

Cobra X Q

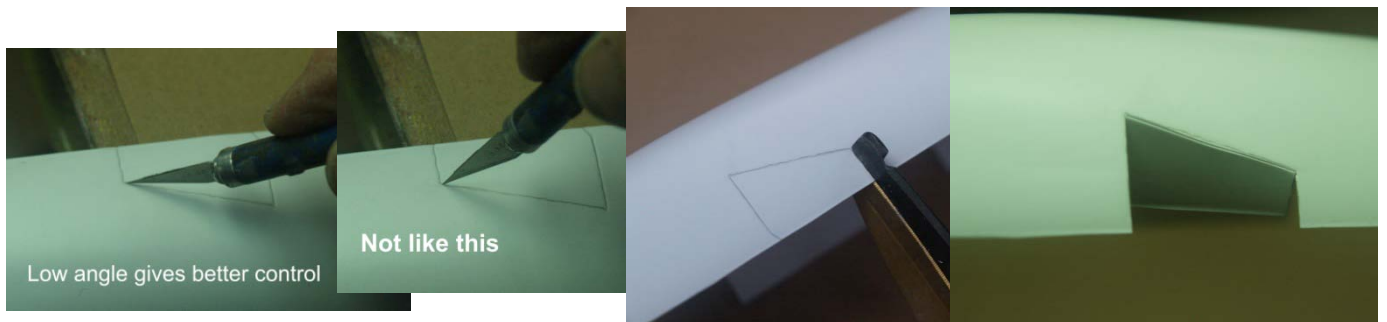
Construction Tips : The white plastic in this kit is high impact styrene. It can be painted with most types of coatings if light coats are applied this is necessary due to the thickness of the material. For the same reason plastic model cement is used sparingly to bond the plastic parts. Never use CA adhesive on the white plastic, cracks will form right away. Keep all scrap material for testing paints and adhesives until the model is complete. Most cuts are made with scissors however there are places where scoring must be done. Scoring plastic is when a hobby knife is used to make a cut in the surface to weaken a specific place and the remainder of the cut is made by bending the plastic. Several light weight cuts is better than one heavy one. There are steps that will require long drying times: This is the perfect time to skip ahead to the detail section of the instructions and get some of that work done.

Construction: The three large parts are needed first. The two fuselage sides and the belly pan. Trimming these parts accurately is essential to proper fit.

Belly pan: Trim the flange portion of the plastic away from the part leaving about 1/4 inch; lay the flange on a flat surface. Lay a freshly sharpened pencil on the flat surface next to it and mark all the way around the sides of the pan. Use scissors to cut the line. note it is easier to cut the flange off first then cut to the line.



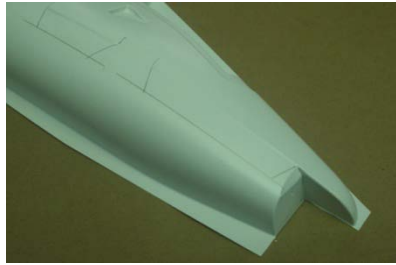
On the sides of the belly pan, follow the trim lines that are molded into the plastic. Cut the notches for the quad copter legs to fit through the pan by scoring the plastic at the top of the notch and completing the rest with scissors. Folding the scrap will break it free.



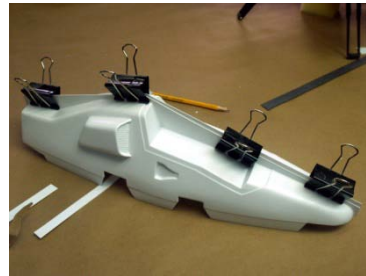
Place the belly pan on the quad copter frame and test it's fit. The scored edge of the pan should rest on the frames edge without pushing down on the pan. It is important that you don't force the pan in place, this will only change its shape and fit to the upper half. If one edge has a gap the other will need a little shaved off to close the gap. Remove small quantities and test the fit with each adjustment until the pan touches the edge of all frame legs.



Fuselage sides: Along the sides of the fuselage halves follow the trim lines that are molded into the plastic. **NOT** the step formed in the sides. Cut the notches for the quad copter legs to fit through like you did the belly pan; fit adjustments are done later.



Use spring clamps on the fuselage side flange area to hold the halves together. Align the halves using key features like the canopy steps; corners and by feeling the edges to see that they are flush with each other.



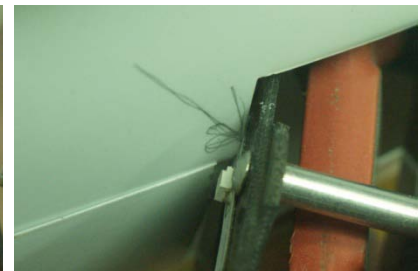
Cut 3/4 inch wide strips from the scrap material and bond them to the inside of the **flat** portions of the seam.

(it is not necessary to bond the cockpit area.)



Fuselage to frame fit.

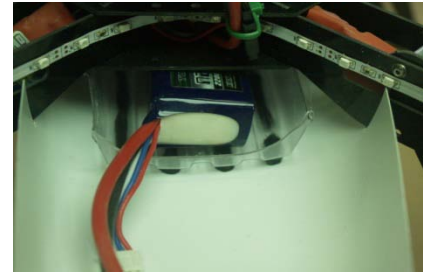
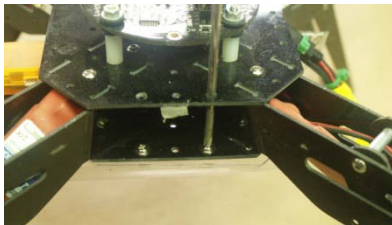
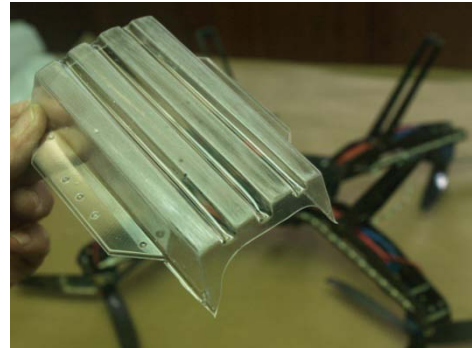
Use a soft foam rubber block or equivalent under the belly pan to hold the pan against the frame but not enough to lift it. Place the fuselage on the frame and adjust the frame contact points so the step in the fuselage sides matches the edge of the belly pan. Note that the vertical cuts in the fuselage sides can cause the sides to flex inward. Removing a small amount of material will allow it to spring outward. See the illustration page if it is not clear.



When you are happy with the fit. Remove the fuselage trim the aft end of the pan on the molded line. Bond the detail piece in place. Do not bond the top 1/4 inch of the pan. This will form a slot for the fuselage side to go.



Trim the corners of the battery tray and enough of the front (short end) to clear the camera mount if installed. Cut the aft end leaving enough to install the battery. Lightly sand the bottom of the battery tray then Fit the battery tray to the frame and attach with screws. Test fit the belly pan, there should be a gap from 1/4 to 1/8 inch between the tray and pan. Apply a silicone bead to the high points on the bottom of the battery tray, install the belly pan and fuselage to the frame and hold the two together with tape, check that all seams are aligned while the silicone dries completely.



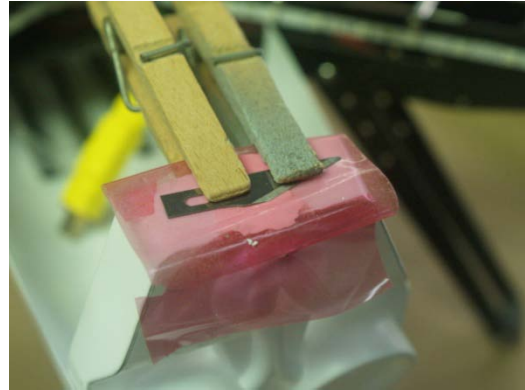
Note: bonding a hardwood strip to the battery box flange will strengthen the attachment and may be necessary for those "hard landings" .

Four rare earth magnets hold the fuselage to the belly pan The nose uses a stiffener to hold the magnet in place. before it is bonded in place plastic tape is used to hold the magnet centered in the cavity and epoxy is used to fill the void. The tape is removed after it cures and the stiffener is bonded to the fuselage nose with model cement. Note: the lip on the stiffener bonds to the inside of the fuselage nose.

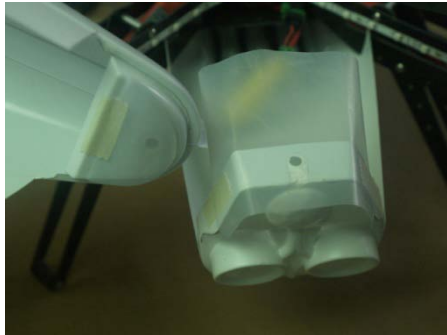


Sand the groove in the top of the tail detail and use a piece of steel to hold the magnet flush with the top surface.

fill the groove with epoxy . Note: You will need to either tip the pan or use tape as a dam to prevent the epoxy from running out of the groove.



Install the fuselage on the belly pan and allow a magnet to "find its spot" on the back of the fuselage. Mark and drill a hole at this spot.



Use masking tape to hold patches of the plastic that protected the canopy for shipping over the installed magnets.



At the fuselage nose location, allow a magnet to jump into position on the nose magnet with the plastic in-between them. Apply a pool of epoxy in the recess at the nose of the belly pan

and install the fuselage on the belly pan. Allow the last magnet to jump into its position and cover it with epoxy. Double check the fuselage to pan fit and allow the epoxy to set up. The exposed magnet on the aft end will be covered with a tail gun turret. If you do not want a gun in that position there are beacon lenses located on the ends of the canopy that could be used to hide the magnet installation.

JB weld epoxy was used to attach the magnets due to its thick viscosity. Adding baking soda to hobby epoxy is another method that can be used to thicken the epoxy mix to prevent it from running off the magnets before it sets up.

Filling the seam.

There is not as much filling to do as it first appears. From the canopy edge to the nose and a short space on the back; the rest is covered with details or simply removed. To get started use your finger to feel for any remaining flange that is not flush with the rest of the fuselage and shave it off with a hobby knife. Tape off the seam and apply plastic seam filler with a piece of card stock.



Remove the tape right away and give it a day to dry. Taping off the seam does several things for us; saves on filler, makes a uniform filler thickness above the surface of about .003, dries faster, but most important it saves on sanding.

Details:

Cockpit.

The cockpit is made up with only six parts and assembles easily , most of the "looks" come from the way it is painted. Some skill is involved but not rushing it is the best advice . There is a pilot painting tutorial on the parkflyerplastics website that should be useful to any one new to this type of task. Look under the banner and click on instructions.

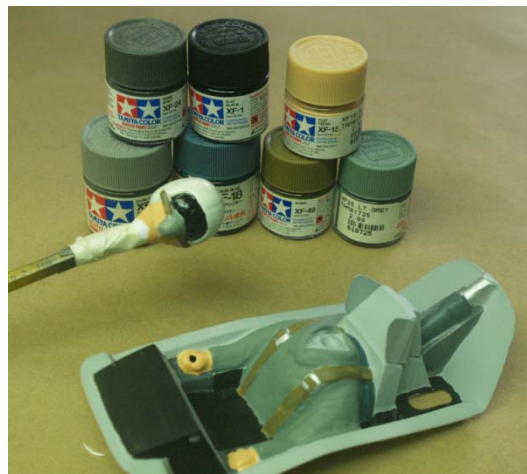
The pilots head is the most difficult task , that is why three of them has been provided. Choose the one you want to use and save it for last and use the others to gain experience. Cut the heads from the parts sheet and keep the front paired with its back. Block sand the back of the sheet until the plastic becomes thin around the edge of the part. You can track your progress by holding the sheet to a bright light. Lightly score the plastic around the head half and remove it from the sheet. Fold a piece of tape and stick it to the halves to use as a handle. Apply plastic cement in a circle the size of the head on a non porous surface. Dip a half in the cement and bond the edges. The edge of the helmet is a good reference point for alignment. If you use your fingers to match the halves, keep a rag handy to clean your fingers.

Trim the cockpit detail and bond the seat head rest in place. Cut scrap plastic to make the sides of the head rest. Bending the plastic on a sharp corner will give it the angle you need to look right. Give the assembly a light coat of primer as a base coat. The primer will etch the surface and help prevent brush strokes the slick surface would cause. take your time and have fun with it. When you install the head it is possible to turn his head however this will cause the head to raise if the collar is not trimmed .



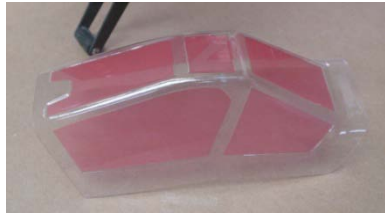
Straight or turned **do not glue the head in place without checking for proper canopy clearance.**

Before you bond the cockpit in place check to be sure it does not overhang the edges of the fuselage, this will interfere with the canopy installation. If your control board has indication lights as a safety feature drill peak holes so they are easier to see.



canopy

Tape off the windows of the canopy , trim the canopy following the molded trim lines and test the fit to the recess in the fuselage. Sand the inside of the canopy where it contacts the fuselage and the recess. Again; J B weld epoxy was used to bond the canopy because of its consistency.

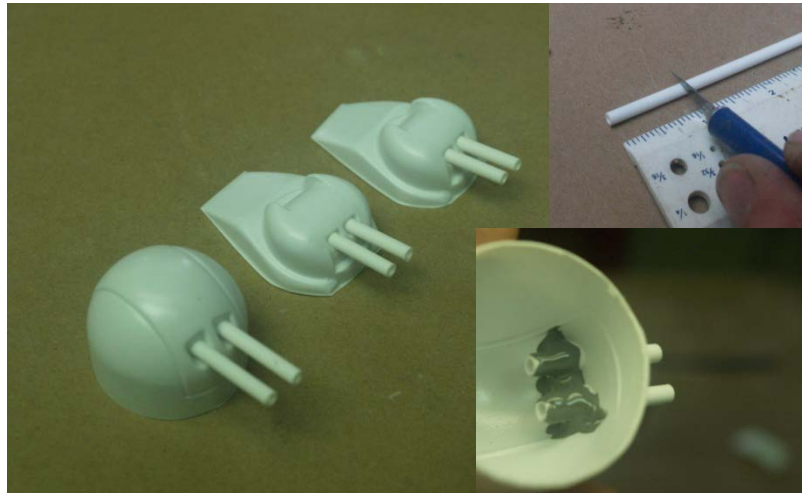


The Guns.

The two aft guns are identical parts and all gun turrets assemble the same. The same method used to trim the pilot

heads from the parts sheet is used for the guns. The gun barrels are scored by rolling them on the table with a hobby knife then breaking them to length. (one inch) A small amount of plastic

cement holds them in place and aligned while the epoxy on the inside sets up.



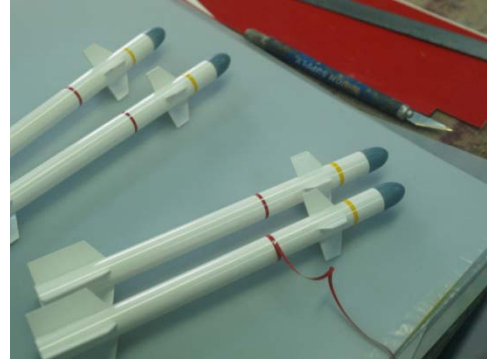
Missiles

The missile tubes and tips use a joiner to help align the two parts. Forcing the joiner into the tips could cause cracks, to avoid damaging the tips just push them in far enough to engage the inner edge . Model cement only, NO CA. Lightly sand the tips to match the tube and add filler if



desired. Using a 1/8 piece of angle stock as a straight edge will make marking lines evenly spaced and parallel to the missile tube.

The Fins are cut from the plastic strips in the kit. Use the pattern on the illustration sheet to make one master fin . Lay the master on the plastic strip and use it to guide the scissors to cut copies until enough fins are made. Dip the edge of the fins in cement and bond them to the missile tube. Bonding the aft fins first will allow you to look at the end of the tube and adjust them to form a cross. (model cement takes about 15 min. to set so there is time for adjustments. Bonding the aft fins first also makes aligning the forward fins easier by sighting down the body tube and using them as a guide. Colored tape cut into narrow strips makes adding the colored bands easy . They are used to identify the missile type and adds to the missile detail .



Final assembly.

The missile pylons fit the belly pan contour 1/2 inch from the forward frame holes. Their positions are numbered 1 thru 4 left to right (from the pilots position) They can be bonded in a row or off set to enhance the detail a bit. Use scissors to cut the pylons leaving a small flange, 1/8 inch is enough. Hold the pylons in place with tape while you decide where you want them to be mounted. Make light marks at the ends with a pencil and bond them in place one at a time. When the missiles are mounted use silicone as the adhesive. This will allow you time to align them. Tape may be needed to hold the outer missiles while the silicone dries.



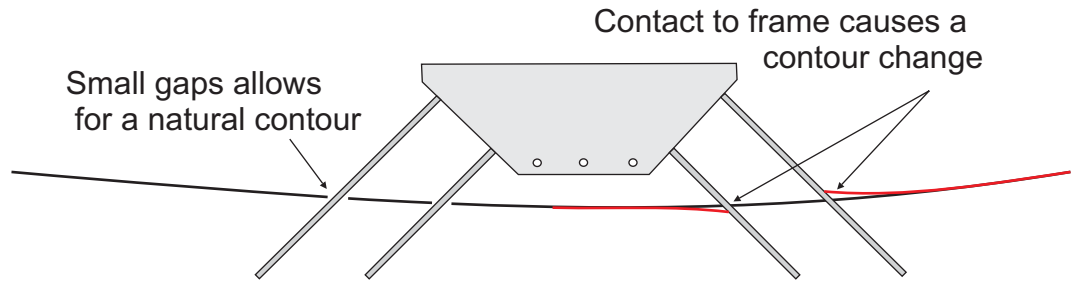
The body clips should not be necessary for the Whitspy frame. It is supplied simply as a stop gap measure for copter frames that has been adopted to this body. The clips have molded part numbers their position is shown on the illustration page. To install them, measure down from the edge of the belly pan equal to the length of the fuselage tabs. Make a pencil mark and bond the clip so the step in the clip is slightly lower.



Finnish.

The plastic is compatible with most store bought spray paints however you should apply a quality primer and give it plenty of time to dry so it will protect the thin plastic. Using a model air brush to apply weathering or camouflage works best. Waterslide decals or sticker sets are not included in this kit. Preferences in the markings that can be used on this model was just too wide to settle on a single set or type. A wide variety of markings is available by contacting me at Parkflyerplastics.com. Please specify the file type that you want so you can print your own markings on the medium you prefer.





Missile fin patterns

