

MTMA Summer Picnic Contest Events

The events are:

- B Streamer Duration
- B Big Bertha Parachute Duration
- Sport Scale

The rules for the events originate or are adapted from the [US Model Rocket Sporting Code](#), and appear here as follows.

General Rules

1. This contest is open to all MTMA members and their guests.
2. A flight is official if any part of the entry leaves the launcher under a motor's thrust phase, except in the case of a catastrophic failure.
3. Each contestant shall be given an opportunity to make two official flights in each event.
4. Except for the Sport Scale event, a contestant may substitute entries between official flights.
5. A contestant must not time his/her own entry.
6. All contestants shall be available to time other contestants' entries. Contestants who do not participate in timing other entries may be disqualified from the contest.
7. Duration events will be timed with at least one timer.
8. Duration event entries must be timed from the instant of first motion on the launcher until the entry or portion to be scored for time of flight touches the ground or is stopped by a ground-based object. If the entry drifts out of sight in the sky, each timer(s) must stop their watches individually when they lose sight of the entry.
9. No timed entry may separate into two or more unattached parts or eject its motor.
10. The contestant need not return a duration event entry to a contest official after flight.
11. Sport scale entries must be returned to a contest judge after flight for inspection.
12. All contestants begin the contest with zero points. Points will be awarded per the following schedule for performance in each event as determined by place:
 - 1st–25 points
 - 2nd–20 points
 - 3rd–17 points
 - 4th–14 points
 - 5th–12 points
 - 6th–10 points
 - 7th–8 points
 - 8th–6 points
 - 9th–4 points
 - 10th–2 points
 - Flight Points –1 point
13. In case of a tie, duplicate places shall be awarded.
14. Disqualified flights receive a score of zero.

15. Any entry that in the opinion of the Range Safety Officer was not considered safe in operation may be disqualified. In no case, may any official override a safety ruling of the RSO.
16. Disputes shall be resolved by a contest jury of three senior MTMA members.

B Streamer Duration

1. This event is open to single-stage entries that contain a single streamer as the only recovery device. The purpose of this event is to achieve the longest flight duration time.
2. Entries shall be powered by a NAR-certified B class motor.
3. A streamer is a continuous plane of identical cloth, plastic film, or paper; has a length-to-width ration of 5:1 or greater; may be folded and/or creased; it may not be cut, slit, punched, and or perforated.
4. Several pieces of material may be joined into a single streamer. All such joints must be parallel to the narrow axis of the streamer. All pieces of the streamer must consist of identical material.
5. A contestant's official score is the sum of the durations achieved on all official flights.

B Big Bertha Parachute Duration

1. This event is open to single-stage entries containing one or more parachutes for recovery purposes. The purpose of this event is to achieve the longest flight duration time.
2. Entries shall be powered by a NAR-certified B class motor.
3. Entries must be an Estes Big Bertha kit, or a clone or copy of said kit.
4. Entries must have an airframe like the original Big Bertha design in that it is comprised of cardboard BT-60 tubing (or equivalent) that is 18-inches in length.
5. Entries must have four fins with the same planform as the original Big Bertha design.
6. Entries must use the same rounded nose cone as the original Big Bertha design but may be either plastic or balsa material. Original Estes designations for acceptable nose cones are: BNC-60L, PNC-60L, BNC-60MS, and PNC-60MS (current version).
7. A contestant's official score is the sum of the durations achieved on all official flights.

Sport Scale

1. Sport Scale is open to any entry that closely resembles an existing or historical guided missile, rocket vehicle, or space vehicle, that has flown under rocket power. The purpose of this event is to produce an accurate, flying replica of a real rocket powered vehicle that is judged for craftsmanship in construction, finish, and flight performance.
2. The contestant must supply data to substantiate his/her entry's adherence to scale in shape, color, and paint pattern.
3. Entries must be judged for static points in the following manner: Scale-like qualities are to be judged from a distance of at least one meter from the model. Judges may then closely examine the model to judge it for craftsmanship.
4. **Similarity of Outline: 200 points**
The contestant is required to submit data to substantiate his/her entry's visual resemblance to the prototype. Minimum allowable data consists of a line, tone, or color

drawing or one or more clear photographs, halftones, or photo-reproductions of the prototype, sufficient to show the outline and general configuration of the prototype modeled.

5. Finish, Color, and Markings: 200 points

The contestant should submit data to substantiate his/her model's fidelity to the prototype. Such as:

- One or more clear photographs, halftones, or photo-reproductions, including at least one in color. The number of these submitted should be sufficient to substantiate additional views of the model on which the color pattern and markings differ significantly.
- Other published pictorial representations, such as a color painting, or a drawing from a magazine.
- A detailed written description and/or drawing (which may be created by the contestant), from verifiable source, of the color scheme and markings, accompanied by a drawing of the prototype on which the color scheme and markings described have been included.

Any entry not accompanied by data substantiating the finish, color, and markings of the prototype must be given zero points for Finish, Color and Markings.

1. Degree of Difficulty: 100 points

Points must be awarded according to the difficulty experienced by the contestant in building the model and adapting it for flight. Consideration should be given to whether the entry was built from a kit. Points should be awarded for parts and details that were individually constructed by the contestant. To facilitate judging, the contestant should point out difficult assemblies or construction problems in his/her data.

2. Craftsmanship: 300 points

Points will be awarded for neatness, care in construction, craftsmanship of details, and quality of finish. Consideration should be given to the invisibility of body seams and wood grain, and the accurate reproduction of curved lines and edges. The finish should be free of fingerprints, brush strokes, runs, or other unintentional blemishes, and the paint pattern should be well defined

3. Flight: 100 points

Points are awarded for proper operation of the entry during flight, including launch, lack of misfires, stability, recovery, and lack of damage on landing. No consideration should be given to staging or scale-like flight characteristics. However, if the general flight performance of the entry is adversely affected by the failure of one or more of these aspects, general flight points may be deducted. If a motor is ejected and if that motor does not have a streamer or parachute attached, the flight is disqualified.

4. Sport Scale must be scored as follows: the entry's static points are added to its flight points. The competitor receiving the highest score is the winner