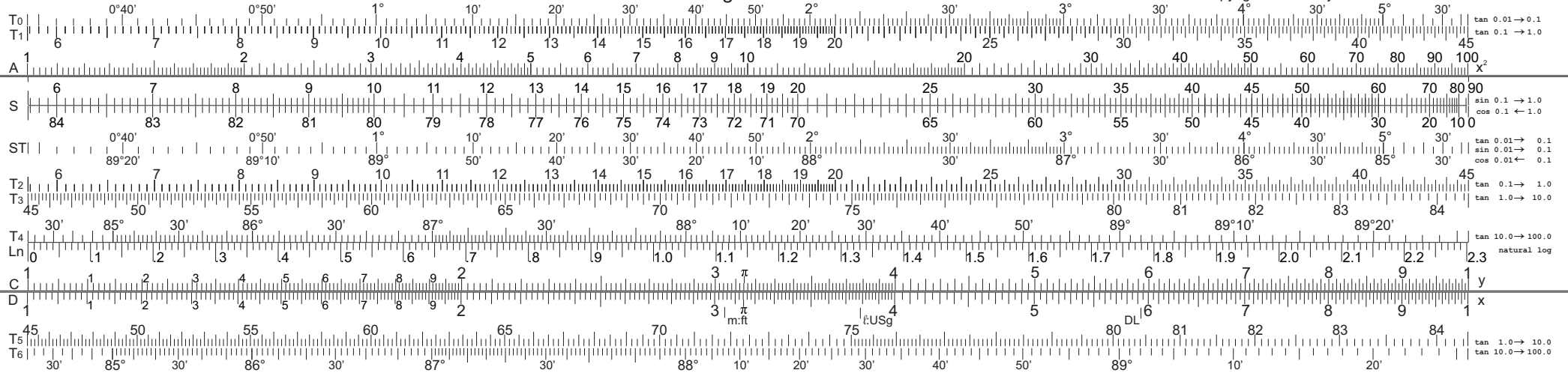


Serial Num: 1

Mark 1 Navigator's Slide Rule

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VALUES OF THE SCALES

T ₀ & ST:	tan 0.01	→ 0.1 =	0° 34.4'	→ 5° 42.6'
T ₁ & T ₂ :	tan 0.1	→ 1.0 =	5° 42.6'	→ 45° 00.0'
T ₃ & T ₅ :	tan 1.0	→ 10 =	45° 00.0'	→ 84° 17.4'
T ₄ & T ₆ :	tan 10	→ 100 =	84° 17.4'	→ 89° 25.6'
S:	cos 0.1	← 1.0 =	84° 15.6'	← 0° 00.0'
ST:	cos 0.01	← 0.1 =	89° 25.6'	← 84° 15.6'
S:	sin 0.1	→ 1.0 =	5° 44.3'	→ 90° 00.0'
ST:	cos 0.01	→ 0.1 =	0° 34.3'	→ 5° 44.3'

CHART SCALES AND DISTANCE

Nautical Miles Per Inch = Reciprocal of Chart Scale ÷ 72,900

Inches



GREAT CIRCLE CALCULATIONS

Meridian Angle (t) = _____ °
 My Latitude (L) = _____ °
 Latitude of destination (d) = _____ °

1. $\tan(d) \div \cos(t) = \tan(W)$
2. Use [+W] if d has same sign as L.
 Use [-W] if d has opposite sign as L.
 $(90^\circ - L) \pm W = X$
3. Ignore the sign of X (i.e. -60 = 60).
 If X < 90°, then X = Y
 If X > 90°, then 180 - X = Y

4. $[\cos(W) \div \cos(Y)] * \tan(t) = \tan(Z)$
5. $\cos(Z) * \tan(Y) = \tan(Hc)$
 Azimuth = Zn
6. $D = (90^\circ - Hc) \times 60$

If meridian angle > 90° then...
 Use alternate data input: $180^\circ - MA = t$
 Use alternate Step 2: $(90^\circ - L) - W = X$

Azimuth Rules for Step 5

Meridian angle (t)	1° to 179° W	1° to 179° E
L is in North Latitude		
If d or W > L	Zn = 360 - Z	Zn = Z
if d contrary or W < L	Zn = 180 + Z	Zn = 180 - Z
L is in South Latitude		
If d or W > L	Zn = 180 + Z	Zn = 180 - Z
if d contrary or W < L	Zn = 180 + Z	Zn = 180 - Z