

# Rigging the Dethermalizer

If you have any ideas about flying your ARFA Senator outdoors, you must install a D/T lest your beauty fly away for good. The installation of a typical lightweight viscous button or badge timer and a simple wing-style D/T rig will, under most thermally active conditions bring your baby home.

The additional cost is marginal and the weight penalty is only the addition of 2 to 2.5 grams. My prototype outdoors ARFA Senator weighs in at a whopping 14.2 grams including her 1.2-gram loop of 1/8" Tan II rubber. Her flight performance mimics that of her full-sized brethren and with 1600 winds, gives her a full minute to get up to where the good air lives. Her first four, full-power flights allowed her to stretch her wings for the full two and a half minutes that her timer let her run wild. When that D/T popped... she looked a lot like a shot duck as her freedom-flight was quickly ended. That was on a nice early morning between rainsqualls when the air was nice.

The choice of a wing D/T and the positioning of the timer was one of necessity in order to keep the weighty components as close to the CG as possible. Rigging your bird for this type of D/T is simple and during fuselage construction you need to add a 1/32" sheet ply D/T mounting plate in the bottom bay just behind the LG. Drill access and mounting holes for your D/T of choice before you glue it in.

Small 1/8" Scrap balsa blocks are glued in at the points shown on the plan where the guide eyelets are to be mounted as support. You need not install the front wing mount dowel, as it is not needed for this installation. Pre fit the eyelets by simply locating their position with a pinhole and push them in. After the fuselage is covered and doped you will epoxy glue the eyelets in their respective positions.

There are two small modifications to the wing. One is the addition of a 1/8" scrap glued in just to the left of the center planking between the L.E. and the upper and lower front spars. This is to add support where the D/T cord rides over the front of the wing. The second is the addition of a small 1/8" support block glued under the center planking just in front of the top rear spar. This supports the Dubro™ micro ball that acts as the D/T cord and rubber band wing hold down.

Using "Stretch Magic" elastic beading cord creates spring tension for the timer. This material is a great choice for its toughness and very lightweight. It looks like nylon fishing line but stretches like elastic. Tie a small loop in one end and run through both eyelets as shown on the plan and tie a second loop where the relaxed length allows the D/T'd wing to be approximately 45°. Hook the loop over the micro ball on top of the wing and secure with the wing hold down rubber band. Pull the cord down and hold the wing in flying position. You should have about an inch of stretch to reach the timer sweep lever. Set the timer and watch it go. It works surprisingly well for such a simple device. When satisfied with the operation and the angle of the D/T'd wing, secure the knots in the cord with a drop of CA.

