

# The “Care and Feeding” of Your Two-Way Radio Batteries

## Part 2 – Storage

INTRODUCTION: It is sometimes necessary for radios to be stored for extended periods of time, such as during the “off season” for seasonal businesses or during Summer, Christmas Break or Spring Break at school districts. This document outlines the proper storage procedure plus instructs the reader on pre-and-post storage battery charging procedures.

UPDATE: We at ProComm are continually striving to bring you the most up-to-date information regarding taking care of your equipment investment (including during times when storing batteries for a prolonged period of time is necessary). New information has come to our attention which has revealed that there is no tangible benefit to storing your Lithium-Ion (Li-Ion) batteries in the refrigerator while they are out of service for an extended duration. Please note: this only applies to Lithium-Ion batteries. Most users have a mix of various battery chemistries in use at their site. Care should be taken to store the batteries according to the procedure that matches the battery being stored.

Federal and Consumer Safety law requires that all batteries be marked with their chemical type. The three most common battery types are:

Lithium-Ion (Li-ION)

Nickel-Metal-Hydride (Ni-Mh)

Nickel-Cadmium (Ni-Cd) (no longer being manufactured, but millions are still in service)

You must look on the product label of each and every battery you intend to store for an extended period to determine which type it is and store it as recommended below.

If you have ANY questions not answered in this document, please call ProComm at the number on our Home Page.

### FOR LITHIUM-ION BATTERIES:

Lithium-Ion batteries may be stored at room temperature for the duration of your extended times of non-use, provided they have at least a 50-75% charge on them when placed into storage. Always top them off with a fresh charge before putting them back into service.

### FOR NICKEL-CADMIUM BATTERIES AND NICKEL-METAL-HYDRIDE BATTERIES:

- 1) REMOVE your batteries from your radios before storing.
- 2) Store your radios and other accessories in a secure location of your choosing. NEVER store radios in the refrigerator with or without the batteries!
- 3) ALWAYS store your batteries in a **charged** state.
- 4) For maximum life of your rechargeable batteries, you should store them in a refrigerator when not in use for extended times. Below is the procedure for that:
  - A) Charge the batteries fully.

B) Place the batteries in a Ziploc® (or equivalent) bag to prevent ingress of moisture. (Some people double-bag them to have an extra assurance against moisture getting in.)

C) Place the batteries in a refrigerator which will be ON for the entire duration of the storage period. Be sure the placement within the refrigerator is NOT in an area that is likely to freeze. In the door is typically safe, or near the front of a shelf, NOT in the rear of the refrigerator.

D) When you are ready to put the radios back into service, remove the batteries from the refrigerator, take them out of the bag and lay them out flat (NOT stacked up or piled up) on a table or shelf, allowing them to come up to room temperature. (Overnight is good, but several hours may be sufficient depending on ambient temperature.)

E) Place the warmed-up batteries back into the chargers to be “topped off”. Leave them in the charger until fully charged.

F) Place the charged batteries back onto their respective radio and resume normal operation.

5) Heat is your batteries biggest enemy, and while it’s hard to say exactly how much longer life you will get from batteries stored in this manner, the process of storing them this way essentially places the batteries in a state of suspension. That prevents the chemical degradation from taking place in the battery which would occur if stored in a non-air-conditioned building over the summer or even an air conditioned building at room temperature. Preventing further degradation of the chemicals which make your battery operate will prolong the useful life of the battery.

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