VINTAGE COMPASS

Instruction Manual

Introduction to the Compass

The compass dial is a circle of 360 degrees, which is divided into 4 sections of 90 degrees. Each section is a quadrant. North (N), east (E), south (S) and west (W) are located at 0 degrees in each section.

On this model, each quadrant is divided into two. The degrees located within these new divisions indicate north-east (NE), south-east (SE), south-west (SW) or north-west (NW).
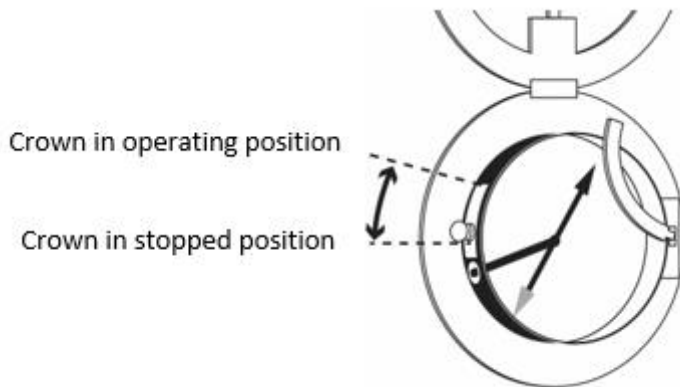

Fig. 1

Use

Warning: The compass can be misleading if not used correctly.

➢ ***Before use***
- Turn the ***crown to operating position***, so that the needle is not blocked.
- Hold the compass horizontally and flat. For example, place the compass flat on the palm of your hand.
- Do not use a compass near electric lines or metal objects.
- A compass used in the northern hemisphere of the planet will not work in the southern hemisphere.

➢ **Use**
- **Rotate the compass** until the directional arrow aligns with "**N**", or north, indicating magnetic north.
- Turn the crown to the stopped position in order to block the needle. Locate yourself in relation to your geographic map.

   Precision: *Difference between "geographic north" and "magnetic north".*
- *Geographic north is what you see on some maps. It is the North Pole. In contrast, a compass never indicates that point, but another one close enough, that we call "magnetic north".*
- *Magnetic north refers to the tilt of the Earth's magnetic field. On average, magnetic north is offset by 11° in relation to geographic north.*
   Note: In some points of the Earth, the tilt can reach 20°. This depends on the location on Earth where you may find yourself. To have a proper orientation, it will be necessary to take this difference into account.
- *Adjust the variation between magnetic north and geographic north.*

Reading the Time

Stylet

Solar time: The shadow made by the stylet from the sunlight indicates the time according to the position of the sun.

Read the solar time displayed on the dial and apply the 3 corrections to obtain the legal time.

- Longitude correction
- Equation of time correction
- The addition of 1 hour in winter or 2 hours in summer

The formula for the calculation is below. Please refer to the example at the end of the instruction manual to know how to calculate the legal time.

Legal time = dial time + longitude correction + equation of time correction + 1 h in winter (2 h in summer)

LONGITUDE CORRECTION

The sun makes an apparent turn of the earth in 24 h, or 15° per hour or 1° every 4 min.

The legal time in our time zone corresponds to the passage of the sun at the Greenwich meridian. Therefore, the offset of longitude must be taken into account.
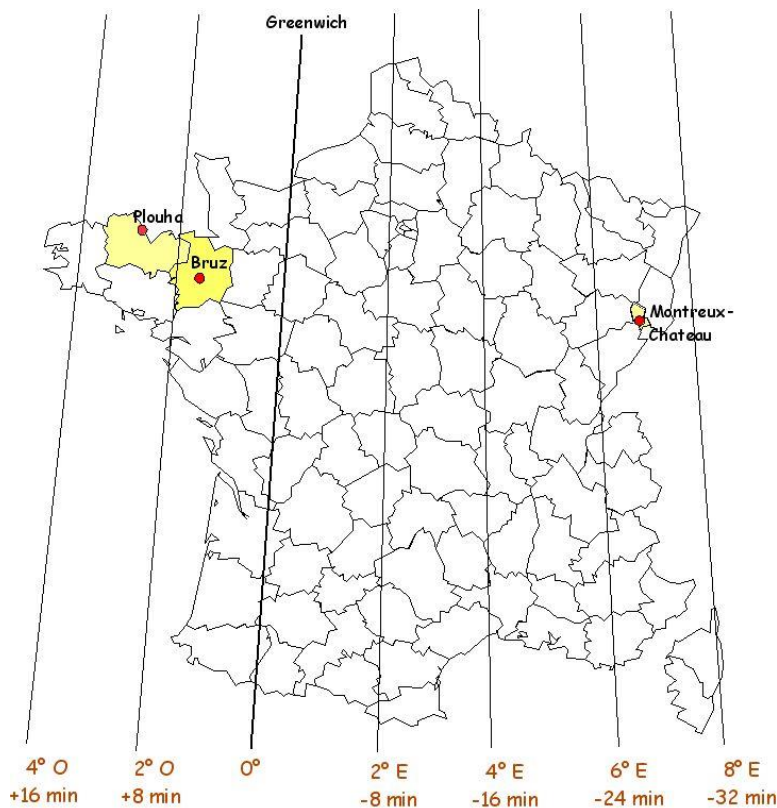

4° O	2° O	0°	2° E	4° E	6° E	8° E
+16 min	+8 min		-8 min	-16 min	-24 min	-32 min

Fig. 2

Examples

Montreux-Château	7° 00'	East	- 28 min.	The sun will arrive at Greenwich later
Bruz	1° 45'	West	+ 7 min.	The sun has already passed Greenwich
Plouha	3°	West	+ 12 min.	The sun has already passed Greenwich
Pleumeleuc	2°	West	+ 8 min.	The sun has already passed Greenwich

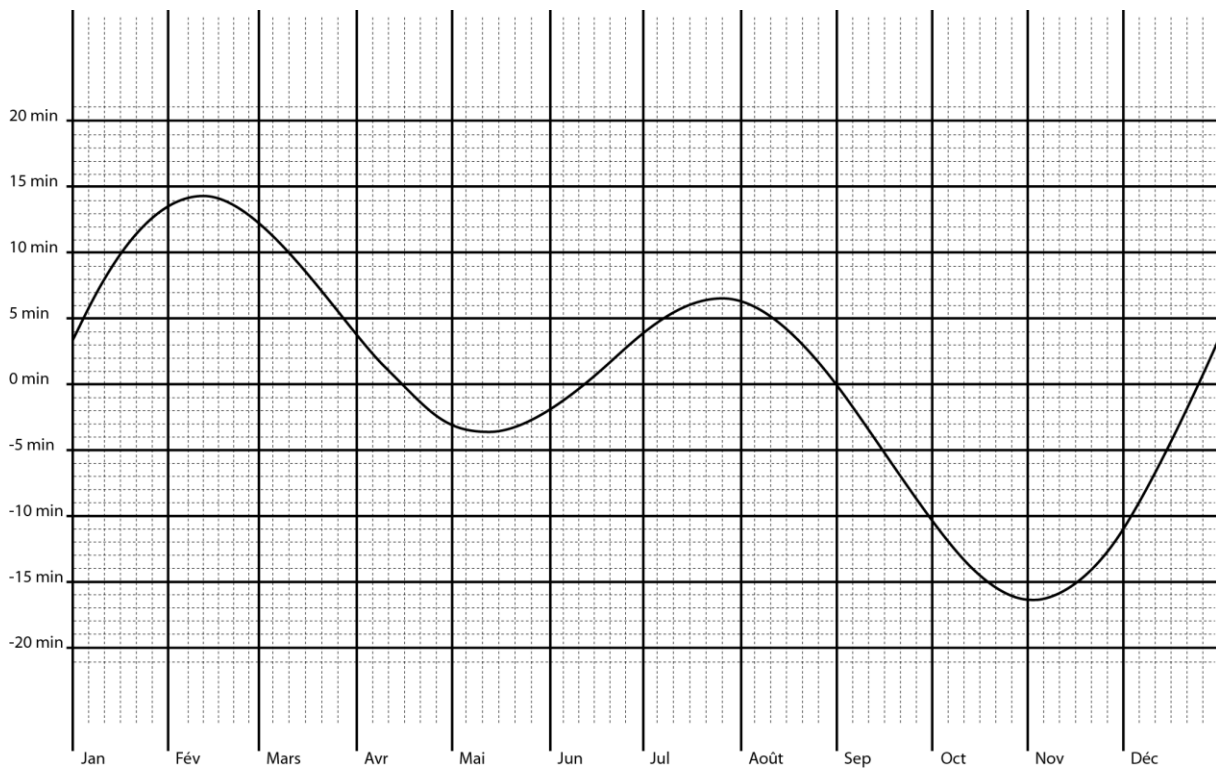## *Equation of time correction*

Fig. 3

Example for calculating the legal time:

Formula

Legal time = dial time + longitude correction + equation of time correction + 1 h in winter (2 h in summer)

On 6 August at Montreux-Château

	Solar time	Noon (reading on the dial)
Correction 1 - Longitude		-28 min. (longitude correction)
Correction 2 - Equation of time		+6 min. (equation of time correction)
Correction 3 - Summer time		+2 h.
	Legal time	13:38 (1:38 p.m.)

Refer to the table for the equation of time.