

Application Note: K2 LCD and Backlight Pre-installation

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Background:

Some LCD and Backlight assemblies for the K2 may need some minor pre-installation treatment for an optimum display. Some builders have expressed uncertainty about removing plastic films from these parts, for they are concerned they will ruin the display.

Backlight:

The backlight has two diffusers, one per side. Both of these are essential for the backlight to properly illuminate the LCD. They appear to be simple strips of white paper, but the back paper reflects light toward the front and the front paper diffuses the light evenly across the face.

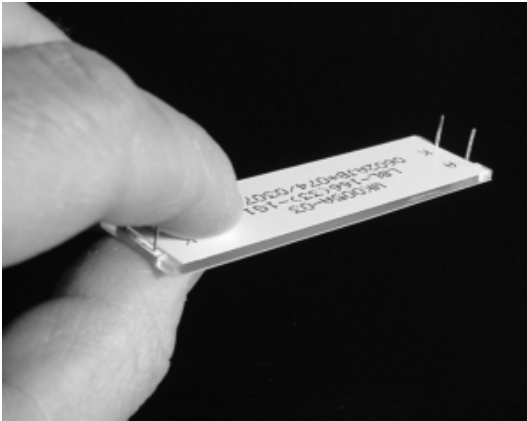


Figure 1

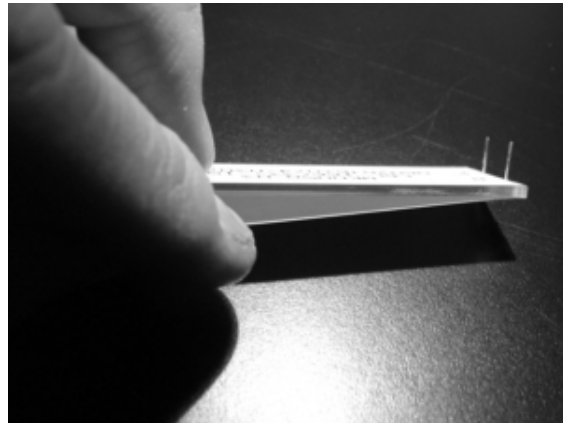


Figure 2

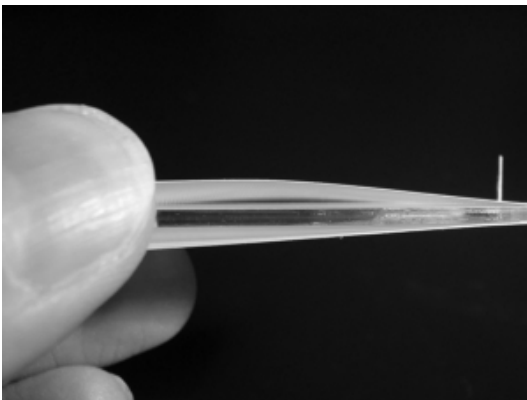


Figure 3

Figure 1 shows a normal backlight.

Figure 2 shows a backlight with the front diffuser separated from the plastic.

Figure 3 shows a backlight with the rear reflector and front diffuser separated from the plastic.

In extreme cases the reflector and diffuser may have one end become separated from the plastic. Regardless of how loose they seem, neither strip should be removed. If you are careful and install the backlight properly along with the LCD, these strips will be pressed against the backlight plastic and will not fall out.

LCD display:

The LCD display has a protective plastic strip across the face. This will need to be removed *as a final assembly step after the LCD is soldered onto the PC Board.*

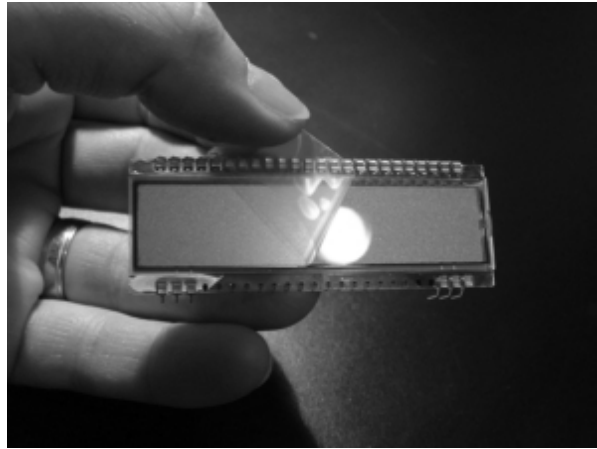


Figure 4

Figure 4 shows the protective film partially removed from the face of the LCD display. The glass of the LCD will reflect light like a mirror (right half), while the protective film diffuses it due to its satin finish (left half).

Another issue is the rare case where a LCD display has a protective strip on the backside. Normally the back of the LCD will appear solid white. Occasionally an LCD is shipped with a strip of tape on the back that has thin diagonal lines. When the LCD is held up to a source of light, the difference is easily seen, as demonstrated below.

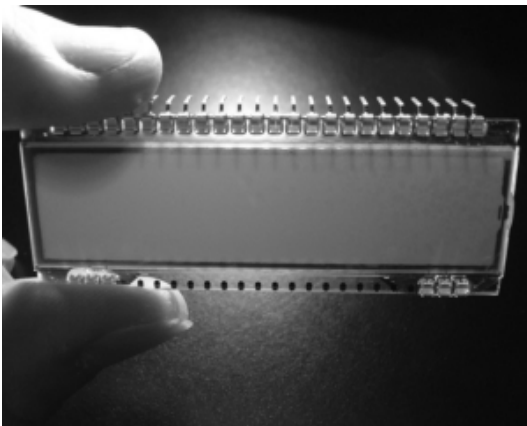


Figure 5

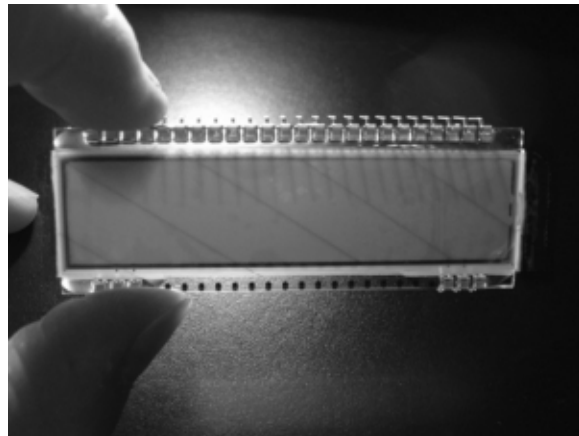


Figure 6

Figure 5 shows the proper image of a clear LCD. No further preparation is needed for this LCD display.

Figure 6 shows an LCD with the tape backing visible due to the diagonal lines. This tape can be removed from the back of the LCD by gently scraping with a fingernail, or using the sticky side of standard adhesive tape to pull it off.