"CURSOR"

NEWSLETTER OF THE

COMMODORE COMPUTER USERS GROUP (QLD)

JANUARY 1985 VOL.1 NO.5

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

CONTENTS

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Diary for February

Group meeting on Tuesday, 5th February 1985, at 7.30 pm in our club rooms. Visitors are welcome!

PRESIDENT'S WELCOME TO NEW (AND OLD!) MEMBERS

THE GROUP'S MODEM : PROGRESS REPORT

NEW SUB-GROUPS

During the business part of our meeting one of our members will run a separate mini-workshop for our Junior Members.

Immediately after the main business part of the meeting is finished there will be a Beginners Corner, run by one of our senior members.

Workshop meeting on Sunday, 17th February 1985, 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**!

SMOKERS: Smoking is *NOT ALLOWED* in the class rooms! If you must smoke, go to the kitchen or the play ground.

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.

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!

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).

Who would be prepared to start an *** ADVENTURE GAME SUB-GROUP *** ?
Volunteers contact our secretary, or step forward at our February meeting!

NEW SUB-GROUPS

With the phenomenal growth rate of our group in 1984 it is becoming increasingly necessary to form additional suburban sub-groups.

Based on the club membership list we feel that sub-groups need to be started in the following areas:

ASHGROVE AREA
REDCLIFFE PENINSULA
KENMORE / JINDALEE AREA
MT. GRAVATT / SUNNYBANK AREA

Please note that, beyond organizing a meeting place (preferably a local school), there is very little administrative work involved in running a sub-group.

If you are interested in starting a group in your local area please ring either Norm Chambers or Ralph De Vries for further information. We will only be too pleased to assist you as much as possible in the formation of a group in your district.

Robert Adamson of 17 Kywong St. Wavell Heights (Ph.266 8353, after hours), will act as co-ordinator for a sub-group in the Wavell Heights area. If you live in this part of Brisbane give Robert a ring to let him know you will be joining!

Similarly Leigh Winsor of 24 Egmont St. Sherwood (Ph. 379 2405, after hours), would like to hear from members who want to join a sub-group based around the Sherwood area.

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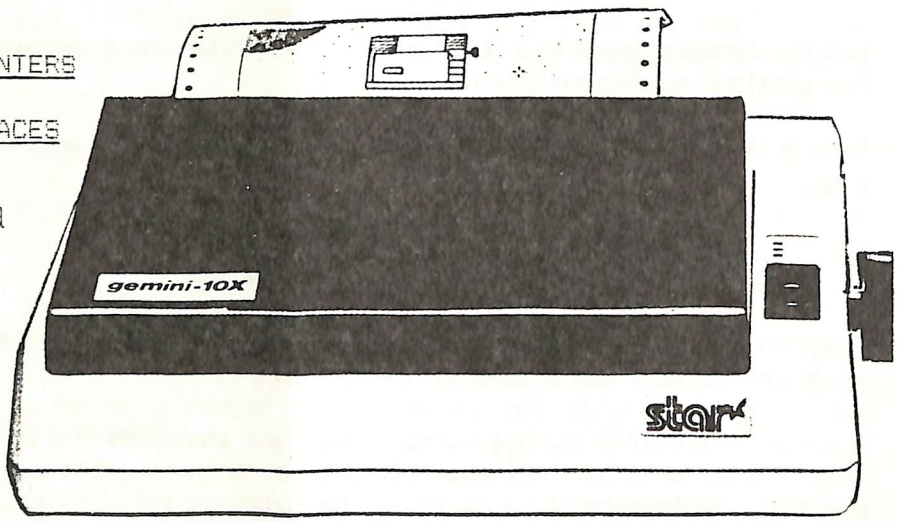

CONTACT: LES VAN TOVIER - PH: 221 7822

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CHANDLERS

EDITORIAL

Best wishes for a happy 1985 to all our members, both old and new, and to all our friends and supporters.

With the astounding growth of Commodore in the market place during 1984, we in turn can expect considerable growth in 1985. This is very good up to a point, but it has also created some major headaches for your committee, particularly as regards our main meeting.

With an average attendance of 200 - 300 members and guests, it does tend to get rather messy at times (!). It is estimated that 75% of all members attending disappear after exchanging their library books or software, and who can blame them. Yet, we do need a main meeting as a focal point for our activities, thus we'll carry on regardless!

This however does not solve the problem of a very overcrowded meeting, and particularly for recently joined members it could mean disappointment with our group.
We feel therefore that in 1985 we **must expand** our network of Suburban Sub-groups.

The advantages of the Suburban Sub-groups are threefold. In the first place it usually means a lot less travelling. In the second place it means you join a group of some twenty to thirty fellow members, thus making it so much easier to get to know the other members of the group. Thirdly you learn a lot more!

On page three of this newsletter we have identified the major suburban areas where we feel that new sub-groups are needed. If you live in one of these districts please come forward **now** to help us expand this suburban network. In this way you can contribute to the continuing welfare of our group.

Ralph De Vries

NOTES & GOSSIP

The Committee has decided to waver any charges for Member's Advertisements in the future.
Please note these advertisements are for computer gear and computer related equipment only!
Submit your adverts in written form only to the newsletter editor. Deadline is the second Tuesday of the month.

The competition is hotting up! You can now buy a Gemini 10X printer inclusive of Cardprint Interface for $475.00 from Chandlers.

Case Communications, the importer of the Gemini range of printers have advised us that early in 1985 they hope to import their own interface for Commodore computers, which may even result in a further reduction in the price of the total package.

Beginners Please Note: During our normal monthly meetings on the first Tuesday of the month we will be running a special Beginners Corner. Sometimes one of our senior members will give a talk on a specific programming topic or on a particular piece of hardware or software, and at other times it will take the form of a question and answer session.
This is the ideal opportunity for beginners to find out all about the range of Commodore Computers, their peripherals, and Basic programming techniques.

Interested in the group's modem? In last November's newsletter there were full details about prices and availability.
If you have recently joined ring Roger Haigh (ph.339 8037 a.h.) for further details. Roger will also present a progress report during our February meeting.

The Woolloongabba Community Youth Support Scheme (32a Logan Rd. W'gabba) purchased last year a VIC-20 computer for educational uses. Regretfully it is still sitting in it's box, because nobody knows how to use it!
They are looking for a VIC-20 user who would be prepared to spend a couple of hours per week giving instructions in the use of the VIC-20. Sorry no renumeration, although travelling costs will be reimbursed.
If you feel that you would like to do something for the unemployed of Brisbane then here is your oppportunity!
Ring Kathy Holliday at the centre on 391 3600 or 391 8577 for further details.

Have you noticed the conspicuous absence of the **"Letters To The Editor"** column during the last few issues? Well, the reason is quite simple: we aren't getting any letters!
So how about it members? There must be something to write about!

NEW F/D DISK FOR C-64

C.C.U.G.Q. U7

LOADME	Auto loader.
1526/802 HIRES	Hi-res screen dump to 1526 or 802 printer
ECF	Data Base Program
SPEED CUST BOOT	Boot program for Cust.SS
CUST.SS	Speedscript Customiser
SCREEN HEAD/64	Create large characters.
CHANGE DISK NAME	Disk Tricks.
CHANGE DISK ID	" "
UNSCRATCH	" "
SCRATCH	" "
VOCAB BUILDER	Create word & definition files
TEACH ENGLISH	Adventure game that accepts plain English.
QUIZ MASTER	Create Student quiz.
QUIZ MASTER 2	Asks the quiz questions.
FIRST AID	How to cope with common medical problems.
HIRES DUMP/64	Hi-res screen dump to 1525 or 801 printer.
C/G TERM	Terminal Program.
C/G TERM BOOT	Loads the program above.
PROOFREADER	Latest version of Compute! proof-reader.
TIME CLOCK/64	Displays time.
WORD GUESS/64	Guess the word.
AUTOLINE/64	Automatic line numbering.
MLX 64 V2.02	Latest version Computes Gazette machine language entry program.
LETTER ATTACK/64	Computes Gazette Gazette Game
COS COMBAT BOOT	Loads Cos Combat64.
3-D LABYRINTH	Computes Gazette Game.
COS COMBAT64	" " "
TREK	" " "
CABBY/64	" " "
TURTLE GRAPHIC 1	Gazette Turtle Graphics.
TURTLE GRAPHIC 2	" " "
TURTLE GRAPHICS	" " "
TOMB/64	Computes Gazette Game.
BAGDAD/64	" " "
SUPERTANK	" " "
KAYLON/64	" " "

NOTE Most of these programs are from Sep.Oct.Nov.Dec.84 Computes Gazette. For instructions on any of the programs please consult your copy of the appropriate magazine.

REVIEW: HOME ACCOUNTING

Review copy by courtesy of C.W. Electronics Stones Corner - R.R.P. $59.95

Some nine months ago I was given a copy of "The Home Accountant" ($100.00) for review. This review never saw the light of day, because the program in question kept on crashing!

No such problems apply to "Home Accounting" (also known as "TOTL MONEYMINDER 3.6) for the C-64. A home budget program can of course be set up on a spreadsheet if you possess such an item, but if you want to do your home budgeting in style I suggest that you investigate this program.

This program is supplied on disk and comes with a good 70-page instruction book.
After loading up the program your first job is to format a working disk. This has to be done through the program, as the program both formats and initializes the data disk. The program writes data in the form of relative files which work without a hitch. The next job is to "configure" your data disk. Here you decide on screen, character and border colours, 40 or 80 column display (80 columns only for users of hardware 80 column adaptors), and the type of printer to use.
(A tip for users of Epson or Gemini printers with Cardprint interface: choose the VIC printer and not the Serial printer option - it works like a charm.)

You are now ready to set up your income and expenditure accounts. (A total of 110 accounts can be defined by the user!) There are a lot of categories of accounts, such as credit card accounts, savings accounts, cheque accounts etc., but the real beauty of the program lies in the fact, that you don't have to use a particular type of account if you have no need for it, which means that the program is quite flexible. Thus, if you keep your money in an old sock you don't have to open a "cheque account"!

I spent some hours setting up quite a few accounts, and then put in budget figures for one month. The program allows the user to replicate one month's figures to another month, thus saving quite a bit of typing - another nice feature.
After setting up your accounts you are ready to make entries, either daily, weekly or monthly.
At any given time you can ask for a report printout in different formats. At least seven different reports can be printed out - either to the screen or a printer!

The program offers many other features as well, but I'll leave those to the intending purchaser to find out.
A minor "gripe": Dates have to be entered the "American" way, that is MM/DD/YY. A bit of a nuisance, but I found that I got used to it fairly quickly.

Despite this minor complaint I can say that I liked "Home Accounting". It works, and it works well! Thoroughly recommended.

Ralph De Vries

24 Hour Timer & Alarm (C-64)

Recently, when writing a program to interface a C64 to run a weighbridge (yes, a weighbridge!), we came across a small problem (as well as several large ones, but I'll leave those to another time). First, the computer had to continually display an accurate time, and second, it had to automatically printout a summary of the days' operations early each morning after everyone had gone home, at 2 AM for instance.

Since the program required some disk access and several machine code routines, we could not use the time variables TI and TI$ because the system jiffy clock loses time under these conditions. Having noticed a passing reference to a 24 hour alarm/timer in the Programmers' Reference Guide, we set to work to discover how to put it to good use. The following is a summary the results and a four part program to set time, display time, set the alarm, and process the alarm, which you should be able to readily adapt and use in your own programs.

The TOD clock

The C64 contains two 6526 Complex Interface Adapter chips. (CIA#1 and CIA#2) These live in memory at 56320-56575 and 56576-56831 respectively, and control several functions including the input/output operation of the C64 (the keyboard, disk and tape access etc). Each of these chips contain a full Time Of Day (TOD) clock which counts in hours, minutes, seconds, and tenths of seconds, with an AM/PM indicator, as well as an alarm function. The TOD clock runs directly from the mains frequency and therefore, once started, will keep time fairly accurately, independent of the rest of the C64.

The relevant locations for the TOD clock in CIA#1 are

No	Decimal	Hex	Function
0	56328	DC08	1/10 seconds
1	56329	DC09	Seconds
2	56330	DC0A	Minutes
3	56331	DC0B	Hours plus AM/PM flag (bit 7)
.			
5	56333	DC0D	Interrupt Control Register (ICR)
6	56334	DC0E	TOD Clock Frequency Flag (bit 7)
7	56335	DC0F	Select Alarm/TOD flag (bit 7)

Let's provide a BASIC program to set/read the TOD clock before we go any further.

```
100 REM TOD CLOCK
110 DEF FNA(X)=INT(X/10)*16+X-INT(X/10)*10
120 DEF FNB(X)=INT(X/16)*10+X-INT(X/16)*16
130 T=56328: R$="OUT OF RANGE"
140 REM SET TO PAL 50 HZ OPERATION
```

```
150 POKE T+6, PEEK(T+6) OR 128
160 PRINT"[CLR,DOWN10] ENTER TIME IN 24 HOUR FORMAT"
170 INPUT "HOURS";H: IF H<1 OR H>23 THEN PRINT R$: GOTO 170
180 IF H>12 THEN H=H-12 : POKE T+3,128+ FNA(H): GOTO 200
190 POKE T+3,FNA(H)
200 INPUT"MINUTES";M: IF M>59 THEN PRINT R$: GOTO 200
210 POKE T+2,FNA(M)
220 INPUT"SECONDS";S: IF S>59 THEN PRINT R$: GOTO 220
230 POKE T+1,FNA(S)
240 INPUT"PRESS RETURN TO SET CLOCK";A$:
250 REM START CLOCK
260 POKE T,0
300 PRINT "[HOME] TIME IS ";
310 A$="AM":H=PEEK(T+3): IF H>128 THEN H=H-128:A$="PM"
320 PRINT A$; FNB(H); FNB(PEEK(T+2)); FNB(PEEK(T+1));
330 PRINT FNB(PEEK(T)): GOTO 300
```

What's this all do then eh?. First, if you are unfamiliar with the use of the BASIC function statement DEF FNA(X) then you should read up on it. It simply allows one to set up a complicated formula and then call it, rather than having to repeat the equation each time.

The C64 normally works in direct binary (or its equivalent hexadecimal notation), where both PEEK and POKE operations convert the decimal number directly into binary and vice versa. However, the TOD clock counts in Binary Coded Decimal (BCD) which encodes only a value of 0-99 per byte. (In two decimal digits each 0-9.) This is easy to handle in machine code, but to use BCD from BASIC, we must provide our own conversion algorithms. Function A (FNA) converts a decimal value into binary-coded decimal (BCD) and function B (FNB) converts binary-coded decimal back into decimal.

The TOD clock must be set by a specific sequence, not just POKEd in any order. First, we must set it to operate from the Australian 50 Hz (PAL) mains frequency. This is done by setting bit 7 (decimal value 128) in 56334 as in Line 150. (If bit 7 is 0, then TOD runs at 60 Hz, the American NTSC frequency.)

Next, a POKE to the hours, location 56331, STOPS the clock. It can only be restarted by a POKE to the 1/10 seconds in 56328. Therefore, it is important that the above sequence of POKEing to hours, followed by minutes, seconds, and 1/10 seconds be followed in order to set the clock correctly.

The 24 hour feature of the TOD clock is obtained from the hour register. Seven bits, bits 0-6, contain the hour (in BCD) and bit 7 is a flag to indicate AM or PM. Bit 7 of 56331 is set for PM and clear for AM. So, if a PEEK(56331) returns a value greater than 128, it is PM and the BCD hour is found by subtracting 128 from the PEEK value. The same rule must be followed when setting the hour to AM or PM. Set hour with 1-12 plus 128 if PM.

To make the above program more useful, wouldn't it be nice that, if once set, the time was automatically displayed on the screen all the time, irrespective of whatever the C64 was doing?

How can this be done?

Every 1/60 th of a second, the C64 generates what is called an interrupt. This temporarily suspends whatever the C64 is doing at the time and jumps to the interrupt handling routine which checks for a key press, updates the jiffy clock, does a few other things, then resumes normal operations. The address of this interrupt routine is stored as a vector in locations 788 and 789 ($0314-$0315). We can change these pointers to a routine of our own which will display the time first then jump back to continue the normal interrupt code.

Add the following lines to the above program

```
300 REM DISPLAY CLOCK WITH INTERRUPT
310 N=0:CH=12717
320 READ A: IF A>255 THEN 340
330 POKE 828+N,A:N=N+1: CH=CH-A: GOTO 320
340 IF CH<>0THEN PRINT "CHECKSUM ERROR":STOP
350 SYS 828: REM CASSETTE BUFFER
400 DATA 120, 169, 89, 141, 20
410 DATA 3, 169, 3, 141, 21
420 DATA 3, 173, 14, 220, 9
430 DATA 128, 141, 14, 220, 169
440 DATA 8, 133, 166, 169, 220
450 DATA 133, 167, 88, 96, 162
460 DATA 0, 160, 3, 169, 80
470 DATA 44, 11, 220, 48, 2
480 DATA 169, 65, 32, 179, 3
490 DATA 169, 77, 32, 179, 3
500 DATA 232, 177, 166, 72, 41
510 DATA 112, 32, 173, 3, 104
520 DATA 41, 15, 32, 177, 3
530 DATA 136, 169, 45, 32, 179
540 DATA 3, 177, 166, 72, 32
550 DATA 173, 3, 104, 41, 15
560 DATA 32, 177, 3, 136, 208
570 DATA 236, 169, 46, 32, 179
580 DATA 3, 177, 166, 32, 177
590 DATA 3, 173, 13, 220, 41
600 DATA 4, 240, 7, 169, 134
610 DATA 133, 2, 141, 32, 208
620 DATA 76, 49, 234, 74, 74
630 DATA 74, 74, 9, 48, 157
```

```
640 DATA 0, 4, 169, 0, 157
650 DATA 0, 216, 232, 96
660 DATA 9999
```

Once this code has been entered and initialized (by the SYS in Line 340) it will display the time continually until RUN/STOP and RESTORE are pressed. This resets the interrupt vectors back to normal. This does not stop the clock, but simply disables the screen display routine. A new SYS command will restore the time display. NOTE: To allow MONAD monitor to be used to enter the code directly, the routine has been placed in the cassette buffer. The cassette can now not be used.

At the end of this article I've included an assembler listing of the routine. If you are learning machine code, try entering the code directly. Use either the Commodore Public Domain Assembler package (available from user groups), or use Paul Blair's MONAD program we published in the last issue. With MONAD, either type in the hex numbers into the correct addresses (using .M) or assemble (.A) the routine by entering the mnemonics.

The Alarm

Using the alarm is slightly complicated but let's see what is involved. Remember those interrupts we mentioned before The main C64 clock generates these every 1/60 of a second, but other events can also cause interrupts. (The RS 232 port, serial port and cassette read and others.) When our alarm bell rings, this is exactly what happens, a special interrupt is generated. Unfortunately, if we are not there to hear it within 1/60 of a second, we have to wait another 24 hours!

When interrupts of are generated from any source, one or more of the bits in location 56333 (named the Interrupt Control Register) is set. By checking these, the interrupt routine can decide which source has requested the interrupt and can process it accordingly.

When an interrupt is requested by the alarm, bit 3 of 56333 is set. After each interrupt, our routine must therefore check this bit, and, if set, must perform our alarm function. This can only be done in machine code. BASIC is too slow because every time location 56333 is read it is cleared. The check must be done on every interrupt at least 60 times per second. In the above machine code routine this has been done. If an alarm bell is detected, the border colour is changed to blue and location 2 is set to 134. Once the new routine has been patched into the interrupt code, the check is done automatically. All the BASIC program has to do is PEEK(2) now and then and, if the value is not zero, process the alarm condition and reset the border colour to whatever and location 2 to zero in preparation for the next alarm.

The alarm time is set in the same way as for the clock time by POKEing the TOD clock registers with the desired hour, minute, and second. Bit 7 of location 56335 determines whether the POKE goes to the TOD clock or the alarm. When set to 1, the alarm time is POKEd and if set to 0 (as usual), the TOD time is set.

Let's complete the program by adding the alarm and checking for it.

```
1000 SET ALARM
1010 REM SET BIT FOR ALARM WRITE
1020 POKE T+7, PEEK(T+7) OR 128
1030 PRINT"ENTER ALARM TIME IN 24 HOUR FORMAT"
1040 INPUT "HOURS";H: IF H<1 OR H>23 THEN PRINT R$: GOTO 1040
1050 IF H>12 THEN H=H-12 : POKE T+3,128+ FNA(H): GOTO 1070
1050 POKE T+3,FNA(H)
1060 INPUT"MINUTES";M: IF M>59 THEN PRINT R$: GOTO 1060
1070 POKE T+2,FNA(M)
1080 REM RESET FOR TOD
1090 POKE T+7, PEEK(T+7) AND 127
1100 GOSUB 2000
1110 GOTO 1100
```

and a subroutine to check for alarm

```
2000 REM PROCESS ALARM BELL
2010 REM IF LOCATION 2 SET
2020 IF PEEK(2)=0 THEN RETURN
2030 REM RING BELL
2040 S=54272: POKE S+24,15: POKE S+1,30
2050 POKE S+6,250: POKE S+4,17: POKE S+4,16
2060 PRINT "RING RING, RING RING"
2070 FOR I=1 TO 2000: NEXT : POKE S+24,0
2080 POKE 53280,14: REM RESET BORDER COLOUR
2090 POKE 2,0: REM RESET ALFAG
3000 RETURN
```

Enter the whole program and RUN it. Set the time to 6.15 PM, say, then set the alarm for 6.17 PM and wait to see what happens.

PROBLEM

One minor problem with the alarm is the apparent inbuilt snooze facility! By this I mean that the alarm goes off at the correct time alright, but it also goes off AGAIN ONE MINUTE LATER. Sorry, but I don't know why. Can anyone out there suggest a reason? Because of this, when using the alarm function, one must either reset the alarm to zero (poor) or do something for at least one minute before checking the alarm again!

Greg Perry

The Consultant

Review of a Database Program

Over the last three or four months I have had the opportunity, by courtesy of Chandler's Computer Department in Adelaide Street, to take a long hard look at several database programs.

For the benefit of our new members a few explanations on database programs are in order.

Usually a database is described as a computerised card filing cabinet, and I have no quarrel with this description, except that a good database program is capable of doing a lot more than the old fashioned card filing system.
A "data file" is equivalent to a card filing box, e.g. a "recipe file". A "record" is equivalent to a card (with information) to go into the filing card box. A "field" is equivalent to one line of information (such as "surname") on the filing card. Obviously several or many "fields" can be held per card.
Thus a database program produces "data files", which in turn make use of "records", which contain "fields".
If your card file or address book only contains a few dozen names and addresses, I would not consider a database program, because your old system will be a lot faster than the computerised equivalent. This may sound like heresy, but facts are facts. It is a lot quicker to look up a phone number in a diary rather then switching on your computer, load the program, and than load the file disk to find your phone number!

If, however, we take our group's membership list as an example, a database program is very practical indeed. In the first place we have all names, addresses and phone numbers on hand. Furthermore there are details of type of membership, contributions paid, type of computer equipment owned etc. Thus, if we want a printout of all unfinancial members, the computer obliges without any fuss. We can also ask for a printout of only those members who own VIC-20 computers. Every month I ask the program to print out address labels in postcode order, thus saving me a lot of time sorting newsletters for posting. Here we see that a database program becomes a real viable proposition, because some of the things we ask it to do cannot be duplicated very easily on a non-computerised filing system. (As an aside: the club membership database program was written by our president, Greg Perry.)

The two basic computer file types are *sequential* or *relative* files. To explain it in the most simple terms a sequential file writes a "record" to tape or disk one after the other, regardless how long the individual record is. Thus we may have a name and address of 90 characters, followed by a record of 290 characters. The program writes one after the other, and, if we delete or update an entry, the total file has to be rewritten. This obviously imposes severe restrictions on the length of the total file, as well as on the access time of a particular record. It is however the only feasible way to use a (simple) database on a cassette-based system.

Relative files can only be used on a disk-based system. They have several major advantages, coupled with some minor disadvantages. In the first place you have to decide beforehand the length of the longest record you intend to use, because the program reserves space on the file disk for each record. You can however delete or add to records at any time, without having to rewrite the whole file. Relative files make use of a separate index file (sometimes called a key file) for fast retrieval of an individual record. Although relative files are more wasteful on disk space, (after all, if you have reserved 254 bytes per record, and your average record is only 150 characters long, you obviously waste a lot of bytes per record) this disadvantage is offset by the advantage of fast retrieval and flexibility.

To write a sequential file program is relatively straight forward, but to write a good relative file program takes a lot of programming skill. Two of our members, Lex Hinkley and Greg Perry have written some good relative file programs for Commodore computers. There may well be others, but if they are out there, they do hide their light under a bushell!

For those members who are interested in this subject there are several good examples of both file types on our public domain disks. If you have programming problems with either type, talk to Lex or Greg. They will soon point you in the right direction.

If writing your own program is not your scene you may have to try a commercial database program, and this is where your problems start. They range in price from appr. $30.00 to $180.00 - quite a range indeed.

At the lower end of the price range you can buy something like a computerised mailing list program, often (but not always) using sequential files, and offering label printing facilities. In most cases our public domain programs are just as good and cheaper!

On the other hand at the top end of the price range we look at some very sophisticated programs indeed. Most of them make use of relative files, and offer a host of other features.

Some of the most expensive programs however are so versatile that you have to be an expert in Basic programming to use them! In this category I would include "SUPERBASE 64" and "MAGPIE 64". These are so-called Relational Database Programs, which allow interaction between several data files. Very sophisticated indeed, but definitely not for beginners.

All other database programs which I have managed to preview only support one file at a time, with varying degrees of sophistication.
Commodore's "EASY MAIL" employs relative files, but for a mailing list program the price ($80.00) is far too high. In the USA it is advertised for $20.00!

Commodore do however market another and far more flexible database program, called "THE MANAGER" (R.R.P. $100.00). This is an excellent program indeed, which allows records up to 1500 characters, allows for printing out data in Report Format, as well as Label printing, with good search facilities, "help" screens, interfaces with wordprocessors (Easy Script) etc. All in all

a very good and flexible program indeed. But there had to be a snag! And the snag is the instruction book. Described as "the worst collection of gibberish I've ever encountered" (Midnite Software Gazette), this sums it up admirably!

Which brings me to an Australian database program, "THE ELECTRONIC CARDFILE" which suffers from a similar inadequate instruction book. This program allows for records up to 920 characters, has good search facilities, but it's Report printing facilities seem to be very limited. (I may be wrong though, as the instructions are so vague.) It does not interface with word processors or allow files to be re-arranged. A good, but limited program. I am not certain of the price, but it used to retail for $140.00, and at that price I would not consider it good value for money.

At this stage I have to declare a personal predilection for the products of the Canadian Software company "Batteries Included". This newsletter is produced using their word processor "Paper Clip", which I consider by and large to be the best word processor on the market for the C-64. This program uses a protection key (also called a "Dongle") in joystick port 1. It allows me to make backup copies of the program, but the program will not run without the dongle. As a result of this there are no pirated copies of "Paper Clip" floating around!

The same company produces "THE CONSULTANT". This database program also uses a protection key in joystick port 1. It is not a cheap program ($150.00 - $180.00), but after testing the program I decided to purchase my own copy!
A record can be up to 3300 characters long, spread over 9 screens and 99 fields! An individual field can have up to 877 characters! (The norm is 40 characters per field!) Up to 8 key (index) fields are possible, for sorting and retrieval purposes. Files, in relative format, can be saved in sequential format as well, for use with word processors (Paper Clip) etc. Report and Label Printing facilities are amongst the best available, and different brands of printers are supported. Files can be re-arranged if at some time in the future you wish to change the format of your file. Limited math facilities can be performed between different fields of a record. It is even possible to use password protection to keep "snoopers" out of your file!
Their 184 page instruction book with a 100 page tutorial is written for both beginners and more experienced computer users, and as such deserves top marks.

Regrettably the products of Batteries Included are not always easy to come by. I believe that Imagineering do import "Paper Clip", but not "The Consultant". A locally based importer does however bring in small quantities of this program and Chandlers are usually able to supply it. Highly recommended.

Suggested reading on commercial data base programs:

"RUN" May 1984
"COMMODORE MICROCOMPUTERS" Sept/Oct 1984

Ralph De Vries

TURBO-64

Review of a Fast Load System from Cockroach Software (R.R.P. $45.00)

Do you own a disk drive? Do you recall the day when you changed from using cassettes to floppy disks? Wasn't it marvellous, that fantastic speed increase?

And, after using your disk drive for some months, do you now find that the old 1541 is not so fast after all, particularly if a program is over a 100 blocks long?

It is true of course that by disk drive standards the 1541 is a bit of a "slow coach". When Commodore decided to use the serial port for the 1540-series drive, rather than the parallel port which was used on the older PET computers, they took a decided step backwards. The different disk drives used with the PET load and save programmes appr. three times faster than the 1540/1 drives.

It has to be remembered however that the 1541, which is an **intelligent** drive, with it's own built-in Disk Operating System (with many other computer systems the Disk Operating System is not built in - you have to load it as a separate program which uses up valuable RAM), is probably the cheapest drive on the market to-day.

Stu Burrows and Ralph Down of Cockroach Software in Southport decided quite a few months ago, while designing their "Turbo Roach" fast copying program which works by manipulating the Disk Operating System (DOS), that they were going to take a hard look at the Commodore DOS, to make it work a bit faster. And now, after many months of hard work, the result is "TURBO-64".

TURBO-64 is supplied on disk, and is very well documented (a very big plus!).
Please note: this program is designed to allow you to load programs up to 5 times faster than normal. It is not designed to *save* programs faster than normal!
It is not designed either for fast loading of commercial programs which are copy protected by means of disk errors. However the authors are prepared to make Turbo Loading copies of several commercial programs for registered users of Turbo-64, as set out in their instruction leaflet. Included amongst these is Easy Script, which, in it's Turbo Load version, loads in 10 seconds!

The actual program is supplied as the "Turbo-64 Editor". After booting up the program your first job is to format some special disks to hold your Turbo programs. Don't format your disks in the convential manner - remember this program uses it's own form of the DOS! Formatting takes less than 30 seconds.

You are now ready to convert your programs to the special Turbo format. Up to 20 programs or up to 664 blocks - whichever comes first - can be saved out to the Turbo disk.

Up to 210 blocks can be converted at a time, so if you have to convert more than 210 blocks, you will have to swap the Editor disk and File disk a few times.

When you have done this it is a simple matter of loading "T",8,1 and in a few seconds your programs are listed in menu form on the screen. It is then a simple matter of pressing an alphabetic key, and your program loads and auto-runs in a fraction of the normal time.

Does it work? Yes it works very well, but there are a few programs that can cause problems. Most of these have to do with the structure of the original program. If, for example, you have a program that makes use of sequential files, you will find that the main program can be "Turbo charged", but the sequential (or relative) files cannot be converted. It is of course possible to load this type of file in from the standard disk, but that is a bit fiddly.

Machine Code programs present their own problems, but these are very well documented in the instructions and should run without any major hassles.

The program itself is located in the lower part of the 64's memory (below $07F8 - dec. 2040), and as such should not often clash with the programs to be converted.

Apart from the very good documentation they have even included a quantity of special Turbo-64 labels - a nice touch.

All in all the Southport boys have done a very nice job indeed. There are of course several other Fast Load/Save programs on the market. Some of these are cartridge based, other require extensive hardware modification. These program can be priced up to $200.00 in some cases, depending on the degree of sophistication.

"Turbo-64" may not be as sophisticated as some of these programs, but within it's given limitations (and it's relative low price) I can whole-heartedly recommend this program.

Our review copy from Cockroach Software, P.O. Box 1154, Southport, Qld, 4215.

Ralph De Vries

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