

# SouthernX-AM

Assembly/instruction manual



SouthernX-AM, The freestyle competition which is done in the interior (the aero musical) it was designed to business.

In order to be able to use the narrow gymnasium widely, the general interior アクロ machine compared to we have become going around small, because of hybrid structure of EPP デブロン than the general デ professional シ machine it is more difficult to be broken, more lightweight fuselage has become. In addition, approximately half of the fuselage is EPP make in spite, securely to be a rigid impression of the デブロン machine, it has become the fuselage where the rudder is effective very accurately.

Being free, because it can download the fuselage data of SouthernX-AM for the RC simulator FMS which you can use, from the home page of the RC airplane experimental atelier, please use in flight practice.

RC Airplane experimental atelier  
home page

<http://rcp.web.infoseek.co.jp/>

FMS Bussiness SouthernX -AM



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Please read in beginning

### **!Notice**

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At the place where it has radi-con club and the like within around 2km, please do not put out radio wave no matter what. When radio wave does the radio interference and the large-sized machine falls, there is a possibility serious accident such as physical injury occurring. In addition, at the point where the person is, the building, the power line, at the vicinity of the road please do not make fly.

Because the propeller point has become sharp, while turning please do not touch the hand no matter what. When the hand you throw the fuselage, please pay attention to the propeller sufficiently. While producing, using the cutter knife, and the like because there is a job, there is no wound, the sea urchin noting sufficiently, please produce.

As for production and flight of the fuselage, at responsibility of the production person and the operator please go. The selling agency and the production origin are unable to owe responsibility production and flight, in addition, regarding whatever trouble. In addition, this product change of design thing and it ends abruptly production with circumstances, because there are times when price is reformed, please acknowledge.

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Example of power unit and the mechanic etc. whom it loads

- The brush less motor of 20 g or less : AXi2203 series AXi2203/52 recommendation
- The propeller which conforms to the motor: GWS 8 x 4.3 and the like
- 4.7g servo elevator & for ladder: Tahmazo TS-1002 or TS-1006
- For servo aileron below 8g: FUTABA digital micro servo S3154 recommendation
- ESC below 10g: Phoenix-10 THUNDERBIRD-9 and the like
- Receiver above channel 4 of 4g: Berg4 recommendation
- 300mAh2 cell Lipo battery 20g: HYPERION HP-LVX300-2S and the like
- connector below 1g (even with BEC connector yes)

Those which are necessary for the assembly:

- The adhesive which can glue the polypropylene (the for Scotch 3M powerful adhesive plastic, GP clearing of コニシボンド)
- the super X and the like elastic adhesive & the instantaneous adhesive agent (medium viscosity it is low viscosity)
- the hinge tape & the glass tape

**Note:** In this instruction manual, as for the part where it does not have the appointment of the especially adhesive the adhesive which can glue the polypropylene is used.

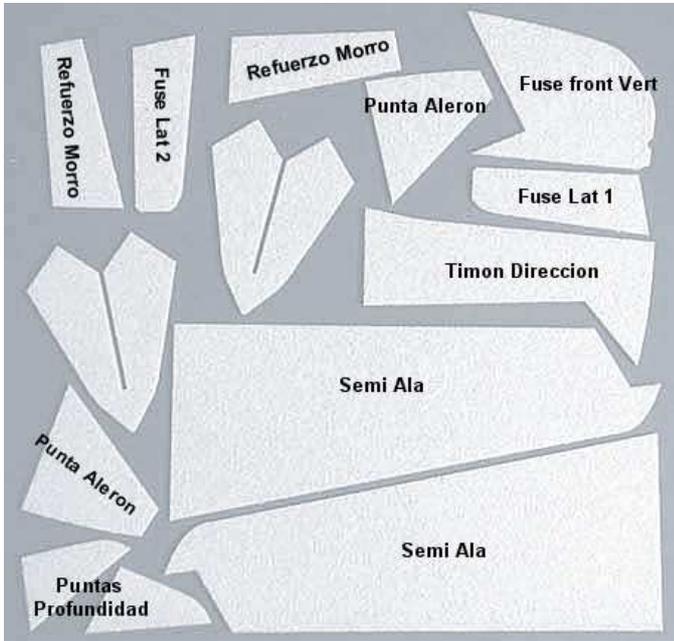
Instrument:

- Because the cutter (the work of boring the hole is many, 30 degree acute angle blade for the workmanship cutter is convenient)
- In order the needle (in order to do the installing wire in the tail assembly you use)
- the lighter/writer (you use)
- the radio plier
- the scissors
- the nipper
- the 1.2mm drill (bore the screw hole of the mount in order to heat the contractile tube and/or to expand the hole of the wheel)

In addition when it is, convenient ones:

- You work the VHS videotape which is stopped using 8 (turning over the fuselage, you use) as the main wing fixture.

EPP



In case of the AXi2203 motor please cut off top in as in this figure.

The picture of the mount is actual size:



Motor mount (polypropylene make)

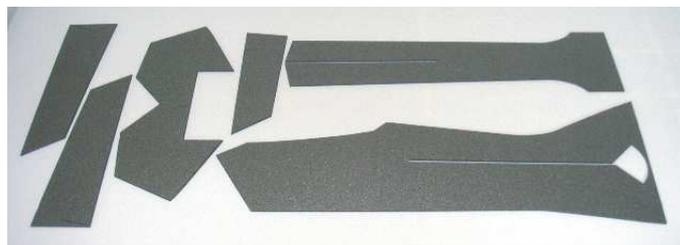
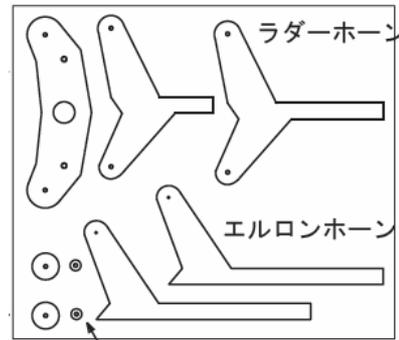
Micro screw (for extension horn linkage thread fixing)



2 mm washers (for linkage thread fixing)  
Tapping bis (for motor installation)

Elevator horn

Aileron servo extended horn



Depron



## Other parts

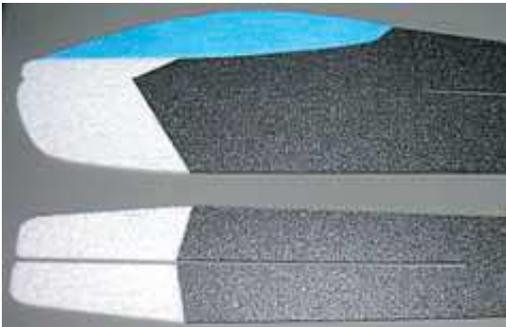
- Tire
- canopy
- contractile tube (for linkage rod)
- Kevlar thread (for installing wire)
- PE line (for wire linkage)
- round Kent paper (for body reinforcement)
- carbon rod 1.2mm 1.5mm
- carbon seat
- piano line 1mm
- sponge

PE line

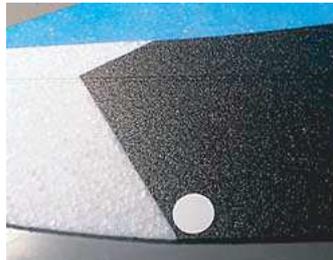


Kevlar thread

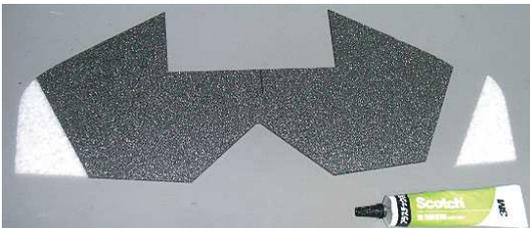
**Note:** Hanging the weight of 2kg in advance, several days please leave the PE line, take the extension sufficiently.



It glues with like the photograph combining the body and the nose and the cockpit section.



The round Kent paper is pasted in position of the photograph.



Combining also the elevator and the ladder respectively, it glues.

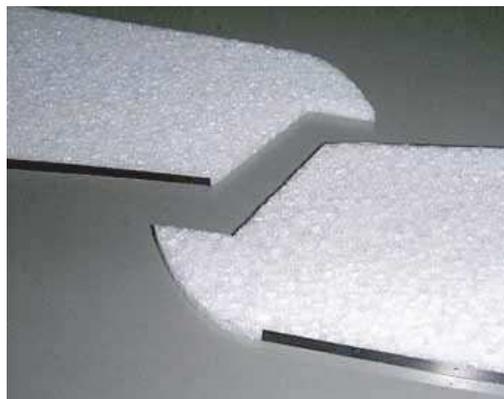


**Note:** When it glues the end face, until the adhesive pulls the thread, you attach the respective material, you separate, because over again, it attaches with compared to it can glue to power. When the end face of the デブロン material does not become completely perpendicular, when several times it rubs with the axis and the like of the pen, it is possible to form perpendicularly.

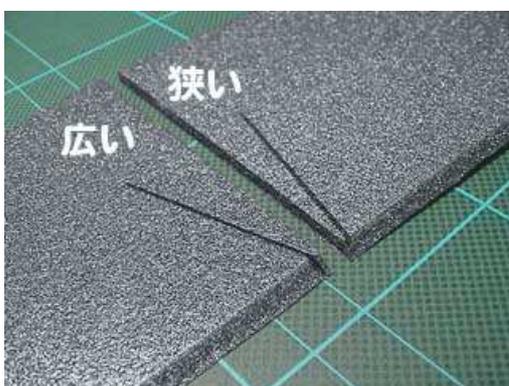


You insert the scissors in the edge of the carbon seat, tear in width and 3mm stick between the main wing trailing edge & aileron blade tip. Because the end face of the carbon seat very much has become sharp, in order not to cut the hand, please pay attention. The round Kent paper is pasted in position of the photograph. Making thicker than thickness of the main wing, tearing in width above 4mm, please use just the reinforcement of the main wing leading edge which it makes the top and bottom aspect protrude a little. Is in order (this makes the carbon the main wing top and bottom aspect protrude a little and to obtain the ground effect

It does not make the trailing edge protrude



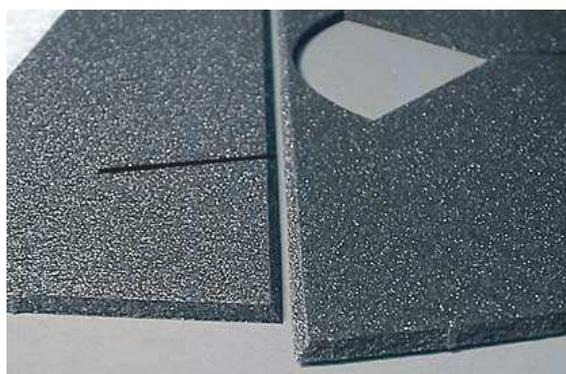
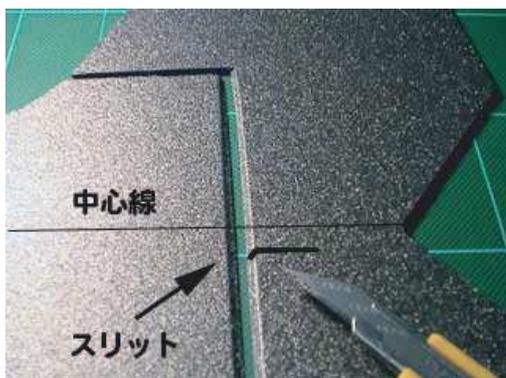
Making thicker than thickness of the main wing, it makes the top and bottom aspect protrude a little



45 degrees it cuts hinge side of the aileron slantedly. As for the slit where horn is attached with the relationship which does not load servo onto the center, it meaning that angle is different in left and right please note.

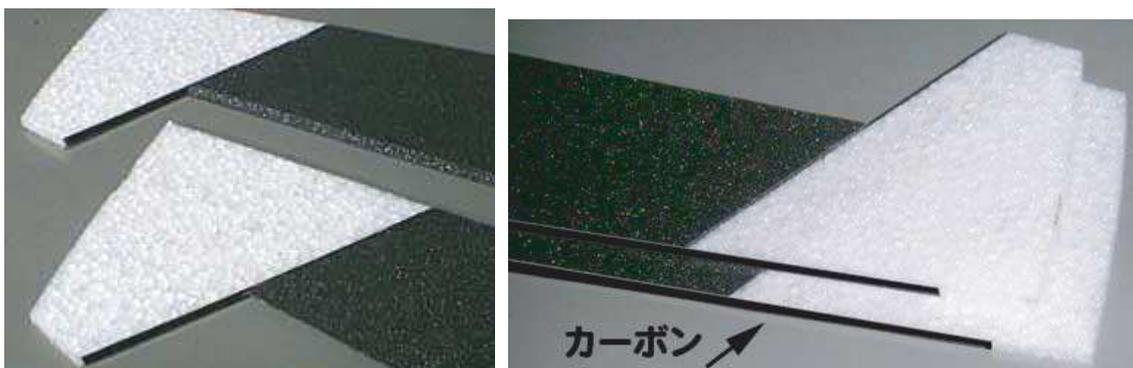
As for the hinge of this fuselage, the aileron and the elevator the surface, the ladder are the left surface.

Please cut also the ladder and the body vertical board, in the same way respectively slantedly.

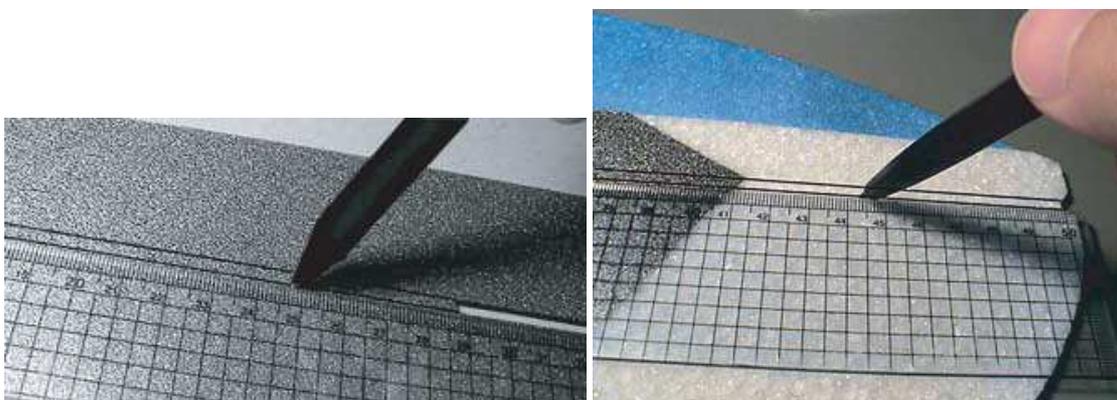


It cuts also the body side board and the elevator slantedly. Because as for the slit of the elevator there is no on center, please make sure not to make a mistake in both sides.

It glues the aileron and the blade tip section. This part in order to put the carbon, means to glue.



The carbon is pasted even in the trailing edge of the aileron. The blade tip section in order to absorb the impact of fall, makes to the middle.



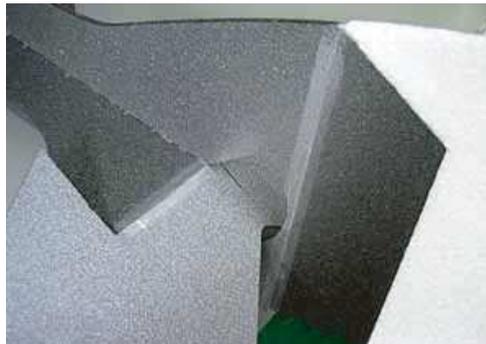
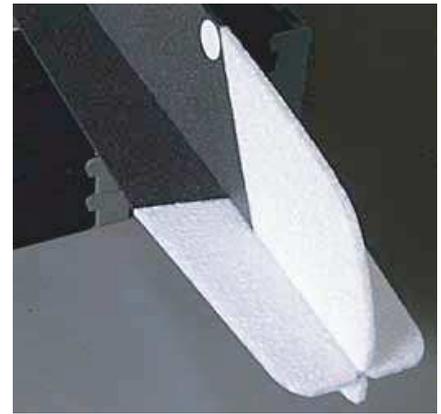
The line which in the body vertical board and the side board becomes the guide when gluing is pulled.



It keeps inserting the body side board from rear. This time please insert also the elevator.



The adhesive is painted in the part which pulled the line, each one glues. In order to become perpendicular, please note. To place on the table being to become difficult, when it designates the videotape and the like as the stand, it is convenient.



The elevator and the ladder are installed with the hinge tape. Please verify whether or not 45 degrees it moves securely.

**Note:** The hinge tape does not have the adhesive strength which is sufficient for デプロン and EPP. In the part which pastes the hinge tape, painting adhesive such as Scotch in advance, after the べ it is making the rank dry which is not attached, please paste the hinge tape.



Near horn is attached please paste the hinge tape even on back.



Bending the piano line, it makes this kind of part. This photograph almost is actual size large. The accuracy there is no respective size that much and also the て is all right.



The carbon rod (thicker one) you snap to half exactly, wind the piano line for the leg with the Kevler thread and set with the instantaneous adhesive agent.

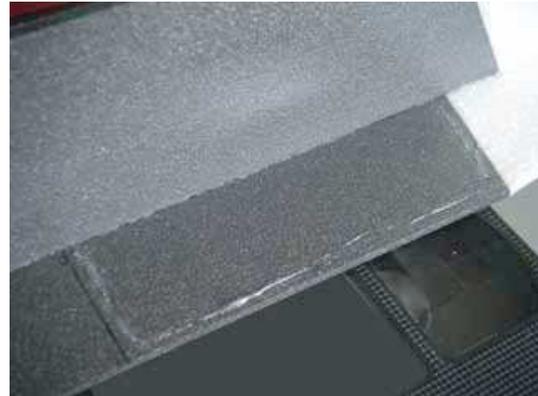
**Note:** The carbon rod breaks being the hand, raising the nail, when you snap, rather than using the nipper and the like, cleanly.



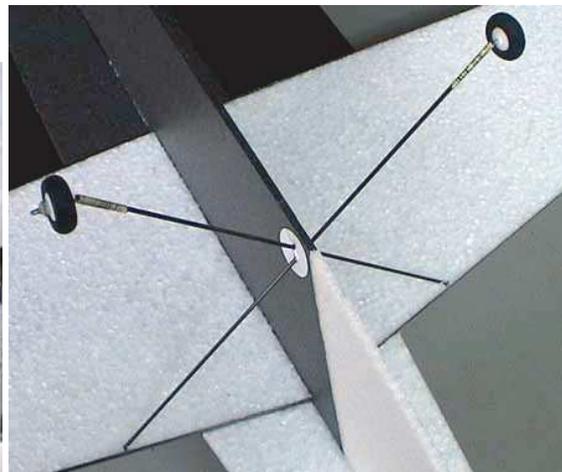
Because the hole of the wheel it is a little smaller than as many as 1 mm, in order to turn smoothly with the 1.2mm drill and the like, please process. You put tire stopper and are packed, paint super X in the coming out stop.



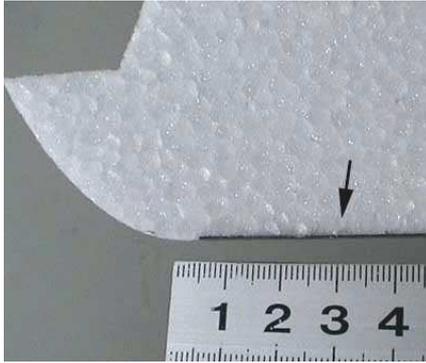
It glues the main wing to the underside of the body side board. The boundary of EPP and デプロン exactly becomes position of the main wing leading edge.



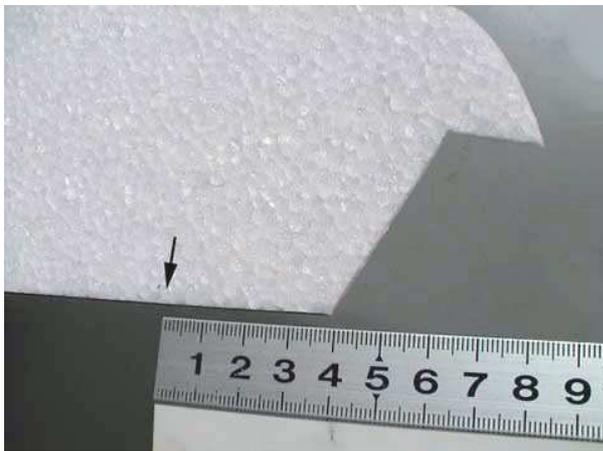
Because the majority of increases is required for the installing wire, it is not necessary to glue extensively. The fact that the adhesive is painted is OK in just the part of the edge.



From the body in 30 mm leading edge parts inserting cutting into with the cutter, making the leg cross in the body reinforcement part, you insert. The carbon rod breaks being the hand, raising the nail, when you snap, rather than using the nipper and the like, cleanly. (As for gluing please do not do yet)



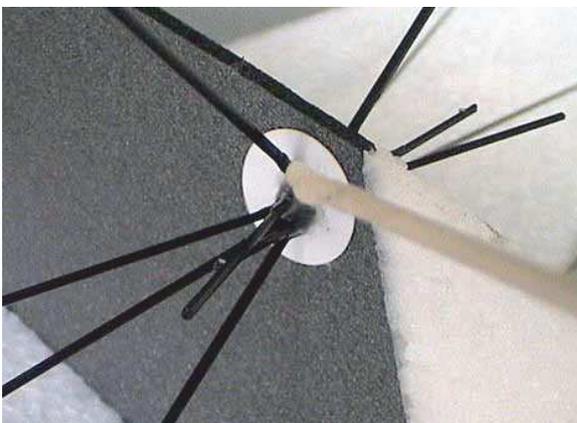
In order to insert the installing wire of the carbon rod, from the part where R of the main wing leading edge starts in approximately 30 mm places the break is inserted with the cutter. Directing to the reinforcement of the Kent paper where the body is round please open the direction of the break, slantedly.



In the same way, slantedly from the blade tip of the main wing trailing edge the break is inserted in 40 mm places.



4 carbon rods for the main wing installing wire is inserted in the break of inserting and the main wing in reinforcement of the entirely round Kent paper. Piling up the videotape, when it makes the jig of the main wing, it is convenient. As for the installing wire as much as possible please make sure to become the straight line. When it has bent, sufficient rigidity becomes unable to obtain. As for the hole of the Kent paper becoming large, you are not concerned,



Before the gluing please verify sufficiently whether there is no distortion and twist in the main wing. In addition, applying the ruler and the like to the wheel, thing and the wheel where the tread left and right becomes horizontal please verify that the true  $\sphericalangle$  immediately it is faced in travelling direction. Please do not acquire sign with such as magic. When the instantaneous adhesive agent is dropped, it spreads. When position is decided completely, it glues main wing EPP and the carbon rod with the medium viscosity instantaneous adhesive agent.

with the body, the carbon rod glues.

Super X is painted in the part which is crossed



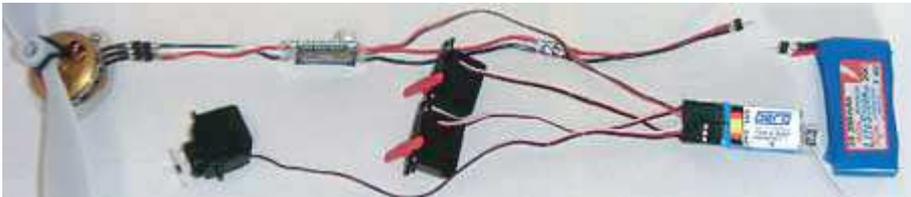
One evening putting, when the adhesive becomes firm, it cuts the unnecessary part of the carbon rod with the nipper.



In the main wing the aileron is installed with the hinge tape. (Please be sure to jointly use the Scotch adhesive.) In the same way as the tail assembly, as for the part where horn is attached please paste the hinge tape even on reverse side. Being something where the point is round rubbing well, please make stick.



It glues horn to each rotor blade. Aileron horn is attached to the underside.



Connecting the mechanics entirely, please verify, put out the neutral of servo whether it operates just.

Balance station of this fuselage from the main wing central leading edge becomes 90mm.

Changing helicopter loading site depending upon the motor, and the mechanics whom you use there are times when it becomes necessary to adjust center of gravity.



Trying arranging the mechanic to the body, please verify whether or not center of gravity is agreeable.



You install extended horn of aileron servo with the screw which belongs. Please cut off the unwanted part of genuine horn.

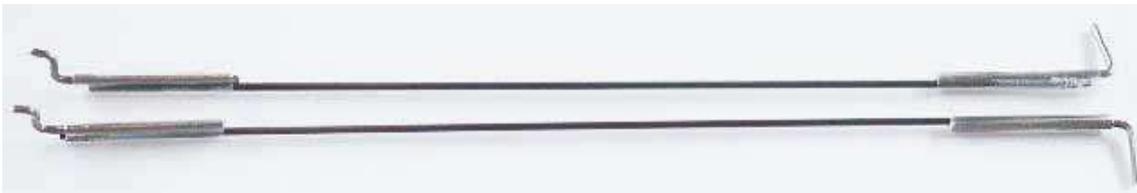


In case of the recommendation mechanic, boring the hole through position of the photograph, please load servo.

(Please remove EPP of the part of the brim of servo completely.)

When position is decided, the point please do to attach servo and デブロン with super X.

**Note:** Aileron horn, like the photograph becomes the shape which was opened facing toward the nose.



Connecting the carbon rod and the piano line with the contractile tube, it makes the aileron linkage. Roasting the contractile tube with the lighter/writer and the like, please to the rank which can adjust length from after loose contractively.



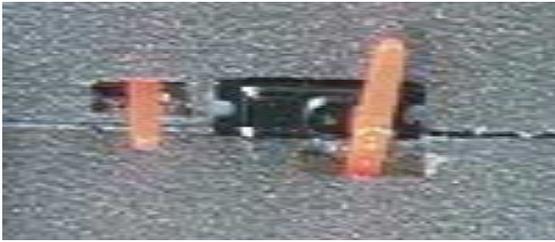
As for the rotor blade side piano line of the aileron, inserting the linkage coming out stop, painting super X in the point, please make sure not to come out.

Connecting the battery, fine you adjust length when it puts out neutral, make the viscosity instantaneous adhesive agent soak low inside the contractile tube and lock the linkage.



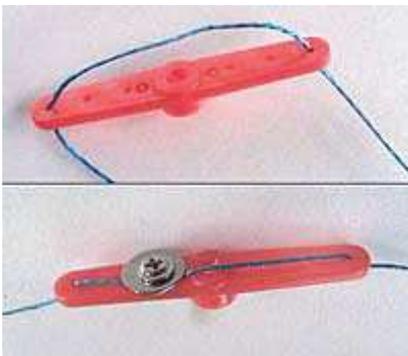
Please load the elevator and ladder servo onto this position. (This is the photograph which was seen from the reverse side)

**Note:** That length of the cord/code does not become insufficient, you note.



The point you attach servo in the same way as the aileron with super X.

Moving horn to all the way, please bore the long hole of the rank which does not contact.



It cuts the PE line in half, like the photograph it passes to horn. Using the washer and the screw of attachment, you hold down. You can adjust neutral by loosening this screw.



Linkage of ladder servo  
Linkage of elevator servo

As for elevator servo, in order to avoid the fact that the screw and the line contact please attach the screw to the hole of one advanced side.



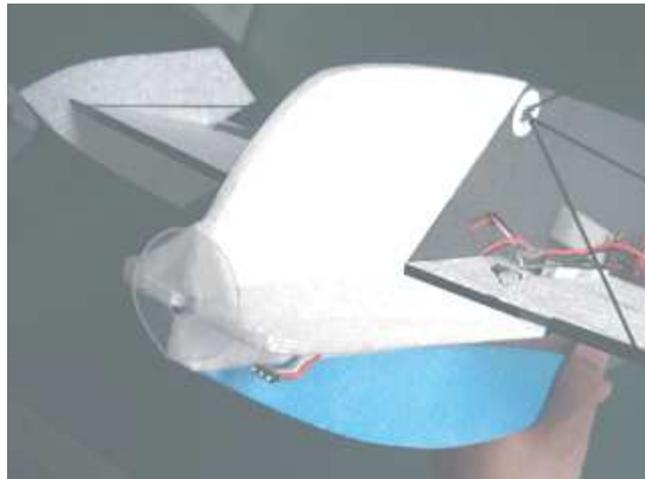
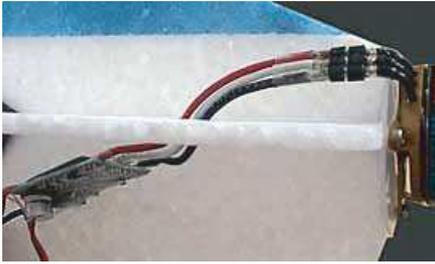
Several times twisting in the hole of horn of the rotor blade through the line, it stops with the instantaneous adhesive agent.

In order not to drop the instantaneous adhesive agent into デプロン, please note.



You install the motor in the mount, glue to the nose. As for this fuselage also the down side as for thrust is 0 degrees. Trying attaching the propeller, please be sure to verify that the true  $\sphericalangle$  immediately it has been attached vis-a-vis the body. Fine control is possible with the motor and putting the washer between the mount.

In order to extend over the nose end face and the mount, please tear the glass tape in 3mm width, paste.



Boring the hole through the nose side board, please pass through the cord/code of スピコン.



Boring the hole through the kind of position which does not contact horn and the linkage, it passes through various cords/codes.



Boring the hole through near the main wing rear end back, try to be able to insert the battery. For the coming out stop, please stick the sponge of attachment.



Cutting the gluing surface of the EPP material for nose slanted reinforcement to 45 degrees, it glues. Please pay attention to both sides and the top and bottom.



← nose direction

It glues body slanted reinforcement. Because this job is difficult well enough, several degrees rehearsing practicing, please go quickly.



It designates the adhesive the extremely way it keeps attaching as the end face and.



When the gluing mark is attached to デプロン, if the tape ペタペタ is done, it is you take.

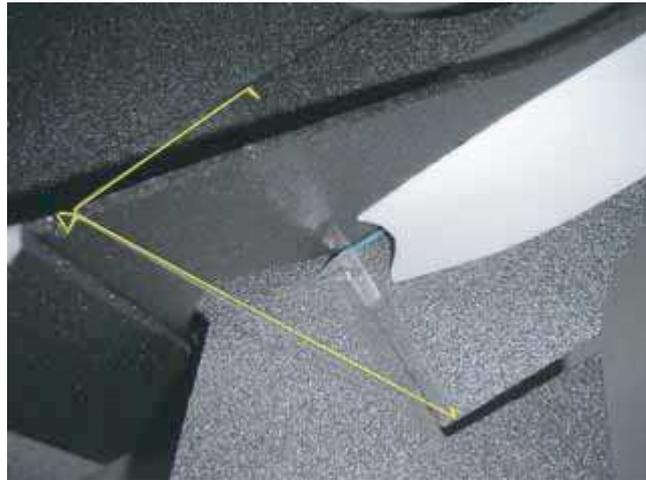


In order for the elevator linkage not to hit, please cut off the rear end a little.



The carbon seat is pasted in the tail ソリ part and under the body.





In the fin and rudder and the tail plane, please do the installing wire with the Kevlar thread. It is not necessary to stretch that much strongly. When position is decided, please glue with super X.



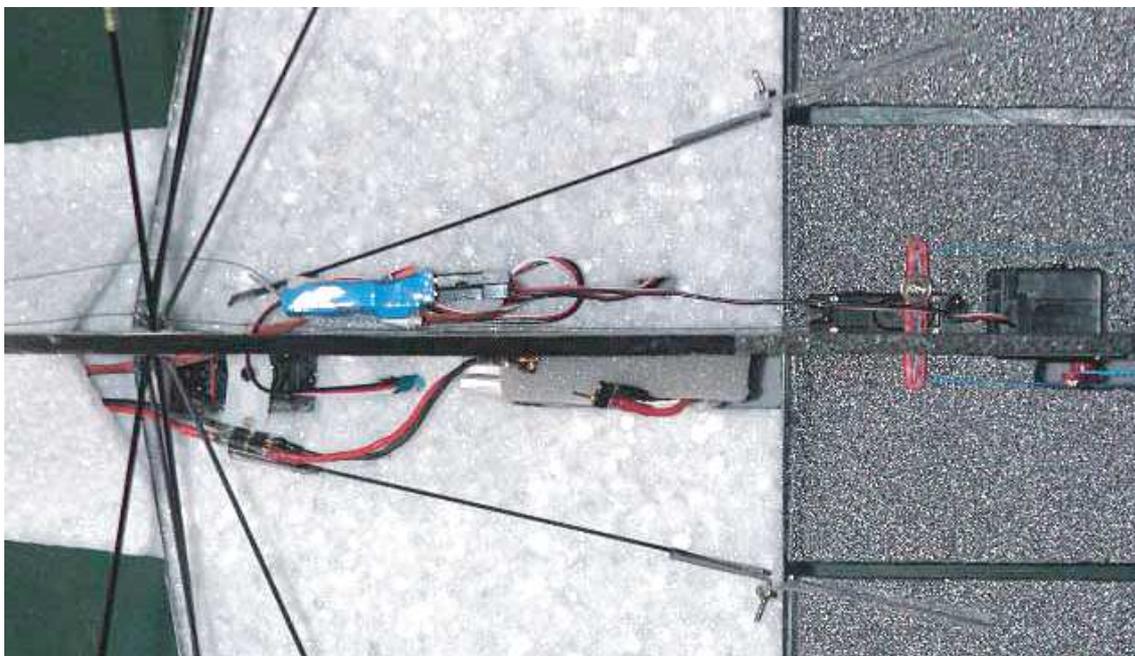
The blade tip board is installed

Angle of standard, like the photograph is the rank which is a little more shallow than the slanted line of the counter part.

Because as for this you think, that there is the taste of the person who is thrown temporarily locking first with the scotch tape and the like, while throwing, you should have adjusted, probably will be. (The scotch tape of ニチバン adheres to EPP)

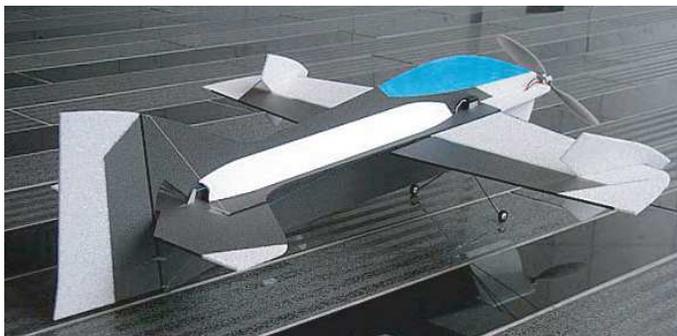
When the position where the blade tip board is attached is decided, please be sure to glue to the wing securely. When the blade tip board has done グラグラ, big habit appears in the knife edge and the like.

## Mechanic arrangement photograph



As for the position of a vessel's helm of standard also each rudder 45 degrees, as for EXP only the elevator is 30% concerning the setting of SouthernX-AM.

There is no necessity of the knife edge mixing. Of course throwing with setting of each taste, you are not concerned. Throwing the fuselage of this hand in case of the new person, please decrease the position of a vessel's helm half or less.



The weight of SouthernX-AM to be light very, when AXi2203/46 of high rotary type is loaded, there being too much a power, because inside the gymnasium it is difficult to throw, it sets the throttle curve to flight mode, it recommends that the end point which is in the midst of flying is lowered.



### From designer (Sekiai)

When it tries throwing SouthernX-AM really, it understands directly that as for good quality and operation feeling of the reaction it is something which it should feature, probably will be.

Quite, the stick and the fuselage connect directly and as for the flight the high way, think that which raises the pleasure which throws RC in many times. To by all means please try challenging new skill with this fuselage. When and, it is accustomed to the behavior of the fuselage sufficiently, placing favorite in music, flight (the aero musical) we recommend that it tries being able to point.