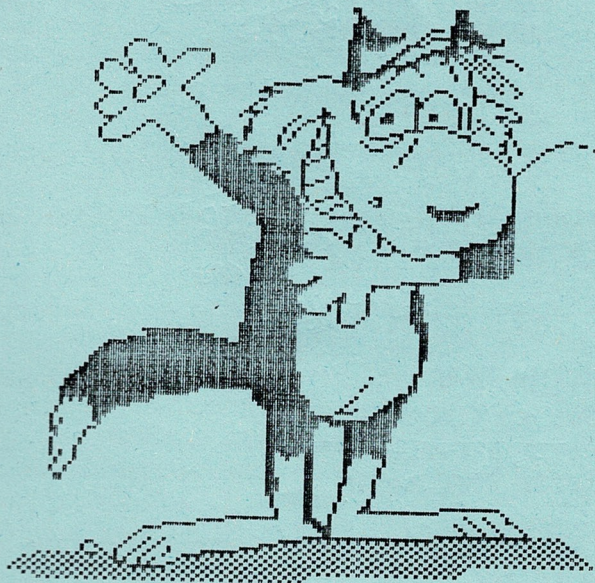


S E C A M A C
NEW SOUTH WALES

July '89



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MEETINGS: SECOND SUNDAY EACH MONTH EXCEPT JANUARY.
NEXT MEETING: SUNDAY, JULY 9, 1989.

SERVICING: Scott MacDonald

HARDWARE & SOFTWARE SALES: Scott MacDonald and John Carter

SEGAMAG IS PUBLISHED IN MARCH, MAY, JULY, SEPTEMBER, AND
NOVEMBER EACH YEAR.

AGENDA FOR JULY MEETING.

DATE: Sunday, July 9, 1989.
TIME: 10:00am to 4:00pm
PLACE: Gladesville Public School
Victoria Road opposite Post Office.

10:00-11:30 am. Setting-up and Games. Try some of the latest games on the SEGA, the MASTER SYSTEM, or the new MEGA DRIVE or visit Scott's shop.

11:30 am (approx). Continuation of the workshop on the spreadsheet HU-CAL, (including revision of last months lesson), by Ted Hartley and helpers.

4:00 pm. Meeting closes & clean-up.

COMPLIMENTARY TEA, COFFEE, OR CORDIAL SERVED AT ALL SEGA GROUP MEETINGS.

REVIEW OF JUNE'S MEETING.

On a cool, wet and otherwise uninviting day, we had a good roll up for our second games competition day. The morning's session consisted of:-

GIRLS' GARDEN, STARFORCE, H.E.R.O., & ASTRO WARRIOR (Master).

GIRL'S GARDEN is a new game for the younger ones and involves a girl avoiding the bears and collecting the flowers when they bloom. STARFORCE and ASTRO WARRIOR are shootem games similar to STARJACKER, but their own variations and difficulties make them compelling. H.E.R.O. is a blend of strategy and shooting skill which has appeal over a wide range of ages.

The prize of a cartridge of choice was won by N.Davies. Individual prizes of a tape of choice were won by M.Minett, J.Williams, B.Sarkis, and L.Minett.

The afternoon session's games were:-

CONGO BONGO, GOLGO 13, RYGAR (Master), & ZILLION 2 (Master).

CONGO BONGO is the tried and true strategy game of ascending a pathway and waterfall in the face of a gorilla throwing coconuts. GOLGO 13 is one of the newer shooting games where hostages are released from a train. RYGAR is the arcade game of fighting endless monsters, and it and the search and rescue game ZILLION 2 held good interest with action and enhanced graphics. All of the games used are highly recommended in their groupings of style and age.

The afternoon's cartridge prize was won by Mark C. and the tapes were won by J.Williams, N.Davies, M.Minett, and R.Sarkis.

During the pandamonium of games playing, a significant group of determined spreadsheet devotees enjoyed a presentation on HU-CAL presented by Ted Hartley and John Thornley. I was unable to attend this to my disappointment, but I'm assured that much of the mystery of this useful program was unfolded and that topics such as worksheet formatting, data entry, file handling and macro instructions were explored. The presentation will continue at JULY'S meeting.

Our thanks also go to John Thornley for his presentation to our library of a number of cartridges, discs and tapes. These will be catalogued and will be listed in due course.

The much awaited MEGA DRIVE was on display and I was left in complete awe at the power of six titles I saw.

Others are available. These are true arcade games, not just arcade style, with extremely detailed graphics, very fast action, and excellent sound and music. SPACE HARRIER 2 and SUPER THUNDER BLADE are extremely fast, reflex-shooting games with a stunning array of foes who are on top of you before you know it. This is shooting at its best. ALTERED BEAST was also very popular where you (the beast) pulverize a neverending array of weird and tricky beasts and demons. The detail and action is fantastic. ALEX KIDD is a gentler fantasy of hitting objects which turn into coins, avoiding monsters, finding treasure, suitable for younger children of all ages. SUPER STRATEGIC CONFRONTATION is a war strategy game where troops and equipment are moved around one of the maps by the players (up to four) in preparation for battle scenes and victory. The battle scenes are quite detailed and spectacular. One game may take days or weeks and the state of the game can be stored for the next session. It is a compelling game for the thinker who likes action. BASEBALL is the sports game with life-like players as seen from the catchers position or from above. The detail is magnificent, even down to the dust when the ball hits the ground. This is the best sports game I have seen.

You can order your MEGA DRIVE right now from either Scott MacDonald or John Carter. Delivery from overseas will take a little time however. The cost is \$330 plus \$85 per cartridge. The games cost more than those of other systems but the content, quality, and enjoyment level of each more than makes up for this. The games have a variety of options and include several levels of difficulty. This means that all likes and ability levels from the rank beginner through to the veteran raster-jockey (such as B.C.) are catered for. The joypad has three fire keys for different functions. An adapter is available overseas to permit all existing Master System games to be played on the MEGA DRIVE. This will be made available here as soon as practicable. The 16 bit processor of the MEGA DRIVE represents a substantial improvement on the already good Master System. All this means that SEGA is surging on to bigger and better things.

The meeting was a very productive one with a wide range of interests catered for and a good attendance. Games playing seems to be the most popular pursuit and now has an ever-widening scope. We look forward to another enjoyable meeting in JULY.

REX CHANDLER-EDITOR.

COMPUTER STORY.

This month, I've put Machine Code to rest (some of you will note with relief) and returned to BASIC. The original of the program I'm describing is anonymous. It asks the player for certain key words which it then inserts into a set-piece story. I've modified it so that two stories are interwoven at random and so that each page may be sent to a printer. You may try weaving three stories together if you wish to test your sanity. Its a fun game for the younger kiddies or an interesting exercise for those learning BASIC. The main experience of this exercise is in PRINT statements and string handling, with the odd GOSUB, CONSOLE, and keyscan routine. You may see some parts which could benefit from a little tidying-up.

The PRINT command is used to output messages to the screen. These can be direct text such as PRINT "A", text described by a string variable such as A\$="2+3 equals five":PRINT A\$, direct numbers such as PRINT 5, or the result of a calculation such as X=2:Y=3:PRINT X+Y. The colon : is used to separate commands within the same line of the program. Where PRINT is used alone, the computer does not know what to print, so it leaves a blank line. Thus, there will be an empty line between A and B in the following :- PRINT "A":PRINT:PRINT "B". Where the PRINT command is followed by a comma , it means that the next PRINT command will be at the next Tab Position. There are two of these per screen line. Thus PRINT "A",,,,PRINT "B" will give the same result as the previous example. Where a semi-colon ; is used after a PRINT command, the next print position will follow directly after. Thus X=3:PRINT X;"A" will result in 3A.

Lines 20-120 clear the screen and use the PRINT command as above to to display the introduction. The GOSUB command is used in programming to minimize repetition. Thus, a repeatedly used sequence can be accessed from different parts of the program. When the sequence is executed, the program will always return to execute the command which immediately follows the particular GOSUB. This is the role of the RETURN command which always follows GOSUB. The role of GOSUB 540 in line

120 is to hold the screen display until the user presses the CR key. This is done by using the INKEY\$ statement. Thus, when any key is pressed, the INKEY\$ statement stores which key it was as a character string variable. Even a numerical key must be stored as a string initially even though it can be transferred later to a value using the VAL(?\$) command. Those keys which do not have character symbols on them are assigned CHR\$() numbers. One can test which key was pressed using IF (condition) THEN (action) tests. If (condition) is false, the computer will ignore the rest of the line and proceed to the next line number. Similarly, if (condition) is true, the next command, ie (action), is executed. The (condition) used here is whether the CR key was pressed. The CR key is assigned CHR\$(13).

The next command is PRINT CHR\$(22). This is one which removes scrol limits set by the CONSOLE statement. Operations which don't have single key assignments are also allocated CHR\$() values, such as CHR\$(22). These are listed on page 23 of the Disc Drive User's Manual. Line 550 is proceeded to if the test in line 540 is false. This tests for the Graph key, CHR\$(23). Since the Graph key is not used in the introduction, I'll deal with it a little later. If this test is also false, the program will GOTO 540 to retest until either key is pressed.

The next scene asks for responses to questions and stores those responses as string variables for later use. The form is INPUT "message";string variable. Thus the first "message" is "MALE CHARACTER" and its response is stored as A\$. Unlike INKEY\$, INPUT will automatically wait for key entries and will proceed only when CR is pressed. The line following the INPUT command tests for null string ie CR pressed without another key entry first. If this occurs, a BEEP is given and the question is re-asked. When all of the questions are asked, a message involving CR and Graph is displayed and we use GOSUB 540 again. As before, line 540 will RETURN when CR is pressed and the story will continue. If Graph is pressed, the first 18 lines are "frozen" by the CONSOLE and the bottom 6 lines can still be accessed. These are then cleared with CLS, ie the message at the bottom of the page is removed. The last number in the CONSOLE

command specifies the centronics printer. The HPCOPY command is used to output the current screen image to the printer. The program then RETURNS for the next page.

A heading is set up, and line 370 uses the random number generator command RND to generate the numbers 0 and 1 at random. The INT command ensures the number is an integer and 1 is added to the result so that the number is now either 1 or 2. This is necessary for the ON (variable) GOSUB command. Where (variable) is 1, the program will GOSUB to the first line specified in the GOSUB list, where it is 2, the second, and so on. If (variable) is 1, story 1 page 1 follows the heading. Variables selected from those entered in lines 140-300 are printed along with the specified text to give a humorous story line. When page 1 is printed, the program RETURNS to line 390 and adds the regular message re. CR or GRAPH after the correct spacing. GOSUB 540 performs the same function as before. In the same manner, Pages 2, 3, and 4 are printed using the randomly selected alternative texts.

At the end of page 4, the exit message is different. It asks for instructions to see the story again using the INKEY\$ statement as before. The "Y", "N", and "S" keys are tested for in a similar manner to that used for the CR key ie. CHR\$(13), previously. If "Y" is pressed, the program GOTOs 330 to re-display the story using the same characters. The random chance preceding each page means that some of the pages will be ones not seen first time through. If "N" is pressed, the program restarts completely, and if "S" is pressed, the screen clears and the program ENDS.

If a program achieves its objectives, it is programmed correctly. There really is no single "right" or "wrong" way. Those looking towards a smoother style may consider CURSOR commands with READ and DATA statements to deliver the various X and Y co-ordinates, and perhaps even the text. I hope this has provided a light hearted introduction for those commencing BASIC.

Happy Programming,

REX CHANDLER.
EDITOR.


```

10 REM ** COMPUTER STORY **
20 Z$="*****"
30 CLS:PRINT Z$
40 PRINT :PRINT "          COMPUTER STORY":PRINT
50 PRINT :PRINT Z$
60 PRINT :PRINT :PRINT "IN THIS PROGRAM YOUR COMPUTER"
70 PRINT :PRINT "HELPS YOU WRITE YOUR VERY"
80 PRINT :PRINT "OWN STORY.ALL YOU DO IS ADD"
90 PRINT :PRINT "THE DETAILS!!"
100 PRINT :PRINT "TYPE YOUR ANSWERS TO THE FOLLOWING"
110 PRINT :PRINT "QUESTIONS.THEN PRESS THE RETURN KEY"
120 PRINT :PRINT "(PRESS CR TO CONTINUE)":GOSUB 540
130 CLS
140 INPUT "MALE CHARACTER: ";A$
150 IF A$="" THEN BEEP 2:GOTO 140
160 PRINT :INPUT "FEMALE CHARACTER: ";B$
170 IF B$="" THEN BEEP 2:GOTO 160
180 PRINT :INPUT "PASSER-BY: ";C$
190 IF C$="" THEN BEEP 2:GOTO 180
200 PRINT :INPUT "SUBURB: ";D$
210 IF D$="" THEN BEEP 2:GOTO 200
220 PRINT :INPUT "TYPE OF FOOD: ";E$
230 IF E$="" THEN BEEP 2:GOTO 220
240 PRINT :INPUT "TYPE OF DRINK: ";F$
250 IF F$="" THEN BEEP :GOTO 240
260 PRINT :INPUT "HORRIBLE INSECT: ";G$
270 IF G$="" THEN BEEP 2:GOTO 260
280 PRINT :INPUT "LARGE ANIMAL: ";H$
290 IF H$="" THEN BEEP 2:GOTO 280
300 PRINT :INPUT "PART OF BODY: ";I$
310 IF I$="" THEN BEEP 2:GOTO 300
320 PRINT,,,,,:PRINT "(PRESS CR TO START THE STORY:GRAPH TO PRINT)":GOSUB 540
330 CLS:PRINT Z$
340 PRINT :PRINT "          THE AMAZING ADVENTURES OF"
350 PRINT "          ";A$;" & ";B$;" !"
360 PRINT :PRINT Z$
370 R=INT(RND(-1)*2+1):ON R GOSUB 580,640
380 PRINT,,,,,:PRINT "(PRESS CR TO CONTINUE:GRAPH TO PRINT)":GOSUB 540:CLS
390 R=INT(RND(-1)*2+1):ON R GOSUB 700,780
400 PRINT,,,,,,,"(PRESS CR TO CONTINUE:GRAPH TO PRINT)":GOSUB 540:CLS
410 R=INT(RND(-1)*2+1):ON R GOSUB 850,930
420 PRINT,,,,,,,"(PRESS CR TO CONTINUE:GRAPH TO PRINT)":GOSUB 540:CLS
430 R=INT(RND(-1)*2+1):ON R GOSUB 1000,1060
440 PRINT,,,,,,,:PRINT Z$

```



```

450 PRINT :PRINT "DO YOU WANT TO SEE THE STORY AGAIN"
460 PRINT :PRINT "(PRESS Y FOR YES, N FOR NO, S TO"
470 PRINT:PRINT "STOP PROGRAM:GRAPH TO PRINT)"
480 S$=INKEY$
490 IF S$="Y" THEN BEEP:GOTO 330
500 IF S$="N" THEN BEEP:GOTO 10
510 IF S$="S" THEN BEEP:CLS:END
520 IF S$=CHR$(23) THEN GOSUB 540
530 GOTO 480
540 IN$=INKEY$:IF IN$=CHR$(13)THEN BEEP:RETURN
550 IF IN$=CHR$(23) THEN CONSOLE18,6,1,0,2:CLS:HCOPY:PRINT CHR$(22):RETURN
560 GOTO 540
570 REM STORY 1, PAGE 1
580 PRINT :PRINT A$;" LIVED IN A"
590 PRINT :PRINT "LITTLE SHACK IN ";D$
600 PRINT :PRINT "WITH HIS FRIEND ";B$;"."
610 PRINT :PRINT "ONE DAY ";A$;" & ";B$
620 PRINT :PRINT "WENT OUT FOR DINNER.":RETURN
630 REM STORY 2, PAGE 1
640 PRINT:PRINT B$;" LIVED IN A"
650 PRINT:PRINT "GRASS HUT IN ";D$
660 PRINT:PRINT "WITH THE WITCH DOCTOR ";A$;"."
670 PRINT:PRINT "ONE DAY ";A$;" AND ";B$
680 PRINT:PRINT "WENT LOOKING FOR BREAKFAST.":RETURN
690 REM STORY 1, PAGE 2
700 PRINT,, ,A$;" ORDERED A LARGE"
710 PRINT,,"JUG OF ";F$;" & ";B$
720 PRINT,,"ASKED FOR LOTS OF ";E$;"."
730 PRINT,,"WHEN THE FOOD ARRIVED"
740 PRINT,,B$;" FOUND A ";G$
750 PRINT,,"SITTING IN THE MIDDLE OF HER"
760 PRINT,,"PLATE SMILING OH SO SWEETLY !":RETURN
770 REM STORY 2,PAGE 2
780 PRINT,,A$;" LOOKED FOR A COOL"
790 PRINT,,"STREAM OF ";F$;"", WHILE"
800 PRINT,,B$;" ROASTED THE "
810 PRINT,,E$;" OVER THE CAMPFIRE."
820 PRINT,,"A LOT OF ";G$;"S CAME"
830 PRINT,,"ALONG AND CARRIED OFF THE FOOD.":RETURN
840 REM STORY 1, PAGE 3
850 PRINT,, ,,"WHEN ";A$;" STARTED TO "
860 PRINT,,"LAUGH, ";B$;" PICKED UP"
870 PRINT,,"THE PLATE & THREW IT AT HIM."
880 PRINT,,A$;" DUCKED & THE"

```



```

890 PRINT,,E$," ";C$;" & ALL,"
900 PRINT,,"HIT ";C$;" SQUARE IN THE"
910 PRINT,,I$;" !!":RETURN
920 REM STORY 2, PAGE 3
930 PRINT,,"WHEN ";B$;" STARTED TO LAUGH,"
940 PRINT,,A$;" CAST AN EVIL SPELL"
950 PRINT,,"ON THE ";G$;"S. THE SPELL"
960 PRINT,,"MISSED AND HIT ";C$
970 PRINT,,"WHO FELL AND LANDED"
980 PRINT,,I$;" FIRST.":RETURN
990 REM STORY 1, PAGE 4
1000 PRINT,,,C$;" PICKED UP THE ";H$
1010 PRINT,,"THAT HAPPENED TO BE"
1020 PRINT,,"PASSING BY & THREW IT AT"
1030 PRINT,,A$;" & ";B$;" AS"
1040 PRINT,,"THEY RAN OUT THE DOOR !!":PRINT:RETURN
1050 REM STORY 2, PAGE 4
1060 PRINT,,C$;" TURNED INTO"
1070 PRINT,,"A LARGE. ";H$;" WHICH"
1080 PRINT,,"THEN CHASED ";A$; " AND ";B$
1090 PRINT,,"BACK TO CAMP",,,,,,,,,:RETURN

```

TREASURERS REPORT JUNE 1989

Unlike trying to balance the federal governments books, our accounts are a bit easier and, happily to report, in the black.

Our membership has increased to more than 50 and the club has a favourable bank balance. Planned expenses for the forthcoming year include prizes for games day(\$100), underwriting the development of a new disc drive(\$500) and overhauling the photocopier(\$300), and our Christmas party(\$250). The amounts may vary slightly but not by much.

By next January, membership fees will cover these costs leaving a balance in the bank. Our normal expenses including the magazine, newsletters and other running costs are within next years budget and no financial problems are seen.

Brian Minett
Treasurer

GAMES REVIEW.

"BOMB JACK"

TYPE: Cartridge.

This is an interesting game converted from the arcade and it still has overtones of an arcade. It has five basic background screens which repeat with different foregrounds. It also speeds up the further you go. The idea is to get the bombs and coins while avoiding the monsters. Some coins will freeze the monster for a short time allowing you to eat them. If you get the bombs in the order their fuses are lit, you score higher. This is a simple but fast-moving game.

SOUND: 6 COLOR: 6 GRAPHICS: 7 ACTION: 7 PLAYABILITY: 7

TREVOR WILLIAMS.

The following game may be considered to have overtones of political or social comment if you're from my generation. You may wish to treat it as a fun little game which is cleverly programmed however.

[PRESS SPACEBAR] - (ED).

```
1 REM "JET" -anonymous.
2 DATA 80C0E0F0FCFCC40C
3 DATA 00205048FCF88000
4 DATA 00000000002074FC
5 DATA 38301070102848FC
6 FORI=149TO152:READA$
7 PATTERNC#I,A$:NEXTI
8 CLS:X=6:Y=13:TIME$="00:00:00"
9 I$=INKEY$:X=X+((I$=".")*(X<31)-(I$=",")*(X>0))*2
10 IFI$=" "ANDC=0THENC=1:A=X+2:B=Y
11 CURSORX,Y:PRINT" ";CHR$(149);CHR$(150);" ":ONCGOTO14
12 IFTIME$>"00:01:00"THEN20
13 CURSOR1,20:PRINTCHR$(8);TAB(37);CHR$(RND(1)*4+152):GOTO9
14 B=B+1:IFB=20THEN16
15 CURSORA,B:PRINT":":CURSORA,B:PRINT":":CURSORA,B:PRINT" ":GOTO12
16 C=0:IFVPEEK(A+16162)<>152THEN18
17 S=S+1:CURSOR9,3:PRINTS;" HIT(S)":BEEP:GOTO19
18 M=M+1:CURSOR0,3:PRINT"MISS";M:IFM=4THEN20
19 CURSORA,20:PRINTCHR$(151):GOTO12
20 PRINT"---END-----"
```



```

39 COLORC:CURSOR127-(LW/2),MY:PRINTDF$:RETURN
40 FORI=1TORD*25
41 X=((INT(RND(1)*28)+2)*8)+1
42 Y=((INT(RND(1)*15)+3)*8)+1
43 PAINT(X,Y),4:NEXT
44 SCREEN2,2
45 COLOR15:PRINTCHR$(16);
46 CURSOR30,170:PRINT"SCORE :";SC;"      HI-SCORE :";HS
47 CURSOR90,180:PRINT"ROUND :";RD
48 SPRITE0,(YX,YY),SS,15:SPRITE1,(EX,EY),4,13
49 BEEP1:BEEP0: TG=TG+1:DB=DB+1:SC=SC+1
50 IFTG=1000THENBEEP:BEEP:RD=RD+1:SCREEN1,1:CLS:SC=SC+1000+INT(RND(1)*101)
:GOTO34
51 IFDB=10THEN74
52 A$=INKEY$:IFA$=""THEN67
53 IFA$=CHR$(28)ANDYX<232THENYX=YX+8:SS=2:GOTO57
54 IFA$=CHR$(29)ANDYX>16THENYX=YX-8:SS=3:GOTO57
55 IFA$=CHR$(30)ANDYY>24THENYY=YY-8:SS=0:GOTO57
56 IFA$=CHR$(31)ANDYY<144THENYY=YY+8:SS=1
57 Y1=YY+1:SPRITE0,(YX,YY),SS,15
58 CV=VPEEK(INT(Y1/8)*256+INT(YX/8)*8+Y1MOD8)
59 IFCV<>255THEN67
60 SPRITE0,(YX,YY),5,15:SOUND4,1,15:FORI=1TO10:FORJ=0TO15:COLOR,,J:NEXTJ,
I:SOUND0:COLOR,,1:AA=-1
61 DF$="GR":MY=0:C=15:GOSUB37:BEEP:BLINE(0,10)-(255,0),,BF
62 DF$="GAER":MY=0:GOSUB37:BEEP:BLINE(0,10)-(255,0),,BF
63 DF$="GAMVER":MY=0:GOSUB37:BEEP:BLINE(0,10)-(255,0),,BF
64 DF$="GAME OVER":GOSUB37:BEEP
65 IFSC>HSTHENHS=SC
66 FORA=0TO500:NEXT:SCREEN1,1:GOTO4
67 IFEX>YXTHENEX=EX-RD*4:GOTO69
68 IFEX<YXTHENEX=EX+RD*4
69 IFEY>YYTHENEY=EY-RD*4:GOTO71
70 IFEY<YYTHENEY=EY+RD*4
71 SPRITE1,(EX,EY),4,9
72 IFEX=YXANDEY=YYTHEN60
73 GOTO48
74 FORV=0TO15STEP.5:SOUND4,2,V:NEXT
75 LINE(255,68)-(0,68),15
76 LINE(255,100)-(0,100),15
77 FORV=15TO0STEP-.5:SOUND4,2,V:NEXT :BLINE(255,68)-(0,68):BLINE(255,100)-
(0,100):DB=0
78 IFYY=64ORYY=96THEN60
79 GOTO48

```


FADY'S CORNER

Hello, I am the new assistant editor.

Good, now that I have introduced myself, I can get on to some serious business.

I would like to talk about the new diskdrive (yes!! a new diskdrive) which is to be available for the SEGA. The new diskdrive would enable your computer to have a minimum of 256 kilobytes and up to a maximum of 1 megabyte (over 1000 kilobytes) and maybe up to a whopping 4 megabytes!!!.

Well, if you think that was good news, wait till you here what else I have in line for you.

The new diskdrive will have the capacity to run 4 drives at a time, and it will enable you to use all IBM type drives, that is, you will be able to run 1.2 megabyte drives and hard drives. I mean, do you find Commodore computers doing that???

It will also have an eight channel analog I/O port, otherwise known as a real world interface. You can use this interface for connecting up an alarm system, weather station, analyse sound waves and sine waves.

It will also have two RS232 communication ports and one printer port.

It will be in kit form but there is someone such as Scott who can put it together for you. To start, you will need roughly \$300 which will include :-

one drive (of your choice)
a professionally done board
256 kilobytes

the rest, you can add later. The cost price is not definite, it might cost \$200 or more, but we are trying to get the lowest price possible.

To have a complete system, it might cost \$500 but this price is also not definite.

If you have any programs or articles, then please submit them to the magazine as we desperately need them as to make this magazine more interesting. If your wondering why I am asking you for articles and programs, well it's because it's my job to. Excellent excuse, eh?

That's all for this time, and I hope you like this month's issue. See you next edition of SEGAMAG.

FADY SARKIS

1 REM DECIMAL TO BINARY CONVERTER by Scott MacDonald.

```
10 CLS:PRINT,,"==> CONVERT ==> DECIMAL ==> BINARY",,,:INPUT"==> DECIMAL VALUE  
";D:PRINT,,"==>";B=D/16^4:FORN=0TO15:B=2*(B-INT(B)):PRINT-(B>=1);:NEXT:PRINT,  
,"==> ALL DONE",,,:BEEP:BEEP
```

1 REM HEXADECIMAL TO DECIMAL CONVERTER by Scott MacDonald.

```
10 READA$:GOSUB20:PRINTJ:END  
20 N=1:GOSUB30:G=F*16:N=2:GOSUB30:J=G+F:PRINTJ;" ";HEX$(J):END  
30 E=ASC(MID$(A$,N,1)):F=E-48:IFE<58THENRETURN  
40 F=F-7:RETURN  
50 DATA 60
```


PROGRAM DISECT.
'THE DOG.'

LINE 10-60.

REM statements do not affect the operation of program.
LINE 70.

Goes to graphics screen, sets the color to black on white, and reads DATA.

LINE 110.

READs the data as A\$, then X,Y co-ordinates. If A\$ = 0 then to end loop.

LINE 120.

Defines character 255 as A\$, places it at the co-ordinates, then goes back and does it again.

LINE 130.

This is a loop.

LINE 140-1820.

DATA.

LINE 1830.

This is the tag line to finish reading the data.

TREVOR WILLIAMS.

[ED] This program draws the picture of 'The Dog' which appears on the front cover of this issue. It shows how patterns can be defined and data manipulated to generate complex pictures. It was done by enlarging a photocopy of a cartoon onto graph paper which was marked off in groups of 8*8 squares. Each of these squares was then either filled in or left blank. Each horizontal group of eight squares could then be considered to be in BINARY (with the filled in squares as '1' and the empty as '0'). The BINARY was converted to HEXADECIMAL so that one horizontal group of eight squares gave rise to one BYTE. Eight vertical BYTES were then used for each PATTERN statement.

```
10 REM *****
20 REM *           *
30 REM *   THE DOG   *
40 REM *           *
50 REM *           *
60 REM *****
70 SCREEN 2,2:CLS:COLOR1,15,(0,0)-(255,191),8:RESTORE 140
110 READA$,X,Y:IFX=0THEN130
120 PATTERNC#255,A$:CURSORX,Y:PRINT CHR$(255):GOTO 110
130 GOTO 130
```


140 DATA 0000000000000060,136,8
150 DATA 0000000000000003,152,8
160 DATA 0000000000000080,160,8
170 DATA 603038787C7E7FFF,136,16
180 DATA 00000000010F1E2,144,16
190 DATA 0303030777877F86,152,16
200 DATA 8080C0C0E0F0F87F,160,16
210 DATA 0000000000008080,168,16
220 DATA 000000000030404,80,24
230 DATA 0E11202020905028,88,24
240 DATA 0080414224281000,96,24
250 DATA 0000F00808081020,104,24
260 DATA 0000000000000001,128,24
270 DATA FFFFE0E0E0E1E3FF,136,24
280 DATA 8F183163CEFEB221,144,24
290 DATA 0F7EFF8A19040402,152,24
300 DATA DEC433A854AA514A,160,24
310 DATA 0000806010080080,168,24
320 DATA 0808080402010204,80,32
330 DATA 1805020408C80906,88,32
340 DATA 00C0212242810000,96,32
350 DATA 4080000000008040,104,32
360 DATA 0000000103000304,112,32
370 DATA 00017E80E0800000,120,32
380 DATA 39C7010000000000,128,32
390 DATA FEF8F16000044952,136,32
400 DATA 4080003844820303,144,32
410 DATA 0200003844820201,152,32
420 DATA 444221203826A140,160,32
430 DATA 40A0108810008060,168,32
440 DATA 0808040301020404,80,40
450 DATA 0020408001020408,88,40
460 DATA 0000000080402010,96,40
470 DATA 202010100804061F,104,40
480 DATA 091E240808181890,112,40
490 DATA 0000020409121424,120,40
500 DATA 10183CD018282828,128,40
510 DATA 5464692908080807,136,40
520 DATA 02C2C2C2020F7092,144,40
530 DATA 01616101F9060100,152,40
540 DATA 404150485422C040,160,40
550 DATA 10C8B84020602050,168,40
560 DATA 0000000000000003,176,40

570 DATA 0403000000000000,80,48
580 DATA 30C0000000000000,88,48
590 DATA 0808040301000000,96,48
600 DATA 1F3FFFFFFFFFFFF7F,104,48
610 DATA D0E0C4DFFCF8FFFF,112,48
620 DATA 282010800001C1A1,120,48
630 DATA 4858688898648404,128,48
640 DATA 1008070000000000,136,48
650 DATA 22C4040810102000,144,48
660 DATA 300C020100000000,160,48
670 DATA D048C820A1422428,168,48
680 DATA 0C30408000000000,176,48
690 DATA 6008000000000000,184,48
700 DATA 3F1F0F0703010000,104,56
710 DATA FFFFFFFFFFFFFFF7F,112,56
720 DATA D9F1F9F9DFDFFFE,120,56
730 DATA 020A32C202038DB0,128,56
740 DATA 0000000000000385,136,56
750 DATA 0000000000000010,160,56
760 DATA 1010101010101010,168,56
770 DATA 3F1F070303030101,112,64
780 DATA FFFFFFFFFFFFFFFF,120,64
790 DATA 43A4180700007C82,128,64
800 DATA 434020F008342241,136,64
810 DATA 607F3F1F00000000,152,64
820 DATA 70E0C08000000000,160,64
830 DATA 101030307070F0F0,168,64
840 DATA 0101030303030707,112,72
850 DATA FFFFFFFFFFFFFFFFC,120,72
860 DATA 01000080C0F80000,128,72
870 DATA 41C1410201000000,136,72
880 DATA 80402030CC030000,144,72
890 DATA 0000000F71800000,152,72
900 DATA 033FFFFFFFFFFFFFFF,160,72
910 DATA F0F0F0F0F0F0F0F0,168,72
920 DATA 07070707070F0F0F,112,80
930 DATA F8F8F8FCFFFFFFFFFE,120,80
940 DATA 00003060C0800001,128,80
950 DATA 0000000003028484,136,80
960 DATA 0000000FF1030303,144,80
970 DATA 00000FF000008080,152,80
980 DATA FFFFC00000000000,160,80
990 DATA F0E0000000000000,168,80

1000 DATA 0F0F0F0F0F0F1F1F,112,88
1010 DATA FFFFFFFF0F0F0F0F,120,88
1020 DATA 030585F901010000,128,88
1030 DATA 840404040810E000,136,88
1040 DATA 0303030303030101,144,88
1050 DATA 8080808080C0C0C0,152,88
1060 DATA 00000000103070F,80,96
1070 DATA 01000FFFFFFFFF,88,96
1080 DATA FFFFFFFFFFFFFFFF,96,96
1090 DATA E0FCFFFFFFFFFFFF,104,96
1100 DATA 1F1F9FFFFFFFFF,112,96
1110 DATA FEFEFEFEFEFEF,120,96
1120 DATA C0C0C0C0C0C0C080,152,96
1130 DATA 000000000010103,72,104
1140 DATA 0F1F3F7FFFFFFFFF,80,104
1150 DATA FFFFFFFFFFFFFFFF,88,104
1160 DATA FFFFFFFFFFFFFFFF,96,104
1170 DATA FFFFFFFFFFFFFE0,104,104
1180 DATA FFFFFFFFFFFFF03,112,104
1190 DATA FEFEFEFEFEF,120,104
1200 DATA 000000200040800,136,104
1210 DATA 000001010103030E,144,104
1220 DATA 8080800000000000,152,104
1230 DATA 030302020404080A,72,112
1240 DATA FFFFAF0F07070706,80,112
1250 DATA FFFFFFFF8C0800000,88,112
1260 DATA FFC0800000000000,96,112
1270 DATA 8000000000000000,104,112
1280 DATA 0303010000000000,112,112
1290 DATA FFFFFFFF7F7F7F7F,120,112
1300 DATA 80C0C0C0E1FEFFF3,128,112
1310 DATA 10204090E103FFFF,136,112
1320 DATA 1C3C78F8F8F8F0F0,144,112
1330 DATA 0A0C0C040808080A,72,120
1340 DATA 020C101020204040,80,120
1350 DATA 7F7F7F7F7F7F7F6F,120,120
1360 DATA F0E0E0E0E0E0E060,128,120
1370 DATA 7F7F7F7F7F7F7F79,136,120
1380 DATA E0E0E0E0C0C0C0C0,144,120
1390 DATA 0A04040909060600,72,128
1400 DATA 4040800000000000,80,128
1410 DATA 6460606060707070,120,128
1420 DATA 6060606060606060,128,128
1430 DATA 606040404041C181,136,128
1440 DATA 4040808080000000,144,128
1450 DATA 00000000000007F,112,136
1460 DATA 70602020201010F0,120,136
1470 DATA 6060606161616272,128,136
1480 DATA 81818202060F0000,136,136
1490 DATA 00000000FF0000,144,136
1500 DATA 000000007F80000,152,136
1510 DATA 0000000FF002211,160,136
1520 DATA 0000000C0201018,168,136
1530 DATA 000000000000C12,80,144
1540 DATA 0000000102040811,88,144
1550 DATA 00FF00000489024,96,144
1560 DATA 1FE0000000000000,104,144
1570 DATA 800000000000000F,112,144
1580 DATA 0000000000FF5AA,120,144
1590 DATA 7A1E0E067FAA55AA,128,144
1600 DATA 0000000FFAA55AA,136,144
1610 DATA 0000000FFAA55AA,144,144
1620 DATA 000000FF5AA55AA,152,144
1630 DATA 884422FF55AA55AA,160,144
1640 DATA 844221FF55AA55AA,168,144
1650 DATA 000000AA55AA55AA,176,144
1660 DATA 0000000008040A0,184,144
1670 DATA 00000102050A0100,64,152
1680 DATA 002A55AA55AA552A,72,152
1690 DATA 11AE55AA55AA55AA,80,152
1700 DATA 22A469B957AA55AA,88,152
1710 DATA 44882146F9AA55AA,96,152
1720 DATA 0FFA55AA55AA55AA,104,152
1730 DATA F5AA55AA55AA55AA,112,152
1740 DATA 55AA55AA55AA55AA,120,152
1750 DATA 55AA55AA55AA4080,128,152
1760 DATA 55AA55AA55AA0000,136,152
1770 DATA 55AA55AA55AA0000,144,152
1780 DATA 55AA55AA55AA0000,152,152
1790 DATA 55AA55A040800000,160,152
1800 DATA 55AA550000000000,168,152
1810 DATA 55AA550000000000,176,152
1820 DATA 50A8540000000000,184,152
1830 DATA 0,0,0

Dear Sir,

LETTERS TO THE EDITOR.

In response to your request for donations of programs for the club library, I have dusted off my shelves and pulled out the enclosed, which represent the bulk of my remaining Sega software. Some of it will be sadly missed, but I hope that there are some younger enthusiasts in the club who may be able to make better use of them than me.

The only Sega applications I have retained are the spreadsheet program, 'HUCAL' and Sega LOGO. I find LOGO fascinating to experiment with, and since I don't have LOGO for my Apple or Atari computers, I will selfishly retain the Sega version.

I will probably never part with HUCAL either, because I have not been able to yet find another spreadsheet with features like being able to add a cell's value to itself, or with such a super macro programming language. I speak with a little experience, since I now have a total of nine spreadsheet programs, some of which have some very advanced features.

If Sega ever bring out their 16 bit machine, with an updated version of this spreadsheet, complete with such goodies as mouse control and graphing, I might just be tempted to part with the rest of my Sega gear. Incidentally, I have a SEGA SP-400 plotter which doesn't work, because the pen holder is broken. Should anyone in the club like to try and fix it, they are welcome to it, because I have no further use for it.

JOHN THORNLEY.

[ED] YOUR GENEROUS DONATION IS MUCH APPRECIATED AND WILL BE PUT TO GOOD USE.
ANYONE WISHING TO CONTACT JOHN CAN DO SO THROUGH THE EDITOR.

CLUB LIBRARY.

CARTRIDGES.

1. Yamato.
2. Music.

DISCS.

1. Discwasher.
2. Segaword.
3. Segabase.

TAPES.

Educational.

1. Basic 1 Tutorial.
2. Demon Devision.
3. Marauding Multiplication.
4. Satellite Subtraction.
5. Super Tape (general knowledge).
6. Watch Me Draw.

Adventure Games.

1. Environoid. (Text Adventure).
2. Heroic Conquest. (Text Adventure).
3. Alien. (Text Adventure).
4. Ninja. (Text Adventure).
5. Solar Conquest. (Space Adventure).
6. Ice Cream Stall.

Business.

1. Mailing List.
2. SIMPLE 1. (Various Loan & Interest Calculations)
3. SIMPLE 2. (Data & Analysis Calculations).
4. Expense Analyser.

The above may be hired on a weekly or monthly basis by members at modest rates. Enquiries may also be made of The Librarian regarding the hiring of the Group's hardware by established members. The more expensive items will involve a deposit (returned) as well. We intend to build the Library into one of SSUG's features. Any assistance in building up the Library with pre-loved originals will be gratefully received.

Brian Minnett.
LIBRARIAN.

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