https://www.caravansplus.com.au/guides/calculating-how-big-your-battery-needs-to-be-a-44.html

Caravans Plus 12v Calculation Sheet

| | | | | Usage | | |
|---|---|---|---|---|---|---|
| Note | 12 Volt Device | Watts | Amps=watts/12 | Quantity | Hrs/day | Total Current/day |
| 1 | Water Pump | | 5.2 | *1* | *0.2* | 1.0 |
| 2 | Fridge fan for gas fridge | | 0.4 | *1* | *6* | 2.4 |
| 3 | Stove Exhaust Fan | | 0.4 | *1* | *0.5* | 0.2 |
| 5 | TV - digital | 40 | 3.3 | *1* | *2* | 6.7 |
| 6 | Bedside LED Light | 0.36 | 0.03 | *2* | *1* | 0.1 |
| 7 | Ceiling LED Light | 3.6 | 0.3 | *3* | *3* | 2.7 |
| 8 | Outside LED Light | 3.6 | 0.3 | *1* | *3* | 0.9 |
| | | | | | | 14.0 |
| | | | **Amps=watts/220/85%** | | | |
| 20 | **240 Volt Devices** | | *85%* | *Edit Inverter efficiency* | | |
| 21 | Inverter Overhead | | 2.1 | *1* | *9* | 18.9 |
| 22 | Curlers | 1500 | 8.0 | *1* | *0.5* | 4.0 |
| 23 | Microwave | 1800 | 9.6 | *1* | *0.3* | 2.9 |
| 24 | Food processor | 1800 | 9.6 | *1* | *0.2* | 1.9 |
| 25 | Carving knive | 900 | 4.8 | *1* | *0.25* | 1.2 |
| 26 | Kettle | 1200 | 6.4 | *1* | *0.5* | 3.2 |
| 27 | Toaster | 1200 | 6.4 | *1* | *0.08* | 0.5 |
| 28 | Table Fan | 75 | 0.4 | *1* | *3* | 1.2 |
| 9 | Mobile phone chargers | 5 | 0.0 | *2* | *2* | 0.1 |
| 10 | Laptop | 50 | 0.3 | *2* | *3* | 1.6 |
| 11 | Shaver | 10 | 0.1 | *1* | *3* | 0.2 |
| | | | | | | 35.7 |
| | ***Daily Use A/h*** | | | | | **49.69** |

| **Batteries** | ah | Quantity | Discharge | Usable ah |
|---|---|---|---|---|
| | 120 | 2 | 50% | **120** |

| | Usable ah | | Daily usage | |
|---|---|---|---|---|
| **Days of average usage** | 120 | *divide by* | 49.69 | **2.41** |

Instructions:

Changes to LED devices

***Devices used***

**Watts** - If watts are known enter watts and *Amps are automatically calculated*.

**Amps** – If watts are not known for 12v devices they can be manually added *(this will delete the auto calculation)*

**Usage** – Enter expected hours and mins per day

**Amp Hours per day** is automatically calculated.

***Batteries available***

Enter different battery configurations

***Days of average usage***

The number of days you can expect from a full charge. No solar input or Alternator input is included here.

## 220 Inverter

For all essential 220V appliances, the watts need to be divided by 220V to get the amps/h for the calculations

| | |
|---|---|
| | |
| **Frequency/ week** | **Total / week** |
| 7.0 | 7.3 |
| 7.0 | 16.8 |
| 7.0 | 1.4 |
| 7.0 | 46.7 |
| 7.0 | 0.4 |
| 7.0 | 18.9 |
| 7.0 | 6.3 |
| | 97.8 |

| | |
|---|---|
| | |
| 7.0 | 132.3 |
| 1.0 | 4.0 |
| 3.0 | 8.7 |
| 3.0 | 5.8 |
| 2.0 | 2.4 |
| 7.0 | 22.5 |
| 7.0 | 3.6 |
| 7.0 | 8.4 |
| 3.0 | 0.3 |
| 2.0 | 3.2 |
| 1.0 | 0.2 |
| | 191.3 |
| | **289.09** |

Weekly