



Standard Specification for Paintball Markers¹

This standard is issued under the fixed designation F2272; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers paintball markers, which propel a paintball by means of energy released by compressed air, compressed gas, or other means.

1.2 *Limitations*—This specification does not cover non-recreational paintball markers, for example, those used by law enforcement, scientific, military or theatrical entities.

1.3 The values stated in SI units are to be regarded as the standard; the inch-pound units in parentheses are provided for information only.

1.4 The following precautionary caveat pertains only to the test method portion, Section 8, of this specification. *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 ASTM Standards:²

F1776 Specification for Eye Protective Devices for Paintball Sports

F1979 Specification for Projectiles Used in the Sport of Paintball

2.2 ANSI Standard:

Z535.1 Safety Color Code³

¹ This specification is under the jurisdiction of ASTM Committee F08 on Sports Equipment, Playing Surfaces, and Facilities and is the direct responsibility of Subcommittee F08.24 on Paintball and Equipment.

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² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036.

3. Terminology

3.1 Definitions of Terms Specific to This Standard:

3.1.1 *auto-trigger*—a trigger which, when held in the discharge position, will automatically cause the paintball marker to discharge when the pump or bolt action is manipulated.

3.1.2 *backstop*—an object intended to stop a paintball.

3.1.3 *barrel*—that portion of a paintball marker through which the paintball is discharged.

3.1.4 *barrel blocking device*—a muzzle blocking safety device which, when properly installed, reduces the likelihood of an intact paintball discharging from the marker or leaving the confines of the barrel blocking device. The device is often referred to as a barrel plug or barrel bag.

3.1.5 *burst mode marker*—a burst mode marker may discharge two or more times per trigger cycle or may discharge two or more times with the pull and release of the trigger.

3.1.6 *caliber*—the term used to refer to the size of a paintball projectile. Related to the measurement of the diameter of the paintball as described in Specification F1979.

3.1.7 *cautionary statement*—the warning outlined in Section 8 of this standard, which is to be placed on paintball markers, packaging and literature.

3.1.8 *de-gassed, n*—the state of the marker in which the propellant source and any internal propellant has been removed from the marker.

3.1.9 *disabling device*—a device which, when activated, disables a part of the paintball marker, usually the trigger, to prevent unintentional discharges and must be released to allow the marker to be discharged by the movement of the trigger. The device is sometimes referred to as the “safety,” “safety button,” or “safety lever.” An electronic on/off switch is considered a disabling device when placing it in the “off” position renders the marker inoperable.

3.1.10 *discharge mode*—a mode that controls the number of paintballs discharged per trigger cycle.

3.1.11 *enhanced trigger mode marker*—a paintball marker that at some point discharges more than one paintball per trigger cycle. This includes markers that “store” the number of trigger pulls and discharge more than one paintball at some point.

3.1.12 *feed mechanism*—a mechanism that stores, transports and facilitates the loading of paintballs. It may be gravity, mechanically or air assisted or automatic in its actions.

3.1.13 *fully-automatic mode marker*—a marker that discharges when the triggering device is actuated and continues to discharge until the trigger returns to its reset or recycle position.

3.1.14 *hopper*—a device used with a paintball marker to store paintballs.

3.1.15 *impact tester*—device used to test for accidental discharges of paintball marker. See Fig. 1.

3.1.16 *modified fully automatic mode 1 marker*—a semi-automatic mode marker which, after the trigger is pulled at least three times within 1 s, is able to function in a fully automatic mode with a firing rate not to exceed 15 shots per second until the trigger is released.

3.1.17 *modified burst mode 2 marker*—a semi-automatic mode marker which, after the trigger is pulled at least three times within 1 s, is able to cycle more than one time per trigger pull with a firing rate not to exceed 15 shots per second.

3.1.18 *paintball*—a spherical ball, comprised of a shell and a fill, designed to be expelled from a paintball marker, as defined in Specification F1979.

3.1.19 *paintball marker*—a device specifically designed to discharge paintballs. The device is sometimes referred to as a paintball gun.

3.1.20 *pump mode marker*—a marker that requires the operator to manually cock or engage the sear of the marker before each shot by a means of a pump, bolt, lever, cocking handle or similar device.

3.1.21 *range*—the maximum distance to which an object may be propelled, whether limited by energy or an obstacle.

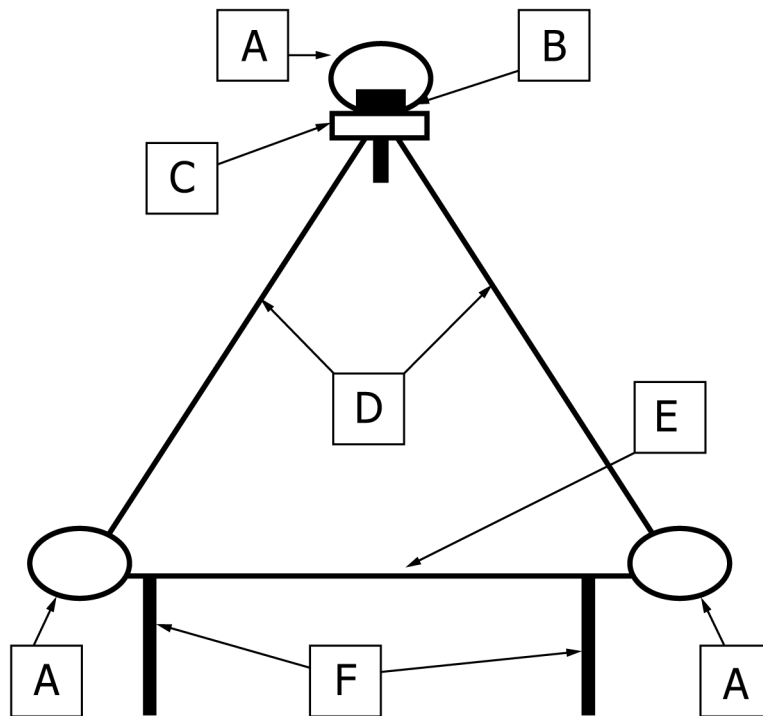
3.1.22 *response trigger*—a semi-automatic paintball marker in which after firing the trigger is assisted back to the reset position.

3.1.23 *sear*—the catch that holds the mechanism in the ready-to-discharge position until released by the user, usually through trigger movement.

3.1.24 *selector switch*—a switch (either internal or external) regardless of method of activation that is designed to allow the consumer to change the marker's discharge mode.

3.1.25 *semi-automatic mode marker*—a semi-automatic marker discharges one time with each trigger cycle. Markers that “store” the number of trigger pulls and discharge more than one paintball at some point do not meet this definition. Markers that operate in any other discharge mode(s) do not meet this definition.

3.1.26 *standard ambient temperature and pressure (SATP)*—used to describe a substance at the pressure of 1 bar (1.01325 atmospheres, 750 mm Hg, 14.5 psi, 100 kPa) and a temperature of 25°C (77°F).



- A. Yoke
- B. Pivot Bolt
- C. Swivel
- D. 91.29 cm (36 in.) Strap or Rope
- E. 60.86 cm (24 in.) aluminum bar with 1.27 cm (0.5 in.) diameter or 1.9 cm (0.75 in.) copper tube
- F. Hook and loop strap able to suspend marker parallel to and 15.21 cm (6 in.) below E

FIG. 1 Marker Suspension Sling