# **SOLAR SECURITY**VIDEO CAMERA & FLOODLIGHT



# STOP! READ FIRST!

# To use the Solar Security Video Camera and Floodlight, you need a computer.

The videos are viewable on Windows compatible or Apple computers. However, the date and time on the camera can only be synced to the date and time on Windows XP, Windows Vista, Windows 7, or Windows 8 computers.

# Before using the Solar Security Video Camera and Floodlight, you must:

- 1. Connect the solar panel to the video camera floodlight, make sure the switch is in the *OFF position*, and set the solar panel outside in the sun for three days to charge the batteries fully.
- 2. If using a Windows computer, plug the camera module into a USB port on your computer or laptop and run the Sync program (See "Setting the Date and Time On the Camera Module" on page 4).

# ABOUT YOUR SOLAR SECURITY VIDEO CAMERA AND FLOODLIGHT

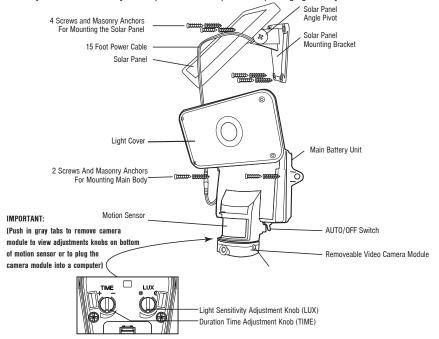
This video camera floodlight requires no electrical wiring and is ideal for recording video at entrance areas, porches, driveways, carports, garages, and warehouses. It can even be used as a game camera. The video camera floodlight has a built-in motion sensor which turns on the camera automatically when movement of a heat source (such as people, animals, or cars) is detected in the area. In sufficient darkness, the 16 Surface Mount LEDs, with an estimated life of 30,000 hours, also activate and provide over 878 lumens of light for you to see and for the camera to record. The camera remains on while motion is detected. The camera saves the recorded videos to the (included) 16GB micro-SD card which can hold up to 4 hours of video. When the micro-SD card is full, the oldest files are overwritten. To access the videos, the camera module must be disconnected from the light and plugged into a computer's USB port.

A time control can be adjusted to allow the camera to stay on for 10 - 60 seconds after the motion sensor stops detecting motion. At night, the time control also controls the floodlight. The light sensitivity can be adjusted to allow the floodlight to start activating at varying darkness levels.

An included 3.7V 4.4Ah Lithium-ion rechargeable battery pack will need to be replaced when its charging ability decreases. When the batteries are fully charged, the floodlight portion will activate for up to 100 one-minute cycles per night. Low temperatures (14°F/-10°C) can result in limited functionality in the lithium-ion battery pack which may cause irregular activity in the video camera floodlight. Normal operation will return when the temperature rises.

### **INCLUDED PARTS:**

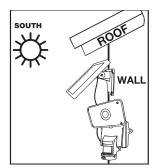
Carefully remove and identify all the parts from their protective packaging and lay them out.

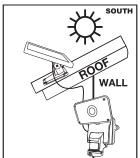


# CHOOSING A LOCATION FOR YOUR SOLAR SECURITY VIDEO CAMERA AND FLOODLIGHT

- 1. The video camera floodlight connects to its solar panel with a 15 foot power cord.
- Ideally the solar panel should face the southern sky and receive at least 6-8 hours of direct sunlight per day to maximize the charging of the battery pack as shown in the images below.



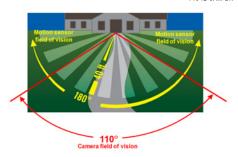




The solar panel will charge the battery pack on cloudy days; however, the total battery charge will be less than it would be on a sunny day. Placing the solar panel in a shaded location or behind a window will prevent the battery pack from charging and the video camera floodlight from operating.

When deciding where to mount the video camera floodlight, keep in mind that the motion sensor has a field of vision of 180° (horizontal) at a distance of up to 40 feet when the surrounding temperature is 75°F. The distance range increases in colder temperatures and decreases in warmer temperatures. The camera has a resolution of 640x480 pixels with a field of vision of 110° (horizontal). This means the motion sensor may pick up movement the camera does not record.

During the day, the camera will record everything in its field of view. At night, the darkness makes it difficult to see objects more than 15 feet away even if the floodlight has activated. Because of this, if the motion sensor is triggered by a moving object more than 15 feet away, the moving object may not appear on the video.



# HOW TO INSTALL YOUR SOLAR SECURITY VIDEO CAMERA AND FLOODLIGHT:

**NOTE:** Install your video camera floodlight in a location where you can access the camera module.

# Tools Required:

- 1. Phillips head screwdriver.
- 2. Drill, if you want to mount the video camera floodlight on harder surfaces like cement, concrete, or brick.

# To Install The Solar Security Video Camera And Floodlight:

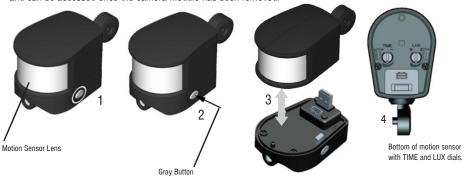
- 1. Align the video camera floodlight on the wall and mark the locations of the two mounting holes with a pencil.
- If mounting on cement, concrete, or brick, drill pilot holes for masonry anchors. The masonry anchors are not needed for mounting on wood.
- 3. Align the video camera floodlight on the wall and install the two screws using a screwdriver.
- 4. Use the four (4) screws to mount the solar panel onto a solid surface following the same three steps above.
- 5. Adjust the angle of the solar panel by gently rotating the solar panel to a different locking position. Remember to face the panel south for direct sunlight exposure. See the "Choosing A Location" section on page 2.

# Fully charge the Solar Security Video Camera and Floodlight's battery pack.

- 1. Tightly connect the solar panel to the video camera floodlight power cable.
- 2. Ensure the power switch on the main body of your video camera floodlight is in the *OFF position*. In this position, the solar panel will charge the battery during the daytime, but the unit will not activate.
- 3. Leave the switch in the **OFF position** for 3 days or longer before initial use to charge the battery pack fully.

# HOW TO DISCONNECT THE CAMERA MODULE/ACCESS THE DIALS

- Hold the motion sensor by the sides. Be very careful not to put your fingers on the lens of the motion sensor
  as doing so could damage the device.
- 2. Next, use your other hand to press the two gray buttons on both sides of the camera module to release the module.
- 3. The camera module should separate directly away from the motion sensor.
- 4. There are two adjustment dials: TIME and LUX. These dials are located on the bottom of the motion sensor and can be accessed once the camera module has been removed.



### HOW TO TEST THE COVERAGE AREA

This section covers the steps you need to take to ensure your camera module will capture the desired area. This section is important to review anytime you are installing the video camera floodlight in a new location.

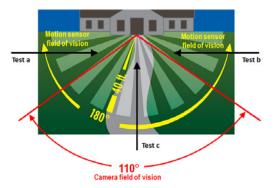
- 1. Remove the camera module as shown in "How To Disconnect the Camera Module/Access the Dials" on page 3.
- 2. The TIME dial is already set to the minimum (-) position and the LUX dial to the "light" (\$\cdot\cdot\cdot\cdot\) position. This ensures short test videos and floodlight activation.
- Reattach the camera module to the motion sensor once you have checked the dials and switch the video camera floodlight to the AUTO position.

**NOTE:** When the video camera floodlight is first switched on, it will perform a test activation of the camera and floodlight. This will happen regardless of the configuration of the dials. The camera will not record a video during this test.

- 4. Point the motion sensor in the direction that you want to detect motion.
- 5. You can test the camera during the day or night. The videos will not have as much detail at night due to the darkness. Test the coverage of the area by walking slowly around the area of detection. At night, the floodlight will activate when you are detected. If the floodlight does not come on, you may need to adjust the angle of the camera and sensor unit.
- 6. When you are satisfied with the detection area, trigger the camera three times. Trigger the camera video floodlight in the following ways:
  - a. Once entering from the left,
  - b. Once entering from the right, and
  - c. Once entering straight towards the light.

Be sure to let the camera module turn off between each trigger to ensure you get three separate video files. When the camera module is recording, you will see a blinking red light in the motion sensor and on the bottom of the camera module.

**NOTE:** Do not switch the video camera floodlight to the **OFF** position while recording a video. The camera module will not save a video if turned off while recording.



**NOTE:** The field of vision of the camera is 110°. The field of vision of the motion sensor is 180°. Be sure to walk all the way in front of the camera to ensure you are captured in the video.

7. Remove the camera module from the video camera floodlight by following the directions in the "How to Disconnect the Camera Module" section on page 3. Then continue to the "Setting the Date and Time" section below.

### SETTING THE DATE AND TIME ON THE CAMERA MODULE

This section covers the steps you need to take to ensure your camera module has the correct date and time for your time zone; however it is not required and the video camera floodlight will still function and record videos if this section is skipped.

- To set the time and date, the camera module must be removed from the floodlight and connected to a Windows compatible computer via the USB port.
- Plug the camera module into a USB port on your computer. Your computer should show you two new drives. Both should be listed in the "Devices with Removable Storage" section in your Computer folder view. One is the camera, one is the storage card.

NOTE: The drive letters may differ on your computer. Identify the drive labeled "Removable Disk" and the drive labeled "Sync Camera Clock".



 Click "Open folder to view files" on the "Sync Camera Clock" Autoplay box. The camera does not automatically sync when you plug the camera into a USB port. You must run the program to sync the camera.





4. Click the program called, "Sync Camera Clock".

5. A pop-up will confirm the camera is now synced to the PC clock.



**NOTE:** You will need to sync the camera module again when seasonal time changes occur. The camera module will not automatically adjust the time. Syncing the camera module to a Windows computer ensures you have the proper time.

**NOTE**: If the video camera floodlight is OFF or the battery has no power for more than four (4) days, the date and time may lose accuracy. Repeat the "**Setting the Date and Time**" section on page 4 to sync the camera again. Be sure the battery pack in the video camera floodlight is fully charged as well.

### **VIEWING THE VIDEOS**

You must follow the steps in this section anytime you wish to view the videos on the micro-SD storage card located in the camera module. If the camera is already plugged into the computer, skip to step 3. If not, start with step 1. If the product or micro-SD card is new and no testing has been done, the card will not have any files.

- 1. Disconnect the camera module by following the steps in "How to Disconnect the Camera Module" on page 3.
- 2. Plug the camera module into a USB port on your computer.
- 3. Open the drive for the storage card from either:
  - a. The AutoPlay menu for the *Removable Disk* that appeared when you first plugged in the camera module by choosing "Open folder to view files" or





b. Your "My Computer" folder by double-clicking "Removable Disk".

4. Double-click the folder labelled "DCIM".

**NOTE:** If the micro-SD card is new or if you have not done the test activations, the "**DCIM**" folder will not exist yet.



The next set of folders you see are named by the date the videos were recorded.

The folders holding the videos for each day will be named with the following format:

YYYYMMDD (Year, Month, Day)

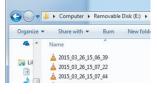
For example, all videos recorded on March 26th, 2015 will be in a folder labelled 20150326. Find the day you want to view and double-click the folder.

Within each folder, you will see all the video files recorded that day.

The video files will have the following format:

YYYY\_MM\_DD\_HH\_MM\_SS (Year, Month, Day, Hour, Minute, Second)

The time stamp corresponds to the time the video started recording. The hours are listed in military time so will appear as 00 through 23. For example, a video recorded on March 26th, 2015 at 3:07 and 22 seconds PM will have the filename 2015\_03\_26\_15\_07\_22.



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20150326

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7. Click on any of the files to view the video that was recorded at that time.

**NOTE:** There is a one (1) second delay between the time when the video camera floodlight is activated and the time when the camera actually starts recording. Moving objects may be well within the field of view of the camera when the video starts.

**NOTE:** After the micro-SD card is full, the camera records over the earliest recordings, so make sure you save any files you want to your hard drive.

# SAVING THE VIDEOS

- 1. Open the folder on your hard drive where you want to store the videos.
- 2. Go back to the folder view for the micro-SD card storage and highlight all of the files you wish to save.
- 3. Click and drag the group of files to the folder on your hard drive where you want to store the files.
- 4. Once the files have transferred, you can delete the files on the micro-SD card storage.

# REMOVING THE CAMERA MODULE FROM THE COMPUTER

1. Look at the system tray icons (shown in the red square in image 1 below) for the icon of a USB plug with a green check mark. Hover the mouse over the icon and a box should appear that says "Safely Remove Hardware". You may have to hit an upwards pointing arrow in the system tray to see the icon. This arrow is circled in red.





2. Right click on the icon of a USB plug with a green check mark and choose "Eject USB 2.0 Device"

Remove the camera module from the computer and return to the floodlight, but do not reconnect the camera to the motion sensor yet. You may want to change the TIME and LUX settings, which is covered on page 7.

**NOTE:** You will need to sync the camera module again when seasonal time changes occur. The camera module will not automatically adjust the time. Syncing the camera module to a Windows computer ensures you have the proper time.

**NOTE**: If the video camera floodlight is OFF or the battery has no power for more than four (4) days, the date and time may lose accuracy. Repeat the "**Setting the Date and Time**" section on page 4 to sync the camera again. Be sure the battery pack in the video camera floodlight is fully charged as well.

# ADJUSTING THE LUX AND TIME DIALS

The video camera floodlight is factory set to record 10 seconds after motion stops. This is the recommended setting to conserve video storage space on the micro-SD card. If you want to increase the recording time and how long the floodlight stays on at night, move the switch on the main body of the floodlight to the **AUTO position** and follow the directions below.

# Recording Duration Adjustment (TIME)

The TIME dial sets the duration that the unit remains activated after motion stops. The time period has an adjustable range of 10 seconds to 1 minute. When it is dark enough, the floodlight is also controlled by the TIME dial

- To decrease the time period, move the dial toward the ( ) symbol.
- To increase the time period, move the dial toward the (+) symbol.

Test the time period by triggering the motion sensor at night and measure the time period the floodlight stays on. Adjust the TIME dial until the desired duration is reached. The camera will stop recording at the same time the floodlight turns off. During the day, only the camera will activate.

A shorter TIME setting will conserve battery life and storage space on the micro-SD card. For best results, use the shortest TIME setting for your location as possible.

# Light Level Adjustment (LUX)

The LUX dial controls the amount of darkness needed for the motion sensor to be able to trigger the floodlight. It does not impact the camera which will activate at all times, day or night, regardless of the floodlight. The video camera floodlight is factory set to activate the floodlight when there is more daylight so the dial is set towards bright (\$\frac{1}{4}\$). To allow the floodlight to activate only after the sun has set, move the dial toward dark ()).

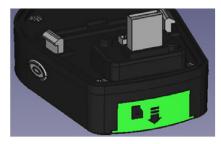
Once you are done adjusting the dials, turn the switch on the main body to the *OFF position*. Re-attach the camera module to the motion sensor.

Move the switch back to the AUTO position. Your video camera floodlight is now ready for use!

# REPLACING THE MICRO-SD CARD

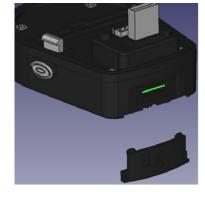
You may want to use more than one micro-SD card or you may want to use a micro-SD card with a different capacity. To remove or replace the micro-SD card:

Remove the camera module from the motion sensor.

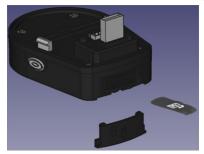


2. Locate the sliding cover on the back of the camera module with a picture of a micro-SD card.

Use a Phillips-head screwdriver to remove the screw in the bottom of the cover, then slide the cover off the camera module. You will see the back of the micro-SD card.

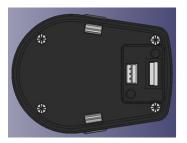


Lightly press the micro-SD card into the camera module until you hear a slight click. Then remove your finger and the micro-SD card should slowly spring back out of the module.



5. Grab the back end of the micro-SD card with your fingertips and remove it from the camera module. To replace the micro-SD card, push it back into the slot on the back of the camera module. Be sure it is in the correct orientation! This can be seen in the image below.

6. Once in place, lightly press the micro-SD card into the camera module until you hear a slight click. Then release your finger. The micro-SD card should bounce back slightly, but still be firmly in place in the camera module.



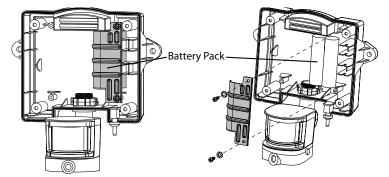


**NOTE:** The back of the micro-SD card should not be flush with the gasket. It should be slightly deeper into the camera module so it is almost hard to touch with your finger. If it looks flush with the gasket after hearing it click, take it out and try again. It may not record properly if it is not inserted correctly.

- 7. Replace the sliding cover and put the screw back in the bottom of the cover with the screwdriver.
- 8. Reconnect the camera module to the motion sensor.

# REPLACING THE BATTERY PACK

When the charging ability of the battery pack decreases, it should be replaced with a new 3.7V/4.4Ah Lithium-Ion battery pack. Follow the steps below when replacing the battery pack.



- 1. Move the power switch on the main body to the OFF position.
- 2. Unplug the solar panel and take the video camera floodlight down from where it is mounted.
- 3. Remove the four (4) screws on the back of the main unit that hold the halves together.
- 4. Once the unit is open, carefully remove the bracket holding the battery pack in place by unscrewing the two (2) screws as indicated in the diagram above.
- Carefully unplug the battery pack from the unit. Be sure to pull at the plug. Do not pull by the wires as this may damage the unit.

- 6. Carefully remove the battery pack and replace with a new 3.7V / 4.4Ah Lithium Ion battery pack obtained from MAXSA Innovations. The plug will only fit in one orientation. Do not force the plug into place as this may damage the unit. If it does not fit, rotate the plug until it matches with the receiving end on the circuit board.
- Replace the bracket to hold the battery pack in place by using the two (2) screws removed in step 4, taking care not to damage any cables.
- 8. Re-assemble the main unit by screwing the two (2) halves of the main body together securely.
- 9. Once assembled, remount your video camera floodlight.
- 10. Repeat the steps in the "How to Install Your Solar Security Video Camera and Floodlight" on page 3 to ensure your new battery pack is charged fully.

**NOTE:** Do not dispose of battery pack in general household trash or into a fire since the battery pack may explode. Consult your local regulations for correct disposal of the battery pack.

# **MAINTENANCE TIPS:**

The LED lights in your video camera floodlight will last up to 30,000 hours.

To keep your video camera floodlight looking its best, keep the solar panel free of dust and deposits by wiping occasionally with a dry cloth or with warm soapy water. It is important that the solar panel is kept free of dirt and debris at all times. A dirty solar panel will not allow the battery to be fully charged. This will shorten the life of the battery and may cause the video camera floodlight to malfunction.

The video camera floodlight should always be mounted vertically with the light on top and motion sensor and camera module on the bottom. Mounting it any other way than as shown in the image on page 2 may compromise the camera function.

# Cold Weather Functionality

In temperatures below 14°F, performance of the Lithium-ion battery pack may be reduced. Normal performance will return when the temperature rises.

### Safety Tips

Do not immerse the video camera floodlight in water or any other liquid.

### Storage

If you wish to store your video camera floodlight indoors for more than two or three days, turn the power switch to the *OFF position*. Battery capacity may be reduced during prolonged storage.

**NOTE:** the date and time on the camera will slip if more than 4 days pass without charging the video camera floodlight. When you are ready to use the video camera floodlight again, you must follow all the directions as though you were setting up the video camera floodlight for the first time. Start with the "**How To Install Your Solar Security Video Camera and Floodlight**" section on page 3.

# **TROUBLESHOOTING**

Problem	Possible Solutions
I cannot see the Sync Program on my computer or I can see the Sync Program, but it will not run on my computer.	The Sync Program only works with Windows compatible computers running Windows XP, Windows Vista, Windows 7, or Windows 8. It does not work with Apple computers.
Computer wants to format the disk.	The micro-SD may not be installed properly. Follow the steps in the "Replacing the Micro-SD Card" section on page 7 to re-install the micro-SD card properly.

When the camera is plugged into the computer, there are no video folders in the DCIM folder on the Removeable Disk.	<ul> <li>Make sure the video camera floodlight has been switched to the <i>AUTO position</i>.</li> <li>Make sure the camera module has been properly attached to the motion sensor.</li> <li>Make sure the micro-SD card is installed properly and the rubber gasket is in place. The back of the micro-SD card should not be flush with the gasket. It should be a little deeper into the camera module so it is almost hard to touch with your finger. If it looks flush with the gasket after hearing it click, take it out and try again.</li> <li>Be sure to leave the switch in the <i>AUTO position</i> for the duration of the light cycle as turning it <i>OFF</i> before the end of the cycle will prevent the video(s) from being stored.</li> <li>Make sure there have been multiple activations. When you first turn the video camera floodlight on, it runs a test activation but does not record a video. It will record all activations after the test activation.</li> <li>If the camera still does not store the videos, please contact MAXSA for further assistance.</li> </ul>
Time and Date seem wrong.	Remember to sync your camera whenever a time change occurs.
	If the date and time are off considerably, the battery pack may need to be recharged. If the video camera floodlight is OFF or the battery pack has no power for more than four (4) days, the date and time may lose accuracy. Repeat the "Setting the Date and Time" section on page 4 to sync the camera again. Be sure the battery pack in the video camera floodlight is fully charged before using the video camera floodlight again.
Night videos show very dark footage.	The LUX dial may be pointed too far towards the (). This prevents the light from activating unless it is extremely dark. Turn the LUX dial so it is halfway between the (♥) and the (). This sets the product so the light activates at dusk. Your videos should now have more light. If the light still does not activate early enough, continue to turn the LUX dial towards the (♥) until it activates at an acceptable time.  Something may have activated the motion sensor but never made it within the field of view of the camera. The motion sensor has a field of view of 180°, but the camera only has a field of view of 110°. Also, the motion sensor has a range of 40 feet, but the camera can only see things up to 15 feet away when it is dark, so the object that activated the camera may be too far away to appear on the video.
Videos only show ground.	The motion sensor and camera may be pointed too low. Try raising them to direct them more towards the desired area. Aim for where a person's torso and head would appear.
There are videos with nothing moving in them.	Something may have activated the motion sensor but never made it within the field of view of the camera. The motion sensor has a field of view of 180°, but the camera only has a field of view of 110°. Also, the motion sensor has a range of 40 feet, but the camera can only see things up to 15 feet away when it is dark, so the object that activated the camera may be too far away to appear on the video.
It looks like there should be more footage at the beginning of the video.	There is a one (1) second delay between when the video camera floodlight is activated and when the camera starts recording. This means moving objects may be well within the field of vision of the camera when the video starts.

# **TROUBLESHOOTING**

Problem	Possible Solutions
Should there be a video immediately after switching the light to <b>AUTO</b> ?	• No, the video camera floodlight performs a test activation when it is first switched to <b>AUTO</b> . No video is recorded during this test.
Should there be a video of me turning the light <b>OFF</b> ?	No. The camera does not save a video if switched <i>OFF</i> while recording.
How do I know the camera is recording?	You will see a blinking red light in the motion sensor and on the bottom of the camera module, denoting the camera is recording.     NOTE: The exception to this rule is when the video camera floodlight is performing the test activation when the switch is put in the AUTO position. You will see the blinking lights, but the camera will not be recording for the test activation.
Light is not as bright as normal.	Move the LUX control more to the dark () position.
	Move the TIME control towards the (-) position to have shorter videos.
	Battery charge may be low. Turn the power switch to the <i>OFF</i> position and charge the battery for three (3) sunny days with the solar panel placed in direct sunlight.
Light will not switch on when there is movement in the detection area.	Ensure that the power switch on the main body has been turned to the <i>AUTO position</i> .
	Ensure that the motion sensor has been positioned to face oncoming movement.
	Ensure that the battery has been fully charged in direct sunlight for 3 sunny days. Refer to the "How to Install Your Solar Security Video Camera and Floodlight" section on page 3.
	Check to see that the solar panel is facing south so that it receives direct sunlight for most of the day, enabling the battery to fully charge.
	<ul> <li>Check to see that the LUX control has not been set too far towards the moon symbol. Setting the LUX control too far towards dark () will cause the video camera floodlight to turn on only in complete darkness.</li> </ul>
	Check to see that the motion sensor is not near night time light sources such as street lights.
Light switches on for no apparent reason.	<ul> <li>Moving trees, traffic, pets or birds may be getting in the area of detection. This may be unavoidable; however the sensor could be redirected to a height where this is less likely to occur.</li> <li>If there are reflective objects in the detection area such as windows, water, or white walls, you may need to redirect or possibly reposition the motion sensor.</li> <li>Test the motion sensor by covering it completely with cardboard and waiting several minutes to make sure it does not detect motion. If the light still switches on, please contact MAXSA for further assistance.</li> </ul>
Light only switches on at night.	<ul> <li>The LUX control may be set too far towards the dark () ) position.</li> <li>Reposition the motion sensor.</li> </ul>

### **TROUBLESHOOTING**

Light switches on during the day.	<ul> <li>The LUX control may be set too far towards the light (♥) position.</li> </ul>
	Reposition the motion sensor.
Light quickly flashes on and off.	<ul> <li>Move the LUX control more to the dark () position.</li> <li>Move the TIME control towards the (-) position to have shorter videos.</li> <li>Battery charge may be low. Turn the power switch to the OFF position and charge the battery for three (3) sunny days with the solar panel placed in direct sunlight.</li> </ul>

# **SPECIFICATIONS**

# **Floodlight**

 Power Source: Solar - Amorphous Solar Panel

· Function: Motion-Activated

Power Storage: 3.7V/4.4Ah Lithium-ion battery pack

 Light/Camera Duration: 10 - 60 seconds after motion stops

Lumens: 878.6

Light Color: 6500K (Cool White or Daylight color)

Weatherproof Rating: IP44

Maximum Floodlight Runtime: up to 100 minutes on a full charge

Motion Detection Angle: 180°

Maximum Detection Distance: 40 feet (12.2 meters)

# Security Camera

Camera Angle: 110°

· Camera Resolution: 480x640 pixels

 Camera Capture Speed: 30 frames/sec daytime, 15 frames/sec nighttime.

· Included Video Storage: 16 GB micro-SD card

· Hours of Video on included Storage: up to 4 hours

Computer Compatibility:
 To view videos: Windows or Apple computers
 To sync date and time: Windows compatible computers only

# MADE IN CHINA

