



www.volairsim.com

ASSEMBLY INSTRUCTIONS

Version 1.6



© 2012-2020 BARELLE GROUP LLC, All Rights Reserved

Thank you for purchasing the Volair Sim™ universal flight | racing sim chassis! We hope that it will give you countless hours of enjoyment. Although we have designed the system with ease of assembly in-mind, please read these instructions carefully first.

YOU CAN ALSO FOLLOW THE INSTRUCTIONAL VIDEO AVAILABLE ON OUR WEB-SITE DURING ASSEMBLY

We recommend that you find an open space to carefully unpack the box and inventory all of the components and hardware before beginning the assembly process. Please refer to the **Installation Drawing** to verify that you have all of the chassis components and **Table 1** below that you have all of the hardware. Throughout the assembly process, please refer to **Table 1** which reference parts used during each step of the assembly. You should note that all hardware is Metric. Although we provided you with basic tools, we recommend that you use an adjustable wrench, Philips screwdriver, and a metric socket set during installation.

NOTE: SOME OF THE PARTS MAY VARY SLIGHTLY FROM THE PHOTOS BELOW AS WE CONTINUOUSLY IMPROVE OUR PRODUCTS. ALSO, SOME FASTENERS MAY BE PRE-INSTALLED ON THE COCKPIT.

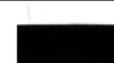
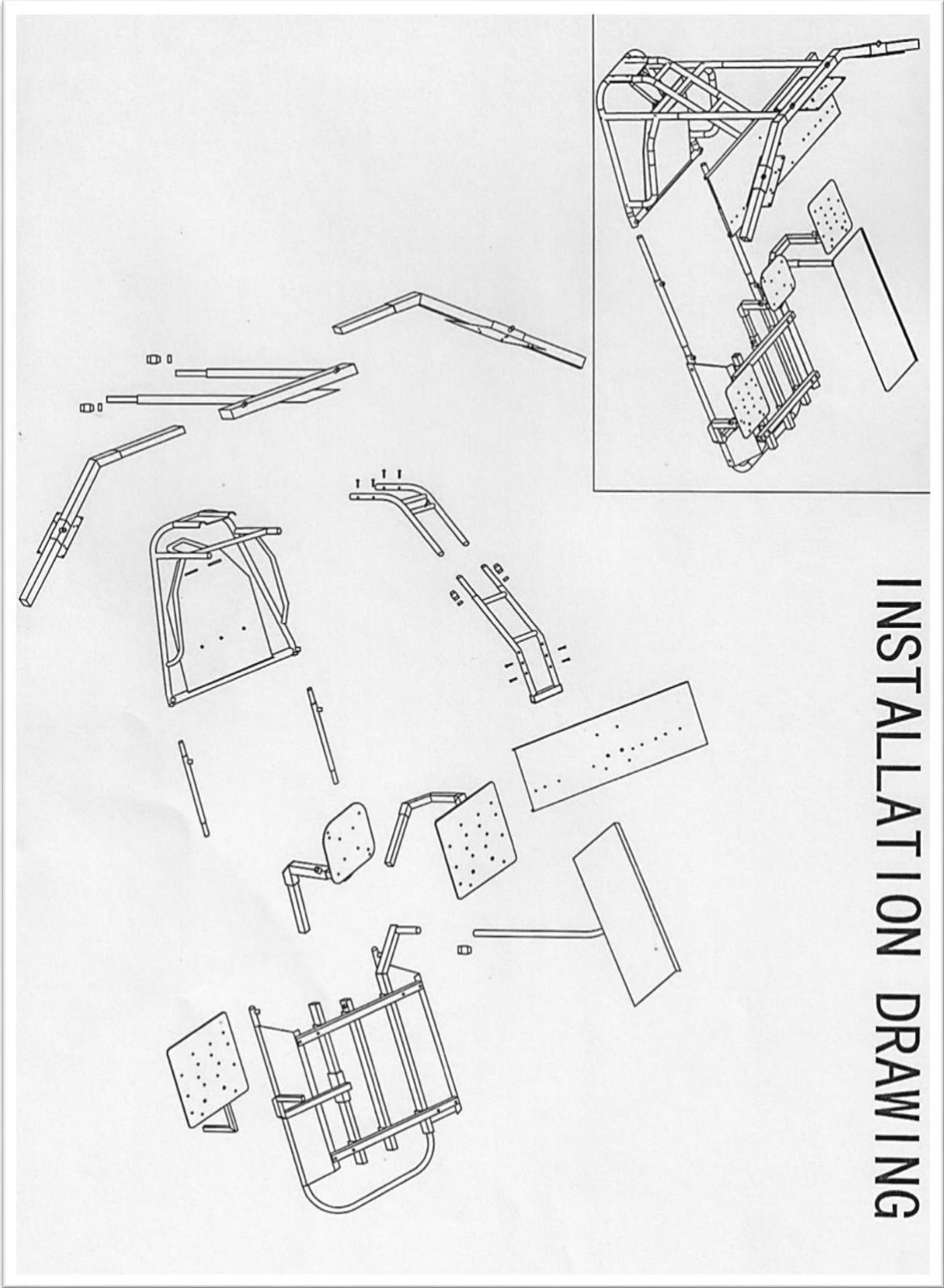
NO.	PART NAME	QTY	PHOTO	NO.	PART NAME	QTY	PHOTO
1	M6*25mm Button Head Machine Screw	4 (all are pre-installed)		11	M8*20mm Socket Cap Machine Screw	4	
2	M6*30mm Button Head Machine Screw	5 (3 are pre-installed)		12	M8 Self-Locking Nut	1	
3	M8*16mm Socket Cap Machine Screw	4		13	Nylon Washer	1	
4	M6 Self-Locking Nut	8 (2 are pre-installed)		14	Hex Key M4	1	
5	M8*16mm Machine Screw with Knob	12		15	Hex Key M6	1	
6	M8*35mm Socket Cap Machine Screw	12		16	Universal Wrench	1	
7	M8*20mm Machine Screw with Knob	10		17	Silicon Grease	1 bag	
8	M8 Flange Nut	12		18	Seat Spacer	4	
9	M6*35mm Button Head Machine Screw	4		19	Velcro Strip	2	
10	M4*12mm Phillips Machine Screw and M4 Washer	12		20	M8 Washer	4	

Table 1: Hardware List



INSTALLATION DRAWING

STEP 1:

Begin assembly by attaching monitor base to the seat base using the adjustment tubular connectors. The adjustment tubes allow you to vary the horizontal distance between the seat base and the monitor base. Use four (4) M8*16mm Socket Cap Machine Screws (No. 3) and two (2) M8x16mm Machine Screws with Knob (No. 5). Do not tighten the knobs all the way at this point so that you can adjust the optimum seat distance later.

TIP: APPLYING A THIN LAYER OF SILICON GREASE (NO. 17) ONTO THE ADJUSTMENT TUBES WILL FACILITATE INSTALLATION AND FURTHER ADJUSTMENTS

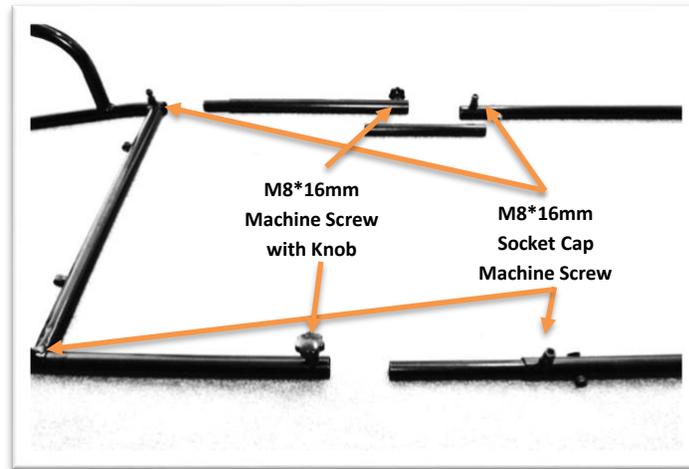


Figure 1: Attaching Monitor Base to Seat Base

STEP 2:

Flip the monitor base and seat base over and attach the pedal tray using two (2) M6*30mm Button Head Machine Screws (No. 2) and Two (2) M6 Self-Locking Nuts (No. 4). See Figures 2a and 2b below:

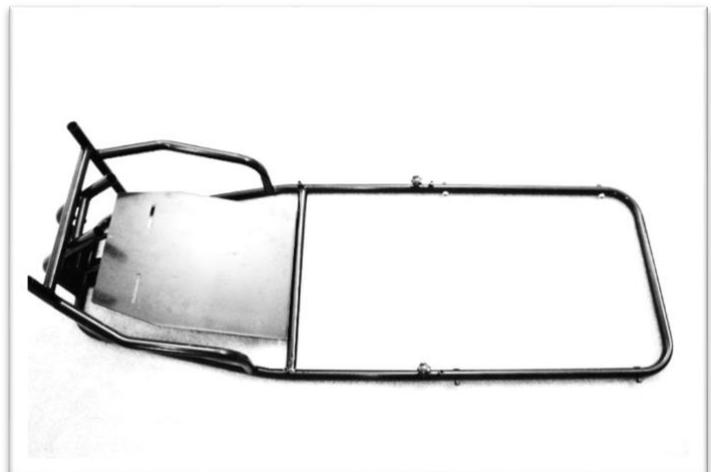


Figure 2a: Attaching Pedal Tray to Monitor Base

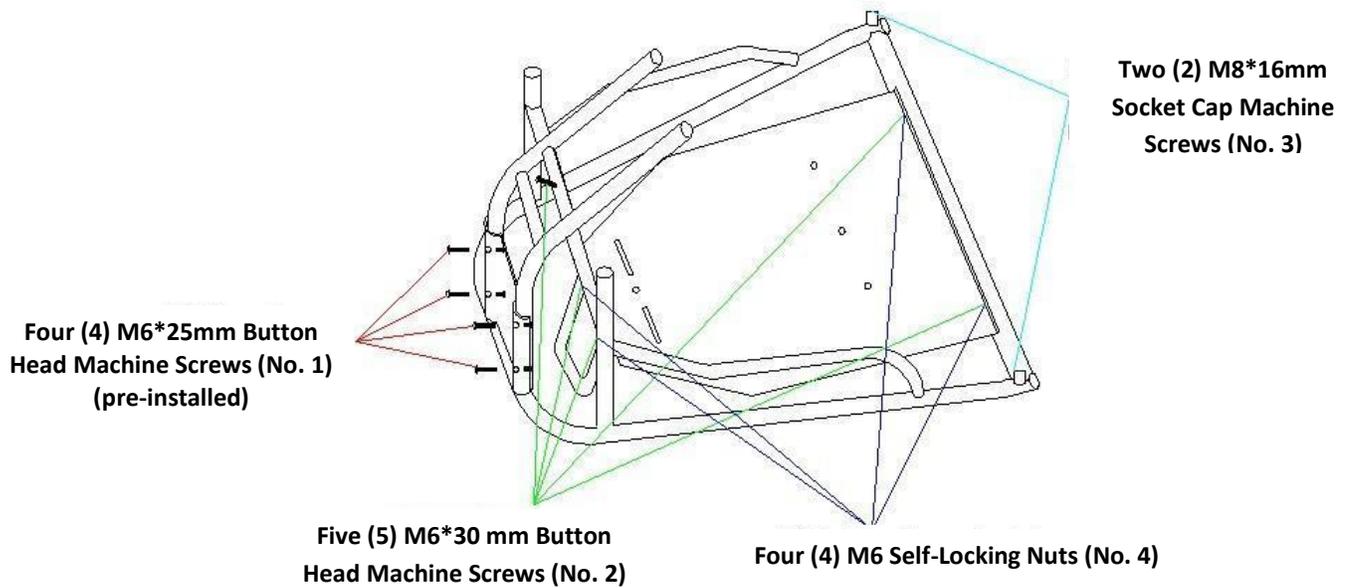


Figure 2b: Monitor Support Base with Pedal Tray

STEP 3:

Attach center monitor support to monitor base as shown in Figure 3. Do not tighten the plastic adjustment nuts (circled) all the way at this time since you will want to adjust the height after installation of monitors.



Figure 3: Attaching Center Monitor Support to Monitor Base

STEP 4:

Attach cockpit table to the support structure with four (4) M6*35mm Button Head Machine Screws (No. 9) and four (4) M6 Self-Locking Nuts (No. 4). Note that there are two positions (as shown in Figure 4) in which the table can be mounted depending on whether you want the table closer or farther away from the monitors. Also, ensure that holes drilled along the edge of the table are facing towards the seat. These holes are pre-drilled for attaching the Volair Sim Avionics Panel, Logitech (Saitek) Pro Flight Yoke, Logitech Steering Wheel, Thrustmaster T500RS Steering Wheel, and Logitech (Saitek) Pro Flight Accessories (on left and right sides of the yoke) to table.

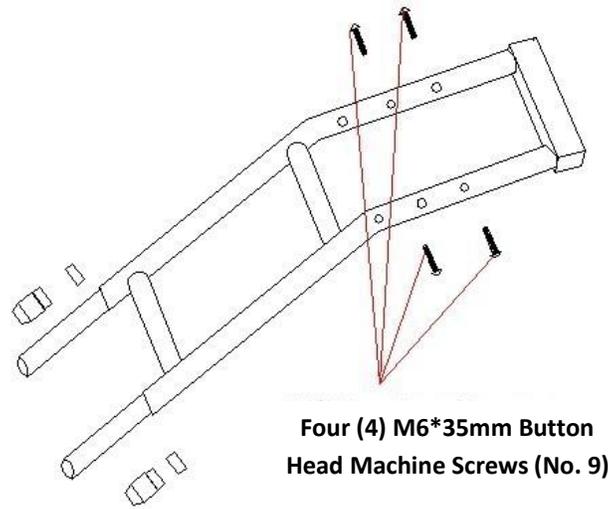


Figure 4: Attaching Table to Support Structure

STEP 5:

Attach the assembled table and support structure to the monitor base and tighten the plastic adjustment plastic nuts (circled) lightly. You will be able to adjust the distance and angle of the table to suit your preferences after the entire assembly process is complete.



Figure 5: Attaching Table to Monitor Base

STEP 6:

Attach seat support risers to the seat base using four (4) M8*35mm Socket Cap Machine Screws (No. 6) and four (4) M8 Flange Nuts (No. 8) as shown in Figure 6 below.



Figure 6: Attaching Seat Support Risers to Seat Base

STEP 7:

Continue the assembly of the seat base as shown in Figure 7 with the two cross braces (#1) and the left (#2), center (#3) and right (#4) square tubes. **Note that the seat support brackets attach to the OUTERMOST holes on the two cross braces and that the square profiles on the cross braces point DOWN.** You may need to apply some pressure on the seat support brackets and bend them outward as you insert the four (4) M8*35mm Socket Cap Machine Screws through the cross braces. Partially thread four (4) M8*20mm Machine Screw with Knobs into the cross braces.

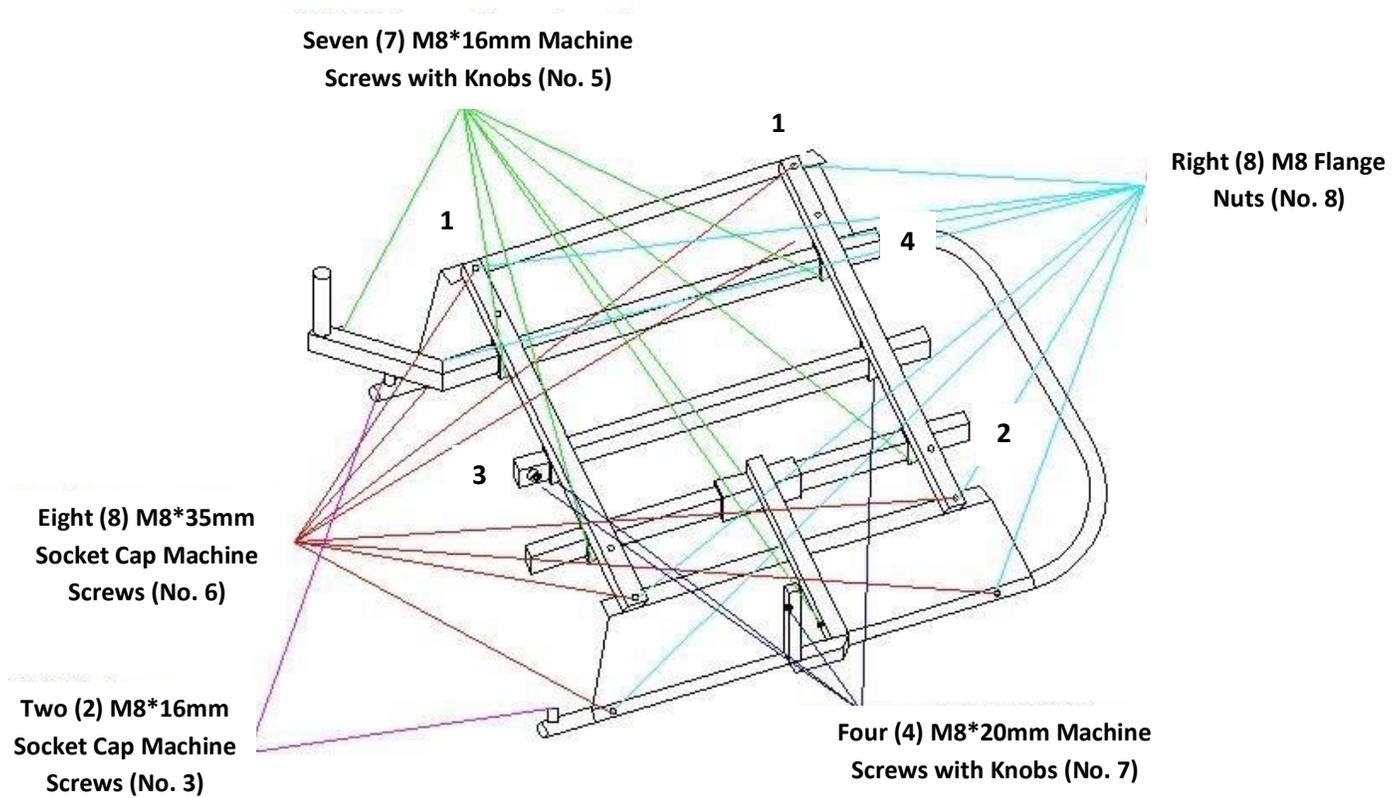


Figure 7: Seat Support Assembly

STEP 8:

Assemble the seat using the two sliders and the seat spacers as shown in Figure 8a taking care that you place the four (4) Seat Spacers (No. 18) between the sliders and the seat. Also note the adjustment slider handle location. The seat has blind nuts installed under the seat but they may be a little hard to find as they are partially covered by fabric.

Next, attach the seat and sliders to the seat base using four (4) M8*35mm Socket Cap Machine Screws (No. 6), and four (4) M8 Flange Nuts (No. 8) as shown in Figure 8b.

Remember to place four (4) M8 Washers (No. 20) between the bottom of sliders and top of the seat support brackets. This will ensure that the left and the right side mounts have adequate clearance for forward and aft adjustment.

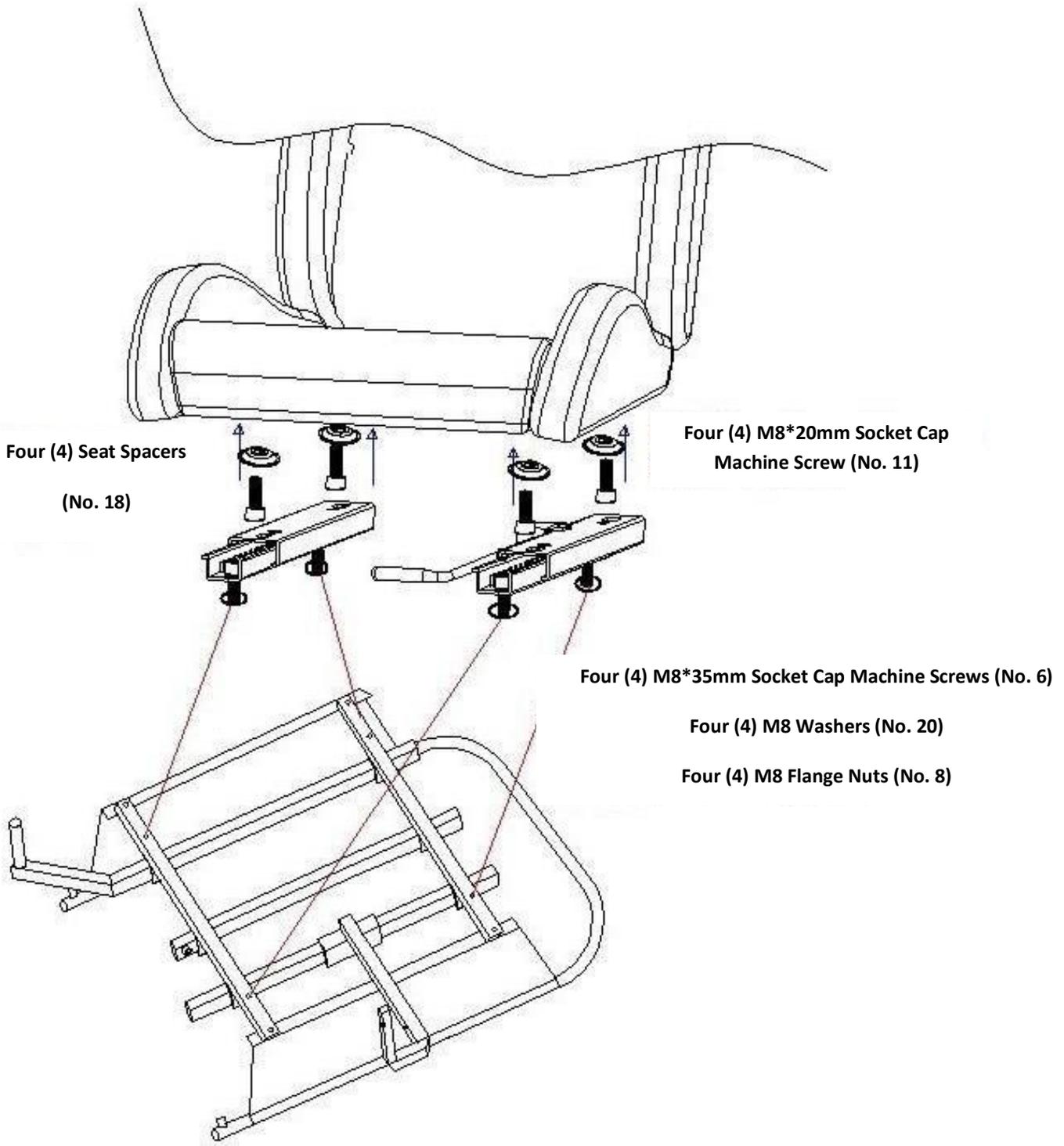


Figure 8a: Attaching the Seat to Seat Base



Figure 8b: Attaching Seat to Seat Base

Step 9:

Assemble the left and right throttle quadrant | shifter mounts as shown in Figure 9a below. Use M8*16mm Machine Screws with Knobs (No. 5) to tighten the support plates to the L-shaped supports. Note, you must use a M8*20mm M8*20mm Machine Screw with Knob (No .7) as shown in Figure 9b on the corner attachment points. Assemble the center tick mount per Figure 9c. Use Figure 9d to visualize the completed orientation of the left, center, and right mounts.

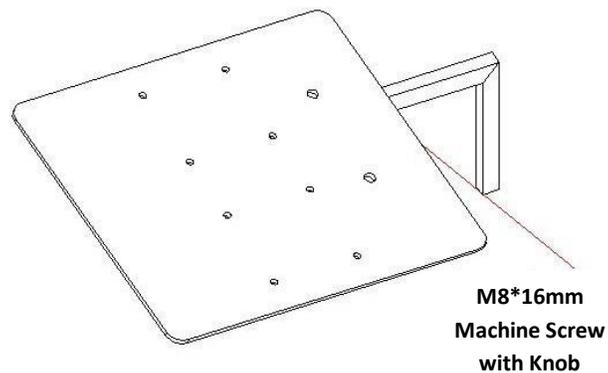


Figure 9a: Left-hand Mount

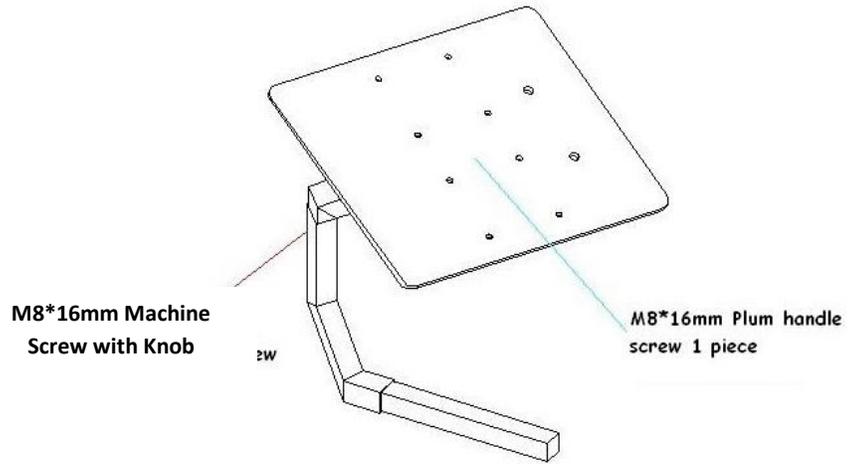
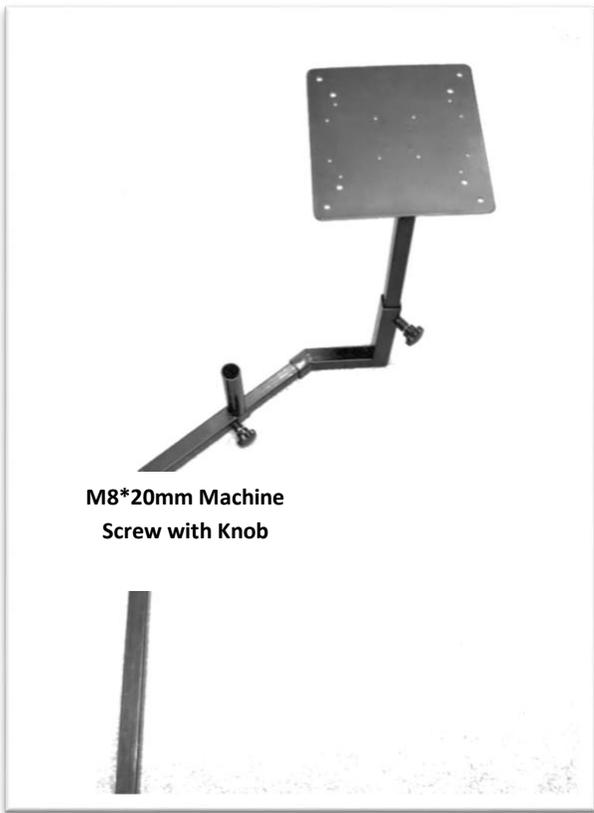


Figure 9b: Right-Hand Mount

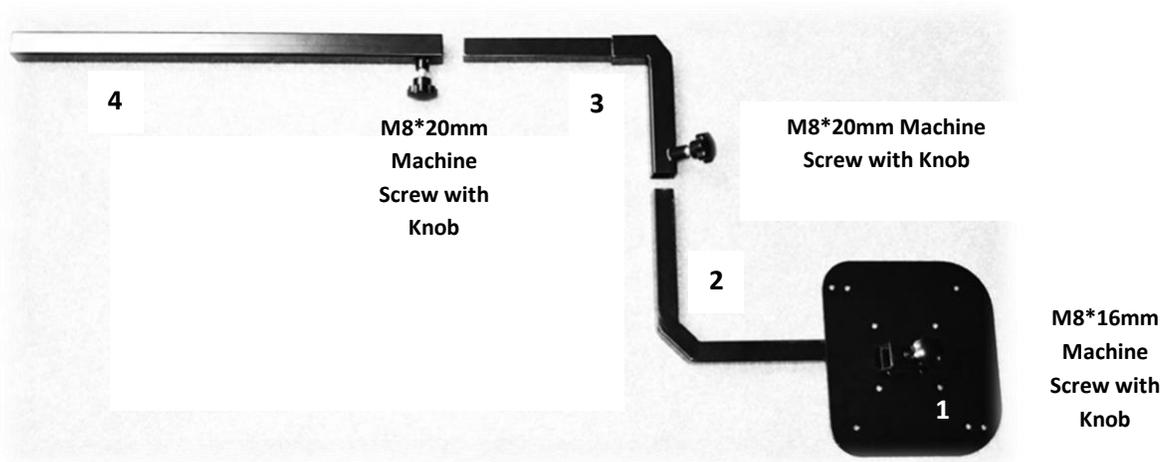


Figure 9c: Center-Stick Mount

1. Joystick mounting plate with M8*16mm Machine Screw with Knob
2. Right angle mounting plate support tube
3. Vertical tube with M8*20mm Machine Screw with Knob
4. Center tube with M8*20mm Machine Screw with Knob

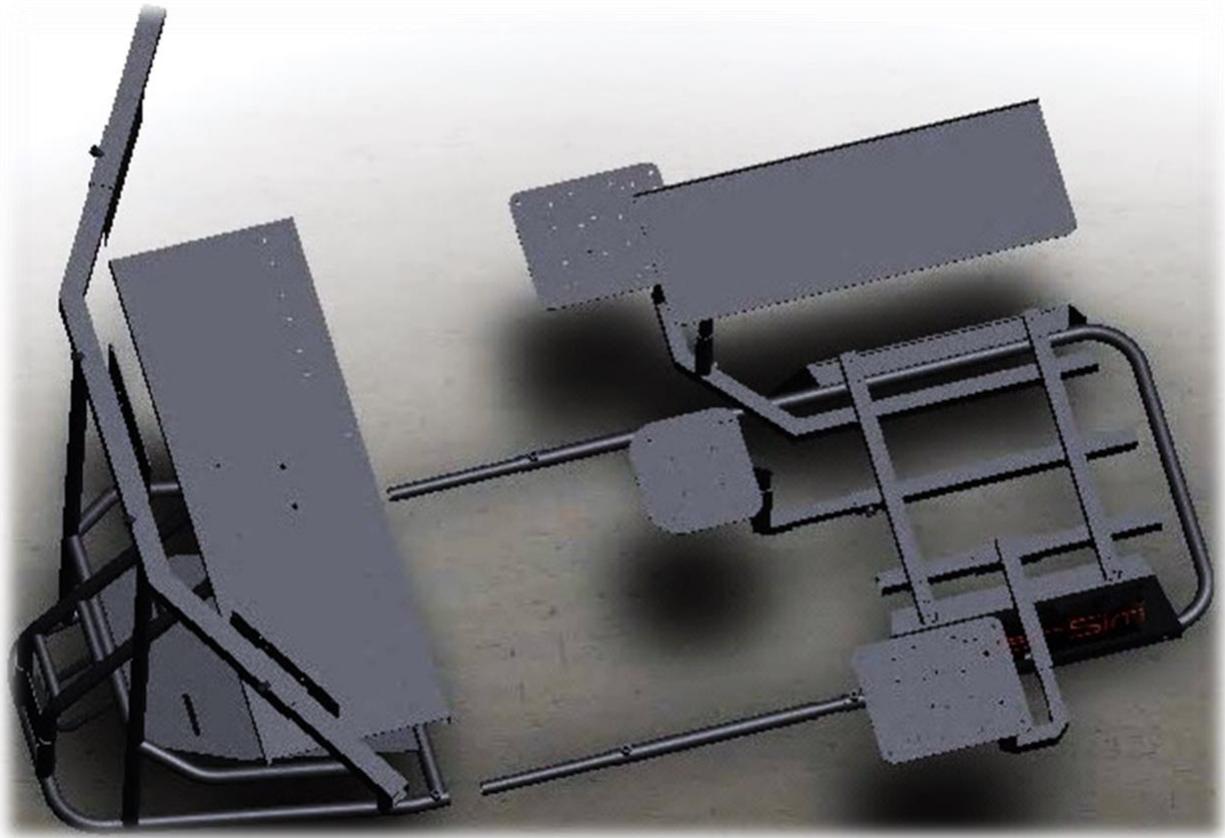


Figure 9d: Mount Assembly

STEP 10 (if using the left and right monitors):

Assemble the additional monitor mounts as in Figure 10. Use the provided M4*12mm Phillips Machine Screws and M4 Washers (No. 10), or suitable machine screws as needed (your display may require larger or longer screws than provided). The Volair Sim cockpit mounts are pre-drilled with the industry standard VESA bolt patterns for most of the common monitor bolt pattern sizes (see below). Depending on the size of your monitors, you will be able to adjust the side monitors to create a seamless wrap-around monitor set-up. You can use single monitor up to about 52" diagonal or three monitors up to 30" diagonal each. Note that the side monitor attachment points are slotted so that you will be able to make small vertical adjustment for the left and right monitors as you align them.

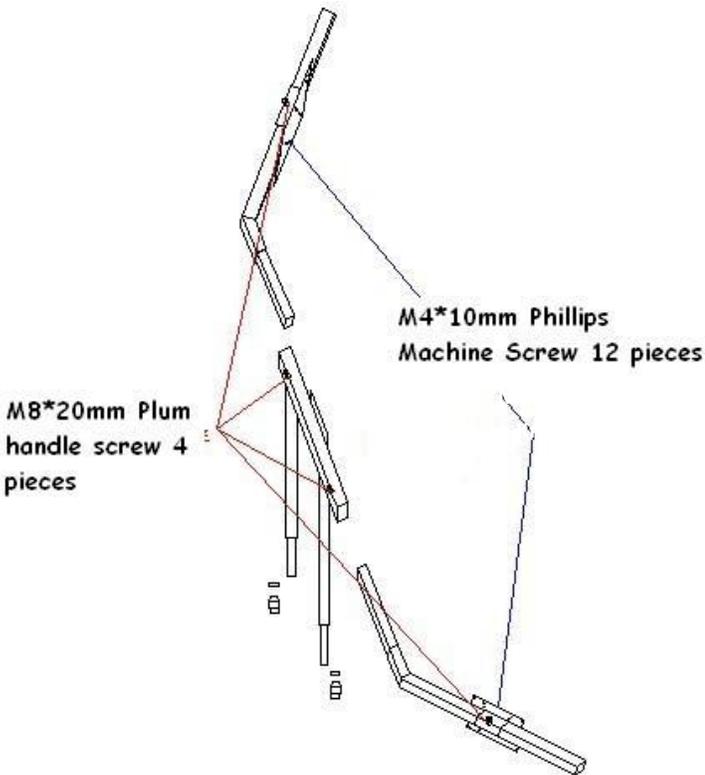
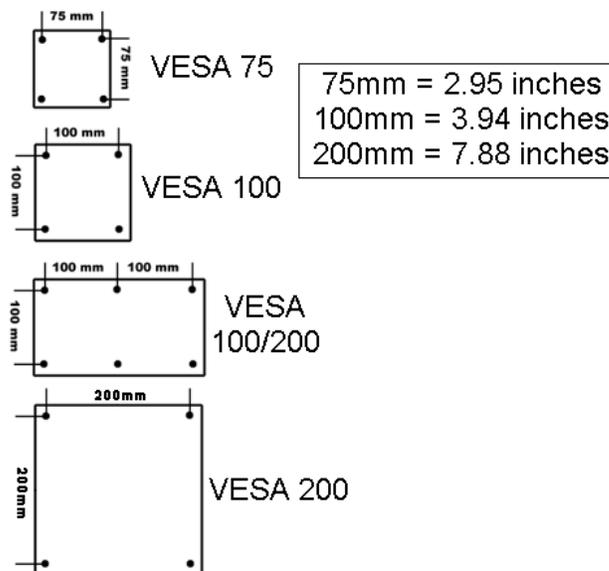


Figure 10: Monitor Mount Bracket



STEP 11:

Attach keyboard tray to the keyboard support structure as shown in Figure 11. First, apply some of the enclosed silicon grease between the two sliding parts of the keyboard tray and the keyboard support. Next, place the keyboard on the keyboard support. Finally, insert the white Nylon Washer (No. 13) on the threaded portion of the keyboard and tighten the M8 Self-Locking Nut (No. 12) until it is snug. Do not over-tighten the locknut as you will not be able to rotate the keyboard tray freely. Use the plastic adjustment nut to adjust the height of the keyboard and tighten to lock in-place.

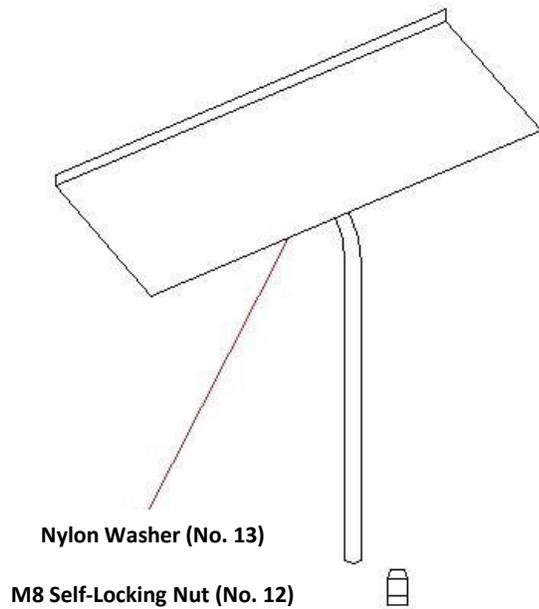


Figure 11: Keyboard Tray Assembly

STEP 12: ATTACHING ACCESSORIES

You have several options when attaching accessories to the Volair Sim chassis. You can opt for a permanent installation using the pre-drilled locations or a semi-permanent installation using the clamps provided with the yoke, steering wheel, and associated accessories.

1. Yoke | Steering Wheel Installation

The Volair Sim cockpit chassis is pre-drilled to accept the Logitech (Saitek) Pro Flight Yoke, Logitech G27|G29, and Thrustmaster T500RS steering wheels. Use the fasteners provided with your accessories to attach the steering wheel and yoke to the table. Note that in order to mount the Logitech steering wheel, shifter, and pedals using the pre-drilled locations, you will need eight (8) M6*10mm machine screws (2 for the wheel, 2 for the shifter, and 4 for the pedals). You can purchase these at any hardware store.

Note: The Honeycomb Alpha yoke can be attached with the Micro-Suction pad mount (included with the yoke) or the clamping system. The Honeycomb yoke does not have any provision for installation with screws.

2. Throttle Quadrant | Trim Wheel | Gear Shifters | HOTAS

Volair Sim features pre-drilled locations for the Saitek Throttle Quadrant(s), Thrustmaster HOTAS Warthog, Logitech (Saitek) X-52|X-55|X-56, Fanatec ClubSport Shifter SQ. You can also combine several Saitek quadrants for a twin or multi-engine set-up, set-up HOTAS systems, or gear shifters for either left or right-hand drive.

NOTE: for the Thrustmaster HOTAS Warthog installation, the throttle plate will overlap the mounting plate on top and bottom. You should use the bottom two holes pre-drilled in the side mount plate for attachment. Also, in order to use the center mount for Thrustmaster HOTAS installation, you will have to remove the Thrustmaster joystick from the large support plate included with the HOTAS system and mount it directly on Volair Sim center support plate using pre-drilled holes.

3. Rudder Pedals | Racing Pedals

The pedal base accepts a wide variety of rudder pedals such as: CH Products Pro Pedals, Thrustmaster, and Logitech (Saitek). The pedal base has pre-drilled holes for the Logitech G27|G29, Fanatec Clubsport, and Thrustmaster T500RS pedals but you can mount nearly any rudder and racing pedals with the provided Velcro strips. Just attach one strip to the bottom of the pedal base and the second strip to the pedals or rudder set and you will have a very secure installation.

4. Flight Simulation Accessories

For flight simulation Volair Sim has pre-drilled mounting locations for all Saitek Pro Flight accessories including the Radio Panel, the Multi Panel, Switch Panel, and the Flight Instrument Panel(s). Just use the machine screws provided with the Logitech accessories and attach the accessories on either left or right side of the yoke as desired. Note that you will be able to mount the Volair Sim Avionics Panel (sold separately) for even greater realism.

5. Additional Volair Sim Accessories

Volair Sim offers several accessories (sold separately) for your Volair Sim cockpit. The arm rests attach to your Volair Sim cockpit allowing greater precision and comfort, especially when flying with the side stick or a HOTAS system. The Volair Sim Avionics Panel allows you to mount all of the Logitech (Saitek) accessories in a realistic aircraft panel complete with a padded carbon-fiber-look glare shield for ultimate flight realism.