

against the vibration, moisture, temperature, and excessive currents and voltages.

(d) A VHF-DSC radiotelephone installation or a remote unit must be located at each steering station except those auxiliary steering stations which are used only during brief periods for docking or for close-in maneuvering. A single portable VHF-DSC radiotelephone set meets the requirements of this paragraph if adequate permanent mounting arrangements with suitable power provision and antenna feed are installed at each operator steering station. Additionally, for vessels of more than 100 gross tons, the radiotelephone installation must be located at the level of the main wheelhouse or at least one deck above the vessel's main deck.

[51 FR 31213, Sept. 2, 1986, as amended at 56 FR 19301, Apr. 26, 1991; 57 FR 34262, Aug. 4, 1992; 68 FR 46973, Aug. 7, 2003; 69 FR 64677, Nov. 8, 2004; 73 FR 4487, Jan. 25, 2008; 76 FR 67616, Nov. 2, 2011]

EDITORIAL NOTE: At 76 FR 67616, Nov. 2, 2011, in § 80.905, paragraph (a)(4)(vii) was revised, however, no text was published, therefore it could not be incorporated.

§ 80.907 Principal operating position.

The principal operating position of the radiotelephone installation on vessels over 100 gross tons must be in the room from which the vessel is normally steered while at sea. If the station can be operated from any location other than the principal operating position, a positive means must be provided at the principal operating position to take full control of the station.

§ 80.909 Radiotelephone transmitter.

(a) The medium frequency transmitter must have a peak envelope output power of at least 60 watts for J3E emission on 2182 kHz and at least one ship-to-shore working frequency within the band 1605 to 2850 kHz enabling communication with a public coast station if the region in which the vessel is navigated is served by a public coast station operating in this band.

(b) The single sideband radiotelephone must be capable of operating on maritime frequencies in the band 1710 to 27500 kHz with a peak envelope output power of at least 120 watts for

J3E emission on 2182 kHz and J3E emission on the distress and safety frequencies listed in § 80.369(b).

(c) The transmitter complies with the power output requirements specified in paragraphs (a) or (b) of this section when:

(1) The transmitter can be adjusted for efficient use with an actual ship station transmitting antenna meeting the requirements of § 80.923 of this part; and

(2) The transmitter, with normal operating voltages applied, has been demonstrated to deliver its required output power on the frequencies specified in paragraphs (a) or (b) of this section into either an artificial antenna consisting of a series network of 10 ohms effective resistance and 200 picofarads capacitance or an artificial antenna of 50 ohms nominal impedance. An individual demonstration of power output capability of the transmitter, with the radiotelephone installation normally installed on board ship, may be required.

(d) The single sideband radiotelephone must be capable of transmitting clearly perceptible signals from ship to shore. The transmitter complies with this requirement if it is capable of enabling communication with a public coast station on working frequencies in the 4000 to 27500 kHz band specified in § 80.371(b) of this part under normal daytime operating conditions.

[56 FR 19302, Apr. 26, 1991, as amended at 57 FR 34262, Aug. 4, 1992; 68 FR 46974, Aug. 7, 2003]

§ 80.911 VHF transmitter.

(a) The transmitter must be capable of transmission of G3E emission on 156.800 MHz, 156.300 MHz, and on the ship-to-shore working frequencies necessary to communicate with public coast stations serving the area in which the vessel is navigated.

(b) The transmitter must be adjusted so that the transmission of speech normally produces peak modulation within the limits 75 percent and 100 percent.

(c) The transmitter must be certificated to transmit between 20 watts and 25 watts, on each of the frequencies 156.300 MHz, 156.800 MHz and on ship-to-shore public correspondence channels, into 50 ohms effective resistance when

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operated with a primary supply voltage of 13.6 volts DC.

(d) When an individual demonstration of the capability of the transmitter is necessary the output power requirements prescribed in this paragraph must be met as follows:

(1) Measurements of primary supply voltage and transmitter output power must be made with the equipment drawing energy only from ship's battery;

(2) The primary supply voltage, measured at the power input terminals to the transmitter, and the output power of the transmitter, terminated in a matching artificial load, must be measured at the end of 10 minutes of continuous operation of the transmitter at its full power output.

(3) The primary supply voltage must not be less than 11.5 volts.

(4) The transmitter output power must be not less than 15 watts.

(5) For primary supply voltages, measured in accordance with the procedures of this paragraph, greater than 11.5 volts, but less than 12.6 volts, the required transmitter output power shall be equal to or greater than the value calculated from the formula

$$P=4.375(V) - 35.313$$

where V equals the measured primary voltage and P is the calculated output power in watts."

[51 FR 31213, Sept. 2, 1986, as amended at 54 FR 40059, Sept. 29, 1989; 63 FR 36607, July 7, 1998]

§ 80.913 Radiotelephone receivers.

(a) If a medium frequency radiotelephone installation is provided, the receiver must be capable of effective reception of J3E emissions, be connected to the antenna system specified by § 80.923, and be preset to, and capable of accurate and convenient selection of, the frequencies 2182 kHz, 2638 kHz, and the receiving frequency(s) of public coast stations serving the area in which the vessel is navigated.

(b) If a single sideband radiotelephone installation is provided, the receiver must be capable of reception of H3E and J3E emissions on 2182 kHz and J3E emission on any receiving frequency authorized pursuant to § 80.909 of this part.

(c) If a very high frequency radiotelephone installation is provided, the receiver used for maintaining the watch required by § 80.303 must be capable of effective reception of G3E emission, be connected to the antenna system specified by § 80.923 and be preset to, and capable of selection of, the frequencies 156.300 MHz, 156.800 MHz, and the receiving frequency(s) of public coast stations serving the area in which the vessel is navigated.

(d) One or more loudspeakers must be provided to permit reception on 2182 kHz or 156.800 MHz at the principal operating position and at any other place where listening is performed.

(e) Any receiver provided as a part of the radiotelephone installation must have a sensitivity of at least 50 microvolts in the case of MF equipment, and 1 microvolt in the case of HF or VHF equipment.

(f) The receiver required in paragraphs (a), (b) or (c) of this section must be capable of efficient operation when energized by the main source of energy. When a reserve source of energy is required pursuant to § 80.905 or § 80.917 of this part, the receiver must also be capable of efficient operation when energized by the reserve source of energy.

(g) The sensitivity of a receiver is the strength in microvolts of a signal, modulated 30 percent at 400 Hertz, required at the receiver input to produce an audio output of 50 milliwatts to the loudspeaker with a signal-to-noise ratio of at least 6 decibels. Evidence of a manufacturer's rating or a demonstration of the sensitivity of a required receiver computed on this basis must be furnished upon request of the Commission.

[51 FR 31213, Sept. 2, 1986, as amended at 56 FR 19302, Apr. 26, 1991; 73 FR 4487, Jan. 25, 2008]

§ 80.915 Main power supply.

(a) There must be readily available for use under normal load conditions a main power supply sufficient to simultaneously energize the radiotelephone transmitter at its required antenna power, and the required receiver. Under this load condition the potential of the main power supply at the power input