

# UA4C Assembly Instructions

Use the following directions to turn your mostly assembled UA4C into a fully assembled UA4C.

If you are going to install a stepper driver the best time is now. Insert the module through the top of the board with the adjustment pot over the hole in the hole in the UA4C. Flip the UA4C over and solder the pins down and clip the remaining off.

The next step is to attach the BARO and MAP sensors. Pay attention to the clipped corner of the sensor and align it with the markings on the board. vA3 has solder already on the sensor pads. Use this solder to tack one of the sensor legs and then adjust its position if necessary. If you have access to flux this can help get it to stick. Now use the finest solder wire available and solder the rest of the legs and touch up the first one if necessary.

Now attach the Arduino and trigger jumper header pins to the top of the board. You should have three strips of 40 pins. Break one of the sticks into five sections of eight and insert them into the board. Take another strip and break four pins off and then break both the section of four and the section of 36 in half. Insert the two pin pieces in the jumper positions where the VR socket will go and the 18 pin pieces in the double row Arduino connection. You will now be left with one more stick. Break one ten and two six pin sections off. Put the ten and one of the six pin sections into the appropriate Arduino locations. The remaining six pin section gets broken in half and used in the final jumper positions by the VR socket. Now take a ~10cm<sup>2</sup> piece of something flat but not easily melted (a piece of good cardboard) and set it on top of the board. Avoid the MAP sensor as it protrudes. Now flip the sandwich you have created over, again be careful of the MAP sensor, you may need to let it hang off the edge of a table. Press down a bit to make sure all the pins are fully through the board and solder away.

The next step is to attach the VR module socket. Break off two four pin strips from your remaining header pins. Insert them into the sockets such that they create a square. Insert the sockets into the board and while holding them in flip the board and carefully tack a pin in each row with solder. Set the board down and solder the remaining socket pins. Remove the header pins from the socket.

Final step is the card edge with the harness connectors and reset protection jumper. The header jumper can simply be pressed in to its spot in the corner and soldered down. For the harness connectors snap both of them to the board. Now on each connector solder ONE of the middle pins toward the outside edge. Now while squeezing the connector and the PCB together with your finger in the middle of the connector and over the outside row heat the solder. The connector will snap tight to the board and become level. Repeat for the other connector and then solder all the contacts.

Congrats! You're Done!