QUANTUM BATTERY

OPERATING INSTRUCTIONS

1. INTRODUCTION

The Quantum Battery is a unique rechargeable power pack for increased performance of your flash unit. It provides hundreds to thousands of flashes per charge and faster recycling times. Its status monitor informs you of the battery charge level. Protected outputs prevent overloading to a flash unit, so just one Power Module is used for a variety of flash models. And, this powerful, rugged battery can be recharged any time without the "memory" effect of NiCads.

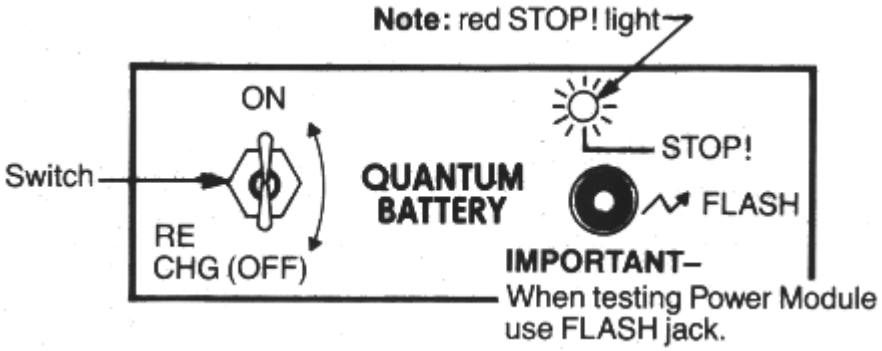
To gain full benefit from your Quantum Battery read the instructions completely.

2. IMPORTANT - USING FOR THE FIRST TIME

Remove the 4 AA batteries from your flash. Note the polarity marker (+,-) on the Power Module*. Match the Power Module to the polarity markers (+,-)** inside the battery compartment, and install the Power Module. There are two possible orientations. The Quantum Battery will tell you which one is correct for your flash. Follow this procedure:

POWER MODULE POLARITY TEST

1)Switch the flash unit *off*.
2)Switch the Quantum Battery to RE-CHG (*off*).
3)Plug the Power Module into the FLASH jack *only*!
4)Now switch the Quantum Battery to ON, then back to RE-CHG. If the red STOP! light came on, the Power Module is in backwards. Orient it the other way, and try this step (4) again.
5)Next, turn the flash unit ON and the Quantum Battery ON and you should now have flash power!
6)As a reminder of Power Module orientation red "dot" stickers have been provided. Place one on your flash unit next to red marker on the Power Module.



Notes:

To secure the Power Module in the battery compartment, velcro fasteners are provided. For flashes with hinged doors place one adhesive-backed velcro tab on the door, another on the flash body, close the door tightly against the Power Module, and secure with the 4" velcro strip.

For flashes with sliding doors, such as Vivitar, slide the door as far closed as possible. This will be sufficient to secure the Power Module. The velcro fasteners can be used in addition, if desired.

* Power Modules are purchased separately. The following models use Power Module A:

Vivitar 283, 285, 3700, 5600

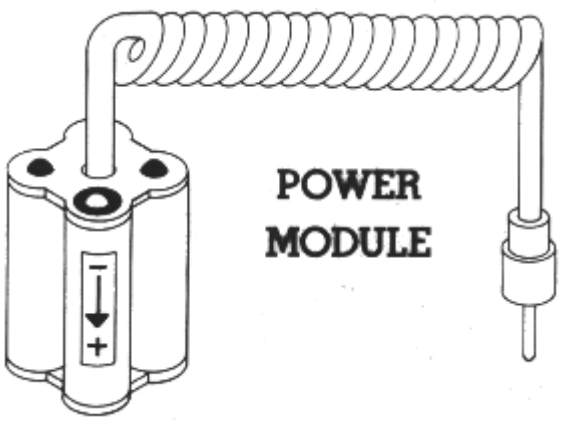
Sunpak 311, 322, 411, 422, 433, 444

Phillips 546

Braun 320 BVC, 340 BVC

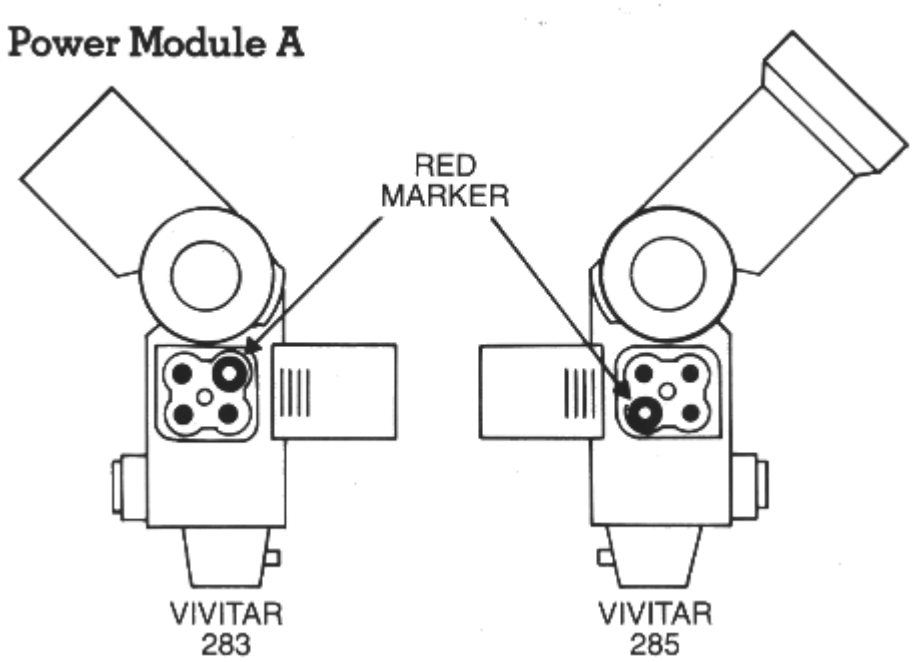
Canon 199A, 155A

Osram BCS-44 Studio



Module A will work with other flash models as well. (Special modules will be available for certain flash units. Consult your dealer or Quantum).

** For Vivitar flashes, battery polarity markers are on the battery clip. Orient the Power Module according to them, or follow the diagram below.



3. BATTERY OPERATION AND RECHARGING

Always follow these important procedures!

1) Leave the switch in the RE-CHG (off) position when not using.
2) Recharge after each use.
3) When all 3 green lights go out (with the switch ON) stop using and recharge immediately.
4) Store in a fully charged state.

Controls, Lights, and Functions

When switched to ON, power is supplied to the FLASH and FAST outputs. The yellow ON light and one, two, or three green lights should light. When switched to RE-CHG, the charger may be connected to the adjacent jack.

FLASH Output
Always use this output first whenever you insert the Power Module into the flash. It prevents damage to a flash unit in the event the Power Module is inserted backwards.

Red STOP! Light
This monitors the FLASH output and lights continuously whenever the Power Module is backwards, even when the flash unit is switched off. It does *not* monitor the FAST output.

Note: It is normal for the STOP! to light a second or so after a full power burst from the flash.

FAST Output
Plug your Power Module in here only after testing correct orientation of your Module using the FLASH output jack. FAST will give you even faster recycling times. WARNING: incorrect module orientation could damage your flash or blow a fuse inside the Quantum Battery. See Care and Maintenance.

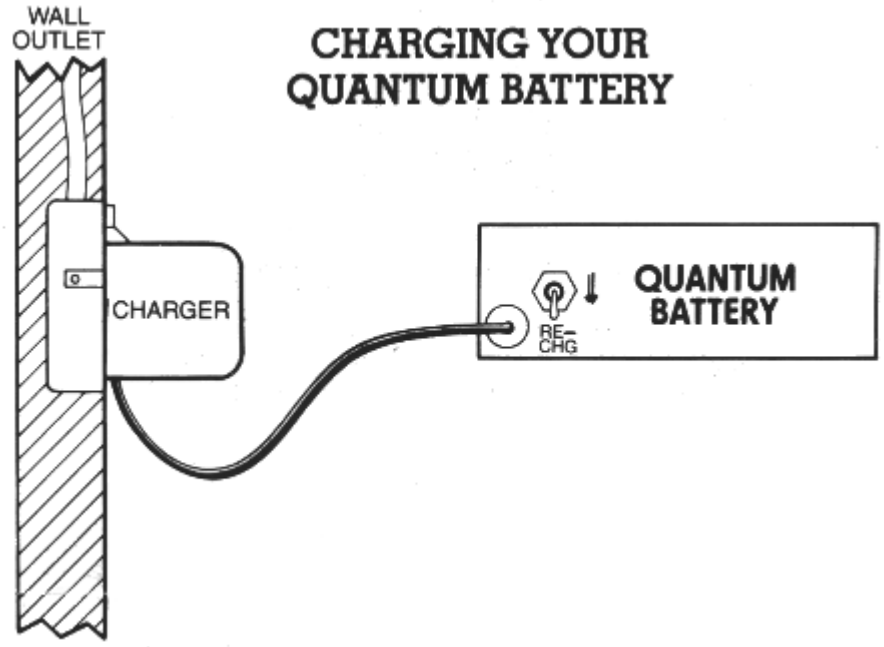
Dual Outputs
You may power two flash units by connecting two Power Modules, one to each output (FLASH, FAST) of the Quantum Battery. First test each Power Module on the FLASH output. The FAST output will recycle ahead of the FLASH output.

GREEN Battery Lights
These monitor the power in the battery and indicate approximately 1/4, 1/2, or 3/4-plus charge left in the battery. After firing the flash, some lights may go out, then come on again after the flash recycles. The status of the battery is most accurately indicated a minute or more after firing the flash.

IMPORTANT - When the green lights do not come on after flash recycling, shut off the Quantum Battery and recharge. Allowing the battery to discharge any further will severely decrease its recharging lifetime.

Recharging
Use only the charger supplied! Others will not work. Plug the charger into a wall outlet, and insert the recharge plug into the RE-CHG jack on the Quantum Battery. Switch to RE-CHG. A full charge takes up to 6 hours, but significant capacity can be added to the battery in just an hour. After an overnight charge, remove the charger.

If the Quantum Battery is not used for long periods of time give it a charge every 3-6 months to maintain battery recharge life. Store at room temperature (70°F, 21°C) or below. IMPORTANT: Do not leave the charger connected to the battery unless it is also connected to a live outlet.



For Your Convenience
Clip the Quantum Battery to your belt or connect a camera strap to the "D" rings for over-the-shoulder wearing. Or perhaps you may prefer keeping the Quantum Battery in your camera bag while you shoot.

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4. CARE AND MAINTENANCE

Observe the following:

- Never submerge the Quantum Battery or charger in water.
- Recharge indoors at room temperature.
- Never deliberately short circuit the output or recharge jacks. The battery cells are very powerful and might cause burns.
- Do not leave the charger connected to the battery unless it is also connected to a live wall socket. Otherwise, the battery will discharge.
- Use the Quantum Battery in temperatures between -40°F and +120°F (-40°C to 55°C).

In case of no power:

- Check the Power Module orientation. Is it seated firmly in the battery compartment?
- Be sure the Power Module is securely plugged into an output jack on the Quantum Battery.
- Is the flash unit switched on?
- If the FLASH output provides power but the FAST output does not, the internal fuse has probably blown, indicating abnormal operation. Return the unit to the factory, or if you wish to replace the fuse yourself, remove 4 screws on the side of the case. Switch to RE-CHG. Slide the panel out about 2" until you see the fuse. (Turn upside down with your hand underneath, and shake). Replace the fuse with a type 3AG or 8AG, 5 to 8 amp, fast blow. WARNING: do not use a metal object to pry out the fuse - you may short circuit the battery.
- When the capacity of the battery on a full charge diminishes substantially, the cells can be replaced by sending the entire unit to the factory either directly or through your dealer.
- If you have any further questions, do not hesitate to contact Quantum.

ADDENDUM

NOTICE - NEW OPERATING PROCEDURE

The Quantum Battery FLASH and FAST outputs are now protected by an automatic circuit breaker. With this improvement the FLASH and FAST jacks are interchangeable. Both provide fast recycling of the flash, and either can be used for the Power Module polarity test in section 2 of the instructions.

Should the Power Module be inserted backwards into the flash (so that it is shorted) the circuit breaker will shut off power to the outputs and the red STOP! indicator will light. In a few seconds power will be restored, provided the incorrectly placed Power Module is removed.

Note that there are altogether 4 possible positions for Power Module A. One is correct and will power the flash, one is backwards and will cause the red STOP! indicator to light, and two will do neither. (The polarity markers are mismatched for these two positions).

For Vivitar flashes, a polarity clip is provided with Power Module A that allows only one proper orientation.

Also due to this product improvement, there is no fuse to replace in the Quantum Battery.

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.