



## Thank you for your purchase of the RoverCam 23!

### 1.1 Features of the RoverCam 23:

- Multiple heights give you a lot of flexibility to shoot
- Light weight, so you can easily transport the RoverCam 23
- Can be setup and stored in less than 5 minutes!
- Comes with an accessory bag for easy transport
- The camera is powered by the battery at the base, freeing you from having to buy an extended life battery
- Designed to protect your investment
- Quick release plate for the camera allows for easy setup, and protection plate allows you to set the ROVERCAM 23 down on the ground!
- Electrical Tilt of the RoverCam 23 gives you great control over shooting
- Adjustable 8 inch monitor with 450 CD/M2 brightness, providing you a bright and clear view!

### 1.2 Warnings



#### *1.2.1 Overhead Power Lines Warning*

Overhead power lines are especially hazardous because they carry extremely high voltage. **Fatal electrocution is the main risk, but burns and falls from elevations are**

**also hazards.** Using tools and equipment that can contact power lines increases the risk. You must take adequate care to make sure that the RoverCam 23 is not operating close to overhead power lines.

### **How Do I Avoid Hazards?**

Look for overhead power lines. Post warning signs. Stay at least 30 feet away from overhead power lines. Unless you know otherwise, assume that overhead lines are energized.

## ***1.2.2 Be Careful when lowering and raising the RoverCam 23***

### **Raising the RoverCam 23:**

The RoverCam 23 is raised by standing by the camera and gripping the mast. You would then walk up the RoverCam 23 by moving your hands up the mast sections as you push the mast up until the tripod supports the Rover23. While not heavy, it is possible to drop the RoverCam 23 if you are not careful. Make sure no one is standing near by the RoverCam 23 while raising it. You do not want to provide a hazard for those around you.

### **Lowering the RoverCam 23:**

The RoverCam 23 is lowered by standing at the base of the tripod, opposite where the battery is mounted on the tripod. The battery will provide a good counterbalance for you when lowering the RoverCam 23. Gripping the Bottom section of the mast at the highest point you are able, pull the RoverCam 23 down gently and back up, moving up the mast section as you walk the RoverCam 23 down. While not heavy, you must take care to keep hold of the RoverCam 23, to avoid dropping the RoverCam 23. Make sure no one is around the RoverCam 23 to avoid providing a hazard to those around you.

## ***1.2.3 Place the RoverCam 23 on a Level Surface***

Make sure to place the RoverCam 23 tripod on a level surface. Placing the Tripod on more than a 5 degree angle could result in the RoverCam 23 leaning and falling. This could damage the RoverCam 23 or provide a falling hazard.

## ***1.2.4 Sunspots on the monitor***

Long, daily exposure to direct sunlight will damage an LCD screen. Ultraviolet radiation is the killer. Make sure that you avoid direct sunlight shining on LCD, as it can affect the quality of the picture and can burn in spots on the LCD surface.

## ***1.2.5 Battery Charging and Overcharging***



Do not overcharge the RoverCam 23 Battery. You should charge the RoverCam 23 battery for no more than 16 hours per charge. Overcharging the RoverCam 23 battery will reduce the life of the battery. You should charge the RoverCam 23 battery at least once a month to keep the battery in good shape. It is a good practice with the RoverCam 23 battery to discharge the battery

completely before recharging it. (This will keep the battery in tip top shape!)

### ***1.2.6 High Winds and the RoverCam 23***

**Do not leave the RoverCam 23 unattended!** Although very sturdy, a strong wind gust could topple the RoverCam 23. This could result in damage to the RoverCam 23 and a falling hazard to those around. On windy days, weight down the legs of the tripod. You could use bags of sand or weights against the bottom of the tripod to provide extra stability. Consider only raising the RoverCam 23 one section on windy days to reduce the amount of sway in the camera.

## **1.3 Description of the RoverCam 23**

The RoverCam 23 is a tripod based, camera on a mast. The RoverCam 23 is designed to be operated between 7 and 23 ft tall.

Your monitor, zoom, and record controls are adjustable.

RoverCam 23 is 7 ft. to 23 ft. long with a ¼ 20 camera mount quick release plate.

The mast sections are silver in color and made out of aluminum.

The tripod is Black in color and made of Steel.

It is designed for recording events from an elevated view point while controlling the camera from the ground

## **1.4 Assembly of the RoverCam 23**

When you receive your RoverCam 23 you will need to assemble the components each time you use it. We ship the RoverCam 23 in several boxes to keep the components protected.

Check out the Demo video for the RoverCam 23, as it shows us setting up the RoverCam 23. You can access the video at the following youtube link:

<http://www.youtube.com/watch?v=d4YyKiZkkDw>

### ***Steps to Assembling the RoverCam 23:***

1. Unbox everything, and set the components on the side. Inspect the box to make sure you have left nothing in the packing materials. You should have 3 boxes on a standard RoverCam 23 order.
  - Box 1: Box one would house the RoverCam 23 Tripod



*Picture of the RoverCam 23 tripod collapsed.*

- Box 2: Box two would house the RoverCam 23 Mast Sections



*Picture of the RoverCam 23 Mast sections collapsed*

- Box 3: Box three would house the case and the accessory pieces for the RoverCam 23



*This is a Picture of the Contents of the RoverCam 23 Accessory case and contents. At the top left is the RoverCam 23 battery. Bottom Left is the RoverCam 23 Head assembly foot. To the Right of the Head foot assembly, is the RoverCam 23 Camera head monitor. In the middle is the RoverCam 23 control arm. In the Bottom Right is the RoverCam 23 Monitor assembly. At the top right is the camera bag.*

2. Expand the tripod. Place the Tripod vertically on the ground and pull gently on the legs to expand the tripod. By grabbing and lifting on the center piece of the tripod, it should fully extend the legs to provide a stable surface and weight for the RoverCam 23.



*Picture of the Tripod fully extended. Notice by gripping and lifting on the center piece of the tripod, it helps to extend the legs with very little effort.*

3. Slide the Protected 8 inch monitor assembly at the bottom of the mast section and move it up to the bottom of the Webb sticker then tighten the screw to clamp the Monitor assembly in place.



*Picture of the Monitor Assembly before it has been clamped onto the RoverCam 23 mast.*



*Picture of lining up the clamp for the RoverCam 23 on to the Bottom Mast section.*



*Picture of Monitor assembly clamped in place to the bottom mast section.*

4. Slide the control arm at the bottom of the mast section and move it up to 9 inches below where the Monitor assembly is clamped then tighten the screw to clamp the Monitor assembly in place.



*Picture of lining up the control arm at the bottom of the mast section to slide it up into place.*



*Picture of control arm clamped into place.*

5. Once you have both the Monitor assembly and Control arm attached to the bottom mast section, line up the bottom mast section to the tripod and place it as a sleeve over the tripod. Let gravity do the work to place the mast section onto the tripod.



*Picture of lifting the mast section and placing it over the tripod. Line up the holes and gently lower the mast section down into the tripod. It should fit fairly snug.*

6. Put the battery into the battery sleeve at the base of the tripod. Zip up the battery sleeve to keep the battery in place.



*Picture of the battery outside the sleeve.*



*Picture of the Battery zipped up in the battery sleeve.*

7. Stand opposite of the battery sleeve and grip the RoverCam 23. Pull the RoverCam 23 towards yourself to begin lowering it and raising the leg with the battery off the ground. Begin walking the RoverCam 23 down, moving backwards and get to the joint between the base section and the second section. Having the Battery in the sleeve for this step allows the battery to provide a good counter balance to allow you to easily lean the RoverCam 23 over.



*Picture of leaning RoverCam 23 over and walking it down.*

8. When you move to the middle section, expand the middle section of the RoverCam 23 mast by pulling on it until you meet resistance. Twist the RoverCam23 clockwise to engage the J hooks to secure the extended mast in place. Push down on the section to make sure the mast section is locked into place.



*Picture of holding up the RoverCam 23 as you expand the middle section of the mast. Twist the upper mast section clockwise to lock the mast section in place.*



*This picture is a mast section with the outer casing removed to illustrate how the J-hooks work. You as you extend the mast to the top section, the j-hook will hit to the top of the section.*



*Once the J-hook hits the top of the section, you would not able to extend that mast section any further. You would then turn the top section clockwise to engage the J-hook and lock that mast section in place.*



This picture shows the mast section fully locked into place. Notice the J-hook fully engaged.

9. Once you have fully extended the middle section, walk your self to the top section and fully extend the top section in the same manner you have extended the middle section.



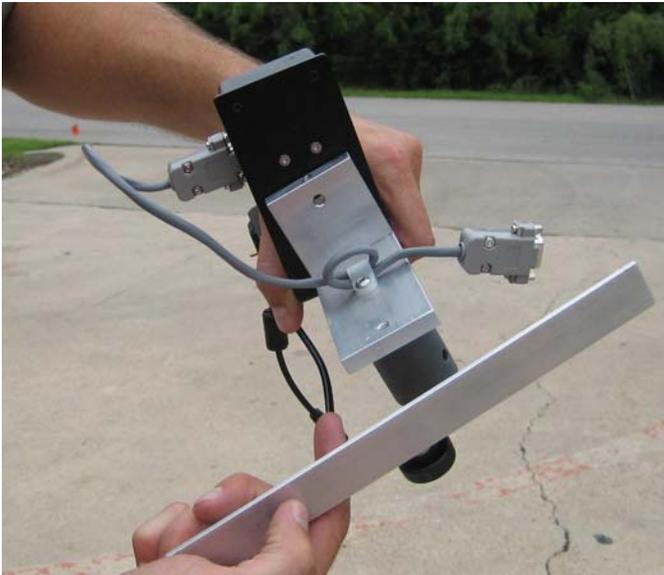
*The pictures show you extending the top section of the RoverCam23. Make sure to twist the top section clockwise to engage the J-hooks. Push down on the top section to make sure you have to top section locked into place.*

10. Once you have extended the section and engaged the J-hooks, you can further secure the mast sections with the pressure clamps provided at each section. You can tighten each section for added stability. This is also useful if you want to use the Rover at variable heights. If you use the pressure clamps, you don't really need to use the J-hooks.

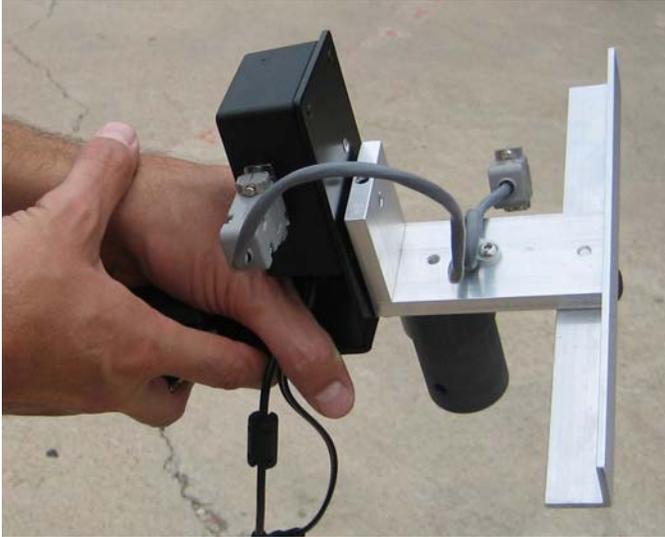


*Picture of Rover with section clamps you can tighten and loosen.*

11. Set the RoverCam 23 down for a second and grab the Camera head assembly. You will need to screw in the rest bar to the Head Assembly.



*This picture shows you the head assembly and the rest bar. Screw the rest bar onto the head assembly.*



*This picture shows you the head assembly after the rest bar has been screwed on to the head assembly. Once that is done, you are ready to attach the head assembly to the top mast section.*

12. Attach the head assembly to the top mast section. The bottom of the head assembly will fit into the top of the top mast section. There are holes for you to align, so you can use the clip shown to secure the head assembly to the top mast section. Once aligned, put in the secured clip to secure the head assembly to the top mast section.



*This picture shows the Head assembly and clip before it is attached to the top mast section.*



*This picture shows you putting the head assembly into the top mast section. Notice the holes that need to align in order to get the clip in place to secure the head assembly to the top mast section.*



*This picture shows the clip in place and a fully secured head assembly on the top mast section.*

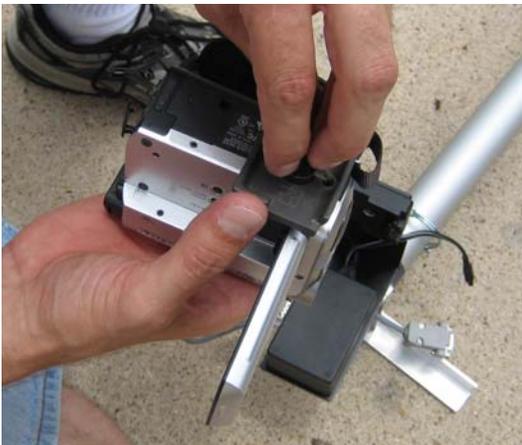
13. Attach the camera to the head assembly. The quick release plate will be attached to the head assembly. Remove the quick release plate from the tripod head at the head assembly and screw it in to the bottom of the Camera. If you look at the bottom of the quick release plate you will see a diagram to where you should orient the plate to the direction that the lens of the camera will point. Once you have screwed the quick release plate to the camera, mount the camera back on the Assembly head. Make sure that the Camera is securely mounted to the head assembly.



*Picture of removing the quick release plate from the head assembly*



*Picture of the quick release plate, once removed from the head assembly. Screw this onto the bottom of the camera, making sure that the diagram at the bottom reflects the way the camera lens is pointing.*



*Picture of screwing on the quick release plate to the bottom of the camera.*



*Clip the Camera back on to the Head assembly and secure it on place. Make sure that the camera is securely attached to the head assembly. You don't want it to fall off!*

14. Connect the Power Connector to the Camera from the Head Assembly.



*Picture of the power connection, before plugged into the camera from the head assembly. The power connection on the camera may be in the front, back or side, depending on the camera model.*

15. Connect the AV-LANC cable to the Camera from the head assembly. Make sure you open the viewfinder on the Camera.
16. Make sure if using a camera for the 1<sup>st</sup> time, you set the time and date, and turn demo mode, and power save off on the menu settings. Consult the camera manual for steps to turn off power save mode and demo mode.



*Picture of the AV-LANC connection, before plugged into the camera from the head assembly. The AV-LANC connection on the camera may be in the front, back or side, depending on the camera model.*

17. Grab the Control Cable from the Accessory bag and uncoil it. You will use the control cable to connect one end to the top of the Monitor assembly and the other end to the Head Assembly. Connect one end to the Head assembly and screw in the connectors to secure the cable to the head assembly.



*Picture of the Control Cable before it is uncoiled.*



*Connect the 9 pin Control cable connector*

18. Run the Control Cable down the mast and use the Velcro strap provided to secure the Cable about halfway down the mast. This will keep the cable from blowing in the wind and being a nuisance.



19. Raise the RoverCam 23. Starting at the top mast section below the head assembly, grip the mast and start walking the unit up slowly. Walk it up until the unit is sitting on the 3 legs of the tripod and is fully upright.



*Picture of raising the RoverCam 23 by slowly walking the unit up. Slowly ease it up until the Tripod has all 3 legs firmly on the ground.*

20. Connect the Bottom of the Control Cable to the top of the Monitor Assembly.  
Secure the connections by screwing them in.



*This picture illustrated the connection on the monitor assembly where you screw in the Control cable.*

21. Connect the Control arm Cable to the bottom of the Monitor Assembly. Secure the connections by screwing them in.



*Picture of the Control arm cable plugged in and secured to the bottom of the monitor assembly.*

22. Plug the power cable molded to the back of the monitor box into the top of the tripod. There will be a little female power connector at the top of the tripod that you can connect the power lead to.



*Picture of the molded end of the power cable that connects to the back of the monitor box.*



*Picture of the Power Cable, that you would plug one end into the bottom of the Monitor assembly and the other end into the top of the tripods female power connection.*

23. Connect the battery to the bottom of the power connector on the bottom of the leg of the tripod.



*Picture of the battery connected to the bottom leg of the tripod.*

24. You may have to adjust the Monitor and Control arm if they are facing differently than the camera lens. Loosen the connectors on the monitor and Control arm and swivel them to have them face opposite of the direction the camera lens is facing. Then tighten them back up. You can also loosen them to adjust the height of the control arm and the Monitor, depending on the cameraman's height.

### **1.5 Operation of the RoverCam 23**

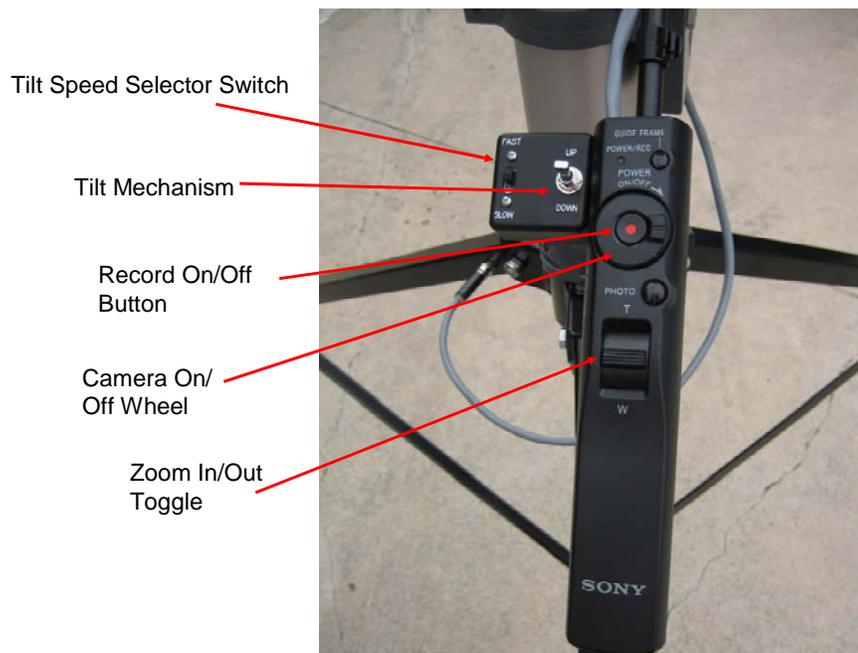
1. With the RoverCam 23 fully assembled and up, turn the Monitor on, by pressing the power button on the lower right hand corner of the Monitor. Press the AV

button until the input is set to AV1. This is important. If the monitor is not set to the correct input, you will not see the video coming from the camera.



*The picture shows the Monitor when powered on. You should see the current input shown in the upper left corner of the screen for the first few seconds.*

3. Press record on the control arm to put the camera into record. Press record again to put it in pause. The Control arm should flash red when in pause and solid red when in record.
4. You can use the Zoom control to zoom in and out on the video.
5. Pan the Camera (moving side to side) by moving the control arm left and right
6. Use the Tilt switch on the left side of the control arm to tilt the camera up and down. You have a selector switch for fast and slow tilt for your convenience.



### Functions of the control arm

Tilt (High and Low Speed)  
 Zoom in multiple speeds  
 Zoom out multiple speeds  
 Record  
 Record Pause

Power on camera (Most models)

Power off camera (Most Models)

## **1.6 Disassembly of the RoverCam 23**

Basically, you would perform the same actions outlined above to take the RoverCam23 down.

1. Disconnect the Power cable from the bottom of the tripod.
2. Disconnect the power cable from the bottom of the Monitor assembly and the top of the tripod. Store the power cable
3. Disconnect the Control Cable from the bottom of the Monitor assembly that goes to the control arm
4. Disconnect the Control Cable from the top of the Monitor Assembly
2. Walk the RoverCam Down Gently, gripping at the top of the bottom mast opposite the battery, and gently pull it down as you walk back on the mast.
3. Disconnect the power, control and AV-LANC connectors from the camera.
4. Remove the Camera and remove the quick release plate from the camera and reconnect it to the head assembly.
5. Remove the Camera Head Assembly.
6. Remove the rest bar from the Head assembly. Store the rest bar and the Head assembly in the case.
7. At the bottom of the Top mast section, Twist counter clockwise to disengage the J-hook. Collapse the top section.
8. At the Bottom of the 2<sup>nd</sup> Mast section, twist counter clockwise to disengage the J-hook. Collapse the middle section.
9. Remove the Velcro strap keeping the Control cable attached to the mast.
10. Coil and store the Control cable in the case.
11. With the Mast completely collapsed, walk the unit back up so the tripod is sitting securely on 3 legs on the ground.
12. Lift the Mast section out of the Tripod
13. Loosen the Control arm and remove it from the mast. Store the Control Arm.
14. Loosen the Monitor assembly and remove it from the mast. Store the Monitor Assembly.
15. Fold up the tripod and Store the Tripod. You may purchase an optional RoverCam 23 bag to store the tripod and mast.
16. Store the mast. You may purchase an optional RoverCam 23 bag to store the tripod and mast.

## **1.7 Charging the RoverCam 23**

You have been supplied a battery charger with the RoverCam 30. You can plug the battery to the charger cable to charge the battery, and plug the other end into an electrical outlet. To get a full charge, charge the unit 8 hours.



*Picture of the RoverCam battery charger and Battery side by side. Connect the Charger end to the battery, the other end to an electrical outlet.*

### **1.8 Using the RoverCam 23 with the Air Potato**

If you have purchased the RoverCam 23 with the Air Potato, the backside of your monitor's junction box will have a switch with two positions. The AP switch will set your air potato to control the RoverCam 23. The RV Switch will set your RoverCam to be a standalone unit.

To allow the Air Potato to function, the switch must be in the AP position. If you want the RoverCam to function as a standalone product, it must be in the RV position



*Picture of the Air Potato/RoverCam switch for those customers that have purchased the RoverCam 23 with the Air Potato*

### **1.8 Reminders for the RoverCam 23**

Please make sure of the following when using the RoverCam 23:

- Make sure the **battery is charged**. (Do *NOT* charge the battery for more than 16 hrs. at 1 time)
- Make sure all of **your connections are connected** securely.
- Make sure you have **media to record on**. (HDD, Internal Memory, SD, or Tape)
- Make sure the **lens cap is open**
- Make sure **the monitor is powered on**.
- Make sure the input to the **monitor is set to AV1**.
- Make sure **the camera is turned on or the LCD door is open**.
- Make sure that the J-Hook Locks for each section securely when expanding the Mast section. Do not put the RoverCam 23 up without verifying this.
- Battery must be charged at least once a month or the battery can be damaged.
- Close and secure the box lid on the monitor so the monitor will be more difficult to damage.
- Do not leave the camera attached to the head assembly.
- Do not leave the quick release plate on the bottom of the camera. Store it in the head assembly.
- Store all RoverCam 23 components together.

- Make sure you have Demo mode off on the camera. Consult the camera manual for steps on turning Demo mode off.
- Make sure you have Power save off on the camera. Consult the camera manual for steps on turning Power save off.

## **1.9 Additional Add-ons for the RoverCam 23**

There are multiple different add-ons for RoverCam 23.

- Wireless remote control
- Air potato
- Hand-held Potato
- Battery charger
- Batteries

## **2.0 Contact Us**

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