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INDEPENDENT COMMODORE PRODUCTS USERS GROUP newsletter

Vol 7 No 5 September/October 1985

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Europe's first independent magazine for CBM users

EDITOR'S NOTEBOOK

With this issue so soon after the last, we are virtually back on publication schedule - Phew! The way material is coming in for the newsletter these days, and its standard, are, I must say, very encouraging. In particular, we are getting articles from new authors, as this issue well shows. More power to your pens, and please at least glance at the Notes for prospective authors on p. 394.

In particular, please don't 'parallel publish' without telling us, i.e. submit articles to your own regional newsletter as well as to us without telling either editor. We regularly repeat regional articles when we think they justify national dissemination, by kind permission of our regional colleagues, but others may justify publication in one or t'other but not both, and nothing irks two editors more than to find they have both published the same article more or less at the same time because the author submitted it to both without telling either he had offered it to the other. This is one of the reasons why our Notes ask you to consult us in advance before embarking on any major literary project, the other being of course to save you burning midnight oil and then finding you've been pipped at the post.

Partly as a result of a mix-up of this nature, but mainly because we think the article is of value on its own apart from being interesting in the difference in its approach from the one in the last issue, we are publishing this month a second review of Superscript 64 (p. 383).

In January we announced (Vol 7, No 1, p. 45) that Peter Reynolds was undertaking the compilation of a new edition of the ICPUG Compendium, a collection of the best and most valuable material from the Newsletter since the first Compendium, now out of print, Peter has put a great deal of work into this project, his main difficulty having been the difficult task of selection from so much good material. It looks at the moment as though it would be necessary to sell the result at something near £10, and also that the production would call for several thousand pounds 'up front', which it would be difficult for the Committee to justify without some guarantee of demand.

The project is therefore in some danger of withering on the bough unless enough members are willing underwrite it. Will all those interested get in touch with Peter at 65 Claremont Rd, Tunbridge Wells, TN1 1TE, or buttonhole him at the AGM at the end of the month? At which meeting we sincerely trust we shall see as many as possible of you.

HdeG

EASY SCRIPT WITH MPS802 PRINTERS

by Brian Grainger

Alan Morgan wrote to ask me how he could alter the space between lines on his MPS802 when using Easy Script. He was trying to create forms by using contiguous graphic characters.

For some reason the '*sa' command does not work with Commodore printers. However, so long as a whole text file is to be closed up, there is a solution.

Before printing your text, after saving it on disk or cassette, create a simple document which only says:

```
*sa6,23<R>
```

Note that 23 is used because chr\$(23) to secondary address 6 will close up the line spacing on an MPS802. <R> means the return key.

Having created this little document, press RUN/STOP and RESTORE together and specify printer device 4 and 'S' for serial. You will then be returned to the text screen with the single line above still there. Output it to the printer.

You can now press RUN/STOP and RESTORE together again and this time specify a Commodore printer (0). Load the text file to be printed, and output to the printer. It will be printed with no spaces between the lines. Obviously you could modify the value of 23 to produce any desired spacing.

I have found printer 4 is the only one which accepts the '*sa' command. Unfortunately you cannot print the text using printer 4 because the printer stays in graphics mode rather than text mode. If anybody knows how to print text on an MPS802 with printer 4 specified, let me know!

WARNING

It has come to my attention that a well known software house, S*perso*t, are spreading rumours that an unprotected version of Easy Script is available within ICPUG. While I cannot deny that this may exist, members should be aware that ICPUG does not condone the illegal copying of commercial software, and requests to provide such software through ICPUG will be refused. It is worth mentioning in passing that ICPUG will not accept responsibility for any illegal copying that may

occur at regional group meetings either!

In the particular case of Easy Script, which causes the dreaded bumps in such a manner that Mike Todd's routine to remove them usually causes Easy Script to hang up, I feel that the software writers (Precision Software) ought to do something.

I have good reason to believe that one ICPUG member at least has had to have his 1541 disk realigned twice, at a cost of 40 pounds each time, solely because of the protection on Easy Script.

Perhaps Precision Software, who are ICPUG members, would care to provide a routine to modify the Easy Script disk to remove the dreaded bumps without losing the disk protection (see page 388 - Ed). They can assume, if necessary, that a copy of Disk Revealed is available to do the modification and then perhaps ICPUG could provide a service to members without this software. I feel this is a more responsible method of solving a serious problem than making pirate copies of unprotected software! Let's hear from you, Precision Software. (While you are at it why doesn't the '*sa' command work with Commodore printers!)

--oOo--

ANNUAL GENERAL MEETING

The announcement of the AGM last month said that there was a slight possibility that the venue might have to be changed: it has been, to Central Hall, Westminster, SW1. At that time it was not certain that this issue of the newsletter would be out in time to notify everyone, so it was said that members would be notified by post. However, this issue is out in good time, so this is the only notification of the change that will be given.

The Central Hall is just a few steps from the north side of Victoria Street opposite the Abbey. Tube stations: St James's Park/Westminster.

The date and time are unchanged - 2.30pm on Saturday 28 September - as is our hope to see as many members there as can make it.

--oOo--

COMMODORE—A POTTED HISTORY

by Mike Todd

There is little doubt that, like so many computer manufacturers, Commodore is at a watershed in its history. A real thrust towards the business market has been made and we are seeing a significant change in performance and specification after 7 years of Commodore computers.

It is also a time when ICPUG itself is starting to feel the pressures of an expanding product range and I thought it a good time to look at the background to Commodore and its machines.

During the early 1950's, a Polish refugee from Auschwitz started a typewriter repair service in New York City. He had come to the USA in the mid-40's as a boy and had served in the US Army as a way of gaining creditation. The man was Jack Tramiel, who moved to Toronto in 1955 to set up Commodore Business Machines, where his company manufactured typewriters under licence and was soon supplying mechanical adding machines to a major retail outlet.

In 1965, Tramiel could see the demise of these mechanical machines and was himself already experiencing serious problems, so he started to get involved in the new electronics by initially distributing some of the early electronic calculators for a company that was eventually to become one of his toughest rivals.

Tramiel soon gave up distributing calculators and started to produce his own, initially using components from other manufacturers; but in 1974, Commodore started its own chip design team and a year later acquired a company that could manufacture the light-emitting diodes which were the essential part of the displays on the ever-shrinking calculators.

More problems came in 1975 as the American calculator market crashed and Commodore started making very large losses. At this time, two major decisions succeeded in keeping the company from going under. Firstly, it decided to concentrate much of its efforts in the European market and secondly, the company bought MOS Technology complete with chip designer Chuck Peddle.

It was Peddle who said he could take the 6502 microprocessor and design a small, affordable personal computer around it. Tramiel said 'yes' and, in characteristic style, gave Peddle a very strict timetable. The result was the PET, first shown to the public in 1977.

The early PETs were built inside heavy metal housings, which was

perhaps a relic of earlier activities in the field of office furniture. They were an instant success, with a huge rush of orders when it was first shown to the public. Unfortunately, it was some time before these initial orders were fulfilled.

These early PETs were built around a simple BASIC, the licence for which was bought outright by Commodore; an unusual step, since traditionally, software licensing agreements are based on a royalty for each copy sold. Commodore are still benefitting from this agreement, although I suspect the company who wrote the interpreter regret their decision!

The first PET, the 2001, had a built-in screen, a cassette deck, and a calculator-style keyboard, which made it extremely good value and it sold extremely well almost everywhere it was shown.

By the time that the next generation of PETs appeared (with no built-in cassette deck, but with a full size keyboard), there was a range of peripherals available, including floppy disks and a printer. The new style PETs, which were now given numbers such as 3032 and, later, 4032 and 8032, became useful business machines with a very large range of business software available for them.

But Commodore machines were not without their problems. The very early PETs had many bugs in the internal software and a new set of ROMs had to be produced to put them right. These ROMs (known as BASIC 2), caused some compatibility problems for software written using the original ROMs, but these were not insurmountable and, in any case, programs written in pure BASIC, with no PEEK, POKE or SYS commands, were almost fully transportable.

As the influence of Commodore spread, an improved BASIC (BASIC 4) was introduced to allow easier access to the disk drives and to put right one or two minor problems that were still present in the BASIC 2 ROMs. The new BASIC 4 was also at the heart of the new 8000 series PETs, or CBM Professional Computers as they were now known, which provided for 80 characters on a line, as opposed to the 40 on the earlier machines.

Two other variants on the 8000 series were produced to fill gaps in the market. The 8096 was little more than an ordinary 8000 with 96k of RAM and the 9000 (also known as the Micro-Main-Frame) was an 8000 with a second processor and capable of running a variety of languages.

In 1980, Tramiel was holding a meeting in London with several of the Commodore International set, and on the second day he announced that he had decided that it was time to introduce a low-cost colour computer that could actually compete with Commodore's other computers by doing more and costing less. With their own chip-manufacturing facility,

there should be no problems, for they could use the proven 6502 microprocessor together with a newly developed video chip. Many suggested that the chip was too limited and that, with only 22 characters on a line, the new computer would have only limited appeal.

After a race between two groups of designers, a prototype was shown in the summer of 1980 and the machine was finalized in the autumn of that year, with the first launch being in September at an exhibition in Japan. In fact, the machine was marketed in Japan several months before it appeared in the USA or Europe as it was considered that the Japanese market was more critical and would provide a valuable test-bed.

The name of the new computer was the subject of some concern and embarrassment. It was to be named after the video interface chip, and therefore called the VIC, or rather the VIC-20 (it should have been 22, but 20 sounded better); but problems arose in Germany where the word VIC is not a word to be used in polite company and so there it was known as the VC-20 whereas in Japan it was known as the VIC-1001.

The BASIC built into the VIC-20 was the old BASIC 2 from the early PET days, rather than the later BASIC 4. There were probably two reasons for this choice. The prototype VIC-20 was being prepared at a time when BASIC 2 was still the standard PET BASIC and the new BASIC 4 required a bigger interpreter and so needed more ROM chips, which would have made the VIC-20 more expensive. Commodore relied on software houses and user groups to develop suitable packages to provide the missing commands needed for high-resolution graphics and so on.

At least one advantage of using the same BASIC was that there would be an element of compatibility between the VIC-20 and other PETS, except that the screen was smaller and the internal electronics so very different that rewriting PET software for the VIC-20 became a challenge for the large number of private software writers that had sprung up by this time.

With the introduction of the VIC-20, Commodore were rapidly being accused of ignoring their business customers. The image of the PET, and indeed the later CBM Professional Computers, was still of a hobby machine, and the introduction of the VIC-20 only served to emphasize Commodore's apparent concentration in the consumer electronics market, despite the existence of the 8000 and 9000 computers and a wide range of powerful disk drives and printers.

At the end of 1982, Commodore were talking about a large new range of computers, to include the MAX, a very low-cost computer aimed at the video games market and using plug-in cartridges; the P500, a 40-column colour business machine using the same video chip as the MAX, but with

a full-size keyboard and aimed at some of the business market; and the Commodore 64, a machine half-way between the MAX and the P500, which would run games or other software written for the MAX, but also be suitable for use on the fringe of the business market. There was also to be a 700 series which was unashamedly a business machine and which would be supported as such.

This new 'family' of microcomputers was to offer the customer a broad alternative in price and performance with colour, larger memory than before (after all, memory chips were becoming extremely cheap), portability, and other significant features not found on the earlier Commodore machines.

As it turned out, the MAX was never released, probably as a result of the huge price drop of the VIC-20, which would have made it an unattractive buy, and the P500 was very much a 'will it, won't it' machine and was only produced in very limited quantities, probably as a result of the uncertainty of its place in the market.

In the end, it was the Commodore 64 which stole the show when it was launched in early 1982 and, by the middle of 1983 it was available in large enough quantities to make it a cheaper and versatile alternative to other machines on the market.

Its sophisticated colour graphics made it ideal for games enthusiasts, whilst the 40-column screen and interface capabilities made it a useful work horse in small business applications. At the end of 1983, Commodore introduced a semi-portable version called the SX64 which had a small built-in colour monitor as well as a single disk drive. About the size of a large brief-case, it could be carried and operated anywhere with a suitable mains supply, making it ideally suited to certain data collection applications.

With the C64 well established as a low-end business machine, and a popular home machine, Commodore started looking to a new generation of machines to replace it with.

It was in 1983 that first rumours of a co-ordinated range of computers were heard. Their numbering scheme was the subject of much discussion with machines such as the 132 and 264 being mentioned. There were machines with real keyboards, membrane keyboards, and built-in speech synthesis and varying degrees of memory.

These machines were Tramiel's swansong for, in July 1984, before any were in production, he left the company he had started and went out and bought one of his major rivals, Atari.

Why did Tramiel leave? There are many stories around, one of which concerns his desire to have his son become part of the board. This was

not necessarily as nepotistic as it sounds, since he was involved a great deal with Japanese companies whose obsession with family concerns is well known. But his efforts were thwarted by the rest of the board, and so he quit. This account may not be absolutely true, and is certainly not the full story, but it does explain a very unusual move.

The fact that he had taken some of his staff from Commodore, and several very complex legal wrangles over technology agreements and who owned the rights to what chips, all led to great confusion in the Commodore camp. In the end, two new machines, the C16 and the Plus 4, were released late in 1984. They were the remnants of the 264 series of computers and their introduction caused a wave of apathy in the market.

The Plus 4 was a true 64k home computer, while its smaller brother, the C16, had 16k of memory. The graphics and sound were inferior to the C64, but the BASIC, whilst based on that in the C64, was very much more advanced. But, after a year's delay and confusion, the machines didn't find their true potential and both failed to make any impact.

The fact that the C16 and Plus 4 were almost totally incompatible with the C64 was seen by many as Commodore shooting itself in the foot. Even as these machines started production, a new version of the C64 was being considered. It had to have 80 columns available, and a decent BASIC, and be well packaged. As an added bonus, it could also have a second-processor option, a Z80 perhaps, to give accessibility to CP/M software. So was born the Commodore 128.

But the new management at Commodore still had two major projects in hand. A Commodore version of the IBM personal computer, and a sophisticated multi-tasking machine based on the Z8000 chip following a technology agreement with Zilog, the company responsible for the 6502 processor's main rival, the Z80.

In addition, there was a third machine which K.U.J. (Kindly Uncle Jack - as Tramiel is sometimes referred to) had under his belt. This was the Amiga Lorraine, over which there seems to have been much legal hassle between himself and Commodore.

The Commodore PC is now launched, whilst the 'Zee' machine, or 900, seems to have retreated into the undergrowth. Now the move is towards launching the Amiga. And that is were the story ends . . . for now.

K.U.J. has pushed Atari into some interesting machines, whilst those left in Commodore are still reeling from the C16/Plus 4 episode. Stability is on the horizon with the three new machines, the C128, the PC, and the Amiga, but who knows where Commodore will go next.

--oOo--

MCT BASIC

by Jim Kennedy

Background

BASIC, like most computer languages, is continually growing and changing. Commodore versions of BASIC are no exception. The Commodore 64 (as well as the VIC 20) uses a version of BASIC known as Commodore BASIC V2. The C16 and Plus 4 use the newer Commodore BASIC V3.5. This new V3.5 version added some additional commands such as ELSE and the luminance level command which are meaningless to the older 64. On the other hand some features such as sprites on the 64 were omitted from the C16 (from now on I shall use C16 to mean both the C16 and the Plus 4) and consequently BASIC V3.5 did not include the ability to control them. Finally, the new V3.5 machines use a new tape format, and while it is possible to save a program from a PET onto tape and load it into a 64, this tape compatibility does not extend to the C16.

One-way compatibility

As the saying goes, 'I have some good news and some bad news; first the good news.' Some of this incompatibility has now begun to disappear. MCT (Micro Component Trading Company) have developed a version of BASIC V3.5 for the 64 that combines the best of the new with the old. MCT BASIC accepts all the normal V3.5 commands, even if they are meaningless, so as to retain compatibility with programs written for a C16. They have also added some commands to the standard V3.5 BASIC to control the 64 features, such as the sprites, that are missing from the V3.5 machines. To illustrate these points, let us take a look at two commands.

First is the COLOR command. On a C16 this command is given as:

COLOR location, colour, luminance

Location refers to background, foreground, etc and is a number from 0 to 4. Colour is specified as a number from 1 to 16. Luminance is a number from 0 to 7 but does nothing to the 64! It is there for compatibility only.

Our second example is the MCT BASIC ENV... command. The sound envelope may be changed on the 64 but not on the C16. Hence it is missing from the V3.5 language. Since most 64-owners would like the ability to change the sound envelope in BASIC, an ENV command has been added which is not in the original V3.5 BASIC. (A FILTER

command has also been added to supplement the VOL and SOUND commands of V3.5 BASIC.)

The effect of MCT BASIC is to make programs written for a C16 transportable to a 64. The reverse is not true. Even programs written on a 64 using MCT BASIC will not, in general, be transferable to the V3.5 machines due to these 'extra' commands which neither a C16 nor a Plus 4 could understand. MCT BASIC can therefore be thought of as a combination of V3.6 BASIC plus some additional features.

Remaining incompatibilities

Next is the bad news; there are two areas where MCT BASIC cannot make V3.5 programs compatible with the 64. As mentioned before, the tape format of the V3.5 machines is different from previous CBM machines. Consequently, your 64 cannot read a C16 tape. You must key the program into the 64 directly. On the other hand no such problems arise when using disks since the disk format for both machines is identical. The other area where it is not practicable to make things compatible is PEEKS and POKES and machine code programs. Of course, PEEKS and POKES can be changed when keying in a program, as one does when converting a program from say a PET to a 64 or a VIC 20. But there is not much the average person can do about machine code programs, as there is no easy way to make them compatible. These are areas in which MCT BASIC (and any other utility program for that matter) cannot help you much.

Programming aids

Tape loading of MCT BASIC took 2min 55sec. It would not load with a 1541 Flash unit operating but worked fine with it turned off. The copyright notice you get after loading shows 26,362 bytes free which reflects the fact that MCT BASIC takes up a little over 12K of RAM. One very nice feature is that the dreadful blue on blue screen colours have been replaced by dark grey characters on a white screen.

The first command I checked out was 'RENUMBER'. As some of you are aware, Simons' BASIC has a RENUMBER command but it only renumbers the line numbers, not the numbers following a GOTO, GOSUB, or THEN. That omission makes Simons' BASIC not only useless, but dangerous, as far as renumbering is concerned. I am happy to say that MCT BASIC does renumbering properly. I also tried AUTO; NEW followed by OLD - which recovers a program you have inadvertently lost by the NEW command (providing you have not typed in anything else in between); and HELP. All these programming aid commands worked well. There are

also other commands including TRAP/RESUME/ERR\$ and TRON/TROFF. All very useful.

Extended keyboard functions

Next in line for testing were the extended keyboard functions. These are extra functions where the Back Arrow key at the top left of the keyboard becomes an ESCape key which, when used with other keys, implements 17 new screen editing functions, including: automatic insert mode; delete a line; insert a blank line; move cursor to beginning of line; move it to last character in a line; screen scrolling both up and down; and setting up of reduced size screens. These ESC sequences can also be used in program mode. Another useful feature is that you may program the four function keys to make them represent almost anything you want. For instance you could enter

```
KEY 7, "DLOAD"+CHR$(34)+"*"+CHR$(13)+"RUN"+CHR$(13) .
```

Then hitting the F7 function key would LOAD and RUN the first program on a disk.

They also gave the RESTORE key two functions. Used with STOP it results in the usual warm start, but with the CTRL and CBM keys it does a cold start. These features are all nice and, although few people will use all of them, one or two them will be of great benefit for certain users.

Graphics and sprite commands

I tried a few of the graphics commands and they all worked just as stated in the manual. For anyone who needs to put boxes, circles, triangles, or to draw lines, etc. on the screen these commands will make life much easier. I did not test the sprite commands extensively but they seem to be straightforward and easy to use, like the others, and they make life easier than all those PEEKS and POKES one uses with BASIC V2.

Better BASIC

The ELSE/DO/LOOP/EXIT/UNTIL/WHILE commands included in MCT BASIC are at the heart of BASIC V3.5 as they are the commands that allow more structured programming. A short series of examples of these commands are given in the 23 page manual for people who are unfamiliar with them. A very useful set of PRINT USING commands are included for formatted output such as

```
100 PRINT USING "#$,###.##"; .67, 1234.56, 987.6
```

gives an output as follows:

\$0.67 \$1,234.56 \$987.60

One small niggle as far as British users are concerned is that the dollar sign (\$) is the default for money. The pound sign (£) may be used but you must use the PUEDEF command to change it. It is not a major drawback, but it would have been nice to have had the two money systems side by side rather than having to change the default one. Many other useful items are included in the PRINT USING command. You can put plus or minus signs before or after a number, align all numbers on a decimal point, divide numbers into thousands, print number scientific notation (eg: 5.22E17), centre a string, right-justify a string, and truncate a string to any number of spaces.

I should mention at this point that some PRINT USING functions can be dangerous at times. That is because they either have not got proper rounding routines or they truncate the figures. Consequently, I checked out MCT BASIC in this respect. While not claiming my methods to be complete, or even extensive, MCT BASIC worked in all cases. For instance, 0.34567 gave 0.3, 0.35, 0.346, etc. when the the significant figures were incremented one by one. It also performed correctly when I forced the output into scientific (exponential) notation. Full marks to MCT for making sure this was done properly.

There is a modified MID\$ command. RESTORE commands can now specify a line number or can be used as previously without one. The GETKEY Z\$ command can be used to replace the following:

```
GET Z$ : IF Z$ = "" THEN . . .
```

All very much an improvement on existing Commodore BASIC V2.

Disk commands

The MCT BASIC disk commands (sometimes referred to as DOS commands) are just like V3.5 disk commands. They even included the BACKUP command so as to make it compatible with the original V3.5 commands. The reason I mention the BACKUP command is that almost no one can use it! You must have a dual disk drive (two singles won't do). CBM has only made dual disk drives for PETs and only a few 64 owners use these type disk drives. However, MCT BASIC is merely reflecting what BASIC V3.5 contains.

One small item was not in the manual and that was the equivalent of the BASIC V2 command 'Save and Replace'. The SAVE "Name",8 is replaced by DSAVE "Name". However, the old SAVE "@0:Name",8 becomes DSAVE"@Name" (note both zero and colon are omitted). Of course, this 'Save and Replace' command contains the infamous bug and should be used with some caution.

STARTING WITH COMAL

Ingvar Gratte, Prentice Hall £7.95

by Brian Grainger

This book is the fifth title on COMAL to be published in the UK. As the author says at the end it aims to teach structured programming and top-down design. The author is a Swedish teacher who uses Commodore COMAL versions predominantly throughout the book. As I was involved with reading and commenting on the manuscript it also means the book is well researched!

I should say from the outset that this book was a long time in the making, which shows a little in the various references to different COMAL versions. The original manuscript was written at the transition from 0.11 to 0.12 PET versions of COMAL and I suspect it has been recently updated to cover the 64 versions as well. This may lead to some confusion, as the COMAL standard was really only finalised with the latter versions. Earlier versions were steps along the way.

Quite simply, this book is in direct competition with 'Beginning COMAL' (Christensen), as it is a teach-yourself book on COMAL. I believe 'Starting with COMAL' is better. I find it less childish and it has numerous simple exercises to reinforce the points in the book.

The book follows a natural progression from simple programs involving input and output, through conditional structures and loop structures, to use of procedures. The final chapters cover the more complex subjects of array variables, DATA statements and file handling. Random (or relative) files are covered in the latter, which is somewhat unusual.

The text is written in such a way as to introduce some points then provide lots of simple exercises for the reader to carry out. On completion, more points are introduced and so on. This makes the book fun to use because one can actually get on the computer while learning, rather than just reading the book by itself.

All the important niceties of programming that some programmers think they can avoid are introduced painlessly as a matter of course. I am talking in particular of remarks to indicate program title, version and author, AND THE USE OF STRUCTURE DIAGRAMS. Extensive use is made of structure diagrams throughout the book. On completion of the course the student should realise just how valuable they are.

Another feature of this book that I think is unique is that some of the exercises are deliberately designed so the answers don't work! Just

like real-life programming. A valuable way of learning.

In reading the text I have found a couple of errors. One is caused by a change from SELECT OUTPUT"LP" to SELECT OUTPUT"LP:" in standard COMAL. The other relates to obtaining random integers, which will not apply to Commodore COMAL versions as a COMAL function exists to do this.

All in all, this is a good teaching book that I think the newcomer to structured programming will find helpful and fun to read.

--oOo--

GETTING ROUND AUTO LINE FEEDS

by Lee Allen

Commodore computers do not send a line feed character to devices selected with file numbers less than 128. For this reason many users select the 'auto line feed' mode on their printer. There are however occasions where line feed is not wanted. In my case I wanted to indicate the position of the perforations between labels for setting-up purposes but did not want to move up the paper in the process. Another example would be where an overstrike character is required. Many members use Epson printers, which do not have a software facility for deselecting 'auto line feed' mode. Therefore you cannot normally print without a line feed when 'auto line feed' mode is selected.

The short program below shows how this may be achieved. It relies on the fact that the printer will print the contents of its buffer as soon as graphics mode is selected even if subsequently sent a 'cancel last print line' command. This works with the Epson FX80+ printer and probably other Epson models. Strictly speaking, this is a logical 'bug' in the printer firmware and so it may not work with other printers. If it doesn't, try sending the 'reset' command instead of the 'cancel' code.

```
10 open 4,4
20 get q$:if q$="" then 20
30 print#4, "-----";           :' perforation position
40 print#4,chr$(27);"k";chr$(0);chr$(0);      :' dummy graphics command
50 print#4,chr$(24);               :' cancel code
60 goto 20
```

--oOo--

USING 'SCRIPT' IN SUPEROFFICE

by John Barrs

Switching in and out of Superscript from Superbase is really quite simple, and provides some useful applications. This note is designed to demonstrate the sort of thing one can do, and so I'll begin with a simple example. Some may find it a bit pedantic and boring, but we all have to begin somewhere.

This little program demonstrates the loading and outputting of a file to either screen or printer.

```
5 display @0@10,2"Document to be 'scripted' to printer/screen"
10 display @0@10,4;"filename: ";@10,6;"drive: ";@20,6*0";
    @10,8;"scr/prt "; @20,8;"s "; @0
20 ask &16@20,4;y$:if y$="q"or y$="Q"then menu
30 ask &1@20,6;x$:if x$=""then x$="0"
35 if x$="0"or x$="1"then 40
36 goto 30
40 ask &1@20,8;z$:if z$=""then z$="s"
45 if z$="s"then z$="v"
46 if z$="p"or z$="v"then 60
47 goto 40
60 f$=x$+"."+y$:gosub 2000:goto 5
```

This first box of code merely asks for the name of a file, the drive it is on, and whether to output the file to screen or printer.

```
2000 rem output via script
2010 rem f$ contains file to be output (as d:name)
2020 script "ea↑+chr$(18)+"nb"+chr$(34)+f$+chr$(34)+chr$(13),r
2030 a$="g3↑+chr$(18)+"lm10:rm80:of25:tl60:pl66:vp5"+chr$(13):
    script a$,r
2040 script "g4↑<esc>l"+f$+chr$(13)+"<esc>o"+z$,r:return
```

Looking at each line of this coding in turn:

2020 calls script with a series of SUPERSCRIPT commands:

ea erases all from the script area

↑ tells SUPERSCRIPT that another command follows; i.e. it is a command delimiter

nb etc sets a comment with the file name in quotation marks 'chr\$(34)'

r returns to program control

This clears any junk out of the editor area and sets up the usual sort of comment to give the file name. chr\$(18) is the <RVS> key, the usual format command. NB: This comment line will appear on line 2 of the editor with a blank line above. Note also the line delimiter chr\$(13) to terminate the line.

2030 uses a different technique - it puts the commands in a string and passes the string across. The commands used are:

```
g3↑ = 'goto line 3 (see note above) and expect another command'  
chr$(18) is the <RVS> character, another format command follows  
lm10 etc is the format string
```

This string is terminated with chr\$(13) and passed across to the editor (note the 'r' for the return from the editor).

2040 is really the working line for this application:

```
g4↑ at line 4 = 'and expect another command'  
<esc>l = 'load f$ . . .' the file name is in f$ as d:name  
<esc>o = 'output', whether to screen or printer, is controlled by z$
```

The <esc> key is the SUPERSCRIPPT command key. Note the chr\$(13) to complete the load instruction.

In other words, it is really quite simple, all you have to do is to remember what you would enter into the editor and pass it through from Superbase. Whether it is worthwhile doing it this way is open to question, but there are valuable uses, and I will try to indicate one of them now that we've got hold of the principles.

Always specify a GOTO number, this will help ensure that you don't overwrite.

```
chr$(18)           is interpreted as the <rvs> format command key  
Up arrow ↑       is interpreted as a command delimiter  
don't forget the chr$(13) to act as line terminators
```

The next application is more real. Assume a Superbase address file with names and addresses in [name], [line1], [line2], etc, and a client reference in [ref]. I assume also that there is a Superscript file called "myaddress" (not everyone can afford headed notepaper!), and another Superscript file called "stand.letter". What is required is to place the client's name and address on the left of the sheet, my address on the right of the sheet, to add the date on the next line, and the client's and my references on the next line together. The particular client's and my reference will be input from the screen, but

this process could easily be automated. Then the standard letter is to be loaded and printed. The sort of code that is needed is as follows:

```
.
.
.... get date in A printable form in dt$ and spaces in sp$
.
.
5000 script"ea↑<esc>|myaddress"+chr$(13),r:rem clear the script area
5001 rem and load myaddress
5100 ask"client code";a$:select (a$):rem select requested client
5200 script "g2↑"+[name],r
5300 script "g3↑"+[line1],r:rem pass client name across
5400 script "g4↑"+[line2],r:rem NB. do not put these on
5500 script "g5↑"+[line3],r:rem a single line, each call
5600 script "g6↑"+[line4],r:rem to script must be on a
5700 script "g7↑"+[line5],r:rem separate line
5800 script "g8↑ +sp$+dt$+chr$(13),r:rem pass date across
5900 ask "my reference";b$
6000 c$="g9↑"+sp$+"your reference:"+[ref]+sp$+"my reference: "+b$+
chr$(13)
6100 script c$,r
6101 rem pass the two refs across
6200 script"g10↑<esc>|stand.letter"+chr$(13)+"<esc>op",r
6201 rem load the standard letter
6202 rem and output it to printer
.
.
... if you are going to go back, you may find that you may get away
... with 5100, but it is safer to do the 'ea' of 5000. Incidentally,
... controlling script through Superbase is a noisy business,
... (at least, it is on my Pet) and you need strong nerves or thick
... ear drums. NB. Don't forget to have a rational way out at 5100,
... if you have finished, just hitting <STOP> is somewhat inelegant.
```

Some points must be borne in mind. Firstly, for adding the client name and address on the same lines as myaddress, you must not add chr\$(13) to the lines, and you must not be in insert mode. It is necessary to go into script first to ensure that this is so. If you are in insert mode, then myaddress will be completely disoriented. If you are not in insert mode, then if you add the chr\$(13), then you will delete everything to the right on that line. Secondly, you must make

sure that you do not have your Superbase fields too long to fit on, or else they will overwrite myaddress. The same applies to the references as well. You can of course concatenate them. Thirdly, you could concatenate lines 5200 to 5700, but you must only have one call to script on a line, e.g.

```
c$="g2↑+[name]+"<esc>g3↑+[line1]+"<esc>g4↑+[line2] . . . :  
  script c$,r
```

Fourthly, you must be very careful to know where you are so that you do not overwrite something already in the file. Once organised, however, you could pass information across into any part of the script file from either the screen or a database file. Of course, if you do not want the standard letter, or if you wish to make major amendments to it, then you can always call script without the 'r' of the return. The effect of this is to put YOU into the script editor, that is with manual control, but to continue with your Superbase program when you (eventually) exit by pressing <esc> <run/stop>.

--oOo--

ASSEMBLERS FOR THE 64

by Chris Green (from the Sultanate of Oman)

Ever since I bought my C64 I have been trying to get a good assembler development system for it. The following notes are the result of my experience with the assemblers I have bought and tried out over the past 2 1/2 years or so. They are presented in approximate order of cost.

1) INTERCEPTOR-ASSEMBLER 64 - Cassette (about £5)

This has now been superseded by a new offering from Interceptor. It is a real waste of time and money. Written in Basic, slow, using non-standard syntax and offering virtually no extra facilities. Definitely not worth even its relatively low price.

2) MASTERCODE ASSEMBLER and book 'MACHINE CODE MASTER'

Cassette £14.95, book £6.95 published by Sunshine

This is all written in Basic, listings and explanations are provided in the book, the cassette is a compiled version, and also, of course, avoids the need for typing it all in. An editor and various debugging tools are included. As a whole this is a good introduction to assembly programming for a beginner, but I feel it is too slow, the editor is clumsy and the assembler is not very sophisticated. Although it is a good learning tool and probably useful for developing short routines in assembler, I would not like to write a large program in assembler with it.

3) BEGINNER'S ASSEMBLY LANGUAGE PROGRAMMING FOR THE C64

Honeyfold, Dr. Watson series (£10 to £15, I think)

This is definitely a tutorial package, it is of little or no use for program development. As a teaching tool it is reasonable, but suffers from the major disadvantage of using non-standard mnemonics for the 6502/6510 op-codes. It is all in BASIC except for the separate monitor, which is quite useful (and fairly standard) in itself. The book gives quite a lot of useful information about the C64 kernal routines and the comparable VIC-20 and PET ones.

4) SIMPLY ASSEMBLE - Simple Software Ltd. (£20+ on disc)

Initially this appears to be a reasonable and quite professional package, but it has major disadvantages. It is written in BASIC and a compiled version of the assembler is provided, this is 92 blocks long and so takes ages to load. It is still slow and not very powerful, no macros for instance. The pseudo-operators are not standard. The assembler, editor and loader are all separate programs and have to be loaded each time they are used. The disassembler sounds quite good as it is a labelling disassembler which can produce source code to be edited by the editor. But it is incredibly slow and thus virtually useless. The editor is the one redeeming feature: it functions quite well and this is the only package I have used that provides a dedicated editor, rather than adapting the Commodore BASIC editor. Overall Simply Assemble is not worth its fairly high price.

5) COMMODORE ASSEMBLER DEVELOPMENT SYSTEM (disc £24.95)

This comprises a very powerful assembler, editor, loaders, monitors and cross-reference-listing generator. The documentation is adequate but not outstanding. It is well written in machine language and is thus

quite fast. The edit, assemble, load, debug process is tedious however as each program has to be loaded and run individually. The assembler always has to be reloaded after using the editor and there is no way of automatically linking from one to the other. The editor is just an extension of the BASIC editor, adequate but not brilliant. The monitors are fairly standard, one loads at \$8000, the other at \$C000. There is a bug that prevents the X (exit to BASIC) command working correctly. The assembler is very powerful, has a very good macro facility and is the only one I have come across with an 'include' file facility, quite useful. There are some minor bugs in the assembler but they can be overcome.

I have used this package a lot and it is quite good value for money for a comprehensive development package. It is a pity a little more effort could not be put into getting rid of the odd bugs and making it into a more integrated suite of programs.

6) ASSEMBLER - 64 from ABACUS (disc - around £30)

This offers similar facilities to the Commodore package. The assembler is not quite as powerful but the package as a whole is rather better integrated, thus simplifying the program development cycle. The documentation is quite good. The monitor includes some powerful debugging tools (better than Commodore's) but cannot be relocated. On the whole I think I prefer the Commodore package but this one might suit other people better, I recommend a look at it before buying, as it is a bit out of the ordinary in the way it works.

7) MACHINE LIGHTNING by Oasis (cassette or disc £29,95)

This offers more than an assembler development system as it includes a package of graphics and sound subroutines for use in games programs. I can comment only on the assembler package. It is a very nicely integrated system; assembler, editor and monitor are all loaded together and stay in memory so no reloading is needed during the program development process. Very many nice facilities are included and it is difficult to fault this package. The only weakness is the editor, which although it has quite a few nice facilities is still only an extension of the BASIC editor - perhaps some would rate this an advantage. The assembler is not quite as sophisticated as Commodore's but offers a simple macro facility and source-file linking. A Centronics printer interface is built in and cross-reference tables are output automatically, both very useful. Overall I think this is my 'best buy' for serious assembler programming on the C-64.

MIKE'S MEANDERINGS

by Mike Todd

Everybody's talking about the Amiga. As if we didn't have enough to do, delving into the innards of the C128 and the 1571 disk drive! Despite the fact that few have actually seen an Amiga (once known as the Amiga Lorraine) the initial specification appears extremely exciting and it is a machine that will do more than most that are on, or expected to be on, the market.

One of our problems is that the processor at the heart of the Amiga is no longer the 6502 or one of its clones. Instead, we have the 68000 processor, a 16/32-bit version of the 6800 which should at least have some similarity with the 6502 in concept if not in detail.

Inevitably, like the PC10 and PC20, ICPUG will have to make a decision on whether or not to 'support' the new machine as it is alien to our existing environment. The PC10 and PC20 are both 'copies' of an existing machine and therefore, in theory at least, users could get software and support from the IBM PC users group, but the Amiga is a uniquely Commodore product.

Exactly where this will lead us is anybody's guess.

I don't want to go into a full specification of the Amiga, since it's going to be quite a while before we can go out and buy one, however I thought a brief discussion might be useful.

In appearance, the Amiga looks something like the PC10 with a white box sitting underneath the screen (an optional extra) and a slim-line keyboard on a flying lead. The front of the box has a single slot containing the disk drive - an 800k 3.5 inch drive - and a panel covering the main expansion slot. On its back panel are all the other interface connections for printer, external disk drives, modem, colour monitor and loudspeakers (left and right since we're talking stereo!). Joystick and mouse ports are round the side.

Inside, the processor runs at a fast clock speed of 8MHz and the Amiga's performance is further improved by the three additional 'processors'. In keeping with Commodore's tradition of giving chips names (remember VIC and SID), these have the delightful names of Agnus, Portia, and Daphne.

Agnus handles the graphics, Portia the main interfaces (including sound), and Daphne the display controller. I leave it to you to work out the origin of the acronyms.

These simple descriptions of the three chips belie their immense power. To say that Agnus is a graphics controller is an understatement: it is a graphics animation controller which can get on with drawing a line (which it does VERY fast) or moving a section of the screen while the main processor is doing something more important. The graphics facilities are enhanced even further by Daphne, which controls both colour and sprites and lots more besides.

Portia looks after the disk and analogue output, but all three chips seem to share a little of each other's responsibilities and together they make a very powerful team indeed.

If the graphics of the Amiga are something we've never seen the like of before, then the sound should knock us out! Sound is generated from a digitized form stored in memory (some may remember the VMM and MTU packages based around an 8-bit version of the technique first pioneered by Hal Chamberlin). The technique is used on the infamous Fairlight synthesizer and is the most powerful and effective method of sound generation there is - near-perfect speech generation is a doddle! I could ramble on about the sound of the Amiga for ages, but I won't. I'd rather try the machine out to see (or rather hear) if the fantastic claims made for the sound side are valid. I suspect they are.

The system software has been the subject of some discussion over the past few months, and it appears that the actual operating system is based on Tripos, and written here in England. However, there are rumours that an emulation package will be available to make the Amiga operate like an IBM PC. It cannot be a perfect emulation as the whole system is different, but it should be enough to run some of the more straightforward packages (including Lotus 1-2-3).

With a complex system of icon graphics, the Amiga can operate very much like the Apple Macintosh but very much faster. In fact, the speed of the Amiga has been commented on by some who have been able to get hands-on experience of the machine. It is, by all accounts, one of the fastest personal computers around.

Add-ons include extra memory and a video digitiser: put these two together with a colour camera and, in theory at least, you have the capability of video-processing your colour slides just like the pros! It should even be possible to 'grab' frames from a video recorder and manipulate them.

Anyway, that's a first brief look at the machine. Next time we should have more hard news. In the meantime, the C128 should be hitting the market and work must begin to support that machine.

OBSOLETE?

When is a computer obsolete? When is a computer a non-starter? These two questions arise out of one of our members' letters in the last newsletter. In this, the 4000/8000 series is described as obsolete and the 500/700 as non-starters.

Well, I can't deny that the 500 is a non-starter. It simply never emerged on the market in anything more than a minute trickle, and in any case it was very slow and a fairly poor machine. On the other hand, the 700 appeared in a sort of dribble, and there are actually some very happy users around. The 700 was a significant machine from Commodore; the fact that they didn't support it made it difficult to get software, but it is fast and extremely versatile.

As for the 4000/8000, there are still a huge number of these machines around in constant use by business and home computer users alike. Commodore themselves have recently brought out two new versions of the old 8032. The 8296D, which is a 128k version of the 8032 and is fully compatible with it, but with a built-in 8250 dual disk drive. There is also a version with built-in hi-res graphics.

While Commodore may now see these as end-of-the-line machines, there are still many users about and there is still a lot to be said about these machines. If Commodore and the dealers don't support them any more, as seems likely to occur by the end of the year, then it is the user group who should keep the ball rolling.

Yes, ICPUG will take a look at the new machines including the C128, the PCs, and the Amiga and will, as far as possible, offer to support them. Unfortunately, such back-up requires manpower and for this we rely a great deal on a swarm of beavering ants who spend the majority of their waking hours (and some of the non-waking hours too, it would appear) providing the information and backup services our members have come to expect. This is often in return for little thanks from wives, husbands, boyfriends, girlfriends, employers, and - dare I say it - even members!

If those members who have the new machines in question are prepared to give us the material, we will publish it - but ICPUG cannot conjure up the information from nothing. The best we can do is try to get machines into the hands of the 'experts' to allow them to pry into the inner mysteries, but their time is inevitably limited and the more complex and numerous the new machines, the more difficult the task.

However, we shall engage our best endeavours!

--oOo--

MY LIFE AND TIMES WITH AN SX64

by Brian Grainger

As far as I can recall, every piece of Commodore hardware has had a review in the newsletter except for one, the SX64. Quite why this should be is beyond me as I think the SX64 is a very worthy addition to the Commodore stable.

Let me first of all relate why I got my SX64. As regular readers will know, I've been around since the 8K PET days. Since then I've bought three computers for my own use (and had one given me). I tend to look for a new computer about every 3 years. I look at the market and decide what machine is going to last that long! It started with the 8K PET with integral cassette, which was absolute magic in those days. As time went on I bought a 4032 computer, specifically the 'thin' 40 for compatibility reasons at the time. This was eventually fitted with an 80-column board, ZIF sockets to accommodate any ROM and character generator I might want, and it can also be attached to a modem for use with Prestel. This is my workhorse and, provided it keeps working, will remain so. In the meantime the 64 was given to me and I have slowly built up a good range of software for it but, except for COMAL, I do little development work on it: its main use is online Prestel, Compunet and COMAL.

About this time last year I decided I wanted a computer for my desk at work. The company were not going to get one just for my use, which was what I wanted, so I had to buy it myself. At that time I decided there were two options. Be brave and buy a Macintosh, or get an SX64. The price of the Mac was a problem but not insurmountable. What swung it in the end however was the lack of software for the Mac, so I sent my cheque to CBM (via John Bickerstaff) for an SX64 and MPS802 printer. Some time later it became a fixture on my desk at work.

Initial reaction to the machine by workmates was curiosity. When they saw it, 99 times out of a 100 the first question was, 'Can you read that screen?' The SX64 is an integral 64, 1541 disk drive and 5" colour video screen. Yes, 5" looks small, but so is my desk top. I have found in use it is perfectly adequate. I would not wish to use it 8 hours a day, but a desk-top computer is not used like that. It sits there turned on ready for use all day, but in reality is only used a fraction of the time. It now performs a very valuable function at work, mainly as a word processor for documentation, a scratchpad for rough notes and, with a program written in COMAL, as a number cruncher specific to

my line of work. The timesaving is enormous. Whereas, before, documentation had to be written, then sent to be typed, then checked on return, and then sent back for corrections, it is now done in one sweep by me alone. Instead of writing it, I type it on the SX64 using Easyscript. If I need a correction it is done quickly and, because I am both author and typist, the meaning of the document does not get changed during the process of generation! When I finally master Superbase, I hope to incorporate my diary and other things and banish paper from my desk completely!

Another story about my SX64 concerns the times I bring it home. During last winter I took a week's break and, because I was playing around with a Compunet modem that would only work with my SX64, I decided to bring it home for the week. You will have no idea how much more useful it was than my ordinary 64. The latter, because of all the cables to attach everything together, has one fixed place in my room and I have to bring a chair to sit by it. With the SX64 I could simply put it on the coffee table and relax on the couch while reading my Prestel mailbox. When I had finished I could simply put it out of the way in the corner of the room. Because it has its own video screen, it doesn't stop other members of the family watching the TV while you use the computer. Finally, come the day of my local regional group meeting, I could simply put the SX in a box on the back of my motorcycle and I was away. I couldn't do that with my PET or with the separate 64 and 1541 and TV system.

What do these little stories tell us about the advantages of the SX64?

1) It is not a toy computer. I have successfully used it at work. Because it is relatively cheap, one person can have their own computer so there are no access problems;

2) the all-in-one unit, with no trailing cables and no separate power supply to worry about, means that it looks elegant, is portable, and takes up little space;

3) the built-in colour video screen means that no separate TV is required;

4) it is rugged, as is borne out by the fact mine still works after several trips on the back of my motorbike;

5) it is fairly portable: I have hand-carried mine for 2 miles but it does tend to lengthen the arms a bit. Half-a-mile is more realistic.

6) the design layout is so good. The position of the cartridge port, on top, is much better than poking at the back of the normal 64.

Cartridge removal and insertion is so easy and takes up no additional space.

Are there any drawbacks with the SX64. Well, I would prefer an 80-column screen for business work, but I understand Superscript for the 64 does not split words between lines, so maybe this would solve that problem. The only other drawback is one shared with the normal 64, namely the BASIC. I resolve this problem by plugging in a COMAL cartridge, and this will still be better than the forthcoming Commodore 128.

All in all I rate the SX64, MPS802 printer, and COMAL cartridge a very useful business system that will last for a while yet. With the price of an SX64 falling (so long as you don't buy from Commodore) I rate it very good value for money. Laskys were selling them at £450 last Christmas, which is not bad for a 64, disk drive and colour video screen all in one!

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. . . AND PROBLEMS WITH THE SX64

by Dr Klaus Bung

I have an SX64 and use it to develop educational programs for a German publisher. I bought the machine because I have to take it with me on my travels and use it to demonstrate software in various locations. I expected to have a full equivalent of the CBM64 + Diskdrive + Monitor all in one box.

However I soon found that there are differences. The built-in monitor of the SX64 is so small that it is only useful in emergencies (the odd evening's typing in a hotel room). For all extended serious work, to say nothing of presentations to several people, a separate monitor or TV screen is required.

Even though monitors provide a better image, access to a TV screen is important because

1. in most larger hotels TV sets, but not monitors, are provided
2. when giving a presentation in a company often no suitable monitor can be laid on in advance or, if there is a monitor, my selection of connecting leads and plugs is not suitable. Even if a company promises to supply a 'suitable' monitor, I often find on arrival that it is not (Murphy's Law).

While the CBM64 can be plugged straight into a TV set OR a monitor

(i.e. the user has choice), the SX64, as supplied by Commodore UK, does not have an output signal suitable for TV sets.

This means that I am done for in the two situations described above (hotels and company presentation). In other words, the SX64 lacks the 'portability' for which it is advertised.

Commodore UK when asked if there was a device which enabled the SX64 to be used together with a TV set, said that none existed and there was no technical solution to the problem. I then approached Commodore Germany, and they had in fact a modulator (official Commodore product!), which I bought from a dealer for about £15.00. But why is it that this device is known only in Germany? The modulator is accompanied by a one-page leaflet explaining how to open the SX64 and how to bridge two points in the machine with a short piece of radio wire to provide a power supply for the modulator. Soldering at two points was required but, contrary to my fears, it was so easy that even I (entirely non-technical) could do the job and the TV set worked immediately.

The modulator has the product number 425 606 1-04.

The SX64 has another disadvantage compared to the CBM64 with separate accessories. It is impossible to run it with a cassette recorder. This annoys me for various reasons:

1. There is a certain amount of software, which I wish to study, only available on cassette. I have no access to it.

2. I have to convert some of my own programs or those sent by my publisher from disk to cassette and vice versa. This is impossible.

I solved Problem 1, grudgingly, by using the machine of a friend who has a cassette recorder but no disk drive.

However, I now want to transfer my publisher's cassettes onto disk for further study by linking my built-in disk drive with my friend's CBM64. We failed to address my disk drive. We asked a dealer for help: in vain - he had phoned Commodore and been told categorically, and without apology, that the SX64 disk drive could not be addressed by an outside CBM64.

This made me really angry because it implies that, in order to get a complete working system, I have to buy everything again, the CBM64, the datasette and the expensive disk drive. I can only conclude that, in this respect, the SX64 is either stupidly or mischievously designed.

This conclusion apart, is there any electronics expert who can help solve my problem?

--oOo--

JUKI 6100/DPS1101 PRINTER

by Barry Biddles and Mick Ryan

(Reproduced by courtesy of ICPUG SE, from their Feb'85 N/letter No24)

The JUKI 6100 printer sits at the top of a group of low-cost daisywheel printers which are taking over the bottom end of the daisywheel market. Priced at little more than a good dot matrix printer, the Juki is aimed squarely at people like myself, who require the daisywheel print quality but are prepared to sacrifice speed and extreme ruggedness in favour of low price. The DPS 1101 is a Commodore printer based upon the Juki, but having a different case and a serial IEEE interface instead of the Juki's Centronic interface.

The Juki weighs in at 27.5 lb, and measures approximately 20x14x6 inches. A small black panel in the cream coloured main moulding contains power and status indicators, three touch switches, and a slide switch to select printer pitch. A light grey three quarter top may be completely removed for ribbon changing or platen removal, but has a smoked transparent panel which hinges up for wheel changing. This panel carries scales showing text width in the three principal character sizes of 10, 12 and 15 cpi. (The machine also does proportional spacing, but here of course the text width depends upon the text itself, so there is no fixed comparison possible.) Looking inside, one is struck by the simplicity. The main internal feature is the massive bar, 3/8"x1.5", along which the carriage is free to roll in either direction if the computer is slightly tipped. The usual drive cables have been replaced by using the bar as part of a linear motor, positioning being obtained by reference to transverse grooves on the underside of the bar. The effect is to produce an uncluttered interior, with the maximum driving torque for the available power, and the minimum of lost movement. Moreover, there is nothing to go out of adjustment, no cables to re-tension after a period of use. The only penalty is the minor nuisance of having to replace packing pieces when transporting the Juki, as the carriage is not restrained at all when power is off.

The Juki uses an IBM ribbon cartridge, and this is quite clean and fairly easy to fit if new and with an uncoated leader. Otherwise it could be messy threading the loop of ribbon through the two guides. The Triumph-Adler compatible daisywheels are easy to change, as the whole solenoid head moves back so that the wheel may be picked out. Alignment

of the new wheel is automatic; one simply has to drop the wheel into place, close up the solenoid by means of a lever, and press the 'RESET' switch.

Paper is loaded in the usual way, past a single adjustable guide. When the paper rises in front of the platen it is quite usual for the top left corner to catch in the aperture in that clear plastic plate next to the paper. The cure is to bend the corner of the paper just a little between finger and thumb while loading it. (This problem always used to occur with the Spinwriter as well, so one can hardly count it against the Juki.) The Juki takes paper up to 13" wide, and can print up to 165 characters per line at 15 cpi, or 220 at 20 cpi (selectable from software), which is very good news for Mick Ryan, who prints out large blocks of spreadsheet using A4 paper in landscape.

One of the most useful features of the printer is that the character pitch can be controlled from software. From Superscript II, for example, one simply sends the command "pt15" to set the character pitch to 15 cpi. I find it convenient to use a dual-pitch wheel, a 12/15, and to use the 12-pitch for titles and the 15-pitch for text. Most of the articles in the newsletter are created using this system. By sending the appropriate escape code sequence the character pitch can be set to values other than the three preset values. Mick does this in direct mode, before starting to use the printer:

```
OPEN4,4:CMD4:PRINT#4,CHR$(27)chr$(31)chr$(7):PRINT#4:CLOSE4
```

The 27 is an escape warning to the printer that what follows are control codes not text. The 31 is the code to set the character width, and the 7 is the required width in 1/120" +1.

The print buffer

The Juki has a 2K print buffer, and I therefore expected that upon telling it to start, it would almost immediately free the computer for other use, meanwhile printing bi-directionally from its buffer memory. What actually happens is that it does not free the computer until just a few lines before the end of text, and it prints mainly left to right. Tom Cranstoun explained to me that this is a consequence of the fact that I always use right justification, and treat the printer as a 'type three' printer from Superscript. This means that Superscript sends it text which has been right justified by the 'even-white' method, in which the words are spaced out using increments of 1/120th inch, instead of by whole character spaces as would be done for the less

versatile 'type one' printers. When he listed the text file, I could see that it consisted mainly of control characters required for the justification, and so many of these are required that a few lines of text can fill a 2K buffer! The other question of it printing mainly unidirectionally is not fully explained, but is to do with printing full lines, such as right justified lines. When printing lines which are not completely full it does indeed print bi-directionally.

In operation

The sound emitted during printing is not especially loud, but has an unpleasant edge of high frequencies from the stepper motor. Even so, I find it much easier to live with than some of the early dot matrix printers, such as Commodore's. The Juki prints at around 17 characters per second. This may not be impressive compared to the word processors you may have seen in the typing pool at work, which would typically be doing 50 or more cps. Remember, however, that these machines could cost over £2000. It is the comparatively low speed, plus the less rugged construction, that allows the low cost printers to be so very cheap.

Text quality

When I compare the appearance of the print with that of a Spinwriter, I can persuade myself that the Spinwriter gives a slightly crisper image, with greater precision of character and line placement, but so it should at five times the cost! I can live with the difference.

The Manual

The manual is somewhat bigger than A5 and covers 44 pages, including commissioning instructions and running instructions. The latter includes how to set the ten DIP switches just behind the front panel, and tables of the escape codes required to access various special actions. To save other Superscript users having to work it out, the settings I use are all OFF except 4 and 5. The codes are in two groups, one of which is engagingly titled 'Word Precessing Functions'. I haven't dared to try them yet! Actually, I haven't used any of the codes because I only ever drive the printer from Superscript, which does it all for me. Working from BASIC, I am sure that I would find the codes extremely useful, as almost everything is programmable. It is even possible to go into 'graphics mode' and directly control the movement of the head, to draw graphs or generate special characters. (But it would be prudent to use an old wheel, to avoid wearing out the full stop.)

The manual provides ASCII code tables for eight different countries, and these are selectable from the DIP switches. Naturally, you also have to use the appropriate printwheel - this is not a dot matrix printer in which one can simply call up another character set from ROM.

The manual even contains interfacing information, in the form of a full description of the Centronic signals, complete with a timing diagram, and full details, including circuits, of the optional RS232 and 20 mA current loop interfaces.

The DPS 1101

The DPS 1101 is basically a Juki disguised as a Commodore. It has a different case, and uses the serial IEEE interface, but is Juki internally. Note that the Juki has been properly redesigned as a Commodore printer, not just converted to serial IEEE with a removable interface. The DPS 1101 is now the only daisywheel printer available from Commodore, since they discontinued the 6400 and the 8300 series printers that would formerly have been used with the larger CBM computers. Why Commodore is content to allow this section of their business to be taken by other manufacturers is a mystery, especially as they had such good machines in that slot.

Another mystery is why, with a perfectly good English manual available for the Juki, Commodore base the DPS 1101 manual on a badly translated Japanese document. The manual supplied had the usual dreadful Japanese-English, and all but incomprehensible technical explanations. When Mick complained about it, he was sent 30-odd pages of typed amendments which go part way but still leave a lot to be desired.

There was the usual Commodore hiatus with the ROMs, and the early machines had the wrong ones fitted. The latest correct ROMs (Autumn '84) were supposed to be numbered 003C, 071C, 8051 and SCU05A. On checking, Mick found SCU05A on one board, and 8051 and H0194 on the other. He could not find 003C or 071C anywhere but located an 013B and an 8340HAR. Commodore assured him that this was correct.

However, there may well be something wrong with the ROMs, as Mick experiences problems when running the printer from Multiplan. On DIP switch 1, pin 3 determines which type of ASCII code is required. It is factory set to OFF, for CBM code, ON being standard ASCII. From Multiplan, using the CBM position, the printer produces only numbers and lower case, and not upper case at all. Using the STD position, it prints in upper and lower case, but the wrong way round! Mick has informed Microsoft of the problem, and also Commodore. Each blamed the

other, promised to investigate and call him back, and didn't.

There are many facilities on the DPS 1101 which do not seem to occur on the Juki, of which the most amazing is that it is possible to run a program in the PET which sets up the printer to interpret incoming codes as different codes. Using this facility it should be possible to solve the case reversal problem mentioned above. The difficulty however is that the manual is so badly written that Mick cannot understand what to do, and bear in mind that Mick is very far from being the 'naive user' at whom the manual should be aimed! HELP from the club experts will be much appreciated.

Mick is very pleased with the print quality of the DPS 1101, claiming it to be every bit as good as a £1600 Diablo that he has used. He recommends the use for most purposes of the IBM Multistrike ribbon, as it lasts very much longer than the film ribbon which I use for the newsletter, and is only slightly inferior.

Price and availability

By shopping around you should be able to get the Juki for substantially less than £400. Watch the buffer size; there seems to be a larger buffer available at a higher price, but read my comments on right justification before deciding whether you will be able to benefit from this. Optional extras include RS232 or 20mA interfaces, and a sheet feeder. List price of the DPS 1101, before club discount, is £399.95.

--oOo--

SUPERBASE STOP PRESS

We hear that Superoffice for the C128 is quite a program. How does 10k for program lines and 54k for variables grab you? And editing goodies like autonumber, trap, trace, and so on? And you have SB and Superscript in Superoffice, surely a very cheap way into business computing.

We also hear a book of hints and tips for programming SB with contributions by Bruce Hunt, Simon Tranmer, and John Barrs is likely to be out soon at an affordable price. Those interested may write in to Precision Software to be on the mailing list for further information.

--oOo--

BUILT-IN HEX FOR THE PET

by Lee Allen

For years I have struggled with the lack of proper hexadecimal functions for the PET. Judging by the numerous hex/decimal and decimal/hex routines that have been published, I am not alone. Some time ago I decided that the time had come to modify the interpreter to provide intrinsic hex functions. By 'intrinsic' I mean not just a base conversion utility but a full implementation that allows the use of hex keywords within programs as well as command mode, used in exactly the same way as decimal numbers or variables.

The modification is fairly simple for experienced hackers (the average ICPUG member!) but not recommended for beginners. The extra code is slotted into unused areas of the existing interpreter memory map. If you have a 32k machine you will have to change the ROMs addressed at \$b000, \$c000 and \$f000 to EPROMs. If your PET is a 96k version the altered code may be copied into the RAM under ROM.

Once the changes have been made the following example program would be perfectly valid:

```
10 for i= &h8000 to &h8100
20 poke i,peek(i+&h200)
30 print hex$(i),val(hex$(i))/&hff
40 next
50 sys &ha000
```

DETAILED EXPLANATION OF SYNTAX

- 1) Hex numbers are accepted in exactly the same way as decimals. The hex number always has the prefix &h (in line with other implementations of Microsoft BASIC) and the legal range is &h0 thru &hffff. If an attempt is made to use an out of range value the message 'illegal quantity error' will result.
- 2) Hex strings may be generated with the new function hex\$(x) where x is any number, expression or variable that evaluates to the range 0 thru 65535. If x is outside the legal range 'illegal quantity error' is reported. The first three characters of the hex string are always <space>&h.

Both 1) and 2) convert to integers before conversion to hex.

- 3) The val(x\$) function has been extended to return the decimal value of a hex string. The string must be in legal range and have the &h

prefix. Spaces in the string are ignored. The string is evaluated from left to right. Leading zeros in the string are handled sensibly. The function returns when the first non hex character is encountered. Note that if the hex string is outside the legal range it is treated as a non-hex string. In this case the prefix &h would cause the value returned to be zero.

CHANGING THE INTERPRETER

Any alteration to the PET interpreter must be done with care so that existing entry points are not changed. If this were not done many non-BASIC programs would not run. This consideration requires the following minor changes.

- 1) The hex\$(x) function replaces the pos(x) function in the keyword table. The pos(x) function is lost but in practice is seldom used. If you do have a program that uses pos(x) the keyword will be replaced by hex\$(x) when the program is loaded. This will be detected when the program is run. The 'type mismatch' error will be reported. Change the hex\$(x) in the offending line to peek-198) or peek(&hc6)! This is an exact equivalent to pos(x).
- 2) In order to fit 'hex\$' into the space in the keyword table occupied by 'pos' all following keywords have to be shifted up one byte. As there is no free space in this ROM area, special measures must be taken to avoid altering the subsequent entry points. The problem can be overcome by changing the keyword 'rem' into the ' (apostrophe) character. (The ISO now recommends the apostrophe character instead of the 'rem' in all future BASICS - luckily!) The apostrophe is also quicker to type and its use makes the remarks easier to read. As 'rem' is tokenised it is automatically changed to the apostrophe when the program is reloaded. No retyping is necessary.
- 3) If a hex number includes the sequence 'def' the interpreter will think that the defined function is being referred to and will tokenise that part of the hex number. This is best overcome by changing the keyword 'def' to 'dfu'. Similarly, no retyping will be required with existing programs.

These modifications have been in daily use for the past year or so and no bugs or problems have been found. The only limitation I have discovered is that hex numbers cannot be 'read' into a variable from a 'data' statement - but then neither can an expression!

SPECIFIC CHANGES REQUIRED - PET/BASIC 4.0 (Numbers are hex)

Address	Change to	Comments
b000 thru b06f		No change
b070 thru b071	41 bf	Re-vector pos() addr field to hex\$()
b072 thru b0ef		No change
b0f0	a7	New rem keyword ... apostrophe
b0f1 thru b109		Code originally at b0f3 thru b10b
b10a thru b10b	46 d5	def changed to dfu
b10c thru b16d		Code originally at b10e thru b16f
b16e thru b171	48 45 58 a4	Hex\$ keyword
b172 thru b20b		Code originally at b173 thru b20c
b20c	00	
b20d thru be91		No change
be92 thru be94	4c d0 fd	"evaluate a variable" patch to unhex
be95 thru bf40		No change
bf41 thru bf8b		Empty space - code for hex\$ function squeezed in here ... see dump below
bf8c thru bfff		No change
c910 thru c912	20 3e fe	Patch to val() routine

Code for hex\$(x)

```

.: bf40 20 87 bd 20 2d c9 20 51 bf 98 9d 00 01 4c 96
.: bf50 c5 a9 20 85 ff a0 04 a2 00 a9 26 9d 00 01 e8 a9
.: bf60 48 9d 00 01 e8 a5 12 20 6c bf a5 11 48 4a 4a 4a
.: bf70 4a 20 77 bf 68 29 0f 20 3a d7 88 c9 30 d0 08 e0
.: bf80 02 d0 04 c0 00 d0 04 9d 00 01 e8 60

```

Code for "unhex" and val(x\$) patch

```

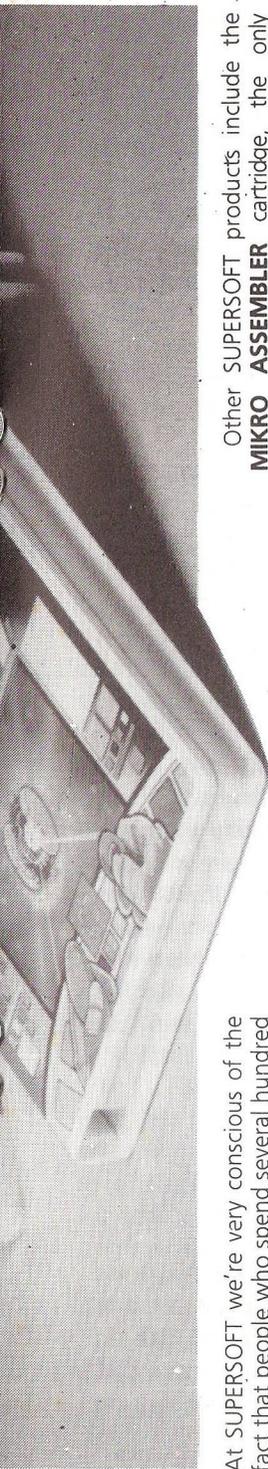
.: fdd0 c9 ff d0 03 4c 96 be c9 26 f0 05 4c a5 be a9 ff
.: fde0 85 62 20 70 00 c9 48 d0 4b a9 00 85 5f 85 60 85
.: fdf0 61 20 70 00 90 0a c9 47 b0 23 c9 41 90 1f e9 37
.: fe00 29 0f a2 04 86 61 18 26 60 26 5f 90 07 24 62 30
.: fe10 2a 4c 73 c3 ca d0 ef 05 60 85 60 90 d4 a5 61 f0
.: fe20 13 a5 5f a4 60 20 bc c4 24 63 10 07 a9 49 a0 fe
.: fe30 20 9d c9 60 24 62 30 03 4c 00 bf 4c 2d ca b0 03
.: fe40 4c 29 ce c9 26 f0 97 d0 f7 91 00 00 00 00

```

(I can supply anyone interested with a printout of the source code, if they send a largeish envelope to: Altek Instruments, Unit 30, Enterprise House, 44/46 Terrace Rd, Walton-on-Thames, Surrey KT12 2SD.)

***Choosing the right computer
is a good start — but can you
find the right software?***





At SUPERSOFT we're very conscious of the fact that people who spend several hundred pounds on computer equipment are looking to do rather more than play Space Invaders.

Financial planning is a rather grand name for something you've been doing all your life — making ends meet! Perhaps if Mr Micawber had used **BUSICALC** he would have been able to balance the books a little better.

For home, club or small business use **BUSICALC 1** should pay for itself in no time at all; for larger companies we recommend **BUSICALC 3**, one of the few really valuable programs that you can learn to use in a day.

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Imagine, if you will, life in the 22nd century: space travel is commonplace, and on the outskirts of the galaxy the first war between civilizations is being fought. A shortage of trained pilots has prompted the Federation to develop a computer simulation that allows raw recruits to gain experience without paying for their mistakes with their lives. With the aid of your Commodore 64 you too can learn to pilot the Interdictor Mk 3 craft. But be warned — this is no game!

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THE FINAL CARTRIDGE FOR THE 64

by David Chastney-Parr

The Final Cartridge, produced by H & P Computers of Rotterdam, has a switch and a reset push button fitted at the end of the normal plastic cartridge case. The switch enables the cartridge to be disabled while still plugged into the C64, a useful facility as the cartridge did not work when plugged into my buffered mother board.

My first Final Cartridge was supplied direct from Holland. Regrettably, not only had the parcel been opened by Customs, but the switch on the cartridge had been broken for it refused to move at all. H & P Computers, however, gave me permission to replace it. The cartridge contains a 16k ROM, eight other IC's and a few assorted components. The ROM gives extra code at the BASIC and Kernal locations.

The following review covers the UK version of the Final Cartridge (not all the facilities of the Dutch version work with a UK C64).

With the Final Cartridge enabled a new start up message is displayed

THE FINAL CARTRIDGE

80K RAM/ROM SYSTEM (C) H&P COMPUTERS

On checking how much store was now available for BASIC, the usual 38909 bytes free was disappointing, but the cartridge has memory read and write commands which copy 193 bytes at a time of the C64's memory. These commands can address any RAM location, including the areas under the BASIC, Kernal, and Character ROMs. The syntax is SYS65269 (or SYS\$FEF5) to initialise the routines followed by MR<source start address> and MW<destination start address>. The addresses for these and any other BASIC commands which need a numeric value can also be specified in hexadecimal (if preceded with the \$ sign) as well as decimal.

The function keys produce the following results when pressed:

F1 gives LIST:<return>	F2 - MONITOR:<return>
F3 - RUN:<return>	F4 - OFF:<return>
F5 - DLOAD <return>	F6 - DSAVE"
F7 - CATALOG:<return>	F8 - DISK"

The colon included with some of the commands prevents a syntax error message should the command be printed on a line with characters already there. For example, pressing F7 displays the directory of a disk in drive 8 on the screen without over-writing the program in memory. If the cursor is placed on the start of the line displaying the program

you want to load, pressing the F5 key causes a non-relocatable load to take place, five times faster than normal from drive 8, and the start and end addresses are displayed on the screen. F6 - DSAVE" enables you to save at high speed, and as all the disk commands default to drive 8 the closing quote after the filename can be omitted. Pressing F8 - DISK" and <return> reads the disk drive error channel without having to OPEN first or, by adding a command, the drive can be initialized, a disk validated or formatted, etc.

The cartridge provides additional toolkit commands such as AUTO and RENUMBER which default, if the start line and increment are not given, to 100,10. DELETE uses the same format as LIST, but a line range must be given. FIND lists all the lines which match a given 'string', command or variable, but searching for B will also find all references to B\$ as well. There is also a HELP command which lists the last line executed, useful for listing a syntax error, or the last line of the program if the FIND command has been actioned. DVERIFY checks a disk saved program at normal speed. APPEND and DAPPEND append a BASIC program to a previously loaded program, the line numbers are not altered. DAPPEND"program name" carries out a relocatable load with the start and end addresses being displayed, as with DLOAD"program name". The fast disk load and save can be disabled by using a secondary address of 2, e.g. LOAD"program name",8,2

I discovered that occasionally I had unreported load errors when using my early 1541 (a CBM-modified 1540) unit during fast loads and saves, so I used the above facility to load and save at normal speeds without error. Repeated attempts to reproduce the error with my newer 1541 produced no problems.

The Final Cartridge also supports turbo SAVE to cassette. A test with a 29,694 byte program produced the following results.

- Normal disk load 77 secs. Fast disk load 16 secs.
- Normal tape load 585 secs. Turbo tape load 67 secs.

The OFF command (F6) does not disable the disk and tape routines, so a program not previously Turbo-saved can only be saved by switching off the Final Cartridge. Having loaded the program, the cartridge should be re-enabled and the reset button pressed. If a BASIC program has been loaded it can be recovered by using the OLD command. All the extra commands provided by the cartridge, including the function key commands, which can also be typed in, can be abbreviated to the first letter followed by the second letter shifted.

The cartridge also supports a Centronics interface; the handshake being between pin M (PA2) of the User-port to pin 1 (Strobe) of the

Centronics interface, and pin 10 (ACKNLG) of the Centronics interface to pin B (FLAG2) of the User-port. Those of you who read my previous article on the Centronics interface (Volume 6, Number 2, page 118), will realise that this interface is yet another permutation of the control lines. Using the interface in direct mode worked well with all the secondary addresses quoted in the manual for the OPEN command, performing correctly on my Epson FX80. Of course, if you are using a daisy-wheel printer then don't expect to obtain Commodore graphic or reversed characters. I also checked the interface with Easy Script and Superscript, both of which operated correctly with the Final Cartridge enabled although, once loaded, the extra facilities cannot be accessed as the application takes control. Superbase64 did not work with the cartridge enabled.

On printers which support Bit Map Mode, the cartridge enables screen dumps. A text screen dump is initiated by pressing CTRL & L. A high-resolution screen dump can be obtained by loading the program and then pressing the reset button while pressing the CTRL key. F1 is then pressed until the required screen is displayed, then F5 starts a normal screen dump, with shades of grey representing a multi-colour screen, or F7 prints an inverse image. F3 returns to BASIC.

Pressing reset whilst pressing the Commodore key enters the built-in monitor. The monitor can also be entered by typing MONITOR, M Shifted O, or by pressing the F2 key. The monitor command syntax is similar to Supermon but a unique command is O (the letter) followed by a number. Quoted as a bank switching command, the number is used to set the low nibble of byte 1. So, entering O5 switches off the BASIC and Kernal ROM's but eXiting from the monitor resets the byte back to normal, so you don't crash when returning to BASIC.

A UK version of the Final Cartridge can now be obtained through H & P Computers' UK agent, George Lloyd, 9 Hornbeam Walk, Witham, Essex. Tel. (0376) 511471 The cartridge is £50 and the Centronics cable £8 if purchased at the same time. An introductory offer is available for multiple purchases, but members should contact John Bickerstaff for ICPUG discount details (see Discount Corner - Ed).

Finally, is the Final Cartridge value for money? If you consider that you get a fast load and save system to both disk and tape, a Centronics printer interface, a built-in monitor, function keys that function, and the extra toolkit commands, then the answer must be yes when compared with the cost of buying separate aids.

--oOo--

SUPERBASE COLUMN

edited by Hugh de Glanville

While bullying all our regular contributors to produce fresh copy a month after their last contribution so N/A publication could catch up a month, I have neglected to do much in this line myself, so 'the corner' will be briefer than usual in this issue: even Precision's Brian has written at reasonable length this month.

All correspondence on the lines of 'Shame' from our fans and of 'Thank God' from those who think that while Superbase may very well be a nice program, it doesn't deserve 15% of the available space month after month will be read with interest. It always helps to know who's for and who against you.

Terry Hart sent in a number of questions about version 2 which, largely due to their unintentionally getting the F&F (file and forget) treatment used so routinely in my office, I cannot answer this month, but which will give a good start towards our taking up an undue share of space again in November. However, he also sent in the following two little utilities which look handy, to delete a range of records, and to delete a list.

```
10 rem *****delete range*****
20 display @0chr$(147)@4,2@+ "DELETE RANGE OF RECORDS (FROM/TO)"
30 display @1,4 "Prior to running this program enter key field name in
   line 70
40 ask @1,7 "Enter full key field of first record to be deleted: ";s$
50 ask @1,10 "Enter full key field of last record to be deleted: ";f$
60 select s$:select d:rd=0:gosub100
70 c$=[key]:if c$=f$then90
80 select d:gosub100:goto70
90 select d:gosub100:display @0@9,15@+"BULK DELETION COMPLETE":wait:
   menu
100 rd=rd+1:display@0@5,13"Number of records deleted = "@3,0rd:return
```

(It seems to me that the step required in line 30 could easily be converted to a run-time entry as well, I'm not sure why he chose to require us to modify the program each time. It's the sort of thing I always do, but it does mean the utility is not suitable for non-technical operators.)

```

10 rem*****delete list*****
20 display @10,2@+ "DELETE LIST OF RECORDS"
30 ask@2,4 "Enter list name: ";ln$:rd=0
40 select from ln$
50 select d:rd=rd+1:display@0@2,6"Number of records deleted ="&3,0rd
60 goto40
70 display@14,10@+ "LIST DELETED":wait:menu

```

(Warning: These listings have had to be keyed in by hand by me. No prizes are offered for finding the syntax error I just must have introduced somewhere and not spotted - if there isn't one, this'll be the first time - Ed.)

Before we proceed to the words of wisdom from Worcester Park, I must thank Terry for the most delightful and apposite typing error elsewhere in his letter, where he wrote: "... The amount of data is so hugh and disorganized" How did he know? Does it hang out that far?

MENUS AND CHAINS - Brian Leighfield

This month I have written a shorter piece about creating menus and chaining programs together. I thought it might be fun to present an alternative start program to illustrate yet another approach to option selection. Owners of Superbase version 2 can use this program in conjunction with the labels, and delete programs. If you have obtained a copy of the stepping stones 'sort' utility sold as a bolt-on for superbase starter this can also added.

The listing contains a menu of options displayed in row and column form. One of the options is highlighted and the command line shows additional information about that particular option. Options are selected using the cursor control keys, and a single return executes the one selected.

The program is based on the start program present on all SB disks and listed in every SB manual.

The program has five main modules:

- 1: The program initialization routine
- 2: A subroutine to set the printer and other system parameters
3. A module containing the information displayed by the menu subroutine
- 4: The menu generation and option selection subroutine
- 5: The main routine of the program, which calls the menu subroutine

and acts upon the decision selected. This section can be used in conjunction with the addition of more information in section 3 to access multiple menus.

The modified section 1 closely follows the normal program, as the requirements remain the same.

```
10 rem          Superbase Start Program
12 sp$=""
20 dim x$(10,2):dim y$(10,2):brkon:gosub 400
21 rem allow break key and set system parameters
29 goto 100:rem          JUMP TO MAIN PROGRAM
```

The first array on line 20 is for holding all of the option titles which will be displayed in row and column form. The second array will hold the option descriptions. A line of spaces is assigned to sp\$. This will enable us to avoid having the remains of a prior description left on the edit line when we change options. It can be seen in use on line 38.

Although I prefer to assign all of my subroutines to the beginning of a program the printer subroutine has been left in lines 400-450 in accordance with the existing start program. They are the default options for the C64.

Section 2: the subroutine for setting system parameters.

```
410 lmargin 1:rmargin 80:rem margins
430 pdev 4:pdef 0:rem printer device 4 cbm code
440 lfeed 0:cont 1:rem normal line feeds:continuous print
450 space 0:rem normal line spacing:output across
460 screen 0:rem screen 0 is default
470 return:rem end of subroutine
```

Section 3: the data statements are held at the end of the listing in accordance with convention. The very first item is a numeric variable that contains the number of options available in this menu. This is followed by data for the menu and data for the description in alternate order. When 'select database' is chosen the edit line will display 'select database, unit, drive'.

```
1000 data6:rem 6 items present in menu
1020 data"select database","Select database, unit, drive"
1030 data "select file","Get a file from the catalog"
1040 data"superbase menu","Select superbase menu 1"
```

```

1050 data"run sort","Sort current file into new order"
1060 data"run labels","Print labels using current file
1070 data"disk housekeeping","Run disk housekeeping utility"

```

Section 4: The menu subroutine. The first lines of this module display information that remains constant for all menus selected.

```

30 display chr$(147)@0@7,2"SUPERBASE START PROGRAM":
40 display @4,21"choose option using cursor keys"
41 display @5,22"press return to select option";@0

```

The first command on line 50 returns a numeric item from the data statement, the purpose of which is to declare how many options are available for the current menu. As the display is in two columns, a1 will be the number of lines used to display all the options.

```

50 read a:a1=int(a/2):for c=1to 2:for i=1to a1:read x$(i,c),y$(i,c)
51 next:next:restore:a2=1:a3=1:a4=1

```

The next task is to load the two arrays with the next six pairs of items in the data table. This is done within two nested loops. The inner loop will first load x\$(i,c) with the option title and y\$(i,c) with the related description, for column one of the display. Then the outer loop will be incremented to move the pointer (i) to the second column and the process repeated. Finally the data statement pointer is reset to the first item in the table. The variables a2, a3, and a4 are used as pointers in the option selection. These are pre-set to the first option on the display whenever the menu subroutine is called.

```

52 display @0@+chr$(145)+left$(y$(a3,a4)+sp$,38);@0:

```

The use of the code for cursor up (145) in this display statement will place the option description into the command line. The values of a3 and a4 will change according to which option has been selected.

```

53 for i=1to a1:for c=1to 2:a$=x$(i,c):x=$((c-1)*21)+1
54 a$=left$(a$+sp$,17)

```

Lines 53-60 give the row and column display. On line 53 the row position of each option is controlled using the row counter (i) which also gives us one of the pointers for the option title array. The variable (c) gives us the column co-ordinate and the second pointer to the correct element of x\$(i,j), which is now transferred into a\$ for ease of handling. A formula similar to that used in the labels program is used to control the column position for a\$ to be displayed.

```

57 if i=a3and c=a4then display &19@x,9+i;@+a$;goto 60
58 display &19@x,9+i;a$;

```

Lines 57 and 58 display the option. If the option about to be displayed has pointers a3 and a4 associated it will be displayed in highlighted form. The use of a semicolon at the end of the display statement will allow another item to be displayed on the same line.

```

60 next:next:a$="":get a$:if a$=chr$(13)then 69: rem option selected
64 if a$=chr$(17)and a3<a1then a3=a3+1:goto 52: rem cursor down
65 if a$=chr$(145)and a3>1then a3=a3-1:goto 52: rem cursor up
66 if a$=chr$(29)and a2=1then a2=22:a4=2:goto 52: rem cursor right
67 if a$=chr$(157)and a2=22then a2=1:a4=1:goto 52:rem cursor left
68 goto 52:rem no option selected
69 a=a3:if a4=2then a=a3+a1
79 return: rem end of routine.

```

On lines 60-79 we can see the code that controls option selection. Every time a\$ contains a character other than a return (chr\$(13)) the menu is redisplayed. If a cursor control key has been pressed, the pointers a3 and a4 are adjusted. If a return is pressed, a numeric for the option choice is computed and stored in the numeric variable (a). The program returns to the main routine.

Section 5: the main routine. In the present form only one menu has been used. As you can see, the main work has taken place in the subroutines. The option counter (a) now holds a number (1 - 6 for this menu).

```

100 gosub 3 :on agoTo 110,120,130,140,150,160:rem first menu choice
    made
110 display @0@1,7"Enter database name :";@:ask &16@22,7;a$
111 display @0@1,7"Unit number (8 or 9) :8";@0
112 ask &1@25,7x;if x<8or x>9then goto 111
114 display @0@1,7"Drive number (0 or 1) :0";@0
116 ask &1@25,7y;if y<0or y>1then goto 114
118 database a$,x,y:goto 100
120 file:goto 100
130 menu:rem superbase menus
140 execute "sort":rem change program
150 execute "labels":rem change program
160 execute "delete":rem change program
200 rem *****

```

If you do not own programs called 'sort' or 'delete' you should substitute the commands in lines 140 and 150, and associated data statements in section 3, for another function. Those people who do own these programs can carry out amendments in each of them to link them in with the start program following execution. The way to chain the programs together is to remove all occurrences of the 'menu' command in each of the chained programs and replace them with an 'execute"start" command.

Finally it is a good idea to replace the contents of lines 140-160 with display statements temporarily when writing the program, to avoid the frustration of clearing your code, e.g.

```
150 display@0"execute labels";@0:wait:goto100
```

--oOo--

LAST WORD

Jim Kennedy writes, a propos July/August's SB Corner:

Unexpected problems can arise if you use duplicate as opposed to unique key fields in a Superbase file. It is therefore recommended that, whenever possible, unique key fields be used. Last names are favourites for key fields but the chances are you will have two Smiths, or whatever, to contend with. Last names can still be made unique key fields by the following technique.

Define a field called Lastname as having a length of 17 spaces. However, when printing this field, truncate the output to 16 spaces using a format command such as &16[Lastname]. You may then use the last space in the field for a number or letter to make it unique. Examples would be:

Smith	1
Smith	2
Smith	3

All print as simply Smith, since the field truncates just before the number.

--oOo--

TRIGSOFT GT LOADER CARTRIDGE

by Ray Medford

Having read the various comments on the 1541 Flash in two previous issues of the newsletter, together with other comments in various journals, I wrestled with my conscience for quite some time before gracefully admitting defeat. All but £90 is a lot of money, particularly to the user like myself to whom speed is desirable but not all-important. No doubt there are many more 1541 users out there in precisely the same category: if so then let me commend a cheaper alternative, Trigsoft's GT Loader Cartridge - a somewhat unwieldy name, but that's what they call it.

Again a certain amount of humming and haa'ing went on before I took the plunge. Not that I am all that cautious but £20 is still £20. The offer of a 10-day money-back guarantee decided me. After a small amount of hassle trying to get delivery, a letter and a couple of 'phone calls, the package arrived after a total time of 2 weeks. Not bad, I guess, but it was promised a week earlier.

With the cartridge was a double-sided A4-size sheet of instructions which were quite clear and very easy to follow. There was also a 'flying lead' which it was recommended to fit to ensure that the cartridge would be compatible with virtually all software. It was stressed that the device would work quite well without it (which it did) but it would be required for any programs that use the RAM under the Kernal ROM to function correctly.

Fitting the lead was very easy, even for someone like me with more than his share of thumbs. No soldering is required, the lead merely clips on to a resistor (clearly shown on the leaflet), and is fed through the case by the side of the cartridge socket and plugged into the cartridge itself.

On power up with the cartridge in position, in addition to the usual message, there is the legend 'RUNNING TRIGSOFT'S GT LOADER' to show that all is well. If the flying lead is not fitted there is also a reverse video 'F' in the top left corner of the screen.

After having done all that, which takes a lot less time to do than to write, how does the cartridge perform? The claimed increase in speed - read-only incidentally - is up to four times and the following figures should speak for themselves. . .

Hobbit 0:34 (1:54)	Wordpro64 0:18 (1:12)
New Hobbit 2:48 (2:41)	Scrabble 0:38 (2:09)
197 blocks 0:37 (2:04)	141 blocks 0:26 (1:35)

EasyScript saves about four seconds with the cartridge, but the leaflet explains that where programs use their own loading routines, loading may revert to normal speed. However, one multipart program I tested returned 0:58 seconds instead of the normal 2:34, so in the majority of the things I tried (not all listed above) there were considerable improvements.

The cartridge is fitted with an on/off switch so can be left in situ unless the port is required for other devices of course. It must be switched off if tape access is required. The following facilities are also available.

FAST LOADING COMMANDS

SHIFTED RUN/STOP	GT loads and runs the first program on the disk.
LOAD*filename	GT loads a program called filename (use instead of ,8,1 for fast loading)
LOAD*filename",8	GT loads a program called filename (equals LOAD*filename",8 but fast-loading)

NORMAL LOADING COMMANDS

LOAD*\$	displays Directory without erasing program in memory
LOAD*filename",7	loads filename at normal speed.
LOAD*filename",7,1	loads filename at normal speed.
VERIFY*filename	verifies filename at normal speed.
SAVE*filename	saves filename at normal speed (replaces SAVE*filename",8)

The cartridge is guaranteed for 12 months and, although it is early days yet, I now leave it connected at all times. In my view a very good-value product - perhaps another possibility for a negotiated discount. Incidentally, I should add the usual disclaimer of any connection with TRIGSOFT other than as a customer.

--oOo--

ROM TO EPROM ADAPTOR

by Robin Harvey

In the March/April issue of the newsletter, an article by Bob Nowill showed how it was possible to replace the Commodore 64's E/F kernel ROM with an EPROM enabling modifications to be made. For example, if you do not like the switch on colours of blue and blue, they can be changed to ones giving a better contrast. Another option is to change the Commodore sign-on message on the top line of the screen to something more personalised or humorous. The opportunity can also be taken to upgrade the kernel to the latest version.

The ROM in the computer is an 8K device with only 24 pins but the equivalent EPROM has 28 pins. The article gave details of the conversion required so that an EPROM can be used and hinted that an adaptor might be available soon. This is now the case and a small neat printed circuit adaptor board is now available from me for £4. In addition, if you wish to have your switch-on colours changed, and/or a personalised sign-on message incorporated, I can supply a programmed EPROM to go with the adaptor.

The adaptor is not just for the Commodore 64 ROMs but any other 8K ROM device and is equally suitable for those brave experimenters who wish to modify the DOS in the 1541 Disk drive or change the character set in printers.

The question that arises with the 64 is whether the ROM is to be directly soldered in or fitted with a socket. The former can represent a challenge to those not having the correct tools or expertise and in this case I can offer to fit a socket at a nominal charge. For further details please contact:

Robin Harvey
30 Wimborne Close
Coombe Glen
Cheltenham Glos
(0242) 527588

--oOo--

EPROM PROGRAMMER

by Derek Hoare

The following circuit diagram and program are for a very simple and cheap EPROM blower which I have built for use with my VIC. It can be used with any computer which has an 8-bit parallel user port and CB2 line with appropriate changes to the PEEK and POKE locations for the position of the user port in the particular computer. The whole circuit can be built on veroboard, or a PCB could be designed. Care needs to be taken of the FULL MAINS voltage and, if you prefer, 4 PP3-type batteries can be used instead of the transformer; these would be connected across C1.

OPERATION

With ALL power OFF, insert the EPROM into the socket, connect the EPROM unit to the user-port and the external power supply. Set S1 in READ position and turn on the computer, then the EPROM unit's power. If the screen does not appear as normal within the usual time, TURN OFF immediately and check connections, etc. If everything appears alright then load EPROM program and follow the instructions. With the switch in the READ position, only the GREEN LED should be lit to show that the 30v supply is getting to the board. With the switch in the PROG position ALL LEDs should be lit. Programming 4k EPROMs should take about 5.5 minutes.

The start address is the start of your code you have in memory, and the end is obviously the last byte of your code. Pushing PB1 resets the counter to 0. You do not have to blow a full 4k at any one time, you can have lots of smaller code blocks, but you will have to construct a way of clocking the address manually as the design only starts from 0. Another idea for the more adventurous is to incorporate switches and a larger address chip to enable many different types of EPROM to be blown. Modifications to the program would also allow these extra facilities. The design only caters for the 2532 EPROM but few changes would be necessary to cope with the 2732. I hope you find this as much use as I have found it.

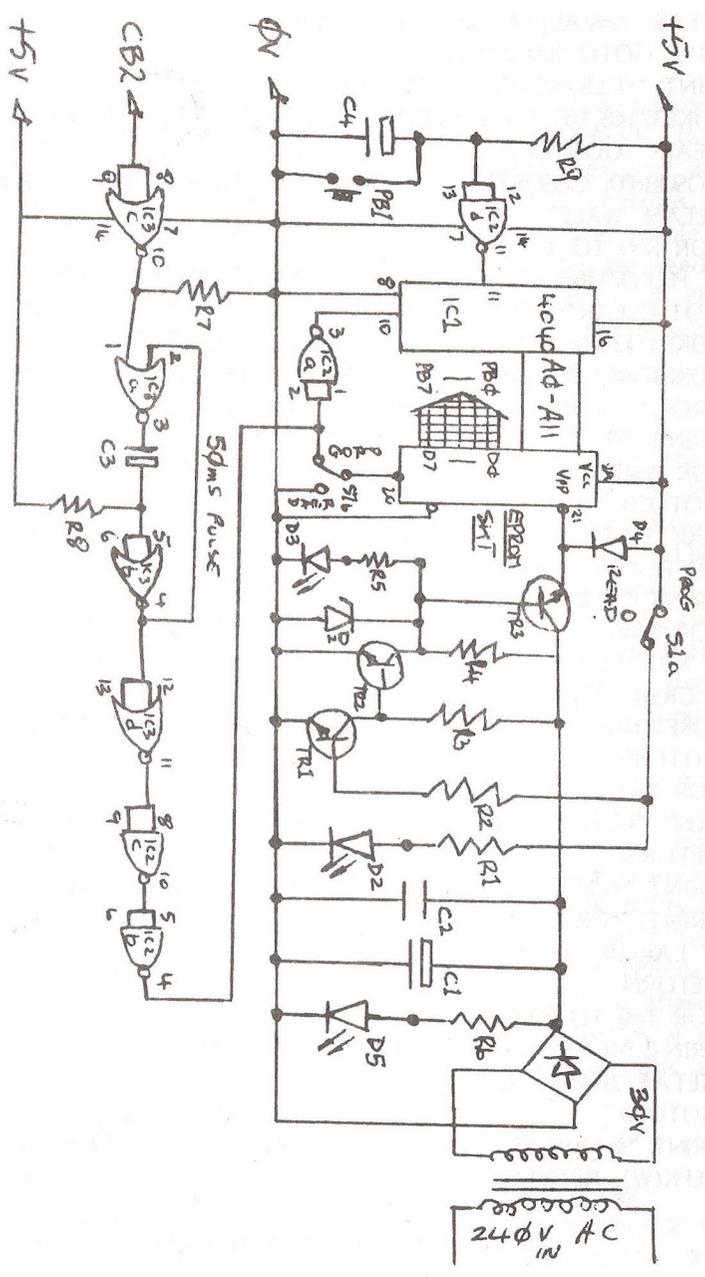
```
10 REM EPROM BLOWER PROGRAM
20 PRINT "<CLS><CRSR DOWN><5 SPACE> EPROM BLOWER"
30 PRINT "<2 CRSR DOWN> (1) READ":PRINT "<CRSR DOWN> (2) WRITE":
   PRINT "<CRSR DOWN> (3) VERIFY" :PRINT "<CRSR DOWN> (4) END "
```

```

40 PRINT "<4 CRSR DOWN><5 SPACE> INPUT CHOICE"
45 GETA$: A=VAL(A$): IF A<1 OR A>4 THEN45
50 ON A GOTO 100,200,300
60 PRINT "<CLS><CRSR DOWN> GOOD BYE" :END
100 POKE37148,160: POKE37138,0: PRINT "<CLS><CRSR DOWN> SWITCH TO
    READ" :GOSUB700
110 GOSUB600: GOSUB700: PRINT "READING EPROM": PRINT "<CRSR DOWN>
    PLEASE WAIT"
115 FOR R=0 TO 4095
120 IF PEEK(37136)<>255 THEN PRINT "<CLS><CRSR DOWN><REV.ON> EPROM
    NOT CLEAR": PRINT "<CRSR DOWN>" R, PEEK(37136): X=1: GOTO320
130 POKE37136,0: NEXT: PRINT "<CRSR DOWN> EPROM CLEAR": GOTO800
200 POKE37148,160: POKE37138,255: PRINT "<CLS><CRSR DOWN> SWITCH TO
    PROG": GOSUB700: GOSUB600: GOSUB610
205 PRINT "<CRSR DOWN> PROGRAMMING"
210 FOR W=BE TO LA: POKE37136,PEEK(W): GOSUB500: GOSUB900: NEXT:
    GOTO20
300 X=0: POKE37148,160: POKE37138,0: PRINT "<CLS><CRSR DOWN> SWITCH
    TO READ": GOSUB700: GOSUB600: GOSUB610
305 PRINT "<CRSR DOWN> VERIFYING"
310 FOR W=BE TO LA: GOSUB900: IF PEEK(37136)<> PEEK(W) THEN X=1
320 IF X>0 THEN PRINT "<CRSR DOWN> YOU SHOULD ERASE EPROM": PRINT
    "<CRSR DOWN> THEN START AGAIN": END
330 POKE37136,0: GOSUB500: NEXT: PRINT "<CRSR DOWN> EPROM VERIFIED":
    GOTO800
500 FOR T=0 TO 40: NEXT: RETURN
600 PRINT "<CRSR DOWN><REV.ON> PRESS RESET BUTTON NOW": GOSUB700:
    RETURN
610 PRINT "<CRSR DOWN> START ADDRESS";: INPUT BE
620 PRINT "<CRSR DOWN> END ADDRESS";: INPUT LA
630 IF LA=<BE THEN PRINT "<CLS>": GOTO610
640 RETURN
700 FOR T=0 TO 3000: NEXT: RETURN
800 PRINT "<CRSR DOWN> PRESS KEY FOR MENU"
835 GETA$: IFA$="" THEN835
840 GOTO20
900 PRINT "<HOME><CRSR DOWN>" TAB(242) W,"<4 SPACE><4 CRSR LEFT>"
    PEEK(W): RETURN

```

(Circuit diagram on next page)



Components List

S1a/b - Switch; double-pole changeover

PB1 - Switch; single-pole pushbutton

TR1,2 & 3 - NPN Transistor (eg BC109)

Transformer - 30V secondary plus suitable rectifier

Connector - to suit user port

	R	C	D	IC
1	470	220uF	Red LED	4040
2	47k	100nF	BZY88(27V)	4011
3	47k	2u2	Green LED	4001
4	2k2	10uF	IN4148	
5	4k7		Yellow LED	
6	4k7			
7	120k			
8	27k			
9	120k			

--oOo--

ROUND THE REGIONS

by Tim Amot

August is traditionally a quiet month when club members desert their micros for the beaches, and the wind and driving rain of the British summer.

Most groups were on holiday in August, and Hants was no exception, with no meetings in August at Petersfield or Gosport. Gosport will reconvene on 3rd September at the Bury House Community Centre, Bury Road, at 7.30pm to discuss disks. For more details contact Tony Cox, 10 Staplers Reach, Rowner, Gosport, Hants.

Last time I said that three people turned up out of 30,000 in Portsmouth: I should have said out of 300,000. Next month I shall probably say three out of 3,000,000. Or did I mean 30,000 Commodore owners? I suspect the organiser, Nick Ryan, went into hiding after that, because he hasn't been seen since. Nobody turned up to the next scheduled meeting (except me), and I don't think I shall bother next time. Contact Nick Ryan if you can find him.

I should like to mention a couple of new groups just starting. The first calls itself ICPUG London South East (ICPUCLSE). They meet at the Lewisham Triangle Community Centre, 10 Wisteria Road, Lewisham, on the first Saturday of each month at 3.00pm. The contact is Dr Klaus Bung, 13 Wisteria Road, Lewisham, London SE13 5HW (01-852 5775). I went along to one of their formative meetings last week, along with three curious members of South East. I have to say that Klaus has it very well organised. We have there the makings of a very strong and active group. Admittedly the four of us ICPUG committee 'heavies' almost outnumbered the natives but, to be fair, I was pre-warned of likely low attendance.

For people living in and around Leicester, a new group is being set up there by John Broad of 19 Highleys Drive, Oadby, Leicester, LE2 5TL (0533 716539). John says that Cavendish Commodore, a retail shop in the area, has provisionally offered their premises as a meeting place. If you are interested, get in touch with John, as I know he's anxious to hear from anyone interested.

Jeff Jones 'phoned me up from Liverpool last evening for a chat. In addition to being organiser of the Liverpool region, Jeff is Regional Co-ordinator for the North of England. Some time ago it was decided that being Regional Organiser for the whole country is actually quite a big task: it would be impractical for me to personally visit and help out in that sort of way. So Jeff does my job but in the northern half of the country. Anyway, we intend to try and visit every region in the country during the year to offer them support and encouragement. If anyone will offer to fund me for a visit to our New Zealand region, I would be very pleased to hear from them . . .

Personal plug

A little while ago I heard from my publisher. I have written a book, the 'Commodore 64 Whole Memory Guide', consisting of 400-odd pages of info on just about every memory location in the 64, and a few more, plus a fully annotated ROM disassembly and a very nice little drawing on the front cover. It's published by Melbourne House and if you buy it you get 5p change out of a tenner. Good, eh?

Hands up all you people who've bought a C128. I had to sell my 64 to get one (just before writing this column, so the Editor has had to transcribe this from my awful handwriting [too true - Ed]).

--oOo--

US GOLD GAMES

by Derek Hoare

All the following games are from US GOLD and only for the 64. We get no discount, but joining their club gets you quite a few extras.

Grog's revenge

In this you are a caveman on a unicycle, your task is to ride over the clams along paths and in caves to score points. When you have got enough points you must find your way to the toll bridge, where you pay to cross up to the next level of the mountain. All the time you must keep an eye and an ear open for GROG because if he Gets onto the same screen as you you're dead. You lose wheels by crashing into walls, holes, or rocks or by riding over the edge. On higher levels a green 'Tyredactyl' sometimes appears to eat your tyres. The action is fast and the graphics are good, drawn like cartoons. There is a triple screen: a larger one showing a view of the roads and caves that you are travelling, the other smaller screens showing score and your and Grog's positions on the mountain. There are three different mountains to choose from, of increasing difficulty.

There are a couple of gripes: first, although the game is fast and the graphics good I didn't find the game itself too interesting; secondly, when you get to the top of the mountain you do not progress. There is a very basic high-score screen.

Quasimodo

You are the Hunchback and your task is to recover the jewels from the castle and return them to their boxes. In the first stage you throw rocks at archers climbing ladders and, once these are defeated, you can get the first jewel and deposit it into its box. For the next level you must swing on ropes across the bells, climb ladders and watch out for bats, and then you have to fight the archers again to let you deposit the jewel. At the third level you must do all this again but to get to the jewel you must also climb the castle walls, watching out for arrows and boiling oil. After this you can carry on playing, but it gets harder. A very realistic game with good graphics and sound. The only fault I have found is that there isn't a high-score table and people do like to see what score they have to beat. But, overall, very moreish.

Bounty Bob strikes back

This is the follow up to 'Miner 2049-er', which I have not seen, but if it was anything like this, it must have been good. There are 25 levels

and 4 difficulty choices, which are made on the options big screen containing lives, players, extra life score, volume, name, length etc. - the most comprehensive options choice I have seen. The aim of the game is that, as Bob, you jump, run, use lifts, cannons and various other objects to move about the levels, avoiding or killing the aliens and making each platform solid, i.e. no lines. If you have scored enough when you lose all your lives, a secret message appears, which tells how to warp to higher levels, a very good idea. Finally the high-score factory is a game in itself: instead of just typing your name you use bulldozers and lifts to spell it out, then the birds fly in to put it onto the score card, a very nice touch. I must say I can only find one minor fault: on some levels you can be stranded unable to get killed or progress and then have to wait for your time to run out. However, in the little instruction book it says that help is at hand if you type in Big Five's phone number from the title screen: unfortunately it's not there. I got in touch with US Gold who sent me a number that did not work; I shall try to find out why. Apart from that a very good game and highly recommended.

Dambusters

This is a very realistic flight simulator/battle game. You control a bomber that is going to blow up the dams in the Ruhr valley. You can choose between three levels: (1) take off from England and fly to the destination (the hardest); (2) start over the channel etc. (medium); (3) start over the lakes where the dams are, with no enemy fire, which rates as practice. During the flight you must watch the small rectangular box which flashes numbers 1 - 6, which tells you which screen to switch to, as you may be under enemy attack; you must also watch your speed and altitude. Screens 2 & 3 are gunners, screen 2 is also the bomb-aimer when you reach the dams and have turned the bomb rotation switch on; you then have to get into the correct position to release the bomb. The screen then shows the bomb dropping and finally the results of your run. My advice is to keep switching to the screen maps to make sure that you are on course and also, with the disc version, to leave it in the drive, because the disc is accessed after the bomb is dropped. There is a lot of action to keep everyone happy and it is very realistic; the screens contain good graphics, and the maps are well laid out, making it easy to plot your course. A game for flight-simulator addicts and action freaks. Very good.

--oOo--

UPGRADE TO SUPERSCRIPT 64

by Jim Kennedy

Precision Software have come out with a new word processor for the C64 Superscript 64. The RRP is £69.95 but it's available as an Easy Script upgrade for £39.95. It is worth every penny - this article will explain why. I am not alone in my opinion about this package. A friend with a degree in computer science, who writes software for machines like Wangs which are near-as-damn-it the perfect word-processing computer, and also borrows my 64 from time to time to attach to his home-brewed circuits and to drive his astronomical telescope and camera, thinks Superscript 64 a 'very reasonable word processor' when compared with most available at the usual business micro software prices of £150 - £400. When I told him the price of Superscript 64, he was very impressed, and I think it is the best value-for-money commercial software package I have seen.

Superscript 64 caters for both the newcomer and the experienced user. Like Gaul, the Superscript 64 screen is divided into three parts. On the top are two status Lines, used to display the current mode, line and column data, name of the current file, and menus you will be presented with; also you will occasionally enter information here. The filename display is very useful. If, like me, you hate trying to remember what was filed under which filename, tend to make mistakes entering long filenames, and regularly get 'file not found' messages, then you will love this system. The second line is the tab line, showing either TAB settings or information about each command as a sort of mini-help window. Below is the 22-line main text area.

On the top status line the highlit bar is moved around by the cursor keys, and pressing RETURN causes the command to be executed. However, once you get the hang of things, you may use single key strokes to bypass the menu. Pressing 'D' is the same as moving the bar in the menu over 'DOCUMENT' and pressing RETURN. A third option, to execute commands involving multiple key strokes by, to cite just two examples, CTRL and X or CTRL and F. The eight function keys are also used for certain commonly used commands.

Now comes an interesting bit. Like a programmable database, this word processor is flexible. If you prefer something like ESC-N to toggle in and out of the Insert Mode, then in Superscript 64 you may define the Run/Stop and N keys to do the same. Almost any special command you wish to use may be programmed in and executed with a simple two-key

stroke entry, by defining Command strings (example below). You can't make the excuse of disliking the command sequences to condemn this program.

To illustrate its flexibility, suppose you do a lot of TABbing in your work: Superscript 64 will allow you to TAB to the next position in no less than five different ways. You may either press:

- 1) F7
- 2) CTRL and I
- 3) F1 - T - T
- 4) F1 - highlight TAB - RETURN - highlight TAB - RETURN

or set your own command such as

- 5) RUN/STOP - T

In the above I have used CTRL 'and' I to indicate pressing CTRL and I together while F1 '-' T indicates F1 followed by T. You do not have to remember all of these possible commands: just those commands that come naturally to you and define others for the ones you dislike.

One of the first differences you will notice between Superscript 64 and Easy Script is that the former has wordwrap in edit mode. This means words do not split over two lines and editing is much easier. Switching to the Preview mode gives you a WYSIWYG (What You See Is What You Get) display before printing - very much like Easy Script, but with wordwrap you only need to use preview for overall format checks, actual reading and editing is better done in edit mode.

True edit-mode WYSIWYG word processors are all the rage nowadays but they have their drawbacks - they usually cannot display on the screen features like underlining, bold, enhanced, superscripts, and subscripts so, often, they do not support these features, as this would require embedded commands and make them no longer true WYSIWYG systems. Systems with embedded commands in the editing display may not look quite so neat but they can be far more powerful than strict WYSIWYGs.

Both the range of printers and features on each printer supported are very good. The printer type is entered on first program entry and is carried forward to your work disks, but may be changed at any time and can be overridden by commands from the keyboard. For those with two printers, a facility to define RUN/STOP and two other keys (maybe 4 and 5) to define and direct the output to either printer by command strings will be a godsend. All the major printer types are provided for, including CBM dot matrix and Daisywheel, Epson, Diablo, Qume, Juki, Canon, Kayaka, Microline, Daisy Step, Kaga, Star, NEC Spinwriter, and Ricoh 1600S. Complete details about the printer definition program with detailed codes for these printers are included, so even if yours is

not catered for, you should still be able to modify one of the standard sets of code to suit. Underlining, bold, shadow, superscript, subscript, etc. are all supported here, and there is even a separate 'Troubleshooting with the printer' section in the 186-page manual. I have a CBM DPS 1101 daisywheel printer. At startup I selected CBM DAISYWHEEL and then obtained a perfect printout, including super- and subscripts, underlining, bold, and shadow printing first time around with the printer test program. As nothing with printers normally works first time around, full marks!

One also gets a rudimentary spreadsheet as part of the package. You may create a table of figures in your document and then chop and change them as you like. After you have finished, Superscript 64 will add them up row by row and column by column and give you the totals. It also subtracts, multiplies, divides and calculates percentages. Not a complete spreadsheet, but very useful.

Really professional word-processing functions like boilerplating are available. Complete cut-and-paste as well as search and exchange/replace facilities are available. Mail merge and labels are well supported. The decimal tab facility is first-class. The figures are entered calculator style, i.e. from the decimal point to the left until you enter the decimal point itself and then they are displayed to the right.

You can link one file to another for printing or spelling checks (see below). One could put the Encyclopedia Britannica on dozens of floppy disks and print the whole lot out at one go with Superscript 64 (provided someone was prepared to feed the printer and change disks for several days).

Superscript 64 includes a 30,000-word spelling checker which can learn new words. As an added touch of class it also gives you a choice between English or American usage. I thought I would have to teach it my name and address the first time I used it to check a letter. Surprise! It already knew how to spell my name. Common first and last names have been included in the dictionary, as have things like lower case Roman numerals (e.g. iii) used at the beginning of a book, a nice touch. If you need to index a document, then a list of words you have used can be obtained after the spelling check, which would assist in index creation, though you would have to add the page numbers yourself.

Let us pause and put a few things in perspective. Easy Script, at a recommended retail price of £75, has been considered a 'down market' word processor in business micro circles. (I understand its price has

recently been reduced to £50.) Easy Spell can be purchased for an additional £50 (RRP). Superscript 64 is a much improved combination of the two for £69.95. And Superscript 64 has more features than many of the so-called 'business micro' word-processing packages. For example, a calculator add-on package for Wordstar which almost exactly duplicates the facilities in Superscript 64 has recently been announced at a price of £69.

A few more of Superscript 64's features may be important to people with unusual requirements. Two lines of headings and footings are available per page with three zones (left, centre, and right) along with automatic, but resettable, page numbering; alternating headings for odd and even pages are available; and the cut-and-paste option is much improved over Easy Script in that you do not get the 'Cursor in Range' error message when transferring text close to its original location. Superscript 64 can read Easy Script files and you should have no problems with the conversion. The same applies to any Easy Spell dictionary files you may have built up, although I do not have Easy Spell so I have not confirmed this. The spelling-checker option tells you how many words the document contains, how many are unique, their average length, and the number of sentences and paragraphs.

Offhand I can only think of two minor word-processing functions not available: automatic footnote insertion (of course, there is nothing to stop you from using cut-and-paste to add footnotes followed by forced page breaks to get the format right; and automatic prevention of 'widows and orphans' (this again you can cure by either a forced page or conditional forced page command).

Personal preference plays a big role in choosing a word processor. Some may like one, others think it horrible. However, I cannot see anyone having a very hard time learning to use Superscript 64, and in any case, if you pay £69.95 for the whole package (but not when you upgrade from Easy Script, when you don't really need it), you get an audio learning cassette. 'Upgraders' may be greatly tempted to start off without reading the tutorial section of the manual: they shouldn't, for they will miss learning about some of Superscript 64's more powerful new features including both the Calculate and the Mail Merge facilities. Seeing Superscript 64 doing the arithmetic on the demonstration financial statement for the first time is impressive as well as fun.

Having used the program for a fortnight I have found surprisingly little to niggle about. The only one of any consequence was lack of an index to my manual. Superbase also came out without an index but they

added one later. I understand this is to be the case with Superscript 64. When I first used Superscript 64 I tried to change the Default file so that page breaks could be set, such as CONT 0 and CONT 1 do in Superbase, to make make Superscript 64 and Superbase absolutely printer compatible in single-sheet printing without changing DIP switches. I could not find such an option in the Default file, so I defined a Command String so that pressing RUN/STOP - P would initiate printing with a WAIT at the end of each page, which is really what CONT 0 does in Superbase. Finally, there is a small bug in the dictionary. Apparently if you use an apostrophe (') in a word it cannot be erased from the User Dictionary, but this is being corrected and versions released by the time you read this article should be OK. Another dictionary bug whereby one could not make the User Dictionary learn a word beyond the last existing word, is also already fixed. These are very small items which do not detract from this very professional word processor. I recommend it highly to both the new, as well as the experienced user.

While talking about Superscript 64, my earlier mentioned friend and I discussed what we would like to see in the way of improvements to word processors. I said it would be nice to display words from the dictionary to help suggest correct spelling of unrecognized ones. Why should we be forced to go to a printed dictionary to find out the spelling of a word when we have one sitting there in the computer? First thoughts said it was not practicable. On second thought we decided that a possible solution would be to display the unrecognized word in context in a display at the top of the screen. Words on either side of the point in the dictionary where the search stopped could be displayed in groups of 22 below. Pressing the space bar would bring successive groups of 22 words onto the screen; the left column of 22 could be preceding words and the right column of 22 the succeeding words. Moving a highlight bar over the desired word and pressing return would result in it replacing the unrecognized word. It would be interesting to see what the authors think of such an idea and whether or not something like it could be incorporated in future versions of Superscript 64 [surely there can't be room in memory? - Ed.].

In parting, Superscript 64 is probably the best word processor around for the C64. The competition will have to cut their prices to sell any significant quantity. Most other micro owners will be green with envy when they see C64 owners using Superscript 64 (along with Superbase 64). Well done Precision Software!

Apart from its undisputed merits, however, and its value for money, I deplore a pricing policy that offers no discount for ICPUG members. However, a well known software shop is now selling Superscript 64 at their own discount price of £61.95. Enough said.

--oOo--

DE-BUMPING EASY SCRIPT

by Chris Ansell

Doubtless many of you will have read Mike Todd's remarks in Disk File, Sector 10 (N/letter September 84) on how to kill the dreaded bumps on the 1541. My worst trouble with this was when loading Easy Script, so I eagerly keyed in Mike's program and hoped never to hear another bump.

Unfortunately, when I tried to load Easy Script it failed to load properly: my 64 locked after about a minute, with the drive spinning aimlessly. Subsequently, however, I have found that if Mike's routine is modified to turn off the head offset routine, then Easy Script loads perfectly, and silently. This mod to the 1541's RAM seems to cause no problems with file loading and saving.

I have found it most convenient to keep this program on a separate disk and load and run it before using Easy Script: this is far easier than keying in lines 10-30 in direct mode every time you want to load it. Finally, I always 'cold start' the 64 before using the program.

```
10 open 15,8,15
20 print#15,"M-W;chr$(106);chr$(1);chr$(197)
30 close 15
40 print "change disk and press return"
50 print "to load Easy Script"
60 get w$:if w$<>chr$(13)then60
70 load "easy script",8,1
80 end
```

[I am sure this works for the Easy bumps if Chris says so, but as far as I can see neither Mike's nor Chris's programs will de-bump the Sublogic Flight Simulator I got recently; well, they de-bump it alright, because it doesn't load: has anyone discovered how to de-bump and load that? While on this subject, I was interested to hear from Mike Hodgson that his 1541 never bumps at all - lucky fellow - Ed.]

--oOo--

SPEEDI-PEN WORD PROCESSOR

by David P Morgan

This product from JCL Software Ltd is one of the cheapest word-processors I have seen. At £17.50 including VAT and postage it looks very good value for money. SPEEDI-PEN comes in a tough plastic wallet containing the single disk and a thin 28-page manual, with index. The manual appears to be aimed at the new or inexperienced user. This is no bad thing, since it is easy to skip something too simple but impossible to extract meaning from something too complicated. I started using the package by simply loading it and beginning to type. The cursor and INST/DEL keys work exactly as normal, so editing of text, as you go along, is very easy. The function keys are set to give six different functions: tab set, tab clear, disk filing, printing, editor and utilities. Text is entered from the keyboard without the need to press the RETURN key at the end of every line. Word-wrap can be switched on or off so that you can make sure that words are not split. It is assumed that you have an 80-column printer, which will be correct for most home users. The software is set up initially for Commodore printers, but it is very easy to alter the settings for a wide variety of Centronics or serial printers, although you may not be able to access all their special features.

Saving files to disk and loading them back again might be easier. Wild card symbols, e.g. '*' are not allowed in filenames, but this is compensated for by the ability to call up the directory.

Many home users would be happy with a wordprocessor that can only be used in the way I have already described. SPEEDI-PEN does much more. There are facilities, both useful and easy to use, for deleting and inserting lines of text. Text justification is also easy to use. Function key 7 (F7) gives access to block delete, move and insert, to justification set or cancel. You must first mark out the block of text to be affected then use (F7) followed by the appropriate letter and your text is moved or justified or whatever. Text can be either right justified or centred, otherwise it is assumed to be left justified.

SPEEDI-PEN also allows you to set page length, force page feeds, and to print labels. It will not allow accidental overwriting of a file on disk: you are allowed to save with replace but you are warned that you already have a file with the same name.

I would give SPEEDI-PEN 9/10 for value and 8/10 for usability.

NETWORK NEWS (FRAGMENT)

by Brian Grainger (Systel 438727925, Courier BRIAN)

[The @ bug or some other form of corruption got at the pointers on Brian's disk this time and, instead of four files, both the disk he sent me and his back-up turned out to have one complete file in good order, one with two words in it, and two other corrupt files, each with a complete version of the first appended to a variable amount of what should have been in them. Time did not permit reconstruction when this was discovered, so we are printing his uncorrupted article, and the uncorrupted fragments of the other two readable files, of which this page is one, with his apologies originating corruption and ours for not discovering the trouble until too late. Normally Brian's material requires so little editing and is in such apple-pie order that it gets left to the last minute: this time we got caught out--Ed.]

Not a lot to report this time. Being written (on 11th August), just over a month after the last lot, to enable our Editor to get the newsletter out earlier, means that not much has had a chance to happen.

On the Prestel front there have been a few changes. The terminal software for the CBM modem and the OEL modem has changed as mentioned last time. The new version is called Mustang and was available free to Prestel Microcomputing (PM) members for about a month. It now costs about £11.

ICPUG 64 software has also started to appear on Micronet (in the PM CUG). On-screen messages say the new Mustang software is needed to download it but a subscriber to Compunet reported that the OEL comms pack would download it happily. Perhaps Mustang is only needed for commercial protected software? The moral of the story is, unless you really want to part with money, try the old viewdata software to download it first.

Talking of the OEL modem reminds me that OEL have gone out of business. The modem is now being dealt with by Modem House, Iolanthe Drive, Exeter. Tel. 0392 69295. I am still awaiting a report from anybody who can tell me whether the OEL version of the Mustang software will allow offline printing to a Commodore printer. This was a serious problem with the OEL comms pack.

--oOo--

PCs FOR BEGINNERS

by John Bickerstaff

A few lines on the CBM PC may help owners or potential owners.

Firstly, the User Manual, all 42 pages of it - there are also some 6 blank pages at the end (guess why?) - has some errors in it [No! - Ed]. So far I have found a few and one you may like to make a note of is: page 29, 2nd line under b), should read 'i' (yes, the character i not l - 'eye' not 'ell'); page 31, line 6, has the same error. So the motto is don't go to 'ell just use your eye.

Next, about the cable to your Centronics printer: the PC10 is just like the IBM PC in that its Centronics outlet is not a true Centronics 38-way connector but a 25-pin D connector, so make sure you get the right ends.

Start-up is different from a PET in that you should turn on the peripherals first before the PC and you CAN insert a disk when the machine is off. In fact you should insert the system disk before switching on the PC.

The manual on MSDOS is much bigger than the User Manual and will take a bit of reading. Some of you will be familiar with this system but for a PET-only person (well, I do have a 64), some commands will take a bit of getting used to.

There is also another manual on GWBASIC (standing, I am told, for Gee Whiz BASIC), which is quite a volume too.

This BASIC is accessed from the system disk after loading MSDOS by typing GWBASIC <return>.

Fine, but how do you find the directory? Well, it is not DIR as in the MSDOS you used first; it is shown in the manual - near the end - and is FILES. You may have known that, but it fooled me for a while.

The keyboard is, so Richard Hunt tells me, not exactly like the IBM but I like the feel of the keys and am adapting to it quite quickly. It had a Caps Lock facility - which should please Kevin Viney if he ever gets on to a PC with SUPERSCRIP T III (hint, hint to PSL) - and a Number Lock facility. To those of you who are not yet familiar with Caps Lock [as opposed to Shift Lock], this facility capitalises letters only, and not anything else - not even the colon instead of the semi-colon - and other upper-case 'letters' still need the Shift key.

So far I only have a couple of proper disks of IBM software. One is a demonstration disk from Handic which shows the abilities of their Calc Result and Word Result programs but does not allow writing files or

printing out. This demonstration disk is well put together but is rather fast to follow. It loads easily; all you do after loading MSDOS is to enter 'sm', press return, and the program loads. There is a macro to change from one file to another, which works easily, and the whole thing is very frustrating as I itched to get at it and write something.

The other program I use is Vizawrite, which loads, like the Handic disk, with 'vw' followed by return. This is an exciting program and has a macro facility from a menu along the top produced by pressing the ESC key and spacing along to the required point, pressing return, and selecting the 'drawer' with the cursor keys followed by a return. I found it easy to output to my FX-80 after switching off the IEEE internal interface (but the PET will not yet run with the PC connected).

At a demonstration at the South East group recently Dbase II was shown running, but for some reason Lotus 123 would not load (yes, the real System disk was used). I will let you know CBM's comments on this when I hear them. Maybe it was because there was no colour card in the PC, although other programs requiring such a card told you so with a message on the screen.

Expanding the RAM involves buying an upgrade pack containing a revised PLA chip from CBM, without which - and it is not available separately - no expansion RAM can be accessed.

Finally, Dave Jowett is co-ordinating a PC owners' group: anyone interested should contact him (address at foot of inside back cover).

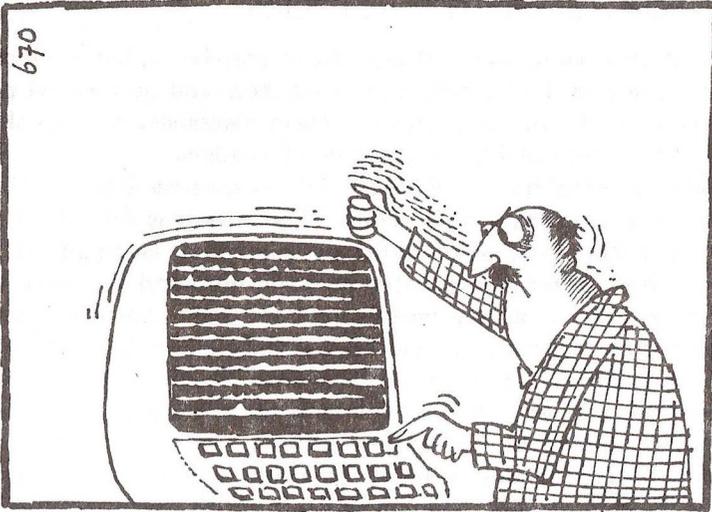
--oOo--

SUPERBASE 8096/700 INDEX

A notable omission from the Superbase/Superoffice manuals for 80-column machines is an index. Some time ago Precision supplied me with a copy of the index for the 64 version, from which I produced an index for the 96/700 versions. In due course Precision will include this in their manuals; meanwhile I am allowed to distribute copies of my index.

If anyone would like a copy, I can supply it as a Superscript file ON DISK. Please send me (Joe Griffin, PET librarian, see inside back cover) a disk as if requesting Library software. Remember to say which format you use, and to send return postage.

--oOo--



SUPPORT HOME INDUSTRY

Our Regional Organiser, Tim Arnot, has published a new book, the 'Commodore 64 Whole Memory Guide', covering disassembly of ROMs, copious notes on routines, memory locations, I/O ports, etc. The publishers are Melbourne House. Price £9.95

NOTES FOR PROSPECTIVE AUTHORS

The Newsletter welcomes articles from members. The subject matter should be relevant to Commodore computers and associated peripheral devices or to software/programs for them machines. Articles should aim to appeal to a reasonably wide range of readers.

For authors who have not had much experience in writing for a magazine such as ours, a few words of advice may be useful. Organise your ideas before you start writing; keep the language simple and sentences short - far the greater part of our work involves replacing ten words by five; avoid obscure expressions and terms; find someone to give your article a good, critical review before finalising it.

If you are reviewing an item and find faults that you intend to publicise, check them thoroughly! It is a good idea to contact the manufacturer, importer, or author and discuss the fault with them before finally committing yourself to print. Sometimes the fault turns out to have been already fixed, to be a one-off manufacturing defect, or to arise from a bad tape or disk. And even the best authors make mistakes and have to make embarrassing apologies in later printings.

Before writing a long article or reviewing a major piece of hardware or software, contact Henry Velleman to ensure that someone else is not already doing it. Feel free to contact either the editor or assistant editor if you have any questions about writing for us. Your article, even if 'accepted', will not always get into the next issue.

We prefer copy on a 1541/4040/8050/8250 disk, but we can transcribe cassettes if you have no access to a disk drive; please send plain (or CBM) ASCII files, without layout characters, soft hyphens, tabs, or other embedded control codes. If you have a complex table or something similar to lay out, make sure we have a good reproducible copy of it because, using proportional spacing as we do, layout by spacing does not work. If you happen to have Wordcraft, on the other hand, you can embed any code you like, and do use tabs, not spaces, as much as possible.

If you like to make your lines 70 characters wide and pages 41 lines long, it helps us slightly, and you will know how your article is going to 'page', but this is not vital, and anyway we may add or subtract half a line here or there to get it to 'page' nicely.

A hard copy of the article with the disk is appreciated but not essential, except as just mentioned. Disks will be returned, probably faster if a peel-off label with the author's address and a stamp is enclosed, but scream if yours does not come back reasonably soon after actual publication.

--oOo--

DISCOUNT CORNER

Please refer to pages 24/5, 160/61, 242, and 319 of this year's newsletters for other discount information.

PRECISION SOFTWARE have produced SUPERScript & SUPERBASE for the C128 machine and the prices for these are being detailed on an insert into this newsletter.

Any other prices not printed on this insert will be as on previous inserts or Discount corners.

PHOENIX PUBLISHING ASSOCIATES LTD

Please look at my piece in the last newsletter about the books available from this publisher and let me have your order indications as soon as possible.

DISKS

Please refer to page 24 and note that the dimensions of each box are now 6" x 6.5" x 1.5" inches by 1.5 inches (40mm x 145mm x 165mm). These disks are all double-sided and you will need double-sided disks for the new 1571 and 1572 drives when they become available for the C128.

THE FINAL CARTRIDGE - for the C64 (see also p. 364)

This product is available through me at a very special price of £30 each including VAT & postage (RRP £50). This offer requires me to send off orders in minimum batches of three, so please be prepared for a little delay. Your cheques, made out to H & P Computers, should be endorsed on the back with your current membership number and address. Please enclose a stamped self-addressed envelope so that I can advise when your order has been sent forward for action. Briefly, this cartridge includes a TOOL KIT, DOS commands - fast loading & saving (disks 5 times, standard tapes 10 times as fast a normal), programmed function keys, monitor, reset switch, 24k extra RAM, and Centronics interface software. A Centronics cable (user port to Centronics plug) can be supplied at the special ICPUG price of £8 if ordered with the Cartridge. Full details from H & P at 9 Hornbeam Walk, Witham, Essex CM8 2SZ or Mailbox on Prestel 376511471.

VIZASOFT LIMITED

This company have produced their VIZAWRITE and VIZASTAR programs for the new C128 machine (£99.95 & £129.95 are the respective RRP's) and

these programs will be sold to members at similar discounts to those on their products for the C64. The same procedure of purchase through me will apply as before.

VIZAWRITE for the CBM PCs is now available at a substantial discount on the RRP of £269 through me: please write, mailbox, or call me for details.

Y2 COMPUTING LTD

Their offer for the KAGA printer is reduced to £235 before VAT. They also have available a special internal interface which simulates the MPS 801/803 and costs £50 plus VAT. The standard external interface is still £24.50 plus VAT and carriage still £10 plus VAT. Order direct, giving your membership number. Contact is Rod Eva on Watford (0923) 50161.

Y2's PET communications packs have now been increased in price to cover the many modem variations and cost £86 plus VAT each (less 15% to members)

This company can offer good discounts on software for the PC; call Rod for details - some discounts are as much as 40%.

Do you want a PC10 + 10 still with two disk drives? Then call Rod Eva as he can sell such a beast to members at the very special price of £2125.00 plus VAT. The +10 means an internal 10Mb hard disk which, because of the size of the CBM PC's power supply, does not require an extra power supply (which the IBM's PC does).

HANDIC SOFTWARE LTD

This company will offer to members, on orders placed through me, discounts of 15% on hardware and 10% on software. Your written orders should be sent to me with cheques made out to Handic - endorsed on the back with your current membership number and address - together with a 17p stamp to enable me to forward your order to Handic. They will be making special offers from time to time which will be detailed in this column.

FIRST PUBLISHING LTD

This company have agreed, on orders placed through me, to allow a discount of 25% to members on their books and software. They do books on both the C64 and the 1541 disk drive; their software list includes Pascal 64, Assembler/Monitor, ADA, and a Compiler plus FirstWord (wordpro), PowerPLAN (graphics & spread sheet), Graphics 64 and

Personal Finance 64. When placing your order, enclose your cheque - made out to First Publishing Ltd, endorsed on the back with your current membership number and address - and a 17p stamp for my endorsement and forwarding to the supplier.

JB

--oOo--

COMAL DISK FOR THE CARTRIDGE

by Brian Grainger

The following disk of programs, utilities, pictures, fonts etc. is available from me subject to the usual conditions. State clearly which disk you want, send a disk and return postage and a copy will be sent to you. The time taken will be dependent on how inundated I am.

The listing consists of programs from the UK and the disk contains brief instructions.

```

-----
comal2.01 UKNo.1
-----
44 "structured'prg'1" prg
60 "structured'prg'2" prg
89 "structured'prg'3" prg
4 "selection'sort.l" seq
36 "demo'select'sort" prg
4 "bubblesort.l" seq
39 "demo'bubblesort" prg
4 "insertion'sort.l" seq
37 "demo'insert'sort" prg
4 "quicksort'vert.l" seq
35 "introd'quicksort" prg
38 "demo'quicksort" prg
24 "rnd'name$'1000" seq
25 "sort'timer'prg" prg
4 "binary'search.l" seq
35 "demo'bin'search" prg
36 "roman'numerals" prg
10 "hanoi'40" prg
19 "color'hanoi'40'2" prg
9 "magic'inst" prg
25 "magic'squares" prg
20 "the'memory'game" prg
1 "-----" prg
1 " instructions " prg
1 "- -----" prg
29 "read'about'disk" prg
21 "about'disk" prg

```

READERS WRITE . . .

PET NEGLECT

C Briggs at Coverack, Court Mill Lane, Wadeford, Chard, Somerset TA20 3AX has been catching up on his N/letters after being ill and has just found one of the several complaints that PETters are neglected in our pages. He should be interested in Mike Todd's remarks on the point this month, but anyway he says:

AD Lock's experience (Jan/Feb N/letter) is much the same as mine except that I have an 8032/8050/4022P system. I would also like to start networking but am unable to do so. I am more concerned, however, at the lack of all programming material. There is now nothing for the PET owner in ICPUG and I have been unable to locate a single magazine where there is any mention of programmers' aids, hints and tips, or even games programmes for the PET.

My plea is certainly an echo of his - don't let the games people take over completely: remember there are still a lot of us PET owners about.

● I don't think there is danger of the games people taking over under the present editors; and there are at least two specific PET articles in this issue, three if you include Superbase corner, which I for one use only on PET - Ed.

S I Gs

SG Fatcher, of Primrose Villa, Clockhouse Lane, North Stifford, Grays, Essex wants to know:

Have we any members who share my interest in a) beekeeping b) keeping 'hive' records on a 64 c) keeping detailed records of climatic conditions? I hope to use this information to set up a graphic design sheet to exercise my computer and my mind in winter.

Thank you, by the way, for an interesting magazine. Where else would I find such detailed articles on Superbase and Comal?

● Along the same lines, Alan Bennett (one the few craftsmen left in England able to build a watch or clock from scratch, by the way) would like to know, at Old Thornwell, Fore Street, Milverton, whether there are fellow-members interested in genealogy - well, actually he asks if there is a Family Tree special interest group, and says he'd like to join it if there is. I am sure there isn't one within ICPUG yet, but his enquiry may well bring together the makings of one.

● Moreover, the Editor would like to hear from any Flight Simulator buffs, to discuss problems in flying this infernal machine. Although he used to be a pilot (of a rather dangerous sort), he is having great difficulty; the only consolation so far has been from ringing up Mick Ryan in Brussels, when in answer to his lament that he and two pilot friends with several hundred hours' flying time could do little but crash (the program is very good at this), Mick replied 'Don't worry, I have 4000 hours on jets and I can't fly it yet either.'

BATRACHIAN BRICKBAT

Rose Humphrey writes from overseas - 146 rue du Theatre, 75016 Paris, France:

I am not normally given to writing to editors and doing a Retired Colonel act ('shocking inaccuracies', 'never been so outraged in my life', cancel subscription

forthwith', etc) but I felt Richard Wilson's article on the Commodore US scene had two important omissions as regards Commodore-specific magazines available there (and here in Europe as well, if you look carefully enough), viz. 'Compute!'s Gazette' and 'RUN' [and 'Midnite Gazette', for Lord's sakes - Ed].

If Mr Wilson's newsagent does not stock these, then perhaps he should take his custom elsewhere. Compute!'s Gazette has been favourably mentioned elsewhere in the N/Letter (although I personally am not too keen on it) and RUN I would class as essential for a serious (i.e. incurable) Commodore user: it is chock-full of games, utilities actually worthy of the name, and routines. So there!

Please accept my apologies for not coming to the AGM at the end of September: it is rather far on the bus. I'll try and produce an article on the Terrible State of Computing in France, or something, in the near future. If you think you've got it bad over there, you should have a look at our set-up. Meanwhile, keep up the good work.

HELPFUL

AD Miller offers from 38 Exeter Gardens, Ilford, Essex IG1 3LB:

I noticed in the last N/Letter that another member was interested in having programs listed for him, and in fact I got in touch with him and offered to help him. If any other members would like listings printed for them I would be prepared to do them for a nominal charge. I think £1 per listing plus return postage would be reasonable.

Please would you make it known to members that any listings for the 64 sent to me at the above address on either tape or 1541 disk can be printed for them within a week.

ICONOCLASM

M Hodgson, of 23 Crookham Rd, Fleet, Hants GU13 8DP, writes at some length on several subjects, and when I remonstrated that I wasn't about to key that lot in and he would have to send me a disk if he wanted to see it in print, replied that he was only really interested in the part in which he says (I summarize):

What, apart from interest/education/games and use by club secretaries and the like, is the real use of a home computer? I can see eyebrows rising and arms being flung up in horror amid cries of amazement from members at my temerity in asking this, but my question stands.

I use Easy Script and one or two commercial programs, but I cannot see the use of a database to the man-in-the-semi? Books? - I have about 2000 but don't need to put them on computer, unless I plan to trade in them. Stocks and shares? I would guess Mr Average has little involvement in this area and certainly doesn't need a program to analyse his Building Society account. Menus? - my wife would kill me if I suggested it: she can calculate with inbuilt accuracy to several decimal places exactly how much of a given ingredient is required (i.e. a pinch of this, and maybe a handful and a half of t'other).

No, I can see a use for a home computer for interest and now communication, but the vast majority of commercial programs on offer are of little use to the man-in-the-semi unless, as I said, he is a club secretary or a businessman. Am I missing something?

VACANT SLOT

WH Jarvis, Salewheel House, Salesbury Hall Rd, Ribchester, Preston, Lancs PR3 3XU writes:

Having had an 8096 since '82, I seem to be unable to stretch it yet to its limits and I'm now looking for anything interesting (and preferably useful as well) to put into

the vacant \$9000 slot. Any suggestions would be welcome, and if it involves contacting someone with a blower who would write and blow something for me, I'd be glad to pay a reasonable price.

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FOR SALE AND WANTED

2001 with BASIC 4, Visicalc, and Command-O; 4040 drive and 3022 printer/spares. £750. Will separate; will deliver. C] Aston tel. (0785) 813241 (day) or (0785) 56558 (evenings, weekends)

4032 (9") + Toolkit (BEE), Repeat/reset (KRK2); 2031 LP drive (DOS 2a); cassette; manuals; software. £200 ono. Will deliver up to 160km. Tel. (0642) 563360 [Repeat - Hugh the disorganizer got the number wrong last month]

Commodore 2001 (large keyboard) and 3032 + twin Computhink drive. RS232 interfaces for both (one 2-way). Offers to Charles on 01-977 5000

3022 printer, new head fitted, good condition, £120. JCL IEEE interface cartridge for C64, £50; Vizawrite and Vizaspell [I think - hardly decipherable] £50; Practicalc £20; original disks for C64. John, tel. Salisbury (0722) 29506

Brother HR-5 printer (Centronics interface) including PSU, £130; Easy Script + games pack, £30; Future Finance £30; BC BASIC (cartridge), £35. Open to offers. 'Phone Andrew Scott on 082 625 431 (nr Dundee), preferably of an evening

For the VIC 20 - various VIC games, including: Gridrunner, Micky the Brick, and the Quest. Many more available, some 16K, some unexpanded; each £1.50. 'Phone Adam on (0272) 656461 4 - 6pm

ROM Issue 5 (901229) for 1541 disk drive; Interpod - very little use [used? - Ed]; First Publishing Compiler for 64 (also compiles in real m/code); Powerline 'C' language for 64 inc. 500-page manual; new and unopened: Easy Script, Easyfile, Intro to Basic Pt 1; Petspeed for 8000 series; Superbase version 2 for 8000 series.

Sensible offers to Mark, tel. 0702 557145 ((Southend)

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SOFTWARE LIBRARIANS

PET*

Joe Griffin
Clovelly
Lynwick Street
Rudgwick
Horsham
W Sussex RH12 3DJ

VIC-20
Brian Wise
17 Knighton Close
South Croydon
Surrey
CR2 6DP

*also responsible for 64/VIC programs on 8050 disks

64 LIBRARY - DISK/CASSETTE

UK ADDRESSES, SURNAMEN BEGINNING WITH -

A or D Kenneth J Hill, 25 Mount Avenue, Rayleigh, Essex SS7 7HS

B Fred Owens, PO Box 3241, RAF Mildenhall, Suffolk

C R Burns, 48 Grasmere Rd, Royton, Oldham, Lancs OL2 6SR

E I J K Mike Hingston, 1 Stafford Rd, Eccles, Manchester M30 9HN

F G Geoff Crowther, 60 Fleckney Rd, Kibworth Beauchamp, Leics LE8 0HE

H Barry Whitelaw, 25 Buckerills, Basildon, Essex

L N O Nigel Corry, 4 Horsted Way, Rochester, Kent ME1 2XY

M Raymond Medford, 7 Thorn Grove, Hale, Altrincham, Cheshire WA15 9AW

P U V }
X Y Z } Bill Hull, Rocklea, Pilling Lane, Preenall, Blackpool, Lancs

Q R T Tony Harrison-Smith, 150 Moreland Avenue, Benfleet, Essex

S Brian Wise, 17 Knighton Close, South Croydon, Surrey CR2 6DP

W Chris Wright, 37 Cecil Street, Lytham-St-Annes, Lancs FY8 5NN

Germany including BAOR

Brian Carrel, Berlin ICPUG, 29 Signal Regt, Berlin BFPO45

Overseas other

David Jowett, Windmill Electronics, 335 Red Bank Rd, Bispham, Blackpool

FY2 0HJ

64 programs on 8050 disks - Joe Griffin, see PET library above

