-Tyne Poly from 7.00p.m. – 9.00p.m. They help all ranks of programmers, and cater for game players too. They have a large range of TI hardware and software for demonstration, including TI's expansion box, disk controller, disk drive, minimum and Extended Basic cartridges, speech synth etc. New Members are always welcome. Any newcomers, please ask for Phil or Errol. If you write for details please enclose a s.a.e.

NOTTINGHAM – Contact: Gordon Tomlinson
75A Rossell Drive, Stapleford, Nottingham NG9 7EG

ROTHERHAM – Contact: Mark Lee
89 Rotherham Road, Maltby, South Yorks S66 8LZ
Phone Rotherham 816654

SOUTHAMPTON – Contact: A. Hopkinson
16 Linden Walk, North Baddesley, Southampton, Hants
Phone 0703 732801

SOUTHSEA – Contact: Andrew Lawes
Flat 17, 61 – 63 Elm Grove, Southsea, Hants PO5 1JF

TYNE & WEAR – Contact: David O'Doherty
23 Newlyn Drive, Bilton Hall Estate, Jarrow, Tyne & Wear
NE32 3TW Phone Jarrow 4894905

WEST MIDLANDS – Contact: G.W. Pitt
259 Sneyd Lane, Bloxwich, Walsall, West Midlands

WEST YORKSHIRE – Contact: Peter Cooper
68 Eastfield Drive, Pontefract, West Yorkshire WF8 2EZ
Phone 0977 700702

INTERNATIONAL GROUPS

MSP 99 USERS GROUP
P O Box 12351, St Paul, Minnesota 55112, USA

This Group publishes a Newsletter eleven times a year, and if anyone is interested in obtaining a copy then we suggest you write to their President, Joel Gerdeen, who, we re sure will be pleased to advise you of the costs involved

USERS GROUP OF ORANGE COUNTY
c/o Knute Ersland, 17301 Santa Isabel Street, Fountain Valley, CA 92708

This Group's publication is entitled "The ROM News Letter" and is specific to users wishing to further their knowledge of TMS 9900-based computer languages If anyone is interested, then write to Knute Ersland at the above address

MELBOURNE TIMES
This Group publishes a 20-page Newsletter – in the issue we received some of the subjects covered were. FORTH, 9900 Assembly Code, Extended Basic Tutorial plus program If you'd like to take up International Membership then write for details to the Co-Ordinator, Doug Thomas at 59 Landstrom Quadrant, Kilsyth 3137, Melbourne, Victoria, Australia

SOFTWARE

Thank you for all the Reviews you have sent us for this issue – unfortunately shortage of space means we can only include four on this occasion. We have selected Defender by Atarisoft, Battlestar by Firefly, a TI game Car Wars and Diablo by Extended Software.

Defender *by Atarisoft*

Full marks to Atari for a superb game. Before you rush out to buy a Quickshot II for it, think again! Defender uses the TI joysticks like you never thought possible. It also helps to slacken them a little. The graphics are true to the arcade game. Virtually every detail has been copied. The sound brings your TI alongside a Beeb (a what?!).
There are four skill levels, easy and hard, for one or two players. My only criticism is the speed at which the aliens move. Those of you who have been feeding your arcade machine will notice this. At around £20 it is a little expensive but a must for the TI owner.

Ratings:

INSTRUCTIONS	95%	VALUE-FOR-MONEY	90%
PLAYABILITY	95%	OVERALL	95%
GRAPHICS	100%		

Defender is available from both Parco Electrics and Arcade Hardware.

Marcus Bainbridge – Peterlee.

Battlestar Attack *by Lantern* Language – Extended Basic

Once the program is loaded and run you are asked to select a skill level (1 – 4), which is not a bad idea for complete novices. Once the skill level is entered you are confronted by a 3D channel, cross hairs (a sight), a large red moon (at the top of the screen), the Earth (slowly emerging from behind the moon) and 3 white mines in the foreground. The objective is to strike the small exhaust port 5 times (using the sight) to destroy the battleship and save the Earth.
The small mines suddenly grow larger, turn red and explode in random sequence during the game. This requires the use of shields and one is used every time a mine explodes. The number of shields you have depends on your skill level. 3 shields on level 1, 2 on level 2, etc.
However, if a mine explodes and you have no shields you are destroyed and asked if you require another game.
If the battlestar is destroyed then the game goes back to the beginning. But if the battlestar reaches Earth then a commendable sequence where the Earth is destroyed takes place. The game is far too slow to be enjoyable, the best bit was Earth's annihilation. It is also too expensive.

Ratings:

INSTRUCTIONS	80%	GRAPHICS	85%
PLAYABILITY	75%	VALUE-FOR-MONEY	60%

L. Goodison (age 14) – Lancashire.

Car Wars by Texas Instruments

Car Wars is a command module made by TI. The object of the game is to clear the dots from the screen by manoeuvring your car through a maze of lanes. However, it is not as easy as that; also on the screen is the computer's car, whose sole purpose is to crash into your car. You have an advantage of being able to change over two lanes instead of one. Your car is controlled by the Arrow keys or by using the joystick. Once you have done this, the computer adds one more car to the screen, until it has crashed all your cars (you start with 3 and you get a bonus car with every completed screen). There are six levels to choose from which makes this a real tough game, and one of the fastest available.
The good graphics and addictiveness make this a fun, exciting game.

Ratings:

INSTRUCTIONS	100%	GRAPHICS	90%
ADDICTIVENESS	90%	VALUE-FOR-MONEY	100%

Car Wars is available from Parco Electrics.

Jeremy Young (age 16) – Pinner.

Diablo *by Extended Software Co.* Language – Extended Basic

This game makes a nice change from the usual shoot 'em ups and capture princesses. In fact it is unlike any other game I know of. The instructions are very good although they are not included in the program. This does not surprise me as I expect the game takes up most of the memory, this is impossible to check as the program is protected. The game loaded first time. I entered RUN and after a short wait a title screen appeared. First you are asked if you are playing with joysticks or on the keyboard. After this you are played a short jazzy tune and the main game screen appears. Displayed are 116 moveable tiles. On each tile there are 2 tracks which makes a total of 232 tracks. The lower centre panel is missing. Just above this space there is a ball which starts rolling along the tracks. The idea is to move the tiles into the space so that the ball doesn't crash into a dead-end or the border. After you have rolled over a track that track disappears. Even when both pieces of track on a tile have disappeared the tile remains and can be moved. Although the ball seems slow at first it's not long until you start to wish it was slower. After the ball has rolled over 60 tracks a 'wrap-around' comes into action. There is a high score feature which is displayed all the time, as is the score. It is available at £8.95 from Parco Electrics.

Ratings:

INSTRUCTIONS	95%	GRAPHICS	100%
PLAYABILITY	100%	VALUE-FOR-MONEY	100%
SOUND	100%		

Matthew Smith (age 12) – Streetly.

For any TI Club Members wishing to contribute to this page we would remind you please to include the Software Supplier's name for the benefit of anyone wishing to obtain the particular piece of software – it saves telephone enquiries at our offices, and is quicker for readers to locate what they want.

We always welcome letters from our Members – remember if you've something to say that other Members would find informative or you have a problem that maybe someone else can help you solve – WRITE TO THE CLUB. Our address is: Letters Page, TI Club News, P.O. Box 190, Maidenhead, Berks. SL6 1YX.

We've had a lot of correspondence from our Members concerning letters published in our last issue...

Firstly, a thank you from Pete Sturgess who tells us that he has had quite a few phone calls from other users offering help with his TI99/4A.

***Marcus Bainbridge** supplied us with the following information on BASICODE (see H. Hindle and James Smith's letters in our last issue)...*

"BASICODE loads in a set of routines to handle key presses, screen displays etc. (only 50 commands are used) and then changes the Cassette Operating System to accept BASICODE. To do this on the TI would either mean an extra set of cassette chips in the form of a cartridge with an outlet port to accept Ex. BASIC or other programming cartridges, or use the EDITOR/ASSEMBLER. Unfortunately, the programs are written in BASIC and GOSUB the routines mentioned above. Unless you can write BASIC on the ASSEMBLER, you can rule it out.

The chips seem the most likely, but would be expensive, at a guess, at least £20. Also the BASICODE programs are rubbish at the moment, have no graphics in hi-res, and are slow, so manufacturers would be advised to wait until a final standard is agreed on."

Finally in reply to Paul Hook – two responses

***... Mr A. Garritt** offers the following information:*

"In Times (should I mention the name) Henry Clark in his article refers to a manual called 'TI99/4A Console and Peripheral Expansion System, Technical Data' and in his words 'it gives a wealth of information' – he then gives the layouts of the pins on all the plugs and what they control. This manual is available from TI, P.O. Box 50, Market Harborough, Leics."

*... and **Mike Goddard** of the Bala Computer Club (address is given on page 5) would be pleased to correspond with anybody with an interest in modifying and designing equipment on an amateur level.*

Dear Editor,

I am trying to track down HI-RES GRAPHICS (Cassette) for TI99/4A, but so far I am not having any luck here in Ireland or through catalogues from Great Britain. If you can help, I would be very appreciative of details. Thank you.

F. O'Driscoll, Co. Cork.

If anyone can help Mr O'Driscoll please write to him via the Club and we will forward on your letters.

Dear Editor,

HELP!! I am attempting to create a program which will aid our fortnightly visit to Sainsbury's (never a pleasant experience for most husbands) but having spent several evenings trying the patience of my wife, I am turning to the Club for advice on how to proceed.

The program needs to work as follows:

1. Items displayed on monitor in 'kitchen storage' format, i.e. fridge, then freezer and so on.
2. As each item is displayed, the facility to input whether it is to be purchased.
3. A printout – in Sainsbury's 'shelf' order, of items to be bought, via RS232, to my printer.
4. Facility to input quantity to be purchased.

The enclosed will print out required items in 'kitchen storage' format and will run until the last data statement is displayed, at which point an error message appears for line 715. Can you advise please?

1. How to overcome the error message.
2. How to re-organise the items required, into the order in which they will be displayed on Sainsbury's shelves.
3. How to incorporate an input for quantity required.

Both I (and my wife!) will be most grateful for some help. Thanks in anticipation. **Frank Saunders,** Suffolk.

Unfortunately we don't have the room to list his printout of grocery items, but if anyone thinks they can help Mr Saunders write to us and we will send you a copy of the list – s.a.e. please.

Dear Editor,

I am interested in modems. I knew that you could send messages to one another, but when I found out about Prestel and its adaptor I was totally confused. Please! Please! Please! could anyone help me?

Yours sincerely,

Christopher Oates, Sunderland.

If anyone feels like sorting Christopher out, please drop him a line at the Club address, and we'll pass it on to him.

Dear Editor,

I thought club members may be interested to know that over 550 (yes, five hundred and fifty) programs are possibly available from Canada and the USA. A breakdown shows the following:

Education – 172 Organisation – 229 Entertainment – 153

The above information was kindly supplied by Texas Instruments in an excellent information package which includes such items as amendments to the Users Reference Manual, memory space available routine, pin assignments for the cassette, joystick and video connectors plus a useful system block diagram and memory map. I also have available some 24 addresses of third-party software houses in the UK and 44 addresses of suppliers in the USA and Canada (s.a.e. please).

Yours sincerely,

Roger Gregory, 8 Bevan Road, Mayfield, Dalkeith, Midlothian, Scotland EH225DE.

Publications

*On the subject of specialist books for the TI99/4A we were pleased to receive the following information from **Mr Scott Rosser** from Surrey:*

"Recently I was in Foyle's bookshop in London and while there I found in their technical dept. a selection of specialist books for the TI99/4A which I'd never before seen advertised elsewhere – not even by TI (so far as I know).

Here follows a list I made on the spot. All these books seem to be American in origin.

Art and Graphics with your TI99/4A £11.50
Thomas A. Thompson Jr.
Hayden & Co.
(25 programs dealing with graphics and animation)

TI99/4A User's Handbook £4.95
Weber Systems Inc.
(Extremely good – info on BASIC and peripherals)

Basic Tricks for the TI99/4A £8.95
Allen Wyatt
SAMS Software

TI99/4A User's Guide £9.50
C. Cascato & D. Horsfall
SAMS Software

Numerical Analysis with the TI99/4A, Commodore 64, Apple II+IIIe, and TRS80 I/III £16.15
(Mathematical programs to A-level standard – and beyond!)

How to Use the TI99/4A £3.15
Bill Brewer & Jerry Willis
Dilithirum Press

Your First TI99/4A Program £9.45
Rodney Zaks
Sybex

In addition to the above books some more familiar titles are also available – mostly British publications. Anyone interested can visit Foyle's at 119 Charing Cross Road (just south of Tottenham Court Road tube), or if unable to visit London, can try this phone number – 01-437 5660."

TEXAS MANUFACTURED GAMES

PARSEC	£11.50
TOMBSTONE CITY	£9.95
TI-INVADERS	£9.95
MUNCHMAN	£9.95
CAR WARS	£9.95
CHISHOLM TRAIL	£9.95
CONNECT FOUR	£9.95
HOPPER	£14.95
SOCCER	£14.95
MICROSURGEON	£19.95
DEMON ATTACK	£19.95
MOONSWEEPER	£19.95
BUCK ROGERS	£19.95
BIGFOOT (MBX)	£19.95
SEWERMANIA (MBX)	£19.95
SUPERFLY (MBX)	£19.95
METEOR BELT (MBX)	£19.95
SPACE BANDITS (M)	£19.95
HONEY HUNT (M)	£19.95
S/DTRACK TROLLEY	£19.95

MILTON BRADLEYS MBX

MBX Expansion System

MBX, BASEBALL & I'M HIDING £125.00

All MBX games except Baseball, I'm Hiding and Terry Turtle can be played on just TI99/4A, with little or not loss of features.

SUBJECT TO AVAILABILITY.

TIGERVISION

MINER 2049'er £23.95

SPRINGER (new) £23.95

(Both require joystick)

NEW MODULES

FACE CHASE	£29.95
MIDNITE MASON	£29.95
SPACE PATROL	£29.95
STAR TRAP	£29.95

Possible by the time you read this.

FLIGHT SIMULATOR	P.O.A.

INTRODUCING THE BIGGEST (24k) GAME EVER

ARCTURUS £48.00

ADVENTURES

ADVENTURE/PIRATE	£19.95
RETURN TO PIRATE ISLE	£19.95

ADVENTURE TAPES

GOLDEN VOYAGE	£9.95
GHOST TOWN	£9.95
VOODOO CASTLE	£9.95
MYSTERY FUN HOUSE	£9.95
STRANGE ODYSSEY	£9.95

TINY LOGO	£14.00

TAPE BASED LOGO IN TI BASIC

MOONBEAM SOFTWARE (tapes)
All tapes require ExBas

GARBAGE BELLY	£7.95
ASTROMANIA	£7.95
CAVERN QUEST	£7.95
ZERO ZONE	£7.95
ROBOT RUNNER	£7.95
MOONBEAM EXPRESS	£7.95

SERIOUS STUFF

EXTENDED BASIC	£89.95
TI-LOGO II (requires 32k R.A.M.)	£74.95
EDITOR/ASSEMBLER (requires 32k R.A.M. & disc system)	£45.00
MULTIPLAN (requires 32k R.A.M. & disc system)	£74.95
TI-WRITER (requires 32k R.A.M. & disc & RS232 & printer)	£74.95
TERMINAL EMULATOR	£29.95
DISC FIXER (cartridge, requires disc & 32k R.A.M.)	£39.95
NAVARONE CONSOLE WRITER - Cartridge based word processor requiring nothing more than a printer.	£49.95

NAVARONE DATABASE

DATABASE ENTRY	£34.95
DATABASE SORT	£34.95
Or buy the two together for	£65.00

THE BASIC CONVERSION KIT

Allows the basic programmer using the Editor/Assembler to program in Basic and then convert the program to Assembley language. Requires Disc system & 32k R.A.M. & T.I.'s Editor/Assembler.

£65.00

BOOKS

INTRODUCTION TO ASSEMBLY LANGUAGE FOR THE T.I. HOME COMPUTER Steve Davis pub.

£16.95

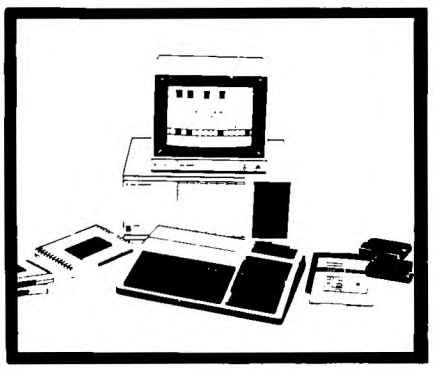
PROGRAMS FOR THE T.I. HOME COMPUTER Steve Davis pub.

£14.95

ARCADE HARDWARE

211 HORTON ROAD, FALLOWFIELD, MANCHESTER, M14 7QE.
FOR ACCESS AND ENQUIRIES TELEPHONE 061 225 2248

TEXAS PERIPHERAL

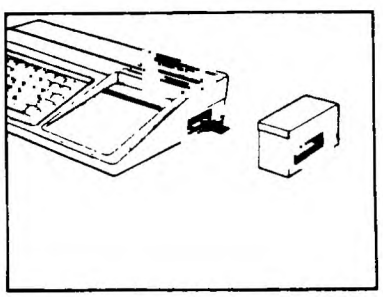


PERIPHERAL EXPANSION BOX	£95.00
32k R.A.M. CARD	£95.00
DISC CONTROL CARD (T.I.)	£120.00
DISC CONTROL CARD (MYARC) (controls up to 4 ds/dd drives)	£185.00
RS232 CARD (Myarc)	£115.00
T.I. INTERNAL DISC DRIVE	£150.00
2 x HALF HEIGHT DRIVES (Includes fitting)	£280.00

MYARC MINIBOX £595.00

(Hard wired system giving RS232 Centronics, 4 x ds/dd disc control, 32k R.AM. and 1 ds/dd disc drive.)

BOXCAR
Stand Alone Peripherals



RS232 & CENTRONICS (requires mains adaptor)	£119.95
32k R.A.M.	£125.00

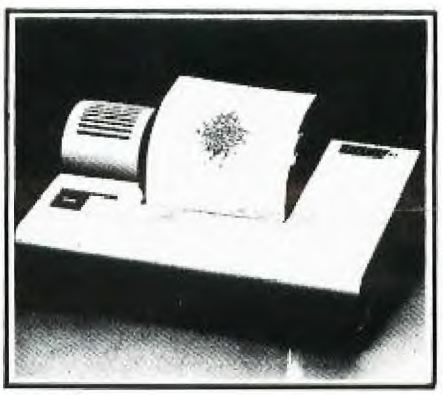
AXIOM

CENTRONICS INTERFACE (provides 1 x parallel, requires mains adaptor)	£109.95

PRINTERS

ALPHACOM 42
Plug in thermal printer

This 40 column thermal printer plugs into the right hand port on the TI99/4A. Will LIST from Basic, Exbas, etc. Can be printed to as a file. Will do screen dumps from Basic. Responds to TI modules such as P.R.K. Household Budget, etc. Uses 4" thermal paper. Comes supplied with one roll blue print paper. All you need to start printing is a 13 amp plug.



PRINTER INC. TI99/4A Interface	£145.00
PACK 5 ROLLS BLACK PRINT PAPER	£7.00

QUENDATA PRINTERS

Now top quality matrix and daisywheel printers are available from Arcade Hardware at sensible prices.

DWP 1120 20 c.p.s. DAISYWHEEL	£249.95
DMP 120 20 c.p.s. & PROPORTIONAL SPACING & N.L.Q. PRINT	£249.95

Buy a Quendata printer and Axiom interface and take £20.00 off total price.

CASSETTE 'N' GAME FILE

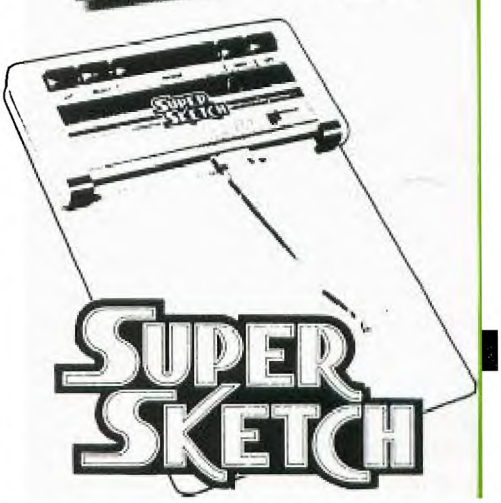
Store up to 18 modules or tapes in this attractive case.
£22.50

JOYSTICKS

PERSONAL PERIPHERALS PAIR
£24.95

SUPER CHAMP SINGLE JOYSTICK
£14.95

NAVRONE WIDGIT
Save wear and tear on your cartridge port. Can be very useful too!
£34.95



Allows freehand or traced drawings to be done on screen. Choose colours, brush type, etc. Then save your drawing to tape.
£65.00

THE SMALL PRINT

ALL ITEMS SUBJECT TO AVAILABILITY. PRICES SUBJECT TO CHANGE.

PERSONAL CALLERS WELCOME BUT PLEASE BY PRIOR ARRANGEMENT.

TIHOME has split its operations.

In future if you have any queries regarding the cassette-based software collection or the disc-based software from TI, such as Forth, Debugger, etc. then contact:

Peter Brooks; 61 The Avenue, Kennington, Oxford OX1 5PP. Tel: Oxford 730044.

For all other information, or for your initial contact then:

Paul Dicks; 157 Bishopsford Road, Morden, Surrey. Tel: 01-640 7503.

But, please, observe good manners! Only phone between the hours of 7p.m. and 10p.m. on a weekday.

A great many things are happening in the computer world, and some of them make you think carefully about just what is a 'home computer'.

Recently, I went to a very slick presentation by ICL of their new product, the One-per-desk (the OPD). After you had waded your way through the very sophisticated (IBM style) presentation, complete with video, film and the ICL man spotlighted at the podium, and had fortified yourself against the later dispensing of chicken buffet and unlimited wine, you were allowed to view the product.

It is a good machine, but is basically only a Sinclair QL (that man gets in everywhere) connected to a BT telephone.

A superb idea, yes, and there are more superb ideas. The programs are contained in ROM so most of the 128K of RAM is available to the user. 128K, yes you heard correctly! So, what do you get for your money?

You get a computer, colour optional at greater cost, that will do eight tasks, each of which can be suspended while you change to another task and then come back to the original one later. These tasks are:

1. Spreadsheet
2. Word processing
3. Database
4. Business graphics
5. Basic
6. Messaging to other OPD's
7. Telephone in
8. Telephone out

You have your own telephone directory and can instruct the OPD to dial a number and let you know when it is answered, while you continue with your word processing. You can, also, go on holiday and leave a message on your OPD and when someone rings you the OPD answers through its speech chip (and I'll give you three guesses who makes that) and delivers your preset message.

And the price of this wonder, which comes with only two plugs, one for the 13 amp socket and one for the BT telephone socket? A mere £1365. When you consider the price of your TI with expansion box, 32K memory, RS232 card, double disc drive and serial printer, it does rather make you wonder where the market is going to, doesn't it!

After the chicken buffet and the unlimited wine, I thought the machine was marvellous. Later, I was struck by a thought, who do they think they are going to sell it to?

Heigh-ho! such is the life of a Data Processing Manager.

BOOKS

There are a number of books available related to the 99/4A. I have received some of them as complimentary copies.

If you do not have all the titles, this is what I have so far:

THE BEST OF 99'ER VOL 1.

This is a book containing the best of the games in the 99'er magazine Vol 1. There is a lot more to it. There is a section on Starting Out, a section on programming techniques, on Basic and Extended Basic, on assembly language and, also, on LOGO.

Published by Emerald Valley Pub Co, Eugene, Oregon at about $17.

Contact Tel: (503) 485-97405.

GETTING STARTED WITH THE TI99/4A *by Stephen Shaw.*

An excellent start to the TI99/4A. This book has been written by one of the original users of the machine; he, therefore, knows quite a number of secrets.

Published by Phoenix Publishing, 14 Vernon Road, Bushey, Herts. £5.95.

MASTERING THE TI99/4A *by Peter Brooks*

This definitely has to be the book written by the funniest man I have met in a long time. There is nothing like getting your computer medicine laced with a sharp, satirical humour.
This is the book written by the idiot (pax!!!) for idiots.

Published by Micro Press, 27 London Road, Tunbridge Wells, Kent £5.95.

For the more technical minded there is:

LEARNING TI99/4A HOME COMPUTER ASSEMBLY LANGUAGE PROGRAMMING *by Ira McComic*

A useful book for those struggling with the first principles of assembly programming.
It is, of course, taken from the manual for the 990 series, but is none the worse for that.

Published by Wordware Publishing Inc, 4217 Country Club Drive, Plano, Texas, 75074 at $20.

PROBLEMS

Now let us deal with the sort of problems met by Users who have a TI but do not have Extended Basic, the PRK module or the Stats module.

When you want to write a message to the screen, but not on the bottom line, it would be nice if you didn't have to scroll the complete screen. Well, you can. Examine and try the following block of coding.

```
100 CALL CLEAR
110 DIM M$(19)
120 DATA T,H,I,S,.,I,S,.,
    T,H,E,.,M,E,S,S,A,G,E
130 FOR Z=1 TO 19
140 READ M$(Z)
150 NEXT Z
160 FOR Z=1 TO 19
170 CALL HCHAR
    (1,Z+6,ASC(M$(Z)))
180 NEXT Z
190 GOTO 190
```

Now most messages require an answer. So, it will be necessary to reverse the logic of the block and accept an answer from anywhere on the screen except the bottom line.

A small prize is offered for the most elegant solutions received before 1 March 1985. Beginners only please.

Answers to 157 Bishopsford Road, Morden, Surrey.

★ ★ ★

I have been considering the sort of systems for the TI99 that I am familiar with on the commercial type of computer.

I have, therefore, wondered if any readers of this magazine might be interested in telling me the sort of facilities they expect from a version of Sales Ledger, Purchase Ledger, Nominal Ledger or Stock Control.
I would also be interested in the sort of hardware expected and the sort of price that the software would cost.

I have worked with these systems on commercial computers for the last 13 years and would consider writing versions of them for the TI99, if it was worth while.

So, if you have any comments to make on this subject please contact me, in writing, at the known address and perhaps we can produce a few decent pieces of software.

Well, here's the end of another load of rubbish from your faithful friend at TIHOME. Don't forget if you have any problems, queries, comments, or suggestions for future articles in the TI magazine, then don't forget to contact me at the known address.

Keep the gremlins away!

Paul Dicks, MIDPM MBIM

In our last issue we printed a letter from ***Cameron Price*** *who was having problems with Pirate Adventure. Well, we received a nice letter from* ***Mrs B. Smith*** *with the following advice for Cameron.*

"... he has to build a ship to get to Treasure Island. Everything he needs is either on Pirate Island or in the cave. There is a plan and map in the chest but he needs the keys from the flat, also the nails. When the boat is built he needs a crew!"

We've already passed this on to Cameron – hope it's been helpful!

Now can any of our younger members (or 'older' ones!) help ***Mrs B. Smith*** *with her problem on 'Ghost Town':*

"... I am stuck on Ghost Town – I have 7 treasures and a barrel of gunpowder, but what do I blow up and how?"

If anyone can help Mrs Smith please write to us at the Club and we will forward your letter.

Dear Editor,
Can anyone tell me how to beat Troll King by Lantern? I have tried everything, including breaking into the program but I still cannot win.
Yours sincerely,
S. Fox (age 12), Huntingdon.

Dear Editor,
I have a very useful tip for anyone who has not yet succeeded in conquering 'Munch Man' and wants to see the other sheets. After pressing number 2 to start game a message comes up saying "Press any key to start". Just before the border goes around the message, hold the shift key down and press the keys "#" then "*", then "#" (be careful, you have to be quick). The screen goes blank then "Rncl (0-2)" appears, then press any number between 0 and 2. Then "Scn (0-19)" appears. These are the different screens you can get. Press any number between 0 and 9 (the number 1 does not work). Then "MM (1-9)" appears. This is the number of men you want, again press any key between 1 and 9. Now the game begins. Happy playing!
Yours sincerely,
Gary Pilcher (age 15), London N13.

Dear Editor,
Could you please show me a photo of what Protector 2 looks like on the screen. If anyone has Protection 2 and would like to swap for a while, I would like to hear from them.
Yours sincerely,
T.M. Lewis, Purley.

If anyone can help here please write to the Club and we will forward your letter.

Matthew Smith *(age 12) of Streetly has sent us an interesting program he calls 'DISCO' (TI-Basic) which we thought you could have some fun with.*

Using this program you can play your favourite music tapes through your TV set, and also have a flashing screen display which can be altered to the beat of the music. The TV volume control can be used to make the music louder or vice versa. First enter this program:

```
100  RANDOMIZE
110  CALL CLEAR
120  CALL SCREEN (2)
130  CALL CHAR (28,"OCOC3F3FFCFC3O3O")
140  CALL HCHAR (1,1,768)
150  CALL COLOR (13,2,INT(RND*7)+3)
160  FOR I=1 TO 50
170  NEXT I
180  GOTO 50
```

Line 160 should be made so that the loop is longer for playing slower music.

Check that your tape recorder is plugged into your TI as if you were loading a progrm. Put a music tape into the recorder with the volume at the usual loading position. Type RUN into your computer then press ENTER. Press PLAY on your recorder and listen and watch the results.

Note: If you cannot hear the music, turn the TV volume up and if there is interference try tuning the computer in better.

High Flyers

We've had our usual batch of high score letters from Members since our last issue – several of them with new record high scores.

If you have beaten any of the scores appearing on our 'Scoreboard' – or have achieved a really high score on a TI game not yet featured, write to the Club at the usual address and you might see your name in print in our next issue!

Game	Score	Achieved by
Alpiner	96,142	A. Southern
Car Wars	50,050	N. Gleave
Munch Man	469,950 sheet 73	T. Van der Velde
TI Invaders (Downright Nasty)	69,979 sheet 21	T. Van der Velde
Tombstone City Level 2 – day 5	242,400	A. Sims

LITTLE TWO SOFTWARE

The great new **adventure game** *for the standard TI with Extended Basic* **Escape from the Planet Brontitor** *is supplied on* **cassette** *for* **£4.95** *or* **disk** *plus 32K for* **£6.50**. *The game consists of two parts. A 16K graphic/instruction part which utilizes some unique programing techniques and on side two is the main text adventure in which almost every free byte is used Written by Phil Coates - who gave you 32 sprites from BASIC*, this game should present you with a challange for very many hours. (Helpline available for S.A.E.)*
* with Minimem

CHOMPER c/w COMPARE
Guide your snake around the poison mushrooms and eat as many spiders as you can, good graphics in this **TI BASIC** 'arcade style' game. Written by Paul Talyor,this game presents fun for all the family
£4.95 **TI BASIC**
Complete with bonus program **COMPARE**— *Let your TI help you make the right decision*

BLACKHOLES & HYPERWARPS c/w NUMBER E.S.P.
Can you survive Blackholes, Gas Clouds, Meteor Storms and Super Nova to reach the End of the Universe!? Written by Phil Coates, BLACKHOLES is a *Two player graphic game which needs the full 16K **TI BASIC** **£4.95**
Complete with bonus game **NUMBER ESP** — *Has your TI got E.S.P.?*
* Can be played solo

5 SAVILLE PLACE NEWCASTLE NE1 8DQ

Competition Page

SPOT THE DIFFERENCE COMPETITION

Our competition this time is one to test your powers of observation!

You have the choice of the following great prizes, which we have been fortunate in obtaining from the same companies who were so generous last time!

Take your pick!

THE TOY – a VHS or Beta video cassette of the 1983 movie 'The Toy': from RCA/Columbia Pictures Video UK. This is the story of an unemployed journalist, played by Richard Pryor, who takes up a job in a department store owned by multi-millionaire Jackie Gleason. Gleason tells his son that he can take home anything from the toy department and the kid chooses Pryor. A very funny and touching film starring two of America's most popular comics.

DONKEY KONG 3 – one of the new Game & Watch Micro Vs System games by CGL, which features more fun with Donkey Kong in battle with Stanley – in the greenhouse! With this pocket-sized game you can either play against the computer or against a friend.

TI-1788 III CALCULATOR – this is an all-purpose traveller's companion calculator by Texas Instruments. Apart from the usual calculator functions it also features an LCD permanent display clock, stopwatch and alarm. For the International traveller it has facilities for displaying 19 time zones and also converts foreign currency to the sterling equivalent.

WHAT TO DO

Below you will see two pictures which may look identical but on closer inspection you will see that picture B has 10 differences – can you spot them?

Circle the 10 differences on picture B with a coloured pen. Complete the entry form and send it to the Club address, to reach us **no later than Friday, 29 March 1985.**

The first three correct entries drawn from our postbag on that day will be deemed to be the Winners.

COMPETITION ENTRY FORM

"Spot the Difference"

MEMBER'S NAME _____

ADDRESS _____

_____

_____ Postcode _____

Send your entry form to this address: "Spot the Difference", TI Club News, P.O. Box 190, Maidenhead, Berks. SL6 1YX.

"Me and My Computer" – RESULTS

We were thrilled to receive such an overwhelming response to our cartoon competition. We were very impressed by your artistic talents and amused by the relationship some of you have with your computers!
We selected one winner from each age group as follows:

Donald Grieve (0 – 11 group) from Strathaven who won GEORGE the computer robot.

Suzanne Morgan (12 – 21 group) from Pontypridd who won the KRULL video cassette.

Larry Mata (22+ group) from Liverpool who won the TI-30 Galaxy calculator.

Well done all of you!

If my entry is one of the lucky ones drawn from the postbag, I'd like to win:

THE TOY* video cassette ☐ **DONKEY KONG 3** ☐ **TI-1788 III Calculator** ☐

VHS/BETA **delete system not required*

If you have any problems or queries about your Membership, contact Katie Lomax at this address – and address any other correspondence to this address, to:

TI HOME COMPUTER USERS CLUB, P.O. BOX 190, MAIDENHEAD, BERKS. SL6 1YX.
Or telephone: Maidenhead (0628) 71696.

No. 015 TITLE : HIGH RESOLUTION POLAR GRAPH PLOT by John Stocks

```
 1Ø  REM  POLAR GRAPH PLOT
 2Ø  CALL CLEAR
 3Ø  GOSUB 1Ø3Ø
 4Ø  CALL CLEAR
 5Ø  DIM L(16),M$(16),T$(126),U$(16),V$(16),W$(16),X$(16),Y$(16)
 6Ø  O=159
 7Ø  A=Ø
 8Ø  D=Ø
 9Ø  E=Ø
1ØØ  R=12
11Ø  B=R*SIN(A)
12Ø  C=R/1.3*COS(A)
13Ø  IF (INT(B)<-12)+(INT(B)>11)+(ABS(INT(C))>15) THEN 21Ø
14Ø  IF (INT(B)=D)*(INT(C)=E) THEN 16Ø
15Ø  GOSUB 23Ø
16Ø  F=INT(8*(B-INT(B)))
17Ø  G=INT(8*(C-INT(C)))
18Ø  H(F+1,G+1)=1
19Ø  D=INT(B)
2ØØ  E=INT(C)
21Ø  A=A+1/(16*8)
22Ø  GOTO 1ØØ
23Ø  CALL GCHAR(12-D,17+E,S)
24Ø  IF S=32 THEN 26Ø
25Ø  GOSUB 62Ø
26Ø  FOR I=8 TO 1 STEP -1
27Ø  J=8*H(I,1)+4*H(I,2)+2*H(I,3)+H(I,4)
28Ø  K=8*H(I,5)+4*H(I,6)+2*H(I,7)+H(I,8)
29Ø  L(17-2*I)=J
3ØØ  L(18-2*I)=K
31Ø  NEXT I
32Ø  FOR I=1 TO 16
33Ø  IF L(I)<1Ø THEN 35Ø
34Ø  ON 16-L(I) GOTO 37Ø,39Ø,41Ø,43Ø,45Ø,47Ø
35Ø  M$(I)=STR$(L(I))
36Ø  GOTO 48Ø
37Ø  M$(I)="F"
38Ø  GOTO 48Ø
39Ø  M$(I)="E"
4ØØ  GOTO 48Ø
41Ø  M$(I)="D"
42Ø  GOTO 48Ø
43Ø  M$(I)="C"
44Ø  GOTO 48Ø
45Ø  M$(I)="B"
46Ø  GOTO 48Ø
47Ø  M$(I)="A"
48Ø  NEXT I
49Ø  N$=M$(1)&M$(2)&M$(3)&M$(4)&M$(5)&M$(6)&M$(7)&M$(8)&M$(9)&M$(1Ø)&M$(11)&M$(12)
     &M$(13)&M$(14)&M$(15)&M$(16)
5ØØ  T$(O-33)=N$
51Ø  CALL CHAR(O,N$)
52Ø  CALL HCHAR(12-D,17+E,O)
53Ø  O=O-1
54Ø  IF O > 32 THEN 56Ø
55Ø  GOTO 55Ø
56Ø  FOR P=1 TO 8
57Ø  FOR Q=1 TO 8
58Ø  H(P,Q)=Ø
59Ø  NEXT Q
6ØØ  NEXT P
61Ø  RETURN
```

SOME INTERESTING SHAPES (LINE 1ØØ)

```
R=6*(1+SIN(3*A))
R=6*(1+SIN(4*A))
R=5*(1+SIN(5*A))
R=6*(1+COS(A))
R=6*(1+2*COS(A))
R=6*(1+2*COS(2*A))
R=12*SIN(2*A)
R=A/2
R=12*SIN(1.25*A)
  (TERMINATES PREMATURELY DUE TO
   LIMITED AVAILABILITY OF
   CHARACTERS)
```

Over/...

Please note Since these programs are not created by the Club, we cannot take responsibility for their content. But if you need advice, give Katie Lomax at the Club Office a ring on Maidenhead (0628) 71696 – and she'll put you in touch with the programmer, then you can sort it out between you.

```
 62Ø  FOR I=1 TO 16
 63Ø  W$(I)="Ø"
 64Ø  X$(I)="Ø"
 65Ø  Y$(I)="Ø"
 66Ø  U$(I)=SEG$(T$(S-33),I,1)
 67Ø  IF U$(I)<>"F" THEN 7ØØ
 68Ø  V$(I)="1111"
 69Ø  GOTO 95Ø
 7ØØ  IF U$(I)<>"E" THEN 73Ø
 71Ø  V$(I) ="111Ø"
 72Ø  GOTO 95Ø
 73Ø  IF U$(I)<>"D" THEN 76Ø
 74Ø  V$(I)="11Ø1"
 75Ø  GOTO 95Ø
 76Ø  IF U$(I)<>"C" THEN 79Ø
 77Ø  V$(I)="11ØØ"
 78Ø  GOTO 95Ø
 79Ø  IF U$(I)<>"B" THEN 82Ø
 8ØØ  V$(I)="1Ø11"
 81Ø  GOTO 95Ø
 82Ø  IF U$(I)<>"A" THEN 85Ø
 83Ø  V$(I)="1Ø1Ø"
 84Ø  GOTO 95Ø
 85Ø  IF VAL(U$(I))<8 THEN 88Ø
 86Ø  W$(I)="1"
 87Ø  U$(I)=STR$(VAL(U$(I))-8)
 88Ø  IF VAL(U$(I))<4 THEN 91Ø
 89Ø  X$(I)="1"
 9ØØ  U$(I)=STR$(VAL(U$(I))-4)
 91Ø  IF VAL(U$(I))<2 THEN 94Ø
 92Ø  Y$(I)="1"
 93Ø  U$(I)=STR$(VAL(U$(I))-2)
 94Ø  V$(I)=W$(I)&X$(I)&Y$(I)&STR$(VAL(U$(I)))
 95Ø  NEXT I
 96Ø  FOR P=8 TO 1 STEP -1
 97Ø  FOR Q=1 TO 8
 98Ø  IF (H(P,Q)=Ø)*(SEG$(V$(17-2*P)&V$(18-2*P),Q,1)="Ø") THEN 1ØØØ
 99Ø  H(P,Q)=1
1ØØØ  NEXT Q
1Ø1Ø  NEXT P
1Ø2Ø  RETURN
1Ø3Ø  CALL CHAR(64,"ØØFFØØØØØØØØØØØØ")
1Ø4Ø  FOR I=2 TO 8
1Ø5Ø  CALL COLOR(I,1,4)
1Ø6Ø  NEXT I
1Ø7Ø  READ A$
1Ø8Ø  IF A$="X" THEN 111Ø
1Ø9Ø  PRINT A$
11ØØ  GOTO 1Ø7Ø
111Ø  FOR I=2 TO 8
112Ø  CALL COLOR(I,2,4)
113Ø  NEXT I
114Ø  FOR I=1 TO 3ØØØ
115Ø  NEXT I
116Ø  RETURN
117Ø  DATA "←6 SPACES→HIGH-RESOLUTION←13 SPACES→@@@@@@@@@@@@@@@@←
     —13 SPACES→POLAR GRAPH PLOT←5 SPACES→"
118Ø  DATA "←6 SPACES→@@@@@@@@@@@@@@@@←5 SPACES→",,,,,EDIT 1ØØ TO
      SPECIFY R=F(A)  @@@@@@@@,,
119Ø  DATA RUN 4Ø TO BYPASS CAPTION←4 SPACES→@@@@@@,,,,,,X
12ØØ  END
```

TI Home Computer Users Club

MEMBERS PROGRAMS | No. Nos./ 016

No. 016 TITLE : FORKLIFT TRUCK by Rod Lane

In this game you play the part of a forklift truck operator putting in some overtime at the warehouse. Unfortunately the only truck around is old and the battery in it does not last long!! So to keep going you will probably need to recharge a number of times. However the recharge points (shown as new batteries) keep appearing and disappearing. You should therefore only go for one if it appears near to you!! To use these recharge points you must BACK your truck over them. If you are successful you will gain between 1 and 4 units of power (shown on the power level meter at the bottom of the screen). The normal four cursor keys control the movement of the truck. Your job then, assuming your power lasts, is to pick up all the coloured crates by sliding the forks of your truck into the pallet from the FRONT and to load them into the corresponding containers at the right of the screen. When you have loaded the last crate and backed your truck out of the container the game ends and offers you a new game at the same or a different skill level. This skill level determines the number of crates to be loaded. Levels 1 and 2 are best only for practice. Speed is not essential as you use no power when standing still, so plan your routes to conserve as much power as possible.

```
100 CALL CLEAR
110 GOSUB 1860
120 CALL CLEAR
130 RX=1
140 CX=1
145 REM  ** DEFINE CHAR'S **
150 FOR Q=40 TO 64 STEP 8
160 CALL CHAR(Q,"78484878484878F8")
170 NEXT Q
180 CALL CHAR(140,"1C14141E7E7E7E2B")
190 CALL CHAR(141,"00000000000000F0")
200 CALL CHAR(95,"0000000000000FF")
210 CALL CHAR(96,"FF")
220 CALL CHAR(105,"0101010101010101")
230 CALL CHAR(106,"8080808080808080")
240 CALL CHAR(34,"6666FF99FFFF99FF")
250 V=41
260 FOR V=41 TO 65 STEP 8
270 CALL CHAR(V,"FFFFFFFFFFFFFFFF")
280 NEXT V
290 CALL COLOR(2,16,1)
300 CALL COLOR(3,7,1)
310 CALL COLOR(4,15,1)
320 CALL COLOR(5,2,1)
325 REM  ** SET UP SCREEN **
330 PRINT
340 RANDOMIZE
350 BC=1
360 BATT=1
370 TOT=0
380 PRINT "   ____________________ "
390 FOR P=1 TO 19
400 PRINT "  i                    j"
410 NEXT P
420 PRINT "   ``````````````````````  "
430 PRINT "        POWER LEVEL"
440 W=5
450 N=27
460 FOR D=1 TO 2
470 FOR L=1 TO 2
480 FOR V=41 TO 65 STEP 8
490 CALL HCHAR(W,N,V)
500 W=W+5
510 NEXT V
520 W=6
530 NEXT L
540 W=5
550 N=28
560 NEXT D
570 R=INT(18*RND)+4
580 C=INT(20*RND)+6
590 X=141
600 GOSUB 1390
610 FOR T=1 TO SK
620 FOR Q=40 TO 64 STEP 8
630 PR=INT(18*RND)+4
640 PC=INT(18*RND)+8
650 CALL GCHAR(PR,PC,PG)
660 IF PG<>32 THEN 630
670 CALL HCHAR(PR,PC,Q)
680 NEXT Q
690 NEXT T
700 CALL HCHAR(24,1,41,32)
705 REM  ** KEYBOARD SCAN **
710 CALL KEY(3,K,S)
720 IF S=0 THEN 710
730 BATT=BATT+1
735 REM  ** CHECK FOR & SET UP RECHARGE **
740 IF FLAG=1 THEN 820
750 IF RND<.8 THEN 820
760 RX=INT(13*RND)+7
770 CX=INT(13*RND)+8
780 CALL GCHAR(RX,CX,G)
790 IF G<>32 THEN 760
800 CALL HCHAR(RX,CX,34)
810 FLAG=1
815 REM  ** DIRECTION OF MOVEMENT **
820 IF K=88 THEN 870
830 IF K=69 THEN 960
840 IF K=83 THEN 1050
850 IF K=68 THEN 1210
860 GOTO 710
865 REM  ** MOVE DOWN **
870 CALL GCHAR(R+1,C,G)
880 CALL GCHAR(R+1,C+1,GN)
890 IF (G=32)*(GN=32)THEN 900 ELSE 710
900 CALL HCHAR(R,C,32,2)
910 R=R+1
920 IF R<23 THEN 940
930 R=22
940 GOSUB 1390
950 GOTO 710
955 REM  ** MOVE UP **
960 CALL GCHAR(R-1,C,G)
970 CALL GCHAR(R-1,C+1,GN)
```

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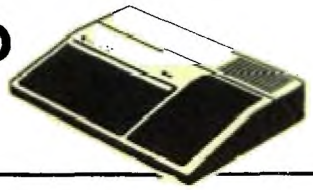
```
980 IF (G=32)*(GN=32)THEN 990 ELSE 710
990 CALL HCHAR(R,C,32,2)
1000 R=R-1
1010 IF R>3 THEN 1030
1020 R=4
1030 GOSUB 1390
1040 GOTO 710
1045 REM  ** MOVE BACK **
1050 CALL GCHAR(R,C-1,G)
1060 IF G=34 THEN 1080
1070 IF G<>32 THEN 710
1080 CALL HCHAR(R,C,32,2)
1090 C=C-1
1100 IF C>5 THEN 1120
1110 C=6
1120 GOSUB 1390
1125 REM  ** RECHARGE SEQUENCE **
1130 IF G<>34 THEN 710
1140 E=INT(4*RND)+1
1150 BC=BC-E
1160 IF BC>0 THEN 1180
1170 BC=1
1180 CALL HCHAR(24,BC,41,32-BC)
1190 CALL SOUND(400,-8,2)
1200 GOTO 710
1205 REM  ** MOVE FORWARD **
1210 CALL GCHAR(R,C+2,GF)
1220 IF (GF=106)+(GF=34)THEN 710
1230 IF GF=X+1 THEN 1520
1240 IF (GF=41)+(GF=49)+(GF=57)+(GF=65)THEN 710
1250 IF GF<>32 THEN 1320
1260 CALL HCHAR(R,C,32)
1270 C=C+1
1280 IF C<27 THEN 1300
1290 C=26
1300 GOSUB 1390
1310 GOTO 710
1315 REM  ** PICK UP CRATE **
1320 IF X<>141 THEN 710
1330 X=GF
1340 CALL HCHAR(R,C,32)
1350 C=C+1
1360 GOSUB 1390
1370 CALL SOUND(-100,110,4,-7,16)
1380 GOTO 710
1385 REM  ** MOVEMENT SUB. & POWER DECREASE **
1390 CALL SOUND(-200,-7,12)
1400 CALL HCHAR(R,C,140)
1410 CALL HCHAR(R,C+1,X)
1420 IF BATT/10<>INT(BATT/10)THEN 1510
1430 CALL SOUND(250,550-(13*BC),5)
1440 CALL HCHAR(24,BC,49)
1450 BC=BC+1
1460 IF BC=33 THEN 1730
1470 CALL GCHAR(RX,CX,F)
1480 IF F<>34 THEN 1500
1490 CALL HCHAR(RX,CX,32)
1500 FLAG=0
1510 RETURN
1515 REM  ** LOAD CRATE & COUNT **
1520 CALL HCHAR(R,C,32)
1530 C=C+1
1540 CALL HCHAR(R,C,140)
1550 X=141
1560 CALL KEY(0,K,S)
1570 IF S=0 THEN 1560
1580 IF K=83 THEN 1600
1590 GOTO 1560
1600 C=C-1
1610 CALL HCHAR(R,C+1,X)
1620 CALL HCHAR(R,C,140)
1630 TOT=TOT+1
1640 IF TOT=SK*4 THEN 1660
1650 GOTO 710
1655 REM  ** WIN **
1660 FOR Z=1 TO 24
1670 PRINT "FINISHED FINISHED FINISHED"
1680 NEXT Z
1690 FOR Z=1 TO 24
1700 PRINT " "
1710 NEXT Z
1720 GOTO 1790
1725 REM  ** LOSE **
1730 FOR Z=1 TO 24
1740 PRINT "NO POWER NO POWER NO POWER"
1750 NEXT Z
1760 FOR Z=1 TO 24
1770 PRINT " "
1780 NEXT Z
1785 REM  ** REPLAY **
1790 INPUT "MORE??? [Y/N]  ":A$
1800 IF A$<>"N" THEN 1830
1810 CALL CLEAR
1820 END
1830 IF A$<>"Y" THEN 1790
1840 GOSUB 1860
1850 GOTO 330
1855 REM  ** SKILL LEVEL **
1860 INPUT "SKILL LEVEL? [UP TO 4] ":SK
1870 IF (SK<>1)*(SK<>2)*(SK<>3)*(SK<>4)THEN 1860
1880 RETURN
```



No. 017 TITLE : GREEDY PIG by Norman Gleave

```
 10  REM   GREEDY PIG
 20  REM   BY N V GLEAVE
 30  REM   1984
100 CALL CLEAR
110 PRINT "ENTER PLAYERS NAME":"OR INITIALS (1-6 LETTERS)"
120 INPUT P$
130 PRINT
140 IF LEN(P$)>6  THEN 150 ELSE 180
150 PRINT "6 LETTERS MAXIMUM, PLEASE!"
160 PRINT
170 GOTO 120
180 CALL CLEAR
190 CALL CHAR(128,"3070FCFE7E3F1F1F")
200 CALL CHAR(129,"3F7FFFFFFFF7F3F")
210 CALL CHAR(130,"1F0F070301000000")
220 CALL CHAR(131,"000000183CFFFFFF")
230 CALL CHAR(132,"3C3CFFFFFF812481")
240 CALL CHAR(134,"FFC3FFFFFFFF0000")
250 CALL CHAR(135,"0C1E3F7F7EFCF8F8")
260 CALL CHAR(136,"FCFEFFFFFFFFFEFC")
270 CALL CHAR(137,"F[illegible]0800000000")
280 CALL CHAR(96,"FFE7C38181C3E7FF")
290 CALL CHAR(97,"FF")
300 CALL COLOR(9,5,11)
310 CALL COLOR(16,5,5)
320 CALL COLOR(13,10,5)
330 CALL COLOR(14,10,5)
340 T=0
350 SC=0
360 Z=0
370 Y=0
380 M$="RUNNING"
390 PR=11
400 PC=21
410 IF (C=0)THEN 430 ELSE 440
420 IF (N=0)THEN 430 ELSE 440
430 SC=0
440 GOSUB 2260
450 IF (C=0)*(N=0)THEN 460 ELSE 470
460 T=0
470 M$="SCORE"
480 PR=13
490 PC=22
500 GOSUB 2260
510 M$=STR$(SC)
520 PR=15
530 PC=24
540 GOSUB 2260
550 M$="TOTAL"
560 PR=5
570 PC=5
580 GOSUB 2260
590 M$=P$
600 PR=7
610 PC=5
620 GOSUB 2260
630 M$=STR$(T)
640 PR=9
650 PC=7
660 GOSUB 2260
670 REM
680 IF Z>2 THEN 2310
690 CALL KEY(0,K,S)
700 IF S=0 THEN 690
710 IF K=32 THEN 770
720 IF K=13 THEN 730
730 Y=Y+1
740 T=T+SC
750 IF Y>2 THEN 2310
760 SC=0
770 RANDOMIZE
780 CALL CLEAR
790 C=INT(RND*7)
800 IF C=0 THEN 1400 ELSE 810
810 IF C=1 THEN 1330 ELSE 820
820 IF C=2 THEN 1250 ELSE 830
830 IF C=3 THEN 1150 ELSE 840
840 IF C=4 THEN 1060 ELSE 850
850 IF C=5 THEN 940 ELSE 860
860 IF C=6 THEN 880
870 REM 6
880 CALL VCHAR(5,27,96,3)
890 CALL VCHAR(5,28,152,3)
900 CALL VCHAR(5,29,96)
910 SC=SC+6
920 GOTO 1520
930 REM 5
940 CALL HCHAR(5,27,96)
950 CALL HCHAR(5,28,152)
960 CALL HCHAR(5,29,96)
970 CALL HCHAR(6,27,152)
980 CALL HCHAR(6,28,96)
990 CALL HCHAR(6,29,152)
1000 CALL HCHAR(7,27,96)
1010 CALL HCHAR(7,28,152)
1020 CALL HCHAR(7,29,96)
1030 SC=SC+5
1040 GOTO 1520
1050 REM 4
1060 CALL HCHAR(5,27,96)
1070 CALL HCHAR(5,29,96)
1080 CALL HCHAR(6,27,152,3)
1090 CALL HCHAR(5,28,152,3)
1100 CALL HCHAR(7,27,96)
1110 CALL HCHAR(7,29,96)
1120 SC=SC+4
1130 GOTO 1520
1140 REM 3
1150 CALL HCHAR(5,27,96)
1160 CALL HCHAR(5,28,152,2)
1170 CALL VCHAR(6,27,152,2)
1180 CALL HCHAR(6,28,96)
1190 CALL HCHAR(6,29,152)
1200 CALL HCHAR(7,28,152)
1210 CALL HCHAR(7,29,96)
1220 SC=SC+3
1230 GOTO 1520
1240 REM 2
1250 CALL HCHAR(5,27,96)
1260 CALL HCHAR(5,28,152,2)
1270 CALL HCHAR(6,27,152,3)
1280 CALL HCHAR(7,27,152,2)
1290 CALL HCHAR(7,29,96)
1300 SC=SC+2
1310 GOTO 1520
1320 REM 1
1330 CALL HCHAR(5,27,152,3)
1340 CALL HCHAR(6,27,152,3)
1350 CALL HCHAR(7,27,152,3)
1360 CALL HCHAR(6,28,96)
1370 SC=SC+1
```

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```
1380 GOTO 1520
1390 REM PIG
1400 CALL HCHAR(5,27,128)
1410 CALL HCHAR(5,28,131)
1420 CALL HCHAR(5,29,135)
1430 CALL HCHAR(6,27,129)
1440 CALL HCHAR(6,28,132)
1450 CALL HCHAR(6,29,136)
1460 CALL HCHAR(7,27,130)
1470 CALL HCHAR(7,28,134)
1480 CALL HCHAR(7,29,137)
1490 SC=0
1500 Z=Z+1
1510 GOTO 1520
1520 RANDOMIZE
1530 N=INT(RND*7)
1540 IF N=0 THEN 1610 ELSE1550
1550 IF N=1 THEN 1740 ELSE 1560
1560 IF N=2 THEN 1810 ELSE 1570
1570 IF N=3 THEN 1890 ELSE 1580
1580 IF N=4 THEN 2000 ELSE 1590
1590 IF N=5 THEN 2080 ELSE 1600
1600 IF N=6 THEN 2200
1610 REM PIG
1620 CALL HCHAR(5,22,128)
1630 CALL HCHAR(5,23,131)
1640 CALL HCHAR(5,24,135)
1650 CALL HCHAR(6,22,129)
1660 CALL HCHAR(6,23,132)
1670 CALL HCHAR(6,24,136)
1680 CALL HCHAR(7,22,130)
1690 CALL HCHAR(7,23,134)
1700 CALL HCHAR(7,24,137)
1710 SC=0
1720 Z=Z+1
1730 GOTO 380
1740 REM 1
1750 CALL HCHAR(5,22,152,3)
1760 CALL HCHAR(6,22,152,3)
1770 CALL HCHAR(7,22,152,3)
1780 CALL HCHAR(6,23,96)
1790 SC=SC+1
1800 GOTO 380
1810 REM 2
1820 CALL HCHAR(5,22,96)
1830 CALL HCHAR(5,23,152,2)
1840 CALL HCHAR(6,22,152,3)
1850 CALL HCHAR(7,22,152,3)
1860 CALL HCHAR(7,24,96)
1870 SC=SC+2
1880 GOTO 380
1890 REM 3
1900 CALL HCHAR(5,22,96)
1910 CALL HCHAR(5,23,152,2)
1920 CALL VCHAR(6,22,152,2)
1930 CALL HCHAR(6,23,96)
1940 CALL HCHAR(6,24,152)
1950 CALL HCHAR(7,23,152)
1960 CALL HCHAR(7,24,96)
1970 SC=SC+3
1980 GOTO 380
1990 REM 4
2000 CALL HCHAR(5,22,96)
2010 CALL HCHAR(5,24,96)
2020 CALL HCHAR(6,22,152,3)
2030 CALL VCHAR(5,23,152,3)
2040 CALL HCHAR(7,22,96)
2050 CALL HCHAR(7,24,96)
2060 SC=SC+4
2070 GOTO 380
2080 REM 5
2090 CALL HCHAR(5,22,96)
2100 CALL HCHAR(5,23,152)
2110 CALL HCHAR(5,24,96)
2120 CALL HCHAR(6,22,152)
2130 CALL HCHAR(6,23,96)
2140 CALL HCHAR(6,24,152)
2150 CALL HCHAR(7,22,96)
2160 CALL HCHAR(7,23,152)
2170 CALL HCHAR(7,24,96)
2180 SC=SC+5
2190 GOTO 380
2200 REM 6
2210 CALL VCHAR(5,22,96,3)
2220 CALL VCHAR(5,23,152,3)
2230 CALL VCHAR(5,24,96,3)
2240 SC=SC+6
2250 GOTO 380
2260 FOR J=1 TO LEN(M$)
2270 CHR=ASC(SEGS(M$,J,1))
2280 CALL HCHAR(PR,PC+J,CHR)
2290 NEXT J
2300 RETURN
2310 M$="GAME OVER"
2320 PR=17
2330 PC=12
2340 GOSUB 2260
2350 M$="YOUR TOTAL SCORE IS"
2360 PR=19
2370 PC=7
2380 GOSUB 2260
2390 M$=STR$(T)
2400 PR=21
2410 PC=14
2420 GOSUB 2260
2430 M$="ANOTHER GAME?  (Y/N)"
2440 PR=23
2450 PC=7
2460 GOSUB 2260
2470 CALL KEY(0,K,S)
2480 IF S=0 THEN 2470
2490 IF K=89 THEN 100
2500 END
```

INSTRUCTIONS

Using the space bar to roll two dice the idea is to score as many points as possible without becoming a "greedy pig".

You have three chances to transfer your "running" score to your "total" score by using the enter key, you must do this before the pigs attack your score.

If one pig appears then you lose your "running" score, but your "total" score is safe. That is unless two pigs appear together then both your "running" and "total" scores are reduced to nil.

The game ends when you either make your third transfer from "running" score to your "total" score or receive a third pig.

Each press of the space bar rolls the dice and brings the pigs a little nearer.

No. 018 TITLE : FILE HANDLING ROUTINE by Ian Wheater

I have a requirement to use data files with my basic 99/4A, using a Cassette Recorder. As anyone who has tried this will tell you this is a pain. I have reduced the pain a little, but not a lot, with the following routine.

The best way of minimising the trouble is to pack as much data into each file as possible. Generally speaking numbers are best stored as strings. However, to demonstrate my routine I will just use the simplest of data.

```
100 DIM A(255)          Not that I intend to use all 255 files, but I might as
                        well dimension that way.
110 INPUT "NO. OF FILES = ":N
                        Dont put too many or you will wear out the keys.
120 FOR X=1 TO N
130 INPUT A(X)
140 NEXT X
                        Now clear the screen and start writing in Red.
150 GOSUB 1000
160 PRINT "  FOR INSTRUCTIONS IN BLACK"
170 PRINT "     JUST PRESS ""ENTER"""
                        Wait long enough to read it
180 FOR X=1 TO 2000
190 NEXT X
                        Rather than use End of Files, I prefer, with tape, to
                        put the number of files in the first one.
200 OPEN #1:"CS1",OUTPUT,INTERNAL,FIXED
210 PRINT #1: N
220 CLOSE #1
                        Revert to Black writing
230 GOSUB 1100
                        Open all files except the last
240 FOR X=2 TO N
250 OPEN #X:"CS1",OUTPUT,INTERNAL,FIXED 192
260 CALL CLEAR
270 NEXT X
                        Back to Red
280 GOSUB 1000
290 PRINT "     IGNORE THIS REWIND"
300 PRINT "        INSTRUCTION"
                        Open the last file
310 OPEN #N+1:"CS1",OUTPUT,INTERNAL,FIXED 192
                        Send Data
320 FOR X=2 TO N+1
330 PRINT #X: A(X-1)
340 NEXT X
                        Close Files
350 CLOSE #2
360 GOSUB 1100
370 CALL CLEAR
380 FOR X=3 TO N+1
390 CLOSE #X
400 NEXT X
410 STOP
```

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A similar routine for reading the files, and finally printing the contents, is:

```
500 GOSUB 1000
510 PRINT "  FOR INSTRUCTIONS IN BLACK"
520 PRINT "     JUST PRESS ""ENTER"""
530 FOR X=1 TO 2000
540 NEXT X
550 OPEN #1:"CS1",INPUT,INTERNAL,FIXED
560 INPUT #1: N
570 CLOSE #1
580 GOSUB 1100
590 FOR X=2 TO N
600 OPEN # X:"CS1",INPUT,INTERNAL,FIXED 192
610 CALL CLEAR
620 NEXT X
630 GOSUB 1000
640 PRINT "     IGNORE THIS REWIND"
650 PRINT "        INSTRUCTION"
660 OPEN # N+1:"CS1",INPUT,INTERNAL,FIXED 192
670 FOR X=2 TO N+1
680 INPUT #X: A(X-1)
690 NEXT X
700 CLOSE #2
710 GOSUB 1100
720 CALL CLEAR
730 FOR X=3 TO N+1
740 CLOSE # X
750 NEXT X
760 FOR X=1 TO N
770 PRINT A(X);
780 NEXT X
790 STOP
```

The Subroutines are used to set up red printing, and return to black.

```
1000 CALL CLEAR
1010 Y=9
1020 GOSUB 1200
1030 RETURN
1040 STOP

1100 CALL CLEAR
1110 Y=2
1120 GOSUB 1200
1130 RETURN
1140 STOP

1200 FOR X=1 TO 12
1210 CALL COLOR(X,Y,1)
1220 NEXT X
1230 RETURN
1240 END
```

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No. 019 TITLE : CHARACTER CRUNCH by D. Swinburne

```
10 REM   CHARACTER CRUNCH
20 SC=0
30 M=SC
40 CALL INSTRUC
50 CALL CLEAR
60 RANDOMIZE
70 CALL SCREEN(10)
80 CALL MAGNIFY(2)
90 P=34
100 SC=0
110 TI=30
120 F=100
130 CALL SPRITE(#1,64,16,100,100,#2,64,2,150,150)
140 CALL MOTION(#1,RND*F-50,RND*F-50)
150 IF SC=15 THEN F=127
160 CALL JOYST(1,X,Y):: CALL MOTION(#2,-Y*10,X*10)
170 TI=TI-1
180 DISPLAY AT(1,2):"SCORE=";SC
190 DISPLAY AT(1,15):"TIME=";TI
200 CALL SOUND(50,262,0)
210 DISPLAY AT(2,10):"HI-SCORE=";M
220 IF TI=0 THEN 320
230 CALL COINC(#1,#2,20,E)
240 IF E=-1 THEN 260
250 GOTO 140
260 P=P+1
270 CALL PATTERN(#1,P, 2,P)
280 CALL SOUND(200,-2,0)
290 TI=30
300 SC=SC+1
310 GOTO 140
320 CALL DELSPRITE(ALL)
330 DISPLAY AT(12,6):"G A M E  O V E R" :: DISPLAY
    AT (14,1):"PRESS BUTTON TO PLAY AGAIN"
340 FOR Z=250 TO 110 STEP -10
350 CALL SOUND(-99,Z,0)
360 NEXT Z
370 M=MAX(SC,M)
380 CALL KEY(1,K,S):: IF K=18 THEN 50
390 GOTO 380
400 GOTO 400
410 SUB INSTRUC
420 CALL CLEAR
430 CALL SCREEN(16)
440 DISPLAY AT(1,6):"CHARACTER CRUNCH"
450 DISPLAY AT(2,6):"================"
460 DISPLAY AT(5,3):"YOU HAVE TO CATCH THE WHITE
    CHARACTER WITH YOUR BLACK CHARACTER"
470 DISPLAY AT(10,3):"JOYSTICKS REQUIRED"
475 DISPLAY AT(12,3):"PRESS BUTTON TO START"
480 CALL KEY(1,K,S)
490 IF K=18 THEN 500 ELSE 480
500 SUBEND
```

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No. 020 TITLE : FORBIDDEN FRUIT AND THE SNAKE by Brian Garrod

```
 10 CALL CLEAR
 20 SC=0
 30 INPUT "SKILL LEVEL (1 TO 3)":LVL
 40 IF (LVL<1)+(LVL>3) THEN 30
 50 LET X=17
 60 LET Y=12
 70 CALL SCREEN(4)
 80 CALL CLEAR
 90 CALL CHAR(96,"C07C3C7CFEFEF103")
100 CALL CHAR(104,"81423C3C3C3C2481")
110 CALL CHAR(112,"E143251818A4C21F")
120 CALL CHAR(120,"FFFFFFFFFFFFFFFF")
130 CALL COLOR(9,14,1)
140 CALL COLOR(10,2,11)
150 CALL COLOR(11,5,1)
160 CALL HCHAR(1,1,120,32)
170 CALL HCHAR(24,1,120,32)
180 CALL VCHAR(1,1,120,24)
190 CALL VCHAR(1,31,120,24)
200 FOR I=1 TO LVL
210 RANDOMIZE
220 LET R=INT(24*RND)+5
230 CALL GCHAR(3,R-1,E)
240 IF E=120 THEN 210
250 CALL GCHAR(3,R+1,E)
260 IF E=120 THEN 210
270 IF (R=16)+(R=17)+(R=18) THEN 210
280 CALL VCHAR(1,R,120,24)
290 CALL VCHAR(10,R,127,5)
300 NEXT I
310 FOR I=1 TO (LVL*5)
320 RANDOMIZE
330 LET O=INT(27*RND)+3
340 LET P=INT(21*RND)+2
350 CALL GCHAR(P,O,Q)
360 IF (Q=120)+(Q=96) THEN 320
370 IF (O=16)*(P=12) THEN 320
380 IF (O=17)*(P=12) THEN 320
390 IF (O=18)*(P=12) THEN 320
400 CALL HCHAR(P,O,96,1)
410 NEXT I
420 FOR I=1 TO (LVL*5)
430 RANDOMIZE
440 LET F=INT(27*RND)+3
450 LET G=INT(21*RND)+2
460 CALL GCHAR(G,F,H)
470 IF (H=120)+(H=96)+(H=112) THEN 430
480 IF (F=16)*(G=12) THEN 430
490 IF (F=17)*(G=12) THEN 430
500 IF (F=18)*(G=12) THEN 430
510 CALL HCHAR(G,F,112,1)
520 NEXT I
530 RANDOMIZE
540 LET M=INT(27*RND)+3
550 LET N=INT(21*RND)+2
560 CALL GCHAR(N,M,L)
570 IF (L=120)+(L=96)+(L=112) THEN 530
580 IF (M=16)*(N=12) THEN 530
590 IF (M=17)*(N=12) THEN 530
600 CALL HCHAR(N,M,104,1)
610 CALL KEY(0,K,S)
620 IF S=0 THEN 610
630 CALL HCHAR(12,16,42,1)
640 CALL HCHAR(12,17,42,1)
650 X=X+1
660 GOSUB 940
670 CALL HCHAR(Y,X,42,1)
680 GOSUB 850
690 GOTO 650
700 LET X=X-1
710 GOSUB 940
720 CALL HCHAR(Y,X,42,1)
730 GOSUB 850
740 GOTO 700
750 Y=Y-1
760 GOSUB 940
770 CALL HCHAR(Y,X,42,1 )
780 GOSUB 850
790 GOTO 750
800 Y=Y+1
810 GOSUB 940
820 CALL HCHAR(Y,X,42,1)
830 GOSUB 850
840 GOTO 800
850 CALL KEY(0,K,S)
860 CALL SOUND(10,-4,0)
870 IF S=0 THEN 880 ELSE 890
880 RETURN
890 IF K=68 THEN 650
900 IF K=83 THEN 700
910 IF K=69 THEN 750
920 IF K=88 THEN 800
930 RETURN
940 CALL GCHAR(Y,X,T)
950 IF (T=127)+(T=32) THEN 960
    ELSE 970
960 RETURN
970 IF T=96 THEN 1030
980 IF T=120 THEN 1060
990 IF T=112 THEN 1060
1000 IF T=104 THEN 1200
1010 IF T=42 THEN 1060
1020 RETURN
1030 CALL SOUND(10,1000,0)
1040 SC=SC+1
1050 RETURN
1060 CALL CLEAR
1070 CALL SOUND(500,-6,0)
1080 PRINT ::::::::::::
1090 PRINT "YOU'VE JUST SMASHED
     YOUR HEAD ON"
1100 PRINT "AN OBSTACLE - YOU LOSE"
1110 PRINT "SCORE : ";SC
1120 PRINT ::::::::::::
1130 GOTO 1160
1140 REM
1150 REM
1160 PRINT "ANOTHER GAME? - PRESS
     ANY KEY"
1170 CALL KEY(0,K,S)
1180 IF S=0 THEN 1170
1190 GOTO 20
1200 LET LVL=LVL+(0.2)
1210 IF LVL>3 THEN 1220 ELSE 50
1220 LET LVL=3
1230 GOTO 50
```

INSTRUCTIONS :

Use the cursor keys to guide the snake around the walled garden making sure not to run into the walls or hit any obstacles (blue crosses). The object is to eat as much forbidden fruit as possible - until either the fruit or your nerve runs out, then you must head for the drain (yellow and black symbol) through which you can go to the next, harder garden.
The snake cannot run into itself nor turn back onto itself - so plan the route carefully.
Higher skill levels have more obstacles and more fruit .

An even harder game can be played by adjusting the skill levels possible (lines 30,40,1210,1220), by increasing the amount of obstacles (line 420), by decreasing the number of fruit (line 310) or by more than one of these methods !

10-690	Screen set up
700-930	Movement
940-1020	Eat fruit / hit obstacle / reach drain ?
1030-1050	Eat fruit
1060-1190	Hit obstacle - Lose
1200-1230	Down drain - next level