HKSCC Queen’s College Division

Origin of Hong Kong Sea Cadet Corps Queen’s College Division

The Hong Kong Sea Cadets Corps was introduced to Hong Kong in 1968 as a government subsidized Uniformed Youth Organisation with cadet members aged 12-18.

In fact, we have a history with the Hong Kong Sea Cadet Corps. Our college was actually served as the temporary headquarter of the Hong Kong Sea Cadet Corps during 1862 to 1889 when it was named The Government Central School.,.

In 2002, the Hong Kong Sea Cadet Corps of Queen's College, a brand new training unit was formed with the missioned to build up confidence, self-discipline, and nautical skills of QC cadets so that they can contribute to the society.

You may refer to our video to have a grasp of our formal trainings and activities. We also have an article for guests and our fellow students regarding ancient and present nautical tools. We wish you all a good day and hope you enjoy our video and article.

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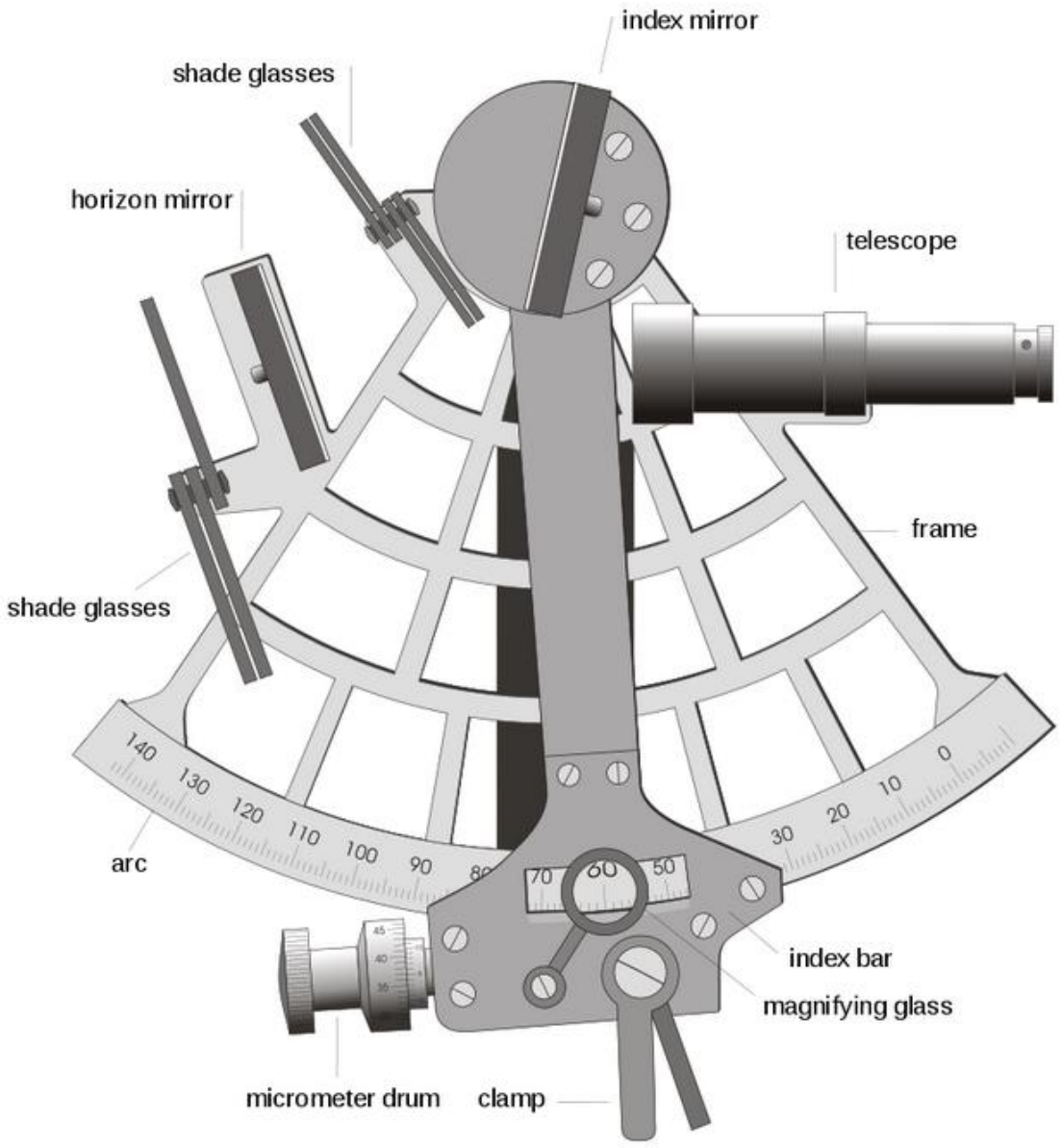
Differences of Sailing
Between Ancient Times and Nowadays

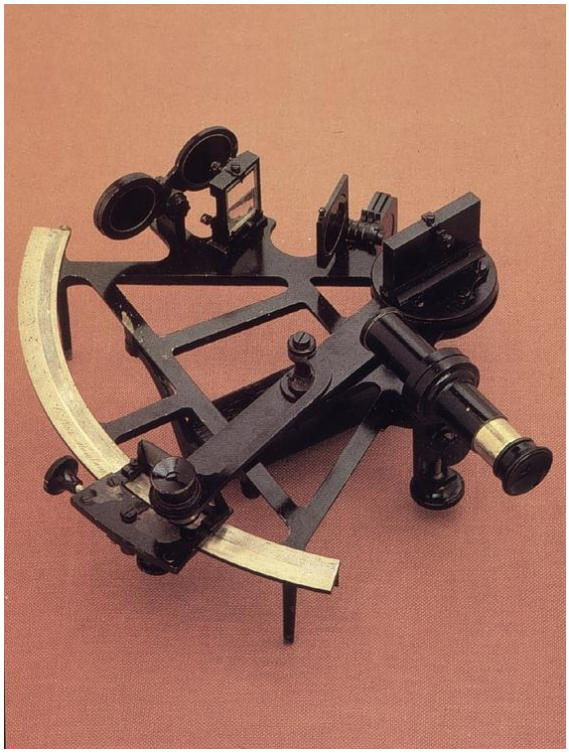
By Chan Chin Ching, Tsang Man Sing

Sextant (六分儀定位)

In 1714, people tried to make the sextant more accurate, so the sextant had been changed to an accuracy of 0.5 degree, and it may have been the single greatest factor in establishing Britain as the world's leading nation of navigators for almost a full century.



During the earlier years of the Board of Longitude, existing instrumentation was inadequate for the accurate measurement of a Lunar Distance (the angle between the Moon and selected reference stars as the Moon moves against the stellar background). When John Hadley presented his new, doubly-reflecting quadrants before the Royal Society in the year 1731, a new order of instrumental accuracy was established. The sextant is a doubly reflecting navigation instrument that measures the angle between two visible objects.



Admiral John Campbell, having used Hadley's octant in sea trials of the method of lunar distances, found that the 90° angle subtended by the arc of the instrument was insufficient to measure some of the angular distances required for the method. He suggested that the angle be increased to 120°, yielding the sextant. John Bird made the first such sextant in 1757.

Examples of sextants are mostly made with wood, however most are made from brass. Edward Troughton made the double-framed sextant in 1788. This used two frames held in parallel with spacers. This significantly increased the stiffness of the frame.

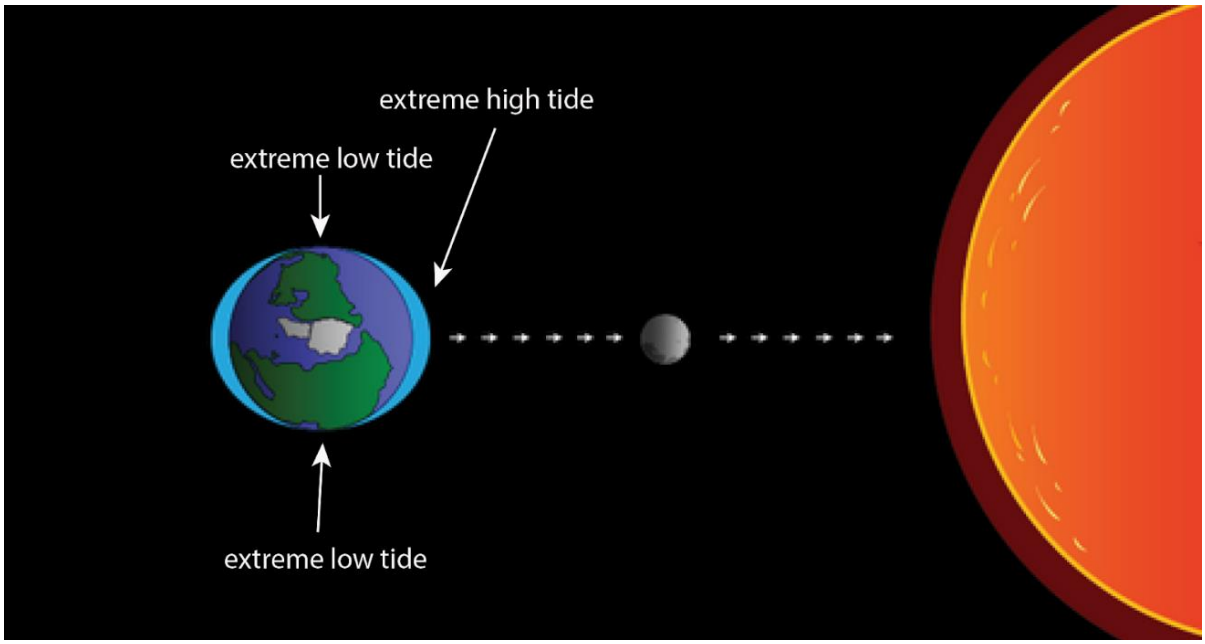
As the developments in dividing engines progressed, the sextant was more accurate and could be made smaller. Frame designs were modified over time to create a frame that would not be easily affected by temperature changes. Sextant’s frame patterns became standardized and can see the same general shape from different shops.

Ebb and flow (潮汐漲退)

So, how does the tide come about?

In ancient times, many people discussed this issue and put forward some hypotheses. The ancient Greek philosopher Plato believed that the earth, like people, must breathe. The tide is the breath of the earth. He guessed that this was caused by vibrations in underground caves, just like the beating of a human heart.

As people continue to observe tidal phenomena, they gradually have an understanding of the true causes of tidal phenomena.



The rise and fall of the sea will increase or decrease, and when the moon is over, it will follow. They all pointed out that tides are related to the moon. By the 1780s, British scientist Newton discovered the law of universal gravitation to show that tides are controlled by the force acting by the sun and the moon, making them have a tendency to leave the center of rotation. Because the moon is closest to the earth, the attraction of the moon is greater. In this way, under the combined action of these two forces, the seawater forms a tidal force. As the earth and the moon are constantly moving, and the relative positions of the earth, the moon and the sun are changing periodically, the tidal force is also changing periodically.

The relationship between sea water and navigation is the most important. In the vast sea, of course, the tide cannot be felt to rise or fall, but when the ship approaches the shore, the situation is completely different. In many ports, large amounts of seawater move due to the influence of tides, causing strong currents. If the tide is too strong, even the largest ships will have to wait until the most appropriate time before they can enter or leave the port.

Radar (雷達)

Radar is a detection system that uses radio waves to determine the range, angle, or velocity of objects. It can be used to detect aircraft, ships, spacecraft, guided missiles, motor vehicles, weather formations, and terrain. A radar system consists of a transmitter producing electromagnetic waves in the radio or microwaves domain, a transmitting antenna, a receiving antenna (often the same antenna is used for transmitting and receiving) and a receiver and processor to determine properties of the object(s). Radio waves (pulsed or continuous) from the transmitter reflect off the object and return to the receiver, giving information about the object's location and speed.

Radar was developed secretly for military use by several nations in the period before and during World War II. A key development was the cavity magnetron in the United Kingdom, which allowed the creation of relatively small systems with sub-meter resolution. The term RADAR was coined in 1940 by the United States Navy as an acronym for "RAdio Detection And Ranging". The term radar has since entered English and other languages as a common noun, losing all capitalization.

Radar for sailing has come on leaps and bounds in the past decade. A far cry from the bulky, heavy and power-hungry radar antennae of old, the latest generation of pulse compression radars draw minimal power, weigh less than 5kg and deliver excellent resolution at close and long range. But why do you need Radar on your boat?

Put simply, radar will show what is around the boat, seeing through darkness, precipitation and poor visibility. Whether you’re crossing a busy shipping channel in thick fog, looking for squalls offshore, or identifying a harbour entrance in the dark, Radar offers a significant aid to navigation and safety.

Marine radars are used to measure the bearing and distance of ships to prevent collision with other ships, to navigate, and to fix their position at sea when within range of shore or other fixed references such as islands, buoys, and lightships. In port or in harbour, vessel traffic service radar systems are used to monitor and regulate ship movements in busy waters.

Sonar (聲納)

Sonar (SOund Navigation And Ranging) is a technique that uses sound propagation (usually underwater, as in submarine navigation) to navigate, communicate with or detect objects on or under the surface of the water, such as other vessels. Two types of technology share the name "sonar": passive sonar is essentially listening for the sound made by vessels; active sonar is emitting pulses of sounds and listening for echoes. Sonar may be used as a means of acoustic location and of measurement of the echo characteristics of "targets" in the water. Acoustic location in air was used before the introduction of radar.

The first recorded use of the technique was by Leonardo da Vinci in 1490 who used a tube inserted into the water to detect vessels by ear. It was developed during World War I to counter the growing threat of submarine warfare, with an operational passive sonar system in use by 1918. Modern active sonar systems use an acoustic transducer to generate a sound wave which is reflected from target objects.

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