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**ELEVATION CONTROL** 

## Annex 5 to FAI Sporting Code Section 4 Volume S

## FAI Spacemodel Safety Code

- 1.Materials. Spacemodels shall use only lightweight, non-metal parts for the soft nose, body and fins and shall not use any internal heavy metal part that could cause injurities to person od damaged to property. Material for streamer or parashute protection must be made from fireproof material, not from smoldering material like cotton wool or soft balza.
- 2. Motors. Spacemodels shall only be flown with certified, commercially made spacemodel engines, and these engines shall not be tampered with or used for any purposes expect those recommended by the manufacturer.
- 3. Ignition System. Spacemodels shall be launched only with an electrical system with electrical igniters. The launch system will have a safety interlock in series with the launch switch, and will use a launch swich that returns to the "off" position when released.
- 4. Misfires. If the spacemodel does not launch when the button on electrical launch system is presed, the launchers safety interlock shall be removed in "off" position, and will wait 60 seconds after the last launch attempt before allowing anyone to approach the spacemodel.
- 5. Launch Safety. Before launch, the spacemodelers must check the stability the spacemodel, ensure a safe distance from launcher to all persons.

For specemodel with D engine or smaller, minimum safe distance of at least 4 m away and they can be launched neer vertikal elevation- 80° - 90°.

For multistage spacemodels and spacemodels with stronger spacemodels engine safe distance is 8 m, and mast be launched with elevation  $65^{\circ}$  –  $80^{\circ}$  in safe, empty place. Spacemodels shall be launched after a 5 – second loud countdown after warning spectators and clearing them away to a safe distance.

- 6. Launcher. Spacemodels shall be launched from a launch rod, tower or rail that is within 30 degrees of vertical to ensure that the spacemodel flies nearly straight up. Lenght of launcher mast ensure inaf speed for stabile and precise flight. If necesery, launcher shall use a blast deflector to prevent the fire engines exhaust from hitting the ground and any dry grass close the launch pad.
- 7. Size. Spacemodels shall not weight more than 1500 grams at liftoff and shall not contain more than 125 grams of propellant and 160 Ns ( $2 \times 80 \text{ Ns}$ ) of total impulse.
- 8. Flight Safety. Spacemodels shall not be launched at targets, into clouds, or near airplanes, and will not contain any flammable or explosive payload. Launcher must be oriented in the safe, empty place.
- 9. Launch Site. Spacemodels shall be launched outdoors, in the open area and in safe weather conditions with wind speeds no greater than 9 meters per second. Dimension of launch site depend on used spacemodel engines and type of space models, shown in the accompanying table.

- 10. Recovery. Spacemodels shall be so constructed to be capable of more than a single flight and shall contain a means for retarding its descent to the ground so that its structure may not be substantionally damaged and so that no hazard is created to persons and property on the ground.
- 11. Recovery Safety. No attempt shall be made to recover spacemodels from power lines, tall trees, or other dangerous places.

## LAUNCH SITE DIMENSIONS

Installed Total Impulse (Ns) (meters)	Equivalent Motor Type	Minimum Site Dimensions
0,00 - 1,25	1/4A - 1/2A	15
1,26 - 2,50	Α	30
2,51 - 5,00	В	60
5,01 - 10,00	С	120
10,01 - 20,00	D	150
20,01 - 40,00	E	300
40,01 - 80,00	F	300
80.01 - 160.00	2 x F	450