

Cheerwing Syma X20 Mini

Cheerwing Syma X20 Mini Drone Instruction Manual

Model: Syma X20 Mini

1. INTRODUCTION

Thank you for purchasing the Cheerwing Syma X20 Mini Drone. This compact and versatile quadcopter is designed for both kids and beginners, offering stable flight and exciting features like auto-hovering and 3D flips. Please read this manual thoroughly before operating the drone to ensure safe and optimal performance.

2. PRODUCT OVERVIEW

2.1 Package Contents

Upon unboxing, verify that all components are present:

- Cheerwing Syma X20 Mini Drone (Black)
- Remote Control / Transmitter
- USB Charging Cable
- Screwdriver
- Spare Propellers (4 pieces)
- User Manual (this document)



Figure 2.1: Package Contents of the Syma X20 Mini Drone.

2.2 Key Features

- **One Key Take-off and Landing:** Simplifies operation for beginners.
- **Hover / Altitude Hold Mode:** Maintains a stable altitude, making it easier to control.
- **Headless Mode:** Eliminates the need to distinguish the drone's head or tail direction, simplifying flight control.
- **360° Roll:** Perform impressive aerial stunts with a single button.
- **LED Lights:** Designed for enhanced visibility and night flight.
- **Compact and Portable:** Mini size for easy transport and indoor flying.



One Key Start

More easy to fly, Suitable for Kids and Beginners

360° Flip

Perform cool aerial stunts with remote control

Figure 2.2: One Key Start and 360° Flip Feature.

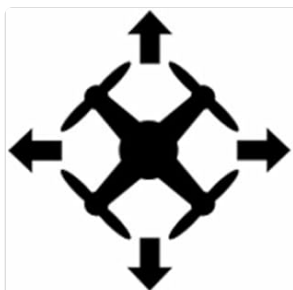


Altitude Hold

Auto Hover Function, let you free your hands and enjoy flying



Figure 2.3: Altitude Hold Functionality.



HEADLESS MODE

In headless state, the operator has no need to recognize the position of drone's headpiece, and he just needs to control the drone in accordance with direction of remote control's operating rod.



Figure 2.4: Headless Mode Explanation.

3. SETUP

3.1 Charging the Drone Battery

The drone is equipped with a built-in 180 mAh Lithium Polymer battery. Before first use, fully charge the battery.

1. Connect the USB charging cable to the drone's charging port.
2. Plug the other end of the USB cable into a USB power source (e.g., computer USB port, USB wall adapter).
3. The charging indicator light will illuminate during charging and turn off when charging is complete.
4. Charging time is approximately 50-70 minutes. Flight time is approximately 5-6 minutes per charge.

Important: Do not overcharge the battery. Disconnect the charger once charging is complete. Always supervise charging.

3.2 Installing Remote Control Batteries

The remote control requires AAA batteries (not included).

1. Open the battery compartment on the back of the remote control.

2. Insert the required number of AAA batteries, ensuring correct polarity (+/-).
3. Close the battery compartment securely.

3.3 Propeller Installation (if needed)

If propellers need replacement, use the provided screwdriver and spare propellers. Ensure propellers are installed on the correct motor shafts (A and B markings).



Figure 3.1: Drone Details and Size.

4. OPERATING INSTRUCTIONS

4.1 Pairing the Drone and Remote Control

1. Place the drone on a flat, level surface.
2. Turn on the drone's power switch. The LED lights on the drone will flash.
3. Turn on the remote control's power switch.

4. Push the left joystick (throttle) all the way up, then pull it all the way down. The drone's LED lights will stop flashing and remain solid, indicating successful pairing.

4.2 Calibration

For stable flight, it is recommended to calibrate the drone before each flight.

- After pairing, push both joysticks down and to the right simultaneously for 2-3 seconds.
- The drone's LED lights will flash rapidly and then become solid, indicating successful calibration.

4.3 Take-off and Landing

- **One Key Take-off:** Press the One Key Take-off/Landing button (usually located on the remote control, refer to Figure 4.1). The drone will automatically ascend and hover at a certain altitude.
- **Manual Take-off:** Slowly push the left joystick (throttle) upwards. The propellers will start spinning, and the drone will ascend.
- **One Key Landing:** Press the One Key Take-off/Landing button again. The drone will automatically descend and land gently.
- **Manual Landing:** Slowly pull the left joystick (throttle) downwards until the drone lands.



Figure 4.1: Remote Control Layout and One Touch to Fly.

4.4 Flight Controls

The remote control features two main joysticks and various function buttons:

Control	Function
Left Joystick (Throttle)	Up/Down: Ascend/Descend; Left/Right: Rotate Left/Right (Yaw)
Right Joystick (Direction)	Up/Down: Fly Forward/Backward (Pitch); Left/Right: Fly Left/Right (Roll)
Fine-tuning Buttons	Adjust drone drift (e.g., if drone drifts forward, press backward fine-tuning button).
3D Eversion Button	Press to perform a 360° flip.
Headless Mode Button	Activates/Deactivates Headless Mode.

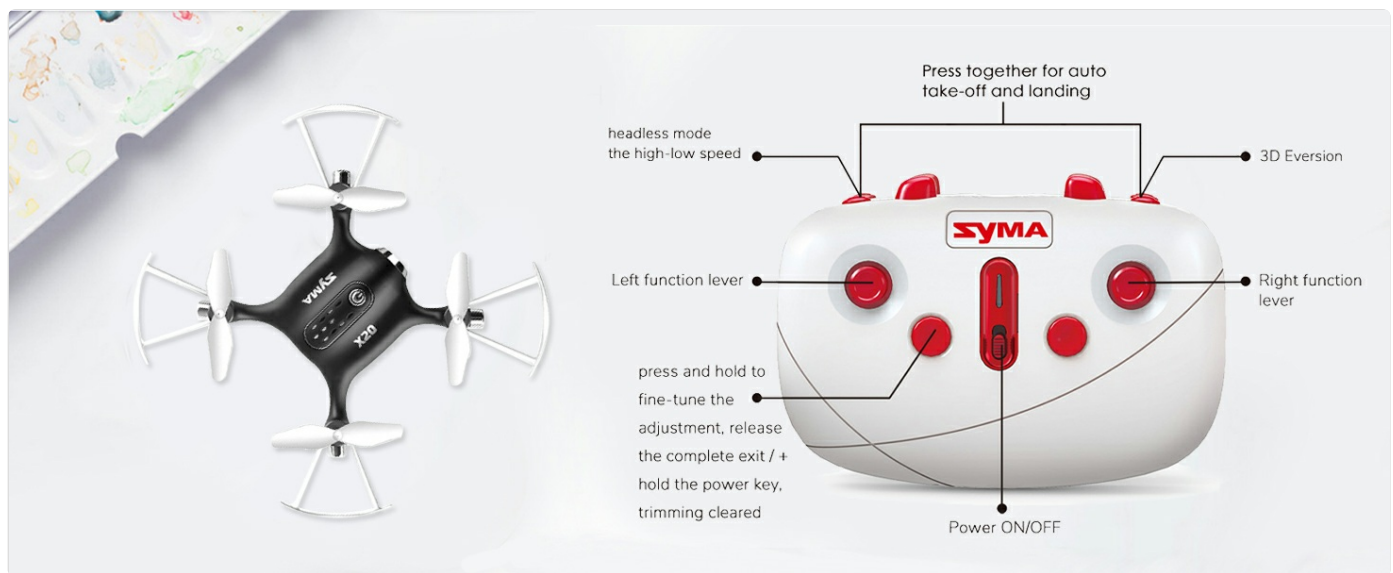


Figure 4.2: Detailed Remote Control Functions.

4.5 Altitude Hold Function

The SYMA X20 Mini Drone features an altitude hold function, allowing it to maintain a stable height without constant throttle input. This makes it easier for beginners to control the drone's horizontal movement.



Figure 4.3: Drone Hovering with Altitude Hold.

4.6 Performing 3D Flips

To perform a 360° flip:

1. Ensure the drone is flying at a sufficient height (at least 2-3 meters).
2. Press the 3D Eversion button on the remote control.
3. Immediately push the right joystick in the desired direction of the flip (forward, backward, left, or right). The drone will perform a flip in that direction.



Hover Function

Enjoy a stable flying with Syma X20 even free your hands from the controller.



Figure 4.4: 3D Flips & Roll Feature.

4.7 Flight Safety Tips

- Fly in open areas, away from people, animals, and obstacles.
- Avoid flying in strong winds or adverse weather conditions.
- Keep the drone within your line of sight.
- Do not fly near airports or restricted airspace.
- Always turn off the drone and remote control after use.

5. MAINTENANCE

- Clean the drone regularly with a soft, dry cloth.
- Inspect propellers for damage before each flight. Replace bent or broken propellers immediately.
- Store the drone and remote control in a cool, dry place, away from direct sunlight and extreme temperatures.
- If the drone will not be used for an extended period, remove batteries from the remote control.

6. TROUBLESHOOTING

Problem	Possible Cause	Solution
Drone does not respond to remote control.	Not paired; Low battery (drone or remote).	Re-pair the drone and remote; Charge drone battery; Replace remote control batteries.
Drone drifts during flight.	Not calibrated; Uneven surface for take-off; Wind interference.	Calibrate the drone; Use fine-tuning buttons; Fly in calm conditions.
Propellers do not spin.	Obstruction; Damaged motor; Low battery.	Check for obstructions; Contact support if motor is damaged; Charge drone battery.
Short flight time.	Battery not fully charged; Old battery.	Ensure full charge; Battery life naturally decreases over time.

7. SPECIFICATIONS

Feature	Detail
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Feature	Detail
Brand	Cheerwing
Model Name	Syma X20 Mini
Color	Black
Item Weight	6.4 ounces
Product Dimensions	4.13"L x 4.13"W x 0.98"H
Battery Capacity	180 Milliamp Hours (LiPo)
Maximum Range	50 Meters
Control Type	Remote Control (IR)
Skill Level	Beginner
Recommended Age	14 years and up

8. WARRANTY AND SUPPORT

For warranty information, technical support, or replacement parts, please contact Cheerwing customer service. Refer to the contact information provided on the product packaging or the official Cheerwing website.

Cheerwing USA Seller: [A1IED1Q3HGQJQ1](#)

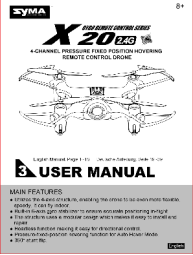
We are committed to providing high-quality products and outstanding after-sales service to ensure customer satisfaction.

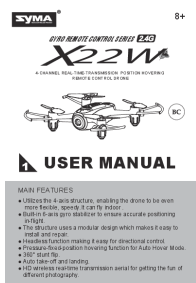
9. OFFICIAL PRODUCT VIDEOS

No official seller videos are available for embedding at this time based on the provided criteria.

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Related Documents - Syma X20 Mini

	<p>SYMA X20 Drone User Manual: Features, Operation, and Safety</p> <p>This user manual provides comprehensive instructions for the SYMA X20 2.4G 4-Channel Pressure Fixed Position Hovering Remote Control Drone. It details main features, safety guidelines, battery warnings, operation procedures, troubleshooting tips, product specifications, and warranty information.</p>
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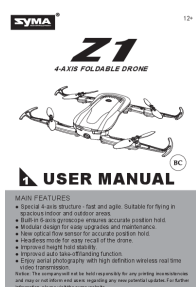
SYMA X22W Drone User Manual: Features, Operation, and Safety Guide

Comprehensive user manual for the SYMA X22W remote control drone. Learn about its features, safety guidelines, flight controls, app connectivity, and maintenance.



[Syma X8C Quadcopter User Manual - Instructions and Features](#)

Comprehensive user manual for the Syma X8C 4CH 2.4G Remote Control Quadcopter. Learn about features, safety, operation, and maintenance of your Syma drone.



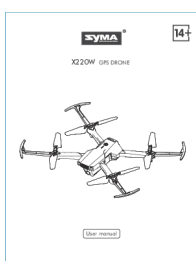
Syma Z1 4-Axis Foldable Drone User Manual

Comprehensive user manual for the Syma Z1 4-Axis Foldable Drone, covering main features, safety guidelines, repair and maintenance, box contents, app usage, assembly, battery charging, blade installation, troubleshooting, and specifications.



Syma X5UW-D Drone User Manual: Features, Operation, and Safety

Comprehensive user manual for the Syma X5UW-D quadcopter drone. Learn about its features, technical specifications, setup, flight controls, safety guidelines, troubleshooting, and app connectivity.



SYMA X220W GPS Drone User Manual: Safety, Setup, and Flight Guide

Comprehensive user manual for the SYMA X220W GPS Drone, covering safety, assembly, flight operations, troubleshooting, and specifications. Learn to operate your drone safely and effectively.