



VHF Radio Facility Requirements

Radio facilities have specific technical requirements that must be met in order to be accepted as federal emitters. This document provides some information to assist members with radio facility questions and issues.

All radio facility owners are urged to carefully read the current [Auxiliary Operations Policy Manual](#) with emphasis on Annex 4. The use of out of date information is often the cause for confusion. This information is current as of the revision date below.

Radio Equipment Policy

In addition to meeting [Auxiliary Operations Policy Manual COMDTINST 16798.3\(series\)](#), requirements, Auxiliary radio equipment must meet Coast Guard Spectrum Management policy, which in turn is driven by federal government requirements set by the National Telecommunications and Information Administration ([NTIA](#)). Aviation facilities are more complex as they also involve airframe and FAA requirements, and are not covered here.

Acceptable VHF Marine Radios

Most facilities (OPFACS) have at least one FCC "Part 80" marine VHF radio ([47 CFR, 80](#) type accepted).

However, according to USCG policy, certain other FCC "Part 90" radios may be used on Auxiliary marine frequencies if they meet technical standards for emission, frequency, and power (starting with [47 CFR 90](#) type acceptance). In particular, policy requires limiting output power on marine frequencies to a maximum of 25 watts. Many "Part 90" radios have excess power capability: It is the responsibility of the equipment programmer/facility owner/facility operator to adhere to policy requirements.

Facilities might choose to have a valid "Part 90" radio for marine VHF frequencies because the same radio would include coverage for non-marine VHF frequencies, allowing a single radio to meet many needs. Note that marine and non-marine frequencies may be far enough apart in the spectrum to make a single efficient antenna ineffective. Also realize that such radios sacrifice the advantage of the MMSI features found on marine radios.

Amateur radio 2 meter VHF radios are **not** acceptable for use on Auxiliary-authorized marine or non-marine VHF frequencies, irrespective of technical capabilities. Facilities will no longer be accepted where amateur radio 2 meter VHF radios are used for Auxiliary-authorized marine or non-marine VHF frequencies.

Maritime Mobile Service Identities (MMSI)

Marine VHF radios with [Digital Selective Calling](#) (DSC) and [GMDSS](#) features aboard surface facilities should have a civilian-requested [Maritime Mobile Service Identity \(MMSI\) number](#). These are available without license (free) from [BOAT/US](#) and other commercial sources or with license (\$\$) from the [FCC](#) (form 605 with payment). One MMSI number applies to all radios aboard a vessel. Note that the "Part 90" radios referred to above do not have the capability for DSC.

Marine VHF radios on unit-owned vessels, on aircraft, at fixed land radio facilities, or in land mobile radio facilities are not authorized to have civilian MMSI numbers. Contact the national DVC-RT through the DSO-CM for current information on MMSI assignment to these other types of facilities.

Acceptable VHF Non-Marine Radios

Most manufacturers of “commercial mobile” or “Part 90” ([47 CFR 90](#)) VHF radios meet technical requirements. Make sure these radios are certified by the manufacturer to be operated from 136-174 MHz LMR, as all Auxiliary non-marine VHF frequencies are below 151 MHz (some are below 144 MHz). Radios with more than 50 watts of output power require formal Coast Guard Spectrum Management location coordination.

Note that any “Part 90” type accepted radio must be programmed in advance of operation. By FCC regulation they cannot be changed beyond their pre-programmed frequencies except by an appropriately licensed technician. To remain in compliance with FCC regulations, most manufacturers will not sell programming software and programming cables to unlicensed individuals.

Non-Marine VHF Frequencies

Only narrowband (12.5 KHz bandwidth) FM emissions may be used, and only FCC narrowband Type Accepted “Part 90” radios may be used on the non-marine VHF frequencies ([47 CFR 90](#)). The [Auxiliary Operations Policy Manual](#) has a list of authorized frequencies. The 143.28MHz frequency is no longer authorized for any usage.

Handheld Radios for Radio Facilities

Handheld radios will not be accepted as the primary radio for fixed land facilities or transportable facilities.

Per the Operations Policy Manual COMDTINST M16798.3E: (emphasis added)

A.2.b “A land mobile facility is radio equipment that an Auxiliarist can operate while in motion (e.g., in a vehicle, walking, etc.) It may be installed in a vehicle or portable”.

A.2.d. “Portable radios are radios that an Auxiliarist can hand-carry and operate by means of a self contained antenna and power source”. When used on an Operational Facility the Auxiliarist must use the facility’s callsign, and have permission of the Coxswain/Pilot.

Portable radios will only be accepted as the primary radio for fixed land or transportable facilities if the Director determines a portable radio is appropriate for mission. Additional antenna, power, or other capabilities may be required.

It is strongly recommended that hand held radios should only be accepted as the primary facility radio if there is means to power it from, or charge it’s batteries from, a vehicle (or other) power system, in addition to its internal batteries. An appropriate external (to the vehicle) antenna is highly recommended.

It is recommended that vehicle-based land mobile radio facility equipment include a 25 watt marine/50 watt non-marine, fixed mount, VHF radio with an external antenna.

Encryption

The Coast Guard may provide Coast Guard owned encrypted radios to be used by Auxiliarists for a specific task. In such cases, the Auxiliarist will be required to follow all security policies as specified by the Coast Guard.

Gary G. Young, BC-RTI
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