

## VIII. COMMUNICATION

**A. CURRENT STATUS:** Operational communications in the LA/LB Harbor area use marine VHF radio and commercial telephone communications. The five principal nodes are the San Pedro Vessel Traffic Service (VTS) at the Marine Exchange, Los Angeles Pilots, Long Beach Pilots (Jacobsen Pilot Service), Port of Long Beach Joint Command Center (POLB JCC), and the USCG Captain of the Port (CG Sector LA/LB). These stations exchange vessel movement information and safety notices by e-mail, telephone, and fax.

Marine VHF-FM radio is the most heavily used means of communication. Vessels use VHF-FM Channel 13 bridge-to-bridge, and VTS LA/LB uses Channels 14, 73 and 74 VHF to pass traffic information to participating vessels (see Chapter XI, VTS). Harbor area bridge-to-bridge transmissions, added to Navy traffic from San Diego and the local area, will occasionally congest Channel 13. On-duty pilots (Los Angeles, Long Beach, and El Segundo) work on Channels 77, 5a, and 65a for tug communications, and monitor Channels 13 or 14 for traffic. All primary users monitor Channel 13, allowing very successful safety communications between vessels underway in the LA/LB area.

In 1992 FCC regulations changed VHF Channel 9 to an alternate calling frequency for noncommercial vessels.

All VHF-equipped vessels and all Coast Guard Stations must monitor VHF FM Channel 16. However, when a vessel is operating within the San Pedro VTS area (within 25 miles of Point Fermin) AND is monitoring the VTS frequency (VHF FM Channel 14), it may maintain a concurrent listening watch on VHF FM Channel 16, but it is not required to do so.

When operating on the Navigable Waters of the United States (12 nautical miles from the baseline), the following vessel categories must monitor VHF FM Channel 13:

- power driven vessels 65.5' (20 m.) or longer;
- vessels 26' (7.9 m.) or longer with tows;
- vessels of 100 gross tons or more carrying one or more passengers for hire;
- vessels certified for 150 passengers or more for hire; and
- dredge and floating plants operating in or near a fairway or channel.

**B. PRINCIPAL OPERATING CHANNELS (VHF-FM):**

<b>STATION</b>	<b>CHANNEL</b>	<b>FREQUENCY</b>
Bridge to Bridge	13	156.650
Non-Commercial Calling	9	156.450
Distress Safety & Calling	16	156.800
VTS San Pedro Sector	14	156.700
VTS LA Sector	73	156.675
VTS LB Sector	74	156.725
LA Pilots (Primary)	73	156.675
LA Pilots (Secondary)	63A	156.175
Long Beach Pilots (Primary Working)	12	156.600
Long Beach Pilots (Secondary)	74	156.725
U.S. Coast Guard	16 (Primary)	156.800
	22A (Secondary)	157.100
U.S. Navy	12 (Primary)	156.600
	65A (Secondary)	156.275
Harbor Tug Working Channels	77 (LA)	156.875
	65A (Seal Beach)	156.275
	5A (LB)	156.250
Inter-Ship Safety	6	156.300
El Segundo Pilots	77	156.875
	10	156.500

**C. CURRENTLY - INSTALLED COMMUNICATIONS EQUIPMENT:** VTS LA/LB, the Los Angeles Pilots, and Long Beach Pilots (Jacobsen Pilot Service) use state-of-the-art communications equipment well-suited to the requirements of the area. The Committee does not know of any area within the LA/LB Harbors with inadequate radio communications.

1. VTS LA/LB

- a. Three Furuno FM-8900S shipboard-type, VHF-FM all-channel synthesized transceivers, maximum 25 watts, with scan capabilities and local antennas.
- b. One remote Motorola VHF-FM transceiver capable of channels 13, 14, and 16, maximum 45 watts, located on San Pedro Hill at the FAA radar site.
- c. Three Automatic Identification Systems (AIS) units located at the Marine Exchange in San Pedro, and remote units at Santa Barbara and Port San Luis. All 3 units are capable of transmitting AIS messages, but a permit from the FCC to use the transmit messaging function pends.
- d. Computer-based Maritime Information System (MARIS 2.1) system used by the Marine Exchange to collect, store, display, create, and sent reports of ship arrival,

departure, shift, and other information. Data feeds from this system are provided to the LA Pilots, LB Pilots (Jacobsen Pilot Service), and the USCG Captain of the Port.

- e. Kongsberg/Norcontrol C-Scope VTS System with wide-screen displays on a common Local Area Network between the VTS LA/LB, LA Pilots, LB Pilots (Jacobsen Pilot Service), USCG Captain of the Port (CG Sector LA/LB), and Port of Long Beach Command and Control Center (POLB JCC)
- f. One diesel-fueled, automatic-starting emergency generator (55KW) capable of powering the entire MX building. Approximately 40-hour supply of diesel fuel is on site (20 gallon tank and 20 gallons in portable containers).
- g. One lithium-ion battery backup system capable of powering the entire MX building for 2-6 hours depending on load.
- h. One battery-based uninterrupted power supply (UPS) capable of powering critical equipment (VTS System, MARIS 2.1, computers, radars, radios, telephones, and other sensitive electronic equipment for 25 minutes.
- i. Backup VTS at the Port of Long Beach Joint Commander Center, on a Local Area Network with the Long Beach Pilots (Jacobsen Pilot Service).

## 2. Los Angeles Pilot Station

- a. Two primary VHF transceivers, Motorola MCD 5000 Deskset base stations, 50-watt, Channels 16 and 73 have a remote antenna located on San Pedro Hill.
- b. One ICOM VHF transceiver, IC-M304, shipboard-type, all channel synthesized, 25-watt, with local antenna.
- c. One Motorola CDM 250 all channel synthesized, 25-watt, with local antenna.
- d. Two Standard Horizon all channel synthesized, 25-watt, with local antenna.
- e. Two live feed large screen Norcontrol ECDIS with AIS and radar overlay.
- f. One large screen ARINC ECDIS with AIS and Portable Pilot Unit information
- g. Two direct access camera systems (300+ PTZ cameras) covering POLA berths and waterways.
- h. One diesel-fueled, automatic-starting emergency generator (45KW). Essential operational communications, computers, cameras, and ECDIS displays are on UPS circuits.

- i. PC-based email message program to exchange vessel movement information among operating entities throughout the harbor area.
  - j. POLA Pilots are supplied with smart phones (iPhones) for communications, job and navigation related information.
3. Long Beach Pilot Station (Jacobsen Pilot Service):
- a. Two primary VHF transceivers, Motorola base-station C53RTB-1196C, 50-watt. Used on Channels 12, 16 and 74; with unselected audio monitor speakers on Channels 5A, 12, 13, 14, 16, 65A, 73, 74 and 77. The second, remote unit is sited on San Pedro Hill and connected to the pilot station by a leased telephone line.
  - b. Two secondary VHF transceivers, Sea 156,25 watt shipboard-type, all-channel synthesized radio with scan.
  - c. One diesel-fueled automatic-starting emergency generator (50KW).
  - d. One PC-based private circuit fax based messaging program.

**D. OBSERVATIONS:**

- 1. VTS LA/LB and both pilot groups use high-quality, reliable communications equipment. Any replacement equipment should equal or exceed the current equipment.
- 2. All primary communication users encourage their personnel to minimize voice traffic on channel 13. The Committee supports this necessary effort to maintain circuit discipline and minimize congestion.
- 3. Both pilot organizations normally use low transmitting power when communicating with their escort/assist tugs. This usually minimizes interference and congestion on Channels 5A and 77. High power is only used when low power doesn't work.
- 4. Chapter XI gives specific communication requirements for the VTS area.