

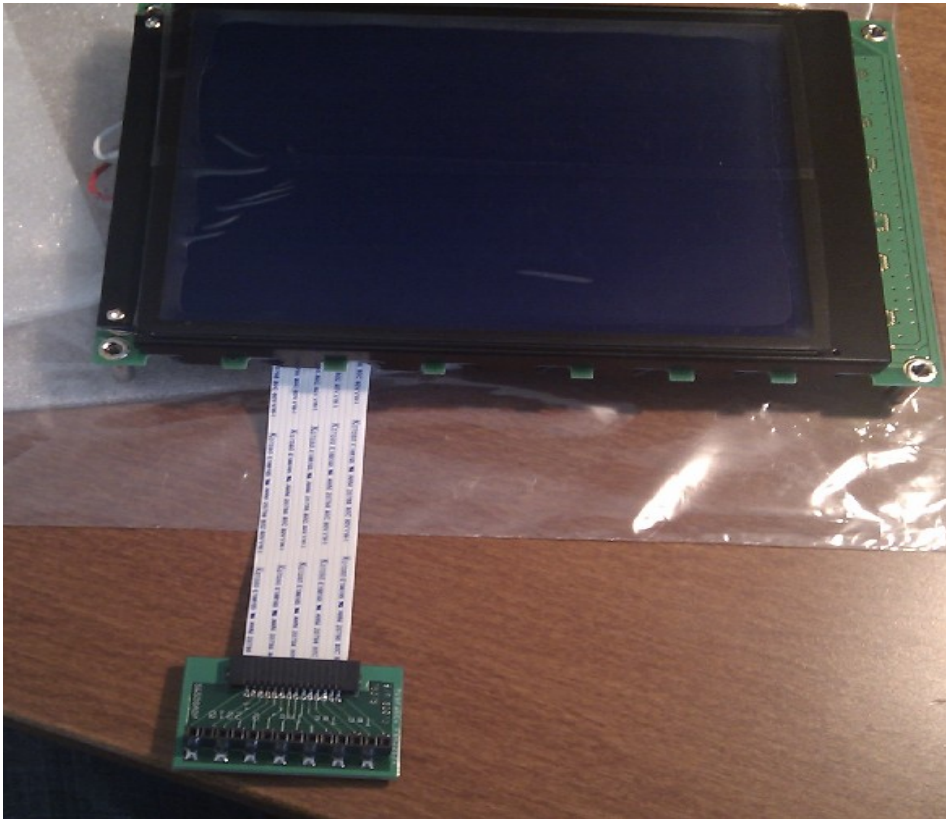
disclaimer

- I have described the installation process through my own limited experience
- Everything is at your own risk

Getting to the logic board / lcd screen

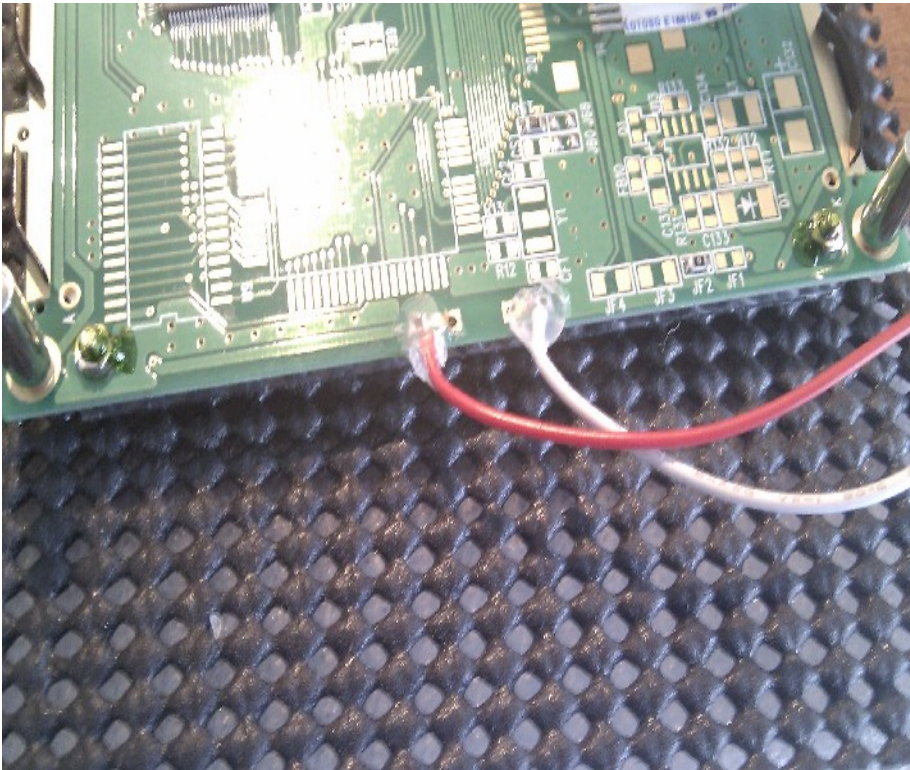
- I found the existing Orion V2 logic modification procedure as provided by Ten-tec very useful
- Next slides describe specifics to replacing the LCD which I found useful

Out of the package



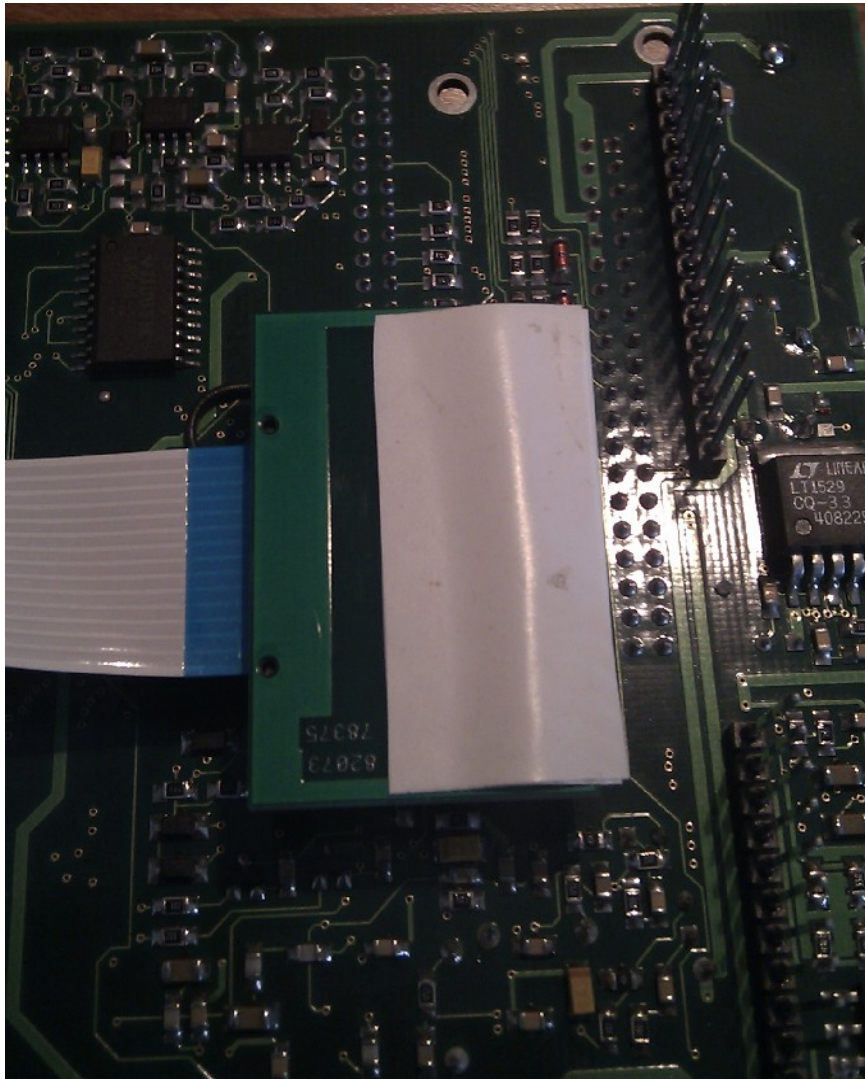
- Old LCD screen had connector on the pcb, new screen has flat cable with connector
- There is only one way to mount the flat cable
 - Picture on this later

Preparing the LCD



- The led backlight has some glue on it, in my case I had to remove it to make room for the connector pcb
- Please note that the LCD is mounted to the logic board using 4 plastic isolators. They are needed to keep proper distance from the logic board.
- Also please note that the connector pins from the logic board are long and in my case they almost touched the lcd pcb... I have included a few layers of tape to isolate the pcb from the pins
 - Also do not tighten the mounting screws to firmly as that will compress the plastic isolators and hence decrease the distance between lcd pcb and logic pcb
 - That might have been an issue on my unit, but the isolation won't harm I think

Orientation of the cable



- The cable can only be mounted in one orientation.
- The flat cable points away from the two (2) pin rows on the logic board
- Notice the tape I have included to avoid issues

Mounted to the logic board



Manufacture information



Good results



Nice but with annoying flicker



Observations

- There is something “wrong” with the LCD drive and there is an annoying “flicker” when using blue on white. Its like a stroboscope effect.
- Contrast is very high and the side effect of this is that you will notice cold to warm transition much quicker
 - An automatic contrast control adjustment is under investigation using a simple thermistor
 - I am also suspecting the unit construction for not allowing enough LCD cooling since running the Orion for a couple of hours in a row will result in some LCD contrast saturation (applicable for both old and new screen). Investigating how the heat build up can be reduced
- White on blue requires a different contrast setting then Blue on White. This was also on the old LCD
- Firmware 1 works well but Firmware 2 has better contrast stability
 - This was also the case for the old screen
- The new LCD PCB seems a little bigger then previous one and as a result it is rotated a little bit because it touches the s-meter post during mounting it. This results in a small rotation