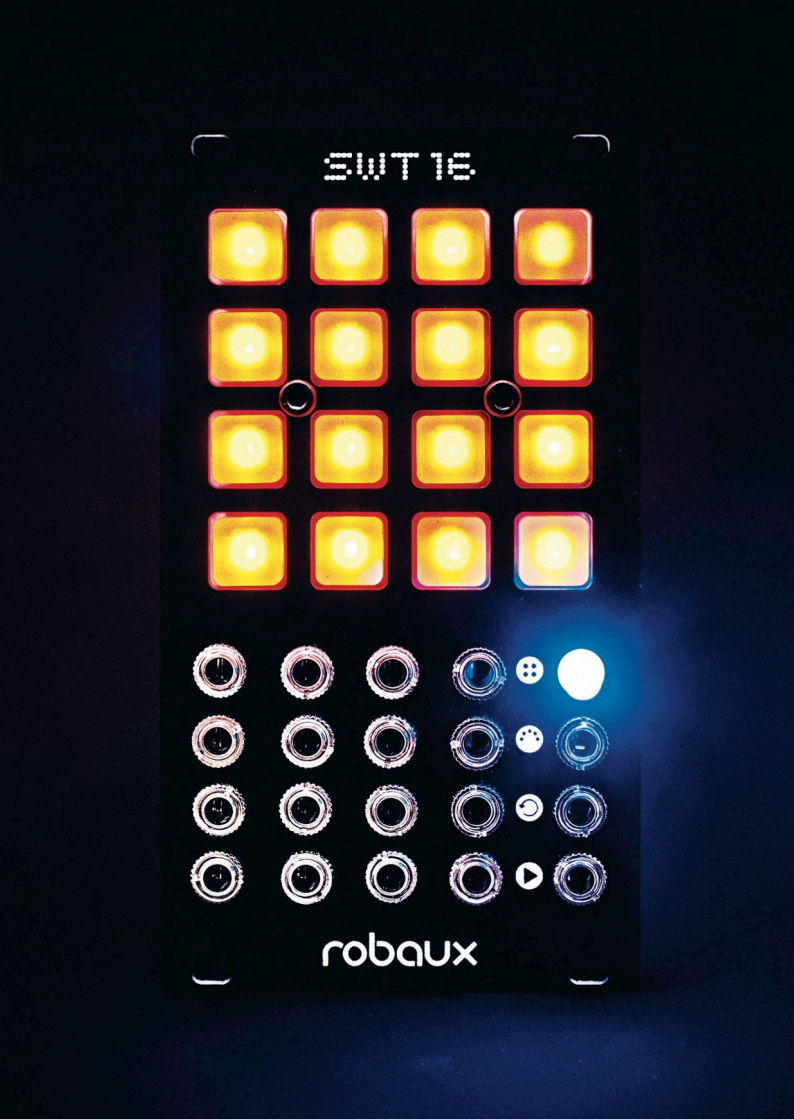
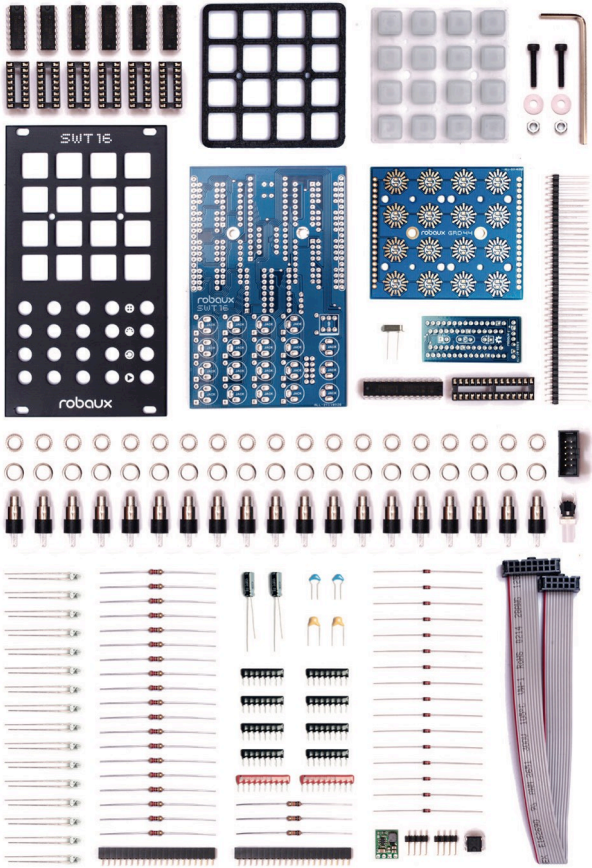

SWT16
robaux


SWT16
robaux
robaux
SWT16
robaux
GRID16

Assembly Guide

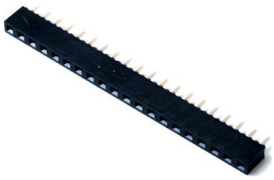
With these assembly instructions, you can quickly build your SWT16. All required components are included in this kit.

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 Sequencer.

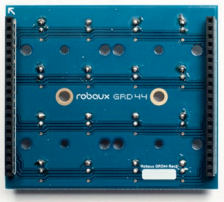
1 LEDs

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 goes into the + hole, the short leg into the - hole.



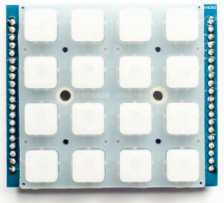
2 20 Pin Header

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



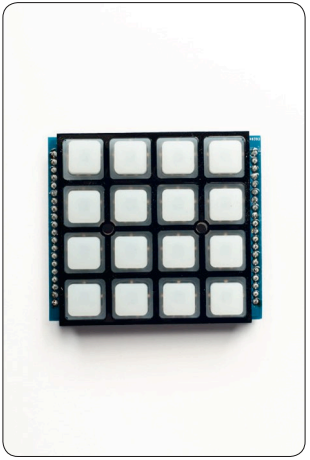
3 4x4 Keypad

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.

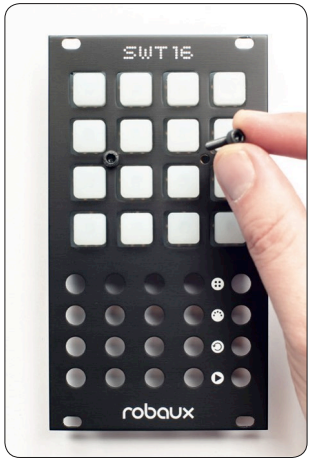


5 Frontpanel

Now it's time to put the front panel on the buttons. Make sure that the small arrow on the back side of the PCBs is pointing to the top left.

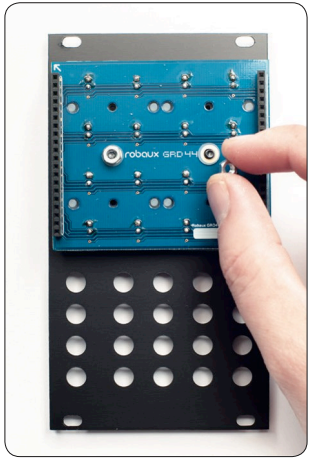
6 Screws

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.



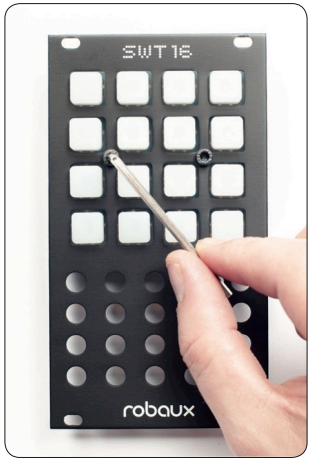
7 Nuts

Secure the screws with the washers and nuts.



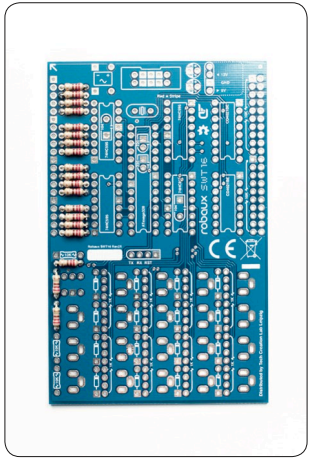
8 Allen key

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



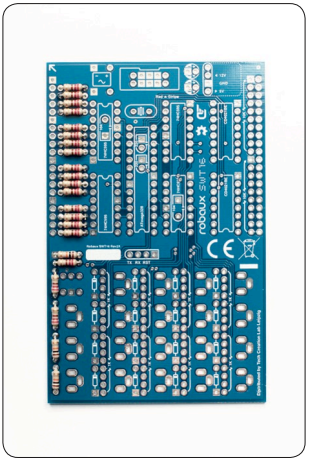
9 Resistor 220

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.



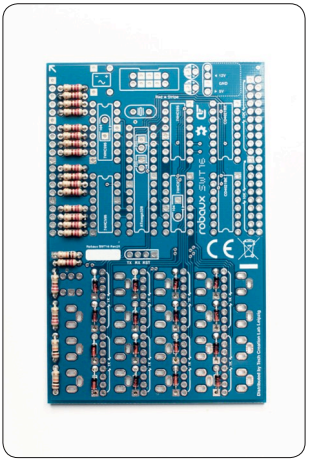
10 Resistor 10K

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



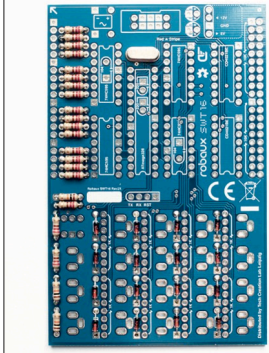
11 Diodes

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



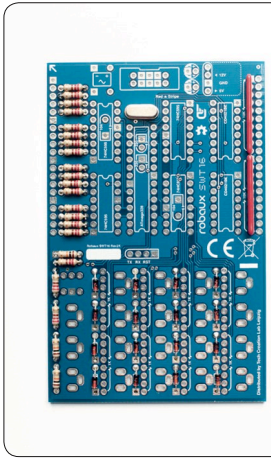
12 Crystal

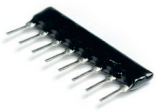
Now solder the 16MHz crystal as shown in the picture.



13 Array 10K

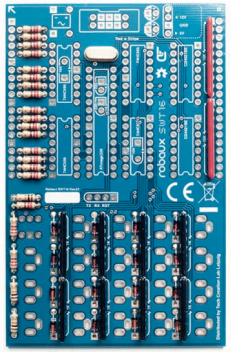
There are even more 10K resistors in the form of two resistor arrays. Solder the two arrays as shown in the picture. Please note that the arrays soldered in the right direction: the GND must point upwards.





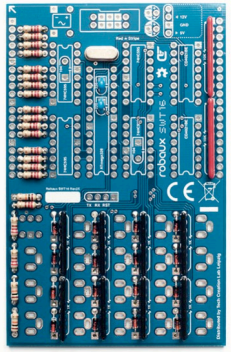
14 Array 1K

There are even more resistor arrays. Solder the eight 1K resistors to the circuit board as shown in the picture. These arrays do not have a specific direction to follow.



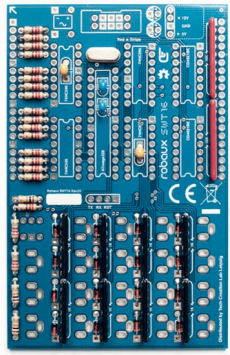
15 Capacitor 220

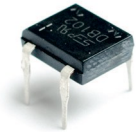
Now solder the two 220 capacitors to the board as shown in the picture.



16 Capacitor 104

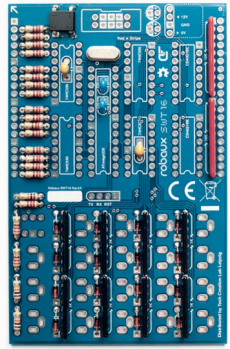
Now solder the two 104 capacitors to the board as shown in the picture.

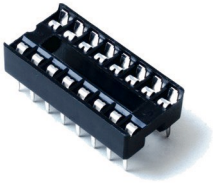




17 Rectifier

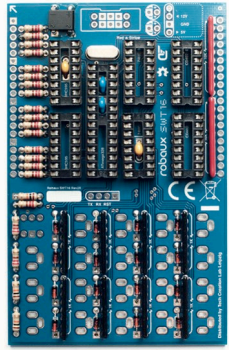
Now it's time for the rectifier. Solder this to the PCB as shown in the picture. Note that the - and + symbols on the board match the symbols on the board match the symbols on the rectifier.

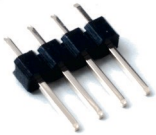




18 IC Sockets

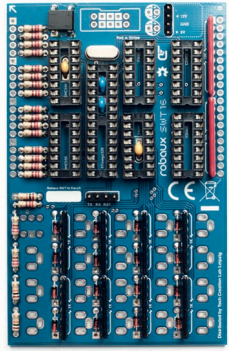
Now solder the seven IC sockets to the board. It is easiest to solder first only the outer pins and then the remaining ones.





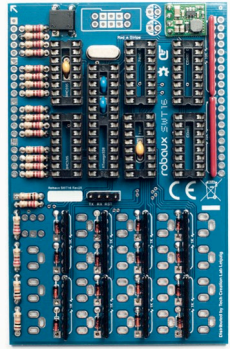
19 4 Pin Headers

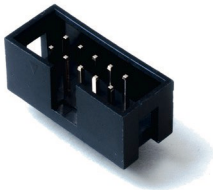
Place and solder the both Male Pin Headers as shown in the picture. It is the shorter pins of the pin header that you are soldering.



20 Step Down

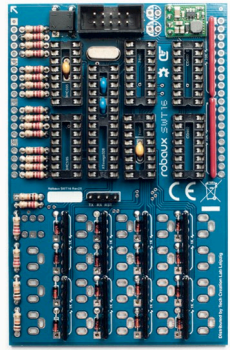
Now solder the step-down adapter to the pins as shown in the picture. Please note that the names of the pins on the adapter match those on the PCB.





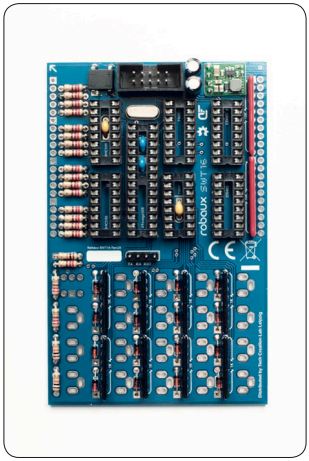
21 Power Socket

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



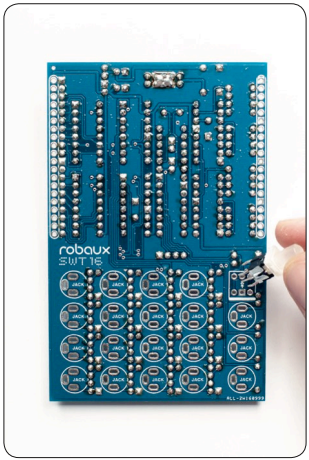
22 Capacitors

Now solder the two Electrolytic Capacitors to the board as shown in the picture. Please pay attention to the polarity of the Capacitors. The white mark must match the mark on the PCB.



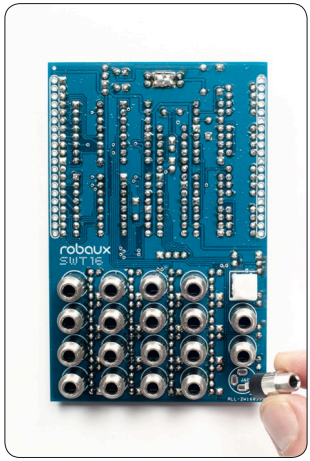
23 Button

Now flip the Mainboard and plug the button as shown in the picture. Notice that the white mark on the button matches the white mark on the PCB.
Please do not solder the button yet!



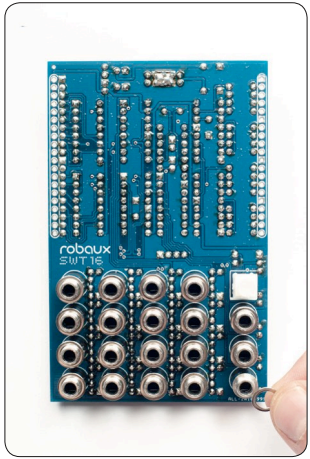
24 Jacks

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



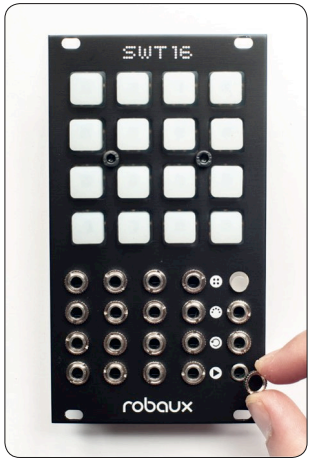
25 Washer

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



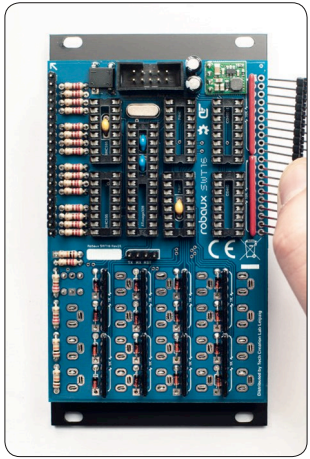
26 Knurled Nuts

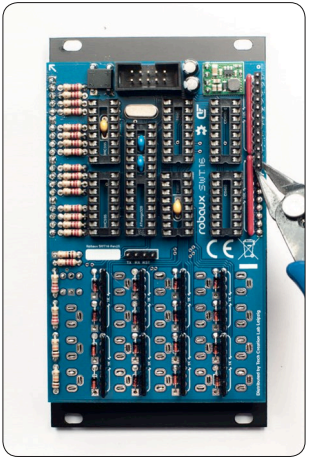
Now place the front panel with the buttons on the main board. Align all the jacks and fix them with the knurled nuts.



27 Long Pins

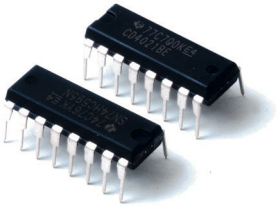
Be especially careful because now comes the tricky part! Insert the long pins through the mainboard into the header of the button board. Align everything carefully and then solder the long pins to the main board.





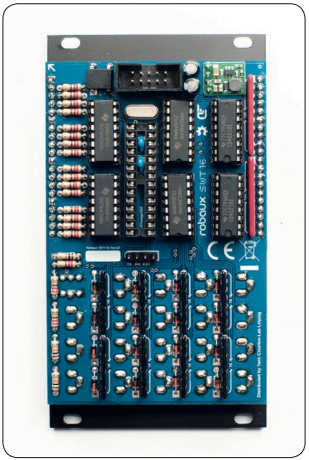
28 Trim the pins

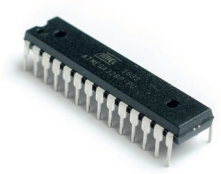
Now trim the long pins as shown in the picture. Then resolder the pins. Then solder all jacks and the button on the main board.



29 Shift Registers

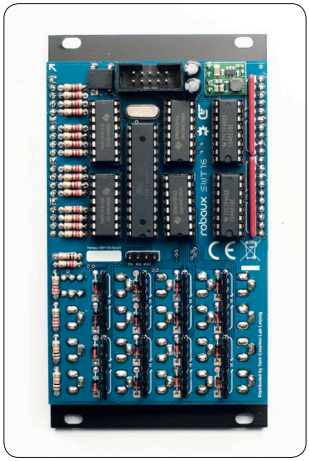
Now insert the Shift Registers into the sockets. Be sure to attach them in the correct direction as shown in the picture.

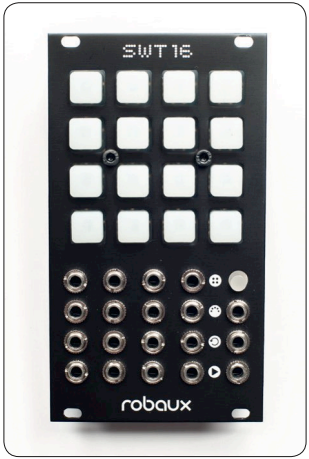




30 ATmega

Now insert the ATmega into the socket. Be sure to attach it in the correct direction as shown in the picture.





31 Voilà

Congratulations! Your module is ready and can be installed in your case. Make sure the power cable is plugged in the right way on both connectors. Enjoy creating beats with the Robaux Sweet 16!

PCB Adapter

Everything is finished - but there is still an unused part?

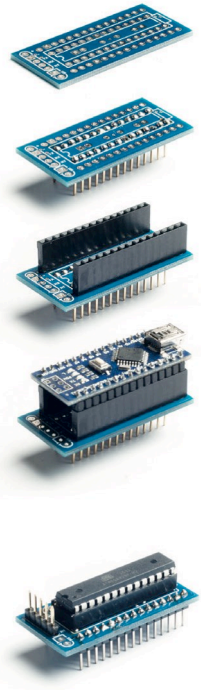
The new version of the Robaux SWT16 uses an ATmega328 chip instead of the Arduino Nano from the previous version.

It is still possible to use an Arduino Nano with the included PCB adapter. You can quickly put it where the ATmega is located.

However, an Arduino Nano and the required pin headers are not included in the kit.

Of course, the PCB adapter works the other way around too! So you can replace an Arduino Nano with an ATmega328 chip.

All you have to do is solder a 16MHz crystal and two 220 capacitors. How easy is that?



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