

Launch Guidelines of the West Virginia Society of Amateur Rocketry

NAR Section 564



Over the past few years WVSOAR has grown from a handful of avid rocketeers to over 15 active members with from 10 to 30 people attending monthly launches. What used to be two or three launch pads has at times grown to 14. With more members and guests certified for various levels of High Powered flight, the motors have increased in size and power. It has become apparent that some range control is necessary to insure a safe and accident-free launch. Not everyone who comes to visit our launches at Bob Evans Farm is aware, for instance, that we are not to launch when horses are within sight, as the launch noise can startle the horses and throw their riders. Nor are we to launch our rockets when vehicles are within a certain distance from the rocket range. With these thoughts in mind, WVSOAR has initiated the following guidelines to help insure a safe and exciting launch.

Field

The field will have three designated areas: parking, prep area, and launch area.

Parking: The parking is nearest the road. Fliers are encouraged not to use their trunks as their sole prep area for safety reasons, primarily the protection of your vehicles.

Prep Area: The prep area should be approximately 15 feet from the parking area. This would be the area for tents, tables, chairs, coolers, flight kits, rockets and spectators.

Launch Area

Low power: For class A, B, C, and single D motor. The launch area is to begin at least 30 feet from the front of the preparation area.

Mid-power: For class E, F & G motors and all clusters rated at less than an H class. The launch area should be at least 45 feet from the close edge of the prep area.

High-power: H class motors and larger will be set 100 to 200 feet from the prep area, depending on the category. Level I launches will be set no closer than 100 feet, Level II launches no closer than 200 feet from the near edge of the prep area.

Prep and Launch

Rocket Prep: No rockets will be allowed to launch if people are present within the safety limit; low power is a 15-foot safety diameter around the launch pad, mid-power is a 30-foot clearance, high power is at least 100 feet clearance. When a launch is announced, all persons preparing rockets should stop and watch the launch. If a countdown has begun, please do not enter any launch area. Wait until the rocket has successfully launched and has cleared the launch area before approaching your launch pad.

Launching Your Rocket: After your rocket has been prepared for launch, move to the launch controller and signal the Launch Control Officer (LCO) that you are ready for launch. The LCO will let you know when to arm your launcher, and will call your countdown. At the count of "zero", launch your rocket. If it misfires, the LCO may ask you to wait until after another launch in case you need to change igniters or other systems checks before trying another launch attempt. No one will be allowed to count down and fire his or her rockets without obtaining the permission of the LCO. This will help insure safety and keeping everyone aware of range operations in case of an unexpected launch or catastrophic take off.

Launch Field Control

NAR guidelines call for a number of people that should be present for a launch. These include a Range Safety Officer or RSO, a Range Control Officer or RCO, and a Launch Control Officer or LCO. For our purposes, the RCO and the LCO can be combined.

RSO: The Range Safety Officer's primary duty is to inspect your rockets before they are launched to insure they are as flight-worthy as can be expected. The RSO has the authority to prevent you from flying your rocket if a serious enough concern exists or is obviously visible regarding the flight-worthiness of your rocket. This will be of primary importance for any scratch-built rockets, kits that have had major modifications, clusters, high-powered rockets, etc. Also, anything considered "experimental" such as unique building materials, untested rockets, etc., will be under close scrutiny, and may be flagged as not flyable by the RSO. Please take this into consideration when building your rockets. The RSO may also be responsible for Fire Patrol, indicating when to wet down the pads if the ground is uncharacteristically dry, or in going to put out a fire from a CATO, sparks, etc.

RCO/LCO:

The **Range Control Officer's** responsibility is to insure that everything is ready for a launch. The RCO checks the range and insure that it is clear, acknowledges which flyer will be launching, and counts down that launch. Safety responsibilities are; to check to see the immediate airspace is clear of aircraft and birds, that moving vehicles are not in close proximity to the launch area, that horseback riders at the Bob Evans range are not in sight, as well as other localized safety concerns. No flights can take place until the RCO clears the range.

The **Launch Control Officer** will give the countdown for a particular launch site. Many ranges have the LCO fire the ignition. We do not currently have this requirement, but circumstances may see us adopting this function. Presently, the flyer can fire the ignition of his/her rocket once the LCO provides the count down.

WVSOAR currently assigns the RCO and LCO responsibilities to a single person.

Launch-day Assignments: Typically, the RSO and the RCO/LCO will be assigned prior to a given launch day. The RSO will be chosen from one of the Executive Members of WVSOAR. The RCO/LCO can be chosen from any of the responsible adult flyers present. Both of these positions can be changed periodically on the launch day as necessary.

These guidelines are within the spirit of the NAR guidelines and are intended to comply with them, modified only for our particular circumstances and size. If you wish to participate in our scheduled WVSOAR events and are willing to abide by these guidelines, then sign the acknowledgment below and return it to one of the WVSOAR executive officers.

West Virginia Society of Amateur Rocketry (WVSOAR) Launch Field Release Form

I (print name) _____, realize there are inherent risks involved in the sport of model rocketry. As I participate in a scheduled WVSOAR event, I will abide by the rules and regulations as set by the National Association of Rocketry (NAR) and WVSOAR. I agree not to hold WVSOAR, its officers, members, Bob Evans Farm or Buffalo High School liable for any incidents while participating in a scheduled event. I further agree to abide by the decisions of WVSOAR's designated Range Safety Officer and/or elected Officers at any WVSOAR-sponsored event. By signing below, I acknowledge I have read, understand and will follow all stipulations as stated in the WVSOAR Launch Guidelines.

_____ Signed _____ Date

_____ Witnessed