

HISTORY of ANGLE MEASUREMENT

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Earliest Times

- Discovery in 1936 near Babylon in the town of Shush of a clay tablet, on which was a text that showed that the Babylonians measured angles using a factor of 360 to form a circle.

- The markings on the clay tables showed
 $\text{Pi} = 25/8 = 3.125$

Babylonian Clay Tablets



Egyptian Tomb Drawings 1500BC



Scene from the Tomb of Djoserkersonb

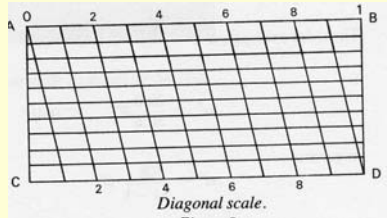
Egyptian Groma



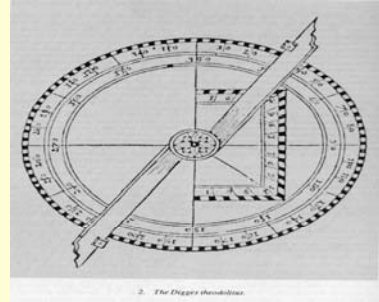
Islamic Astrolabe



Diagonal Scale



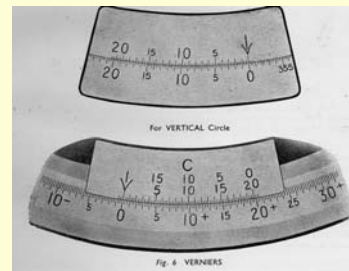
"Theodolitus" by Leonard Digges, 1571



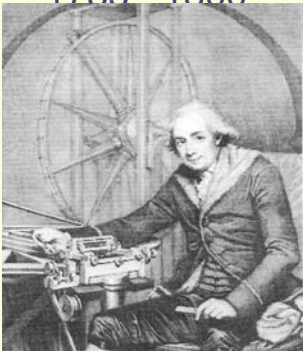
Earliest Theodolite Humphrey Cole, 1586



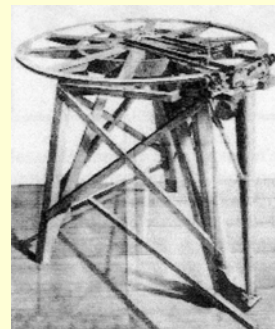
The Vernier System



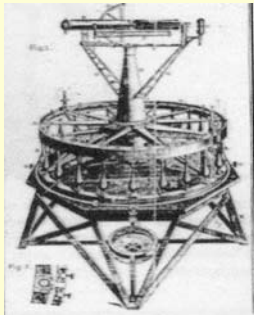
Jesse Ramsden 1735 - 1800



Ramsden's Dividing Engine

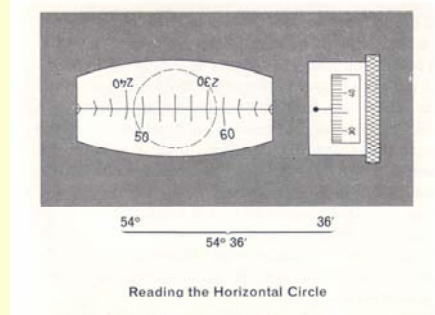


Ramsden's Great Theodolite

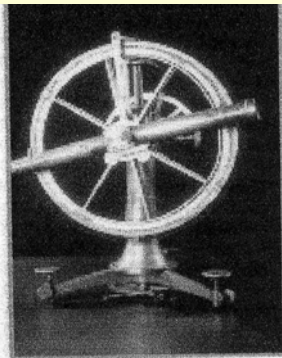


Ramsden Theodolite drawing

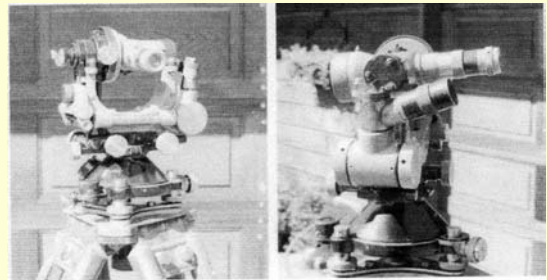
Micrometer Reading System



1900th Century Theodolite



First Glass Circle Theodolite Zeiss, Jena. 1920



Wild Optical Reading Micrometer

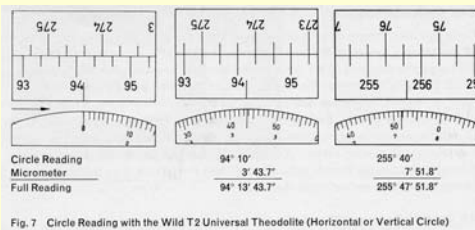
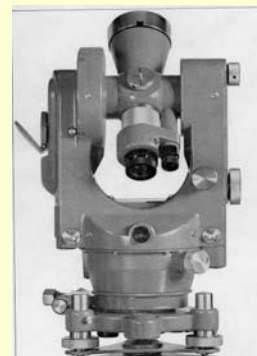
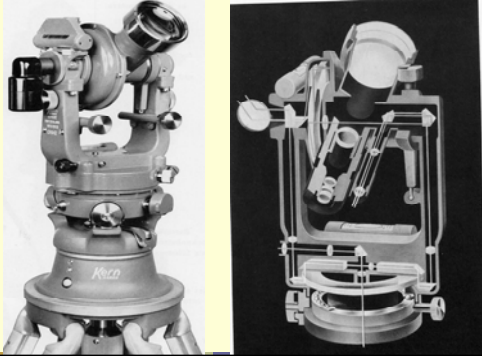


Fig. 7 Circle Reading with the Wild T2 Universal Theodolite (Horizontal or Vertical Circle)

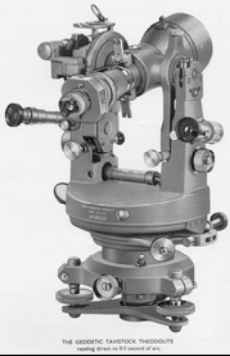
Wild T2



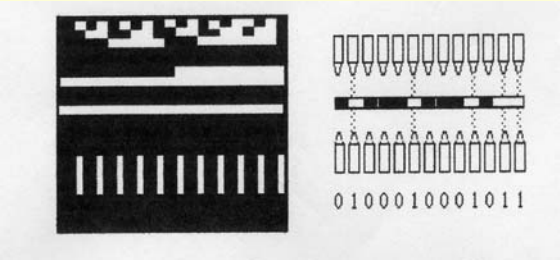
Kern Double Circle Theodolite



CT&S Tavistock Theodolite



Coded Circle System



Modern Total Station

