

Section 1

Systems Descriptions

The Pro Flight Trainer PUMA is a single pilot, modifiable to dual Pilot, 8 axes HID USB Helicopter Control Device that provide advanced immersion in a realistic helicopter cockpit and reproduce very realistic controls inputs compared to real operations. Its affordability, size, design and precision perfectly meet requirements for any pilot wanting to expend his skills using simulator software.

The HID Plug&Play USB connection is designed for easy setup, and compatibility to all established flight simulation software; the high resolution of 12Bit on each axes permits very sensitive control inputs, as in real machines.

The Aluminum frame provides high stability and low weight, easy to transport and store. All controls are wheel-bearing based, and have adjustable friction, relieving pressure and stress from the pilot to ensure maximum controllability, and positive stability for training requiring simulated trim functionality.

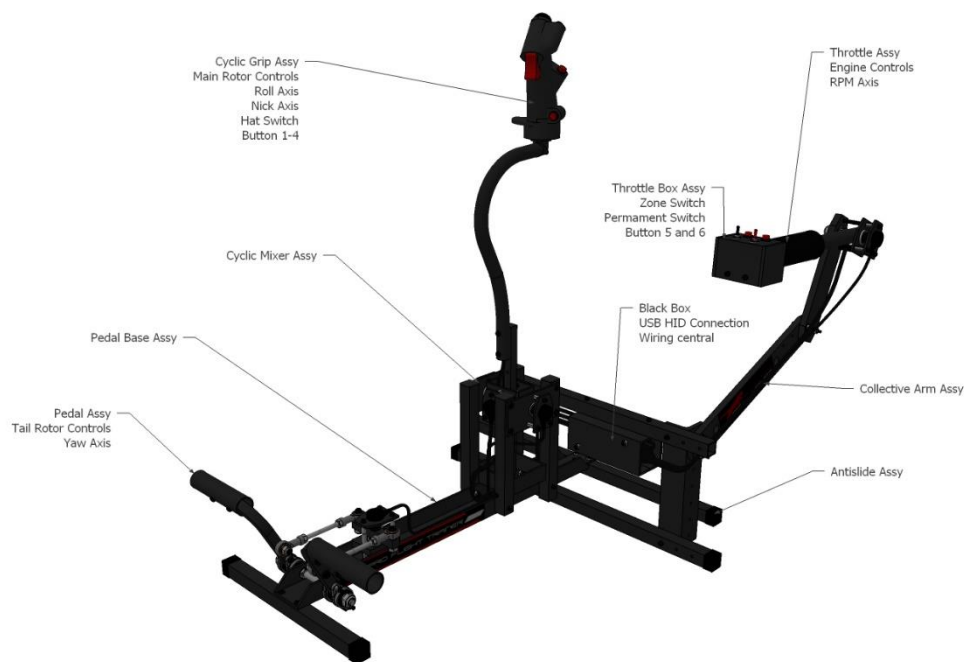
After flying the Pro Flight Trainer PUMA for a few minutes, along with a well configured flight simulator, you'll almost forget you're not in a real helicopter.

Happy Landings!

Pro Flight Trainer Development Team

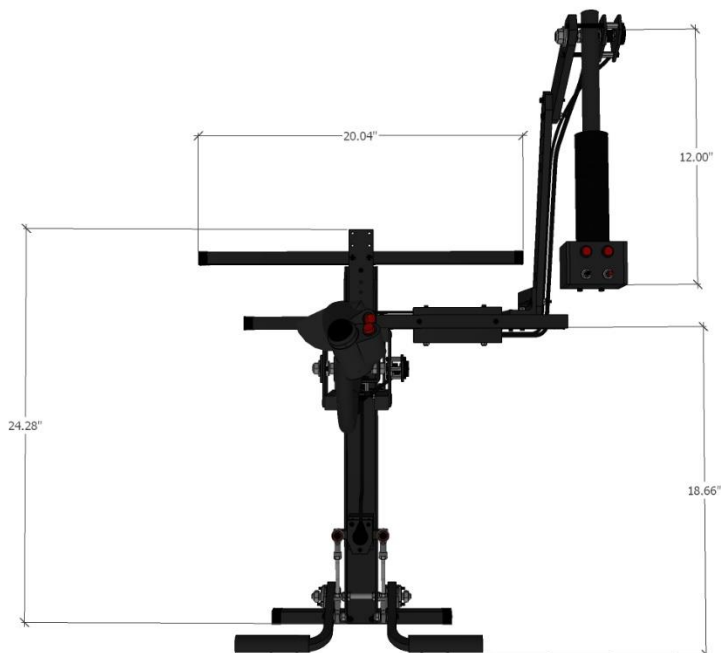
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1.1 Location References

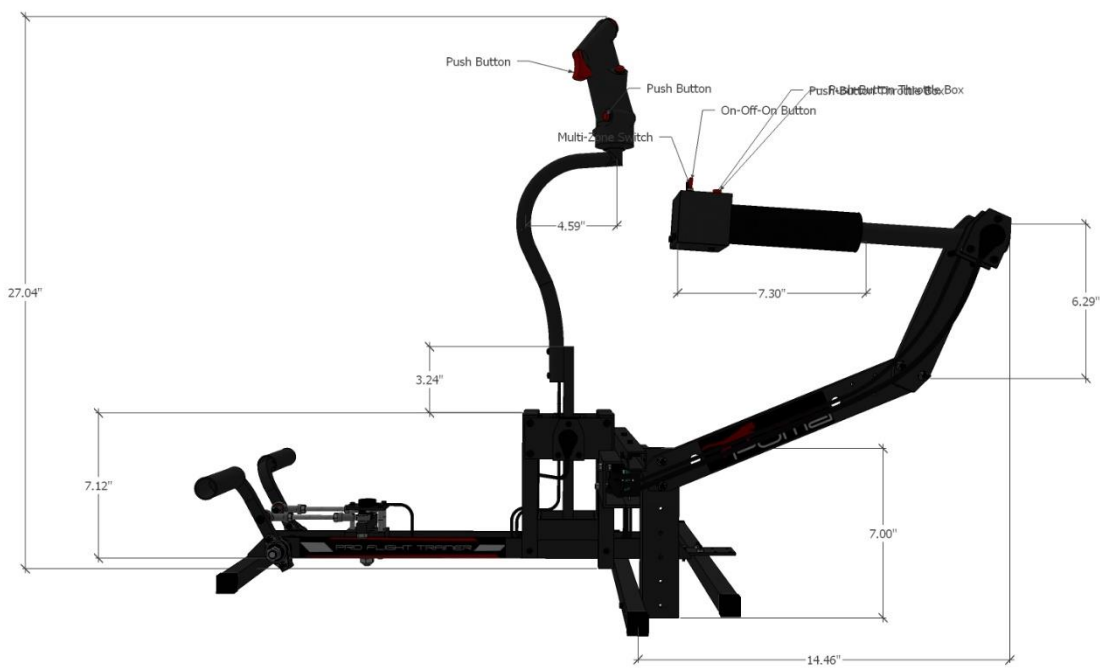


1.2 Principal Dimensions

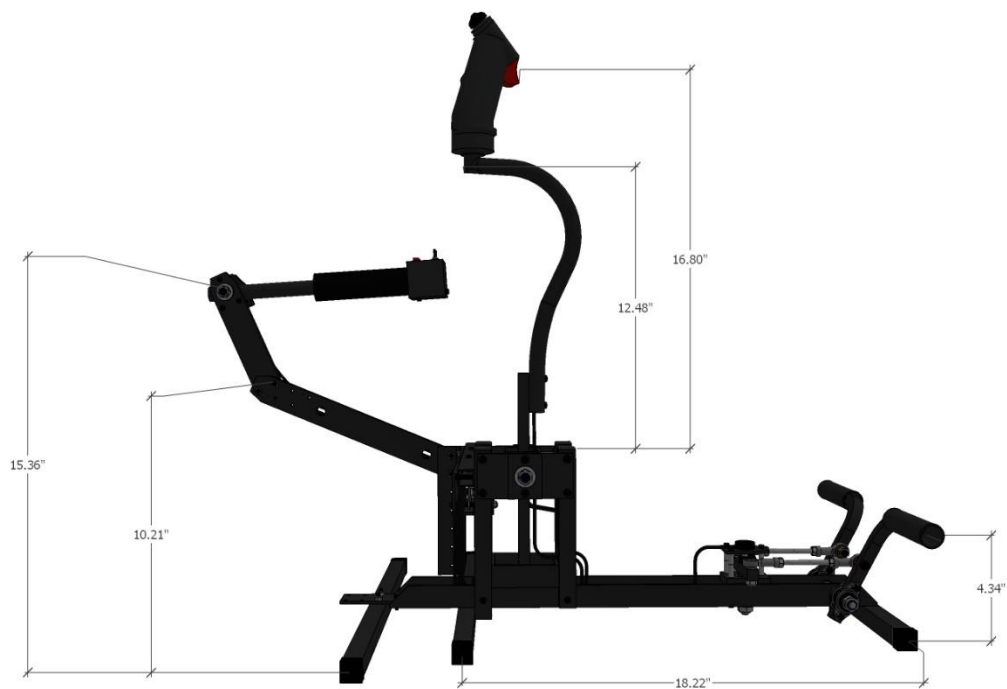
Top view



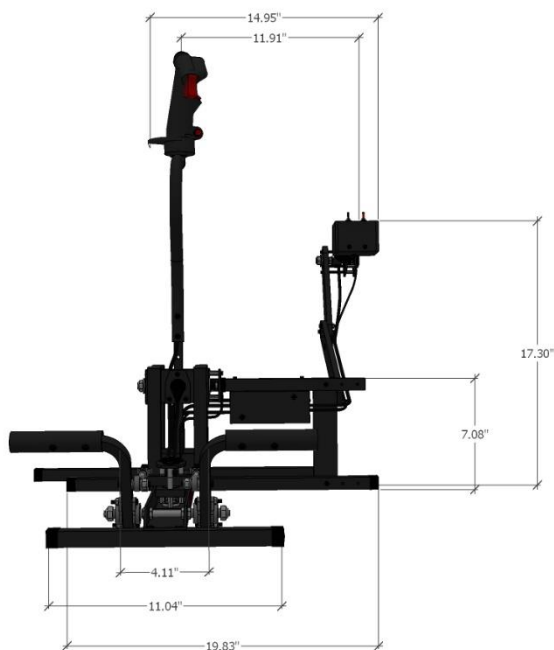
West View



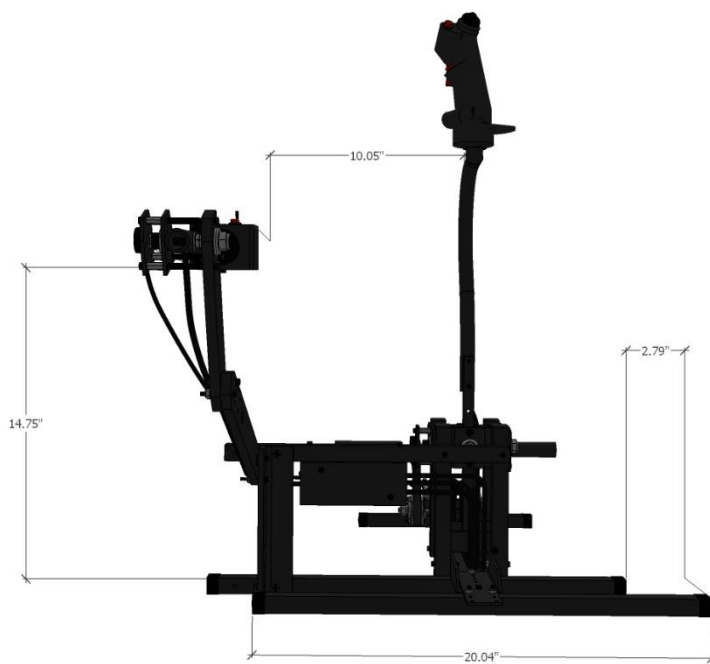
East View



North View

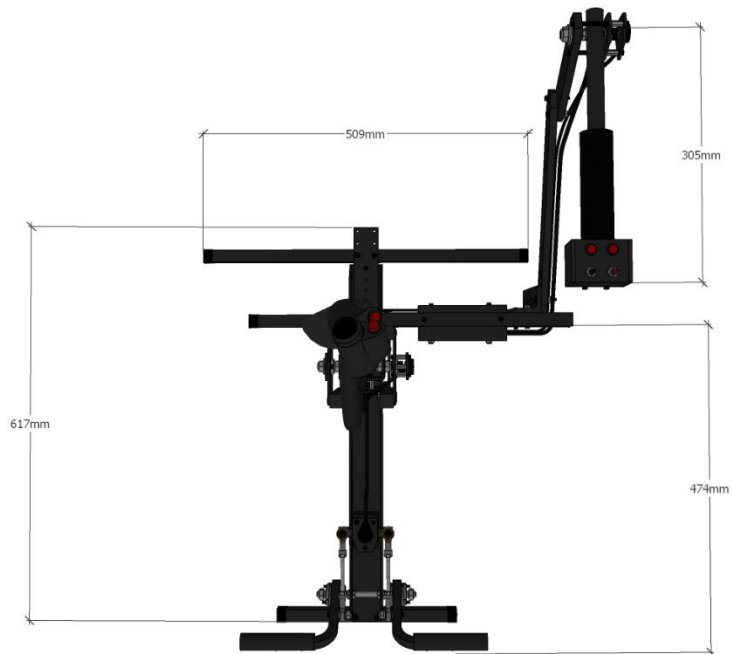


South View

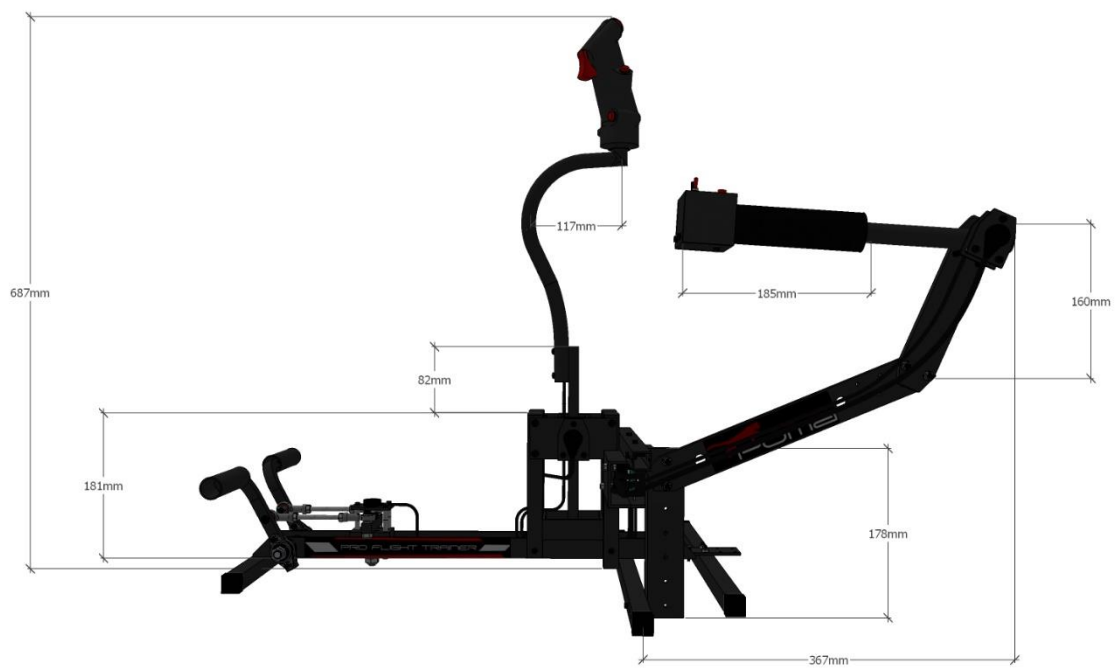


1.2 Principal Dimensions Metric

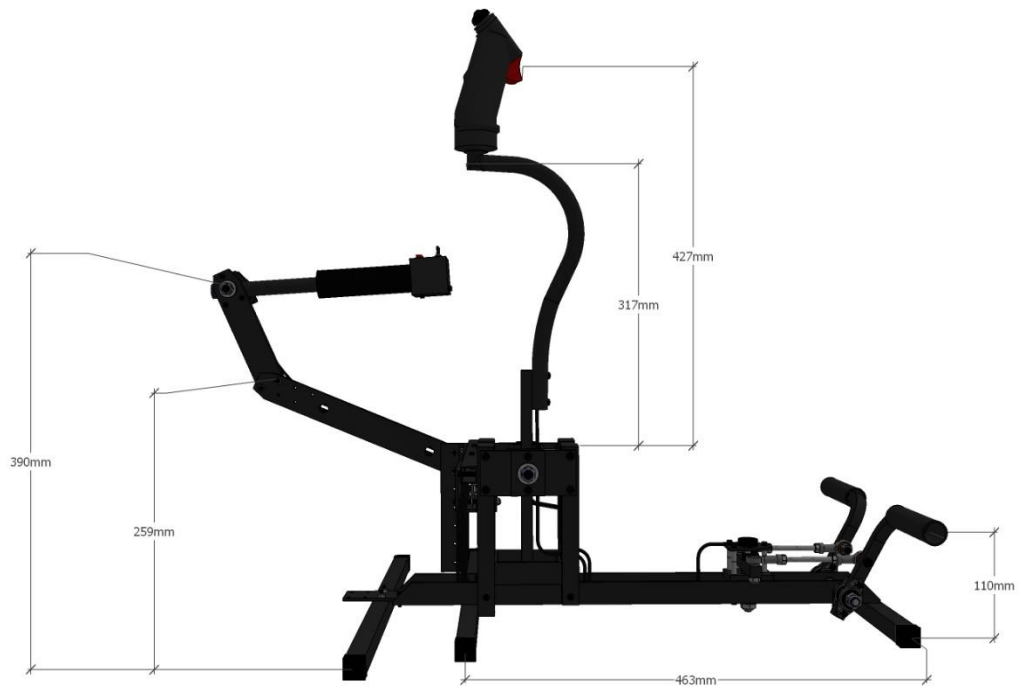
Top view



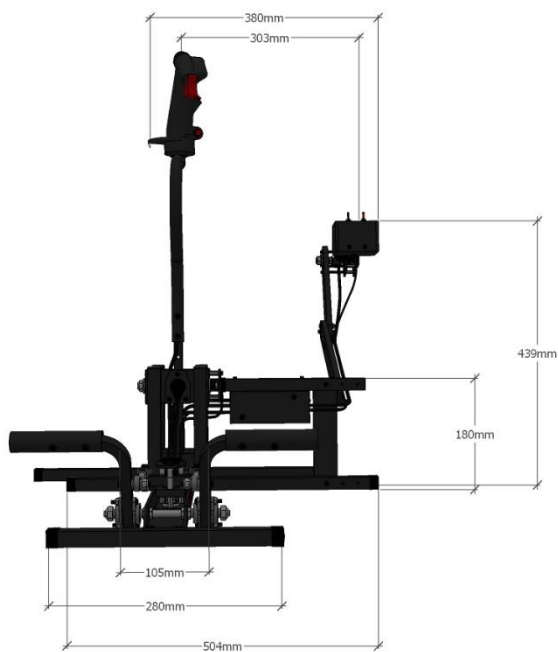
West View



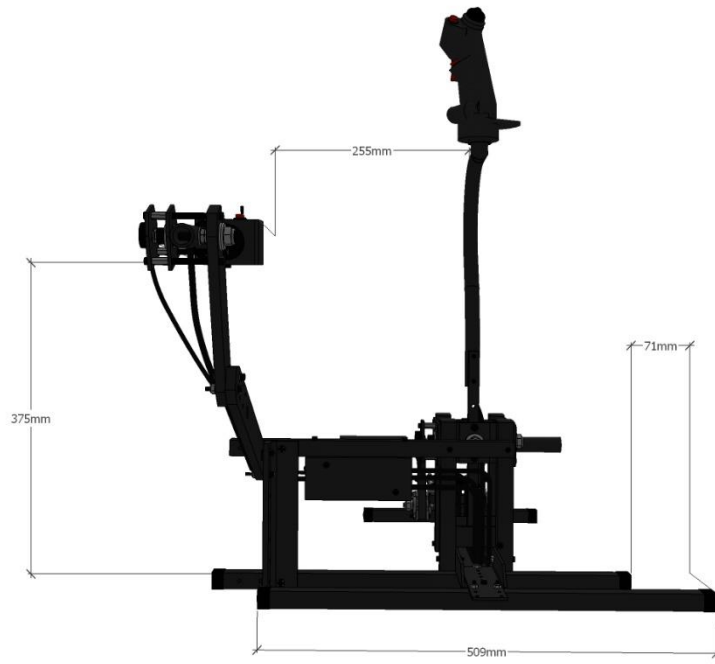
East View



North View



South View



1.3 Electrical Systems

The Cyclic Grip (B8 Version) contains 4 Temporary Push/Release buttons and 1 Hat-Switch.

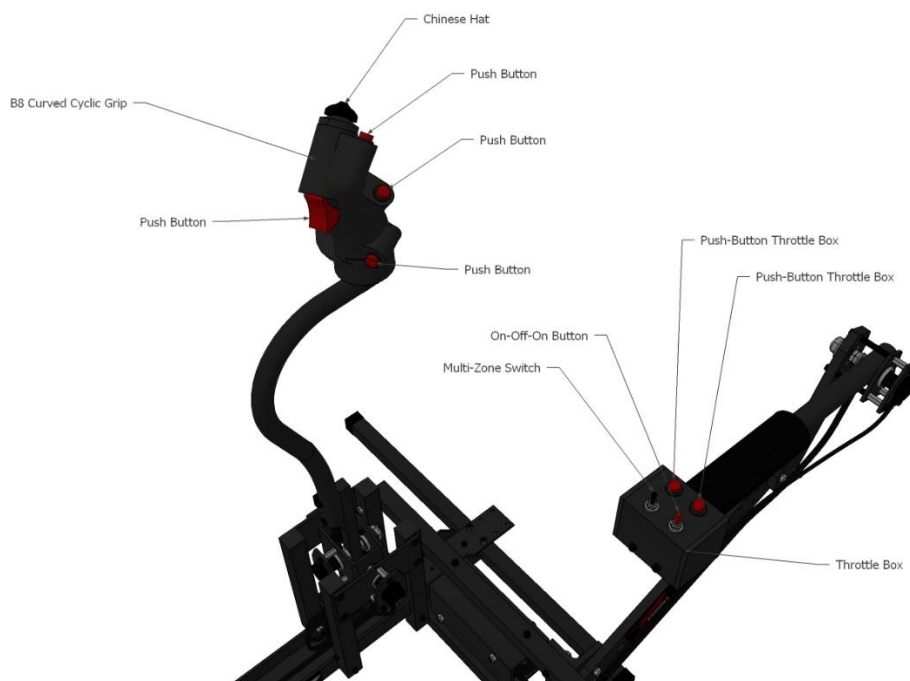
The Hat Switch is usually used for virtual cockpit view control, but each of its positions can be assigned to any configurable function. The Zone Switch Button allows to assign different controls to each zone, as you would have 3 Hat-Switches on the grip.

The Throttle Box contains 2 Temporary Push/Release Buttons, 1 Zone Switch Button, and 2 Permanent Switch Buttons.

All the buttons can be freely assigned to any configurable function.

NOTE!

Using the freeware Autohokey® or JoyToKey®, you can combine buttons and hat-switch into combo-buttons to increase configurable options to almost countless options. Visit the Autohotkey® Website or JoyToKey®, for more information, and current releases.



1.4 Flight Control Systems

1.4.1 Cyclic – Main Rotor Controls

The Cyclic is used for X-Axis (pitch) and Y-Axis (roll) inputs.

It is attached to the cyclicassy, and expanded down to the calibration square. The calibration square also provides mechanical control limits, to prevent any damage to the electronic equipment on the axis.



1.4.2 Collective and Throttle Controls

The Collective is used to increase/reduce the pitch angle of the main rotor blade.

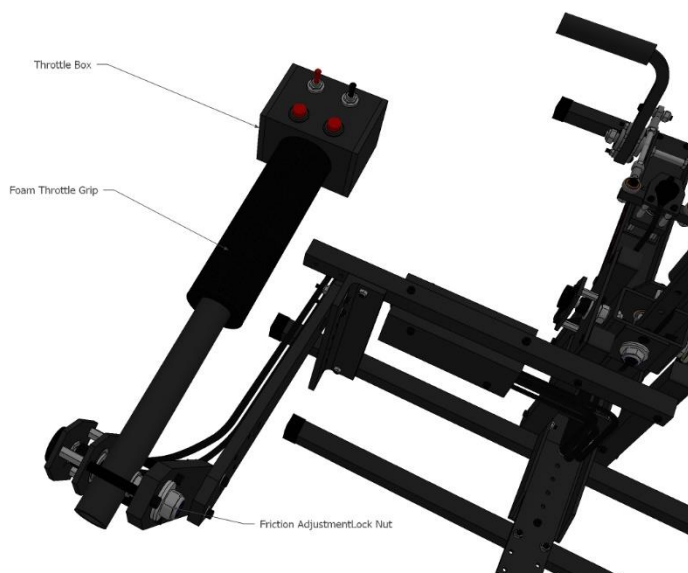
It is attached to the collective arm, and holds the throttle and throttle box.

The throttle is used for the manual control of the engine speed.

It is mounted on the collective lever, in a similar manner then the well-known Bell Textron design.

The Throttle Box contains 2 Temporary Push/Release Buttons, 1 Zone Switch Button, and 1 ON-OFF-ON Permanent Button.

All the buttons can be freely assigned to any configurable function.



1.4.3 Pedal – Tail Rotor Controls

The pedal is used to increase/decrease the pitch angle of the tail rotor blade, if present, or to control the yaw axis when flying a ducted fan, NOTAR, or dual rotor machine.

It is attached to the pedal frame.

