

## Automatic Dark Detector Emergency Light

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I was caving with a fellow that had a big LED attached to his headlamp. On closer inspection I discovered that he had designed and built an automatic dark detecting emergency light. It uses a photocell and transistors to switch current to the LED's.

When the photo cell has light striking it (from your main headlamp, for example) it keeps the LED's switched off. When the light is removed from the photo cell, the transistors switch the LED's on.

I put together a copy of this circuit with two high brightness LED's and had to play with the resistors a bit to get mine to work. The resistance of my photocell or it's response to light was probably different than the original one. A photo transistor could possibly be used in place of the photo cell.

This makes a fine emergency light source if the main headlamp fails. A switch in the + line of the battery source will keep from draining the battery during transport to the cave.

John Harkey NSS 41259 Automatic Dark Detector  
When PHOTO CELL is illuminated, LED's are off.  
When light fails, LED's turn on.  
Add switch in + line if needed.

