MIDI Bastl Assembly Instructions

by **bastl-instruments** on February 5, 2014

Intro: MIDI Bastl Assembly Instructions

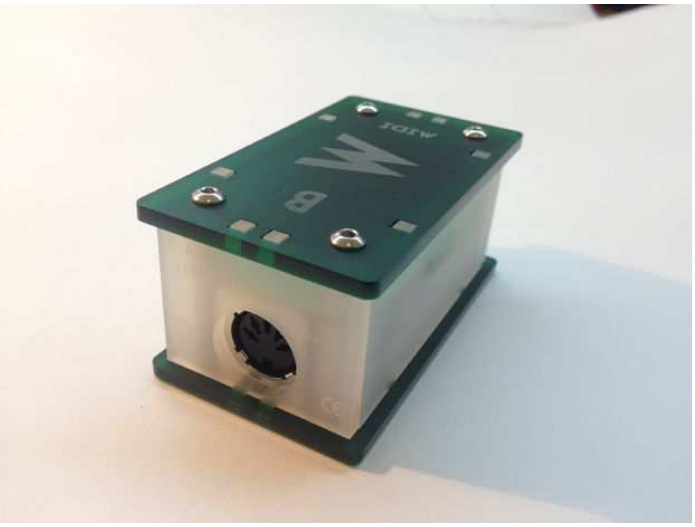
This is tutorial on How to assemble the MIDI Bastl Kit.

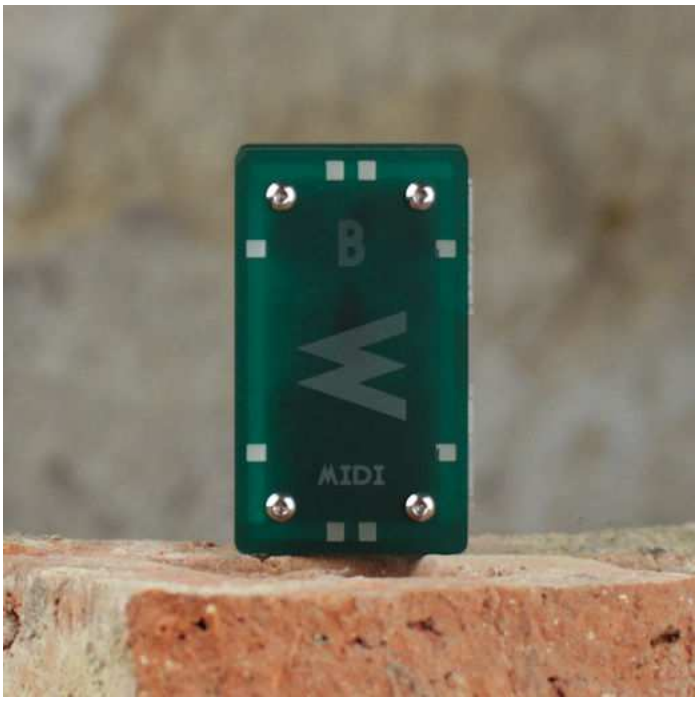
The kit without sync contains:

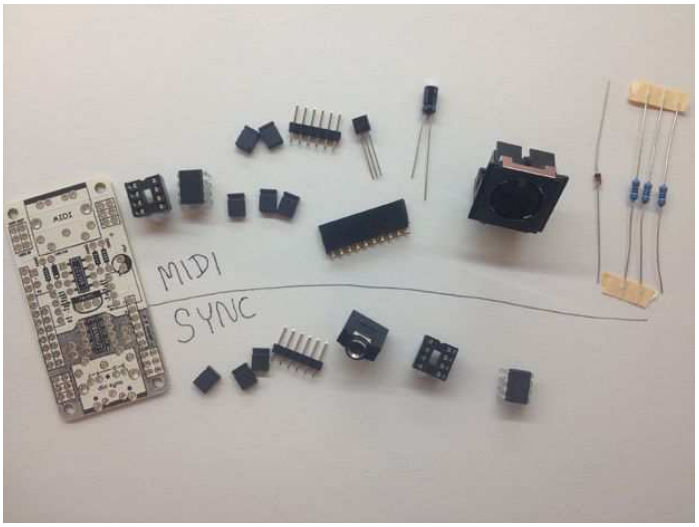
- PCB board
- 8 pin socket for IC
- IC: 6N137 - optoisolator
- 20 pin header
- 2x female right angle 4-pin header (or longer one to cut)
- electrolytic capacitor 10uF
- 4148 diode
- 3 x 220 ohm resistors
- MIDI jack
- 78L05 voltage regulator
- 6 jumpers
- 4 round screws
- 4 flat screws
- 4 small spacers
- 4 long spacers
- top plexi board
- bottom plexi board
- 2 side plexi boards
- front plexi board
- rear plexi board
- hexagon screwdriver
- manual

The sync kit:

- 8 pin socket
- IC: pre-programmed Attiny 85
- pin header
- jumpers
- 3.5mm TRS stereo Jack

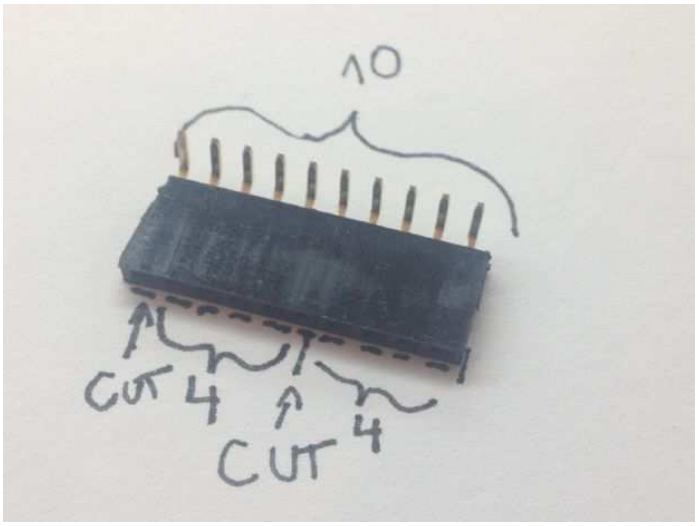


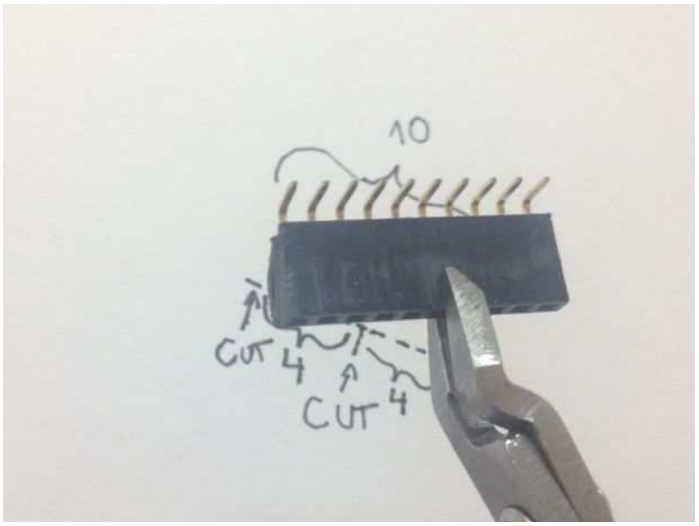


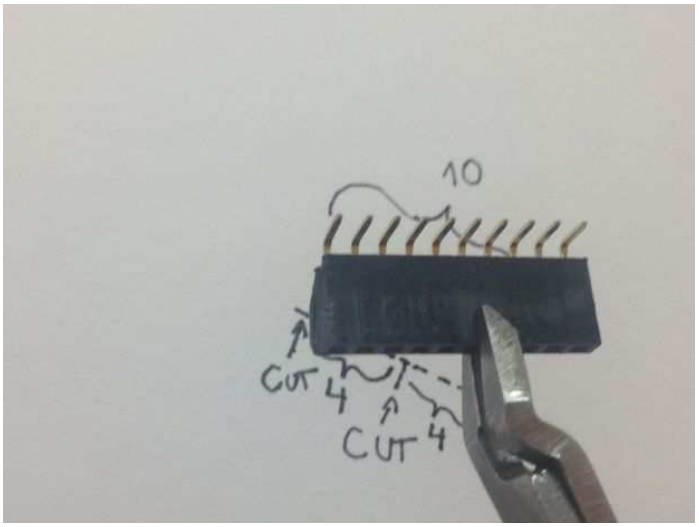


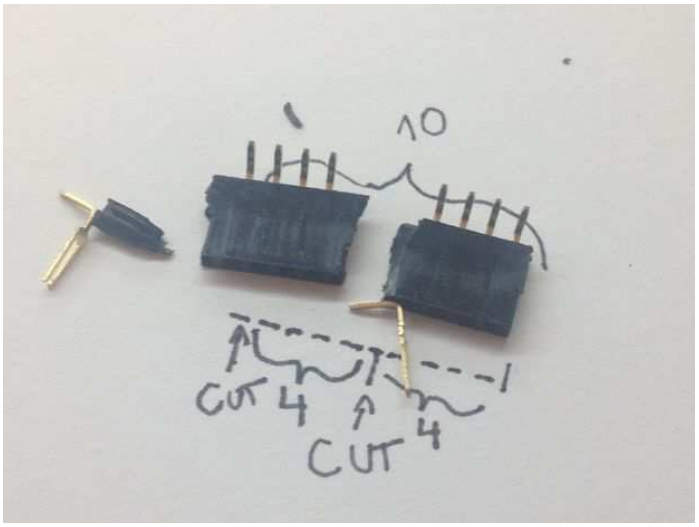
Step 1: Prepare the 4 pin angle female headers

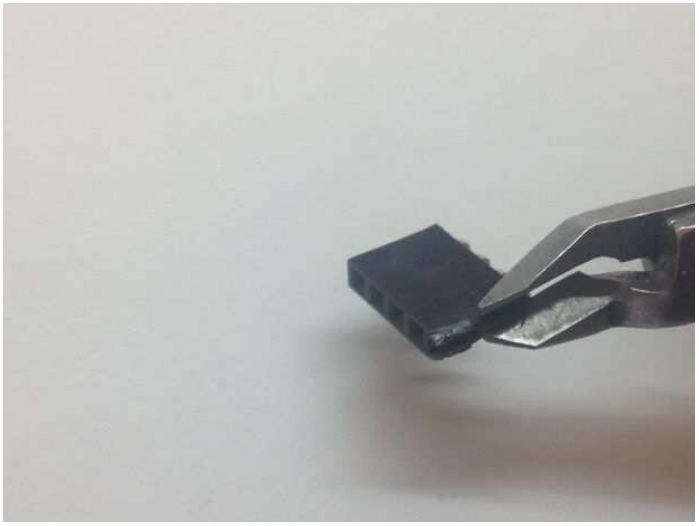
We need to make two 4-pin versions of angled female pin headers so we need to cut it. It is not possible to cut in between the pins so we always need to cut in the middle of another pin. Measure correctly and check the photos! When you have the 4 pins cut of the remaining plastic to be sure the headers would go nicely into the plastic housing later.

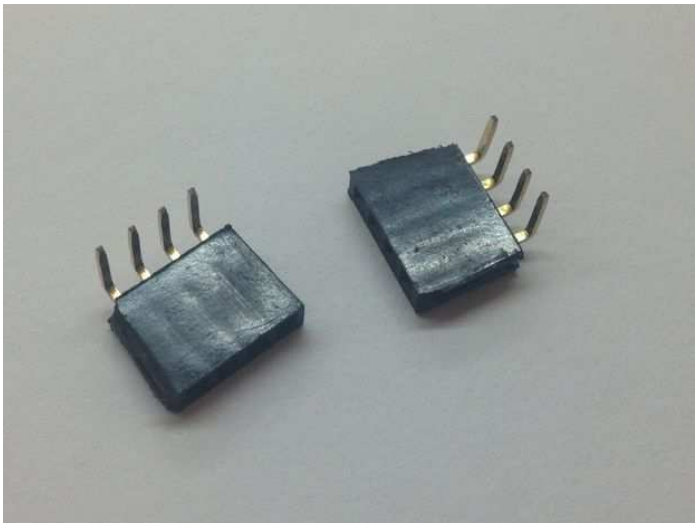






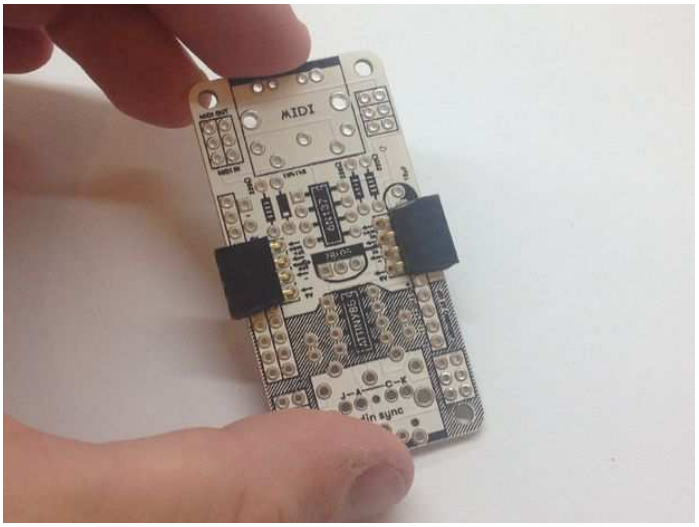


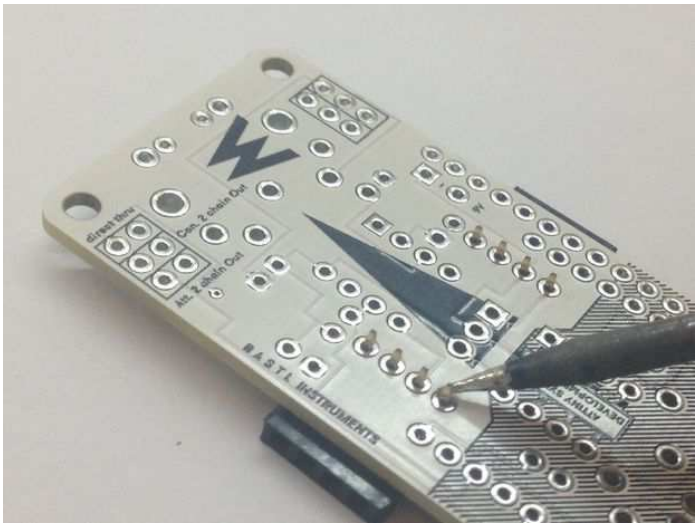


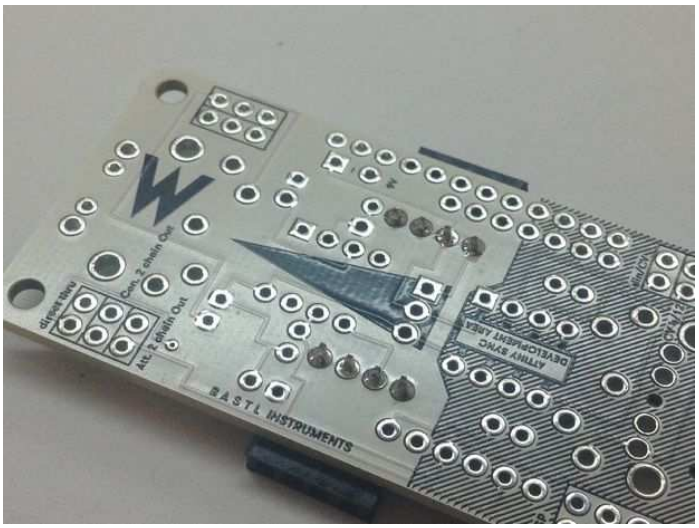


Step 2: Solder the 4-pin headers

Lets start with soldering. All components solder from the component side of the board - the one with component labels. Place the headers and solder them - make sure they are straight.

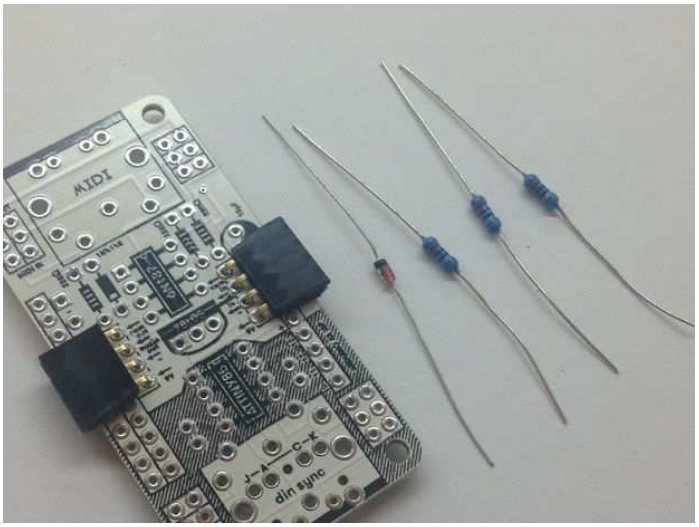


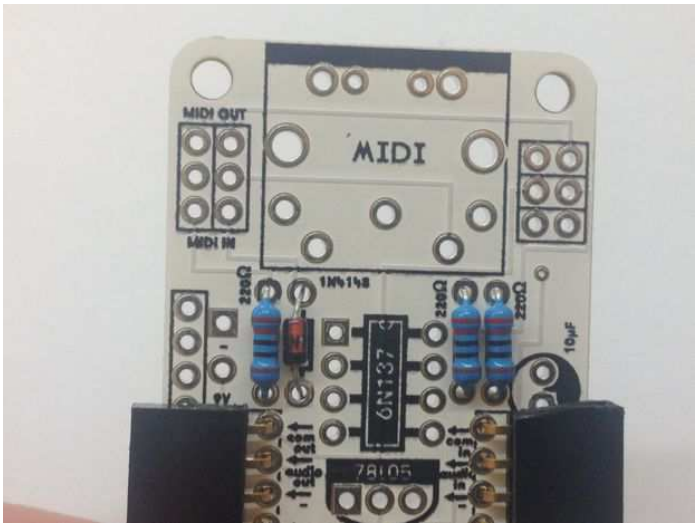


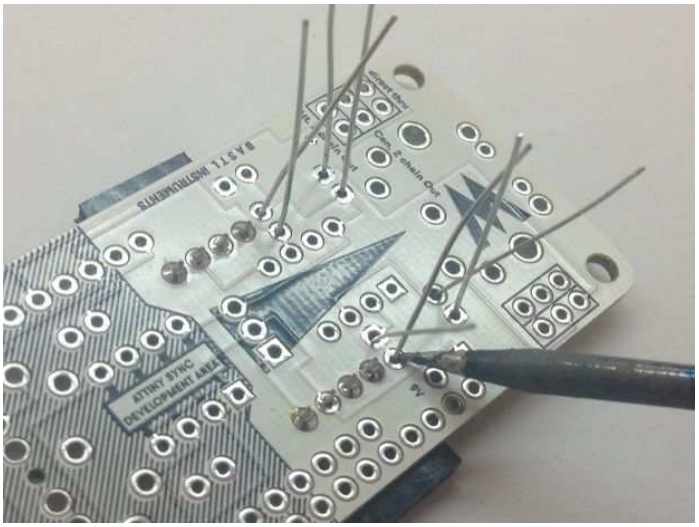


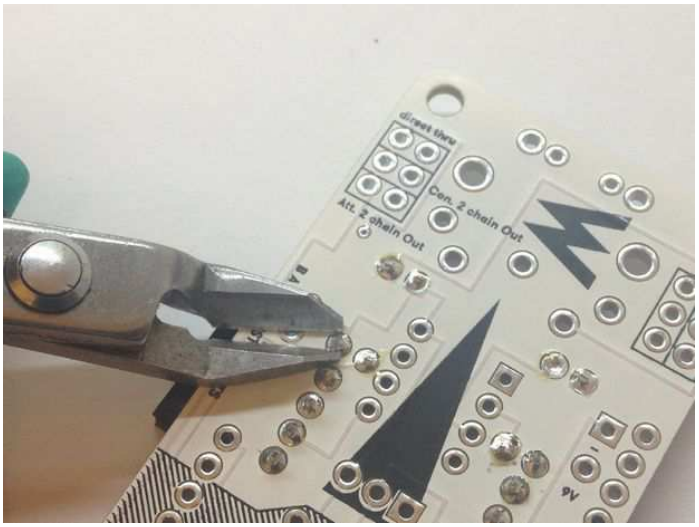
Step 3: Diode + resisotrs

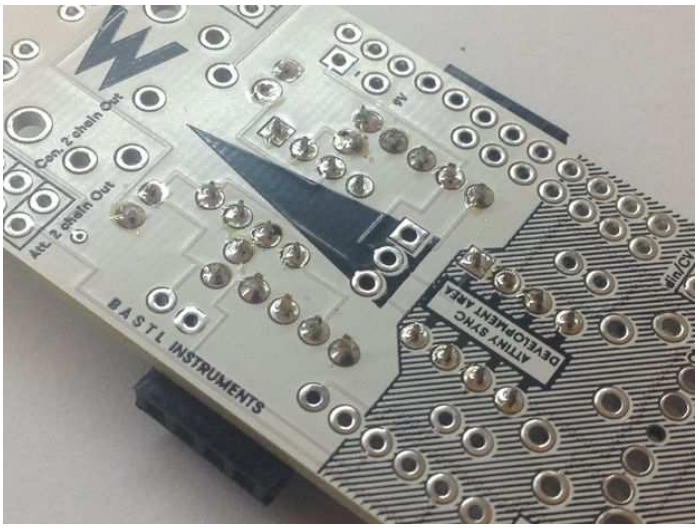
Now bend the legs of the diode 1N4148 and place where the picture shows the diode - the stripe (black on the diode) is the stripe (white in the print) - follow that polarity! Than 3 220 ohm resistors. Solder,cut, easy!





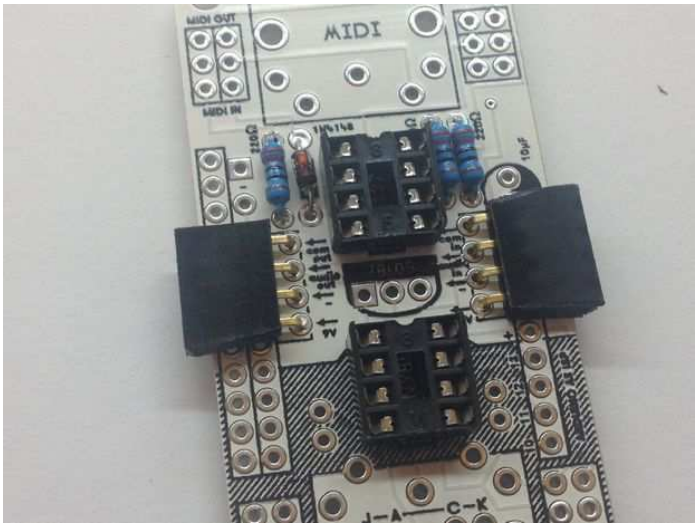






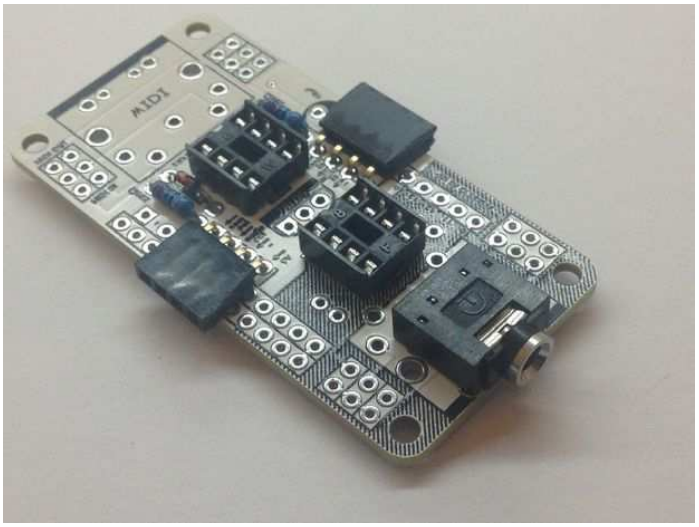
Step 4: 8 pin socket

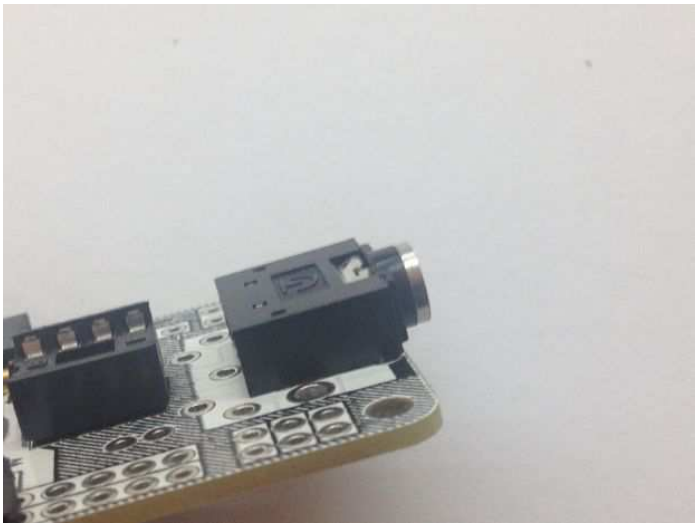
Lets place the 8 pin socket - follow its polarity (a little notch goes up). That is useful when inserting the ICs.



Step 5: Place the sync jack

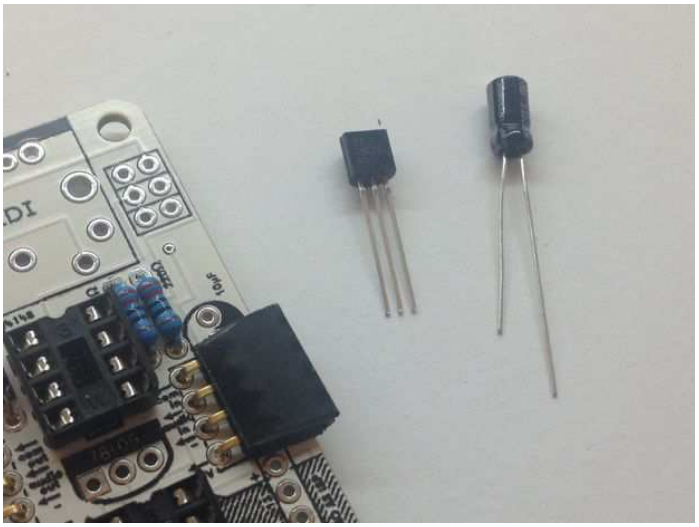
Place the sync jack - used for sync out. Make sure it is all the way down on the board and there is no gap between the jack and the board.

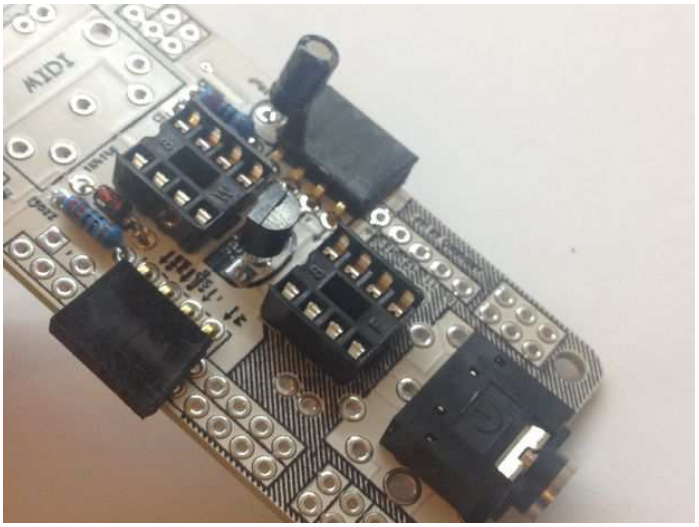




Step 6: Voltage regulator + capacitor

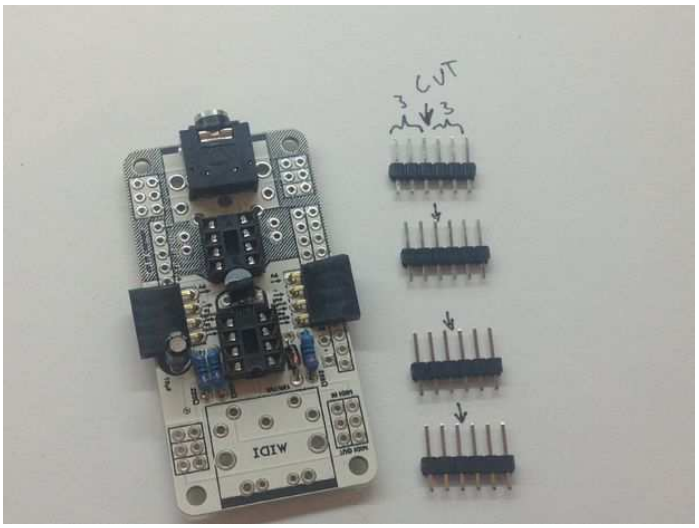
Place these components and take care about the polarity. The regulator is indicated in the print. The capacitor short leg (-) goes closer to the pin header. (yes there is not so much space - will be improoved in PCB 1.1 - doesn`t affect functionality).

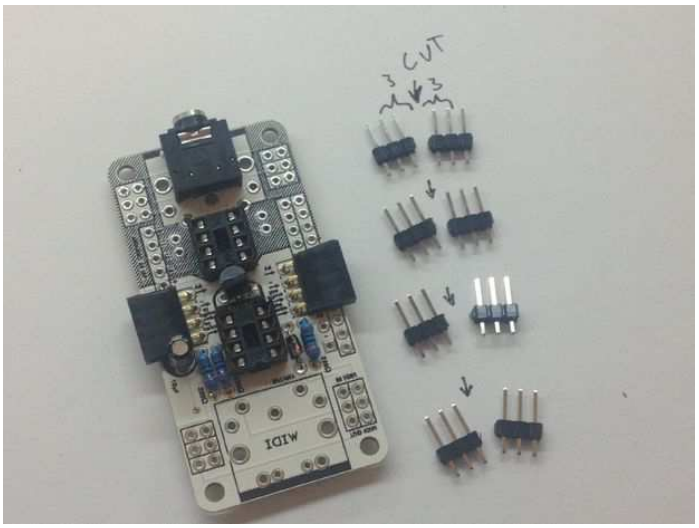


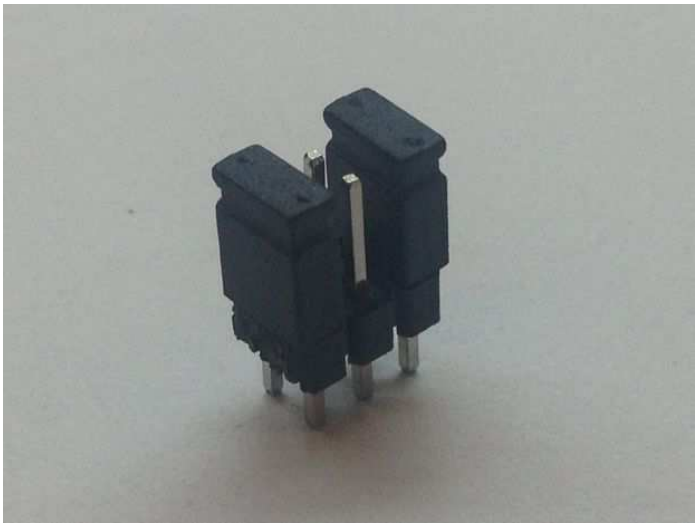


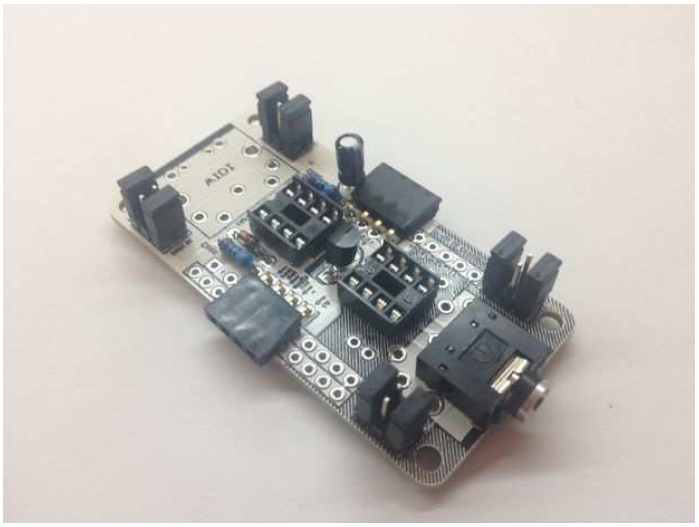
Step 7: Pin headers for jumpers

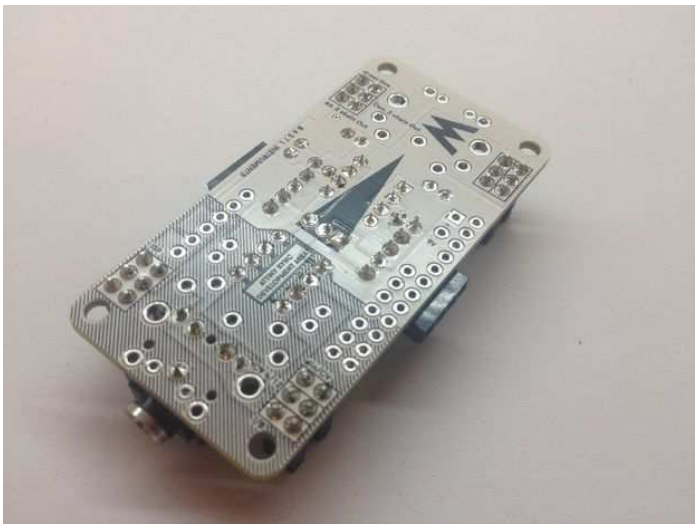
Prepare 8 3-pin headers. They are easy to solder when you use the jumper connectors to make the 6 pins hold together. Than remove the jumpers - we will set them up properly later.

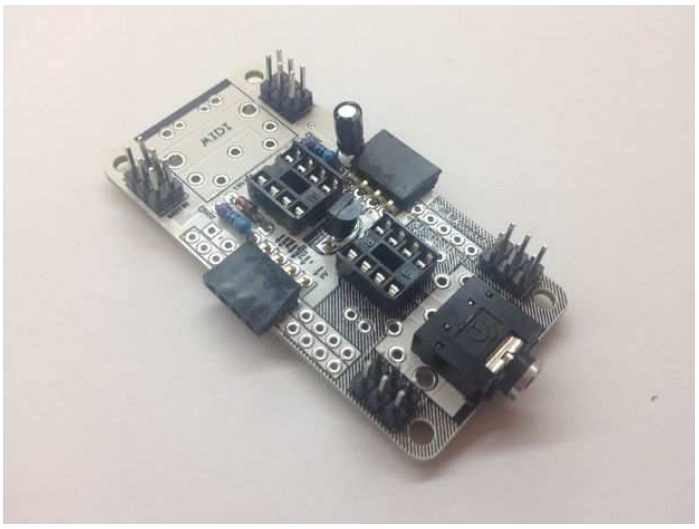






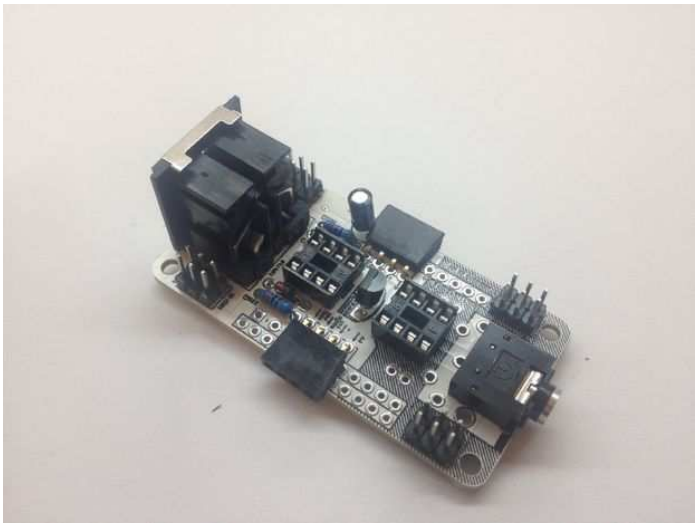






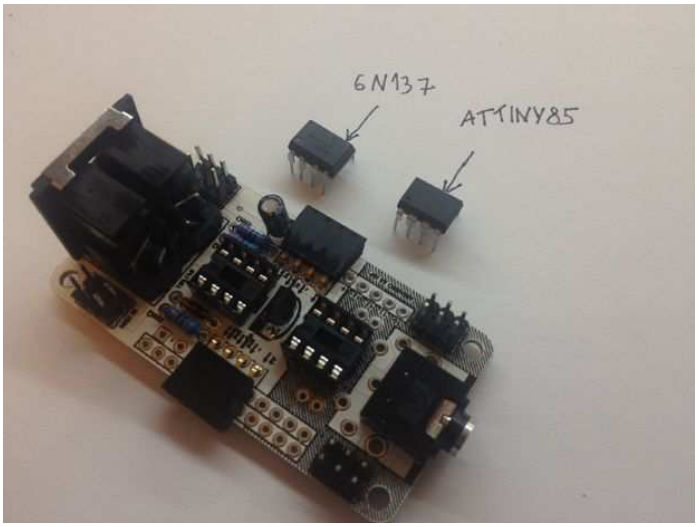
Step 8: Prepare the MIDI jack

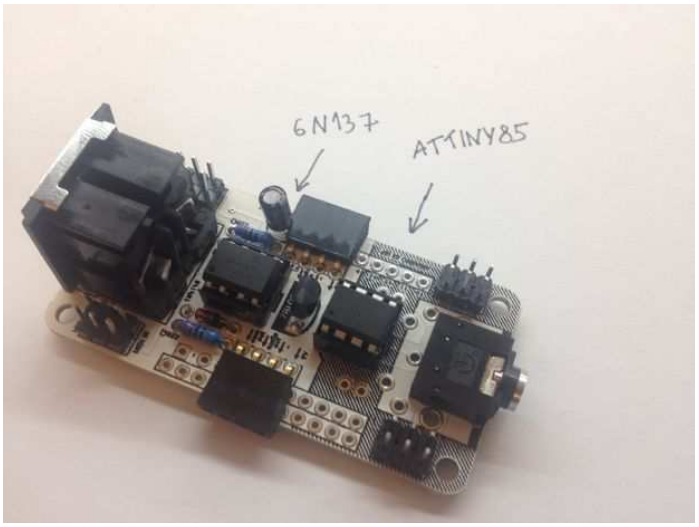
There might be not enough space if you have this type of MIDI jack with some plastic "left-overs" . Just cut them of and solder the connector. Leave no gap between the connector and the PCB.



Step 9: Place the ICs

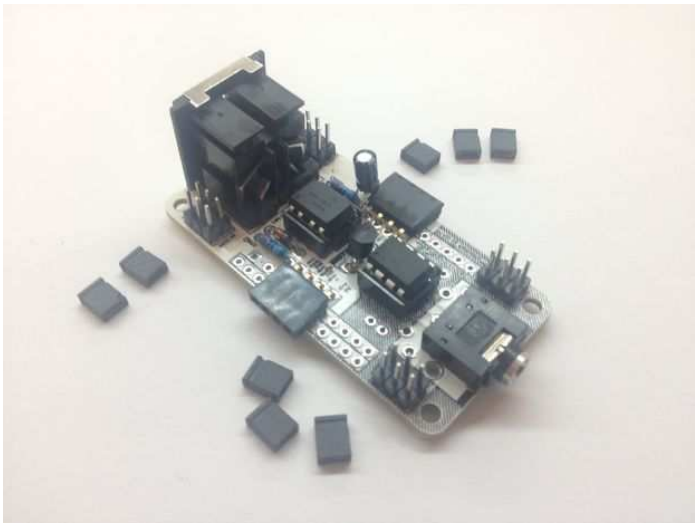
The polarity or these ICs is indicated by a little dot in one corner of both ICs. Place them according to the picture. You might need to bend the legs a little bit so they would fit into the socket.

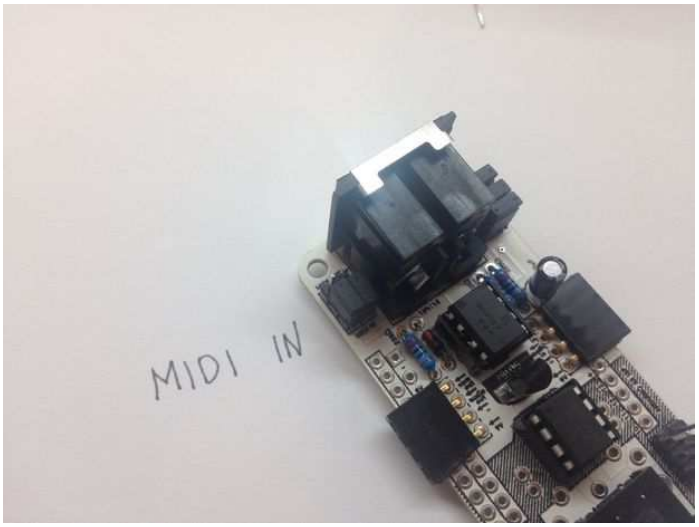


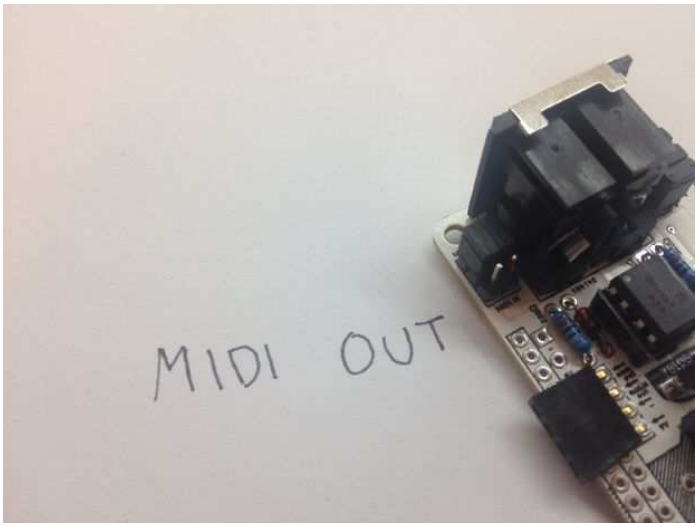


Step 10: Set up jumpers

If you want to use MIDI Bastl as MIDI input place the jumpers as on the picture. Other wise follow the MIDI OUT picture.



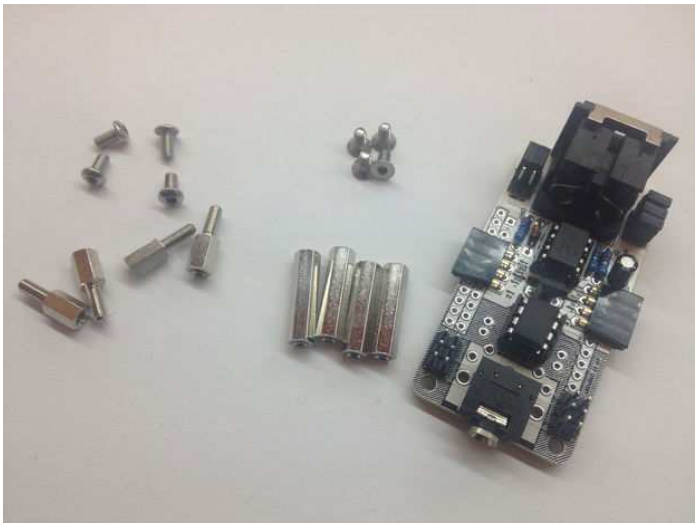


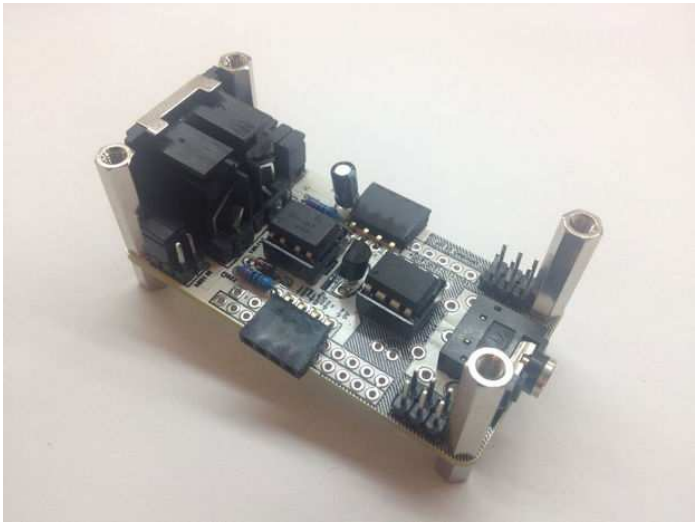


Step 11: Place the spacers

Place the spacers correctly and screw them tight.

note: the ones in the sync part don`t have that much space. First place the long one and than screw the short one in from the other side - that should make it.





Step 12: Test

Before you dress up your MIDI Bastl it is good to test whether it works. Follow the manual to test it.

Step 13: Dress UP

Congratulations if your MIDI Bastl works! Now you can dress it up into the plastic housing. Follow the pictures and n-joy your MIDI friend.

Note: it is important to have the side connectors soldered properly so the fit nicely into the housing.

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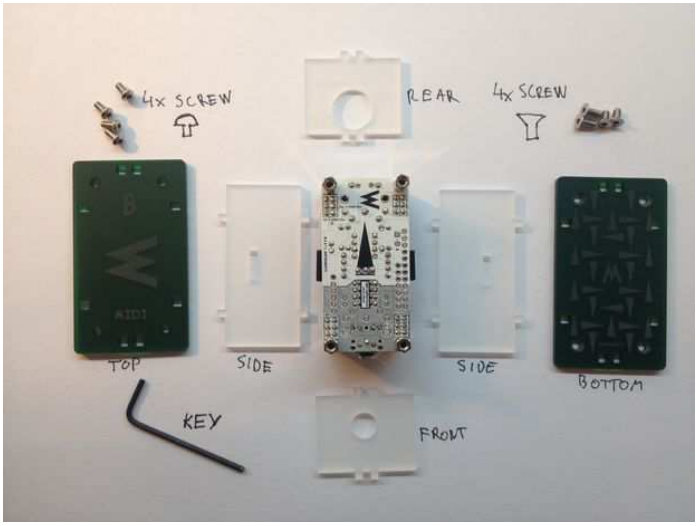

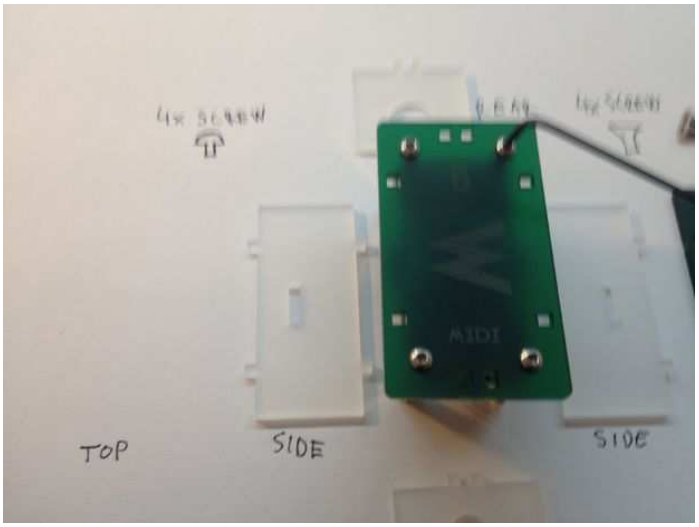

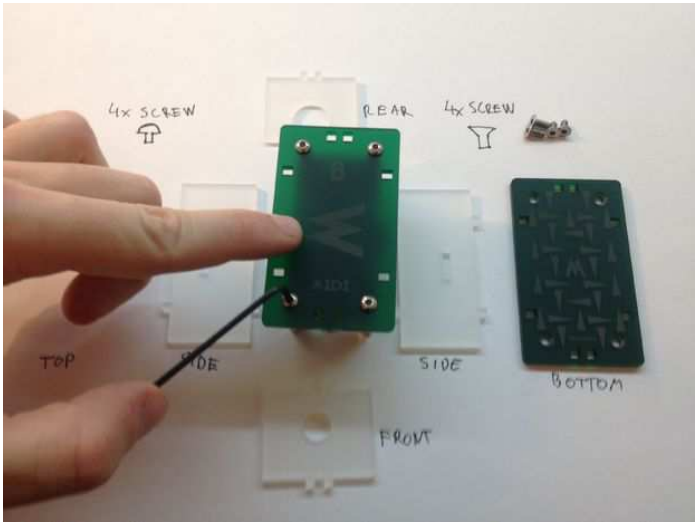
4x SCREW
REAR
4x SCREW
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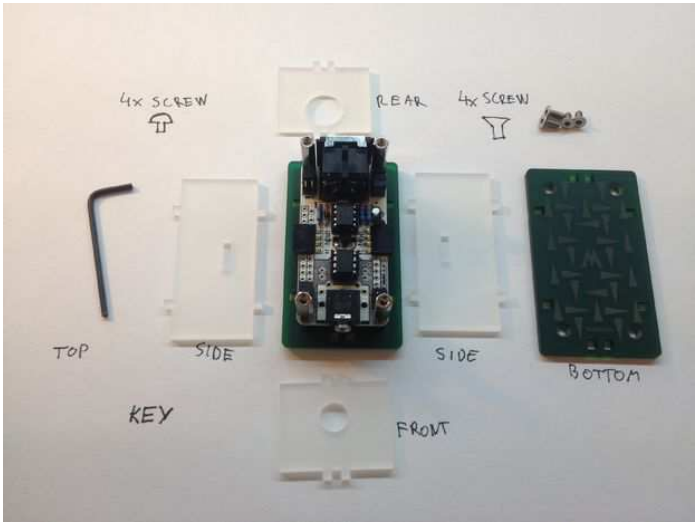
4x SCREW
REAR
4x SCREW
TOP
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SIDE
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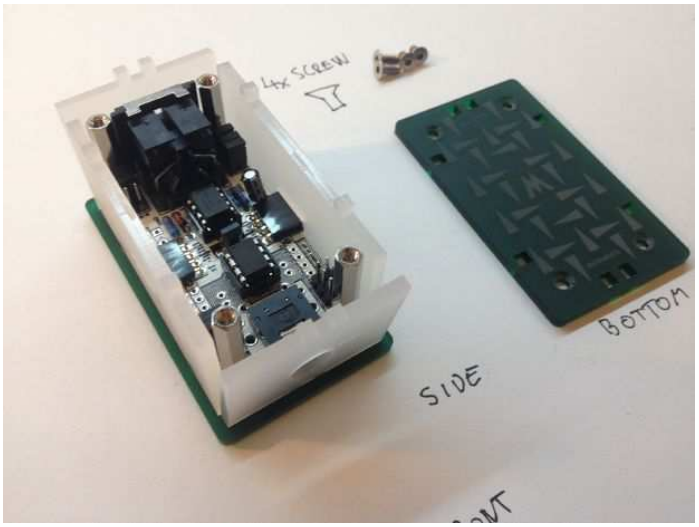
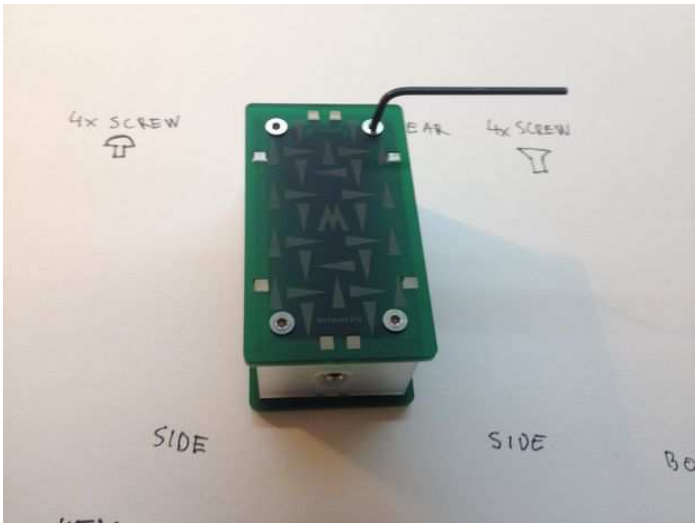
KEY
FRONT


4x SCREW
BOTTOM
SIDE


4x SCREW
4x SCREW
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SIDE