

**§ 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. [Reserved]**

EFFECTIVE DATE NOTE: By USCG-1999-6580, 66 FR 55091, Nov. 1, 2001, § 84.25 was added effective November 1, 2002. At 67 FR 2330, Jan. 17, 2002, the effectived date was delayed to November 1, 2003. For the convenience of the user, the added text is set forth as follows:

**§ 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.

**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.

**§ 86.01**

**33 CFR Ch. I (7-1-02 Edition)**

**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 fre-

quency 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 (plusmn: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	Funda- mental fre- quency range (Hz)	For measured fre- quencies (Hz)	1/3-octave band level at 1 meter in dB referred to $2 \times 10^{-5} \frac{N}{m^2}$	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 .....	130-350	130-180	140	1.5
		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 plusmn: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.

(b) A whistle shall be placed as high as practicable on a vessel, in order to reduce interception of the emitted sound by obstructions and also to minimize hearing damage risk to personnel. The sound pressure level of the vessel's own signal at listening posts shall not exceed 110 dB(A) and so far as practicable should not exceed 100 dB(A).

**§ 86.11 Fitting of more than one whistle.**

If whistles are fitted at a distance apart of more than 100 meters, they shall not be sounded simultaneously.

**§ 86.13 Combined whistle systems.**

(a) A combined whistle system is a number of whistles (sound emitting sources) operated together. For the purposes of the Rules a combined whistle system is to be regarded as a single whistle.

(b) The whistles of a combined system shall:

(1) Be located at a distance apart of not more than 100 meters,

(2) Be sounded simultaneously,

(3) Each have a fundamental frequency different from those of the others by at least 10 Hz, and

(4) Have a tonal characteristic appropriate for the length of vessel which shall be evidenced by at least two-thirds of the whistles in the combined system having fundamental frequencies falling within the limits prescribed in § 86.03, or if there are only two whistles in the combined system, by the higher fundamental frequency falling within the limits prescribed in § 86.03.

NOTE: If due to the presence of obstructions the sound field of a single whistle or of one of the whistles referred to in § 86.11 is likely to have a zone of greatly reduced signal level, a combined whistle system should be fitted so as to overcome this reduction.

**§ 86.15 Towing vessel whistles.**

A power-driven vessel normally engaged in pushing ahead or towing alongside may, at all times, use a whistle whose characteristic falls within the limits prescribed by § 86.03 for the longest customary composite length of the vessel and its tow.

**Subpart B—Bell or Gong**

**§ 86.21 Intensity of signal.**

A bell or gong, or other device having similar sound characteristics shall produce a sound pressure level of not less than 110 dB at 1 meter.

**§ 86.23 Construction.**

Bells and gongs shall be made of corrosion-resistant material and designed to give a clear tone. The diameter of the mouth of the bell shall be not less than 300 mm for vessels of more than 20 meters in length, and shall be not less than 200 mm for vessels of 12 to 20 meters in length. The mass of the striker shall be not less than 3 percent of the mass of the bell. The striker shall be capable of manual operation. Note: When practicable, a power-driven bell striker is recommended to ensure constant force.

**Subpart C—Approval**

**§ 86.31 Approval. [Reserved]**

**PART 87—ANNEX IV: DISTRESS SIGNALS**

Sec.

87.1 Need of assistance.

87.3 Exclusive use.

87.5 Supplemental signals.

AUTHORITY: 33 U.S.C. 2071; 49 CFR 1.46.

**§ 87.1 Need of assistance.**

The following signals, used or exhibited either together or separately, indicate distress and need of assistance:

(a) A gun or other explosive signal fired at intervals of about a minute.

(b) A continuous sounding with any fog-signaling apparatus;

(c) Rockets or shells, throwing red stars fired one at a time at short intervals;