



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

**MAY 23 2020**

**MEMORANDUM CIRCULAR**

**NO.: 2020-039**

**PRESCRIBING THE TECHNICAL SPECIFICATIONS FOR  
HIGH FREQUENCY (HF) TACTICAL MANPACK RADIO TRANSCEIVER**

**1. REFERENCES:**

- a. NAPOLCOM Memorandum Circular (MC) No. 2019-002: "Defining the Duty and Authority of the NAPOLCOM to prescribe Minimum Standards for Uniforms, Arms, and Equipment to be Procured by the Philippine National Police" dated January 29, 2019;
- b. NAPOLCOM Resolution No. 2019-754: "Prescribing the Minimum Standards for High Frequency (HF) Tactical Manpack Radio Transceiver" dated October 3, 2019;
- c. PNP UESB Resolution No. 2019-034: "Approving the Proposed Technical Specifications for High Frequency (HF) Tactical Manpack Radio Transceiver" dated October 14, 2019; and
- d. NAPOLCOM Resolution No. 95-091: "Specifications of HF Tactical Transceiver, VHF Low-Band Tactical Transceiver, Scrambler, Tactical Handset, Battery Pack (I), Battery Pack (U) and Power Amplifier" dated December 1, 1995.

**2. RATIONALE:**

This MC sets forth the technical specifications for High Frequency Single Side Band (HF/SSB) Tactical Manpack Radio Transceiver to be used by the different PNP units.

**3. SITUATION:**

The existing standard specifications for HF Tactical Radio Transceiver were approved on December 1, 1995 under NAPOLCOM Resolution No. 95-091. From 1995 onwards, continuous development in communications technology has made significant changes in different communications equipment including two-way radios.

Further, the security feature is not included in the current specifications which makes the radio unsuitable for tactical and mission critical operations. Hence, the need to revise the existing standard specifications for HF Tactical Radio Transceiver materialized.

**CERTIFIED TRUE COPY  
FROM PHOTOCOPY**

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

#### 4. PURPOSE:

To provide and establish the technical specifications for High Frequency Single Side Band (HF/SSB) Tactical Manpack Radio Transceiver that will serve as reference in the procurement of said equipment.

#### 5. DEFINITION OF TERMS:

- a. Frequency Stability – refers to the ability of an oscillator to maintain a desired frequency; usually expressed as percent deviation from the assigned frequency value.
- b. High Frequency (HF) Band – refers to the band of frequencies between 3 and 30 MHz. It is also known as the decameter band or decameter wave as the wavelengths range from one to ten decameters (ten to one hundred meters).
- c. Manpack Radio – refers to a radio that can be carried on the back of a person or mounted in a vehicle.
- d. Modulation Types.
  - 1) Amplitude Modulation (AM) – refers to a modulation in which the amplitude of a wave is the characteristic subject of variation.
  - 2) Continuous Wave (CW) – refers to an electromagnetic wave that varies sinusoidally in amplitude and remains constant in frequency.
  - 3) Single Sideband (SSB) – refers to an amplitude modulation with the carrier and one sideband suppressed.
- e. Sensitivity – refers to 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.
- f. Tactical Radio – refers to a type of radio equipment that can be used for field combat operations.

#### 6. GUIDELINES:

**CERTIFIED TRUE COPY  
FROM PHOTOCOPY**


##### a. SPECIFICATIONS:

##### 1) Description

The High Frequency Single Side Band (HF/SSB) Tactical Manpack Radio Transceiver is a compact communication equipment that can be carried easily which is durable with respect to shock, vibration, humidity and immersion on fresh and salt water.

##### 2) Technical Specifications

- a) Frequency Range : 1.6-30 MHz

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

- b) Display : LCD
- c) Programmable Memory Channels : 100 channels
- d) Receiver Sensitivity : 0.5  $\mu$ V at 10 dB SINAD
- e) Transceiver Frequency Stability :  $\pm$ 0.5 ppm
- f) Built-in automatic antenna tuner
- g) Built-in Scanner
- h) Type Modulation : USB, LSB, AM, CW (optional)
- i) Transmitter Power Output : Selectable 5W, 20W
- j) AC Power Supply : 30 Ampere, 220 VAC input, 13.5 VDC output
- k) Battery Life : High Power, 50 hours (9:1 receive-transmit mode)
- l) Weight : 4.5 kg. maximum (transceiver only)
- m) Environment : IP67  
MIL-STD-810F compliant

3) Features

- a) AES-256 encryption or its latest version;
- b) Automatic Link Establishment (ALE);
- c) Built-in GPS Receiver;
- d) SMS messaging; and
- e) Noise reduction capability or its equivalent.

4) Accessories

- a) Antenna
  - (1) Whip antenna
  - (2) Long wire antenna
  - (3) Broadband antenna
  - (4) Fifty (50) ohms Dipole antenna

**CERTIFIED TRUE COPY  
FROM PHOTOCOPY**

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

- (5) Global Positioning System (GPS) antenna
- b) Battery
  - (1) Two (2) each rechargeable battery
  - (2) Li-Ion or latest type
  - (3) 10 Ah (minimum)
- c) Ruggedized, lightweight handset
- d) Compatible battery charger and appropriate AC and DC power cables
- e) Bag (Cotton duck or equivalent)
- f) Programming cable
- g) Set of programming hardware (laptop (specification will be based on NAPOLCOM Res. No. 2015-061 or its latest amendment)) and software
- h) User manual

**7. REPEALING CLAUSE:**

All other technical specifications contrary to or inconsistent with the provisions of this MC 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 Francisco F. Gamboa*  
**ARCHIE FRANCISCO F GAMBOA**  
 Police General  
 Chief, PNP

Distribution:  
 D-Staff  
 P-Staff  
 D, NSUs  
 IG, IAS  
 RD, PROs

Copy furnished:  
 Command Group  
 SPA to SILG

CPNP Ltrs'20 S081756



S081756

**CERTIFIED TRUE COPY  
 FROM PHOTOCOPY**

*Barwin D. Valderas*  
**BARWIN D VALDERAS**  
 POLICE LIEUTENANT COLONEL  
 Chief, Administrative Section