

# INTERFACING

## (1) Stepper motor interfacing

**Aim:** To write a 8051 program for stepper motor interfacing

### PROGRAM:

memory	#	label	Instructions	Comment
8000	90:11:00	AGAIN	MOV DPTR, #1100H	move DPTR to 1100H
8003	74:11		MOV A, #11H	move 11H to A
8005	F0		MOVX @DPTR, A	move content of A to memory.
8006	11:1A		ACALL DELAY	call delay
8008	74:22		MOV A, #22H	load 22H to A
800A	F0		MOVX @DPTR, A	move content of A to memory.
800B	11:1A		ACALL DELAY	call delay
800D	74:44		MOV A, #44H	load A with 44H
800F	F0		MOVX @DPTR, A	move content of A to memory.
8010	11:1A		ACALL DELAY	call delay
8012	74:88		MOV A, #88H	load A with 88H
8014	F0		MOVX @DPTR, A	move data from A to memory.
8015	11:1A		ACALL DELAY	call delay.
8017	02:80:00		LJMP AGAIN	jump to again
801A	78:55	DELAY	MOV R0, #55H	load R0 with 55H
801C	79:FF	LOOP	MOV R1, #0FFH	load R1 with FFH
801E	89:FE	HERE	DJNZ R1, HERE	decrement R1, if $\neq 0$ and jump to here
8020	D8:FA		DJNZ R0, LOOP	decrement R0, if $\neq 0$ jump to loop
8022	2A		RET	



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RESULT :

Write and executed 8051 program for stepper motor interfacing.



(2) 50 DIN ADG 8051 LCD

Aim: To write a 8051 assembly level program for 50 pin ADG 8051 interfacing.

PROGRAM:

memory		label	Instructions	Comments
8000	90:11:00	LOOP	MOV DPTR, #1100	Move DPTR to 1100H
8003	74:00		MOV A, #00	Load A with 00
8005	FD		MOVX @DPTR, A	Moving Value of A to memory
8006	12:80:16		LCALL DELAY	Calling Delay
8007	7F:01		MOV R7, #01	Load R7 with 01H
800B	12:60:00		LCALL 6000	
800E	ED		MOVX A, @DPTR	Moving data from memory to A
800F	FF		MOV R7, A	Copy Value of A to R7
8010	12:60:90		LCALL 6090	
8013	07:80:00		LJMP LOOP	Jump to Loop
8016	78:01	DELAY	MOV R0, #10H	Load 10H to R0
8018	79:FF	LOOP1	MOV R1, #FFH	Load R1 with FFH
801D	09:FE	LOOP2	DJNZ R1, LOOP2	Decrement R1 and Jump to loop 2 if R1 ≠ 0
801C	D8:FA		DJNZ R0, LOOP2	Decrement R0 and jump to loop1 if R0 ≠ 0
801E	22		RET	



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RESULT :

Written and executed 8051 program for 50 pin ADC interfacing successfully.



### 3. DAC by using Microcontroller.

Aim:

To generate the Saw-tooth wave at the output of DAC by using microcontroller.

- ADDRESS DAC1 = 1100H
- ADDRESS DAC 2 = 1200H

PROGRAM:

Memory		Label	Instructions	Comments
8000	74:00	START	MOV A, #00H	Load 00H to A
8002	80:11:00	LOOP	MOV DPTR, #1100H	Load DPTR with 1100H
8005	FD		MOVX @DPTR, A	move value at A to memory
8006	90:12:00		MOV DPTR, #1200H	move DPTR to 1200H
8009	FD		MOVX @DPTR, A	move value of A to memory
800A	04		INC A	Increment A
800B	B4:FF:FF		CJNE A, #0FFH, LOOP	Jump to loop if A $\neq$ 0FFH
800E	80:10		JMP START	jump to start

RESULT:

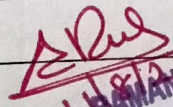
generated a saw tooth wave as the output of DAC using 8051 microcontroller.

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experiments

Completed  
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