

Traveling DAW 1-26 2 Meter Instructions

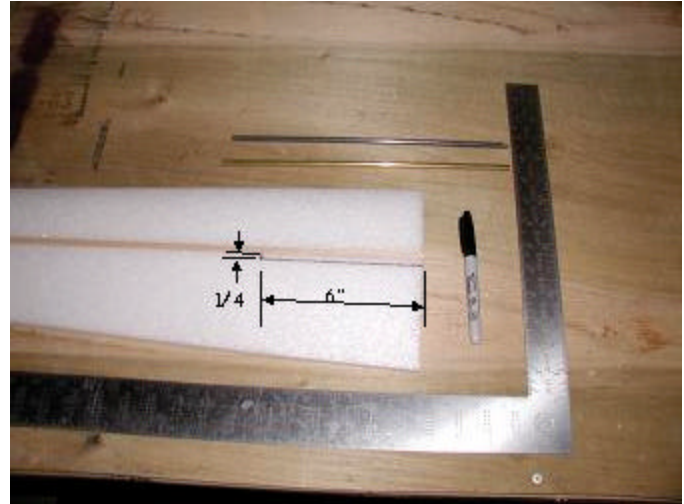
All you need to convert a stock 1-26 to the packable traveling variety is 12 inch length of 9/32 inch brass tubing, a 12 inch length of 1/4 inch piano wire, and two one inch nylon screws. With this, and a few minor tweaks during construction, you will have a 1-26 with a 2-piece wing and a removable stabilizer that will let you pack, store and even ship it in its original box.

These steps are meant to be a supplement to the instructions.

Two-Piece Wing Construction

Before gluing the spars in place, make a mark 6 inches from the root along the aft side of the spar slot. Draw a 6 inch line 1/4 inch behind the spar slot. This will be the location of the slot for the wing rod receiver tube. When you glue the spars in, be sure not to get any glue in this area. You'll be cutting this foam away for the brass tube in a later step and you will want the spar to be clean for a good strong joint.

Go ahead and glue the spars in per the instructions. After the glue has cured, you can cut the slot for the wing rod receiver tube. You'll want it to be snug but not tight enough to deform the foam so test the fit as you go. The slot should be at least as deep as the spar and a little bit deeper at the outer ends of the tube. You can adjust this depth as necessary when setting the dihedral.



Install the sub-trailing edges and trailing edges per the instructions and proceed through shaping the tips and cutting the ailerons.

Stop when you get to the point where you will install the dihedral brace.

Use the 80 grit sanding block to bevel the roots enough to match the 3 3/4 inch dihedral.

Prop one wing tip up to set the dihedral and test fit the brass tube in the wing. It should sit deep at the outer ends and flush with the top of the wing at the center. If it isn't flush at the center, cut the slot a little bit deeper at the ends.

Gently roughen the outside of the brass tube with coarse sandpaper to ensure a good glue joint.



Traveling DAW 1-26 2 Meter

You're about ready to install the tube but there are a couple of precautions.

We'll keep the brass tube in one piece at this stage to make it easier to get the proper alignment when setting the dihedral. The tube will be cut at the center after it's glued into the wing. **MAKE SURE THE PIANO WIRE WING ROD IS NOT INSIDE THE BRASS TUBE.** If it is, you'll have a bear of a time cutting it out.

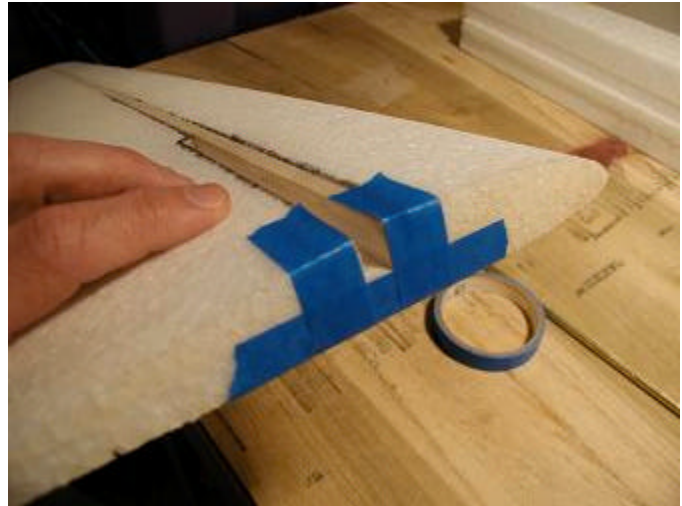
If you're not careful, epoxy can ooze into the open ends of the tube and cause problems when you go to install the wing rod. To prevent the unwanted intrusion of epoxy, place a piece of masking tape over the ends of the tube. I also put some masking tape around the area of the slot so I don't have to worry about accidentally gluing the wing halves together.

Now you can glue the tube into the wing with a slow curing epoxy. Don't skimp on the epoxy here. Make sure you get a good joint between the tube and the spar. You may want to mix in a little milled glass fiber for added strength. Be sure to set the proper dihedral while the epoxy cures.

You'll probably have a bit of a cavity in the top of the wings at the outer ends of the tube gap. This is easily filled with a little epoxy and microballoons. You got your strength from the joint between the tube and spar so this is just to fill the gap. Sand the top smooth once the epoxy has cured.

Now you can take a sharp razor saw and gently cut the tube at the center of the wing.

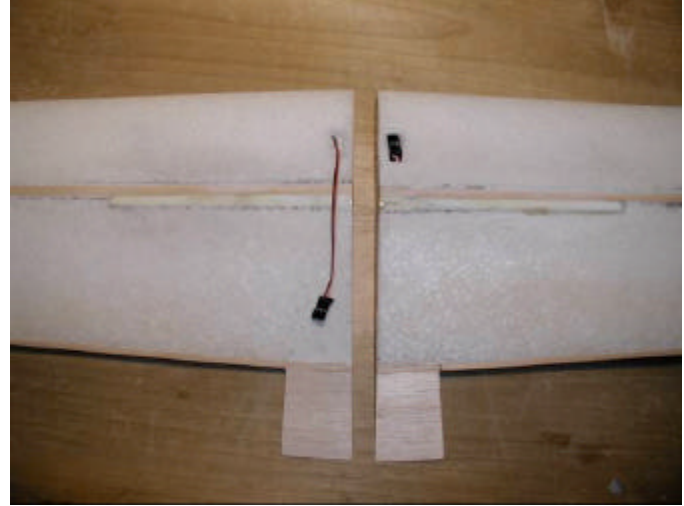
Clean up the ends of the tube with a small file and you're ready to test fit your wing rod. If you haven't done so already, rounding the ends of the wing rod with a file helps with the installation.



Traveling DAW 1-26 2 Meter

Cut the aileron servo cavities and slits for the leads as per the instructions. Since you have two wing sections, you'll want to have a cavity on the top of each wing, near the center, in which to stow the connectors when the wing is assembled in the fuselage.

Go ahead and glue the servos into the wing and run the leads to the center cavities. Let this cure thoroughly because the next step is taping of the wing.



Taping the Wing

I generally follow the standard taping instructions except I beef up the tape at the center. All of these steps assume 2 inch wide strapping tape. Spray a light mist of contact cement on both sides of the wing before you begin taping.

Starting on the bottom of the wing lay a strip of tape from the root to the tip. Add a second strip just ahead of the first taking care not to overlap the first strip. As you get to the tip, the tape will be wrapped over the leading edge onto the top of the wing.

Still working on the bottom, lay a strip approximately 8 inches long just behind the center strip. This strip should be long enough to extend an inch or two beyond the servo. Repeat this all the way to the trailing edge taking care not to overlap the successive strips. Not overlapping the strips helps to maintain a smooth final finish.

Turn the wing over and repeat these steps for the top of the wing.

Reinforce the leading edge by adding one final strip of tape from the root to the tip with its width centered on the leading edge. Wrap this strip around to the top and bottom surfaces of the wing panel.

Now, turn the wing back over and tape the center section from leading to trailing edge. Lay successive strips out toward the tip for at least eight inches being sure to extend it past the end of the wing rod and the servo.

Turn the wing over and do the same on the top.

Tape the other wing and your ready to move on to covering. From this point on, you can follow the standard instructions for the wing.



Removable Stabilizer

One of the cool aspects of the 2-meter 1-26 is that if you make a two-piece wing, you won't need the plywood dihedral brace. Rather than throw it in the scrap box, you can use part of it as the platform for a removable stabilizer.

You'll need a drill and tap for the method described here. The tap will obviously need to match the size of bolt you plan to use and you'll need drill bits that match the sizes required for both the tap and the bolt. I used two 8-32 nylon bolts to for my 1-26. Hint: If you don't already have a tap set and don't want to invest in one, you can buy a self-tapping screw in the same size and thread as the bolts you'll be using. Just substitute the self-tapping screw whenever a tap is required.

Holding the dihedral brace on the stabilizer mounting location you'll see that its $\frac{3}{4}$ inch width just about covers the entire width of the stabilizer mount. This is plenty good enough to provide a stable mounting platform.



Since the plywood is $\frac{1}{4}$ inch thick, you'll need to remove $\frac{1}{4}$ inch of the foam at the platform location. Use the plywood itself as a straight edge to mark line for removal of the foam. Be sure to hold the top edge of the plywood flush with the top of the foam or you may end up with a crooked mount.



Traveling DAW 1-26 2 Meter

Once you have it marked on both sides, use a razor saw or very sharp serrated knife to cut the foam away.

Now hold the wood in position and mark a line at the end of the fuselage where you will cut the wood. Hint: Leave a little extra wood past the end of the fuselage. This will allow you to sand a nice bevel on the platform that follows the contour of the fuselage.

Glue the plywood mount in place with epoxy and allow it to cure thoroughly.



Mark the centerline of the stabilizer and the centerline of the platform to help you align the stabilizer on the fuselage. You'll be drilling holes first through the stabilizer and then, using the stabilizer as a guide, through the platform. Mark locations for the holes in the stabilizer at least $\frac{1}{2}$ inch from the edges, taking care not to be too close to ends of either the stabilizer or the platform.

Drill pilot holes through the stabilizer. Then use the stabilizer as a guide to drill the holes in the platform.



Run the tap through the holes in the platform to accept the hold down bolts. At this point, I like to soak the threads with thin CA and let it cure. Then I run the tap through again. This helps to strengthen the threads.



Traveling DAW 1-26 2 Meter

I also like to strengthen the balsa around the mounting holes in the stabilizer by poking a bunch of holes and then soaking the area with thin CA.

You should now be able to bolt the stabilizer onto the fuselage.

That's pretty much it. From here on out, just follow the standard instructions. Make sure that you do follow the instruction to tape around the stabilizer platform. This gives added strength to this area.



Field Assembly

Field assembly is very easy and takes no time at all.



The Traveling 1-26 ready for assembly.



Move the rudder out of the way so you can access the bolts and attach the stabilizer



Connect the clevis to the control horn. Don't forget this step or your first flight won't be a pretty one!



Put the wing rod in one wing and feed it through the fuselage. Hook up the appropriate aileron servo.



Slide the other wing onto the rod and hook up the other servo.



Slip both wings into the fuselage. Make sure they're centered and straight and you're ready to go flying!