

Program 11

PROGRAM	ALGORITHM
START: MVI A, 80 OUT CWR REP: XRA A VP: OUT P _a OUT P _b INR A CPI FF JNZ UP DN: DCR A OUT P _a OUT P _b JNZ DN JMP REP	STEP 1: Write the control word in to the control register of PPI STEP 2: Send the data's towards PPI to generate triangular wave STEP 3: send the data's for positive slope & negative slope alternatively STEP 4: Keep the processor in the continuous loop, till termination STEP 5: Terminating point

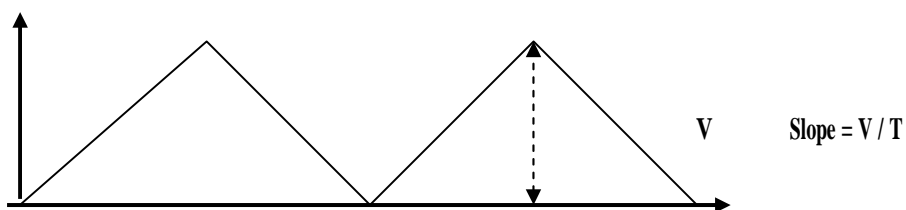
NOTE:

- Store the program starting from F000H
- Connect the interfacing unit to the kit
- Execute the program
- Observe the waveform on the CRO

PORT ADDRESS:

FOR P3		FOR P4	
PORT	ADDRESS	PORT	ADDRESS
PORT A	D8	PORT A	F0
PORT B	D9	PORT B	F1
PORT C	DA	PORT C	F2
CWR	DB	CWR	F3

OUTPUT WAVEFORM:



Program 12

Program to display using seven segment display scrolling

<pre>START: MVI A,CW OUT CWR: MVI C,04H RPTCD: MVI A,FFH CALL DISP LXI D,FFFFH CALL DELY DCR C JNZ RPTCD LXI D,FFFFH CALL DELY LXI H, F100H MVI C, 04H RPDIS: MOV A,M CALL DISP INX H PUSH H PUSH B LXI D,FFFFH CALL DELY POP B POP H DCR C JNZ RPDIS LXI D,FFFFH CALL DELY JMP START DISP: MVI E,08H MOV B,A RPTR: MOV A,B OUT PB RRC MOV B,A</pre>	<pre>STEP 1: Initialize all ports STEP 2: Make all rows high STEP 3: Sense the Key board STEP 4: Is any Key Pressed , if Yes call delay STEP 5: If No, Check the Key Pressed STEP6: Initialize counter Step 7: Set Row High. Step 8:Is any Key Pressed Check first column, If No increment the counter by 8 and enable next Row. Step 9: If Yes Display the counter.</pre>
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MVI A,00H OUT PC CMA OUT PC DCR E INZ RPTR RETURN: RET	
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NOTE:

- Store the program from F000H.
- Store the string of data from F100h.
- Connect the interfacing unit to the PPI of the kit.
- Execute the program.
- Observe the result in the display interface unit.

String for SSIT:

A	b	c	d	e	f	g	h	
0	1	0	0	1	0	0	1	49H(S)
0	1	0	0	1	0	0	1	49H(S)
1	0	0	1	1	1	1	1	9FH(i)
1	1	1	0	0	0	0	1	E1H(t)