ADCLDR PAGE 1

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

2 ;

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

4 ;

5 ; Date : March 2001

6 ;

7 ; File : ADCldr.asm

8 ;

9 ; Hardware : ADuC831

10 ;

11 ; Description : Performs repeated single ADC conversions on ADC1

12 ; Adjusts output of DAC0 to vary with LDR

13 ;

14 ;

15 ;\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

16

17 $MOD831 ; Use 8052&ADuC831 predefined symbols

18

0003 19 CHAN EQU 3 ; convert this ADC input channel..

20 ; ..chan values can be 0 thru 6

21 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

22 ; BEGINNING OF CODE

---- 23 CSEG

24

0000 25 ORG 0000h

26

0000 02004B 27 JMP MAIN ; jump to main program

28 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

29 ; INTERRUPT VECTOR SPACE

30

31

32 ;====================================================================

33 ; MAIN PROGRAM

004B 34 ORG 004Bh

35

004B 36 MAIN:

37

38 ; PRECONFIGURE...

39

004B 75EF80 40 MOV ADCCON1,#080h ; power up ADC

004E 75D803 41 MOV ADCCON2,#CHAN ; select channel to convert

0051 75FD3D 42 MOV DACCON,#03DH ; Dac 0 0-5V 12bits

43

44

45 ; PERFORM REPEATED SINGLE CONVERSIONS...

46

0054 D2DC 47 AGAIN: SETB SCONV ; innitiate single ADC conversion

48 ; ADC ISR is called upon completion

0056 30DFFD 49 JNB ADCI,$

0059 C2DF 50 CLR ADCI

005B 85DAFA 51 MOV DAC0H,ADCDATAH

005E 85D9F9 52 MOV DAC0L,ADCDATAL

53

0061 80F1 54 JMP AGAIN

55

56 ;\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

57 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