Throw Away Your Wristwatch

Operators Guide for the Deluxe Handout

This equatorial sundial will work for any summer-time location in the Northern Hemisphere from mid-morning to late afternoon

- Find your local Latitude
  - 41° for Pennsic
- Remove gnomon from leather cord
  - The gnomon is a Bright Common, 16d, 3 ½" nail
- Mark the gnomon for the appropriate Latitude using the scale below the sundial face
  - Align point of nail with line on left-hand side of scale
  - Ink pens wipe off quickly. Sharpies wipe off eventually. A jeweler's file is best.
- Calculate adjustment to modern time
  - Add 1 hour if on Daylight Saving Time
    - Add 1 hour when at Pennsic
  - Add / subtract for deviation from standard time zone meridian
    - Add 20 minutes for Pennsic
  - Add / subtract for equation of time.
    - Add 5 minutes for August 14th
- Determine which direction is true north
  - if using a compass be sure to adjust for magnetic declination
  - for Pennsic, magnetic declination as about 7°
  - 3° magnetic declination equals about 1 minute of time, so at Pennsic it's basically negligible
- Tie leather cord tightly around book to keep it closed
  - or it will flop over
- Push gnomon into hole in center of sundial until Latitude mark appears even with the BOTTOM (outside back cover) of the book.
  - The point of the nail is on the ground / table. The head casts the shadow.
  - Note – if you take your book apart and use only the front cover, still align the Latitude mark with the bottom (now the inside front cover). The angle will be correct in both instances
- Set sundial on flat surface with the gnomon pointing up at the North Star
  - When you read the sundial, you will be facing South
- Read time where center of shadow falls and adjust to modern time
  - Add 1 hr, 25 minutes for August 14th & 15th at Pennsic (every year)

You should be able to tell time to within 15 minutes easily.
To within 5 minutes with a bit of practice.
Go forth and be Medieval.

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