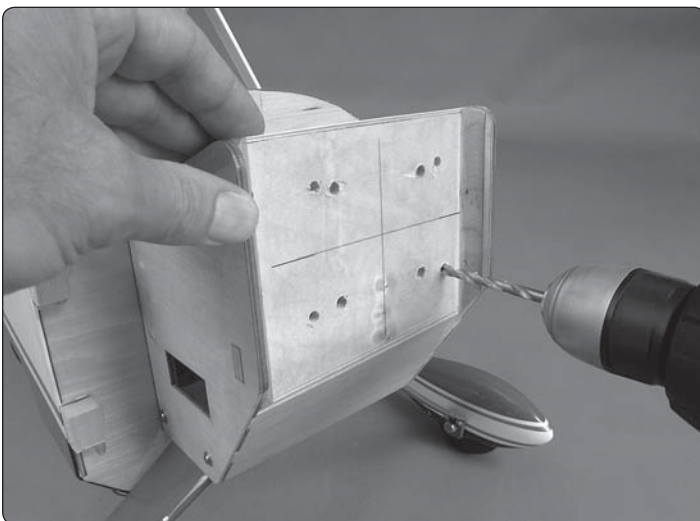
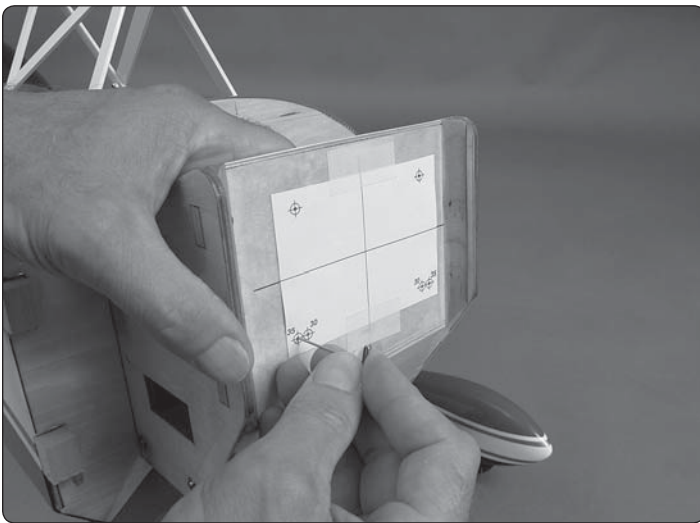


# Ultimate!

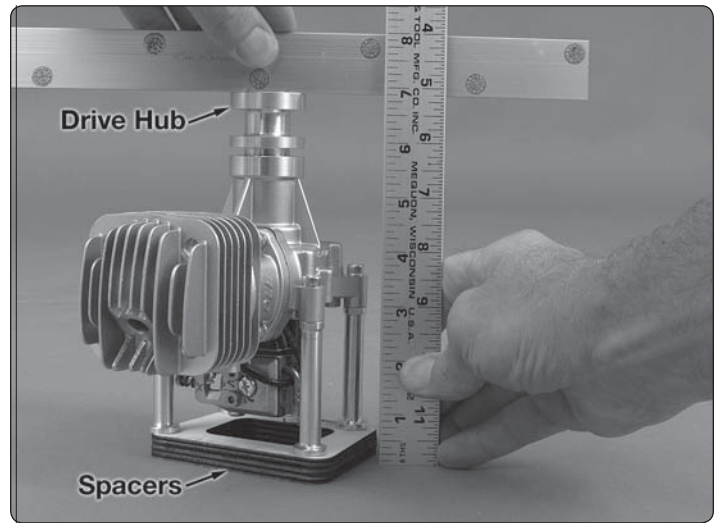
## BIPLANE ARF

### INSTRUCTION MANUAL ADDENDUM

For mounting the DLE 30cc/35cc spark-ignition engine to  
GPMA1307 Great Planes 1.6 – 1.8 Ultimate Biplane ARF



❑ 1. Use the engine mount template to mark, then drill #8 (.199" [5.1mm]) or 13/64" holes through the firewall – note that the top holes in the template are for both the 30cc and the 35cc DLE engines, but the bottom holes are different for each of the two.



❑ 2. Stack as many of the 1/8" [3.2mm] plywood universal spacers (the ones with the elongated bottom holes) plus one specialized spacer (for DLE 30 or DLE 35) to achieve a distance of 6-3/4" to 7-1/4" [171mm – 184mm] from the firewall to the drive hub as specified in the instruction manual. (Four spacers were used on the engine in the image for a distance of about 6-7/8" [174mm].)

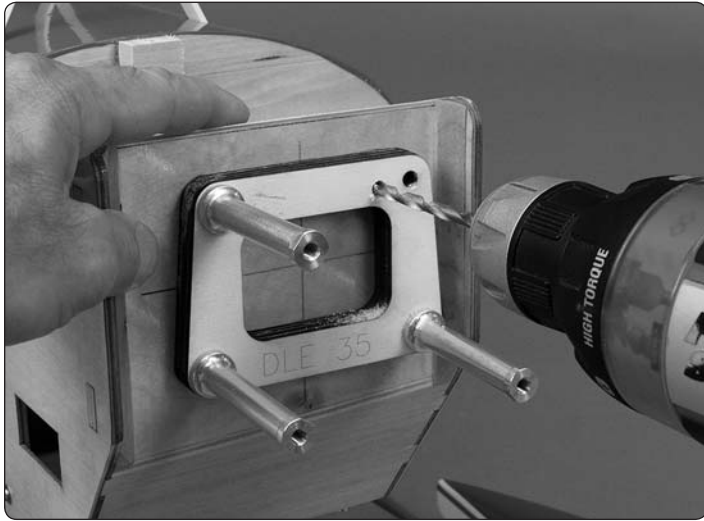


❑ 3. Glue the spacers together after accurately aligning them. Working in a well-ventilated area, use thin CA to thoroughly wet the spacers around the area of the bolt

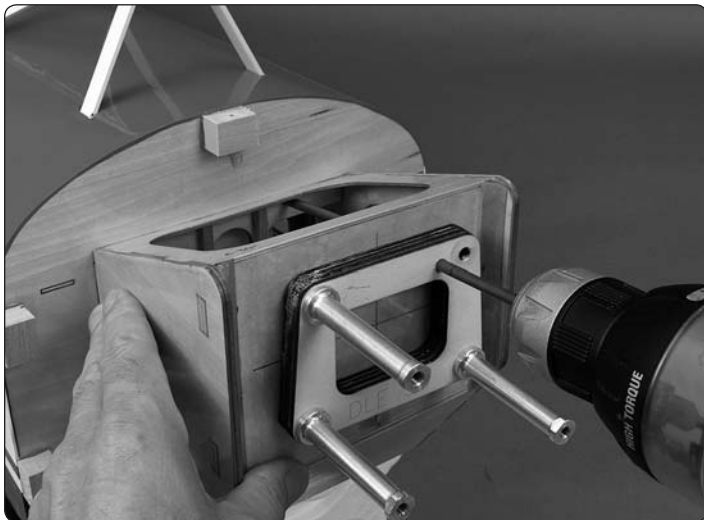
holes to harden the wood around the holes – the wood will really “drink up” a lot of CA. Allow the CA to harden. If necessary, clean out the holes with the same drill used to drill the holes in the firewall.

❑ 4. It would also be a good idea to fuelproof the spacer stack with epoxy. Allow to harden before proceeding.

❑ 5. Mount the spacer stack to the firewall with the standoffs using M5 lock washers and large washers and whatever length M5 socket-head cap screws are suitable depending on the thickness of your spacer stack—M5 x 35 SHCS were used with our stack of four spacers, but 30mm screws would also be suitable.

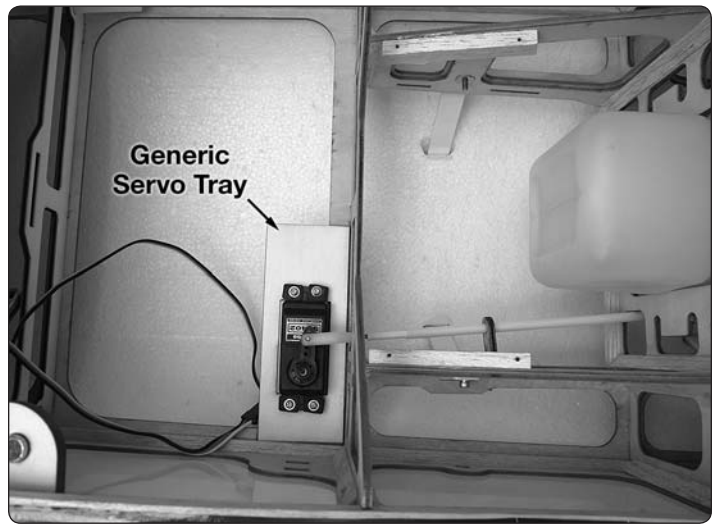


❑ 6. If necessary, temporarily remove one of the standoffs, then drill a 3/16” [4.8mm] hole through the “+” mark in the spacer stack and through the firewall for the throttle pushrod guide tube.

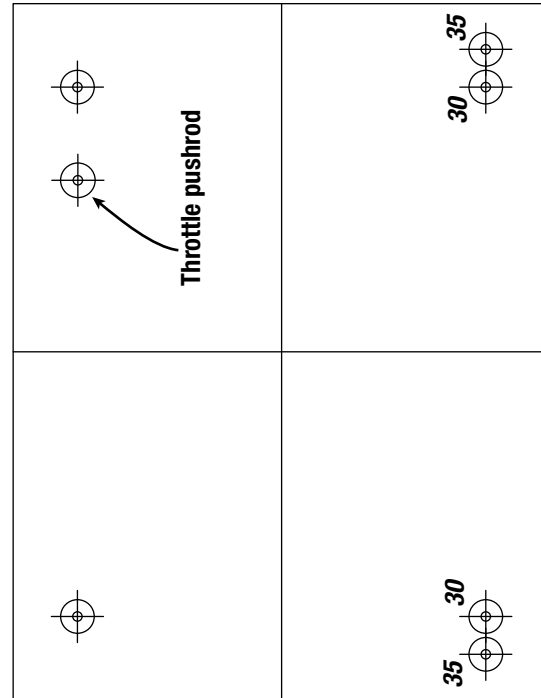
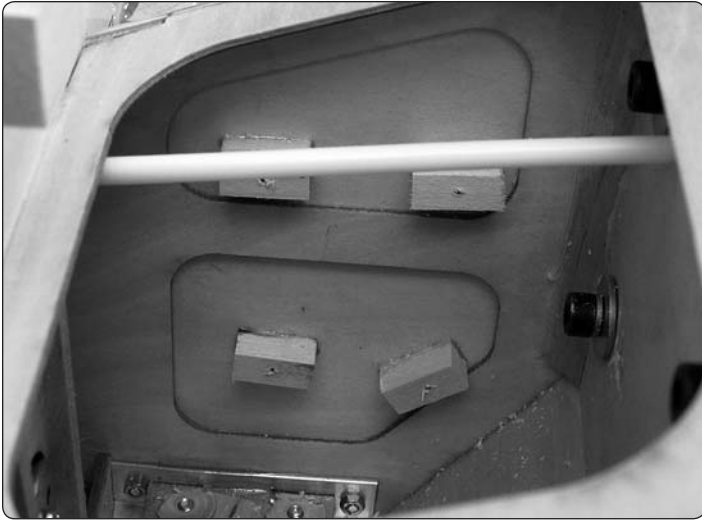
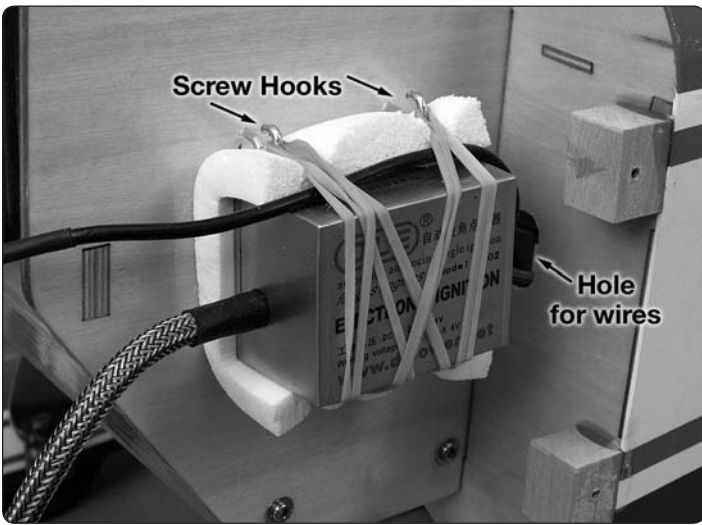


❑ 7. Use an extended 3/16” [4.8mm] drill or a 3/16” [4.8mm] brass tube sharpened on the end to drill/cut a hole through the front former just below the top of the engine mount box as shown.

❑ 8. Also drill holes through the firewall where necessary for the fuel lines.



❑ 9. Mount the engine. Use the generic servo tray to mount the throttle servo and hook up the throttle as shown and as specified in the instruction manual. The carburetor arm on the DLE 35cc is threaded for an M2 screw, so a DuBro Swivel ball link with 2mm hardware (DUBQ1769) was used on the front of the pushrod.



□ 10. Mount the ignition battery and ignition box where desired – there is plenty of room for each on either side of the engine mount box. The ignition box in the image was mounted with small screw hooks, hardwood blocks inside to anchor the hooks and RC foam for cushioning (not supplied). A hole was cut in the front former to pass the wires.

11. Make certain all the engine mounting bolts are securely tightened and check them periodically.

# DLE 30/35 ENGINE MOUNT TEMPLATE

