

COMPASS

By Richard Sorokin

The earth has a magnetic field around it. The North Pole of the Earth is the south pole of the magnetic field. The South Pole of the Earth is the north pole of the magnetic field. Remember -with magnets opposite attract, similar repel.

Your compass has a magnet built in it. Its North is attracted by the South Pole of the Earth.

The magnetic pole in the north is not located in the same place as the geographic North Pole. The earth's iron deposits also cause inconsistencies with the magnetic field. Because of these problems there is an error in the magnetic reading we call variation. This variation error changes annually and is different in different locations.

The compass rose on your charts has an outer compass ring which shows the true course or directions. The inner compass rose corrects for local variation and gives you the magnetic course.

We have now gone from true course to magnetic course through variation correction.

Your boat compass can be affected by metal or electronics around it. This error is called deviation. There are a few ways to correct for this. The old way is to swing your vessel in a location where geographic markers and directions can be compared to your compass. Every 15 degrees is recommended for correction. Most modern compasses come with adjustment screws on the bottom to take out the deviation problem. Another method is to take a second compass and locate it far from possible interference. Swing the boat and compare the two.

You should come out with a chart that tells you at a certain degree reading of the magnetic course you have to add or subtract degrees to get a compass course for your boat.

The chart that you make should read that at different degrees you have to add or subtract degrees. The corrections are written as east or west corrections.

Going from True course -Variation-TO Magnetic course-Deviation-TO Compass course you add west corrections and subtract East correction.

When you do dead reckoning -you go from compass course to true course. You are now going in the opposite direction. You add east and subtract west.

Today with GPS all this is not used. However if you have a power failure you may be thankful to know the old methods.

To navigate today you pick your destination, make it a way point and punch in go to. The GPS will give you the true course and a path for you to travel. Just make sure the path does not go through obstacles. Some time through harbors you have to create a route with many way points to get you through the obstacles. Also with GPS maps, it shows where things should be not necessarily where they are.