Write a program in 8085 to multiply two 8-bit numbers without using shifting multiplicand.

Address	Assembly Code	Hex code	Comments
0000	LHLD 2050H	2A 50 20	Loading data to HL reg pair
0003	MOV E, L	5D	Move data in L to E
0004	MOV A, H	7C	Move data in H to Acc
0005	MVI D, 00H	16 00	Moving 00 to D
0007	MVI C, 08H	0E 08	Move 8 to C
0009	LXI H, 0000H	21 00 00	Loading 0000 to HL reg pair
000C	BACK: DAD H	1F	HL <- HL+HL (left shift)
000D	RAL	17	Rotate accumulator left
000E	JNC NEXT	D2 11 00	Jump to next if no carry
0011	DAD D	19	HL <- HL + DE
0012	NEXT: DCR C	EB	Decrease C by 1
0013	JNZ BACK	29	Jump to Back if C not zero
0016	SHLD 2052	22 52 20	Store HL reg pair to 2052 and 2053
0019	HLT	76	Halt

Procedure:

Step – 1: Writing program in memory.

1. Press Reset
2. Press SET/MEM
3. Type in Address 0000
4. Press Enter
5. Type 1st Hex Code (Here 21)
6. Press Enter
7. Follow step 5 and 6 to type in all Hex Code

Step – 2: Assigning Value to the Address Location

1. Press Reset
2. Press SET/MEM
3. Type in Address of 1st Location (Here 2050)
4. Press Enter
5. Enter value of Multiplicand
6. Press Enter
7. Enter value of Multiplier
8. Press Enter

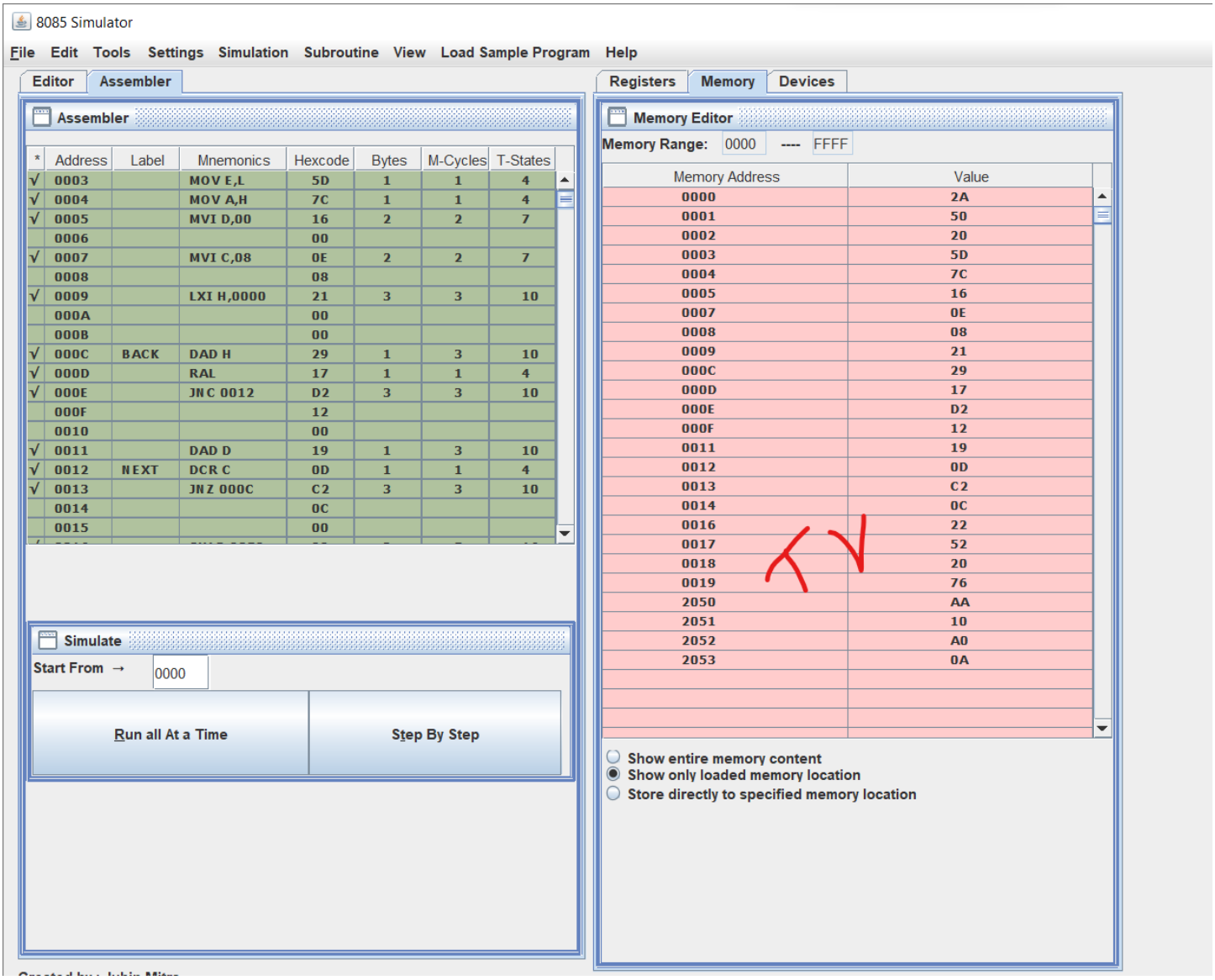
Step – 3: Executing the program

1. Press Reset to clear Buffer
2. Press Go
3. Enter Starting Address of Program (Here 0000)
4. Press Execute

Step – 4: Checking output

1. Press reset and Clear the Buffer
2. Press Go
3. Enter Result Location (Here 2052 for LB and 2053 for UB)
4. You will find the product of the numbers

Output:



Search (Alt+Q)

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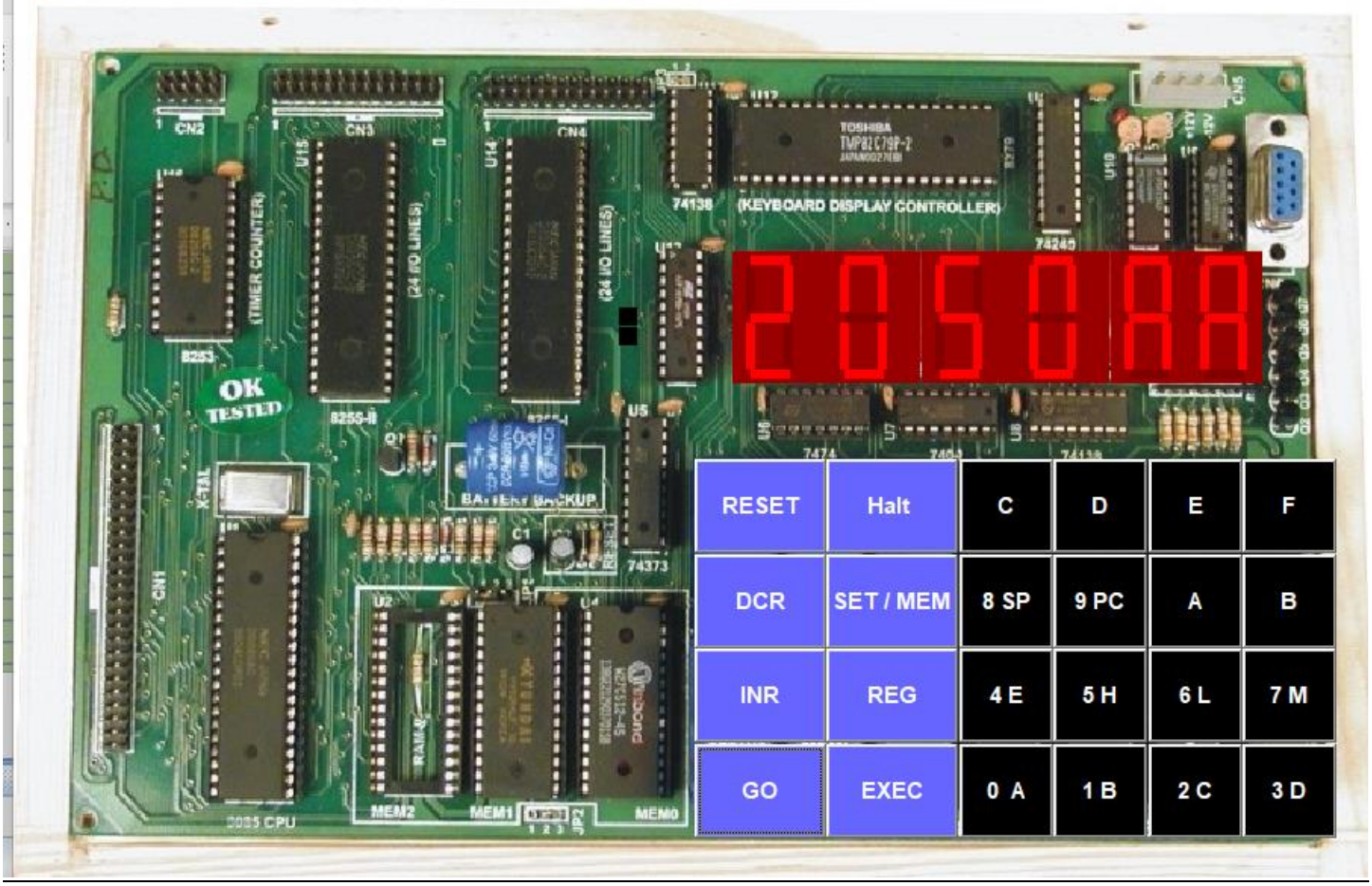

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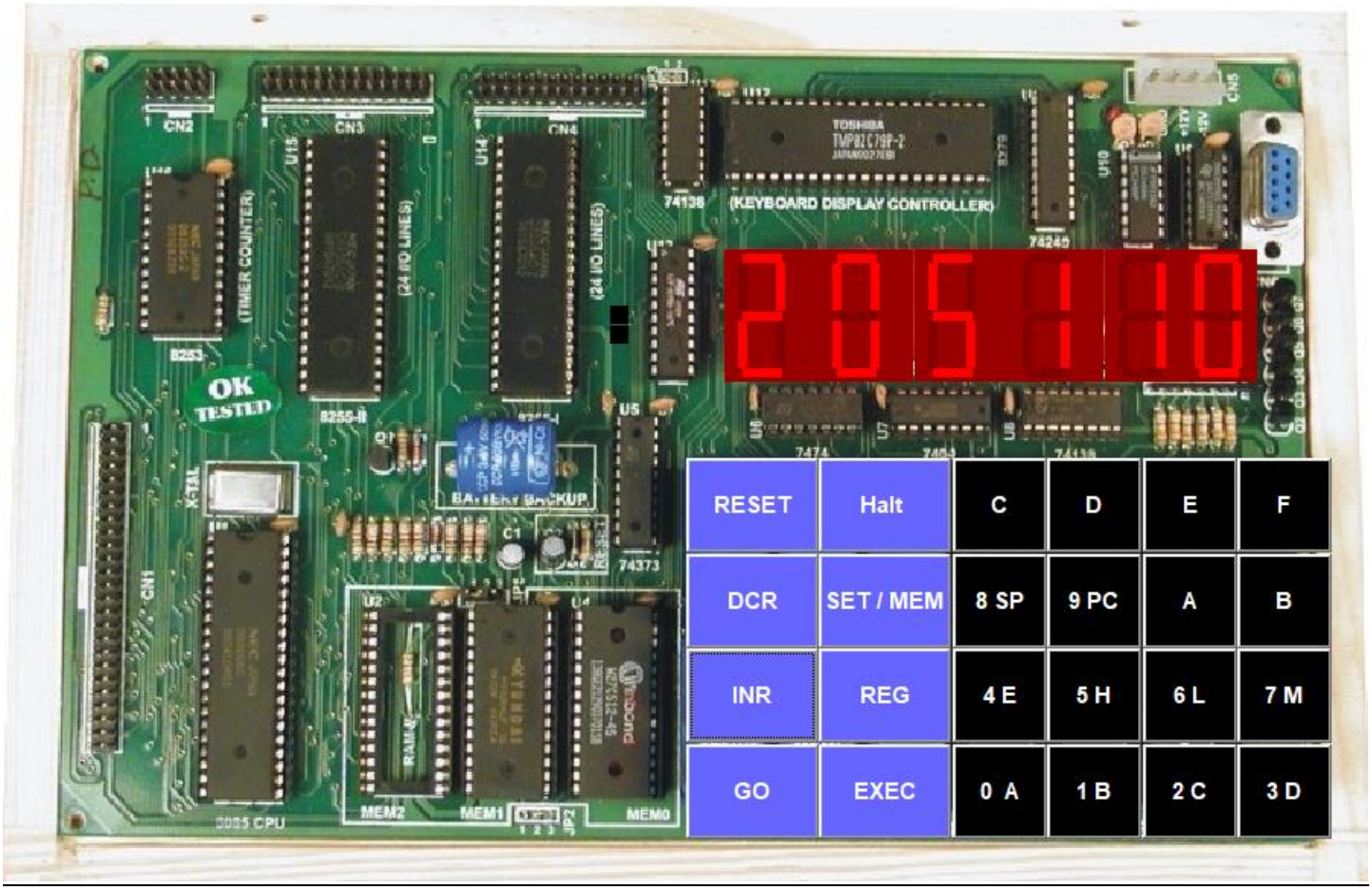

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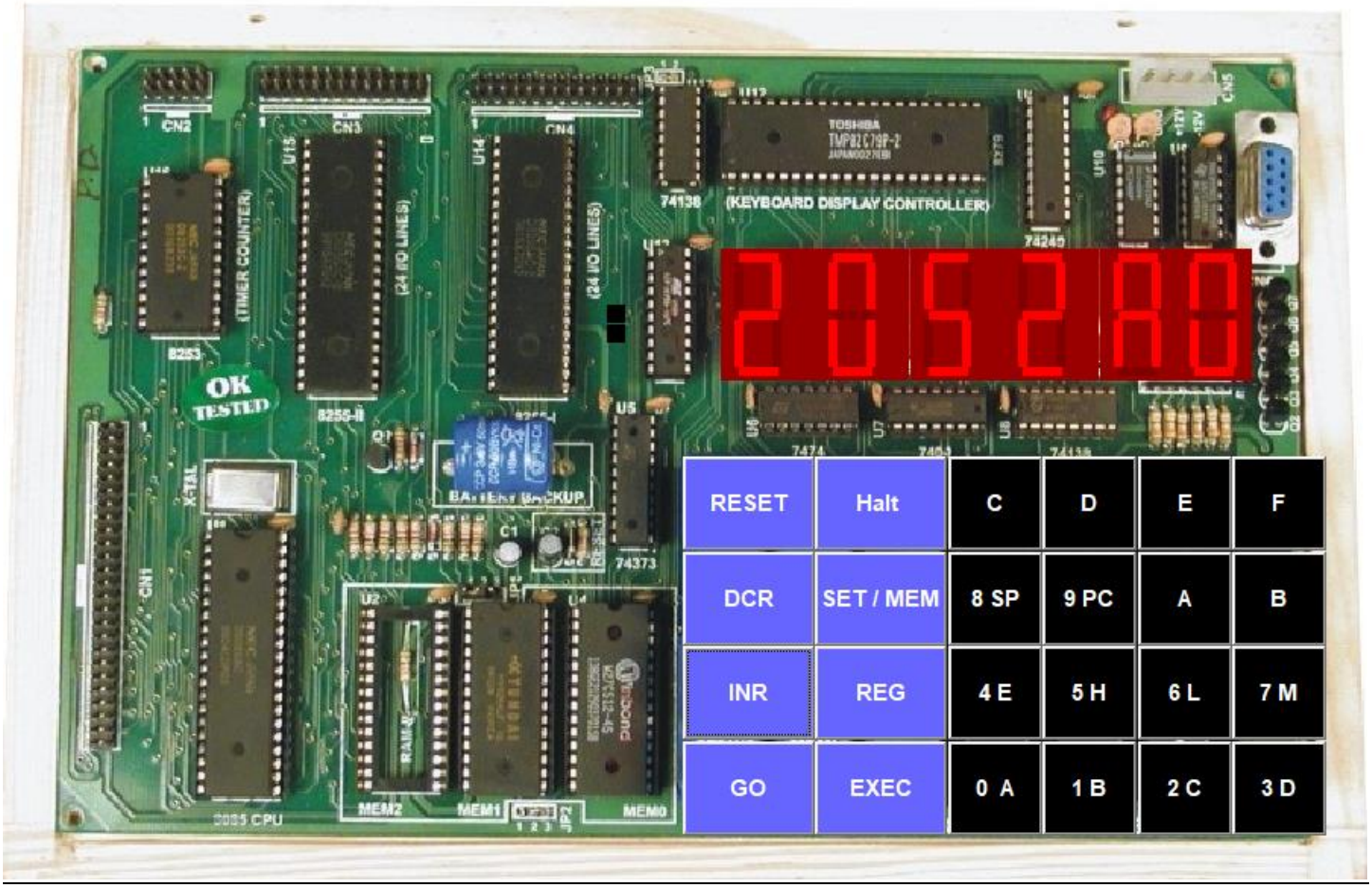

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