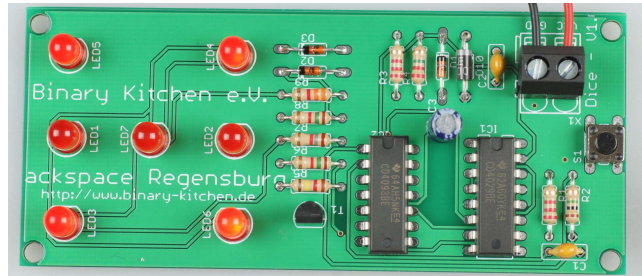


Dice (DIP)



Quantity	Name	Description	Label/Color Code
2	C1, C2	Ceramic Capacitor 100 nF	104
1	C3	Capacitor 47 μ F	
3	D1, D2, D3	Diode BAW 76	
1	D10	Diode 1N4007	
1	IC1	CMOS-IC 4029	
1	IC2	CMOS-IC 4093	
7	LED1 - LED7	LED 5 mm	
2	R1, R3	Resistor 2.2 k Ω	RE RE BK BR BR
1	R2	Resistor 1 M Ω	BR BK BK YE BR
1	R4	Resistor 2.2 M Ω	RE RE BK YE BR
1	R5	Resistor 120 k Ω	BR RE BK OR BR
2	R6, R8	Resistor 1.5 k Ω	BR GR BK BR BR
1	R7	Resistor 1.8 k Ω	BR GR BK BR BR
1	R9	Resistor 3.3 k Ω	OR OR BK BR BR
1	T1	Transistor BC547B	
1	S1	Push Button	
1	X1	Terminal Block 2-poles (optional)	
1	PCB		
1	IC-Socket 14-polig		
1	IC-Socket 16-polig		
1	Battery Clip für 9 V Block		
1	Battery 9 V Block		

Difficulty: ●●●○○ Build Time: 1-2 hours

Manual v2.0 CC BY-SA 4.0 Binary Kitchen e.V.

PCB v1.0 CC BY-SA 4.0 Binary Kitchen e.V.

Farblgende: SI = silber; GO = gold; BK = schwarz; BR = braun; RE = rot; OR = orange; YE = gelb; GR = grün; BL = blau; VI = violett; GR = grau; WH = weiß

Safety Information

- ATTENTION: Not suitable for children under 3 years, choking hazard due to small parts that may be swallowed.
- We recommend: Supervision of the assembly and soldering process by an adult.
- Keep these operating instructions in a safe place for later use! It contains important information.
- If the battery is empty, replace it only with a new battery with the same values.
- When soldering, the soldering iron, the solder and also the components being soldered become very hot.
- Always wear safety glasses when soldering and assembling the kit.
- Always use a fire proof soldering pad when soldering! This prevents the components from slipping away.
- To keep the soldering iron safe during assembly, always use a suitable soldering stand.
- The kit is designed for battery operation only.
- CAUTION: Never connect the kit to 230 V mains voltage! There is an absolute danger to life!
- Please take the device to appropriately certified disposal companies at the end of its service life. This is good for the environment and ensures correct disposal.
- Subject to changes and errors.

Disposal

This appliance is labelled in accordance with the European Directive 2012/19/EU on waste electrical and electronic equipment (WEEE). The directive provides the legal framework for the take-back and recycling of waste equipment throughout the EU.

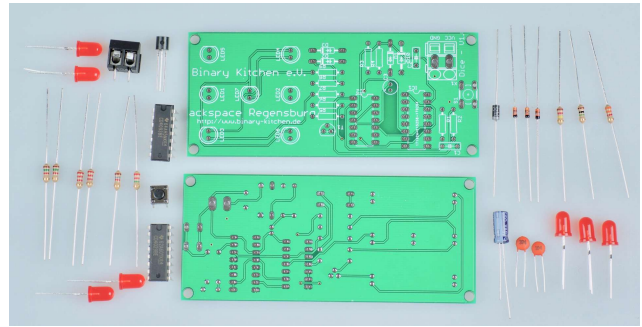
- **packaging:** The packaging is made of environmentally friendly materials and is therefore recyclable. Dispose of packaging materials that are no longer needed accordingly.
- **waste equipment:** Old appliances often still contain valuable materials. Therefore, hand in your old appliance to your retailer or a recycling centre for reuse. Please ask your retailer or your local authority for the current disposal routes.

blinkyparts.com
Egerstr. 9
93057 Regensburg
GERMANY



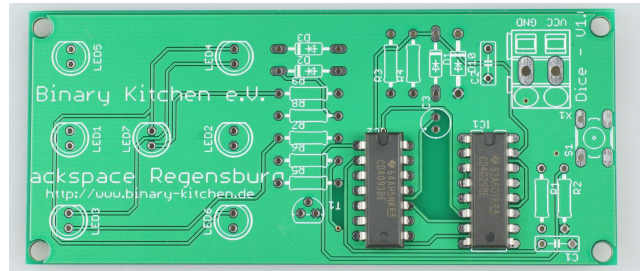
Step 1

- Tips:
- Resistor value can be determined by color coding
- Alignment of the board so, that Binary Kitchen e.V. can be read normally (see picture)
- Alignment for resistors does not matter
- LEDs have a flat side and a shorter leg. Both indicate the negative side



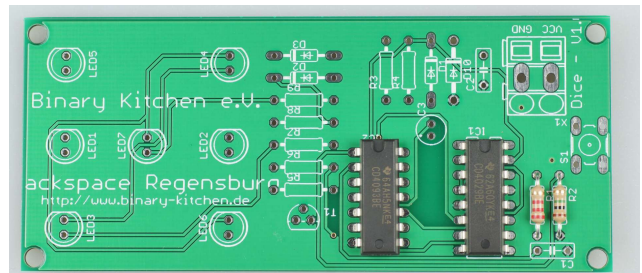
Step 2

- Solder both IC sockets (Only the socket, not the actual IC device) with the nose up on the board
- Attention: Do not solder the IC but only the IC socket
- Note the pin count: IC1 with 14 pins left, IC2 with 16 pins right



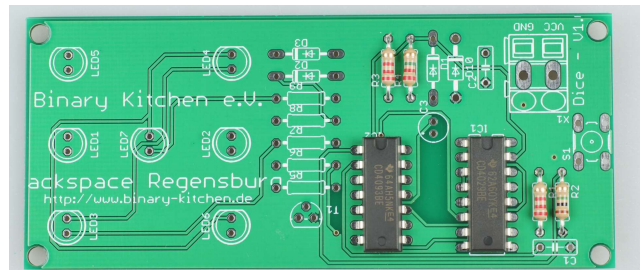
Step 3

- Solder resistors R1 (2.2 k Ω) and R2 (1 M Ω)
BR BK BK YE BR
- orientation does not matter



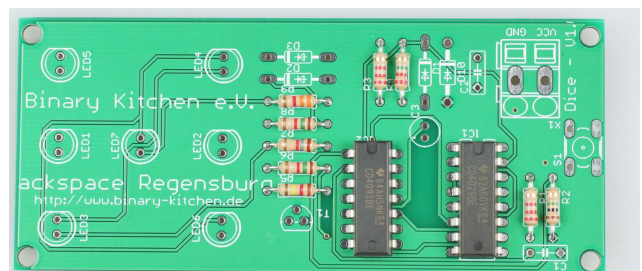
Step 4

- Solder resistors R3 (2.2 k Ω) and R4 (2.2 M Ω)
RE RE BK YE BR
- orientation does not matter.



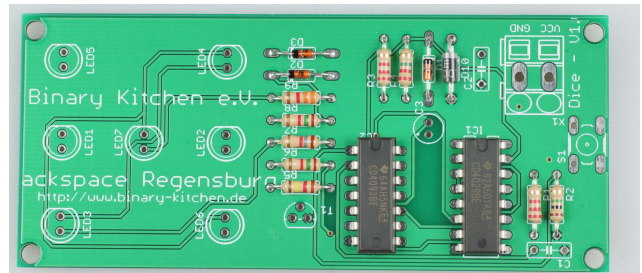
Step 5

- Solder resistors R5 (120 k Ω), R6 (1.5 k Ω), R7 (1.8 k Ω), R8 (1.5 k Ω) and R9 (3.3 k Ω)
BR RE BK OR BR, BR GR BK BR BR, OR OR BK BR BR
- orientation does not matter.



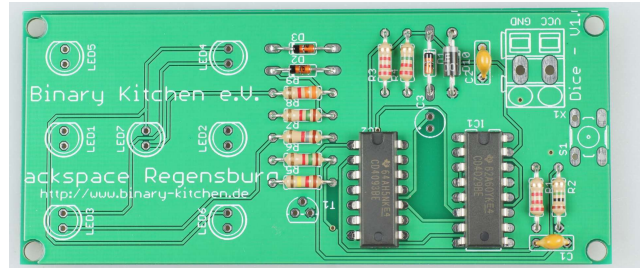
Step 6

- Attention! Orientation of diodes is important
- solder diodes D1 to D3 (BAW76) with black side towards white mark on PCB
- solder diode D10 (1N4007) with white side towards white mark on PCB



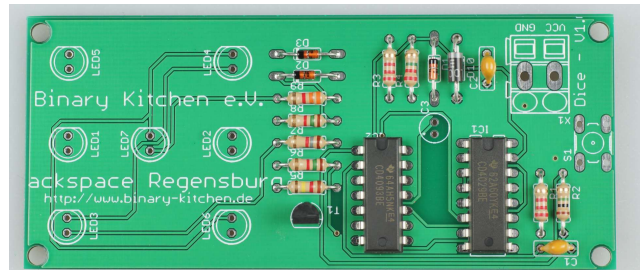
Step 7

- Solder capacitors C1 (104) and C2 (104)
- orientation does not matter



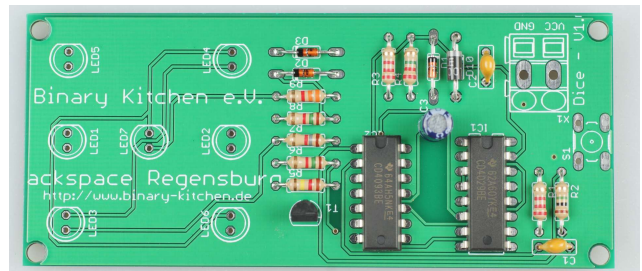
Step 8

- Attention! Orientation of the transistor is important
- solder transistor T1 (BC547) according to the marking
- orientation: flat side downwards



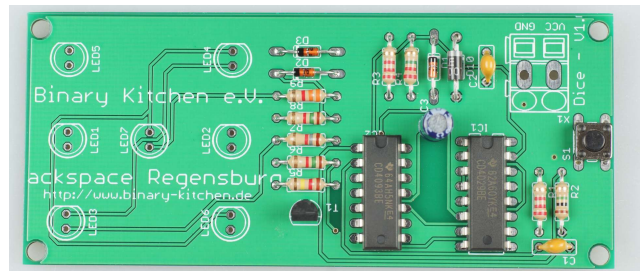
Step 9

- Attention! Alignment of this capacitor is important
- Solder capacitor C3 (47 μ F) with long leg (+) downwards
- Hint: There is a plus sign printed on the board.



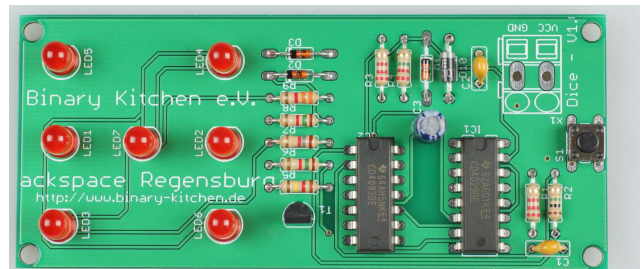
Step 10

- Solder switch S1
- Hint: Legs have different distances. Nothing has to be bent. Switch fits exactly
- Some pressure may be necessary



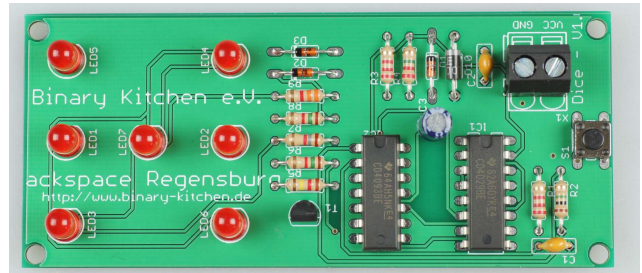
Step 11

- Attention! Alignment of LED is crucial
- Solder LED 1-7. Alignment important! Short leg upwards



Step 12

- Solder power connector X1 with opening upwards
- As an alternative, the cables can also be soldered directly (VCC red, GND black)
- before doing so, guide the cable through the hole next to the connection and tie it in a knot (strain relief).



Step 13

- Connect battery holder (VCC red, GND black)
- Insert both ICs into the sockets (count the number of legs! There are differences here)
- Insert batteries
- Push button. Done
- Cube goes off again by itself

