

Joulebox 190

Mark II

Kit No. CBMD-006

Construction Detail

CB Model Designs

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CB Model Designs

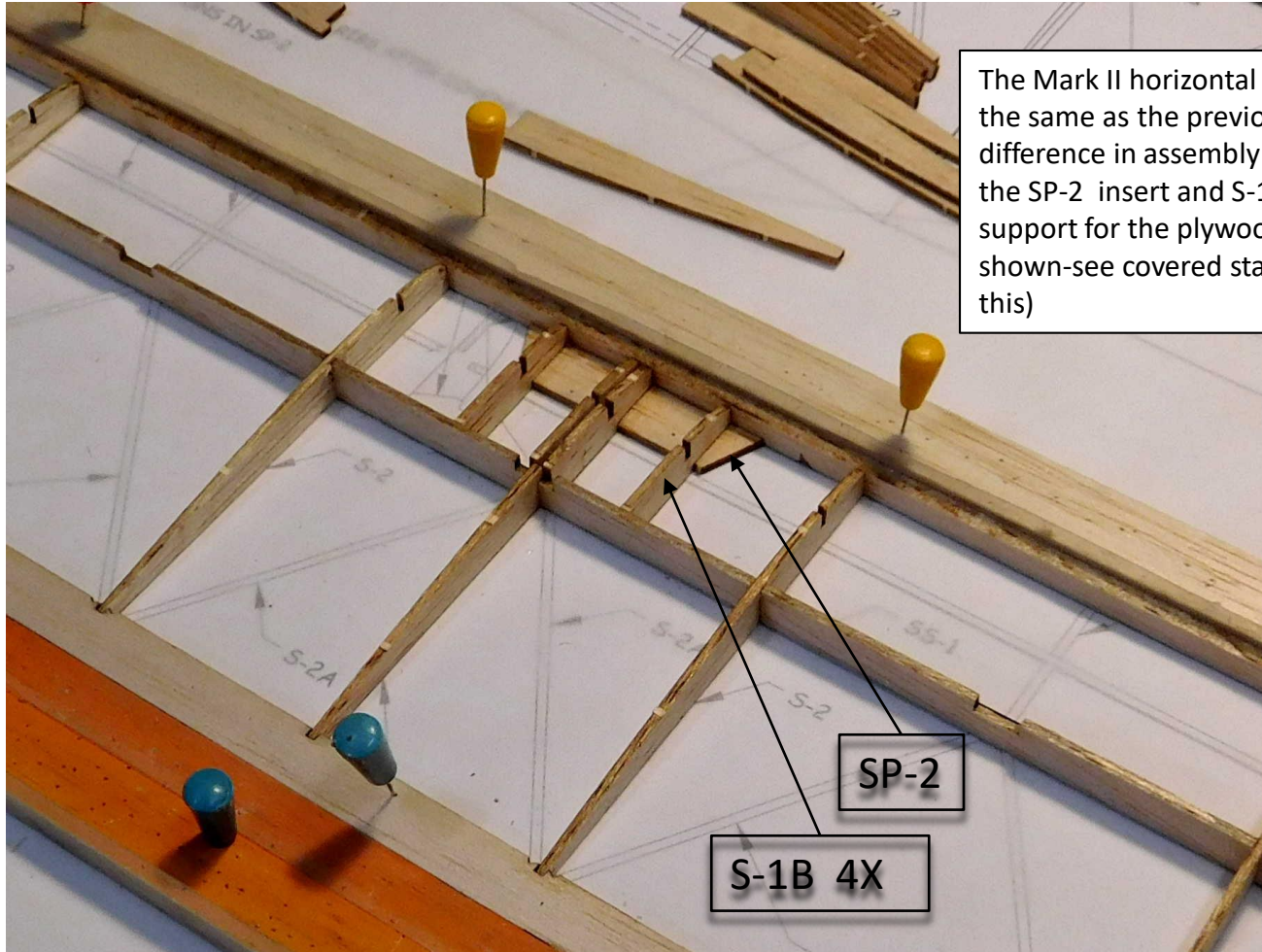
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This construction detail document is provided to show the differences between the original Joulebox 190 design and the MkII version. Refer to the existing construction detail document for common assembly information between the two versions.



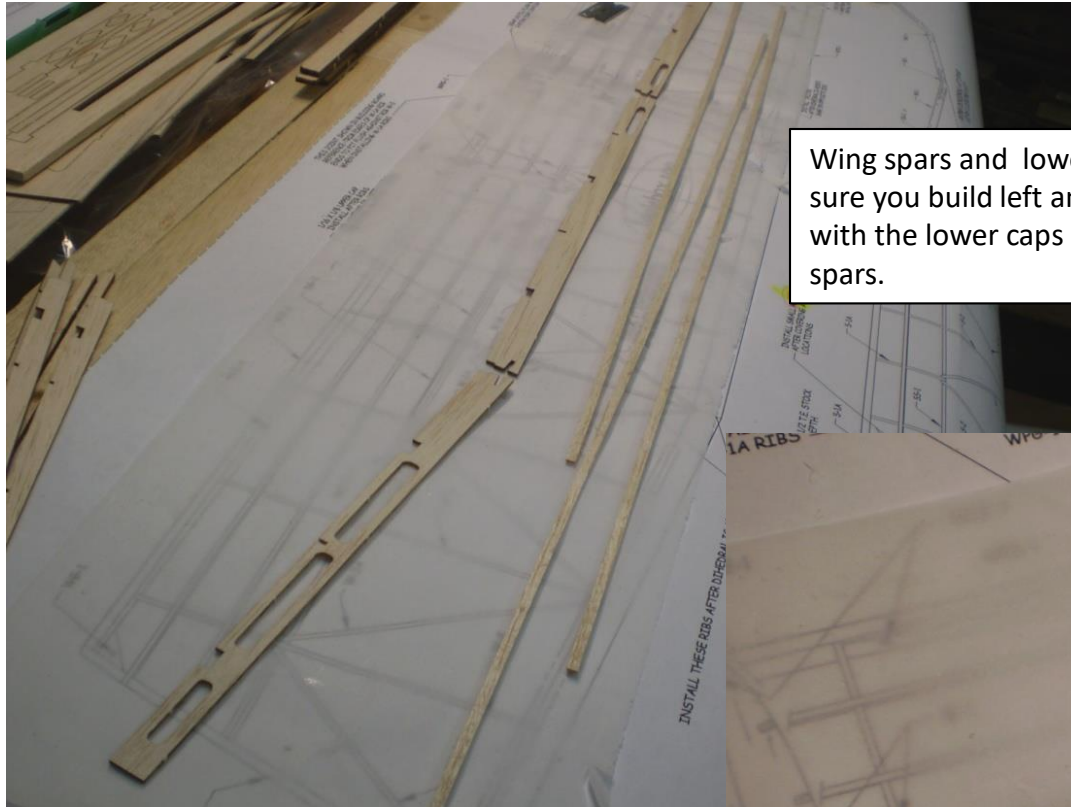
Model data:

- Weight ready to fly.....150 grams
- Wingspan.....36 Inches
- Wing Area.....190 Sq. In.
- Nominal Length.....31 5/8 Inches

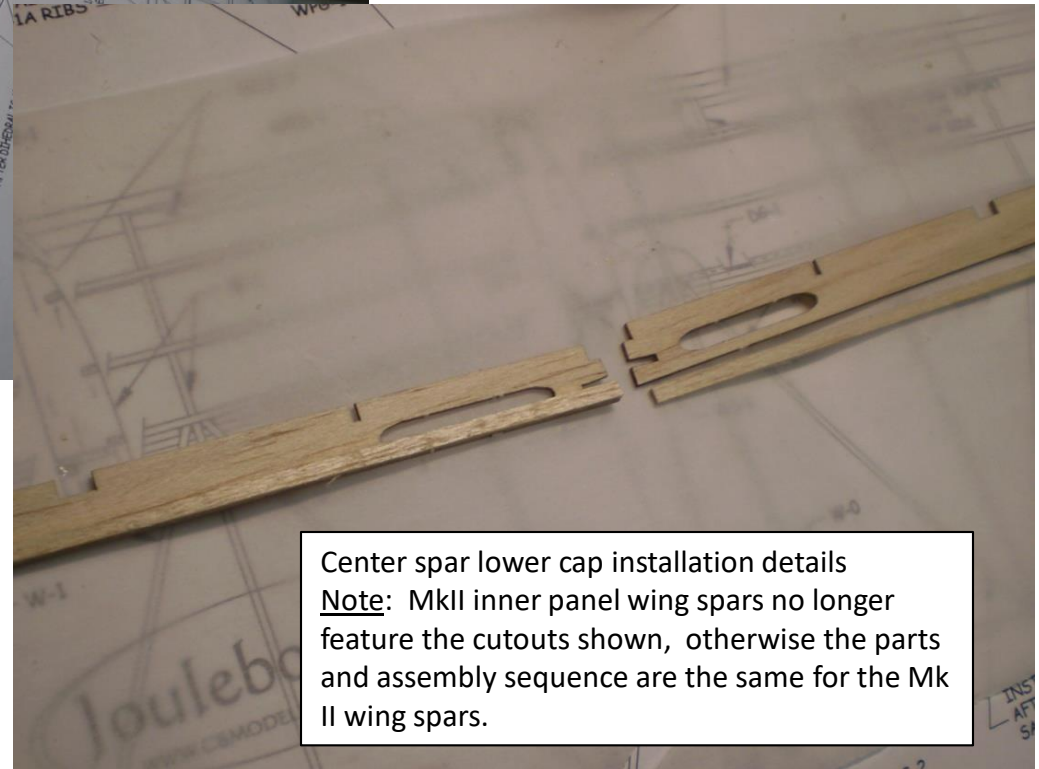


The Mark II horizontal stabilizer construction is the same as the previous version. The difference in assembly is the center section with the SP-2 insert and S-1B ribs that form the support for the plywood D/T post DPT-1 (not shown-see covered stab images on website for this)

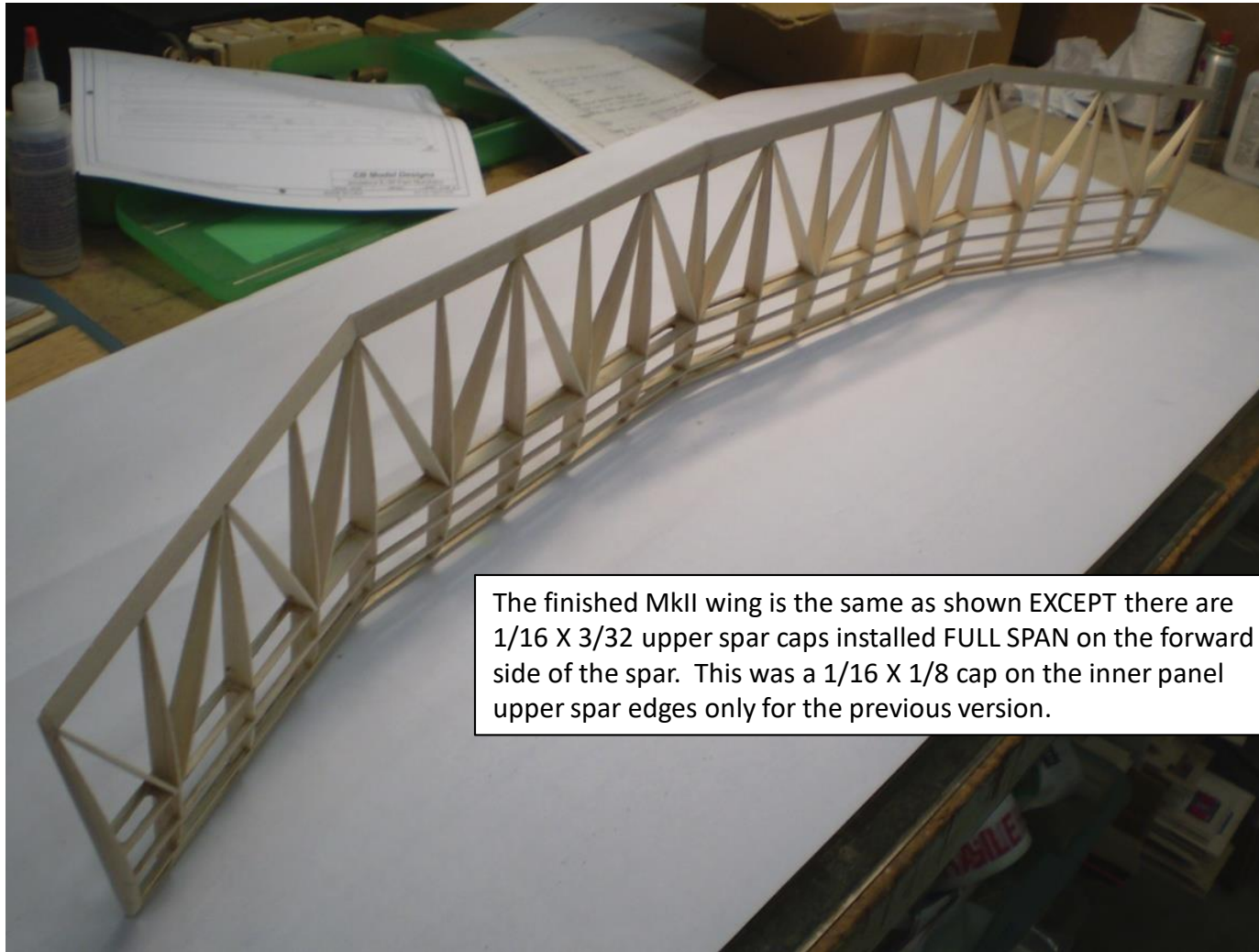
SP-2
S-1B 4X



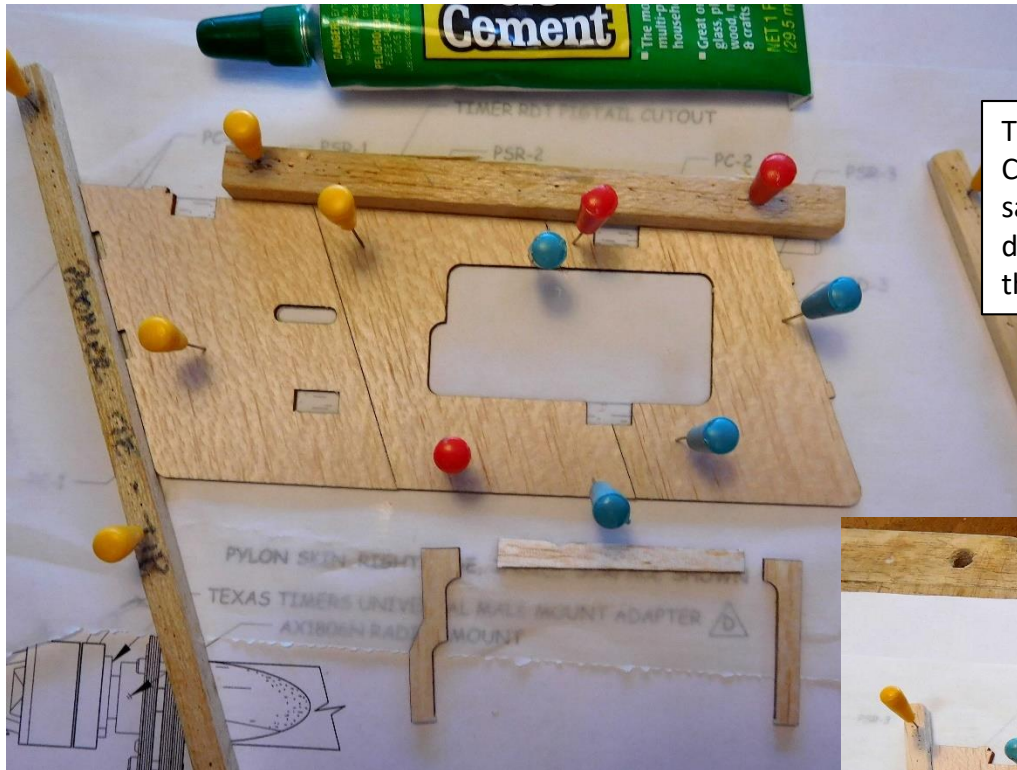
Wing spars and lower spar cap material-make sure you build left and right hand assemblies, with the lower caps on the AFT sides of the spars.



Center spar lower cap installation details
Note: MkII inner panel wing spars no longer feature the cutouts shown, otherwise the parts and assembly sequence are the same for the Mk II wing spars.



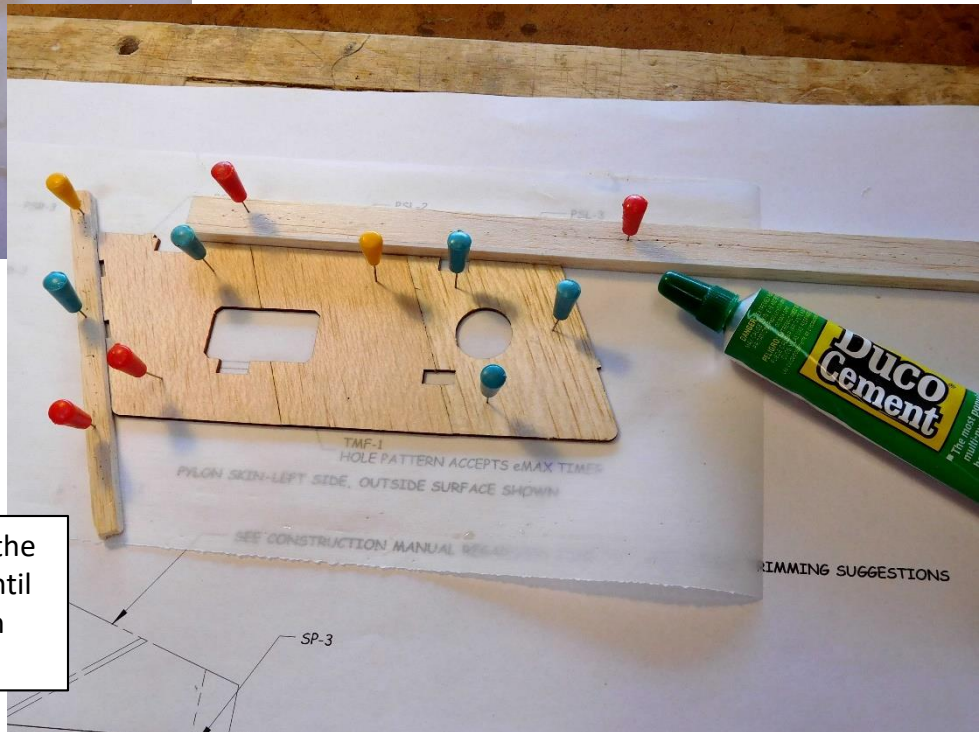
The finished MkII wing is the same as shown EXCEPT there are 1/16 X 3/32 upper spar caps installed FULL SPAN on the forward side of the spar. This was a 1/16 X 1/8 cap on the inner panel upper spar edges only for the previous version.

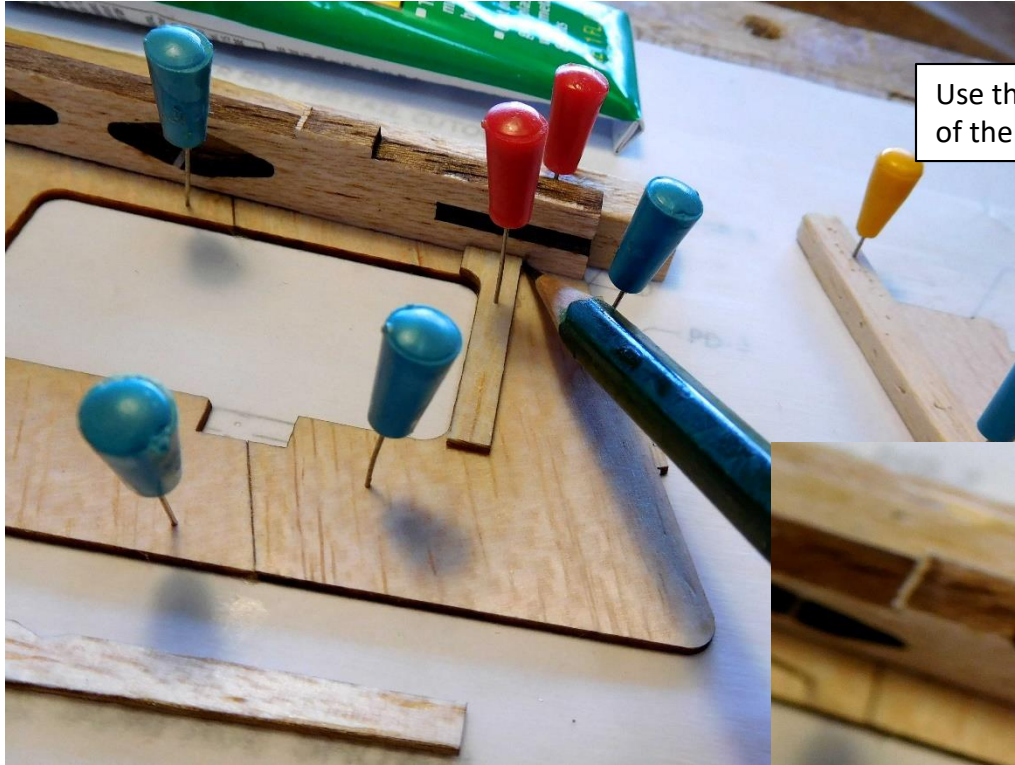


The MkII right side pylon skin being assembled. Cellulose cement is recommended for smooth sanding after assembly. Orient the lipo cutout doublers as shown for installation reference in the subsequent steps.



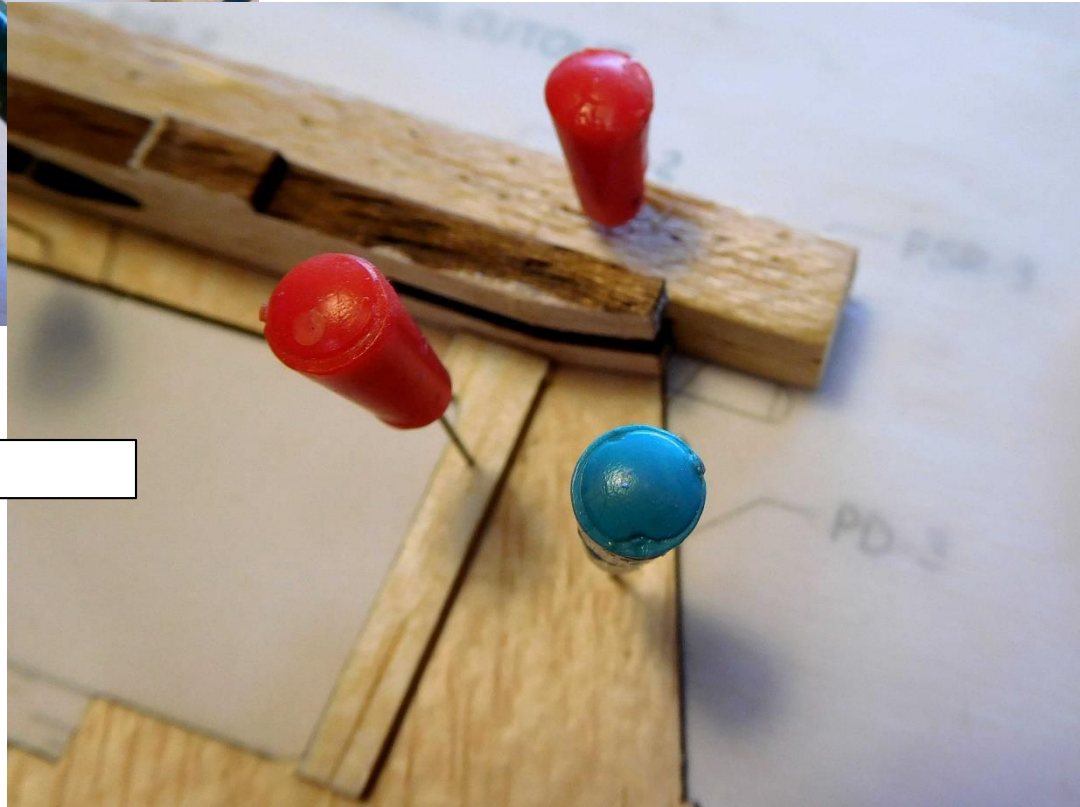
Left side pylon skin assembly. Leave the plywood timer mounting frame off until after the pylon assembly is sanded on the outside surface.

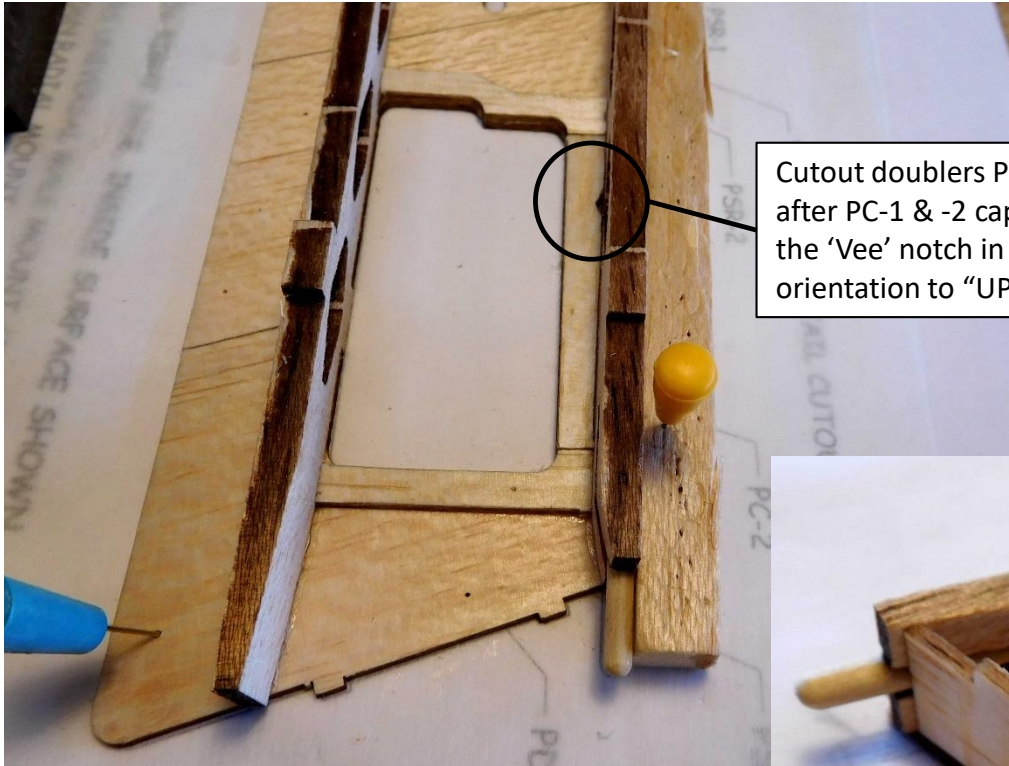




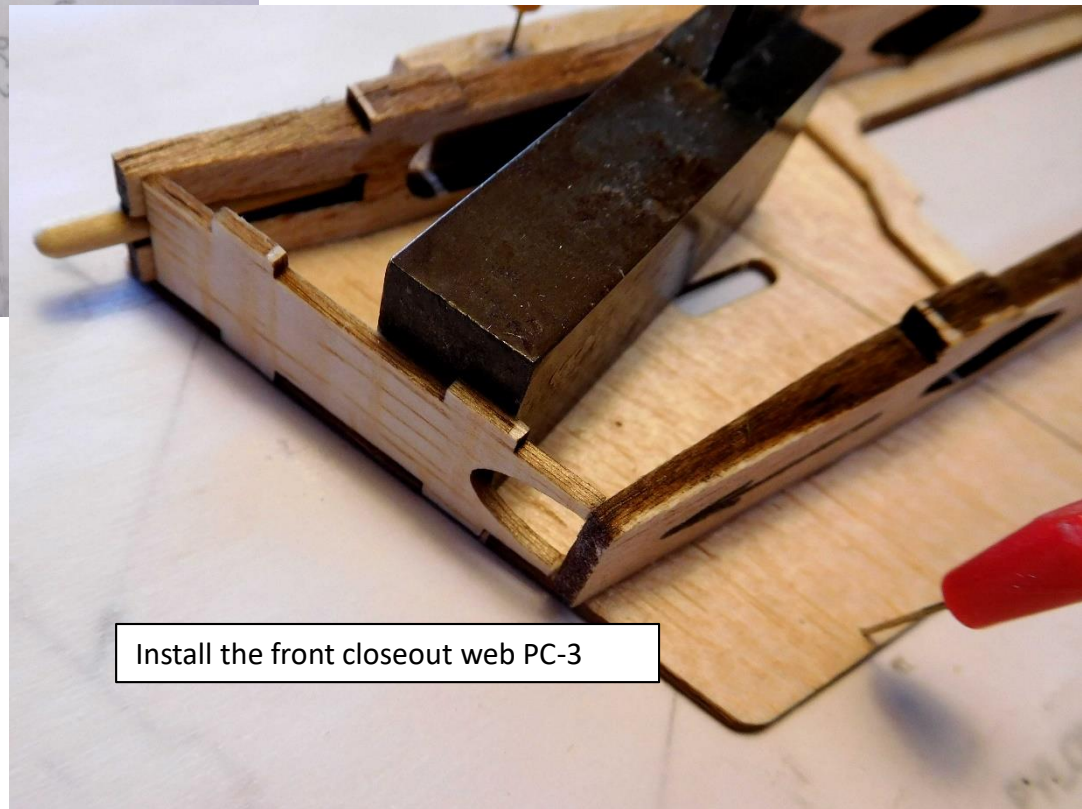
Use the aft cutout doubler frame PD-3 to locate the edge of the taper sanded into the PC-2

Sanded taper in PC-2

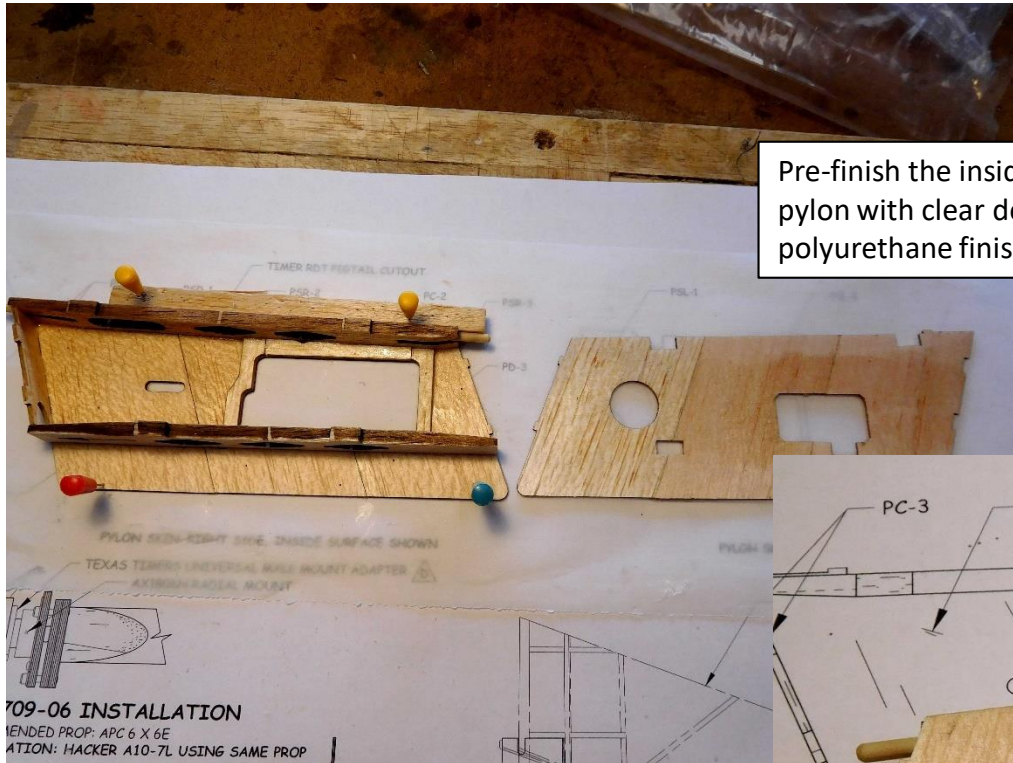




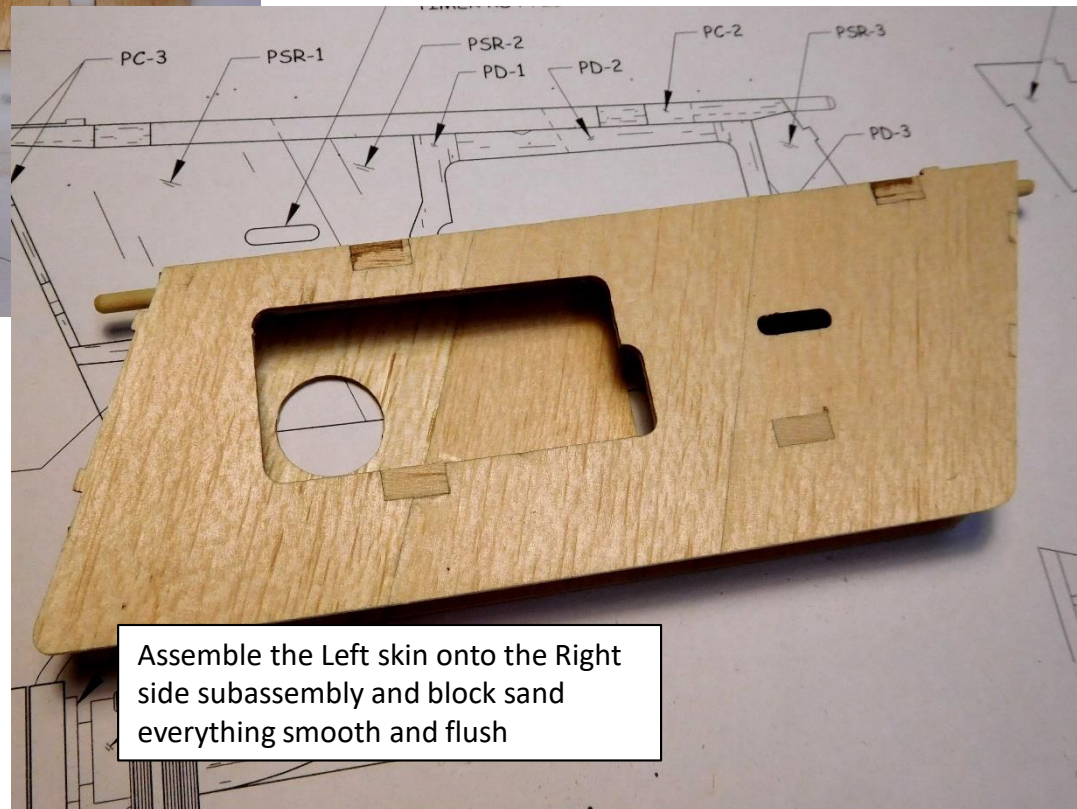
Cutout doublers PD-1, -2, -3 installed after PC-1 & -2 caps installed. Note the 'Vee' notch in PD-2 to give orientation to "UP"

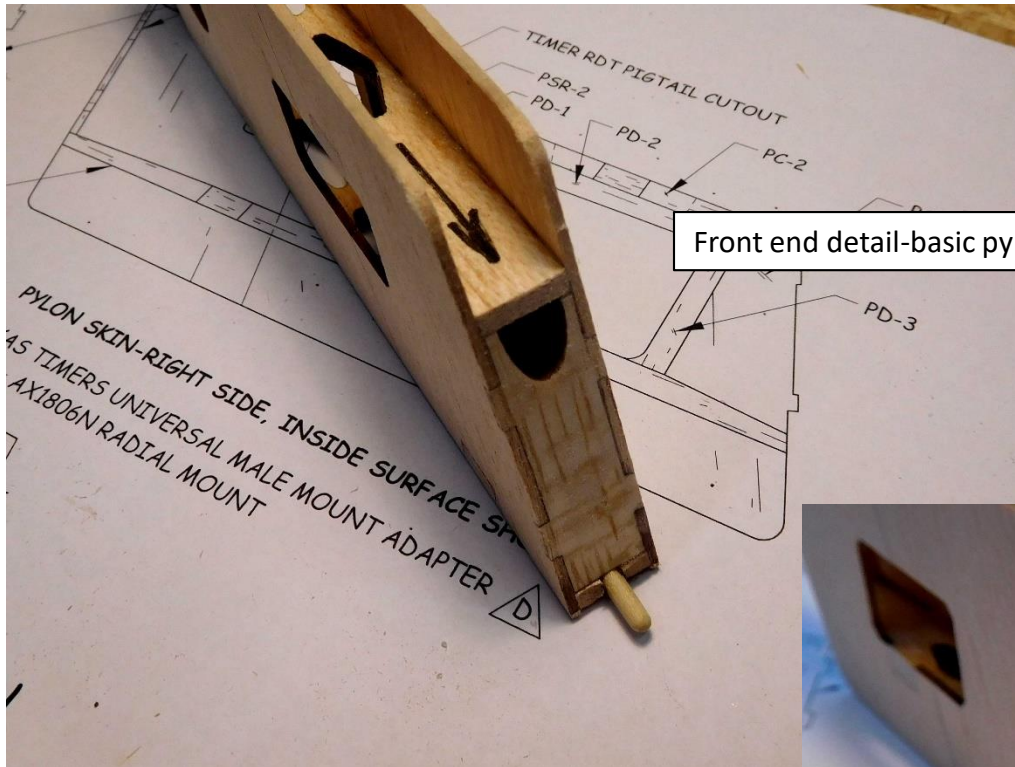


Install the front closeout web PC-3

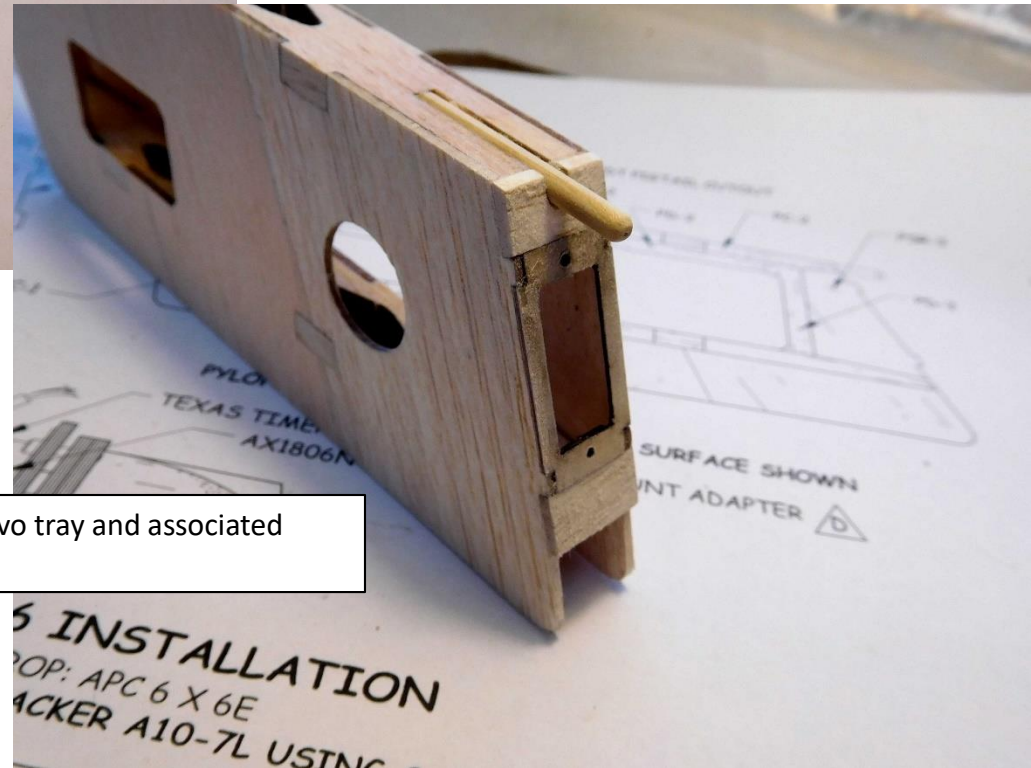


Pre-finish the inside surfaces of the pylon with clear dope or polyurethane finish

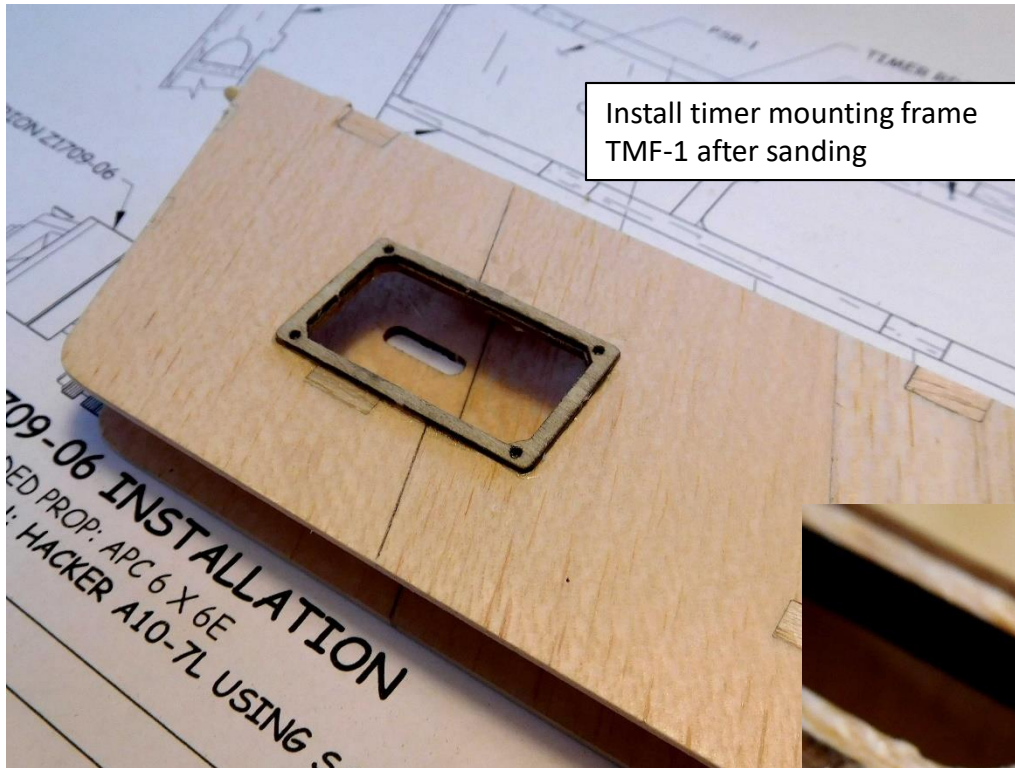




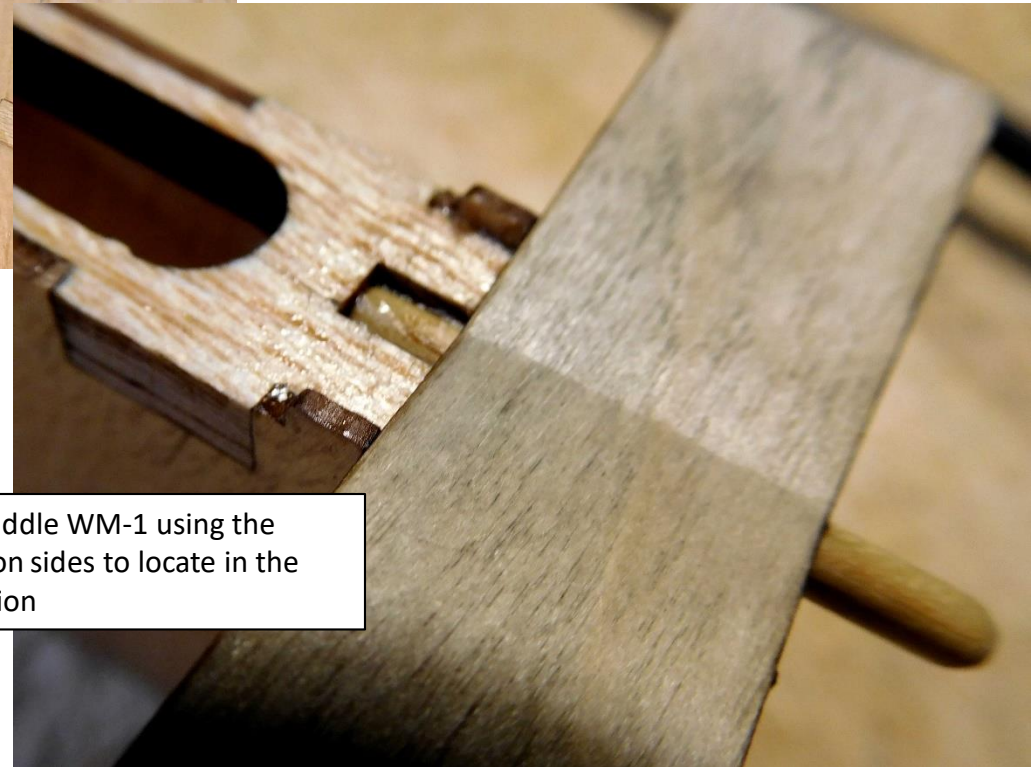
Front end detail-basic pylon assembly



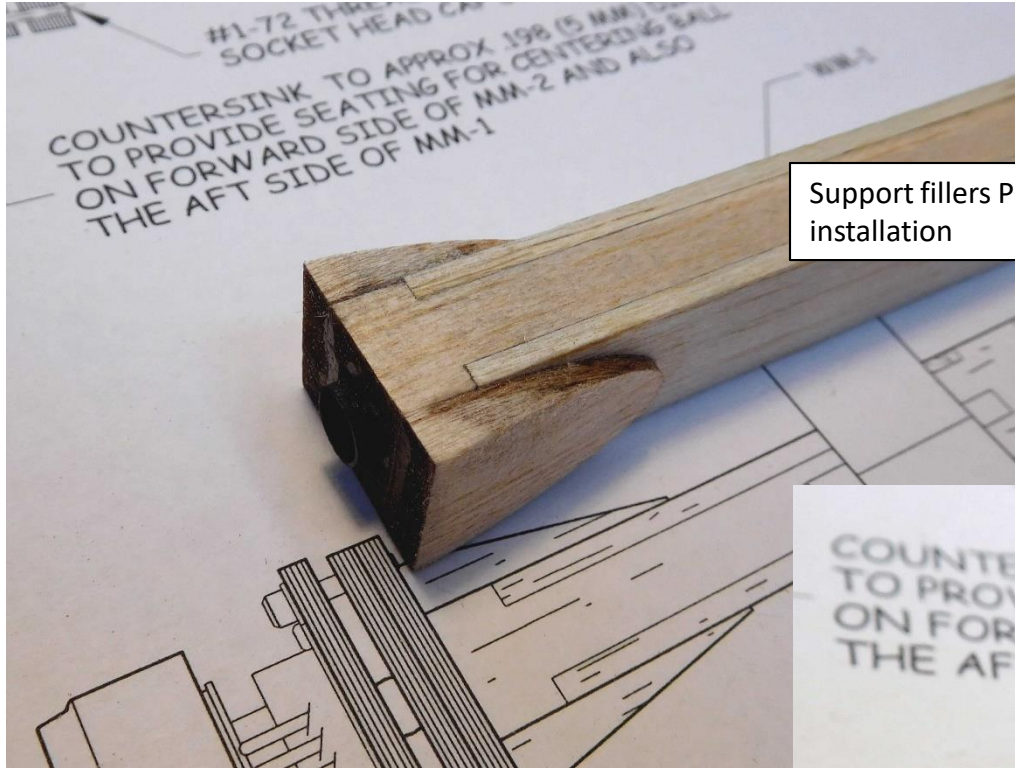
Pylon aft end with servo tray and associated fillers installed



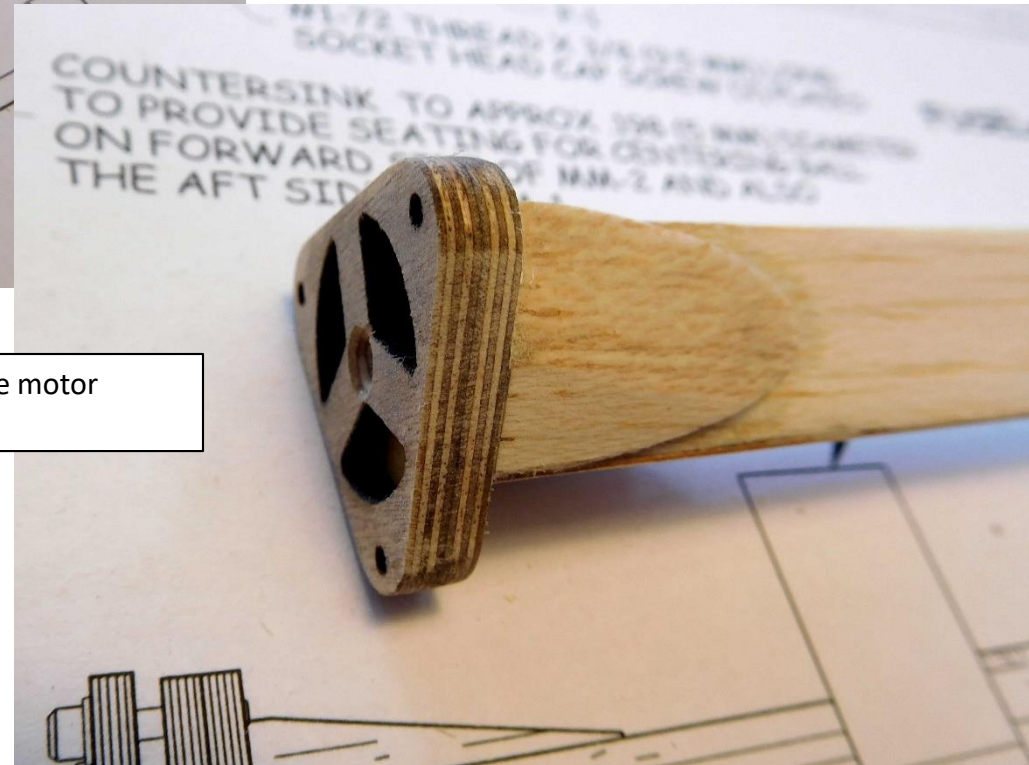
Install timer mounting frame
TMF-1 after sanding



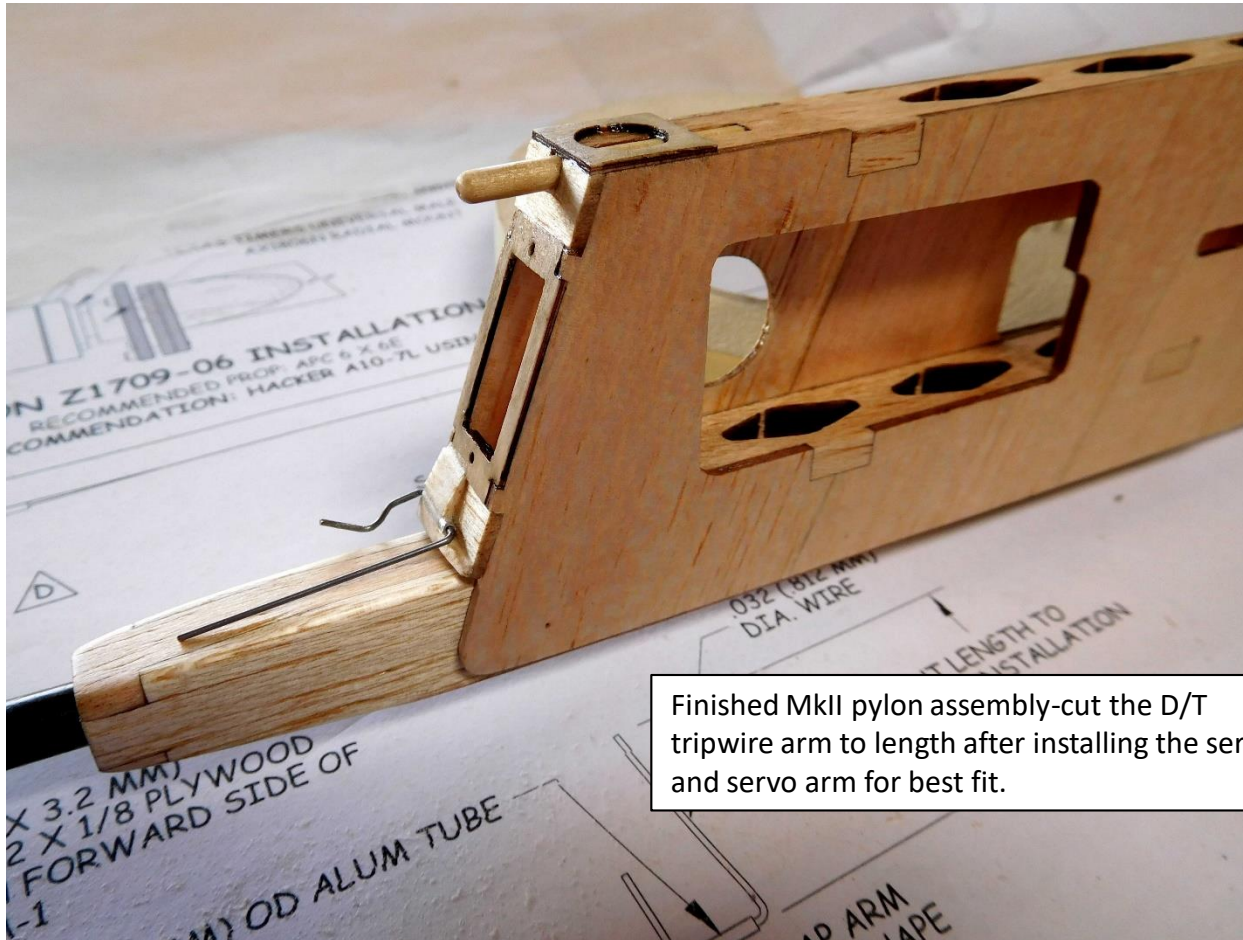
Install wing support saddle WM-1 using the
raised tabs on the pylon sides to locate in the
forward and aft direction

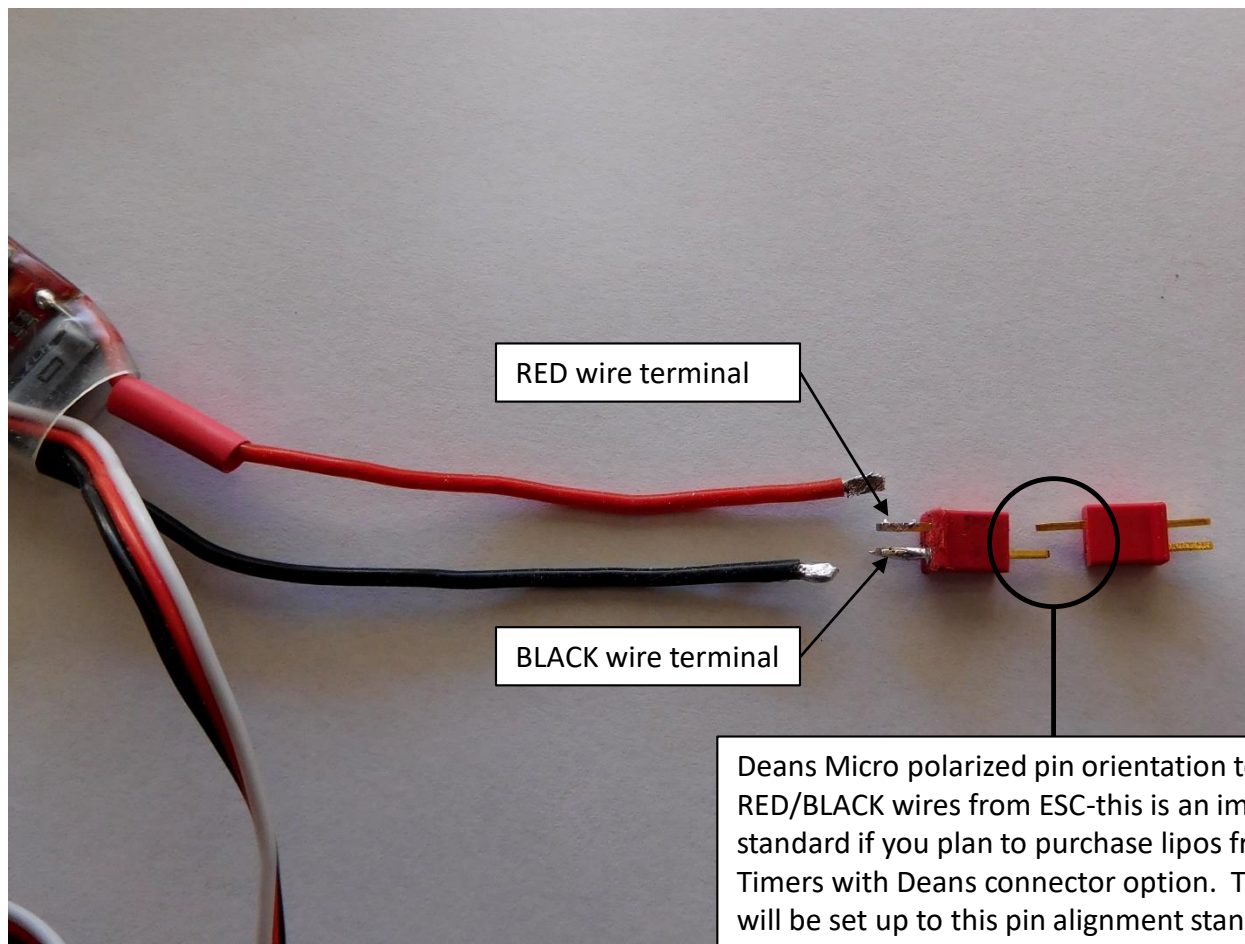


Support fillers P-3 have been added for the MkII motor mount installation



Sand the P-3 fillers to flush with the sides of the motor mount assembly frames.

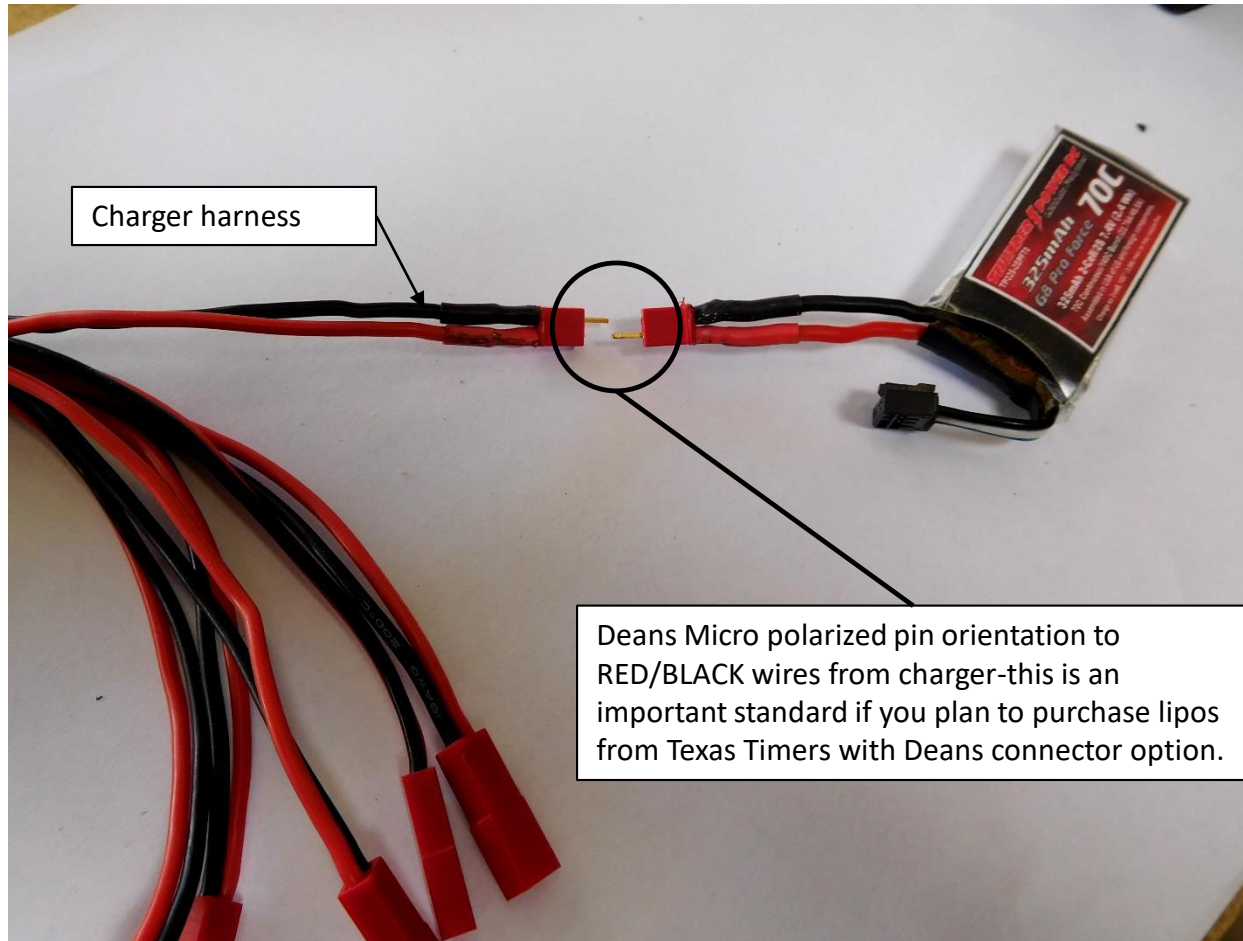




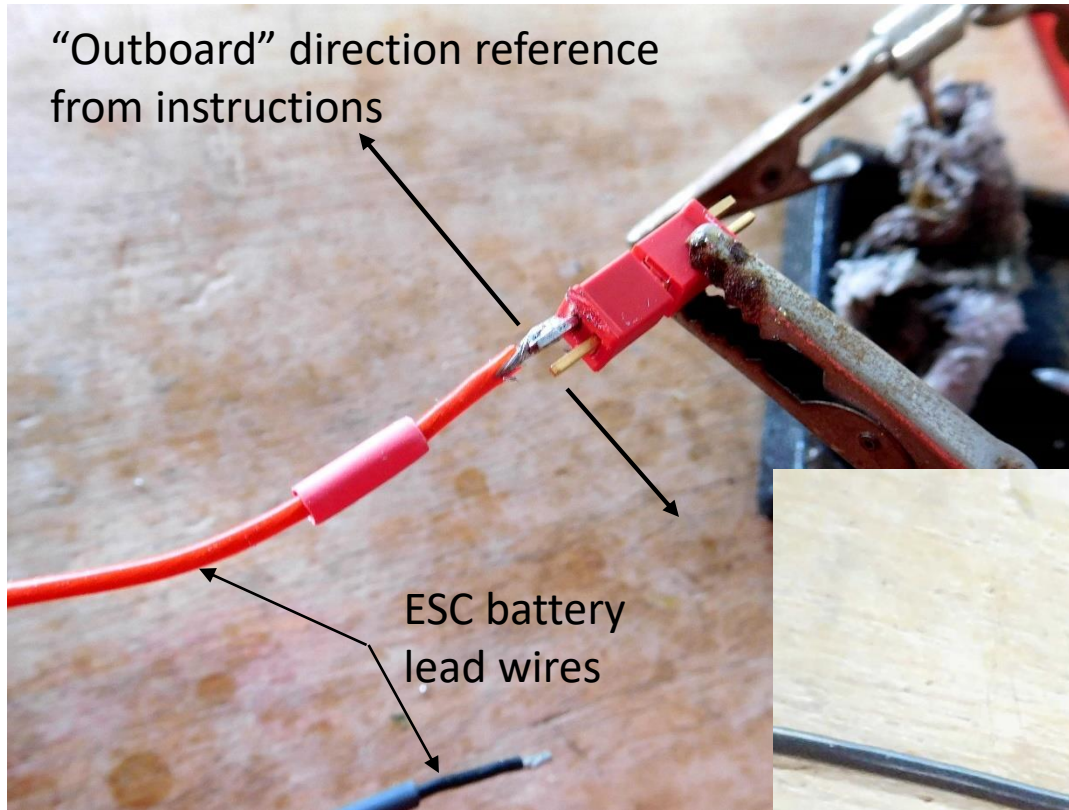
RED wire terminal

BLACK wire terminal

Deans Micro polarized pin orientation to RED/BLACK wires from ESC-this is an important standard if you plan to purchase lipos from Texas Timers with Deans connector option. The lipo will be set up to this pin alignment standard as a default.

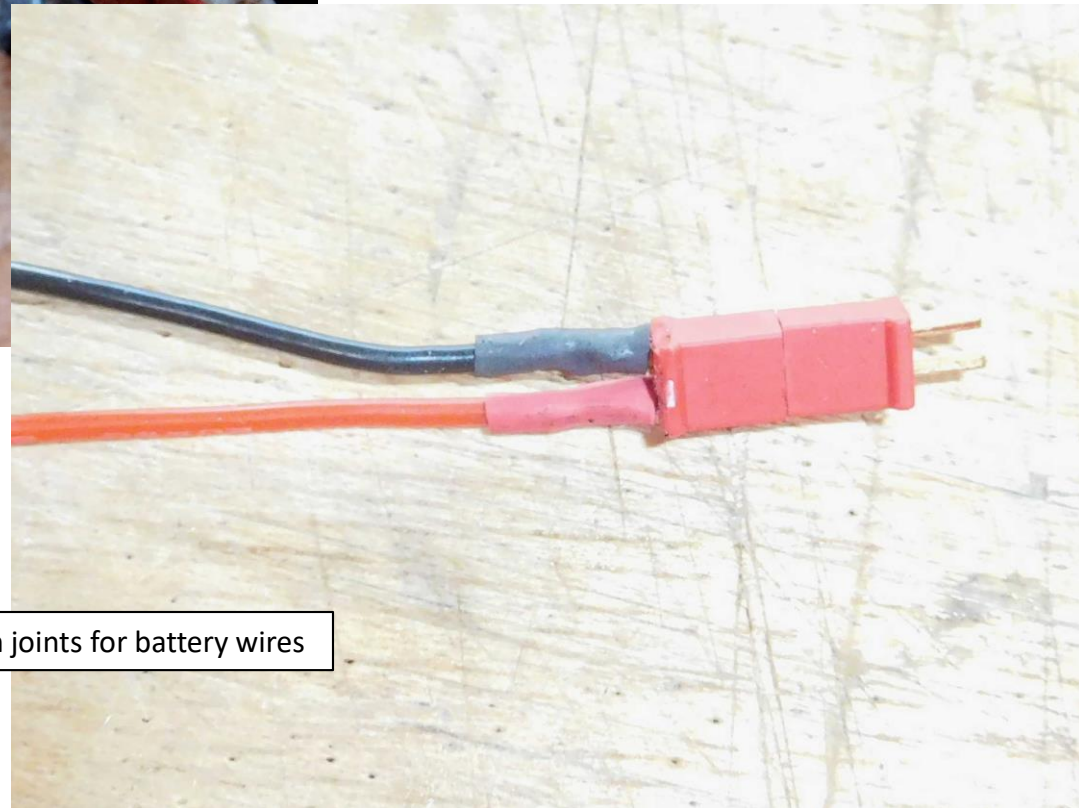


“Outboard” direction reference
from instructions

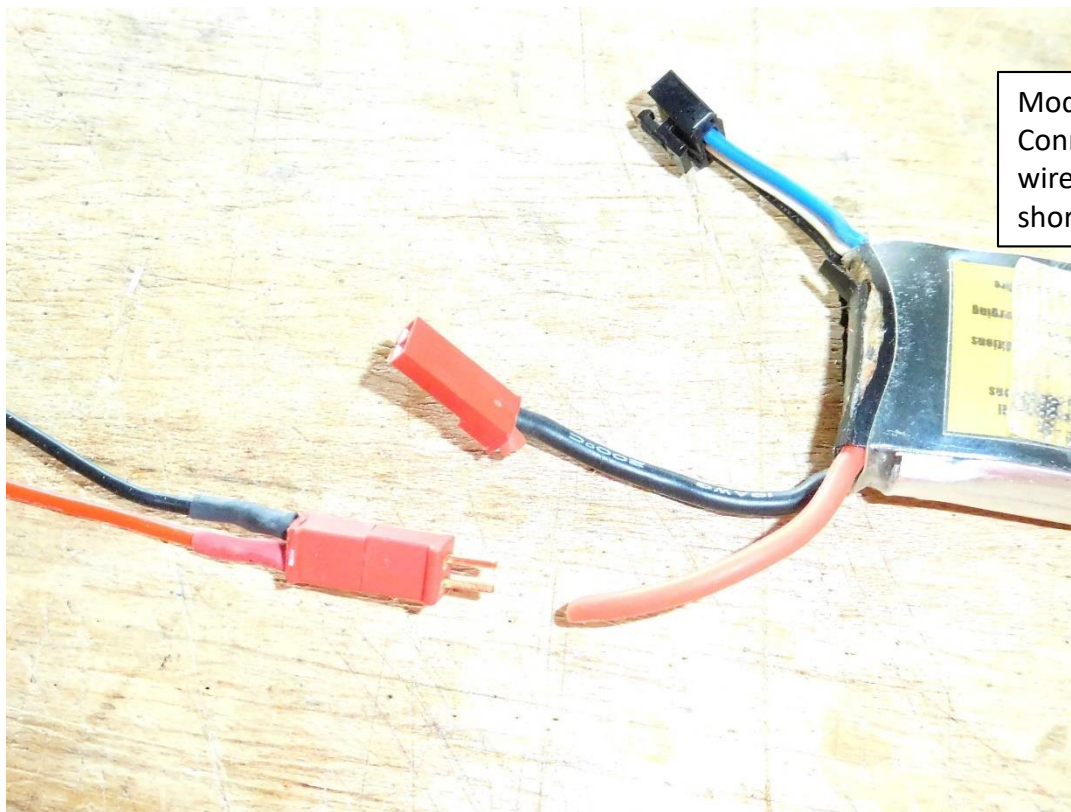


Soldering the ESC battery lead wire onto the Deans Micro polarized connector plug assembly. Keep the plug halves assembled to maintain reference to polarity of the wiring.

ESC battery
lead wires

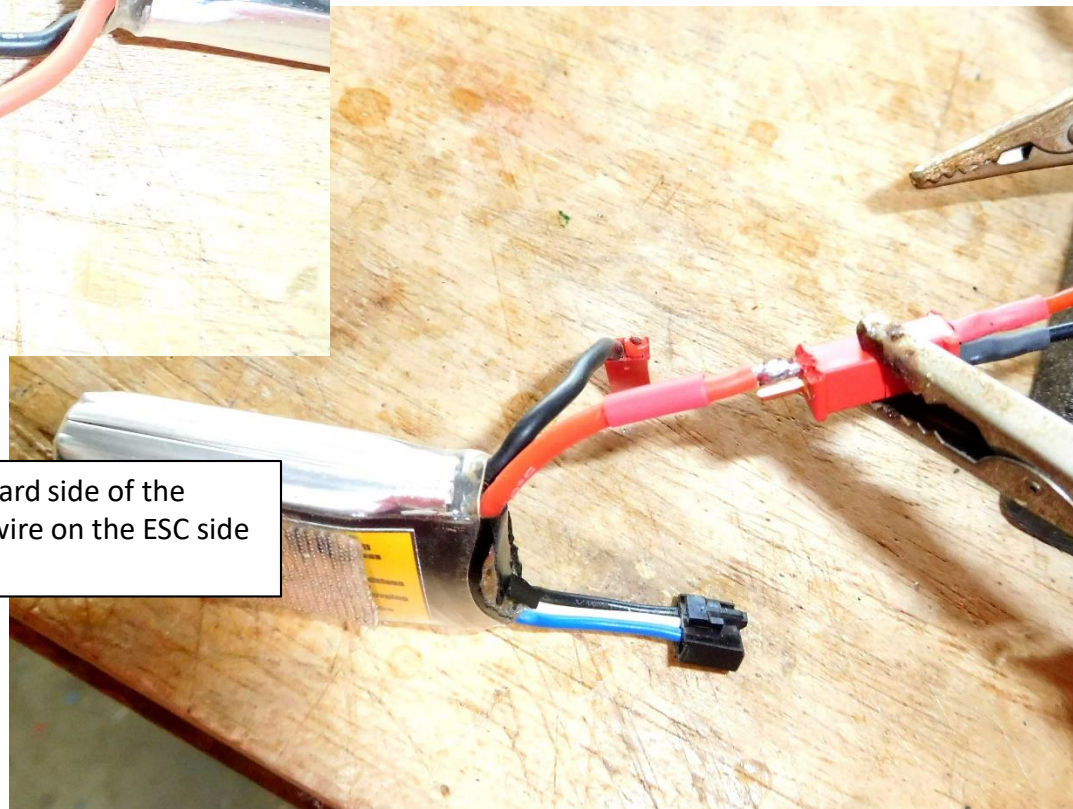


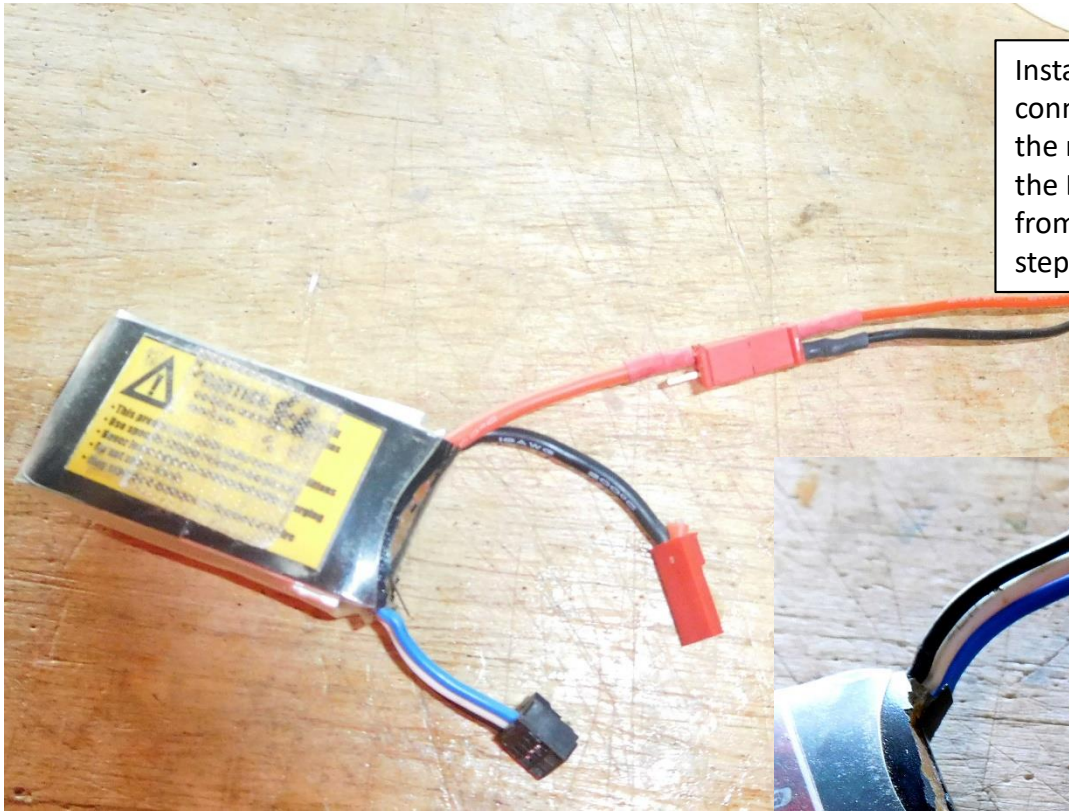
Finished ESC wire solder connection joints for battery wires



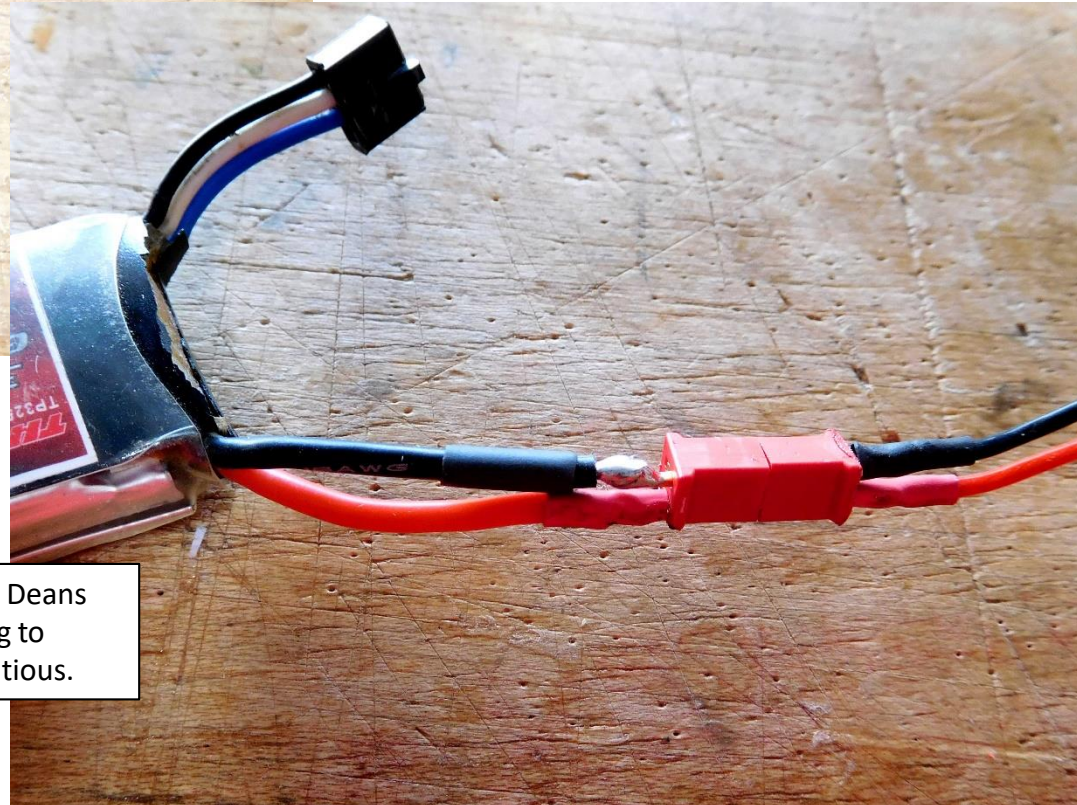
Modifying a JST equipped lipo for Deans Micro Connector plug installation. Work ONE lipo lead wire at a time to reduce the risk of electrical shorting during this process.

Tinned lipo lead wire soldered to the outboard side of the Deans connector plug. Match the colored wire on the ESC side for correct polarity orientation.

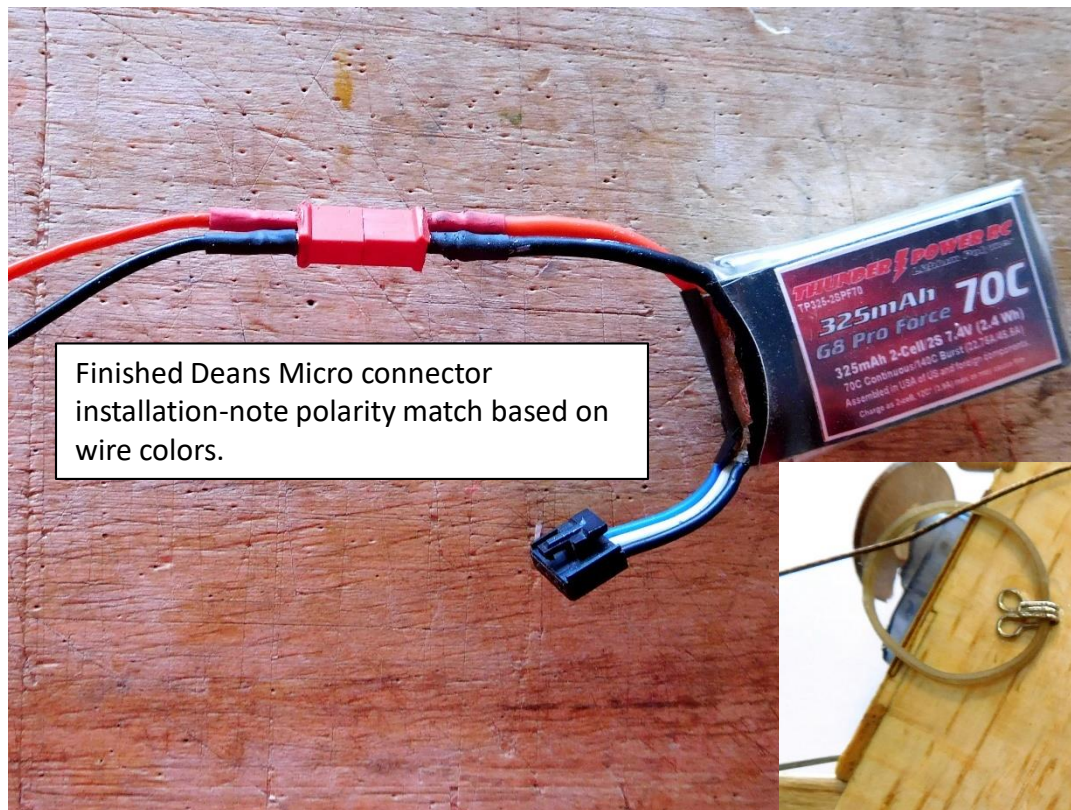




Install the heat shrink tubing on the Deans connector plug lipo terminal BEFORE installing the remaining lipo lead wire. NOTE-make sure the ESC motor connector wires are insulated from contact with each other prior to the next step.



Install the remaining lipo lead wire onto the remaining Deans connector plug terminal. Cover with heat shrink tubing to isolate. NOTE-the ESC is energized at this point-be cautious.



Finished Deans Micro connector installation-note polarity match based on wire colors.



Lipo installation into the Mk II pylon-hook Velcro is installed on side of lipo not visible. The pile Velcro is visible inside the cavity adjacent to the finger hole. The two hooks provide an anchor point for a small rubber band to restrain the connector wires against the side of the lipo from an earlier version on this model. The Aeris RDT host unit shown is held to the pylon side with small pieces of Velcro. Note: this version of battery installation may vary from some Mk2 drawing information and construction manual info.

Partial installation into the lipo cavity-connector wire tuck in easily above the battery and the balance port will tuck in behind the battery when installed.



Installed lipo-very neat and flush to the side of the pylon. The rubber band shown is not needed to retain the battery. To remove the lipo poke your finger through the hole on the far side and break the lipo away from the Velcro, then angle out as done for installation. There is room to slide the battery aft if needed to fine tune the Center of Gravity on the model.

