

Electrofishing Battery Information

Capacity

We currently offer three amp hour levels of batteries for SRI Backpack Electrofishers. All are 24 volt, sealed deep discharge-rated, lead acid batteries.

Recharging

Batteries should never be allowed to remain in a discharged state. Recharge as soon as possible after use.

Always recharge the battery after each use even if the battery is only slightly discharged (These batteries do not have a memory). Total number of charge/discharge cycles possible varies inversely with the depth of discharge on each cycle. Over-discharging or completely discharging the battery will greatly reduce the cycles possible and a battery left in a discharged condition may be ruined.

Recharging with BC-24PS charger is automatic and consists of four stages:

Stage #1 Desulfation: Encourages the breakdown of large sulfate crystals which form during prolonged periods of deep discharge.

Stage #2 Constant Current: Applied to achieve the fastest possible return of energy to the battery.

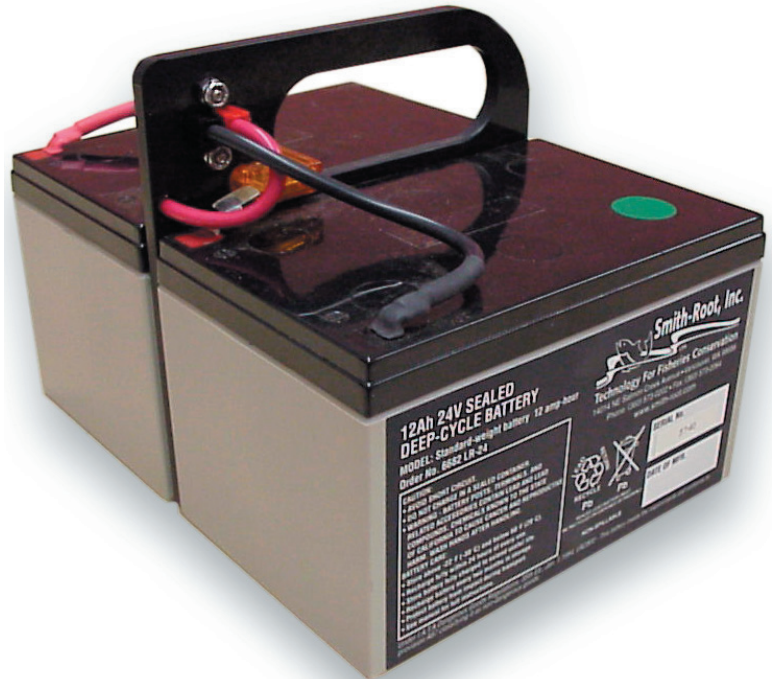
Stage #3 Constant Voltage: Temperature compensated with adaptive timing to insure maximum charge for each battery, this stage provides the final 20% of the total charge.

Stage #4 Standby Float-Charge: This stage will replace standing losses and keep the battery in a fully charged state. Batteries may be left in this state indefinitely provided that they are in a well-vented area and the AC input is not subject to frequent or periodic power outages (switched outlet or bad power). Damage to or failure of the battery may cause the charger to stay in the high-rate mode with subsequent battery venting. In these situations, consider using an MC-24 charger (not subject to these limitations) for long-term battery storage.

Time to recharge will vary depending on state of charge, condition of the battery and battery size. Rules of thumb are 2 to 3 hours for Feather-Weight, 2.5 to 4 hours for Light-Weight and 3 to 6 hours for standard batteries. These charge times are for batteries recently discharged to the low battery cutout. A fully charged battery placed on a BC-24PS charger may not indicate that it is fully charged for as long as 2.5 hours due to the timed charge feature.

Storage

Fully charge batteries before placing them in storage. As these batteries will self-discharge, we recommend that they be recharged after 3 or 4 months of storage at 20 degrees centigrade. More frequent charging is required at higher storage temperatures and less at lower temperatures (9 months at 0 degrees). Batteries removed from storage should be recharged for at least 48 hours prior to placing it back in service. If batteries are stored on a maintenance charger (MC-24), they are always ready for use.



Service Life

Batteries that have been properly maintained should last 3 to 5 years depending on ambient temperature, depth of discharge (D.O.D) and number of cycles. For batteries to maintain at least 80% of original capacity, they are rated 230 cycles for 100% D.O.D. or 470 cycles of 50% of D.O.D., and 1100 cycles for 30% D.O.D. Batteries which have reached this end of life condition may still be useful where shorter operating time is acceptable.

Shipping

These batteries conform to the UN2800 classification as “Batteries, wet, non-spillable, electric storage.” They conform to the International Air Transport Association (I.A.T.A.) Special Provision A67, classifying them as non-dangerous goods and are therefore exempt from the subject regulations of dangerous goods and are acceptable for transport on both cargo and passenger aircraft.

Reference, I.A.T.A. Dangerous Goods Regulations, 35th Edition, Jan 1, 1994, Section 4.4, Special Provisions:

A67) Non-spillable batteries are considered to be non dangerous if at a temperature of 33 degrees C (130 degrees F) the electrolyte will not flow from a ruptured or cracked case and there is no free liquid to flow and if, when packaged for transport, the terminals are protected from short circuit.

Tips and Precautions

1. Keep the battery charged! The most frequent cause of battery failure is not recharging after every use. More than one charge may be required if you have multiple batteries.
2. Heat kills batteries. Avoid storage in exceedingly warm areas. Recommended operating temperatures are between 5 or 35 degrees C (maximum -15 to 50 degrees C). The energy available on a given discharge cycle decreases at low temperatures and increases at higher-than-normal temperatures. Increased temperatures increase the gradual process of very slow corrosion, which normally occur in all lead acid batteries.
3. Avoid heavy vibration or shock application, which may cause internal damage. Some foam packing is cheap insurance.
4. Avoid contact with oils and solvents which may attack the battery case (ABS plastic resin). Clean with soap and water only.
5. Do not crush, incinerate, or dismantle the battery. The electrolyte contains sulfuric acid, which can cause serious damage to eyes and skin. Dispose of old batteries at a battery recycler.