

# Modular Flight Simulator Pit, **MSFS Edition**

- \* Assembly Manual
- \* Introduction Of Modular Design
- \* Optional Add-on Accessories



Assembly instruction manuals available at:

V6.2M 102824

<http://bit.ly/ow-manuals>

by **SimFab**.com

If your item is damaged, defective or missing parts, please contact us first directly at Email: [info@SimFab.com](mailto:info@SimFab.com) or Toll Free: **1-888-299-2746**

As the manufacturer, our knowledge of your new product ensures that we will be able to assist you promptly and accurately.

For invoices and other price information, please refer to your market place account for more details. Alternatively, you can always email us at [info@SimFab.com](mailto:info@SimFab.com)

## WARNINGS:



Proceed with caution and extra attention when warning signs are present during installation instructions manual.



SimFab modular cockpit “MSFS edition” package consists of several individually packed modules (configurations). Install each in the following order and refer to their dedicated assembly manuals where applicable.

1. Install seat lift kit (located within seat frame on bottom of the box) between seat frame and seat base sliding rails.  
⚠ Follow instructions in Seat lift kit manual booklet.  
\* Install optional seat arm rest kit along with seat lift kit.
2. Install seat backrest to seat base. ⚠ Do not use seat before it is fully assembled and has weight in front, or rear extensions installed to the back, preventing seat from tipping over.
3. Install optional seat frame rear extensions. Refer to module dedicated manual booklet.
4. Install flight sim configuration #4, rudder pedal plate.
5. Install flight sim configuration #5, yoke and throttle quadrant brackets.
6. Install all rest optional configurations or add-on accessories available for purchase at [www.SimFab.com](http://www.SimFab.com) or [www.Amazon.com](http://www.Amazon.com)

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## Explore the Ultimate in Simulation with SimFab: Where Innovation Meets Immersion

At SimFab, we're redefining the world of simulation with our cutting-edge Modular Racing and Flight Sim Concepts and Designs. Dive into an unparalleled realm of fidelity, realism, and immersion with our bespoke cockpits, meticulously crafted to mirror the intricate layouts of real aircraft and race cars.

We prioritize your comfort, offering modular, fully compatible setups that adapt seamlessly to all major brands and control makers. Starting with affordable yet uncompromised quality base models, our products cater to both novice pilots eager to explore flight simulation and seasoned racers seeking upgradeable, interchangeable designs for a tailored experience.

Join us on a journey where every detail is designed with precision, ensuring a simulation experience that's as thrilling as it is authentic.



SimFab introduces several base models as follows:

Combat sim modular flight cockpit, **DCS World edition**

General aviation modular flight cockpit, **Trainer edition**

Civil aviation modular cockpit, **MSFS edition**

Civil, combat and space sim modular cockpit, **Hybrid edition**

Civil or combat sim modular cockpit, **Rotor-craft edition**

The SimFab modular flight sim trainer station is a state-of-the-art training system designed to optimize cognitive memory and provide full compatibility with high-end flight simulation controls. It offers precise user adjustment options and the ability to hot swap between panels and controls for a customizable and efficient training experience.



**DCS edition**



**Trainer edition**

Base package combines several flight sim add-on modules. For compatibility refer to flight sim add-on kit configurations #2, #4, #6



**MSFS edition**

Base package combines several flight sim add-on modules. For compatibility refer to flight sim add-on kit configurations #4, #5



**Hybrid edition**

Base package combines several flight sim add-on modules. For compatibility refer to flight sim add-on kit configuration #1



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### DD sim racing conversion kit

Convert your flight sim pit to sim racing setup and hot swap between each setup in seconds

Requires Gen3 base chassis.

## Modular flight pit add-ons Introduction

**⚠ Please read introduction carefully in order to understand modular design concept and learn about available flight sim options (configurations).**

We have incorporated simplicity, dynamic adjustment and rigidity, making your conversion effortless between different flight sim setups or sim racing, and vice versa. All controls are hard-mounted for maximum strength, handling the most aggressive pilot there is.

Our flight sim mounting brackets are compatible with all brands such as Thrustmaster, Saitek, CH Products, Logitech, VKB, WinWing, MFG, VirPil, Turtle Beach, Honeycomb, Slaw and others. We constantly update our designs, mounting patterns and hardware along with all newly introduced flight sim controls. For controls not mentioned within the list, please reach out to us for additional instructions or custom solutions.

We offer several flight sim add-on options based on commonly used and most desired setups, so called **"configurations"**. Order of configuration numbers is based on the time of which each was developed, where some options can be used independently such as configurations #1, #2, #5, #8 and rest configurations compliment the flight setup dependina on controls beina used.

All configurations are offered as "Add-on" kits as they require base model cockpit. Dedicated flight pits include group of said configuration as specified.

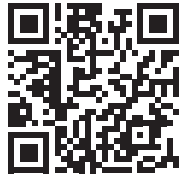


## Flight sim Add-on **configuration #1**, combat or commercial aviation flight sim HOTAS style, side by side mounted throttle and stick.

Brackets and adapter plates are compatible with the following brands and models flight sim controls:

1. Logitech/Saitek X52, X52 Pro, X56
2. Thrustmaster T16000M stick and throttle
3. Thrustmaster HOTAS T.Flight stick and throttle
4. Thrustmaster TCA AirBus
5. Hori stick and throttle
6. CH Products stick and throttle
7. VKB Gladiator Stick
8. Turtle Beach Velocity One Stick

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## Flight Sim add-on **configuration #2**, combat aviation flight sim HOTAS style, side by side mounted throttle and stick.

Brackets and adapter plates are compatible with the following brands and models flight sim controls:

1. Thrustmaster Warthog stick and throttle
2. VirPil Sticks, throttles, control panels
3. WinWing stick bases and Orion throttle
4. VKB Gunfighter stick

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**Flight Sim add-on configuration #3, centered stick standard mount bracket. Requires either configuration #1 or Configuration #2.**

Centered stick standard mount bracket provides quick and convenient conversion from racing wheel to flight stick by sharing same steering post. While config. #3 can be used in combination with either config. #1 or #3 we recommend it for #1 where stick base height adjustment is not necessary below knee level.



Configuration #1 + #3  
Thrustmaster T.Flight

<https://bit.ly/simfabhotascenterstick>



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Configuration #3



Configuration #2 + #3  
Thrustmaster Warthog

**Flight Sim add-on configuration #4, rudder pedals plate.**

Configuration #4 consists of dedicated rudder pedal plate and shaft connected to seat frame. Rudder pedals are optional for lower end flight sticks within configuration #1 family, with built in yaw movement by twisting flight stick grip. Rudder pedal plate is required with higher end flight controls within configuration #2 family where rudder pedals are used for yaw movement and ground braking. Rudder pedal plate is pre-drilled to accept all rudder pedals hard mounted. Included in the package is various mounting hardware compatible with the following rudder pedals:

1. VKB
2. MFG Crosswind
3. VirPil Ace Flight/Torq/WarBrd
4. Thrustmaster TPR/TFPR
4. Logitech Pro Flight
5. CH Products
6. Slaw device
7. WinWing Skywalker

<https://bit.ly/simfabrudderplate>



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### Flight Sim add-on **configuration #5**, civil and commercial aviation simulation package.

Configuration #5 consists of rudder pedal plate (config. #4), mounting brackets and adapter plates for various yokes and throttle quadrants. Our proprietary design of how controls are being mounted unifies adapter plates for all leading brands yokes and throttle quadrants with maximum rigidity and leg clearance.

Configuration #5 is compatible with the following yokes and throttle quadrants:

1. Honeycomb Alpha yoke and Bravo throttle quadrant
2. Turtle Beach Velocity One yoke and throttle quadrant
3. Logitech/Saitek yoke and single/dual throttle quadrant with optional Flight Velocity Trim Wheel
4. CH Products yoke and throttle quadrant

⚠ Thrustmaster TCA yoke and single/dual quadrant Boeing edition requires separate kit.



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### Flight Sim add-on **configuration #6**, centered flight stick lower mount bracket.

Configuration #6 is a specially designed bracket for flight sticks with need of precise and long range of height adjustment. Lower mount bracket provides lowest height level of adjustment of stick base to accommodate flight sticks typically within configuration #2 with removable grips, where grip extension is added between standard grip and stick base. Major benefits are precise height placement of stick grip in accordance with various grip extensions for better stick control or when grip is used as helicopter simulation cyclic. Lower mount bracket can be used whether stick grip is used with extension or without.

⚠ Kit does not include adapter plates. Adapter plates are included in Configurations #1 and #2

Typically used (not limited to) with following flight sticks:

1. Thrustmaster Warthog stick
2. VirPil Sticks
3. VKB Gunfighter stick
4. WinWing Super Libra Stick



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<https://bit.ly/simfablowerstick>



## Flight Sim add-on **configuration #7**, flight stick grip extension kit.

Proprietary design grip extension kit offering full range of grip extension from 2.75" (70mm) short to 7.5" (190mm) long. Package includes adapters, extensions, extension cables and all hardware, ready to use right out the box. All anodized and machined billet aluminum for light ,and yet strongest material.

Grip extension is compatible with the following stick grips:

1. All Thrustmaster Warthog based grips
2. VirPil stick grips
3. WinWing stick grips



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70mm to 110mm (2<sup>3</sup>/<sub>4</sub> - 4<sup>3</sup>/<sub>8</sub> in.) extension  
 105mm to 145mm (4<sup>1</sup>/<sub>8</sub> - 5<sup>3</sup>/<sub>4</sub> in.) extension  
 150mm to 190mm (5<sup>7</sup>/<sub>8</sub> - 7<sup>1</sup>/<sub>2</sub> in.) extension

**Total of 70mm to 190mm (2<sup>3</sup>/<sub>4</sub> - 7<sup>1</sup>/<sub>2</sub> in.) grip extension all in one kit**

## Flight Sim add-on **configuration #8** Complete package for GA aviation, Thrustmaster TCA Boeing Edition: yoke, throttle quadarant, rudder pedals **configuration #9** Thrustmaster TCA Boeing yoke bracket only



**Complete package**  
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<https://bit.ly/simfabboeingcompl>

**Yoke bracket only**  
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<https://bit.ly/simfabboeingbronly>

## Flight Sim add-on **configuration #10**

### **Advanced Modular Side Mount "AMSM"**

Compatible with WinWing Super Taurus throttle, take of / combat panels, VirPil control panels.



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<https://bit.ly/simfabamsm>

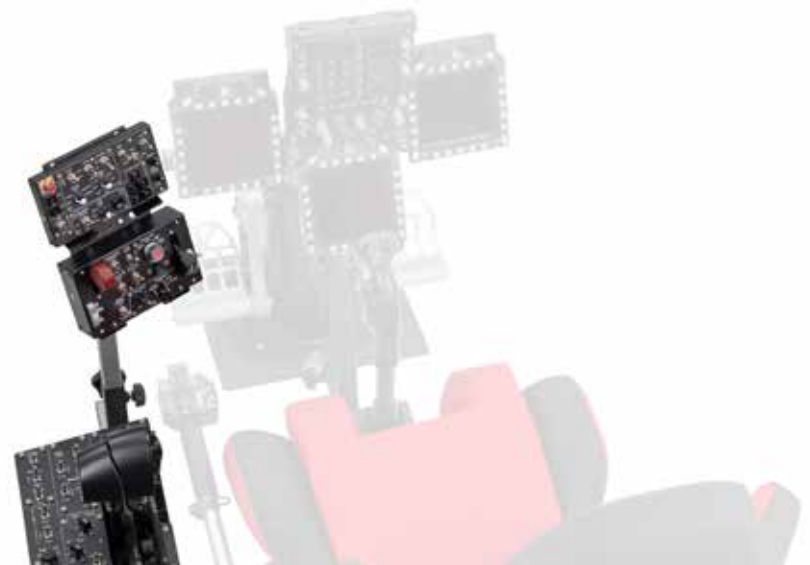
## Flight Sim add-on **configuration #10A**

### **Vertical panel left/right side with single control**

Compatible with update list from 10a plate



### Flight Sim add-on **configuration #10B**



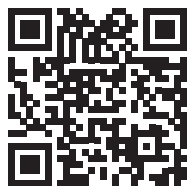
## Flight Sim add-on **configuration #11**

### **Helicopter Collective Universal Mount Bracket**

Compatible with WinWing, VirPil and Komodo helicopter collectives



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<https://bit.ly/hellicollective>

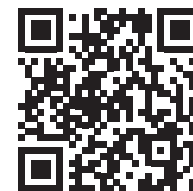
## Flight Sim add-on **configuration #12**

### **Main Instrument Panel: MFD/UFC/ICP/HUD Holder**

Compatible with WinWing MIP F18, Thrustmaster Cougar MFDs, SimGears ICP



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## Flight Sim add-on **configuration #13**

### Advanced Modular Side Mount



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## Flight Sim add-on **configuration #14**

Extended upper L bracket for dual side control mount



Included in the kit is adapter plate of choice with appropriate controls mounting hardware



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## Transition and hot swap between sim racing controls and flight sim controls.

Hot swap side controls when using flight sim configurations #1 by releasing quick connect knobs holding upper L bracket with each control permanently mounted on its designated upper L bracket.



Hot swap entire front chassis between sim racing and flight sim when using center mounted stick and rudder pedals plate



## Master Parts list

### Seat and frame kit assembly, [page 28](#)

1. Seat with removable center foam insert.
2. Felt pads (4)
3. Seat frame
4. Seat lift kit
5. "Easy Roll" wheel set
6. Velcro ties (cable management) (6)
7. Quick release knob (attach to seat frame)
8. Wrench Set: Open Wrenches: 17mm, 13mm, 10mm, 7mm  
Allen Keys: 8mm, 5mm

**Keep all wrenches in black pouch for future use on all rest OpenWheeler and SimFab products, and add-on accessories.**



**Seat and frame assembly**

### Rudder plate assembly and hardware

**⚠ Part list from 1 through 4 and images, refer to rudder pedal plate assembly section, [page 33](#)**

1. Rudder pedal plate with mounting bracket.
2. Rudder pedal plate shaft.
3. Rudder pedal plate to shaft mounting hardware.
4. Various rudder pedals controls mounting hardware



**Rudder plate assembly**

### Yoke and throttle quadrant bracket kit, and hardware.

**Refer to Configuration #5 Yoke package assembly section, [page 46](#)**

1. Yoke and quadrant plate with pre-assembled shaft (2)
- ⚠** Hardware for Honeycomb controls is pre-assembled by default.
- ⚠** Hardware must be removed when Logitech, CH Products or Turtle Beach Velocity One controls are being used.
2. Yoke and throttle posts
3. T extension tube
4. Yoke and throttle quadrant controls mounting hardware:
5. Quadrant main support shaft
6. Knobs and bolts (pre-installed to both posts)
7. 4-way coupler for optional keyboard mount on right hand side



**Yoke and throttle quadrant assembly**

## Seat and Seat frame installation

1. Install seat lift kit between seat frame and seat base.

⚠ Refer to seat lift kit installation manual.

Attach felt pads to each corner of seat base frame. Align each pad with welded nuts, towards the end of frame tube as shown.



Fig.1



Fig.2

## 2. Seat Assembly

- Remove pre-screwed pair of bolts on left side of the backrest and bolt on right side of the seat.

⚠ Seat base is designed with removable center foam insert for center mounted stick or cyclic use.



Fig.3

- Align backrest with seat reclining arm on the left side. Hand tight single hinge bolt on right side **first**, then two bolts on the left side.



Fig.4

- Tighten down all 3 bolts with supplied wrenches: small Allen (Hex) key for the pair bolts on the left; Large combo wrench for the bolt on right side.



Fig.5

- 3. "Easy Roll" wheel set installation.** Insert wheel tube into rear side of seat frame until it bottoms out. Secure tubes with pair of bolts pre-installed to seat frame.



Fig.24

- To move the cockpit around or out of the way, lift front of chassis by the lower support bracket until "Easy Roll" wheels touch the floor.



Fig.25

#### 4. Rudder plate assembly.

⚠ Refer to rudder pedal plate installation, **page 33**  
a.k.a "Configuration #4".

#### 5. Yoke package assembly.

⚠ Refer to yoke package installation manual  
a.k.a "Configuration #5", **page 46**

⚠ Thrustmaster TCA Yoke, Boeing edition requires additional mounting bracket. To order, refer to QR code and link below.



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<https://bit.ly/sf-tm-tca>

## Flight Simulator Add-on Kit **Configuration #4** Rudder Pedal Plate Assembly Manual

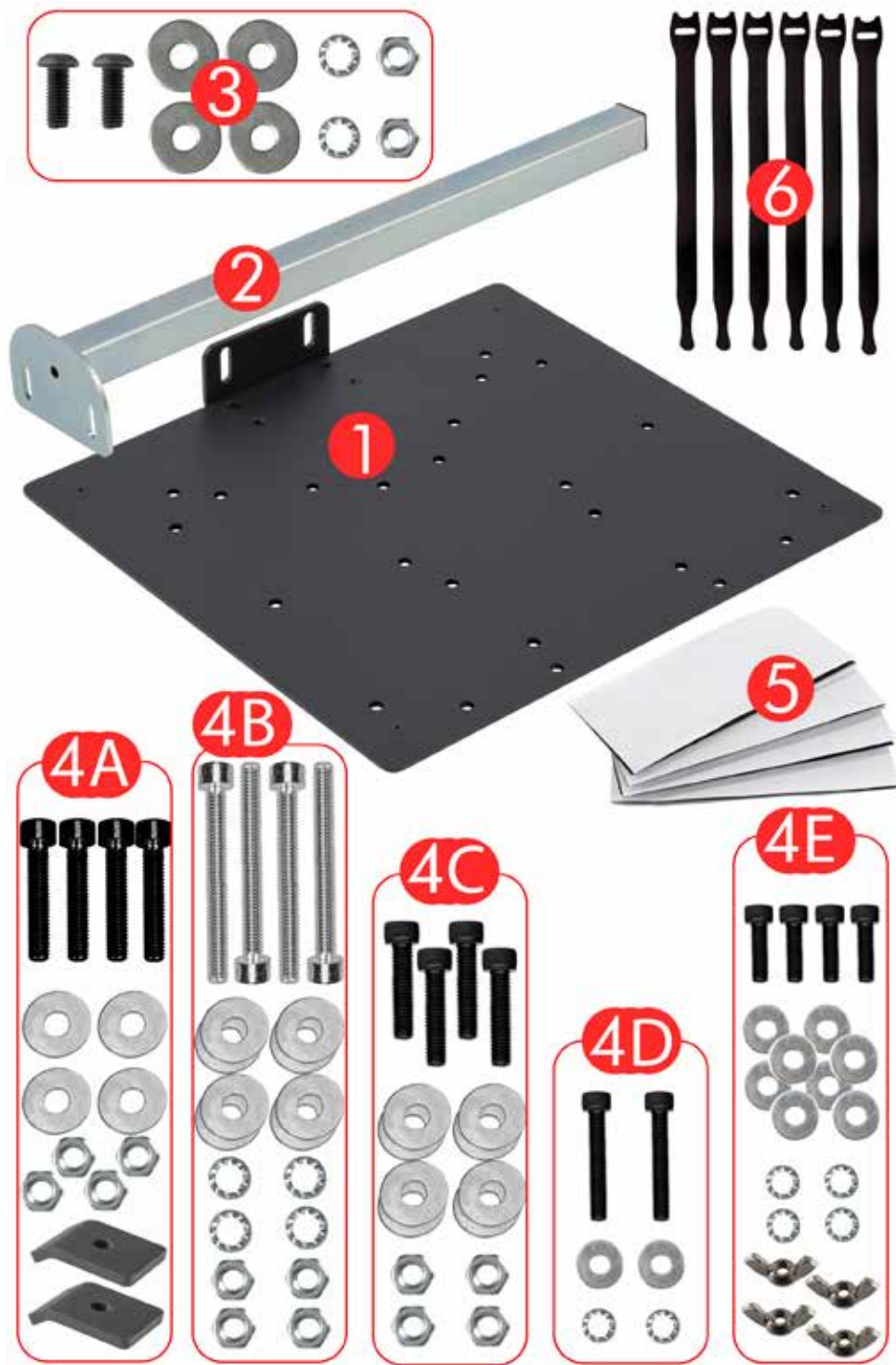


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## Parts list

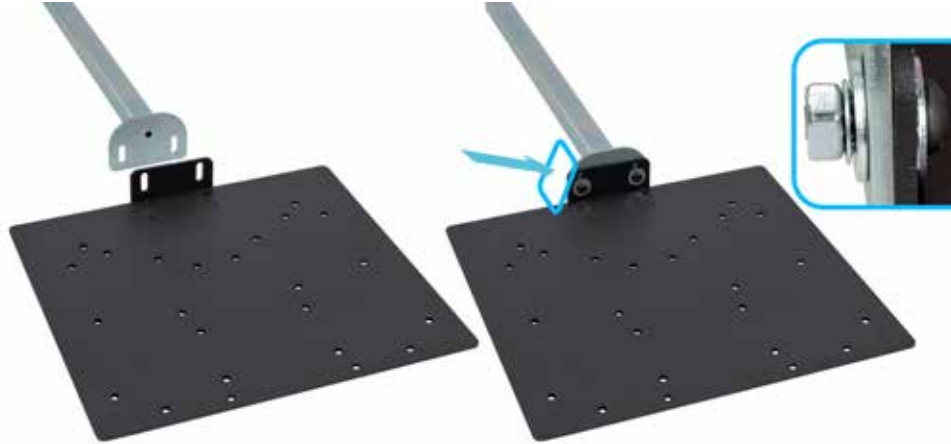
1. Rudder pedal plate with mounting bracket.
2. Rudder pedal plate shaft.
3. Rudder pedal plate to shaft mounting hardware.
4. Various controls mounting hardware:  
 ⚠ All controls mounting bolts are installed upside down except WinWing pedals (bolt heads on floor side).  
 A. Thrustmaster TFRP, VirPil Torq, WinWing Skywalker  
 B. Logitech (Saitek)  
 C. MFG Crosswind  
 D. VKB T-Rudders Mk.IV  
 E. TPR, VirPil Ace Interceptor/Collection, Slaw Viper, Turtle Beach Velocity One
5. Vecro strips for rudder pedals not equipped with through holes or inserts. (4)
6. Velcro ties for cable management (6)



## Installation

### Pedal plate and shaft assembly

1. Install hardware connecting pedal plate with shaft, leave hardware hand tight.

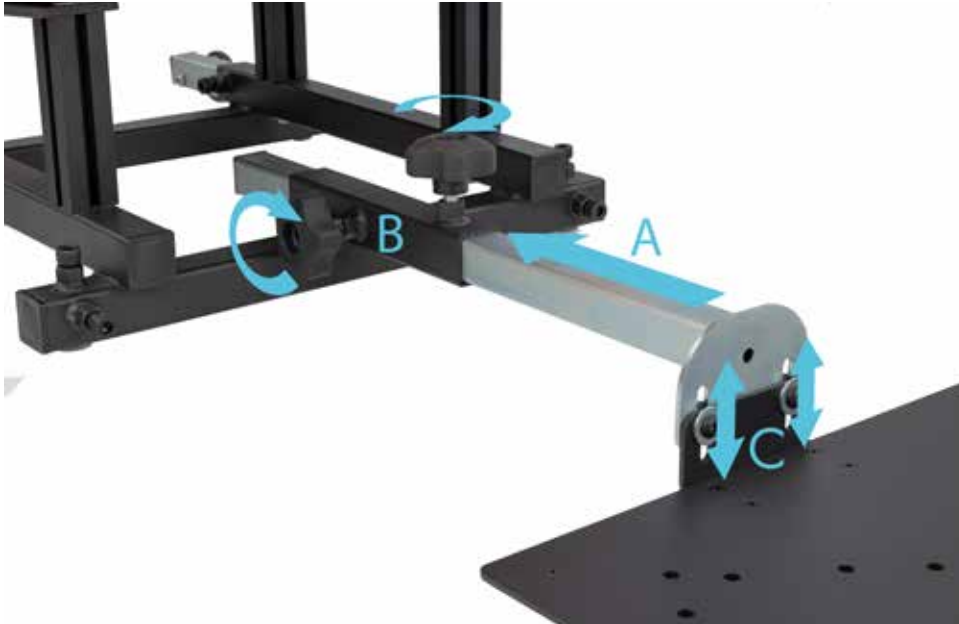


2. Rudder pedal plate assembly to seat frame installation.

A. Slide in shaft to seat frame

B. Tighten quick release knobs

C. Adjust plate to lay flat on floor and tighten plate mounting hardware by using 5mm hex key and 13mm combo wrench.



### Rudder pedals installation

3. Install controls mounting hardware upside down with bolt heads facing the floor.

⚠️ All controls (except WinWing rudders) mounting bolts are installed upside down (bolt heads on floor side).



## Rudder pedals mounting pattern

Saitek/Logitech

ThrustMaster TFPR

ThrustMaster TPR

VirPil Ace Interceptor / Collection

VirPil Ace Torq

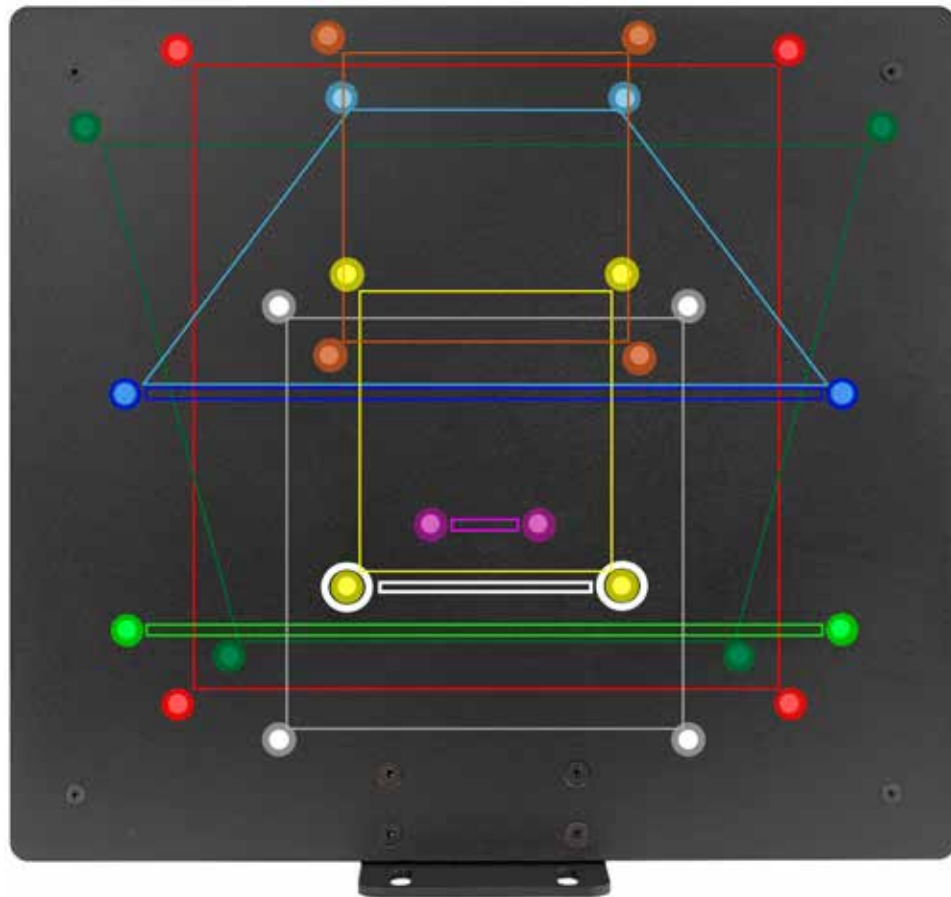
MFG CrossWind

VKB Sim and Turtle Beach Velocity One

CH Products - use Velcro strips

Slaw Device Viper

WinWing Skywalker



4. Thrustmaster TFPR rudder pedals holding tabs installation. Align rudder pedals along with plate mounting holes and clamping marks as indicated on pedals.

⚠ Clamping holding tabs elsewhere may damage pedals plastic.



5. VirPil Collection / Interceptor rudder pedals.

⚠ Remove factory base bracket held by four bolts and mount pedals to OpenWheeler rudder pedal plate.



6. VirPil Torq rudder pedals holding tabs installation.

⚠ Use holding tabs and hardware to secure rudder pedals to plate.



7. VKB T-Rudders Mk.IV rudder pedals.

⚠ Remove factory inserts and bolts holding rudder rear feet as shown, and replace them with hardware as labeled through pedal plate.





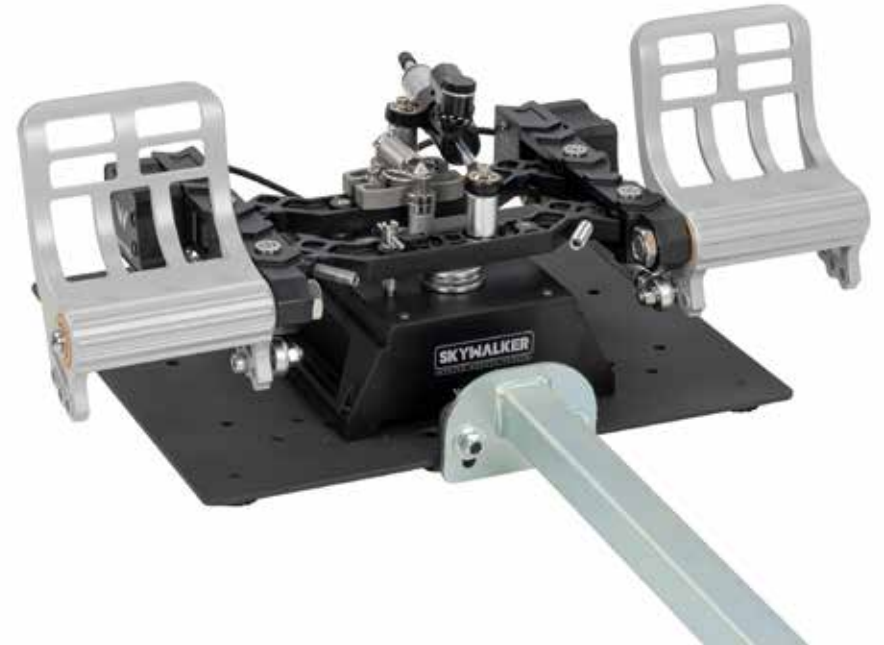
part 1  
part 2  
bolts



## 8. WinWing Skywalker (Orion) rudder pedals.

Use rudder kit hardware, bag 4A: 4 bolts M6x25mm, 4 washers, 4 nuts.

⚠ WinWing rudder pedals are the only ones with bolts installed right side up: bolt head top of rudders, washers and nuts bottom of plate.



Flight Simulation Add-on Kit  
**Configuration #5**  
**General And Commercial Aviation Package**  
Yoke/Quadrant/Rudder Pedals **MK2**  
Assembly Manual  
And  
Optional Accessories



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## Parts list

### Yoke and throttle quadrant bracket kit, and hardware.

7. Yoke and throttle quadrant plate with pre-assembled shaft (2)

⚠ Hardware for Honeycomb controls is pre-assembled by default.

⚠ Hardware must be removed when Logitech, CH Products or Turtle Beach Velocity One controls are being used.

8. Yoke and throttle posts

9. T extension tube

10. Yoke and throttle quadrant controls mounting hardware:

10A. Mounting hardware for Logitech (Saitek) yoke and throttle quadrant

10B. Mounting hardware for Turtle Beach Velocity One yoke and quadrant

⚠ Use 4mm Allen key from rudder hardware bag 4E

10C. Mounting hardware for Thrustmaster TCA Boeing edition throttle quadrant, single or dual.

⚠ Thrustmaster TCA Boeing edition yoke requires additional bracket, sold separate.

11. Throttle quadrant main support shaft

12. Knobs and bolts (pre-installed to both posts #8)

13. 4-way coupler for optional keyboard mount on right hand side



### Yoke and Quadrant brackets assembly

7. Slide yoke post on rudder pedal plate shaft and slide shaft into seat frame center tube.

⚠ Yoke post can be mounted reversed according to personal preference and comfort.



8. Insert T extension tube into front/right side seat frame tube.



9. Slide quadrant post to horizontal shaft in opposite direction of the yoke post holding the Yoke. Horizontal shaft with felt pad is pointing forward. Slide horizontal shaft into T extension tube. Tighten all bolts and knobs.





10. Insert yoke and quadrant shafts into each post. Ensure pivot bolt of each plate is fastened enough to hold the weight of the control. Keep pivot brackets slightly loose for tilt adjustment before final setting and tightening down of all knobs and hardware.



### Keyboard assembly mounted on right hand side by using 4-way coupler

To mount optional keyboard assembly on right hand side along with throttle quadrant bracket assembly, use included in the package 4-way coupling.



Slide in 4-way coupling on throttle quadrant shaft. Leave pre-installed set screws loose until keyboard tray assembly is set to proper position.



Slide Keyboard tray wedge tube into 4-way coupling and adjust position according to throttle quadrant post, and available tube space. Tighten all four (4) set screws with 5mm Allen key.



## Controls installation and mounting

⚠ By default pre-assembled hardware on both plates is for Honeycomb Alpha yoke and Bravo quadrant.

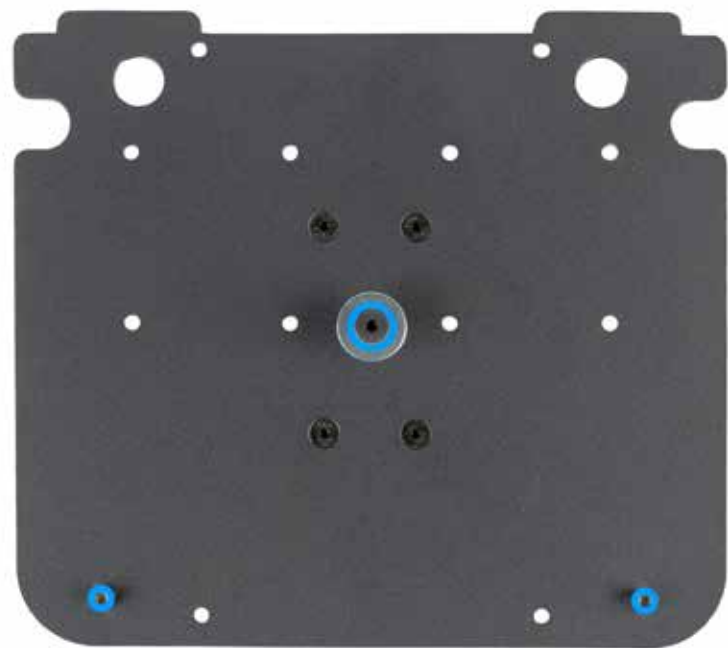
1. Honeycomb Alpha yoke and Bravo quadrant installation.



1.1. Transfer controls from factory plastic plate to OpenWheeler / SimFab aluminum plates. Mounting principal is the same as factory plate.

1.2. Slide yoke and quadrant on the plate with centered mounted bolt/washer fitting into the control center key way.

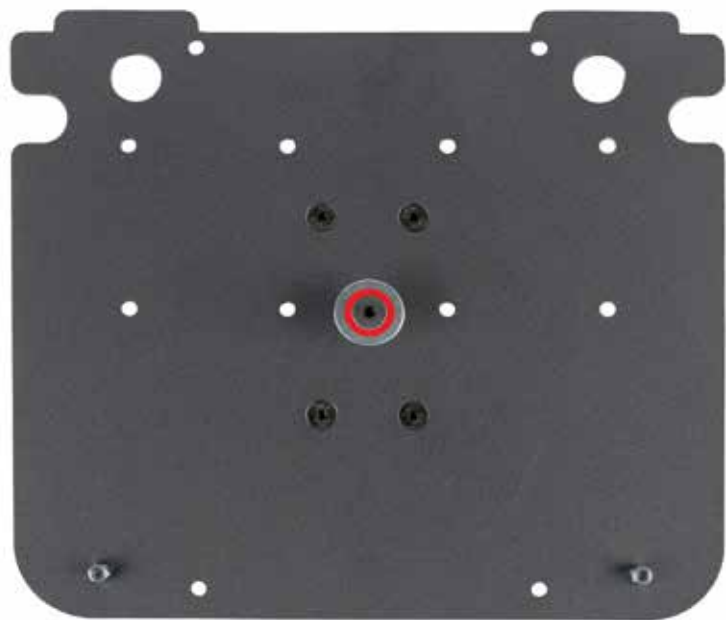
1.3. Extend tension wheels until they nest into pre-assembled nuts on each plate. Adjust both wheels equally until plates are secured to the controls.



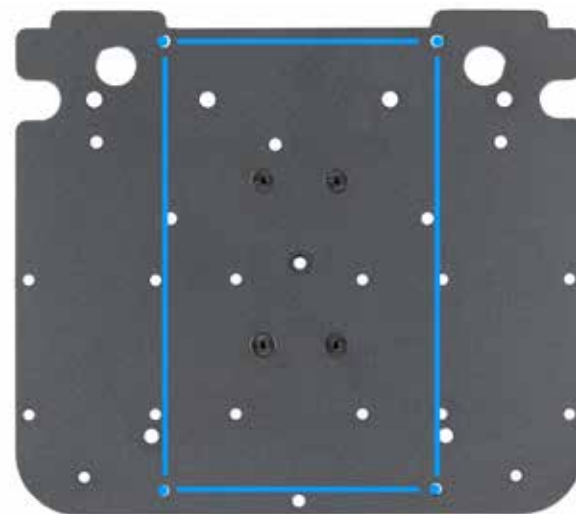
## 2. Logitech (Saitek) Yoke and quadrant installation



2.1. Remove pre-installed center bolt from plates.



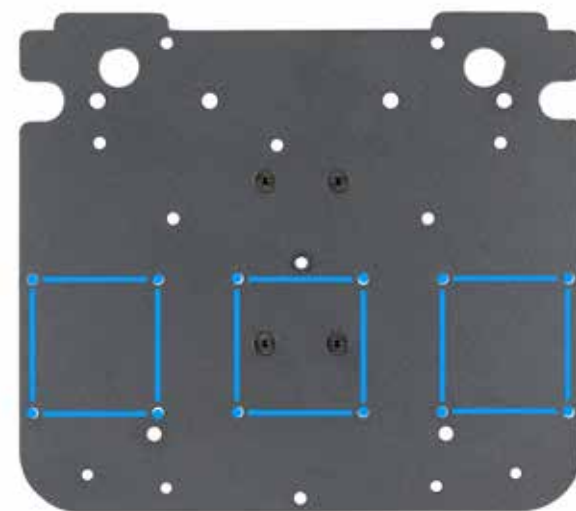
2.2. Use selected hardware (four bolts) to secure Logitech yoke to plate.



2.3. Use selected hardware (four bolts) to secure Logitech throttles to plate: single, dual or dual with Flight Velocity trim wheel.

⚠ Flip plate, remove all pre-installed hardware for Honeycomb throttle

⚠ Dual quadrants can be mounted next to each other with Flight Velocity trim wheel.

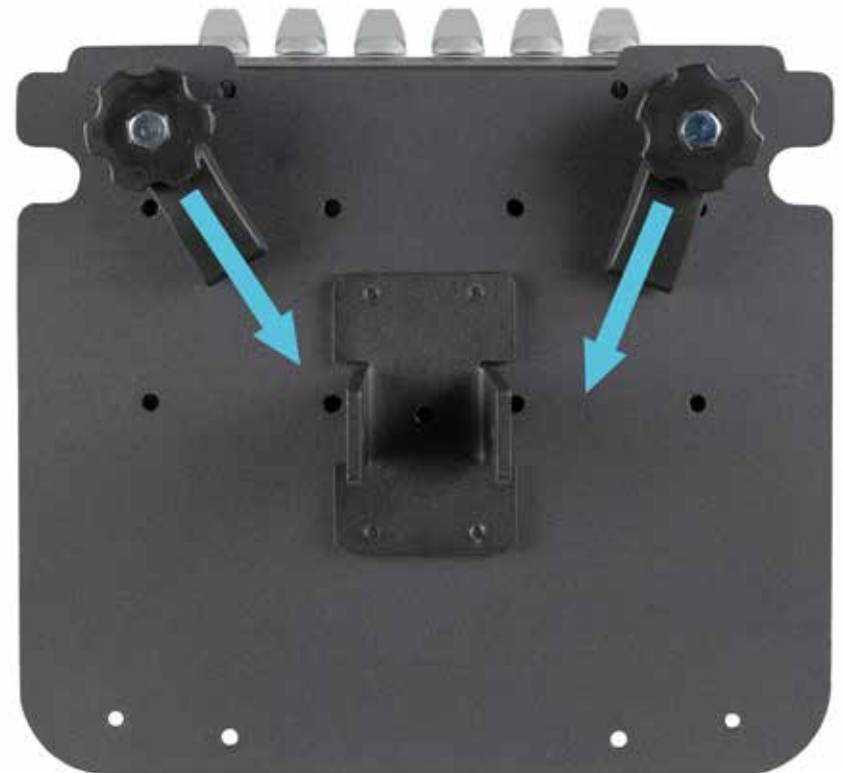
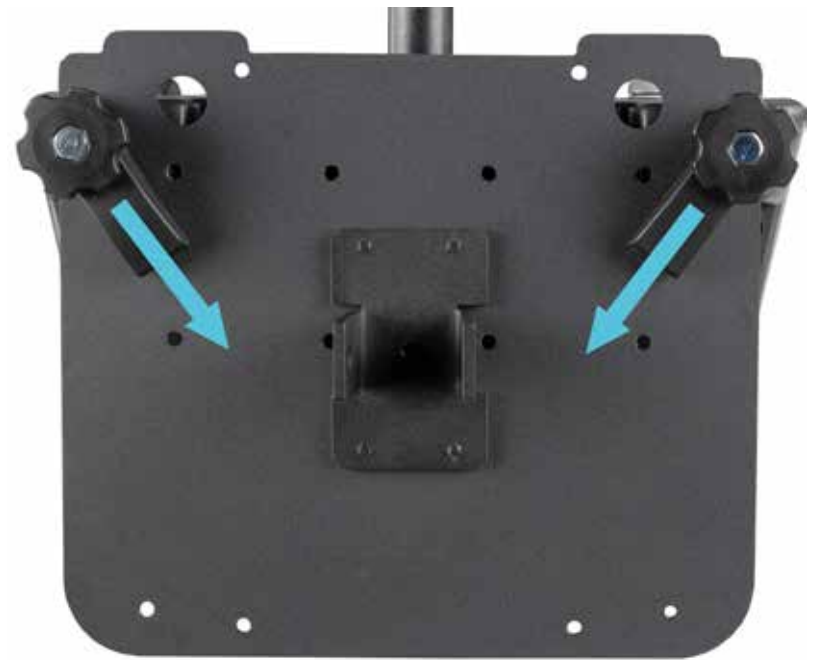


### 3. CH Products Yoke and quadrant installation.



3.1. Remove factory clamps from yoke and quadrant.

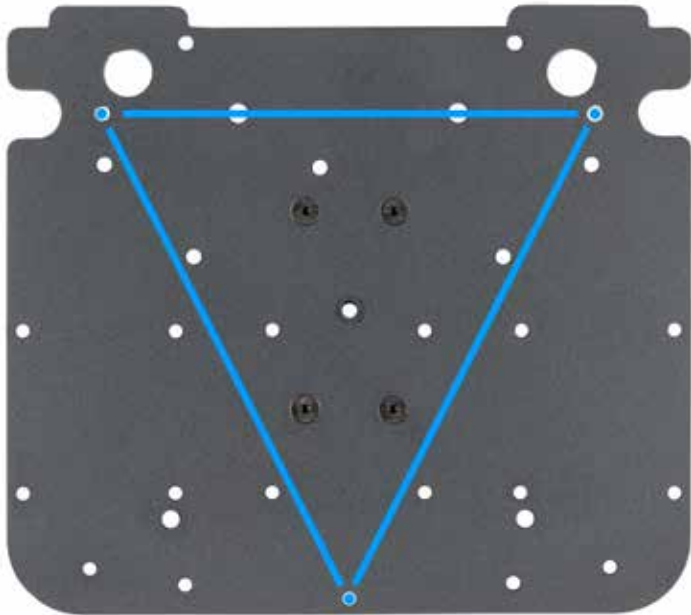
3.2. Install clamps through plate larger holes and tighten them down, pointing towards center of the plate.



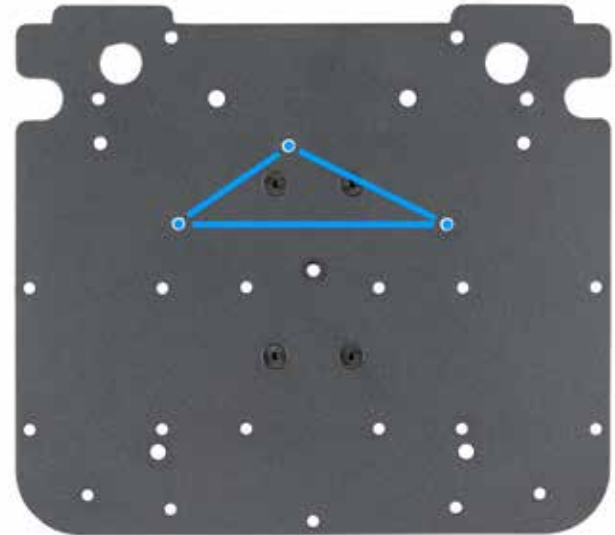
## 4. Turtle Beach Velocity One yoke and quadrant installation



4.1. Use selected hardware (three bolts) to secure Velocity One yoke to plate.



4.2. Use selected hardware (three bolts) to secure Velocity One quadrant to plate.



Thrustmaster TCA Boeing edition yoke bracket kit, sold separate.

<https://bit.ly/sf-tm-tca>



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## 5. Thrustmaster TCA Boeing throttle installation.

⚠ Boeing yoke requires additional bracket, sold separate.

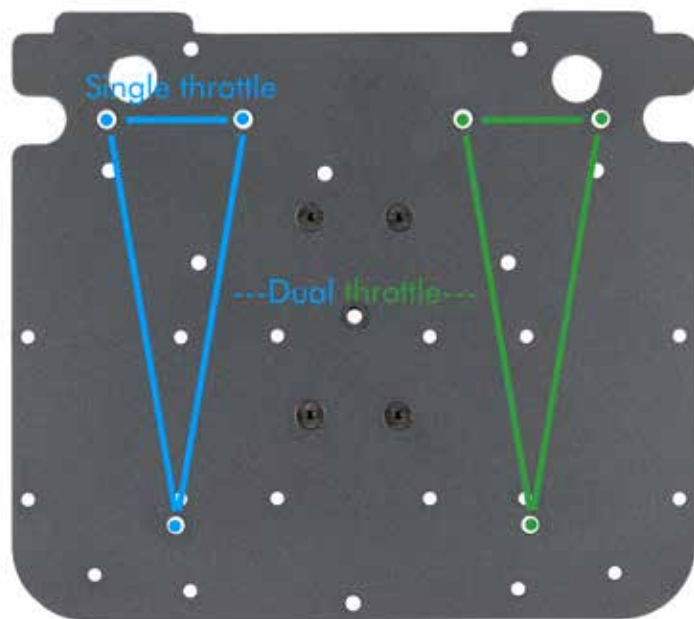
Single throttle



Dual throttle



5.1. Use left sets of holes for single throttle or both sets of holes for dual throttle. Use mounting hardware baa 10C.



## Specifications:

Recliner: max: 170 degrees

Construction: tubular steel frame with elastic strap supports

Seat Materials: high-density cold cure foam filling; Fabric, Steel chassis

## Instructions during use and care:

Move simulator around with caution to avoid collision.

Keep out of direct sunlight and outdoor use.

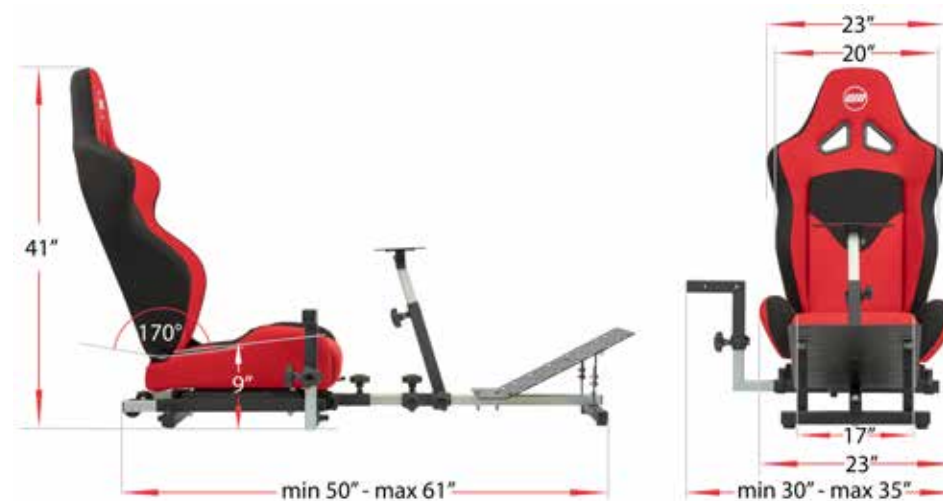
Watch fingers when adjusting recliner.

Placing heavy or sharp objects on the seat may damage the surface material.

Do not use abrasive or chemically aggressive materials on the seat.

Use dry cloth or soft brush to clean the chair.

## Dimensions:



Warranty Information

Return Policy

Terms And Conditions

<http://homeracer.com/ow-termsandconditions.html>

