

# The Sundial Primer

## Getting Started with ZW2000

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ZW2000 is a FREE software program developed by Fer de Vries that will aid you in the design of a number of different sundials. Its purpose is to provide you with the lines and curves necessary to design a sundial. It does not produce a complete design including hour numbers and other dial plate furniture. It does allow you to export its output in dxf format, which can then be opened in a CAD software package. You can then finish the sundial including any details you like to include. To obtain this program and a user's manual go to the following site: <http://www.de-zonnewijzerkring.nl/eng/index-links.htm>

When you download the software and manual they will come in the form of zip files. You will need software to extract the files. I suggest that you create the directory "ZW2000" where you can download and extract the program zip file. Create a sub-directory "Manual" in the directory "ZW2000" where you can download and extract the manual zip file. To start the program just select the "Zw2000.exe" file and to read the manual select the "zw2000.htm" file. There is no set up required. It's just that easy!

Figure 1 shows the ZW2000 introductory screen that appears when you start up the program.

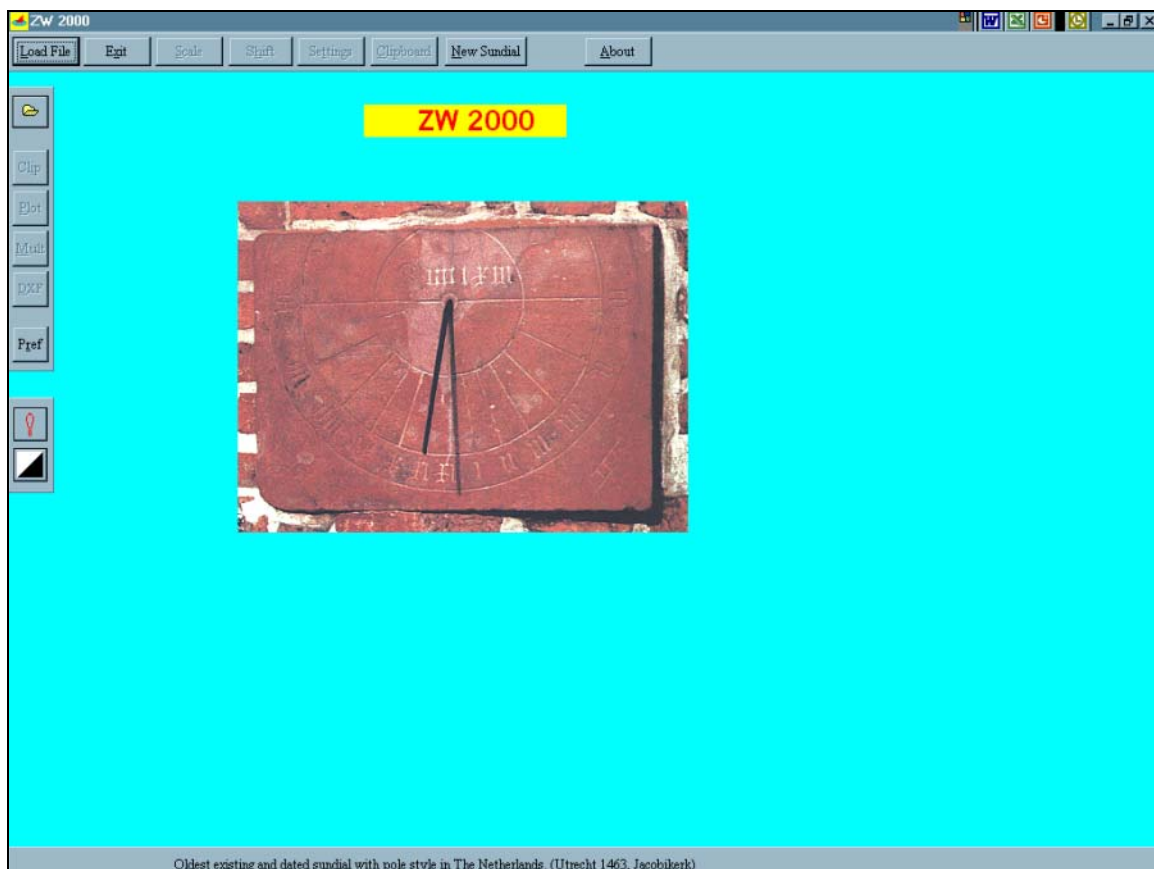
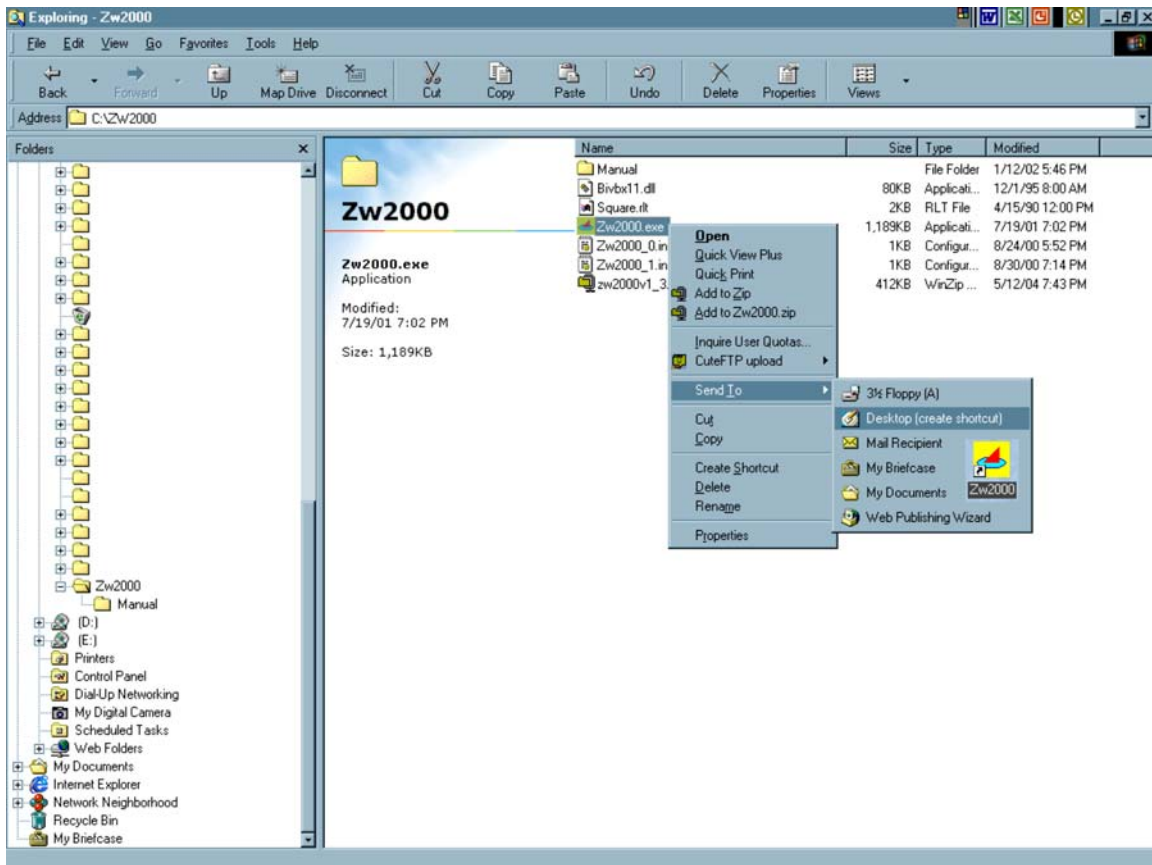


Figure 1: ZW2000 Intro Screen

Because there was no set up procedure involved with ZW2000, selecting “Start” and then “Programs” cannot be used to initiate the software. You will find no link to the software this way. To make it easy to start the program it is necessary to get an icon on the Desktop. This is easy to do. Just follow Figure 2. **Right click** on your “My Computer” icon, located on the Desktop, and select “Explore”. Select in sequence “Drive\_c (C)” and the directory “ZW2000” that was created. Find the file “Zw2000.exe” and **right click** on it. A new list of commands will appear as shown in the figure. Now select “Send To” and finally “Desktop (create shortcut)”. The ZW2000 logo shown on this last list will be placed on the Desktop. You can then move it wherever you like and select the shortcut to start the software.



**Figure 2: ZW2000 Shortcut**

You can create a shortcut to the manual using this same procedure.

This introduction is intended to help you get ZW2000 up and running, which is not a difficult task. It is not intended to teach you how to use the software. The one thing that will do that is to practice.

Just to get you excited Figure 3 shows the ZW2000 sundial design input page. This is obtained by selecting “New Sundial”. Everything is entered on one page. Can it get any easier?

**Data Input**

cancel definitions calculate and draw print default taal language sprache langue idioma

**general input**

filename without extension  
TEMP

kind of sundial  
 flat sundial  
 bifilar sundial  
 mirror sundial  
 flat submerged sundial  
 bifilar submerged sundial  
 mirror submerged sundial

year 2007

standard meridian 0  
 local meridian 0  
 latitude 0  
 dial inclination 0  
 dial declination 0  
 gnomon 10

constants of flat sundial  
 styleheight 0  
 hourangle subtype 0  
 angle subtype / y-axis 0

points every 3 days  draw subtype  
 draw points on half analemmas

**kind of lines**

kind of lines	begin	end	step
A <input type="checkbox"/> local time	0	0	1
B <input type="checkbox"/> local time + full analemma	0	0	1
C <input type="checkbox"/> local time + half analemma 21 dec - 21 jun	0	0	1
D <input type="checkbox"/> local time + half analemma 21 jun - 21 dec	0	0	1
E <input type="checkbox"/> standard time	0	0	1
F <input type="checkbox"/> standard time + full analemma	0	0	1
G <input type="checkbox"/> standard time + half analemma 21 dec - 21 jun	0	0	1
H <input type="checkbox"/> standard time + half analemma 21 jun - 21 dec	0	0	1
I <input type="checkbox"/> sidereal time 21 dec - 21 jun	0	0	1
J <input type="checkbox"/> sidereal time 21 jun - 21 dec	0	0	1
K <input type="checkbox"/> date lines ( day, month )	<input type="radio"/> 1/ month <input type="radio"/> 1.16/ month <input checked="" type="radio"/> none		choose
L <input type="checkbox"/> declination lines	<input type="radio"/> 3 lines <input type="radio"/> 7 lines <input checked="" type="radio"/> none		choose
M <input type="checkbox"/> altitude lines	0	90	1
N <input type="checkbox"/> azimuth lines	0	90	1
O <input type="checkbox"/> babylonian hour lines	0	24	1
P <input type="checkbox"/> italian hour lines	0	24	1
Q <input type="checkbox"/> antique hour lines	0	12	1
R <input type="checkbox"/> islamic prayer lines			
S <input type="checkbox"/> planetary hour lines 21 dec - 21 jun	0	12	1
T <input type="checkbox"/> planetary hour lines 21 jun - 21 dec	0	12	1
U <input type="checkbox"/> ascendants 21 dec - 21 jun	0	12	1
V <input type="checkbox"/> ascendants 21 jun - 21 dec	0	12	1
W <input type="checkbox"/> astrological houses	6	12	1
X <input type="checkbox"/> CheckBox24			
Y <input type="checkbox"/> CheckBox25			
Z <input type="checkbox"/> CheckBox26			

Figure 2: ZW2000 Input Page

If you decide that you are not interested in ZW2000 you will want to get rid of the program. All you have to do is delete the directory containing the files. This does not remove the shortcut that you placed on the Desktop. **Right click** on the shortcut icon and select "Delete". Say "GOODBYE"!