

**§84.24 High-speed craft.**

(a) The masthead light of high-speed craft with a length to breadth ratio of less than 3.0 may be placed at a height related to the breadth lower than that prescribed in §84.03(a)(1), provided that the base angle of the isosceles triangle formed by the side lights and masthead light when seen in end elevation is not less than 27 degrees as determined by the formula in paragraph (b) of this section.

(b) The minimum height of masthead light above sidelights is to be determined by the following formula:  $\tan 27^\circ = x/y$ ; where Y is the horizontal distance between the sidelights and X is the height of the forward masthead light.

[CGD 94-011, 63 FR 5731, Feb. 4, 1998. Redesignated by USCG-1999-5832, 64 FR 34712, June 29, 1999]

**§84.25 Approval.**

The construction of lights and shapes and the installation of lights on board the vessel must satisfy the Commandant, U.S. Coast Guard.

[USCG-1999-6580, 66 FR 55091, Nov. 1, 2001]

**PART 85—ANNEX II: ADDITIONAL SIGNALS FOR FISHING VESSELS FISHING IN CLOSE PROXIMITY**

Sec.

85.1 General.

85.3 Signals for trawlers.

85.5 Signals for purse seiners.

AUTHORITY: Sec. 3, Pub. L. 96-591; 49 CFR 1.46(n)(14).

SOURCE: CGD 81-006, 46 FR 61845, Dec. 21, 1981, unless otherwise noted.

**§85.1 General.**

The lights mentioned herein shall, if exhibited in pursuance of Rule 26(d), be placed where they can best be seen. They shall be at least 0.9 meter apart but at a lower level than lights prescribed in Rule 26(b)(i) and (c)(i) contained in the Inland Navigational Rules Act of 1980, as amended (33 U.S.C. 2001 et seq.). The lights shall be visible all around the horizon at a distance of at least 1 mile but at a lesser distance from the lights prescribed by these Rules for fishing vessels.

**§85.3 Signals for trawlers.**

(a) Vessels when engaged in trawling, whether using demersal or pelagic gear, may exhibit:

(1) When shooting their nets: two white lights in a vertical line;

(2) When hauling their nets: one white light over one red light in a vertical line;

(3) When the net has come fast upon an obstruction: two red lights in a vertical line.

(b) Each vessel engaged in pair trawling may exhibit:

(1) By night, a searchlight directed forward and in the direction of the other vessel of the pair;

(2) When shooting or hauling their nets or when their nets have come fast upon an obstruction, the lights prescribed in paragraph (a) of this section.

**§85.5 Signals for purse seiners.**

Vessels engaged in fishing with purse seine gear may exhibit two yellow lights in a vertical line. These lights shall flash alternately every second and with equal light and occultation duration. These lights may be exhibited only when the vessel is hampered by its fishing gear.

**PART 86—ANNEX III: TECHNICAL DETAILS OF SOUND SIGNAL APPLIANCES**

**Subpart A—Whistles**

Sec.

86.01 Frequencies and range of audibility.

86.03 Limits of fundamental frequencies.

86.05 Sound signal intensity and range of audibility.

86.07 Directional properties.

86.09 Positioning of whistles.

86.11 Fitting of more than one whistle.

86.13 Combined whistle systems.

86.15 Towing vessel whistles.

**Subpart B—Bell or Gong**

86.21 Intensity of signal.

86.23 Construction.

**Subpart C—Approval**

86.31 Approval. [Reserved]

AUTHORITY: Sec. 3, Pub. L. 96-591; 49 CFR 1.46(n)(14).

SOURCE: CGD 81-009, 46 FR 61848, Dec. 21, 1981, unless otherwise noted.

**Subpart A—Whistles**

**§ 86.01 Frequencies and range of audibility.**

The fundamental frequency of the signal shall lie within the range 70-525 Hz. The range of audibility of the signal from a whistle shall be determined by those frequencies, which may include the fundamental and/or one or more higher frequencies, which lie within the frequency ranges and provide the sound pressure levels specified in § 86.05.

**§ 86.03 Limits of fundamental frequencies.**

To ensure a wide variety of whistle characteristics, the fundamental frequency of a whistle shall be between the following limits:

(a) 70-200 Hz, for a vessel 200 meters or more in length;

(b) 130-350 Hz, for a vessel 75 meters but less than 200 meters in length;

(c) 250-525 Hz, for a vessel less than 75 meters in length.

**§ 86.05 Sound signal intensity and range of audibility.**

A whistle on a vessel shall provide, in the direction of the forward axis of the whistle and at a distance of 1 meter from it, a sound pressure level in at least one 1/3-octave band of not less than the appropriate figure given in Table 86.05 within the following frequency ranges (±1 percent):

(a) 130-1200 Hz, for a vessel 75 meters or more in length;

(b) 250-1600 Hz, for a vessel 20 meters but less than 75 meters in length;

(c) 250-2100 Hz, for a vessel 12 meters but less than 20 meters in length.

TABLE 86.05

Length of vessel in meters	Fundamental frequency range (Hz)	For measured frequencies (Hz)	1/3-octave band level at 1 meter in dB referred to $2 \times 10^{-5} \text{ N/m}^2$	Audibility range in nautical miles
200 or more	70-200	130-180	145	2
		180-250	143	
		250-1200	140	
75 but less than 200	130-180	130-180	140	1.5
	130-350	180-250	138	
		250-1200	134	
20 but less than 75	250-525	250-450	130	1.0
		450-800	125	
		800-1600	121	
12 but less than 20	250-525	250-450	120	0.5
		450-800	115	
		800-2100	111	

NOTE. The range of audibility in the table above is for information and is approximately the range at which a whistle may usually be heard on its forward axis in conditions of still air on board a vessel having average background noise level at the listening posts (taken to be 68 dB in the octave band centered on 250 Hz and 63 dB in the octave band centered on 500 Hz).

In practice the range at which a whistle may be heard is extremely variable and depends critically on weather conditions; the values given can be regarded as typical but under conditions of strong wind or high ambient noise level at the listening post the range may be much reduced.

**§ 86.07 Directional properties.**

The sound pressure level of a directional whistle shall be not more than 4 dB below the sound pressure level specified in § 86.05 in any direction in the horizontal plane within ±45 degrees of the forward axis. The sound pressure level of the whistle in any other direction in the horizontal plane shall not be more than 10 dB less than the sound pressure level specified for the forward axis, so that the range of audibility in

any direction will be at least half the range required on the forward axis. The sound pressure level shall be measured in that one-third octave band which determines the audibility range.

**§ 86.09 Positioning of whistles.**

(a) When a directional whistle is to be used as the only whistle on the vessel and is permanently installed, it shall be installed with its forward axis directed forward.