

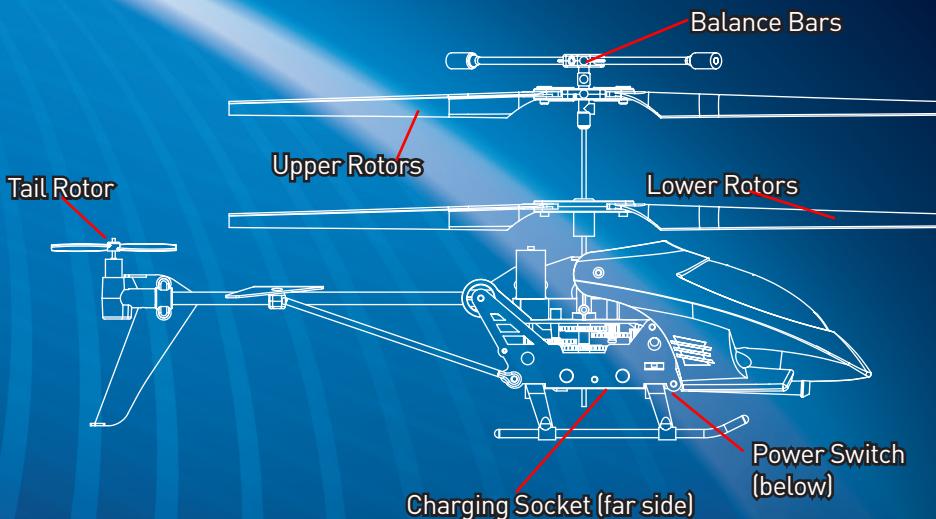
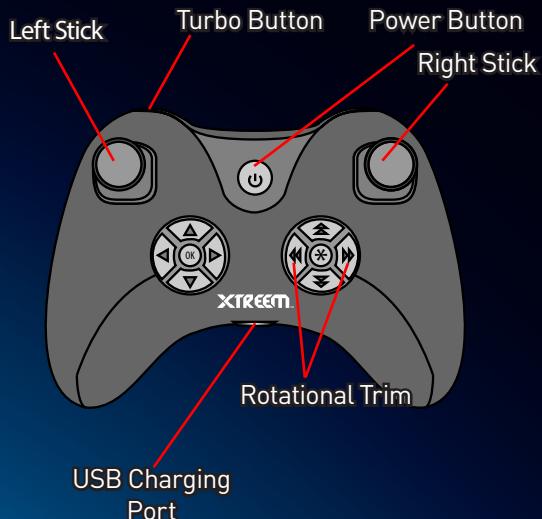


Micro Lightning

Congratulations on your purchase of this remote control model helicopter from Xtreem™ RC Fun! We were going to tell you all about how much fun these are, the tricks you can do and how many hours of enjoyment you're going to get out of it, but we figure that if we just talk about how to fly it, you'll discover the fun for yourself!

NOTICE: Before using this helicopter, read this operating guide carefully, and obey all warnings and caution labels.

Seriously, it's no fun if someone gets hurt.

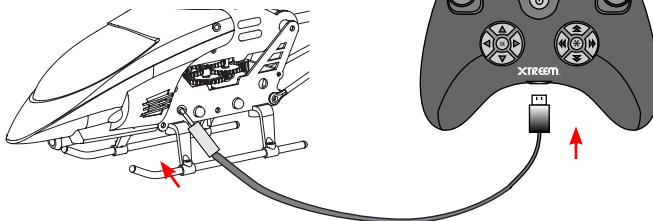


Preparing for Flight

1. Charging the Helicopter

Ensure the helicopter is turned **OFF** before attempting to charge it.

If left on, the helicopter won't charge.



- Connect the charging pin to the charging port on the helicopter.
- Ensure that the helicopter is turned off.
- Connect the USB plug to one of the following:
 - a) a **USB 2.0 (or later) port on your computer** while the computer is on
 - b) a **stand-alone USB charger** such as those used for cell phones
 - c) the **USB charging port on the remote control** for in-the-field charging
(the charge will come from the batteries in the remote, depleting them over time).
- **While charging, the USB plug on the charging lead will glow red.** This light will go out when the helicopter is fully charged and ready to fly.
- **It'll take 35 – 45 minutes to charge the helicopter.**

Don't over-charge the helicopter, and don't leave it connected to any charger for more than ninety minutes. Always use a DC5V 500mA source (such as a standard USB 2.0 port). Don't use USB hubs, USB 1.0 or USB 1.1 ports: these may not have enough current to properly charge the helicopter.

Inserting / replacing batteries in the controller:

The remote control requires 4 x AA batteries. To replace the batteries:

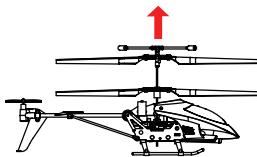
- Read and obey all warnings and cautions in this booklet.
- Open the battery compartment on the rear of the remote control.
- Insert four (4) fresh alkaline batteries.
- The correct polarity is marked inside the battery compartment.
- **Do not use rechargeable batteries** - they don't have enough power to charge the helicopter, and can cause erratic controller performance.

2. Pairing the Remote

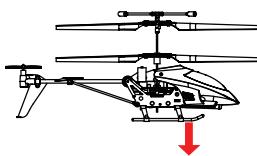
The helicopter must be paired to the remote control to function - the two need to 'agree' on a frequency so that performance won't be affected by nearby wireless devices. To pair the controller:

- **Turn on the helicopter.** A red LED will flash to signal it is in pairing mode.
- **Turn on the remote control.** If the controller was already on, turn it off and then on again. It will beep quickly, several times signalling that it, too, is in pairing mode.
- Once the **remote control stops beeping** and the **helicopter stops flashing**, then it's paired and you're ready to fly!
- **To pair another set of helicopter and remote control,** repeat the steps above but before you start, make sure you turn off the earlier set of helicopter and remote control that you've already paired.

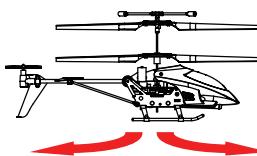
Basic Maneuvers



Moving up and down: The helicopter moves up and down by varying the speed of its main rotors (those two big things that spin). You can control how fast these spin by using the left stick on the controller. Pushing the stick up will increase the throttle.



To get good results, be gentle and subtle. Small adjustments made slowly and carefully are the best way to get the helicopter to fly well. Be careful when easing off the throttle: if the helicopter stalls (that is, doesn't have enough lift to stay in the air) it'll fall, and might not be able to recover in time, even if you jam the throttle back on.



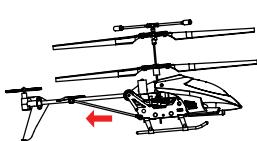
Rotation: To rotate the helicopter, move the right stick to either side. This will cause the main rotors to change their speeds, causing the body of the helicopter to spin on the spot.



Forward & Backwards: The right stick on the controller affects the helicopter's direction, kind of like the right stick on a video game controller.

Pushing the right stick up will pitch the helicopter forwards. Whilst pitched in this way, the main rotors will push the helicopter along forwards. The opposite is also true – moving the right stick down will pitch the helicopter backwards and move it in reverse.

By using the right stick at different angles and positions, you can design and execute some graceful, arcing turns. On the other hand, quick thrusts of the stick in different directions can create some unique tricks or stunts. Practice makes perfect!



Turbo: The Turbo button makes your helicopter move forwards/backwards faster by increasing the speed of the tail rotor. Press once to enable turbo mode. To return to normal speed, press again.



CAUTION: Do **not** touch the running rotors.
Do **not** fly above or near someone's head.
Adult supervision is required at **all times**.

Adjusting the Trim

Trim (Rotation): If you find that the helicopter is turning slowly left or right when you're not using the right stick on the controller, then you'll need to adjust the trim. The trim controls are located on the right-side D-pad, and are marked with the double-arrow icons.



You may need to adjust the trim every few minutes of flight, but it only takes a moment. Basically, the trim 'fine-tunes' the speed of the rotor blades, and will help keep the helicopter flying straight.

If the helicopter is rotating clockwise (it's turning right from the imaginary miniature pilot's perspective) then press the **left** trim adjustment button, compensating counter-clockwise.

If the helicopter is rotating counter-clockwise (it's turning left from the imaginary miniature pilot's perspective) then press the **right** trim adjustment button, compensating clockwise.

To reset the trim to default, press and hold either trim adjustment button until the controller emits a long beep. The trim will then be set at zero.



WARNING: Do **not** fly near eyes or face.

Flying Guide

Wind: Basically, these are (approximately) 1/40th scale helicopters. Full sized helicopters can't fly in high winds – and neither can the models. If a full sized helicopter has difficulty overcoming 50mph winds, then the model will have the same difficulty with 1-2 mph winds (i.e. 1/40th as much). There's nothing that can be done about this, it's just physics.

Air conditioning: Hot air rises and cool air falls – this creates movement in the air, leading to an effect called "wind shear". Basically, this is when there's a column of hot air going up next to cold air going down. Many full-scale aircraft accidents have been caused by wind shear. Air conditioners create lots of wind shear. If the helicopter flies through wind shear, it will seem to suddenly fly up or down (depending on the direction of the wind shear).

The Ground Effect: When the helicopter is near the ground, the air it pushes down with its rotor has nowhere to go – the ground is in the way. Some of this air bounces back, this pushes the helicopter up. When the helicopter is near the ground, it will get slightly more lift than it normally would. This is something to keep in mind when landing.

The Ceiling Effect: Conversely to the ground effect, when you fly too close to a ceiling, a small pocket of low pressure is created above the helicopter, and it will be sucked upwards. This could be bad – if you hit the ceiling, the helicopter will stall, fall and possibly be damaged.

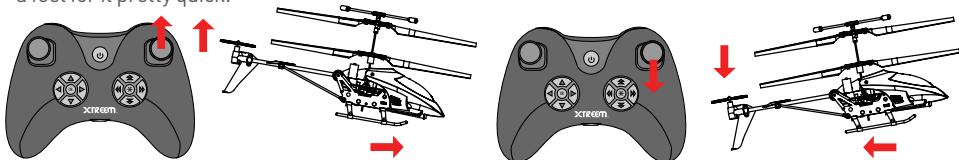
Places to Fly: Because high winds can be a problem, we recommend flying indoors. However, you really do need a bit of space to get the most out of the helicopter. Some places which are good for flight include large garages (whilst the car's not parked there), indoor sports areas, aircraft hangars, secret underground submarine pens and so on (though why you'd fly a toy helicopter in your secret underground submarine pen is beyond us). Or a large lounge room with delicate items stashed somewhere out of the way - whatever you've got.

Low Battery: To get the longest possible life from the built-in battery, never completely discharge it. As soon as the helicopter shows any sign of running low on power (such as responding slowly or being unable to maintain altitude easily) turn it off and charge it as soon as practicable. For more information about battery care, see page 6.

Back & Forwards, Up & Down: This helicopter features counter-rotating coaxial rotors (a fancy way of saying two rotors which spin in opposite directions). If you're any kind of expert on helicopters, you'll know that this is not the same way that full-scale helicopters are usually made – they've got a uni-directional main rotors with a vertical tail rotor. We think that this coaxial design works best for these scale models because:

- It's more stable than a single rotor. Because the rotors move in opposite directions, the helicopter has less of a tendency to spin the other way.
- It is way easier to set up. There are only two trim settings to get right, as opposed to the three trim settings that are required for the more conventional helicopter design.
- More rotors mean more lift, which means an easier to fly and more manoeuvrable helicopter.

However, because the tail rotor is horizontal rather than vertical, the helicopter has a tendency to ascend whilst moving forwards, and descend whilst reversing. This isn't really a problem if you ease off on the throttle whilst moving forward and increase the throttle whilst moving backwards. You'll get a feel for it pretty quick.



Battery Safety Instructions

- Requires 4 x 1.5V AA Alkaline batteries (not included)
- Batteries are small objects.
- Replacing batteries must be undertaken by a competent adult.
- Follow the polarity diagram (+ / -) in the battery compartment.
- Promptly remove dead/exhausted batteries from the controller.
- Dispose of used batteries responsibly.
- Remove batteries for prolonged storage.
- DO NOT incinerate used batteries.
- DO NOT dispose of batteries in fire, as batteries may explode or leak.
- DO NOT mix new and old batteries or types of batteries (i.e. alkaline/standard).
- DO NOT recharge non-rechargeable batteries.
- DO NOT short circuit the supply terminals.
- Rechargeable batteries are NOT recommended.

LiPo Battery Instructions:

The helicopter has a built in Lithium Polymer battery. These kind of batteries are light and powerful, as their chemistry is based on lithium, a light and extremely volatile metal.

- Never completely exhaust the battery. When the helicopter starts to lose power, turn it off and charge it as soon as practicable.
- Never leave the helicopter unattended while charging.
- Charge battery in an isolated, controlled environment. Keep far away from flammable materials.
- Do not expose to direct sunlight: there is a risk that the battery may overheat, ignite and/or explode.
- Do not disassemble, modify, heat, or short circuit the battery. Don't place it in fire or leave in hot places or near heat sources.
- Do not drop the battery or subject it to strong impacts.
- Do not allow the battery to get wet.
- Only charge the battery with the supplied charging equipment. Using other charging equipment will void your warranty, may damage the battery and poses a risk of fire or explosion.
- Use the battery only in this helicopter.
- Read these instructions carefully and thoroughly, and obey all guidelines herein.
- In the unlikely event of leakage or explosion, use sand or a chemical fire extinguisher to extinguish the batteries.
- The battery must be disposed of responsibly.



DANGER

Never insert any sharp objects, pins or screws into the helicopter as this may puncture the internal battery.

General Safety Guidelines

CAUTION: Never fly near your face. Keep rotor away from your fingers, hair, eyes and other body parts. Always lift off from a flat surface. Never hold the flying helicopter in your hand when lifting off. DO NOT launch helicopter near people or animals. Stay away from obstacles and electrical hazards.

Parental supervision is required whenever this helicopter is in use by younger children.

Care and Maintenance:

- Always remove the batteries from the controller when not being used for extended durations.
- To clean, wipe gently with a damp cloth. Avoid use of solvents, as these can damage the plastic components.
- Keep the helicopter and remote away from heat sources.
- Do not submerge the helicopter or remote control in water. This will damage the electronic components, and could pose a severe risk to the built-in battery.

SAFETY PRECAUTIONS

- Keep hands, hair and loose clothing away from the rotors when the power switch is turned on.
- Turn off controller/charger and helicopter when not in use.
- Remove batteries from the controller when not in use.
- Parental guidance is required for younger users.
- Keep your helicopter close and within line of sight – if the line-of-sight to the controller is lost, you may lose control of the helicopter.
- For best performance, use only fresh Alkaline AA batteries in the controller.
- Read and obey all warnings and safety guidelines in this manual.
- The controller and charger are specifically designed to charge this helicopter. Never use any other charging equipment!

Special Notice to Adults:

- The helicopter is NOT intended for use by children under fourteen (14) years old, unless directly supervised by a competent adult at all times.
- The helicopter must only be used with the supplied controller/charger.
- Regularly examine the helicopter and controller for any damage to the plugs, enclosure, rotors, battery covers and other parts. In the event of any damage, neither the helicopter nor controller should be used until the damage is completely repaired.



CHOKING HAZARD – Small parts.
Not for children under 3 years.

Quick Flight Guide

1. Read and obey all warnings and directions in this manual and on the packaging. We wrote it because we mean it!
2. Insert batteries into the controller. Use 4 high quality alkaline AA's.
3. Grab the charging lead in the controller and pop it (gently) into the charging socket on the helicopter. Ensure that the helicopter is turned OFF.
4. Insert the USB end of the charging cable into the USB charging port on the remote. The USB plug will glow red while the helicopter is charging.
5. When it's done, disconnect the charging cable.
6. Turn the helicopter ON. Turn the remote control ON. Wait for the beeping to stop.
7. Fly!

Controlling the Helicopter

Moving up / down: Use the left stick on the remote control.

Turning Left / Right: Move the right stick left or right.

Moving forward / back: Move the right stick forward or back.

Adjusting Trim:

Rudder: Use the rudder trim adjustment buttons, the double-arrow icons on the right D-pad. Adjusts the helicopters turning/spinning. If it's spinning left, press the right trim control repeatedly until it's stationary, and vice-versa.

What is this "trim" thingy? If the helicopter is turning when you don't want it to, then you need to adjust the trim. Basically, it makes fine adjustments to the rotor speeds, and allows you to fine tune the helicopter's sense of direction.

Information

Got questions or comments about this helicopter?

E-mail: tech@swann.com

Or visit our website - www.xtreemfun.com

FCC Compliance Information Statement (for U.S.A.)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- [1] This device may not cause harmful interference, and
- [2] This device must accept any interference received, including interference that may cause undesired operation.