Bearing compass

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El compàs de marcacions o compás de demores, és un instrument nàutic utilitzat per determinar demores d'objectes observats. (Demora: angle format pel nord i la visual a un objecte determinat en el mar). S'utilitza en la navegació per determinar l'angle entre la direcció d'un objecte i el nord o un altre punt de referència. Proporciona el rumb absolut, que és l'angle en sentit horari entre el nord magnètic o nord veritable i l'objecte. Per exemple, un objecte cap a l'est tindria una orientació absoluta de 90 graus és veritable es diu demora veritable, si el nord és el magnètic es diu demora magnètica. És utilitzat habitualment per geòlegs, agrimensors i navegants per obtenir orientacions precises sobre el terreny.[1]

Dial of a Suunto compassSUUNTO dial compass

A bearing compass, is a nautical instrument used to determine the bearing of observed objects. (Bearing: angle formed by the north and the visual to a certain object in the sea or ashore). Used in navigation to determine the angle between the direction of an object and north or another reference point. Provides the absolute bearing, which is the clockwise angle between magnetic north or true north and the object. For example, an object to the east would have an absolute bearing of 90º, if it is relative to the magnetic north than it is called magnetic bearing. It is commonly used by geologists and surveyors to obtain precise bearings on the ground.[1]

Sailors use successive demarcations of fixed reference points along with simple geometric techniques to determine their position, course and speed. In addition, making successive demarcations of other vessels, together with simple geometry techniques, can help the navigator to determine if there is a risk of collision and to decide what measures should be taken to avoid the danger.[1]

Contents

Illustration of an old bearing compass

All hand compasses can be used to take bearings, but what distinguishes the bearing compass from the rest is the fact that it has some type of optics to allow viewing "at the same time" the compass marks and the observed target. The simplest and most common type of hand compass has a horizontal compass rose and an observation device:
a pinnule, alidade or viewfinder that allows the user to observe the target and then by "changing view", read the angle formed by the target's direction and the one marked by the compass with respect to the magnetic north.

More complex prismatic versions, such as SUUNTO compasses (see first photograph), use an optical system to display the bearing marks through an ocular while pointing to the target. There are also electronic models of binoculars which, by means of an hybrid electronic-optical system, allow the bearing marks to be viewed digitally at the same time as the object is observed through its optical system.[2]

Description

An ancient marker compass

All handheld compasses can be used to take a delay, but what distinguishes the dial compass from the rest is the fact that it has some kind of optics that allow you to visualize "at the same time" the marks of the compass and the observed lens. The simplest type of handheld compass, it has a "horizontal compass rose" disc and an observation device: a pin, alidada or viewfinder that allows the user to observe the object and then, by "changing views" read the angle marked by the compass with respect to magnetic north. More complex prism versions, such as SUUNTO compasses (see first photo), use an optical system to display delay marks through an eyepiece while pointing at the lens.[2]

Monocular with compass

Monocular + Seago 8×42 compass

There are also some models of monoculars/binoculars, with or without electric lighting, which by means of a hybrid optical system (some of them electronic-digital) allow the dimension marks to be visualized at the same time as the object is observed through its optical system.[3]The built-in compass helps you determine cardinal points, which is especially useful for outdoor activities such as hiking, boating, or exploring.[4]

Type

Monocular with zoom: this type has variable magnifications, which allows you to observe objects at different distances, adjusting the magnification according to needs and according to the situation
Monocular with rangefinder: models also include a reticle for estimating distances

Characteristics:

Magnifications: Monoculars with a compass can also be of different magnifications (e.g. 8-25x), which means that you can magnify making the image 8 times larger.
Outer lens diameter: The diameter of the front lens (objective) influences the amount of light that enters. For example, an 8x42 monocular has a 42mm front lens.

See also

Solar compass
Astrocompass

References

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See also

Compass
Astrocompass
Grid compass
Marine sandglass

References

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External links

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