

How to Read The Geochron Global Time Indicator

INTRODUCTION

Geochron's map moves imperceptibly from left to right while its time scale atop the map stands still. The time scale can be shifted manually, or on Model B visually, for a distance equal to one hour. To the left of "noon" on the scale is A.M., to the right, P.M. On the left and right of the map are black vertical lines which represent the circumference of the earth or 24 hours.

Time zones are identified by letters. The bold purple lines represent time zone boundaries. Horizontal distances on the map are related to time on the basis of one inch to the hour.

TIME

ZONE TIME in the land areas within time zone boundaries is indicated by pointers bridging the zone at the top of the map and the stationary time scale, calibrated in 5-minute increments.

When a time zone extends vertically to the top of the map without being blocked off by a boundary line, its associated pointer indicates the time for that zone. (Example: Zone W)

Where a time zone is blocked off and does not extend vertically to the top of the map, applicable time is indicated by reference to the pointer identified with the same letter as that placed within the boundaries of the zone. (Example: Finland, Zone B.)

Countries and zones in which time differs by a fraction of an hour are identified by a letter plus numerals. Applicable time is indicated on the time scale by the pointer identified with the same letter, to which is added the number of minutes indicated by the numeral. (Example: India, E + 30.)

DAYLIGHT SAVINGS TIME -- Shift the time scale manually (or visually) to the left a distance equal to one hour and read time same as zone time.

LOCAL TIME -- Project a perpendicular line or meridian from any locale on the map to the time scale. The point at which the line intersects the time scale indicates local time.

APPARENT SOLAR TIME for any meridian is obtained by subtracting from, or adding to local time, the number of minutes indicated by the horizontal distance between the center of the black dot (Sun) to the left or right of the mean noon line. One inch is equivalent to one hour.

EQUATION OF TIME is indicated by the horizontal distance of the black dot (sun) the mean noon line translated into time on the basis of one inch to the hour.

DAY OF THE WEEK

The prevailing day of week in any part of the world is self-evident. For example, if London appears on the right of the Date Line on Geochron's map, the "day of week" shown on the right applies. If it appears on the left side of the Date Line, the "day of week" shown on the left applies.

DATE

The Calendar moves imperceptibly from East to West (relative to map). There are two indicator lines, one each associated with the wording "Right of Date Line," "Left of Date Line." Indicators show the prevailing date on either side of the Date Line.

SUN

The Black Dot indicates "apparent noon" position of the sun. "Mean noon" is shown by the red line running vertically from the time scales's 12:00 o'clock (noon) line. The dot moves according to declination and meridian passage of the Sun. A figure 8 pattern results from this gradual shift on the sun's zenith position. It is called "analemma." If the dot is left of the red line, the sun's meridian passage occurs before 12:00 o'clock noon. If it is to the right, it occurs after 12 o'clock noon. The distance from the dot to the line can be translated into time on the basis of one inch to the hour. Thus, we have 'equation of time.'" The Black Dot's position North or South of the Equator indicates the "Sun's Declination."

SUNRISE AND SUNSET

Geochron's illuminated pattern shows in what parts of the world the sun is shining and where it is dark. The terminators, or the demarcation between light and dark is the moment of sunrise on the left and the moment of sunset on the right. The configuration of this demarcation is changing continually as sunrise and sunset changes daily throughout the world. A vertical line from the intersection of the demarcation and a location on the map to the time scale above will provide quick reading of sunrise and sunset "local time." However, when zone time is desired, move the map placing the location over the sunrise or sunset demarcation; then read the time indicated by the arrow of the related time zone. Obviously, the duration of daylight is readily determined by the difference between the time of sunrise and sunset for any locale.