



# UNDERSTANDING **SURPASS™** TECHNOLOGY

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EXCELLENT SHELF LIFE • SEAMLESS AND TRANSPARENT TO THE END USER  
SELF-CALIBRATING AND MAINTAINING • IMPROVED BATTERY DATA REPORTING ACCURACY

Our **SURPASS™** (*Smart Unique Regulation and Product Authentication System Suite*) technology **includes** an intelligent energy system\* that leverages the battery's self-contained Battery Management System, continuously monitoring performance and optimizing battery life through self-calibration and cell balancing.

## THE BKR0303-2 CHARGER:

*ENERGY MONITORING:* Makes real-time inquiry of Battery Data.

- Improved Charge Accuracy
- Improved LED Accuracy (State of Charge <95%, 95-100%)
- End of Service Life indicator based on Age / Health
- Authentication of authorized batteries



## THE BKR0102 BATTERY:

The BKR0102 is best in class regarding "Standloss": Increased battery shelf life and the time required between charges.

The BKR0102 has advanced diagnostics capabilities that continuously monitors and analyzes battery performance which enables the BK BKR0303-2 Dual Unit Charger to alert the user when it is time to replace the battery.

The BKR0102's fuel gauge continuously self-calibrates to maintain its accuracy hour-to-hour, day-to-day, and month-to-month without expending battery charge cycles and/or adding time for the "fuel gauge" maintenance.

- Battery information available to both radio and charger.
- Real Time Clock (for event tracking)
- Tracks Minimum and Maximum battery: cell voltage, current and temperature.
- State of Health
- Age
- Age Forecast (remaining cycles of usable life)
- Capacity
- State of Charger
- Time to Empty
- Time to Full Charge
- Four Dynamic power and current indicators based on the state of charge (SOC), temperature and radio current draw to estimates.
  - Peak and sustainable power
  - Peak and sustainable current
- Continuous self calibration: during charging, discharging and storage/rest.
- Continuous cell balancing to extend battery life: during charging, discharging and storage/rest.



\*battery and charger