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**APPLICATION NOTE NO. 43**

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**OPERATING INSTRUCTIONS FOR THE SBE UNIVERSAL BATTERY CHARGER**

The SBE Universal Battery Charger, Part Number 90226, is designed to charge any of the 6-, 9-, or 12-cell Ni-Cad battery packs supplied by Sea-Bird. The charger operates with AC main power from 90 to 240 VAC, 50 or 60 Hz.

To charge a battery pack:

1. Plug the charger into AC mains power.
2. Connect the red plug on the charger cable (PN 80844) to the red terminal on the battery pack and the black plug on the cable to the black terminal on the battery pack.
3. When the charger is turned on, the red 'Charge' LED on the front panel should light indicating that the battery is being charged. If the red LED does not light, check the AC mains power wiring and the battery charger cable connections.
4. The red LED should stay lit for 15 hours for a set of batteries that have been completely discharged.
5. When the batteries are charged, the red LED will go off and the yellow 'trickle' LED will light, showing that the battery pack is being kept at full charge.

Sea-Bird battery packs use high capacity Ni-Cad batteries, which must be charged at a slow rate. The Universal Battery Charger is designed to provide the correct charging current of 440 mA. When in trickle mode, 185 mA of current is passed through the battery pack.

**Do not attempt to charge Sea-Bird battery packs with a fast Ni-Cad charger; the battery pack may not charge to full capacity and can possibly be damaged.**