

EXTRA330S 120C

FLNEXT330S120 / 880 920604 013 9



----- Motor -----

28cc Gas, 120 Glow or same size of Electric motors

----- Prop -----

APC 18X6 (28cc Gas), 16X10 (1.20 Glow)

----- Transmitter -----

4 channels

----- Servos -----

(3) Hitec HS-625MG servos on the ailerons
and the elevator and (1) Hitec HS-645MG on the rudder

----- Wingspan -----

72 inches

----- Length -----

72 inches w/ Spinner

----- Flying Weight -----

12 LBs

 **Fliton**

www.fliton.com
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EXTRA330S^{120C}

Fliton
Imac✈️
International Miniature Aerobatic Club



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1 RECOMMENDATIONS

The Following are only recommendations and specifications

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Transmitter : 4 Channel

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WINGSPAN : 72 inches

Length : 72 inches W/Spinner

Flying Weight : 12 Ibs



2 LIMITED WARRANTY

- (A) This warranty is limited to the original Purchaser ("Purchaser") and is not transferable repair or replacement as provided under this warranty is the exclusive remedy of the purchaser.
This warranty covers only those products purchased from an authorized Fliton distributor or dealer.
Under no circumstance will Fliton's liability exceed the original cost of the purchased Fliton Product(s)
Third Party transactions are not covered by this warranty.
Proof of purchase is required for all warranty claims. Furthermore, Fliton reserves the right to change or modify this warranty without notice and disclaims all other warranties, express or implied.
- (b) Limitations - Fliton makes no warranty or representation, express or implied, about Non-infringement, merchantability or fitness for a particular purpose of the product.
The purchaser acknowledges that they alone have determined that the product will suitably meet the requirements of the purchaser's intended use.
- (c) Purchaser Remedy - Fliton's sole obligation hereunder shall be that Fliton will, at its option, (i) repair or (ii) replace, any product determined by Fliton to be defective.
In the event of a defect, these are the purchaser's exclusive remedies.
Fliton reserves the right to inspect any and all equipment involved in a warranty claim.
Repair or replacement decisions are at the sole discretion of Fliton.
This warranty does not cover cosmetic damage or damage due to acts of God, accident, misuse, abuse, negligence, commercial use, or modification of or to any part of the product.
This warranty does not cover damage due to the improper installation, operation, maintenance, or attempted repair by anyone other than Fliton. Return of any goods by purchaser must be approved in writing by Fliton before shipment.
- Warranty Period : Fliton warranties that the products purchased (the "Product") will be free from defects in materials and workmanship at the date of purchase by the purchaser.

3 CONFIGURATION

Make Sure to always check the voltage on the receiver battery before flying.

4 WARNING

This is not a toy and if misused can cause serious bodily harm or damage to property.
Children should use this product only under adult supervision.
Fly in open(safe) areas, preferably AMA approved flying sites.
Follow all instructions, practice safety and error on the side of caution at all times

5 PRELIMINARY SETUP AND PREPARATION

PRODUCT INSPECTION : Inspect the various ariious of your new Extra120C aircraft.

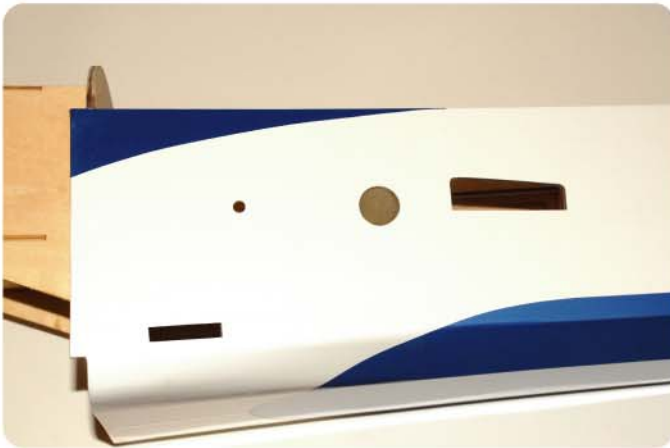
If you notice any damage out of the box, stop building and Immediately notify your Fliton aircraft proviedr.

Fliton wants to ensure that all of our products are used in the quality and manner in which they were created for and would not want our customers to experience anything otherwise.

Read directions through completely before starting step by step assembly

Before we begin, carefully go over all of the covering on the aircraft with a low heat Iron.

This will tighten down the covering and remove any wrinkles, Also, glue hardens and can loosen from vibrations during transport. It is highly recommended that you inspect and go over the joints with medium or thin CA glue before proceeding



Use your fingers to locate the pre-cut openings underneath the covering. Then use a sharp hobby knife to remove the covering as needed. Be careful not to cut into any surrounding wood surfaces during this process.

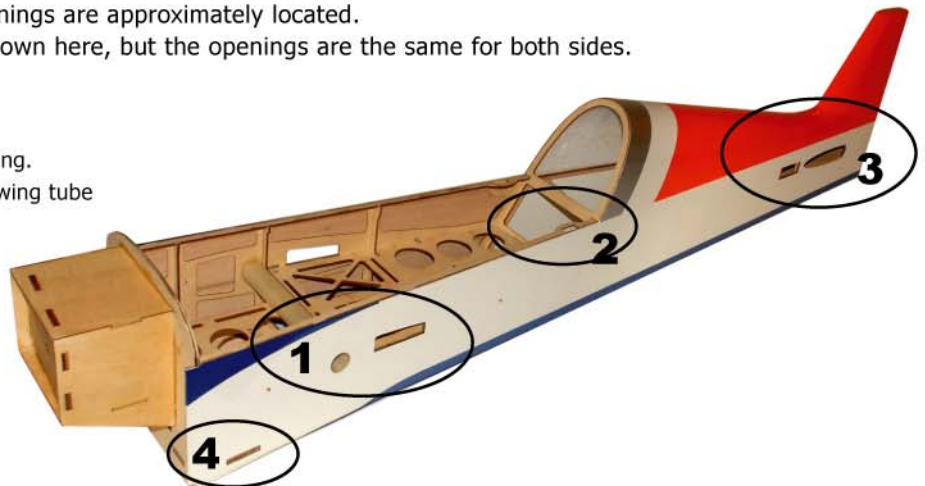
Here are images of where the openings are approximately located.

Only one side of the fuselage is shown here, but the openings are the same for both sides.

AREA #1

Show the four openings for themain wing.

The circular opening is for the carbon wing tube the larger rectangular opening is for the aileron servo wires to pass through and the to small circular openings in the front and back are for the anti-rotations pans (dowels in the wing).



AREA #2

Is a very small screw hole opening where the hatch mechanism will go later on in the manual.

AREA #3

In comprised of two openings. The large opening is for the horizontal stabilizer, elevater servo and directly above that is a slit for your rudder pull/pull cable to pass through.

AREA #3

Is the rectangular opening for the landing gears to enter the fuselage.

To clean up the covering and better define the openings that you made above, carefully use a soldering iron and go over the edges very quickly. The covering reacts fast to the heat.

6 HORIZONTAL STABILIZER PREPARATION

Locate the Tail Feathers; horizontal stabilizer, elevator halves with six ca hinges and elevator Joiner (wood dowel). Take note of how the ca hinges are positioned and how everything fits together.



Before we Proceed, Separate the horizontal stabilizer from the elevator halves

In this step, we will trial fit the horizontal stabilizer into the tail section (opening) of the fuselage without glue, carefully slide the stab into position and use a ruler or calipers to ensure the stab is on correctly.



Use the illustration below as a guide to how the stab should be positioned. You may have to attach the main wings temporarily to get the exact distances.

Once you have established that the stab is positioned correctly, use a felt tip pen and draw cut marks on the horizontal stabilizer (top & bottom), using the fuselage sidewall as a guide.



Remove the horizontal stabilizer from the fuselage to reveal your cut marks.

Then use a straight edge and a sharp hobby knife to carefully perforate along the cut marks.

DO NOT cut too deep with the hobby knife as this will fracture and weaken the wood.

After perforating, carefully peel back the unusable portion of the covering on both sides (as shown left).

This will expose the wood underneath and make for a strong adhesion later on to the fuselage

HORIZONTAL STABILIZER INSTALLATION

It is time to attach the stab to the fuselage. To do so, carefully slide the stab into position, using the exposed wood surface on your horizontal stab as a guide.

Once again, ensure that the horizontal stabilizer is on correctly. It helps to take a step back from the airplane and view at eye level from behind.

Once you are confident that the stab is on properly, wick a good amount of thin CA glue in and around the joint (as shown) on both sides of the fuselage. Let dry.

It is a good idea to then run medium CA glue along the outside again to ensure the horizontal stab is on securely. Let dry.

7 ELEVATOR HINGING AND ASSEMBLY

We will start by attaching the left elevator to the horizontal stab



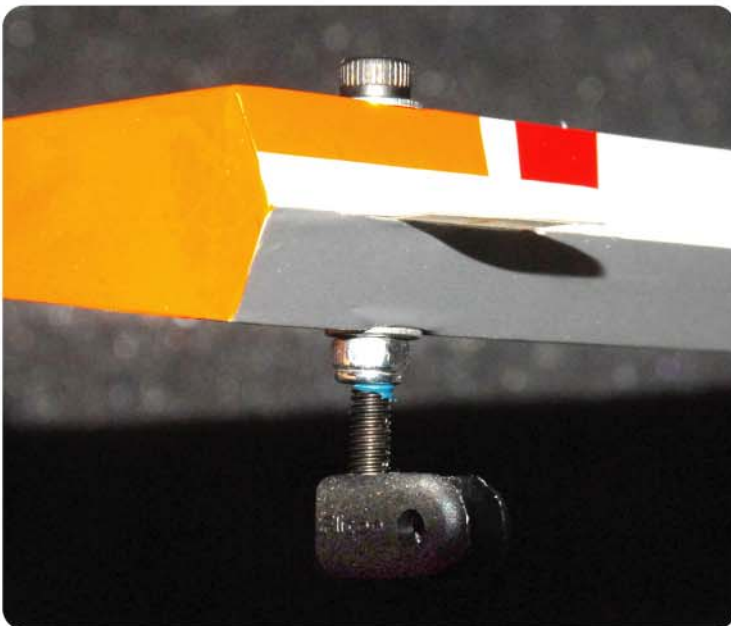
Notice that each elevator half has 4CA hinge slits with corresponding hinges slits on the horizontal stab pre-cut at the factory.

Now, we will attach the completed left elevator half onto the horizontal stabilizer. First, make sure that you are looking at the topside of both the elevator half and the horizontal stabilizer before proceeding.

Then insert the CA hinges that are fixed onto the left elevator half, into the hinge slits on the horizontal stabilizer.



If the hinges do not slide in freely, open up the slits a little bit using a hobby knife.



Once you have all of the three hinges inserted, ensure that there is a 1mm hinge gap and that the tip of the elevator half is lined up with the tip of the horizontal stabilizer.

Then apply a good amount of thin CA glue to all three of the hinges, on both sides (top/bottom). Let dry.

Work the elevator half up and down a few times to break them in.

8 RUDDER INSTALLATION



Locate the four hinges slits on the rudder and slide the CA hinges in halfway. Use thin CA glue to securely attach them.

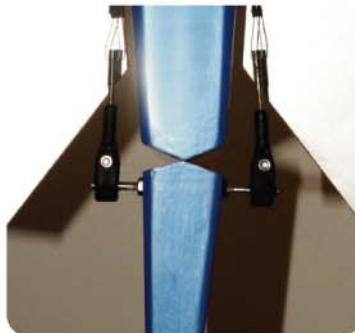
Pull/pull opening to figure out the angle of attack of the pull/pull cable.



Slide the four CA hinges on the rudder into the corresponding locations on the vertical stab (fuselage tail).

Once you have an even 1mm hinge gap between the rudder and vertical stab, drop thin CA glue onto the hinges on both sides.

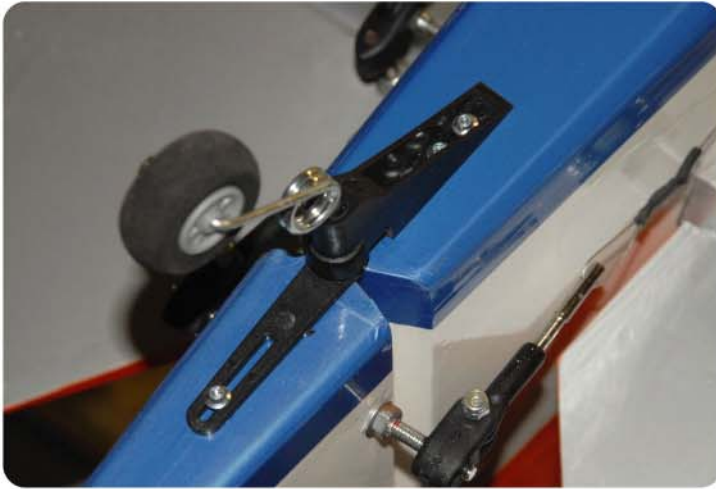
Remember to leave a 1mm gap also between the rudder counter-balance and top of the vertical stab. Work rudder left/right to break in.



Insert the torque rod into the opening you made on the rudder.

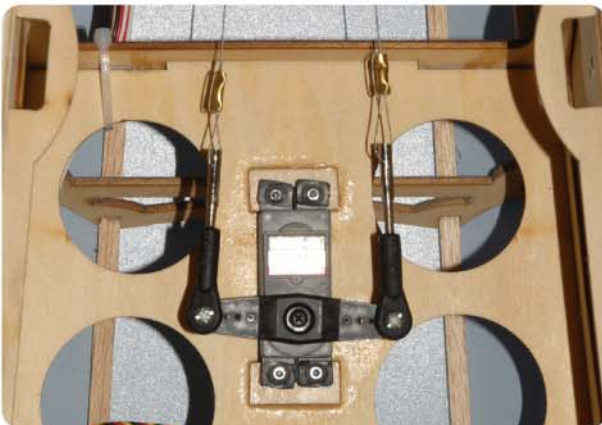
Distribute the torque rod evenly on both left/right sides. Assemble as shown above with the horns facing forward.

9 TAIL WHEEL INSTALLATION



Along the bottom of the fuselage, rudder marks a point in the center. (see left)

9 SERVO INSTALLATION



Locate the pre-slotted pull/pull servo tray inside the hatch. It is currently slotted for the hitec HS-654MG servo.

Install the rudder pull/pull servo as shown(left). You will need a dual horn/arm on the servo.

NOTE: When completely installed, the pull/pull cables should crisscross inside the fuselage for the right tension.

NOTE: The cable entering the pilot's right rear exit hole will attach to the left arm of the pull/pull servo, vice-versa.



Locate the pre-slotted elevator servo tray in the tail along the right side of the fuselage. If you haven't done so already, use a sharp hobby knife and remove the covering over the servo tray.

Attach a 12" servo wire extension to your current servo wire. Then feed the wire toward the front of the aircraft through the servo bay and install the elevator servo as shown (left).



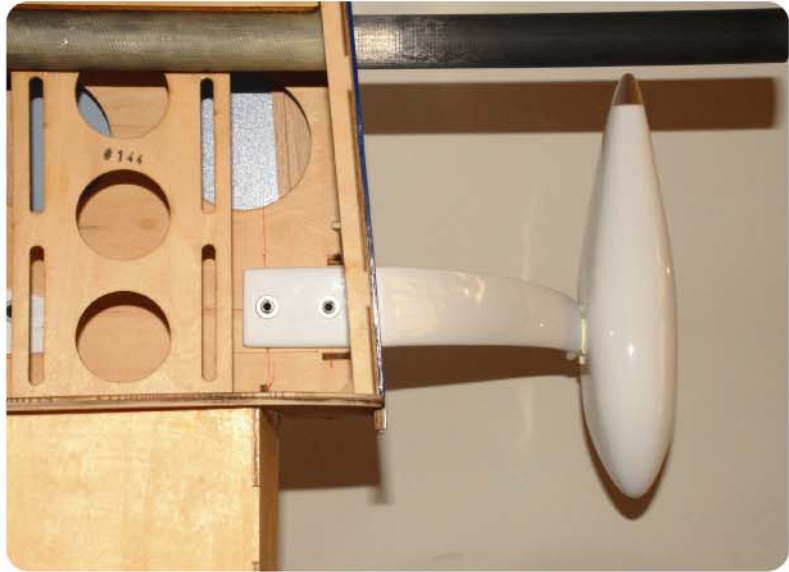
Locate the pre-slotted aileron servo trays on the bottom surface of both main wing panels.

If you haven't done so already, use a sharp hobby knife and remove the covering over the servo trays.

Attach 6" servo wire extensions to your current aileron servo wires. Then free the wires out through the root rib and install the aileron servos as shown (left).

NOTE: Make sure all of your servos are on securely before proceeding.

10 LANDING GEAR ASSEMBLY, INSTALLATION



Slide the tops of the gears into the fuselage and align the holes with the blind nuts on the landing gear plate. Ensure that the gears are sweeping slightly forward before fastening securely.

Locate the plywood wheel wells provided in your kit. There should be two (one for each wheel pant). Apply 5 minute epoxy to both the wheel pant and the plywood, then line up the arches and clamp until dry. Place the arch side of the wheel pant on the wheel axle, so that the arches face inward. Use scotch tape to temporary hold both wheel pants on, until you get them evenly lined up together. Taking a step back helps to see if they are truly level.

11 ENGINE MOUNT



Right thrust has already been incorporated into the engine mount.

Use the wood plate mount that was provided with your Gas engine to mark your drill locations.

Then use a 2mm drill bit to drill out your holes for location

12 AILERON HINGING AND INSTALLATION

Each aileron is pre-slotted and equipped with four CA hinges. Slide the hinges in halfway in the position shown above then attach them using thin CA glue.



Once you have attach CA hinges to both ailerons, slide them into position onto both wings.

Be sure to match up the covering pattern on the top surface of the wings with the ailerons, to make sure they are installed correctly. With the ailerons in place and an even 1mm gap between the aileron and wing, apply thin CA glue to the hinges on both sides. Let dry.

Work the hinges up and down a few times to break them in.

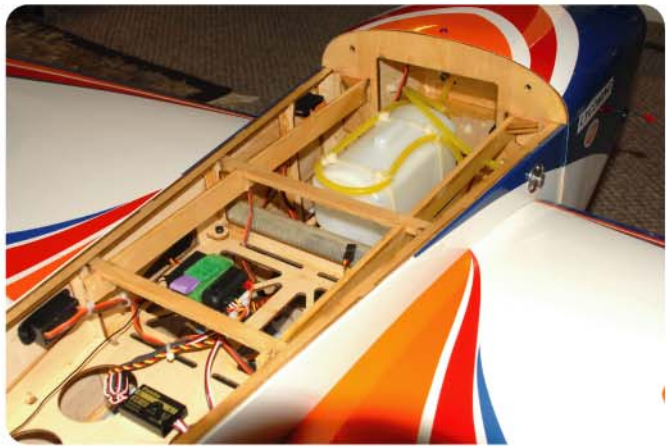


With the pushrod connect to the ball linkage center the servo arm and aileron again.

Tighten the ball connector securely but still ensure that it can swivel freely.

13 HATCH INSTALLATION

At this time, remove the hatch from the fuselage and notice the two screw holes on the side of the hatch.

14 REINFORCEMENT

As shown in the top picture. When you use over size power source with model, we are recommended make a reinforcement with additional contained parts.

(This reinforcement are optional process to safety flying for over vibration)

15 CENTER OF GRAVITY

In preparing the aircraft for flight, it is important to properly balance the model.

The CG range was determined from our flight tests. The forward range is better suited for sport and precision aerobatics, while the rear range is better suited for 3D flying.

Fly at this CG until you become more experienced with the aircraft, then make adjustments as needed.

The CG is 5"~5 1/2" from the leading edge of the main wing at the fuselage with the airplane

BEFORE FLYING

Pre-flying test is needed after assembly.

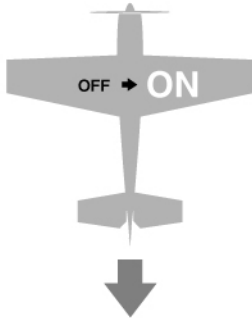
Fill up 'Extra 330' and check battery.



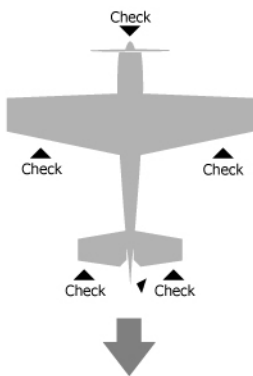
Turn on Receiver Switch.



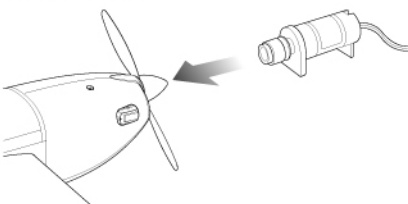
Turn on 'Extra330s 120C'



Check Ailerons, Elevators and Rudder.



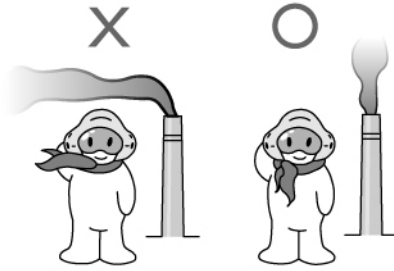
Start the Engine.



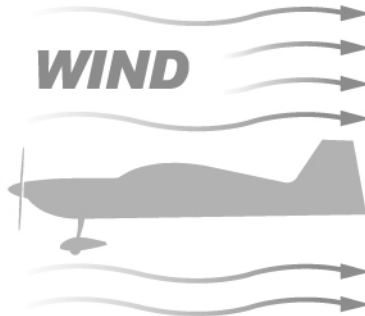
DO NOT face the plane towards anyone.

WHILE FLYING

Recommend to fly when there is no breath of air for first flight to test condition of plane.



Please see image below for proper flying tips.



For optimal flying, we recommend operating the plane with it's various parts in good condition.

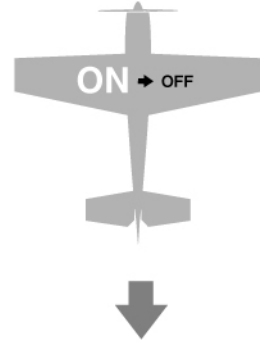


Always land your airplane into the wind.

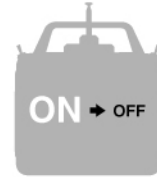


AFTER FLYING

Stop the engine after flying and turn off the switch.



Turn off the transmitter.



We recommend that you check the conditionb of the plane before and after the flying.



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Thank You for your support in Fliton.

We are professionals dedicated to providing our customers with the very best in radio controlled airplane technology.
We hope that you will always keep us in close consideration for your next airplane purchase.

Stay tuned to Fliton.com for more product releases.



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