This requires a basic understanding of series resistances in a circuit. If you lack that, hopefully you have a basic understanding of how Google works. If you lack that, feel free to use Bing.

Voltage adjustment and regulation can be as complex as an industrial regulator like a GE Raptor or Murata OKR. It can also be as simple as a variable resistor. Let's look at how the latter works.

Every resistance in series with a load drops a voltage and dissipates heat in the form of watts. That's a fundamental electrical concept that tends to escape some vapers. When you consider a basic unregulated box, every resistance is a watt burner. That goes for the contact resistance of the battery holder, the internal resistance of the batteries, the resistance of the copper in the wires, the resistance of the solder joints, and the resistance of the 510 connection. Now that I said that, we can take those resistances for granted and focus on two specific resistances: the atomizer and the variable resistor.

Let's say you have a .5Ω atomizer. All those mod internal losses aside, all the voltage is dropped across that load. So you want to have less voltage dropped across the atomizer. You think "they use a pot on Raptors, but I don't like soldering more than three pins, so maybe I can use a pot without the Raptor". So let's use a 1 ohm variable resistor set at three quarters (.75Ω). These numbers are just for demonstration. It's all basic math based around Ohm's law. So we need to look at the total resistance of the circuit so we can determine the current. Current is the same at all points in a series setup, so we can use that to determine voltage drop. .5Ω+.75Ω is 1.25Ω. We'll say 4V is being supplied. Ohm's law is V=IR so I=V/R. 4V/1.25Ω is 3.2A. Now let's plug that back into our atomizer load and see what voltage it actually gets. V=IR so 3.2Ax.5Ω is 1.6V. That'll give you about 5W of vape. That's fine, but let's see what happens with the variable resistor. 3.2Ax.75Ω is 2.4V. That's more than the atty sees. The variable resistor is burning off over 7.5W of power.

As you can see, the variable resistor needs to be rated to dissipate a decent amount of heat even at wattages far below where most of you vape. How do things change when we get into the really low builds? Let me do some more math for you so you're saved the effort of having to buy a calculator. We'll do all that again with a .05Ω atty and a 4V supply. We'll turn the pot to .1Ω for the sake of demonstration. Total resistance is .15Ω, current is just over 26.5A and total power is just under 107W. Breaking that down by each component, we have about 35.5W at the atty and 71W at the variable resistor. Your variable resistor requirement just got a whole lot bigger.

Here's an example of the kind of pot you'd need for such an application:
http://www.ebay.com/itm/100W-1-OHM-High-Power-Wirewound-Potentiometer-Rheostat-Variable-Resistor-/400297872817

Notice the dimensions of the variable resistor. It’s rather large. It's also expensive. As much as I would love to see one of you do this for my entertainment, I still recommend against it.