

TROUBLESHOOTING

CAMERA NOT OPERATING (Turn camera ON before takeoff)

- Pictures ‘scrambled’ or half images

Software won’t load

Camera will not take pictures

No pictures to download
- Low Camera Batteries - Replace batteries.

Using Win98 - Install DIRECTX8.1.b as per instruction.

Check connection to plane.

Memory is full - Download pictures then turn camera Switch OFF then back ON to clear.

Batteries low - Replace with new batteries.

Camera was switched OFF before being connected to computer.

ELECTRIC MOTOR DOES NOT RUN OR LOW POWER:

- Controller and/or plane switch not turned ON

Flight Battery not charged

Batteries in charger need replacement

Propeller jammed against plane’s nose
- Turn switch ON.

Recharge Flight Battery.

Replace batteries in charger.

Pull propeller 1/16 in. (1.5 mm) away from nose.

RUDDER DOES NOT MOVE WHEN CONTROL STICK MOVED:

- Flight Battery not charged

Controller batteries low
- Recharge Flight Battery.

Replace batteries.

SHORT FLIGHT TIME:

- Flight Battery not fully charged

Flight Battery damaged from over charging
- Recharge Flight Battery.

Replace Flight Battery.

ERRATIC, LITTLE OR NO RADIO CONTROL

- Other controllers (CBs, RC Cars or Boats) operating on same frequency near by

Controller batteries low

Flight Battery low
- Move to a new location.

Replace batteries.

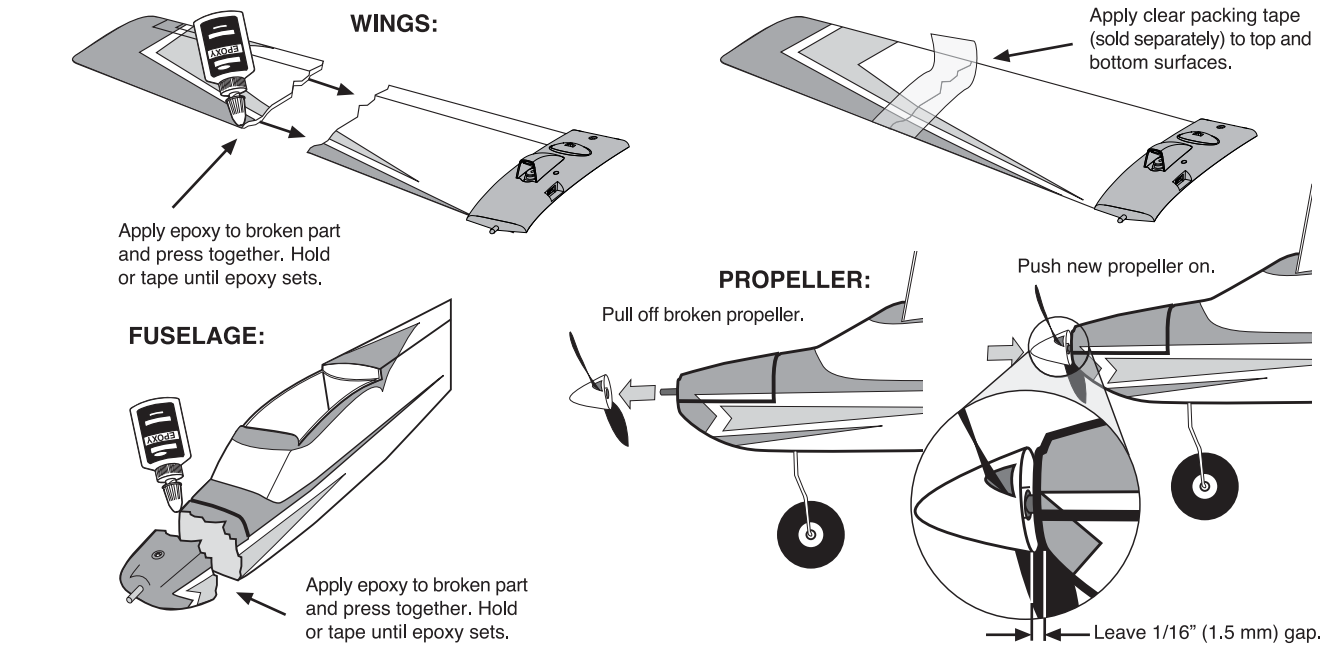
Recharge Flight Battery.

DO NOT RETURN YOUR PLANE TO THE STORE WHERE PURCHASED. For more tips, go to [www.estesrockets.com](http://www.estesrockets.com).

**IMPORTANT:** Always discharge flight battery completely before recharging.

REPAIRS YOU CAN DO YOURSELF

Your plane is easy to repair. If damaged, repair any foam part that breaks with 5-minute epoxy and/or clear packing tape (sold separately at hardware or hobby stores). Review the illustrations below.



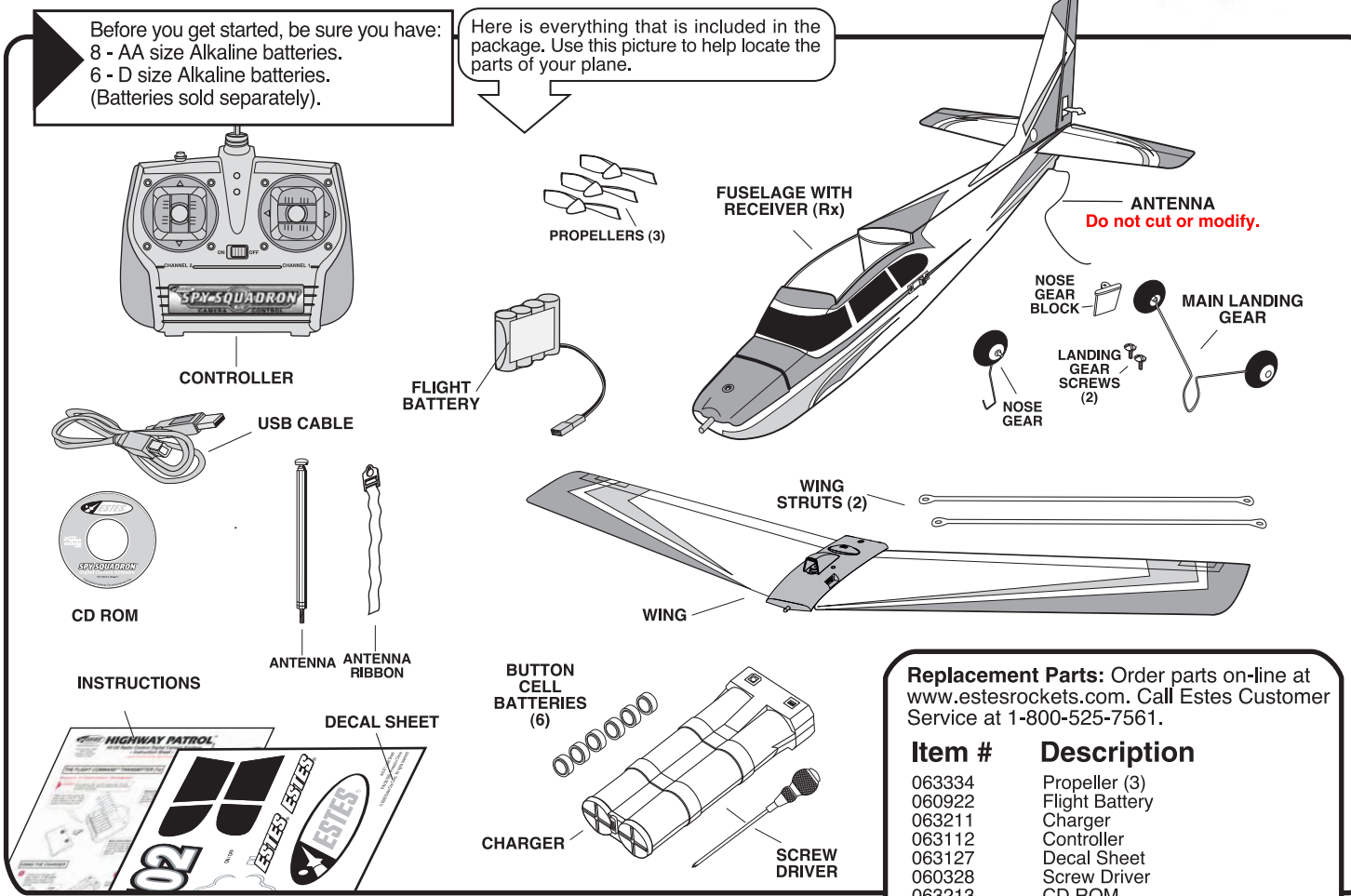
[www.estesrockets.com](http://www.estesrockets.com)

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Printed in China

HIGHWAY PATROL™

#4155 Radio Control Digital Camera Spy Plane – Instruction Manual –

KEEP FOR FUTURE REFERENCE



**Replacement Parts:** Order parts on-line at [www.estesrockets.com](http://www.estesrockets.com). Call Estes Customer Service at 1-800-525-7561.

Item # Description

- |        |                                 |
|--------|---------------------------------|
| 063334 | Propeller (3)                   |
| 060922 | Flight Battery                  |
| 063211 | Charger                         |
| 063112 | Controller                      |
| 063127 | Decal Sheet                     |
| 060328 | Screw Driver                    |
| 063213 | CD ROM                          |
| 061647 | Antenna                         |
| 063331 | Wing w/Camera & Wing Strut (2)  |
| 063332 | Fuselage w/ Rx & Wing Strut (2) |
| 063108 | Landing Gear                    |
| 063333 | Fin & Tail Pin (2)              |
| 060455 | Button Cell Batteries (6)       |
| 063212 | USB Cable                       |

IMPORTANT USER INFORMATION

This radio system complies with Part 95 of the F.C.C. rules. Operation is subject to the following two conditions:

1. This radio system may not cause harmful interference.
2. This radio system must accept any interference received, including interference that may cause undesired operation.

Changes or modification of any kind to the transmitter not expressly approved by Estes-Cox Corp. will void the user's authority to operate the transmitter.

Transmitter frequency can only be changed and the associated electronic circuitry tuned by Estes-Cox Corp. Changing frequency by the consumer will void the warranty and is a violation of F.C.C. regulations.

Do not cut or shorten the length of the transmitter antenna or receiver antenna wire on the back of the plane. Doing so greatly reduces the operational range of the radio system.

Refer to label on back of transmitter for operating frequency. Do not fly or operate more than one R/C plane or vehicle on the same frequency at a time. Operational interference may occur.

**! WARNING: TO AVOID INJURY AND PROPERTY DAMAGE:**

**PROPELLER SAFETY:**

- Keep your face, fingers, clothing and other objects away from the propeller at all times.
- Keep spectators behind and away from plane at all times.
- Before each flight, make certain propeller is securely attached to your plane.
- After each flight, inspect the propeller for nicks and breaks.
- Discard and replace nicked, chipped, cracked or broken propeller.
- Use only the propeller supplied with the plane.
- Do not alter, modify, or customize the propeller.

**BATTERY AND CHARGING SAFETY:**

This plane contains 1 removable 300 mAh 4.8 Volt Nickel-Metal Hydride (NiMH) battery. To prevent possible injury to the battery or you, read the following precautions. Battery should be recycled.

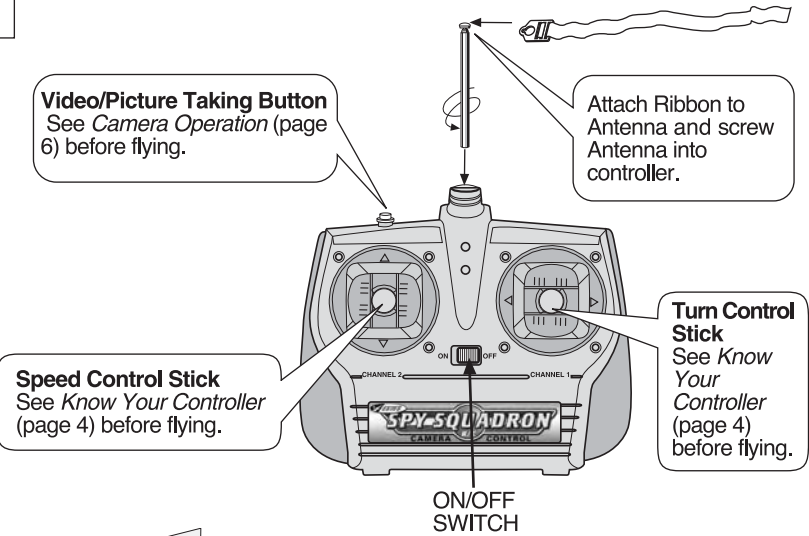
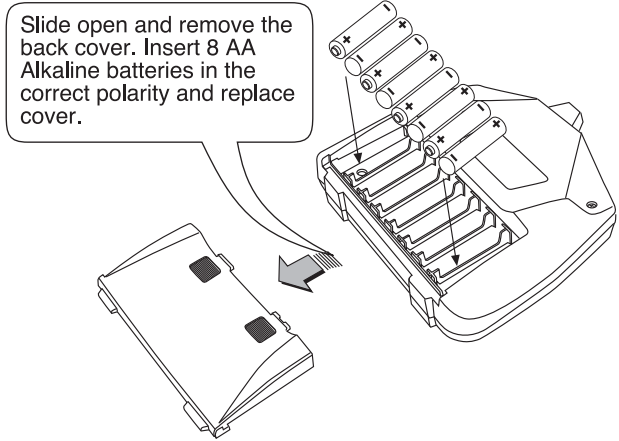
- An adult must be present during charging.
- Remove battery from plane before charging.
- DO NOT open battery—may burst and release toxic liquids.
- Use only the charger supplied to charge the battery.
- Check battery continuously during charging.
- Do not leave battery unattended during charging.
- Never store or transport battery in plane.
- Never leave battery connected to charger.
- If battery gets hot, makes a popping sound, or leaks liquid during a charge, disconnect from charger immediately.
- Do not short-circuit battery or charger.
- Dispose of battery properly—do not incinerate or burn.



# THE SPY SQUADRON™ CONTROLLER

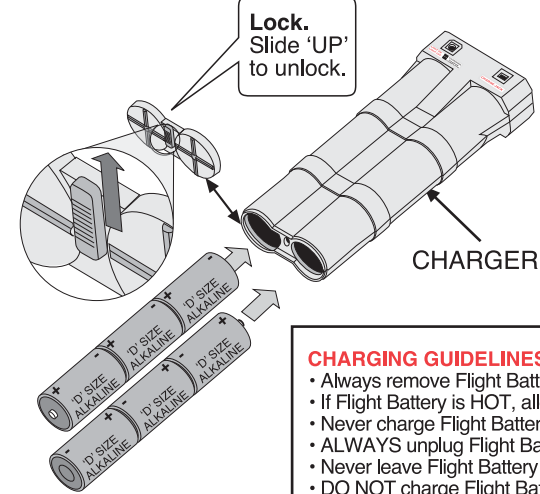
(Requires 8 - AA Alkaline Batteries - Sold Separately)

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

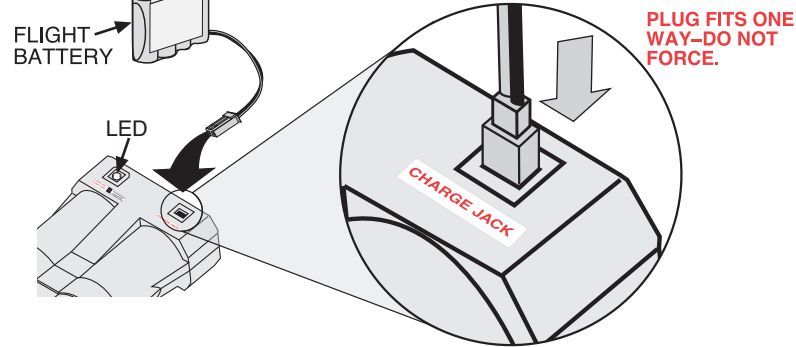


## USING THE CHARGER

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



**2**



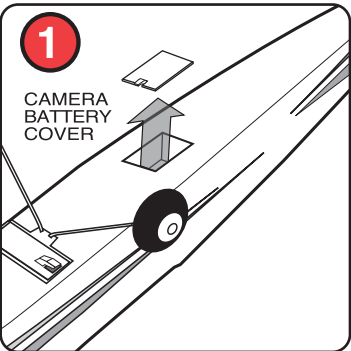
**CHARGING GUIDELINES:**

- 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.

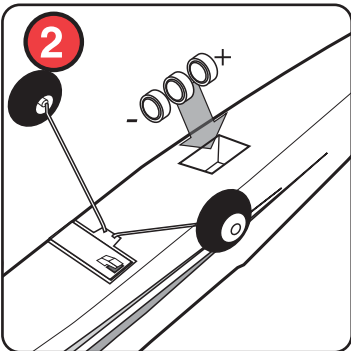
1. Fully discharge Flight Battery by running the motor until it stops.  
2. Remove Flight Battery from plane. NOTE: If Flight Battery is very warm, let it cool before charging.  
3. Plug Flight Battery into Charger. Charger LED will turn solid.  
4. Charge the Flight Battery until the Charger LED blinks.  
(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

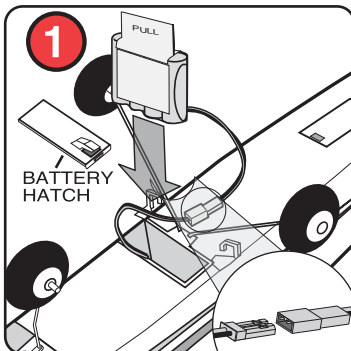


Remove Camera Battery Compartment cover.

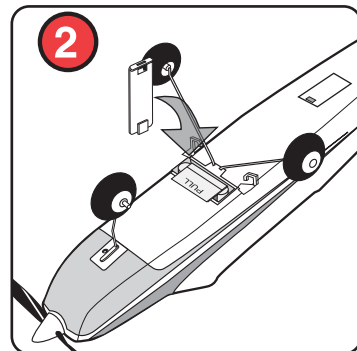


Insert 3 button cell batteries (included) in correct polarity as shown, and then replace cover.

## 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.

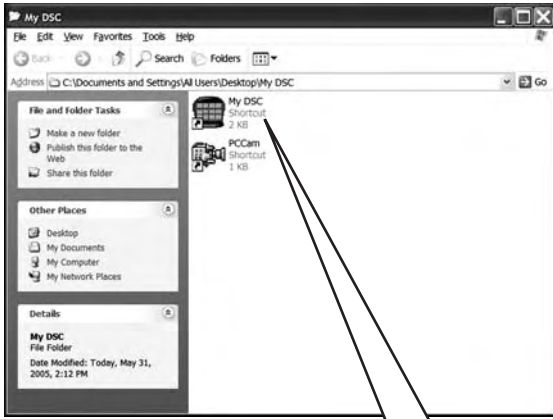
# DOWNLOAD PICTURES FROM CAMERA

**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.



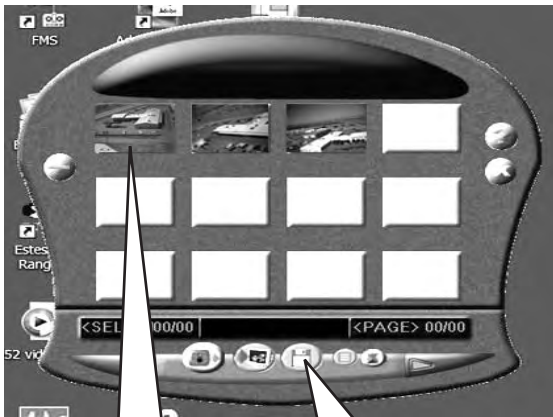
A. Open 'My DSC 2' folder on the desktop.



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

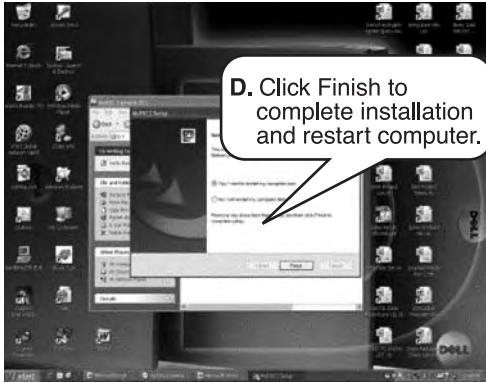
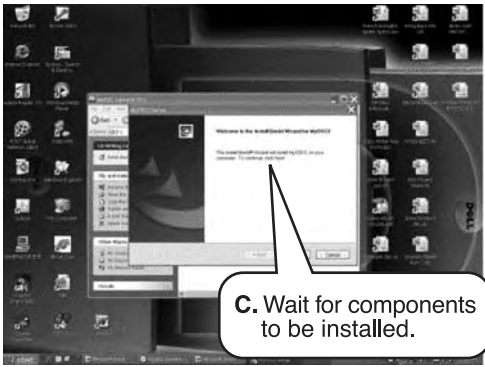
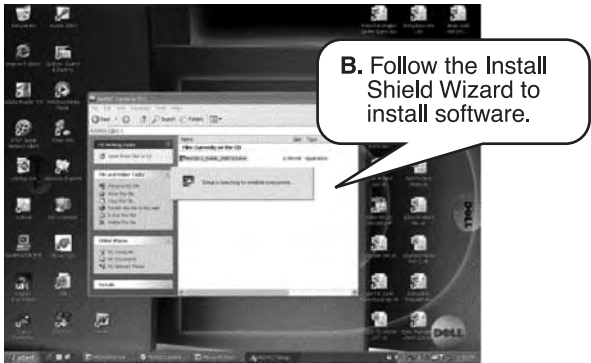
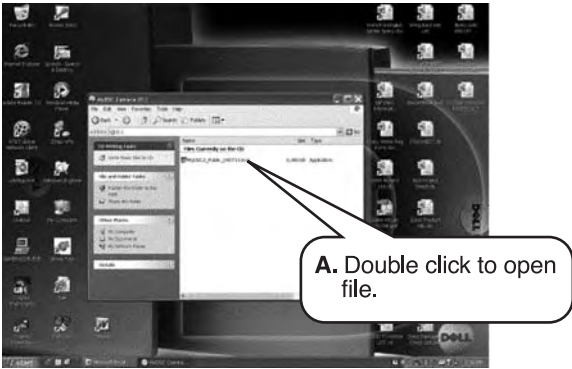
**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can 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.

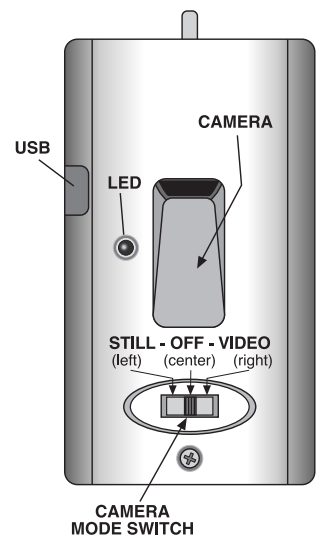


# LOAD THE SOFTWARE (My DSC 2)

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



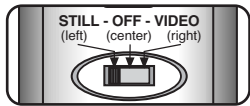
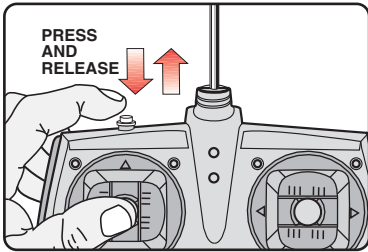
## PRE-FLIGHT CAMERA SETUP

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:**

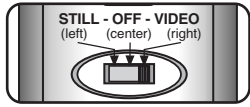
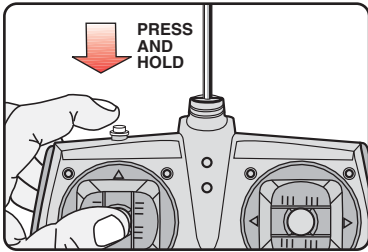
1. DO NOT switch camera OFF or from STILL to VIDEO or vice versa before downloading to a PC. Doing so will ERASE all pictures/video from camera.
2. Camera will only take pictures or videos when plane's motor is running.
3. Allow 5 seconds between each picture/video for camera to reset.
4. Replace the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



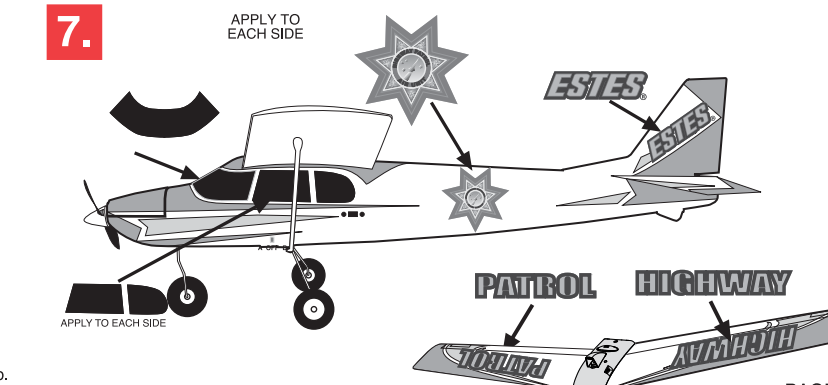
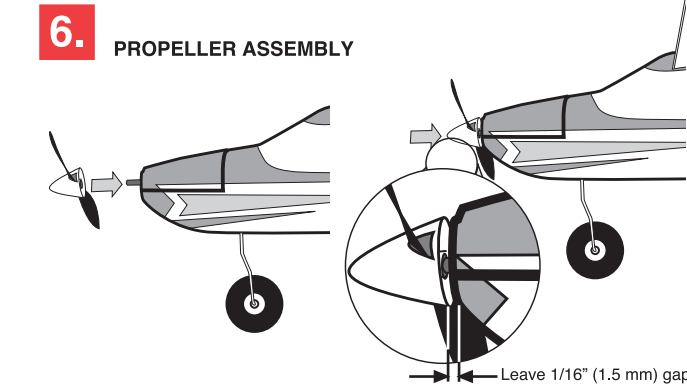
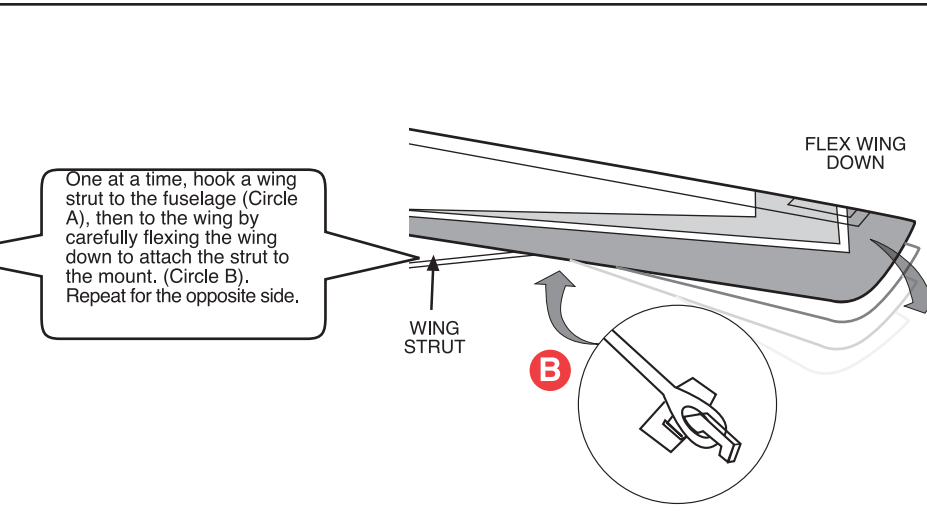
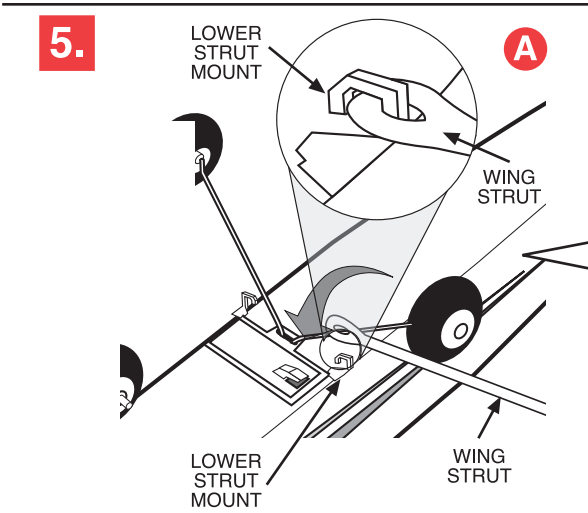
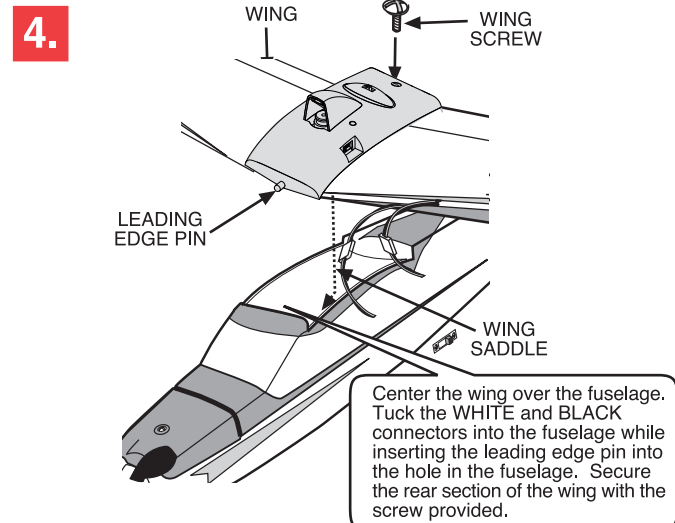
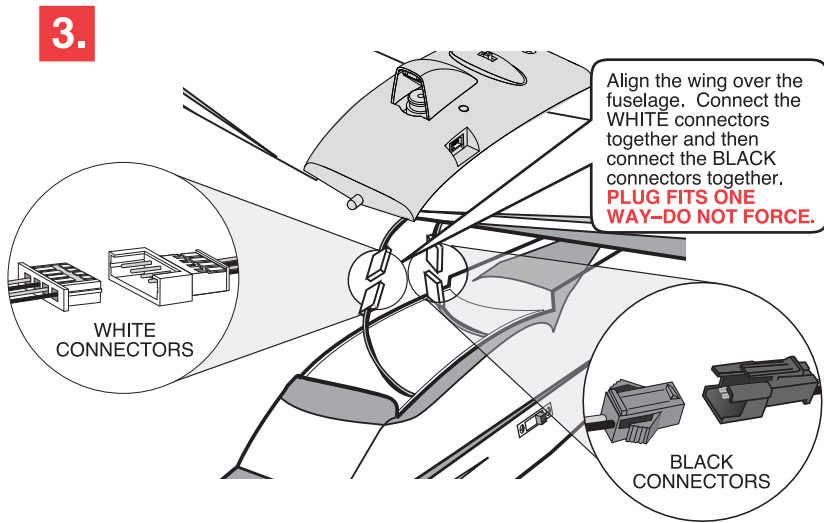
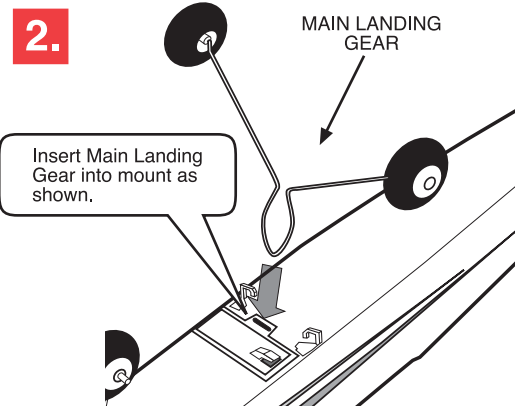
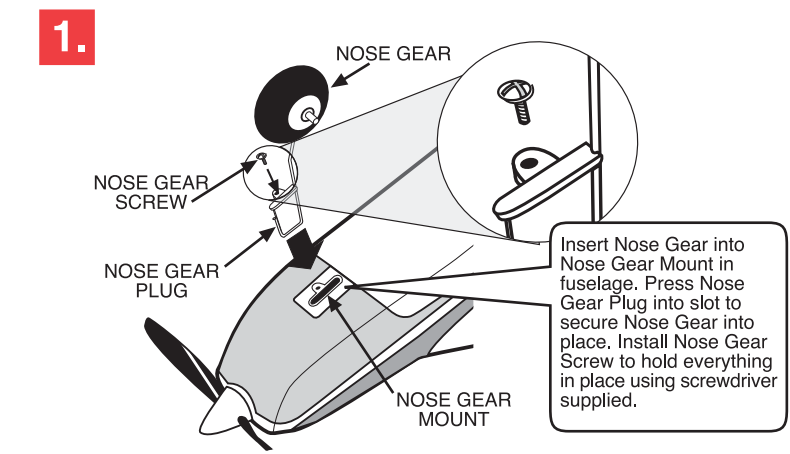
- Switch the camera mode switch to STILL, the camera can take a total of 15 pictures.
- Press and release the picture button. Wait 5 seconds between shots. For best results during flight, release the Speed Control Stick (center-cruise speed) before taking pictures.

## 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

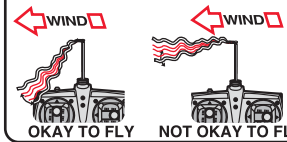


# FLYING YOUR PLANE - READ AND STUDY THESE INSTRUCTIONS *BEFORE YOU FLY!*

## 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



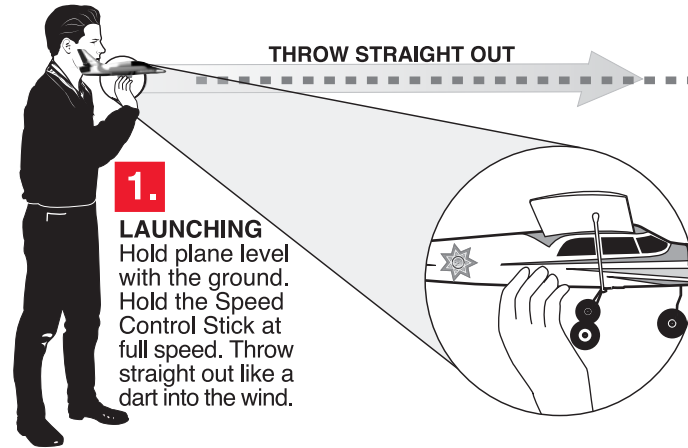
WIND  
5 MPH (8 KPH) OR LESS



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



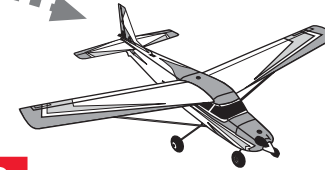
2.

**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.



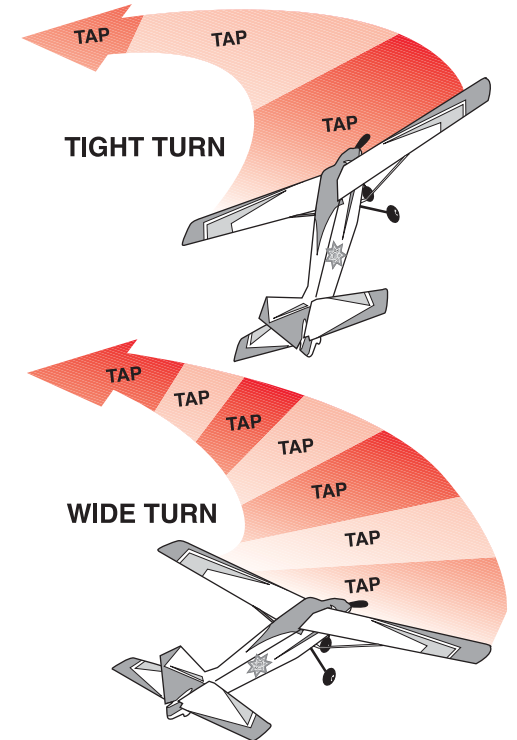
## CHOOSE A GOOD FLYING SITE:



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.

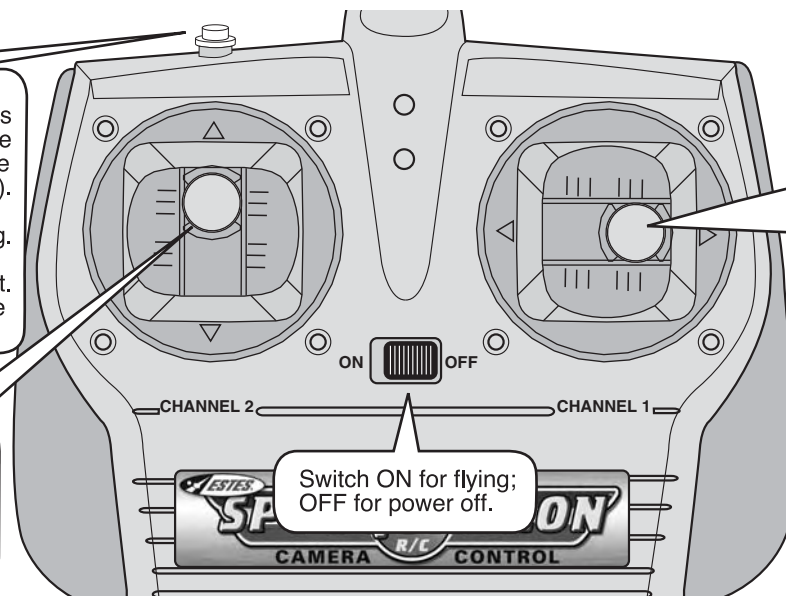
## KNOW YOUR CONTROLLER

### 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!**

