HOCUS

Home Computer
Users Spotlight

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

September meeting will be on the THIRD SATURDAY !

AUGUST 1985

ROVING REPORTER RETURNS FROM LUBBOCK !!

Cheering Crowds Greet "Scoop Digithead" Local Hero Brngs Back The Big News !!

When T.I. reported they were dropping the 99/4A home computer from production, everyone was aghast. At the time (what was it 2 or 3 years ago ?) the famed 99/4A was the hottest selling but also least understood computer on the market. It's still on sale in back rooms of computer shoopes across the country but we've learnt an awful lot about it now, probably more than we really want to know specially the awful part, but until now we still didn't know ?? WHY ?? should a company losing bundles of money drop such a top selling product ???

With this in mind we immediately dispatched our top reporter to Lubbock, the scene of the crime, to get the real inside scoop.

Unfortunately we were only a vibrant active group growing in numbers but stagnant in cash-flow, unlike now, stagnant every which way but loose. Therefore all we could provide him with was several peanut-butter & jelly sandwiches, a jug of KOOL-AID and maps of Kansas, Texas and HongKong.
He already knew how to use his thumb because that's how he had managed to escape Illinois originally. Since Texas is all downhill from here, it only took him 6 months to get there, however then his problems were just beginning.
We had been in constant touch with him along the way via modem on the popular TI bulletin boards COMPUICSERVE & the SEWERCE.
By the time he arrived, it seems, everyone even remotely connected to the 99/4A had already been put out to pasture. Everywhere he looked, the TI logo had been replaced with IBM and the remaining executives all pleaded ignorance, with which he couldn't very well find argument.
Doors were locked, no one was allowed in, everything was hush-hush, all evidence was destroyed.
Sneaking in late one night though, all he found was a pile of ashes. Sifting through the ashes he discovered a few tattered and charred pages from the TI computer engineers dictionary.
Since Texas to Wisconsin is all uphill, as any map will attest to, it took a little longer to return home. Of course it was a bit difficult to accept his reasoning for the 'DisneyWorld' stop along the way but anyways he's finally arrived with the all the evidence, for what it's worth.
Reading it over though, one can find little to comprehensively explain TI's bug-out solution, but here is what was found in its entirety:

T.I. DICTIONARY

AMPS.....little creepy crawlers
ARC.....Noah's biblical boat
BUS BAR.....onboard cocktail lounge
CAPACITOR....one who can hold his liquor
COAXIAL.....2 engineers fired simultaneously
COMMUTATOR...one driving to the city daily
CONDENSOR....writer for the READERS DIGEST
DEBUSS.....removing a bandage
DETECTOR.....private eye
DETENT.....small outdoor canvas shelter
ELECTRODE....automated highway
FARAD.....deposed Egyptian ruler
FOURIER .....superceded by FIVEIER
GAMMA.....short for grandmother
GAUSS.....singular for geese
GERMANIUM....pretty pink flower
HERTZ.....medical term for painful
IMPEDANCE....synonym for Data Processing
INFRA RED....American spy in Moscow
ION.....device to take out wrinkles
JOULE.....gift from Richard Burton
KILOVOLT.....dangerous volt wanted by police
LOAD LINES...Monday morning wash
LOGARITHM....dancing on logs
MICROFARAD...son of deposed Egyptian ruler
NEGATIVE CHARGE..poor credit risk
OHM.....house in Great Britain
OUTLET.....going away party for engineers
OVERHEAD.....the boss
PENTODE.....frog in captivity
POWER FACTOR.mother-in-law
QUARTZ.....measurment unit for booze
QUALITY CONTROL..excuse to return extra parts
RECEPTACLE...round filing cabinet
RESONANCE....historical age of artistic rebirth
SCHEMATIC DIAGRAM..map used by skiiers
SERIES RESISTOR....TV censor
TRANSFORMER..a good beautician
TUNER.....piano repairman
TUBE CHECKER.chemistry student
UHF.....sound made by tackled quarterback
VACUUM.....product made by Hoover
VARIABLE MU..sounds of many cats
VOLT.....what Russians cast in elections
WATT-HOUR....how the French ask for the time
ZERO DEFECTS.production line shut-down

SOMETHING NEW IN CASSETTE LOADING

When trying to load a program from a cassette, you usually get one of three messages:

1. DATA OK (That's the message you want)
2. NO DATA FOUND (The message you don't want)
3. ERROR IN DATA (Recognizes some of the data)

With message 2, the computer can't read anything, the volume or tone probably is far off, probably too low but also possibly too high.

With message 3 you're getting closer, so make only minor adjustments for the next try. When the volume is set too high it's possible to get 'NO DATA FOUND' and contrary to popular belief, sometimes the tone can be set so high as to get an 'ERROR IN DATA'

>>> Now here comes the NEW trick !! <<<

Recently I had an occasion to use a cassette based system, so figured to use the opportunity to type in some HCM programs and save to tape. I had been tied to a cassette system myself for 3 1/2 years before I finally broke down and expanded to disc etc. so I was sure I'd encounter no difficulties later transferring them to disc. In the week spent there I'd managed to type in 4 long programs and had no trouble recalling them with the recorder I saved them with, however at home with my own system I had no luck reading them and after about 4 hours of fruitless trying, finally gave up, tossed the tape aside and proceded on to some of my other more pressing tasks.

Several weeks later, with a little free time, I dug it out again. I'm kind of stubborn and think that I'm pretty good at cassette reading, so was determined to read those cranky tapes. Recalling all my supposed cassette reading skills I plunged in. I've found that using the tape counter as a guide, I can keep check on my progress. After each attempt I would check the counter, a higher count meant a more accurate setting than the previous attempt. In this way I knew whether to adjust the setting higher or lower. Incidently it was in this manner that I discovered that by lowering the tone control I did get a better reading.
Thus with each attempt the counter reading increased and I knew I was on the right track. Finally it ran past all previous attempts and kept right on reading and I knew I had the optimum setting, so I sat back and waited for it to reach the end, but to my horror it didn't stop, it kept running past the end a few seconds more and then gave the old 'ERROR IN DATA'
I knew I had the optimum settings or it wouldn't have continued reading all the way to the end, so I tried again without any changes. As it once again began on its merrie way, I began to think about it. If it had read the entire program without an ERROR, why did I get the ERROR message after it was finished ??
Evidently the computer was checking for some kind of flag from the program saying 'I'M FINISHED-STOP HERE'
Assuming this, I decided to turn up the volume right at the end, but where was that end ??
Just then the program reached the end and again the tape continued on as before. I immediately rewound it a few numbers and hit 'PLAY' but before I could turn up the volume, the computer instantly shut off and gave me the prize message 'DATA OK'. Gleefully I then tried listing it and there the program was, however several of the lines were slightly askew. When trying to edit them though, other lines began to mess-up.
That's right. The program was glitched. T'was useless
Once again back to the beginning, only this time I watched the counter closely for the finish. This time when it ran out I rewound it just to the very point it had run out and again pressed 'PLAY' again.
Again 'DATA OK' and !! VOILA !! listing was PERFECTO and the program ran beautifully !! Using the same technique on the other impossible-to-read programs I was successful with them all on the very first try.
Perhaps you too can recover some of your supposedly lost programs using this trick ?? ...Hopefully

great graphics gaze

At our September meet I (with some help) would like to demo the four or five leading bit-map graphics programs. They are Bit-Mac, Graphx, Paint & Print, Draw a Bit II, and possibly SuperSketch. My intent is not only to demo these programs but to show their strong and weak points by way of comparison.

To demonstrate one graphic program is quite an undertaking, but four at the same time requires me to ask for your assistance. If anyone has one of these programs,is the least bit familiar with it and is willing to bring their computer to the September meeting see me at the August meeting or call me at home. I will run the demo and therefore do most of the talking. I just need your expertise in remembering all those keys not to mention running the extra computer systems.

Those who can't or won't demo their programs please bring along your favorite graphic printouts and we will display them. If we can pull this off it should be a very graphic Saturday afternoon as well as being most informative for those considering a bit-map graphics program. So plan to gaze at our graphics.

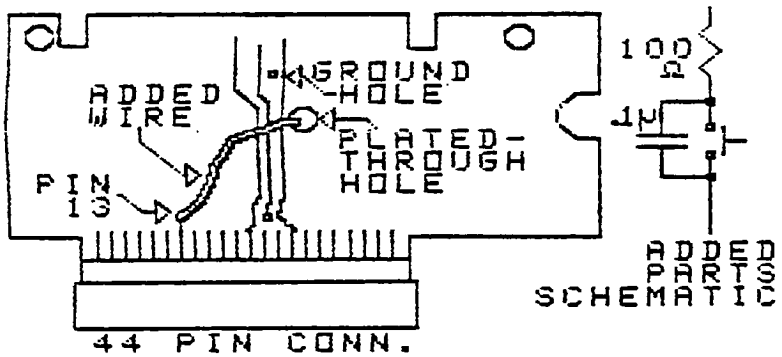
Jerry Trinkl

A TERRIBLE LOSS by Cricket Raybern

We were saddened to learn recently of the death of one of our most valued members, Someone Else. Someone's passing created a vacancy that will be difficult to fill. Else had been with us almost since the club was formed, and during that time Someone did far more than a normal person's share of the work. Whenever leadership was mentioned this wonderful person was looked to for inspiration as well as results.
It was often said, "Someone Else can work with that group or committee." Whenever there was a job to be done or a meeting to attend, one name was on everybody's list—"Let Someone Else do it".
Someone Else was a wonderful person sometimes appearing superhuman. But a person can only do so much. Were the truth known, everone expected too much of Someone Else. Now Someone Else is gone, and we wonder what we are going to do. Someone Else left a wonderful example to follow, but who is going to follow it ? Who is going to do the things that Someone Else always did ?

```
50 REM  <<< SKEETERS >>>
100 CALL CLEAR
110 CALL CHAR(104,"101010D6B
ABAD61")
120 CALL CHAR(105,"784830FF3
04878")
130 CALL CHAR(106,"1E120EFF0
E121E")
140 CALL CHAR(107,"10D6BABAD
610101")
150 GOSUB 1740
160 PRINT : : : : : :TAB(6);
"h i j k j i h i j": :TAB(6)
;"i  SKEETERS     k": :TAB(6
);"j      SKEETERS   j": :TAB(
6);"k      AND       i"
170 PRINT :TAB(6);" MORE SK
EETERS h": :TAB(6);"i h i j
k j i k j": : :
180 PRINT TAB(14);"DSIGNED B
Y":TAB(12);"ARCADE ACTION":T
AB(12);"SOFTWARE": :
190 PRINT "PRESS ANY KEY TO
START"
200 GOSUB 1780
210 CALL KEY(0,K,S)
220 IF S=0 THEN 210
230 GOSUB 1740
240 PRINT : : :"YOU HAVE 5 I
NSECT SPRAY CANSTO SPRAY THE
 SKEETERS.": : :"EACH TIME T
HEY STING YOU,   YOU LOSE A
CAN."
250 PRINT : :"FOR EACH 10 SK
EETERS SPRAYEDYOU GET ANOTHE
R CAN.": : :"YOUR SCORE IS B
ASED UPON THEHEIGHT OF THE S
KEETER HIT."
260 PRINT : :"MOVE WITH KEYS
 <S> & <D>    SPRAY WITH <EN
TER>": : : :"PRESS ANY KEY T
O START"
270 GOSUB 1780
280 CALL KEY(0,K,S)
290 IF S=0 THEN 280
300 RANDOMIZE
310 D=1
320 X=22
330 Y=16
340 GOSUB 1740
350 CALL SCREEN(14)
360 CALL CHAR(108,"10D6BA")
370 CALL CHAR(109,"343DDF7EF
FF47E38")
380 CALL CHAR(96,"0B1C3E3E2A
362A3E")
390 CALL CHAR(112,"55AA55AA5
5AA55AA")
400 CALL CHAR(110,"141414141
4141414")
410 CALL CHAR(120,"AAAAFFFFF
FFFFFFF")
420 CALL CHAR(130,"49221C551
C2249")
430 PRINT TAB(11);"SKEETERS"
: : : : : : : : : : : : : :
: : : : : : : :"xxxxxxxxxxxx
xxxxxxxxxxxxxxxx":"SCORE 0",
"CANS *****";
440 GOSUB 1690
450 CALL HCHAR(X,Y,96)
460 B=16-(13*D)
470 A=10
480 GOSUB 1790
490 IF (B>2)+(B<30)=-2 THEN
510
500 D=-D
510 CALL HCHAR(A,3,32)
520 ON INT(RND*5+1)GOTO 530,
540,590,620,660
530 B=B+D
540 CALL HCHAR(A,B,105-D)
550 GOTO 690
560 A=A+1+(A>18)
570 CALL HCHAR(A,B,107)
580 GOTO 690
590 A=A-1-(A<3)
600 CALL HCHAR(A,B,105)
610 GOTO 690
620 A=A-1-(A<3)
630 B=B+D
640 CALL HCHAR(A,B,105-D)
650 GOTO 690
660 A=A+1+(A>18)
670 B=B+D
680 CALL HCHAR(A,B,105-D)
690 IF (K<>13)+(10*RND>1)=-2
 THEN 760
700 CALL SOUND(200,-1,0)
710 CALL VCHAR(A,B,108,22-A)
720 CALL HCHAR(X,B,107)
730 CALL VCHAR(A,B,32,22-A)
740 IF B=Y THEN 1100
750 CALL HCHAR(X,B,32)
760 CALL KEY(0,K,S)
770 IF S=0 THEN 490
780 IF K=83 THEN 810
790 IF K=68 THEN 850
800 IF K=13 THEN 890 ELSE 49
0
810 CALL HCHAR(X,Y,32)
820 Y=Y-2-2*(Y<5)
830 CALL HCHAR(X,Y,96)
840 GOTO 490
850 CALL HCHAR(X,Y,32)
860 Y=Y+2+2*(Y>29)
870 CALL HCHAR(X,Y,96)
880 GOTO 490
890 FOR @=660 TO 220 STEP -2
20
900 CALL SOUND(-50,@,0)
910 NEXT @
920 IF Y=B THEN 980
930 CALL VCHAR(3,Y,110,19)
940 CALL HCHAR(2,Y-1,109,3)
950 CALL VCHAR(3,Y,32,19)
960 CALL HCHAR(2,Y-1,32,3)
970 GOTO 490
980 CALL VCHAR(A+1,Y,110,21-
A)
990 CALL HCHAR(A,B-1,109,3)
1000 CALL VCHAR(A+1,Y,32,21-
A)
1010 G=G+25-A
1020 CALL HCHAR(A,B-1,32,3)
1030 GOSUB 1690
1040 CALL HCHAR(X,Y,96)
1050 W=W+1
1060 CALL SOUND(100,1000,0,-
2,4)
1070 CALL SOUND(100,500,1,-2
,3)
1080 IF W=100 THEN 1490
1090 IF W/10=INT(W/10)THEN 1
370 ELSE 1220
1100 H=H+1
1110 CALL HCHAR(X,Y,130)
1120 CALL SOUND(-100,-5,0)
1130 CALL SOUND(-100,-6,0)
1140 CALL SOUND(-100,-7,0)
1150 CALL SOUND(-100,-8,0)
1160 IF H>4 THEN 1240
1170 CALL HCHAR(X,Y,32)
1180 CALL HCHAR(24,27-H,32)
1190 GOSUB 1690
1200 Y=16
1210 CALL HCHAR(X,Y,96)
1220 D=-D
1230 GOTO 460
1240 CALL CLEAR
1250 IF E>=6 THEN 1270
1260 E=6
1270 GOSUB 1740
1280 PRINT : : : : : :TAB(10
);"HEY  HEY": : :TAB(9);"I G
OT'CHA": : :"   FINAL SCORE"
;G: : :"   HIGH SCORE";E: :
: :"   PLAY AGAIN (Y/N) ?":
: :
1290 GOSUB 1780
1300 CALL KEY(0,K,S)
1310 IF S=0 THEN 1300
```

```
1320 IF K=78 THEN 1730
1330 H=0
1340 W=0
1350 G=0
1360 GOTO 300
1370 H=H-1-(H>9)
1380 CALL HCHAR(24,26-H,96)
1390 CALL SOUND(500,262,10)
1400 CALL SOUND(500,392,7)
1410 CALL SOUND(1000,523,4)
1420 CALL SOUND(250,659,2)
1430 CALL SOUND(500,622,3)
1440 CALL SOUND(500,392,7)
1450 CALL SOUND(500,262,10)
1460 CALL SOUND(400,196,10)
1470 CALL SOUND(1000,262,7)
1480 GOTO 460
1490 CALL CLEAR
1500 CALL SCREEN(11)
1510 CALL SOUND(400,500,0,200,0,-1,4)
1520 CALL SOUND(50,110,0,-2,4)
1530 IF E>=G THEN 1550
1540 E=G
1550 PRINT TAB(12);"WOW !!!" : : : :TAB(8);"YOU DID IT !!!"
1560 CALL SCREEN(10)
1570 CALL SOUND(400,1000,0,300,0,-2,4)
1580 CALL SOUND(50,110,0,-2,4)
1590 PRINT : :TAB(8);"YOU SWATTED": :TAB(5);"ALL THE SKEETERS !"
1600 CALL SCREEN(11)
1610 CALL SOUND(400,880,0,660,0,-4,4)
1620 CALL SOUND(50,110,0,-2,4)
1630 PRINT : :TAB(7);"FINAL SCORE";G: :TAB(7);"HIGH SCORE";E
1640 CALL SCREEN(15)
1650 CALL SOUND(400,440,0,220,0,-2,4)
1660 CALL SOUND(50,110,0,-2,4)
1670 PRINT : :TAB(7);"PLAY AGAIN (Y/N) ?"
1680 GOTO 1300
1690 FOR @=1 TO LEN(STR$(G))
1700 CALL HCHAR(24,3+@,ASC(SEG$(STR$(G),@,1)))
1710 NEXT @
1720 RETURN
1730 END
1740 FOR @=1 TO 12
1750 CALL COLOR(@,1,1)
1760 NEXT @
1770 RETURN
1780 FOR @=2 TO 8
1790 CALL COLOR(@,16,2)
1800 NEXT @
1810 CALL COLOR(1,2,2)
1820 CALL COLOR(9,7,2)
1830 CALL COLOR(10,11,2)
1840 CALL COLOR(12,8,2)
1850 CALL COLOR(11,13,8)
1860 CALL COLOR(13,7,2)
1870 RETURN
```



BOTTOM VIEW OF SPEECH SYNTHESIZER BOARD

ADDING A LOAD INTERRUPT SWITCH TO THE SPEECH SYNTHESIZER

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A number of people have asked me about the load interrupt switch I had added to my speech synthesizer to allow dumping screens from the various cartridges using the excellent screendump program that was written by Danny Michaels. So here are instructions to allow you to modify you own synthesizer to accomplish this.

Keep in mind that you have to know enough about electronics to add the parts needed for the modification without messing up your synthesizer. I have made the modification to my own synthesizer so I know that it works, but if you mess up, then you're out a synthesizer. You could add the same parts inside the console and have a small switch sticking out the back if you want the modification self-contained or don't have a speech synthesizer.

The only part really needed is a miniature pushbutton switch with normally open contacts but if you add a 100-500 ohm resistor in series with the switch and a .01-.1 MFD capacitor across the switch, there will be less chance for contact bounce (If you really want bounce-free contact closure, use cross-coupled gates as an R-S flip-flop). The added parts schematic and location diagram of the speech synthesizer board is shown above. These were drawn with GRAPHX.

To modify your unit, do the following:

1)buy the parts. The switch must not stick >1/4in. beyond threads.
2)dismantle synthesizer. note how shield slides together.
3)clear large plated-through hole of solder.
4)solder 2 1/2in. piece of wire to pin 13 of 44 pin connector.
(all other parts go on top side of circuit board)
5)solder one end of 1ØØ ohm resistor in ground hole.
6)solder 1 1/2in. piece of wire to other end of resistor.
7)solder wires to switch and .1 MFD capacitor.
8)drill hole in middle top of shield for switch.
9)mount switch, making sure everything fits.
1Ø)reassemble unit, making sure nothing shorts.

You can now follow the instructions for the screendump program to check the operation of the switch. You may find other interesting uses of the switch. If you do, please pass them on to the newsletter.

SIMPLEFILER FROM STARTING FORTH

by Ron McDermott

As most people, when I decided to attempt FORTH, I read Leo Brodie's fine book, STARTING FORTH; TI had nicely provided the adjustments needed to use the book, and all went well initially. When I reached page 223 and read about the filing system he built so easily, I was hooked, but to my horror, the thing wouldn't run! I tried everything I could think of (which didn't take long since I didn't know much FORTH), but to no avail. In the months that followed, I continued to fuss with the program; I found that the major problem revolved around the FORTH "word" ' (tick). I discovered that if I removed tick from the screen definitions and reversed the order of the commands, I could get some functions to work; for example, FIND JOB NEWSCASTER became JOB FIND NEWSCASTER. Unfortunately, this didn't work for all the functions!

I've now managed to make the filer work as written, by defining a new symbol to perform the function which tick was not. In FORTH, tick is supposed to find an address (the PFA) for the word which follows in the input stream (what you type on the keyboard), but Brodie's tick does this when in a definition (following a colon); whereas our tick finds the PFA for the word following it in the definition itself, and ignores anything in the input stream! From my reading, I suspect that it is possible to cause tick to execute properly from a definition, but I didn't know how to do it, so I looked for a way to define a new symbol to perform the task!

I discovered a resident word -FIND which would do the job, and returned either a 0 if the input stream word was not defined or the PFA,count,1 if a match was found in the existing vocabulary. The definition I created was for a backslash, but you can use what you wish : YOURSYMBOL -FIND IF DROP ENDIF ; . If no match is found, the IF removes the 0, and if a match is found, IF removes the 1, DROP removes the count, and the PFA is left on the stack! Brodie defined a word -FIND which must be changed (I used SEARCH instead) wherever -FIND appeared; also, I changed FREE to AVAIL since FREE is in my FORTH vocabulary already.

So that does it, right? Wrong! FREE (or AVAIL) also has a bug. Brodie apparently wants his loop 33 < IF NOT LEAVE THEN LOOP ABORT" FILE FULL " ; to be exited when a blank file is located (LEAVE), but control should then bypass the instructions following LOOP since these should only be executed if no records are empty (also we don't have ABORT")! To fix it, do the following, 33 > IF THEN LOOP #RECORD MAXRECS = IF ." FILE FULL " ABORT ENDIF ; this only prints the message and aborts if #RECORD has reached the maximum value MAXRECS. Otherwise, control passes to the next instruction following as intended.

It should be pointed out that no provision was made to indicate that -FIND had not found a match in the tick replacement, since in this application matches are ensured. Best would be to have the word tested repeated with a question mark as is standardly done when a word is not understood by the system. In any event, I hope you enjoy the filer; it has real possibilities, and it certainly was long-awaited in my case. Now perhaps, I can concentrate on adding to it rather than trying to make it work!

TIPS FROM THE TIGERCUB

#23

TIGERCUB SOFTWARE
156 Collingwood Ave.
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The entire contents of Tips from the Tigercub Nos. 1 through 14, with more added, are now available as a full disk of 50 programs, routines and files for just $15.00 postpaid!

Nuts & Bolts is a diskfull of 100 (that's right, 100!) XBasic utility subprograms in MERGE format, ready for you to merge into your own programs. Contents include 13 type fonts, 14 text display routines, 12 sorts and shuffles, 9 data saving and reading routines, 9 wipes, 8 pauses, 6 music, 2 protection, etc., and now also a tutorial on using subprograms, all for just $19.95 postpaid!

And I have about 140 other absolutely original programs in Basic and XBasic at only $3.00 each!(plus $1.50 per order for casette, packing and postage, or $3.00 for diskette, PPM) I will send you my descriptive catalog for a dollar, which you can then deduct from your first order.

Several different routines have been published which will extract and save a specified series of lines out of a program, but this one by George Steffen of the L.A. 99ers is certainly the best.

```
1 !SUBROUTINE EXTRACTOR by G
eorge F. Steffen. SAVE in ME
RGE format. MERGE into any p
rogram (with line # starting
 above 8). RUN to extract
2 !selected lines. Deletes i
tself. Then BE SURE to SAVE
the selected lines in MERGE
format because the remaining
 lines are still in memory!
3 CALL CLEAR :: CALL INIT ::
 INPUT "Line numbers of rout
ine to be saved: First,Last?
      ":L,M :: G=256 :: CAL
L PEEK(-31952,H,I,J,K)
4 C=INT(M/G):: D=M-C*G :: F=
(J-G)*G+K :: FOR E=(H-G)*G+I
 TO F STEP 4 :: CALL PEEK(E,
A,B):: IF A=C AND B=D THEN 6
5 NEXT E :: PRINT :"LINE";M;
"NOT FOUND!" :: STOP !@P-
6 H=INT(E/G):: I=E-(G*H):: H
=H+6 :: C=INT(L/G):: D=L-C*G
 :: FOR E=E+4 TO F STEP 4 ::
 CALL PEEK(E,A,B):: IF A=C A
ND B=D THEN 8 !@P-
7 NEXT E :: PRINT :"LINE";L;
"not found!" :: STOP !@P-
8 E=E+3 :: J=INT(E/G):: K=E-
(G*J):: J=J+6 :: CALL LOAD(-
31952,H,I,J,K):: STOP !@P-
```

The enhancements to my Menu Loader, published in Tips #22, contained an error. Please change line 413 to read -

```
413 LINPUT #2:M$ :: PRINT M$
 :: IF EOF(2)THEN 416
```

Some folks were interested in the idea of a program that writes a program, so let's write a program that will write a program to list the token codes that you need to use to write a program that will write a program -

```
100 OPEN #1:"DSK1.TOKENLIST"
,OUTPUT,DISPLAY ,VARIABLE 16
3 :: FOR N=129 TO 254 :: L1=
INT(N/256):: L2=N-256*L1
110 PRINT #1:CHR$(L1)&CHR$(L
2)&CHR$(131)&CHR$(N)&CHR$(0)
:: NEXT N
120 PRINT #1:CHR$(255)&CHR$(
255):: CLOSE #1 :: END
```

Key that in and SAVE it just in case, then RUN it. When READY, type NEW, then MERGE DSK1.TOKENLIST. Now LIST it and you will see a list of ASCII codes 129 through 254 and their token meanings. Delete lines 171 through 175, 185, 198, 226 through 231, and 242. Change the definition of 199 to QUOTED STRING, of 200 to UNQUOTED STRING, and 201 to LINE NUMBER, and add line 255 END OF FILE.

You don't need all those exclamation points, so change the program to a DIS/VAR 80 file by LIST "DSK1.TOKENLIST". Then key in this little routine.

```
100 OPEN #1:"DSK1.TOKENLIST"
 :: OPEN #2:"PIO"
110 LINPUT #1:A$ :: PRINT #2
:SEG$(A$,1,4)&SEG$(A$,6,LEN(
A$)):: IF EOF(1)<>1 THEN 110
120 CLOSE #1 :: CLOSE #2 ::
END
```

RUN it, and print out a list of all the token codes. More on this next month - if someone buys a few programs so that I can afford another month.

Now that we've done about all that we can with the Menu Loader, here is another version to use on your finalized library disks of programs. It lacks the features that you will no longer need, but will list your programs by their full names, up to 24 characters long.

```
100 !NAMELOADER by A. Kludge
/M. Gordon/T. Boisseau/J. Pe
terson/etc.
110 CALL CLEAR :: CALL SCREE
N(5):: FOR S=1 TO 14 :: CALL
 COLOR(S,7,16):: NEXT S :: C
ALL VCHAR(1,31,1,96):: CALL
COLOR(0,2,16)
120 OPTION BASE 1 :: DIM PG$
(99),M$(99)
130 ! List the full names of
 the programs on the disk in
 the DATA statements, in the
 sequence in which they are
 listed by an ordinary disk
 cataloger program
140 !Then SAVE this program
under the filename LOAD
150 DATA
160 DATA
170 DATA
180 DATA
190 DATA END
200 FOR J=1 TO 99 :: READ M$
(J):: M$(J)=SEG$(M$(J),1,24)
210 IF M$(J)="END" THEN M$(J
)=" " :: GOTO 230
220 NEXT J
230 IMAGE ##
240 DISPLAY AT(1,4):"TIGERCU
B NAMELOADER"
250 D$="DSK1." :: OPEN #1:D$
,INPUT ,RELATIVE,INTERNAL ::
 INPUT #1:P$
260 FOR X=1 TO 99 :: IF X/20
<>INT(X/20)THEN 290
270 DISPLAY AT(24,1):"Type #
 of choice or Enter 0" :: AC
CEPT AT(24,27)VALIDATE(DIGIT
)SIZE(-3):K :: IF K=0 THEN 2
80 :: IF K>0 AND K<NN+1 THEN
 390 ELSE 270
280 X=1
290 I=I+1 :: IF I>127 THEN K
=X :: GOTO 370
300 INPUT #1:P$ :: NN=NN+1
310 IF LEN(P$)=0 THEN 350
320 DISPLAY AT(X+3,2):USING
230:NN :: DISPLAY AT(X+3,5):
M$(NN):: PG$(NN)=P$
330 CALL KEY(0,KK,ST):: IF S
T=0 THEN 340 :: FLAG=1 :: GO
TO 350
340 NEXT X
350 DISPLAY AT(X+4,1):" " ::
 DISPLAY AT(X+5,2):USING 230
:NN+1 :: DISPLAY AT(X+5,6):"
Terminate"
360 DISPLAY AT(X+6,1):"    C
hoice?" :: ACCEPT AT(X+6,16)
SIZE(2)VALIDATE(DIGIT):K ::
IF K<>NN AND K<>NN+1 THEN 38
0
370 IF K=NN+1 THEN CALL CLEA
R :: CLOSE #1 :: END
380 !IF K<1 OR K>99 OR LEN(P
G$(K))=0 THEN 350
390 CLOSE #1
400 CALL INIT :: CALL PEEK(-
31952,A,B):: CALL PEEK(A*256
```

```
+8-65534,A,B):: C=A*256+B-65
534 :: A$=D$&P6$(K):: CALL L
OAD(C,LEN(A$))
410 FOR I=1 TO LEN(A$):: CAL
L LOAD(C+I,ASC(SEG$(A$,I,1))
):: NEXT I :: CALL LOAD(C+I,
0)
420 CALL VCHAR(1,3,32,672)::
 CALL SCREEN(8):: FOR S=0 TO
 14 :: CALL COLOR(S,2,1):: N
EXT S :: DISPLAY AT(12,2):"L
OADING ";M$(K)
430 RUN "DSK1.1234567890"
```

Last month I forgot to have anything for the kids, or anything in Basic, so -

```
100 CALL CLEAR
110 REM by Jim Peterson of
Tigercub Software
120 PRINT TAB(1);"***AUTOMA
TIC MOUSE MAZE***": : : :"
  Choose your mouse and":"wa
tch it try to find its way"
130 PRINT "through the maze.
": :"  When one of the mice
 has":"taken 50 extra steps,
 the":"cat gets it!"
140 PRINT : :"Touch any key"
150 CALL KEY(0,K,ST)
160 IF ST<1 THEN 150
170 CALL CLEAR
180 CALL CHAR(120,"0078FEFFF
E78")
190 CALL CHAR(121,"1038387C7
C7C7C38")
200 CALL CHAR(122,"387C7C7C7
C383810")
210 CALL CHAR(123,"001E7FFF7
F1E")
220 CALL CHAR(128,"001E61816
11E")
230 CALL CHAR(129,"384444444
4242410")
240 CALL CHAR(130,"102828444
4444438")
250 CALL CHAR(131,"007886818
678")
260 CALL SCREEN(5)
270 T1=610
280 T2=610
290 CALL CHAR(136,"FFFFFFFFF
FFFFFFF")
300 CALL COLOR(14,16,16)
310 CALL COLOR(13,2,16)
320 CALL COLOR(12,2,16)
330 R=10
340 GOSUB 1460
350 R1=10
360 C=2
370 C1=2
380 CALL HCHAR(R,C,136,2)
390 C=C+1
400 M=120
410 M2=128
420 RANDOMIZE
430 A=(INT(2*RND)+1)*2
440 B=INT(10*RND)+1
450 ON B GOSUB 470,470,470,4
70,510,510,550,550,590,590
460 GOTO 420
470 IF C+A>30 THEN 630
480 CALL HCHAR(R,C,136,A)
490 C=C+A
500 RETURN
510 IF R+A>20 THEN 540
520 CALL VCHAR(R,C,136,A)
530 R=R+A
540 RETURN
550 IF R-A<2 THEN 580
560 CALL VCHAR(R-A+1,C,136,A
)
570 R=R-A
580 RETURN
590 IF C-A<3 THEN 620
600 CALL HCHAR(R,C-A+1,136,A
)
610 C=C-A
620 RETURN
630 CALL HCHAR(R,C,136)
640 C=C+1
650 IF C<31 THEN 630
660 R2=R
670 C2=C
680 CALL HCHAR(R1,C1,M)
690 CALL HCHAR(R2,C2,M2)
700 Y=Y+1+(Y=2)*2
710 IF Y=2 THEN 1020
720 CALL HCHAR(R1,C1,136)
730 ON M-119 GOTO 800,900,74
0,850
740 IF C1=31 THEN 950
750 CALL GCHAR(R1,C1+1,G)
760 IF G=32 THEN 850
770 C1=C1+1
780 M=120
790 GOTO 950
800 CALL GCHAR(R1-1,C1,G)
810 IF G=32 THEN 740
820 R1=R1-1
830 M=121
840 GOTO 950
850 CALL GCHAR(R1+1,C1,G)
860 IF G=32 THEN 900
870 R1=R1+1
880 M=122
890 GOTO 950
900 CALL GCHAR(R1,C1-1,G)
910 IF G=32 THEN 800
920 C1=C1-1
930 M=123
940 GOTO 950
950 CALL HCHAR(R1,C1,M)
960 IF (C1=31)*(C2=2)THEN 13
20
970 IF C1<31 THEN 700
980 T2=T2-10
990 CALL SOUND(50,T2,5)
1000 IF T2=110 THEN 1340
1010 GOTO 700
1020 CALL HCHAR(R2,C2,136)
1030 ON M2-127 GOTO 1040,120
0,1090,1150
1040 CALL GCHAR(R2+1,C2,G)
1050 IF G=32 THEN 1090
1060 R2=R2+1
1070 M2=129
1080 GOTO 1250
1090 IF C2=2 THEN 1250
1100 CALL GCHAR(R2,C2-1,G)
1110 IF G=32 THEN 1150
1120 C2=C2-1
1130 M2=128
1140 GOTO 1250
1150 CALL GCHAR(R2-1,C2,G)
1160 IF G=32 THEN 1200
1170 R2=R2-1
1180 M2=130
1190 GOTO 1250
1200 CALL GCHAR(R2,C2+1,G)
1210 IF G=32 THEN 1040
1220 C2=C2+1
1230 M2=131
1240 GOTO 1250
1250 CALL HCHAR(R2,C2,M2)
1260 IF (C2=2)*(C1=31)THEN 1
320
1270 IF C2>2 THEN 700
1280 T1=T1-10
1290 CALL SOUND(50,T1,5)
1300 IF T1=110 THEN 1370
1310 GOTO 700
1320 CALL HCHAR(1,1,32,768)
1330 GOTO 330
1340 GOSUB 1460
1350 PRINT "THE CAT GOT THE
WHITE MOUSE": :
1360 GOTO 1390
1370 GOSUB 1460
1380 PRINT "THE CAT GOT THE
BLACK MOUSE": :
1390 PRINT "TO PLAY AGAIN, T
OUCH ANY KEY"
1400 CALL KEY(0,K,ST)
1410 IF ST<1 THEN 1400
1420 T1=610
1430 T2=610
1440 CALL HCHAR(1,1,32,768)
1450 GOTO 330
1460 CALL HCHAR(23,1,32,32)
1470 PRINT CHR$(120);(610-T1
)/10;TAB(20);CHR$(128);(610-
T2)/10
1480 RETURN
```

Did you know that ACCEPT AT(1,0) will accept a full line of 28 characters? Did you know that ACCEPT AT (R,0)SIZE(-28) and Enter will accept everything on row R? And did you know that ACCEPT N$ will accept a string of 255 characters?

Need a filler, so -

```
100 !MUSICAL BARGRAPH by Jim
 Peterson
110 CALL CLEAR :: CALL SCREE
N(5):: FOR J=2 TO 14 :: X=J-
(J>4):: CALL COLOR(J,X,X)::
NEXT J
120 DIM N$(13),N(13):: M$="(
08@HPX'hpx"&CHR$(128)&CHR$(1
36):: FOR J=1 TO 13 :: N$(J)
=SEG$(M$,J,1):: DISPLAY AT(J
+6,1)SIZE(1):N$(J):: NEXT J
130 X=110 :: FOR J=1 TO 13 :
: N(J)=X*1.059463094^(J-1)::
 NEXT J
140 A=INT(13*RND+1):: B=INT(
25*RND+1):: DISPLAY AT(A+6,2
)SIZE(28):RPT$(N$(A),B):: CA
LL SOUND(B*40,N(A),0,N(A)*2+
4,0,N(A)*4+6,0)
150 DISPLAY AT(A+6,2):"" ::
GOTO 140
```

MEMORY FULL

Jim Peterson

QUICK REFERENCE SHEET

COLOR CODES

COLOR	VALUE
TRANSPARENT	1
BLACK	2
MED. GREEN	3
LT. GREEN	4
DARK BLUE	5
LT. BLUE	6
DK. RED	7
CYAN	8
MED. RED	9
LT. RED	10
DK. YELLOW	11
LT. YELLOW	12
DK. GREEN	13
MAGENTA	14
GRAY	15
WHITE	16

PATTERN IDENTIFIER CONVERSION TABLE

0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7
1	0	0	0	8
1	0	0	1	9
1	0	1	0	A
1	0	1	1	B
1	1	0	0	C
1	1	0	1	D
1	1	1	0	E
1	1	1	1	F

ERROR CODES

FIRST	COMMAND OR STATEMENT
0	OPEN
1	CLOSE
2	INPUT
3	PRINT
4	RESTORE
5	OLD
6	SAVE
7	DELETE
9	EOF

SECOND	TYPE OF ERROR
0	DRIVE NOT FOUND
1	DEVICE or FILE WRITE PROTECTED
2	BAD OPEN ATTRIBUTE
3	ILLEGAL OPERATION
4	OUT OF SPACE
5	ATTEMPT TO READ PAST END OF FILE
6	DEVICE ERROR or HARDWARE ERROR
7	FILE ERROR - File or disk does not exist

ASCII CODES

CODE		CODE		CODE		CODE		CODE		CODE		CODE		CODE	
30		48	0	65	A	82	R	99	c	116	t	133	GO	150	NEXT
31		49	1	66	B	83	S	100	d	117	u	134	GOTO	151	READ
32		50	2	67	C	84	T	101	e	118	v	135	GOSUB	152	STOP
33	!	51	3	68	D	85	U	102	f	119	w	136	RETURN	153	DELETE
34	"	52	4	69	E	86	V	103	g	120	x	137	DEF	154	REM
35	#	53	5	70	F	87	W	104	h	121	y	138	DIM	155	ON
36	$	54	6	71	G	88	X	105	i	122	z	139	END	156	PRINT
37	%	55	7	72	H	89	Y	106	j	123	{	140	FOR	157	CALL
38	&	56	8	73	I	90	Z	107	k	124	|	141	LET	158	OPTION
39	'	57	9	74	J	91	[	108	l	125	}	142	BREAK	159	OPEN
40	(	58	:	75	K	92	\	109	m	126	~	143	UNBREAK	160	CLOSE
41	)	59	;	76	L	93	]	110	n	127	DEL	144	TRACE	161	SUB
42	*	60	<	77	M	94	^	111	o	128		145	UNTRACE	162	DISPLA
43	+	61	=	78	N	95		112	p	129	ELSE	146	INPUT	163	IMAGE
44	,	62	>	79	O	96	`	113	q	130	::	147	DATA	164	ACCEPT
45	-	63	?	80	P	97	a	114	r	131	!	148	RESTORE	165	ERROR
46	.	64	@	81	Q	98	b	115	s	132	IF	149	RANDOMIZE		
47	/														

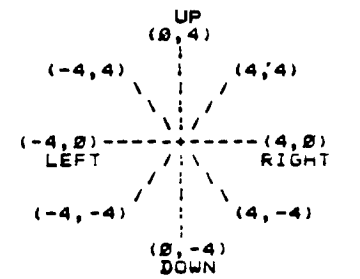
CHARACTER SETS

SET	ASCII CODES
0	30-31
1	32-39
2	40-47
3	48-55
4	56-63
5	64-71
6	72-79
7	80-87
8	88-95
9	96-103
10	104-111
11	112-119
12	120-127
13	128-131
14	136-143
15	144-151\BASIC
16	152-159/ONLY

CALL KEY VALUE OF KEYSTROKES

CODE	KEYSTROKE
1	FCTN 7
2	FCTN 4
3	FCTN 1
4	FCTN 2
5	FCTN =
6	FCTN 6
7	FCTN 3
8	FCTN 5
9	FCTN D
10	FCTN X
11	FCTN E
12	FCTN 6
13	ENTER
14	FCTN 5
15	FCTN 9

JOYSTICK RETURN VALUES



CONTROL CODES

ASC	PRESS	COMMENTS
1	CTRL A	START OF HEADING
2	CTRL B	START OF TEXT
3	CTRL C	END OF TEXT
4	CTRL D	END OF TRANS.
5	CTRL E	INQUIRY
6	CTRL F	ACKNOWLEDGE
7	CTRL G	BELL
8	CTRL H	BACKSPACE
9	CTRL I	HORIZ. TAB
10	SHFT/ENTR	LINE FEED
11	CTRL K	VERTICAL TAB
12	CTRL L	FORM FEED
13	ENTER	CARRIAGE RETURN
14	CTRL N	SHIFT OUT
15	CTRL O	SHIFT IN
16	CTRL P	DATA LINK ESCAPE
17	CTRL Q	DEVICE CONTROL 1
18	CTRL R	DEVICE CONTROL 2
19	CTRL S	DEVICE CONTROL 3
20	CTRL T	DEVICE CONTROL 4
21	CTRL U	NEG. ACKNOWLEDGE
22	CTRL V	SYNCHRONOUS IDLE
23	CTRL W	END OF TRANSMIS.
24	CTRL X	CANCEL
25	CTRL Y	END OF MEDIUM
26	CTRL Z	SUBSTITUTE
27	CTRL .	ESCAPE
28	CTRL M	FILE SEPARATOR
29	CTRL J	GROUP SEPARATOR
30	CTRL 8	RECORD SEPARATOR
31	CTRL 9	UNIT SEPARATOR
127	SHIFT V	DELETE CHARACTER

EXTENDED BASIC STATEMENTS

ACCEPT	DISTANCE	KEY	ON WARNING	SCREEN
CHAR	END	LET	OPEN	SOUND
CHARPAT	ERR	LINK	OPTION BASE	SPSET
CHARSET	FOR	LINPUT	PATTERN	SPRITE
CLEAR	GCHAR	LOAD	PEEK	STOP
CLOSE	GOSUB	LOCATE	POSITION	SUB
COINC	GOTO	MAGNIFY	PRINT	
COLOR	HCHAR	MOTION	RANDOMIZE	
DATA	IF THEN	NEXT	READ	
DEF	IMAGE	ON BREAK	REM	
DELSPRITE	INIT	ON ERROR	RESTORE	
DIM	INPUT	ON GOSUB	RETURN	
DISPLAY	JOYST	ON GOTO	SAY	

CALL LOADS

ADDRESS	PARAMETERS	DESCRIPTION
-32768	POKE 0-255	RATE of FLASH of CURSOR
-31786	POKE 192	DISABLE SPRITE action
-31804	PEEK X,Y	Returns to Title Screen
	POKE X,Y	
-31806	POKE 16	DISABLE QUIT KEY(Fctn =)
	POKE 32	DISABLES SOUND
	POKE 64	DISABLES AUTOSPRITE MOTION
-31868	POKE 4	Goes to Console BASIC after 'NEW' is typed
-31860	POKE 0	Runs DSK1.LOAD
-31878	POKE 0-28	Highest # SPRITE in motion
-31866	POKE 63,255	Disables Disks,NEW frs.mem
-31931	POKE 0/128	Unprotects/Protects progrm
-31962	POKE 2	Returns to TITLE SCREEN
-31962	POKE 55	Runs DSK1.LOAD
-31952	PEEK A,B,C,D	Recovers program with LOAD
-28672	PEEK A	96=Speech Syn. 0=No Speec

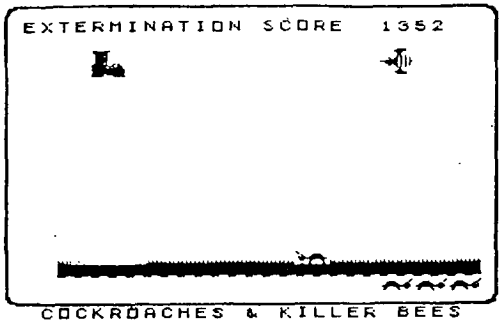
We wish to give credit to the PUGET SOUND 99'ERS who printed this All Purpose Handy Dandy Reference sheet in their APRIL 85 Newsletter.

PROGRAM INNOVATORS

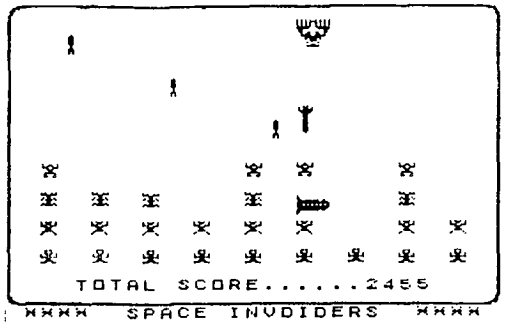
ARCADE ACTION SOFTWARE

Edmonton UG

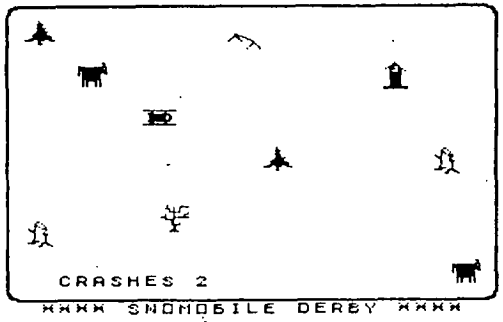
Arcade Action Software
4122 N. Glenway
Wauwatosa, WI 53222



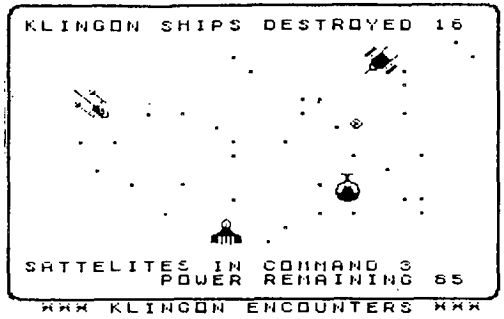
COCKROACHES & KILLER BEES



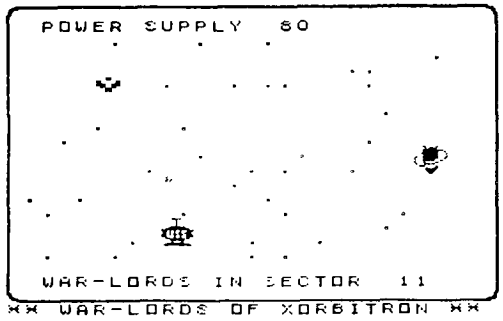
XXXX SPACE INVDIDERS XXXX



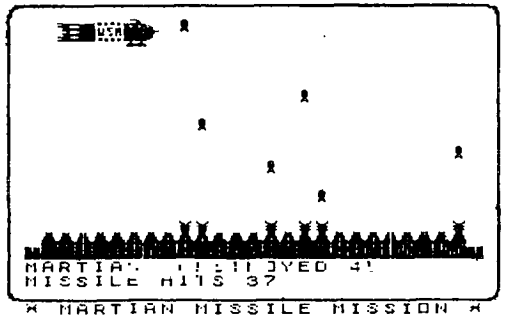
XXXX SNOMOBILE DERBY XXXX



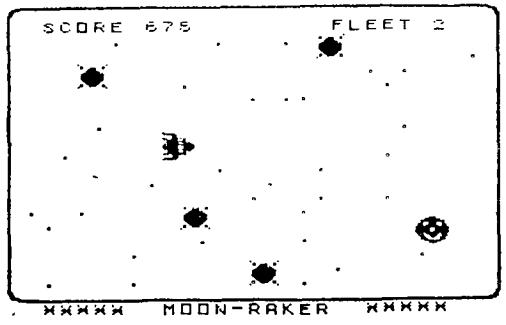
XXX KLINGON ENCOUNTERS XXX



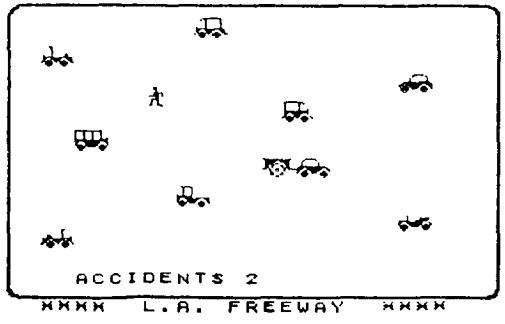
XX WAR-LORDS OF XORBITRON XX



X MARTIAN MISSILE MISSION X



XXXXX MOON-RAKER XXXXX



XXXX L.A. FREEWAY XXXX

EXTENDED BASIC

---

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operate moon shuttle thru meteorite storm

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cross country race on snomobile thru hazardous fields

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cross the L.A. freeway during rush hour

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stop the alien invasion evade deadly H-bombs

KLINGON ENCOUNTERS
control space sattelites under alien attack

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try to dock your shuttle at the space station

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blast out the missile launcher sites

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PROGRAM INNOVATORS

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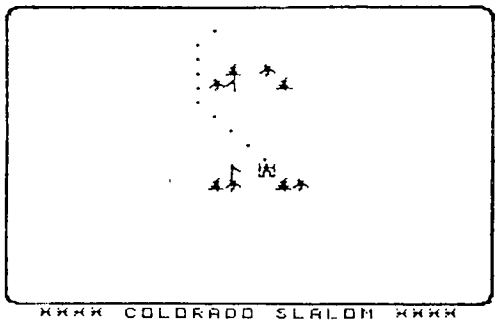

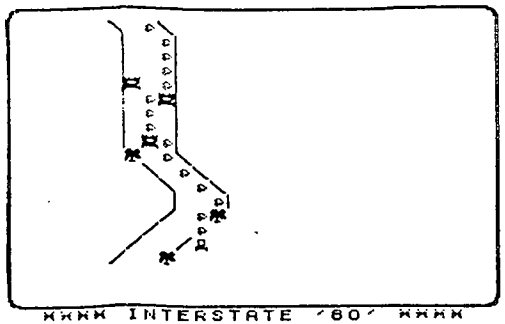

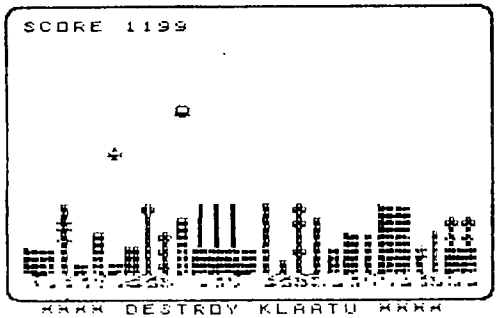

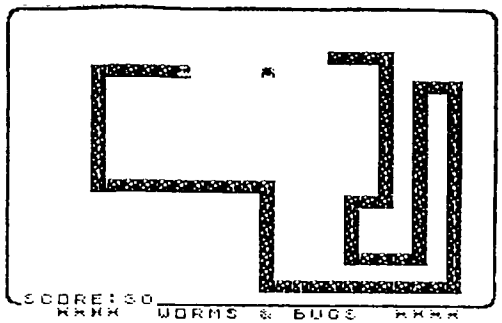

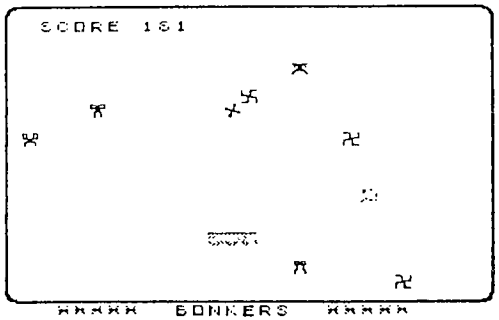

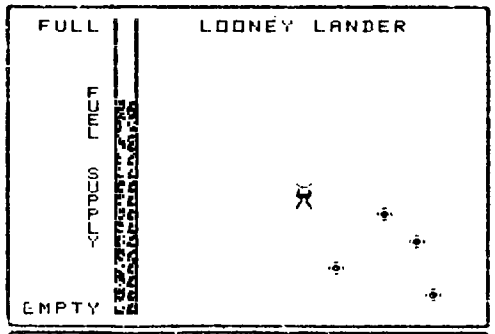

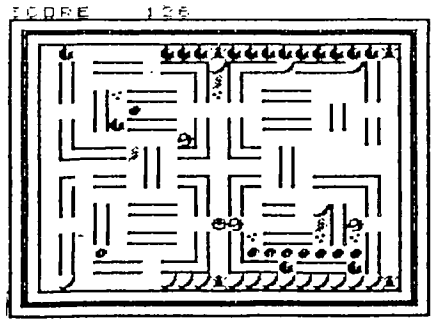

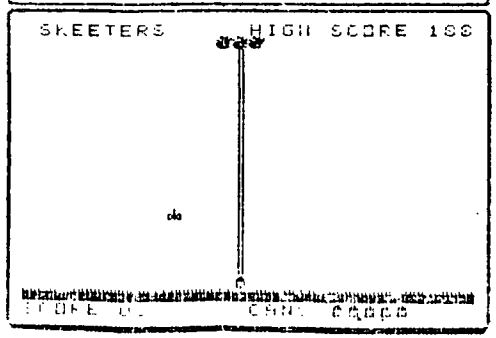

T.I. BASIC

DESTROY KLATU
laser-blast the engire
evade the drone defenders

COLORADO SLALOM
ski the giant slalom
don't collide with the trees

INTERSTATE '80'
cross country on the interstate
watch out for the semis

BONKERS II
catch the crazy bonkers
in your little bonker-net

ZOMBIES GALORE
the zombies will get you
if you don't watch out

KAPTAIN KRUNCH
race against the munchkins
thru the maze of fruit

CATZ N' MOUSE
while the cat's away
the mouse will play

ROBOTHELLO
play othello against the
grandmaster computer

BUGS & WORMS
gobble up the elusive bugs
with your ever-expanding worm

LOONEY-LANDER
try to land softly on the moon
dodging space quarks

MISSILE TRACKER
defend U.S. cities from
ICBM missile attack

DON'T FENCE ME IN
2 players try to trap
each other...& GOMOKU

BOMBSCARE
defuse the hidden bomb
before we all blow up

DIET RITE
diet evaluator, calorie count
& B.M.R. analyzer

HOME VALUE
appraisal, amortization,
& rental comparison

SKEETERS & SKEETERS
spray the pesky skeeters
cuz skeeters bite

PRICES:

Cassette tape version,
First selection.....$
Each additional one...$
Disk version.....add $

Edmonton UG

Arcade Action Software
4122 N. Glenway
Wauwatosa, WI 53222

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WALL STREET ANALYST $ 40 (american)

$$$$$$$$$$$$$$$$$$$$

HOW-TO-USE....package documentation

Detailed instructions for program use displayed on screen or to printer

$$----$----$----$----$----$----$----$----$$

TREND.....technical trend analysis

Sets up and analyses index trendlines using averages and data line
Includes trend files for DJ INDUSTRIALS, S&P 500, NYSE INDEX & Weekly A/D

$$----$----$----$----$----$----$----$----$$

PORTFO.....portfolio management

Keeps up-to-date analysis of individual securities plus the complete portfolio, records, results and returns

$$----$----$----$----$----$----$----$----$$

ANA.....fundamental security analysis

Corporate balance-sheet statistical comparison to industry key business ratios, shows liquidity, efficiency & profitability
Includes files for 50 industries

$$----$----$----$----$----$----$----$----$$

ANALI.....income & statistics analysis

Determines yield, PE ratio, volatility, risk, price correlation & deviation, Alpha, Beta, coefficient of determination, price and earnings projections, value analysis, warrant, option and debenture evaluations

$$----$----$----$----$----$----$----$----$$

MARKET.....comprehensive market evaluation

Market trend prediction based on current fundamental, technical, speculative, economic and monetary data

$$

[illegible] $ 20 (american)

Professional Football Prediction Program

A. Load latest ratings from file
Current ratings with file date are on the disk or immediately following the program on tape.

B. Team abbreviations
Abbreviations used in program for brevity, however, the program will accept the name of the city or team, and gives prompts for miss-spellings.

C. League line-ups
Lists entire league by divisions.

D. League rating order
Lists entire league in descending rating order.

E. Initialization
Prior to the start of the exhibition season, regular league play and post-season play-offs, initialization eliminates momentum and upset factors.

F. Ratings updated
Each week, game scores are installed into rating formulas.

G. Ratings adjusted
Individual rating changes can be made at the option of program user, and can be used to set up new league ratings.

H. Save ratings on file
After ratings have been updated or adjusted, they can be saved on disk or tape for future use.

I. Predictions
Game score predictions are made based upon present ratings, home advantage, momentum and upset or bounce back factors.

J. Prediction order
Weekend predicted scores are arranged in spread order.

Print out options are offered on menu selections B, D & J

Program alteration option for any other league

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

MILWAUKEE, WI
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19??

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