Up and Outer L-Antenna

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Some thing about the "Up and Outer" antenna has fascinated me since I first came across it in the 1974 edition of the ARRL Antenna Book.

This antenna, which was once popular many years ago, is about as simple as it gets. Simply put, the Up and Outer is basically a dipole or doublet where one leg is vertical while the other leg is horizontal.

Although it seems to be overlooked by Amateurs these days, this antenna offers some significant benefits:

- It is a good limited space antenna, since one leg of the doublet is vertical. It only requires half of the space that a horizontal doublet would take up.
- When fed with balance line and used with a suitable transmatch, it is a good multi-band antenna.
- It combines characteristics of both verticals and horizontal wire antennas, making it ideal for both local and DX work.
- It's very easy to build an erect.

A little background on this antenna. According to some handwritten notes from QRP Hall of Famer, C. F. Rockey W9SCH, this antenna goes back to the 20s and 30s. Lew McCoy W1ICP (SK) wrote about it in the October 1960 edition of QST. He did not use the name, "Up and Outer" - he merely referred to it as a "limited space antenna."

McCoy recommended horizontal and vertical elements of 30-feet each for operation on 80-10 meters. He also recommended using an open-wire feedline to minimize losses. Information from McCoy's article has appeared for years in the ARRL Antenna Book. I first saw it in my 1974 edition and it was still shown in the 1997 edition.

W9SCH wrote a couple of articles about this antenna for SPRAT and appears to have coined the term "*Up and Outer*." In the first SPRAT article, Rock suggested using 1/4 wave elements for the lowest band and feeding it with either coax for single band operation, or balanced line for multi-band operation.

In a follow up article, Rock suggests pruning the horizontal element to equalize the current in the balanced feeder. He noted the imbalance when operating with the horizontal element close to ground. He started with 16-foot elements to cover 30-10 meters.

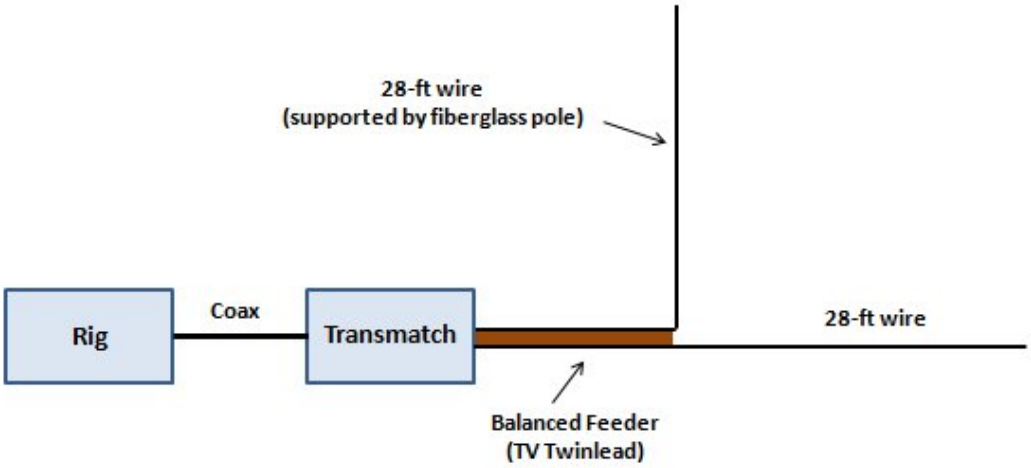
Another Hall of Famer, L. B. Cebik W4RNL (SK), wrote about a coax-fed version of this antenna for 10 meters. Cebik built the antenna using aluminum tubing and called it the "*L Antenna*."

The **Up and Outer** has turned out to be an ideal portable antenna to use while on vacation in a rented house on the Outer Banks of North Carolina. For several years, I have used a 56-foot doublet with one wire supported by a 28-foot fiberglass telescopic mast and one 28-foot leg run horizontally.

The vertical radiator is typically situated on a 3rd or 4th story wooden deck with the horizontal wire secured to a nearby tree or other support. For feedline, I use 25-feet of TV twinlead - the cheap brown stuff. Using either a homebrew Z-match tuner or the

LDG Z-817 autotuner with an external balun, I have been able to use this antenna on 40-10 meters.

Depending on the transmatch you use, you might need to adjust the length of the feedline to get a good match on 40 meters.



WB3GCK Portable "Up and Outer"

If you are looking for a limited-space HF antenna, give this obscure classic a try.

2-meter L-antenna

Mounted on 6-foot corner bookshelf
Coax fed with 3 ferrite-beads at antenna base
Vertical radiator 19.5" Horizontal wire 19.5"
Larry Nelson – K5IJB