

# BMFA Model Rocketry Safety Code

**MODEL ROCKETRY - SPACE MODELING** is a sport with an exemplary safety record. One reason is that participants have followed an established Model Rocketry Safety Code, which originated in the United States of America. The introduction of novel rocketry products in the UK has made it necessary to update the basic safety code. The code below provides baseline standards for the launching of any model rocket - space model in the UK.

**Construction.** All model rockets - space models shall be made from lightweight materials, such as paper, wood, plastic and rubber, with only minimal metal parts. The model shall be soundly and accurately constructed and the stability must be checked before its first flight, unless of proven design. Rocket Motors & Launch Weight

**Motors.** Only propellants (motors) produced by a bonafide manufacturer shall be employed. These motors must be stored and used in accordance with the relevant manufacturer's instructions. No modification of the case, nozzle, or contents shall be carried out, nor any reloading of single use motors undertaken. The motor manufacturer's pertaining to Maximum Launch Weight for safe operation must be adhered to.

**Preparation and Recovery.** All model rockets - space models must have provision for, and contain at launch, a recovery system - or have appropriate aerodynamic surfaces - so that the model may be returned to the ground and flown again. Great care in preparation must be employed to ensure that the recovery system deploys correctly and that any insulating recovery wadding is flameproof. Multiple stage prototypes, or vehicles with discarding booster sections, shall have a form of recovery device in each portion, to ensure a safe return to the ground. No model shall carry an explosive, flammable, or live animal payload. No ballistic flights may be attempted, or any attempt to strike a target.

**Launch Systems.** Model rockets - space models must be launched from a stable platform, with a device - such as a rigid launch rod, rail, tower or other system - to provide initial direction and stability. The angle of the launching device must not deviate from the vertical by more than 30 degrees. The exposed top of any such launch rod shall be capped except for the execution of a launch and where possible should be set to above eye level. The launch system must incorporate a blast deflector to prevent motor exhaust from sticking the ground.

**Firing System.** A model's rocket motor(s) must be ignited on the launch system using an electrical device (Igniter), According to the relevant manufacturer's instructions. The electrical system must allow the operator to place him / herself 5 meters - or any such greater distance recommended by the motor manufacturer from the rocket to be launched. The system must include a Safety Key to facilitate the disarming of the electrical circuitry when removed and shall possess switchgear the reverts to the 'off' position when released. The Safety Key shall be inserted for the moment of launch and removed

immediately afterwards. A clearly audible countdown of at least 5 seconds shall be given before launching. In the event of an igniter misfire, no one shall approach the model until the safety key has been removed from the launching system and until it is certain that there is no likelihood of ignition.

**Launch Site and Safety Conditions.** Model rockets - space models must be launched from open sites, away from buildings, railways and roads and in conditions of good visibility in clear air space. Launching should not be attempted in high wind conditions, where they could endanger full-size aircraft, flammable materials or in any situation that could cause a nuisance/danger to people or property. No attempt must be made to recover model rockets from high-tension electricity cables or telephone lines. Great care must be exercised in the recovery of model rockets - space models from high trees, water or any other potentially dangerous situation. If there are any concerns whatsoever relating to personal safety in the recovery of a model, in any situation, appropriate specialist guidance should be sought. In group flying sessions, with members of the public / onlookers present, a Range Safety Officer (RSO) shall be appointed. The RSO is responsible for the safe conduct of the flying model rockets - space models and keeping all personnel 5 meters, or and such greater distance defined by the motor manufacturer, from the point of any launch.

**Controls.** At all times, model rocket - space model flying must comply with Civil Aviation Authority (CAA) Publication CAP658 (link to .PDF file), Appendices A, F and I and Air Navigation Order (ANO), article 55, 56 and 76 ANO87A and Art129.

High power rockets and large model rockets are subject to a separate safety code.