

Manuals+

[Q & A](#) | [Deep Search](#) | [Upload](#)

[manuals.plus](#) /

› [Tiny Hawk](#) /

› [Tinyhawk 3 RTF Kit User Manual](#)

Tiny Hawk

Tinyhawk 3 RTF Kit User Manual

Model: TH3RTF KIT

INTRODUCTION

The Tinyhawk III RTF Kit is a comprehensive ready-to-fly FPV (First Person View) drone system designed for beginners. This kit includes the Tinyhawk III quadcopter, a compatible FRSKY controller, and 5.6G FPV goggles, providing everything needed to start flying immediately. The drone is engineered with a focus on durability and flight efficiency, making it an ideal platform for learning and enjoying FPV flight.

- Ready-to-fly setup for immediate use.
- Durable plastic frame designed to withstand crashes.
- Optimized power system for improved flight time and performance.
- Real-time 5.8G FPV video transmission for immersive piloting.
- Integrated controller and goggles for a complete FPV experience.

SAFETY GUIDELINES

Always prioritize safety when operating the Tinyhawk III. Failure to follow these guidelines may result in injury or damage to property.

- **Read the entire manual:** Understand all features and operations before first flight.
- **Maintain line of sight:** Always keep the drone within your visual line of sight, even when using FPV goggles.
- **Fly in open areas:** Operate the drone in clear, open spaces, away from people, animals, buildings, and obstacles.
- **Check local regulations:** Be aware of and comply with all local laws and regulations regarding drone operation.
- **Pre-flight inspection:** Before each flight, inspect the drone, propellers, and batteries for any damage.
- **Battery safety:** Use only approved batteries and chargers. Do not overcharge or discharge batteries. Store batteries in a safe, fireproof location.
- **Propeller caution:** Keep hands, face, and loose clothing away from spinning propellers.
- **Weather conditions:** Do not fly in strong winds, rain, or other adverse weather conditions.
- **Emergency procedures:** Know how to disarm the drone quickly in an emergency.

PACKAGE CONTENTS

Verify that all items listed below are present in your Tinyhawk III RTF Kit package:

- Tinyhawk III FPV Quadcopter
- FRSKY Compatible Radio Transmitter (Controller)
- 5.6G FPV Goggles
- 1S LiPo Battery (for drone)
- USB Battery Charger
- Spare Propellers
- Small Screwdriver / Hex Wrench
- USB Cable (for firmware updates/charging)
- User Manual (this document)



Image: All components of the Tinyhawk 3 RTF Kit, including the drone, FPV goggles, radio controller, and various accessories like batteries and charging cables.

COMPONENT OVERVIEW

Tinyhawk III Quadcopter



Image: Top-down view of the Tinyhawk III quadcopter, highlighting its white frame and red propellers.

The Tinyhawk III is a compact and agile FPV drone. Its frame is constructed from flexible plastic to enhance durability against impacts. It features four brushless motors, each with a quad-blade propeller, providing stable and efficient flight. The integrated FPV camera transmits real-time video to the goggles.

- **Frame:** Durable, lightweight plastic.
- **Motors:** Brushless motors for power and longevity.
- **Propellers:** Quad-blade design for optimal thrust.
- **Camera:** Integrated FPV camera for video transmission.
- **Battery Connector:** Typically PH2.0 or BT2.0 for 1S LiPo batteries.

Radio Transmitter (Controller)



Image: The gray radio controller for the Tinyhawk 3, showing its two main joysticks, trim buttons, and power indicator lights. The included radio transmitter is pre-bound to the Tinyhawk III drone, simplifying the setup process. It features standard FPV drone controls:

- **Left Stick (Mode 2):** Controls Throttle (vertical movement) and Yaw (rotation).
- **Right Stick (Mode 2):** Controls Pitch (forward/backward tilt) and Roll (left/right tilt).
- **Switches:** Used for arming/disarming motors, changing flight modes, and other functions.
- **Trim Buttons:** For fine-tuning drone stability.

FPV Goggles



Image: The FPV goggles included in the Tinyhawk 3 kit, featuring two antennas for video reception and a head strap. The 5.6G FPV goggles provide an immersive first-person view from the drone's camera. They receive the video signal wirelessly from the drone.

- **Antennas:** For receiving the 5.8GHz video signal.
- **Screen:** Internal display for FPV feed.
- **Controls:** Buttons for channel scanning, menu navigation, and DVR (if equipped).

SETUP GUIDE

1. Charging Batteries

Ensure all batteries are fully charged before use.

- **Drone Battery:** Connect the drone's 1S LiPo battery to the provided USB charger. Plug the charger into a USB power source (e.g., computer, wall adapter). The indicator light will show charging status (e.g., red for charging, green for full).
- **Controller Battery:** The controller typically has an internal battery. Connect the controller to a USB power source using the provided USB cable.
- **Goggles Battery:** The goggles also have an internal battery. Connect the goggles to a USB power source using the provided USB cable.

Note: Charging times may vary. Refer to the charger's specific instructions for detailed indicator meanings.

2. Propeller Installation (if needed)

The Tinyhawk III usually comes with propellers pre-installed. If replacement is necessary:

- Identify the correct rotation direction for each propeller (CW for clockwise, CCW for counter-clockwise). The drone's

arms are usually marked.

- Carefully push the propeller onto the motor shaft until it seats firmly. Ensure it is fully seated and not wobbly.

3. Powering On

- **Goggles:** Press and hold the power button on the FPV goggles until the screen turns on.
- **Controller:** Press and hold the power button on the radio transmitter until it powers on.
- **Drone:** Connect the fully charged 1S LiPo battery to the drone's battery connector. The drone will power on and perform a self-check.

Note: The drone, controller, and goggles are typically pre-bound from the factory. If binding is required, consult the specific binding instructions provided in the full manual or manufacturer's website.

OPERATING INSTRUCTIONS

1. Pre-Flight Checks

- Ensure all batteries are charged.
- Verify propellers are securely attached and undamaged.
- Confirm the flight area is clear of obstacles, people, and animals.
- Check that the FPV goggles are receiving a clear video signal from the drone.

2. Arming the Motors

To start the drone's motors, you must "arm" them. This is a safety feature to prevent accidental propeller spin.

- Place the drone on a flat, level surface.
- Ensure the throttle stick (left stick, Mode 2) is at its lowest position.
- Move the designated arming switch on your controller (refer to controller diagram or quick start guide for exact switch). The motors will spin up slowly, indicating they are armed.

Warning: Once armed, propellers will spin. Keep clear of the drone.

3. Basic Flight Controls (Mode 2)

Control	Stick Movement	Drone Action
Throttle	Left Stick Up/Down	Increases/Decreases altitude
Yaw	Left Stick Left/Right	Rotates drone left/right on its vertical axis
Pitch	Right Stick Up/Down	Tilts drone forward/backward (moves forward/backward)
Roll	Right Stick Left/Right	Tilts drone left/right (moves sideways)

4. Disarming the Motors

To stop the motors after landing or in an emergency:

- Land the drone gently.
- Move the designated arming switch to the disarm position. The motors will stop spinning.
- Alternatively, for emergency disarm, move the throttle stick to the lowest position and the yaw stick fully to the right or left (depending on configuration) for a few seconds.

MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Tinyhawk III.

- **Cleaning:** After each flight, especially outdoors, gently clean the drone to remove dirt, dust, or debris from the frame, motors, and camera lens. Use a soft brush or compressed air.
- **Propeller Inspection:** Regularly check propellers for cracks, bends, or chips. Damaged propellers can cause instability and reduce flight efficiency. Replace them immediately if damaged.
- **Motor Inspection:** Ensure motors spin freely and are free of obstructions. If a motor feels gritty or makes unusual noises, it may need cleaning or replacement.
- **Battery Care:**
 - Store LiPo batteries at a storage voltage (around 3.8V per cell) if not used for extended periods.
 - Do not fully discharge LiPo batteries below 3.0V per cell, as this can damage them.
 - Avoid overcharging. Always use a charger designed for LiPo batteries.
 - Inspect batteries for swelling or damage. Discontinue use if any damage is observed.
- **Firmware Updates:** Periodically check the manufacturer's website for firmware updates for the drone, controller, and goggles. Updates can improve performance, add features, or fix bugs. Firmware updates for the drone typically involve connecting it to a computer and using software like Betaflight Configurator.

TROUBLESHOOTING

This section addresses common issues you might encounter with your Tinyhawk III RTF Kit.

Problem	Possible Cause	Solution
Drone does not arm.	Throttle not at lowest position; arming switch not engaged; low battery; drone not level.	Ensure throttle is down. Engage arming switch. Charge battery. Place drone on a flat surface.
No FPV video in goggles.	Goggles not powered on; incorrect video channel; drone not powered on; damaged VTX/camera.	Power on goggles. Scan for channels on goggles. Power on drone. Inspect VTX/camera for damage.
Drone flies erratically or wobbles.	Damaged or incorrectly installed propellers; bent motor shaft; debris in motors.	Inspect and replace damaged propellers. Check motor shafts for bends. Clean motors.
Short flight time.	Battery not fully charged; old/degraded battery; aggressive flying style.	Ensure battery is fully charged. Consider replacing old batteries. Practice smoother flying.
Loss of signal (video or control).	Flying too far; interference; low battery on controller/drone.	Stay within range. Avoid areas with strong interference. Ensure all batteries are charged.

SPECIFICATIONS

- **Brand:** Tiny Hawk
- **Model Name:** tinyhawk
- **Model Number:** TH3RTF KIT
- **Special Feature:** Crash Resistant

- **Age Range (Description):** Adult
- **Color:** Grey
- **Video Capture Resolution:** 1080p
- **Connectivity Technology:** FPV
- **Included Components:** Camera, Controller, Goggles
- **Skill Level:** Beginner
- **Video Capture Format:** MP4
- **Remote Control Technology:** FPV
- **Control Type:** Remote Control
- **Media Type:** SD (for DVR on goggles, if applicable)
- **Material:** Plastic
- **Wireless Communication Technology:** FPV
- **Battery Cell Composition:** Lithium Polymer
- **Batteries Included:** Yes (1 Lithium Polymer battery for drone)
- **Video Output Resolution:** 1080p
- **Optical Sensor Technology:** CMOS
- **UPC:** 717351957463
- **Manufacturer:** EMAX
- **Item Weight:** 3.21 pounds (package weight)
- **Package Dimensions:** 11.42 x 8.31 x 5.04 inches

WARRANTY INFORMATION

The Tinyhawk III RTF Kit is covered by a manufacturer's warranty against defects in materials and workmanship. The specific terms and duration of the warranty may vary by region and retailer. Please retain your proof of purchase for warranty claims.

For detailed warranty information, please refer to the warranty card included in your product packaging or visit the official Tiny Hawk / EMAX website.

SUPPORT

For technical assistance, troubleshooting beyond this manual, or spare parts inquiries, please contact Tiny Hawk / EMAX customer support.

- **Online Resources:** Visit the official EMAX website for FAQs, firmware downloads, and additional support materials.
- **Contact Support:** Refer to the contact information provided on the product packaging or the manufacturer's website for direct customer service.

Always ensure you are using official channels for support to receive accurate and reliable assistance.