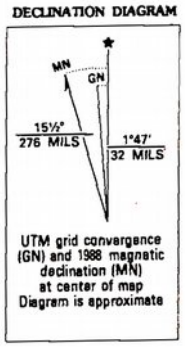
Converting between Magnetic and True North bearings

When a compass does not have a declination set:

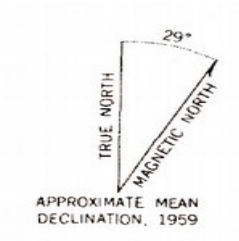
Map to compass – West, Add (true to magnetic)
- Bearing measured on map: 45 degrees (true)
- Declination 15 degrees West
- Map to compass: 45 + 15 = 60 degrees (magnetic)

Compass to map – West, Subtract (magnetic to true)
- Bearing measured with Compass: 45 degrees (magnetic)
- Declination 15 degrees West
- Compass to map: 45 - 15 = 30 degrees (true)

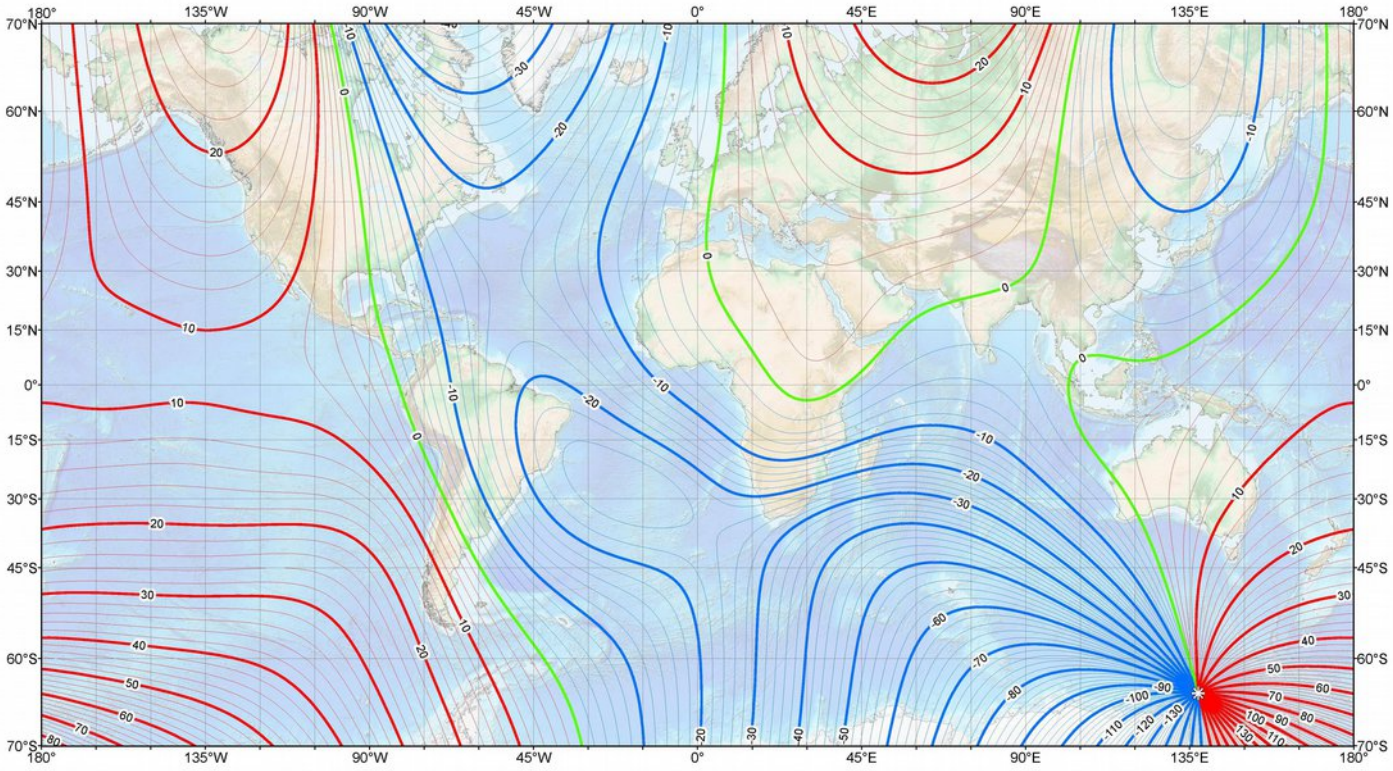


Map to compass – East, Subtract (true to magnetic)
- Bearing measured on map: 45 degrees (true)
- Declination 15 degrees East
- Map to compass: 45 - 15 = 30 degrees (magnetic)

Compass to map – East, Add (magnetic to true)
- Bearing measured with Compass: 45 degrees (magnetic)
- Declination 15 degrees East
- Compass to map: 45 + 15 = 60 degrees (true)



US/UK World Magnetic Model -- Epoch 2010.0
Main Field Declination (D)



Main field declination (D)
Contour interval: 2 degrees, red contours positive (east); blue negative (west); green (agonic) zero line.
Mercator Projection.
: Position of dip poles

Map developed by NOAA/NGDC & CIRES
http://ngdc.noaa.gov/geomag/WMM/
Map reviewed by NGA/BGS
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