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Perfect Appearance Excellent Performance

J-3

Operating Manual



Specifications

Wingspan.....1400 mm (55.1 in)
Length.....900 mm (35.4 in)
Weight.....1340 g (47.3 oz)
Wing Area.....28.9 dm² (448.0 in²)
Wing Load.....46.4 g/dm² (0.11 oz/in²)
Radio Controls.....4 Channel



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www.fmsmodel.com



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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 requires some basic mechanical ability. Failure to operate this 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 lick or place any portion of your model in your mouth as it could cause serious injury or even death.

FMS Kindly Reminder



Thank you for purchasing a FMS model product. Our goal is to provide high quality products and offer great customer service. If you have any problems with your product or want to offer suggestions for improvements (such as plane design, packaging, building instructions, etc.) please feel free to contact us at

info@fmsmodel.com

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Safety

Lithium Polymer (Li-Po) Battery Warning

CAUTION: Always follow the manufacturer's instructions for safe use and disposal of batteries. Fire, property damage, or serious injury can result from the mishandling of Li-Po Batteries.

- By handling, charging or using a Li-Po Battery you assume all risks associated with lithium batteries.
- If at any time the batteries begin to swell, or balloon, discontinue use immediately! Charging or discharging a swelling or ballooning battery can result in fire.
- Always store the batteries at room temperature in a dry area to extend the life of the battery. Always transport or temporarily store the battery in a temperature range of 40-120F. Do not store the battery or model in a car or in direct sunlight. If stored in a hot car, the battery can be damaged or even catch fire.
- Never use a Ni-Mh Charger to charge Li-Po Batteries. Failure to charge the battery with a Li-Po compatible charger may cause fire resulting in personal injury and property damage.
- Never discharge Li-Po Cells below 3V.
- Never leave charging batteries unattended.
- Never charge damaged batteries.

Charging the Flight Battery Warning

- Use a battery charger that is designed to safely charge the Li-Po Battery. Read the charger instructions carefully before use. When charging the battery, make certain the battery is on a heat resistant surface. It is also highly recommended to place the Li-Po Battery inside a fire resistant charging bag readily available at hobby shops or online.

Introduction and History

The Piper J-3 Cub is widely regarded as the most recognized and fondly remembered airplane ever built. The roots of Piper started in 1929 when Pennsylvania oil tycoon C. G. Taylor invested in an aviation company. His plan was to make simple, low cost planes to sell to the general public. The firm soon declared bankruptcy. The assets were then purchased by William T. Piper, who instructed his designer, Walter Jamouneau, (the "J" in J-2 and J-3 Cubs), to create lightweight, inexpensive, and easy-to-fly aircraft. Thus the J series Cubs were born. The J-3's were produced from 1938 until 1947.

The J-3 Cubs were immensely popular with civil aviators. The tail dragger design worked well on the typical grass runways. The planes were inexpensive to maintain. They also provided a vivid, simple and exciting flying experience. They even played a large role in the military as L-4 Grasshoppers and part of the highly successful wartime Civilian Pilot Training Program. Floats and skis were common accessories.

The simple controls of stick, rudder and throttle provided lifetimes of joy to those who experienced it in Cubs. Many pilots tell the tale of the first time they held the stick of a Cub in their hands on a wonderful, crisp fall afternoon and became pilots for life at that very moment.

The FMS J-3 Cub reflects the classic color, distinctive lines and iconic style of the original. It will provide the RC pilot with the same short takeoff rolls, slow easy landings, and graceful flight characteristics pilots of many generations have enjoyed for decades.

Contents of Kit

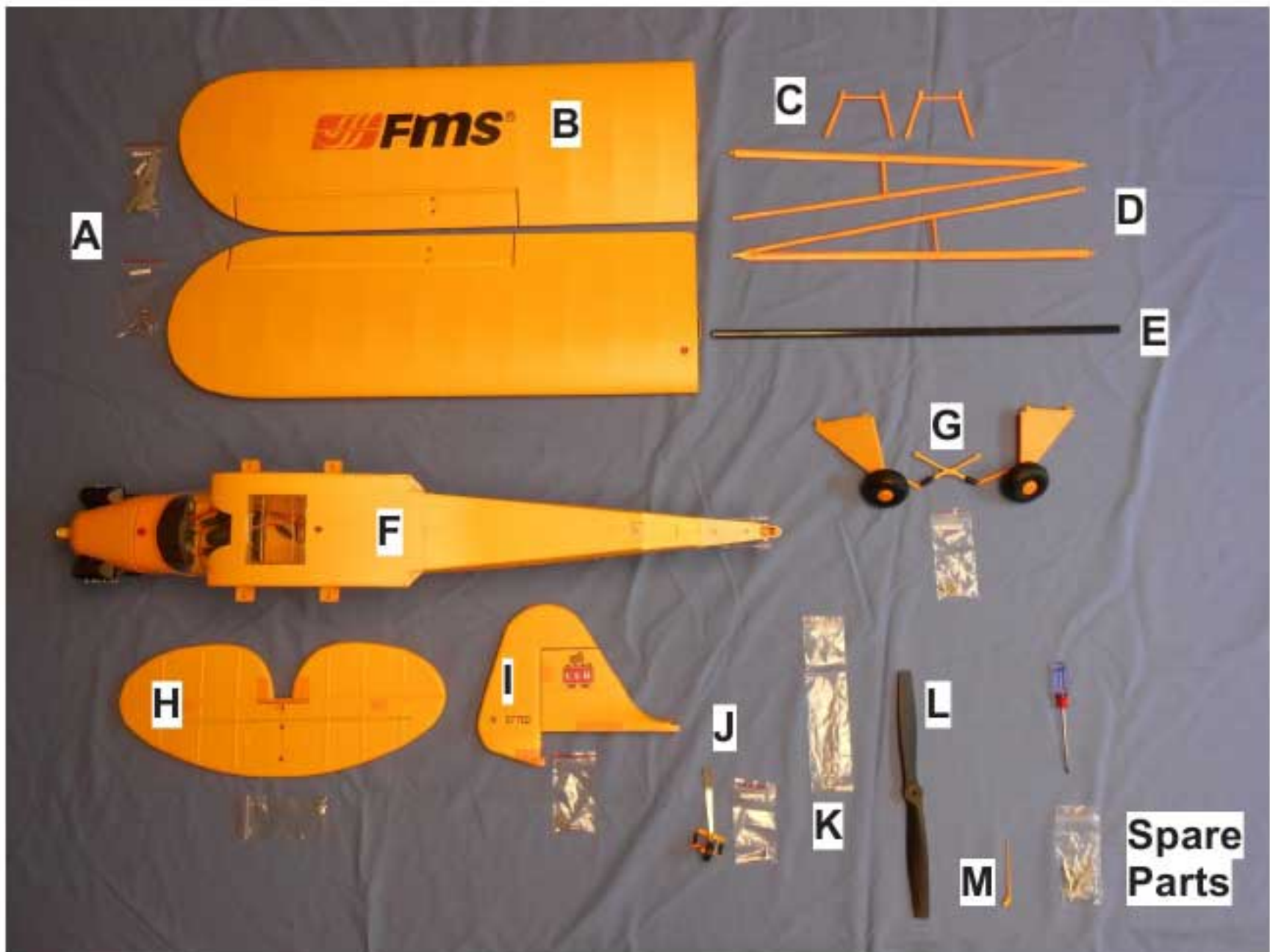
Before assembly, please inspect the contents of the kit. The two photos below detail the contents of the kit and label the major pieces "A" thru "M" for your convenience. If any parts are missing or defective, please identify the name or part number (refer to the spare parts list near the end of the manual), then contact the FMS Team.

FMS Team Product Support

3/F, Building B, 3rd Industry Zone, Matigang, Dalingshan Town,
Dongguan City, P.R.C.

Phone: 0086-769-86976655

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Additional Required Items

Tools and Adhesives

Glue Brush

Transmitter/Receiver (required for PNP and kit version)

This model requires a 4 channel receiver and transmitter.

Battery/Charger (required for PNP and kit version)

An 11.1V 1800 mAh 25C Li-Po Battery is recommended. If using another battery, it must be at least a 11.1V 1800mAh 25C battery, approximately the same capacity, dimensions, and weight to fit in the fuselage without changing the center of gravity significantly. A standard Li-Po Battery Balancing Charger is required to safely charge the battery. Caution: A 4S (14.8V) Li-Po Battery exceeds the maximum capacity of the ESC and motor and will result in ESC failure during flight. This would cause a complete loss of control creating a potentially dangerous condition. Do not use a 4S (14.8V) or larger battery in this product.

Motor/ESC/Servos/Propeller (required for kit version only)

The kit version requires a Brushless 3536-K800 motor, an FMS-DT30 30A ESC, (4) 9g servos, and an 11x7 propeller.

Assembly Instructions

The assembly instructions in this manual have been divided into logical steps. Check boxes have been placed in front of each step to help you keep track of your progress. Please read each step carefully, perform the task per the instructions, and mark when completed. If you are unavoidably interrupted before completing a step, it is advisable to make a detailed notation of any unfinished items to ensure the step is fully completed when you return to the task. Refer to the "Contents of Kit" photos if you need help identifying a part.

Install the Aileron Control Horns

- 1) Locate parts bag "A" labeled "Ailerons" which contains the aileron control horns, backing plates, and control rods. Insert a control horn into the pre-drilled holes on the underside of one of the wings "B" with the horn pointing towards the hinge line of the aileron (fig. 1). While holding the control horn in place, install the backing plate in the corresponding pocket on the top side of the wing. Secure the control horn and backing plate with the screws provided (fig. 2). Note: The backing plate is designed with a countersink for the screw heads and must be installed as shown.
- 2) Repeat this process for the other wing half.



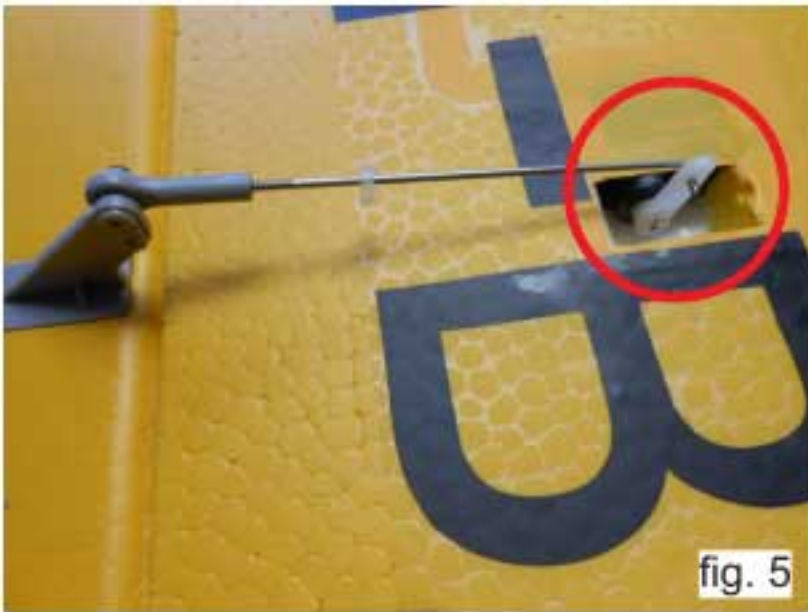
Connect the Aileron Control Rod Linkages

3) Attach the control rod to the control horn by removing the the ball link screw, placing the hole in the connector over the threaded hole in the control horn, and then re-attaching the ball link as shown (fig. 3 & 4)

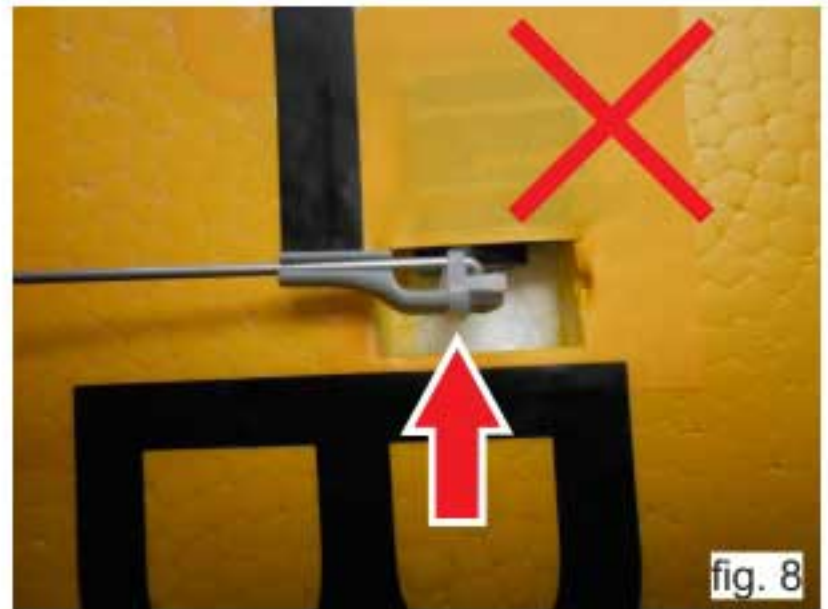


4) Slide the provided piece of fuel tubing over the control rod linkage and then insert the control rod linkage thru the desired hole in the aileron servo arm (fig. 5). Note: For a single rate transmitter use the hole farthest from the servo to achieve a high rate setting. Use the hole nearest the servo to achieve a low rate setting.

5) Press the hole in the clevis over the end of the control rod linkage, rotate it and snap the base of the clevis over the control rod linkage (fig. 6).

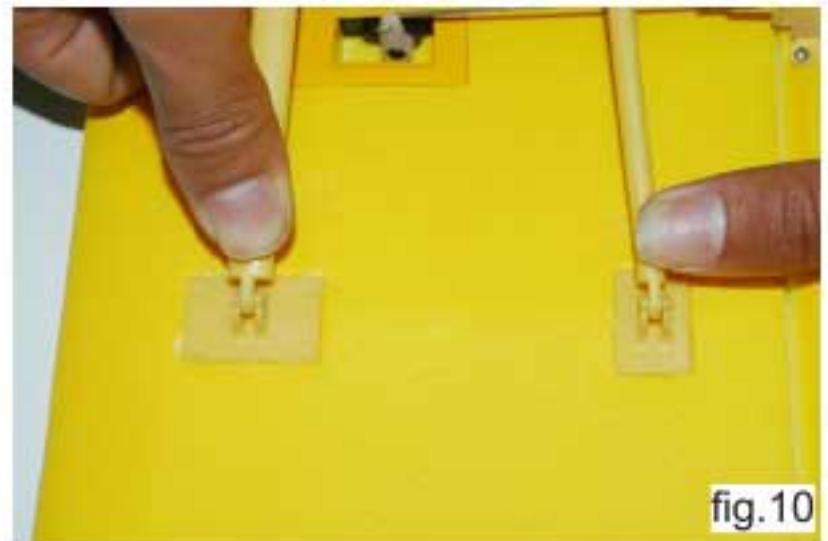
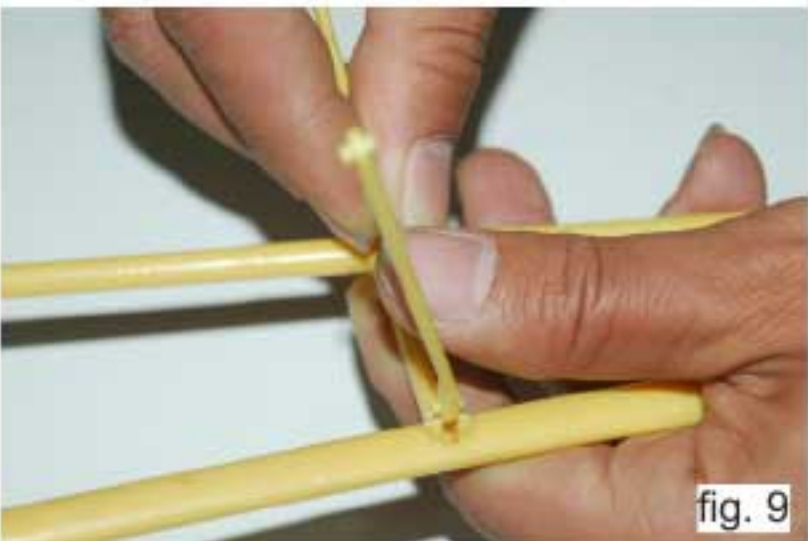


6) Slide the fuel tubing over the clevis to secure it (fig. 7). Note: Do not slide the fuel tubing too far or binding of the servo arm could result (fig. 8). Repeat steps 3-6 for the other aileron control rod linkage.



Install the Wing Struts

- 7) Install the auxiliary wing struts "C" on the main wing struts "D" as shown (fig. 9).
- 8) Install the main wing struts on each wing as shown (fig. 10 & 11).



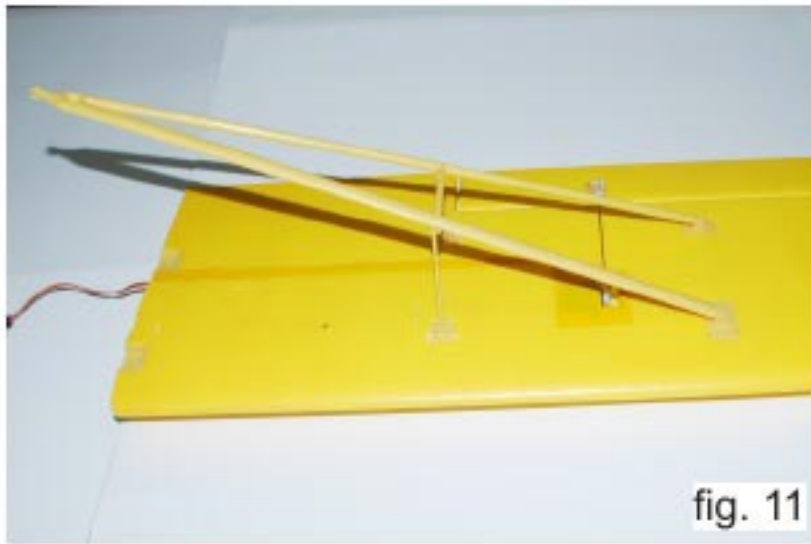


fig. 11

Install the Main Wing

- 9) Insert the carbon fiber tube "E" into one wing half. Open the window on the top of the fuselage "F" to provide access for the next step (fig. 12 & 13).



fig. 12



fig. 13

- 10) Align the carbon fiber tube with the hole in the side of the fuselage. Slide the tube through the fuselage being careful to guide the servo lead through its corresponding hole in the fuselage at the same time. Reach through the window in the top of the fuselage to pull the servo lead and keep it from getting pinched between the wing and the side of the fuselage (fig. 14 & 15).



fig. 14



fig. 15

11) Align the hole in the other wing half with carbon fiber tube. Slide the second wing half onto the tube and against the fuselage while guiding the servo lead through the corresponding hole in the side of the fuselage.(fig. 16).

12) Secure the wing to the fuselage using the four provided PM3.0x10 screws (fig. 17).



13) Connect each aileron servo lead to the pre-installed Y-harness. Re-install cover on top of fuselage (fig. 18 & 19).



Install the main landing gear

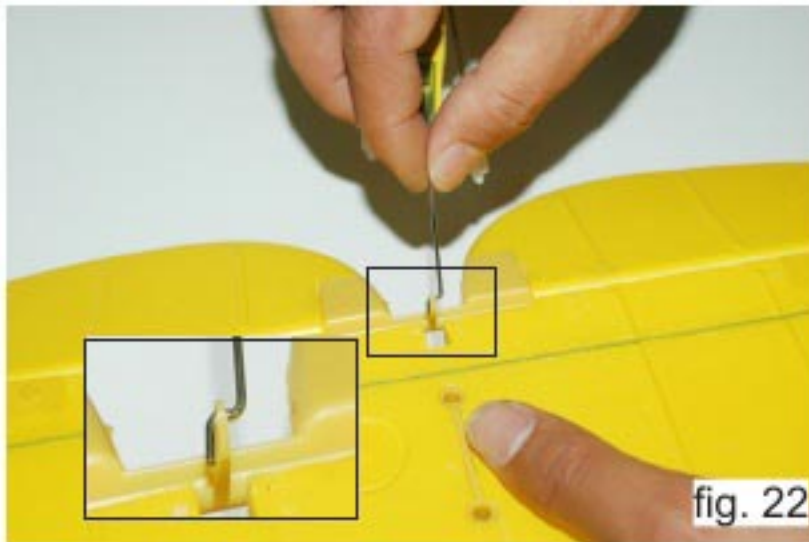
14) Attach the main landing gear "G" and secure the wing struts with the four provided PA2.6x15 screws (fig. 20).

15) Secure the landing gear struts with the two provided PA1.7x9 screws (fig. 21).



Install the horizontal and vertical stabilizer

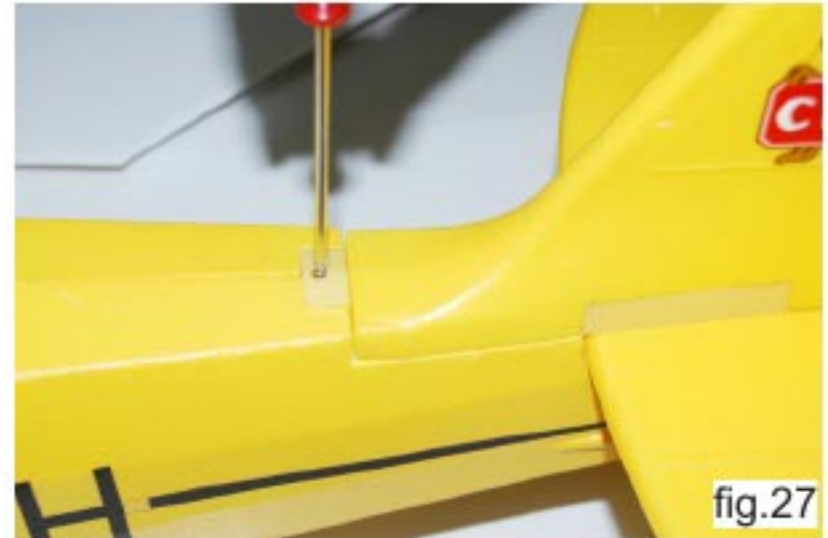
- 16) Connect the linkage rod to the elevator control horn on the horizontal stabilizer "H" (fig. 22). Note: The control rod may need to be temporarily disconnected from the servo arm to allow enough rod to exit the tail end of fuselage for connection.
- 17) Install the horizontal stabilizer and secure it with the two provided PWA2.0x8 screws (fig. 23).



- 18) Align the slot in the vertical stabilizer "I" with the key on the top of the horizontal stabilizer (fig. 24 & 25).



19) Slide the vertical stabilizer forward and secure it with the provided PA1.7x9 screw (fig. 26 & 27).



Install the rear landing gear

20) Install the plastic portion of the rear landing gear "J" and secure it with the provided PA2.8x16 screw (fig. 28). Note: There is a feature on one side of the gear that mates with the corresponding feature on the bottom of the rudder.

21) Install the metal portion of the rear landing gear and secure it with the two provided PWA2.6x5 screws (fig. 29).

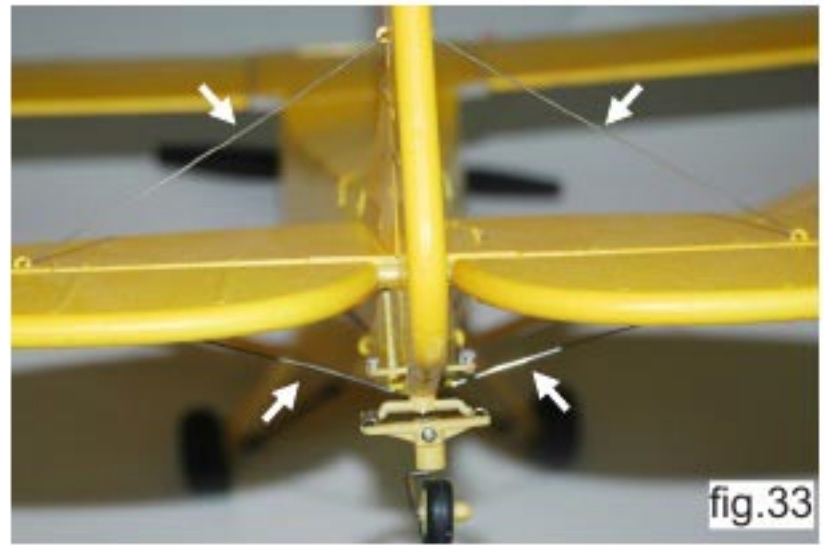


22) Connect the two rudder control rod linkage clevis and secure with the provided fuel tubing (fig. 30 & 31).



Install the vertical stabilizer supports

23) Install the four vertical stabilizer support rods "K" (fig. 32 & 33).



Receiver Connection

24) Connect wiring per the receiver connection schematic (fig. 34).

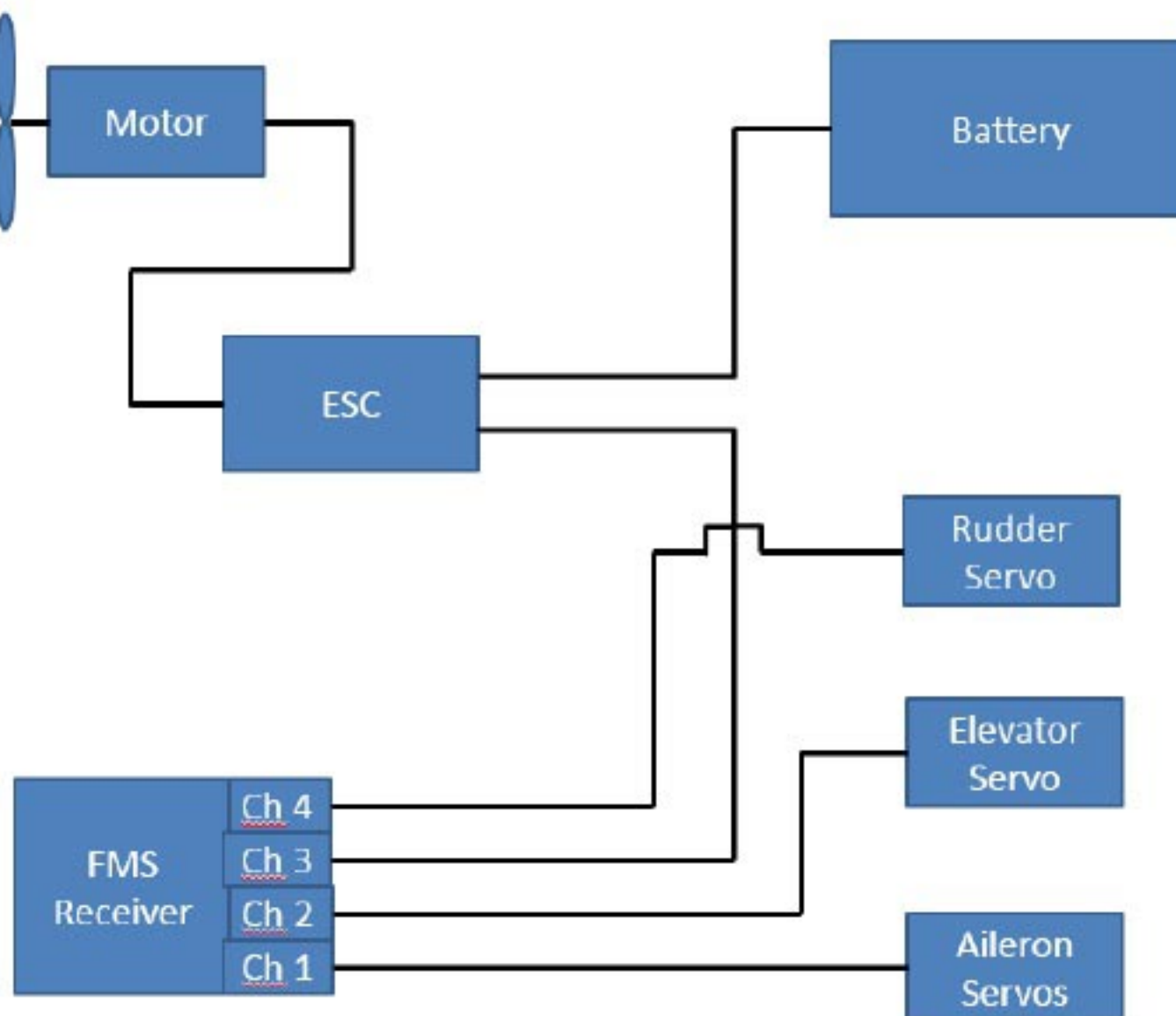


fig.34

Install the Battery

25) Insert the battery in the compartment on the underside of the fuselage. Use the velcro strap to secure it in place, but do not connect the wires at this time (fig. 35).
 Note: The battery position can be adjusted slightly as needed to achieve the proper center of gravity which will be detailed later in this manual.



fig.35

Generic Binding Instructions

Binding is the process of programming your receiver to respond to your specific transmitter. Always follow your radio equipment manufacturer's specific binding instructions. Below is a typical generic procedure for reference:

1. Power off the transmitter.
2. Set the throttle control on the transmitter to its lowest position (all other controls should be at their neutral position).
3. Install binding plug in receiver bind port.
4. Connect the battery to the ESC.
5. The receiver LED will flash rapidly.
6. Turn on the transmitter while holding the bind button or switch in the bind position.
7. When the receiver binds, the LED on the receiver will turn on and remain steady.
8. Remove the binding plug from the receiver.

Note: Re-binding the radio after all the control throw settings are adjusted will help keep the servos from moving full stroke while the transmitter and receiver connect.

ESC Information

Please refer to the separate ESC Manual for detailed information about your programmable ESC.

Motor Rotation

The motor and ESC comes pre-connected. The direction of motor rotation should be counterclockwise when viewed from the front of the plane facing the spinner. If the motor is rotating in the wrong direction, simply reverse two of the three motor wires to change the direction of rotation.

Control Surfaces

Center Adjustment (trim)

1. Follow all safety precautions as outlined in this manual and your transmitter manufacturer's manual, including setting the throttle to the off position.
2. Turn on the transmitter and plug in the ESC battery.
3. Center all the trim controls on the transmitter.
4. Look at all the control surfaces to determine which ones need adjustment.
5. Unplug the ESC battery and turn off the transmitter before attempting any adjustments.
6. Adjust clevises as necessary to center control surfaces to their neutral position.
7. Repeat steps 1 thru 4 to verify adjustments.
8. If more adjustment is required, repeat steps 5 and 6 until process is completed.

Please see the following for reference; ailerons (fig. 36), rudder (fig. 37), elevator (fig. 38).



Direction Check

Turn on your transmitter and receiver. Viewing the model from the rear (fig. 39), move the controls on the transmitter per the instructions that follow and verify the control surfaces are responding in the appropriate direction. You may have to reverse the direction of one or more channels on your transmitter to correct any issues.

1. Move the left joystick to the right. The rudder should move to the right. Move the joystick to the left. The rudder should move to the left. Reverse channel on transmitter if necessary.
2. Move the right joystick down towards the bottom of the transmitter. The elevator should move up. Move the joystick towards the top of the transmitter. The elevator should move down.
3. Move the right joystick to the right. The right aileron should go up. The left aileron should go down. Move the joystick to the left. The right aileron should go down. The left aileron should go up.



Travel Settings (throw)

Adjust the throw by moving the clevis position on the control surface horns. A commercially available gauge is helpful in this task though not required. If you have a single rate transmitter, adjust throws to low rate settings. If you have a dual rate transmitter, adjust the throws to achieve high rate settings.

Aileron Control Throw Setting (low rate)

11 mm up/down (fig. 40-42). Note: the pictures are for reference only and do not reflect the actual throw setting values. Set other surfaces to their respective rates in the same manner. Values listed are from center position.

Elevator Control Throw Setting (low rate)

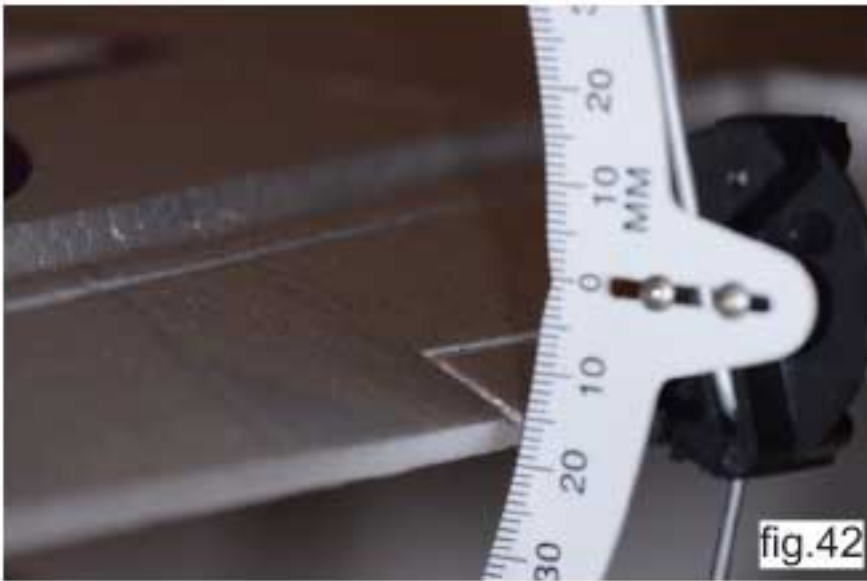
15 mm up/down

Rudder Control Throw Setting (low rate)

15 mm left/right

Note: Measure the throw (deflection) at the widest point (chord) of each control surface.





Dual Rates and Exponential Recommendations

On many transmitters, dual rates can be setup for aileron, elevator, and rudder channels. If your transmitter is capable, designate a switch on the transmitter to change between a low and high rate of servo travel for each channel. Low rates are for normal flying. High rates are for extreme aerobatics.

To use dual rates, the control surface throw settings should be set to equal the high rate settings. When the transmitter switch is in the high rate position, the control surface will travel 100%. When the transmitter switch is in the low rate position, the servo will travel less than 100% (a percentage that you determine) to make the control surface throw equal to the low rate deflection.

Aileron high rate 15 mm up/down
Elevator high rate 20 mm up/down
Rudder high rate 20 mm left/right

Generic Propeller Balancing Instructions

A well-balanced propeller is important to reduce vibration and increase RPM performance. Balance increases in importance with larger propellers.

You will need a propeller-balancing device to balance the propeller properly. A prop balancer is simply a shaft that securely positions the propeller in a device that has extremely low rotational friction. This allows the propeller to rotate freely until the heaviest end of the propeller points down. You will need an appropriate size based on the size of the propellers you will be balancing.

Begin by placing the propeller blades parallel to the horizon. Observe which end of the propeller moves downward which indicates the heavy side of the prop. To balance the prop, material is removed from the heavy side, or weight is added to the light side. Light sanding with fine sandpaper can be used to carefully remove small amounts of material at a time, checking the balance often until the prop remains horizontal and level. Alternatively, weight can be added to the light side. A small piece of clear tape can be used or cyanoacrylate can be brushed onto the surface.

Once the propeller blades are balanced enough to remain horizontal, move the blades into a vertical position. If the blades move, this is caused by the hub being out of balance. Determine which side of the hub moves downward. This is the heavy side. Add a drop of cyanoacrylate to the light side or lightly sand the heavy side of the hub. Repeat this process until the blades do not move from the vertical position. At this point you should be able to move the propeller into any orientation and it should stay in place with little or no movement. The propeller is now balanced.

Three and four blade props

A four-blade propeller is balanced as a pair of two-blade props. Balance one set until they remain level, then turn the prop 90 degrees and balance the second set of blades.

A three-blade prop is more challenging to balance and requires patient effort. Start by finding the heaviest blade that settles to the bottom. Lighten that prop blade until it no longer is the heaviest. Then determine the next blade that settles to the low point. Lighten it until it no longer moves to the bottom of the arc. Continue to reposition the prop blades to see if one repeatedly settles to the bottom. Eventually all three blades should remain neutral in position so that the prop remains still regardless of where you position any blade. At this point the prop is balanced.

Please refer to the reference photos below (fig. 43 & 44).



Final Assembly, Detailing, and Propeller Set

- 1) Install the propeller "L" with the lettering facing out (fig. 45).
- 2) Install and tighten the spinner nut as shown (fig. 46).



3) Install the antenna "M" as shown (fig. 47).



Center of Gravity

Before balancing your model, make sure the it is completely assembled and the battery is installed. The recommended center of gravity (CG) for your model is 55-60 mm from the wing's leading edge (fig.48). Lightly mark the ideal center of gravity position on the top surface of the wing on each side of the fuselage. Support the plane inverted at the marks made on the top of the wing with your fingers or a commercially available balancing stand. It should be level or just slightly nose down. Adjust the position of battery as necessary to achieve the proper balance.

CENTER OF GRAVITY (C.G.)



fig.48

Pre-flight Checklist

Prior to first flight:

1. Ensure your transmitter and ESC batteries are fully charged per manufacturer's instructions.
2. Ensure propeller is properly secured.
3. Ensure receiver and ESC battery are secure.
4. Check all control surface actuating hardware (linkages, screws, nuts, bolts, etc.)
5. Perform a range test on the radio equipment.
6. Check control surfaces for proper direction and throw.
7. Check center adjustment of each control surface.
8. With someone holding the aircraft, start the motor and make sure it runs smoothly. Ensure it will transition from off to high throttle and back to off.

Flight Safety

1. Do not fly in strong winds or bad weather.
2. Never fly in crowded areas near people, cars, buildings, power lines, airports, etc. The plane can travel at high speed so choose a wide open space and give yourself plenty of room to operate. Remember you are responsible for the safety of others.
3. Not recommended for children under 14 years of age. Children under 12 must have adult supervision.
4. Never use or leave the battery charger in a wet environment.
5. Keep the model away from heat which can easily destroy the foam structure of the plane, the electronics, or the battery.
6. Do not attempt to catch the model while flying.
7. Stay clear of the propeller at all times, even when it is not moving because the transmitter could easily be bumped and cause the propeller to move without warning.
8. Never leave the model unattended with a battery installed. Injury could be caused by children or unaware adults turning on the transmitter.
9. When preparing for flight, turn the transmitter on and ensure the throttle is off before connecting the battery.

Daily Flight Checks

Prior to first flight:

1. Check condition of major components. Ensure wing, tail, motor, and landing gear are secure.
2. Check condition of propeller.
3. Check all control surface actuating hardware (linkages, screws, nuts, bolts, etc.)
4. Check the voltage on the transmitter and ESC batteries.
5. Perform a range test on the radio equipment.
6. Check control surfaces for proper direction and throw.
7. Check center adjustment of each control surface.

Post flight:

1. Disconnect ESC battery
2. Turn off transmitter
3. Remove ESC battery from model.

4. Recharge ESC battery.
5. Store ESC battery away from model in fire proof container.
6. Repair or replace any damaged parts on the model airplane.

Maiden Flight Tips

If this is your first RC Model Airplane, you may want to seek the help of an experienced pilot to assist you on the first flight. You can usually find people that are happy to assist at a local RC Club. You can also inquire at your local hobby shop. Often hobby shop employees will know where to go locally for flight assistance.

Whether you are a new or experienced pilot, the maiden flight for any new RC model can often be challenging. Even if you have followed all the instructions exactly and adjusted all the control surfaces to their neutral positions, the model will likely need to be "trimmed out". Once you have the plane in the air, immediately climb to a safe altitude. Many RC Pilots will tell you that a safe altitude is "three mistakes high". Reduce throttle to half. Put the plane on a straight and level trajectory. While trimming, hold your transmitter up high near eye level; this will make it easier to see your plane and your trim settings at the same time. The goal of trimming the plane is to adjust it so it will maintain straight and level flight with no control inputs. For example, if the plane climbs, add down elevator trim. If it dives, add up trim. You may also need to adjust rudder trim (and aileron trim if applicable). Make as many passes as necessary, putting the plane on a straight and level trajectory and making required trim corrections until the plane flies straight and level.

Monitor and limit your flight time using a timer (in your transmitter if available, or a wrist watch). To avoid a dead-stick landing on your first flight, conservatively set the timer to four minutes. When you hear the alarm, land your plane as soon as possible.

Routine Maintenance

Store Li-Po batteries at room temperature in a dry environment in a fire proof container. Periodically check the cell voltage. Do not let the voltage drop below the manufacturer's recommended minimum storage voltage (typically around 3.3V per cell).

Repairs to foam should be made with foam safe adhesives such as hot glue, foam safe CA, and 5 min epoxy.

Troubleshooting Guide

Troubleshooting Guide		
Problem	Possible Causes	Solution
Receiver will not bind to transmitter	Transmitter is too close to the receiver Transmitter or receiver is too close to a large metal object ESC battery or Transmitter battery is not charged Bind plug installed incorrectly in receiver	Move transmitter a few feet away from receiver and then unplug and reconnect the ESC battery Move transmitter a few feet away from receiver and then unplug and reconnect the ESC battery Charge ESC battery or Transmitter battery Follow manufacturer's instructions for binding and re-bind receiver
Control Surface(s) will not move	Transmitter/receiver not bound correctly Incorrect model selected on transmitter Loose connection Control linkage, clevis, horn not connected, binding or damaged Servo damaged ESC battery or Transmitter battery is not charged	Re-bind receiver to transmitter per manufacturer's instructions Select correct model on transmitter Check battery, ESC, and receiver connections Check all control linkage connections Replace servo Recharge/replace batteries
Control Directions reversed	Transmitter servo direction settings are reversed	Perform Control Surfaces Direction Test and reverse transmitter settings as necessary
Model responds to all controls except throttle	Throttle channel is reversed Throttle is not at idle or trim is too high on transmitter	Reverse throttle channel setting on transmitter Move throttle stick and trim to lowest setting
Motor pulses then loses power	Low ESC battery charge or damaged battery Battery "C" rating too small	Re-charge/replace ESC battery Use proper battery
Excessive noise or vibration at high throttle	Damaged propeller or motor Propeller is not balanced	Replace damaged part Replace defective propeller
Model underpowered or has a reduced flight time	Propeller installed backwards Propeller rotation direction incorrect ESC battery charge is too low or battery damaged	Install propeller with numbers facing towards you Perform Control Surfaces Direction Test and reverse transmitter settings as necessary Recharge/replace battery
Model will not climb	Elevator trim not adjusted correctly	Adjust elevator trim
Model keeps turning in same direction	Rudder trim not adjusted correctly Aileron trim not adjusted correctly	Adjust rudder trim Adjust aileron trim
Model is difficult to control	Wing or tail damaged Center of Gravity incorrect Inadequate or excessive control throw settings	Repair/replace as necessary Check center of gravity and correct as necessary. Make sure battery is secure (not moving in flight) Verify control throws are at recommended settings

Customer Support and Spare Parts Contact Information

FMS Team Product Support
 3/F, Building B, 3rd Industry Zone, Matigang, Dalingshan Town,
 Dongguan City, P.R.C.
 Phone: 0086-769-86976655
 Email: info@fmsmodel.com

Spare Parts List

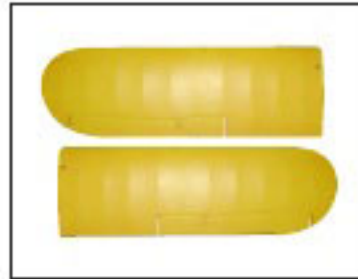
Replacement parts for the FMS J-3 are available using the order numbers in the spare parts lists that follows. The fastest, most economical service can be provided by your hobby dealer or mail-order company.

Spare Parts List

SPARE PART LIST



Fuselage



Main Wing Set



Elevator



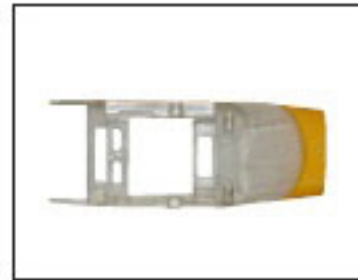
Rudder



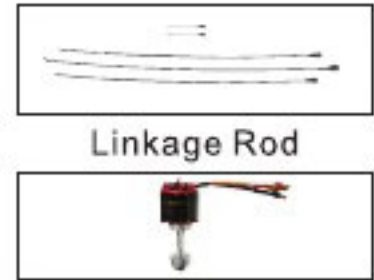
Supporting Bar



Propeller



Canopy



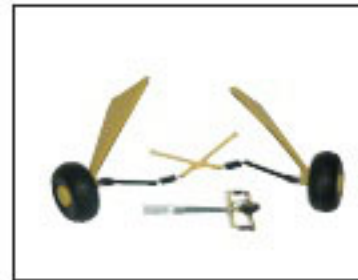
Linkage Rod



Servo



Balance Charger



Landing Gear Set



Brushless ESC



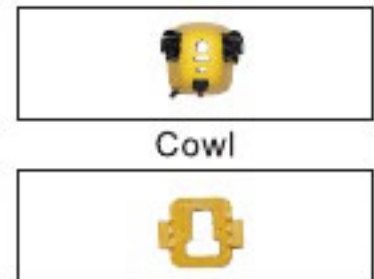
Sticker



Motor Shaft



Motor Mount



Cowl



Motor Board

AMA

If you are not already a member of the AMA, please join, The AMA is the governing body of model aviation and membership provided liability insurance coverage, protects modelers' rights and interests and is required to fly at most R/C sites.

Academy of Model Aeronautics

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Or via the Internet at: <http://www.modelaircraft.org>



Academy of Model Aeronautics National Model Aircraft Safety Code Effective January 1, 2011

A. GENERAL: A model aircraft is a non-human-carrying aircraft capable of sustained flight in the atmosphere. It may not exceed limitations of this code and is intended exclusively for sport, recreation and/or competition.

All model flights must be conducted in accordance with this safety code and any additional rules specific to the flying site.

1. Model aircraft will not be flown:
 - (a) In a careless or reckless manner.
 - (b) At a location where model aircraft activities are prohibited.
2. Model aircraft pilots will:
 - (a) Yield the right of way to all man carrying aircraft.
 - (b) See and avoid all aircraft and a spotter must be used when appropriate.
(AMA Document #540-D-See and Avoid Guidance.)
 - (c) Not fly higher than approximately 400 feet above ground level within three (3) miles of an airport, without notifying the airport operator.
 - (d) Not interfere with operations and traffic patterns at any airport, heliport or seaplane base except where there is a mixed use agreement.
 - (e) Ensure the aircraft is identified with the name and address or AMA number of the owner on the inside or affixed to the outside of the model aircraft.
(This does not apply to model aircraft flown indoors).
 - (f) Not operate aircraft with metal-blade propellers or with gaseous boosts except for helicopters operated under the provisions of AMA Document #555.
 - (g) Not operate model aircraft while under the influence of alcohol or while using any drug which could adversely affect the pilot's ability to safely control the model.
 - (h) Not operate model aircraft carrying pyrotechnic devices which explode or burn, or any device which propels a projectile or drops any object that creates a hazard to persons or property.

Exceptions:

- ◆ Free Flight fuses or devices that burn producing smoke and are securely attached to the model aircraft during flight.
 - ◆ Officially designated AMA Air Show Teams (AST) are authorized to use devices and practices as defined within the Team AMA Program Document (AMA Document #718).
3. Model aircraft will not be flown in AMA sanctioned events, air shows or model demonstrations unless:
 - (a) The aircraft, control system and pilot skills have successfully demonstrated all maneuvers intended or anticipated prior to the specific event.
 - (b) An inexperienced pilot is assisted by an experienced pilot.
 4. When and where required by rule, helmets must be properly worn and fastened. They must be OSHA, DOT, ANSI, SNELL or NOCSAE approved or comply with comparable standards.

B. RADIO CONTROL (RC)

1. All pilots shall avoid flying directly over unprotected people, vessels, vehicles or structures and shall avoid endangerment of life and property of others.
2. A successful radio equipment ground-range check in accordance with manufacturer's recommendations will be completed before the first flight of a new or repaired model aircraft.
3. RC model aircraft must use the radio-control frequencies currently allowed by the Federal Communications Commission (FCC). Only individuals properly licensed by the FCC are authorized to operate equipment on Amateur Band frequencies.
4. RC model aircraft will not operate within three (3) miles of any pre-existing flying site without a frequency-management agreement (AMA Documents #922-Testing for RF Interference; #923- Frequency Management Agreement)
5. With the exception of events flown under official AMA Competition Regulations, excluding takeoff and landing, no powered model may be flown outdoors closer than 25 feet to any individual, except for the pilot and the pilot's helper(s) located at the flight line.
6. Under no circumstances may a pilot or other person touch a model aircraft in flight while it is still under power, except to divert it from striking an individual. This does not apply to model aircraft flown indoors.
7. RC night flying requires a lighting system providing the pilot with a clear view of the model's attitude and orientation at all times.
8. The pilot of a RC model aircraft shall:
 - (a) Maintain control during the entire flight, maintaining visual contact without enhancement other than by corrective lenses prescribed for the pilot.
 - (b) Fly using the assistance of a camera or First-Person View (FPV) only in accordance with the procedures outlined in AMA Document #550.

C. FREE FLIGHT

1. Must be at least 100 feet downwind of spectators and automobile parking when the model aircraft is launched.
2. Launch area must be clear of all individuals except mechanics, officials, and other fliers.
3. An effective device will be used to extinguish any fuse on the model aircraft after the fuse has completed its function.



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MADE IN CHINA