Chargie

Lightly Electronics

Lithium Ion Batteries - Quick Review

Even thought Lithium Ion batteries can store large amount of energy in a small compact form, they do have several issues,

1. Loss of capacity over time
2. Charging Cycles (Approx 500)*
3. Temperature (150 degrees F - Max)**

Nothing can be done about loss of capacity over time. Charging cycles and temperature can be controlled

* Completion of 500 cycles is approx 60% of battery capacity on average 2 years.

** Overheating can cause rapid loss capacity 60% or more with in months.

Chargie

What is a "Chargie"?

It is a combination of Hardware and Software to protect your mobile device battery while charging. The Developers goal is to extend useable battery life up to six years

How does the Chargie work:

The User sets the charging level (less than 100%) and temperature range (less than 150 F). The Chargie then balances the charging Rate (W) and Temperature (F) set by the User

What Happens

One Cycle is used for two recharges, doubling the Cycles

KISS

The *"Chargie System"* is designed for overnight charging.

My Setup

Charge to 95% at no more than 90 degrees F.

Test Equipment

USB A & C test meter

Google and Apple certified wall chargers and cables

KISS

Devices used to test "Chargie"

Jelly 2 (Mediatek) **HP Chromebook** (Intel i5) **Lenovo Flex Chromebook** (Mediatek) **Z Flip 3** (Qualcomm)

Razr 5G (Qualcomm) **iPhone 13 Pro** (A15) **iPad** (A13) **iPad Pro** (M1)

Each device was checked for capacity and noted.

Four Devices were tested at a time, they all started at around 20% to 25%, with a maximum charge of 95%

Results

1. Intel and Mediatek CPU's did not work with the Chargie
2. Qualcomm and Apple CPU's worked as advertised
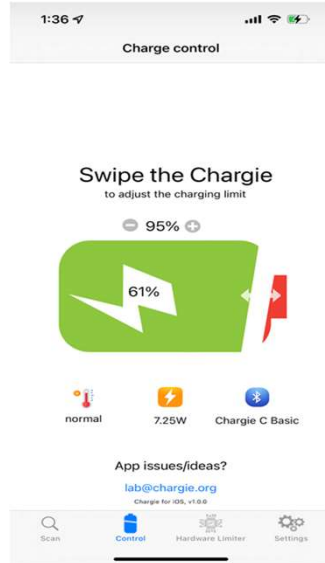3. No loss of capacity were noted over 60 days of testing

Charging time to 95% took from 5 to 6 hours, depending on battery capacity

Comment: The Chargie's appear to work as advertised, however long term monitoring will have to be done.
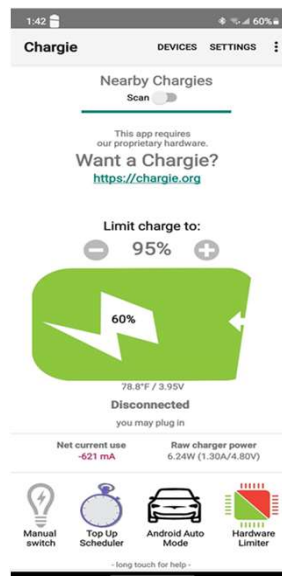
The Chargie can not restore lost capacity.

Images

iOS

Android

Chargie USB C & A