



MEETING ELECTRICAL NEEDS

JTB POWER SOLUTION CAN ADD
20 AMPS TO ANY MOTORHOME

by BILL AND JENN GEHR

PHOTOS BY JENN GEHR



The complete JTB kit includes all of the wiring and hardware needed for installation. A helpful, step-by-step instruction manual will direct installers from beginning to end.

Motorhomes are becoming more power thirsty every year. Not long ago, 30-amp circuits were more than enough to power all the electrical needs of many motorhomes. But as coach manufacturers add air conditioners, fireplaces, convection ovens, washers/dryers and larger, home-style refrigerators, the demand for 50-amp power (or greater) increases. Many RV parks are not equipped to keep up with power demands — especially on hot days when everyone is running air conditioners — because their circuits were not designed for power-hungry coaches. JTB Manufacturing has a simple way to add 20 amps to any motorhome, whether equipped with 30- or 50-amp service. In a nutshell, you can create 50 amps with 30-amp park service just by employing the JTB Power

Solution system and the existing 20-amp GFCI at the power post — without tripping a breaker.

Over the years, many motorhome owners have inquired whether it's possible to install an additional air conditioner to an existing 30-amp service or convert the motorhome from 30- to a 50-amp service. Because of the high costs of parts and labor, the power service conversion was usually not a feasible option. The JTB Power Solution requires a fraction of the time to install, and is a much more affordable alternative to adding increased power.

In the past, Y adapters were marketed to supposedly increase load capability only to disappoint users by tripping the GFCI, which almost all RV parks have installed for safety and to meet code. JTB designed its product to solve this problem within the PC board and to eliminate cross



JTB Power Solution labeled both lengths of Romex in the kit, helping take the guesswork out of the connection process inside the main distribution panel of the coach.

Using an existing access hole located under the floor in the bedroom, we were able to run both Romex wires up to the distribution panel.

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This smaller box houses the 20-amp breaker for the 30-foot power cord. Make sure the cord is securely clamped in place.



The JTB power cord with adapter is plugged into the GFCI, alongside the 30-amp power cord from the RV.



The circuit board is clearly marked for easy installation of the A/C and panel wire. Simply strip the Romex wires, insert into the proper location and tighten the screws to secure into place.



The JTB is mounted to a solid, vertical surface in a location close to the cable hatch exit for the JTB power cord. This gives the maximum amount of footage between the coach and campground power.

phase as well.

JTB uniquely configures available power at the hookup by utilizing the 20-amp GFCI receptacle. Keep in mind that once the JTB cord is plugged in to the GFCI power source, it switches from 30 to 50 amps automatically.

The JTB Power Solution comes complete with a steel box that houses the

circuit board with an attached load center, a 30-foot, 30-amp power cord, a 30-to-20-amp adapter, two rolls of No. 10 Romex, an installation hardware kit and a step-by-step instruction manual. JTB allows you to manage and boost the circuit of your choice: a second air conditioner, the microwave, fireplace or an electric water heater.

For the evaluation of the JTB Power Solution we opted to use the second air conditioner as the circuit of choice. The owner of the RV used for the installation often camps in hot weather and has experienced a lack of power on several occasions when using 30-amp service.

Installation time on the JTB system consumed 90 minutes, largely because of the inaccessibility of the main distribution panel. Feeding the pair of 10-gauge

Romex cables to the main panel proved to be a challenge, but, by contrast, installing the JTB unit and the power cord was relatively easy. The directions are clear and easy to understand and follow. An installation video is also available on the company's website.

The interior of the main distribution panel in the test RV was large enough to allow easy connection of the Romex, but a small distribution panel would likely

challenge even the smallest of hands. The Romex cables and the PC board are marked for a "plug and play" installation. The wires are cut to length, stripped and installed at the pre-marked locations.

There are several ways of attaching the JTB 30-amp power cord so that it can exit the RV without leaving an exterior compartment door open. A twist-lock power inlet can be installed next to your existing power cord for convenience and clean looks, or a simple cable hatch can be installed in a baggage door or in a wall next to a compartment. The cable hatch installation with the power cord attached directly to the JTB was the option we chose for this project because it was simple, yet effective.

When calculating the demands of the circuit you want to use for the JTB system there are two simple mathematical equations: watts divided by volts equal amps or amps multiplied by volts equal watts. Most appliances have at least one rating listed on the labeling.

We tested the capabilities of the JTB system at a state park with 30-amp service and a GFCI. With only the refrigerator on, we measured 115 volts AC. We turned on the water heater, both air conditioners, the fireplace and a parabolic dish heater all the while carefully watching a high-quality plug-in digital meter for low voltage. (Refrain from using a cheap voltmeter to monitor the system.) With all of these appliances running, the voltage only dropped to 108. We measured current draw using a Fluke clamp-on meter and noted the total load at the time of the test at 48.8 amps. And, after 30 minutes, did not trip any breaker, verifying the effectiveness of the JTB Power Solution (kit number 2010-100). Camping World's Club Price is \$799 and the JTB system comes with a one-year warranty.

With the increased demand for additional power to run the many modern appliances and accessories in our RVs, the automatic function of the JTB Power Solution allows for worry-free camping. So go ahead and use the hair dryer while heating coffee in the microwave and running both air conditioners, JTB has you covered. ♦

JTB Power Solution, www.jtbmfg.com

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