

# The Tempometer:



## your Clock as a Sundial

**Description:** The Tempometer is a clock which, once installed, independent from the system clock of the computer, at your website displays the time of the user representing the tempo of the locally passing sun. One is then able to set other clocks at home to the sun, like to a sundial with regular hours. From this one is able to have instead of the politically/centrally determined standard-time, the scientifically/astronomically determined local true solar time of nature in front with one's planning of personal activities.

**Purpose/motivation:** Restoration of the dynamical, natural consciousness of time that with the standard time of means, zones and summertimes was lost. Thus has the user the opportunity to recover from his estrangement relating to nature and has he thus the chance to regain his, from the stress-society lost, synergy with himself and his fellow man.

**Installation:** There are some more files in the folder. These are a php-file to separately deal with php and html, two php-pages to compute the day corrections to the equation of time and a page with help-functions. The notimeserver-page is an error-page also to be installed. As the daily corrections around 2023 run invalid and an upgrade is needed, this daycorrection.php-file must be adapted. The two html-pages can, once loaded to the internet, be summoned to compute solar time. All files have to be placed in the same folder on the internet of your php version 7-capable server. The php-files can be integrated in an html-file with the help of the code:

```
<IFRAME title=solartime border=0 name=l1 align=center marginWidth=1 marginHeight=1  
src="oft1_3.php?lang=UK" frameBorder=0 width=550 scrolling=no  
height=230></IFRAME>
```

The folder `suntime-java` contains a javascript offering a calculation-helper needed to compute next to one's present time also the solar time for any other time and date.

**Operation of the program:** The program sets the Tempometer displayed to the sun with the help of the by the user entered longitude in degrees and minutes belonging to the place where the computer is situated (for the user to check out on: <http://www.astro.com/cgi/aq.cgi?lang=e>). This setting is done with the help of the equation of time, see also (<http://theorderoftime.com/science/fullcalendaroforder.html>). This is a table indicating the degree to which a normal clock qua tempo runs ahead or behind of the the sun. Solar time is always:  $\text{GMT} + \text{longitude} \times 4 \text{ min.} - \text{EqoT}$  for eastern longitudes and  $\text{GMT} - \text{longitude} \times 4 \text{ min.} - \text{EqoT}$  for longitudes west of Greenwich. To perform the computation is the GMT, the mean time GMT of Greenwich derived from the time fetched by the program from <http://www.ntp.org/> (see also: <http://ntp.greenwichmeantime.com/time/timemain.php>; notice: the Tempometer offers in a leap-year with a 29e febr. a normal shift of values of one day, with an extra value of 2.43 for the 31 Dec.). The meter operates correctly if the indication of 12 o'clock on the meter is

in accord with 12 o'clock on a sun-dial - the sun in the exact south. The time-indication in the Tempometer-field runs to the sun, but a standard-time-clock corrected with it can show a deviation of half an hour maximum over four months (from the 2 Nov. to the 2 febr.). For that reason must standard-time clocks at least once a week be corrected if one wants to keep them to the sun. With a clock thus corrected is the natural tempo of the time-indication restored that since the political/pragmatical, horological introduction of mean time for mechanical clocks was lost. Once in the twenty-four years (24.23 year) must, the phase of the equation of time - the phase of 1683 lags about 13 days behind the one of 1998 - with one day be shifted ahead (the entire table thus), in order to accurately do justice to the time of mother nature. This updating of the file daycorrection.php must, as said, be performed around 2023. Ultimately is Standard time derived from the Solar time of the Tempometer and not the other way around.

**Extra javascript-application, tempometer.js, for the web to compute times different from the present time:** A simple javascript web-application to which the user enters his longitude degree and minute and then, after next entering the GMT-data fetched from the internet (see also: <http://www.greenwichmeantime.com/>) gets to see the solar time of his locality. GMT must be entered by hand in order to calculate solar time for any time and date. Html-example-page included.

**References for the data:**

<http://www.sundials.co.uk/equation.htm>;

<http://theorderoftime.com/ned/wetenschap/vereffening.html>;

<http://theorderoftime.com/ned/wetenschap/vkalendervorde.html>;

<http://freepages.pavilion.net/users/aghelyar/sundat.htm#Notes>;

for technical astronomical data:

[http://www.astro.uu.nl/~strous/AA/en//reken/zonpositie.html#equation\\_of\\_time](http://www.astro.uu.nl/~strous/AA/en//reken/zonpositie.html#equation_of_time)).

**Site:** <http://theorderoftime.org>

**Download:** <http://theorderoftime.org/truetime/tempometer.zip>

**System-demands:** PHP7-suitable server. Missing such a php7-server can the javascript be used.

**Nature of the license:** Free use provided the references to [www.theorderoftime.org](http://www.theorderoftime.org) and to the author of the program ([www.petergragert.nl](http://www.petergragert.nl)) are kept.

**Version:** 1.07 2

**Languages:** English and Dutch

**Known bugs:** one in the two hundred calculations may result in an error as for date and time. Recalculation is the remedy.

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