ADCLDR PAGE 1

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

2 ;

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

4 ;

5 ; Date : April 2001

6 ;

7 ; File : ADCldr.asm

8 ;

9 ; Hardware : ADuC832

10 ;

11 ; Description : Performs repeated single ADC conversions on ADC0

12 ; Adjusts output of DAC0 to vary with LDR

13 ;

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

15

16 $MOD832 ; Use 8052&ADuC832 predefined symbols

17

0003 18 CHAN EQU 3 ; convert this ADC input channel..

19 ; ..chan values can be 0 thru 8

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

21 ; BEGINNING OF CODE

---- 22 CSEG

23

0000 24 ORG 0000h

25

0000 02004B 26 JMP MAIN ; jump to main program

27 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

28 ; INTERRUPT VECTOR SPACE

29

30

31 ;====================================================================

32 ; MAIN PROGRAM

004B 33 ORG 004Bh

34

004B 35 MAIN:

36

37 ; PRECONFIGURE...

38

004B 75EF80 39 MOV ADCCON1,#080h ; power up ADC

004E 75D803 40 MOV ADCCON2,#CHAN ; select channel to convert

0051 75FD3D 41 MOV DACCON,#03DH ; Dac 0 0-5V 12bits

42

43 ; PERFORM REPEATED SINGLE CONVERSIONS...

44

0054 7401 45 AGAIN: MOV A,#01H ; Delay length

0056 D2DC 46 SETB SCONV ; innitiate single ADC conversion

47 ; ADC ISR is called upon completion

0058 30DFFD 48 JNB ADCI,$

005B C2DF 49 CLR ADCI

005D 85DAFA 50 MOV DAC0H,ADCDATAH

0060 85D9F9 51 MOV DAC0L,ADCDATAL

52

0063 80EF 53 JMP AGAIN

54

55 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

56 END

VERSION 1.2h ASSEMBLY COMPLETE, 0 ERRORS FOUND

ADCLDR PAGE 2

ADCCON1. . . . . . . . . . . . . D ADDR 00EFH PREDEFINED

ADCCON2. . . . . . . . . . . . . D ADDR 00D8H PREDEFINED

ADCDATAH . . . . . . . . . . . . D ADDR 00DAH PREDEFINED

ADCDATAL . . . . . . . . . . . . D ADDR 00D9H PREDEFINED

ADCI . . . . . . . . . . . . . . B ADDR 00DFH PREDEFINED

AGAIN. . . . . . . . . . . . . . C ADDR 0054H

CHAN . . . . . . . . . . . . . . NUMB 0003H

DAC0H. . . . . . . . . . . . . . D ADDR 00FAH PREDEFINED

DAC0L. . . . . . . . . . . . . . D ADDR 00F9H PREDEFINED

DACCON . . . . . . . . . . . . . D ADDR 00FDH PREDEFINED

MAIN . . . . . . . . . . . . . . C ADDR 004BH

SCONV. . . . . . . . . . . . . . B ADDR 00DCH PREDEFINED