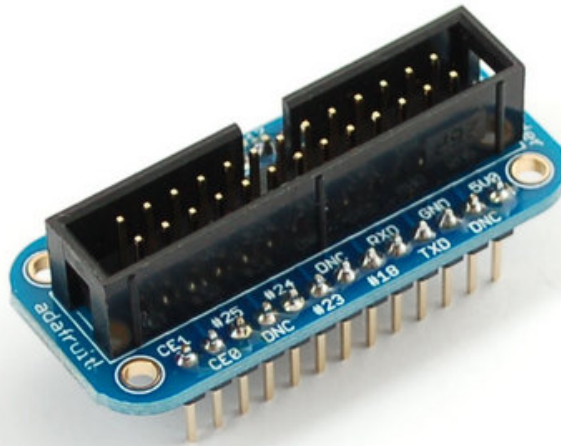


 adafruit learning system

Adafruit Pi Cobbler Kit

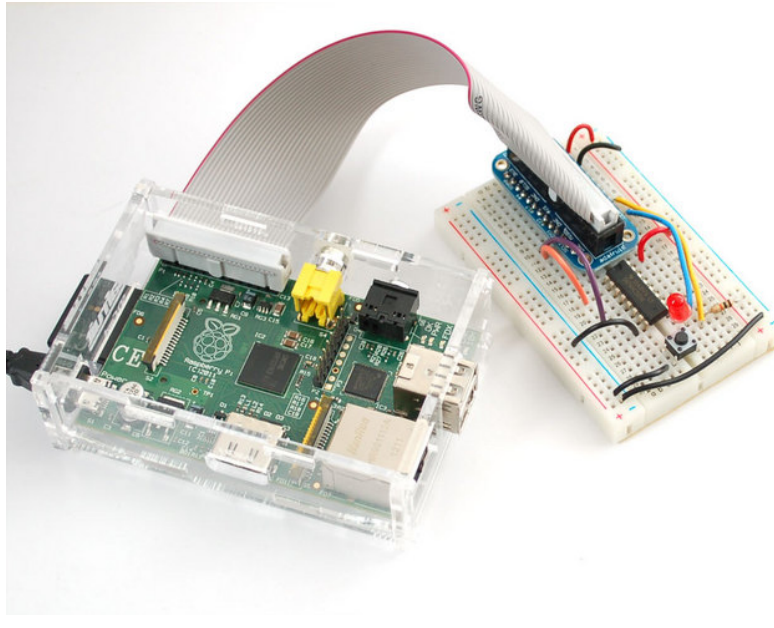
Created by Ladyada



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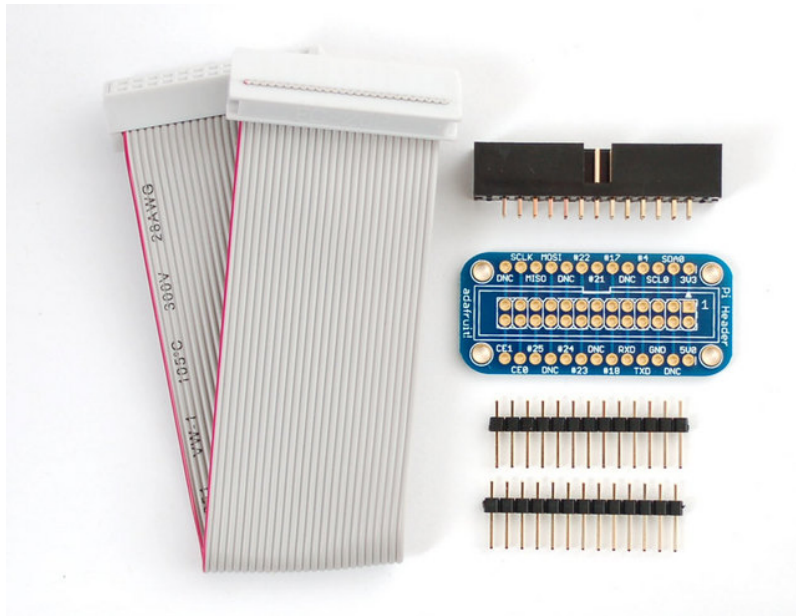
Overview



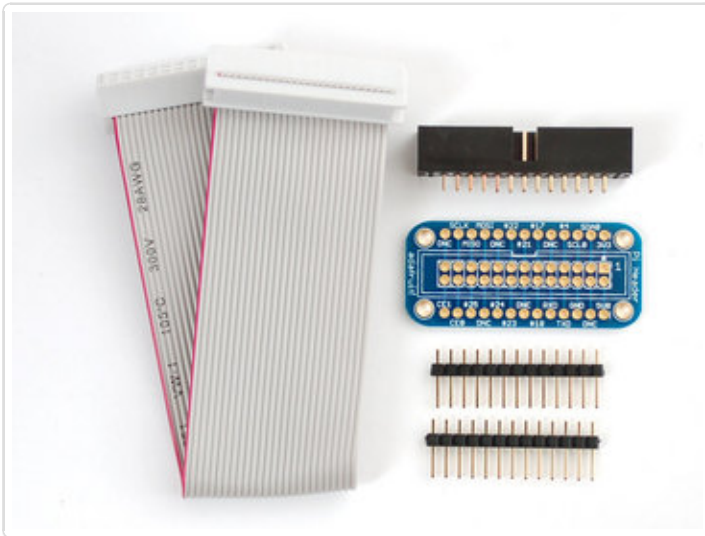
Now that you've finally got your hands on a [Raspberry Pi®](http://adafru.it/aHx) (<http://adafru.it/aHx>), you're probably itching to make some fun embedded computer projects with it. What you need is an add on prototyping Pi Cobbler from Adafruit, which can break out all those tasty power, GPIO, I2C and SPI pins from the 26 pin header onto a solderless breadboard. This mini kit will make "cobbling together" prototypes with the Pi super easy.

The Pi Cobbler mini kit comes with a 26 pin ribbon cable, a custom PCB, ribbon cable socket and header pins. A little soldering is required to put it together but its really easy, even a beginner can do it in 15 minutes! Once soldered together, the cable plugs between the Pi computer and the Cobbler breakout. The Cobbler can plug into any solderless breadboard (or even a prototyping board like the PermaProto). The Cobbler PCB has all the pins labeled nicely so you can go forth and build circuits without keeping a pin-out printout at your desk. We think this will make it more fun to expand the Pi and build custom circuitry with it.

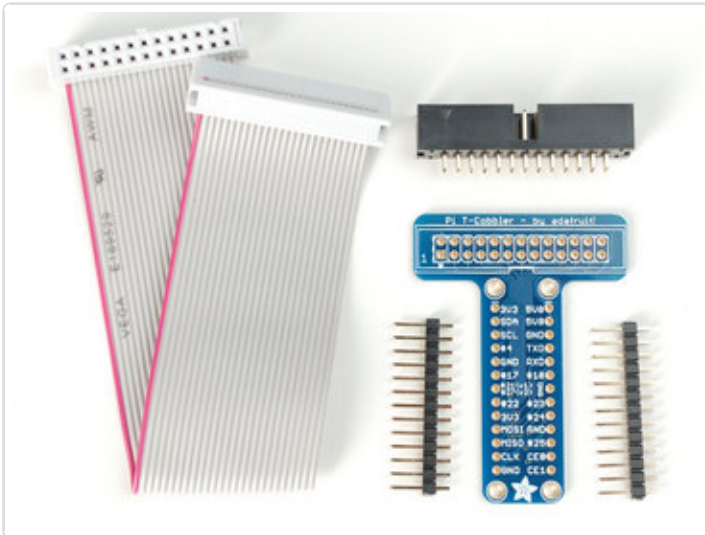
Please note, this kit only contains a 26 pin ribbon cable, a custom PCB, ribbon cable socket and header pins. A Raspberry Pi, breadboard, breadboarding wires, cables, components, case, power supply, etc is not included! We do stock many of those items in the shop, so check those out as well!

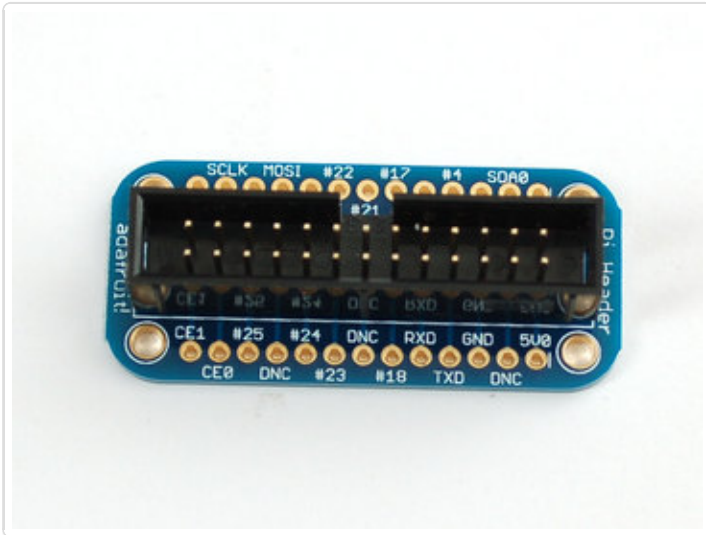


Solder it!



First up, open up your kit and verify you have the components - gray cable, blue PCB, black connector and a stick of male header. The header is breakaway, so it might be one long piece instead of two shorter



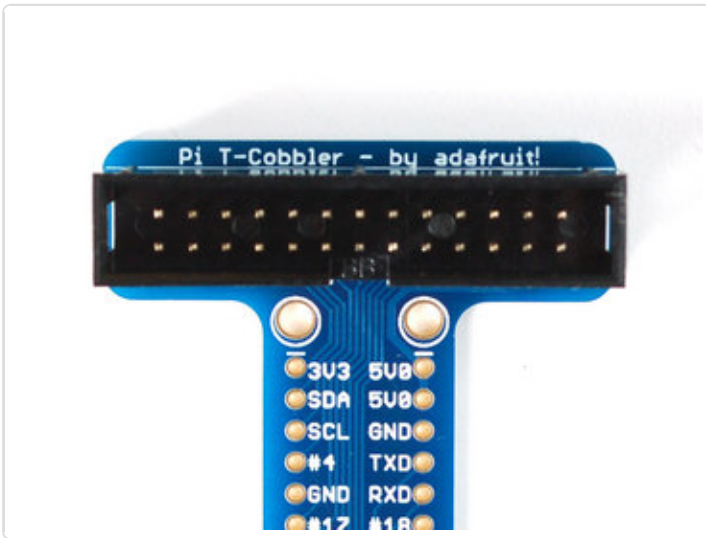


Start by putting the PCB in front of you with the text as shown on the left. Then place the header on top.

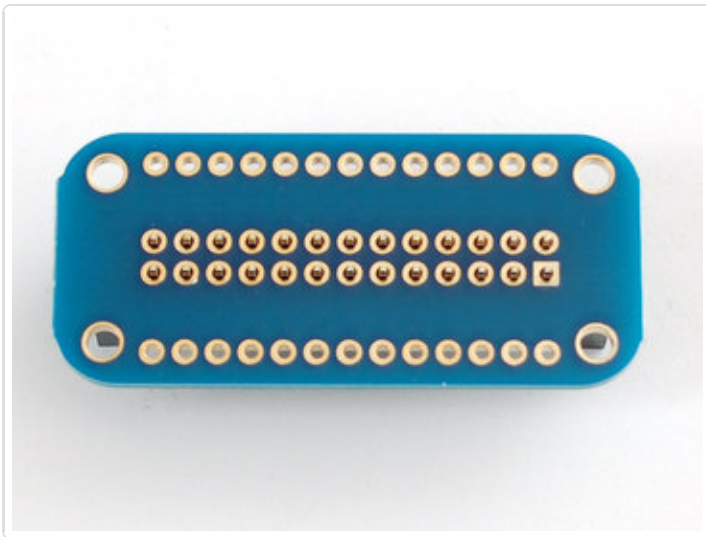
For the classic cobbler: THERE IS A NOTCH IN THE HEADER MAKE SURE ITS RIGHT NEXT TO THE PIN LABELED #21!

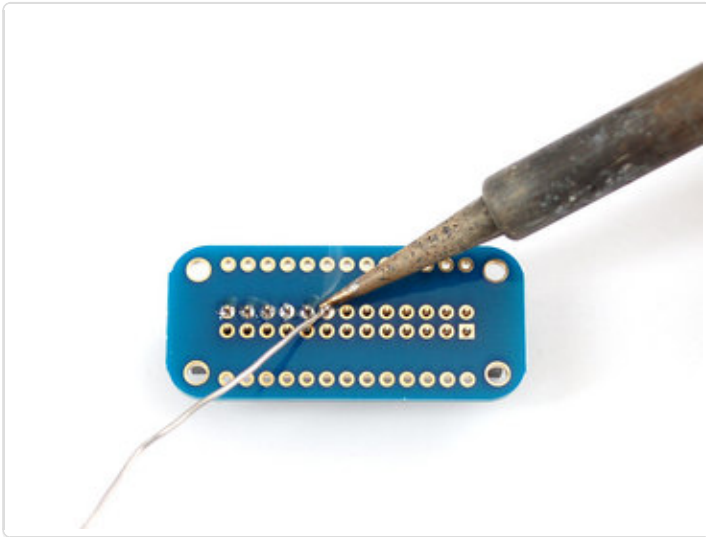
For the T-cobbler: THERE IS A NOTCH IN THE HEADER MAKE SURE ITS RIGHT NEXT TO TWO HOLES AT THE T JUNCTION

Its really important to line up the header right, because otherwise the pins will be reversed, making the cobbler useless



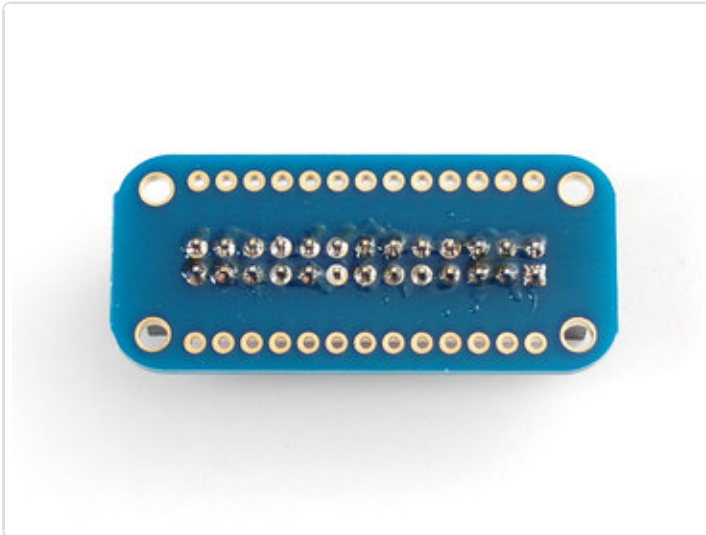
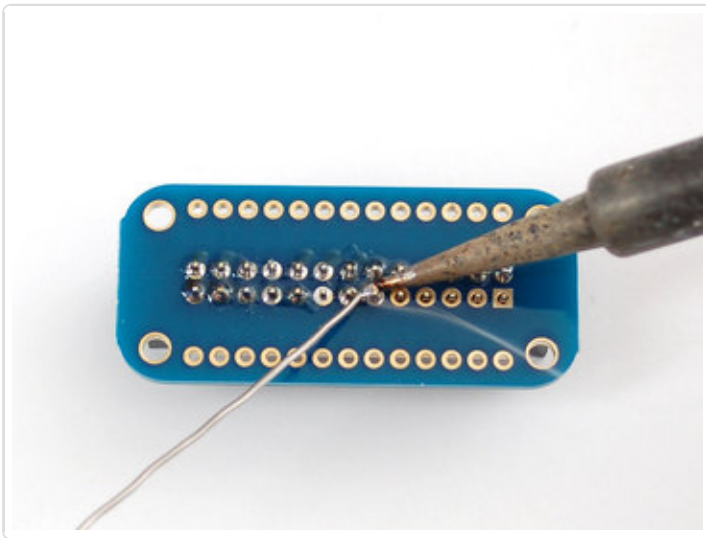
Flip over the two pieces so they are resting on the black header.

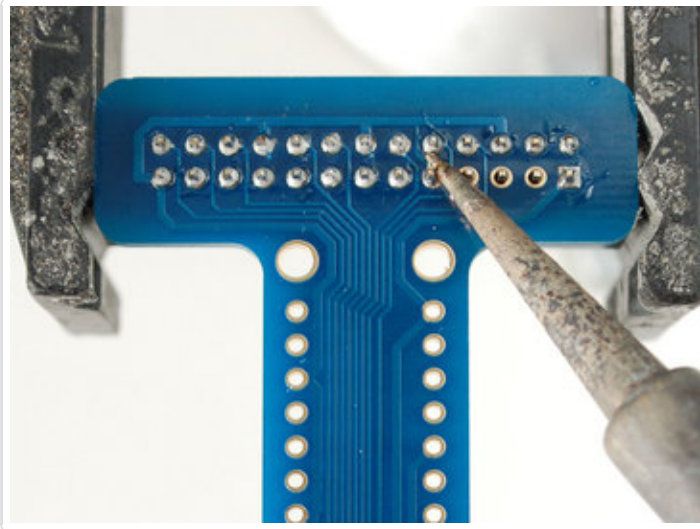
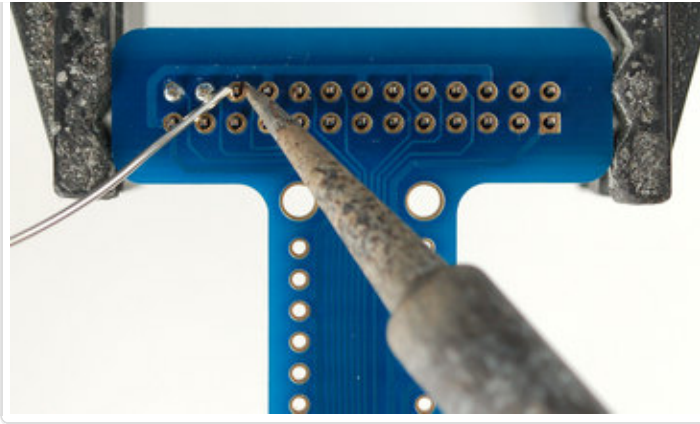




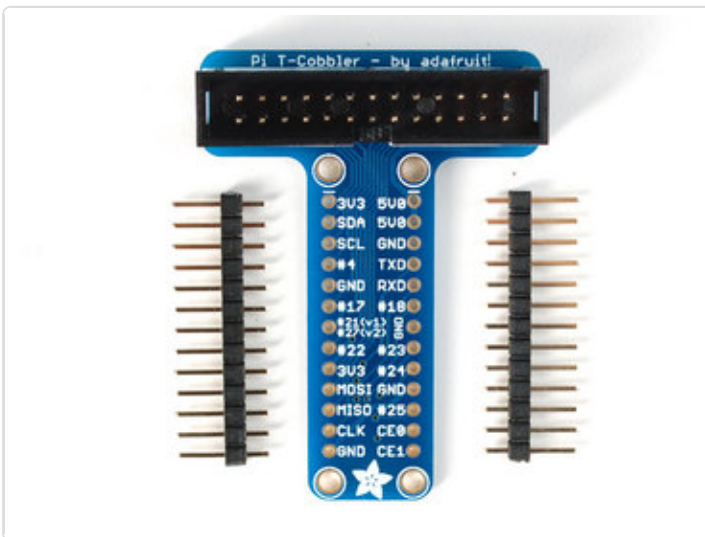
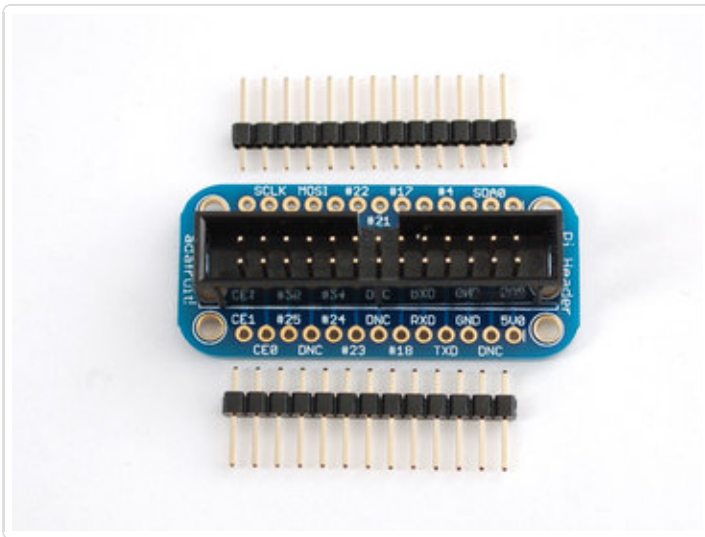
With your soldering iron heated up to 700 degrees F, and some solder, heat up each ring/pin pair for 2 seconds, then poke the end of the solder in to melt it in and make a strong electrical and mechanical connection. Then pull the solder away. Finally remove the iron.

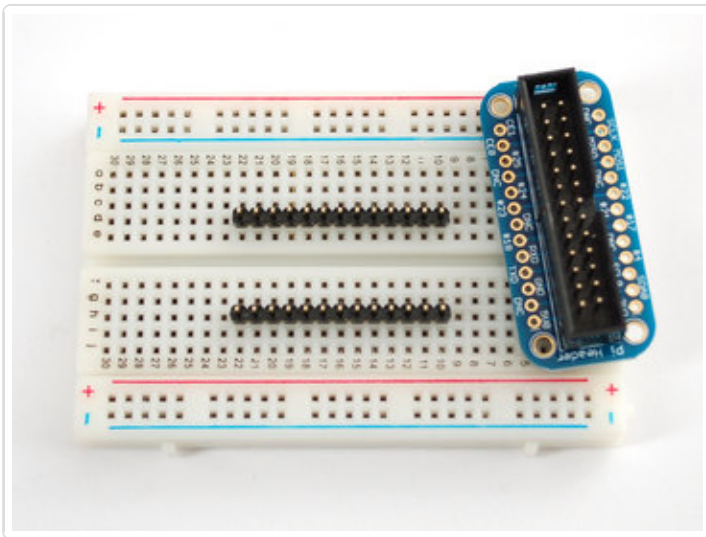
Repeat for all 26 pins!





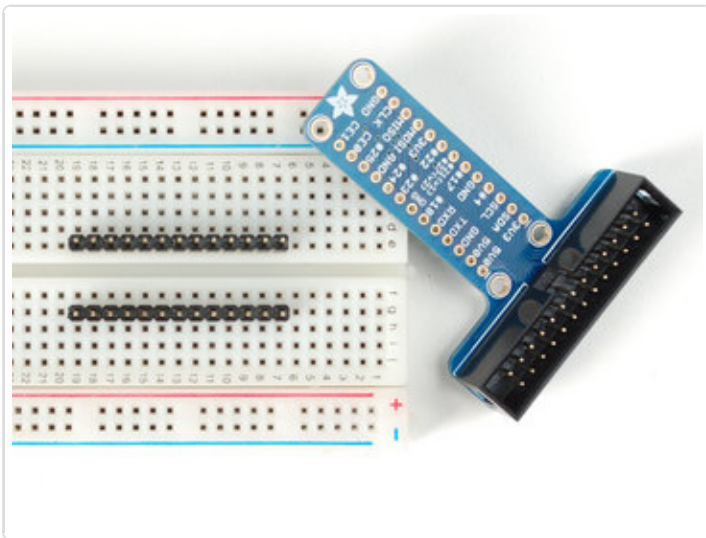
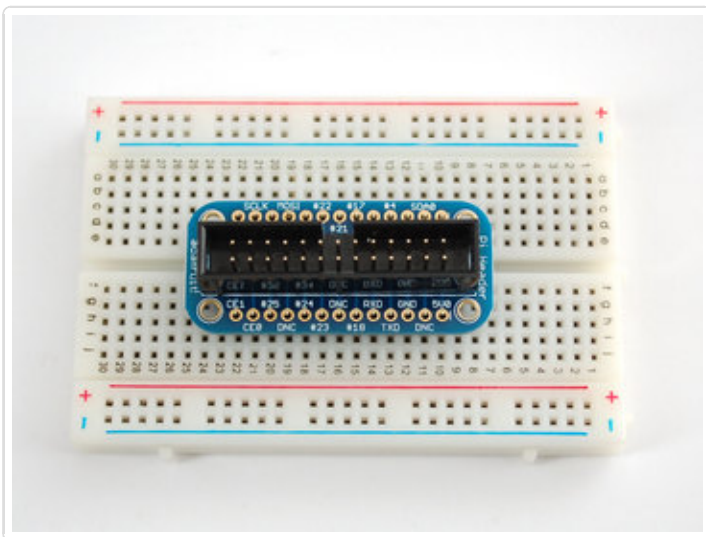
Next break the long piece of header into two 13 pin pieces. You can do this with diagonal cutters, pliers or your fingers

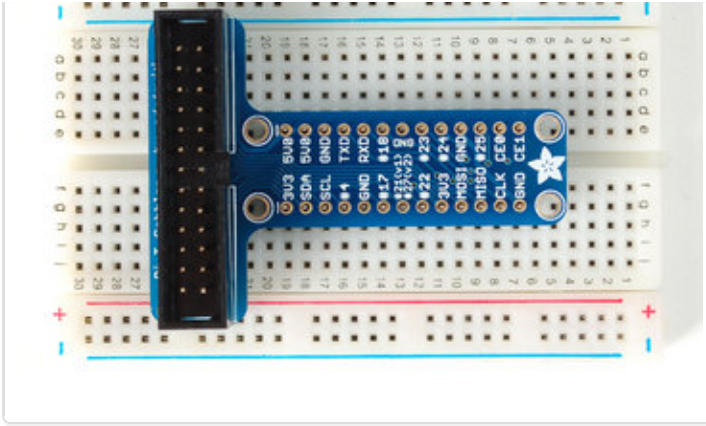




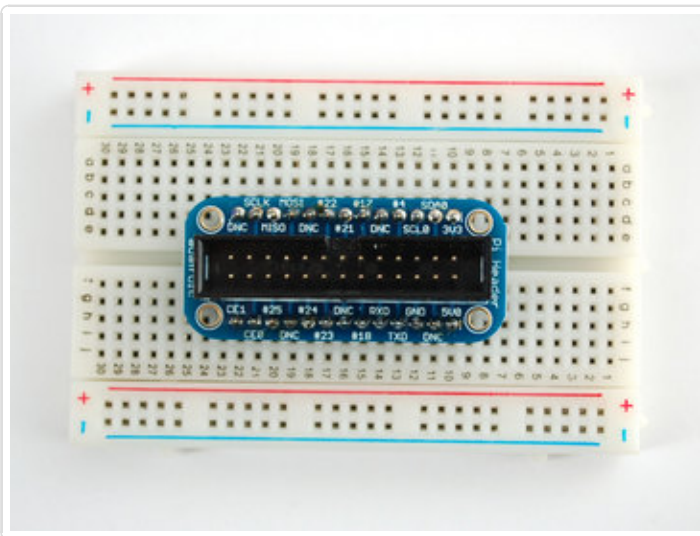
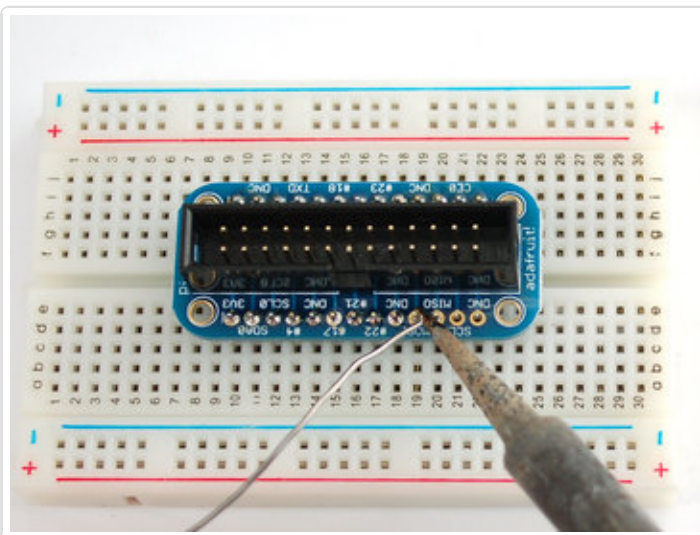
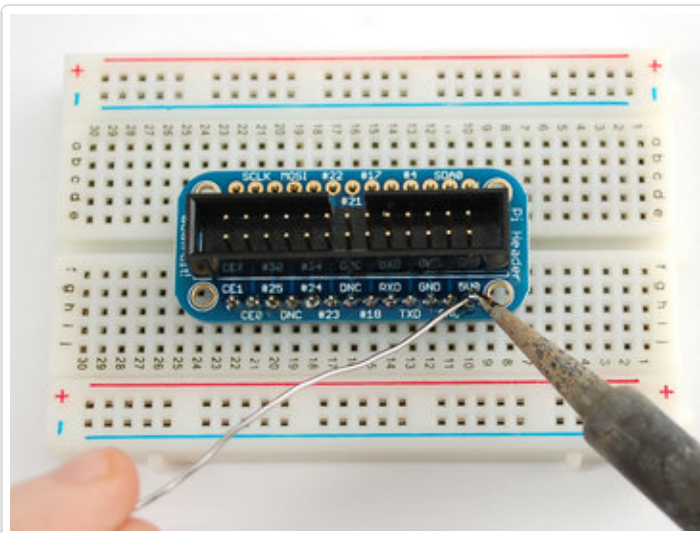
The easiest way to align the pins is to plug them into a solder-less breadboard as shown, with the LONG ends down into the breadboard.

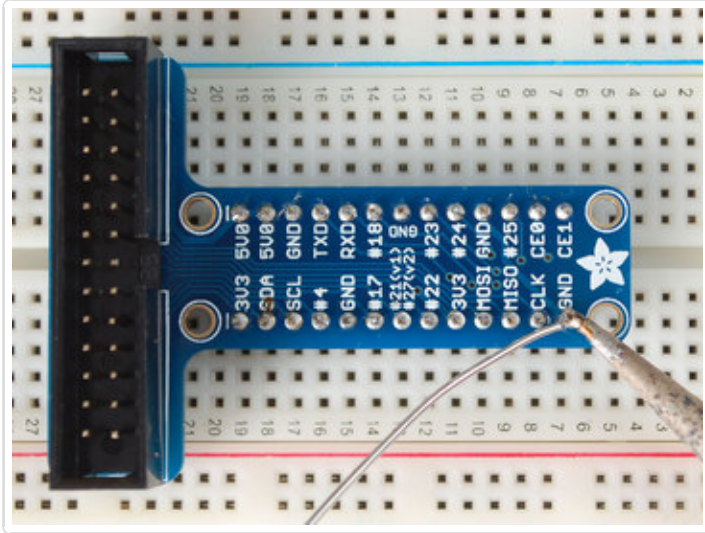
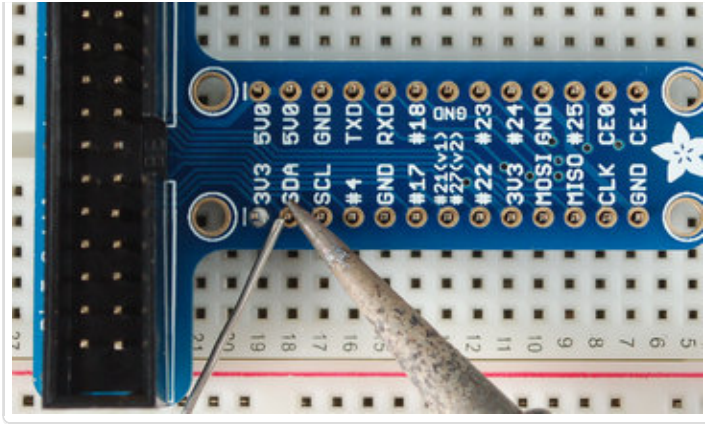
Then place the cobbler PCB on top so that the short ends of the header stick through the 26 pads on either side of the connector. If the PCB doesn't slip right on, check that you have the pins aligned and spaced right. It doesn't matter which way the PCB is oriented on the breadboard.

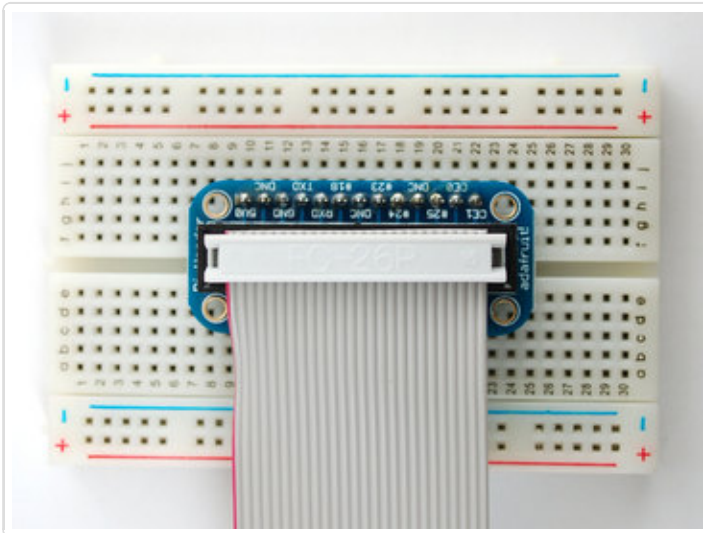




Solder each of the 26 pads just like you did with the connector before.

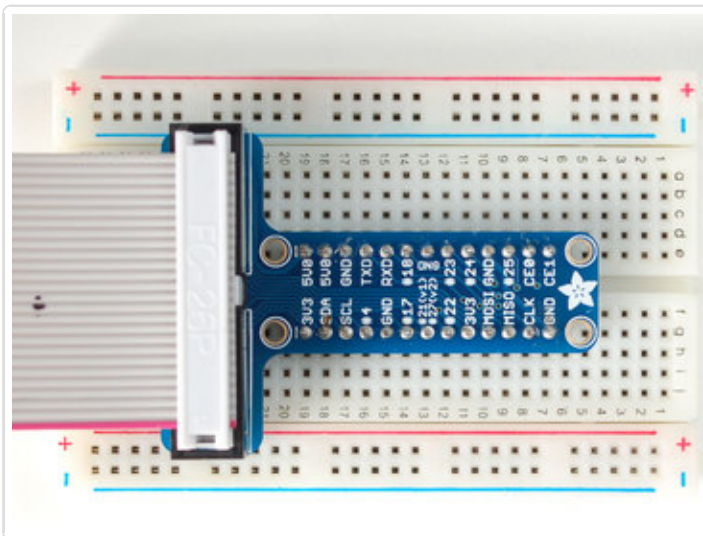






That's it! Now you can turn off the soldering iron and plug the IDC cable. Note that one wire of the cable has a red stripe. That's pin #1. Because the cobbler connector has that notch, you can only put it in the right way (whew!)

However, it is possible to put the cable in upside down on the Raspberry Pi! Check the images on the left to verify that the red stripe is on the edge closest to the SD card!



Buy a Pi Cobbler Kit!

Buy a Pi Cobbler Kit! (<http://adafru.it/914>)