

'furanje SL1935 (Digi SAT-TV tuner sint) na I2C bus preko Ipt porta  
 'd0 (pin 2) = scl d1 (pin 3) = sda s transistorskima inverterjema  
 'error (pin 15) = vhod

'preizkusena verzija by s57uuu aug 2004

DIM bb(4)

cddd% = &HFF: cddg% = &HFD: cgdd% = &HFE: cgdg% = &HC  
 OUT &H378, cgdg% 'bus idle

adr = 1 '0=gnd,1=open,2=30k na + (0.4-0.6V),3=+  
 cp = 0 '0..3 charge pump current 155,330,690,1450uA  
 bp = 0 '0..1 base band path  
 buf = 0 '0..1 Buffered crystal reference output enable  
 tm = 0 '0..7 Test mode select 0=normal operation  
 rr = 1 '0..31 reference divider !!po tabeli!! 1= /4 (1MHz 4MHz xtal)  
 vco = 0 '0..1 VCO select 0=1400-2200 1=950-1500  
 p0 = 0 '0..1 izhod noga 34

bb%(0) = 192 + 2 \* adr 'adr+write  
 bb%(1) = &H3 'N=1000 (1GHz za 1MHz ref)  
 bb%(2) = &HE8  
 bb%(3) = 128 + cp \* 32 + rr  
 bb%(4) = tm \* 32 + vco \* 16 + bp \* 8 + buf \* 2 + p0

xtal = 4000000!

fref = xtal \ 4

zac:  
 CLS  
 PRINT : PRINT : PRINT : PRINT  
 PRINT "MENU:": PRINT  
 PRINT "1 - nastavljanje frekvence"  
 PRINT "4 - testiranje dinamike zanke (skakanje med dvema f)"  
 PRINT "5 - konec"

menu: INPUT men%  
 SELECT CASE men%  
 CASE 1: GOTO zanka1  
 CASE 4: GOTO zanka4  
 CASE 5: SYSTEM  
 CASE ELSE: GOTO menu

END SELECT

'zanka1: nastavljanje frekvence z glavnim delilcem

```
zanka1:
INPUT "daj frekvenco v MHz! (0=konec)"; f
IF f = 0 THEN GOTO zac
n% = f * 1000000! / fref
bb%(1) = n% \ 256
bb%(2) = n% MOD 256
'PRINT bb%(1), bb%(2)
IF f < 1400 THEN          'izbira VCOja
  bb%(4) = bb%(4) OR 16
ELSE
  bb%(4) = bb%(4) AND 239
END IF
GOSUB prog3302
SLEEP 1
GOSUB beri1935
GOTO zanka1
```

```
zanka4:
INPUT "daj f1 in f2 (0,0=konec)"; f1, f2
zan4:
IF f1 = 0 THEN GOTO zac
n% = f1 * 1000000! / fref
bb%(1) = n% \ 256
bb%(2) = n% MOD 256
GOSUB prog3302
FOR caki = 1 TO 10000: NEXT caki
IF f2 = 0 THEN GOTO zac
n% = f2 * 1000000! / fref
bb%(1) = n% \ 256
bb%(2) = n% MOD 256
GOSUB prog3302
FOR caki = 1 TO 10000: NEXT caki
IF INKEY$ = "" THEN GOTO zan4
GOTO zanka4
```

'-----  
prog3302:

```
OUT &H378, cgdd%: GOSUB delay      'start
OUT &H378, cddd%: GOSUB delay
```

```
FOR i% = 0 TO 4
```

```
  byt% = bb%(i%)
```

```
  bitw% = 128
```

```
  FOR j% = 7 TO 0 STEP -1
```

```
    IF byt% >= bitw% THEN  'bit = 1
```

```
      byt% = byt% - bitw%
```

```
      OUT &H378, cddg%: GOSUB delay
```

```
      OUT &H378, cgdg%: GOSUB delay
```

```
      OUT &H378, cddg%: GOSUB delay
```

```
    ELSE  'bit = 0
```

```
      OUT &H378, cddd%: GOSUB delay
```

```
      OUT &H378, cgdd%: GOSUB delay
```

```
      OUT &H378, cddd%: GOSUB delay
```

```
    END IF
```

```
    bitw% = bitw% \ 2
```

```
  NEXT j%
```

```
  OUT &H378, cddg%: GOSUB delay      'ACK
```

```
  OUT &H378, cgdg%: GOSUB delay
```

```
  ack(i%) = (INP(&H379) AND 8) / 8
```

```
  OUT &H378, cddg%: GOSUB delay
```

```
NEXT i%
```

```
OUT &H378, cgdd%: GOSUB delay
```

```
OUT &H378, cgdg%: GOSUB delay      'idle
```

```
'FOR i% = 0 TO 4: PRINT "ACK("; i%; ")="; ack(i%): NEXT i%
```

```
FOR i% = 0 TO 4: IF ack(i%) = 1 THEN PRINT "Prog3302 no ACK"; i%
```

```
NEXT i%
```

```
RETURN
```

```
beri1935:
```

```
OUT &H378, cgdd%: GOSUB delay      'start
```

```
OUT &H378, cddd%: GOSUB delay
```

```
byt% = 192 + 2 * adr + 1      'address + read
```

```
bitw% = 128
```

```
FOR j% = 7 TO 0 STEP -1
```

```
  IF byt% >= bitw% THEN  'bit = 1
```

```
    byt% = byt% - bitw%
```

```

OUT &H378, cddg%: GOSUB delay
OUT &H378, cgdg%: GOSUB delay
OUT &H378, cddg%: GOSUB delay
ELSE      'bit = 0
  OUT &H378, cddd%: GOSUB delay
  OUT &H378, cgdd%: GOSUB delay
  OUT &H378, cddd%: GOSUB delay
END IF
bitw% = bitw% \ 2
NEXT j%
OUT &H378, cddg%: GOSUB delay      'ACK
OUT &H378, cgdg%: GOSUB delay
ackn = (INP(&H379) AND 8) / 8
OUT &H378, cddg%: GOSUB delay
IF ackn = 1 THEN PRINT "Ber1935-1: no ACK!!"
stat% = 0
FOR j% = 7 TO 0 STEP -1
  OUT &H378, cddg%: GOSUB delay
  OUT &H378, cgdg%: GOSUB delay
  stat% = stat% + ((INP(&H379) AND 8) / 8) * 2 ^ j%
  OUT &H378, cddg%: GOSUB delay
NEXT j%
OUT &H378, cddg%: GOSUB delay      'ACK
OUT &H378, cgdg%: GOSUB delay
ackn = (INP(&H379) AND 8) / 8
OUT &H378, cddg%: GOSUB delay
'IF ackn = 1 THEN PRINT "Ber1935-2: no ACK!!"
OUT &H378, cddd%: GOSUB delay
OUT &H378, cgdd%: GOSUB delay
OUT &H378, cgdg%: GOSUB delay      'idle

PRINT "Status: ";
IF (stat% AND 128) = 128 THEN PRINT "POR=1 "; ELSE PRINT "POR=0 "; '!!!!
IF (stat% AND 64) = 64 THEN PRINT "LOCK=1" ELSE PRINT "LOCK=0" '!!!!

RETURN      'Ber1935

delay:
FOR mi = 1 TO 10: NEXT
RETURN

```