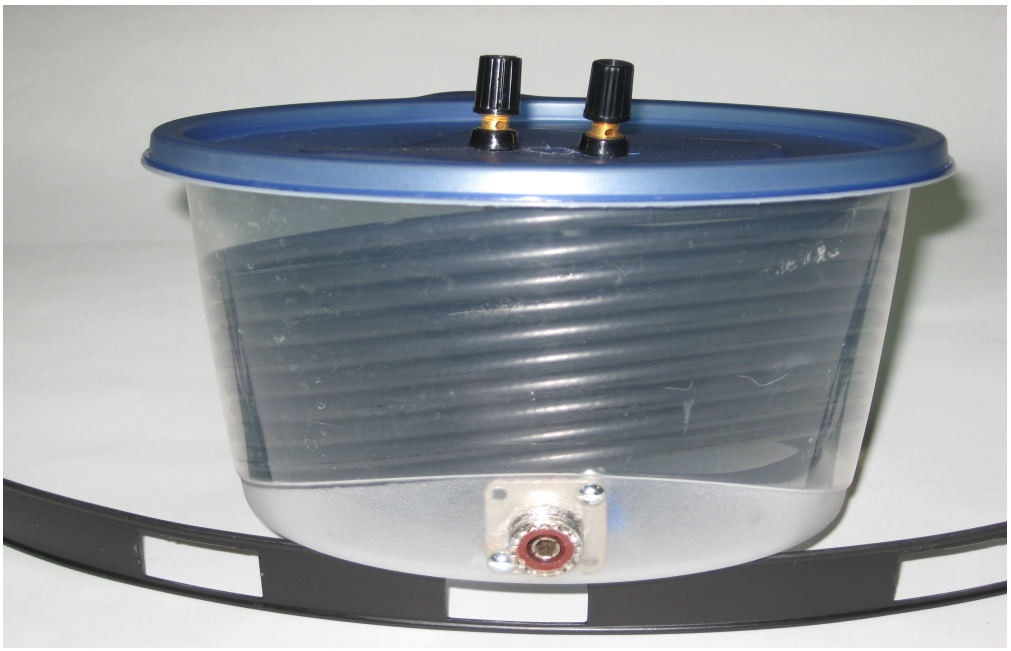
Coaxial Feed-line Choke

The Coaxial Feed-line Choke is my preferred method to transition from a balanced system such as a Light Beam Antenna to an unbalanced System such as coaxial cable and a Transceiver. To be most effective, most of the reactive component of the antenna system impedance must be first removed, leaving mostly just radiation resistance. This can be done by interfacing the antenna with a balanced feed-line transformer. See previous paper titled: "Light Beam Antenna Feed-line Options, read Option 1, "Balanced Feed-line Impedance Transformer". The Coaxial Feed-line Choke is then interfaced with the Balanced Feed-line. 50 Ohm Coaxial Cable is then used to interface the Choke with the Transceiver.

To build your own coaxial choke you will need the following components:

- 6 to 8 Inch Diameter Cylindrical Container – Qty. 1
- RG-8x Coaxial Cable
- SO-259 UHF Connector – Qty. 1
- Feed-through Binding Posts – Qty. 2
- Silicone RTV sealant.



Coaxial Choke

Note: The ladder-line is only used as a prop to hold the choke up during the photo shoot.

The cylindrical container can be obtained from your local Walmart Store for only $1.98 for 3 containers. The other components can be obtained from your favorite electronic component suppliers.

- The container is a bit flimsy but the price is right. Take care when making the holes to mount the UHF connector and the binding posts to avoid splitting the container material.
- To determine the length of the coaxial cable needed, first loop 11 windings of the coaxial cable inside the container. Remove and cut the cable to this length.
- Prepare the cable ends and connect to the connector and posts.
- Mount he UHF Connector and Binding Posts inside the container.
- Wind 10 turns of the cable within the container. Close the lid.
- Place sealant around the connector and posts.

- Connect your transceiver coaxial cable to the UHF Connector and connect the feed-line transformer to the Feed-Through Binding Posts.