



# UWOT

## Short Guide and FAQ

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## 1 Short Guide on UWOT installation and usage

UWOT is available to you in a zipped directory with a precompiled executable and does not require installation through a wizard. The file can be used in Windows 7/8/10, in a 32bit or 64bit environment.

1. Using a program such as WinRAR or 7-zip, unzip the .zip file you downloaded to a directory (folder) of your choice.
2. Once the unzipping process is complete, you should have the following files in the folder: (a.) A shortcut (UWOT), and a dist subfolder containing the necessary model files.

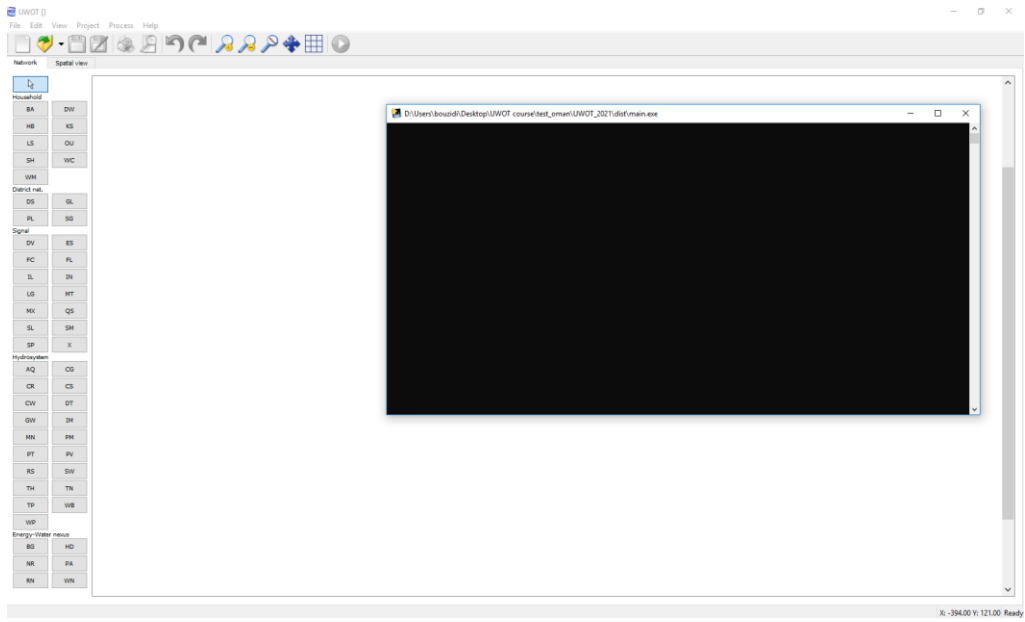
Name	Date modified	Type
 dist	12-4-2022 19:42	File folder
 uwot	12-4-2022 19:43	Shortcut

3. Go to the subfolder and find the main.exe file (\ dist \ main.exe). Please open this relevant file, ideally running it as an administrator.

Name	Date modified	Type	Size
 data	12-4-2022 19:36	File folder	
 icons	12-4-2022 19:36	File folder	
 manual	19-4-2021 18:14	File folder	
 default_map.jpg	12-4-2021 12:44	JPG File	18 KB
 dickinson.dll	14-4-2020 14:08	Application extens...	504 KB
 main.exe	12-4-2021 19:34	Application	97,257 KB
 UWOT.dll	12-4-2021 14:28	Application extens...	165 KB

4. The following windows will open: firstly, a command prompt (black screen) running in the background, and (secondly) the main interface - UWOT GUI (a white empty canvas with multiple buttons on the left and a menu with icons on the top). **Keep both windows open while working with UWOT.** To work with the user interface, simply select the relevant window, leaving the window with the black screen open in the background.

5. When you stop working with UWOT, closing the main window with the interface will automatically close the second window with the black screen.



## 2 FAQ – Typical usage issues

**Issue: UWOT does not open for me via the "uwot" shortcut which is outside the dist folder (on the top level of the unzipped directory).**

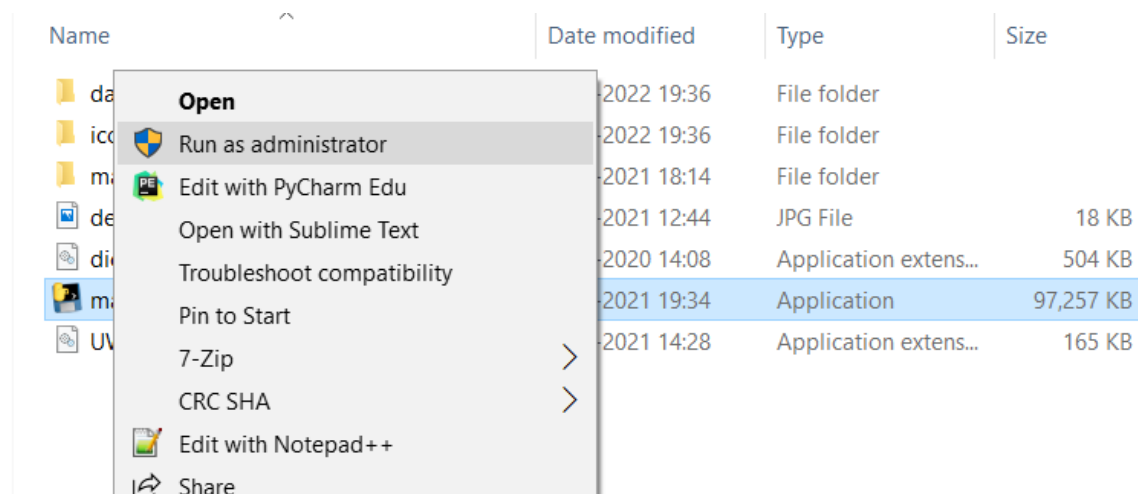
**Solution:** Some versions of Windows may show a problem with the path ("*The specified path does not exist*" error, even if the path exists). In this case, open the executable *main.exe* directly in the *dist* folder.

**Issue: The windows system (Windows Defender) or my antivirus program does not allow me to open the 'main.exe' file OR After unzipping a firewall / antivirus / antimalware notification appears and there is no 'main.exe' file.**

**Solution:** Try unzipping and running the relevant executable '*main.exe*' after temporarily disabling your antivirus real-time monitoring (e.g., for 10 minutes or 1 hour). You can also add the relevant executable (or the entire UWOT directory) to the firewall / antivirus exceptions from the settings of the relevant program you have.

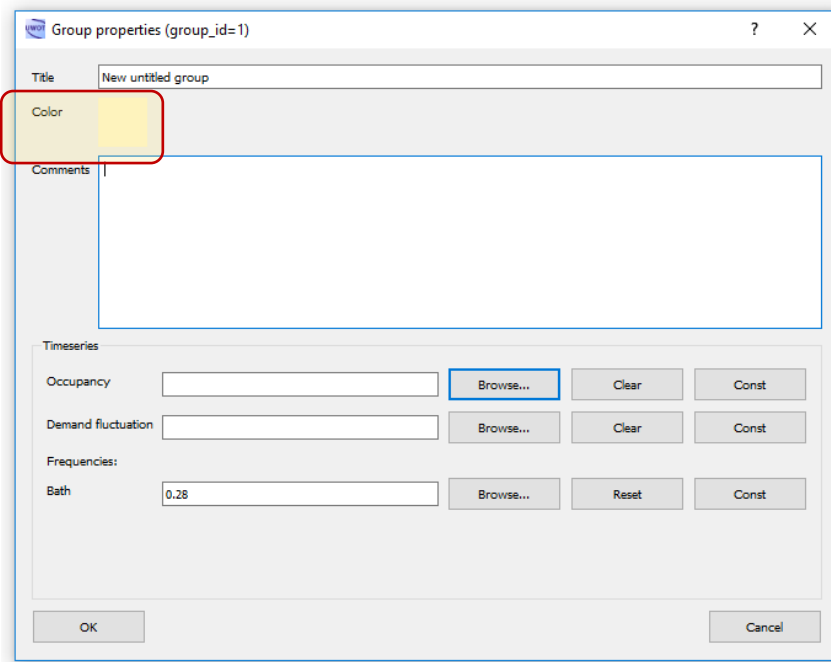
**Issue: My Windows system shows "You don't have permissions to open this file" when I open main.exe**

**Solution:** Try the following: (a.) Change the Windows User Account Control Settings (UAC) to a setting that allows notifications when apps try to make changes on the computer, (b.) Open the *main.exe* file as an administrator by right clicking-> Run as administrator.



**Issue: UWOT freezes and crashes when I go to change color in a group.**

**Solution:** This is a known issue due to an outdated library for color selection. It will be solved in the next version of the model. Until then, please leave the default colors in the group properties when you create groups and do not change them by clicking on the color option. As this functionality is purely aesthetic, this problem obviously does not affect the functionality of the groups and related components.



**Issue: UWOT crashes when I delete many connected components.**

The problem may occur in some components which have multiple connections to other components, when one tries to delete the component outright without deleting its connections first. It is generally good modeling practice to delete: (a) first the signals coming out and going in the component you want to remove, one by one, (b.) the component itself, once all of its connections have been removed. This will keep the .uwot file free of "orphan" links that may cause problems when accessing the file.

**Issue: UWOT crashes when I add a custom brand and try to change some of its properties.**

This issue occurs if a value is placed in a field that is not the type (floating point number using a dot as decimal) UWOT expects. To add custom brands without problems, it is generally considered good practice to:

- (a.) select the id of template brand in a number, if there is this option in the drop-down menu. This will give your new brand a set of ready-made values that you can then selectively change.
- (b.) change ONLY the custom brand fields that interest you for the calculations and not all (e.g., only alter capacity, loss ratio and energy use, and not capital and operational costs and dates), leaving the pre-existing values in the other fields.
- (c) use the correct semicolon character, which usually exists in the imported/preexisting fields (',' or ';' depending on your operating system settings).
- (d.) try not to change the last two fields Cap.cost date / Op.cost date, as they have a custom numbering format.

The problem also occurs when the Regional Settings of the system do not use the dot "." as the system's decimal character, but instead use any other character, such as the comma "," character. In that case, please try changing the relevant setting from the Windows options ((1) Region & Language -> (2)

Additional date, time & regional settings -> (3) Region -> Change date, time or number formats -> (4) Additional settings -> (5) Decimal symbol).

The image shows two windows from a software application. On the left is the 'Brand "BATH1" properties' window, which contains a table with columns 'j', 'value', and 'unit'. The first three rows are highlighted with a red box:

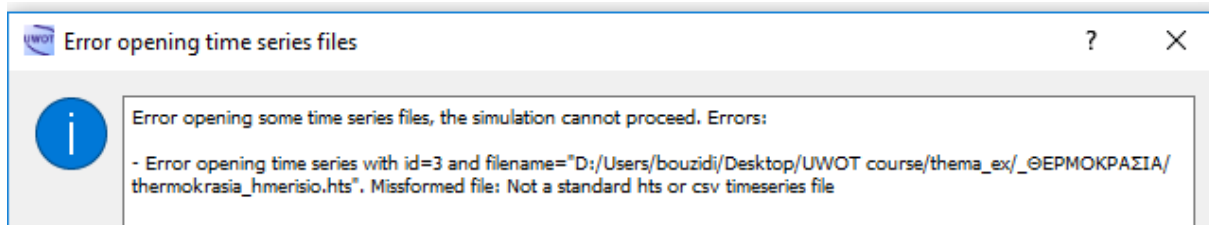
j	value	unit
1	80	L/use
2	0.1	0 to 1
3	2.973369	kWh/use

On the right is the 'Add brand' dialog box. The 'Id of template brand' dropdown menu is highlighted with a red box and contains the value '34'. Other fields include 'Brand name' and 'Technology' (set to 'Bath').

This image shows a sequence of Windows Control Panel windows with numbered callouts:

- (1) Region & language**: A yellow callout box pointing to the 'Country or region' section of the Windows Settings app.
- (2) Related settings**: A yellow callout box pointing to the 'Additional date, time, & regional settings' link in the Windows Settings app.
- (3) Region**: A yellow callout box pointing to the 'Region' link in the Windows Settings app.
- (4) Additional settings...**: A yellow callout box pointing to the 'Additional settings...' button in the 'Region' dialog box.
- (5) Decimal symbol**: A yellow callout box pointing to the 'Decimal symbol' dropdown menu in the 'Customize Format' dialog box.

**Issue:** As soon as the key for simulation execution is pressed, UWOT gives me an error related to not being able to read input time series (e.g., *Missformed file: Not a standard hts or csv timeseries file*).



Even though older UWOT versions were compatible both with .csv and .hts files (HYDROGNOMON software storage files), newer versions do not recognize complex .csv formatting or the .hts format, which is essentially a multi-line header .csv file with two columns (date and value).

The educational version of UWOT that you have in your hands can only read simple (headerless and single column) .csv files and you should bring all the input time series in such format. The .csv file:

- can be easily exported through MS Excel environment (Save As -> .csv file option) or with a scripting language, such as Python or R.
- must contain **only one column** with the values of the time series (and not e.g., two columns, such as time / date).
- **should not contain lines with metadata** or blank lines at the beginning of the file and before the data (the so-called file header). In other words, the values should start at the first line (cell A1 in MS Excel). The file should contain only numeric values and no other information.
- the values should be in floating point format, using the dot '.' as the decimal.

Also, when processing the input data, make sure that the timeseries contain only floating point numbers, without other complex special values (no flagged values such as "NaN", -999, etc.). Finally, the file must not contain spaces, so please fill in the relevant timeseries [using any timeseries infilling methods] before importing them into UWOT, if they have gaps. Indeed, the quality control of input time series (checking for outliers or unreasonable values, filling in gaps with proper justification for the method, etc.) is a separate pre-processing step which is not handled by the model and should be addressed by the modeler *a priori*.





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