

DEFINITIONS

GREAT CIRCLE

A circle on the surface of the earth whose plane passes through the center of the earth. It is also the shortest distance between two points on the surface of the earth.

RHUMB LINE

A curved line on the surface of the earth cutting all meridians at the same angle. All parallels of latitude are rhumb lines.

MEASUREMENT OF DIRECTION

Direction is measured from degrees clockwise from north which is 0 degrees (or 360 degrees). East is 90 degrees, south is 180 degrees and west is 270 degrees.

HEADING

The direction that the aircraft nose (longitudinal axis) is pointing, measured clockwise from north.

TRUE HEADING

Is measured from true north.

MAGNETIC HEADING

Is measured from magnetic north.

VARIATION

Defined as the angle between the true meridian and the magnetic meridian. It is also referred to as magnetic variation.

ISOAGONALS

- Lines on a map joining places of equal variation.
- Also known as isogonals.
- These are numbered east and west according to whether the magnetic variation is to the east or west of true north.

AGONIC LINE

Lines on a map joining places of zero variation.

DEVIATION

- The angle between compass heading and magnetic heading.
- The difference is caused by the magnetic fields generated from the metal airframe and engine.

COMPASS HEADING

The direction that the needle in the compass is pointing.

BEARINGS

- The position of an object relative to your aircraft.
- This angle is also known as the azimuth.
- Measured clockwise from the meridian through 360 degrees.
- Has nothing to do with the aircraft heading.

STATUTE MILE

Distance measuring 5280 feet

NAUTICAL MILE

Average length of one minute of latitude: 6080 feet.

KILOMETRE

1000 meters.

SPEED

The rate at which an object moves in relation to a fixed object.

MPH (Miles per Hour)

Speed in statute miles per hour.

KNOTS

Speed in nautical miles per hour.

KPH (Kilometers per hour)

Speed in kilometers per hour.

INDICATED AIRSPEED

Speed shown on the airspeed indicator.

TRUE AIRSPEED

Speed of the aircraft relative to the air.

GROUNDSPEED

Speed of the aircraft relative to the ground.

TRACK

- The direction the aircraft intended to take over the ground.
- May be represented by a straight line drawn on a map. Also known as intended track or required track.
- Direction is the angle between this line and a meridian measured clockwise through 360 degrees. Can be true magnetic or compass.

TRACK MADE GOOD

- Actual path traveled by the aircraft over the ground.
- Line track it may be represented by a line drawn on a map and its direction measured (if it is reasonably straight line).

DRIFT

Drift or drift angle, is the angle between the heading being flown and the track made good over the ground. It can be expressed in degrees either left or right.