PROTO N

44xx
Estes-Cox Corp. d/b/a Estes Industries
1295 H Street, PO Box 227
Penrose, CO 81240-0227
Made In Shantou, Guangdong, China

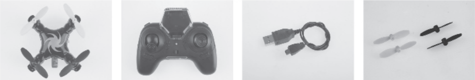
The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

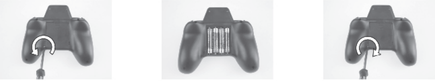
Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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.

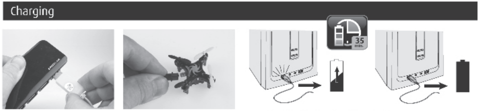
Included (5103 5104 5105 5106)



Inserting Batteries



Charging



Guangdong Cheerson Hobby Technology Co., Ltd
Fengxin No.2 Road, Chenghai District, Shantou City, Guangdong, China

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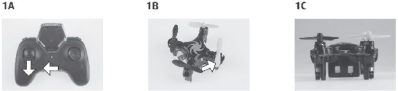

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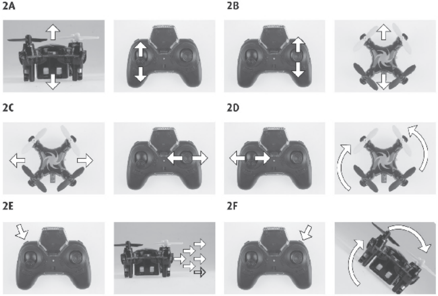

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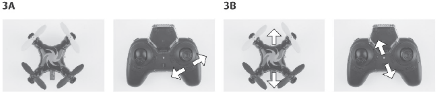

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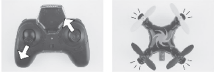

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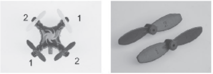

START PREPARATION

The left stick must be all the way down before being switched on. Then set the ON/OFF switch of the remote control to the “ON” position; the Power LED will flash red **(1A)**.The LEDs begin to blink when the PROTO N is switched on. Place the PROTO N on the ground so that the tail points towards the pilot. Move the left stick all the way up and then all the way down, in order to unlock the remote control. The remote control will beep two times. Once the LEDs are continuously lit, the model is ready.

Attention! Always place the PROTO N on an even horizontal surface - the stabilizers align their neutral position to the surface the PROTO N is placed on **(1C)**!

FLIGHT CONTROL

Note: Only minimal corrections of the controls are necessary for the PROTO N to fly smoothly! The direction information applies for when the PROTO N is viewed from behind.

Note: If the PROTO N is flying towards the pilot, it must be steered in the opposite direction relative to the pilot.

2A Take off or fly higher by carefully moving the left stick, up. Land or decrease altitude by carefully moving the left stick down.

2B Fly forward by moving the right stick carefully up. Fly backward by moving the right stick down.

2C Fly to the left by moving the right stick carefully to the left. Fly to the right by moving the right stick carefully to the right.

2D Turn the Proto-N around to the left by moving the left stick carefully to the left. Turn Proto-N around to the right by moving the left stick carefully to the right.

Control adjustment: By pressing the left button **(2E)**, sensitivity of the control can be adjusted in three levels (Easy - 1 beep, Normal - 2 beeps, and Expert - 3 beeps).

Attention! Only switch to a higher level when you have mastered the lower one!

Battery Level: If the LEDs blink rapidly, the battery is depleted. The model must be landed soon in order to avoid crashing!

TRIM ADJUSTMENT OF THE CONTROL

The correct trim is a basic requirement for fault-free flying behavior of the Proto N. Its adjustment is simple, but it requires some patience and a feel for it. Please observe the following instructions precisely: Carefully move the left stick up and raise the Proto-N approximately 2–3 feet in altitude.

3A If the PROTO N moves by itself slowly or quickly to the left or right ... Press the roll trim incrementally in the opposite direction.

3B If the PROTO N moves by itself slowly or quickly forwards or backwards ... Press the pitch trim in the opposite direction.

PERFORMING FLIPS - ONLY FOR EXPERIENCED USERS!

Once you have mastered your PROTO N, you can try your hand at the flip function. For this purpose, make sure that you have sufficient room in each direction (at least 8–10 feet). Also observe the safety height - fly at a height of at least 6 feet as your loses altitude when flipping and has to be recovered afterwards! **Please note:** Flipping is more successful when the battery is still nearly full! Now climb to the safety height. If you press the right button on the remote control **(2F)**, the remote control issues multiple short beeps. Now control with the right stick and the PROTO N executes a flip in the corresponding direction. Then be prepared to recover the PROTO N, as the altitude, direction and speed after the flip depend largely on the wind and previous flight movements.

CALIBRATION

If the PROTO N drifts or can only be trimmed with difficulty while flying (yawing), try to calibrate your PROTO N. For this purpose, switch on the remote control and (see instructions) and place the model on a level surface. The left stick must be all the way down. Adjust the sensitivity of the remote control to ‘expert’ (3 beeps). Now move the left stick down and to the left and hold it there. Move the right stick up and to the left and hold it there for about 2 seconds. The LEDs on the PROTO N will briefly flash, indicating that the calibration is finished.

CHANGING THE PROPELLERS

If the PROTO N’s rotor blades are damaged and must be replaced, proceed as follows:

Before fitting the propellers, make sure they are not mixed up. The Proto N has 4 different propellers, which differ in color and markings on the bottom:

Front right: Color, marking 1
Front left: Color, marking 2
Rear right: Black, marking 2
Rear left: Black, marking 1

Carefully pull the defective propeller off the shaft.

Carefully fit the new propeller onto the shaft again.

TROUBLESHOOTING

PROBLEM: The propellers do not move.

Cause: The ON/OFF switch is in the “OFF” position.
The battery is too weak or depleted.

Remedy: Set the ON/OFF switch to the “ON” position.
Charge the battery.

PROBLEM: The PROTO N stops and descends during flight for no apparent reason.

Cause: The battery is too weak.

Remedy: Charge the battery.

PROBLEM: It isn't possible to control the using the remote control.

Cause: The ON/OFF switch is in the "OFF" position.
The batteries were not inserted correctly.
The batteries do not have enough power.

Remedy: Set the ON/OFF switch to the "ON" position.
Check whether the batteries are inserted correctly.
Insert new batteries.

PROBLEM: The PROTO N only turns on its vertical axis or rolls over when started or does not lift off.

Cause: Incorrect arrangement of propellers.

Remedy: Install the propellers as outlined in this manual.

PROBLEM: Power LED of the remote control blinks and beeps.

Cause: The remote control's batteries are depleted.

Remedy: Insert new batteries.

Attention: Risk from heat development and rotating parts during operation! Adult supervision is required!

CHARGING UNIT SAFETY INSTRUCTIONS

1. Non-rechargeable batteries may not be charged.
2. This charging unit is not suitable for people (including children) with physical or mental limitations, or those with insufficient knowledge and experience of charging units, unless under supervision or following proper directions from a parent or legal guardian.
3. Children must be supervised - the charging unit is not a toy!
4. The charging unit for the LiPo battery is specially designed for the charging of the model battery. The charging unit may only be used to charge the model battery, not other batteries.

MAINTENANCE AND CARE

- Please only use a clean, damp cloth to wipe off the model.
- Protect the model and batteries from direct sunlight and/or direct heat.
- Never allow the model, the remote control and charging unit to come into contact with water. This may result in its electronics becoming damaged.

SAFETY INSTRUCTIONS FOR CHARGING THE QUADCOPTER

- **Attention:** The battery and motor must cool down for 10 to 15 minutes before charging and after every flight. Otherwise they can be damaged. The charging process must be constantly monitored. Always ensure that the charging process takes place on a fire proof surface in a fire-resistant environment.

- Switch off the PROTO N and the remote control.
- Plug the charger into a free USB port and connect the PROTO N to the charger. The charger illuminates.
- The charging process takes approx. 35 minutes and must be continuously monitored. As soon as the charging process is complete, the charger light goes out.
- Disconnect the USB plug from the USB port.
- The PROTO N can fly for approx. 4-5 minutes after a charge time of approx. 35 minutes.
- **Warning Notice:** The LiPo battery can become warm during charging. If it should become hot and/or changes to the surface begin to appear, immediately discontinue the charging process!

GENERAL FLYING TIPS

- Always place the PROTO N on a level surface. An inclined surface can, under certain circumstances, have a negative impact on the starting behavior of the .
- Always move the control slowly and with a gentle touch.
- Always maintain visual contact with the PROTO N and do not look at the remote control!
- Move the left stick down again somewhat, as soon as the PROTO N lifts off from the ground. To maintain the flying altitude, make adjustments to the throttle as necessary.
- If the PROTO N lowers, move the left stick slightly upward again.
- If the PROTO N climbs, move the left stick down slightly.
- In order to fly along a curve, it often suffices to tap the right stick very slightly in the respective direction. On initial flight attempts, there is a general tendency toward excessive movements of the PROTO N controls. Always move the sticks slowly and carefully. Never fast and forcefully.
- Beginners should only attempt to master the direction control after the trim adjustment. The Proto-N does not necessarily have to fly straight at the beginning - initially, it is more important to maintain a constant height of approximately 3–4 feet above the ground by adjusting the left stick as needed. Only then should the pilot practice steering the PROTO N left and right.

THE SUITABLE FLYING ENVIRONMENT

- The location in which the PROTO N is flown should fulfill the following criteria:
- It should be an indoor location with still air. If possible, there should be no air condition systems, heaters, etc., which could cause airflow.
- For stunt flying, we recommend flying outdoors or in an indoor area with at least 35 feet in each direction.

- There should be no disruptive objects in the room (fans, lamps,etc.).
- When starting, make absolutely sure that all persons and animals - including the pilot-are at least 3–5 feet away from the aircraft before the flight begins.

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:
(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le
brouillage est susceptible d'en compromettre le fonctionnement.

90 DAY LIMITED WARRANTY

PLEASE DO NOT RETURN YOUR PRODUCT TO THE STORE – Estes will repair or replace factory defects for 90 days from the date of purchase. This warranty specifically does not cover crash damage, misuse or abuse. To make a warranty claim, please contact our product support team at 1-217-398-8970 or e-mail us at productsupport@hobbico.com

If requested by Product Support, please send defective product to:

Hobby Services
3002 N Apollo Dr., Suite #1
Champaign, IL 61822

This warranty applies only if the product is operated in compliance with the instructions and warnings provided with each model. Estes assumes no liability except for the exclusive remedy or repair of parts as specified above. Estes shall not be liable for consequential or incidental damages. Some states do not allow the exclusion of consequential or incidental damages so the above exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

BATTERY REQUIREMENTS FOR CONTROLLER

Requires: 4 x 1.5V AAA size batteries (not included)

REQUIREMENTS FOR USB CHARGE CORD

USB Output Jack (not included)

BATTERY CAUTIONS

- Parental guidance is recommended when installing batteries.
- Do not power controller by mixing different types of batteries, or old and new batteries.
- Use only batteries of the same or equivalent type as those recommended.

The Proto N **is equipped with a rechargeable 3.7V LiPo battery. Please pay attention to the following cautions for safe use:**

- Do not dispose of battery into fire or heat.
- Do not use or leave battery near a heat source, such as fire or a heater.
- Do not strike battery or throw it against a hard surface.
- Do not pierce battery.
- Do not disassemble or alter battery.
- Turn off power switch after use.
- Recycle used batteries.

- Do not turn on the PROTO N unless controller has been turned on first.
- Keep hands, hair and loose clothing away from spinning blades.
- Turn off controller and PROTO N when not in use.
- Parental guidance is recommended.
- Do not submerge into water. This could damage electronic assemblies.
- Follow operating instructions exactly.
- Not intended for children under 12 years old.
- Replace any damaged or broken parts before attempting to fly.
- Do not drop the PROTO N by suddenly reducing the throttle. This could lead to severe damage.
- The PROTO N's range will also be affected if the battery is not fully charged.
- Do not touch the motors after flying. They can become hot.
- The battery in the PROTO N is not replaceable.

⚠ Do not touch the spinning blades or fly over another person's head. Adult supervision is required.