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'   PET hop sequence generator

'   Pinnacle technologies
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'   03-03-2000
'   Version 1.2
'   ver$ = "1.2"

DO
  CLS
  indent% = 5
  LOCATE 3, 1
  PRINT TAB(indent%); "The output data file name is:  hoptable.txt "
  PRINT
  PRINT TAB(indent%); "Enter a seed value between -32,767 and 32,767."
  PRINT TAB(indent%); "A given seed value will always yield the"
  PRINT TAB(indent%); "same random sequence. ";

  INPUT i$

  IF ABS(VAL(i$)) <= 32767 THEN
    EXIT DO
  ELSE
    SOUND 700, 2
  END IF
LOOP

'Select the sequence
seedval% = VAL(i$)
RANDOMIZE (seedval%)

DIM table%(255, 24), UsedFreq%(24)
FOR seq% = 0 TO 255
  PRINT "Working on sequence # "; seq%

  'reinitialize used table
  FOR hop% = 0 TO 24
    UsedFreq%(hop%) = 0
  NEXT hop%

  FOR hop% = 0 TO 24
    DO
      'Pick a random hop
      potentialhop% = RND(1) * 24

      'See if the proposed hop is already used
      IF UsedFreq%(potentialhop%) <> 1 THEN
        'It is not used
        UsedFreq%(potentialhop%) = 1
        table%(seq%, hop%) = potentialhop%
        EXIT DO
      END IF
    LOOP
  NEXT hop%
NEXT seq%

'Now, print out the results to a file

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OPEN "hoptable.txt" FOR OUTPUT AS #1

PRINT #1, "Seed Value Selected = "; LTRIM$(RTRIM$(STR$(seedval%)))
PRINT #1, "Program Version = "; ver$
PRINT #1,

FOR seq% = 0 TO 255
  SELECT CASE seq%
    CASE IS >= 100
      i$ = ""

    CASE IS >= 10
      i$ = " "

    CASE ELSE
      i$ = "  "
  END SELECT

  PRINT #1, "Sequence "; i$; LTRIM$(RTRIM$(STR$(seq%))); ": ";
  FOR hop% = 0 TO 24
    PRINT #1, LTRIM$(RTRIM$(STR$(table%(seq%, hop%))));
    IF hop% <> 24 THEN
      PRINT #1, ",";
    ELSE
      PRINT #1,
    END IF
  NEXT hop%
NEXT seq%

CLOSE #1
END

```