



The On the Road® 24' Edition contains a 2KWh of lithium iron phosphate (LiFePO4) battery. Bowlus Road Chief® was the first travel trailer manufacturer (with our Endless Highways Edition in 2016) to develop a solution with this technology and we are delighted to extend it in our On The Road® 24' Edition.

Bowlus Road Chief® lithium iron phosphate batteries are manufactured under European specifications and feature integrated cell balancing and cell monitoring for optimum protection. Lithium iron phosphate batteries are noted for a much wider range capacity than traditional lead acid batteries for both “usable” capacity” and “cycle life”. A lithium iron phosphate (LiFePO4) battery is on average about a third of the weight of a traditional battery with a safety discharge range to 20% of the battery capacity. Traditional lead acid batteries can only drop to 50% before damage occurs. A lithium iron phosphate battery can last more than 3000 charge cycles (8 to 10 years of heavy camping use) versus traditional batteries, which last between 2 to 5 years depending on care. Traditional batteries will self-discharge over time and require a trickle charge to stay healthy during storage whereas LiFePO4 can sit (for months) without losing charge.

The On The Road® 24' Edition design incorporates complete battery management at the cell level with disconnect in case of under voltage, over voltage or over temperature. Much like electric vehicles, the Bowlus Power System can dynamically adjust battery charging to protect the lithium ion phosphate battery. If needed, the system will disconnect charging from the tow vehicle and solar panel charging circuits. Traditional batteries and after market lithium systems do not have this level of protection and as a result require more attention to ensure they do not dip below safe discharge level and permanently damage the batteries.

In addition, the On The Road® 24' Edition can function as a four-season travel trailer. A special circuit allows power to flow in the travel trailer in sub zero temperatures but does not allow the batteries to be charged until they warm up since LiFePO4 batteries should not be charged at low temperatures. Since the batteries are located within the Bowlus Road Chief® shell, this warm up simply occurs by warming the inside of the Road Chief® using the heating system set on propane or 120V. Additionally, the On The Road® 24' Edition allows for the lithium battery to be very slowly charged until the battery reach over 32 degrees where it can then be charged at the full rate.



The Bowlus Power Management 2000W inverter delivers a maximum of 16A to three inverted 120V outlets. That means you can easily charge your devices or run a laptop or a CPAP machine while off grid. The inverter is also pure sine wave, which means that all electrical appliance work just like plugging in at home. A control panel allows monitoring of the entire 12V system. This panel can connect via Bluetooth allowing all this information to be checked via a smartphone.

Overall the usable power is approximately 25% greater than was previously (a long weekend off grid) available in the On The Road® Edition, which is dramatic more than any other travel trailer (other than our Endless Highways Edition). The On The Road® 24' Edition charges at up to 60 amps so charging the lithium batteries from 20% to 80% takes just a few hours. The On The Road® 24' Edition intelligently manages itself where as any traditional battery system requires owners to stay “on top” of their power usage.

The article runs a little longer than our usual ones. However, your power system is often not addressed until after purchase. Whether you are looking to be on or off the grid you need a power solution that will ensure maximum flexibility and reliability. At Bowlus Road Chief® we focus on meaningful design so you can make every adventure your best.

Sincerely,
Geneva Long
Bowlus Road Chief®