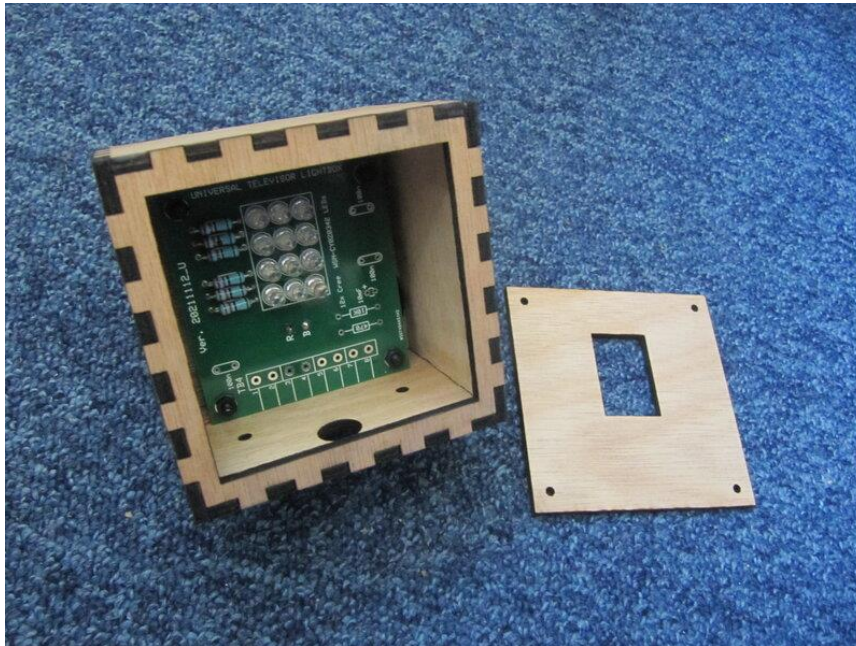


## Chapter 6 Display housing



A laser-cut enclosure has been designed to house the PCB display assembly. Anybody without access to Laser cutting can utilise a plastic project box or even a disused small biscuit tin. Twelve high brightness LEDs along with dropper resistors produce the modulated light source that backlights the spinning disc. Once assembled two cables approximately 400mm in length marked R and B need to be soldered to the board and passed through the central hole before securing the PCB on four stand-off pillars. It is recommended beforehand painting the inside of the display assembly with matt black paint. Before fitting the front panel with four small self-tapping screws a small piece of diffuser material needs to be glued over the window of the assembly's lid. Once again, the CAD design files [may be found here](#) and the diffuser material are available from [the club shop](#).

There are two options for making up the lightbox circuit board. One option is to populate the board with twelve ultra-bright LED's and the other option is to fit one or two LED patches in parallel. The choice is up to the builder as both options will give satisfactory results with the patch option being the easier of the builds for a beginner. However the discreet LEDs tend to give a 'warmer' picture. Anybody without access to Laser cutting can utilise a plastic project box or even a disused tin. If using LEDs in your own enclosure ensure they 'sit back' from the diffuser else a bright halo effect will become visible. As the light aperture is somewhat larger and different shape than the display frame on the disc a mask to correct size is glued over the box window during testing to eliminate stray light from the LDs in the lightbox. As the amount of light penetrating the disc is very small a further improvement can be made by either painting the internal faces of the enclosure matt white or lining them with tin foil.

