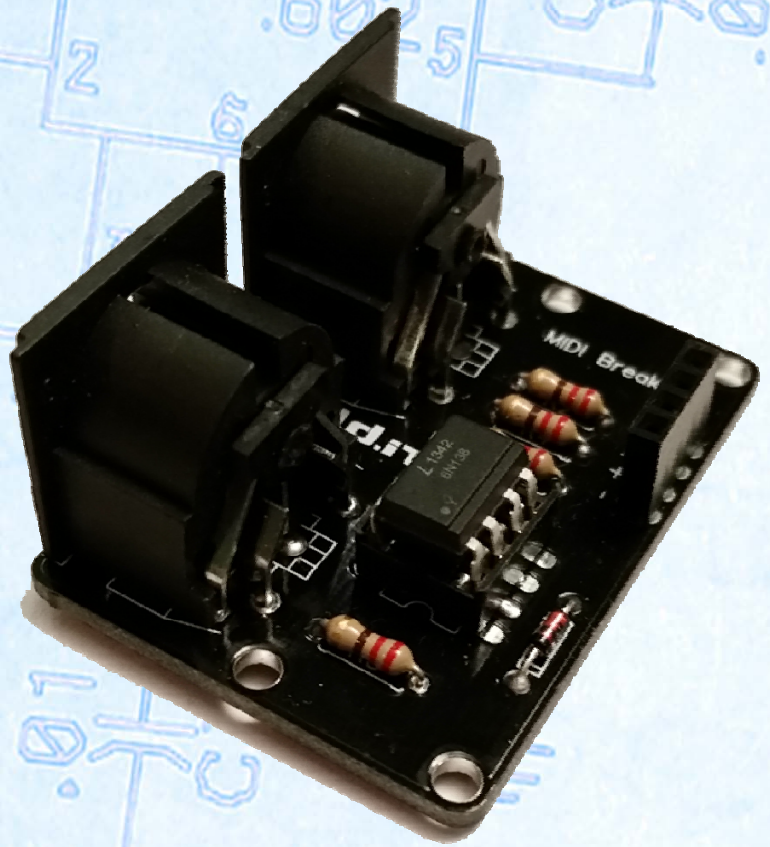
MIDI BREAKOUT

Assembly Guide



The MIDI Breakout board provides you with a MIDI interface for your favorite dev board.

ubld.it

Support: http://ubld.it/midibo

Manual: v1.0

Kit Version: v1.0

Tool Checklist

1. Soldering Iron

We recommend the Hakko FX888 or similar iron with a chisel tip.

2. Wire Cutters

Small cutters for clipping excess wire leads after soldering.

3. Solder

Electronic solder is used for soldering parts to the PCB.

4. Multimeter

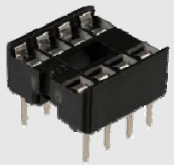
Multimeter for verifying component values and adjusting the circuit.

CAUTION

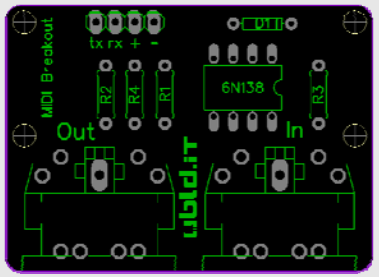
EYE PROTECTION REQUIRED BEYOND THIS POINT

STEP 1: Check the BOM

BOM is short for Bill of Materials. Check each line item as you verify the required quantity of components.

	Line	Designator	Description	Required	Kit Qty
☐	1	D1	1N4148 Diode 	1	1
☐	2	Out, In	5 Pin MIDI Jack 	2	2
☐	3	tx rx + -	4 Pin Header (Optional)  or 	0	2
☐	4	R1,R2,R3,R4	220 Ohm Resistor 	4	4
☐	5	6n138	8 Pin Socket (Optional) 	0	1
☐	6	6n138	6n138 IC 	1	1

STEP 1: Check the BOM (continued)

☑	Line	Designator	Description		Required	Kit Qty
☐	7		PCB		1	1

|4|

STEP 2: Inserting the first component

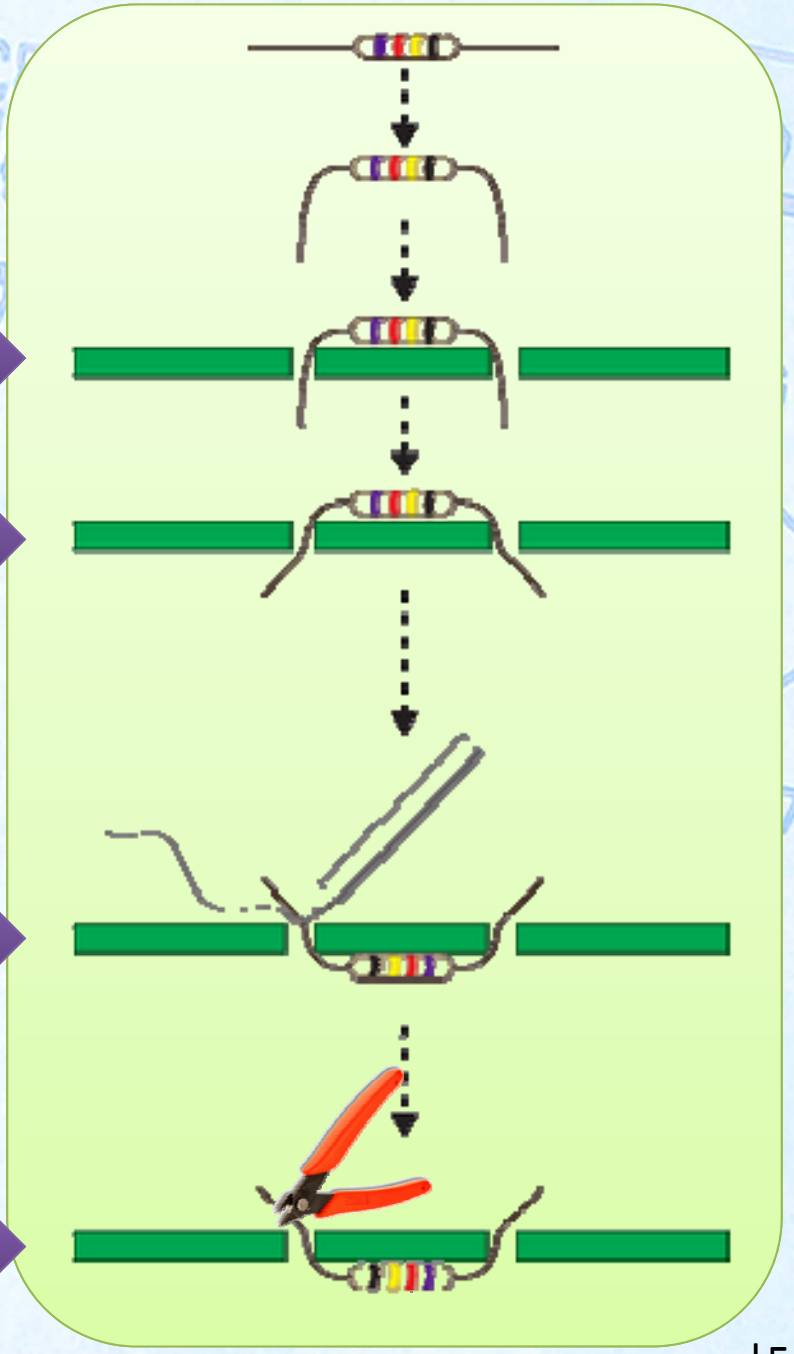
Before we locate the first component let's take a minute to review the proper way to insert and solder the components to your circuit board.

Insert the components into the circuit board.

Bend the component leads to hold the component in place while soldering.

Flip the board and solder the component leads .

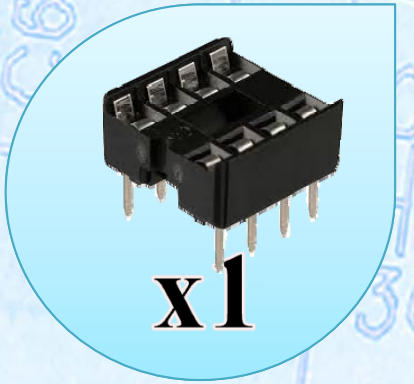
Trim the component leads at the top of the solder joint.

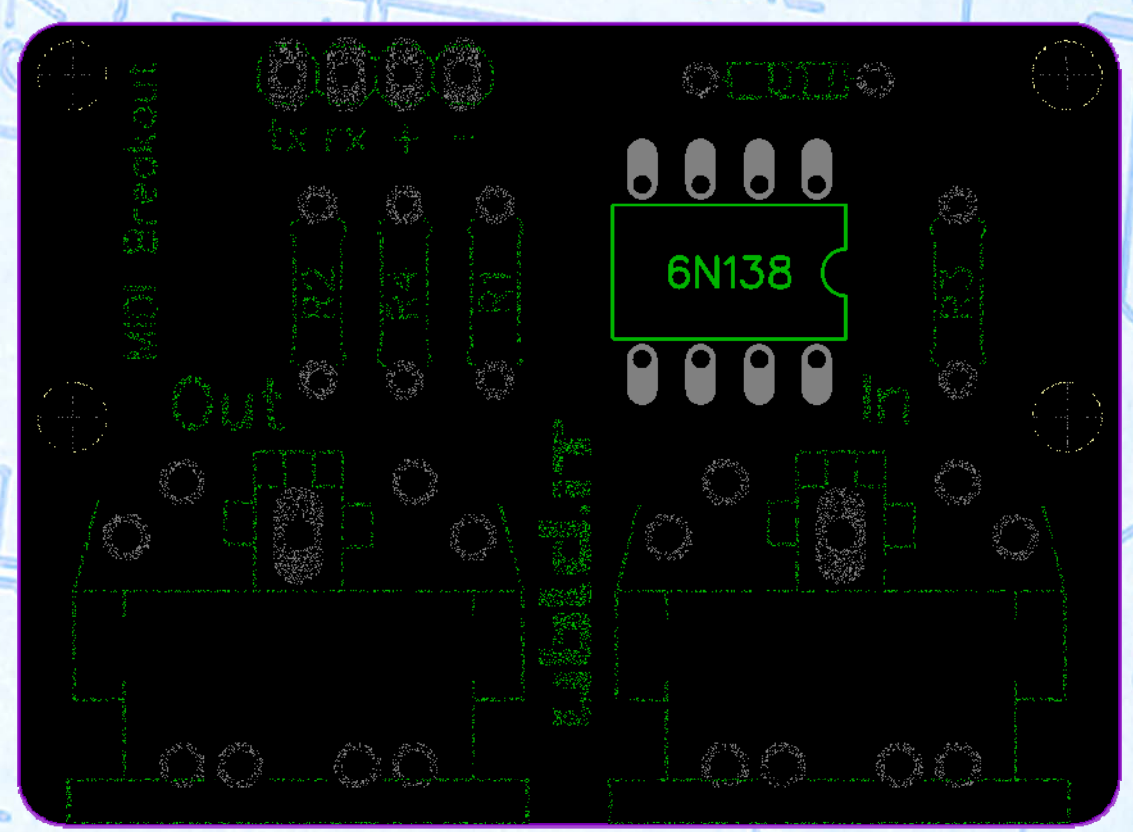


STEP 2b: Inserting the first component

Solder the 8 pin socket

The first component to locate is the 8 pin socket.
(line #5)



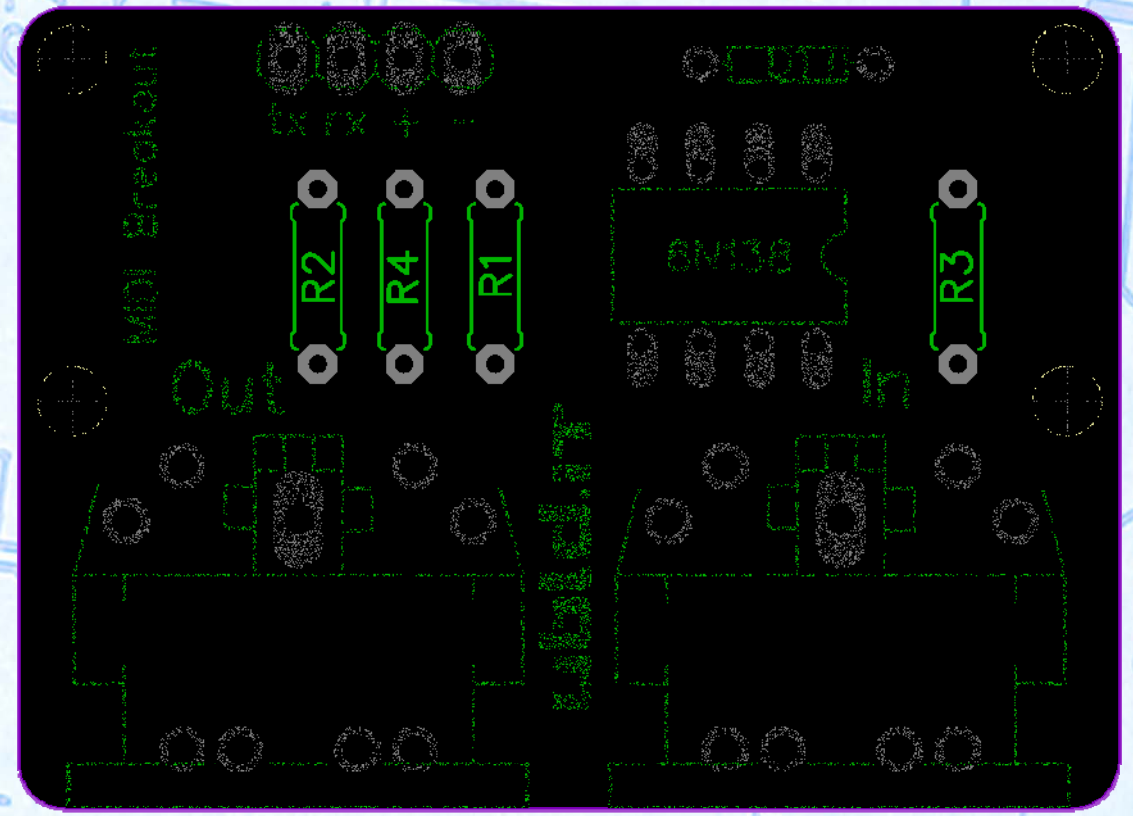


Pay attention to the divot in the front of the socket, it is notched. This helps when you insert the IC to know the orientation. Although using the socket is recommended, you may solder the IC directly without the socket.

STEP 3: Insert the 220 Ohm Resistors

Locate four 220 Ohm resistors
(line #4)

Solder the 220 Ohm resistors into R1, R2, R3, R4

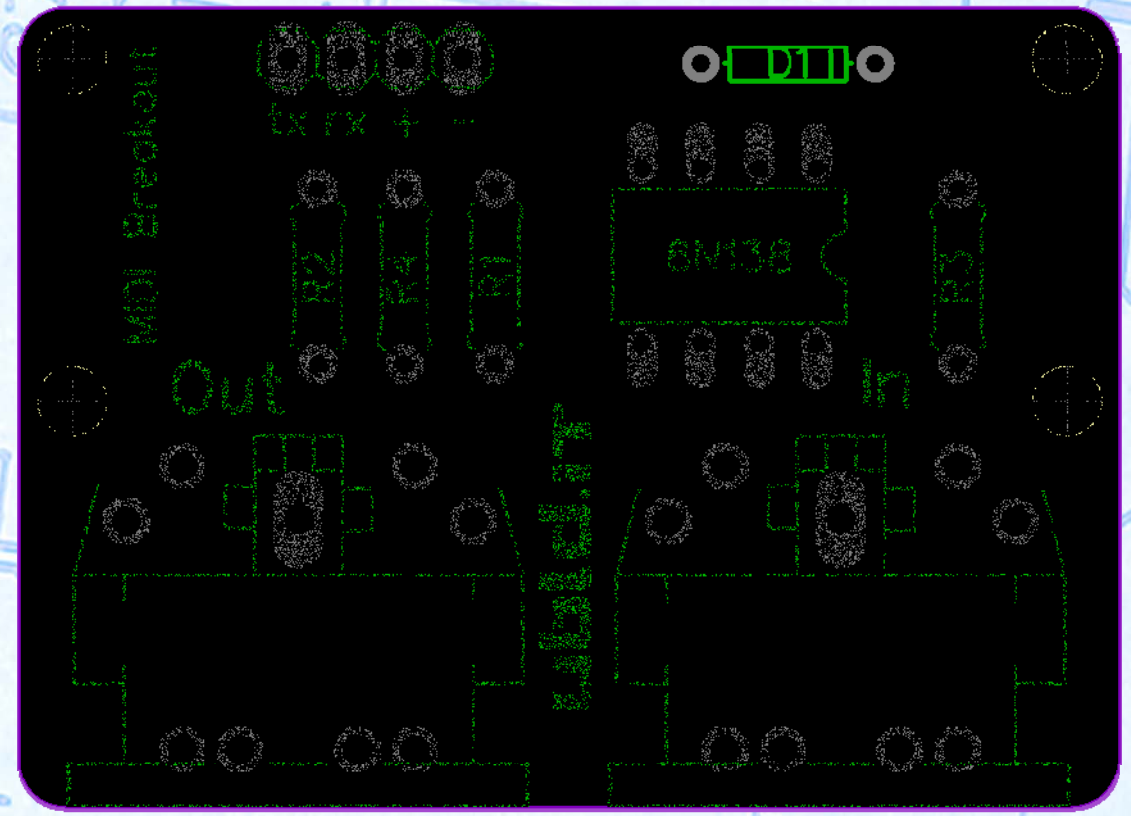


Take pride in your work. This is a show piece so make sure you take your time to bend all the components leads to 90 degree angles using needle nose pliers.

STEP 4: Insert the 1n4148 Diode

Locate a 1n4148 Diode (line #1).

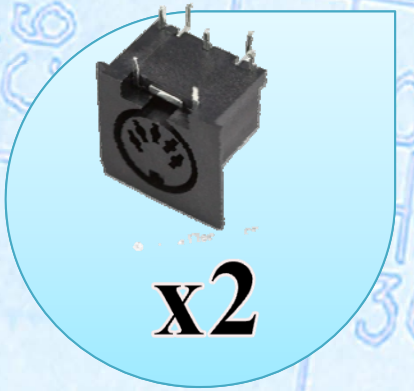
Solder the 1n4148 Diode into D1



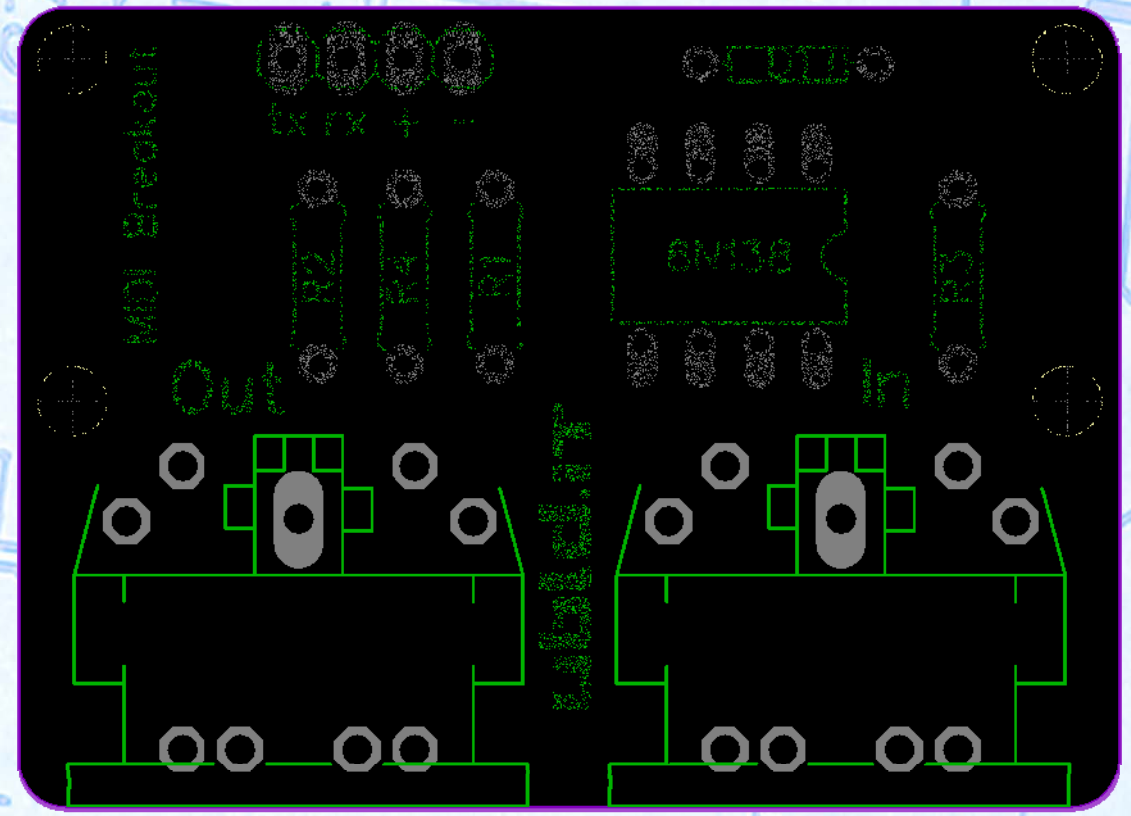
Warning: Diodes are polarized. Match the stripe on the components with the stripe on the silkscreen.

STEP 5: Insert the MIDI Jacks

Locate two MIDI Jacks (line #2).



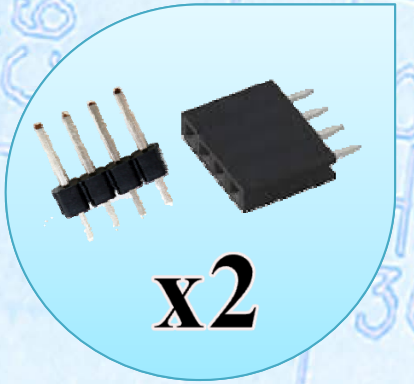
Solder the MIDI Jacks into the In and Out spots



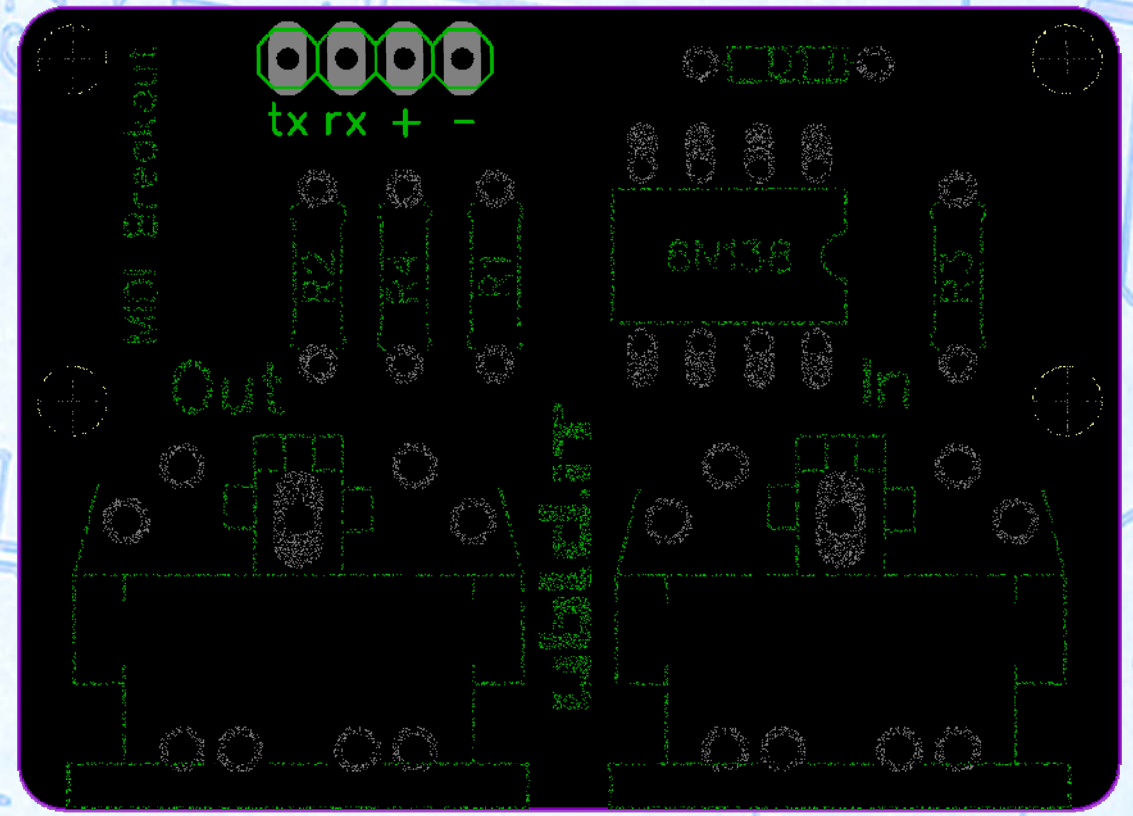
For better looking solder joints use Kester #2331-ZX water soluble flux pen on every pad before applying solder. Flux removes oxidation and allows heat to transfer from your iron to the pad.

STEP 6: Insert the 4 Pin Header

Locate two 4 Pin Sockets, Male and Female (line #3).

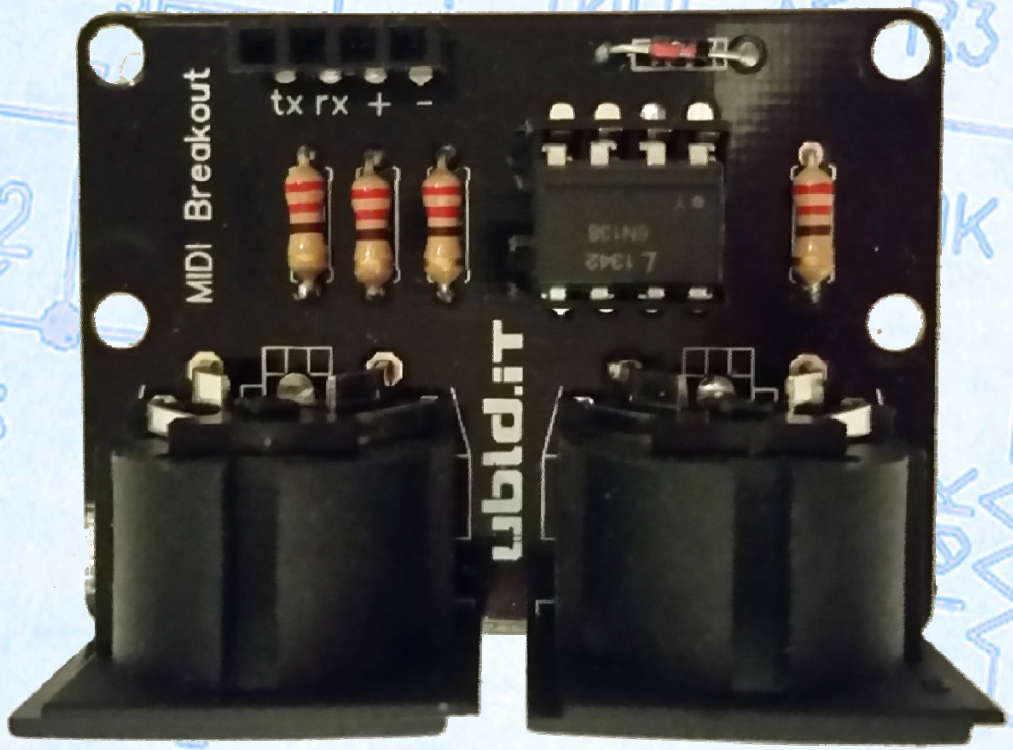


Solder one of the 4 Pin Headers



You have the option of using the Female Header, or the Male Header. Choose which one fits your preference or solder wires (not included) directly for a more permanent installation.

Visit the Community Support Forums:
http://ubld.it/midibo



5v or 3.3 power

Don't forget to insert the 6n138 IC into the socket with the correct direction.

Your final assembly should look like this. Double check all polarized components.