

Doodle

A drawing utility for the HP-28S

HEWLETT-PACKARD 28S · C. 1989 · NOTEBOOK PAGES 8-10

DOODL · LINE

THE MANUAL

These two programs work together to allow the 28S to work as a drawing utility. DOODL will draw both points and lines, and also erase them.

To run DOODL, all that needs to be on the stack is the name of the picture to be worked on. If it is a new picture, DOODL will detect it and automatically create a new picture file. The name of the picture to be worked on must be entered in single quotes.

Operations

Drawing a point

move the cross-hairs to the spot where the point is desired, and press INS, then press ON.

Erasing a point

same as drawing a point; just align the cross-hairs with the point to be erased.

Drawing a line

move the cross-hairs to the spot for the beginning of the line and press INS, then move the cross-hairs to the spot for the end of the line and press INS, then press ON.

Erasing a line

same as drawing a line, just align with line to be erased.

Note: the INS key is the menu key located directly under the LCD with INS written above it.

When a drawing is finished or you are ready to stop drawing, just press ON without having pressed INS and the drawing will be saved. Any drawing can be edited as many times as desired.

THE PROGRAMS

LINE

« → n

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« OVER PIXEL
  IF DUP2 ==
  THEN DROP PIXEL
  ELSE OVER – PPAR DUP 2 GET SWAP 1 GET – C→R 31 / SWAP 136 /
    3 PICK C→R 4 ROLL / ABS SWAP ROT / ABS MAX PPAR 4 GET /
    SWAP OVER / ROT 1 4 ROLL
    START OVER + DUP PIXEL
  NEXT
END
»
»

DOODL
« → n
  « n IFERR RCL THEN CLLCD LCD→ DUP ROT STO END
  WHILE →LCD DGTIZ CLLCD DEPTH DUP 0 ≠
  REPEAT
    IF 2 ==
    THEN n LINE
    ELSE PIXEL
    END CLEAR LCD→ n RCL XOR DUP n STO
  END CLLCD "  * * Saved * * " 2 DISP DROP .5 WAIT CLMF 'PPAR' PURGE
»
»

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NOTES ON THIS EDITION

1. The manual page is headed DOODLE and the program it runs is named DOODL. Both are right, and neither is corrected here. Every user-defined program in this notebook sits under a five-character ceiling — DEPOS for Deposit, BALAN for Balance, HISCR for High Score, SPACE for Space Chase — so DOODLE is the name and DOODL is what fits a menu label.
2. This listing and the one printed on page 285 of Selden's 1990 conference paper agree line for line.

The notebook is the manuscript — handwritten, photocopied, and reproduced exactly as scanned at michaelmorrison.com/downloads/hp28s/doodl-notebook.pdf. This is the edited edition. The wording and the voice are the manuscript's and the program listings are unaltered; where the prose has been corrected, the notes above say what was changed, so the two can be held against each other.