FT-897 LCD Fitting Instructions.

Caution!

The replacement of the LCD module requires knowledge and experience in electronics repair.
This repair should not be conducted if you are not competent in soldering and testing techniques.
The pitches of the connections are 0.8mm and they are static sensitive.

Remember this radio is of an era where semiconductor devices were more susceptible to electro-static and capacitive discharge.

The LCD is directly connected to the front panel MCU and damage to it will render the radio USELESS.

This instruction is not a complete "how to" and is only intended to highlight points that have been found to aid during the replacement procedure.

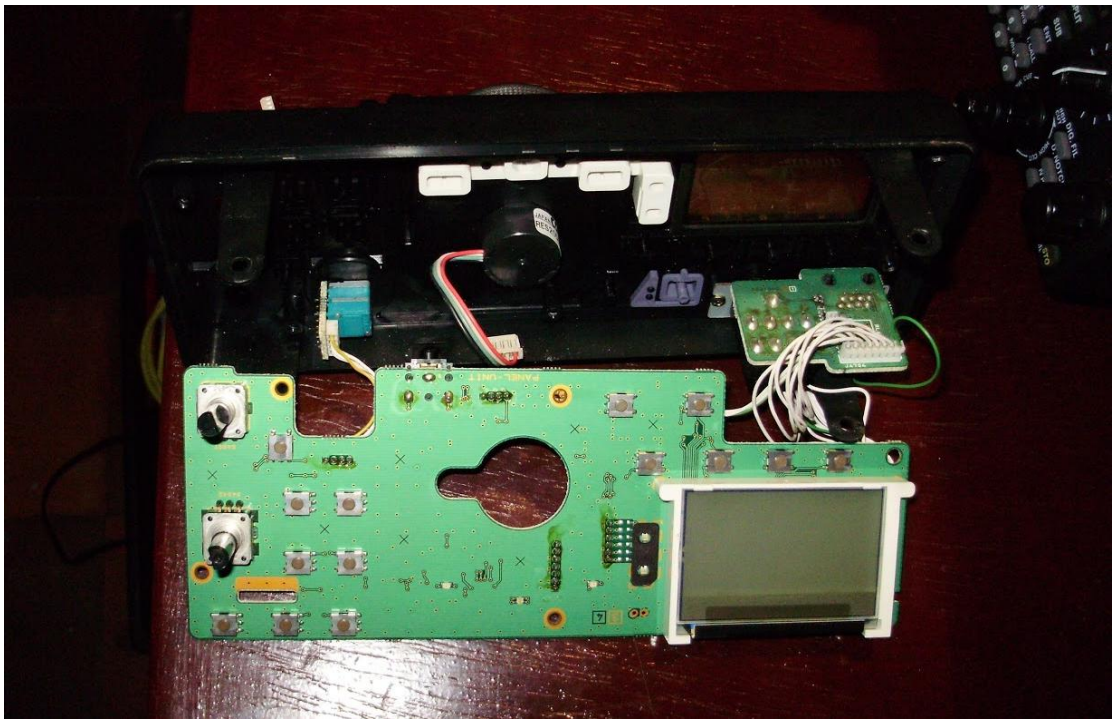
If you lack the experience or otherwise doubt your abilities to perform this repair then please contact us and we will help out.

REMEMBER you can easily destroy the radio if you do not perform this repair satisfactorily.

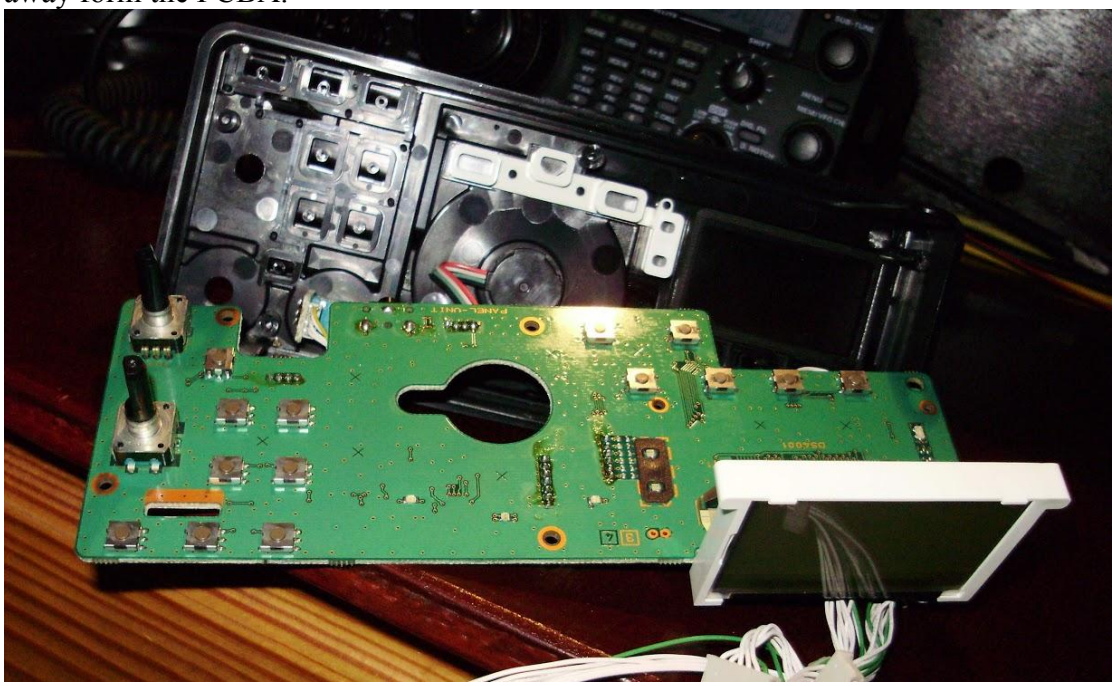
The LCD's have been tested before sending out, and as this procedure requires a high level of electronic competency we can not take responsibility if the radio is damaged.

BEFORE YOU DO ANYTHING ELSE POWER UP THE RADIO GO TO MENU ITEM 42 AND ADJUST CONTRAST TO "9"!

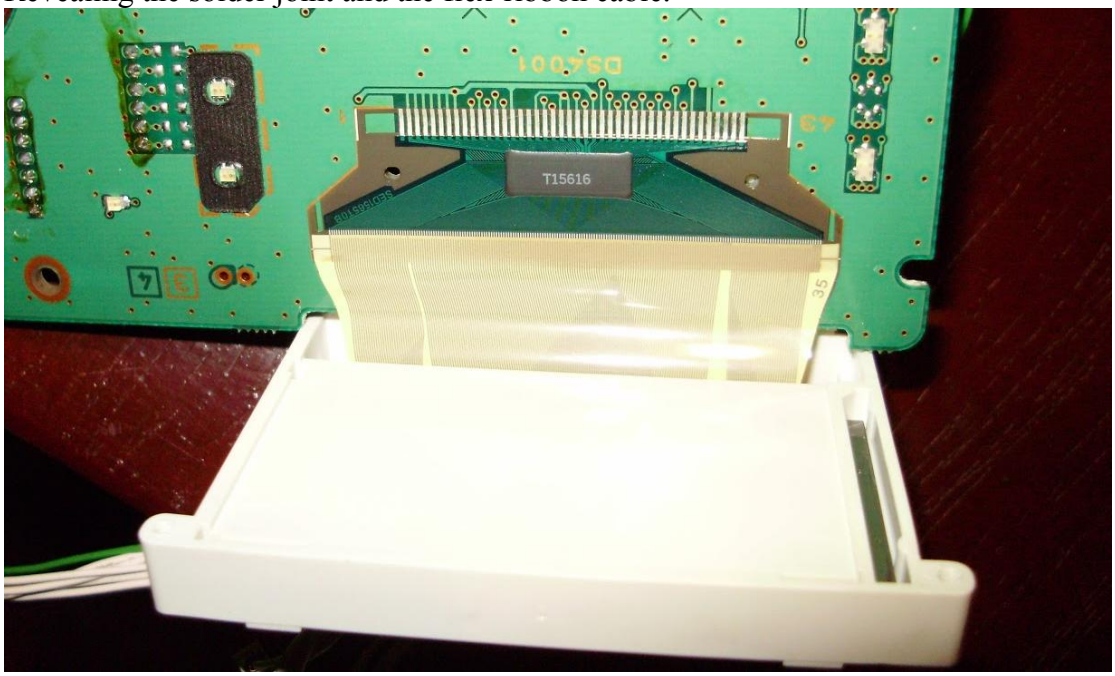
After disassembly of the FT-897 front panel assembly you will have access to the LCD module as shown here.



There is no need to remove the frequency dial but the other knobs must be pulled off. A soft plastic pry like a guitar pick is suitable.
The LCD is secured via two additional screws once these are removed it will come away form the PCBA.



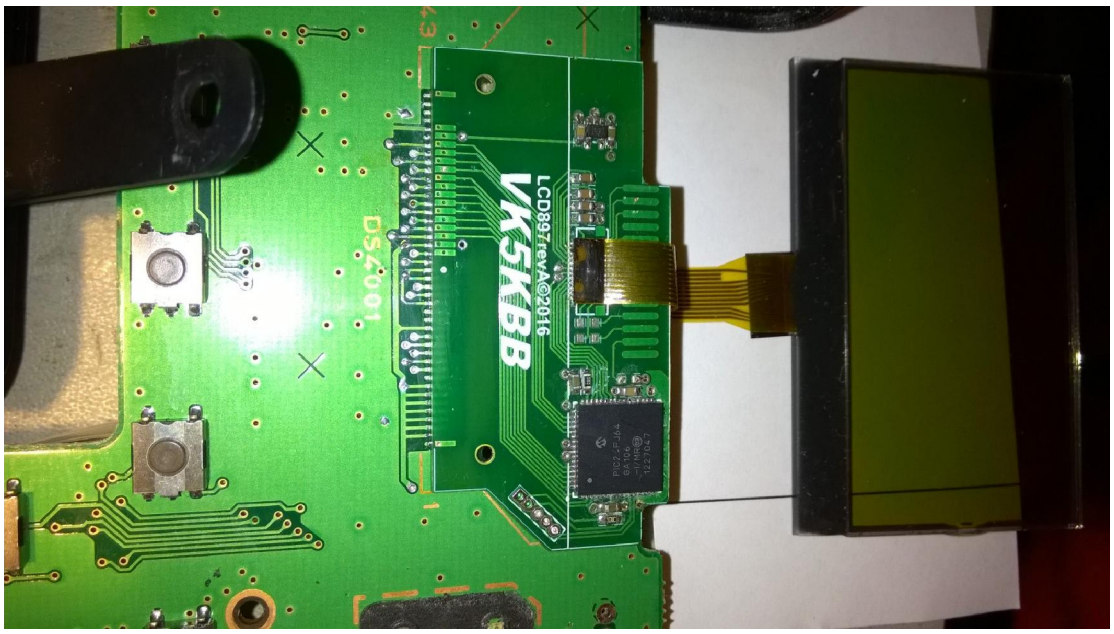
Revealing the solder joint and the flex-ribbon cable.



I normally cut the flex with old scissors to remove the LCD and light-pipe assembly.
One can also gently roll the flex up off the PCB as it is held with double sided adhesive.
Try to preserve the adhesive on the PCB as it will aid with the future reassembly.
A 5mm chisel tip soldering iron with temperature control set low enough to just melt the solder is best for removing the soldered fingers.
Too much heat will peel the tracks off the PCBA and destroy the radio.
Once removed clean PCB with desoldering braid and IPA.

The LCD module needs to be soaked in IPA overnight to allow easy removal of the old LCD form the light pipe. We have found that IPA does not harm any of the parts.

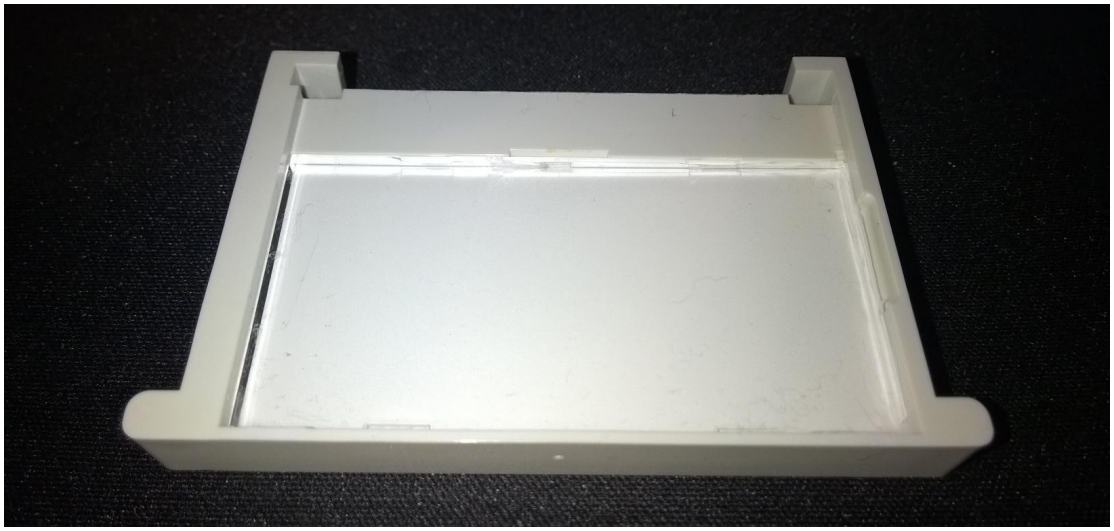
While it is soaking you can fit the new LCD PCB assembly.



We use a hot air gun but the 5mm chisel tip will also work for this. Use fresh solder and apply downwards pressure with an ice-cream stick or similar, while heating.

Once again it is important to keep parts clean and remove all flux after soldering to allow inspection of solder joints.

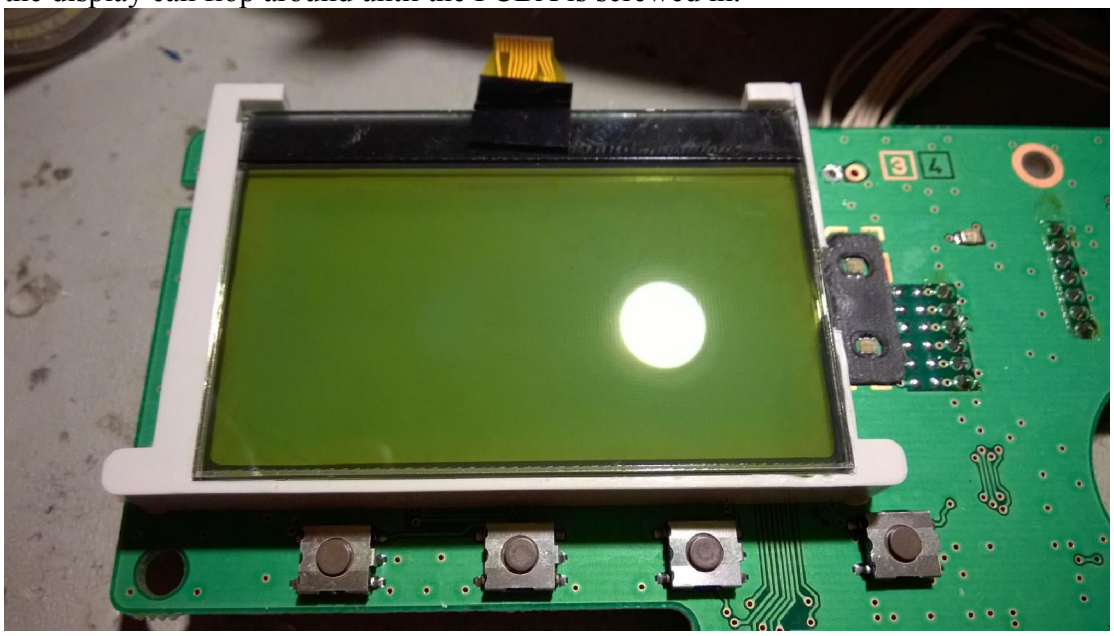
The LCD holder need to be modified to fit the new LCD as the new LCD is 1mm longer.
This is the holder with the old LCD removed.
On the right you can see a notch that clears the adhesive for the LCD assembly.
This the side to be modified.



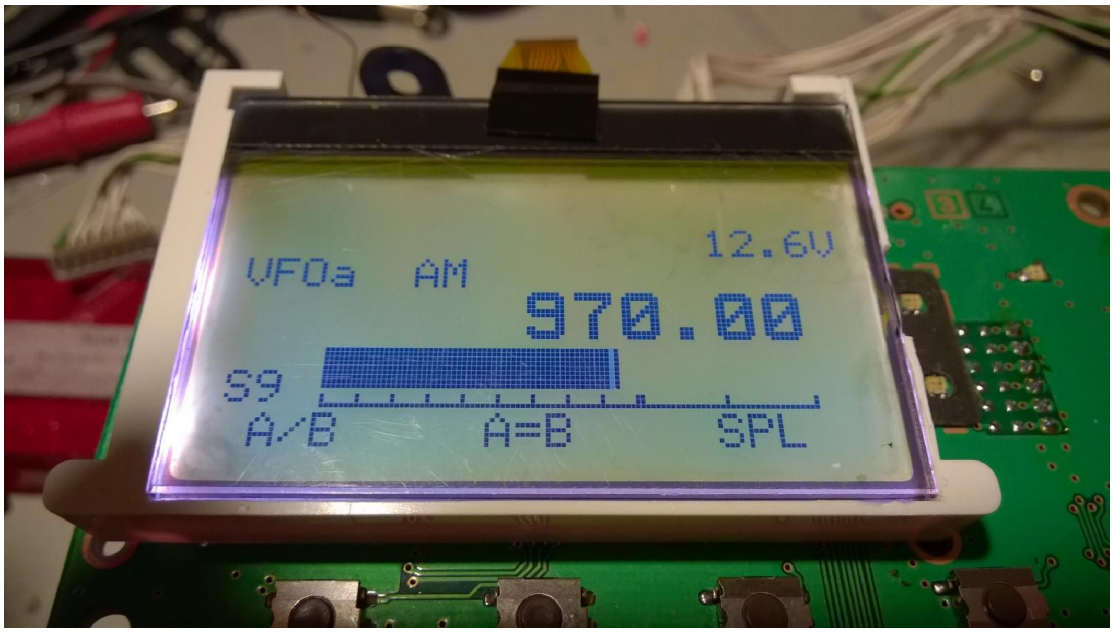
Here is the holder after modification.
A craft knife was used to carve out the plastic until the LCD fits.
If you are in a hurry and as it is not visible you may choose to remove the edge all together with a pair of side cutters.
How you perform this modification is entirely up to you.

Try to be careful and not damage the back plane as it is visible (you can see were we did).

Here is the LCD fitted. You may use double sided tape but we found no need to as the foam rubber of the display frame secures it. It just makes reassembly a little fiddly as the display can flop around until the PCBA is screwed in.



Should you choose to this would be a good time to check that every thing has worked correctly.
Also the Holder clips into place and has a slight interference with the chip on the new PCB as it is pressed on that is normal and as long as one is careful it will cause no harm.



Reassemble radio.

N.B. Don't forget to remove the protective film from the LCD before reassembly.
email eric@vk5kbb.com if you want a PDF copy of this document as it will be clearer to read.