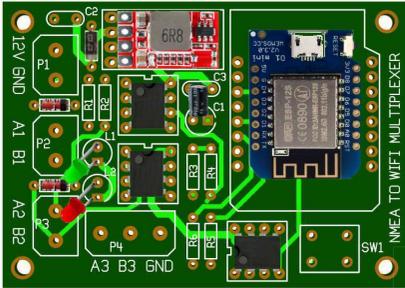
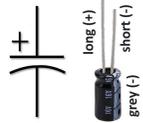


ASSEMBLING THE PCB

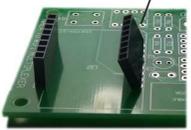


leds, electrolytical capacitor and ICs. The diodes have a printed bar that indicates the cathode and that bar is also shown in the PCB silk screen. Take the previous picture as a reference. Electrolytical capacitors have a grey stripe indicating the minus terminal. Also the length of the leads identifies the polarity of the component. The longer lead is the positive terminal and the shorter lead is the minus terminal. Leds follow a similar rule. The longer lead is the anode or the positive terminal. The shorter lead is the cathode or the negative terminal. The cathode can

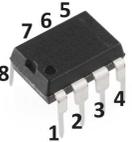
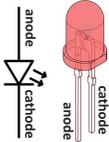


also be identified by a flat surface in the body of the led. When soldering the 2 sockets that hold the ESP8266 module, start by soldering just one pin and then check the alignment of the socket. If it is not perpendicular to the PCB surface correct the situation by heating the soldered pin. When the two rows of sockets look fine, solder all the remaining pins. Before inserting the ESP8266 module and the three ICs in their sockets, check once more the output voltage from the voltage regulator. Supply a proper voltage (around +12V) on the P1 screw connector and measure the voltage from pin 8 of U3 U4 and U5 with respect to the GND terminal of P1. This voltage should be comprised between 4.95 V and 5.05 V. Finally, disconnect the voltage at P1 and insert the ESP8266 module, the two 6N139 and the MAX485 ICs into their sockets, respecting their polarities.

this row is not right!



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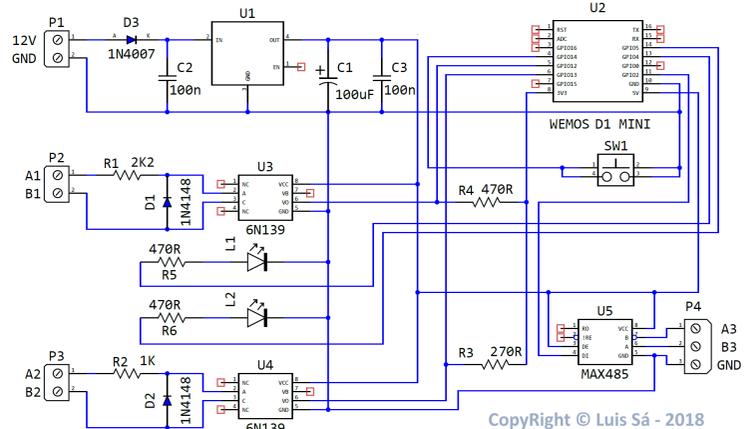
TESTING THE MULTIPLEXER

You should fix the assembled PCB to the plastic box with the 4 self-tapping supplied screws, before testing the unit. The multiplexer starts to work as soon as supply power to the P1 connector. You should disconnect your PC, tablet or smartphone from any existing network and search for wifi access points. You should find the network called NMEA2WIFI. Connect to this network using the password 12345678. Once the connection is established, open a browser window and type 192.168.4.1. The following web page should appear, from which you can programme the unit.



Reaching this point, means that the ESP8266 was correctly programmed. In order to test the output (P#3) and the inputs (P#1 and P#2) of the multiplexer, perform the test described here: <http://www.vela-navega.com/forum/viewtopic.php?f=6&t=51>.

CIRCUIT DIAGRAM



NMEA2WIFI KIT

