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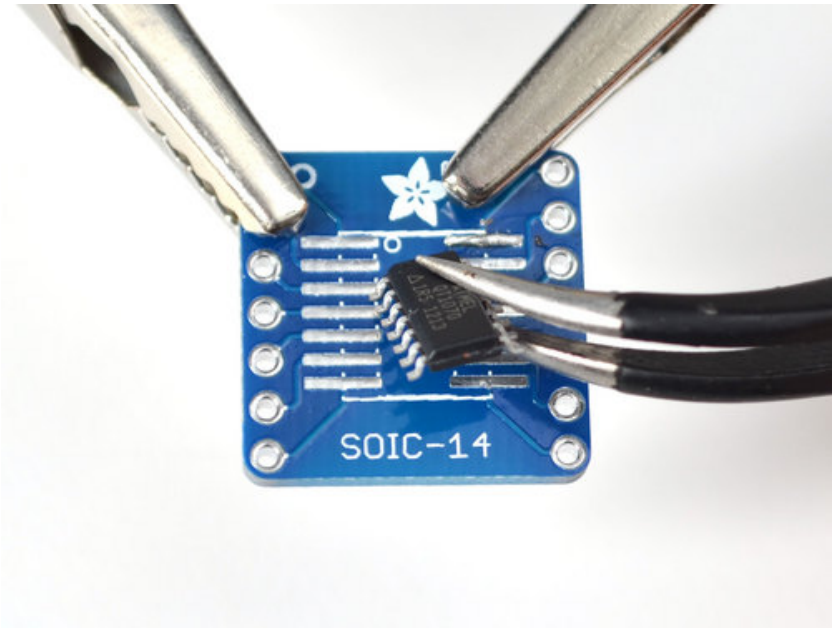
SMT Breadboard Prototyping Using Breakout PCBs

Created by Ladyada



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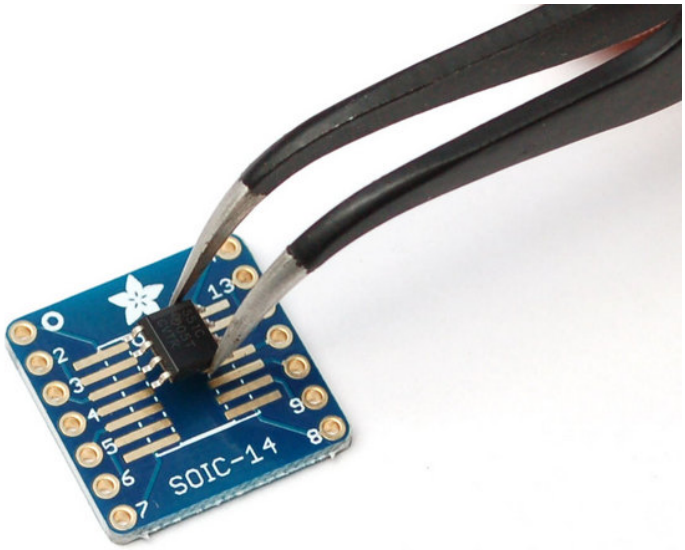

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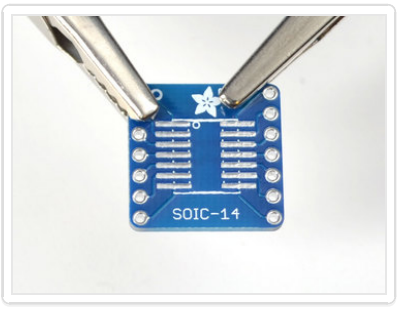
Soldering an SOIC

We'll start by showing how to solder an SOIC component. Although we have many different 'package' versions available (such as SOIC/TSSOP/QFP/QFN) SOIC is the easiest to start with and its the chip I needed to work with today so that's what we're going to do :)



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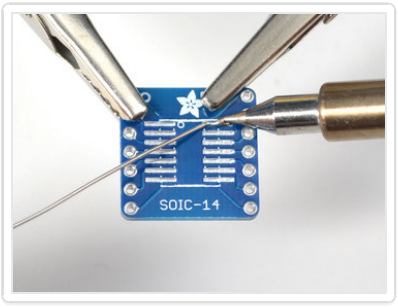

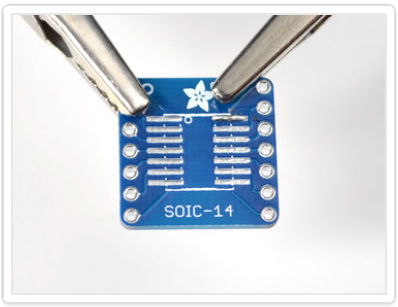

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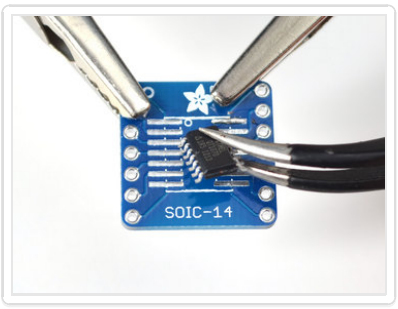
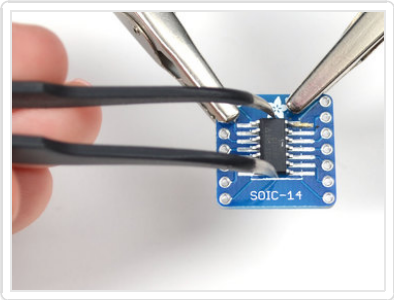
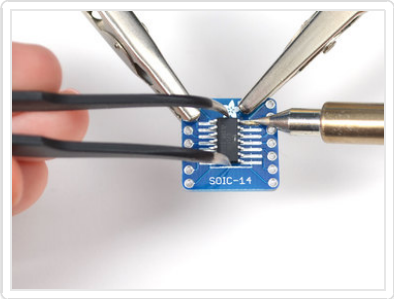
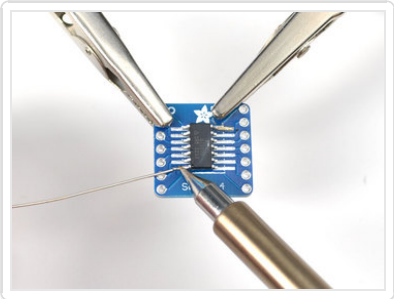


Next you need to place the part onto the pads, and you'll want to get the orientation right. You can look for a dot (indicating pin #1). In some cases, look for a flattened corner (on the left side here) which indicates which side is on the left





Once you've identified which is pin 1, hold the chip with the tweezers over the pads and then *re-heat* the corner pad you soldered onto a few steps ago.



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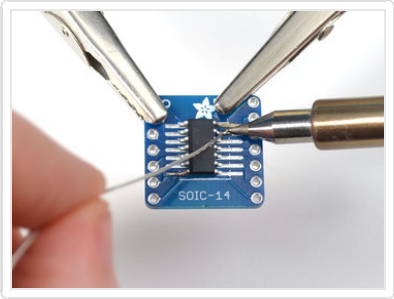

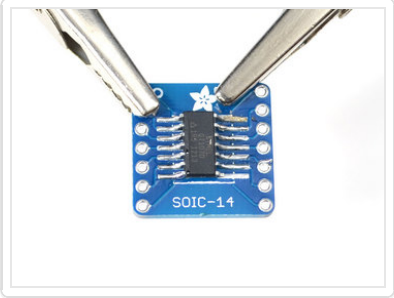

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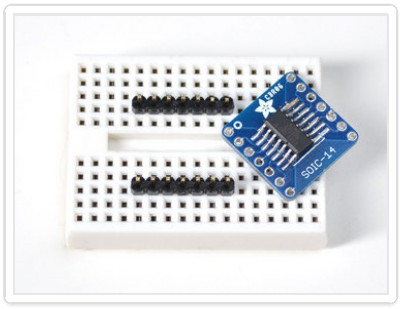

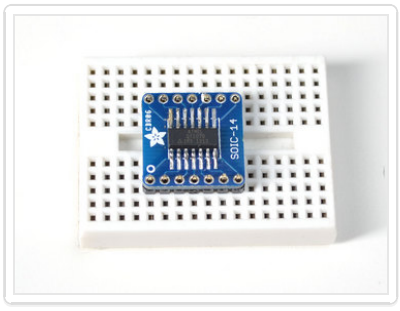

The hard part's done! Now we can solder on regular 0.1" spaced male header. We like the break-away kind so its easy to get just the right amount. (You can get some at the adafruit shop if you don't have any!) (http://adafru.it/392)

Break two pieces the same length as the pads on either side of the PCB and place them into a breadboard, long pins down. They should be parallel and the same distance as the PCB pads so that you can place the PCB on top with ease

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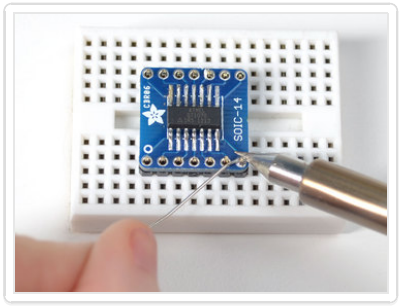

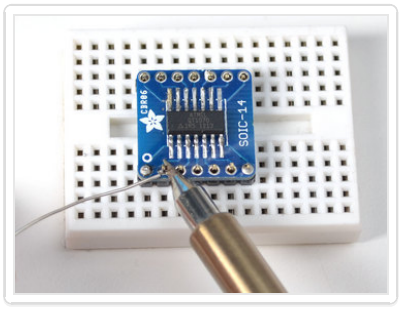

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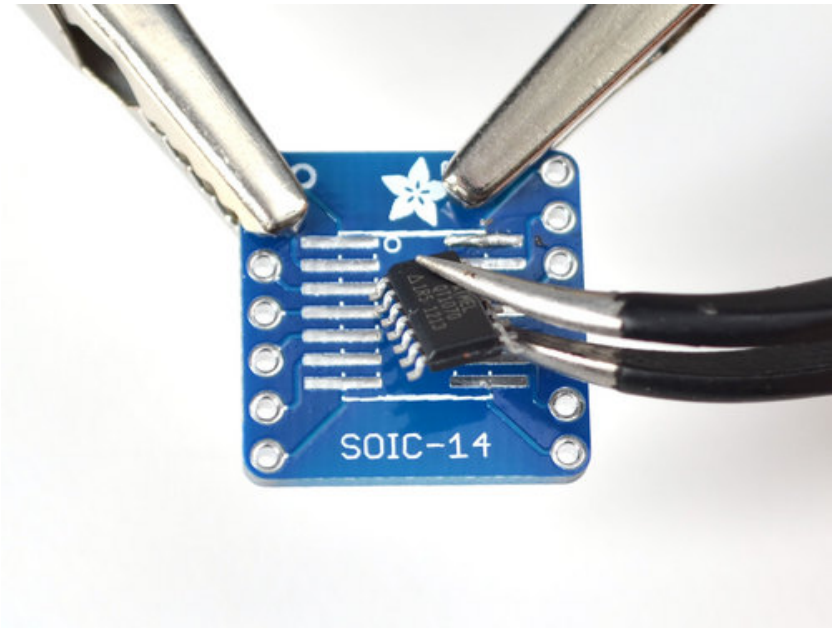

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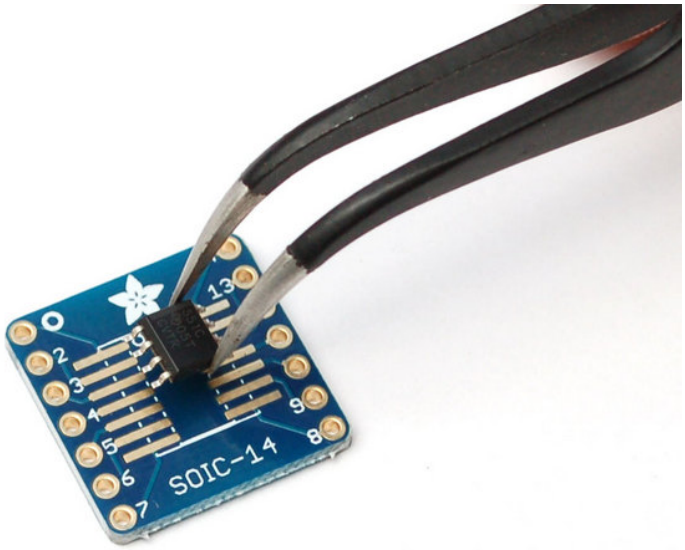

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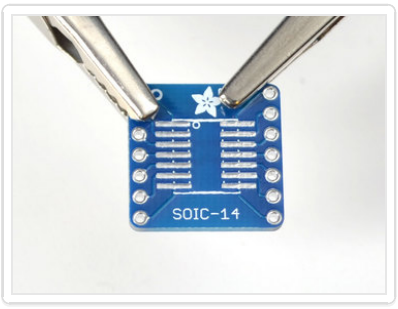

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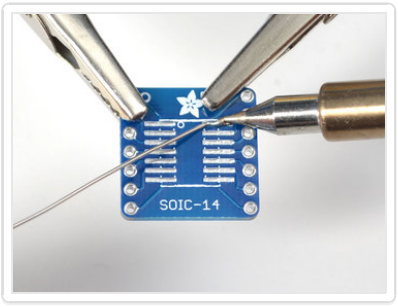

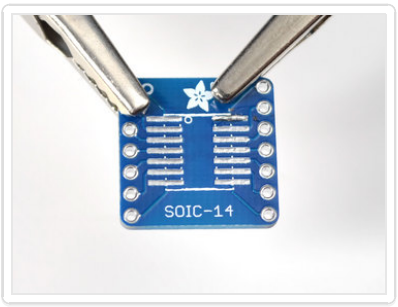

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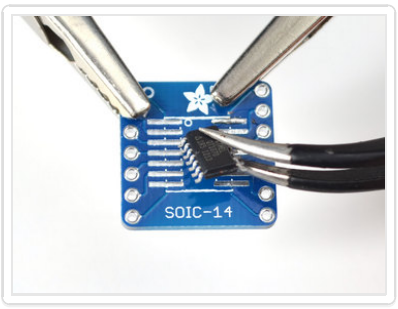

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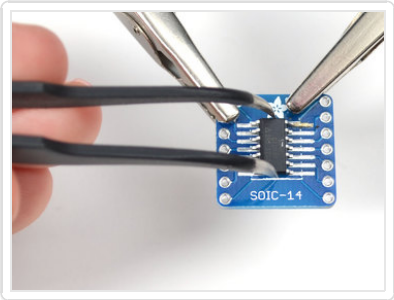

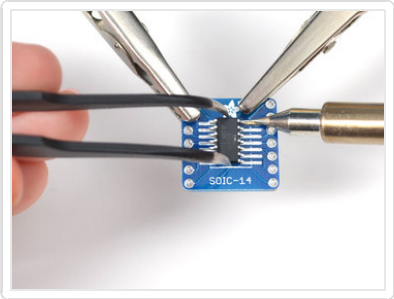

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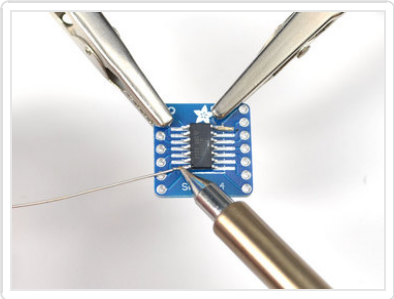

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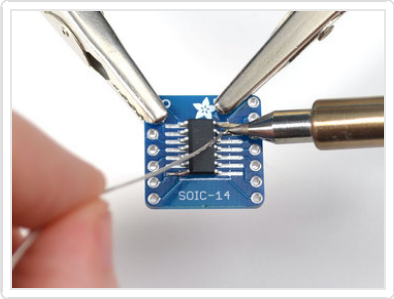

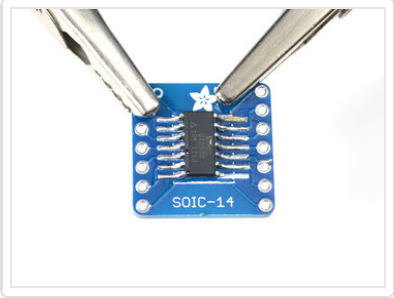

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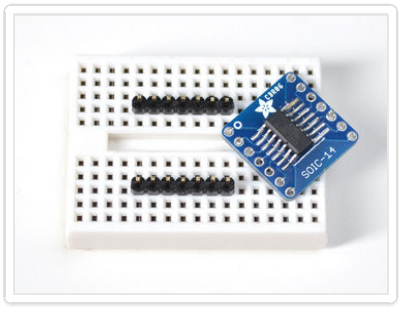

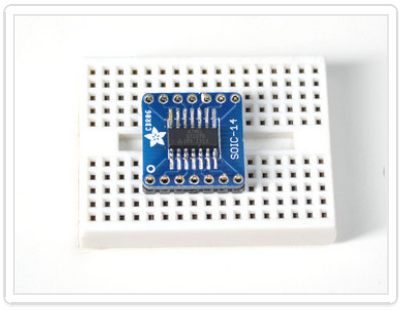

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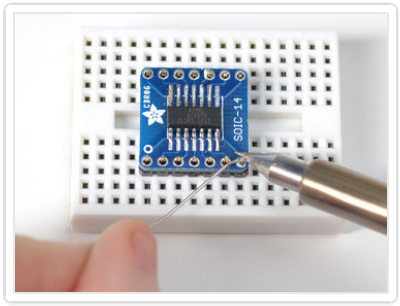

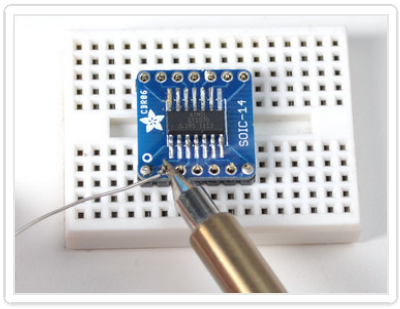

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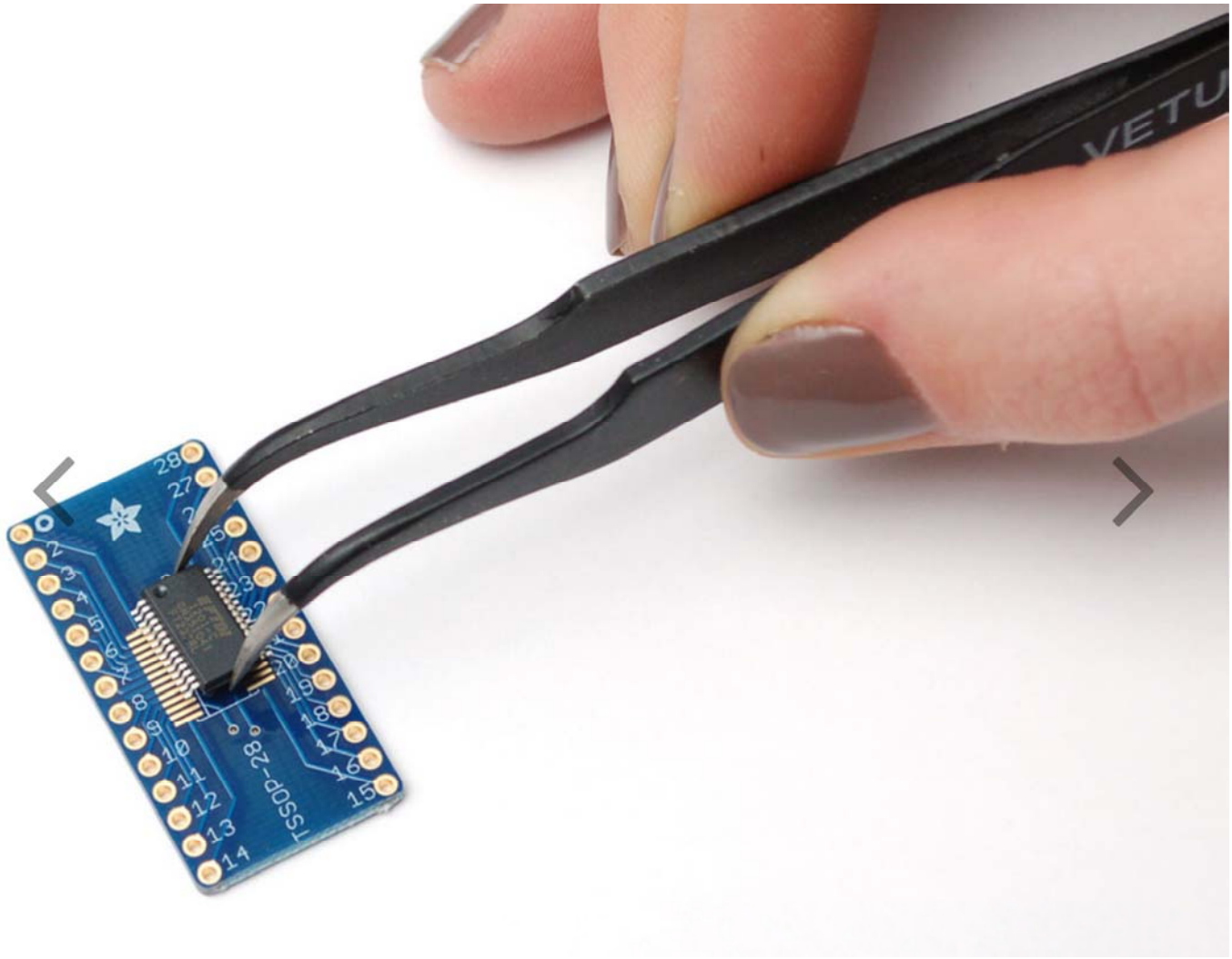
PRODUCT ID: 1208



DESCRIPTION

Beguiled by a fancy new chip that is only available in a SOIC or (T)SSOP pinout? This breakout PCB set will make your life much much easier and get you prototyping faster than ever. One side has a 28-TSSOP pin out with traces going to two rows of 0.1" spaced holes, the other has 28-SOIC. Solder your chip to either side and you're ready to rock on any solderless breadboard.

Each item comes with three PCBs, each PCB is identical and can support either a SOIC (narrow, medium or wide variety) or TSSOP. Standard thickness PCBs, with 0.6" spacing between the two rows. You can of course use a smaller chip but the pin numbering wont be right so use care.