

# Sound Signaling

**The Law:** U.S. Department of Homeland Security, United States Coast Guard:

**NAVIGATION RULES:** These rules apply to all vessels upon the inland waters of the United States, and to vessels of the U.S. on Canadian waters of the Great Lakes.

**Part A - General:** Rule 3. The word "**vessel**" includes every description of water craft, including non-displacement craft and seaplanes. "**Inland Waters**" mean the navigable waters of the U.S. shoreward of the high seas, and includes rivers, other inland waters of the U.S. and the waters of the Great Lakes on the U.S. side

**Part D - Sounds and Light Signals:** Rule 32. The word "whistle" means any sound signaling appliance capable of producing the prescribed blasts and which complies with specifications in Annex III to these Rules [33 CFR 83.32(a)].

**Part D:** Rule 33. A vessel of less than 39.4 feet (12 meters) in length shall be provided with some means of making an efficient signal [33 CFR 83.33(b)].

**Part D:** Rule 36. If necessary to attract the attention of another vessel, any vessel may make light or sound signals that cannot be mistaken for any signal authorized elsewhere in these Rules [33 CFR 83.36].

**ANNEX III to the USCG Navigation Rules:** For inland waters a sound signal with audibility range of 1/2 nautical miles (0.58 miles) for a vessel of 39.4 feet in length but less than 66.6 feet. [No listed sound signal intensity or range of audibility for vessels less than 39.4 feet].

**Code of Federal Regulations, Title 33, Part 2.36: Navigable waters** of the United States mean: (1) Territorial seas of the United States; (2) Internal waters of the U.S. that are subject to tidal influence; and (3) Internal waters of the U.S. not subject to tidal influence that: (i) Are or have been used, or are or have been susceptible for use, by themselves or in connection with other waters, as highways for substantial interstate or foreign commerce, notwithstanding natural or man-made obstructions that require portage; (ii)(b)...and all waters within the U.S. tributary thereto. Except where Congress has designated them not to be navigable waters of the U.S.

**U.S. Coast Guard "A Boater's Guide to the Federal Requirements for Recreational Boats":** Recreational vessels are required to use sound signals during periods of reduced visibility and while at anchor [33 CFR 83.35(h)].

It is important that your sound signal can be heard at a distance of 1/2 mile.

**Sound Level Calculations:** A standard whistle produces sound less than 85 decibels (dB). You need a loud whistle or air horn that can produce a sound of at least 110 dBs. Assuming no wind and no noise from motor boats or thunderstorms, and no obstructions (such as trees, buildings, or hills) - if the sound level is 85 decibels at one meter from the whistle, the sound at 1/2 mile (805 meters) is 26.88 decibels (level of whisper). However, if the background noise is around 35 decibels, at 1/2 mile a person would not be able to hear a standard whistle being blown which only produces sound up to 85 decibels; therefore you would need a whistle that can produce at least 115 dB or more. See the 115 dB whistles below. [Also, see dB calculator located at website <http://www.sengpielaudio.com/calculator-distance.htm>]

## Whistles: Sound Power > 115 dB

\* Whistles which contain a "pea" which whirls to produce a trilling sound.



Fox 40 Classic



Fox 40 Sonic



Jetscream



Jetscream 2.0



Windstorm



Storm



REI Tri-Power



Coghlans  
Survival Horn

## Air Horns: Sound Power > 115 dB



Super Sound



Marco Gas Horn



Seasense Horn



Gas Horn

## Ship's Bell: Sound Power ~ 110 dB



\* Many safety whistles for small boats are pealess, because a whistle can be rendered useless if the pea jams when the whistle fills with water from splashing water, rain, or if the boat were to capsize. Whistle chambers designed to self-clear when submerged in water is desirable.

## Whistles: Sound Power ~ 110 dB



Fox 40 Mini



Fox 40 Micro



Seattle Sports

## Standard Whistles: Sound Power < 85 dB



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