

## Replacing batteries & maintenance:

When Derringer does FINALLY need new batteries, it may not operate properly or the brightness from lamp to lamp may vary greatly. To replace the batteries, simply use your finger nail or other like object and gently pull the tab down on the door on the back. Remove the old batteries and replace with new ones, orient as indicated by the diagram on the plastic. Replace the battery door. See figure 2 below.

If eternalLight ever becomes DAMP on the inside for whatever reason, remove the batteries immediately and allow the unit to air dry for 24 hours.



Figure 2

**CAUTION!** Lamps are powerful enough to cause damage to the human eye. DO NOT STARE directly into lights.

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

**NOTE!** It is normal for the tint of color and brightness to vary slightly from lamp to lamp.

This is NO indication of failure or malfunction.

**NOTE!** Unit is NOT water resistant!

## eternaLight Light

eternaLight uses a solid state light source (white LED) which has much more durability and a much longer life than a standard flashlight bulb. Each white LED is rated at 100,000 hours or more of continuous use compared with 40 hours or less from a typical flashlight bulb. The solid state white LED bulbs will always produce the "fresh-battery" moonlight-white light, even when your batteries are nearly dead, unlike a typical bulb which will gradually yellow. Depending on your power (*Dimmer* setting) use, a standard set of three AAA alkaline batteries will continuously produce light from 15 hours to well over 400 hours!

## The eternaLight Secret revealed!

eternaLight's secret to its long battery life is in the white LEDs it uses AND the microprocessor's ability to control power to them. The LEDs are fairly efficient by themselves. However, in the On/Dim modes, the microprocessor really takes over and energy savings become obvious. The lowest setting only consumes 5% of the power used in the maximum setting yet still produces a very usable amount of light - enough to walk or read with! The microprocessor accomplishes this by pulsing the energy to the light sources within average optic nerve response time. Since the spectral output of the LEDs 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 Red/White flasher 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. For more eternaLight information, be sure to see our website at [www.TECHASS.com](http://www.TECHASS.com).

### **Limited 1 year warranty:**

Technology Associates, Inc. warrants this product to be free from defective material and workmanship for a period of 1 year. 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.

Copyright (c) 2003 by Technology Associates, Inc. All rights reserved.  
eternaLight(tm) and Derringer(tm) are trademarks of Technology Associates, Inc.

## **eternaLight™**

**The most technologically advanced  
personal lighting instruments available!**

- 450 hours or more of CONTINUOUS light from regular AAA alkaline batteries!
- Visible over 1.5 miles!
- From the family of the world's first microprocessor- controlled flashlight features:
  - Momentary • Timer • Dimmable power settings • Flashers • Distress (SOS)
- Exclusive Pocket-Smart(tm) technology prevents accidental turn on.
- Two powerful long life white LEDs.
- One powerful long life red LED.
- Really BRIGHT! Light never turns yellow!
- Lanyard hole for easy tethering.
- Toolless battery access.
- Easy single hand operation!
- Red and white lights for night vision or general vision use.
- 1-Year limited warranty!



# IMPORTANT! READ FIRST!

## **Model L1 Derringer™**

*Designed in Nevada U.S.A.  
Patent Pending*

### Operations and Maintenance manual

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

Designed and built by  
**TECHNOLOGY ASSOCIATES, INC.**  
1455 Deming Way #11  
Sparks, NV 89431  
(775) 331-3330  
[WWW.TECHASS.COM](http://WWW.TECHASS.COM)

DOC version 1.0 for Code version 1.0

## **eternaLight Derringer Operations:**

Your Derringer has 14 basic modes of operation: Momentary, Timer, On High, On Medium, On Low Left, On Low Right, On Low Red, On High Red, Low power beacon/locator, White Flasher, Red Flasher, Red/White Flasher, All-On, SOS. The single (Power) button allows access to all these features. To activate the button, simply press it (don't use your fingernail).

A -.	M --	Y ---	, --- comma
B ...	N -. .	Z ---	. --- period
C ---	O ---	1 ----	? --- question mark
D ..	P ---	2 ----	; --- semicolon
E .	Q ---	3 ----	: --- colon
F ---	R -. .	4 ----	/ --- slash
G --	S ...	5 ----	- --- dash
H ....	T -	6 ----	' --- apostrophe
I ..	U ..	7 ----	() --- parenthesis
J ---	V ---	8 ---	
K -. .	W --	9 ----	<b>Morse Code Chart</b>
L ---	X -. .	0 ----	- means a long pulse
			. means a short pulse

Figure 1

When you first press the (Power) button, the white LEDs will light until you release the button. You can do this repeatedly if you like, this is the momentary mode. You can use this mode for quick looks or to send signals like Morse code signals in the table above in Figure 1. However, if you hold the button down for 2 seconds or more continuously, the light will enter the timer mode and stay there after you release the button. This will be indicated by the flashing of the center red LED. Once the light is in this mode or any other mode, you may turn it off by holding the button down again for 1/2 second or more. Or, you can select the next mode by "clicking" (quickly pressing and releasing) the button. Clicking in the last mode (S.O.S) will also turn the light off.

In summary, at anytime in any mode, holding the button down for 1/2 second or more will turn off the flashlight. When turned back on, by holding the button down for 2 seconds or more, it will always start with the first mode (Timer).

### **Timer mode:**

This is the first mode that Derringer enters once the (Power) button has been held down for more than 2 seconds. In this mode, the white LEDs will burn at 100% power while the Red LED blinks. After about 5 minutes, one LED will turn off. After about another 5 minutes, the other white LED will turn off, leaving the blinking red LED which will blink for the last 5 minutes and then turn off. While in this mode, holding the button down for a 1/2 second or more will turn the unit off. "Clicking" the button will advance to the ON High mode.

### **On High mode:**

Upon entering this mode, the unit will light the two white LEDs at 100% power and will remain this way until shut off or the mode is changed. While in this mode, holding the button down for a 1/2 second or more will turn the unit off. "Clicking" the button will advance to the ON Medium mode.  
*\*Expected life in this mode 25 hours.*

### **On Medium mode:**

Upon entering this mode, the unit will light the two white LEDs at 33 % power and will remain this way until shut off or the mode is changed. While in this mode, holding the button down for a 1/2 second or more will turn the unit off. "Clicking" the button will advance to the ON Low-L mode.  
*\*Expected life in this mode 150 hours.*

### **On Low-Left mode:**

Upon entering this mode, the unit will light the one left white LED at 5% power and will remain this way until shut off or the mode is changed. While in this mode, holding the button down for a 1/2 second or more will turn the unit off. "Clicking" the button will advance to the ON Low-R mode.  
*\*Expected life in this mode 450 hours.*

### **On Low-Right mode:**

Upon entering this mode, the unit will light the one right white LED at 5% power and will remain this way until shut off or the mode is changed. While in this mode, holding the button down for a 1/2 second or more will turn the unit off. "Clicking" the button will advance to the ON Low-Red mode.  
*\*Expected life in this mode 450 hours.*

### **On Low-Red mode:**

Upon entering this mode, the unit will light the one center red LED at 8% power and will remain this way until shut off or the mode is changed. While in this mode, holding the button down for a 1/2 second or more will turn the unit off. "Clicking" the button will advance to the ON High-Red mode.  
*\*Expected life in this mode 400 hours.*

### **On High-Red mode:**

Upon entering this mode, the unit will light the one center red LED at 50% power and will remain this way until shut off or the mode is changed. While in this mode, holding the button down for a 1/2 second or more will turn the unit off. "Clicking" the button will advance to the Beacon/Locator mode.  
*\*Expected life in this mode 50 hours.*

### **Beacon/Locator mode (\*1500 hours):**

Upon entering this mode, the unit will briefly flash one white LED and then the other repeatedly. This mode is intended to allow you to find the light in the dark. Thus it has a very low power draw and can be left on in this mode for up to 1500 hours. While in this mode, holding the button down for a 1/2 second or more will turn the unit off. "Clicking" the button will advance to the White Flasher mode.  
*\*Expected life in this mode 1500 hours.*

### **White Flasher mode:**

Upon entering this mode, the unit will flash both white LEDs at full intensity. While in this mode, holding the button down for a 1/2 second or more will turn the unit off. "Clicking" the button will advance to the Red Flasher mode.  
*\*Expected life in this mode 250 hours.*

### **Red Flasher mode:**

Upon entering this mode, the unit will flash the red LED at full intensity. While in this mode, holding the button down for a 1/2 second or more will turn the unit off. "Clicking" the button will advance to the Red/White Flasher mode.  
*\*Expected life in this mode 400 hours.*

### **Red/White Flasher mode:**

Upon entering this mode, the unit will flash the red LED and then the two white LEDs at full intensity. While in this mode, holding the button down for a 1/2 second or more will turn the unit off. "Clicking" the button will advance to the All-On Battery check.  
*\*Expected life in this mode 70 hours.*

### **All-On Battery check:**

Upon entering this mode, the unit will light all the LEDs at full intensity. This mode is useful for checking your battery condition. If the Red LED is producing much more light than to two whites, your batteries are weak and may need to be replaced. While in this mode, holding the button down for a 1/2 second or more will turn the unit off. "Clicking" the button will advance to the S.O.S. distress mode.  
*\*Expected life in this mode 15 hours.*

### **S.O.S. distress mode:**

Upon entering this mode, the unit will flash the white LEDs in the Morse Code pattern of S.O.S. an old maritime emergency distress signal. While in this mode, holding the button down for a 1/2 second or more will turn the unit off. "Clicking" the button will also turn the unit off.  
*\*Expected life in this mode 50 hours.*

\*Expected lives calculated with fresh AAA alkaline batteries of 1375mah capacity. Assumes running continuously with light not falling below 20% of fresh battery output.