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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GA/T 1727-2020

**Calibration specifications for speedmeter of photoelectric
screen target**

光幕靶测速仪校准规范

(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009:

This standard was proposed and managed by the Technical Committee for Standardization of Social and Public Security Applications of the Ministry of Public Security:

The main drafting organizations of this standard: the First Research Institute of the Ministry of Public Security, the Ministry of Public Security Security and Police Electronic Product Quality Inspection Center (Beijing), Xi'an University of Technology, Wuxi Haina Optoelectronics Information Technology Co., Ltd:

1 Scope

This standard specifies the measurement performance, calibration method, calibration result expression and recalibration of bullet speedometers using the principle of light curtain target speed measurement time:

This standard applies to the calibration of light curtain target speedometers that measure the speed of flying objects (including projectiles):

2 Normative references

The following documents are indispensable for the application of this document: For dated reference documents, only the dated version applies to this article Pieces: For undated references, the latest version (including all amendments) applies to this document:

GB/T 28800 Airsoft bullet GB/T 28801 air gun GJB3196.30A bullet test method part 30: speed test light curtain target method GA 141 police body armor GA 293 police bulletproof helmet and face shield GA/T 953 Forensic Science Muzzle Specific Kinetic Energy Velocimeter Method Test Regulation GA/T 1488 General Technical Requirements for Forensic Science Bullet Speedometer

3 Terms and definitions

The following terms and definitions apply to this document:

Photoelectricscreentarget A photodetector that uses an artificial light source to form a light curtain: Generally consists of light source emitting parts, receiving parts, support frame, amplifying circuit and power supply composition:

Light curtain target detection surface testingsurfaceofphotoelectricscreentarget the light beam starts from the emitting part of the light curtain target and reaches the detection light curtain formed by the termination of the receiving part:

Distancebetweentargets the distance between the detection surfaces of two light curtain targets placed parallel to each other:

4 Basic requirements

4.1

Structure

The light curtain target velocimeter (hereinafter referred to as the velocimeter) uses a light curtain target as a detector to measure various flying objects with a diameter of 4 mm to 20 mm:

An instrument that measures the speed of objects (including projectiles): It is mainly composed of two or more light curtain targets, a time measurement unit, and a calculation display unit: The structure is shown in Figure 1:

Shown: