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

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MEMORANDUM CIRCULAR
NO.: 2020 - 074

PRESCRIBING THE MINIMUM TECHNICAL SPECIFICATIONS FOR UNIVERSAL TEST RECEIVER SYSTEM (BALLISTIC RANGE TEST EQUIPMENT)

1. **REFERENCES:**
   a. NAPOLCOM Resolution No. 2020-0637 entitled, "Prescribing the Minimum Standards for Universal Test Receiver System (Ballistic Range Test Equipment)" dated August 12, 2020;

   b. NAPOLCOM Memorandum Circular (MC) No. 2019-002 entitled, "Defining the Duty and Authority of the NAPOLCOM to Prescribe Minimum Standards for Uniforms, Arms, and Equipment to be Procured by the PNP" dated January 29, 2019;

   c. PNP MC No. 2019-016 entitled, "Implementing Guidelines of NAPOLCOM Resolution No. 2019-002 Defining the Commission's Function to Prescribe Minimum Standards for Uniforms, Arms and Equipment for the Philippine National Police and Delineation of Authority to the Chief, Philippine National Police and to Set Technical Specifications of PNP Uniforms, Arms and Equipment" dated April 4, 2019; and

   d. PNP UESB Resolution No. 2020-023 entitled, "Approving the Proposed Minimum Technical Specifications of Universal Test Receiver System (Ballistic Range Test Equipment)" dated September 30, 2020.

CERTIFIED PHOTO COPY FROM THE ORIGINAL
JENNIFER D CONJOC
POLICE LIEUTENANT COLONEL
Chief, Administrative Section

2. **RATIONALE:**

This Memorandum Circular (MC) sets forth the minimum technical specifications for Universal Test Receiver System (Ballistic Range Test Equipment) to be used in the procurement of the said equipment.

3. **SITUATION:**

Presently, the construction of the PNP Research and Development Center (RDC) building located at Camp Bagong Diwa, Bicutan,Taguig City is one of the projects of the PNP in support to the PNP Self Reliant Development Program. Several testing equipment are needed to be procured to conduct our own test and evaluation of items to be used/procured by the PNP. As of the moment, PNP needs to acquire an equipment particularly for the testing of protective equipment such as but not limited to body armor, ballistic armor plate, and ballistic combat helmet.

The said firing test equipment is a necessary tool to be used by the DRD through its RDC in the conduct of research, test, and evaluation to determine the performance requirement of ballistic materials. Therefore, there is a need to formulate minimum technical specifications for ballistic range test equipment in order to aid concerned personnel in the procurement of the same.

4. PURPOSE:

This MC sets forth the minimum technical specifications for the Ballistic Range Test Equipment 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. **416 stainless** – refers to a free-machining variation of martensitic stainless steel with the addition of Sulphur or selenium. The material can be hardened by heat treatment to higher strength and hardness levels. It has better machining properties than the austenitic grades, but lower corrosion resistance;

b. **Accuracy** – refers to the quality or state of being correct or precise;

c. **Backing material** – refers to the material used in the ballistic testing of soft body armor in quantifying the penetration resistance characteristics of the material;

d. **Desktop Computer** – refers to a computer designed for suitable use and/or fits on the requirement for ballistic range test equipment;

e. **Firearm Frame** or **Receiver** – refers to that part that provides housing for the hammer, bolt or breechblock, and firing mechanism, and which is usually threaded at its forward portion to receive the barrel;

f. **Laptop Computer** – refers to a portable computer designed for suitable use and/or fits on the requirement for ballistic range test equipment;

g. **Laser** – refers to a device that emits light through a process of optical amplification based on the stimulated emission of electromagnetic radiation;

h. **Pound per inch (psi)** – refers to the pressure resulting from a force of one pound-force applied to an area of one square inch;

i. **Safety Firing Pin** – refers to a mechanism used to help prevent the accidental discharge of a firearm, helping to ensure safer handling;

j. **Tensile Strength** – refers to the ability of a material to resist a force that tends to pull it apart;

k. **Test Barrel** – refers to a barrel of special dimensions used for testing ammunition;

l. **Windage adjustment** – refers to the sight adjustment used to compensate for the horizontal deviation of the projectile trajectory from the intended point of impact due to wind drift or Coriolis effect;

m. **Velocity Screen** – refers to a device capable of measuring and reflectsw the velocity of the ammunition.

6. SPECIFICATIONS:

a. Description:

A ballistic range equipment with mounting stand and bracket used for testing pressure and velocity, body armor and extreme accuracy. The system has a quick change mounting plates and firearms holding fixtures for various applications and equipped with laser aiming device.

b. Technical Specifications:

1) Receiver/Base Stand

a) Mounting Stand and Mounting Bracket (Firing Rest)	:	With damped recoil system. Easy elevation and lateral adjustment via hand wheels
b) Windage and elevation adjustments	:	With windage and elevation adjustments that can be attached to an existing firing bench or be used with the firing table
c) Laser Aiming System	:	With laser Aiming System

2) Ballistic Test Barrel

a) Material	:	416 Stainless Steel or equivalent hardness
b) Minimum Tensile Strength	:	at least 140,000 psi

3) Integral Components

a) Interface	:	Laptop or Desktop
b) Velocity screen	:	Precision Measurement (Meters per Second (MPS) or Feet per

			Second (FPS) readings) +/- 0.25% accuracy
	c) Sample Holder	:	With sample holder for test specimen/armor
	d) Bullet Trap	:	With bullet trap
	e) Safety Firing System	:	With safety Firing System including Remote Trigger Pull
4)	Capability		
	a) Receiver	:	Capable to mount barrel from gun pellet gun up to a 0.50 cal BMG. Including shotgun
	b) Accuracy	:	Less than 0.0005"

7. EFFECTIVITY:

This MC shall take effect immediately 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.

CAMILO PANCRATIUS P CASCOLAN
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Chief, PNP

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