



"CURSOR"



The official Newsletter of the
COMMODORE COMPUTER USERS GROUP [QLD]

OCTOBER 1984

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CLUB ROOMS *MILTON STATE SCHOOL, BAYSWATER ROAD, MILTON*

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Diary for November

Group meeting on Tuesday, 6th November 1984, at 7.30 pm in our club rooms. Visitors are welcome!

QUESTIONS & ANSWERS

Yes (!), this time we will really have the panel of experts to answer all your questions!!!

Workshop meeting on Sunday, 18th November 1984, from 1 pm till 5 pm in our club rooms. To get the maximum benefit from the workshop it is recommended that you bring your own computer equipment.

Please note that workshop meetings are for **members only!**

Regional Meetings

Cannon Hill Sub-branch meets every 2nd and 4th Saturday of the month at 7.30 pm, in the Cannon Hill State School. For further information ring Barry Wilson (VIC-20) at 399 6204 or Augy Norman (C-64) at 399 2080, after hours.

Springwood Sub-branch meets on the 3rd Thursday of the month at 7.30 pm, in the Springwood Central Primary School, Dennis Rd., Springwood. Contact Terry Steer at 200 5926 (after hours) for further details.

Pine Rivers Sub-branch meets on the 2nd and 4th Sunday of the month (1 pm - 5 pm) at the Strathpine High School (rear entrance). Ring Clayton Lancaster at 285 4157 (after hours) for further information.

SPECIAL INTERESTS GROUPS

Business Sub-Group meets after the main meeting in Milton (first Tuesday in the month) and at the West End State School on the 3rd Tuesday of the month at 7.30 pm. Contact Ken Charters at 341 7222 during business hours for further information.

Primary Education Sub-Group meets after the main meeting in Milton (first Tuesday of the month). Venue for intermediate meetings still to be decided upon. Contact Bill Weeks at 208 8620 (working hours) or at 341 2823 (after working hours).

IMPORTANT NOTICE: Copying of Commercial Software is *not allowed* at our meetings or workshops. Failure to comply with this regulation will result in loss of membership!

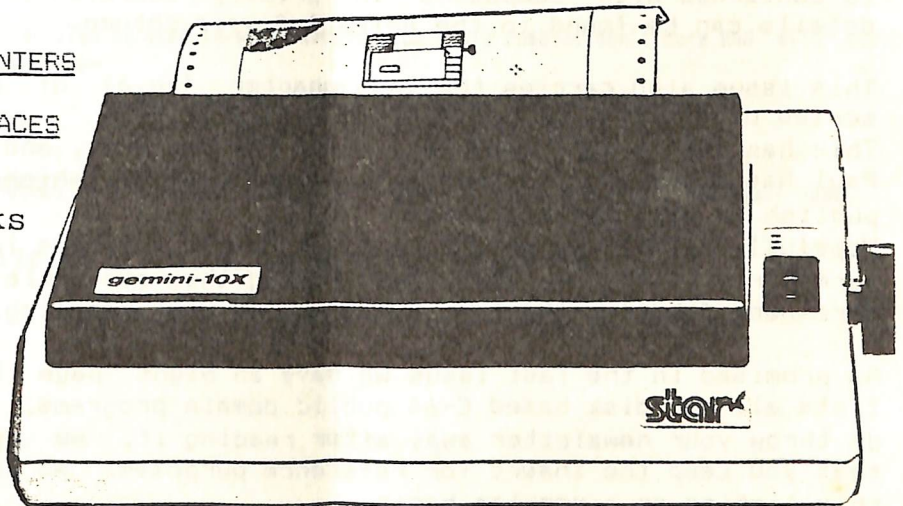


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CHANDLERS

EDITORIAL

Several changes have taken place within our group in the last month or so.

Because of a pending change in his job status which will take him away from Brisbane, our trusted secretary John Egan has had to resign. Our thanks to John (and his wife Kaylene) for the many months of work he has put into the club, both as treasurer and secretary.

We extend a very warm welcome to Norm Chambers who has been prevailed upon to take over the post of secretary at short notice. Having experienced his valuable assistance at first hand in the past we look forward to a great working relationship.

A further change is the arrival of another new sub-group. This one is concerned with computers in primary education, and further details can be found in the *Notes & Gossip* column.

This issue also carries the last chapter (no.6) of Paul Blair's series of articles on *Starting with Disk Drives*.

This has been a very good series for the beginner, and fortunately Paul has supplied a further article on Track 18, which we hope to publish in next month's issue.

Hopefully we will be able to publish Paul's articles in a booklet form early in the new year, thus making them available in a more permanent form for the many newcomers to disk handling.

As promised in the last issue we have an eight page insert which lists all our disk based C-64 public domain programs. Even if you do throw your newsletter away after reading it, we would suggest that you keep the insert for reference purposes. We hope to update this listing on a regular basis.

Don't miss Greg Perry's article on Multi-Link. It really shows that the C-64 is growing up now.

Due to the 8-page disk insert a lot of material had to be held over for the next issue. As this issue is the last one for 1984 you can expect an real bumper edition!

Ralph De Vries.

STARTING WITH DISK DRIVES

Part 6 - Handy Tricks (or the End is nigh!)

We have been looking at the directory track (Track 18) and I promised to show you a few tricks that can be used with WEDGE. Let's go....

Do you remember "don't care" and "wild card"? You do? Fine, that's a help. Try this-

>\$0:FROG*

FROG may not be the correct choice for the disk you are using, but let me explain. If your disk had FROGGER, FROGMARCH and FROGMIST on it, the syntax above would search and display only those three entries, plus the usual disk 'header' and 'blocks free.' information. So you can pattern search your disks for that pesky program that you can't find without having to read metres of scrolling directories (and, like me, blinking at the wrong moment!).

The wild card '?' can also be used to good effect. You could combine don't care and wild card to be even more selective-

>\$0:FR??GE*

would find only FROGGER in the example given here. Handy if you can't recall the exact name.

Another syntax can be used to find, say, the one SEQ file on your disk-

>\$0:*=S

Or try this

>\$0:FROG*=P

This will give you any PRG files having FROG as the first 4 letters of the file name. Experiment for yourself.

WEDGE lets you load and save programs with simple commands-

/FROGGER loads FROGGER, like LOAD"FROGGER",8

^FROGGER loads FROGGER and runs it.

If the file is not to be loaded to the usual Basic load address then you would use-

ZMAYDAY which is the same as LOAD"MAYDAY",8,1

Try wild card and don't care with these commands. As your experience grows, you will find great value in these short cut methods.

WEDGE also helps with SAVE. You would have used-

```
SAVE"LAST TWO",8
```

but may not have used-

```
<LAST TWO
```

which does the same thing. It may not seem much to be able to omit the LOAD or SAVE words, the quote marks, and ',8' or ',8,1', but as your disk experience grows you will type these commands many times. I'm a bit lazy, so the simpler syntax appeals to me.

The last three WEDGE commands are not used often, but can be helpful.

The first command resets the disk drive - just as if you turned it off then on again-

```
>UJ
```

The second command changes the target drive number for WEDGE - the device number that it uses when automatically OPENING and CLOSEing channels for use with your WEDGE commands. Note that it does NOT alter the device number that the disk drive thinks it is. You have to do that with a software or hardware change-

```
>#9 sends any future WEDGE commands to Device 9
```

```
>#8 would then redirect comands to Device 8
```

Lastly (aptly?), if you want to disconnect the WEDGE program from the computer operating system, use-

```
>Q
```

for Quit, as if you hadn't guessed!

I have used the '>' symbol throughout these notes, probably because I grew up with the original program that only allowed that symbol. As WEDGE matured and was rewritten for later Commodore computers, the '@' symbol was permitted as an alternative to '>', probably because of different keyboard layouts and to save having to shift some keys to type the wedge symbol. The C64 WEDGE supports both '@' and '>', so choose for yourself.

That's the end of this introductory series. With a bit of encouragement, I might get to expand some on the Mysteries of Track 18. No? Oh well.....

Paul Blair

NOTES & GOSSIP

PRIMARY EDUCATION SUB-GROUP

At the September meeting it was decided to form a primary education sub-group.

State primary schools can now officially purchase the C-64 for class room use, which means that there will be a much greater demand for educational software.

Our member Bill Weeks (himself a primary school teacher) is the convener of this new group. Any member who is interested in the educational aspects of the C-64 is welcome to join this group - you don't have to be a teacher to join, although we anticipate that teachers will form a fair percentage of the group.

Final details for meetings are still to be worked out, but for further information you can contact Bill at 208 8620 (working hours), or at 341 2823 (after hours).

LIBRARY

Several books have gone missing from our book library. These include "The Anatomy of a Commodore 64" and "The Anatomy of a 1541 Disk Drive". If you, dear reader, have taken one of these books out of the library, or know who did take one of these books, our book librarian Cliff Yule would love to hear from you!!!

We expect that any member who borrows books, magazines, tapes etc., and loses or damages these items, will make up the loss to the club. This rule will be strictly policed in future.

Please, please, you out there, who has overdue library material! The rule is: you can borrow material for one month only, unless you have made special arrangements with the librarian. If you are unable to attend the next meeting we expect you to post the overdue material to our librarian. Thanks for your co-operation.

EQUIPMENT NEEDED AT MAIN MEETINGS

We are still desperately short of members who are prepared to bring some computer equipment to our main meeting, particularly C-64 equipment.

Now we are perfectly well aware that having to bring computer, disk drive, monitor etc. is a pain in the proverbial, but why not club together with some friends and each bring a specific piece of equipment? If half of our total membership would partake, it would mean fifty complete outfits! It would really look like a computer users group than!

FLOPPY DISKS

Although we are hesitant to condemn a particular brand of disks out of hand, we have to report some problems with Control Data disks. Lately our disk librarian has had a considerably higher failure rate with this particular brand, and the club has decided not to offer these disks to our members at present. We are now supplying Fuji disks as an alternative.

CAPITALIST!

Have you noticed that brand new bright red Alfa Romeo yet? It belongs to a bearded gentleman who occupies a rather prominent position in this group (no, not Terry Steer!). It proves that there must be money in writing software for the C-64!

IMPORT DUTY AND SOFTWARE

For the benefit of those readers who have been thinking of importing software from overseas we have 'borrowed' the following article from the Sept. 84 issue of the ACT Users Group magazine.

Computer Software Price Reduction

In a press release dated 5 July 1984, the Government announced a significant reduction in the duty on pre-recorded floppy-disks and tapes. Before this date, a duty of 35% was payable on the value of the recorded disk or tape. In other words, you paid 35% duty on both the tape/disk and its contents. As from 6 July, there is NO duty payable on the recorded program contained on the tape or disk and the duty on the tape/disk has been reduced from 35% to 20%.

Sales tax remains the same at 20% and is calculated on 120% of the duty paid value of the media. For example, say you imported a tape or disc for \$20 (forgetting about "on top" charges such as bank fees, freight or postage), here is what you would have paid and what you now pay in duty and sales tax :

	<u>Pre 6/7/84</u>	<u>From 6/7/84</u>
Value of tape/disc	\$2.00	\$2.00
(Duty payable)	\$0.70	\$0.40
Value of program	\$18.00	\$18.00
(Duty payable)	\$6.30	\$0.00
Value for sales tax assessment	\$32.40	\$24.48
(Sales tax payable)	\$6.48	\$4.90

Total Cost	\$33.48	\$25.40
Total Duty and Sales Tax	\$13.48	\$5.30

Dealers are now clearly paying less for recorded tapes and discs; but are we?

MEMBER'S ADVERTISEMENTS

FOR SALE

COMMODORE 1520 Printer/Plotter complete
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COMMODORE COMPUTER USERS GROUP (QLD) DISK SOFTWARE

Generally the only disk software available is for the 64 but there is a small quantity of Vic 20 software. PET owners should contact the PET Sub-committee to find out what is available to them.

The Users Group has two types of disk software - Public Domain and Commercial. The Commercial type can be borrowed for a period of one month while the Public domain type may be bought or copied.

To borrow any of the Commercial programs, contact the Disk Librarian (Cliff Pottinger) at a club meeting. Commercial software may only be borrowed by club members who have paid a \$5.00 library bond and unfortunately can not be sent to country members by mail.

Public Domain disks may be obtained by MAIL ORDER from Cliff Pottinger, 31 Wapping St, Acacia Ridge, Qld 4110. at a cost of \$5.00 per disk, which includes postage and packaging. Public Domain disks may also be obtained free of charge if you bring your own computer and disk drive to a Sunday Workshop meeting, where you may copy any disk onto your own blank disks. A fast copy program will be made available to you so that the job can be done quickly.

COMMERCIAL SOFTWARE

Pilot	A computer language
Logo	" " "
6-Pascal	" " "
Petspeed 64	A basic compiler
CP/M	An operating system

As only one copy of each of the above is owned by the club, you may have to wait quite a while to borrow an item. If it is not available when you request it your name will be put on a waiting list.

NOTE - ITEMS ON LOAN MUST BE RETURNED AFTER ONE (1) MONTH!

EDUCATIONAL SOFTWARE

The club also has about 50 different Commodore Educational Disks for which there is an extensive catalogue which is available for perusal at meetings. As only two copies of this catalogue are owned at present we can not lend them out to everyone but we will lend it to schools who may photocopy it and return it as quickly as possible. Special deals are given to schools for bulk purchases (5 or more) of these disks - e.g. 1 free disk for every 5 purchased.

NOTE - The Commodore Educational Software is written to run on both PET and 64 computers.

COMMODORE SOFTWARE DEVELOPMENT KIT

This kit originally consisted of a book and three disks but we have placed most of the useful material on one disk. (Assembler, Machine Code Monitor, Sprite Editor, Character Editor etc.) The other two disks contain mainly machine code subroutines and demonstration programs designed for dealers to show off the 64's capabilities but they are available if you really want them. A couple of copies of the book that accompanies these disks are available from the book librarian.

The following pages contain a directory and short description of the Public Domain Software.

64 PROGRAMS , U1

"MYSTERY SPELL" Hangman type program from "Compute!" magazine.Sept.83
"CAVES OF ICE" Game from Compute! magazine Sept.83
"PLOT & DRAWTO" Run this program before loading "SPIRALIZER"
"SPIRALIZER" From Compute! Oct 83. Try these inputs - Speed 7 - Radius 50 - Spin 18 - M
"DIAMOND DROP" Game from Compute! Magazine Sep.83
"PROGRAM MERGER" Merge two programs from disk - with different line numbers - to form one
program. Compute! Oct.83
"M.C SAVE" Save machine code programs.
"DISK APPEND" Append one program to another - does not merge them.
"U-BOAT" Game from Compute! Magazine Nov.83
"S/D FILE COPY" Copy files from one disk to another.
"PROG.FUNCT.KEYS" Program the Function Keys.
"PATHWAY" Game for up to 4 players from Compute! Nov.83
"DATA BASE 1" Database program
"ANCESTORS" Record your family tree on disk. From Practical Computing November 1981
"MUNCHMATH" Maths game from Compute's Gazette Nov.83.
"COPYCAT" Copy files from one disk to another.
"SUPER/BASIC" Enhanced BASIC commands from Compute! Dec.83.
"BETS" Betting game
"GOBLIN" Game from Compute! July 83.
"MINEFIELD" Game
"HAWKMEN/OF/D" Game from Compute! June 83. Hawkmen of Dindrin.
"OIL TYCOON" Drill for oil
"MOTOR MONITOR" Motorists log.
"HARDHAT CLIMBER" Game
"DOMINATION" 2 Player game.
"BOWLING CHAMP" Bowling game from Compute!'s Gazette Dec.83.
"SPRITE CLOCK" Clock program.
"T&S UTILITY" Track & Sector Utility.
"SIMPLE ASSEMBLER" For machine language programming.
"MLX" Used for entering some machine language programs that are published in
Compute! publications.
"GAZETTE PRODFRDR" Proofreader program for entering some Compute! programs
"DISASSEMBLER" Disassembles Machine Language programs from memory.
"SUPERBASIC DEMO" Demonstration of "SUPER/BASIC" program
"DEMONS OF OSIRIS" Game from Compute! Jan.84
"DEMON" Main program loaded by the program above.
"MOZART" A silly musical.
"COLORBOT" Game from Compute! Jan.84.
"TYPING DERBY" Practice typing and race the horse at the same time.

LAWN Mow the grass - joystick.
BINGO 64 Game
TAB Modem program to access The Australian Beginning
FRONTEND Used by TAB
DOS Used by TAB
WRD.PROC.PETSPD A compiled version of North West User Group Word Processor.
CHESS Game
CHESS-64 Used by CHESS
CHESS/CLK Used by CHESS
CHS/CHAR Used by CHESS
SYMBOL CODE Mastermind type game from RUN Magazine Jan.84.
BREAKOUT Game - Instructions Included.
GAMBLERS DELIGHT Poker Machine
FLIP Don't know what this one does.
MAGIC SQUARE Guess the missing numbers.
SYMBOL MATCH Match pairs of hidden symbols.
AL-KHWARIZMI Keep track of an ever increasing number.
SINGALONG Limericks.
BALL MAZE Game.
MAGIC JIGSAW Game.
BASIC RESET-850 Un-new program to recover a BASIC program after NEW or after using a Reset
Switch. Load it ,8,1 and then type SYS 850.
LABELMASTER Part of the Infomaster suite of programs.
BAS.RESET CREA. Create a tape version of BASIC RESET-850.
FRONT25 Terminal program
PAS Terminal program
PONZO TUTOR-1 BASIC Tutorial Part 1
PONZO TUTOR-2 BASIC Tutorial Part 2
PONZO TUTOR-3 BASIC Tutorial Part 3

CLUB ,U3

"MUSICMASTER" Musical program.
"3D GRAPH"
"LUNA LANDER 5664" You need Screen Graphics64 or UltraBasic (Commercial programs) to run this
program
"ES6" Experimental sound generator
"SOUND DEMO"
"PIANO DEMO"
"SPRITE EDITOR"
"REACTION"
"SPEEDTYPE"
"TESTCARD"
"RAGTIME"
"WEDGE-64-\$8000.C" Programmers aid
"WEDGE-64-\$C000.C"
"SOUND TUT-1" Sound tutorial
"SOUND TUT-2"
"SOUND EFFECTS"
"CANYONS OF ZELAS" A game
"PLANETFALL" A game
"INVICER"
"TAPE LABEL" Print labels for cassettes

C64 UTILITIES ,UA

1541 BACKUP	Copy whole disk(D) or contents of BAM(B) to another disk.
1541 EXPLORER	Read or write to disk RAM. Hex dump or disassemb.disk RAM/ROM
64 DISK LOGGER	Prints program start &/or finish addresses to screen or printer
64ORDIR V1.0P	Re-arrange disk directory in alphabetical order.
BAM 64	Examine block allocation map.Instructions in REM statements.
BAM VIC	" " " " Vic 20 or 64
BANGET	Loaded by "FAST BAM 64"
BLOCK FREE	Indicates free blocks on a disk.
BOOT.DOS5.2	Loads DOS5.2
CHECK DISK	Checks out diskette after formatting. Takes more than 1 hour.
COPY FILE	Copy 1 file from a disk to another disk
COPY FILES	Copy about 180 Blocks at a time to another disk.
DATA ENTRY	Data entry demonstration.
DBASE	Database program using relative files.
DIREAD64	Fast get directory read demonstration.
DISK ADR-1540/1	Software disk device number change.
DISK ADR-2/3/4/8	" " " " " "
DISK CHECK	Won't load. Faulty.
DISK TIDIER	Aid for deleting files from disk.
DOS5.2	A DOS Wedge program.
FAST BAM 64	Examine Block Allocation Map.
FGET.BA	
FILECOPY	Copy, delete, rename, catalogue - files.
FILEMERGE	Reads 2 sorted files and writes a merged file.
FUNCTION KEYS	Enables function keys. May be altered to suit.
INDEX	File from "RANDOM FILE" Demonstration Program.
LISTADISK 64	Sort disk directory and print to printer - side by side.
LOAD ADDRESS	Reads and displays decimal and hex. load address of a file.
MAIL.FILE	Relative file used by "MAIL.PROG"
MAIL.PROG	Mail list program using relative files.
PERFORMANCE TEST	Tests disk drive.
RANDOM FILE	Random file demonstration.
RECORD.RTN	Subroutine to perform RECORD command.
RECOVER.1541	Recover scratched file.
REL.AMEND	Sequentially reads Rel file created by "REL.WRITE" and amends.
REL.READ.RND	Read Rel file backwards created by "REL.WRITE".
REL.READ.SEQ	Reads Rel file (created by "REL.WRITE") in sequential order.
REL.TEST	File created by "REL.WRITE".
REL.WRITE	Creates a Relative file.
RELREAD	Reads a Relative file (REL.TEST or MAIL.FILE).
SEQ.READ	Reads a sequential file
SEQ.WRITE	Creates a sequential file ("TEST")
SEQUENTIAL FILE	Example of a program to read and write a sequential file.
SINGLE FILE COPY	Single disk file copier.
TEST	File read by "SEQ.READ"
TSU64	Track and sector utility - read from and write to disk.
SUPERBASIC	Enhanced BASIC plus
SUPERBASIC INST	Instructions
MOIRE DEMO	Superbasic demonstrations.
STAR DEMO	" " " "
JS DODDLE DEMO	" " " "
SPRITE DEMO	" " " "
PET EMUL	" " " "
SPEEDSCRIPT	Word processor. Complete instructions from Terry Steer \$1.00
SPEEDSCRIPT INST	Instructions.
TEXTMASTER 64	Word processor.
TM-INSTRUCT 1	Instructions for TEXTMASTER part 1
TM-INSTRUCT 2	" " " " 2.
Use "COPY FILES" to put the "TEXTMASTER" program and instructions on to another disk before you try to use them.	

U.G. PROGRAMS , US

HELLO Introduction
SPEEDSCRIPT Word Processor - allows you to print out the following instructions. This is the latest version of Speedscript.
INFOMASTER INST. Speedscript file of instructions for the Infomaster suite of programs to be found on user group disks UA and U2.
INVOICER INST. Speedscript file of instructions for Invoicer program on this disk.
FASTSORT64 INST. Speedscript file of instructions for Fastsort64 program on this disk.
SSORT64 INST. Speedscript file of instructions for Ssort64 program on this disk.
FASTSORT64 Sort program.
FASTSORT64 TEST Test of sort program.
SSORT LOADER Loads Supersort64.
SSORT64 Supersort program.
SSORT64 TEST Test of supersort program.
PONZO TUTOR-4 Programming tutorial.
PONZO TUTOR-5 Programming tutorial.
PONZO TUTOR-6 Programming tutorial.
PONZO TUTOR-7 Programming tutorial.
COPY FILES Use this to copy the programs you want off this disk.
INVOICER Prints invoices to printer.
PORTFOLIO Saves a portfolio of stocks to disk - instructions included.
80 COL FOR C64 Converts your 64 to 80 column display - if you can read it.
ULTRASORT Another sort program.
ULTRASORT DEMO Demonstration of the above program.
SPEED0 Speedscript Instructions written as Speedscript files.
SPEED1 " " " " " "
SPEED2 " " " " " "
SPEED3 " " " " " "
SPEED4 " " " " " "
SPEED5 " " " " " "

CCUGB UTIL. A , UA

"64FASTGET.S.A" SEQ
"64ORDIR" PRG Re-arrange disk directory in alphabetical order.
"COCKROACH 2D" PRG Copy a disk using two 1541 disk drives.
"COCKROACH 1D" PRG Copy a disk using one 1541 disk drive.
"COCKROACH E" PRG Check a disks for errors.
"DIREAD64" PRG Demonstrates the use of FGGET program.
"FGGET.BASIC" PRG Fast get from disk - basic loader program. Some instructions included in rem statements.
"FGGET.BA" PRG Used by DIREAD64
"FORMATTER" PRG Creates screen format & blank data file for "INFOMASTER"
"INFOMASTER" PRG Data base program from Microcomputer Printout Mag.Oct 83
"LOCK-UNLOCK" PRG Protect files so they can not be scratched.
"M-CODE MASTER" PRG Assembler/Disassembler. Use in conjunction with the book "Commodore64 Machine Code Master" by David Lawrence.
"COCKROACH 1B" PRG Copy the BAM contents of a disk to another disk.
"RAGTIME" PRG Musical program
"REPORTMASTER" PRG Print reports from "INFOMASTER".
"SOUND EFFECTS" PRG Create sounds. (Some of this program seems to be missing)
"SOUND TUT-1" PRG A tutorial on the SID chip.
"SPEEDSCRIPT" PRG Word processor program. Printed instructions available from Terry Steer
"TSU64" PRG Track & Sector utility program.
"WEDGE-64-\$7000.C" PRG Programmers Aid - Printed Instructions available
"WEDGE-64-\$8000.C" PRG "
"WEDGE-64-\$9000.C" PRG "
"WEDGE-64-\$C000.C" PRG "
"COPY FILES" PRG Copy files from one disk to another.

PERRY-64 U6 PROG ,U6

10	"NICE LIST INST"	PRG	1	"B/S COLORS"	PRG
1	"ERROR BORDER"	PRG	2	"COLOR HISTOGRAM"	PRG
1	"COLOR MESSAGE"	PRG	2	"SCREEN POSITION1"	PRG
2	"SIMPLE BORDER"	PRG	2	"MOVING HEART"	PRG
17	"WEDGE-64-\$8000.C"	PRG	17	"WEDGE-64-\$C000.C"	PRG
2	"WEDGE BOOT"	PRG	13	"MAZE"	PRG
1	"MAZE JOY ADDS"	PRG	2	"ECM DEMO"	PRG
3	"FLASHING BORDER"	PRG	2	"3-D HISTOGRAM"	PRG
4	"3-D HISTO SCALED"	PRG	1	"COLOR TEST"	PRG
3	"DATA MAKER"	PRG	3	"VERTICAL HISTO"	PRG
3	"HORIZONTAL HISTO"	PRG	5	"TIMER HISTOGRAM"	PRG
1	"RND COLOUR RAM"	PRG	1	"JOYSTICK 1"	PRG
19	"GRAPHICS DATA"	PRG	3	"GRAPHICS.BIN"	PRG
3	"HRG TEST 1"	PRG	3	"HRG TEST 1.2"	PRG
3	"NICE LISTER"	PRG	1	"TEST"	SEQ
9	"CALC FREQ"	PRG	9	"CALC FREQ 64"	PRG
3	"COSINE CURVE"	PRG	4	"COSINE BANKED"	PRG
2	"SM.SCROLL DATA"	PRG	1	"SAVE MC GRAPHICS"	PRG
3	"SPRITE BOOT"	PRG	9	"KEYBOARD"	PRG
3	"PRG CHARACTERS"	PRG	9	"SPRITE GEN"	PRG
3	"HRG TEST 2"	PRG	3	"HRG TEST 1.3"	PRG
3	"HRG TEST 1.4"	PRG	3	"HRG TEST 1.5"	PRG
43	"SPRITE EDITOR"	PRG	2	"SCROLL.DATA"	PRG
16	"TSU64"	PRG	3	"DOWN SCROLL"	PRG
3	"OCTAVE"	PRG	2	"SINGLE NOTE"	PRG
3	"TRAIN"	PRG	1	"SURF"	PRG
3	"BATTLE"	PRG	1	"PING"	PRG
2	"SM.SCROLL PRG"	PRG	1	"SM.SCROLL.BIN"	PRG
2	"SLIDE 2"	PRG	4	"MAN DATA"	PRG
2	"SPACE SHIP DATA"	PRG	11	"EAT TEXT"	PRG
11	"PRINT TEXT"	PRG	5	"SPRITE MOVEMENT"	PRG
6	"ANIMATION"	PRG	2	"HOUSE"	PRG
1	"ASCII/SCREEN"	PRG	2	"MOVE CHARACTERS"	PRG
2	"NEW CHARACTERS"	PRG	32	"CHARACTER EDITOR"	PRG
4	"CHAR BOOT"	PRG	9	"STANDARD.SET"	PRG
9	"COMPUTER.SET 5"	PRG	1	"ROTATE.DATA"	PRG
5	"FILTER SONG"	PRG	2	"S+27 EFFECT 1"	PRG
2	"S+27 VIBRATO"	PRG	10	"TOREDDOR'S SONG"	PRG
13	"HAYDEN SONG"	PRG	3	"FIRST SONG"	PRG
7	"MUSIC SUITE 1"	PRG	1	"SLIDE 1"	PRG
3	"FILTER"	PRG	3	"FILTER 2"	PRG
3	"MULTIVOICE 1"	PRG	3	"SPITE DEMO"	PRG
5	"ARROW"	PRG	9	"SPRITE GEN FULL"	PRG
8	"SPRITE GENERATOR"	PRG	5	"S-B COLLISION"	PRG
6	"S-S COLLISION"	PRG	19	"MUSIC SUITE 2"	PRG

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NW USERS BACKUP ,64

"WORD PROCESSOR" PRG
"@W/WP.DOC" SEQ
"MAILING LIST" PRG
"INTRO TO BASIC" PRG
"INTRO TO 6502" PRG
"SPRITEMAKER 64" PRG
"MUSICMAKER 64" PRG
"INTRO TO SID" PRG
"LIGHT CYCLES 64" PRG
"MONOPOLE 64" PRG
"TURTLE GRAPHICS" PRG
"LOADME" PRG

This is an ideal disk for beginners. Load and run "LOADME" first.

C64 COMAL 0.14 ,14

This disk contains COMAL - a computer language - and many Comal demonstration programs. One book on Comal is in the Club's book library and several booklets of Comal notes are available.

This listing will be updated when and if new public domain software is added to our library.

The Library Committee

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On production of your current membership card you can obtain club discounts at the following dealers:

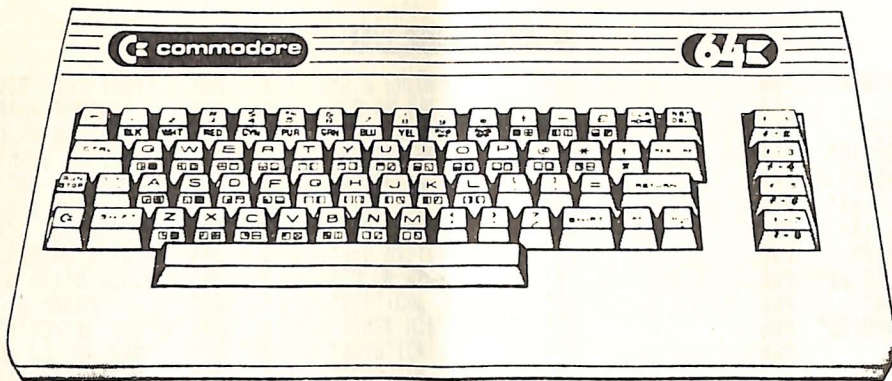
C.W. Electronics - 416 Logan Rd. Stones Corner

Chandlers - 43 Adelaide St. Brisbane

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B.C.F. Bookshop - 107 Elizabeth St. Brisbane
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CBM-64 NOTESUSING COMAL

COMAL is a language distributed by Commodore as a public domain disk. It is described as a replacement for BASIC, and has also been designed for use by schools. The Club has ten copies of COMAL in the disk library for members to borrow and copy. There is also a rather old handbook, the only documentation available, in the book library. I haven't looked at this, nor did I have any experience of COMAL before running my copy. My comments are therefore based on what I have been able to learn from what is on the disk itself.

There are, of course, good and bad points about the language, but the good points are better than the bad ones are bad... if you know what I mean.

Information about COMAL is available as soon as the program is running, in the form of a four-way choice, HELP, DEMO, INFO, and PROG. Choosing the last enters you into the language proper; the other three automatically run the appropriate information-giving programs. At this stage you can easily access the keywords.

The list of keywords contains many familiar BASIC words, making it possible for a BASIC programmer to start straight away and learn only the new bits. Also in the keyword list are words that allow structures similar to those of the Pascal language. In COMAL, at last, the IF..THEN.. statement can lead to the ELSE.. that seems so natural.

Another structure available is the procedure, which is used in some form by almost all computer languages. Groups of statements doing a meaningful thing can be labelled PROC (for procedure, similar to a subroutine), and given a name. The usefulness of procedures is that they can be called by name in the program, giving greatly enhanced readability, (for example, IF A\$ = "Y" THEN playsong).

COMAL offers Turtle Graphics, just like so many languages do today. I don't know how these compare to, say the LOGO original, but I have found it easy to learn the commands (eg FORWARD, SETHEADING, PENUP) necessary to fill the screen with my designs - and text. Once a COMAL program has been run, you can call any procedure in the direct mode, and a demo program is available with lots of turtle procedures for you to do just that.

For potential programmers, the disk contains a large number of short programs demonstrating programming techniques, like recursion, using the clock, and reading the joystick.

Some other practical and morale-boosting features are the fact that syntax checking is done even in the programming mode (ie with line numbers being used), with a disk file being accessed for each error. As well, once you correct the error, the message is erased. This means the screen doesn't fill up with messy mistakes.

Here is one of those negative points: there is considerable difficulty with using a printer, to the point where a special program (provided) must be used to print out the directory. One of the problems arises out of the fact that no secondary addresses can be set for the printer output. With both printers I have seen used, one Commodore and one non-, the default secondary address used did not allow upper/lower case, causing prints of the information files to be full of graphics characters where they shouldn't be. To print out the Keyword list, we had to go through Easyscript, would you believe.

COMAL never crashes, or at least I haven't been able to make it, which must be a useful feature for children and frustratable users. It gives me the impression of professionalism, in that all the information you could need has been provided, and all possible incorrect responses have been anticipated. All these make COMAL easy and relatively painless to use. If it cost money I would recommend it to some people. Since it's free, I'll recommend it to everyone.

Pauline Francis

BOOK REVIEW

"TRICKS & TIPS FOR THE COMMODORE 64" by ABACUS Software (Data Becker Germany) - R.R.P. \$29.95
Our copy by courtesy of C.W. Electronics - 416 Logan Rd. - Stones Corner

Another book from the same people who published The Anatomy of the C-64 and The Anatomy of the 1541.

These two volumes were of a highly technical nature (mainly for people who know machine code), but this volume is for every C-64 user. In fact, for its wide range of topics covered, there should be something in it for everybody. Some of the topics covered include:

- 3-D Graphics - Colour line Graphics - Dividing the Screen - Soft scrolling.
- Changing the Keyboard layout - Repeat functions on all keys - The WAIT command
- Defining 16 Function keys - A 'MOUSE' on the 64
- No more negative numbers with the FRE command - DEF FN command - Screendump
- Programming in FORTH - CPM on the C-64 - Interface and expansion options
- Transferring data between a C-64 and 8032 PET - Synthesizer in Stereo
- Data management on tape & disk - Pokes and other useful routines.

All in all the book covers a wide range of topics. Many programs have an assembly listing, but in all cases there's a Basic loader program listing as well, so you don't have to know machine code to enter the program.

Certainly not a cheap book, but much better value for money than some other computer books. In fact, we think it is good enough to add to our library! Thoroughly recommended.

Ralph De Vries

Networking Commodore 64s: MULTI-LINK

Once upon a time, if you wished to network Commodore 64s or VICs the only choice was the faithful VIC switch. The VIC switch will allow up to eight 64s or VICs to access the same 1541 disk drive(s) and any Commodore printers compatible with the 64/VIC serial bus, such as the printer/plotter, 1525, 1526, 801, and 802.

This is not networking in the normal sense of the word. The VIC switch is a simple device which intercepts requests for access to the disk or printer and holds them in a queue until the particular device is free. Each computer still accesses the 1541 at the same droning pace (in fact, slightly slower). To load EASY SCRIPT into all eight computers takes more than 10 minutes. Any one computer using large amounts of disk or printer access hangs the system for all other users. On the other hand, the advantage of the VIC Switch is that it is cheap, at around \$280, and the only accessories required are a few cables.

I have been using the VIC switch for about 12 months in a class situation and have often thought that there must be a better system with true networking capacity. At last it is available: MULTI-LINK.

MULTI-LINK, a product from Richvale Telecommunications in Canada, is a networking system in the real sense. In the MULTI-LINK system, one Commodore 64 acts as a controller for up to 48 satellite 64s and offers the sort of facilities previously only available on more expensive machines such as the BBC micro via Econet.

The system overcomes most of the horrors of class use of the 1541 drive. It can use the 1541 but preferably uses the faster parallel IEEE 2031 disk drive (which apparently does not suffer the reliability problems of the 1541, or so I'm told) and a high speed communications link between the master controller and the satellite units. By way of comparison to the VIC switch, EASYSCRIPT can be loaded to eight satellite 64s in approximately 3 minutes instead of 10.

A summary of MULTI-LINK's capabilities:

Uses 1541, 2031 or 4040 disk drive and can use any parallel drive such as 1001, 8250, or hard disk. Up to 4 dual disk drives may be connected.

Allows the use of a wide range of printers, serial and parallel IEEE or centronics. (No direct connections for RS 232 types.) Up to four printers may be connected at the same time.

Automatic cueing of disk and printer access if a number of satellites wish to use the same device, with the very important added feature of selectively limiting the time an individual satellite unit may tie up the system. Any satellite overusing the system may be temporarily halted, allowing access to other units. Also, the printer channel can be automatically closed if it hasn't been used after a specified time. This eliminates the problem of one user keeping the printer open and preventing other users from gaining access.

Simultaneous downloading of programs to any number of specified satellites. For example, once the program is loaded into the master, the command RUN 1-15 will download and run the program on all satellites 1-15 almost simultaneously. Transfer between the master and each (!) satellite is at approximately 6K/second, making it substantially faster than direct disk access.

Special features to allow the rapid transfer of commercial protected software to the satellites. The master may be placed in a RECORD mode to record how a satellite loads the program and a subsequent PLAY command will allow other satellites to effectively load/run the program in roughly one third the time.

Programs can be rapidly transferred between the master and satellites and the reverse.

Direct disk access commands are available on the master include LOAD, CATALOG, DISK (access to the error channel)

The master computer can completely monitor and control the activity of any satellite; view the screen, lock the student out of the keyboard, send specific instructions or demonstrate commands. Some of the commands available through the master include

MESSAGE: send messages to specified satellites. Can be used to enter program lines on any or all satellites from the master or list/run programs etc.

QUERY: prevents satellites accessing the disk or printer until they receive permission.

SCREEN: displays the full contents of any satellite's screen on the master. (Without the satellite being aware of the monitoring.)

ALLOW/DISALLOW :prevents any satellite using the disk or printer.

BREAK : equivalent to pressing the RUN/STOP key on any satellite, stops program execution on that satellite.

ECHO : duplicate the master computers screen to specified satellites. A complete class may be instructed by demonstration or individual students may be given special attention.

HALT : freeze the screen display of any/all satellites and prevent the satellite responding to its own keyboard.

A number of facilities are available for restricting access to disk files to specified users. Files may be automatically prefaced by satellite number, thus keeping a record of who's program is who's. Files can also be labelled by as class files, allowing only a specified class to access them, or as library files for general access. Destructive disk commands such as NEW, SCRATCH, etc. can be automatically trapped and prevented.

If the computer lab has to be left unsupervised (!), the master terminal can be locked and password protected allowing the students to use the satellites only under the specified conditions and not have access to the potentially destructive power of the master.

Summary

The system is a delight to use. The main control program asks a series of simple questions to set up the desired parameters for the system which are then saved to disk. This allows a quick changeover of system parameters between classes, for example. The operating commands are easily mastered and the manual explains all the commands in a concise manner but provides a quite adequate explanation of how to use the system. Since most of the commands are self evident once seen in action, teachers and staff new to computing should not have a great deal of trouble in learning and using the system.

MULTI-LINK is supplied in a number of stages; a master control unit and a number of satellite interfaces interconnected by flat ribbon cable. These connect via the cartridge port with internal connections to the main processor chip. Prices are in the \$700 mark for the controller unit and \$190 for each satellite connection. Local dealers should be consulted for accurate quotes.

MULTI-LINK is distributed nationally through CYBEX COMPUTING in North Adelaide (Phone 08-267 5855) and other dealers. I wish to thank Charles Hatchman from the Computer Sales Centre in Brisbane (07-354 3639) for background information on the system and John Hurley of Marcellin College, Enoggera, for the use of their system for an afternoon.

Greg Perry

SOFTWARE REVIEW

SUCCESS WITH MATHS by C.B.S. Maths

Addition/Subtraction: \$34.95 - Multiply/Divide: \$34.95

Fractions:- Addition/Subtraction: \$34.95 & Multiply/Divide: \$34.95

GENERAL:

Success with Maths is one of the better educational software packages to come onto the market. You can select the number of problems to be attempted on all programs and once you have completed the initial set you have the option of stopping, going back to the Menu or continuing with the problems. All programs give an error analysis at the end of each set of problems. The above features are essential in any programs of this type. The programs are ideally suited to children who have difficulty with these aspects of mathematics.

ADDITION/SUBTRACTION

One of my common criticisms of mathematics programs is that they do not have the capability of selecting levels. This program achieves the level selection by allowing the user to indicate the number of rows and columns in the addition section and to indicate the number of digits and whether borrowing is required in the subtraction program. I consider this to be an excellent program.

MULTIPLICATION/DIVISION

Levels are selected in this program by pre-selecting the number of digits in the multiplier for the multiplication section and the number of digits in the division for the division section. By this method the child can progress from normal division to long division quite easily. This program also has an excellent rating.

FRACTIONS - MULTIPLICATION/DIVISION

This program like the ones above are for children who are just learning or who have problems in the particular area. It would be too slow for children who have mastered fractions and just want to practice them. This program makes the child go through every step involved with multiplying or dividing fractions. For example in multiplication the child has to cancel or reduce before multiplying. In division the child has to reciprocate the divisor and then cancel or reduce before the final multiplication. This is an extremely good program.

FRACTIONS - ADDITION/SUBTRACTION

Once again an excellent program that takes a child through the various stages of changing the fractions to least common denominator, adding or subtracting and then reducing the fraction to a mixed fraction. Children are given help throughout all the programs by computer prompts. The computer will advise the child of an error and if the error occurs again the computer will then correct the answer with an explanation. I must admit I found this helpful on occasions.

In conclusion I would have to say how good it is to see high standard educational programs now being produced for the 64.

DALE GILBERT

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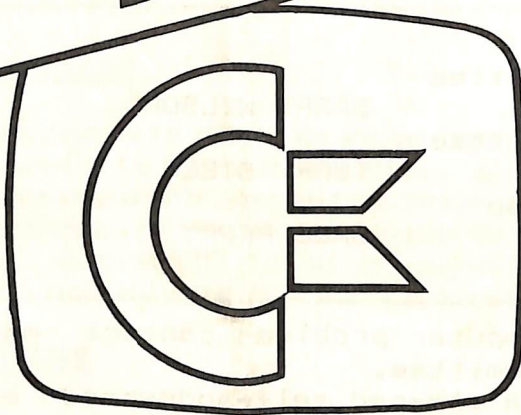
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