

DipoleDesigner

(Version 4.0.0 -- Revised January 5, 2013)

Introduction

DipoleDesigner is a simple program for calculating the dimensions of half-wave dipole antennas. The program will calculate the dimensions for the following types of dipole antennas:

- Standard Half-Wave Dipole.
- Off-Center Fed (OCF) Dipole (a.k.a. – Windom).
- Coaxial dipole (a.k.a. – Double Bazooka).

Installation

Run the installation package file, *DipoleDesignerSetup.exe*. This will install *DipoleDesigner.exe* and all required supporting files on your computer. The installer will suggest a default location for the program file. You may change the location or leave it at the default, it does not matter. However, the *DipoleDesigner.rtf* file MUST be located in the same directory as the *DipoleDesigner.exe* file.

Program Operation

Standard Half-Wave Dipole

When the program starts, the window shown in **Figure 1** is displayed. This window allows you to calculate the dimensions of a standard half-wave dipole.

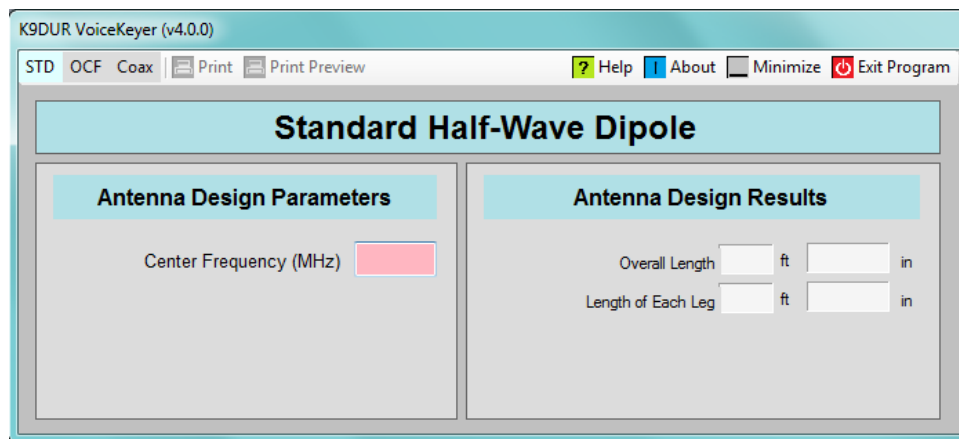


Figure 1 – Standard Dipole Window

Enter the desired center frequency of the dipole in MHz and the antenna dimensions will be calculated & displayed automatically.

Off-Center Fed Dipole (Window)

Clicking on the **OCF** button on the toolbar will cause the window shown in **Figure 2** to be displayed. This window allows you to calculate the dimensions of an off-center fed (OCF) dipole.

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STD OCF Coax Print Print Preview Help About Minimize Exit Program

Off-Center Fed Dipole

Antenna Design Parameters

Center Frequency (MHz)

Feed Point Position (% from end)

Antenna Design Results

Overall Length ft in

Length of Short Leg ft in

Length of Long Leg ft in

Figure 2 – Off-Center Fed Dipole

Enter the desired center frequency of the dipole in MHz and enter the feedpoint position expressed as a percentage of the total length from one end. Values of 1% to 49% may be entered. When both values have been entered, the antenna dimensions will be calculated & displayed automatically.

Coaxial Dipole (Double Bazooka)

Clicking on the **Coax** button on the toolbar will cause the window shown in **Figure 3** to be displayed. This window allows you to calculate the dimensions of a coaxial dipole. This antenna is often referred to as a double-bazooka antenna.

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Coaxial Dipole

Antenna Design Parameters

Center Frequency (MHz)

Velocity Factor (%)

Antenna Design Results

Overall Length ft in

Overall Length of Coax Section ft in

Length of Each Coax Leg ft in

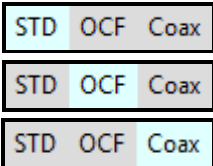


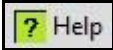
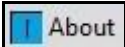

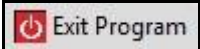
Length of Each Wire Extension ft in

Figure 3 – Coaxial Dipole

Enter the desired center frequency of the dipole in MHz and enter the velocity factor in percent of the coax used for the center portion of the antenna. Values of 1% to 99% may be entered. When both values have been entered, the antenna dimensions will be calculated & displayed automatically.

Toolbar

The toolbar contains the following buttons & controls (left-to-right):

	These 3 buttons allow you to select the type of antenna to be designed.
	Clicking on this button will open a print dialog box so you can print an instruction sheet for building the antenna.
	Clicking on this button will open a print preview dialog box so you can view the instruction sheet on screen before printing it.
	Clicking on this button will open a window to display this document.
	Clicking on this button will open a window that displays basic information about the program.
	Clicking on this button will minimize the main window.
	Clicking on this button will close the program.

About the Author

VoiceKeyer.exe was written by Ray Andrews, K9DUR.

Ray holds an Amateur Extra class license and was first licensed in April 1960. He currently resides in West Terre Haute, IN, and is a retired electronic design engineer and software developer. He operates a small custom software consulting business just to keep him out of mischief between camping trips.

For more information, visit Ray's web pages:

<http://k9dur.info>

<http://www.rnaconsultingservices.com>

Revision History

V4.0.0 – January 5, 2013 – Complete re-write.

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