

# Distance Calculator

(Version 3.0.3 -- Released February 27, 2013)

## Introduction

**DistanceCalculator** is a utility to calculate the distance between any 2 points on the surface of the earth. Points can be specified in either latitude/longitude coordinates or by Maidenhead locator.

By only entering a single location, DistanceCalculator can also be used to convert between latitude/longitude coordinates and Maidenhead locators.

## Installation

Run the installation package file, **DistanceCalculatorSetup.exe**. This will install **DistanceCalculator.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 **DistanceCalculator.rtf** file MUST be located in the same directory as the **DistanceCalculator.exe** file.

## Program Operation

When the program starts, the screen shown below will be displayed.

The screenshot shows the 'Distance, Bearing, & Maidenhead Locator Calculator by K9DUR (v3.0.0)' window. The window has a title bar with 'Home', 'Miles', and 'Kilometers' tabs, and a menu bar with 'Help', 'About', 'Minimize', and 'Exit' options. The main interface is divided into three sections:

- Starting Location:** Contains input fields for Latitude (deg, min, sec) and Longitude (deg, min, sec). It includes 'North' and 'West' buttons and a 'Locator' field.
- Ending Location:** Contains input fields for Latitude (deg, min, sec) and Longitude (deg, min, sec). It includes 'North' and 'West' buttons and a 'Locator' field.
- Short Path Results:** Displays 'Distance' in miles and 'Bearing' in degrees.
- Long Path Results:** Displays 'Distance' in miles and 'Bearing' in degrees.

Enter a starting location and an ending location. When both values have been entered, the program will automatically calculate the distance and bearing for both the short path and the long path.

You can enter the starting or the ending locations in one of 3 ways:


- Enter degrees & decimals of degrees into the wide text box immediately to the right of the word “Latitude” or “Longitude”.
- Enter degrees, minutes, & seconds into the 3 smaller text boxes labeled “deg”, “min”, & “sec”.
- Enter a 4 or 6 character Maidenhead locator into the box labeled “Locator”. Initially, the background of the locator text box will be **red**. When a valid locator has been entered, the background will be white.


Latitudes and longitudes are always entered as positive numbers. Select the hemisphere by clicking on the **North/South** & **East/West** buttons.


### Home Location


Any location may be stored as the “home location”. The home location can be:

- Automatically loaded into the starting location on program startup.
- Manually loaded into the starting location at any time.
- Manually loaded into the ending location at any time.

Clicking on the  symbol in the starting location panel will load the home location into the starting location. If no home location has been set, clicking on the symbol will have no effect.

Right-clicking on the  symbol in the starting location panel will store the starting location as the home location.

Clicking on the  symbol in the ending location panel will load the home location into the ending location. If no home location has been set, clicking on the symbol will have no effect.

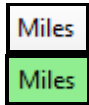
Right-clicking on the  symbol in the ending location panel will store the ending location as the home location.

## Toolbar

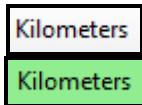
The toolbar at the top of the screen contains the following buttons (left-to-right):



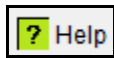
The **Home** button indicates whether the home location will be automatically loaded into the starting location when the program is started. If the background is **green**, the home location will be loaded on program startup. If a home location has not yet been set, then the background will be **yellow**, & the button is disabled.



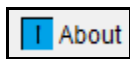
Clicking on the **Miles** button will set the distance unit of measurement to miles. If miles is selected, the background will be **green**.



Clicking on the **Kilometers** button will set the distance unit of measurement to kilometers. If kilometers is selected, the background will be **green**.



Clicking on the **Help** button will open a window to display this document.



Clicking on the **About** button will open a window that displays basic information about the program.



Clicking on the **Minimize** button will minimize the window.



Clicking on the **Exit** button will close the program.

## About the Author

**DistanceCalculator.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>

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## **Revision History**

v3.0.3 – February 27, 2013 – Changed different compiler setting to allow use on 32-bit systems.

v3.0.2 – February 10, 2013 – Changed compiler setting to allow use on 32-bit systems.

v3.0.1 – December 24, 2012 – Fixed bug in calculating bearings. Fixed bug where N-S & E-W buttons were reset to “North” & “East” when coordinates were entered. Fixed bug where home location was not saved.

v3.0.0 – December 19, 2012 – Complete re-write.

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