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# SUUNTO SK-7 COMPASSES USER GUIDE





# SUUNTO SK-7 DIVING COMPASS USER GUIDE

The high-quality, liquid-filled Suunto diving compasses are durable, reliable and easy to use. The Suunto diving compass range includes both wrist and combo models. The SK-7 compasses have a side reading window.

The direction line, which indicates the direction of your destination, is indicated as follows:

Compass	Direction line
SK-7 wrist compass	Red line on the compass capsule
SK-7 combo compass	Red line on the compass capsule and console center line.

## COMPASS USE FOR DIVERS

#### ABOVE WATER

#### - Sighting a compass bearing

Hold the compass so that the compass is in a horizontal position and the direction line points away from you. Turn with the compass until the direction line points at your destination, then turn the direction ring until the magnetic North needle is aligned between the direction slit marks. On the SK-7 compass the front end of the direction line shows your compass bearing, and as long as the North needle is aligned between the slit marks, the direction line points toward your destination. You can also take a bearing by directing the compass towards the destination and by reading the compass bearing from the side window. This bearing can be memorized by turning the direction ring to that bearing.

#### - Obtaining a bearing from a map

Place the compass on the map, the direction line pointing from your point of departure to your destination. If necessary, use a ruler to connect the two points, and hold the compass against the ruler. Turn the direction ring until the direction silt marks point to the magnetic North on the map. When proceeding from map to terrain, all you have to do is keep the North needle between the silt marks while going from point of departure to destination.

#### - Setting a given bearing or direction

The scale division is 360 degrees going clockwise from 0 degrees at North. Turn the direction ring until the front end of the direction line is at the desired direction. Turn the compass until the needle falls between the slit marks. The direction line now points in the desired direction.

#### Magnetic declination

Maps are drawn in correlation to the geographic poles, while the magnetic compass needle is subject to magnetic declination, which varies according to the location. For absolutely exact map work, local declination (which is usually given on the map) should be taken into account.

#### - General orientation on the diving site

Before diving, check the main compass bearings at the diving site, paying special attention to memorizing the direction of the shoreline and bearings of landmarks that may be of importance.

# UNDER WATER

# Natural aids to underwater navigation

- The underwater extension of the shore's inclination tells the diver if he is following the shoreline. Be extremely careful, however: underwater ridges may lead you astray. Surface occasionally to check.
- The dip and stratification of rocks on the shore can often be followed over large areas under water.
- Sand ripples form long lines parallel to the shore.
- The direction of currents should be noted by their effect on algae or drifting particles. (Use the compass to check the bearing of the current).
- In shallow water, the sun's direction can be seen from shadows on the bottom, or by looking toward the surface.
- Swimming in a straight line along the bottom is greatly facilitated if you can line up three distinctive objects in

your line of vision. As you reach the first one, line up a new one farther away, so that you again have three points determining your course. This way you can counteract the effect of a side current.

#### Using the compass under water

- Usually, a compass must be held precisely in a horizontal position, otherwise the magnetic needle will stick. However, in the SK-7 the allowed inclination is approximately ±30 degrees.
  - Do not attempt to use the compass before you come to rest and can align the compass horizontally with the aid of a flat bottom, a glimpse of the surface, your own bubbles going up, or the pull of gravity. When doubtful, as in darkness or very murky water, turn the compass slowly right and left, checking that the North needle swings freely, before trusting your bearing.
    - Swimming along the bottom, make use of fixed points. Keep still until the needle settles between the slit marks (your predetermined bearing), choose a distinctive object near the edge of vision in that direction, swim toward it, and repeat the operation on reaching it.
- Commonly, the diver wants to follow a predetermined bearing under water, trying to reach a wreck, a rock etc.
  When submerging after obtaining the bearing on the surface, he must be careful not to accidentally disturb the direction ring, and to be on the safe side, the compass bearing should always be memorized.

- Avoid swimming long distances "in the blue". With practice you can swim straight by holding the compass constantly in front of your face, making sure that the direction line as precisely as possible points in your swimming direction. This can be facilitated by holding the compass in your hand instead of attaching it to your wrist. When possible, start by diving straight down to the bottom, then use the compass to follow fixed points, as described above.
  - In clear water, the compass can be used to swim in a search pattern over a fairly large area. Count your swim kick pairs (each left or each right kick), swimming on one of the main bearings (North, South, East, West). Count to 100 kick pairs (roughly 100 meters), turn 90 degrees, swim a few kicks, then turn 90 degrees further, and again swim 100 kick pairs. The pattern is continued for as long as necessary. The side displacement between the long legs in a search pattern depends on visibility. Make it preferably shorter than theoretically possible, as your directional error on the long legs is apt to be in the order of several degrees.

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