TIHUG NEWS DIGEST

Focusing on the TI99/4A Home Computer

Volume 13, Number 11 December, 1994

Print Post Approved - Publication No. PP244099/00016

SAT 3rd DEC 94
AGM and BBQ

Sydney, New South Wales, Australia $3

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A.C.N. 003 374 383

TIsHUG News Digest

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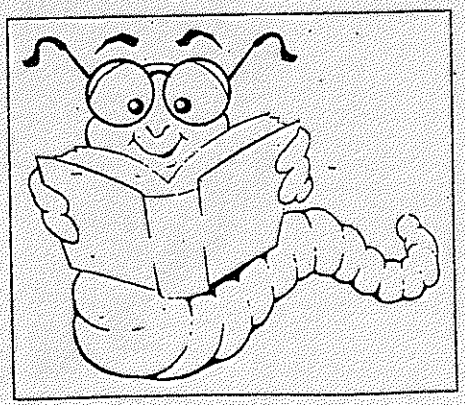
TIsHUG Sydney Meeting

The December Meeting will start at 2.0 pm on the 3rd December 1994 at Meadowbank Primary School, Thistle Street, Meadowbank.

Printed by
Kwik Kopy West Ryde

TIsHUG News Digest ISSN 0819-1984

I N D E X



TiSHUG December Software File

BITS AND BITES
By Larry Saunders
Subject: TIsHUG software December 1994

Diskname P101
Date Dec 1994
Used= 357 Free= 1

Page Pro Christmas pictures part 1

ANGEL	13 I 13	CANDLE1	2 I 13
CANDLE2	7 I 13	CANDLE3	2 I 13
CAROLS	13 I 13	CENTERPCE	27 I 13
ELF	12 I 13	FROSTY	16 I 13
HOLCHEER	12 I 13	MRRYXMAS	6 I 13
ORNAMENT	13 I 13	PARTRIDGE1	27 I 13
PARTRIDGE2	58 I 13	POINSETTAS	17 I 13
REINDEER	14 I 13	SANTA1	13 I 13
SANTA2	15 I 13	SANTA3	12 I 13
SLEIGH	21 I 13	SNOWFLAKE1	4 I 13
SNOWFLAKE3	3 I 13	SNOWMAN	14 I 13
STNICK	36 I 13		

Diskname U102
Date Dec 1994
Used= 351 Free= 7

Page Pro Christmas pictures part 2

SNOWFLAKE2	3 I 13	STOCKING	12 I 13
TREE	16 I 13	TRIHELF	16 I 13
WINDOW	11 I 13	WISEMAN	40 I 13
WREART	18 I 13	WREATH2	49 I 13
WREATH3	64 I 13	XBEAR	14 I 13
XBELLS2	30 I 13	XBELLS3	38 I 13
XBIRD	13 I 13	XMASTREE1	3 I 13
XMASTREE2	12 I 13	XMOUSE	12 I 13

Diskname U103
Date Dec 1994
Used= 158 Free= 200

The Animator, example disk.

ASTER	8*i145	ASTER/M	3*d163
BASEBALL	26*i145	CATS	17*i145
DEMO	11*Prog	DEMO2	59*i254
FLAME	5*i145	FLAME/M	2*d163
SAMPLE	4*d163	SHIP	6*i145
SHIP/M	2*d163	STARS	12*i145
STARS/M	3*d163		

Diskname U104
Date Dec 1994
Used= 318 Free= 40

The Animator, program disk.

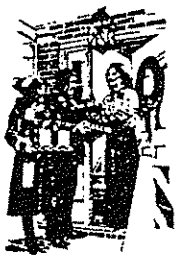
Press Function
S - Save frames on disk
L - Load frames from disk
G - Toggle grid
E - Set Erase mode
D - Set Draw mode

Fire button toggles between whatever mode you are in (Draw or Erase) and the movecursor.

Press ENTER to return
I - Invert current frame
A - Erase All frames
O - Erase current frame
N - next frame
SHIFT N = previous frame
T - Store frame in buffer
R - Copy buffer to frame function.
J - Shift frame
M - Animate
B - Set speed / size
F - catalog disk
K - set animation sequence
= - Exit to main menu
W - Small format menu
Press ENTER to return

A joystick must be used to move the cursor. Select 'Configure' at the main menu to change the active joystick, and other program defaults.

ANIMATOR	76*i254	AN-UTIL	6*Prog
ASSM	31*Prog	AUTOAN	15*Prog
AUTOAN;O	20*D 80	CONVERT	44*Prog
HELP1	4*I225	HELP2	4*I225
HELP3	4*I225	HELP4	4*I225
LOAD	31*Prog	MENU	13*Prog
MKPARAM	24*Prog	PARAM	5 d140
PARAM2	2 i141	PRINT	35*Prog



DUMPING DATA INTO MULTIPLAN

How To Use The SYLK File Format

Part 2

by Bob Relyea

As you may have guessed from reading through part 1 of this series, especially the two programmes written by Bill Harms, there are three main parts in converting files into ones compatible with Multiplan-

1) Understanding and selecting the proper SYLK file parameters,
2) Working out a way of dumping the data into the file parameters, and
3) Writing a short Basic/Extended Basic programme that puts it all together.

The object of this article is to explain the basics of the SYLK file parameters. It would be of use if you had your Multiplan Manual handy so you can locate and, perhaps, make notes as we go along. Remember, it is probably better to photocopy pages 205 to 208 so that you use them as a working copy rather than the mark up the manual- suit yourself!

On page 205 it states that "it is useful to subdivide the definition of SYLK into the following "layers", and then it procedes to give the usual computer jargon that nobody seems to understand very much. So, at the risk of oversimplifying, I will attempt to re-word the three layers. I might add that, even though it may be useful to subdivide them into three categories, you do not have to think about this as you go along, you will just do this naturally when you learn what the SYLK file parameters do.

1. The file must be labelled so that Multiplan will accept it. You can also define the bounds of the workspace (that is, how many rows and columns you want), indicate the number of decimal places, the cell width and set up a system which makes it easy to decide what information from your set of data you want to transfer into Multiplan, and so on. Of all of this, the one that is absolutely crucial to the function of the file is the ID label. Selecting the information you want is the next most inportant. Most of the other things mentioned, if not specified by you in the programme, will be automatically set to ed a default and you can change them after you load the file if you do not like what you see.

2. A 'data point' is a cell for all practical purposes. So you have to assign each bit of information to a particular cell.

3. You also have the option of doing the more 'fancy' things, like specifying windows, naming a set of cells, setting up eXternal file links, and indicating formulas to be used in the worksheet, etc.

The whole idea of setting up a SYLK file, in my opinion, is- KISS, i.e. Keep It Simple Stupid! The main objective with the SYLK file is to 'dump' large amounts of data into Multiplan so that it does not have to be keyboarded in. The fancy bits can sometimes be done a lot quicker once the data is put into a spreadsheet.

To set up a SYLK file, all of the parameters and the data are put into a string. The first part of the string sets up the parameters (i.e. The ID label, all the defaults, like the column widths and the size of the workspace, etc). The middle part is where all the data from the non-Multiplan files is placed and the end of the string is where you basically 'sign off'. To summarise-

1. Record Type ID, that is the label 'ID' must be placed first. If you want, you can place a sort of comment after ID to remind you about, perhaps, the source of the file. A typical statement would be-

   ID;MP/CP/XB2

   This is my of way of saying that the programme that I wrote that generated the SYLK file was called MP/CP/XB2.

2. Record Type F, the defaults come next and a typical statement is-

   F;DG2G6.

   This is explained on pages 132 to 137 of the Multiplan manual. The 'D' stands for Default, 'G' stands for General, that is, text is aligned to the left and numbers right, '2' means that numbers are rounded to two decimal places, and so on.

3. Record Type B. This is optional but if you know the size of your workspace you can define it as follows:

   B;Yn1;Xn2.

   Y stands for Row and X for column, n1 and n2 being the number of rows and columns. If you are not sure just ignore this and procede to 4.

4. Record Type C. This is the 'meat' of the file, where all the data is dumped. The worst part about this is that each bit of data must be assigned individually to a cell. However, you can do this quickly by setting up a loop or two. A typical C record would be-

   C;Y1;X1;K"BILL" and C;Y1;X2;K34

   This means that at row 1, column 1 would be placed the name 'Bill' and at row 1 column 2 would be placed the number '34'.

5. Record Type W. This is optional as well, unless you want more than one window to be defined right from the word go. If not, you can ignore it. If you wish to put it in like Bill Harms did in his programme and you want just the normal screen defined without two or more windows then you write in-

   W;N1;A1 1

   'W' stands for window definition, N1 means that there is one window (i.e. just the normal screen), A1 1 means that when the file is called up by Multiplan that the data in the upper left portion of the screen is from row 1 and column 1 of your file. If you wrote A1 3, then the data from row 1 and column 3 of your SYLK file would appear in the upper left of the screen.

6. Record Type E. This is put at the very end of the string and it defines the end of the SYLK file.

All of the other gear in Appendix 4 on SYLK files is optional and not necessary at all to transfer data into Multiplan. I would not even bother looking at it until I had mastered the basic gear. After mastering the basic bits you can do the fancy bits.

As mentioned above, all of the Record Types must be placed into a string in the order given above. Each record type must be followed by a carriage return symbol and a line feed in succession. The end of each data point (i.e. the information in each cell) must be marked by a carriage return and a line feed, as well, no matter how many times you use the same record type in succession. To avoid the pain of putting this in manually, you just define a string to include the carriage return and line feed and set it up in one of the loops. The following is a typical example-

```
RS=CHR$(13)&CHR$(10)
```

All you do is to place 'R$' where you need the carriage return and line feed. Like all strings you have to place double quotes around everything, and any text in the data must have a set of double quotes around it as well. The latter set of quotes can be more easily done by defining a special string just for quotes, such as-

```
X$=CHR$(34)
```

The use of both of these features is illustrated in the Bill Harms programmes, the expecially the second one. Because the string is a conglomeration of data the use of the concatenation- & is widespread. This symbol in the string joins things together.

The final point in this part of the series deals with the size of a string. The only reason why it has to be mentioned is that the size of a string is limited to 128 character records. Most records that you will want to dump into Multiplan will be far greater than that otherwise there is no point on creating a SYLK file- you might just as well keyboard it in. If you do not give instructions as to what to do when the string reaches or exceeds 128 then you will be issued a message that a string has been truncated (i.e. chopped off!) and you will lose part of it. Bill Harms shows how this problem is handled in the second of his two programmes. You simply put a subroutine in your programme that is automatically accessed when the string exceeds 128 character records. The subroutine (called WRITE in Harms' programme) prints the first 128 characters of the string and assigns the rest to the beginning of the next string. The control of the programme is then returned to the line it left and the string continues to be built again until it exceeds the magic number of 128, upon which the whole routine is repeated. Your whole SYLK file is, therefore, a collection of all these 128 record-character strings that are placed systematically on your file, and as we will see in a later part of the series, is normally stored on a disk. The subroutine (with different line numbers) is repeated below for your convenience.

```
100 IF LEN(T$)>128 THEN CALL WRITE(T$,T1$)
110 T$=T1$

300 SUB WRITE(T$,T1$)
310 PRINT #2:SEG$(T$,1,128)
320 T1$=SEG$(T$,129,LEN(T$)-128)
330 SUBEND
```

Line 100 is placed just before any line in your programme where data is added to the SYLK file string, T$. Line 300 defines WRITE in relation to the two strings, T$ (the main one) and T1$, the part that exceeds 128 characters. Line 310 chops off the first 128 characters and prints it (to disk). Line 320 then defines string T1$ as the part that exceeded 128 characters in the T$ string. Following the execution of a subroutine, the programme always returns to the line after the 'Call' statement, which is line 110. This line says that T$ is now T1$, which means that T$ starts out as the left-over part from the original T$ string. And then the string continues to build again. As stated above, this process is repeated over and over until all the data makes its way into the SYLK file.

I think I will let it go at that for the time being. Next month I will show how to set up the string incorporating all of the above, and the month after that we will look at an entire programme.

LEARN TO KNOW YOUR TI

LESSON 22

with Percy Harrison

This lesson covers the ASCII code for characters and the functions ASC() and CHR$() which change characters to ASCII numbers and vice versa.

The ASCII code is primarily intended to standardize signals between hardware pieces such as computers with printers, terminals, other computers, etc. But with programs the ASCII nosumbers are also useful. The letters are numbered in increasing order and so the ASCII numbers are useful in alphabetizing routines. The numerical digits are also in order, and the punctuation marks also have ASCII numbers.

The CALL KEY statement gets keystrokes from the keyboard and reports them as ASCII numbers in a variable. This will be treated in the next lesson.

The CALL CHAR statement treated later identifies characters by numbers from 30 to 159. The default value of these characters is that given by the ASCII code.

On with the lesson.

LESSON 22 ASCII CODE, KEYBOARD, ON...GOTO

NUMBERING THE LETTERS IN THE ALPHABET

"That is easy", you say. "A is 1, B is 2, C is 3..."

Well, for some strange reason, it goes like this: A is 65, B is 66, C is 67.. .

These numbers are called the ASCII code of the characters. ASCII is pronounced "ask-key".

The punctuation marks and number digits have ASCII code numbers too. Later you will learn how to make your own characters and give them ASCII numbers.

ASC() CHANGES CHARACTERS INTO NUMBERS

Use the ASC() function to change characters into ASCII numbers.

```
Run:    10 REM *** WHAT NUMBER IS THIS KEY? ***
        20 PRINT "PRESS KEYS TO SEE ASCII NUMBER"
        30 INPUT C$
        40 PRINT C$;TAB(5);ASC(C$)
        50 GOTO 30
```

Try out some letters, digits, and punctuation.

Press FCTN CLEAR to end the program. Then SAVE it to tape or disk.

CHR$() CHANGES NUMBERS INTO CHARACTERS

Use CHR$() to change ASCII code numbers into a string holding one character.

```
Run:    10 REM /// DISPLAY ASCII ///
        11 REM
        20 CALL CLEAR
        30 FOR I=30 TO 127
        40 PRINT I, CHR$(I)
        50 FOR T=1 TO 200
        51 NEXT T
        52 NEXT I
```

Save the progran to tape or disk.

CHR$() IS THE REVERSE OF ASC()

We showed these two functions: ASC() and CHR$().

ASC() gives you the ASCII number for the FIRST character in the string.

CHR$() does the reverse. It gives you the character belonging to each ASCII number.

THE ASCII NUMBERS FOR CHARACTERS

Here are the groups of characters and their ASCII numbers:

```
 13              ENTER key
 30              cursor
 31              edge character (invisible)
 32 to  47       punctuation
 48 to  57       number digits
 58 to  64       punctuation
 65 to  90       capital letters
 90 to  96       more punctuation
 97 to 126       small letters
127              DEL (invisible)
128 to  :::      graphics use
```

ALPHABETIC LIST

What good are the ASCII numbers. They are needed for the CALL KEY command explained in the next lesson.

They can also help in making alphabetical lists.

Run:

```
10 REM ALPHABETIZE
20 PRINT
30 INPUT "GIVE ME A LETTER: ":A$
35 PRINT
40 INPUT "GIVE ME ANOTHER: ":B$
45 A=ASC(A$)
46 B=ASC(B$)
47 REM PUT IN ALPHABETICAL ORDER BY
48 REM SEEING WHICH HAS THE LOWER ASCII
   NUMBER.
50 IF A<B THEN 60
51 REM SWAP THE LETTERS
52 X=A
53 A=B
54 B=X
60 PRINT
65 PRINT "HERE THEY ARE IN ALPHABETICAL ORDER"
70 PRINT
71 PRINT CHR$(A);TAB(5);CHR$(B)
```

THE ON...GOTO COMMAND

The SNAKE program below illustrates the use of the ON...GOTO command in line 125 as follows:

```
if Z is      1        GOTO 130
             2             135
             3             140
             4             145
if Z is something else  print:

             * BAD VALUE IN 125
```

After the GOTO you can put in one, two, three, or as many numbers as you want. Each number is the same as the number of a line somewhere in the program.

To finish up this lesson type in the following SNAKE program and run it.

```
  2 REM +++++ SNAKE +++++
  3 GOTO 1000
100 REM
101 REM------------MAIN LOOP
102 REM
109 REM------------GET KEY STROKE
110 CALL KEY(0,W,S)
111 IS S=0 THEN 125
113 REM------------TURN WHICH WAY
114 IF W<>46 THEN 120
116 Z=Z-1
117 IF Z<>0 THEN 125
118 Z=4
119 GOTO 125
120 Z=Z+1
121 IF Z<5 THEN 125
122 Z=1
124 REM------------NEW POSITION OF HEAD
125 ON Z GOTO 130,135,140,145
130 Y=Y-1
131 GOTO 150
135 X=X-1
136 GOTO 150
140 Y=Y+1
141 GOTO 150
145 X=X+1
149 REM------------SNAKE MOVES
150 A=B
151 B=C
152 C=D
153 D=E
154 E=F
155 F=X
160 L=M
161 M=N
162 N=O
163 O=P
164 P=Q
165 Q=Y
169 REM------------ERASE OLD TAIL END
170 CALL HCHAR(L,A,32,1)
171 REM------------PRINT NEW HEAD
172 CALL CHAR(50,"FFFFFFFFFFFFFFFF")
173 CALL HCHAR(Y,X,50,1)
199 GOTO 100
1000 REM
1001 REM +++++ S N A K E +++++
1002 REM
1500 GOSUB 3000
2000 REM
2001 REM------------BORDER
```

```
2010 CALL CHAR(42,"FFFF000000000000")
2011 CALL CHAR(43,"00000000000FFFF")
2015 CALL CHAR(59,"0303030303030303")
2016 CALL CHAR(60,"COCOCOCOCOCOCOCO")
2020 CALL COLOR(2,5,1)
2021 CALL COLOR(4,9,1)
2030 CALL CLEAR
2099 REM------------MAKE BORDER
2100 CALL HCHAR(1,1,42,32)
2101 CALL HCHAR(24,1,43,32)
2110 CALL VCHAR(1,1,59,24)
2111 CALL VCHAR(1,32,60,24)
2199 REM------------SNAKE EGG IN CENTRE
2200 X=16
2201 Y=12
2210 A=X
2211 B=X
2212 C=X
2213 D=X
2214 E=X
2215 F=X
2220 L=Y
2221 M=Y
2222 N=Y
2223 O=Y
2224 P=Y
2225 Q=Y
2300 Z=1
2999 GOTO 100
3000 REM
3001 REM------------INSTRUCTIONS
3002 REM
3005 CALL CLEAR
3010 PRINT "TURN LEFT, '<' KEY"
3020 PRINT
3030 PRINT "TURN RIGHT, '>' KEY"
3100 FOR T=1 TO 2000
3101 NEXT T
3999 RETURN
```

Assignment 22:

1. Write a program which asks for a word. Then it re-arranges all the letters in alphabetical order.

2. Write a program which speaks "double dutch". It should ask for a sentence, then removes all the vowels and prints it out.

3. Write a program which uses CALL KEY to get a letter A to C to use in a menu. Change the letter to a number 1 to 3. Then use the ON...Goto command to pick which menu item to do.

ANSWERS TO LESSON 21

Assignment Question 21-1

Because of space limitations the diagrams for the arrows will not be included as I believe that you have managed to plot these out without any difficulties.

Assignment Question 21-2

Listed below are all of the arrow codes:

1) 081C2A0808080800
2) 0703050810204000
3) 0004027F02040000
4) 4020100805030700
5) 080808082A1C0800
6) 0102040850607000
7) 0010207F20200000
8) 7060500804020100

ASSIGNMENT QUESTION 21-3&4

```
10 REM GRAPHICS
20 CALL CLEAR
30 CALL CHAR(40,"081C2A0808080800")
31 CALL CHAR(41,"0703050810204000")
32 CALL CHAR(42,"0004027F02040000")
33 CALL CHAR(43,"4020100805030700")
34 CALL CHAR(44,"080808082A1C0800")
35 CALL CHAR(45,"0102040850607000")
36 CALL CHAR(46,"0010207F20200000")
37 CALL CHAR(47,"7060500804020100")
40 CALL COLOR(2,16,2)
50 FOR H=40 TO 47
55 FOR X=8 TO 22 STEP 2
60 CALL VCHAR(8,X,H)
65 CALL HCHAR(X,8,H)
70 NEXT X
75 FOR T=1 TO 200
76 NEXT T
80 NEXT H
90 GOTO 50
```

Assignment Question 21-5

```
10 REM GRAPHICS
20 CALL CLEAR
30 CALL CHAR(42,"081C2A0808080800")
31 CALL CHAR(50,"0703050810204000")
32 CALL CHAR(58,"0004027F02040000")
33 CALL CHAR(66,"4020100805030700")
34 CALL CHAR(74,"080808082A1C0800")
35 CALL CHAR(82,"0102040850607000")
36 CALL CHAR(90,"0010207F20200000")
37 CALL CHAR(98,"7060500804020100")
```

```
40 CALL COLOR(2,16,2)
41 CALL COLOR(3,15,7)
42 CALL COLOR(4,12,5)
43 CALL COLOR(5,4,14)
44 CALL COLOR(6,2,11)
45 CALL COLOR(7,7,15)
46 CALL COLOR(8,5,12)
47 CALL COLOR(9,14,5)
50 FOR H=42 TO 98 STEP 8
55 FOR X=8 TO 22 STEP 2
60 CALL VCHAR(8,X,H)
65 CALL HCHAR(X,8,H)
70 NEXT X
75 FOR T=1 TO 200
76 NEXT T
80 NEXT H
90 GOTO 50
```

Bye for now.

FLOPPY DISK FACTS

Retyped by Loren West.

Many computer users beleve that floppy disks are extremly sensitive to magnetic fields. But according to 3M, a leading American manufacturer of floppy disks, this is not necessarily true. Here are some facts:

* A few inches of space protect against even strong magnetic fields. A refrigerator magnet will erase data if direct contact is made. A magnet on top of a stack of disks will damage only the closest one or two. Magnets stuck on a metal field cabinet containing disks will not do any harm.

* Heat will not cause data loss unless the disk is melted.

* Static electricity will not harm the disk. A close lightning strike could zap data, but the disk would need to be so close that the disk would likly to be destroyed anyway.

* X-rays and airport metal detectors will not erase disks.

* Radar and microwaves only damage media that is in front of the antenna.

TREASURER'S REPORT

by Cyril Bohlsen

```
Income for previous month ..... $ 1122.50
Expenditure for previous month .. $ 1389.06
Loss for previous month ..... $  266.56
Membership accounted for $ 135.00 of Income.
Shop sales ..... $ 987.50 of Income.

The expenditure was made up of the following

Printing & Postage of TND ..... $ 273.76
Purchase of 80 Column Card Parts . $ 313.04
BBS running expenses ..... $  69.80
Purchase of B/J ink ..... $ 142.00
Shop purchases ..... $ 525.11
Administration costs ..... $  64.35
```

Once again we are up to our AGM and the election of the Board of Directors for the comming year.

This year has seen our finances diminish still furthur, mainly with the costs involved in the construction of the eighty column cards, and the purchase of our IBM clone computer system.

I would like to set the records straight on one thing, that is, the listing of me as one of the life members of this club as stated in the November issue of the TND.

I AM NOT A LIFE MEMBER

The life members are:- Shane Andersen
John Robinson
Terry Phillips
Ross Mudie
Geoff Trott

Techo-Time

from Geoff Trott

Playing with file types

Our regional group, which now meets on the first Tuesday evening after the Sydney meeting, has been considering an interesting problem raised by Bob Relyea for a number of months. He had written a program to help him sort out marks generated by students when doing various assignments in class. Bob is a high school teacher of Physics and so this is something that he needs to do on a continuing basis. He wrote some articles a few years ago on making a set of marks fit a standard curve and this is what his program does, I believe. He has also written some more recent articles on the subject, which started to appear in the TND in November 1994. The original problem the group considered, was to take the output of his original Extended BASIC program (internal fixed 80 files) and convert them into a form where they can be loaded into Multiplan so that a large number of results for the same set of students can be put together for the term or yearly results. This involved learning about SYLK format, which is the alternative way of storing data with Multiplan (and a number of other Microsoft products). This proved to have a few interesting problems to overcome and I am sure that Bob will be telling you all about those. The other interesting problem was to get the file type correct so that it can be read by Multiplan.

Multiplan is a fussy program, as far as the type of file it will read. The TI99/4A operating system is very rich in file types also. For example, the PC scene does not have different file types but uses the three letter file name extension to differentiate between different types of files. The TI99/4A has display variable 80 files for text, display fixed 80 files for object code, program files for memory image, and internal fixed 128 for many uses including Multiplan. All these file types have a different structure for the way the data are stored in the sectors of the files and, for example, Multiplan will not look at files unless they are in the internal fixed 128 format. The trouble is that if a file is opened for output in internal fixed 128 format and the data is written to it, the data is incorrect for Multiplan. However, if a file is opened for output in display fixed 128 format, the data is written correctly. The reason for this is that internal format means that the data is stored in exactly the same format it would have in memory in the computer and so relates to how strings are stored in the memory of the computer while the display format has the data just as it would be printed or displayed, ie just the characters. The strings in memory have one byte at the start of the string which holds the number of characters in the string so that if internal format is used, that size byte is written out at the start of every string and Multiplan does not want that. Bob solved that problem by using a display fixed 128 format for output in his program and then using a sector editor to change the type of the file in the File Information Block of the file. At our meeting, Rolf was sure that there is a way to do this by a program.

My first thought was that it should be possible to change the file type before the file information block was finally written out to the disk. By reading a few documents, we found that the disk DSR sets aside room for three files (CALL FILES(3)) at power up in the VDP memory. For each file there are two 256 byte buffers in VDP memory, one for the currently active data sector and the other for the FIB sector. I reasoned that if, just before the file was closed, the data in the FIB sector held in memory were changed to indicate an internal file, when the file was closed, that information would be written out to the disk and the file would now be internal fixed 128 although the data would be written as display fixed 128. This did indeed work, but only for disk controllers which store their sector data in VDP memory (all disk controllers except the Myarc ones). The Myarc HFDCC does not do this but stores this data in its own internal memory.

While pondering this problem, I had a discussion with George Meldrum and he suggested another way. He suggested that the file should be opened as internal fixed 128 format to make the FIB contents correct, but then the PAB should be changed to make it a display fixed 128 format. When the data is written, the data in the PAB determines the format that is used by the disk DSR and so the data is written in the correct format and the advantage is that the PAB is always in VDP memory. Both methods rely on the fact that the FIB data is set up on open and written to the disk on close, while the format of the data is determined by the contents of the PAB (peripheral access block) which is also set up at open time with only the command and buffer bytes changed after that. I have tried both ways and they both work but the latter method should work with any disk controller while the first method will not work with some disk controllers. I have not tried RAM disks, but I assume the second method will work here also.

The means to make either of these work requires routines to read and write to VDP memory. Extended BASIC comes with PEEK and LOAD which allow data in CPU memory to be read and written. The CorComp disk controllers (including the AT and MiniPE cards) have

extra routines for doing this built into then and this was the first way we looked at solving the problem. To activate these routines, you need 32K memory expansion and then to load them into memory, to do a DELETE "XILR". In the program segments below, the memory is initialised in line number 180 and the file is opened for output in display fixed 128 format in line 210. Line 880 is the last write to the file and this is then followed by the code to change the data in the FIB sector. First the address in memory is obtained from address >8340 (-31888) which points to the highest free location in VDP memory. Twelve bytes on from this address is the start of the buffer which holds the FIB sector. The code uses "MOVEM" to move 14 bytes from VDP starting at this address to CPU memory at address >3000, which is not normally in use. The twelfth byte is changed to a "2" by the LOAD routine and then the 14 bytes are copied back. There is a POKEV command available, but we did not seem to be able to make it work. Then when the CLOSE is executed in line 910, the FIB is written and the file becomes an internal fixed 128 type.

```
180 CALL INIT :: DELETE "XILR" :: CALL CLEAR
210 OPEN #2:"DSK1."SFS,DISPLAY ,FIXED 128,OUTPUT
880 PRINT #2:T$RPT$(CHR$(0),128-LEN(T$))
890 CALL PEEK(-31888,AH,AL):: AW=256*AH+AL+12
900                 CALL LINK("MOVEM")(2,AW,12288,14)::
CALL LOAD("",12288+12,2)::
CALL LINK("MOVEM")(3,12288,AW,14)
910 CLOSE #2 :: STOP
```

The second set of code fragments uses XXB to provide the routines required. XXB came from Barry Traver and friends and gives extensions to Extended BASIC. It is quite a good package and worth using. To use it you simple enter Extended BASIC and run XXB which prints out a message and returns to Extended BASIC. So now all we have to do is open the file in line 200 as display fixed 128 and then after the last write to the file in line 870, access the same location as before. These routines return data in character variables, which are a bit harder to deal with but have other advantages. To change the 13th byte to "2", I have read in 14 bytes from VDP memory, taken the first twelve and appended two "2" codes and then written them back. This is exactly the same algorithm as the first program but uses XXB routines rather than the CorComp ones.

```
200 OPEN #2:"DSK1."SFS,DISPLAY ,FIXED 128,OUTPUT
870 PRINT #2:T$RPT$(CHR$(0),128-LEN(T$))
880                     CALL LINK("PEEKC",-31888,2,AD$)::
AW=256*ASC(SEG$(AD$,1,1))+ASC(SEG$(AD$,2,1))+12
890                       CALL LINK("PEEKV",AW,14,AD$)::
AD$=SEG$(AD$,1,12)CHR$(2)CHR$(2)::
CALL LINK("POKEV",AW,AD$)
900 CLOSE #2 :: STOP
```

The last program segment follows the method suggested by George Meldrum. Here the file is opened as internal fixed 128 in line 200 and immediately the PAB is changed in line 210 to make it display fixed 128 before any data is written. This is done by reading in the address of the first PAB in the list from address >833C (-31940). The status byte is five bytes into the PAB and this byte is changed to have the value of "2". Once this is done, all commands to write will use the data set in the PAB, which is now display fixed 128, while the FIB sector data will stay set to the internal fixed 128 that it was opened as. This worked with my Myarc HFDCC system as well as my MiniPE system and so is the preferred solution. It does require XXB to provide the VPOKE routine, but just the routines used can be loaded and saved with the program using the XXB system.

```
200 OPEN #2:"DSK2."SFS,INTERNAL,FIXED 128,OUTPUT
210                     CALL LINK("CPEEK",-31940,2,AD$)::
AD=256*ASC(AD$)+ASC(SEG$(AD$,2,1))+5                    ::
CALL LINK("VPOKE",AD,CHR$(2))
870 PRINT #2:T$RPT$(CHR$(0),128-LEN(T$))
900 CLOSE #2 :: STOP
```

To add the XXB routines to your program, the following procedure is recommended. Develop your program using XXB until it is working properly. Then save it in merge format with SAVE DSK1.filename MERGE. Then type in:

```
CALL INIT
CALL LOAD("DSK1.XBALBASE")
CALL LOAD("DSK1.CPU/UTIL")
CALL LOAD("DSK1.VDP/UTIL")
CALL LOAD("DSK1.ALSAVE")
CALL LINK("SAVE")
100 REM
MERGE DSK1.ALLOADM
MERGE DSK1.filename
SAVE DSK1.filename2
```

Now it will not be necessary to run XXB first as the routines needed will be embedded within the Extended BASIC program (filename2) and it will be self-contained.

DISK MANAGER 1000

DISK MANAGER 1000 6.0

==========

FILE UTILITIES
Copy/Move/Delete/Type(display)/Print/
Protect/Unprotect/Rename Files

COPY DISK
"Bit Map" Disk Copy
"Sector" Disk Copy

RENAME DISK
UNDELETE (files)
SWEEP DISK
INITIALIZE DISK
BOX FORMAT

MISC UTILITIES
Install Disk Protection
Remove Disk Protection
Remove XB Protection
Change Foregnd Color
Change Backgnd Color

==========

Written by Bruce Caron
1 May 1985

==========

Modified from 3.0 to 3.5
By Ralph Romans of the O.U.G.

==========

Modified from 3.5 to 6.0
By Jack Mathis of Southwest 99ers
5941 E 26th
Tucson, AZ 85711
Version 5.0 released September 1991
Version 6.0 released November 1992

==========

TABLE OF CONTENTS

FCTN KEY DESCRIPTION

DEL 1 Delete a character.
INSERT 2 Insert a character.
ERASE 3 Configure List Device.
CLEAR 4 Halt Disk Drive I/O operation.
BEGIN 5 Return to Disk Manager 1000 main menu.
* PROC'D 6 Request "EXECUTE COMMANDS Y/N" prompt.
* AID 7 Print Catalog to List Device.
* REDO 8 Re-enter Drive #.
BACK 9 Return to Disk Manager 1000 main menu.
QUIT = Exit Disk Manager 1000.
E Move cursor up one field.
X Move cursor down one field.
S Move cursor left one character or back one field.
D Move cursor right one character or ahead one field.

CTRL KEY DESCRIPTION

---

* E Move cursor back one page.
* X Move cursor ahead one page.
* C Copy All Files.

* D Delete All Files.
* N Perform No Action on Any Files.
* P Protect All Files.
* U Unprotect All Files
* Indicates FCTN and/or CTRL commands active in Fi
Utilities.

START UP INSTRUCTIONS

This utility program can execute a number of differe
WRITE operations on your diskettes. Read through t
instructions to familiarize yourself with the vario
operations before inserting diskettes or you m
inadvertently DESTROY part of a good diskette. Y
should always use a Write Protect tab on your Mast
diskettes.

Make a backup work copy of the Disk Manager 1000 diskette. Place the original with your other Masters for a backup, in case your work disk should ever get damaged.

EQUIPMENT REQUIRED

Firmware Extended Basic module or
Editor/Assembler module
Hardware TI 99/4A or Geneve 9640
32K memory expansion
Disk memory system
1 or more disk drives
Optional VW67DISK MANAGER 1000

EXTENDED BASIC LOAD

Insert the Disk Manager 1000 diskette in disk drive 1 and select Extended Basic from the TI menu screen. The disk contains a file that will automatically Load and Run the Disk Manager 1000 program.

EDITOR/ASSEMBLER LOAD
You can Load and Run the Disk Manager 1000 program from the Editor/Assembler module by selecting option 5, RUN PROGRAM FILE from the main menu screen, and entering DSK1.MGR1. BOOT or MENU LOAD
Follow the instructions with BOOT or MENU to load a program.

CONFIGURING DISK DEFAULTS

Defaults for disk initialization can be changed to match your system. After loading Disk Manager 1000, you will need to initialize a disk. Insert a blank or un-initialized disk. Choose the option to Initialize a disk. Then, choose the options for number of sides, density, and Validate (Y or N) that you will use the most. This will set the defaults for Disk Manager 1000 for this session. To save the defaults to be the same every time Disk Manager 1000 is loaded, press FCTN 3 from the main menu. Follow the proceedure shown below for Configuring List Device. When the configuration is saved to disk, the defaults for disk initialization and foreground and background colors will also be saved.

CONFIGURING LIST DEVICE

Allows you to customize the Disk Manager 1000 program to match the requirements of your particular printer. You will be able to enter your RS232 or PIO options; you can also select whether or not to send control codes to your printer. Once all selections have been made you have the option of saving them to your Disk Manager 1000 disk.
Default is set for PIO with no control codes.
In order to configure your system, from the Disk Manager 1000 main menu press FCTN 3 (ERASE), enter printer drive and options, for example:
Enter List Device: PIO or RS232.BA=1200.TW

Entering an invalid device name will cause the printing of a Disk CATALOG function to behave erratically. To correct this situation simply re-enter a VALID list device and parameters. You can also list a catalog to disk by entering DSK1.FILENAME as the List Device. This will create a DISPLAY,VARIABLE 80 file.
VARIABLE 80
file.

You will then be prompted for printer Control Codes, which will allow entering any control codes you would like sent to your printer. Press "Y" to enter your string of control codes. The maximum length of your string is 30 control or ascii codes.
Enter Control Codes: Ex. 27 83 01 *

Enter the decimal value of the control code and separate each code number with a space. When finished entering control codes enter 1 more space followed by an asterisk "*" and press ENTER. The asterisk is the control code terminator. At this point 1 of 2 things will happen. The prompt to save the options to disk will be displayed, or the line will go blank and you will have to re-enter your control codes. If the line goes blank it is because the format was not correct or the codes were not decimal values.
If you have entered your control codes correctly, or if you had answered "N" to the enter control code prompt then the following option is displayed.
Save to Disk (Y/N):

If you want to save the options to disk, press "Y" and this prompt will be displayed.

Insert Disk Manager 1000 Disk
In Drive #1 and press ENTER.

The drive number will default to the drive the program was loaded from. The drive number can be changed. The configur- ation you choose will be saved to any file with the same name as the program was loaded from. In other words, if you call the first DM1000 file DM1 (the second must be DM2, in that case), the configuration parameters will be saved to DM1 on the disk you designate. If the correct file is not found on the designated drive you will receive an error message and be given the option to change the drive number.

Follow the instructions to save the list device parameters and control codes to disk. If you choose not to save the options to disk enter "N".

HALTING DISK DRIVE I/O or PRINTING OF A CATALOG

To HALT the disk drives or printing of a catalog, press and hold FCTN 4 until the following message is displayed.

USER HALTED I/O

Certain operations are under control of the Disk Controller ROM so you may have to keep FCTN 4 pressed for a few seconds until program control returns to Disk Manager 1000.

COPY/MOVE/DELETE/TYPE/PRINT/PROT/UNPROT/RENAME

A catalog of all files and programs on your disk, and using a powerful screen editor, it allows you to enter all the file commands at the same time. Once the commands have been entered, Disk Manager 1000 takes over and executes each function specified. The main exception here is the <T>ype and <P>rint options. It has proven impractical to chain these two operations with the <C>opy, <M>ove, <D>elete, <P>rotect, and <U>nprotect ones, so it will <T>ype and <P>rotect as the letter is entered into the CMD field area.
COPY Copy files from one diskette to another.
MOVE Move files from one diskette to another.
DELETE Delete unprotected files.
TYPE Display DV/DF-80 files to screen.
PRINT Send DV/DF-80 files to printer.
PROTECT Install WRITE protection on a file.
UNPROTECT Remove WRITE protection from a file.
RENAME Rename unprotected files.
FCTN-7 sends the file catalog to the printer or list device.
CHANGING FIELDS
Moving from field to field is accomplished by using the cursor control keys. Hold the FCTN key down and use the arrow keys to move. Only valid characters unique to their field are accepted. The cursor will not enter the Size or Type field.

CONTROL KEYS
Control C, M, D, or N will mark all files in the CMD field.
Control P, or U will mark all files in the P field.
Control
E, and X will change directory pages. Control keys are active from any field.

SCREEN EDITOR

The Screen Editor allows you to select, and enter, all your file commands at one time. The Screen Editor commands, and fields, are described below.
EXAMPLE OF A FILE UTILITIES SCREEN
Screen -> DSK1 : SAMPLE + Free 127 Used 593
Header CMD Filename Size Type/No. 30 P DSSD

```
Directory N APROG          7 PROGRAM U
          N ASORT/S       64 DIS/VAR 80 U
          N BGRAF          7 PROGRAM U COPY
          C BGRAF/S       14 DIS/VAR 80 P MOVE
          M BSORT/S       30 DIS/VAR 80 U 146
          N BUBBLE/S      11 DIS/VAR 80 U
          M BUY/MORE      10 DIS/VAR 80 P
          D CHARDF        26 DIS/FIX 127 U
          N CRASH/S        6 DIS/VAR 80 P DELETE
          I DAYCARE       20 DIS/VAR 80 U
          M DISP/S        19 DIS/VAR 80 P
          D GAS/COMP       4 PROGRAM U
          C JUMP-IT1      33 PROGRAM U
          C JUMP-IT2      27 PROGRAM U
          N MOM'S-PROG    37 PROGRAM P
          C NEWLOOK        6 DIS/VAR 80 U
          N NEWTON         6 DIS/VAR 80 U
          N SELL/ALL       5 DIS/VAR 80 P
          C SELL           7 PROGRAM P
          Turn Page with CTRL E - CTRL X Pg 1/2
```

SCREEN HEADER
The first 2 lines of the Screen Editor, or Disk Catalog is called the Screen Header. The Screen Header display the following information about your diskette.

Current Drive in operation DSK1
Current Disk Name SAMPLE
Proprietary Disk Protection + = Yes (- = No)
Number of unused sectors FREE 127
Number of used sectors USED 593
Number of Files on Disk Type/No. 30
Disk Density Sides Used DSSD

Disk Density Sides Used use abreviations as follows:
SSSD = Single Sided/Single Density
DSSD = Double Sided/Single Density
SSDD = Single Sided/Double Density
DSDD = Double Sided/Double Density

The screen will hold the information for 20 files at time, additional files are stored in memory and ar paged in and out with the CTRL E and CTRL X keys. Th lower right corner displays which page is on display an how many pages are stored in memory. For example; p 1/2 means page 1 of 2.

CMD FIELD
In the CMD field, <C>opy, <M>ove, <D>elete, <T>ype <P>rint, and <N>o operation are valid entries.

<C>OPY
When copying a file from one disk to another a check i made to verify the destination drive has enough fre space on it to accomodate the new file. If a file i TOO LARGE to be transfered, the Copy operation i HALTED, and 'File too large for Backup Disk' will b displayed. This is a reminder that the file has NO been copied. Pressing any key will return
you to the File Utilities Menu.

Attempting to Copy a file onto a WRITE PROTECTED fil with the SAME NAME will also HALT operation an 'DUPLICATE FILE WRITE PROTECTED' will appear on you screen. Pressing any key will transfer control to Fil Utilities main menu.

<M>OVE
This command allows you to Copy a file from one disk to another disk, then Delete it is write protected or not.

NOTE: Should the Backup disk have insufficient space for a file, or if it becomes full, all commands left pending are aborted. Files that were successfully transfered to the Backup disk will remain there, and files that were moved will NOT BE DELETED from the Master disk.

<D>ELETE
Files that are not protected are deleted with this command. Files that are write protected must be changed before they can be deleted.

COPY/MOVE and DELETE on the right side of the screen will keep track of the total sectors being operated upon on your master disk. Both totals will update when Move is chosen.

<T>YPE Will immediately display a DV/DF-80 type file on the screen. EOF will appear in the lower left corner of your screen when the entire file has been displayed. Press any key to return to disk catalog listing without loss of C, M, etc. choices.

<P>RINT
Will immediately send a DV/DF-80 file to the printer or list device, as set up in the Configure List Device. Pressing any key at the end of the printing action will return you to the disk catalog listing without loss of C, M, etc. choices. FILENAME FIELD
Rename files by typing in this field. Both upper and lowercase characters are accepted however the space and period are invalid characters. All cursor movement keys are active in this field, including the DELETE and INSERT keys.

P FIELD (Write Protection)
If a file is unprotected a "U" is displayed, for a protected file a "P" is displayed. To either protect or unprotect a file select and enter the appropriate character.

CONTROL KEYS
Control C, M, D, or N will mark all files in the CMD field. Control P, or U will mark all files in the P field. Control E, and X will change directory pages. Control keys are active from any field.

EXECUTE FILE COMMANDS
Once all commands have been selected pressing FCTN 6 will display: 'Execute File Commands (Y/N)? N'. Pressing "Y" will will begin execution of commands selected. Pressing "N" or pressing ENTER will return you to the last postion the cursor was located. Pressing "ENTER" when the cursor is at the last field on the last page works the same as pressing FCTN 6.

Disk Manager 1000 will keep you informed of its status. When Copying or Moving files it will display the number, and size, of files being transferred, and update counters for both the Master and Backup disks.

ORDER OF OPERATION

The File Utility commands are executed in the following order.

1. Unprotect all files marked with "U".
2. Delete all files marked with "D".
3. Rename all files changed in Filename field.
4. Protect all files marked with "P".
5. Copy all files marked with "C" or "M".
6. Delete all files marked with "M".

FILE UTILITY ERRORS

For a complete description of the error messages check the section entitled ERROR MESSAGES.
COPY DISK
=========

Copies and on a sector by sector copy basis. Copies a SSSD diskette in four passes or less, depending on whether "Bit Map" or "Sector" copy option is selected.

The Disk Copy Utility will initialize the Backup diskette to the same format as the Master diskette and will completely over-write any data on the Backup disk. To prevent data from being lost on the Backup disk, or if you are copying from one format to another use File Utilities.

Selection of Copy Disk will display the following sub-menu:

1. "BIT MAP" Disk Copy
2. "SECTOR" Disk Copy

The BIT MAP option copies only those sectors that are mapped as USED to the Backup diskette.

The SECTOR option (default) copies every sector on the Master diskette to the Backup diskette, making an exact duplicate of the Master diskette.

After you have selected the type of disk copy you desire the following prompts are displayed.

"SECTOR" or "BIT MAP" Disk Copy

Master Disk
Drive No.: 1
Sector 0000

Backup Disk
Drive No.: 2
Sector 0000

WARNING: Backup Disk will be erased.

Enter the drive number of the Master and Backup disk drives, single drive users will be prompted when to change disks. Should the Backup disk not be initialized, or be in a different format than the Master Disk, Disk Manager 1000 will initialize the diskette to the same format as the Master Disk, and continue on with the copy process. Disk Manager 1000 will read in, and write out 97 sector chunks, until the diskette has been completely copied. The Sector counters will increment as the diskettes are copied.

When the disk copy process is finished the number of READ and WRITE errors will be displayed. A READ error indicates a bad sector on the Master Diskette. A WRITE error indicates a bad sector on the Backup Diskette.

RENAME DISK

==========

To change the a diskette name select Rename Disk, enter the drive number of the diskette you want to change the name on. The current disk name, disk protection, the number of FREE and USED sectors, and Sides/Density of the diskette will be displayed. Enter the New disk name and press ENTER. The name of the diskette will be changed.

UNDELETE File

=============

Allows you to undelete a file.
deleted from a diskette. Undeleteing a file should be done before performing any other operations on that disk to prevent the file from being over-written.

Selecting the Undelete option will display the following:

Undelete File on Drive : 1

Enter Name of File:

Enter the drive number for the disk with the lost file or press "ENTER" to accept the default drive number. Enter in the name of the lost file. The disk drive will start up and 'SEARCHING DISK' will be displayed. If the lost file is found and is intact, 'RE-BUILDING LOST FILE' is displayed. Once the file has been restored, 'FILE RECOVERED' is displayed. Pressing any key will return you to the File Utilities main menu.

If the lost file cannot be found, or has been over-written FILE NOT FOUND or FILE HAS BEEN OVER-WRITTEN will be displayed. Undeleteing files, or portions of a file, that have been over written or destroyed by a damaged diskette is beyond the scope of this utility.

SWEEP DISK

==========

Returns Sectors 0 and 1 on Selected Disk to that of a freshly formatted disk. Quickly clears all files without re-initial- izing the disk, and does it quickly.

Choose the Sweep Disk option, enter the name of t drive that contains the diskette. The diskette Nam the number of FREE and USED sectors, and Sides/Densi will be displayed. To Sweep the Disk press "Y Pressing "N" will return you to the Disk Manager 10 main Menu. Default is "N".

INITIALIZE DISK

==========

Initializes (formats) a diskette in single or doub density with both single and double sided drives. Th function is configured for 40 track disk drives only, track initialization is not supported.

NOTE: In order to initialize a disk double density a double sided you must have a Disk Controller and a Di Drive that support these formats. Currently only Di controller cards manufactured by Myarc and CorCo support the double density feature.

Enter the drive number for the diskette to initialized. Disk Manager 1000 checks to see if t diskette is already initialized, if so, the disk nam disk protection, Sides/ Density, and number of FREE/US sectors will be displayed. The following screen:

Initialize Diskette (Y/N)? Y

If you answer "Y" to the prompt you will be prompted enter the rest of the initialization parameters.

Drive No.: 1
Diskname : (Enter diskette name-10 Characters Max
DSSD - Free 0000 Used 0000

No. Sides : 2 (Number of sides 1 or 2)
Density S/D : S (Density <S>ingle or <D>ouble)
Verify Y/N : Y (Verify all sectors <Y>es or <N>o)

Answering "N" to verify option will redu initialization time by half. However should t diskette have defective sectors on it, they will not mapped as defective. If your drives are reliable a you haven't had problems with any diskettes this opti will save you time.

BOX FORMAT

==========

Initializes (formats) an infinite number of diskette with- out having to re-enter initialization parameter each time. Enter the Diskname and initializatio parameters as you would with the previous option. Afte the first diskette has been initialized the followi prompt is displayed.

Insert Next Disk. Press ENTER.

Follow instructions, Disk Manager 1000 will display:

Initializing Next Disk.

To exit this funtion press FCTN 9 (BACK) or FCTN (BEGIN).

MISC UTILITIES
==========

The Disk Manager 1000, Misc Utilities section, allows you to modify proprietary protection flags and to change screen colors. Techniques for removing proprietary protection from Diskettes and Extended Basic programs have been published in various magazines and books for the TI. As these are no longer considered to be "SECRET" information, I have included them as utilities, which you may find useful.

INSTALL DISK PROTECTION

Allows setting the proprietary disk protection flag that is located on sector 0, offset address >0010 of a diskette. Setting this flag will prevent diskettes from being copied with the TI Disk Manager module.

Enter the drive number containing the diskette to be protected, the diskette NAME, number of FREE/USED sectors, and a "-" right after Sides/Density indicator. Once the diskette is protected the minus will change to a "+".

REMOVE DISK PROTECTION

Allows removing the proprietary disk protection flag that may be set on sector 0, offset address >0010 of a diskette. Removing this flag will allow a diskette to be copied with the TI Disk Manager module.

Enter the drive number containing the diskette to be unprotected, the diskette NAME, number of FREE/USED sectors, USED space to be displayed. The absence of the letter "P" and a "+" right after Sides/Density indicator. Once the diskette is unprotected the plus will change to a "-".

REMOVE XB PROTECTION

Allows removal of the proprietary Extended Basic protection from a program image file. Proprietary XB protection prevents Extended Basic programs from being copied or listed. This option is helpful when modifying protected programs, and making Backup copies of protected programs.

The following prompts are displayed.

```
XB PROGRAM ON DRIVE : 1
ENTER XB PROGRAM NAME:
```

Enter drive number containing the XB program, followed by the name of the XB program. Disk Manager 1000 will search for the location of the proprietary protection flags. When the XB program flags have been changed the following message is displayed.

```
PROGRAM IS UNPROTECTED
```

Wlthe flags of a file that is noto the Misc Utilities menu. an Extended Basic program the following error message is displayed.

```
NOT IN PROGRAM FORMAT
```

If the program cannot be found on the diskette specified the following message is displayed.

```
FILE NOT FOUND
```

Pressing any key will return you to the Misc Utilities menu.

NOTE: This option should NEVER be used on anything but an Extended Basic program. A directory entry for an Extended Basic program is identical to a directory entry for an assembly language program image file. Proprietary protection flags are NOT located on the Directory entry, but are imbedded in the program file itself. Using this option on an assembly language program image file may render that file unusable.

CHANGE SCREEN/TEXT COLORS

Foreground colors will be changed by pressing 4, and background will be changed by pressing 5. If you wish these colors to be changed permanently follow Configuring List Device instructions (colors will be saved when List Device is saved).

ERROR MESSAGES
==========

The Disk Manager 1000 program is unique in that all error messages are displayed in English, instead of returning a number that the user must refer to in a manual. The Disk Manager 1000 program handles both Hardware and Software errors in the same way.

HARDWARE ERRORS are those that occur during execution of a device I/O operation, such as attempting to catalog a drive with no diskette in it. SOFTWARE ERRORS are those that occur as a feature or restriction of the program, such as trying to copy a file onto a diskette that is already full.

WHAT HAPPENS?
When a hardware or software error has been detected the command currently being executed is HALTED, an error message is displayed, and any commands left pending are aborted.

WHY?
Attempting to recover from a hardware or software error is extremely difficult if not impossible. One cannot predict what the user will do when confronted with an error, and not all TI computers return the same error code for the same error.

The SOFTWARE ERROR MESSAGES are documented throughout this manual and all are self-explanatory.

The HARDWARE ERROR MESSAGES which are listed below exception of t he DEVICE ERROR
message. This is the "CATCH ALL" message for almost anything that goes wrong with a TI-99/4A.

No Diskette in Drive

Disk Write Protected

Disk Not Initialized

Device Error

Whenever an error message is displayed on the screen, press any key to return to either the main menu or one of the sub menus, depending on where the error occured.

WARNING: Single drive users must be careful to insert the correct disk when prompted. Failure to do so may cause the contents of a diskette to be over-written, rendering it completely useless.

NEVER CHANGE DISKS WITHOUT FIRST RETURNING TO ONE OF THE MENU'S, OR UNLESS PROMPTED TO CHANGE DISKS.
APPENDIX B

Acknowledgements/Credits
==========

No other group, organization or company may distribute this product for gain. Free distribution or distribution at cost through User Group libraries or exchanges is encouraged.

Disk Manager 1000 was written completely from scratch and does not operate the same as other disk manager programs. Although Disk Manager 1000 may look similar to the CorComp disk manager, it is a completely different program with different features.

As Disk Manager 1000 makes use of every free area of memory not taken up by itself, other programs cannot be co-located in memory at the same time.

The original Disk Manager 1000 program was written entirely by Bruce Caron with the exception of the Extended Basic loader.

Ralph Romans made modifications to Disk Manager 1000 on behalf of Ottawa UG, from version 3.0 through 3.5.

BRUCE CARON HAS SOLD ALL RIGHTS; BUT NOT OWNERSHIP; OF THIS PACKAGE TO THE OTTAWA TI-99/4A USER GROUP. Donations should be sent to the following address:

The Ottawa TI-99/4A User's Group
3489 Paul Anka Dr
Ottawa Ontario Canada

Jack C. Mathis of the SouthWest Ninety-Niners h extensively modified Disk Manager 1000. Jack releas version 5.0 Sept. 1991. Version 6.0 was released November 1992. Please direct questions, comment and/or suggestions about these

versions to Jack at the following address.

Jack C. Mathis
5941 E. 26th
Tucson, AZ 85711

APPENDIX C

DM 1000
VER 3.0 - Modified by Ralph Romans of Ottawa Users Grou
- Incorrect file count when going from 'H' to 'C'

- File copy would give you a bad copy if the file bein copied was stored on the Master disk as a non-continuo file and the size of the first segment was exactly 3 sectors with additional sectors in another segment o the disk.
VER 3.1 - Modified by Ralph Romans of Ottawa Users Grou
- File copy would give a bad copy if the master file wa a fractured file of exactly 39 sectors and the same fil name was on the copy disk.
- When entering a file name in various modes, it wa possible to mess it up.

UNFIXED BUGS IN VER 3.1
- Unable to display some DIS/VAR 80 files that are ful of control characters. Computer hangs up!

VER 3.3 - Modified by Ralph Romans of Ottawa Users Grou
- Changed defaults on SWEEP and DISK INITIALIZATION.
- Disk initialization works for MYARC and CORCOMP.
- READ/WRITE errors gets cleared after 1st use on DIS COPY
- File 'MGR1' may now be called any name and al features of DM1000 will work!! This will only work wit TI CONTROLLER and CORCOMP CONTROLLER.
- The loader for MYARC CONTROLLER is called LOADMY.
- During DISK INITIALIZATION MENU, you can use the U ARROW to go back to previous prompt.

VER 3.4 - Modified by Ralph Romans of Ottawa Users Grou
- With File List on screens, pressing 'T' for Type will display DV/80 and DF/80 files on the screen, pressing 'P' for Print to list device with optional printer control codes sent first. The 'P' and 'T' for print or type are only valid in the left (CMD) field.
- 'EOF' notice added in lower left corner of screen.
- DISPLAY VAR 80/FIXED 80 MENU removed.

VER 5.0 - Modified by Jack Mathis of Southwest 99ers Sept'91.
- File Utility Section changes:
- Copy, Move, and Delete information stay on screen when paging.

- With File Catalog on screen, Prompt for "Execute Commands?" no longer activated by C, M, D, or N except at end of the last page of catalog. Can be activated by pressing ENTER.
- With File List on screen, press CTRL C, M, D, N, U, or P, to Copy, Move, Delete, No action, Unprotect, or Protect ALL files in the File List.
- Print catalog with FTCN 7 from File Utility
- Computer no longer "hangs up" when displaying text files that are full of Control codes or were written with Myword (fixed bug in ver.3.1 listed above).
- Disk Utility Section Changes:
- Erases the words "UP ARROW ACTIVE" when box formatting starts, as up arrow is no longer "ACTIVE".
- Changes in both Disk Utility and File Utility Sections.
- Disk Name field no longer leaves garbage when backspacing.
- General changes to DM1000:
- Screen blanking active.
- Myarc 9640 Geneve compatible.
- Horizon RAM disk compatible.
- Drives 1-9 and A-Z accepted (Horizon Ramdisk/Rambo).
- Defaults for Density, Sides, Verify, Tracks, and Sectors/track (for double density) easily changed
- BUG - due to addition of higher numbered drives (Horizon) access disk initialization with verify disk copying time doubled.

VER 6.0 - Modified by Jack Mathis of Southwest 99ers - Nov'92.
- Disk and File Utility Menus consolidated into Main Menu, allowing fewer key presses to use.
- <T>ype and <P>rint options return to file catalog when finished typing (displaying) or printing file.
- Disk initialization and copying speeds increased to the speed of 3.5 or slightly faster, by a change to DSRLNK.
- Disk initialization and printer configuration defaults and color selections save into program.
- Saving of configuration defaults to drive of choice.

Just a reminder
AGM and BBQ
SAT 3rd DEC 94

PUZZLE

This months list of words is based around the subject of "Street Names"

Y F J G J P M V A N B N U N Z Q V E M S
G P N W S I Y K V K O A D N Y Q R C H N
X C Q M N N C H A D D T L C P E U A A H
J E B D D V X T V Z E G E L Q P G A X C
B V S G C M E E T P Y U M C L A W P I U
S U H K O L K E G O N A V A I C E K F L
S A I T L G S A U I D N W U W I E E U X
R F R A D A L D D M J M N Y U F M I Z O
E P Q E N I H P E S O J A O G I S V C H
D P M L B B P M T L H Y N N I C D E Q L
N Z X M S B A D Z A A R T E N N A X A I
U L A B K N F C R G E D Y U M N U P U H
A B Q X N P C R N B E M B W A G K E K N
S Q F I I V O W T Q D A W R V M H L A W
Y U N H O W P S S P N N H L O E P R F D
H G X J Z I U K V Z U N B F U K K Z C H
N I P P A R P N T V D A Q N I A E R K W
X P O A D A E H W O R R A H O P B T E V
B A V D Z U E B E O N A D A R F P A S P
F I M G U D U F C Y G Z I V J U C Y R M

Find these hidden words

HOW TO PLAY
In this puzzle there are (20) words somewhere, horizontally, vertically, diagonally even backwards.
GOOD LUCK!

ANNAM	APPIN	ARROWHEAD
BALL	BAMBIL	DUNDEE
HARROW	ICETON	JOSEPHINE
KATELLA	LADBROKE	MANNING
NADA	OCEANA	PACIFIC
QUAIL	RABAUL	SAUNDERS
TODMAN	UNION	

This puzzle was compiled using Ashley Lynn's programme "Word Puzzle" which is avaliable from the TIsHUG shop.

Last months list of words, based around the subject of "Christhan Names" were.....

WARREN	HANNAH	DAWN
MARY	MAVIS	IAN
SHELLEY	SHARON	LISA
ROBYN	LOREN	MARTIN
JUDY	BOB	SCOTT
CAROL	JESSY	LUCAS
IRENE	KEVIN	

4.9 List of Commands

The main menu is activated by pressing the </> key. Select an option by using the cursor keys to highlight the option. You can also select an option or command by using the <Home> and <End> keys. Then press <Enter> to select the option or command.

You can also choose a menu option by typing the first letter of your menu choice (e.g., pressing <F> accesses the "File" option).

Note: The commands may be listed on the right side of the screen if you're using certain computers or if you called AsEasyAs with the /ATT parameter.

4.9.1 WSHEET commands

After selecting the "WSHEET" option from the main menu, your screen should look similar to the following figure:

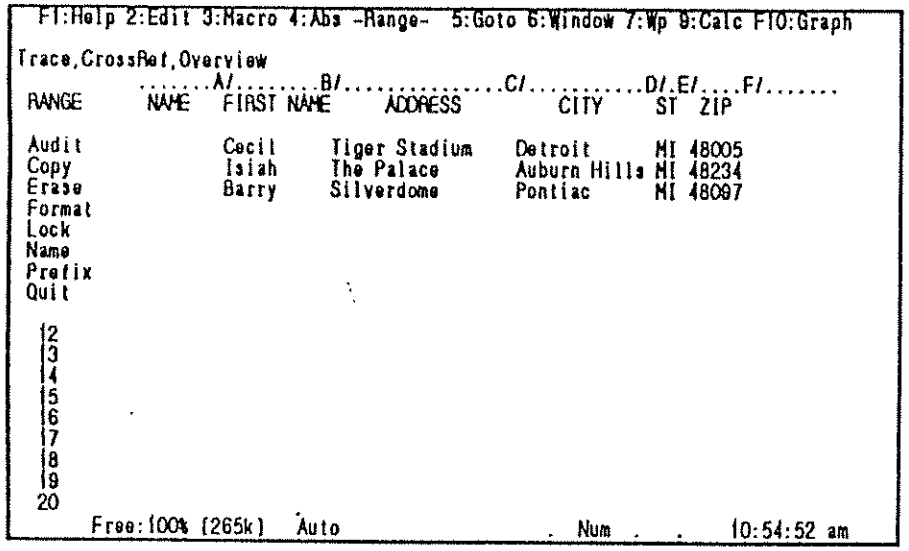
```
 F1:Help 2:Edit 3:Macro 4:Abs -WSheet- 5:Goto 6:Window 7:Wp 8:Calc F10:Graph

Set Column WIDTH
        .....A/.....B/.............C/.....D/.E/....F/.....
 WSHEET    NAME   FIRST NAME     ADDRESS        CITY     ST  ZIP

 ColWidth         Cecil     Tiger Stadium    Detroit      MI 48005
 Delete           Isiah     The Palace       Auburn Hills MI 48234
 Erase            Barry     Silverdome       Pontiac      MI 48097
 Border
 Insert
 General
 Macro
 Summary
 Window
 Text

  4
  5
  6
  7
  8
  9
 20
     Free:100% [265k]  Auto                  . Num . .    10:53:22 am
```

WSHEET menu

ColWidth	Select this to adjust the width of a column
Delete	Removes a row or column
Erase	Erases the entire worksheet (a confirmation window
Border	Sets a border
Insert	Inserts new rows or columns
General	
Format	Set numeric format
Label	For centering or justifying
Column	Set column width
Recalc	Recalculation automatic/manual
Protect	Global protection on or off
Zero	Show zero valued cells
Negative	Highlight cells containing negative values
Install	Add startup defaults
Macro	Define keyboard macro
Summary	View spreadsheet settings
Window	Reset horizontal and vertical borders of the screen
Text	Edit text

4.9.2 Range commands

Your screen should look similar to the following figure after selecting the "Range" option from the main menu.



Range Menu

Audit	Shows references
Copy	Copy contents of a range of cells to another range
Erase	Erases a range of cells
Format	Set the numeric format
Lock	Cell protection on or off
Name	Sets names for ranges and macros
Prefix	Choose justification
Quit	Return to main menu

4.9.3 CopyCell command

CopyCell	Copy a range of cells

4.9.4 MoveCell command

MoveCell	Moves a range of cells

4.9.5 Array commands

Add	Add two matrices
Subtract	Subtract two matrices
Multiply	Multiply two matrices
Invert	Invert matrix
Transpose	Transpose matrix
E-Solve	Solve equations
Quit	Exit from all menus

4.9.6 Data commands

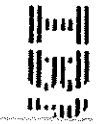
Fill	Fill range with incremented numbers
Parse	Convert labels into values
Question	Find records based on criteria
Sort	Sort the rows of a range
Table	Create a table of values
GoalSeek	Calculate input value to achieve goal value
Regress	Linear regression of X & Y data points
Bin	Distribute data by BIN
Input	Input form of data entry

4.9.7 File commands

Retrieve	Bring in a worksheet from memory
Store	Save a worksheet to memory
Merge	Combine worksheets
Xport	Store a section of the worksheet in a file
Import	Bring in a file
Erase	Erase a worksheet from memory
List	Show a list of file names
Dir	Change the directory
UpLink	Update all linked cell values
Option	Filter out blank cells

4.9.8 Graphics commands

Type	Choose the type of graph	
	x-y	Relates an X-range to another row of numbers
	Bar	Bar graph
	Pie	Pie chart
	Stack	Stacked bar graph
	Line	Line graph
	Cume	Shows cumulative values
	Hloc	Hi/lo graph
	Radar	Type of polar graph
	Delta	Plots ranges as step functions
X	Define the X range (horizontal axis)	
A,B,C,D,E,F	Define the data ranges for the graph	
Labels	Label range for each data set	
Options		
	Legend	Explanatory text
	Format	Choose a method for presenting the data
	Titles	Give titles
	Scale	Scale of the axes
	Grid	Draw coordinate lines
	Color	Color/BW switch
	Quit	Go back to Graphics menu
	Reset	Erase graph settings
	Name	Create or erase the name of a graph
	View	Display the graph on the screen
Plot		
	Image	Set height and width
	Density	Set graph print density
	Hardware	Type of printer
	Paper	Size of paper to print
	Orient	Portrait (vertical) or Landscape (horizontal)



TIsHUG SHOP.

with Percy Harrison.

Firstly I would like to correct a pricing error in last months TND. The 15 ft Printer Cable was incorrectly priced at $9.00. This should have been $12.00 so could you please ammend your copy of the TND to save any embarassment should you use this list at a later date.

The November meeting was well attended with quite a lot of TI material being sold by our members. Several members to whom I spoke were more than pleased with their purchases. We also sold a resonable amount of PC hardware and software including a Hard Drive, 1.44 Floppy Drive, Screen Filter and 5 Houses'. It is hoped that the sales of PC items will increase as our members get a feel for the quality and price of the equipment being sold by the club.

The December meeting will commence at 1.00 PM instead of the normal time of 2.00 PM as we are planning a christmas barbeque. To defray some of the costs involved we will charge $2.00 per person and subsidise the balance so make sure you come along and join in and bring your family with you.

The December meeting is also our Annual General Meeting which will require that all of the current Directors will stand down and you will elect five Directors to run your club for the next twelve months so I would like to take this opportunity to thank Dick Warburton for the time and effort that he has put into the club during the past twelve months, especially in setting up the rooms for our meeting each month and cleaning up after the meetings have finished. I am sure that most of our members do not realise just how much time and effort is involved in preparing for each meeting.

Next I would like to thank Cyril Bohlsen for the accurate recording of our finances throughout the year. There is no truth in the rumour that he is leaving for Majorca to join his good friend, Christopher, before our next meeting.

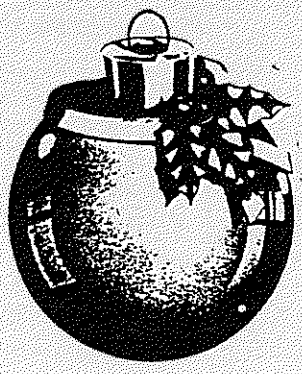
Then there is our editor, Loren West, and the Paste-up group, Peter Young, Derek Wilkinson and Ian Mullins, who have been responsible for producing one of the best computer magazines around. My thanks also to Robert Relyea for attending to the urgent secretarial matters and to Thomas Marshall for his contribution to our committee meetings. Thanks also to Robert Peverill for his efforts in re-inking ribbons for our members, and to Larry Saunders who has kept us supplied with club software disks each month.

Last, but not least, thanks goes to those club members who have contributed to its wellbeing throughout the year with particular reference to Geoff Trott who has again given a great deal of his time and expertise to the club and its members especially with the development, assembly and testing of the TIM/SOB cards.

As there will be no meeting or magazine in January, notices for membership renewals due in December and January have been included in this issue. Under the new Print Post rules we are not permitted to include more than one TND in each envelope so it is very important to make sure that your renewal fees reach us well before the mailing date of the magazine each month. Please look at your membership expiry date printed on your mailing label each month and make sure that your remittance is forwarded to us prior to that date.

There are still three TIM/SOB cards that have not been collected. Would the three members who ordered these from OPA please pay the additional $35.00 and collect their Cards from me as there will be no refund to those members who opt not to take their card. This decision was taken by the Directors because of the enormous loss to the club in honouring the orders placed on OPA over two years ago.

Bye for now.



REGIONAL GROUP REPORTS

Meeting Summary For DECEMBER

Central Coast	10/12/94 Saratoga
Glebe	08/12/94 Glebe
Hunter Valley	11/12 18/12/94
Illawarra	06/12/94 Keiraville
Liverpool	09/12/94 Yagoona West
Sutherland	16/12/94 Jannali

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CENTRAL COAST Regional Group

Regular meetings are normally held on the second Saturday of each month, 6.30pm at the home of John Goulton, 34 Mimosa Ave., Saratoga, (043) 69 3990. Contact Russell Welham (043)92 4000.

==========

GLEBE Regional Group

Regular meetings are normally on the Thursday evening following the first Saturday of the month, at 8pm at 43 Boyce Street, Glebe. Contact Mike Slattery, (02) 692 8162.

==========

HUNTER VALLEY Regional Group

The Meetings are usually held on the second or third Sunday of each month at members homes starting at 3pm. Check the location with Geoff Phillips by leaving a message on (049) 428 617. Please note that the previous phone number (049) 428 176 is now used exclusively by the ZZAP BBS which also has TI support. Geoff.

==========

ILLAWARRA Regional Group

Regular meetings are normally held on the first Tuesday of each month after the TIsHUG Sydney meeting at 7.30pm, at the home of Geoff Trott, 20 Robsons Road, Keiraville. A variety of investigations take place at our meetings, including Word Processing, Spreadsheets and hardware repairs. Contact Geoff Trott on (042) 29 6629 for more information.

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* LIVERPOOL Regional Group *

Regular meeting date is the Friday folling the TIshug Sydney meeting at 7.30 pm. Contact Larry Saunders (02) 644-7377 (home). After 9.30 PM or at work (02)602 3312 Liquorland Liverpool West for more information.

*** ALL WELCOME ***

9th December 1994
My Place : 34 Colechin St. Yagoona West

JANUARY 1995 NO MEETING
My Place : 34 Colechin St. Yagoona West

Bye for now Larry.
Liverpool Regional Co-Ordinator

==========

SUTHERLAND Regional Group

Regular meetings are held on the third Friday of eac month at the home of Peter Young, 51 Jannali Avenue Jannali at 7.30pm. Peter Young.

==========

TIsHUG in Sydney

Monthly meetings start promptly at 2pm (except for ful day tutorials) on the first Saturday of the month tha is not part of a long weekend. They are held at th MEADOWBANK PRIMARY SCHOOL, on the corner of Thistl Street and Belmore Street, Meadowbank. Cars can ente from Gale Street and park in the school grounds Regular items include news from the directors, th publications library, the shop, and demonstrations o monthly software.

DECEMBER MEETING - 3rd DECEMBER

~~JANUARY~~ FEBRUARY MEETING - ~~4~~th ~~JANUARY~~ FEBRUARY

****

The cut-off dates for submitting articles to the Editor for the TND via the BBS or otherwise are:

February - 14th January

These dates are all Saturdays and there is no guarante that they will make the magazine unless they ar uploaded by 6:00 pm, at the latest. Longer article should be to hand well before the above dates to ensur there is time to edit them.

EDITORS COMMENTS

I hope that everybody that attended our last buy swa and sell day went away with something of use to them, I they didn't It was there own fault, there was quit a l of things, some free some sold, but a great range products been offered, before I forget,

NEXT MEETING IS OUR A.G.M

so come along bring your appetite for our

BBQ and salad

a small fee of $2;00 for each person eating.

Peter had a few IBM systems up and running with soun and music conning from them, Geoff was again helpi people who needed technical assistance including mysel who had purchased a 80 column card and mounting it i the consol, It worked first go ....then ..... oh well new power board to replace the old was called fo nothing seems to last forever.

Percy appeared to be doing a good trade at the sho (This is a good time to put a plug in for the sho MEMBERS! this is our club so please patronise from t club as much as possible to enable us to supply at lower price).

See you all at the A.G.M. 3rd December.