

FLIGHT SIMULATOR AROUND-THE-WORLD RACE

General Rules and Charter

2015
v1.00
February 5, 2015

1. Organization of Rules.

The General Rules for the Race are codified in this document. In addition to these General Rules, which apply to every Around-The-World Race, each year's race will have a set of Special Rules specific to that race alone. These rules will contain the race's starting airport and any additional rules, such as special bonuses or prohibitions that are specific to an individual race. They will be made public at least 24 hours before the race start.

2. Official Website.

The official website of the Race is: <http://www.fsrtwrace.com/>

3. Participants.

Avsim.com
Flightsim.com
Sim-Outhouse.com

4. Starting Time.

The race begins annually on the weekend following St. Valentine's Day with a post from a member of the Executive Committee in each team's race forum. The specific starting time for each year's race will be made public via forum posts and the race website well in advance of the race.

5. Objective.

The objective of the race is to be the team to successfully carry a virtual baton around the globe in the fastest possible Race Time[*] by completing and authenticating a series of flight legs using Microsoft Flight Simulator.

At the beginning of the event, the organizers start the official Race Thread in each team's forum, whereupon the first volunteer who responds by stating that they "have the baton" becomes the "baton holder." This pilot must then immediately go to the race's starting airport within FS and fly to another airport carrying the baton.

Upon completion of the leg the pilot must communicate to the team via the forum that "the baton is free." Upon posting this message, the baton is available again for a new volunteer to take in a similar fashion and the race continues around the planet.

The new pilot must start from the airport where the previous leg finished and is free to choose the next destination airport. This cycle repeats itself until each team has made it back to the race starting point, where the fastest team is declared the winner.

[*] Race Time is defined as the period between the race start and team's arrival at the race end point having completed all race requirements, adjusted for any credits and penalties accrued during the race, as measured by each forum clock.

6. Requirements.

a. Routing Requirements.

i. General

Teams must begin at the starting airport and return to it by:

- flying around the world, passing through all degrees of longitude.
- make at least one full stop landing on the primary landmass of the following continents¹:

Africa
Asia
Australia
Europe
North America
South America

ii. Special requirements.

Teams must complete any requirements specific to a given race, as defined in the Special Rules and Requirements for that race.

b. Pilot Requirements.

i. General

Any flight simulator pilot is eligible to fly in the race. A pilot may fly for any team, but may fly for only one team during the race.

ii. Leg eligibility.

A pilot may claim the baton when it is released or transferred by another pilot. However, no pilot may advance the baton in consecutive legs.

c. Aircraft Requirements.

i. General.

Aircraft must meet all of the following requirements to be eligible for use in the race.

[a] They must be either:

Piston-powered fixed-wing aircraft.

Turboprop-powered, fixed-wing aircraft of two engines or fewer.

Rotorcraft.

[b] In addition, at least 10 real-life flying examples of the model, type, and specific version of the simulated aircraft must have been produced and put into service.

[c] The flight simulator model must have been designed for use in FS2004 or FSX or P3D, and have been openly available to the general public, either as a commercial product or as freeware, consistently for at least one month before the race.

[d] The aircraft must satisfy any additional requirements to be established in the Special Rules for each year's Race.

ii. Aircraft modifications.

The only modifications you may make to your aircraft are to its avionics, sounds, and textures. Aircraft may not be equipped with non-certified ferrying tanks or engine tweaks. Single and twin engine prop aircraft available with drop tanks or ferry tanks may not be flown for any leg longer than 800 nm. Autoland capability is prohibited unless it is integrated with the aircraft's autoflight system and is realistic for the aircraft type being flown. More generally, any special gauges and modifications that produce unrealistic behavior are prohibited.

iii. Exceptions.

The Executive Committee reserves the right to except aircraft from sections [a] and [b] of this rule. That is, aircraft ordinarily eligible found to be insufficiently realistic for race purposes may be declared ineligible, and aircraft ordinarily ineligible found to be suitable for the race may be declared eligible.

iv. Appeals and Clarification.

To appeal an aircraft's eligibility or ineligibility, or for clarification on a specific aircraft's status, interested parties may contact any member of the Executive Committee.

d. Leg Requirements.

i. Definition.

A leg:

- is a takeoff, en route flight, and full-stop landing at a different airport.
- lasts from the moment that the baton is claimed until the baton is successfully relinquished, as measured by the forum clock.

ii. Permissible Airports.

Each leg must begin and end at an airport included in the Flight Simulator 2004 or FSX or P3D database of airports.

iii. Time limit.

There is an absolute time limit of 3 hours for any leg. Legs exceeding this limit are automatically invalid.

Legs lasting for more than two hours are automatically penalized by three minutes for each minute by which the previous leg exceeded this two-hour limit.

iv. Distance limit.

There is an absolute distance limit of 750 nautical miles for each leg. Legs exceeding this limit will be declared invalid. Leg lengths, and distance measurements in general, are measured by the internal Flight Simulator system, accessible through the built-in GPS, Flight Planner, and World Map. Precise measurements require setting intermediate waypoints within a longer flightplan.² For help, see the FAQ.

e. Flight Simulator Requirements.*i. Eligible Simulators.*

Microsoft Flight Simulator X (both the original "Classic" and the "Steam" editions) and Flight Simulator 2004 and Lockheed-Martin Prepar3d (P3D) are the only simulators eligible for flight in this race.

ii. Time Settings.

You must fly in real-time. In other words, your flight simulator clock (in GMT, Zulu, or UTC terms) should read the same as the real world Universal Coordinated Time (UTC) for the moment you are flying.

iii. Weather Settings.

You must fly using Real-World Weather. You may use the default Jeppesen weather engine, or you may use an appropriate version of one of the following add-on weather engines: Active Sky, FS Pilots Global Real Weather, Opus and the freeware FSrealWX. You must declare your weather engine of choice before the race and stick with that choice throughout the race. Teams should post the pilots' choices for all to see.

You must enable the following settings in MSFS or the equivalent in other weather engines (See Options|Settings|Weather):

- 15-minute updates must be enabled, if possible;
- the "Download winds aloft..." box must be checked;
- the "Disable turbulence effect on aircraft" box must be unchecked.

Whatever weather engine you use, you must use realistic "live" weather that is at least as challenging as the default weather engine.

iv. Realism Settings.

You must fly with (See Aircraft|Realism):

- the "unlimited fuel" box in realistic mode (that is, unchecked);

- crash detection enabled;
- the General and Crash Tolerance sliders set to the most realistic position (full right);
- Aircraft Stress Causes Damage enabled;
- Simulator scenery display settings at or above the most realistic level consistent with acceptable performance;

The following are not allowed:

- En-route refueling;
- Time acceleration.

v. *Realistic Environment.*

All pilots will run the simulator with realistic scenery/mesh/clouds settings. While pilots are encouraged to maximize their realism, these are the absolutely minimal conditions:

- *Scenery.* Autogen density: Normal. Scenery Complexity: Normal.
- *Mesh.* Keep the terrain mesh you normally use. A minimum standard would be the default mesh (with a 38m resolution setting in FSX).
- *Weather.* Weather options: Real-world weather (updated every 15 minutes if the internet connection permits).
- *Clouds.* Cloud draw distance: 60mi. Detailed clouds/Cloud coverage density: Medium. (And for FS2004, 3-D cloud percentage: 100.)

Pilots whose computer equipment does not allow these minimum settings should, privately or publicly, ask for a waiver and they will automatically receive one.

f. Addon Sceneries.

i. *Mesh and Terrain*

Pilots using third-party *global or continental or regional* add-on meshes or scenery packages may use those products as long as they meet the "good faith" realism standard.

ii. *Airports and Facilities*

Pilots may employ third-party scenery addons (freeware and payware) that upgrade their airports to current real world standards. These upgrades include new runways, lights, and navigation aids as well as other realistic features. Good faith attempts to model real world conditions constitute the realism standard. In all cases, these add-ons/corrections must openly available to the general public, either as a commercial product or as freeware, consistently for at least one month before the race. Pilots should be prepared to justify their upgrade if necessary.

iii. *Additional airports*

No imaginary airports or proposed or planned future airport upgrades are allowed. Pilots may not add airports beyond those in their respective sim-

ulator's (FS9 or FSX or P3D) default data base – even if the additional simulated airports accurately represent real life airports.

iv. Other

Pilots may not create or alter scenery on their own for the purposes of the race.

g. Overspeeds and the Flight Envelope Requirement.

In any flight, a cumulative time of over 90 seconds in overspeed invalidates the leg. The baton pilot may execute a wingman transfer or restart or abort the flight at any time until the baton is released. If the excessive overspeed is discovered after the baton release for an otherwise legal leg, the baton holder must (a) execute a retrospective wingman transfer, or (b) return to the original departure airport preceding the now invalid leg and recommence from that point, or for legs of no more than 750nm (c) choose to accept an additional two hour (120 minutes) penalty and continue current operations.

7. Baton Procedures.

a. Claiming the baton.

i. The baton may be claimed and relinquished only through each team's official public forum. The first pilot to claim the baton after its relinquishment, as measured by the forum software, is awarded possession.

ii. The pilot must post in the forum a message in the following format:

"I have the baton at (departure airport ICAO code) in (aircraft type, model, and modeler) headed for airport (destination airport ICAO code)."

That is to say that, on posting the takeoff for any leg, the pilot must explicitly identify his aircraft. He should announce (a) the aircraft type, (b) the model and (c) the specific simulation modeler. Failure to announce all three in a timely manner (within an hour after releasing the baton) may incur a documentation penalty.

b. Relinquishing the baton voluntarily.

i. Completing a leg.

Pilots must relinquish the baton upon completing a leg. Upon successfully completing a leg, the baton holder must post a message in the forum in the following format:

"The baton is free at airport (arrival airport ICAO code)."

ii. Other ways.

The pilot may relinquish the baton:

- The baton holder may invoke the Wingman Transfer Rule (Rule 9(c)) and thus transfer it to another pilot;
- The baton holder may voluntarily abort the leg (Rule 8(a)(iii)).

c. Involuntary relinquishment of the baton.

The baton-carrier automatically loses possession of the baton in any of the following circumstances:

- The current flight being automatically cancelled due to violation of the three-hour time limit;
- The team's invocation of the "intentional foul play" rule (Rule 11) to declare the flight invalid;
- After a flight's two hour mark when there has been no communication of any sort with the baton-carrier for the prior 30 minutes. In such a case:
 - The baton is given up at the discretion of the team, or, if the baton-carrier had a wingman, at the discretion of the wingman;
 - If the baton is taken by a wingman, the normal rules applying to emergency baton transfers to wingmen (Rule 9(c)) apply;
 - If the pilot had no wingman, the team may abort the leg as in Rule 8(a)(iii).

d. Authentication Procedures.

i. Time.

All legs must be authenticated within one hour of their termination.

ii. Normal Procedures.

Pilots must use the RTW-Duenna flight tracking utility, available from the official race website, to track their flight. The authentication graphic and text produced by this utility are normally uploaded to the Duenna tracking server at the termination of a flight. Pilots authenticate their flights on the team forum by posting either links to the uploaded verification files or the Duenna graphic and text file to their Team forum. To guard against failures in the tracking system or glitches in the forum software, pilots should post both the tracking link and the Duenna graphic and text files. Doing so will also help make the Race easy to follow for teammates, fellow competitors, and the viewing public.

iii. Uploading Errors.

If a pilot cannot confirm that the authentication was successfully uploaded to the tracking server, the pilot must post the Duenna graphic and text file to the team's forum.

iv. Duenna Errors.

In the case of an error in the RTW-Duenna software, pilots may take a screenshot of Flight Simulator's Flight Analysis window upon their arrival. This screenshot must show the entirety of the flight route, to the best capability of the program. Pilots

should also make public any other evidence they may have in support of the authenticity of their flight. The Racing Committee will examine all evidence and come to a decision as to whether to certify or invalidate the leg while the team continues to advance its baton around the world.

v. Team Events.

For team flights and other special events, pilots must post their authentication to their team's forum and may not rely on the automatic upload feature of the Duenna software.

e. Failure to authenticate.

i. Procedures and Penalties.

Should a leg not be authenticated within the time limit, the leg in question will automatically become void. All progress after the void leg will also become void, any current flights cancelled, and the team will be required to return to the last authenticated arrival airport. In such a case:

- The pilot in possession of the baton at the time that it is determined that the previous leg will not count must either restart his/her flight from the departure point of the unauthenticated leg or declare the baton free at that airport.
- If restarting, the pilot posts the details of the new flight in the proper format.
- The clock for the pilot's new leg restarts from the time of the new post.

ii. Decision Authority.

The baton carrier has the sole authority to decide whether to wait for authentication or to assume that the previous flight leg will not be authenticated in time and restart.

iii. Inadvertent failure to authenticate.

In the case of an inadvertent failure to post the authentication and when compelling confirmatory evidence is available, the leg will be considered valid and the team will incur an automatic documentation penalty.

iv. Exceptions

These provisions may be suspended for authentications under review; other remedies may be applied. Normally, a leg will be considered valid if it is not challenged within 24 hours of its completion.

f. Pilot Reports.

Our goal is that at least one half of all completed legs must be accompanied by a Pilot Report that includes a narrative of at least 50 words and at least one screenshot, ideally posted together with other Pilot Reports in a thread separate from the main race thread. The report and screenshot may be crafted by anyone, not only the pilot in charge. (Any special multi-pilot events are exempt from this rule.)

8. Incomplete Legs.

a. In the case of premature termination of a leg due to a crash, computer error, or other reason, it may be necessary to prematurely terminate a flight. In such case, the baton holder chooses from the following options:

i. Restarting the flight.

The baton holder may restart the flight from the departure airport. The leg time continues to be measured from the lead pilot's original "I have the baton" post, except in the case of a pilot restarting due to failure of the previous pilot to authenticate.

ii. Transfer to wingman.

The baton holder may transfer the baton to the wingman, as provided for in rule 9.

iii. Aborting the leg.

The baton holder may abort the leg and relinquish the baton. This option:

- Returns the baton to the last departure location;
- Vacates any penalties accrued on the aborted leg.

9. Wingmen.

a. Wingman Declaration and Departure and Landing.

After a pilot (now the "Lead Pilot") has claimed the baton on the forum, a second pilot eligible to carry the baton may declare, "I am flying Wing (route, in Aircraft, etc)". Once declared, the wingman must comply with all race rules.

After the declaration, the wingman may depart and land either before or after the lead pilot. The wingman may choose a different destination but may land only once.

b. Wingman Replacement.

In case of an incident, the wingman may choose to restart or abort his/her flight. In the latter case another pilot may declare, "I am flying Wing" and depart from the original airport.

c. Invoking the Wingman Transfer Rule.

i. Procedures.

The lead pilot may, via a post on the official race thread, transfer the baton to the wingman. In such circumstances:

- The wingman immediately becomes the baton holder at his/her current location.
- The wingman continues uninterrupted to the destination of his/her choosing.

- Leg time and distance requirements, as measured for the original baton carrier, apply to the wingman.
- The wingman, now baton carrier, may not take on a wingman of his/her own.
- The wingman transfer incurs a penalty of 30 minutes.

ii. Retrospective Wingman Transfer.

A team may choose to invoke the Wingman Transfer Rule on a completed leg. There is no additional penalty associated with such a transfer.

10. Team Organization.

a. Team membership.

Teams may make such rules and policies as they deem necessary to establish and maintain a list of eligible pilots and support staff, bearing in mind the primary goal is to provide an open and welcoming environment for participation in the RTWR. Teams shall communicate any internal decisions which may affect the outcome of a leg, any other part of the race, or the integrity of the race community to the Executive Committee at the earliest possible opportunity.

b. Team communications.

i. Private Communications.

It is expected and encouraged that teams will plan their route, organize aircraft, and help each other. It is understood that in order to accomplish these goals teams will set up private channels of communication.

ii. Procedures.

Each team:

- is responsible for administering and facilitating their own communications channels
- must conspicuously post in their official forum instructions on how pilots from all teams may gain access to their team's communications channels.
- may not access or attempt to access the confidential communications channels of any team but their own.
- may set up whatever methods they deem necessary to screen out opponents from their confidential communications.

c. Responsibility.

The baton-carrier has the final say on any given flight – its route, aircraft, and all other aspects of the flight – are his/her responsibility.

d. Claiming the baton and team orders.

Pilots wishing to fly are responsible for claiming the baton. Team plans regarding who will carry the baton on a given flight are non-binding. This said; it is hoped

that pilots will act unselfishly and in the best interest of their team and the spirit of the race.

e. New Teams.

New teams are welcome. However, it should be understood that organizing a complete new team, especially one comprised of rookie pilots, will prove a substantial challenge. Accordingly, new teams should submit a request for inclusion by November 1 prior to the Race start. Acceptance decisions will be made by the Executive Committee.

11. Intentional Foul Play.

This Race is meant to be fun and light-hearted. If there is intentional foul play – and this must be obvious to everyone – then the Team may declare the particular flight "Null and Void" and ask the pilot to refrain from further participation. Foul play might include flying in the absolute wrong direction, or worse; it does not include cases where pilots do something suboptimal but well-intentioned. In such cases appropriate adjustments will be applied to make the victimized nearly whole.

12. Rules Enforcement and Appeals.

The application of the Race Rules is in the joint responsibility of the pilots' Racing Committee and the Executive Committee.

a. The *Racing Committee*, comprised of two members from each team, is responsible for enforcing the race rules. (For more, see the Administration section of the rules.)

i. The *Race Master*, a member of the Racing Committee, will have responsibility for managing the rules enforcement during any given day.

ii. The *Duty Officer*, assigned by the Racing Committee, will monitor race events during his time slot. He assists the teams, answers questions, and applies routine penalties. For non-routine situations, he refers the case to the Race Master who calls an Appeals Board. Individual pilots and teams may also appeal a Duty Officer decision and ask the Race Master to call an Appeals Board; such appeals should include a written brief that explains the argument for the appeal.

iii. The *Appeals Board*, made up of Racing Committee members from the three teams whenever possible, investigates the facts, consults with the Executive Committee about rules interpretations, and then applies the rules to fit the current situation.

b. The *Executive Committee* is responsible for the overall organization of the Race. In unusual circumstances, race participants may appeal a Racing Committee ruling to the Executive Committee. Normally, such appeals will be granted a hearing only in cases where the fundamental rules and character of the race is at question. All such appeals should be accompanied by a thoroughly-argued brief.

13. Race Administration.

a. The Race is administered and its rules set by an Executive Committee. This committee has the final authority over all aspects of the race. They are responsible for setting and interpreting the rules, administering the race, and handling final appeals. The Executive Committee consists of the following people:

Michael MacKuen
 Rob Ibey
 Ed Keller

b. From time to time, the Executive Committee may convene special advisory committees to aid them in setting race policy or administering certain parts of the race. The volunteers' efforts are key to the race's success. That being said, these committees exist as advisory and administrative bodies. Final responsibility remains with the Executive Committee.

c. The Executive Committee may consult with and receive advice from the Emeritus Advisory Board whose members include Ian Dale, Matt Smith, and Reggie Fields.

d. Above all, the goal of this race is to have fun. It is our belief that if we all follow the rules, we cannot possibly fail in this respect.

¹ Most boundaries between continents are straightforward. The ocean boundaries are obvious. The Panama and Suez Canals are boundaries. The boundary between Europe and Asia is set by the Russian border between the Arctic and the Black Sea as well as the Bosphorus Strait (that divides Turkey). The Ukraine, including the Crimean Peninsula, is on the European continental landmass. Similarly, Scandinavia is part of the European landmass. Kaliningrad, the Russian enclave between Poland and Lithuania, is treated as part of Asia. The French DOM (*départements d'outre-mer*) are not part of the European landmass.

² When the differences matter, then follow this procedure. Using the MSFS Flight Planner, plot a flight plan that includes the relevant airports as intermediate points. Then print the Navlog – which will show the distance between the airports. For example, you want the distance between airports A and B. Generate an MSFS flightplan from X-A-B-Z, where X and Z are the departure and destination airports. The navigation log (Navlog) will give the intermediate distances, including that between airports A and B. Distances are calibrated in tenths of a nautical mile. Keep that degree of precision: no rounding up or down.