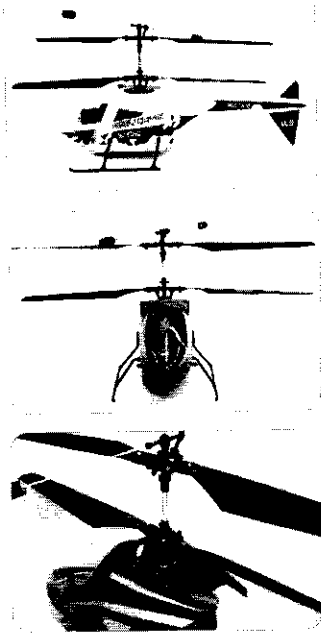
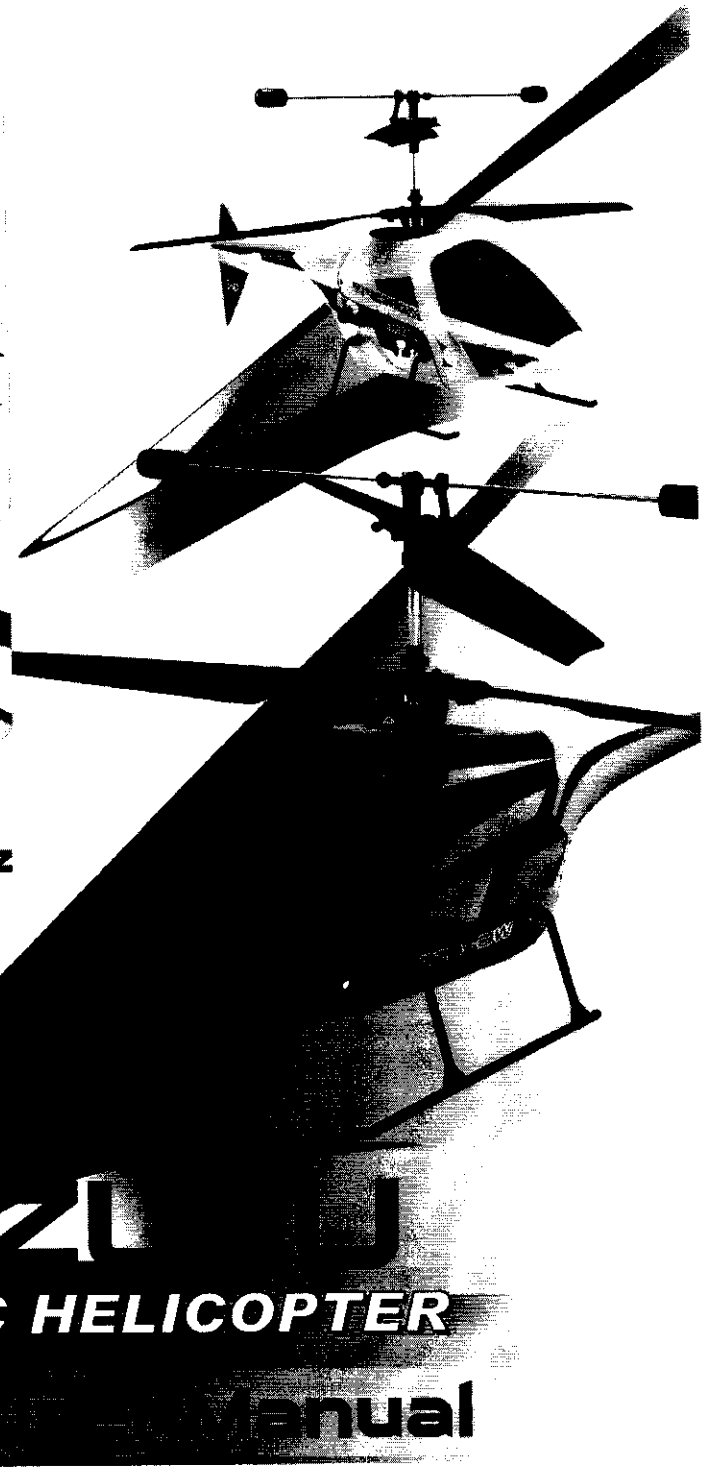
Aztech





2.4GHz
DIGITAL

RC HELICOPTER

Manual

Contents

Operating Precautions

To ensure safety, please read through the manual thoroughly before flying for the first time. It is important to be familiar with the precautions, limitations and the flight controls of this product while observing the safety rules.

Improvements are constantly being made to this product and changes to the specifications may occur without notification.

WARNING

- Never leave equipment such as the battery, transmitter, charger and Zulu in a location easily accessible by infants or children.
- Never disassemble or attempt to modify the product other than what is specified by this manual.
- Always turn on the transmitter first before turning on Zulu.
- Always switch off the Zulu first before turning off the transmitter.
- Never store the transmitter, battery, charger of Zulu in the following conditions
  - Under -10 degrees and above 40 degrees
  - Under direct sunlight
  - High humidity, vibration or dust
- Never fly this product in the following areas:
  - Outdoors with winds
  - Places with sand and grit where they can penetrate the inner parts
  - Close to other flying fields for radio controlled aircraft (3km radius)
  - Close to high voltage lines or communications installations

CAUTION

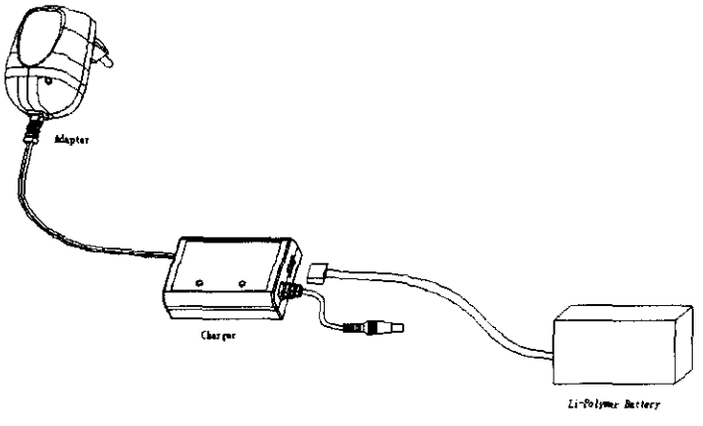
- Always use the batteries and charger provided. If non-genuine parts are used, we will not be liable for any loss arising of such use.
- Refrain from touching parts that are installed in the Zulu, before and after use as they may cause misalignment and affect flight performance. Heat generated during flight may cause burns as well.
- The Zulu is a high precision RC product with parts rotating at high speeds and children below the age of 14 are not permitted to play.

Li-Polymer Battery

Do not overcharge or over discharge the lithium polymer batteries provided. This could cause battery to rupture, get hot or ignite.

Charging takes approximately 90mins for full charge.

Red light indicates that the LiPo is in charging status while green light will indicate battery is now full.



Always adhere to the following instructions on the usage of the battery.

- *Never throw the battery into fire or heat it up in any way.*
- Never attempt to disassemble or modify the battery.
- Never leave the battery inside places where it can get very hot or where the temperature exceeds 60 degrees
- Never drop the battery or hit it hard
- *Never wet it with water*
- Never short the battery by connecting the positive (+) terminal with the negative (-) with a metal object such as a necklace or paperclip
- Never attempt to charge battery with something other than the supplied charger

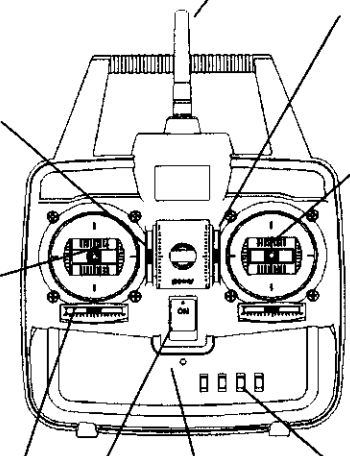
- Never use the battery provided with this product with any other equipment
- Always ensure charger is kept with it's plug removed from the power outlet at all times when not charging
- Always charge the battery after flying to prevent over discharge
- Never use an abnormal battery. During charging, if it becomes hot, has a strange smell, goes out of shape, or discoloured, disconnect the connector immediately and discontinue battery use.
- Always plug the battery to the charger first, before plugging the supplied adaptor to the wall socket.
- Always plug in the battery to the Zulu when the throttle stick is at low position.

Each charge will give a flight time of 10 to 15mins, depending on flying style.

There is a possible fire danger when charging the Li-Po batteries. Never charge it unattended or near flammable items.

Transmitter

Name and function of the transmitter parts



Antenna

Throttle Trim

Elevator Trim

Use to adjust neutral position of forward/backwards movement

Mode I

Throttle/aileron stick

Controls vertical movement and horizontal movement

Mode II

Elevator/aileron stick

Use to control forward/reverse movement and horizontal movement.

Mode I

Elevator/rudder stick

Controls forward/backwards movement and left/right turning

Mode II

Throttle/rudder stick

Use to control up/down movement and left/right turning.

Power Switch

Reverse Switch

Use switch to toggle movements in opposite

Rudder Trim

Use to adjust neutral position of left/right turning

Battery Indicator

Green is up to 100% capacity.

Yellow is up to 40% capacity.

Red is up to 20% capacity.

	Left Control Stick		Right Control Stick	
	Up/Down	**Left/Right**	**Up/Down**	**Left/Right**
Mode 1	Elevator	Rudder	Throttle	Aileron
Mode 2	Throttle	Rudder	Elevator	Aileron
Mode 3	Elevator	Aileron	Throttle	Rudder
Mode 4	Throttle	Aileron	Elevator	Rudder

In Mode 1, all Reverse Switch will be set to Normal.

In Mode 2 - AIL (Nor), ELE (Rev), THR (Rev), RUD (Nor)

In Mode 3 - AIL (Rev), ELE (Nor), THR (Nor), RUD (Rev)

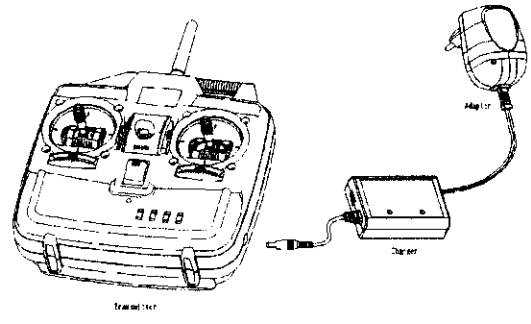
In Mode 4 – AIL (Rev), ELE (Rev), THR (Rev), RUD (Rev)

WARNING

- Never use a combination of different batteries such as alkali batteries with NiCd batteries or NiMH batteries.
- Never attempt to fly without the antenna
- Never operate the on/off switch during flight

Transmitter Charging

The Zulu charger is designed to charge both the Li-Poly batteries provided and also AA NiMH batteries. The 8xAAA Batteries **are not** included



CAUTION

- The Zulu charger is optimized to use with 1500mAH NiMH rechargeable batteries.
- It will take up to 12 hours to fully charge.
- Using rechargeable batteries of other capacities may cause leaks and explosion to the batteries and users are advice to use only the recommended capacity size.
- **Do not** charge both the Li-Poly batteries together with the NiMH batteries.

Features

The Zulu gyro stabilized coaxial R/C Helicopter comes with the following safety features:

• **Low power safe (LPS)** mode gradually reduces power to the main motor in the event of a radio transmission failure.

• **Battery protection mode (BPM)** to prevent the motor and servo from activation when capacity is below 7V, to prevent a full discharge on the battery.

• **Throttle safe system (TSS)** that allows the motor to start only when the throttle stick is at low power so there is no danger of connecting the battery and sending power to the motors instantly.

Right out of the box with our very own 2.4GHz transmitter, pilots can now experiencing the joy of having multiple Zulus flying in the air at the same time, without the worry of interference from another transmitter!

The enhanced data rate provides a more accurate reading and response between the Zulu and the pilot!

The additional on/off switch allows users to conveniently turn on and off the Zulu without having to plug out the battery connectors constantly, which will damage the connectors over time.

Specifications

- Main Rotor Diameter – 350mm
- Weight – 230gm
- Length – 396mm (Zulu 1), 381mm (Zulu2)
- Power System – 180 motor x 2
- Servo – 8g, 1.3kg/CM, 0.11s/60 degree
- Kit – Ready to Fly (RTF)
- Transmitter – 2.4GHz, 4 Channel
- Battery – 7.4V 1000mAh Li-Polymer
- Flight Range – Up to 50m
- Flight Height – Up to 50m
- Flight Time – Up 12mins

Pairing the Zulu with the TX

Do follow the below steps for the **pairing procedure**:

1. Power up the TX.
2. Connect the Li-Poly battery to the Helex and turn on the power switch. The green LED on RX and the TX LED will start blinking at the same time. TX and RX are now in pairing mode.
3. Push the throttle control stick to maximum throttle, and then follow by pulling it all the way down to confirm pairing with the receiver.
4. Both TX LED and RX green LED will remain solid on, indicating the pairing sequence has completed and link is established. The helicopter is ready to fly now.

Receiver LED indications :

Red : **On** - Battery ok; **Off** - Battery Low

Green : **Blinking** - Transmitter found for pairing, pending user confirmation; **On** - Link up; **Off** - Link down

Transmitter LED indications :

Green : Transmitter battery status **full**

Amber : Transmitter battery status **medium**

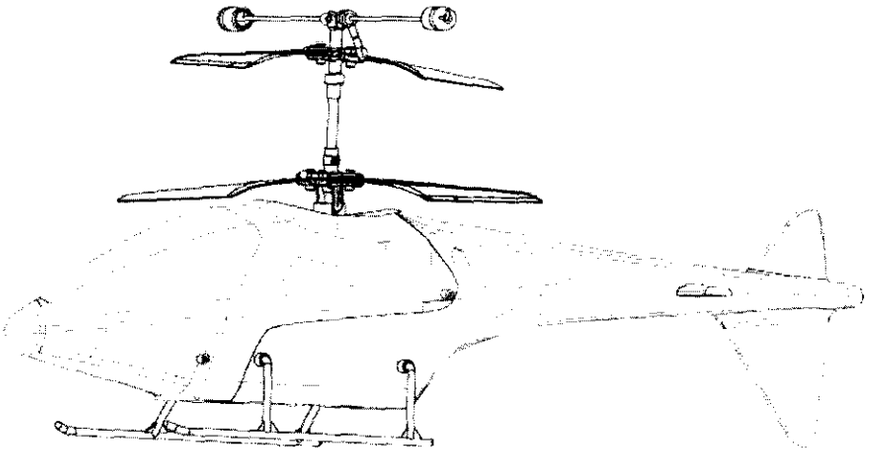
Red : Transmitter battery status **low**

Blinking Amber : Pairing found, pending user confirmation

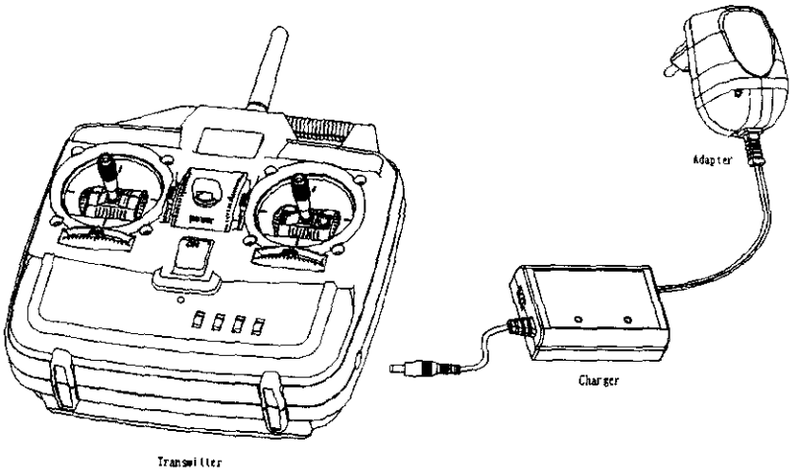
Blinking Red : Transmitter battery **low**, and Helicopter battery **going low pre-warning**

Alternating between Green and Amber : Transmitter battery **Ok**, but Helicopter battery **going low pre-warning**

Set Contents



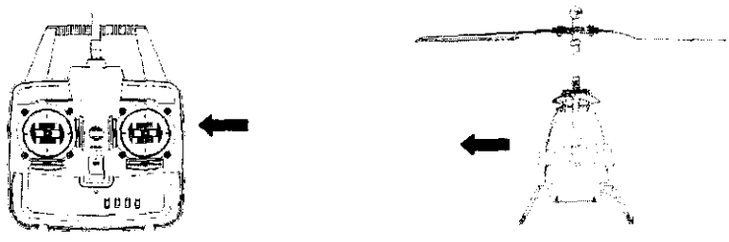
Zulu



Transmitter

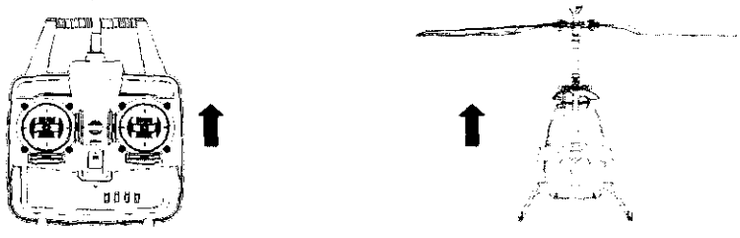
Flight Basics

Mode 1 (Right Throttle)

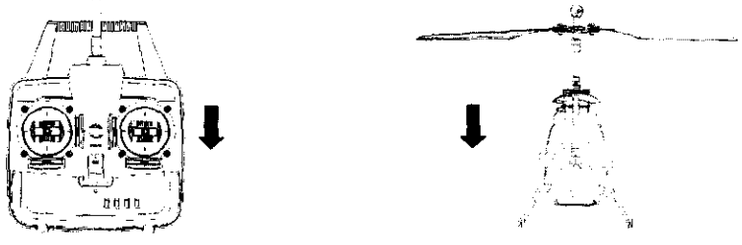


When aileron is moved to the left, swash plate should also tilt and Zulu moves to the left.

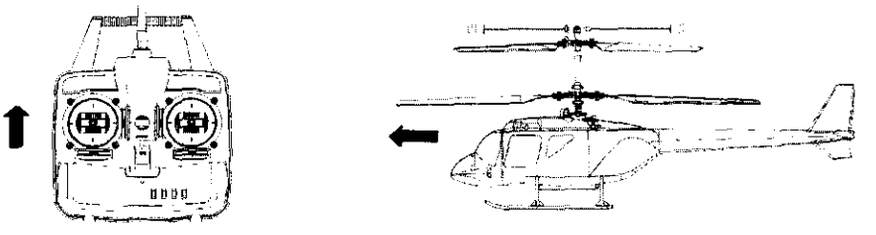
When aileron is moved to the right, swash plate should also tilt and Zulu moves to the right.



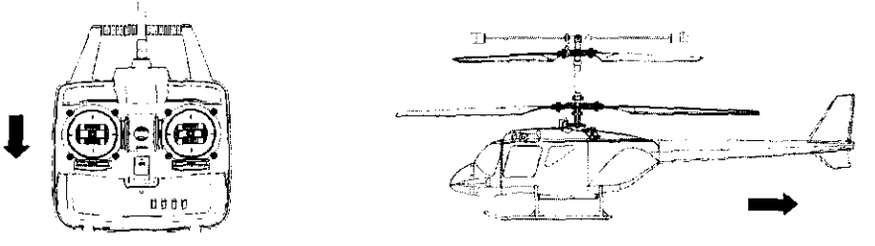
When throttle is pushed up, rotor speed increases and Zulu lifts up.



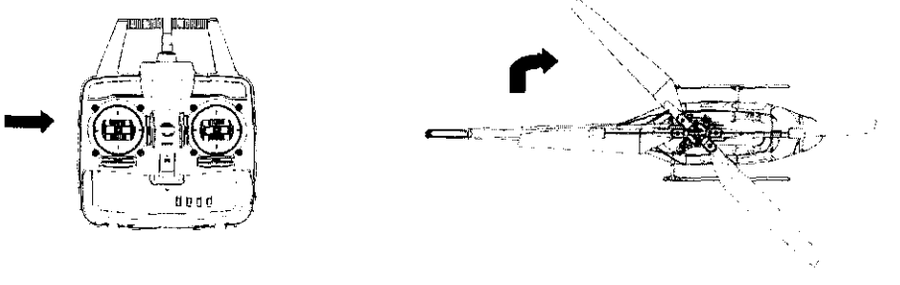
When throttle is pushed down, rotor speed reduces and Zulu descends.



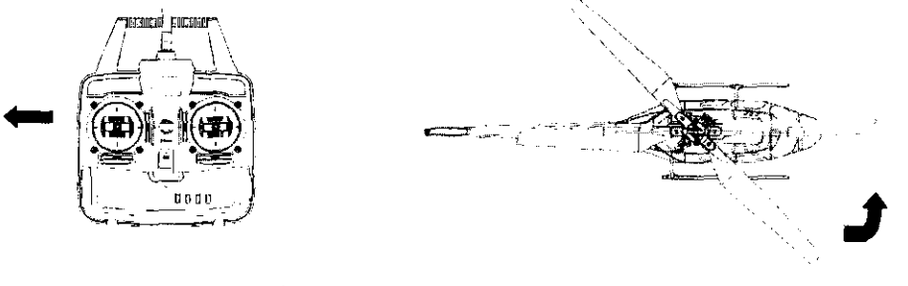
When elevator stick is pushed up, nose will tilt down and Zulu moves forward.



When elevator stick is pushed down, nose will tilt down and Zulu moves backwards.

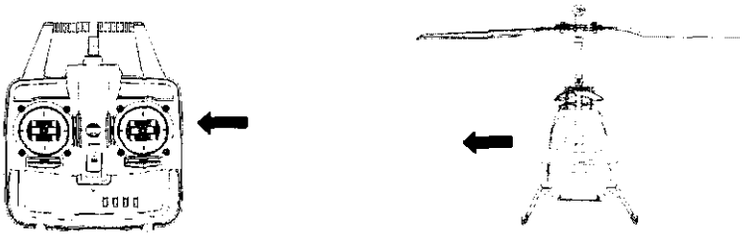


When rudder is moved to the right, nose of Zulu turns right.



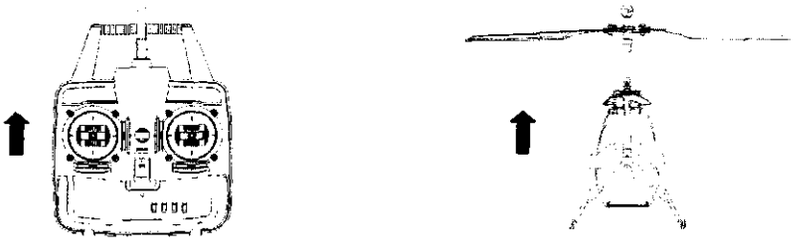
When rudder is moved to the left, nose of Zulu turns left.

Mode 2 (Left Throttle)

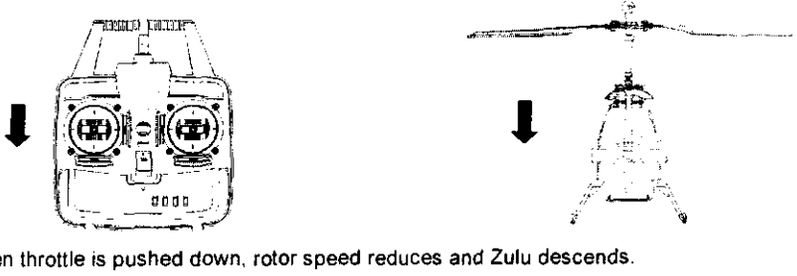


When aileron is moved to the left, swash plate should also tilt and Zulu moves to the left.

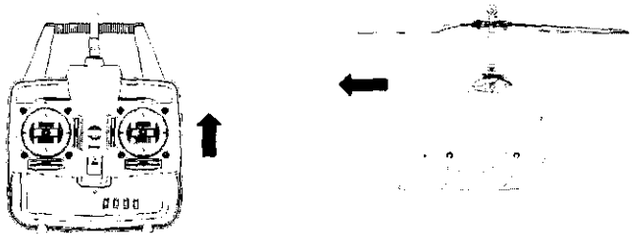
When aileron is moved to the right, swash plate should also tilt and Zulu moves to the right.



When throttle is pushed up, rotor speed increases and Zulu lifts up.

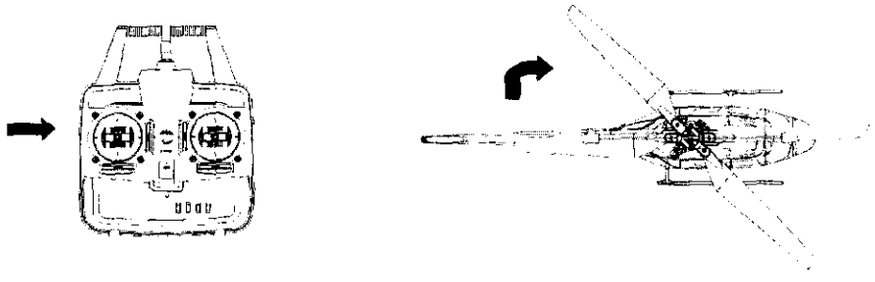


When throttle is pushed down, rotor speed reduces and Zulu descends.

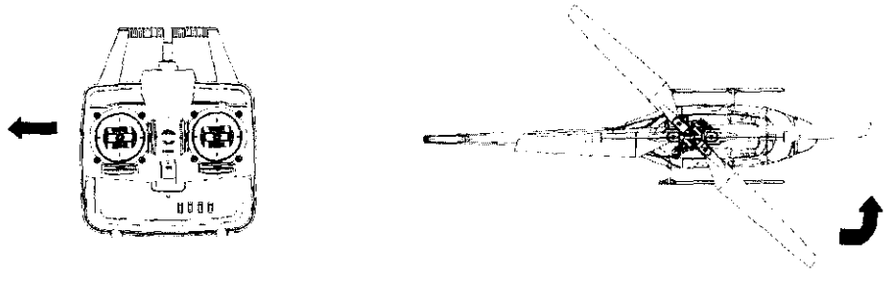


When elevator stick is pushed up, nose will tilt down and Zulu moves forward.

When elevator stick is pushed down, nose will tilt down and Zulu moves backwards.



When rudder is moved to the right, nose of Zulu turns right.



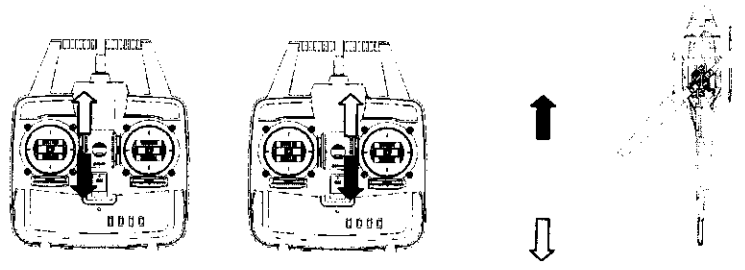
When rudder is moved to the left, nose of Zulu turns left.

Trimming

When the Zulu moves forward on its own, trim the elevator lever back.

When the Zulu moves backward on its own, trim the elevator lever forward.

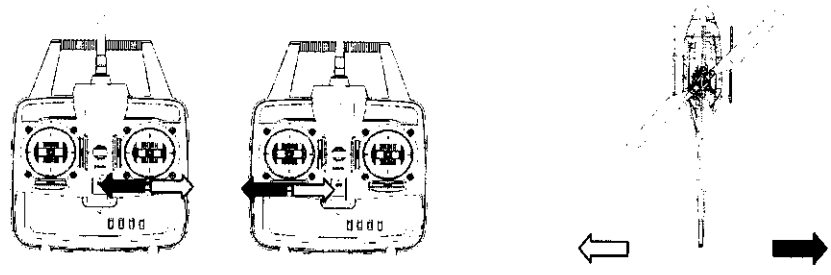
Mode I Mode II



When the Zulu moves right on its own, trim the aileron lever left.

When the Zulu moves left on its own, trim the aileron lever right.

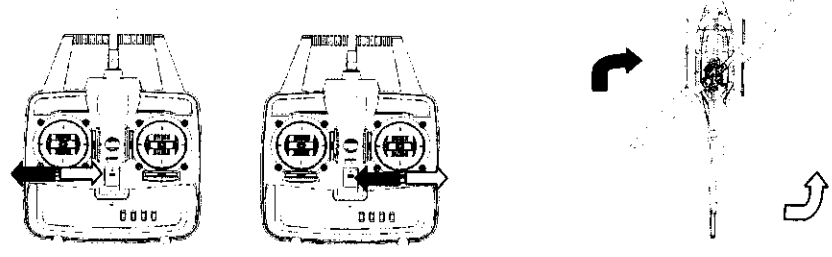
Mode I Mode II



When the Zulu turn right on its own, trim the rudder lever left.

When the Zulu turns left on its own, trim the rudder lever right.

Mode I Mode II



Flight Tips

To make it easier, always stand behind the helicopter, facing in the same direction. This will make it easier for you to understand the basics of flying a helicopter.

Avoid moving the control sticks too abruptly as sudden changes in direction or speed may cause the upper and lower blades to hit one another.

Hovering means maintaining the helicopter in a static position in mid air. Hovering is the most basic and important skill in flying helicopter and should be well practiced.

1. Gently push the throttle up until the skid pads are about to leave the floor.
2. Increase the throttle further to lift it off the ground.
3. Practice hovering around 50cm above the ground initially before flying it higher.
4. Reduce the throttle gently to land the helicopter.

Sudden increase or decrease of the throttle may cause crashes to the helicopter and is dangerous.

Once you've mastered the hovering, slowly tilt the other control sticks in the direction in which you want. Practice one operation at a time.

When you're familiar, you can increase the throttle further increase flying height. If the unit starts moving in any direction, use the trimmers to improve stability of the product.

Flight Troubleshooting

The main blades are the parts that take the most impact during flying. It is often that flying performance improves just by replacing the main blade. It is recommended that during blade replacements, both blades are to be balance adjusted to ensure smooth flying.

Zulu does not move at all

1. Check if power is switched on at the transmitter and Zulu.
2. Check that the battery levels on transmitter and Zulu are sufficient.
3. Check that the radio frequency on transmitter is the same as that of Zulu.
4. Check if the throttle is pushed to the top.

Zulu flies unsteadily

1. Check that the battery levels on transmitter and Zulu are sufficient.
2. Check that the main blades are not damaged.
3. Adjust the link rod of the stabilizing bar.

Zulu does not stop rotating when flying

1. Check that the rudder has been trimmed correctly.
2. Check that the main blades are balanced.
3. Check if the motor and its gears are not damaged or worn.

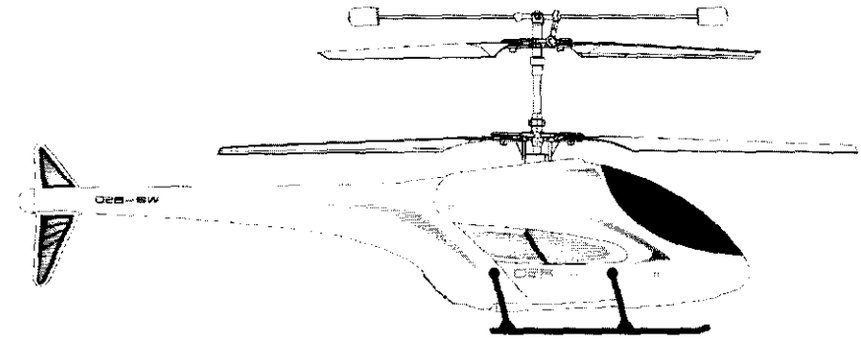
Zulu is unable to hover freely

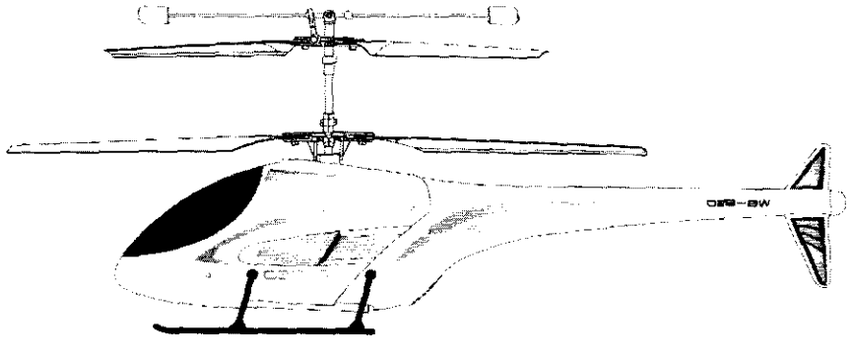
1. Check that the unit is not being caught in winds.
2. Check if the battery is properly aligned in the battery cage.
3. Check to ensure trimming has been done.

Zulu vibrates strongly

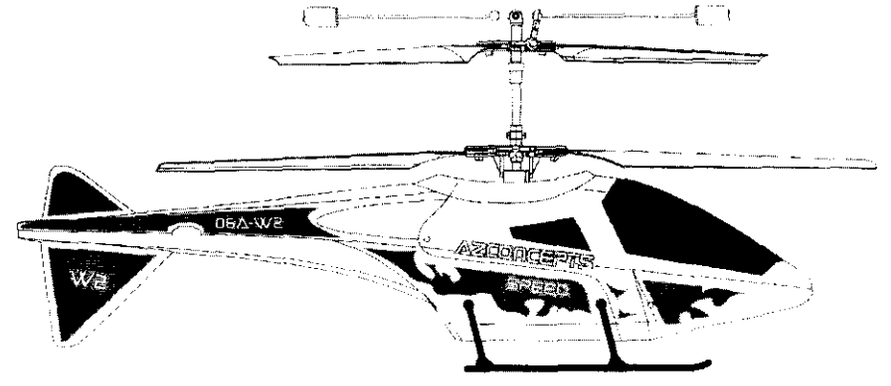
1. Check that the main blades are able to move smoothly.
2. Check that the main mast is not deformed.
3. Adjust the stabilizing bar.

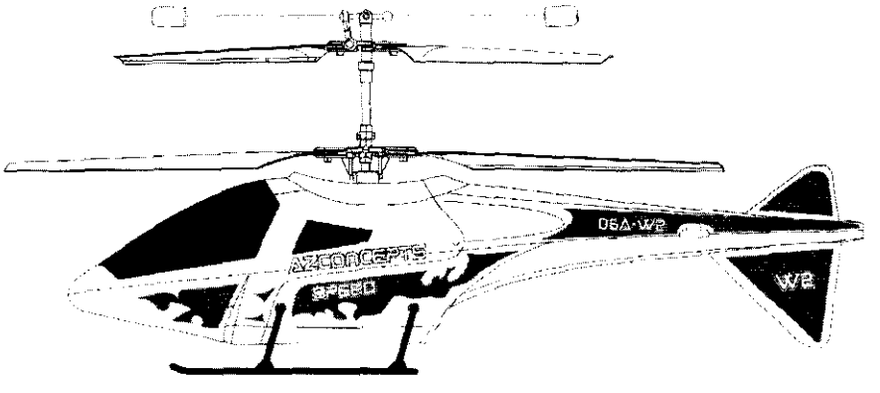
Sticker Label (Zulu 1)



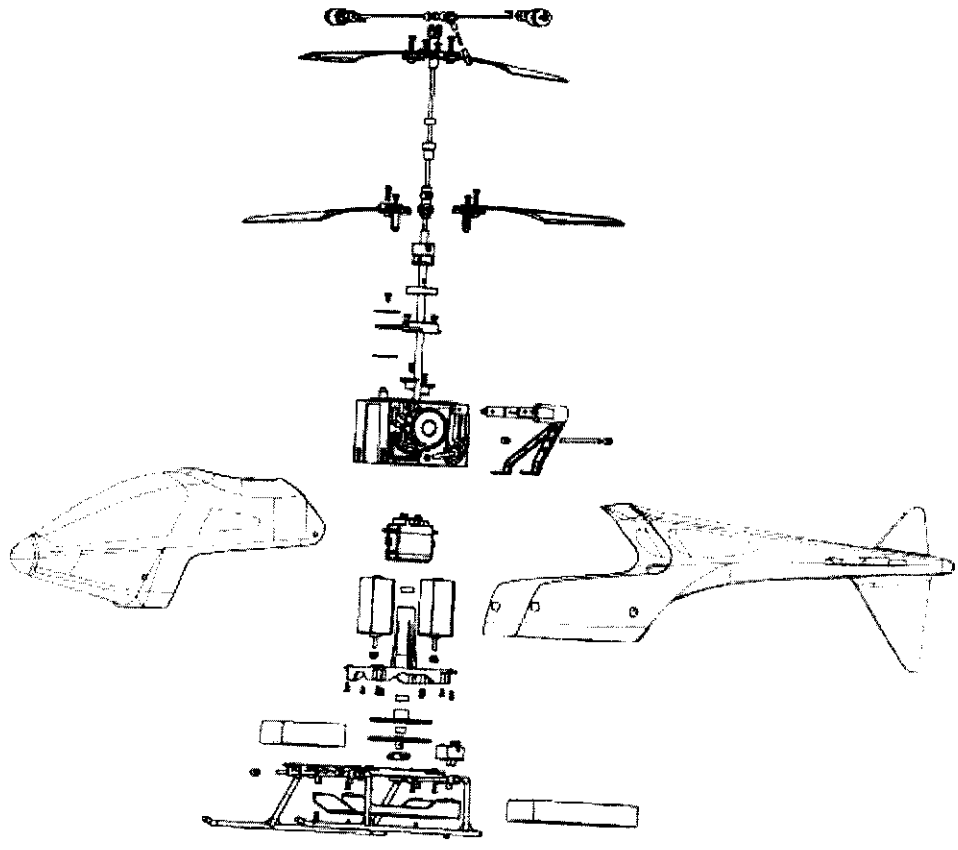


Sticker Label (Zulu 2)





Zulu Exploded View



FCC Part 15 Warning statement:

Warning:

Changes or modifications to this unit not expressly approved by the party responsible for compliance will void the user's authority to operate the equipment. Any change to the equipment will void FCC grant.

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.

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.

The frequency range of 2.4G Zulu is 2412-2463MHz which operates within the bands 2400-2483.5MHz according to FCC 15C section 15.247.

Channel number is 0~248;

Channel step is 0.799805MHz.

The equipment compliance with FCC radiation exposure limit set forth for uncontrolled environment

About Aztech

Incorporated in 1986, and listed on the Main board of the Singapore Stock Exchange, Aztech Systems Ltd specializes in design and manufacturing of voice and data communications solutions.

Headquartered in Singapore, Aztech today has over 2,500 [illegible] world-wide with strong R&D, design and manufacturing capabilities.

Aztech R&D centres are located in Singapore, Hong Kong, Shenzhen and Dong Guan, China. Its six sales offices are located in Singapore, Hong Kong, China, USA, Germany and Malaysia.

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