

The Compass & Taking a Bearing



The Compass

- ▶ Silva is the most popular compass for hillwalking
- ▶ These are the four most common types



Silva Type 7



Silva Type 3

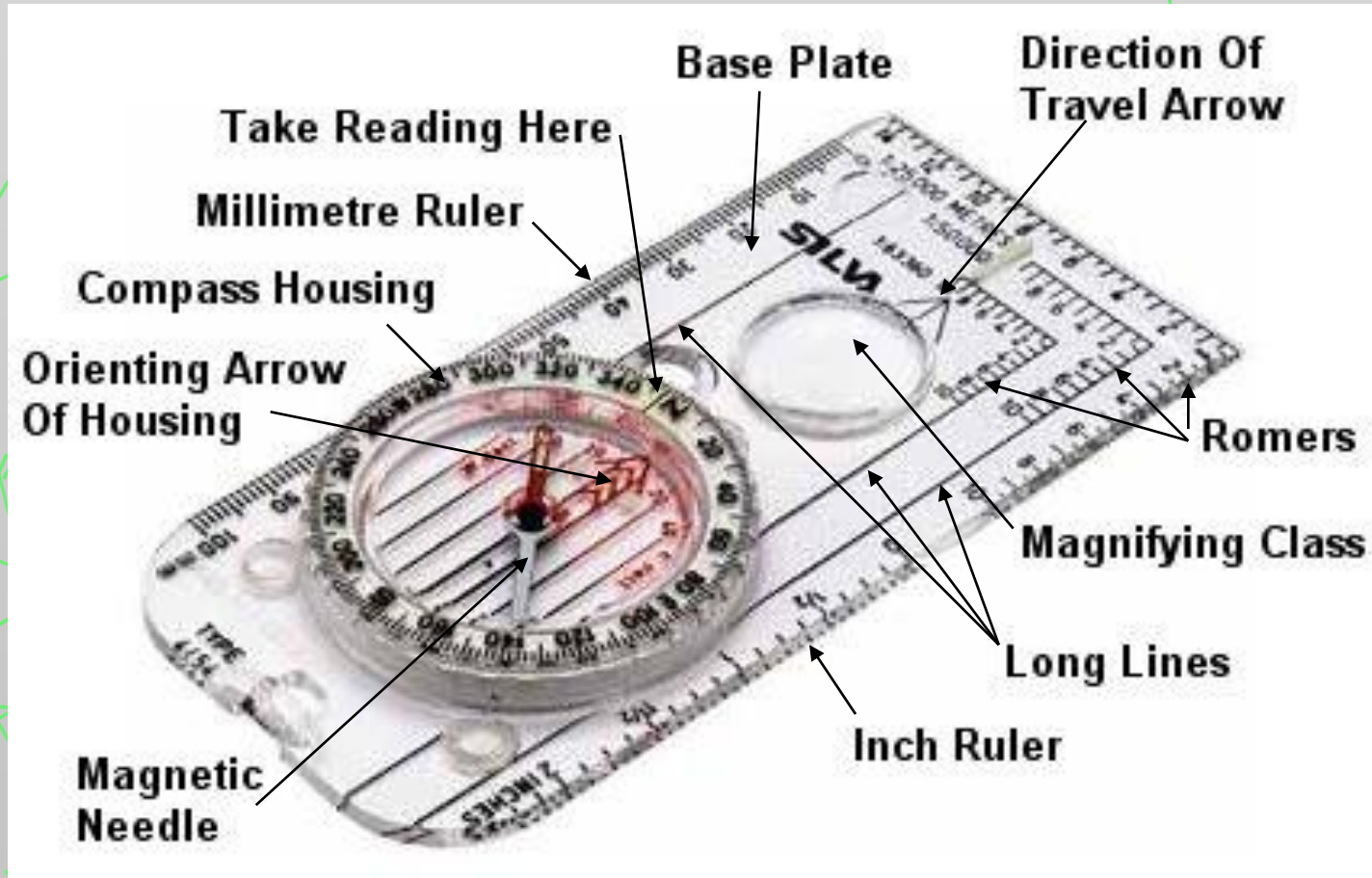


Silva Type 4



Silva Type 15

Parts of the Compass



Taking a Bearing

Before we can take a bearing, we must know 2 very important pieces of information,

Where we are
&
Where are we
going



Taking a Bearing – Step 1



Place the compass on the map so that either of the edges (or one of the long lines) of the base plate is touching both your starting point and finishing point

Make sure that the 'Direction of Travel Arrow' is pointing in the direction you are travelling

Taking a Bearing – Step 2



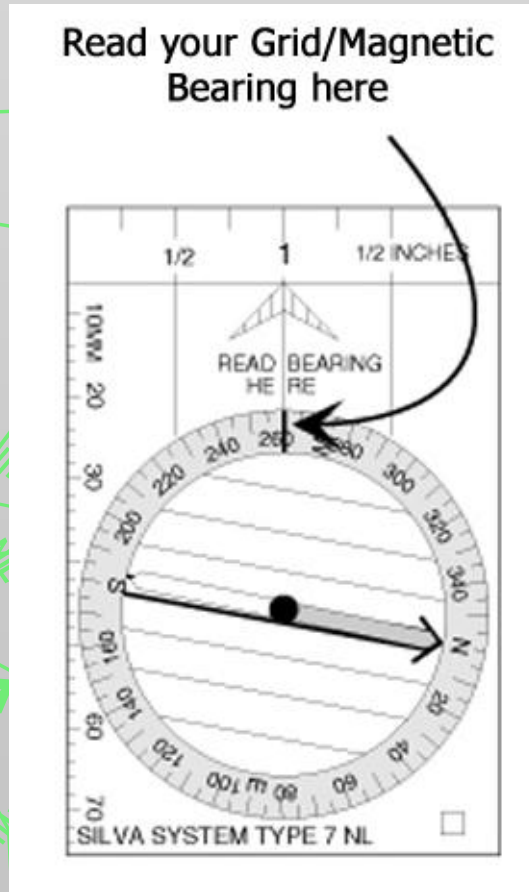
Hold the 'Base Plate' in position on the map and turn the 'Compass Housing' so that the 'Orienting Arrow of the Housing' is pointing to North on the map (The lines inside the housing should be parallel with the grid lines on the map)

Taking a Bearing – Step 2a



Double check that the 'Base Plate' is still lined up on your two points
Lift the compass off the map

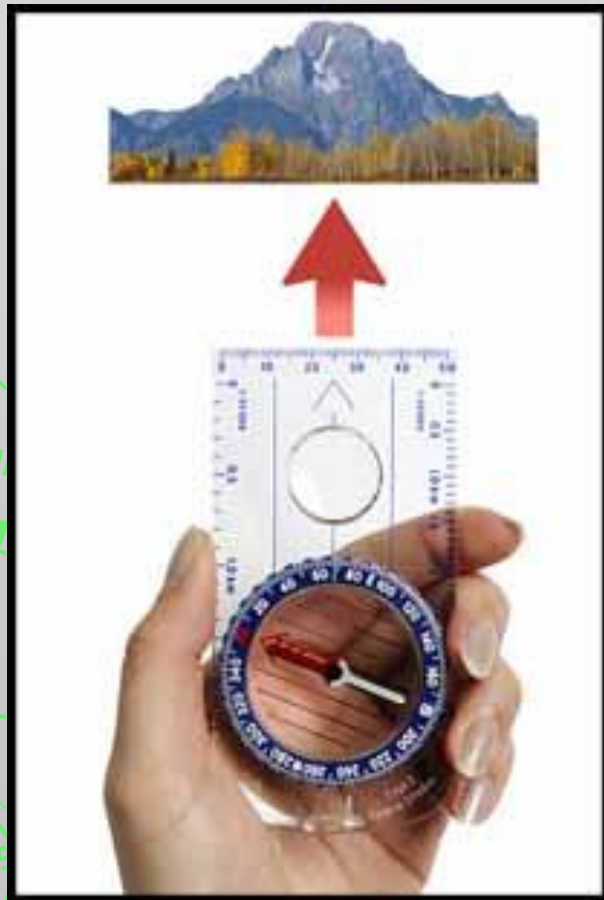
Taking a Bearing – Step 3



Read the bearing on the rim of the housing – This is your **GRID BEARING**

Add your magnetic variation to this number (and turn the housing to the new number) – This is your **MAGNETIC BEARING**

Taking a Bearing – Step 4

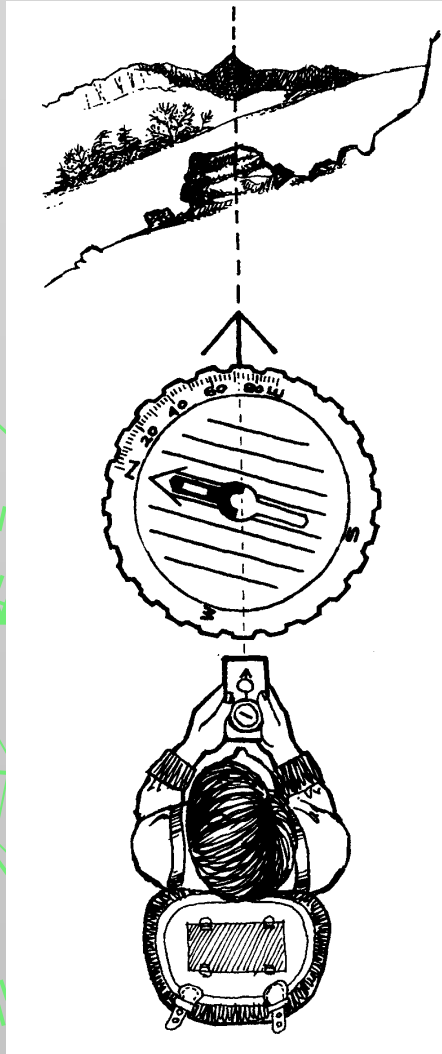


Hold the compass in front of you with the 'Direction of Travel Arrow' pointing directly away from you

Turn your whole body until the north end of the needle is in line with the 'Orienting Arrow of the Housing'

The 'Direction of Travel Arrow' is now pointing towards your objective

Following a Bearing



Once you have your magnetic bearing, and the compass is pointing to your objective, you need to start walking

Do not walk and look at the compass at the same time

- It's easy to veer off your bearing
- You can't see what's in front and around you

Find an intermediate point that is on your bearing, put your compass down and walk to this point, and repeat this until you get to your objective

North

There are 3 different types of North

▶ **TRUE NORTH**

- The North Pole

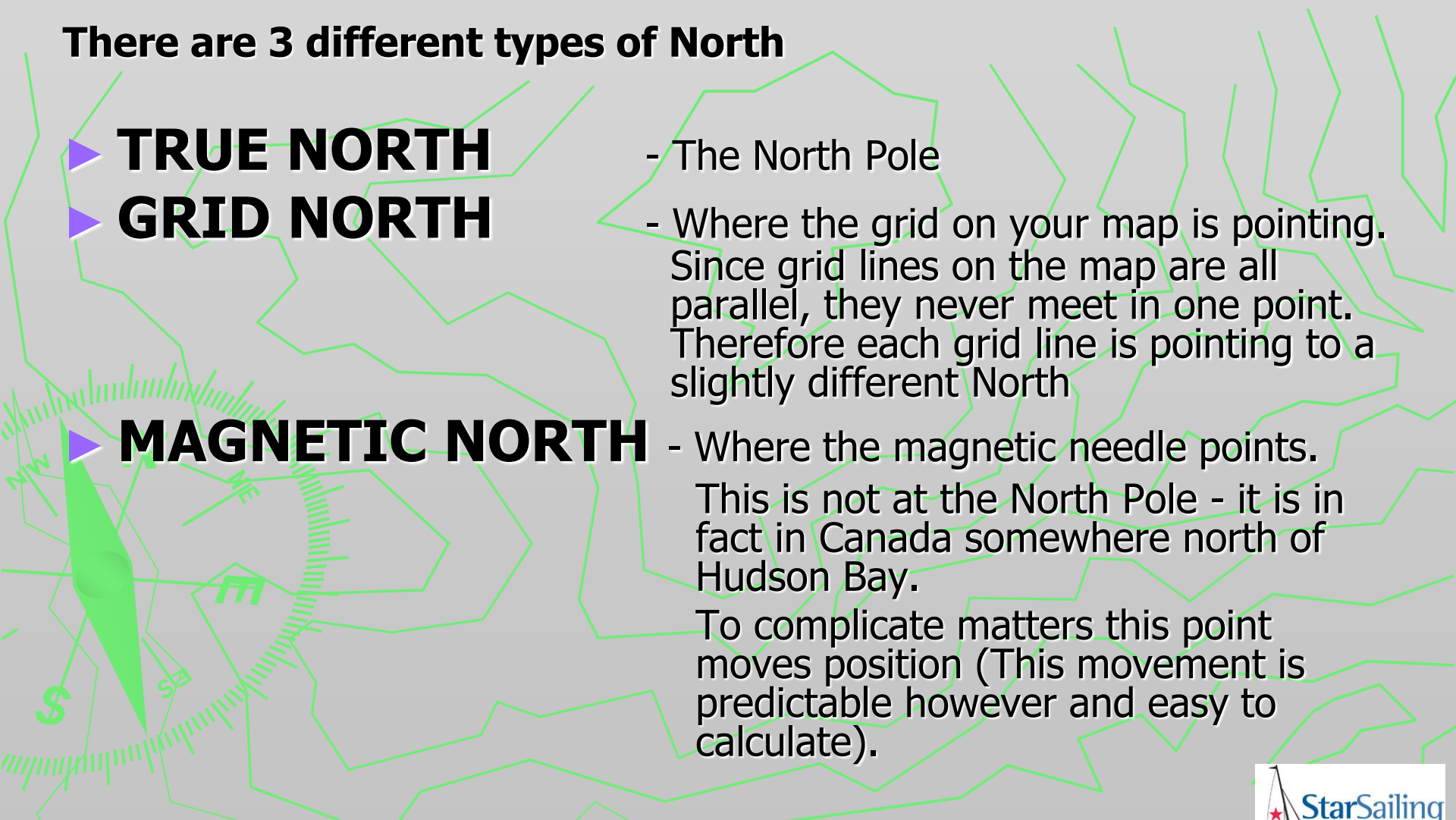
▶ **GRID NORTH**

- Where the grid on your map is pointing. Since grid lines on the map are all parallel, they never meet in one point. Therefore each grid line is pointing to a slightly different North

▶ **MAGNETIC NORTH**

- Where the magnetic needle points. This is not at the North Pole - it is in fact in Canada somewhere north of Hudson Bay.

To complicate matters this point moves position (This movement is predictable however and easy to calculate).



As walkers we take our bearing from the grid on the map.

We need to convert this to a magnetic bearing – where the compass actually points.

This is our **MAGNETIC VARIATION.**

Due to every grid line pointing to a slightly different north, this variation is different on every map.

Therefore instead of having a number in our head as a magnetic variation, you need to know how to work out the variation on the map that you are using

§ Somewhere in the legend of the map it will tell you how to work this out

Kerry Sheet 78

North Point

At the mid point of the eastern edge of this Sheet True North is $01^{\circ} 09'E$ of Grid North.
At the mid-point of the western edge of this Sheet True North is $01^{\circ} 36'E$ of Grid North.
At the centre of this map Magnetic North is $06^{\circ} 56'$ West of Grid North (1995).
Annual decrease $09.4'$.

Achill Sheet 30

North Point

At the mid point of the eastern edge of this Sheet True North is $01^{\circ} 20'E$ of Grid North.
At the mid-point of the western edge of this Sheet True North is $01^{\circ} 49'E$ of Grid North.
At the centre of this map Magnetic North is $07^{\circ} 16'$ West of Grid North (1995).
Annual decrease $09.9'$.

As walkers we are only interested in the last sentence, which is the relationship between grid and magnetic north

North Wales

North Points

At the centre of the E and W sheets true north is $1^{\circ}27'$ and $1^{\circ}42'$ east of grid north respectively.
Magnetic north is estimated at 4° west of grid north for 1999 decreasing by about $\frac{1}{2}^{\circ}$ in four years