



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

05 JUN 2020

MEMORANDUM CIRCULAR
NO.: 2020-041

**PRESCRIBING THE TECHNICAL SPECIFICATIONS FOR VERY HIGH
FREQUENCY (VHF) LOW BAND TACTICAL HANDHELD 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. 2019-755: "Prescribing the Minimum Standards for Very High Frequency (VHF) Low Band Tactical Handheld Radio Transceiver" dated October 3, 2019;
- c. PNP UESB Resolution No. 2019-036: "Approving the Proposed Technical Specifications for Very High Frequency (VHF) Low-Band Tactical Handheld Radio Transceiver" dated October 14, 2019;
- d. NAPOLCOM Resolution No. 2011-191: "Approving Amendment and Addenda to NAPOLCOM Resolution No. 95-091 for HF Tactical Transceiver, VHF Low-Band Tactical Transceiver, Scrambler, Tactical Handset, Battery Pack (I), Battery Pack (U) and Power Amplifier" dated June 14, 2011; and
- e. NAPOLCOM Resolution No. 2016-659: "Approving the PNP-UESB Resolution No. 2016-023 dated March 4, 2016, Amending NAPOLCOM Resolution No. 2011-191 on the Minimum Standards in the Specifications for Very High Frequency (VHF) Low-Band Tactical Transceiver" dated October 18, 2016.

2. RATIONALE:

This MC sets forth the technical specifications for Very High Frequency (VHF) Low-Band Tactical Handheld Radio Transceiver to be used by the operating units of the Philippine National Police (PNP).

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FROM PHOTOCOPY**

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3. SITUATION:

Communication plays a significant part in the success of an operation. Operating units of the PNP like the Special Action Force recognizes the need for a reliable, durable, and secure communication equipment during mission critical operation.

It is for this reason that operating units were equipped with tactical radios such as VHF Low Band Transceiver to ensure that the communication between the command post, blocking force and assault team will not be compromised when carrying out their mission.

However, in the existing standard specifications for said communication equipment, the security/encryption feature is only an optional requirement. This could lead to the procurement of unsecured tactical radios in which communication can be monitored by outside groups particularly those that belong to the enemy of the state. This scenario can possibly compromise the plan or mission/operation that would lead to its failure. To guarantee the secrecy of communication, this requirement has to be indicated in the Terms of Reference every time there is a procurement of said communication equipment

Further, due to competitive bidding, different brands of VHF Low Band Tactical Transceivers were procured resulting in interoperability problem when the radios are operating in encrypted mode. Hence, there is a necessity to amend the existing specifications in order to satisfy the need of the organization.

4. PURPOSE:

To provide and establish the technical specifications for Very High Frequency (VHF) Low-Band Tactical Handheld Radio Transceiver that will serve as reference in the procurement of said equipment.

5. DEFINITION OF TERMS:

- a. Battery Life - the length of time required for a fully charged battery to discharge to a specified end-point voltage under specified conditions.
- b. Sensitivity – 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.
- c. Squelch - a circuit that acts to suppress the audio (or video) output of a receiver in the absence of a sufficiently strong desired input signal.
- d. Tactical Radio – a type of radio equipment that can be used for field combat operations.
- e. Very High Frequency (VHF) Band - band of frequencies between 30 to 300 MHz with wavelengths ranging from one (1) to ten (10) meters.

6. GUIDELINES:

a. SPECIFICATIONS:


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1) Description

The Very High Frequency (VHF) Low-Band Tactical Handheld Radio Transceiver is a ruggedized and fully synthesized portable tactical transceiver with frequency hopping enclosed in a case of high impact materials to withstand shock, vibration, humidity, and immersion on fresh and salt water.

2) Technical Specifications

- a) Frequency Range : 30 – 88 MHz
- b) Number of Channels : 2,320 or more
- c) Channel Spacing : 12.5 kHz/25 kHz
- d) Squelch : 150 Hz and/or selectable noise squelch
- e) Power Source : Rechargeable battery pack
- f) Battery Life : 12 hours, 9:1 Rx to Tx ratio in high power (2 Watts)
- g) Transmit Power : Selectable up to 5 Watts
- h) Receiver Sensitivity : Not greater than 0.4 μ V @12 dB SINAD
- i) Operating Temperature : -30° C to +60° C
- j) Built-in Antenna Tuner
- k) Modulation : Frequency
- l) Weight : 1.5 kgs. maximum (transceiver including the standard battery)
- m) Built-in Scanner
- n) Built-in Global Positioning System (GPS)
- o) Capable of sending data
- p) Display : LCD or latest technology
- q) Ingress Protection : IP67

3) Features

- a) AES-256 encryption or its latest version;
- b) Interoperable with the existing VHF low band tactical radios of the PNP with or without the use of an additional equipment; and
- c) Capable to act as repeater to extend coverage.

4) Accessories

- a) Antenna
 - (1) Short : 3 feet long, semigrad steel tape, whip
 - (2) Long : 10 feet, multi-section, whip or as appropriate to the unit

- (3) Rubber ducky antenna
- (4) Global Positioning System (GPS) antenna

- b) Two high capacity rechargeable battery packs, Li-Ion or latest technology
- c) Appropriate radio programming software and cable
- d) Battery charger with appropriate AC and DC power cable
- e) Belt clip
- f) User manual or user guide
- g) Carrying pouch for the radio
- h) Carrying bag for the accessories
- i) Handset type : Manufacturer's standard
- j) Headset : Manufacturer's standard

- 5) Optional Requirement

The handheld radio can be configured as Base Station or Mobile/Vehicular Radio by attaching a power amplifier with appropriate antenna system compatible with the standard radio.

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.



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