HIGH-END TECHNOLOGY RC

F18 electric twin ducted fan

First we want to thank and congratulate you with your decision in buying one of our Kits.

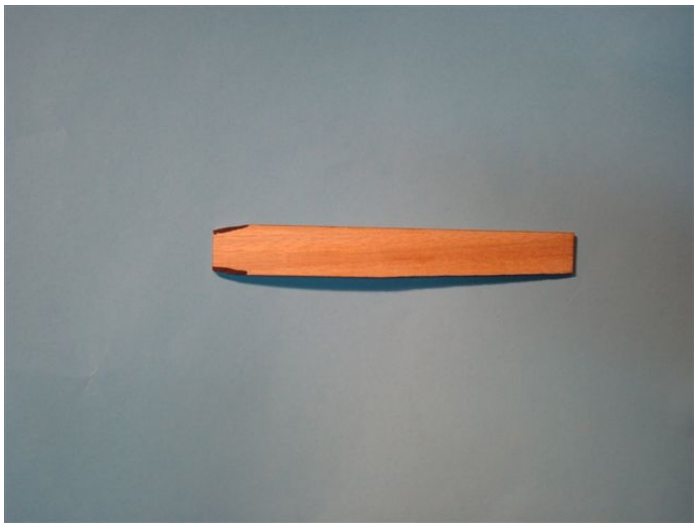
The F18 puts together very easily so there is not much explanation needed.
Just look carefully at the pictures .
This in not a plane for beginners, and you should have some experience with putting together ARFs.

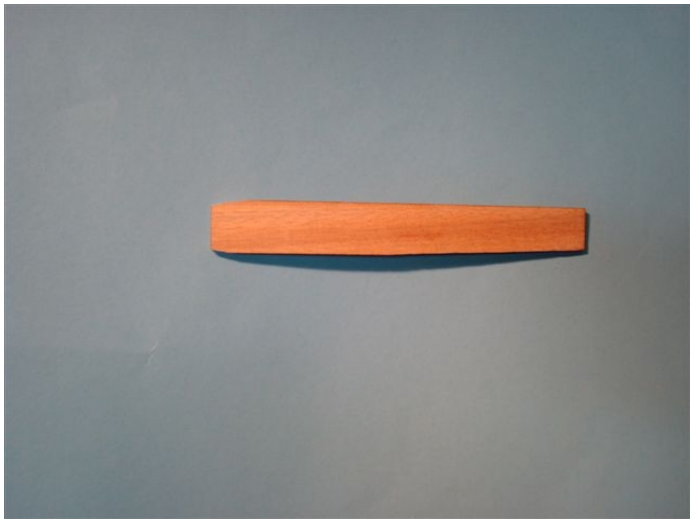
DATA:

Winspan: 1000 mm
Length: 1430 mm
Weight: 2400-2800 gram
Ducted fans 2 x 72mm

Item needed to complete.
7-8 ch. Computer Radio system w/ 4-5 micro servos
2 Electronic speed control
2 Fan units 6904 Hetfan or MF480
2 480 size brushless motors e.g 2 x 2W20
5or 30 min epoxy
CA w/ accelerator
Canopy glue
Velcro

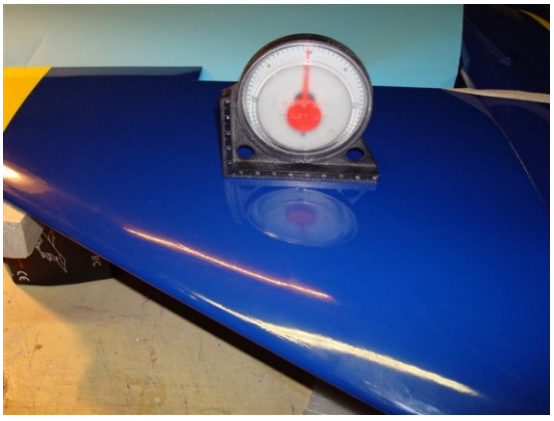
Standard tools:
Drill or dremel tool
plyer/cutter
scissor
Xacto-knive
Soldering iron



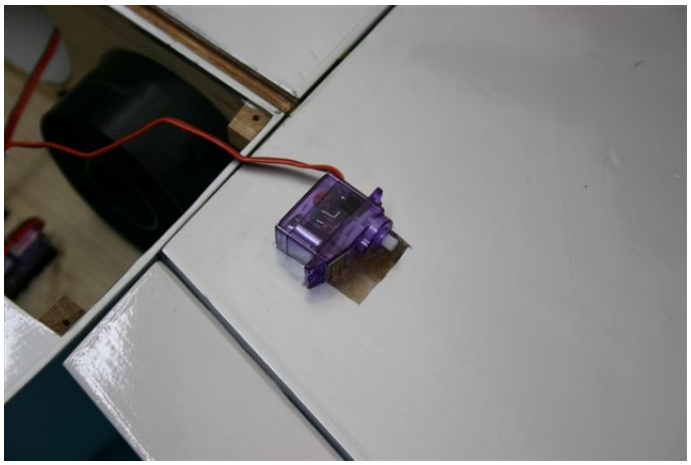


Sand of the inside edges of the wing joiner like in the picture above.

Trial fit the wings to the fuselage. Don't force the wing joiner in the fuselage. Before gluing the wings to fuselage insert an extension leads for the aileron servos . Se above picture. Glue the wings with slow 30 minute epoxy.

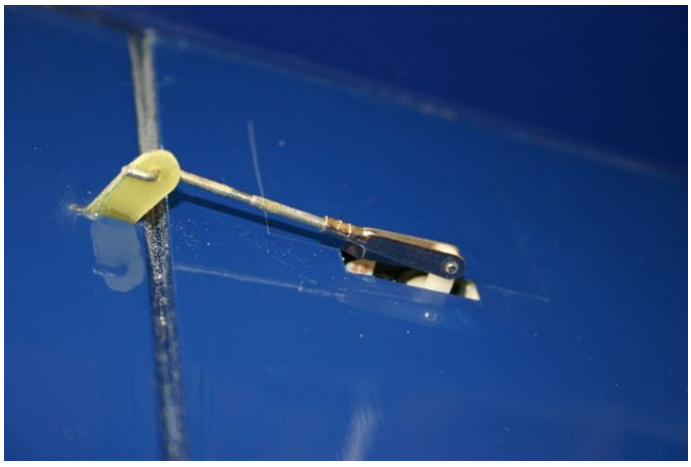


Use tape to keep the wings tight to the fuselage while the epoxy cures. Make sure that the top surface from the wings are level.



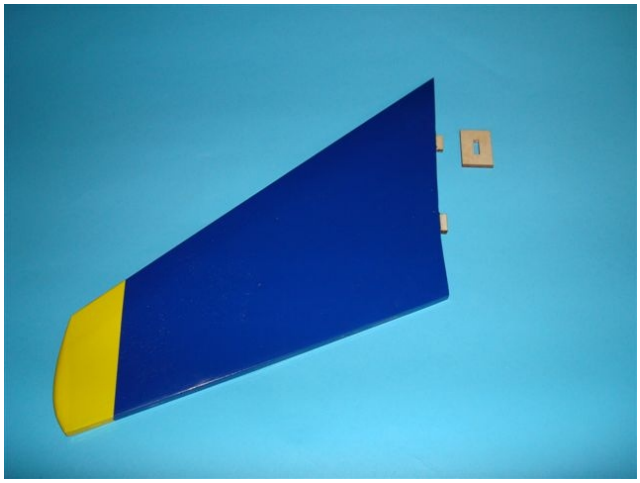
Place your servo (2 KG/cm torque minimum) over the pre-cut hole of the wing. Leave room for the control horn of the servo. Adjust the hole for your servo with a X-acto knife . Don't get confused wings from our phantom are shown..

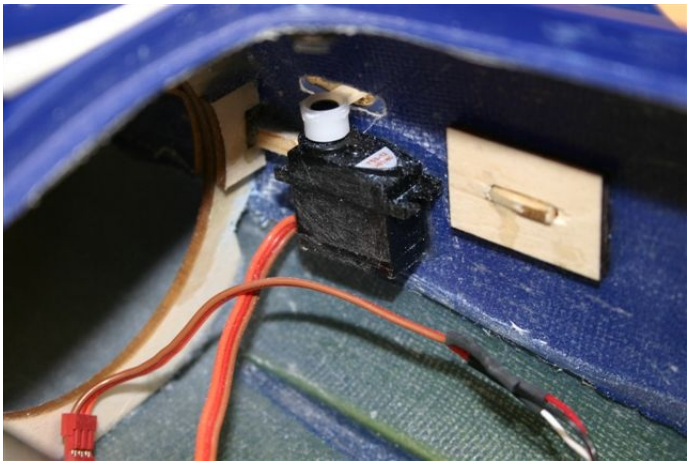
Before you install the servo make sure the control horn is placed in the middle position. Do this with your radio and receiver



Install the control horns as included in the kit or use your own. Make a Z bens on one side or use 2 clevises on both sides.

Glue the hinge in place with thin CA glue from the bottom side look at the above picture. In the picture the elevator is shown, but the aileron hinges are glued in the same manner.



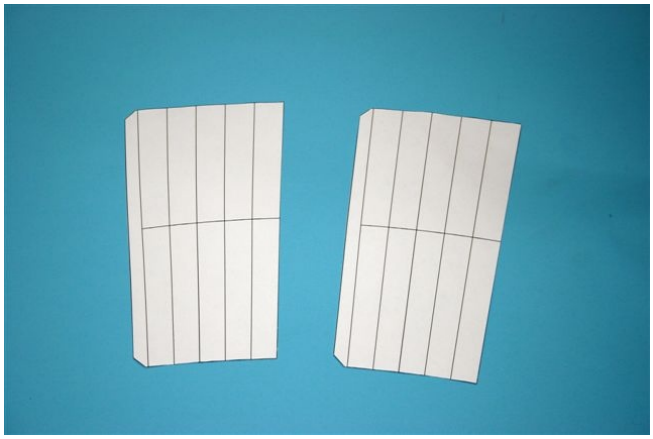


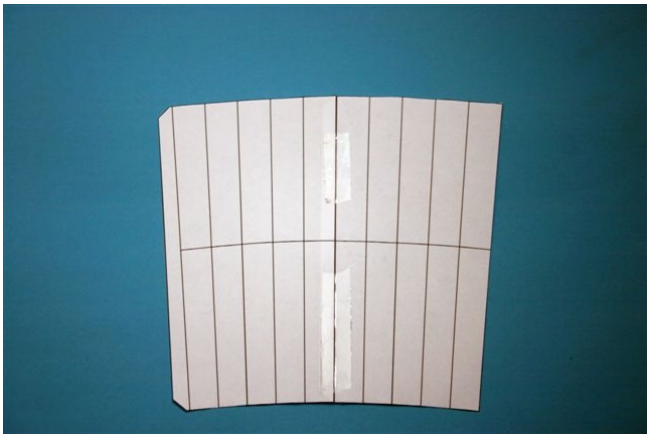
Note the bracket, this bracket must be glued inside the fuselage to support the front dowel of the stabilizer, se left picture. Now fit the elevator to the stabilizer. Now fit the stabilizer with elevator in the slots in the fuselage. Make sure that the elevator can move freely.

Before you install the servo make sure the control horn is placed in the middle position. Do this with your radio and receiver.

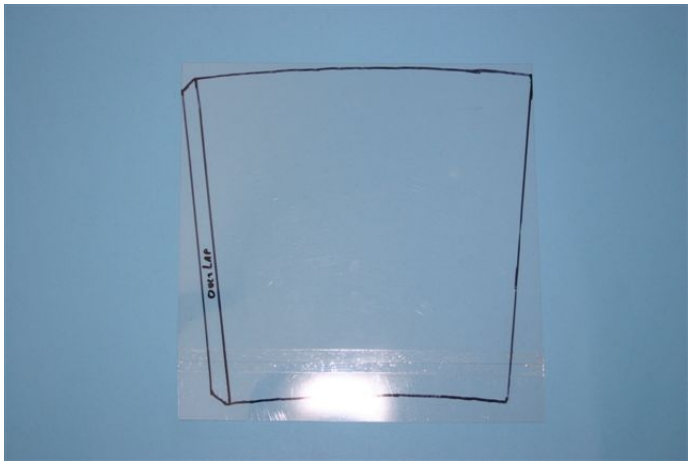
Glue the stabilizers in place with 5 minute epoxy (only apply epoxy in the slots), remove excess epoxy with cleaning alcohol before the epoxy cures. Check if both stabilizers are on the same angle. When you leave the glued parts to settle you can put a small distance block underneath the tips of the stabilizer. Make sure that the distance blocks have the same height.

Look at the top right servo for the elevator servo installation. Cut a small slot in the fuselage with a dremel for the servo control horn. Now you can glue the servo in the fuselage with 5 minute epoxy. Cut a small slot for the control horn in the elevator. Trim the top tab of the control horn so that it does not protrude the top surface of the elevator. Glue the control horn in place with 5 minute epoxy. Install the pushrods with clevises as shown. Do this for both sides.

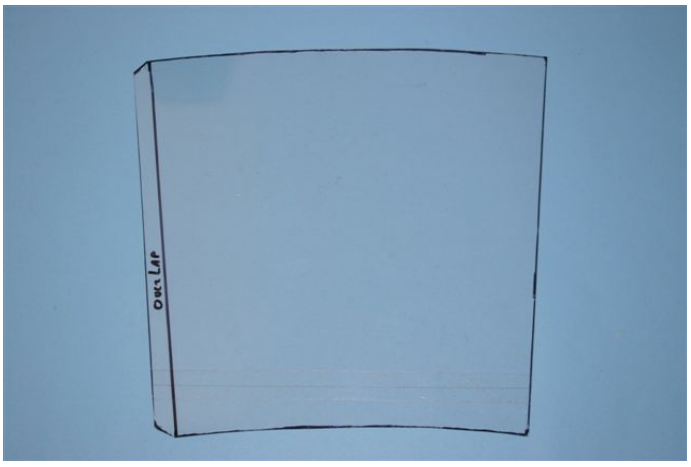


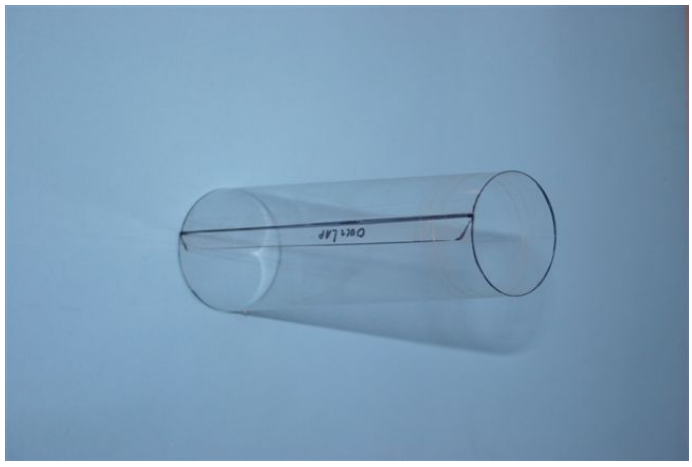


Print out the template 2 times cut them out and glue or tape them togetter. On the CD we have put 2 templates Letter and A4 Format depending on which format of paper you use in your printer. Template is shown on page 12.

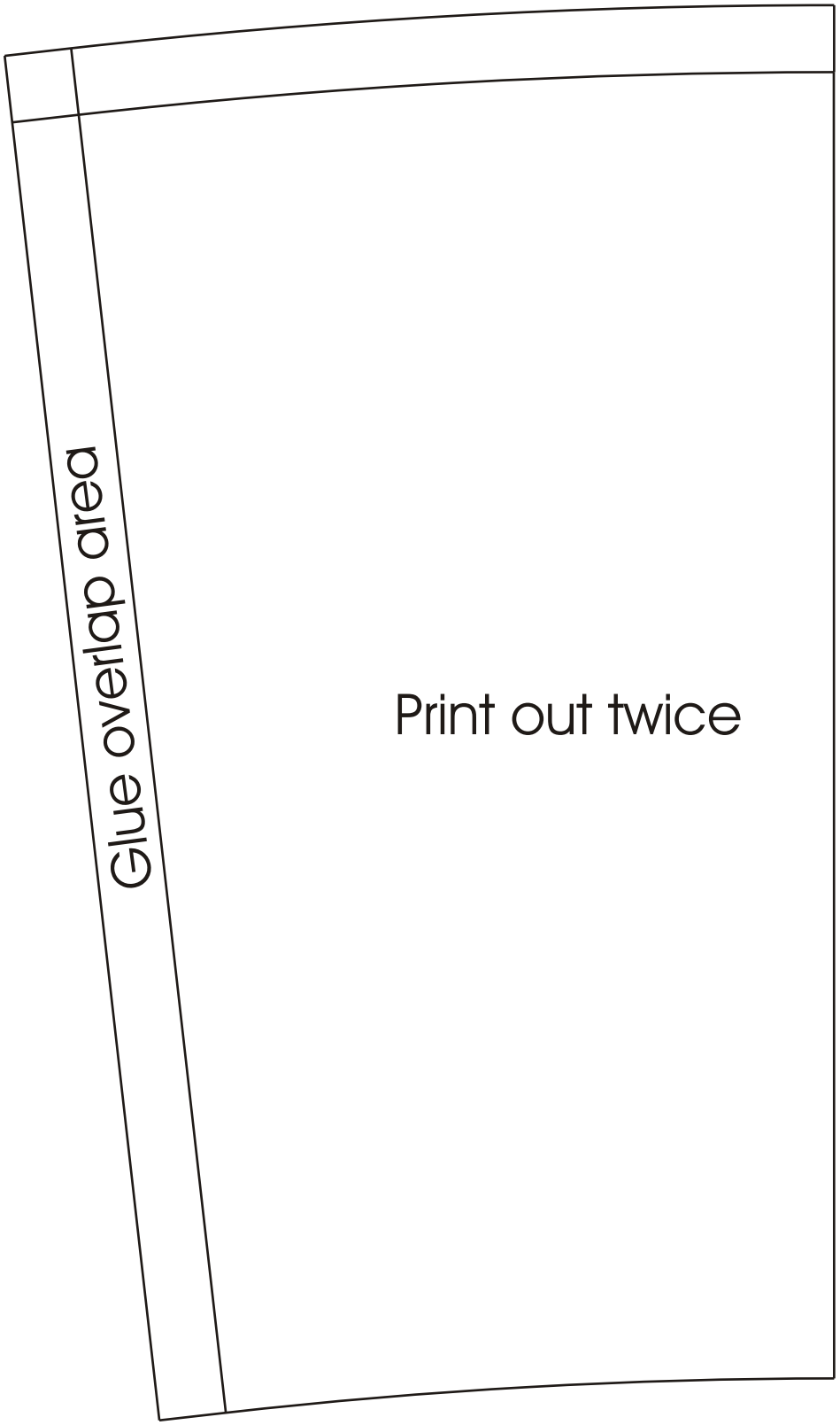


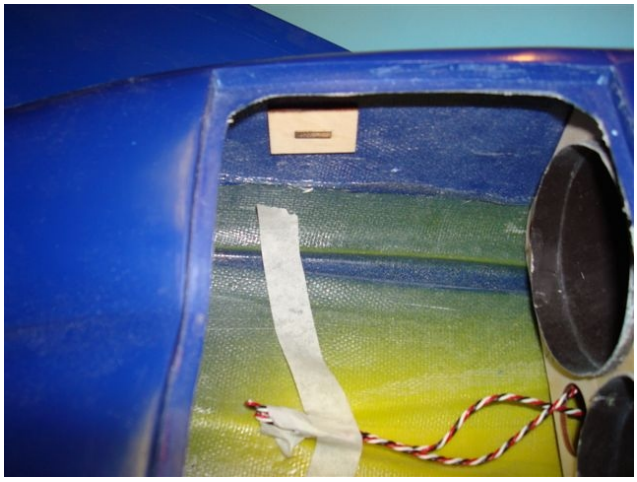
Place the template under the supplied pvc sheet and trace the outline with a marker. Do this twice as there are 2 fanunits.



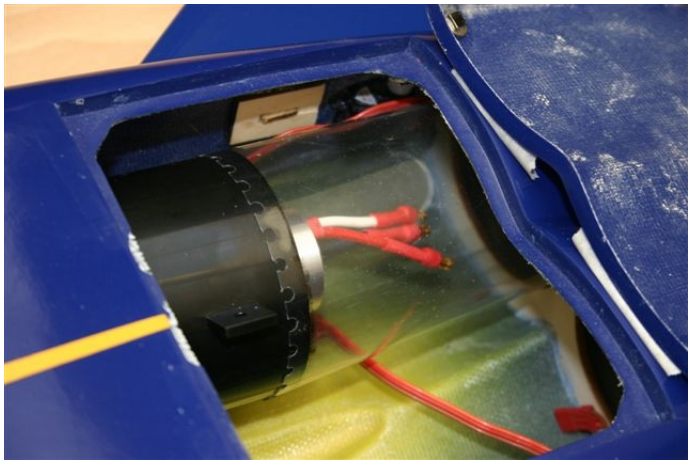


Cut out the unrolled surface for both trust tubes. Put the ovelap area inside. Roll the pvc to a tube and apply outside adhesive tape. The Edge should match the innerline of the overlap area. Now you have a perfect conical trust tube.


Glue overlap area
Print out twice

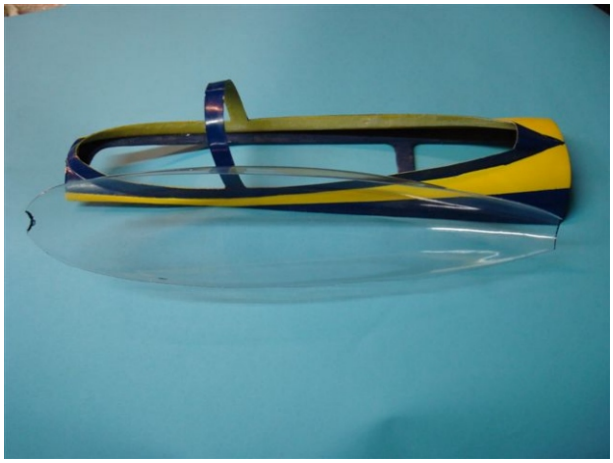


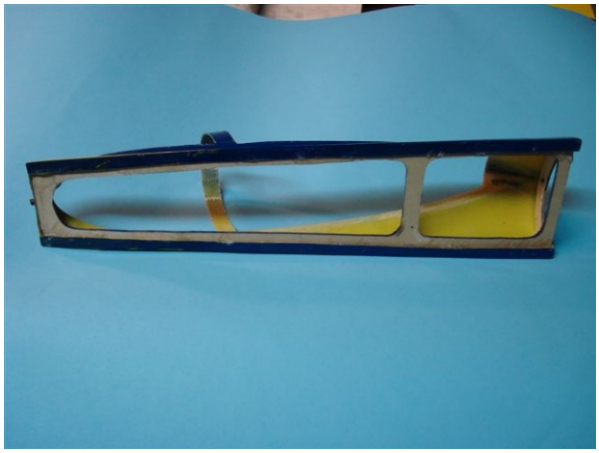
Fit the tube to the fanunit. (read fanuit installation instructions first) You should have installed the motor and ESC already. Make a hole for the wires from the esc and route them trough the just made hole.. Now take of the tube and insert it from the back by squeezing the tube a lilttle. Leave enough room to install the fanunit.



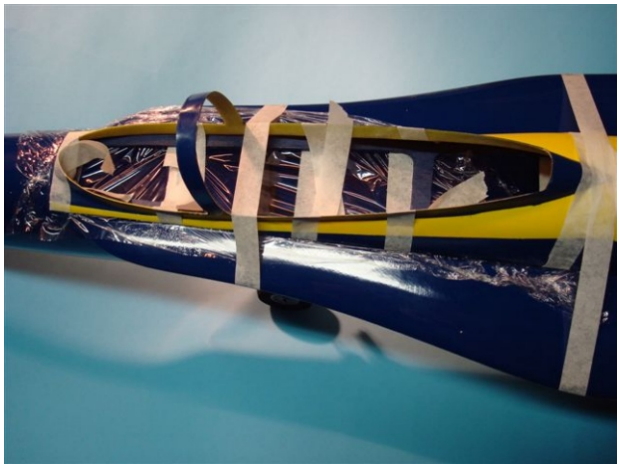
Now installl the fanunit. Chamfer the front of the shroud of the fanunit a litlle with a sharp knife this will make it eassier to install the fanunit inside the duct. Now route the esc wires trhrough the hole in the trust tube you made.. And slide the Trust tube over the back end from the shroud. Use adhesive tape to attach the trust tube to the fan shroud.

Trim of the ends of the exhaust tubes about 10 mm.
Exhausts diameter should be around 58 mm.

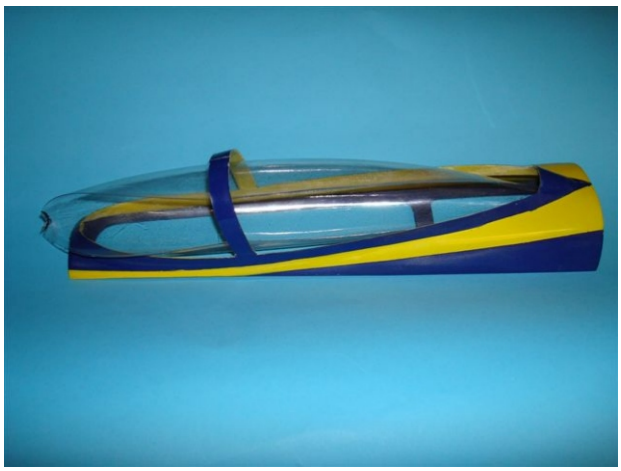


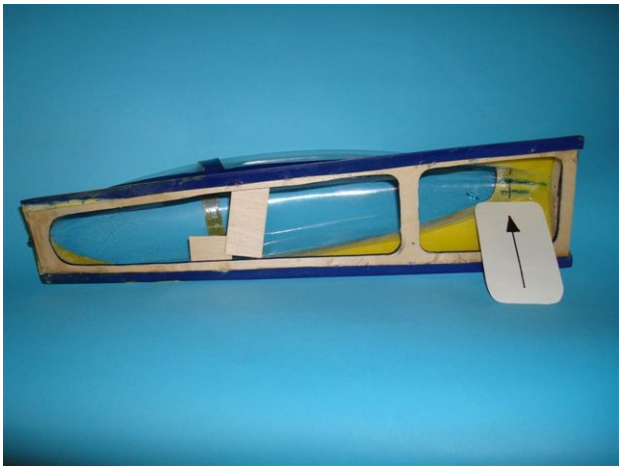


Canopy assembly, trim the edges of the clear abs canopy to size, go slowly you don't want to cut of to much. Sand the plywood frame to size. Trial fit the cockpit frame with Plywood frame on the fuselage. Install the dowel Glue the plywood frame with 5 minute epoxy glue inside the glass fibre frame.

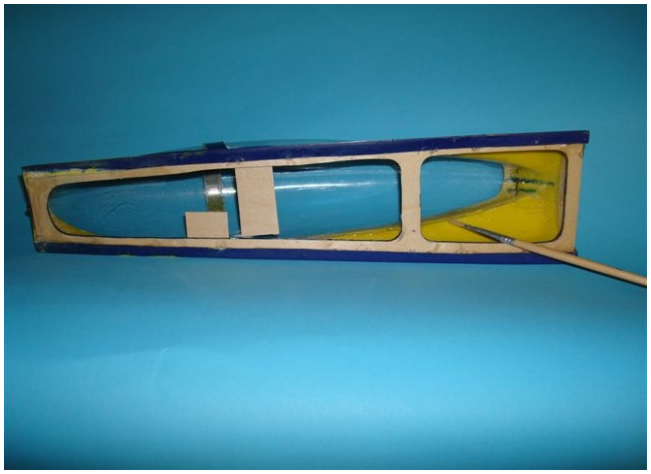


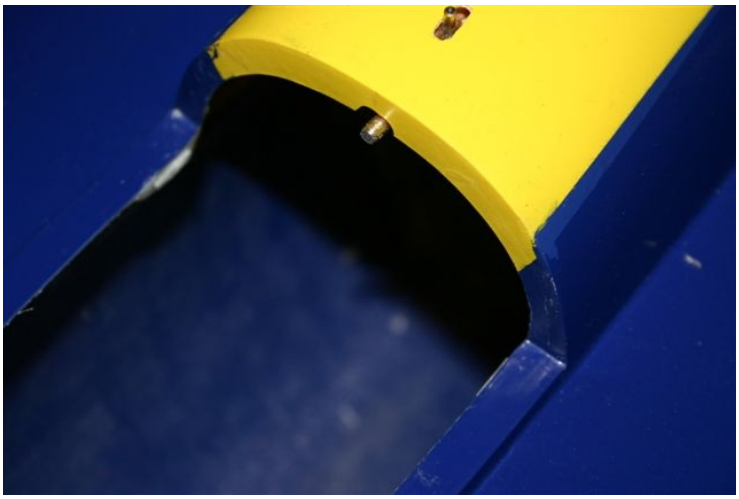
When you glue the plywood frame in place cover the fuselage first with a piece of plastic film. Tape the fibre glass canopy frame to fuselage to get an exact fit.



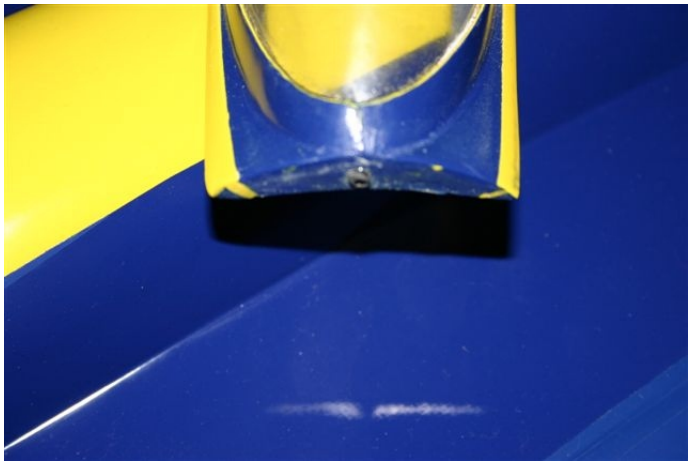


Slide the clear canopy in the frame from the front. Fit and cut the back end as marked in the above picture.



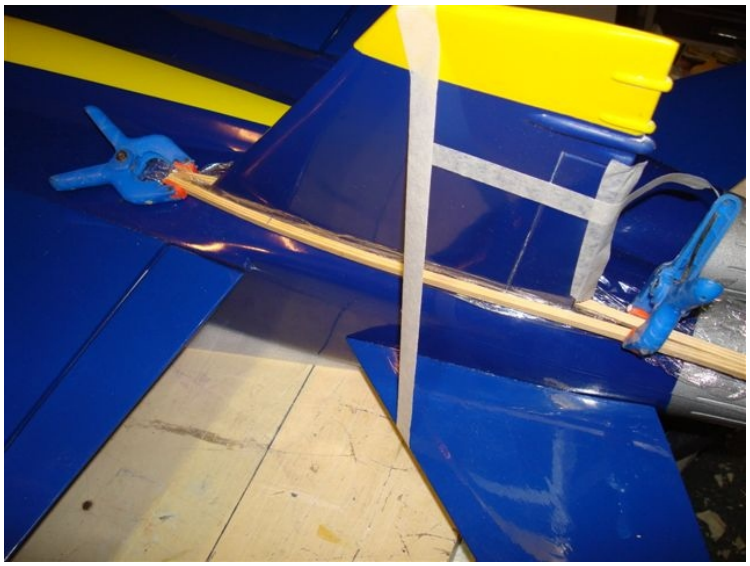


Glue the Clear canopy in the frame with 5 minute epoxy. Install the canopy release.



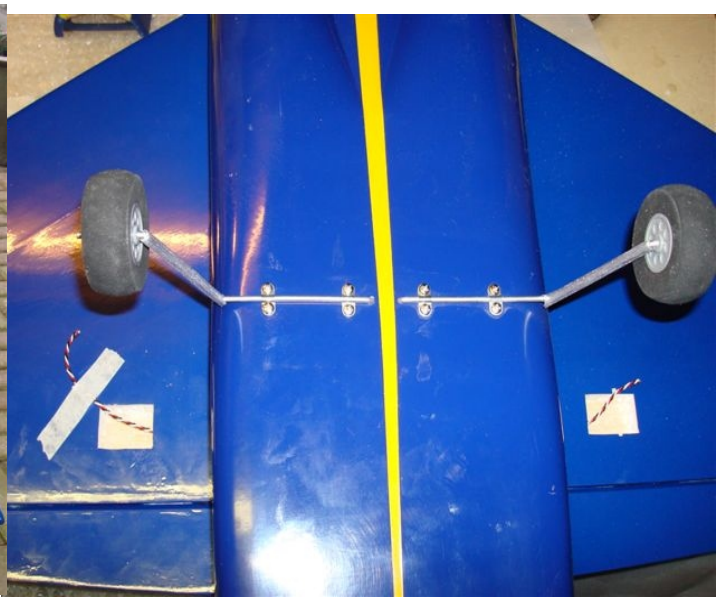
Install the dower in the front of the canopy frame. Make accordingly a hole in the fuselage.

IF You use a bungee you must install the bungee hook, the best location is between the front of the 2 intakes.Glue the first the plywood block 12x30X20 mm in the fuselage then drill the hole for the hook which also need to be glued in place with 5 minute epoxy.

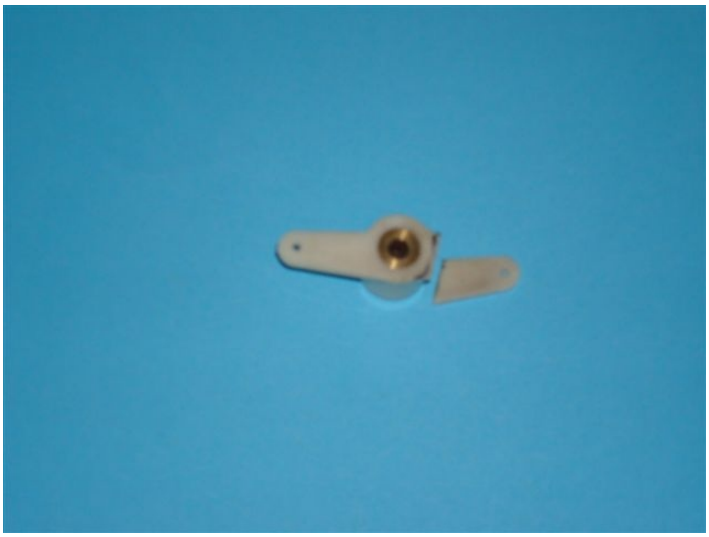


Now it is time to glue the vertical fins in place notice that we use two hardwood sticks and 2 clamps to act like a vice. Use 30 minute epoxy. (sand the inside edges of the fins first before gluing)

You can use a template with a 105 degrees angle .



Install the landing gear as shown in the picture.



Trim the control horn for the from landing gear leg to make it steareable.install the control horn in the fuselage on the landing gear leg. And install a servo with pushrod.

Settings:

C.G. 100-105 mm from the leading edge of the wing.
Elevator throws 10 mm up 10 mm down. Use40% exponential
Ailerons throws 12 mm up 8 mm down. Use 30% exponential.
Aileron servos >= 2.0 kg torque
Elevator servo >= 2.0 kg torque

First Flight.

Use a bungee to start the plane. Before start is good to use some up trim. After start level the plane don't attempt to turn, climb and trim the plane. F18 can be flown very slow with a high AOT But never make turns with a high angle of attack (nose high position) You risk to drop a wing. It is possible to start from grass with the landing gear.

You will find the airplane is very nimble but has excellent stability. Loops and snap rolls are easily obtained with adequate entry speeds.. **Just remember to land level; as to avoid damage to the plane** . Happy Flying.

WARNING!

Although the F1* is a stable airplane, it is not a trainer or first EDF airplane. This airplane is capable of very high speeds and therefore can cause serious personal injury and property damage. We strongly urge you to seek the help of an AMA approved instructor if this is your first aircraft of this type. Please use common sense

Fly in suitable areas for a high-speed aircraft such as an AMA approved field.

High-end Technology Holland assumes no liability for the operation or performance of this product. It is the responsibility of the operator to use this product in a safe and responsible manner.