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DECUS NO.	5-277
TITLE	ICBM
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DATE	May 20, 1970
SOURCE LANGUAGE	PAL III

Sample output and input from ASR-33 is shown below with explanations in parenthesis.

(Program is started at $\emptyset 2\emptyset\emptyset_8$.)

INSTRUCTIONS

Speeds S/B < or= to $3\emptyset$.
Return key will ask questions again.
Rubout will return to system.
Note: Control keys operate only during display.
        (Control keys are return and rubout.)
        (S/B=should be less than or equal to $3\emptyset_8$.)
Rocket speed=12
UFO speed=14
        (Both speeds are octal numbers followed by a return.)

Hit a key to fire rocket.
        (Any key except the 2 control keys will fire the rocket.)

Rocket speed=(At this point I finally hit the saucer and it is asking me for another rocket speed)

UFO speed=1.

Hit a key to fire rocket.

Rocket speed=(I didn't hit it this time but hit the return key to ask the questions again.)

UFO speed=3.

Hit a key to fire rocket.

Rocket speed=13.
UFO speed=$3\emptyset$.

Hit a key to fire rocket.

(Rubout hit here and the program went to the system.)

Escape.

        Another version of the program is available if you have the following equipment: Light
        Pen, at least 4 channel multiplexor, analog to digital convertor, hardware character
        generator.

```
/ 4/15/70
TITLE   ICBM-1970  TTY VERSION
/FLYING SAUCER-ROCKET PROGRAM
/FOR THE PDP-5 COMPUTER.
*14
0014   0000   MESCNT,0
/ALL CONSTANTS AND VARIABLES USED IN ROCKET, FS.
/LOCATIONS 10-17 USED AS AUTO-INDEXING REGISTERS.
*20
0020   0000   SPEEDR,0
0021   0000   SPEEDF,0
0022   0000   MROCK,0
0023   0000   MFS,0
/ROCKET STALL CONSTANT.
0024   7213   STAL,-565
0025   7563   MRETURN,-CR
0026   0212   LINEFD,LF
0027   0215   RETURN,CR
0030   0000   SYM,0
0031   1201   MESS,MESSAG-1
0032   1663   INSTR,INSDAT-1
0033   0001   C1,1
0034   0000   COUNTR,0
0035   0000   COUNTF,0
0036   1777   CROCKP,2000-1
0037   0777   CROCK,ROCDAT-1
0040   1377   CFSDAT,FLYDAT-1
0041   2377   CFSDAP,2400-1
0042   1400   CFSDAA,FLYDAT
0043   7401   M377,-377
0044   6200   M1600,-1600
0045   0000   DIVIDE,0
/ADDRESS EXIT TO DIGITAL DECTAPE SYSTEM.
/ALTER THIS ADDRESS TO SUIT YOUR OWN USE.
0046   7600   C7600,7600
0047   0007   C7,7
0050   7740   MM40,-40
0051   0000   TEMPA,0
0052   0000   TEMPB,0
0053   0000   CNT,0
0054   7775   M3,-3
0055   0741   CRLFEN,CRLF
0056   0377   C377,377
0057   0400   CRAISE,400
0060   0020   C20,20
0061   0725   PRNT,PRNT1
0062   0600   TESTHT,TEST
0063   0040   CHIT,40
0064   0000   XR,0
0065   0206   GHOST,REST
/HIT CHECK COORDINATES.
0066   2176   CR1,TAGR1+1000
0067   2177   CR2,TAGR2+1000
0070   2502   CF1,TAGF1+1000
0071   2503   CF2,TAGF2+1000
0072   0706   CHAN,CHANG
0073   0400   ROCKET,ROCKT
0074   0500   FS,FLY
0075   0421   ROCINI,ROCIN
0076   0520   SAUINI,FSINI
0077   0443   STALL,RSTALL
```

2

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0100    0750    CHECK,CCHECK
0101    0000    TEMP,0
0102    0000    INCREM,0
0103    5203    INSTJP,5203    /JMP LOC 003 CURRENT PAGE.
0104    7700    M100,-100
0105    7500    M300,-300
                *200
                /MAIN PROGRAM TO CONTROL THE ROCKET AND UFO.
0200    4472    BEGIN,JMS I CHAN
0201    6032    KCC
                /PRINT INSTRUCTIONS THE FIRST TIME.
0202    4271    JMS GETSTR
0203    7200    CLA
0204    1103    TAD INSTJP
0205    3200    DCA BEGIN
0206    6032    REST,KCC
                /GET SPEEDS.
0207    4276    JMS GET
0210    4455    JMS I CRLFEN
0211    1020    TAD SPEEDR
0212    4214    JMS DIVID
0213    5232    JMP PUTIN
                /DIVIDE SUBROUTINE.
                /CALCULATE HOW MANY TIMES TO ADD SPEED
                /SO THE SCOPE IS NOT OVERFLOWED.
0214    0000    DIVID,0
0215    3101    DCA TEMP
0216    3045    DCA DIVIDE
0217    1101    TAD TEMP
0220    7650    SNA CLA
0221    5206    JMP REST
0222    1044    TAD M1600
0223    1101    TAD TEMP
0224    2045    ISZ DIVIDE
0225    7510    SPA
0226    5223    JMP .-3
0227    7200    CLA
0230    1045    TAD DIVIDE
0231    5614    JMP I DIVID
                /
0232    3022    PUTIN,DCA MROCK
0233    1021    TAD SPEEDF
0234    4214    JMS DIVID
0235    3023    DCA MFS
                /MAIN DISPLAY CONTROL.
                /RESET ROCKET & FLYING SAUCER.
0236    4475    START,JMS I ROCINI
0237    4476    JMS I SAUINI
0240    6031    GOON,KSF
0241    5260    JMP CONTFS
                /IF FLAG=1 SEE IF RUB-OUT OR RETURN,
                /IF NEITHER START DISPLAYING ROCKET.
0242    7200    CLA
0243    6034    KRS
0244    1025    TAD MRETURN
0245    7650    SNA CLA
0246    5206    JMP REST
0247    6034    KRS
0250    1043    TAD M377
0251    7450    SNA
0252    4500    JMS I CHECK
0253    4473    JMS I ROCKET
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3

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0254   2036   ISZ COUNTR
0255   5260   JMP .+3
              /IF THE ROCKET IS AT THE TOP OF THE SCREEN
              /RESET IT AND CLEAR THE FLAG.
0256   4475   JMS I ROCINI
0257   6032   KCC
0260   4474   CONTFS,JMS I FS
0261   6031   KSF
0262   4477   JMS I STALL
              /SEE IF IT IS A HIT.
0263   4462   JMS I TESTHT
0264   7200   CLA
0265   2035   ISZ COUNTF
0266   7410   SKP
              /RESET FLYING SAUCER.
0267   4476   JMS I SAUINI
0270   5240   JMP GOON
              /THIS IS THE ROUTINE THAT PRINTS OUT THE INSTRUCTIONS.
0271   0000   GETSTR,0
0272   7200   CLA
0273   1032   TAD INSTR
0274   3014   DCA MESCNT
0275   5301   JMP .+4
              /THIS IS THE ROUTINE THAT GETS THE PARAMETERS.
0276   0203   SET,203
0277   1031   TAD MESS
0300   3014   DCA MESCNT
0301   4455   JMS I CRLFEN
0302   1060   TAD C20
0303   3101   DCA TEMP
0304   3020   DCA SPEEDR
0305   3021   DCA SPEEDF
0306   1414   CONTUE,TAD I MESCNT
0307   7510   SPA
0310   5676   JMP I GET
0311   7440   SZA
0312   5314   JMP CONT3
0313   5316   JMP GETCAR
0314   4461   CONT3, JMS I PRNT
0315   5306   JMP CONTUE
0316   6031   GETCAR,KSF
0317   5316   JMP .-1
0320   6036   KRB
0321   3030   DCA SYM
0322   1030   TAD SYM
0323   4461   JMS I PRNT
              /RETURN SIGNIFIES END OF ENTRY.
0324   1030   TAD SYM
0325   1025   TAD MRETURN
0326   7640   SZA CLA
0327   5333   JMP CONT5
0330   4455   JMS I CRLFEN
0331   2101   ISZ TEMP
0332   5306   JMP CONTUE
0333   1030   CONT5,TAD SYM
0334   0047   AND C7
0335   3030   DCA SYM
0336   1501   TAD I TEMP
0337   7106
0340   7004   CLL RTL,RAL
0341   1030   TAD SYM
0342   3501   DCA I TEMP
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4

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0343   5316   JMP GETCAR
              /
              /;;;;;;;;;;EDITING BREAK;;;;;;;;;;
              /
              /ROCKET SUBROUTINE.
              *10
0010   0000   XCO,0
0011   0000   XPUT,0
              *400
0400   0000   ROCKT,0
0401   7200   RESET,CLA
0402   1036   TAD CROCKP
0403   3011   DCA XPUT
0404   1036   TAD CROCKP
0405   3010   DCA XCO
0406   1410   STARTA,TAD I XCO
0407   7510   SPA
0410   5600   JMP I ROCKT
0411   6053   DXL
0412   1020   TAD SPEEDR
0413   3411   DCA I XPUT
0414   1410   TAD I XCO
0415   6067   DYS
0416   1020   TAD SPEEDR
0417   3411   DCA I XPUT
0420   5206   JMP STARTA
              /RESET ROCKET TO STARTING POSITION.
0421   0000   ROCIN,0
0422   7200   CLA
0423   1022   TAD MROCK
0424   7041   CIA
0425   3034   DCA COUNTR
0426   1037   TAD CROCK
0427   3010   DCA XCO
0430   1036   TAD CROCKP
0431   3011   DCA XPUT
0432   1410   GOON1,TAD I XCO
0433   7510   SPA
0434   5237   JMP CONT
0435   3411   DCA I XPUT
0436   5232   JMP GOON1
0437   3411   CONT,DCA I XPUT
0440   1044   TAD M1600
0441   3411   DCA I XPUT
0442   5621   JMP I ROCIN
              /THIS ROUTINE STALLS IF THE ROCKET IS NOT FIRING
0443   0000   RSTALL,0
0444   7200   CLA
0445   1024   TAD STAL
0446   3101   DCA TEMP
0447   2101   ISZ TEMP
0450   5247   JMP .-1
0451   5643   JMP I RSTALL
              /FLYING SAUCER SUBROUTINE.
              *12
0012   0000   XCOO,0
0013   0000   XPUTT,0
              *500
0500   0000   FLY,0                    5
0501   7200   RESETT,CLA
0502   1041   TAD CFSDAP
0503   3013   DCA XPUTT
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0504   1041   TAD CFSDAP
0505   3012   DCA XCOO
0506   1412   STARTT,TAD I XCOO
0507   7510   SPA
0510   5700   JMP I FLY
0511   6053   DXL
0512   1021   TAD SPEEDF
0513   3413   DCA I XPUTT
0514   1412   TAD I XCOO
0515   6067   DYS
0516   3413   DCA I XPUTT
0517   5306   JMP STARTT
              /RESET FLYING SAUCER TO STARTING POSITION.
0520   0000   FSINI,0
0521   7200   CLA
0522   1023   TAD MFS
0523   7041   CIA
0524   3035   DCA COUNTF
0525   1040   TAD CFSDAT
0526   3012   DCA XCOO
0527   1041   TAD CFSDAP
0530   3013   DCA XPUTT
0531   1412   GOON2,TAD I XCOO
0532   7510   SPA
0533   5336   JMP CONT1
0534   3413   DCA I XPUTT
0535   5331   JMP GOON2
0536   3413   CONT1,DCA I XPUTT
0537   1044   TAD M1600
0540   3413   DCA I XPUTT
0541   5720   JMP I FSINI
              /ROUTINE TO SEE IF IT A HIT.
              /CONSTANTS C40 AND M40 CONTROL
              /HOW CLOSE YOU HAVE TO BE TO SCORE A HIT.
              *600
0600   0000   TEST,0
0601   7200   CLA
0602   1054   TAD M3
0603   3053   DCA CNT
0604   1467   TAD I CR2
0605   1063   TAD CHIT
0606   3051   DCA TEMPA
0607   1467   TAD I CR2
0610   1050   TAD MHIT
0611   3052   DCA TEMPB
0612   1051   TAD TEMPA
0613   7041   CIA
0614   1471   TAD I CF2
0615   7710   SPA CLA
0616   2053   ISZ CNT
0617   2053   ISZ CNT
0620   1052   TAD TEMPB
0621   7041   CIA
0622   1471   TAD I CF2
0623   7510   SPA
0624   5230   JMP TEST1
0625   2053   ISZ CNT
0626   5600   JMP I TEST
0627   5233   JMP TESTY
0630   2053   TEST1,ISZ CNT
0631   5233   JMP TESTY
0632   5600   JMP I TEST
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6

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0633    7200    TESTY,CLA
0634    1054    TAD M3
0635    3053    DCA CNT
0636    1466    TAD I CR1
0637    1063    TAD CHIT
0640    3051    DCA TEMPA
0641    1466    TAD I CR1
0642    1050    TAD MHIT
0643    3052    DCA TEMPB
0644    1051    TAD TEMPA
0645    7041    CIA
0646    1470    TAD I CF1
0647    7710    SPA CLA
0650    2053    ISZ CNT
0651    2053    ISZ CNT
0652    1052    TAD TEMPB
0653    7041    CIA
0654    1470    TAD I CF1
0655    7510    SPA
0656    5262    JMP TEST2
0657    2053    ISZ CNT
0660    5600    JMP I TEST
0661    5265    JMP CRAZ
0662    2053    TEST2,ISZ CNT
0663    5265    JMP CRAZ
0664    5600    JMP I TEST
                /DISPLAY GARBAGE FOR HIT!
0665    7200    CRAZ,CLA
0666    1054    TAD M3
0667    3101    DCA TEMP
0670    6032    KCC
0671    1410    CRAZY,TAD I 10
0672    1410    TAD I 10
0673    6053    DXL
0674    2051    ISZ TEMPA
0675    5277    JMP .+2
0676    5303    JMP SEE
0677    7040    SEEON,CMA
0700    1410    CONTDS,TAD I 10
0701    6067    DYS
0702    5271    JMP CRAZY
0703    2101    SEE,ISZ TEMP
0704    5277    JMP SEEON
0705    5465    JMP I GHOST
                /ROUTINE TO ADD A CONSTANT TO
                /Y-COORDINATES OF THE FLYING SAUCER.
                /CONSTANT "CRAISE" CAN BE CHANGED
                /FOR YOUR OWN USE.
0706    0000    CHANG,0
0707    7200    CLA
0710    1042    TAD CFSDAA
0711    3010    DCA 10
0712    1042    TAD CFSDAA
0713    3011    DCA 11
0714    1410    KEEP1,TAD I 10
0715    7510    SPA
0716    5324    JMP CONT6
0717    1057    TAD CRAISE
0720    3411    DCA I 11
                /SKIP X-COORDINATES.
0721    1410    TAD I 10
0722    3411    DCA I 11
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7

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0723    5314    JMP KEEP1
0724    5706    CONT6,JMP I CHANG
                /PRINT SUBROUTINE.
0725    0000    PRNT1,0
0726    1043    TAD M377
0727    7440    SZA
0730    5333    JMP .+3
0731    4455    JMS I CRLFEN
0732    5446    JMP I C7600
0733    1056    TAD C377
0734    6041    TSF
0735    5334    JMP .-1
0736    6046    TLS
0737    7300    CLA CLL
0740    5725    JMP I PRNT1
                /CRLF ROUTINE.
0741    0000    CRLF,0
0742    7200    CLA
0743    1027    TAD RETURN
0744    4325    JMS PRNT1
0745    1026    TAD LINEFD
0746    4325    JMS PRNT1
0747    5741    JMP I CRLF
                /MAKE SURE 377 IS IN BUFFER.
0750    0000    CCHECK,0
0751    1105    TAD M300
0752    3102    DCA INCREM
                /STALL LOOP TO BE SURE CHARACTER IS IN BUFFER.
0753    2102    ISZ INCREM
0754    5353    JMP .-1
0755    6034    KRS
0756    1043    TAD M377
0757    7450    SNA
0760    5446    JMP I C7600
0761    5750    JMP I CCHECK
                /
                /;;;;;;;;;;;EDITING BREAK;;;;;;;;;;;
                /
                /ROCKET DATA COORDINATES (X,Y).
                *1000
1000    0000    ROCDAT,0
1001    0060    60
1002    0004    4
1003    0054    54
1004    0004    4
1005    0060    60
1006    0010    10
1007    0050    50
1010    0010    10
1011    0060    60
1012    0014    14
1013    0044    44
1014    0014    14
1015    0060    60
1016    0020    20
1017    0040    40
1020    0020    20
1021    0060    60
1022    0024    24
1023    0034    34
1024    0024    24
1025    0044    44
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8

1026	0024	24
1027	0060	60
1030	0030	30
1031	0030	30
1032	0030	30
1033	0050	50
1034	0030	30
1035	0060	60
1036	0034	34
1037	0024	24
1040	0034	34
1041	0054	54
1042	0034	34
1043	0060	60
1044	0040	40
1045	0020	20
1046	0040	40
1047	0060	60
1050	0044	44
1051	0014	14
1052	0044	44
1053	0024	24
1054	0044	44
1055	0054	54
1056	0044	44
1057	0064	64
1060	0050	50
1061	0010	10
1062	0050	50
1063	0030	30
1064	0050	50
1065	0050	50
1066	0050	50
1067	0070	70
1070	0054	54
1071	0004	4
1072	0054	54
1073	0034	34
1074	0054	54
1075	0044	44
1076	0054	54
1077	0074	74
1100	0060	60
1101	0000	0
1102	0060	60
1103	0004	4
1104	0060	60
1105	0010	10
1106	0060	60
1107	0014	14
1110	0060	60
1111	0020	20
1112	0060	60
1113	0024	24
1114	0060	60
1115	0030	30
1116	0060	60
1117	0034	34
1120	0060	60
1121	0040	40
1122	0060	60
1123	0100	100

9

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1124    0064    64
1125    0044    44
1126    0064    64
1127    0074    74
1130    0064    64
1131    0104    104
1132    0070    70
1133    0050    50
1134    0070    70
1135    0070    70
1136    0070    70
1137    0110    110
1140    0074    74
1141    0054    54
1142    0074    74
1143    0064    64
1144    0074    74
1145    0114    114
1146    0100    100
1147    0060    60
1150    0100    100
1151    0120    120
1152    0104    104
1153    0064    64
1154    0104    104
1155    0120    120
1156    0110    110
1157    0070    70
1160    0110    110
1161    0120    120
1162    0114    114
1163    0074    74
1164    0114    114
1165    0120    120
1166    0120    120
1167    0100    100
1170    0120    120
1171    0104    104
1172    0120    120
1173    0110    110
1174    0120    120
1175    0114    114
1176    0120    TAGR1,120
1177    0120    TAGR2,120
1200    4000    4000
1201    4000    4000
                /MESSAGES ARE NOT TRIM CODE BECAUSE
                /OF THE NATURE OF THE PRINT & GET ROUTINE.
                /MESSAGES STORED STARTING AT *1202
1202    0322    MESSAG,R
1203    0317    O
1204    0303    C
1205    0313    K
1206    0305    E
1207    0324    T
1210    0240    SPACE
1211    0323    S
1212    0320    P
1213    0305    E
1214    0305    E
1215    0304    D
1216    0275    EQUAL            10
```

```
1217   0000   0
1220   0325   U
1221   0306   F
1222   0317   O
1223   0240   SPACE
1224   0323   S
1225   0320   P
1226   0305   E
1227   0305   E
1230   0304   D
1231   0275   EQUAL
1232   0000   0
1233   0212   LF
1234   0310   H
1235   0311   II
1236   0324   T
1237   0240   SPACE
1240   0301   A
1241   0240   SPACE
1242   0313   K
1243   0305   E
1244   0331   Y
1245   0240   SPACE
1246   0324   T
1247   0317   O
1250   0240   SPACE
1251   0306   F
1252   0311   II
1253   0322   R
1254   0305   E
1255   0240   SPACE
1256   0322   R
1257   0317   O
1260   0303   C
1261   0313   K
1262   0305   E
1263   0324   T
1264   0256   PERIOD
1265   4000   4000
              /FLYING SAUCER COORDINATES (X,Y).
              *1400
1400   0057   FLYDAT,57
1401   1077   1077
1402   0063   63
1403   1101   1101
1404   0063   63
1405   1077   1077
1406   0063   63
1407   1075   1075
1410   0067   67
1411   1103   1103
1412   0067   67
1413   1077   1077
1414   0067   67
1415   1073   1073
1416   0073   73
1417   1103   1103
1420   0073   73
1421   1077   1077
1422   0073   73
1423   1073   1073
1424   0073   73
```

11

```
1425    1063    1063
1426    0075    75
1427    1067    1067
1430    0077    77
1431    1103    1103
1432    0077    77
1433    1077    1077
1434    0077    77
1435    1073    1073
1436    0077    77
1437    1063    1063
1440    0101    101
1441    1067    1067
1442    0103    103
1443    1103    1103
1444    0103    103
1445    1077    1077
1446    0103    103
1447    1073    1073
1450    0105    105
1451    1107    1107
1452    0107    107
1453    1113    1113
1454    0107    107
1455    1103    1103
1456    0107    107
1457    1077    1077
1460    0107    107
1461    1073    1073
1462    0113    113
1463    1117    1117
1464    0113    113
1465    1103    1103
1466    0113    113
1467    1067    1067
1470    0113    113
1471    1073    1073
1472    0117    117
1473    1123    1123
1474    0117    117
1475    1113    1113
1476    0117    117
1477    1107    1107
1500    0117    117
1501    1103    1103
1502    0117    TAGF1,117
1503    1077    TAGF2,1077
1504    0117    117
1505    1073    1073
1506    0123    123
1507    1123    1123
1510    0123    123
1511    1113    1113
1512    0123    123
1513    1107    1107
1514    0123    123
1515    1103    1103
1516    0123    123
1517    1077    1077
1520    0123    123
1521    1073    1073
1522    0125    125
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12

1523	1125	1125
1524	0127	127
1525	1127	1127
1526	0127	127
1527	1123	1123
1530	0127	127
1531	1103	1103
1532	0127	127
1533	1077	1077
1534	0127	127
1535	1073	1073
1536	0131	131
1537	1125	1125
1540	0133	133
1541	1123	1123
1542	0133	133
1543	1113	1113
1544	0133	133
1545	1107	1107
1546	0133	133
1547	1103	1103
1550	0133	133
1551	1077	1077
1552	0133	133
1553	1073	1073
1554	0137	137
1555	1123	1123
1556	0137	137
1557	1113	1113
1560	0137	137
1561	1107	1107
1562	0137	137
1563	1103	1103
1564	0137	137
1565	1067	1067
1566	0137	137
1567	1073	1073
1570	0143	143
1571	1117	1117
1572	0143	143
1573	1103	1103
1574	0143	143
1575	1077	1077
1576	0143	143
1577	1073	1073
1600	0147	147
1601	1113	1113
1602	0147	147
1603	1103	1103
1604	0147	147
1605	1077	1077
1606	0147	147
1607	1073	1073
1610	0151	151
1611	1107	1107
1612	0153	153
1613	1102	1102
1614	0153	153
1615	1077	1077
1616	0153	153
1617	1073	1073
1620	0155	155

13

```
1621    1067    1067
1622    0157    157
1623    1103    1103
1624    0157    157
1625    1077    1077
1626    0157    157
1627    1073    1073
1630    0157    157
1631    1063    1063
1632    0161    161
1633    1067    1067
1634    0163    163
1635    1103    1103
1636    0163    163
1637    1077    1077
1640    0163    163
1641    1073    1073
1642    0163    163
1643    1063    1063
1644    0167    167
1645    1103    1103
1646    0167    167
1647    1077    1077
1650    0167    167
1651    1073    1073
1652    0173    173
1653    1101    1101
1654    0173    173
1655    1075    1075
1656    0173    173
1657    1077    1077
1660    0177    177
1661    1077    1077
1662    4000    4000
1663    4000    4000
                /INSTRUCTIONS STORED HERE.
                /IF THEY ARE NOT TO BE PRINTED OUT
                /PUT A 7000 IN LOCATION 202
                /BEFORE STARTING THE PROGRAM.
                /OR PUT A 4000 (- 0) IN LOCATION 1664.
                *1664
1664    0215    INSDAT,CR
1665    0212    LF
1666    0311    I
1667    0316    N
1670    0323    S
1671    0324    T
1672    0322    R
1673    0325    U
1674    0303    C
1675    0324    T
1676    0311    I
1677    0317    O
1700    0316    N
1701    0323    S
1702    0272    COLON
1703    0215    CR
1704    0212    LF
1705    0323    S
1706    0320    P
1707    0305    E
1710    0305    E
```

                                                14

```
1711    0304    D
1712    0323    S
1713    0240    SPACE
1714    0323    S
1715    0257    NSLASH
1716    0302    B
1717    0240    SPACE
1720    0274    LT
1721    0240    SPACE
1722    0317    O
1723    0322    R
1724    0240    SPACE
1725    0275    EQUAL
1726    0240    SPACE
1727    0324    T
1730    0317    O
1731    0240    SPACE
1732    0263    THREE
1733    0260    ZERO
1734    0256    PERIOD
1735    0215    CR
1736    0212    LF
1737    0322    R
1740    0305    E
1741    0324    T
1742    0325    U
1743    0322    R
1744    0316    N
1745    0240    SPACE
1746    0313    K
1747    0305    E
1750    0331    Y
1751    0240    SPACE
1752    0327    W
1753    0311    I I
1754    0314    L
1755    0314    L
1756    0240    SPACE
1757    0301    A
1760    0323    S
1761    0313    K
1762    0240    SPACE
1763    0321    Q
1764    0325    U
1765    0305    E
1766    0323    S
1767    0324    T
1770    0311    I I
1771    0317    O
1772    0316    N
1773    0323    S
1774    0240    SPACE
1775    0301    A
1776    0307    G
1777    0301    A
2000    0311    I I
2001    0316    N
2002    0256    PERIOD
2003    0215    CR
2004    0212    LF
2005    0322    R
2006    0325    U
```

15

2007	0302	B
2010	0317	O
2011	0325	U
2012	0324	T
2013	0240	SPACE
2014	0327	W
2015	0311	II
2016	0314	L
2017	0314	L
2020	0240	SPACE
2021	0322	R
2022	0305	E
2023	0324	T
2024	0325	U
2025	0322	R
2026	0316	N
2027	0240	SPACE
2030	0324	T
2031	0317	O
2032	0240	SPACE
2033	0323	S
2034	0331	Y
2035	0323	S
2036	0324	T
2237	0305	E
2040	0315	M
2041	0240	SPACE
2042	0256	PERIOD
2043	0215	CR
2044	0212	LF
2045	0316	N
2046	0317	O
2047	0324	T
2050	0305	E
2051	0272	COLON
2052	0240	SPACE
2053	0303	C
2054	0317	O
2055	0316	N
2056	0324	T
2057	0322	R
2060	0317	O
2061	0314	L
2062	0240	SPACE
2063	0313	K
2064	0305	E
2065	0331	Y
2066	0247	SQUOTE
2067	0323	S
2070	0240	SPACE
2071	0317	O
2072	0320	P
2073	0305	E
2074	0322	R
2075	0301	A
2076	0324	T
2077	0305	E
2100	0240	SPACE
2101	0317	O
2102	0316	N
2103	0314	L
2104	0331	Y

16

```
2105    0240    SPACE
2106    0304    D
2107    0325    U
2110    0322    R
2111    0311    II
2112    0316    N
2113    0307    G
2114    0240    SPACE
2115    0304    D
2116    0311    II
2117    0323    S
2120    0320    P
2121    0314    L
2122    0301    A
2123    0331    Y
2124    0256    PERIOD
2125    0215    CR
2126    0212    LF
2127    4000    4000
                /TABLE OF LETTERS AND THEIR ASCII VALUE IN OCTAL.
                A=301
                B=302
                C=303
                D=304
                E=305
                F=306
                G=307
                H=310
                II=311
                J=312
                K=313
                L=314
                M=315
                N=316
                O=317
                P=320
                Q=321
                R=322
                S=323
                T=324
                U=325
                V=326
                W=327
                X=330
                Y=331
                ZZ=332
                ONE=261
                TWO=262
                THREE=263
                FOUR=264
                FIVE=265
                SIX=266
                SEVEN=267
                EIGHT=270
                NINE=271
                ZERO=260
                EX=241  /!
                QUOTE=242
                NUMSIN=243  /#
                DOLLAR=244
                PERCNT=245
                AMPER=246  /&
```

```
                    SQUOTE=247 /'
                    LPAR=250
                    RPAR=251
                    ASTER=252
                    PLUS=253
                    COMMA=254
                    MINUS=255
                    PERIOD=256
                    NSLASH=257
                    COLON=272
                    SEMCOL=273
                    LT=274
                    EQUAL=275
                    GT=276
                    QUES=277
                    ATSIGN=300
                    LBRAK=333
                    LSLASH=334
                    RBRAK=335
                    LAR=337
                    LF=212
                    SPACE=240
                    CR=215
                    BELL=207
A          0301
AMPER      0246
ASTER      0252
ATSIGN     0300
B          0302
BEGIN      0200
BELL       0207
C          0303
CCHECK     0750
CFSDAA     0042
CFSDAP     0041
CFSDAT     0040
CF1        0070
CF2        0071
CHAN       0072
CHANG      0706
CHECK      0100
CHIT       0063
CNT        0053
COLON      0272
COMMA      0254
CONT       0437
CONTDS     0700
CONTFS     0260
CONTUE     0306
CONT1      0536
CONT3      0314
CONT5      0333
CONT6      0724
COUNTF     0035
COUNTR     0034
CR         0215
CRAISE     0057
CRAZ       0665
CRAZY      0671
CRLF       0741
CRLFEN     0055
```
18

```
CROCKP   0036
CR1      0066
CR2      0067
C1       0033
C20      0060
C377     0056
C7       0047
C7600    0046
D        0304
DIVID    0214
DIVIDE   0045
DOLLAR   0244
E        0305
EIGHT    0270
EQUAL    0275
EX       0241
F        0306
FIVE     0265
FLY      0500
FLYDAT   1400
FOUR     0264
FS       0074
FSINI    0520
G        0307
GET      0276
GETCAR   0316
GETSTR   0271
GHOST    0065
GOON     0240
GOON1    0432
GOON2    0531
GT       0276
H        0310
II       0311
INCREM   0102
INSDAT   1664
INSTJP   0103
INSTR    0032
J        0312
K        0313
KEEP1    0714
L        0314
LAR      0337
LBRAK    0333
LF       0212
LINEFD   0026
LPAR     0250
LSLASH   0334
LT       0274
M        0315
MESCNT   0014
MESS     0031
MESSAG   1202
MFS      0023
MHIT     0050
MINUS    0255
MRETUR   0025
MROCK    0022
M100     0104
M1600    0044
M3       0054
M300     0105
```

M377	0043
N	0316
NINE	0271
NSLASH	0257
NUMSIN	0243
O	0317
ONE	0261
P	0320
PERCNT	0245
PERIOD	0256
PLUS	0253
PRNT	0061
PRNT1	0725
PUTIN	0232
Q	0321
QUES	0277
QUOTE	0242
R	0322
RBRAK	0335
RESET	0401
RESETT	0501
REST	0206
RETURN	0027
ROCDAT	1000
ROCIN	0421
ROCINI	0075
ROCKET	0073
ROCKT	0400
RPAR	0251
RSTALL	0443
S	0323
SAUINI	0076
SEE	0703
SEEON	0677
SEMCOL	0273
SEVEN	0267
SIX	0266
SPACE	0240
SPEEDF	0021
SPEEDR	0020
SQUOTE	0247
STAL	0024
STALL	0077
START	0236
STARTA	0406
STARTT	0506
SYM	0030
T	0324
TAGF1	1502
TAGF2	1503
TAGR1	1176
TAGR2	1177
TEMP	0101
TEMPA	0051
TEMPB	0052
TEST	0600
TESTHT	0062
TESTY	0633
TEST1	0630
TEST2	0662
THREE	0263

```
U        0325
V        0326
W        0327
X        0330
XCO      0010
XCOO     0012
XPUT     0011
XPUTT    0013
XR       0064
Y        0331
ZERO     0260
ZZ       0332
```