

# Variables de la simulation

Il y a deux catégories de variables de simulation : les données des avions (*aircraft data*) et les données globales (*global data*). Les tables qui suivent listent toutes les variables qui peuvent apparaître dans les instruments créés en XML (*XML based gauges*), ou celles utilisées à partir des APIs de [SimConnect](#).

On trouve ci-dessous les liens vers :

- les articles de ce fichier, traduits partiellement en français,
- les fichiers de Microsoft, en anglais. En principe, ces fichiers font référence, et ils devraient être à jour.

## Voir aussi

- Identificateurs des événements (en français) / [Event IDs](#) (Microsoft)
- Survol du SDK (en français) / [SDK Overview](#) (Microsoft)

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## Données des avions (*Aircraft Data*)

### Notes (Gauges)

Les données des avions sont référencées par **A:** dans les instruments XML. Certains paramètres prennent un indice pour déterminer lequel ceux d'un système est demandé. Dans les instruments XML, la syntaxe pour ajouter un index est :N, par exemple : FUEL TANK SELECTOR:index.

### Notes (SimConnect)

Les variables de simulation sont référencés dans les clients SimConnect grâce à l'appel à `SimConnect_AddToDataDefinition` (voir le document SimConnect pour plus de détails). Lorsque les unités sont listées comme une structure ou comme une chaîne de caractères, saisissez une chaîne vide, ou tout simplement NULL, dans le paramètre `units` de cet appel de fonction.

Par exemple :

```
hr = SimConnect_AddToDataDefinition(hSimConnect, DEFINITION_1, "Kohlsman
setting hg", "inHg");
hr = SimConnect_AddToDataDefinition(hSimConnect, DEFINITION_1, "Indicated
Altitude", "feet");
hr = SimConnect_AddToDataDefinition(hSimConnect, DEFINITION_1, "Plane
Latitude", "degrees");
hr = SimConnect_AddToDataDefinition(hSimConnect, DEFINITION_1, "Plane
```

```

Longitude", "degrees");
hr = SimConnect_AddToDataDefinition(hSimConnect, DEFINITION_2,
"Category", null);           \\ string
hr = SimConnect_AddToDataDefinition(hSimConnect, DEFINITION_2, "AI
Waypoint List", null);       \\ structure

```

Sauf si la colonne Units dans le tableau suivant identifie les unités comme une structure ou une chaîne, les données seront retournées par défaut dans une valeur de 64 bits en virgule flottante signée. La fonction SimConnect\_AddToDataDefinition a un paramètre optionnel pour changer cela en un format entier 32 ou 64 bits, ou en 32 bits signé en virgule flottante.

**NDT : (1) Percent** : entre 0 et 100, bien que ces limites puissent être dépassées, par exemple la poussée des inverseurs de poussée.

**(2) Percent over 100 (% divisé par 100)** : pourcentage divisé par 100, donc entre 0,00 et 1,00, bien que ces limites puissent être dépassées, par exemple la poussée des inverseurs de poussée.

**(3) Variables Booléennes** : quand on lit une variable Booléenne (état d'un switch par exemple), la seule valeur digne de confiance est « 0 » (zéro), qui veut dire « OFF ». Toute autre valeur veut dire « ON ».

#### Notes (Multijoueur)

Lorsque la simulation est exécutée en mode multijoueur, seul un petit nombre de variables est échangé entre les aéronefs. Ceci est indiqué dans la colonne Multijoueur (All aircraft : tous les aéronefs ou Shared Cockpit : cockpit partagé).

## Aircraft Engine Data

En mode multijoueur avec cockpit partagé, le seul index pris en charge est 1, ce qui signifie que les données sont supposées être identiques pour tous les moteurs. En mode joueur unique, les index des moteurs vont de 1 à 4.

Simulation Variable	Description	Units	Settable	Multiplayer
<b>NUMBER OF ENGINES</b>	Number of engines (minimum 0, maximum 4)	Number	N	-
<b>ENGINE CONTROL SELECT</b>	Selected engines (combination of bit flags) 1 = Engine 1 2 = Engine 2 4 = Engine 3 8 = Engine 4	Mask	Y	-
<b>THROTTLE LOWER LIMIT</b>	Percent throttle defining lower limit (negative for reverse thrust equipped airplanes)	Percent	N	-
<b>ENGINE TYPE</b>	Engine type: 0 = Piston 1 = Jet 2 = None 3 = Heli(Bell) turbine 4 = Unsupported 5 = Turboprop	Enum	N	-
<b>MASTER IGNITION SWITCH</b>	Aircraft master ignition switch (grounds all engines magnetos)	Bool (voir note 3)	N	-

<b>GENERAL ENG COMBUSTION:index</b>	Combustion flag	Bool (voir note 3)	Y	Shared Cockpit (Index of 1 only).
<b>GENERAL ENG MASTER ALTERNATOR:index</b>	Alternator (generator) switch	Bool (voir note 3)	N	Shared Cockpit (Index of 1 only).
<b>GENERAL ENG FUEL PUMP SWITCH:index</b>	Fuel pump switch	Bool (voir note 3)	N	Shared Cockpit (Index of 1 only).
<b>GENERAL ENG FUEL PUMP ON:index</b>	Fuel pump on/off	Bool (voir note 3)	N	-
<b>GENERAL ENG RPM:index</b>	Engine rpm	Rpm	N	-
<b>GENERAL ENG PCT MAX RPM:index</b>	Percent of max rated rpm	Percent	N	-
<b>GENERAL ENG MAX REACHED RPM:index</b>	Maximum attained rpm	Rpm	N	-
<b>GENERAL ENG THROTTLE LEVER POSITION:index</b>	Percent of max throttle position	Percent	Y	Shared Cockpit (Index of 1 only).
<b>GENERAL ENG MIXTURE LEVER POSITION:index</b>	Percent of max mixture lever position	Percent	Y	Shared Cockpit (Index of 1 only).
<b>GENERAL ENG PROPELLER LEVER POSITION:index</b>	Percent of max prop lever position	Percent	Y	Shared Cockpit (Index of 1 only).
<b>GENERAL ENG STARTER:index</b>	Engine starter on/off	Bool (voir note 3)	N	-
<b>GENERAL ENG EXHAUST GAS TEMPERATURE:index</b>	Engine exhaust gas temperature.	Rankine	Y	-
<b>GENERAL ENG OIL PRESSURE:index</b>	Engine oil pressure	Psf	Y	-
<b>GENERAL ENG OIL LEAKED PERCENT:index</b>	Percent of max oil capacity leaked	Percent	N	-
<b>GENERAL ENG COMBUSTION SOUND PERCENT:index</b>	Percent of maximum engine sound	Percent	N	-
<b>GENERAL ENG DAMAGE PERCENT:index</b>	Percent of total engine damage	Percent	N	-
<b>GENERAL ENG OIL TEMPERATURE:index</b>	Engine oil temperature	Rankine	Y	-
<b>GENERAL ENG FAILED:index</b>	Fail flag	Bool (voir note 3)	N	-
<b>GENERAL ENG GENERATOR SWITCH:index</b>	Alternator (generator) switch	Bool (voir note 3)	N	-
<b>GENERAL ENG GENERATOR ACTIVE:index</b>	Alternator (generator) on/off	Bool (voir note 3)	Y	-

<b>GENERAL ENG ANTI ICE POSITION:index</b>	Engine anti-ice switch	Bool (voir note 3)	N	-
<b>GENERAL ENG FUEL VALVE:index</b>	Fuel valve state	Bool (voir note 3)	N	Shared Cockpit (Index of 1 only).
<b>GENERAL ENG FUEL PRESSURE:index</b>	Engine fuel pressure	Psi	Y	-
<b>GENERAL ENG ELAPSED TIME:index</b>	Total engine elapsed time	Hours	N	-
<b>RECIP ENG COWL FLAP POSITION:index</b>	Percent cowl flap opened	Percent	Y	Shared Cockpit (Index of 1 only).
<b>RECIP ENG PRIMER:index</b>	Engine primer position	Bool (voir note 3)	Y	-
<b>RECIP ENG MANIFOLD PRESSURE:index</b>	Engine manifold pressure	Psi	Y	-
<b>RECIP ENG ALTERNATE AIR POSITION:index</b>	Alternate air control	Position	Y	-
<b>RECIP ENG COOLANT RESERVOIR PERCENT:index</b>	Percent coolant available	Percent	Y	-
<b>RECIP ENG LEFT MAGNETO:index</b>	Left magneto state	Bool (voir note 3)	Y	Shared Cockpit (Index of 1 only).
<b>RECIP ENG RIGHT MAGNETO:index</b>	Right magneto state	Bool (voir note 3)	Y	Shared Cockpit (Index of 1 only).
<b>RECIP ENG BRAKE POWER:index</b>	Brake power produced by engine	Foot pounds per second	Y	-
<b>RECIP ENG STARTER TORQUE:index</b>	Torque produced by engine	Foot pound	Y	-
<b>RECIP ENG TURBOCHARGER FAILED:index</b>	Turbo failed state	Bool (voir note 3)	Y	-
<b>RECIP ENG EMERGENCY BOOST ACTIVE:index</b>	War emergency power active	Bool (voir note 3)	Y	-
<b>RECIP ENG EMERGENCY BOOST ELAPSED TIME:index</b>	Elapsed time war emergency power active	Hours	Y	-
<b>RECIP ENG WASTEGATE POSITION:index</b>	Percent turbo wastegate closed	Percent	Y	-
<b>RECIP ENG TURBINE INLET TEMPERATURE:index</b>	Engine turbine inlet temperature	Celsius	Y	-
<b>RECIP ENG CYLINDER HEAD TEMPERATURE:index</b>	Engine cylinder head temperature	Celsius	Y	-
<b>RECIP ENG RADIATOR</b>	Engine radiator temperature	Celsius	Y	-

<b>TEMPERATURE:index</b>				
<b>RECIP ENG FUEL AVAILABLE:index</b>	True if fuel is available	Bool (voir note 3)	Y	-
<b>RECIP ENG FUEL FLOW:index</b>	Engine fuel flow	Pounds per hour	Y	-
<b>RECIP ENG FUEL TANK SELECTOR:index</b>	Fuel tank selected for engine. See <a href="#">fuel tank list</a> .	Enum	N	-
<b>RECIP ENG FUEL TANKS USED:index</b>	Fuel tanks used, one or more of the following bit flags: Center 1 Bit 0 Center 2 Bit 1 Center 3 Bit 2 Left Main Bit 3 Left Aux Bit 4 Left Tip Bit 5 Right Main Bit 6 Right Aux Bit 7 Right Tip Bit 8 External 1 Bit 9 External 2 Bit 10	Mask	Y	-
<b>RECIP ENG FUEL NUMBER TANKS USED:index</b>	Number of tanks currently being used	Number	N	-
<b>RECIP CARBURETOR TEMPERATURE:index</b>	Carburetor temperature	Celsius	Y	-
<b>RECIP MIXTURE RATIO:index</b>	Fuel / Air mixture ratio	Ratio	Y	-
<b>TURB ENG N1:index</b>	Turbine engine N1	Percent	Y	Shared Cockpit (Index of 1 only).
<b>TURB ENG N2:index</b>	Turbine engine N2	Percent	Y	Shared Cockpit (Index of 1 only).
<b>TURB ENG CORRECTED N1:index</b>	Turbine engine corrected N1	Percent	Y	Shared Cockpit (Index of 1 only).
<b>TURB ENG CORRECTED N2:index</b>	Turbine engine corrected N2	Percent	Y	Shared Cockpit (Index of 1 only).
<b>TURB ENG CORRECTED FF:index</b>	Corrected fuel flow	Pounds per hour	Y	-
<b>TURB ENG MAX TORQUE PERCENT:index</b>	Percent of max rated torque	Percent	Y	-
<b>TURB ENG PRESSURE RATIO:index</b>	Engine pressure ratio	Ratio	Y	-
<b>TURB ENG ITT:index</b>	Engine ITT	Rankine	Y	-
<b>TURB ENG</b>	Afterburner state	Bool (voir note 3)	N	-

<b>AFTERBURNER:index</b>				
<b>TURB ENG JET THRUST:index</b>	Engine jet thrust	Pounds	N	-
<b>TURB ENG BLEED AIR:index</b>	Bleed air pressure	Psi	N	-
<b>TURB ENG TANK SELECTOR:index</b>	Fuel tank selected for engine. See <a href="#">fuel tank list</a> .	Enum	N	-
<b>TURB ENG TANKS USED:index</b>	Fuel tanks used, one or more of the following bit flags: Center 1 Bit 0 Center 2 Bit 1 Center 3 Bit 2 Left Main Bit 3 Left Aux Bit 4 Left Tip Bit 5 Right Main Bit 6 Right Aux Bit 7 Right Tip Bit 8 External 1 Bit 9 External 2 Bit 10	Mask	N	-
<b>TURB ENG NUM TANKS USED:index</b>	Number of tanks currently being used	Number	N	-
<b>TURB ENG FUEL FLOW PPH:index</b>	Engine fuel flow	Pounds per hour	N	-
<b>TURB ENG FUEL AVAILABLE:index</b>	True if fuel is available	Bool (voir note 3)	N	-
<b>TURB ENG REVERSE NOZZLE PERCENT:index</b>	Percent thrust reverser nozzles deployed	Percent	N	-
<b>TURB ENG VIBRATION:index</b>	Engine vibration value	Number	N	-
<b>ENG FAILED:index</b>	Failure flag	Number	N	-
<b>ENG RPM ANIMATION PERCENT:index</b>	Percent max rated rpm used for visual animation	Percent	N	-
<b>ENG ON FIRE:index</b>	On fire state	Bool (voir note 3)	Y	-
<b>ENG FUEL FLOW BUG POSITION:index</b>	Fuel flow reference	Pounds per hour	N	-
<b>PROP RPM:index</b>	Propeller rpm	Rpm	Y	-
<b>PROP MAX RPM PERCENT:index</b>	Percent of max rated rpm	Percent	N	-
<b>PROP THRUST:index</b>	Propeller thrust	Pounds	N	-
<b>PROP BETA:index</b>	Prop blade pitch angle	Radians	N	-

<b>PROP FEATHERING INHIBIT:index</b>	Feathering inhibit flag	Bool (voir note 3)	N	-
<b>PROP FEATHERED:index</b>	Feathered state	Bool (voir note 3)	N	-
<b>PROP SYNC DELTA LEVER:index</b>	Corrected prop correction input on slaved engine	Position	N	-
<b>PROP AUTO FEATHER ARMED:index</b>	Auto-feather armed state	Bool (voir note 3)	N	-
<b>PROP FEATHER SWITCH:index</b>	Prop feather switch	Bool (voir note 3)	N	-
<b>PANEL AUTO FEATHER SWITCH:index</b>	Auto-feather arming switch	Bool (voir note 3)	N	-
<b>PROP SYNC ACTIVE:index</b>	True if prop sync is active	Bool (voir note 3)	N	-
<b>PROP DEICE SWITCH:index</b>	True if prop deice switch on	Bool (voir note 3)	N	-
<b>ENG COMBUSTION</b>	True if the engine is running	Bool (voir note 3)	N	-
<b>ENG N1 RPM:index</b>	Engine N1 rpm	Rpm (0 to 16384 = 0 to 100%)	N	-
<b>ENG N2 RPM:index</b>	Engine N2 rpm	Rpm(0 to 16384 = 0 to 100%)	N	-
<b>ENG FUEL FLOW GPH:index</b>	Engine fuel flow	Gallons per hour	N	-
<b>ENG FUEL FLOW PPH:index</b>	Engine fuel flow	Pounds per hour	N	-
<b>ENG TORQUE:index</b>	Torque	Foot pounds	N	-
<b>ENG ANTI ICE:index</b>	Anti-ice switch	Bool (voir note 3)	N	-
<b>ENG PRESSURE RATIO:index</b>	Engine pressure ratio	Ratio (0-16384)	N	-
<b>ENG EXHAUST GAS TEMPERATURE:index</b>	Exhaust gas temperature	Rankine	N	-
<b>ENG EXHAUST GAS TEMPERATURE GES:index</b>	Governed engine setting	Percent over 100 (% divisé par 100)	N	-
<b>ENG CYLINDER HEAD TEMPERATURE:index</b>	Engine cylinder head temperature	Rankine	N	-
<b>ENG OIL TEMPERATURE:index</b>	Engine oil temperature	Rankine	N	-
<b>ENG OIL PRESSURE:index</b>	Engine oil pressure	Pounds per square foot	N	-
<b>ENG OIL QUANTITY:index</b>	Engine oil quantity as a percentage of full capacity	Percent over 100 (% divisé par 100)	N	-
<b>ENG HYDRAULIC PRESSURE:index</b>	Engine hydraulic pressure	Pounds per square foot	N	-

<b>ENG HYDRAULIC QUANTITY:index</b>	Engine hydraulic fluid quantity, as a percentage of total capacity	Percent over 100 (%) divisé par 100)	N	-
<b>ENG MANIFOLD PRESSURE:index</b>	Engine manifold pressure.	inHG.	N	-
<b>ENG VIBRATION:index</b>	Engine vibration	Number	N	-
<b>ENG RPM SCALER:index</b>	Obsolete	Scalar	N	-
<b>ENG MAX RPM</b>	Maximum rpm	Rpm	N	-
<b>GENERAL ENG STARTER ACTIVE</b>	True if engine starter is active	Bool (voir note 3)	N	-
<b>GENERAL ENG FUEL USED SINCE START</b>	Fuel used since the engines were last started	Pounds	N	-
<b>TURB ENG PRIMARY NOZZLE PERCENT:index</b>	Percent thrust of primary nozzle	Percent over 100 (%) divisé par 100)	N	-
<b>TURB ENG IGNITION SWITCH</b>	True if the turbine engine ignition switch is on	Bool (voir note 3)	N	-
<b>TURB ENG MASTER STARTER SWITCH</b>	True if the turbine engine master starter switch is on	Bool (voir note 3)	N	-
<b>TURB ENG AFTERBURNER STAGE ACTIVE</b>	The stage of the afterburner, or 0 if the afterburner is not active.	Number	N	-
<b>TURB ENG AFTERBURNER PCT ACTIVE</b>	The percentage that the afterburner is running at.	Percent_over_100	N	-

### Fuel Tank Selection

Number	Description
0	Off
1	All
2	Left
3	Right
4	Left auxiliary
5	Right auxiliary
6	Center
7	Center2
8	Center3
9	External1
10	External2
11	Right tip

12	Left tip
13	Crossfeed
14	Crossfeed left to right
15	Crossfeed right to left
16	Both
17	External
18	Isolate
19	Left main
20	Right main

## Aircraft Fuel Data

Simulation Variable	Description	Units	Settable	Multiplayer
<b>FUEL TANK CENTER LEVEL</b>	Percent of maximum capacity	Percent Over 100	Y	-
<b>FUEL TANK CENTER2 LEVEL</b>	Percent of maximum capacity	Percent Over 100	Y	-
<b>FUEL TANK CENTER3 LEVEL</b>	Percent of maximum capacity	Percent Over 100	Y	-
<b>FUEL TANK LEFT MAIN LEVEL</b>	Percent of maximum capacity	Percent Over 100	Y	-
<b>FUEL TANK LEFT AUX LEVEL</b>	Percent of maximum capacity	Percent Over 100	Y	-
<b>FUEL TANK LEFT TIP LEVEL</b>	Percent of maximum capacity	Percent Over 100	Y	-
<b>FUEL TANK RIGHT MAIN LEVEL</b>	Percent of maximum capacity	Percent Over 100	Y	-
<b>FUEL TANK RIGHT AUX LEVEL</b>	Percent of maximum capacity	Percent Over 100	Y	-
<b>FUEL TANK RIGHT TIP LEVEL</b>	Percent of maximum capacity	Percent Over 100	Y	-
<b>FUEL TANK EXTERNAL1 LEVEL</b>	Percent of maximum capacity	Percent Over 100	Y	-
<b>FUEL TANK EXTERNAL2 LEVEL</b>	Percent of maximum capacity	Percent Over 100	Y	-
<b>FUEL TANK CENTER CAPACITY</b>	Maximum capacity in volume	Gallons	N	-
<b>FUEL TANK CENTER2 CAPACITY</b>	Maximum capacity in volume	Gallons	N	-
<b>FUEL TANK CENTER3 CAPACITY</b>	Maximum capacity in volume	Gallons	N	-

<b>FUEL TANK LEFT MAIN CAPACITY</b>	Maximum capacity in volume	Gallons	N	-
<b>FUEL TANK LEFT AUX CAPACITY</b>	Maximum capacity in volume	Gallons	N	-
<b>FUEL TANK LEFT TIP CAPACITY</b>	Maximum capacity in volume	Gallons	N	-
<b>FUEL TANK RIGHT MAIN CAPACITY</b>	Maximum capacity in volume	Gallons	N	-
<b>FUEL TANK RIGHT AUX CAPACITY</b>	Maximum capacity in volume	Gallons	N	-
<b>FUEL TANK RIGHT TIP CAPACITY</b>	Maximum capacity in volume	Gallons	N	-
<b>FUEL TANK EXTERNAL1 CAPACITY</b>	Maximum capacity in volume	Gallons	N	-
<b>FUEL TANK EXTERNAL2 CAPACITY</b>	Maximum capacity in volume	Gallons	N	-
<b>FUEL LEFT CAPACITY</b>	Maximum capacity in volume	Gallons	N	-
<b>FUEL RIGHT CAPACITY</b>	Maximum capacity in volume	Gallons	N	-
<b>FUEL TANK CENTER QUANTITY</b>	Current quantity in volume	Gallons	Y	-
<b>FUEL TANK CENTER2 QUANTITY</b>	Current quantity in volume	Gallons	Y	-
<b>FUEL TANK CENTER3 QUANTITY</b>	Current quantity in volume	Gallons	Y	-
<b>FUEL TANK LEFT MAIN QUANTITY</b>	Current quantity in volume	Gallons	Y	-
<b>FUEL TANK LEFT AUX QUANTITY</b>	Current quantity in volume	Gallons	Y	-
<b>FUEL TANK LEFT TIP QUANTITY</b>	Current quantity in volume	Gallons	Y	-
<b>FUEL TANK RIGHT MAIN QUANTITY</b>	Current quantity in volume	Gallons	Y	-
<b>FUEL TANK RIGHT AUX QUANTITY</b>	Current quantity in volume	Gallons	Y	-
<b>FUEL TANK RIGHT TIP QUANTITY</b>	Current quantity in volume	Gallons	Y	-
<b>FUEL TANK EXTERNAL1 QUANTITY</b>	Current quantity in volume	Gallons	Y	-
<b>FUEL TANK EXTERNAL2 QUANTITY</b>	Current quantity in volume	Gallons	Y	-
<b>FUEL LEFT QUANTITY</b>	Current quantity in volume	Gallons	N	-
<b>FUEL RIGHT QUANTITY</b>	Current quantity in volume	Gallons	N	-
<b>FUEL TOTAL QUANTITY</b>	Current quantity in volume	Gallons	N	-
<b>FUEL WEIGHT PER GALLON</b>	Fuel weight per gallon	Pounds	N	-
<b>FUEL TANK SELECTOR:index</b>	Which tank is selected. See <a href="#">fuel tank list</a> .	Enum	N	-

<b>FUEL CROSS FEED</b>	Cross feed valve: 0 = Closed 1 = Open	Enum	N	-
<b>FUEL TOTAL CAPACITY</b>	Total capacity of the aircraft	Gallons	N	-
<b>FUEL SELECTED QUANTITY PERCENT</b>	Percent or capacity for selected tank	Percent Over 100	N	-
<b>FUEL SELECTED QUANTITY</b>	Quantity of selected tank	Gallons	N	-
<b>FUEL TOTAL QUANTITY WEIGHT</b>	Current total fuel weight of the aircraft	Pounds	N	-
<b>NUM FUEL SELECTORS</b>	Number of selectors on the aircraft	Number	N	-
<b>UNLIMITED FUEL</b>	Unlimited fuel flag	Bool (voir note 3)	N	-
<b>ESTIMATED FUEL FLOW</b>	Estimated fuel flow at cruise	Pounds per hour	N	-

### Aircraft Lights Data

Simulation Variable	Description	Units	Settable	Multiplayer
<b>LIGHT STROBE</b>	Light switch state	Bool (voir note 3)	N	All aircraft
<b>LIGHT PANEL</b>	Light switch state	Bool (voir note 3)	N	All aircraft
<b>LIGHT LANDING</b>	Light switch state	Bool (voir note 3)	N	All aircraft
<b>LIGHT TAXI</b>	Light switch state	Bool (voir note 3)	N	All aircraft
<b>LIGHT BEACON</b>	Light switch state	Bool (voir note 3)	N	All aircraft
<b>LIGHT NAV</b>	Light switch state	Bool (voir note 3)	N	All aircraft
<b>LIGHT LOGO</b>	Light switch state	Bool (voir note 3)	N	All aircraft
<b>LIGHT WING</b>	Light switch state	Bool (voir note 3)	N	All aircraft
<b>LIGHT RECOGNITION</b>	Light switch state	Bool (voir note 3)	N	All aircraft
<b>LIGHT CABIN</b>	Light switch state	Bool (voir note 3)	N	All aircraft
<b>LIGHT ON STATES</b>	Bit mask: 0x0001: Nav 0x0002: Beacon 0x0004: Landing 0x0008: Taxi 0x0010: Strobe 0x0020: Panel 0x0040: Recognition 0x0080: Wing 0x0100: Logo 0x0200: Cabin	Mask	N	-
<b>LIGHT STATES</b>	Same as LIGHT ON STATES	Mask	N	All aircraft
<b>LANDING LIGHT PBH</b>	Landing light pitch bank and	<b>SIMCONNECT_DATA_XYZ</b>	N	-

	heading	structure		
<b>LIGHT TAXI ON</b>	Return true if the light is on.	Bool (voir note 3)	N	-
<b>LIGHT STROBE ON</b>	Return true if the light is on.	Bool (voir note 3)	N	-
<b>LIGHT PANEL ON</b>	Return true if the light is on.	Bool (voir note 3)	N	-
<b>LIGHT RECOGNITION ON</b>	Return true if the light is on.	Bool (voir note 3)	N	-
<b>LIGHT WING ON</b>	Return true if the light is on.	Bool (voir note 3)	N	-
<b>LIGHT LOGO ON</b>	Return true if the light is on.	Bool (voir note 3)	N	-
<b>LIGHT CABIN ON</b>	Return true if the light is on.	Bool (voir note 3)	N	-
<b>LIGHT HEAD ON</b>	Return true if the light is on.	Bool (voir note 3)	N	-
<b>LIGHT BRAKE ON</b>	Return true if the light is on.	Bool (voir note 3)	N	-
<b>LIGHT NAV ON</b>	Return true if the light is on.	Bool (voir note 3)	N	-
<b>LIGHT BEACON ON</b>	Return true if the light is on.	Bool (voir note 3)	N	-
<b>LIGHT LANDING ON</b>	Return true if the light is on.	Bool (voir note 3)	N	-

### Aircraft Position and Speed Data

Simulation Variable	Description	Units	Settable	Multiplayer
<b>GROUND VELOCITY</b>	Speed relative to the earths surface	Knots	N	-
<b>TOTAL WORLD VELOCITY</b>	Speed relative to the earths center	Feet per second	N	-
<b>VELOCITY BODY Z</b>	True longitudinal speed, relative to aircraft axis	Feet per second	Y	-
<b>VELOCITY BODY X</b>	True lateral speed, relative to aircraft axis	Feet per second	Y	-
<b>VELOCITY BODY Y</b>	True vertical speed, relative to aircraft axis	Feet per second	Y	-
<b>VELOCITY WORLD Z</b>	Speed relative to earth, in North/South direction	Feet per second	Y	-
<b>VELOCITY WORLD X</b>	Speed relative to earth, in East/West direction	Feet per second	Y	-
<b>VELOCITY WORLD Y</b>	Speed relative to earth, in vertical direction	Feet per second	Y	-
<b>ACCELERATION WORLD X</b>	Acceleration relative to earth, in east/west direction	Feet per second squared	Y	-
<b>ACCELERATION WORLD Y</b>	Acceleration relative to earth, in vertical direction	Feet per second squared	Y	-

<b>ACCELERATION WORLD Z</b>	Acceleration relative to earth, in north/south direction	Feet per second squared	Y	-
<b>ACCELERATION BODY X</b>	Acceleration relative to aircraft axis, in east/west direction	Feet per second squared	Y	-
<b>ACCELERATION BODY Y</b>	Acceleration relative to aircraft axis, in vertical direction	Feet per second squared	Y	-
<b>ACCELERATION BODY Z</b>	Acceleration relative to aircraft axis, in north/south direction	Feet per second squared	Y	-
<b>ROTATION VELOCITY BODY X</b>	Rotation relative to aircraft axis	Feet per second	Y	-
<b>ROTATION VELOCITY BODY Y</b>	Rotation relative to aircraft axis	Feet per second	Y	-
<b>ROTATION VELOCITY BODY Z</b>	Rotation relative to aircraft axis	Feet per second	Y	-
<b>RELATIVE WIND VELOCITY BODY X</b>	Lateral speed relative to wind	Feet per second	N	-
<b>RELATIVE WIND VELOCITY BODY Y</b>	Vertical speed relative to wind	Feet per second	N	-
<b>RELATIVE WIND VELOCITY BODY Z</b>	Longitudinal speed relative to wind	Feet per second	N	-
<b>PLANE ALT ABOVE GROUND</b>	Altitude above the surface	Feet	Y	-
<b>PLANE LATITUDE</b>	Latitude of aircraft, North is positive, South negative	Radians	Y	-
<b>PLANE LONGITUDE</b>	Longitude of aircraft, East is positive, West negative	Radians	Y	-
<b>PLANE ALTITUDE</b>	Altitude of aircraft	Feet	Y	-
<b>PLANE PITCH DEGREES</b>	Pitch angle, although the name mentions degrees the units used are radians	Radians	Y	-
<b>PLANE BANK DEGREES</b>	Bank angle, although the name mentions degrees the units used are radians	Radians	Y	-
<b>PLANE HEADING DEGREES TRUE</b>	Heading relative to true north, although the name mentions degrees the units used are radians	Radians	Y	-
<b>PLANE HEADING DEGREES MAGNETIC</b>	Heading relative to magnetic north, although the name mentions degrees the units used are radians	Radians	Y	-

<b>MAGVAR</b>	Magnetic variation	Degrees	N	-
<b>GROUND ALTITUDE</b>	Altitude of surface	Meters	N	-
<b>SURFACE TYPE</b>	Type of surface: 0 = Concrete 1 = Grass 2 = Water 3 = Grass_bumpy 4 = Asphalt 5 = Short_grass 6 = Long_grass 7 = Hard_turf 8 = Snow 9 = Ice 10 = Urban 11 = Forest 12 = Dirt 13 = Coral 14 = Gravel 15 = Oil_treated 16 = Steel_mats 17 = Bituminous 18 = Brick 19 = Macadam 20 = Planks 21 = Sand 22 = Shale 23 = Tarmac 24 = Wright_flyer_track	Enum	N	-
<b>SIM ON GROUND</b>	On ground flag	Bool (voir note 3)	N	-
<b>INCIDENCE ALPHA</b>	Angle of attack	Radians	N	-
<b>INCIDENCE BETA</b>	Sideslip angle	Radians	N	-
<b>WING FLEX PCT:index</b>	The current wing flex. Different values can be set for each wing (for example, during banking). Set an index of 1 for the left wing, and 2 for the right wing.	Percent over 100 (% divisé par 100)	Y	-
<b>STRUCT LATLONALT</b>	Returns the latitude, longitude and altitude of the user aircraft.	<b>SIMCONNECT_DATA_LATLONALT</b> structure	N	-
<b>STRUCT LATLONALTPBH</b>	Returns the pitch, bank and heading of the user aircraft.	<b>SIMCONNECT_DATA_LATLONALT</b> structure	N	-
<b>STRUCT SURFACE RELATIVE VELOCITY</b>	The relative surface velocity.	<b>SIMCONNECT_DATA_XYZ</b> structure, feet per second	N	-

<b>STRUCT WORLDVELOCITY</b>	The world velocity.	<b>SIMCONNECT_DATA_XYZ</b> structure, feet per second	N	-
<b>STRUCT WORLD ROTATION VELOCITY</b>	The world rotation velocity.	<b>SIMCONNECT_DATA_XYZ</b> structure, radians per second	N	-
<b>STRUCT BODY VELOCITY</b>	The object body velocity.	<b>SIMCONNECT_DATA_XYZ</b> structure, feet per second	N	-
<b>STRUCT BODY ROTATION VELOCITY</b>	The body rotation velocity. Individual body rotation values are in the <a href="#">Aircraft Position and Speed</a> section.	<b>SIMCONNECT_DATA_XYZ</b> structure, radians per second	N	-
<b>STRUCT WORLD ACCELERATION</b>	The world acceleration for each axis. Individual world acceleration values are in the <a href="#">Aircraft Position and Speed</a> section.	<b>SIMCONNECT_DATA_XYZ</b> structure, feet per second squared	N	-
<b>STRUCT ENGINE POSITION:index</b>	The engine position relative to the reference datum position for the aircraft.	<b>SIMCONNECT_DATA_XYZ</b> structure, feet.	N	-
<b>STRUCT EYEPOINT DYNAMIC ANGLE</b>	The angle of the eyepoint view. Zero, zero, zero is straight ahead.	<b>SIMCONNECT_DATA_XYZ</b> structure, radians	N	-
<b>STRUCT EYEPOINT DYNAMIC OFFSET</b>	A variable offset away from the EYEPOINT POSITION	<b>SIMCONNECT_DATA_XYZ</b> structure, feet	N	-
<b>EYEPOINT POSITION</b>	The eyepoint position relative to the reference datum position for the aircraft.	<b>SIMCONNECT_DATA_XYZ</b> structure, feet	N	-

## Aircraft Flight Instrumentation Data

Simulation Variable	Description	Units	Settable	Multiplayer
<b>AIRSPEED TRUE</b>	True airspeed	Knots	Y	-
<b>AIRSPEED INDICATED</b>	Indicated airspeed	Knots	Y	-
<b>AIRSPEED TRUE CALIBRATE</b>	Angle of True calibration scale on airspeed indicator	Degrees	Y	Shared Cockpit
<b>AIRSPEED BARBER POLE</b>	Redline airspeed (dynamic on some aircraft)	Knots	N	-
<b>AIRSPEED MACH</b>	Current mach	Mach	N	-
<b>VERTICAL SPEED</b>	Vertical speed indication	Feet per second	Y	-
<b>MACH MAX OPERATE</b>	Maximum design mach	Mach	N	-
<b>STALL WARNING</b>	Stall warning state	Bool (voir note 3)	N	-

<b>OVERSPEED WARNING</b>	Overspeed warning state	Bool (voir note 3)	N	-
<b>BARBER POLE MACH</b>	Mach associated with maximum airspeed	Mach	N	-
<b>INDICATED ALTITUDE</b>	Altimeter indication	Feet	Y	-
<b>KOHLSMAN SETTING MB</b>	Altimeter setting	Millibars	Y	-
<b>KOHLSMAN SETTING HG</b>	Altimeter setting	Inches of Mercury, inHg	N	-
<b>ATTITUDE INDICATOR PITCH DEGREES</b>	AI pitch indication	Radians	N	-
<b>ATTITUDE INDICATOR BANK DEGREES</b>	AI bank indication	Radians	N	-
<b>ATTITUDE BARS POSITION</b>	AI reference pitch reference bars	Percent Over 100	N	-
<b>ATTITUDE CAGE</b>	AI caged state	Bool (voir note 3)	N	-
<b>WISKEY COMPASS INDICATION DEGREES</b>	Magnetic compass indication	Degrees	Y	-
<b>PLANE HEADING DEGREES GYRO</b>	Heading indicator (directional gyro) indication	Radians	Y	-
<b>HEADING INDICATOR</b>	Heading indicator (directional gyro) indication	Radians	N	-
<b>GYRO DRIFT ERROR</b>	Angular error of heading indicator	Radians	N	-
<b>DELTA HEADING RATE</b>	Rate of turn of heading indicator	Radians per second	Y	-
<b>TURN COORDINATOR BALL</b>	Turn coordinator ball position	Position 128 (-127 to 127)	N	-
<b>ANGLE OF ATTACK INDICATOR</b>	AoA indication	Radians	N	-
<b>RADIO HEIGHT</b>	Radar altitude	Feet	N	-
<b>PARTIAL PANEL ADF</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	Y	-
<b>PARTIAL PANEL AIRSPEED</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	Y	-
<b>PARTIAL PANEL ALTIMETER</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	Y	-
<b>PARTIAL PANEL ATTITUDE</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	Y	-
<b>PARTIAL PANEL COMM</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	Y	-

<b>PARTIAL PANEL COMPASS</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	Y	-
<b>PARTIAL PANEL ELECTRICAL</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	Y	-
<b>PARTIAL PANEL AVIONICS</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	N	-
<b>PARTIAL PANEL ENGINE</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	Y	-
<b>PARTIAL PANEL FUEL INDICATOR</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	N	-
<b>PARTIAL PANEL HEADING</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	Y	-
<b>PARTIAL PANEL VERTICAL VELOCITY</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	Y	-
<b>PARTIAL PANEL TRANSPONDER</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	Y	-
<b>PARTIAL PANEL NAV</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	Y	-
<b>PARTIAL PANEL PITOT</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	Y	-
<b>PARTIAL PANEL TURN COORDINATOR</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	N	-
<b>PARTIAL PANEL VACUUM</b>	Gauge fail flag (0 = ok, 1 = fail, 2 = blank)	Enum	Y	-
<b>MAX G FORCE</b>	Maximum G force attained	Gforce	N	-
<b>MIN G FORCE</b>	Minimum G force attained	Gforce	N	-
<b>SUCTION PRESSURE</b>	Vacuum system suction pressure	Inches of Mercury, inHg	Y	-

### Aircraft Avionics Data

Simulation Variable	Description	Units	Settable	Multiplayer
<b>AVIONICS MASTER SWITCH</b>	Avionics switch state	Bool (voir note 3)	N	All aircraft
<b>NAV SOUND:index</b>	Nav audio flag. Index of 1 or 2.	Bool (voir note 3)	N	Shared Cockpit
<b>DME SOUND</b>	DME audio flag	Bool (voir note 3)	N	Shared Cockpit
<b>ADF SOUND:index</b>	ADF audio flag. Index of 0 or 1.	Bool (voir note 3)	N	Shared Cockpit

<b>MARKER SOUND</b>	Marker audio flag	Bool (voir note 3)	N	Shared Cockpit
<b>COM TRANSMIT:index</b>	Audio panel com transmit state. Index of 1 or 2.	Bool (voir note 3)	N	Shared Cockpit
<b>COM RECIEVE ALL</b>	Flag if all Coms receiving	Bool (voir note 3)	N	Shared Cockpit
<b>COM ACTIVE FREQUENCY:index</b>	Com frequency. Index is 1 or 2.	Frequency BCD16	N	All aircraft
<b>COM STANDBY FREQUENCY:index</b>	Com standby frequency. Index is 1 or 2.	Frequency BCD16	N	All aircraft
<b>COM STATUS:index</b>	Radio status flag : -1 =Invalid 0 = OK 1 = Does not exist 2 = No electricity 3 = Failed	Enum	N	-
<b>NAV AVAILABLE:index</b>	Flag if Nav equipped on aircraft	Bool (voir note 3)	N	-
<b>NAV ACTIVE FREQUENCY:index</b>	Nav active frequency. Index is 1 or 2.	MHz	N	Shared Cockpit
<b>NAV STANDBY FREQUENCY:index</b>	Nav standby frequency. Index is 1 or 2.	MHz	N	Shared Cockpit
<b>NAV SIGNAL:index</b>	Nav signal strength	Number	N	-
<b>NAV HAS NAV:index</b>	Flag if Nav has signal	Bool (voir note 3)	N	-
<b>NAV HAS LOCALIZER:index</b>	Flag if tuned station is a localizer	Bool (voir note 3)	N	-
<b>NAV HAS DME:index</b>	Flag if tuned station has a DME	Bool (voir note 3)	N	-
<b>NAV HAS GLIDE SLOPE:index</b>	Flag if tuned station has a glideslope	Bool (voir note 3)	N	-
<b>NAV BACK COURSE FLAGS:index</b>	Returns the following bit flags: BIT0: 1=back course available BIT1: 1=localizer tuned in BIT2: 1=on course BIT7: 1=station active	Flags	N	-
<b>NAV MAGVAR:index</b>	Magnetic variation of tuned nav station	Degrees	N	-
<b>NAV RADIAL:index</b>	Radial that aircraft is on	Degrees	N	-

<b>NAV RADIAL ERROR:index</b>	Difference between current radial and OBS tuned radial	Degrees	N	-
<b>NAV LOCALIZER:index</b>	Localizer course heading	Degrees	N	-
<b>NAV GLIDE SLOPE ERROR:index</b>	Difference between current position and glideslope angle. Note that this provides 32 bit floating point precision, rather than the 8 bit integer precision of NAV GSI.	Degrees	N	-
<b>NAV CDI:index</b>	CDI needle deflection (+/- 127)	Number	N	-
<b>NAV GSI:index</b>	Glideslope needle deflection (+/- 119). Note that this provides only 8 bit precision, whereas NAV GLIDE SLOPE ERROR provides 32 bit floating point precision.	Number	N	-
<b>NAV TOFROM:index</b>	Nav TO/FROM flag: 0 = Off 1 = TO 2 = FROM	Enum	N	-
<b>NAV GS FLAG:index</b>	Glideslope flag	Bool (voir note 3)	N	-
<b>NAV OBS:index</b>	OBS setting. Index of 1 or 2.	Degrees	N	Shared Cockpit
<b>NAV DME:index</b>	DME distance	Nautical miles	N	-
<b>NAV DMESPEED:index</b>	DME speed	Knots	N	-
<b>ADF ACTIVE FREQUENCY:index</b>	ADF frequency. Index of 1 or 2.	Frequency ADF BCD32	N	Shared Cockpit
<b>ADF STANDBY FREQUENCY:index</b>	ADF standby frequency	Hz	N	-
<b>ADF RADIAL:index</b>	Current direction from NDB station	Degrees	N	-
<b>ADF SIGNAL:index</b>	Signal strength	Number	N	-
<b>TRANSPONDER CODE:index</b>	4-digit code	BCO16	N	All aircraft (Index of 1 only).
<b>MARKER BEACON STATE</b>	Marker beacon state: 0 = None 1 = Outer 2 = Middle	Enum	Y	-

	3 = Inner			
<b>INNER MARKER</b>	Inner marker state	Bool (voir note 3)	Y	-
<b>MIDDLE MARKER</b>	Middle marker state	Bool (voir note 3)	Y	-
<b>OUTER MARKER</b>	Outer marker state	Bool (voir note 3)	Y	-
<b>NAV RAW GLIDE SLOPE:index</b>	Glide slope angle	Degrees	N	-
<b>ADF CARD</b>	ADF compass rose setting	Degrees	N	Shared Cockpit
<b>HSI CDI NEEDLE</b>	Needle deflection (+/- 127)	Number	N	-
<b>HSI GSI NEEDLE</b>	Needle deflection (+/- 119)	Number	N	-
<b>HSI CDI NEEDLE VALID</b>	Signal valid	Bool (voir note 3)	N	-
<b>HSI GSI NEEDLE VALID</b>	Signal valid	Bool (voir note 3)	N	-
<b>HSI TF FLAGS</b>	Nav TO/FROM flag: 0 = Off 1 = TO 2 = FROM	Enum	N	-
<b>HSI BEARING VALID</b>	This will return true if the HSI BEARING variable contains valid data.	Bool (voir note 3)	N	-
<b>HSI BEARING</b>	If the GPS DRIVES NAV1 variable is true and the HSI BEARING VALID variable is true, this variable contains the HSI needle bearing. If the GPS DRIVES NAV1 variable is false and the HSI BEARING VALID variable is true, this variable contains the ADF1 frequency.	Degrees	N	-
<b>HSI HAS LOCALIZER</b>	Station is a localizer	Bool (voir note 3)	N	-
<b>HSI SPEED</b>	DME/GPS speed	Knots	N	-
<b>HSI DISTANCE</b>	DME/GPS distance	Nautical miles	N	-
<b>GPS POSITION LAT</b>	Current GPS latitude	Degrees	N	-
<b>GPS POSITION LON</b>	Current GPS longitude	Degrees	N	-
<b>GPS POSITION ALT</b>	Current GPS altitude	Meters	N	-

<b>GPS MAGVAR</b>	Current GPS magnetic variation	Radians	N	-
<b>GPS IS ACTIVE FLIGHT PLAN</b>	Flight plan mode active	Bool (voir note 3)	N	-
<b>GPS IS ACTIVE WAY POINT</b>	Waypoint mode active	Bool (voir note 3)	N	-
<b>GPS IS ARRIVED</b>	Is flight plan destination reached	Bool (voir note 3)	N	-
<b>GPS IS DIRECTTO FLIGHTPLAN</b>	Is Direct To Waypoint mode active	Bool (voir note 3)	N	-
<b>GPS GROUND SPEED</b>	Current ground speed	Meters per second	N	-
<b>GPS GROUND TRUE HEADING</b>	Current true heading	Radians	N	-
<b>GPS GROUND MAGNETIC TRACK</b>	Current magnetic ground track	Radians	N	-
<b>GPS GROUND TRUE TRACK</b>	Current true ground track	Radians	N	-
<b>GPS WP DISTANCE</b>	Distance to waypoint	Meters	N	-
<b>GPS WP BEARING</b>	Magnetic bearing to waypoint	Radians	N	-
<b>GPS WP TRUE BEARING</b>	True bearing to waypoint	Radians	N	-
<b>GPS WP CROSS TRK</b>	Cross track distance	Meters	N	-
<b>GPS WP DESIRED TRACK</b>	Desired track to waypoint	Radians	N	-
<b>GPS WP TRUE REQ HDG</b>	Required true heading to waypoint	Radians	N	-
<b>GPS WP VERTICAL SPEED</b>	Vertical speed to waypoint	Meters per second	N	-
<b>GPS WP TRACK ANGLE ERROR</b>	Tracking angle error to waypoint	Radians	N	-
<b>GPS ETE</b>	Estimated time enroute to destination	Seconds	N	-
<b>GPS ETA</b>	Estimated time of arrival at destination	Seconds	N	-
<b>GPS WP NEXT LAT</b>	Latitude of next waypoint	Degrees	N	-
<b>GPS WP NEXT</b>	Longitude of next waypoint	Degrees	N	-

<b>LON</b>				
<b>GPS WP NEXT ALT</b>	Altitude of next waypoint	Meters	N	-
<b>GPS WP PREV VALID</b>	Is previous waypoint valid (i.e. current waypoint is not the first waypoint)	Bool (voir note 3)	N	-
<b>GPS WP PREV LAT</b>	Latitude of previous waypoint	Degrees	N	-
<b>GPS WP PREV LON</b>	Longitude of previous waypoint	Degrees	N	-
<b>GPS WP PREV ALT</b>	Altitude of previous waypoint	Meters	N	-
<b>GPS WP ETE</b>	Estimated time enroute to waypoint	Seconds	N	-
<b>GPS WP ETA</b>	Estimated time of arrival at waypoint	Seconds	N	-
<b>GPS COURSE TO STEER</b>	Suggested heading to steer (for autopilot)	Radians	N	-
<b>GPS FLIGHT PLAN WP INDEX</b>	Index of waypoint	Number	N	-
<b>GPS FLIGHT PLAN WP COUNT</b>	Number of waypoints	Number	N	-
<b>GPS IS ACTIVE WP LOCKED</b>	Is switching to next waypoint locked	Bool (voir note 3)	N	-
<b>GPS IS APPROACH LOADED</b>	Is approach loaded	Bool (voir note 3)	N	-
<b>GPS IS APPROACH ACTIVE</b>	Is approach mode active	Bool (voir note 3)	N	-
<b>GPS APPROACH MODE</b>	Sub mode within approach mode : 0 = None 1 = Transition 2 = Final 3 = Missed	Enum	N	-
<b>GPS APPROACH WP TYPE</b>	Waypoint type within approach mode : 0 = None 1 = Fix 2 = Procedure turn left 3 = Procedure turn right 4 = Dme arc left 5 = Dme arc right 6 = Holding left 7 = Holding right 8 = Distance	Enum	N	-

	9 = Altitude 10 = Manual sequence 11 = Vector to final			
<b>GPS APPROACH IS WP RUNWAY</b>	Waypoint is the runway	Bool (voir note 3)	N	-
<b>GPS APPROACH SEGMENT TYPE</b>	Segment type within approach : 0 = Line 1 = Arc clockwise 2 = Arc counter-clockwise	Enum	N	-
<b>GPS APPROACH APPROACH INDEX</b>	Index of approach for given airport	Number	N	-
<b>GPS APPROACH APPROACH TYPE</b>	Approach type : 0 = None 1 = GPS 2 = VOR 3 = NDB 4 = ILS 5 = Localizer 6 = SDF 7 = LDA 8 = VOR/DME 9 = NDB/DME 10 = RNAV 11 = Backcourse	Enum	N	-
<b>GPS APPROACH TRANSITION INDEX</b>	Index of approach transition	Number	N	-
<b>GPS APPROACH IS FINAL</b>	Is approach transition final approach segment	Bool (voir note 3)	N	-
<b>GPS APPROACH IS MISSED</b>	Is approach segment missed approach segment	Bool (voir note 3)	N	-
<b>GPS APPROACH TIMEZONE DEVIATION</b>	Deviation of local time from GMT	Seconds	N	-
<b>GPS APPROACH WP INDEX</b>	Index of current waypoint	Number	N	-
<b>GPS APPROACH WP COUNT</b>	Number of waypoints	Number	N	-
<b>GPS DRIVES NAV1</b>	GPS is driving Nav 1 indicator	Bool (voir note 3)	N	Shared Cockpit
<b>COM RECEIVE ALL</b>	Toggles all COM radios to receive on	Bool (voir note 3)	N	-
<b>COM AVAILABLE</b>	True if either COM1 or COM2	Bool (voir note 3)	N	-

	is available			
<b>COM TEST:index</b>	Enter an index of 1 or 2. True if the COM system is working.	Bool (voir note 3)	N	-
<b>TRANSPONDER AVAILABLE</b>	True if a transponder is available	Bool (voir note 3)	N	-
<b>ADF AVAILABLE</b>	True if ADF is available	Bool (voir note 3)	N	-
<b>ADF FREQUENCY:index</b>	Legacy, use ADF ACTIVE FREQUENCY	Frequency BCD16	N	-
<b>ADF EXT FREQUENCY:index</b>	Legacy, use ADF ACTIVE FREQUENCY	Frequency BCD16	N	-
<b>ADF IDENT</b>	ICAO code	String	N	-
<b>ADF NAME</b>	Descriptive name	String	N	-
<b>NAV IDENT</b>	ICAO code	String	N	-
<b>NAV NAME</b>	Descriptive name	String	N	-
<b>NAV CODES:index</b>	Returns bit flags with the following meaning: BIT7: 0= VOR 1= Localizer BIT6: 1= glideslope available BIT5: 1= no localizer backcourse BIT4: 1= DME transmitter at glide slope transmitter BIT3: 1= no nav signal available BIT2: 1= voice available BIT1: 1 = TACAN available BIT0: 1= DME available	Flags	N	-
<b>NAV GLIDE SLOPE</b>	The glide slope gradient.	Number	N	-
<b>NAV RELATIVE BEARING TO STATION:index</b>	Relative bearing to station	Degrees	N	-
<b>SELECTED DME</b>	Selected DME	Number	N	Shared Cockpit
<b>GPS WP NEXT ID</b>	ID of next GPS waypoint	String	N	-
<b>GPS WP PREV ID</b>	ID of previous GPS waypoint	String	N	-
<b>GPS TARGET DISTANCE</b>	Distance to target	Meters	N	-
<b>GPS TARGET ALTITUDE</b>	Altitude of GPS target	Meters	N	-
<b>ADF LATLONALT:index</b>	Returns the latitude, longitude and altitude of the station the	<b>SIMCONNECT_DATA_LATLONALT</b> structure	N	-

	radio equipment is currently tuned to, or zeros if the radio is not tuned to any ADF station. Index of 1 or 2 for ADF 1 and ADF 2.			
<b>NAV VOR LATLONALT:index</b>	Returns the VOR station latitude, longitude and altitude.	<b>SIMCONNECT_DATA_LATLONALT</b> structure	N	-
<b>NAV GS LATLONALT:index</b>	Returns the glide slope.	<b>SIMCONNECT_DATA_LATLONALT</b> structure	N	-
<b>NAV DME LATLONALT:index</b>	Returns the DME station.	<b>SIMCONNECT_DATA_LATLONALT</b> structure	N	-
<b>INNER MARKER LATLONALT</b>	Returns the latitude, longitude and altitude of the inner marker of an approach to a runway, if the aircraft is within the required proximity, otherwise it will return zeros.	<b>SIMCONNECT_DATA_LATLONALT</b> structure	N	-
<b>MIDDLE MARKER LATLONALT</b>	Returns the latitude, longitude and altitude of the middle marker.	<b>SIMCONNECT_DATA_LATLONALT</b> structure	N	-
<b>OUTER MARKER LATLONALT</b>	Returns the latitude, longitude and altitude of the outer marker.	<b>SIMCONNECT_DATA_LATLONALT</b> structure	N	-

### Aircraft Controls Data

Simulation Variable	Description	Units	Settable	Multiplayer
<b>YOKE Y POSITION</b>	Percent control deflection fore/aft (for animation)	Position (-16K to 0) -16K = Yoke fully pushed in	Y	-
<b>YOKE X POSITION</b>	Percent control deflection left/right (for animation)	Position (-16K to 0) -16K =	Y	-
<b>RUDDER PEDAL POSITION</b>	Percent rudder pedal deflection (for animation)	Position (-16K to 0) -16K = left pedal pushed full in	Y	-
<b>RUDDER POSITION</b>	Percent rudder input deflection	Position (-16K to 0) -16K = full left	Y	-
<b>ELEVATOR POSITION</b>	Percent elevator input deflection	Position (-16K to 0) -16K = full down	Y	-
<b>AILERON POSITION</b>	Percent aileron input left/right	Position (-16K to 0) -16K = full left	Y	-
<b>ELEVATOR TRIM POSITION</b>	Elevator trim deflection	Radians	Y	Shared Cockpit
<b>ELEVATOR TRIM</b>	Percent elevator trim (for indication)	Position (-16K to 0) -16K =	N	-

<b>INDICATOR</b>		full down		
<b>ELEVATOR TRIM PCT</b>	Percent elevator trim	Percent Over 100	N	-
<b>BRAKE LEFT POSITION</b>	Percent left brake	Position (0 to 32K) 0 = off, 32K full	Y	-
<b>BRAKE RIGHT POSITION</b>	Percent right brake	Position (0 to 32K) 0 = off, 32K full	Y	-
<b>BRAKE INDICATOR</b>	Brake on indication	Position (0 to 16K) 0 = off, 16K full	N	-
<b>BRAKE PARKING POSITION</b>	Parking brake on	Position (0 to 32K) 0 = off, 32K full	Y	Shared Cockpit
<b>BRAKE PARKING INDICATOR</b>	Parking brake indicator	Bool (voir note 3)	N	-
<b>SPOILERS ARMED</b>	Auto-spoilers armed	Bool (voir note 3)	N	All aircraft
<b>SPOILERS HANDLE POSITION</b>	Spoiler handle position	Percent over 100 (% divisé par 100) or Position (16K = down, 0 = up)	Y	All aircraft
<b>SPOILERS LEFT POSITION</b>	Percent left spoiler deflected	Percent over 100 (% divisé par 100) or Position (0 = retracted, 16K fully extended)	N	-
<b>SPOILERS RIGHT POSITION</b>	Percent right spoiler deflected	Percent over 100 (% divisé par 100) or Position (0 = retracted, 16K fully extended)	N	-
<b>FLAPS HANDLE PERCENT</b>	Percent flap handle extended	Percent Over 100	N	-
<b>FLAPS HANDLE INDEX</b>	Index of current flap position	Number	Y	All aircraft
<b>FLAPS NUM HANDLE POSITIONS</b>	Number of flap positions	Number	N	-
<b>TRAILING EDGE FLAPS LEFT PERCENT</b>	Percent left trailing edge flap extended	Percent Over 100	Y	-
<b>TRAILING EDGE FLAPS RIGHT PERCENT</b>	Percent right trailing edge flap extended	Percent Over 100	Y	-
<b>TRAILING EDGE FLAPS LEFT ANGLE</b>	Angle left trailing edge flap extended. Use TRAILING EDGE FLAPS LEFT PERCENT to set a value.	Radians	N	-
<b>TRAILING EDGE</b>	Angle right trailing edge flap extended. Use	Radians	N	-

<b>FLAPS RIGHT ANGLE</b>	TRAILING EDGE FLAPS RIGHT PERCENT to set a value.			
<b>LEADING EDGE FLAPS LEFT PERCENT</b>	Percent left leading edge flap extended	Percent Over 100	Y	-
<b>LEADING EDGE FLAPS RIGHT PERCENT</b>	Percent right leading edge flap extended	Percent Over 100	Y	-
<b>LEADING EDGE FLAPS LEFT ANGLE</b>	Angle left leading edge flap extended. Use LEADING EDGE FLAPS LEFT PERCENT to set a value.	Radians	N	-
<b>LEADING EDGE FLAPS RIGHT ANGLE</b>	Angle right leading edge flap extended. Use LEADING EDGE FLAPS RIGHT PERCENT to set a value.	Radians	N	-
<b>AILERON LEFT DEFLECTION</b>	Angle deflection	Radians	N	-
<b>AILERON LEFT DEFLECTION PCT</b>	Percent deflection	Percent Over 100	N	-
<b>AILERON RIGHT DEFLECTION</b>	Angle deflection	Radians	N	-
<b>AILERON RIGHT DEFLECTION PCT</b>	Percent deflection	Percent Over 100	N	-
<b>AILERON AVERAGE DEFLECTION</b>	Angle deflection	Radians	N	-
<b>AILERON TRIM</b>	Angle deflection	Radians	N	-
<b>AILERON TRIM PCT</b>	Percent deflection	Percent Over 100	Y	Shared Cockpit
<b>RUDDER DEFLECTION</b>	Angle deflection	Radians	N	-
<b>RUDDER DEFLECTION PCT</b>	Percent deflection	Percent Over 100	N	-
<b>RUDDER TRIM</b>	Angle deflection	Radians	N	-
<b>RUDDER TRIM PCT</b>	Percent deflection	Percent Over 100	Y	Shared Cockpit
<b>FLAPS AVAILABLE</b>	True if flaps available	Bool (voir note 3)	N	-
<b>FLAP DAMAGE BY SPEED</b>	True if flaps are damaged by excessive speed	Bool (voir note 3)	N	-
<b>FLAP SPEED EXCEEDED</b>	True if safe speed limit for flaps exceeded	Bool (voir note 3)	N	-
<b>ELEVATOR DEFLECTION</b>	Angle deflection	Radians	N	-

<b>ELEVATOR DEFLECTION PCT</b>	Percent deflection	Percent Over 100	N	-
<b>ALTERNATE STATIC SOURCE OPEN</b>	Alternate static air source	Bool (voir note 3)	N	All aircraft
<b>AILERON TRIM PCT</b>	The trim position of the ailerons. Zero is fully retracted.	Float. Percent over 100	Y	-
<b>RUDDER TRIM PCT</b>	The trim position of the rudder. Zero is no trim.	Float. Percent over 100	Y	-
<b>FOLDING WING HANDLE POSITION</b>	True if the folding wing handle is engaged.	Bool (voir note 3)	N	-
<b>FUEL DUMP SWITCH</b>	If true the aircraft is dumping fuel at the rate set in the configuration file.	Bool (voir note 3)	N	-

**NDT :** au sujet des variables des compensateurs (trims) on trouve des définitions en double :

<b>ELEVATOR TRIM POSITION</b>	Elevator trim deflection	Radians	Y	Shared Cockpit
<b>ELEVATOR TRIM INDICATOR</b>	Percent elevator trim (for indication)	Position (-16K to 0) -16K = full down	N	-
<b>ELEVATOR TRIM PCT</b>	Percent elevator trim	Percent Over 100	N	-
<b>AILERON TRIM</b>	Angle deflection	Radians	N	-
<b>AILERON TRIM PCT</b>	Percent deflection	Percent Over 100	Y	Shared Cockpit
<b>AILERON TRIM PCT</b>	The trim position of the ailerons. Zero is fully retracted.	Float. Percent over 100	Y	-
<b>RUDDER TRIM</b>	Angle deflection	Radians	N	-
<b>RUDDER TRIM PCT</b>	Percent deflection	Percent Over 100	Y	Shared Cockpit
<b>RUDDER TRIM PCT</b>	The trim position of the rudder. Zero is no trim.	Float. Percent over 100	Y	-

### Aircraft Autopilot Data

Simulation Variable	Description	Units	Settable	Multiplayer
<b>AUTOPILOT AVAILABLE</b>	Available flag	Bool (voir note 3)	N	-
<b>AUTOPILOT MASTER</b>	On/off flag	Bool (voir note 3)	N	Shared Cockpit
<b>AUTOPILOT NAV SELECTED</b>	Index of Nav radio selected	Number	N	-

<b>AUTOPILOT WING LEVELER</b>	Wing leveler active	Bool (voir note 3)	N	Shared Cockpit
<b>AUTOPILOT NAV1 LOCK</b>	Lateral nav mode active	Bool (voir note 3)	N	-
<b>AUTOPILOT HEADING LOCK</b>	Heading mode active	Bool (voir note 3)	N	Shared Cockpit
<b>AUTOPILOT HEADING LOCK DIR</b>	Selected heading	Degrees	N	Shared Cockpit
<b>AUTOPILOT ALTITUDE LOCK</b>	Altitude hold active	Bool (voir note 3)	N	Shared Cockpit
<b>AUTOPILOT ALTITUDE LOCK VAR</b>	Selected altitude	Feet	N	Shared Cockpit
<b>AUTOPILOT ATTITUDE HOLD</b>	Attitude hold active	Bool (voir note 3)	N	Shared Cockpit
<b>AUTOPILOT GLIDESLOPE HOLD</b>	GS hold active	Bool (voir note 3)	N	Shared Cockpit
<b>AUTOPILOT PITCH HOLD REF</b>	Current reference pitch	Radians	N	-
<b>AUTOPILOT APPROACH HOLD</b>	Approach mode active	Bool (voir note 3)	N	Shared Cockpit
<b>AUTOPILOT BACKCOURSE HOLD</b>	Back course mode active	Bool (voir note 3)	N	Shared Cockpit
<b>AUTOPILOT VERTICAL HOLD VAR</b>	Selected vertical speed	Feet/minute	N	Shared Cockpit
<b>AUTOPILOT PITCH HOLD</b>	Set to True if the autopilot pitch hold has is engaged.	Bool (voir note 3)	N	-
<b>AUTOPILOT FLIGHT DIRECTOR ACTIVE</b>	Flight director active	Bool (voir note 3)	N	Shared Cockpit
<b>AUTOPILOT FLIGHT DIRECTOR PITCH</b>	Reference pitch angle	Radians	N	-
<b>AUTOPILOT FLIGHT DIRECTOR BANK</b>	Reference bank angle	Radians	N	-
<b>AUTOPILOT AIRSPEED HOLD</b>	Airspeed hold active	Bool (voir note 3)	N	Shared Cockpit
<b>AUTOPILOT AIRSPEED HOLD VAR</b>	Selected airspeed	Knots	N	Shared Cockpit
<b>AUTOPILOT MACH HOLD</b>	Mach hold active	Bool (voir note 3)	N	Shared Cockpit
<b>AUTOPILOT MACH HOLD VAR</b>	Selected mach	Number	N	Shared Cockpit
<b>AUTOPILOT YAW DAMPER</b>	Yaw damper active	Bool (voir	N	Shared

		note 3)		Cockpit
<b>AUTOPILOT RPM HOLD VAR</b>	Selected rpm	Number	N	-
<b>AUTOPILOT THROTTLE ARM</b>	Autothrottle armed	Bool (voir note 3)	N	Shared Cockpit
<b>AUTOPILOT TAKEOFF POWER ACTIVE</b>	Takeoff / Go Around power mode active	Bool (voir note 3)	N	Shared Cockpit
<b>AUTOThROTTLE ACTIVE</b>	Auto-throttle active	Bool (voir note 3)	N	-
<b>AUTOPILOT NAV1 LOCK</b>	True if autopilot nav1 lock applied	Bool (voir note 3)	N	Shared Cockpit
<b>AUTOPILOT VERTICAL HOLD</b>	True if autopilot vertical hold applied	Bool (voir note 3)	N	-
<b>AUTOPILOT RPM HOLD</b>	True if autopilot rpm hold applied	Bool (voir note 3)	N	-
<b>AUTOPILOT MAX BANK</b>	True if autopilot max bank applied	Radians	N	-
<b>FLY BY WIRE ELAC SWITCH</b>	True if the fly by wire Elevators and Ailerons computer is on.	Bool (voir note 3)	N	-
<b>FLY BY WIRE FAC SWITCH</b>	True if the fly by wire Flight Augmentation computer is on.	Bool (voir note 3)	N	-
<b>FLY BY WIRE SEC SWITCH</b>	True if the fly by wire Spoilers and Elevators computer is on.	Bool (voir note 3)	N	-
<b>FLY BY WIRE ELAC FAILED</b>	True if the Elevators and Ailerons computer has failed.	Bool (voir note 3)	N	-
<b>FLY BY WIRE FAC FAILED</b>	True if the Flight Augmentation computer has failed.	Bool (voir note 3)	N	-
<b>FLY BY WIRE SEC FAILED</b>	True if the Spoilers and Elevators computer has failed.	Bool (voir note 3)	N	-

### Aircraft Landing Gear Data

Simulation Variable	Description	Units	Settable	Multiplayer
<b>IS GEAR RETRACTABLE</b>	True if gear can be retracted	Bool (voir note 3)	N	-
<b>IS GEAR SKIS</b>	True if landing gear is skis	Bool (voir note 3)	N	-
<b>IS GEAR FLOATS</b>	True if landing gear is floats	Bool (voir note 3)	N	-
<b>IS GEAR SKIDS</b>	True if landing gear is skids	Bool (voir note 3)	N	-

<b>IS GEAR WHEELS</b>	True if landing gear is wheels	Bool (voir note 3)	N	-
<b>GEAR HANDLE POSITION</b>	True if gear handle is applied	Bool (voir note 3)	Y	All aircraft
<b>GEAR HYDRAULIC PRESSURE</b>	Gear hydraulic pressure	Pound force per square foot (psf)	N	-
<b>TAILWHEEL LOCK ON</b>	True if tailwheel lock applied	Bool (voir note 3)	N	-
<b>GEAR CENTER POSITION</b>	Percent center gear extended	Percent Over 100	Y	-
<b>GEAR LEFT POSITION</b>	Percent left gear extended	Percent Over 100	Y	-
<b>GEAR RIGHT POSITION</b>	Percent right gear extended	Percent Over 100	Y	-
<b>GEAR TAIL POSITION</b>	Percent tail gear extended	Percent Over 100	N	-
<b>GEAR AUX POSITION</b>	Percent auxiliary gear extended	Percent Over 100	N	-
<b>GEAR POSITION:index</b>	Position of landing gear: 0 = unknown 1 = up 2 = down	Enum	Y	-
<b>GEAR ANIMATION POSITION:index</b>	Percent gear animation extended	Number	N	-
<b>GEAR TOTAL PCT EXTENDED</b>	Percent total gear extended	Percentage	N	-
<b>AUTO BRAKE SWITCH CB</b>	Auto brake switch position	Number	N	-
<b>WATER RUDDER HANDLE POSITION</b>	Position of the water rudder handle (0 handle retracted, 100 rudder handle applied)	Percent Over 100	Y	All aircraft
<b>WATER LEFT RUDDER EXTENDED</b>	Percent extended	Percentage	N	-
<b>WATER RIGHT RUDDER EXTENDED</b>	Percent extended	Percentage	N	-
<b>GEAR CENTER STEER ANGLE</b>	Center wheel angle, negative to the left, positive to the right.	Percent Over 100	N	-

<b>GEAR LEFT STEER ANGLE</b>	Left wheel angle, negative to the left, positive to the right.	Percent Over 100	N	-
<b>GEAR RIGHT STEER ANGLE</b>	Right wheel angle, negative to the left, positive to the right.	Percent Over 100	N	-
<b>GEAR AUX STEER ANGLE</b>	Aux wheel angle, negative to the left, positive to the right. The aux wheel is the fourth set of gear, sometimes used on helicopters.	Percent Over 100	N	-
<b>GEAR STEER ANGLE:index</b>	Alternative method of getting the steer angle. Index is 0 = center 1 = left 2 = right 3 = aux	Percent Over 100	N	-
<b>WATER LEFT RUDDER STEER ANGLE</b>	Water left rudder angle, negative to the left, positive to the right.	Percent Over 100	N	-
<b>WATER RIGHT RUDDER STEER ANGLE</b>	Water right rudder angle, negative to the left, positive to the right.	Percent Over 100	N	-
<b>GEAR CENTER STEER ANGLE PCT</b>	Center steer angle as a percentage	Percent Over 100	N	-
<b>GEAR LEFT STEER ANGLE PCT</b>	Left steer angle as a percentage	Percent Over 100	N	-
<b>GEAR RIGHT STEER ANGLE PCT</b>	Right steer angle as a percentage	Percent Over 100	N	-
<b>GEAR AUX STEER ANGLE PCT</b>	Aux steer angle as a percentage	Percent Over 100	N	-
<b>GEAR STEER ANGLE PCT:index</b>	Alternative method of getting steer angle as a percentage. Index is 0 = center 1 = left 2 = right 3 = aux	Percent Over 100	N	-
<b>WATER LEFT RUDDER STEER ANGLE PCT</b>	Water left rudder angle as a percentage	Percent Over 100	N	-
<b>WATER RIGHT RUDDER STEER ANGLE PCT</b>	Water right rudder as a percentage	Percent Over 100	N	-
<b>WHEEL RPM:index</b>	Wheel rpm. Index is 0 = center 1 = left	Rpm	N	-

	2 = right 3 = aux			
<b>CENTER WHEEL RPM</b>	Center landing gear rpm	Rpm	N	-
<b>LEFT WHEEL RPM</b>	Left landing gear rpm	Rpm	N	-
<b>RIGHT WHEEL RPM</b>	Right landing gear rpm	Rpm	N	-
<b>AUX WHEEL RPM</b>	Rpm of fourth set of gear wheels.	Rpm	N	-
<b>WHEEL ROTATION ANGLE:index</b>	Wheel rotation angle. Index is 0 = center 1 = left 2 = right 3 = aux	Radians	N	-
<b>CENTER WHEEL ROTATION ANGLE</b>	Center wheel rotation angle	Radians	N	-
<b>LEFT WHEEL ROTATION ANGLE</b>	Left wheel rotation angle	Radians	N	-
<b>RIGHT WHEEL ROTATION ANGLE</b>	Right wheel rotation angle	Radians	N	-
<b>AUX WHEEL ROTATION ANGLE</b>	Aux wheel rotation angle	Radians	N	-
<b>GEAR EMERGENCY HANDLE POSITION</b>	True if gear emergency handle applied	Bool (voir note 3)	N	-
<b>GEAR WARNING</b>	One of: 0: unknown 1: normal 2: amphib	Enum	N	-
<b>ANTISKID BRAKES ACTIVE</b>	True if antiskid brakes active	Bool (voir note 3)	N	-
<b>RETRACT FLOAT SWITCH</b>	True if retract float switch on	Bool (voir note 3)	N	-
<b>RETRACT LEFT FLOAT EXTENDED</b>	If aircraft has retractable floats.	Percent (0 is fully retracted, 100 is fully extended)	N	-

<b>RETRACT RIGHT FLOAT EXTENDED</b>	If aircraft has retractable floats.	Percent (0 is fully retracted, 100 is fully extended)	N	-
<b>STEER INPUT CONTROL</b>	Position of steering tiller	Percent over 100 (% divisé par 100)	N	-
<b>GEAR DAMAGE BY SPEED</b>	True if gear has been damaged by excessive speed	Bool (voir note 3)	N	-
<b>GEAR SPEED EXCEEDED</b>	True if safe speed limit for gear exceeded	Bool (voir note 3)	N	-
<b>NOSEWHEEL LOCK ON</b>	True if the nosewheel lock is engaged.	Bool (voir note 3)	N	-

### Aircraft Environment Data

Simulation Variable	Description	Units	Settable	Multiplayer
<b>AMBIENT DENSITY</b>	Ambient density	Slugs per cubic feet	N	-
<b>AMBIENT TEMPERATURE</b>	Ambient temperature	Celsius	N	-
<b>AMBIENT PRESSURE</b>	Ambient pressure	Inches of mercury, inHg	N	-
<b>AMBIENT WIND VELOCITY</b>	Wind velocity	Knots	N	-
<b>AMBIENT WIND DIRECTION</b>	Wind direction	Degrees	N	-
<b>AMBIENT WIND X</b>	Wind component in East/West direction.	Meters per second	N	-
<b>AMBIENT WIND Y</b>	Wind component in vertical direction.	Meters per second	N	-
<b>AMBIENT WIND Z</b>	Wind component in North/South direction.	Meters per second	N	-
<b>STRUCT AMBIENT WIND</b>	X (latitude), Y (vertical) and Z (longitude) components of the wind.	Feet_per_second	N	-
<b>AMBIENT PRECIP STATE</b>	Precip state (bit field) 2 = None 4 = Rain 8 = Snow	Mask	N	-
<b>AIRCRAFT WIND X</b>	Wind component in aircraft lateral axis	Knots	N	-
<b>AIRCRAFT WIND Y</b>	Wind component in aircraft vertical axis	Knots	N	-

<b>AIRCRAFT WIND Z</b>	Wind component in aircraft longitudinal axis	Knots	N	-
<b>BAROMETER PRESSURE</b>	Barometric pressure	Millibars	N	-
<b>SEA LEVEL PRESSURE</b>	Barometric pressure at sea level	Millibars	N	-
<b>TOTAL AIR TEMPERATURE</b>	Total air temperature is the air temperature at the front of the aircraft where the ram pressure from the speed of the aircraft is taken into account.	Celsius	N	-
<b>WINDSHIELD RAIN EFFECT AVAILABLE</b>	Is visual effect available on this aircraft	Bool (voir note 3)	N	-
<b>AMBIENT IN CLOUD</b>	True if the aircraft is in a cloud.	Bool (voir note 3)	N	-
<b>AMBIENT VISIBILITY</b>	Ambient visibility	Meters	N	-
<b>STANDARD ATM TEMPERATURE</b>	Outside temperature on the standard ATM scale	Rankine	N	-

## Helicopter Specific Data

Note: Only variables that specifically mention the Bell helicopter apply to the Bell.

Simulation Variable	Description	Units	Settable	Multiplayer
<b>ROTOR BRAKE HANDLE POS</b>	Percent actuated	Percent Over 100	N	-
<b>ROTOR BRAKE ACTIVE</b>	Active	Bool (voir note 3)	N	-
<b>ROTOR CLUTCH SWITCH POS</b>	Switch position	Bool (voir note 3)	N	-
<b>ROTOR CLUTCH ACTIVE</b>	Active	Bool (voir note 3)	N	-
<b>ROTOR TEMPERATURE</b>	Main rotor transmission temperature	Rankine	N	-
<b>ROTOR CHIP DETECTED</b>	Chip detection	Bool (voir note 3)	N	-
<b>ROTOR GOV SWITCH POS</b>	Switch position	Bool (voir note 3)	N	-
<b>ROTOR GOV ACTIVE</b>	Active	Bool (voir note 3)	N	-
<b>ROTOR LATERAL TRIM PCT</b>	Trim percent	Percent Over 100	N	-
<b>ROTOR RPM PCT</b>	Percent max rated rpm	Percent Over 100	N	-
<b>ENG TURBINE TEMPERATURE</b>	Turbine temperature. Applies only to Bell helicopter.	Celsius scalar 16K (degrees * 16384)	N	-
<b>ENG TORQUE PERCENT:index</b>	Torque. Returns main rotor torque for Bell helicopter, or the indexed rotor torque of other helicopters.	Percent scalar 16K (Ft/lbs * 16384)	N	-
<b>ENG FUEL PRESSURE</b>	Fuel pressure. Applies only to Bell helicopter.	PSI scalar 16K (Psi * 16384)	N	-

<b>ENG ELECTRICAL LOAD</b>	Electrical load. Applies only to Bell helicopter.	Percent scalar 16K (Max load * 16384)	N	-
<b>ENG TRANSMISSION PRESSURE</b>	Transmission pressure. Applies only to Bell helicopter.	PSI scalar 16K (Psi * 16384)	N	-
<b>ENG TRANSMISSION TEMPERATURE</b>	Transmission temperature. Applies only to Bell helicopter.	Celsius scalar 16K (Degrees * 16384)	N	-
<b>ENG ROTOR RPM:index</b>	Rotor rpm. Returns main rotor rpm for Bell helicopter, or the indexed rotor rpm of other helicopters.	Percent scalar 16K (Max rpm * 16384)	N	-
<b>COLLECTIVE POSITION</b>	The position of the helicopter's collective. 0 is fully up, 100 fully depressed.	Percent_over_100	N	-
<b>Slings and Hoists</b>				
<b>NUM SLING CABLES</b>	The number of sling cables (not hoists) that are configured for the aircraft. Refer to the document <a href="#">Notes on Aircraft Systems</a> .	Number	N	-
<b>PAYOUT STATION OBJECT:index</b>	Places the named object at the payout station identified by the index (starting from 1). The string is the Container name (refer to the title property of <a href="#">Simulation Object Configuration Files</a> ).	String	Y-set only	-
<b>PAYOUT STATION NUM SIMOBJECTS:index</b>	The number of objects at the payout station (indexed from 1).	Number	N	-
<b>SLING OBJECT ATTACHED:index</b>	If units are set as <b>Bool (voir note 3)</b> ,ean, returns True if a sling object is attached. If units are set as a string, returns the container title of the object. There can be multiple sling positions, indexed from 1. The sling positions are set in the <a href="#">Aircraft Configuration File</a> .	<b>Bool (voir note 3)</b> /String	N	-
<b>SLING CABLE BROKEN:index</b>	True if the cable is broken.	<b>Bool (voir note 3)</b>	N	-
<b>SLING CABLE EXTENDED LENGTH:index</b>	The length of the cable extending from the aircraft.	Feet	Y	-
<b>SLING ACTIVE PAYLOAD STATION:index</b>	The payload station (identified by the parameter) where objects will be placed from the sling (identified by the index).	Number	Y	-
<b>SLING HOIST PERCENT DEPLOYED:index</b>	The percentage of the full length of the sling cable deployed.	Percent_over_100	N	-
<b>SLING HOOK IN PICKUP MODE:index</b>	A <b>Bool (voir note 3)</b> ean for whether or not the hook is in pickup mode, so capable of picking up another object.	<b>Bool (voir note 3)</b>	N	-
<b>IS ATTACHED TO SLING</b>	Set to true if this object is attached to a sling.	<b>Bool (voir note 3)</b>	N	-

## Aircraft Miscellaneous Systems Data

Simulation Variable	Description	Units	Settable	Multiplayer
<b>SMOKE ENABLE</b>	Set to True to activate the smoke system, if one is available (for example, on the Extra).	Bool (voir note 3)	Y	All aircraft
<b>SMOKESYSTEM AVAILABLE</b>	Smoke system available	Bool (voir note 3)	N	-
<b>PITOT HEAT</b>	Pitot heat active	Bool (voir note 3)	N	All aircraft
<b>FOLDING WING LEFT PERCENT</b>	Left folding wing position, 100 is fully folded	Percent Over 100	Y	-
<b>FOLDING WING RIGHT PERCENT</b>	Right folding wing position, 100 is fully folded	Percent Over 100	Y	-
<b>CANOPY OPEN</b>	Percent primary door/exit open	Percent Over 100	Y	-
<b>TAILHOOK POSITION</b>	Percent tail hook extended	Percent Over 100	Y	-
<b>EXIT OPEN:index</b>	Percent door/exit open	Percent Over 100	Y	-
<b>STALL HORN AVAILABLE</b>	True if stall alarm available	Bool (voir note 3)	N	-
<b>ENGINE MIXURE AVAILABLE</b>	True if engine mixture is available for prop engines. Obsolete value as mixture is always available. Spelling error in variable name.	Bool (voir note 3)	N	-
<b>CARB HEAT AVAILABLE</b>	True if carb heat available	Bool (voir note 3)	N	-
<b>SPOILER AVAILABLE</b>	True if spoiler system available	Bool (voir note 3)	N	-
<b>IS TAIL DRAGGER</b>	True if the aircraft is a taildragger	Bool (voir note 3)	N	-
<b>STROBES AVAILABLE</b>	True if strobe lights are available	Bool (voir note 3)	N	-
<b>TOE BRAKES AVAILABLE</b>	True if toe brakes are available	Bool (voir note 3)	N	-
<b>PUSHBACK STATE</b>	Type of pushback : 0 = Straight 1 = Left 2 = Right	Enum	Y	-
<b>ELECTRICAL MASTER BATTERY</b>	Battery switch position	Bool (voir note 3)	Y	All aircraft
<b>ELECTRICAL TOTAL LOAD</b>	Total load amps	Amperes	Y	-

<b>AMPS</b>				
<b>ELECTRICAL BATTERY LOAD</b>	Battery load	Amperes	Y	-
<b>ELECTRICAL BATTERY VOLTAGE</b>	Battery voltage	Volts	Y	-
<b>ELECTRICAL MAIN BUS VOLTAGE</b>	Main bus voltage	Volts	Y	-
<b>ELECTRICAL MAIN BUS AMPS</b>	Main bus current	Amperes	Y	-
<b>ELECTRICAL AVIONICS BUS VOLTAGE</b>	Avionics bus voltage	Volts	Y	-
<b>ELECTRICAL AVIONICS BUS AMPS</b>	Avionics bus current	Amperes	Y	-
<b>ELECTRICAL HOT BATTERY BUS VOLTAGE</b>	Voltage available when battery switch is turned off	Volts	Y	-
<b>ELECTRICAL HOT BATTERY BUS AMPS</b>	Current available when battery switch is turned off	Amperes	Y	-
<b>ELECTRICAL BATTERY BUS VOLTAGE</b>	Battery bus voltage	Volts	Y	-
<b>ELECTRICAL BATTERY BUS AMPS</b>	Battery bus current	Amperes	Y	-
<b>ELECTRICAL GENALT BUS VOLTAGE:index</b>	Genalt bus voltage (takes engine index)	Volts	Y	-
<b>ELECTRICAL GENALT BUS AMPS:index</b>	Genalt bus current (takes engine index)	Amperes	Y	-
<b>CIRCUIT GENERAL PANEL ON</b>	Is electrical power available to this circuit	Bool (voir note 3)	N	-
<b>CIRCUIT FLAP MOTOR ON</b>	Is electrical power available to this circuit	Bool (voir note 3)	N	-
<b>CIRCUIT GEAR MOTOR ON</b>	Is electrical power available to this circuit	Bool (voir note 3)	N	-
<b>CIRCUIT AUTOPILOT ON</b>	Is electrical power available to this circuit	Bool (voir note 3)	N	-
<b>CIRCUIT AVIONICS ON</b>	Is electrical power available to this circuit	Bool (voir note 3)	N	-
<b>CIRCUIT PITOT HEAT ON</b>	Is electrical power available to this circuit	Bool (voir note 3)	N	-
<b>CIRCUIT PROP SYNC ON</b>	Is electrical power available to this circuit	Bool (voir note 3)	N	-
<b>CIRCUIT AUTO FEATHER</b>	Is electrical power available to this circuit	Bool (voir	N	-

<b>ON</b>		note 3)		
<b>CIRCUIT AUTO BRAKES ON</b>	Is electrical power available to this circuit	Bool (voir note 3)	N	-
<b>CIRCUIT STANDBY VACUUM ON</b>	Is electrical power available to this circuit	Bool (voir note 3)	N	Shared Cockpit
<b>CIRCUIT MARKER BEACON ON</b>	Is electrical power available to this circuit	Bool (voir note 3)	N	-
<b>CIRCUIT GEAR WARNING ON</b>	Is electrical power available to this circuit	Bool (voir note 3)	N	-
<b>CIRCUIT HYDRAULIC PUMP ON</b>	Is electrical power available to this circuit	Bool (voir note 3)	N	-
<b>HYDRAULIC PRESSURE:index</b>	Hydraulic system pressure. Indexes start at 1.	Pound force per square foot	N	-
<b>HYDRAULIC RESERVOIR PERCENT:index</b>	Hydraulic pressure changes will follow changes to this variable. Indexes start at 1.	Percent Over 100	Y	-
<b>HYDRAULIC SYSTEM INTEGRITY</b>	Percent system functional	Percent Over 100	N	-
<b>STRUCTURAL DEICE SWITCH</b>	True if the aircraft structure deice switch is on	Bool (voir note 3)	N	-
<b>APPLY HEAT TO SYSTEMS</b>	Used when too close to a fire.	Bool (voir note 3)	Y	-
<b>DROPPABLE OBJECTS TYPE:index</b>	The type of droppable object at the station number identified by the index.	String	Y	-
<b>DROPPABLE OBJECTS COUNT:index</b>	The number of droppable objects at the station number identified by the index.	Number	N	-

## Aircraft Miscellaneous Data

Simulation Variable	Description	Units	Settable	Multiplayer
<b>TOTAL WEIGHT</b>	Total weight of the aircraft	Pounds	N	-
<b>MAX GROSS WEIGHT</b>	Maximum gross weight of the aircraft	Pounds	N	-
<b>EMPTY WEIGHT</b>	Empty weight of the aircraft	Pounds	N	-
<b>IS USER SIM</b>	Is this the user loaded aircraft	Bool (voir note 3)	N	-
<b>SIM DISABLED</b>	Is sim disabled	Bool (voir note 3)	Y	-
<b>G FORCE</b>	Current g force	GForce	Y	All aircraft
<b>ATC HEAVY</b>	Is this aircraft recognized by ATC as heavy	Bool (voir note 3)	Y	-

<b>AUTO COORDINATION</b>	Is auto-coordination active	Bool (voir note 3)	Y	-
<b>REALISM</b>	General realism percent	Number	Y	-
<b>TRUE AIRSPEED SELECTED</b>	True if True Airspeed has been selected	Bool (voir note 3)	Y	-
<b>DESIGN SPEED VS0</b>	Design speed at VS0	Feet per second	N	-
<b>DESIGN SPEED VS1</b>	Design speed at VS1	Feet per second	N	-
<b>DESIGN SPEED VC</b>	Design speed at VC	Feet per second	N	-
<b>MIN DRAG VELOCITY</b>	Minimum drag velocity	Feet per second	N	-
<b>ESTIMATED CRUISE SPEED</b>	Estimated cruise speed	Feet per second	N	-
<b>CG PERCENT</b>	Longitudinal CG position as a percent of reference chord	Percent over 100 (% divisé par 100)	N	-
<b>CG PERCENT LATERAL</b>	Lateral CG position as a percent of reference chord	Percent over 100 (% divisé par 100)	N	-
<b>IS SLEW ACTIVE</b>	True if slew is active	Bool (voir note 3)	Y	Shared Cockpit
<b>IS SLEW ALLOWED</b>	True if slew is enabled	Bool (voir note 3)	Y	Shared Cockpit
<b>ATC SUGGESTED MIN RWY TAKEOFF</b>	Suggested minimum runway length for takeoff. Used by ATC	Feet	N	-
<b>ATC SUGGESTED MIN RWY LANDING</b>	Suggested minimum runway length for landing. Used by ATC	Feet	N	-
<b>PAYOUT STATION WEIGHT:index</b>	Individual payload station weight	Pounds	Y	-
<b>PAYOUT STATION COUNT</b>	Number of payload stations	Number	N	-
<b>USER INPUT ENABLED</b>	Is input allowed from the user	Bool (voir note 3)	Y	-
<b>TYPICAL DESCENT RATE</b>	Normal descent rate	Feet per minute	N	-
<b>VISUAL MODEL RADIUS</b>	Model radius	Meters	N	-

<b>CATEGORY</b>	One of the following: "Airplane", "Helicopter", "Boat", "GroundVehicle", "ControlTower", "SimpleObject", "Viewer"	String	N	-
<b>SIGMA SQRT</b>	Sigma sqrt	Number	N	-
<b>DYNAMIC PRESSURE</b>	Dynamic pressure	Pounds per square foot	N	-
<b>TOTAL VELOCITY</b>	Velocity regardless of direction. For example, if a helicopter is ascending vertically at 100 fps, getting this variable will return 100.	Feet per second	N	-
<b>AIRSPEED SELECT INDICATED OR TRUE</b>	The airspeed, whether true or indicated airspeed has been selected.	Knots	N	-
<b>VARIOMETER RATE</b>	Variometer rate	Feet per second	N	-
<b>VARIOMETER SWITCH</b>	True if the variometer switch is on	Bool (voir note 3)	N	-
<b>PRESSURE ALTITUDE</b>	Altitude reading	Meters	N	-
<b>MAGNETIC COMPASS</b>	Compass reading	Degrees	N	-
<b>TURN INDICATOR RATE</b>	Turn indicator reading	Radians per second	N	-
<b>TURN INDICATOR SWITCH</b>	True if turn indicator switch is on	Bool (voir note 3)	N	-
<b>YOKE Y INDICATOR</b>	Yoke position in vertical direction	Position	N	-
<b>YOKE X INDICATOR</b>	Yoke position in horizontal direction	Position	N	-
<b>RUDDER PEDAL INDICATOR</b>	Rudder pedal position	Position	N	-
<b>BRAKE DEPENDENT HYDRAULIC PRESSURE</b>	Brake dependent hydraulic pressure reading	Pounds per square foot	N	-
<b>PANEL ANTI ICE SWITCH</b>	True if panel anti-ice switch is on	Bool (voir note 3)	N	-
<b>WING AREA</b>	Total wing area	Square feet	N	-
<b>WING SPAN</b>	Total wing span	Feet	N	-
<b>BETA DOT</b>	Beta dot	Radians per second	N	-
<b>LINEAR CL ALPHA</b>	Linear CL alpha	Per radian	N	-

<b>STALL ALPHA</b>	Stall alpha	Radians	N	-
<b>ZERO LIFT ALPHA</b>	Zero lift alpha	Radians	N	-
<b>CG AFT LIMIT</b>	Aft limit of CG	Percent over 100 (% divisé par 100)	N	-
<b>CG FWD LIMIT</b>	Forward limit of CG	Percent over 100 (% divisé par 100)	N	-
<b>CG MAX MACH</b>	Max mach CG	Machs	N	-
<b>CG MIN MACH</b>	Min mach CG	Machs	N	-
<b>PAYOUT STATION NAME</b>	Descriptive name for payload station	String	N	-
<b>ELEVON DEFLECTION</b>	Elevon deflection	Radians	N	-
<b>EXIT TYPE</b>	One of: 0: Main 1: Cargo 2: Emergency 3: Unknown	Enum	N	-
<b>EXIT POSX</b>	Position of exit relative to datum reference point	Feet	N	-
<b>EXIT POSY</b>	Position of exit relative to datum reference point	Feet	N	-
<b>EXIT POSZ</b>	Position of exit relative to datum reference point	Feet	N	-
<b>DECISION HEIGHT</b>	Design decision height	Feet	N	-
<b>DECISION ALTITUDE MSL</b>	Design decision altitude above mean sea level MSL	Feet	N	-
<b>EMPTY WEIGHT PITCH MOI</b>	Empty weight pitch moment of inertia	Slugs per foot squared	N	-
<b>EMPTY WEIGHT ROLL MOI</b>	Empty weight roll moment of inertia	Slugs per foot squared	N	-
<b>EMPTY WEIGHT YAW MOI</b>	Empty weight yaw moment of inertia	Slugs per foot squared	N	-
<b>EMPTY WEIGHT CROSS COUPLED MOI</b>	Empty weight cross coupled moment of inertia	Slugs per foot squared	N	-
<b>TOTAL WEIGHT PITCH MOI</b>	Total weight pitch moment of inertia	Slugs per foot squared	N	-

<b>TOTAL WEIGHT ROLL MOI</b>	Total weight roll moment of inertia	Slugs per foot squared	N	-
<b>TOTAL WEIGHT YAW MOI</b>	Total weight yaw moment of inertia	Slugs per foot squared	N	-
<b>TOTAL WEIGHT CROSS COUPLED MOI</b>	Total weight cross coupled moment of inertia	Slugs per foot squared	N	-
<b>WATER BALLAST VALVE</b>	True if water ballast valve is available	Bool (voir note 3)	N	-
<b>MAX RATED ENGINE RPM</b>	Maximum rated rpm	Rpm	N	-
<b>FULL THROTTLE THRUST TO WEIGHT RATIO</b>	Full throttle thrust to weight ratio	Number	N	-
<b>PROP AUTO CRUISE ACTIVE</b>	True if prop auto cruise active	Bool (voir note 3)	N	-
<b>PROP ROTATION ANGLE</b>	Prop rotation angle	Radians	N	-
<b>PROP BETA MAX</b>	Prop beta max	Radians	N	-
<b>PROP BETA MIN</b>	Prop beta min	Radians	N	-
<b>PROP BETA MIN REVERSE</b>	Prop beta min reverse	Radians	N	-
<b>FUEL SELECTED TRANSFER MODE</b>	One of: -1: off 0: auto 1: forward 2: aft 3: manual	Enum	N	-
<b>DROPPABLE OBJECTS UI NAME</b>	Descriptive name, used in User Interface dialogs, of a droppable object	String	N	-
<b>MANUAL FUEL PUMP HANDLE</b>	Position of manual fuel pump handle. 100 is fully deployed.	Percent over 100 (% divisé par 100)	N	-
<b>BLEED AIR SOURCE CONTROL</b>	One of: 0: min 1: auto 2: off 3: apu 4: engines	Enum	N	-
<b>ELECTRICAL OLD CHARGING AMPS</b>	Legacy, use ELECTRICAL BATTERY LOAD	Amps	N	-

<b>HYDRAULIC SWITCH</b>	True if hydraulic switch is on	Bool (voir note 3)	N	-
<b>CONCORDE VISOR NOSE HANDLE</b>	One of: 0: visor up, nose down 1: visor down, nose up 2: visor down, nose 5 degrees 3: visor down, nose 12.5 degrees	Enum	N	All aircraft
<b>CONCORDE VISOR POSITION PERCENT</b>	0 = up, 1.0 = extended/down	Percent over 100 (% divisé par 100)	N	-
<b>CONCORDE NOSE ANGLE</b>	0 = up	Radians	N	-
<b>REALISM CRASH WITH OTHERS</b>	True indicates crashing with other aircraft is possible.	Bool (voir note 3)	N	-
<b>REALISM CRASH DETECTION</b>	True indicates crash detection is turned on.	Bool (voir note 3)	N	-
<b>MANUAL INSTRUMENT LIGHTS</b>	True if instrument lights are set manually	Bool (voir note 3)	N	-
<b>PITOT ICE PCT</b>	Amount of pitot ice. 100 is fully iced.	Percent over 100 (% divisé par 100)	N	-
<b>SEMIBODY LOADFACTOR Y</b>	Semibody loadfactor x and z are not supported.	Number	N	-
<b>SEMIBODY LOADFACTOR YDOT</b>	Semibody loadfactory ydot	Per second	N	-
<b>RAD INS SWITCH</b>	True if Rad INS switch on	Bool (voir note 3)	N	-
<b>SIMULATED RADIUS</b>	Simulated radius	Feet	N	-
<b>STRUCTURAL ICE PCT</b>	Amount of ice on aircraft structure. 100 is fully iced.	Percent over 100 (% divisé par 100)	N	-
<b>ARTIFICIAL GROUND ELEVATION</b>	In case scenery is not loaded for AI planes, this variable can be used to set a default surface elevation.	Feet	N	-
<b>SURFACE INFO VALID</b>	True indicates SURFACE CONDITION is meaningful.	Bool (voir note 3)	N	-
<b>SURFACE CONDITION</b>	One of: 0: Normal 1: Wet 2: Icy 3: Snow	Enum	N	-

<b>PUSHBACK ANGLE</b>	Pushback angle (the heading of the tug)	Radians	N	-
<b>PUSHBACK CONTACTX</b>	The towpoint position, relative to the aircrafts datum reference point.	Feet	N	-
<b>PUSHBACK CONTACTY</b>	Pushback contact position in vertical direction	Feet	N	-
<b>PUSHBACK CONTACTZ</b>	Pushback contact position in fore/aft direction	Feet	N	-
<b>PUSHBACK WAIT</b>	True if waiting for pushback.	Bool (voir note 3)	N	-
<b>YAW STRING ANGLE</b>	The yaw string angle. Yaw strings are attached to gliders as visible indicators of the yaw angle. An animation of this is not implemented in <i>ESP</i> .	Radians	N	-
<b>YAW STRING PCT EXTENDED</b>	Yaw string angle as a percentage	Percent over 100 (% divisé par 100)	N	-
<b>INDUCTOR COMPASS PERCENT DEVIATION</b>	Inductor compass deviation reading	Percent over 100 (% divisé par 100)	N	-
<b>INDUCTOR COMPASS HEADING REF</b>	Inductor compass heading	Radians	N	-
<b>ANEMOMETER PCT RPM</b>	Anemometer rpm as a percentage	Percent over 100 (% divisé par 100)	N	-
<b>ROTOR ROTATION ANGLE</b>	Main rotor rotation angle (helicopters only)	Radians	N	-
<b>DISK PITCH ANGLE</b>	Main rotor pitch angle (helicopters only)	Radians	N	-
<b>DISK BANK ANGLE</b>	Main rotor bank angle (helicopters only)	Radians	N	-
<b>DISK PITCH PCT</b>	Main rotor pitch percent (helicopters only)	Percent over 100 (% divisé par 100)	N	-
<b>DISK BANK PCT</b>	Main rotor bank percent (helicopters only)	Percent over 100 (% divisé par 100)	N	-
<b>DISK CONING PCT</b>	Main rotor coning percent (helicopters only)	Percent over 100 (% divisé par 100)	N	-

<b>NAV VOR LLAF64</b>	Nav VOR latitude, longitude, altitude	LLA structure	N	-
<b>NAV GS LLAF64</b>	Nav GS latitude, longitude, altitude	LLA structure	N	-
<b>STATIC CG TO GROUND</b>	Static CG to ground	Feet	N	-
<b>STATIC PITCH</b>	Static pitch	Radians	N	-
<b>CRASH SEQUENCE</b>	One of: 0: off 1: complete 3: reset 4: pause 11: start	Enum	N	-
<b>CRASH FLAG</b>	One of: 0: None 2: Mountain 4: General 6: Building 8: Splash 10: Gear up 12: Overstress 14: Building 16: Aircraft 18: Fuel Truck	Enum	N	Shared Cockpit
<b>TOW RELEASE HANDLE</b>	Position of tow release handle. 100 is fully deployed.	Percent over 100 (% divisé par 100)	N	-
<b>TOW CONNECTION</b>	True if a towline is connected to both tow plane and glider.	Bool (voir note 3)	N	-
<b>APU PCT RPM</b>	Auxiliary power unit rpm, as a percentage	Percent over 100 (% divisé par 100)	N	-
<b>APU PCT STARTER</b>	Auxiliary power unit starter, as a percentage	Percent over 100 (% divisé par 100)	N	-
<b>APU VOLTS</b>	Auxiliary power unit voltage	Volts	N	-
<b>APU GENERATOR SWITCH</b>	True if APU generator switch on	Bool (voir note 3)	N	-
<b>APU GENERATOR ACTIVE</b>	True if APU generator active	Bool (voir note 3)	N	-
<b>APU ON FIRE DETECTED</b>	True if APU on fire	Bool (voir note 3)	N	-

<b>PRESSURIZATION CABIN ALTITUDE</b>	The current altitude of the cabin pressurization..	Feet	N	-
<b>PRESSURIZATION CABIN ALTITUDE GOAL</b>	The set altitude of the cabin pressurization.	Feet	N	-
<b>PRESSURIZATION CABIN ALTITUDE RATE</b>	The rate at which cabin pressurization changes.	Feet per second	N	-
<b>PRESSURIZATION PRESSURE DIFFERENTIAL</b>	The difference in pressure between the set altitude pressurization and the current pressurization.	Pounds per square foot	N	-
<b>PRESSURIZATION DUMP SWITCH</b>	True if the cabin pressurization dump switch is on.	Bool (voir note 3)	N	-
<b>FIRE BOTTLE SWITCH</b>	True if the fire bottle switch is on.	Bool (voir note 3)	N	-
<b>FIRE BOTTLE DISCHARGED</b>	True if the fire bottle is discharged.	Bool (voir note 3)	N	-
<b>CABIN NO SMOKING ALERT SWITCH</b>	True if the No Smoking switch is on.	Bool (voir note 3)	Y	-
<b>CABIN SEATBELTS ALERT SWITCH</b>	True if the Seatbelts switch is on.	Bool (voir note 3)	Y	-
<b>GPWS WARNING</b>	True if Ground Proximity Warning System installed.	Bool (voir note 3)	N	-
<b>GPWS SYSTEM ACTIVE</b>	True if the Ground Proximity Warning System is active	Bool (voir note 3)	Y	-
<b>IS LATITUDE LONGITUDE FREEZE ON</b>	True if the lat/lon of the aircraft (either user or AI controlled) is frozen. If this variable returns true, it means that the latitude and longitude of the aircraft are not being controlled by <i>ESP</i> , so enabling, for example, a <a href="#">SimConnect</a> client to control the position of the aircraft. This can also apply to altitude and attitude. Also refer to the range of KEY_FREEZE..... <a href="#">Event IDs</a> .	Bool (voir note 3)	N	-
<b>IS ALTITUDE FREEZE ON</b>	True if the altitude of the aircraft is frozen.	Bool (voir note 3)	N	-
<b>IS ATTITUDE FREEZE ON</b>	True if the attitude (pitch, bank and heading) of the aircraft is frozen.	Bool (voir note 3)	N	-

## Aircraft String Data

Simulation Variable	Description	Units	Settable	Multiplayer
<b>ATC TYPE</b>	Type used by ATC	String (30)	N	-
<b>ATC MODEL</b>	Model used by ATC	String (10)	N	-
<b>ATC ID</b>	ID used by ATC	String (10)	Y	-

<b>ATC AIRLINE</b>	Airline used by ATC	String (50)	Y	-
<b>ATC FLIGHT NUMBER</b>	Flight Number used by ATC	String (6)	Y	-
<b>TITLE</b>	Title from aircraft.cfg	Variable length string	N	-
<b>HSI STATION IDENT</b>	Tuned station identifier	String(6)	N	-
<b>GPS WP_PREV ID</b>	ID of previous GPS waypoint	String	N	-
<b>GPS WP_NEXT ID</b>	ID of next GPS waypoint	String	N	-
<b>GPS APPROACH AIRPORT ID</b>	ID of airport	String	N	-
<b>GPS APPROACH APPROACH ID</b>	ID of approach	String	N	-
<b>GPS APPROACH TRANSITION ID</b>	ID of approach transition	String	N	-

**AI Controlled Aircraft**

Simulation Variable	Description	Units	Settable	Multiplayer
<b>AI DESIRED SPEED</b>	Desired speed of the AI object.	Knots	Y	-
<b>AI WAYPOINT LIST</b>	List of waypoints that an AI controlled object should follow.	<b>SIMCONNECT_DATA_WAYPOINT</b> structure list	Y	-
<b>AI CURRENT WAYPOINT</b>	Current waypoint the list	Number	Y	-
<b>AI DESIRED HEADING</b>	Desired heading of the AI object.	Degrees	Y	-
<b>AI GROUNDTURNTIME</b>	Time to make a 90 degree turn.	Seconds	Y	-
<b>AI GROUNDCRUISESPEED</b>	Cruising speed.	Knots	Y	-
<b>AI GROUNDTURNSPEED</b>	Turning speed.	Knots	Y	-
<b>AI TRAFFIC ISIFR</b>	Request whether this aircraft is IFR or VFR See <a href="#">Note 1</a> .	Bool (voir note 3)ean	N	-
<b>AI TRAFFIC STATE</b>	English string describing an AI object's state. If the object is an aircraft under ATC control the string will be one of: <b>"init"</b> <b>"sleep"</b> <b>"fit plan"</b> <b>"startup"</b> <b>"preflight support"</b> <b>"clearance"</b> <b>"push back 1"</b> <b>"push back 2"</b> <b>"pre taxi out"</b> <b>"taxi out"</b> <b>"takeoff 1"</b>	String	N	-

	<p><b>"takeoff 2"</b>  <b>"T&amp;G depart"</b>  <b>"enroute"</b>  <b>"pattern"</b>  <b>"landing"</b>  <b>"rollout"</b>  <b>"go around"</b>  <b>"taxi in"</b>  <b>"shutdown"</b>  <b>"postflight support"</b></p> <p>If the AI object is not an aircraft under ATC control, the string is one of:</p> <p><b>"Sleep"</b>  <b>"Waypoint"</b>  <b>"Takeoff"</b>  <b>"Landing"</b>  <b>"Taxi"</b></p> <p>This string also appears in the State column of the <a href="#">Traffic Explorer</a> tool dialog. See <a href="#">Note 1</a>.</p>			
<b>AI TRAFFIC CURRENT AIRPORT</b>	ICAO code of current airport. See <a href="#">Note 1</a> .	String	N	-
<b>AI TRAFFIC ASSIGNED RUNWAY</b>	Assigned runway name (for example: "32R"). See <a href="#">Note 1</a> .	String	N	-
<b>AI TRAFFIC ASSIGNED PARKING</b>	<p>English assigned parking name. The string is the same as the one shown in the Parking column of the <a href="#">Traffic Explorer</a> dialog, and is made up in the form:</p> <p>Name + Number, Type ( radius )</p> <p>For example:</p> <p><b>Ramp 1, RAMP sml (10m)</b>  <b>Gate G 4, RAMP lrg (18m)</b></p> <p>Refer also to the Taxiway Parking section of the <a href="#">Compiling BGL</a> document.</p> <p>See <a href="#">Note 1</a>.</p>	String	N	-
<b>AI TRAFFIC FROMAIRPORT</b>	ICAO code of the departure airport in the current schedule. See <a href="#">Note 2</a> .	String	N	-
<b>AI TRAFFIC TOAIRPORT</b>	ICAO code of the destination airport in the current schedule. See <a href="#">Note 2</a> .	String	N	-

<b>AI TRAFFIC ETD</b>	Estimated time of departure for the current schedule entry, given as the number of seconds difference from the current simulation time. This can be negative if ETD is earlier than the current simulation time. See <a href="#">Note 2</a> .	Seconds	N	-
<b>AI TRAFFIC ETA</b>	Estimated time of arrival for the current schedule entry, given as the number of seconds difference from the current simulated time. This can be negative if ETA is earlier than the current simulated time. See <a href="#">Note 2</a> .	Seconds	N	-

**Notes**

1. These variables make most sense for aircraft with flight plans. If an aircraft does not have a flight plan, the value returned will be 0 (or false), or an empty string, depending on the units.
2. These variables only make sense for aircraft generated by the traffic database, and so have schedules. If an aircraft does not have a schedule, the value returned will be 0 (or false), or an empty string, depending on the units.

**Carrier Operations**

Simulation Variable	Description	Units	Settable	Multiplayer
<b>LAUNCHBAR POSITION</b>	Installed on aircraft before takeoff from a carrier catapult. Note that gear cannot retract with this extended. 100 = fully extended. Refer to the document <a href="#">Notes on Aircraft Systems</a> .	Percent_over_100	N	-
<b>LAUNCHBAR SWITCH</b>	If this is set to True the launch bar switch has been engaged.	Bool (voir note 3)	N	-
<b>LAUNCHBAR HELD EXTENDED</b>	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 (voir note 3)	N	-
<b>NUMBER OF CATAPULTS</b>	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	N	-
<b>CATAPULT STROKE POSITION:index</b>	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	N	-
<b>HOLDBACK BAR INSTALLED</b>	Holddown bars allow build up of thrust before takeoff from a catapult, and are installed by the deck crew of an aircraft carrier.	Bool (voir note 3)	N	-
<b>BLAST SHIELD</b>	Indexed from 1, 100 is fully deployed, 0 flat on deck	Percent_over_100	N	-

<b>POSITION:index</b>				
<b>CABLE CAUGHT BY TAILHOOK</b>	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	N	-
<b>TAILHOOK HANDLE</b>	True if the tailhook handle is engaged.	Bool (voir note 3)	N	-
<b>SURFACE RELATIVE GROUND SPEED</b>	The speed of the aircraft relative to the speed of the first surface directly underneath it. Use this to retrieve, for example, an aircraft's taxiing speed while it is moving on a moving carrier. It also applies to airborne aircraft, for example when a helicopter is successfully hovering above a moving ship, this value should be zero. The returned value will be the same as GROUND VELOCITY if the first surface beneath it is not moving.	Feet_per_second	N	-

## Racing

Simulation Variable	Description	Units	Settable	Multiplayer
<b>RECIP ENG DETONATING:index</b>	Indexed from 1. Set to True if the engine is detonating.	Bool (voir note 3)	N	-
<b>RECIP ENG CYLINDER HEALTH:index</b>	Index high 16 bits is engine number, low 16 cylinder number, both indexed from 1.	Percent_over_100	N	-
<b>RECIP ENG NUM CYLINDERS</b>	Indexed from 1. The number of engine cylinders.	Number	N	-
<b>RECIP ENG NUM CYLINDERS FAILED</b>	Indexed from 1. The number of cylinders that have failed.	Number	N	-
<b>RECIP ENG ANTIDETONATION TANK VALVE:index</b>	Indexed from 1, each engine can have one antdetonation tank. Installed on racing aircraft. Refer to the document <a href="#">Notes on Aircraft Systems</a> .	Bool (voir note 3)	Y	-
<b>RECIP ENG ANTIDETONATION TANK QUANTITY:index</b>	Indexed from 1. Refer to the <a href="#">Mission Creation documentation</a> for the procedure for refilling tanks.	Gallons	Y	-
<b>RECIP ENG ANTIDETONATION TANK MAX QUANTITY:index</b>	Indexed from 1. This value set in the <a href="#">Aircraft Configuration File</a> .	Gallons	N	-
<b>RECIP ENG NITROUS TANK VALVE:index</b>	Indexed from 1. Each engine can have one Nitrous fuel tank installed.	Bool (voir note 3)	Y	-
<b>RECIP ENG NITROUS TANK QUANTITY:index</b>	Indexed from 1. Refer to the <a href="#">Mission Creation documentation</a> for the procedure for refilling tanks.	Gallons	Y	-
<b>RECIP ENG NITROUS TANK MAX QUANTITY:index</b>	Indexed from 1. This value set in the <a href="#">Aircraft Configuration File</a> .	Gallons	N	-

## Environment Data

This data is referenced by **E:** in XML gauges.

Simulation Variable	Description	Units	Settable	Multiplayer
<b>ABSOLUTE TIME</b>	Time, as referenced from 12:00 AM January 1, 0000	Seconds	N	-
<b>ZULU TIME</b>	Greenwich Mean Time (GMT)	Seconds	N	-
<b>ZULU DAY OF WEEK</b>	GMT day of week	Number	N	-
<b>ZULU DAY OF MONTH</b>	GMT day of month	Number	N	-
<b>ZULU MONTH OF YEAR</b>	GMT month of year	Number	N	-
<b>ZULU DAY OF YEAR</b>	GMT day of year	Number	N	-
<b>ZULU YEAR</b>	GMT year	Number	N	-
<b>LOCAL TIME</b>	Local time	Seconds	N	-
<b>LOCAL DAY OF WEEK</b>	Local day of week	Number	N	-
<b>LOCAL DAY OF MONTH</b>	Local day of month	Number	N	-
<b>LOCAL MONTH OF YEAR</b>	Local month of year	Number	N	-
<b>LOCAL DAY OF YEAR</b>	Local day of year	Number	N	-
<b>LOCAL YEAR</b>	Local year	Number	N	-
<b>TIME ZONE OFFSET</b>	Local time difference from GMT	Seconds	N	-
<b>TIME OF DAY</b>	General time of day: 1 = Day 2 = Dusk/Dawn 3 = Night	Enum	N	-

## Program Data

This data is referenced by **P:** in XML gauges.

Simulation Variable	Description	Units	Settable	Multiplayer
<b>SIMULATION RATE</b>	Time acceleration factor	Number	N	-
<b>UNITS OF MEASURE</b>	Units of measure: 0 = English 1 = Metric (with altitude in feet) 2 = Metric (with altitude in meters)	Enum	N	-

## Units of Measurement

Le tableau suivant donne les chaînes de caractères qui sont acceptées par le SDK pour les unités. Toutes les chaînes dans la même ligne sont identiques dans leur signification. Notez que certaines chaînes utilisent "per" ("par"), et certaines utilisent "/", et notez que quelques unes contiennent des traits d'union ou des underscores (souligné).

- [Distance](#)
- [Area](#)
- [Volume](#)
- [Temperature](#)
- [Angle](#)

- Global Position
- Angular Velocity
- Speed
- Acceleration
- Time
- Power
- Volume Rate
- Weight
- Weight Rate
- Electrical Current
- Electrical Potential
- Frequency
- Density
- Pressure
- Torque
- Miscellaneous Units

## Notes

Lors de définitions d'objets dans SimConnect, il est possible de demander l'unité dans laquelle on souhaite recevoir les valeurs. Toutes les unités dans les tableaux ci-dessous sous une seule rubrique (comme la fréquence ou la vitesse) peuvent être utilisées de manière appropriée à l'application cliente, sauf ceux dans Miscellaneous Units (unités diverses). Consultez la documentation de SimConnect pour plus de détails .

Distance	Détails
<b>meter, meters, m</b>	~
<b>centimeter, centimeters, cm</b>	~
<b>kilometer, kilometers, km</b>	~
<b>millimeter, millimeters</b>	~
<b>mile, miles</b>	~
<b>decimile, decimiles</b>	One tenth of a mile
<b>nautical mile, nautical miles, nmile, nmiles</b>	Nautical mile, 2024 yards
<b>decinmile, decinmiles</b>	One tenth of a nautical mile
<b>foot, feet, ft</b>	~
<b>inch, inches, in</b>	~
<b>yard, yards</b>	~
Area	Détails
<b>square inch, square inches, sq in, in2</b>	~
<b>square feet, square foot, sq ft, ft2</b>	~
<b>square yard, square yards, sq yd, yd2</b>	~
<b>square meter, square meters, sq m, m2</b>	~

<b>square centimeter, square centimeters, sq cm, cm2</b>	~
<b>square kilometer, square kilometers, sq km, km2</b>	~
<b>square millimeter, square millimeters, sq mm, mm2</b>	~
<b>square mile, square miles</b>	~
<b>Volume</b>	<b>Détails</b>
<b>cubic inch, cubic inches, cu in, in3</b>	~
<b>cubic foot, cubic feet, cu ft, ft3</b>	~
<b>cubic yard, cubic yards, cu yd, yd3</b>	~
<b>cubic mile, cubic miles</b>	~
<b>cubic millimeter, cubic millimeters, cu mm, mm3</b>	~
<b>cubic centimeter, cubic centimeters, cu cm, cm3</b>	~
<b>meter cubed, meters cubed, cubic meter, cubic meters, cu m, m3</b>	~
<b>cubic kilometer, cubic kilometers, cu km, km3</b>	~
<b>liter, liters</b>	~
<b>gallon, gallons</b>	~
<b>quart, quarts</b>	~
<b>Temperature</b>	<b>Details</b>
<b>kelvin</b>	Same graduations as Centigrade but zero degrees Kelvin corresponds to a temperature of -273.15C (Absolute Zero).
<b>rankine</b>	Same graduations as Farenheit but zero degrees Rankine corresponds to a temperature of -459.67F
<b>farenheit, fahrenheit</b>	~
<b>celsius</b>	~
<b>Angle</b>	<b>Details</b>
<b>radian, radians</b>	~

<b>round, rounds</b>	~
<b>degree, degrees</b>	Float
<b>degree latitude</b>	~
<b>degree longitude</b>	~
<b>grad, grads</b>	~
<b>Global position</b>	<b>Details</b>
<b>degree latitude, degrees latitude</b>	~
<b>degree longitude, degrees longitude</b>	~
<b>meter latitude, meters latitude</b>	~
<b>Angular velocity</b>	<b>Details</b>
<b>radian per second, radians per second</b>	~
<b>revolution per minute, revolutions per minute, rpm, rpms</b>	~
<b>minute per round, minutes per round</b>	~
<b>nice minute per round, nice minutes per round</b>	~
<b>degree per second, degrees per second</b>	~
<b>Speed</b>	<b>Details</b>
<b>meter per second, meters/second, m/s</b>	~
<b>meter per minute, meters per minute</b>	~
<b>feet/second</b>	~
<b>feet/minute, ft/min</b>	~
<b>kilometer/hour, kilometers/hour, kilometers per hour, kph</b>	~
<b>knot, knots</b>	Nautical mile per hour
<b>mile per hour, miles per hour, mph</b>	~
<b>mach, machs</b>	~
<b>Acceleration</b>	<b>Details</b>
<b>meter per second squared meters per second squared</b>	~

<b>Gforce, G Force</b>	Unit of acceleration equal to the acceleration of gravity.
<b>feet per second squared, foot per second squared</b>	~
<b>Time</b>	<b>Details</b>
<b>second, seconds</b>	~
<b>minute, minutes</b>	~
<b>hour, hours</b>	~
<b>day, days</b>	~
<b>hour over 10, hours over 10</b>	~
<b>year, years</b>	~
<b>Power</b>	<b>Details</b>
<b>Watt, Watts</b>	~
<b>ft lb per second</b>	~
<b>Volume rate</b>	<b>Details</b>
<b>meter cubed per second, meters cubed per second</b>	~
<b>gallon per hour, gallons per hour, gph</b>	~
<b>liter per hour, liters per hour</b>	~
<b>Weight</b>	<b>Details</b>
<b>kilogram, kilograms, kg</b>	~
<b>slug, slugs, geepound, geepounds</b>	A unit of mass to which a force of one pound imparts an acceleration of one foot per second squared. One geepound, or slug, equals about 14.59 kg or 32.2 lb.
<b>pound, pounds, lbs</b>	~
<b>Weight rate</b>	<b>Details</b>
<b>kilogram per second, kilograms per second</b>	~
<b>pound per hour, pounds per hour</b>	~

Electrical Current	Details
<b>ampere, amperes, amp, amps</b>	~
Electrical Potential	Details
<b>volt, volts</b>	~
Frequency	Details
<b>Hertz, Hz,</b>	~
<b>Kilohertz, KHz</b>	~
<b>Megahertz, MHz</b>	~
<b>Frequency BCD32</b>	Frequency in 32 bit binary coded decimal
<b>Frequency BCD16</b>	Frequency in 16 bit binary coded decimal
<b>Frequency ADF BCD32</b>	~
Density	Details
<b>kilogram per cubic meter, kilograms per cubic meter</b>	~
<b>Slug per cubic feet, Slugs per cubic feet, Slug/ft3, slug per cubic foot, slugs per cubic foot</b>	~
<b>pound per gallon, pounds per gallon, lbs/gallon</b>	~
Pressure	Details
<b>pascal, pascals, Pa</b>	~
<b>Newton per square meter, newtons per square meter</b>	~
<b>kilopascal, kpa</b>	~
<b>kilogram force per square centimeter, KgFSqCm</b>	~
<b>millimeter of mercury, millimeters of mercury, mmHg</b>	~
<b>centimeter of mercury, centimeters of mercury, cmHg</b>	~
<b>inch of mercury, inches of mercury, inHg</b>	~

<b>atmosphere, atmospheres, atm</b>	~
<b>millimeter of water, millimeters of water</b>	~
<b>pound-force per square inch, psi</b>	~
<b>pound-force per square foot, psf</b>	~
<b>bar, bars</b>	~
<b>millibar, millibars, mbar, mbars, hectopascal, hectopascals</b>	~
<b>boost cmHg</b>	~
<b>boost inHg</b>	~
<b>boost psi</b>	~
<b>slug feet squared, slugs feet squared</b>	~
<b>kilogram meter squared, kilograms meter squared</b>	~
<b>millibar, millibars, mbar, mbars, hectopascal, hectopascals</b>	~
<b>Torque</b>	<b>Details</b>
<b>Newton meter, Newton, meters, nm</b>	~
<b>foot-pound, foot pound, ft-lbs, foot-pounds</b>	~
<b>lbf-feet</b>	One lbf-foot equals 1.36 Newton meters
<b>kilogram meter, kilogram meters, kgf meter, kgf meters</b>	~
<b>poundal feet</b>	One poundal foot equals 0.042 Newton meters
<b>Miscellaneous Units</b>	<b>Details</b>
<b>part</b>	~
<b>half, halves</b>	~
<b>third, thirds</b>	~
<b>percent, percentage</b>	Normally a value between 0 and 100, though sometimes values outside this range are possible (reverse thrust, for example).
<b>percent over 100 (% divisé par 100)</b>	Normally a value between 0.0 and 1.0, though sometimes values outside this range are possible (reverse thrust, for example).
<b>bel, bels</b>	~
<b>decibel, decibels</b>	~

<b>more_than_a_half</b>	~
<b>times</b>	~
<b>ratio</b>	~
<b>number, numbers</b>	~
<b>scaler</b>	~
<b>position</b>	~
<b>Enum</b>	A positive or negative integer corresponding to the member of the enum
<b>Bool (voir note 3), Bool (voir note 3)ean</b>	Le seul équivalent numérique fiable est que 0 est renvoyé pour False (faux). Des valeurs non nulles, surtout les deux 1 et -1, sont utilisés pour indiquer la valeur True (vrai).
<b>Bco16</b>	~
<b>mask</b>	~
<b>flags</b>	~
<b>string</b>	~
<b>per radian</b>	~
<b>per degree</b>	~

Traduction Jean-Paul Corbier ; août 2011.