## **How to Position Your Horizontal Sundial**

Sundials are designed to display the approximate "sun time" which may be significantly off "clock time" depending on where you live. Even if it is exact at one time of the year, it will be slightly off at other times.

Horizontal sundials consist of two parts: a flat base plate (or dial) on which the hours are marked and a gnomon (or shadow arm). Locate your sundial in an area exposed to sunlight throughout the day. Position the base plate on a post, display column, or other firm support, such that the gnomon is pointing north. Secure as desired.

## 3 Ways to Find North

- 1. With a compass, establish true north. You will need to know the compass variation for your area to convert compass north to true north. Align the gnomon accordingly.
- 2. At night, point the gnomon toward Polaris the North Star. It is at the end of the handle of the Little Dipper (Ursa Minor).
- 3. At exactly noon local time, rotate the sundial until the gnomon casts a shadow over 12 noon on the base. If daylight saving time is in effect, do this at 1 p.m. (With this method, depending on your location, the gnomon may not point exactly north.)

For better accuracy, the angle of the gnomon should be the same as your latitude (which may be looked up in an atlas). Most manufactured sundials are set to an angle of 40° as a compromise. If the gnomon on your sundial is adjustable for latitude, measure the angle between the gnomon and the base plate and change that angle to the value of the latitude. Some models are adjustable; some are not. Some non-adjustable sundials have fixed gnomons that can be bent slightly if first heated with a torch.

For a sundial in the Southern Hemisphere, the gnomon should point south.



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