LED Dice PCB

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Purpose of Project

- Model components of project

- Create schematic based on kit schematic

- Design board layout

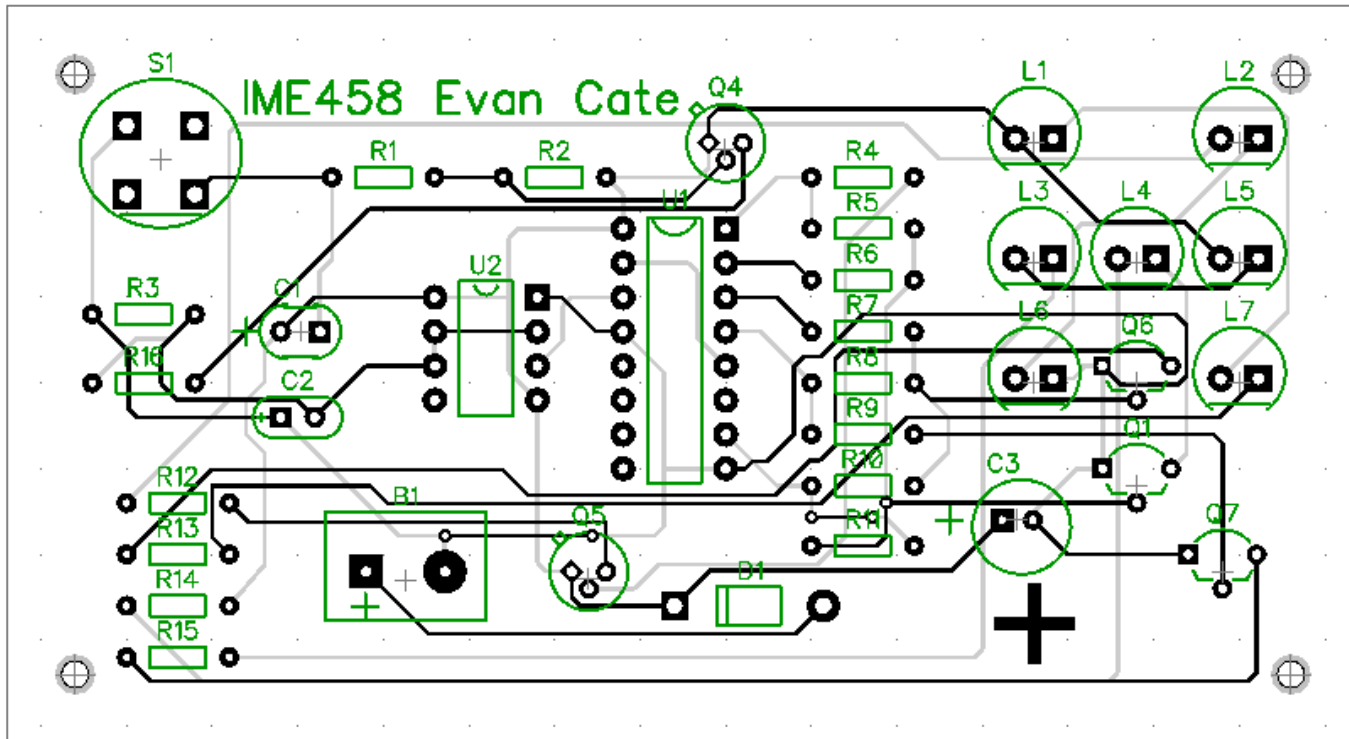- Assemble board

Bill of Materials

Table I: BOM

| Item #	Item	Description	Quantity
1	Resistor	220 ohm	3
2	Resistor	270 ohm	1
3	Resistor	10K ohm	8
4	Resistor	100K ohm	1
5	Resistor	10M ohm	1
6	Resistor	3M3 ohm	2
7	Capacitor	470nF monoblock	1
8	Capacitor	100nF monoblock	1
9	Capacitor	100uF electrolytic	1
10	Diode	1N4004	1
11	LED	5mm	7
12	IC	555 timer	1
13	IC	14017C decade timer	1
14	Transistor	BC557	2
15	Transistor	BC547	3
16	Switch	Hat Keyswitch	1
17	9V battery snap	--	1

Circuit Schematic
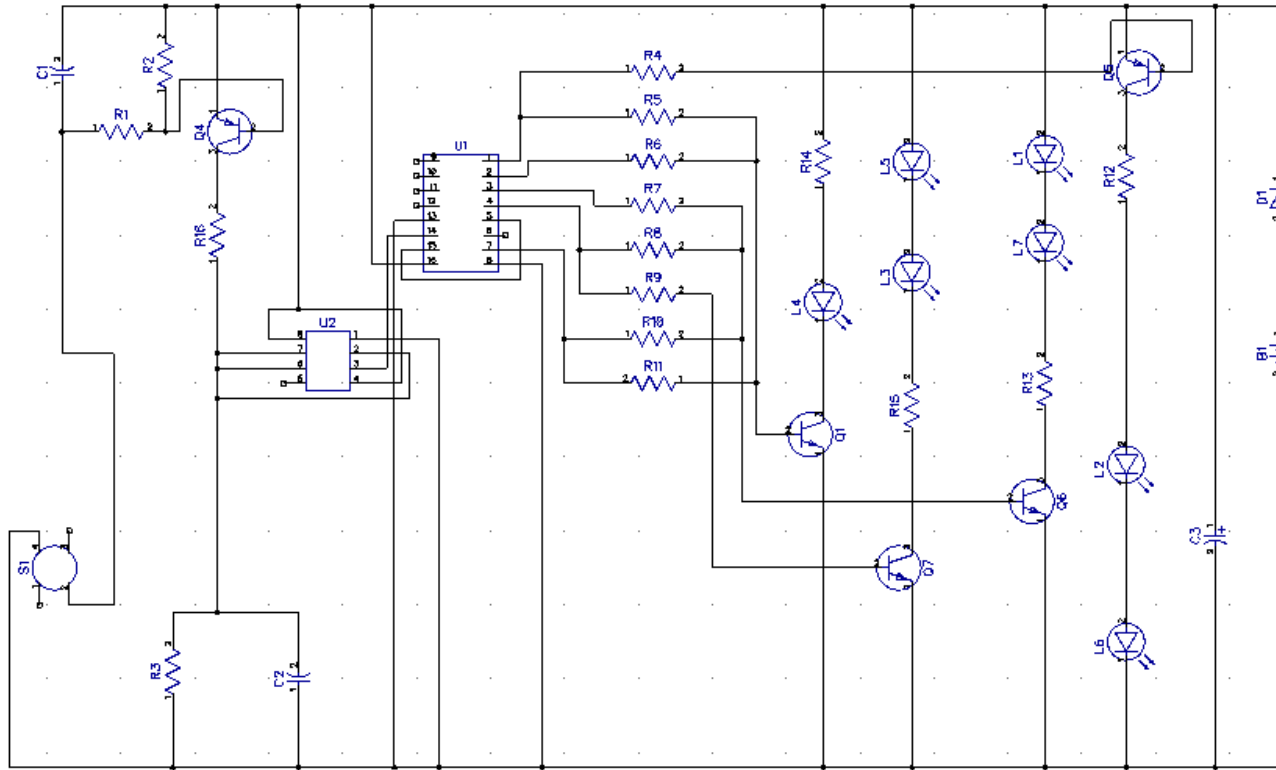
Board Layout

Finished PCB
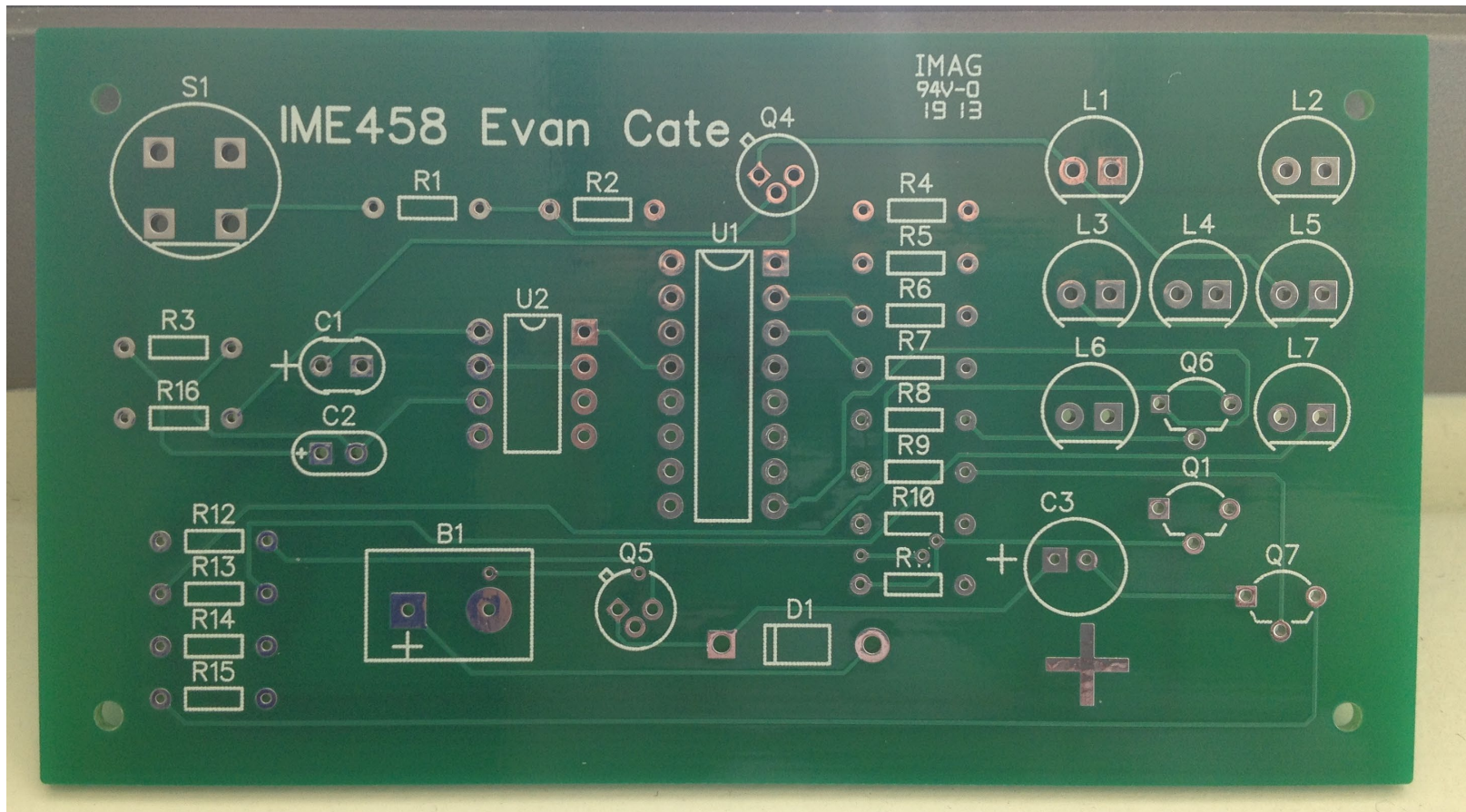
Final Board After Assembly
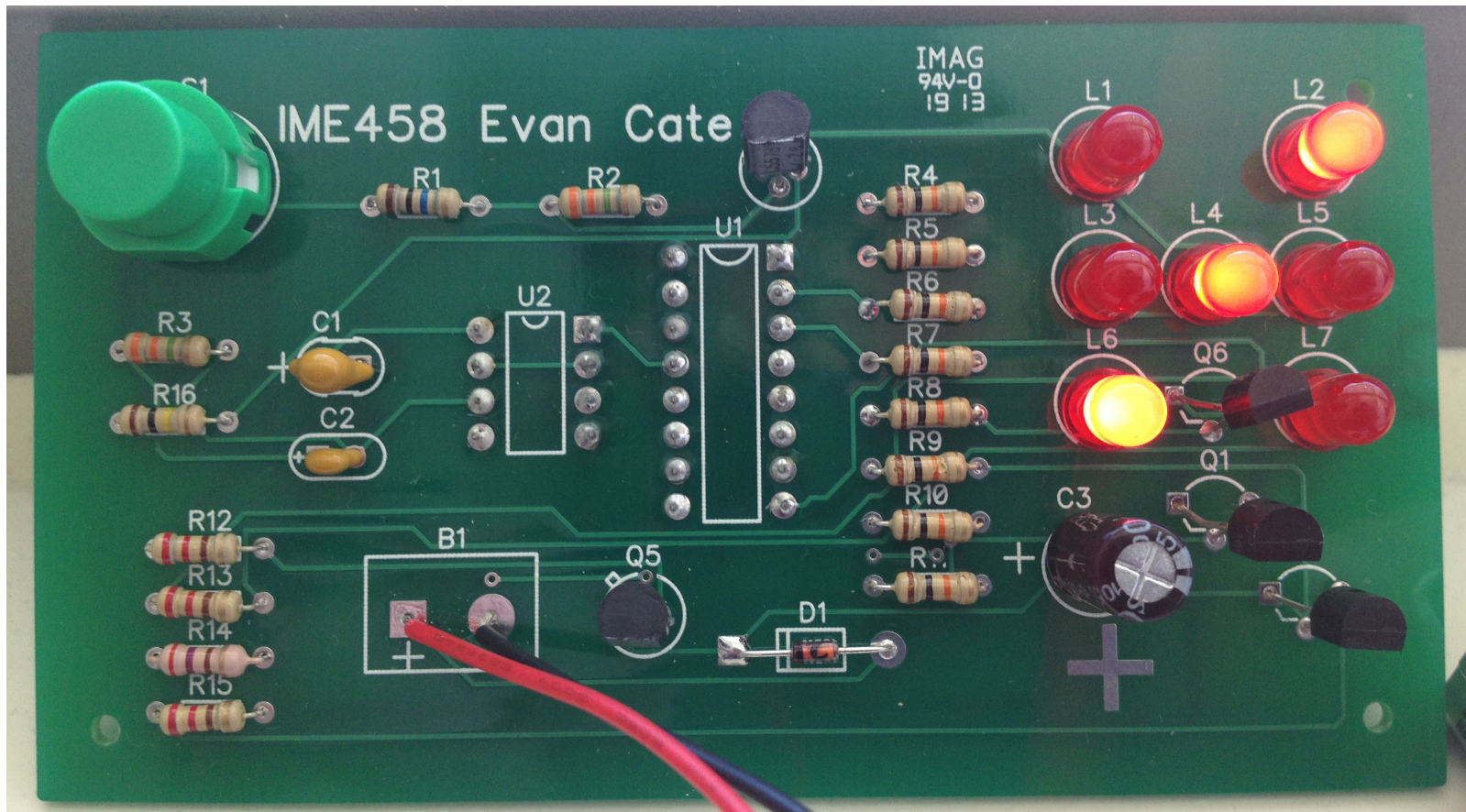
Conclusions

- ☐ Functioning LED dice achieved

- ☐ Soldering ICs from the back of the board solved the numbering issue

- ☐ Recommendation: order two or more kits for spare parts

- ☐ Recommendation: increase resistor spacing