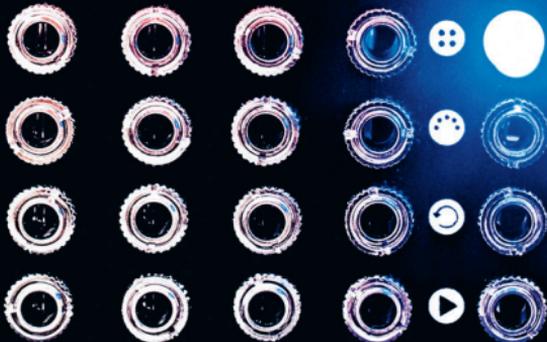
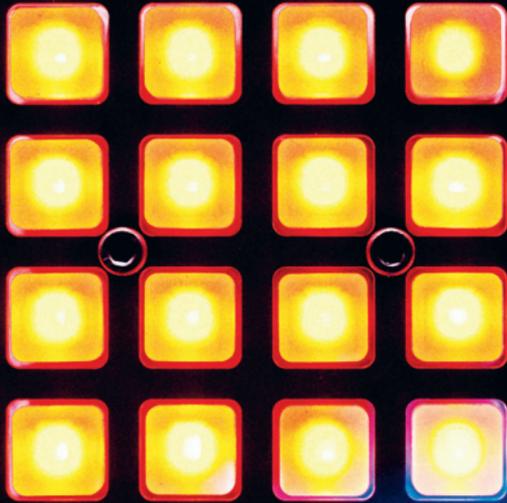
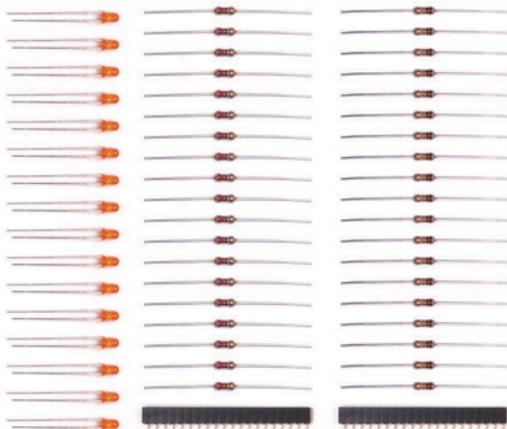
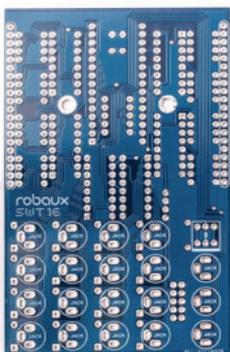
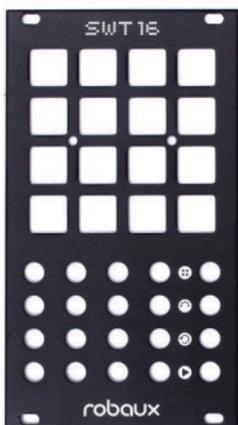
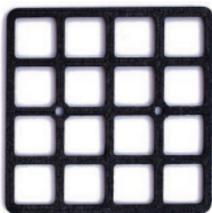
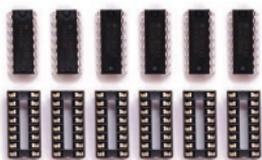


SWT 16



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# Assembly Guide

With these assembly instructions, you can easily build your own SWT16. All required components are included in this kit.

You need the following tools: soldering iron, wire cutter and solder. Also a desoldering pump and a nut driver.

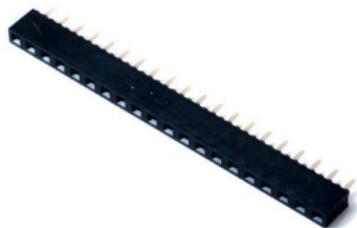
Read the instructions carefully and follow the steps in the correct order. Robaux wishes you much fun building the Sweet 16.



## 1 LEDs

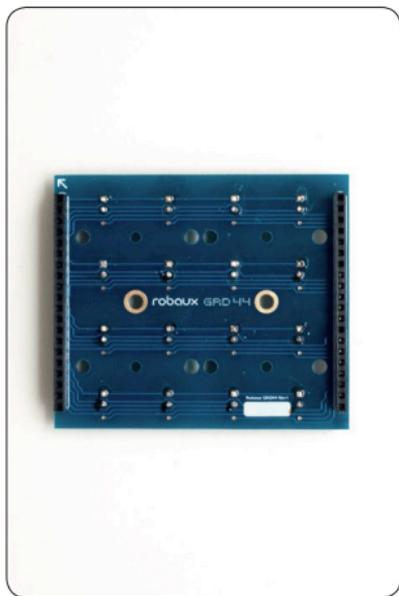
We start with the button board. Attach and solder the sixteen LEDs as shown in the picture. Please pay attention to the polarity of the LEDs. The long leg comes into the + hole, the short leg into the - hole.





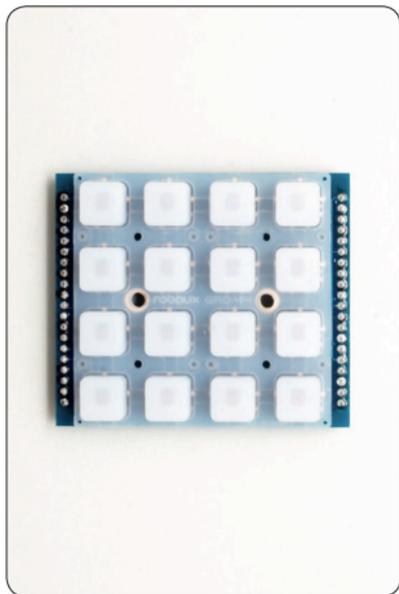
## 2 20 Pin Header

Next, solder the two 20-pin headers to the back of the button board. It is best to first solder the two outer pins and then the remaining pins.



## 3 4x4 Keypad

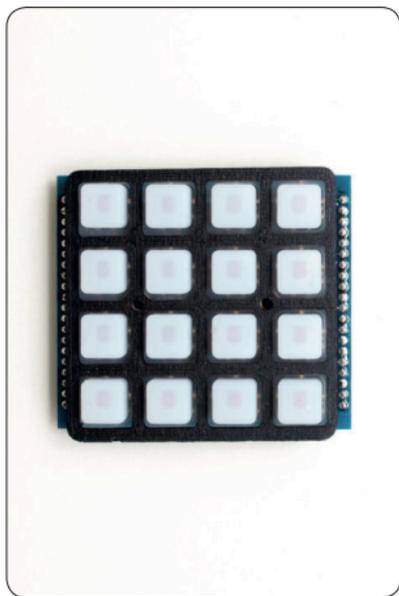
Now place the 4x4 Button Keypad on the front of the Button Board. Make sure that the holes on the keypad match the holes on the button board.





#### 4 Frame

Now put the frame on the keypad. Make sure the holes in the frame match the holes in the keypad.



#### 5 Frontpanel

Now it's time to put the front panel on the buttons.





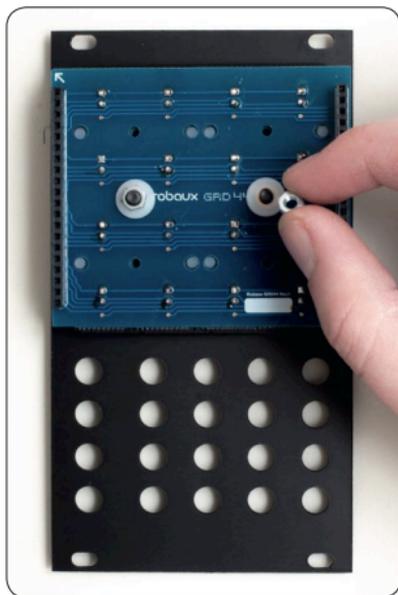
## 6 Screws

Now fix the front panel, the frame, the keypad and the button board with the two screws. Insert the screws through all parts as shown in the picture.



## 7 Nuts

Secure the screws with the washers and nuts.





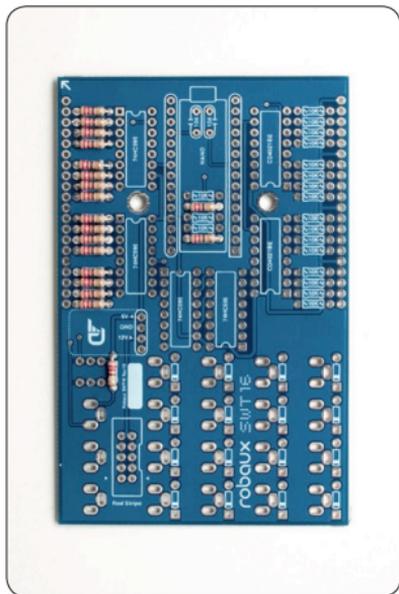
## 8 Allen key

Tighten the screws with the supplied allen key. Please do not over tighten the screws so that none of the parts will be damaged.



## 9 Resistor 220

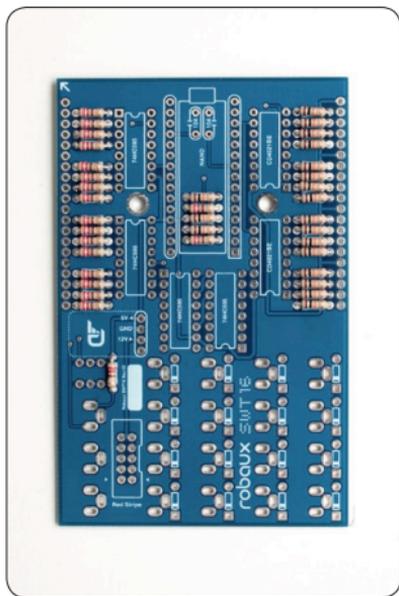
Now pick up the motherboard and solder the nineteen 220 ohm resistors as shown in the picture. You can recognize the resistors by their color code Red, Red, Brown, Gold.





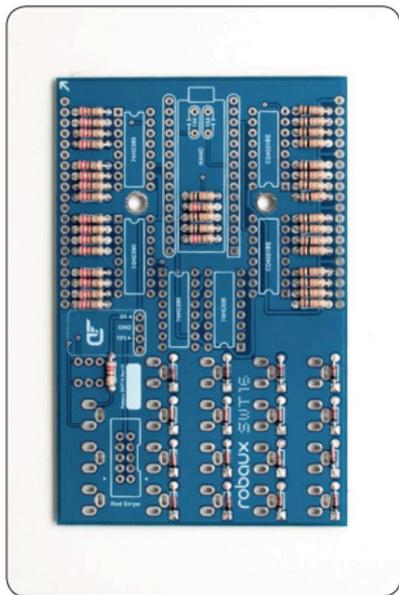
## 10 Resistor 10K

Now solder the nineteen 10K resistors to the board. You can recognize the resistors by their color code Brown, Black, Orange, Gold.



## 11 Diodes

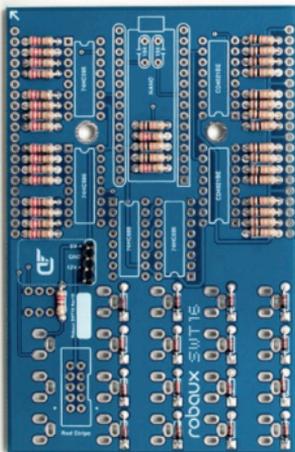
Now solder the sixteen diodes to the board as shown in the picture. Please pay attention to the polarity.





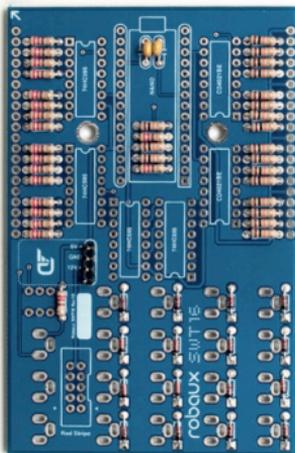
## 12 Pins

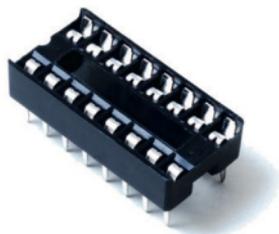
Now solder the 4 pins on the board. There, the step-down adapter will be soldered on later. If you like, you can shorten the pins to the height of the adapter before soldering them on.



## 13 Capacitor 104

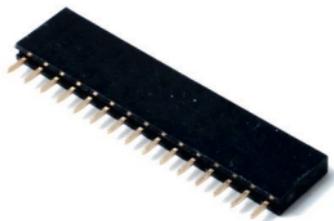
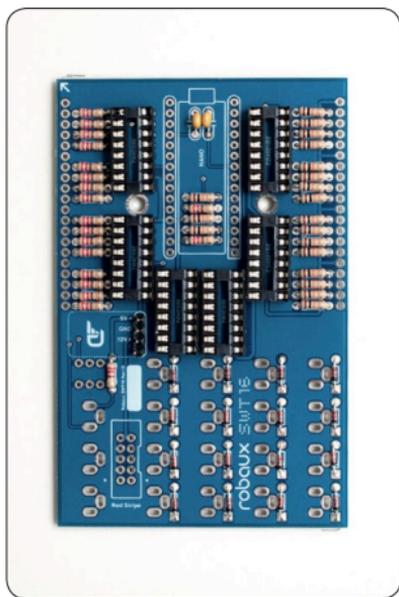
Now solder the two 104 capacitors to the board as shown in the picture.





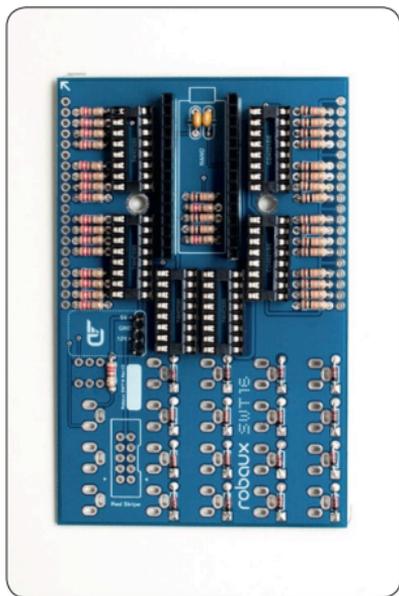
## 14 IC Socket

Now solder the six IC sockets to the board. It is easiest to solder first only the outer pins and then the remaining ones.



## 15 15 Pin Header

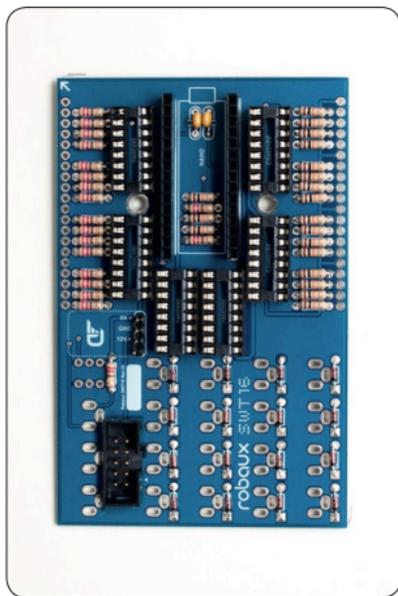
Next, solder the two 15-pin headers onto the main board. It is best to solder first the two outer pins and then the remaining pins.





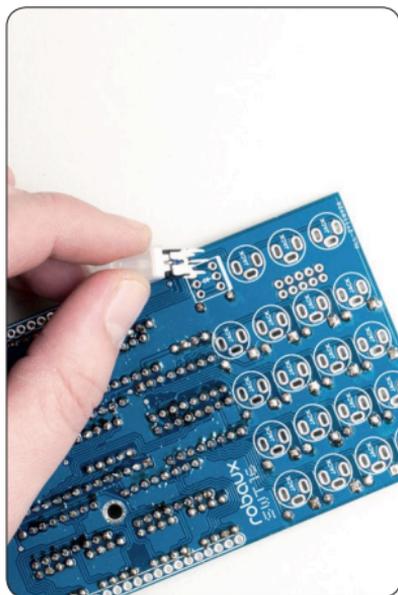
## 16 Power Socket

Now solder the power socket as shown in the picture. Notice that the socket points in the right direction.



## 17 Button

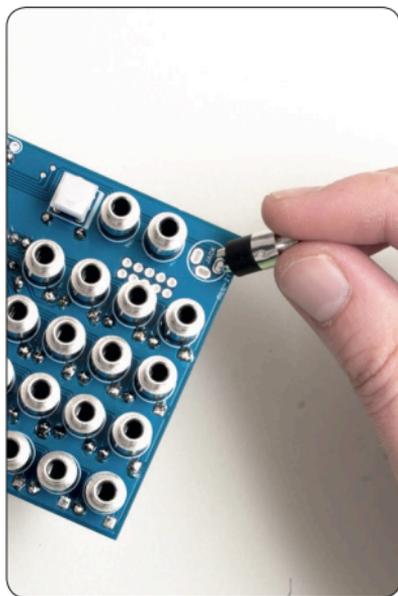
Now plug the button on the front of the main board. Please do not solder the button yet! Notice that the white mark on the button matches the white mark on the PCB.





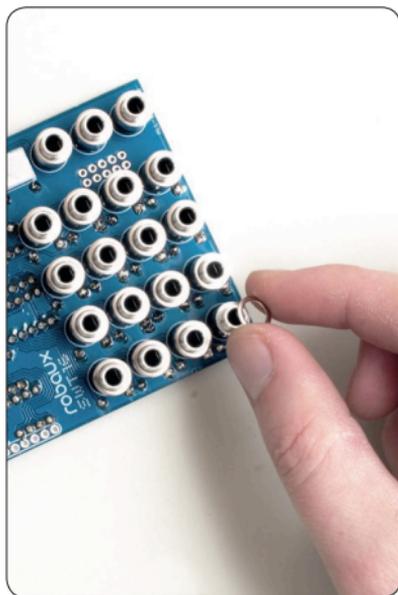
## 18 Jacks

Now plug the nineteen jack sockets on the motherboard.  
**Please do not solder them yet!** If you like, you can trim the pins of the jacks to the same length.



## 19 Washer

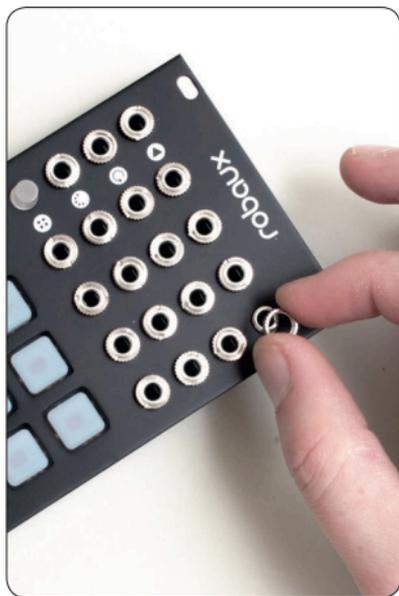
Place a washer on each jack.  
This ensures that the jacks have the correct distance to the front panel.





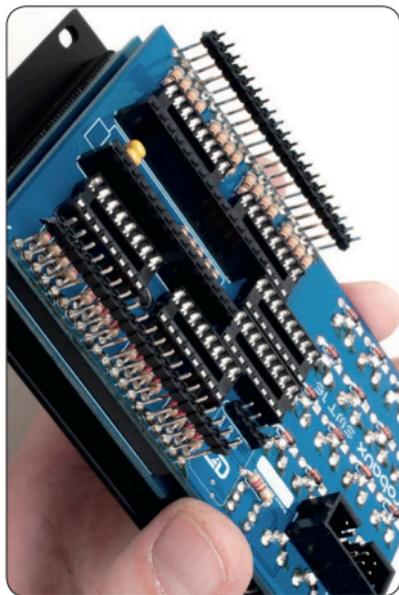
## 20 Knurled Nuts

Now place the front panel with the buttons on the main board. Align all the jacks and fix them with the knurled nuts.



## 21 Long Pins

Now comes the tricky part. Insert the long pins through the main board into the header of the button board. Align everything carefully and then solder the long pins to the main board.



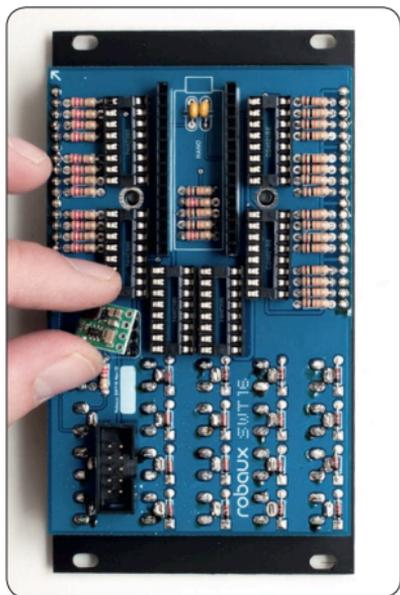
## 22 Trim the pins

Now trim the long pins as shown in the picture. Then resolder the pins. Then solder all jacks and the button on the main board.



## 23 Step Down

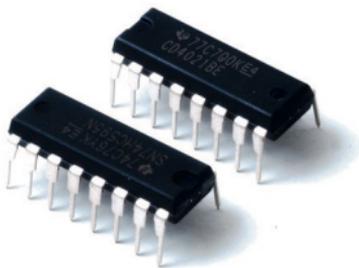
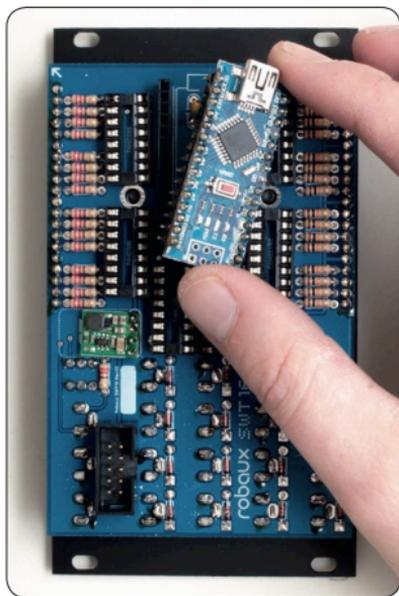
Now solder the step-down adapter to the pins as shown in the picture. Make sure that the components on the adapter point upwards.





## 24 Arduino

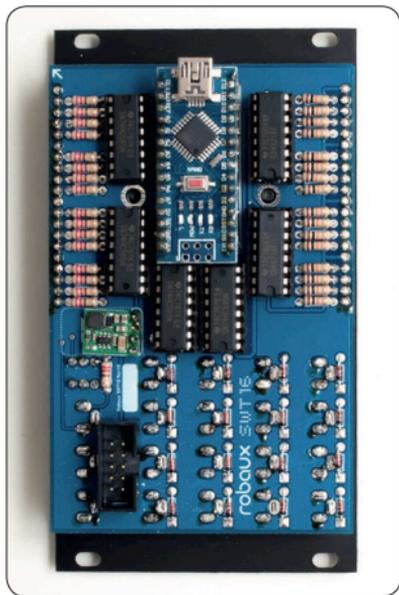
Now plug the Arduino board onto the headers as shown in the picture. Note that the USB connector should point upwards.



## 25 ICs

Now insert the ICs into the sockets. Be sure to attach them in the correct direction as shown in the picture.

Voilà - your SW16 is ready!



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