### Great Planes<sup>®</sup> Power Pod<sup>™</sup> Assembly Instructions

*Congratulations* on the purchase of the *Great Planes Power Pod.* This unit is designed to be used with either an electric motor or an .049 size glow engine. It may be mounted to your airplane using one of three different methods.



1. Spar mounted (GP Spirit<sup>™</sup> and other 2-piece wings).



2. Install with bolts (for permanent installation).



3. Mount with rubber bands (universal/removable).

Please inspect all parts carefully before starting to build. If any parts are missing, broken, or defective, or if you have any questions about building the *Power Pod*, please call us at **(217) 398-8970.** 



Die-cut sheet PPOD01



Die-cut sheet PPOD02

## Parts Included:

Part#	Qty.	Description
PPOD01	1	Die-cut Plywood Sheet 1
PPOD02	1	Die-cut Plywood Sheet 2
PPOD03	1	ABS Shroud - Front
PPOD04	1	ABS Shroud - Rear
SCRW043	4	#4 X 3/8" Screws
PPODD01	2	1/2" X 12" White Decal Strips
MOTOR-A	1	Motor Set (Electric Version Only)
SCRW104	4	4-40 X 1-1/4" Screw
NUTS001	4	4-40 Blind Nuts
NYLON146	2	Nylon Tie Straps
WSHR005	4	#4 Washers
VLCRSH03	1	3/4" x 3-1/2" Hook & Loop

# **Tools Required:**

- □ 1oz. Thin CA (GPMR6002)
- CA Accelerator (GPMR6035)
- □ Hobby Knife with #11 blade
- DuraTrax<sup>®</sup> curved scissors for trimming shroud (optional) (DTXR1150)
- □ Sandpaper

# **Gluing Technique For Plywood:**

For best results when gluing plywood to plywood, first spray the joint with CA accelerator. Wait about five seconds or enough time for the accelerator to evaporate. Then, glue the joint with thin CA.

## Assembly:

Before beginning assembly, choose the mounting method that best suits your application. Follow the instructions accordingly.



□ 1. If you are planning to use this pod with the **electric motor**, complete the cut on the main frame *as shown above*.



□ 2. If you are building either the **bolt-on** or **rubber band** version, cut off the bottom of the frame as shown.



□ 6. Attach the side braces to the uprights and base.



□ 3. Glue the front and rear uprights to the main frame.



 $\Box$  4. If you intend to use the bolt-on method, drill four 1/8" holes at the punch marks on the base halves.



 $\Box$  5. Glue the base halves to the main frame. *If you are using the rubber band version, use the set of bases that has the tabs.* 



□ 7. If using an **electric motor**, glue the two motor supports together and then attach them to the main frame. Glue a small strip of sandpaper to the supports and the front upright. This will help keep the motor in position.

□ 8. Install the electric motor into the power pod using two nylon straps (*see photo below*).

 $\Box$  9. Using two small screws (servo screws work great), attach the micro switch to the main frame, as shown, in the following photo. Route the fuse to the back of the pod and secure it in place using the plywood fuse holder glued to the upright. Attach the toggle switch to the opposite side brace.



□ 10. Install a micro servo in the plywood servo tray and glue into the main frame. Set up your radio system so the servo will actuate the micro switch when the transmitter is at full throttle.



□ 11. Attach the ON/OFF switch to the frame.



□ 12. If using an .049 glow engine, glue the two firewall supports to the main frame. Glue the firewall assembly together and then to the main frame. Make sure the firewall points are square to the frame.



 $\hfill\square$  13. Center the engine onto the firewall so the engine head is straight up. Use 2-56 bolts with locknuts (not included) to secure the engine.



□ 14. Trim the mating edges, and test fit the shroud halves together. The edges should meet with minimal gaps. *The bottom* 

*edges will be trimmed off later.* Cut a circle for the toggle switch and the engine head (if needed). If you use the bases that have the tabs for rubber bands, trim the shroud around them.

 $\Box$  15. When satisfied with the fit, drill 1/16" holes through the shroud and into the side braces. Attach the shroud using four #4 x 3/8" screws.



□ 16. Use the white decal strips to cover the seam between the edges of the shroud halves. Start each piece of tape at the top of the shroud and work towards the bottom. Cut off any excess.



 $\Box$  17. Trim off the bottom edge of the shroud so it is even with the bottom of the base.

## Mounting the Power Pod to your Model:

#### Method A:

Mounting on the Great Planes Spirit with two-piece wing.



□ 1. Position the Power Pod onto the wing root and insert the wing joiner. Glue the plywood rib spacers to the root of one of the wing panels. If needed, carefully trim away balsa to allow additional clearance for the servo and battery wires.

 $\Box$  2. Reposition the servos and pushrods if needed to allow a place for the motor battery. Try to locate the battery so it is centered as close as possible to the center of gravity. Secure the battery in place with hook and loop strips (GPMQ4480).

□ 3. **IMPORTANT!!** Rebalance your plane according to the airplane manufacturer's instructions.

#### Method B:

Universal mounting using the "Bolt-On" system.



4-40 Blind nuts



□ 1. With the shroud removed, position the Power Pod onto the wing so it is centered over the wing joiner.

□ 2. Mark the hole locations through the base.

 $\hfill \ensuremath{\square}$  3. If needed, cut or drill a hole for the servo and battery wires.

□ 4. Drill 1/8" holes all the way through the wing at the marks.

 $\Box$  5. Drill 5/32" holes at the punch marks on the two nut plates and install the four blind nuts in the holes.

 $\Box$  6. Position the pod in place and insert the 4-40 screws with washers into the pod and through the wing. Tighten the screws into the nut plates.

 $\Box$  7. Reposition the servos and pushrods if needed to allow a place for the motor battery. Try to locate the battery so it is centered as close as possible to the center of gravity. Secure the battery in place with hook and loop strips.

□ 8. **IMPORTANT!!** Rebalance your plane according to the airplane manufacturer's instructions.

### Method C:

Universal mounting using rubber bands.



□ 1. Cut the piece of hook and loop lengthwise into two strips. Attach the strips to the bottom of the pod.

□ 2. Position the Power Pod onto the wing so it is centered over the center of gravity. Install the mating hook and loop material on the wing so it lines up properly.

□ 3. Reposition the servos and pushrods if needed to allow a place for the motor battery. Try to locate the battery so it is centered as close as possible to the center of gravity. Secure the battery in place with hook and loop strips.

□ 4. Attach the wing to the fuselage with rubber bands. Position the rubber bands over the tabs on the pod. Crisscross two on each side for extra security.

□ 5. **IMPORTANT!!** Rebalance your plane according to the airplane manufacturer's instructions.

#### Flying with the Great Planes Power Pod:

With the Power Pod running, hand launch the glider with a straight and level toss into the wind. The glider will climb almost immediately. When you get high enough, turn off the motor (if servo controlled) and soar around the sky. It is not uncommon to get five or six climb-outs using a 6-cell SCR type battery pack. When you notice a significant power drop, set up to land.

When flying with a glow engine, find an assistant to aid in starting and launching. Climb and soar until the engine runs out of fuel.

Good Luck and Happy Flying!

