4 bit PC

Components	**Bits**	**Signals**
PC	4	C_p, L_p, E_p
MAR	4	L_M
Memory	8	CE
IR	8	L_I, E_I
A	4	L_A, E_A, S_A
ALU	4	S_2, S_1, S_0, C_{in}, E_U
TEMP	4	L_T
B	4	L_B, E_B
C	4	L_C, E_C
OUT	4	L_O

Step 1: Design Components, test each of them using logic states and logic probes

Step 2: Connect components, test data movement

Step 3: Find microinstructions and control words (can be done in parallel to 1 and 2)

Step 4: Write control words in ROM.

Step 5: Write test RAM contents.

Step 6: Test each instruction