Barefoot® connect

Frequently Asked Questions

How is the Barefoot Connect 600 turned on?

Barefoot Connect 600 will automatically turn on when an active solar panel is plugged in. This system includes an internal battery, to preserve battery power while shipping the system goes into a 'shut-down mode". To activate Barefoot Connect 600 for the first time simply place the solar panel in the sun and plug it into the controller.

The controller will automatically re-enter 'shut-down mode" if it is not charged or used for 72 hours.

How long can the system run on a full day of charging?

All Barefoot Connect systems will run all lights for 6 hours on one full day of charging.

How long can the system run on a full battery?

All Barefoot Connect systems will run all lights for at least 9 hours on one full battery.

Why does Barefoot Power not quote full battery run times on the packaging?

Barefoot Power quotes run-time per 'solar day" which is one full day of charging. All Barefoot Connect systems come with oversized batteries, so if it is a very cloudy day the system does not fully charge there is half a day's reserve power available.

How many hours of light per lamp per night can the system run?

All Barefoot Connect systems will run all lights for 6 hours per night. If only two lights are used, they will run for 12 hours. If only one lamp is used, it will run for 24 hours.

How many hours can Barefoot Connect run a TV for?

Refer to energy use examples on the last page.

What devices can be charged through the USB ports?

The USB ports on Barefoot Connect systems have an output of 1A at 5V. This is standard USB output. Any device that can be charged or powered from a computer USB can be charged from the Barefoot Connect USB outputs. This includes smart phones and tablets.

IMPORTANT: To conserve power all Barefoot Connect systems enter sleep mode when they are not being used. It is important that phones or devices are unplugged when they are fully charged so they do not keep drawing power, preventing Barefoot Connect from entering sleep mode.

What devices can be charged from the 12V outputs?

Any 12V device that draws less than 24W of power can be plugged into the 12V output on the front of the controller. The cigarette socket cable included with all Barefoot Connect systems allows almost all 12V DC products designed for cars and caravans to operate with Barefoot Connect.

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What is the total wattage that can be powered by the system?

The Barefoot Connect systems can power a total of 53W. This includes 24W from the 12V output on the front, 24W from the 12V lighting outputs and 5W from the 2 USB outputs.

53W is equal to 4.4Amps at 12 volts.

Where must the solar panel be installed?

It is important that the solar panel is installed in a location where it will receive direct sun and not be shadowed by nearby trees and buildings. Usually the best place will be on top of the roof of the building the system is installed in.

It is also important that the solar panel faces towards the equator at a slope equivalent to latitude. For regions near the equator, the panel should be kept facing upwards, with a slope of 10 degrees in either north or south. The slope helps the rain wash any dust from the panel.

IMPORTANT: To maximise solar power, solar panels should be cleaned every three months. In very dusty areas cleaning could be required up to every two weeks.

Does the solar panel still produce power even when it's cloudy?

The amount of power produced by the solar panel is proportional to the strength of the sun. During cloudy periods the output of the solar panel can be as low as 10% of its rated power. The battery provides some backup to ensure the lights still work after a cloudy day.

How do I know the system is charging correctly?

If the battery status LEDs are flashing the system is charging. The green 100% LED should illuminate at least once a week. The battery does not need to charge to 100% every day – once a week is enough to ensure the battery is not damaged.

Does Barefoot Connect need to be charged for one full day before use?

No, as long as one of the orange LEDs illuminates Barefoot Connect can be used straight away. However, the user may not get full run-time on the first night and must make sure the system charges to 100% at least once a week.

If the red LED or no LED illuminate, the system should be charged for one day before use.

Does Barefoot Connect need to be boosted before selling?

Only if the red LED, or no LED illuminate should Barefoot Connect be boosted before selling to the end-user. The Barefoot Connect 600 battery must not be removed from the controller for boosting. Batteries must only be boosted via a Barefoot Connect controller with an approved Barefoot Power AC charger.

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Why are there no splitters and less cables in the Barefoot Connect 600 kit?

Compared to the PowaPack 5W, extra cable length is provided and the installation and wiring of the Connect 600 has been simplified. Barefoot Connect 600 includes a total of 34 meters of cable, compared to only 26 meters in the PowerPack 5W. Barefoot Connect systems include four lighting outputs, so fewer splitter cables are required.

What is the maximum number of tube lamps that the Connect 2000 or 3000 can run?

Barefoot Connect 2000 and 3000 can operate a total of 12 tube lamps at the same time – six from the rear outputs, and another six from the front 12v output.

All Barefoot Connect systems would need to be upgraded with larger panels and batteries to run more lamps than included in the box.

What happens to the controller if it is overloaded?

Barefoot Connect controllers include automatic thermal fuses to ensure that they are not damaged from over-loading. If an output is overloaded, the fuse will trip and cut the power. Once this load is removed the fuse will reset automatically and the output will continue working.

When does the controller cut the load to the battery?

Barefoot Connect systems have a low voltage disconnect point of 11.8V, which is a 60% depth of discharge. This means that 60% of the capacity of the battery can be used before the charge controller disconnects the load. This is done to protect the battery.

The controller will double flash all the loads on and off to indicate that the battery is almost flat.

How can a 6V radio be connected?

The radio connector is the white cable with the radio symbol on it. This connects onto the USB to phone charging cable and the other end plugs into the radio.

Most 6V radios in the market have the polarity of the input reversed compared to normal 12V devices. The radio cable reverses the polarity of the output so that it can power 6V radios. Because the voltage is reversed this cable must not be used to power other devices. Using this cable to power other devices will most likely destroy the device.

What is the wattage and brightness of the lamps?

Barefoot Connect Bright LED Lamps produce 75lm at 0.70W.

Barefoot Connect Ultra Bright LED Tubes produce 290lm at 3.1W.

Barefoot Power generations 2.5 lamps produced 51 and 220 lumens.

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Which phones can Barefoot Connect charge?

Barefoot Connect systems come with a phone charging kit including a 1.5m long USB to phone pin cable and 6 phone pins. Barefoot Connect can change any USB compatible phone or device.

Why do the battery status LEDs turn off at night?

When not in use the controller goes into sleep mode and the battery status LEDs turn off. As soon as a device or lamp is used, or the system starts charging the controller will wake up.

Can Barefoot Connect systems be upgraded?

Barefoot Connect 2000 and 3000 are fully upgradable. The panel can be upgraded to a total of 60W, and there is no limitation to the maximum size of the 12v battery.

It is important to review the Energy Use Tables before considering an upgrade.

Barefoot Connect 600 is partially upgradable. As the battery is internal, only the panel can be upgraded to a maximum of 30W. This would only be useful if a user wants to run more devices during the day only, as the amount of power available at night will not change.

IMPORTANT: Only one battery should be connected to Barefoot Connect at any time. Connecting an old and new battery at the same time could damage both the batteries and the controller.

Two solar panels can be connected together using a Barefoot Power solar splitter cable. The maximum combined power must not exceed 60W for Barefoot Connect 2000 and 3000, or 30W for Barefoot Connect 600.

Can Barefoot Connect operate with a 24v battery?

No, Barefoot Connect systems can only operate with 12v sealed lead acid batteries rated to charge with a float voltage of 13.8v and absorption voltage of 14.4v.

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