PRIVATE

ATARI ENIGMA

magazine.

JULY/AUGUST
1985

ISSUE 1
An I.E.U.G publication

Up to date **News.**

Latest Software **reviews.**

examined: **Ports.**

Readers **PROGRAMS**

Graphics: **CHANNELS** and more...

BY ARRANGEMENT

Editorial

Welcome to the very first issue of PRIVATE ENTERPRISE MAGAZINE, the user magazine that brings Enterprise owners out of the dark ages.

Having got this far you cannot fail to have noticed the message plastered across our front cover "No longer alone". A bit corny, we do admit, but it does sum up what The Independent Enterprise User Group is all about- meeting other users, hearing about the latest news, and realising you are one of many users who feel left out. Uniting is the only answer.

Many of you will know how our first issue has been delayed by the letter we sent out on the 13th of last month. The reason was that we greatly under-estimated the amount of work that is needed to produce a quality user magazine,and decided not to take any short cuts in order to get the magazine out on the date we had originally set. Having said that, we do believe that it can be improved both in Design and content. (ideas on a postcard please!) If any of you feel up to writing for us we would be very grateful, on any subject from articles and programs, to running and controlling a power station.

Having already apologised for the delay, may we apologise for informing early members that there would be an exclusive interview with Marketing Director, Mike Shirley. , when in fact there isn't. This was mainly due to extra work load put upon him prior to the launch of the 128. However, we do hope to have it in our second issue which will be available before the middle ofSeptember (if everything goes to plan.)

We would now like to turn to the subject on everyone's lips, that of software (or the lack of it).We feel we must inform you that although things look pretty bleak at the moment, Enterprise are investing heavily to get out of the 'catch 22' situation, by commissioning many software houses to produce a variety of Business, games, educational and utility software for the machines.

We look forward to hearing and meeting you in the not too distant future.

PRIVATE ENTERPRISE magazine. Jul/Aug 1985

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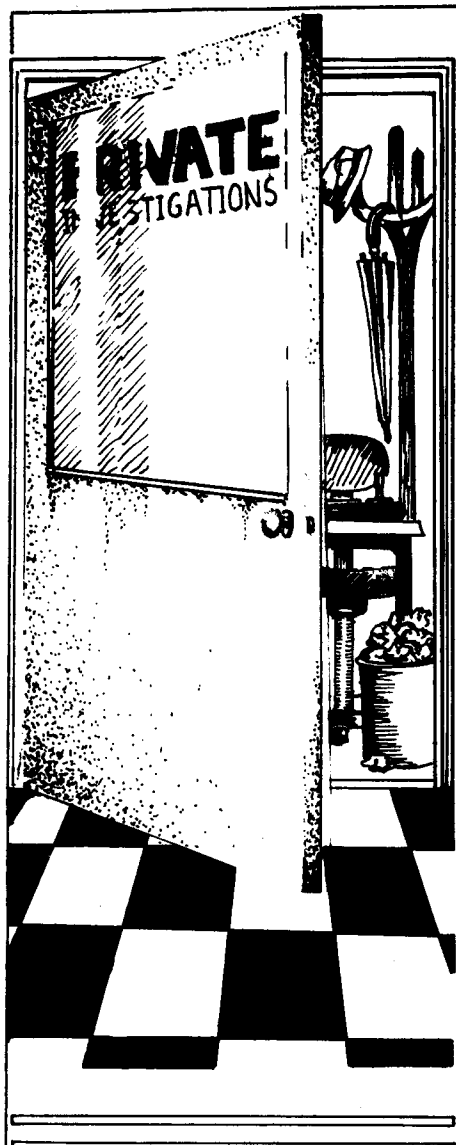
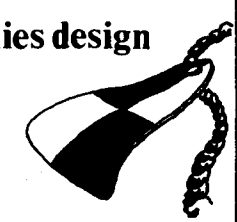
ISSUE 1

An Independent Enterprise User Group Publication. Created and produced by Mark Lissak and Tim Box. With contributions from Neil Blaber, Gary Thomson, Dave Race. With thanks to all who helped in the production of this magazine.



Enterprise flies design centre kite.



The 20 th of May not only saw the launch of the Enterprise 128, but saw the day it was announced that the machine had been selected for the Design Centre, an accolade only given to three other computers, the ZX81 the SPECTRUM and the BBC. It is on display at the Haymarket in the West End of London, showing it's metamorphosis, from first grey wooden flaking model and drawings to todays finished 128k machine.

The 64's Big Brother launched in London. (attended by Tim Box.)

The 20th of May was a big day for Enterprise for it was the day they launched the 128k machine. The venue for this historic day was the conference rooms at the design centre (well at least I thought it was a great day mind you after all that champagne I was drinking im not sure I was thinking at all).

Upon arriving I was greeted by a very lovely lady from the Good Relations Consumer LTD and offered some of the afore said champagne. Then with glass in hand I wandered around the conference rooms watching the arrival of the 128k machines and mingling with the press. A little later we were summoned to a room where Mike Shirley gave a short speech out linning the basis of marketing strategyfor the 128 and 64k machines, which included advertising, software, retail support and peripherals.(more on these items later in the news section). Then we were shown a couple of videos. The first of which will be distributed to all the outlets selling the Enterprise. It points out 8 important features of the machine that make it stand out from the rest of the competition. The second video was of the TV advert featuring the voice of Max Headroom and alot of OBSOLETE looking computers.A short speech later I was mixing with the press again and that motley lot of Enterprise staff. No I should'nt call them that-they're a great bunch really. Some names you should remember are Steve Groves, head of technical support and Keith Elliott of head of software and our much quoted friend Mike Shirly, Marketing Director. Any way,less of this chit chat and back to the serious business of the launch. speaking to a few of the press brought favourable comments about the machine although they were a little w'ary about the growth of the machine being stunted by the lack of software at the the moment. I must say I agreed with them until speaking with Keith Elliott about the response from his ad. in Popular Computing Weekly, the one that said can you convert this from this to this showing super pipeline 2 a commodore 64 and the good old Enterprise 64. Very enthusiastically he told me about large numbers of calls from both programers and software houses alike, interested in doing conversions. He also told me of programmers raving about the possibility of producing some really excitting games on the machine. This kind of response from programers I my self have had although Ive not spoken to alot of pepole they are generally very pleased with the machines capabilities even if there are a few bugs in the operating system.

Filled with confidence I took a look at the newly launched 128's. Visually there is not much difference beween the 64 and the 128k machines except that the joystick is now black and the new sticker proclaiming its vast 128k memory. The biggest surprise about the new machine is the speed increase. Due to the memory allocation on the 64, the video processor takes control of the busline so it can read the video memory. This in turn stops the Z80 and so slows down the machine, but on the 128, the video processor does'nt want your page of memory and lets the Z80 zip along at 4 megahurtz until you want to write to the page used by the video processor, only then will the Z80 get interrupted so the end result is an on average 30% faster machine. Next I typed ver$ and up came 2.1 EXOS. This new version has had most of the bugs that were

News Desk

in the 2.0 version removed. The next thing you will notice is the amount of memory free to the user 113k! Thats better than any other machine even the QL.

Time was running out but I did get to see a few Demonstration programmes. One was of the Demo going out with the new machines. It showed the view you would get from a shuttle flying in the user port and over various components zooming in on the magor chips, demonstrating the capabilities of each in turn. Some of the pictures drawn are very good and the really amazing thing about this program is that it was written in basic. Also on display was the Sprite Editor By Britten software. I can't say how it performed because there were no instructions lying about but it looked extremely good. Cyrus chess was there, It is claimed to be able to beat all other chess programs about including Colossus and Cp super chess 3. But the most Impressive demonstration of the machine was the prerelease version of Star Strike. I have seen this version running on the 64 and its on par with the spectrum version, but on the 128 with it's speed increase, it trounces any other game of this type with its fast smooth graphics. Now my time had run out and I had to leave but I went with the feeling of great excitement and confidence that Enterprise had launched a winner.

Enterprise signs big new distribution deal.

A major step in distribution has been made for Enterprise, by the signing up of Terry Blood Distribution LTD. This adds to their deals with Zappo and Spectrum groups shops who in turn have 1200 dealer outlets. Joe Woods T.B.D's sales and marketing director enthusiastically said of the new contract "We have be looking at Enterprise for some months and I believe now is just the right time for us to come to terms with them. The new 128 will provide momentum for a major drive towards the Christmas selling season "

I think Enterprise has a great future. The machines are incredibly reliable and the support package that they have put together in terms of advertising and PR is exceptional. It is a pleasure to be dealing with a company that is offering realistic margins at a good price."

Aiming for Lowest return rates in the business

Enterprise is the name,reliability is our aim..... Thats the message from Entreprise at the moment. Now how many of you out there have bought a computer only to get it home and find that it didn't work, a fair number I should imagine. Now Enterprise is aiming for that to be a thing of the past with their range of products. They started of with the aim to keep the return rate down to 5% and claim to have kept to that target. Now there after 3%! Mike Shirley of Enterprise Computers stated "retailers want the same quality that the get from the consumer electronics manufacturers. It's disgraceful that the home computer industry has be able to get away with return rates of 30% and more". Word has it that a £50,000 machine has been developed to test every computer before it leaves the factory a lot of money you might think, well just imagine the cost of repairing 30% of the machines that are made, it looks like Enterprise have got their heads screwed on straight with this issue.

Peripherals not ignored

Enterprise has recently launched a range of peripherals for both the 64 and the 128k machines.They are: (1) A colour monitor, capable of showing all the Enterprises 256 colours. Code named ECM1, it supports a din socket at the rear with which you can connect up the machine to a stereo amplifier. Also built in is a mono amplifier and speaker with volume control, brightness and illuminated on/of switch on the front panel, priced at £349.95.(2) A dot matrix printer code named EP80+ capable of printing up to 100 cps with fonts ranging from normal to italic withthe capability of down loading user defined characters. Print types available are are emphasized, enlarged, condensed subscript superscripted and underlining. Friction and adjustable sprocket feed come as standard with the machine .Price is £239.95. Included with both the monitor and the printer are the appropriate leads to connect them to your machine.(3) A joystick adapter. The Enterprise has two joystick ports but you will have noticed that they are not Atari compatible so Enterprise had to make an adapter to connect the two together; they are on sale for £9.95 each.

In the pipe line is a disk controller. You might remember in previous ads. seeing their own brand twin disk units, These were to sell for around the £600 mark but Cumana are selling the same size disks for around £500 so the decision has been made to manufacture just a disk controller. This means you can use any 5 1/4 or 3 1/2 Shugart compatible drives (the type used on the beebs). They will be on display about the PCW show time along with the base unit.

News Desk

A soft glimmer of hope

Software is a sensitive subject at the moment, but a ray of light is shining at the end of the rainbow. The light I'm referring to is the news of many new titles soon to be released by Entersoft the software arm of Enterprise.

A spokesman for the company said " Since the launch of the Enterprise 128 and the start of the TV advertising campaign, Enterprise is being taken very seriously as a contender in the computer market place." He also went on to mention these titles and companies currently working on the machine.

OCEAN; Daley Thompsons Decathlon
Match Day
Frankie Goes To Hollywood

US GOLD; Raid
Beach Head
Dambusters

TASKSET ; Super Pipeline II

MASTERTRONIC; Finders Keepers

BUBBLE BUS; Wizards Lair

ELITE; Frank Bruno's Boxing
Airwolf

REAL TIME; Starstrike

DREAM SOFTWARE; Machine Code For Beginners

I-S; Forth
Lisp
Cyrus Chess II
Basic To Basic

BITTERNE SOFTWARE; Sprite Editor

HI-SOFT; Dev Pack
Pascal

both Hi-soft and Realtime claim to have produced their best versions of Devpac and Starstrike respectively, and in case you're wondering what's happened to 'A view to a Kill' Domark are working very hard to make this version stand out above Spectrum and Commodore versions, though they say it may take a little longer, it should be worth waiting for.

Also games such as, Jacks House of cards, Hypersports and software houses like Softek and Alligator were discussed. These companies will soon be joined by other big software houses from here and abroad. The total number of programs available by September is expected to exceed ninety.

Two new titles emerge

Enterprise last week (June 28th) announced details of two new games titles to be launched very shortly. The first of these is supposedly immediately available and sounds a little reminiscent of the Spectrum game,'Skool daze'. Called 'Beatcha' Its a 'fun packed' game where a pupil at a familiar sounding 'Range Hill' comprehensive school attemps to avoid the teachers by negotiating a maze of classrooms to collect keys in order to escape from the main door (My god! a psychopathic door, help!) He starts with 26 lives and gains an extra life for each key found.

The second game (briefly mentioned earlier) will be available around mid July and is a M/Miner type game called Jacks House of Cards. In this game Jack's aim is to win the love of the Queen of Hearts, but he can only do this by collecting all the missing aces scattered round the House of Cards. The many hazards to negotiate include electric force fields, crumbling platforms, crushers and monsters. There are 16 screens to battle through and points are scored for each card collected. Both Beatcha and Jacks House of Cards will be compatible with the 64 and 128 machines. (we hope Enterprise can keep to these dates and restore a little confidence amongst owners.)

STOP PRESS

The very latest news on hardware upgrades and extensions have been made available to us today, only one day before this issue goes to print. The first will be a great relief to all those who bought a 64k machine when it was priced £249.95inc (that includes us!) and that is that the ram upgrade will be available in about a months time, and will be available at cost or very close to cost price. The best news of all is that the price will not only include a ram upgrade, but a rom upgrade to the 2.1 Exos. Well done Enterprise.

The second is very good news to all those eagerly awaiting Enterprises Disk Controller (if you remember their own brand was dropped, as it was thought that there was already a number of low cost drives that could do the job.) The system will include a flexible operating system called ENTER/DOS. This will operate in the same user friendly maner as the tape system we are used to.

CP/M (TM Digital Research) programs can also be run under this operating system, giving access to a vast range of available software. The operating system is also file compatible with MS/DOS (TM Microsoft). allowing transfer of data between the Enterprise popular 16-bit machines. The controller is expected to appear soon after its unveiling at PCW.

And there's more, yes. The long awaited base unit will arrive in the last quarter of this year, capable of handling six extensions such as the new ram cards which will be available a little before this.

PRIVATE Correspondence.

gossip, outrage, it's your page.

USER GROUPS. A pirates haven?

Do user groups fly the skull & crossbones ? Are WE going down the same avenue? Are you a 'Jolly Roger'? This week along with many inquiries about upgrades, I received the following letter. It set me thinking on whether user groups were a benefit or a liability to the industry, what do you think? (more about this delicate issue next time)

Being our first issue , as you can imagine we haven't had alot of feedback. Perhaps you could state your opinion on illegal copying, or absolutely anything else on your mind and provided it isn't too obscene, we'll print it. I can't stress how important communication between us is. Without this page theres no action or reaction, no change, no fun. Get down and write to us now. Whats your major quarm ?, Software?, Enterprise computers?, Us?

Private Pirate.

As I am very keen on software, I feel that the club would be an excellent way of swapping it. If all the members could pool the software to you, then when a game is wanted, a member could send you the necessary postage etc and get his game, or, a small extra fee could be paid to contribute toward buying a new one. If twenty people paid fifty pence each, the ten pounds could easily buy a new game. Home made software could also be swapped, but it would be a bit unfair to charge a fee for it.

Good luck with the club; you could be onto a good thing here.

ED. No comment, Let's have yours please.

Interlace Waste.

Have you worked out how to get 672 X 512 resolution yet ? I've worked out that you could go up to 672 X 450 with interlace, but I don't know where the extra 62 pixels come from. Illegal advertising perhaps?

Jonathan Binnie,
Edinburgh.

ED. The only way to get the maximum resolution is by defining your own video pages (see graphics channels). But, Alas there is not enough memory in the humble 64k machine to cope with it. This is a different story on the 128k.

An 'upgrade', what cost?

I've had my Enterprise since just before Christmas, and I fully agree with you that its not getting the support it deserves. The software situation is particularly bad, and I for one would like to see the promised advanced user guide!

But the biggest disappointment came this week with the 'announcement' that the Enterprise 128k will be £250, and the 64k dropped to £180. Ithink some pressure should be brought to bear on Enterprise to give their 'faithful followers' at least a cheap upgrade to the 128k standard.

Steve Loft,
Staffs

ED. As the vast majority of our members are in such a situation, I think some sort of statement is called for. As for software, things do seem to be picking up, (see 3rd news page)

Problems Assorted.

I have a few problems which I would be very grateful if you could help me with. Firstly, I am puzzled by the number on the right hand side of the status line. Could you tell me what this is for.

Secondly, how do you use the PRINT USING and IMAGE commands, and what do they do ?

Thirdly, is there any way you can check to see what character is at a certain character position without using the look function ?

Fourthly, how do you use the SET SCROLL up/down command ? What does it mean by n-32 and m-32 ? Every time i try to use it, I either get an INVALID ESCAPE SEQUENCE report or INVALID ROW TO SCROLL report. Could you fill me in on this command.

And finally, How do you use interlace in your own programs in order to get the high vertical screen resolution.

Howard Ingleby,
West Yorkshire.

ED. right you awkward person, here we go!
(1) The number you mentioned seems to have puzzled alot of people. To put it simply, it represents the number of characters you can type before you lose a line off the top of the editor page, which you probably won't be able to see as it may be off the top of the screen. If however the top line is on screen, the computer will scrub the bottom line so as not to affect your screen.
(2) PRINT USING and IMAGE are used to

format text and numbers. You give the computer either a line number containing an IMAGE string, or simply, give the string after the USING statement; the computer will then try to format the data to be printed to match the image string:-

```
eg. 100 IMAGE:-ff,fff.ff
    110 DO
    120   READ N
    130   PRINT USING 100:N
    140 LOOP
    150 DATA 100,2000,-34.5,99999.99
        ,9.9
    160 END

      would output:-
         100.00
       2,000.00
         -34.50
      99,999.99
           9.90
```

These commands are explained more completely in the manual pages 164 and 175.

(3) There is no way that I know of, of checking what characters are on the screen from within a program, unfortunately the LOOK command only works on graphics screens, where it returns the value of specific pixels.

(4) Firstly, this command will only work on text screens. Secondly, the command scrolls the specified block of screen up or down by one line. Once this is understood, the rest is easy. You simply substitute the line numbers that you want to scroll, plus 32, for n and m; lowest Number first.

eg To scroll lines 10 to 20 up one line use:-

```
SET SCROLL UP 42,52
```

Of course the block to be scrolled need not be on screen when the command is used.

(5) The easiest way I know of using the interlace driver from within a program is to put these 3 programs on tape. Firstly the program:- 100 RUN " ". Secondly the interlace driver, and finally your own program. What will happen when the tape is run is, the first program will load and run the interlace driver, this will set up the machine for interlace mode but will not affect the program already in memory, and will infact re-run that program, thereby loading and running your program. Remember that the interlace screen uses the same plotting co-ordinates as the normal screen, so you can develop any graphics on the easier to read non-interlaced screen. Phew!

What really bugs me IS-BASIC!

Below is a list of minor bugs that I have found so far in IS-BASIC; this is almost certainly not exhaustive. I feel I should point out that I am not knocking the computer's basic on the grounds that it is bug ridden, I have yet to see a bug free language, but it is a little disheartening to see simple faults on a machine that has taken so long to appear.

Having said that, IS-BASIC is probably the most complete form of basic to appear yet.

Bug line up:-

(1) RETRY is not allowed in an if statement. (this is not mentioned in the manual)

(2) Use of PRINT or LET with INF+INF form with an error trapped or trapping statement causes corruption of basic data, the computer behaves as expected in all other situations

(3) The standard text display does not handle 40 characters across for the purpose of PRINT AT, eg. PRINT AT 3,39 causes the print to occur at what would be expected to be 4,2; this is caused by the video editor, and does not occur on user defined text screens.

(4) There is an error in the COS function so that COS(PI/2) is given as 1E-11.

(5) * is ignored in immediate mode if at the beginning of a line, not so much a bug as a peculiarity.

(6) There seems to be some problem in using goto. Don't laugh !, it has it's uses; From within error trapped or trapping routines, if GOTO is used to leave one of these routines, it has a habit of crashing.

(7) In case anyone hasn't noticed the remote sockets are reversed. I don't know if this has been solved on the new machines (who said you only get software bugs ?)

(8) There is a bug with the TIMER, causing inaccuracies in timing with this function, up to a 25% deviation.

(9) The look command only works on graphics screens, although it can be used in immediate mode to return the ascii value of the character at the current cursor position. Suggestions on a postcard to.....

(10) ALLOCATE -n clears the current program. there is also a far more serious bug within the allocate function which stops it from working at all after the first time it is called.

(11) Despite being able to create a screen 255 lines deep, you can only scroll the top 223 lines.

(12) If a screen too large for the memory to cope with is created, then instead of producing an error message, it crashes.

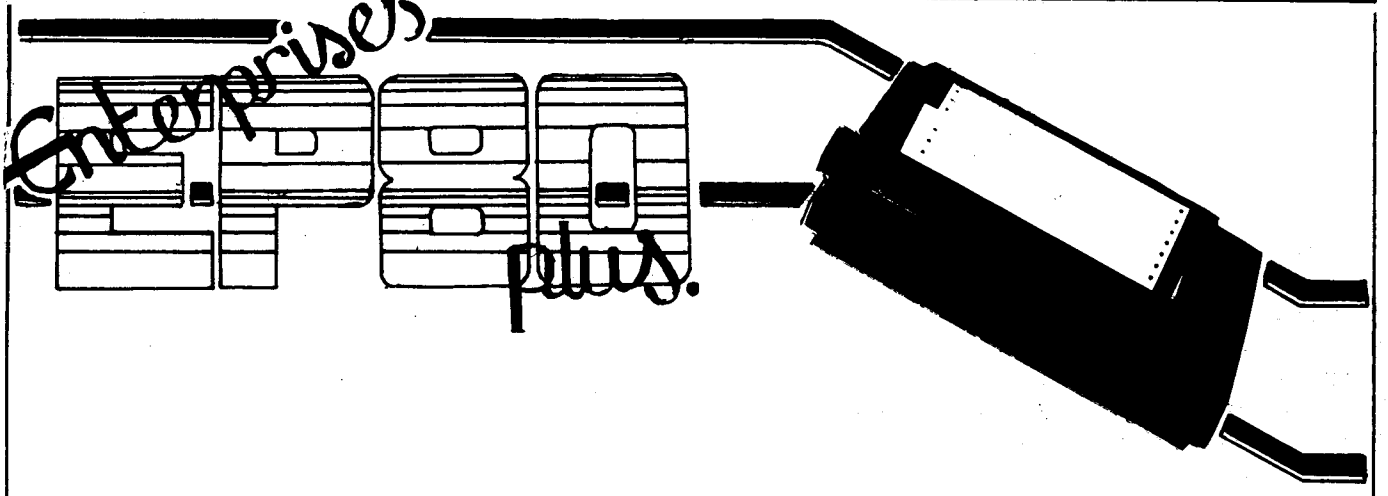
(13) VAL (STR$(A(N,M))(X:Y)) doesn't work.

Dave Race,
Oxford.

ED. If we get anymore we'll have to run a new page!! perhaps we will?

This page is open to you NOW and for the next two months, please make use of it. We publish all letters of any importance, we are not limited by space.

A long hard look



The first peripheral on most people's shopping list is very likely to be a printer and,to be honest, no Enterprise owner should be without one. How else could you show off your literary master piece or debug that long program you've been working on all week. There are a very large number of printers on the market costing anything from below two hundred to over two thousand pounds, all of which are compatible owing to the Enterprise centronics port. The printer I'm looking at today is the EP80+, Enterprise's own brand printer. The name EP80+ might sound similar to Mannesmanntallys offering, the "MT80+", this is because they are one and the same. The only difference is the colour of the case, the EP80+ having the same colour scheme as the Enterprise.

Included in its sturdy carriage box is a ribbon cartridge, operating manual, paper guide wire rack and the cable to connect the Enterprise to the printer's centronics port. First impressions of the machine are that it is good looker and has a fairly robust feel to it, so it should stand up to a fair bashing without falling apart.

Once all the parts are assembled, the shipping screws removed, and the power lead plugged into the mains, the paper can be inserted. A large tinted plastic cover sits on top of the paper feed and this piece is hinged at the rear,hooking into slots on the main casing. Once the cover has been lifted out of the way, the paper feed sprockets can be seen. These are adjustable and will take anything from 4 1/2 to 10 inch paper either plain or sprocket form type. Inserting the paper is a easy process, and the only time it gave trouble was if the paper was torn at the edges. The front panel holds three mode buttons and four warning lights. The buttons are Form Feed, Line Feed and online. The first, as you would imagine, is for auto feeding paper through,a sheet length at at time. The line feed button feeds paper through one line at a time and the online button stops the flow of information from the computer to the printer, so halting printing. The lights are abbreviated and are marked; PWR to indicate power on, OL to show that the printer is on line, ,RD indicating that it is ready to accept data, and PO that it is about to run out of paper (when this happens a buzzer sounds and the printer goes off line).

Printing from basic presented no trouble as the Enterprise supports LPRINT and various other commands, to send data to the printer. Controlling print is also very easy with the control codes almost identical to that of the EPSON'S. LPRINT chr$(27); usually forms the basis for most control codes so that the printer knows to expect control data rather than text etc. Then with a combination of different characters, line spacings, tab spacings and character sets etc can be called and controlled.

Basic type fonts are normal, Pica, Elite, Italic, proportional, superscript and subscript. To these you can in most cases double strike, emphasize, condense and enlarge.You can even combine two or three together. Alternate character sets are U.S.A, FRENCH, DANISH, SWEDISH, ITALIAN, SPANISH, JAPANESe and graphical.

The printer can be made to default to these by setting the dip switches. These are hidden inside the machine, requiring several screws and the casing to be removed to gain access to them, so it's not a job you would want to do often. Other default settings obtainable by the dip switches are line spacing, columnlength, form length, zero slash and perforation skipping. A feature

A long hard look

of the machine, not that often seen on other machines, is the capability to down load user definable characters. Bit image graphics are another option of this machine,though this is quite common now on most printers.

The quality of the print is not up to NLQ but never the less it was of a high enough quality to be presentable for letters etc. Fig.1 is an example of the various print modes and quality available. When in full flight it is fairly noisy thoughnot deafening, a 60 db sound reducing kit is available. This was not available to me,but it should quieten the the machine down a fair bit. Also available is a 4K buffer,useful when printing long documents, freeing the machine to to the user long before the printer has finished printing.

Conclusion:

At £239 the machine represents good value for money. The nearest competitors in this price range being the Brother 1009 at £199 the Fastext 80 at £228, and the CPA-80 at £228. Though a little more expensive, it is faster and is certainly alot better looking than its competitors, its sleek looks matching those of the Enterprise. Also remember that included in this package is the printer lead normally priced at around £14.

FIG.1

PICA mode. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

ELITE mode. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

Condensed mode. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

Emphasized mode. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

Double strike mode. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

ELITE/double strike. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

Condensed/double strike mode. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

Emphasized/double strike. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

Enlarged mode. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

ELITE/enlarged mode. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

Condensed/enlarged mode. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

Emphasized/enlarged mode. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

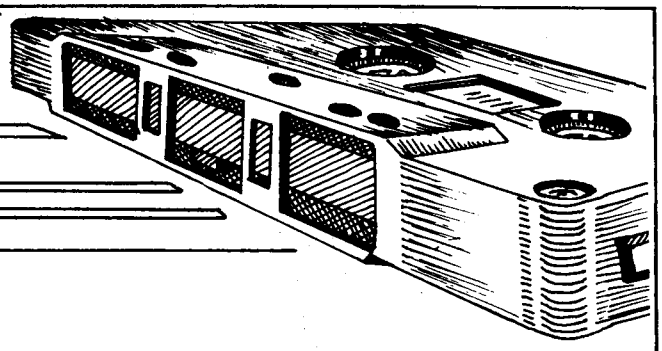
Double strike/enlarged mode. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

ELITE/double str/enlarged mode. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

Cond/double str/enlarged mode. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

Empha/double str/enlarged mode. ABCDEFGHIJKLMNOPQSRTUVWXYZ-Ø123456789+=~^!£$%&

Software Update



KEY TO RATINGS;

ARCADE and ANIMATED ADVENTURES

GAME CONTENT - Variety of actions / screens
PLAYABILITY - Ease of use, addictive quality
GRAPHICS - Quality and use of graphics related to machine
SOUND - Use of stereo and tune / noise originality.
VALUE FOR MONEY - Overall impression when compared with price.

ADVENTURES

GAME CONTENT - Design of plot / background. Puzzle ingenuity.
PRESENTATION - Atmosphere,graphics (if any), text / screen layout.
INTERACTION - Parser quality, editing facilities
VALUE FOR MONEY - Overall impression when compared with price.

PERCENTAGES

0 - 25 - Yuk, Bleah !
26- 50 - Bad to Mediocre
51- 75 - Average to Good
75-100 - Excellent to completely Brilliant

SOFTWARE UPDATE is an integral part of Private Enterprise, dedicated to the review of software currently available to the user. Although software availability for the Enterprise machines is becoming a very stale joke among its critics, we have managed to un-earth several of these elusive titles and got our review team to give them a good going over (in some cases a trampling) Their reactions follow.

It'll Bring out the Idi Amin in you.

NAME : DICTATOR
Producer : Entersoft
Category : Strategy
(Starter Software)
Price : £5.95

In this strategy game you play the part of the unscrupulous President of the banana republic of Ritimba. Your aim is to stay in power for as long as possible - this means keeping the various factions (peasants, army, landowners and Secret Police) happy while holding the guerillas in check and diverting funds to your Swiss bank account. Failure to do this will result initially in assassination attempts by an unhappy group, or ultimately in revolution if the group joins with the guerillas or with another unhappy group.

Play takes place month by month - you have to deal with requests from individual groups after considering the consequences of your actions. Other decisions are made via a menu (most decisions can be made only once per game) such as increasing your popularity, raising cash etc. At various times during the month you can request a Secret Police report showing your popularity with the various factions, together with their strengths.

This is a fair version of a traditional computer game which is not particularly complex but is fun to play. It is written entirely in IS-Basic and is one of Entersoft's Starter Software series - this means you are allowed to break into the program and look at and modify the code, which is supposed to help the novice understand the rudiments of programming and some of the constructs of IS-Basic. However, the program is badly written and completely undocumented, thus defeating the Starter Software object by making the programming mechanisms almost impossible to comprehend !

COMMENTS :
GT. Simple but fun game lacking lasting interest. Pity you can't side with the guerilla forces !

NB. There doesn't seem to be an option to torture or imprison the composer of the National Anthem ! It's horrible ! Unfortunately there aren't enough different things that can happen to give this game much lasting appeal.

Software Update

Game Content	50%
Playability	65%
Graphics	50%
Sound	55%
Value For Money	40%

Is that the pink ?!

Name : STEVE DAVIS SNOOKER
Producer : CDS Sofware
Category : Arcade
Price : £8.95

This is a very realistic snooker simulation for two players (including long or short game options together with a single player practice option) . A point to make at this stage is that the version we tried was INCOMPATIBLE WITH THE 128K ENTERPRISE although it worked perfectly well on the 64K machine. It is unclear whether the problem lies with the program or with the Enterprise, so if you are a 128K-owning snooker fan and CAN run Steve Davis Snooker please write and let us know before we launch a nationwide campaign in order to resolve this problem.

OK then - let's get back to the game. For those who have seen the Spectrum or Amstrad versions of this game, the versions are almost identical. for those yet to chalk up their digital cues, this is the best snooker simulation currently in existence for a microcomputer. Features include a retake-last-shot option (even in the two player game !) and forcing a fouling player to play on. Taking a shot involves positioning a cursor in order to determine the direction of the shot, altering the power of the shot (this is indicated by a bar running along the bottom of the screen), and spinning the cue ball (which is done by positioning a cursor on a representation of the cue ball in order to show the point of contact of the cue).

On the cassette inlay the control keys are given as O,P,Q,A and Enter - ignore this ! The on-board joystick controls cursor movement with the space bar being used to execute instructions - rather an oversight on CDS's part !

COMMENTS :
GT. The game is fine to play when using a monitor, but on a normal television it is difficult to distinguish the cue ball from the pink and the green ball from the yellow - the brown ball is also rather dubious.

NB. My initial impression after the setup of the table (which on the first game after loading is painfully slow) was that the pockets seemed exceptionally large when compared to the size of the balls - however this didn't seem to improve my scores at all ! I was very impressed with the ball movement and ricochets - very realistic. Pricewise this is still very expensive even if it is the best snooker simulation available.

Game Content	70%
Playability	70%
Graphics	60%
Sound	40%
Value For Money	55%

Beaten, FIVE IN A ROW

Name : FIVE IN A ROW
Producer : Entersoft
Category : Strategy
(Starter Software)
Price : £5.95

This is another game which is INCOMPATIBLE WITH THE 128K ENTERPRISE ! The game involves placing markers on a 15 x 15 grid in order to get five markers in a vertical, horizontal or diagonal line. Play can either be between two players or against the computer at one of six levels (we couldn't tell the difference

between levels - they're all impossible to beat !). There are facilities for taking back moves (useful for cheating purposes when you're playing the computer) and to swap sides with the computer (also useful if you're taking a hammering).

The cassette inlay claims this to be another of the Starter Software series - this is by far the worst of the series so far for learning purposes as it is totally undocumented and comprises many machine code routines which are totally incomprehensible to the beginner.

COMMENTS :
GT. I was comprehensively thrashed on all levels (even after cheating !)

NB. Unbelievably expensive for what amounts to a very simple game (although quite playable and well implemented) which is totally useless for programming tutorial purposes.

Game Content	35%
Playability	70%
Graphics	30%
Sound	none
Value For Money	20%

Still going strong

Name : Colossal Adventure
Producer : Level 9
Category : Adventure
Price : £9.95

This is the classic grandaddy of

Software Update

all text adventure games. Originally written for a mainframe it has been reproduced for the Enterprise by Level 9 Computing, with the addition of an extra 70 locations as an "end game".

You have been given a map containing the location of Colossal Cavern which is rumoured to contain untold wealth. You start the game standing outside a brick building and your initial task is to discover how to enter the caverns. Ultimately you must find all the treasures and return them to the building.

In comparison to some more recent adventures, Colossal appears fairly unsophisticated with input restricted to simple sentences and limited editor functions. However, this is more than compensated by the marvellous atmosphere generated by the brilliant location descriptions and the ingenious puzzles contained within the caves which have to be solved in order to get all the treasures. Unfortunately we cannot comment on the end game as neither of us has managed to get that far!

COMMENTS:

GT. Next on my shopping list will be Snowball from Level 9 (when they get round to releasing it). These are my two favourite adventures, simply great fun.

NB. Old but brilliant. I eagerly await the rest of Level 9's catalogue which they are busily converting for the Enterprise.

Presentation	90%
Interaction	60%
Game Content	80%
Value For Money	80%

Diamonds are forever

Name : Fantasia Diamond
Producer : Hewson Consultants
Category : Adventure
Price : £7.95

In this text + graphics adventure game, your quest is to retrieve a stolen family heirloom, the fabulous Fantasia Diamond and also to rescue Boris the Masterspy who, on a previous mission to find the diamond, was captured and thrown into the dungeons. An added dimension is the existence of other independent characters who bop around at random pretending they're going somewhere really important. The game takes place in REAL TIME - every 15 seconds the independent characters will perform an action regardless of whether you have or not.

The screen is split into two windows. The bottom four lines of the screen comprise the command input window, with the remainder showing either a graphic picture of the location or location description and computer generated messages. The first innovative use of an Enterprise feature is the command input window. This allows the use of thefull editor features, including the facility to scroll back in order to edit and re-execute previous commands. Also the function keys have been set to the most frequently used commands to cut down unneccessary typing. When a picture disappears, the underlying text has not been deleted, but merely scrolls up - hence recent messages can still be read.

The parser (command interpreter) understands abbreviations of as little as three letters as long as their is no ambiguity (this doesn't do much for readability but is a boon for the lazy typist!)

COMMENTS

NB. Amazing! A game which shows that the programmer has investigated the machine's capabilities before converting the code from the Spectrum.

GT. The graphics window is too large for the amount of detail in it. Apart from this minor quibble this is the best use of the Enterprise that I have seen to date.

Presentation	70%
Interaction	85%
Game Content	65%
Value For Money	75%

Meanwhile, chaos at London airport

Name : Heathrow A.T.C.
Producer : Hewson Consultants
Category : Simulation
Price : £7.95

This is a highly complex and detailed simulation of the workings of Heathrow Air Traffic Control. You are the controller and it is your job to land as many aircraft as possible in an allotted 30 minute period. There is a comprehensive instruction pamphlet included with the program, although pressing CONTROL and H will bring up the first of a series of online help screens which give an overview of the instructions together with command descriptions. There are eight levels at which Heathrow ATC can be played, ranging from pretty damn difficult to absolutely impossible! Each level brings in additional features to add to the airborne chaos you are already creating.

The screen shows a radar type picture of the Heathrow Airport and surrounding area. at the top of the screen is a radio communication

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window via which you issue commands to the aircraft and get feedback from them. Also displayed is in an information window giving details on the aircraft present on the radar display.

Commands are issued by single key entry together with numeric values in some cases. Once you learn enough to be able to play without constantly looking at the instruction pamphlet you will find them quite easy to use.

COMMENTS

GT. The Instruction pamphlet filled me with dread and foreboding, but after I found the "help" facility I actually made some progress. So far I have managed to crash 4 aircraft (what do you mean -thats not the the point of the exercise ?). This game take a LONG time to get into. Recommended for those with 5 or 6 hours to kill.

NB. What I want to know is who this bloke called Roger and why is he so popular? I was never cut out to be an Air Traffic Controller anyway and these airline captains are giving me an inferiority complex by asking for some other guy all the time so I think I'll hand in my notice and become a brush salesman instead! A comforting thought, however, is that you can organise multiple air crashes and other such atrocities - this adds excitement to what is otherwise a rather boring game.

Game Content	75%
Playability	45%
Graphics	50%
Sound	35%
Value For Money	55%

Attack of the medium sized blobs

→

Name : GAMES PACK 1
Supplier : Entersoft
Category : Arcade ?????
(Starter Software)
Price : £5.95

Games Pack 1 comprises two programming atrocities of unimaginable proportions - Eddie the Exterminator and Windsurfer - and is said by Entersoft to be "a mixture of novel games for old and young to test your wits and your reflexes". On the front of the cassette inlay is the word ARCADE. This is somewhat misleading - Arcade implies fast action, excitement and zapping, all of which are totally absent from either of these programs.

Eddie the Exterminator involves moving Eddie (a little blob) through 10 rooms in search of the Great Diamond of Esah, avoiding the guardian robots (medium-sized blobs) or destroying them by luring them onto mines (big blobs) which are scattered liberally about in each room. In Windsurfer you must guide your man through a rather overpopulated sea, avoiding inanimate patrol boats, ferocious rocks, dead submarines and speed(??)boats in order to reach an island (there are 10 altogether) and blow it up.

Both games are written in IS-Basic and are incredibly slow and unresponsive - pressing the STOP key (the best feature of either game) halts the program and invites you to examine and modify the code - unfortunately there is no documentation to let you know what is happening and the appalling structure of the programs rules out simple investigation - maybe this is the test of wits Entersoft mentioned !

COMMENTS :
GT. This was written by a REAL KLINGON !
(can anyone beat 13300 on Eddie the Exterminator?)

NB. If this was five pounds cheaper, and was publicised as being the two worst games ever written it would be a good laugh (I love the way bits of robot seem to disappear when they're close together). Unfortunately it is deadly serious and at £5.95 don't bother.

Game Content	15%
Playability	10%
Graphics	15%
Sound	5%
Value For Money	10%

COMMENT

Should Entersoft's "NON-STARTER SOFTWARE" carry a government health warning ?

Entersofts starter software series is an example of an excellent idea, bodged so badly that it should never have seen the light of day. Producing well written & documented IS-BASIC programs which make good use use of Enterprise features in order to demonstrate programming constructs to the novice in a way which a manual would never atain is a stroke of genius. However, the first three releases in the starter series are so unbelievably appalling that if a novice were to seriously examine the code it would do actual harm by implying that the terrible misuse of constructs is the correct way to program !

Comments are almost totally absent from any of the programs, and variable names in them bear no clue as to their use. As for construct misuse, there are jumps from the middle of loops, unnecessary IF...THEN tests on consecutive lines and mixed use of GOTO's, GOSUB's and DEF statements.

CHANNELS

One of the best features of the Enterprise when compared with its competitors is its graphics, but to make the most of them you have to know how to control the VIDEO PAGES. If you look in the manual all the information is there, but it is spread all over the place to such an extent that hunting through to find it all takes forever! and even then it is not explained clearly (typical manual style). Well,to save you the trouble of searching through I have done it for you, and with a few pictures and some text I hope to be able to explain it all in clear English.

GRAPHICS CHANNELS

The reason for having graphics channels is because the graphics chip (NICK) is so very flexible. On most other 'obsolete' skeletal computers, graphics pages are decided for you, and there isn't a sausage you can do about it,a case of like it or lump it. This approach to the machines graphics has two disadvantages 1. Your screen resolution is decided for you, ie if you want to display a high res screen,it's all high res, no in betweens (that is if you are lucky enough to have more than one screen res). 2. The memory.For example, if you want to display a screen of high res and some text, you have to use a whole screen for it, and that takes up a lot of memory. How ever,with the Enterprise, you can decide what res, what colour, what size, where you want it and, most importantly you can mix modes. Say for example you have the top half in high res and have the bottom in a memory saving text mode it soon becomes very clear just how much memory you can save. Fantastic you think! 'but how do I do it?', well, read on.....

RESOLUTION MODES

```
MODE 0 = 40 Column text page
MODE 1 = High resolution graphics page
MODE 2 = 80 Column text page
MODE 5 = Low resolution graphics page
MODE 15 = 'Attribute' graphics screen
```

COLOUR MODES

```
MODE 0 = 2 Colours
MODE 1 = 4 Colours
MODE 2 = 16 Colours
MODE 3 = 256 Colours
```

Start by imagining that a graphics channel is a sheet of paper, you can decide what kind of res it is, how many colours you want on it, how big it is and what part of it you want to see. With this in mind, we shall look at the way you would define and display a page.

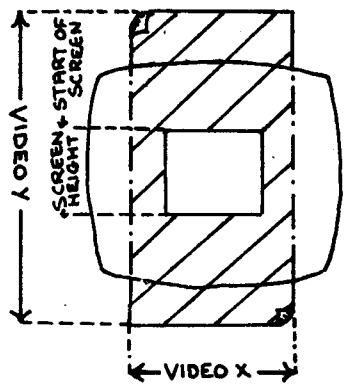
```
100  SET VIDEO MODE 1
110  SET VIDEO COLOUR 2
120  SET VIDEO X 20
130  SET VIDEO Y 10
140  OPEN £10:"VIDEO:"
150  DISPLAY £10: AT 1  FROM 1 TO 20
```

Line 100 tells the computer that you want make a page of high res graphics. The 1 denotes the type of graphics mode.
Line 110 tells it that you want to display 16 colours. Here again the number 2 means the code for the number of colours. See fig 1 for full list of modes and colour codes.
Line 120 says you want it to be 20 characters squares across. It can be anything from 2 to 42 squares wide.
Line 130 is the same as 120 but it is the number of character squares tall. From 1 to as much as 255 squares high.
Line 140 says 'I want my page called channel 10 and it is a VIDEO page.(as opposed to a channel for a tape recorder)'.The word OPEN means give me space in memory for my video page. When you close a channel you give memory space back to the computer.
Line 150 the first part of this line tells it to display on the screen my page called channel 10. The second part (and this is the interesting bit) says I want it to be displayed from screen character position 1 downwards and I want you to show my page from the first character to the twentieth. You could of course show the page from the third to the fourteenth, it is entirely up to you (see fig 2). But if you run it and fill it with colour you will see that the page is positioned in the middle of the screen, width way. There is I'm afraid no way of moving this about side ways or only displaying some of the width of your page,(from basic any way) This is a small disadvantage I'm sure you would agree when you compare what you you can do on a Spectum or Commodore (or should I say you can't do it on them). Just because you can't move it side ways

does not mean you cant move your viewing hole up and down. Let me tell you that it can, and with this function you can get some really spectacular effects, as you will note if you try the program at the bottom of this article.

Now to elaborate on these points. As you have seen in fig 1 there are 5 different modes to choose from but note that if you choose a graphics page, every increase in the colour number reduces the horizontal resolution by half,so you have to compromise over the resolution to the colour. When you display a page you will note that the space next to the border is changed to the border colour (see fig 3) .When opening a channel it can be numbered any thing from 0 to 254 but it is best not to open it to a channel that is already open, (ie. £104 as it aready used for tape reading and writing) If you choose a channel below 100 it will be closed when you run the program or any other task that clears all variables, but if you choose a channel above 100 it will stay open until you close it yourself, or, reset the computer.

When writing, drawing, etc. to a graphics page, you can can use all the graphics commands that you have become familiar with when using the default graphics screens. The only difference is that you have to state what channel you are writing to . fig 4 is a list of all the graphics commands and syntax for use with predefined graphics channels. Another advantage of making up your own video page(s) is that you can draw on it without it been seen until it is finished, then in an instant, display it in all its glory. The last fig. is a list of a few interesting things that can be discovered if you read the small print in the manual.



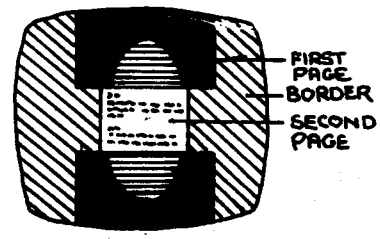


FIG.4

```
SET £CHAN: BEAM OFF/ON
SET £CHAN: BIAS COLOUR-CODE
SET £CHAN: BORDER COLOUR-CODE
SET £CHAN: CHARACTER N,A,B,C,D,E,F,G,
H,I
SET £CHAN: CURSOR COLOUR NUMBER
SET £CHAN: INK COLOUR NUMBER
SET £CHAN: LINE MODE
SET £CHAN: LINE STYLE
SET £CHAN: PALETTE A,B,C,D,E,F,G,H,I
SET £CHAN: PAPER: COLOUR COLOUR
NUMBER
SET £CHAN: SCROLL ON/OF
SET £CHAN: SCROLL UP/DOWN
PLOT £CHAN: X,Y
PLOT £CHAN: ELLIPSE X,Y
PLOT £CHAN: ANGLE expr
PLOT £CHAN: LEFT /RIGHT expr
PLOT £CHAN: PAINT
PRINT £CHAN, AT
LOOK £CHAN: AT X,Y:V
CLEAR £CHAN:
```

```
2 COLOUR Lores = 320 pixels wide
4 COLOUR Lores = 160 pixels wide
16 COLOUR Lores = 80 pixels wide
256 COLOUR Lores = 40 pixels wide

2 COLOUR Hires = 640 pixels wide
4 COLOUR Hires = 320 pixels wide
16 COLOUR Hires = 160 pixels wide
256 COLOUR Hires = 80 pixels wide
```

£101: Graphics page = 40,20 characters wide by high and is in colouur mode 1.
£101: Text Page page = 24,40 characters wide by high and is in colour mode 0.

If you open a graphics page and call it £101: all commands can be used with out stating the channel No. as it defaults to that channel.

When setting up a page, set the colour no to 12 or 5 colour and watch some
interesting effects.

Channel demonstration program

```
100 TEXT
110 PRINT "Please WAIT a moment"
120 SET STATUS OFF
130 SET VIDEO MODE 5
140 SET VIDEO COLOUR 0
150 SET VIDEO X 40
160 SET VIDEO Y 107
170 OPEN £101:"VIDEO:"
180 SET £101:PALETTE BLACK,WHITE
190 PLOT £101:(1279/2),(53*36),
200 PLOT £101:ELLIPSE(1278/2),((53*
    36)-1),
210 PLOT £101:PAINT
220 DO
230   FOR F=107 TO(107-24) STEP-1
240     DISPLAY £101:AT 1 FROM F TO
        107
250   NEXT
260   FOR F=106 TO 25 STEP-1
270     DISPLAY  £101:AT 1 FROM(F-
        24) TO F
280   NEXT
290   FOR F=2 TO 25
300     DISPLAY £101:AT F FROM 1 TO
        26-F
310   NEXT
320 LOOP
```

OUTSIDE CONNECTIONS

a regular feature of private enterprise. this issue-

As you will know doubt have noticed there are a number of interesting looking sockets running the along the rear of the Enterprise and although they look rather odd they are in fact fairly standard and are simple to make use of. Unfortunately the manual goes into little depth on these matters, I hope now to clear up some of the mysteries of peripherals, and examine how we can make use of them.

Taking the monitor socket first and working across the machine to the control ports .The monitor socket has infact facilities for three items :-

1 A colour monitor
2 A monochrome monitor
3 A stereo amplifier

The colour monitor you use should support an analogue input and is known as an R.G.B monitor. This is not the most common system but it is a better one than the TTL type (the more popular model). Using this, you would only be able to show 8 colours. This is because there are only two states that the red, blue and green signals can be, either on or off, making them more like binary signals. The maximum permutations from three bits being 8. R.G.B signals can be anything from 0 to 4 volts so increasing the number of alternatives almost infinitely, hence the ability to display the Enterprises 256 colours.

The monochrome monitor is not such a headache in that it only produces two signals. This produces an ideal display for 80 column word processing.

The stereo amplifier is of course a simple means of taking the sound out to your hi-fi etc turning those little 'plinks and blips' into ear shattering stereophonic 4 channel 8 octave ....'PLINKS and BLIPS.

Now that we have discussed what we can connect, how do we do it? The first thing you will notice about the sockets is that they are an extension of the main circuit board. This was, say Enterprise, because it was inexpensive and reliable (why don't they just say what they mean-'CHEAP'!).To connect this to your peripheral you'll need an edge connector socket and from this to your monitor plug, a suitable piece of cable, (multi core screened is recommended.) With all the pieces of equipment at hand including a soldering iron and crossed fingers, we can begin. Look at the pc board within the monitor port, You'll see thin strips of metal on the top and underneath. As you look into the socket (with ports facing you) the top row is called the B side and the bottom the A side, with numbering starting from the left to right (eg top left is B.1 and bottom left is A.1) This form of numbering applies to all ports.
For connections on your particular monitor, see the manual supplied with it.-

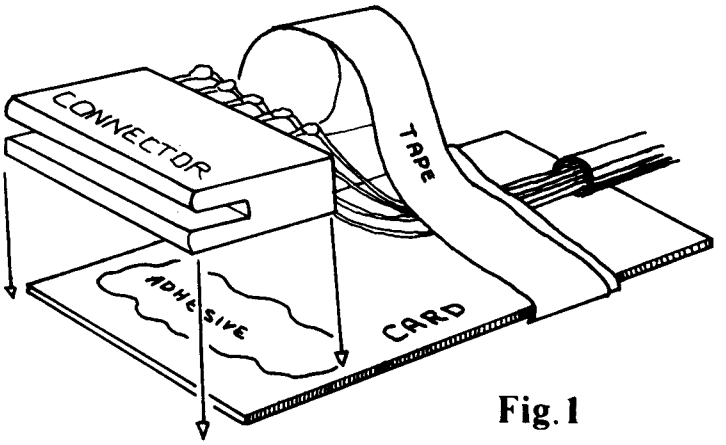


Fig.1

(if you have'nt thrown it away with the guarantee!)

Use screened cable.

A.1 is connected to the GREEN SIGNAL line
A.2 to Ov on the monitor either the colour or monochrome usually the out side braided wire
A.3 the MONOCHROME COMPOSITE line (usually the center one of the two).
A.4 is the HSYNC if you have one on your monitor.
A.5 is the VSYNC if you have one.
A.6 there is no metal strip here but the space it is still counted.
A.7 is the left half of the AUDIO SIGNAL.

B.1 there is no strip but again still counted.
B.2 Ov use it as the common for the audio lines
B.3 the BLUE SIGNAL line.
B.4 the RED SIGNAL line.
B.5 this is the sync line to your COLOUR MONITOR if you don't have the separate HSYNC or VSYNC lines.
B.6 MODE SWITCH (Peritel) dont worry about this it has nothing to do with us.
B.7 this is the other half of the AUDIO SIGNAL (the right side.)

Now that you have nopefully soldered all the pieces together in the right place, checking all connections and making sure there are no shorts, you are now left with the problem of remembering to put it in the right way up.To over come this problem Enterprise has made little blips on the socket wall, two on each side and one on the top, so that if you put the plug in up side down the lack of slot in the plug would prevent it from going in properly, but as we dont have proper plugs we have to come up with other ways of preventing this, i'm sure you'll come up with some idea of your own, but in case you don't try this. Cut a piece of thick hard card or circuit board to the width of the port and about 60 mm long, plug in your edge connector, turn your computer up side down, place the card etc on top of the edge connector in the slot, and strap the cable onto the board with insulating tape, pull the plug out, and glue the edge connector to the board then wrap the rest of the cable and plug to the board see fig 1 .Now try and plug it in up side down, good isn't it. This method of connecting can be used with all the sockets.

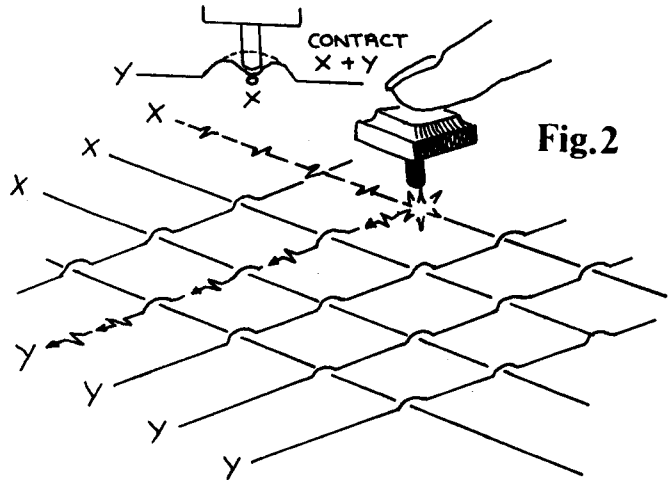


Fig.2

Next along is the serial/ network port, just the thing to connect up modems plotters etc to . Here again there are pin outs for more than one item, RS432 and the network.

Once again make sure that you get the right plug for the peripheral that you are going to connect to this port and check that you have the right pin outs. (6 core screened cable is advised.)

Connections to the serial port.

A.1 REFERENCE.
A.2 Not connected but counted.
A.3 RTS.
A.4 CTS.
B.1 GROUND.This should be connected to the braiding on the out side of the cable.
B.2 Not connected but counted.
B.3 DATA out.
B.4 DATA in.

Signal levels
0 = 0v
1 = 12v

ref line
0 = -5v
1 = +7v

A point to watch is that the reference line is an offset 'ground', this may not be possible with certain equipment configurations.

Connections for the network
Use 3 core screened cable.

A.3 and A.4 are connected together to form the 'CONTROL BUS'.
B.1 you connect to the braiding on the out side of the cable.
B.3 and B.4 are connected together to form the 'DATA BUS'.

You will note that you can only connect two machines together if you make up a plug to plug cable, but with a bit of imagination and two stereo jack sockets and plugs you could connect more than two machines together look at fig 2.

Along side the serial port is the printer port, you guessed it, for connecting up standard centronics-

printers.

Use 12 way flexible ribbon cable

At the computer end use a 7 way edge connector, and at the printer end use a standard printer plug.

To make it really easy just connect up as stated.

A.1 Ov connect to pin 16
A.2 /STROBE connect to pin 1
A.3 DATA 3 connect to pin 5
A.4 not used but counted
A.5 DATA 2 connect to pin 4
A.6 DATA 1 connect to pin 3
A.7 DATA 0 connect to pin 2

B.1 Ov connect to pin 33
B.2 /READY connect to pin 11
B.3 DATA 4 connect to pin 6
B.4 not used but still counted
B.5 DATA 5 connect to pin 7
B.6 DATA 6 connect to pin 8
B.7 DATA 7 connect to pin 9

The last two sockets on the back are the control ports. To these you can connect joysticks, mice, tracker balls extra keys and I dare say alot of other things not yet dreamt of.To understand how to connect the extra peripherals to the port you have to know how the pins are read by the computer.

Look at fig 3, it is a matrix of wires! If two wires make contact at a cross over (ie when a key is pressed) the computer will know about it, It does this by sending a signal down a X wire then checking each Y wire in turn. If it gets a signal back from that Y wire it knows that it was at this intersection, thus deducing which key was pressed. With this out of the way I can now tell you the wiring connections of the two ports.

Control 1

A.1 KEY BOARD J an X signal line.
A.2 KEY BOARD L an X signal line.
A.3 not used but still counted.
A.4 KEY BOARD 4 a Y line.
A.5 KEY BOARD 2 a Y line.
A.6 KEY BOARD 0 a Y line.

B.1 OV
B.2 KEY BOARD K an X signal line.
B.3 not used but still counted.
B.4 +5V
B.5 KEY BOARD 3 a Y line.
B.6 KEY BOARD 1 a Y line.

Control 2 is the same as control 1 but for the following connections.

A.4 KEY BOARD 9 a Y line.
A.5 KEY BOARD 7 a Y line.
A.6 KEY BOARD 5 a Y line.
B.5 KEY BOARD 8 a Y line.
B.6 KEY BOARD 6 a Y line

To connect up a joystick use these pin outs. Alternatively you could make a joy stick adaptor, just connect an edge connector to a female 9 pin D plug (Atari type) and strap it to a piece of board as explained earlier.

A.1 COMMON connected to the common wire in the joystick.
A.4 RIGHT connected to the right switch.
A.5 DOWN connected to the down switch.
A.6 FIRE connected to the fire button.
B.5 LEFT connected to the left switch.
B.6 UP connected to the up switch.

For those of you who don't know the joystick end connections they are as folows. When you buy the right joystick compatable socket the pins are numbered from 1 to 9 so the numbering here corresponds to that.

Common is pin 8.
Right is pin 4.
Down is pin 2.
Fire is pin 6.
Left is pin 3.
Up is pin 1.

That concludes this article on the ports but always remember -CHECK YOUR WIRING. If you have any problems understanding this guide or have had problems interfacing, please dont hesitate to contact us.

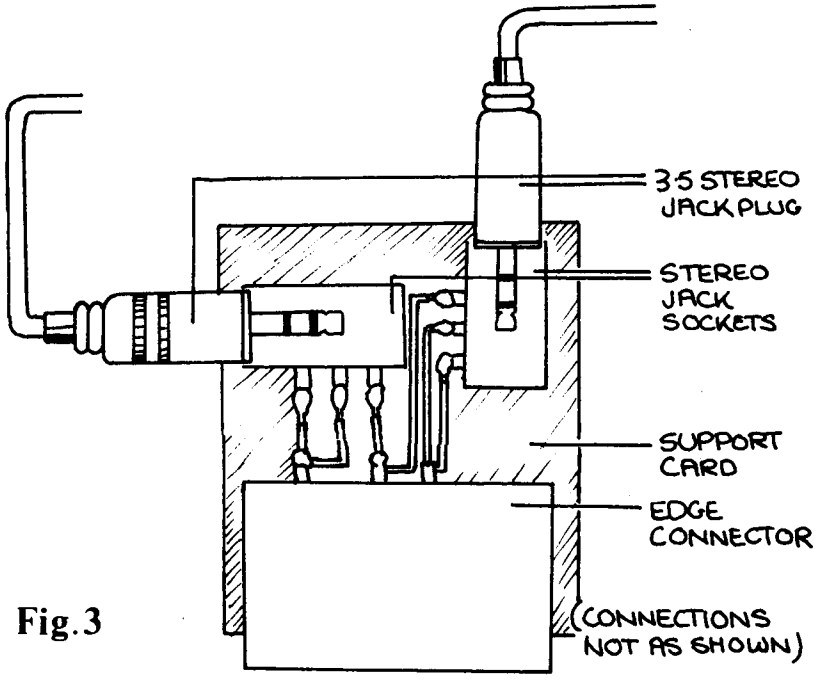
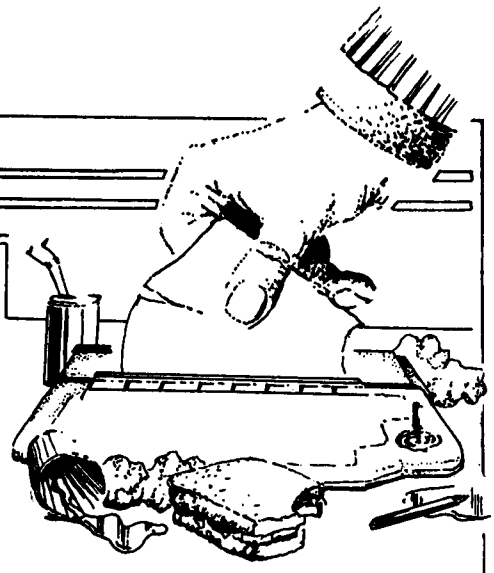


Fig.3

We regret that we cannot accept liability for any damage caused by following this article

Home Produce



"Do it for fame not fortune." This is another 'user contribution page'. The success of it, as does most of the magazine, depends on the user. What we would like to see on this page are short concise programs of not more than two A4 pages worth that make best use of the machines advanced specification. Please supply your masterpiece on tape. (and listing, but only if you have access to a printer) We will of course return all tapes as soon as we have finished with them.

The first two programs in this issue are two graphics demo's from Chris Moore of Devon. The first is based on mathematical formula producing two 3D isometric plots on two different graphic pages. It then allows you to toggle between them when they are both complete. We must warn you it takes many stardates to run.

```
100 SET STATUS OFF
110 DIM P(2,20),V(2,20)
120 LET CHOICE=1
130 LET C=10
140 SET VIDEO MODE 1
150 SET VIDEO COLOUR 1
160 SET BORDER RED
170 OPEN £C:"video:"
180 SET £C:PALETTE RED,YELLOW,BLACK
190 SET £C:INK 1
200 DISPLAY £C:AT 1 FROM 1 TO 24
205 PLOT £C:50,40
207 PRINT £C:"NOW GO AND MAKE A CUP OF TEA."
210 LET XX=1
220 LET T=XX
230 FOR X=1 TO 2
240   FOR Y=1 TO 20
250     ON CHOICE GOSUB 410,420
260     LET P(X,Y)=INT((XX/2+Y/2)*60)
270     LET V(X,Y)=INT((Z+XX/2-Y/2)*40+400)
280   NEXT
290   LET XX=XX+1
300 NEXT
310 LET X=1
320 FOR Y=1 TO 19
330   PLOT £C:P(X,Y),V(X,Y);P(X+1,Y),V(X+1,Y);P(X+1,Y+1),V(X+1,Y+1);P(X,Y+1),V(X,Y+1);P(X,Y),V(X,Y)
340 NEXT
350 LET T=T+1
360 LET XX=T
370 IF XX=19 THEN 430
380 GOTO 230
390 LET CHOICE=2
400 GOTO 210
410 LET A=XX-10:LET B=Y-10:LET Z=COS(SQR(A*A+B*B))*2:RETURN
420 LET A=XX-10:LET B=Y-10:LET Z=EXP(6-(SQR(A*A+B*B)))/35:RETURN
430 SET £C:INK 2
440 PLOT £C:1,1,PAINT
450 LET C=11
460 SET BORDER BLACK
470 WAIT 5
480 IF XX=19 AND CHOICE=2 THEN 510
490 LET CHOICE=2
500 GOTO 140
510 TEXT
520 PRINT "Move joystick up to display first picture."
530 PRINT "Move joystick down to display second picture."
540 LET C=10
550 WAIT 10
560 DO
570   IF JOY(0)=8 THEN LET C=10
580   IF JOY(0)=4 THEN LET C=11
590   DISPLAY £C:AT 1 FROM 1 TO 24
600 LOOP
```

The second of Chris Moore's graphics demo's is an animation program on the lines of Elite, (well not quite) only with a triangle. What it does is sets up two graphics channels, then in a loop calls the triangle calculating routine, draws a triangle onto the page (decided by the variable chan) displays the page and toggles the page No. Then goes round in the loop again, this time drawing on a freshly cleaned page. The not (chan) statement is binary logic, and the end result is that the chan No. swops between -1 and 0. (You do of course have to change this number to a integer above 0 so thats why all references to chan have +2 with it.

```
100 ! SET UP SCREENS AND A FEW VARIABLES
110 !
120 LET CHAN=0
130 RANDOMIZE
140 CLEAR SCREEN
150 FOR SCR=1 TO 2
160   SET VIDEO MODE 1
170   SET VIDEO COLOR 0
180   SET VIDEO X 40
190   SET VIDEO Y 20
200   OPEN £SCR:"video:"
210   SET £SCR:PALETTE BLACK,WHITE
220 NEXT
230 LET A=RND(50):LET B=RND(50):LET C=RND(50):LET D=RND(50):LET E=RND(50):LET F=RND(50):LET X1,Y1=0:LET X2,Y3=200
    :LET Y2,X3=100
240 !
250 ! MAIN ROUTINE
260 !
270 DO
280   CALL CALC
290   CALL DRAW
300   CALL DISPLAY
310 LOOP
320 !
330 !
340 ! CLEARING OLD AND DRAWING NEW TRIANGLE ROUTINE
350 DEF DRAW
360   CLEAR £CHAN+2
370   PLOT £CHAN+2:X1,Y1;X2,Y2;X3,Y3;X1,Y1
380 END DEF
390 !
400 ! TRIANGLE CALCULATING ROUTINE
410 !
420 DEF CALC
430   LET X1=X1+A:LET Y1=Y1+B:LET X2=X2+C:LET Y2=Y2+D:LET X3=X3+E:LET Y3=Y3+F
440   IF X1>1279 OR X1<0 THEN LET A=-A:LET X1=X1+A
450   IF X2>1279 OR X2<0 THEN LET C=-C:LET X2=X2+C
460   IF X3>1279 OR X3<0 THEN LET E=-E:LET X3=X3+E
470   IF Y1>719 OR Y1<0 THEN LET B=-B:LET Y1=Y1+B
480   IF Y2>719 OR Y2<0 THEN LET D=-D:LET Y2=Y2+D
490   IF Y3>719 OR Y3<0 THEN LET F=-F:LET Y3=Y3+F
500 END DEF
510 !
520 ! DISPLAY AND SWAP CHANNELSROUTINE
530 !
540 DEF DISPLAY
550   DISPLAY £CHAN+2:AT 1 FROM 1 TO 20
560   LET CHAN=NOT(CHAN)
570 END DEF
```

Home Produce

The last of the programs in this issue of Home Produce is courtesy of I.S and Dave Race and fills an important gap in IS-BASIC, a screen save command. The program works as follows; Lines 100-290 are to get round the allocate bug (those of you with 2.1 Exos, leave it out) and works by peeking memory to see if the allocate command has been called before, If so, does not call it again. Lines 330-410 is the machine code routine. It looks up the start and end address of the screen from pointers in the Nick chip, transfers the contents to the specified channel, which dumps the code to tape. (When loading in from tape it works in reverse).

```
100 LET UNIQUE$="SCREEN$"
110 LET DESIRED_SPACE=400
120 LET SIZE=DESIRED_SPACE+LEN(UNIQUE$)
130 IF VERNUM=2 THEN
140   LET T=PEEK(544)+256*PEEK(545)-SIZE
150   FOR X=1 TO LEN(UNIQUE$)
160     IF PEEK(X+T-1)<>ORD(UNIQUE$(X:X)) THEN
170       ALLOCATE SIZE
180       POKE 542,PEEK(544)
190       POKE 543,PEEK(545)
200       CODE ="SCREEN$"
210       RUN
220     END IF
230   NEXT
240   LET X=X+T
250   POKE 540,X BAND 255
260   POKE 541,X/256
270 ELSE
280   ALLOCATE DESIRED_SPACE
290 END IF
300 !
310 !THE MACHINE CODE ROUTINE
320 !
330 CODE VSAVE=HEX$("E5,21,CB,D,AF,6,10,2B,77,10,FC,23,36,20,23,D1,D5,7B,6,2,F7,B,DF,70,23")
340 CODE =HEX$("71,23,72,23,73,23,E5,ED,62,B2,59,54,19,10,FD,28,13,5D,54,29,29,29,19,3D,28,A,FE,4")
350 CODE =HEX$("28,6,3D,28,2,29,3E,19,EB,E1,73,23,72,EB,D1,D5,7A,11,BB,D,1,10,0,F7,8,DF")
360 CODE =HEX$("D1,D5,7B,6,3,F7,B,DF,D1,DB,B2,F5,C5,78,7,7,E6,3,F6,FC,D3,B2,CB,F8,CB,B0,A,47,7A,D5,F7,7,DF,D1")
370 CODE =HEX$("C1,3,2B,7C,B5,20,E3,F1,D3,B2,C9")
380 CODE VLOAD=HEX$("E5,11,BB,D,7C,6B,62,1,10,0,F7,6,DF,7E,B7,20,56,23,7E,FE,20,20,50")
390 CODE =HEX$("23,D1,D5,7B,6,2,F7,B,DF,78,BE,20,46,23,79,BE,20,41,23,7A,BE,20,3C,23,7B,BE,20,37")
400 CODE =HEX$("23,D1,D5,7B,6,3,F7,B,DF,D1,7E,23,66,6F,DB,B2,F5,C5,78,7,7,E6,3,F6,FC,D3,B2,CB,F8,CB,B0")
410 CODE =HEX$("C5,D5,7A,F7,5,DF,78,D1,C1,2,C1,3,2B,7C,B5,20,E1,F1,D3,B2,C9,3E,EE,DF,3E,DE,DF")
```

This program below can be added to the first routine, and demonstrates the M/C , by drawing ellipses, then saving the screen onto tape and reloading it back onto a clean graphics page. To use the screen save routine, follow these steps: (1) Open a channel to tape thus, OPEN £chan-No:"TAPE:file_name" ACCESS OUTPUT. (2) CALL USR (VSAVE, 256*chan-no+video_page-no). (3) CLOSE £chan-no

To load in from tape (1) set up a screen the same as it was saved from. (2) OPEN £chan-no:"TAPE:file_name". (3) CALL USR(VLOAD,256*chan-no+video_page-no). (4) CLOSE £chan-no

```
430 ! DEMONSTATION OF SCREEN_SAVE IN USE
440 !
450 TEXT
460 GRAPHICS HIRES 4
470 PLOT 660,360,
480 FOR N=12 TO 1 STEP-1
490   SET INK MOD(N,3)+1
500   PLOT ELLIPSE 50*N,25*N,
510   PLOT PAINT
520 NEXT
530 !
540 ! SAVE SCREEN
550 !
560 PRINT AT 1,2:"PRESS SAVE ON YOUR TAPE THEN ENTER";
570 DO
580 LOOP UNTIL INKEY$=CHR$(13)
590 OPEN £106:"tape:screen" ACCESS OUTPUT
600 CALL USR(VSAVE,256*106+101)
610 CLOSE £106
620 !
630 !LOAD SCREEN
640 !
650 CLEAR £101
660 GRAPHICS HIRES 4
670 PRINT AT 1,2:"REWIND TAPE AND PRESS PLAY
680 OPEN £106:"tape:screen"
690 CALL USR(VLOAD,256*106+101)
700 CLOSE £106
710 END
```

User Group Activities

Private Enterprise not only provides an informative and lively magazine, but also supports a national user group network, The Independent Enterprise User Group.

The main aim of the group will be to organise regional meetings and activities stretching the length and breadth of the country, allowing fellow members to meet, have fun and do whatever else they want to get up to! As yet, although there are a fair number of you out there, you are spread in pockets throughout the country. The only area in which meetings have become viable at the moment is in London (though I'm sure you'll remedy that)

This column will appear every issue with details of future user group activities and meetings. Those of you who wish to be put forward as regional organisers, please write to me at the usual address. Please include your address and phone number (if applicable) giving details of when and where meetings are to be held. (We recommend that these meetings should be every month or so, as many may have to travel some distance to attend, perhaps on the last weekend of every month.

As mentioned earlier, there will be a London meeting on 14th July 1985 from 2pm to 6pm at the user group headquarters, 40, Mansfield road, London, NW3, 2HT. The best way to get here is either by bus route 24 , 46, C11. Or by Underground, northern line BELSIZE PARK (about 8 mins walk) see map below for directions. We hope all Londoners will do their utmost to attend. Members from outside London are also invited. Hope to meet some of you soon, and don't forget to write.