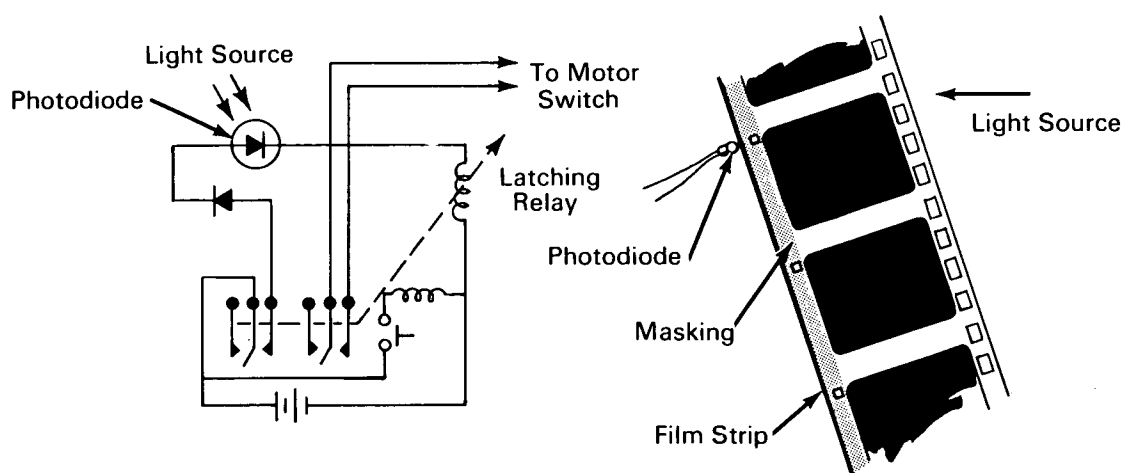


# NASA TECH BRIEF



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## Simple Circuit Positions Film Frames in Projector



**The problem:** Automatically positioning individual frames on a strip of photographic film in a projector, viewer, or an enlarger.

**The solution:** A circuit employing a photodiode that senses frame registry position and a relay that cuts off the film-advance motor to stop the film at the point of registry.

**How it's done:** One edge of a standard 35-mm film is masked to cover all of the perforations in each frame but one, which serves as a registry marker. A photodiode placed between the masked edge of the advancing film and a light source senses the registry perforation adjacent to a frame and opens the contacts of a latching relay to cut off the film-advance motor at the proper point. The open relay contacts also prevent the motor from restarting until the reset button is

pressed to reengage the latching relay and advance the film to the next frame.

**Note:** Inquiries concerning this innovation may be directed to:

Technology Utilization Officer  
Jet Propulsion Laboratory  
4800 Oak Grove Drive  
Pasadena, California, 91103  
Reference: B65-10132

**Patent status:** NASA encourages commercial use of this innovation. No patent action is contemplated.

Source: Robert H. Silver  
(JPL-508)

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