

# Precision Aero Products

## Alchemy/PRO Adverrun XS Mount Kit



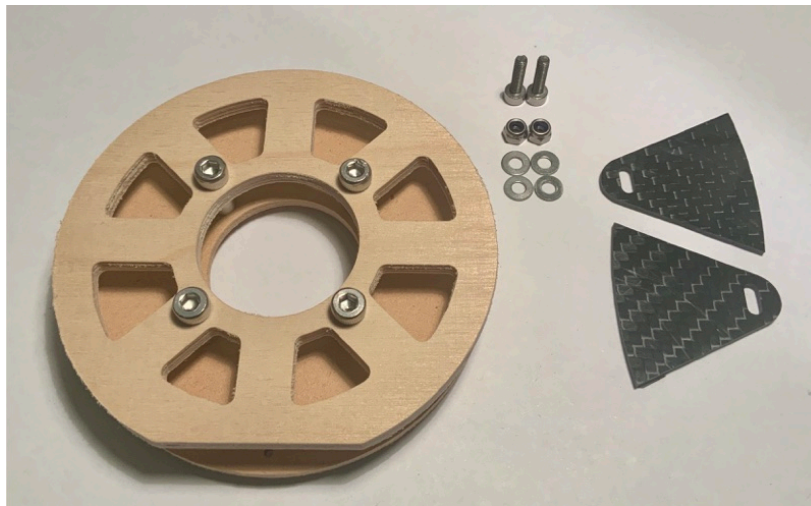
### Installation Notes

Thank you for choosing to purchase a Precision Aero Products Alchemy/Pro Adverrun XS Mount Kit. This product is proudly designed and manufactured in Australia by Precision Aero Products. The aim of the product is to make the installation process easy and accurate. It also eliminates the need to use the heavy drive assembly whilst the adhesive cures on the firewall.

**Note: Some of the pictures shown are an Allure Bipe being fitted out with an Adverrun Single. The principle of assembly is the same.**

The kit is comprised of the following items:

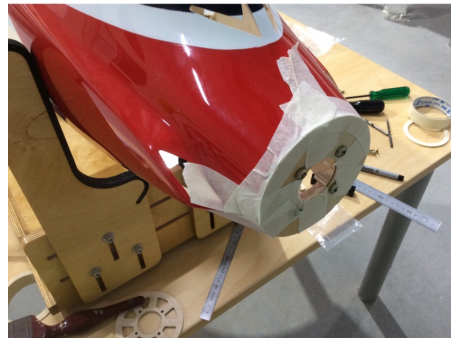
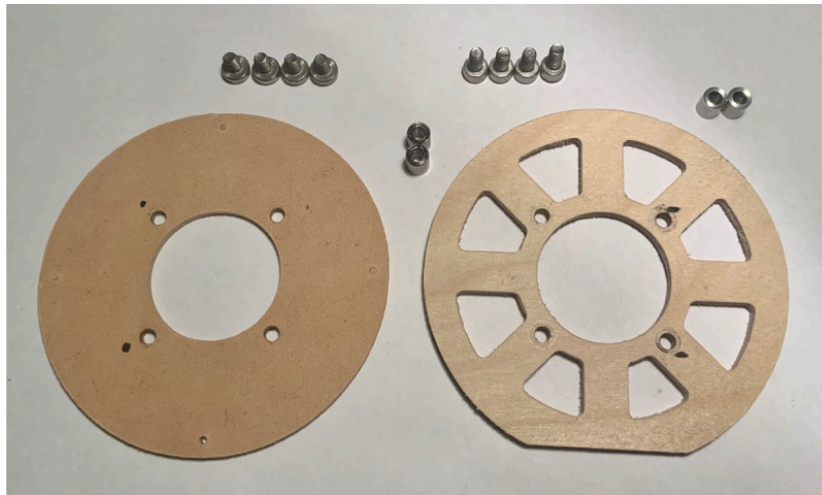
- 4mm AC Ply Firewall – Alchemy/Pro.
- 3mm MDF Nose ring jig (88mm).
- 1.5mm Carbon Side Parts (2).
- 6mm OD, 7mm long Aluminium stand-offs (2).
- 6mm OD, 7.3mm long Aluminium stand-offs (2).
- M3 x 12mm SS Screws (2). For rear support side parts.
- M4 x 8mm SS Screws (4).
- M4 x 6mm SS Screws (4).
- M3 SS Flat Washers (4). For rear support side parts.
- M3 SS Nyloc Nuts (2). For rear support side parts.
- 1.5mm Carbon Side Parts (2).



Additional items & tools required:

- Masking tape – low tack green painters tape if available.
- Small spirit level.
- Steel ruler.
- Dremel tool with sanding drum (optional).
- Epoxy resin (30 minute).
- Glass powder (optional).
- Carbon tow 12k (optional).
- Methylated Spirits or IPA.
- Personal Protective Equipment (PPE) – Dust mask, eye protection and rubber gloves.

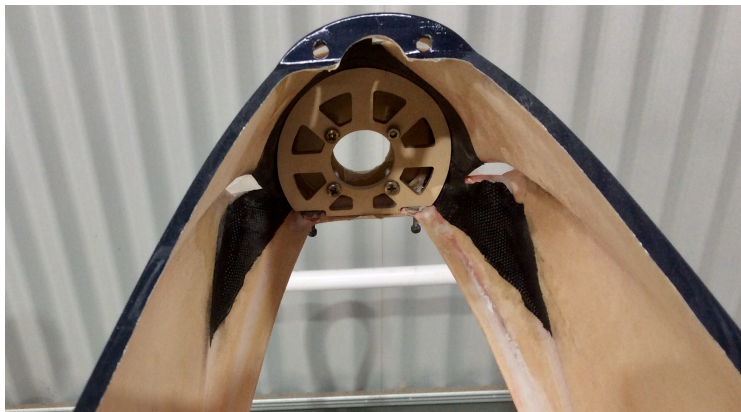
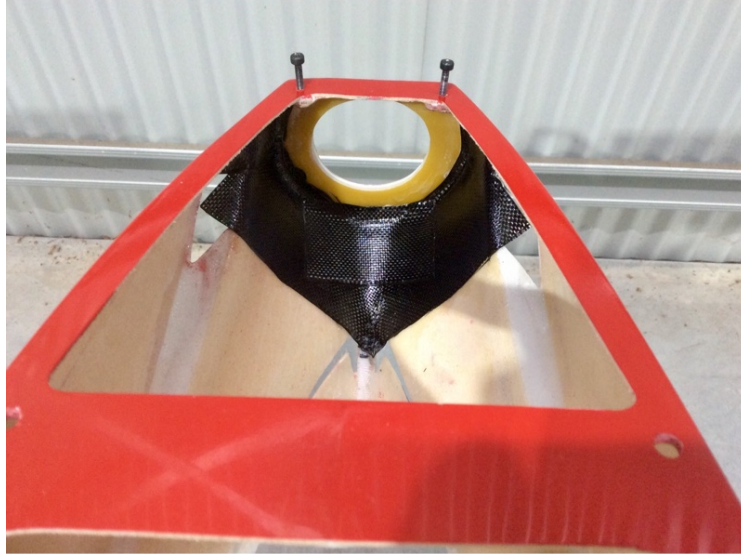
1. The first step is to level the fuselage. It makes the job much easier if the fuselage is securely held in a cradle. Using the spirit level, make sure the fuse is level. The canopy opening or undercarriage mounting can normally be used to set a reference. This can also be done with a digital angle meter.
2. The factory installed fibreglass nose ring will not be used but it can be left in place. The mount kit comes pre-assembled. **Importantly, this kit has longer standoffs (7.3mm) fitted to the left hand side of the firewall as noted by the black dots.** The intent here is to remove the right thrust built into the fuse nose ring. Remove the MDF nose ring jig from the assembly by undoing the four M4 screws. The outside diameter (OD) of this MDF nose ring jig is 88mm diameter. This matches the Alchemy/Pro nose ring and will be used to align the mount to the fuselage. We need to level two of the holes in the MDF. Temporarily push two of the M4 screws into the MDF drill Jig. Using the top two holes will be easier. Then sit the steel ruler on the screws and then place the spirit level on the ruler. This is where an extra set of hands comes in handy (pardon the pun). Now align the MDF jig so it's concentric to the fuselage nose ring and so the spirit level is actually level. Tape the MDF to the fuselage. I've found the green painters tape works well and will not pull the paint off your fuse. With the MDF securely taped down and positioned correctly, we can now start shaping the AC Ply firewall.



3. Fit the four (4) 6mm Aluminium stand-offs to it with the supplied M4 x 6mm screws. **Make sure the longer standoffs are fitted to the left hand side of the Jig.**



4. The 4mm AC Ply firewall has been deliberately cut oversized. The inside of the fuse is somewhat irregular in its shape so the firewall will need to be sanded into shape to match the fuse irregularities. If the fuselage half joining tape is standing up now would be a good time to trim it. Likewise, if you want to add some carbon cloth to the inside of the nose then this should be done before the firewall is set in place. To trim the firewall we'll primarily use the holes in the stand-offs and the matching holes in the firewall for alignment. Time for a Dremel party! Trimming the firewall with a Dremel sanding drum makes life so easy. Take your time removing small amounts of material from the outside of the firewall whilst repeatedly testing the alignment in the fuse. You want all four holes lining up and minimal gap between the fuse side and firewall. When trimmed correctly, the front face of the firewall will rest flat on the four Aluminium stand-offs and all four screw holes should line up. Test fit the M4 x 8mm screws through the firewall into the stand-offs. We're almost there!



5. It's now time to glue the firewall in place. Remove the firewall from the fuse. Rough up the inside of the fuselage where the firewall will be glued with 220 grit sandpaper or similar. Then clean the area with methylated spirit (or IPA) and a clean cloth. I use 30-minute Pacer Z-Poxy and glass powder to glue in firewalls. I recommend using a high quality epoxy in this application. Firstly mix up your epoxy as per the manufacturers instructions. Then mix in some glass powder to give the resin some body. Use appropriate PPE when working with epoxy and glass powder. With the epoxy and glass powder well mixed, a bead can then be applied to the firewall outside edge (glued edge) all the way around. Carefully fit the firewall to the fuselage and fix into position with the four M4 x 8mm screws. Wipe any excess resin off leaving a nice fillet between the firewall and the fuse sides. Add extra epoxy and push into any gaps if required. Now go make that cup of coffee whilst the epoxy cures.

6. After an hour of curing it should be ok to carefully remove the jig and standoffs. Remove all the masking tape and M4 x 8mm screws. Again, take care when removing the masking tape. If you need to add more epoxy to the firewall do that now. There will also be a small gap between the firewall and factory fitted nose ring. This can gap can be filled with epoxy and glass powder if desired. An optional extra is to add a length of 12k carbon tow around the firewall circumference.



7. You can now test fit the Adverrun XS Contra to the fuselage using the M4 x 8mm screws. If all has gone well, the spinner should be nicely centred to the fuse nose ring. You should have a larger spinner to nose ring gap on the right hand side. On the left side the gap should be approximately 2-3mm.
8. The Rear support is built into the Adverrun XS Contra. The carbon side parts supplied in this kit will need to be roughed up with 220 grit sand paper where they are to be glued to the fuse sides. The side parts can be trimmed if needed to match the fuse sides. Glue the side parts in place with 30 minute epoxy resin and glass power (optional). The M3 x 12 screws, M3 flat washers and Nyloc nuts are used to secure the carbon side parts to the Adverrun XS contra.

