

Space Chase

A game for the HP-28S

HEWLETT-PACKARD 28S · C. 1989 · NOTEBOOK PAGES 1-7

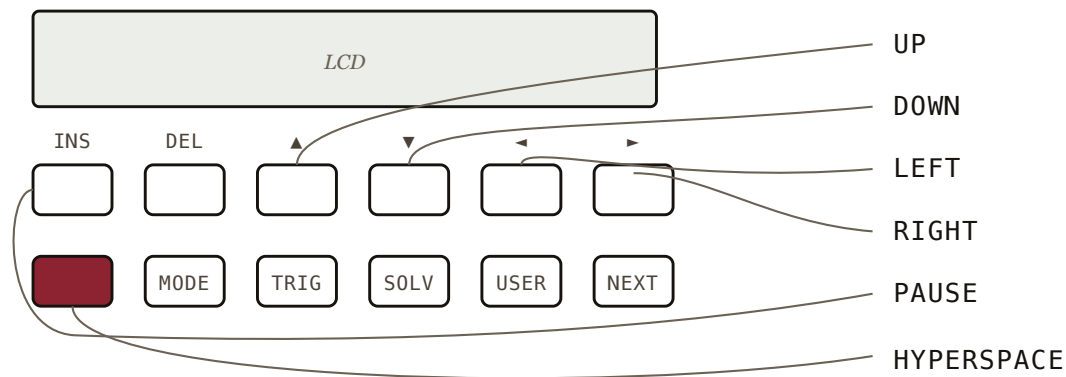
SETUP · MAKE · SPACE · HISCR · UP · DOWN · RIGHT · LEFT · SHIFT · INS

THE MANUAL

These programs all work interactively as a fully animated space game. The programs SETUP and MAKE must be entered first. SETUP will call MAKE and create the ships, background, and high score files. SETUP and MAKE may be purged after SETUP has been executed.

SPACE can then be executed, which is the main program that calls all of the others except HISCR. Executing HISCR shows the current high score and screen associated with it.

Game controls



Redrawn from the diagram on notebook page 1. The four cursor softkeys under the display are UP, DOWN, LEFT and RIGHT; INS is pause; the red shift key is hyperspace.

Playing

The game play is pretty simple. The shift key operates hyperspace, which is limited to three times per game. Hyperspace will put the ship on a random location on the screen and can be used to get out of “tight squeezes”.

To pause the game, press INS. The calculator may even be turned off with the game paused. To resume game play press ON.

THE PROGRAMS

SETUP

```
« { 255 24 24 36 102 90 90 102 36 24 24 255 } 137 MAKE 'SHIP1' STO
  { 64 97 250 228 228 228 228 250 97 64 } 200 MAKE 'SHIP2' STO
  { 16 24 24 30 57 57 63 57 57 30 24 24 16 } 261 MAKE 'SHIP3' STO
  CLLCD (0,0) PMIN (136,31) PMAX
  1 30
  START RAND 137 * FLOOR RAND 32 * FLOOR R→C PIXEL
  NEXT
  'PPAR' PURGE LCD→ 'BACK' STO
  0 "" 2 →LIST 'HI' STO
  CLMF
»
```

MAKE

```
« 0 CHR 1 9
  START DUP +
  NEXT 1 ROT SUB
  SWAP LIST→ "" 1 ROT
  START SWAP CHR +
  NEXT + CLLCD →LCD
  LCD→
»
```

SPACE

```
« # 11CAh SYSEVAL 0
  SHIP2 SHIP1 SHIP3
  WHILE 3 DUPN OR DUP2 OR DUP BACK OR →LCD XOR ==
  REPEAT { UP DOWN LEFT RIGHT LEFT }
    RAND 5 * CEIL GET EVAL ROT
    IF KEY
    THEN STR→
    END 512 .01 BEEP
    ROT { UP DOWN LEFT RIGHT RIGHT } RAND 5 * CEIL GET EVAL ROT
  END 1 4
  START LCD→ NOT →LCD
  NEXT 4 DROPN 50 1 BEEP
  WHILE KEY
  REPEAT DROP
  END # 11CAh SYSEVAL SWAP - B→R 819.2 / IP
  DUP LCD→ CLLCD SWAP 4 DISP LCD→ OR →LCD
  IF DUP HI 1 GET ≥
  THEN LCD→ 2 →LIST 'HI' STO
  ELSE DROP
  END
»
```

[+]

HISCR

```
« HI 2 GET →LCD
»
```

UP

```

« DUP 138 548 SUB SWAP 1 137 SUB +
»

DOWN
« DUP 1 411 SUB SWAP 412 548 SUB SWAP +
»

RIGHT
« DUP 540 548 SUB SWAP 1 539 SUB +
»

LEFT
« DUP 9 548 SUB SWAP 1 8 SUB +
»

SHIFT
« 4 ROLL 1 + DUP 5 ROLLD
  IF 3 ≤
    THEN DUP RAND 547 * SWAP OVER CEIL 548 SUB 3 ROLLD
      1 SWAP FLOOR SUB + 512 1500
      FOR x x .015 BEEP 50
      STEP
    END
  »

INS
« # 11CAh SYSEVAL DEPTH → d
  « DGTIZ
    WHILE DEPTH d ≠
      REPEAT DROP
    END # 11CAh SYSEVAL SWAP - 6 ROLL + 5 ROLLD
  » 'PPAR' PURGE
»

```

NOTES ON THIS EDITION

1. The manual pages are handwritten; the program listing is a dot-matrix printout. Both are photocopies.
2. In the SPACE listing, ELSE DROP is not printed — it is added by hand in ink, and the transcription marks the surrounding END with [+].
3. One word is struck out in the first paragraph, before “SETUP and MAKE may be purged”, and is not legible.
4. Corrected here, and visible uncorrected in the scan: a semicolon before “which is the main program” is now a comma, and “highscore” is set as two words to match its own first use.
5. This is the notebook version. It is not identical to the listing published in Selden’s 1990 conference paper, which moves the ship six bytes horizontally where this one moves eight and nine, calls MAKE L→LCD, and builds the starfield from an explicit PPAR instead of PMIN/PMAX.

The notebook is the manuscript — handwritten, photocopied, and reproduced exactly as scanned at michaelmorrison.com/downloads/hp28s/spacechase-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.