

# **How to Conduct a Bridge to Bridge Inspection**

## **§80.1001 Applicability.**

The Bridge-to-Bridge Act and the regulations of this part apply to the following vessels in the navigable waters of the United States:

- (a) Every power-driven vessel of 20 meters or over in length while navigating;
- (b) Every vessel of 100 gross tons and upward carrying one or more passengers for hire while navigating;
- (c) Every towing vessel of 7.8 meters (26 feet) or over in length, measured from end to end over the deck excluding sheer, while navigating; and
- (d) Every dredge and floating plant engaged, in or near a channel or fairway, in operations likely to restrict or affect navigation of other vessels. An unmanned or intermittently manned floating plant under the control of a dredge shall not be required to have a separate radiotelephone capability.

[51 FR 31213, Sept. 2, 1986, as amended at 57 FR 61012, Dec. 23, 1992; 58 FR 44954, Aug. 25, 1993]

## **§80.1003 Station required.**

Vessels subject to the Bridge-to-Bridge Act must have a radiotelephone installation to enable the vessel to participate in navigational communications. This radiotelephone installation must be continuously associated with the ship even though a portable installation is used.

Foreign vessels coming into U.S. waters where a bridge-to-bridge station is required may fulfill this requirement by use of portable equipment brought aboard by the pilot. Non portable equipment, when used, must be arranged to facilitate repairs. The equipment must be protected against vibration, moisture, temperature and excessive currents and voltages.

## **§80.1005 Inspection of station.**

The bridge-to-bridge radiotelephone station will be inspected on vessels subject to regular inspections pursuant to the requirements of Parts II and III of Title II of the Communications Act, the Safety Convention or the Great Lakes Agreement at the time of the regular inspection. If after such inspection, the Commission determines that the Bridge-to-Bridge Act, the rules of the Commission and the station license are met, an endorsement will be made on the appropriate document. The validity of the endorsement will run concurrently with the period of the regular inspection. Each vessel must carry a certificate with a valid endorsement while subject to the Bridge-to-Bridge Act. All other bridge-to-bridge stations will be inspected from time to time.

An inspection of the bridge-to-bridge station on a Great Lakes Agreement vessel must normally be made at the same time as the Great Lakes Agreement inspection is conducted by a technician holding one of the following: a General Radiotelephone Operator License, a GMDSS Radio Maintainer's License, a Radiotelegraph Operator Licensee or a First Class Radiotelegraph Operator's Certificate<sup>1</sup>. Additionally, the technician must not be the owner, operator, master, or an employee of any of them.

Ships subject to the Bridge-to-Bridge Act may, in lieu of an endorsed certificate, certify compliance in the station log required by §80.409(f).

[81 FR 90747, Dec. 15, 2016]

## **§80.1007 Bridge-to-bridge radiotelephone installation.**

Use of the bridge-to-bridge transmitter must be restricted to the master or person in charge of the vessel, or the person designated by the master or person in charge to pilot or direct the movement of the vessel. Communications must be of a navigational nature exclusively.

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<sup>1</sup> Beginning May 20, 2013, no applications for these Radiotelegraph Operator's Licenses or Certificates will be accepted for filing.

### **§80.1009 Principal operator and operating position.**

The principal operating position of the bridge-to-bridge station must be the vessel's navigational bridge or, in the case of dredges, its main control station. If the radiotelephone installation can be operated from any location other than the principal operating position, the principal operating position must be able to take full control of the installation.

### **§80.1011 Transmitter.**

(a) The bridge-to-bridge transmitter must be capable of transmission of G3E emission on the navigational frequency 156.650 MHz (Channel 13) and the Coast Guard liaison frequency 157.100 MHz (Channel 22A). Additionally, the bridge-to-bridge transmitter must be capable of transmission of G3E emission on the navigational frequency of 156.375 MHz (Channel 67) while transiting any of the following waters:

(1) The lower Mississippi River from the territorial sea boundary, and within either the Southwest Pass safety fairway or the South Pass safety fairway specified in §166.200 of the U.S. Coast Guard's Rules, 33 CFR 166.200, to mile 242.4 AHP (Above Head of Passes) near Baton Rouge;

(2) The Mississippi River-Gulf Outlet from the territorial sea boundary, and within the Mississippi River-Gulf outlet Safety Fairway specified in §166.200 of the U.S. Coast Guard's Rules, 33 CFR 166.200, to that channel's junction with the Inner Harbor Navigation Canal; and

(3) The full length of the Inner Harbor Navigation Canal from its junction with the Mississippi River to that canal's entry to Lake Pontchartrain at the New Seabrook vehicular bridge.

(b) [Reserved]

[57 FR 61012, Dec. 23, 1992]

### **§80.1013 Receiver.**

The bridge-to-bridge receiver must be capable of reception of G3E emission on the navigational frequency 156.650 MHz (Channel 13) and the Coast Guard liaison frequency 157.100 MHz (Channel 22A). In addition, the bridge-to-bridge receiver must be capable of reception of G3E emission on the navigational frequency of 156.375 MHz (Channel 67) while transiting in the waters of the lower Mississippi River as described in §§80.1011 (a)(1), (a)(2) and (a)(3) of this part.

[57 FR 61012, Dec. 23, 1992]

### **§80.1015 Power supply.**

(a) There must be readily available for use under normal load conditions, a power supply sufficient to simultaneously energize the bridge-to-bridge transmitter at its required antenna power, and the bridge-to-bridge receiver. Under this load condition the voltage of the power supply at the power input terminals of the bridge-to-bridge radiotelephone installation must not deviate from its rated voltage by more than 10 percent on vessels completed on or after March 1, 1957, nor by more than 15 percent on vessels completed before that date.

(b) When the power supply for a nonportable bridge-to-bridge radiotelephone installation consists of or includes batteries, they must be installed as high above the bilge as practicable, secured against shifting with motion of the vessel, and accessible with not less than 26 cm (10 in.) head room.

(c) Means must be provided for adequately charging any rechargeable batteries used in the vessel's bridge-to-bridge radiotelephone installation. There must be provided a device which will give a continuous indication of the charging current during charging.

[51 FR 31213, Sept. 2, 1986, as amended at 58 FR 44954, Aug. 25, 1993]

### **§80.1017 Antenna system.**

(a) An antenna must be provided for non-portable bridge-to-bridge radiotelephone installations which is non-directional and vertically polarized. The construction and installation of this antenna must insure proper operation in time of an emergency.

(b) In cases where portable bridge-to-bridge equipment is permanently associated with a vessel, the equipment must be provided with a connector for an external antenna of a type capable of meeting requirements of paragraph (a) of this section and §80.71<sup>2</sup>. The vessel must be equipped with an external antenna meeting requirements of paragraph (a) of this section and §80.71, capable of use with the portable equipment during a normal listening watch.

**§80.1019 Antenna radio frequency indicator.**

Each non-portable bridge-to-bridge transmitter must be equipped, at each point of control, with a carrier operated device which will provide continuous visual indication when the transmitter is supplying power to the antenna transmission line or, in lieu thereof, a pilot lamp or meter which will provide continuous visual indication when the transmitter control circuits have been placed in a condition to activate the transmitter.

[52 FR 35246, Sept. 18, 1987]

**§80.1021 Nameplate.**

A durable nameplate must be mounted on the required radiotelephone or be an integral part of it. When the transmitter and receiver comprise a single unit, one nameplate is sufficient. The nameplate must show at least the name of the manufacturer and the type or model number.

**§80.1023 Test of radiotelephone installation.**

Unless normal use of the required radiotelephone installation demonstrates that the equipment is in proper operating condition, a test communication for this purpose must be made by a qualified operator each day the vessel is navigated. If the equipment is not in proper operating condition, the master must be promptly notified. The master must have it restored to effective operating condition as soon as possible.

**§80.309 Watch required by the Bridge-to-Bridge Act.**

In addition to the watch requirement contained in §80.148, all vessels subject to the Bridge-to-Bridge Act must keep a watch on the designated navigational frequency. The watch must be maintained by the master or person in charge of the vessel or the person designated by the master or person in charge to pilot or direct the movement of the vessel. The person standing watch may perform other duties provided such other duties do not interfere with the watch.

**§15.103 Unintentional radiators - VHF interference from LED lighting**

The U.S. Coast Guard released Marine Safety Alert 13-18 describing the potential for radio frequency interference from LED navigation and other above deck lighting to VHF marine radios and AIS<sup>3</sup>. FCC regulation 47 CFR Part 15.103 states that “The operator of the exempted device (i.e. LED) shall be required to stop operating the device upon a finding by the Commission or its representative that the device is causing harmful interference. Operation shall not resume until the condition causing the harmful interference has been corrected.” An RFI test has therefore been included.

**33 CFR §164.46 Automatic Identification System.**

Vessels must have on board a properly installed, operational Coast Guard type-approved AIS Class A device. However, use of a Coast Guard type-approved AIS Class B/CS or B/SO device in lieu of an AIS Class A device is permissible on the following vessels if they are not subject to pilotage by other than the vessel Master or crew:

- Fishing industry vessels;
- Vessels that are certificated to carry less than 150 passengers **and** that do not operate in a Vessel Traffic Service (VTS) or Vessel Movement Reporting System (VMRS) **and** do not operate at speeds in excess of 14 knots
- Vessels identified in paragraph (b)(1)(iv) of this section engaged in dredging operations.

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**END OF REGULATION TEXT**

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<sup>2</sup> This reference appears to be an error from the FCC regulations. The correct reference should be §80.81.

<sup>3</sup> See <https://www.dco.uscg.mil/Portals/9/DCO%20Documents/5p/CG-5PC/INV/Alerts/1318.pdf?ver=2018-08-16-091109-630>

**Ship's Particulars**

Date of Survey \_\_\_\_\_ Survey Location \_\_\_\_\_  
 Vessel Name \_\_\_\_\_  
 Port of registry \_\_\_\_\_ Tonnage GT \_\_\_\_\_ GRT \_\_\_\_\_  
 Type of ship\* \_\_\_\_\_ Number of passengers (if applicable) \_\_\_\_\_  
 Length Overall \_\_\_\_\_  
 Call Sign \_\_\_\_\_ MMSI Number \_\_\_\_\_  
 IMO Number \_\_\_\_\_ USCG Number \_\_\_\_\_

\*Cargo or Passenger or Dredge

**Surveying Test Equipment:**

The following test instruments used:

	<u>Yes</u>	<u>No</u>	N/A
Frequency counter	<input type="checkbox"/>	<input type="checkbox"/>	
Watt meter	<input type="checkbox"/>	<input type="checkbox"/>	
Ampere Volt/Ohm meter.	<input type="checkbox"/>	<input type="checkbox"/>	
Acid tester (specific gravity).	<input type="checkbox"/>	<input type="checkbox"/>	
Deviation meter.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VHF DSC Handheld	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Service Monitor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**§80.1015 Power supply**

(a) There must be readily available for use under normal load conditions, a power supply sufficient to simultaneously energize the bridge-to-bridge transmitter at its required antenna power, and the bridge-to-bridge receiver. Under this load condition the voltage of the power supply at the power input terminals of the bridge-to-bridge radiotelephone installation must not deviate from its rated voltage by more than 10 percent on vessels completed on or after March 1, 1957, nor by more than 15 percent on vessels completed before that date.

(b) When the power supply for a non-portable bridge-to-bridge radiotelephone installation consists of or includes batteries, they must be installed as high above the bilge as practicable, secured against shifting with motion of the vessel, and accessible with not less than 26 cm (10 in.) head room.

(c) Means must be provided for adequately charging any rechargeable batteries used in the vessel's bridge-to- bridge radiotelephone installation. There must be provided a device which will give a continuous indication of the charging current during charging.

The following items were checked and tested as necessary and found satisfactory:

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
1. Checked main source of energy available in accordance with requirements.	<input type="checkbox"/>	<input type="checkbox"/>	
2. If the main source of energy for a non-portable installation is a battery, specify make and model: _____			
a) Checked its installation. Specify location: _____			
b) Checked for defects including all cables.	<input type="checkbox"/>	<input type="checkbox"/>	
3. Checked the battery condition by specific gravity measurement or voltage measurement (non-portable installations) Specify voltage: _____ or specific gravity: _____			
4. With battery off charge, and the maximum required radio installation load connected to the reserve source of energy, check the battery voltage (non-portable installations) . Specify voltage _____			
5. Checked that battery charger is of an automatic type.	<input type="checkbox"/>	<input type="checkbox"/>	

## Radio Installation

YES    NO    N/A

1. Is the principal Bridge to Bridge station located in the position from which the vessel is normally navigated ?  
      
a) The station is located at: \_\_\_\_\_
2. If fitted with a remote control station, does the principal position have control priority?
3. Does the equipment have a nameplate showing the name of the Manufacturer and the model number?
4. Is the unit a non-portable or portable unit? \_\_\_\_\_  
a) If portable, is the antenna connector capable of being connected to an external antenna?

## VHF transceiver

Make I Model		
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1. Checked for operation on channels 13, 67 and 22A (1022)
2. Checked that equipment is within frequency tolerance (10 ppm)
3. Checked RF power output and VSWR on channels 13, 67 and 22A (1022).  
Note 1: Ch. 13 and 67 are limited to one (1) watt for normal operation  
Note 2: Ch. 22A (Ch 1022) is allowed to transmit 25 watts (*see Sec 80.373(f)*)
4. Checked correct operation of all controls including priority of control units (if provided).
5. Checked for correct operation by on-air contact with a coast station or other ship.
6. Is the external antenna non-directional and vertically polarized?          
a) If a portable unit is utilized - is it connected to this antenna?
7. Confirm that the VHF radio does not have a public address mode capable of disrupting required continuous watch on channels 16 and 13 while underway              
Remarks: \_\_\_\_\_
8. Checked receiver sensitivity<sup>4</sup>

## VHF DSC Function (if fitted)

1. Performed an off-air check confirming the correct Maritime Mobile Service Identity is programmed in the equipment.
2. Checked that the ship's position in the distress alert is automatically provided with this information from an internal or external navigation receiver (e.g. GPS) .
3. Checked for correct transmission by means of a routine or test call to a coast station, other ship, on-board duplicate equipment or special test equipment.
4. Checked for correct reception by means of a routine or test call from a coast station, other ship, on board duplicate equipment, or special test equipment.
5. Checked the audibility of the VHF/DSC alarm.
6. Checked that DSC distress procedure and the MMSI number are clearly displayed near the unit.

<sup>4</sup> Checking with a known weak NOAA Weather radio is acceptable

**VHF interference from LED lighting**

Check for absence of VHF interference with LED navigation and other above decks lighting activated.

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
First VHF Radio	<input type="checkbox"/>	<input type="checkbox"/>	
Second VHF Radio	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AIS	<input type="checkbox"/>	<input type="checkbox"/>	

*NOTE: Use of a VHF handheld near AIS VHF antenna is suggested. Turn off LED light(s). Tune the radio to a weak NOAA weather radio station. Turn on the LED light(s) one at a time, and then all on. If the NOAA channel vanishes after a lamp is energized, it's generating RF interference.*

*As an alternative to tuning to a weak NOAA weather channel, tune the VHF radio to some quiet channel. Adjust the VHF radio's squelch control until the radio outputs audio noise. Re-adjust the squelch until the audio noise is quiet, only slightly above the noise threshold. If the radio does now output audio noise, then the LED light(s) have raised the noise floor.*

Radio Surveyors Remarks and Equipment Deficiencies:

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Master's Signature and Ship's Stamp

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Radio Surveyor's Signature

\_\_\_\_\_  
Radio Surveyor's Printed Name and License Number

\_\_\_\_\_  
Surveyor's Company, City, State

\_\_\_\_\_  
Date

NOTE: Logbook Entry to be made by Surveyor along with Master's comments (§ 80.59 (2))