

started me thinking about a suitable battery charger circuit for a 12V 7Ah Lithium-iron-phosphate battery, as sold by Jaycar (Cat SB2210). I tried asking the counter staff and got a general “don’t worry” sort of reply.

I have one friend who lost half of his house when a lithium battery on charge blew up. I am becoming a little anxious about this.

Is there a suitable product that can be built or bought which can be used to charge the battery overnight, to something like a full charge? You review lots of those little modules from China; is there one of them which would be suitable? With a 7Ah battery, I would only need a charge current of 1A or so. (R. J., via email)

● You seem to be getting lithium-ion (Li-ion) and lithium-polymer (LiPo) batteries mixed up with lithium-iron-phosphate (LiFePO<sub>4</sub>). Li-ion and LiPo batteries can catch fire if they are faulty or abused, while LiFePO<sub>4</sub> is much more tolerant of abuse and is generally considered safe. We aren’t aware of any fires started by LiFePO<sub>4</sub> cells, as used in Jaycar’s SB2210 and other similar batteries.

Li-ion and LiPo batteries require different charging methods from LiFePO<sub>4</sub> (and from lead-acid). The LiFePO<sub>4</sub> charging method is more similar to that of lead-acid, which is why many such batteries are indicated by the vendor or manufacturer as able to be charged using a lead-acid battery charger. If you have a ‘dumb’ charger, you should definitely use our Charge Controller though.

We would not hesitate to use any of the smart chargers sold and recommended by Jaycar to charge their range of LiFePO<sub>4</sub> batteries.

## LiFePO<sub>4</sub> batteries are a safe option

John Clarke’s Clever Battery Charger Controller in the December 2019 issue ([siliconchip.com.au/Article/12159](http://siliconchip.com.au/Article/12159))