



To run the power 'up' coax, what you are doing is using the center conductor of the coax going to the antenna to carry the DC power for a mast-mounted preamp at the antenna. The way you accomplish this is to interrupt the coax center conductor with a 0.1uF, 0.01uF, & 0.001uF trio of 100V (more is better, 50V would be OK though) disc or monolithic capacitors IN SERIES with the coax center conductor. That way, any DC voltage you put on that center conductor has no path to the receiver. Then, on the antenna side of the 'blocking' capacitors, you feed your DC into that center conductor through an RF choke. Preferably one of those old 'pie-wound' 2.5mH chokes, but at these frequencies (50MHz to > 1200MHz) even a 100 uH choke would be OK.

The best way to accomplish this is to use a small, metal minibox. Put 'female' chassis-mount connectors (SO-239s or Type N's if that's your choice of connector... mine is BNC) on either end. Use a small power connector (easiest thing to use is the female mate to whatever connector is already on your "wall-wart"... but I prefer the Switchcraft 712A 2.5mm coaxial power jack. See: <http://www.switchcraft.com/products/pdf_files/jack-120_schematic.pdf>.

IMPORTANT: BEFORE anything else, if you're using a "wall-wart", check its connector, and see if '+' is the center (as it ought to be) or the outer part of the connector. Consumer devices tend to do it wrong (that's an "IMHO" kind of thing!) and put '+' on the outer part, with '-' in the center. Once you know what's what, polarity-wise, wire your chassis power connector appropriately. Be sure to use another 0.1uF, 0.01uF, & 0.001uF trio of capacitors as a bypass at that DC input connector (to ground this time, of course.)

Make CERTAIN you know which connector is IN and which is OUT. I consider the INPUT connector to be the one FROM the antenna-therefore it's the one that will have the DC on it. So... the OUTPUT goes to your scanner. You could THINK of it the other way around... just be certain the DC goes to the antenna.

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