

How many hours does the battery inverter work





Overview

A 12V battery's duration with an inverter depends on the battery's capacity and the inverter's power consumption. Generally, it can last from 1 to 10 hours. How long will a 12V battery last with an inverter?

As a simple rule, to calculate how long a 12v deep-cycle battery will last with an inverter multiply battery amp-hours (Ah) by 12 to find watt-hours, and divide by the load watts to find run time hours. Finally, multiply run time hours by 95% to account for inverter losses. Introduction to Solar Power Battery Inverters - What Do Inverters Do?

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How long can a 24V inverter run?

Regardless of the size, the calculation steps are always the same. Using this calculation, a 24V inverter with a 100ah battery and 93% efficiency can run a 500W load for 2.3 hours. You have a 24V inverter with a 150ah deep cycle battery. The inverter is 93% efficient. You want to run a 700 watt load, so how long can the inverter run this?

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How do you calculate inverter runtime?

Divide the inverter watts by battery voltage to get the amps, then divide the amps by the inverter efficiency rating. Divide the result by the amps and you get the inverter runtime. An inverter draws its power from the battery so the battery capacity and power load determines how long the inverter will last.

How long can a 12 volt battery run a 1500 watt inverter?

A 12 volt 50Ah lithium iron phosphate (LiFP04) battery with regular depth of discharge (DoD) of 80% will run a fully-loaded 1500 watt inverter for 13 minutes. The calculation incorporates typical pure sine wave inverter efficiency of 95%.



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