

MACRO [RESET]

Article on page 24

LISTING 1

Don't type the
TYPE II Codes!

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ZC 10 REM SOFT RESET
AT 20 REM BY BRAD TIMMINS
GD 30 REM (c) 1985,1988 ANTIC PUBLISHING
EV 40 REM CLINES 10-250 MAY BE USED WITH
OTHER BASIC LOADERS IN THIS ISSUE.
IJ 50 REM CHANGE LINE 70 AS NECESSARY.
PR 60 DIM FN$(20),TEMP$(20),AR$(93):DPL=P
EEK(10592):POKE 10592,255
OG 70 FN$="D:RESET.EXE":REM THIS IS THE NAME OF THE DISK FILE TO BE CREATED
RD 80 ? "Disk or @ssette?":;POKE 764,25
5
PY 90 IF NOT PEEK(764)=18 OR PEEK(764)=
58: THEN 90
TH 100 IF PEEK(764)=18 THEN FN$="C:" AN
VB 110 POKE 764,255:GRAPHICS 0:?" AN
TIC'S GENERIC BASIC LOADER"
MY 120 ?, "BY CHARLES JACKSON"
KB 130 POKE 10592,DPL:TRAP 200
PU 140 ?:?:? "Creating ";FN$?:? "...Plea
se stand by."
LW 150 RESTORE :READ LN:LM=LN:DIM AS(LN):C=1
BQ 160 ARS="":READ ARS
YC 170 FOR X=1 TO LEN(CARS) STEP 3:POKE 75
2,255
DM 180 LM=LM-1:POSITION 10,10:?"<Countdo
wn...T-";INT(LM/10);"
BK 190 AS(C,C)=CHRS(VAL(CARS(X,X+2))):C=C+
1:NEXT X:GOTO 160
MM 200 IF PEEK(195)=5 THEN ?:?:? "GTOO
MANY DATA LINES!":? "CANNOT CREATE FIL
E!":END
CM 210 IF C<LN+1 THEN ?:?:? "GTOO FEW DATA
LINES!":? "CANNOT CREATE FILE!":END
UQ 220 IF FN$="C:" THEN ?:?:? "Prepare ca
ssette, press [RETURN]"
AR 230 OPEN #1,8,0,FN$
PV 240 POKE 766,1:#1;AS:;POKE 766,0
AL 250 CLOSE #1:GRAPHICS 0:?"COMPLETED"
"

IP 1000 DATA 183
QE 1010 DATA 2552550850062550061650121412
05006165013141206006169122133012169006
133013169236141068003169006
ER 1020 DATA 1410690030321850061690001410
84006096173031208201003208008173084006
073001141084006173084006240
QB 1030 DATA 0271692091410680031690061410
69003032185006169002133084169000133085
169013141074003096169236141
UB 1040 DATA 0680031690061410690030321850
06108205006169009141066003169000170141
072003169002141073003032086
SS 1050 DATA 228096000000000001250290290
29029080079075069056052050044049050058
071079084079032051049048048
AW 1060 DATA 0481551250831111021160320821
01115101116032110111119032079070070155
224002225002085006

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LISTING 2

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0100 ;SOFT RESET, SOURCE CODE
0110 ;BY BRAD TIMMINS
0120 ;(c)1988, ANTIC PUBLISHING
0130    *= $0655
0140 ;IOCB equates
0150 PUTREC = $09
0160 EOL = $9B
0170 ICCOM = $0342
0180 ICSTA = $0343
0190 ICBAL = $0344

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0200 ICBAH = $0345
0210 ICPTL = $0346
0220 ICPTH = $0347
0230 ICBLL = $0348
0240 ICBLH = $0349
0250 AUX1 = $034A
0260 CIOV = $E456
0270 ;Program Equates
0280 DOSINI = $0C
0290 FLAG = $0654
0300 CLEAR = $7D
0310 CONSOL = $D001F
0320 CDOWN = $1D
0330 ;Save old RESET vectors.
0340 START
0350    LDA DOSINI
0360    STA VECTOR
0370    LDA DOSINI+1
0380    STA VECTOR+1
0390 ;Replace with new address.
0400    LDA #<NEWVEC
0410    STA DOSINI
0420    LDA #>NEWVEC
0430    STA DOSINI+1
0440 ;Print "OFF" message.
0450    LDA #<OFF
0460    STA ICBAL
0470    LDA #>OFF
0480    STA ICBAH
0490    JSR PRINT
0500 ;Set FLAG's value to "OFF"
0510 ;and exit.
0520    LDA #0
0530    STA FLAG
0540    RTS
0550 ;
0560 ;This is executed whenever
0570 ;RESET is pressed:
0580 ;Has OPTION been pressed?
0590 ;If so, change FLAG's value:
0600 ; 0=Continue
0610 ; 1=Print "OFF" return to BASIC
0620 ;
0630 NEWVEC
0640    LDA CONSOL
0650    CMP #3
0660    BNE NVEC1
0670 ;
0680 ;Change FLAG's value.
0690    LDA FLAG
0700    EOR #1
0710    STA FLAG
0720 NVEC1
0730    LDA FLAG
0740    BEQ OFF1
0750 ;
0760 ;Display "POKE842,12:GOTO 31000"
0770    LDA #<GOTO
0780    STA ICBAL
0790    LDA #>GOTO
0800    STA ICBAH
0810    JSR PRINT
0820 ;Put cursor at 2,0
0830    LDA #2
0840    STA 84
0850    LDA #0
0860    STA 85
0870 ;Put Editor in Forced Read mode
0880 ;and return to BASIC.
0890    LDA #13
0900    STA AUX1
0910    RTS
0920 ;
0930 ;Program is off. Print "OFF"
0940 ;and exit through old vectors.

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0950 0FF1
0960 LDA # <OFF
0970 STA ICBAL
0980 LDA # >OFF
0990 STA ICBAH
1000 JSR PRINT
1010 JMP CVECTOR
1020 ;
1030 ;IOCB PRINT subroutine
1040 PRINT
1050 LDA #PUTREC
1060 STA ICCOM
1070 LDA #0
1080 TAX
1090 STA ICBLL
1100 LDA #2

1110 STA ICBLH
1120 JSR CIOV
1130 RTS
1140 ;
1150 VECTOR
1160 .WORD 0,0
1170 GOTO
1180 .BYTE CLEAR,CDOWN,CDOWN,CDOWN
,CDOWN,"POKE842,12:GOTO 31000",EOL
1190 OFF
1200 .BYTE CLEAR,"Soft Reset now 0
FF",EOL
1210 LABEL
1220 *= $02E0
1230 .WORD START
1240 .END

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mighty mailer becomes an inventory database

MIGHTY LISTER

Article on page 31

LISTING 1

Don't type the
TYPO II Codes!

```

LP 5 REM MIGHTY LISTER
HO 20 REM <c> 1988, ANTIC PUBLISHING
WN 33 GRAPHICS 2:POKE 710,186:POKE 712,18
6:POKE 708,3:POKE 709,3:POSITION 6,3:?
#6;"MIGHTY"
LO 36 POSITION 6,5:?"LISTER"
ON 40 DIM SUB$(255),RAND$(260),FILENAME$(2
14),EOL$(2),I0$(7),MSG1$(28),MSG2$(24),
MSG3$(36)
KK 60 MSG3$="IF PRINTER READY PRESS 'A' T
O PRINT"
BG 90 REM
QM 100 REM
BF 120 FILENAME$="D:INVENTORY":GOSUB 1330
HY 130 REM MAIN MENU
OK 135 GRAPHICS 0:POKE 752,1:POKE 764,255
:POKE 82,2:POKE 756,226:POKE 702,64:PO
KE 710,204:POKE 709,0:RAND=0
UI 150 ? :? :? " █ - LOCATE ITEM & PR
INT"
JV 170 ? :? " █ - PRINT LIST"
UA 270 REM FIND ENTRY & PRINT ENVELOPES
AN 280 ? "█":POKE 702,0:POKE 752,0:POSITI
ON 2,10:? "Locator for item to display
":INPUT SUB$
TS 282 ? :? "Do you want automatic printo
ut of all locators Y/N":POKE 702,64:GE
T #1,A:IF A>89 THEN 290
SC 284 A=65:GOSUB 1070:GOSUB 1160:? FILE$(
START,RAND+1)
SF 286 GOTO 284
DV 320 ? :? "Press █SPACEBAR█ to get next
locator":? :? FILES($START,RAND+1)
QJ 360 REM SERIALLY PRINT ENVELOPES
CU 410 IF A=32 OR A=65 THEN 370
QT 430 REM PRINT COMPLETE LIST
CK 440 ? "█":? :? MSG3$:POKE 764,255
NG 441 IF PEEK(764)>>63 THEN 441
RZ 450 REM
RB 460 REM
CJ 470 POKE 764,255:CLOSE #4:OPEN #4,8,0,
"p":PRINT #4;FILES$:CLOSE #4
SC 490 REM SCREEN COMPLETE
YU 530 REM CHANGE MENU
LU 550 ? :? :"█ - Add items":? :? "█ -
Delete items":? :? "█ - Save Updated L
ist"
TR 610 REM ADD NAME
VS 710 REM DELETE A NAME
UE 730 POKE 702,0:POSITION 2,6:? "Item to
Delete":INPUT SUB$:IF LEN(SUB$)=0 TH
EN 540
CJ 830 REM SAVE ROUTINE
BH 860 ? :? "DEVICE:FILENAME IS ";FILENA
ME$=? :? "Press SPACEBAR to add changes
to this file. Press WSH to change ";
RU 865 REM
GC 940 REM MAKE NEW LIST
HI 960 ? :? "If you have a word processor
use it to make new files. Separate ent

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ries with two RETURN's."
990 REM PAUSE SUBROUTINE
1040 IF A=65 THEN GOSUB 1220
XL 1060 REM RAND SUBROUTINE
KW 1150 REM SEARCH SUBROUTINE
CX 1160 START=START-10:IF START<0 THEN ST
ART=1
BU 1210 REM PRINTER SUBROUTINE
SX 1230 ? "":? ?:? "I/O ERROR #":PEEK(195
):TRAP 40000:CLOSE #4:GOTO 130
IM 1240 REM
EU 1250 IF A=65 THEN PRINT #4,CHR$(27);":"
";CHR$(10):FILE$(START,RAND-1):CLOSE #
4:RETURN
WN 1270 REM LOAD MENU
VU 1300 REM LOAD ROUTINE
CU 1340 CLOSE #2:FILE$(TRUELEN)=CHR$(155)
:TRAP 40000:GOTO 130
DS 1370 REM I/O LOAD & SAVE

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LISTING 2

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":INPUT SUB$"
TS 282 ? :? "Do you want automatic printout of all locators Y/N":POKE 702,64:GE
T #1,A:IF A<>89 THEN 290
SC 284 A=65:GOSUB 1070:GOSUB 1160:? FILE$(
START,RAND+1)
SF 286 GOTO 284
DU 320 ? :? "Press [SPACEBAR] to get next
locator":? :? FILE$(START,RAND+1)
RJ 360 REM SERIALLY PRINT ENVELOPES
CV 410 IF A=32 OR A=65 THEN 370
QT 430 REM PRINT COMPLETE LIST
CK 440 ? "?":? :? MSG3$:POKE 764,255
NG 441 IF PEEK(764)<>63 THEN 441
QZ 450 REM
RB 460 REM
CJ 470 POKE 764,255:CLOSE #4:OPEN #4,0,0,
"p":PRINT #4:FILE$:CLOSE #4
SC 490 REM SCREEN COMPLETE
YU 530 REM CHANGE MENU
LU 550 ? :? ?:? "[ - Add items":? :? "[ - Delete items":? :? "[ - Save Updated List"
TR 610 REM ADD NAME
US 710 REM DELETE A NAME
UE 730 POKE 702,0:POSITION 2,6:? "Item to
Delete":INPUT SUB$:IF LEN(SUB$)=0 TH
EN 540
CJ 830 REM SAVE ROUTINE
BH 860 ? :? "DEVICE,FILENAME IS ";FILENAME$?:? :? "Press SPACEBAR to add changes
to this file. Press WSH to change ";
RU 865 REM
GC 940 REM MAKE NEW LIST
HI 960 ? :? "If you have a word processor
use it to make new files. Separate ent

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continued on next page

OK 135 GRAPHICS 0:POKE 752,1:POKE 764,255
 :POKE 82,2:POKE 756,226:POKE 702,64:PO
 KE 710,204:POKE 709,0:RAND=0
 PC 140 ? :? " **MAIN MENU**"
 UI 150 ? :? :? " **I - LOCATE ITEM & PR
INT**"
 GN 160 ? :? " **SCROLL & PRINT**"
 JV 170 ? :? " **PRINT LIST**"
 YF 180 ? :? " **SCREEN LIST**"
 VS 190 ? :? " **CHANGE MENU**"
 SD 200 ? :? " **DIR & LOAD**"
 LZ 210 ? :? " **MAKE NEW LIST**"
 JG 220 ? :? :? " ;MSG2\$
 ZS 230 A=PEEK(764):IF A=255 THEN POKE 77,
 0:GOTO 230
 PX 240 GET #1,A:IF A=255 THEN 240
 EE 250 ON A-48 GOTO 270,360,430,490,530,1
 270,940
 NA 260 GOTO 130
 UA 270 REM FIND ENTRY & PRINT ENVELOPES
 AN 280 ? "":POKE 702,0:POKE 752,0:POSITION
 ON 2,10:? "Locator for item to display
 ":"INPUT SUBS"
 TS 282 ? :? "Do you want automatic print to
 ut of all locators Y/N":POKE 702,64:GET
 T #1,A:IF A<>89 THEN 290
 SC 284 A=65:GOSUB 1070:GOSUB 1160:? FILES\$
 (START,RAND+1)
 SF 286 GOTO 284
 UO 290 GOSUB 1070
 TW 300 GOSUB 1160
 AI 310 POKE 702,64:? "":? :? MSG3\$
 DV 320 ? :? "Press **SPACEBAR** to get next
 locator":? :? FILES\$ (START,RAND+1)
 TD 330 POKE 702,64:GOSUB 1000
 MP 340 IF A=32 THEN 290
 MZ 350 GOTO 130
 QJ 360 REM SERIALLY PRINT ENVELOPES
 MV 370 START=RAND+2:GOSUB 1120
 UE 380 POKE 702,64:? "":? MSG3\$
 JU 390 ? :? "Press **SPACEBAR** to scroll n
 et print":? :? FILES\$ (START,RAND)
 QL 400 GOSUB 1000
 CV 410 IF A=32 OR A=65 THEN 370
 MU 420 GOTO 130
 QT 430 REM PRINT COMPLETE LIST
 CK 440 ? "":? :? MSG3\$:POKE 764,255
 NG 441 IF PEEK(764)<>63 THEN 441
 QZ 450 REM
 RB 460 REM
 CJ 470 POKE 764,255:CLOSE #4:OPEN #4,8,0,
 "P":PRINT #4:FILES\$:CLOSE #4
 NG 480 GOTO 130
 SC 490 REM SCREEN COMPLETE
 PR 500 FOR I=1 TO 200:NEXT I:? :? FILES:\$
 OR I=1 TO 250:NEXT I
 LR 510 IF LEN(FILES\$)=0 THEN ? "NO LIST LO
 ADED":FOR I=1 TO 250:NEXT I
 MU 520 GOTO 130
 YU 530 REM CHANGE MENU
 NK 540 ? "":POSITION 10,2:? " **CHANGE
MENU**"
 LU 550 ? :? :? " **I - Add items**":? :? " **II -
Delete items**":? :? " **III - Save Updated L
ist**"
 GO 560 ? :? " **I - Main Menu (Without savin
g list)**":?
 EB 570 POSITION 3,20:? " **SAVE BEFORE RETUR
NING TO MAIN MENU**"
 XF 580 POSITION 8,18:? MSG2\$:GOSUB 1020
 MC 590 POKE 702,0:POKE 752,0:? "":ON A-4
 8 GOTO 620,720,840,130
 MS 600 GOTO 130
 TR 610 REM ADD NAME
 KK 620 ? "":IF LEN(FILES\$)=0 THEN FILES\$ (L
 EN(FILES\$)+1)=EOL\$:POSITION 2,1:? " **NEW
LIST**"
 NF 630 ? :? " **FILE LOADED IS**":FILENAMES\$
 HT 640 ? :? FILENAME=LEN(FILES\$);" **FREE CHA
RACTERS IN MEMORY**":POSITION 2,22:? "PR
ESS RETURN FOR CHANGE MENU"
 GG 650 POKE 752,0:POSITION 2,7:? " **FIRST L
INE**":INPUT SUBS
 JB 660 IF LEN(SUBS\$)=0 THEN 540
 HN 670 FILES\$ (LEN(FILES\$)+1)=SUBS\$:FILES\$ (LEN
 (FILES\$)+1)=CHR\$(155)
 XS 680 ? :? " **NEXT LINE**":INPUT SUBS\$
 RU 690 IF LEN(SUBS\$)=0 THEN FILES\$ (LEN(FILES
 \$)+1)=CHR\$(155):? "":GOTO 630
 QJ 700 GOTO 670
 VS 710 REM DELETE A NAME
 QQ 720 POSITION 2,22:? " **PRESS RETURN FOR**
 UE 730 POKE 702,0:POSITION 2,6:? " **Item to
Delete**":INPUT SUBS\$:IF LEN(SUBS\$)=0 TH
 EN 540
 UJ 740 GOSUB 1070
 UK 750 GOSUB 1160
 UW 760 ? :? " **PRESS SPACE BAR TO DELETE**":?
 FILES\$ (START,RAND+1)
 ZB 770 GET #1,A:IF A=255 THEN 770
 GW 780 IF A<>32 THEN 540
 VA 790 GAP=RAND-START+2
 PY 800 FILES\$ (START,LEN(FILES\$))=FILES\$ (RAND
 +2,LEN(FILES\$))
 PE 810 FILES\$=FILES\$ (1,LEN(FILES\$)-GAP)
 OX 820 GOTO 540
 CJ 830 REM SAVE ROUTINE
 OJ 840 POKE 702,64
 RR 850 IF LEN(FILENAME\$)=0 THEN 890
 BH 860 ? :? " **DEVICE.FILENAME IS**":FILENAM
 E\$?:? :? " **Press SPACEBAR to add changes
to this file. Press USW to change**":?
 RU 865 REM
 JL 870 ? " **to a new**":? " **DEVICE.FILENAME**":G
 OSUB 1000
 LJ 880 IF A=32 THEN 900
 NI 890 ? "":POSITION 1,10:? " **DEVICE.FILE
NAME TO SAVE**":INPUT FILENAME\$
 CC 900 IF LEN(FILENAME\$)=0 THEN 130
 ME 910 TRAP 930:CLOSE #2:OPEN #2,8,0,FILE
 NAME\$?:LET READ=0:X=32:MAXLEN=LEN(FILES\$
):SADR=ADR(FILES\$):GOSUB 1370
 PU 920 CLOSE #2:TRAP 40000:GOTO 130
 UT 930 POSITION 5,10:? " **I/O ERROR**":PEEK
 (195):CLOSE #2:TRAP 40000
 GC 940 REM MAKE NEW LIST
 LQ 950 ? "":? :? " **MAKING NEW FILES**
 HI 960 ? :? "If you have a word processor
 use it to make new files. Separate ent
 ries with two RETURN'S."
 XZ 970 ? :? "You can also use this progra
 m to make lists. Follow directions be
 low."
 PF 980 POKE 702,64:FILES\$="":? :? " **NEW DE
VICE FILENAME TO USE**":INPUT FILENAME\$:
 POKE 702,0:GOTO 620
 LO 990 REM PAUSE SUBROUTINE
 UO 1000 POSITION 6,22:? MSG1\$
 OG 1010 A=PEEK(764):IF A=255 THEN POKE 77
 ,0:GOTO 1010
 HC 1020 GET #1,A:IF A=255 THEN 1020
 UF 1030 IF A=155 THEN 130
 MP 1040 IF A=65 THEN GOSUB 1220
 AO 1050 RETURN
 XL 1060 REM RAND SUBROUTINE
 NU 1070 IF LEN(SUBS\$)=0 THEN 130
 TY 1080 START=RAND+1
 BG 1090 RAND=USR(ML,ADR(FILES\$),LEN(FILES\$)
 ,ADR(SUB\$),LEN(SUB\$),START)
 YU 1100 IF RAND=0 THEN POP ?:? "":? :? " **U
NALID NAME OR LIST ENDED**":FOR I=1 TO
 200:NEXT I:GOTO 130
 MS 1110 START=RAND
 PX 1120 RAND=USR(ML,ADR(FILES\$),LEN(FILES\$)
 ,ADR(EOL\$),LEN(EOL\$),START)
 JE 1130 IF RAND=0 THEN 1100
 AN 1140 RETURN
 KW 1150 REM SEARCH SUBROUTINE
 CX 1160 START=START-10:IF START<0 THEN ST
 ART=1
 RT 1170 X=0:X=USR(ML,ADR(FILES\$),LEN(FILES\$)
 ,ADR(EOL\$),LEN(EOL\$),START)
 JE 1180 IF X=RAND THEN 1160
 GR 1190 START=X
 AD 1200 RETURN
 BU 1210 REM PRINTER SUBROUTINE
 TP 1220 TRAP 1230:CLOSE #4:OPEN #4,8,0,"P
 ":"GOTO 1240
 SX 1230 ? "":? :? " **I/O ERROR**":PEEK(195
):TRAP 40000:CLOSE #4:GOTO 130
 IM 1240 REM
 EU 1250 IF A=65 THEN PRINT #4,CHR\$(27);"
 1";CHR\$(10);FILES\$ (START,RAND-1):CLOSE #
 4:RETURN
 OY 1260 GOTO 130
 WN 1270 REM LOAD MENU
 QY 1280 TRAP 1290:? "":CLOSE #2:OPEN #2,
 6,0,"D:*.*":FOR X=1 TO 10000:GET #2,A:
 ? CHR\$(CA):NEXT X
 UU 1290 CLOSE #2:? MSG1\$:TRAP 40000
 VV 1300 REM LOAD ROUTINE
 KT 1310 POKE 752,0:? :? " **DEVICE.FILENAME**

```

TO LOAD":INPUT FILENAME$  

YW 1320 IF LEN(FILENAME$)=0 THEN 130  

JF 1330 TRAP 1360:CLOSE #2:OPEN #2,4,0,FI  

LENAMES$:LET READ=1:X=32:MAXLEN=FILELEN  

:SADR=ADR(FILE$):GOSUB 1370  

CU 1340 CLOSE #2:FILE$<TRUELEN>=CHR$(155)  

:TRAP 40000:GOTO 130  

IZ 1350 ? "":POSITION 5,10:?"I/O ERROR  

#";PEEK(195):CLOSE #2:TRAP 40000  

PA 1360 GOTO 130  

DS 1370 REM I/O LOAD & SAVE  

IE 1380 ICCOM=834:ICBADR=836:ICBLEN=840:I  

CSTAT=835  

WT 1390 H=INT(SADR/256):L=SADR-H*256:POKE  

ICBADR+X,L:POKE ICBADR+X+1,H  

BE 1400 H=INT(MAXLEN/256):L=MAXLEN-H*256:  

POKE ICBLLEN+X,L:POKE ICBLLEN+X+1,H  

OF 1410 POKE ICCOM+X,11-4*READ:A=USR(CADR C  

IO$),X  

WJ 1420 TRUELEN=PEEK(ICBLEN+X)+256*PEEK(I  

CBLLEN+X+1)  

AQ 1430 RETURN

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LISTING 3

```

PD 10 REM MIGHTY LISTER, HELPER FILE  

MW 20 REM BY PHILIP BATE, Ph.D.  

GD 30 REM CC, 1985, 1988 ANTIC PUBLISHING  

YJ 35 REM CREATES LINES 78-83 FOR LISTER  

.BAS  

EV 40 REM CLINES 10-250 MAY BE USED WITH  

OTHER BASIC LOADERS IN THIS ISSUE.  

IJ 50 REM CHANGE LINE 70 AS NECESSARY.  

PR 60 DIM FNS<(20>,TEMPS<(20>,AR$<(93>:DPL=P  

EEK<10592>:POKE 10592,255  

WO 70 FNS$="D:LINE.LST":REM THIS IS THE N  

AME OF THE DISK FILE TO BE CREATED  

RD 80 ? "Disk or Cassette?":POKE 764,25  

5  

PY 90 IF NOT (PEEK(764)=18 OR PEEK(764)=  

58) THEN 90  

TH 100 IF PEEK(764)=18 THEN FNS$="C:"  

UB 110 POKE 764,255:GRAPHICS 0?: " AN  

TIC'S GENERIC BASIC LOADER"  

MY 120 ?, "BY CHARLES JACKSON"  

KB 130 POKE 10592,DPL:TRAP 200  

PU 140 ? :? :"Creating ";FNS$?: "...Plea  

se stand by."  

LW 150 RESTORE :READ LN:LM=LN:DIM AS<(LN>:  

C=1

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BQ 160 AR$="":READ AR$  

YC 170 FOR X=1 TO LEN(AR$) STEP 3:POKE 75  

2,255  

DM 180 LM=LM-1:POSITION 10,10:?"Countdo  

wn...T-";INT(LM/10);"  

BK 190 AS<(C,C>=CHR$(VAL(AR$<X,X+2>)):C=C+  

1:NEXT X:GOTO 160  

MM 200 IF PEEK(195)=5 THEN ? :? :"TOO  

MANY DATA LINES!":? "CANNOT CREATE FIL  

E!":END  

CM 210 IF C<LN+1 THEN ? :? :"TOO FEW DATA  

LINES!":? "CANNOT CREATE FILE!":END  

UQ 220 IF FN$="C:" THEN ? :? "Prepare ca  

ssette, press [RETURN]!"  

AR 230 OPEN #1,8,0,FNS$  

PV 240 POKE 766,1?: #1,A$,:POKE 766,0  

AL 250 CLOSE #1:GRAPHICS 0?: "COMPLETED."  

  

IQ 1000 DATA 336  

BD 1010 DATA 0550480320730790360610341041  

04104170076086228034155056048032082065  

078068036040049044056054041  

JM 1020 DATA 0610341690001332121332131042  

01005240018141000004162000236000004208  

001096104104232169000240243  

UL 1030 DATA 1041410050041041410040041041  

4100300410424109804004141002004173003  

004109005004141003004104133  

DE 1040 DATA 2041041332031041041410010041  

04133206104024109004004133205165206109  

005004133206034155056050032  

ES 1050 DATA 0820650780680360400560550440  

49055050041061034165205056233001133205  

165206233000133206162000160  

DD 1060 DATA 0011772052092032400371730020  

04056229205141000004173003004229206013  

000004208001096165205024105  

XC 1070 DATA 0011332051652061050001332061  

690082402092322360010842080041690000240  

054200177205209203240037173  

KT 1080 DATA 0020040562292051410000040341  

55056051032082065078068036040049855051  

044050054048041061034173003  

YE 1090 DATA 0042292060130000042080010961  

65205024105001133205165206105000133206  

169000240042232236001004240  

HU 1100 DATA 0041690002402021730020040562  

29205141000004173003004229206013000004  

144030240028165205056237004  

KI 1110 DATA 0041332121652062370050041332  

13165212024105001133212165213105000133  

213096034155

```

fix the roof, or shop for grandma's birthday?

JOB JAR ATARI

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LISTING 1

Don't type the
TYPO II Codes!

```

BK 10 REM JOB JAR
JH 20 REM BY JEFFREY A. SUMMERS, MD
QH 30 REM CC, 1988, ANTIC PUBLISHING
QY 40 BRK=PEEK(53279)>>5
GU 99 GOTO 10000
XF 100 CLOSE #5:OPEN #5,4,0,"K":FOR ZZZ=1 TO MCH?: "?":NEXT ZZZ:FOR ZZZ=1 TO MCH?: "?":NEXT ZZZ
LX 105 COUNT=1
QD 110 GET #5,X:IF X=155 THEN 150
HC 120 IF X=126 THEN 140
TU 130 ? CHR$(X);:FIELDS(COUNT)=CHR$(X):COUNT=COUNT+1:IF COUNT<=MCH THEN 110
NS 131 GOTO 150
KP 140 IF COUNT=1 THEN 110
TD 141 COUNT=COUNT-1?: CHR$(X);:GOTO 110
FA 150 COUNT=COUNT-1:CLOSE #5:RETURN
NN 1000 REM GET PERSON
TU 1010 POSITION 6,10:PRINT "Whose jar? "
;:MCH=8:GOSUB 100
GO 1020 IF COUNT=0 THEN 1010
UK 1030 NAMES$=FIELDS(1,COUNT):FNAME$="D":FNAME$(3)=NAMES:FNAME$(LEN(FNAME$)+1)="JAR"

```

```

LU 1040 TRAP 1100
YP 1050 CLOSE #1:OPEN #1,4,0,FNAME$  

TE 1060 TRAP 2010:COUNT=0
XX 1070 INPUT #1,DOES:INPUT #1,DOC$  

#1,P1:INPUT #1,P2:INPUT #1,SIZE$  

INPU T #1,DESCR$  

LH 1075 ADDE$<COUNT*6+1,COUNT*6+6>=DOES:A  

DOC$<COUNT*6+1,COUNT*6+6>=DOC$<SPRIOR C  

COUNT+1>=P1:EPRIOR<COUNT+1>=P2  

SE 1076 ASIZES<COUNT+1,COUNT+1>=SIZE$<ADE  

SCR$<COUNT*37+1,COUNT*37+37>=DESCR$<CO  

UNT=COUNT+1:GOTO 1070
NM 1100 TRAP 1200:CLOSE #1
GD 1110 CLOSE #1:OPEN #1,8,0,FNAME$:COUNT  

=0
PD 1115 ? :? :"New Person"
YO 1116 FOR I=1 TO 500:NEXT I
NU 1120 GOTO 2010
ZG 1200 ? :? :"Cannot open file.":? "Pleas  

e check device"
ZZ 1210 FOR I=1 TO 500:NEXT I:GOTO 30000
IZ 1500 POKE 77,0:IF BRK THEN POKE 16,112  

:POKE 53774,112

```

continued on next page

AM 1510 RETURN
 QD 2000 REM GET TODAY'S DATE
 MF 2010 CLOSE #1:NJOBS=COUNT:?: "■ job jar
 HF 2020 POSITION 6,10:?" "Today's date? MM DDYY"
 XB 2030 POSITION 10,12:MCH=6:GOSUB 100
 TA 2040 IF COUNT<>6 THEN 2020
 NT 2041 LET DOES\$=FIELDS\$<1,COUNT>
 YX 3010 REM MAIN MENU
 IS 3030 ? "■ job jar " ;NAM E\$
 DH 3040 POSITION 12,8:?"Add a Job":POSITION 12,10:?"List jobs"
 UW 3050 POSITION 12,12:?"Delete a Job":POSITION 12,14:?"Exit"
 DO 3060 POSITION 0,0:?" ";CLOSE #5:OPEN #5,4,0,"K":GET #5,X:CLOSE #5
 HS 3070 IF X=65 THEN 4010:REM ADD
 KT 3080 IF X=68 THEN 5010:REM DELETE
 NU 3090 IF X=69 THEN 6010:REM EXIT
 OY 3100 IF X=76 THEN 7010:REM LIST
 QR 3110 GOTO 3060
 MG 4000 REM ADD JOB
 IN 4010 ? "■ job jar " ;NAM E\$
 HS 4020 POSITION 6,6:?"Completion date < MMDDYY>"
 FF 4030 POSITION 12,7:MCH=6:GOSUB 100
 VN 4035 IF COUNT<>6 THEN 4020
 GW 4036 LET DOCS\$=FIELDS\$
 YO 4040 POSITION 6,8:?"Enter starting priority":POSITION 16,9:MCH=1:GOSUB 100
 JT 4045 TRAP 4040:SPRIOR=VAL<FIELDS\$<1,1>
 MW 4050 POSITION 6,10:?"Enter ending priority":POSITION 16,11:MCH=1:GOSUB 100
 BT 4055 TRAP 4050:EPRIOR=VAL<FIELDS\$<1,1>
 MX 4060 POSITION 6,12:?"Enter size of job <5/M/L)":POSITION 16,13:MCH=1:GOSUB 100
 HW 4065 SIZES\$=FIELDS\$<1,1>:IF SIZES\$<>"5" AND SIZES\$<>"M" AND SIZES\$<>"L" THEN 4060
 MX 4070 POSITION 6,14:?"Enter job description":MCH=37:POSITION 2,15:GOSUB 100
 PZ 4074 IF COUNT<1 THEN 4070
 NQ 4075 DESCRES\$=FIELDS\$<1,COUNT>
 RP 4080 POSITION 6,16:?"Is this O.K. (Y/N)";:MCH=1:GOSUB 100
 QI 4090 IF FIELDS\$<1,1><>"Y" AND FIELDS\$<1,1><>"N" THEN 4080
 AD 4100 IF FIELDS\$<1,1>="N" THEN 3030
 GZ 4110 ADOES\$<NJOBS*6+1,NJOBS*6+6>=DOES\$:
 LZ 4120 EPRIOR<NJOBS+1>=EPRIOR:ASIZES\$<NJOBS+1>=SIZES\$:
 ZS 4130 CLOSE #1:OPEN #1,9,0,FNAME\$?:#1:DOES\$?:#1:DOCS\$?:#1:SPRIOR
 XM 4140 ? #1:EPRIOR?:#1:SIZES\$?:#1:DESCR\$:
 PR 4150 GOTO 3030
 KB 5000 REM DELETE JOB
 IO 5010 ? "■ job jar " ;NAM E\$
 BC 5020 POSITION 3,8:?"Enter description of job to delete"
 JO 5030 ? :MCH=37:GOSUB 100
 LD 5035 IF COUNT=0 THEN 3030
 TO 5040 FOR I=0 TO NJOBS-1:IF ADESCRS\$<37*I+1,37*I+COUNT>=FIELDS\$<1,COUNT> THEN 5070
 FI 5050 NEXT I
 DT 5060 ? :"No matching entry":? "Press RETURN":CLOSE #5:OPEN #5,4,0,"K":GET #5,X:CLOSE #5
 PX 5061 GOTO 3030
 HZ 5070 DCHANGE=1:?: " deleting..
 AU 5080 POP :ADOES\$<6*I+1>=ADOES\$<6*I+7>
 YL 5090 ADOCS\$<6*I+1>=ADOC\$<6*I+7>
 JX 5100 FOR J=I+1 TO NJOBS:SPRIOR<J>=SPRIOR<J+1>:EPRIOR<J>=EPRIOR<J+1>:NEXT J
 QE 5110 ASIZES\$<I+1>=ASIZES\$<I+2>
 AJ 5120 ADESCRS\$<37*I+1>=ADESCR\$<37*I+38>
 HC 5130 NJOBS=NJOBS-1:GOTO 3030
 CP 6000 REM EXIT
 NZ 6010 IF DCHANGE=0 THEN 30000
 MN 6015 ADESCRS\$<3800>=""
 OC 6020 CLOSE #1:OPEN #1,8,0,FNAME\$:
 FG 6040 NEXT I
 EI 6050 CLOSE #1:GOTO 30000
 ET 7000 REM LIST JOBS
 IQ 7010 ? "■ job jar " ;NAM E\$
 MK 7020 POSITION 6,6:?"List by":POSITION 8,8:?"Size":POSITION 8,9:?"Priority"
 ED 7030 POSITION 8,10:?"Due date":POSITION 8,11:?"Entry date":POSITION 0,0:?"
 LI 7040 CLOSE #5:OPEN #5,4,0,"K":GET #5,X:CLOSE #5:IF X<>68 AND X<>69 AND X<>80 AND X<>83 THEN 7040
 PM 7045 ALGO=X
 TH 7046 IF ALGO=83 THEN FILTER=65:GOTO 7100
 JC 7050 ? "■ job jar " ;NAM E\$
 GL 7060 POSITION 6,6:?"List sizes":POSITION 8,8:?"Small":POSITION 8,10:?"Medium"
 QQ 7070 POSITION 8,12:?"Large":POSITION 8,14:?"@11":POSITION 0,0:?"
 GP 7080 CLOSE #5:OPEN #5,4,0,"K":GET #5,X:CLOSE #5:IF X<>65 AND X<>76 AND X<>77 AND X<>83 THEN 7080
 NP 7090 FILTER=X
 IP 7100 ? "■ job jar " ;NAM E\$
 IJ 7110 POSITION 8,8:?"Output to":POSITION 8,10:?"Screen":POSITION 8,12:?"Printer"
 AI 7120 POSITION 0,0:?" ";CLOSE #5:OPEN #5,4,0,"K":GET #5,X:CLOSE #5:IF X<>80 AND X<>83 THEN 7120
 EL 7130 DEVICE=X
 DY 8000 IF DEVICE=80 THEN TRAP 8070:CLOSE #4:OPEN #4,8,0,"P":GOTO 8010
 JY 8010 TRAP 40000:IF DEVICE=83 THEN CLOSER #4:OPEN #4,8,0,"E":POKE 710,2:GOSUB 1500
 UT 8020 IF ALGO=68 THEN 8100
 WI 8030 IF ALGO=69 THEN 8200
 TF 8040 IF ALGO=80 THEN 8300
 UY 8050 IF ALGO=83 THEN 8400
 SI 8060 STOP :REM SHOULDN'T GET HERE
 IO 8070 ? :? :? :"PRINTER OFFLINE":FOR X=1 TO 200:NEXT X:?"":GOTO 7110
 SG 8100 FOR I=1 TO NJOBS:ORDER<I>=I:NEXT I
 EL 8110 FOR I=0 TO NJOBS-1:IF NJOBS-1<0 THEN 8121
 JL 8112 RDATE\$<6*I+1>=ADOC\$<6*I+5,6*I+6>:RDATE\$<6*I+3>=ADOC\$<6*I+1,6*I+2>
 JH 8120 RDATE\$<6*I+5>=ADOC\$<6*I+3,6*I+4>
 FI 8121 NEXT I
 LO 8130 FOR I=0 TO NJOBS-1:IF NJOBS-1<0 THEN 8170
 YS 8135 CHANGE=0:FOR J=1 TO NJOBS-1-I:IF NJOBS-1-I<1 THEN 8160
 YQ 8140 IF VAL<RDATE\$<6*I+1>=ADOC\$<6*I+5,6*I+6>:RDATE\$<6*I+3>=ADOC\$<6*I+1,6*I+2>:RDATE\$<6*I+5>=ADOC\$<6*I+3,6*I+4> THEN 8160
 YK 8150 T=ORDER<J>:ORDER<J>=ORDER<J+1>:ORDER<J+1>=T:CHANGE=1
 XO 8160 NEXT J:IF CHANGE=0 THEN POP :GOTO 9000
 OU 8170 NEXT I:GOTO 9000
 SI 8200 FOR I=1 TO NJOBS:ORDER<I>=I:NEXT I
 GF 8210 FOR I=0 TO NJOBS-1:IF NJOBS-1<0 THEN 8221
 PL 8211 RDATE\$<6*I+1>=ADOES\$<6*I+5,6*I+6>:RDATE\$<6*I+3>=ADOES\$<6*I+1,6*I+2>
 LD 8220 RDATE\$<6*I+5>=ADOES\$<6*I+3,6*I+4>
 FK 8221 NEXT I
 NI 8230 FOR I=0 TO NJOBS-1:IF NJOBS-1<0 THEN 8270
 AZ 8235 CHANGE=0:FOR J=1 TO NJOBS-1-I:IF NJOBS-1-I<1 THEN 8260
 YS 8240 IF VAL<RDATE\$<6*I+1>=ADOC\$<6*I+5,6*I+6>:RDATE\$<6*I+3>=ADOC\$<6*I+1,6*I+2>:RDATE\$<6*I+5>=ADOC\$<6*I+3,6*I+4> THEN 8160
 YM 8250 T=ORDER<J>:ORDER<J>=ORDER<J+1>:ORDER<J+1>=T:CHANGE=1

```

XQ 8268 NEXT J:IF CHANGE=0 THEN POP :GOTO
9000
OW 8270 NEXT I:GOTO 9000
OR 8300 FOR I=1 TO NJOBS:ORDER(I)=I:NEXT
I:TDAY=365*VAL(CODES(5,6))+MLEN(VAL(CODE
$1,2))+VAL(CODES(3,4))
LK 8310 FOR I=0 TO NJOBS-1:IF NJOBS-1<0 T
HEN 8350
DY 8315 TC=365*VAL(ADOC$(6*I+5,6*I+6))+ML
EN(VAL(ADOC$(6*I+1,6*I+2))+VAL(ADOC$(6*I+3,6*I+4))
OU 8320 TE=365*VAL(CODES(6*I+5,6*I+6))+ML
EN(VAL(CODES(6*I+1,6*I+2))+VAL(CODES(6*I+3,6*I+4))
KQ 8330 IF TDAY>TC THEN CPRIOR(I+1)=EPRIOR
(I+1):GOTO 8350
DU 8340 CPRIOR(I+1)=SPRIOR(I+1)+EPRIOR(I
+1)-SPRIOR(I+1)*((TDAY-TE)/(TC-TE))
FR 8350 NEXT I
LF 8360 FOR I=1 TO NJOBS:IF NJOBS<1 THEN
8395
AN 8365 CHANGE=0:FOR J=1 TO NJOBS-I+1:IF
NJOBS-I+1<1 THEN 8390
CB 8370 IF CPRIOR(ORDER(J))>=CPRIOR(ORDER
(J+1)) THEN 8390
YX 8380 T=ORDER(J):ORDER(J)=ORDER(J+1):OR
DER(J+1)=T:CHANGE=1
YB 8390 NEXT J:IF CHANGE=0 THEN POP :GOTO
9000
PY 8395 NEXT I:GOTO 9000
SM 8400 FOR I=1 TO NJOBS:ORDER(I)=I:NEXT
I
ZL 8410 FOR I=1 TO NJOBS:IF NJOBS<1 THEN
8460
QJ 8415 CHANGE=0:FOR J=1 TO NJOBS-I:IF NJ
OBS-I<1 THEN 8450
KH 8420 IF ASIZES(ORDER(J),ORDER(J))<=ASI
ZE$(ORDER(J+1),ORDER(J+1)) THEN 8450
YK 8430 T=ORDER(J):ORDER(J)=ORDER(J+1):OR
DER(J+1)=T:CHANGE=1
XR 8450 NEXT J:IF CHANGE=0 THEN POP :GOTO
9000
FW 8460 NEXT I
RK 9000 FOR I=1 TO NJOBS:IF NJOBS<1 THEN
? #4;"No Jobs":GOTO 9070

```

```

PV 9002 IF FILTER(>65 AND FILTER(>ASC(A$1
ZE$(ORDER(I),ORDER(I))) THEN 9070
TO 9005 ? #4;ADESCR$ ORDER(I)*37-36,ORDER
(I)*37)
KT 9010 ? #4;" Due date: ";ADOC$ ORDER(I
)*6-5,ORDER(I)*6)
WJ 9020 ? #4;" Date of entry: ";ADOC$ COR
DER(I)*6-5,ORDER(I)*6)
JG 9030 ? #4;" Priority (S/E): ";SPRIOR(
ORDER(I));"/";EPRIOR(ORDER(I))
CI 9040 IF ALGO=80 THEN ? #4;" Current P
riority: ";INT(CPRIOR(ORDER(I))*1000+0
.5)/1000
BE 9050 ? #4;" Size: ";ASIZES(ORDER(I),O
RDER(I))
ZP 9060 ? #4
YK 9070 NEXT I:CLOSE #4
OZ 9075 IF DEVICE=80 THEN 3030
JE 9080 ? "Press RETURN":POSITION 0,0:CLOSE
#5:OPEN #5,4,0,"K":GET #5,X:CLOSE
#5
ME 9090 POKE DLIST+3,71:POKE DLIST+6,6
PH 9100 GOTO 3030
RW 9999 STOP
YG 10000 DIM NAMES(8),FNAME$(14),CODES(6),
DOC$(6),SPRIOR(100),EPRIOR(100),SIZES(1
),DESCRS(38),FIELDS(100)
FN 10010 DIM CODES(6000),ADOC$(6000),ASIZES
(100),ADESCR$ (3800),ORDER(100),RDATE$(6
00),CPRIOR(100)
AF 10011 DIM MLEN(12):FOR I=1 TO 12:READ
X:MLEN(I)=X:NEXT I
UG 10012 DATA 0,31,59,90,120,151,181,212,
243,273,304,334
CD 10020 GRAPHICS 0:POKE 710,2:DLIST=PEEK
($560)+256*PEEK($561):POKE DLIST+3,71:PO
KE DLIST+6,6:CHANGE=0:DCHANGE=0
FJ 10021 ADESCR$ (1)=" ":"ADESCR$ (3800)="" "
:ADESCR$ (2)=ADESCR$ (1):ADOC$=ADESCR$ :A
DOC$=ADESCR$:ASIZES=ADESCR$ :A
ZI 10022 FIELDS=ADESCR$ :DESCRS=ADESCR$ :G
SUB 1500
UO 10030 ? " job jar"
SW 10040 GOTO 1010
YE 30000 GRAPHICS 0:END

```

from screen to Okimate 10, in nine colors

JOYSTICK OKI DRAW

Article on page 28

LISTING 1

Don't type the
TYPO II Codes!

```

RU 10 REM JOYSTICK COLOR DRAWING
HH 20 REM BY DENIS SCHAFFER
QH 30 REM <>1988, ANTIC PUBLISHING
BW 40 SIDE=0
MV 45 GOTO 300
EI 50 PLOT X,Y:IF FLAG=1 OR MODE$=="1" THE
N DRAWTO X,Y+W
ZW 60 RETURN
LR 70 Y=0:GOTO 90
JY 80 IF FLAG=-1 THEN 120
SP 90 TRAP 70:COLOR 0:GOSUB 50:FOR D=1 TO
DELAY:NEXT D:COLOR C:GOSUB 50
SZ 100 IF STRIG(0)=0 THEN COLOR 0:GOSUB 5
0:COLOR C
PC 110 GOSUB 210:GOTO 80
NH 120 IF FIRST=1 THEN FIRST=0:LOCATE X,Y
,TEMP
PS 130 DX=X:DY=Y
FB 140 IF FLAG=1 THEN 80
RT 150 GOSUB 210
DG 160 IF (DX=X AND DY=Y) THEN 140
AO 170 TX=X:TY=Y:X=DX:Y=DY
LL 180 COLOR TEMP:GOSUB 50:X=TX:Y=TY:LOCA
TE X,Y,TEMP:COLOR 0:GOSUB 50
SY 190 FOR D=1 TO DELAY:NEXT D:COLOR C:GO
SUB 50
RU 200 GOTO 80
BF 210 S=STICK(0):POKE 77,0
RJ 220 X=X+(S=5 OR S=6 OR S=7)-(S=9 OR S=
10 OR S=11)
FT 230 Y=Y+(W+1)*(S=5 OR S=9 OR S=13)-(S

```

```

=6 OR S=10 OR S=14)
BH 240 IF X>78 THEN X=0
AU 250 IF X<0 THEN X=78
XK 260 IF Y+W>191 THEN Y=0
WX 270 IF Y<0 THEN Y=191-W
UN 280 IF PEEK(764)>>255 THEN GOSUB 630
ZQ 290 RETURN
HA 300 FLAG=1:DELAY=0:W=3:DIM Y$(474),R$(4
74),B$(474),DRAWFIL$(14),TEMPFIL$(12),
POW(6),MODE$(1),BL$(6),PT$(6)
CD 310 TEMPFIL$="":DRAWFIL$="D":DRAWFILE"
VA 320 GOSUB 920
AX 330 FOR T=0 TO 6:POW(T)=2^T:NEXT T
IR 340 FOR T=1 TO 6:BL$(T)=CHR$(0):PT$(T)
=CHR$(127):NEXT T
IA 350 C=1:GRAPHICS 10
TM 360 POKE 705,66:POKE 706,38:POKE 707,2
18:POKE 708,195:POKE 709,130:POKE 710,
85:POKE 711,13:POKE 712,3
MC 370 GOSUB 880:X=39:Y=96:COLOR C:GOTO 8
0
XW 380 FOR ROW=0 TO 188 STEP 4:FOR COL=0
TO 78:LOCATE COL,ROW,K:T=COL*6+1:Y$(T)
=PT$(T):R$(T)=PT$:B$(T)=PT$
WD 390 IF K=1 OR K=5 OR K=6 OR K=7 THEN Y
$(T)=BL$
KL 400 IF K=3 OR K=4 OR K=5 OR K=7 THEN R
$(T)=BL$
JF 410 IF K=1 OR K=2 OR K=3 OR K=7 THEN B

```

continued on next page

```

$ (T)=BLS
EP 420 POKE 77,0:NEXT COL
KI 430 ? #3;CHR$(153);Y$
YH 440 ? #3;RS
NO 450 ? #3;BS;CHR$(155):NEXT ROW:#3;CH
RS<145>
BK 460 TRAP 470:CLOSE #3
ZO 470 RETURN
EB 480 TRAP 460:LPRINT ":"OPEN #3,8,0,"P:
":? #3;CHR$(27);CHR$(37):IF MODE$="1"
THEN 380
CZ 490 COUNT=6:FOR ROW=0 TO 189 STEP 7:FO
R COL=0 TO 79:L=127:R=127:B=127:T=COL*
3+1
QZ 500 IF ROW=189 THEN COUNT=2:L=7:R=7:B=
7
GJ 510 FOR SCAN=0 TO COUNT:POKE 77,0
JP 520 LOCATE COL,ROW+SCAN,K
AG 530 IF K=1 OR K=5 OR K=6 OR K=7 THEN L
=L-POW(SCAN)
RN 540 IF K=3 OR K=4 OR K=5 OR K=7 THEN R
=R-POW(SCAN)
RR 550 IF K=1 OR K=2 OR K=3 OR K=7 THEN B
=B-POW(SCAN)
VT 560 NEXT SCAN:Y$(T)=CHR$(L):R$(T)=CHR$(
R):BS(T)=CHR$(B):Y$(T+1)=Y$(T):R$(T+1
)=R$(T):BS(T+1)=BS(T)
ZM 570 Y$(T+2)=Y$(T):R$(T+2)=R$(T):BS(T+2
)=BS(T)
UQ 580 NEXT COL
YL 590 IF SIDE=1 THEN 612
RO 595 ? #3;CHR$(153);Y$(1,237)
HH 600 ? #3;RS<1,237>
SA 610 ? #3;BS<1,237>;CHR$(155):GOTO 620
PC 612 ? #3;CHR$(153);Y$(1,237);BL$;Y$(1,
237)
WZ 614 ? #3;RS<1,237>;BL$;R$(1,237)
KA 618 ? #3;BS<1,237>;BL$;BS<1,237>;CHR$(1
55)
NJ 620 NEXT ROW:#3;CHR$(145):GOTO 460
SU 630 PK=PEEK(764):POKE 764,255
MI 640 IF PK=14 AND MODE$="2" THEN 800
UZ 650 IF PK=6 AND MODE$="2" THEN 820
WI 660 IF PK=78 AND MODE$="2" THEN W=0:GO
TO 880
JO 670 IF PK=70 AND MODE$="2" THEN W=50:G
OT0 880
SX 680 IF PK=33 THEN 840
XS 690 IF PK=44 THEN 890
JA 700 IF PK=55 THEN DELAY=DELAY-1:GOTO 8
60
PZ 710 IF PK=54 THEN DELAY=DELAY+1:RETURN
UH 720 IF PK=119 THEN DELAY=0
WS 730 IF PK=118 THEN DELAY=50
HW 740 IF PK=39 THEN FLAG=-FLAG:FIRST=1:R
ETURN
XE 760 IF PK=62 THEN GOSUB 1120
QZ 770 IF PK=0 THEN GOSUB 1170
CK 780 IF PK=10 THEN GOSUB 480
AN 790 POKE 77,0:RETURN
OD 800 W=W-1:IF W<0 THEN W=0

```

```

RR 810 GOTO 880
UU 820 W=W+1:IF W>50 THEN W=50
RV 830 GOTO 880
JF 840 C=C+1:IF C=9 THEN C=1
ZO 850 RETURN
BQ 860 IF DELAY<0 THEN DELAY=0
ZS 870 RETURN
DK 880 COLOR 0:PLOT 79,0:DRAWTO 79,50:COL
OR 7:PLOT 79,0:DRAWTO 79,W:RETURN
PG 890 IF PEEK(764)=255 THEN 890
PV 900 IF PEEK(764)=44 THEN POP :POKE 764
,255:GOTO 350
XL 910 POKE 764,255:RETURN
MU 920 GRAPHICS 0:POKE 710,0:POSITION 16,
0?: "JOYSTICK":POSITION 15,1?: "COLOR
DRAW"
SR 930 POSITION 14,2?: "INSTRUCTIONS":?
"
YU 940 ? "Spacebar - Changes the color of
cursor";
HN 950 ? "Reverse Video - Draw/Non-draw.
Holding down the trigger in draw mode
causes cursor to erase"
HS 960 ? "S - Saves the screen to the dis
k"
ZA 970 ? "L - Loads a file from the disk"
TC 980 ? "P - Prints a picture on a 'Okim
ate"
UE 990 ? "X - Speeds up cursor SHIFT-X se
ts cursor to maximum speed"
YU 1000 ? "K - Opposite of X"
GJ 1010 ? "+ - In Mode 2, increases size
of cursor. SHIFT-X sets size
to max."
AI 1020 ? " Size is shown at upper rig
ht of screen"
BR 1030 ? "H - Opposite of H"
QZ 1040 ? "TAB - Press twice to erase the
screen"
HA 1050 ? "Do you want to draw using MODE
D 48x79 or H 192x79"::INPUT MODES
LK 1060 IF MODE$<>"1" AND MODE$<>"2" THEN
1050
IM 1070 GRAPHICS 0:POKE 710,0
PI 1080 ? "What is the name of the file y
ou want to save or load. Default is 'D
RAWFILE':INPUT TEMPFIL$"
QY 1090 IF LEN(TEMPFIL$)=0 THEN 1110
UP 1100 DRAWFIL$(3)=TEMPFIL$"
AE 1110 RETURN
TR 1120 TRAP 1220:CLOSE #4:OPEN #4,8,0,DR
AWFIL$:IO=896:PUT #4,VAL(MODE$):POKE I
O+2,11
RY 1130 GOTO 1190
JA 1170 TRAP 1220:CLOSE #4:OPEN #4,4,0,DR
AWFIL$:GET #4,T:MODE$=STR$(T):IO=896:P
OKE IO+2,7
FK 1190 POKE IO+4,PEEK(88):POKE IO+5,PEEK
(89):POKE IO+8,0:POKE IO+9,30
TX 1200 JNK=USR(ADR("HHHLV"),64)
RY 1220 TRAP 1230:CLOSE #4
AM 1230 RETURN

```

they don't seem hostile, but . . .

SAUCERIAN SHOOTDOWN

Article on page 30

LISTING 1

Don't type the  TYPO II Codes!

```

IR 10 REM SAUCERIAN (SCREENFREEZE @ 686)
KB 15 REM BY JIM CATALANO
QC 20 REM ((1988, ANTIC PUBLISHING
YK 30 GRAPHICS 0:POKE 710,0:POKE 752,1:DL
I=PEEK(560)+PEEK(561)*256+4:POKE DLI-1
,66
UX 31 POKE DLI+6,7:POKE DLI+7,7:POKE DLI+
11,6:POKE DLI+12,6:POKE DLI+17,6:POKE
DLI+18,6
QZ 32 POSITION 7,3?: "B P R E S E N T I
N G B":POSITION 1,5?: "S A U C E R I
A N"

```

```

XO 33 POSITION 7,7?: "DESIGNED AND PROGRA
MMED BY":POSITION 2,9?: "james catala
no"
PF 34 POSITION 14,12?: "((1988)":POSITION
2,14?: "ANTIC Magazine":?: "Press
Trigger to Begin"
BS 35 IF STRIG(0) THEN 35
HU 39 REM INITIALIZATION
BQ 40 PMMODE=1:CRMODE=23:GOSUB 20050
AO 45 POKE 708,50:POKE 709,52:POKE 710,54
:POKE 712,136:UFOAX=INT(RND(0)*248)+1:
UFOAY=INT(RND(0)*140)+1

```

```

EV 50 UF0BX=INT(RND(0)*248)+1:UF0BY=INT(RND(0)*140)+1:UF0AMOV=INT(RND(0)*8)+1:U
FOBMOV=INT(RND(0)*8)+1
GJ 55 BASEX=122:BASEY=190:MISX=BASEX:MISY
=173:MISSL=50:HIT=0:MISS=0:BONUS=0:SCR=0
EY 100 REM LANDSCAPE ROUTINE
RB 105 REM
AW 110 GOSUB 130:FOR Y=60 TO 95:COLOR 3:P
LOT 0,Y:DRAWT0 156,Y:NEXT Y:COLOR 2:RE
STORE 113
GF 111 READ L:IF L=-1 THEN FOR X=0 TO 156
STEP 14:PLOT 79,61:DRAWT0 X,95:NEXT X
:GOTO 114
NM 112 PLOT 0,L:DRAWT0 156,L:PLOT 0,L:DRA
WTO 79,61:DRAWT0 156,L:GOTO 111
HQ 113 DATA 61,63,66,78,75,81,88,-1
VL 114 GOSUB 10005
PT 115 GOTO 505
GH 125 REM MOUNTAIN ROUTINE
QN 130 COLOR 1:Y=40:X=-1:GOSUB 150
VE 135 COLOR 2:Y=55:X=-1:GOSUB 150
ZU 145 RETURN
JZ 150 FOR T=1 TO 157
JW 155 M=INT(RND(0)*2)+1
CU 160 IF M=1 THEN Y=Y-1
CF 165 IF M=2 THEN Y=Y+1
DI 166 IF Y<35 THEN Y=Y+1
IF 167 IF Y>59 THEN Y=Y-1
XM 170 X=X+1
IQ 175 PLOT X,Y:DRAWT0 X,60:NEXT T:RETURN

YD 500 REM UFO 'A' CONTROL
MD 505 POKE 53278,0:UFOADIR=INT(RND(0)*15
>+1:IF UFOADIR<3 THEN 515
NW 510 GOTO 520
PM 515 UFOAMOV=INT(RND(0)*8)+1
BW 520 IF UFOAMOV=1 THEN UFOAY=UFOAY-10
WJ 525 IF UFOAMOV=2 THEN UFOX=UFOX+10:U
FOAY=UFOAY-10
YG 530 IF UFOAMOV=3 THEN UFOX=UFOX+10
TX 535 IF UFOAMOV=4 THEN UFOX=UFOX+10:U
FOAY=UFOAY+10
BH 540 IF UFOAMOV=5 THEN UFOAY=UFOAY+10
XV 545 IF UFOAMOV=6 THEN UFOX=UFOX-10:U
FOAY=UFOAY+10
DM 550 IF UFOAMOV=7 THEN UFOX=UFOX-10
CX 555 IF UFOAMOV=8 THEN UFOX=UFOX-10:U
FOAY=UFOAY-10
XI 560 IF UFOX<15 THEN UFOX=15:UFOAMOV=
3
HK 565 IF UFOX>208 THEN UFOX=208:UFOAMO
V=7
TK 570 IF UFOAY<10 THEN UFOAY=10:UFOAMOV=
5
QI 575 IF UFOAY>140 THEN UFOAY=140:UFOAMO
V=1
QR 580 IF UFOAY<71 THEN UFOSIZEA=3:UFOCOL
A=14
IW 585 IF UFOAY>70 AND UFOAY<116 THEN UFO
SIZEA=1:UFOCOLA=10
KB 590 IF UFOAY>115 THEN UFOSIZEA=0:UFOCO
LA=6
IB 595 POKE 53258,UFOSIZEA:POKE 706,UFOCO
LA:A=USR(PMMOVE,3,SHAPE3,SIZE3,UFOX,U
FOAY)
YS 600 REM UFO 'B' CONTROL
QB 605 UFOBDIR=INT(RND(0)*15)+1:IF UFB
D1 R<3 THEN 615
OH 610 GOTO 620
PV 615 UFBMOV=INT(RND(0)*8)+1
EO 620 IF UFBMOV=1 THEN UFBY=UFBY-10
CL 625 IF UFBMOV=2 THEN UFBX=UFBX+10:U
FOBY=UFBY-10
AY 630 IF UFBMOV=3 THEN UFBX=UFBX+10
ZZ 635 IF UFBMOV=4 THEN UFBX=UFBX+10:U
FOBY=UFBY+10
EO 640 IF UFBMOV=5 THEN UFBY=UFBY+10
DX 645 IF UFBMOV=6 THEN UFBX=UFBX-10:U
FOBY=UFBY+10
GE 650 IF UFBMOV=7 THEN UFBX=UFBX-10
IZ 655 IF UFBMOV=8 THEN UFBX=UFBX-10:U
FOBY=UFBY-10
AB 660 IF UFBX<15 THEN UFBX=15:UFBMOV=
3
KG 665 IF UFBX>208 THEN UFBX=208:UFBMO
V=7
WD 670 IF UFBY<10 THEN UFBY=10:UFBMOV=
5
TE 675 IF UFBY>140 THEN UFBY=140:UFBMO
V=1
TT 680 IF UFBY<71 THEN UFOSIZEB=3:UFOCOL

```

```

B=14
NY 685 IF UFBY>70 AND UFBY<116 THEN UFO
SIZEB=1:UFOCOLB=0
LU 686 IF STRIG<1>=0 THEN 686
NF 690 IF UFBY>115 THEN UFOSIZEB=0:UFOCO
LB=6
ZG 695 POKE 53259,UFOSIZEB:POKE 707,UFOCO
LB:A=USR(PMMOVE,4,SHAPE4,SIZE4,UFOX,U
FOBY)
SB 700 REM MOVE MISSILE BASE
GI 705 IF FIRE=1 THEN 755
GK 710 ST=STICK<0>:T=STRIG<0>:POKE 77,0
BY 715 IF ST=11 THEN BASEX=BASEX-8:MISX=M
ISX-8
XY 720 IF ST=7 THEN BASEX=BASEX+8:MISX=M
ISX+8
QK 725 IF BASEX<50 THEN BASEX=50:MISX=50
XT 730 IF BASEX>194 THEN BASEX=194:MISX=1
94
EJ 735 A=USR(PMMOVE,1,SHAPE1,SIZE1,BASEX,
BASEY):A=USR(PMMOVE,2,SHAPE2,SIZE2,MIS
X,MISY)
DU 740 IF T=0 THEN MISSL=MISL-1:FIRE=1:GOT
0 755
JR 744 IF MISSL=0 THEN 870
QF 745 GOTO 505
TQ 750 REM FIRED MISSILE
HR 755 MISY=MISY-20
CH 760 IF MISY<0 THEN MIS=MIS+1:SOUND 0,0
,0,A=USR(PMMOVE,2,SHAPE2,SIZE2,0,0):M
ISY=173:FIRE=0:GOTO 505
RM 765 SOUND 0,MISY/19+19,0,15:A=USR(PMMO
VE,2,SHAPE2,SIZE2,MISX,MISY)
UP 770 IF PEEK(53261)=4 AND UFOSIZEA=3 TH
EN HIT=HIT+1:GOTO 800
SO 775 IF PEEK(53261)=8 AND UFOSIZEB=3 TH
EN HIT=HIT+1:GOTO 835
PY 780 GOTO 505
JV 785 REM MISSILE HIT
RK 790 REM
BW 795 REM SAUCER 'A' HIT
NR 800 A=USR(PMMOVE,2,SHAPE2,SIZE2,0,0):S
OUND 0,0,0
PO 805 FOR A=0 TO 75:SOUND 0,A*2,0,15:POK
E 706,A*3:NEXT A
IV 810 A=USR(PMMOVE,3,SHAPE3,SIZE3,0,0):F
OR V=15 TO 0 STEP -0.5:SOUND 0,A*2,0,V
:NEXT V:SCR=SCR+100
ZZ 815 UFOX=INT(RND(0)*208)+1:IF UFOX<1
5 THEN UFOX=15
JC 820 POKE 706,6:UFOAY=140:POKE 53258,0:
A=USR(PMMOVE,3,SHAPE3,SIZE3,UFOX,UFOA
Y):FIRE=0:MISY=173:SOUND 0,0,0,0
QC 825 GOTO 505
BN 830 REM SAUCER 'B' HIT
OM 835 A=USR(PMMOVE,2,SHAPE2,SIZE2,0,0):S
OUND 0,0,0,0
QY 840 FOR A=0 TO 75:SOUND 0,A*2,0,15:POK
E 707,A*3:NEXT A
MM 845 A=USR(PMMOVE,4,SHAPE4,SIZE4,0,0):F
OR V=15 TO 0 STEP -0.5:SOUND 0,A*2,0,V
:NEXT V:SCR=SCR+100
DG 850 UFOX=INT(RND(0)*208)+1:IF UFOX<1
5 THEN UFOX=15
YU 855 POKE 707,6:UFBY=140:POKE 53259,0:
A=USR(PMMOVE,4,SHAPE4,SIZE4,UFOX,UFOB
Y):FIRE=0:MISY=173:SOUND 0,0,0,0
PV 860 GOTO 505
HW 865 REM GAME OVER
WL 870 A=USR(PMMOVE,1,SHAPE1,SIZE1,0,0):A
=USR(PMMOVE,2,SHAPE2,SIZE2,0,0):A=USR(
PMMOVE,3,SHAPE3,SIZE3,0,0)
GU 875 A=USR(PMMOVE,4,SHAPE4,SIZE4,0,0):P
OKE 53277,0:GRAPHICS 17:POKE 708,15
HC 880 POSITION 5,2:? #6;"GAME OVER":PO
SITION 1,5:? #6;"MISSILES FIRED:50"
BO 885 POSITION 6,7:? #6;"HITS":;HIT:PO
SITION 5,9:? #6;"MISSES":;MIS
AJ 890 BONUS=INT(HIT/5)*1000:POSITION 4,1
1:? #6;"BONUS":;BONUS:SCR=SCR+BONUS:P
OSITION 4,15:? #6;"SCORE":;SCR
EV 895 POSITION 0,18:? #6;"PROGRESS Start to
play again"
JH 900 IF PEEK(53279)=6 THEN POKE 106,PEE
K(740):GRAPHICS 0:RUN
PF 905 GOTO 900
RV 10000 REM P/M DATA
UX 10005 POKE 623,1
ZU 10010 REM MISSILE BASE
LO 10015 DIM SHAPE1$(14):SHAPE1$="$$fBf00Z

```

continued on next page

LISTING 2

```
VU 10 REM SAUCERIAN, LISTING 2
JS 20 REM BY JIM CATALANO
GD 30 REM <> 1985,1988 ANTIC PUBLISHING
JJ 35 REM <CREATE LINES 20060-20075>
EV 40 REM <LINES 10-250 MAY BE USED WITH
     OTHER BASIC LOADERS IN THIS ISSUE.
IJ 50 REM CHANGE LINE 70 AS NECESSARY.>
PR 60 DIM FN$(20),TEMP$(20),AR$(93):DPL=P
EEK<10592>:POKE 10592,255
WO 70 FN$="D:LINE.SLT":REM THIS IS THE N
     AME OF THE DISK FILE TO BE CREATED
```

```

RD 80 ? "Disk or Cassette?"::POKE 764,25
5
PY 90 IF NOT (PEEK(764)=18 OR PEEK(764)=
58) THEN 90
TH 100 IF PEEK(764)=18 THEN FN$="C:" AN
UB 110 POKE 764,255:GRAPHICS 0:?" AN
TIC'S GENERIC BASIC LOADER"
MY 120 ?, "BY CHARLES JACKSON"
KB 130 POKE 10592,DPL:TRAP 200
PU 140 ?:?:?:?"Creating ";FN$?:? "...plea
se stand by."
LW 150 RESTORE :READ LN:LM=LN:DIM A$(LN):C=1
BQ 160 AR$="":READ AR$
YC 170 FOR X=1 TO LEN(AR$) STEP 3:POKE 75
2,255
DM 180 LM=LM-1:POSITION 10,10:?"Countdo
wn...T-";INT(LM/10);":"
BK 190 A$(C,C)=CHR$(VAL(AR$(X,X+2))):C=C+
1:NEXT X:GOTO 160
MM 200 IF PEEK(195)=5 THEN ?:?:??"@TOO
MANY DATA LINES!":?"CANNOT CREATE FIL
E!":END
CM 210 IF C<LN+1 THEN ?:?:??"@TOO FEW DATA
LINES!":?"CANNOT CREATE FILE!":END
UQ 220 IF FN$="C:" THEN ?:?:??"Prepare ca
ssette, Press [RETURN]":
AR 230 OPEN #1,8,0,FN$:
PV 240 POKE 766,1:?:#1,A$,:POKE 766,8
AL 250 CLOSE #1:GRAPHICS 0:?"COMPLETED"
"
GP 1000 DATA 341
KZ 1010 DATA 0500480480540480320800650710
67076082036061034104201002240016133206
1620002282086208001096104104
AJ 1020 DATA 2321690002402441041332041041
33203104104133205169000168170145203200
208251230204232228205208244
UU 1030 DATA 0960341550500480480550480320
80077077079086069036040049044054055041
061034104201005240018141000
FF 1040 DATA 0041620002360000042080010961
04104232169000240243104104201009144009
104104104104104104104096
GA 1050 DATA 024201008204202421410040041041
33206104133205104104141005004104104141
002004104104141003004034155
NH 1060 DATA 0500480480550500320800770770
79086069036040054056044049051052041061
034174004084173002004157255
PI 1070 DATA 2072240051760021440051690001
41004004165207281002240828165106824105
0031090040804133204169000133
UM 1080 DATA 2031681452032002082511730030
04133203024144065165106024105001133204
169128133203173004034155050
SF 1090 DATA 0480480550530320800770770790
860690360480480501853044050048050041061
034004240021162000165203024
MM 1100 DATA 1051281332031652041050001332
04232236004004208237160000152145203200
192127208249173003004201128
FG 1110 DATA 1440010961012031332031652041
05000133204160000204005004240008177205
145203200024144243096034155
GP 1120 DATA 133

```

will the whole movie fit?

TAPE TIME

Article on page 16

LISTING 1

Don't type the
TYPO II Codes!

```

CT 130 ? " OC.1988 (BETAC) "
MI 140 ? " "
WG 150 ? " "
LO 160 ? " "
BU 170 ? " "
ZB 180 ? " "
QK 190 ? " "
DN 200 ? " "
RI 210 POSITION 2,19:?
UL 220 POSITION 2,20:?
VE 230 POSITION 2,21:?
QT 240 POSITION 2,22:?
JE 250 FOR J=1 TO 10:FOR L=2 TO 11
LA 260 POSITION 20,L:?
HM 280 NEXT L
GD 300 NEXT J
UT 320 GOSUB 1830
PI 330 FOR Z=1 TO 5:POSITION 12,12:?
PI 330 FOR WAIT=1 TO 100:NEXT WAIT
ZE 340 POSITION 12,12:?
MT 360 NEXT Z
IP 370 POSITION 12,12:?
IP 370 POSITION 12,12:?
MF 380 CLR :DIM ERR$(<6>),HOLD$(<6>)
GC 390 POSITION 2,16:?
TA 2>VHS"
LY 400 LINE=1:TRAP 1920
US 410 POSITION 27,16:INPUT A:GOSUB 1750:GOSUB 1830
QE 420 IF A<1 OR A>2 THEN 390
DU 430 IF A=1 THEN POSITION 12,12:?
RH 440 IF A=2 THEN POSITION 12,12:?
ZC 450 IF A=1 THEN GOSUB 1830
AK 460 IF A=2 THEN 880
LX 470 REM BETA
MY 480 LINE=2:TRAP 1920
GM 490 POSITION 2,16:?
GM 490 POSITION 2,16:?
T TAPETYPE:GOSUB 1750
ZD 500 IF TAPETYPE<1 OR TAPETYPE>2 THEN 480
MB 510 POSITION 2,16:?
MB 510 POSITION 2,16:?
MX 520 LINE=3:TRAP 1920
FE 530 POSITION 27,16:INPUT MINBII:GOSUB 1750
NF 540 IF MINBII=0 THEN GOSUB 1710:GOTO 580
HC 550 IF MINBII>900 THEN GOSUB 2080:GOTO 510
MJ 560 TOTMINBII=TOTMINBII+MINBII
NX 570 GOTO 510
FV 580 IF TAPETYPE=1 THEN POSITION 23,2:?
FV 580 IF TAPETYPE=1 THEN POSITION 23,2:?
EQ 590 IF TAPETYPE=2 THEN POSITION 23,2:?
EQ 590 IF TAPETYPE=2 THEN POSITION 23,2:?
RA 600 POSITION 22,5:?
RA 600 POSITION 22,5:?
SI 600 POSITION 22,5:?
SI 600 POSITION 22,5:?
NO 645 IF MINBIII=0 THEN 670
NO 645 IF MINBIII>900 THEN GOSUB 2080:GOTO 620
UK 650 TOTMINBIII=TOTMINBIII+MINBIII
OR 660 GOTO 620
VQ 670 POSITION 22,8:?
VQ 670 POSITION 22,8:?
SI 670 POSITION 22,8:?
SI 670 POSITION 22,8:?
YG 680 FOR PAUSE=1 TO 200:NEXT PAUSE
JZ 690 DIM TAPE$(<11>)
SD 700 IF TAPETYPE=1 THEN TBII=180:TBIII=270:MET=222:TAPE$="BETA L-750"
KC 710 IF TAPETYPE=2 THEN TBII=200:TBIII=300:MET=246:TAPE$="BETA L-830"
DE 740 BIIMETER=<TOTMINBII/TBII>*MET
EK 750 BIIIMETER=<TOTMINBIII/TBIII>*MET
DS 760 TOTALMETER=BIIMETER+BIIIMETER
ON 770 TIMELEFTBII=<(MET-TOTALMETER)/MET>*TBII:GOSUB 1710
SU 780 RO=INT(<100*TIMELEFTBII+0.5>/100
IY 790 POSITION 22,2:?
IY 790 POSITION 22,2:?
DX 800 POSITION 21,5:?
DX 800 POSITION 21,5:?
B 1790
CG 810 POSITION 21,6:?
ML 820 TIMELEFTBIII=<(MET-TOTALMETER)/MET>*TBIII
ZL 830 ROIII=INT(<100*TIMELEFTBIII+0.5>/100
PD 840 POSITION 21,8:?
PD 840 POSITION 21,8:?
OSUB 1790
DR 850 POSITION 21,9:?
DR 850 POSITION 21,9:?
SUB 1750
OY 860 GOTO 1380
PS 870 REM VHS
PA 880 LINE=7:TRAP 1920
KM 890 POSITION 2,16:?
KM 890 POSITION 2,16:?
VA 900 IF VHSTYPE<1 OR VHSTYPE>2 THEN 880
QI 910 POSITION 2,16:?
QI 910 POSITION 2,16:?
SP"
OZ 920 LINE=8:TRAP 1920
UI 930 POSITION 22,16:INPUT MINSP:GOSUB 1750
HK 940 IF MINSP=0 THEN GOSUB 1710:GOTO 980
XT 950 IF MINSP>900 THEN GOSUB 2080:GOTO 910
FD 960 TOTMINSP=TOTMINSP+MINSP
PP 970 GOTO 910
RW 980 IF VHSTYPE=1 THEN POSITION 23,2:?
RW 980 IF VHSTYPE=1 THEN POSITION 23,2:?
ZU 990 IF VHSTYPE=2 THEN POSITION 23,2:?
ZU 990 IF VHSTYPE=2 THEN POSITION 23,2:?
OZ 1000 POSITION 21,4:?
OZ 1000 POSITION 21,4:?
POSITION 21,5:?
POSITION 21,5:?
SP"
KU 1010 LINE=9:TRAP 1920
UL 1020 POSITION 2,16:?
UL 1020 POSITION 2,16:?
Enter The Minutes SP"
LP 1030 POSITION 22,16:INPUT MINLP:GOSUB 1750
HP 1040 IF MINLP=0 THEN 1070
FT 1045 IF MINLP>900 THEN GOSUB 2080:GOTO 1020
NN 1050 TOTMINLP=TOTMINLP+MINLP
OG 1060 GOTO 1020
PE 1070 POSITION 21,7:?
PE 1070 POSITION 21,7:?
POSITION 21,8:?
POSITION 21,8:?
TOMINLP
BR 1080 LINE=10:TRAP 1920
AW 1090 POSITION 2,16:?
AW 1090 POSITION 2,16:?
Enter The Minutes EP"
GI 1100 POSITION 27,16:INPUT MINEP:GOSUB 1750
CF 1110 IF MINEP=0 THEN 1140
NO 1115 IF MINEP>900 THEN GOSUB 2080:GOTO 1090
XC 1120 TOTMINEP=TOTMINEP+MINEP
RM 1130 GOTO 1090
KC 1140 POSITION 21,10:?
KC 1140 POSITION 21,11:?
KC 1140 POSITION 21,10:?
KC 1140 POSITION 21,11:?
POSITION 21,11:?
POSITION 21,11:?
EP"
CN 1150 FOR PAUSE=1 TO 200:NEXT PAUSE
AW 1160 DIM VHSTAPE$(<11>)
YO 1170 IF VHSTYPE=1 THEN TSP=120:TLP=240
YO 1170 IF VHSTYPE=1 THEN TSP=120:TLP=240
SI 1190 IF VHSTYPE=2 THEN TSP=160:TLP=320
SI 1190 IF VHSTYPE=2 THEN TSP=160:TLP=320
:TEP=360:MET=246:VHSTAPE$="BETA L-120"
:TEP=360:MET=246:VHSTAPE$="BETA L-120"
:TEP=480:MET=327:VHSTAPE$="BETA L-160"
:TEP=480:MET=327:VHSTAPE$="BETA L-160"
YJ 1210 SPMETER=<TOTMINSP/TSP>*MET
YJ 1210 SPMETER=<TOTMINSP/TSP>*MET
KM 1220 LPMETER=<TOTMINLP/TLP>*MET
KM 1220 LPMETER=<TOTMINLP/TLP>*MET
WP 1230 EPMETER=<TOTMINEP/TEP>*MET
WP 1230 EPMETER=<TOTMINEP/TEP>*MET
AF 1240 TOTALMETERS=SPMETER+LPMETER+EPMETER
AF 1240 TOTALMETERS=SPMETER+LPMETER+EPMETER
SI 1250 TIMELEFTSP=<(MET-TOTALMETERS)/MET>*TSP:GOSUB 1710
JL 1260 ROSP=INT(<100*TIMELEFTSP+0.5>/100
SS 1270 POSITION 22,2:?
SS 1270 POSITION 22,2:?
VHSTAPE$>POSITION 21,3:?
VHSTAPE$>POSITION 21,3:?
SF 1280 POSITION 21,4:?
SF 1280 POSITION 21,4:?
ROSP;"MINUTES"
QW 1290 POSITION 21,5:?
QW 1290 POSITION 21,5:?
SPSPEEDLEFT"
RJ 1300 TIMELEFTLTP=<(MET-TOTALMETERS)/MET>

```

continued on next page

```

 3*TLP
ZN 1310 ROLP=INT<100*TIMELEFTLP+0.5>/100
NF 1320 POSITION 21,7:?"ROLP;" "Minutes"
MD 1330 POSITION 21,8:?"LP Speed Left"
CT 1340 TIMELEFTEP=<(MET-TOTALMETERS>/MET
 3*TEP
QO 1350 ROEP=INT<100*TIMELEFTEP+0.5>/100
NI 1360 POSITION 21,10:?"ROEP;" "Minutes"
GOSUB 1810
PF 1370 POSITION 21,11:?"EP Speed Left"
GOSUB 1750
CJ 1380 LINE=11:TRAP 1920
AZ 1390 POSITION 2,16:?"Want To >CONTIN
UE >PRINT"
XU 1400 POSITION 28,16:INPUT X
KR 1410 IF X<1 OR X>2 THEN GOSUB 1750:GOT
O 1380
MJ 1430 IF X=1 THEN GOSUB 1830:GOSUB 1750
:GOTO 380
BB 1460 GOSUB 2060
CU 1470 LINE=12:TRAP 1920
VO 1480 REM PRINT
SO 1490 POSITION 2,17:?"Input Tape Numbe
r"
OM 1500 INPUT I
VK 1510 LPRINT "#";I
XQ 1520 IF A=1 THEN 1610
XN 1530 IF VHSTYPE=1 THEN LPRINT "VHS T-1
20"
EH 1540 IF VHSTYPE=2 THEN LPRINT "VHS T-1
60"
CZ 1550 LPRINT "-----"
JT 1560 IF X<>2 THEN 1590
XT 1570 LPRINT ROSP;" Minutes SP Speed R
emaining":LPRINT ROLP;" Minutes LP Sp
eed Remaining"
UK 1580 LPRINT ROEP;" Minutes EP Speed R
emaining"
BM 1590 GOSUB 2060
WX 1600 LPRINT :GOTO 1660
TX 1610 IF TAPETYPE=1 THEN LPRINT "BETA L
-750"
TC 1620 IF TAPETYPE=2 THEN LPRINT "BETA L
-830"
RY 1630 LPRINT "-----"
RK 1640 LPRINT R0;" Minutes BETA II Rema
ining"
FY 1650 LPRINT ROIII;" Minutes BETA III
Remaining":GOSUB 2060
CU 1660 LPRINT :GOSUB 1830
DV 1670 GOSUB 1750
SQ 1680 GOTO 380
GA 1690 END
CN 1700 REM CLEAR SCREEN
CE 1710 FOR C=2 TO 11
QY 1720 POSITION 20,C:?"-----"

```

```

CY 1730 NEXT C
AZ 1740 RETURN
WU 1750 FOR CS=16 TO 18:POSITION 2,CS:?""
:NEXT CS
BL 1780 RETURN
SA 1790 TOTMINBII=0:TOTMINBIII=0
AP 1800 RETURN
AE 1810 TOTMINSP=0:TOTMINLP=0:TOTMINEP=0
AV 1820 RETURN
EF 1830 POSITION 20,2:?"-----"
AV 1840 POSITION 20,3:?"Press RETURN"
:POSITION 20,4:?"After Each"
LX 1850 POSITION 20,5:?"Entry"
:-----
XQ 1860 POSITION 20,6:?"-----"
:-----
IC 1870 POSITION 20,7:?"Enter 0 When"
:POSITION 20,8:?"Done Entering"
:-----
NR 1875 POSITION 20,9:?"For Each Speed"
:-----
JZ 1880 POSITION 20,10:?"-----"
KU 1890 POSITION 20,11:?"-----"
:-----
AR 1900 RETURN
NS 1910 REM ERROR TRAP
XT 1920 ERROR=PEEK<195>
DP 1930 GOSUB 1750
DZ 1940 IF ERROR=8 THEN POSITION 10,16:?
"ENTER NUMBERS ONLY":FOR WAIT=1 TO 15
:NEXT WAIT
DU 1950 GOSUB 1750
BD 1960 IF ERROR=8 THEN ON LINE GOTO 390,
480,510,610,2060,2060,880,910,1010,108
0,1380,1470
LF 2060 LPRINT "-----"
:-----
AU 2070 RETURN
BG 2080 POKE 709,0:POKE 710,12:POKE 712,6
6
CS 2090 ERR$="ERROR":TRAP 40000
NA 2100 FOR X0=1 TO 25:P0=INT<1.5+6*(<X0/
6)-INT<X0/6>>:HOLD$=ERR$(P0,6)
HN 2110 IF P0<>1 THEN HOLD$(<6-P0+2>)=ERR$(<
1,P0-1>
PA 2120 POSITION 12^1,12:? HOLD$(<1,5>):NEX
T X0
PW 2130 POKE 712,0:POKE 709,282:POKE 718,
0
QG 2140 IF A=1 THEN POSITION 12,12:?"BET
A":?
DJ 2150 IF A=2 THEN POSITION 12,12:?"VH
S":?
AU 2160 RETURN

```

put a smile on your squares

HAPPYFACE REVERSI

Article on page 14

LISTING 1

Don't type the
TYPO II Codes!

```

GX 2 REM HAPPYFACE REVERSI
XO 3 REM BY EDWARD BROWN
QS 4 REM <>1988, ANTIC PUBLISHING
NI 5 GOTO 1535
SL 10 REM DISABLE BREAK
BU 15 RETURN :K=USR<ADR("h0p5m0R0m5MS")>:
:RETURN
UP 25 REM PURPLE THING
DI 30 COLOR 1:FOR CY=Y TO Y-7 STEP -1:PLO
T X,CY:DRAWTO X-8,CY:NEXT CY
IT 35 COLOR 0:PLOT X-5,Y-6:PLOT X-5,Y-5:P
LOT X-3,Y-6:PLOT X-3,Y-5
IQ 40 PLOT X-6,Y-1:DRAWTO X-2,Y-1:PLOT X-
7,Y-2:PLOT X-6,Y-2:PLOT X-4,Y-2:DRAWTO
X-1,Y-2
NJ 45 PLOT X-7,Y-3:PLOT X-1,Y-3:COLOR 0:L
OCATE 155,89,D:RETURN
JN 50 REM GREEN THING
EE 55 COLOR 2:FOR CY=Y TO Y-7 STEP -1:PLO

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T X,CY:DRAWTO X-8,CY:NEXT CY
IM 60 COLOR 0:PLOT X-5,Y-6:PLOT X-5,Y-5:P
LOT X-3,Y-6:PLOT X-3,Y-5
ZR 65 PLOT X-5,Y-1:DRAWTO X-3,Y-1:PLOT X-
5,Y-2:DRAWTO X-3,Y-2:PLOT X-6,Y-3:PLOT
X-2,Y-3:COLOR 0:LOCATE 155,89,D
ZX 70 RETURN
PH 75 REM TITLE SCREEN
XW 80 GRAPHICS 7:GOSUB 1700:POKE 710,74
XE 85 COLOR 3:PLOT 23,48:DRAWTO 42,21:DRA
WT 0 54,30:DRAWTO 34,34:DRAWTO 49,49:PL
OT 65,35
ZL 90 DRAWTO 55,41:DRAWTO 65,48:PLOT 55,4
1:DRAWTO 65,41:PLOT 71,35:DRAWTO 75,47
SH 95 DRAWTO 81,35:PLOT 94,35:DRAWTO 85,4
1:DRAWTO 93,48:PLOT 85,41:DRAWTO 94,41
RY 100 PLOT 103,36:DRAWTO 98,49:PLOT 102,
39:DRAWTO 109,37:DRAWTO 111,39:PLOT 12
3,38

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AA 105 DRAWTO 113,44:DRAWTO 122,42:DRAWTO
111,52:PLOT 128,49:DRAWTO 132,38:PLOT
135,33
XY 110 POKE 752,1:=? "           by Edwar
d Brown":? "          PRESS START"
FO 115 C=1:STRT=0
OB 120 Y=15:FOR X=31 TO 136 STEP 15:SOUND
0,28,6,8:IF C=1 THEN GOSUB 55:GOTO 13
UB 125 GOSUB 30
ED 130 IF PEEK(53279)=6 THEN STRT=1
LJ 135 WAIT=1:GOSUB 1460:SOUND 0,0,0,0:NE
XT X
BI 140 Y=75:FOR X=136 TO 31 STEP -15:SOUN
D 0,50,6,8:IF C=1 THEN GOSUB 30:GOTO 1
50
XJ 145 GOSUB 55
EH 150 IF PEEK(53279)=6 THEN STRT=1
CF 155 WAIT=1:GOSUB 1460:SOUND 0,0,0,0:NE
XT X:IF STRT=0 THEN C=1-C:GOTO 120
ZJ 160 RETURN
DE 165 REM INITIALIZE
MN 170 DIM BOARD(10,10),VALUE(10,10),SCOR
E(2),GP$(2),PP$(2),MESS$(38),HC$(2)
BN 175 RESTORE :FOR C=0 TO 9:FOR C1=0 TO
9:BOARD(C,C1)=0:READ A:VALUE(C,C1)=A:N
EXT C1:NEXT C:CRY=1:CRX=1
LG 180 BOARD(4,4)=1:BOARD(5,5)=1:BOARD(4,
5)=2:BOARD(5,4)=2:SCORE(1)=2:SCORE(2)=
2
LE 185 DATA 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
TU 190 DATA 0,0,6,2,3,3,2,6,0,0,0,6,6,4,4
,4,4,6,6,0
FM 195 DATA 0,2,4,1,2,2,1,4,2,0,0,3,4,2,7
,7,2,4,3,0
TM 200 DATA 0,3,4,2,7,7,2,4,3,0,0,2,4,1,2
,2,1,4,2,0
FX 205 DATA 0,6,6,4,4,4,4,6,6,0,0,0,6,2,3
,3,2,6,0,0
KC 210 DATA 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
ZP 215 RETURN
XB 220 REM DRAW BOARD
JA 225 GRAPHICS 23:GOSUB 1700
VH 230 DL=PEEK(560)+PEEK(561)*256+4:POKE
DL+93,2:POKE DL+94,65:POKE DL+137,PEEK
(560):POKE DL+138,PEEK(561)
ES 235 C=C-48:IF A=78 THEN 275
YU 240 IF HC$="P" THEN S=1
UU 245 IF HC$="G" THEN S=2
JV 250 C1=1:C2=1
CM 255 X=31+C1*12-2:Y=1+C2*11-2:BOARD(C1,
C2)=S:SCORE(5)=SCORE(5)+1:IF S=1 THEN
GOSUB 30
MT 260 IF S=2 THEN GOSUB 55
UL 265 C=C-1:IF C>0 THEN C2=C2+7:IF C2>8
THEN C2=1:C1=8
YG 270 IF C>0 THEN 255
ET 275 COLOR 3:FOR X=31 TO 127 STEP 12:PL
OT X,1:DRAWTO X,89:NEXT X
LG 280 FOR Y=1 TO 89 STEP 11: PLOT 31,Y:DR
AWTO 127,Y:NEXT Y
GA 285 X=31+(4*12)-2:Y=1+(4*11)-2:GOSUB 3
0:X=31+(5*12)-2:Y=1+(5*11)-2:GOSUB 38
IR 290 X=31+(4*12)-2:Y=1+(5*11)-2:GOSUB 5
5:X=31+(5*12)-2:Y=1+(4*11)-2:GOSUB 55
TO 295 I=PEEK(106)-8:POKE 54279,M
PX 300 PMBAS=M*256
VQ 305 FOR C=PMBAS+512 TO PMBAS+640:POKE
C,0:NEXT C
FD 310 CXP=81:CYP=22:POKE 704,15:POKE 559
,46:POKE 53277,3
NA 315 POKE 623,0:POKE 53248,CXP:POKE PMB
AS+512+CYP,12
ZD 320 RETURN
EW 325 REM MOVE CURSOR
GW 330 SWITCH=0:ST=STICK(TURN-1):CYT=CYP:
IF ST=15 THEN 375
CF 335 XC=(ST=5 OR ST=6 OR ST=7)-(ST=9 OR
ST=10 OR ST=11):CRX=CRX+XC:CXP=CXP+12
*Xc
FA 340 IF CXP>165 THEN CXP=81:CRX=1
HJ 345 IF CXP<81 THEN CXP=165:CRX=8
NJ 350 YC=(ST=5 OR ST=9 OR ST=13)-(ST=6 OR
ST=10 OR ST=14):CRY=CRY+YC:CYP=CYP+1
1*YC
MX 355 IF CYP>99 THEN CYP=22:CRY=1
AJ 360 IF CYP<22 THEN CYP=99:CRY=8
QS 365 POKE PMBAS+512+CYP,0:POKE 53248,CX
P:POKE PMBAS+512+CYP,12
HA 370 SOUND 0,6,6,6:WAIT=10:GOSUB 1460:S
OUND 0,0,0,0

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NN 375 IF STRIG(TURN-1)=1 AND PEEK(764)<>
33 AND PEEK(53279)=7 THEN 330
FN 380 IF PEEK(764)=33 THEN 395
JD 385 IF PEEK(53279)<>7 THEN GOSUB 1480:
SWITCH=1:GOTO 395
HK 390 IF BOARD(CRX,CRY)<>0 THEN SOUND 0,
41,2,6:WAIT=10:GOSUB 1460:SOUND 0,0,0,
0:GOTO 330
AG 395 RETURN
XO 400 REM VALID? & SCORE
YG 405 LEGAL=0:ENEMY=2:IF TURN=2 THEN ENE
MY=1
ZC 410 IF BOARD(CRX,CRY)<>0 THEN 495
KA 415 FOR C=-1 TO 1:FOR C1=-1 TO 1:IF C=
0 AND C1=0 THEN 490
DK 420 IF BOARD(CRX+C,CRY+C1)<>ENEMY THEN
490
MT 425 X2=CRX+C:Y2=CRY+C1:LAST=0
ZN 430 IF BOARD(X2+C,Y2+C1)=ENEMY THEN X2
=X2+C:Y2=Y2+C1:GOTO 430
RK 435 IF BOARD(X2+C,Y2+C1)=0 THEN 490
KZ 440 IF CHK THEN 470
LB 445 X=31+X2*12-2:Y=1+Y2*11-2:IF BOARD(
X2,Y2)<>TURN THEN SCORE(TURN)=SCORE(TU
RN)+1
NU 450 IF BOARD(X2,Y2)=ENEMY THEN SCORE(E
NEMY)=SCORE(ENEMY)-1
CG 455 BOARD(X2,Y2)=TURN
GU 460 IF TURN=1 THEN GOSUB 30
PB 465 IF TURN=2 THEN GOSUB 55
WV 470 IF LAST THEN 485
KV 475 X2=X2-C:Y2=Y2-C1:IF X2=CRX AND Y2=
CRY THEN LAST=1:GOTO 440
OV 480 GOTO 440
BN 485 LEGAL=1
LP 490 NEXT C1:NEXT C
AH 495 RETURN
QN 500 REM TURN INDICATOR
DC 505 COLOR 0:IF TURN=2 THEN 520
UG 510 PLOT 130,35:DRAWTO 140,45:DRAWTO 1
30,55:PLOT 130,45:DRAWTO 140,45
XA 515 COLOR 1:PLOT 28,35:DRAWTO 18,45:DR
AWTO 28,55:PLOT 18,45:DRAWTO 28,45:GOT
0 530
WU 520 PLOT 28,35:DRAWTO 18,45:DRAWTO 28,
55:PLOT 18,45:DRAWTO 28,45
LC 525 COLOR 2:PLOT 130,35:DRAWTO 140,45:
DRAWTO 130,55:PLOT 130,45:DRAWTO 140,4
5
ND 530 COLOR 0:LOCATE 155,89,D:RETURN
SE 535 REM WINNER!
ZU 540 IF SCORE(1)>SCORE(2) THEN COL=7:ME
S$="Purple Wins!"
CX 545 IF SCORE(2)>SCORE(1) THEN COL=12:M
ES$="Green Wins!"
UR 550 IF SCORE(2)=SCORE(1) THEN COL=5:ME
S$="Tie Score!"
LA 555 GOSUB 585:POSITION 0,0:? SCORE(1):
MESS$:SCORE(2):GOSUB 605
EL 560 FOR C=15 TO 0 STEP -1:SETCOLOR 2,C
OL,C
IH 565 FOR C1=1 TO 6: SOUND 0,253+C1,2,C:N
EXT C1:NEXT C
ZR 570 IF STRIG(0)=1 AND STRIG(1)=1 THEN
560
SE 575 SOUND 0,0,0,0:RETURN
GK 580 REM TEXT WINDOW
AT 585 POKE 87,0:TOP=PEEK(88)+PEEK(89)*25
6
NP 590 TOP=TOP+3681:POKE 88,TOP-(INT(TOP/
256)*256):POKE 89,INT(TOP/256):POSITIO
N 0,0
AI 595 RETURN
DI 600 REM GRAPHICS WINDOW
LI 605 POKE 87,7:TOP=TOP-3681:POKE 88,TOP
-(INT(TOP/256)*256):POKE 89,INT(TOP/25
6):POSITION 0,0
ZE 610 RETURN
ZU 615 REM CHK FOR LEGAL MOVES
MA 620 YES=0:CHK=1:XT=CRX:YT=CRY:GOSUB 58
5:?"":GOSUB 605
LK 625 FOR CRX=1 TO 8:FOR CRY=1 TO 8:IF B
OARD(CRX,CRY)=0 THEN GOSUB 405:IF LEGA
L THEN YES=1
KS 630 NEXT CRY:NEXT CRX
YO 635 IF NOT YES THEN 650

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continued on next page

LD 640 IF YES THEN GOSUB 585:POSITION 0,0
?:
":GOSUB 605
Yes you do!
UD 645 SOUND 0,41,2,6:WAIT=160:GOSUB 1460
:SOUND 0,0,0,0
WK 650 CRX=XT:CRY=YT:RETURN
KO 655 REM RECALC. VALUE & COMPUTER MOVE
WC 660 GOSUB 585:POSITION 0,0:?"
Thinking..":GOSUB 605
SR 665 ENEMY=3-TURN:FOR C1=1 TO 8:FOR C1=1
TO 8 STEP 7:IF BOARD(C1,C1)>>0 THEN PF
=PF+1
KM 670 IF BOARD(C1,C1)>>0 THEN PF=PF+1
GJ 675 NEXT C1:NEXT C:IF PF=0 THEN 1390
MU 680 REM CORNER BORDERS
ZF 685 FOR C=2 TO 7 STEP 5:FOR C1=1 TO 8
STEP 7:VALUE(C,C1)=6:VALUE(C1,C)=6:NEX
T C1:NEXT C
YJ 690 REM OPPONENT BORDERS
US 695 FOR C=3 TO 6:FOR C1=1 TO 8 STEP 7:
IF BOARD(C-1,C1)=TURN OR BOARD(C+1,C1)
=TURN THEN VALUE(C,C1)=5
MH 700 IF BOARD(C1,C-1)=TURN OR BOARD(C1,
C+1)=TURN THEN VALUE(C1,C)=5
LP 705 NEXT C1:NEXT C
AG 710 REM IN BETWEEN MOVES
PM 715 FOR C=3 TO 6:FOR C1=1 TO 8 STEP 7:
IF BOARD(C,C1)>>0 THEN 880
KT 720 IF BOARD(C-1,C1)>>TURN OR BOARD(C+
1,C1)>>TURN THEN 770
OR 725 S=0:FOR C2=C-2 TO 1 STEP -1:IF BOA
RD(C2,C1)=0 AND S=0 THEN S=1
ZP 730 IF BOARD(C2,C1)=ENEMY AND BOARD(C2
-1,C1)=TURN AND S=0 THEN S=1
TS 735 NEXT C2:IF S=1 THEN S=0:GOTO 745
RW 740 GOTO 880
AM 745 FOR C2=C+2 TO 8:IF BOARD(C2,C1)=0
AND S=0 THEN S=1
PQ 750 IF BOARD(C2,C1)=ENEMY AND BOARD(C2
+1,C1)=TURN AND S=0 THEN S=1
ST 755 NEXT C2:IF S=1 THEN VALUE(C,C1)=2:
GOTO 880
BX 760 VALUE(C,C1)=5:GOTO 880
FY 765 REM CHECK IN-BETWEEN DEFENSE
SD 770 IF BOARD(C-1,C1)>>ENEMY OR BOARD(C
+1,C1)>>TURN THEN 825
YP 775 S=0:FOR C2=C+2 TO 8:IF BOARD(C2,C1
)=0 AND S=0 THEN S=1
TE 780 IF BOARD(C2,C1)=ENEMY AND S=0 THEN
S=2
GQ 785 IF BOARD(C2,C1)=0 AND S=2 THEN S=3
DM 790 IF BOARD(C2,C1)=TURN AND S=2 THEN
S=1
QC 795 NEXT C2:IF S=1 THEN S=0:GOTO 805
RP 800 GOTO 880
VY 805 FOR C2=C-2 TO 1 STEP -1:IF BOARD(C
2,C1)=TURN AND S=0 THEN S=1
BW 810 IF BOARD(C2,C1)=0 AND S=0 THEN S=2
PN 815 NEXT C2:IF S=1 THEN VALUE(C,C1)=1:
GOTO 825
AH 820 VALUE(C,C1)=5
WG 825 IF BOARD(C+1,C1)>>ENEMY OR BOARD(C
-1,C1)>>TURN THEN 880
OF 830 S=0:FOR C2=C-2 TO 1 STEP -1:IF BOA
RD(C2,C1)=0 AND S=0 THEN S=1
TK 835 IF BOARD(C2,C1)=ENEMY AND S=0 THEN
S=2
FU 840 IF BOARD(C2,C1)=0 AND S=2 THEN S=3
DS 845 IF BOARD(C2,C1)=TURN AND S=2 THEN
S=1
OK 850 NEXT C2:IF S=1 THEN S=0:GOTO 860
SO 855 GOTO 880
RB 860 FOR C2=C+2 TO 8:IF BOARD(C2,C1)=TU
RN AND S=0 THEN S=1
CV 865 IF BOARD(C2,C1)=0 AND S=0 THEN S=2
QY 870 NEXT C2:IF S=1 THEN VALUE(C,C1)=1:
GOTO 880
UW 875 VALUE(C,C1)=5
KF 880 IF BOARD(C1,C1)>>0 THEN 1030
FF 885 IF BOARD(C1,C-1)>>TURN OR BOARD(C1
,C+1)>>TURN THEN 930
OU 890 S=0:FOR C2=C-2 TO 1 STEP -1:IF BOA
RD(C1,C2)=0 AND S=0 THEN S=1
ZL 895 IF BOARD(C1,C2)=ENEMY AND BOARD(C1
,C2-1)=TURN AND S=0 THEN S=1
FU 900 NEXT C2:IF S>>1 THEN 1030
YG 905 S=0:FOR C2=C+2 TO 8:IF BOARD(C1,C2
)=0 AND S=0 THEN S=1
UB 910 IF BOARD(C1,C2)=ENEMY AND BOARD(C1
,C2+1)=TURN AND S=0 THEN S=1
TE 915 NEXT C2:IF S=1 THEN VALUE(C1,C)=2:
GOTO 925
AU 920 VALUE(C1,C)=5
LR 925 GOTO 1030
TZ 930 IF BOARD(C1,C-1)>>ENEMY OR BOARD(C
1,C+1)>>TURN THEN 980
YM 935 S=0:FOR C2=C+2 TO 8:IF BOARD(C1,C2
)=0 AND S=0 THEN S=1
TB 940 IF BOARD(C1,C2)=ENEMY AND S=0 THEN
S=2
GN 945 IF BOARD(C1,C2)=0 AND S=2 THEN S=3
DJ 950 IF BOARD(C1,C2)=TURN AND S=2 THEN
S=1
GT 955 NEXT C2:IF S>>1 THEN 1030
FG 960 S=0:FOR C2=C-2 TO 1 STEP -1:IF BOA
RD(C1,C2)=TURN AND S=0 THEN S=1
CZ 965 IF BOARD(C1,C2)=0 AND S=0 THEN S=2
TE 970 NEXT C2:IF S=1 THEN VALUE(C1,C)=1:
GOTO 980
BU 975 VALUE(C1,C)=5
AK 980 IF BOARD(C1,C+1)>>ENEMY OR BOARD(C
1,C-1)>>TURN THEN 1030
PI 985 S=0:FOR C2=C-2 TO 1 STEP -1:IF BOA
RD(C1,C2)=0 AND S=0 THEN S=1
TL 990 IF BOARD(C1,C2)=ENEMY AND S=0 THEN
S=2
GX 995 IF BOARD(C1,C2)=0 AND S=2 THEN S=3
WF 1000 IF BOARD(C1,C2)=TURN AND S=2 THEN
S=1
UG 1005 NEXT C2:IF S>>1 THEN 1030
SZ 1010 S=0:FOR C2=C+2 TO 8:IF BOARD(C1,C
2)=TURN AND S=0 THEN S=1
LF 1015 IF BOARD(C1,C2)=0 AND S=0 THEN S=2
MD 1020 NEXT C2:IF S=1 THEN VALUE(C1,C)=1:
GOTO 1030
OW 1025 VALUE(C1,C)=5
EA 1030 NEXT C1:NEXT C
MK 1035 REM EDGE UNDER ATTACK?
JK 1040 FOR C=3 TO 6:FOR C1=1 TO 8 STEP 7:
IF BOARD(C,C1)>>ENEMY OR BOARD(C-1,C1
)>>TURN THEN 1075
AG 1045 S=0:FOR C2=C+1 TO 8:IF BOARD(C2,C
1)=0 AND S=0 THEN S=1
VT 1050 IF BOARD(C2,C1)=TURN AND S=0 THEN
S=2
GB 1055 NEXT C2:IF S>>1 THEN 1075
JB 1060 S=0:FOR C2=C-2 TO 2 STEP -1:IF BO
ARD(C2,C1)=ENEMY AND S=0 THEN S=1
WJ 1065 IF BOARD(C2,C1)=0 AND BOARD(C2-1,
C1)>>TURN AND S=0 THEN S=1:VALUE(C2,C1
)=1
ZY 1070 NEXT C2
CH 1075 IF BOARD(C,C1)>>ENEMY OR BOARD(C+
1,C1)>>TURN THEN 1110
IL 1080 S=0:FOR C2=C-1 TO 1 STEP -1:IF BO
ARD(C2,C1)=0 AND S=0 THEN S=1
WW 1085 IF BOARD(C2,C1)=TURN AND S=0 THEN
S=2
UJ 1090 NEXT C2:IF S>>1 THEN 1110
BB 1095 S=0:FOR C2=C+2 TO 7:IF BOARD(C2,C
1)=ENEMY AND S=0 THEN S=1
SF 1100 IF BOARD(C2,C1)=0 AND BOARD(C2+1,
C1)>>TURN AND S=0 THEN S=1:VALUE(C2,C1
)=1
ZZ 1105 NEXT C2
VK 1110 IF BOARD(C1,C1)>>ENEMY OR BOARD(C1
,C-1)>>TURN THEN 1145
AC 1115 S=0:FOR C2=C+1 TO 8:IF BOARD(C1,C
2)=0 AND S=0 THEN S=1
UP 1120 IF BOARD(C1,C2)=TURN AND S=0 THEN
S=2
DN 1125 NEXT C2:IF S>>1 THEN 1145
IX 1130 S=0:FOR C2=C-2 TO 2 STEP -1:IF BO
ARD(C1,C2)=ENEMY AND S=0 THEN S=1
UZ 1135 IF BOARD(C1,C2)=0 AND BOARD(C1,C2
-1)>>TURN AND S=0 THEN S=1:VALUE(C1,C2
)=1
ZR 1140 NEXT C2
QY 1145 IF BOARD(C1,C1)>>ENEMY OR BOARD(C1
,C+1)>>TURN THEN 1180
IH 1150 S=0:FOR C2=C-1 TO 1 STEP -1:IF BO
ARD(C1,C2)=0 AND S=0 THEN S=1
WS 1155 IF BOARD(C1,C2)=TURN AND S=0 THEN
S=2
BX 1160 NEXT C2:IF S>>1 THEN 1180
AX 1165 S=0:FOR C2=C+2 TO 7:IF BOARD(C1,C
2)=ENEMY AND S=0 THEN S=1
RR 1170 IF BOARD(C1,C2)=0 AND BOARD(C1,C2
+1)>>TURN AND S=0 THEN S=1:VALUE(C1,C2
)=1
AU 1175 NEXT C2
ER 1180 NEXT C1:NEXT C
LU 1185 REM COMPUTER HOLDS CORNERS?

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YN 1190 A=1:B=1:AV=1:BV=1:AE=7:BE=7
SR 1195 IF BOARD(A,B)<>0 THEN VALUE(A+AV,
B+BV)=4
PD 1200 IF BOARD(A,B)<>ENEMY THEN 1250
FG 1205 S=0:FOR C2=A+AV TO AE STEP AV:IF
BOARD(C2,B)=0 AND S=0 THEN VALUE(C2,B)
=2:S=1
GU 1210 IF BOARD(C2,B)=TURN AND S=0 THEN
S=2
ZE 1215 IF BOARD(C2,B)=ENEMY AND S=2 THEN
S=1
MX 1220 IF BOARD(C2,B)=0 AND S=2 THEN VAL
UE(C2,B)=2:S=1
JP 1225 NEXT C2:S=0:FOR C2=B+BV TO BE STE
P BV:IF BOARD(A,C2)=0 AND S=0 THEN VAL
UE(A,C2)=2:S=1
GE 1230 IF BOARD(A,C2)=TURN AND S=0 THEN
S=2
YN 1235 IF BOARD(A,C2)=ENEMY AND S=2 THEN
S=1
KI 1240 IF BOARD(A,C2)=0 AND S=2 THEN VAL
UE(A,C2)=2:S=1
AN 1245 NEXT C2
ON 1250 IF A=1 AND B=1 THEN B=8:BV=-1:BE=
2:GOTO 1195
QW 1255 IF A=1 AND B=8 THEN A=8:AV=-1:AE=
2:GOTO 1195
GH 1260 IF A=8 AND B=8 THEN B=1:BV=1:BE=?
:GOTO 1195
UU 1265 REM CORNER IN-BETWEEN MOVES?
LG 1270 A=1:B=1:V=1:E=7
PI 1275 IF BOARD(A,B)<>0 THEN 1310
KZ 1280 IF BOARD(A,B-V)<>TURN OR BOARD(A,
B+V)<>TURN THEN 1310
MF 1285 S=0:FOR C2=B+2*V TO E STEP V:IF B
BOARD(A,C2)=0 AND S=0 THEN S=1
XN 1290 IF BOARD(A,C2)=ENEMY AND S=0 THEN
S=2
IN 1295 IF BOARD(A,C2)=TURN AND S=2 THEN
S=1
JL 1300 IF BOARD(A,C2)=0 AND S=2 THEN S=3
MM 1305 NEXT C2:IF S<2 THEN VALUE(A,B)=2
RI 1310 IF BOARD(B,A)<>0 THEN 1340
LR 1315 S=0:FOR C2=B+2*V TO E STEP V:IF B
BOARD(C2,A)=0 AND S=0 THEN S=1
HZ 1320 IF BOARD(C2,A)=ENEMY AND S=0 THEN
S=2
HZ 1325 IF BOARD(C2,A)=TURN AND S=2 THEN
S=1
JZ 1330 IF BOARD(C2,A)=0 AND S=2 THEN S=3
MT 1335 NEXT C2:IF S<2 THEN VALUE(B,A)=2
GL 1340 IF A=1 AND B=2 THEN B=7:V=-1:E=2:
GOTO 1275
FZ 1345 IF A=1 AND B=7 THEN A=8:V=1:E=7:G
OTO 1275
JN 1350 IF A=8 AND B=2 THEN B=7:V=-1:E=2:
GOTO 1275
MA 1355 REM CORNERS VULNERABLE?
KK 1360 EN=ENEMY
GI 1365 IF BOARD(1,1)=0 AND BOARD(2,2)=TU
RN THEN IF BOARD(1,3)=EN OR BOARD(3,1)
=EN THEN VALUE(1,3)=5:VALUE(3,1)=5
FI 1370 IF BOARD(1,8)=0 AND BOARD(2,7)=TU
RN THEN IF BOARD(1,6)=EN OR BOARD(3,8)
=EN THEN VALUE(1,6)=5:VALUE(3,8)=5
DQ 1375 IF BOARD(8,1)=0 AND BOARD(7,2)=TU
RN THEN IF BOARD(6,1)=EN OR BOARD(8,3)
=EN THEN VALUE(6,1)=5:VALUE(8,3)=5
YA 1380 IF BOARD(8,8)=0 AND BOARD(7,7)=TU
RN THEN IF BOARD(6,8)=EN OR BOARD(8,6)
=EN THEN VALUE(6,8)=5:VALUE(8,6)=5
RT 1385 REM FIGURE COMPUTER MOVE
MU 1390 GOSUB 1445:CXT=CRX:CYT=CRY:U=0:EN
EMY=3-TURN:CRX=1:CRY=1
YU 1395 IF VALUE(CRX,CRY)<>U THEN 1415
EL 1400 IF BOARD(CRX,CRY)<>0 THEN 1415
OC 1405 S=0:FOR C1=-1 TO 1:FOR C1=-1 TO 1:
IF BOARD(CRX+C,CRY+C1)=ENEMY THEN S=S+
1
OL 1410 NEXT C1:NEXT C:IF S>0 THEN CHK=0:
GOSUB 405:IF LEGAL THEN STK=0:GOTO 143
5
HO 1415 CRY=CRY+1:IF CRY>8 THEN CRY=1:CRX
=CRX+1
XZ 1420 IF CRX>8 THEN CRY=1:CRX=1:U=U+1
PT 1425 IF U<7 THEN 1395
FC 1430 GOSUB 585:POSITION 0,0:?"I
have no valid move ":"WAIT=160:
GOSUB 1460:GOSUB 605:STK=STK+1
EF 1435 CRX=CXT:CRY=CYT:RETURN

KD 1440 REM RESET ATTRACT MODE
GK 1445 IF PEEK(77)>50 THEN BACK=PEEK(559
):POKE 77,0:POKE 559,0:POKE 559.BACK
AW 1450 RETURN
BG 1455 REM WAIT
HU 1460 POKE 20,0
YN 1465 IF PEEK(20)<WAIT THEN 1465
BC 1470 RETURN
FZ 1475 REM SWITCH PLAYERS
WR 1480 OPEN #4,4,0,"K":GOSUB 585
JT 1485 POSITION 0,0:?" Switch Purple to
";
TK 1490 IF PP$="H" THEN ? "Computer (Y,N)?
":GET #4,A:IF A=89 THEN PP$="C":G
OTO 1500
GQ 1495 IF PP$="C" THEN ? "Human (Y,N)?
":GET #4,A:IF A=89 THEN PP$="H"
MH 1500 IF A<>89 AND A<>78 THEN 1485
YW 1505 POSITION 0,0:?" Switch Green to
";
NO 1510 IF GP$="H" THEN ? "Computer (Y,N)?
":GET #4,A:IF A=89 THEN GP$="C":G
OTO 1520
FM 1515 IF GP$="C" THEN ? "Human (Y,N)?
":GET #4,A:IF A=89 THEN GP$="H"
DW 1520 IF A<>89 AND A<>78 THEN 1505
UY 1525 GOSUB 605:CLOSE #4:RETURN
QG 1530 REM MAIN PROGRAM
DZ 1535 CLR :GOSUB 170:M=PEEK(106):M=M-16
:POKE 106,M
YX 1540 GOSUB 80
HN 1545 OPEN #4,4,0,"K":G
IO 1550 GRAPHICS 17:GOSUB 1700:POKE 711,2
4:POKE 712,96
JZ 1555 POSITION 0,5:?" PURPLE Player
HUMAN OR COMPUTER? "
BK 1560 GET #4,A:PP$=CHR$(A):IF PP$<>"H"
AND PP$<>"C" THEN 1550
HJ 1565 POSITION 0,8:?" GREEN Player h
UMAN OR COMPUTER? "
KW 1570 GET #4,A:GP$=CHR$(A):IF GP$<>"H"
AND GP$<>"C" THEN 1565
HO 1575 GRAPHICS 17:GOSUB 1700
FX 1580 POSITION 0,5:?" HANDICAP (Y OR
N)?":GET #4,A:IF A<>78 AND A<>89 THEN
1580
HM 1585 IF A=78 THEN 1600
ZS 1590 POSITION 0,8:?" IN FAVOR OF (P
OR GREEN)":GET #4,A:HCS$=CHR$(A):I
F A<>89 AND A<>71 THEN 1590
CH 1595 POSITION 0,11:?" HOW MANY CORN
ERS (0 OR 2)":GET #4,C:IF C<49 OR C>52 T
HEN 1595
IR 1600 CLOSE #4:GOSUB 225
WN 1605 TURN=1:IF PP$="C" THEN GOSUB 505:
GOSUB 660:GOTO 1640
XZ 1610 GOSUB 585:POSITION 0,0:?" Press
SPACE BAR if no legal move":GOSUB 605

JS 1615 GOSUB 505:GOSUB 330:IF PEEK(764)=
33 THEN POKE 764,255:GOSUB 620:IF NOT
YES THEN CHK=0:STK=STK+1:GOTO 1640
PC 1620 IF CHK THEN CHK=0:GOTO 1605
XB 1625 IF SWITCH THEN 1605
UP 1630 GOSUB 405:IF NOT LEGAL THEN SOUN
D 0,41,2,6:FOR C=1 TO 30:NEXT C:SOUND
0,0,0,0:GOTO 1615
AR 1635 STK=0
KV 1640 IF SCORE(1)+SCORE(2)=64 OR SCORE(
1)=0 OR SCORE(2)=0 OR STK=2 THEN 1685
AM 1645 TURN=2:IF GP$="C" THEN GOSUB 505:
GOSUB 660:GOTO 1680
YL 1650 GOSUB 585:POSITION 0,0:?" Press
SPACE BAR if no legal move":GOSUB 605

BC 1655 GOSUB 505:GOSUB 330:IF PEEK(764)=
33 THEN POKE 764,255:GOSUB 620:IF NOT
YES THEN CHK=0:STK=STK+1:GOTO 1680
UI 1660 IF CHK THEN CHK=0:GOTO 1645
BB 1665 IF SWITCH THEN 1645
JF 1670 GOSUB 405:IF NOT LEGAL THEN SOUN
D 0,41,2,6:FOR C=1 TO 30:NEXT C:SOUND
0,0,0,0:GOTO 1655
BD 1675 STK=0
XJ 1680 IF SCORE(1)+SCORE(2)<>64 AND SCOR
E(1)<>0 AND SCORE(2)<>0 AND STK<2 THEN
1690
PW 1685 POKE 53248,0:GOSUB 540:GOSUB 175:
GOTO 1545
TN 1690 GOTO 1605
RN 1700 POKE 708,86:POKE 709,196:POKE 710
,232:GOSUB 15:RETURN

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