

# Syracuse Rocket Club

September 23, 2023

## Sport Scale

1. Scope - Sport Scale Competition is open to any model rocket that closely resembles an existing or historical guided missile, rocket vehicle, or space vehicle, that has flown under rocket power (not a sci-fi model such as a Star Wars or Star Trek model). The purpose of this competition is to produce a flying replica of a real rocket vehicle that exhibits maximum craftsmanship in construction, finish, and flight performance.

2. Plastic Models and Kits - Entries that qualify for Plastic Model Conversion Competition are specifically excluded from this event. Parts from commercial plastic kits may be used on Sport Scale models, provided this is pointed out in the data presented with the model for judging.

3. Data - The contestant must supply data (like a photo and data sheet from the internet or Rockets of the World) to substantiate his/her model's adherence to scale in shape, color, and paint pattern.

4. Transparent Fins - If the prototype is not stabilized by means of fins, or if the scaled fins are not of sufficient size to ensure the stable flight of the model, the scale model may be fitted with transparent plastic fins to make it stable in flight. However, the transparent fins and their attachment shall be judged for craftsmanship along with the model.

5. Judging - Models shall 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.

6. Flight - Each entry shall make one safe, stable flight. If the entry does not make a safe, stable flight, it shall be disqualified. A flight that fails as a result of a motor defect (CATO) will count as "no flight" and may be re-flown. The model must be returned to the judges for inspection to qualify as a successful contest flight.

7. Static Points Static points shall be awarded according to the following schedule:

a. Similarity of Outline: 20 points. The contestant is required to submit a scale drawing or photograph sufficient to show the outline and general configuration of the prototype modeled. Any entry not accompanied by a drawing or photo shall receive no points for similarity of outline.

b. Color, and Markings: 20 points. The contestant is required to submit a scale drawing or photograph sufficient to substantiate the color and markings. Any entry not accompanied by data substantiating the color, and markings of the prototype shall be given zero points for Color and Markings.

c. Degree of Difficulty: 10 points. Points shall be awarded according to the difficulty experienced by the modeler in building the model and adapting it for flight. Minor consideration should be given to whether the model was built from scratch or a kit. Points

should be awarded for parts and details that were individually constructed by the modeler. (To facilitate judging, the contestant should point out difficult assemblies or construction problems to the judges)

d. Craftsmanship: 30 points. Points will be awarded for neatness, care in construction, craftsmanship of visible details, and quality of finish. Consideration should be given to the invisibility of body seams and wood grain, the proper curving of curved lines, and edges made properly sharp or rounded as visible from the substantiating drawing or photo. The finish should be free of fingerprints, brush strokes, runs, or other unintentional blemishes; and the paint pattern should be well defined. The details should be precise, and neither more nor less obvious than on the prototype.

8. Flight Characteristics: Flight points shall be awarded according to the following schedule:

a. Mission: 20 points Mission points are awarded for appropriate and scale-like operation of the model during flight. Examples of such operations are staging, simulated cloud seeding, operation of electronic payload, and smoke ejection. Any such operation must comply fully with NAR or Tripoli Safety standards. If it does not, the entry shall be disqualified. The RSO is the only official who may judge the safety qualities of the operation.

b. General Flight: 10 points General Flight points are awarded for proper operation of the model 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, as these are covered under Mission points; however, if the general flight performance of the model is adversely affected by the failure of one or more of these aspects, points may be deducted from General Flight.

9. Scoring - Sport Scale Competition shall be scored as follows: the points awarded to the entry in static judging shall be added to the points awarded to the entry in flight. The contestant receiving the highest score is the winner.

10. Scoring Summary:

|                       |            |
|-----------------------|------------|
| Static Points         |            |
| Similarity of Outline | 20 points  |
| Color and Markings    | 20 points  |
| Degree of Difficulty  | 10 points  |
| Craftsmanship         | 30 points  |
| Flight Points         |            |
| Mission               | 20 points  |
| General Flight        | 10 points  |
| Total Possible Points | 110 points |