

**§ 80.855 Radiotelephone transmitter.**

(a) The transmitter must be capable of transmission of H3E and J3E emission on 2182 kHz, and J3E emission on 2638 kHz and at least two other frequencies within the band 1605 to 3500 kHz available for ship-to-shore or ship-to-ship communication.

(b) The duty cycle of the transmitter must permit transmission of the international radiotelephone alarm signal.

(c) The transmitter must be capable of transmitting clearly perceptible signals from ship to ship during daytime under normal conditions over a range of 150 nautical miles.

(d) The transmitter complies with the range requirement specified in paragraph (c) of this section if:

(1) The transmitter is capable of being matched to actual ship station transmitting antenna meeting the requirements of § 80.863; and

(2) The output power is not less than 60 watts peak envelope power for H3E and J3E emission on the frequency 2182 kHz and for J3E emission on the frequency 2638 kHz into either an artificial antenna consisting of a series network of 10 ohms resistance and 200 picofarads capacitance, or an artificial antenna of 50 ohms nominal impedance. An individual demonstration of the power output capability of the transmitter, with the radiotelephone installation normally installed on board ship, may be required.

(e) The transmitter must provide visual indication whenever the transmitter is supplying power to the antenna.

(f) The transmitter must be protected from excessive currents and voltages.

(g) A durable nameplate must be mounted on the transmitter or made an integral part of it showing clearly the name of the transmitter manufacturer and the type or model of the transmitter.

(h) An artificial antenna must be provided to permit weekly checks of the automatic device for generating the radiotelephone alarm signal on frequencies other than the radiotelephone distress frequency.

**§ 80.858 Radiotelephone receiver.**

(a) The receiver required by § 80.854(a) of this part must be capable of recep-

tion of H3E and J3E emissions on the radiotelephone distress frequency. The receiver must be capable of reception of J3E emissions on 2638 kHz and the receiving frequencies associated with the transmitting frequencies authorized pursuant to § 80.855(a).

(b) One or more loudspeakers capable of being used to maintain the distress frequency (2182 kHz) watch at the principal operating position and at any other place where the listening watch is performed must be provided.

(c) The receiver required by paragraph (a) of the section must:

(1) Have a sensitivity of 50 microvolts;

(2) Be capable of operation when energized by the main source of energy, and by the reserve source of energy if a reserve source is required by § 80.860(a);

(3) Be protected from excessive currents and voltages;

(4) Be provided with a nameplate showing the name of the receiver manufacturer and the type or model.

(d) The sensitivity of a receiver is the strength in microvolts of a signal, modulated 30 percent at 400 cycles per second, 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 a Commission representative.

[51 FR 31213, Sept. 2, 1986, as amended at 73 FR 4487, Jan. 25, 2008]

**§ 80.859 Main power supply.**

(a) The main power supply must simultaneously energize the radiotelephone transmitter at its required antenna power and the required receivers. Under this load condition the voltage of the main power supply at the radiotelephone input terminals must not deviate from its rated potential by more than 10 percent on ships completed on or after July 1, 1941, nor by more than 15 percent on ships completed before that date.

(b) Means must be provided for charging any batteries used as a main power supply. A continuous indication of the

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rate and polarity of the charging current must be provided during charging of the batteries.

### § 80.860 Reserve power supply.

(a) When the main power supply is not on the same deck as the main wheelhouse or at least one deck above the vessel's main deck, a reserve power supply must be provided and must be so situated. The location of the reserve power supply must be located as near to the required transmitter and receivers as practicable and meet all applicable rules and regulations of the United States Coast Guard.

(b) The reserve power supply must be independent of the propelling power of the ship and of any other electrical system, and must simultaneously energize the radiotelephone transmitter at its required antenna power, the required receivers, the emergency light and the automatic radiotelephone alarm signal generator. The reserve power supply must be available at all times.

(c) The reserve power supply may be used to energize the bridge-to-bridge radiotelephone and the VHF radiotelephone installation required by § 80.871.

(d) All circuits connected to the reserve power supply must be protected from overloads.

(e) Means must be provided for charging any batteries used as a reserve power supply. A continuous indication of the rate and polarity of the charging current during charging of the batteries must be provided.

(f) The cooling system of each internal combustion engine used as a part of the reserve power supply must be adequately treated to prevent freezing or overheating consistent with the season and route to be traveled by the particular vessel involved.

(g) The reserve power supply must be available within 1 minute.

[51 FR 31213, Sept. 2, 1986; 52 FR 35246, Sept. 18, 1987]

### § 80.861 Required capacity.

If the main power supply or the reserve power supply provided for the purpose of complying with §§ 80.859 and 80.860 consists of batteries, the batteries must have sufficient reserve ca-

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capacity available at all times while the vessel is leaving or attempting to leave a harbor or port for a voyage in the open sea, and while being navigated in the open sea outside of a harbor or port, to permit operation of the radiotelephone transmitter and the required receivers for at least 6 hours continuously under normal working conditions.

### § 80.862 Proof of capacity.

(a) When directed by the Commission or its authorized representative, the station licensee must prove that the requirements of § 80.861 are met.

(b) Proof of the ability of a battery used as a main or reserve source to operate continuously for 6 hours can be established by a discharge test over a prescribed period of time, when supplying power at the voltage required for normal operation to an electrical load as prescribed by paragraph (d) of this section.

(c) When the reserve power supply is an engine-driven generator, proof of the adequacy of the engine fuel supply to operate the unit continuously for 6 hours can be established by measuring the fuel consumption for 1 hour when supplying power, at the voltage required for normal operation, to an electrical load as prescribed by paragraph (d) of this section.

(d) In determining the electrical load to be supplied, the following formula must be used:

(1) One-half of the current of the required transmitter at its rated power output.

(2) One fourth of the current of the automatic radiotelephone alarm signal generator; plus

(3) Current of receiver; plus

(4) Current of emergency light(s); plus

(5) Current of the bridge-to-bridge transceiver when connected.

(e) At the conclusion of the test specified in paragraphs (b) and (c) of this section, no part of the main or reserve power supply must have an excessive temperature rise, nor must the specific gravity or voltage of any battery be below 90 percent discharge point of the fully charged value.