

ASSEMBLY GUIDE

F/A-18C Flight Chassis

Structural assembly, canopy support, pedal plate, and MIP mounting



Reference configuration shown. Your supplied revision and installed controls may differ.

Version 2.1 / August 2026 | Customer assembly documentation

Use this guide with the packing list supplied for your order. Hardware revisions can change. If a part, fastener, hole pattern, or extrusion differs from the photographs, stop and contact Dogfight Dynamics before modifying it.

Before you begin

This guide covers the standard aluminum-profile flight chassis shown in the supplied illustrations, including the base, vertical structure, upper rails, canopy arc, pedal plate, and main instrument panel mounting.

Simulator hardware only. These products are cockpit-simulator components. They are not aircraft parts, emergency equipment, certified seating, steps, or access handrails.

Work area and preparation

- Unpack on a clean, level floor and compare all parts with the order packing list.
- Keep extrusion lengths grouped: 1400 mm base rails, 500 mm cross members, 700 mm verticals, and 1300 mm upper rails.
- Install sliding T-nuts before closing an extrusion end that must accept later hardware.
- Start all fasteners finger-tight; square and level the structure before final tightening.
- Protect powder-coated panels from direct contact with the floor.

Tools

- Metric Allen keys sized for the supplied M8 fasteners.
- Tape measure and carpenter's square.
- Small spirit level.
- Safety glasses and work gloves.
- Optional: light dry PTFE or silicone lubricant for aluminum-profile adjustments. Keep lubricant away from electronics.

Hardware to identify

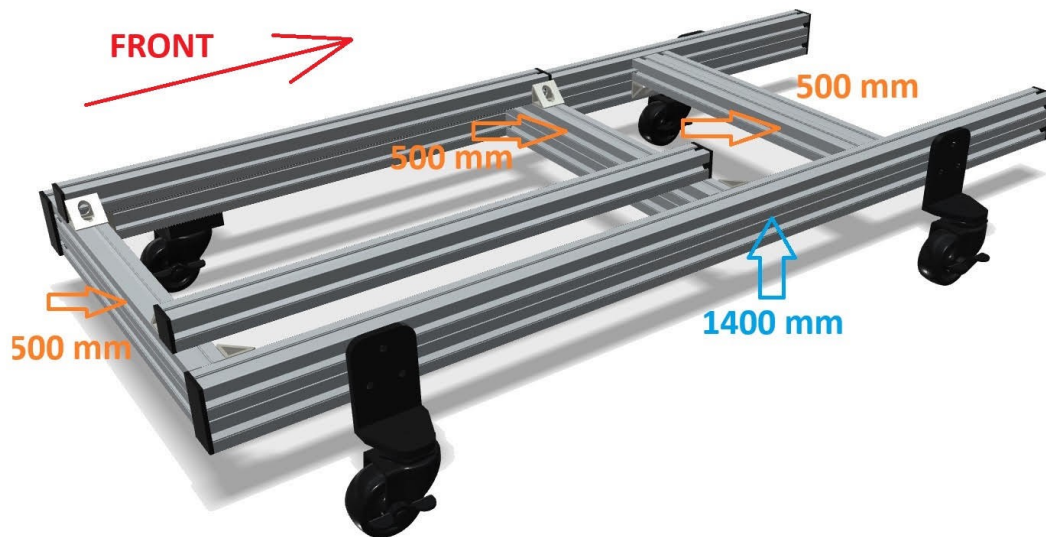
- M8 x 16 mm, M8 x 20 mm, and M8 x 35 mm screws supplied for the relevant connections.
- M8 sliding T-nuts and structural brackets.
- Four caster assemblies and their mounting hardware.
- Canopy arc and eight M8 x 20 mm fasteners.
- Pedal-plate brackets and M8 x 35 mm connection hardware.

Two-person lift recommended. Use a second person whenever a large panel, seat assembly, or chassis member must be held square while fasteners are started.

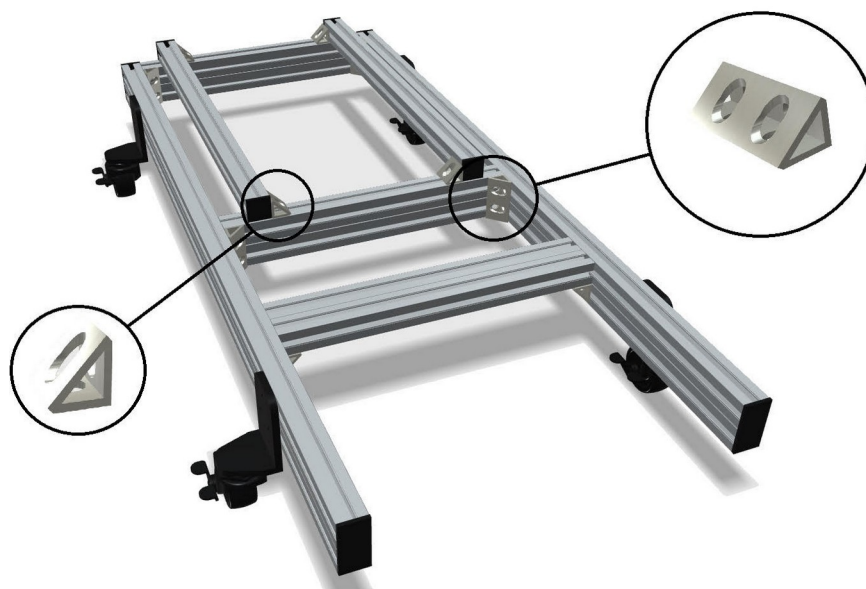
Step 01 / Assemble the base

1. Place the two 1400 mm rails parallel to one another with the front orientation matching the illustration.
2. Connect the rails with three 500 mm cross members. Keep the assembly square and the cross members aligned.
3. Install the four caster assemblies and confirm that every caster plate sits flat.

Field note. Leave the base connections slightly loose until both diagonal measurements match, then tighten evenly.



Base orientation, principal dimensions, cross-member placement, and caster positions.



Use the structural corner brackets and sliding T-nuts at each cross-member connection.

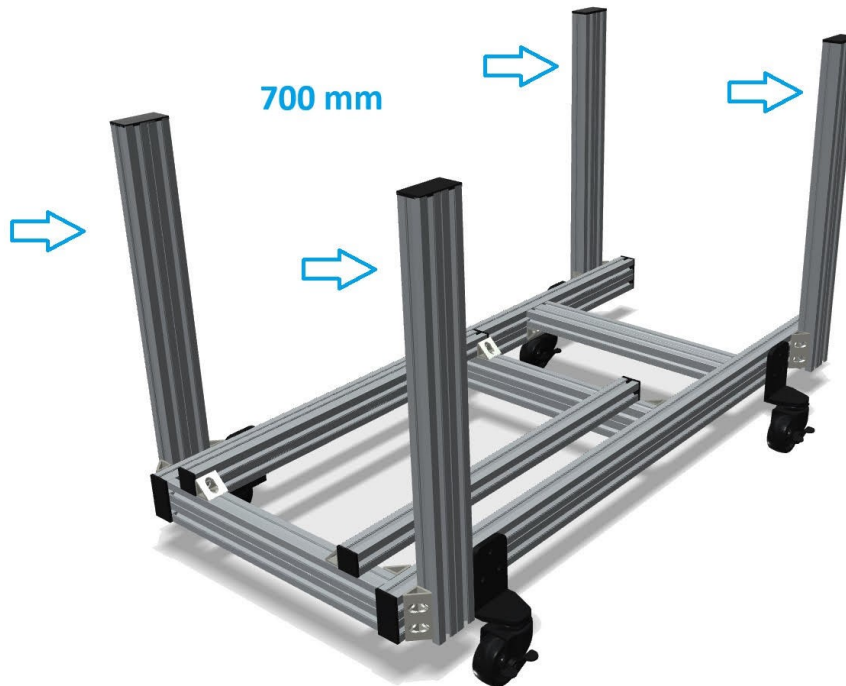


Completed base before the vertical members are installed.

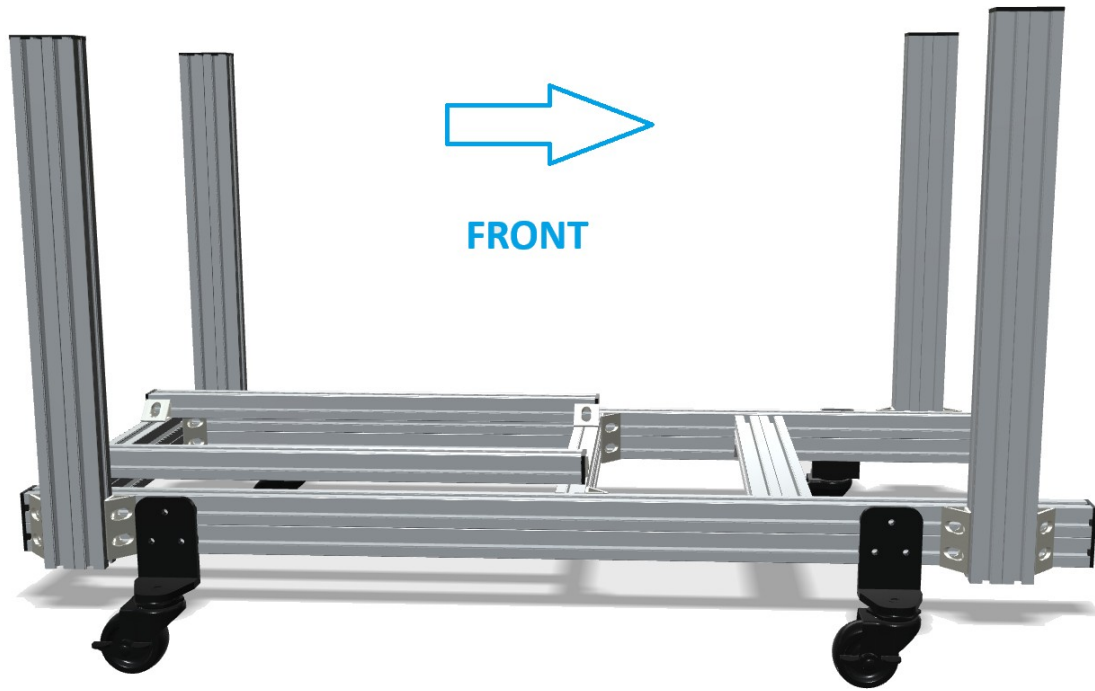
Step 02 / Install the vertical members

4. Attach the four 700 mm vertical profiles at the illustrated base locations.
5. Use a square to hold each member perpendicular while the fasteners are tightened.
6. Confirm the rear pair and front pair are installed on the correct sides of the base.

Stop and verify. Do not use the vertical members as handles until the upper structure has been installed.



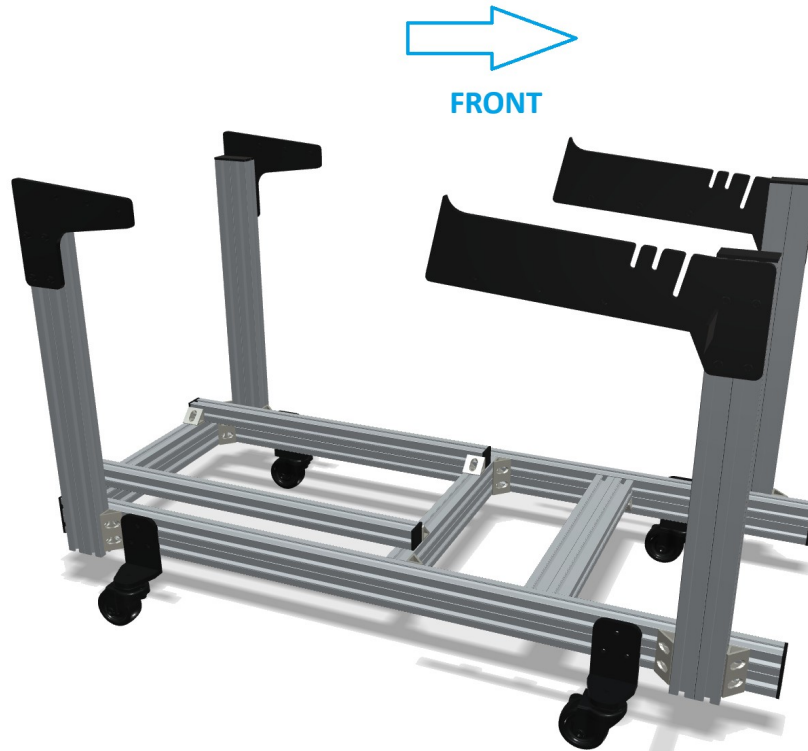
The four 700 mm members rise from the base corners shown by the arrows.



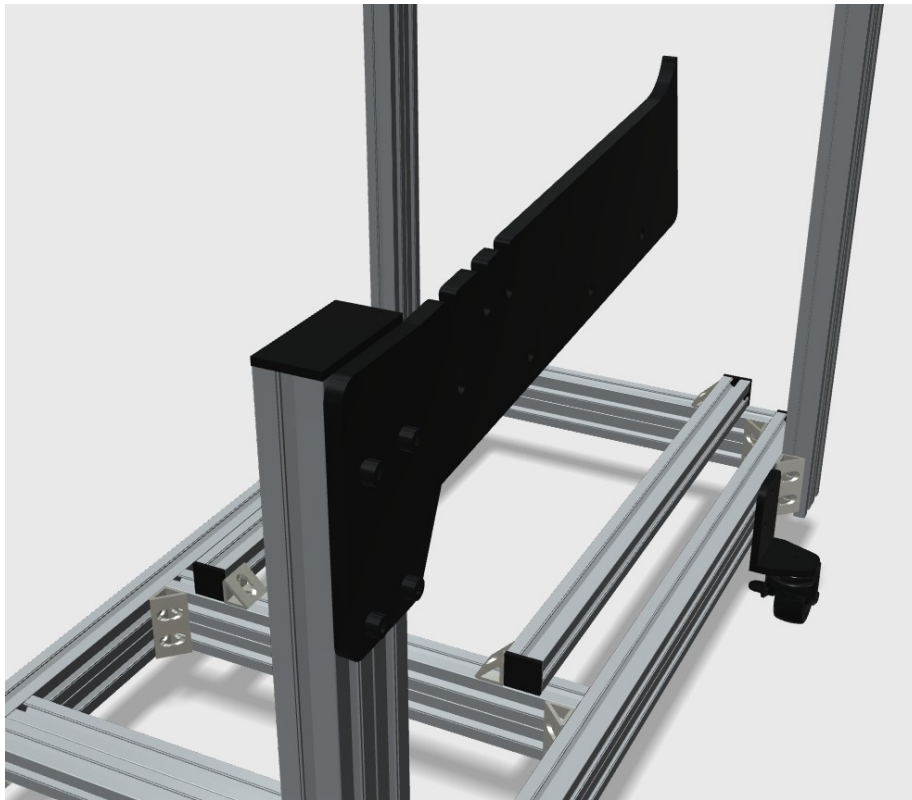
Front orientation and completed vertical-member layout.

Step 03 / Fit the upper support brackets

7. Position the superior support brackets at the top of the vertical profiles.
8. Load the required sliding T-nuts before an upper rail blocks access to the profile groove.
9. Start all bracket fasteners, align the two sides, and tighten progressively.



Upper bracket orientation and front reference.

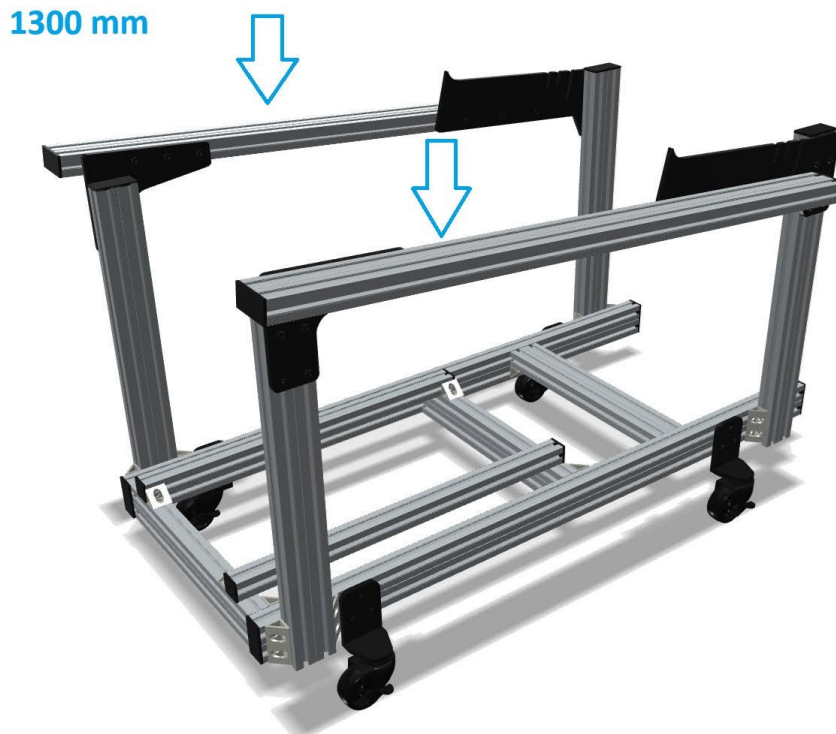


Close-up of the bracket seated against the vertical profile.

Step 04 / Install the upper rails

10. Place the 1300 mm upper rails between the superior brackets.
11. Level the rails from front to rear and confirm the left and right sides are parallel.
12. Tighten the upper bracket connections only after the geometry is confirmed.

Field note. Recheck the base diagonals after the upper rails are tightened; the frame should remain square.

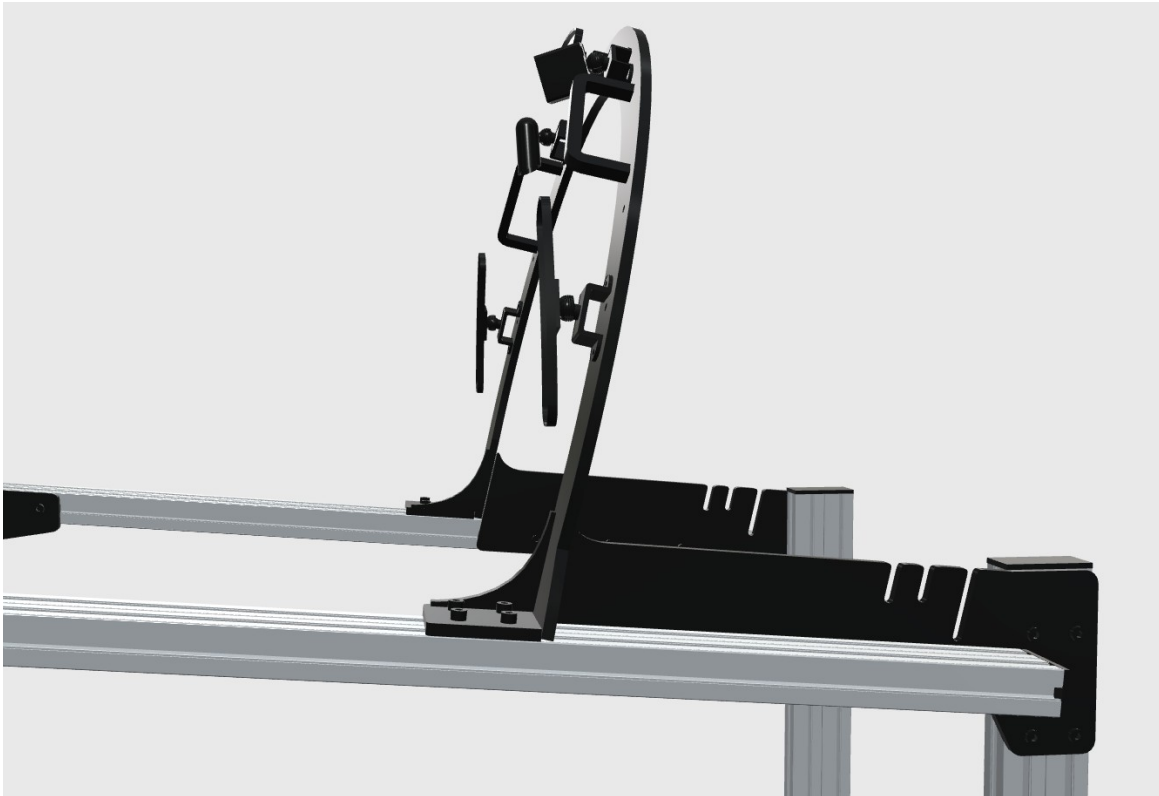


The 1300 mm rails bridge the upper brackets on both sides.

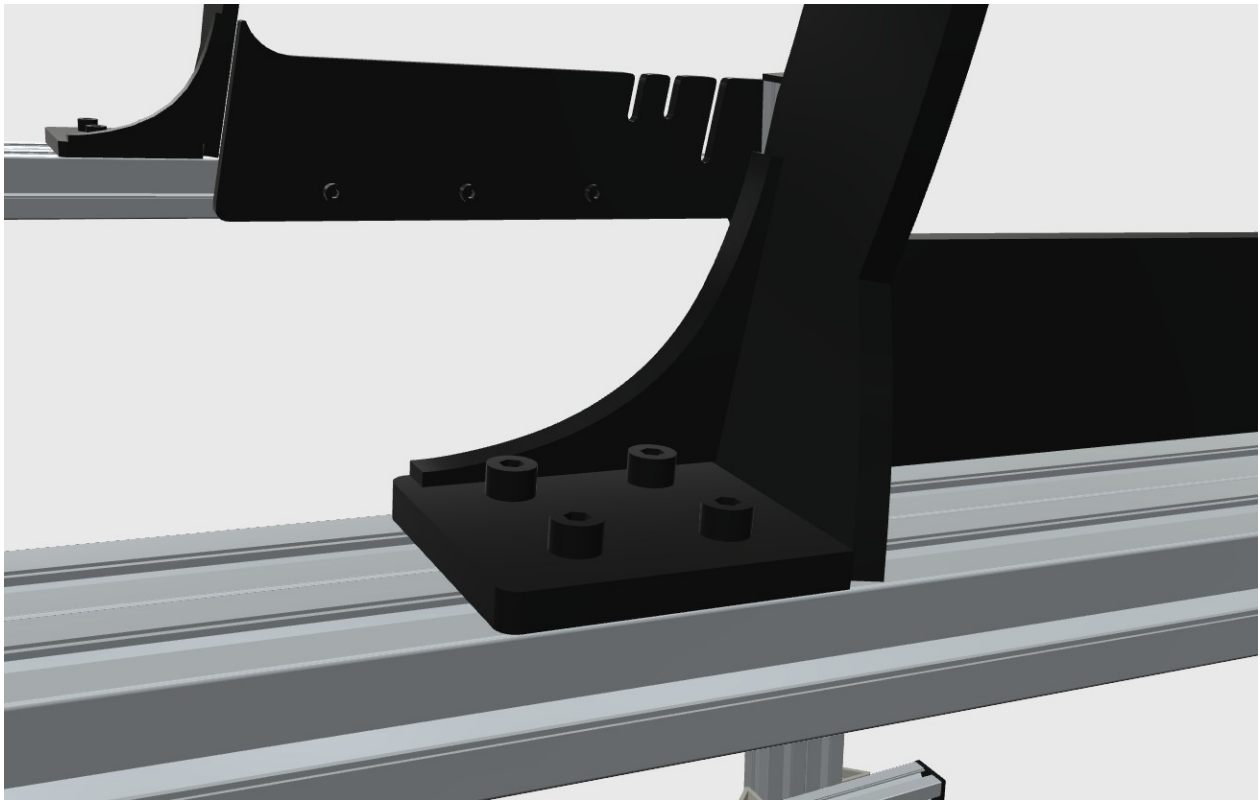
Step 05 / Install the canopy arc

13. Position the canopy arc between the left and right upper structures.
14. Install eight M8 x 20 mm screws with the corresponding sliding T-nuts.
15. Center the arc and tighten in an alternating pattern so the plates seat evenly.

Stop and verify. The canopy arc is not a step, seat, or body-weight support. Do not use it to enter or exit the cockpit.



Canopy arc position relative to the upper rails.

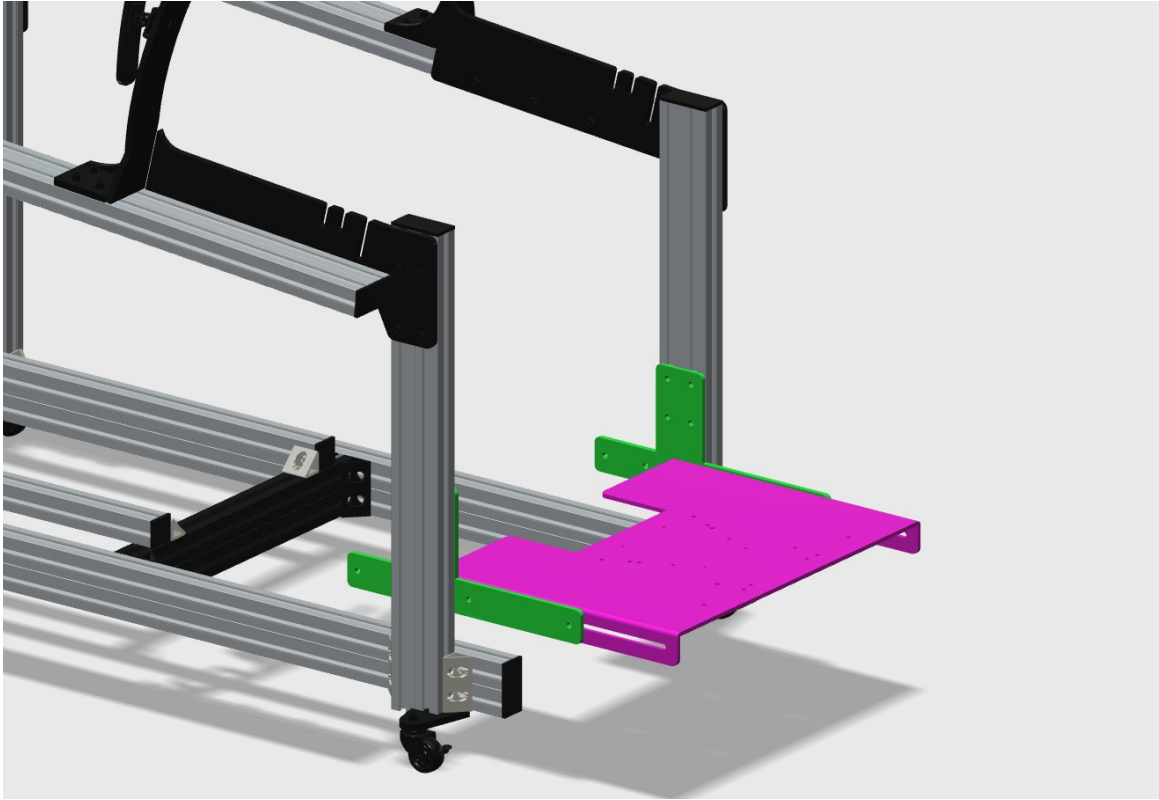


Fastener locations at the canopy-arc base plate.

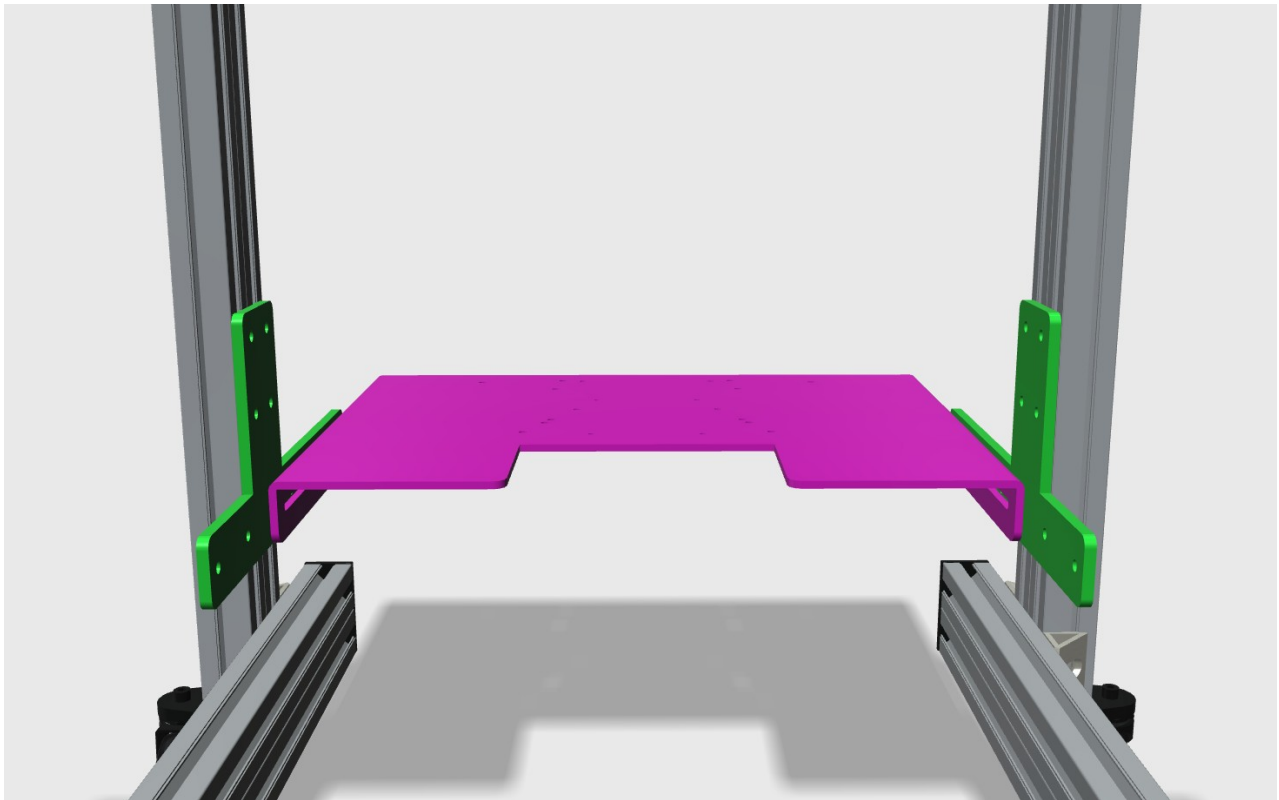
Step 06 / Install the pedal plate

16. Assemble the pedal-plate components in the orientation shown.
17. Use the M8 x 35 mm fasteners at the green/pink bracket connection shown in the illustration.
18. Set the plate position for the intended pedal travel, then tighten both sides equally.

Field note. Cycle the pedals through their full travel before installing nearby panels or cable bundles.



Pedal-plate components and the color-coded connection points.



Installed pedal plate between the chassis side members.

Step 07 / Mount the main instrument panel

19. Loosen the MIP side fasteners enough for the panel plates to enter the chassis bracket channels; do not remove the screws.
20. With a second person supporting the panel, lower it fully into both channels.
21. Confirm both sides reach the lower channel stop, then tighten the fasteners evenly.

Stop and verify. Do not allow the MIP to hang from one bracket while aligning the opposite side.



Side fasteners remain installed but loose while the panel enters the bracket channels.



The panel must seat to the lower limit on both sides before tightening.

Final inspection

Do not skip this check. Complete the inspection before installing electronics, applying body weight, or moving the assembly.

- The base is square, all four casters contact the floor, and caster brakes operate correctly.
- Every vertical member is plumb and every upper rail is level and parallel.
- All brackets are fully seated; no T-nut is bridging a groove or turned outside its channel.
- The canopy arc is centered and all eight mounting fasteners are present.
- The pedal plate is secure and the pedal set can complete its full travel without interference.
- The MIP is seated to the bottom of both bracket channels and supported evenly.
- All tools, loose fasteners, and packaging have been removed before electronics are installed.

Troubleshooting

Condition	Recommended action
Frame will not square	Loosen the base corners, compare diagonal measurements, square the base, and retighten progressively.
T-nut is missing	Remove only the nearest unblocked end connection, insert the correct T-nut, and restore the connection. Do not substitute an undersized nut.
Member will not slide	Check for a rotated T-nut, burr, or over-tightened fastener. Use a small amount of dry lubricant only after the obstruction is removed.
MIP sits unevenly	Support the panel, loosen both sides, confirm both plates are inside their channels, and lower the panel to both stops.

Need help?

Send your order number, the step number, one wide photo of the complete assembly, and close-up photos of the part or fastener in question through the Flight Desk.

Flight Desk: dogfightdynamics.com/pages/contact