Boost converter power supply:

The Boost Converter power supply is a simple DC to DC converter. Conventional push/pull power supplies convert DC to AC and then steps up AC voltage. This stepped up AC voltage then has to be converted back to DC for the amplifier to use. Since you are converting it from DC to AC and back to DC again, there is a significant amount of loss and it requires a lot of electrical components to do so.

The Boost Converter steps up the DC voltage directly to a higher DC voltage. There are approximately 60 percent fewer parts and that means higher efficiency. A Boost Converter power supply is more than 90 percent efficient as compared to about 70 percent for a push/pull power supply.

The Boost Converter is also fully regulated from 11 to 16 volts, which means the power output from the amplifier will remain constant within that voltage range. A conventional non-regulated amplifier output will vary as the input voltage varies. The output of the amplifier is not consistent and will vary with the speed of the engine and the voltage supplied to the amplifier. A KICKER Boost Converter power supply will always have a consistent output as long as the voltage is between 11 and 16 volts.

The major advantage of KICKER amplifiers with the Boost Converter power supply is that the amplifier converts almost 90 percent of the power coming into the amplifier. Very little is lost to heat, so a large heat sink is not necessary, keeping the size of the amplifier to a minimum because a large heat sink is not needed to dissipate the heat generated by an inefficient power supply.

Some amplifiers on the market are similar in size but will start to limit their power output as they reach operating temperatures as low as 100 degrees Fahrenheit. These other small footprint amplifiers will sometimes reduce their power by as much as 75 percent at slightly warmer ambient temperatures, while others will quickly go into thermal protection and then won't have any output until they cool off. The KICKER Boost Converter will not reduce output or lose power and will not shut down from thermal overload prematurely.

The KICKER amplifiers with the Boost Converter power supply also use MOSFETs that switch the output five times faster than conventional Class D amplifiers. The damping on the output of these amplifiers is greater than 1,000 for the best subwoofer control possible as compared to less than 100 on conventional Class D amplifiers. The combined technology makes them the best sounding and most efficient amplifiers KICKER has ever built.

Now you can have a very powerful amplifier that can fit just about anywhere, including behind panels, and you won't have to worry about it shutting down from thermal overload or limiting the power they produce.

Kicker Training Department 2017