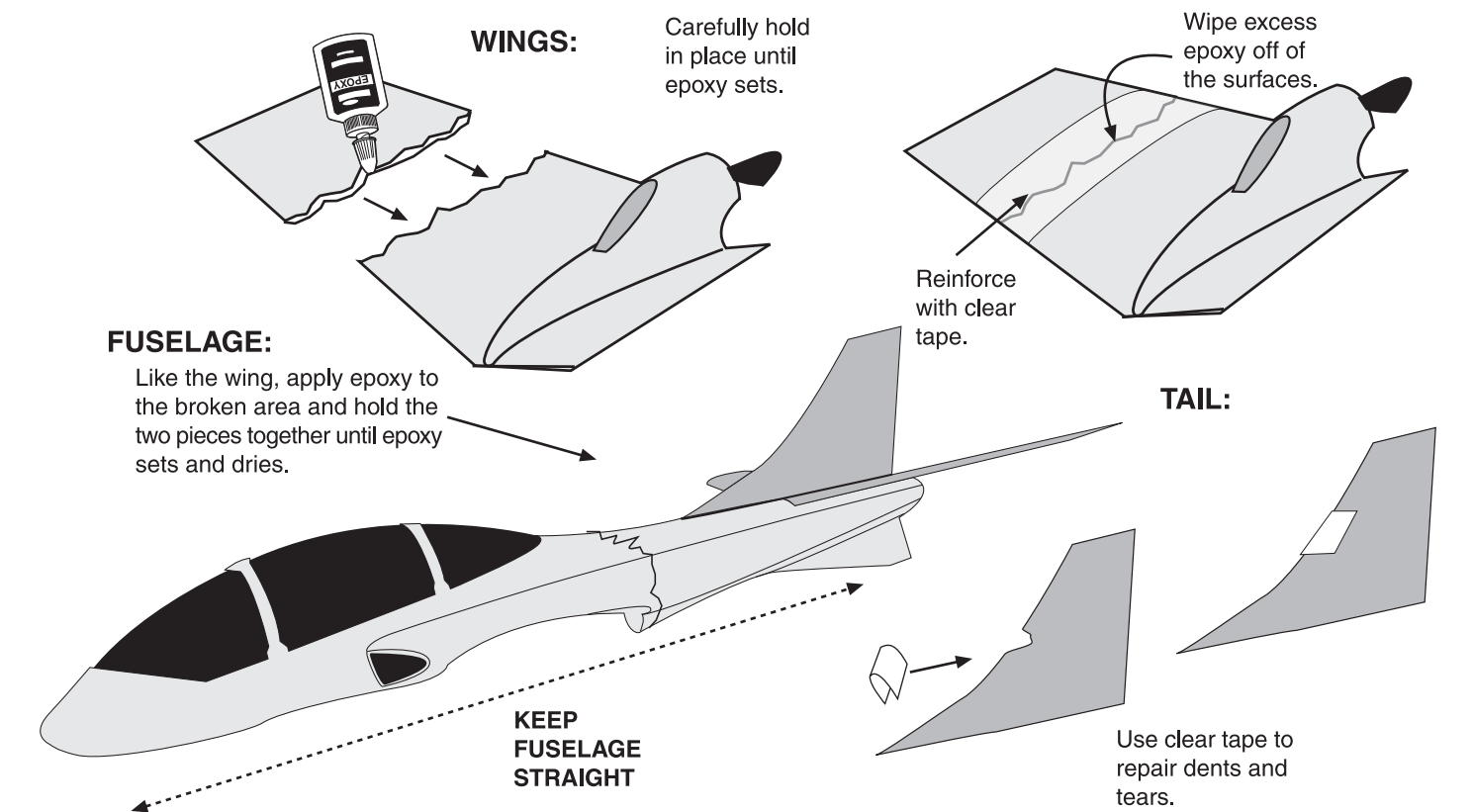


TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Motors will not turn on or operate	<ul style="list-style-type: none">• Plane not charged• Plane was not set to 'OFF' during charging• Tx / Charger was not set to 'OFF' during charging• Tx Battery power is drained• Tx has been left 'ON' longer than 2 minutes• Plane not turned 'ON'	<ul style="list-style-type: none">• Charge plane for a complete charge cycle• Set fuselage to the 'OFF' position prior to charging• The Tx / Charger must be in the charge position (this would be the Tx 'OFF' position)• Replace the Tx/Charger batteries after 4 30-minute charges• Switch Tx 'OFF' then 'ON'• Turn plane switch 'ON'
Plane is flying too high	<ul style="list-style-type: none">• Need to decrease power	<ul style="list-style-type: none">• Move the Motor Control Stick to middle position to reduce motor speed or release the Motor Control Stick
Plane is flying too low	<ul style="list-style-type: none">• Plane not fully charged• The six 'AA' batteries in the Tx / Charger need to be replaced• Need to increase power	<ul style="list-style-type: none">• Charge plane for a complete charge cycle• Install new batteries• Press the Motor Control Stick upward all the way
Plane will not turn	<ul style="list-style-type: none">• Tx / Charger is not turned 'ON'• Tx / Charger antenna is not extended all the way.• Flying in too strong of wind• You have exceeded the 2 minute Flight Optimizer period	<ul style="list-style-type: none">• Set the Tx / Charger to the 'ON' position• Fully extend the antenna prior to flying• Do not fly in adverse wind conditions or wind in excess of 5 mph (8 kph)• Turn Tx 'OFF' then 'ON' again

EASY REPAIRS YOU CAN DO YOURSELF

Plane parts are made of foam for impact strength and durability. Even so, some parts may break during a crash. Foam parts may easily be repaired using household tape and glue. Clear packing tape works well for most repairs, however, larger breaks may require glue and tape for best results. To make your own repairs, use 5 minute epoxy or household white glue (sold separately) and follow the steps below. While we don't recommend you crash your plane, sometimes it happens. Simple home repairs will get you back in the air and flying in no time.



PLEASE DO NOT RETURN YOUR PLANE TO THE STORE - they are not trained to help you like Estes flight techs are! So... before you pack your plane away, visit our troubleshooting guide at www.estesrockets.com or give us a call at 1-800-525-7561.



www.estesrockets.com
ESTES-COX CORP.
1295 H Street
Penrose, CO 81240
Printed in China

WARNING:
Choking/Cutting Hazard - small parts, sharp propeller. Not for children under 8 yrs.

SKY RANGERS

Radio Control Model Airplane INSTRUCTIONS

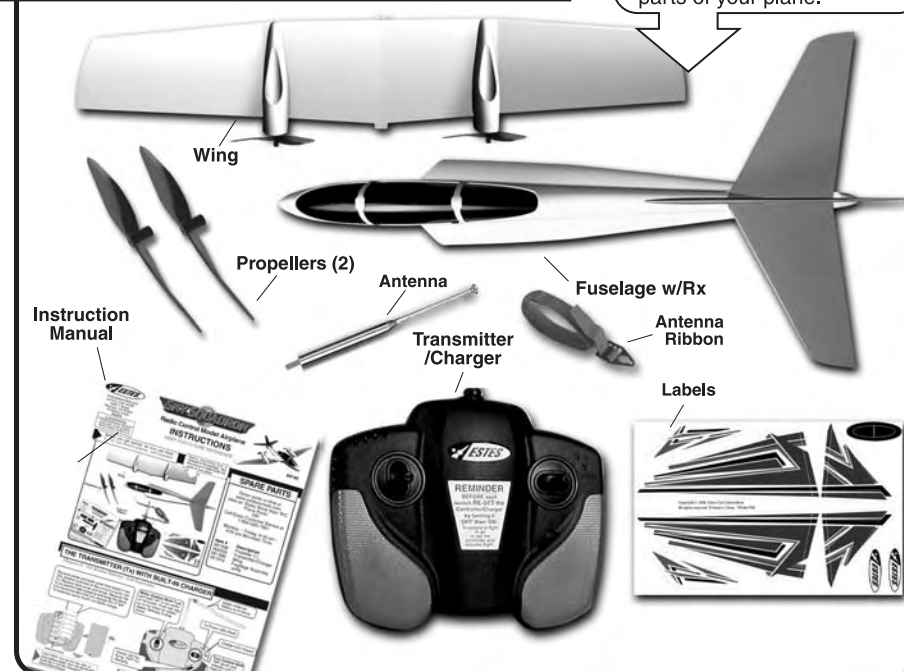
KEEP FOR FUTURE REFERENCE



#4160

Before you get started, be sure you have:
6 - 'AA' size Alkaline batteries - sold separately

Here's everything that is included in the package. Use this picture to help locate the parts of your plane.



SPARE PARTS

Order parts on-line at www.estesrockets.com, click on 'Estes Store' then 'R/C Plane Parts'.
OR
Call Estes Customer Service at 1-800-525-7561

Monday - Friday, 8:00 am - 4:00 pm Mountain Time.

Item #	Description
061786	Wing Assembly Spare Part Set*
061779	Fuselage w/Rx Spare Part Set*
061920	Propellers (2 per bag)
061794	Transmitter (Tx)/Charger, Antenna & Antenna Ribbon

*Label sheets included with each spare part set.

THE TRANSMITTER (Tx) WITH BUILT-IN CHARGER

(Requires 6 - 'AA' Alkaline Batteries - Sold Separately)

Remove screw and back cover then insert 6 new 'AA' alkaline batteries in the correct polarity into Tx. Replace back cover and screw. Because the Tx is used for both charging and flying the plane, it is recommended that you replace the 6 "AA" Tx batteries every fourth complete charge.

Motor Control Stick Push and hold 'UP' to run motor at full power. Push half way up to run motor at 'cruise' speed. Release to stop motor.

Insert then screw Antenna into Tx - Finger tight. Attach Antenna Ribbon to Antenna.

Tx Power LED (Red)

Charger LED (Green)

Turn Control Stick 'TAP' (push and release) Left or Right to steer the plane during flight.

NOTE: Read **Important Flying Tips** before using.

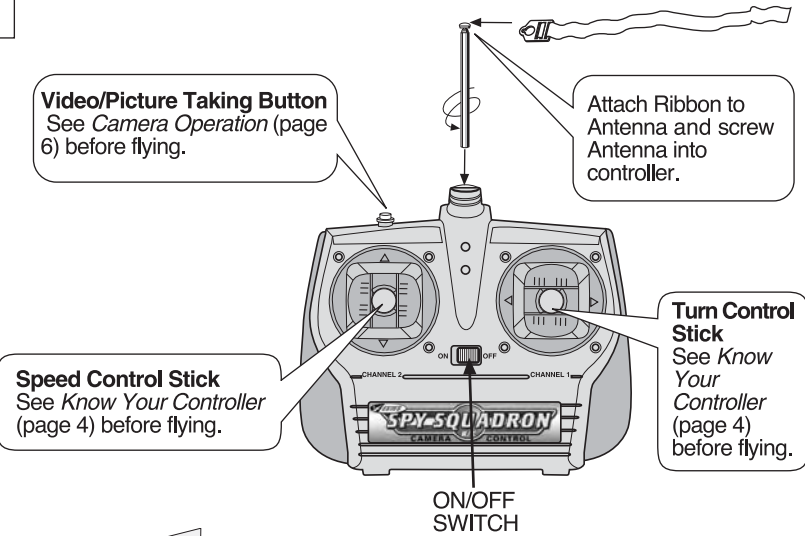
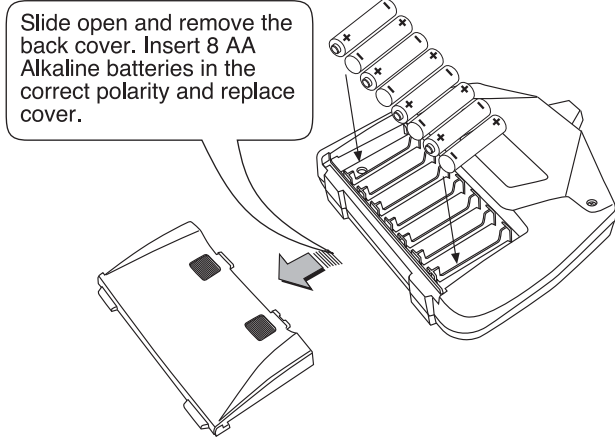
IMPORTANT TIPS: This radio has been equipped with an auto shut-off circuit. Tx will automatically turn off Motor Control after 2 minutes of continuous flying. To reset the Motor Control, switch Tx 'OFF' then back 'ON'. See 'Flight Optimizer' page for more details.

CAUTION: Do not mix old, new, or other battery types. Use only ALKALINE batteries in the Sky Cruisers® transmitter/charger.

THE SPY SQUADRON™ CONTROLLER

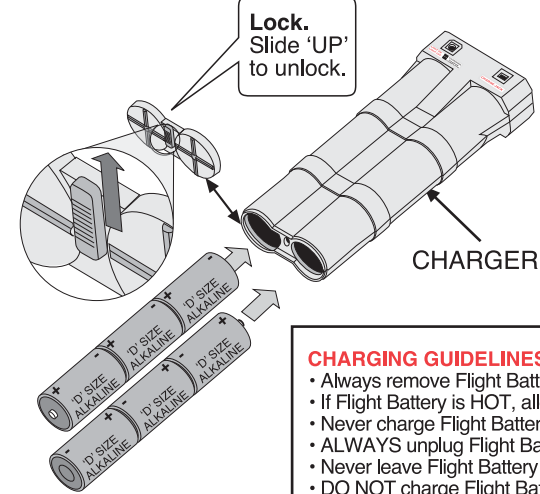
(Requires 8 - AA Alkaline Batteries - Sold Separately)

CAUTION: Do not mix old, new or other battery types. Use only ALKALINE batteries. Remove batteries from unit when storing for long periods.

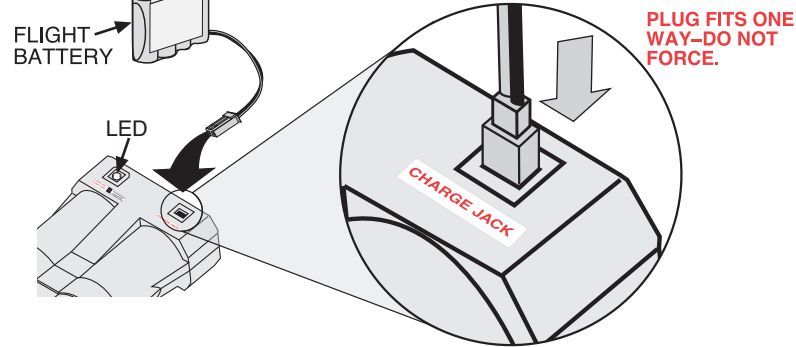


USING THE CHARGER

1 Unlock end of charger and open. Insert 6 D size alkaline batteries into charger in the correct polarity. Replace end and lock.



2



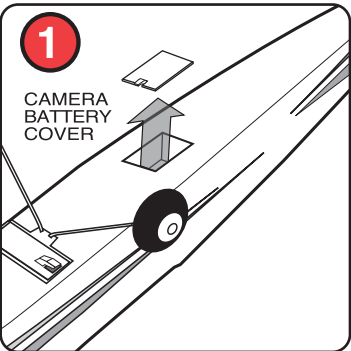
CHARGING GUIDELINES:

- Always remove Flight Battery from airplane before charging.
- If Flight Battery is HOT, allow it to cool before charging or using.
- Never charge Flight Battery if Charger or Flight Battery is wet.
- ALWAYS unplug Flight Battery from Charger when not in use.
- Never leave Flight Battery unattended when charging.
- DO NOT charge Flight Battery if it shows leakage or corrosion.

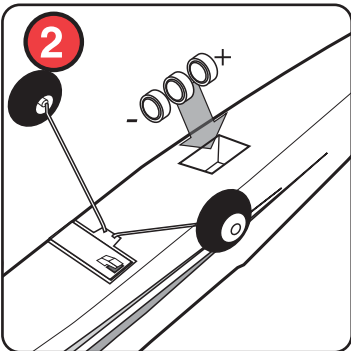
1. Fully discharge Flight Battery by running the motor until it stops.
2. Remove Flight Battery from plane. NOTE: If Flight Battery is very warm, let it cool before charging.
3. Plug Flight Battery into Charger. Charger LED will turn solid.
4. Charge the Flight Battery until the Charger LED blinks.
(Approximately 20 minutes. DO NOT charge more than 25 minutes.)
NOTE: If flight battery gets hot during charge, remove from Charger immediately and let cool.

NOTE: Charge time will get longer the more times the Flight Battery is charged since the D batteries in the charger lose power. After 20 charges replace the batteries in the charger.

INSTALLING THE CAMERA BATTERIES

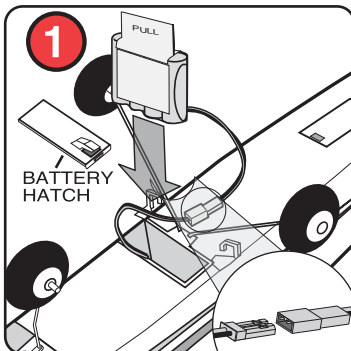


Remove Camera Battery Compartment cover.

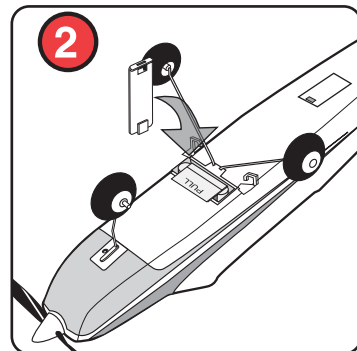


Insert 3 button cell batteries (included) in correct polarity as shown, and then replace cover.

INSTALLING THE FLIGHT BATTERY



Remove Battery Hatch. Connect Flight Battery to plane. **PLUG FITS ONE WAY-DO NOT FORCE.**

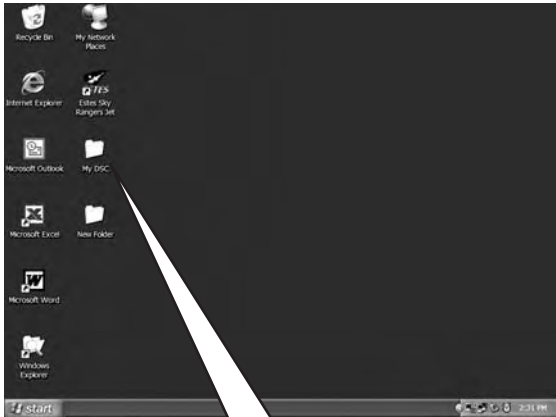


Carefully guide the battery wires into compartment followed by Flight Battery. Be sure Flight Battery is all the way in the battery compartment. Replace Battery Hatch.

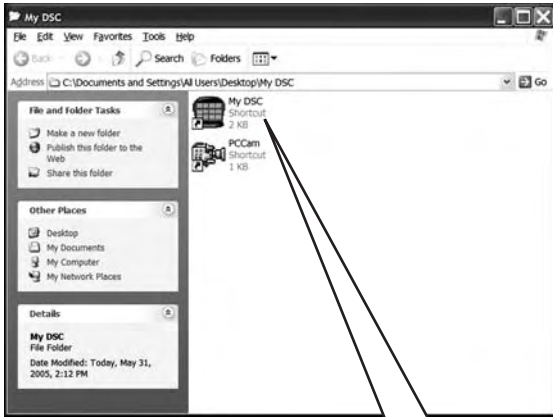
DOWNLOAD PICTURES FROM CAMERA

IMPORTANT:
DO NOT turn camera switch OFF - doing so will erase the pictures stored in the camera.

1. Connect USB cable to the computer, then to the camera pod as shown.
2. Follow the steps below to download and save your pictures.



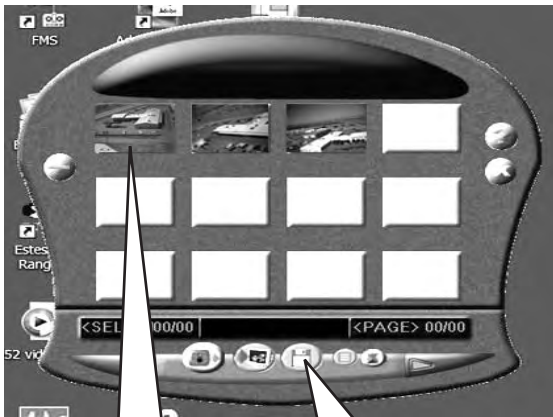
A. Open 'My DSC 2' folder on the desktop.



B. Click on 'My DSC 2' to open.



C. Click the 'Load Pictures' icon.



D. Right Click to enlarge picture to view or Left Click to Highlight (Red Box), then click the 'Save' icon below.

Camera may be turned off after pictures have been downloaded and saved on your computer.

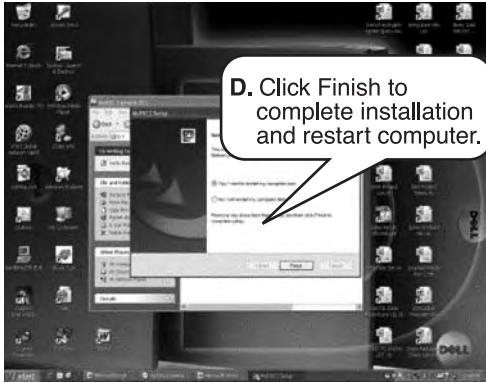
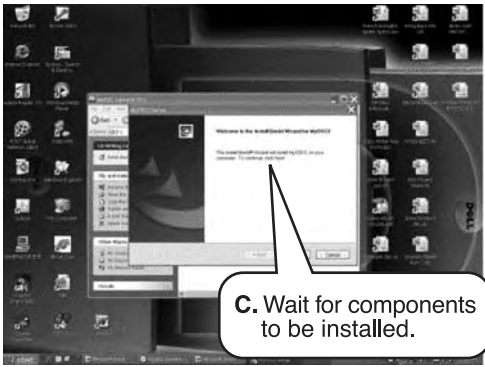
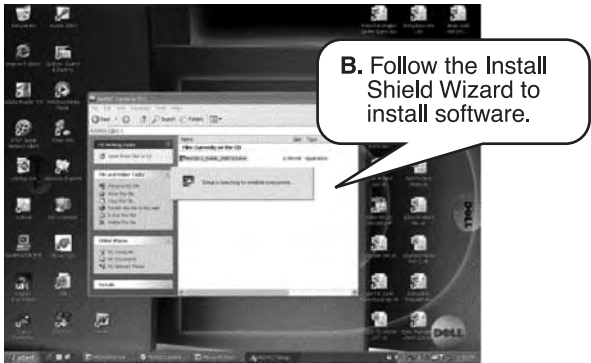
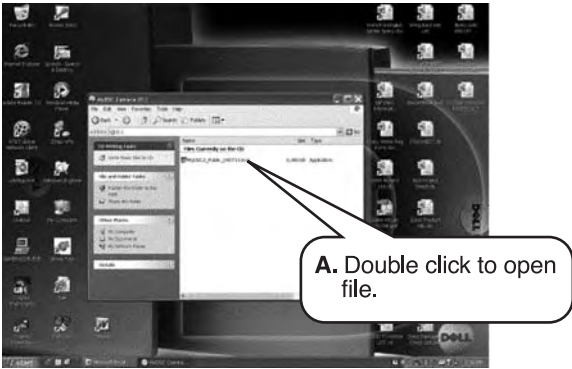
IMPORTANT USER INFORMATION

Note: 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:

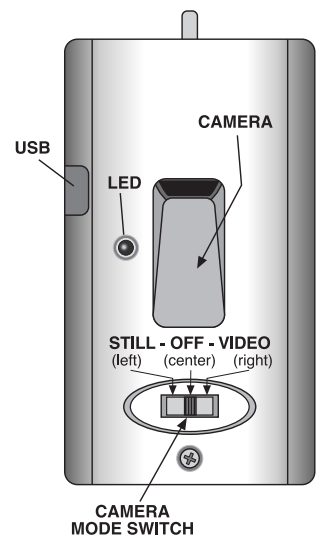
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Consult Estes-Cox Corp. for help.

LOAD THE SOFTWARE (My DSC 2)

1. Insert CD in CD Drive. **Important:** Close other programs before installation. You will need to restart your computer after installation. If program does not begin automatically, you will need to click START and then MY COMPUTER and double click the CD drive.



CAMERA OPERATION



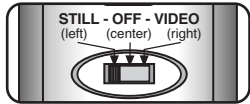
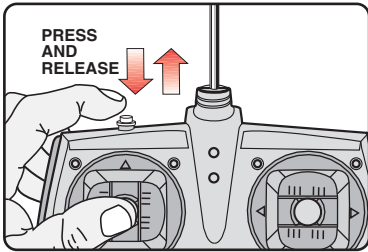
PRE-FLIGHT CAMERA SETUP

1. The camera turns ON by turning the camera mode switch to STILL or VIDEO. If switched to VIDEO, camera can take up to 14 seconds of video. If switched to STILL, camera can take up to 15 pictures.
2. The LED indicates the camera is ON, it works as follows:
 - If Camera is turned ON before the Plane and Controller, LED will flash twice. After Controller and Plane are turned ON, LED will turn solid indicating Camera is ready.
 - If Camera is turned ON after the Plane and Controller, LED will flash once, and then turn solid indicating Camera is ready.
 - The LED will go OFF when Camera is turned OFF.

IMPORTANT NOTES:

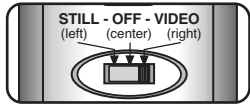
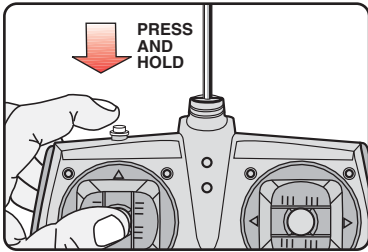
1. DO NOT switch camera OFF or from STILL to VIDEO or vice versa before downloading to a PC. Doing so will ERASE all pictures/video from camera.
2. Camera will only take pictures or videos when plane's motor is running.
3. Allow 5 seconds between each picture/video for camera to reset.
4. Replace the camera batteries when camera starts failing to take consistent video or pictures.
5. After pictures/video are downloaded switch camera OFF when not in use.

TAKING STILL PHOTOS



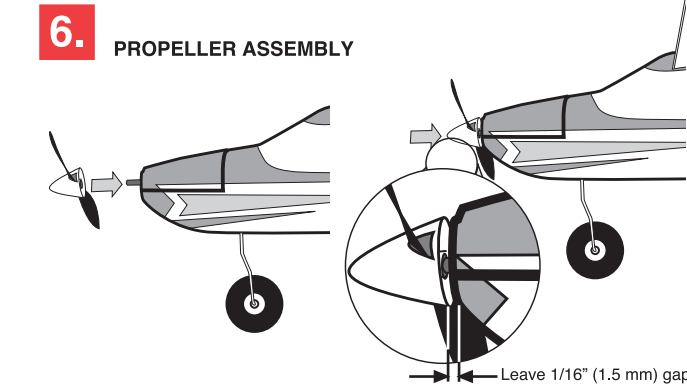
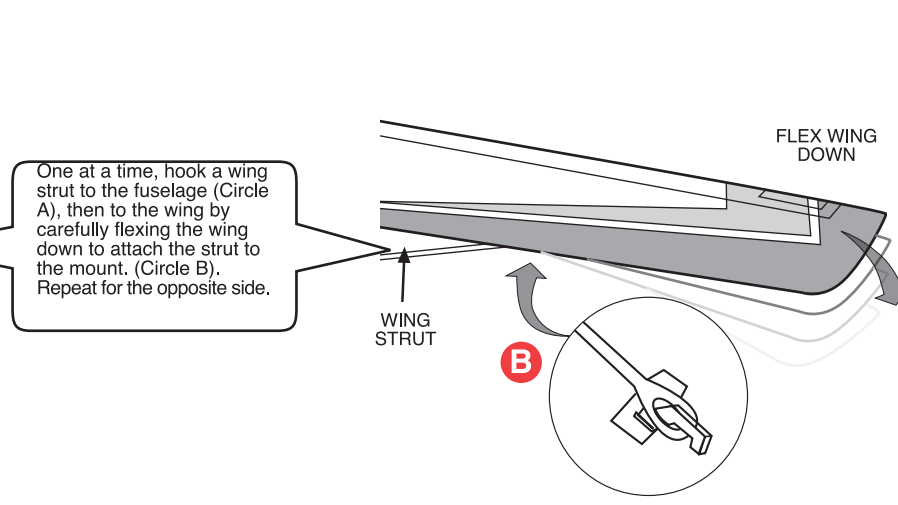
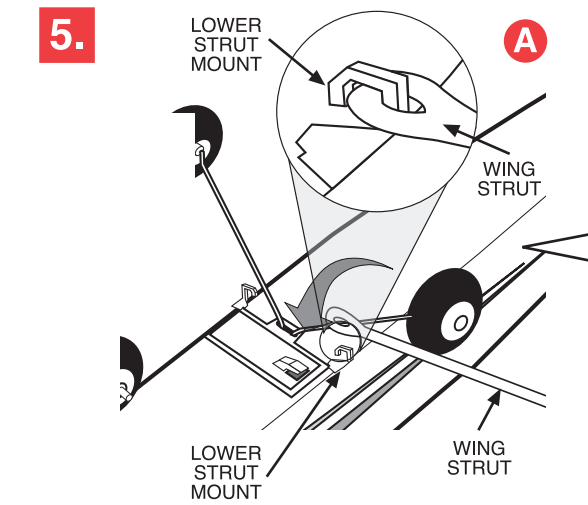
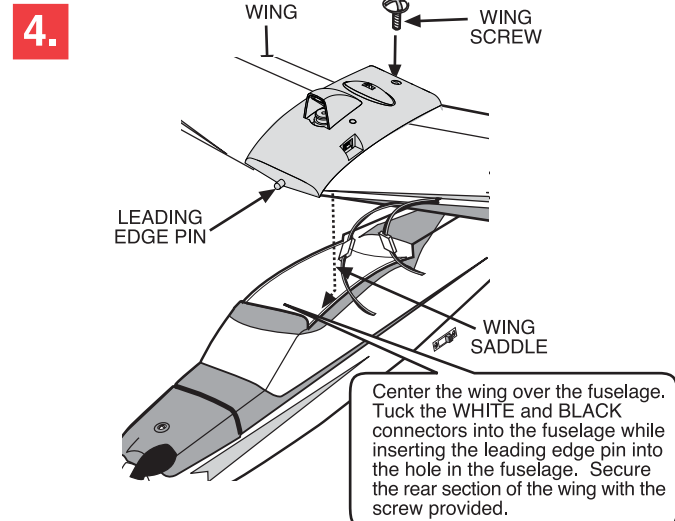
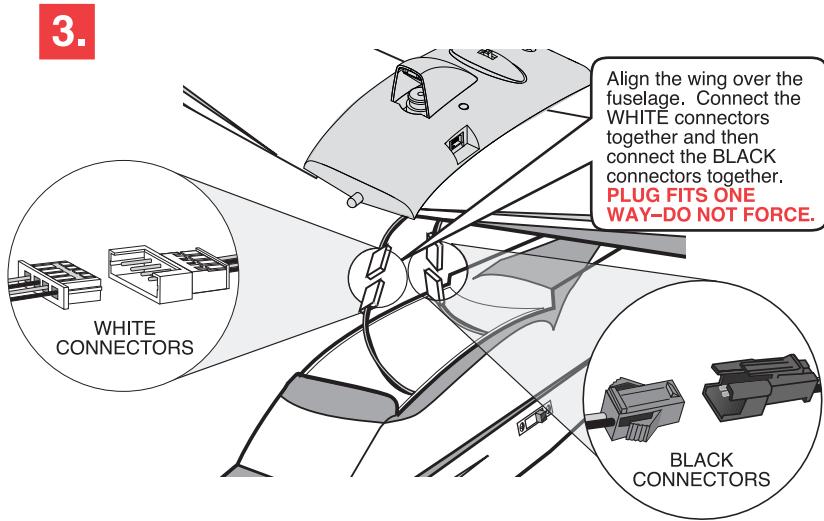
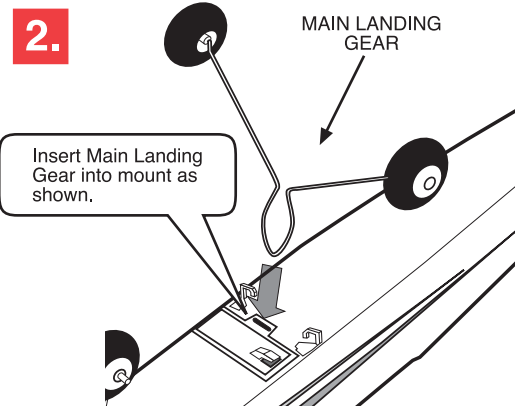
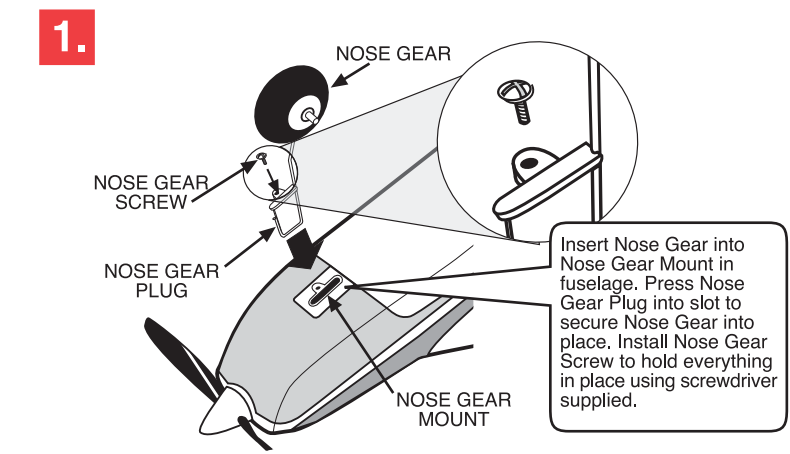
- Switch the camera mode switch to STILL, the camera can take a total of 15 pictures.
- Press and release the picture button. Wait 5 seconds between shots. For best results during flight, release the Speed Control Stick (center-cruise speed) before taking pictures.

TAKING VIDEO MOVIES



- Switch the camera mode switch to VIDEO, the camera can record a total of 14 seconds of video.
- Press and hold the video button to take the entire length of video in one shoot, or press and release the video button to take random lengths of video. Wait 5 seconds between shots. For best results during flight, release the Speed Control Stick (center-cruise speed) before video.

AIRPLANE ASSEMBLY

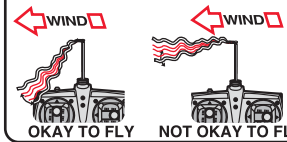


FLYING YOUR PLANE - READ AND STUDY THESE INSTRUCTIONS *BEFORE YOU FLY!*

PRE-FLIGHT CHECKLIST

1. Have a fully charged battery installed in plane.
2. Fully extend controller antenna.
3. Check wind speed and direction using **wind indicator**.
4. Turn controller switch ON.
5. Turn plane switch ON.
6. Check controls by tapping each control button.

USING THE WIND INDICATOR



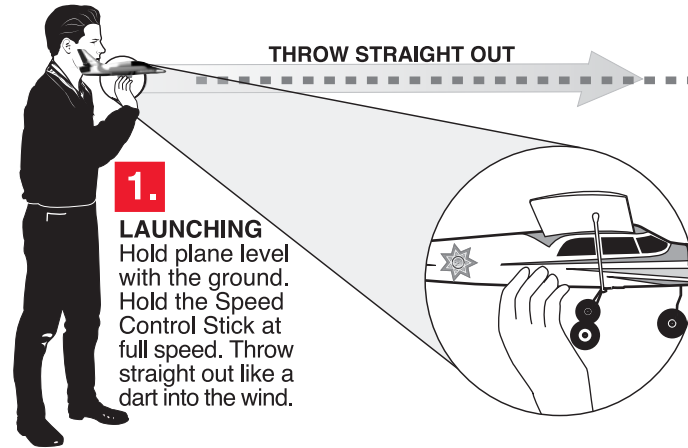
WIND
5 MPH (8 KPH) OR LESS



1.

LAUNCHING
Hold plane level with the ground. Hold the Speed Control Stick at full speed. Throw straight out like a dart into the wind.

THROW STRAIGHT OUT



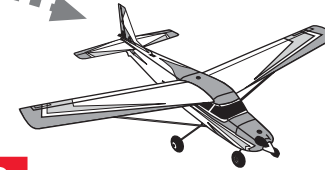
2.

TAKE OFF
Apply full power. Allow plane to climb 3-5 seconds. Tap Turn Control Stick Left or Right if needed to level wings.



3.

BEGIN RIGHT TURN
Tap Turn Control Stick Right to bank wing.



4.

END RIGHT TURN
Tap Turn Control Stick Left to level wing.



5.

PREPARE TO LAND
Release the Speed Control Stick to reduce speed. Tap Left or Right if needed to level wings.



6.

LANDING
Press Speed Control Stick down to turn power off. Press the Speed Control Stick up then down when needed to keep the nose up during landing until touch down.



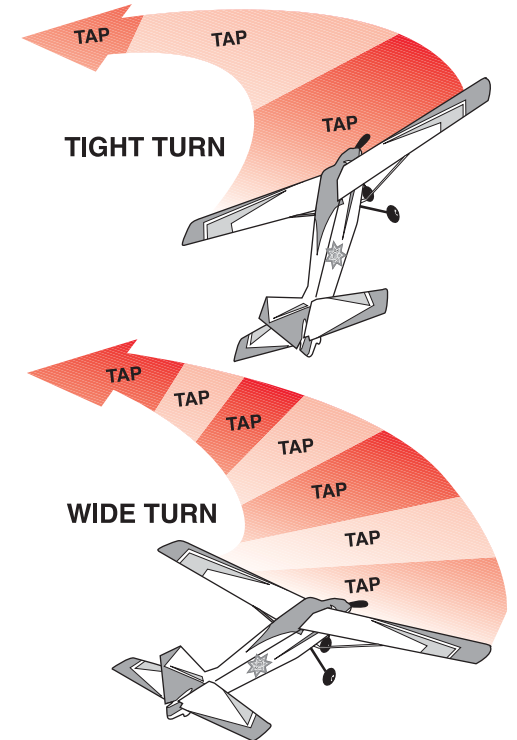
CHOOSE A GOOD FLYING SITE:



Find a large area with a soft grassy surface to fly over like a soccer field. Avoid flying near people, houses, power lines, trees or buildings.

STEERING YOUR PLANE

- DO NOT continuously hold the Turn Control Stick. This over-steering may cause your Highway Patrol™ plane to get into a tight spiral turn, resulting in a crash.
- The longer you hold the Turn Control Stick the tighter the turn. Longer taps for tight turns, shorter taps for wide turns.



- Only tap the Turn Control Stick enough to bank the wing for a turn, then stop tapping. Once the wing is banked the plane will continue to turn, you DO NOT have to hold the Turn Control Stick.
- Tap the Turn Control Stick in the opposite direction of the turn to level wings and fly straight.

ADVANCED FLYING TECHNIQUE

Takeoff From the Ground: When taking off from the ground it is important to take off from a smooth surface, such as the infield of a baseball field or a smooth and straight sidewalk.

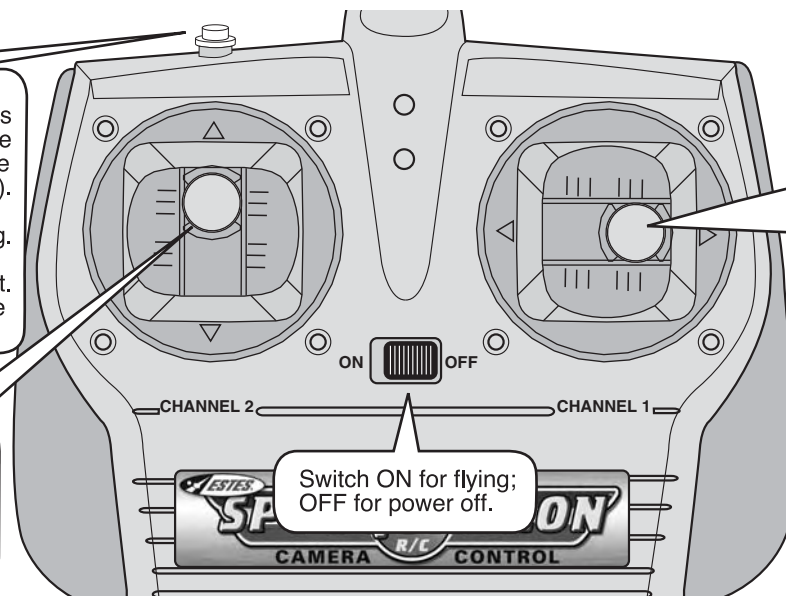
KNOW YOUR CONTROLLER

VIDEO/PICTURE BUTTON

Push and release to take still pictures or video while flying. Switch on plane must be set to either STILL (to take pictures) or VIDEO (to take movies). **NOTE:** 1) Camera will only take video/pictures when motor is running. 2) Allow 5 seconds between each picture or video for camera to reset. See CAMERA OPERATION (page 6) before flying.

SPEED CONTROL STICK

Push up to start motor at cruise speed. Push up a second time and hold for full speed, release for cruise speed. Push down for power off.



TURN CONTROL STICK
Tap LEFT to bank wings and turn plane left. Tap RIGHT to bank wings and turn plane right. See STEERING YOUR PLANE before flying.

Switch ON for flying;
OFF for power off.

CONTROLLING THE PLANE FLYING TOWARDS YOU!

When the plane is flying towards you while watching it from the ground, to turn the plane to **your** LEFT you need to tap RIGHT. To Turn RIGHT tap LEFT.
OR
IMAGINE YOU ARE CONTROLLING FROM THE COCKPIT!

