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What are SSB Radios?

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SSB radio is used by boats or yachts for communication at sea. It is part of the Global Maritime Distress, and Safety System established under SOLAS, the international convention for the safety of life at sea.

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The full form of SSB Marine radio is Single Side Band radio. The SSB radios offer quick access to over 700 radio channels. MF or medium-frequency SSB radios range about 400 nautical miles, while HF or high-frequency SSB radios range a thousand miles.

Hence, they have a larger reach than VHF radios, ranging from 35 to 50 [nautical miles](#). The system consists of chargeable lithium-ion batteries, chargers, an external antenna, and an automatic antenna tuner and is used by sailors, mariners and naval forces.

The State of California declared that these batteries contain certain cancer-causing chemicals and should be handled cautiously. While charging the radio system, one should place it on a fire-proof surface and not leave it unattended for a long time. Also, good-quality cable connections should be installed for greater transmission clarity.

While many believe that a satellite phone may come in handy during [emergencies](#), an SSB radio with marine SSB transceivers is the most helpful tool since it sends distress signals to all ships in the vicinity and alerts the rescue authorities automatically.

In contrast, you can call just one number through a satellite phone. Also, pairing the SSB radio with a Pactor modem would allow one to receive weather faxes, weather GRIB Data and e-mails onboard a vessel.

Depending on the requirement, one can opt for SSB amateur radio systems cheaper than SSB Marine radios. However, an amateur radio certificate is more difficult to get than a marine radio license or a Long Range Certificate. Also, the expensive SSB marine radios have a DSC or Digital Selective Calling function.

The SSB radio was first used as part of the navigational radio system after World War II. The main reason for introducing the SSB radio system was the problems caused by the AM (Amplitude Modulation) radio system.

One of the main disadvantages or problems of the AM radio system was that it absorbed a considerable amount of unwanted power and space. Also, the AM system was not foolproof. The messages and information passed through the AM system could be listened to and monitored by unwanted channels leading to important information being passed on and emergencies being created.



The SSB radios offer a wide variety of services like a two-way communication marine radio system with the captains of other boats, yachts and the coast guards. Apart from this, the SSB radios are not affected by distance.

They can be easily used for calls and messages between yachts or boats far away from each other without disrupting or distorting transmission. In addition to being a marine radio system that offers full-proof communication channels, the SSB radio system also provides entertainment in the form of music to the boat's crew. The SSB radio thus provides a comprehensive marine radio communication system to the shipping industry.

However, a specific transmitter must be equipped in the boat to receive and send

messages through an SSB radio system. If this transmitter is not fixed to the ship, then routine radio communication transmitters like the AM radio channel would be used for receiving the SSB radio signals.

The voice modulation in AM radio frequency channels will be vastly different because of the difference in the transmitting channels. This could make the messages distorted, leading to further confusion and chaos.

The appropriate systems that need to be used to read the messages sent via the SSB radio system correctly are the Beat Frequency Oscillator (BFO) or the Carrier Insertion Oscillator (CIO). The system of SSB radios is a significant development in the field of radio communication. This development will only increase in the days to come, helping the seamen navigate and communicate even more effectively than ever before.

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