

# HOCUS

0211  
8712  
Milwaukee

## Home Computer Users Spotlight

a monthly publication of the Milwaukee Area 99/4 Users Group



DECEMBER - 1987

MILWAUKEE AREA 99/4 GROUP  
4122 GLENWAY WAUWATOSA, WI 53222

President...	D. Walden	5292173
Vice-Pres...	J. Schroeder	2644735
Treasurer...	P. Norton	4628954
Secretary...	B. Kling	5293161
Librarian...	E. VonDerEhe	5490593
Librarian...	F. Pabian	3273618
Newsletter...	G. Hitz	5350133
S.I.G. ....	Schroeder/Walden/Hitz	

Next Group Meeting  
January 9, 1987 2nd Saturday  
Wisconsin Savings & Loan  
7000 West State Street  
12:00 Noon - 4:00 PM

Next S.I.G. Meeting  
January 5, 1987 1st Tuesday  
Security Savings & Loan  
5555 North Port Washington  
7:00PM - 10:00PM

Annual Membership Dues  
Individual - \$10  
Family - \$15

((( HOCUS NEWSLETTER INDEX )))

The Case Of The Missing Cartridge or  
How To Play The Slots by Denis Dann .... 2,3  
"DUFFY" (cartoon) ..... 4  
ASTRONOMY TISHUG News Digest ..... 5,7  
RE-ACT (game) TISHUG News Digest ..... 7,8  
Tips From Tigercub by Jim Peterson .... 10,11



"THE CASE OF THE MISSING CARTRIDGE" or  
"HOW TO PLAY THE SLOTS" by Denis A. Dann - Milwaukee 99

After reading "INSTALLING EXTENDED BASIC INSIDE YOUR CONSOLE" by John F. Willforth of West Penn 99, I proceeded to make the necessary modifications. My efforts were rewarded with a well functioning unit. Then I discovered that of course I couldn't have a cartridge in the grom port at the same time X-Basic was loaded unless I wanted a fine array of Assembly Language Codes on the screen. Furthermore, if I used a \*Cartridge Expander I now had to leave one connector open in order to use the X-Basic option. Now I had a Navarone two-cartridge "Widget". With the aid of a Jeweler's file and 15 minutes time, a simple modification of the indexing switch allowed me to restore it to a three-cartridge Expander with a four position indexing switch.

1. Remove cartridges from expander.
2. Remove four (4) phillips screws from back side of Expander and gently separate housing, noting position of components.

Note: modifications will be made to top side of housing and white index switch slider.

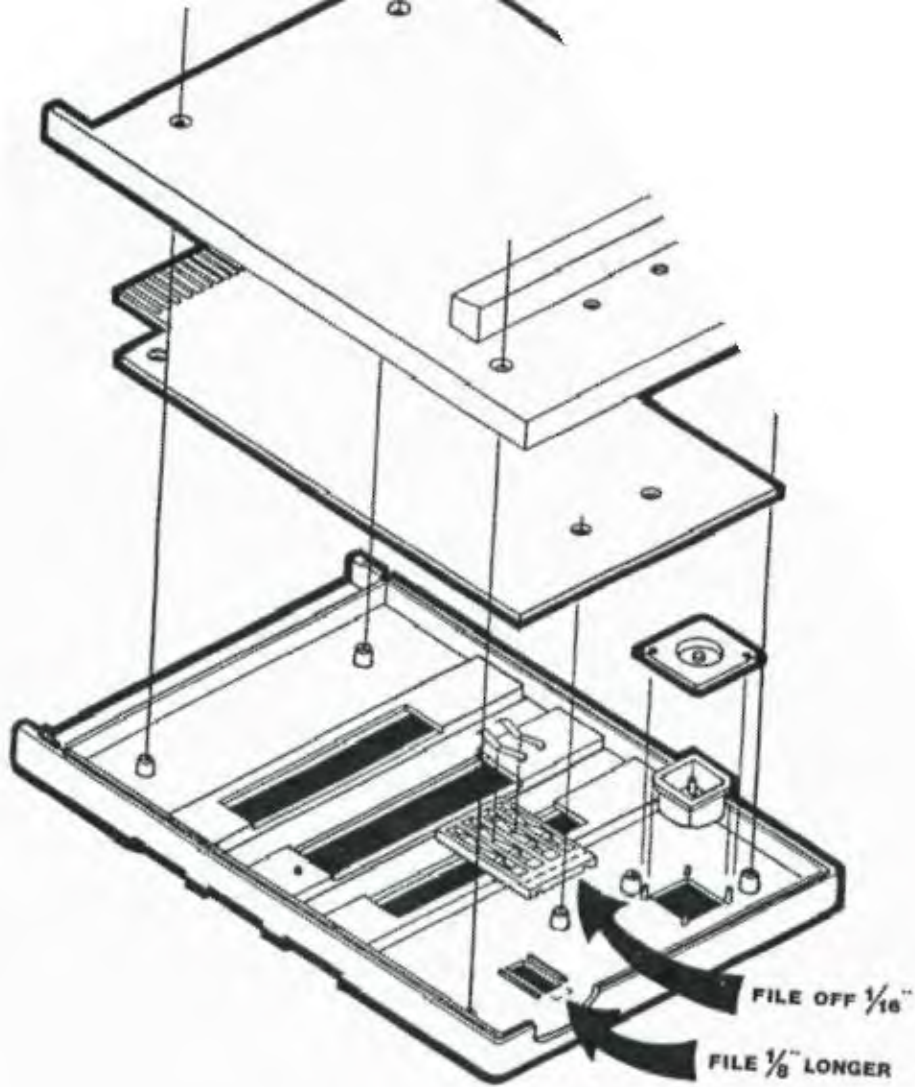
3. File index switch opening an additional 1/8" towards front of housing.
4. When switch normally bottoms out at position 3, there is approximately 1/16" of clearance to the inside front edge of housing. Therefore you need only to file 1/16" off of front edge of switch slider for a total of 1/8" clearance.
5. Reassemble components and you now have a 4 position index switch with one open circuit position to facilitate the use of the internal X-Basic mode.
6. Label the switch opening ( 1 2 3 X ).

REMEMBER: If you see assembly language on the screen check all switch positions first.

7. In addition to the above...putting a length of double-stick tape on the foot of the Expander will provide a nice tight installation preventing movement of the Expander by accidental bumps.

Many thanks to John Willforth for a neat project; and to Navarone for a fine product.

\*Cartridge Expander is a Trademark of  
Navarone Industries - Sunnyvale, California



3.

# DUFFY



## GK ENTERPRISES

Your Computer Supply Source

No need to wait for a sale.  
Our prices are low everyday.

Wide selection of printer ribbons.

BLACK AND COLORED

C.ITOH EPSON OKIDATA PANASONIC  
STAR AND MANY MORE

Colored Paper - Colored Labels  
Colored Disks

\*\*\*\*\*  
\* 546-0111 \*  
\*\*\*\*\*

8634 West National Avenue  
West Allis WI 53227

Open M-F 9AM-7PM, Sat 11-4

100 CALL CLEAR  
 110 CALL SCREEN(3)  
 120 DISPLAY AT(2,12):"ASTRONOMY"  
 130 INPUT "PRESS ENTER TO CONTINUE":\$  
 140 CALL CLEAR  
 150 PRINT "DAY AT(1,1):"WHICH PLANET?"  
 160 DISPLAY AT(3,1):"1 MERCURY"  
 170 DISPLAY AT(5,1):"2 VENUS"  
 180 DISPLAY AT(7,1):"3 EARTH"  
 190 DISPLAY AT(9,1):"4 MARS"  
 200 DISPLAY AT(11,1):"5 JUPITER"  
 210 DISPLAY AT(13,1):"6 SATURN"  
 220 DISPLAY AT(15,1):"7 URANUS"  
 230 DISPLAY AT(17,1):"8 NEPTUNE"  
 240 DISPLAY AT(19,1):"9 PLUTO"  
 250 PRINT "DAY AT(1,1):"10 EXIT TO MENU"  
 260 INPUT "WANT TO PLANET?":\$  
 270 IF P=6 THEN GOTO 380  
 280 IF P=5 THEN GOTO 490  
 290 IF P=8 THEN GOTO 580  
 300 IF P=9 THEN GOTO 820  
 310 IF P=7 THEN GOTO 960  
 320 IF P=1 THEN GOTO 1090  
 330 IF P=2 THEN GOTO 1260  
 340 IF P=4 THEN GOTO 1400  
 350 IF P=3 THEN GOTO 1500  
 360 IF P=10 THEN GOTO 1600  
 370 INPUT "WANT TO PLANET?":\$  
 380 CALL CLEAR  
 390 PRINT "GRAVITY OF ICE ON FRIGID PLANETS"  
 400 PRINT "GRAVITY OF ICE ON FRIGID PLANETS"  
 410 PRINT "GRAVITY OF ICE ON FRIGID PLANETS"  
 420 PRINT "GRAVITY OF ICE ON FRIGID PLANETS"  
 430 PRINT "GRAVITY OF ICE ON FRIGID PLANETS"  
 440 PRINT "GRAVITY OF ICE ON FRIGID PLANETS"  
 450 PRINT "GRAVITY OF ICE ON FRIGID PLANETS"  
 460 PRINT "GRAVITY OF ICE ON FRIGID PLANETS"  
 470 INPUT "PRESS ENTER TO CONTINUE":\$  
 480 GOTO 140  
 490 CALL CLEAR  
 500 PRINT "JUPITER":\$  
 510 PRINT "THE LARGEST PLANET IN THE SOLAR SYSTEM"  
 520 PRINT "IT IS 318 TIMES AS MASSIVE AS EARTH"  
 530 PRINT "ITS ATMOSPHERE IS COMPOSED OF HYDROGEN AND HELIUM"  
 540 PRINT "IT HAS 63 MOONS"  
 550 PRINT "IT IS THE ONLY PLANET IN OUR SOLAR SYSTEM WITH A GREAT RED SPOT"

550 PRINT "ATMOSPHERE, WHICH MAY BE A"  
 560 PRINT "VIOLENT ONE OF TROPICAL STORMS"  
 570 PRINT "RAINS AND TITANIC BULBOSITY"  
 580 PRINT "IS MARRED BY SHIFTLING BANDING"  
 590 PRINT "COLORED BANDS, THE MOST FAMOUS MARKING IS THE GREAT RED SPOT"  
 600 PRINT "FAMOUS MARKING IS THE GREAT RED SPOT"  
 610 PRINT "RED SPOT, THE SPOT WHICH HAS BEEN OBSERVED FOR CENTURIES"  
 620 PRINT "COLOR FROM RED TO GREAT RED SPOT"  
 630 PRINT "SOMETIMES DISAPPEARS FOR MONTHS"  
 640 PRINT "YEARS AT A TIME."  
 650 PRINT "PRESS ENTER TO CONTINUE":\$  
 660 GOTO 140  
 670 GOTO 140  
 680 CALL CLEAR  
 690 PRINT "NEPTUNE":\$  
 700 PRINT "THE PLANET BEYOND URANUS"  
 710 PRINT "NEARLY 2.8 BILLION MILES FROM THE SUN, ASTRONOMERS HAVE NOTICED IRREGULARITIES IN THE PLANET'S ORBIT"  
 720 PRINT "IT IS A PALE GREEN ORB, BEARING THE NAME OF NEPTUNE, ONE OF THE ROMAN GODS"  
 730 PRINT "NAMED TRITON"  
 740 PRINT "PRESS ENTER TO CONTINUE":\$  
 750 PRINT "PRESS ENTER TO CONTINUE":\$  
 760 PRINT "PRESS ENTER TO CONTINUE":\$  
 770 PRINT "PRESS ENTER TO CONTINUE":\$  
 780 PRINT "PRESS ENTER TO CONTINUE":\$  
 790 PRINT "PRESS ENTER TO CONTINUE":\$  
 800 PRINT "PRESS ENTER TO CONTINUE":\$  
 810 PRINT "PRESS ENTER TO CONTINUE":\$  
 820 PRINT "PRESS ENTER TO CONTINUE":\$  
 830 PRINT "PRESS ENTER TO CONTINUE":\$  
 840 PRINT "PRESS ENTER TO CONTINUE":\$  
 850 PRINT "PRESS ENTER TO CONTINUE":\$  
 860 PRINT "PRESS ENTER TO CONTINUE":\$  
 870 PRINT "PRESS ENTER TO CONTINUE":\$  
 880 PRINT "PRESS ENTER TO CONTINUE":\$  
 890 PRINT "PRESS ENTER TO CONTINUE":\$  
 900 PRINT "PRESS ENTER TO CONTINUE":\$  
 910 PRINT "PRESS ENTER TO CONTINUE":\$  
 920 PRINT "PRESS ENTER TO CONTINUE":\$  
 930 PRINT "PRESS ENTER TO CONTINUE":\$  
 940 PRINT "PRESS ENTER TO CONTINUE":\$  
 950 GOTO 140  
 960 CALL CLEAR  
 970 PRINT "PLUTO":\$  
 980 PRINT "THE NINTH PLANET, DISCOVERED IN 1930, KNOWN AS A TINY ICE DWELLER"  
 990 PRINT "IT ORBIT ECCENTRICALLY BETWEEN 4.6 AND 49.5 AU FROM THE SUN"  
 1000 PRINT "IT IS 248 EARTH YEAR LONG"  
 1010 PRINT "TEMPERATURE IS -223 F"  
 1020 PRINT "AND 35 MILLION MILES FROM THE SUN"  
 1030 PRINT "IT IS 14.5 TIMES AS MASSIVE AS EARTH"  
 1040 PRINT "THE EARTH, ITS TEMPERATURE IS"

1050 PRINT "AT LEAST 270 F."  
 1060 PRINT "ZERO"  
 1070 PRINT "ITS YEAR IS 84 EARTH YEARS"  
 1080 PRINT "LONG, AND IT ROTATES ON ITS AXIS IN 6.4 HOURS AND 49 MIN"  
 1090 PRINT "PRESS ENTER TO CONTINUE":\$  
 1100 PRINT "THE SMALLEST PLANET AND THE CLOSEST TO THE SUN, THE PERIOD OF REVOLUTION IS 88 DAYS ON EARTH"  
 1110 PRINT "EQUATOR RECEIVES 1180 WATT PER SQUARE METER OF SOLAR RADIATION"  
 1120 PRINT "DAYS, THE SIDE FACES THE SUN"  
 1130 PRINT "IS BEING COOKED"  
 1140 PRINT "TEMPERATURES THERE APPROACH 1,000 F"  
 1150 PRINT "PRESS ENTER TO CONTINUE":\$  
 1160 PRINT "PRESS ENTER TO CONTINUE":\$  
 1170 PRINT "PRESS ENTER TO CONTINUE":\$  
 1180 PRINT "PRESS ENTER TO CONTINUE":\$  
 1190 PRINT "PRESS ENTER TO CONTINUE":\$  
 1200 PRINT "PRESS ENTER TO CONTINUE":\$  
 1210 PRINT "PRESS ENTER TO CONTINUE":\$  
 1220 PRINT "PRESS ENTER TO CONTINUE":\$  
 1230 PRINT "PRESS ENTER TO CONTINUE":\$  
 1240 PRINT "PRESS ENTER TO CONTINUE":\$  
 1250 PRINT "PRESS ENTER TO CONTINUE":\$  
 1260 PRINT "PRESS ENTER TO CONTINUE":\$  
 1270 PRINT "PRESS ENTER TO CONTINUE":\$  
 1280 PRINT "PRESS ENTER TO CONTINUE":\$  
 1290 PRINT "PRESS ENTER TO CONTINUE":\$  
 1300 PRINT "PRESS ENTER TO CONTINUE":\$  
 1310 PRINT "PRESS ENTER TO CONTINUE":\$  
 1320 PRINT "PRESS ENTER TO CONTINUE":\$  
 1330 PRINT "PRESS ENTER TO CONTINUE":\$  
 1340 PRINT "PRESS ENTER TO CONTINUE":\$  
 1350 PRINT "PRESS ENTER TO CONTINUE":\$  
 1360 PRINT "PRESS ENTER TO CONTINUE":\$  
 1370 PRINT "PRESS ENTER TO CONTINUE":\$  
 1380 PRINT "PRESS ENTER TO CONTINUE":\$  
 1390 PRINT "PRESS ENTER TO CONTINUE":\$  
 1400 INPUT "PRESS ENTER TO CONTINUE":\$  
 1410 GOTO 140  
 1420 CALL CLEAR  
 1430 PRINT "MARS":\$  
 1440 PRINT "141 MILLION MILES FROM THE SUN, TEMPERATURE IS -60 F. A YEAR ON MARS IS 687 AND 1 HALF EARTH DAYS LONG"  
 1470 PRINT "AND ITS DAY LASTS A LITTLE"

```

1480 PRINT "OVER 24 AND 1 HA
LF EARTH"
1490 PRINT "HOURS,MARS HAS T
WO DAYS"
1500 PRINT "SATELLITES OR MO
ONS,PHOBOS"
1510 PRINT "AND DEIMOS,ONE 1
0 AND THE"
1520 PRINT "OTHER FIVE MILES
IN"
1530 PRINT "DIAMETER."
1540 PRINT "PRESS ENTER TO C
ONINUE"
1550 PRINT "MILES PER HOUR IN MILE
PER HOUR"
1560 PRINT "MEAN DISTANCE FR
OM THE SUN"
1610 PRINT "IN MILLIONS OF M
ILES"
1620 PRINT "THE TIME TAKEN F
OR THE LIGHT"
1630 PRINT "TO GO ONCE ROUND
THE"
1640 PRINT "365 DAYS,THE EAR
TH"
1650 PRINT "POINTS TO THE NO
RTH"
1660 PRINT "CELESTIAL POLE,R
"
1670 PRINT "MARKED BY POLARI
S, EARTH"
1680 PRINT "MAXIMUM 94,600,0
00 MILES;"
1690 PRINT "MEAN,93,000,000
MILES;"
1700 PRINT "MINIMUM,91,400,0
00 MILES."
1710 PRINT "THE MEAN DISTANC
E BETWEEN"
1720 PRINT "THE EARTH AND SU
N, KNOWN AS"
1730 PRINT "THE ASTRONOMICAL
UNIT HAS"
1740 PRINT "RECENTLY BEEN RE
MEASURED"
1750 PRINT "RADAR AND RADIO
ASTRONOMY"
1760 PRINT "METHODS;THE LATE
ST VALUE IS"
1770 PRINT "APPROXIMATELY 92
MILLION"
1780 PRINT "MILES."
1790 PRINT "PRESS ENTER TO C
ONINUE"
1800 PRINT "CALL CLEAR"
1810 PRINT "DISPLAY AT(1,1):"WHICH
OPTION?"
1820 PRINT "DISPLAY AT(3,1):"1 NUM
BER OF STARS"
1830 PRINT "DISPLAY AT(5,1):"2 DIS
TANCES OF STARS"
1840 PRINT "DISPLAY AT(7,1):"3 STA
RLIGHT"
1850 PRINT "DISPLAY AT(9,1):"4 STA
R BR"
1860 PRINT "DISPLAY AT(11,1):"5 ST
AR SIZE"
1870 PRINT "DISPLAY AT(13,1):"6 DE
NSITY OF STARS"

```

```

1880 PRINT "1980 DISPLAY AT(15,1):"7 MO
NTHS OF STARS"
1890 PRINT "1990 DISPLAY AT(17,1):"8 CO
LORS OF STARS"
1900 PRINT "1970 DISPLAY AT(19,1):"9 ST
AR MAGNITUDES"
1910 PRINT "1980 DISPLAY AT(21,1):"10 E
ND PROGRAM"
1920 PRINT "1990 INPUT "WHICH OPTION? "
"
IF P=1 THEN GOTO 2000
IF P=2 THEN GOTO 2100
IF P=3 THEN GOTO 2200
IF P=4 THEN GOTO 2300
IF P=5 THEN GOTO 2400
IF P=6 THEN GOTO 2500
IF P=7 THEN GOTO 2600
IF P=8 THEN GOTO 2700
IF P=9 THEN GOTO 2800
IF P=10 THEN GOTO 2900
INPUT "WHAT IS YOUR CHOICE? "
CALL CLEAR
PRINT "NUMBER OF STARS"
PRINT "ON THE CLEAREST
NIGHT YOU"
2140 PRINT "ARE NOT LIKELY T
O SEE"
PRINT "MORE THAN 2,000"
PRINT "WITH CHANGING SE
ASONS"
PRINT "NEW STARS APPEAR"
PRINT "THE TOTAL VISIBL
E DURING"
2190 PRINT "THE YEAR TO ABOU
T 6,000"
2200 PRINT "PRESS ENTER TO C
ONINUE"
2210 PRINT "GOTO 1870"
CALL CLEAR
PRINT "DISTANCES OF STA
RS"
PRINT "THE NEAREST STAR
FROM OUR SUN,"
2260 PRINT "IS A MERE 93 MIL
LION MILES"
PRINT "AWAY,THE NEXT NE
AREST"
PRINT "IS 26 MILLION MI
LES"
2290 PRINT "MILES-NEARLY 300
MILLION"
2300 PRINT "FARTHER THAN THE
CLOSEST"
PRINT "FOR THESE GREAT
DISTANCES"
PRINT "MILES ARE NOT A
MEASUREMENT"
PRINT "MEASURE,INSTEAD
OF DISTANCE"
PRINT "YEAR IS OFTEN US
ED AS A UNIT"
PRINT "THIS IS THE DIST
ANCE LIGHT"
PRINT "TRAVELS IN
ONE YEAR"
2370 PRINT "MOVING AT 186,00
0 MILES PER"
PRINT "SECOND, NEARLY 6
MILLION"
2390 PRINT "MILLION MILES,ON
THIS SCALE"
2400 PRINT "THE NEAREST STAR
IS"
2410 PRINT "(EXCLUDING THE S
UN) IS"
2420 PRINT "4.3 LIGHT YEARS
AWAY."

```

```

2430 PRINT "2440 INPUT "PRESS ENTER TO C
ONINUE"
2450 GOTO 2460
2460 CALL CLEAR
2470 PRINT "GIANTS"
2480 PRINT "ALL SHINE
BY THEIR"
2490 PRINT "OWN LIGHT.THIS L
IGHT MAY"
2500 PRINT "BE PRODUCED BY N
UCLEAR"
2510 PRINT "REACTIONS SIMILA
R TO"
2520 PRINT "THOSE OF THE HY
DROGEN"
2530 PRINT "PRESS ENTER TO C
ONINUE"
2550 GOTO 1870
2560 CALL CLEAR
2570 PRINT "STAR BRIGHTNESS"
PRINT "THE SUN IS ABOUT
AVERAGE IN"
PRINT "SIZE AND BRIGHTN
ESS"
2600 PRINT "STARS ARE UP TO
600,000"
2610 PRINT "TIMES AS BRIGHT
AS THE SUN"
2620 PRINT "OTHERS ARE ONLY
1/55"
2630 PRINT "MOST ARE BETWEEN
10,000 AND"
2640 PRINT "1/10,000 TIMES A
S BRIGHT"
2650 PRINT "AS THE SUN.THE B
RIGHTEST"
PRINT "OF A STAR YOU SE
E"
PRINT "ON ITS DISTANCE
AND ABSOLUTE"
2680 PRINT "REAL OR ABSOLUTE
BRIGHTNESS"
PRINT "PRESS ENTER TO C
ONINUE"
2700 PRINT "MOST ARE 5
DIPLOMATS"
2760 PRINT "THAT THEIR SIZE
CAN"
2770 PRINT "BE MEASURED IND
IRECTLY"
PRINT "CERTAIN GIANT RE
D GIANTS"
2790 PRINT "ARE THE LARGEST.
ANTARES"
2800 PRINT "HAS A DIAMETER 3
90 TIMES"
PRINT "THAT OF THE SUN,
ANTARES"
PRINT "EVEN LARGER.AMON
GIGANTS"
2830 PRINT "SMALL STARS ARE
WHITE"
PRINT "DWARFS,NO LARGE
GIANTS"
PRINT "PLANETS,THE SHAL
LOWEST ARE"
2860 PRINT "NEUTRON STARS TH
AT MAY"
2870 PRINT "BE NO MORE THAN
TEN MILES"
PRINT "ACROSS."
PRINT "PRESS ENTER CONT
INUE"

```

2910 GOTO 1870  
 ... CLEAR  
 ... "DENSITY OF STARS  
 2940 ... "THE DENSITIES OR  
 REL...  
 2950 ... "WEIGHTS OF STARS  
 VAR...  
 ... PRINT "CONSIDERABLY.ACT  
 ... "STARS ARE MASSES  
 2980 PRINT "BUT GAS UNDER VE  
 PR"  
 ... PRINT "DIFFERENT CONDIT  
 ... "THOSE WE USUALLY  
 ... "STARS SUCH AS AN  
 HAVE"  
 ... PRINT "A DENSITY AS LOW  
 ... PRINT "1/2000 OF THE DE  
 OF"  
 ... PRINT "AIR.THE MORE USU  
 OF STARS"  
 ... PRINT "HAVE A DENSITY F  
 ... PRINT "CLOSE TO THAT OF  
 ... "PRESS ENTER TO C  
 ... GOTO 1870  
 ... "IONS OF STARS  
 ... PRINT "OUR SUM IS MOVIN  
 G ABOUT"  
 ... PRINT "12 MILES PER SEC  
 3140 PRINT "TOWARD THE CONST  
 RELATION"  
 ... PRINT "HERCULES.OTHER S  
 ARE"  
 ... PRINT "MOVING TOO,AT SP  
 ... "PRINT "TO 30 MILES PER  
 SECOND OR"  
 3180 PRINT "FASTER.ARCURUS  
 TRAVELS"  
 3190 PRINT "AT 84 MILES PER  
 SECOND."  
 ... PRINT "MANY STARS ARE M  
 ... AS"  
 3240 PRINT "PARTS OF SYSTEMS  
 OR"  
 3220 PRINT "CLUSTERS.ONE SUC  
 N SYSTEM."  
 ... PRINT "INCLUDING STARS  
 IN T...  
 3240 ... "IS MOVING AWAY A  
 T ABOUT"  
 3250 PRINT "30 MILES PER SEC  
 ... ME"  
 ... PRINT "STARS CONSIST OF  
 ... PRINT "DR MORE COMPONENT  
 ... "PRESS ENTER TO C  
 ... GOTO 1870  
 ... CALL  
 ... PRINT "COLOR OF STARS":  
 ... 3330 PRINT "VARIES FROM BRIL  
 LIANT"  
 ... 3340 PRINT "BLUE-WHITE TO DU  
 LL."  
 ... 3350 PRINT "REDOISH,INDICATI  
 NG STAR"

PRINT "TEMPERATURE.A FA  
 IN"  
 ... PRINT "STAR CLASSIFICAT  
 ... "OBSERVATION IS N  
 ... PRINT "SEE THE RANGE OF  
 COLORS"  
 3400 PRINT "IN THE NIGHT SKY  
 ...  
 3410 PRINT :  
 ... INPUT "PRESS ENTER TO C  
 ... "JE":AS  
 ... GOTO 1870  
 3440 ... CLEAR  
 3450 ... "STAR MAGNITUDES"  
 ...  
 3460 PRINT "BRIGHTNESS OF ST  
 ARS IS"  
 3470 PRINT "MEASURED IN TERM  
 S OF"  
 3480 ... "MAGNITUDE.A 2ND-  
 MAGN...  
 3490 PRINT "STAR IS 2.5 TIM  
 ES AS"  
 3500 PRINT "BRIGHT AS A 3RD,  
 AND SO ON"  
 ... "THROUGHOUT THE S  
 ... "THAT A 1ST-MAGNI  
 ... "IS 100 TIMES AS  
 ... "PRINT "AS A 6TH. THE B  
 RIGHTER THAN 1ST MAG-10<sup>2</sup> B  
 AVE...  
 3550 PRINT "OR MINUS MAGNITU  
 DE."  
 ... "PRESS ENTER TO C  
 ... GOTO 1870  
 ... CLEAR  
 3600 ... "GOOD LUCK IN THE  
 ... "ZONE.11"  
 ... END

100 CALL CLEAR  
 110 PRINT " \*RE-AC  
 T"  
 120 ...  
 130 ... "THE OBJECT IS TO  
 REACH THE "INNER REACTOR DO  
 OR"  
 140 ...  
 150 ... "AVOIDING THE SECU  
 RITY...  
 160 PRINT "IF HE CATCHES YOU  
 THEM YOU:"ARE DEAD":  
 170 PRINT "WHEN HE RUNS EVER  
 ... "G":ELSE SHUTS DOWN FOR  
 A WHILE":  
 180 CALL SOUND(100,1109,0)  
 190 FOR I=1 TO 2000  
 200 ... D  
 210 ... CLEAR  
 220 ... "PRESS THESE KEYS T  
 O ... "TIM  
 E ... "OUT AND I ... DES  
 230 ...  
 240 ... "SECURITY HAS COME  
 ... "CALL THE ... AR  
 E OUT":OF SYNCHRONIZATION A  
 ND ...  
 250 ... "INNER DOORS CLOSE  
 AND ... "AT RANDOM"  
 260 ...  
 270 PRINT " \*GOOD-LU  
 CK"  
 280 CALL SOUND(200,1109,0)  
 290 FOR D=1 TO 2000  
 300 NEXT D  
 310 CALL CLEAR  
 320 R=24  
 330 C=16  
 340 RR=4  
 350 CC=4  
 360 REM SET SCREEN  
 370 CALL SCREE...  
 380 CALL CHAR(0,1,FFFFFFFFF  
 FFFFFFFF)  
 390 CALL CHAR(97,"FFC3A59999  
 ASC3FF")  
 400 CALL CHAR(120,"FFFFFFFFF  
 FFFFFFFF")  
 410 CALL CHAR(112,"0000081C2  
 41C1422")  
 420 CALL CHAR(104,"1C1C083E2  
 41C1422")  
 430 CALL CHAR(105,"002200999  
 90022")  
 440 CALL ... =1,1,40,32)  
 450 CALL ... =24,1,40,32)  
 460 CALL VCHAR(1,1,40,24)  
 470 CALL VCHAR(1,32,40,24)  
 480 CALL HCHAR(3,3,40,28)  
 490 CALL HCHAR(22,3,40,28)  
 500 CALL VCHAR(3,3,40,20)  
 510 CALL ... =,30,40,20)  
 520 CALL ... =,5,40,24)  
 530 CALL ... =,5,40,24)  
 540 CALL VCHAR(5,5,40,15)  
 550 CALL VCHAR ... =,8,40,15)  
 560 ... =,15,40,7)  
 570 ... =,15,40,7)  
 580 ... =,1,15,40,2)  
 590 ... =,1,15,40,4)  
 600 CALL VCHAR(11,20,40,3)  
 610 CALL VCHAR(11,21,40,3)  
 620 CALL VCHAR(15,21,40,5)  
 630 CALL VCHAR(5,15,40,5)  
 640 CALL HCHAR(24,16,32)  
 650 ... HCHAR(3,16,32)  
 660 ... HCHAR(12,5,32)  
 670 ... HCHAR(12,28,32)  
 680 ... HCHAR(7,15,32)  
 690 CALL HCHAR(17,21,32)  
 700 CALL HCHAR(12,20,32,2)



```

710 CALL HCHAR(18,7,40,5)
720 CALL VCHAR(19,7,40)
730 CALL VCHAR(19,11,40)
740 FOR A=2 TO 25
750 CALL VCHAR(8,A,40,7)
760 NEXT A
770 CALL COLOR(9,2,12)
780 CALL COLOR(11,5,1)
790 CALL 10,7,1)
800 CALL 9,23,120,3)
810 CALL 24,120,3)
820 REM SE
830 TIME=41
840 TIME=TIME-1
850 IF LEN(STRS(TIME))=1 THE
N B60 ELSE B70
860 CALL HCHAR(19,10,32)
870 FOR I=1 TO LEN(STRS(TIME
))
880 CALL HCHAR(19,I+8,ASC(SE
GS(STRS(TIME),I,1)))
890 NEXT I
900 REM
910 REM MATM LOOP
920 REM
930 CALL HCHAR(R,C,112)
940 REM 1160
950 REM 1100
960 REM
970 REM
980 REM 12,21,E)
990 REM 2400
1000 REM
1010 REM 10)
1020 IF MD=INM 1130
1030 GOSUB 1160
1040 DC=INT(RND*10)+1
1050 ON DC GOSUB 1740,1810,1
800,2020,1950,2020,1950
1060 1740
1070 GOTO 1160
1080 HCHAR(RR,CC,104)
1090 930
1100 REM JRE COLOR
1110 COLL=INT(RND*15)+1
1120 CALL COLOR(12,COLL,1)
1130 RETURN
1140 GOSUB 1440
1150 GOTO 930
1150 REM MAN MOVES
1160 CALL HCHAR(R,C,32)
1170 CALL KEY(O,K,S)
1180 IF K=69 THEN 1190 ELSE
1190
1200 R=R+1
1210 CALL GCHAR(R,C,G)
1220 IF G=32 THEN 1230 ELSE
1230
1240 R=R+1
1250 GOTO 1410
1260 IF K=88 THEN 1250 ELSE
1270
1280 R=R+1
1290 CALL GCHAR(R,C,G)
1300 IF G=32 THEN 1280 ELSE
1310
1320 R=R+1
1330 GOTO 1410
1340 IF K=83 THEN 1310 ELSE
1350
1360 C=C-1
1370 CALL GC # W,C,G)
1380 IF G=32 THEN 1400 ELSE
1390
1400 C=C+1
1410 GOTO 1410
1420 IF K=68 THEN 1370 ELSE
1430
1440 C=C+1
1450 CALL GCHAR(R,C,G)
1460 IF G=32 THEN 1400 ELSE
1470
1480

```

```

1490 C=C-1
1500 CALL HCHAR(R,C,112)
1510 RETURN
1520 REM ROBOT MOVES
1530 FOR T=4 TO 29
1540
1550 T=T+1,104)
1560 T=T+1,T+1,GC)
1570 T=T+1,THEN 2320
1580 CALL HCHAR(4,T,32)
1590 NEXT T
1600 GOSUB 2100
1610 FOR VV=5 TO 21
1620 CALL VCHAR(VV,29,104)
1630 CALL GCHAR(VV+1,29,GC)
1640 IF GC=112 THEN 2320
1650 CALL VCHAR(VV,29,32)
1660 NEXT VV
1670 T=T+1
1680 T=T+2 TO 4 STEP -1
1690 CALL T+8,CO,104)
1700 CALL T+8,CO+1,GC)
1710 IF GC=112 THEN 2320
1720 T=T+8,21,CO,32)
1730 NEXT T
1740 T=2100
1750 FOR T=20 TO 5 STEP -1
1760 CALL VCHAR(VC,4,104)
1770 CALL GCHAR(VC+1,4,GC)
1780 IF GC=117 THEN 3200
1790 CALL HCHAR(VC,4,32)
1800 NEXT VC
1810 GOSUB 2100
1820 RETURN
1830 REM DOOR CONTROL
1840 CALL T+8,CO,32)
1850 CALL T+8,CO,32)
1860 CALL T+8,CO,32)
1870 CALL HCHAR(7,15,32)
1880 CALL T+8,7,21,32)
1890 CALL T+8,CO,110,10)
1900 RETURN
1910 CALL HCHAR(12,5,97)
1920 CALL T+8,2,28,32)
1930 CALL T+8,15,32)
1940 CALL T+8,7,21,32)
1950 CALL T+8,16,32)
1960 CALL T+8,CO,110,10)
1970 HCHAR(12,28,97)
1980 CALL HCHAR(7,15,32)
1990 CALL HCHAR(17,21,32)
2000 CALL HCHAR(3,16,32)
2010 CALL HCHAR(12,5,32)
2020 CALL HCHAR(12,28,32)
2030 CALL SOUND(100,110,10)
2040 RETURN
2050 CALL HCHAR(17,21,97)
2060 CALL HCHAR(3,16,32)
2070 CALL HCHAR(12,5,32)
2080 CALL T+8,CO,32)
2090 CALL T+8,CO,32)
2100 CALL T+8,CO,100,110,10)
2110 RETURN
2120 REM TIME COUNT
2130 TIME=TIME-1
2140 IF TIME=0 THEN 2150
2150 GOTO 2150
2160 CALL HC # W,C,32)
2170 FOR I=1 TO LEN(STRS(TIM
E))
2180 CALL HCHAR(19,I+8,ASC(S
EGS(STRS(TIME),I,1)))
2190 NEXT I
2200 TIME=TIME-1
2210 CALL SOUND(100,1760,0)
2220 RETURN

```

```

2190 REM DESTRUCTION
2200 CALL COLOR(2,14,1)
2210 FOR S=30 TO 0 STEP -1
2220 CALL SOUND(50,110,5)
2230 NEXT S
2240 CALL SOUND(300,110,0)
2250 CALL C(PAR
2260 T=T+1,14)
2270 T=T+1,BLEW THE REA
2280 T=T+1,110,10)
2290 FOR D=1 TO 2000
2300 NEXT D
2310 END
2320 REM LIGHT BY
2330 CALL T+8,CO,32)
2340 CALL T+8,CO,32)
2350 CALL T+8,CO,32)
2360 FOR S=1 TO 1300
2370 NEXT S
2380 REM
2390 REM JEARIAUN OVER
2400 BY A = TIME:
2410 STOP
2420 FOR V=30 TO 0 STEP -1
2430 CALL SOUND(50,392,V)
2440 NEXT V
2450 A = "LEAR"
2460 A = "FANTA" YOU DI
2470 D IT = "TIME" A = "S LEF
T"
2480 FOR D=1 TO 3000
2490 NEXT D
2500 END

```



```

100 I = AL KALEIDOSCOPE
101 ED FROM HCH
110 CALL CHAR(A,N,RPTS("F",16
)); CALL
111 TO 13 :
112 K=2,192,2,
113 3,17-I,192,224,-128,-127);
NEXT I : A=A-1
120 T=
130 A=
140 L=
150 L=
160 N=
170 N=
180 DATA 110,262,311,369,392
,415,440,466,494,523,466,700
00
190 FOR Z=1 TO LEN(A)
200 CALL SOUND(T,I,
,ASC(Z,1))-64),5,
,ASC(Z
,2,1))-64),2,N
,I))-64),0)
210 NEXT Z : RESTORE 180 :
A=A : GOTO 120

```



9.

**COMPETITION COMPUTER PRODUCTS**  
2629 W. NATIONAL AVE. MILWAUKEE, WIS. 53204

**414-672-4010**

BANKCARDS - CHECKS - DISCOVER CARDS - COD WELCOME!

**\* NOW - DISKS .49 EACH! \***

**GENUINE TI JOYSTICKS \$6 PR/SEE GENE**

WE WILL BUY ANY TI HARDWARE OR SOFTWARE YOU NO LONGER NEED - CALL!

STORE HOURS; MON THRU FRI 10-6 SAT 10-3

WE TAKE TI SYSTEMS IN TRADE ON IBM COMPATIBLES.

NEW-NEW

NEW-NEW

*	*	*
* P.E.P S/WARE TO TRANSFER FILES TO MS/DOS COMPUTERS *		*
* DATA CASSETTE SALE 20% OFF - THIS MONTH ONLY *		*
128K/512K MEMORY EXPANSION CARD BY MYARC \$200.00/\$327.50		*
MINIWRITER III+ WORD PROCESSOR CARTRIDGE W/PRINTER INTERFACE \$89		*
COMPLETE LINE OF DATABIOTICS INC. SOFTWARE		*
* * LATE STYLE KEYBOARD - FITS ALL 99/4A \$19.95 * *		*
* * NIGHT MISSION BY MILLER GRAPHICS * *		*
* * LOTS OF NEW 3RD PARTY SOFTWARE * *		*
IF IT'S AVAILABLE - WE USUALLY STOCK IT!		*
* BETTER BANNER \$19.95 *		*

NEW-NEW

NEW-NEW

NEW AND USED TI99/4A COMPUTERS AVAILABLE!

EXPANSION SYSTEMS AVAILABLE - NEW AND USED!

**\* HUGE SOFTWARE INVENTORY - MORE IN STOCK THAN EVER BEFORE! \***

BEFORE YOU MAIL ORDER OR BUY ELSEWHERE - GIVE US A CALL - WE WILL TRY TO MEET OR BEAT ANYBODY'S PRICES. REMEMBER THAT WE ARE HERE TO HELP YOU HAVE A QUESTION OR PROBLEM. WE DO NOT CHARGE EXTRA FOR BANKCARDS. WE WANT YOUR BUSINESS AND WE'LL PROVE IT!

TED. GENE. JIM & RON

TIPS FROM THE TIGERCUB

445

Copyright 1987

TIGERCUB SOFTWARE  
156 Collingwood Ave.  
Columbus, OH 43213

Distributed by Tigercub Software to TI-99/4A Users Groups for promotional purposes and in exchange for their newsletters. May be reprinted by non-profit users groups, with credit to Tigercub Software.

Over 138 original programs in Basic and Extended Basic, available on cassette or disk, now reduced to just \$2.28 each, plus \$1.50 per order for cassette or disk and PPM. Cassette programs will not be available after my present stock of blanks is exhausted.

Descriptive catalogs, while they last, \$1.00 which is deductible from your first order.

Tigercub Full Disk Collections, reduced to \$18 postpaid. Each of these contains either 5 or 6 of my regular \$2 catalog programs, and the remaining disk space has been filled with some of the best public domain programs of the same category. I am NDI selling public domain programs - they are a free bonus!

TIGERCUB'S BEST, PROGRAMMING TUTOR, PROGRAMMER'S UTILITIES, BRAIN GAMES, BRAIN TEASERS, BRAIN BUSTERS!, MANEUVERING GAMES, ACTION REFLEX AND CONCENTRATION, TWO-PLAYER GAMES, KID'S GAMES, MORE GAMES, WORD GAMES, ELEMENTARY MATH, MIDDLE/HIGH SCHOOL MATH, VOCABULARY AND READING, MUSICAL EDUCATION, KALEIDOSCOPES AND DISPLAYS

NUTS & BOLTS (No. 1), a full disk of 100 Extended Basic utility subprograms in merge format, ready to merge into your own programs. Plus the Tigercub Menuloader, a tutorial on using subprograms, and 5 pages of documentation with an example of the use of each subprogram. Reduced to \$15.00 postpaid.

NUTS & BOLTS NO. 2, another full disk of 100 utility subprograms in merge format, all new and fully compatible with the last, and with 10 pages of documentation and examples. Also \$15 postpaid.

```
*****
# NUTS & BOLTS #3 is now #
# ready, another full disk #
# of 140 new merge-format #
# utility subprograms, all #
# compatible with the pre- #
# vious. With 11 pages of #
# documentation, $15 ppd. #
*****
```

TIPS FROM THE TIGERCUB, a full disk containing the complete contents of this newsletter Nos. 1 through 14, 50 original programs and files, reduced to \$18 ppd.

TIPS FROM THE TIGERCUB VOL. 2, another diskfull, complete contents of Nos. 15 through 24, over 60 files and programs, also just \$18

TIPS FROM THE TIGERCUB VOL. 3, another 62 programs, tips and routines from Nos. 25 through 32, \$18 postpaid.

TIPS FROM THE TIGERCUB VOL. 4, another 48 programs and files from issues 33 through 41, also \$18 postpaid.

If you have as much trouble as I do, trying to get the strip labels lined up in the printer, you'll like this one -

```
100 DISPLAY AT(4,7)ERASE ALL
:"TIGERCUB LABELER": : :
This label maker will allow
:you to specify different:
```

\*printer codes for each line

```
110 DISPLAY AT(11,1):"of a 5
-line label.": : " You may
stop the program:"while lab
els are printing:"by pressi
ng any key, turn"
```

```
120 DISPLAY AT(17,1):"off th
e printer to adjust:"the la
bels, turn it back on,":and
press any key to con-":tin
ue printing."
```

```
130 DISPLAY AT(23,1):"Printe
r designation?:"PI0" :: ACC
EPT AT(24,1)SIZE(-20)BEEP:PR
$ :: OPEN #1:PR$: P$,E$,DS
$,CENS="Y" :: DW$,I$,SS$,U$
="N" :: P=1
```

```
140 CALL CHAR(95,"FF")
150 FOR J=1 TO 5 :: CALL KEY
(3,K,S)
```

```
160 DISPLAY AT(2,1)ERASE ALL
:Line #";J;" - PRINT? "%P$
:: CALL QUERY(2,20,P$): IF
P$="N" THEN L$(J)="": GOTO
360
```

```
170 IF J=1 THEN DISPLAY AT(4
,1):"Change codes? N" :: CAL
L QUERY(4,15,Q$):: IF Q$="N"
THEN 300
```

```
180 DISPLAY AT(4,1):"Print p
itch? ";P: (1)pic": (2)el
ite": (3)condensed" :: ACCE
PT AT(4,15)SIZE(-1)VALIDATE(
"123"):P
```

```
190 C1=(P=1)*-10+(P=2)*-12+(
P=3)*-17 :: L$(J)=CHR$(27)*"
B"&CHR$(P): DISPLAY AT(5,11
):"": ""
```

```
200 DISPLAY AT(6,1):"Double
width? "%DW$ :: CALL QUERY(6
,15,DW$): IF DW$="Y" THEN C
1=C1/2 :: L$(J)=L$(J)&CHR$(1
4)ELSE L$(J)=L$(J)&CHR$(20)
```

```
210 DISPLAY AT(8,1):"Italics
? "%I$ :: CALL QUERY(8,10,I
$): IF I$="Y" THEN L$(J)=L$
(J)&CHR$(27)*" " ELSE L$(J)=L
$(J)&CHR$(27)*"5"
```

```
220 DISPLAY AT(10,1):"Supers
cript? "%SS$ :: CALL QUERY(1
0,14,SS$): IF SS$="Y" THEN
L$(J)=L$(J)&CHR$(27)&CHR$(83
)&CHR$(8)ELSE L$(J)=L$(J)&C
HR$(27)&CHR$(84)
```

```
230 IF SS$="Y" THEN 250
```

```
240 DISPLAY AT(12,1):"Double
-strike? "%DS$ :: CALL QUERY
(12,16,DS$): IF DS$="Y" THE
N L$(J)=L$(J)&CHR$(27)&"6" E
```

```
LSE L$(J)=L$(J)&CHR$(27)*"4"
250 IF P<>1 OR SS$="Y" THEN
270 :: DISPLAY AT(14,1):"Exp
hasized? "%E$ :: CALL QUERY(
14,13,E$)
```

```
260 IF E$="Y" THEN L$(J)=L$(
J)&CHR$(27)*"E" ELSE L$(J)=L
$(J)&CHR$(27)*"F"
```

```
270 DISPLAY AT(16,1):"Underl
ine? "%U$ :: CALL QUERY(16,1
2,U$)
```

```
280 IF U$="N" THEN L$(J)=L$(
J)&CHR$(27)&CHR$(45)&CHR$(8)
290 DISPLAY AT(18,1):"Center
text? "%C$ :: CALL QUERY(18,1
4,C$)
```

```
300 DISPLAY AT(18,1):"Type 1
line? "%J$". Enter each:"scree
n line, enter again": "when d
one." :: DISPLAY AT(22,1):RP
T$("_",INT(C1*3.5)): R=21 ::
CALL KEY(5,K,S)
```

```
310 ACCEPT AT(R,I):M$ :: IF
M$="" THEN 320 :: A$=A$&M$:
R=R+1 :: GOTO 310
```

```
320 IF LEN(A$)INT(C1*3.5)TH
EN DISPLAY AT(16,1):"LINE TO
O LONG?": CALL SOUND(300,1
0,0,-4,0): A$="" :: R=21 ::
GOTO 310
```

```
330 L=LEN(A$): IF U$="Y" TH
EN A$=CHR$(27)&CHR$(45)&CHR$
(11)&A$&CHR$(27)&CHR$(45)&CHR$
(8)
```

```
340 IF CENS="Y" THEN A$=RPT$
(" ",INT(C1*3.5)-1)/2)&A$
350 L$(J)=L$(J)&A$ :: A$=""
360 NEXT J
```

```
370 DISPLAY AT(12,1)ERASE AL
L:"Print how many?" :: ACCEP
T AT(12,17)N
```

```
380 FOR J=1 TO N :: FOR K=1
TO 6 :: PRINT #1:L$(J): NEX
T K
```

```
390 CALL KEY(0,K,S): IF S=0
THEN 410 ELSE CLOSE #1
400 CALL KEY(0,K1,S1): IF S
1<1 THEN 400 ELSE OPEN #1:PR
$
```

```
410 NEXT J
420 DISPLAY AT(12,8)ERASE AL
L:"Another?" :: CALL QUERY(1
2,17,Q$): IF Q$="N" THEN ST
OP ELSE 150
```

```
430 SUB QUERY(R,C,Q$): ACCE
PT AT(R,C)SIZE(-1)VALIDATE("
YM")BEEP:Q$ :: SUBEND
```

```
More peculiarities of the
TI computer -
```

```

90 CALL CLEAR :: PRINT TAB(7
);"SPRITE PUZZLE #1":
  from Tigercub"
100 PRINT "A non-existent spr
ite can be:"created by CAL
L MOTION.": "It apparently
starts in"
110 PRINT "dot-row 1, dot-co
lumn 1, and":has color 1, b
ut its pattern":is not that
of any ASCII!"
120 by Jim Peterson
130 FOR CH=0 TO 255 :: PRINT
CHR$(CH):: NEXT CH
135 PRINT "CALL MOTION(01,5,
5):: CALL COLOR(01,16):: CAL
L MAGNIFY(4)"
140 CALL MOTION(01,5,5):: CA
LL COLOR(01,16):: CALL MAGNI
FY(4)
150 GOTO 150

```

And another -

```

100 DISPLAY AT(3,5)ERASE ALL
:"SPRITE PUZZLE #2": "
  from Tigercub"
110 DISPLAY AT(7,1):"Non-exis
tent sprites can be:"creat
ed by CALL COLOR.": "Their
existence can be con-"
120 DISPLAY AT(11,11):"firmad
by CALL COINC, but":CALL P
OSITION reports that:"they
have no position!"
130 CALL COLOR(01,16):: CALL
COLOR(02,16)
140 CALL COINC(01,02,1,X)::
DISPLAY AT(15,11):"COINC #1,0
2=";X :: CALL POSITION(01,X,
Y)
150 CALL POSITION(01,X,Y)::
DISPLAY AT(17,11):"POSITION #
1=";X;Y
160 CALL POSITION(02,X,Y)::
DISPLAY AT(19,11):"POSITION #
2=";X;Y
170 IF FLAG=1 THEN 140 :: FL
AG=)
180 DISPLAY AT(21,11):"PRESS
ANY KEY"
190 CALL KEY(0,K,S):: IF S=0
THEN DISPLAY AT(21,11):"pres
s any key" :: GOTO 180
200 DISPLAY AT(21,11):"Until
they're set in motion!"
210 CALL MOTION(01,5,5):: CA
LL MOTION(02,-5,-5):: GOTO 1
50

```

If you have the Terminal Emulator II, Speech Synthesizer, and a pre-schooler in the house, this will help him to grasp the idea of spelling as well as letter recognition and keyboard familiarization-

```

100 REM PRE-PELLER BY JIM
PETERSON
110 REM TI BASIC WITH TERMINAL
EMULATOR II AND SPEECH SYNTHESIZER
120 CALL CLEAR
130 DIM M$(100),S$(100)
140 OPEN #1:"SPEECH".OUTPUT
150 PRINT " PRE-PELLER":::::
160 PRINT "TYPE WORDS TO PRACTICE"::
"TYPE END" WHEN FINISHED":::::
170 X=X+1
180 INPUT M$(X)
190 IF M$(X)="END" THEN 300
200 PRINT @t:M$(X)
210 PRINT "PRONUNCIATION OK?(Y/N)"
220 CALL KEY(J,K,S)
230 IF S<1 THEN 220
240 IF K=70 THEN 200
250 IF K<89 THEN 220
260 S$(X)=M$(X)
270 GOTO 170
280 PRINT "TRY SPELLING PHONETICALLY"
290 INPUT S$(X)
300 PRINT @1:S$(X)
310 PRINT "PRONUNCIATION OK?(Y/N)"
320 CALL KEY(J,K,S)
330 IF S<1 THEN 320
340 IF K=89 THEN 170
350 IF K<70 THEN 320
360 PRINT "TRY AGAIN"
370 GOTO 290
380 CALL CLEAR
390 FOR J=1 TO X-1
400 PRINT @1:"CAN YOU SPELL THIS?"
410 FOR A=1 TO LEN(M$(J))
420 CALL HCHAR(12,0+A,ASC(SEG$(M$(J),A,1)))
430 NEXT A
440 FOR B=1 TO LEN(M$(J))
450 CALL KEY(J,K,S)
460 IF (S<1)+(K=32)THEN 450
470 IF K=ASC(SEG$(M$(J),B,1))THEN 500

```

```

480 GOSUB 640
490 GOTO 450
500 C=C+CHR$(K)
510 CALL HCHAR(14,9+B,K)
520 NEXT B
530 IF C<>M$(J)THEN 640
540 PRINT @1:S$(J)
550 FOR D=1 TO 500
560 NEXT D
570 PRINT @1:"VEREE GOOD"
580 FOR D=1 TO 500
590 NEXT D
600 C$=""
610 CALL HCHAR(12,1,32,100)
620 NEXT J
630 GOTO 390
640 PRINT @1:"NO THAT IS NOT RIGHT"
650 PRINT @1:"TRY AGAIN"
660 RETURN

```

And, a simple little game that is a bit different than any I've seen -

```

100 !FORMATION by Jim Peters
on - use the S and D keys
110 CALL CLEAR :: CALL CHAR(
100,"301010F0F0F0303010103030F
0F01010303030"):: CALL SCREEEN(
5):: CALL MAGNIFY(2):: RANDO
MIZE
120 V,W,P=0 :: FOR J=1 TO 7
:: CALL SPRITE(0J,100,7,1,25
0*JND+1,10,4):: FOR D=1 TO 1
00 :: NEXT D :: NEXT J :: CA
LL SPRITE(011,101,16,160,120
)
130 CALL KEY(J,K,S):: W=W+1
:: IF W=150 THEN 170 ELSE IF
W=300 THEN 180 ELSE IF K=60
THEN V=V+2+(V>125)*2 ELSE I
F K=83 THEN V=V-2-(V<-125)*2
140 IF P=0 THEN CALL MOTION(
011,0,V)ELSE IF P=1 THEN CAL
L MOTION(011,0,V,012,0,V)ELS
E CALL MOTION(011,0,V,012,0,
V,013,0,V)
150 CALL COINC(ALL,A):: IF A
=0 THEN 130
160 CALL SOUND(1000,-4,0)::
H=MAX(H,W):: DISPLAY AT(23,1
):"SCORE";W:"HIGH SCORE";H
: CALL DELSPRITE(ALL):: GOTO
120
170 P=1 :: CALL POSITION(011
,R,C):: CALL SPRITE(012,101,
16,160,C+0-(C<216)*256):: G
OTO 140
180 P=2 :: CALL POSITION(011

```

```

,R,C):: CALL SPRITE(013,101,
16,160,C+0-(C<216)*256):: G
OTO 140

```

If you can't figure out where all the money goes, this may be an eye-opener -

```

100 DISPLAY ERASE ALL AT(3,5
):"THE COST OF CREDIT" ! by
Jim Peterson
110 S,T,X=0 :: DISPLAY AT(0,
1):"AMOUNT OF PURCHASE?"
ACCEPT AT(0,21):A :: B,T=A
: DISPLAY AT(0,1):"CREDIT C
AR INTEREST RATE?" :: ACCEP
T AT(11,1):R
120 DISPLAY AT(13,1):"SAVING
$ ACCOUNT INT. RATE?" :: ACC
EPT AT(14,1):SR
130 X=X+1 :: I=0*R/100/12 ::
B=B+I :: T=T+I :: P=B/10 ::
B=0-P :: S=S+S+P*SR/100/12
:: IF S<A THEN 130
140 O$="STR$(INT((T+A-S+A
+5)*100)/100)
150 DISPLAY AT(17,11):"If you
had saved the amount":of y
our minium 10% of the:"bal
ance credit card payment":e
ach month for";X;months,"
160 DISPLAY AT(21,11):"and us
ed it to pay cash, you:"wou
ld have saved ";D$ :: GOTO 1
10

```

And this is one of the handiest routines I've seen in a long time -

```

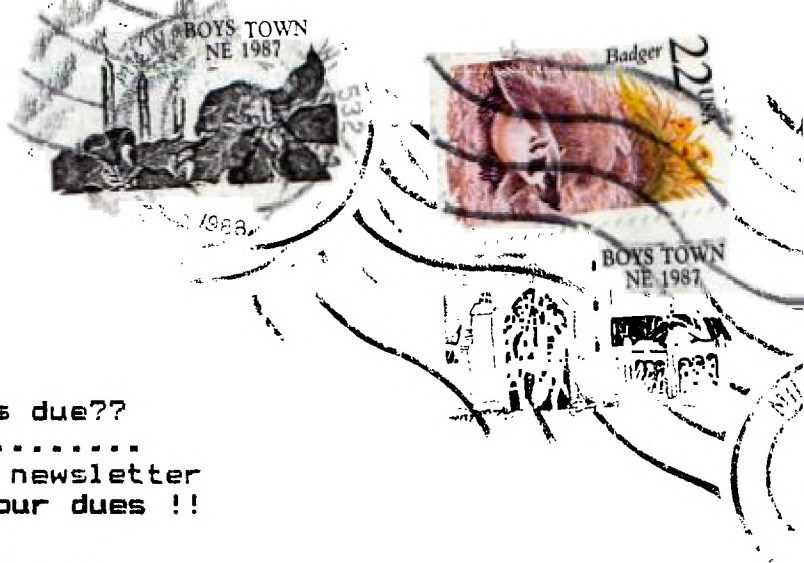
10 !TURNS ALL NUMERALS AND P
UNCTUATION WHITE! BY HARRY W
ILHELM IN TWIN Tiers US NEWS
LETTER
20 !TURN IT OFF BY CALL LOA
D(-31004,0)::TURN IT ON BY CA
LL LOAD(-31004,63)
100 CALL INIT
110 CALL LOAD(16128,2,224,30
,0,2,0,17,2,1,63,36,2,2,0,
3,4,32,32,36,2,224,131,192,3
,120)
120 CALL LOAD(16164,240,240,
240)
130 CALL LOAD(-31004,63)

```

Memory full  
Jim Peterson



MILWAUKEE AREA 99-4 USER GROUP  
4122 N. GLENWAY  
WAUWATOSA, WI 53222



Are your dues due??

.....  
Don't miss your newsletter  
by not paying your dues !!

Edmonton 99 06

box 11783

Edmonton

Alberta

Canada

T5J 3L1