

Fms®

FW 190

Perfect Appearance Excellent Performance



Email: info@fmsmodel.com
Http://www.fmsmodel.com



WARNING

WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury. This is a sophisticated hobby product and NOT a toy. It must be operated with caution and common sense and require some basic mechanical ability. Failure to operate the Product in a safe and responsible manner could result in injury or damage to the product or other property. This product is not intended for use by children without direct adult supervision. This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.

Safety Precautions and Warnings

As the user of this product, you are solely responsible for operating in a manner that does not endanger yourself and others or result in damage to the product or the property of others. This model is controlled by a radio signal subject to interference from many sources outside your control. This interference can cause momentary loss of control so it is advisable to always keep a safe distance in all directions around your model, as this margin will help avoid collisions or injury. Age Recommendation: Not for children under 14 years. This is not a toy.

- Never operate your model with low transmitter batteries.
- Always operate your model in an open area away from cars, traffic or people.
- Avoid operating your model in the street where injury or damage can occur.
- Never operate the model in the street or in populated areas for any reason.
- Carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.) you use.
- Keep all chemicals, small parts and anything electrical out of the reach of children.
- Moisture causes damage to electronics. Avoid water exposure to all equipment not specifically designed and protected for this purpose.
- Never look or place any portion of your model in your mouth as it could cause serious injury or even death.

page1



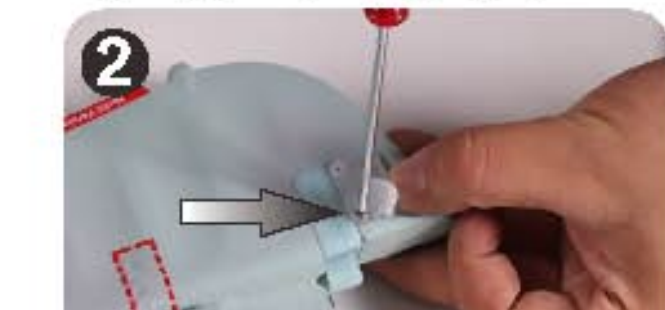
step1

Installing the control horn

1. The plastic control surface horns for the rudder and elevator are stapled to the bags containing the rudder and elevator, do not to accidentally discard them.



2. Make sure the control surface horn is facing the proper direction before installing for the most deflection.



3. Install the elevator control surface horns with the screws provided in the small plastic bag on the bottom of the elevator surface, the arrow pointed surface is the top.



4. Now attach the alleron surface control horn onto the bottom of the main-wing half. The camo point is also only on the top surface.



6. Next attach the flap control surface horn, you will need to open the flap to install the back plate. Once both wing halves are done the same way the hardest part is now done!



8. Always make sure that the screws are seated into the back plates of the control horns. It is very important that these are tight during flight.



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page2



step2

Installing the elevator and rudder

1. Attach the horizontal stabilizer first. Mount the stabilizer into the pre-notched aft section of the fuselage. Use two screws to secure it. (PA2.6*25 2PCS)



2. Now the vertical stabilizer is ready to be mounted. Gently push the stabilizer down until it is fully seated with no gaps between it and the fuselage, it fits perfectly when properly pushed down.



3. Install the elevator control surface horns with the screws provided in the small plastic bag on the bottom of the elevator surface, the arrow pointed surface is the top.



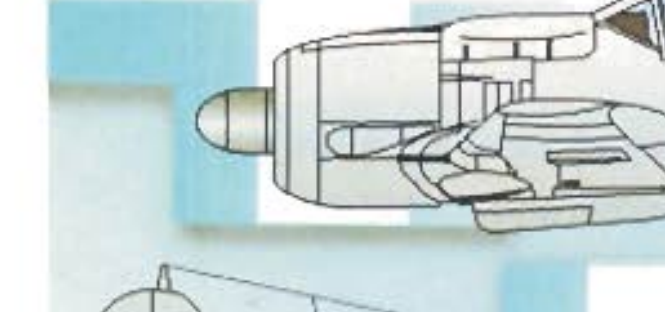
2. Now use the screws to secure the rudder bottom. It is easier to do this with a magnetized screwdriver. Note: Keep the bolts straight into the hole then in to the nut. Don't look too tight to avoid any effect on control throw movement of rudder. (PM3.0*10 1PC, PA2.6*50 1PC)



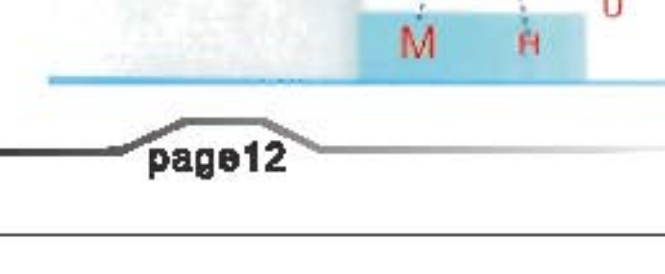
3. The provided piece of fuel tubing keeps the clevis closed during flight. Do all the linkages the same way.



5. Install the foam part. Gently set the wing filler into place after glue has been applied and let dry.



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page3



step3

Installing the main wing

1. Put the Z band end of the linkage in the desired surface control horn hole. It will fit tightly but will allow the linkage to move slightly within the hole to avoid binding up.



2. Snap the plastic clevis end of the linkage into the surface control horn.



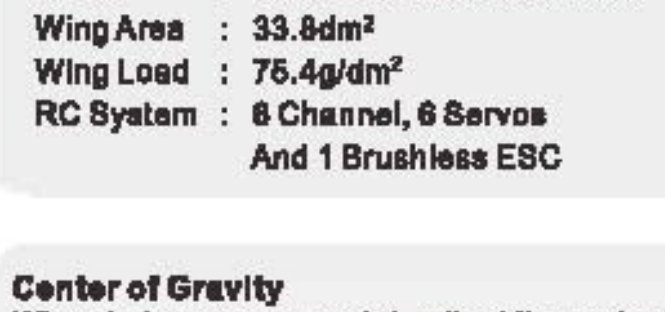
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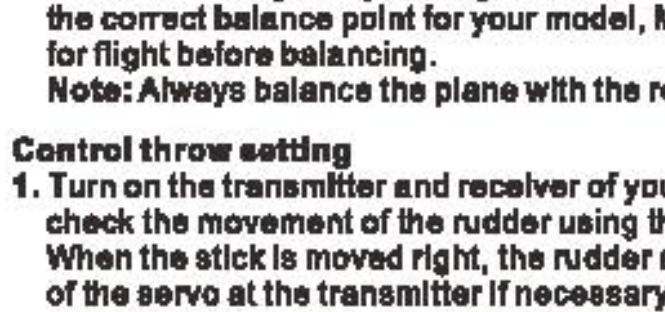
5. Install the foam part. Gently set the wing filler into place after glue has been applied and let dry.



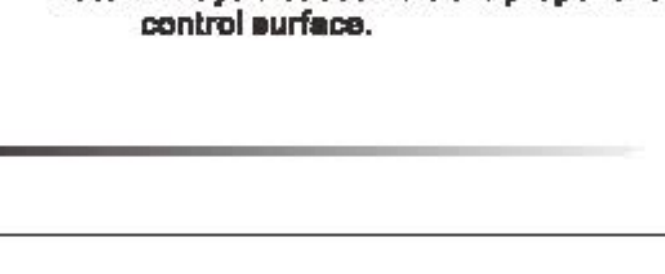
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step3

Installing the main wing

6. Get the wing panels ready.



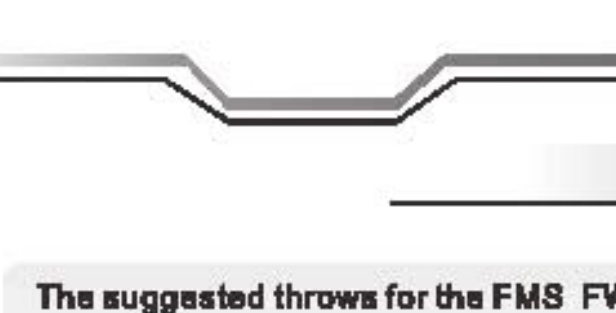
7. The longer one should be slide in front tube on the leading edge side. The shorter one on the trailing edge side. Note: A. The shorter rod. B. The longer rod.



8. Slide the tube in one wing panel. It should slide in easily, so do not push it further than it will slide.



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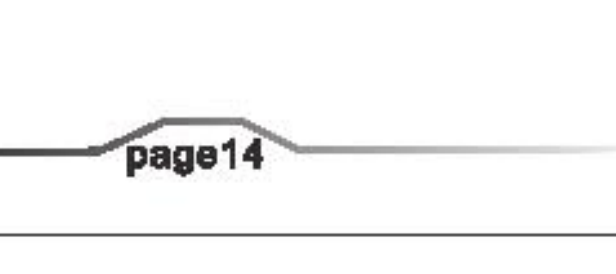
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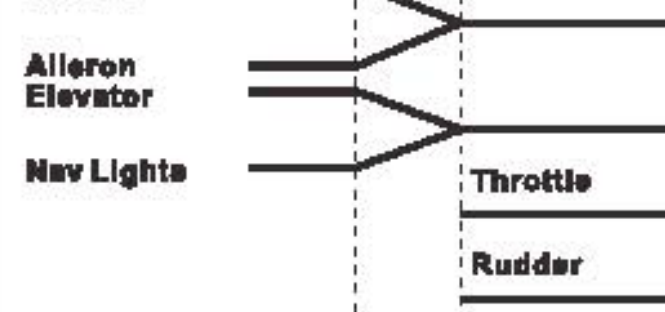
step3

Installing the main wing

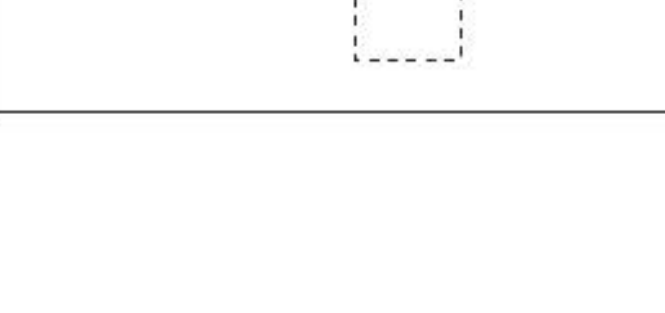
10. Plug the leads from the alleron, flap servos, retract and LED into the pre-labeled Y-harness.



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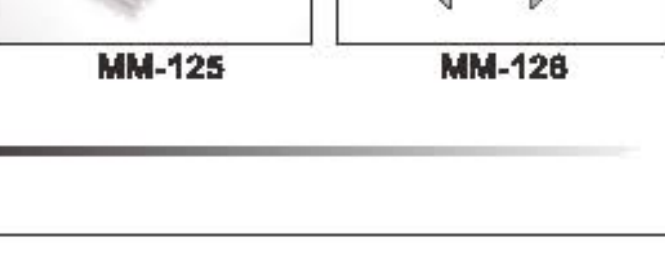
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step4

Installing the oil tank

1. Apply glue on the pre-notched slot for the foam fuel tank rack.



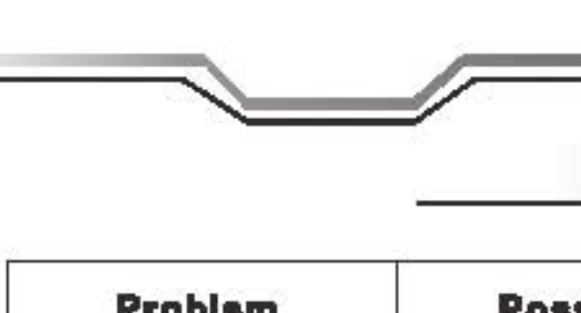
2. Fit the foam rack properly into place, make sure it goes straight into the bottom of the slot.



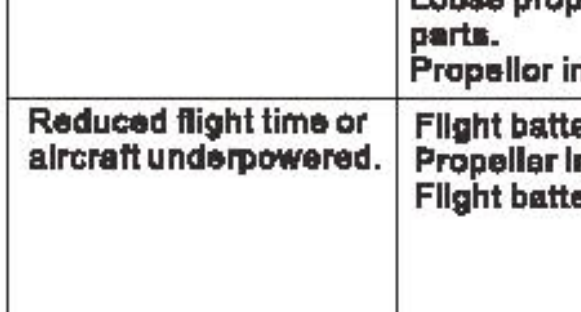
3. Install the plastic rack of the oil tank. Note 1: There are some slight different between those two racks, the higher one on the propeller side, the shorter one locate on the rear end side.



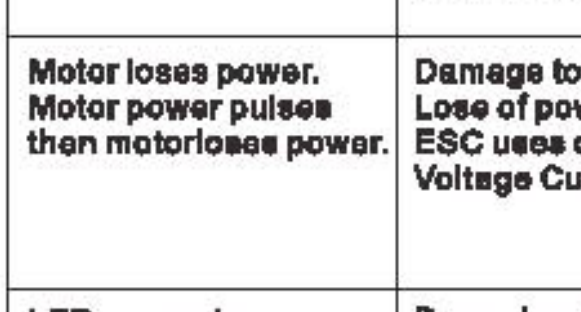
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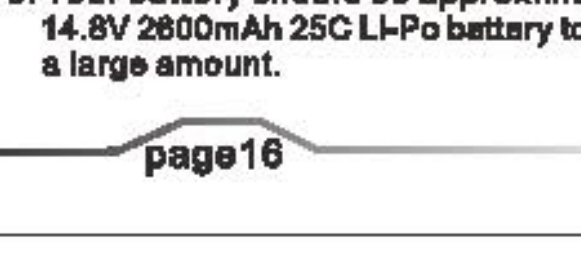
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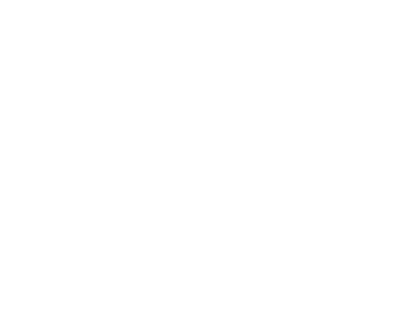


Installing the oil tank

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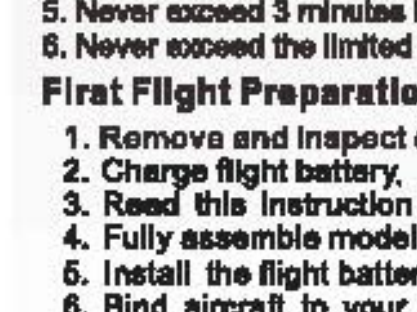
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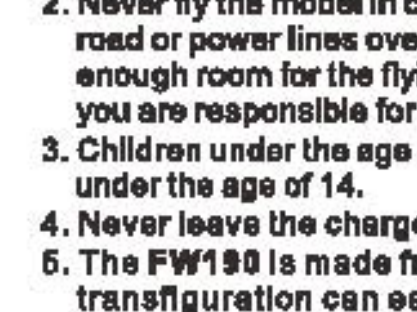
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step5

Mounting the main wing

1. Install the wing connector. Note: Put the connector into the position right. Making sure there is no slot between the two wing panel.



2. Thread the bolt into the connector making sure it is tight enough. (PM3.0*75 2PCS)



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step6-7

Installing the propeller and small parts

1. Assemble the blades using screws. (PA2.6*16 8PCS)



2. Install the propeller set making sure it is keyed into the motor shaft.



3. Secure the oil tank with provided screws. (PA1.7*6 4PCS)



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step7

Installing the cannon and pilot tube

2. Install the cannons, the shorter wing cannons go near the fuselage and the longer wing guns go on the outside.



4. Secure the prop with the spinner and tighten by hand firmly.



1. Install the antenna. Attach the scale antenna included to the back of the canopy and tie it off. Attach the shorter end of the scale antenna to the vertical stabilizer and tie it off.



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step8

Battery position

1. Battery position.



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Battery position

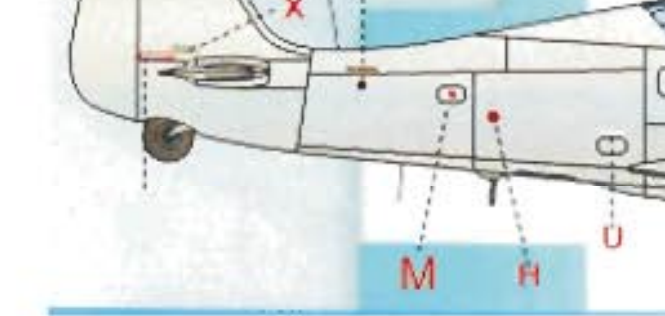
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Main specification

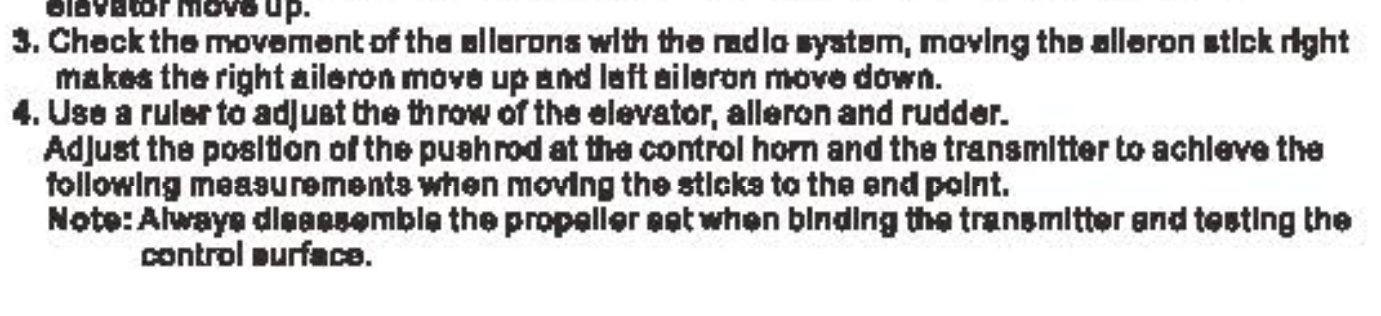
The suggested throws for the Fms FW 190 are as follows:

Low rate High rate
Elevator - 5/16 or 8 mm up and down 7/16 or 11 mm up and down
Rudder - 3/4 or 19 mm left and right 1" or 25.4 mm left and right
Ailerons - 3/8 or 10 mm up and down 1/2 or 13 mm up and down
Flaps - 1" or 25.4mm full down

Spare Parts List
Item# Description
MM-101 Fuselage
MM-102 Main Wing Set
MM-103 Rudder
MM-104 Elevator
MM-105 Cowd
MM-106 Spinner
MM-107 Canopy (the front part of the plastic canopy)
MM-108 Canopy (the rear part of the plastic canopy)
MM-109 Battery Cover
MM-110 Oil Tank
MM-111 Battery (14.8V 2800mAh 25C)
MM-112 Brushless motor (4260-KV680)
MM-113 ESC (BSA ESC with 5A SBEC)
MM-114 8g Servo (metal)
MM-115 17g Servo
MM-116 E-Extract (For Main Landing Gear)
MM-117 E-Extract System (For Main Landing Gear With two E-Extract and Main Landing Gear Set)
MM-118 Rear Landing Gear Set
MM-119 Propeller
MM-120 Linkage Rod
MM-121 Motor Mount
MM-122 Slickers (a set of stickers)
MM-123 Machine Gun
MM-124 Decals sticker
MM-125 Screws Set
MM-126 Motor Board
MM-127 Motor Shaft

Center of Gravity (C.G.)
When balance your model, adjust the motor battery as necessary so the model is level or slightly nose down.
The correct balance point for your model.
After the first flights, The C.G. position can be adjusted for your personal preference.
1. The recommended Center of Gravity (C.G.) location for your model is (90mm) back from the leading edge of the main wing as shown with the battery pack installed. Mark the location of the C.G. on top of the wing.
2. When balancing your model, support the plane inverted at the marks made on the top of the main wing with your fingers or a commercially available balancing stand. This is the correct balance point for your model. Make sure the model is assembled and ready for flight before balancing.
Note: Always balance the plane with the retract down.

Control throw setting
1. Turn on the transmitter and receiver of your model.
2. Check the movement of the rudder using the radio system.
3. When the stick is moved right, the rudder should also move right. Reverse the direction of the servo at the transmitter if necessary.
4. Check the movement of the elevator with the radio system.
5. Moving the elevator stick toward the bottom of the transmitter makes the airplane elevator move up.
6. Check the movement of the ailerons with the radio system, moving the aileron stick right makes the right aileron move up and left aileron move down.
7. Use a ruler to adjust the throw of the elevator, aileron and rudder.
8. Adjust the position of the pushrod at the control horn and the transmitter to achieve the following measurements when moving the sticks to the end point.
Note: Always disassemble the propeller set when binding the transmitter and testing the control surface.



1. Battery position.

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