

```

3770 :
3780 REM ** ADD OBJECT TO LIST **
3790 A=0
3800 FOR J=1 TO 2
3810 IF IC*(J)="" THEN IC*(J)=IV*(F,1):AF=1:J=2
3820 NEXT J
3830 :
3840 REM ** FULL QUOTA **
3850 IF AF=0 THEN PRINT "YOU ALREADY HAVE TWO
OBJECTS":RETURN
3860 :
3870 SN$="YOU TAKE THE "+IV*(F,1):GOSUB5500
3880 IV*(F,2)=-1:REM DELETE INVENTORY ENTRY
3890 RETURN

```

Let's now look at each of the three tests separately.

THE VALIDITY TEST

The most important and complicated of the three tests is the *validity test*. In its simplest form this could be a routine that just took the second part of the split command and compared it with each of the components of the inventory array, IVS(.). However, if this was the case, the TAKE command would be limited to the rigorous structure of TAKE OBJECT. Even variations such as TAKE THE GUN would be unacceptable as the routine would attempt to match THE GUN with the inventory, rather than just GUN. To allow flexibility in the command structure of TAKE we must develop a more sophisticated method of comparing the second part of the command given with the object inventory.

The most obvious method of increasing flexibility is to divide the second part of the command given into its constituent words and then compare each in turn with the object inventory. While overcoming the problem outlined earlier, this method too has its flaws. If, for example, we wanted to use a two-word description of an object such as LARGE KNIFE, then the command TAKE THE LARGE KNIFE would not give a match using this method. The routine would compare the words THE, LARGE and KNIFE separately with the inventory list. This problem can be overcome by making the routine even more sophisticated. Instead of searching for an exact match, a routine could be designed that would scan each object description in the inventory for the command word under examination, moving through the object name letter by letter until a match was found or the end of the object name was reached. The screen shots show how this is done.

One advantage of looking for a match between command and inventory in this way is that shortened versions of the object word can be given in the command. In the above example, the command TAKE THE KNI would also make the correct match, assuming that there were no other object names in the inventory prior to LARGE KNIFE with the combination of letters KNI. If this were the case, then an incorrect match would be made with the earlier entry in the inventory. Problems of this type are part of the price that must be paid for the greater flexibility of the routine. Most incorrect matching problems can be eliminated by careful selection of object names. If two object names must contain the same group of characters, or if one name is a substring of another — such as BULL and BULLET — then the shorter of the two names should be placed earlier in the inventory array. In addition, different

The Big Match



```

1000REM **** MATCH AN OBJECT DEMO ***
40MODE 5:COLOUR 2:DIM V$(3)
50FOR I=1 TO 3:READ V$(I):NEXT I
70A$="THE":J$="KNIFE":C$="KNI"
953$=""
110M$=A$:GOSUB 1000:REM MATCH "THE"
130M$=B$:GOSUB 1000:REM MATCH "KNIFE"
150M$=C$:GOSUB 1000:REM MATCH "KNI"
160END
1000REM **** MATCH S/R ***
1010CLS:F=0:LM=LEN(M$)
1030FOR J=1 TO 3:LI=LEN(V$(J))
1042X=1:Y=5:GOSUB2000:PRINT S$
1045X=1:Y=6:GOSUB2000:PRINT V$(J)
1047FOR I=1 TO LI-LW+1
1050X=1:Y=5:GOSUB2000:PRINT S$
1060X=1:Y=6:GOSUB2000:PRINT M$
1070IF MID$(V$(J),I,LW)=M$ THEN F=1:I=LI:J=3
1075FOR D=1 TO 300:NEXT D,I:REM DELAY
1080IF F=0 THEN GOSUB 2500
1087NEXT J:RETURN
2000REM **** POSITION CURSOR AT X,Y ****
2010PRINT TAB(X,Y):RETURN
2500REM **** MATCH FOUND ****
2502COLOUR 1:X=F:Y=6:GOSUB2000:PRINT M$
2505FOR K=1 TO 5:X=1:Y=10:GOSUB2000:PRINT S$
2508FOR D=1 TO 300:NEXT:REM DELAY
2510X=1:Y=10:GOSUB2000:PRINT "MATCH FOUND"
2512FOR D=1 TO 500:NEXT D,K:REM DELAY
2520A$=BETA$:COLOUR 2:RETURN
3000REM **** INVENTORY DATA ****
3005DATA "SMALL FORK","RED DOOR","LARGE KNIFE"
10 REM ** SPECTRUM MATCH **
40 INK 6:DIM V$(3,20)
1070 IF V$(J,I TO I+LW-1)=M$ THEN F=1:[I=LI:J=3
2010 PRINT AT (Y,X):RETURN
2502 INK 2:X=F:Y=6:GOSUB2000:PRINT S$
2520 A$=INKEY$:IF A$="" THEN 2520
2525 INK 6:RETURN
10 REM ** COM 64 MATCH **
40 PRINT CHR$(158):DIM V$(3)
50 D$=CHR$(17):FOR K=1 TO 5:D$=D$+D$:NEXT I
D$=CHR$(19)+D$
2010 PRINT LEFT$(D$,Y):TAB(X):RETURN
2502 PRINTCHR$(20):X=F:Y=6:GOSUB2000:PRINT S$
2520 BETA$:IF A$="" THEN 2520
2525 PRINT CHR$(158):RETURN

```

The validity test subroutine designed for use with the TAKE routine scans the statement entered a word at a time, trying to find a match with an entry in the inventory. This short program illustrates the way in which the validity routine searches through the inventory for a match. Three objects are held in the inventory for this demonstration and the program tries to match the words 'THE', 'KNIFE' and 'KNI'. Whenever a match is found, the program waits for a keypress before continuing