BLINK PAGE 1

1 ;\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

2 ;

3 ; Author : ADI - Apps www.analog.com/MicroConverter

4 ;

5 ; Date : October 2003

6 ;

7 ; File : blink.asm

8 ;

9 ; Hardware : ADuC842/ADuC843

10 ;

11 ; Description : Blinks LED continuously.

12 ; 200mSec period @ 50% duty cycle.

13 ;

14 ;\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

15

16 $MOD842 ; use 8052 predefined symbols

17

00B4 18 LED EQU P3.4 ; P3.4 is red LED on eval board

19

20 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

21 ; MAIN PROGRAM

---- 22 CSEG

23

0000 24 ORG 0000h

25

0000 740A 26 MOV A,#010

0002 B2B4 27 BLINK: CPL LED ; flash (complement) the red LED

0004 120009 28 CALL DELAY ; call software delay

0007 80F9 29 JMP BLINK ; repeat indefinately

30

31 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

32 ; SUBROUTINES

0009 33 DELAY: ; Delays by ms 10\* A

34 ; 10mSec based on 2.094MHZ

35 ; Core Clock

36 ; i.e. default ADuC842 Clock

37

0009 F9 38 MOV R1,A ; Acc holds delay variable (1 clock)

000A 7A1B 39 DLY0: MOV R2,#01Bh ; Set up delay loop0 (2 clocks)

000C 7BFF 40 DLY1: MOV R3,#0FFh ; Set up delay loop1 (2 clocks)

000E DBFE 41 DJNZ R3,$ ; Dec R3 & Jump here until R3 is 0 (3 clocks)

0010 DAFA 42 DJNZ R2,DLY1 ; Dec R2 & Jump DLY1 until R2 is 0 (3 clocks)

0012 D9F6 43 DJNZ R1,DLY0 ; Dec R1 & Jump DLY0 until R1 is 0 (3 clocks)

0014 22 44 RET ; Return from subroutine

45 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

46

47 END

VERSION 1.2h ASSEMBLY COMPLETE, 0 ERRORS FOUND

BLINK PAGE 2

BLINK. . . . . . . . . . . . . . C ADDR 0002H

DELAY. . . . . . . . . . . . . . C ADDR 0009H

DLY0 . . . . . . . . . . . . . . C ADDR 000AH

DLY1 . . . . . . . . . . . . . . C ADDR 000CH

LED. . . . . . . . . . . . . . . NUMB 00B4H

P3 . . . . . . . . . . . . . . . D ADDR 00B0H PREDEFINED