HOW TO MAKE AN ALTERNATIVE EXPOSING DEVICE
(FOR PHOTOGRAPHIC SILKSCREEN PRINTING)

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Nowadays, teaching students how to print a design on a t-shirt or any garment is a challenging but rewarding activity. Being included as one of the contest packages in the National Festival of Talents Technolympics in the previous years, photographic silkscreen printing has become even more popular among teacher coaches. TULCO, a leading supplier of printing supplies discussed the importance of an exposing device as essential in the photographic design production in a video tutorial in YouTube.

A commercially available exposing device for photographic silkscreen printing is relatively expensive compared to the one proposed in this article. All you have to do is construct the equipment according to the suggested specifications and dimensions and you can save a lot.

The dimension of the enclosure is 40” x 20” x 6” (length, width, height). This enclosure can be framed using a 1” x 1” wood and the bottom sides can be finished using ¼ “thick plywood walls. The estimated distance of the light bulb from the surface top glass would be 5”. According to TULCO, this is the ideal distance. Inside the enclosure are five 20-watts fluorescent lights connected in parallel and controlled by a switch that can be mounted outside the enclosure. A 5/18” thick, clear, heavy duty top glass which measures 40” x 20” is also needed as the top cover. See the detailed drawings below for reference.
The wire that will connect the 5 fluorescent lamps to the mains can be inserted by boring a hole on one side of the enclosure. The switch should be positioned such that it will be accessed easily. You may also connect and mount an optional surface type outlet where you can connect your blower.

This device is a much cheaper alternative to the commercially available ones, but equally efficient as well. But the success of the output will matter on how patient the person using the equipment is. It is still a matter of trial and error on the amount of
exposure time. If the emulsion is hard to wash out, reduce the time by 10 seconds. Repeat this if the emulsion still exhibits overexposure characteristics until you achieve the right consistency of emulsion. By then, the emulsion should be easy to wash out using your sprayer.

References:

https://www.youtube.com/watch?v=SZIAK0Qs5Vg