

Fms FMM123P

FMS 850mm Ranger Trainer RC Plane Instruction Manual

Model: FMM123P | Brand: FMS

INTRODUCTION

Welcome to the FMS 850mm Ranger Trainer RC Plane. This manual provides essential information for the safe assembly, operation, and maintenance of your aircraft. Please read it thoroughly before your first flight to ensure a safe and enjoyable experience.



Image: The FMS 850mm Ranger Trainer RC Plane, a high-wing aircraft designed for stability and ease of flight.

SAFETY PRECAUTIONS

Adhering to these safety guidelines is crucial for preventing injury and damage:

- Always operate the aircraft in open areas, away from people, buildings, and obstacles.
- Ensure all components are securely attached and functioning correctly before each flight.
- Do not fly in strong winds or adverse weather conditions.
- Keep hands and loose clothing away from the propeller when the motor is active.
- This product is recommended for users aged 14 years and up.
- Always disconnect the flight battery when the aircraft is not in use or during transport.

PACKAGE CONTENTS (PNP VERSION)

The Plug and Play (PNP) version of the FMS 850mm Ranger Trainer includes the following pre-installed components:

- FMS 850mm Ranger Trainer Airframe
- 2315-KV3850 Brushless Motor
- Electronic Speed Controller (ESC)
- Four 1.9g Micro Servos
- Propeller

Please note: A transmitter, receiver, flight battery, and battery charger are **not** included and must be purchased separately to complete the aircraft for flight.

ASSEMBLY INSTRUCTIONS

Follow these steps to assemble your FMS 850mm Ranger Trainer. Ensure all connections are secure and components are properly aligned.

1. Wing Installation

Attach the main wing to the fuselage. Ensure it is centered and securely fastened according to the provided hardware. The high-winged design contributes to stable flight characteristics.

High winged design with a single piece horizontal stabilizer

STOL capable design, takes off within 3 meters and handles well at very slow speeds



Image: The FMS 850mm Ranger Trainer showcasing its high-winged design and single-piece horizontal stabilizer, which aids in short take-off and landing (STOL) capabilities and slow-speed handling.

2. Wing Strut Attachment

Install the robust wing struts. These struts are designed to increase wing rigidity and enhance the aircraft's structural integrity. Ensure they are firmly connected to both the wing and the fuselage.



Image: The FMS 850mm Ranger Trainer with its robust wing struts installed, designed to increase wing rigidity and payload capability.

3. Landing Gear Setup

Assemble the tricycle landing gear. This configuration improves ground handling during take-off and landing. Ensure all wheels spin freely and the landing gear is securely attached to the fuselage.

Tricycle landing gear

Tricycle landing gear setup for improved ground handling



Image: The FMS 850mm Ranger Trainer featuring its tricycle landing gear setup, which is designed for improved ground handling.

4. Tail Assembly

Secure the horizontal and vertical stabilizers to the tail section of the fuselage. Verify that all control surfaces (elevator and rudder) move freely and correctly when connected to their respective servos.

5. Receiver and Battery Installation

Connect your chosen receiver to the pre-installed servos and ESC. Install your flight battery in the designated compartment, ensuring proper balance. Refer to your receiver and battery manuals for specific connection, binding, and charging instructions. Proper weight distribution is critical for stable flight.

PRE-FLIGHT CHECKLIST

Before each flight, perform the following checks to ensure safe operation:

- Verify all control surfaces (ailerons, elevator, rudder) move correctly and in the proper direction relative to transmitter stick input.
- Check battery charge level for both the aircraft's flight battery and the transmitter's battery.
- Ensure the propeller is securely attached, free from damage, and balanced.
- Inspect all connections, linkages, and fasteners for security and proper function.

- Confirm the flight area is clear of people, animals, and obstacles, and is safe for operation.
- Check the aircraft's center of gravity (CG) to ensure it is within the recommended range.

OPERATING INSTRUCTIONS

Basic Flight Controls

The FMS 850mm Ranger Trainer is a 4-channel RC plane. Basic controls typically include:

- **Throttle:** Controls motor speed and overall aircraft power, affecting altitude.
- **Ailerons:** Controls roll (banking) of the aircraft, used for turning.
- **Elevator:** Controls pitch (nose up/down) of the aircraft, used for ascent and descent.
- **Rudder:** Controls yaw (nose left/right) for directional control on the ground and coordinated turns in the air.

Electronic Fence Feature

This feature provides an added layer of safety. If the aircraft flies beyond a 120-meter GPS positioning point, it will automatically initiate a return. During this return, you maintain control with the remote controller. If no manual input is received, the aircraft will hover at a radius of 30-40 meters above the GPS point, at approximately 40 kilometers per hour and about 25 meters above the ground.

One-Key Return Function

For operational errors or unexpected situations during flight, simply press the one-key return button on your remote controller. The airplane will automatically fly back to a predetermined point. Similar to the Electronic Fence, you can override this function with manual control during the return sequence.



Image: The FMS 850mm Ranger Trainer in stable flight, demonstrating its ease of control and suitability for beginners.

MAINTENANCE

Regular maintenance ensures the longevity and safe operation of your aircraft:

- Regularly inspect the airframe for any damage, cracks, or loose components. Repair or replace as necessary.
- Check the propeller for nicks, bends, or cracks; replace if damaged to ensure balanced flight and prevent vibration.
- Keep all moving parts, such as control horns, linkages, and hinges, free from debris and ensure smooth, unrestricted operation.
- Store the aircraft in a cool, dry place, away from direct sunlight and extreme temperatures.
- Ensure flight batteries are stored and charged according to manufacturer guidelines to maximize their lifespan and safety.
- Periodically check the landing gear and wing struts for any signs of stress or damage.

TROUBLESHOOTING

This section addresses common issues you might encounter and provides potential solutions:

Problem	Possible Cause	Solution
Aircraft does not respond to controls.	Low battery in aircraft or transmitter; receiver not bound; loose connections.	Charge batteries; re-bind receiver to transmitter; check all wiring connections.
Motor not spinning or weak thrust.	Damaged propeller; motor or ESC malfunction; low flight battery.	Replace propeller; check motor/ESC connections; ensure flight battery is fully charged.
Unstable flight or difficulty controlling.	Incorrect center of gravity (CG); damaged control surfaces; strong wind conditions.	Adjust battery position for correct CG; inspect and repair control surfaces; fly in calmer conditions.
Landing gear damage (e.g., nose wheel).	Hard landing; impact during ground handling.	Inspect for damage and replace components as needed. Practice smoother landings and gentle ground handling.
Wing strut damage.	Impact; excessive stress during flight or transport.	Replace damaged wing struts immediately to maintain wing rigidity and flight safety.

SPECIFICATIONS

Model: FMM123P

Wingspan: 850mm (33.4 inches)

Length: Approximately 600mm (estimated)

Motor: 2315-KV3850 Brushless Motor

Servos: Four 1.9g Micro Servos

Channels: 4-Channel Control

Weight: 5.99 pounds (approx. 2.72 kg)

Recommended Age: 14 years and up






Features: Electronic Fence, One-Key Return, Reflex V3 (Flight Controller)

Landing Gear: Tricycle configuration

WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the official FMS website or contact your authorized retailer. Keep your proof of purchase for any warranty claims.

For common questions regarding product definitions (e.g., PNP vs. RTF), shipping, or issues like damaged packages or incorrect products, please refer to the FMS brand's frequently asked questions or contact customer service immediately with relevant documentation or photos.

	<p>FMS 1220mm Ranger V2 Instruction Manual</p> <p>Comprehensive instruction manual for the FMS 1220mm Ranger V2 remote-controlled airplane, covering assembly, safety, operation, and maintenance for hobbyists.</p>
	<p>FMS 1400mm Kingfisher RC Airplane Instruction Manual</p> <p>Comprehensive instruction manual for the FMS 1400mm Kingfisher RC airplane. Learn about assembly, setup, flying, maintenance, and troubleshooting for this versatile EPO trainer aircraft.</p>
	<p>FMS Reflex V3 Bluetooth Version User Manual</p> <p>A comprehensive guide to the FMS Reflex V3 Bluetooth Version, covering its features, operation, and software updates for enhanced RC aircraft control.</p>
	<p>FMS 1280mm Easy Trainer V2 Instruction Manual - Assembly, Setup, and Flying Guide</p> <p>Comprehensive instruction manual for the FMS 1280mm Easy Trainer V2 RC airplane. Covers assembly, setup, transmitter binding, flight controls, safety precautions, troubleshooting, and ESC operation. Features dual-purpose trainer and glider capabilities.</p>
	<p>FMS Reflex V3 Bluetooth Version Flight Controller Manual</p> <p>Comprehensive guide to the FMS Reflex V3 Bluetooth Version flight controller, covering system overview, functions, operation instructions, aircraft model updates, and FCC information.</p>
	<p>FMS 1220mm Ranger RC Airplane Instruction Manual</p> <p>Comprehensive instruction manual for the FMS 1220mm Ranger RC airplane, covering safety precautions, assembly, setup, and flying guidelines. Learn about the features, kit contents, and troubleshooting for this high-performance model.</p>



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850mm Ranger SIMPLE Simple assembly OPERABILITY 0 flying experience necessary RIGID Strong durable epo Instruction Manual Bedienungsanleitung Manuel d utilisation FMSMODEL.COM E N WARNING WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before ...
lang:en score:29 filesize: 5.02 M page_count: 40 document date: 2021-09-03



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850mm Ranger Aus Electronics Direct WARNING Read the ENTIRE instruction manual to become familiar with features of product before operating Failure operate correctly can result in damage personal property and cause serious injury This is a sophisticated hobby NOT toy TR4070 auselectronicsdirect au assets brochures Tower Hobbies FMM123P Manual MULTI towerhobbies on demandware static Sites horizon master default dw4502ed58 Manuals Horizon Hobby contains instructions for safety operation maintenance It essential read follow all warnings prior assembly setup or use order avoid horizonhobby us Site DroneShop 20200606023945FMS850mmRangerManual myos 3 banggood products 20200606 0 flying experience necessary RIGID Strong durable epo FMSMODEL COM Manuel d utilisation Instruction Bedienungsanleitung Banggood Use battery charger that designed safely charge Li Po Battery care fully When charging make certain heat resistant surface also highly recommended place inside fire bag readily available at shops

850mm Ranger SIMPLE Simple assembly OPERABILITY 0 flying experience necessary RIGID Strong durable epo Instruction Manual Bedienungsanleitung Manuel d utilisation FMSMODEL.COM E N WARNING WARNING: Read the ENTIRE instruction manual to become familiar with the features of the product before ...
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