

- *The first of its kind!*
- *The last one you'll need!*
- *eternaLight - the new LIGHT SOURCE for the 21st century!*
- *700 hours or more of CONTINUOUS light from regular batteries!*
- *Visible over 3 miles against city lights!*
- *The world's first microprocessor-controlled Flashlight features:*
 - Timer
 - Dimmable power
 - Flasher
 - Strobe
 - Effects
 - Distress
 - Send Code
- *Really BRIGHT! Never turns yellow!*

**IMPORTANT!
READ ME FIRST!!!**

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Made in Reno, Nevada U.S.A.

Operations and Maintenance Manual

(betcha never heard of a flashlight coming with one of these before...)

Version 1.7b

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eternaLight Operations:

Your eternaLight has seven basic modes of operation. They are: Timer, On / Dimmable, Flasher, Strobe, Dazzle, S.O.S. and Momentary. There are three subsurface buttons under the decal on the front which are the On/Off button, Mode button and Rate button as indicated below in Figure 1. To activate a button, simply press (don't use fingernail) on the decal in the vicinity indicated by the decal.

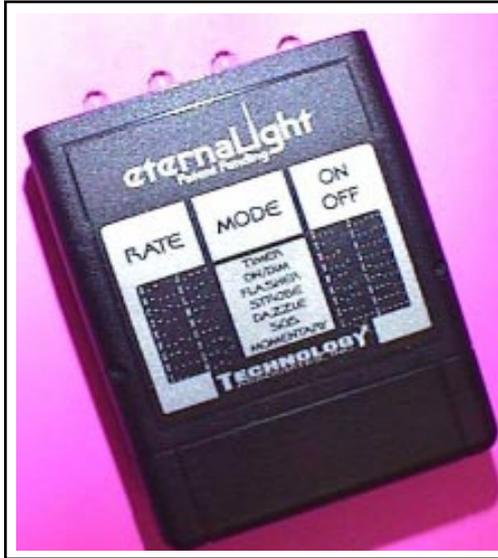


Figure 1

When you first press the On button, the flashlight turns on with full power in "Timer" mode. From here, you can press the Mode button to cycle through the modes. Each time you press the Mode button, you will see the lights sequence indicating that the unit will change modes when the button is released.

Timer mode: When first powered on, eternaLight will light up with full power but will shut itself down gradually. Each of the four lights will extinguish approximately every two minutes in succession. When all lights are finally extinguished, the unit is Off. While in this mode, pressing the:

On/Off button will turn the unit Off.

Mode button will place the unit in the On / Dimmable mode.

Rate button has no effect.

On / Dimmable mode (long life mode):

Upon entering this mode, the unit will light up with full power (maximum light output). While in this mode, pressing the:

On/Off button will turn the unit Off.

Mode button will place the unit in the Flasher mode.

Rate button will dim the light output (power conservation). Pressing this button once puts the unit at its first conservation setting which draws only half as much power! Continuing to press the Rate button will further decrease the light output thus saving even more power! See "the eternaLight revealed" on the last page. When the lowest level is reached, pressing the Rate button will reset the power level to its first conservation setting again. **NOTE!** In daylight, the "strobing effect" of lower power settings may appear to obvious and not usable. This is NOT true! This timing is set way your eyes function in the darkness. Judging your eternaLight's effectiveness in light conditions will not give you a proper idea of how well it functions in dark.

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Flasher mode:

Upon entering this mode, the unit will simultaneously flash all four lamps. While in this mode, pressing the:

On/Off button will turn the unit Off.

Mode button will place the unit in the Strobe mode.

Rate button will cycle the flashing rate.

Strobe mode:

Upon entering this mode, the light will appear to glimmer. It's actually flashing very fast. This mode is similar to the Flasher mode above but much faster and with many more rate settings than the Flasher mode. You may point the light at a repetitive moving object like a fan and adjust the rate by holding the Rate button down until the fan appears to be standing still. While in this mode, pressing the:

- On/Off** button will turn the unit Off.
- Mode** button will place the unit in the Dazzle mode.
- Rate** button will cycle the flashing rate.

Dazzle mode:

Upon entering this mode, the unit will flash each bulb in an attention-getting pattern. While in this mode, pressing the:

- On/Off** button will turn the unit Off.
- Mode** button will place the unit in the S.O.S. mode.
- Rate** button has no effect.

S.O.S. mode:

Upon entering this mode, the unit will flash the Morse Code sequence S - O - S (Save Our Ship), an old maritime distress message for requesting emergency help. While in this mode, pressing the:

- On/Off** button will turn the unit off.
- Mode** button will place the unit in the Momentary mode.
- Rate** button has no effect.

Momentary mode:

Upon entering this mode, the unit will extinguish all of its lamps. Note the complete coding for the alphabet in Morse code is printed on the decal of the unit. A '-' means a long pulse and a '.' means a short one. Pressing the Rate button while in this mode will illuminate all four lamps at maximum power until the rate button is released allowing you to send signals. However, the unit will turn itself off again if you have not sent any messages in the last 12 minutes. While in this mode, pressing the:

- On/Off** button will turn the unit off.
- Mode** button will cycle back to the timer mode.
- Rate** button will illuminate all four lamps at maximum power until the button is released.

Replacing batteries & maintenance:

When eternaLight does FINALLY need new batteries, it may not operate properly. To replace the batteries:

1. On the side with the decal, remove the two screws with a small point phillips screwdriver.
2. Holding eternaLight in your left hand with the decal against your palm and the lights facing away from you, apply a slight pressure to the top side with your right hand and slide the top side toward you.
3. When the top is removed, note the polarity (+ and - orientation) of the batteries and carefully remove them. **NOTE:** the battery contacts are extra thin and delicate. Be careful to not bend or tear them.
4. Place the new batteries in with the same polarity. The unit will turn on when the batteries are placed in it. Don't worry, you can turn it off after you reassemble the unit.
5. Holding the unit in the same fashion as when you removed the top cover in step 2, set the top cover back on, slightly set back, then slide it forward.
6. Keeping a slight pressure on both sides of the case, turn the unit over and install the screws removed in step 1.



WARNING! Installing the batteries incorrectly can permanently damage your light.

CAUTION! Lamps are powerful enough to cause damage to the human eye. DO NOT STARE directly into lights for more than a few seconds.

NOTE! It is normal for the tint of color to vary slightly from lamp to lamp. This is NO indication of failure or malfunction.

If eternaLight ever becomes more than DAMP on the outside for whatever reason, remove the batteries and allow the unit to air dry for 24 hours. Carefully rub a pencil eraser against the battery contacts at the point where the batteries touch to remove any corrosion.

eternaLight Features:

Congratulations! You're holding the first ever flashlight of this type. eternaLight uses a solid state light source which has much more durability and a much longer life than a standard flashlight bulb. Each of the four light sources is rated at 50,000 hours or more of continuous use compared with 40 hours from a typical flashlight bulb.

The solid state bulbs will always produce the "fresh-battery" moonlight-white light, even when your batteries are nearly dead, unlike a typical bulb which will yellow.

Depending on your power (*Dimmer* setting) use, a standard set of three AA alkaline batteries will continuously produce light from 48 hours to well over 700 hours (actual testing beyond this limit has not occurred, but projections indicate continuous operating time could hit 1400 hours!). If you purchase lithium AA batteries to use in your eternaLight, this performance could be double or better and the shelf life could be over 10 years!

The eternaLight Secret revealed - bolt on your brain caps!

eternaLight's secret to its long battery life is in the light sources it uses and the microprocessor's ability to control power to those sources. The light sources are fairly efficient by themselves and capable of delivering over 30 hours of continuous usage at full power before their output drops below 50% of the fresh battery output (tested using alkaline batteries rated at 2850mah.) However, in the On/Dimmable mode, the microprocessor really takes over and energy savings become obvious. The first conservation setting is barely dimmer than the maximum power setting yet only consumes half as much power! The next setting consumes roughly only 37% as much, next 25%, next 13%, next 3%... finally, the lowest setting only consumes 0.26% of the power used in the maximum setting yet still produces a very usable amount of light! The microprocessor accomplishes this by pulsing the energy to the light sources within average optic nerve response time. Since the spectral output of the light sources remains fairly constant, these pulse timings can vary greatly yet still produce usable light.

But wait, there's more...!

Because eternaLight uses a microprocessor, it can provide different modes of operation which may have different applications. The Timer mode will save your batteries if you accidentally turn on the light. The Flasher mode is useful for signaling, emergency, safety or attention-getting purposes. The Strobe mode is useful for "freezing" an object which is in a regular cyclic motion such as a fan blade or an engine pulley. The Dazzle mode is useful for sales attractions, presentations, costumes or just to look cool! The S.O.S. mode can signal for help and the Momentary mode allows you to send your own code or use it momentarily.

Lifetime Limited Warranty:

Technology Associates, Inc. warrants this product to be free from defective material and workmanship for as long as you originally own the product. Technology Associates, Inc. agrees to repair, replace or otherwise exchange for comparable value, at its sole discretion, a defective unit if returned to Technology Associates, Inc. with proof of purchase. Technology Associates, Inc. is not responsible for shipping damage or loss. Units to be returned should be packed carefully.

This warranty does not extend to any units which have been subject to misuse, neglect, accident, incorrect maintenance, or alteration or repair by anyone other than Technology Associates, Inc. This warranty does not cover any incidental or consequential damages and is in lieu of all other warranties expressed or implied and no representative or person is authorized to assume for us any other liability in connection with the sale of this product.