

Acro fest 2021 competition scoring

1. Introduction

This document describes the scoring system that will be used for the AcroFest21.

This is not final, there might still be changes. However the general structure of the scoring won't change.

This scoring is made to encourage acrobatic pilots to push themselves and improve and vary their skills. It is strongly based on the FAI system, with some adaptations and simplifications.

2. Warnings

Pilot can receive warnings for different reasons:

- Dangerous flying
- Not throwing reserve
- Disregard of the flight box
- Disregard of the signal closing the flight box
- Performing one of the manoeuvres not allowed to be flown as one the last 2 manoeuvres
- Over flying the public
- Unauthorised take off
- Endangering others (raft crew)
- Unsafe landing
- Late arrival/non-attendance at briefings
- Delay at take-off
- Unsporting behaviour
- Disrespectful or aggressive behaviour towards the organisation, officials or other competitors
- Any other behaviour deemed by the judges and/or the meet director as serious misconduct

Warnings will impact run and final score as follow:

- **1st warning : pilot is noticed**
- **2nd warning: run score = 0**
- **3rd warning: disqualified, competition score = 0**

3. Competition final score

A pilot **final score is the sum of all its run scores**. (same as FAI)

3 runs per pilot are expected at this event.

If not all pilots are able to do 3 runs (for meteorological reasons for example), the total score will be based on the amount of runs all pilots in that category managed to fly.

3.1 Finals

If finals are organized, pilots with the best completion score (after their 3 runs) will be selected.

Final pilots get (1 or 2) extra runs, their score over those runs only determine the finals ranking.

Manoeuvre repetitions are reset to 0 for the final.

4. Run score

The run score is a combination of: (different % from FAI)

- **Technical score (40%)**
- **Choreography score (30%)**
- **Landing score (30%)**

Judges scores are always a number between 0 and 10 (from worse to best).

Each score (technical, choreography and landing) is the average of the judges scores.

4.1. Technical score

Each manoeuvre is scored individually by each judge.

All judge scores are averaged (per manoeuvre).

This average score is multiplied by the manoeuvre coefficient and by twisted/reversed/flipped bonuses to get the final manoeuvre score.

The final technical score for the run is the average of all manoeuvre scores.

4.1.1. Repetitions

Repetitions (over the whole competition) are penalized. Every repetition of a manoeuvre gets its score divided by the amount of time the manoeuvre has been repeated (1st repetition = manoeuvre score / 2, 2nd repetition = manoeuvre score / 3, etc) (different system than FAI).

- o Performing a manoeuvre on the other side does **not** count as a repetition (same as FAI).
- o Performing a manoeuvre twisted or reversed or flipped does **not** count as a repetition (opposite to FAI).
- o Only two tumbling/infinite/rhythmic manoeuvres per run (same as FAI). If more, only the ones performed first are counted.
- o Repetitions are counted within a run for all categories.
- o Repetitions are counted across all runs for Acro category (not for novices and fun).

4.1.2. Twisted, reversed, flipped bonus

Any manoeuvre performed twisted or reversed or flipped gets a bonus on its manoeuvre score:

- Twisted 25%
- Reversed 25%
- Flipped 25%

(different system than FAI)

4.1.3. Manoeuvres list

Only manoeuvres listed below are allowed (same as FAI, only added spiral for novices).

Manoeuvres marked *** cannot be one of the last 2 manoeuvres (same as FAI).

Some connections are forbidden (same as FAI). If one of those connections is performed, only the first manoeuvre or the one that hasn't been performed prior will be scored.

Manoeuvres	Coefficient	Minimum	Scoring guidelines	Forbidden connection
Horseshoe	1	5 sec	control, direction	
Spiral	1		entry, exit (straight (better) or bleed out), control	
Full Stall	1		control, direction	
Tail Slide	1.15	5 sec	control, direction, glider shape	
SAT	1.25	2 rotations	wing 90 deg best, direction	SAT2heli
WO	1.35	2 each side	rhythm, flow, height, direction	
Assy Spiral	1.35		rhythm, flow, height	
Looping	1.5		energy, height	
Assy SAT	1.55		energy, height	
Dynamic Stall	1.6		height (90+ deg best), control, direction	
Misty	1.65		entry and exit straight, direction, glider shape	
Mac Twist	1.7		energy, height, exit	
Heli	1.7	3 rotations	glider shape, stability, exit	twister, heli2SAT
X chopper	1.7		see misty	
Misty 2 SAT	1.7		see misty and SAT transition (clean and speed)	SAT
Misty 2 Misty	1.75		see misty	
Misty 2 Heli	1.75		see misty and heli transition (clean and speed)	heli
Tumbling ***	1.8		energy, height (180 deg best)	infinite
Anti-Rhythmic SAT ***	1.8		rhythm and regularity	
SAT 2 Heli	1.85		see SAT and heli transition (clean and speed)	heli
Mac Twist 2 Heli	1.85		see mctwist and heli transition (clean and speed)	heli
Twister	1.85	3 each side	see heli transition (clean and speed)	heli
Heli 2 SAT	1.85		see SAT and heli transition (clean and speed)	SAT
Corkscrew	1.9		see heli, energy height, transition (clean and speed)	heli
Cowboy	1.9		see misty and heli transition (clean and speed)	heli
Infinite Tumbling ***	1.9	5 rotations	trajectory (no roll), tension in lines, exit	tumbling, AR
Rhythmic SAT ***	1.95		rhythm and regularity, max height (best 180 deg)	tumbling, infinite, AR

Joker	1.95		see heli energy, height transition (clean and speed)	heli
Esfera ***	2		see rhythmic and anti-rhythmic	
Misty 2 Tumbling ***	2.1	3 rotations		AR
Stall 2 Infinite Tumbling ***	2.2	3 rotations		AR

4.1.4. Other scoring guidelines and penalties

- Collapses/Tucks:
 - o 0 to 25%: 0 to 2.5 points reduction for the manoeuvre
 - o 25 to 50%: 2.5 to 5 points reduction for the manoeuvre
 - o 50 to 100%: 5 to 8 points reduction for the manoeuvre
- Unplanned Change of Direction:
 - o <90 o: 0 to 2.5 points reduction for the manoeuvre
 - o 90 to 180o: 2.5 to 5 points reduction for the manoeuvre
 - o >180o: 5 to 8 points reduction for the manoeuvre
- Cravat:
 - o Fast recovery and full control are required.
 - o <10% and recovery in less than 3s: 2.5 points reduction for the manoeuvre
 - o >50% and recovery in more than 3s: 2.5 to 8 points reduction for the manoeuvre
- Unplanned Twist
 - o <1 turn: 2.5 to 5 points reduction for the manoeuvre
 - o 1 turn or more: 5 to 8 points reduction for the manoeuvre

4.2. Choreography score

A single score per judge which takes into account:

- Placement & Drift (5pts/10)
- Flow, Style, Originality, Fun (5pts/10)
- Number of manoeuvres (malus if <5, bonus >6)
 - o Final choreography score = (PlacementDrift + StyleOriginalityFlow)

* #Manoeuvrecoefficient

# manoeuvres	coefficient
0	0
1	0.2
2	0.4
3	0.6
4	0.8
5	1
6	1
7	1.1

8	1.2
9+	1.25

4.3. Landing score

Two options are available for landing, landing on the ground or on the raft.

Attempting to land on the raft gives a 20% bonus on the landing score.

- **Accuracy (6pts/10)**
- **Spiral (2pts/10)**
- **Bonus (2pts/10)**

!!! Spiral, spin and flip landings are forbidden over ground !!!

Accuracy scoring:

on spot and stopped	6 pts
on spot and move out	5 pts
<5m from spot	4 pts
<10m from spot	2 pts
>10m from spot	0 pts

Spiral scoring:

- entry (speed, sink rate)
- min 360 turn
- lowest height above water
- wingtip touch water
- hand touch water

Bonuses:

- Foot touch
- Hand touch
- Jesus walk
- Spin
- Flip

4.4. Reserve

If the pilot throws his reserve, **his technical score takes into account all manoeuvres flown till then, choreography and landing scores are 0.** (same as FAI)