

Kinetik

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KINETIK TECH GUIDE & FAQ

The number one reason why electronics fail is due to lack of power!

- Lack Of Power = Low Voltage
- Low Voltage = Increased Current
- Increased Current = Increased Heat
- Increased Heat = Fried Amplifiers & Electronics

By providing your amplifiers and electronics with the proper amount of power they will run cooler, they will run more efficient, they will perform better and they will last longer!

What do I need to know BEFORE installing a Kinetik Power Cell?

The first thing most that comes to mind when lights are dimming or amplifiers are going into protection is to replace or add another battery. If the alternator is not charging properly, you must fix the problem before adding power. Adding more than a few hundred watts to a vehicle will tax the factory electrical system and will not provide the peak performance, power output or lifetime of the added electrical equipment, amps etc. An upgraded alternator must be installed to insure maximum performance above this wattage.

Always check and LOAD TEST the alternator and battery currently in the vehicle. Never install a Kinetik Power Cell or any other additional battery in a vehicle that has not had a thorough electrical system check. Simply checking the voltage of a battery or alternator can not determine its condition. A load must be applied to find the maximum current output at any voltage. If the alternator and battery already in the vehicle are not in good working order, adding additional power storage devices will offer nothing more than a short term solution.

How do I choose the correct Kinetik Power Cell for my application?

Kinetik makes choosing a Kinetik Power Cell simple. We made our model numbers equal to the wattage needed for your vehicle. For peak performance and the maximum lifespan of all electrical equipment in your car, simply add up the total wattage needed including all amplifiers, lights, winches, video and all other electronics and make sure the model numbers add up the same amount. Allow from 800 to 1200 watts to run the vehicle depending on the electrical requirements if you are replacing the under hood battery also. For example; a car with a stock 90 amp alternator can use up to 1200 watts to run the factory equipment already in the vehicle (90 amps x 13.6 volts = 1224 watts). Remember, there is a reason the factory put that size alternator in the vehicle in the first place and it was not so you could have extra power to run your aftermarket equipment! You must add power if you increase the demand. If you add a 1000 watt amp and a 200 watt 4 channel amplifier and allow 1200 watts to run the car then make sure the Kinetik model numbers add up to 2400. 1200+1000+200=2400. Assuming you are replacing the starting battery with a Kinetik Power Cell, install the size that best fits the space (for example an 1800) and add the rest of the 2400 needed to the rear near the amplifier (a 600). In this car a KHC1800 and a KHC600 add up to 2400 watts total and the car should have plenty of power assuming everything else is working properly.

How do I install my Kinetik Power Cell?

• Installation Location

Kinetik Power Cells can be mounted anywhere in a vehicle since they are sealed, non-hazardous and do not leak. We recommend installing the Power Cell close to where it is needed for best performance. When you install amplifiers or other electrical equipment in the rear of a vehicle you should try to provide power as close as possible to the load for maximum current and voltage. The best case scenario is to have the Kinetik model numbers match the demand near the load. If you add 1200 watts in the rear of a car then try to add 1200 in the rear if possible.

• Wiring

In an amplifier install, wire the positive and negative power wires from the amplifier directly to the Power Cell with as few breaks or connections in the wire as possible. Connect the front Kinetik Power Cell or battery to the rear Power Cell using proper gauge wire (see wire gauge chart in the manual). It is best to run both positive and negative wires from the front to the rear Power Cell. When a negative wire is not run all the way then ground the Power Cell to the frame or body of the car. We strongly advise soldering all ring terminals any time they are used. Keep in mind the most important connections you can make in an install are between the Power Cells and the amplifiers or load. Use the wire gauge chart in the manual to determine the recommended cable length.

• Mixing Different Battery Technologies

Kinetik Power Cells are compatible with most standard 12 volt charging systems and battery technologies. We do however advise using Kinetik Power Cells exclusively throughout the vehicle for maximum voltage, performance and longevity of aftermarket electronics as well as the Power cells. This will minimize self discharging of the power storage

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devices in the vehicle while not in use also. Kinetik Power Cells have a very low self discharge rate much lower than that of a standard 'wet cell' car battery. When different types of power storage devices (batteries or Power Cells) are used in parallel in an electrical system, current will have a tendency to flow between storage devices unnecessarily resulting in heat build up and loss of power where it is needed most. When Kinetik Power Cells are used throughout the install, current will flow directly from the Power Cells to the load in a balanced manner minimizing 'fighting' between unlike storage devices.

I bought a Kinetik power cell and after a week my lights are dimming again, why?

Professionally check your alternator and charge then load test the starting battery. When lights are dimming people have a tendency to add power storage devices instead of checking to see what the real problem may be. If an alternator or front battery is bad then adding more power will only temporarily solve the problem until the new Power Cell is dead too. The reason the lights stopped dimming when adding the Kinetik Power Cell was because you 'recharged' the car with the new cell instead of replacing the alternator or battery that was bad. Kinetik Power Cells rest at 13 volts after being fully charged and allowed to cool. Most car batteries rest between 12.6 and 12.8 volts. If your voltage is lower than this on a vehicle after being allowed to cool down with the motor off, check your battery and alternator immediately.

I heard that adding more batteries to my car will lower the voltage and is harder on my alternator, is this true?

Adding multiple Kinetik Power Cells to a vehicle will not add extra load on your alternator or lower you voltage in your car like adding 'wet cell' batteries will. Due to the low ESR and high voltage of Kinetik Power Cells, your voltage will actually increase. Kinetik Power Cells also charge more efficiently and quickly than a standard 'wet cell' battery reducing the stress on your alternator.

My amplifier has a highly regulated power supply that makes the same power no matter what the voltage in my car is, so I do not need an extra battery!

Wrong! Ohm's law is not negotiable. Yes a highly regulated power supply can help stabilize output of an amplifier, but the power has to come from somewhere. If an amp is trying for 1000 watts output and your voltage is at 14 volts then you need 72 amps of current to provide this (14.4 volts x 69.4 amps = 1000 watts). If voltage drops to 10.5 volts while the amp is trying to do 1000 watts a regulated power supply will automatically demand 95.2 amps of current. If the electrical system was already taxed at 69 extra amps, then 95 amps is only compounding the original problem lowering the voltage even more and starting the downward spiral to fried electronics. No matter what type of amplifier you have, higher voltage is always better. Higher voltages reduce the required amount of current to provide the same wattage output and as a result your amplifier runs cooler. Remember...increased current results heat and heat kills amplifiers and other electronics. Woofers and full range speakers alike will always sound better at higher system voltages because it is much easier for the amplifier to maintain wattage and also damping factors which is what 'holds' the speaker in place keeping it from flopping around like a wet piece of cardboard.

My lights are dimming. Will adding a Kinetik Power Cell fix it?

Yes it will IF the alternator is the proper size and in good working order and the front or starting battery is in good condition. Follow all recommendations on wiring and Power Cell selection from earlier. If extra power is what is needed at the amplifier and a faulty electrical system is not the cause of the voltage problem a properly selected Power Cell will add enough power to run the aftermarket equipment. A Kinetik HC600 has many times more stored energy than a 100 farad capacitor.

How do I charge and test my Kinetik Power Cells?

Kinetik Power Cells can be charged in a properly functioning vehicle charging system or with any high quality 12 volt battery charger. For best results and maximum power output and lifecycle for outboard charging, use a Kinetik power supply or maintainer to charge and maintain your Power Cell. If you are charging with an automotive type charger always use chargers that are "voltage regulated, two stage, Automatic or microprocessor controlled". Do not use chargers that only have amp settings such as 2, 5 or 10 amp settings that do not regulate voltage. These chargers increase in voltage as the battery or Power Cell charges leading to an over voltage situation that will ruin the cell. This is true for any 12 volt battery or Power Cell. The proper charging range for Kinetik Power Cells is between 13.5 and 14.4 volts. Any quality battery charger will stay in this range. To "bulk" charge or quick charge your Power Cell for one to three hours use voltages between 14 and 14.4 volts. To saturate (fully charge) or maintain your Power Cell for extended periods of times up to months at a time, use a float voltage between 13.5 and 13.8 volts. Kinetik power supplies and maintainers automatically switch from bulk to float charge as needed during the charging process to optimize the performance, lifecycle and charging time of your Power Cell.



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