

DO YOU KNOW HOW LONG YOU CAN FREEDOM CAMP?

Calculating how long your battery will last

(These figures are based on an average battery bank of 200 Amp Hours)

For best battery maintenance you should recharge your battery BEFORE it gets down to **50%** of capacity. Regular drain below this will reduce the life of the battery. Recharging it when it gets to **75%** on a regular basis is even better and will make your battery last even longer.

Take your total battery bank size (eg. 200 Amp Hrs) and multiply it by the percentage you are willing to regularly discharge it (eg. 50%). This gives you your regularly available power.

$$200 \text{ Amp hrs} \times 50\% = 100 \text{ Amp Hours}$$

Sure, you can go lower than this but don't do it often or your battery will suffer.

So, say you have 100 Amp Hrs of available power. How long will this last for you?
Take your regularly available battery capacity and divide it by your daily usage.

TYPICAL POWER USAGE is 50 Amp Hrs/Day.

$$100 \text{ Amp hrs} / 50 \text{ Amp hrs per day} = 2 \text{ days freedom camping}$$

CONSERVATIVE POWER USAGE is 25 Amp Hrs/Day

$$100 \text{ Amp hrs} / 25 \text{ Amp hrs per day} = 4 \text{ days freedom camping}$$

HIGH POWER USAGE is 100 Amp Hrs/Day

$$100 \text{ Amp hrs} / 100 \text{ Amp hrs per day} = 1 \text{ day freedom camping}$$

Calculating How Much Power your Appliances Use

NOTE: 1 Amp of power used for 1 hr = 1 Amp hr

1. On the appliance it should show how many Amps it uses or, failing that, how many Watts it is. Take a note of this.
2. If you have the Amps that's great. If you only have the Watts, divide that wattage by the voltage of your system (typically 12V).

The wattage, divided by the voltage is how many Amps the appliances uses per hour.

$$\text{A } 20 \text{ Watt bulb in a } 12 \text{ volt system uses } 1.66 \text{ Amps of power per hr} \\ \text{or } 1.66 \text{ Amp hrs } (20\text{W}/12\text{V} = 1.66\text{Amp hrs})$$

3. Then work out how many hours the appliance is used for each day

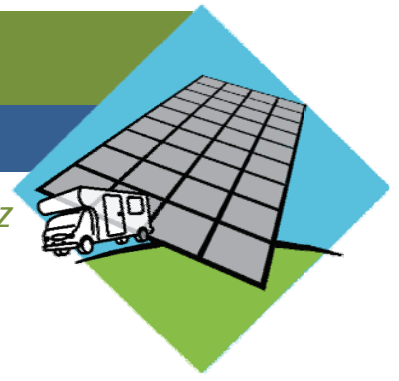
$$3 \times 20 \text{ watt bulbs used for } 3 \text{ hours/day will consume } 15 \text{ Amp hrs} \\ (3 \text{ bulbs} \times 3 \text{ hrs} = 9 \text{ hrs/day} \times 1.66 = 14.94 \text{ Amp Hrs})$$

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An example of what power you could be consuming:

<u>Appliance</u>	<u>Typical Power Consumption</u>	<u>Daily Usage</u>	<u>Consumption</u>
Typical Light Bulb (non LED)	1Amp / Hr	3 lights x 3hrs	9Amp hrs/day
Typical TV with decoder	3-4 Amps/Hr	2 hrs @ 4 Amps	8 Amp hrs/day
Typical radio	1-2 Amps/Hr	2 hrs @ 2 Amps	4 Amp hrs/day
TV or radio on permanent standby	0.5 Amps/ Hr (each)	24 hrs	12 Amp hrs/day
Water Pump	6 Amps/Hr	20 mins	2 Amp hrs/day
Fridge, electric	3-6 Amps/Hr	10 hrs @ 4 Amps	40 Amp hrs/day
		TOTAL	75 Amp hrs

How can you extend your freedom camping time:

1. Increase the size of your battery bank so you have a greater available capacity
2. Carry a battery charger and generator on board for recharging your batteries while away
3. Increase your solar capacity so you have power regularly going back into the batteries
4. Have your house batteries set up so they charge from the alternator while driving
5. Reducing your power consumption is one of the quickest & easiest ways. HOW?

* LED LIGHTBULBS

These use around 1/10th of the power of a typical incandescent bulb
Power savings of 5-10Amp Hrs daily are easily achieved

* STANDBY SWITCHES

Have a switch installed to turn standby appliances (eg TV & radio) off
Power savings of 6-12 Amp Hrs daily can be saved for each appliance

* OFF SWITCHES

Have a switch installed to turn your electric fridge off overnight
Power savings of 10 Amp Hrs daily can be achieved

* LOCATE PHANTOM LOADS

Identify unnecessary drains (eg gas solenoids)
Power savings of 10 Amp Hrs daily can easily be achieved

WE HOPE YOU'VE FOUND THIS INFORMATION USEFUL.

We deal with ALL ASPECTS OF POWER SOLUTIONS for Mobile Homes:

- Solar Panels and Solar Equipment
- Batteries, Chargers, Alternator Charging
- Solutions for reducing power consumption

If you have power problems WE CAN HELP - Call us on 09 2929103

Practical advice, great service and proven solutions to power problems in mobile homes