

Aqua SnakeEye™

OA-09 Extended Life NiMH Battery

Operators Manual

Rev. 1.2



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I. INTRODUCTION

Congratulations on your purchase of the Aqua OA-09 Extended Life NiMH Battery. When fully charged, this wearable OA-09 Extended Life NiMH Battery will give you about 9 hours of uninterrupted use when connected to the SnakeEye™ Video Inspection Tool. This OA-09 Extended Life NiMH Battery can also provide 12V DC for up to two other 12V portable devices using the supplied power output cables (figure 6). When a second 12V device is connected the battery life will be decreased. The combination of using one SnakeEye and another portable 12V DC device or two other portable 12V DC devices can not exceed 60 Watts.

This OA-09 Extended Life NiMH Battery can be attached to a waist belt and/or worn around the shoulder or neck with the included adjustable shoulder strap for added convenience.

IMPORTANT NOTE:

Failure to operate and maintain the Aqua OA-09 Extended Life NiMH Battery in accordance with the instructions in this manual may result in damage to the unit, damage to other personal property or personal injury.

Read this manual carefully and completely before operating the OA-09 Extended Life NiMH Battery and keep the manual on file for future reference.

CAUTION:

Use only the supplied AC power source to charge the OA-09 Extended Life NiMH Battery.

Only use the OA-09 Extended Life NiMH Battery with a SnakeEye or another device that requires a 12V DC source.

Never charge or use the OA-09 Extended Life NiMH Battery in the rain or in water.

II. Part List

You will find the following parts when you open this OA-09 Extended Life NiMH Battery:

1. Battery Pack and Carry Bag



figure 1

2. OA-09-01 Smart Charger TM12-10A2



figure 2

3. OA-09-02 Universal AC Adapter For Charger



figure 3

4. OA-09-03 24V Car DC Adapter for Charger



figure 4

5. One OA-09-04 5 Foot Cable from OA-09 Extended Life NiMH Battery to SnakeEye™



figure 5

6. Two OA-09-05 Output Cables for Other Portable 12V DC Devices



figure 6

7. This User Manual

III. GETTING STARTED

Though The OA-09 Extended Life NiMH Battery may have a small charge when you receive the unit, it is recommended that the battery be fully charged before use to gain maximum use. It will take approximately 10 hours to charge a fully depleted OA-09 Extended Life NiMH Battery.

CHARGING THIS EXTENDED LIFE NIMH BATTERY

To charge the battery;

- 1) If this is your first time to charge the OA-09 Extended Life NiMH Battery, you need to open the carry bag and turn the storage switch on (figure 7). Fail to turn on this switch, will not allow the Extended Life NiMH battery to be charged properly. If you turn on this switch after connecting and powering the charger, the charger may not function properly. If this switch has already been turned on, please ignore this step.



figure 7

- 2) Identify the following; cable connection (figure 8) for the charger located on the end of the OA-09 Extended Life NiMH Battery, the Smart Charger TM12-10A2 (figure 2), and the Universal AC adapter (figure 3).



figure 8

- 3) Connect the charger cable to the OA-09 Extended Life NiMH Battery charger cable making sure that the arrows (→ ←) line up. This is very important as there is only one way to complete this connection.
- 4) You **MUST** disconnect all of the output cables from the OA-09 Extended Life NiMH Battery before you power on the charger.
- 5) Connect the Universal AC cable to the charger.
- 6) Plug the AC adapter into the wall outlet.
- 7) When the connection is complete, you will notice 2 steady red lights on the charger.
- 8) When you charge a fully depleted OA-09 Extended Life NiMH Battery, the buzzer will beep 5 seconds for every 5 seconds time interval until the voltage reaches 12.5V. This warning signal indicates that the OA-09 Extended Life NiMH Battery is NOT ready for use.
- 9) When the OA-09 Extended Life NiMH Battery is fully charged, one of the red lights on the smart charger will turn green.
- 10) Alternate Charge Method: You can also use the supplied 24V Car DC Adapter (figure 4) in place of the AC Adapter to charge the OA-09 Extended Life NiMH Battery. Simply replace the Universal AC Adapter with the 24V Car DC Adapter and plug into the cigarette lighter in an auto. This can be helpful if traveling from one site to another and you need the maximum battery capacity.

IV. READY FOR USE

Now with a fully charged OA-09 Extended Life NiMH Battery, you are ready to connect the SnakeEye™ and/or another 12V DC device. If you don't use this OA-09 Extended Life NiMH Battery to power SnakeEye, you can power up to two portable 12V DC devices. The total power consumption combining using SnakeEye and/or other 12V DC devices can not exceed 60 watts.

- 1) To connect the SnakeEye™ to the OA-09 Extended Life NiMH Battery you will need to have the supplied 5 foot SnakeEye™ to OA-09 Extended Life NiMH Battery cable (figure 5).
- 2) Assemble the SnakeEye™ for use.
- 3) Connect the 5 foot cable to the OA-09 Extended Life NiMH Battery.
- 4) Connect the other end of the 5 foot cable to the SnakeEye™.
- 5) Turn on the SnakeEye™, and you are now ready to utilize the OA-09 Extended Life NiMH Battery for extended use of the SnakeEye™.
- 6) When you are finished using the OA-09 Extended Life NiMH Battery, make sure that you recharge the unit before storage to insure that it will be ready for use the next time it is needed.
- 7) If the low power warning LED on the front of the OA-09 Extended Life NiMH Battery turns red and you hear 5 consecutive beeps, this indicates that the OA-09 Extended Life NiMH Battery can power SnakeEye for another five minutes, after which it will shut off. At this time the OA-09 Extended Life NiMH Battery shall be recharged.
- 8) Please disconnect all of the output cables after use to prevent the OA-09 Extended Life NiMH Battery from damage caused by over discharging.
- 9) If you plan to store the OA-09 Extended Life NiMH Battery for an extended period of time, it is recommended that you open the carrying bag and turn off the switch for battery charging control board (figure 7). This will allow the battery to drain at a slower rate. All rechargeable batteries will lose some of their charge in an idle state.

Warning:

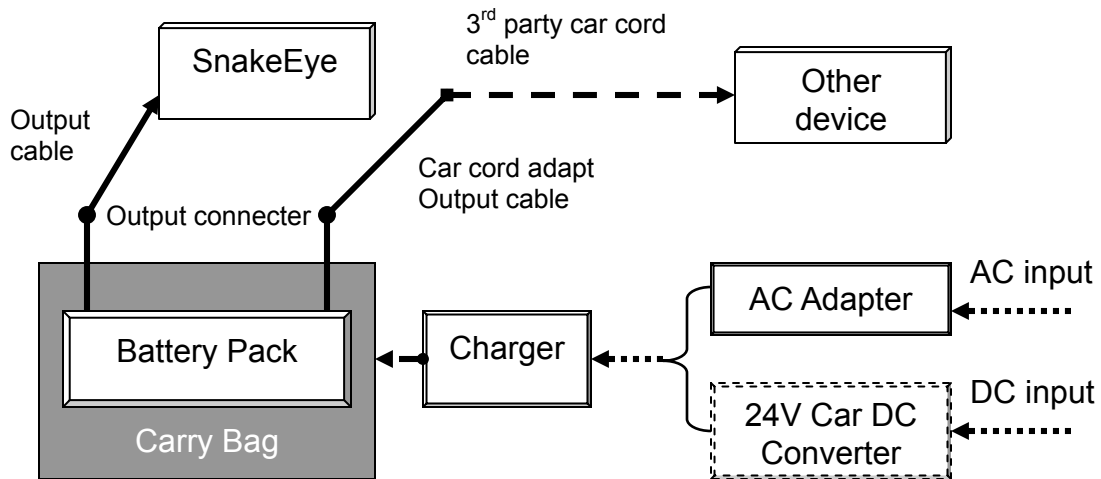
1. Do not short-circuit the battery.
2. Disconnect all of the output cables to prevent the OA-09 Extended Life NiMH Battery from over-discharging when not in use.
3. Fully charge the OA-09 Extended Life NiMH Battery before long term storage, and always store the battery in a cool and dry location. Avoid storing in a damp or humid environment.
4. It is recommended opening the carry bag and turning off the storage switch (see figure 7) before long term storage. If you turn off the storage switch remember to turn it back on when you plan to use OA-09 Extended Life NiMH Battery.
5. Only use the supplied AC power source and charger to charge the OA-09 Extended Life NiMH Battery. Using other charger and/or power supply will automatically void product warranty.
6. Don't expose the OA-09 Extended Life NiMH Battery in fire or water.
7. Dispose of in accordance with all applicable laws and regulations. Please contact your local recycle center for details.

V. TROUBLE SHOOTING

1. If the OA-09 Extended Life NiMH Battery will not operate the SnakeEye or other device, make sure that the battery storage switch is on (figure 7). If you turn on the storage switch and the green LED of OA-09 Extended Life NiMH Battery is on, it indicates that the battery has enough power and is ready for use. If the Green LED is not on, you need to charge the OA-09 Extended Life NiMH Battery.
2. If after turning the battery storage switch on and it still will not operate the SnakeEye and other devices, make sure that all of the cables are connected properly (see section IV).
3. If after step 1 and 2 above are complete and it still will not operate the SnakeEye and other device, make sure that the OA-09 Extended Life NiMH Battery is fully charged.

VI. SPECIFICATIONS

System structure



OA-09 Extended Life NiMH Battery Specification:

1. Nominal Voltage: 12V
2. Capacity: 8.5AH
3. Charge Time: 10 hours @ 1A charging current
4. Battery Material: Ni-MH; Lead Free, HHR900D applied
5. Discharging Current: Continuous Maximum 5000 mA
6. Life Cycle: ≥ 300 Cycles
7. Working Temperature: Charging: 32°F to 104°F (0°C to 40°C);
Discharge 14°F to 122°F (-10°C to 50°C)
8. Storage Time: One Year (when the storage switch is off and temperature is between -4°F to 95°F/-20°C to 35°C)
9. Stand-by Time: Two Months (when the storage switch is on and temperature is between -4°F to 95°F/-20°C to 35°C)
10. Battery Cell Dimension: 7.0in (L) X 3.5in (D) X 3.0in (W)
11. Weight: 6.0 Lbs

OA-09-01 Smart Charger TM12-10A2 Specification:

1. Charge Current: 1A
2. Power on Indicator: Red LED
3. Charge Indicators: One dual color LED (Red: Charging; Green: Battery fully charged; Flash Red: Charge Failure)
4. Charge Termination Mechanism:
 - 4.1 Negative Delta V Detected;
 - 4.2 Temperature rises higher then 0.7 degree C per minute;
 - 4.3 Zero Delta V for 12 Minutes.

All components are no Lead approval.