

NAVIGATION AND VESSEL INSPECTION CIRCULAR NO. 9-93

Electronic Version for Distribution on the World Wide Web

Subj: EMERGENCY POSITION INDICATING RADIOBEACONS (EPIRBs) AND OTHER RADIO LIFESAVING EQUIPMENT FOR INSPECTED VESSELS AND UNINSPECTED COMMERCIAL VESSELS

- Ref:
- (a) Coast Guard Final Rule on Emergency Position Indicating Radio Beacons for Uninspected Vessels, 10 March 1993, 58 FR 13367 with corrections of 11 May 1993, 58 FR 27658
 - (b) 1988 Amendments to the 1974 Safety of Life at Sea Convention (SOLAS)
 - (c) Federal Communications Commission (FCC) Regulations on the Global Maritime Distress and Safety System (GMDSS) (47 CFR Part 80, Subpart W; 57 FR 9065, 16 March 1992)
 - (d) Coast Guard Notice of Proposed Rule making on Lifesaving Equipment, 19 April 1989, 54 FR 16198
 - (e) NVIC 3-87, "Implementation of the 1983 SOLAS Amendments on Lifesaving Appliances and Arrangements"
 - (f) FCC Regulations on Special Requirements for Class A EPIRB Stations (47 CFR 80.1053)
 - (g) FCC Regulations on Technical Requirements for Portable Survival Craft Radiotelephone Transceivers (47 CFR 80.271)
 - (h) International Maritime Organization (IMO) Resolution A. 605(15)

1. PURPOSE.

- a. This Circular provides current information and recommendations on the use of Emergency Position Indicating Radio Beacons (EPIRBs) and other radio lifesaving equipment. This Circular replaces NVIC 9-92, and reflects the changes resulting from Coast Guard rules on EPIRBs in reference (a), as well as the changes that took effect 1 August 1993 under the Global Maritime Distress and Safety System (GMDSS) rules in references (b) and (c). Enclosure (1) summarizes the radio lifesaving equipment requirements now in effect or soon to come into effect for various classes of vessels. Enclosure (1) is similar to the enclosure in NVIC 9-92, but it has been reorganized, and certain corrections have also been included.
- b. The information in this Circular applies primarily to U.S. inspected commercial vessels and uninspected commercial vessels, but those portions discussing requirements of the Safety of Life at Sea (SOLAS) Convention are also applicable to foreign vessels on international voyages.

2. PERIODICALS AFFECTED. NVIC 9-92 is canceled.

3. DISCUSSION.

- a. The 1988 SOLAS Amendments (reference (b)) establish internationally agreed requirements for the GMDSS. GMDSS is a worldwide marine radio communications system based on satellite communications, digital data transfer, and other modern communications technologies. The conference which adopted the GMDSS also adopted two resolutions recommending early introduction of the new radio lifesaving appliances which are a part of that system.
- b. Reference (d) is a Notice of Proposed Rule making published by the Coast Guard to implement the 1983 SOLAS Amendments dealing with lifesaving systems. This notice also proposed the use of Category 1 406 MHz satellite EPIRBs to replace Class A 121.5 MHz EPIRBs. Satellite EPIRBs are an integral part of the GMDSS under the 1988 SOLAS Amendments.

[NOTE: "Category 1" is an FCC designation for an automatic float-free 406 MHz satellite EPIRB and "Category 2" is the manually operated version.)

- c. Reference (c) is the FCC regulation implementing the GMDSS system for U.S. registered vessels operating on the open sea which are:
 - (1) Cargo vessels of 300 tons gross tonnage and upwards in both domestic and international services;
 - (2) Passenger vessels carrying more than 12 passengers on international voyages; and
 - (3) Passenger vessels of 100 tons gross tonnage and upwards in domestic services.
- d. The terms used in paragraph 3.c and the FCC regulation in reference (c) have the following meanings:
 - (1) "Vessel" has the same meaning as in Coast Guard regulations, except that the Communications Act does not apply to vessels in tow (47 U.S.C. 352(a)(5)). For example, a Mobile Offshore Drilling Unit is normally considered a vessel, but it does not fall under the FCC regulation in reference (c) unless it is self-propelled.
 - (2) "Cargo vessel" is any commercial vessel which is not a passenger vessel.
 - (3) "Open sea" means "seaward of the ordinary low-water mark, or seaward of inland waters" (47 CFR 80.5). Therefore, the affected vessels are those operating beyond the Boundary Line, or certificated by the Coast Guard for Ocean or Coastwise services.
- e. Table 3 of enclosure (1) concerning certain small passenger vessels, differs from the version of the same table which appeared in NVIC 9-92. It has been revised to delete an indicated February 1, 1999, Federal Communications Commission (FCC) requirement for satellite EPIRBs, 9 GHz radar transponders, and two-way radiotelephone apparatus for survival craft. According to the FCC, regulations at 47 CFR 80.1065(b)(5)(iii), should make reference to 47 CFR 80.836LYc, applying only to certain cargo vessels. Passenger vessels less than 100 tons gross tonnage are exempted from GMDSS

requirements under 47 CFR 80.1065(c). This eliminates the differences between Table 3 and Table 4 as they appeared in NVIC 9-92, so the two tables have been merged under a new Table 3.

- f. Coast Guard and FCC authorities overlap in the area of radio lifesaving equipment, and consequently, references (c) and (d) contain overlapping and sometimes conflicting regulations and proposals. The Coast Guard intends to eliminate duplicated and conflicting radio lifesaving equipment regulations from Coast Guard regulations in 46 CFR. The Coast Guard has broader statutory authority than the FCC for certain vessels, however. Radio lifesaving equipment requirements for vessels not under the FCC's statutory authority will continue to be under the Coast Guard regulations in 46 CFR. The vessels that will continue to be under the Coast Guard's regulations include:
- (1) Commercial vessels operating on the Great Lakes and anywhere inside the Boundary Line;
 - (2) Passenger vessels carrying six or less passengers (There are no radio lifesaving equipment regulations currently in effect for these vessels, however.);
 - (3) Commercial vessels other than passenger vessels, of less than 300 tons gross tonnage; and
 - (4) Passenger vessels under 100 tons gross tonnage in domestic services. (The FCC does have authority to require GMDSS equipment on such vessels carrying more than six passengers, but has not done so. The Coast Guard and FCC intend to coordinate future regulations in this area so that there are no overlapping requirements.)
- g. NVIC 3-87 (reference (e)) addressed implementation of the 1983 SOLAS Amendments on lifesaving appliances. This Circular supercedes those portions of NVIC 3-87 dealing with EPIRBs and portable two-way radiotelephone apparatus for survival craft.
- h. The 1988 SOLAS Amendments require SOLAS ships to be equipped with two 9 GHz radar transponders, one mounted on each side of the ship, in a position ready to be taken to one of the survival craft. The 9 GHz radar transponder requirement replaces the requirement for 121.5 MHz Class S survival craft EPIRBs that was in the 1983 SOLAS Amendments.

[NOTE: Cargo ships 300 tons gross tonnage and over, but less than 500 tons gross tonnage are required to carry only one 9 GHz radar transponder.]

- i. Recent tests of 9 GHz radar transponders have shown that they do not have the 10-mile operational radius that was expected when the 1988 SOLAS Amendments were developed. However, 121.5 MHz Class S survival craft EPIRBs, as well as the 121.5 MHz homing beacon required on all 406 MHz satellite EPIRBs, do have an operational range which greatly exceeds 10 miles. This frequency can be monitored by virtually any aircraft, and most aircraft and ships equipped for search and rescue can home on this signal. Consequently, vessel operators are urged to carry either Class S EPIRBs or 406 MHz satellite EPIRBs in lifeboats and liferafts, in addition to the required equipment.

- j. In addition to the 406 MHz satellite EPIRBs, the 1988 SOLAS Amendments provide for two other types of EPIRBs. The Coast Guard will evaluate these systems to determine if they can be used in the future instead of 406 MHz satellite EPIRBs in appropriate situations.
- (1) The L-band EPIRB operates with geostationary satellites of the INMARSAT system. The L-band EPIRB provides an instantaneous alert of a casualty. The system does not work in polar areas where there is no geostationary satellite coverage, and it relies on an interface with the ship's navigation system for updates of the ship's position. Once the EPIRB has floated free, it continues to transmit the last position of the ship. Future versions of this EPIRB may update their position through another satellite system known as the Global Positioning System (GPS).
 - (2) The second system is the VHF channel 70 Digital Selective Calling (DSC) EPIRB. This EPIRB would operate through coast stations only in near-coastal areas where a DSC system is in operation.
- k. The FCC regulation in reference (c) covers other GMDSS radio requirements beyond the scope of this Circular, including requirements for equipment not discussed here. Reference (c) should be consulted for a complete discussion of the GMDSS regulations information, contact: For more
Federal Communications Commission
Private Radio Bureau
Special Services Division
Washington, DC 20554
(202) 632-7197/7175

4. IMPLEMENTATION.

- a. Under the requirements of the 1988 SOLAS Amendments, every ship certificated under SOLAS will be required to carry a satellite EPIRB, 9 GHz radar transponders, and two-way radiotelephone apparatus for survival craft. This equipment will have to be on board by various dates before 1 February 1995. The tables in enclosure (1) include the dates on which the requirements go into effect. These dates vary, depending upon the size and type of vessel and the keel-laying date.
- b. Under FCC regulations (reference (f)), Class A EPIRBs manufactured prior to 1 October 1988 do not meet current signal coherency and stability standards, and may not be used to meet the requirements for any Coast Guard regulations after 1 August 1991. The Coast Guard recommends replacement with a Category 1 406 MHz satellite EPIRB.
- c. The Coast Guard strongly encourages the installation of 406 MHz satellite EPIRBs on oceangoing and Great Lakes vessels. FCC regulations in reference (c) now require 406 MHz satellite EPIRBs on many oceangoing commercial vessels. Coast Guard proposed regulations in reference (d) would require them on certain Great Lakes vessels. Until Final Rules are in effect the Coast Guard will accept one FCC Type Accepted Category 1 406 MHz satellite EPIRB as equivalent to a Class A EPIRB required under any regulation in 46 CFR. One FCC Type Accepted 406 MHz Category 1 satellite EPIRB will be accepted as equivalent to one or two Class C EPIRBs required by regulations for

Great Lakes vessels under 46 CFR. The 406 MHz satellite EPIRB must be installed in a manner so that it will automatically float free and activate in the event of a sinking.

- d. As discussed in NVIC 3-87, paragraph 2.c.(3)₁ ships certificated under SOLAS will be required to carry three or more survival craft portable two-way radios. (Cargo ships 300 tons gross tonnage and over, but less than 500 tons gross tonnage are required to carry only two survival craft portable two-way radios under the 1988 SOLAS Amendments.) These radios should meet FCC regulations and the IMO Resolution (references (g) and (h)). Eventually, these radios will be required to meet new FCC regulations (reference (c)) and operate on 156.3 MHz (channel 6), and 156.8 MHz (channel 16). See enclosure (1) for specific dates for different vessels. Under the 1988 SOLAS Amendments, lifeboats may be provided with permanently installed radios to meet this requirement.
- e. The hand-cranked portable lifeboat radiotelegraph (and the lifeboat radio cabin-installed version on passenger ships) is not a required item for SOLAS ships under the GMDSS. This device is no longer required to be carried by ships equipped with a 406 MHz satellite EPIRB. Antenna mounting arrangements and transceiver mounting brackets for this radio, in lifeboats and liferafts, do not have to be retained if the ship does not carry the portable lifeboat radio. However, the antenna mounting arrangements for these radios may still be needed to mount certain designs of 9 GHz radar transponders.
- f. The FCC regulations will affect the following self-propelled vessels for which there are currently Coast Guard regulations covering radio lifesaving equipment. The FCC regulations will prevail in the event of conflicting requirements for:
 - (1) Commercial fishing industry vessels under 46 CFR Part 28, operating beyond the Boundary Line, 300 tons gross tonnage and upwards;
 - (2) Tank vessels inspected under 46 CFR Subchapter D, certificated for either Ocean or Coastwise service, 300 tons gross tonnage and upwards;
 - (3) Passenger vessels inspected under 46 CFR Subchapter H, certificated for either Ocean or Coastwise service;
 - (4) Cargo and miscellaneous vessels inspected under 46 CFR Subchapter I, certificated for either Ocean or Coastwise service, 300 tons gross tonnage and upwards;
 - (5) Mobile offshore drilling units inspected under 46 CFR Subchapter I-A, certificated for either Ocean or Coastwise service, 300 tons gross tonnage and upwards;
 - (6) Public nautical school ships inspected under 46 CFR Part 167, certificated for either Ocean or Coastwise service, 300 tons gross tonnage and upwards;
 - (7) Civilian nautical school ships inspected under 46 CFR Part 168, certificated for either Ocean or Coastwise service, carrying more than twelve persons in addition to the crew;
 - (8) Sailing school vessels inspected under 46 CFR Part 169, carrying more than twelve passengers, certificated for either Ocean or Coastwise service; and

- (9) Oceanographic research vessels inspected under 46 CFR Subchapter U, certificated for either Ocean or Coastwise service, 300 tons gross tonnage and upwards.



A. E. HENN
Rear Admiral, U.S. Coast Guard
Chief, Office of Marine Safety,
Security and Environmental Protection

**RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR
SHIPS ON INTERNATIONAL VOYAGES AND FOR
U.S. COMMERCIAL VESSELS IN DOMESTIC SERVICES**

Current and future requirements for radio lifesaving equipment on commercial vessels are summarized in the following tables. In each case, the source of the requirement is identified in parentheses. All of the requirements listed apply to U.S. vessels. Foreign-flag vessels do not have to comply with any of the requirements where the source is identified as Coast Guard or FCC regulations in Title 46 or Title 47, respectively, of the Code of Federal Regulations (abbreviated "46 CFR" or "47 CFR" in the tables).

In these tables, the requirements apply to self-propelled vessels, and -

Passenger ship means a vessel which carries more than six passengers, including civilian nautical school Ships and sailing school vessels;

Fishing vessel means a commercial fishing industry vessel which comes under the regulations in Part 28 in Title 46 of the Code of Federal Regulations; and

Cargo ship means a commercial vessel which is not a passenger vessel or fishing vessel. The term includes self-propelled Mobile Offshore Drilling Units, tank vessels, oceanographic research vessels, and public nautical school ships.

Acronyms used in the tables:

EPIRB:	Emergency Position Indicating Radiobeacon
FCC:	Federal Communications Commission
GMDSS:	Global Maritime Distress and Safety System
SOLAS:	International Convention for the Safety of Life at Sea

Notes:

1. "Class A EPIRB" means a Coast Guard approved and FCC type accepted, Class A 121.5~3 MHz EPIRB, installed to automatically float free of a sinking vessel.
2. "Satellite EPIRB," for U.S. registered vessels, means an FCC type accepted, 406 MHz EPIRB. Unless otherwise stated, the required EPIRB is a Category 1, installed to automatically float free of a sinking vessel. Category 2 devices are similar, but are manually operated
3. "Survival craft EPIRB," for U.S. registered vessels, means an FCC type accepted, Class S, 121.5/243 MHz EPIRB.
4. "Transponder," for U.S. registered vessels, means an FCC type accepted 9 GHz radar transponder, sometimes referred to as a Search and Rescue Radar Transponder (SART).
5. "Two-way radio," for U.S. registered vessels, means an FCC type accepted, survival craft two-way radiotelephone apparatus, generally VHF, but certain UHF radios may be used until 1995 on some vessels, as explained in the tables.
6. "Survival craft radiotelegraph," for U.S. registered vessels, means FCC type accepted, survival craft radiotelegraph equipment. This equipment is discontinued under GMDSS. It operates on 500 kHz and 8364 kHz. The non-portable version is intended for installation in a lifeboat radio cabin, and is battery powered. The portable version is powered by hand cranks and is sometimes known as a "Gibson Girl."

DATE OF BUILD

Before February 1, 1992 On or After February 1, 1992

PASSENGER SHIP

Inspected. 100 Tons Gross Tonnage and Over

Ocean or Coastwise Service	Table 1	Table 2
Great lakes Service	Table 16	Table 16

Inspected. Less Than 100 Tons Gross Tonnage

Ocean or Coastwise Service		
Over 12 Passengers, International Voyages	Table 1	Table 2
All others	Table 3	Table 3
Great Lakes Service	Table 14	Table 14

<u>Uninspected (6 passengers or less)</u> (Including vessel assistance towing vessels)	Table 4 (p.)	Table 4 (p.)
---	--------------	--------------

INSPECTED CARGO SHIPS

500 Tons Gross Tonnage and Over

Ocean or Coastwise Service	Table 1	Table 2
Great Lakes Service	Table 14	Table 14

300 Tons Gross Tonnage and Over. But Less Than 500 Tons

Ocean or Coastwise Service	Table 5	Table 6
Great Lakes Service	Table 14	Table 14

Less Than 300 Tons Gross Tonnage

Ocean or Coastwise Service	Table 7	Table 7
Great Lakes Service	Table 14	Table 14

UNINSPECIED COMMERCIAL FISHING INDUSTRY VESSELS

500 Tons Gross Tonnage and Over

Beyond Boundary Line/On High Seas	Table 8	Table 9
Great Lakes	Table 15	Table 15

300 Tons Gross Tonnage and Over. But Less Than 500 Tons

Beyond Boundary Line I On High Seas	Table 10	Table 11
Great Lakes	Table 15	Table 15

Less Than 300 Tons Gross Tonnage

11 m(36 ft) Long or More, on the High Seas	Table 12	Table 12
Under 11m(36 ft)Long, on the High Seas	Table 13	Table 13
Great Lakes	Table 15	Table 15

OTHER UNINSPECIED VESSELS

On High Seas	Table 13	Table 13
--------------	----------	----------

Great Lakes

Table 15

Table 15

1. RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR THE FOLLOWING VESSELS IN OCEAN OR COASTWISE SERVICE BUILT BEFORE FEBRUARY 1, 1992:

- PASSENGER SHIPS 100 TONS GROSS TONNAGE AND OVER
- PASSENGER SHIPS LESS THAN 100 TONS GROSS TONNAGE, CARRYING MORE THAN 12 PASSENGERS ON INTERNATIONAL VOYAGES
- CARGO SHIPS 500 TONS GROSS TONNAGE AND OVER

Ship EPIRB Current requirement, all ships: Satellite EPIRB required (1988 SOIAS Amendments and 47 CFR 80.1065(b)(1))¹. Coast Guard will accept a satellite EPIRB as an equivalent replacement for a Class A EPIRB required under Coast Guard regulations in 46 CFR 33.60,75.60,94.601 108.523, 167.35-72, or 192.65.

Survival Craft EPIRB No requirement: However, Coast Guard recommends that Class S or Category 2 EPIRBs be carried in survival craft.

9 GHz Radar Transponder February 1,1995, all ships: Two transponders, one on each side of the ship in a position ready to be taken to the survival craft (1988 SOLAS Amendments and 47 CFR 80.1065(b)(2)).¹

Two-Way Radiotelephone Apparatus for Survival Craft Current requirement, international (SOLAS) voyages only: Three or more two-way radios (1983 SOLAS Amendments). Each must operate on 156.8 MHz (VHF channel 16) or 457.525 MHz (UHF). Transceivers in use on board the ship before October 1, 1988, and which are compatible with FCC technical requirements, are acceptable until October 1¹ 1993. Transceivers brought on board to meet this requirement on or after October 1, 1988 must be type accepted by the FCC as meeting 47 CFR 80.271 or 47 CFR 80.1101(47 CFR 80.271(b) & (c), 80.1095(a)).

October 1,1993, international (SOLAS) voyages only: Three or more two-way radios (1983 SOLAS Amendments). Each must operate on 156.8 MHz (VHF channel 16) or 457.525 MHz (UHF). All transceivers must be type accepted by the FCC as meeting 47 CFR 80271 or 47 CFR 80.1101 (47 CFR 80.271(d), 80.1095(a)). A transceiver meeting 47 CFR 80.1101, permanently installed in a lifeboat, may be counted toward this requirement.

February 1,1995, all ships: Three or more two-way radios (1988 SOLAS Amendments and 47 CFR 80.1065(b)(2)).¹ Each must operate on 156.8 MHz (VHF channel 16) and one other channel --156.3 MHz (VHF channel 6) is recommended. All transceivers must be type accepted by the FCC as meeting either 47 CFR 80.1101, or for VHF radios brought on board prior to February 1, 1992,47 CFR 80.271 (47 CFR 80.271(d), 80.1095(a)). A transceiver meeting 47 CFR 80.1101, permanently installed in a lifeboat, may be counted toward this requirement.

February 1,1999, all ships: Three or more two-way radios (1988 SOLAS

¹ Certain cargo vessels of 1600 tons gross tonnage and upward, on domestic voyages along the coasts of the contiguous 48 states, not more than 150 miles from the nearest land, may be exempt from the indicated requirements until August 1, 1999. See 47 CFR 80.1065(1,)(5)(iii) and 80.836(c).

Amendments and 47 CFR 80.1065~X2)). These transceivers must be type accepted by the FCC as meeting 47 CFR 80.1101(47 CFR 80.1095(a)). Each transceiver must operate on 156.8 MHz (VHF channel 16) and one other channel -- 156.3 MHz (VHF channel 6) is recommended A transceiver meeting 47 CFR 80.1101, permanently installed in a lifeboat, may be counted toward this requirement.

**Survival Craft
Radiotelegraph**

No requirement: Under Resolution 4 adopted by the 1988 GMDSS Conference, this equipment may be met by carriage of a satellite BPIRB (above) Coast Guard will therefore accept the vessel's satellite EPIRB M an equivalent replacement for survival craft radiotelegraph equipment required on international voyages under 46 CFR 33.15-25, 75.10-10(a)(4), 75.55-1, 94.55-1, 108.519, 167.35.70, and 192.55-1.

2. RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR 'THE FOLLOWING VESSELS IN OCEAN OR COASTWISE SERVICE BUILT ON OR AFTER FEBRUARY 1, 1992:

- PASSENGER SHIPS 100 TONS GROSS TONNAGE AND OVER
- PASSENGER SHIPS LESS THAN 100 TONS GROSS TONNAGE, CARRYING MORE THAN 12 PASSENGERS ON INTERNATIONAL VOYAGES
- CARGO SHIPS 500 TONS GROSS TONNAGE AND OVER

Ship EPIRB	<u>Current requirement, all ships:</u> Satellite EPIRB required (1988 SOLAS Amendments and 47 CFR 80.1065(b)(1)) ² . Coast Guard will accept a satellite EPIRB as an equivalent replacement for a class A EPIRB required under Coast Guard regulations in 46 CFR 33.60,75.60,94.60, 108.523, 16735-72, or 192.65.
Survival Craft EPIRB	<u>No requirement:</u> However, Coast Guard recommends that Class S or Category 2 EPIRBs be carried in survival craft.
9 GHz Radar Transponder	<u>Current requirement, all ships:</u> Two transponders, one on each side of the ship in a position ready to be taken to the survival craft (1988 SOLAS Amendments and 47 CFR 80.1065(b)(2)). ²
Two-Way Radiotelephone Apparatus for Survival Craft	<u>Current requirement, all ships:</u> Three or more two-way radios (1988 SOLAS Amendments and 47 CFR 80.1065(b)(2)). ² These transceivers must be type accepted by the FCC as meeting 47 CFR 80.1101 (47 CFR 80.1095(a)). Each transceiver must operate on 156.8 MHz (VHF channel 16) and one other channel -- 156.3 MHz (VHF channel 6) is recommended. A transceiver meeting 47 CFR 80.1101, permanently installed in a lifeboat, may be counted toward this requirement.
Survival Craft Radiotelegraph	<u>No requirement:</u> Under Resolution 4 adopted by the 1988 GMDSS Conference, this requirement may be met by carriage of a satellite EPIRB (above). Coast Guard will therefore accept the vessel's satellite EPIRB as an equivalent replacement for survival craft radiotelegraph equipment required on international voyages under 46 CFR 33.15-25, 75.10-10(a)(4), 75.55-1, 94.55-1, 108.519, 167.35.70, and 192.55-1.

² Certain cargo vessels of 1600 tons gross tonnage and upward, on domestic voyages along the coasts of the contiguous 48 states, not more than 150 miles from the nearest land, may be exempt from the indicated requirements until August 1, 1999. Sec 47 CFR 80.1065(b)(5)(iii) and 80.836(c).

**3. RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR THE FOLLOWING VESSELS IN OCEAN OR COASTWISE SERVICE:
- PASSENGER SHIPS LESS THAN 100 TONS GROSS TONNAGE, CARRYING MORE THAN 6 PASSENGERS ON VOYAGES WHICH ARE NOT INTERNATIONAL VOYAGES**

Ship EPIRB

Current requirement. ocean service. operating more than 100 miles from the nearest land: Satellite EPIRB required (47 CFR 80.905(a)(3)(vi)). Coast Guard will accept a satellite EPIRB as an equivalent replacement for the class A EPIRB required under 46 CFR 180A0.

Current requirement. ocean or coastwise service beyond 20 miles from a harbor of safe refuge ("but not more than 100 miles from the nearest land): class A EPIRB manufactured on or after October 1, 1988(46 CFR 180A0; 47 CFR 80.1053(a)(8)). Coast Guard will accept a satellite EPIRB as an equivalent replacement for a class A EPIRB.

Proposed regulations: Coast Guard has proposed, but has not taken final action on rules which would require a satellite EPIRB. Under 47 CFR 80.1065(c), these vessels are exempt from FCC regulations requiring this and other GMDSS equipment

9 GHz Radar Transponder

No requirement: Under 47 CFR 80.1065(c), these vessels are exempt from FCC regulations requiring this and other GMDSS equipment.

Two-Way Radiotelephone Apparatus for Survival Craft

No requirement: Under 47 CFR 80.1065(c), these vessels are exempt from FCC regulations requiring this and other GMDSS equipment.

4. RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR UNINSPECTED PASSENGER VESSELS AND VESSEL ASSISTANCE TOWING VESSELS

Ship EPIRB No requirement

**9 GHz Radar
Transponder** No requirement

**Two-Way
Radiotelephone
Apparatus for
Survival Craft** No requirement

5. RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR CARGO SHIPS IN OCEAN OR COASTWISE SERVICE, 300 TONS GROSS TONNAGE AND OVER BUT LESS THAN 500 TONS, BUILT BEFORE FEBRUARY 1,1992:

Ship EPIRB	<u>Current requirement. all ships:</u> Satellite EPIRB required (1988 SOLAS Amendments and 47 CFR 80.1065(b)(1)). Coast Guard will accept a satellite EPIRB as an equivalent replacement for a Class A EPIRB required under Coast Guard regulations in 46 CFR 33.60,94.60, 108.523, or 192.65.
Survival Craft Radiotelegraph	<u>No requirement:</u> However, Coast Guard recommends that class S or Category 2 EPIRBs be carried in survival craft.
9 GHz Radar Transponder	<u>February 1,1995. all ships:</u> One transponder required in a position ready to be taken to the survival craft (1988 SOLAS Amendments and 47 CFR 80.1065(b)(2)).
Two-Way Radiotelephone Apparatus for Survival Craft	<u>February 1,1995. all ships:</u> Two or more two-way radios (1988 SOLAS Amendments and 47 CFR 80.1065(b)(2)). Each must operate on 156.8 MHz (VHF channel 16) and one other channel -- 156.3 MHz (VHF channel 6) is recommended. All transceivers must be type accepted by the FCC as meeting either 47 CFR 80.1101, or for VHF radios brought on board prior to February 1, 1992,47 CFR 80.271(47 CFR 80.271(d), 80.1095(a)). A transceiver meeting 47 CFR 80.1101, permanently installed in a lifeboat, may be counted toward this requirement. <u>February 1,1999. all ships:</u> Two or more two-way radios (1988 SOLAS Amendments and 47 CFR 80.1065(b)(2)). These transceivers must be type accepted by the FCC as meeting 47 CFR 80.1101(47 CFR 80.1095(a)). Each transceiver must operate on 156.8 MHz (VHF channel 16) and one other channel --156.3 MHz (VHF channel 6) is recommended A transceiver meeting 47 CFR 80.1101, permanently installed in a lifeboat, may be counted toward this requirement.
Survival Craft Radiotelegraph	<u>No requirement</u>

6. RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR CARGO SHIPS IN OCEAN OR COASTWISE SERVICE, 300 TONS GROSS TONNAGE AND OVER BUT LESS THAN 500 TONS, BUILT ON OR AFTER FEBRUARY 1,1992:

- Ship EPIRB** Current requirement. all ships: Satellite EPIRB required (1988 SOLAS Amendments and 47 CFR 80.1065(b)(1)). Coast Guard will accept a satellite EPIRB as an equivalent replacement for a Class A EPIRB required under Coast Guard regulations in 46 CFR 33.60,94.60, 108.523, or 192.65.
- Survival Craft EPIRB** No requirement: However, Coast Guard recommends that class S or Category 2 EPIRBs be carried in survival craft.
- 9 GHz Radar Transponder** Current requirement. all ships: One transponder required in a position ready to be taken to the survival craft (1988 SOLAS Amendments and 47 CFR 80.1065(b)(2)).
- Two-Way Radiotelephone Apparatus for Survival Craft** Current requirement. all ships: Two or more two-way radios (1988 SOLAS Amendments and 47 CFR 80.1065(b)(2)). These transceivers must be type accepted by the FCC as meeting 47 CFR 80.1101(47 CFR 80.1095(a)). Each transceiver must operate on 156.8 MHz (VHF channel 16) and one other channel -- 156.3 MHz (VHF channel 6) is recommended A transceiver meeting 47 CFR 80.1101, permanently installed in a lifeboat, may be counted toward this requirement.
- Survival Craft Radiotelegraph** No requirement

7. RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR CARGO SHIPS IN OCEAN OR COASTWISE SERVICE, LESS THAN 300 TONS GROSS TONNAGE:

Ship EPIRB Current requirement, ocean or coastwise service beyond 20 miles from a harbor of safe refuge: class A EPIRB manufactured on or after October 1, 1988 (46 CFR 33.60,94.60, 108.523, 192.65; 47 CFR 80.1053(a)(8)). Coast Guard will accept a satellite EPIRB as an equivalent replacement for a Class A EPIRB.

Proposed regulations: Coast Guard has proposed, but has not taken final action on rules which would require satellite EPIRBs. Until final rules are in place, Coast Guard will accept a satellite EPIRB as an equivalent replacement for a Class A EPIRB.

Survival Craft EPIRB No requirement

Proposed regulations: Coast Guard has proposed, but has not taken final action on rules which would require survival craft EPIRBs.

9 GHz Radar Transponder No requirement

Two-Way Radiotelephone No requirement

Apparatus for Survival Craft Proposed regulations: Coast Guard has proposed, but has not taken final action on rules which would require VHF two-way radios.

Survival Craft Radiotelegraph No requirement

8. RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR UNINSPECTED COMMERCIAL FISHING INDUSTRY VESSELS, 500 TONS GROSS TONNAGE AND OVER, BUILT BEFORE FEBRUARY 1,1992, OPERATING BEYOND THE BOUNDARY LINE OR ON THE HIGH SEAS:

Ship EPIRB

Current requirement. vessels operating on the high seas (over 3 miles beyond the territorial sea baseline). except those without berthing facilities and without a galley: Satellite EPIRB required (46 CFR 25.26-5, 28.150).³

Current requirement. all vessels operating beyond the Boundary Line: Satellite EPIRB required (47 CFR 80.1065(b)(1)).⁴

March 10,1994. all vessels operating on the high seas (over 3 miles beyond the territorial sea baseline): Satellite EPIRB required (46 CFR 25.26-5, 28.150).³⁵

9 GHz Radar Transponder

February 1,1995. all vessels operating beyond the Boundary Line: Two transponders, one on each side of the vessel in a position ready to be taken to the survival craft (47 CFR 80.1065(6X2)).⁴

Two-Way Radiotelephone Apparatus for Survival Craft

February 1,1995. all vessels operating beyond the Boundary Line: Three or more two-way radios (47 CFR 80.1065(b)(2)).⁴ Each must operate on 156.8 MHz (VHF channel 16) and one other channel --156.3 MHz (VHF channel 6) is recommended. A" transceivers must be type accepted by the FCC as meeting either 47 CFR 80.1101, or for VHF radios brought on board prior to February 1, 1992,47 CFR 80.271 (47 CFR 80.271(d), 80.1095(a)). A transceiver meeting 47 CFR 80.1101, permanently installed in a lifeboat, may be counted toward this requirement.

February 1,1999. all vessels operating beyond the Boundary Line: Three or more two-way radios (47 CFR 80.1065(b)(2)). These transceivers must be type accepted by the FCC as meeting 47 CFR 80.1101 (47 CFR 80.1095(a)). Each transceiver must operate on 156.8 MHz (VHF channel 16) and one other channel -- 156.3 MHz (VHF channel 6) is recommended. A transceiver meeting 47 CFR 80.1101, permanently installed in a lifeboat, may be counted toward this requirement.

³ If the vessel has a builder's certification that it is constructed with sufficient inherent buoyancy to keep the flooded vessel afloat, either a Category 1 or Category 2 EPIRB can be used to meet this requirement.

⁴ Certain vessels of 1600 tons gross tonnage and upward, on domestic voyages along the coasts of the contiguous 48 states, not more than 150 miles from the nearest land, may be exempt from the indicated requirements until August 1, 1999. See 47 CFR 80.1065(b)(5)(iii) and 80.836(c).

⁵ A Class A or Class B EPIRB may be used to meet the EPIRB requirement until February 1, 1998 if -
The vessel does not have either galley or berthing facilities;
The Class A or Class B EPIRB was on board on or before April 26, 1993;
The Class A or Class B EPIRB was built after October 1, 1988; and
Any Class B EPIRB used to meet this requirement is watertight and self-buoyant, and stable in a floating position to properly transmit a distress signal.

9. RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR UNINSPECTED COMMERCIAL FISHING INDUSTRY VESSELS, 500 TONS GROSS TONNAGE AND OVER, BUILT ON OR AFTER FEBRUARY 1,1992, OPERATING BEYOND THE BOUNDARY LINE OR ON THE HIGH SEAS:

Ship EPIRB Current requirement. vessels operating on the high seas (over 3 miles beyond the territorial sea baseline), except those without berthing facilities and without a galley: Satellite EPIRB required (46 CFR 25.26-5,28.150).⁶

Current requirement. all vessels operating beyond the Boundary Line: Satellite EPIRB required (47 CFR 80.1065(b)(1)).⁷

March 10,1994. all vessels operating on the high seas (over 3 miles beyond the territorial sea baseline): Satellite EPIRB required (46 CFR 25.26-5, 28.150).⁶⁸

9 GHz Radar Transponder Current requirement. all vessels operating beyond the Boundary Line: Two transponders, one on each side of the vessel in a position ready to be taken to the survival craft (47 CFR 80.1065(b)(2)).⁷

Two-Way Radiotelephone Apparatus for Survival Craft Current requirement. all vessels operating beyond the Boundary Line: Three or more two-way radios (47 CFR 80.1065(b)(2)).⁷ These transceivers must be type accepted by the FCC as meeting 47 CFR 80.1101(47 CFR 80.1095(a)). Each transceiver must operate on 156.8 MHz (VHF channel 16) and one other channel --156.3 MHz (VHF channel 6) is recommended. A transceiver meeting 47 CFR 80.1101, permanently installed in a lifeboat, may be counted toward this requirement.

⁶ If the vessel has a builder's certification that it is constructed with sufficient inherent buoyancy to keep the flooded vessel afloat, either a Category 1 or Category 2 EPIRB can be used to meet this requirement.

⁷ Certain vessels of 1600 tons gross tonnage and upward, on domestic voyages along the coasts of the contiguous 48 states, not more than 150 miles from the nearest land, may be exempt from the indicated requirements until August 1, 1999. See 47 CFR 80.1065(b)(5)(iii) and 80.836(c).

⁸ A Class A or Class B EPIRB may be used to meet the EPIRB requirement until February 1, 1998 if -
The vessel does not have either galley or berthing facilities;
The Class A or Class B EPIRB was on board on or before April 26, 1993;
The Class A or Class B EPIRB was built after October 1, 1988; and
Any Class B EPIRB used to meet this requirement is watertight and self-buoyant, and stable in a floating position to properly transmit a distress signal.

10. RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR UNINSPECTED COMMERCIAL FISHING INDUSTRY VESSELS, 300 TONS GROSS TONNAGE AND OVER BUT LESS THAN 500 TONS, BUILT BEFORE FEBRUARY 1,1992, OPERATING BEYOND THE BOUNDARY LINE OR ON THE HIGH SEAS:

Ship EPIRB

Current requirement. vessels operating on the high seas (over 3 miles beyond the territorial sea baseline). except those without berthing facilities and without a galley: Satellite EPIRB required (46 CFR 25.26-5,28.150).⁹

Current requirement. all vessels operating beyond the Boundary Line: Satellite EPIRB required (47 CFR 80.1065(b)(1)).

March 10,1994. all vessels operating on the high seas (over 3 miles beyond the territorial sea baseline): Satellite EPIRB required (46 CFR 25.26-5,28.150)."⁹¹⁰

9 GHz Radar Transponder

February 1,1995. all vessels operating beyond the Boundary Line: One transponder, in a position ready to be taken to the survival craft (47 CFR 80.1065(b)(2)).

Two-Way Radiotelephone Apparatus for Survival Craft

February 1, 1995. all vessels operating beyond the Boundary Line: Two or more two-way radios (47 CFR 80.1065(0X2)). Each must operate on 156.8 MHz (VHF channel 16) and one other channel --156.3 MHz (VHF channel 6) is recommended. All transceivers must be type accepted by the FCC as meeting either 47 CFR 80.1101, or for VHF radios brought on board prior to February 1, 1992,47 CFR 80.271 (47 CFR 80.271(d), 80.1095(a)). A transceiver meeting 47 CFR 80.1101, permanently installed in a lifeboat, may be counted toward this requirement.

February 1,1999. all vessels operating beyond the Boundary Line: Two or more two-way radios (47 CFR 80.1065(1,X2)). These transceivers must be type accepted by the FCC as meeting 47 CFR 80.1101 (47 CFR 80.1095(a)). Each transceiver must operate on 156.8 MHz (VHF channel 16) and one other channel --156.3 MHz (VHF channel 6) is recommended. A transceiver meeting 47 CFR 80.1101, permanently installed in a lifeboat, may be counted toward this requirement.

⁹ If the vessel has a builder's certification that it is constructed with sufficient inherent buoyancy to keep the flooded vessel afloat, either a Category 1 or Category 2 EPIRB can be used to meet this requirement.

¹⁰ A Class A or Class B EPIRB may be used to meet the EPIRB requirement until February 1, 1998 if -
The vessel does not have either galley or berthing facilities;
The Class A or Class B EPIRB was on board on or before April 26, 1993;
The Class A or Class B EPIRB was built after October 1, 1988; and
Any Class B EPIRB used to meet this requirement is watertight and self-buoyant, and stable in a floating position to properly transmit a distress signal.

11. RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR UNINSPECTED COMMERCIAL FISHING INDUSTRY VESSELS, 300 TONS GROSS TONNAGE AND OVER BUT LESS THAN 500 TONS, BUILT ON OR AFTER FEBRUARY 1,1992, OPERATING BEYOND THE BOUNDARY LINE OR ON THE HIGH SEAS:

Ship EPIRB

Current requirement. vessels operating on the high seas (over 3 miles beyond the territorial sea baseline). except those without berthing facilities and without a galley Satellite EPIRB required (46 CFR 25.26-5,28.150).¹¹

Current requirement. all vessels operating beyond the Boundary Line: Satellite EPIRB required (47 CFR 80.1065(b)(1)).

March 10,1994. all vessels operating on the high seas (over 3 miles beyond the territorial sea baseline): Satellite, EPIRB required (46 CFR 25.26-5, 28.150).^{11,12}

9 GHZ Radar Transponder

Current requirement. all vessels operating beyond the Boundary Line: One transponder, in a position ready to be taken to the survival craft (47 CFR 80.1065(b)(2)).

Two-Way Radiotelephone Apparatus for Survival Craft

Current requirement. all vessels operating beyond the Boundary Line: Two or more two-way radios (47 CFR 80.1065(b)(2)). These transceivers must be type accepted by the FCC as meeting 47 CFR 80.1101(47 CFR 80.1095(a)). Each transceiver must operate on 156.8 MHz (VHF channel 16) and one other channel -- 156.8 MHz (VHF channel 6) is recommended. A transceiver meeting 47 CFR 80.1101, permanently installed in a lifeboat, may be counted toward this requirement.

¹¹ If the vessel has a builder's certification that it is constructed with sufficient inherent buoyancy to keep the flooded vessel afloat, either a Category 1 or Category 2 EPIRB can be used to meet this requirement.

¹² A Class A or Class B EPIRB may be used to meet the EPIRB requirement until February 1, 1998 if -
The vessel does not have either galley or berthing facilities;
The Class A or Class B EPIRB was on board on or before April 26, 1993;
The Class A or Class B EPIRB was built after October 1, 1988; and
Any Class B EPIRB used to meet this requirement is watertight and self-buoyant, and stable in a floating position to properly transmit a distress signal.

12. RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR UNINSPECTED COMMERCIAL VESSELS (EXCEPT UNINSPECTED PASSENGER VESSELS AND VESSEL ASSISTANCE TOWING VESSELS), LESS THAN 300 TONS GROSS TONNAGE, BUT 11 METERS (36 FEET) OR MORE IN LENGTH, OPERATING ON THE HIGH SEAS:

Ship EPIRB Current requirement. commercial fishing industry vessels. with galley or berthing facilities. operating on the high seas (over 3 miles beyond the territorial sea baseline): Satellite EPIRB required (46 CFR 25.26-5,28.150).¹³

March 10, 1994: Satellite EPIRB required (46 CFR 25.26-5, 25.26-20(a), 28.150).¹³¹⁴

**9 GHz Radar
Transponder**

**Two-Way
Radiotelephone
Apparatus for
Survival Craft**

No requirements

¹³ If the vessel has a builder's certification that it is constructed with sufficient inherent buoyancy to keep the flooded vessel afloat, either a Category 1 or Category 2 EPIRB can be used to meet this requirement.

¹⁴ A Class A or Class B EPIRB may be used to meet the EPIRB requirement until February 1, 1998 if -
The vessel does not have either galley or berthing facilities;
The Class A or Class B EPIRB was on board on or before April 26, 1993;
The Class A or Class B EPIRB was built after October 1, 1988; and
Any Class B EPIRB used to meet this requirement is watertight and self-buoyant, and stable in a floating position to properly transmit a distress signal.

13. RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR UNINSPECTED COMMERCIAL VESSELS (EXCEPT UNINSPECTED PASSENGER VESSELS AND VESSEL ASSISTANCE TOWING VESSELS), LESS THAN 11 METERS (36 FEET) IN LENGTH, OPERATING ON THE HIGH SEAS:

Ship EPIRB	<u>March 10, 1994</u> : Satellite EPIRB required (46 CFR 25.26-5, 25.26-20(a), 28.150). ¹⁵¹⁶
9 GHz Radar Transponder	<u>No requirement</u>
Two-Way Radiotelephone Apparatus for Survival Craft	<u>No requirement</u>

¹⁵ If the vessel has a builder's certification that it is constructed with sufficient inherent buoyancy to keep the flooded vessel afloat, either a Category 1 or Category 2 EPIRB can be used to meet this requirement.

¹⁶ A Class A or Class B EPIRB may be used to meet the EPIRB requirement until February 1, 1998 if -
The vessel does not have either galley or berthing facilities;
The Class A or Class B EPIRB was on build on or before April 26, 1993;
The Class A or Class B EPIRB was built after October 1, 1988; and
Any Class B EPIRB used to meet this requirement is watertight and self-buoyant, and stable in a floating position to properly transmit a distress signal.

**14. RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR INSPECTED VESSELS
IN GREAT LAKES SERVICE, INCLUDING:**

- PASSENGER SHIPS
- CARGO SHIPS

Ship EPIRB

Current requirement: Two FCC type accepted Class C Channel 16 VHF EPIRBs required (46 CFR 33.60, 75.60, 94.60, 167.35-72, 19Z65). (One EPIRB required on small passenger vessels inspected under 46 CFR Subchapter T (46 CFR 180.40-1).) Coast Guard will accept one satellite EPIRB as an equivalent replacement for one or two Class C EPIRBs.

Proposed regulations: Coast Guard has proposed, but has not taken final action on rules which would require a satellite EPIRB.

**9 GHz Radar
Transponder**

No requirement

**Two-Way
Radiotelephone
Apparatus for
Survival Craft**

No requirement

Proposed regulations: Coast Guard has proposed, but has not taken final action on rules which would require three or more VHF two-way radios on all vessels, except for small passenger vessels inspected under 46 CFR Subchapter T.

15. RADIO LIFESAVING EQUIPMENT REQUIREMENTS FOR UNINSPECTED COMMERCIAL VESSELS (EXCEPT UNINSPECTED PASSENGER VESSELS AND VESSEL ASSISTANCE TOWING VESSELS), OPERATING ON THE GREAT LAKES:

Ship EPIRB	<u>March 10, 1994, all vessels operating over 3 miles beyond the coastline:</u> Satellite EPIRB required (46 CFR 25.26-5, 28.150). ^{17/18}
9 GHz Radar Transponder	<u>No requirement</u>
Two-Way Radiotelephone Apparatus for Survival Craft	<u>No requirement</u>

¹⁷ If the vessel has a builder's certification that it is constructed with sufficient inherent buoyancy to keep the flooded vessel afloat, either a Category 1 or Category 2 EPIRB can be used to meet this requirement

¹⁸ A Class A or Class B EPIRB may be used to meet the EPIRB requirement until February 1, 1998 if -
The vessel does not have either galley or berthing facilities;
The Class A or Class B EPIRB was on board on or before April 26, 1993;
The Class A or Class B EPIRB was built after October 1, 1988; and
Any Class B EPIRB used to meet this requirement is watertight and self-buoyant, and stable in a floating position to properly transmit a distress signal.