RED BRICK®

OPERATION GUIDE

WWW.RED.COM

INTRODUCTION

RED BRICK® 153Wh batteries use multiple lithium ion rechargeable battery cells. These batteries have been specifically designed for use with the RED ONE® Digital Cinema Camera and utilize a V-lock mount.

PROPERTIES

- Robust, water-resistant construction for use in studio and field environments.
- Batteries are compact, lightweight, and support high continuous load use.
- Sophisticated electronics provide safety protection and optimal performance.
- RED EVF, RED LCD, RED PRO LCD display and 5 step LED indicators on the RED BRICK accurately monitor remaining capacity.

The battery will shut down if the maximum specification discharge current is exceeded. It will reset a short time after the excessive load is removed. The battery will shut down if fully discharged, but will reactivate upon charging.

PRECAUTIONS

The RED BRICK battery has been designed for use with the RED ONE Digital Cinema Camera and accessories. Although the battery uses an industry standard V-lock mount, the battery may not be compatible with certain third party equipment.

- Never attempt to open or dismantle the battery.
- Opening the battery will void the warranty.
- Do not short circuit the battery even though it is short circuit protected.
- Do not use the battery in extreme environments (operating range: 0˚C - +40˚C).
- Keep the battery away from fire to avoid explosion.

CHARGING

The battery can be optimally charged using a RED CHARGER. ONLY use a RED CHARGER to charge battery. It is recommended that you charge the battery before first use. Note that the battery may become hot during charging. This is normal. Stop charging immediately, discontinue battery use, and contact your RED® service representative if during charging, the battery becomes excessively hot or charging stops. Charging is only allowed in temperatures between 0˚C and 40˚C.

PERFORMANCE

- The battery will give full capacity performance only if it is fully charged before use.
- The battery will self-discharge to some extent over time.
- Recharging will restore this lost capacity.
- Performance degradation may be observed in very cold or very hot environments.
- Performance decreases as the battery ages or if not stored at the correct temperatures. When the performance noticeably decreases the battery must be replaced.

STORAGE

Store the battery in a dry place, protected from the elements, at normal temperatures ideally below 25˚C (storage range: -20˚C - +50˚C). For safety, fully discharge the battery for prolonged periods of non-use.

WARRANTY

As a responsible manufacturer, RED DIGITAL CINEMA® is confident in the quality and workmanship of this RED BRICK battery. We guarantee it to be free from defects in material or workmanship for 90 days from date of delivery or 400 charge cycles (whichever occurs first). In case of claim, please contact RED DIGITAL CINEMA at **www.RED.com/support** to obtain an RMA number. Instructions will be provided on how to return defective equipment to RED. Equipment found to be faulty in manufacture will be repaired or, at our option, replaced free of charge. This guarantee does not cover defects caused by incorrect handling, non-RED repair, unsuitable storage, accidental or abnormal conditions of operation, transport damage, tampering, and normal wear. The above guarantee does not affect your statutory rights as a consumer.

Complete information about product warranties and product return policies are available at **www.RED.com/terms**.

ALL WARRANTIES IMPLIED BY LAW, INCLUDING MECHANABILITY, SHALL BE OF A DURATION OF 90 DAYS FROM THE DATE OF DELIVERY OR 400 CHARGE CYCLES (WHICHEVER OCCURS FIRST). NO OTHER EXPRESS WARRANTY OR GUARANTY EXCEPT AS STATED ABOVE, GIVEN BY ANY PERSON, FIRM OR CORPORATION WITH RESPECT TO THIS BRICK SHALL BE BINDING TO RED. RED SHALL NOT BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED BY THIS EQUIPMENT.

LITHIUM-ION BATTERY PACK HANDLING PRECAUTIONS

WARNING!

- If recharging operation fails to complete even when a specified recharging time has elapsed, immediately stop further recharging. Otherwise, electrolyte leakage, overheating, smoke emission, bursting and/or ignition may occur.
- Do not put the battery into a microwave oven or a pressurised container. Rapid heating or punctured sealing may lead to electrolyte leakage, overheating, smoke emission, bursting and/or ignition.
- If the battery leaks or gives off a bad odor, remove it from any exposed flame. Otherwise, the leaking electrolyte may catch fire, and the battery may emit smoke, burst or ignite.
- If the battery gives off an odor, generates heat, becomes discolored or deformed, or in any way appears abnormal during use, recharging or storage, immediately remove it from the equipment or battery charger and stop using it. Otherwise, the problematic battery may develop electrolyte leakage, overheating, smoke emission, bursting and/or ignition.

CAUTION!

- Do not use or subject the battery to intense sunlight or hot temperatures such as in a car in hot weather. Otherwise, electrolyte leakage, overheating and/or smoke emission may occur. Also, its guaranteed performance will be lost and/or its service life will be shortened.
- The battery incorporates built-in safety devices. Do not use it in a location where static electricity may be present. Otherwise, the safety devices may be damaged, possibly leading to electrolyte leakage, overheating, smoke emission, bursting and/or ignition.
- The guaranteed recharging temperature range is 0˚C to 40˚C. A recharging operation outside this temperature range may lead to electrolyte leakage and/or overheating of the battery, and may cause damage to it.
- If electrolyte leaking from the battery contacts your skin or clothing, immediately wash it away with running water. Failure to do this may result in skin inflammation.
- Store the battery in a location where children cannot reach it. Also, make sure that a child does not remove the battery from the battery charger or equipment.
- If you find discoloration, a bad odor due to leakage, overheating and/or other irregularities when using the battery for the first time contact your RED™ service representative.

DANGER!

- Do not disassemble or modify the battery. The battery is equipped with built-in safety/protection features. Should these features be disabled, the battery may leak corrosive chemicals, overheat, emit smoke, burst and/or ignite.
- Do not connect the positive (+) and negative (-) terminals to a metal object such as a wire. Do not transport or store the battery together with metal objects such as jewelry, hairpins, etc. In such cases, short-circuiting or over-current flow may occur causing the battery to leak, overheat, emit smoke, burst and/or ignite. Metal objects such as wires, jewelry or hairpins may generate heat if they come into contact with the battery.
- Do not discard the battery into fire or heat since this may cause the insulation to melt down and may also damage the gas release vents and other safety features

possibly leading to chemical leakage, overheating, smoke emission, bursting and/or ignition.

- Do not use or leave the battery near a heat source such as a fire or a heater (> 80°C). If the resin separators should become damaged due to overheating, short-circuiting may occur inside the battery, possibly leading to chemical leakage, overheating, smoke emission, bursting and/or ignition of the battery.
- Do not immerse the battery in fluids, water or seawater and do not allow it to get wet. Otherwise, the protective features inside the battery may be damaged and abnormal chemical reactions may occur, possibly leading to leakage, overheating, smoke emission, bursting and/or ignition.
- Do not recharge the battery near fire or in extremely hot environments. Otherwise, hot temperatures may trigger its built-in protective features, inhibiting recharging or damaging these built-in protective features, causing it to be charged with an excessive current. As a result, abnormal chemical reactions may occur internally, possibly leading to leakage, overheating, smoke emission, bursting and/or ignition.
- To recharge the battery, use the battery charger specifically designed for the device and observe the recharging conditions specified by the maker of the charger. A recharging operation under non-conforming conditions may cause the battery to become overcharged, or charged with an excessive current. Abnormal chemical reactions may occur, possibly leading to electrolyte leakage, overheating, smoke emission, bursting and/or ignition.
- Do not pierce the battery with pointed or other sharp objects. Do not strike it with a hammer, or step on it. Otherwise, the battery may become damaged and deformed internal short-circuiting may occur, possibly leading to chemical leakage, overheating, smoke emission, bursting and/or ignition.
- Do not strike or throw the battery. An impact may cause leakage, overheating, smoke emission, bursting and/or ignition. Moreover, if the protective features inside become damaged, the resulting internally generated high current could lead to abnormal chemical reactions, electrolyte leakage, overheating, smoke emission, bursting and/or ignition.
- Do not use an apparently damaged or deformed battery. Otherwise, electrolyte leakage, overheating, smoke emission, bursting and/or ignition of the battery may occur.
- Do not directly solder the battery. Otherwise, heat may melt down its insulation, damage its gas release vents or other safety features possibly leading to leakage, overheating, smoke emission, bursting and/or ignition.
- Do not reverse the positive (+) and negative (-) terminals. Otherwise, during recharging, the battery will be reverse-charged, abnormal chemical reactions may occur, or excessively high current may flow during discharging possibly leading to chemical leakage, overheating, smoke emission, bursting and/or ignition.
- The positive (+) and negative (-) terminals are arranged in a particular orientation. Do not force the connection if you may not easily connect the battery terminals to the battery charger or other equipment. Confirm that the terminals are correctly oriented. Reversing the terminals will result in reverse charging, possibly leading to electrolyte leakage, over heating, smoke emission, bursting and/or ignition of the battery.
- Do not use the battery for other purposes other than those specified. Otherwise, its guaranteed performance will be lost and/or its service life will be shortened. Depending on the equipment in which the battery is used, excessively high current may flow through battery, possibly damaging it and leading to electrolyte leakage, overheating, smoke emission, bursting and/or ignition.
- If the battery leaks, and the electrolyte reaches the eyes, do not rub them. Instead, rinse the eyes with clean running water and immediately seek medical attention. Failure to do this may result in eye injury.

CONNECTING & CHARGING BATTERY

CONNECTING BATTERY TO RED ONE CAMERA

Battery can be connected to the RED ONE camera through the RED BATTERY PLATE, RED QUICKPLATE or RED CRADLE.

CHARGING USING RED CHARGER

1. Plug AC power cord into charger AC input and power source.
2. Turn the charger power switch ON.
3. Insert battery into the V-plate adapter.
4. Observe the charger LED. Charger LED will illuminate Orange during charging (battery LED array will also illuminate displaying charge status).
5. Remove battery when charger LED flashes Orange/Green (all battery LEDs will be lit).

NOTE: When a cable is plugged into the 6-pin LEMO auxiliary power output, the charging process will be suspended. The AUX LED will light up and battery LEDs on the charger will blink Green. Once the cable is unplugged, the charger will continue the previous charging sequence and from the same point of interruption.

Installing Battery **Removing Battery**

NOTE: To ensure a good connection between battery and RED™ CHARGER, RED CRADLE, RED QUICKPLATE, and/or RED BATTERY PLATE V-plate adapter, it is recommended to perform a break-in sequence. To break-in: Fully engage/disengage a RED BRICK battery approx. 20 times in V-plate adaptor.

POSSIBLE ISSUES AND SOLUTIONS

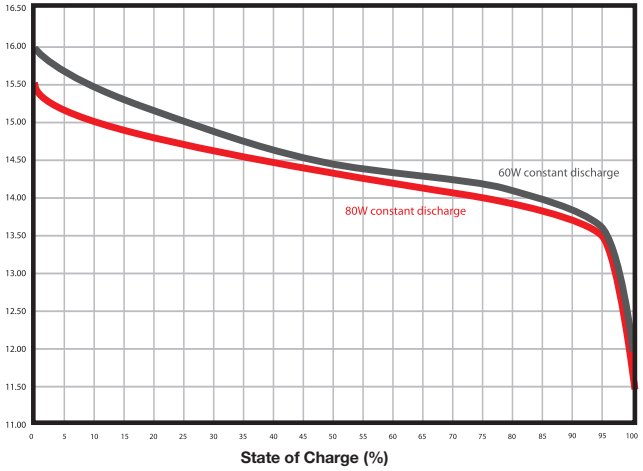
If your camera looses power when bumped or moved:

- Remove / reinstall battery into V-Plate adapter and ensure battery engages fully.
- Ensure lock holds battery securely and click is heard when battery is installed.
- Check battery terminal connections. If any are damaged, contact RED support. **www.RED.com/support**

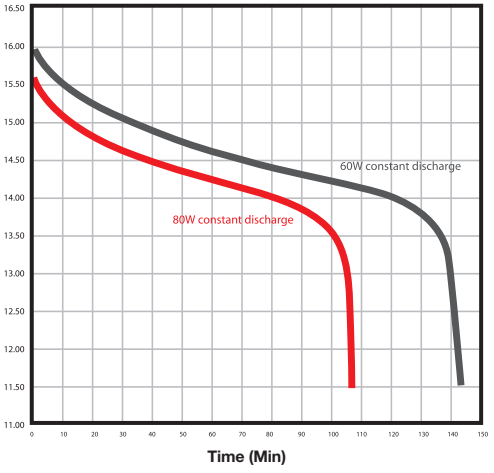
BATTERY LED ARRAY

Consists of five (5) LED's and a button. When button is pressed, LEDs will illuminate in relation to battery life available (in 20% steps). If single LED blinks or no LEDs illuminate when pressed, battery requires charging. When charging, LEDs will illuminate indicating current battery charge status.

RED BRICK Discharge Voltage VS. State of Charge at 60W and 80W Load



RED BRICK Discharge Voltage VS. Time at 60W and 80W Load



Nominal Voltage (V)	Maximum Voltage (V)	Nominal Capacity (Ah)	Maximum Current (A)	Nominal Energy (Wh)	Operating Temperatures (℃)	Dimensions (WxHxD mm)	Weight (Kg)	Energy Density (Wh/Kg)
14.8	16.8	9.5	9.0	140	-20℃ +60℃	164x90x48	0.961	145

DISCLAIMER

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