

BM PRO DEFINITIONS | HOW TO BUILD A BATTERY BANK

A battery bank is an easy DIY project and Team BM PRO has put together a simple guide for your convenience. Battery banks can be a great addition to any caravan or camper trailer, and the best part is there are only a few basic factors you need to take into consideration.

A battery bank is essentially the result of **connecting a series of batteries together for efficient application**. There are two main types of battery banks: 'Series' and 'Parallel' and how you use your battery bank and what you hope to achieve through connecting two or more batteries, will dictate the type of connection best for you. The amperage and voltage your battery bank will output is dependent on how you design and wire a product.

'SERIES' | BATTERY BANK

A battery bank designed in **series** will increase voltage (V) only. The amperage (Ah) will not change. The total voltage of the battery bank will equal the voltage of all the batteries in the series added together. A series is a neat, efficient way of achieving the amount of voltage you need without purchasing a new, larger battery.

For example, if you have three 12V batteries with a capacity of 10Ah each connected in a battery bank series, the series will output 36V and 10Ah. It is highly recommended that you use batteries with the same voltage, capacity and age in a series; otherwise you may encounter charging problems and reduced battery life.

To connect batteries in series you will need to use jumper wires. First, connect the negative terminal of the first battery (either) to the positive terminal of the second battery. Using another set of jumper wires, connect the positive terminal of the first battery to the positive terminal of the application. Then connect the negative terminal of the second battery to the negative terminal of the application. For a series with more than two batteries, repeat the first step until you're left with one negative and one positive terminal to connect to your application.

'PARALLEL' | BATTERY BANK

A battery bank designed in **parallel** will increase the potential amp hours (Ah) you can draw from, but the voltage (V) will stay the same. The total amperage of the battery bank will equal the amp hours of all the batteries in parallel added together.

For example, if you have three 12V batteries with a capacity of 10Ah each connected in a battery bank parallel structure, the series will output 12V and 30Ah. *Depending on how much your amperage is going to increase with your connected battery bank, you may require heavy duty cables to avoid burning them out.

To connect batteries in parallel first connect the positive terminals together – the positive terminal of the first battery (either) to the positive terminal of the second battery. Using another set of cables, connect the negative terminal of the first battery and the negative terminal of the second battery. For a setup with more than two batteries, repeat the first step. Connect the positive terminal of any of the batteries to the positive terminal of the application. Then connect the negative terminal of any of the batteries to the negative terminal of the application.

