

Slinky Dipole Antenna

By: Gennadiy Kuzmichyov, UN7FGO

I found descriptions of different Slinky Antennas in the Internet and I decided make my own one. At first, I need a metal Slinky. I bought this one in one of the local toy store. **Figure 1** shows the slinky toy. Length of the Slinky was a bit more the 19 meters, so the antenna should work at the 40 meter band. (you may found information on spiral antennas at:

http://www.antentop.org/library/shelf_helical.htm)

In several hours the antenna was made and installed inside of my room. **Figure 2** shows the slinky antenna in the room. Balun is sitting in the central box at the antenna. Antenna analyzer was hook up to the antenna terminals and measured the antenna impedance and antenna SWR. **Figure 3** shows antenna impedance/SWR Vs frequency. Antenna has SWR less the 2 at 40 and 15 meter band.

So the antenna test shows that the antenna could operate at the two bands without ATU. After the test antenna was reinstalled on my balcony. Balcony was at four floor of the building and the main direction for antenna radiation was closed by nearest building. **Figure 4** shows slinky antenna installed on the balcony.



Figure 1

Slinky Springy



Figure 2 Slinky Antenna in the Room

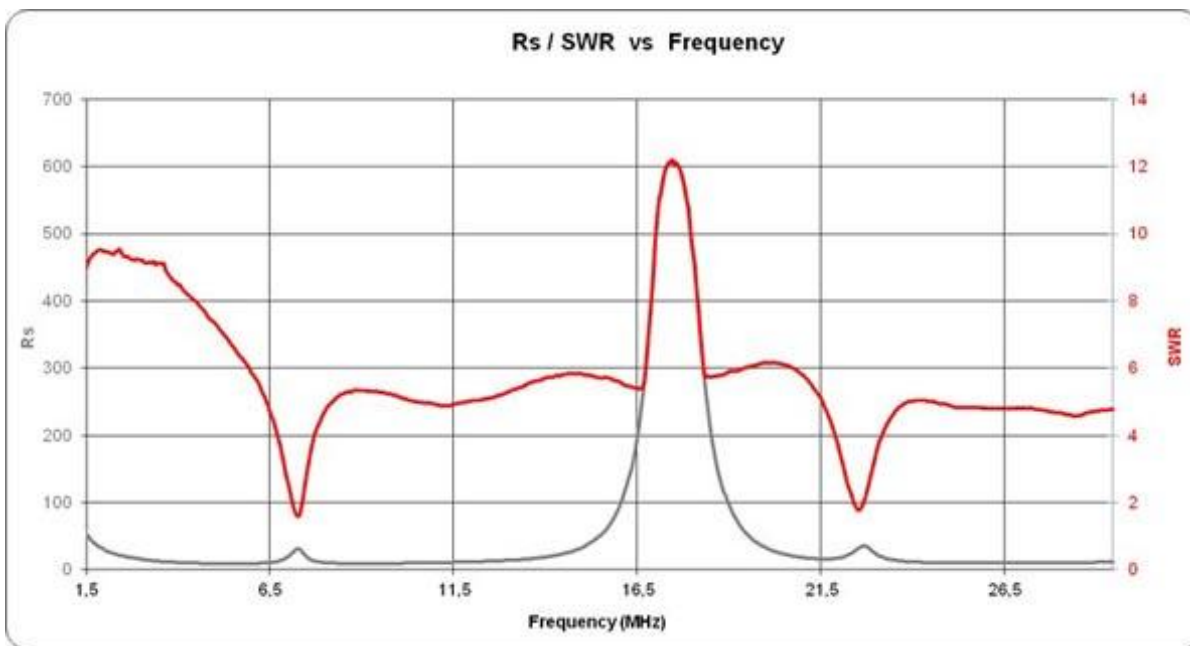


Figure 3 Antenna Impedance/SWR Vs Frequency

My balcony is small in sizes thereof the slinky antenna has only two meter length, each slinky vibrator has one meter length. Antenna analyzer showed different plot for antenna impedance/SWR however resonances at 40 and 15 meters band still were present. Figure 5 shows antenna impedance/SWR Vs frequency for balcony slinky antenna. Figure 6 shows fine plot for antenna impedance/SWR Vs frequency for balcony slinky antenna at 40 meter band.

Figure 7 shows fine plot for antenna impedance/SWR Vs frequency for balcony slinky antenna at 15 meter band.

I have been used the antenna for two weeks at the 40 meter band. All QSOs with the antenna were at distance no more the 900 km.

However it is not bad for such small antenna.

73! UN7FGO

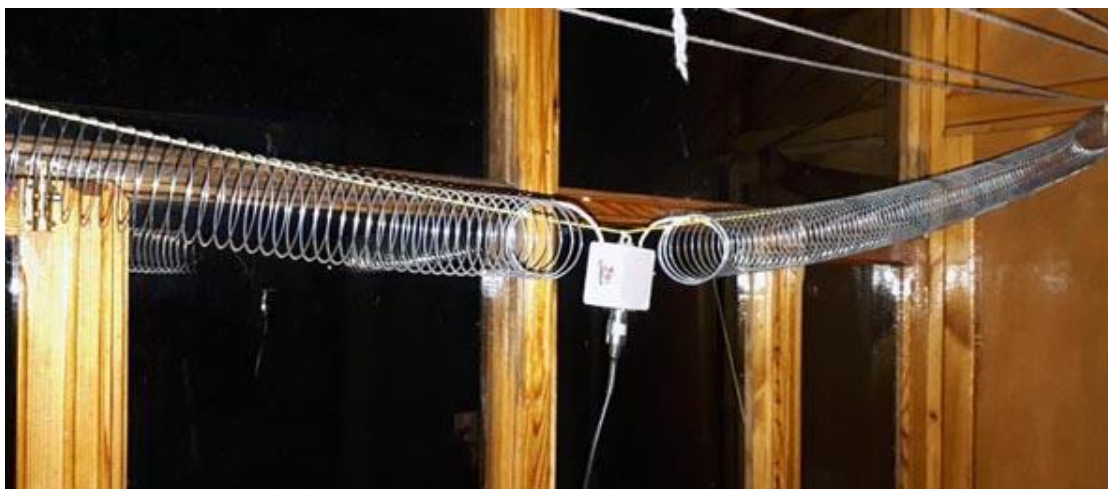


Figure 4 Slinky Antenna Installed on the Balcony

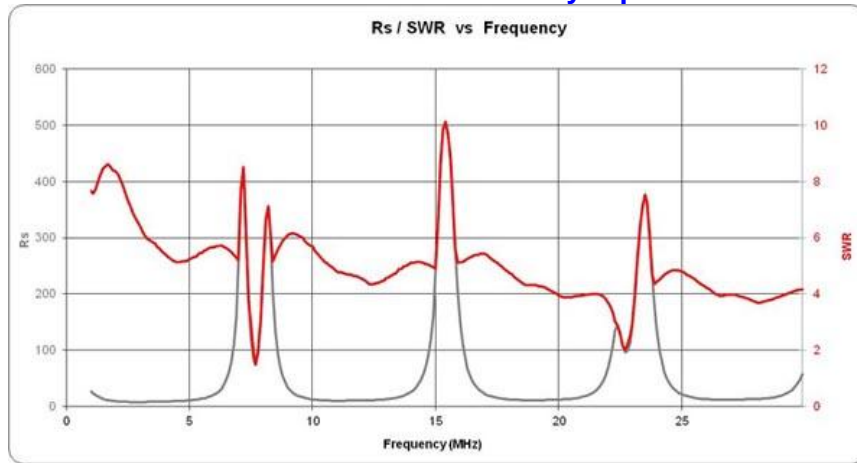


Figure 5 Antenna Impedance/SWR Vs Frequency for Balcony Slinky Antenna.

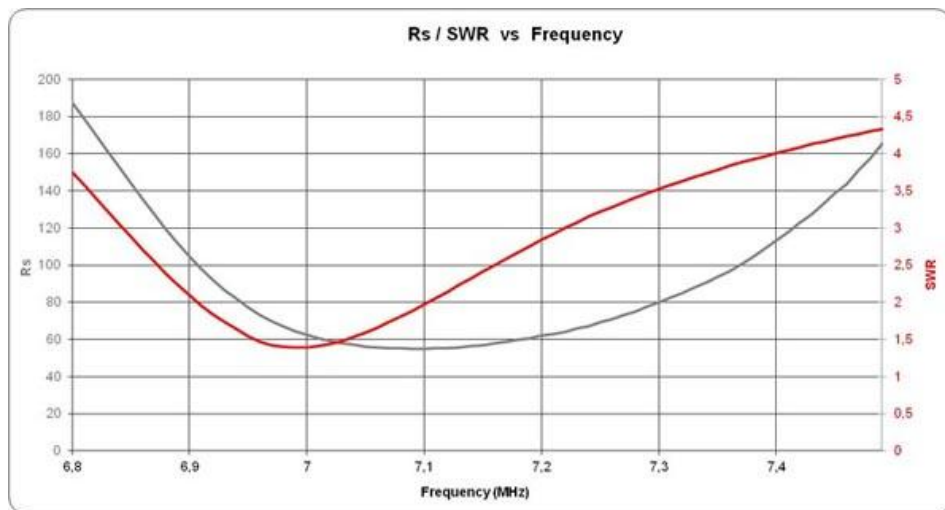


Figure 6 Fine Plot for Antenna Impedance/SWR Vs Frequency for Balcony Slinky Antenna at 40 meter Band

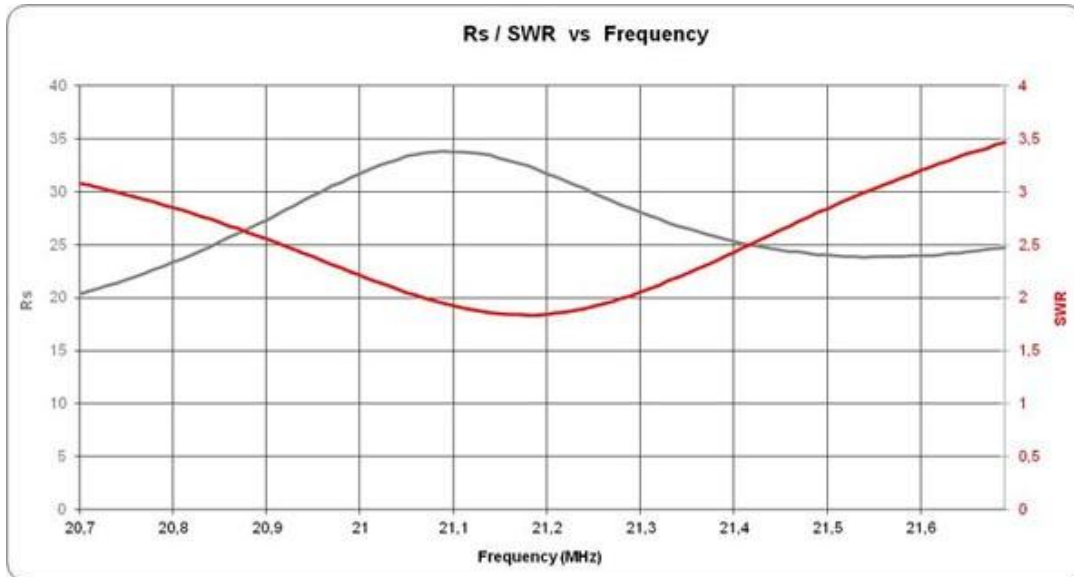


Figure 7 Fine Plot for Antenna Impedance/SWR Vs Frequency for Balcony Slinky Antenna at 15 meter Band