

```

1 *
2 *          Compurobot Control program          *
3 *          -----                          *
4 *
5
6 RESTORE
7 TROFF : KEY OFF : ' ** Turn trace off & function key line **
8 ON ERROR GOTO 30000 : ' ** Enable standard error trapping **
9 FOR I=1 TO 10 : KEY I,"" : NEXT : ' ** Blank out function keys **
10
11 GOSUB 9110 : ' ** Clear screen and display menu **
12 ** Define functions to work out Row & column positions **
13 DEF FN R(K)=INT((K-1)/40)+4
14 DEF FN C(L)=L-INT((L-1)/40)*40
15 *
16 *          ENG is the maximum number of commands allowed in each *
17 *          program.                                             *
18 *
19 ENG=129
20 G$=CHR$(7) : ' ** CHR$(7)=Bell=Ctrl G **
21 *
22 *
23 *          A is an array of valid characters & their assigned values *
24 *          B is an array of all characters in program           *
25 *
26 *
27 DIM A(40),B(129),D(129)
28 FOR I=1 TO 40 : ' ** Read data for key press into array **
29   READ A(I)
30
31 NEXT
32
33 DATA 177,178,179,180,181,182,183,184
34 DATA 255,255,255,255,255,255,255,255
35 DATA 1,194,2,202,197,193,203
36 DATA 5,199,255,255,198,201,255
37 DATA 3,255,255,196,192,4,255
38 DATA 255,255,205
39 L=1 : VIRT=1
40 *
41 *          Accept commands from keyboard                       *
42 *
43 *
44 LOCATE 9,1 : PRINT "SYSTEM COMMAND:"
45 : LOCATE FN R(VIRT),FN C(VIRT),1
46
47 DEM=0 : VDEM=0
48 FOR I=1 TO 40 : ' ** A continuous loop to accept operator**
49   ISOUN=440+(I-1)*53 : SOUND ISOUN,5
50   KYY$=INKEY$ : IF KYY$="" THEN 187
51   KY = ASC(KYY$)+128 : IF KY>128 THEN SOUND ISOUN,0 : BEEP
52   : GOTO 202
53
54 NEXT I : GOTO 181
55
56 ***          Accept operand          ***
57
58 LOCATE 9,1 : PRINT "SYSTEM COMMAND:"
59 : LOCATE FN R(VIRT),FN C(VIRT),1
60
61 GOSUB 20000
62
63 ***          Decide which routine to access          ***
64
65 IF KY=209 THEN 5000 : ' ** File directory (Q)          **
66 IF KY=206 THEN 6000 : ' ** Insert (N)                 **
67 IF KY=160 THEN 4000 : ' ** Delete (SPACE)             **
68 IF KY=136 THEN 1030 : ' ** BACK SPACE                 **
69 IF KY=149 THEN 3020 : ' ** NAK or Error                **
70 *
71 *          Check for validity of character                *
72 *
73 *
74 IF KY>216 OR KY<177 THEN 1100 : ' ** Choice < ASC("X") or > ASC("1") **
75 *

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224 *      Extract a character value from array A.
226 *****
230 I=A(KY-176)
240 IF I=255 THEN 1100      : ' ** Invalid key pressed **
241 *****
242 ***      The sub-routines that this ON GOTO statement calls are:
243 ***      <1> Save program to disk
244 ***      <2> Clear memory
245 ***      <3> Load program from disk
246 ***      <4> Transmit program to Compurobot
247 ***      <5> Delete a disk file
248 *****
250 ON I GOTO 510,5,660,790,990
251 **      Fall through to this line if I>5
252 IF L=VIRT THEN LO=L : D=DEM : GOTO 260
: ' ** LO is the char. length of          the program **
254 LO=VIRT : D=VDEM
255 **      Check to see if the program is full
260 IF LO=ENG THEN 1170
265 **      If only one character in program then skip next few lines
270 IF LO=1 THEN J=0 : GOTO 300
275 **      Store the value of the last function of program in variable J
280 J=B(LO-2+D)
290 IF D<>0 THEN 350 : ' *** Check to see whether an operator or operand
300 IF KY<185 THEN 1100 : ' *** Check for an invalid key entry
310 IF KY<>216 THEN 341 : ' ** If ky<> Multiply then 341
315 **      Make sure person multiplies only once in any single command
320 IF J=205 THEN 1120
324 *****
325 **      If person has previously issued a Gear command or there
327 **      is only on character in command so far then do not allow
328 **      a multiply
329 *****
330 IF J=203 OR LO=1 THEN 1130
332 *****
334 *      Store character value in array B
336 *****
340 GOTO 460
341 IF KY<>203 THEN 460 : ' ** If ky<> "K"
342 IF B(LO+1)=177 THEN B(LO+1)=206
343 IF B(LO+1)=178 THEN B(LO+1)=205
344 GOTO 460
350 IF J=202 AND KY<>177 THEN 1140
360 IF J<>203 THEN 400
370 IF KY=177 THEN I=206 : GOTO 460
380 IF KY=178 THEN I=205 : GOTO 460
390 GOTO 1150
400 IF J<>201 THEN 450
410 IF KY=194 THEN I=202 : GOTO 460
420 IF KY=198 THEN I=201 : GOTO 460
430 IF KY=201 THEN I=204 : GOTO 460
440 IF KY=204 THEN I=203 : GOTO 460
450 IF KY>185 THEN 1160
452 *****
454 *      Store value of key pressed in array B
456 *****
460 B(LO)=I
462 D=D+1
464 IF D=2 THEN D=0
480 LO=LO+1

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481 IF L<>VIRT THEN 2000
483 L=LO : DEM=D : VIRT=LO : VDEM=D
484 LOCATE FN R(LO-1),FN C(LO-1) : PRINT KYYS$
485 PRINT G$
500 GOTO 190
510 IF L=1 THEN 1180
512 *
514 * Save program to disk *
516 *
520 PRINT G$
530 LOCATE 9,1 : PRINT "FILENAME " : GOSUB 32000
536 F$="A:"+F$
540 OPEN "O",£1,F$
580 PRINT £1,DEM
590 PRINT £1,L
600 FOR I=1 TO L-1
610 PRINT £1,L
611 PRINT £1,SCREEN (FN R(I),FN C(I))
630 NEXT
640 CLOSE £1
650 GOTO 190
652 *
654 * Load program from disk *
656 *
660 PRINT G$
670 LOCATE 9,1 : PRINT "FILENAME " : GOSUB 32000
676 F$="A:"+F$
690 OPEN "I",£1,F$
692 FOR I=1 TO L
693 LOCATE FN R(I),FN C(I) : PRINT " "
694 NEXT
700 INPUT £1,DEM : VDEM=DEM
710 INPUT £1,L : VIRT=L
720 FOR I=1 TO L-1
730 INPUT £1,B(I)
740 INPUT £1,J
750 LOCATE FN R(I),FN C(I) : PRINT CHR$(J)
760 NEXT
780 GOTO 640
790 IF L=1 THEN 1180
800 IF DEM=1 THEN 1190
802 *
804 * Transmit program to Compurobot *
806 *
810 PRINT G$
820 LOCATE 9,1 : PRINT "PLUG IN SOCKET & PRESS RECEIVE KEY "
830 GOSUB 20000
840 OPEN "COM1:300,N,8,2,RS,DS,CS,CD" AS £2
900 FOR I=1 TO L-1
910 PRINT £2,CHR$(B(I));
920 NEXT
925 PRINT £2,"O"
930 CLOSE £2
940 PRINT G$
950 LOCATE 9,1 : PRINT "UNPLUG & PRESS GO KEY "
960 FOR I=0 TO 1000
970 NEXT
980 GOTO 190
982 *
984 * Delete a file *

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986 * *****
990 PRINT G$
1000 LOCATE 9,1 : PRINT "FILENAME" " : GOSUB 32000
1006 F$="A:"+F$
1010 KILL F$
1020 GOTO 190
1030 IF VIRT=1 THEN VDEM=0 : GOTO 190
1080 VIRT=VIRT-1
1081 VDEM=VDEM+1
1082 IF VDEM=2 THEN VDEM=0
1090 GOTO 190
1092 * *****
1094 * Display user error messages & beep *
1096 * *****
1100 LOCATE 9,1 : PRINT "INVALID KEY ENTRY" " : GOTO 1200
1110 LOCATE 9,1 : PRINT "FUNCTION ONLY" " : GOTO 1200
1120 LOCATE 9,1 : PRINT "MULTIPLY ONCE ONLY" " : GOTO 1200
1130 LOCATE 9,1 : PRINT "CANNOT MULTIPLY" " : GOTO 1200
1140 LOCATE 9,1 : PRINT "SHOULD BE DANCE 1" " : GOTO 1200
1150 LOCATE 9,1 : PRINT "GEAR 1 OR 2 ONLY" " : GOTO 1200
1160 LOCATE 9,1 : PRINT "NUMBER ONLY" " : GOTO 1200
1170 LOCATE 9,1 : PRINT "PROGRAM FULL" " : GOTO 1200
1180 LOCATE 9,1 : PRINT "PROGRAM EMPTY" " : GOTO 1200
1190 LOCATE 9,1 : PRINT "PROGRAM INCOMPLETE" " : GOTO 1200
1200 PRINT G$
1210 PRINT G$
1220 GOTO 960
2000 IF D=0 OR KY=205 THEN 3000
2005 IF L=LO THEN 3000
2007 LOCATE 9,1
2010 IF SCREEN (FN R(LO),FN C(LO)+128 > 184 THEN PRINT
" " : GOTO 1200
"MUSIC ONLY " : GOTO 1200
2020 IF KY=196 AND SCREEN (FN R(LO),FN C(LO)+128 <> 177 THEN 1140
2030 IF KY=199 AND SCREEN (FN R(LO),FN C(LO))+128>178 THEN 1150
2040 IF L=LO+1 THEN 3000
2050 IF KY=199 AND SCREEN (FN R(LO+1),FN C(LO+1)=88 THEN 1130
2060 IF KY=216 AND SCREEN (FN R(LO+1),FN C(LO+1))=88 THEN 1130
3000 LOCATE FN R(LO-1),FN C(LO-1) : PRINT KYY$
3010 VIRT=LO : VDEM=D : PRINT G$ : GOTO 3080
3020 IF L=VIRT THEN 3090
3040 VIRT=VIRT+1
3045 IF L<>VIRT THEN 1081
3070 GOTO 3090
3080 IF L<>VIRT THEN 190
3090 VDEM=DEM : GOTO 1090
3092 * *****
3094 * Delete a character *
3096 * *****
3097 ** If there is only one character in the program then don't **
3098 ** do anything **
4000 IF L=1 THEN 190
4010 PRINT G$
4020 IF L=VIRT OR L=VIRT+1 THEN 4030
4025 GOTO 4100
4030 LOCATE FN R(L),FN C(L) : PRINT " "
4040 L=L-1 : VIRT=L
4045 LOCATE FN R(L),FN C(L) : PRINT " "
4050 DEM=DEM+1
4060 IF DEM=2 THEN DEM=0
4070 VDEM=DEM

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4090 GOTO 190
4100 VIRT=VIRT-VDEM : VDEM=0
4110 IF SCREEN (FN R(VIRT+2),FN C(VIRT+2))+128=216 THEN L=L-4 : DA=4
      : GOTO 4130
4120 L=L-2 : DA=2
4130 I=VIRT
4140 IF I<>L THEN 4200
4160 FOR J=0 TO DA
      LOCATE FN R(I+J),FN C(I+J) : PRINT " "
4180 NEXT
4182 IF L=1 THEN 190
4184 IF I=VIRT THEN VIRT=VIRT-1 : VDEM=1
4190 GOTO 190
4200 B(I)=B(I+DA)
4210 LOCATE FN R(I),FN C(I) : PRINT CHR$(SCREEN(FN R(I+DA) ,FN C(I+DA)))
4220 I=I+1
4230 GOTO 4140
4340 IF I<>L THEN 4200
4350 *
4360 *      Display a file directory
4370 *
5000 PRINT G$
5010 FOR I=1 TO L
5020     D(I)=SCREEN (FN R(I),FN C(I))
5030 NEXT
5060 CLS
5070 FILES "A:*.**"
5080 GOSUB 20000
5090 GOSUB 9110
5100 FOR I=1 TO L
5110     LOCATE FN R(I),FN C(I) : PRINT CHR$(D(I))
5120 NEXT
5130 GOTO 190
5140 *
5150 *      Insert a character
5160 *
6000 LOCATE 9,1
6001 IF L=1 OR L=VIRT THEN PRINT "NO INSERT"
      : GOTO 1200
6005 IF L>127 THEN PRINT "PROGRAM FULL"
      : GOTO 1200
6007 PRINT G$
6008 LOCATE 9,1
6010 PRINT "PROGRAM INSERT"
      " : GOSUB 18000
6015 LOCATE 9,1
6020 IF Z$="N" THEN 190
6030 IF LEN(Z$)=2 THEN 6085
6040 PRINT "ENTER CORRECT COMMAND ONLY"
      "
6050 PRINT G$;G$
6060 FOR I=1 TO 1000
6070 NEXT
6075 LOCATE 9,1
6080 GOTO 6010
6085 ZI$=LEFT$(Z$,1)
6090 I=ASC(ZI$)+128
6100 IF I>216 OR I<193 THEN 6302
6120 IF II=255 OR II<128 THEN 6302
6125 ZJ$=RIGHT$(Z$,1)
6130 J=ASC(ZJ$)+128
6140 IF J>216 OR J<177 THEN 6290

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6150 JJ=A(J-176)
6160 IF JJ=255 OR JJ<128 THEN 6290
6170 IF I<>196 THEN 6200
6180 IF J=177 THEN 6310
6190 PRINT "SHOULD BE DANCE 1"
6200 IF I<>199 THEN 6230
6210 IF J=177 OR J=178 THEN 6310
6220 PRINT "GEAR 1 OR 2 ONLY"
6230 IF I<>205 THEN 6280
6240 IF J=194 THEN JJ=202 : GOTO 6310
6250 IF J=198 THEN JJ=201 : GOTO 6310
6260 IF J=201 THEN JJ=204 : GOTO 6310
6270 IF J=204 THEN JJ=203 : GOTO 6310
6280 IF J<185 THEN 6310
6290 PRINT "NUMBER ONLY"
6300 GOTO 6050
6302 PRINT "FUNCTION ONLY"
6304 GOTO 6050
6305 IF I<>199 THEN 6370
6307 IF B(0)=205 THEN 1130
6309 GOTO 6370
6310 O=VIRT-VDEM
6320 IF I<>216 THEN 6305
6330 IF B(0)=205 THEN 1120
6340 IF O<3 THEN 1130
6350 IF B(O-2)=203 THEN 1130
6360 IF B(O-2)=205 THEN 1120
6370 PRINT G$
6420 VDEM=0 : VIRT=0 : O=L : L=L+2
6430 B(O+2)=B(O)
6440 LOCATE FN R(O+2),FN C(O+2) : PRINT CHR$(SCREEN (FN R(O),FN C(O)))
6450 O=O-1
6460 IF O>=VIRT THEN 6430
6470 LOCATE FN R(VIRT),FN C(VIRT) : PRINT CHR$(I-128)
6480 B(VIRT)=I
6490 LOCATE FN R(VIRT+1),FN C(VIRT+1) : PRINT CHR$(J-128)
6500 B(VIRT)=JJ
6510 GOTO 190
6520 * *****
6530 * * Display main menu *
6540 * *****
9110 CLS
9170 COLOR 15,0
9180 PRINT "COMPUROBOT II PROGRAM EDITOR VERSION 1"
9190 COLOR 7,0
11100 PRINT
11110 PRINT "PROGRAM COMMAND : "
11120 FOR I=0 TO 5
11130 PRINT
11140 NEXT
11150 COLOR 15,0
11160 PRINT " T=TRANSMIT C=CLEAR PROGRAM"
11170 PRINT " A=SAVE INTO DISK O=LOAD FROM DISK"
11175 PRINT " H=DELETE FILE Q=FILE DIRECTORY"
11180 PRINT " <-=CURSOR LEFT ->=CURSOR RIGHT"
11185 PRINT "N=INSERT (SPACE)=DELETE"
11190 COLOR 7,0
11200 PRINT
11210 PRINT "PROGRAM FUNCTION : "
11230 COLOR 15,0

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11240 PRINT " F=FORWARD           B=BACKWARD           S=STOP      "
11250 PRINT " L=TURN LEFT        R=TURN RIGHT      G=GEAR      "
11260 PRINT " E=CURVE LEFT       I=CURVE RIGHT    M=MUSIC     "
11270 PRINT " D=DANCE                X=MULTIPLY       "
11280 COLOR 7,0
11290 PRINT
11300 PRINT "PROGRAM NUMBER : "
11301 PRINT "1   2   3   4   5   6   7   8"
11325 LOCATE 4
11330 RETURN
18000 LOCATE 9,20 : Z$="" : I=0
18010 GOSUB 20000
18020 IF KY<177 OR KY>216 THEN 18060
18025 LOCATE 9,20+I : PRINT KYY$ : LOCATE 9,21+I
18030 Z$=Z$+KYY$
18040 I=I+1 : IF I=2 THEN RETURN
18050 GOTO 18010
18060 IF KY=141 THEN RETURN
18070 PRINT G$;G$ : LOCATE 9,20+I
18080 GOTO 18010
19000 * *****
19010 *           Accept the operand           *
19020 * *****
20000 KYY$=INKEY$ : IF KYY$="" THEN 20000
20002 IF LEN(KYY$)=1 THEN GOTO 20009
20004 IF ASC(RIGHT$(KYY$,1))=75 THEN KYY$=CHR$(8) : GOTO 20010
20006 IF ASC(RIGHT$(KYY$,1))=77 THEN KYY$=CHR$(21) : GOTO 20010
20008 GOTO 20000
20009 IF ASC(KYY$)=8 THEN 20000
20010 KY=ASC(KYY$)+128
20015 IF KY>224 AND KY<249 THEN KY=KY-32 : KYY$=CHR$(KY-128)
20040 RETURN
20050 * *****
20060 *           Display error messages trapped from line 8           *
20070 * *****
30000 LOCATE 9,1
30020 IF ERR=70 THEN PRINT "WRITE PROTECTED"           "
      : RESUME 31000
30021 IF ERR=64 THEN PRINT "BAD FILE NAME"             "
      : RESUME 31000
30022 IF ERR=25 THEN PRINT "HARDWARE ERROR"           "
      : RESUME 31000
30023 IF ERR=72 THEN PRINT "DISKETTE FAULT"           "
      : RESUME 31000
30024 IF ERR=71 THEN PRINT "DISK NOT READY"           "
      : RESUME 31000
30025 IF ERR=51 THEN PRINT "SYSTEM ERROR"             "
      : RESUME 31000
30026 IF ERR=61 THEN PRINT "DISK FULL"                "
      : RESUME 31000
30030 IF ERR=53 THEN PRINT "FILE NOT FOUND"           "
      : RESUME 31000
30040 IF ERR=68 THEN PRINT "NO COMMUNICATIONS CARD"   "
      : RESUME 31000
30050 IF ERR=57 THEN PRINT "I/O ERROR"                 " : RESUME 31000
30060 IF ERR=67 THEN PRINT "DISK FULL"                 " : RESUME 31000
30070 PRINT "COMAND ERROR"                             " : RESUME 31000
31000 PRINT G$;G$
31020 FOR I=0 TO 1000 : NEXT
31030 GOTO 190

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31100 * .....
31110 * *      Routine to accept file name (Called from lines: *
31120 * *      530, 670 & 1000) then display it *
31130 * .....
32000 LOCATE 9,20 : F$="" : I=0
32010 GOSUB 20000
32020 IF KY<193 OR KY>218 THEN 32060
32025 LOCATE 9,20+I : PRINT KYY$ : LOCATE 9,21+I
32030 F$=F$+KYY$
32040 I=I+1 : IF I=7 THEN RETURN
32050 GOTO 32010
32060 IF KY=141 THEN RETURN
32070 PRINT G$;G$
32075 LOCATE 9,20+I
32080 GOTO 32010

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