Building The
Ultra Micro Pitts

www.BlastRC.com

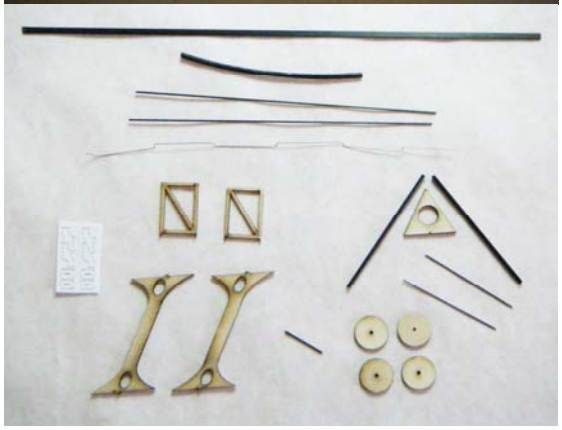
Congratulations on your Ultra Micro Pitts Special. This kit is designed for an Intermediate builder in mind. Because of this, certain techniques will be brief in explanation but you can find more detailed techniques on any of the internet forums of send us an email and we would be happy to share our experiences.

Please use good judgment when flying this or any other R/C model and always be safe. Even though it is extremely small and light weight, there is always the possibility that you could poke someone's eye out or other personal injury or damage. It is also a very good idea to join the Academy of Model Aeronautics which also has a Park Pilot Program for smaller models.

On to business… It's always a good idea to read the instructions thoroughly before starting. That way you can become familiar with what parts go where. Hopefully pictures will help for those of us with attention deficits.

You will need:

A very sharp hobby knife
Foam Safe CA glue and accelerator
A small piece of wax paper
Hinge tape (Scotch tape or Blenderm will do)



Your kit should include foam parts:

A) Upper Wing
B) Lower Wing
C) Main Fuselage
D) Cowling C1-C4
E) Rudder
F) Horizontal Stabilizer
G) Bulkhead F1
H) Dash Panel
I) Cockpit Bulkhead F2
J) Cockpit Floor
K) Battery Support
L) Wheel Pant pieces (x8)

Your kit should include these other parts:

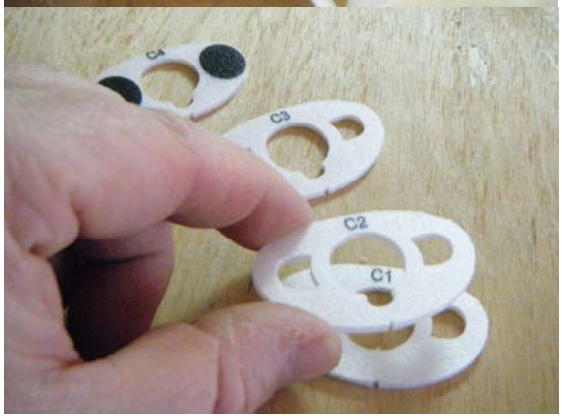
A) Carbon main wing spar
B) Shrink tube
C) Carbon control rod
D) Pre-bent push rod ends
E) Control horns and wheel pant collars
F) Wing center struts
G) Wing outer struts
H) Carbon landing gear struts
I) Landing gear "A" frame
J) Wire wheel axles
K) Little wooden wheels
L) Carbon tail skid

Take the fuselage and pre-bend the creases on the inside of the fuselage. Place a small piece of wax paper on your work surface so your parts won't get glued down. Hold together the edges on the front bottom so the first panels are flat to each other. Apply some CA glue to the seam and hit it with some accelerator. Once it hardens, you should hit the bottom side with accelerator as it was covered by the wax paper and may not be cured yet.

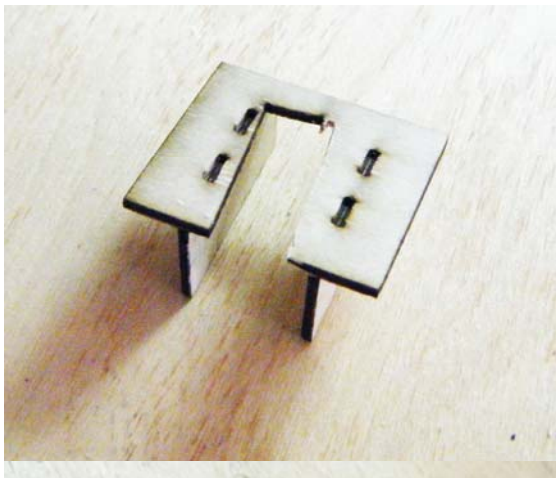
Glue in the rear cockpit bulkhead to one side of the fuselage. Be sure the printed side is facing the inside of the cockpit. There is a small notch on the top of the bulkhead to help center it to the inside of the fuselage edge. The bottom of the bulkhead should be just outside where the lower wing nests to the bottom edge of the fuselage.

Glue the other side of the fuselage to the bulkhead too.

Glue together the edges of the top turtle deck by holding it down flat on a piece of wax paper. Then apply glue down the seam and hit it with accelerator. Be sure the two halves line up in the rear toward the tail.

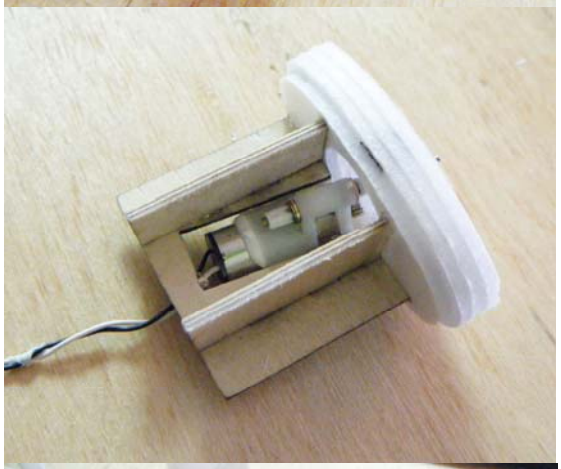


Stack and glue together C1 – C3. Start with the front piece (C1) and stack them with the printing face up. The last one, C4, will glue facing the front. This is so the black will show through the front. This one is smaller than the other three and will fit inside the front of the fuselage and be the firewall for the motor mount. There is a notch on the bottom of each one to aid in alignment.



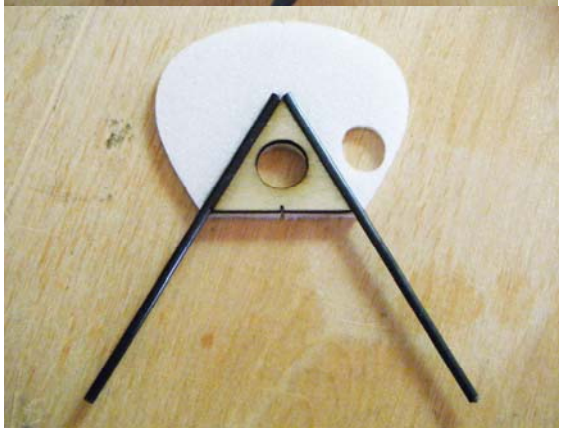
Assemble the motor mount. As viewed from the top facing the front, the motor should angle to the right and down (not necessarily they way it's pictured here). The motor will glue up onto the bottom of the mount as pictured below.

If you are using a motor that was in a previous model, be sure to remove all the old glue that you can (nothing will stick to that white silicon glue, so it must be fully removed or you will not get a good glue joint).



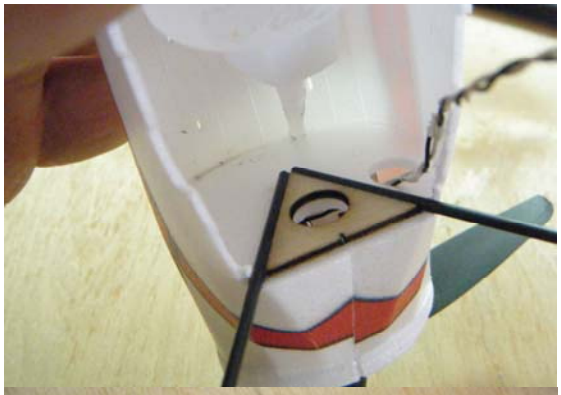
Glue the motor mount assembly to the cowling so that the shaft is centered horizontally and vertically to the hole. Also, be sure you have clearance for the pinion gear on the motor itself. Once the motor is glued in, you can sand down the cowling for a rounded more scale appearance. You can also screw the prop on at this point.

Glue motor/cowl assembly to fuselage. Align bottom notch with seam. You do not need to glue around the whole seam. Simply tack it in about four places. This will make removal much easier. At this point it is O.K. to twirl the prop and make engine noises.

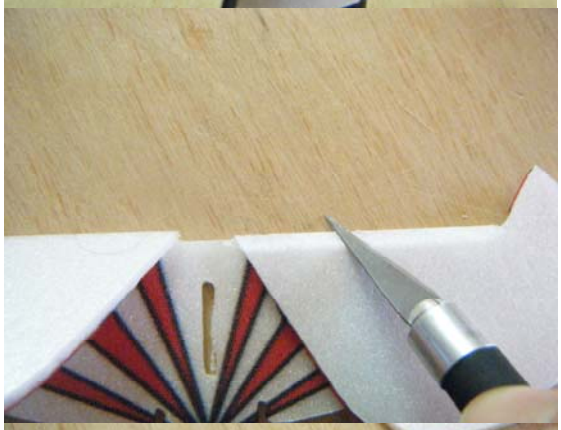


Glue the "A" frame to the bottom of bulkhead F1. The "A" frame has a notch on the bottom of it for alignment. It is probably best to keep the pass through hole on the right as shown if using a standard AR6400 brick.

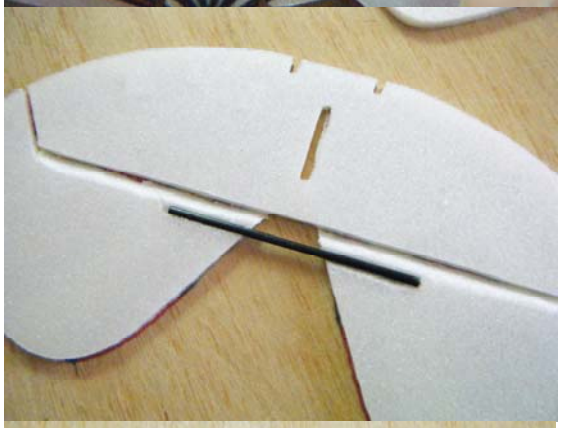
Glue the landing gear struts to the "A" frame and F1 so they are even at the top where they meet. Once glued in place, apply a second coat of glue to fill in any gaps and to make a secure bond.



Thread the motor wire through the opening hole and place F1 in the fuselage. It should press up against the back of the motor mount with the legs of the landing gear resting against the front of the wing opening. Once in place, apply a generous amount of CA to the outer seam and along the bottom of the “A” frame seam.

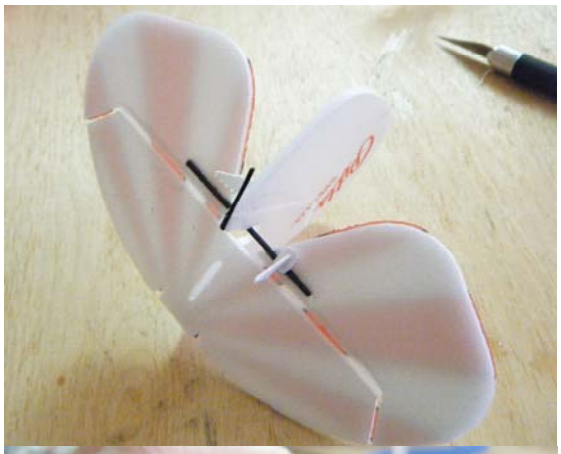


Spread glue on elevator and rudder hinge areas (printed side). This will let your hinge tape stick to the foam. Apply the hinge tape. This can be the whole length of the hinge or in small sections for less stress on the servos. Flip over and finish scoring the hinge line. Fold back completely and bevel the elevators and rudders at a 45 degree. You can also rub the bevel to smooth out the hinge line with the flat of your hobby knife as shown.



Glue in the elevator connecting rod.

Glue in tail skid. Be sure to not get glue in the hinge..

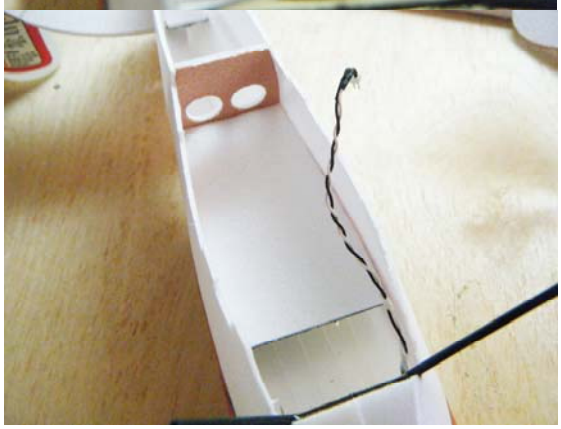


Assemble rudder and elevator. Assemble and attach control horns. Set aside for now.

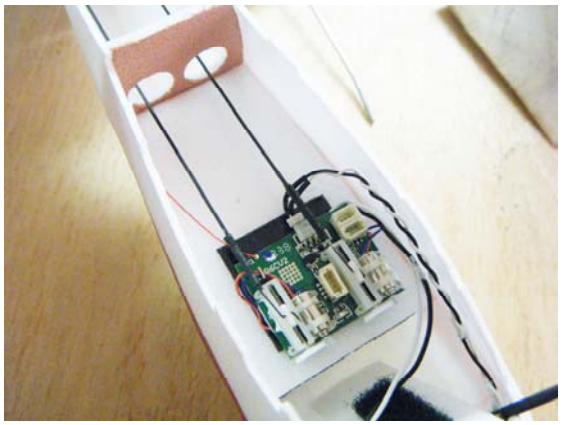
Fit the rudder/elevator assembly to the fuselage and align everything up. You can hold it as shown and use your thumb to spread the fuselage apart to ease placement of the rudder/elevator. Once in place, apply CA to the seams.

Apply an extra amount of glue to the rear skid (it always seem to fall off easier than it should).

Glue in instrument panel. Angle in toward the cockpit a little for aesthetics.

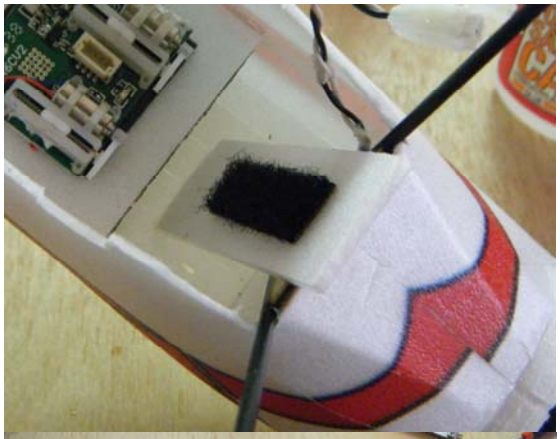


Glue in cockpit floor. The rear will be just above the holes for the control rods and the front will be resting over the instrument panel. This should follow along the main crease.



Cut apart the pre-bent Z-Bend wire. You should end up with six Z-Bends. Cut four pieces of the shrink tube about half inch long each. Slide a piece of the shrink tube over the end of the control rod and insert the straight end of a Z-Bend. Heat the shrink tube to fix the Z-Bend to the control rod. Apply a half drop of CA to make a permanent joint. Thread the bent end onto the receiver brick servos.

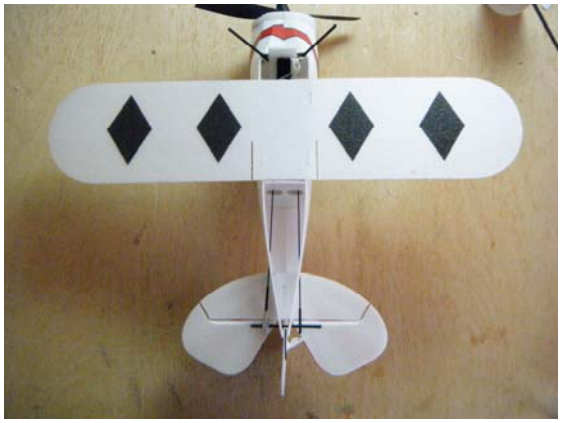
Apply the double stick tape and mount the RX brick threading the control rods though the fuselage. Fit the Z-Bends to the tail ends of the control rods to the rudder and elevator.



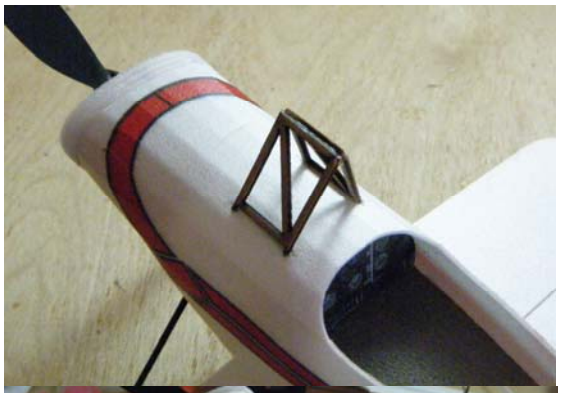
Apply Velcro to battery tray and glue in place at slight angle (to accommodate longer 150mah batteries if needed).

Take the long carbon wing spar and run the end through the slot in the bottom of the upper wing. Test fit the spar in the slot so it has a tight fit but is flush to the surface of the wing. Apply glue to the spar to hold in place.

If you are installing ailerons, skip to the aileron addendum. If you are just using rudder, elevator and throttle, use the smaller set of outer wing struts. Glue on the struts to the upper wing. (The struts are reversible.) Align the hole to the small notch in the strut and be sure they are straight and vertical.



Fit the lower wing slots to the tabs on the fuselage. You may have to pinch the tabs so they will make a nice tight fit to the wing. Make sure everything is lined up and hit with a few spots of CA and Accelerator.



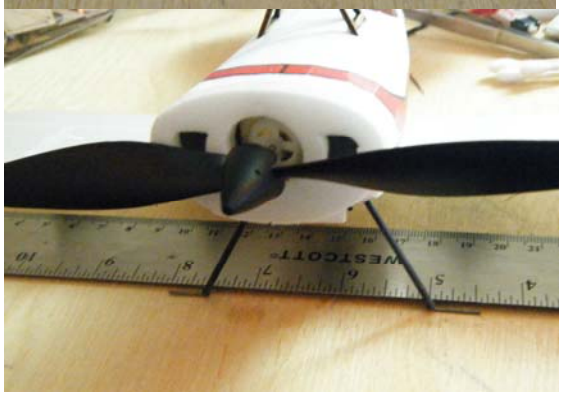
Glue on the center wing struts to fuselage.

Glue the upper wing to the center struts.

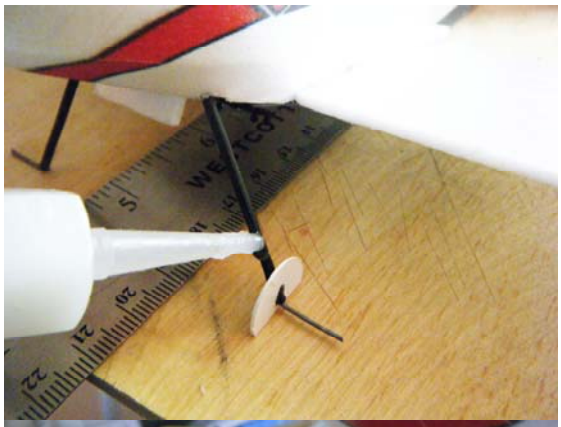
Crease the lower wing at the roots right next to the fuselage. Fold up to meet the outer struts. Glue the outer struts to the lower wing. The upper wing should stay relatively flat while the lower wing will provide the dihedral. Be sure it's all lined up and hit it all with accelerator.

Once set, fill in lower wing creases at the root of the wing with a small line of glue.

Build up wheel pants and glue the two wheel halves together.

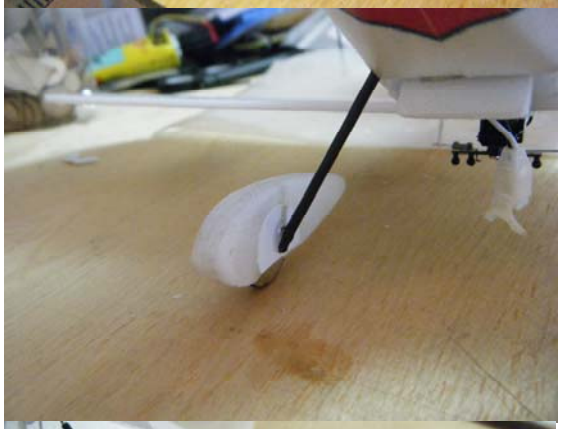


Bend and glue in the metal wheel axles so the are level and straight. You should test fit them in the hollow centers of the carbon rod landing gear struts.

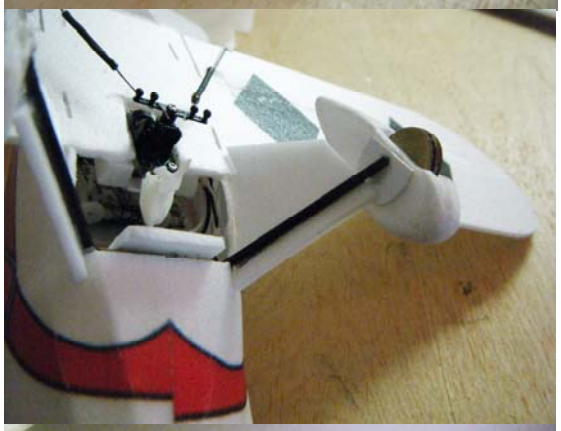


Set the plane on a flat surface (preferably with wax paper (not shown) so it doesn't get glued to the flat surface). Set the wheel pants bushing on the landing gear strut as shown so it is straight and vertical. Apply a small drop to the landing gear strut and let it drip down to the bushing. Hit it with the accelerator and this will tack it in place.

Hold the plane on it's side and apply a full drop of CA right to the bearing on the inside to strengthen it fully.



Thread the wheel pants with the wheel onto the axle and glue the pants to the bearing. Be sure not to get glue on the axle and glue the wheel. Trim off any extra axle that sticks out of the wheel pants.



Glue the landing gear strut covers to the landing gear struts as shown.

ENJOY!

With a 120mah battery, the Center of Gravity should be just behind the leading edge of the lower wing. It is preferable to trim with weight, but you can tweak the ailerons for trim if you are not using an aileron servo. Try to be conscientious of when your battery will run dry. It really does not have much of a glide ratio and will come down like a rock, making dead stick landings a trick.