

DECEMBER 1986 ISSUE NO.15

FOR THE RECORD

by Ed Bittner
Recording Secretary

Well ,if you weren't there you missed it ! (Obvious excess verbage). Tuesday the 18th was the November meeting of the West Penn 99 er's. Elections were held and were moving into a new year with double the membership of last. Recently elected Scott Coleman re-enforced his platform commitment by proclaiming that, despite age, we are both organizationally and enthusiastically young!!(tell my arthritic keyboard fingers, Scott).

Since this report needs to be submitted yesterday, I will simply list the newly elected officers and what they are doing for the club.

- President Scott Coleman- Attended TI Faire Chicago, Nov 1 1986. He has for us a video tape for the Nov and Dec meetings. He also demoed the TI SINGS program, if you haven't seen it come to the Dec meeting. It's neat.
- V.Pres. Mickey Schmitt- Brought and distributed copies of our cassette and disk library catalog with more to come.
- Corres.Sec. Gene Kelly- Continues to stay in the "upper room" but spent some time on contest rules. DON'T FORGET Dec 17 our Dec. meeting date is the last date for submission.
- Rec-Sec Ed Bittner- Distributed what he considered worthy materials reproduced from newsletters from around the country. Also, available is the "borrow a newsletter library."
- Librarian Clyde Colledge- continues his never ending battle with about 3000K programs (Heeeeeee111111ppppppp!!!!!!).
- Treasure Jan Trayers- Besides peddling her diskettes and memberships and keeping track of \$I/O\$, Jan does coffee tea and hot chocolate, not to mention munchies and pumpkin cake. Thanks Jan.!
- Editor John Willforth- John does nothing except make it all happen. Enough said.

Merrily submitted,
Scoops Bittner



TREASURER'S REPORT FOR NOVEMBER

RECEIVED		PAID	
11/4	\$ 60.00	DISKS	11/7 44.00
	10.00	MEMBERSHIP	72.00
11/17	112.50	MEMBERSHIP	11/17 26.00
			POSTAGE
			12 DATA CASES
			FOR SOFTWARE
			(FOR LIBRARY)
	24.00	LIBRARY	
	4.00	POP SALE	
	9.00	MICROPENDIUM	
	107.50	DISKS & DATA CASES	
-----		-----	
	\$ 327.00	TOTAL	142.00
			TOTAL
-----		-----	

AS OF NOVEMBER THE BANK BALANCE IS \$390.48
AND THE CASH BALANCE (CASH ON HAND) 50.00

440.48 TOTAL ASSETS

I HAVE ORDERED 800 DISKS FOR THE CLUB. I KNOW I WAS TO ORDER 1000, BUT AFTER SENDING JOHN \$46.20 FOR POSTAGE WITH THIS REPORT, THAT WOULD TAKE OUR TOTAL ASSETS DOWN UNDER \$100, AND I DO NOT FEEL THAT IT WOULD BE A WISE MOVE. SINCE YOU ALL HAVE ELECTED (???) ME TREASURER, I WOULD HOPE THAT MEANS THAT YOU TRUST MY JUDGEMENT -- SO I DECIDED THAT WE SHOULD KEEP A BALANCE OF \$100 (OR AS CLOSE AS POSSIBLE) IN OUR ACCOUNT. SINCE THIS WAS MY DECISION, I WILL ACCEPT THE FLAK GLADLY, KNOWING THAT WE CAN HANDLE MOST EMERGENCIES THAT WOULD COME ALONG. OH YES, THE MONEY THAT WAS DONATED TO THE "GOODIE FUND" IS NOT IN THE REPORT BECAUSE IT WILL KEPT COMPLETELY SEPARATE AND USED FOR JUST GOODIES, PERIOD. TO SATISFY THE CURIOUS, WE COLLECTED \$13 AND SOME ODD CENTS (PROBABLY FROM ED). THIS WILL INSURE SOME SORT OF MUNCHIES FOR THE NEXT MEETING. SEE YOU THERE!

JAN TRAYERS, TREASURER

MY BUTTONS ARE POPPING, AND I KNOW THAT SOME OF YOU WILL SAY THAT HAS TO DO WITH MY WEIGHT, BUT SERIOUSLY, HERE WE ARE IN DECEMBER OF THE FIRST FULL YEAR OF THIS CLUB'S EXISTANCE, AND WE HAVE GROWN FROM ABOUT 23 MEMBERS IN JANUARY, TO OVER 60 AS I WRITE THIS. NUMBERS, ARE NOT THE IMPORTANT THING HERE EITHER, BUT I BELIEVE THAT WE NOW KNOW THAT "WE WILL" SUCCEED!

THE FIRST MONTHS OF EFFORT BACK IN SEPT. THROUGH DEC. 1985, WERE FILLED WITH UNCERTAINTIES, BUT THE RIGHT COMBINATION OF PEOPLE, WITH THE RIGHT MOTIVATIONS, CAME TOGETHER, AND THE "WEST PENN 99'ERS" WAS BORN.

WE NOW MEET "EVERY" THIRD TUESDAY AT THE PRESBYTERIAN CHURCH OF THE COVENANT, AT 4TH AND OAK STREETS, IN DOWNTOWN IRWIN, PENNSYLVANIA, AT 7:00 PM. IF ANYONE COMES UPON THIS NEWSLETTER, AND WOULD LIKE TO ATTEND, YOU ARE WELCOME TO COME AND VISIT WITH US. WE HAVE BOTH ASSOCIATE AND FAMILY TYPES OF MEMBERSHIP. THE FAMILY MEMBERSHIP IS \$15. A YEAR, FROM JAN. 1, OF ANY ONE YEAR, TO DEC. 31, OF THAT YEAR, AND INCLUDES ALL BENIFITS, WHILE THE ASSOCIATE MEMBERSHIP IS FOR THE SAME DURATION, YOU ARE ENTITLED TO RECEIVE ONLY THE NEWSLETTER, AND THE YEARLY MEMBERSHIP IS \$10.

FOR FURTHER INFORMATION CONTACT: SCOTT COLEMAN (412) 271-6283

GETTING THE MOST FROM YOUR CASSETTE SYSTEM
BY MICKEY SCHMITT
NUMBER 8
CLYDE COLLEDGE'S: HIGH-SPEED CASSETTE LOADER
PART II

AS PROMISED... THIS MONTH I AM CONTINUING WITH THE TOPIC OF CLYDE COLLEDGE'S: HIGH-SPEED CASSETTE LOADER. FOR THOSE OF YOU WHO ARE NOT YET FAMILIAR WITH THIS PARTICULAR PROGRAM... LET ME SAY ONCE AGAIN... IF YOU ARE STILL USING A CASSETTE SYSTEM... THIS PROGRAM IS A MUST! IT IS BY FAR ONE OF THE MOST IMPRESSIVE CASSETTE UTILITIES AVAILABLE TO DATE! WHILE LOADING CLYDE'S PROGRAM IS NOT A DIFFICULT PROCESS IN ITSELF... UNDERSTANDING THE PROCEDURE FOR THE VERY FIRST TIME CAN BE A LITTLE CONFUSING. WITH THAT THOUGHT IN MIND I HAVE TRIED TO KEEP THE "LOAD" INSTRUCTIONS AS SIMPLE AS POSSIBLE.

INSTRUCTIONS FOR LOADING CLYDE'S LOADER

1. INSERT THE EXTENDED BASIC MODULE INTO THE COMPUTER
2. SELECT OPTION 2 - EXTENDED BASIC
3. TYPE: OLD CS1
4. THEN: PRESS ENTER
5. FOLLOW THE DIRECTIONS AS THEY APPEAR ON YOUR MONITOR OR TV SCREEN:
 - 5.1 * REWIND CASSETTE TAPE CS1
THEN PRESS ENTER
 - 5.2 * PRESS CASSETTE PLAY CS1
THEN PRESS ENTER
 - 5.3 COMPUTER DISPLAYS MESSAGE:
* READING
 - 5.4 COMPUTER DISPLAYS MESSAGE:
* DATA OK
 - 5.5 * PRESS CASSETTE STOP CS1
THEN PRESS ENTER
6. WAIT FOR THE FLASHING CURSOR TO APPEAR IN THE LOWER LEFT-HAND CORNER OF YOUR MONITOR OR TV SCREEN
7. TYPE: RUN
8. THEN: PRESS ENTER
9. THE COMPUTER WILL THEN RETURN BACK TO THE EXTENDED BASIC SCREEN WITH THE MESSAGE: * READY * AND THE CURSOR WILL ONCE AGAIN BE FLASHING IN THE LOWER LEFT-HAND CORNER OF YOUR MONITOR OR TV SCREEN
CLYDE COLLEDGE'S: HIGH-SPEED CASSETTE LOADER IS NOW LOADED

INSTRUCTIONS FOR USING CLYDE'S LOADER

1. AFTER YOU HAVE LOADED CLYDE'S LOADER
TYPE: CALL LINK("OLD")
2. THEN: PRESS ENTER
3. YOU CAN NOW LOAD IN ANY PROGRAM WHICH YOU HAVE ON CASSETTE IN HALF THE AMOUNT OF TIME THAT IT WOULD HAVE TAKEN YOU NORMALLY!
4. JUST FOLLOW THE DIRECTIONS AS THEY APPEAR ON YOUR MONITOR OR TV SCREEN: THAT'S ALL THERE IS TO IT!

CLYDE'S LOADER HAS TWO VERY SPECIAL FEATURES THAT SHOULD NOT GO WITHOUT MENTION. FIRST OF ALL... THE HIGH-SPEED CASSETTE ROUTINES ARE EXACTLY THE SAME AS TEXAS INSTRUMENTS CASSETTE ROUTINES - MAKING THIS PROGRAM VERY USER FRIENDLY. SECONDLY... ONCE THE LOAD PROGRAM HAS BEEN PLACED IN THE 32K MEMORY... IT WILL STAY IN MEMORY... EVEN IF YOU ACCIDENTLY HIT "FUNCTION QUIT". JUST RETYPE "CALL LINK("ON")" AND YOU ARE READY TO GO. YOU CAN'T LOSE THE "LOAD PROGRAM" UNLESS YOU TURN OFF THE CONSOLE!

IF YOU WISH TO PURCHASE THIS PROGRAM PLEASE SEND \$5.00 TO:

WEST PENN 99'ERS
C/O JOHN F. WILLFORTH
R.D. #1 BOX 73A
JEANNETTE, PA. 15644

ATTN: WEST PENN LIBRARIAN

ED. NOTE:

THIS PROGRAM IS THE ENHANCED VERSION OF THE ONE THAT SOME OF YOU U.G.'S HAVE RECEIVED FROM ME TO SAMPLE. CLYDE HAS REFINED THIS PROGRAM EVEN MORE THAN THE COPY YOU HAVE. IF YOU WANT THE "BEST" CASSETTE LOADER PROGRAM IN EXISTANCE, SEND FOR THIS UNIQUE UTILITY.

A local electronics supply house had a sale on dot matrix printers so I grabbed one for "the kids'" TI(or so I told the salesman). In reality I fully intended to keep it for myself, but what self respecting adult would want a slow(salemans word), not nearly letter quality(him again), cheap(my word) printer? I did. The Smith-Corona D100 can do more tricks than a monkey on a stick, prints at 120cps, has built in tractor feed and friction feed. The sale price was \$188. I thought I would miss the near letter quality feature, but the proportional space feature more than makes up for it and runs full tilt to boot(no double typing and much faster than 20-30 cps).

The interface with the parallel port turned out to be almost easy. The pinout suggested by Jack Mathis(July 86 Newsletter) was correct in most details but I didn't have that to go by. The D100 Busy(pin 11) works best if you pull it up to +5V with a jumper from pin 10 to pin 15 on the PIO port of the RS232 card or the RS232 connector. The D100 manual is a gem. It gives you all of the dope you need to use the thing. The TI manual is the opposite. To give you a head start I have tried many of the features and give examples below for use of the D100 with TI-WRITER.

The Printer is PIO

ESC 4 selects italics. the keypress sequence is CTRL(red dot)U FCTN(black dot)R CTRL U, 4(that is number four). In the following I will show CTRL as ^ and FCTN as *.

ESC 5 turns off the italics. The keypress sequence is ^U*R^U5.

ESC W1 selects enlarged letters.

ESC W0 turns off the large letters(need I repeat (^U*R^UW0)?

ESC E selects emphasized mode, while ESC F turns it off. This mode can be used with certain other modes for such things as

TITLES

ESC M selects elite type(12 cpi). I will leave the key sequence to your imagination(see the above examples if your memory erased in the last 100 ms).

ESC P cancels the elite type by setting the normal mode (10cpi).

This is my favorite mode, PROPORTIONAL MODE. It is nearer letter quality than most NLQ modes I have seen on Cheap Dot Matrix Printers. It is selected by ESC p1 that is a lower case p and a numeral one.

ESC p0 that is a lower case p and a zero will turn it off

Underlined text is selected by ESC -1, turned off by ESC -0

Condensed mode(16.7cpi) and elongated mode can be set and reset by single control characters. They are entered by keystroke sequences ^U0^U, ^UR^U, ^UN^U, and ^UT^U (go ahead and try them out).

The printer also gives you complete control over the line spacing through five escape sequences. ESC 0 is the 1/8 inch space, ESC 1 is the 7/72 inch space, ESC 2 is the default 1/6 inch space. The two remaining codes let you set n/144 inch(ESC 3,n), and n/72 inch (ESC A,n) linespaces. Both require a bit of thinking to get them right. Remember, each is a three character code. The first is easy, remember old ^U*R^U), the next is on the keyboard(3 or A). the third is scattered all over the place. What you need to do is get the TI-WRITER to generate a code with a value of n.

If n is less than 32 look on page 146 of the quick reference guide in the TI-WRITER manual. IF n is between 31 and 127 look on page 145. The codes you might want above 127 for the n/144 inch mode are not available within TI-WRITER. They would be available within BASIC by a call to CHR\$(n).

The printer will respond to a large variety of form control codes. ESC j,n feeds paper n/144 inch, ESC N,n skips n lines at the bottom of the page, ESC j,n feed in reverse n/144 inch (don't do it if tractor feed or across perfs) ESC B,n,n,n,n, NULL sets vertical tabs, ESC C,n sets the form length in number of lines, ESC D,n,n,n, NULL set horizontal tabs, ESC l,n sets left margin.

As you can see, this is a full function printer. I will not try to go into the graphics capabilities except to say that three densities are offered, 60, 72, and 120 dpi and full pin mapping is available.

Rich (DOC) Sprecher

notes:

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TO LOAD THE CORECOMP DISK MANAGER FROM WITHIN A PROGRAM,  
>100 CALL INIT  
>110 DELETE "LD-CMDS"  
>120 CALL LINK("MGR")
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TO OREDER A **REPLACEMENT** T.I. WRITER MANUAL, CALL 1-800-TI-CARES. YOU CAN PLACE AN ORDER FOR ONE AND THEY WILL SEND YOU ONE FOR "NUTHIN", + \$3.00 TO COVER SHIPPING AND HANDLING.

TO GET A REPLACEMENT "GROM EXT. ASSEMBLY", ORDER PART # 1049693-001, AND BE ADVISED THAT THE UNIT WILL COST \$5.86 + \$2.50 S/H.

TO **STOP** AN ACCIDENTALLY STARTED " **OLD CS1** ", (BEFORE THE CASSETTE STARTS TO ACTUALLY READ THE NEW FILE FROM TAPE), PRESS "FCTN" AND "E" KEYS, AND WHILE HOLDING THEM DOWN, PRESS "ENTER".

TO MAKE YOUR SPEECH SYNTHESIZER SPEAK A LISTING OF YOUR PROGRAM, FIRST SAVE THE PROGRAM TO SOME DEVICE, IF THE PROGRAM IS EXTENDED BASIC THIS IS REQUIRED, THEN USING THE "BASIC" OPTION ON THE TE-2, LOAD THE PROGRAM BACK INTO YOUR COMPUTER, (DON'T RUN IT), IN THE COMMAND MODE, TYPE: LIST"SPEECH".

I WILL TRY TO INCLUDE MORE HELPFUL HINTS NEXT MONTH, AND IF ANY OF YOU WOULD LIKE TO CONTRIBUTE SOMETHING THAT YOU HAVE LEARNED ABOUT YOUR T.I.99, FEEL FREE TO SEND IT TO ME.

MEETING INFORMATION:

AT THE UNITED PRESBYTERIAN CHURCH OF THE COVENANT
4TH AND OAK STREETS
IRWIN, PA
TIME 7:00 PM
DATE DECEMBER 16, 1986

THE LIBRARY MAY BE OPEN AT 6:45 PM , DEPENDING ON VARIABLES THAT MAY AFFECT THE PROGRAM FLOW, WHICH ARE INFLUENCED BY WEATHER AND TRAFFIC.

BY THE WAY THE ARTICLE ON PAGES 4 AND 5 WAS CONTRIBUTED BY ONE OF OUR NEWEST MEMBERS, RICH SPRECHER. I FOUND THE ARTICLE TO BE INFORMATIVE, INTERESTING, AND WELL WRITTEN.

PRINTER COMMANDS

(energizes or turns on)

	10X	SG-10	MX-80	FX-80	KX-P1091	OKIDATA
ITALICS	127 52	127 52	#####127 52	127 52	127 52	#####
ELITE	127 66 2	127 66 2	#####127 77	127 77	127 77	28
CONDENSED	127 15	127 15	127 15	127 15	127 15	29
PICA	127 66 1	127 66 1	#####	#####127 80	127 80	30
EXPANDED	127 87 1	127 87 1	127 14	127 87 1	127 87 1	31
SUPERSCRIPT	127 83 0	127 83 0	#####	27 83 0	127 83 0	127 74
SUBSCRIPT	127 83 1	127 83 1	#####	127 83 1	127 83 1	127 76
NEAR LETTER	#####	127 65 4	#####	127 120 1	127 110	127 49
EMPHASIZED	127 69	127 69	#####	127 69	127 69	127 84
UNDERLINE	127 45 1	127 45 1	#####	127 45 1	127 45 1	127 67
DOUBLE STRIKE	127 71	127 71	127 71	127 71	127 71	127 72
SLASHED ZERO	#####	127 92 1	#####	#####	#####	#####
1/8 LINE SP.	127 48	127 48	127 48	127 48	127 48	127 56
1/6 LINE SP.	127 50	127 50	127 50	127 50	127 50	127 54
7/72 LINE SP.	127 49	127 49	127 49	127 49	127 49	#####
n/72 LINE SP.	127 65 n	127 65 n	127 65 n	127 65 n	#####	#####
n/144 LINE SP.	127 51 n	127 51 n	#####	#####	#####	127 37 57 n
n/216 LINE SP.	#####	#####	#####	127 51 n	#####	#####
TOP MARGIN	127 82 n	127 82 n	#####	#####	#####	#####
BOTTOM MARGIN	127 78 n	127 78 n	127 78 n	127 78 n	#####	#####
LEFT MARGIN	127 77 n	127 77 n	#####	127 108 n	#####	#####
RIGHT MARGIN	127 81 n	127 81 n	#####	127 81 n	#####	#####
COLUMN WIDTH	#####	#####	127 81 n	#####	#####	#####
PAGE LTH. LINES	127 67 n	127 67 n	27 67 n	127 67 n	#####	#####
PAGE LTH. INCHES	127 67 0 n	127 67 0 n	#####	127 67 0 n	#####	#####
PAPER OUT "OFF"	127 56	127 56	127 56	127 56	127 56	#####
PROPORTIONAL	#####	127 112	#####	127 112	127 111	#####
RESET PRINTER	127 64	127 64	#####	127 64	#####	24

THE ABOVE ARTICLE COULD NOT HAVE COME AT A BETTER TIME. I HAVE RECEIVED MANY QUERIES ON HOW TO CONTROL A PARTICULAR PRINTER, WELL WHAT DO I KNOW ABOUT EVERY PRINTER UNDER THE SUN, SO WHEN THIS ARTICLE ARRIVED IN THE " BRAZOS VALLEY 99'ERS ", I WAS ELATED ! SO YOU HAVE ALONG WITH RICH SPRECHER'S ARTICLE QUITE A BIT OF NEW PRINTER INFO TO CHEW ON.

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100 ! ***** MS/LABELS ***** By: Martin A. Smoley ***** For EPSON Printer *****
110 ! ***** NorthCoast 99er's UB *****
120 OPEN #9:"P10" : OPEN PRINTER (Could be RS232) *** Extended Basic ***
130 PRINT #9:CHR$(27);"D";CHR$(27);"B";
      "D"=STOP skip over perf,"B"=STOP paper end detector
140 CALL CLEAR :: CALL SCREEN(13)
150 PRINT " ** MS/LABELS **: " PRINTS: : " 3-1/2in BY 15/16in":
      " LABELS": : :
160 PRINT " Enter Data at Prompts!": : " You will have 4 line per": : " label. Li
ne #1 = 15 Cols.": : " Line #2 = 28 Cols.": :
170 PRINT " Lines #3 and #4 = 49 Cols.": : :
180 GOSUB 190 :: GOSUB 210 :: GOSUB 220 :: GOSUB 230 :: GOTO 240
190 PRINT :: PRINT " *****
200 INPUT "ENTER LINE 1 ":A$ :: RETURN
210 PRINT :: PRINT " ENTER LINE #2" :: INPUT "*****";B$
:: RETURN
220 PRINT :: PRINT " ENTER LINE #3" :: INPUT "0*****1*****2*****3****
*****4*****49 " :C$ :: RETURN
230 PRINT :: PRINT " ENTER LINE #4" :: INPUT "0*****1*****2*****3****
*****4*****49 " :D$ :: RETURN
240 PRINT :: INPUT "HOW MANY COPIES ":X
250 CALL CLEAR :: PRINT " Hold >Q< to Quit Printing": : : : :
260 FOR I=1 TO X ! ***** PRINTOUT LOOP *****
270 ! PRINT #9:CHR$(27);"B";! START DOUBLE STRIKE OPTIONAL
280 PRINT #9:CHR$(27);"E";! START EMPHASIZED
290 ! PRINT #9:CHR$(27);"M";! Start Elite-size(makes #1=18 characters)
300 PRINT #9:CHR$(27);"W";CHR$(1);! START ENLARGED
310 PRINT #9:A$
320 PRINT #9:CHR$(27);"W";CHR$(10);! STOP ENLARGED
330 ! PRINT #9:CHR$(27);"P";! Stop Elite-size(Needed if 290 is used)
340 PRINT #9:" ";B$;CHR$(27);"F" ! STOP EMPHASIZED
350 PRINT #9:CHR$(27);CHR$(15);" ";C$;;" ";D$;CHR$(18);CHR$(27);"H";!
CHR$(15)=START CONDENSED+CHR$(18)=STOP,"H"=STOP DOUBLE STRK.
360 FOR K=1 TO 3 :: PRINT #9 :: NEXT K
370 CALL KEY(0,K,S):: IF K=81 OR K=113 THEN 390
380 NEXT I
390 CALL CLEAR :: CALL SCREEN(6)! ***** Beginning of TASK SCREEN *****
400 PRINT " Enter M for More labels": : " N for New labels": : " L to
Change a line": :
410 PRINT " 0 to Quit the program": :
420 INPUT " Enter your choice": :DO$
430 IF DO$="M" OR DO$="m" THEN CALL CLEAR :: GOTO 240
440 IF DO$="N" OR DO$="n" THEN 140
450 IF DO$="L" OR DO$="l" THEN 480
460 IF DO$="0" OR DO$="q" THEN 520
470 GOTO 420
480 CALL CLEAR ! ***** Beginning of LINE CHANGE SCREEN *****
490 INPUT " Enter line number to be changed 1 to 4 ":L :: IF L<1 OR
L>4 THEN 490
500 ON L GOSUB 190,210,220,230
510 GOTO 390
520 PRINT #9:CHR$(27);"@";! Initialize Printer = Wipe out any leftover commands
530 CLOSE #9
540 ! *** MS/LABELS ***
550 END

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MS/LABELS-DOC

"MS/LABELS" started out to be a small, simple program to print 3-1/2 in X 15/16 in. labels for return addresses and disk labels, but it evolved into the program you see at the left.

THE USER INSTRUCTIONS FOLLOW

- (1) Load the program (Don't run it yet).
- (2) Align your labels in the printer then turn the printer on.
- (3) Now RUN the program.
- (4) Enter the data as prompted by the program. There is one circumflex (^) for each space on the entry line. Do not use any commas.
- (5) After you have entered (4) lines the program will ask how many labels you want. If you want to see one enter 1. After the label is printed you will see a screen which will let you print (N)ore if you like what you see.
- (6) If you don't like them enter L to change a line and then the line number you would like changed. You can repeat the L for as many lines as you need, or you can use M for more and print one at any time until you like the label you have. At this point you use More, then type in the quantity you want and the printer will start running them off. If you change your mind, HOLD >Q< until the printer stops and you will return to the task screen.
- (7) At the task screen you can also enter an (N) if you want a completely New label or (Q)uit to exit the program.

NOTE: If your ribbon is not dark enough you can edit the program and delete the (!) and the space from the beginning of line 270. This will give you Double Strike throughout. Also! Doing the same thing to line Nos. 290 and 330 will give you 18 characters in line #1 if your printer is capable of Elite Print (You will have to remember that you have (3) characters past the last (^) in line one.)

If you do not like to type, my programs are in the NorthCoast 99er's Library. Good Luck! Marty

--- MS/LABELS ---
 TI99/4A Extended Basic
 This label was made by the program listed above.
 Ln.#1=ENLARGED #2=Std. size #3=Condensed

SECTOR SAVE

by John E. Miller

```

100 CALL CLEAR
105 INPUT "PRINT INSTRUCTIONS?"
:ANS#
110 CALL CLEAR
115 IF ANS#="Y" THEN 130
120 IF ANS#="YES" THEN 130
125 GOTO 235
130 PRINT "This program display
a sectorbytes in ASCII. It can
be used (1) to p
rint a number"
135 PRINT "of consecutive secto
rs or (2) to analyze and then
modify the by
tes one sector"
140 PRINT "at a time. It allow
s you tomake changes to any or
all of the 256 by
tes by entering"
145 PRINT "the byte location (t
wo numbers between 0 and 2
55, separated by
a comma). The"
150 PRINT "The program will ask
you forthe correct ASCII for e
ach byte location
and, after"
155 PRINT "printing the correct
ed sector to verify accura
cy, it will trans
fer the data to disk."
160 PRINT
165 PRINT
170 INPUT "PRESS ANY KEY TO CON
TINUE":CONT#
175 CALL CLEAR
180 PRINT "Because the screen c
annot display all the bytes o
f a sector at one
time, all"
185 PRINT "information is print
ed. Thedefault is PIO but this
can be changed in
line 235."
190 PRINT
195 PRINT "The core of the prog
ram is the DIS/FIX 80 file RAW
/0 which is assu
med to be on"
200 PRINT "the disk in Drive 1.
That assumption can be chang
ed inline 250. RA
W/D was written"
205 PRINT "by Barry Traver and
is available on HORIZON-25
."
210 PRINT
215 PRINT
220 PRINT
225 PRINT
230 INPUT "PRESS ANY KEY TO CON
TINUE":CONT#
235 OPEN #1:"PIO"
240 REM .....LOCATES SECTOR INF
ORMATION.....
.....
245 CALL INIT
250 CALL LOAD("DSK1.RAW/0")
255 CALL CLEAR
260 INPUT "DISK DRIVE= ":D
265 CALL CLEAR
270 PRINT "MENU:"

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275 PRINT : " 1. PRINT RANGE OF
SECTORS"
280 PRINT : " 2. CHANGE SECTOR
DATA"
285 PRINT : " 3. END"
290 PRINT
295 INPUT "YOUR CHOICE?":ANS
300 IF ANS=1 THEN 320
305 IF ANS=2 THEN 390
310 IF ANS=3 THEN 460
315 GOTO 265
320 REM .....PRINTS A RANGE OF
SECTORS.....
.....
325 INPUT "SECTOR RANGE(2 NUMBE
RS, 0 TO 359):":SX,SY
330 IF SX<=SY THEN 350
335 S1=SX
340 SX=SY
345 SY=S1
350 FOR SECTOR=SX TO SY
355 S=SECTOR
360 PRINT #1
365 PRINT #1:"SECTOR =":S
370 CALL LINK("READ",D,S,A#,B#)
375 GOSUB 760
380 NEXT SECTOR
385 GOTO 265
390 REM .....REVIEW/CHANGE SECT
OR DATA.....
.....
395 INPUT "SECTOR FOR REVIEW= "
:S
400 PRINT #1
405 PRINT #1:"SECTOR =":S
410 CALL LINK("READ",D,S,A#,B#)
415 GOSUB 760
420 REM .....DECIDE IF CHANGES
DESIRED OR A DIFFERENT SECTOR N
EEDED.....
.....
425 INPUT "ANY CHANGES?":ANS#
430 IF ANS#="Y" THEN 475
435 IF ANS#="YES" THEN 475
440 INPUT "ANOTHER SECTOR?":ANS
#
445 IF ANS#="Y" THEN 370
450 IF ANS#="YES" THEN 370
455 GOTO 270
460 REM .....END PROGRAM.....
.....
465 CLOSE #1
470 END
475 REM .....DESCRIBE BYTE LOCA
TIONS FOR CHANGES.....
.....
480 RANGEHI=0
485 INPUT "RANGE FOR CHANGES(2
NUMBERS, 0 TO 255):":RANGELO,RA
NGEHI
490 IF RANGELO<=RANGEHI THEN 51
0
495 R1=RANGELO
500 RANGELO=RANGEHI
505 RANGEHI=R1
510 RANGELO=RANGELO+1
515 RANGEHI=RANGEHI+1
520 IF RANGEHI<129 THEN 545
525 RANGEHI=RANGEHI
530 RANGEHI=128
535 IF RANGELO>128 THEN 615
540 REM .....INPUT ASCII CHANGE
S FOR FIRST 128 BYTES OF SECTOR

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.....
545 PRINT "ASC FOR BYTE":RANGELO
0-1;"=";
550 INPUT ASCII
555 A2#=CHR*(ASCII)
560 FOR A=RANGELO+1 TO RANGEHI
565 PRINT "ASC FOR BYTE":A-1;"
"
570 INPUT ASCII
575 A2#=A2#&CHR*(ASCII)
580 NEXT A
585 A1#=SEG*(A#,1,RANGELO-1)
590 A3#=SEG*(A#,RANGEHI+1,128-R
ANGEHI)
595 A#=#A1#&A2#&A3#
600 IF RANGEHI=0 THEN 670
605 REM .....INPUT ASCII CHANGE
S FOR LAST 128 BYTES OF SECTOR.
.....
610 RANGELO=129
615 PRINT "ASC FOR BYTE":RANGELO
0-1;"=";
620 INPUT ASCII
625 B2#=CHR*(ASCII)
630 FOR A=RANGELO+1 TO RANGEHI
635 PRINT "ASC FOR BYTE":A-1;"=
"
640 INPUT ASCII
645 B2#=#B2#&CHR*(ASCII)
650 NEXT A
655 B1#=SEG*(B#,1,RANGELO-129)
660 B3#=SEG*(B#,RANGEHI-127,25
6-RANGEHI)
665 B#=#B1#&B2#&B3#
670 INPUT "ANY CORRECTIONS? ":A
NS#
675 IF ANS#="Y" THEN 475
680 IF ANS#="YES" THEN 475
685 PRINT
690 PRINT
695 PRINT
700 PRINT "HERE'S A PRINT-OUT O
F WHAT IS GOING TO THE DISK SE
CTOR."
705 PRINT "LAST CHANCE TO MAKE
A "
710 PRINT "CORRECTION."
715 GOSUB 760
720 PRINT
725 PRINT
730 INPUT "ANY CHANGES DESIPED?
":ANS#
735 IF ANS#="Y" THEN 475
740 IF ANS#="YES" THEN 475
745 REM .....WRITE CORRECTED BY
TE DATA TO PROPER SECTOR.....
.....
750 CALL LINK("WRITE",D,S,A#,B#
)
755 GOTO 440
760 REM .....SUBROUTINE FOR PRI
NTING SECTOR IN ASCII.....
.....
765 FOR A=1 TO 128
770 M#=SEG*(A#,A,1)
775 PRINT #1:ASC(M#);
780 NEXT A
785 FOR A=1 TO 128
790 M#=SEG*(B#,A,1)
795 PRINT #1:ASC(M#);
800 NEXT A
805 PRINT #1
810 PRINT #1
815 RETURN

```


IDENTIFICATION OF 5 1/4" DISKS



SEAL	COMPANY	COMMENTS
• • •	MAXELL	
COMPLETE SEAL	MEMOREX	ALSO ALBINAAR (BEST Co)
• •	VERBATIM	
• •	NASHUA	6 dots down each side
■ ■ ■ ■	BASF	
••••••••	ELEPHANT	
—	3 M	2 bars down each side
■■■■■■■■	WABASH	6 SETS OF 8 SQS. PER SIDE
■■■■■	FUJI	
■ ■ ■ ■	CONTROL DATA	STORAGE MASTER
—	SYNCOM	3 bars down each side
• •	CERATRON	8 dots down each side
• •	BONUS	
—		

THIS CHART SHOWS THE NAME OF THE MANUFACTURER WHO MAY HAVE PRODUCED THAT DISKETTE YOU NOW HAVE IN YOUR DISKETTE DRIVE. I WOULD LIKE TO THANK THE N.O.V.A. USERS GROUP OF VANCOUVER, WA. FOR THIS CHART PRINTED IN THEIR NOV. ISSUE.

DMI000 REVISION RECORD

MODIFIED BY RALPH ROMANS:

VER 3.0 FIXES TO VER 2.4:

- INCORRECT FILE COUNT WHEN GOING FROM 'M' TO 'C'
- FILE COPY WOULD GIVE YOU A BAD COPY IF THE FILE BEING COPIED WAS STORED ON THE MASTER DISK AS A NON CONTINUOUS FILE AND THE SIZE OF THE FIRST SEGMENT WAS EXACTLY 39 SECTORS WITH ADDITIONAL SECTORS IN ANOTHER SEGMENT ON THE DISK.

VER 3.1 FIXES TO VER 3.0:

- FILE COPY WOULD GIVE YOU A BAD COPY IF THE MASTER FILE WAS A FRAGMENTED FILE OF EXACTLY 39 SECTORS AND THE SAME FILE NAME WAS ON THE COPY DISK.
- WHEN ENTERING A FILE NAME IN VARIOUS MODES, IT WAS POSSIBLE TO MESS IT UP.

UNFIXED BUGS IN VER 3.1 - UNABLE TO DISPLAY SOME DIS/VAR 80 FILES THAT ARE FULL OF CONTROL CHARACTERS. COMPUTER HANGS UP!

VER 3.3-CHANGED DEFAULTS ON SWEEP AND DISK INITIALIZATION

- DISK INITIALIZATION WORKS FOR MYARC AND CORCOM
- READ/WRITE ERRORS GETS CLEARED AFTER 1ST USE ON DISK COPY
- FILE 'MGR1' MAY NOW BE CALLED ANY NAME AND ALL FEATURES OF DMI000 WILL WORK.!! THIS WILL ONLY WORK WITH TI CONTROLLER AND CORCOM CONTROLLER
- THE LOADER FOR MYARC CONTROLLER IS CALLED LOADMY
- DURING DISK INITIALIZATION MENU, YOU CAN USE THE UP ARROW TO GO BACK TO PREVIOUS QUESTION.

VER 3.4- ABLE TO DELETE/MOVE/COPY 1 SECTOR FILES

- ADDED 'UP ARROW ACTIVE' NOTICE WHEN UP ARROW WILL TAKE YOU BACK TO PREVIOUS QUESTION.

VER 3.5- ABLE TO TYPE/PRINT DISPLAY VAR 80/FIXED 80 FILES

- WHILE THE FILE LISTING IS ON THE SCREEN BY PRESSING A 'T' FOR TYPE(DISPLAY) FILE TO SCREEN OR 'P' FOR PRINT TO LIST DEVICE WITH OPTIONAL CONTROL CODES SENT TO PRINTER FIRST.
- THE 'P' AND 'T' FOR PRINT OR TYPE ARE ONLY VALID IN THE LEFT MOST FIELD.
- 'EOF' noticed added in lower left corner of screen

- DISPLAY VAR 80/FIXED 80 MENU REMOVED

THE LATEST VERSION OF DISK MANAGER 1000, IS 3.5, AND IT IS TRUELY REMARKABLE. THE ABOVE IS A LISTING OF THE VERSION 3.x HISTORY SHOWING THE ADDITIONS, IMPROVEMENTS, AND THE ENHANCEMENTS.

THIS LATEST VERSION HAS TWO SIGNIFICANT ENHANCEMENTS, WHICH INVOLVE THE DISPLAYING AND PRINTING OF DV/80 FILES DIRECTLY TO THE PRINTER FROM THE [CMD] PROMPT AS THE CURSOR IS SITTING THERE A 'T' FOR TYPE (TO DISPLAY), OR A 'P' FOR THE PRINTER MAY BE TYPED INSTEAD OF THE NORMAL Copy, Move, OR Delete.

COPYING A CARTRIDGE TO DISK

The following is for non-modem users and was released to the Spirit of 99 through the courtesy of Bud Wright, SysOp of T.A.B.B.S.

TO DO THIS, MAKE SURE YOU HAVE THE T.I. DISASSEMBLER, A CARTRIDGE WITH ROM CHIPS ONLY (YOU CAN FIND OUT BY OPENING IT UP, THEN LOOK IF IT HAS LARGE CHIPS ONLY. IF IT DOES, IT IS ROM ONLY. IF IT HAS ANY SMALL CHIPS, TOO BAD, YOU HAVE GROM WHICH HASN'T WORKED FOR ME YET SINCE IT IS IN GPL.

- (1) COVER PIN 1 OF THE CARTRIDGE BEING COPIED (IF YOU HAVE A WIDGIT, THIS IS NOT NECESSARY)
- (2) IF YOU HAVE A WIDGIT, PLUG E/A IN SLOT 1, THE CARTRIDGE YOU WANT COPIED IN IN SLOT 2, TI EXTENDED BASIC IN SLOT 3.
- (3) MAKE SURE YOU HAVE A TOTALLY BLANK DISK TO COPY THE CARTRIDGE ON.
- (4) SWITCH OVER TO THE E/A CARTRIDGE (EITHER WITH THE WIDGIT OR JUST INSERT IT), INSERT E/A DISKETTE 'A', PRESS 2 (3 ON 99/4) TO SELECT LOAD AND RUN, FOR FILENAME TYPE 'DSK1.DEBUG' AND PRESS ENTER. WHEN IT IS LOADED, PRESS ENTER AGAIN, AND TYPE 'DEBUG' FOR PROGRAM NAME.
- (5) WHEN THE DEBUGGER PROMPT APPEARS, SWITCH OVER TO SLOT 2 (FOR THE CARTRIDGE BEING COPIED) OR INSERT THE CARTRIDGE BEING COPIED. MAKE SURE THE COMPUTER DOESN'T RESET. IF IT DOES, MAKE SURE PIN 1 IS DEACTIVATED AND START OVER. (WITH THE WIDGIT, DON'T PRESS RESET). NOW MAKE SURE THE DEBUGGER IS STILL OPERATIVE (PRESS ENTER A COUPLE OF TIMES).
- (6) NOW TYPE IN 'M6000 B000' AND PRESS ENTER. THE SCREEN SHOULD START SCROLLING UPWARD AND DISPLAY DIFFERENT KINDS OF NUMBERS. IF ALL YOU GET IS '6000=00 00 00 00 00 00 00 00 00 *****', ETC. OR ZEROS ONLY, MAKE SURE YOU HAVE A ROM CARTRIDGE ONLY, AND THAT YOU ARE SWITCHED OVER TO THE CARTRIDGE BEING COPIED (OR IS INSERTED). OTHERWISE, YOU SHOULD BE GETTING ALL KINDS OF NUMBERS. YOU WILL PROBABLY SEE THE TITLE OF THE CARTRIDGE IN THE FEW FIRST LINE AT THE RIGHT. NOW LET THE SCREEN DISPLAY THE NUMBERS FOR A WHILE, AND MAKE SURE THAT EVERYTHING IS O.K.
- (7) PRESS QUIT, (FCTN =) TO GO BACK TO THE MAIN TITLE SCREEN.
- (8) SELECT 2 FOR THE E/A AGAIN, 3 FOR LOAD AND RUN, THEN INSERT THE DISKETTE WITH THE T.I. DISASSEMBLER ON IT, AND LOAD IT.
- (9) PRESS ENTER ONCE, THEN TYPE 'START' & ENTER. NOW THE DISASSEMBLER TITLE SCREEN SHOULD APPEAR. NOW SWITCH OVER TO THE CARTRIDGE BEING COPIED OR PLUG IT IN. AGAIN, MAKE SURE IT DOESN'T RESET OR OTHERWISE STOP YOU. FOR STARTING ADDRESS, PRESS '6000'. FOR ENDING ADDRESS, PRESS '6500'. NOW INSERT THE DISKETTE YOU WANT TO COPY IT ON AND TYPE IN 'DSK1.CART1' FOR DEVICE NAME. PRESS ENTER TO START THE DISASSEMBLY PROCESS. THE DISK DRIVE COMES ON, ETC. THE DISASSEMBLED CODE SHOULD APPEAR ON THE SCREEN. FOR EXAMPLE, THIS MIGHT APPEAR:
'61FC JNE >6F64 >16F4'

TO PAUSE DISASSEMBLING, PRESS A KEY TO PAUSE. PRESS IT AGAIN TO CONTINUE. THE PROCESS WILL CONTINUE FOR A WHILE. WHEN THE NUMBER ON THE LEFT='>6500' OR AROUND THAT NUMBER, THE SCREEN WILL STOP SCROLLING. PRESS ENTER TWICE FOR E/A MENU.

(10)

NOW PRESS QUIT. EITHER PLUG IN EXTENDED BASIC OR SWITCH OVER TO IT, AND SELECT EXTENDED BASIC. NOW ENTER THE FOLLOWING PROGRAM:

```
-----  
100 CALL CLEAR  
110 INPUT "SOURCE FILE?>DSK1.":A#  
120 INPUT "OBJECT FILE?>DSK1.":B#  
130 OPEN #1:"DSK1."&A#,VARIABLE B0,INPUT  
140 OPEN #2:"DSK1."&B#,VARIABLE B0,OUTPUT  
150 LINPUT #1:C#
```

THIS ARTICLE REPRINTED FROM THE NOVEMBER ISSUE OF THE----- SPIRIT OF 99

```

160 D$=BEG$(C$,6,27)
170 PRINT #2:D$
180 IF EOF(1)THEN 200
190 GOTO 150
200 PRINT "FINISHED."
210 CLOSE #1 :: CLOSE #2
   0 DELETE "DSK1."&A$

```

NOTICE THIS CAN NOT BE DONE IN BASIC, SINCE THE 'LINPUT' STATEMENT IS USED.

(11) RUN THIS PROGRAM. FOR SOURCE FILE, INPUT 'CART1'. FOR OBJECT FILE, INPUT 'CART11'. NOW THE DISK DRIVE WILL COME ON, AND IT WILL TAKE A WHILE BEFORE IT IS FINISHED. WHEN IT IS FINISHED, IT WILL SAY SO. IF YOU RECEIVE AN ERROR, CHECK TO SEE IF YOU HAVE THE RIGHT DISK INSERTED AND THAT THE SOURCE AND OBJECT FILES ARE VALID. IF THAT ISN'T IT, CHECK TO SEE IF YOU HAVE ENOUGH DISK SPACE AVAILABLE. IF YOU DON'T, CHANGE LINE 140 FROM 'DSK1.' TO 'DSK2.' IF YOU HAVE A SECOND DRIVE. OTHER WISE, SORRY! YOU MIGHT WANT TO CHANGE LINE 160 SO THAT IT SAVES VARIABLE LENGTH LINES, THUS SHORTENING THE OUTPUT. WHEN DONE, PRESS QUIT AND INSERT THE E/A MODULE OR SWITCH OVER USING THE WIDGET.

(12) INSERT THE E/A DISKETTE 'A' AND SELECT 1 FOR EDITOR. PRESS 1 FOR LOAD FILE. FOR FILE NAME, USE CART11.

<13> WHEN LOADED, PRESS FCTN-9 FOR THE EDITOR COMMAND LIST (THIS ONE:)
Edit, Tabs, Files, Delete, Insert, Move, Copy, etc. then select R for replace. next type in V,1000/6/A/ AND PRESS ENTER. NOW PRESS 'Y' WHENEVER THE CURSOR IS ON A JMP 6??? OR A LI 6??? OR A SB,CB,B,BLWP ,LI, AND ALL OTHER ONES EXCEPT TWO-DIGIT (FOR EXAMPLE '6?' OR DATA STATEMENTS. WHEN YOU REACH THE LAST ONE, THE EDITOR WILL BE IN EDIT MODE. PRESS FCTN-9 AND TYPE R FOR REPLACE AGAIN. THIS TIME TYPE IN V,1000/7/B/ AND PRESS ENTER. DO THE SAME THING AS THE LAST TIME. WHEN FINISHED, SAVE THIS IN VARIABLE 80 FORMAT ON THE EDITOR COMMAND LIST.

(14) DO STEPS 8-13 AGAIN, CHANGING THE STARTING ADDRESS FOR DISASSEMBLY PROCESS SECOND TIME AROUND TO 6500 AND THE ENDING ADDRESS TO 7000 THE FILE NAME TO CART2, SHRINKED VERSION TO CART22 THE THIRD TIME 7000-7500, CART33, THE FOURTH TIME 7500-8000, CART44. WHEN YOU HAVE DONE THIS, GO ON TO NEXT STEP.

(15) TYPE IN THE FOLLOWING PROGRAM IN EDITOR OF THE E/A.

```

DEF START
ADRG >A000
START
COPY 'DSK1.CART11'
COPY 'DSK1.CART22'
COPY 'DSK1.CART33'
COPY 'DSK1.CART44'
END

```

SAVE THIS AS CART55 IN VARIABLE 80 FORMAT NOW LOAD THE ASSEMBLER (OPTION 2) AND FOR SOURCE FILE NAME USE CART55, OBJECT FILE CART66. NOW ASSEMBLE UNDER THE 'R' OPTION. WHEN IT IS FINISHED, JUST LOAD AND RUN IT AND FOR PROGRAM NAME USE START. IF IT DOES NOT LOOK RIGHT, USE THE EDITOR TO LOOK AT THE FIRST AND LAST LINES OF THE DISASSEMBLED CODE TO SEE IF THE NEXT FILE NAME HAS IDENTICAL ONES OR IF ANY LINES ARE LEFT OUT. WHEN DONE WITH THIS, ASSEMBLE AGAIN, CHECK AGAIN UNTIL IT WORKS.

DATA BASE MANAGERS
FOR THE II-99/4A
By Bill Gaskill

Some owners/authors of the applications I have covered in this article will no doubt be angered by the apparent brutality of it. I choose to view it as honesty rather than brutality. Too many reviewers white wash the weaknesses of II software they critically review. I will not. I think sometimes that we are afraid that the software market will dry up and blow away unless we give favorable reports on the software products that do appear for our computer. I prefer to think of it in another way: if we promote junk software in a favorable light those that do publish product reviews will lose credibility, and those that buy software based upon those reviews will simply be that much more reluctant to get burned a second time.

In the process of searching for the perfect data base manager I have purchased several programs and spent over \$300. All of the programs that I own have positive points and all have negative points. What I have discovered to date is that the "perfect" data base manager does not exist, yet (not even in the business world). What I am going to share with you are my impressions of the programs I own, and in doing so, will perhaps save you a little time and money if you too are looking for that "perfect" application.

The programs I own are:

- ACORN 99 from Oak Tree Systems
- DBMS from Navarone Industries
- DATA BASE 1 from SPC Software
- DATA BASE 99 from Quality 99 Software
- DATA BASE 300 from the International Users Group
- DATA BASE X from Western Ware
- PRBASE V1.2 and V2.0 from William Warren
- TURBO DATAMAN from Easy Ware

I have used these programs enough to feel comfortable with each and could probably write several pages about each one. Unfortunately, publication space is limited and such a voluminous article would never see print because of it. Thus I have tried to be brief, but to the point, in my comments on each program. Also, please keep in mind that my comments are subjective, based upon how each product meets MY needs and expectations. Yours may be different.

For ease of reference I have included some of the information in a comparison table that allow analysis at a glance. In the paragraphs that follow I will try to provide a little detail to each issue and cover special features, lack of what I view as standard features and product performance of each program. I apologize in advance for the cryptic style you will read, however, I needed to be brief. The DATA BASE 300 program will not be looked at since it is not available.

ACORN 99:

Among the top three DBM's available to the II community. The only relational data base available. Also, the only one with a programming language interface for custom applications. EXTREMELY powerful and

I WOULD LIKE TO THANK BILL GASKILL FOR ALL THE EFFORT THAT IT MUST HAVE TAKEN TO TRY ALL THE DATA BASE PROGRAMS THAT HE WRITES ABOUT IN THIS ARTICLE. I WANTED TO DO A REVIEW OF ONE OR TWO OF THEM, BUT WHEN I SAW THESE DONE SO WELL, I COULD NOT PASS THE CHANCE TO PRINT HIS REVIEW AND COMPARISON. THIS ARTICLE WAS TAKEN FROM THE "FRONT RANGER", THE NOV., 1986 ISSUE.

well designed. Can support three active files at one time, allows existing data file formats to be edited, copied to another file, resequenced and can reformat a file structure into another file format. Does not have the ability to show number of records in a file. Can hold more than 1500 records per file on a SS/SD disk (depending on file size). Sorts alpha characters and strings better than numbers. Indexes record location for subfile creation and mainfile is then concatenated to create the subfile as another database. Possesses ability to search, using; "equal to, unequal, greater than, less than, ignore" logical operators. Supports relational operators in search routines through the use of a true/false convention that allows selection of records where all parameters are met, or any parameters are met. CAN print a single record from a display screen. EXTREMELY slow in operation. Uses 40 column text mode. Allows duplicate key field data entries. Allows printer control codes to be encrypted in setup file. Provides input checking for "numeric, integer, money, string, flag and date" entries. Overall, a fabulous program, with almost limitless potential. The best documentation of the group, giving many examples along with explanations. SUPERB application.

DBMS (Navarone):

Allows 32,000 records per file, but only 350 per SS/SD diskette. Limits you to half that amount if you wish to sort the file since it creates a second sorted file that demands equal space on your data disk. Most interesting report generator I have ever seen, a cut and paste type affair that is really neat, but poorly documented. Excellent custom screen design module which includes help screens that you design. FAST FAST FAST. Requires unique key field entries only, which I find inconvenient. Documentation is better than originally written, but still confusing at times, and incomplete. Dotes on mundane things and skips over, or entirely omits, important things. Does totaling in reports, but no other computational work. Does not support single record printing, but can use the report module to scroll data on screen, write it to disk or send it to your printer. Can append new data fields to the end of an existing record, but cannot reformat the record in any other way. Can create subfiles, but you have to figure out how to do it for yourself because the documentation does not tell you how. It doesn't even mention subfiles. Allows printer control codes to be encrypted in Report Generation file. Does not perform input checking of any type. All data is considered to be a string entry. Best suited for a hard disk environment. Not difficult to use once you have "played" with it, but can be intimidating at first.

DATA BASE 1:

Best suited for mailing lists or other LIST type data files. Cumbersome design setup requiring records to be accessed by their relative position in the file (record number). You must first list the records by a specified field if you don't know the record number. Time consuming. Provides three pre-set mailing label report formats and one custom format for your own design. Will NOT do reports that have heading information. Includes several nice utilities, such as a formletter generator, disk file data base which creates a DB1 data base file out of the information on your library of disks. Does not provide for input checking, nor length of field entries. Only looks at the length of overall record. Does searches by "equal to" operator only,

only on one data field at a time. Requires that you first create an index file and then search. To search by another field you must create another index file. Searches by a maximum of 5 characters in any field. Sorts are limited to 1000 records, no matter how many exist in the file, but both alpha and numeric sorts are offered. Subfiles can be created to a printer in the main program or to disk by using the Utilities options. Selection is by "equal to" or "between two values", which can be either alpha or numeric type.

DATA BASE 99:

More emphasis put on copy protection than on program performance. Allows custom screen design and claims 28 fields of up to 28 characters each. Would be a neat trick to do since four of the 24 rows on screen are used by program prompts. Fast assembly language interface for report generation. Cannot generate reports with headings and does not permit printer control codes to be inserted in report data. Does not save a format after design, so you will have to re-create it each time you want a report. Data is printed in continuous format without regard to page breaks or anything else. Design of layout is cumbersome, requiring you to conceptualize how many colons and/or semi-colons are needed to push the data across the page. Number of colons/semi-colons is limited to 127 characters allowed in a LINPUT command. A terrible system. Disk catalog accessed from main menu will crash program if you enter an alpha character instead of a number when it prompts for the disk drive number to be cataloged. Color is lost after a crash since it was CALLED from the LOAD program. Does not permit single record screen print (unless you buy the DB 99 Utilities), must use EDIT option to search for a record or search sequentially. Cannot go directly to a record by its relative position in the file. Will create subfiles to disk, allowing the search by "less than, equal to or greater than" operators. Search is limited to one field for all practical purposes. Sorts can be performed in ascending order, by any one field. Sort is an actual re-write of the file. All data is considered string information. No number crunching (again, unless you buy the DB99 Utilities), no input checking. Documentation consists of two 8 1/2" X 11" sheets of paper printed on both sides. Program is slow, inflexible, inconvenient in many ways and cumbersome to use. It might have been an advanced application two years ago. Today it is a dinosaur, even with the DB99 Utilities. Much too expensive.

DATA BASE X:

Very modular, meaning that each function (adding, editing, printing, deleting etc.) is a separate program that must be loaded each time you want to use that function. Does statistical analysis of data. Record counter is inaccurate, code of program is jumbled and entirely unstructured. Does not sort data, even though documentation uses the term "sort". What it means is "select". When DATA BASE X "sorts" by a particular parameter it is really selecting records for dumping to a printer that meet that parameter. Does allow selection between ranges. Cannot create subfiles, does not index existing records. Access of a record is done sequentially, unless you know the record number. No way to tell the record number, you must guess. Supports 1 or 2 disk drives. Excruciatingly slow. Requires that you name the data disk DBXDATA, for no good reason that I can see, otherwise program errors out. Does not save report definition, but does allow it to be printed in normal or compressed mode. Definition process is fairly simple, but

time consuming. Documentation is the "shabbiest" I have ever seen. It is photocopied and put into booklet form with the pages not even cut straight, so that some information is missing off of some pages. Overall, this program is JUNK! As with the IUG's DATA BASE 300/500, it never really belonged on the market in the state that it is in. Unfortunately, I didn't know that and paid out over \$30 to find out.

PRBASE:

Totally assembly language coded. THE BEST all-around application in my opinion. FAST, flexible, does virtually anything a user would want in the way of data handling, except number crunching. It will not do anything in that area. Treats all data as part of a big string just as DBMS and DATA BASE 99 do. As long as you own the PRB Utilities written by John Johnson you can create subfiles, other wise you can't. Has on-line help for commands, creates an index by any input field you choose and then accesses any record in about 1 second. Also has a FIND feature to look at data sequentially in any single field and a GLOBAL option that searches for a single data entry anywhere in the record. Saves up to five report formats, V2.0 allows you to format a data disk. Custom screen layout with terrific graphics options for borders/windows etc. is available. A tremendous program, well thought out, well designed, artistically executed. FAIRWARE!!! PRB Utilities are free for the asking as long as you provide the disk and mailer. Report design routine is cumbersome and confusing. Prints single record from screen display in either 40 or 80 column mode. Program is very sensitive about I/O device names. My copies [V1.2 and V2.0] both require PIO. to work rather than just PIO or PIO/1, etc. With number crunching abilities this program would be a perfect "flat-file data manager" for most TI users. As it is, the value and performance for a FAIRWARE application, or a commercial application too for that matter, is unsurpassed. If you don't have PR BASE then you are missing out on one of the premier productivity tools available to the TI Community.

TURBO DATAMAN:

This is the second most powerful and useful data manager, taking a backseat only to PR BASE. It runs slightly ahead of ACORN because it performs number crunching and is faster in operation. Like ACORN, TURBO DATAMAN allows you to create a dictionary of data items (fields) and then lets you choose from that library of fields to put a record together. Up to 30 fields are allowed per record. Twenty pre-defined records (file formats) can exist on one disk. Allows custom screen layout design, complete with graphics for borders/windows etc. Does input checking, allows secondary screen access, like ACORN's Detail Records. Allows formulas to be created and saved that perform the four basic math functions. Report definitions can be saved. Allows wildcard type operators in searches, will print single record from screen display. Provides "less than, greater than, equal to, not equal to, greater than or equal to, less than or equal to" operators in screen display and report generation modules. Permits sub-totals in reports that can be formatted like TI Extended Basic does with the IMAGE statement. Subfiles can be created through the report generator by sending the output selected to a disk file rather than a printer. The results must be converted back to INTERNAL, FIXED from DISPLAY FIXED before you can use it in the program however. TURBO DATAMAN does not provide you with that utility. The documentation instructs you to "write a program" to do it. Names used for different modules in the

program are confusing. Ex; ETCH, SKETCH, SKETCHR, FETCH. Should change names to more accurately reflect function of module. Documentation acceptable, but lacks adequate coverage in some areas. Utilities are provided to perform some mundane operations, such as counting the amount of records in a database. Reformatting or restructuring of an existing file is not permitted, unless the input field is appended to the end of a record format. This program needs some "fine tuning" in some areas, but is still an exciting productivity tool with immense possibilities. Its speed of operation is not fast, but acceptable. It is faster than ACORN. One can set up the SKETCH program to auto-load if desired, but the whole application should be centered around a menu in my opinion. As it is now, you must RUN each module from the READY> prompt when you need to use it, because every module exits with an END statement. If you don't own this program, you should. Whether you want to manage a mailing list or do accounting, TURBO DATAMAN is for you.

FEATURE TABLE:

FEATURE	ACORN99	DBMS	DB1	DB99	DB X	PRBASE	TURBO DM
	-----	-----	-----	-----	-----	-----	-----
RECORDS/FILE	LIMITED BY DISK	32,000	LIMITED BY DISK	350-1400	LIMITED BY DISK	350/710	LIMITED BY DISK
FIELDS/REC.	54	25	10	28	10	32	30
MAX.RECORD LENGTH	255	255	245	246	246	246	255
MAX.FIELD LENGTH	40	40	28	28	28	246	28
MEMORY REQ'D	32K	32K	32K	32K	16K	32K	32K
LANUGUAGE	XB/ASSM	ASSM	XB/ASSM	XB/ASSM	XBASIC	ASSM	XB/ASSM
CUSTOM DESIGN SCREEN LAYOUT	NO	YES	NO	YES	NO	YES	YES
SCRN GRPHICS CAPABILITY	NO	NO	NO	NO	NO	YES	YES
ALTERED CHAR SET USED	NO	YES	YES	NO	NO	YES	NO
CUSTOM REPORT DEFINITION	YES	YES	YES	YES	YES	YES	YES
SAVES REPORT DEFINITION	NO	YES	YES	NO	NO	YES	YES

EXTENDED BASIC SUBPROGRAMS

FLYING LINE

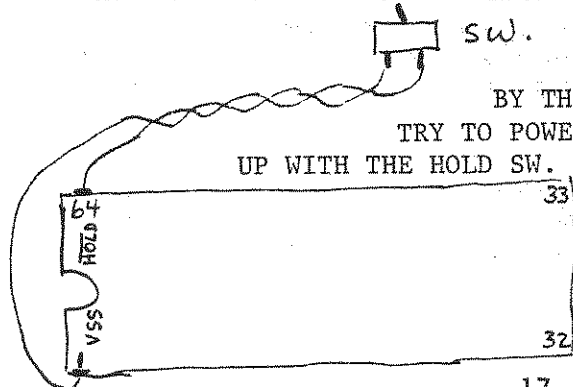
Here is a program which will allow you to have a line of text formed by flying letters coming from the sides of the screen. To use this in one of your programs, just merge lines 2000-2120 at the end of your program. Warning: make sure there is no code after line 2120 unless it is another SUBprogram. To make the letters 'fly', insert the command: CALL FL(A\$,L) Where A\$ is the text to be printed and L is the line to be printed on.

```
100 CALL CLEAR
110 CALL FL("PROGRAM NAME HERE",5)
120 CALL FL("BY",7)
130 CALL FL("YOUR NAME HERE",9)
140 GOTO 140 ! YOUR PROGRAM STARTS HERE
2000 SUB FL(A$,L):: W=15-INT(LEN(A$)/2):: RANDOMIZE
2010 FOR N=1 TO LEN(A$):: F=1500
2020 G=ASC(SEG$(A$,N,1)):: IF G=32 THEN 2130
2030 IF N/2<>INT(N/2)THEN 2060
2040 C=INT(32*RND)::IF C>1 THEN R=INT(RND*2)ELSE R=INT(24*RND)
2050 GOTO 2070
2060 R=INT(24*RND)::IF R>1 THEN C=INT(RND*2)ELSE C=INT(32*RND)
2070 IF R=0 THEN R=24
2080 IF C=0 THEN C=32
2090 CALL SPRITE(#1,G,2,1+(R-1)*8,1+(C-1)*8,(L-R)*4,(W+N-C)*4)
2100 CALL COINC(#1,(L-1)*8+1,(W+N-1)*8,48,D)
2110 CALL SOUND(-100,F,10):: F=F-125 :: IF D=0 THEN 2100
2120 CALL DELSPRITE(#1):: CALL HCHAR(L,W+N,G)
2130 NEXT N :: SUBEND
```

THE ARTICLE ABOVE WAS TAKEN FROM THE PUGET SOUND 99'ERS, THE OCT. ISSUE OF THEIR NEWSLETTER. YOU WILL SEE A VERY INTERESTING WAY TO EXPRESS YOURSELF.

THE ARTICLE ON YOUR RIGHT WAS TAKEN FROM THE NOV. ISSUE OF THE NEWSLETTER SENT TO US FROM THE VAST 99 USERS GROUP.

EACH MONTH, I LIKE TO INTRODUCE YOU TO A NEW OR DIFFERENT HARDWARE EXPERIENCE. I'VE BEEN AWAY SOME THIS MONTH, AND HAD VERY LITTLE TIME, BUT HERE IS A MOD THAT IS VERY EASY TO DO AND IS VERY USEFUL. IT IS A **HOLD SWITCH** FOR YOUR TI. IT WILL STOP ANY PROGRAM THAT IS RUNNING, UNTIL YOU WISH IT TO GO ON. . YOU NEED JUST A SINGLE POLE, SINGLE THROW SWITCH, AND TWO LENGTHS OF WIRE TO LOCATE THE SW. ATTACH THE TWO WIRES TO PINS 1 AND 64 ON THE CPU CHIP AS SHOWN BELOW, AND LOCATE THE SWITCH IN THE CONSOLE WHERE EVER IT PLEASURES. THAT IS IT. BUT, REMEMBER YOU DO SO AT YOUR OWN RISK!



BY THE WAY, DON'T TRY TO POWER THE CONSOLE UP WITH THE HOLD SW. ON. IT WILL NOT COME UP!

KEYBOARD / ASCII READ:
Practically all 255 ASCII characters are available to be included in your program from the keyboard. The only problem is that TI did not print a list to tell you how to access characters lower than 32 or greater than 126. This little program will record the character and the ASCII number when you press just about any key. I say just about because if you press FCTN+ you'll return to the title screen. For instance if you press FCTN V (that means the FCTN key and the V key simultaneously) you will see that it is ASCII character 127.

```
100 CALL CLEAR :: CALL SCREE
N(11):: DISPLAY AT(12,9):"PR
ESS ANY KEY"
110 ON BREAK NEXT
120 DISPLAY AT(1,1):" KEY
BOARD/ASCII SEARCH" :: DISPL
AY AT(2,1):RPT$("-",28)
130 CALL KEY(0,K,S):: IF S=0
THEN 130
140 IF K>128 OR K<32 THEN 15
0 ELSE 160
150 PRINT "Character: - No
t Defined -" :: GOTO 170
160 PRINT "Character: ":CH
R$(K)
170 PRINT "ASCII #: ":K :
: PRINT :: GOTO 120
```

There are several short miscellaneous routines that we ought to discuss that are useful (and important) so here goes.

The standard "typing" mode is called word-wrap. In this mode when you come to the end of the line that word is automatically put on the next line. This is the opposite to a typewriter where one has to return the carriage by hand. If you press the return key you start a new paragraph. If you want an empty line between paragraphs just press the enter key again. If you remember an earlier paper on how to edit we used the reformat key (Ctrl 2). The reformat key only works within the paragraph one is working in.

If we want to combine two adjacent paragraphs all we have to do is remove the carriage return symbol (by pressing "Del Char" (Fctn 1)) and then reformat will combine the two paragraphs.

By default a page of material is 66 lines long. In order to make the document have, say, only 60 lines per page just keep track of the line numbers at the left of the screen and put in a new page symbol by pressing Ctrl 9 and when the document is printed the new page symbol will cause the printer to start at the beginning of a new sheet. (This new page symbol also works in the Formatting Mode.

The other "method" of writing a document is in "Fixed Mode". To get into fixed mode press "Ctrl Zero(0)" (Word Wrap) and this puts you in Fixed mode (the cursor will be a hollow rectangle). To get out of fixed mode press Ctrl 0 again (toggle) and you are back to word wrap. In fixed mode you do not automatically go to the next line in order to get to the next line, you have to press enter and you will go to the next line. If you do not press enter at the end of the line each character entered will just replace the last entered character. The fixed mode is used to make tables of data.

Now something more about printing out a file. If you noticed in the past in order to load or save part of a file you had to know the start and finish line numbers. It makes it easier to load or save file parts if you have a print out with the line numbers, well we can do that also. In order to have a print out with the line numbers go to Command Mode enter F and the enter PF, at the statement "PRINT FILE, enter devicename:" enter L, space, and then PIO (for a parallel printer). Eg. L PIO. There is one minor catch and that is it will not print anything in columns 75-80.

You can also print only part of a file, get the PF mode and then type the starting line number, space, ending line number, space and then PIO. Eg 23 48 PIO and only lines 23 to 48 will be printed out.

One last function, Q (Quit) (quite appropriate). To quit working go to command mode and enter Q there will be another menu which is obvious that you can easily follow.

More later.

-----NOVEMBER, 1986-----

HINTS AND TIPS

USING T.I. MULTIPLAN

One of the main uses of the T.I. MultiPlan (TIMP) for a home computer owner would be to keep track of investments. Each person would want to set up his own spreadsheet, so below is an example.

The amount in column 4 would be automatically calculated by causing col 3 to be multiplied by col 2 for each row and the amount in col 4 designated as total would be kept up to date by having column 4 add itself and show the total at RBC4, which is the way a cell is designated.

In practice, a column could be inserted so that the Stock Exchange Symbols would be in column 1, cost and total cost columns could be inserted between cols 2 and 3 and even expected returns and yield columns are feasible. And in all cases the amounts would figure themselves out at each recalculation.

As an example of how these formulae are entered, to get the value in RBC4, the cursor would be placed over that cell; pressing "V" for "value" would command that a formula be entered and then the UP arrow would be used until the cursor is over the R3C4 cell. The add(+) is punched and the cursor immediately drops to the home cell (RBC4). Use the UP arrow again to the next lower amount, use + and again the cursor comes home. Repeat this for each value to be added except the last when ENTER is pressed completing the operation and the Total sought will enter itself in the proper (home) cell. Upon RECALC any changes in any of the figures will reflect in the TOTAL cell (RBC4 in this case). In using VALUE the formula

can contain + - * / as needed. The method using the arrow keys works very well for a few lines, but if our list of stocks were longer we might just type out the formula for each line, thus:(assuming row 3)

R[-C2]*R[-C1] (Press ENTER)

This translates into: on the same row take the cell 2 columns to the left and multiply it by the cell one column to the left and enter the result in the home cell (RBC4).

A series of columns with an additional total column could be added to show the dividends received on these stocks or a separate file (XTERN) could be set up as appended to the file. If the latter is done the external files are updated and entered on the main spreadsheet each time the TRANS - Load: mainfile (or other name) is loaded.

Notice that the difference in widths of the columns in the example and the difference in the type of information in each of them is set using the FORMAT command.

Next time we'll look at some of the other aspects of TIMP.

By Herbert Schlesinger

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 Sample Worksheet

	1	2	3	4
1	Name of Company	#shares	Pr.Val	Total Value:
2	-----+-----			
3	Aetna Life	100	\$45.25	\$4525.00
4	Burroughs Corp	150	\$55.25	\$8287.50
5	Detroit Edison	100	\$17.25	\$1725.00
6	-----+-----			
7	8 TOTAL			\$14537.50
-----+-----				

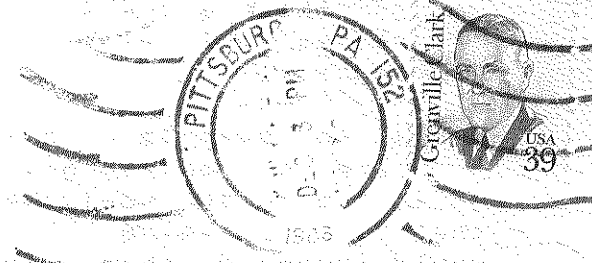
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