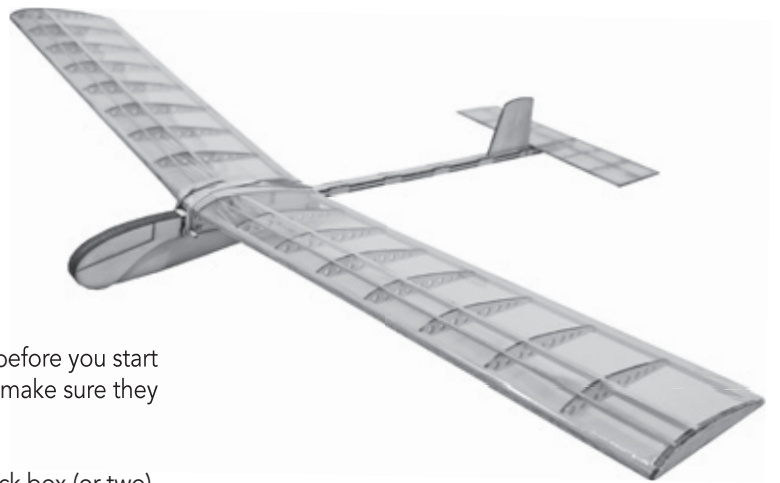


**Specifications:** Wingspan: 28 in. • Wing Area: 105 sq in.  
Airframe Length: ~20.5 in. • Weight: ~1.9 oz. (rtf)



## Using the Manual

Be sure to read each step thoroughly before you start the step. Test-fit the parts together to make sure they fit properly. If necessary trim to fit.

Beside each step you will notice a check box (or two). These are so you can keep track of your progress while building your kit. For steps that have two boxes, as in the construction of the left and right wing halves, these steps must be performed at two different times.

- Your **Old School Model Works** aircraft should not be considered a toy, but rather a sophisticated, working model that functions very much like a full-size airplane. If not assembled and flown correctly, it could possibly cause injury to yourself or spectators, and damage to property.
- You must assemble this model according to the instructions. Do not alter or modify this model, as doing so may result in an unsafe or un-flyable model.
- You must take time to build straight, true and strong.
- While this kit has been flight tested to exceed normal use, if this model will be used for higher stress flying, the modeler is responsible for taking steps to reinforce the high stress points and/or substituting wood that is more suitable for the increased stress.

**Remember: Take your time and follow the instructions to end up with a well-built model that is straight and true.**



# WARNING

**READ THROUGH THIS MANUAL BEFORE STARTING CONSTRUCTION. IT CONTAINS IMPORTANT WARNINGS AND INSTRUCTIONS CONCERNING THE CONSTRUCTION AND USE OF THIS MODEL.**

***If misused, this model could cause serious bodily harm and damage to property. Fly only in open areas.***

- Inspect your model before every flight to ensure it is airworthy.
- Always be courteous and respectful of other users in your selected flight area.
- Choose an area clear of obstacles and large enough to safely accommodate your flying activity.
- Make sure this area is clear of friends and spectators prior to launching your aircraft.
- Be aware of other activities in the vicinity of your flight path that could cause potential conflict.
- Abide by any and all established AMA National Model Aircraft Safety Codes.

**IMPORTANT!!!** Two of the most important things you can do to preserve the aircraft hobby are to avoid flying near full-scale aircraft and avoid flying near or over groups of people.

## INCLUDED ITEMS

### Wood parts included in this kit:

- 1 LP1 - laser cut 1/8" x 2-1/2" x 24" lite ply sheet
- 1 BP1 - laser cut 1/16" x 4" x 24" balsa sheet
  
- 2 3/16" x 3/16" x 18" balsa strips
- 2 1/16" x 1/16" x 18" balsa strips
- 2 1/8" x 1/4" x 18" balsa strips
- 2 1/8" x 1/8" x 18" basswood strips

### Hardware parts included in this kit:

- 2 Rubber bands
- 1 2-1/2" Bamboo stick

### Other items included in this kit:

- 1 Rolled plan
- 1 Manual - the thing you're reading right now. :-)

## ITEMS NEEDED

### Additional Required Building Tools and Adhesives

- Hobby knife and new, sharp blades
- Sand paper - medium grit (150-200)
- Pencil or pen
- T-Pins
- Waxed paper
- Building board
- Wood adhesive of your choice. We use medium viscosity CA (cyanoacrylate), but aliphatic resin and/or carpenter's glues (used correctly) will work just as well and give longer working time.
- Covering: can be a light-weight, iron-on (Ultracote, Monokote or similar), or you use tissue, silk, or similar covering which also requires dope (or equivalent).

### We advise the following:

Closely inspect the supplied laser-cut parts for damage. If you find any damaged or missing parts, contact us within 60 days of purchase (not your dealer).

When removing the laser-cut parts from their sheets, you'll notice the parts are held in place by several small "tabs." These tabs are uncut pieces of wood and can sometimes make it difficult to remove a part. Rather than breaking and/or splintering the wood by forcing out the part, we recommend removing any laser-cut parts from their sheets by using a hobby knife with a sharp blade. A quick cut of the tab will allow the piece to be removed with no damage. Sand any tab remainders flush with the part, so there will be no problem aligning them later.

Don't remove parts from their sheets until you need them. Refer to Appendix A (in the back of this manual) as a reference to what all the laser-cut parts look like and are named.

You'll notice a check box next to each step. Check these off as you go along so you don't miss a step.

There could be a step or two, which leaves you a bit puzzled. If this happens, step back and study the photo(s) for that step, both in this manual and online.

All photos shown in this manual are of different Dove prototypes. Some pieces may have changed slightly with the improvements we've made, so parts can look a little different in some steps.

### Online Supplementary Photos

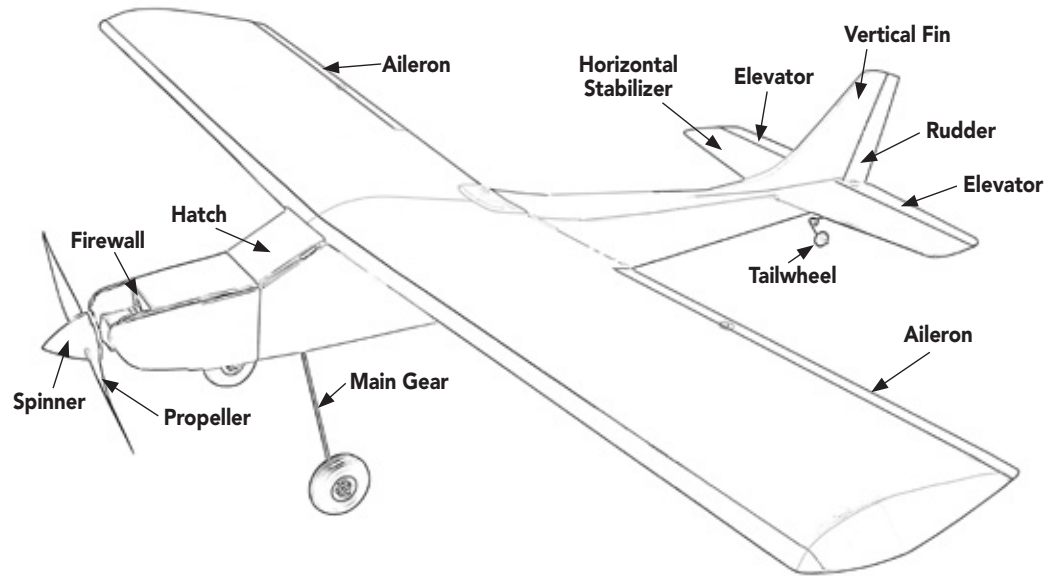
We realize that the smaller black-and-white photos in this manual might not show some of the steps as clearly as you might want. So we've anticipated this and made these photos available on our website. You can either scan the QR code or type this address into your browser:



[www.oldschoolmodels.com/mpics/dove/](http://www.oldschoolmodels.com/mpics/dove/)

# BASIC AIRCRAFT PARTS

Some of these terms do not apply to the Dove, but they are good to know for any future aircraft kits you will build.



## OSMW BASIC AIRCRAFT TERMINOLOGY

**3D FLYING (HOVERING)** - Something that should definitely NOT be done (or attempted) with OSMW aircraft. Our designs are meant to fly like airplanes, not hovering like a helicopter.

**AIRFOIL** - the cross-section shape of a wing. Airfoils can be flat-bottomed (like the GHOST), or other shapes, depending on the style of airplane and what it needs to do.

**AILERONS** - the moving section of the trailing edge (TE) of the wing. Ailerons come in pairs, (left and right) and always work in opposite directions from each other (one up, one down). When used, they cause the airplane to roll to the left or right.

**C/A** - cyanoacrylate glue that bonds quickly compared to woodworking glues. If using C/A with the GHOST, we recommend medium viscosity for the majority of the build, then for the hinges.

**CENTER OF GRAVITY (CG)** - the airplane's point of fore-aft balance, or the point at which all gravitational forces act on the plane.

**CLEVIS** - a plastic or metal clip that is used on the end of pushrods, so the pushrod can be attached to control horns and servo horns.

**CONTROL HORN** - a plastic component that is securely attached to a control surface, onto which the servo linkage is connected.

**CONTROL SURFACE** - any moving part of the flying surface: rudder, elevator, ailerons, and/or flaps.

**DIHEDRAL** - the upward 'V' angle of the wings when viewed from the front. An airplane with a dihedral is more stable in the air than one without.

**DOWN THRUST** - designed into the Dart, it angles the firewall and powerplant downward to help counteract the natural lift of the flat-bottom airfoil when at higher speeds.

**ELEVATOR** - the moving section at the rear of the horizontal stabilizer that controls the pitch attitude of the airplane.

**FIN (VERTICAL STABILIZER)** - the vertical surface at the rear of the airplane used to stabilize the plane in flight.

**FLAPS** - moving sections of the trailing edge of the wing, usually found between the ailerons and fuselage. Flaps create more lift at slower flying speeds and also slows the plane on landing approaches.

**FUSELAGE** - the main body of an airplane, excluding the wings, tail, and everything else.

**HORIZONTAL STABILIZER (TAILPLANE)** - the horizontal surface at the back of the fuselage, to which the elevators are attached.

**LANDING GEAR (MAIN GEAR)** - the wires and wheels on the forward part of the fuselage.

**LEADING EDGE - (L.E.)** - the front edge of the wing, tailplane, or rudder.

**PILOT ERROR** - any mistake, particularly one that ends in a crash, made by the pilot for whatever reason. Pilot error is rarely ever admitted to by the pilot in question. Instead, the incident is usually blamed on radio failure, interference, unexplained gusts of wind, extra-fast-growing trees, or gravity having some fun and suddenly increasing its strength.

*Don't be this type of pilot - admit it when there's pilot failure - it happens to all of us.*

**PORT** - the left side of anything.

**PUSHROD** - a piece of metal/ plastic rod (or thread/cable) that connects a servo arm to its control surface or function. Clevises are commonly used at the ends of the linkages, to clip to the servo/control horns.

**RECEIVER** - a component of the radio control gear that lives inside the aircraft and picks up the radio signals being emitted by the transmitter, then sends signals out to attached servos.

**RIGHT THRUST** - designed into the GHOST, it angles the firewall and powerplant to the right to help counteract the natural pull to the left when at higher speeds.

**RUDDER** - the moving section on the back part of the fin. Used to control the airplane's yaw.

**SERVO** - the component of the radio control gear that converts the radio signal into movement.

**SERVO ARM** - a plastic or metal piece fixed to the servo's output shaft, onto which a pushrod (and/or clevis) connects.

**STARBOARD** - the right side of anything.

**TAILDRAGGER** - an airplane that has 2 main wheels and a small tail wheel - like the Dart. Taildraggers require you to use the rudder when on the ground, a bit more than tricycle gear designs.

**TRAILING EDGE (T.E.)** - the rear edge of the wing, tailplane, or rudder.

**WHEEL COLLAR** - a small, donut-shaped metal piece that slips over the landing gear wire and holds the wheel in place - using a small set screw.

**WING** - the airfoil shaped piece that generates most of the lift.

**WINGSPAN** - the overall length of the wing, from tip to tip.

## IF YOU READ NOTHING ELSE IN THIS MANUAL, PLEASE READ THESE FOUR POINTS.

**Wood is fragile - especially the 1/16th balsa used in this kit. "Fragile" means easily broken or damaged. It also means you must be careful when cutting, trimming, sanding, and handling the wood pieces in this kit. Yes, you can glue things back together, but let's strive to not break them in the first place.**

**It is very important that you assemble the Dove in the order described. Skipping forward in the steps could leave you without the proper lengths of wood to finish the kit. We've included enough wood to easily complete this kit, but you must take care to properly measure and not waste wood when cutting.**

**Save ALL of the scrap wood as you build - the ends of sticks, the leftover sheets, etc. You will use some of this in assembly and can use other parts if you need repairs.**

**Remember, building is not a race. You are the craftsman here. If you take your time, take the time to understand the steps, and make the effort to do good work, it will certainly show when the Dove's airframe is completed.**

### If this is your first build, congratulations!

What you're about to do is build a flyable airplane - yup, that's a pretty cool thing. All of the techniques that you'll learn here can easily be used for anything else you'll build down the road.

Please read through each step before you start, so you can understand what's needed to be done for that step. We'll try to explain everything along the way, but there might be times you run into something you can't wrap your head around. Help can be found at your local r/c club or even on the interwebs - lots of forums and videos on building are available to you.

And remember, building is not a race. You are the craftsman, and if you take your time, take the time to understand, and make the effort to do good work, it will certainly show when the airframe is built.

#### InstaCaddy

Throughout this manual, you'll see photos with our InstaCaddy on the bench. This is a unique collection of Bob Smith C/A glues, accelerator, and pipettes. What makes this special is the box, as it has cutouts that make it the perfect tool to hold everything in one spot - **and the glue won't spill!** If you're needing C/A, consider our InstaCaddy!



Let's begin construction by building the horizontal tail of your Dove.

#### Prepare your work area

Tape down the plans so that the horizontal stab portion is flat on your building surface. Now, tear off a piece of waxed paper to cover this area and tape it to your building surface. Again, make sure it is all perfectly flat.



#### Step 1 - Hor. Stab Assembly (H1)

Locate one of the H1s from BP1. Pin this in place over the plans as shown here, with the pre-cut notches facing inward.

Note - DO NOT PUSH THE PIN THROUGH THE WOOD. Instead, place pins on either side to hold H1 in place.

Make sure that H1 is perfectly straight along its length.



#### Step 2 - Hor. Stab Assembly (H2)

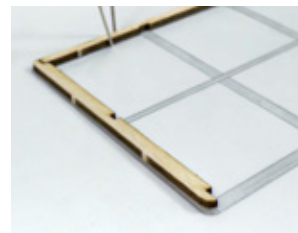
Locate one H2 from BP1. Glue the tip of H2 into the notch pre-cut into the center of H2. Make sure it is flat while the glue cures.



#### Step 3 - Hor. Stab Assembly (H3)

Locate one H3 from BP1. Glue this to the port (left) end of the H1 strip. Make sure that the notches of H3 face inward, and that the top notch fits around the end tip of H1, as shown here.

Make sure it is flat while the glue cures.



#### Step 4 - Hor. Stab Assembly (H3)

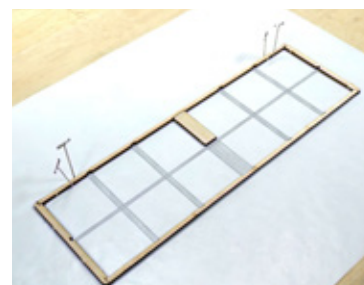
Locate the other H3 from BP1. Glue this to the starboard (right) end of the H1 strip. Again, make sure that the notches of H3 face inward and that the top notch fits around the end tip of H1. Make sure it is flat while the glue cures.



#### Step 5 - Hor. Stab Assembly (H1)

Locate the other H1 from BP1. Glue this into the pre-cut notches on the ends of the H3 pieces you just installed.

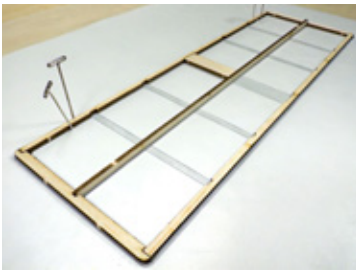
Again, make sure H1 is flat while the glue cures.



**Step 6 - Hor. Stab Assembly (H5)**

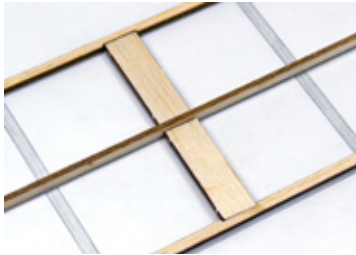
Locate H5 from BP1. This is glued into the center notches of the H3 tip pieces, as well as to the end of the H2 in the center. Note that this piece will stick up taller than the other pieces you installed - this is on purpose.

Make sure H5 is perfectly flat while the glue cures.



**Step 7 - Hor. Stab Assembly (H2)**

Locate the other H2 from BP1. This is glued into the center, pre-cut notch of the bottom H1 and to H5 you just installed. Please make sure it's flat against the building board as the glue cures.



**Step 8 - Hor. Stab Assembly (H4)**

Locate the eight H4s from BP1. These are glued into place as shown here, making sure that they fit into the pre-cut notches of both H1 pieces and to H5. Also make sure they are straight and flat on the building surface.



**Step 9 - Hor. Stab Assembly (G-optional)**

Locate the sixteen Gs from BP1. These optional gussets which can add strength to the joints in the stab. You'll see them called out on the plans. Glue one into the corners as shown on the horizontal stab plans.



**Step 10 - Hor. Stab Assembly (remove)**

Once the glue has completely cured, you can remove the t-pins, un-tape the waxed paper, and gently start to remove the delicate framework from the waxed paper. Take your time, as it can be easily broken at this point.

Set this assembly aside for now.

**Let's now build the fuselage of your Dove.**

**Prepare your work area**

Remove the horizontal stab plan from your building surface. For the fuselage, you don't need to build over the plans for the fuselage, but we do advise that you tape down a fresh piece of waxed paper, roughly 24" long, onto your building surface. Again, make sure it is perfectly flat.

**Step 11 - Fuselage Assembly (F5, F6)**

Locate F5 and one of the F6s from BP1. Dry-fit these two pieces together before applying glue so you can see how this works.

F5 has several pre-cut notches into each longer side. The tabs in F6 will fit into these notches. F6 is symmetrical, so it can be attached on either side. So you'll glue F6 to F5, a little at a time, making sure the pieces are perpendicular to each other as shown. Glue a few inches together first, then work your way along until the entire length is glued together.



**Step 12 - Fuselage Assembly (F6)**

Locate the other F6 from BP1. This is glued to the F5/F6 assembly from the previous step. Just as you did before, you'll now install this F6 on the other side of F5, as shown here.

So you'll glue F6 to F5, a little at a time, making sure the pieces are perpendicular to each other as shown.

Glue a few inches together first, then work your way along until the entire length is glued together.



**Step 13 - Fuselage Assembly (F7)**

Locate F7 from BP1. This is glued on top of the F5/F6 assembly from the previous steps.

Take your time as F7 needs to be glued to both F6s. Do this a little at a time, making sure that F7 is firmly pressed down onto the F6s as you go along.

Glue a few inches together first, then work your way along until the entire length is glued together.



**Step 14 - Fuselage Assembly (F1)**

Locate both F1s from LP1.

These are glued, one on top of the other, to form a thicker F1. Make sure these are perfectly aligned and keep the two pre-cut circles clear of glue.

Hold this down firmly while the glue cures to guarantee that it is flat along its entire length.



**Step 15 - Fuselage Assembly (dowel)**

Locate the basswood dowel and cut two equal 1-1/2" lengths. These dowels will be glued into the pre-cut holes in the F1 assembly from the previous step. Make sure each is pushed in halfway, as shown here.

Cut two dowels to this length



### Step 16 - Fuselage Assembly (F2)

Locate the F2 from LP1. This is glued to the port side of the fuselage so that the etching will show. Press this in place, over the dowels, and firmly against the F1 assembly.



### Step 17 - Fuselage Assembly (F3)

Locate the F3 from LP1. This is glued to the starboard side of the fuselage so that the etching will show. Press this in place, over the dowels, and firmly against the F1 assembly.



### Step 18 - Fuselage Assembly (F4)

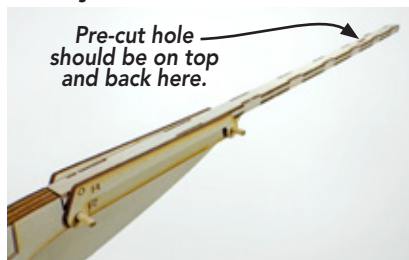
Locate both F4s from LP1. Note the etched circle on one end of each F4. This designates the end that should be nearer to the front of the fuselage. When properly installed, these two pieces will give the wing a positive angle of incidence and give a little more lift. Push these in place over the dowels, and glue them to the F2 and F3 pieces you just installed.



### Step 19 - Fuselage Assembly (install boom)

Locate the fuselage boom you created earlier, as this will now be slid into the fuselage's nose section, and dry-fit this in place - **DO NOT GLUE IT IN AT THIS TIME!**

Look for the pre-cut hole on the top surface of the boom. This is where the vertical fin will be installed, so position the boom with that hole facing upwards and away from the nose.



The boom should be able to slide back and forth with a little pressure. This will aid in balancing the model and getting the best glide later on.



### Step 20 - Fuselage Assembly (V)

Locate V from BP1. This is the vertical fin and will now be attached to the tailboom, into the pre-cut hole referenced in the last step.

Before you glue it in place, here's how to tell the proper way it should be positioned. On the bottom edge of "V"



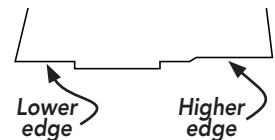
there is the large tab. This obviously slots into the hole on the boom.

But also look at the bottom edge on each side of the notch. One side is a little lower than the other - it's subtle, but it's there if you look. This lower side will face the front of the fuselage when glued in place.

Now apply glue to this lower bottom edge and to the tab - **BUT NOT ALONG THE HIGHER BOTTOM EDGE.**

Press V into place, making sure it is perfectly straight and vertical with the fuselage.

Set the fuselage aside for now.



### Let's now build the wings of your Dove.

As you'll see in these following photos, we built both wings at the same time. If your work surface isn't big enough for this, you'll have to build one half of the wing, and when done, come back to this step and start on the other half.

### Prepare your work area

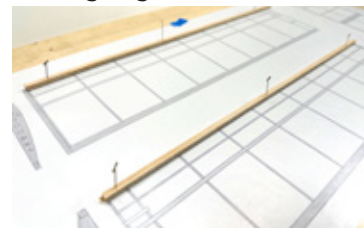
Clear off your building surface, and tape down the wing plans over your board. Cover this with a new piece of waxed paper and tape it in position - nice and flat.



### Step 21 - Wing Assembly (leading edge)

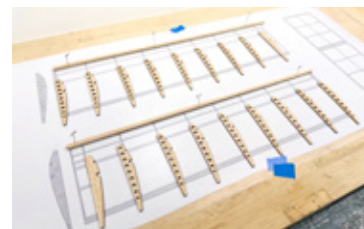
Locate the 3/16" sq balsa strip. You'll measure and cut the leading edges of the wings from this piece. Mark your cuts so they're roughly a 1/4 inch past the ends of each wing half. Then pin these pieces in place over the plans.

Make sure they are both straight along their entire lengths.



### Step 22 - Wing Assembly (R2, R3)

Locate eight R2s and one R3 for the port wing half, and lay them out in place, similar to what's shown in this photo (look at the plans to see the placement of these ribs). Also, don't worry about the R1 ribs that are shown - those will be installed later - just the R2s for now.



### Step 23 - Wing Assembly (R2, R3)

Now you'll glue each of these ribs in place to the leading edge. Use a little dab of glue and carefully place each rib, making sure it's perfectly vertical, flat on the building surface, and up against the leading edge.

**Again, pay no attention to the R1 ribs installed in this photo - those come in the following steps.**



### Step 24 - Wing Assembly (R1, W)

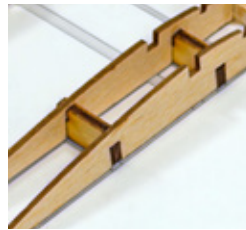
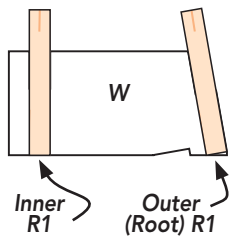
This is another step where it's best to dry-fit things together first.

Locate the four R1 ribs from BP1 and the four Ws from LP1.

Note that the Ws have a vertical slot and an angled slot. Let's focus on the vertical slot first.

Grab two Ws and one R1. Push one W into R1's front pre-cut slot. Then push the second W into R1's rear pre-cut slot. Then the second R1 can be inserted into the angled slots - just as shown in this picture. When you're satisfied with how this goes together, remove the pieces, apply glue, and attach these pieces together, making sure they are straight and flat on the building surface.

Using the remaining two Ws and R1s, you'll now make a MIRROR image of this first assembly. AGAIN - A MIRROR IMAGE.



### Step 25 - Wing Assembly (R1, W)

Now you'll glue these R1/W assemblies in place on the wing halves. Note that the angled R1 is the root (inside) rib to give the proper dihedral when the halves are joined later on). Use the DG gauge in LP1 to double check the angle - place flat the workbench and up against R1.

When you have these assemblies correctly positioned, glue them in place to the leading edge of the wing halves.



### Step 26 - Wing Assembly (main spars)

Locate the 1/8" sq. basswood strip and cut two lengths to form the main spars. Again, cut this a little long on each end.

Dry-fit this into place first, making sure you see how the spar fits into each rib. Then remove the spar, and you'll apply a dab of glue into each rib's spar notch and press the spar into place. Make sure that all of the ribs are straight as you do this, and that the spar is fully inserted into each notch.



### Step 27 - Wing Assembly (sub spars)

Locate the 1/16" sq. balsa strip and cut two lengths to form the sub spars. Again, cut this a little long on each end.

Use a bit of care, as this piece will be far more fragile than the basswood spar. Dry fit this into place first, making sure you see how the spar fits into each rib.

Then remove the spar, and you'll apply a dab of glue into each rib's sub-spar notch and press the spar into place. Make sure that the spar is fully inserted into each notch.

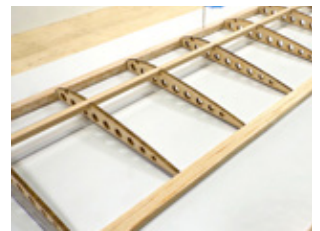


### Step 28 - Wing Assembly (trailing edge)

Locate the 1/8 x 1/4" balsa strip and cut two lengths to form the

trailing edges of each wing half.

Starting at one end, apply a dab of glue to the first 3 ribs. Then press the trailing edge into place so that the 1/8" side is up against the ribs. Make sure the ribs are straight when you do this. Wait for the glue to cure; then move on to the next couple of ribs, apply glue, and attach the trailing edge. Continue on down the wing until the trailing edge is glued to all of the installed ribs.



### Step 29 - Wing Assembly (W)

You should now have both assembled wing halves, which should look pretty close to what's in this picture. Carefully remove the wing halves from the waxed paper.



Note - if you're only building one half at a time, it's time to go back to step 19 and make the other half - make sure you are building a port and a starboard wing - not two matching halves.

### Step 30 - Wing Assembly (sanding)

With both wing halves finished, it's time to true up both ends of each wing half. This means that you'll remove any extra stick material that extends past the ribs. Carefully cut and/or sand until the material is flush with the rib surfaces on both ends of each half.

### Step 31 - Wing Assembly (join halves)

Now it's time to glue both wing halves together, forming a one-piece wing assembly.

Glue both angled R1 (root) ribs together, making sure they are perfectly aligned. Hold or lightly clamp these together until the glue cures completely.



### Step 32 - Wing Assembly (R4)

Locate both R4 ribs and glue one to the end of each wingtip as shown here. Make sure they are perfectly aligned.



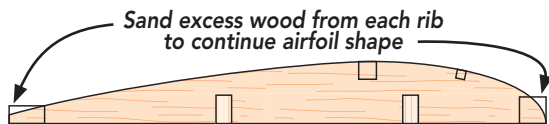
### Step 33 - Wing Assembly (S)

Locate both Ss from BP1. These are strips that are glued on top of the wing, covering the center ribs and adding strength to support the rubber bands later on in assembly. Glue each of them in place, making sure they are attached to the leading edge, trailing edge, each rib, and the Ws.



### □ Step 34 - Sanding

It's now time for some gentle sanding. Really the only place that needs attention is the leading and trailing edges of the wing. The leading edge should be rounded to continue the airfoil shape, instead of the blunt edge it has now. And the trailing edge should also be tapered a bit.



Also lightly sand the S sheeting from the previous step. Look over the rest of the airframe and make sure any extra glue, wood, or anything else that will interfere with covering is removed/sanded-smooth.

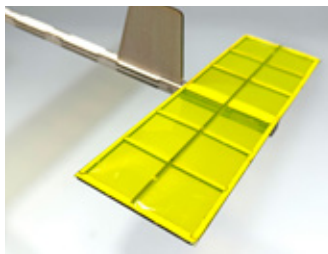
### □ Step 35 - Covering

You'll need to cover the top surfaces of the wing and the horizontal stab. You can also cover the bottom if you want, but we found that it really didn't add much to the flight capabilities - it just added more weight. So that's why we only covered the top surfaces.

We chose to use a simple iron-on covering for our prototypes, but you can use more elaborate (and lighter) tissue or silk-type coverings. Note that those coverings will also require dope to work properly. You can find many examples of how these coverings are applied on YouTube.

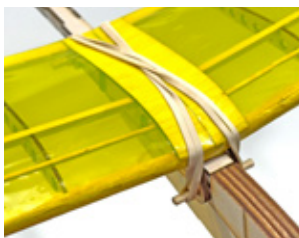
### □ Step 36 - Attach stab

Once the horizontal stab is covered, it can be glued to the stab. Apply glue to the bottom of the center H3 pieces, and glue the stab to the top of the boom, just behind the vertical fin. Please take the extra second or two to make sure it's aligned before the glue cures.



### □ Step 37 - Attach wing

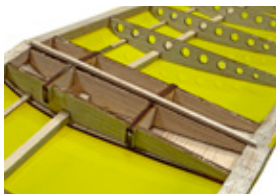
Included in your Dove kit are a couple of rubber bands. These are used to hold the wing in place. You'll center the wing, resting on top of the fuselage between the two dowels. Then carefully attach the rubber bands in a criss-cross fashion, as shown here.



### □ Step 38 - Insert tailboom

Push the tailboom into the rear of the fuselage, making sure the vertical fin is pointing upwards. Slide it in roughly 3-1/2" - **but DO NOT GLUE THIS IN AT THIS TIME.**

If the boom is not a snug fit, remove the wing and glue a strip of the leftover 1/16th square balsa to the underside of the wing - centered on the two R1 ribs as shown here. This will give more friction to hold the boom in place.



**This completes the construction of your Dove.**

### □ Step 39 - N

Located in LP1 are two N pieces. These are glued to the nose, on each side of the fuselage as shown here.



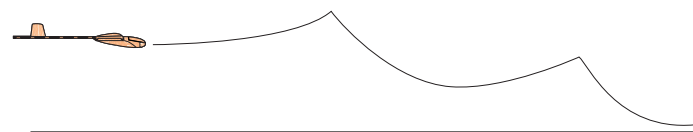
### □ Step 40 - Test flying

Please note that the Dove is not indestructible. As you've seen throughout the build, it's made from very light and thin balsa wood to keep the weight to a minimum and give good gliding performance. It is only recommended to be flown in little to no wind. Higher winds will cause problems.

Resist the urge to use a high-powered throw. It's not a javelin, nor will it hold up to a lot of abuse. With this in mind, gently throw the Dove level when test flying it - like you would throw a dart towards a dartboard. You should find that it will go a good 50 feet with just a gentle, level toss.

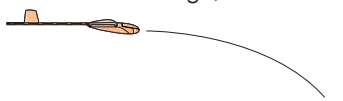
If you recall, we asked you not to glue the tailboom of your Dove to the forward part of the fuselage. This allows it to be slid slightly forward or aft as needed to help with the balance, without adding weight. Pushing the tailboom into the forward part will move the weight forward, in effect adding nose weight. And by pulling the tailboom out, it will move weight rearward, in effect, adding tail weight.

**If the Dove climbs**, then dives when it's thrown, there's a good chance it's tail-heavy - causing a porpoising flight - climb, then dive, then climb, etc.



Push the tailboom into the forward section of the fuselage, a little at a time, and test the balance with additional flights until you get it just right.

**If the Dove dives**, then it's nose heavy. Pull the tailboom slightly backwards from the forward section of the fuselage, a little at a time, and test the balance with additional flights until you get it just right.



**Another thing you can do** is to cut a small scrap from the BP1 balsa sheet (roughly 1/8" x roughly 1" long). This can be placed under the leading edge of the wing in this location - see pic - to increase the incidence of the wing and change the glide performance.

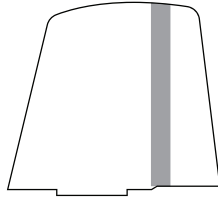


**You can place a scrap under the leading edge of the wing, spanning across the fuselage.**

Once you are happy with the glide of your Dove, glue the tailboom in place to lock in the balance.

Experiment and have fun learning your Dove's flight tendencies. Each kit will be slightly different and will fly just a little differently into the wind, going downwind, and in crosswind conditions.

Oh, and in case you were wondering about that higher edge on the vertical fin. This allows you to add a "rudder" of sorts. If you'd like to add a gentle left or right turn into the Dove, wet the vertical fin in the shaded area shown in this diagram. This will soften the wood and allow it to bend. Hold a very small bend into the wood until the moisture evaporates; then wood will hold that slight left or right turn. You don't need much of a bend - so start small, test, then add more if you'd like.



#### Warranty Information

**Old School Model Works** guarantees this kit to be free from defects in both material and workmanship at the date of purchase. This warranty does not cover any parts damage by use or modification. In no case shall **Old School Model Works'** liability exceed the original cost of the purchased kit. If you find any damaged or missing parts, contact us within 60 days from purchase to receive replacement(s).

Further, **Old School Model Works** reserves the right to change or modify this warranty without notice.

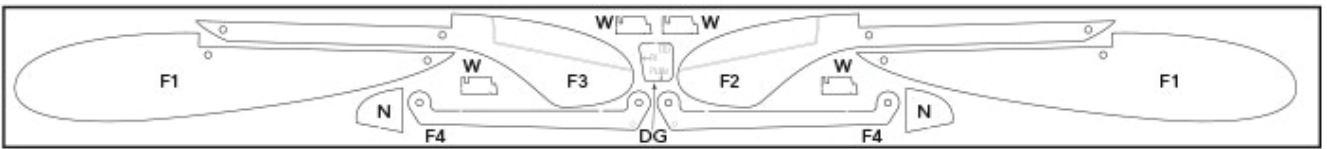
In that **Old School Model Works** has no control over the final assembly or material used for the final assembly, no liability shall be assumed nor accepted for any damage of the final user-assembled product. By the act of using the product, the user accepts all resulting liability.

#### Limit of Liability

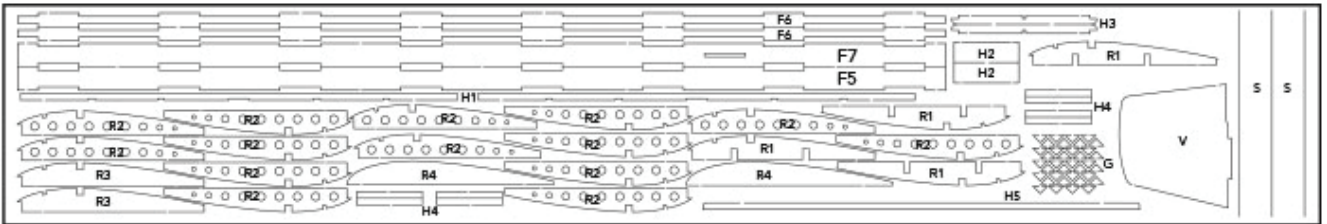
In the use of this product, our only obligation shall be to replace such quantity of the product proven to be defective. The user shall determine the suitability of the product for his or her intended use and shall assume all risk and liability in connection therewith.

If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unopened condition.

**LP1**  
1/8" Lite Ply



**BP1**  
1/16" Balsa



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