



BITS BYTES & PIXELS



MERRY CHRISTMAS
LIMA 99/4A USERS GROUP
VOLUME 1 NO 5 DECEMBER 1985

COMMENTARY...

The other day we were talking to a friend who had recently bought a new computer. In the course of our conversation we asked, "Have you joined a user group?" His response was, "What the heck is a user group? Is it a bunch of dopers who buy their stuff from the same dealer?" We attempted to steer the conversation onto a higher plane by pointing out that computer freaks also have user groups.

This set us to thinking about what a user group (computer, that is) really is. We pointed out that a member has the advantage of sharing ideas with people who are experts, of solving problems with the advantage of the group's collective expertise and having access to a library that will save a member megabucks in software costs.

And that is just for starters. A user group is one of the few organizations that expects nothing from a member except the sharing of ideas. There is no annual membership drive just to have numbers; we do, however, need a few good members who can be contributors to our knowledge of computers and of software usage.

So you can see that we are a group of computer freaks who want to share their habits with other addicts.



BRAIN TEASERS...

Try this on your brain!
A woman goes into a hardware store to buy something for her house. She asks the salesperson the price and he replies, "The price of one is twelve cents, the price of thirty is twenty four cents, the price of a hundred and forty four is thirty six cents." What does the woman want to buy? (the answer is in the back pages)

TIPS FROM THE FIBER CUB....

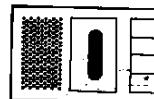
It has become a part of the Bits ect to include Jim Peterson's latest Tips. They are always filled with useful information.

From the Northwest Ohio User's Group comes this suggestion:

CLEAN DISK DRIVE

by Arthur Author

```
100 CALL CLEAR
110 CALL SCREEN(13)
120 FOR C=1 TO 12
130 CALL COLOR(C,16,13)
140 NEXT C
150 PRINT "      CLEANING"
160 FOR X=1 TO 12
170 PRINT
180 NEXT X
190 PRINT "HOLD FCTN CLEAR TO STOP"
200 ON ERROR 220
210 GOSUB 230
220 GO TO 200
230 RUN "DSK1.B"
240 RETURN
```



MORE HUMOR!

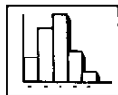
THIS MONTH'S FUNNY
FROM EDMONTON, ALBERTA'S
"COMPUTER USERS' SOCIETY"

The world's greatest computer was powered up for the first time last week. It is so powerful that four CRAY computers are used just to input data into it! The memory is so large that all of man's accumulated knowledge is stored in just 10 percent of the available space. Of course, speech recognition and speech are just two of it's many features.

After powering up the beast and testing it out, the white jacketed compu-wizards proudly announced that the machine was ready for it's first question. Immediately, great arguments arose over the suitability of the various questions that were posed. Some wanted to present mathematical theorems for validation, while others

wanted to test the latest video game for the ultimate thrill. Finally, in the midst of all the hub-bub, the janitor quietly slipped up to the main console and, taking the input microphone into his hands, he calmly asked the ULTIMATE QUESTION that has plagued mankind since the dawn of history: "Is there a God", he asked?

There was a moment of stunned silence in the crowd of reporters and scientists. Of course! Why hadn't they thought of that? The computer calmly spun disks and blinked its lights for a few moments and then suddenly the room was plunged into darkness and a deep voice boomed, "There is NOW!"



MINI CAL....

This may keep you from missing pay day in 1986!

1986															
JANUARY							FEBRUARY								
S	M	T	W	T	F	S	S	M	T	W	T	F	S		
			1	2	3	4						1			
5	6	7	8	9	10	11	2	3	4	5	6	7	8		
12	13	14	15	16	17	18	9	10	11	12	13	14	15		
19	20	21	22	23	24	25	16	17	18	19	20	21	22		
26	27	28	29	30	31		23	24	25	26	27	28			
MARCH							APRIL								
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MAY							JUNE								
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JULY							AUGUST								
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6	7	8	9	10	11	12	3	4	5	6	7	8	9		
13	14	15	16	17	18	19	10	11	12	13	14	15	16		
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							31								
SEPTEMBER							OCTOBER								
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14	15	16	17	18	19	20	12	13	14	15	16	17	18		
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28	29	30					26	27	28	29	30	31			
NOVEMBER							DECEMBER								
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						1			1	2	3	4	5	6	
2	3	4	5	6	7	8	7	8	9	10	11	12	13		
9	10	11	12	13	14	15	14	15	16	17	18	19	20		
16	17	18	19	20	21	22	21	22	23	24	25	26	27		
23	24	25	26	27	28	29	28	29	30	31					
30															

The software for this is in our library. It originally came from Micropendium.

THE ANSWER TO THE BRAIN TEASER:

"SHE WAS BUYING HOUSE NUMBERS"



NEXT PAGE PLEASE

CHARLIE SAYS

The DISK MANAGER 1000 Program

Those of you with disk systems know how slow the DM2 can be when you have alot of disk work to do, particularly if you are copying disks. When copying with one disk drive you may have to switch disks as many as 127 times. Knowing this, many of you use sector copy programs from our library such as MASS COPY or QUICK COPY, or a purchased program such as NIBBLER when copying disks. These programs will copy a full disk with no more than four disk exchanges when using one disk drive. Unfortunately, sector copy programs also have their problems.

Problem 1: If your destination disk is not pre-initialized you will get an error message unless you tell the copy program in advance to initialize the disk. But what if you don't know whether the disk has been initialized or not? Or what if you are using QUICK COPY which doesn't format disks from within the program.

Problem 2: Sector copy programs require that there be no bad sectors on the destination disk. Even one bad sector will cause a sector copy program to fail when the program attempts to write data to the bad destination disk sector. Until now, the only thing you could do under these circumstances was to go back to the DM2 and use it to initialize your destination disk and make your copy. Here's why.

As the DM2 initializes a disk the actual initialization is done as the disk drive initially grinds away before any sector numbers are displayed. Then, as sector numbers are displayed, the DM2 performs a

test on each sector and marks each bad sector as "used" and not to be written to. The DM2 copies disks file by file and starts filling sectors sequentially starting with sector 2 and ending with sector 359 (in SS/SD systems). Anytime a bad sector is encountered it is skiped over, since the disk map in sectors 0 and 1 already has this sector marked as "used".

NOW FOR THE GOOD NEWS: We have DM1000 in our program library which can take care of the above two problems. This is not just another sector copy program (like MASS COPY, QUICK COPY, or NIBBLER) capable of formatting disks and copying entire disks fast (it is both of these). DM1000 is a complete disk manager program. It can do anything the DM2 can do and more. DM1000 loads automatically from extended basic and is 100% assembly language so it is very fast.

Problem 1 Solution: When you "Copy Disk" the DM1000 automatically senses whether the destination disk is initialized and IF NECESSARY will AUTOMATICALLY initialize the destination disk in the same format as the source disk. Copying requires no more than 4 disk exchanges when using one disk drive in SS/SD format.

Problem 2 Solution: If "Copy Disk" generates an error because of bad sectors in the destination disk, you can reinitialize the destination disk, map the bad sectors, and copy file by file all without leaving DM1000. This method of disk backup, although slower than the "Copy Disk" of DM1000, is faster than anything the DM2 can do. File copying with DM1000 is VERY easy and flexible. For example, you can unprotect a file on the source disk, copy it to the destination disk, and put protection back on the original all with two keystrokes.

NEXT COLUMN PLEASE

NEXT PAGE PLEASE

Unusual features of DM1000 not found in the DM2 or sector copy programs include BOX FORMAT and SWEEP DISK. BOX FORMAT formats an infinite number of disks without reentering the initialization parameters each time. SWEEP DISK erases data in sectors 0 and 1 of a previously initialized disk so the disk appears to have no used sectors. The result is similar to a newly initialized disk, but SWEEP DISK takes only a fraction of a second to accomplish.

Although loading the DM1000 takes somewhat more time than plugging in the DM2 cartridge, you still save a lot of time with the DM1000 if you have more than one or two disk management functions to perform. This is a recent program, written in May 1985 by Bruce Caron of the Ottawa Users' Group. It comes with extensive on disk documentation written in TI-WRITER format. I highly recommend DN1000. It is probably 1000% better than the DM2 (hence the name DM1000).

ADVENTURELAND Adventure Words

Scott Adams adventure #1, ADVENTURELAND, usually responds to two word commands, the first word a verb and the second word a noun. The computer actually only recognizes the first three letters of the word. Thus LEA, LEAVE, and LEAK are all the same to the computer in this adventure.

Below is a list of all the three letter groups (two letter groups if the word is only two letters in length) that are used in ADVENTURELAND. Capital letters are those the computer responds to. Small case letters are what I believe to be the rest of the word. A question mark (?) means I'm not sure about the rest of the word. If there is nothing after the capital letters this means that the

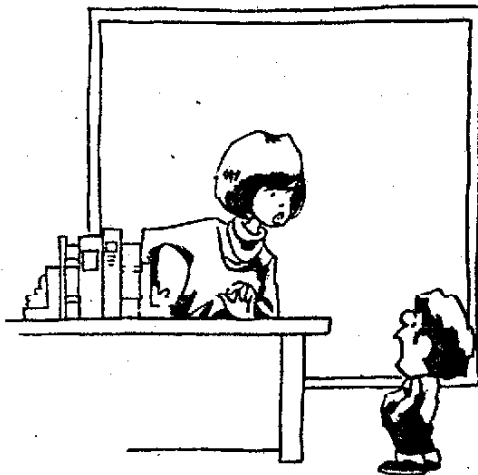
complete word is only 3 (or sometimes 2) letters in length. This list may help you solve ADVENTURELAND.

FIRST WORD (verbs)	SECOND WORD (nouns)
AT	ADVertisement
AtTack	ANY
BUIld	AROUnd
BURy	AWAy
CALL	AX
CATch	AXE
CHOOse	BANG ?
CLImb	BEAr
CROss	BEEs
CUT	BITes
DAM	BLAdder
DEScRibe	BOOom ?
DRInk	BOttle
DROp	BRAcElet
EAT	BRICK
ENTer	BUNyon
EXAMine	CHA ?
FEEl	CHigger
FINd	CONtainer
FLI ?	CROwn
GET	DAM
GIVe	DOOr
HELp	DOwn
HIT	DRAGon
HOLd	EASt
IGNight	EGG
INventory	FIREstone or
JUMp	FIRE
KICK	FISh
KILL	FLInt
KISs	FRIIt
LEAVe	GAME
LIGHt	GAS
LOCK	GLASS
LOOK	HALLway
MAKe	HELp
OPeN	HOLe
PICK	HONey
POKe	INventory
POUR	KEYs
QUIT	LAKe
REAch	LAMP
RELease	LAVa
RUB	IFDge
RUN	MED ?

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SAVe	MIRror
SCOrE	MUD
SCRape ?	NET
SLAy	NORth
SPEEk	OIL
SPIt	OX
STOp	RINg
SWIm	ROCK
TAKe	RUBies
THRow	RUG
TIC ?	SHOrE
TOSs	SIGn
TOUCh	SLImE
INLight	SOUth
WAKe	SPIdEr
WAVe	SWAmP
YELI	THRough ?
	TREe
	UP
	WATer
	WEB
	WEST
	WINDow
	WRItIng
	YOHO

Charles Good



"I couldn't do my history homework, because I didn't have the right software."

Mel Monina, our newest member, has sent this along:

It is a modified program from Micro Pendum (the Jan. '85 issue). He tells us that it has the triple-tech date and time retrofitted in to it; plus the fact that it prints three files across in place of two.

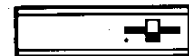
Mel also adds that you can buy the smaller label or the larger label. Most disks will fit the larger label. He adds that to modify your drive to run without triple tech you should drop lines 200, 210, 220 and put your own date and time in.

Example:

30 2\$="12/05/85"
40 q\$= 08:40:25

SEE MEL'S PROGRAM ON ~~BACK~~ ^{NEXT} PAGE

WANT AD
FOR SALE PERIPHIAL EXPANSION BOX \$107
CALL TOM MCCABE AT
419-692 3641



```

DSK - 1 - DISKNAME - MATH/PROG      TIME      DATE
AVAILABLE = 0      USED = 358      08:40:25  12/04/85
Filename  Siz Typ  Filename  Siz Typ  Filename  Siz Typ
ADDSUB    43 PR   CALC      30 PR   CAT        2 DF
EUCLIDTRAS 35 PR  GEOM/CAL  39 PR  GEOM/COORD 18 PR
IRA/SAVING 14 PR   LOAD      19 PR  MORT/PR/XB  11 PR
MORT/PRINT 30 PR  MORTGAGE/X 26 PR  SOLD/GEOMT  29 PR
TRIANGLE/X  4 PR   TRIG/CALC  53 IV          0

```



Sample printout
from program below

```

10 ! MODIFIED BY MEL NOMINA FOR THREE COLUMN PRINTING 5/23/85
20 ! LINE 330 CHANGE THE VALUE OF Z FOR THE LABEL YOU ARE USING
30 OPEN #22:"CLOCK"
40 INPUT #22:L$,Z$,Q$
50 CLOSE #22
60 CALL CLEAR
70 DISPLAY AT(12,8):"MELS -3- LABELS"
80 DISPLAY AT(10,5):"ARE YOU READY (Y/N) ? "
90 DISPLAY AT(16,4):"TODAY'S DATE - ":L$
100 DISPLAY AT(18,4):"TIME OF DAY - ":Q$
110 ACCEPT AT(10,26)SIZE(8)BEEP:R$
120 Z=0
130 DIM TYPE$(4),B$(3)
140 DIM A(3),B(3),C(3)
150 TYPE$(1)="DF" :: TYPE$(2)="DV" :: TYPE$(3)="IF" :: TYPE$(4)="IV" :: TYPE$(5)
="PR"
160 IMAGE "DSK - 1 - DISKNAME - ##### TIME DATE "
170 IMAGE "AVAILABLE =### USED = ### #####"
180 IMAGE "##### ## ## ##### ## ## ##### ## ##"
190 OPEN #2:"RS232/2.DA=B.BA=9600" :: PRINT #2:CHR$(27);CHR$(48);CHR$(15);
200 OPEN #22:"CLOCK"
210 INPUT #22:L$,Z$,Q$
220 CLOSE #22
230 OPEN #1:"DSK1.",INPUT,RELATIVE,INTERNAL
240 INPUT #1:A$,J$,K$
250 PRINT #2,USING 160:A$ :: PRINT #2,USING 170:K$,J$,Q$,Z$
260 PRINT #2,USING 180:"Filename","Siz","Typ","Filename","Siz","Typ","Filename",
"Siz","Typ"
270 Z=3
280 FOR X=1 TO 3
290 INPUT #1:B$(X),A(X),B(X),C(X)
300 NEXT X
310 Z=Z+1
320 IF LEN(B$(1))=0 THEN 370
330 PRINT #2,USING 180:B$(1),B(1),TYPE$(ABS(A(1))),B$(2),B(2),TYPE$(ABS(A(2))),B
$(3),B(3),TYPE$(ABS(A(3)))
340 IF Z<9 THEN 360
350 PRINT #2:" " :: Z=0
360 GOTO 280
370 CLOSE #1
380 IF Z=9 THEN 390 :: PRINT #2:" " :: Z=Z+1 :: GOTO 380
390 DISPLAY AT(20,2):"Another Copy or Disk ? Y"
400 ACCEPT AT(20,25)SIZE(-1)BEEP:Y$
410 IF Y$<"Y" THEN 440
420 DISPLAY AT(20,2)SIZE(25):"INSERT DISK INTO DRIVE" :: CALL KEY(0,X,Y):: DISPLA
Y AT(20,2):" " :: IF Y=0 THEN 420
430 GOTO 230
440 PRINT #2:CHR$(27);"Q" :: CLOSE #2 :: STOP

```


NEW HORIZONS COMPUTER USERS GROUP

RAM DISK PROJECT DEVELOPMENT TEAM

JOHN CLILDK 418-874-8838 RON GRIES 418-874-1414 DAVID ROMER 418-688-8911

-- HORIZON RAMDISK Fact Sheet --

- 104K Ramdisk card for the 99/4a PE-Box, expandable to 192K (720 sectors).
- Uses low-power CMOS static RAM chips.
- Functions EXACTLY like a TI floppy drive but at Random Access Memory speed.
- Compatible with any software or language that uses a standard TI DBRLNK, including disk utilities, sector copy programs, and programs like DM-1000, DISK MANAGER II, and Millers Graphics EXPLORER program. Compatible languages include TI-BASIC, EXTENDED BASIC, TI-FORTH, TI-LOGO and ASSEMBLY LANGUAGE.
- The only BATTERY-BACKED Ramdisk for the 99/4a, carry it from computer to computer like a floppy diskette. Ni-cad batteries charge while the computer is running.
- Features CALL statements from TI-BASIC to 1) set the Ramdisk drive #. 2) set the maximum number of sectors. 3) set the write protection. 4) turn on CRU for direct DSR access. 5) execute machine code from BASIC.
- DIP switch setting allows CRU addressing from >1000 to >1700.
- Comes with complete DSR source code, including a separate manual that details all DSR routines.
- Documentation explains how users may add their own assembly language CALL routines to enhance BASIC.
- Comes with development software, including a loader for any E/A opt. 3 object files to allow users to modify the DSR as desired.
- Schematic Diagram included.
- Available in three packages. 1) as a ready-to-run card (888D or D88D) with 90 day warranty on parts and labor. 2) as a bare printed circuit board with parts list and instructions (no warranty). 3) as a schematic diagram with parts list. All of the packages include the operating system with full source code, documentation and development software.
- If sold through a traditional concept with wholesale and retail mark-ups the price would be \$340+.

Note

FD/RD	- TIME, SEC -			TEST CONDITION
SPEED FACTOR	RAM DISK	FLOPPY DISK		
3.6	15.5	55.3		INITIALIZE 888D WITH DISK MGR II SECTOR COPY PROGRAM
10.0	1.4	16.0		- FORMAT A DISK (888D)
6.5	1.3	8.5		- READ 90 SECTORS
20.4	1.3	26.5		- WRITE 90 SECTORS
4.8	4.9	23.3		LOAD MULTIPLAN
1.4	12.7	17.8		LOAD TI BASIC PROGRAM (35 SECTORS)
11.4	1.3	14.8		SAVE TI BASIC PROGRAM (35 SECTORS)
1.9	5.1	9.5		LOAD EXT. BASIC PGM (35 SECTORS)
3.3	5.9	19.4		SAVE EXT. BASIC PGM (35 SECTORS)
3.4	4.3	14.7		LOAD DISK FIXER
6.3	1.8	11.3		LOAD DM1000 DISK MANAGER
8.7	0.7	6.1		LOAD E/A EDITOR
6.5	1.5	9.8		LOAD E/A ASSEMBLER
9.0	1.2	10.8		LOAD TI WRITER EDITOR
8.9	1.4	12.4		LOAD TI WRITER FORMATTER
4.4	1.5	6.4		READ 15 SECTOR D/V 80 FILE
6.5	24.5	158.5		WRITE 244 SECTOR FIXED 80 FILE
2.6	220.0	544.0		ASSEMBLE THE R/D OPERATING SYSTEM

For price and ordering information, write to:

DAVID R. ROMER
BOX 554
WALBRIDGE, OH 43465

NOTE

This product will be available for demonstration and testing during the January meeting of the Lima H.C.U.G. DON'T BUY ANY "128K CARDS" UNTIL YOU GET A CHANCE TO SEE THIS PRODUCT. The price for a 104K ramdisk (this is in addition to the normal 32K memory expansion) will be about \$160 + tax which is MUCH less than any currently marketed "128K card".