

c2k WASP

Wasp c2k kit instructions.

The following is intended to be a guide only as to how to construct the Wasp model kit. A combination of medium and thin cyno was used throughout the build, 5 min epoxy used on stress areas, and white PVA wood glue used throughout the wing construction. Dry fit each process and trim accordingly before gluing.

No account has been taken for covering in the build sequence.

Centre of gravity for first flight 45/55mm The 4 x 2mm holes on the fuselage sides are cg reference points 45/50/55 & 60mm.

Ailerons 8mm high 4mm low

Elevator 6mm high 3mm low



Produced by ;-Cloud Models

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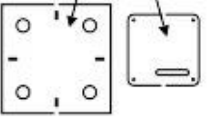
e-mail sales@cloudmodels.com

Web site www.cloudmodels.com

WASP c2k parts

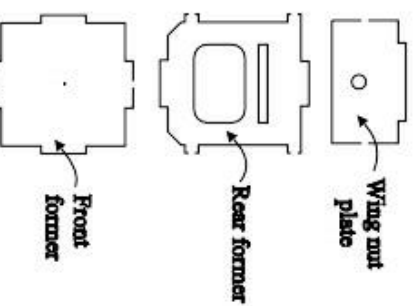
All sizes are nominal

- 1 wing panel
- 1 leading edge 6mm x 10mm x 915mm
- 2 trailing edge insert 9mm x 9mm x 300mm
- 1 trailing edge/aileron sectioned
- 2 wing tips shaped
- 2 servo box lid
- 1 servo box jig
- 4 servo box circles
- 8 servo box dowels
- 4 servo mounting blocks
- 1 servo box liner 1.5mm x 75mm x 300mm
- 3 triangle 6mm x 915mm
- 1 tailplane 4.5mm x 100mm x 330mm shaped
- 1 elevator 4.5mm x 23mm x 330mm
- 1 elevator pushrod 6mm diameter x 300mm



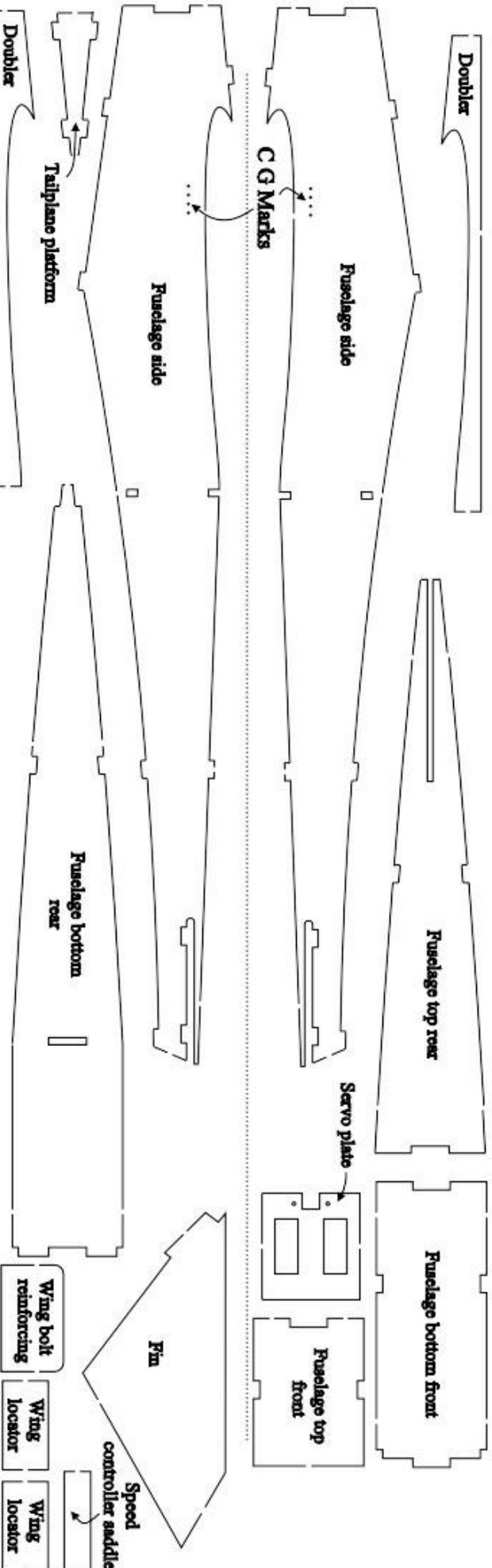
- 8 x No2 x 1/2" screws (Aileron servo lid)
- 3 x horns (including screws)
- 4 x 200mm threaded rods
- 1 x 300mm threaded rod (throttle)
- 5 x Quick links
- 1 x 5mm wing bolt
- 1 x 5mm T nut
- 1 x mylar hinge
- 4 x 3mm T nut (Motor mount)
- 4 x 3mm screws (Motor mount)
- 1 x pushrod tube (throttle)
- 1 x engine mount
- 1 x fuel tank

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Birch ply sheet

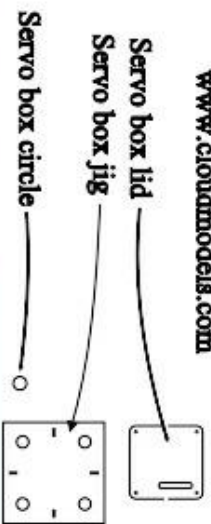
Lite ply sheet



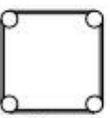
Wasp c2k wing instructions

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Draw a line along the wing tip then sand to shape



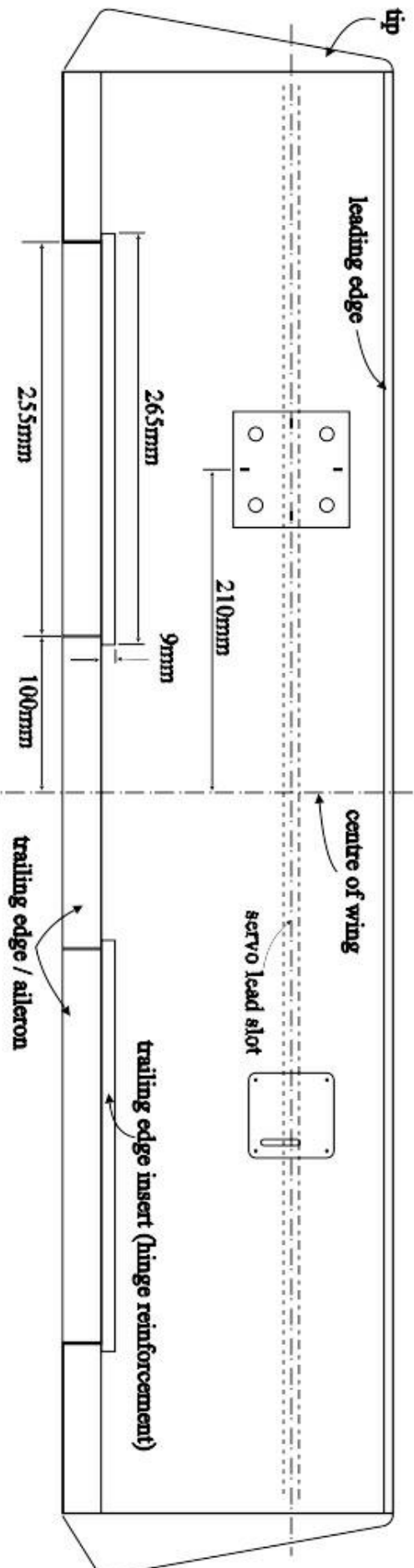
The following is intended to be a guide as to how the Wasp wing is built you may well have your own ideas on how to make your model fly faster than the rest.

Mark the centre line on the top and bottom of the wing. Mark the position of the balsa hinge reinforcement as per drawing. remove the area, then glue the balsa hinge reinforcement in place and secure with masking tape. Now fit the balsa trailing edge to the foam core, line the balsa trailing edge bottom with the bottom of the wing, if need be the foam core edge can be sanded with rough sandpaper until it matches the balsa trailing edge, glue in position but only tack the section that will become the aileron use masking tape to secure and check the trailing edge is true along the entire length, the leading edge and wing tips can also be glued on.

Once the glue is set sand all edges to shape being careful not to reduce the thickness of the veneer as this will weaken the wing, with the wing tip draw a line from the centre of the leading edge to the centre of the trailing edge and shape tip to that line, now mark out the ailerons as per drawing and cut out and shape to allow up and down movement and hinge with the Mylar strip.

Draw a line on the underside of the wing from one end to the other along the path of the T-groove, mark out from the line 210mm as per drawing. Place the jig over the marks, cut 4 holes through the jig using a 9mm hole punch twisting gently don't force, a sharpened piece of brass tube also works well.

A small slot along the side of the dowels will help glue disperse when the dowels are inserted in the wing. Glue the dowels in position use the ply circles to push the dowel in until the circle is flush with the surface of the wing. Carefully line up the cover over the dowels and screw the cover in place, use a sharp knife to cut out the remainder of the veneer around the cover. Remove excess foam to allow servo to fit and line the box with 1.5mm balsa. The servo can then be fitted to the cover using hardwood blocks. The wing is now ready to finish using your desired method.



IMPORTANT PLEASE READ

It is strongly recommended that you carry adequate insurance and only fly in areas designated for model flying keeping well away from people and property. Models are capable of serious injury or even death and should not be abused

The BMFA is a good source for information and insurance. www.bmfa.org

The kits are model aircraft **NOT** toys and **NOT** suitable for children.

The builder/flyer is responsible for the safe building and flying of the model. The model should be checked thoroughly for damage and wear particularly linkages and stress areas prior to every flight and radio equipment should be charged and reliable. If in doubt **DO NOT** fly fix the problem.

C M Manufacturing (Cloud Models) do not accept any responsibility whilst models are being operated.

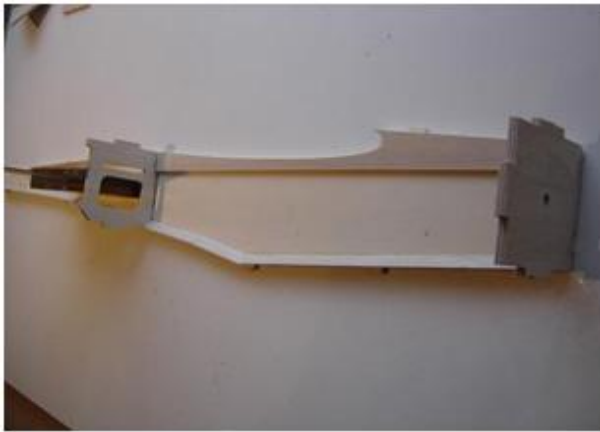
If in doubt about building or flying please contact your local model flying club and seek skilled help particularly if you have not flown this type of model get an experienced pilot to test fly and trim your model. If we can be of assistance please e-mail your question sales@cloudmodels.com.

BUILDING THE WASP c2k

- First step is to complete the wing as per **wasp wing instructions**
- Once the wing is complete cut out all the necessary parts to construct the fuselage, **see attached parts drawing sheet** pre sand all parts to remove residue release agents. Ensure fuselage sides are handed, fit wing doubler's and ¼" triangles as picture. Take care to keep to the fuselage edge, not over or under.



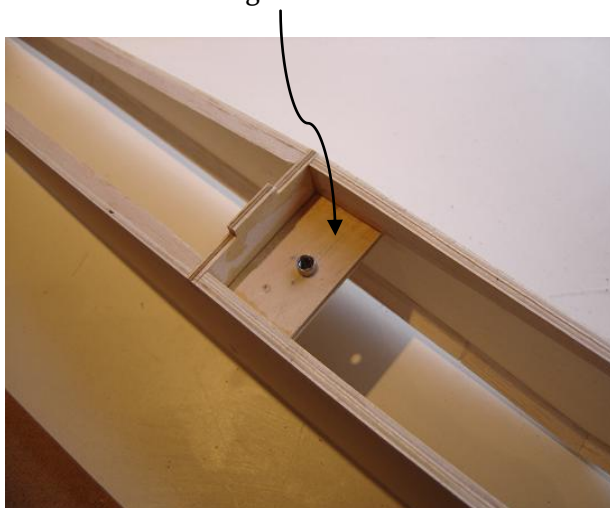
- The engine former requires drilling for the engine mount captive nuts, a centre guide hole is drilled to centre the mount around, the angle of the engine is up to the builder. For racing no side or down thrust is required, 2' side and down thrust can be used for sport flying. Fit supplied motor and wing bolt captive nuts, first add a drop of 5 min epoxy to ensure no movement. Glue front and rear formers ensuring they are square.



- Join both halves together keep square



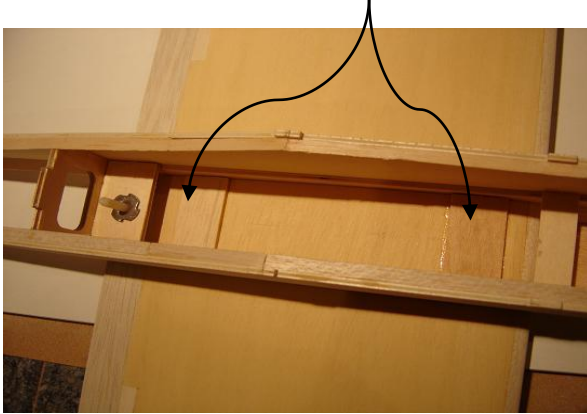
- Now fit the wing bolt seat



- The wing is now needed, ensure the wing seating is accurate, and centred exactly, it should be a nice snug fit. Drill the appropriate holes in the wing and wing bolt reinforcing plate. Take the front top deck and sand underneath the wing end as per picture, a nice snug fit should be achieved



- Now flip over and attach the 2 ply wing locators, these are a snug fit.



- Remove the wing, fix the bottom front deck first, then fit the rear lower deck, this is perhaps the most fiddly one, use cyano activator if needed and have a couple of small clamps handy, some trimming may be needed, then fit the tailplane saddle, the rear $\frac{1}{4}$ triangle stock below the saddle will need sanding on the last 2" to allow the sides to pull together, followed by the rear top deck. The whole fuselage should be dead straight when eyed along its length. Sand and round edges as required



- Servo tray has been cut for 2 HS85mg servos and switch, full size servos can be used equally well. Glue ¼ triangle stock to the sides of the servo tray bottom, fix servo's to tray and fit in desired position, Fit switch to servo tray, use leftover aileron rod to create a push pull lever exiting the side of the fuselage, in for on and out for off. Fit the supplied throttle wire to the servo/carburetor, making the appropriate hole in the former (keep to the outer edge of the former) roughen the plastic tube, slide over pushrod and epoxy to fuselage side.
- A 2oz fuel tank is supplied, fit as far forward as possible and as high as possible in the nose, drill the appropriate holes in the front former for the fuel /exhaust / fill pipes, keep the routes as short and straight as possible, ensure the tank is secured in place with foam, including in front of the tank to ensure the tank cannot move forward and squash the fuel lines. **REMEMBER** to fuel proof the inside of the front fuselage area and both sides of the front former before any installation's, there are many products on the market, clear polyester resin will also do the same job brushed on.



- Tailplane, fix the elevator to the tailplane with the supplied Mylar strip (or desired method) sand edges to desired shape. Dry fit into the tailplane slot and align diagonally with the fuselage and horizontal with the wing, mark and glue, thin cyno wicked works well or white PVA glue, the horizontal to the wing is very important, best viewed from the rear by eye to get this right, Sand the edges of the fin as desired, ensure the fin is up right and glue in place.



- You should now have something that looks like this, with a weight of aprox 1lb



- Make up pushrod to the desired length, keep the metal rods as short as possible, drill a hole aprox 1 1/2" in on each end of the dowel and make a groove for the rod and fix with glue and cotton/fishing line as below, **tip** use a battery drill to wind the cotton/fishing line on



- Radio installation can now be completed.

TIPS

- The c2k Wasp has been designed for a .25 glow engine.
- The current rules for club 2000 racing state specify specific engines check the rules before buying one. A Radio Active 9 X 6 prop (only allowed propeller). Check the rules for changes before you start.
- More information about club 2000 and the rules can be found at www.coventrymarket.co.uk/ukpylon/club2000.htm and at www.rcmf.co.uk
- The Wasp c2k is sensitive in pitch at all C of G positions, excessive elevator movements are not needed and the use of expo recommended and dual rates for takeoff and landing.
- At least 60 percent of pylon success can come from a plane well trimmed for its intended job, so don't skip this, and remember the faster you go the less control movement's are needed so make good use of the dual rates.
- We hope you enjoy the c2k Wasp and get hooked on short course pylon racing.

Cedar Racing.