

QUANTUM BATTERY 1+

OPERATING INSTRUCTIONS

For Quantum Battery 1+ 's with Serial Numbers : L269 and below

INTRODUCING THE QUANTUM BATTERY 1+

You now have the latest advancements in portable flash power. Quantum's engineers and designers have developed new and noteworthy advancements to the already popular Quantum Battery 1. And the new QB1+ is fully compatible with your current QB1 modules.

This is what we have designed for you:

Low Battery Shutdown:

The QB1+ protects the battery cells from being drained or harmed by automatically shutting down should the battery cells become too low.

Electronic Circuit Breaker:

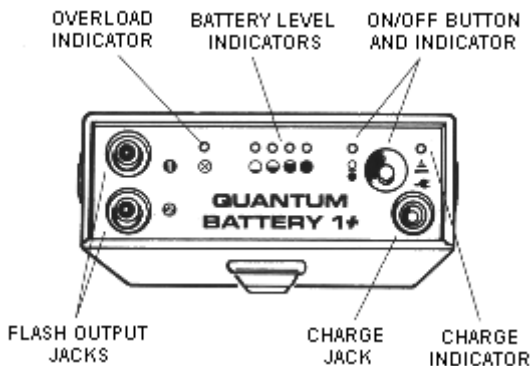
This device is faster than any fuse, and never needs replacement. Shorts and flash overloads are detected rapidly, preventing damage from incorrect operation. Resetting is automatic.

Faster Charging and "Charge Complete" Indicator:

A new charging circuit speeds charging (3-10 hours depending upon the amount of charge required). The charge indicator light goes out when charging is 100% completed.

New Package:

Quantum's sleek "all black look" design is also smaller than before, yet power capacity is as high as ever.



CHARGING WHEN AND HOW

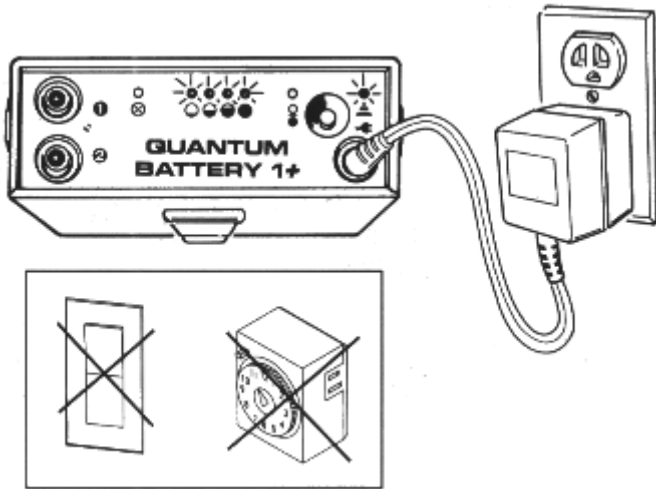
When to Charge:

- Charge before using for the first time.
- Charge after each use.
- You can charge from any capacity indicated. It is not necessary to discharge fully prior to charging. There is never a memory problem with the Quantum Battery.
- Charge immediately if there is a Low Battery shutdown. (See section: Battery Indicators).
- "Top off" the battery by charging before a shoot or in between shooting sessions. Topping off adds extra life and capacity to the battery.
- Charge before storing. Recharge a stored battery every 3 months.

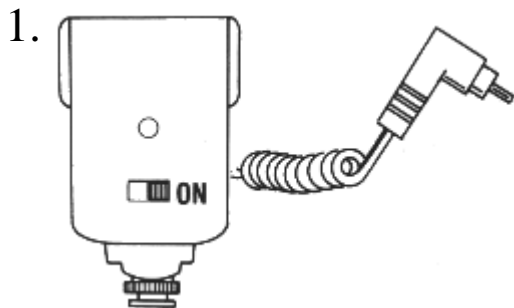
How to Charge:

- Remove modules from the flash output jacks.
- Connect the charger to the QB1+ charge jack and a standard house hold outlet. Select an outlet that cannot be accidentally turned off.
- The yellow charge indicator light and battery indicator lights will be on. It may take 1/2 hour for all the battery lights to go on. (Battery lights do not indicate charge level during the charge cycle.)
- Charging is complete when the yellow charge light goes out. A typical charge will take 3-10 hours, depending upon the charge required. Do not charge for more than 72 hours.

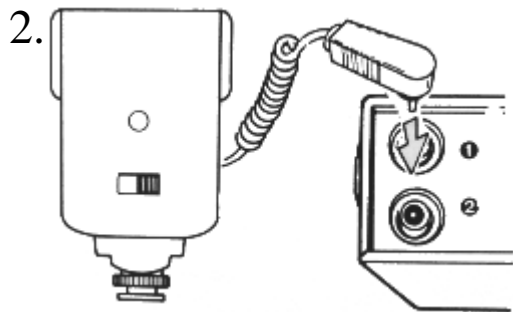
- Charge to completion in one continuous period. If the yellow charge light goes out, and you terminate and restart the charging, the yellow light will come on again. However, additional charging is not required.
- **Do not use a wall outlet timer when charging.**
- When travelling to countries with different voltage ratings, a Quantum Charger recommended for that area is required. **Do not use a voltage adaptor.**
- You can power the flash while charging, however, after the shooting session is over charge to completion as recommended above.



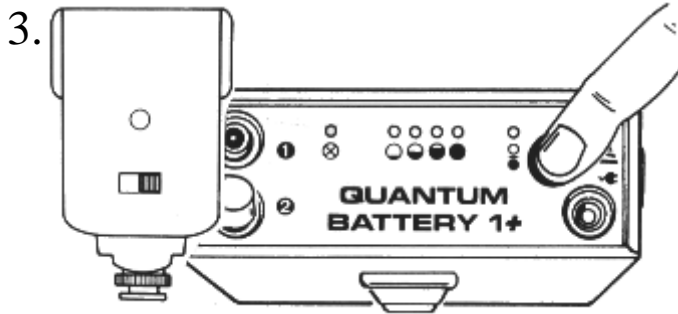
POWERING YOUR QUANTUM BATTERY 1+ AND YOUR FLASH



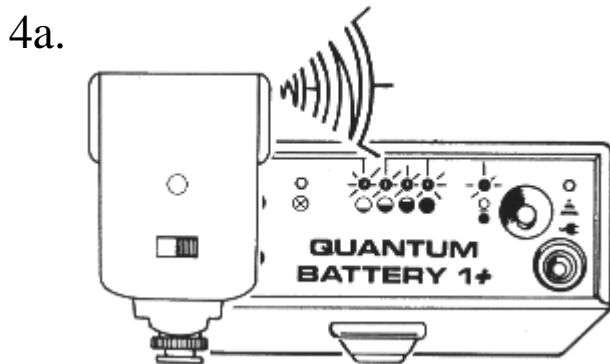
Connect the module to the flash. (See Module Instructions to explain the proper module position.) Turn the flash on.



Plug the module into either one of the two flash output jacks on the QB1+.



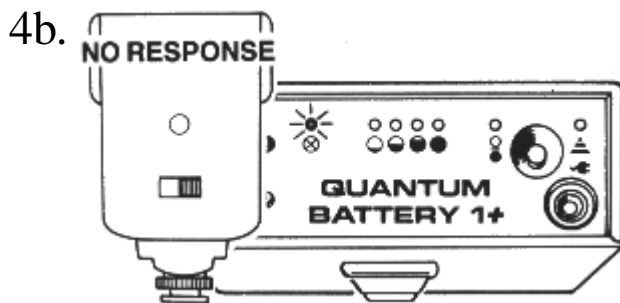
Turn the QB1+ ON. *Note: The QB1+ will not turn on until a module plug is connected.*



CORRECT MODULE POSITION

(Only one position is correct.)

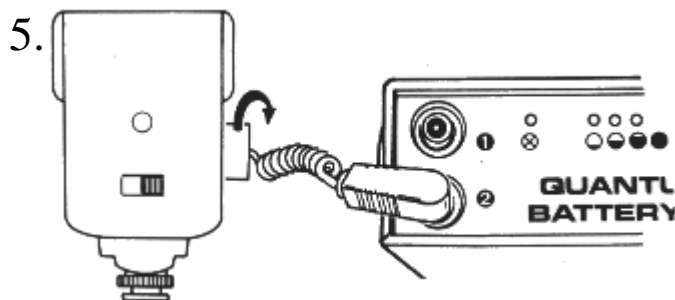
Any of the indicators on the flash will light or you will hear the whine of the flash recycling.



WRONG MODULE POSITION

(Two possible conditions may occur.)

- There is no response from the flash - None of the indicator lights on the flash goes on and there is no sound from the flash. **TURN THE QB1+ OFF IMMEDIATELY.**
- The red overload indicator on the QB1+ will light and the QB1+ will automatically shut-down. (See section: "Overload Indicator".)

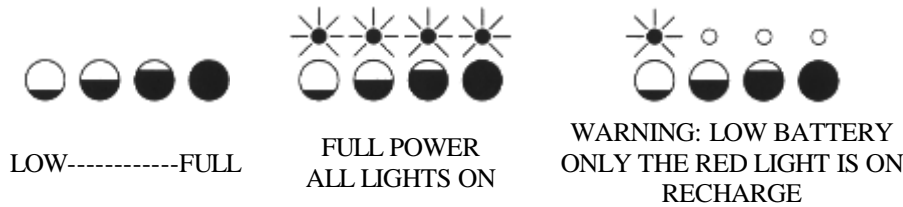


IF THE MODULE IS IN THE WRONG POSITION

Turn the module and reposition it inside the flash. Repeat steps 1-5 until the flash responds and the correct

position has been determined.

BATTERY INDICATORS



Battery lights indicate the amount of power in the battery. After firing the flash, the battery lights will go out then go on again after the flash recycles.

Battery lights are accurate 15 seconds after the flash is fully recycled.

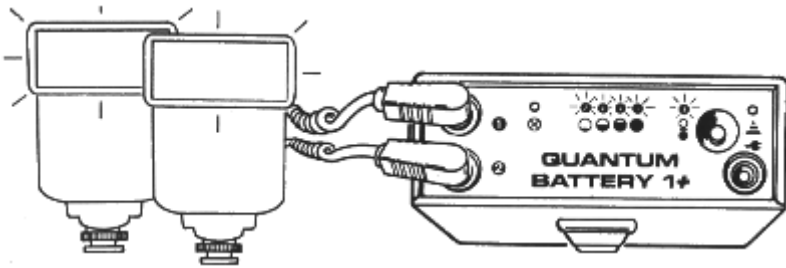
LOW BATTERY SHUTDOWN:

If the battery power is exhausted the QB1+ will automatically shut down to prevent damage to the battery cells. Battery cells must not be kept in an uncharged state and must be recharged immediately.

DUAL FLASH OUTPUTS

Two flashes may be powered by the QB1+. The combined guide number may not exceed 240 feet or 72 meters. This is equivalent to two shoe mount flashes.

Otherwise, we recommend a separate power pack for each flash.



OVERLOAD INDICATOR



If an overload occurs the QB1+ will automatically shut OFF. The red overload indicator will light for several seconds. After the cause of the overload is removed, reset the QB1+ by pushing the ON/OFF button.

CAUSES OF OVERLOAD:

- A module inserted incorrectly into a flash battery compartment.
- A short circuit across the module contacts. Be sure the contacts do not touch any metal surface.
- A defective flash unit which has an internal short circuit (repair or replace flash).
- Firing a flash repeatedly before the ready light comes on. This not only over stresses the flash but also may result in underexposure.

CARE AND MAINTENANCE

- To conserve power during a shooting session, switch the Quantum Battery to the OFF position when it's not being used.
- DO NOT EXCEED the flash manufacturer's recommendation for the MAXIMUM NUMBER OF FULL POWER CONSECUTIVE FLASHES without a COOL-OFF PERIOD.
- Store at room temperature. Recharge every 3 months when in storage.
- Recharge indoors at room temperature.
- Use the Quantum battery between temperatures -40F and 120F (-40C to 55C).
- Never submerge the Quantum Battery or Charger in water.

TROUBLESHOOTING

FLASH NOT POWERED:

- Is the correct Module being used?
- Is the Module in the correct position and firmly seated inside the battery compartment?
- Is the Module securely plugged into the output jack?
- Is the flash switched ON?
- Has the Quantum Battery been properly charged?

CHARGER NOT CHARGING:

- Is the Charger plugged into a working outlet?
- Is the Charger securely plugged into the charge jack of the Quantum Battery?

THE CHARGER LIGHT DOES NOT GO OUT FOR A VERY LONG TIME (24-48 HOURS):

- If the battery was stored for more than 6 months without charging it may need "conditioning". The QB1+ charging circuits do this automatically. Charging is complete when the yellow charge light goes out.
- If the battery was discharged repeatedly, without being fully recharged, it may need "conditioning". See above.
- If the charger is plugged into a mains outlet which is switched on and off periodically, the charger will restart the charge each time. Always plug into an uninterrupted outlet.

BATTERY REPLACEMENT

All rechargeable cells have a limited lifetime, usually a few hundred recharges. This amount can vary depending upon how the battery was used and whether the charging instructions were followed.

Battery cells can be economically replaced by sending the QB1+ and charger to Quantum Instruments or any overseas distributor.



CONTAINS SEALED LEAD ACID BATTERY.
MUST BE RECYCLED OR DISPOSED OF PROPERLY.

DO NOT PLACE USED BATTERIES IN YOUR REGULAR TRASH!

Return this battery to a federal or state approved sealed lead battery recycler.
This may be where you purchased the battery.