



# Facts about Power Caps



## The Truth About Power Capacitors

Power capacitors (also called Stiffening Capacitors\*) are large capacitors that are used to supplement the vehicle's electrical system. This device acts as an electrical storage "buffer". It stores power until needed for high electrical demands such as heavy bass notes. Because the demand for power is so great on heavy musical passages the stock electrical system may not be able to keep up. The power capacitor is able to store current and then release it when needed by the stereo system. It delivers this power more quickly than the stock electrical system because the power capacitor has a much lower internal resistance. Power capacitors have two terminals, positive and negative. They are wired with the negative terminal to ground and the positive terminal wired inline with the amplifier's main power lead. Preferably as close as possible to the amplifier.

## Do You Need a Power Capacitor

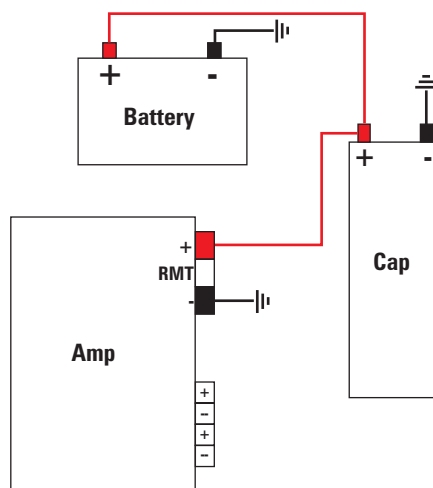
The real question is do you need one. If you have a low powered system without subwoofers than I would say no. If you have a high powered system with multiple amplifiers and large subwoofers than I would say yes. It really depends on the current needs of your system and the type of music you listen to. You may also be helped by a power capacitor if your headlights dim when you have your stereo turned up. This is most noticeable when music with a heavy beat is played. Your headlights will dim to the beat. Before adding a power capacitor for this reason I would have your electrical system checked out. Especially the connections between the alternator and the battery, the ground strap and the battery and the ground strap and the chassis. If everything checks out and you still have dimming headlights then you might try installing a power capacitor. It will provide the amplifiers with the extra current they need and will keep the system voltage from dropping (voltage sag).

## What Size Do You Need

Since power capacitors first came on the scene there has been a general rule of 1 Farad per 1,000 watts. Doing the math is pretty simple. Just divide your amplifiers rated RMS power by 1,000 to get the number of Farads you need. Capacitors usually come in 0.5, 1.0, 1.5, and 2.0 Farad ratings (for cylindrical capacitors) and you can connect the capacitors in parallel if you need more capacitance then is available in a single power capacitor. Larger ones are also available in the double digits. These will be in a rectangular chassis and may even be made to look like an amplifier.



## Single Cap connection



## Double Cap connection

