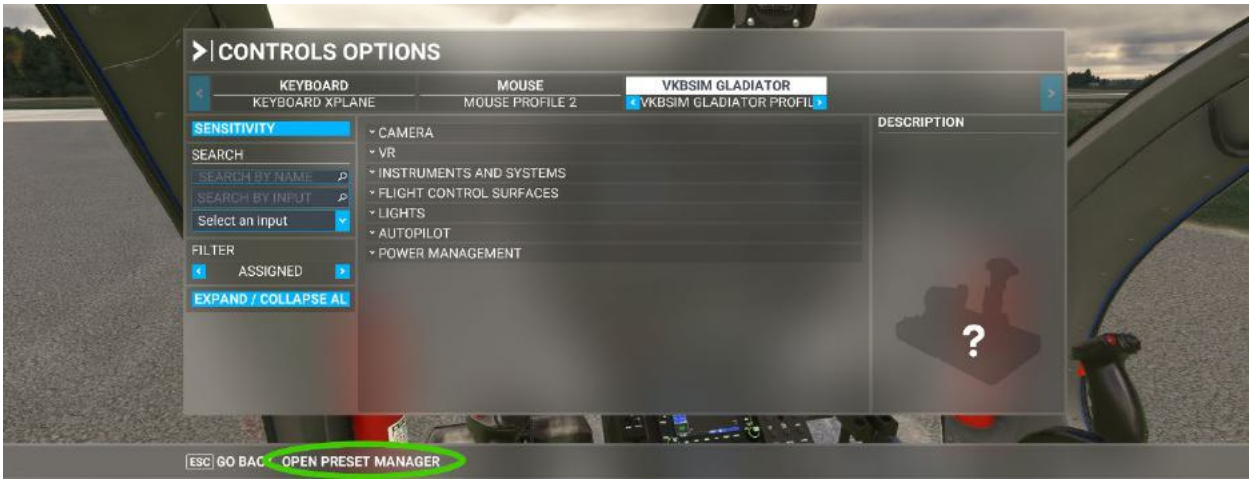
COWANSIM MSFS 500E

USER MANUAL

Mapping Your Hardware

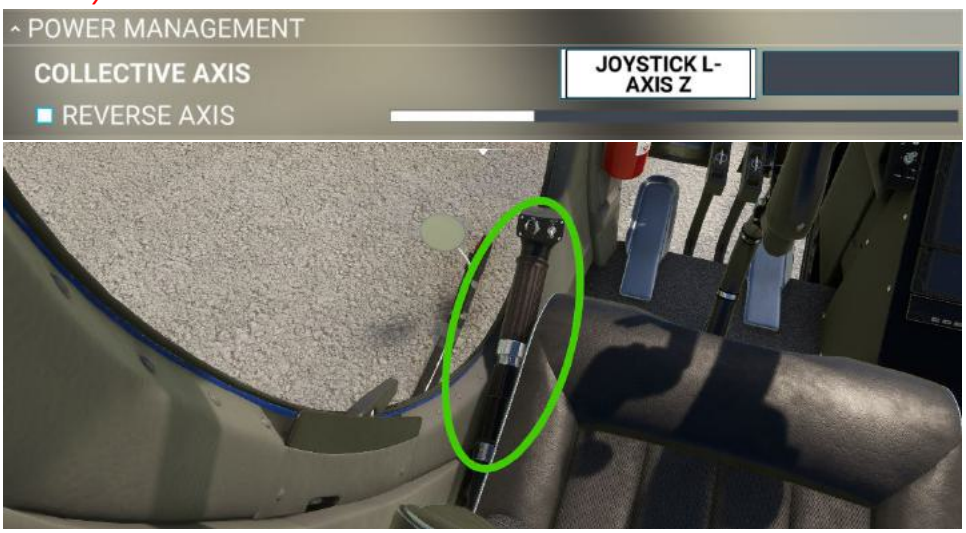
READ THIS: When flying a helicopter, you use the collective to provide power input and to go up/down, **NOT** the throttle. Make sure you map the collective and throttle to a **DIFFERENT** axis. You do not need to adjust the throttle manually; the governor does that for you automatically. (unless the governor fails or if the breaker is pulled) Simply roll the throttle to maximum, then use the collective to fly. If you do not have a dedicated axis for the throttle, then **DO NOT** use it, use the mouse instead. The throttle and collective **MUST** have their own axis.

Always set a unique profile for each aircraft to prevent double bindings and headaches. You can set up custom profiles by clicking "OPEN PRESET MANAGER" at the bottom of the CONTROLS OPTIONS page.



Collective:

Search for **“coll”** to find **COLLECTIVE AXIS** and map it to any axis.
You may have to reverse it.



Throttle (Twist Grip):

Search for **“heli”** to find **SET HELICOPTER THROTTLE AXIS** and map to any axis.
You may have to reverse it.

IF YOU DO NOT HAVE A DEDICATED HELICOPTER THROTTLE, THEN DO NOT USE THIS. (SEE ABOVE)

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Idle Stop Ring:

The idle stop ring is located on the collective, right at the top of the throttle twist grip. The ring will snap into place when rolling the throttle up past the idle detent. This eliminates the chance of unintentionally cutting off the throttle by preventing rolling the throttle down any further than idle. To cut the throttle off, use this binding to snap the ring out, then roll off the throttle.

Search for **"throttle c"** to find **THROTTLE CUT** and map to any axis.

Cyclic Stick:

You can use the default aileron and elevator axis for the cyclic, but it is recommended to use the provided **SET CYCLIC LONGITUDINAL & LATERAL AXIS.**

Search for **"cyc"** to find **SET CYCLIC LONGITUDINAL & LATERAL AXIS** and map them to your stick axis. *You may have to reverse them.*

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Anti-Torque Pedals:

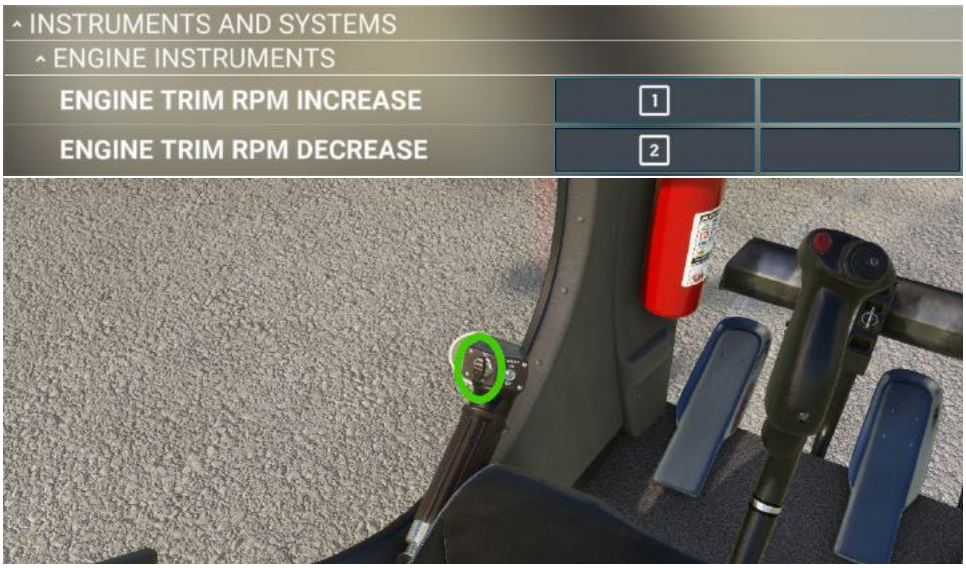
You can use the default rudder axis for the anti-torque pedals, but it is recommended to use the provided **TAIL ROTOR AXIS.**

Search for **“tail”** to find **TAIL ROTOR AXIS** and map it to your pedals or joystick twist axis.
You may have to reverse it.

Governor (BEEP) Switch:

The “BEEP” switch is a toggle located on the head of the collective that you can use to fine tune the rotor RPM when at max throttle**.**

Search for **“trim”** to find **ENGINE TRIM RPM INCREASE & DECREASE** and map them to any two buttons or switches.



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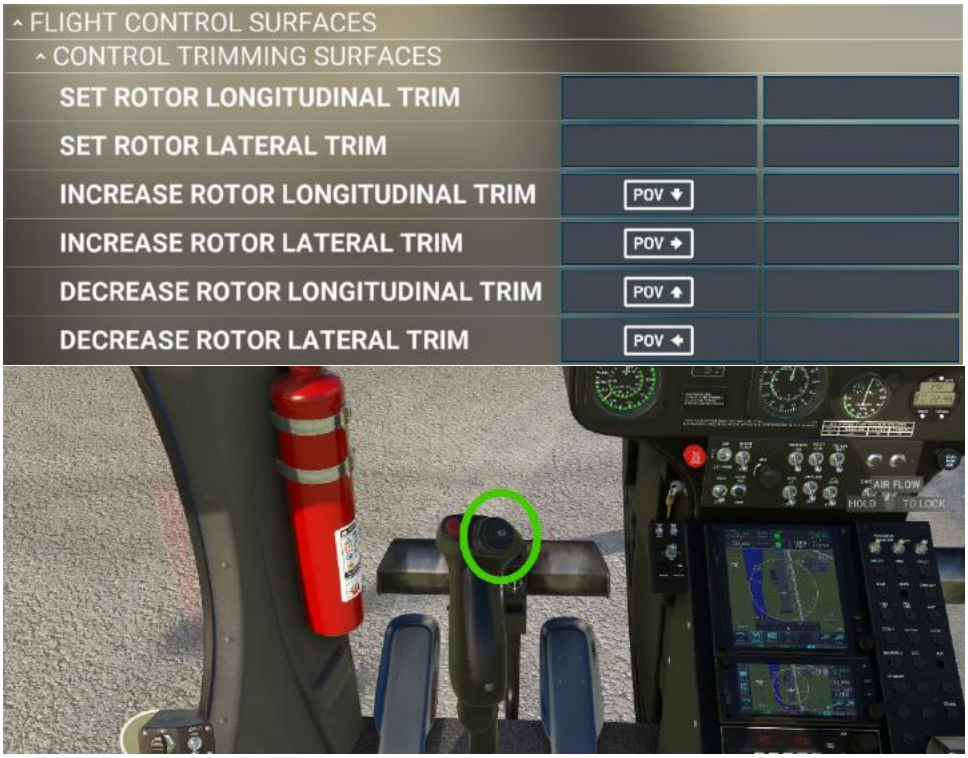
Trim:

The trim hat switch is located on the cyclic so you can trim the helicopter during flight**.** Map the trim and use it like any other helicopter.

Search for **“rotor l”** to find **INCREASE/DECREASE ROTOR LONGITUDINAL/LATERAL TRIM** and map them to any 4 buttons or toggles, typically the hat switch on your stick, as illustrated below.



Trim Reset:

The trim reset button is located on the cyclic and resets all trims to zero**.**

Search for **“trim re”** to find **ROTOR TRIM RESET** and map it to any button/switch.

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Rotor Brake:

The rotor brake is located on the upper middle panel to your right.

Search for **“brake”** to find **TOGGLE ROTOR BRAKE** and map it to any button/switch.

MAIN ELECTRICAL PANEL (NEXT 9)

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Battery:

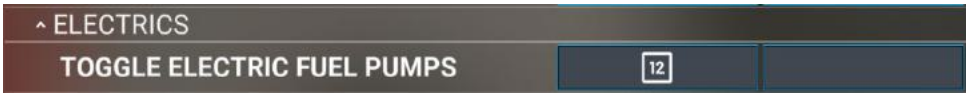
The battery switch is located on the center switch panel**.**

Search for **“bat”** to find **TOGGLE MASTER BATTERY** and map it to any button/switch.

Start Pump:

The start pump switch is located on the center switch panel**.**

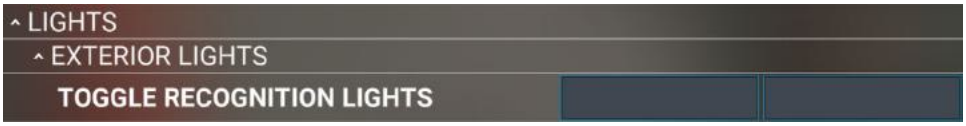
Search for **“fuel p”** to find **TOGGLE ELECTRIC FUEL PUMPS** and map it to any button/switch.



Anti-collision Lights:

The anti-collision lights switch is located on the center switch panel**.**

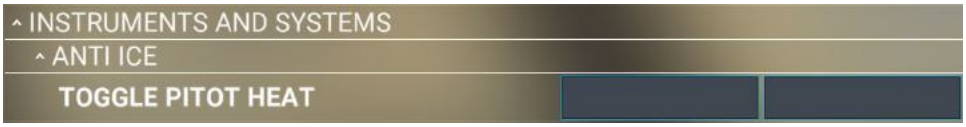
Search for **“recog”** to find **TOGGLE RECOGNITION LIGHTS** and map it to any button/switch.



Pitot Heat:

The pitot heat switch is located on the bottom/center console.

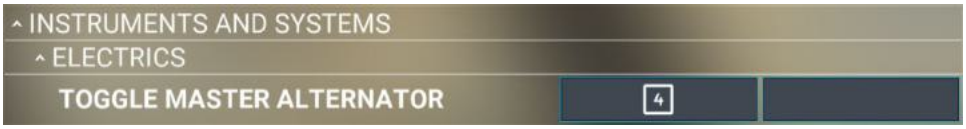
Search for **“peto”** to find **TOGGLE PITOT HEAT** and map it to any button/switch.



Generator:

The generator switch is located on the center switch panel**.**

Search for **“alter”** to find **TOGGLE MASTER ALTERNATOR** and map it to any button/switch.



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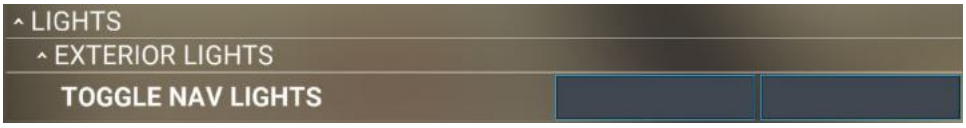
Position Lights:

The position lights switch is located on the center switch panel**.**

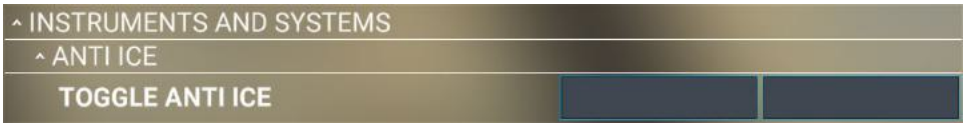
Search for **“nav l”** to find **TOGGLE NAV LIGHTS** and map it to any button/switch.



Anti-Ice:

The anti-ice switch is located on the center switch panel**.**

Search for **“anti i”** to find **TOGGLE ANTI ICE** and map it to any button/switch.



Utility Power:

The utility/external power switch is located on the center switch panel**.**

Search for **“external p”** to find **TOGGLE EXTERNAL POWER** and map it to any button/switch.

Avionics:

The avionics switch is located on the center switch panel**.**

Search for **“avion”** to find **TOGGLE AVIONICS MASTER** and map it to any button/switch.

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Starter:

The starter button is located on the tip of the cyclic**.**

Search for **“starte”** to find **TOGGLE MASTER STARTER SWITCH** and map it to any button/switch.
Note: this is a toggle so it will require toggling on/off to cycle and start again.

Ignition (key):

The igniter/ignition switch is the key located on the bottom right of the main panel.

Search for **“igni”** to find **TOGGLE TURBINE IGNITION SWITCH** and map it to any button/switch.

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Main Fuel Valve (upper):

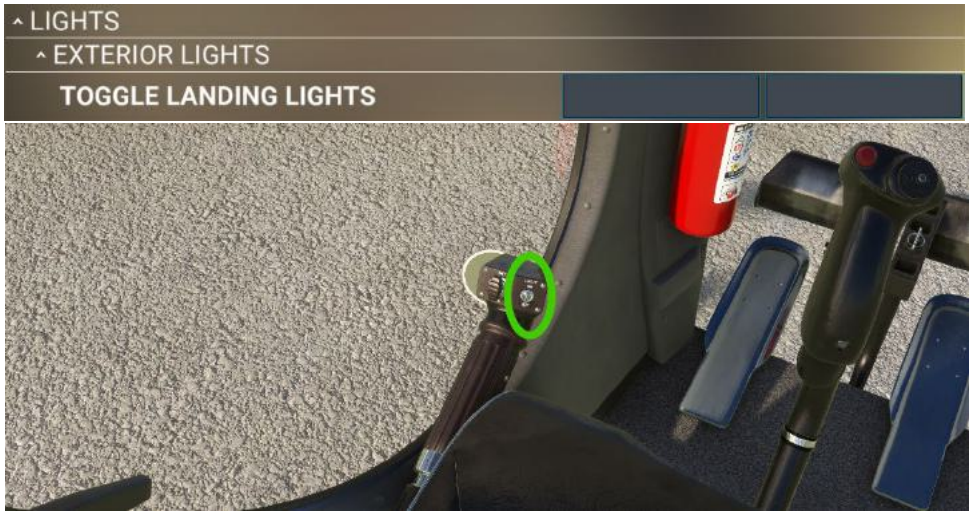
The fuel cutoff valve is located on the bottom/center console.

Search for **“fuel v”** to find **TOGGLE ENGINE 1 FUEL VALVE** and map it to any button/switch.

Landing Lights:

The landing lights switch is located on the center of the cyclic stick.

Search for **“landing l”** to find **TOGGLE LANDING LIGHTS** and map it to any button/switch.



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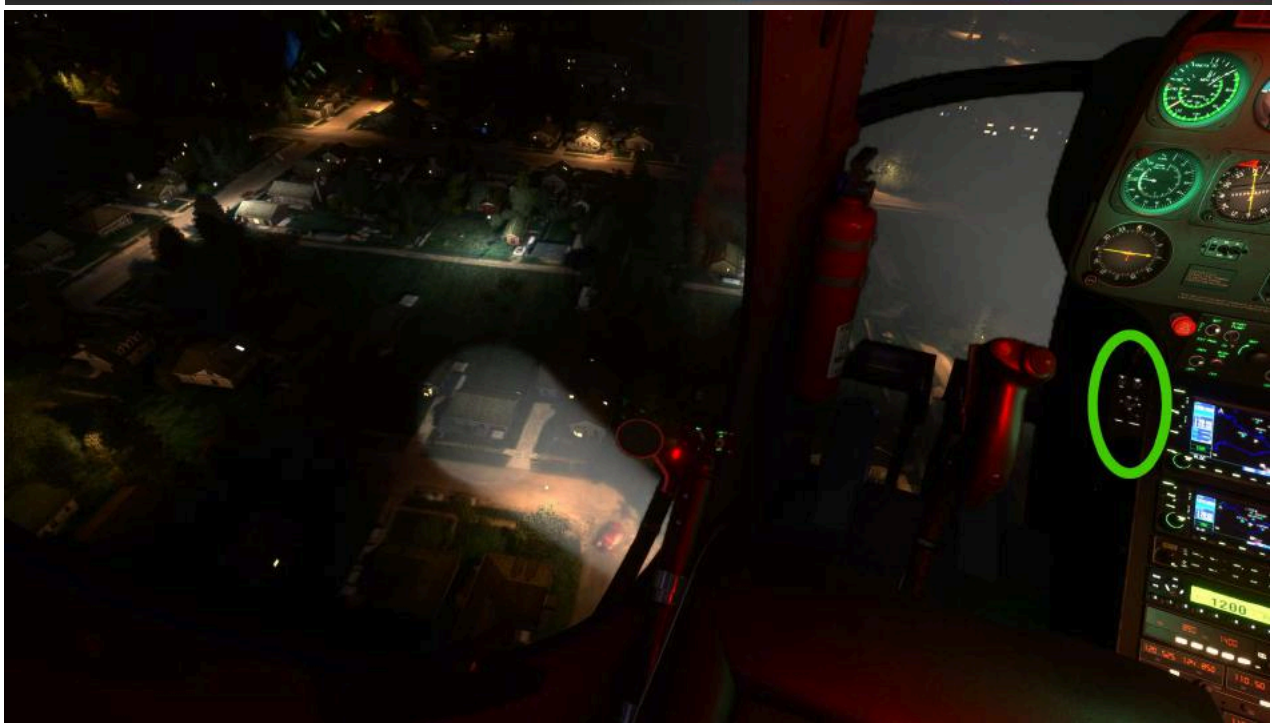
Search/Spotlight:

The search light is connected to landing light number 2. You can turn the search light on/off with the 3D switch, or the on/off bindings below. If using the bindings, then be aware that all of the landing lights will turn on/off, including the search light. It's best to use the 3D switches located on the collective and search light controller. The search light can be aimed with the 4 way 3D switch, or by using the bindings, typically mapped to a hat switch, as illustrated below. The **HOME** binding returns the light to the default position.

Search for **"landing l"** to find **LANDING LIGHTS UP/DOWN/LEFT/RIGHT** and map them to any buttons/ switches.

LIGHTS		
EXTERIOR LIGHTS		
TOGGLE LANDING LIGHTS		
SET LANDING LIGHTS		
LANDING LIGHTS UP	POV ↑	
LANDING LIGHTS RIGHT	POV →	
LANDING LIGHTS ON		
LANDING LIGHTS OFF		
LANDING LIGHTS LEFT	POV ←	
LANDING LIGHTS HOME	3	
LANDING LIGHTS DOWN	POV ↓	



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Other Bindings:

All other bindings are default and can be mapped at your discretion. Just remember to always use a unique profile for each aircraft to prevent double bindings and other issues. You can set up custom profiles by clicking **“OPEN PRESET MANAGER”** at the bottom of the **CONTROLS OPTIONS** page.

Some custom coded items cannot be mapped to an axis or switch since we currently have no way to make custom bindings, only overriding the current bindings available to us all. Please refer to MSFS documentation for all other bindings.

Flight Model

In general settings make sure that you have MODERN flight model selected. The was an issue in the past where this needed to be cycled through LEGACY and MODERN to correct some bugs. If you have issues, then try that first.

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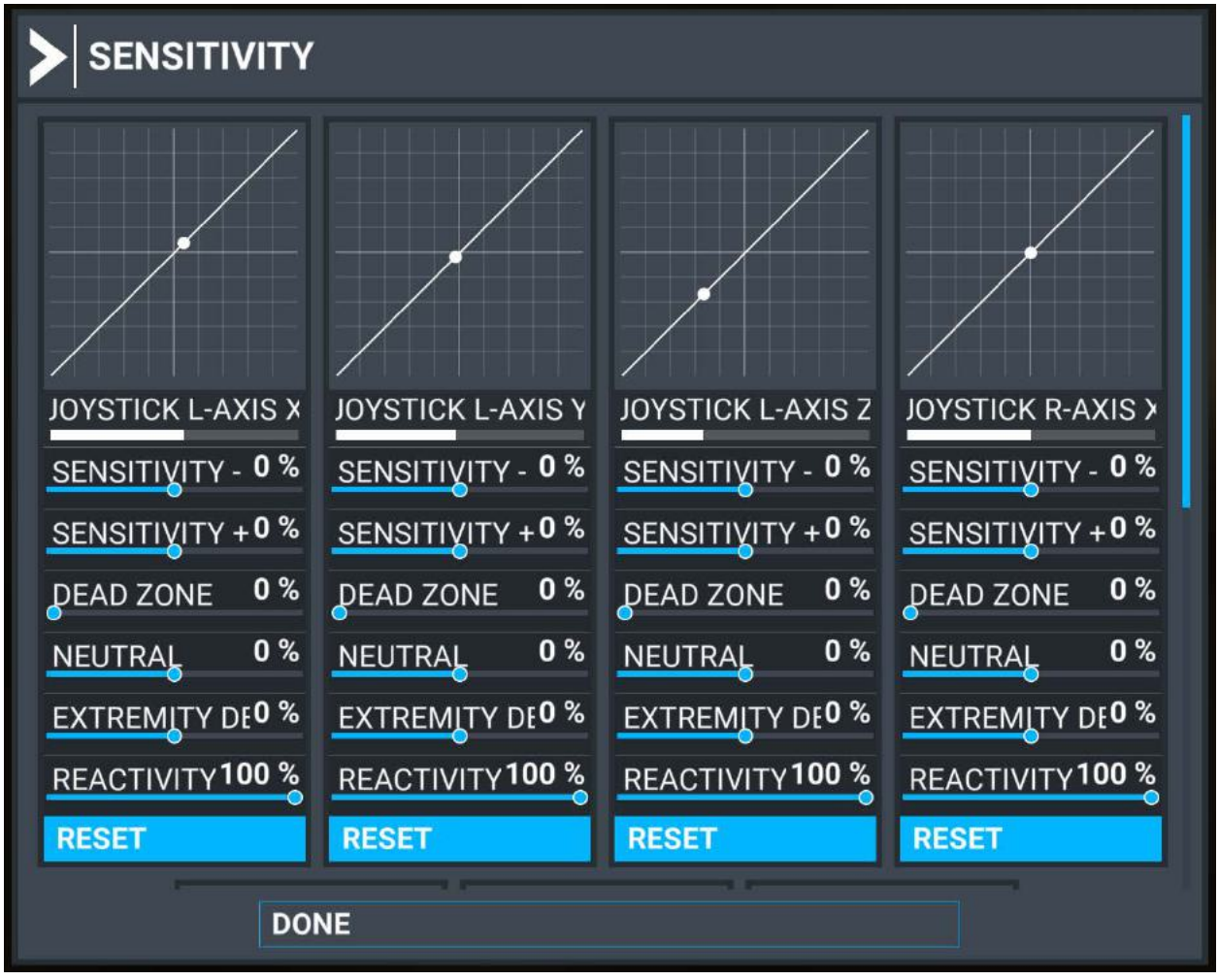
Sensitivity Curves/Settings:

What are the most realistic sensitivity settings? That is a question asked way too often. These settings are for you, and only you. Everyone has a different perception and idea of what seems realistic. You will NEVER get the same answer from anyone. These are personal settings to fine tune to your own preference. The fight model is designed to be neutral and this is where you can make it your own. There are too many variables involved with flight sims and the biggest one of all is hardware. Even if people are using the same hardware, everyone experiences the sim differently. Use your own judgment here.



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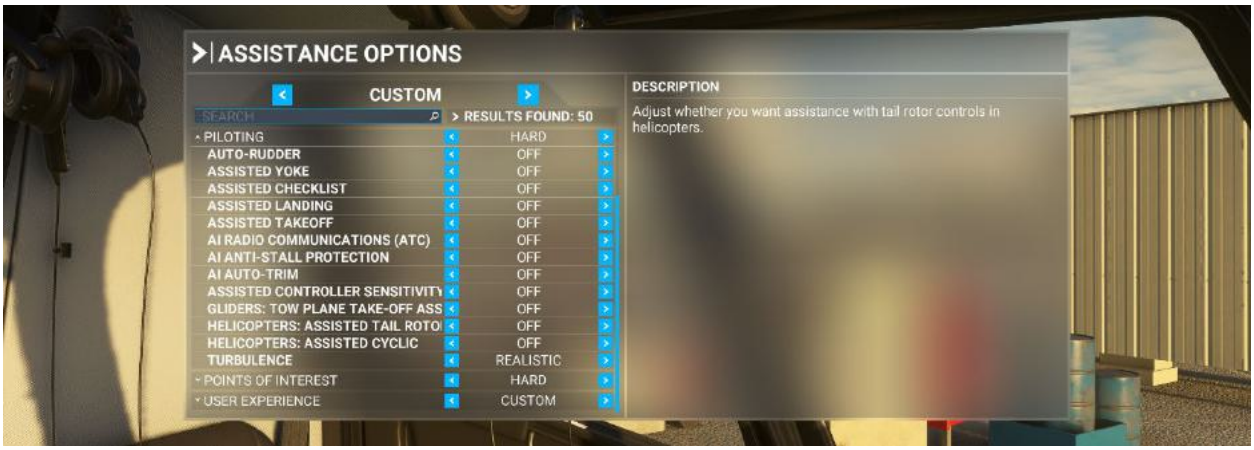
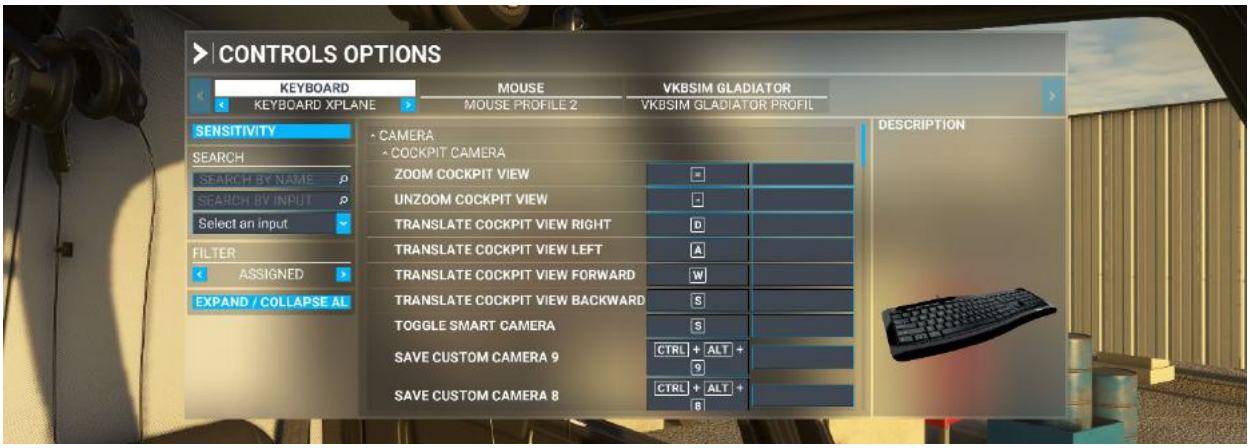
Assistance options

In assistance options, under the PILOTING drop down, make sure that you have HELICOPTERS: ASSITED TAIL ROTOR and ASSITED CYCLIC turned OFF for realistic flight dynamics. If you are a beginner or would like an easy game like flying experience then you can switch them on, and the helicopter will become extremely easy to fly. Helicopters are not easy to fly unless you are experienced.



Moving Around

To move around, like opening the doors and “walking” around outside, map your keyboard just like you would with any first-person game like in the example illustrated below.



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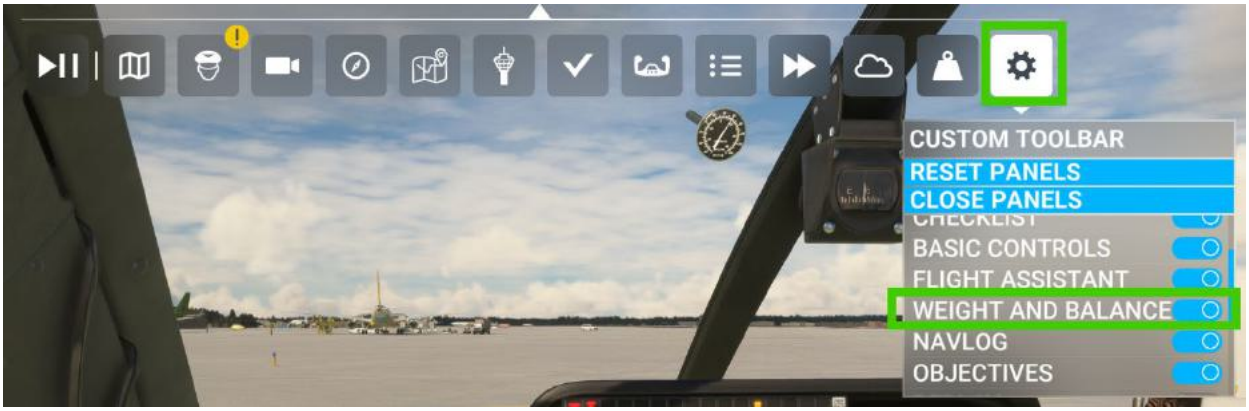
Click Spots

There are click spots tied to objects throughout the cockpit. Click spots can only be used in cockpit view, which is why the moving around explanation up above is important if you would like to open and close the doors while outside. It is not possible from the external view. Some click spots are hidden and some will glow when hovered over.

Accessing Options

Weight and Balance:

To access options like passengers and other objects, make sure that the weight and balance options window is ticked on in the upper menu settings window, as illustrated below.



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Once activated, you can add/remove weight to show/hide all options available.

Panel Options

To switch between panel options simply flip the 2-way panel variant switch.

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Freeware & Payware GTN650 & 750:

This model comes with PMS and TDS GTN software integration. If you have either one installed, then you will be able to use the **GTN OPTION** switch to cycle through your preferred choice.

You can find the TDS software here: https://tdssim.com/index

You can find the PMS software here: https://pms50.com/msfs/

TDS is payware and PMS has both freeware and payware options.

Please refer to their product support for installation. We have everything covered on our side. Once installed correctly then either product will work automatically.

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