

FI ESELLE FI 156 STORCH



ASSEMBLY & OPERATIONS MANUAL

Please review this manual thoroughly before assembling or operating this model.

Proceeding with assembly and use of this product indicates Agreement With & Acceptance of the following Liability Disclaimer.

Model airplanes, model engines, model engine fuel, propellers and related accessories, tools and equipment can be hazardous if improperly used. Be cautious and follow all safety recommendations when using your VMAR model airplane. Keep hands, tools, clothing and all foreign objects well clear of engines when they are operating. Take particular care to safeguard and protect your eyes and fingers and the eyes and fingers of other persons who may be nearby. Use only a good quality propeller that has no cracks or flaws. Stay clear of the propeller and stay clear of the plane of rotation defined by the propeller. The Manufacturer, Distributor, Retailer and/or other

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CAUTION

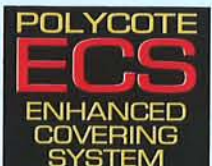
A Remote Control Model Aircraft is not a toy. It is a flying model that functions much like a full size airplane. If you do not assemble and operate this product properly you can cause injury to yourself and others and damage property. **DO NOT FLY** this model if you are not qualified. You are entirely responsible for the mechanical,

aeronautical and electrical integrity of this model and its structure, control surfaces, hinges, linkages, covering, engine, radio, wiring, battery and all other components. Check all components before and after each flight.

Don't fly until it's right!



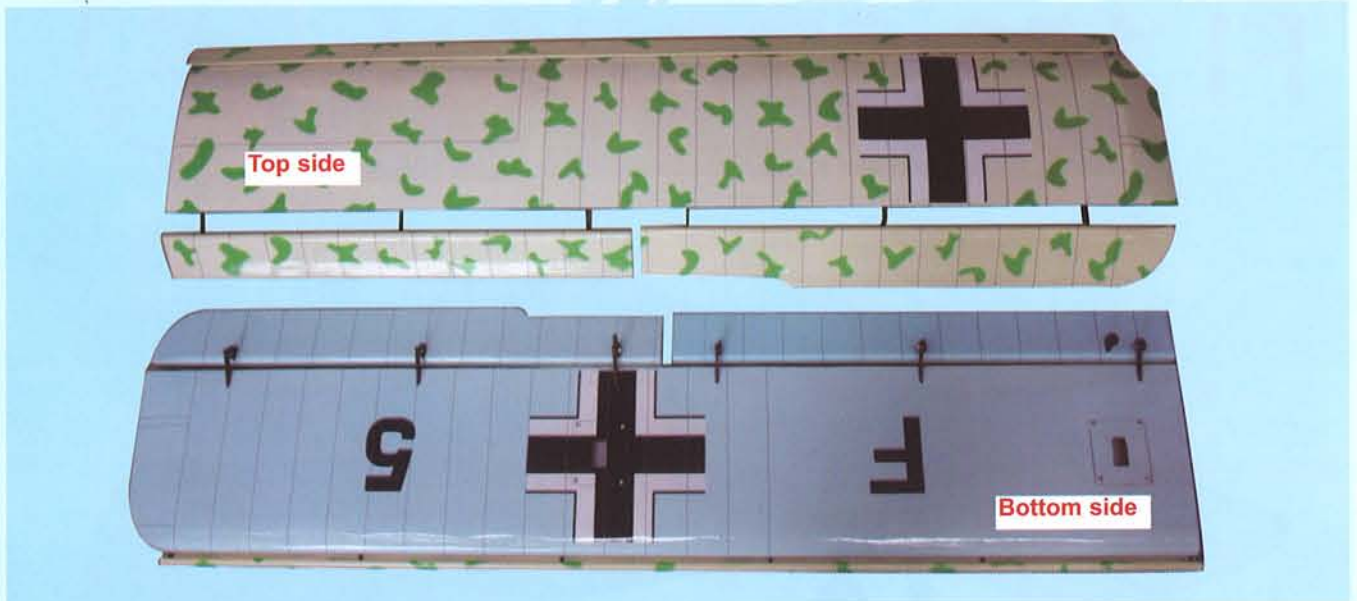
POLYCOTE™ ECS
ENHANCED COVERING SYSTEM



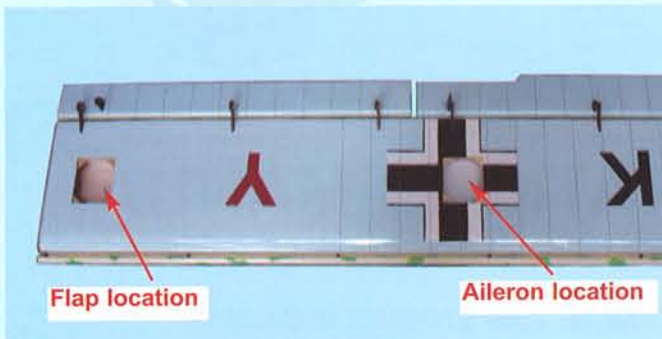
The Graphics and Detailing are inside the POLYCOTE ECS!

STAGE 1

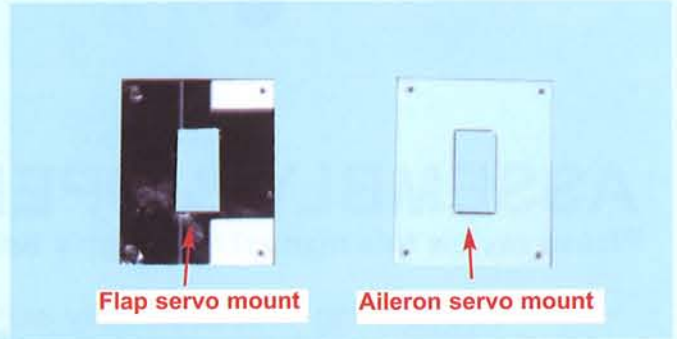
INSTALLING THE AILERON & FLAP SERVOS INTO THE WING



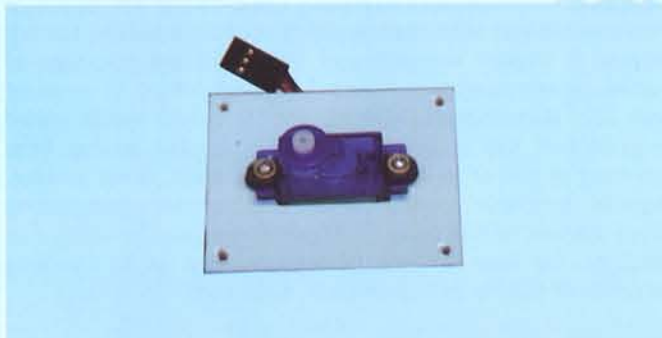
1A - Right and left wing panels (one top side and other bottom side)



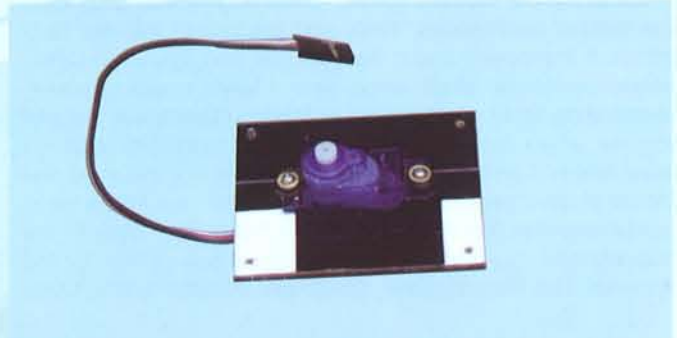
1B - Flap and Aileron location (located at the bottom side)



1C - Flap and aileron servo mount remove from the wing



1E - Install servo to flap servo mount



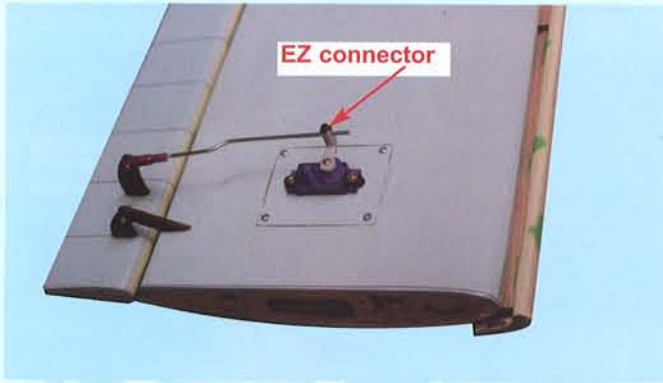
1F - Install servo to aileron servo mount



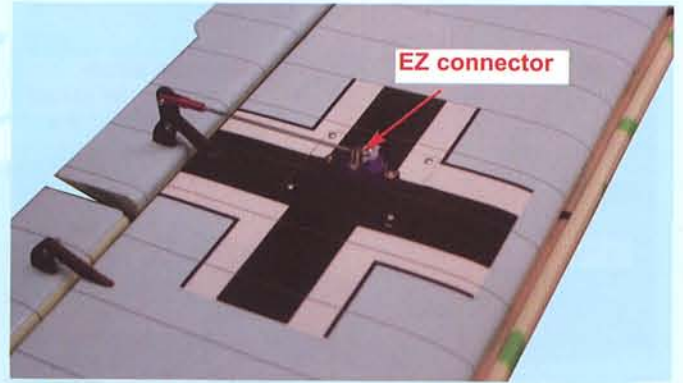
1G - Install flap servo mount to the wing panel



1H - Install aileron servo mount to the wing panel



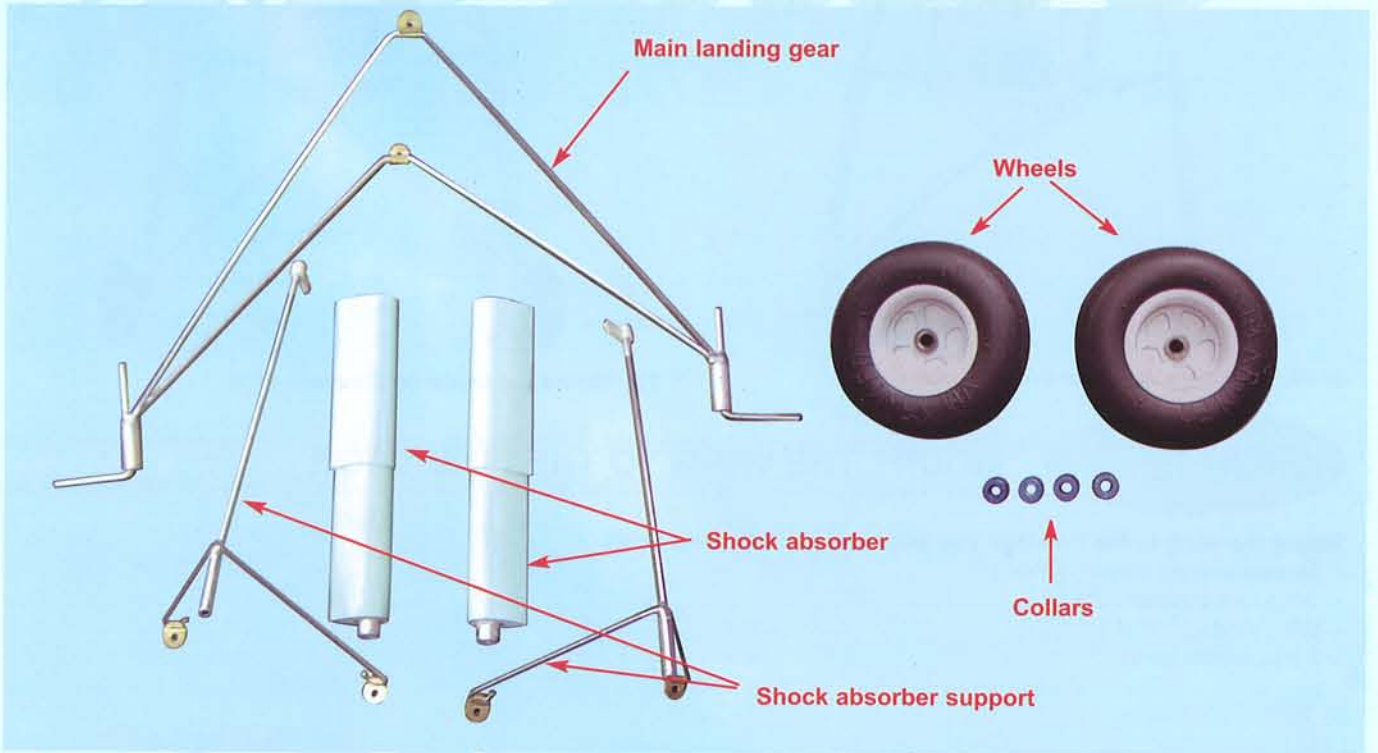
1I- Connect the Flap control rod from the servo arm to the flap control horn



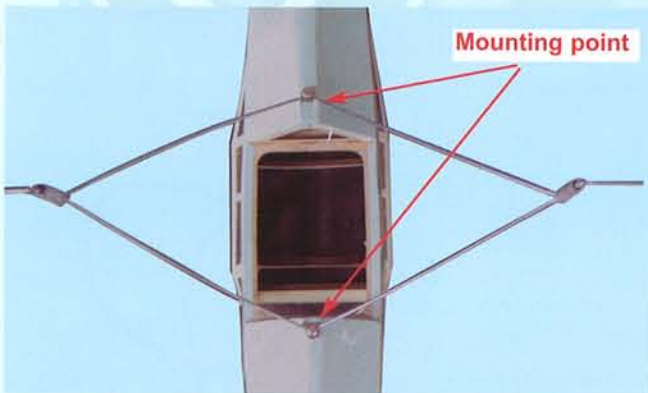
1J- Connect the aileron control rod from the servo arm to the aileron control horn

STAGE 2

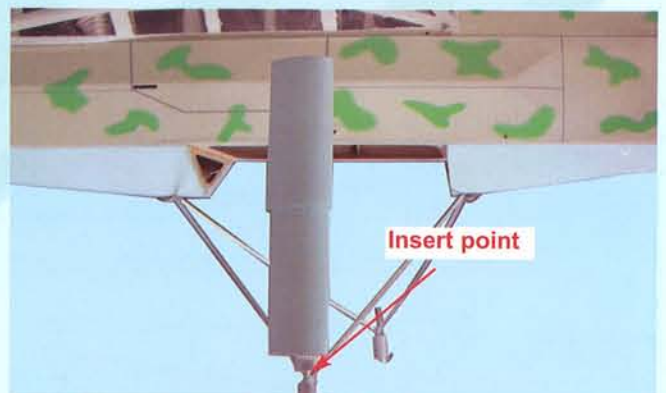
INSTALL THE MAIN LANDING GEAR TO THE FUSELAGE



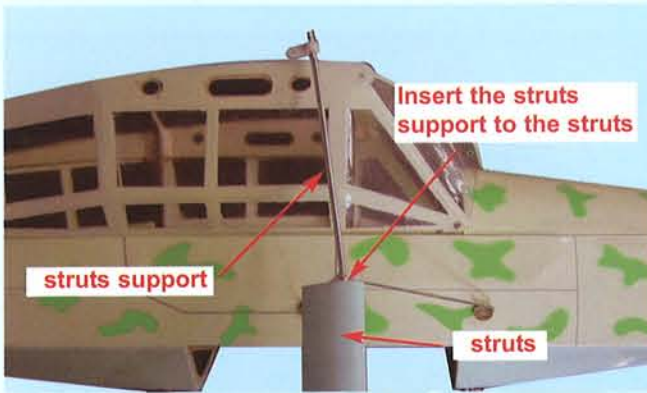
2A- Main landing gear components



2B- Mount the main landing gear to the bottom of the fuselage



2C- Insert the struts to the main landing gear



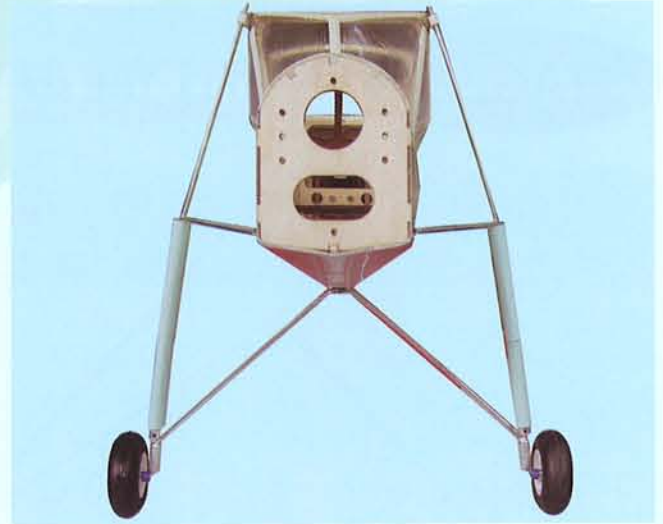
2D- Insert the struts support to the struts



2E- Use three 2 x 8 screws to mount the struts support to the fuselage



2F- Repeat step 2C 2D and 2E for other side



2G- Mount the wheel to the main gear

STAGE 3 MOUNT THE WING TO THE FUSELAGE

Mount the wing to the fuselage you will need the following items

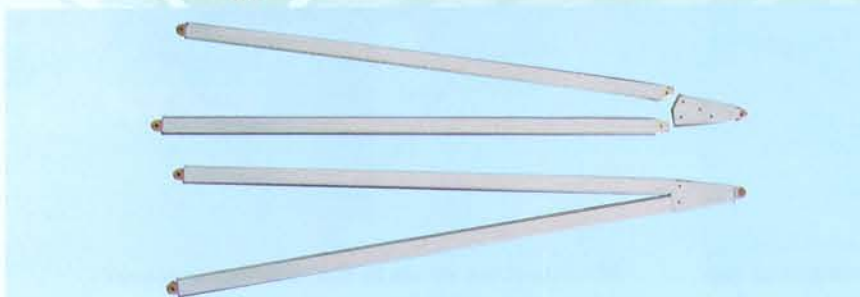
- Aluminum wing joiner (2 Pcs)
- Wing root adaptor (2 Pcs)
- Wing struts (2 Pcs)
- 2 Pcs rubber band



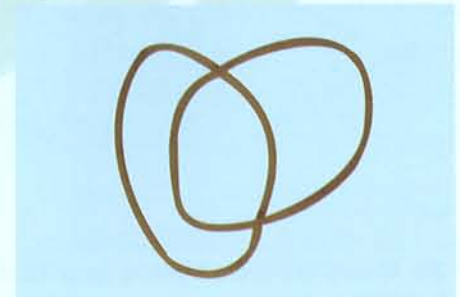
3A- Aluminum wing joiner



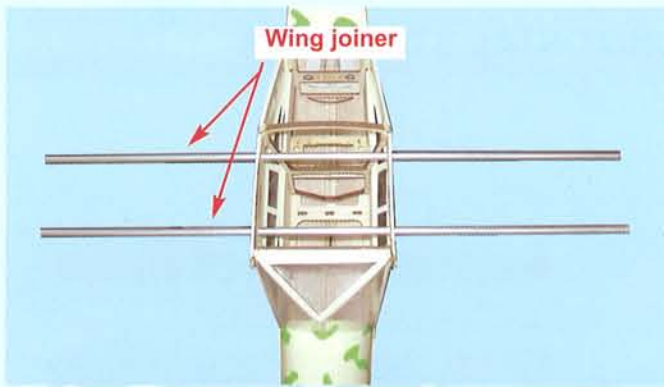
3B- Wing root adaptor



3C- Wing struts



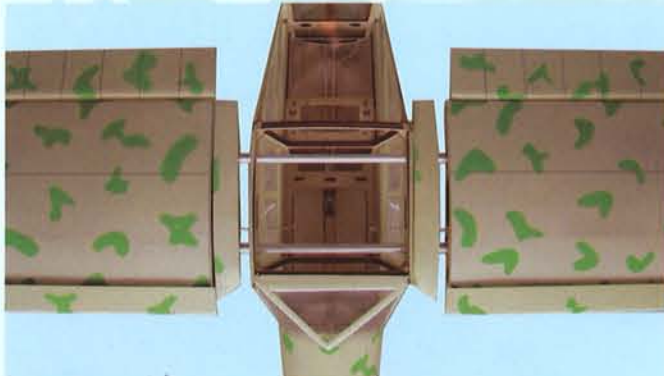
3D-Rubber band



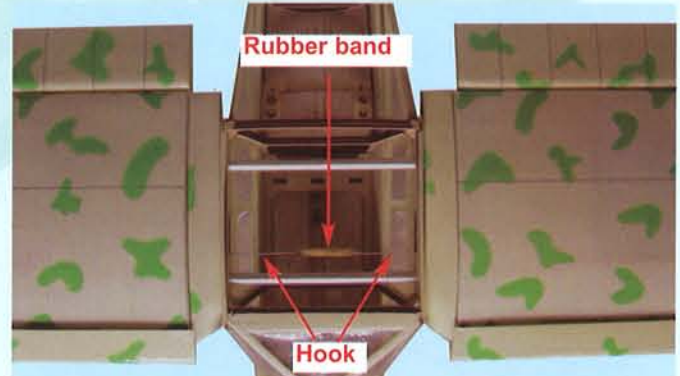
3E- Insert the wing joiner to the fuselage



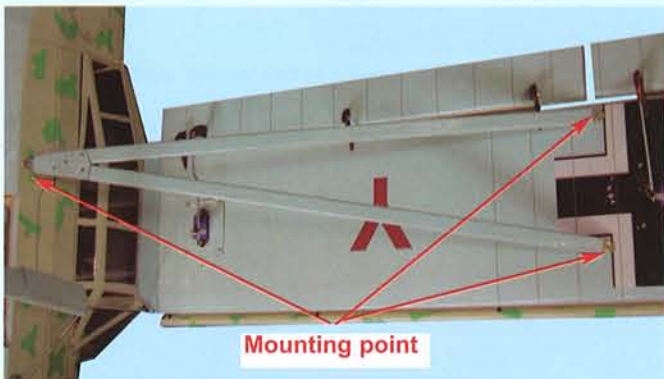
3F- Insert the wing root adaptor to the wing joiner



3G - Insert wing joiner to right and left wing panets



3H - Use rubber band to hold both right and left wing panel together



3I - Mount the wing struts to the wing and fuselage



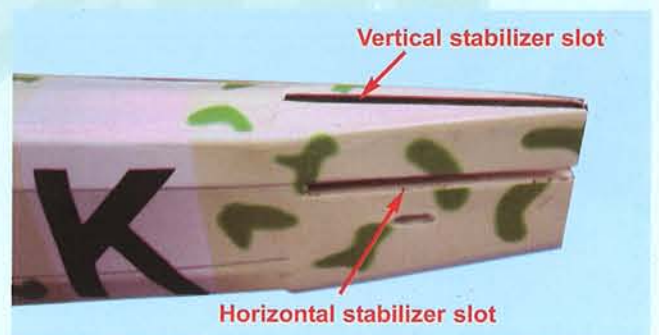
3J - Right and left wing struts mount to the wing and fuselage

STAGE 4

INSTALL THE HORIZONTAL AND VERTICAL STABILIZER

Install the horizontal and vertical stabilizer you will need the following items

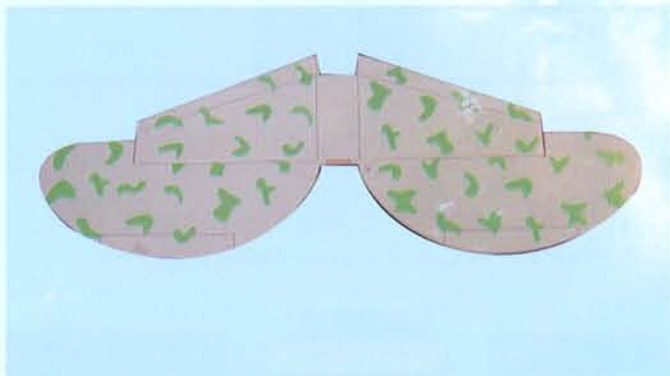
- Fuselage with the pre-cut the horizontal and vertical slots
- Horizontal stablizer with pre-installed elevator
- Vertical stabilizer with pre-installed rudder
- Horizontal and vertical stablizer struts



4A- Horizontal and vertical stablizer slots

STAGE 5

INSTALLING THE HORIZONTAL STABILIZER



5A- Horizontal stabilizer with pre-installed elevator



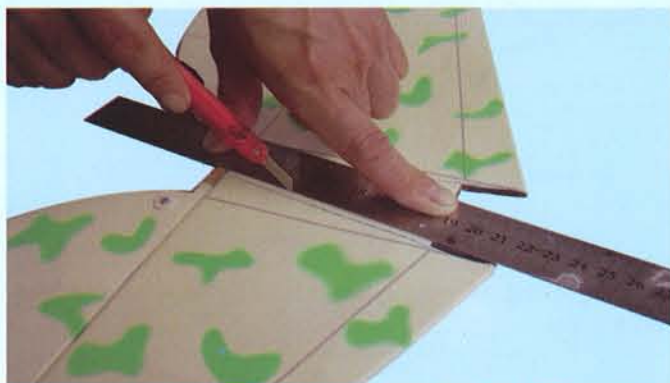
5B - Horizontal and vertical stabilizer struts



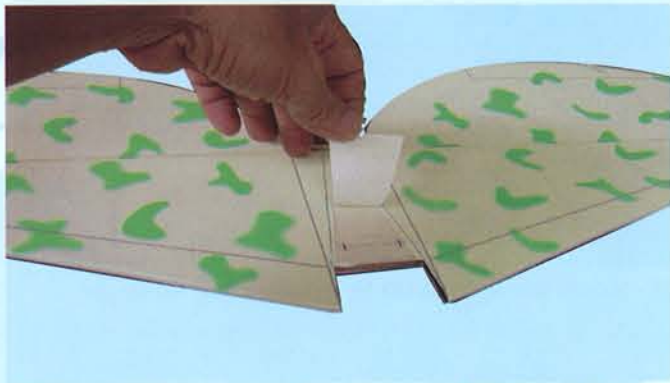
5C- Trial fit the horizontal stabilizer to the fuselage



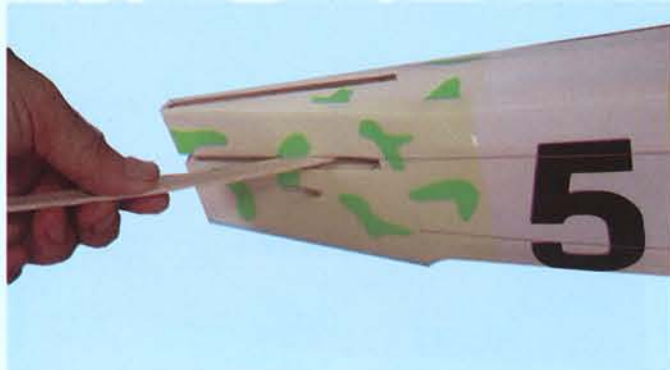
5D Mark the top and the bottom horizontal stabilizer



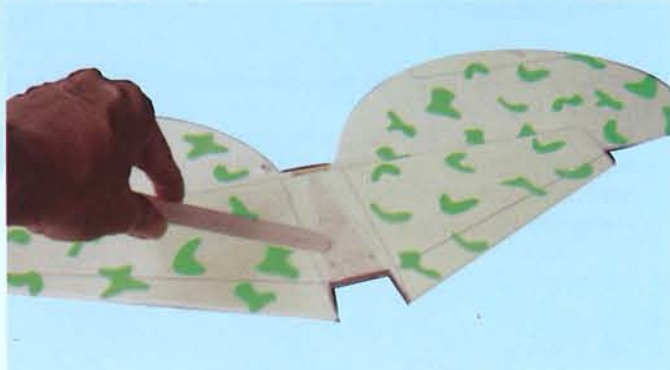
5E- Carefully cut through the covering **Do NOT cut the wood**



5F Remove the covering from top and bottom surface



5G- Apply plenty of 30 minute epoxy into the horizontal slot



5H- Apply plenty of epoxy



5I- Slide the horizontal stabilizer into the place.Wipe off any excess epoxy



5K- Make sure the horizontal stablizer sqare and level

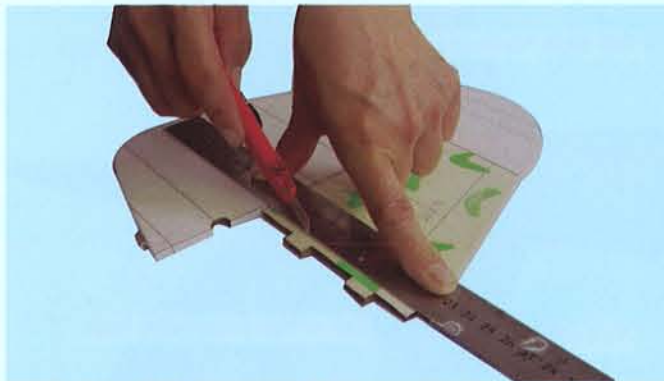
STAGE 6 INSTALL THE VERTICAL ATABLIZER



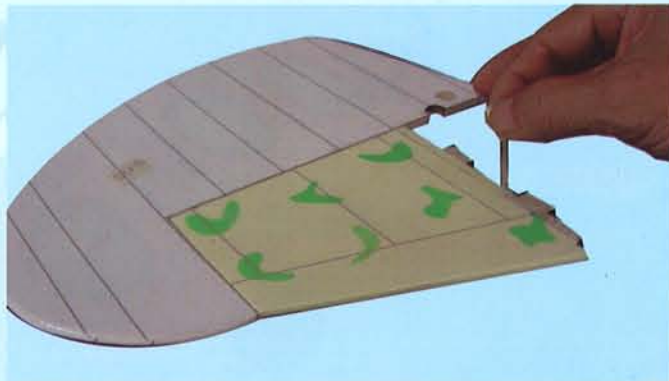
6A- Trial fit the vertical stabilizer in its slot



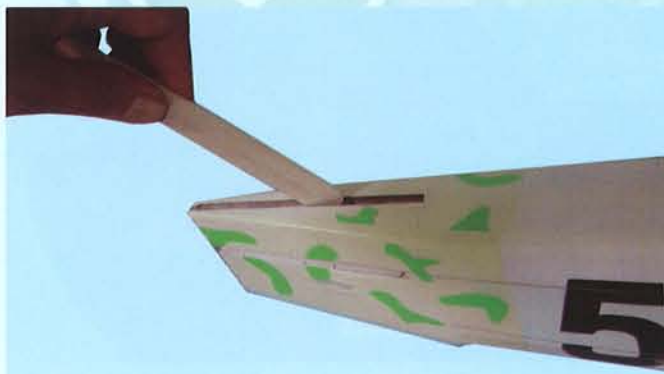
6B- Mark both side of the vertical stabilizer



6C- Carefully cut through the covering.**Do NOT cut the wood.**



6D- Remove covering from both sides



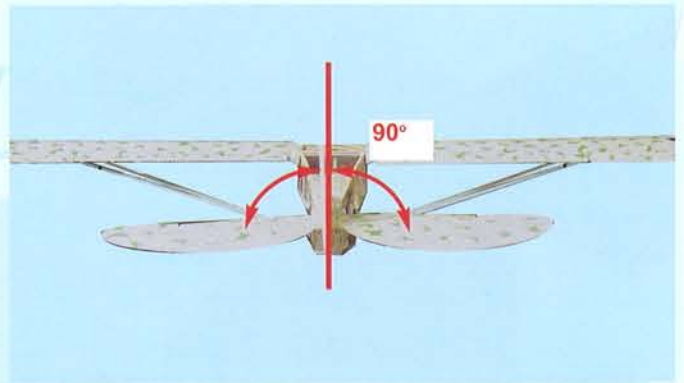
6E- Apply plenty of 30 minute epoxy to the vertical stabilizer slot



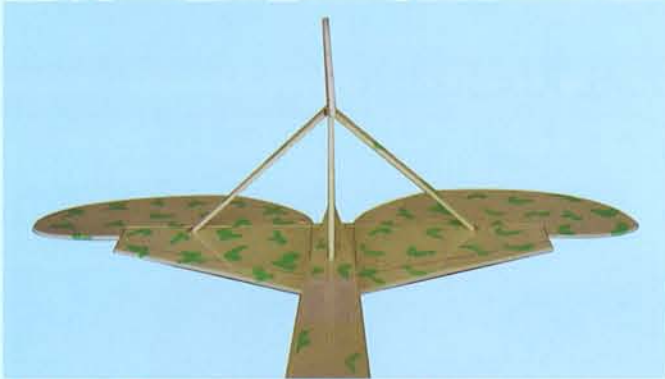
6F- Apply plenty epoxy to the exposed wood on both sides of the vertical stabilizer



6G- Slide the vertical stabilizer into place. Wipe off any excess epoxy



6H- The vertical stabilizer must square with horizontal stabilizer

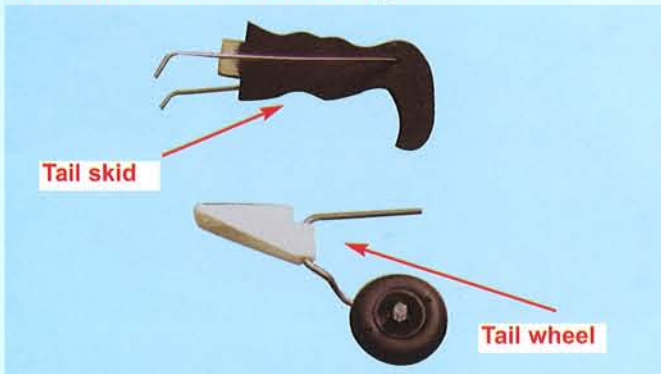


6J- Install the vertical and horizontal struts

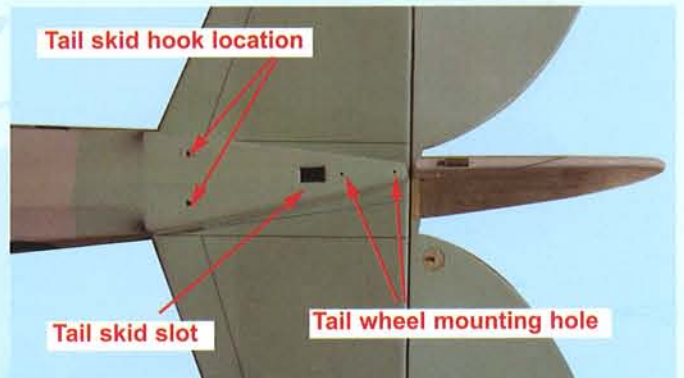


STAGE 7 INSTALL THE TAIL SKID (SCALE LOOK) OR TAIL WHEEL

You may decide to operate this model with tail skid (scale look) or tail wheel version .
Choose one version only



7A- Tail skid and tail wheel



7B- Tail skid and tail wheel location



7C- Use 30 minute epoxy to install the tail skid to the fuselage



7D- Use two 2 x 8 screws to mount the tail wheel to the fuselage

STAGE 8

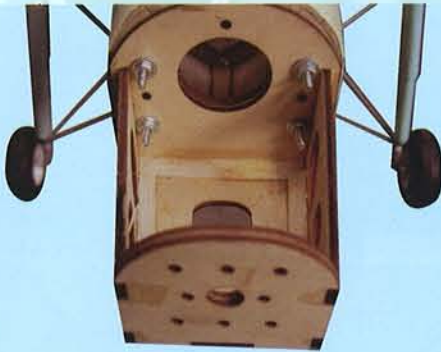
INSTALL THE ELECTRIC MOTOR AND ESC



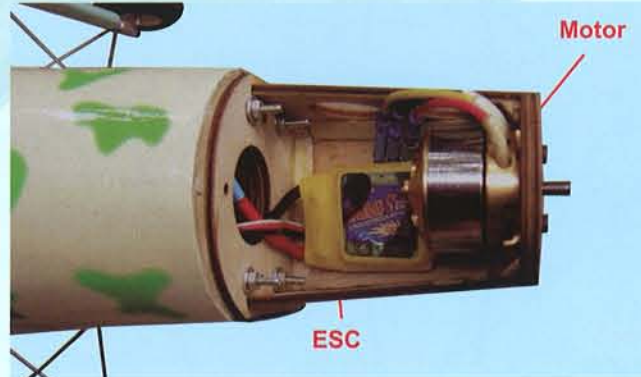
8A- Pre-assembly laser cut engine mount



8B- Fuselage firewall



8C- Use four 3 x 20 bolts to mount the engine mount to the fuselage

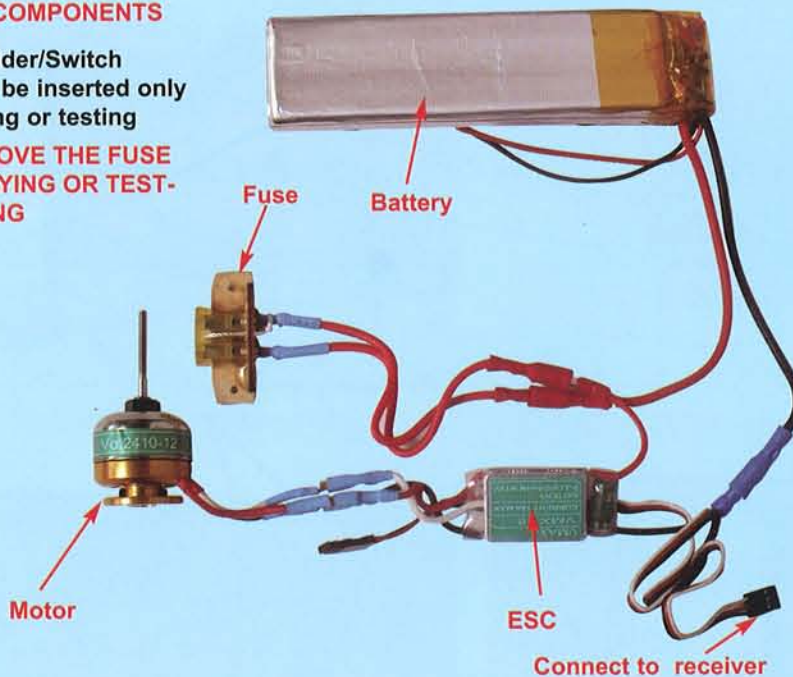


8D- Install the motor and ESC

WARNING
WRONG CONNECTIONS WILL
DESTROY COMPONENTS

Fuse holder/Switch
The fuse is to be inserted only
when flying or testing

**ALWAYS REMOVE THE FUSE
WHEN NOT FLYING OR TEST-
ING**



**BEFORE PLUGGING THIS CON-
NECTOR INTO THE THROTTLE
CHANNEL OF RECEIVER
ENSURE PLUG IS CORRECTLY
POSITIONED TO METCH YOUR
RECEIVER & SERVO WIRING**

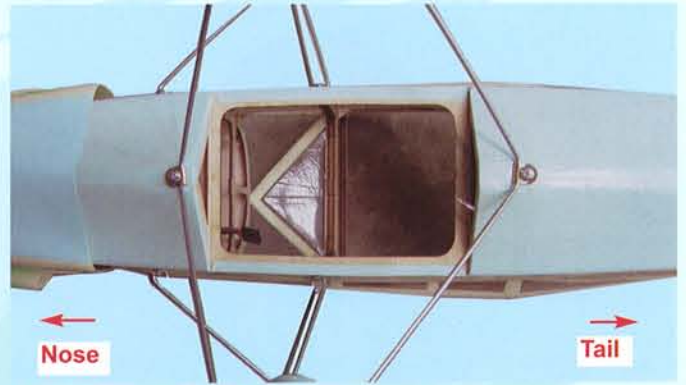
8E- Typical wiring diagram of brushless motor system

STAGE 9

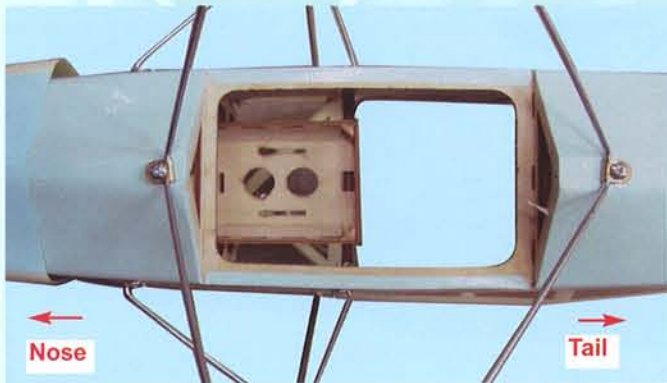
INSTALLING BATTERY PLATFORM



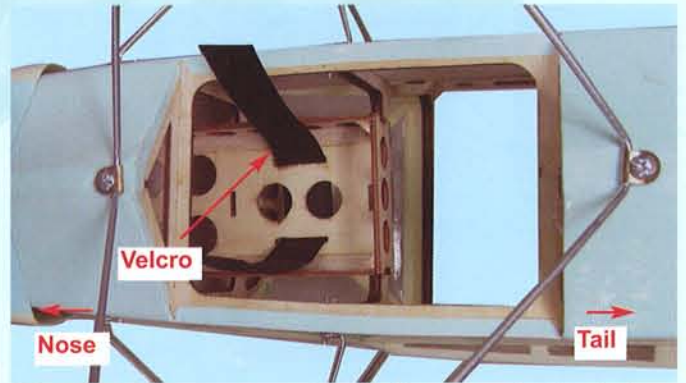
9A- Battery platform



9B- Battery platform location



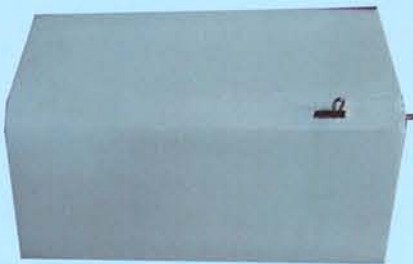
9C- Use 30minute epoxy to install the Battery platform to the fuselage



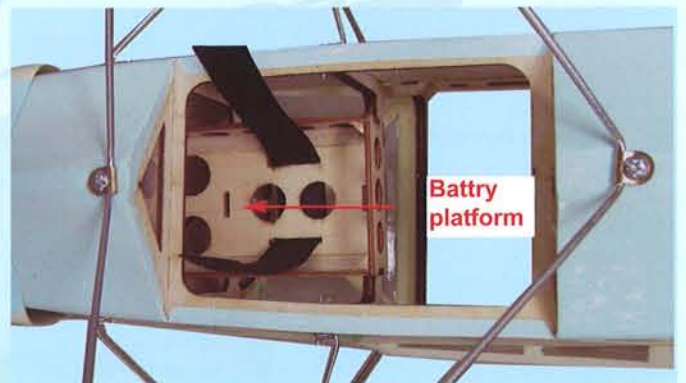
9D- After the epoxy sets install the velcro to the battery platform

STAGE 10

BATTERY INSTALLATION



10A- Battery hatch



10B- Battery platform



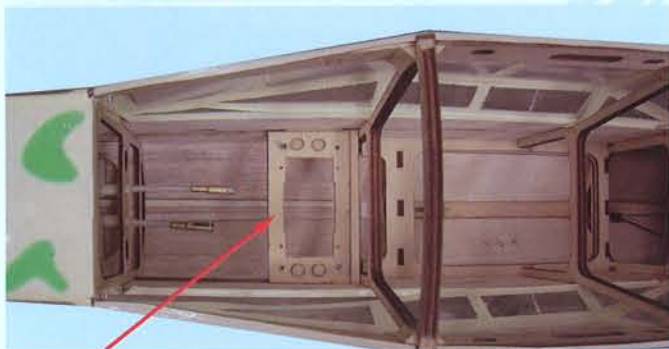
10C- Battery installed



10D- Battery hatch installed

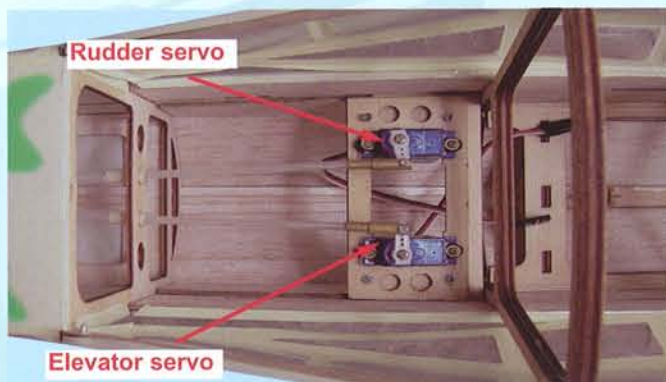
STAGE 11

INSTALLING THE RUDDER AND ELEVATOR SERVOS



Rudder and elevator servos mount

11A - Rudder and elevator servos location



Elevator servo

11B - Rudder and elevator servos installed



Rudder control horn location

11C - Rudder control horn location



11D - Rudder control horn and control rod installed



Elevator control horn location

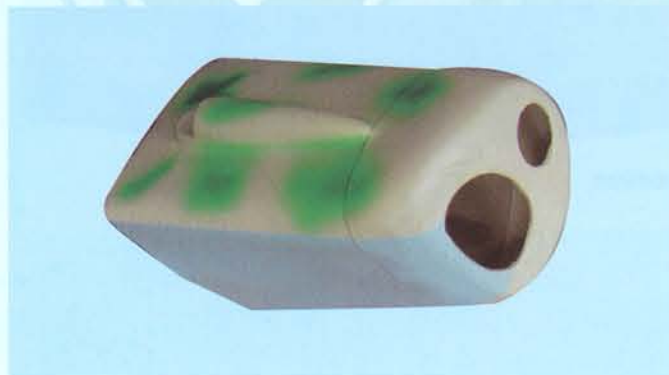
11E - Elevator control horn location



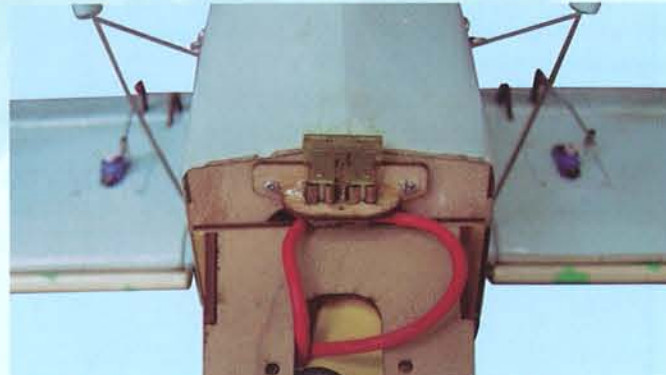
11F - Elevator control horn and control rod installed

STAGE 12

INSTALLING THE COWL



12A- Pre-painted cowl



12B- Make sure the fuse installed to the fuselage

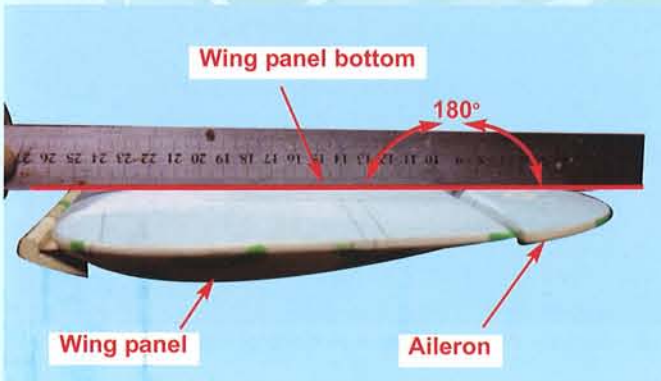


11C- Install the cowl already cut for the fuse exit

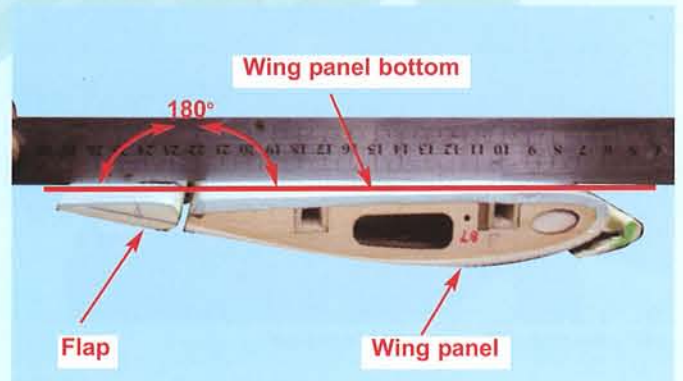


11D- Cowl install to the fuselage

STAGE 12 SET-UP NEUTRAL POSITION AILERON AND FLAP



12A- Use ruler to set-up aileron neutral position. The aileron bottom flat with the wing panel



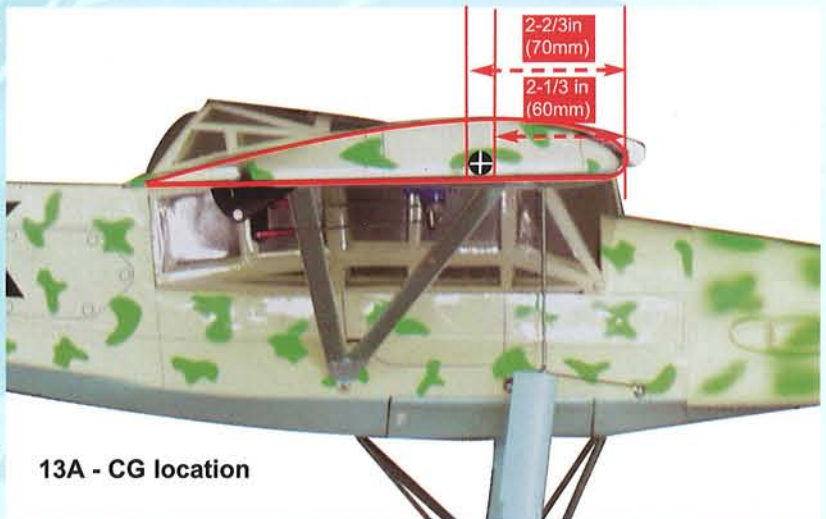
12A- Use ruler to set-up flap neutral position. The flap bottom flat with the wing panel

STAGE 13 CONFIRM MECHANICAL INTEGRITY

Step 13.1 Once you have confirmed that the CG is correct, you should do a thorough review of the entire model before your first flight. Check everything twice! Every hook up, every coupling, everything! Do it twice!!

Step 13.2 Before your first flight, have an experienced flyer review your work. Do not fly your model until it has been checked out by a third party who knows how to fly and how to set up a model aircraft. Do not fly alone. Seek experienced help.

Step 13.3 Once you have completed your first flight, get in the habit of checking your model over before and after each flight! Don't fly if you find something that is not right!



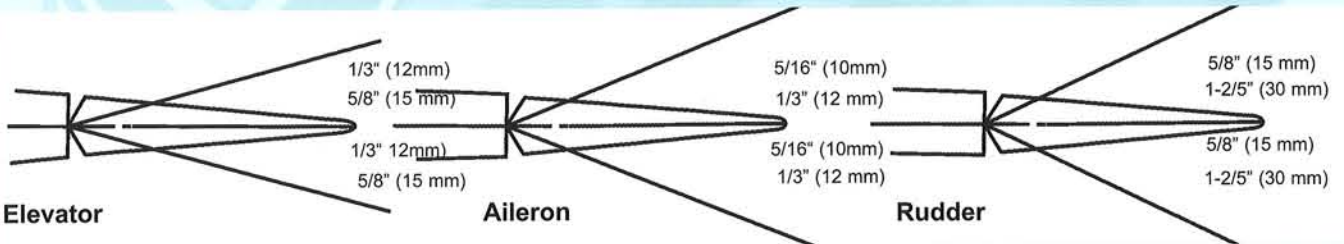
13A - CG location

CONTROL SURFACE THROW SPECIFICATIONS:

The throws are measured at the widest part of the control surface. Adjust the position of the pushrods at the control and/or servo horns to control the amount of throw. You may

also use ATV's if your radio has them but the mechanical linkages should still be set so that the ATV's are near 100% for best servo resolution.

	Low rate	High rate
ELEVATOR	1/3" (12mm) up 1/3" (12mm) down	5/8" (15 mm) up 5/8" (15 mm) down
AILERON	5/16" (10mm) up 1/3" (8 mm) down	1/3" (12 mm) up 3/4" (18 mm) down
RUDDER	5/8 " (15 mm) right 5/8 " (15 mm) left	1-2/5" (30 mm) right 1-2/5" (30 mm) left



STAGE 14 CONFIRM RADIO OPERATION

Step 14.1 Consult your radio manual for instructions about testing and operating your radio system.

Step 14.2 Pay particular attention to charging your batteries and range testing your system before and after each

flight.

Step 14.3 Check that all controls are working correctly before and after each flight.

STAGE 15 BALANCING THE AIRCRAFT

Step 15.1 The CG for your VMAR model is located at 2-1/3 in to 2-2/3 in (60mm - 70mm) back from the leading edge of the wing slot when the wing has been attached to the fuselage as per illustration 13A.

Step 15.2 For the initial flight, the CG should be located at 2-1/3" (60mm) back from the leading edge of the wing slot when the wing has been attached to the fuselage.

Step 15.3 The CG is measured with the engine, radio gear and all other components installed include battery

Step 15.4 Set up the CG as it will be when you fly it.

Step 15.5 It is very important to have the CG correct. Flying your model with the CG too far back will likely lead to loss of control and a crash. If you discover that after you have

assembled your model and installed your radio, motor and battery that the CG of your model is incorrect you must bring the CG to the correct location by doing the following BEFORE FLYING :

- Move the battery pack fore or aft
- Move other components fore or aft
- Change engine to a lighter or heavier model
- Add weight to the nose or tail. If adding it to the nose, try to make it useful by going to a heavier duty engine or adding a spinner with a heavy metal backing plate. As a last resort, add stick on "dead" weight where appropriate

STAGE 16

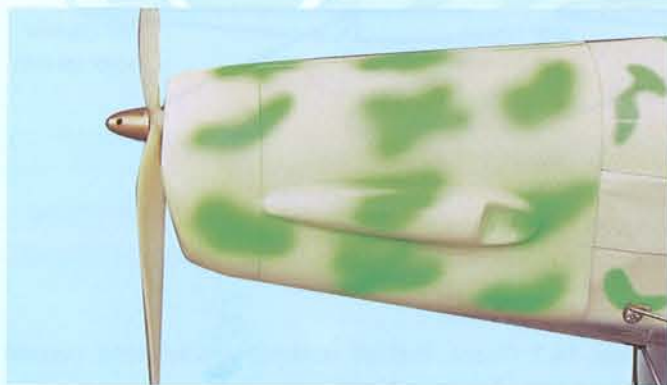
INSTALL THE PROPELLER



16A- Propeller installed side view



16B- Propeller installed front view



16C- Adjust the cowl, make sure the propeller rotation clear from the cowl



16D- Use transparent tape to secure the cowl to the fuselage



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Order Item #VMA-F590U

F5E 60-91 Semi Scale ARF TIGER II



Order Item #VMA-F490N



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PHANTOM F4



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F 18 HORNET

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Order Item #VMA-A460B



Order Item #VMA-A460B

A4 45-52 Semi Scale ARF **SKYHAWK**



Order Item #VMA-A340R



Order Item #VMA-A340Y

ARROW TIGER



Order Item #VMA-E340R



Order Item #VMA-E340Y



Order Item #VMA-E340V

ESCAPE



Order Item #VMA-T210W

DEHAVILAND DHC-6 TWIN OTTER

