

# CANBAT

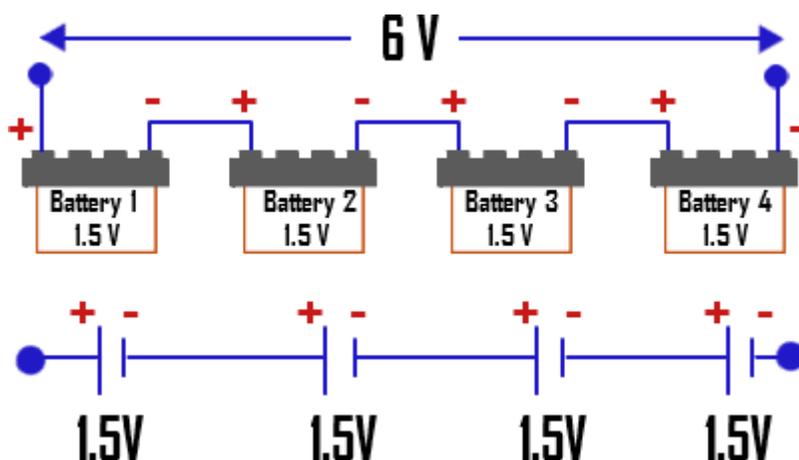
## Connecting in Series (Increases Voltage)

Connecting batteries in series means to connect the positive terminal of the first battery to the negative terminal of the second battery and so on down the string.

The interconnecting cables must have equal lengths and resistance to equalize of the load. All batteries in the string will receive the same amount of charge current, though individual battery voltages may vary.

High voltage strings of batteries in series should be limited to twenty 6 volt or ten 12 volt batteries when a single constant voltage charger is connected across the entire string. Differences in capacity can cause some batteries to overcharge while others remain undercharged thus causing premature aging of batteries. It is, therefore, not advisable to mix batteries of different capacities, make, or age in a series string.

Here is a diagram displaying an example of a series connection:



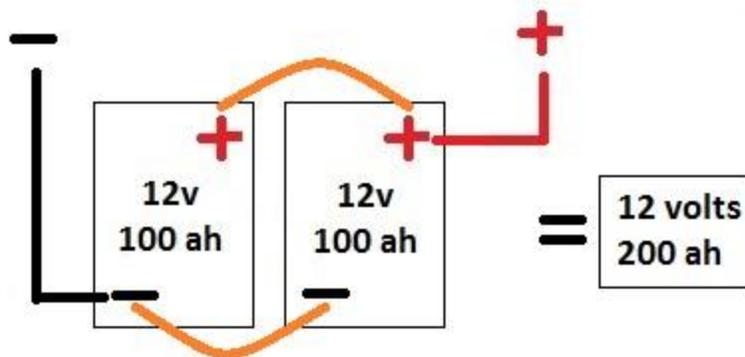
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## Connecting in parallel (Increases Capacity)

Connecting in Parallel is normally done to increase capacity. This can be done by connecting the positive terminal of the first battery to the positive terminal of the second battery. Likewise, the negative terminal of the first battery to the negative terminal of the second battery.

When charging batteries connected in parallel, batteries in the string will receive the same charge voltage but the charge current each battery receives will vary until equalization is reached. Parallel connection is used in a number of applications, such as scooters and UPS backup systems.

Here is a diagram displaying an example of a parallel connection:



Important notes: When connecting batteries together, there are a few important factors you need to keep in mind. It is important to understand the requirements of your application. For instance, be careful from doubling the capacity on your power sport vehicle if you are not supposed to as this may burn the engine.

Always read and follow the recommended guidelines for your application. Never use two different chemistries when connecting multiple batteries together. For example, never connect an AGM battery with a flooded battery. This is because the voltages of the two batteries will be different. More importantly, the charge rates will be different and the capacities may be different, thus resulting in a shortened life span. It is always best to match capacities as much as possible.