



# Guidance on Campsite Electricity

While many campers enjoy a 'back to basics' approach to camping, there are a few who prefer the creature comforts of a few electrical appliances during their holidays.

There are two main ways you can power electrical devices on the campsite. The first is to use a leisure battery, which is like a car battery and provides a 12V supply, and the second is an electric hook-up, which provides a 230V supply as you would find at home.

When you connect to an electric hook-up point you are able to receive an electricity supply as you would at home. This will be a nominal 230V, single phase, 50Hz supply, which is compatible with all UK and modern European caravans, motorhomes, trailer tents, folding campers and tent hook-up connections. This electrical supply can be used either directly to power 230V equipment or indirectly via a power supply unit that converts the mains power at 230V AC to a nominal 12V DC, usually in conjunction with a leisure battery. This guidance looks at how to use this electricity supply safely and discusses its limitations.

## Safety is paramount

Remember that camping on site using a 230V electricity supply within caravans, motorhomes and tents requires even more care than in the home. Because your unit is mobile there is a greater likelihood of things going wrong with an electrical installation than with the fixed installation within your house. It is therefore important you make sure your cables and equipment are maintained in good condition by simple checks every time you use it, by regular inspections by a qualified technician and also by using it in a sensible way.

The Jamboree is responsible for the safety of the electrical supply equipment up to the socket outlet on the site where you connect your hook-up cable. You are then responsible for the safety of the hook-up cable and your unit's electrical installation. However, the Health and Safety Team have an overall responsibility with the Sub Camp team for the safety of all campers while on the site, so if a member of either of these teams notes any electrical equipment not conforming to the recommendations or is connected to the electrical supply in an unsafe manner, he or she is empowered to disconnect that camping unit.



A pitch with electrical hook-up will have access to an electrical supply point within about 25 metres. The hook-up point is individually protected against overload by a miniature circuit breaker (MCB) and a residual current device (RCD).

The MCB is a device to protect the site cabling from overloading and limits the amount of current you can draw from the supply. The hook-ups at the Jamboree will have a maximum ratings of 10A and this will limit the number of appliances you can use at one time (see How Much Power table below). The RCD is designed to cut off the supply if a fault occurs in your connecting lead, caravan or tent. However, to maximise safety your unit should have its own RCD. Don't allow children to play around the hook-up installation or supply cable or allow them to connect or disconnect supplies.

At the Jamboree the supply cable plug is simply a push fit into the distribution point.

### Your supply cable

The socket outlet of the Jamboree's hook-up points complies with the British Standard BS EN 60309-2. Your connecting lead will need a plug to match this socket outlet and a connector to match the inlet to your unit, both complying with BS EN 60309-2. Such leads now come supplied with new caravans and motorhomes constructed under the National Caravan Council (NCC) approval scheme, but suitable leads fitted with the appropriate blue plug and socket are available from most camping or caravan dealers. The connecting lead must be PVC/PVC flexible cable, with three cores, each core being 2.5mm<sup>2</sup>.

The maximum cable length of 25 metres will ensure it can reach the supply bollard at most sites in the UK. Always fully uncoil the supply cable to avoid overheating. The use of a second cable is not recommended, but if it is used it must be fitted with the same BS EN 60309-2 standard plug and connector. The connection between the two cables should be raised off the ground. **Taped cable joints and ordinary 13A household plugs and sockets must not be used under any circumstances.** The cable is normally coloured orange so that it's visible and avoids being damaged by grass cutting and other activities on site.

### Connecting up

When you're ready to connect to your hook-up, make sure the RCD is in the off position and then connect your hook-up to your unit. Only then should you connect to the electricity hook-up outlet. It is good practice to check the operation of the safety RCD device before turning on your appliances by switching on the RCD and pressing the test button. If it fails to operate the system will need to be checked by a suitably qualified person. As an extra check you can plug a proprietary mains tester into a socket to check the polarity of the supply and the presence of an earth connection.



When you are ready to leave, switch off the RCD in your unit. Disconnect the cable from the hook-up outlet socket on the distribution point and then remove the cable from your unit.

### **Loss of supply**

At the Jamboree, any loss of supply should be reported to the Sub Camp helpdesk as soon as possible. If the loss of supply is because you have overloaded the circuit or misused your equipment there may be a donation requested for restoring your electricity supply. Tripping the electrical supply can make you unpopular on site. The least you will need to do is contact the sub camp helpdesk to ask them to reset the system. Please do not ask site staff to attend to hook-ups before 9am or after 9pm unless it's a real emergency.

### **How much power?**

The Jamboree site is limited to supplying 10A. In comparison, a modern domestic kitchen typically has a power supply of 20A, plus a separate electric cooker supply and a lighting supply. Hence, when camping, to keep within the limits of the campsite supply and prevent a loss of supply if a circuit breaker trips, you need to be careful about the appliances you use and how many you use at one time.

You need to ensure the total rated wattage (rated power) of equipment switched on at any one time is less than the power supplied to you. Power (in W) = voltage (in V) x current (in A), so for a 10A hook-up,  $230V \times 10A = 2300W$ , hence 2,300W (2.3kW) of power can be supplied to your unit. Particularly beware of using ordinary domestic kettles that can draw 10A or more on their own. Special low wattage kettles and other equipment are available from camping and caravan dealers. Microwave ovens can also present problems - even though they may be advertised as (for example) 800W, the input operating power requirement, particularly on start up, may be up to twice this.

Even if you were connected to a 16A hook-up, the power sockets in your caravan or motorhome may be protected by a circuit breaker of just 10A. Usually there is another one or more circuits rated at perhaps 6A or 10A, which covers the lighting circuit and possibly some other built-in electrical equipment. If in doubt consult your handbook or contact your dealer.

The supply at the Jamboree is designed on the basis of sharing the electricity feed, so the main supply is geared up to an average electrical usage, not all hook-ups taking 10A at one time. Just occasionally, at times of high occupancy and all users switch on electrical heaters and kettles at the same time, you may suffer reduced power or even a power cut, so it's important to use electricity responsibly.



This chart shows how many watts and amps normal appliances may use. It is only a guide and the power ratings marked on your appliances should be used wherever possible.

Appliance	Power (W)	Current (A)
Domestic kettle	2,000	8.7
Hi speed kettle	3,000	13.0
Iron	1,300	5.6
Camping kettle	750	3.3
Microwave oven (800W cooking power)	1,000	4.4
Domestic fan heater	1,000	4.4
1-2kw	2,000	8.7
Truma water heater	850	3.7
	or 1,300	5.6
Camping fan heater	750	3.3
LCD TV	45	0.2
Refrigerator	135	0.6
Battery Charger	100	0.4
	300	1.3
Toaster	900	3.9
Hair dryer	600	2.6
	1,200	5.2

### Electricity in tents and awnings

UK wiring regulations require special measures if electricity is to be used in outdoor locations and as conditions in tent and awnings can often be damp and affected by condensation, it is only sensible to take special measures in these situations.

Details of the hazards and ways of minimising the risks are outlined later in this document. The important thing to remember is that water and electricity do not mix. Even small amounts of water or condensation in conjunction with an electrical supply will result in a risk of nuisance tripping, fire or electrocution. Keep all electrical equipment off the ground and be prepared to stop using electricity when conditions are damp. Use electricity only when someone is present and unplug appliances and replace the covers over the socket outlets when you leave the tent.

Because of these special conditions it is essential to use a proprietary electric hook-up device, manufactured specifically for tent hook-ups. These devices have one, two or three domestic-style three-pin socket outlets and a control box with safety features incorporating miniature circuit breakers (MCBs) and a residual circuit breaker (RCD). Don't forget to test the RCD each time you connect up.

Remember also that most appliances you use will have been designed for the domestic environment and will therefore be vulnerable to condensation.



### **Be Aware of the Hazards**

- Water and electricity do not mix
- Your tent may leak and it will certainly suffer with condensation
- Mixing even small amounts of water with electrical supply equipment and appliances results in a risk of electrocution or fire
- Proprietary hook up equipment is designed to resist damp conditions, but is only fully effective when appliance plugs are not inserted and covers are over the sockets
- Most domestic electrical appliances are not designed for the damp outdoors
- Supply leads in a confined space can present a trip hazard

### **Minimise the Risks**

#### **Do's**

- Use only proprietary hook-up equipment purchased from a reputable dealer with safety devices including an RCD and an IP rating of 44 or greater
- Keep hook-up equipment off the ground and close to the appliances
- Use only when someone is present otherwise switch off and remove plugs, ensuring covers are over sockets
- Test the operation of the Circuit Breaker before plugging the appliances in
- Be prepared to stop using electricity when conditions in the tent are damp

#### **Don'ts**

- NEVER use a household extension cable, even with an RCD plug, instead of proprietary hook-up equipment
- Do NOT use household plug adaptors: and only one appliance per socket
- Do NOT allow children to be involved in the installation and operation of electricity

### **Maintenance**

Most new caravans and motorhomes will carry a three-year National Caravan Council approval certificate covering the electrical installation. However, some imported caravans and most trailer tents will not carry any kind of certification. The H&S Team strongly recommends you have these units checked and all mains electricity installations should be inspected regularly by a qualified electrical engineer.

The Electrical Safety Council recommends caravans should undergo testing with an Electrical Installation Condition Report (EICR) at least once every three years. Approved Workshops are qualified to undertake this check, but if your caravan or motorhome dealer does not have a suitably qualified person to provide a EICR then contact either the National Inspection Council for Electrical Installation Contracting or the Electrical Safety Council for a list of suitable personnel in your area.



The Jamboree does not require the production of an EICR certificate but recommends members obtain one.

### **12V supply**

Most caravans and motorhomes have a 12V supply from a leisure battery or a supply unit that converts a mains supply to 12V. While 12V provides a voltage, which should not cause a fatality from an electric shock it still has the potential to cause harm. The main hazard is from overloading supply cables. This causes heat to be generated and could lead to a fire. Always check the power rating of any equipment to be connected to a 12V socket for compatibility and consult your dealer before altering 12V wiring circuits unless competent to do so.

### **Generators**

The use of personal generators at the Jamboree is not permitted. If you do attempt to use one, you **WILL** be asked to turn it off and disconnect the power. The risk of fire presented by third party generators to the event is too great therefore, the best thing you can do is leave them at home.

### **Donation for the use of electricity at the Jamboree**

The cost of the electrical provision at the Jamboree is not inconsiderable. The attendant costs of diesel runs in to thousands of pounds, and there is a direct relationship between this cost and the provision of power for caravans and tents on the sub camps.

The basis of providing this electrical supply is that there should be **NO** additional cost to the Jamboree. Therefore, we are asking everyone who avails themselves of this service to pay to cover the costs of diesel and distribution equipment. This will be a flat fee to cover the supply of electricity for the duration of the event. The cost will reflect the costs of electricity consumption at the time of the event and we will confirm this by 1st June 2024. The number of connections is limited and those with special needs will take precedence over caravans, motorhomes and tents.

### **Additional Information**

The electrical team are happy to provide this service by connecting to existing generators on site. The Staff Sub Camp team will administer the provision of the service and manage the receipt of payment for its use when staff register on site. This way, only authorised campers should be connecting to the service.



## Terms & Conditions

1. Arrival: Campers must register at the Staff Sub Camp helpdesk before entering the campsite area.
2. Caravans, awnings, and tents must be contained within the pitch reserved.
3. Maximum power loading (10Amp) on pitch electrical outlets is sufficient for lighting, T.V., fridge, microwave oven, shaver, but NOT standard domestic kettle or hairdryer.
4. The Jamboree is responsible for the safety of the electrical system up to the socket on the distribution hook-up point. It is the responsibility of the Camper to ensure that the plug, cable and associated sockets used to connect between the hook-up point to the Camper's unit is safe. The campsite will not accept responsibility for any accident or loss arising from the use of unsuitable or unsafe electrical equipment connected to the campsite's hook-up point.
5. Do not let children play around the electric hook-up points or cables.
6. All caravans and awnings, which are parked in the vicinity of trees, are at the sole risk of the owner and the Jamboree cannot accept responsibility for damage caused by falling trees or parts there from.
7. All rubbish must be placed in the bins provided.
8. Barbecues may not be used at the Jamboree. The lighting of fires is also prohibited.
9. The Jamboree will not be held responsible for damage to your property by fire, theft or injury to persons whilst on site.
10. Radios, Televisions and other audio equipment should be played at a volume that will not disturb others.
11. Quiet must be observed after 11 pm for the consideration of others.
12. Caravans must NOT be washed on site.
13. Maximum speed limit is 5mph and hazard lights should be used when moving vehicles on site.
14. Children must be under the supervision of their parents/guardians on all areas of the campsite at all times.
15. Failure to comply with these conditions may result in you being disconnected from the power supply at any time without refund.
16. Each pitch must be left clean and tidy on departure and must be inspected by the staff sub camp team before you leave.
17. The Jamboree will not be held responsible for any loss of power to your caravan regardless of the cause. The electrical supply to your caravan or tent is being provided on a best endeavours basis and whilst everything will be done to ensure a constant and consistent electrical supply, this cannot be guaranteed.
18. Payment for the use of the electrical supply must be made to the Staff Sub Camp Helpdesk in advance of connection to the distribution point.

19. All equipment connected to the power supply should have been PAT tested in advance where required.