



Republic of the Philippines  
NATIONAL POLICE COMMISSION  
NATIONAL HEADQUARTERS PHILIPPINE NATIONAL POLICE  
OFFICE OF THE CHIEF, PNP  
Camp BGen Rafael T Crame, Quezon City

MEMORANDUM CIRCULAR  
NO.: 2020-054

2020 05 04

**PRESCRIBING THE MINIMUM TECHNICAL SPECIFICATIONS  
FOR VERY HIGH FREQUENCY (VHF) MARITIME BAND FIXED RADIO**

**1. REFERENCES:**

- a. NAPOLCOM Memorandum Circular (MC) No. 2019-002: "Defining the Duty and Authority of the NAPOLCOM to prescribe Minimum Standards for Uniform, Arms, and Equipment to be Procured by the Philippine National Police;
- b. NAPOLCOM Resolution No. 2019-977: "Prescribing the Minimum Standards for Very High Frequency (VHF) Maritime Band Fixed Radio;
- c. PNP UESB Resolution No. 2020-013 entitled: "Proposed Minimum Technical Specifications for Very High Frequency (VHF) Maritime Band Fixed Radio".

**2. RATIONALE:**

This MC sets forth the minimum technical specifications for Very High Frequency (VHF) Maritime Band Fixed Radio to be used by the Maritime Group and different PNP units.

**3. SITUATION:**

The PNP Maritime Group is mandated to ensure public safety and internal security over Philippine territorial waters, rivers and coastal areas including points of entry and exit such as ports and harbors. Due to the peculiarity of its mission and nature of work which involves patrolling using watercraft, the need for a communication equipment capable of sending distress signals or messages or making distress calls arise.

Based on regulations IV/7.1.1, 7.1.2 and 14.1 of the 1988 amendments to the International Convention for the Safety of Life at Sea (SOLAS), 1974 concerning radio communications for the Global Maritime Distress and Safety System (GMDSS), which require respectively that ships be provided with a VHF radio installation capable of voice communication and digital selective calling, and that such VHF radio installations shall conform to appropriate performance standards not inferior to those adopted by the Organization.

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**DARWIN B. VALDERAS  
POLICE LIEUTENANT COLONEL  
Chief, Administrative Section**

#### 4. PURPOSE:

To provide and establish the minimum technical specifications for Very High Frequency (VHF) Maritime Band Fixed Radio that will serve as reference in the procurement of the said equipment.

#### 5. DEFINITION OF TERMS:

For purposes of this MC, the following terms shall mean:

- a. **Digital selective calling (DSC)** – is a synchronous system developed by the International Telecommunication Union Radiocommunication (ITU-R) Sector, used to establish contact with a station or group of stations automatically by means of radio.
- b. **Distress signal** – is a digital selective call using an internationally recognized distress call format in the bands used for terrestrial communication or an internationally recognized distress message format, in which case it is relayed through space stations, which indicates that a person, ship, aircraft, or other vehicle is threatened by grave and imminent danger and requests immediate assistance.
- c. **Ingress Protection (IP)** – refers to the level of protection offered by an electrical enclosure against solids and liquids. In an environment where dust or water could damage electronic components, a sealed enclosure is used to prevent such ingress and safe house the electronics.
- d. **Sensitivity** – is the smallest input signal which gives a specified output or signal-to-noise ratio. In a radio receiver, it is the smallest RF input which gives a specified signal-to-noise ratio at the output, the modulation frequency and depth of modulation being specified.
- e. **Very High Frequency (VHF) Band** – is a band of frequencies between 30 to 300 MHz with wavelengths ranging from one (1) to ten (10) meters.

#### 6. GUIDELINES:

##### a. SPECIFICATIONS:

##### 1) Description

The Very High Frequency (VHF) Maritime Band Fixed Radio is a fixed mounted, waterproof communication equipment capable of short-range wireless voice communication, location information, and sending and receiving distress signals and calls.

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**DARWIN D. VALDERAS**  
POLICE LIEUTENANT COLONEL  
Chief, Administrative Section

## 2) Technical Specifications

- a) Frequency Range
  - (1) Transmit : 156.025–157.425 MHz
  - (2) Receive : 156.050–163.275 MHz
- b) Channel Spacing : 25 kHz
- c) Antenna Impedance : Manufacturer's standard
- d) Input/Supply Voltage : Manufacturer's standard
- e) Transmitter
  - (1) Output Power
    - Low : 1 Watt
    - High : 25 Watts
  - (2) Frequency Stability :  $\pm 10$  ppm
- f) Receiver
  - (1) Sensitivity @ 12dB SINAD : 0.30 $\mu$ V
  - (2) Audio Output Power : Manufacturer's standard
- g) Ingress Protection Rating : IPX7
- h) Weight : 2.0 kg. (max.) radio only

## 3) Features

- a) Built-in GPS receiver
- b) Class-D Digital Selective Calling (DSC)
- c) Noise canceling
- d) Weather alert channel
- e) Scan function
- f) Automatic identification system

## 4) Accessories

- a) Antenna and antenna cable
- b) Speaker microphone
- c) External speaker
- d) Mounting bracket/surface mount kit

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POLICE LIEUTENANT COLONEL  
Chief, Administrative Section

- e) Power cable/cord
- f) Operating manual
- g) Programming software and cable

**7. REPEALING CLAUSE:**

All other technical specifications contrary to or inconsistent with the provisions of this PNPMC are hereby rescinded, modified or amended.

**8. EFFECTIVITY:**

This MC shall take effect after 15 days from filing a copy thereof at the UP Law Center in consonance with Section 3, Chapter 2, Book VII of Executive Order 292 otherwise known as the "Revised Administrative Code of 1987," as amended.



*Archie Gamboa*  
**ARCHIE FRANCISCO F GAMBOA**  
Police General  
Chief, PNP

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**Chief, Administrative Section**

*[Signature]*

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