

Rules EPA (Electric “Polystyrene” Air Combat)

Valid for the Czech republic in 2006

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1. EPA

1.1. EPA intention

EPA was created for recreation of the air wars of WW II in a historical perspective, in an enjoyable, safe, scale competition that will be interesting for spectators and challenging for the contestants.

1.2. General rules

All FAI regulations covering the R/C-flier, his plane and equipment, shall apply to this event, except as noted herein. The contestant is solely responsible for airworthiness of Aircraft (A/C for following text) used in contest. The arranging group and the main judge, are responsible of frequency control during the event.

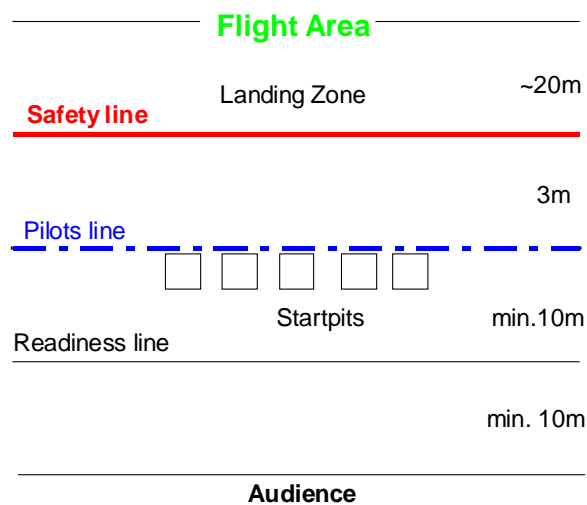
1.3. Safety

A safety matter always has highest priority. Any conduct by a contestant deemed by the main contest arranging judge or group to be hazardous will be cause for immediate disqualification of the contestant from the event.

Any contestant that is not known to the arranging group might be ordered to make a test flight, to prove that he is capable of flying an EPA II - scale war bird.

2. Contest site

2.1. Flight Area



The flight area is always in front of the safety line. During all day of the contest, all models must fly in front of the safety line (as soon as the safety line is drawn up). Penalties -200 points for safety

line crossing during flight are given all day, if model crosses the safety line (including test-flights before, in-between and after fights).

2.2. Start pits and readiness area

The Start Pits are placed with three to five meters in-between and three meters behind the safety line. It is exigent for pilots to stay into their start pits during the compete flight. Readiness Area is marked approximately 10 meters behind start pits (13 meters behind the safety line). In the Readiness Phase (readiness for flight) the pilots and their assistant mast being stand behind this line.

2.3. Landing Area

Landing Area is a 20 m wide strip in front of safety line into Flight Area. If the model landed into Landing Area, it is allow bringing them back to the Start Pit and take off gain. If the model landed outside of the Landing Area it is prohibited to go for the model to bring it back until the compete flight ended, it means, until all aircraft landed.

2.4. Spectators

Area for spectators must be clearly marked by strip of plastic in distance at least 20m from Safety Line. It is not allowed to cross this line for spectators and it is the organizer of competition obligation to look after of spectator's safety.

3. Equipment

3.1. Model

The model must be a scale or semi scale A/C fighter built between 1935 and 1945.

The model dimensions are determined as follow:

- Wingspan for single engine model max 850 mm
- Wingspan for double engine model max. 1000 mm
- Minimum wingspan for model is 800 mm

Recalculations of all other model dimensions are needful to be in the corresponding scale to the chosen model wingspan scale. Max. 2 cm difference of these other dimensions comparing with the corresponding wingspan scale will be tolerated.

It is not mandatory having the three-dimensional fuselage, it is allow having "flatling" fuselage. Its length is measured from the rear line to frontline of the fuselage, or to propeller (if the propeller exists).

No protruding devices may exist on the front leading edge of the wing, stabilizer and fin. It means, there are not allowed any parts of model in front of the leadings edges of the wing and tail planes of model.

Underlay of the leading edge of the wing and tail planes are not permitted. Lading edges covering by glass or textile slips will be tolerated. Application of the stream-cutting sandpaper strips is allowed.

Model should be build from EPP or similar mat. It is not allowed to coat surface of model or fill surface with putty

Model must look like original A/C including of camouflage, marking, emblems and so on. It is mandatory for pilots (competitors) support the visual aspects of model with the pictures or photographs of the A/C if there is some unclearness in the model appearance. Pilot (competitor) could not be a builder of the model.

3.2. Engines

It is possible using the AC or DC electro engines only.

3.3. Accumulator specification

LiPol (LiOn, LiFe) accumulator in maximum 3 cells, or NiCd / NiMh accumulator in maximum 9 cells are allowed.

3.4. Accumulator Capacity Limitations

For AC engine

Single engine model:

LiPol (LiOn, LiFe) double cell max. 1800mAh, for three cells max 1350mAh;
Up to 7 cells NiCd/NiMh 1800mAh, above 7 cells NiCd/NiMh 1350mAh

Double engines model:

Max. 2500mAh

Pro DC motor

Single engine model:

Up to 7 cells NiCd/NiMh 2100mAh, above 7 cells NiCd/NiMh 1500mAh
LiPol (LiOn, LiFe) double cell max 2100mAh, for three cells max 1500mAh;

Double engines model:

Max. 3000mAh

3.5. Propellers

Only propellers that are commercially available is held may be used. As commercially available means the propeller can be bought in normal hobby-shops.

It is the obligation of the competition organizer (security commissioner) not let to use the danger (damaging) propellers in competition.

3.6. Weight of the model

Max. weight of arbitrary EPA II models is 520 g

3.7. Stripe

Length of strip is 10 m \pm 0,5 m in one piece, 6-10mm wide. End of the stream must be marked. Material shall be suitable for proper indication of cuts.

3.8. Helmet

In EPA II the helmet is not mandatory.

3.9. Radio equipment (Remote Control Set)

Radio equipment must have valid European certification. The contestant is responsible for proper operation of the radio equipment.

4. Tournament

4.1. Structure

Each fight consists of at least two and at most seven pilots that fly against each other. When all pilots have flown exactly one fight, this is called a round. The next round, flight-lists are changed to make it possible for as many pilots as possible to meet each other in different fights. The number of rounds flown at a contest is decided by the arranging group, and must be told in the contest-invitation. The number of rounds must be announced before the tournament starts. (The number of rounds is recommended to be 3). A contest also has a final which is flown after the rounds. In the final, the seven pilots with the highest scores meet. The pilot who has most points after the final wins the contest.

4.2. Fights

A fight is divided into three parts: The preparation, readiness and flight part.

4.2.1. Preparation part

The length of the preparation part may be set by the arranging group, but is recommended to be 7 minutes at smaller contests. The main judge blows three signals in whistle and calling out „Seven minutes to readiness“ marks it. During the preparation-part test flights may be performed. 30 seconds before the preparation-part ends the main judge blows two signals in his whistle and calls out „30 seconds to readiness“.

4.2.2. Readiness part

Readiness follows immediately after the preparation part, and is marked by the main judge calling out „Readiness“. During readiness all pilots and helpers shall be behind the readiness line. All equipment must remain in the start pits, and engines may not be running. Readiness may vary in length, upon the main judges decision.

4.2.3. Flight part

The flight part starts when the main judge blows one long signal in his whistle. Pilots and helpers may now run to their models, and get them airborne. The flight-part ends when the main judge blows one long signal in his whistle. The pilots may now fly freely in front of the safety line, and land at their own discretion. As soon as all models have landed, the next preparation part may start.

4.3. Helper

Every contestant may have a helper.

4.4. Take Off

Take off is only allowed in the area between the pilot line and the safety line.

4.5. Time points of flight

One point per three seconds of flight is given. Maximum flight-time is seven minutes.

4.6. Re - Take off (the new take off)

An unlimited number of restarts are allowed during a fight. When a pilot attempts to fetch his plane from the landing zone during a heat he must get permission from the main judge. The main judge then gives an alarm and ensures that all the pilots are aware of the situation. A restart must be made from the same place the first start was made. Restarts are only allowed if the model ends up in the landing zone, after landing. Restarts shall be conducted solely between the start pit allocated to the individual pilot and the safety line.

4.7. Model reparation

Before it's re-entry to the tournament main judge must check model that was repaired during the competition.

4.8. Model change

The same model must be used throughout one fight. A new model may be used the next fight. The model is defined as main parts of fuselage and wing.

4.9. Crossing of lines

A crossing is made either the model is airborne or is moving on the ground. When airborne the model must be clearly over the line. On the ground, the engine counts. If a model has several engines, any engine crossing the line contours.

4.10. Safety line crossing

The first time a pilot crosses the safety line with a model during a contest, the pilot receives a penalty points. The second time a pilot crosses the safety line with a model, the pilot is immediately disqualified from the contest, and ordered to land immediately if airborne.

4.11. Lost streamer

It is the contestant's responsibility to get airborne with a streamer of appropriate and full stretched length attached to his model. After landing, missing or entangled streamer counts as lost (no +50p given), except if the streamer was lost during landing, which must be proved by finding the missing streamer.

4.12. Streamer cut

A contestant that cuts an enemy's model streamer in the air, get +100p. If contestant preserves own stream unbroken during the compete flight, get +50p (points for a stream). A cut made to a stuck streamer, counts as a cut on enemy streamer, and the contestant making the cut gains +100p. If during one flyby cuts are made to several streamers (own and stuck) or several cuts are made to the same streamer, this only counts as one cut made to enemy streamer. If a cut comes along with a collision more or less at the same time (during one fly by), only the cut counts.

4.13 Rating:

- Contestants that use double engines or biplane model will be rated 25p.
- Contestants that use flatling fuselage model get penalization 25 p.
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4.14. Collision

Neither kill points nor consolation points will be given. Flight time shall be stopped when the fuselage of the A/C hits the ground.

4.15. Passivity

A competitor, that is obviously outside of compete flight for more than 30 second will be alert by the main judge. If the competitor will not respect this warning and persist outside of compete flight should gets penalty 50p.

4.16. Tie

If the final points are equal for two pilots, the one with highest points in the final wins. If it is still equal, the pilot with the highest points from one single fight (except from the final) in the contest wins.

4.17. Frequencies

Contestants must be able to change between at least two frequencies. Main judge before each flight checks frequency separation, but it is the contestant's responsibility to avoid frequency-collisions. When a frequency collision occurs in the final, the contestant with the lowest total score shall change frequency. This change must be given extra time, so that the preparation part of the final does not start until the change is done.

4.18. Meteorological evaluation

If meteorological condition gets unsatisfied during the competition, organizer should decide that whether tournament will follows or will be ends. This judgment should be done with all competitors. As part of this should be decision, how the results of competition will be counted.

4.19. Protest

Any contestant can make a protest against judge's decisions. Protests shall always be decided by taking a ballot among the contestants. This should be done as soon as possible. A protest charge should be taken. If the protest is sustained, the protest charge is returned.

5. Judges

5.1. Main judge

It is under responsibility of the Main judge to do timing of the all parts of the competition. Main judge is also responsible for adherence of all security rules and for surveillance of the flying models if they are not behind the Safety Line.

5.2. Safety commissar

Safety commissar is responsible for general tournament safety. In the security rules is his opinion obligatory for all competitors and judges even Main judge.

Safety commissar is particularly responsible for:

- Model checking before tournament
- Checking of the lines delineation before tournament starts
- Adherence of safety rules during tournament
- Checking of competitor's manners during flights. If find out manners of competitor dangerous is powered disqualify this competitor from tournament.

5.3. Pilot's arbiter

Pilot arbiter measures time of flight and write points into a pilot's log. Also is checking the cuts of the "enemy" streams during the flight and check competitors stream after flight.

6. Points

Crossing of the Safety line (every time during the tournament)	- 200
Passivity	- 50
Stream preservation during the flight	+ 50
Rating for double-engines or biplane model	+ 25
Penalty for flatling fuselage	- 25
Cut of the "enemy" stream	+ 100
Time of flight (each 3 sec.)	+ 1

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