

Various replacement displays for Orion 565

Disclaimer; You do this at your own risk. I have described with utmost attention to detail but mistakes could have been made. I hope you can fix your screen and enjoy continued pleasure with your Orion 565. Regards, Onno de pa1ap

The display unit(s) as offered by NewHeaven have display driver chips the Orion does not use. This combined with a memory chip you can remove two chips to downgrade the display to be compatible with the Orion circuitry.

Second, the display does not come with all hardware you need. The following is required;

- 1- 4 x 12 mm posts (m3) to mount the pcb to the logic board
- 2- there is a chance that the board is slightly bigger (2-3 mm) and hence it could touch the 5 meter post.. When you are assembling the display please verify. If it connects, take the display unit out and cut off a small part to make it fit nicely
- 3- the hardest part is the flat cable connection between display and logic unit. I found the following is working well;

- a- find an old ide cable and you need 14 wires. Most of the time the display is provided with a flatcable attached to con2 (20 pins). You can remove this cable. The 14 pin cable can be soldered to con 1 (14 pins). You need about 12 cm.

- b- In order to connect to the logic board Ten-tec used a small pcb with a single row connector. It is a standard pcb connector and it needs 14 pins.. Connector type suggestion; Single Row Right Angle 40 Pin 2.54mm Pitch Female PCB Header Connector. What I did is ordering a 40 pins connector (select the one where the "pins" are at 90 degrees angle) and carefully cut it with a saw to get the right pin count.

- c) the alternative for the connector would be to solder the cable straight to the pins. Its up to you what you deem good or bad.

- 4- Since the NewHeaven display units have their own negative voltage circuit (more stable) do not connect the negative contrast voltage (two wire cable coming from the Orion dc-dc board).

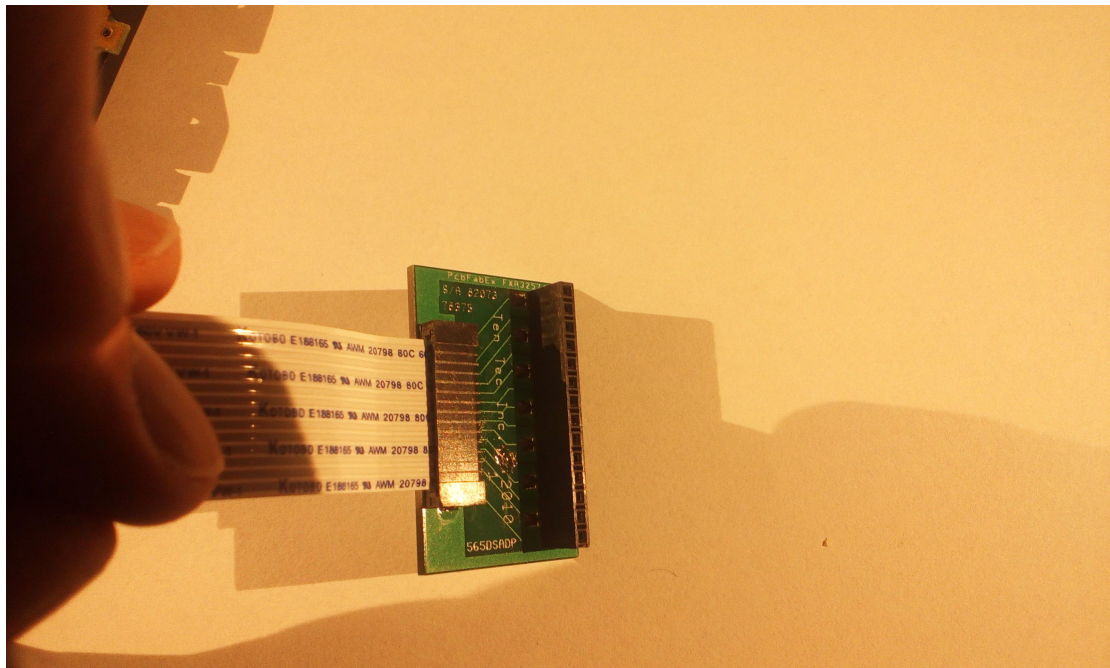
That's pretty much all you need to do. Removing the chip / chips (depending on version) is not very difficult.

Below various examples of display boards. I hope those will help illustrating the layouts.

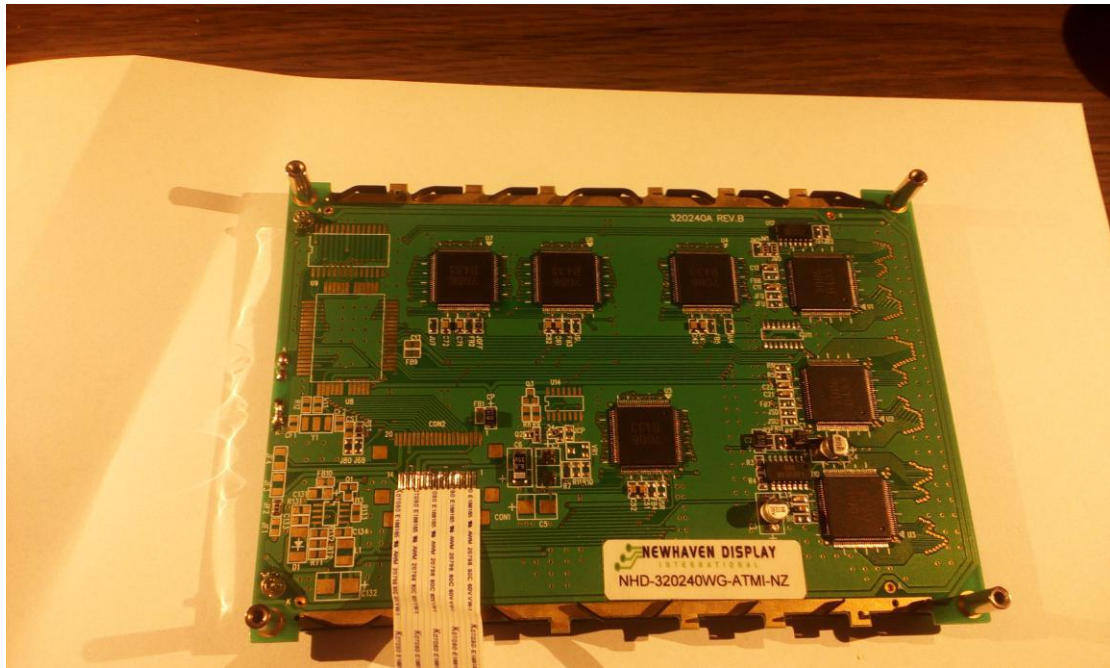
From risk point of view; Well really not that risky since the cpu connects to the display through a driver chip. The driver chip has the outputs connecting to the display and if you shortcut the whole thing you might blow up the driver chip. The cpu behind that chip should not be impacted by that. But as always, as it seems normal in the usa; I dont take any responsibility if things go wrong.

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Below the original Ten Tec connector pcb to connect Display unit to logic board. You have to construct something similar (or solder straight to logic board connector...)

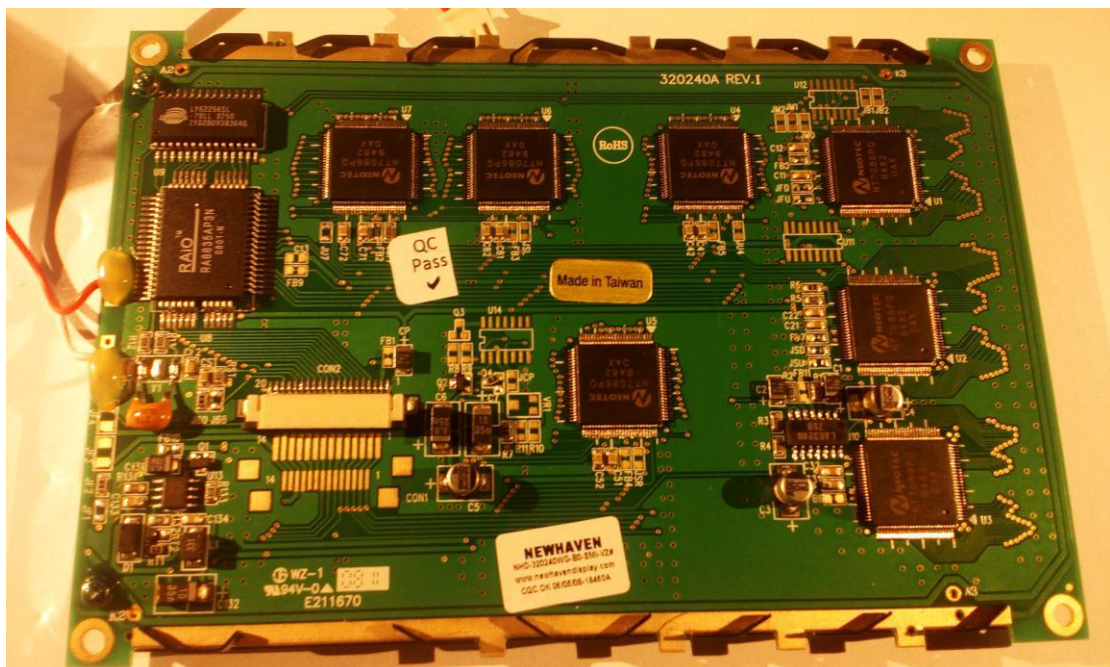


Picture below is one of the Tentec replacement boards. As you can see the driver and memory chip are missing (as well the negative supply bottom left corner). Location of the two missing chips upper left corner.



Below same board but now sourced directly from NewHeaven;

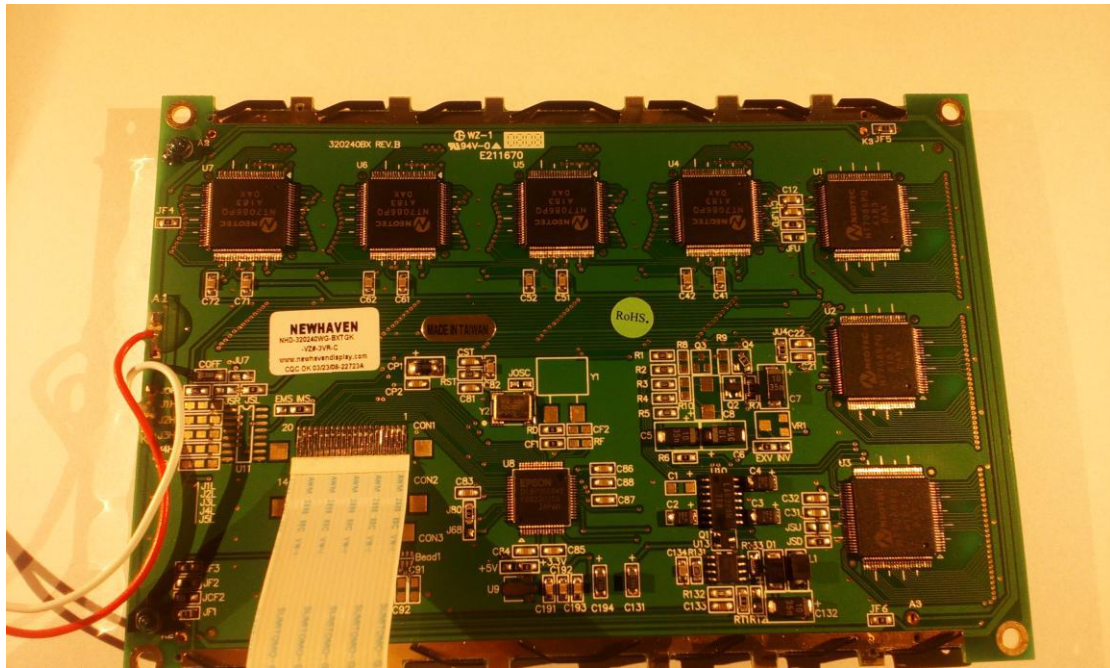
As you can see the upper left corner has the two chips we don't need /want. As well you can see the negative power circuit (do not remove!) This is the blue version.



Below another example;

This is the grey version and I believe it is the nearly same as the original lcd.

Now this board is running on 3V but that's just a jumper setting which needs to be changed.



Below another version (blue) which is provided by Tentec.

