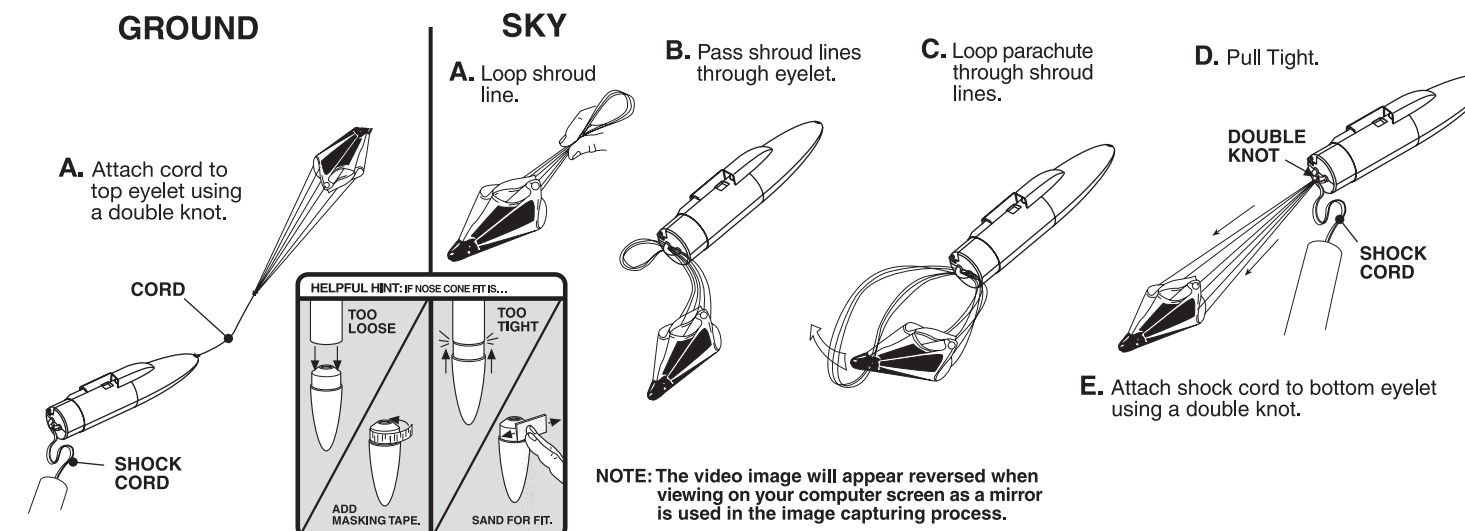## 6. ATTACH PARACHUTE & SHOCK CORD

If you'd like to capture video of the GROUND as the rocket descends, attach a piece of braided cord about 12" long (not included) to the top eyelet and then attach the parachute to the other end of the cord. Pack the parachute in the body tube as normal and run the cord along the side of the nose cone.

NOTE: There are two ways to attach the parachute depending on the images you would like to see during the recovery phase.
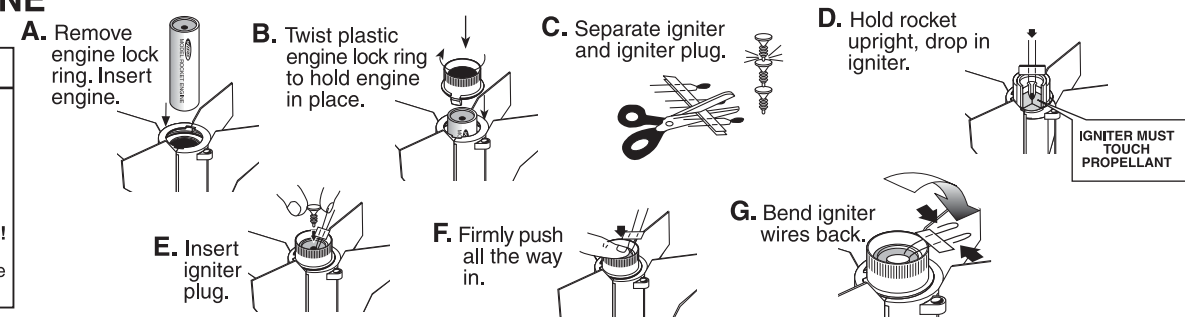
OR

If you'd like to shoot the SKY and parachute during recovery, then attach the parachute to the bottom of the nose cone as shown below.
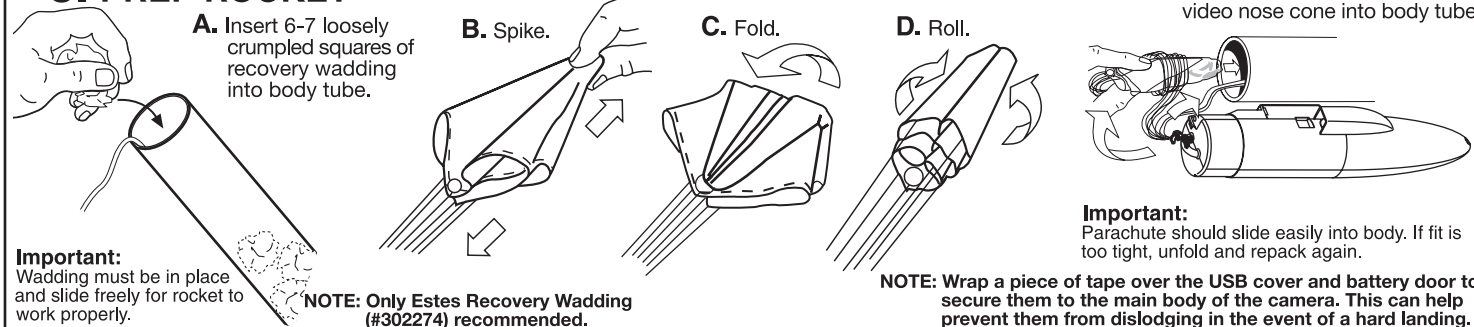
GROUND

A. Attach cord to top eyelet using a double knot.

CORD

SHOCK CORD

HELPFUL HINT: IF NOSE CONE FIT IS...
TOO LOOSE — ADD MASKING TAPE.
TOO TIGHT — SAND FOR FIT.

SKY

A. Loop shroud line.

B. Pass shroud lines through eyelet.

C. Loop parachute through shroud lines.

D. Pull Tight.

DOUBLE KNOT

SHOCK CORD

E. Attach shock cord to bottom eyelet using a double knot.

NOTE: The video image will appear reversed when viewing on your computer screen as a mirror is used in the image capturing process.

7. PREP ENGINE

⚠ **WARNING: FLAMMABLE**
To avoid serious injury, read instructions & NAR Safety Code included with engines. **PREPARE YOUR ENGINE ONLY WHEN YOU ARE OUTSIDE AT THE LAUNCH SITE PREPARING TO LAUNCH!** If you do not use your prepared engine, remove the igniter before storing your engine.

A. Remove engine lock ring. Insert engine.

B. Twist plastic engine lock ring to hold engine in place.

C. Separate igniter and igniter plug.

D. Hold rocket upright, drop in igniter.

IGNITER MUST TOUCH PROPELLANT

E. Insert igniter plug.

F. Firmly push all the way in.

G. Bend igniter wires back.

8. PREP ROCKET

A. Insert 6-7 loosely crumpled squares of recovery wadding into body tube.

B. Spike.

C. Fold.

D. Roll.

E. Wrap lines loosely around 'chute, insert 'chute, shock cord and video nose cone into body tube.

Important: Parachute should slide easily into body. If fit is too tight, unfold and repack again.

Important: Wadding must be in place and slide freely for rocket to work properly.

NOTE: Only Estes Recovery Wadding (#302274) recommended.

NOTE: Wrap a piece of tape over the USB cover and battery door to secure them to the main body of the camera. This can help prevent them from dislodging in the event of a hard landing.

Experiment and have fun with your Oracle™ video rocket!

If you really want to capture the liftoff phase, wait a second or two AFTER the green LED has stopped blinking before launching the rocket. This way the video camera will be running before the rocket lifts off the pad.

If you really want to capture the recovery and landing phase, launch the rocket BEFORE the green LED has stopped blinking. This way the rocket will be in the air when the video camera starts running, allowing for more time of the recovery phase to be recorded.

For additional fun away from the launch site, you can use the Oracle™ as a stand-alone video camera. Simply detach the shock cord and parachute from the nose cone and operate it normally. Video your pets, your family or your friends.

TROUBLESHOOTING

RED LED DOES NOT LIGHT WHEN POWER SWITCH IS "ON".
1) Low Battery - Replace battery with a new "AAA" alkaline battery.
2) Battery installed incorrectly, check polarity.

AVI FILE TAKES A LONG TIME TO DOWNLOAD
The speed at which the .avi file is downloaded is dependent on the computer you are using. A faster computer will download the file quicker.
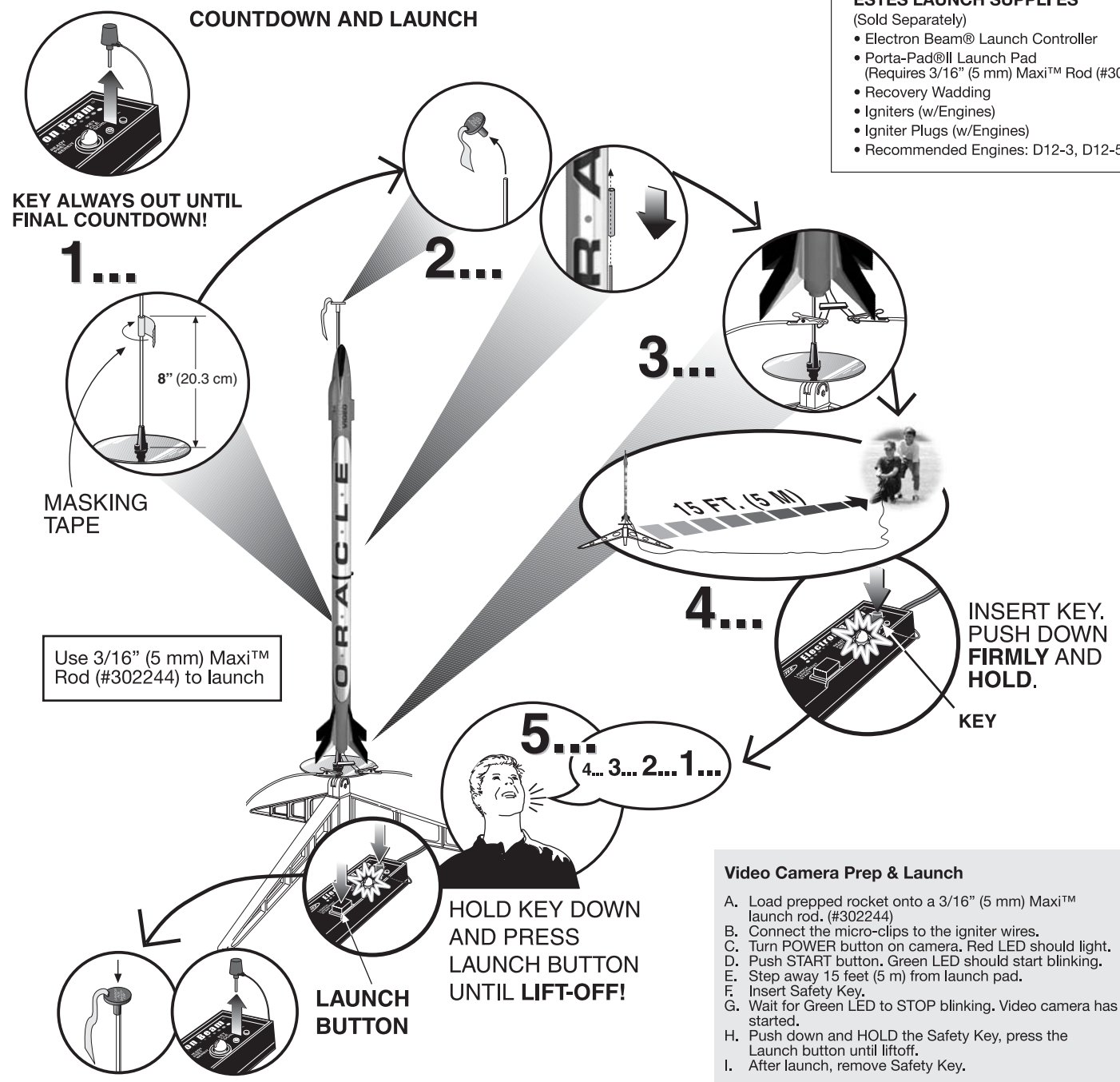
COMPUTER DOES NOT RECOGNIZE CAMERA AFTER SOFTWARE HAS BEEN INSTALLED.
Run the Un-install Wizard. Then reinstall the software.

ENGINE MISFIRE
See page 6 for MISFIRES.

COUNTDOWN AND LAUNCH

KEY ALWAYS OUT UNTIL FINAL COUNTDOWN!

1...

MASKING TAPE

8" (20.3 cm)

Use 3/16" (5 mm) Maxi™ Rod (#302244) to launch

2...

3...

4...

15 FT. (5 M)

INSERT KEY, PUSH DOWN **FIRMLY** AND **HOLD**.

KEY

5... 4...3...2...1...

HOLD KEY DOWN AND PRESS LAUNCH BUTTON UNTIL **LIFT-OFF!**

LAUNCH BUTTON

ESTES LAUNCH SUPPLIES
(Sold Separately)
• Electron Beam® Launch Controller
• Porta-Pad®II Launch Pad (Requires 3/16" (5 mm) Maxi™ Rod (#302244)
• Recovery Wadding
• Igniters (w/Engines)
• Igniter Plugs (w/Engines)
• Recommended Engines: D12-3, D12-5

Video Camera Prep & Launch

A. Load prepped rocket onto a 3/16" (5 mm) Maxi™ launch rod. (#302244)
B. Connect the micro-clips to the igniter wires.
C. Turn POWER button on camera. Red LED should light.
D. Push START button. Green LED should start blinking.
E. Step away 15 feet (5 m) from launch pad.
F. Insert Safety Key.
G. Wait for Green LED to STOP blinking. Video camera has started.
H. Push down and HOLD the Safety Key, press the Launch button until liftoff.
I. After launch, remove Safety Key.

PRECAUTIONS

NAR Safety Code

NO DRY GRASS OR WEEDS

PRE-LAUNCH CHECK

For safety, never launch a damaged rocket. Check the rocket's body, nose cone and fins. Also, check the engine mount, recovery system and launch lug(s). Repair any damage before launching the rocket.

FLYING YOUR ROCKET

Choose a large field (500 ft. [152 m] square) free of dry weeds and brown grass. The larger the launch area, the better your chance of recovering your rocket. Football fields and playgrounds are great. Launch only with little or no wind and good visibility.

Always follow the National Association of Rocketry (**NAR**) Safety Code.

MISFIRES

TAKE THE KEY OUT OF THE CONTROLLER. WAIT ONE MINUTE BEFORE GOING NEAR THE ROCKET! Disconnect the igniter clips and remove engine. Take the plug and igniter out of the engine. If the igniter has burned, it worked but did not ignite the engine because it was not touching the propellant inside the engine. Put a new igniter all the way inside the engine without bending it. Push the plug in place. Repeat the steps under Countdown and Launch.

O·R·A·C·L·E™

FLYING MODEL ROCKET KIT INSTRUCTIONS
KEEP FOR FUTURE REFERENCE
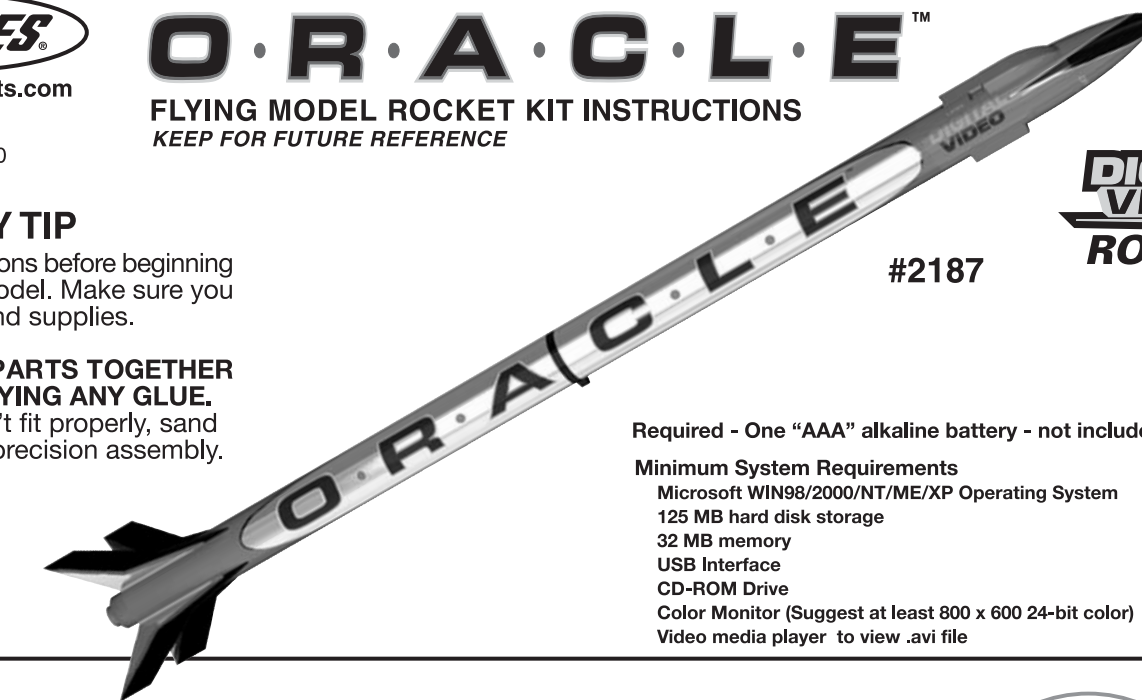
DIGITAL VIDEO ROCKET

#2187

ASSEMBLY TIP

Read all instructions before beginning work on your model. Make sure you have all parts and supplies.

TEST-FIT ALL PARTS TOGETHER BEFORE APPLYING ANY GLUE.
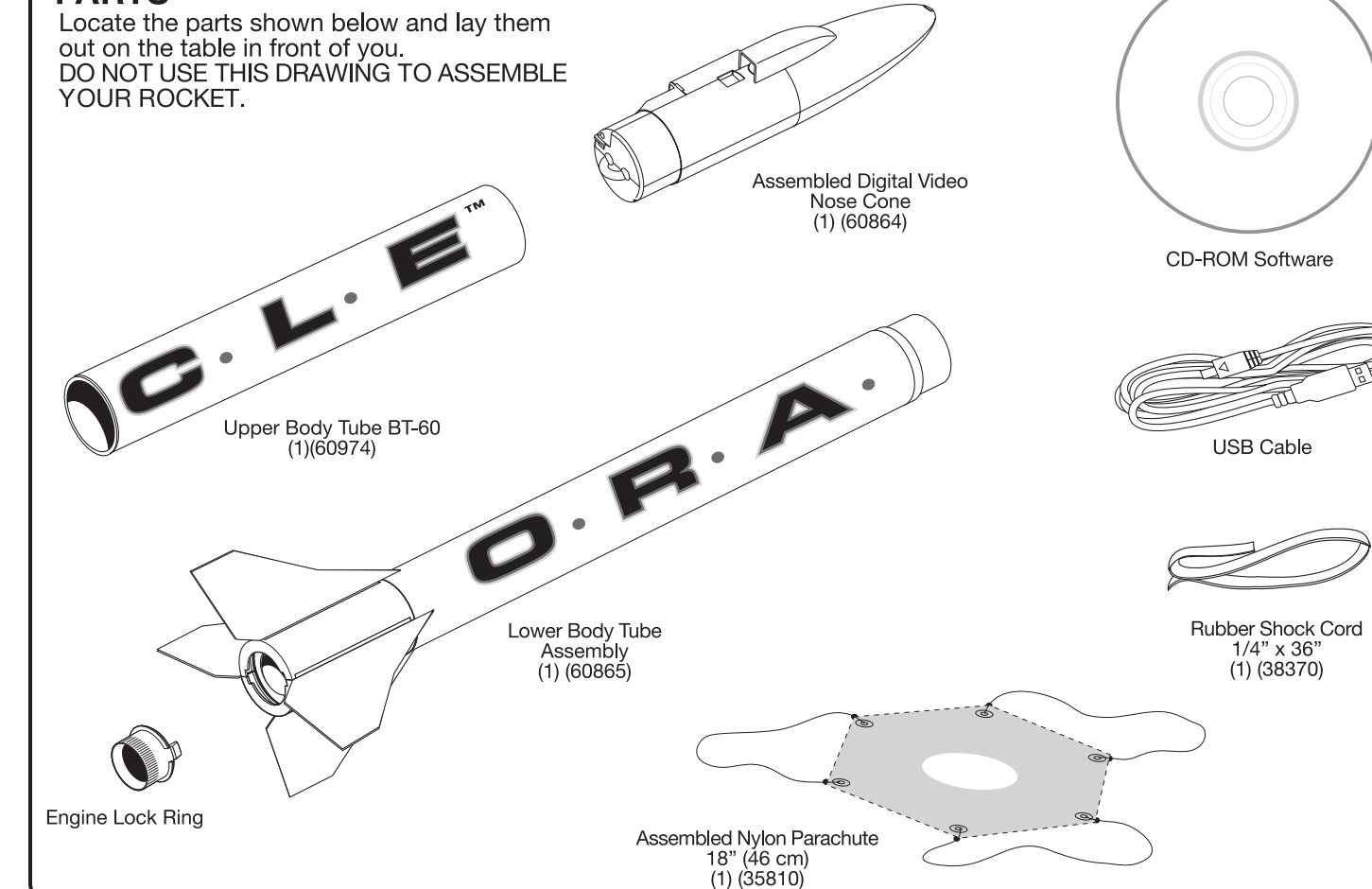If any parts don't fit properly, sand as required for precision assembly.

Required - One "AAA" alkaline battery - not included

Minimum System Requirements
Microsoft WIN98/2000/NT/ME/XP Operating System
125 MB hard disk storage
32 MB memory
USB Interface
CD-ROM Drive
Color Monitor (Suggest at least 800 x 600 24-bit color)
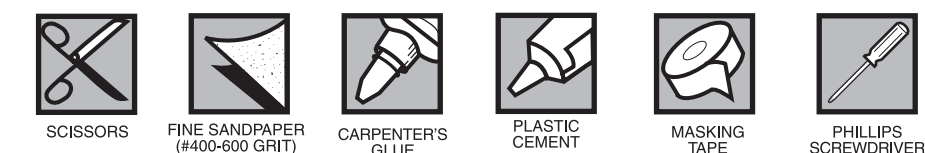Video media player to view .avi file

PARTS

Locate the parts shown below and lay them out on the table in front of you.
DO NOT USE THIS DRAWING TO ASSEMBLE YOUR ROCKET.

Assembled Digital Video Nose Cone (1) (60864)

CD-ROM Software

Upper Body Tube BT-60 (1)(60974)

USB Cable

Lower Body Tube Assembly (1) (60865)

Rubber Shock Cord 1/4" x 36" (1) (38370)

Engine Lock Ring

Assembled Nylon Parachute 18" (46 cm) (1) (35810)

SUPPLIES

In addition to the parts included in the kit you will also need:

SCISSORS   FINE SANDPAPER (#400-600 GRIT)   CARPENTER'S GLUE   PLASTIC CEMENT   MASKING TAPE   PHILLIPS SCREWDRIVER
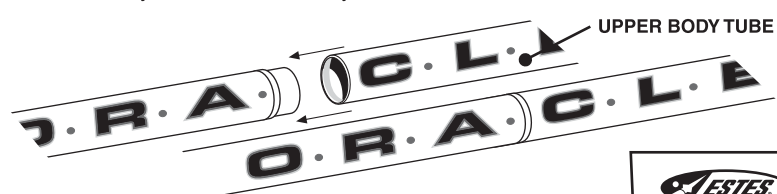
1. ATTACH UPPER BODY TUBE

A. Apply a ring of plastic cement inside upper body tube as shown. Be careful to note which end to apply the plastic cement.

LOWER BODY TUBE ASSEMBLY

B. Slide upper body tube onto tube coupler. Rotate upper body tube to align the body tube decals. Let dry.

UPPER BODY TUBE

SHOCK CORD MOUNT

SECTION 3

SECTION 2

SECTION 1

2. INSTALL SHOCK CORD MOUNT

A. Cut out shock cord mount to the right.

B. Apply glue. Fold forward.
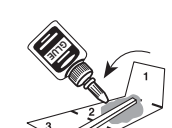
C. Apply glue. Fold forward.

D. Squeeze tightly and hold for one minute.

SHOCK CORD
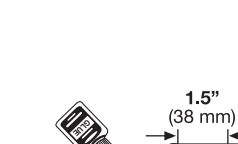
E. Glue mount 1.5" (38 mm) inside front body tube. Hold until glue sets. Let dry.

1.5" (38 mm)

NO

3. INSTALL BATTERY

A. Remove screw from battery door on nose cone to access battery compartment.
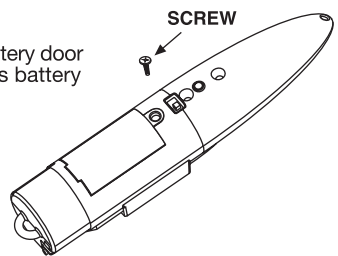
SCREW

B. Install one "AAA" alkaline battery. BE SURE TO NOTE POLARITY.
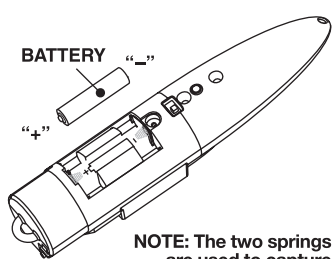
BATTERY "–" "+"

C. Replace battery door and screw. Tighten screw.

Battery Warning
- Do not use rechargeable batteries in unit.
- Only one "AAA" alkaline battery recommended.
- Remove old or dead battery.
- Do not place battery in fire.
- Remove the battery if unit will be stored for long periods of time.
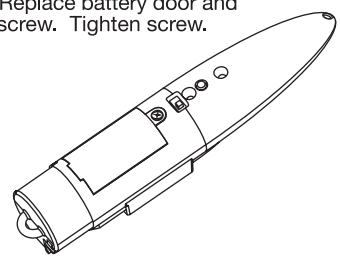
NOTE: The two springs are used to capture the battery so that it maintains contact with the terminals during flight.

4. INSTALL SOFTWARE

**Important:** Close other programs before installation.

Important: If your operating system is WIN98, you must first run *DirectX 8.1b Redist Package.EXE* BEFORE you set up the driver for the digital camera. This executable file is located on the Oracle software CD in the DirectX folder.

A. Insert CD into the CD-ROM drive.
B. Click Install DC Driver.
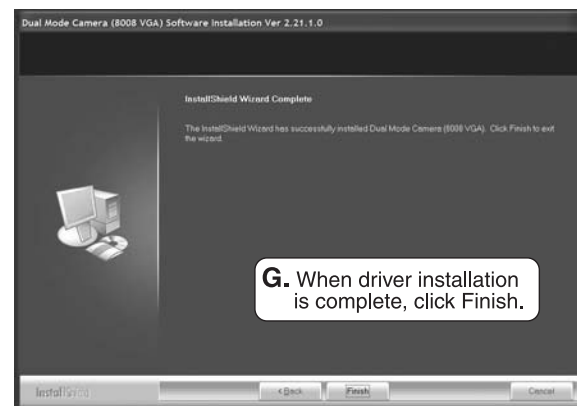
C. At the Welcome screen, click Next.

Exit

page 2
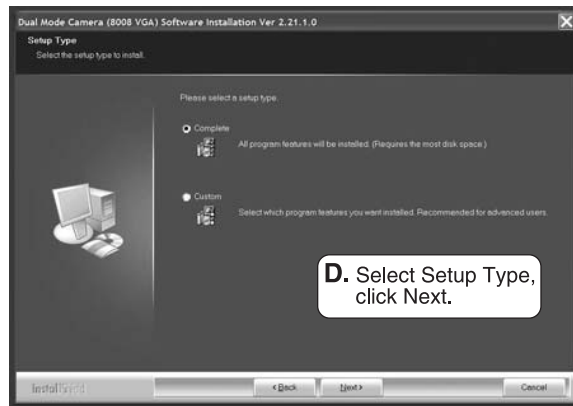
D. Select Setup Type, click Next.

E. Click Install.

F. If warning pops up, click Continue Anyway.

Continue Anyway   STOP Installation

**G.** When driver installation is complete, click Finish.

IMPORTANT: To complete the software installation and new hardware recognition, keep the CD in the computer and complete Step 5. It is recommended that you complete Step 5 before your first launch.
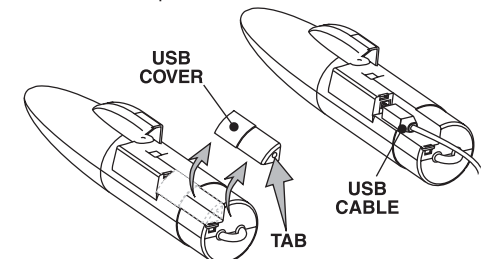
5. TEST VIDEO NOSE CONE

A. Slide POWER switch to ON. Red LED will light.

GREEN LED
RED LED
POWER SWITCH
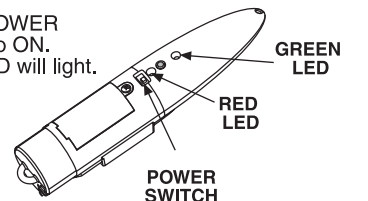
B. Press START button. The Green LED will start blinking. When Green LED stops blinking, the video camera will start taking pictures.

GREEN LED
START BUTTON
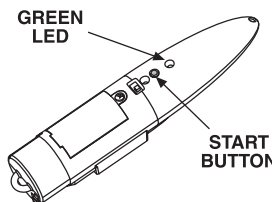
C. Push tab in gently and remove USB cover on nose cone. Connect the USB cable to the connector on the nose cone and the other end to the computer.

USB COVER
TAB
USB CABLE

ATTENTION: Do not connect the video nose cone to the computer until the software is installed.

NOTE: Ensure battery has been installed correctly and battery door is secured before operating video nose cone.

IMPORTANT: When the POWER switch is turned "OFF" or if battery power is interrupted, the video stored in memory will be deleted and there is no method to recover it.

The camera stores one video sequence in its memory. In order to shoot another video, you should first save the current video to your computer. After the video is saved, turn the POWER switch "OFF" for one minute before shooting again.

NOTE: Once you have pushed the START button and the Green LED starts blinking, you will have 15 seconds to move away from the launch pad and launch the rocket.

NOTE: The video runs for approximately 30 seconds. After the video sequence has been completed, the unit will go into a sleep mode and the green LED will turn off. This sleep mode helps to conserve battery power. Remember, it is important to keep the Power Switch turned "ON" during this time or you will lose your video!
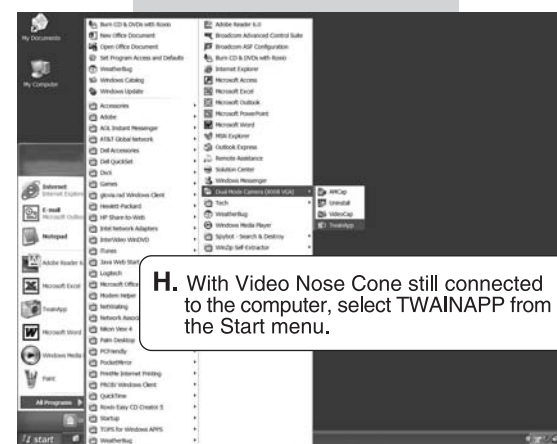
IMPORTANT: Do NOT turn the POWER switch OFF after the camera has taken a video. Turning the POWER switch OFF will erase all images stored in memory.

D. Found New Hardware wizard will start, click Next.

E. Make sure the CD is in the computer, click Next.

page 3

F. If warning pops up, click Continue Anyway.

Continue Anyway   STOP Installation
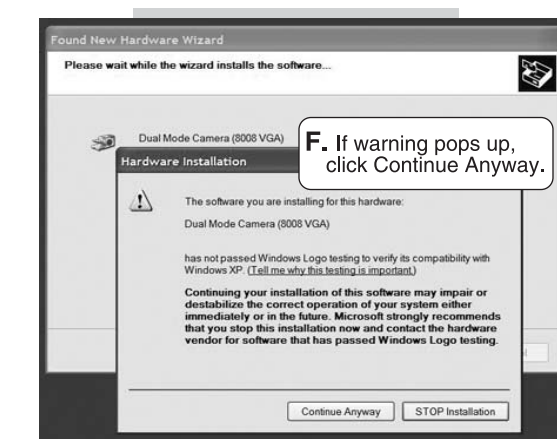
G. When hardware recognition is complete, click Finish.

H. With Video Nose Cone still connected to the computer, select TWAINAPP from the Start menu.

**I.** The computer should recognize the new video camera hardware.

J. A new window will open up showing a live video image. Click on the picture of the camera in the lower right corner to start the Download of the video.

K. The Download of the video from the camera to your computer will start.

L. After the Download, click on the image in the top right corner, then click on Transfer to save the file.
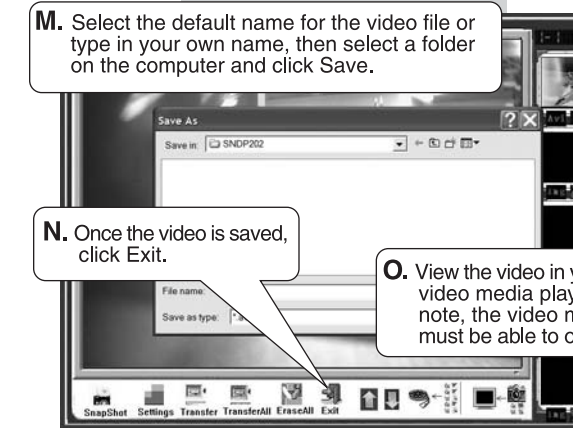
M. Select the default name for the video file or type in your own name, then select a folder on the computer and click Save.

N. Once the video is saved, click Exit.

O. View the video in your preferred video media player. Please note, the video media player must be able to open .avi files.

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