

Cryptogram-Helper

 rickmk.com/rmk/Com/crypt.html

128 Cryptogram-Helper
by Rick Kephart October 20, 1988

I wrote this short program to help to solve cryptograms. It will not solve them automatically, but it will make it much easier and faster to solve them than working them out by completely by hand. It will replace all occurrences of a letter immediately, and may easily be changed, and will not allow a letter to be accidentally repeated. It will also save a cryptogram in the process of being solved.

The program only functions in 40-column mode.

After the screen blanks for a half-second while machine-language subroutines are POKEd in, a blinking cursor appears in the top half of a screen divided through the middle. In the top half of the screen, copy the cryptogram exactly. All cursor controls, as well as the INSERT key, are active. You can use SHIFT-RETURN or LINE FEED to go down to the next line. When you're finished, press RETURN. In the bottom half of the screen, the puzzle will immediately appear, with all alphabetic characters replaced by '='s. Any numbers or punctuation will be copied below as is.

To make a guess, first press the key of the letter in the puzzle to be replaced. It will appear in the upper left corner, followed by an equal sign. Then press the letter to replace it with. If the letter has already been used, you will be alerted to this and the substitution will not take place.

If you make a mistake, simply press "=" as the character to replace the letter with. You can also start all over again by pressing "=" as the character to be replaced.

If you find you made a mistake in copying the cryptogram, press RETURN instead of a character to replace, and you will be able to edit the puzzle; after which the bottom screen will return to all '='s.

You can save a puzzle in process of solving by pressing SHIFT-S instead of a character to replace. You will then be asked for a filename, and it will save the screen to disk. You can load it again by pressing SHIFT-L instead of a letter to replace. At the beginning of a puzzle, to load in an old puzzle right away, you must first press RETURN.

The program starts by clearing the screen, and then uses PLOT to position the cursor and draw the dividing-line. It sets up a WINDOW and uses BASIN to allow free typing in the top half of the screen, until RETURN is pressed. Then the first subroutine is called to instantly replace all the cryptogram's letters with "=". It then uses the SCREEN

EDITOR ROM to clear the top line (this is really for after the LOAD and SAVE routines). It removes the window with two HOMEs, and a character is gotten with GETKEY. Then the top line is cleared (it may have had a previous substitution in it). The INSTR command is then used to check for RETURN,=, S, or L. If one of those has been pressed, it is dealt with. Otherwise, the letter is printed at the top, and GETKEY is used to get the character for the replacement. It then goes to the second ML subroutine, which checks for repetitions and performs the substitution if the letter hasn't already been used. The letter is printed at the top of the screen, with the substitution done if the letter is not a repetition, or the message "USED" on the top line. If the screen is to be SAVED or LOADED, the filename is requested and ",S" is added (note the syntax to BSAVE or BLOAD a SEQ file), and the screen from 1064 to 2023 is BSAVED or BLOADED.

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10 FAST:FOR I=4864 TO 4968:READ A:POKE I,A:NEXT:SLOW
20 SCNCLR:SYS 65520,,12,0,0:PRINT"{40 shift-O}"
30 WINDOW 0,1,39,11:SYS 65487
40 SYS 4864
50 SYS 50341,,0
60 PRINT"{home}{home}";:GETKEY A$:SYS 50341,,0
70 ON INSTR(CHR$(13)+"={shift-L}{shift-S}",A$) GOTO 30,40,100,100
80 PRINT A$" = ";:GETKEY B$:PRINT B$;:SYS 4891:RREG A:IF A THEN PRINT
  TAB(18)"{rvs}USED!"
90 GOTO 60
100 INPUT"FILENAME";F$:F$=F$+",S":IF A$="{shift-S}" THEN
  BSAVE(F$),P1064 TO P2023:GOTO 50:ELSE:BLOAD(F$):GOTO 50
110 DATA 32,86,19,177,251,201,27,176,2,169,61,145,253,200,208,243,230,254
120 DATA 230,252,165,254,201,8,208,233,96,169,61,205,4,4,240,21,32,94
130 DATA 19,177,253,205,4,4,240,41,200,208,246,230,254,165,254,201,8,208
140 DATA 238,32,86,19,173,0,4,209,251,208,5,173,4,4,145,253,200,208
150 DATA 241,230,254,230,252,165,254,201,8,208,231,169,0,96,160,40,132,251
160 DATA 169,4,133,252,169,48,133,253,169,6,133,254,160,0,96

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1300 20 56 13 JSR $1356 ; set up pointers

1303 B1 FB LDA ($FB),Y ; get char from top

1305 C9 1B CMP #$1B ; non-alphabetic?
1307 B0 02 BCS $130B ; if so, print as is

1309 A9 3D LDA #$3D ; =
130B 91 FD STA ($FD),Y ; put in place on bottom

130D C8 INY ; next character
130E D0 F3 BNE $1303 ; loop for 256 characters

1310 E6 FE INC $FE ; increase low pointer
1312 E6 FC INC $FC ; increase top pointer

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1314 A5 FE    LDA $FE      ; check for end
1316 C9 08    CMP #$08      ; end of screen ($0800)?
1318 D0 E9    BNE $1303   ; if not, continue
131A 60      RTS          ; finished

131B A9 3D    LDA #$3D     ; =

131D CD 04 04 CMP $0404   ; erase guess?
1320 F0 15    BEQ $1337   ; if so, skip check routine

1322 20 5E 13 JSR $135E   ; set up pointers to bottom

1325 B1 FD    LDA ($FD),Y ; get a character
1327 CD 04 04 CMP $0404   ; compare to replacement char
132A F0 29    BEQ $1355   ; if repeat, exit

132C C8      INY          ; next character
132D D0 F6    BNE $1325   ; loop for 256 characters

132F E6 FE    INC $FE     ; increase pointer

1331 A5 FE    LDA $FE     ; check for end
1333 C9 08    CMP #$08     ; end of screen ($0800)?
1335 D0 EE    BNE $1325   ; if not, continue
1337 20 56 13 JSR $1356   ; set up both pointers

133A AD 00 04 LDA $0400   ; letter to replace
133D D1 FB    CMP ($FB),Y ; check current position on top
133F D0 05    BNE $1346   ; branch if not a char to replace

1341 AD 04 04 LDA $0404   ; get replacement letter
1344 91 FD    STA ($FD),Y ; replace
1346 C8      INY          ; next character
1347 D0 F1    BNE $133A   ; loop for 256 characters

1349 E6 FE    INC $FE     ; increase low pointer
134B E6 FC    INC $FC     ; increase top pointer

134D A5 FE    LDA $FE     ; check for end
134F C9 08    CMP #$08     ; end of screen ($0800)?
1351 D0 E7    BNE $133A   ; if not, continue

1353 A9 00    LDA #$00     ; signal for non-repeated letter
1355 60      RTS          ; finish

1356 A0 28    LDY #$28     ; set up upper pointer:
1358 84 FB    STY $FB     ; $0428 = second line of screen
135A A9 04    LDA #$04
135C 85 FC    STA $FC

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135E A9 30 LDA #30 ; set up lower pointer
1360 85 FD STA $FD ; $0630 = 13th line of screen
1362 A9 06 LDA #06
1364 85 FE STA $FE

1366 A0 00 LDY #00 ; prepare Y-index

1368 60 RTS
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Some Online Cryptogram Games to Solve: [Search for Cryptograms](#)

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