

IslandAirlinesE (V1.0)

Flight created on 10.11.2024

Estimated flight duration 1-2h (1h per round trip)

Level of difficulty: Difficult

Task: Fly the route of “the shortest airline in the world” .

Prerequisite: **The “Ford Tri-Motor” is absolutely essential for this flight.**

Download this airplane here:

<https://www.rikoooo.com/downloads/viewdownload/52/1010>

(This airplane also works in P3d V6, even though the website only says P3D V4/5 compatibility).

If the download link does not work, please contact me:

p3d@andi20.ch

Introduction:

The US Postal Service does not deliver letters and parcels to the archipelago; the population is simply too small.

That is why Milton Hersberger, an experienced pilot, founded the air service to the islands in 1936 with the Ford Tri-Motor.

The all-metal Ford Tri-Motor, affectionately known as the “Tin Goose” , was a real workhorse and perfect for delivering passengers, mail and cargo to the islands with their short runways.

In 1966, Dr. James Frackelton founded the Rattlesnake Island Local Post (RILP). The local post office made it possible to send and receive mail via Island Airlines. In addition to normal postage, special Rattlesnake stamps are required for all mail items.

For legal reasons, the original 4-cornered stamps had to be changed.



The 3-cornered Rattlesnake stamps, which are very popular with stamp collectors, still exist today:



The islands are now connected to the mainland by ferries. Air traffic has largely ceased.

This is exactly where the fictitious problem begins:

One of the 2 ferries is in dry dock for regular maintenance and now the other ferry has a massive engine problem.

So your boss has sent you and a colleague to use the old tri-

engine to keep the islands supplied.

The flight route:

- 1) From Port Clinton (KPCW) to
- 2) Put in Bay (3W2), on to
- 3) Middle Bass East Point (2W9), to
- 4) Rattlesnake (580H), to
- 5) North Bass (3X5), back to
- 6) Put in Bay (3W2) and back to the Port Clinton Airport (KPCW).



In 1966 this route was flown 5 times a day, on Sunday even 9 times.

You will fly this route twice.

The flight:

The Ford Tri-Motor is parked at Port Clinton Airport with the engine switched off.

The weather is unsettled, with constantly changing wind speeds and directions. In addition, visibility is currently limited to 3 nm due to morning fog.

Start the engines (ctrl+E, or manually see below) and taxi to the cargo house.

To load the cargo, you must open the door (shift+E).

The co-pilot will help you by telling you which runway to take off and land on, depending on the current wind conditions. It will also tell you the direction to the nearest airport and give you

tips on altitude and speed.

To make navigation easier, the Tri-Motor has a portable GPS in which the flight route is programmed.

Select “Vehicle / Instrument Panel /GPS” in the menu:



You can also switch the mission compass on/off as required.



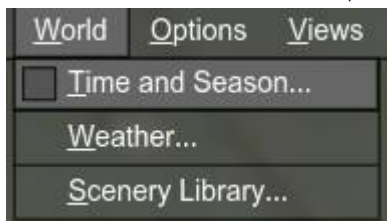
Anyone who knows my previous missions knows that unexpected things will happen along the way.

Start:

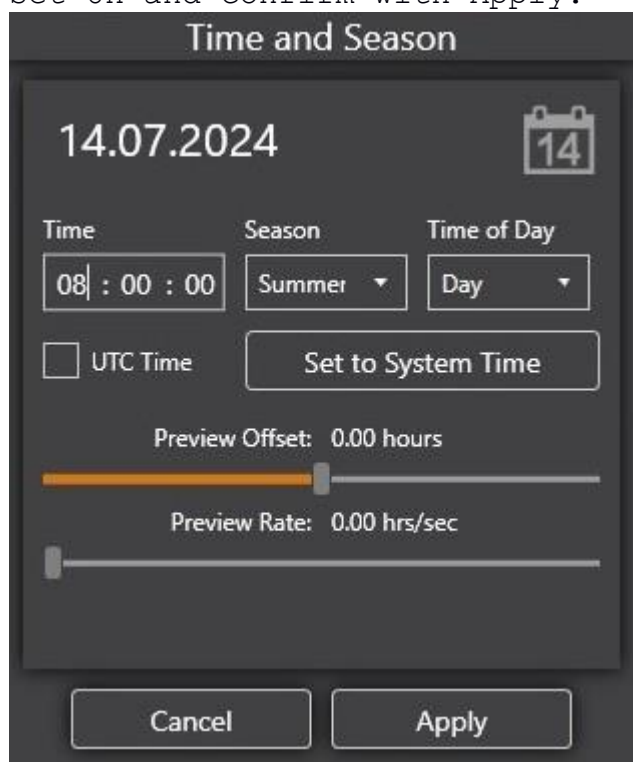
At the beginning you can choose whether you want to complete the entire flight (2x the flight route, i.e. 12 take-offs and 12 landings, duration 2h) or just the second round (6 take-offs and landings, duration 1h).

If you are only flying the second lap, the time must be set to 8am. At 7 a.m. the sun rises, causing extreme glare in the cockpit on the first lap, but at 8 a.m. the sun is much higher.

Go to the “World / Time and Season” menu:



Set 8h and confirm with Apply.



The fuel consumed in the first lap is automatically adjusted.

Information about the airplane:

The Ford Tri-Motor is a fairly simple aircraft with few instruments and controls. Autopilot or landing flaps are not available.

Some of the individual components are in strange places, so that pilots at the time had to be quite agile to reach everything.

Pitch Trim:

Located behind the pilot.

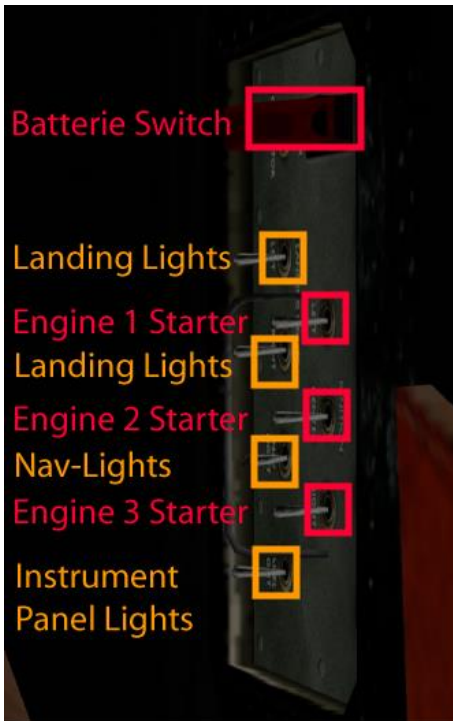


switches:

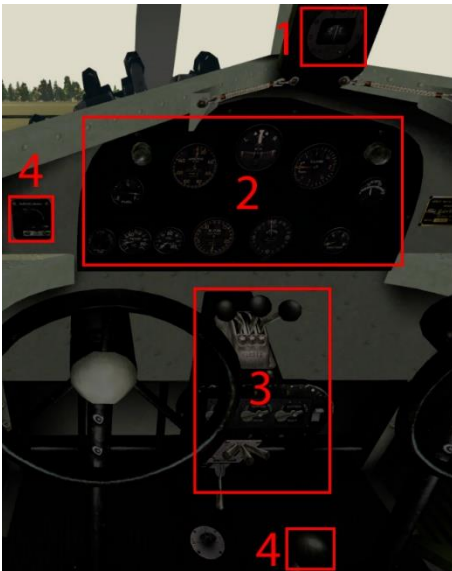
Located on the side of the co-pilot seat.



Detail:

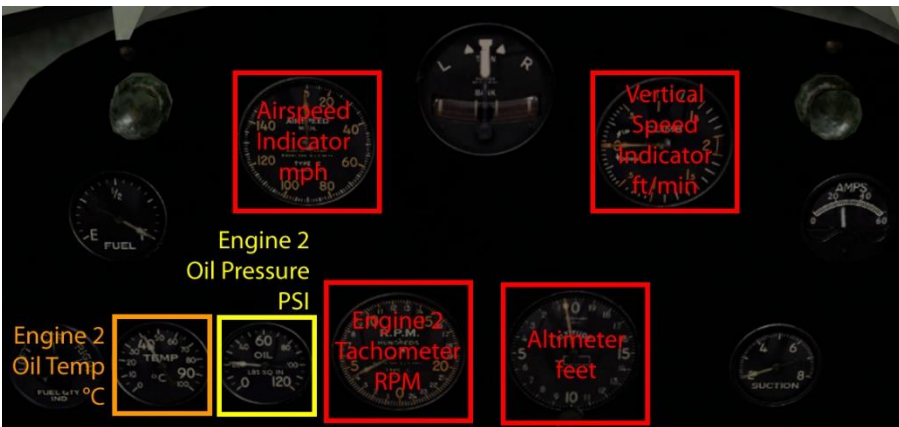


Cockpit overview:



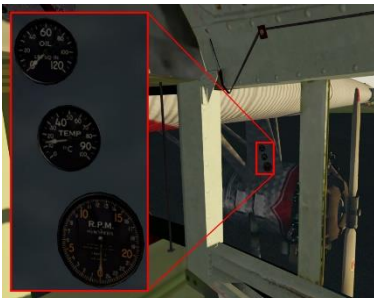
- 1 = Compass
- 2 = Main instruments
- 3 = Engine control
- 4 = Parking brake

Main instruments:

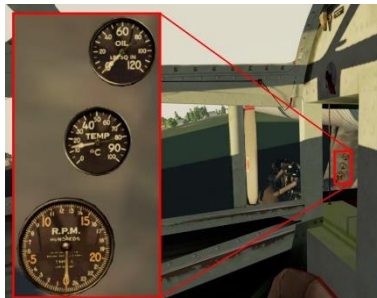


The displays for motor 1 and 3 are located on the respective motor:

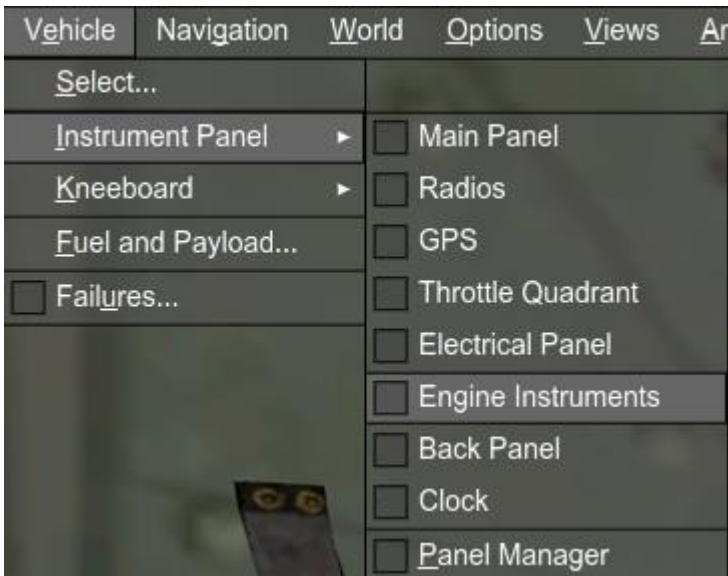
M1



M3



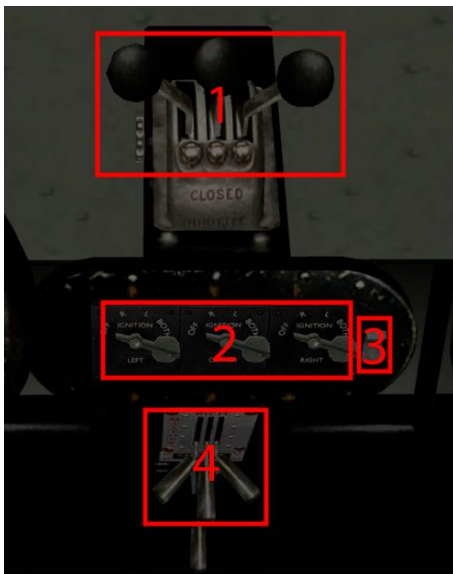
It is therefore better to take binoculars with you, alternatively activate “Vehicle / Instrument Panel / Engine Instruments” in the menu:



This provides you with the M1 + 3 displays in a freely movable window:



Motor control:



- 1 = Power lever
- 2 = Magneto ignition

3 = Main ignition switch
4 = Mixture lever

Engines start manually:

1: Main ignition switch on



2: Magnetic switch on Both



3: Mixture to 100%



4: Motor starter sequence 2/1/3



Why this sequence: The battery is only charged via motor 2. To ensure that there is enough energy to start all motors, motor 2 must therefore be started first. By the way: If motor 2 fails, the battery is empty after approx. 4 minutes.

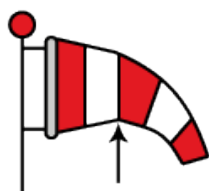
Windsock:

Because wind strength and direction are constantly changing in this mission:

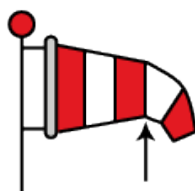
Interpreting the windsock correctly



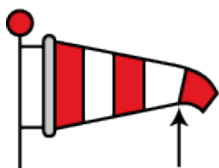
3 Knots
5,5 Km/h
3,5 mph
1,5 m/s



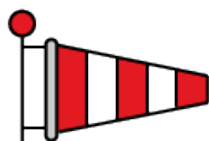
6 Knots
11 Km/h
7 mph
3 m/s



9 Knots
16 Km/h
10 mph
4,5 m/s



12 Knots
22 Km/h
14 mph
6 m/s



15 Knots
28 Km/h
17 mph
7,7 m/s



The windsock was stolen.
Not blown away, as the
windsock has been proven
to withstand wind speeds
of over 75 knots.

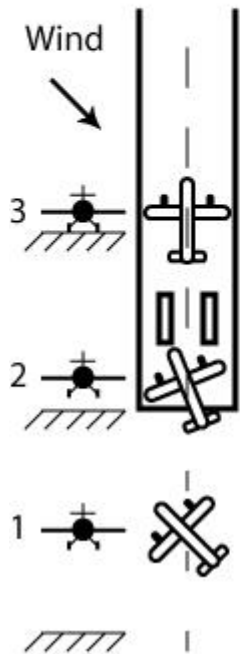
Landing techniques in crosswinds:

The approach to the airport in crosswinds is flown with a slip angle, i.e. a heading is selected that prevents the aircraft from drifting off the centerline.

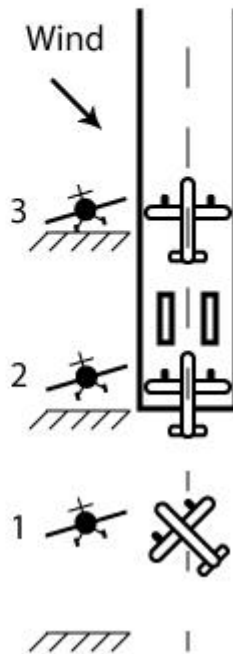
There are several techniques for the landing approach:

Landing techniques in crosswinds

Lead angle
(sliding method or
crabbed approach)



Hanging wing
(sideslip approach)



Lead angle:

One possible method is landing with a lead-in angle without a drooping wing.

This is also known as the crabbed approach. The English term “crab” refers to the crab's sideways movement.

Commercial aircraft are usually landed using this method as it offers increased passenger comfort and the distance between the engines and the runway is greater than with the wings hanging.

Shortly before (approx. 1-2 s) touchdown, the lead angle is abandoned to protect the landing gear and tires.

To do this, the pilot applies rudder on the side facing away from the wind, the nose aligns itself in the direction of the runway and at the same time aileron must be applied on the side facing the wind to keep the wings horizontal.

Hanging wing:

The second method is landing with the wing down.

The first part of the approach is flown with a lead angle, as in crosswind cross-country flight. In the last part of the approach, however, in the short final approach, you change to a flight attitude with the wing drooping and opposite rudder and give up the lead angle.

The wing facing the wind is “left hanging” by applying aileron to the side from which the wind is coming. The top of the fuselage of the aircraft turns into the wind and the aircraft is banked. To prevent the nose of the aircraft from also turning into the wind, the rudder must be used to counteract this.

The rudder and ailerons are deflected against each other. This condition is referred to as “crossed rudders”. The crossed rudders cause the aircraft to glide sideways, also known as a sideslip approach.

The aircraft continues to fly with the wings drooping, rudders crossed and aligned with the runway until touchdown.

Due to the inclined position of the aircraft, the main landing gear facing the wind touches down first and thus prevents drifting.

The required bank angle increases with the strength of the crosswind. The stronger the crosswind, the greater the bank angle and therefore the greater the risk of the wing or engine touching the ground when touching down.

The advantage of this approach method is that the longitudinal axis of the aircraft is already aligned with the center of the runway during the approach and a turn before touchdown is no longer necessary.

Combination of lead angle and hanging wing:

The above-mentioned landing techniques reach their physical limits at some point.

The combination of both methods allows a compromise, a lower bank angle and a smaller lead angle.

With this mixed technique of lead angle and drooping wing, it is possible to land safely even in much stronger crosswinds.

Further information and tips:

1) This sightseeing flight is ideal for getting to know the Tri-Motor extensively.

The aircraft is loaded differently for each takeoff, 2 takeoffs will be with 50-150 pounds overweight.

2) For take-off I recommend an elevator trim of about +4, for landing about +8.

(This may vary slightly depending on the current load and weight distribution).

3) When taking off from a short runway, I recommend: full braking, run up the engines, release the brakes, rotate at 60mph.

4) The Tri-Motor is difficult to control on the ground and when taking off with a crosswind the aircraft drifts. With the rudder

alone, it is difficult to turn or maintain runway heading during takeoff.

- The differential brake makes it easier to steer the aircraft or keep it on course.

- You can also control the aircraft well with different power levels for motors 1 and 3.

If you have a Logitech Throttle Quadrant, reprogram the 3 levers to the power of the 3 motors for this flight. The mixture and propeller axes are not required.

5) Runway "19/1" at North Bass Island Airport (3X5) is in P3dV4 "17/3" .

So if the co-pilot wants you to take off/land on runway 19 or 3, use 17 or 3.

In P3dV5/6 the runway is marked as closed (red X). This closure has been temporarily lifted so that supplies to the island can be guaranteed due to the ferry failure.

6) Was that all? NO!

a) If you are looking for a challenge, try the following:

- On the first approach to Put-in-Bay (3W2), land with a tailwind on runway 3.

- On the first take-off from Put-in-Bay (3W2), take off downwind from runway 3.

(Both are permitted, but you will be monitored to see if you leave the runway).

b) You can attempt take-off/landing on other runways at all airports. However, with a tailwind or strong crosswind it will not be accident-free everywhere.

I hope you enjoyed this flight, if so, please send feedback to p3d@andi20.ch . Please also send any error messages (spelling mistakes, incorrect information, etc.) to p3d@andi20.ch, I appreciate any feedback.