The Model Rocketry Hobby

Sport rocketry is aerospace engineering in miniature. This popular hobby and educational tool was founded in 1957 to provide a safe and inexpensive way for young people to learn the principles of rocket flight. It has grown since then to a worldwide hobby with over 5 million flights per year and is used in 25,000 schools around the United States.

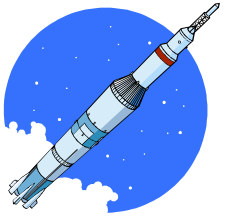
Rocketry's safety record is extraordinarily good, especially compared to other outdoor activities. It is recognized and permitted under federal law and all 50 states' laws and regulations, and it's safe and inexpensive products are available in toy and hobby stores nationwide. Sport rocketry has inspired two generations of America's young people to pursue careers in technology.

Sport rockets are reusable, lightweight, non-metallic vehicles that are propelled vertically by an electrically ignited, commercially made, nationally certified, and non explosive solid fuel rocket motor. For safety reasons no rocket hobbyist is ever required or allowed to mix chemicals or raw propellant. The motors or components are bought pre-made. They are designed to be recovered and flown many times, with the motor replaced between flights.

Sport rockets come in two classes: MODEL rockets which are under 3.3 pounds of weight, and are generally available to all (models over 1 pound in weight require a NOTAM filed with the FAA); and HIGH POWER rockets which are larger, use motors larger than "G" power, are available only to certified adults and require an FAA waiver to fly

Rocketry is Fun!

Rocketry is a family activity with something to interest young and old alike. Whether you are interested in engineering, scale modeling of real rockets, creating your own rocket designs, electronics or competition, there is something for everyone



About SPAAR

The ***S***outhern ***P***ennsylvania ***A***rea ***A***ssociation of ***R***ocketry, **SPAAR** is a chartered section of the National Association of Rocketry. We are based in Lancaster County, Pennsylvania, and have active members in South-Central Pennsylvania and Northeastern Maryland. SPAAR holds monthly sport launches at the Manor Middle School in Lancaster PA and monthly meetings at the Boys Clubhouse at 237 W. Lemon St., Lancaster, PA. We sponsor the Regional Aerospace Meet to Encourage Competition, RAMTEC, at Fort Indiantown Gap

Membership in SPAAR is open to all persons with an interest in rocketry. For more information see the SPAAR website www.spaar.org

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Southern Pennsylvania Area Association of Rocketry

Join the Fun

of Sport Rocketry

National Association of Rocketry, Section 503

Model Rocket Safety Code

- **Materials.** I will use only lightweight, non-metal parts for the nose, body, and fins of my rocket.
- **Motors.** I will use only certified, commercially-made model rocket motors, and will not tamper with these motors or use them for any purposes except those recommended by the manufacturer.
- **Ignition System.** I will launch my rockets with an electrical launch system and electrical motor igniters. My launch system will have a safety interlock in series with the launch switch, and will use a launch switch that returns to the "off" position when released.
- **Misfires.** If my rocket does not launch when I press the button of my electrical launch system, I will remove the launcher's safety interlock or disconnect its battery, and will wait 60 seconds after the last launch attempt before allowing anyone to approach the rocket.
- **Launch Safety.** I will use a countdown before launch, and will ensure that everyone is paying attention and is a safe distance of at least 15 feet away when I launch rockets with D motors or smaller, and 30 feet when I launch larger rockets. If I am uncertain about the safety or stability of an untested rocket, I will check the stability before flight and will fly it only after warning spectators and clearing them away to a safe distance.
- **Launcher.** I will launch my rocket from a launch rod, tower, or rail that is pointed to within 30 degrees of the vertical to ensure that the rocket flies nearly straight up, and I will use a blast deflector to prevent the motor's exhaust from hitting the ground. To prevent accidental eye injury, I will place launchers so that the end of the launch rod is above eye level or will cap the end of the rod when it is not in use.
- **Size.** My model rocket will not weigh more than 1,500 grams (53 ounces) at liftoff and will not contain more than 125 grams (4.4 ounces) of propellant or 320 N-sec (71.9 pound-seconds) of total impulse. If my model rocket weighs more than one pound (453 grams) at liftoff or has more than four ounces (113 grams) of propellant, I will check and comply with Federal Aviation Administration regulations before flying.
- **Flight Safety.** I will not launch my rocket at targets, into clouds, or near airplanes, and will not put any flammable or explosive payload in my rocket.
- **Launch Site.** I will launch my rocket outdoors, in an open area at least as large as shown in the accompanying table and in safe weather conditions with wind speeds no greater than 20 miles per hour. I will ensure that there is no dry grass close to the launch pad, and that the launch site does not present risk of grass fires.
- **Recovery System.** I will use a recovery system such as a streamer or parachute in my rocket so that it returns safely and undamaged and can be flown again, and I will use only flame-resistant or fireproof recovery system wadding in my rocket.
- **Recovery Safety.** I will not attempt to recover my rocket from power lines, tall trees, or other dangerous places.

LAUNCH SITE DIMENSIONS

Installed Total Impulse (N-sec)	Equivalent Motor Type	Minimum Site Dimensions (ft.)
0.00--1.25	1/4A, 1/2A	50
1.26--2.50	A	100
2.51--5.00	B	200
5.01--10.00	C	400
10.01--20.00	D	500
20.01--40.00	E	1,000
40.01--80.00	F	1,000
80.01--160.00	G	1,000
160.01--320.00	Two Gs	1,500

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