Best portable solar batteries 2022

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Jackery was founded in California in 2012 by an ex-Apple engineer, and it soon established itself as one of the leading names in outdoor power generation - and with good reason. The stylish black-and-orange Jackery explorer 1000 is the best all-round portable power station we''ve tested.

The highest power output of any of the portable power stations in our list, the Ecoflow delta kicks out an impressive 1,800W - as much as some small petrol generators. That output is shared across the delta''s generous range of connections: no fewer than four USB-A ports (two of which are fast-charging), two USB-C ports and four UK plug sockets.

This 200W outdoor generator from Anker produces just a fifth of the power of the next most powerful station in our list, but that means it can stay small, lightweight, quiet and super portable. The Anker 521 powerhouse is an ideal travel companion for recharging phones and cameras and running small appliances when you''re miles away from mains power, but its built-in striplight, three-pin plug and 256Wh battery pack make it a useful piece of kit at home too, should you ever lose power unexpectedly.

The Bluetti EB70 has the best price-to-wattage ratio of any of the portable power stations we''ve tested, and uses long-lasting LiFePo4 technology that promises no noticeable deterioration of battery cell performance for at least 2,500 charge cycles.

The smaller Anker 521 is all about portability but, at the opposite end of the range, the Anker 757 is all about power. The 1,500W output is enough to handle all but the most energy-hungry equipment, whether camping or at home, and the long-lasting LiFePo4 1,229Wh battery capacity can recharge phones and laptops dozens of times over before the unit itself needs to be recharged.

A portable power station is essentially a giant battery pack, big enough to charge multiple devices and keep your home''s essential appliances running for hours during a power cut. Because they can be charged up using solar panels, they can be a cheaper alternative to using mains power, especially now that energy costs are going through the roof.

But while you might be looking for a way to cut down your electricity bills, keep in mind that even the best portable power stations are limited by their capacity. These portable power stations are perfect for providing emergency backup power in case of a blackout, or for powering up your gadgets on a remote camping holiday, but even the biggest models hold less than a couple of quid''s worth of electricity at a time.

Still, a good portable power station can keep vital appliances such as your fridge, freezer or any important medical equipment running for up to an entire day off-grid, giving you peace of mind if the power goes. Even a cheap power station is enough to run things such as televisions, outdoor lights and portable projectors -

making them just as useful for hosting garden parties as navigating the looming energy crisis.

So, what do you need to look out for when shopping for portable power? The two main specifications are capacity and output. To over-simplify it: capacity (measured in Wh, or watt hours) is the amount of energy the power station"s battery can store. Output (measured in W, or watts) is how much energy it can provide at any moment. Our list includes power stations ranging from 200W (enough to run a laptop) to 1,800W (enough to run a portable air conditioner).

You should also double check the portable power station you"re buying is the right one for your region. Most are designed with UK, European or US sockets, and aren"t universally compatible with other regions. Every station in our list is built for the UK and can be recharged using solar panels, so if you already own a portable solar charger, it"s worth checking the connection type, to make sure it"s compatible.

We tested these portable power stations while travelling and at home, paying close attention to how they performed under different conditions and with an array of increasingly energy-hungry appliances and electronics, from phone chargers and laptops to hair dryers and travel kettles. We considered a range of factors, from recharge times, inverter efficency and battery capacity, to safety features such as automatic shut down.

The hefty 1,000W power output can comfortably handle recharging high-draw tech such as laptops and phones dozens of times over, but it"s also got enough capacity for running larger home appliances such as refrigerators for 10-14 hours - all while remaining portable at just 10kg.