# Cessna T-50 Bobcat

**By Simon Smeiman**

**Published by**

## FSAddon Publishing

# Contents

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**Now let's get down to business………**
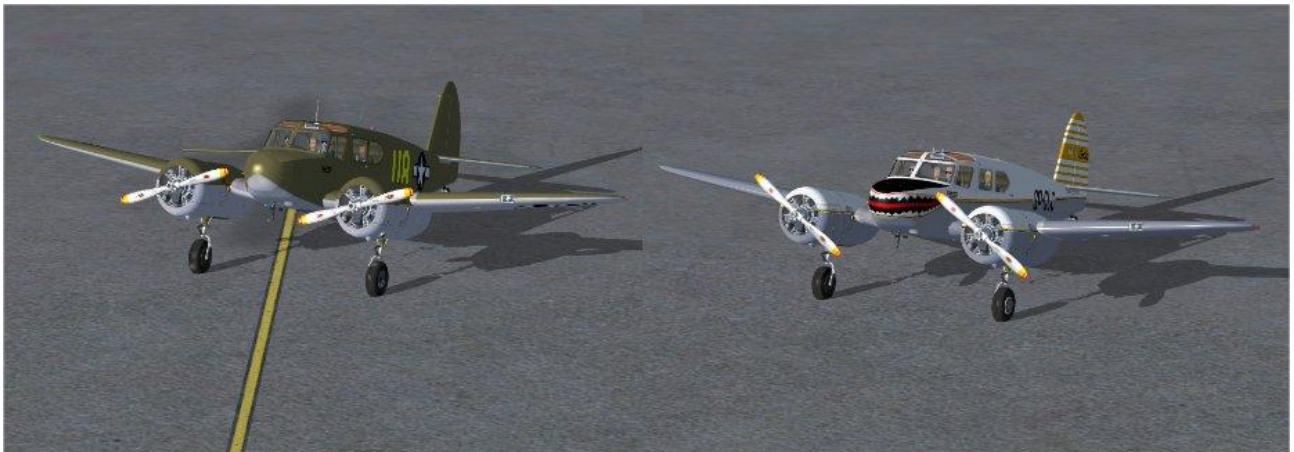
# History and specifications

The Cessna T-50 (Cessna's official name) is a five-seat light transporter manufactured by Cessna Aircraft Company in 1939 for the civilian market. While the wings and tail unit were wood, the fuselage was a welded steel-tube design with fabric over wooden skinning. It featured a unique electrically actuated retractable main landing gear. The main wheels retract half-way into the nacelles. This way the aircraft can do an emergency "belly landing" with minimum damage. The wing trailing-edge flaps are also electrically actuated. The fixed tail wheel is non-steerable and full-swiveling but fitted with a tail wheel lock.

The AT-17 was a military version of the commercial Cessna T-50. The need for a training plane to help pilots convert from single to twin-engine aircraft enabled Cessna to sell 550 aircraft for this purpose to Canada (under the designation Crane), followed by 33 T-50's to the U.S. Army Air Corps under the designation AT-8.

In 1942, the USAAF felt the T-50s would work well as light personnel transports and for liaison/communication. 1,287 AT-17 Bobcats (later designated as UC-78s) were delivered and served in all theaters of war.
The U.S. Navy purchased 67 planes in 1942-43, which they designated JRC-1s, to ferry pilots between delivery ports and transport navy pilots to new duty stations.

The T-50 served in these various roles for several years after the war. Over two dozen Bobcats still roam the skies of the USA, Canada, and Australia/New Zealand.

Some aircraft were fitted with floats similar to those used by the Piper Cub.

The Cessna T-50 Bobcat also featured as the "Songbird" aircraft in the popular 1950's television series "Sky King".

Nicknames: The Bamboo Bomber; Useless-78, The Wichita Wobbler; Brasshat; Double-Breasted Cub; Box kite; Rhapsody in Glue; San Joaquin Beaufighter.
The nickname Bamboo Bomber came from the G.I.'s who preferred the modern all metal airplanes to the wooden winged T-50, which really wasn't a bomber and of course and no bamboo in it's construction!

Specifications:
Engines: Two 245-hp Jacobs R-755-9 radial piston engines.
Weight: Empty 3,500 lbs., Max Takeoff 5,700 lbs.
Wing Span: 41ft. 11in.
Length: 32ft. 9in.
Height: 9ft. 11in.
Performance:
Maximum Speed: 195 mph.
Cruising Speed: 175 mph.
Ceiling: 22,000 ft.
Range: 750 miles.

Number built: 5400 of all models.
Number still airworthy: ><25.

# Installation

Installation is relatively easy. Actually, chances are that when you read this, you've already DONE IT!
>Just to re-iterate what happens then:
>You start the 'installer'
>It will find your FSX installation (unless you have changed something, then you will need to point the installer to the PATH where you have installed FSX)
>The installer will make (or find an existing) FSAddon folder within your FSX folder and move the necessary files into it
>Inside that FSAddon folder you will also find this manual.

# Uninstalling

We can't imagine you would want to uninstall what you just bought, but just in case you need to, here is how:
>Click on Start (bottom left of your windows screen)
>Click on Programs
>Find the FSAddon product title (you may have more)
>Find the appropriate 'Uninstall' and click on it

That's it.

# Support

We don't envisage you will need much support as this is a fairly simple product with an automated install.
But since SUPPORT is one of our famous hallmarks we are here for you of course !!

You can freely READ our Support Forums and find information there. In case you have QUESTIONS you will NEED to REGISTER to our SUPPORT FORUMS , which is THE ONLY PLACE we provide support for FSAddon Publishing products !!

You can find the forum here: http://forums.fsaddon.eu/portal.php
Click on 'forums' and look for the dedicated support forum in the list!
(For reasons of security you will have to register in order to post messages there).

# Versions included for FSX

# Introduction

Congratulations with your new fleet of the Cessna T-50 Bobcat for Flight Simulator X.

This model was developed with FSX compatible tools, tested and found to be working well with Windows XP and Vista with DX10.

We trust that you will have many hours of happy flying with the Bobcat!

The developing of the model was based as far as possible on the data and specifications of the real world Cessna T-50 Bobcat. However, we do not claim that the flying characteristics of the model resemble that of the real world aircraft.

This package consists of the following aircraft configurations:

Civilian version
Military version
Civilian floats version
Military floats version
"Sky King" Version

The main differences between the civilian and military versions are the crew and passengers, the wheel hubs and aerials.

All models share the same panel and sound. The main panel and sound folders are located in the military version aircraft folder.

Two panel folders are included. The active panel folder does not have the GPS, Map and Checklist sim-icons. Should you wish to have these icons on the panel just rename the second panel folder to "panel" and rename the active panel folder to something else. Backup the panel folders first before renaming.

The wheeled aircraft can land with the wheels retracted like the real world aircraft. Read more about this feature under the heading "Belly Landings".

Features
Besides the normal basic animations, the following extra animations are included:
Pilot and passenger animation.
Propeller blades pitch animation.
Cockpit side windows animation.
Landing lights animation.
Doors and cockpit side windows animations.
Elevator/ rudder and trim tabs animation.
Water rudder lever animation (floats version only).

Other features:
3D "glazed" gauges
Detailed radial engines and propellers

# Panel

This model does not have a 2D Cockpit or any pop-up panels. All the gauges in the virtual cockpit are 3D except where indicated otherwise. All the gauges however have a built in 3D appearance. The gauge bezels are "glazed" to show light reflections.

While not available in the 1930's or during the WW11, this model is equipped with some modern communication and navigation aids to make full use of the FSX IFR.
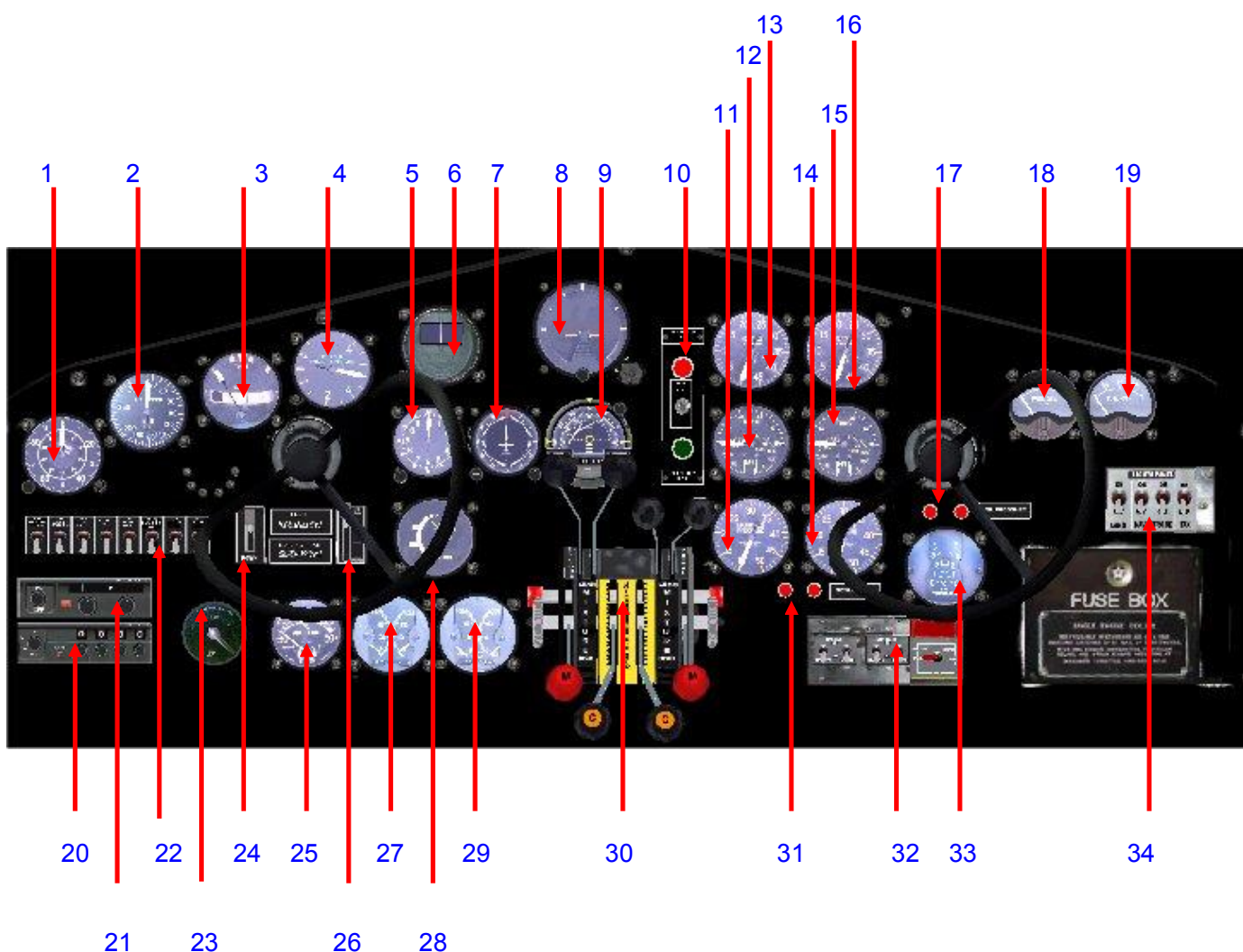
1.  Altimeter.  Calibration knob is located at the bottom left of the gauge.
2.  Airspeed in MPH.
3.  Turn co-coordinator.
4.  Vertical speed.
5.  Clock.
6.  Compass (not 3D).
7.  Directional Indicator. Fitted with OBS and heading bug
8.  Artificial Horizon. Can be calibrated (centre bottom knob) and caged (bottom right hand knob).
9.  NAV Receiver. *** See exploded view below.
10. Landing gear warning lights: Red is gear up. Green is gear down.
11. Engine 1 manifold pressure
12. Engine 1 oil and fuel pressure and oil temperature combination gauge.
13. Engine 1 RPM
14. Engine 1 manifold pressure
15. Engine 1 oil and fuel pressure and oil temperature combination gauge
16. Engine 1 RPM
17. Oil warning lights
18. Left fuel quantity (60 US Gallons)
19. Right fuel quantity (60 US Gallons)
20. Transponder
21. Comm. 1 Radio (not 3D)
22. Main switch panel
23. Fuel tank selector
24. Landing gear lever
25. Outside ambient temperature
26. Flap lever
27. Volts/Amps
28. Flap position indicator
29. Carburetors Air Temperature
30. Engine Management levers
31. Generator warning lights
32. Starter panel. ***See exploded view below for starting procedure
33. Cylinder Head Temperature (not 3D)
34. Lights panel

### ***NAV Receiver

The NAV Receiver must physically be tuned to the station's frequency for the localizer and glide slope needles to work. It will not auto tune with the ATC function of FSX. Consult the FSX Learning Centre for more information regarding navigation and IFR.
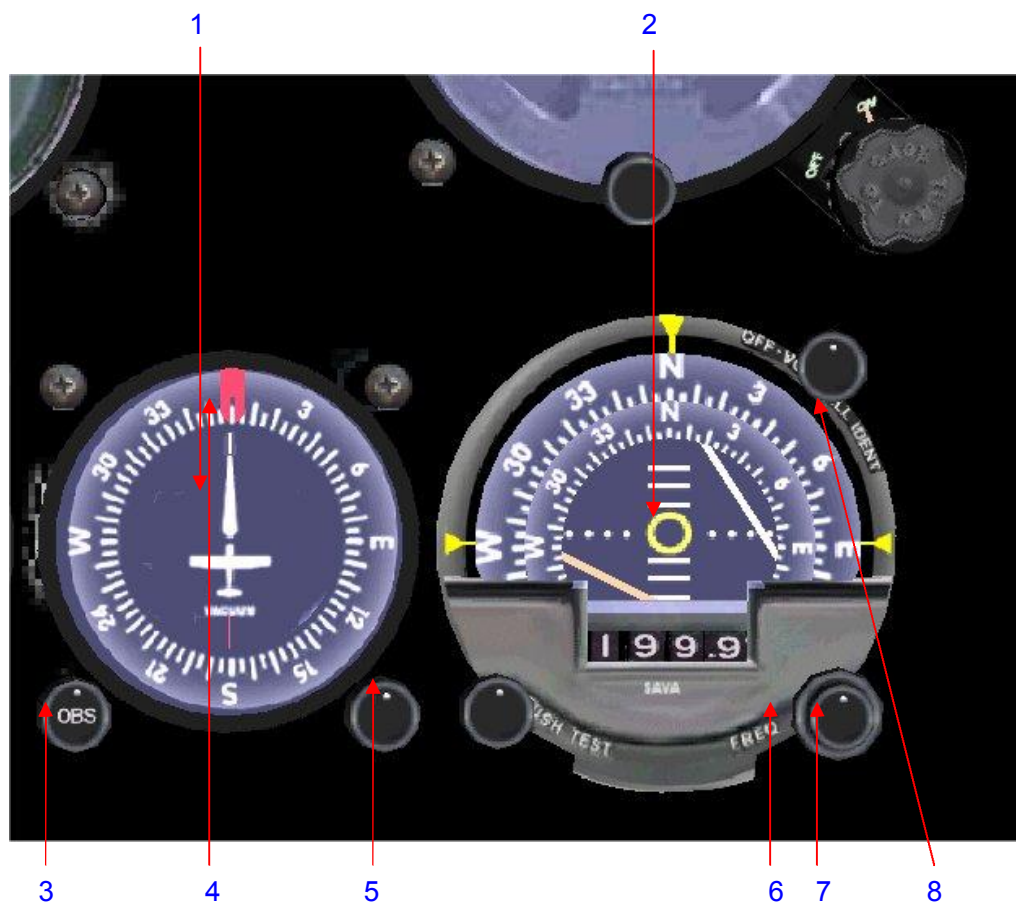


1. Directional Gyro
2. NAV Receiver
3. OBS (course selector) knob. This knob will also set the course in the NAV Receiver
4. Heading Bug
5. Heading Indicator Knob. This knob will also set the heading in the NAV Receiver
6. MHz Tuning Knob
7. KHz Tuning Knob
8. Audio Selector Knob. Push in to listen to the station's identity in Morse code.

**\*\*\*Starter Panel**
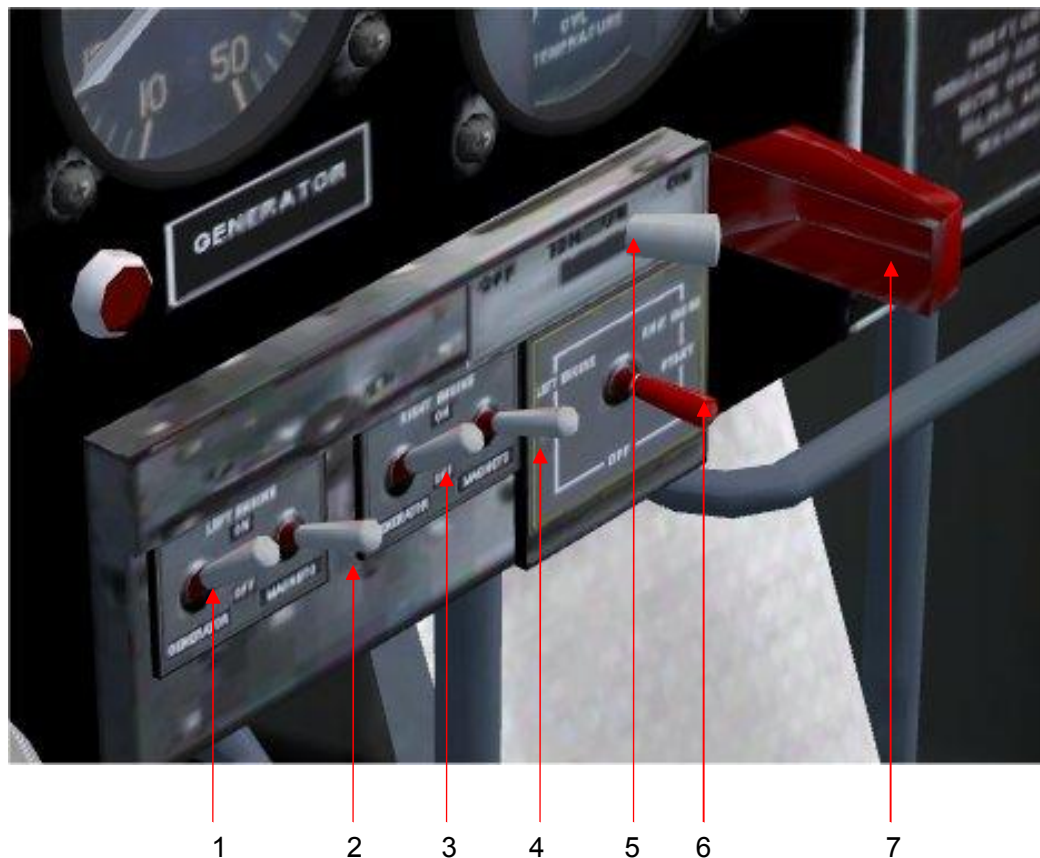


1. Engine 1 generator switch
2. Engine 1 magneto switch
3. Engine 2 generator switch
4. Engine 2 magneto switch
5. Main ignition switch
6. Engine 1(left) and engine 2(right) starter switch
7. Main ignition switch guard (click to open and close)

**Starting procedure**:

1. Master Battery Switch (located on the main switch panel): on
2. Main ignition switch: on. Click on the red switch guard to open.
3. Engine 1 generator and magneto switches: on
4. Click and drag the red starter switch to the left to start engine 1.
5. Repeat from point 3 above the engine 2 switches but click and drag the red starter switch to the right to start engine 2.

# Lights panel, landing and taxi lights





**Landing lights**

These lights are nested in the wing bottoms. Switching the landing lights on will extend the lights and retract it when switching the lights off again.

**Taxi light**

This light is located in the leading edge of the left wing. The taxi light functions independent the landing lights.

# Trim tab levers and tail wheel lock

These levers are located on the cockpit ceiling centre console
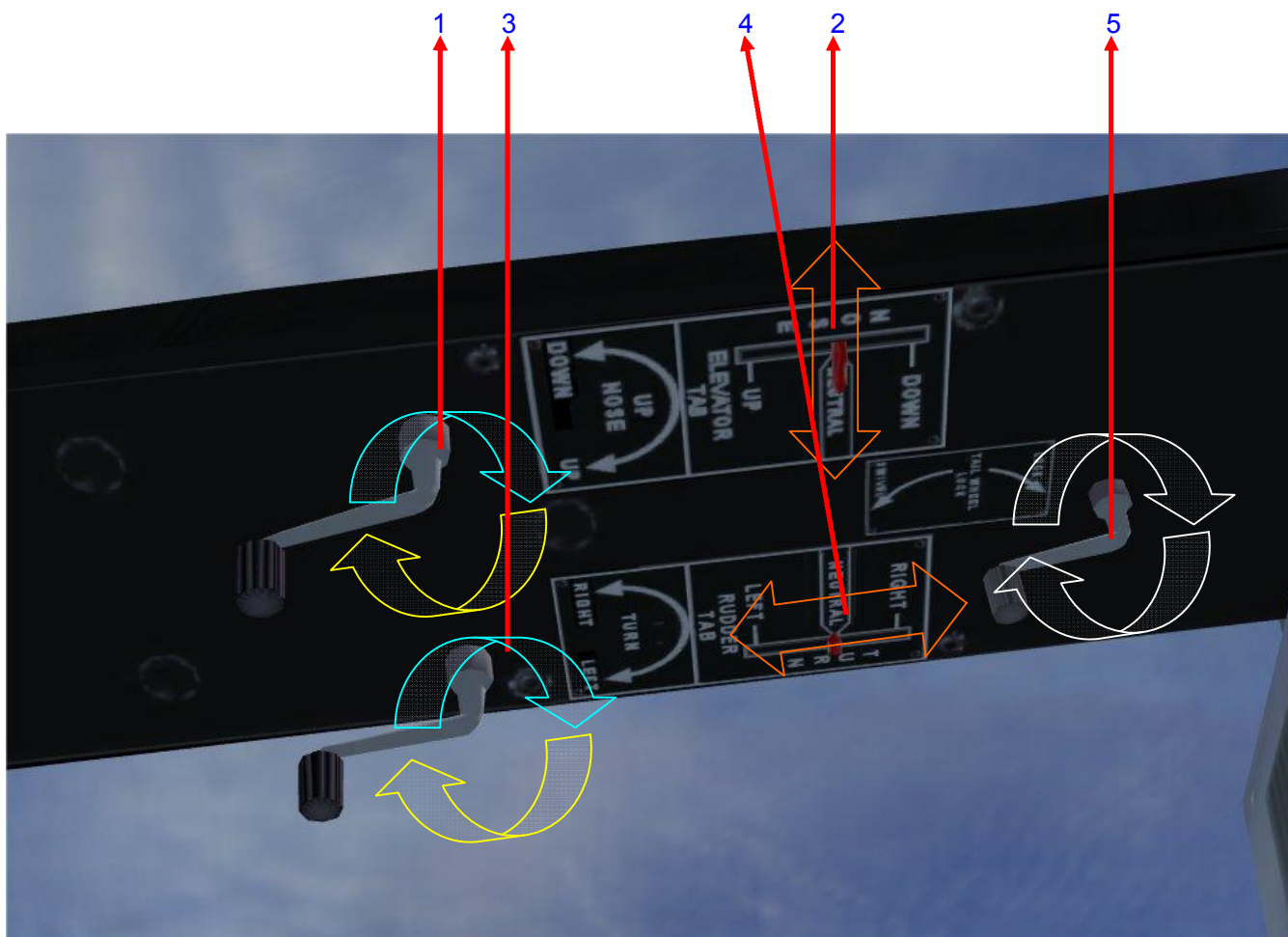


1. Elevator trim tab lever
2. Elevator trim tab position indicator
3. Rudder trim tab lever
4. Rudder trim tab position indicator
5. Tail wheel lock

Both trim levers and the trim indicators are animated and clickable. To trim click and drag the trim lever in the appropriate direction. To make smaller more accurate adjustments click the trim indicator and move with the mouse wheel.

To lock/unlock the tail wheel click on the tail wheel lock lever. Lock for takeoff. Unlock to taxi.

# Elevator and rudder trim tab animation and action
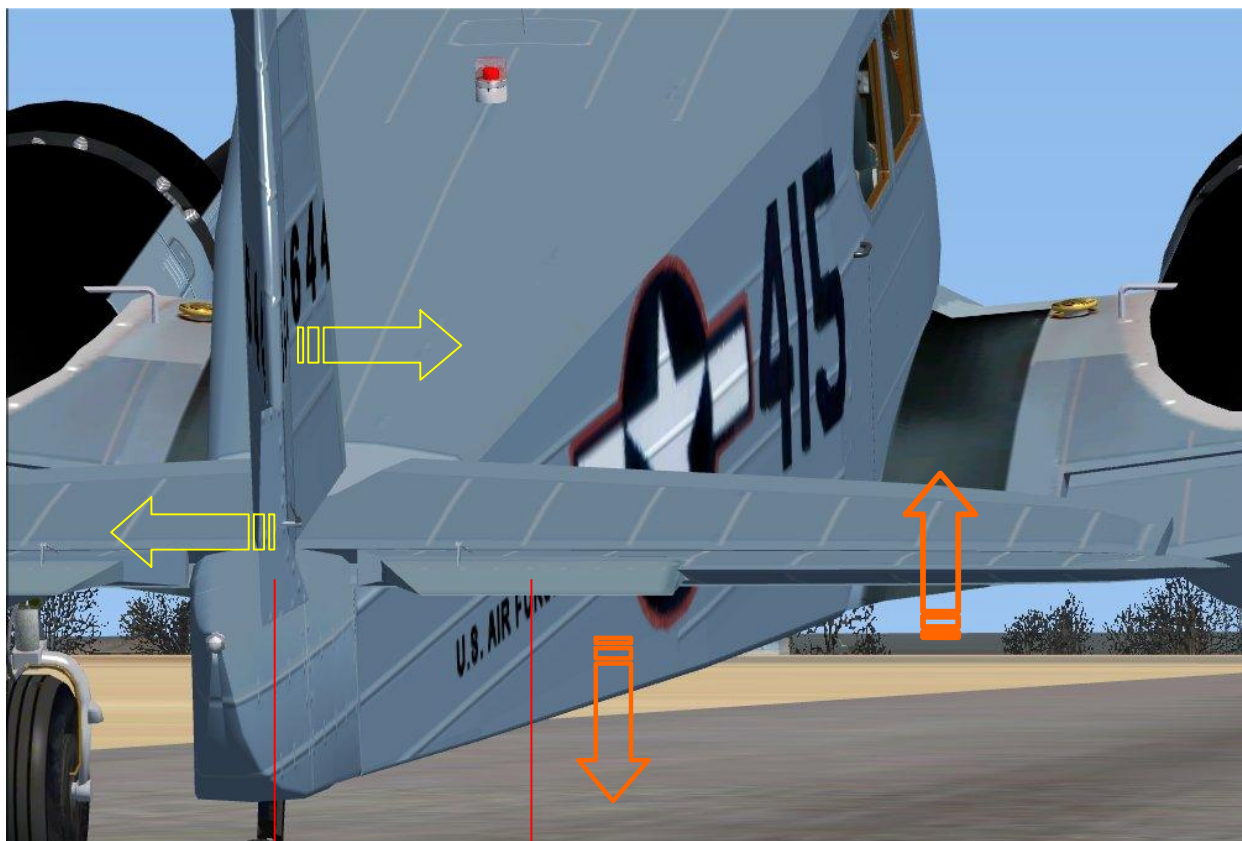


Rudder Trim Tab

Elevator Trim Tab

Adjusting trim tab levers in the cockpit will deflect the trim tabs which in turn will move the control surfaces to move in the opposite direction.

Consult the Flight Simulator Learning Centre for more information on trimming aircraft to release constant pressure on controls.

# Engines management and propeller blade pitch animation
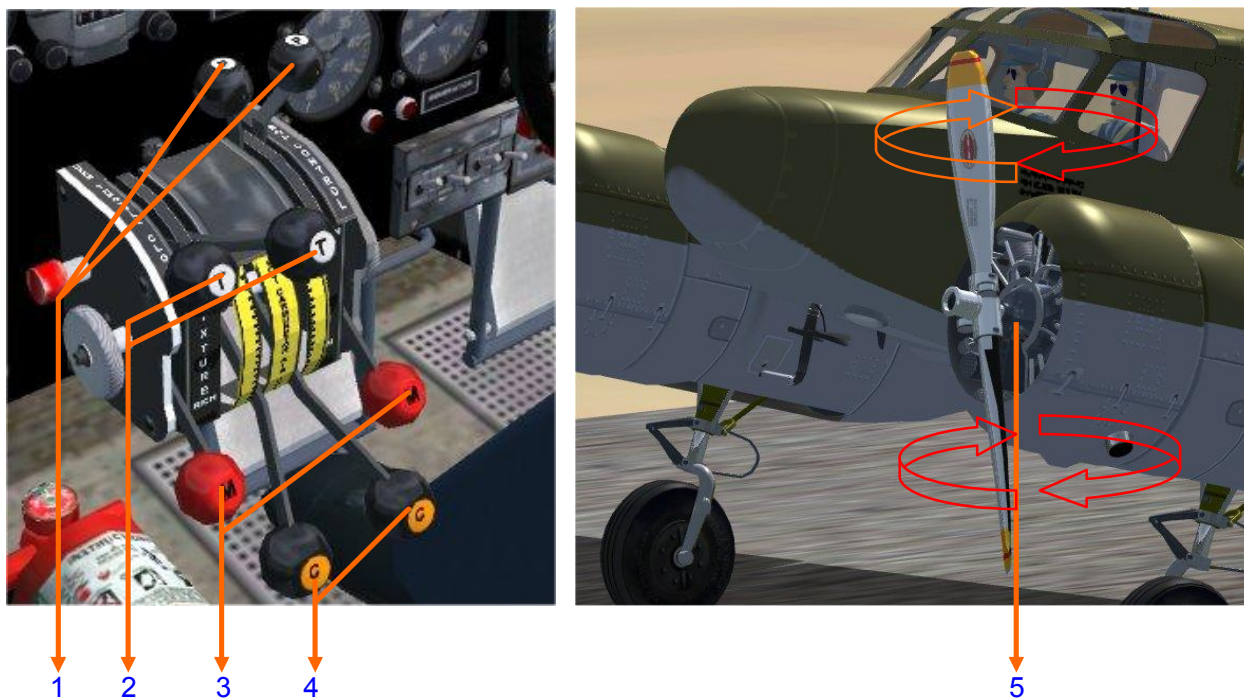


1. Propeller control levers
2. Throttles
3. Mixture control levers
4. Carburetors heat control levers
5. Propeller blade pitch

All levers are clickable and can be adjusted separately by dragging or by means of the mouse wheel.

The Bobcat is equipped with constant pitch propellers. The propeller control levers adjust the propeller blade pitch angle.

 The blade pitch animation can be viewed from the virtual cockpit or from the spot plane view when the propellers are visible.

# Belly landings



One of the design features of the real world Cessna T-50 Bobcat was its unique main landing gear design.
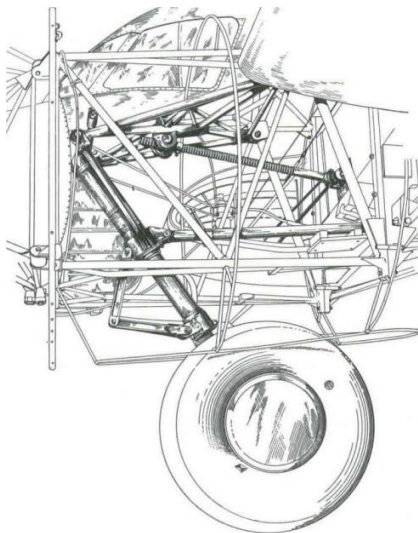


The landing gear retracts half-way into the nacelles. In case of an emergency and the landing gear fails to extend the aircraft can still safely land on its main wheels in the retracted position.

When doing a belly landing at airports, do not land on solid runways. Chose a grass or flat ground surface next to the runway or a flat surface away from airports.

In Flight Simulator, after a belly landing, the landing gear can be extended to raise the aircraft onto the main wheels again.

# Doors and cockpit side window animation
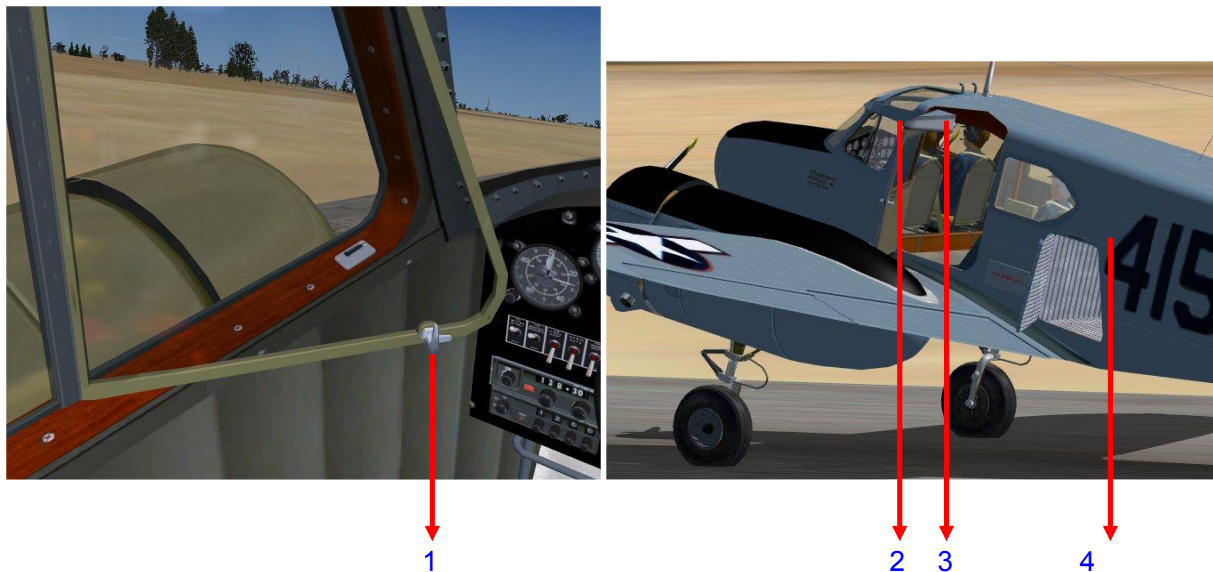


1.  In the virtual cockpit click the cockpit side window latch to open and close both side windows.

The following key board presses will operate the side windows and main and cargo doors:

2.  SHIFT+E or SHIFT+E 1: Operate the cockpit side windows.
3.  SHIFT+E 3: Operates the main door.
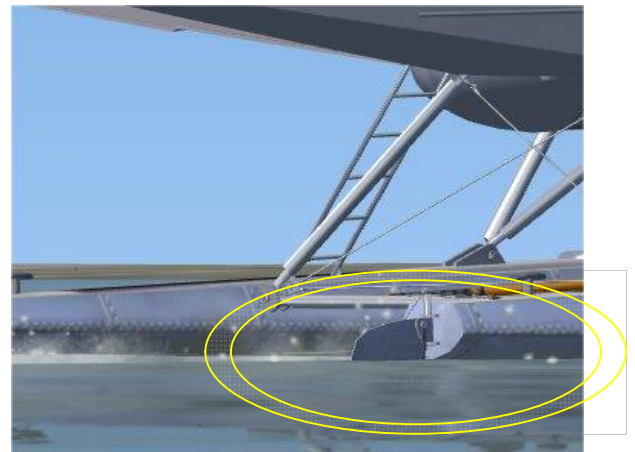4.  SHIFT+E 4: Operates the cargo doors.

Note that we left out SHIFT+E 2 so that the cockpit side windows can be operated and to avoid the main door being opened accidentally while taxing.

# Floats

Water Rudder Up Position



Water Rudder Down Position



In the virtual cockpit click the water rudder lever to raise or lower the water rudders.

The key board press "CONTROL+W" will also action the water rudder animation.

For landing and take-off the water rudders should be in the "up" position.
To taxi and steer the water rudders should be in the "down" position.

Consult the Flight Simulator Learning Centre for more information on operating float aircraft.

# Credits

A big thank you to the following beta testers for their contribution in the making of the Bobcat models. It was an honor working with all of you during the finalization of the project:

Milton Chambers
Lars Peter Hammer
Mike Cameron
Darryl Wightman

A special thanks to:

Nick Churchill for the all the "little things" he did.

Chris Brisland for his guidance and enthusiasm to improve the textures.

Francois Dumas of FSAddon Publishing for his assistance and also the managing and marketing of the project.

# About FSAddon Publishing

Since you've come this far, you must be a die-hard simmer, or at least an avid reader. Congratulations on your perseverance, not many people read manuals at all ;-) To reward you, let me tell you something about our companies then…..

The **FSAddon Publishing** was an idea of Ruud Faber and yours truly. We thought it was a good idea to help developers new to the commercial world of making and selling add-ons AND to provide a somewhat cheaper 'brand' with entry-level add-ons and prices. Ruud kindly offered to use the name if his well known brand, FScene !

The FSAddon Publishing hence is the little sister of FSAddon Publishing, and both are owned by **Silver Cloud Publishing**, François Dumas's privately owned company.

FSAddon.com was founded by Miguel Blaufuks and François Dumas with the main purpose of designing and publishing add-ons for the Microsoft Flight Simulator range of products.
But not just any add-ons!
Our aim is to provide **additional immersion** for the simulation by providing high-quality, **complete packages or series** that do more than just add an airfield, a utility or an aircraft. We are aiming to provide 'reality kits' that are a combination of additional FS software AND other things such as a story line, navigational information and tools, or even community access via the Internet.

We are also convinced that most buyers of these flight simulators only scratch the tip of the proverbial iceberg and won't use more than perhaps 10% of its capabilities. Another goal of ours therefore is providing education and information geared towards better and more satisfying usage of what you have already bought!

The company is affiliated with the well-known company **simMarket,** which in turn is part of the associated **simFlight Network**. SimMarket is the world largest on-line distributor of flight simulator add-ons. But up to now all products have been sold under their own name and without any (or much) guidance from simMarket.

The simFlight Network consists of a multitude of flight simulator news sites, covering many languages and areas around the world, and also hosting a large number of flight simulator user communities via forums and other means.
The two organizations together form a very powerful base for the newly founded FSAddon.com, providing all the basic infrastructure, skills and contacts needed to design, develop and publish flight simulator add-ons.

The company's aim is 3-tiered

1) To substantially expand the possibilities for beginning simpilots to use their flight simulator
2) To provide high-quality, extensive add-ons to the more experienced simpilots
3) To lower the thresholds for communicating and flying together using flight simulators and the internet.

We hope you'll enjoy our products, and above all, the pleasure of sharing this hobby with us and the hundreds of thousands of like-minded enthusiasts all over the world. If we can add just a little value to it, then we have achieved our goal.

Where to find us on the Internet:

Our main website is www.fsaddon.com (and the new version www.fsaddon.eu).
Our main support forums can be found at: http://forums.fsaddon.eu/portal.php

At the time of writing we are changing our main website. It might already be moved to www.fsaddon.eu by the time you read this. Try both!
Silver Cloud Publishing is here: www.SliverCloudPublishing.com

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Just check out the 'Products' link to see everything we have made so far, and the 'News' link for regular info on what we are working on !

Already famous products released in the past include such 'classics' as **Misty Fjords, Tongass Fjords and VancouverPlus, FSCargo, and more recently VancouverPlus for FSX.**

At the time of writing this we have a lot of new titles under development, including **Tongass Fjords for FSX, Misty Fjords for FSX. Emma Field X, the Lysander Package, LHA sips, San Diego Naval** and more.......

**See you in the (virtual) skies !**

**François A. 'Navman' Dumas**
**Publisher**