

## Launch and Recovery Range

Whenever rocketry club members gather together for a launch, it is advantageous to organize a launch and recovery range. Model rocket launch and recovery ranges are operated and organized like miniature versions of the NASA launch sites. The procedures followed can help alleviate the problems that arise when people set up to launch at the same site, then decide to launch at any time they choose.

An organized launch and recovery range also makes the rocketeer feel closer to the 'real' situation that exists at a full scale launch site, in addition to being quite impressive to spectators or passers by.

Here are the proposed duties for the various officer roles:

### RSO

The range safety officer is in charge of the program. This person will be responsible for the safe operation and total organization of the entire range. In addition to this the RSO can help with rocket inspection and monitoring meteorology, as well as monitoring the air and ground traffic in the area. The RSO should have a launch safety key and has final word on all situations.

### LCO

The launch control officer is in charge of the launch panel. The set up and operation of the launch panel is the responsibility of the LCO as well as maintaining its readiness. The LPO can assist the LCO in maintaining the electrical and mechanical requirements of the launch panel and pads. The RSO still has final say on any launch.

### TRO

The tracking and recovery officer is the officer in charge of the tracking and recovery of all rockets. This person will help set up recovery crews, monitor meteorological conditions and aide with LCO data collection. The TRO will communicate with the recovery crews and convey necessary information (eg. Area clear, or pending vehicle traffic, etc.) to the RSO to help maintain range safety.

### COM

The communications officer is responsible for the communications equipment, assisting the tracking and recovery crews and helping with TRO duties. The COM will ensure that all two-way radios, walkie-talkies, etc. are charged and ready for use. The COM will also help with selecting 'runners' or providing flags and/or hand signals if equipment is not available or if equipment failure occurs.

## LPO

The launch pad officer is responsible for the launch pad site, area safety and rocket inspection, as well as assisting others in mounting their rockets properly. When all rockets are ready the LPO stays at the launch panel. The LPO is also the first to respond to mishaps on the launcher, following proper safety procedures.

## LAUNCH SITE SAFETY CODE

1. All rockets to be inspected prior to flight.
2. Verify launch card information for data collection.
3. Check meteorological conditions and area air/ground traffic prior to launch countdown.
4. Ensure that the launch pad area is clear of all personnel, spectators and/or hazards prior to countdown and that the designated ballistic impact area is also clear.
5. Ensure launch pad rod/rail angle does not exceed 30 degrees from vertical and that the launch vector does not intersect with clouds or other obstacles.
6. Listen for any 'calls to halt' the launch and investigate the reason.
7. Announce 'heads up' (or sound a warning siren) for all flights prior to launch countdown.
8. In the event of a misfire, a 60 second 'igniter cool down' period must be carried out.
9. Ensure the safety key is removed from the launch panel prior to approaching the launch pad.
10. The selected launch site must be a minimum of 10 km from any airport or airfield.