

You can have a professional-looking timing light for your club for less than \$25! This project is based on a "Lava Lite Traffic Light", available from AMAZON.COM FOR \$15.99. (Sometimes available at Target for \$19.99).



Parts list:

"Lava Lite Traffic Light"	Amazon.com	\$15.99
275-1386 6 Pole Rotary Switch	Radio Shack	\$2.99
274-0407 1-3/8" Knob	Radio Shack	\$1.79
3 clear 7-watt Night Light Bulbs		\$2.50
6" of #18 wire		

This light works off AC power and as purchased has three randomly-blinking bulbs wired in parallel. This project installs a rotary switch on the back of the case that will turn on the green, yellow and red lights as needed. The blinking bulbs are replaced by standard night light bulbs. The project takes around 30 minutes, and can be done by anyone with a few tools and a little knowledge of electricity and wiring. No drilling or exterior modifications are required – just some internal rewiring and parts installation.

Tools:

Ohm-meter or circuit tester
Small Philips screwdriver
Small Straight-blade screwdriver
Hacksaw
Wire stripper/ cutter
Soldering iron
Rosin solder
Wire nut or tape for AC cord
Label maker

Steps:

1. Be sure the traffic light is unplugged for all steps.
2. Remove the three lens covers by turning them to the right (clockwise).
3. Unscrew the original blinking bulbs and screw in the night light bulbs.
4. Reinstall the lens covers (turn counterclockwise to lock)
5. Remove the back of the light box (6 Philips screws)
6. Cut off 1" of the rotary switch-shaft with a hacksaw
7. Install the rotary switch with the supplied nut on the back of the light box in the existing wall mounting-slot nearest the electrical cord. The switch positioning-tab fits in the elongated slot.
8. Install the knob on the switch using the straight blade screwdriver
9. Cut the crimp-on connector on the red leg of the AC cord and strip $\frac{1}{4}$ " of insulation from the ends of the four wires (AC wire and red wires from the three bulb sockets).

10. The blue wires connected to the other AC leg are OK as-is.
11. Connect the bare end of the AC electrical cord to one of the center posts on the rotary switch. You will need a 4"-6" piece of insulated #18 wire to reach from the AC cord to the switch center post.
12. Solder/tape the extension wire to the AC cord or use a wire nut.
13. Use an ohm-meter or battery powered test light to find the appropriate locations to connect the red wire from the green, yellow and red light sockets to the switch posts
14. Don't use the first switch position - it will serve as the "Off" position.
15. Solder the red wires from the three lamp sockets in order (green, yellow, red) to the appropriate switch lugs
16. Tape any bare wires.
17. Reinstall the back of the light box.
18. Test the light box by plugging it in. The first switch position should be "Off" (no lights on). Continuing the switch rotation should result in "Green", "Yellow" and "Red" lights illuminated, then "Off" again.
19. Label the switch positions, if desired, on the back of the box using a label maker

The box is used as follows: Plug the light into a wall socket. The first switch position is "Off". Turn the knob one click clockwise - the green light will illuminate. Turning the knob clockwise to the next click will turn out the green light and the yellow light will illuminate. Another click will turn out the yellow light and illuminate the red light. Twisting the knob 3 clicks counterclockwise readies the switch for the next timing activity.

With a little more ingenuity, the light could be converted to battery power - Radio Shack carries the necessary parts.

Enjoy your new timing light!