

West Penn
June 86



JUNE 1986 NO. 9

FOR THE RECORD

by Ed Bittner
Recording Secretary

The West Penn Users Group is alive and well! At the May meeting president Scott Coleman opened with a brief discussion of last months meeting and announced that we will continue our monthly meetings throughout the summer (alive). Following was the , in the black, treasurers report by Jan Trayers (well), and Chuck Strink announced that the Basic Class is ready to move into Ext. Basic (both alive and well)! Cassette sales have not yet peaked as reported by the librarian Clyde Colledge but diskette sales have been brisk (at 10 for 8 dollars, DSDD),how could you resist supporting your club.

Some of the seemingly perennials bloomed again such as the possibility of a new meeting place, the inconsistency of the publication of Home Computer Magazine/Journal (better known as Old UNfaithful), the need for more club members to submit articles for the newsletter and who is the most promising and most UNcommitting, Myarc or Concomp for hardware advancement.

Clyde is diligently working to reduce the volume of the library, some 3000 programs, many of which are duplicates or updated versions of others with name changes. He should have a directory soon. Scott Coleman discussed the UNScrewing (secretary's note - I think the UN is UNappropriate) of the P.E. Box so as to make the fan blow in instead of out for quieter operation.

Two programs, the Popeye game and Chuck Strinks - The United Federation of Planets were demoed and three raffle prizes were awarded in a \$1.00 raffle. Classes in Basic (Chuck Strink) and assembler (Gene Kelly) were conducted immediately following the main meeting. John Willforth assisted Gene with a hardware modification of an archaic TV set by the insertion of an anti-zapper device (a coat hanger) into the rear of the set. We were not sure that it improved the output of the set but John now has a glowing personality.

UNrigorously submitted,

Scoops Bittner

P.S. Following a suggestion by the president, I will bring one case of cold pop (soda) to be sold for \$.50/can. Proceeds will, of course, go to the club. I will also bring one large quiet fan for the main meeting to be used also for the assembler class, it really gets cooking in there!.

To the Editor
from Ed Bittner

John, I have typed in several programs which you recently republished from other newsletters. Included are the Dis/Vars 80 to Merge conversion program as well as the one which is a titler for VCR tapes. I will bring several copies on disk of these programs to the meeting in June. I have also included on the disk my own version of Hangman written entirely in Basic.

Ed

TREASURER'S REPORT

by JAN TRAYERS

BALANCE IN THE TREASURY BEFORE MAY MEETING.....	453.91
PAID OUT:	
RENT FOR MEETING ROOMS.....	10.00
POSTAGE (NEWSLETTERS 2 MNTHS).....	<u>36.98</u>
	46.98
RECEIVED:	
NEW MEMBERSHIP.....	15.00
DISK SALES	17.00
RAFFLE.....	<u>20.00</u>
	52.00
BALANCE AS OF JUNE 4th 1986,	458.93

MEETING SCHEDULE FOR THE SUMMER

JUNE, JULY, AND AUGUST MEETINGS WILL BE HELD AT THE NORWIN Y.M.C.A., AT THE OLD NIKE SITE, IN THE AREA OF NORTH IRWIN. ALL OF THESE MEETINGS SHOULD START AT 7:00 P.M. IT IS POSSIBLE THAT WE WILL HAVE DISK SALES, LIBRARY FUNCTIONS, AND EVEN A SWAP OR SALE PERIOD IN THE TIME FRAME OF 6:30 to 7:00. I THINK THAT WITH OUR TIGHT SCHEDULE FROM 7:00 to 9:45, THIS WOULD BE THE ONLY AVAILABLE TIME FOR THIS DESIREABLE FUNCTION OF THE CLUB. ALL THIS OF COURSE DEPENDS ON WEATHER SOME ONE CAN GET HOME FROM WORK, AND TO THE YMCA BEFORE 6:30.

JUNE 16-----JULY 21-----AUGUST 18-----AD INFINITUM !!!!!

Now I've got to tell you who are in need of a PEB, that a bare bones, 3 slot unit without a case, but complete in every other way, is available from the CAPTAIN'S WHEEL, J. JON GOULD , 17295 CHIPPENDALE AV., FARMINGTON, MN 55024 (612) 460-6348.

I put one of these units together in a couple of hours, being very cautious and pessimistic. I plugged the unit into my console (which has 32K of internal memory) and pushed a PASCAL card and a TI Disk Controller card into this very strange unit. The cards were just standing there floping about losely (no enclosure), and turned on the power. It fired up. I'm not going to spend too much space here, but if one of the ones that I ordered the next day, arrive before the meeting, you'll see it there. GAZOOKS, no firehose, no fan, and even with two ½ height drives, and it's own internal p/s, it can't weigh more than 12 pounds. OH YEH, the price.....\$35.00. By the way, Jon has other items that might interest you, a 32K memory unit, with switch selectable (optional) 8K blocks, up to 24K of additional memory. Price \$49.00. Interested???????

Well if you are, you had better call or write (if your the patient sort), but Jon tells me that when the circuit cards for the 3 slot expansion are gone, there will be no more. WHAT! He does hint that there is something better coming. But why take the chance, order yours TODAY.

Table with columns: COLOR CODES (COLOR, VALUE), PATTERN IDENTIFIER CONVERSION TABLE (FIRST, SECOND), and ERROR CODES (COMMAND OR STATEMENT, TYPE OF ERROR).

Table of ASCII CODES with columns: CODE, CHARACTER, and corresponding ASCII values.

Table of CHARACTER SETS and JOYSTICK RETURN VALUES. Includes columns for SET, ASCII CODES, and joystick directions (UP, DOWN, LEFT, RIGHT).

Table of CONTROL CODES and EXTENDED BASIC STATEMENTS. Lists various control codes and their corresponding BASIC statements.

Table of CALL LOADS with columns: ADDRESS, PARAMETERS, and DESCRIPTION. Lists various call load addresses and their functions.

We wish to give credit to the PUGET SOUND 99'ERS who printed this All Purpose Handy Dandy Reference sheet in their APRIL 85 Newsletter.

(Reprinted From SUBFILE99)

CORCOMP'S DSDD Card adds some additional commands to the TOOL SHED of the TI-BASIC programmer. These added commands enable the programmer to do:

- PAGE FLIPPING
- WINDOWING
- ACCESS TO VDP WRITE ONLY REGS.
- PEEK AND POKE COMMANDS IN BASIC

Included here are a few of these programs that will demonstrate these features. NOTE: These are all written in BASIC, not XBASIC!

```
100 REM *****
110 REM *
120 REM * BLOCK MOVE *
130 REM *
140 REM *****
```

150 REM
160 REM REQUIRES
170 REM CORCOMP CARD

```
180 REM
190 CALL CLEAR
200 B$=" "
210 P$=" ++++ "
220 F=1
230 T=550
240 S=33
250 GOSUB 420
260 F=X1
270 T=F-15
280 S=-1
290 GOSUB 420
300 F=X1
310 T=F-500
320 S=-33
330 GOSUB 420
340 F=X1+33
350 T=F-19
360 S=-1
370 GOSUB 420
380 GOTO 220
390 REM
400 REM *BLOCK ROUTINE*
410 REM
420 FOR X=F TO T STEP S
430 X1=X
440 X2=X+33
450 X3=X+66
460 X4=X+99
470 X5=X+132
480 X6=X+197
490 CALL VPOKE(X1,96,B$;X2,96,P$;X3,96,P$;X4,96,P$;X5,96,P$;X6,96,B$)
500 NEXT X
510 RETURN
```

```
100 REM *****
110 REM *
120 REM * PAGE DEMO *
130 REM *
140 REM *****
```

150 REM
160 REM REQUIRES
170 REM CORCOMP CARD

```
180 REM
190 CALL CLEAR
200 FOR X=40960 TO 41728 STEP 32
210 CALL MPOKE(X,96,"AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA")
220 NEXT X
230 CALL SOUND(150,1000,0)
240 CALL CLEAR
250 PRINT "PRESS ANY KEY!"
260 CALL KEY(0,K,S)
270 IF S=0 THEN 260
280 CALL MOVEH(3,40960,0,768)
290 CALL SOUND(150,1000,0)
300 CALL KEY(0,K,S)
310 IF S=0 THEN 300
320 CALL CLEAR
330 GOTO 230
```



THE ONLY WAY THAT WE HERE IN THE WEST PENN 99'ERS CAN HELP THOSE OUT THERE WHO CAN'T FIND THEMSELVES WITH THEIR TI-99, IS FOR YOU TO **ASK** ! WE CAN **NOT** READ YOUR MIND. YOU HAVE THE NAMES OF ALL OF THE OFFICERS AND THEIR PHONE #'S. I'VE NOT HEARD OF ANY ONE BEING REFUSED ASSISTANCE. WE ALSO DO NEED YOUR INPUT TO IMPROVE.

```
100 REM *****
110 REM *
120 REM * 40 COL DISPLAY *
130 REM *
140 REM *****
```

150 REM
160 REM REQUIRES
170 REM CORCOMP CARD

```
180 REM
190 REM * SET 40 & CLEAR *
200 REM
210 CL$=" "
220 CL$=CL$&CL$&CL$
230 CALL WRTRG(7,31)
240 CALL WRTRG(1,240)
250 FOR X=0 TO 3
260 VDPA=X*240+1
270 CALL VPOKE(VDPA,96,CL$)
280 NEXT X
290 REM
300 REM * PRINT LINES *
310 REM
320 FOR X=0 TO 23
330 VDPA=(X*40)
340 M$=STR$(X+1)
350 CALL VPOKE(VDPA,96,M$)
360 VDPA=(X*40)+5
370 M$="...1.....2.....3.....4"
380 CALL VPOKE(VDPA,96,M$)
390 NEXT X
400 GOTO 400
```

```
100 REM *****
110 REM *
120 REM * "SPRITE" DEMO *
130 REM *
140 REM *****
```

150 REM
160 REM REQUIRES
170 REM CORCOMP CARD

```
180 REM
190 CALL WRTRG(7,31)
200 CALL WRTRG(1,240)
210 CALL MPOKE(33748,96,240)
220 FOR X=1 TO 957
230 CALL VPOKE(X,96,"->")
240 NEXT X
250 CALL SOUND(150,1000,0)
260 CALL KEY(0,K,S)
270 IF KEY=0 THEN 260
280 GOTO 220
```

GETTING THE MOST FROM YOUR CASSETTE SYSTEM
BY MICKEY SCHMITT
NUMBER 2
LOADING AND SAVING PROGRAMS

WHILE LOADING AND SAVING PROGRAMS WITH THE USE OF A CASSETTE RECORDER IS NOT A DIFFICULT PROCESS IN ITSELF - READING AND UNDERSTANDING THE INSTRUCTIONS FOR THE VERY FIRST TIME CAN BE QUITE CONFUSING. WITH THAT THOUGHT IN MIND I HAVE TRIED TO KEEP THE INSTRUCTIONS AS SIMPLE AS POSSIBLE.

INSTRUCTIONS FOR LOADING PROGRAMS:

1. TYPE: OLD CS1
2. THEN: PRESS ENTER
3. FOLLOW THE DIRECTIONS AS THEY APPEAR ON YOUR MONITOR OR TV SCREEN:
 - 3.1 * REWIND CASSETTE TAPE CS1
THEN PRESS ENTER
 - 3.2 * PRESS CASSETTE PLAY CS1
THEN PRESS ENTER
 - 3.3 COMPUTER DISPLAYS MESSAGE:
* READING
 - 3.4 COMPUTER DISPLAYS MESSAGE:
* DATA OK
 - 3.5 * PRESS CASSETTE STOP CS1
THEN PRESS ENTER
4. WAIT FOR THE FLASHING CURSOR TO APPEAR IN THE LOWER LEFT-HAND CORNER OF YOUR MONITOR OR TV SCREEN

5. TYPE: RUN

6. THEN: PRESS ENTER

INSTRUCTIONS FOR SAVING PROGRAMS:

1. TYPE: SAVE CS1
2. THEN: PRESS ENTER
3. FOLLOW THE DIRECTIONS AS THEY APPEAR ON YOUR MONITOR OR TV SCREEN:
 - 3.1 * REWIND CASSETTE TAPE CS1
THEN PRESS ENTER
 - 3.2 * PRESS CASSETTE RECORD CS1
THEN PRESS ENTER
 - 3.3 COMPUTER DISPLAYS MESSAGE:
* RECORDING
 - 3.4 * PRESS CASSETTE STOP CS1
THEN PRESS ENTER
4. YOUR PROGRAM IS NOW SAVED - BUT YOU SHOULD GET INTO THE HABIT OF CHECKING ALL YOUR PROGRAMS TO BE SURE THAT THEY WERE SAVED WITHOUT ERROR.

5. CONTINUE TO FOLLOW THE DIRECTIONS AS THEY APPEAR ON YOUR MONITOR OR TV SCREEN:

- 5.1 COMPUTER DISPLAYS MESSAGE:
* CHECK TAPE (Y OR N)?
- 5.2 TYPE: Y
- 5.3 THEN: PRESS ENTER
- 5.4 * REWIND CASSETTE TAPE CS1
THEN PRESS ENTER
- 5.5 * PRESS CASSETTE PLAY CS1
THEN PRESS ENTER
- 5.6 COMPUTER DISPLAYS MESSAGE:
* CHECKING
- 5.7 COMPUTER DISPLAYS MESSAGE:
* DATA OK

6. YOUR PROGRAM IS NOW SAVED - SAFELY AND WITHOUT ERROR.

THAT'S ALL THERE IS TO IT! NEXT MONTH'S TOPIC WILL BE KEEPING YOUR CASSETTE TAPES AND PROGRAMS ORGANIZED. IF YOU NEED ANY HELP UNDERSTANDING HOW TO LOAD AND SAVE PROGRAMS - JUST GIVE ME A CALL (412-335-0163) AND I'LL TRY TO HELP.

MICKEY SCHMITT

ERROR CODE LISTING

REPRINTED FROM FEBRUARY, 1986 ISSUE OF HOCUS NEWSLETTER

EXTENDED BASIC ERROR CODES	EDITOR/ASSEMBLER ERROR CODES	EXECUTION ERRORS
10 Numeric overflow	ERRNO >0200 2	0-7 Standard I/O
14 Syntax Error	ERPSYN >0300 3	08 Memory Full
16 Illegal after Sbrtn	ERRIBS >0400 4	09 Incorrect Statement
19 Name too long	ERRNQS >0500 5	0A Illegal Tag
20 Unrecognized Char	ERRNTL >0600 6	0B Checksum Error
24 \$/# Mismatch	ERPSNM >0700 7	0C Dup. Definition
28 Improperly used name	ERRRBE >0800 8	0D Unresolved Ref.
36 Image error	ERRMUV >0900 9	0E Incorrect Statement
39 Memory Full	ERRIM >0A00 10	0F Program not found
40 Stack Overflow	ERRMEM >0B00 11	10 Incorrect Statement
42 Next without For	ERRSO >0C00 12	11 Bad Name
44 FOR-NEXT Nesting	ERRNWF >0D00 13	12 Can't Continue
47 Must be in Sbrtn	ERRFNN >0E00 14	13 Bad Value
48 Recursive Sbrtn CALL	ERRSNS >0F00 15	14 Number too big
49 Missing SUBEND	ERRRSC >1000 16	15 String/Number
51 RETURN without GOSUB	ERRMS >1100 17	16 Bad Argument
54 String Truncated	ERRRWG >1200 18	17 Bad Subscript
56 Speech \$ too long	ERRST >1300 19	18 Name Conflict
57 Bad Subscript	ERRRBS >1400 20	19 Can't do that
60 Line not found	ERRSSL >1500 21	1A Bad Line Number
61 Bad Line #	ERRLNF >1600 22	1B FOR NEXT Error
62 Line too long	ERRBLN >1700 23	1C I/O Error
67 Can't CONTINUE	ERRLTL >1800 24	1D File Error
69 Command Illegal in Prgrm	ERRCC >1900 25	1E Input Error
70 Only legal in prgrm	ERRCIP >1A00 26	1F Data Error
74 Bad Argument	ERRRLP >1B00 27	20 Line too long
78 No Program Present	ERPBA >1C00 28	21 Memory Full
79 Bad Value	ERRNPP >1D00 29	22 Unknown Error Code
80 Nil	ERRBV >1E00 30	
81 Incorrect Argument List	ERRIAL >1F00 31	
82 Nil	ERRINP >2000 32	
83 Input Error	ERRDAT >2100 33	
84 Data Error	ERRFE >2200 34	
97 Protection Violation	ERRIO >2400 36	
109 File Error	ERRSNF >2500 37	
130 I/O Error	ERRPV >2700 39	
135 Sbrtn not found	ERRINV >2800 40	
	WRNNO >2900 41	
	WRNST >2A00 42	
	WRNPP >2B00 43	
	WRNINP >2C00 44	
	WRNIO >2D00 45	

TI BASIC ERROR CODES PERTAINING TO DISK SYSTEM

#:	FIRST #	SECOND #
0:	OPEN	Can't find specified Disk Drive
1:	CLOSE	Disk or program is Write Protected
2:	INPUT	Bad Open Attribute
3:	PRINT	Illegal Operation
4:	RESTORE	Disk full or too many files opened
5:	OLD	Attempt to read past EOF
6:	SAVE	Device Error
7:	DELETE	File Error
9:	EOF	

TI WRITER ERROR CODES

0	-	Indicates Disk Controller not on; OR: Diskette not Initialized
6	-	No Disk in Drive; OR: Is upside down; OR: Drive is not turned on
7	-	No Disk in Drive
00	-	Illegal use of LoadF, PrintF; OR:
02	-	No file in Diskette with Filename used
04	-	Disk is full
06	-	PrintF Command in progress was interrupted; OR: Disk Door was opened while Red Light was on
07	-	Invalid Filename (I.E. Name too long or using invalid characters)
15	-	Invalid Disk Drive Number, or Device

DISK MANAGER ERROR CODES

#:	FIRST #	SECOND #
1:	OTHER	Rec not found
2:	SEEK/STEP	Cyclic Redundancy
3:	INPUT	Lost Data
4:	PRINT	Write protect
5:	NIL	Write fault
6:	NIL	No Disk Drive
7:	NIL	Invalid input
8:	NIL	
9:	Special Error Code for	Comprehensive Test

I/O ERRORS

#	FIRST #	SECOND #
1:	OPEN	Device not found
2:	CLOSE	Write Protected
3:	PRINT	Invalid I/O Command
4:	RESTORE	Out of space
5:	OLD	EOF
6:	SAVE	Device Error
7:	DELETE	File/Data Mismatch

INSTALABEL

There are many times when I need to make multiple copies of a mailing label. For example, I had to make a bunch of return address labels. Another time there was a mistake in a magic book that I published and I had to put an error notice on the front page. Whatever reason you have, this simple program will do the trick. After you input the information a number will appear on the screen counting the labels as they're made. Every time a label is made a beep will sound. I did this because if I leave the room, the beeps will tell me when they're done. If you don't like the beep just turn down your volume.

Bruce Kalver

```
100 CALL CLEAR
110 INPUT "NAME:";N$
120 INPUT "ADDRESS:";A$
130 INPUT "CITY STATE, ZIP:";C$
140 INPUT "NUMBER OF LABELS:";L
150 OPEN #1:"PIO"
160 FOR I=1 TO L
170 DISPLAY AT(10,4)BEEP:USING "##":I
180 PRINT #1:N$
190 PRINT #1:A$
200 PRINT #1:C$
210 FOR Y=1 TO 3
220 PRINT #1:" "
230 NEXT Y
240 NEXT X
250 PRINT "FINISHED"
260 PRINT
```

**DO NOT BEND
FLOPPY DISK ENCLOSED
DO NOT XRAY**

```
100 : *****
110 : *
120 : * DON'T LABELS *
130 : * BY: Ron Rutledge *
140 : * Central Iowa UG *
150 : *
160 : *****
170 :
180 ESC$=CHR$(27)!
ESCAPE CODE
190 EMP$=ESC$&"E" !
EMPHASIZED PRINT
200 NOR$=ESC$&"W"&CHR$(0)!
NORMAL PRINT
210 ENL$=ESC$&"W"&CHR$(1)!
ENLARGED PRINT
220 UON$=ESC$&"-"&CHR$(1)!
TURN UNDERLINE ON
230 UOF$=ESC$&"-"&CHR$(0)!
TURN UNDERLINE OFF
240 OPEN #1:"PIO"
250 PRINT #1:EMP$&ENL$&UON$&
"DO NOT BEND"
260 PRINT #1:NOR$&" FLOPPY D
ISK ENCLOSED"
270 PRINT #1:ENL$&UOF$&"DO N
OT XRAY"
280 PRINT #1: : : :
290 CALL KEY(O,R,S)! A
RE YOU PRESSING A KEY?
300 IF S=0 THEN 250 !
IF NOT THEN PRINT ANOTHER
310 CLOSE #1
320 END
```

TK-WRITER REVISION JACKSON COUNTY 99ers VIA ATLANTA 99/4A U.G.

This is a modification to the LOAD program that will cut down the wait when switching from the EDITOR to the FORMATTER. This wait is caused by the assembly language program being loaded back into the computer when the load program is rebooted. This assembly language program, however, is still present in memory if you haven't done something like turn off the computer or run some other program. You can convert the LOAD program by replacing line 100 and adding lines 102, 104, and 108 as shown below. Line 100 checks to see if the assembly program is in memory. If not, it jumps to 108 and loads the program. If it is in memory, the REF/DEF table and last free address are loaded, and you can access the assembly code as usual. In plain talk, it will save a whole bunch of time.

```
100 CALL CLEAR :: CALL INIT :: CALL PEEK(-2043,A,B):: IF A<>84 OR B<>75 THEN 108
102 CALL LOAD(16360,85,84,73,76, 73,84,250,212,70,79,82,77,65,84,2
50,132,69,58,73,84,79,82,250,22)
104 CALL LOAD(8196,63,232):: GOTO 110
108 CALL LOAD("DSK1.WRITER")
```

Basic Basics
by
Charles Strink
West Penn Users Group

```
60 FOR A=1 TO 28
70 CALL SPRITE(#A,96,INT(A/3)+3,
92,124,A*INT(RND*4.5)-2.25
+A/2*SGN(RND-.5),A*INT(
RND*4.5)-2.25+A/2*SGN(RND-.5))
80 NEXT A
90 NEXT I
100 GOTO 40::END
```

Line 60 loops thru to use 28 sprites and line 70 calls the sprite in the shape of our redefined character, then sets it into motion in a different direction and speed each time it loops thru.

This month it is time for some Sprite fun, but to enjoy the following program you must have Extended Basic. Sorry, but there are no sprites available in basic. First the program I like to call;
-----BUTTERFLIES-----

```
10 CALL CLEAR
20 CALL CHAR(96,"000B0B1C7F1C0B
0B")
30 RANDOMIZE
40 FOR I=2 TO 16
50 CALL SCREEN(I)
```

Now, just what does all this do? Lines 10 and 20 clear the screen and redefine character 96.

Line 30 makes sure each sprite direction of travel and speed is truly random.

Lines 40 and 50 cause the screen color to loop thru all 15 colors.

Line 70 starts the whole process over again.

This program shows just how much action and color can be packed into a few short lines when it is run on the 99/4A WONDER MACHINE.

Until next time.....

.....Happy Computing

```

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100 ! LABEL
110 ! Version XB.3.0
120 ! By Jim Swedlow
130 ! 22 Mar 86
140 ! Based on a program by Phil Barnes
145 !
150 GOTO 180 :: IN$,SS$,DS$,PI$ :: DIM Y$(4),A$(5):: C$,D$ :: DIM F$(144),T$(144)
160 :: R,J,D,E$,I,C,@ :: CALL KEY
170 DATA "Your Name, Street Address, "City, CA ZIPCD",
180 "MAGNETIC MEDIA", DO NOT BEND * DO NOT X-RAY,
190 "DO NOT EXPOSE TO MAGNETISM,
200 "ESCAPE
210 "DOUBLE STRIKE
220 "CONDENSED
230 "DBL WIDTH
240 "PICA
250 "SUPERSCRIPT
260 "LINE FEED TO
270 "12/144 INCH
280 OPEN #1:"PIO" :: DISPLAY AT(3,9):"LABEL 3.0": "Check the position of the
290 labels before printing."
300 DISPLAY AT(20,0):"Address:"<A>address:"<D>isk:"<W>arning"
310 IF B=550 :: IF I=4 THEN 300 ELSE B=@ :: GOTO 330
320 DISPLAY AT(10,0): " Labels/Disk: ";B: " Drive: ";D$: " Comm
330 GOTO 470,500,310,470,370,470,500
340 ACCEPT AT(12,9)SIZE(-2)VALIDATE(DIGIT)BEEP:E$ :: IF E$="" THEN 340 ELSE B=V
350 ACCEPT AT(13,9)SIZE(-2)VALIDATE(DIGIT)BEEP:E$ :: IF E$="" THEN 350 ELSE D$="
360 ACCEPT AT(15,6)SIZE(-25)BEEP:C$ :: GOTO 320
370 ON ERROR STOP :: C=@ :: DISPLAY AT(10,0):: DISPLAY AT(20,0):"Initialzing" ::
380 INPUT "INPUT,RELATIVE,INTERNAL";
390 IN$=F$(C),I,I :: T$(C)=F$(I)&STR$(I)
400 DISPLAY AT(22,0):F$(C); " ";T$(C):: IF C=127 THEN 420 ELSE INPUT #2:F$(C+@),
410 I,J
420 IF F$(C+@)="" THEN IF C>5 THEN 420 ELSE C=C+@ :: GOTO 390
430 I=ABS(I):: C=C+@ :: IF I=5 THEN T$(C)="Prog" :: GOTO 390 ELSE T$(C)=Y$(I)&STR$(I)
440 CLOSE #2 :: ON ERROR STOP :: DISPLAY AT(20,0):"Printing": : : : FOR B=@ TO
450 B :: J=0 :: D=B :: E$="
460 PRINT #2:DS$:F$(0);E$;T$(0);C$: :
470 FOR I=J+@ TO J+D :: FOR I=1 TO 144 :: T$(I)=F$(I)&STR$(I);TAB(18);F$(I+D);TAB(29);T$(
480 I+D);:d(35);F$(I+2&D);TAB(46);T$(I+2&D);:N$ :: I
490 J=J+24-6&(D=10):: IF C>J THEN D=10 :: IF C=J THEN D=10 :: GOTO 440 ELSE PRINT #
500 @:IN$
510 NEXT B :: B=B+@ :: FOR I=@ TO C :: T$(I),F$(I)="" :: NEXT I :: GOTO 320
520 IF I=4 THEN RESTORE ELSE RESTORE 170
530 FOR C=@ TO 5 :: FOR I=1 TO 144 :: A$(C)=F$(I) :: C=D=10 :: GOSUB 570
540 B=540 :: ON I GOTO 470,500,310,470,530,510,600
550 FOR C=@ TO 5 :: A$(C)="" :: NEXT C :: D=@ :: GOSUB 570
560 FOR C=@ TO 5 :: ACCEPT AT(C+9,2)SIZE(-28)VALIDATE(DIGIT)A$(C) :: NEXT C
570 ACCEPT AT(1,9)SIZE(-2)VALIDATE(DIGIT)BEEP:E$ :: IF E$="" THEN 520 ELSE D=V
580 ACCEPT AT(13,9)SIZE(-2)VALIDATE(DIGIT)BEEP:E$ :: IF E$="" THEN 520 ELSE D=V
590 DISPLAY AT(20,0):"Printing" :: FOR I=@ TO D :: FOR C=@ TO 5 :: PRINT #2:PI$:
600 A$(C) :: NEXT C :: PRINT #2:IN$ :: PRINT #2:CHR$(27)&CHR$(10):: NEXT I
610 GOTO 490
620 DISPLAY AT(20,0)BEEP:"<A>address <P>print labels:"<C>ustom <M>odify default
630 ts:"<D>isk <Q>uit:"<W>arning"
640 CALL KEY(3,I,C) :: IF C<@ THEN 550 ELSE IF I=13 OR I=32 THEN I=80
650 I=POS("ACDWPMD",CHR$(I),@) :: IF I THEN CALL KEY(5,C,C) :: IF B THEN DISPLAY A
660 T(20,@) :: : : : :: RETURN ELSE RETURN
670 FOR C=@ TO 5 :: DISPLAY AT(C+9,0):">"&A$(C):: NEXT C :: DISPLAY AT(15,0): "
680 @: labels: ";D :: RETURN
690 DISPLAY AT(10,0)BEEP:D$: " Could not be accessed" :: ON ERROR 590 :: CLOSE #2
700 ON ERROR STOP :: RETURN
710 CALL CLEAR :: CLOSE #2 :: END

```

```

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140 ! Based on a program by Phil Barnes
145 !
150 GOTO 180 :: IN$,SS$,DS$,PI$ :: DIM Y$(4),A$(5):: C$,D$ :: DIM F$(144),T$(144)
160 :: R,J,D,E$,I,C,@ :: CALL KEY
170 DATA "Your Name, Street Address, "City, CA ZIPCD",
180 "MAGNETIC MEDIA", DO NOT BEND * DO NOT X-RAY,
190 "DO NOT EXPOSE TO MAGNETISM,
200 "ESCAPE
210 "DOUBLE STRIKE
220 "CONDENSED
230 "DBL WIDTH
240 "PICA
250 "SUPERSCRIPT
260 "LINE FEED TO
270 "12/144 INCH
280 OPEN #1:"PIO" :: DISPLAY AT(3,9):"LABEL 3.0": "Check the position of the
290 labels before printing."
300 DISPLAY AT(20,0):"Address:"<A>address:"<D>isk:"<W>arning"
310 IF B=550 :: IF I=4 THEN 300 ELSE B=@ :: GOTO 330
320 DISPLAY AT(10,0): " Labels/Disk: ";B: " Drive: ";D$: " Comm
330 GOTO 470,500,310,470,370,470,500
340 ACCEPT AT(12,9)SIZE(-2)VALIDATE(DIGIT)BEEP:E$ :: IF E$="" THEN 340 ELSE B=V
350 ACCEPT AT(13,9)SIZE(-2)VALIDATE(DIGIT)BEEP:E$ :: IF E$="" THEN 350 ELSE D$="
360 ACCEPT AT(15,6)SIZE(-25)BEEP:C$ :: GOTO 320
370 ON ERROR STOP :: C=@ :: DISPLAY AT(10,0):: DISPLAY AT(20,0):"Initialzing" ::
380 INPUT "INPUT,RELATIVE,INTERNAL";
390 IN$=F$(C),I,I :: T$(C)=F$(I)&STR$(I)
400 DISPLAY AT(22,0):F$(C); " ";T$(C):: IF C=127 THEN 420 ELSE INPUT #2:F$(C+@),
410 I,J
420 IF F$(C+@)="" THEN IF C>5 THEN 420 ELSE C=C+@ :: GOTO 390
430 I=ABS(I):: C=C+@ :: IF I=5 THEN T$(C)="Prog" :: GOTO 390 ELSE T$(C)=Y$(I)&STR$(I)
440 CLOSE #2 :: ON ERROR STOP :: DISPLAY AT(20,0):"Printing": : : : FOR B=@ TO
450 B :: J=0 :: D=B :: E$="
460 PRINT #2:DS$:F$(0);E$;T$(0);C$: :
470 FOR I=J+@ TO J+D :: FOR I=1 TO 144 :: T$(I)=F$(I)&STR$(I);TAB(18);F$(I+D);TAB(29);T$(
480 I+D);:d(35);F$(I+2&D);TAB(46);T$(I+2&D);:N$ :: I
490 J=J+24-6&(D=10):: IF C>J THEN D=10 :: IF C=J THEN D=10 :: GOTO 440 ELSE PRINT #
500 @:IN$
510 NEXT B :: B=B+@ :: FOR I=@ TO C :: T$(I),F$(I)="" :: NEXT I :: GOTO 320
520 IF I=4 THEN RESTORE ELSE RESTORE 170
530 FOR C=@ TO 5 :: FOR I=1 TO 144 :: A$(C)=F$(I) :: C=D=10 :: GOSUB 570
540 B=540 :: ON I GOTO 470,500,310,470,530,510,600
550 FOR C=@ TO 5 :: A$(C)="" :: NEXT C :: D=@ :: GOSUB 570
560 FOR C=@ TO 5 :: ACCEPT AT(C+9,2)SIZE(-28)VALIDATE(DIGIT)A$(C) :: NEXT C
570 ACCEPT AT(1,9)SIZE(-2)VALIDATE(DIGIT)BEEP:E$ :: IF E$="" THEN 520 ELSE D=V
580 ACCEPT AT(13,9)SIZE(-2)VALIDATE(DIGIT)BEEP:E$ :: IF E$="" THEN 520 ELSE D=V
590 DISPLAY AT(20,0):"Printing" :: FOR I=@ TO D :: FOR C=@ TO 5 :: PRINT #2:PI$:
600 A$(C) :: NEXT C :: PRINT #2:IN$ :: PRINT #2:CHR$(27)&CHR$(10):: NEXT I
610 GOTO 490
620 DISPLAY AT(20,0)BEEP:"<A>address <P>print labels:"<C>ustom <M>odify default
630 ts:"<D>isk <Q>uit:"<W>arning"
640 CALL KEY(3,I,C) :: IF C<@ THEN 550 ELSE IF I=13 OR I=32 THEN I=80
650 I=POS("ACDWPMD",CHR$(I),@) :: IF I THEN CALL KEY(5,C,C) :: IF B THEN DISPLAY A
660 T(20,@) :: : : : :: RETURN ELSE RETURN
670 FOR C=@ TO 5 :: DISPLAY AT(C+9,0):">"&A$(C):: NEXT C :: DISPLAY AT(15,0): "
680 @: labels: ";D :: RETURN
690 DISPLAY AT(10,0)BEEP:D$: " Could not be accessed" :: ON ERROR 590 :: CLOSE #2
700 ON ERROR STOP :: RETURN
710 CALL CLEAR :: CLOSE #2 :: END

```

PRINTING FLASHER

```

10 REM REMOVE REMARKS BEFORE USING. LINE 140 ASSIGNS COLORS TO
CHARACTERS.
110 CALL SCREEN(5)
120 FOR I=65 TO 90 :: CALL CHARPAT(I,A$):: CALL CHAR(I+32,A$):: NEXT I
130 CALL CLEAR
140 FOR I=9 TO 12 :: CALL COLOR(I,5,16):: NEXT I :: FOR I=5 TO 8 :: CALL COLOR(I
15,5):: NEXT I
150 A$="I LOVE YOU"
160 B$="i love you"
170 DISPLAY AT(11,11):A$ :: FOR I=1 TO 50 :: NEXT I :: DISPLAY AT(11,11):B$ ::
180 OR I=1 TO 50 :: NEXT I :: GOTO 170
180 END

```



"It's a book, Kevin. It has words and pictures in it...you know...like on your computer."

Single-board nuclear reactor supplies standby power for 12 years

Now available on a full-length plug-in card for IBM PC or compatible computers, the QBX-1 add-on nuclear-reactor card provides backup power for as long as 12 years. When the card senses a power failure, explosive bolts eject moderator and control rods from the reactor's interior within 20 μ sec, bringing the reactor to its fully rated output of 20 kW in less than a millisecond. Over its 12-year active life, the reactor's power decreases by 25% to 15 kW.

Integral heat fins provide convection cooling of the reactor's 500W power dissipation while the reactor remains in its standby condition. If your computer's fans can't furnish 400 ft³/sec of forced air for cooling, consider buying the manufacturer's heavy-water cooling jacket and stainless-steel pump module, which fit conveniently under a desk or workbench. Latches on each side of the reactor module let you quickly exchange the radioactive core,

should you need to replace it. An optional circular viewing port of lead glass lets you check the reactor's internal mechanical assemblies.

To protect users from undue radiation, each reactor includes a shielding kit comprising five self-stick lead plates and 20 radiation-monitoring film badges. The lead plates mount inside your computer's enclosure and reduce the gamma rays that cause soft errors to floppy-disk and RAM data. For further protection, consider buying the manufacturer's 200-ft extension cords for keyboards and monitors.

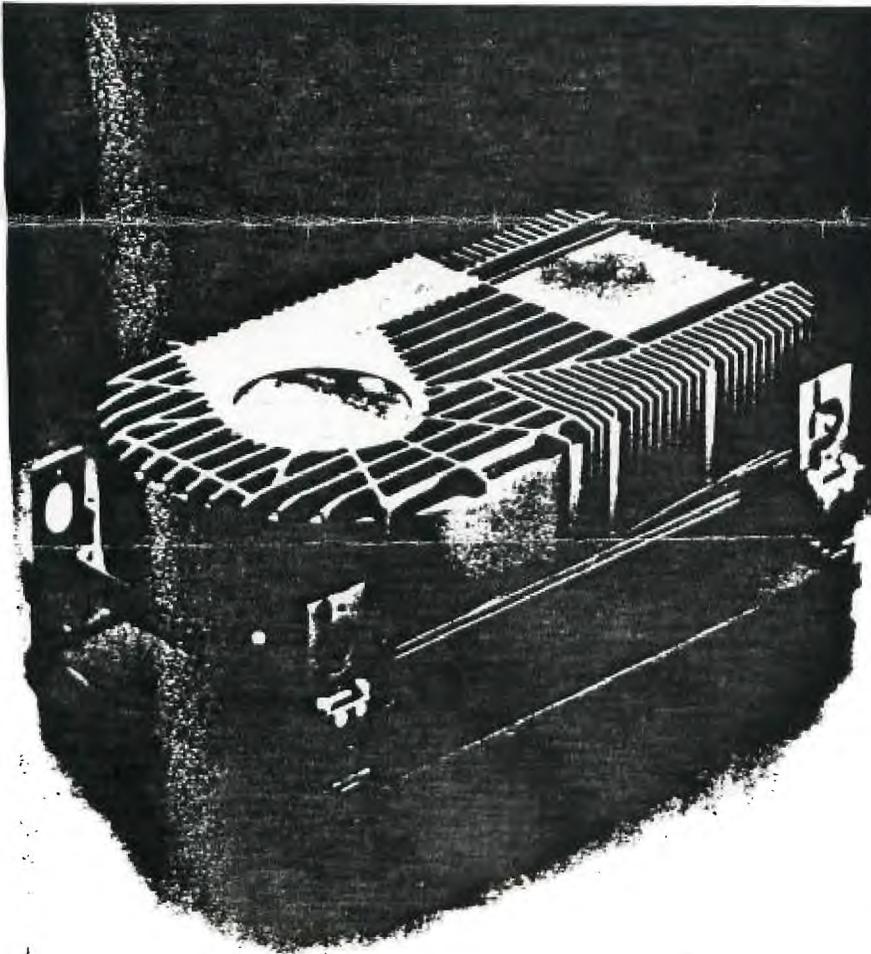
Because the reactor can supply more than enough power for your computer, you can sell excess power to your local utility company. An add-on phasing and metering kit (PMK-1) lets you connect your reactor to the local power grid. Each PMK-1 includes standard power-sale contracts and Rural Electrification Board rules and regulations.

Although not required in all localities, each reactor card package includes a standard 23-volume site-evacuation plan. The plan includes blank forms for you to fill in the name and address of your reactor site and then mail to the Nuclear Regulatory Commission. As an option, the manufacturer supplies the plan on 12 MS-DOS-compatible disks in Wordstar format. User-friendly templates let you type in information so that your word processor can create a complete, printed document.

Reactor prices start at \$2.3 million (1). Delivery, seven years ARO.

—Regus Patoff

Luminescent Electronic Products Inc, Box U-235, Trinity Site, NM 43210. INQUIRE DIRECT



Nuclear reactor supplies CPU power during power failure or other power emergencies. The reactor also glows in the dark (as will you), which makes it easy to find your computer.

I wanted to do a product review this month, but because of time restraints, was unable to do so, so when I received this review from BOB SADUSKY, I jumped on it.

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