Are Car Batteries AC or DC Explained

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Car batteries use DC current because AC power can"t be stored in batteries. Since AC or "Alternating Current" switches back and forth, it"s a little more complicated to use in car batteries.

Before we get into whether a car battery DC or AC, let"s check the basics first. Simply put, AC refers to the Alternating Current. It"s nothing but the streaming of electrons. But the direction those electrons follow differs from AC to DC current.

While AC current alternates the direction throughout the journey, DC imoves in a straight line from the reservoir to the engine of your vehicle. AC current was first invented by Nicola Tesla and DC was invented by Thoms Edison.

For alternating the direction, AC current creates a curve wavelength. It provides long-distance travel of electrons without power loss. By diverting the line, the AC current adjusts the voltage so it doesn"t harm any appliances.

The main reason why a car battery doesn"t run on AC power is the frequent changes of direction in AC power. I mean, imagine AC power changing its direction 50 times per second. It will require the battery to change its every terminal"s polarity at the same interval (I mean, yes, 50 times in a second) which is close to impossible.

Moreover, imagine you"re storing AC power in a battery. To do so, you have to connect an AC supply to a battery which means it"s only possible to charge the battery during the positive half cycle.

Similarly, the battery can discharge the power during the negative half cycle. If you count the average voltage or current in a complete cycle, you"ll get zero. Therefore, the chance of storing AC power in a battery is a big zero.

Also, the fact is, DC power also cannot be directly stored in a battery. However, it"s stored in the battery for future use only after getting converted into chemical energy.

Although there are no AC batteries, AC current can be generated by converters. If you use an AC converter on a DC battery, it will offer more control of the energy source and keep the power in a portable battery unit.

The power grid is one of the most common examples where DC batteries are associated with AC converters. And, the electronics of your car mainly use DC power because it flows in a single direction which makes it easier to control the transistors of the electronics.

The biggest compelling reason for it is that DC batteries offer high efficiency at a lower cost. It helps transfer

more power over very long distances (more than 1,000km) ensuring low electrical losses.

You already know whether a is car battery ac or dc. There are so many differences between these two types of batteries. Among them, most differences are told in the definition of both battery types. Let"s learn some more differences between them.

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