N8XJK Super Booster

I recently purchased the N8XJK Super Booster. Here are my initial impressions (I'll update this post later if anything changes).

Purchase Method

West Mountain Radio makes great product, but their shipping to Canada is pretty expensive. Here is what it would have cost to get the booster shipped here (in USD):

Shipping Method

United Parcel Service (1 pkg x 3 lbs total)	
UPS Worldwide Expedited	$102.93
UPS Saver	$109.27
Customs/Duties/Taxes:	+$13.00

ATTN CANADIAN CUSTOMERS!

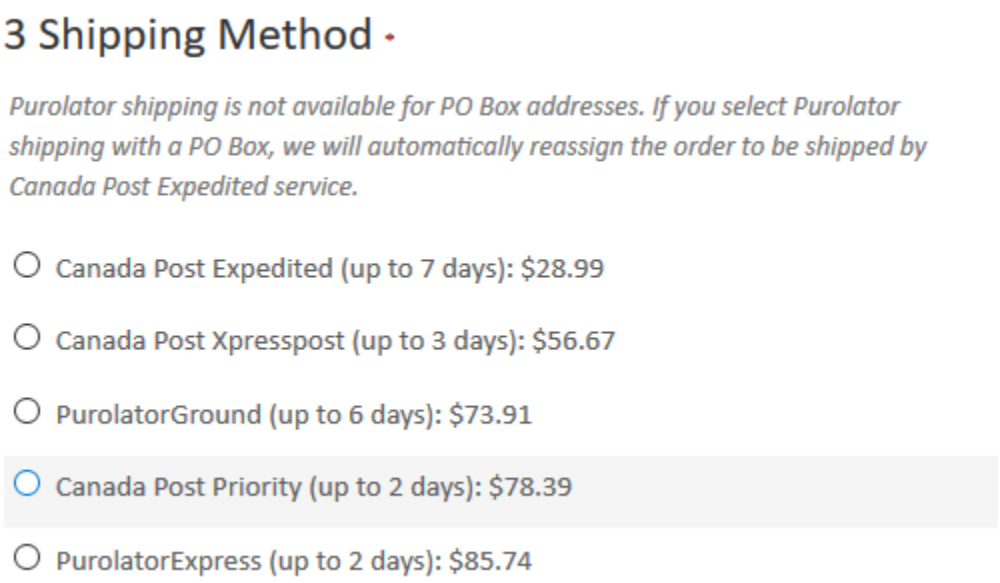
For Canada only, the cost calculated during the order process includes shipping, brokerage, and all duties/taxes.

Thankfully, GPS Central in Alberta carries West Mountain Radio gear and sells it for pretty much the same price (after exchange rate):

	Booster	**Shipping**	**Duty / Taxes**	**Total**
WMR (in **USD**)	$249.95	$102.93	$13.00	$365.88
WMR (in **CAD**[1])	$354.93	$147.58	$18.46	$520.97
GPS Central	$360.00	$20.00	$45.60	$425.60

The Power Booster is currently not listed on GPS Central's website, but I sent them an email and they have it in stock so I was able to buy it over the phone, and I received it 3 days later.

Radio World in Ontario also carries West Mountain Radio equipment, but their shipping is a bit more expensive (probably because of distance). Here's the shipping options for a similarly sized item (they also don't have the Power Boost on their website yet):



We have a list of retailers on the Link page sorted by distance (and most-likely by shipping prices).

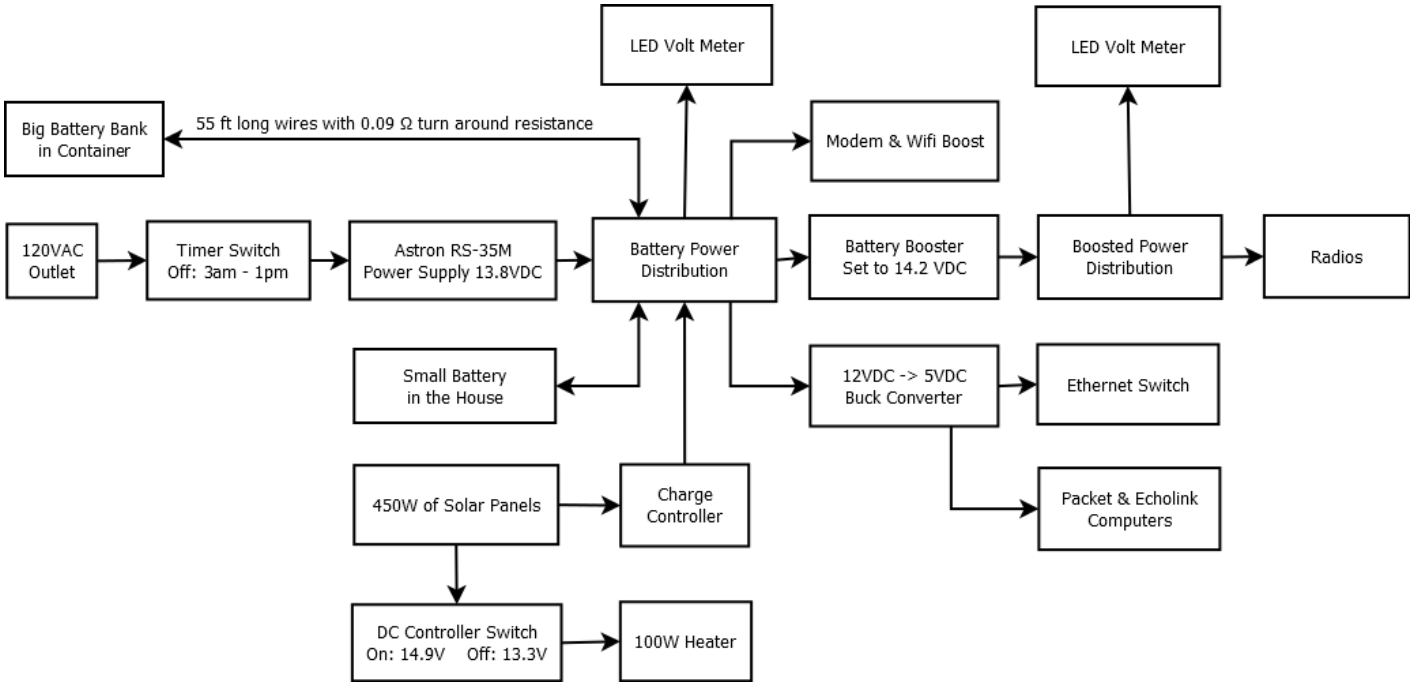
About The Unit

The Power Booster is meant to boost the voltage of a battery that's as low as 10.5V to as high as 15V.

The idea is that while transmitting at high power (say 50W or 100W), the voltage that the radio sees can easily drop below 11.7V because of the voltage drop. This is totally fine for the battery, but many radios need at least 11.7V to function properly. So without the booster, a battery that is still 50% full could be useless for transmitting at high power. The Booster ensures that the radio sees a constant voltage above 13V even if the battery drops below 11.7V, which allows us to use more of the battery's store energy.

My Setup and First Impressions

At the moment, I have my main battery bank in the container feeding a distribution block in the house, which feeds a few low-power items as well as the Power Booster, which feeds a second distribution block, which feeds four radios. Each distribution block has a small LED Voltmeter. The Solar Controller and the Power Supply (on a timer) feed the battery side distribution block to charge the batteries. I also have a smaller battery in the house that helps keep the voltage drop along the 55ft-long wire to a minimum when transmitting.



Here are a few things I noticed:

- When connecting the Booster for the first time (with no load on it), I noticed that the input voltage of the distribution block dropped very quickly for a very brief moment, which was enough to reboot the Packet and Echolink computers as well as the modem. I'm not sure if why that happens but I tried it a few times and it happened every time. As such, I would suggest having everything turned off before connecting it. Once connected, there was no other issues.
- I initially set the output voltage to 14V, and using the batteries, everything worked as expected. I then tried to turn on the power supply to charge the battery and the external speaker of my radio started picking up a hum. I lowered the output voltage until the hum disappeared at 13.3V. For some reason, the booster seems to be noisy when boosting the power supply voltage from 13.8V to 14.0V. With a lower output voltage, the booster simply passes the power supply voltage without any changes and the hum goes away.

[1)]

The Exchange Rate was 1.42 when I bought it