

HEADLAMPS

by KI5YAJ

A head lamp is a wonderful tool, because it frees your hands while illuminating something of interest, such as a notepad you're scribbling on, a hiking trail, or a dangerous obstruction ahead. For radio operators, a flashlight and even better, a headlamp during a field day or a deployment can help avoid trip hazards and make you more visible. So, what kinds of features are meaningful in a head lamp that's suited for your needs?

Usable light

Today's head lamps nearly all use **LEDs** instead of light bulbs, so they're much lighter and use much less energy for even more light. Therefore, one of our first head lamp concerns tends to be its brightness, measured in *lumens*. You need to either purchase a head lamp that can give off your needed amount of light or can be adjusted to various intensities. LEDs come in various sizes based on their diameters, 1 mm, 3mm, 5mm. The larger the diameter usually means the brighter.

Head lamp run time can give you an idea of how long it can deliver usable light. The old standard measured how long your light lasted until its intensity is reduced to that of usable light. The new standard uses ten percent of a light's original brightness as the end of usable light.

Some newer head lamps use what's known as *regulated output*, meaning that, rather than allowing the light to dim with reduced remaining charge, the brightness remains fairly constant.

The advantage, of course, is consistent lighting during its life. The obvious disadvantage is that, when the batteries fall below the regulated threshold of charge, the light turns off without warning, potentially leaving you scrambling to replace batteries in the dark.

Features

Today's head lamps can run on rechargeable batteries or alkaline batteries, which are not rechargeable. Lithium and hybrid rechargeable batteries tend to perform better than alkalines in cold weather, but they tend to lose their charge when sitting idle, while alkalines can sit for years without losing their edge. And along with battery variety comes weight and tend to be heavier with longer-lasting batteries. Some heavier head lamps are intended for specific applications, such as climbing or search-and-rescue, rather than social or routine adventures.

Other features might include the following:

- *water resistance, important if you plan to walk in the rain at night or get caught in a storm. Some lamps have an IPX rating/water resistance rating. The higher the ratings mean better protection*
- *against submersion*
- *shock resistance, important if you often impact your light accidentally against objects or might be clumsy and drop*
- *tilt, allowing you to point your light in an important direction*
- *switch lock, to prevent accidentally switching on while pressed in your backpack*

- *a red-light mode, which can illuminate objects ahead of you, while preventing your pupils from shrinking the way white light does*
- *narrow and wide beam selection, important if you're hiking a long, narrow path or doing close-up repair work*
- *light mode settings as high, low or strobe, even sos*
- *beam type as spotlight for distance or flood light for general tasks*

If you hesitate to use head lamps because they might be bulky or mess up your hair, keep in mind that their purpose is often as much for *others* (like Search and Rescue) to see you, as it is for *you* to see nearby objects. There are options available that may either be attached to a helmet or to the brim of a ball cap.

This concludes tonight's training. This is KI5UAJ.