# Rancang Bangun Rangkaian *Anti-overcharge* Untuk Baterai Li-Ion

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**ABSTRAK**

Overcharge yaitu suatu kondisi dimana proses pengisian tetap dilanjutkan meskipun kondisi baterai sudah penuh 100%. Ketika supply tegangan ke baterai tidak diputus, sementara sel-sel aktif di baterai telah diisi penuh 100%, maka listrik yang lewat tidak akan mengisi sel-sel lagi tetapi akan dilepaskan sebagai panas. Itulah sebabnya, jika melakukan pengisian daya terlalu lama, baterai dan ponsel akan terasa panas.Pembuatan *Anti-overcharge* berfungsi untuk memutuskan pengisian daya gadget saat sudah penuh 100%.Pengisian daya sementara dapat dilakukan saat gadget dalam kondisi hidup yang artinya tidak dalam kondisi baterai 0%, lebih cocok digunakan pada handphone dan ada beberapa smartphone kelas 3g. Namun, tidak cocok untuk kelas 4g, disebabkan kelas 4g sudah memiliki *Anti-overcharge* yang sudah tertanam dalam gadget tersebut. Kesimpulan yang didapat yakni, pengisian daya tanpa menggunakan *Anti-overcharge* ± 190 menit sedangkan dengan *Anti-overcharge* ± 185 menit, dengan keterangan menggunakan *Anti-overcharge* tegangan dan kecepatan pengisian daya lebih stabil dibandingkan tanpa *Anti-overcharge*.

**KataKunci**: pengisian daya, overcharge, baterai, gadget

# Built Up An*Anti-overcharge* CircuitForLi-Ion Battery

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**ABSTRACT**

*Gadgets definitely require a battery, it can serve as an energy source. Overcharge is a condition when the charging process is continued even if the battery condition is full 100%. On rechargeable batteries, the active cells are reversible. When the supply voltage to the battery is not disconnected, while the active cells in the battery have been fully charged 100%, then the electricity that passes will not fill the cells again but will be released as heat. That is why, if charging is too long, the battery and the phone will feel hot. Anti-overcharge works to cut the charging line of the gadget when it's full 100%, It's work when the gadget is alive, it's means battery condition not in 0%, more suitable for use on mobile phones in this case is handphone and there are some 3G class smartphones. However, it is not suitable for the 4G class, due to the 4G class already has an Anti-overcharge already embedded in the gadget. Conclution is cherged with Anti-overcharge fast 5 minutes than without it and the voltage condition and charging speed is more stabil than without Anti-overcharge.*

***Keywords****: charging, overcharge, battery, gadget*