AERO CLUB OF INDIA
(Established 1927)

GUIDELINES FOR AEROMODELLING ACTIVITY

Applicability of Aircraft Rules on Aeromodels

Aeromodels by their aerodynamic characteristics are flying machines deriving their support in the atmosphere from reactions of the air and are power driven- heavier than air deriving its lift in flight mainly from aerodynamic reaction on surfaces which remain fixed under given conditions of flight. Aeromodels, besides being static and built to scale of live aeroplanes, are also available and operated both in fixed wing type (Aeroplanes) as well as in rotary wing type (Helicopters). ***The aeromodels therefore qualify to be defined as Aircraft / Aeroplanes & Heliocopters, as contained in Part I of the Aircraft Rules.***

In view of the above , these guidelines are framed to facilitate the growth of aeromodelling activity as a hobby ,in adherence to the relevant provisions of the Aircraft Rules, as amended from time to time.

2. Definition of Aeromodel

An Aeromodel can be an aeroplane or helicopter weighing not more than 50 Kgs weight without fuel, but including any article or equipment installed in or attached to it for the sole purpose of operating the Aeromodel.

3. Classification of Aero-models

The Aero-models are classified in sizes in accordance with the weight of the individual Aero-model as under:

A. CLASSIFICATION OF AEROMODELS

Size	Model Description	Weight category
Park Flyers	Models made of foam/wood/balsawood having electric motor power or rubber power, normally operated as Free Flight	maximum up to 2 kgs
Small	Models made of balsa wood/ wood having power derived from engines operating with fuel like petrol, glowfuel having nitromethane, and normally operated as a Control Line Flight	Between 2 kgs to 8 Kgs
Medium	These are normally operated by remote control as because of its weight and size are not feasible for Control Line Flight.	Between 8 kgs to 30 Kgs.
Large	These are normally operated by remote control as because of its weight and size are not feasible for Control Line Flight.	Between 30kgs to 50 Kgs
Xtra Large	Note: Would require Special Permission to build and fly in Public Places.	Above 50 kgs

B. The Aero-models can also be of the following types depending on the ***nature of their propulsion*** and operational handling as under:

i) Static Type – not capable of flying
ii) Free Flight types
iii) Rubber Powered
iv) Electric Powered
v) Control Line Power Flight
vi) Remote Control Power Flight

4. Guidelines for Forming Aero-Model Clubs/Organisations

Even though Aero-Modelling activity can be persued by an individual as a personal hobby, with the interest generated and heavier/Large size aero-models being built with precision dimension to scale as of the actual size type aeroplane/helicopter powered by appropriately rated propeller/rotor bladed engines including jet powered and availability of higher capacity radio transmitter & receiver units for better remote control, the Aero-Modelling activity has today become a popular Aerosport activity being persued world over and is also becoming popular in India. In view of the above Aero Club Of India being the nodal agency in the country for developing and advancement of Aerosport activity suggests that Aero_modelling enthusiasts all across the country could get together in groups to form Clubs/Groups etc , so that this aerosports activity can further develop in an organized and broad based manner associating technological advancement and optimum utilization of expertise in this area.

The following **Guidelines** are issued with regard to formation of Aeromodelling Clubs etc. which would facilitate obtaining membership of Aero Club of India :

i) The main aim and objectives of an Aero-modelling Club should be to promote , develop, encourage education and training and advancement of aeromodelling as an Aerosports activity.

ii) The Club should have its own Memorandum and Article of Association defining the Objectives of the club, Membership requirements, Organisational structure & Functioning etc. and the Club could be registered with the concerned Government authorities.

iii) The Club should prepare Rules and Regulations for their members pertaining to aeromodelling activity with specific reference to the location normally to be used by them for such activity. Compilation of these Rules and Regulations to form a part of the Articles of Association of the Club and a booklet on the same be made available to all the member aeromodellers of the club.

iv) The Club should provide for third party insurance against property damage and personal injury on account of the aeromodelling activity.

v) The Club should have a minimum of Seven members of which at least two members should be active Aeromodellers with adequate experience and credentials to provide their expertise in training & skill improvement, educate on the regulations and adherence to laid down procedures on aeromodelling to other members of the Club.

vi) All Club Members should have an acceptable identity proof with updated residential address, the records of which shall be maintained by the Club.

vii) The Aeromodelling Club should have proviso for providing guidance on skill improvement, techniques of flying and ensuring adherence to laid down procedures on aeromodelling activity.

viii) The Club should also have a training programme to train Instructors for aeromodel flying who could be utilized to train aeromodel enthusiasts in starting aeromodelling hobby.

ix) In the event of any incident like damage to the aeromodel, damage/injury to outside parties and loss of the aeromodel, the Aeromodel Club should ensure that such incidents involving their members are reported to the Club management for which a reporting procedure should be laid down by the Club.

5. Operational Guidelines for Aeromodelling

i) No new member who is ab-initio learning to do aeromodelling shall fly an aeromodel unless the same member has taken guidance on Safety as well as Operational Procedures for such activity from an experienced aeromodeller of that Club/organization.

ii) Junior/ab-initio aeromodellers must be supervised at all times by responsible adult members. The level of supervision will depend on the age, maturity, proven capabilities and level of experience of the junior member.

iii) Aeromodel flights should be conducted in fair weather conditions and should be clear of controlled airspace unless prior permission has been obtained from the relevant ATC Unit.

iv) The model aeroplane shall not be flown within 5 kms of any active aerodrome and its flight path shall not encroach into the approach path of aircraft operating to that airport.

v) All model aeroplane are to be flown at a suitable altitude so that the aeromodeller maintains good visibility of the model in flight for proper orientation and maneuverability.

vi) No models shall be used for dropping from the air any article, whether or not attached to a parachute so as to endanger person and property on ground.

vii) No model aeroplane shall be used to carry or attached to it any article which are of highly inflammable nature, explosives, oxidizing material and corrosive substances, compressed gas including tear-gas, radio active materials, poisoness substances or any other dangerous goods.

viii) No model aeroplanes shall be used to carry or attach thereto any Camera or other apparatus for recording photographic impressions until and unless written permission for taking photographs and the carriage of such

photographic equipment is obtained from the authorities as mentioned in the Aircraft Rules.

ix) All model engaged in flying shall carry identity tags affixed at a suitable location on the model to enable identification of the owner/aeromodeller when required.

x) Prior to operating flight aeromodellers should carry out routine range check on the Radio equipment when installed in the models as per recommendations of the manufacturer. The aeromodeller should carry out regular inspection of the Radio equipment when installed in the model to prevent radio control failure in flight.

xi) At any one given time for a particular site only up to 4 models may be allowed to fly in the air.

xii) In case of models having Radio Control Unit fails-safe mechanism, for such units as recommended by the manufacturer should be incorporated so that the system goes to fail-safe mode in the case of loss of Radio signal or due to interference in the Radio signals to from the model.

xiii) For aeromodels powered by gas turbine engines a fail-safe system, proviso must be incorporated to bring the engine to idle in the event of signal failure and also to shut off the fuel supply in case of emergency.

xiv) At the site of aeromodelling proper signage as “Model Flying Site” should be prominently displayed which should also contain information of Radio frequencies used, recommended distances for safety, runway requirements and information on position of Fire Extinguishers.

xv) The runway/longitude distances for operation of the model should be carefully ascertained prior to any aeromodelling activity. In case of aeromodels which are weighing 30 kgs and more the distances shall be 1.5 times the distance required for normal landing of the model to its full stop position. Adverse runway conditions such as wet surface, tall grass etc. can have adverse effect on the take-off performance of the aeromodel.

xvi) Care must be exercised during take-off of the model to ensure safe clearance from any obstacles in the flight path immediately after take-off.

xvii) Prior to commencement of Radio controlled aeromodel flights, all aeromodellers should check that there is no damage to the aeromodel and its power plant/propeller system and initiate the SMART system.

S	-	SWITCH ON
M	-	Model selection correct – ensure
A	-	Aerial secure - ensure
R	-	Rate switches all in correct position – ensure
T	-	Transmitter voltage correct and trims neutral

xviii) After completion of the flight the following checks to be carried out by the aeromodellers :

- Receiver OFF followed by transmitter OFF.
- Check Frequency Control System
- Check for any damage to the airframe, propeller, undercarriage, wings including its fixing to the airframe.

xix) For Control Line models flights should be carried out after ensuring spectators are clear from the intended flight path of the model and in case of incursion into the control line area the model should be flown high above to avoid collision till the incursion is removed.

6. General Safety Guidelines for Aeromodelling

i) Model aircraft which are Remote/Radio Control are to be flown away from Cell Phone Towers or Microwave Towers to avoid short range interruption with the Radio equipment used for controlling the model in flight.

ii) At the aeromodelling site proper safety measures at the location of fuel storage, particularly for petrol and glow-fuel should be ensured.

iii) At the site of aeromodelling a First Aid Kit needs to be made available and it is preferred that a list of telephone numbers of nearest hospital/doctor is kept for use in any emergency situation.

iv) The Club should issue advice to all its aeromodel members w.r.t rechargeable batteries such as Ni-Cal Cadmium, Ni-Cal metal hydride and Lithium Power Batteries. Instructions should also be developed and circulated to all members on safety measures required to be taken for charging and disposal of used batteries.

v) Whenever aeromodel flying activity is in progress a Safety Marshal, who could be a senior aeromodeller, shall be nominated to monitor the flying of the aeromodels. His duties shall include warning the assembly of spectators not to come dangerously close to the aeromodels and their flying area and also advising them of the safest location from where to watch the aeromodel flying. The Safety Marshal shall also coordinate with the aeromodellers w.r.t the flight patterns, take-off and landing areas and safety procedures to be adopted. The Safety Marshal shall also keep a watch on lone aeromodel flyers or small groups operating aeromodels in that general area to avoid interference to other parties as this could result in collision of aeromodels in flight.

vi) Free Flight models should be flown in good visibility on sites that are clear and open with adequate open space downwind of the launch point and after ensuring that spectators are clear of the initial flight path of the model.

vii) Control Line models should be flown on sites that are well clear of any overhead cables and that the site is clear and open of the size suitable for flying the Line Control model.

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7. Separate Guidelines specific for operation of Radio Control Helicopters, Gas Turbine Power Models, Radio Control Silent Models (Gliders), Sea Planes etc. will be issued subsequently.

8. The above Guidelines are being issued by Aero Club of India based on references from Aircraft Rules (India) and CAA (UK). For any clarifications required on the above one can contact –

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