

## How to manage Lithium-ion polymer batteries used in rechargeable CyberKey smart keys

### Charging

Lithium-ion batteries deliver full power after the initial charge. No priming is required. There is no need to charge the battery any longer on the first charge than on any subsequent charge. CyberKey rechargeables typically require one to three hours to fully charge.

It is not necessary to remove the CyberKey from the charger immediately after the battery is fully charged. The charger automatically reduces the charge current when the battery is full. Although rechargeable keys may remain in the charger for many hours or even several days, it is not recommended to leave it in a charger continuously as this prevents it from discharging normally and will slowly shorten its life.

Lithium-ion batteries do not need to be fully charged before removing from the charger. Partial charging does not harm the battery.

During inactivity it is best to charge the lithium-ion battery in the CK-RXD & CK-RXD2 at least once per month. With the CK-PLUS, CK-BLUE2, and the CK-AIR daily charging is recommended. No additional maintenance is required.

### Discharging

Rechargeable CyberKeys prefer a partial rather than a full discharge. Full discharges should be avoided. Several partial discharges with frequent recharges are better.

The battery will lose some charge capacity over time due to aging, whether used or not. Over time, the battery will naturally degrade and will not hold the same amount of charge as when new. This is true for all lithium-ion batteries. This slow degradation will not be noticed by most users during the life of the battery if the recommended charge/discharge cycles are followed.

### Storage

If the CyberKey is to be stored for a period of time, it is best to first fully charge it and then recharge it monthly to prevent it from discharging below 50%. If Bluetooth has been enabled on a CyberKey Blue, it should be disabled in the key prior to storage.

Cool storage temperature is also important. The ideal storage temperature is 59 degrees F (15 degrees C).

### Heat

The rechargeable CyberKey should not be charged or left in high temperatures such as strong sunlight or hot cars. Exposure to heat approaching 129 degrees F (50 degrees C) will shorten the life of the battery. Temperatures above this level increase the risk of fire.

### Disposal

Lithium-ion batteries should be recycled when their service life is over.

### Life

The battery typically delivers 300-500 full charge/discharge cycles. Using a quarter of the battery and then recharging it is equivalent to one-quarter charge cycle.

*The lithium-ion battery in rechargeable CyberKeys is NOT field-replaceable.*

