

F5J FAI Rules Tutorial Outline for F5J USA Tour Events

Last changed: Mar 26 2019 (rev13) Chris Bajorek



1. Tutorial Overview

This presentation focuses on the FAI rules for F5J
as implemented and used in F5J USA Tour events

2. Plane Limits

Can use up to 3 planes

Max wingspan - 4m, Max mass - 5kg (176.4 oz/11 pounds), Max surface
area - 150dm²

No telemetry allowed except battery voltage, RX status (i.e. no altitude)

Must have Altitude Motor Run Timer (AMRT)

No skegs allowed

Altimeter hardware is allowed but cannot be used during a contest

Stability systems hardware and use in contests is allowed

(as of the date of this outline. It is expected this will be disallowed in Spring 2019)

3. AMRT (limiter) details

Records and displays max height between motor start and 10 sec after
cutoff

Restricts motor run to 30 sec max

Emergency motor restarts allowed in *F5J USA Tour* events (FAI rules
deviation). Penalty for restart is a zero flight.

4. Flying Site

No obstructions within 100mtr of launch/land spots

Lane spacing 10mtr min.

Access Corridor 6mtr wide and ≥ 15 mtr from launch/land spots

Main thoroughfare for persons walking to a launch/land lane

5. Safety

CD defines Safety Area

Access Corridor + other restricted flying areas

Infringement of Safety Area - 300 pt penalty

Plane hitting person in Access Corridor - 1000 pt penalty

FAI recommendation: Always enter thermal in same direction as existing planes

6. Flights

Min. of 4 qualifying rounds to be a valid F5J contest

Reflights allowed when

Plane collides with another

Flight is hindered or aborted due to unexpected event e.g. evasive maneuvers to avoid hitting a low flying full-size aircraft

If you continue to fly you waive your reflight right

Reflights assigned in partial group or a new reflight group (min. 6 pilots)

Random draw used to fill new reflight group

7. Zero flights

Zero flight score if

- Plane loses a part during launch or in flight (ok on landings)
- Launch is >4mtr away from land spot
- Nose of plane lands more than 75mtr from land spot
- AMRT fails to display Start Height
- Overfly end horn by 1min or more
- Motor is restarted after launch (*F5J USA Tour* FAI rules deviation)

8. Penalties

Infringement of Safety Area - 300 pts

Plane hits person in Access Corridor - 1000pts

Launch direction violation: 100 pts

- i.e. you must launch substantially in the same direction as declared by the CD.
F5J USA Tour rule: you must also launch straight ahead for 3 seconds before turning.

Motor starts before start horn: 100 pts

Land direction violation: 100 pts

- i.e. your landed plane MUST be pointing in the general landing direction that was declared by the CD.

9. Groups and Working Times

Min. 6 pilots/group

Except in flyoffs...

- ...group draws minimize flying against the same pilot many times

GliderScore scoring program ensures this

Each round starts with 5min Prep Time

Qualifying rounds are 10min Working Time

Fly-off rounds are 15min Working Time

10. Launching

Launch direction set by CD

100pnt penalty for violating

Launch must be straight ahead for 3 seconds before turning

100pnt penalty for violating

Motor must not start until the beginning of the start horn

100pnt penalty for violating

Must launch within 4mtr of landing spot

Zero flight score for violating

11. Landing

Landing direction set by CD

Your landed plane **MUST** be pointing in the general landing direction that was declared by the CD.

100pnt penalty for violating

Zero landing if plane hits pilot or helper

Zero flight if nose of landed plane is >75 meters away

Okay to safely retrieve plane before end of Working Time

12. Scoring: Duration score

Time starts at release of plane (motor must be running)

Time stops at either:

**Contact with ground or object touching the ground, OR
The beginning of the end horn**

Duration score: 1 pnt/sec, rounded down to nearest sec.

Overflying end horn = zero landing points

Overflying end horn by 1min or more = zero flight

13. Handling Late Launches

Example: initial motor spin-up failure, then launch late

- (a) Can land within Working Time limit, get landing points but lose duration points due to shorter window from late launch
- (b) Or can overfly Working Time by up to 59 seconds, lose landing points. No duration points past the end horn.

14. Scoring: Start Height Penalty

Start Height = the highest point achieved between motor on and 10 sec after motor off

Start Height rounded down to nearest meter

Start Height Penalty = 0.5 pnt/mtr up to 200mtr + 3 pnt/mtr above 200

15. Scoring: Land Bonus

Landing Bonus 50pnt max for 10mtr tape (5pnt/mtr)

Landing distance measured from tip of plane's nose

Zero landing:

- If you overfly the Working Time end horn
- If the plane hits the pilot or his helper

16. Scoring: Total Round Score

Total = duration + land bonus - start height penalty

Normalization

- Highest total score in each group is normalized to 1000 for top pilot
- Total score is Normalized

17. Final Classification

Throw-out (discard) round

If more than 4 qualifying rounds flown FAI rules dictate 1 throw-out

No throw-outs in fly-offs

Fly-off rounds

The CD may elect to not have fly-offs if announced before the contest starts.

Top 30% (rounded down) of pilots participate. The F5J USA Tour allows the CD to fill all existing lanes with fly-off pilots.

3 or 4 fly-off rounds, 2 if bad weather or poor visibility

Qualifying round scores do not carry over into fly-offs

18. Any Questions?