ControLeo

Thanks for supporting ControLeo. Here are the recommended steps for soldering:

1. (Optional for real-time clock only) Cut off a 4-pin section of the male header included in the kit of parts. Solder the 4-pin RTC header to the PCB (just the header, not the RTC). This goes in JP9. The pins should face the component side of the ControLeo PCB.
2. This is the tricky part and you need to get this right! The LCD must be attached to the ControLeo PCB. It must sit directly on the PCB and must be exactly within the rectangle on the silkscreen. Failure to align this correctly will result in sticky buttons. Here's my recommended method, but feel free to improvise:
    a. Place the ControLeo PCB on a flat surface, component side down (LCD side up).
    b. Place the LCD on top of ControLeo.
    c. Take 2 male header pins and place them through the pin 1 and pin 16 holes, so that they go through both boards.
    d. Solder pin 1 and 16 on the LCD.
    e. Turn both boards over and solder pin 1 and 16 on ControLeo.
    f. Inspect the alignment of the boards. If necessary, remelt the solder and walk the boards into alignment.
    g. Once you are happy with the alignment, solder pins 2 through 15.
    h. Trim the pins to be flush with the PCB.
3. Solder the 4 LED's to the PCB. Make sure the flat spots on the LED's agree with the image on the silkscreen. Make sure the LED's rest on the LCD PCB and are vertical. Trim the leads after soldering.
4. Adjust the LED's. Place the plastic cover over the LCD and LED's, and see how the holes for the buttons line up. If necessary, melt the solder on the LED's to reposition them. The holes in the plastic should be directly over the circles showing the center of the buttons.
5. Join 4 of the screw terminals together (they slide together) BEFORE putting them in the PCB. The screw terminals must be on the component side of the PCB. Solder all the screw terminals to the ControLeo PCB. The wire holes should face outwards; if they face inwards there is a danger that the wire might short with a component on the board.
6. Solder the buzzer on to the ControLeo PCB. Make sure the '+' on the PCB and the buzzer agree. Trim the leads. Remove the white sticker on the buzzer to increase the buzzer volume.
7. Solder the 2 buttons on to the ControLeo PCB
8. (Optional for real-time clock only) Solder the RTC onto the header you previously soldered onto ControLeo. Place a CR2032 battery into the battery holder.

Good luck! Have fun with ControLeo.

Peter & Gary

Note: We've moved support and sales for ControLeo to www.whizoo.com