```
' {$STAMP BS2}
' {$PBASIC 2.5}

EN      PIN 0    ' enable
CLK     PIN 1    ' clock
DOUT    PIN 2    ' data out

digit   VAR Byte
b       VAR Byte
phrase VAR Byte
idx     VAR Word
char    VAR Byte
x       VAR Nib


disp0    DATA $3f
DISP1    DATA $06
DISP2    DATA $5b
DISP3    DATA $4f
DISP4    DATA $66
DISP5    DATA $6d
DISP6    DATA $7d
DISP7    DATA $07
DISP8    DATA $7f
DISP9    DATA $6f
DISP10 DATA $77
DISP11 DATA $7c
DISP12 DATA $58
DISP13 DATA $5e
DISP14 DATA $79
DISP15 DATA $71

  DIRA = 15

START:
 idx = 0
    LOOKUP (phrase - 0),
    [disp0,disp1, disp2, disp3, disp4,disp5, disp6,disp7, disp8,disp9, disp10,disp11, disp12,disp13, disp14,disp15], idx
 PAUSE 1
  GOSUB SET
  GOSUB SETWRITE
  GOSUB CLEAR
  GOSUB DMAX
  GOSUB COUNT15
GOTO start



'set display TO 6×12 segments
SET:
    EN = 0
      SHIFTOUT DOUT, CLK, LSBFIRST, [$02]
    EN = 1
RETURN
```

```
'set TO writing mode, auto increment address after DATA WRITE
SETWRITE:
  EN = 0
   SHIFTOUT DOUT, CLK, LSBFIRST, [$40]
  EN = 1
RETURN

'clear 8 bytes of the display RAM – This will get rid of weird looking symbols
CLEAR:
   EN = 0
    SHIFTOUT DOUT, CLK, LSBFIRST, [$C0] 'This is the RAM address
     FOR x = 1 TO 8
    SHIFTOUT DOUT, CLK, LSBFIRST, [$00] 'This writes 0 TO RAM
   NEXT
  EN = 1
RETURN

'display ON, MAX brightness
DMAX:
   EN = 0
    SHIFTOUT DOUT, CLK, LSBFIRST, [$8F]
   EN = 1
  PAUSE 10
RETURN

'COUNT through 0-9-a-f
COUNT15:
 FOR b = 0 TO 15
  READ idx ,char
   EN = 0
     SHIFTOUT DOUT, CLK, LSBFIRST,[$C0,char,$C2,char,$C4,char,$C6,char]' reads idx of data starting at 0 to f
    EN = 1
  DEBUG ?  idx , CR
  idx = idx + 1            ' <<< I put this line below shiftout so it will read 0 instead of starting with 1

  PAUSE 1000
 NEXT
RETURN
```