

HF Yagis: 102 Models

The collection of Yagi models covers the HF spectrum from 80 through 10 meters. Models are in both the .EZ (EZNEC) format and in the .NEC format for use with NEC-Win Plus/Pro and generic NEC-2/-4 cores. The EZNEC-format models use a wide variety of dimensional units, but all .NEC files are metric. The filenames are roughly descriptive of the kind of antenna, the frequency band, and any features that discriminate between models of the same general kind and frequency. As well, models with a known designer identify the person in the filename.

The collection includes both wire and tube models, with tubular elements including some stepped-diameter versions and some uniform-diameter versions. Models cover all of the HF bands: 80, 75, 60, 40, 30, 20, 17, 15, 12, and 10 meters. The collection includes both full-size Yagis and samples of element-shortening techniques. If you see a design for one band without a counterpart for another band, you may scale the element lengths, spacing, and diameters to create the desired beam. In the .NEC models, all loads are R-X versions--you will have to perform conversions to transform them to R-L-C loads. Models that are not resonant at 50 Ohms may be resonant at a lower impedance for use with 1/4-wavelength matching sections, or they may show capacitive reactance for use with either a hairpin/beta or a gamma match.

There are 87 true Yagis, although there are a few V-Yagi designs that combine parallel-element coupling and element-end coupling. As well, the collection includes 15 Moxon rectangles, which also use both parallel-element and element-end coupling. No collection can be complete in every aspect, but this set of HF Yagis may provide a basis for your own development work. VHF and UHF Yagis appear in the collection of VHF/UHF antennas.

Although many of the designs may be directly built from the models in this collection, the models themselves are for study purposes. Perfecting the design to a level that permits construction of a Yagi that is both electrically and mechanically sound is your responsibility.

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