

## **Red Rover**

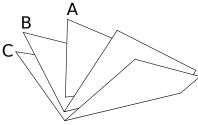
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#### **Preparation**

Print first page on stiff card stock, approximately 200 g/m² (sometimes written gsm) Use glue stick or white glue. Stack books on top of pieces to hold them flat while glue is drying.

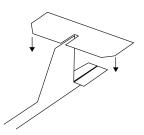
#### Fuselage (A, B, C)

Fold B & C in half along dotted line.
Glue A inside B.
Glue B inside C.
(Don't glue tabs on C yet)



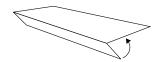
### **Tail (E)**Fold out tail tabs on C.

Glue E to C using tabs.



#### Wing (D)

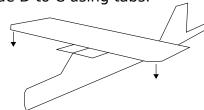
Fold D along dotted line. Glue to itself. (This strengthens front of wing).



Put a slight curve (camber) in wing.

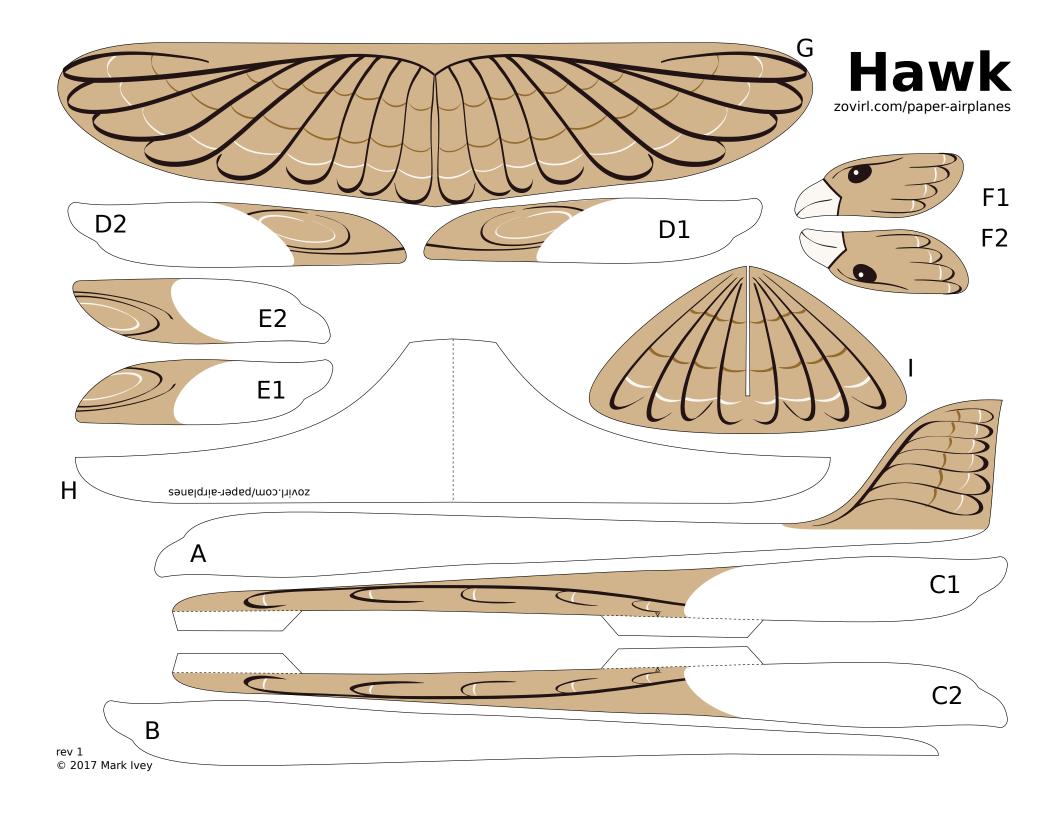


Fold out wing tabs on C. Glue D to C using tabs.



#### **Balance**

Put large paper clip on nose.
Correct balance point is indicated by triangles under wing (on C).
Check that plane balances on your finger tips at the correct balance point.



## Hawk

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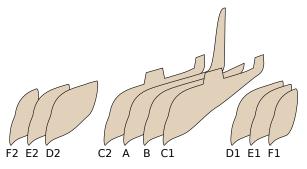
#### **Preparation**

Print 2nd page on stiff card stock (100 gsm paper is good). Cut parts out with scissors or hobby knife as you need them. Use glue stick or white glue.

Stack books on pieces to hold them flat while glue is drying.

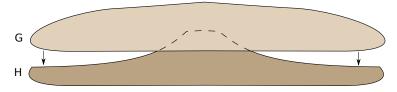
#### Fuselage (A - F)

For fuselage, glue A - F together like a sandwich. Glue A - C, then let dry before adding D - F. Keep glue off the tabs on C.

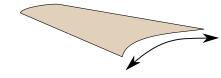


#### Wings (G - H)

Build the wing by gluing H to the bottom of G.



Put a slight curve front-to-back (camber) in the wing.



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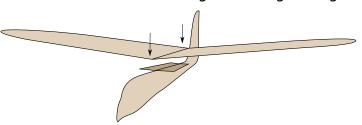


#### ...wings continued

Bend wing in middle to raise wingtips

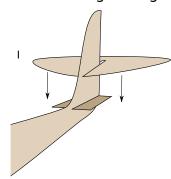


Fold out tabs on C. Glue wing to fuselage using tabs.



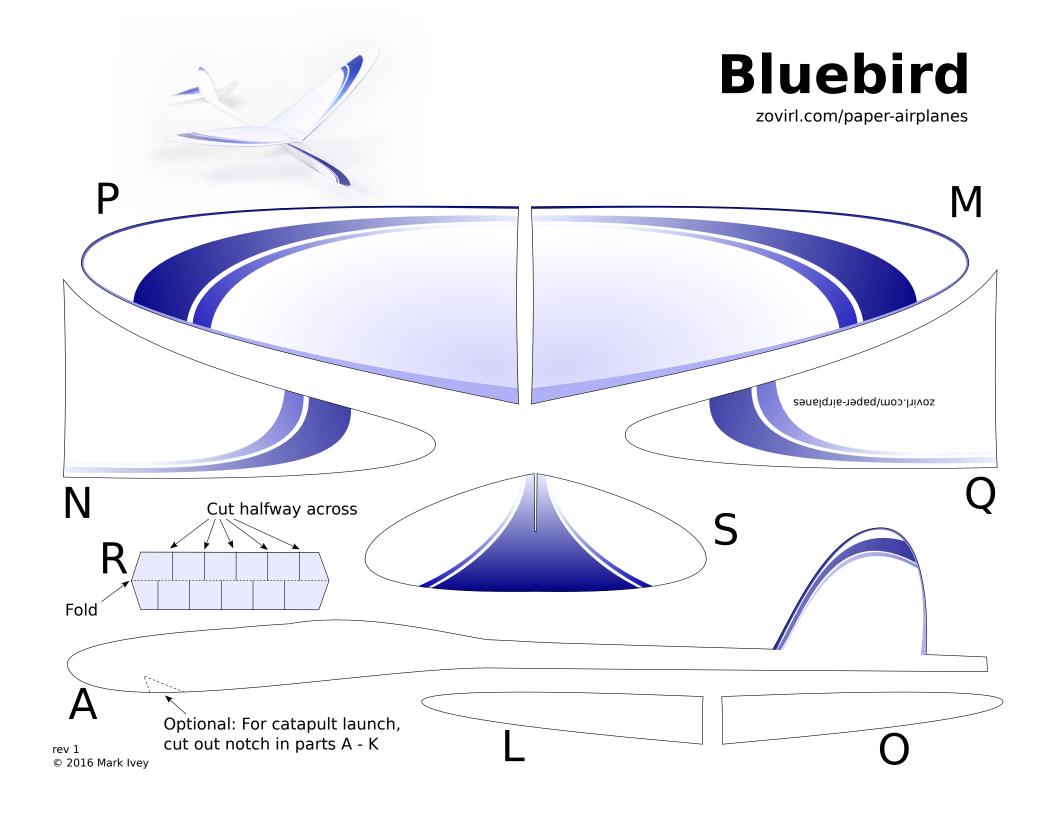
#### Tail (I)

Fold out tail tabs on C. Glue I to fuselage using tabs.



#### **Check Balance**

Correct balance point is indicated by triangles on C, under top wing. Use tweezers or a pair of bent paper clips to reach under the wing and check that plane balances from wing at balance point.



**Bluebird** zovirl.com/paper-airplanes Fold Cut Fold Optional: For catapult launch, cut out notch in parts A - K rev 1 © 2016 Mark Ivey

## **Bluebird**

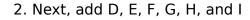
#### **Preparation**

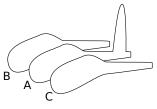
Print first 2 pages on stiff card stock, approximately 100 g/m² (sometimes written gsm) Cut parts out with scissors as you need them. Use glue stick or white glue. Stack books on top of pieces to hold them flat while glue is drying.

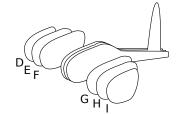
#### Fuselage (A - K)

For best results, let dry after adding each layer. Optional: For catapult launch cut out notch in nose on all fuselage parts (A - K).

1. Glue B and C to A





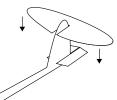


3. Finally, add J and K (Don't glue tabs yet).



Tail (S)

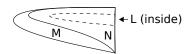
Fold out tail tabs on fuselage (J and K). Glue S to fuselage using tabs.

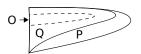


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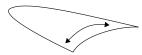
#### Wing (L - R)

Glue L between M and N. Glue O between P and Q

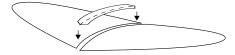




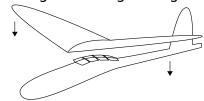
Put a slight curve (camber) in both wings



Glue wings together at an angle, using R



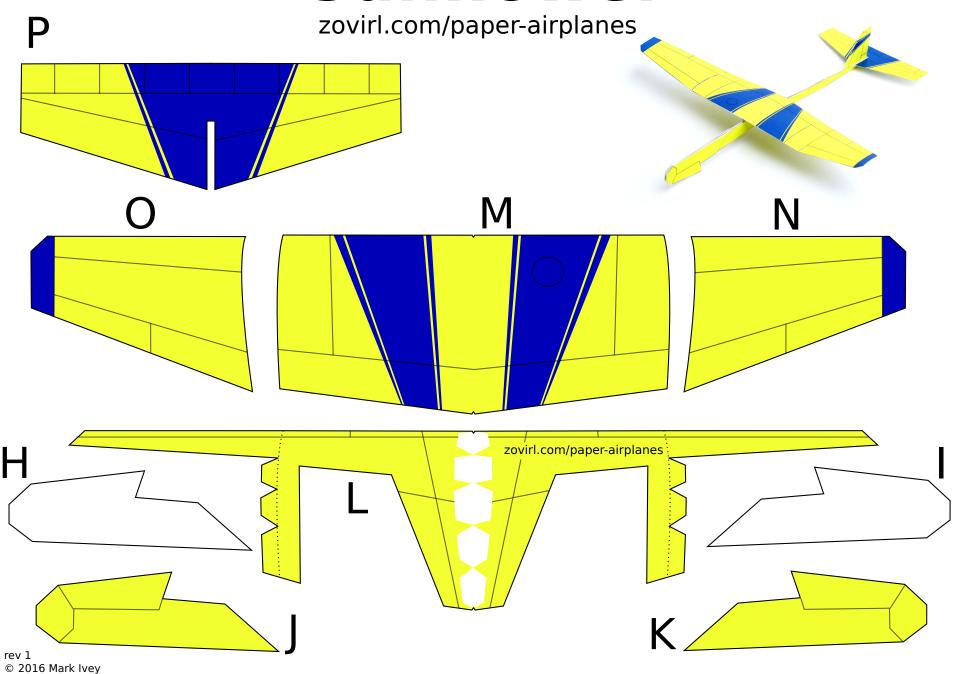
Fold out wing tabs on fuselage (J and K). Glue wing to fuselage using tabs.

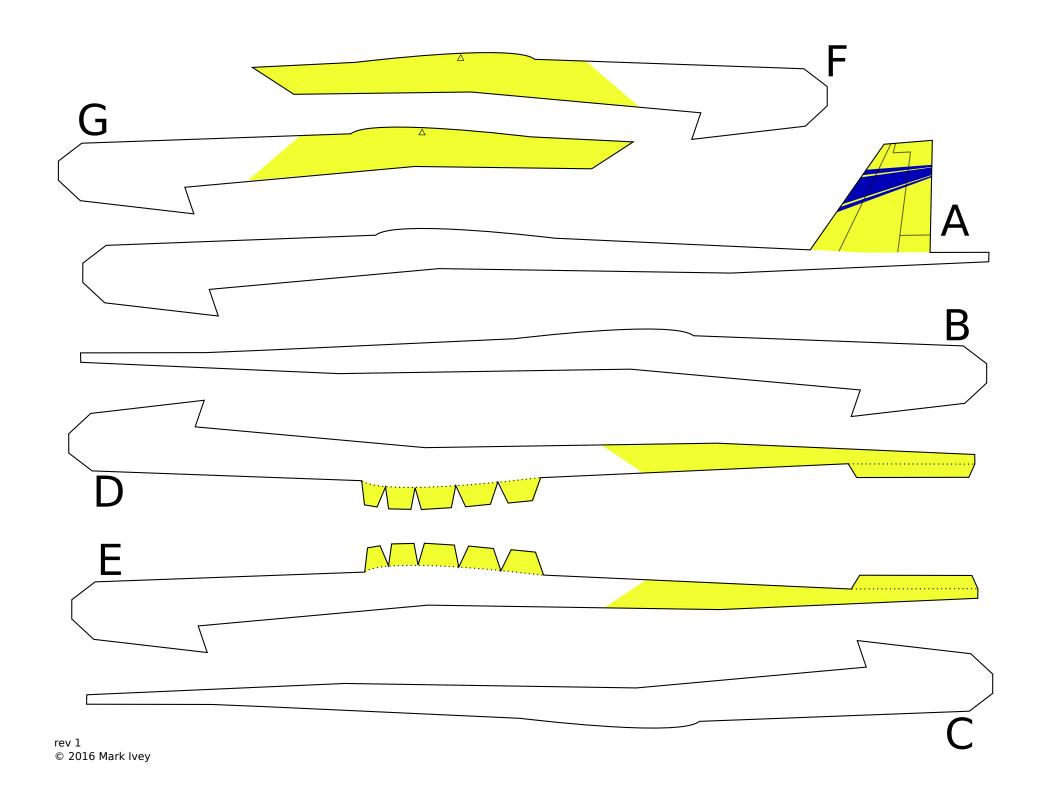


#### **Check Balance**

Correct balance point is indicated by triangles under wing (on J and K).
Check that plane balances on your finger tips at the correct balance point.

# Sunflower





## Sunflower

#### **Preparation**

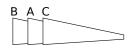
Print first 2 pages on stiff card stock, approximately 100 g/m² (sometimes written gsm) Cut out parts with scissors (remember their labels) Use glue stick or white glue.

Stack books on top of pieces to hold them flat while glue is drying.

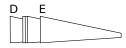
#### Fuselage (A - K)

For best results, let dry after adding each layer

1. Glue B and C to A



2. Next, add D and E (Don't glue tabs yet)



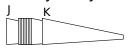
3. Then add F and G



4. Then add H and I

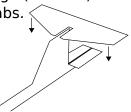


5. Finally add J and K



#### Tail (P)

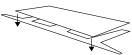
Fold out tail tabs on fuselage (D and E). Glue P to fuselage using tabs.



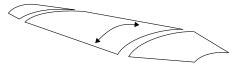
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#### Wing (L - O)

Start wing by gluing L to bottom of M



Put a slight curve (camber) in wing and N and O



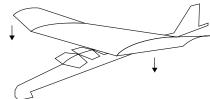
Bend L up along the dotted lines (at the edges of M)



Glue N and O to L

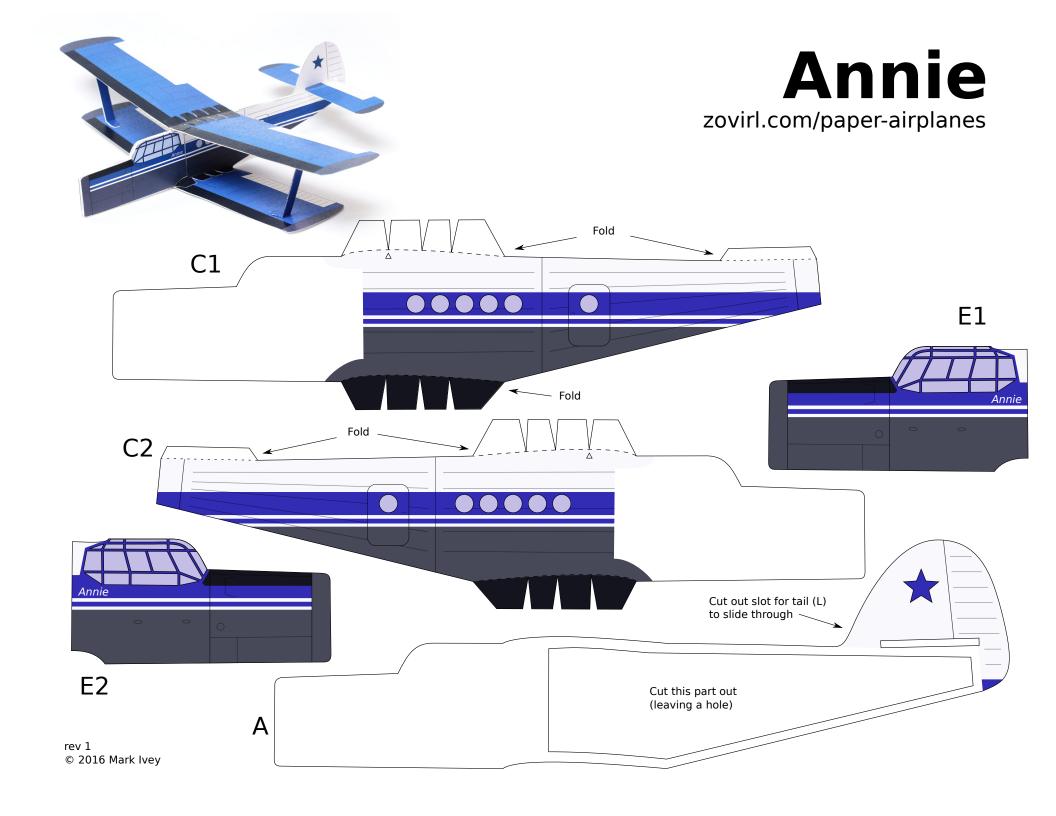


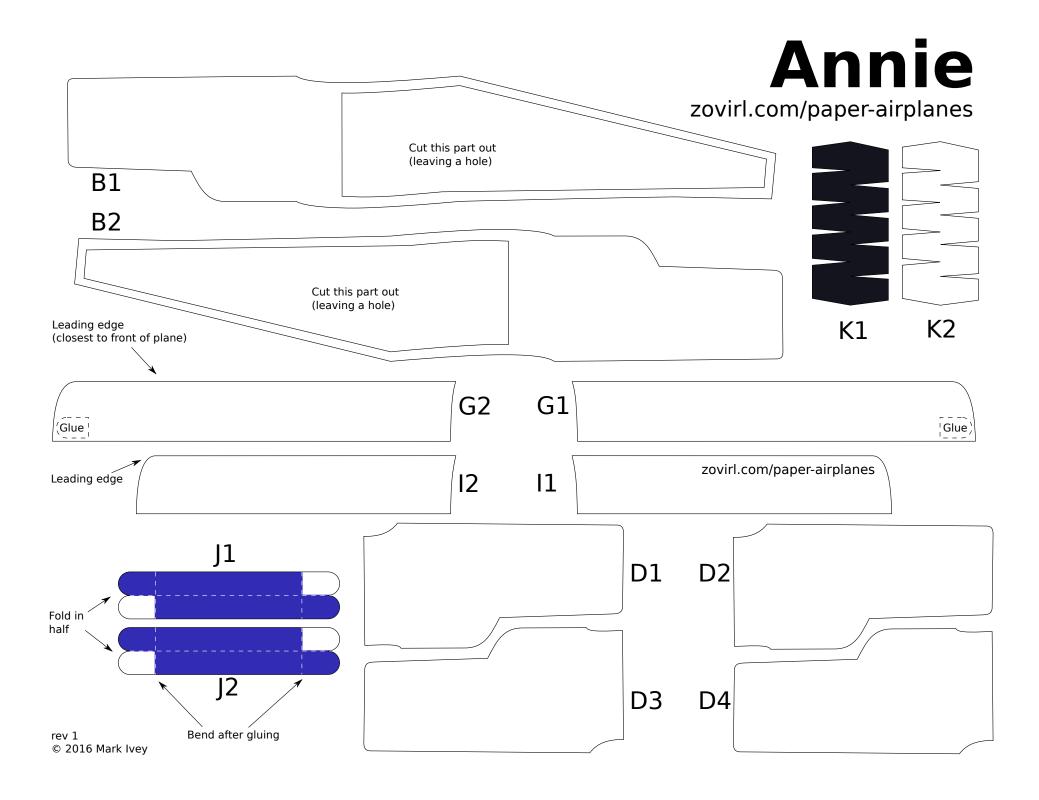
Fold out wing tabs on fuselage (D and E). Glue wing to fuselage using tabs.

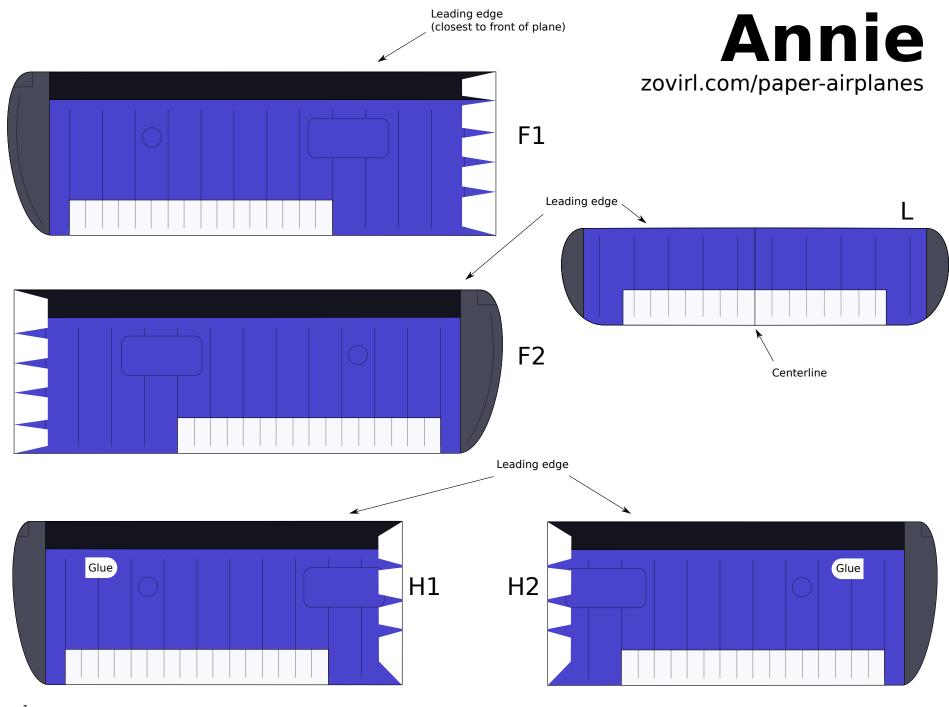


#### **Check Balance**

Correct balance point is indicated by triangles under wing (on F and G).
Check that plane balances on your finger tips at the correct balance point.







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## **Annie**

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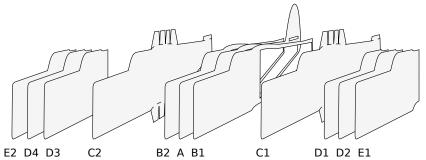
#### **Preparation**

Print first 3 pages on stiff card stock (100 gsm paper is good). Cut parts out with scissors or hobby knife as you need them.5 Use glue stick or white glue.

Stack books on pieces to hold them flat while glue is drying.

#### Fuselage (A - E)

For fuselage, glue A - E together like a sandwich. Glue A - C, then let dry before adding D & E. Keep glue off the tabs on C.

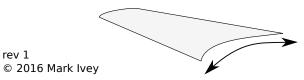


#### Wings (F-K)

Strengthen leading edges of wings by gluing F1/G1, F2/G2, H1/I1, and H2/I2. The skinny pieces go on the underside of the wing, along the leading edge.

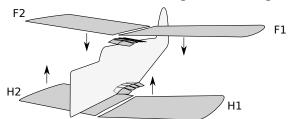


Put a slight curve front-to-back (camber) in all 4 wings.

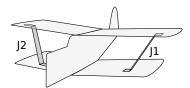


#### ...wings continued

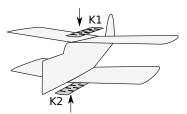
Fold out tabs on C. Glue wings to fuselage using tabs.



Struts: Fold J in half and glue. When dry, bend ends & glue J between top & bottom wings at spots marked "glue."



Strengthen wing joints by gluing K1 on top wing joint and K2 on bottom wing joint.



#### Tail (L)

Fold out tail tabs on C. Slide L through hole in A and glue to fuselage using tabs.



Correct balance point is indicated by triangles on C, under top wing. Use tweezers or a pair of bent paper clips to reach under the wing and check that plane balances from wing at balance point.