

CURSOR

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NEWSLETTER of the COMMODORE COMPUTER USERS GROUP (QLD) INC.

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SHEPPARTON COMMODORE
COMPUTER CLUB,
C/- 11 Dunrobin Street,
Shepparton. 058-214746.



MEETINGS - WHERE & WHEN

MAIN MEETING

Tuesday 7th March 1989, in the Bardon Professional Development Centre, 390 Simpsons Road, Bardon.
Entrance is through the Centre's Car Park in Carwoola Street.
Library Open: 7pm - 8pm and 9pm - 9.30pm.
Shop Open: 7pm - 8pm.
Main Meeting hours: 8pm - 10pm. Topic:

Getting into Spreadsheets by D. Maclurkin

C-64/128 WORKSHOP (MEMBERS ONLY):

Sunday 12th March (1pm - 5pm) in the Guidance Officers Training Centre, Bayswater St. Milton.
Bring your own computer equipment.
Public Domain Disks available for copying.
Ph. Colin Shipley - 366 2511 a.h.

SPECIAL INTEREST GROUP

PLUS/4 SUPPORT GROUP: - Clarence Stock is acting as support coordinator for Plus/4 owners. Ph. Clarence Stock on 397 8894 a.h.

REGIONAL MEETINGS

CANNON HILL: Last Saturday of the month (Noon - Midnight) in the Cannon Hill State School. Ph. Don Friswell - 343 1735 a.h.
KINGSTON: 1st Friday of the month (7pm - 10pm) in the Kingston High School, Bega St. Ph. Peter Martin - 290 1537 a.h. or Alan Hill - 290 0264 a.h.

PINE RIVERS: 1st Sunday of the month (1pm - 5pm) in the Strathpine State High School. Ph. Barry Bean - 269 7390 a.h.

SHERWOOD: 2nd Friday of the month (7.30pm) in the Graceville State School. Ph. Leigh Winsor - 379 2405 a.h. or Philip Parkin - 818 1172 a.h.

WAVELL HEIGHTS: 2nd Tuesday of the month (7.15pm - 9.45pm) in the Wavell State High School, Childers St. Entrance. Ph. Cor Geels - 263 2839

SUNSHINE COAST meets regularly.
For meeting times, dates, places:

Ph. Harvey Riddle - 071 / 421 036 or
Ph. Vic Mobbs - 071 / 941 330

MARYBOROUGH/HERVEY BAY: 4th Monday of the month (7pm - 10pm) in the Sunbury State School, Alice St.
Ph. Terry Baade - 071 / 215 059 a.h.

Copying of Commercial Software is NOT allowed at our Meetings!

GOODS & SERVICES

(AVAILABLE AT OUR MAIN MEETING OR BY MAIL)

Public Domain Disks (C-64/128): \$3.00 ea
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C-128 Memory Map: \$2.00 (+ \$1.00 Postage)
Macro Assembler Book: \$5.00 (+ \$1.00
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64 Sound & Graphics (by G.Perry): \$10.00
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Amiga Dos Summary: \$3.00 (+ \$1.00 Postage)
Amiga Beg. Guide: \$3.00 (+ \$1.00 Postage)
Amiga Edition of "CURSOR": \$10.00 annually
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-ooOoo-

FOR HIRE (to Members only): a 1526 (MPS
802) Commodore Printer. For details contact
John Van Staveren on 372 3651 (a.h.).

-ooOoo-

COMPUTER ADDITIONS/MODIFICATIONS

are being carried out at our
Milton Workshop Meeting (see Page 2) by:
Murray Hungerford (Ph. 848 2363 a.h.) and
Philip Van Der Vliet (Ph. 848 5753 a.h.)

SERVICES OFFERED:

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The Secretary, C.C.U.G. (Q) Inc.
P.O. Box 274 Springwood QLD 4127

-ooOoo-

CURSOR COMMERCIAL ADVERTISING RATE:

\$30.00 per Full Page, per Issue.

(All bromides, artwork etc. to be supplied by
the Advertiser.)

-ooOoo-

PRODUCTION CREDITS:

WordPerfect 4.1

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and all those members whose contributions
you are reading in this issue of *Cursor*.

-ooOoo-

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RANDOM BITS



This logo was designed by our member Lindsay Whipp some twelve months ago. Since then it has just been sitting on your editor's desk, without doing very much at all. Obviously we could use it for letter heads, envelopes, and perhaps even in our newsletter.

But perhaps you, dear reader, may have some other ideas. (Yes, T-shirts have been suggested, but costing of these has never been finalised, and apart from our logo we would have to find a suitable text or illustration for 'the other side'.) Anyhow, the editor would very much like to hear your suggestions.

FEBRUARY MEETING

Our first main meeting for 1989 was very well attended with quite a few new faces joining our ranks. The new members were given an introduction to the Group's services and facilities by John Condon in a very able manner.

After the opening remarks by the President, Secretary and Newsletter Editor, the C64/128 members moved to a new comfortable room (S4) where Reuben Phillips and Gordon Keir showed different aspects of the latest in games software. A good time was had by all.

PRIMARY EDUCATION SUB-GROUP

We have been advised by Bill Weeks that the Primary Education Sub-Group is no more. A variety of circumstances have contributed to this demise, but it was not due to a lack of interest as usually a dozen or more members attended.

According to Bill Weeks, "Due to the fact that many of our regular members have received transfers at the end of 1988, we now have no representatives at Aspley. Another factor against us is, that many of the teachers will now be in "Apple Country". We may

be able to revive the group at another location later on, but prospects aren't too good." It has certainly not been for want of trying by Bill Weeks and his colleagues to further the cause of the C-64 in Primary Education, but because CBM never made any real sustained efforts to place C64s in Primary schools (unlike Apple, BBC and others), their valiant battle has been in vain.

We thank Bill and his colleagues for the valuable work that they have performed on behalf of education and the CCUCQ. Let us hope that CBM read these words and mend their ways.

B Y T E S

--- FOR SALE ---

PaperClip III (128) \$50.00 - WordPro 128 \$30.00 - FontMaster 128 \$50.00 - Fleet System 4 (128) \$60.00 - GEOS 128 \$60.00 - SwiftCalc 128 (with Sideways) \$40.00 BobsTerm Pro 128 \$60.00 - Cobal 128 \$30.00 - Big Blue Reader 128 \$20.00 - FlexiDraw 5.5 (C64/C128) - \$40.00

Contact David Lindgren, 38 Coolangatta Drive, CLIFTON SPRINGS, VIC, 3222

Amiga 1000 (PAL, 512K), c.w. all manuals, printer cable, operating system disks, some Public Domain disks, plus 1084 Colour Monitor - The lot: \$900.00
PROTON 1 Megabyte Expansion Memory Board and Battery Backed up Clock. (for Amiga 1000) - \$600.00
COMMODORE 1010 3½" External Drive - \$200.00

Contact Ralph De Vries on (07) 300 3477

PUBLIC DOMAIN DISK LIBRARY

DISK 044 CCUGQ BUZZ-BOMB V1 3

AUTOBOOT - Disk header and ID
PRINTBOOTDATA - Prints directory as well as information about programs.
SOLO LABEL - Use for making single labels.
DISK LABEL64(PB) - Paul Blair's prog. Makes disk labels in 3 columns in Superscript mode.
FILE COUNTER - Counts # files on disk. Used in directory print programs.
ENVELOPE ADDRESS - Prints address on envelopes & then sender address on back in condensed mode.
5 CHARACTER ID - If you ever want a 5 char. ID this is for you.
SHORT&QUICK DIR - Suitable for merging into your programs. It quickly lists the directory.
WEDGE - A good wedge. After load & run type >help to view the commands.
123 DIRECTORY - This prog. & the next two print out directories in various modes. Load them & pick one
PYTHAGORUS - Calculates any side of a rt.-angled triangle.
ELECTRONIC C.SET - Prints an electronic wiring diagram using the standard symbols.
DIRECTORY PRINT & DIR PRINT DOC - Prints directory with adjacent lines for describing each file. Commodore mode.
DIR PRINT EPSON - Same as direc.print but Epson mode. Help screen on each program.
LASER BOOT - Fantastic mobile graphics with 9 different tunes etc.
NOAH WITH VOICE - Answer questions from Genesis & build up the Ark. Noah's voice accompanies.
RATTLESTOPPER - M. Hawkyard's prog for

stopping disk rattling. Follow the prompts.
READ DISCLAIMER - This program reads the disclaimer file.
READ LOAD ANOTH - Load another prg outlines a method for loading another program from within a program.
STATEMENT - Prints out a statement which you can customize with your own data.

NOTES RE V1 DISK:

Buzz-Bomb (V1) is the first PD Disk I have put together and contains a pot-pourri of various programs; many of which have been contributed by others and some by myself.

I have spent many hours polishing these programs; making new menus; making help screens; making separate instruction files and most importantly obtaining advice from other members from our President downwards; but above all indulging one of my favourite pursuits of making entertaining exits. If you detect any errors then, with glee observe that even the mighty have feet of clay, but nonetheless do not hesitate to advise me.

The beginning and ends have been cared for; I await your judgement as to whether the substance is worthy of your approval.

With acknowledgements to Doreen, Maurie, Greg, Ralph and many others.

Douglas (works for me) Maclurkin

-ooOoo-

FROM THE 64/128 COORDINATOR

There are (I say in pious hope) many 64/128 users out there in the undergrowth doing interesting and creative things with their computers. Unfortunately (again I say in pious hope) their natural modesty leads them to hide their light under a bushel.

If the User Group is to flourish, people doing interesting and creative things with their computers need to share their delights

and frustrations with other members of the Group.

So, if you have mastered a program or discovered how to do something you are pleased with, perhaps you should think of doing a demo for a sub-group or the Main meeting, or even of leaving printouts there for kindred spirits to ponder.

L.D.Winsor

BOOK REVIEWS

(All books supplied by B.C.F. Bookshops, Elizabeth Street, Brisbane)

1001 Things to do with your Commodore 128

by Douglas Maclurkin

What tasks are involved in making a review? I suppose one has to read the book from cover to cover and then try out some of the programs; I have done all this and am aghast and gratified at the multiplicity of programs and functions which can be performed on the 128! Why spend thousands of dollars on a 'Female friend' when it is all here? The 128 was just unlucky. It came at a time when the Amiga was already in the pipeline and was overshadowed by it. Had the 128 been given a fair chance it's versatile characteristics would have been more completely explored. To parody "Annie get your gun" the 128 could say to the Amiga "Anything you can do, I can do if not better, just as well, and a Helluva lot cheaper!" Just read the '1001 things to do' and you will see what I mean.

Try this: close your eyes and think of something you would like to do with your computer then open the book and you will be sure to find it can be done on the 128. Its versatility extends from word processors, investment analysis & business management, and budgeting to scientific & educational applications. From games playing & hobby use to household recordkeeping. You can forecast weather, calculate camera settings, save money and time and increase your profits.

Printouts, flowcharts, diagrams, step-by-step instructions, and a wealth of new illustrations are all featured. A real bonus is the number of formulae for engineering, electrical, astronomical, mathematical etc. applications.

If I may be permitted a criticism it is that after having whetted your appetite by describing a particular application there is no reference to where this can be obtained. In some cases it is obtainable only in America! It would be nice to be able to go out and buy some of the described programs & applications; but where? Some electronic diagrams would be useful also but I think the book

would then be unduly large.

However, I do know of a member who attended one of our subgroups, who had developed a peripheral which acted as a burglar alarm; it detected the opening of doors & windows etc. Perhaps he would care to submit his diagrams & instructions to 'Cursor' or to me so that we can share his enthusiasm. This, of course applies to any other member who has programmed any other useful peripheral.

Of course there is the one thousand and two thing you could do with your 128:-
1002 : Trade it in for an Amiga!

PEEKs and POKES for the COMMODORE 64

Author: H.J.Liesert

by Casanova Maclurkin

When I first ventured into computers and learned some of the language I was immediately conscious of the thought that there was something pornographic about the two words of this title. There was a redolence of the voyeur about PEEK and as for that other word!!! When asked to delve into this book and write a review I fully expected that the author would have been D.H. Lawrence and that Lady Chatterley would peek from the pages and poke at me (or vice versa). I made up my mind that should this happen I would remain coldly aloof and vigorously resist any unseemly response.

It behoves us all to temper our PEEKs and POKES with a leavening of CTRL, to REMAIN calm AND NOT STORM the RAMparts of SIN like CONCATENATED ROMeos, lest we GOSUB to a CONTumely LIST of ABSolutely DECREMENTED LOGs with DIMINISHED INPUT from which there will be no RETURN, all our SYSTEMS RUN to a CLOSE and perhaps LOADED with REMorse, of course.

Some LOGs have sought refuge in the attractions of the 'Friendly Lady' where there are no peeks and pokes. Maybe these terms have been omitted in deference to her gender. I wonder that she was not investigated

by Tony Fitzgerald together with all the other 'Friendly Ladies' with whom she would have a lot in common including costliness and no ease of access. It would be fitting perchance if her meetings could be held in a miasma of cheap perfume, subdued pink lighting and a red light at the door!

But, pardon gentles all, this digression; we must proceed with our review. The book itself is more useful as a reference manual than a text book. Draw it out of the library by all means but you should seriously consider purchasing a copy and adding it to your own library. It would be impossible to memorize all the many useful P's & PO's outlined by the author. You will always want to recall them if you are serious about programming.

There are three sections. Part 1 prepares you for all the tricks that are outlined in Part 2 by giving explanations of PEEK, POKE and other BASIC commands together with an outline of the computer's functions. Part 3 is devoted to a beginner's guide to machine language.

ALLAN & DOREEN HORNE

A VALEDICTORY

by Douglas Maclurkin

Ave (Hall) to Allan & Doreen who now join the ranks of all us other bludgers and hopefully bring with them the enthusiasm, energy and expertise with which they administered the onerous duties of the Group's various libraries. Now, perhaps we can anticipate some stirring in the ranks of the 'hoi pollol' and particularly from my point of view, submission of some interesting programs, of which I know Doreen has quite a few.

Vale (Farewell) to two very wonderful people who have done such a marvellous job not only in continuing the solid groundwork laid down by Maurie Hawkyard, but even improving and extending it into new fields. Who succeeds them has been set a very high standard to follow.

Few Members realise the full extent of the Librarians' duties. There is an enormous amount of work involved in checking all the

Perhaps the best way to demonstrate the value of the book is to tease you with a few questions:-

1. What do the following Pokes perform?
 - a. Poke 198,0
 - b. Poke 650,128
 - c. Poke 788,52
 - d. Poke 1024,68:Poke 1025,77:Poke 55296,2:Poke 55297,1
 - e. Poke 53281,2
2. What does SYS 42115 do?

If you can answer all 6 queries correctly then you have no need of this book. Otherwise you will definitely need to buy it!

Answers:-

- a. reffub draobyek eht sraelc.
- b. taeper syek lla. (Turn off with Poke 650,64)
- c. ffo pots/nur.
- d. neercs fo pot ta MD stnrp
- e. der ot neercs segnahc.
2. YDAER tuohtiw margorp sdne.

transactions, tabulating new books & magazines, correspondence etc. etc. Not many will know that a continuing stream of disks are returned to the library in a faulty condition and these faults have to be discovered and the bugs corrected. This, in many cases requires a knowledge of Machine Language, hours of time and an infinity of patience.

As if this were not enough, there is the added burden of having to carry a load of material to each meeting, arriving early, dragging heavy boxes from the storeroom, and setting up the library. Afterwards, of course, doing the whole thing again in reverse.

Allan and Doreen have unflinchingly served the Club in all areas and are deserving of the highest praise and most fulsome gratitude from all of us. I join with all members in wishing them both a program of peace and good fortune in the future.

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THE SUPER* PAGE

by Paul Blair

This month I plan to go wandering off among a whole lot of useful SB trivia. When you stop laughing, we can start.

DOLLARS

For all the formatting power that Superbase gives you, it's odd that the humble monetary symbol (dollar, pound, lira etc) is not included in any of the output format commands. Well, that seemed an odd thing, so here is a short way to set up for printing dollar amounts with a leading "\$" sign. This is a sample program that you can adapt (even improve on, maybe) for yourself.

```
10 ask @1,0"amount ";a
20 g$=mid$(str$(a*100),2)
30 if len(g$)<3 then g$="0"+g$:goto 30
40 display @2,0"$"+mid$(g$,1,len(g$)-2)+"."+right$(g$,2)
50 wait:menu
```

Simply change the first "\$" sign in line 40 for Chad mumbles, Transylvanian thrups, or whatever your native currency requires. If you have a neater way (please!), share it with us.

PRINTERS

The next routine derived from a query that came from Mike McWatters of Port Hedland - how to detect if the printer is on or off. After some playing around, I came up with:

```
10 trap 40
20 print"error"
30 across:wait:menu
40 if er=105 then display @1,1"Turn the printer on, please"
50 wait:goto10
```

Well, its not glamorous, but it does work on the C=128. The "er" value came from doing it, then checking the value the computer actually got with the serial printer switched off. But 105? Not 5? Does SB somehow like centuries only? Any believable theories? Anyone got a suggestion that works on the C=64?

DATES

More trivia. I got caught with SB's date conversion. Let me explain. I was using Ray West on the 64, page 100. This gives the value 31897 for 1 May 1987. Now, in SB, 01MAY87 is stored as 31898. So I figure that Ray (and Mr Zeller, too) calculate the "number of days since 1.1.1900", while SB uses the actual day number, which is one more. To me, that seems more sensible. Ray's formula needs to have 1 added to it if the results are to be fed into SB. This is an adaptation of Zeller's Congruence, just for you:

```
10 input"date";d,m,y
20 a1=d:a2=m:a3=y
30 a1$="000031059090120151181212243273304334"
40 day=a1+a3*365+int((a3)/4)+val(mid$(a1$,3*a2-2,3))
50 if a2>2 and (1900+a3)/4=int((1900+a3)/4) then day=day+1
60 print day:rem add 1 for SB
```

To judge from my mail, dates (messing about with, reasons why unknown) occupy a lot of you in a heap of work. I confess that I sometimes get a bit impatient with the things that SB would have you do in this regard. However, there are all sorts of routines for dates, and if you want, I could try to explain more about them.

C128 SCREEN UNDERLINE

There is an odd thing in trying to underline headings on the C128 screen. If I tell SB 'display @10,2 chr\$(2)+"DATE ENTRY VALIDATION", I get an extra underline character after the last letter of the last word. Maybe that's a CBM command problem. To get around it, I put a space inside the quotes before the first word, so there is an underline hanging out at both ends. Maybe I'm doing something else wrong? Again, have you found a solution?

MEMO

A few words about MEMO. I stumbled on the value of this one by accident. The story goes that I was doing some SB programming which was to be used by a normal citizen, i.e., one having no computer literacy. If he reads this, then Paul will get torched.

I wanted to provide him with an opening screen that would help him recall what things he had to do, and in which order. There were only three actions, but I preferred not to take the chance on his getting the sequence wrong. I hate unclogging disks at midnight, and will go to great lengths to avoid the situation.

The logical thing was to write some "SB Basic" in the 'START.P' program - you know, the system setter-upper file that SB loads as soon as it comes alive. If you haven't found out about 'START.P', then I suggest you cuddle up to your instruction manual for a while and find out. It's all explained there. The idea of putting the wisdom into 'START.P' would be to make sure the user couldn't escape at least seeing the instructions. But that seemed too much work, and I'm just a bit lazy.

MEMO is a simple text editor that can be used to write a screen "page". The page can then be called up to be read. SB is not disturbed by your recalling the screen page, and it is a useful (albeit limited) feature that I suspect is little used. It was probably included in SB so the HELP screens could be written. In fact, the HELP screens are only MEMOs, with one extra feature - the ability to quit the screen display easily, and go back to what you were doing. But I'm getting ahead of myself.

The F7 MENU option is explained in the instructions, but in effect you can write a new screen (or screens - up to 4, in fact), or recall and read or edit an old one. The top screen line will ask you for a screen (or MEMO) name. If SB finds it, it will be displayed on the screen. If not, the screen is cleared and you can write one. That's all very simple.

But how to integrate all this with my program? Say I created a screen named "gday", and wrote a MEMO. In my 'START.P' program, I could then include a line like:

```
10 memo "gday":wait
```

and the darn thing would load "gday" alright, but then I would have to press some esoteric combination of keys to carry on. That's just too fussy - I want to press only one key for more action. But as I said before, the HELP function is better, because pressing any key quits the screen, and matters proceed from where they left off.

So, if instead of "gday", I named it "hgdoy" (for 40 column screens) or "h8gdoy", then my program line could become:

```
10 help "h8gdoy":wait
```

and the screen would pop up for me. As a bonus, the command line would prompt me to whack a key to go on. Problem solved.

Before you get too delirious, a caution or two. MEMO is probably the simplest screen writer ever devised. Only the screen display is captured - no colour or special features (flash on, underline, etc). The returning screen will be one colour only. If you include the limited SB graphics, they will work. If you want the flashing lights bit, then you will have to write a PROG to do it, or go on back to 'START.P' and do it there.

SPARE FIELDS

When you are designing a new database or file, consider adding an extra field into the format as the last field. Call it something inconsequential, like {dummy} or {spare}. There is a reason for including the extra field.

The best explanation is an example. Say you have a field like {name}, which contains "R T BROWN", initials and surname in this case. Now, you would like to reformat the output on the fly, but still use the powerful SB '&' and '@' formatting/layout features. The simple thing to do is to slice off part of one field and temporarily call it another. So, if a\$=left\$(name),3) and {spare}=a\$, then you can use '&' and '@' with {spare}.

That's a very simple example, just to help grasp the concept. The extra field should not run you out of disk space, because SB will only store a carriage return if the field is empty. One extra byte shouldn't break the bank.

Here's a more useful example - to extract record details for a particular month, and generate a key list of the appropriate records. The author is not known.

```
10 ask "Which month"b$:date"01"+b$+"87",a:if a=0 then 10
20 select f
30 convert {date},a$
40 a$=mid$(a$,3,3)
50 if a$=b$ then calc {spare} = "1": store
60 eof goto 100
70 select n: goto 30
100 find "" where {spare} is "=1"
110 batch all {spare} = ""
120 menu
```

If you only want to store a "flag" or suchlike, then you can format the extra field to be only one character in length. But if you can to do something like the first example, remember to make the field of sufficient length. Again, if it is not used, only one additional byte is stored on disk.

EXPORT/FILL

This bit you shouldn't miss. It's vital. Well....

Files written out to disk are used by many people to do things outside the structure of SB. I use them often to overcome SB's woeful print speed, and to twiddle data for my own purposes (sometimes to enter into other SB databases).

There are different ways of writing files - EXPORT is used to recreate and tidy up files, FILL is used for mail merge, and so on. There is a difference in the way SB writes such files. I won't discourse too long on the matter, but here are some examples (printed as a disk utility would show you - in hexadecimal notation):

EXPORT (E) AND FILL (F) DISK STORAGE

(ordinary text field):

```
      A  D  A  M                B      M
E:   C1 C4 C1 CD D3 20 20 20 20 20 C2 20 CD 20 OD
F:   C1 C4 C1 CD D3 20 20 20 20 20 C2 20 CD OD
```

(empty text field):

```
E:   20 OD
F:   OD
```

(empty date field):

```
E:   OD
F:   30 30 CA C1 CE 30 30 OD (which is 00JAN00)
```

(empty numeric field):

```
E:   OD
F:   20 30 2E 30 30 OD (which is 0.00)
```

As you can see, there are differences - the space (hex 20) in EXPORT files before the carriage return (hex OD), and date and numeric field variants.

The main point is - look at what you plan to use the disk files for, and don't assume that all files are created equal. The empty (carriage return only) field in EXPORT files makes use of INPUT# impossible. In fact, EXPORT files are really only of any use for IMPORT to somewhere. Maybe you already knew that, or hadn't thought of being cheeky and trying to save time by using an EXPORT file for mail merge. Save yourself the time. Do it right.

JUST A REMINDER

If you want updates of Precision Software such as Superbase and Superscript for any Commodore model, the best shot is to direct to the source. Write to:

PRECISION SOFTWARE LTD - 6 PARK TERRACE
WORCESTER PARK - SURREY KT4 7JZ - ENGLAND

Prices for upgrades are reasonable, and air mail is quick. My record is eight (8!) elapsed days from the time I posted back a disk.
I know it sounds stupid, but DON'T FORGET to include your name and address. Please.

(C) 1989 Paul Blair

SUPERSCRIPT TIP 1

by Denis Wright

If you are doing a lot of cutting and pasting text in a Superscript file, then it really pays to take Wordwrap off (f1/s/w) because every time you cut and paste with it on, the paragraph must reformat. This can waste a lot of time if the paragraphs are quite long.

The sequence is:

```
f1/s/w
CTRL-x
```

To return to Wordwrap, simply follow exactly the same procedure again.

SUPERSCRIPT TIP 2

by Denis Wright

If you use Superscript and are really keen to save a few blocks on your workdisk while speeding up loading of your defaults file, you might like to try this.

Load up your Superscript program in the usual way, and then load the defaults file so you can see it on screen. Go down to the printer definition file. You will notice that there are series of numbers followed by a colon, and then a description of what the numbers do. There is really no necessity for these descriptive additions; they are rather like REM statements in a BASIC program. If you delete them, and then refill the defaults file, it will save about 8 blocks of memory (in my case, the defaults file shrank from 16 blocks to 8). As a precaution, make sure you retain a copy of the original defaults file and test the new one by quitting out of Superscript altogether and reloading.

Here is part of the defaults file for Epson as an example.

```
*pd
40: textwidth of editing screen
4:  Unit number of printer  0 for centronics 2 for rs232 4+ for serial
255: secondary address for normal printing, 255 = none
5:  data bits and stop bits for rs232
6:  baud
1:  parity
1:  1 if linefeeds required 0 if not
0:  1 if cbm codes required 0 if not
0:  1 if 'cursor down mode' 0 if not
0:  1 if diablo codes 0 if other
0:  1 if spinwriter codes 0 if other
1:  1 if enhance on makes character double 0 if not
0:  1 if printer can do bold by backspacing 0 if not
0:  1 if printer can do shadow by moving 1/120th inch 0 if not
0:  1 if printer can underline by backspace underline 0 if not
2:  number of extra character prints when bold in effect
0:  1 if features below described in cbm code
```

This can be reduced to the following:

```
*pd
40:
4:
255:
5:
6:
1:
1:
0:
0:
0:
0:
1:
0:
0:
0:
2:
0:
```

Makes a heck of a difference, don't you think?

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GAMES COLUMN

by Reuben Phillips

Hi ho, welcome and please adjust your set. Kingston Arthur wrote in, wishing, in his own words, to 'enrich' the games column. Thank you, the leaf mulch was delicious. As to your query about the fate of Mark, he claims he was abducted by aliens but I think he never existed. Hope you can sleep now Kingston.

REVIEWS (Four Stars)

*** SALAMANDER (Imagine)

I think this is the sequel to Nemesis, which means it is a horizontally scrolling arcade conversion with the most ridiculous amount of add-on weapons possible. Flying a fully armed ship is reminiscent of a Headbanger with killer dandruff. Battle through hordes of aliens to the end of level mother ship, blow it up (what else) and enter a vertically scrolling asteroid storm with nasty bits added.

Losing a life isn't nearly as bad as Nemesis, your painfully gathered weapons stay on screen so you can regather them if you're lucky. Each of the levels is loaded separately, although the multiload is worth it, the graphics are big and lots of them wave around or move to make things difficult, the only problem is the mushy collision detection, however it usually errs to the players advantage. Sound is also good but most importantly the game is very playable.

Pass the ammo and have another cucumber sandwich.

The Tips Bit

From Kingston Arthur of Loganlea comes the following tips for ZORK II:-

First get the sword and lantern and find the gazebo, get all and then move into the carousel room. Leave and enter until you reach

the cobwebby room, cool room or marble hall. Wander around until you reach the tiny room, then put mat under door, open lid, put opener in keyhole, get mat, get all and unlock door, open and go in.

To kill the dragon, hit it, go south, hit it again, go south again, hit it and then go west. The dragon will snuff it. Retrace your steps and enter the lair, say something to the woman, wait, and as she leaves follow her, you should end up in the gazebo with the princess. Wait a few times and the princess will give you a key and a rose.

The answer to the riddle (in the riddle room) is 'a well'.

Now how (says Kingston) do you move the menhir, what do you do with the basket, and what does the lizard in the door want?

Grant Sirett from Mount Gravatt sent these in, along with a map for MERCENARY-THE SECOND CITY which we'll print next time:

THE SENTINEL - Land: 1318, Code: 58896035

BARBARIAN (128 in 64 mode) - load side two and reset while holding the Commodore key for an interesting effect

CYBERNOID -- select redefine keys and type in order Y-X-E-S for inf. lives

ARKANOID II - type DEBBIE S in high score table

USAGI YOJIMBO - LOAD it: RESET it: POKE 15502,96: POKE 15507,255: SYS 24576 for lots of cash and energy

That's it for this month, and please, send more leaf mulch to:

Games Column
P.O. BOX 544

UPPER MOUNT GRAVATT QLD 4122.

-ooOoo-

PROGRAMMING BY NUMBERS

Your Keyboard And The CIA

by Daniel Phillips

All input and output on the '64 (except for video and sound) is controlled by two chips called the CIAs, or Complex Interface Adapters.

The first CIA chip (CIA #1) reads the joysticks, the paddle fire buttons, and the keyboard. CIA #2 meanwhile, controls the serial port, the RS-232 device, and the user port.

The keyboard is just a set of switches connected to CIA #1. The information about which of the switches is open or closed (or, which keys are up or down) can be read directly from CIA #1 by your programs.

The end user is sheltered from all this when reading the keyboard, and usually needn't worry about how the keyboard works - handy built-in routines, such as the GET statement in BASIC, do all the work for us.

However, this can often be inadequate. The existing routines weren't designed to acknowledge more than one key at a time. If you press the "A" and the "B" keys and then try to read the keyboard with the GET

command, it will only report that the "A" key was pressed. After all, the GET command can only return one value. And not only that, you can't tell whether the key is up or down, it only reports that the key was pressed sometime in the past.

So! How can we check exactly which keys are being pressed, and which ones aren't?

All we have to do is read the information straight from CIA #1. This isn't nearly as convenient or as easy as using the ready-made commands, but it's the price you have to pay for added flexibility.

The CIA #1 chip is wired up to the whole computer system so that all the information concerning the keyboard is made 'visible' at two locations in memory - 56320 and 56321, these are called Data Port A and Data Port B. We can PEEK these two locations to see which of the keys are being pressed.

The keyboard is connected in a matrix of eight rows by eight columns to the two Data Ports. The layout of the matrix is shown below.

READ PORT B (56321, %DC01)

	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
WRITE TO PORT A (56320, %DC00)	STOP	Q	C	SPACE	2	CTRL	←	1
Bit 7	/	↑	=	Right Shift	Home	;	*	£
Bit 6	1	@	:	.	-	L	P	+
Bit 5	N	O	K	M	0	J	I	9
Bit 4	V	U	H	B	8	G	Y	7
Bit 3	X	T	F	C	6	D	R	5
Bit 2	Left Shift	E	S	Z	4	A	M	3
Bit 1	CRSR DOWN	F5	F3	F1	F7	CRSR RIGHT	Return	Del
Bit 0								

All the keys in the keyboard appear here, except for the SHIFT LOCK key and the RESTORE key. The SHIFT LOCK key is not read as a separate key, but is identical to the left SHIFT key except that it has a mechanical device to hold it down. Note that Left SHIFT and the Right SHIFT are listed separately and are read independently. The RESTORE key is not part of the normal keyboard matrix either, it is connected directly to the CPU.

To check if a particular key is being pressed, you must first write a 0 in the bit of Data Port A (56320) which corresponds to the keys row, and set the bits in the rows which you wish to ignore with 1s.

You then read Data Port B (56321). A 0 in any bit position signifies that the key in that column of the chosen row is being pressed. A 1 in any row indicates that that key is not being pressed.

To take advantage of all this, unfortunately, you'll need a knowledge of binary numbers and "ANDs" and "ORs".

An example. Suppose you wanted to check if the asterisk key is being pressed. Looking at the table you would see that it is in the row of bit number 6. If you put a 0 in

bit number 6 and 1s in the rest, you would end up with the binary number 10111111 or 191 in decimal. POKE this number to Data Port A, thus: POKE 56320,191. You must then read Data Port B and store the result somewhere (for this example we'll use the variable "B"), like this: B=PEEK(56321).

The asterisk key is in the column of bit number 1, so we'll remove the unwanted bits like this: B=B AND 2. Now, if the key was pressed, B will equal 0 (00000000 binary), if it wasn't, B will equal 2 (00000010 binary).

This is what the routine might look like.

```
100 POKE 56333,127
110 POKE 56320,191
120 B=PEEK(56321)
130 B=B AND 2
140 IF B=0 THEN PRINT "ASTERISK
IS BEING PRESSED"
150 IF B=2 THEN PRINT "ASTERISK
IS NOT BEING PRESSED"
160 GOTO 110
```

The POKE 56333,127 in line 100 turns off the interrupts, which stops the operating system interfering with the keyboard. Unfortunately it also stops the TI string (clock) and disables the keyboard. A POKE 56333,129 puts everything back to normal.

EDITOR'S NOTES

This is one of those months where the wise words of your editor can easily fit in the margins of a page, or to put it differently, there's just not much happening in the 8 bit scene. Am I too pessimistic? Just leaf through the pages of *Run*, *Gazette* etc., and what do you see? Games and more games and very little else. And even in the games field the biggest seller is now the IBM format, followed by the C-64. Where are all the new spread sheets and data base programs? The truth is that there aren't any and it's very unlikely that we shall see many more, as programmers are directing their efforts towards more profitable computer formats. After all, why write programs for computers which may be dying out?

Now before you rush into print to prove that I'm wrong, I'd suggest that you think a bit about the above words. If I am wrong

why has CBM not promoted the 1581 drive or the memory expanders? And when did you last see a CBM advert for the C128?

Currently our group has roughly a 66% C64/128 membership and a 33% Amiga membership, but most of the activity is taking place in the Amiga area (Compare the Milton workshop with the Rosalie Amiga workshop, and you'll see what I mean). So, if you feel that I am unfair, how about getting the finger out and joining Leigh Winsor and Doug Maclurkin in proving that the 8 bitters are still a force to be reckoned with!

My thanks to our member Errol Rayner for his suggestion about the format required for newsletter articles. I have incorporated your ideas on the *Directory* page of this issue.

Ralph De Vries

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COMPUTER NOVICE GUIDE

by Cor Geels

NOVICE'S GUIDE # 4

In our last session we came upon the sign > meaning that what is on the left side, or open side of the sign, is greater or more than what is on the right side.

Also the < sign meaning the opposite was discussed. (Left side is less than right side). The = sign usually means that the value on either side is equal. Where it may be misleading is in statements like: $A = A + 1$ which we normally encounter in a looping program, and every time the computer reads this line he adds 1 to the current value of A.

In such case it means that we are, at that moment, giving A the new value of $A + 1$, so if A was 5, then A is now 6.

The computer just follows orders. There is nothing mysterious about that.

In another looping program we might encounter some similarly confusing statements like:

```
10 REM MO is numeric variable for
Month:MO$ is string variable for Month
20 MO = 0:MO$ = "MONTH"
30 REM Printing the number of the month,
   on every loop one higher
40 MO = MO + 1
50 PRINT MO$:MO
60 PRINT"KILOMETERS TRAVELLED....":
   REM OR "EXPENSES $....."
65 PRINT:PRINT
70 IF MO = 12 THEN MO = 0
80 FOR T = 1 TO 1000:NEXT T
90 GOTO 40
```

RUNning this will result in the word MONTH and the digit 1 on the 1st line, and on the second line the typed heading, e.g KM.TRAVELLED....., followed by 2 blank lines.

Then follows MONTH, a number 2, the same heading, etc.

Every time around he looks at line 70 and when MO has become 12, the next NUMERIC VARIABLE MO gets the new value of 0. Line 90 sends him to line 40, which makes his value 1 again.

Line 80 puts us in slow motion, to see the progress on the screen.

So we have to think very logically when we use or read the = sign, and think about the

way our computer accepts it, or interprets it.

Now we come back to signs other than those already mentioned, for comparisons of the left side with the right side or vice versa: If a value on the left side is more than, or equal to the right side, we use the double sign >= or the double sign =>. Both mean the same, so we can use either.

And so <= or =< of course stand for the opposite, in other words: left side less than, or equal to right side.

The <> sign, or >< means neither side is equal to the other. The values on either side are different, not the same.

Here is a short program that uses some of those comparisons:

```
10 PRINT:PRINT:PRINT:PRINT
20 A=5:B=7:C=12:PRINT "A=5:B=7:C=12"
30 IF A+B = C THEN PRINT "A+B EQUAL
   TO C"
40 IF A<B THEN PRINT "A LESS THAN B"
50 IF B>A THEN PRINT "B MORE THAN A"
60 IF A+B >= C THEN PRINT "A+B MORE
   THAN OR EQUAL TO C"
70 IF A+B =< C THEN PRINT "A+B LESS OR
   EQUAL TO C"
```

The points are set for any line to be printed if the condition is true. If we leave this little program on our screen and RUN it, we see that the listing and the program fill the screen so we can study the signs as they are used.

Another little program about the same subject shows how the computer seems to make a decision on the comparisons:

```
10 INPUT"HOW OLD ARE YOU";AG
20 IF AG <10 THEN PRINT "YOU ARE STILL
   VERY YOUNG"
30 IF AG =>10 AND AG <21 THEN PRINT
   "THE AGE OF LEARNING"
40 IF AG >=21 AND AG =<100 THEN PRINT
   "IS THAT THE AGE OF WISDOM?"
50 IF AG >100 THEN PRINT "YOU'VE GOT
   TO BE JOKING"
60 FOR D = 1 TO 2500:NEXT D:GOTO 10
```

The IF/THEN combination is a very versatile one, which can be used widely, but there is one word of warning with regard to using multiple statements, separated by colons, on the same line (same linenumber) in this context.

When the computer starts to read a line and finds that the IF condition is not true, then he does not act any further on that line. If there is another statement after a colon, on that same line, that statement will not be read.

Let us watch:

```
10 FOR A = 0 TO 12 STEP 2
20 PRINT A
30 IF A = 6 THEN PRINT "HELLO":PRINT"1
   AM SIX"
40 IF A = 9 THEN PRINT "NINE":PRINT"BUT
   I WON'T SHOW"
50 NEXT A
```

In the above exercise we instructed our computer to jump 2 steps every time around, so we completed the count from 0 to 12 in 6 steps. That means, the counts 1, 3, 5, 7, 9 and 11 are skipped over.

We can see that the computer looked at all the lines because he printed 0 through to 12 in the FOR..NEXT loop, which means he looped 6 times through the program, and when the condition in line 30 came true he PRINTed both messages on that line.

But when reading line 40 he never found the condition to be true so he never PRINTed the word NINE, and therefore he never hopped over the colon to print BUT I WON'T SHOW.

ALL of line 40 was disregarded. He kept on going through to line 50 for his loop back to line 10.

Stepping can be done in evens (2, 4, 6, etc.) or unevens (5, 7, etc.), in fractions (.5, .7, etc). We can make a FOR/NEXT LOOP go backwards also, simply by instructing it to do so:

```
FOR S = 30 TO 10 STEP - 5 for instance,
will result in 30, 25, 20, 15 and 10.
```

There is one more very interesting IF/THEN feature which we'll explore. Let us look at it:

Linenumber..GET X\$:IF X\$ = "" THEN same linenumber.(See line 40 below).

As soon as our Commodore reads this line he stops and waits for a key to be pressed. Any key on the keyboard.

This is an easy way to stop a long message or some instructions re your program scrolling past with insufficient time to read. The linenumber at the end of the line must be the same as at the front, because we want to create a horizontal loop, with nothing inside it. Our instruction to the computer means: GET ANY STRING THAT IS BEING PRESSED ON THE KEYBOARD (a string because any key will do):

```
10 PRINT "HI"
20 PRINT "HOW DO YOU DO?"
30 PRINT "PRESS ANY KEY TO CONTINUE"
40 GET Y$:IF Y$ = "" THEN 40
50 PRINT "OKAY THANKS, WELL DONE!"
60 PRINT:PRINT
70 GOTO 10
```

When RUN, the first three lines will be PRINTed on the screen and then follows a wait for a key to be pressed. (GET Y\$). Over the colon he reads (IF Y\$ = "") meaning IF Y\$ = NOTHING, THEN keep sitting on line 40.

As soon as a response is received the computer continues with the rest of the program, and because of the GOTO 10 the program will repeat.

So far we have used only very elementary examples of values for VARIABLES, and because of that it may not seem important to use VARIABLES at all.

But when we are dealing with large values, and perhaps series of decimals in a complicated formula, it is a relief to be able to call up a VARIABLE called, say: XY which may stand for 123456.98765 divided by 654321.567, because we assigned that value to XY.

Similarly we can nominate a STRING VARIABLE, say: E\$ = "ABBACADABRA". Or F\$ = "ARBADACABBA", which is the same mystical word spelled backwards.

We can even make a new STRING of both of them by using, say: Y\$=E\$+F\$

If we now instruct PRINT Y\$ we get on the screen ABBACADABRAARBADACABBA, every time!

We might put a program together wherein we want to go onto more than one sidetrack as we go along, and using GOTO instructions makes it cumbersome or impossible to get back onto our main track. We would have to constantly avoid creating closed loops. Usually in a program where we want to use some of the same sidetracks a number of times, we use another twin: GOSUB...RETURN. (GOSUB actually means GO TO THE SUBROUTINE). A SUBROUTINE is a SUB program, like a side dish, so to speak.

The computer goes through that SUBPROGRAM, and then looks for the instruction RETURN to complete his job.

Some programmers prefer to start by typing their GOSUB..RETURNS first, so when they send their program to a GOSUB they know exactly what the program gets to read. I have done that here, but in the end that makes no difference of course. The high line numbers will automatically LIST in the correct sequence towards the end. Just make sure that you use high, easy to remember linenumbers for your GOSUBs, well outside the length of your program.

A short example to show its use and movements follows, with 2 different GOSUBS: GOSUB 1000 and GOSUB 3000, using GOSUB 1000 twice.

It needs a fair bit of concentration, because we are going to run all over the place. If you feel that you get lost, don't give up, you will see the logic eventually:

```
1000 FOR D = 1 TO 2000:NEXT D
1010 PRINT"(CTRLed2)THIS IS LINE 1010,
AFTER DELAY":REM WHITE
1020 PRINT"THIS IS PART OF GOSUB 1000"
1030 RETURN
3000 FOR D = 1 TO 2000:NEXT D
3010 PRINT"(C=7)NOW HERE WE ARE ON
3010":REM COMMODORE KEY 7 FOR BLUE
3020 PRINT"THE RETURN ON NEXT LINE
SENDS HIM BACK TO JUST UNDER L A S T
SENDER"
3030 RETURN
10 PRINT"THIS IS A GOSUB EXAMPLE":
PRINT
20 PRINT"THIS IS LINE 20,NOW ON TO L I N E
```

```
30"
30 GOSUB 1000
40 PRINT"(CTRLed8)NOW LINE
40,RETURNED FROM 1030":REM YELLOW
50 GOSUB 3000
60 PRINT"(CTRLed8)THIS IS LINE 60, BACK
FROM 3030":REM YELLOW
70 GOSUB 1000
80 PRINT"(C=7)BACK AGAIN FROM GOSUB
1000":REM COMMODORE KEY 7
90 PRINT"ENDING":END
```

If we now LIST this program the 2 GOSUBS are at the bottom of our listing. If we RUN this program, it unfolds like this: We start at line 10 and the computer PRINTs the message THIS IS A GOSUB EXAMPLE, hops over the colon and reads PRINT without anything else, so he then PRINTs a blank line.

On 20 he PRINTs that he is there and will continue to line 30.

Line 30 instructs him to go and do line 1000. GOTO would have sent him to 1000 also, but we could not have got him back to line 40 without another GOTO from then on.

GOSUB 1000 is a time delay, so after counting from 1 to 2000 on his internal counter he reads on line 1010 that he must PRINT in white letters that he is there. Then follows 1020 to be PRINTed on the screen and on 1030 awaits the instruction RETURN, which sends him back automatically to the line following the GOSUB that sent him away.

In other words, back to just after the tail end of the last sender.

So from line 30, after doing 1000, 1010 and 1020, RETURN on 1030 sends him back to 40.

Then line 50 sends him GOSUB 3000, and after 3010 and 3020 he finds RETURN waiting on line 3030. He remembers that he was sent by line 50, so he gets back to work on line 60. (We made him PRINT that he is there). Next he goes to line 70, which instructs him to do GOSUB 1000 again.

Upon completion he remembers that this time he was sent by line 70, so he restarts at line 80, and carries on from there.

The important thing about GOSUB..RETURN is that whenever a message or instruction from a GOSUB is required in your program, you can direct the computer to go to it, use it, over and over again, because the RETURN brings him back to the proper line in the program and he can't get tangled up in a web of GOTO's.

MAIL BOX

Over a number of recent issues there have been a number of articles and letters about these traitors who have deserted the ranks of Commodore users to go over to the (I will dare to write it, if you will dare to print it) IBM and clone ranks. Could it be that these folks have found their poor old C64s and 128s struggling to fulfil their ever increasing expectations or have they found that they were left out in the cold because of compatibility problems?

The advent of GEOS seemed to fulfil some of the expectations of those of us who had heard of DTP but although the results were pretty good at times, the whole exercise seemed, well, not really worth the time and effort.

As a clergyman I had found my C64 invaluable. My little portable typewriter was filed away and became a novel activity for the kids. I could keep my sermons filed away for future reference and in short every activity was made simpler.

Then I tried to keep my parish roll on a database; I used DFM at first and then SUPERBASE but nothing really came close to being suitable. A couple of my fellow priests in neighbouring parishes, also C64 users, said that they had the same problems but had found their way out of trouble. They were using DBASE III. That's right they were using IBM clones and boy were they having fun.

Well, to make a short story long, I began to think they weren't far off the right track. So I began to look around first at the Amiga, but really it wasn't what I was looking for at all and another priest I know had one and was having no end of trouble just getting started. Then I saw a laptop and it was love at first sight. Commodore should have gone further with the old SX-64.... remember that one? Well, now I have 768K to play with.. twin 3½" disk drives (hard disk available soon) and it is totally portable.

The LCD screen doesn't give anywhere near the quality of graphics that the C64 produced, nor has it the sound capabilities, but for me it has cured a number of headaches.

I wont be getting rid of the C64 - there are a lot of programs that will still come in handy. The kids will still get use out of the educational software for some years yet. That will give me a chance to keep them away from the laptop (for a little while anyway). So don't say I've deserted the ranks of C64 users, I've still got a foot in each camp and I still enjoy reading CURSOR, but that 768K.... ah!! Could this be a taste of paradise?

Robert Paget (Moranbah)

Times are a-changing, aren't they Robert?

How well I remember getting my first graphics package on the C64 (*DOODLE*), and how excited I was to be able to print out a picture on my Star Gemini printer! But now, some three or four years down the track, my expectations have changed somewhat. From 7 pin to 9 Pin to 24 Pin printers, and now looking at ink jet and laser printers. Higher resolution, better quality and lower prices; it's all par for the course.

When the C64 was first released an IBM or a clone was strictly for the well-heeled (i.e. a business man). Now I can buy a clone with 2 disk drives, 640K and monitor for less than it once used to cost for a C64 outfit.

I fully agree with your assessment of GEOS. This is surely a case of sending a boy out to do a man's job. And before GEOS supporters get up in arms, observe an experienced Amiga or Mac user at work - then you will see what a *real* Window, Icon, Mouse Interface is capable of doing.

In computer terms a year is a lifetime. Predicting a computer's future is fraught with danger - I know, because I've committed some real clangers! However, with continuing falling prices, I am certain that within the next few years the majority of our members will be owning more powerful computers.

I also hear rumours that some of our senior members who have deserted their 8 bit computers for clones are contemplating forming an MS-DOS sub-group..... oh, well!

COMMERCIAL LIBRARY

Disks and Cartridges (Dec '88) - SUNDRY PROGRAMS - For C64 unless otherwise stated

PLUS 4 - Superbase (database for Plus 4)
D141

128 - Basic 8 with Basic Paint, Print, Write,
Calc.. D197 (best results achieved on C128
with 64K Video RAM)

128 - CP/M Plus (V.3) User's Guide, Pro-
grammer's Guide, System Guide .. D39

128 - Data Manager w. Report Writer .. D88

128 - Data Manager w. Report Writer .. D88B

128 - Desk Manager (wordpro/ d.base/ calen-
dar/ calculator for C128 or C64 .. D49

128 - Hands on CP/M Plus ... D38

128 - Jane (word pro/spreads./filing...D89

128 - Jane (as above) ... D89B

128 - MicroSwift Spreadsheet ... D127

128 - Nevada Cobal - CP/M C128 or C64
with Cartridge ... D42

128 - PaperClip (word pro. C128/64) ... D45

128 - PaperClip II (word processor) ... D118

128 - PaperClip III (word pro 128/64) .. D168

128 - Pocket Filer v1.2 (database) ... D116B

128 - Pocket Planner v1.2 (spreadsheet C128-
/64) ... D115B

128 - Pocket Planner v2.0 (C128/64) .. D115C

128 - Pocket Writer Dictionary (for C128 or
C64) ... D114E

128 - Pocket Writer v1.2 (word processor for
C128/64) ... D114

128 - Pocket Writer v1.2 (128/64) ... D114B

128 - Pocket Writer v2.0 (128/64) ... D114C

128 - Public Domain Catalogue Disk
(C.C.U.G.) for C128/64 .. D43A

128 - Public Domain Catalogue Disk (as
above).. D43B

128 - Public Domain Catalogue Disk (as
above) .. D43C

128 - Super-C Compiler (C128/C64) ... D47

128 - Superbase 128 (database) ... D142

128 - Superscript 128 (word proc.) ... D144

128 - Superscript 128 (word proc.) ... D144B

128 - Swift Spreadsheet (MicroSwift)
(C64/128) ... D138

128 - Swiftcalc (spreadsheet with sideways
print) ... D97

128 - VizaStar 128 (Information processor -
disk & cartridge) ... D107

128 - Vizawrite (word processor - disk &
cartridge) ... D106

128 - WordWriter 128 with Spellchecker
(needs 1571 drive) ... D105

1541 Disk Drive Align Program v2.0 ... D167
1541/1571 Drive Alignment System ... D139

Abraxas databases (all basically the same for
the different systems mentioned):-

Car dealer system ... D123

Client file system ... D120

Collector's system ... D126

Membership system ... D122

Roundsman system ... D121

The repair shop ... D125

The stock file ... D124

Advanced OCP Art Studio ... D195

Adventure Construction Set ... D56

Art Studio (OCP) ... D196

C Compiler (Super C for C128/64) ... D47

C Power 64 (C language editor - compiler
with function libraries) .. D113

C64 Software Bonus Pack ... D44

Cobol (Nevada Cobol) for use with CP/M on
C128 or with cartridge D20 on C64 ... D142

Commodore 64 in Wonderland (educ.) ... D135

Simple educational games for young children
and useful Basic tutorial for beginners.

CP/M (with some TV sets program causes
distortion) ... D20

CURSORS Articles - index of articles of our
Group's Newsletters since 1983 .. D12

Cut and Paste (word processor) ... D79

Desk Manager (word pro/ d.base/ calendar-
/calculator) for C64/128 ... D49

EasyScript (word processor) ... D26

EasyScript (word processor) ... D26B

EasySpell (requires EasyScript) ... D28

EasyStock (stock control) ... D25

EDUCATIONAL

Basic Arithmetic and Algebra ... D147

Algebra - ages 13 and above ... D54

Fractions - Grades 5/8 ... D77

Maths - Grades 7/11 ... D76

Algebra - binomial multiplication and facto-
ring - Grades 7/12 ... D74

Algebra - first degree & advanced linear
equations - Grades 7/12 ... D73

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equations) Grades 7/12 ... D75

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Science 1 - Elementary Science, Physics, Chemistry ... D204
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The Body Transparent - 10 and above ... D55
The Grammar Examiner - 10 and above ... D53
Type Right (learn to type) ... D15
Typing Tutor ... D31
World Geography (demo disk) ... D48

Forth (computer language) ... D24
G.E.O.S. with FontPack 1, DeskPack 1 and Drivers ... D136
G.E.O.S. with GeoDex, Writer's Workshop and Drivers ... D137
Graphics Pirate - cartridge to capture hi-res screens ... D201
Heswriter (cartridge) ... D188
Home Manager (addr./diary/exp.) ... D13
InstaWriter (mail/file) - cartridge ... D189
Intro to Basic Pt 1 (Tut. on Disk) ... D170
Intro to Basic Pt 2 (Tut. on Disk) ... D171
Keyword Cross Reference (keep track of reference data from books, etc. and create cross reference lists by keyword) ... D50
Koala Pad w. Painter & Printer prg. ... D169
Koala Pad with Painter program ... D21
Koala Printer (req. Koala Pad - D21) ... D35
Logo (computer language) ... D14
Magic Desk 1 (type and file prg. & database - cartridge) ... D191
MiniOffice 11 (word pro/d.base/spread sheet-graph/labels) ... D87
Movie Maker ... D37
Multiplan (spreadsheet) ... D27
Multiplan (spreadsheet) ... D27B
Omi-Term (modem terminal program) ... D109
PaperClip (word proc. for C128/C64 ... D45
PaperClip (word processor) ... D17
PaperClip III (C64/128 - w. proc.) ... D168
PaperClip Publisher Desktop Publ. ... D128
Pascal (G Pascal) ... D18
Pascal (Oxford Pascal) ... D99
Pascal (Super Pascal for the C64) ... D46
Pascal (Super Pascal for the C64) - Compiler & Software Development System ... D46B
Petspeed (Basic compiler) ... D40
Pilot (computer language) ... D16
Pocket Filer 1.2 (d.base C64 only) ... D117
Pocket Planner 1.2 (sp.sheet 64/128) ... D115B
Pocket Planner 2.0 (sp.sheet 64/128) ... D115C
Pocket Writer Dictionary 128 or 64 ... D114E
Pocket Writer 1.2 (w. proc. 128/64) ... D114B
Pocket Writer 1.2 (w. proc. 128/64) ... D114
Pocket Writer 2.0 (w. proc. 128/64) ... D114C
PrintShop ... D22
PrintShop ... D22B
PrintShop Companion ... D193
PrintShop Graph. Libr. (use w. D22) ... D112

Programmer's Basic Toolkit (Assembly Language Graph. with Basic convenience) D111
Public Domain Catalogue Disk for C64/128 (C.C.U.G.) 10/88 .. D43A
Public Domain Catalogue Disk for C64/128 (C.C.U.G.) 10/88 .. D43B
Public Domain Catalogue Disk for C64/128 (C.C.U.G.) 10/88 .. D43C
Scroller (word processor) ... D78
Simons' Basic (cartridge) ... D187
Simons' Basic (cartridge) ... D187B
Star Seeker (guide to night sky and solar system) ... D57
Star Seeker (as above) ... D57B
Stock Control (database) ... D119
Story Machine (ages 5-9) cartridge ... D190
Super Expander (cartridge) ... D186
Super Expander (cartridge) ... D186B
Super Expander 64 (add more commands to Basic) - cartridge ... D186C
SuperBase 64 (d.base C64 & Plus4) ... D141
SuperBase additions:

Cashbook ... D81
Club Membership ... D83
Sales Daybook ... D82
Solicitor's Time Recording ... D84

SuperScript 64 (word processor) .. D143
Swift Spreadsheet for C128/64 ... D138
The Consultant (database) ... D19
The Electronic Checkbook ... D85
The Manager (d.base/ list planner/ check-book/ stock portfolio) ... D86
The Quill Adventure Writer ... D1
Trio (integrated word pro/spreadsheet/data-base) ... D148
Turbo 64 Editor (create disk with fast-loading programs) ... D23
Turbo 64 Editor (as above) ... D23B
Turbo Roach (back-up for C64) ... D41
Turtle Toyland Junior ... D7
Turtle Toyland Junior ... D7B

MAGAZINE DISKS:

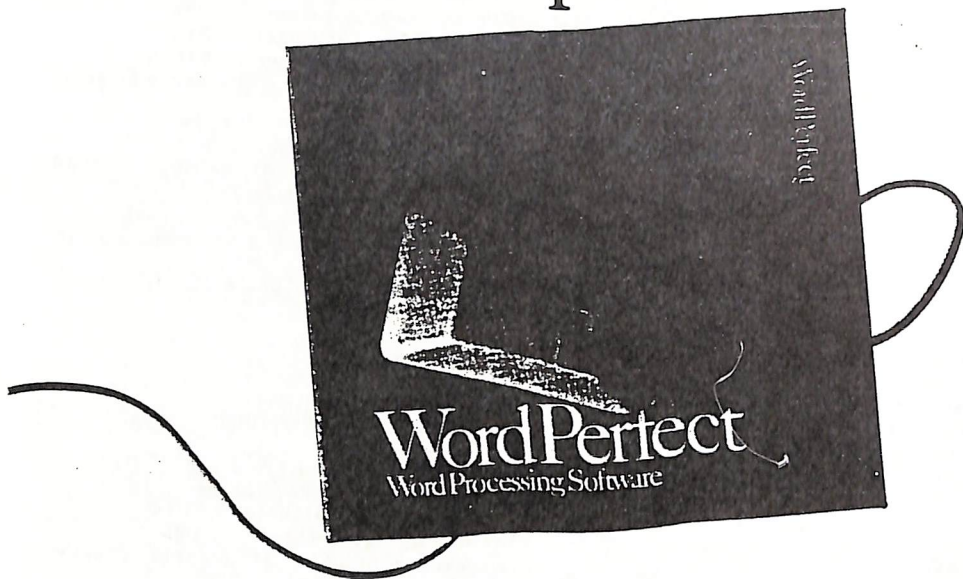
Loadstar (Commodore Magazine)
Rerun (Run Magazine)
Transactor

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Use *minimum* formatting - *no* paragraph indentation and only a *single* space after a full stop. If a specific page layout is required include a printout in the required format. Disks will be returned promptly (we pay return postage).

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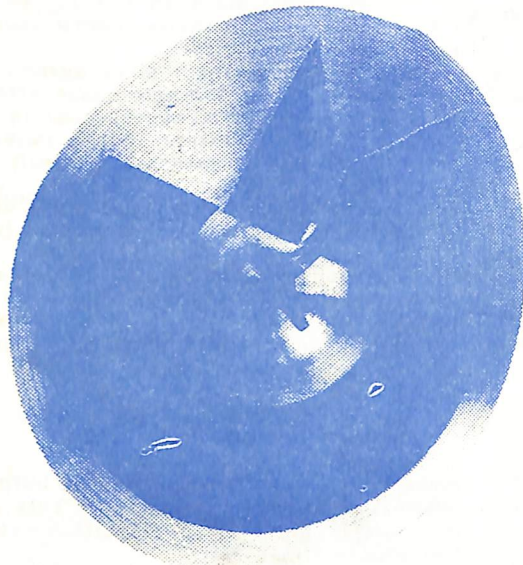
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