



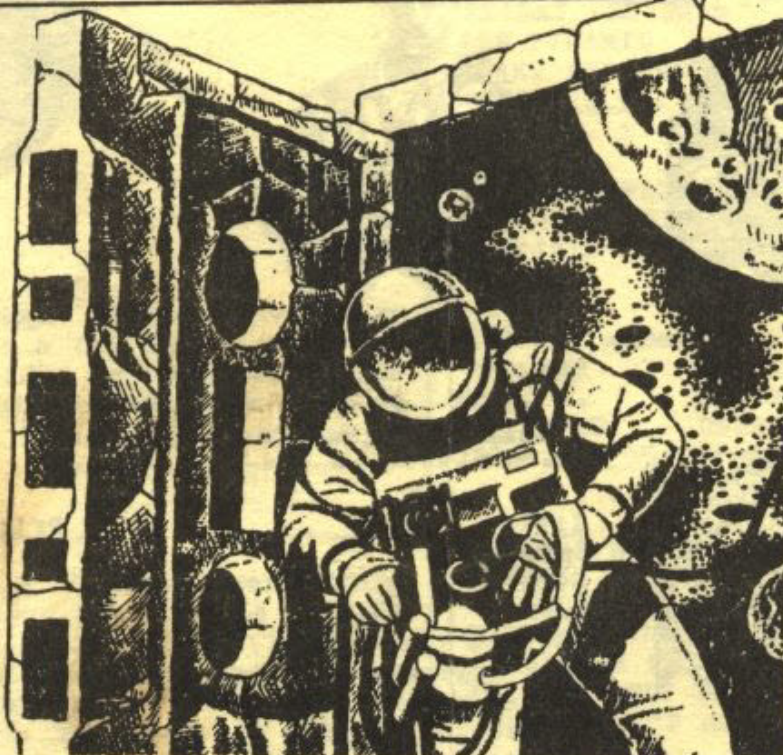
zx mushroom club

☐ 35644
MENLO PARK 0102
☎ (012) 46-8228
TELEX 3-21945 S.A.

JUN 1987

This newsletter:

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The Club
that
mushroomed
into an
Enterprise
for
Information

It has been said that television has destroyed our ability to go on trips of the imagination. This definitely can not be said of computers.

Take the state our country is in. Why, you could undo the terrible episode of last month with *General Election*, or if it is more to your taste, *Revolution* is also available for the Spectrum. (I have it on good authority that Parliament has approved the purchase of several Spectrums and these two games, as part of what is called 'unprecedented action against the revolutionaries')

Now take your average TV program. There you sit, totally excluded from all the action only 4 meters from you. Now that is total bull. You could be the Earthlings in *V*, in *Airwolf* could be Stringfellow Hawk (or whoever) yourself, and the beauty about this is that you do not have to look how David Kramer pedals up some kloof past a microbus between scenes.

Now take the comics the whole family fights to read first every Sunday. How dull. You could be *Asterix*, and we all know that half of all computer owners look like *Asterix* anyway. The other half resembles *Obelix*.

Now back to our beloved country. Why not play *Dictator* or *Millionaire*? We already have a dozen of the latter and one of the other, but there's always space for another.

Now look at the sweaty men breaking their necks to get hold of a ball, to hit a ball, to run with a ball, to drink some Bolls. You could do all this in your living room with excellent games such as *Football*, *Football Manager*, *Golfing World*, *Basketball*, *Baseball* etc. etc. I'm wrong about two things though. Danie Craven's wheels will come off completely if there was a game called *Rugby*, and there is no game called *Bolls*, and even if there was one, I for one will stick to the real thing.

Now take your budget. Firstly there is a program *Budget* which will take care of that (theoretically). Then there are *Fruit Machine*, *Casino Royal* and *Sun City Poker* which will give you enough practice before you do something to enhance your budget.

Now take indoor games. Why let someone cheat being the bank, when the computer could be a totally reliable bank in *Monopoly* (unless you are the one who normally cheats). Or why not play *Scrabble* against a totally stupid computer who does not even know that 'gerbhsdyxxcy' is a word used by millions of bhuilos's every day. Or why not play *Trivial Pursuit* with sound and graphics.

Did I hear you say now Go to Hell and let's get on with the newsletter?. Quite a good game that, and alledged to be much better than the real thing.

Now can anyone tell me what was the point I wanted to make?

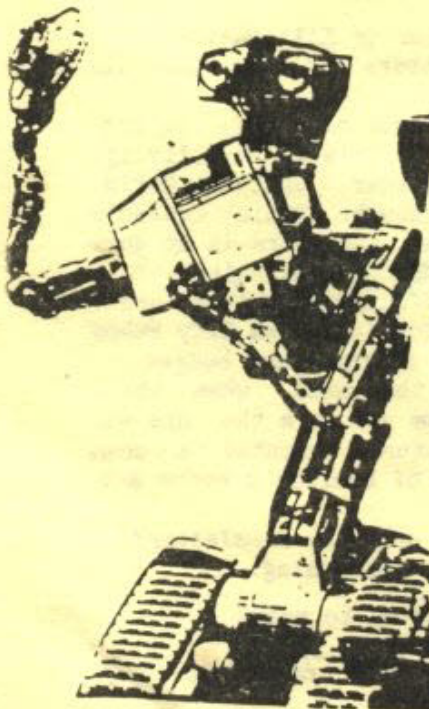
Just Lutz



+=====+
; Computing goes to the movies ;
+=====+



Title	Price (R)
Spiderman	16.99
Superman	16.99
Hulk	16.99
Back to the Future	35.77
Buck Rogers	31.37
Highlander	31.37
A view to a kill	43.05
Prodigy	31.51
Aliens	32.80
V	32.80
Tarzan	30.44
Star Trek	26.05
Super Gran	30.26
Super Mutt	16.11
Frank 'n Stein	35.22
Mad Martha	16.30
Casey Jones	15.80
Dogdy Greezers	26.99
Apocalypse	17.08
Battle of the Planets	39.99
Biggles	41.58
Dracula	39.20
Charlie and the Chocolate Factory	23.92
Fourth Protocol	54.09
Friday the 13th	32.68
Ghostbusters	17.98
Gremlins	39.26
Invasion of the Body Snatchers	10.35
Jaws	17.75
Max Headroom	36.78
Movie	31.35
Never Ending Story	33.24
Profanation	35.75
Rambo	35.91
Return to Oz	31.51
Robin of Sherwood	37.05
Robin of Sherlock	41.96
Robin of the Wood	41.96
Rocky Horror Show	28.08
Sherlock	32.20
Short Circuit	29.82
Sir Lancelot	22.34
Splitting Images	33.26
Spy vs Spy	39.20
Top Gun	29.74
Airwolf	27.41





If you page through Beltel, every so often one comes to a cul de sac called a C.U.G. Peter Sheldon is responsible for the Swoop column and the Sinclair Base of THE NETWORK, a C.U.G. of interest to Sinclair owners.

Why a C.U.G.?

The Network is a Closed User Group (C.U.G.). The reason behind this is that there are very few Advertisers willing to use the Beltel medium at this early stage and the cost of running a base such as this is quite high. What with 12 EDITORS (guys running bases) and page rental. We do have other editors using their own mailnumbers and edit passwords like my-self. We support Spectrum, Commodore, BBC, Spectravideo, MSX, IBM and Apple computers. We also have a General Chatline called Chatline 3. The most popular column is definately NIGHTBEAT with a certain gentleman?? using the non-de-plume of "Mr Gallows" thereby leading to a certain touch of mystecasm. We have approximately 23 sections on The Network that means there should be something of interest to all.

Anthony Walker (who is the owner of The Network) using a modified Spectrum and the Gush-dos wrote the software which is The Silicon System Bulletin Board. Compu-link has now taken over from The Silicon System with Ian Thompson as the Sysops (System Operator). With his experience Anthony has written in BASIC a TELESOFTWARE converter which is only compatible with the Gush-dos which allows me to convert any program into Telesoft which I then upload to Beltel for our members to down-load. The card game 8-card patience from ZX Computing is a 15K program which took 1 1/2 hours to convert and another 1 1/2 to then up-load the 29 screen frames.

Anyone with a modem capable of 1200/75 BAUD can become a member of The Network.

Compilation Specials

6 great games on one tape - Spectrum
A VIEW TO A KILL TEST MATCH
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Great Games Bonanza

This article is a compilation of contributions from Dean Richter, Brett Kennedy, Pieter Nel, Pierre van der Merwe and Malcolm Stevens.

+-----+ : Way of the tiger - Unarmed combat : +-----+

NINJA: use low punches and kicks to beat him. GOBLIN: use low punches, mid-kicks when he transforms; use mid-kicks and upper cuts as he jumps through; crouch down to stop his blows getting in. RINO-HEAD: Stand still and keep mid-kicking him in the chest. GAIIN TROLL: wait until he gets close, mid-kick him, jump backwards immediately, repeat until he dies or make a flying kick once to hit him in the upper body and repeat the move to keep you out of reach of his punches. Once you have done this, turn around and repeat the double kick. Keep turning and double kicking until he dies.

+-----+ : Infiltrator : +-----+

Are you having problems landing your WHIZBANG ENTERPRISES Gizmo DHZ-1 Attack Helicopter?? Here is the solution: On take off, set your ADF to 72.8 (Do this quickly). Accelerate to 300. Don't overheat your battery. Stay at this speed, DON'T SLOW DOWN. Keep the small helicopter on the ADF as straight as possible. Try keeping the compass in the bottom right corner as close to 000 as possible. Keep on course all the time. Don't kill nay planes - It slows you down - instead pretend you are one of them. How? Easy! On the bottom of the page are the names of the goodies and badies. Be the first one to -REQUEST ID- the answer will be -GIZMO REQUESTING ID- there you have his name. Look it up on the list and enter in INF or OVERLORD. REMEMBER NOT TO SLOW DOWN. They will reply -GOOD LUCK JOHNNY- or -CLEAR TO PROCEED-, and you are on your way!! You might ask "What about the turbo?". Use it, but when your oil is hot, switch it off. When it is cold, switch back on. After a while the ADF start spinning and flashing. Slow down to a halt. Get the horizon straight (USE YOUR COMPASS). Start going down. At 190 the computer starts making the warning sound. BLOCK YOUR BARS. Go down slowly, always keep the horizon straight. When you reach 95 be carefull. Your ground missin begins!

If you have completed the game, let us know how to beat the ground missions. Here is a list of names..

GISMO - INF; SETH - INF; GOMAR - INF; SCUM - OVERLORD; HAYMISH - INF; NAPLES - INF; GEOFF - INF; KOMIE - OVERLORD; ZIPPY - OVERLORD; BUZZ - OVERLORD; RHABOW - OVERLORD; WHIPPLE - INF; BOOMER - OVERLORD; DWEEZIL - INF; RATTIE - OVERLORD.

+-----+ : GREEN BERET : +-----+

Some hints and tips to get past the four stages of Green Beret:

Missile Base: Use flamethrower that you collect at the end of the trucks to shoot down the odds. Remember to stand as far left as possible.

Harbour: Use knife to stab dogs. Stand up to the dogs on the left and lie down for the dogs on the right.

Bridge: Use rocketgun that you collect at the top of the log-wall to shoot down helicopters. Wait for them to land.

Prison Camp: Use grenades that you collect at the Prison cells to kill the men with flamethrowers. Remember to throw the next grenade in to the opposite direction, before your previous grenade has hit the ground. The first man will come from the right.

+-----+ : DUN DARACH : +-----+

After making a sufficient amount of money, visit the Argat bank. Bank all except for two thousand iridi. Head for number three on Northwall. Purchase (don't steal) a statue. Proceed to the invisible door on Claw lane (follow the rat). Trade the statue for the d-key with Teth (don't lose it since it is vital). This key opens a door on High Gate - Enter. Here you will find a combination lock. Place objects on the letters D, P and E. Enter the (now) open door and you will be faced with a locked door. The key for this is held by Skar, the key being a script. But there is a slight problem involved with getting this script - Skar is invisible! To make her visible you must give her a spell

found at twenty four Cinder bank. Again buy it, don't steal it! Now we face another problem - where is Skar? Purchase a lyar from ten Old Hill. Take this to Dain. He lives in an invisible door on Park Row. He will give you a shield. Put your star on it and take the shield to the place indicated on the message part of the screen (top left). Drop the shield here and pick it up again, it is now an m-key. This opens an invisible door on Cross Street. Take the tele-stone. Try offering the tele-stone when nobody's around. Locate Skar and give her the spell. She will now be visible. Now purchase a licence from Phieves Guild on Silver Street. Take this to the strangeroom on North Wall. Take the pearl and give it to Skar. Presto, she gives you the key to the locked door, remember... the script. When you pass this locked door you will be faced with a number of rows in order 3;3;5;5;4;4;3;2. You will now be faced with another combination lock. The clue given is 'Call me to enter'. I have traced this to number two of The Calls, this being Lady Q's. Use the spell as a key to enter. You will now be in forbidden territory, as indicated. From here on you are on your own.. any hints how to get further??

```
+-----+
! Spiderman !
+-----+
```

When you are in the lift shaft, examine all three tool niches. In these niches, you will find gems. To get rid of the Ringmaster, stand outside his room, close your eyes and go west. Push knob and then turn knob. Now open your eyes and the Ringmaster will be gone, leaving you his gem.

To get rid of the Lizard, get the acid and the Calcium. Holding only these two objects, enter the Lab. Type mix and you will end up with Calcium Carbonate. Pick up the Calcium Caabonate andd go to the Lizard's room and drop the Calcium Carbonate. You will then find a Sleeping Doc Connors. Search Doc Connors and you will find his gem. When in the Computer Room, RUN Computer. You will then need 900 pounds of paper to run the presses. This is as far as I can get. If anyone knows how to make your web and get rid of the Hydroman, Sandman, Electro, Madame Web and all the other evil people, please write to The ZX Mushroom Club.

COMPETITION TIME

We've received two entries which we thought were worth prizes, and therefor we're giving the winner, Neville Frewin a R20.00 prize! His entry was 'There once was a club that mushroomed into an enterprise for information.' The second prize (R10) is going to Mr O'Connell who wrote 'There once was a club in bloom/ it was called The ZX Mushroom/ forever experiencing a boom/ Truly this club had no gloom.

For a R15.00, R10.00 or R5.00 discount on CHESS or any other program you buy from Information Enterprises in June, all you have to do is to write the name of the local pop group who has female member who's surname is Coetzee. Write "June Competition", your name and the answer on a paper, and staple it to your order.

The DISCiPLE with Beta Basic

To get Beta Basic to LLIST correctly through the DISCiPLE Printer port, type in the following program and run it. (You must first load in Beta Basic)

```
10 m/c pr,3
20 DATA 207,57,201
30 DPOKE(61081),PR
40 DEF PROC m/c REF S,L:
    LOCAL A,B:
    CLEAR L:
    LET S=DPEEK(23730)+2:
    DO UNTIL PEEK(S-1)=0:
        LET S=S+3+DPEEK(S):
    LOOP:
    FOR A=S TO S+L-1:
        READ B:
        POKE A,B:
    NEXT A
50 END PROC
60 DELETE 10 TO
```

Now MERGE the BASIC part of Beta Basic. Change line 2 to:

```
2 POKE 04,1:
CLEAR rt:
LOAD d1"BB" CODE:
RANDOMIZE USR 58419:
DPOKE(61081),39999+INSTRING(1,MEMORY$(
(40000 TO ),CHR$ 207+CHR$ 57)
```

and then SAVE the changed version of Beta Basic.

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Setting up your computer. The uses
of the home computer. How a computer
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you use and understand your home
computer. 4 programs on 2 tapes with
instruction manual.

>-----<
: For Sale : by Ian Brown
>-----<

Spectrum 48K R200, Spectrum 48K plus
Saga R300, 2 X tape recorders R40
each. Can be viewed at Information
Enterprises (by appointment). Mr
Brown's tel (011) 7831951 after
15h00.

Adventure Special

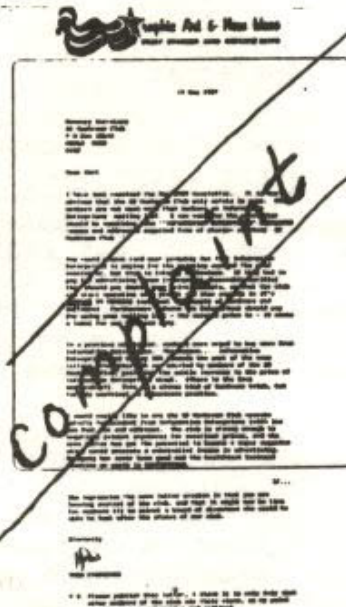
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2) Flight from the Dark
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simultaneously we have a few 2-slot
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NEED TO DISMANTLE YOUR SPECTRUM -
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10 off	R8.29 ea

(IEs normal price now R9.25, in town
they're selling for more than R13)

H E L P

==><==

Could someone contact Dr Hofmeyer at 452691 in connection with the capabilities of Hisoft Pascal.

==><==

Eric Slabbert wil graag 'n kaart en enige ander nuttige 'nformasie oor Batman in die nuusbrief sien. Wat moet hy doen as hy die 'batboots' het? Watter kant toe?

==><==

Dr Strachan would like to know whether there is a musical processor, i.e. software which would allow one to type notes on screen, then print out the music on paper. It need not play anything - it should be the word processors musical equivalent, preferably 80 column printer compatible with an option to choose both printer and interface. If you are a keen programmer, why not start writing this program?? Using graphics and the COPY command this is definately not such a difficult program. The Mushroom Club will promote and advertise the program, and you could get rich (O.K. semi-rich)

==><==

QL QUILL: Is it possible to change the D (Display) information such as page lenght, upper margen etc. etc.? Is it possible to have the PROMPTS dissapear immediately after loading (i.e. without pressing F2).

QL ARCHIVE: Is it possible to have more than 15 fields in a database? It's possible to create "file" with more than 15 fields, and endcreate, but impossible to get these fields onto the screen for insert or display.

==><==

QL KEYBOARDS. There are a few proper QL KEYBOARDS available, including the Schon and Thor. These are quite expensive, and Information Enterprises will import them on order. SAGA, who made name with its Spectrum keyboards, is alledged to bring out a QL KEYBOARD soon.

==><==

The deadline for all contributions, ads etc. is the first Friday of the month. Address changes must be in two weeks before this. We aim to get the newsletter to you towards the 15th.

==><==

'Dear Sir,

I have been experiencing a lot of trouble with Tasword 2 on my Spectrum + since I arrived in Sandton. What happens is that at odd moments Tasword "hangs up" so that one has to reload and lose everything typed up to that stage. A "coola" unit did not appear to improve the situation. This morning after several false starts with the Sinclair transformer I decided to try using a small homemade power supply on which it is possible to vary the output voltage continuously. Starting at 9 volts I still had the trouble but taking the voltage up a fraction to just under 10 volts and running through the "coola" unit (I have not dared to try it without yet) seems to have improved the situation.

This seems very strange to me, since the homemade power supply pushes the voltage up, and the "coola unit" drops it! Maybe the success should be attributed to the psycological effects of this manoeuvre.

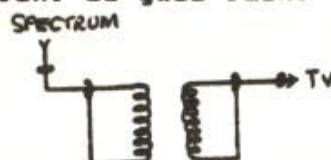
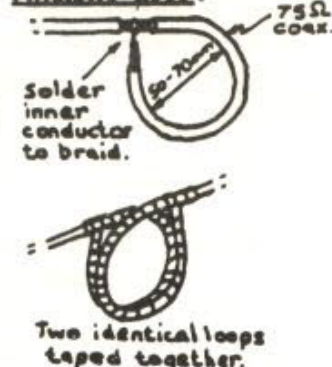
THE FARADAY LOOP.

You have left your computer running with a programme on the screen. Next morning do you find that the screen looks like a moth-eaten Persian carpet? Or there is a sneering "OI OK" at the left hand bottom corner. Worse still, at the end of your first page of Tasword, the cursor has disappeared and you are hamstrung? Try putting a Faraday loop in the co-ax from your Sinclair computer to the T.V. monitor, and see the difference. I did; and it seems to work wonders.

The instructions given below are easy to follow. So good luck.

Ken Paterson.

FARADAY LOOP.



QL Quill

Sinclair

I've been using the QL (and mostly Quill) for several months non-stop, and have a lot to say for and against Quill. **THE EDITOR** (at R86.00 from Information Enterprises) is a

THE EDITOR

 **DIGITAL PRECISION**

good alternative, as you will see from the following..

Editor and Quill have many points in common in their respective program objectives. They also have a considerable number of differences. The most significant difference between the two programs is the manner in which the objectives are achieved.

Quill is exclusively concerned with the creation, modification and printing of 'documents'. An assumption underlies the whole program, namely that Quill is the sole owner and user of the document, and that internal structural conventions within the file are entirely and exclusively the concern of Quill. "Outside world" files have to be transformed into Quill format, using the "import" facility. There is no easy or straightforward way of getting a Quill file back into outside world format.

In Quill, a document is one or more sections, each with one or more pages. Each page contains one or more paragraphs, which in turn consist of one or more sentences of one or more words.

The concepts which are most strongly apparent in Quill are the document, the page, the paragraph. There is a way to 'disable' the forced paging of a document (define the 'lines per page' as zero), but the paragraph concept can not be avoided.

Editor includes within its scope document type files, but also encompasses 'non-document' files, such as program source code, data files, print files etc etc. Consequently, the top level concept of Quill - the document - equates to the Editor concept of "the file". Editor does not make the assumption that it is the 'sole user' of a file. Quite the converse, the program recognises that it has no control over the internal file structure.

As a result of the variety of file types that may be processed, the concepts of page and paragraph do not truly exist within Editor. The program tries bravely to hang on to the idea of a line, but even that concept has to be forsaken for certain types of file. The clearest and most consistent concept in Editor is the character.

Neither Editor nor Quill has a strong view of a sentence. Both however recognise the concept of a word, though the view in each program is different. Quill stays to the idea that a word is a succession of characters between two spaces (or space and start/end of line). Editor's view is similar, except that for space in the Quill definition, Editor uses an arbitrary collection of symbols and punctuation marks - arbitrary in the sense that the program user may adjust them as necessary, according to the file type, language etc that is being processed.

Quill and Editor concepts compared

Philosophy of operation

The overriding concern of Quill in its interaction with the user is to make things as simple and as obvious as possible. In practice, this worthy objective is taken way over the top. Further assumptions in Quill are that the actual file size is pretty small, that the user is a steady and progressive worker and that the unexpected rarely happens. These assumptions are evidenced by the time penalty in attempting to navigate (move the cursor) from one part of a document to another - most particularly going back through a file - and the rather limited navigation commands available. All 'multi-phase' operations in Quill have their own built-in logic, from which one may never deviate. For example, 'block copy' requires that first the start of block is defined, then using a very limited range of navigation commands, the cursor must be moved to the end of the block. After that an equally limited range of navigation commands is used to find the insertion point. After the block operation is complete, Quill forgets all about the definition of the block. Similar problems exist with the "search" and "replace" commands.

During all Quill sequences, absolute priority is placed on keeping the screen looking pretty, and maintaining a verbose dialogue with the user.

These program structures are as they are presumably to avoid swamping the limited brain power of the user. Instead his patience is left in tatters, and the clock ticks on.

Editor takes an entirely different view of the interaction with the user. Certainly, the program has a preferred sequence of operation on receipt of any input (data or command) from the user. Within this sequence, modification of the 'in memory' representation of the file data is given top priority. Only after that does the program concern itself with the 'on screen' representation of the data. Editor is more than ready to be diverted from updating the screen, if new commands are being received from the keyboard. Generally, not nearly so much "hand holding" goes on during the command sequences. For example, the user may define an 'end of block' without first having defined the block start. If the user subsequently attempts to move, insert or delete the block, the program will simply complain that no proper block definition exists. Once a block has been defined, the program hangs on to the conceptual definition, so that the same (or adjusted) block may be manipulated without the task of defining it again.

Equally, the search and replace equivalents "find" and "exchange" will always start at the current cursor position, and search forward or back through the file as directed, but certainly do not reset to start of file as a matter of course.

Differences of this type are apparent through all of the comparable command sequences of the two programs. Editor assumes that the user knows basically what he wants to do and that he will do it in a manner which is most suitable to him at the time. If/when the user needs visual confirmation of his actions, he will stop typing and look at the screen as a whole, rather than merely the current cursor position. The momentary pause in typing will allow Editor to tidy up those parts of the screen that are in disarray (if any).

	EDITOR	QUILL
=====		
FEATURES		
=====		
Cursor up,down,left,right	Yes	Yes
Cursor word left/right	Yes	Yes
Cursor start/end of line	Yes	-
Cursor top/bottom of screen	Yes	-
Cursor top/bottom of file	Yes	Yes
Cursor to specified line	Yes	-
Cursor start of block	Yes	-
Cursor end of block	Yes	-
Cursor to marker	Yes	-
Cursor to last command point	Yes	-
Scroll screen up/down	Yes	-
Page screen forward/back	Yes	-
=====		
Delete character left/right	Yes	Yes
Delete word right	Yes	Yes
Delete word left	Yes	Yes
Delete to end of line	Yes	Yes
Delete to start of line	Yes	Yes
Delete line	Yes	Yes
Delete block	Yes	Yes
=====		
Set marker	Yes	-
Set right/left margin	Yes	Yes
Set tabs	Yes	Yes
Word wrap	Yes	Yes
Justify left	Yes	Yes
Justify right	Yes	Yes
Justify centre	Yes	Yes
Paragraph reform	Yes	Auto
Overstrike/insert mode	Yes	Yes
=====		
Move block	Yes	-
Retain definition of block	Yes	-
Sequence file on cols a to b	Yes	-
Renumber file	Yes	-
Undo current line editing	Yes	-
Issue multiple commands	Yes	-
Issue repeat commands	Yes	-
Repeat last commands	Yes	-
Recall/edit last commands	Yes	-
Process command file	Yes	-
Dynamic memory management	Yes	Yes
On-line help	Yes	Yes
Multitasking	Yes	-
Fully configurable by user	Yes	-
Special font for non-display	Yes	-
INSTANT RESPONSE TO KEYBOARD	YES	-
=====		
SAMPLE TIMINGS	Time Ratio	Time Ratio
=====		
Load file (text) *1	59.6 1	997 16.7
(Quill) *2	21.9 1	27.2 1.2
(other) *3	20.5 1	-
Save file	57.6 1	91 1.6
Merge file	59.7 1	205.6 3.4
=====		

Ratio based on EDITOR time in seconds
 ' - ' means 'feature not supported'

*1 Test file (text) : 2600 lines 104 kbytes
 *2 Test file (Quill) : 55 pages 14000 words 111 kbytes
 *3 Test file (other) : 58 kbytes

	EDITOR	QUILL
=====		
SAMPLE TIMINGS	Time Ratio	Time Ratio
=====		
Create 100 lines of 64 cols	10.0 1	264.0 26
Define 100 line block	2.1 1	140.5 66
Move block fwd by 200 lines	5.3 1	227.0 42
Copy block at bottom to top	6.6 1	aaargh!!
Delete 100 lines	3.9 1	120.0 31
Page from top to bottom	17.0 1	264.0 26
=====		

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TASPRO

In common with many word processors, Tasword Two justifies lines by inserting extra spaces between words towards the end of the line. Taspro is a modification to Tasword Two which allows it to justify using virtually equal spaces between words. These consist of a number of tiny spaces, called unit spaces. Obviously, all character widths must be an exact multiple of the unit space width if lines are to be accurately justified.

In the case of dot-matrix printers, Taspro does unit spaces by switching the printer to graphics mode (ie bit-image mode) and doing high-resolution dot spaces.

In the case of daisywheel printers, Taspro does unit spaces by switching the printer to a spacing pitch equal to the number of unit spaces to be sent, sending a space, and then switching back to normal spacing pitch again.

Taspro fits into the machine-code part of Tasword Two and uses no extra memory. It is supplied with a BASIC program to help you customize it to suit your printer.

Taspro is suitable for use with all popular interfaces except those which require their software to be merged with Tasword Two, eg Hilderbay, Microface 1 and Morex. It cannot be used with the ZX printer or similar (eg Alphacom 32), or Tasprint.

We recommend that you read these instructions right through before starting to use Taspro.

Taspro is available from Information Enterprises for R17.50.

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*Tasword
Word Count*

T. C. Jennings
101 Smyth Road
Ashton
Bristol BS3 2DR
ENGLAND

27 May 1987

Dear Mr. Coetzee,

Thank you for your kind letter asking if your ZX Mushroom Club may print details of my Word Count Facility for Tasword Two. I have no objections to the publishing of full details in your newsletter.

I am not quite sure whether you have the details so I enclose the relevant pages (page 1 was an introductory letter, now irrelevant). I have not enclosed a flow chart or an assembler code listing of the machine code because these exist only in manuscript, but it should not be too difficult for your members to work out what's going on with the aid of a disassembler.

Basically, I test for spaces between words, various punctuation signs, upper and lower case, the end of each 64-character line, and the end of the 20 K text file. I decided not to test for an EOF marker so as to keep the coding more compact. Relative jumps are used so as to make it easier for the code to be transported to other computers if necessary. The word count itself is stored in system variables 23728/9 and is retrieved at the end of the count by FN p(23728). It is possible that later versions of the Spectrum (e.g. the 128 K) may use 23728/9 for their own purposes. In that case it may be prudent to drop RAM-TOP to 31813 and store the word count in 31814/5, making the appropriate amendments to the machine code and Basic listing.

I first worked out the coding in Basic, using structures and variable names that corresponded exactly to Z80 assembler language. This enabled me to debug the program easily (not that it needed much), after which the translation into machine code was straightforward. Interestingly, the Basic version takes about 16 minutes to run - about 1/1000th of the speed of the machine code version.

As a separate matter I wonder if your newsletter would be interested in the enclosed routine I have written for drawing dashed or dotted lines on the screen. I have found it particularly useful for scientific and mathematical work. It is written for the QL but is easily translated to Spectrum Basic by re-writing line 170 as:

```
170 PLOT X1 + (I-1)ILSX, Y1 + (I-1)ILSY : DRAW LSX - SX, LSY - SY
```

Unless you have Beta Basic 3.0 or 4.0 available, lines 100 and 190 will have to be omitted and the parameters INPUT by a standard INPUT routine. I have made no attempt to trap parameters outside permitted ranges because that problem doesn't arise with the QL, but it shouldn't be too difficult to write an appropriate trap routine for the Spectrum.

Yours sincerely,

Trevor Jennings
Trevor Jennings



THE BUDGET is a program you must add to your collection of good accounting Software. It consists of a budget planning facility, a expense recording and bank reconciliation facilities. You can do screen dumps or save to cassette/microdrive the full pages of lists of your expenses. This is a exiting utility and is a must for all Mushroom Club members. Cost is R6.24 (program on cassette & instructions), GST R0.75, P&P R1.00 = T O T A L R7.99

INSTRUCTIONS

Word Count Facility For Tasword Two

DESCRIPTION

The routine, which is menu-driven from within Tasword Basic program, occupies 184 bytes of machine code immediately below Tasword Two text storage area, which, for the purposes of the routine, is assumed to start at 32000 and end at 52479. RANTOP is reduced to 31815.

The routine recognises the apostrophe and hyphen as letters of the alphabet, so "doesn't" will be counted as one word, as will a hyphenated word. Accordingly, the user should be wary of using the hyphen for underlining titles - or on its own as a punctuation mark - if an absolutely accurate word count is desired.

The routine will not recognise as words or parts of words any character that is not a letter of the alphabet, an apostrophe or a hyphen. Such unrecognised characters are considered by the routine as spaces. Accordingly, "1234", "\$10.95", "\$" would not be counted as words if they occurred in a text file, but "1st" would be counted (because of the "st").

The routine takes into account the situation which commonly occurs in right-justified text wherein the last letter of the last word on a line of Tasword text abuts the first letter of the first word on the next line of text, and correctly counts those words as two words. Note that this feature of the routine will give spurious results if the Tasword word-wrap facility has been turned off.

The routine is compatible with Microdrive operation, there being sufficient memory available below RANTOP to accommodate the extra RAM area used by at least one Microdrive.

The routine was timed as .99 seconds to do a word count on the Tasword "Tutor" text file. The time taken for the count is virtually independent of the size of the file because the routine looks at all 20K of the text file, irrespective of its contents. In comparison, an equivalent routine in Spectrum Basic takes about 16 minutes to do the same job!

1. Switch on your Spectrum and CLEAR 31815.
2. Key in Program 1. Check the DATA in LINES 1001-1019 most carefully. In particular, check the placement of commas and the number and order of the items after each DATA statement. The final item in each DATA line is a checksum and is the sum of all the preceding items in that line and should trap any mis-keyed data in that line and identify the line when the program is run. Lines 1001-1018 each contains 11 items (including the checksum) and line 1019 contains 5 items (including the checksum). You may find it easier to check a keyed-in program against a listing if you first print it using LLIST.

Alternatively, instead of using Program 1 you may prefer to key in the hex code of Listing 1 using a hex loader. The code starts at 31816. Suitable hex loader routines are to be found in many books on the Spectrum, and in magazines.

3. SAVE Program 1 as "Prog1" just in case you need to amend it at a later time.
4. RUN Program 1.
5. If Program 1 has been RUN successfully then SAVE "WC1.4" CODE 31816,184 onto a tape and VERIFY "WC1.4" CODE. Then press NEW followed by ENTER to erase Program 1.
6. Key in Program 2 and check it carefully against the listing.
7. SAVE "Prog2" onto a tape and VERIFY "Prog2"
8. RANDOMIZE USR 0 to clear the computer's memory.
9. LOAD Tasword Two into your Spectrum.
10. Drop into the Tasword Basic program from the Tasword Menu. (key: STOP b ENTER).
11. CLEAR 31815
12. LOAD "WC1.4" CODE
13. MERGE "Prog2"
14. RUN
15. SAVE and VERIFY your modified version of Tasword Two using the appropriate menu option (key: STOP t ENTER).
16. The word count facility may be used on a text file by using the menu option (key: STOP w ENTER). The time taken for a word count, irrespective of the size of the text file, should be about 1 second.
17. Experiment with the word count facility on something trivial before you use it on anything important. This advice applies to any program and in particular to those written in machine code.

PROGRAM 1

```
1  REM Routine for reading DATA (with checksum feature)
   into RAM
10  CLEAR 31815: LET P=31816
20  PRINT AT 10,2;"DATA now being POKEd into RAM."; AT 12,11;
   "Please wait."
30  LET K=10
40  FOR L=1001 TO 1018: GO SUB 200: NEXT L
50  LET L=1019: LET K=4: GO SUB 200
100 CLS: BEEP .5,20: PRINT AT 10,12;"FINISHED!"; AT 12,4;
   "DATA now POKEd into RAM."
110 PRINT AT 14,0;"RAMTOP is now at 31815."
120 PRINT AT 16,0;"The machine code for the word"; AT 17,0;
   "count routine occupies 184 bytes"; AT 18,0;"starting
   at 31816.": STOP
200 RESTORE L: LET CH=0
210 FOR J=1 TO K: READ a
220 LET CH=CH+a: POKE P,a
230 LET P=P+1: NEXT J
240 GO SUB 300
250 RETURN
300 READ a
310 IF CH<>a THEN PRINT AT 10,0;"DATA in Line ";L;" is
   incorrect.": PRINT : PRINT "Please check and do again.":
   STOP
320 RETURN
1001 DATA 229,213,197,245,1,0,0,33,0,125,1043
1002 DATA 126,254,39,40,20,254,45,40,16,254,1088
1003 DATA 64,56,13,254,91,56,8,254,96,56,948
1004 DATA 5,254,123,48,1,3,33,255,124,17,863
1005 DATA 64,0,25,125,254,255,32,5,124,254,1138
1006 DATA 204,40,55,126,254,39,40,20,254,45,1077
1007 DATA 40,16,254,64,56,232,254,91,56,8,1071
1008 DATA 254,96,56,224,254,123,48,220,35,126,1436
1009 DATA 254,39,40,20,254,45,40,16,254,64,1026
1010 DATA 56,13,254,91,56,8,254,96,56,5,889
1011 DATA 254,123,48,1,3,43,24,190,33,255,974
1012 DATA 124,35,124,254,205,40,54,126,254,39,1255
1013 DATA 40,245,254,45,40,241,254,64,56,12,1251
1014 DATA 254,91,56,233,254,96,56,4,254,123,1421
1015 DATA 56,225,35,126,254,39,40,20,254,45,1094
1016 DATA 40,16,254,64,56,212,254,91,56,8,1051
1017 DATA 254,96,56,204,254,123,48,200,3,24,1262
1018 DATA 197,120,50,177,92,121,50,176,92,241,1316
1019 DATA 193,209,225,201,828
```

PROGRAM 2

```
15  POKE 23609,2: CLEAR 31815: GO SUB 4000: PRINT AT 10,5;
   FLASH 1;"Do NOT stop the tape"; AT 1,0: LOAD "WC1.4"CODE :
   LOAD "tasword"CODE : CLS : PRINT AT 10,6; FLASH 1;"Stop
   the tape": GO SUB 11: LET a=USR 59081: GO TO 10
60  PRINT "word count" w": REM type 21 spaces
   after "count" in this line
175 IF b=119 THEN LET i=19
670 IF b=119 THEN GO TO 8000
710 SAVE "WC1.4"CODE 31816,184: SAVE aCODE 54784,10751:
   GO SUB 900
790 VERIFY "WC1.4"CODE 31816,184: VERIFY aCODE 54784,10751:
   PRINT AT 21,20; INVERSE 1;"m/code O.K.": GO TO 25
8000 CLS : PRINT AT 10,10;"COUNTING..."
8010 RANDOMIZE USR 31816
8020 CLS : PRINT AT 10,7;"WORD COUNT = ";FN p(23728)
8030 PRINT AT 20,3; INVERSE 1;"press any key to continue": PAUSE
   0: CLS : GO TO 25
```


My apologies if the listings came out a bit faint - I didn't want to retype it so as to avoid a mistake which could ruin your day!

Amstrad 1512

vs.

Quantum Leap

```

10 REMark Copyright Trevor Jennnings ,
   May 1987
20 REMark Draws a dashed line of N
   dashes each of length L etween end
   points (X1,Y1) and (X2,Y2).
100 DEFine PROCedure dash (X1,Y1,X2,
   Y2,N,L)
110 X = X2 - X1: Y = Y2 - Y1
120 D = SQR(X*X + Y*Y): REMark D is the
   distance between end points
130 S = (D - N*L)/(N-1): REMark S is
   spacing between dashes
140 SX= S*X/D : SY=S*Y/D
150 LSX=L*X/D+SX: LSY=L*Y/D+SY
160 FOR I = 1 to N
170 LINE X1 + (I-1)*LSX, Y1+(I-1)*LSY TO
   I*LSX - SX, Y1 + I*LSY - SY
180 END FOR I
190 END DEFine

```

LISTING 1

```

7C48 e5 d5 c5 f5 01 00 00 21
7C50 00 7d 7e fe 27 28 14 fe
7C58 2d 28 10 fe 40 38 0d fe
7C60 5b 38 08 fe 60 38 05 fe
7C68 7b 30 01 03 21 ff 7c 11
7C70 40 00 19 7d fe ff 20 05
7C78 7c fe cc 28 37 7e fe 27
7C80 28 14 fe 2d 28 10 fe 40
7C88 38 e8 fe 5b 38 08 fe 60
7C90 38 e0 fe 7b 30 dc 23 7e
7C98 fe 27 28 14 fe 2d 28 10
7CA0 fe 40 38 0d fe 5b 38 08
7CA8 fe 60 38 05 fe 7b 30 01
7CB0 03 2b 18 be 21 ff 7c 23
7C38 7c fe cd 28 36 7e fe 27
7CC0 28 f5 fe 2d 28 f1 fe 40
7CC8 38 0c fe 5b 38 e9 fe 60
7CD0 38 04 fe 7b 38 e1 23 7e
7CD8 fe 27 28 14 fe 2d 28 10
7CE0 fe 40 38 d4 fe 5b 38 08
7CE8 fe 60 38 cc fe 7b 30 c8
7CF0 03 18 c5 78 32 b1 5c 79
7CF8 32 b0 5c f1 c1 d1 e1 c9

```

QL or 1512? A question which has been on my mind a lot in recent times! Having just got my own QL (complete with drive and Sandy interface), the arrival of the IBM compatible, low cost Amstrad 1512 came as a surprise. I had to investigate - was mine a bad decision??

I compared the two in the table below. Some other points that need stressing are...

- * One QL disc drive = two Amstrad 1512 drives (RAM-wise; 720K vs 360K)
- * Looks. There is no doubt that the Amstrad 1512 is superior. Maybe we will have a proper keyboard and casing for the QL one day.
- * The QL seems to be heap. R649 to start with. But if you add the extras you need to get it on the level of an Amstrad 1512, ie. mouse, memory, disc interface, drive, parallel interface, monitor, joystick adaptor etc. etc. you will get near to, or past the R2085 of the single drive, monochrome 1512 at R2080. Admittedly when purchasing all these extras, you will build up a system more powerful than the 1512 (e.g. 512K upgrade makes it 128K better than the 1512, Sandy interface includes Tony Tebbys QJUMP Basic Extensions etc. etc.) On the other hand, should you wish to add a hard disc to your QL, you will double the price of an Amstrad 1512 hard disc.
- * IBM compatibility. There is no doubt that this facet of the 1512 opens doors in terms of software. Taking into consideration the cost of some IBM compatible software, I would argue that it also shuts a lot of doors! But then we all know that copies are readily available if you know the right people. QL software of the same quality are cheaper in most instances. With the Amstrad 1512, you have a choice of several word processors, the QL now has QUILL and THE EDITOR.

- * QL SuperBasic is build in (ROM). The 1512's Locomotive Basic2 has to be loaded in from disc. This also applies to the DOS, which means that the user RAM is reduced dramatically on the 1512 before you can start doing anything.
- * The Amstrad monitor is not a very good monitor. Should you wish to treat your eyes with a better monitor, you will have some difficulty since the power supply for the computer is contained in the monitor.
- * The Amstrad 1512 also lack anything to compare with QDOS, the QL multi-tasking system whic (apparently!) makes writing QL machine code so interesting.
- * QL SuperBasic seems to have a structure for every occasion but is painfully slow. Some amelioration can be sought in SuperBasic compilers (such as Turbo which I've used a lot in the past month). The Amstrad Locomotive Basic2 runs under the graphics environment GEM. Its strongest relation to QL SuperBasic is its enormous range of graphics commands. The most unusual feature of Basic2 is its lack of line numbers, although labels could be used instead. It lacks procedures, you can GOSUB a label but parameter passing is not supported. If Basic2 is required to write to a graphics screen, which is does via GEM, the results can take a surprisingly long time to appear. SuperBasic will please the computer science teacher more than Basic2!

I think what it boils down to is that the Amstrad has the looks and the compatibility and the hardware all at one go, whereas the QL has the brains and technology, and if you want it, the hardware at more or less the same price. Me, I think I'll stick to my QL.

PROCESSOR

Device 68008
Number of bits 32/8

MEMORY

Total RAM 128K
Maximum RAM 640K
User RAM 94K
Total ROM 32K(48K)

KEYBOARD

Keyboard type Membrane
Total keys 65
Numeric pad No
Cursor pad No
Function keys 5

DISPLAY

Integral No
External Connects to monitor/TV
Text 25x85
Graphics 512x256
Colours 4/8

Sprites

INTERFACES

Parallel No
Serial 2
Joystick No
Mouse No
Sound 1 channel
Expansion bus Yes

STORAGE

DOS
Integral
Winchester

SOFTWARE

Wordprocessor
Database
Spreadsheet
Graphics (data-) Basic
Graphics (paint) GEM
Games

LANGUAGES

Interpreted Basic
Compiled Basic
Pascal
Assembler
Other

NOTIONAL AREAS OF PRIME APPLICATION

Business Yes
Home Yes
Education Yes
Games Yes (?)

PHYSICAL DATA

Size 18.7x5.4x1.7ins
Weight 3.1lbs
Luggable No

Sinclair QL Amstrad 1512

8086
16/8

512K
640K
approx. 480K
16K

Mechanical
85
Yes
Yes
10

Yes
Monitor supplied
80x25
640x200
4/16

(mode dependant)

Yes?
Yes
1
Yes
Yes
Yes
Yes

MS-DOS, GEM,
DOS Plus
1 or 2
Disc Drives
Available
available(CST)

Supplied
Available
Available
Available
Supplied (ROM) Supplied
Supplied
Supplied
Available

Supplied
Available
Available
Available
Available
C,Lisp,Forth
APL, Fortran
APL, Cobol

Yes
Yes
Yes
(?) Yes

372x384x135mm
9kg
No

In the table above I tried to be as reasonable as possible to both the Amstrad 1512 and QL. I've used the Launch issue of QL User, Sinclair/QL World (February 1987) and Amstrad spec sheets as sources.

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Special Price R29.50

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As described for the TAPE options.

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A general regression problem consists of determining the coefficients of a linear equation of the form:

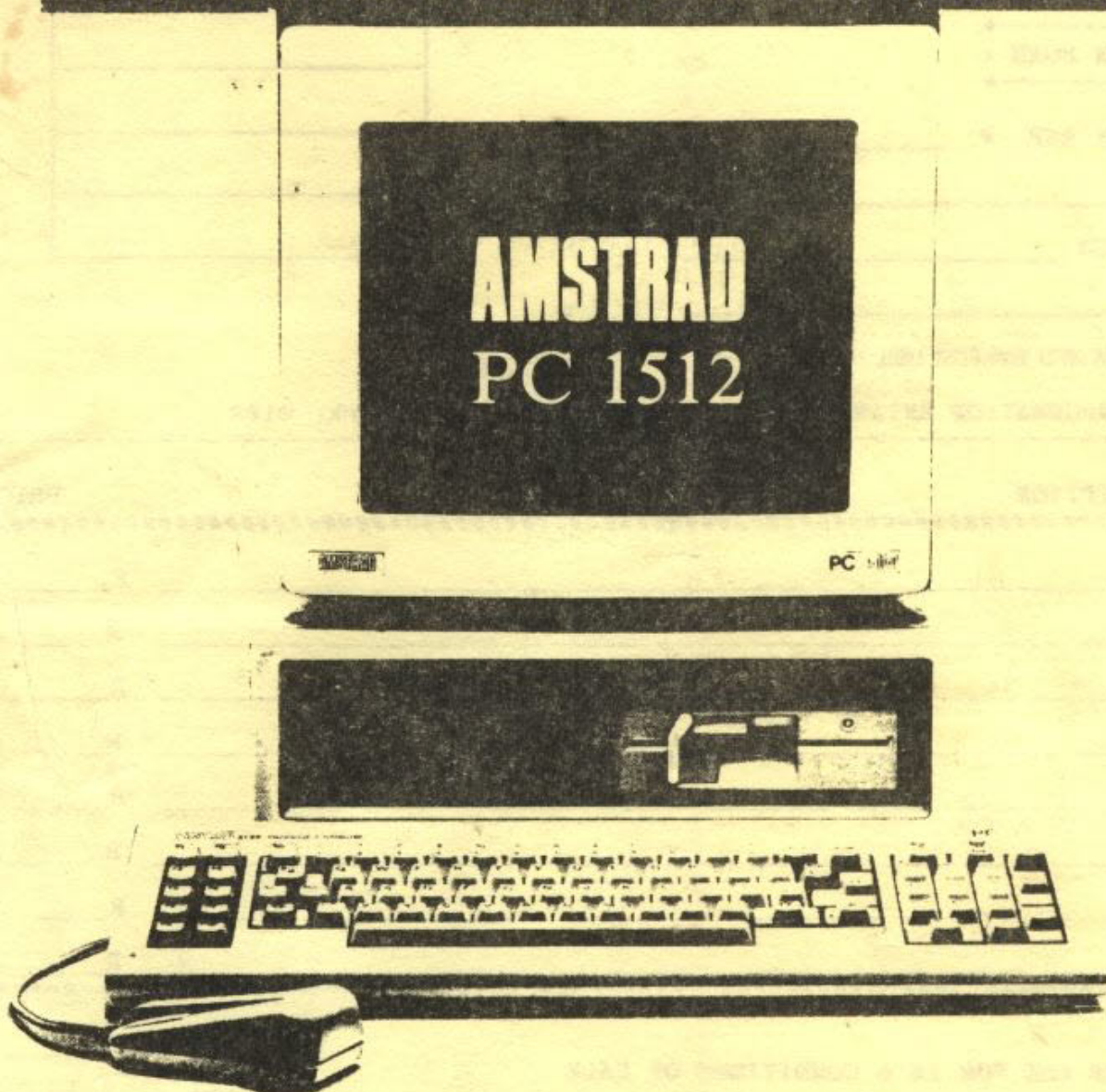
$$y = C_0 + C_1X_1 + C_2X_2 + \dots + C_nX_n$$

Apart from its specific applications the log/ln options is particularly useful in dealing with following types of problems:

- (1) Exponential Regression
- (2) Geometric Regression

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- ★ Detailed clearly presented user manual.

Hardware Options

- ★ Second floppy disc drive
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