



TAIYOR/C



AIR PLANE R/C

MINI AIRPLANE R/C



NORTH AMERICAN P-51D MUSTANG

OWNER'S MANUAL



BEFORE USING THE PRODUCT

Thank you for purchasing this TAIYO product.

Please read this owner's manual thoroughly to get the most use from the plane and to learn how to operate it safely.

WARNING

Parents should read the following.

If the 4.8V Ni-MH battery pack is used incorrectly, it may overheat, explode, or start a fire. Pay attention to the following items.

- Be sure to follow the charging instructions in this manual.
- Do not try to charge any battery pack other than the one supplied or an authorized 4.8V Ni-MH battery pack replacement.
- After playing with the airplane, be sure to turn off the switch and remove the 4.8V Ni-MH battery pack.
- If the battery pack is short-circuited, a large current will flow and this is a dangerous situation. Do not ever short-circuit the battery pack.
- Never drop the battery pack into water, throw it in a fire or disassemble it.
- Do not use, charge, or store the battery pack near a fire or in any place exposed to high temperatures or high humidity.
- When using the 4.8V Ni-MH battery pack for the first time, be sure to charge it. Even if the 4.8V Ni-MH battery pack is not used, it will self-discharge over time. If the battery pack has not been used for about six months, be sure to charge the battery pack before using the product. Once the battery pack is charged, make sure to use it until it is completely dead before recharging it.
- Even if the battery pack has been charged correctly, if the flying time is noticeably reduced, the 4.8V Ni-MH battery pack may have reached the limit of its useful life. Replace it with a new battery pack, and check the plane's operation. (200 to 300 recharges should be possible.) If the external package of the 4.8V Ni-MH battery pack is damaged, do not use it.
- The 4.8V Ni-MH battery pack and charger will become slightly warm during charging. This is not a problem. If the 4.8V Ni-MH battery pack is still warm after use, do not recharge it.
- Do not recharge the battery pack within reach of infants or children.
- Do not use, recharge, or leave the battery pack near a heater or in any place exposed to strong direct sunlight.
- When you are not using the plane, remove the 4.8V Ni-MH battery packs from the airplane and the transmitter (charger).
- Never use the transmitter (charger) as a DC power source for any other purpose. Never recharge the battery pack using any other charger.
- Do not recharge the 4.8V Ni-MH battery pack once it is already recharged. The battery pack may become very warm.

Precautions when playing with the airplane:

- The airplane should only be used in a wide-open area, under the supervision of an adult. Children should be at least 10 years old to operate the airplane.
- Play with the airplane in a wide-open, safe location with no obstacles nearby.
- Do not launch the airplane toward another person. Someone may be injured.

- Never store the airplane in any place exposed to high temperatures, such as in a closed car in the summer. Do not put it in the front of a heater which blows hot air.
- Do not fly the airplane on windy days or when there is lightning.
- Never fly the airplane on the road, a railroad, near power lines, or any place where there are lots of people. Do not fly it in narrow or constricted areas.
- If the airplane gets caught in a tree, on a building or in power lines, it is dangerous. Do not try to recover it. Notify the owner (if the airplane gets caught in power lines, contact the electric power company).
- Warning ! : Do not touch the rotating propellers. Before replacing the battery, turn off the slide switch.
- If the airplane is broken or damaged, do not use it.
- Do not use a combination of new and old batteries or different kinds of batteries in the transmitter (charger).

Other precautions:

- Never put any parts in the mouth. There is a danger of suffocation.
- Sometimes the 4.8V Ni-MH battery pack may become warm. Pay special attention to this after using the airplane.
- Do not point the transmitter (charger) antenna at people or animals. It may cause an accident. Do not bend the antenna.
- Do not play with the transmitter roughly, hit it or swing it around.
- Do not look steadily at the flashing LED on the transmitter. You may feel sick.

Before flying the airplane, be sure to read the following.

1. Airplane R/C

The airplane is different from driving an RC car. A safe and pleasant radio controlled flight may become dangerous if an inexperienced person flies the airplane or because of radio interference. Read this section, "Before flying the airplane, be sure to read the following", and the "Owner's manual" thoroughly. Follow the rules for a safe and pleasant experience.

2. Radio waves

This airplane uses the frequency specified by the Japan Radio Wave Safety Association. The frequency used by this airplane is marked on the box. A ribbon is included that should be attached to the tip of the transmitter antenna. The ribbon color indicates the frequency used by the transmitter. When you play with the airplane, be sure to attach this ribbon to the antenna. The frequency used by this airplane cannot be changed by changing crystal. There is a likelihood that someone nearby may be using the same frequency. Since the radio waves can reach 200 m or more, you can interfere with each other and lose control of the airplane. If this happens, it is a dangerous situation. Before playing with the airplane, be sure to check the RC operation. To check, turn on the airplane switch. If the propellers start rotating without using the controls on the transmitter, there is someone nearby using the same frequency. If you see someone else with the same color ribbon as you have on your transmitter, he/she is using the same frequency as you. In this case, play with the plane at another location, at a different time, or talk to the other person and work out a method for taking turns.



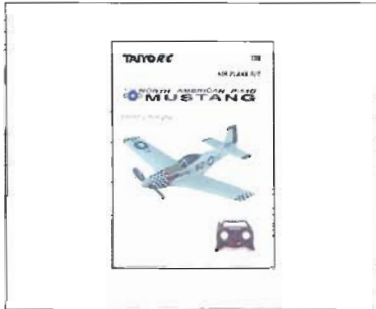
English

CONTENTS

- BEFORE USING THE PRODUCT 2**
- CONTENTS 3**
- PRODUCT DETAILS 4**
 - TECHNICAL DATA (SPECIFICATIONS) 4
- NAMES OF THE PARTS 5**
 - Airplane body (assembled condition) 5
 - Transmitter (also used as a charger) 5
- HOW TO ASSEMBLE THE AIRPLANE 6**
 - I How to Install and Remove the Antenna 6
 - II How to Attach the Wind Check Ribbon (Frequency Indicator Ribbon) 6
 - III How to Install the Batteries 6
 - IV How to Charge the Specialized 4.8V Ni-MH Battery Pack 7
 - V How to Put the Battery Pack into the Airplane 8
- WHERE TO FLY THE AIRPLANE 8**
 - First, look for a good place for flying with the following features. 8
 - Do not play with the airplane in the conditions shown below. 9
- HOW TO FLY THE AIRPLANE 9**
 - Transmitter Functions 10
 - Lesson 1 : For a Person Flying the Airplane for the First Time 11
 - How to launch the airplane from your hand 11
 - Lesson 2 : After you have practiced launching the airplane as described in Lesson 1, try actually flying the plane. 12
 - How to make a successful landing 14
- Airplane Maintenance (Repairs) 14**



PRODUCT DETAILS



Owner's manual



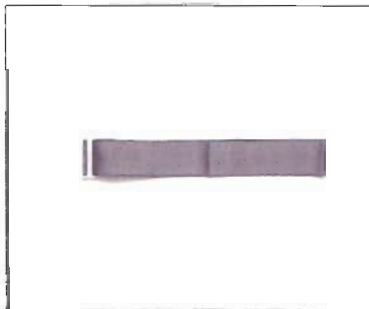
Completed airplane

To the customer:

The box and packing materials are needed to prevent the airplane from being damaged when transporting it or when sending it in for repair. Keep them in a safe place.



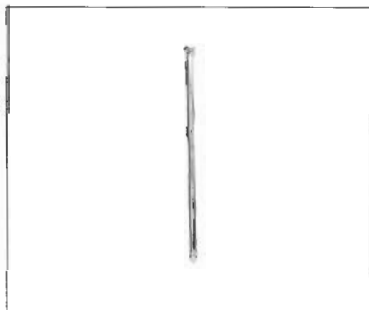
Specialized 4.8V Ni-MH battery pack



Wind Check Ribbon
(Frequency Indicator Ribbon)



Transmitter (also used as a charger) case



Transmitter antenna

TECHNICAL DATA (SPECIFICATIONS)

Fuselage length	: 370 mm
Wing span	: 500 mm
Weight	: Approx. 95 g
Switch-ON time of motor	: Approx. 1.5 minutes

Batteries and Charger

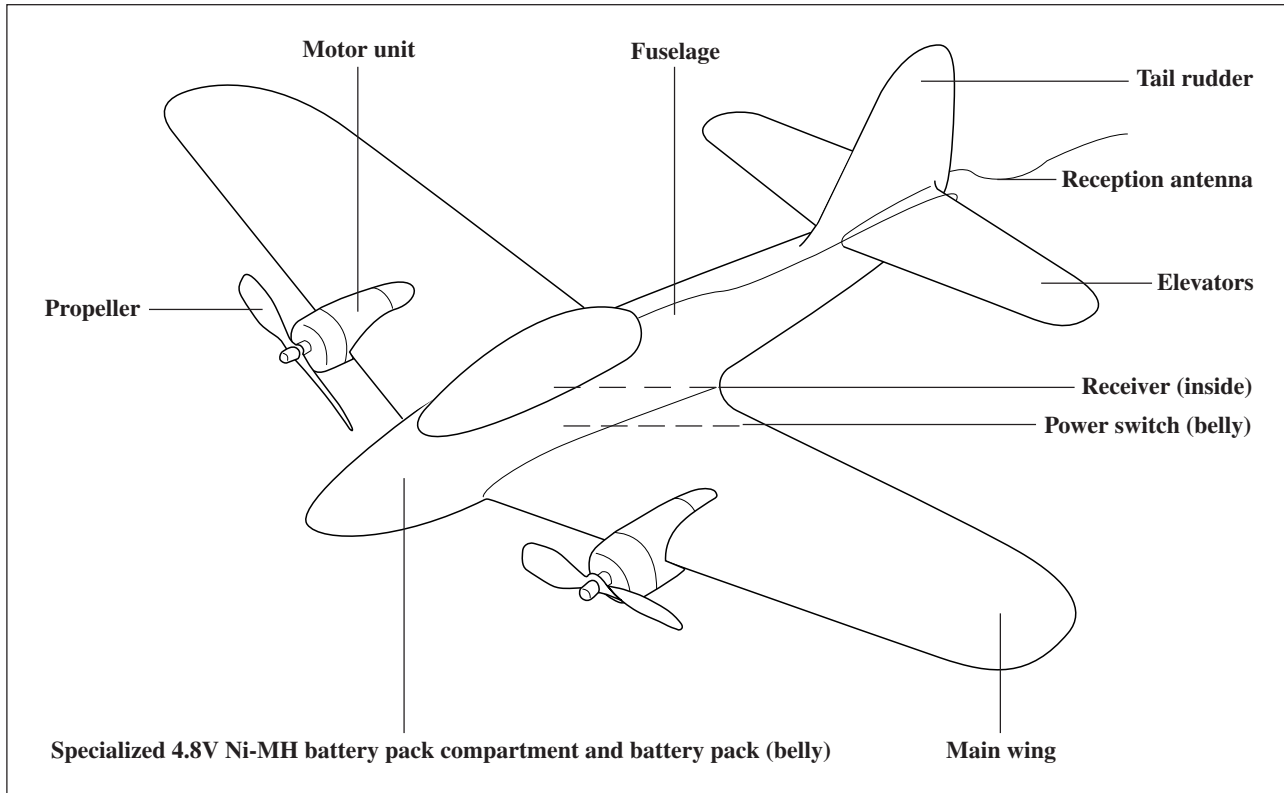
Airplane	: 4.8V Ni-MH battery pack (160 mAh) <supplied>
Transmitter (also used as a charger)	: Eight AAA size batteries (alkaline batteries) <supplied>
Charging condition	: Charging time/Approx. 3 - 4 minutes (However, the alkaline batteries in the transmitter must have sufficient charge)



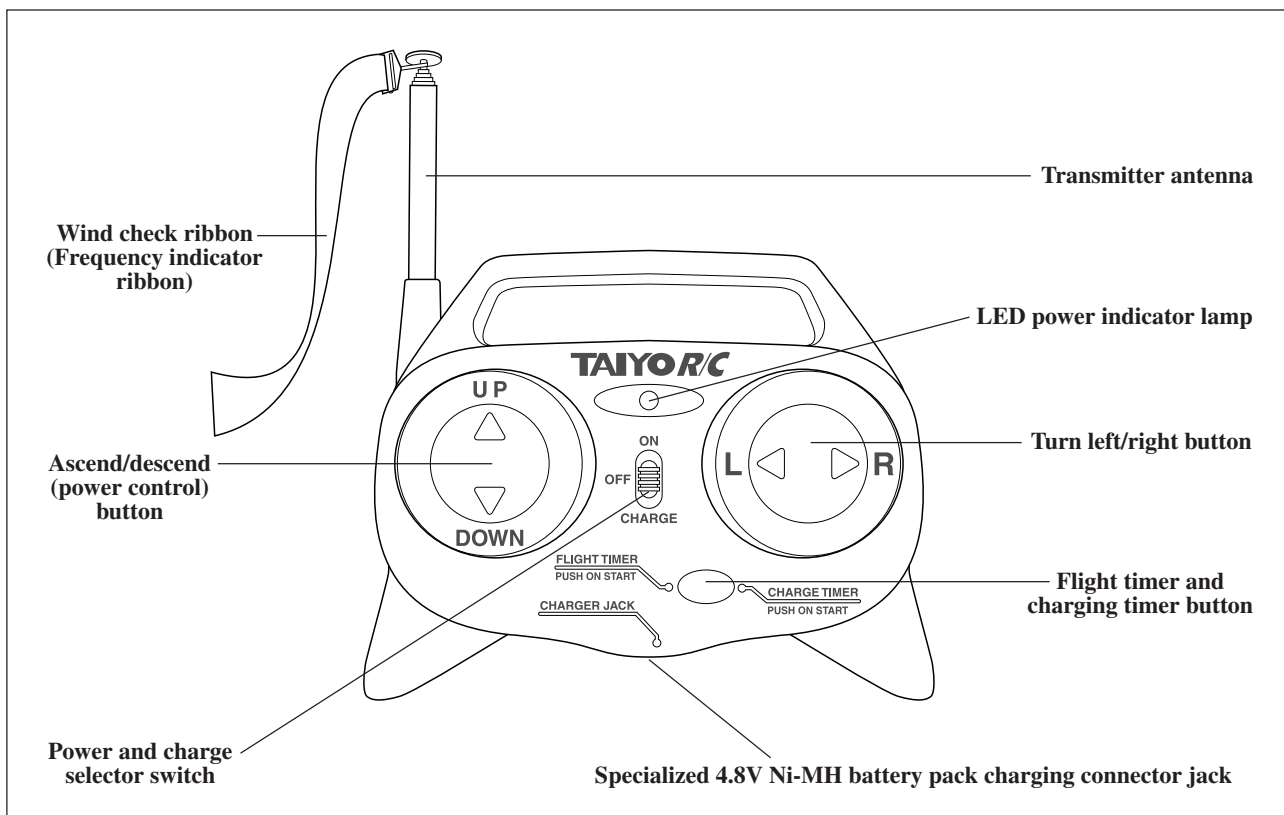
English

NAMES OF THE PARTS

Airplane body (assembled condition)



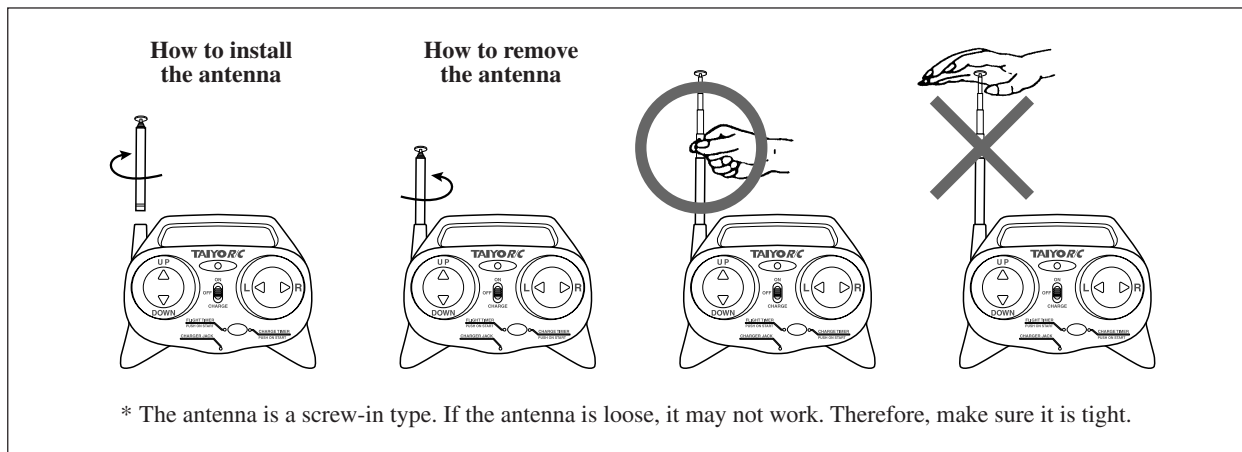
Transmitter (also used as a charger)



HOW TO ASSEMBLE THE AIRPLANE

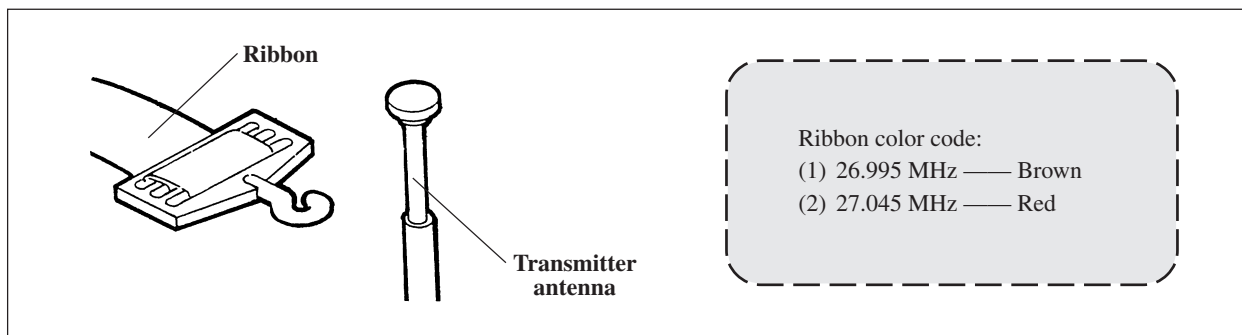
I How to Install and Remove the Antenna

- (1) To install the antenna, screw it into the transmitter body. To reduce the antenna length, push in the lowest segment first, then the next, etc. This will prevent the antenna from being broken.



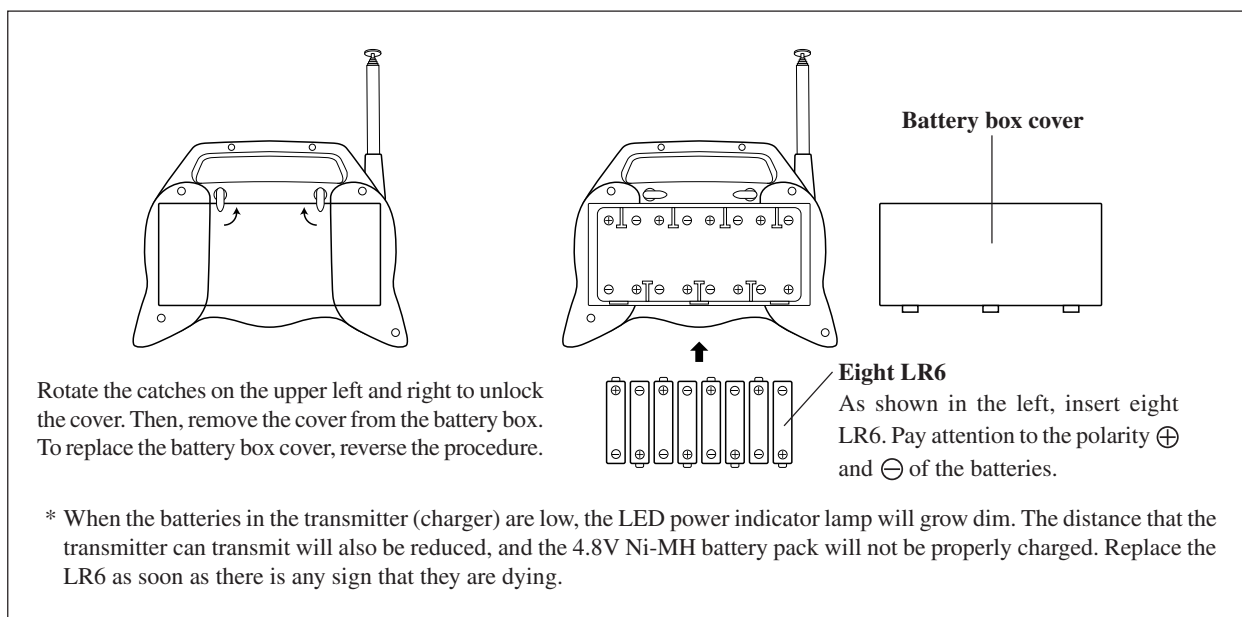
II How to Attach the Wind Check Ribbon (Frequency Indicator Ribbon)

- (1) Put the hook on the ribbon onto the tip of the antenna.



III How to Install the Batteries

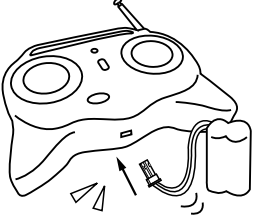
- This transmitter (charger) uses eight AA size alkaline batteries (included).



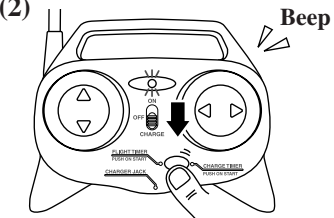
IV How to Charge the Specialized 4.8V Ni-MH Battery Pack

- (1) Plug the specialized 4.8V Ni-MH battery pack connector into the connector jack on the lower part of the transmitter.
- (2) Move the power switch to the [CHARGE] side, and press the [CHARGE TIMER] button. A beep will be heard. The LED power indicator lamp will flash to tell you that charging has started.
- (3) When charging is complete, two beeps will be heard. Then, the LED power indicator lamp will light, to tell you that charging is complete. Unplug the battery pack connector from the transmitter body.
- (4) Turn off the power to the transmitter (charger).

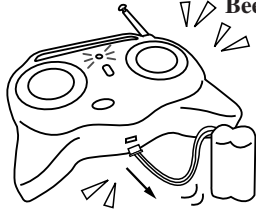
(1)



(2)



(3)



To the customer:

Be sure to move the main switch to the OFF position before moving the main switch to the ON or CHARGE position.

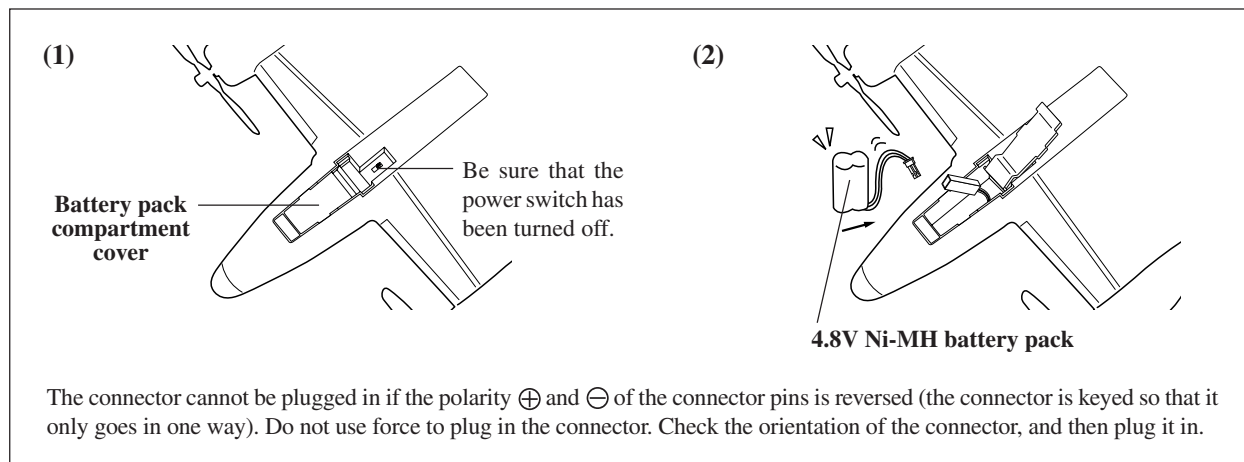
The connector cannot be plugged in if the polarity \oplus and \ominus of the connector pins is reversed (the connector is keyed so that it only goes in one way). Do not use force to plug in the connector. Check the orientation of the connector, and then plug it in.

⚠ CAUTION

- * This charger can only charge the specialized 4.8V Ni-MH battery pack. It cannot charge any other kinds of batteries.
- * Do not charge the battery pack near a fire or in any place exposed to high temperatures.
- * Do not leave the battery pack unattended while charging. This is so that you can stop charging if a problem occurs.
- * Never disassemble or modify the transmitter (charger).
- * After flying the airplane, be sure to remove the battery pack from the airplane and unplug the connector.
- * Never short-circuit the battery pack. A large current will flow and the battery pack will become very warm. It is very dangerous.
- * Recharging a battery pack that is already charged will make it too hot.
- * If the battery pack gets wet, stop using it immediately. The battery pack may be short-circuited inside, which may damage it. Wipe the battery pack until it is dry on the outside and then let it dry thoroughly in the shade before using it again.
- * When unplugging the connector, do not pull on the cord. Hold the connector itself to unplug it.
- * Never throw the battery pack into water or a fire. Do not disassemble it or try to solder it.
- * When the battery pack has been charged correctly, if the power in the battery pack results in reduced flying time, the battery may have deteriorated. In this case, it may be difficult to recharge it. If this happens, replace the battery pack with a new one.
- * The battery pack can be recharged 200 - 300 times, in normal use.

V How to Put the Battery Pack into the Airplane

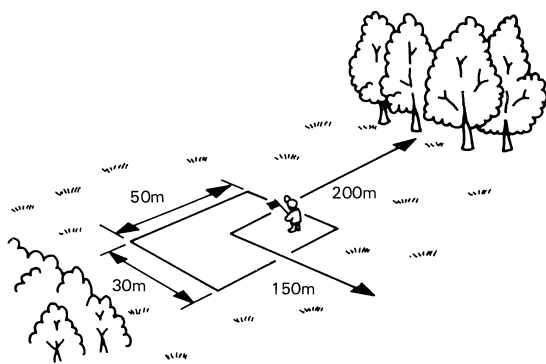
- (1) Open the battery pack compartment cover.
- (2) Plug the battery pack connector into the connector in the battery pack compartment. Then, insert the battery pack into the compartment, and close the cover.



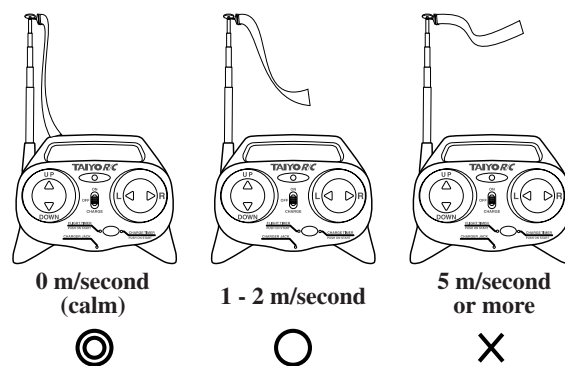
WHERE TO FLY THE AIRPLANE

First, look for a good place for flying with the following features.

- An open area with good visibility and no obstacles
- The ground should be flat and there should not be any rocks or bushes
- Little or no wind



- * A flat place that is at least 400 meters square with no obstacles

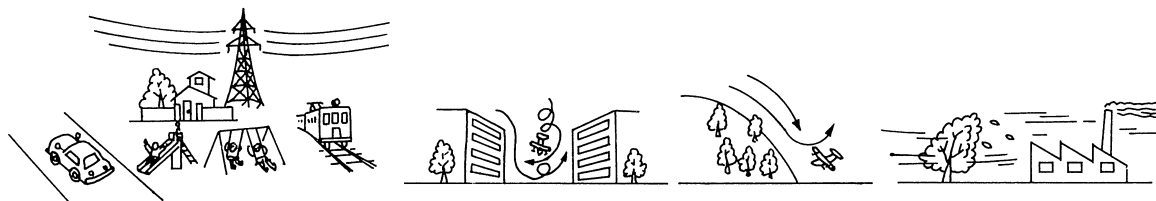


- * A wind velocity of 0 to 2 m per second is the best for flying the plane. In these conditions, the transmitter ribbon will hang at an angle of 45° or less.

English

Do not play with the airplane in the conditions shown below.

* When the transmitter ribbon is flying out to the side, the wind is too strong. Stop flying the airplane.



Any place surrounded by roads, near a train line, high-voltage lines, etc. Any place where there are lots of people or where houses are clustered close together.

Turbulence

Any place where there are downdrafts

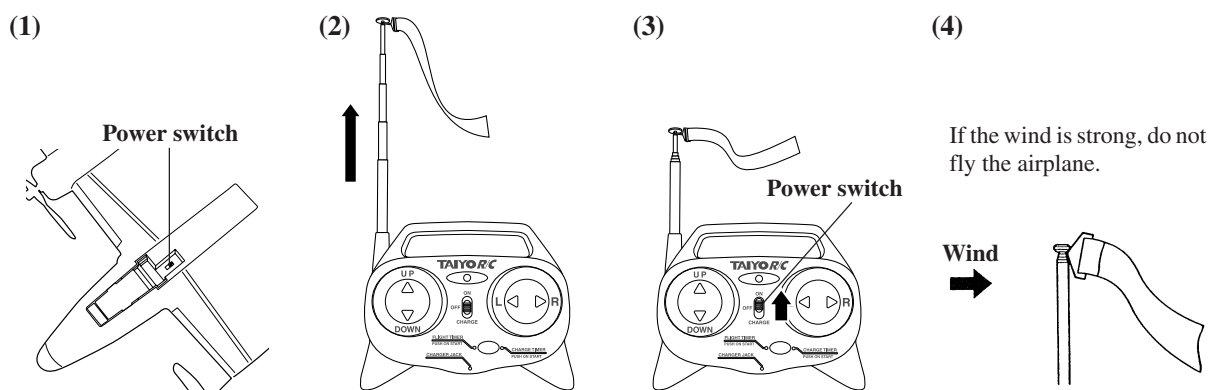
Strong wind

⚠ CAUTION

- * Make sure that no one else is using the same frequency as you.
- * Fly the airplane in a wide-open place. Make sure that there are not any buildings or trees near you and that people are not standing near you.
- * Before flying the airplane, check the area around you.
- * While the airplane is flying, do not take your eyes off of it.
- * Any child who is not experienced at flying the airplane should have an adult present to help.

HOW TO FLY THE AIRPLANE

- (1) Turn on the switch on the airplane.
- (2) Turn on the switch on the transmitter.
- (3) Extend the transmitter antenna all the way out.
- (4) Check the direction and strength of the wind with the ribbon.



⚠ CAUTION

When you turn on the switch on the airplane, the propellers will turn for a moment. Therefore, be sure to turn on the switch while standing behind the airplane. Even though the reception antenna may seem too long, do not cut it or coil it up. Even if the wind is weak on the ground, it may be stronger in the sky. The airplane may be carried away by strong winds in the sky. Therefore, fly the airplane in a place where there are no downwind obstacles (streams, swamps, etc.) to retrieving the airplane if it is carried away by the wind.

Transmitter Functions

<UP button>

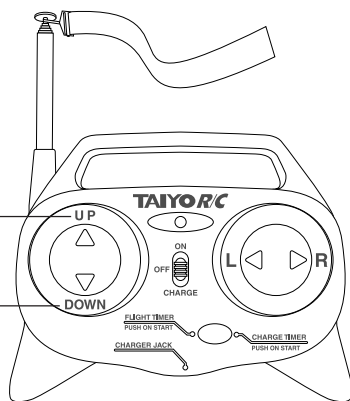
When the UP button is not pressed
Stop

When the UP button is pressed once
Low speed

When the UP button is pressed a second time
Medium speed

When the UP button is held down
High speed

* When you release the button, the speed will return to the medium speed.



<DOWN button>

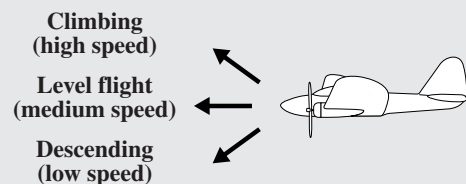
* If the airplane is flying at medium speed

When the DOWN button is pressed once
Low speed

When the DOWN button is pressed a second time
Stop

Relationship between speed and operation

Medium speed is for level flight, low speed for descending and high speed for climbing.



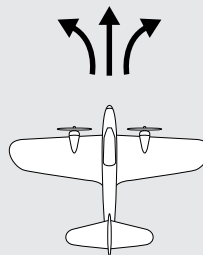
<L button>

When the L button is held down
The airplane turns to the left.

<R button>

When the R button is held down
The airplane turns to the right.

Left turn (L button) Right turn (R button)



<FLIGHT TIMER Button>

CAUTION

If anyone is playing with a radio-controlled toy near you, check with each other about which frequencies are being used. When you turn on the airplane switch, if the propellers start rotating, there is someone nearby using the same frequency.

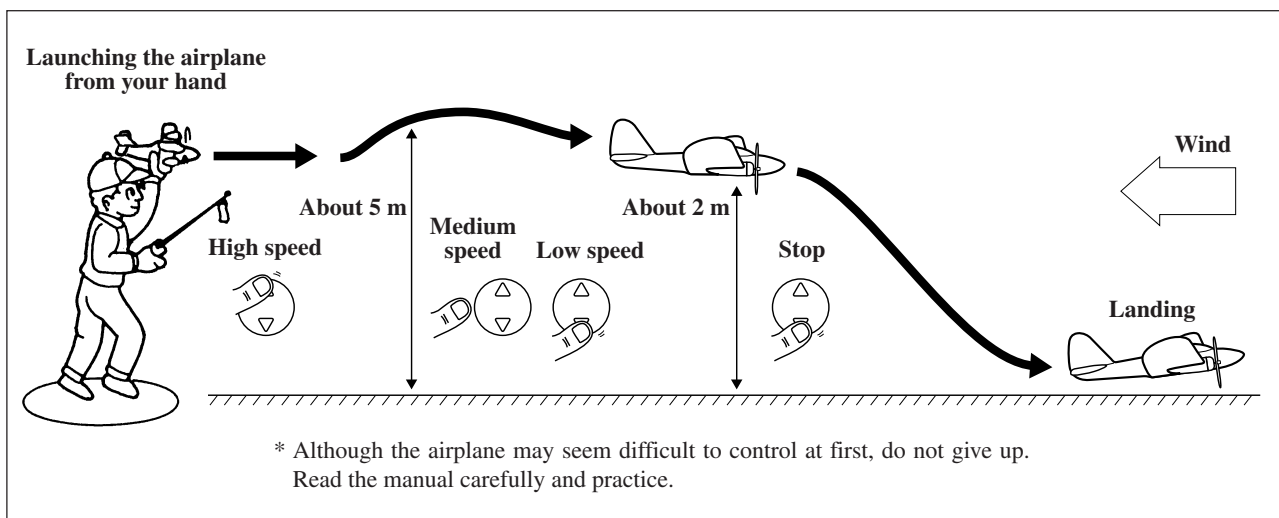
When the [FLIGHT TIMER] button is pressed just before take-off, a beep will be heard and a countdown will be started. When the flying time (battery life) is running short, two beeps will be heard to advise you to land the airplane. Try to land it safely. The total flying time on one battery charge is about 1 minute and 30 seconds. If the battery is run completely down, you can no longer control the airplane.

Lesson 1

For a Person Flying the Airplane for the First Time

First of all, repeat the practice shown in the following drawing, until you get used to the movements the airplane will make.

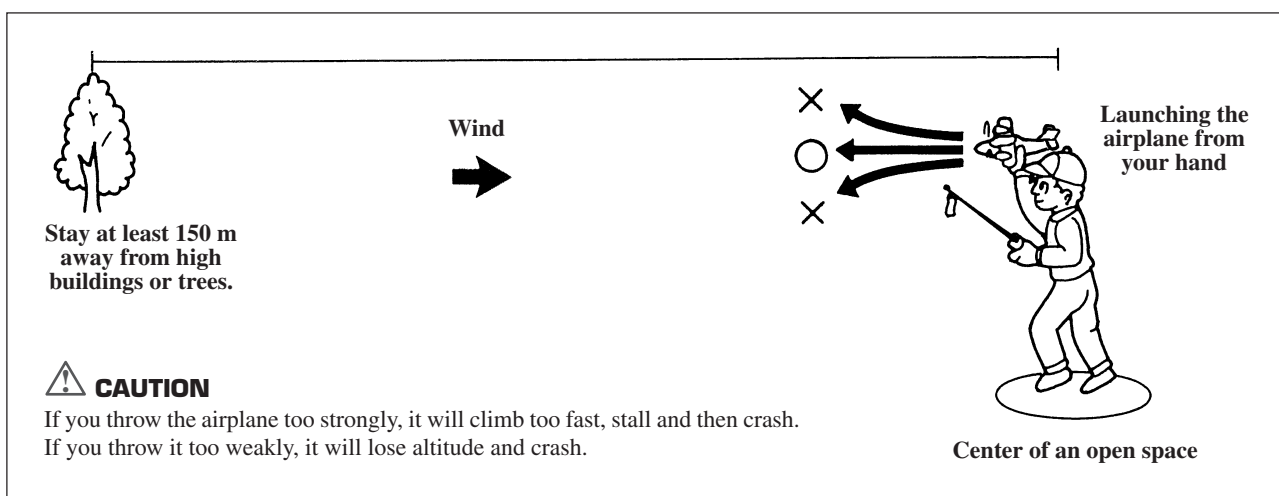
- (1) Point the airplane into the wind. Hold down the [UP] button on the transmitter to make the motor run at high speed.
- (2) While maintaining high speed, throw the plane straight forward. When the airplane has climbed to about 5 m, release the [UP] button to change to medium speed. Fly the plane in level flight. Then, press the [DOWN] button once to reduce the speed (to low) and the airplane will descend.
- (3) When the airplane has descended to about 2 m above the ground, press the [DOWN] button once again to stop the propellers. The airplane will land.
- (4) If the airplane is turning to the right, press the [L] button to turn it to the left. If the airplane is turning to the left, press the [R] button to turn it to the right. Aim the airplane into the wind while landing and try to keep it flying straight.



How to launch the airplane from your hand

Run into the wind and throw the airplane straight forward into the wind.

- (1) Hold the airplane near its center of gravity, over your head.
- (2) Use the [UP] button on the transmitter to run the motor at high speed, and keep the airplane horizontal. Run into the wind and when you feel the airplane becoming light, release it gently.



Lesson 2

After you have practiced launching the airplane as described in Lesson 1, try actually flying the plane.

- (1) Launch the airplane straight into the wind and make it climb. When the airplane has climbed to the desired level, release the [UP] button to return to medium speed. The airplane will then fly level.
- (2) When the plane is high enough, try to start turning the airplane slowly.
- (3) To prevent the airplane being carried away by the wind, try to fly it into the wind, relative to your position.
- (4) When you hear two beeps from the flight timer, start to prepare for a landing right away.

(1)

High speed

High speed

Wind

CAUTION
If the battery pack is not charged properly, the airplane may not climb high enough.

CAUTION
If you hold the [UP] button down too long, to keep the speed high, the nose of the airplane may go up and it will stall. This may cause the airplane to crash.

(2)

CAUTION
Before you become familiar with flying the airplane, do not try and make it climb at a steep angle. Be careful not to use too much rudder.

* Press the button repeatedly.

CAUTION
Do not hold down the [R or L] button. Press either one repeatedly, at short intervals.

When a turning operation is performed, how does the airplane behave?
The airplane will tilt and it will lose some altitude.

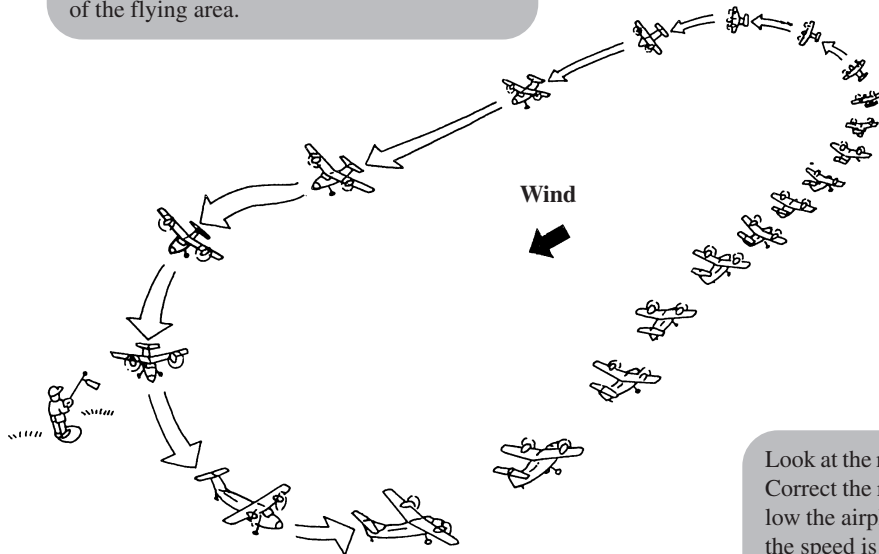
* When a turn is complete, push the button to turn in the opposite direction. This will allow the airplane to stay level and fly stably.

English

(3)

A tail wind

The airplane will speed up and go quickly. Start your turn well before the plane reaches the edge of the flying area.



A cross wind

(When starting a turn with a head wind)

When you press the [R or L] button while flying into the wind, the airplane will turn rapidly. The turning radius will be quite small.

A head wind

Look at the movement of the airplane carefully. Correct the rudder position, as necessary, to allow the airplane to fly straight into the wind. If the speed is increased too much, the plane will gain altitude too fast and stall.

A cross wind

(When starting a turn with a tail wind)

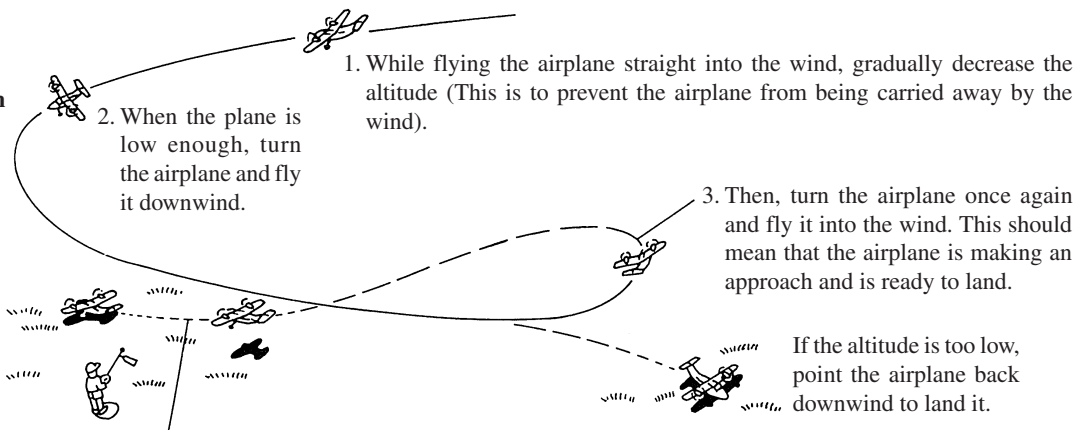
Since the airplane response to a turn command using the [R or L] buttons is slow, a big turn will occur.

CAUTION

Be careful not to allow the airplane to fly so far or high that you lose sight of it.

(4)

Wind direction



1. While flying the airplane straight into the wind, gradually decrease the altitude (This is to prevent the airplane from being carried away by the wind).

2. When the plane is low enough, turn the airplane and fly it downwind.

3. Then, turn the airplane once again and fly it into the wind. This should mean that the airplane is making an approach and is ready to land.

If the altitude is too low, point the airplane back downwind to land it.

4. When the plane is about 1 m above the ground, increase the speed a little, and lift the nose of the airplane a little, to make the belly level with the ground.

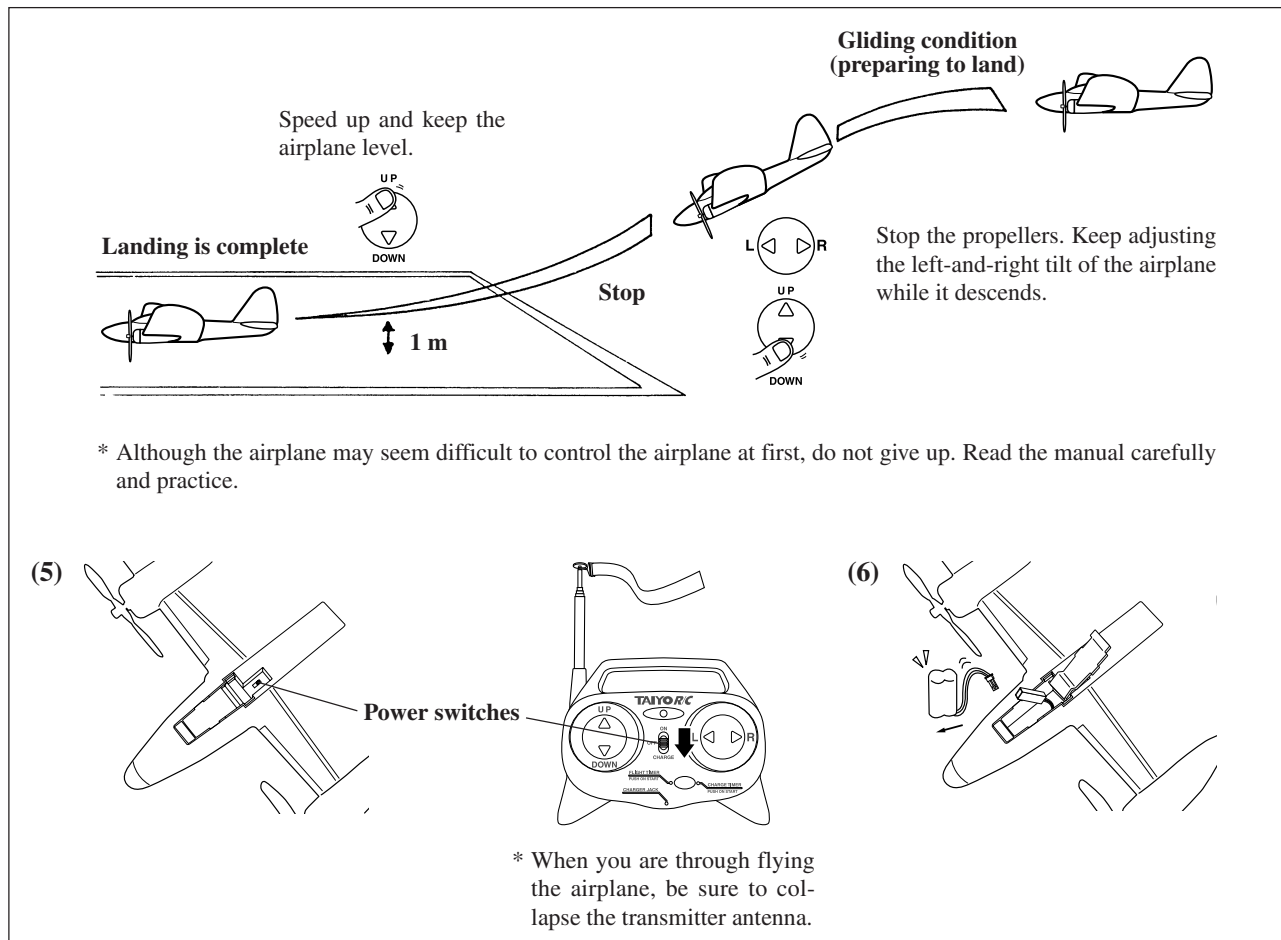
5. Let the airplane coast a distance of several meters. When it touches the ground, the landing is complete.

English

How to make a successful landing

(5) After landing the airplane, turn off the airplane switch and the transmitter (charger) switch, in that order.

(6) Remove the battery pack from the airplane, and unplug the connector.



Airplane Maintenance (Repairs)

- * If mud enter into the airplane or stuck to it near the tail assembly, the center of gravity of the airplane may change. Therefore, be sure to clean the plane as needed.
- * If the airplane is badly damaged, it may become unbalanced and cannot fly properly. Please have it repaired by customer service. (For more details, read the "About after-sales service" section.)
- * Daily maintenance extends the life of the airplane. If grass or mud is stuck on the airplane, be sure to remove it all. Check each section of the plane for looseness.
- * Since the airplane is made of EPP material that is difficult to break and is very flexible, some paints may peel off easily. Please note this possibility.

Direction to Change the Propeller

1. Pull the propeller cap while widening on left and right side.
2. Take off nut by using pliers (Turn to right side), then take off washer. At last take the propeller off.
3. Please be careful installing propeller, flat portion of the propeller is to face front of the airplane. Please refer to direction #1 and #2 for assembly.

Other Maintenance

- * If the body of the airplane is broken, please use glue for "Styrofoam."
- * If the rudder hinge comes off, please use very thin double-sided tape to repair.
- * If the vertical rudder hinge is broken or lost, please use clear film from the package. Cut clear film into 8mmx18mm and use it to repair.
- * If the rudder horn comes off from the shock of landing or other, please use high viscosity type of glue to repair.

A408-English



English

Precautions, when Carrying Airplane

- * Do not carry on vertical tail, may come off.
- * Do not carry on main wing or horizontal tail, may change the shape of the wing.
- * Turn off the power switch. Propeller may spin.
- * Please carry on body.

Note

- The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment.
Such modifications could void the user's authority to operate the equipment.

MEMO



A series of horizontal dashed lines for taking notes.





TAIYO R/C
<http://www.taiyo-toy.co.jp>

TAIYO KOGYO CO.,LTD
HEAD OFFICE

Address:1-23-17,Higashiyotsugi,Katsushika-ku,
Tokyo,Japan 124-0014
Phone:(03)3691-7411
FAX :(03)5698-7091