

Battery Use and Care - Explained

DES would like to take this opportunity to clarify and briefly explain some information regarding the use and care of your Harris radio battery. This document will clarify some information that was relayed in the Harris Train-the-Trainer class and provide real world guidance on the care of your battery.

As you may be aware batteries of all types are usually available in different chemistry types. Some common battery chemistry types are: nickel–cadmium battery (NiCd), nickel–metal hydride (NiMH), lithium-ion (Li-ion), and lithium-ion polymer (LiPo). Each of these battery types have unique charge capacity, charging requirements, and loss of capacity (memory effect).

The battery that was provided with your new Harris radio is a lithium-ion polymer (LiPo) (Part number BT-023436-001). In the selection process DES chose this battery chemistry because of its many benefits over the other chemistry types.

Some of these benefits include:

- The energy density of lithium-ion polymer is typically twice that of the standard nickel-cadmium
- Lithium-ion is a low maintenance battery; there is little to no memory and no scheduled cycling is required to prolong the battery's life
- Relatively low self-discharge; self-discharge is less than half that of nickel-based batteries
- Very low profile & lightweight compared to other chemistry types

In addition to the lithium-ion polymer battery, the chargers provided are considered Tri-Chemistry, which means they are able to charge all three of the aforementioned battery types.



Removing & Re-attaching the Battery

Chester County DES – Voice Radio Project

In some of the Harris Train-the-Trainer classes, the instructor suggested that to achieve maximum life of your battery it is recommended that you not place your battery in the charger until it has been discharged to 20% capacity or lower. While it is true that this method will give you a longer battery life, the benefit is minimal and will not significantly affect performance over the life of the battery. All batteries suffer from loss of capacity, also called “memory”, however the lithium-ion polymer chemistry combined with the advanced charger technology you may place your battery in the charger regardless of capacity remaining.

- ❖ ***We suggest that you place your radio in the charger as you see fit to accommodate your agencies mission. For example a police officer can charge his or her radio at the end of their shift or a firefighter can charge his or her radio after returning from a call.***

Some agencies have asked if they can leave their portable radio in the charger and powered on at the same time without damaging the battery. To understand the answer to this you must take into account how the chargers function in relation to the remaining capacity of the battery. When you place your radio in the charger, the charger analyzes the remaining capacity in your battery and then proceeds to charge the battery to full capacity and stop. When your radio is in the charger and on, it is constantly draining the battery. The charger senses this at a point and begins to “top off” the battery. Over time this repetitive process will have an effect on the overall life of the battery.

- ❖ ***We do not recommend leaving your radio powered on in the charger for long periods of time.***
- ❖ ***DO NOT transmit on your radio while it is in the charger***

No quantity of “spare” batteries were included as part of the equipment package purchased by the County. Spare or additional batteries can be purchased by contacting Harris sales (See contact information below).

Lori Miller, 844-227-5372, Option “1” lori.miller@harris.com

-or-

Roger Kohr, Harris Area Sales Manager 717-979-9999 roger.kohr@harris.com

For additional information or to view any of the training materials from the Harris radio training sessions please visit the DES website at:
www.chesco.org/des