IGFly.com Tupolev 154M

Sample Flight Tutorial

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Introduction

Hi there, student!

Let's get straight to business. Today will make a test flight from Petropavlovsk-Kamchatskiy (Yelizovo airport, UHPP) to Magadan (Sokol airport, UHMM).

Our aircraft is Tu-154M… A plentiful aircraft… I believe you will think so soon.

What we have to do first? Right… Pick up maps and create the route. It should look this way:

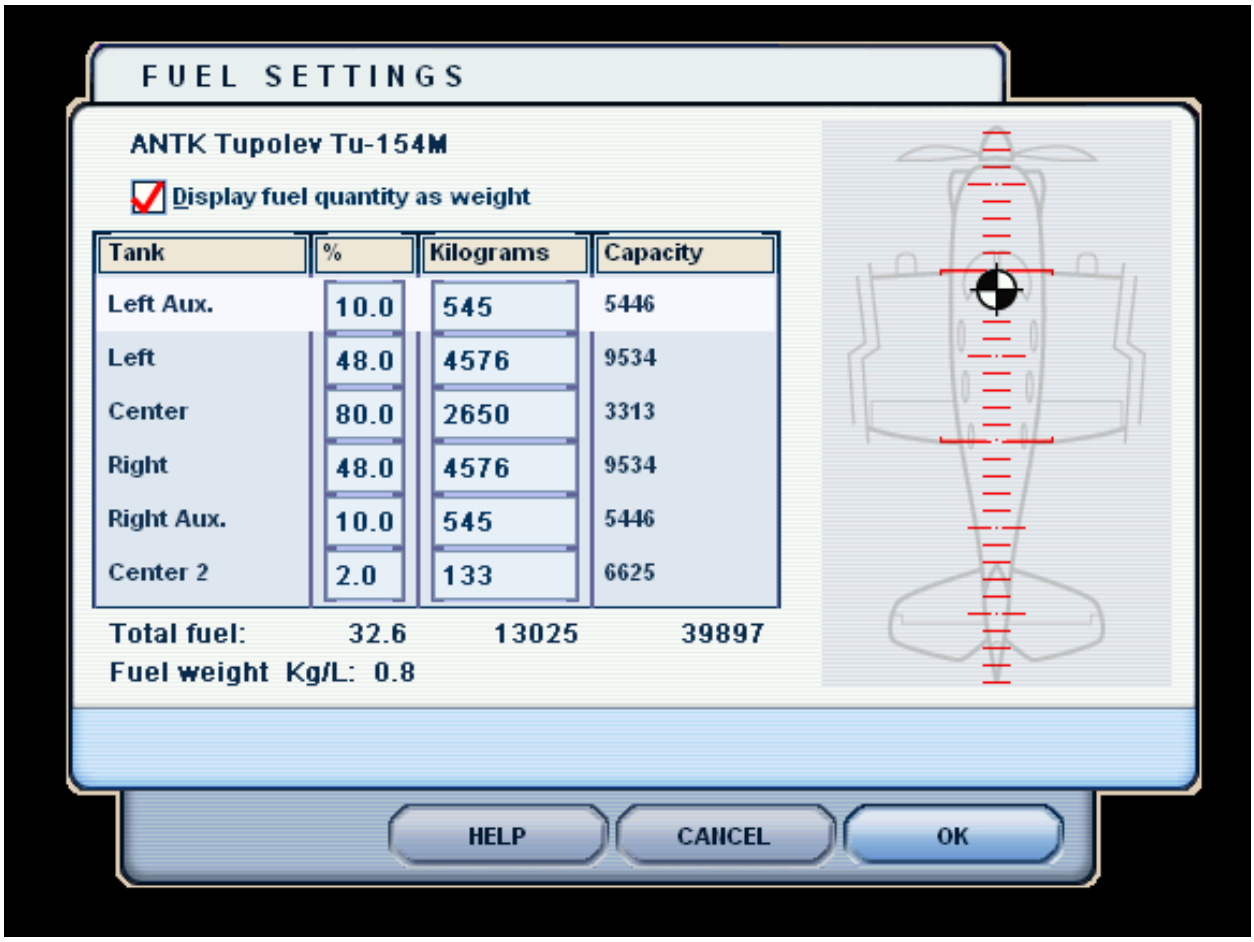
UHPP BAKEN NOGLA VATES NIKSI VORON BUVAK UHMM

You can easily create this route with FSNavigator or with default Flight Planner of MSFS2004. Don't forget to save it. We'll need it later. If you choose to create the route with FSNavigator don't forget to save it as MSFS2004 compatible file. Next step we should load this plan into MSFS2004 default flight planner. All data will be automatically loaded into NVU.

Our route length is 950km, and altitude is 9100m.

According to the Fuel consumption in flight table in the manual we need 13t of fuel.

Let's refuel our plane. It should look like this:



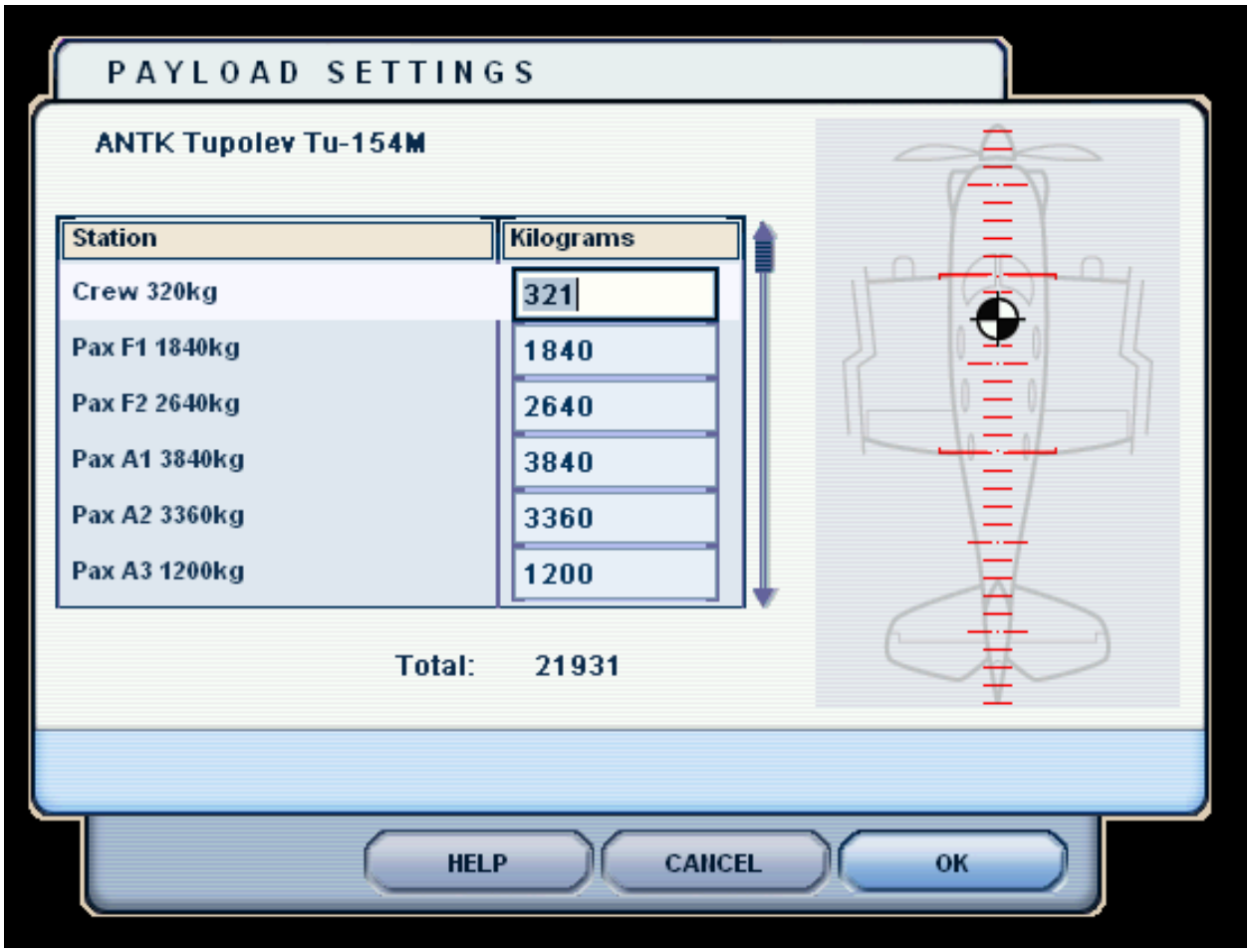
Please be patient when refueling an aircraft. REMEMBER, you must always control the amount of fuel in tanks. Tu-154M have 6 fuel tanks:

- 4 of them located on left and right wings
- 2 of them located in centre-section of aircraft.

Fuel should be distributed proportionally between Left and Right and also between Left Aux and Right Aux. Centering (CoG) of the plane would be broken if you fail to do so. This would cause terrible consequences.

Center2 tank is used for long-distance flights and/or for tuning CoG. In our case we got 133kg in Center2 tank.

Okay, let's load our aircraft with passengers and with barreled caviar. As you can see we got 2337 kg overload here. We won't be able to kick out some of our passengers, so we will throw out your favorite caviar from Cargo F2, Cargo F3, Cargo A3.



By the way you can read Common Limitations chapter in the aircraft manual to know weight limitations.

After all centering operations we got CoG value of 25%, which is acceptable value.

So the aircraft is loaded and refueled. Let's get into the cockpit and get ready for flight while our stewards will help our passengers to take their sits and fasten their belts.

1. First of all let's turn on batteries or switch on the ground power supply

2. Turn on navigation lights

3. Turn on COM1, COM2 and Intercomm

4. Turn on engines fuel supply

We are ready to start APU now.

5. APU startup

When APU is started you should have light turned on as displayed on the screenshot.

6. Power supply by APU

Follow the sequence displayed on the screenshot.

7. Turn all systems on the overhead panel except BKK-18 Test

8. Turn on hydraulic system

Now we are ready to start engines.

9. Air bleed

Set Airbleed Pressure to 6.9 kg/sq sm by switching on and holding APU bleed air switch in this position.

10. Start Engine 3

11. After a start of the Engine 3 switch power supply to use generators.

12. Turn off APU

Start Engine 1 and Engine 2 by analogy with Engine 3

So, engines started.

Let’s move to systems check and starting.

13. Turn on ABSU Hydraulic Switches

14. Pedestal

1. Turn on Arretir Gyro.
2. Turn on autopilot damper switches.
3. Turn on wing leveler power
4. Turn on altitude hold power
5. Turn on NAV power switch
6. Turn on Flight Director switch
7. Turn on NVU power switch

8. Turn on NavCalc switch

15. Switch PNP mode selector to NVU

16. Setting the pressure on altimeter

17. Set beacons frequency on overhead panel

18. Set Taxi/Landing Switch to Taxi mode

We now ready for taxing. We'll skip this procedure, as we kindly believe you're already professional in taxiing.

19. Extend flaps to take-off position while taxiing

We are cleared to take off, Student!

Let's get ready for flight.

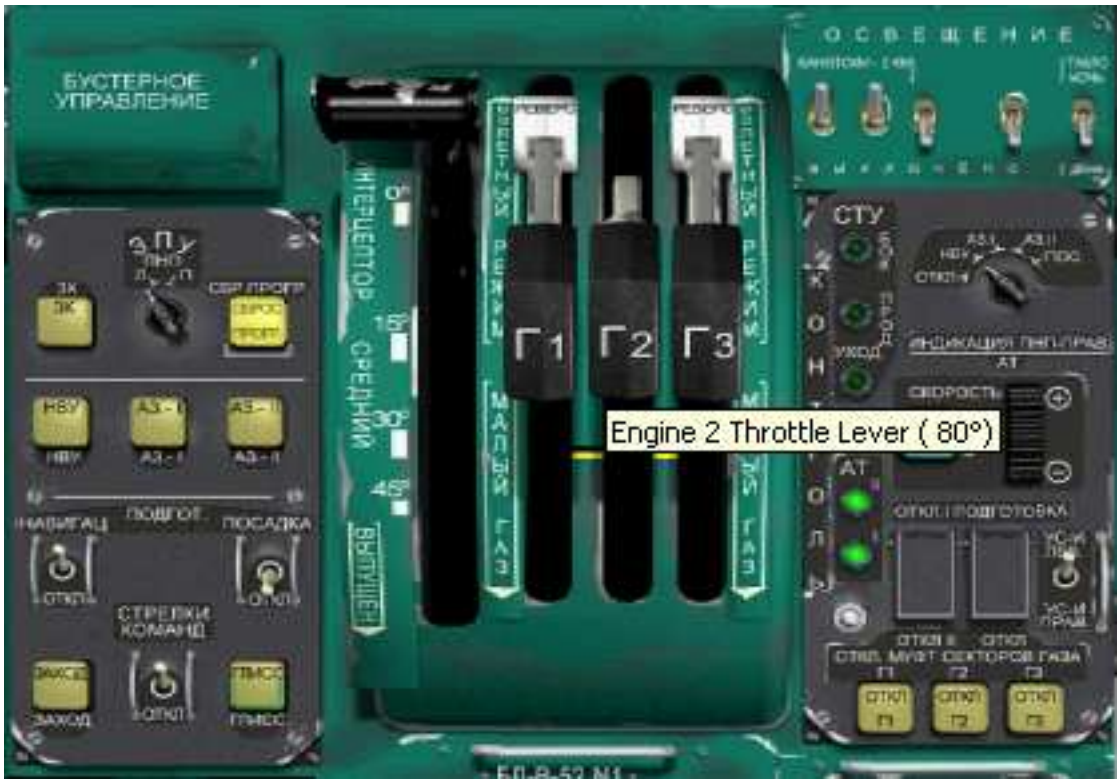
20. Extend landing lights

21. Set nose gear limiter to 10 degrees

22. Set elevator position to bold blue sector by using elevator trimmer (control Elevator Position gauge as displayed on screenshot)

23. If you did everything correct, "Not ready to TKOF" warning light should stop blinking

24. Report "ready to takeoff" to controller, get "clear to takeoff" and start rolling. To start rolling smoothly move throttle to 80 degrees and control engine status



25. Release brakes and set throttle to maximum

26. Start rolling. Move nose gear up when speed reaches 240 km/h. You should takeoff when speed is 280-290 km/h

Now we learned to how to do a take off procedure.

27. Retract gears and start step-by-step flaps retraction according to the aircraft speed after take off

28. Set throttle to "Nominal" mode (93%) after take off and mechanization retraction

29. First stage of take off is finished. Turn on autopilot (cyan button)

30. Switch HSI/PNP Mode Selector to NVU mode

31. Turn on NVU mode on autopilot panel

Continue to climb until 9100m.

32. Increase aircraft speed by adjusting attitude pitch selector

33. Set altimeter to standard pressure 29,92 on transition level. For your information when you fly with default ATC you should know that transition level is usually 18000 ft

34. When IAS reaches 550 km/h turn on V mode on autopilot panel

Now we just need to control climb of aircraft. Watch gauges closely. When mach reaches 0,82 turn autopilot into M mode.

35. When your aircraft is close (300-500ft away) from required altitude turn off M/V modes and decrease attitude

36. When you reach altitude of 9100m turn on Altitude Hold button (H)

37. When Mach=0,82 turn on Auto Throttle Power switch on. Then push Unlock Throttle Level buttons and push AT IAS Hold button

We are at required altitude. We've just finished one of the most intensive parts of our flight. Ask steward to bring you some coffee or tea. Now you can take your time and study navigation maps.

You can even tell your crew an anecdote. You can do a lot of things. But never forget to control your flight because only this will assure its safety.

Finally we moved to the hardest part of our flight. Descending, approach and landing. If you have studied navigation maps you should be aware of possible approaches to airport. Remember that knowing navigation maps will save you a lot of nerves and fuel. Tune the radio on ATIS and listen for weather conditions.

Ask your passengers to take their sits.

38. Set throttle to idle when reaching the point of descending. Auto throttle should turn off automatically

39. You should choose the descending mode depending on flying conditions

In our case we start descending at 150 km from airport.

Control the attitude. Follow the commands of controller.

We entered the airport zone

40. Turn of NAV Power. Turn on ILS power. Switch PNP mode to POS

41. Extend gears at speed of 380-390km/h

42. Extend flaps to 15 degrees when speed reaches 350-360km/h

43. On speed of 320-330km/h extend flaps to 28 degrees before base leg

44. Push Approach Hold button

45. When altitude reaches point of glidepath push H (altitude hold) button on autopilot panel

46. Extend flaps to 36 or 45 degrees based on approach conditions

47. After passing the point of glidepath Glideslobe hold mode should be automatically activated

If it didn't happen you can do it manually by pushing Glideslobe hold button.

We are on glidepath. Approach mode is automatic.

48. Extend landing lights and turn on landing lights when passing outer marker

49. Turn off autopilot and take control of aircraft when reaching decision altitude

50. By slowly pulling yoke start leveling the plane on altitude of 10m. Set throttle to idle or a little bit more when altitude is 6m. Level the aircraft on 1-3m

51. Extend speed brakes by pressing "Slash Button [/]", and turn on reverse

Congratulations! We landed in Magadan

Clear the runway and taxi to parking. While taxiing it is allowed to turn off Engine 2 and power consumers on overhead panel.

Good luck to you in your virtual pilot career!