The way how to prolong the life span of Lithium-ion Battery

If the customer keep Lithium Battery in camera unit over a week, then Battery Power in unit will be reduced gradually (self-discharge issue). Unfortunately, if Battery power in Lithium Battery is less than 2Vdc, it will make Lithium Battery can not be charged by power adapter (O/P:5Vdc/2A) anymore, and shorter the life span of Lithium Battery.

Below illustration show you how to measure the DC voltage of Lithium-ion Battery with digital multi-meter and identify the Lithium Battery can be charged or not. If Lithium-ion Battery can not be charged, it will be worn out. Hence, Lithium Battery shall be kept over 2.5Vdc at any time. (If discharged below 2.5 volts per cell, the internal safety circuit opens and the battery appears dead.)



Measure the DC voltage of Lithium Battery as above illustration.

The red probe is for " + " polarity, the black probe is for " - " polarity.



If the measurement of DC voltage in Lithium Battery is less than 2Vdc, by this way, this Lithium Battery can not be charged by power adapter (O/P : 5Vdc / 2A) again. Hence, this Battery is dead.



The nominal DC voltage in Lithium Battery is 3.7Vdc or higher. Above illustration show you the measurement of DC voltage in Lithium Battery is 3.774Vdc. Hence, this Battery is good.

A Lithium-ion Battery provides 300-500 discharge/charge cycles. The battery prefers a partial rather than a full discharge. Frequent full discharges should be avoided when possible. Instead, charge the battery more often. There is no concern of memory when applying unscheduled charges.

There are no remedies to restore Lithium-ion Battery once worn out.

While the battery is kept fully charged, the inside temperature during operation rises to 45°C (113°F). Hence, avoid keeping Lithium Battery in full charge and in high temperature status for a long time. Or it may damage the Lithium Battery and camera unit.

The notice to prolong the life span of Microtek Lithium-ion Battery is as follows.

- 1. It had better to remove Lithium Battery from Battery compartment of Microtek Video Camera Unit, if the customer did not use their camera unit over a week.
- 2. Keep the Lithium-ion Battery cool (range from 0° to 20°). Avoid it from heating environment. For prolonged storage, keep the battery at a 70% ~ 80% charge level in cool environment.
- 3. Consider removing the Lithium-ion Battery from camera unit when running on power adapter.
- 4. If the customer has a spare Lithium-ion Battery, use one to the camera unit and keep the other cool by placing it in the refrigerator, but do not freeze the battery.
- 5. Several partial discharges with frequent recharges are better for Lithium-ion Battery. Recharging a partially charged Lithium-ion Battery does not cause harm because there is no memory.