AIRCRAFT CONTROL VARIABLES

The tables below indicate the properties for the Simulation Variables that can be used to get and set properties related to the various aircraft control systems. For information on the units listed for each variable, please see here: Simulation Variable Units

> ***NOTE**: When Microsoft Flight Simulator is running in multiplayer mode, only a small number of variables are communicated between aircraft. Those variables that are available will say so in the description as being either for "All Aircraft" or for "Shared Cockpit".*

You can find a complete index of all available SimVars here: SimVar Index

Ailerons

Simulation Variable	Description	Units	Settable
AILERON AVERAGE DEFLECTION	Angle deflection for the aileron.	Radians	
AILERON LEFT DEFLECTION	Angle deflection for the aileron.	Radians	
AILERON LEFT DEFLECTION PCT	Percent deflection for the aileron. ***NOTE**: This is available in multiplayer to all near aircraft. See here for more information: Note On SimVars In Multiplayer.*	*Percent Over 100*	

AILERON POSITION	Percent aileron input left/right.	Position (-16K to 0) -16K = full left	
AILERON RIGHT DEFLECTION	Angle deflection.	Radians	
AILERON RIGHT DEFLECTION PCT	Percent deflection. ***NOTE**: This is available in multiplayer to all near aircraft. See here for more information: Note On SimVars In Multiplayer.*	*Percent Over 100*	
AILERON TRIM	Angle deflection.	Radians	
AILERON TRIM DISABLED	Whether or not the Aileron Trim has been disabled.	Bool	
AILERON TRIM PCT	The trim position of the ailerons. Zero is fully retracted. ***NOTE**: This is available in multiplayer to all near aircraft. See here for more information: Note On SimVars In Multiplayer.*	*Percent Over 100*	

Elevator

Simulation Variable	Description	Units	Settable
ELEVATOR DEFLECTION	Angle deflection.	Radians	

`ELEVATOR DEFLECTION PCT`	Percent deflection. NOTE: This is available in multiplayer. See here for more information: Note On SimVars In Multiplayer.	*Percent Over 100*	
`ELEVATOR POSITION`	Percent elevator input deflection.	Position (-16K to 0) -16K = full down	
`ELEVATOR TRIM DISABLED`	Whether or not the Elevator Trim has been disabled.	Bool	
`ELEVATOR TRIM DOWN LIMIT`	Returns the maximum elevator trim value. This corresponds to the `elevator_trim_down_limit` in the Flight Model Config file.	Degrees	
`ELEVATOR TRIM INDICATOR`	Percent elevator trim (for indication).	Position (-16K to 0) -16K = full down	
`ELEVATOR TRIM NEUTRAL`	Elevator trim neutral.	Radians	
`ELEVATOR TRIM PCT`	Percent elevator trim.	*Percent Over 100*	
`ELEVATOR TRIM POSITION`	Elevator trim deflection.	Radians	
`ELEVATOR TRIM UP LIMIT`	Returns the maximum elevator trim value. This corresponds to the `elevator_trim_up_limit` in the Flight Model Config file.	Degrees	
`ELEVON DEFLECTION`	Elevon deflection.	Radians	

Flaps

Simulation Variable	Description	Units	Settable
`FLAP DAMAGE BY SPEED`	True if flaps are damaged by excessive speed.	Bool	
`FLAP POSITION SET`	Set the position of the flaps control.	Position	
`FLAP SPEED EXCEEDED`	True if safe speed limit for flaps exceeded.	Bool	
`FLAPS AVAILABLE`	True if flaps available.	Bool	
`FLAPS EFFECTIVE HANDLE INDEX:index`	This returns the effective flaps handle index, *after* some of the conditions have potentially forced the state to change.	Number	
`FLAPS HANDLE INDEX:index`	Index of current flap position.	Number	
`FLAPS HANDLE PERCENT`	Percent flap handle extended. ***NOTE**: This is available in multiplayer to all near aircraft. See here for more information: Note On SimVars In Multiplayer.*	*Percent Over 100*	
`FLAPS NUM HANDLE POSITIONS`	Number of available flap positions.	Number	
`LEADING EDGE FLAPS LEFT ANGLE`	Angle left leading edge flap extended. Use `LEADING_EDGE_FLAPS_LEFT_PERCENT` to set a value.	Radians	
`LEADING EDGE FLAPS LEFT`	Index of left leading edge flap position.	Number	

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LEADING EDGE FLAPS LEFT PERCENT	Percent left leading edge flap extended. ***NOTE**: This is available in multiplayer to all near aircraft. See here for more information: Note On SimVars In Multiplayer.*	*Percent Over 100*	
LEADING EDGE FLAPS RIGHT ANGLE	Angle right leading edge flap extended. Use LEADING_EDGE_FLAPS_RIGHT_PERCENT to set a value.	Radians	
LEADING EDGE FLAPS RIGHT INDEX	Index of right leading edge flap position.	Number	
LEADING EDGE FLAPS RIGHT PERCENT	Percent right leading edge flap extended. ***NOTE**: This is available in multiplayer to all **near** aircraft. See here for more information: Note On SimVars In Multiplayer.*	*Percent Over 100*	
TRAILING EDGE FLAPS LEFT ANGLE	Angle left trailing edge flap extended. Use TRAILING_EDGE_FLAPS_LEFT_PERCENT to set a value.	Radians	
TRAILING EDGE FLAPS LEFT INDEX	Index of left trailing edge flap position.	Number	

`TRAILING EDGE FLAPS LEFT PERCENT`	Percent left trailing edge flap extended. ***NOTE**: This is available in multiplayer to all near aircraft. See here for more information: Note On SimVars In Multiplayer.*	*Percent Over 100*	
`TRAILING EDGE FLAPS RIGHT ANGLE`	Angle right trailing edge flap extended. Use `TRAILING_EDGE_FLAPS_RIGHT_PERCENT` to set a value.	Radians	
`TRAILING EDGE FLAPS RIGHT INDEX`	Index of right trailing edge flap position.	Number	
`TRAILING EDGE FLAPS RIGHT PERCENT`	Percent right trailing edge flap extended. ***NOTE**: This is available in multiplayer to all near aircraft. See here for more information: Note On SimVars In Multiplayer.*	*Percent Over 100*	

Fly By Wire

Simulation Variable	Description	Units	Settable
`FLY BY WIRE ALPHA PROTECTION`	Returns true if the fly-by-wire alpha protection is enabled or false otherwise.	Bool	
`FLY BY WIRE ELAC FAILED`	True if the Elevators and Ailerons computer has failed.	Bool	

FLY BY WIRE ELAC SWITCH	True if the fly by wire Elevators and Ailerons computer is on.	Bool	
FLY BY WIRE FAC FAILED	True if the Flight Augmentation computer has failed.	Bool	
FLY BY WIRE FAC SWITCH	True if the fly by wire Flight Augmentation computer is on.	Bool	
FLY BY WIRE SEC FAILED	True if the Spoilers and Elevators computer has failed.	Bool	
FLY BY WIRE SEC SWITCH	True if the fly by wire Spoilers and Elevators computer is on.	Bool	

Folding Wings

Simulation Variable	Description	Units	Settable
FOLDING WING HANDLE POSITION	True if the folding wing handle is engaged.	Bool	
FOLDING WING LEFT PERCENT	Left folding wing position, 1.0 is fully folded.	*Percent Over 100*	
FOLDING WING RIGHT PERCENT	Right folding wing position, 1.0 is fully folded.	*Percent Over 100*	

Rudder

Simulation Variable	Description	Units	Settable
RUDDER DEFLECTION	Angle deflection.	Radians	

RUDDER DEFLECTION PCT	Percent deflection. ***NOTE**: This is available in multiplayer. See here for more information: Note On SimVars In Multiplayer.*	*Percent Over 100*	
RUDDER PEDAL INDICATOR	Rudder pedal position.	Position	
RUDDER PEDAL POSITION	Percent rudder pedal deflection (for animation).	Position (-16K to 0) -16K = left pedal pushed full in	
RUDDER POSITION	Percent rudder input deflection.	Position (-16K to 0) -16K = full left	
RUDDER TRIM	Angle deflection.	Radians	
RUDDER TRIM DISABLED	Whether or not the Rudder Trim has been disabled.	Bool	
RUDDER TRIM PCT	The trim position of the rudder. Zero is no trim.	*Percent Over 100*	

Spoilers

Simulation Variable	Description	Units	Settable

SPOILERS ARMED	Checks if autospoilers are armed (true) or not (false).	Bool	
SPOILER AVAILABLE	True if spoiler system available.	Bool	
SPOILERS HANDLE POSITION	Spoiler handle position.	*Percent Over 100* or Position (16K = down, 0 = up)	
SPOILERS LEFT POSITION	Percent left spoiler deflected. ***NOTE**: This is available in multiplayer. See here for more information: Note On SimVars In Multiplayer.*	*Percent Over 100* or Position (0 = retracted, 16K fully extended)	
SPOILERS RIGHT POSITION	Percent right spoiler deflected. ***NOTE**: This is available in multiplayer. See here for more information: Note On SimVars In Multiplayer.*	*Percent Over 100* or Position (0 = retracted, 16K fully extended)	

Carrier Operations

Simulation Variable	Description	Units	Settable

BLAST SHIELD POSITION:index	Indexed from 1, 100 is fully deployed, 0 flat on deck	*Percent Over 100*	
CABLE CAUGHT BY TAILHOOK:index	A number 1 through 4 for the cable number caught by the tailhook. Cable 1 is the one closest to the stern of the carrier. A value of 0 indicates no cable was caught.	Number	
CATAPULT STROKE POSITION:index	Catapults are indexed from 1. This value will be 0 before the catapult fires, and then up to 100 as the aircraft is propelled down the catapult. The aircraft may takeoff before the value reaches 100 (depending on the aircraft weight, power applied, and other factors), in which case this value will not be further updated. This value could be used to drive a bogie animation.	Number	
HOLDBACK BAR INSTALLED	Holdback bars allow build up of thrust before takeoff from a catapult, and are installed by the deck crew of an aircraft carrier.	Bool	
LAUNCHBAR HELD EXTENDED	This will be True if the launchbar is fully extended, and can be used, for example, to change the color of an instrument light.	Bool	
LAUNCHBAR POSITION	Installed on aircraft before takeoff from a carrier catapult. Note that gear cannot retract with this extended. 100 = fully extended.	*Percent Over 100*	
LAUNCHBAR SWITCH	If this is set to True the launch bar switch has been engaged.	Bool	
NUMBER OF CATAPULTS	Maximum of 4. A model can contain more than 4 catapults, but only the first four will be read and recognized by the simulation.	Number	