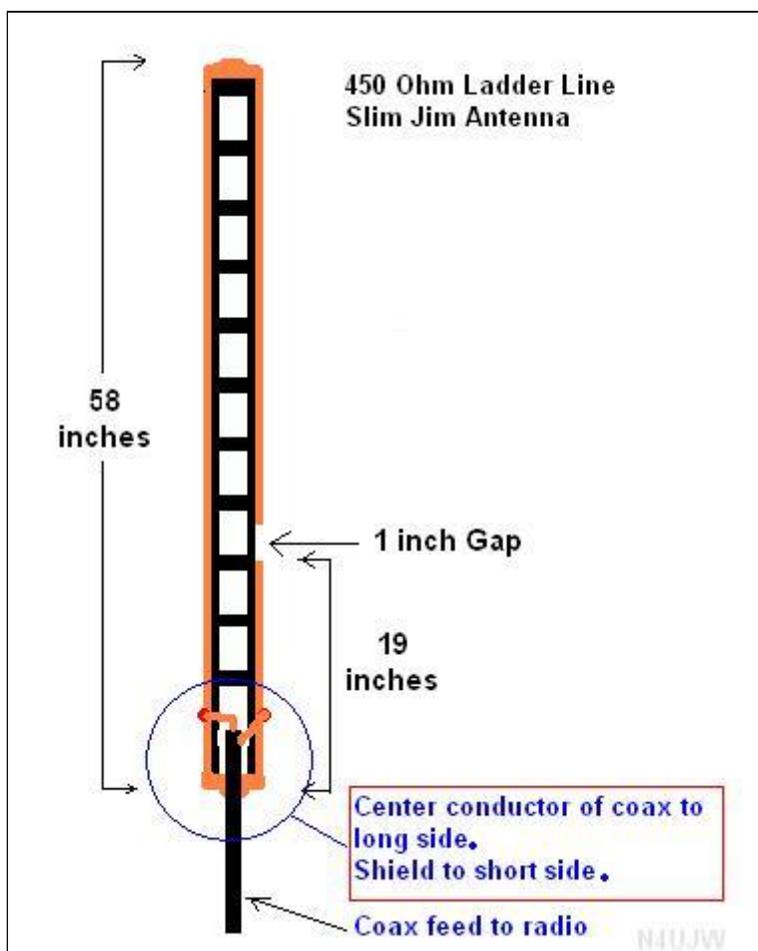


The 450 OHM Ladder Line Slim Jim Antenna

By KE4NU - Alan Wilson, Victor, MT

Want to homebrew an antenna for 2M? Want something that actually works well? Want to get it up and running in an hour or less? Enter the slim jim variation on the jpole.

After researching the internet for easy antennas to build I came across an article or two referring to a [slim jim antenna](#). Unfortunately, they were constructed out of copper tubing or aluminum tubing which was too expensive and I didn't have any laying around the shop. I also saw one using tv twin lead. Well, I didn't have that either but I did have quite a bit of 450 ladder line laying around. So, I decided to adapt the [tv twinlead project](#) to mine using ladder line.



Construction (Refer to drawing)

1. Measure out and cut about 59 or 60 inches of ladder line.
2. Strip both ends (top and bottom) about an 1/2 to 3/4 inch and bend each toward the center so they will overlap each other.

3. After you overlap the wire, measure the entire length of the antenna. Your shooting for 58 inches total length after stripping and overlapping the wires.
4. After achieving your 58 inches (give or take a half inch), solder both ends.
5. Determine which end has the solid plastic closest to end and put a hole through it so you'll have some way of hanging the antenna. (cable tie)
6. On the opposite end (bottom end), measure up 19 inches from the actual bottom (where wires are overlapped), and cut out a 1 inch gap of 1 wire from one side only leaving the gap. You should end up with a very thin slim rectangle from top to bottom with a 1 inch gap starting at 19 inches up from the bottom on one side only.
7. Have an rg58 or rg8x pigtail made with a pl259 on one end and shield and center wire tinned with solder on the other end.
8. Measure up about 4 inches from the bottom and remove the insulation from each side of the Slim Jim antenna using the 4 inch measurement as your center point and remove the insulation about 2 inches up and down from the 4 inch mark to give you access to the conductors on each side of the antenna for swr tuning.
9. Connect center conductor to the long side and shield to short side in a temporary fashion. (I used crimp connectors bent on the end of the pigtail which would connect around the each wire of the antenna for testing).
10. Check your swr with an inline meter or built in to your radio. I used the former (inline swr meter), with an ht. Slide the pigtail up or down for your best swr and solder in place.
11. Using 2 or 3 plastic cable ties, wrap them around the antenna and pigtail so they will be parallel and snug and to reduce strain on the soldered connection.
Your done, hang it and talk!

Testing

I used a commercial jpole to compare the 450 ohm slim jim with. I hung each antenna on a hook using a plastic cable tie at 10 ft using same length and type feed line and exciter at same power level.

I could hear normally marginal signals an average of 2 S units stronger on the slim jim and I could work into repeaters that I could barely hear on the jpole.

Conclusion: I don't care what certain people publish about the slim jim not being any better than a standard jpole. **It DOES make a difference on transmit and receive.**

**I used neither ferrite beads, nor a homemade coaxial balun to keep the coax from radiating. You may use either one you like if needed.
Now, go make something homemade. Lemonade would be nice on a hot day!
73 Alan - KE4NU ke4nu7@gmail.com**