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## Light Therapy Treatment Using Quiet Motors and Remote Control

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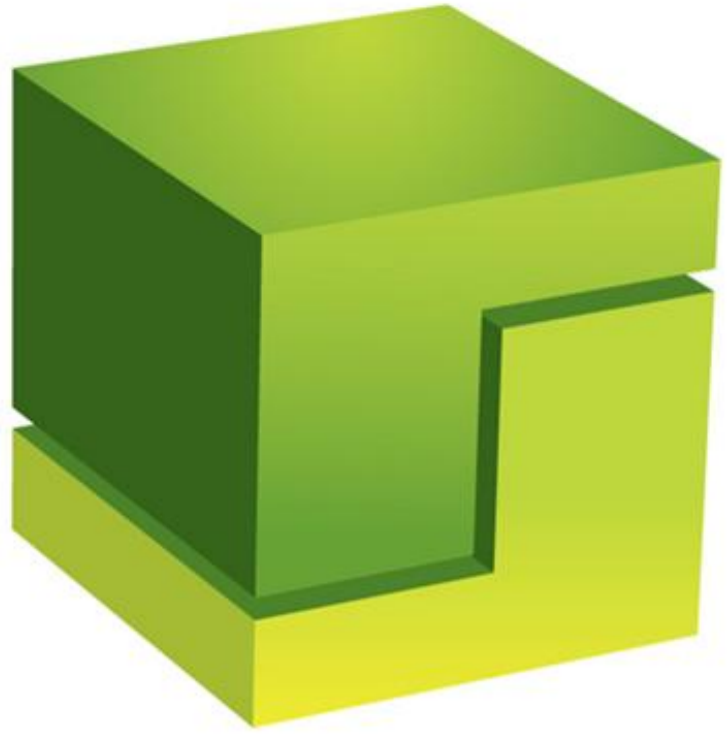
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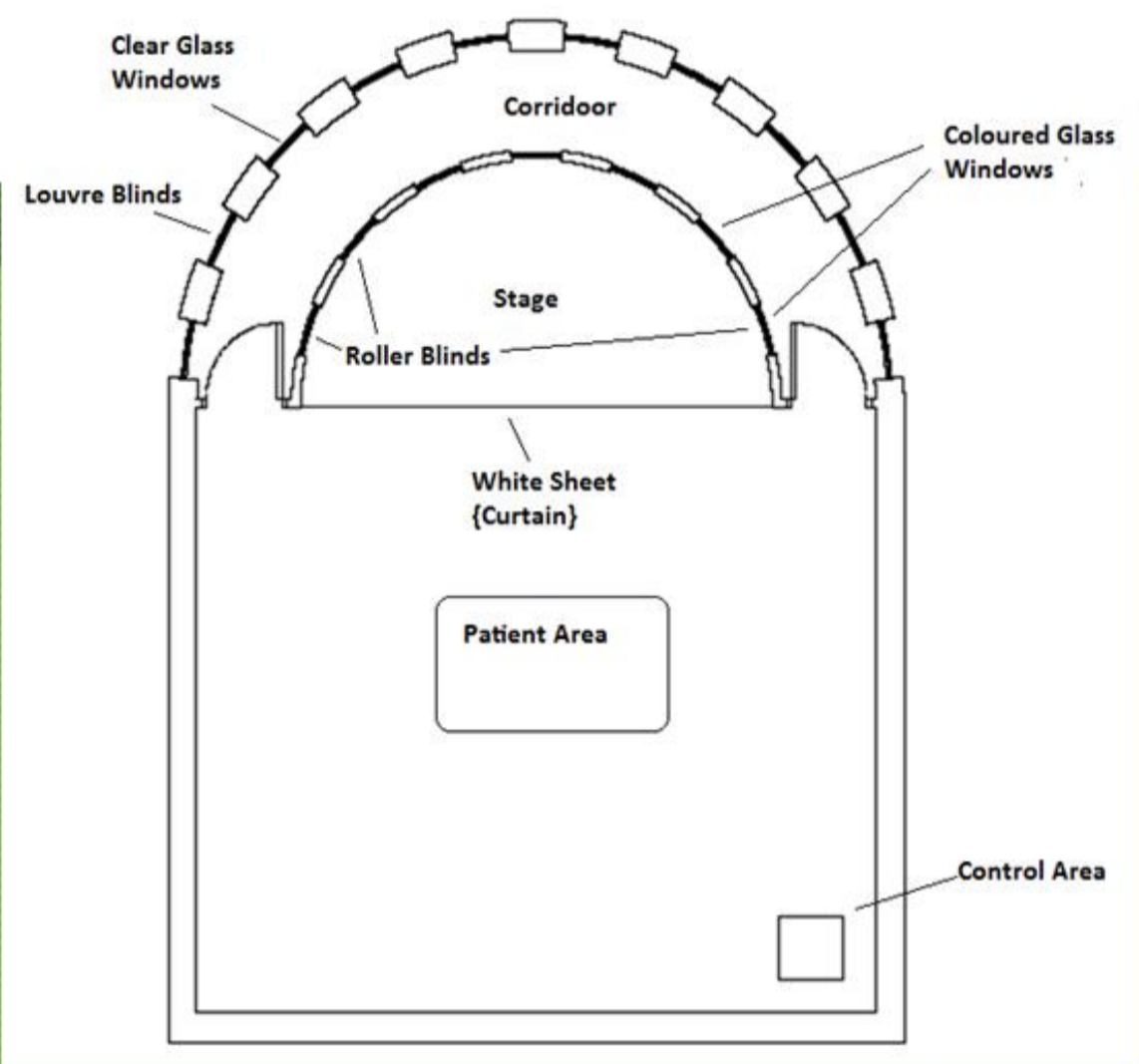


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Students Learning with Communities

# Light therapy treatment using quiet motors and remote control



## Light Therapy Treatment at Camphill, Kilkenny

Light therapy treatment for relaxing Cerebral Palsy patients involves the creation of daylight coloured patterns on the rear of a white silk cloth curtain. The patient is placed in front of the curtain and the image they see is changed by opening and closing coloured blinds along with the slow movement of an actor whose shadow is projected onto the cloth. It is like watching a sunset. The therapist is very busy during the performance as he/she must move around the rear of the stage from one blind to another while checking the image out front. Solutions involving pulleys and string exist. This project looked at electrical engineering options to enhance the therapists control of the performance.

### Solution

A 3<sup>rd</sup> B.Eng.Tech. Electrical Eng. student made this open ended problem his final year project. He communicated with the community partner in Camphill, Kilkenny to develop a solution that would be acceptable to him and technically feasible while minimising cost. Bespoke solutions are generally expensive yet ideal for third level projects.

The solution involved the modification of the supply to a motor to minimise the noise so as not to interfere with the treatment. A remotely located slider interfaced with the motor via a microprocessor to allow the therapist to control blind position from behind the patient thereby enabling the therapist to monitor and adjust light from the one position.

This project raised a myriad of engineering challenges and learning outcomes. It had a real customer who needed assistance in a unique area. The student was highly motivated and thoroughly enjoyed the experience.

