

FLIGHT SIMULATOR AROUND-THE-WORLD RACE

2015 Special Rules FAQ

v1.01

February 16, 2015

Summary of Legs Types: Time, Distances, Aircraft, and Restrictions

- Normal Leg: 2 hours, 750 nm. Normal race aircraft. The only restriction is the limited number of times a "Thoroughbred" may be used
- Wildcard Legs: Unlimited time with a total distance not to exceed 5,150nm. A maximum of three legs of which none may exceed 2,110nm and no other may exceed 1,650nm. Minimum aircraft weight 30,000 pounds Gross. Types limited to "normal" race-eligible aircraft or sponsored jets. (See both White Lists.)
- Special Continental-Island Jet Legs: Twin-engine regional jets for a distance of less than 1,000nm. (See Jet White List.) The legs may connect two airports on the same continental landmass or they may connect a continental landmass with a required island destination. The time limit is 3 hours.
- Extra Aircraft Availability. Lockheed F-80 Shooting Star and North American F-86E/F Sabre (Section F8) limited to 2 legs and 4 legs (respectively) which may optionally substitute for thoroughbred legs.
- Special Aircraft Legs and Team Flights: 4 Special Flights, two required and two optional, to be completed by the baton carrier in a particular aircraft over a particular distance. Additionally, these may be designated Team Flights in which teams must complete a total of 6 Participating Pilot legs. Types restricted. Time and distances vary.

Warnings.

Please see the "Warning about obscure bits" at the end of this FAQ.

For Rookies.

Welcome to the 2015 running of the Around the World Race, the RTWR. For many, this is the premier team competition in flight simulation. As a serious challenge to the individual pilots' airmanship skills and to the teams' planning and organizational abilities, the RTWR aims to bring out the best in all of us. That said, it meant to be a both rewarding and enjoyable. As one grizzled veteran put it: "It's the most fun you can have with your pants on."

You will discover that this is a competitive event. The race is run round the clock, through darkness and miserable weather, to circle the globe in anywhere between three and five days. The intensity of the challenges, along with the continuous need to keep the baton moving, means that each team is under constant pressure to mobilize as many fresh pilots as they can. Even as a rookie, you will play a critical part in your team's success. If you are a veteran flight simmer and feel comfortable flying the fastest of the prop planes and/or jet liners, you should step right into the mix and start flying legs right away. If you are transitioning to racing types of aircraft, you may want to first exercise your new-found skills flying in the team events and in the ever critical role of wingman. Before too long, everything will seem natural and you can proudly take full part in the teams' baton legs. All that said, there is no substitute for practice – to

acclimate yourself to getting the Duenna running, to making efficient baton handoffs, and to thinking your way to quick and safe takeoffs, climbs, cruises, descents, and landings.

Even so, as a rookie you will have one added bit of security. When you take the baton, flying with one of your teammates as a wingman, you will have the comfort of knowing that if you crash then you can transfer the baton to your wingman without any penalty. This "Rookie Mulligan" allows you to fly while knowing that your first "crash" will not hurt the team.

Finally, you may be wondering about the seemingly massive set of rules. Please understand that these have grown up over the years to handle all sorts of ambiguities and complexities that have arisen. And we have pages of extensive "FAQ" material to explain just how those ambiguities and complexities need to be handled. (Sometimes what seems to be a perfectly clear rule ends up being misinterpreted by others. And, to be fair, many participants are reading English as a second language. The subtleties of "legal" expression are a challenge for everyone and especially for you who are working in another language.)

So if you are in your first year, please ask your teammates how to proceed. They will help you pick a favorite aircraft and they will help you find racing slots where you can help the most. From an individual pilot's perspective, the real task is flying fast, clean, and safe legs. Please feel free to leave the complications of planning and rules interpretations to your teammates. Or not.

The main point is that you are most welcome to our little community.

The Setup.

Q. Why is the Duenna required?

A. We're requiring the Duenna for a number of reasons. The software has reached a level of maturity at which we are confident that instability on its part will not affect the race. We will be able to track the race's progress online if all participants use the Duenna. Finally, the Duenna allows us to keep closer tabs on race pilots, giving everyone involved in the race additional confidence that competitors aren't attempting to gain an unfair advantage.

Q. Which version of the Duenna is needed? I already have an older one?

A. You need version 2.0 (latest release). The new version, updated by Eamonn Watson from Johannes Mueller's original work, manages data from FS2004, FSX (Classic), FSX (Steam Edition), and Prepar3D. It also adds a few bits of weather monitoring. FS9 pilots need only install the new Duenna v2.0. FSX (both Classic and Steam) and P3D pilots will also need to update their FSUIPC to the latest version. (v4.939 at the current writing).

Q. What about FSUIPC?

A. You should get the latest version. (You can pay for it, and support Pete Dowson's efforts. Or you can use the freeware version.) You can find the software here: <http://www.schiratti.com/dowson.html> . Please update if you have not done so recently.

1. The Prize.

The main prize goes to the overall winning team. In addition, we award two extra prizes just for the fun of it. The *Roadrunner Prize* goes to the pilot who flies the fastest normal leg. (Minimum 600nm, normal racing aircraft, speed measured by average ground speed in knots.) In addition, the pilot pair who records the most nearly perfect leg in a Formation Flight will win the *Gemini Award* to honor their skill.

Teams are asked to identify and nominate their top qualifiers in each category. The Committee will examine the records and award the honors.

Q. How do we measure average ground speed for the Prize? The Duenna number is not exactly accurate on this matter.

A. Take the Direct distance and divide it by the Flight Time, both as indicated by the Duenna. [The time is the Flight Time, not the Forum clock time. We are focusing on fast flying, not on the baton handoffs.] Yes, the Duenna calculation of the "Average GS" is not exactly correct by this measure. However, the teams can sort on the Duenna calculation to identify the top contenders...and then do the correct calculations to determine the team's best performance. The numbers should be very close unless the pilot takes a very circuitous route from departure to destination.

2. Start Time.

Q. Why start at 0000 UTC?

A. This is daylight in Bali. And the early start will allow us to finish earlier as well.

3. Routing Requirements.

Q. Is this year's continental requirement different than the standard rules?

A. Yes and no. The standard rule has been changed to only one full stop landing on each continent – rather than the previously required two full stop landings.

Q. What is this latitude requirement?

A. The team records the latitudes of their most northern stop and their most southern stop. If the absolute difference is at least 60 degrees latitude, they will have satisfied the requirement. Note that a 60 degree difference may be more or less northern or southern in its extreme anchors. Note also that the special restrictions limit landings to between 80° N and 60° S.

Q. What does airspace denied mean? What constitutes the airspace of a country? What about landing in the country?

A. Race aircraft may not cross the airspace of, nor land in, these nations for any reason. For RTWR purposes, the restricted airspace is defined by the boundaries of a nation's main landmass plus any explicitly designated offshore islands. Small islands and overseas territories and departments do not count for the airspace. Pilots should give these national boundaries a wide 10-20 mile margin because maps can be imprecise. In addition to the airspace, pilots may not land at airports in the nation *nor* in any of the nation's outlying islands. Any race aircraft which crosses the boundaries of, or lands in, those nations may not score a completed race leg or wildcard leg. Should both the baton carrier and the wingman violate the restrictions, the leg should be abandoned and restarted at the airport of the last successful baton landing.

For practical reasons, the rule is slightly different for airspace restrictions and landings. We cannot precisely monitor overflights of small outlying islands while we can surely identify landing at airports on those islands. The weaker "no landings" restriction also applies to both the mainland as well as the offshore islands. (Our not enforcing the prohibition on overflying small islands is due to our inability to track such overflights with precision. The landings are recorded so that we can enforce a landing restriction.) For example, Iran's Kharg and Kish Islands are offshore and we cannot truly know whether an aircraft flies over the islands and we don't want to penalize teams who inadvertently fly over an island

chain. However, both the pilot and the race marshals can know with certainty if the pilot lands at Kharg Island's airport OIBQ.

Finally, we shall make every effort to ascertain whether a leg has violated prohibited airspace. The standard will be a direct great circle path between the departure and destination airports. If there is additional evidence that the flight made a wide berth of the restricted airspace, we shall take that into account. (The online tracking might help.) The bottom line is to leave a goodly margin of error when you are flying near a restricted airspace. Those Iranian interceptors may not be willing to give you the benefit of the doubt. And we hear the food is terrible.

Q. Point Mugu NAS and the islands off Los Angeles are closed for 2015. Is this important? How about the prohibition of landings in Ukraine?

A. Hmmm. These might have strategic implications.

Q. I still have a few sceneries from previous RTWR races, ones that were released by the Executive Committed for that year's events. My I use those addons (with extra night lighting and parking slots) in this year's race.

A. No. Please take care to disable those no longer valid sceneries.

4. Sponsored Aircraft

Q. The use of jets in 2015 is limited to a White List. That means that many excellent simulations will not be available for use in the race. Is that right?

A. Yes. The White List is an important restriction. Not all interesting aircraft are eligible. Plenty are.

Q. Which models/simulations of these sponsored commercial transport jets are legal for the 2015 RTWR?

A. Only those models in the Whitelist (Appendix B) are allowed. We include a large number of transport jets here, but not every possible jet is available. In addition, we limit you to well-known modelers who, in our experience, are likely to get the flight dynamics close to correct. (Happily, with these popular commercial transports we find fewer "optimistic" flight models than for other categories of aircraft.)

Other considerations include the comparison of the simulated Mmo/Vne with the FAA Type Certification numbers, the actual performance of the aircraft, and the competitive balance in the full racing fleet.

Models that were originally designed as FS98/FS2002 or as "AI" aircraft are not suitable. (The David Hanvey model of the Hawker Sea Fury is a current exception.)

Any jets with a Mmo>0.92 or Vne/Vmo>400 will likely not be accepted. In the special class of twin jet regional transports (used in the Continental-Island legs), no aircraft with a Mmo>0.84 or Vne/Vmo>350 will be accepted. There may be exceptions. (The relevant parameters are those found in the MSFS aircraft.cfg file: Vne/Vmo is "max_indicated_speed" and the Mmo is "max_mach".) Further, some perfectly good and realistic simulations may not be accepted simply because their performance does not maintain the competitive balance in this year's race fleet.

The Duenna text file records the aircraft's Mmo and Vne. During the race, authentications that show higher values than those marked in the White List will cause the flight to be ruled invalid and require that it must be re-flown. Additionally, the team will incur a major (30) minute punitive penalty. Note that if your aircraft does not have an entry for Mmo and Vne, then it is illegal. Further, take special care that when you install your aircraft, or any paints or conversions, you check that the flight dynamics are not altered. There exist some "repaints" that will actually change the flight parameters. These are illegal.

We realize that mistakes will happen during the long race. But for these relatively few but critical jet legs, pilots and teams are responsible for strictly following these unambiguous speed-limiting restrictions.

Q. The Jet White list seems to eliminate some high quality aircraft. Why?

A. A note of courtesy here. We do NOT mean to imply that any modeler not listed in our White List is somehow inferior to those that are listed. We are working from common but imperfect knowledge. If you know of a superb modeler of jets who is not on the list, please let us know. We shall adjust accordingly – probably in the future.

Q. I understand that the sponsored jets are civilian commercial transports and that their military equivalents are not allowed. What about a normal civilian sponsored transport jet painted with a military livery? Say a DC-10 portrayed in the colors of a USAF KC-10?

A. The spirit of the RTWR says "yes" but we shall have to say "no." We are worried that we will confuse the matter if we allow military paints. (It is easy to imagine someone who sees a military aircraft in the race might want to install a similar military aircraft—one which might not rely on the civilian flight model.) It will be safer if we keep things simple: civilian transport jets with civilian liveries in 2015.

5. Special Aircraft Requirements for the 2015 Race.

Q. Why an explicit White List?

A. In response to participants' requests, we are limiting choices so that pilots can concentrate on flying rather than on scouring the libraries seeking an edge from some marginal flight model. The White List includes the race aircraft that have been popular over the years. We add a few more.

Q. Aren't there some aircraft flown in previous years that are not on the list? Are these currently eligible aircraft sure to be eligible in the future?

A. This list applies to the Special Rules of 2015 and is intended both to simplify pilots' aircraft searches and selections and to create some competitive balance among a large number of interesting aircraft.

Q. The Sabre Flights are repeated this year. They are limited to a single aircraft, the Section F8 F-86 Sabre. What is going on here? I have a favorite F-86 and it is not the Section F8 version!

A. This option allows teams to fly up to four of their thoroughbred legs in a F-86 Sabre. We limit usage to the Section F8 Sabre because it is a very high quality much-acclaimed simulation for FS9 that ports very well to FSX. It is freeware so that all pilots have access to it. Racing the aircraft over 750nm requires the pilot to make some decisions about trading range for speed. It should prove an entertaining and interesting ride. (Note that it may not port over to P3D.)

Q. Same question for the AlphaSim F-80.

A. More or less the same answer. This is an accessible and enjoyable "transition" jet with its roots in WWII. It works well enough in FS9/FSX/P3D. And adds a extra touch of speed and spice.

Q. Where do I get the Section F8 F-86 Sabre or the AlphaSim F-80?

A. You can find a F-86 download link at <http://www.sectionf8.com/> . For the RTWR, we have pre-assembled packages for both FS9 and FSX. These are intended for private, not public, distribution. See your teammates for a link. For the AlphaSim F-80, look here: <http://www.virtavia.com/Freeware/index.php>.

Q. What about repaints of the Section F8 F-86 Sabre? Do I have to fly the defaults? How about repaints that mimic the FJ-3 Fury (the Navy/Marine version), can I fly those?

A. You may fly any repaint that you wish – as long as the repaint does not alter the flight dynamics. Some of the FJ-3/FJ-4 repaints have the title "FJ-3" in their title. That is just fine. It is not another aircraft but instead a Section F8 Sabre in another livery. (It might be a good idea to say that your SF8 Sabre with the "FJ-3" name is merely a repaint. Informing others will avoid controversy.) We aim to please our Navy and Marine pilots.

Q. I have a friend who is trying to find a racing edge. (Not me, you understand.) Would it be possible to substitute more F-86 Sabres into the mix and pay a mere 30 minutes "maintenance" penalty for each?

A. No. The "maintenance" penalty is designed to handle cases where a team accidentally overuses the thoroughbreds by miscounting. If you are having trouble counting to four... nevermind.

Q. We have 12 thoroughbred legs, four Sabre legs, and two Shooting Star legs. So how many "fast" legs can we fly?

A. You may fly twelve (12) of these legs. Speed-maximizing teams will fly 6 jet legs (4 F-86 & 2 F-80) and 6 piston-engined thoroughbred legs (such as the Do-335 or P-51H). Kerosene averse teams might fly 12 piston-engined legs if they don't mind watching the competitors' tailpipes glow in the distance.

Q. What about port-overs, from FS2004 to FSX? Are they eligible? Under what conditions?

A. Straightforward port-overs from FS2004 to FSX are governed by the same rulings that apply to the original model. For example: porting the FS2004 A2A P-51H is legal, it is implicitly on the "White List," and it is treated as a thoroughbred.

But note well. You may not make "corrections" to the FS9 flight dynamics (in the airfile or the aircraft.cfg) to fit FSX. When you fly a FS2004-native aircraft in FSX you must fly it with exactly the same flight dynamics parameters that were modeled into the original FS2004 simulation. If necessary, read this last sentence again.

Further, you may not fly "port-overs/corrections/updates" by Mark Rooks or Bob Chicilo or any other author who often alters the flight dynamics. (These "port-overs/corrections/updates" have their proper place in our hobby. But they are not suitable for RTWR use.) Any alterations to the flight dynamics parameters will make the aircraft illegal and invalidate any legs completed in the aircraft (and earn a serious penalty if the illegal usage seems intentional).

The only exception, and this is a minor exception, is that you may alter the starter torque (normalized_starter_torque=xx) slightly upward to allow you to start the FS9 engines in FSX and idle friction (idle_rpm_friction_scalar=xx) slightly downward to keep the engines running. But these changes should not affect the performance of the aircraft in any measurable way. (If it does, then the alteration is illegal.)

Q. There are several Hornets on the list. And in different places with different restrictions. What is going on?

A. We are happy to have two quality simulations of the DH.103 Hornet, the older AlphaSim payware Hornet for FS2004 and the newer Rob Richardson freeware Hornet for FSX. The AlphaSim version is now freeware.

The FS9 AlphaSim/Virtavia DH.103 Hornet is the now familiar aircraft, a favorite during many previous races. The older simulation includes several versions of the Hornet under the same flight dynamics. All visual cues aside, this is a single model for RTWR purposes. It falls under the thoroughbred category.

In 2010, Rob Richardson produced an excellent FSX-native DH.103 Hornet. For our race, it will require special attention—team members should be sure that their teammates are careful about this. First, the original flight dynamics are not suitable for the RTWR. Happily, colleagues from SOH (Larry, Tom, and

Dave—we use the "SOH Group" name designation) produced a flight model that is suitable. To be eligible, the Richardson DH.103 Hornet must use the SOH flight model. Call it the RR-SOH Hornet. The corrected flight dynamics package is available here:

http://www.fsrtwrace.com/files/SOH_Hornet_and_Sea_Hornet_Modifications.zip and here:
http://www.sim-outhouse.com/sohforums/local_links.php?action=jump&catid=4&id=3564

Second, the specific aircraft model matters. There is a distinction between the (RAF) Hornet F.1 and the (FAA) Sea Hornet F.20 and NF.21, on the one hand, and the (RAF) Hornet F.3 on the other. The RAF Hornet F.3 does not have external tanks modeled. Although it is technically possible to do so, *when flying the Rob Richardson Hornet F.3, pilots may not use the external tank capacity*. (Note that the Duenna records the fuel on takeoff and landing. Usage of the external tanks for the Hornet F.3 will invalidate any completed leg.) In practical RTWR terms, this means that *pilots should probably choose the F.1 Hornet and not the F.3 Hornet*. (Please check to be sure about not only the type but also the model of Hornet that you are flying.)

We make this extra effort to allow teams to use this splendid freeware FSX-native aircraft that is rather good for RTWR flying. The DH.103 Hornet F.1 is very competitive in the "normal racers" category. It represents a much needed freeware addition to the native-FSX racing stable.

We ask teams to take special care to comply with these restrictions. In particular, pilots flying a Hornet should take the time to announce that they are flying either the "Alpha Hornet" or the "RR-SOH Hornet F.1" or the "RR-SOH Sea Hornet F.20" or the "RR-SOH Hornet F.3." If there is any ambiguity, we will assume that the pilot is flying the "Alpha Hornet" and count the leg against the "thoroughbred" limit. (Neither the Executive Committee nor the community of fellow competitors have time to investigate every usage of the aircraft. It is the responsibility of the pilot, and team, to make the proper announcement while the pilot holds the baton.) If you have a teammate who is casual about these sorts of things, please work to be sure that he is in compliance with the rules.

Finally, and this is confusing, the Rob Richardson Hornet F.1 has a default paint that depicts the Prototype Sea Hornet F.20. This appropriately uses the F.1 flight dynamics—the prototype did not have the folding wings and de-rated engines of the active duty F.20. You may legally fly this "aircraft" as an F.1 aircraft because it represents nothing more than an alternative texture.

If all this extra effort is not worth your while, please do not fly the Rob Richardson FSX Hornet.

Q. The David Hanvey-Peter Forster Sea Fury (v2.3) is eligible. How do I use the version with external tanks?

A. Please consult with your veteran teammates. You will need to make two edits to your aircraft.cfg file to enable the external tanks and point to the correct airfile. Normally such edits are prohibited—so please work with your knowledgeable teammates to understand what is legal and what is not.

Note that this aircraft will not port to FSX. (Its model was designed for FS2002. It is legal for race usage, but not a practicable choice for FSX pilots.)

Q. The Flying Stations Hawker Sea Fury requires the updated airfile. Why? Where can I get it?

A. The author has corrected the airfile to reflect proper operation of the supercharger at different altitudes. (The older one had a glitch that produced unrealistic high speeds.) The required airfile is available here:
http://www.fsrtwrace.com/files/Flying_Stations_Sea_Fury_Corrected_Flight_Model.zip .

Q. Why the limitation on the fast aircraft, the Thoroughbreds?

A. Again, we wish to constrain but not eliminate the role of these very fast aircraft in the race. (To paraphrase a long-honored member of the community, they have served very well over the years and have by now paid off any investments.) Teams will fly about 30 normal legs in the race, of which nearly a third may be in thoroughbreds. These 12 fast thoroughbred legs constitute valuable strategic resources, to be used to advantage. The remaining 20 or so legs will be flown in normal racing aircraft. (Note well: you have 12 legs total of thoroughbred aircraft—not 12 legs each.)

Veteran racers will appreciate the push toward variety. With 12 thoroughbred legs, including wingmen, we have 24 slots for their usage. So they are not banned. But the active participant will surely want to develop alternative "rides" among the many competitive aircraft in what is now the top tier of "normal racing aircraft." The use of thoroughbreds may be further reduced in future years.

Q. Do all legs flown count for the thoroughbred frequency of use restriction?

A. Yes. For example, if you could use a thoroughbred for a Wild Card, that usage would count against the limit.

Q. The thoroughbred aircraft collection is leg-limited to 12 baton legs. How about an aborted flight, does that count? A wingman flight?

A. The key here is "baton leg" – which is defined by a takeoff, en route flight, and a successful landing while delivering the baton. The wingman flight does not matter here unless the wingman flight is substituted for the original lead pilot's flight and thus becomes an official "baton leg."

Q. The FSX Acceleration P-51 Racer is eligible this year. Are other "racers" also eligible?

A. The FSX P-51 Racer is a special exception that incorporates a unique form of variety into this year's race. The normal rules apply otherwise: no other special racers are allowed. (On race-eligible aircraft, racing "liveries" or "repaints" are fine as long as the flight dynamics are race-eligible.)

Q. Are all repaints of eligible normal aircraft automatically legal?

A. As far as we can tell, yes. Sometimes a repainter will provide a visual impression of a slightly different model. This is not a problem as long as the flight dynamics are correct. The aforementioned DH.103 Hornet has repaints of the prototypes, of which no 10 were in regular service. Flying those "paints" is fine because they merely decorate the legal model. Similarly, John Terrell has a nice "Gulfhawk" repaint of the Alpha Bleu Ciel Bearcat. It is fine, despite the fact that the "Gulfhawk" Bearcat was technically a different aircraft of which 10 were not in service. CR-1 use repaints to depict slightly different Do-335 models. They are legal. Our intent of allowing repaints is that you can enjoy your favorite visual representation while flying your perfectly legal race eligible aircraft. Please do not take advantage of this ruling by sneaking in a different flight model under the claim of flying a mere repaint.

The only exception is that for the sponsored civilian transport jets you are limited to civilian liveries. (No military liveries for the civilian jets. This is just a matter of race rules' practicalities.)

Q. The White List indicates that otherwise-eligible realistically modeled aircraft with a maximum speed of less than 350kts are legal. Is that at level flight?

A. Yes. The speed limit here is 350kts true airspeed (350 KTAS) measured while in level flight at critical altitude (under MSFS "Clear Weather" which approximates ISA). For turboprops, for which there is no critical altitude, the relevant altitude is that which maximizes true airspeed. This provision means to allow usage of a large number of slower aircraft (including four-engined transports) that have their place in the race but are not competitive as "racers".

6. Normal Legs.

Note the discussion about aircraft identification is placed in the Special Rules and in the General Rules. For the moment, take this dual message as a signal that you want to identify clearly your aircraft.

Q. Why do we have to announce the aircraft type and model and modeler? In years past this has been an unobserved formality.

A. This year we have two special restrictions on aircraft. First, the aircraft must be on the "White List" of eligible aircraft. You must fly an aircraft that is on this list—and announce that you are doing so. Second, we have restrictions on the usage of some very fast aircraft (the thoroughbreds). When you announce your aircraft type and model and modeler, you are also announcing the status of that aircraft as well. Finally, we have a very specific distinction involving different simulations of the DH.103 Hornet—which require knowing the type, model, and modeler. The title of the aircraft, as retrieved by the Duenna, does not identify the actual aircraft. Thus, you are required to announce the type, model, and modeler.

For example, "RedGreen has the baton flying the WBS P-51D," has a different meaning than "Moses03 is flying the A2A P-51H." The latter counts against the thoroughbred leg limit. Obviously, "flying the Mustang" will not do the job. Other examples include: "salt_air has the baton flying the FS2004 default DC-3," or "apollosmith is flying the dcc P-38M," or "buzzbee flying the FlightOne B727-200." Please make the announcement in good faith—typing the extra word or two is not much extra effort. A repeated failure to identify the aircraft will quickly lead to penalties.

Q. What if I forget. Can I add that information later? Is that a documentation penalty?

A. Good form suggests identifying type, model, and modeler on takeoff. If you forget, you may post that information at any time within an hour after you release the baton. (Your teammates may help out by posting the information while you are flying.) If you forget entirely, you are subject to a documentation penalty. If you need constant reminding to identify your aircraft, you may find yourself penalized for an inability to provide timely documentation—all this at the discretion of the Racing Committee. It is your responsibility as race pilot to inform the race monitors about your aircraft. (They do not have the time to conduct an investigation of every leg.)

Q. How good does the aircraft "declaration" need to be?

A. Good enough. From your declaration, an observer must be able to tell immediately that you are flying a legal aircraft. That said, the purpose here is not to create a "gotcha" opportunity. A good faith effort will in most cases suffice as long as you are willing to work with the race monitors to get it right. If you are unwilling to provide the information, then expect a penalty. The purpose is to make everything clear to all concerned.

7. Wildcards.

Q. The wildcards impose weight restrictions on the aircraft used. How does that work?

A. The aircraft must have a takeoff weight of 30,000 pounds. (You can check your takeoff weight in the aircraft/fuel menu in MSFS. The takeoff weight includes the empty weight plus fuel and payload.) You may not overload the aircraft. If you have any questions, ask.

Q. The wildcard legs this year are restricted by an overall total limit of 5,150nm. The maximum leg is 2,110nm and no other leg may exceed 1,650nm. How are these distances calculated?

A. Distance is officially measured by the MSFS flight planning facility in your simulator. In most cases, any good flight planner will give a good approximation of the distance in your legs. For the total, you merely add up the legs. If a leg is very close to 2,110nm or 1,650nm or if the total is very close to

5,150nm, then you must use the official MSFS flight planning facility to do the calculations. (Getting a precise reading can be time consuming.)

Q. How do I use the MSFS Flight Planner as a precise Measurement Tool?

A. Note that the MSFS flight planner will give different distances between airports – distances that vary by the placement of the aircraft at the airport and the current runway. 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 display and/or 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 arbitrary departure and destination airports. The navigation log (Navlog) will give the intermediate waypoint distances, including that between airports A and B. The distance is given in tenths of a nautical mile. Retain the precision in tenths. We do not round down, we do not round up.

For example, the limits of a single wildcard leg, or the total of the wildcard legs, are set as a mathematical expression. A "longest leg" of 2,110.0 is fine but 2,110.1 is over the limit. A total of 5,150.0 is fine but 5,150.1 is too much. No rounding.

Q. Is there any limit on how we combine the wildcard legs, as long as the total is less than 5,150nm?

A. Not really. You may spread the 5,150nm over your three legs in any way that suits your strategy – keeping in mind the 2,110nm and 1,650nm leg maximums. You could do three 1,650nm legs or any other combination. You need not fly three legs nor fly a total of 5,150nm. These are strategic options.

8. Special Continental-Island Jet Legs.

Q. Why two-engined regional jets?

A. This year features these ubiquitous workhorses which do not normally get much attention in the RTWR. (This is just a special "flavor" for the 2015 event.) Thus, 2015 is the year to "shine" for our proud pilots of the PMDG NGX or the Aerosoft A320X. If you are a POSKY or Project Airbus or a (new) TDS driver, then great. Old timers will appreciate the chance to fly the BAC 1-11 or Caravelle. All pilots have easy access to the default B737-400 (FS9) and B737-800 and A321 (FSX).

Q. The Continental-Island Jet Leg must be less than 1,000nm. What if I fly 999.9nm (as carefully measured by the tedious official way)? What if it is 1,000.0?

A. The wording is precise in the mathematical sense of "less than". That is to say: 999.9 is less than 1,000 – we do not round up. And of course, 1,000 is *not* less than 1,000...by definition. We do not round down, we do not round up. If you are running within a couple of miles of the limit, please be *very* careful to measure, and re-measure, your distances. You are responsible for getting the calibration right. See the FAQ section 7 above.

Q. Does the "continental landmass" requirement mean that I have to fly all the special jet legs on a single continent?

A. No. Each instance of the legs needs to begin and end on the same continent. The first may begin and end in Europe, the second in Asia, the third in North America and the fourth in South America. However, if you wish, you may fly two or more on a single continent.

Please be sure that your departure and arrival airports are on the *landmass* of the continent. (Offshore islands, including Long Island, Newfoundland, Singapore, Hong Kong and Japan, are not on the *landmass*.)

Q. How about the "Island" part of these jet legs? This seems confusing. Can you say more?

A. The 2015 "continental-island" jet legs are merely an optional extended version of the traditional continental jet legs. Rather than being limited to within-continent flights, they may connect a continent with one of the required island destinations (see Rule 3). For example, you may fly from Hamburg to Mallorca or from Mallorca to Hamburg. Note that you may not fly from London to Mallorca because London is not on a continental landmass. You have a total of four Continental-Island jet legs. You can choose the mix of island and continental legs to a maximum of four.

Q. Can I fly two consecutive Continental-Island jet legs. Say from Hamburg to Mallorca and then from Mallorca to Tangier?

A. Yes.

Q. How about from one required "Paradise Island" to another required "Paradise Island?"

A. No. As the rules state, the Continental-Island jet leg connects two airports on the same continental landmass or one airport on a continental landmass to a required destination island. (You can fly from Madeira to Tangier but not from Madeira to Tenerife.)

Q. Does Bali count as one of the required destination islands? Can I fly a continental-island jet to connect Bali with Asia and/or Australia?

A. Yes, for purposes of this rule. Yes, you make such a jet connection—taking care to be sure that your continental airport is on the landmass. Avsim, we are looking at you. ☺

Q. Why a 3 hour time limit?

A. That will give a pilot plenty of time to execute a leg of nearly 1,000nm in a relatively slow transport jet. Racing pilots will probably not need that much time.

Q. Is there any strategic advantage of the continental-island jet legs?

A. They are fast, of course. But in addition to speed, these legs have a special strategic value of allowing longer legs than normal. This feature may be especially helpful in traversing empty seas or sparsely populated regions where there are only unlighted airports or no airports at all.

9. Formation Flights

Q. Another event? Lots of extra stuff to worry about?

A. These are "normal baton legs" flown more-or-less as any normal leg. The difference is that the lead pilot and the wingman coordinate their takeoffs and landings so that they are in close proximity. If the lead and wing are both ready to go, then the formation flight will take little longer than a normal leg. Not much extra here other than an increased attention to the lead-wingman relationship.

Q. What is a perfect score?

A. Two pilots whose Flight Time durations are exactly the same earn a perfect score. (Teams have accomplished this standard a number of times.) Note that the race committee will award a special prize to the two pilots who most nearly perfect a Formation Flight. (With an absolute standard of zero seconds, it is possible for several pairs to win the prize!)

Q. I see that imperfection produces penalties. Why call these penalties rather than give bonuses for excellence?

A. This year we have decided to avoid bonuses. In the Formation Flight, a "penalty" merely reflects falling short of perfection – not wrong-doing.

Q. This seems an odd penalty scoring structure. What gives?

A. Perfection needs no explanation. Missing perfection by only a few (1-10) seconds represents excellence—certainly within the margin of error associated with the factors involved here. And coming within a minute of perfection is solid professional airmanship. These levels of accomplishment are separated by one minute steps in the scores.

The next score reflects the gap between "solid professional" and "ok" flying. Missing by more than a minute costs a 4 minute penalty, and each additional minute increments the penalty. Finally, the penalty for encountering bad luck or for a poor performance or for a failure to complete the Formation Flight is cut off at a substantial but not devastating maximum penalty.

Q. Perfection seems an awfully strict standard. In recent races there have been very few perfect Formation Flights. Won't we end up getting penalized for not accomplishing something that is nearly impossible?

A. Well, yes. We want to encourage and reward excellence. Our expectation is that most serious pilots will finish within a minute of each other to score a penalty of 2 minutes. Several will do better and score a 1 minute penalty. And a few will ace the event to perfection. Of course, a few pilots may have a bad day and miss the mark by more than a minute and thus start to earn progressively greater penalties. (We hope not.)

Q. After declaring the Formation Flight by taking the baton and declaring wingman, one of the pilots experiences a quick computer failure or forgets to arm the Duenna, may the pilots "reset" by returning to the starting point, declaring a reset, and recommencing the leg? This is an option in a normal leg – is it also an option in a Formation Flight?

A. No. Once both pilots declare for the Formation Flight the clock begins and the Duennas mark the pilots' legs. If either pilot resets, then the Formation Flight is automatically transformed into a normal leg. The pilots should proceed as normal, with the baton pilot having the option to transfer the baton to the wingman if necessary. The Formation Flight part of the leg is terminated once either pilot resets. Before commencing on a Formation Flight, both pilots should double-check their setup and be certain that they are ready to go.

Q. If the lead pilot crashes, can the wingman take the baton and complete the leg? If the wingman crashes, can another pilot become wing?

A. If the lead pilot enacts the Wingman Transfer rule, the Formation Flight is automatically terminated and the leg becomes a normal leg. The normal rules and penalties apply. If the wingman crashes, then again the lead would terminate the Formation Flight and follow the normal leg rules.

Q. What if I do not crash but instead have a computer failure? How about a technical error? What if I forget to start the Duenna?

A. Sorry, a pilot error crash and a computer failure are equivalent here. Equally, a leg that is ruled invalid due to a consequential setup error will also forfeit the FF opportunity. The same applies for a failure to use the Duenna...or a Duenna crash. Both pilots must satisfactorily complete and document their legs to earn a score. (If you cannot use the Duenna, do not take on a Formation Flight.)

Q. Is there a penalty for failure to complete a Formation Flight?

A. The team scores the best five of their six opportunities. One failure is excused. Other failures do incur penalties.

Q. This could be awful. If the wingman crashes, then there is a penalty of 12 minutes.

A. Yes, you are correct. The Formation Flight encompasses some risk and should be planned accordingly. However, your team does count only the top five of six attempts...so you can tolerate one bad outcome without it's being a disaster.

Q. Sometimes the weather will make things very difficult. Can the team cancel the Formation Flight and try another time?

A. Once declared, the Formation Flight is active and subject to failure. If things look dicey before the leg, you might choose to postpone the FF opportunity until a later time.

Q. In a Formation Flight, the baton may not advance on the next leg until both pilots have posted their landings. Do both pilots have to post their authentications before the baton advances?

A. No. The authentications may follow in the usual timely manner. You are right, however, that the baton may not be advanced until *both* the lead and the wingman have landed and posted that they are down safely. If the baton is passed prematurely, the Formation Flight fails. For this reason, a formation flight might take a few minutes longer than a normal baton leg. (This is true for the final leg as well. When the team wants the final leg to be a Formation Flight, that leg and thus the team's circumnavigation does not conclude until both pilots have landed and posted.)

Q. I ain't no math wiz. How do I figger out this high falootin' formula?

A. This is easy. Go step-by-step.

(a) The standard Formation Flight Duration Difference = $|D1 - D2|$ where D1 and D2 are the Duenna-indicated Flight Time durations of the first and second pilots. You take the absolute value of the difference in minutes and seconds.

(b) Then examine the table in the Special Rules. Perfection, a Duration Difference of 0:00, is scored accordingly. Missing by 0:08 would incur a penalty of 1 minute. And so forth.

Q. Do we use the Duenna "Flight Time" or "Baton Time?"

A. Flight Time.

Q. What if I forget to use the Duenna's "Auto-arm" feature?

A. You will have to certify the takeoff and landing times, and thus the exact duration of the flight. This information lies in the Duenna's logfile. You should declare your mistake and show all the information in your thread. (You will want to show both your logfile and your partner's logfile. You may ask your teammates for help here.) As long as the Duenna record is complete, and there are no irregularities, all should be well. Repeated failure to use the "Auto-arm" feature will attract a skeptical eye and possible committee action, including voiding the Formation Flight. As part of your Formation Flight checklist, you should confirm that the "Auto-arm" feature is enabled.

Q. Can the pilots cheat to create a false impression of equal flight durations?

A. It is possible to compare the flight durations directly by examining the detailed Duenna flight logs. Those logs show the exact time that each flight took off and landed. Any instance of a team's artificially manipulating the results—such as delaying the Duenna "landing" report or "taxiing" to keep the Duenna alive—will forfeit the Formation Flight *and incur a severe deterrence penalty*. Such actions will be considered an intentional violation of the rules and a breach of the mutual trust that makes the race so enjoyable. (The lead pilot may legitimately delay his landing by circling over the destination airfield until his wing arrives. He may not land and keep the Duenna running until the wing has landed in order to claim a simultaneous arrival.)

10. Special Aircraft Legs and Team Flights.

Q. In previous years, we have earned bonuses for Team Flights. Why not this year?

A. In 2015 we have chosen to eliminate the bonus system in favor of a graduated penalty system. The math is the same.

Q. Teams can score only three Participating Pilot legs in any one event. Doesn't this mean that each team has to fly multiple Team Flights?

A. To score the required six Participating Pilot legs, yes. You can fly two Team Flights with each scoring three Participating Pilot legs or three flights with each scoring two Participating Pilot legs. Remember, a wingman counts as a Participating Pilot as long as he does not hold the baton. (In an emergency, you might consider using the "Skyhawk" option to score any needed Participating Pilot legs.)

Q. How many Participating Pilots should our team fly in any event?

A. You can score a maximum of three in any Team Flight event. However, whenever possible you should fly more than that number because you may experience a failure by one or more of the participants.

Q. The "Cold Warrior" is not an extra leg in jets? Or is it?

A. No. A team merely augments a leg that it might otherwise fly – and designates it a "Team Flight." Thus, a team must have available a Sabre Jet Leg or a Shooting Star Leg to transform it into a Team Flight. If the quota of those legs has already been used up, then the corresponding team flight option has been foregone.

Q. Do teams have to fly every one of these special aircraft legs?

A. The first two legs ("Extra Credit" and "Royal Reign") are required to be flown as a baton leg. The "Skyhawk" and "Cold Warriors" are optional. Your augmenting any of these with a Team Flight is always optional.

Q. Why does the team need a total of three pilots (a baton carrier, a wingman, and at least one participating pilot) to designate the event a Team Flight? After all, the team might need only one more Participating Pilot leg to complete the requirement and the wingman should count as a "participating pilot?"

A. This requirement marks the event as a "team" event rather than the normal baton-pilot-plus-wingman combination. It also provides a bit of security in case the wingman is needed to carry the baton.

Details on the Specific Legs.

Q. Extra Credit. Say more.

A. The baton-carrier and wingman are limited to the default (or Alabeo) Extra 300. What is special here is that to qualify as either the baton pilot *or* as a participating pilot, you have to fly at least one minute inverted. You might reasonably fly upside-down more than just one minute to guard against any tiny measurement error in how the Duenna counts the time of inverted flight. (Note that you will have to authenticate this inverted flight via the Duenna text file. Thus, you cannot score this leg unless you are using the Duenna and are able to display the text file authentication.)

Q. Royal Reign requires the default King Air 350. That is a bland aircraft. Can we fly a more interesting King Air?

A. The baton carrier and wingman must fly the default version. The participating pilots may fly any realistic King Air – some of which may be slower or faster than the default version. Good options might include the Carenado C90, the Carenado B200, the Flight One B200, and the AFG B300. All are legal. Note that the baton speed is determined by the default King Air 350.

Q. Skyhawk. Isn't this a secondary option?

A. Yes. It is intended as such. For both the Extra and King Air options, the baton legs are required. The "Team Flight" costs little or no baton time. Here, however, the C172 leg is optional. So in effect, the team must fly the 25nm minimum on its own time. This option is meant to provide an outlet for teams that have met with major misfortune in the other Team Flights. *You will probably use this flight only in case of an emergency.*

Q. What other models of the C172 are good options?

A. Carenado and Flight One have good models. The best is probably the A2A C172. But any good realistic model is eligible here for participating pilots. Again, the baton speed is set by the lead pilot who must fly a default C172.

Q. The Cold Warriors allows a number of jets. Which is the fastest? Why not simply fly faster planes?

A. The baton holder and implicitly the wingman must both fly the Section F8 F-86E/F Sabre or, alternatively, both fly the AlphaSim F-80. The participating pilots may fly other faster aircraft, but doing so will not affect the speed of the baton carrier. Furthermore, participating pilots need to finish within 20 minutes before or after the baton pilot. So there is no advantage to getting the "fastest" flight model and speeding ahead. *(A word of caution: Be sure that your chosen aircraft can fly the leg distance at the speed you need. Many eligible jet fighters are "range-challenged.")*

The eligible aircraft include: North American F-86 Sabre (AlphaSim/Virtavia, MilViz, Kirk Olsson) , Douglas F3D Skyknight (AlphaSim), Grumman F9F Panther (Aeroplane Heaven [optionally, modified by "Old Salt"]), Lockheed P-80 Shooting Star (Jens Kristiansen), Lockheed F-80 (AlphaSim), Lockheed T-33 (Tim Conrad), Northrop F-89 Scorpion (AlphaSim), Republic F-84 Thunderjet (AlphaSim, Sim Skunk Works), de Havilland DH.100 Vampire (AlphaSim, Rob Richardson), Gloster Meteor (AlphaSim, Rick Piper, Rob Richardson), Hawker Hunter (David Garwood, AlphaSim/Virtavia), Sud Aviation Vautour (Barney Bigard, Philippe Penot), Dassault Mystère IVA (André Chancel), SAAB J29B[not J29F] (Tim Conrad), and MiG 15 (Michel Migaud & ABC team).

Q. In the Cold Warriors, can we mix and match the F-80 and F-86 for the baton holder and the wingman?

A. No. Your Team Flight merely augments a *Shooting Star Flight* or a *Sabre Flight*. The first requires that both the lead pilot and the wingman fly the AlphaSim F-80 Shooting Star. The second requires that both the lead pilot and the wingman fly the Section F-8 F-86 Sabre. You may mix and match aircraft among the Participating Pilots.

More General Matters concerning Team Flights.

Q. Lots of rules here. What is going on?

A. These are simple affairs in practice. A baton pilot takes a default King Air 350 and flies 100nm. Other members of the team take aircraft in the same category (maybe a Carenado C90 or an AFG B300) and fly alongside. Hence, a Team Flight.

Q. If I am flying the "Special Aircraft Legs and Team Flights" as a Special Aircraft Leg but not a Team Flight, am I limited by the time schedule for Team Flights?

A. No. If you are flying one of these flights as a baton holder but without participating pilots (or scoring your wingman as a participating pilot), you may fly that flight under the normal leg racing rules. If you score any participating pilot leg, you must observe the Team Flight restrictions. (This is a "small detail" question. The team flight restrictions involved here have to do with minimum distances. If you are flying a leg without declaring a "Team Flight" you do not have to follow the specific team flight restrictions.)

Q. The Team Flight requirement is fulfilled by participating pilots. What about the baton holder? What about the wingman?

A. The baton holder earns no team flight credit. The wingman counts as a participating pilot as long as he does not carry the baton during the event. (Note that the wingman will want to satisfy the baton pilot's aircraft restrictions just in case he has to take the baton.)

Q. The requirement that the participating pilots land within 20 minutes before or after the baton carrier is new. What is going on here?

A. The slower participating pilots have some pressure to keep up with the lead pilot. The fastest have a reason to stick close to the lead pilot. All in all, some teamwork is required here. The 20 minute time window is a weak version of the "Formation Flight" exercise – applied to the larger team framework. (In this case, we allow a landed lead pilot to delay "posting his landing" to wait until his teammates arrive. Such a tactic is definitely NOT allowed in the Formation Flights. Of course, delaying a landing announcement means delaying the baton transfer as well.)

Q. The timing rule says that participating pilots must land and post no more than 20/30 minutes after the lead pilot. What about authentication? That can sometimes take a long time?

A. As long as you land and make the appropriate arrival post, you are within the 20/30 minute window. But you must authenticate properly within an hour of your posting. Even if three pilots have already landed, you might want to land, post, and authenticate just in case one of those pilots has a bad Duenna. (Participating pilots may land before the baton—though they may not take off before the lead pilot claims the baton.)

Note that the authentication for each participating pilot's flight need include only the Duenna's textfile. (The textfile is sufficient and takes less bandwidth than the map. Everyone is flying the same route.)

Q. The baton holder may release the baton to the next leg's pilot who may take off. My landing as a participating pilot and my authenticating that flight doesn't affect the progress of the baton does it?

A. Right. Your role as participating pilot does not affect the progress of the baton.

Q. What happens if lightning strikes and both lead and wingman crash?

A. No problem. The current baton holder may restart the leg or abort the leg as per the normal rules. If the leg is eventually completed (by someone with the baton – lead or wing) to the same destination in an eligible aircraft, then all the participating pilots' authenticated legs will count. This is true even if those legs were completed before the successful pilot took off. If one of the scoring pilots subsequently carries the baton (in relief of the initial baton pilot), his scoring leg is voided. The team may substitute another valid leg in its place. (Note that the baton carrier aircraft is sometimes more circumscribed than the participating pilots' aircraft.) *The participating pilots' 20/30 minute landing window restriction, before and after the baton pilot's landing, is waived in the case of both the pilot and wingman's crashing.*

Q. So can any participating pilot who completed the flight "carry the baton" retroactively for the team flight if both the lead and wingman crash?

A. No. The participating pilot would have to abandon his successful leg, and restart from the origin airport and complete the leg as baton pilot in an appropriate aircraft.

Q. How do we handle the Duenna's inquiry about Baton Holder or Wingman?

A. The Baton Holder (Lead Pilot) and Wingman check the box appropriately. The remaining "participating pilots" do use the Duenna tracking facility but do *not* check the "Baton holder" box. They should post their authentications on the forum.

Q. Why the Team Flight summary? Who posts this and when?

A. The race needs real time scoring: the summary will allow everyone to know each team's standing. The baton pilot (or any substitute) posts the summary indicating the participating pilot credits earned during this event—taking care to check the authentications. Then he should provide the total cumulative participating pilot credits earned in all the Team Flights that have been completed thus far.

Q. After the final Team Flight, the team should publish an overall Team Flight summary that identifies the date and time of each individual Team Flight and its results. The team then calculates, reports, and enters into the bank account any penalty incurred. What if the team never actually uses a "final Team Flight" – say it holds off until the end to see if it needs to use another Team Flight?

A. That is fine. Upon completion of the team's circumnavigation, it may then post the "Overall Team Flight Summary" and enter the proper penalties (if any) into the team bank. As long as everyone is open and transparent, then we shall be fine. No "gotcha" mentality here.

11. The Consecutive Pilot Rule in 2015.

Q. Why does the (only) pilot need to wait 5 minutes before taking the baton for the second consecutive leg? Why not just take a 5 minute penalty and takeoff?

A. We do not know if there is a second pilot who will be able to take the baton – one who might arrive in a short while. The 5 minute wait assures that a true emergency exists.

Q. Why only once for the 5 minute wait?

A. This provision is not meant to be a strategic option used routinely. One of the very core features of the race is the team framework with short legs and frequent baton handoffs. Under the normal rules, the team would have to wait indefinitely until a second pilot became available. This change allows for one-time emergency relief. If your team uses the emergency provision, you should be on your toes for the rest of the race.

Q. Then...why have an option of further usage, albeit with a 30 minute wait?

A. We want to minimize the chances of a complete disaster. Imagine a team with a very limited pilot roster. In the middle of the night, the scheduled pilot cannot fly (say a rush to the hospital), then the baton would sit idle until someone else showed up. That could be two hours. The 30 minute wait is roughly equivalent to a 30 minute wingman transfer penalty with the missing pilot transferring the baton to the just-landed pilot-of-record pilot.

Q. So a pilot-of-record can fly wingman in the next leg! That is new.

A. Yes and yes. In the early days of the Race, it was helpful to spread the pilot assignments to encourage participation. The need for this restriction has largely disappeared. However, note that *no pilot may be pilot-of-record for more than two (2) consecutive legs*. So if the previous pilot-of-record, now flying wing, is forced to take the baton...the next leg will need a new pilot.

12. Artificial Vision and Artificial Landing Aids in 2015.

Q. I understand that I cannot use third-party addons for "artificial" or "unrealistic" landing aids. But what about artificial vision gauges that replicate advanced systems that are now available?

A. These are not suitable for the Race and are thus prohibited. For this year at least, we judge these devices to artificially eliminate some of the challenges involved in our event. In the future, artificial vision might become commonplace and our stance might change. Note that generating "artificial night vision" by ad hoc fiddling your monitor setting to "turn night into day" is similarly prohibited.

Q. What is this about Glenn Copeland's "Satellite Assisted Landing System" being disallowed?

A. That is the case. This is a clever gauge that effectively allows an ILS approach to dirt strips. Very nice, but not suitable to the RTW Race.

13. New Pilots.

Q. If I'm a new pilot and take the baton, what happens if I crash or my computer dies?

A. You simply execute a "wingman transfer" to move the baton to your wingman. Normally, this move would cost the team 30 minutes. But, as a new pilot, you get a "mulligan" so that the transfer is free. (You can do this only once.) Simply declare "rookie mulligan" and all will be well.

Q. Who is a new pilot?

A. If this is your first year in the RTWR, you are a new pilot. If you have flown before but are returning after an absence (3 years), then you qualify as a "new" pilot. If your case is ambiguous, please declare your "new pilot" status before you fly your first leg.

Q. What is the intent here? Can this feature be used strategically by the teams?

A. The goal here is to give new pilots a little margin of error during their first year. The RTWR can be a demanding event. Any pilot, even grizzled old veterans, will be nervous on taking the baton. We hope to make the first year pilots' experience a little less worrisome. (Teams will likely pair a rookie pilot with a veteran wingman.)

We expect that teams will keep this goal in mind when they give new pilots an opportunity to fly for the first time. Attempts to take advantage of this provision would not be in the spirit of the race.

14. The Duenna.

Q. Why are you asking that we use the latest release of the Duenna v2.0?

A. Because pilots are using different simulation platforms. The new Duenna v2.0 incorporates both FSX Steam and P3D as well as FS2004 and FSX Classic. Thus, it allows identical measurement and authentication for everyone. Further, it reports information about the changing weather conditions—a useful feature that allows you to confirm to your fellow competitors that you are using a dynamic real weather engine.

Q. Where can I get the latest release of the Duenna?

A. Go to the FS Round the World Race website forums. Look for the FS Duenna Version 2 section under Releases. Here is the current URL:

<http://www.fsrtwrace.com/forum/viewforum.php?f=22&sid=7b42212b4f77fc2c897efb4d05a8bd8d>

Q. If I'm flying FS9, do I need the latest FUSIPC? How about FSX? Or P3D?

A. We do not know for certain. You should download the latest FS9 version (the freeware version is fine) just to be safe. On the other hand, all FSX and P3D pilots should be sure to get the latest FSUIPC update and install it. (This is FSUIPC v4.939 at the moment.)

Q. If I have already installed the Duenna 2.0 and want to install a newer version, do I have to uninstall the older one beforehand?

A. No. If you already have Duenna v2.0 installed, you may simply install the newer version on top of the older version. The previous configuration settings will be retained. Note that if you are installing the Duenna v2.0 for the first time, then you will have to enter the configuration settings.

Q. As a veteran, I have the Duenna v1.0 running on my system. It is just fine and I'm ready to race. But this new Duenna seems a last minute requirement and I am short of time and my computer setup does not like last minute changes. If I cannot install the Duenna v2.0, or I cannot get it to work properly, what can I do?

A. You may go back to last year's authentication system which works well. You may use the older Duenna v1.0 coupled with the default MSFS-Jepesen weather engine (with all the Race-required weather settings). No problem at all. For this year, we'll call this the "Legacy" setup.

Q. But I want to run one of the authorized weather addons. I can get the Duenna v1.0 to work nicely, but the Duenna v2.0 just won't cooperate. What can I do?

A. Please contact the Racing Committee or the Executive Committee and explain your position. We shall make every effort to work this out to accommodate your desires. As long as you are willing to swear on a stack of Chuck Yeager biographies that your addon weather is producing realistic dynamic weather, then you will almost certainly be allowed to race with your currently functioning setup. The event should be fun.

Q. What if I run into a Duenna bug or failure?

A. This is true for both Duenna v1.0 and Duenna v2.0. (No software is perfect or foolproof.) If all the evidence indicates a successful leg, the Committee will accept the leg as completed. We do not want software glitches to mar the event.

15. Weather.

Q. What happens if the MSFS weather engine breaks down?

A. Two things can happen. First, you may have a temporary glitch in your own internet connection. Sometimes this can trigger an error message that MSFS cannot generate the weather. You should simply finish your leg while handling the annoying error messages. (You might want to cut the leg short or abort if you find the problem bothersome.)

Alternatively, the entire system may fail: Jepesen has occasionally gone down. Check with your teammates to see if they are all experiencing a failure. Look for an immediate reaction from the Executive Committee. In all likelihood, the entire race will be asked to switch to one of the default weather schemes: Fair Weather. (Not Clear Weather.) When Jepesen comes back up, teams will quickly switch back to the standard race settings: Real-world weather (updated every 15 minutes).

Q. What if my addon weather engine turns out to fail on me.

A. You will have to live with the consequences. Please test your setup before the Race begins. If something happens that necessitates that you abandon your weather engine, please appeal to the Racing Committee (likely through the Duty Officer). If there is no competitive advantage, they might allow you to switch to the default FS9/FSX weather engine. If you are flying P3D, they may allow you to switch to another addon weather engine. This is a matter of fairness not only to you and your team but also to your competitors. If a weather engine simply fails (say their server goes down), then the Racing Committee will take immediate action to enable the Race to go forward.

16. The Bank

Q. What bonus opportunities exist?

A. In 2015, there are no bonuses. We leave the language to remind us of this provision in future years.

Q. Who does the accounting work here? The pilot will be busy after landing and my forget to make all the entries.

A. The book keeping is the team's responsibility. Teams may assign duties among their members to make sure everything is in good order. For example, teams may want to appoint a "Banker" to take responsibility here. Or they may form a "Banking Committee." The intent is for everyone to keep current public records so that everyone else knows where we all stand. You can see why this is so important.

Q. What information do I have to enter into the Bank?

A. Provide the team name, the nature of the penalty, the minutes penalized, and the details.

Q. What happens if we make an honest mistake in our accounting? After all, we are dumb pilots.

A. There is no penalty. If you make a good faith effort in posting, then you may make corrections without a problem. It is vital that you keep your accounts current – hence the one hour rule on posting time. (If you miss the timing once, you can appeal to the Committee and expect leniency. If you miss your posting time more often, you might expect to pay a price.) Normally, once a record has stood for 24 hours it will not be subject to revisions for any reason. (That is, we do not anticipate reexamining the books from previous days. We do not want to change the race standings upon discovering an ancient accounting error. Check your work.)

Q. The Bank is open to all. Why don't I just enter a bunch of withdrawals in the other teams' accounts? No one will ever know that I am responsible.

A. Are you angling for a career in finance? While nothing is proof against a determined effort, please note that we now have a password protection system to remind you of your better self. :-)

18. Communications.

Q. Why have a separate NOTAMS Forum and a NOTAMS section on the website?

A. The NOTAMS Forum is intended for a quick notification. The Duty Officer or Race Master or Appeals Board member can immediately post decisions and warnings and so forth. It may take a few hours for the quick notifications to get put into clear formal language and then posted on the NOTAMS page on the website. This system mixes the need for speedy notification with the need to get the language and format right in the more permanent record.

Q. The Duty Officer forum is the main way to contact the Duty Officer. That means that anything that I say will become visible to all. How can I complain about the other teams if they know what I am saying?

A. You obviously want to be thoughtful about how your words will be perceived. "Say, Team xx's leg seems a bit fast. I don't understand," is much better than, "That Team xx is full of cheaters. Look at what they're trying to get away with." We are all grownups here. Just be careful to reread what you write to be sure that everyone will understand the intent behind your words.

Q. I want to communicate privately with the Duty Officer. What can I do?

A. Most routine matters can be handled by the Duty Office in open public discourse. That is the right way to conduct professional discussions. If you have something that is very sensitive, then you want to ask the Duty Officer to escalate. He may ask that you establish an "off site" email contact, or he may choose to raise the issue with the Race Master who will contact you directly. (This may not happen right away. But if it is a truly sensitive matter, then we don't want to act hastily in any case.) As a last resort, you can contact the Executive Committee via rtwrace@gmail.com but you will understand that that email will not be under constant monitoring.

Warning about obscure bits.

Here is a list of some of the rules that may be obscure but may turn out to be important. We want to avoid "gotchas" in the rules interpretations.

- *Continental Requirement.* The 2015 RTWR requires only one (1) full stop landing on each of the continental landmasses. (But be sure that you do pick an airport directly on the landmass. The required Paradise Islands are not on a landmass.)
- *The North-South latitude requirement* is easy to understand. And it is easy to forget. Please double-check that you have met this requirement of your team's race routing.
- *Required Paradise Island Airports.* It is absolutely essential that your team hits the minimum number of required airports distributed properly. If there is any confusion at all, ask.
- *Continental-Island Jets.* The rule specifically limits the usage of these optional jets. Take care not to violate the restrictions.
- *A Team Flight Declaration* requires at least three pilots: a baton-carrier, a wingman, and one participating pilot. (This means that, absent a wingman transfer, a Team Flight is likely to score at least two participating pilot legs.)
- *Required Special Aircraft Legs.* Each team is required to complete a leg in both the Extra 300 (Extra Credit) and Beech King Air 350 (Royal Reign). You cannot skip these baton pilot legs. Augmenting these legs with Team Flights is optional.
- *Inversion for Extra Credit.* Note that the Extra 300 baton pilot (and any participating pilots) must fly at least one minute in inverted flight for the leg to count. You need the Duenna text file to authenticate the time inverted.
- *Hidden Overspeed.* A flight with over 90 seconds of "overspeed" as marked by the Duenna is an invalid leg. This provision compensates for FSX not counting max_mach time in its overspeed time. FS2004 pilots will probably have already crashed by this time but FSX pilots should check their Duennas to be sure that a seemingly valid leg accords with the amount of time in overspeed.
- *Repaints* of legal racing aircraft are fine. As long as the aircraft paint does not alter the flight dynamics at all, then it is ok. The only exception is that military paints for civilian commercial transport aircraft are disallowed. (We shall not penalize a first inadvertent use. But will strongly monitor further instances.)
- *Official Distances Measurement* employs the FS Flight Planner of the pilot's simulator. The distances are given in tenths of a nautical mile and we keep that level of precision in our calculations. There is no rounding. "Less than", "equal to", and "more than" are ordinary mathematical relationships without ambiguity.
- *Duenna v2.0 Authentication or Legacy Authentication Required.* Just a reminder that you are meant to use the new Duenna v2.0 in its latest release. This means that you also need to update your version of FSUIPC. FSX and P3D pilots will need to be sure to do this before the race. Pi-

lots who cannot use the Duenna v2.0 may instead employ the Legacy Authentication option: they may use last year's Duenna v1.0 coupled with using the MSFS-Jeppesen default weather engine.