![Swann logo]

Swann™
Advanced security made easy™

OutbackCam
Outdoor Motion Camera

SW361-OBC

Operating Instructions

Before You Begin

■ **FCC Verification:**
NOTE: This equipment has been tested and found to comply with the limits for 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 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 the receiver
· Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
· Consult the dealer or an experienced radio/TV technician for help

■ **IMPORTANT NOTE: Prohibition against eavesdropping**
Except for the operations of law enforcement officers conducted under lawful authority, no person shall use, either directly or indirectly, a device operated pursuant to the provisions of this Part for the purpose of overhearing or recording the private conversations of others unless such use is authorized by all of the parties engaging in the conversation.

■ **WARNING:** Modifications not approved by the party responsible for compliance could void user's authority to operate the equipment.

■ **IMPORTANT SAFETY INSTRUCTIONS:**
· Make sure product is fixed correctly and stable if fastened in place
· Do not operate if wires and terminals are exposed

2

Table of Contents

Package Contents

- *OutbackCam*
- SD Card (2GB)
- Mounting Strap
- Operating Instructions
- Clasp for Mounting Strap

Overview

Congratulations on your purchase of the *OutbackCam - Outdoor Motion Camera* from Swann! A terrific short-to-medium-term surveillance solution, the *OutbackCam* can be used for as many purposes as you can imagine, and then some more that you probably can't!

Waterproof

A high-quality hard plastic case with an inner seal provides the *OutbackCam* with a high degree of waterproofing. Thus, you can deploy it just about anywhere with ample confidence that it will survive almost any weather conditions it's subjected to. By the way, when we say "waterproof" we mean it'll be fine if exposed to rain or mist - we don't mean that it'll actually work underwater - the added pressure of being submerged could damage the fragile lens or the PIR sensor.

Passive Infrared (PIR) Sensor

PIR sensors are popular in home security systems, and are the same technology used in sensor lights (the type which automatically turn on when you come home in the evenings). Basically, this lets the *OutbackCam* be practically autonomous - it'll detect anything moving about that is a different temperature to it's environment. It makes the *OutbackCam* a truly fire-and-forget solution to monitoring!

Active Infrared Night Vision

Something happening in the dark that you need to know about? Well, worry not! With 15 infrared LEDs mounted in the front of the *OutbackCam*, it can see up to 32ft/10m in the dark!

Exceptional Battery Life

By using an ultra energy efficient design, the *OutbackCam* can provide weeks or months of autonomous operation at a time. Of course, the actual battery life depends on what kind of batteries you use (specifically their mAh or milliampere-hour rating, which is a measurement of how much energy the batteries contain) and how often the unit is capturing photographs/video. More about this later.
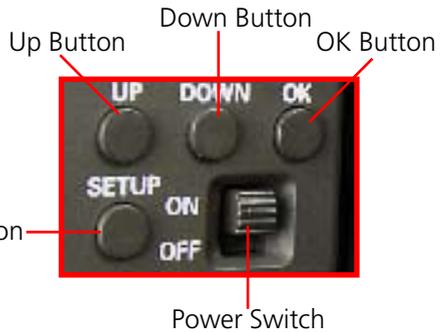
Multiple Recording Modes

Many units which claim to operate in a similar manner to the *OutbackCam* only offer still image recording. The *OutbackCam* also features video recording, boasting an impressive resolution of 640 x 480.

SD Card Recording

Forget annoying tapes or limited built-in memory. The *OutbackCam* uses SD card recording technology - giving you the flexibility of using any amount of storage you want up to a massive 32GB!

Passive Infrared (PIR) Motion Sensor

Locking Clasp

Camera Lens

Padlock Socket

Infrared LEDs

Swann

Light Sensor

Indicator LED

Up Button

Down Button

OK Button

UP   DOWN   OK

SETUP   ON
         OFF

USB Port   LCD Screen

Setup Button

Power Switch

SD Card Slot   Battery Slots

5

About the PIR Sensor

Avoid facing the *OutbackCam* towards nearby objects, as these can cause numerous false triggers (see page 11 for more information).

We strongly suggest that you ensure that there are no objects closer than 10ft/3m from the PIR sensor.

The Passive Infrared (PIR) sensor detects moving heat sources. It does this by using a series of lenses which redirect the infrared light radiation towards a sensor, which detects the intensity of that infrared light. These special lenses break up the infrared light, allowing the sensor to detect any appreciable shift in the origin of the heat source. Objects too close to the PIR sensor will be out of "focus" and cause false triggers.

The reason that the *OutbackCam* can operate so long on battery power is due to the clever integration of the PIR. The PIR doesn't need much power to run, unlike a camera which requires quite a lot. If the camera was to remain on constantly, even the best AA batteries wouldn't last a full day.

Thus, most of the time, the PIR sensor is the only active component of the camera. The camera and the infrared LEDs which support the night vision feature only kick in when something moves in front of the PIR sensor. The area of detection and the view of the camera are shown in the diagram below.

55°   32ft/10m

PIR Motion Detection Area
Camera Viewing Area
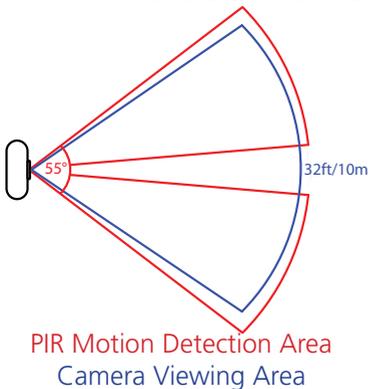
There is a small gap towards the center of the PIR sensors viewing area. Bear this in mind whilst placing the *OutbackCam*.

Note that the actual range of the camera is, technically, limitless (for example, it can see the sun, and that's a really, really long way away). The practical limit is the distance the subject can be from the camera before being 'too small' to see much detail. The distance at which this occurs depends on how much detail you want in your image.

Night Vision Range

The range of the night vision (10m/32ft) is shown in the diagram. This is an average range - the actual range will be affected by environmental conditions (such as humidity, fog or smoke) and the color and brightness of the objects being observed. Note that infrared brightness isn't the same as visual brightness - some white objects can appear black under infrared light, and vice versa.

For the best night vision performance, use still image mode. Still images require less illumination than video, as the electronic shutter can be "open" longer.

Inserting Batteries and an SD Card

Undo the two clips on the side of the *OutbackCam* and open the case. Before inserting batteries or an SD card, **ensure that the *OutbackCam* is turned OFF.**

To install/change batteries:

• Locate the battery slots, on the rear of the camera unit.
• Remove any old batteries.
• Insert new ones observing the polarity shown in the battery slots.
• Use only fresh batteries. Do NOT mix battery types.
• You may need to re-configure the *OutbackCam* when you swap batteries.

To insert an SD card:

• If there is an SD card in the slot already, remove it. To release the SD card, push it into the slot for a moment then release, and it will 'pop' out.
• Face the SD card so that the data connectors are face down, with the 45° cut corner orientated to the top right hand side.

Attaching the Strap

The included strap can be used to attach the *OutbackCam* to any structure which the strap can fit around. Ensure you have the required components. You'll need the fabric strap, and the two halves of the clasp (pictured clipped together, facing "top-side" up).

1. Feed the fabric strap through the two spaces provided on the rear of the *OutbackCam*. Un-clip and separate the two halves of the clasp.

2. Feed one end of the strap though the bottom side of the second hole of one clasp, as pictured to the left.

3. Loop the end of the strap back through the first slot in the clasp, as shown to the left.

4. Repeat for the other half of the clasp. To tighten the strap, simply pull on the loose ends of the strap protruding from the clasp. If you find that the strap slips out of one or both ends of the clasp, then this indicates that the clasp is upside-down.

7

Operating the *OutbackCam*

The different modes, settings and features of the *OutbackCam* can be accessed via the built-in LCD screen. The menu looks something like this:
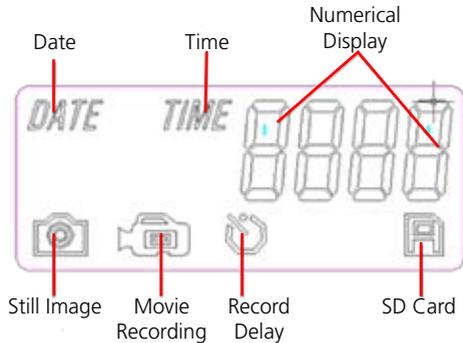
Setting up the *OutbackCam*

- The first time you turn on the *OutbackCam*, you'll be taken directly to Setup Mode. Here you'll be able to configure the *OutbackCam* to operate as you'd like for the duration of its installation.
- To access the Setup Mode at any other time, simply press the SETUP button. It may take approximately 10-20 seconds for the *OutbackCam* to enter Setup Mode, slightly longer if it has to finish recording and saving any recordings already underway.
- To access other options to set, use the UP and DOWN buttons.
- To select an option to edit, use the OK button.
- To exit the setup mode, simply press the SETUP button.
- If you want to change a setting, press OK. Then, use the UP and DOWN buttons to change the value shown.
- The order of options which can be set is as follows:

<div align="center">

Date Setup
Time Setup
Still Image/Movie Recording Selection
Recording Delay Setup
Current Recording Count

</div>

Date Setup

When you have access to the Date Setup, the Date symbol will flash in the upper left corner of the screen. The date is displayed in the format *MMDD*. Thus, the second of March would be displayed as 0302, or the fifteenth of December as 1215.

- Press UP and DOWN to change the selected value. Press OK to confirm.
- Once you've entered the the Month and Day, then you'll be able to select the year. Again, enter the correct value and press OK to confirm. You'll be taken to the Time Setup screen.

Time Setup

Whilst in **Time Setup**, the Time symbol will flash rapidly.
- The time is displayed in 24-hour format. Thus, half-past nine in the morning will be written as 0930, whereas half-past nine in the evening will be represented as 2130.
- Simply use the UP and DOWN buttons to select an hour, and then press OK.
- Then, use the UP and DOWN buttons to select the current minute.

Still Image/Movie Recording Selection

You can select to capture still images (*JPEG*) or movie (*AVI*) files here.
- When both the Still Image and Movie Recording symbols are flashing, press OK to access the selection screen.
- Use UP and DOWN to select between Still Image and Movie recording - the icon will flash to let you know which one you have selected. Press OK to select a mode.
- If you select Still Image recording, then you'll need to select between 1P (taking one photo per motion event detected) and 3P (taking three images per motion event).
- For still image recording, you'll then need to choose between "HI" (high quality, 1600 x 1200) and "LO" (low quality, 1024 x 768).
- All video recordings are 15 seconds in duration, at a resolution of 640 x 480.

Record Delay Setup

When in the Record Delay setup screen, the Record Delay symbol will be shown flashing rapidly.
- The Record Delay is a measurement of how much time must pass between motion events detected by the PIR sensor before the *OutbackCam* will take another picture or record another video.
- This can be set to between 5 seconds and 60 minutes and 59 seconds. We suggest using lower Record Delay settings when you need to capture everything that happens - this is ideal for locations which are relative inactive, or if you plan to periodically copy images/videos off the SD card.
- Longer Record Delay settings help when trying to minimise false triggers or maximise use of your battery and/or storage space. This is great for situations where you want to capture a "slice" of the action without capturing literally everything that moves.

Current Recording Count

Whilst the SD Card icon is flashing, you're looking at the Current Recording count. This will simply display the number of recordings (still image or video recordings) currently stored on the SD card installed in the *OutbackCam*.

Formatting the SD Card

If the *OutbackCam* detects an SD card which is either not formatted or formatted for an incompatible file system, it will give you the option to format the card.
- The *OutbackCam* will display the message FoNo. No will be flashing.
- To format the card, press UP so that Fo is flashing and press OK.
- You will see two options, Y and N. Press UP to select Y and press OK to confirm.

IMPORTANT:

Formatting will **remove all data on the SD card** - this cannot be undone.

Viewing Recorded Images/Videos

Connecting to a PC Directly

- Set the power switch to ON.
- Press the SETUP button.
- Connect the OutbackCam via the USB cable to a free USB 2.0 (or higher) port on your computer.
- The computer will detect the *OutbackCam* as a USB Mass Storage Device, and give it a drive letter (such E:\, F:\ and so on).
- To access your images/videos, navigate to this drive using your file explorer. Alternately, choose "Open to View Files" (or similar) from the *AutoPlay* window (if one appears - not all systems are configured to do this).
- The recordings are stored in a folder called DCIM. They are arranged in chronological order based on the date and time recorded.
- To open files, simply click on them in the same way you open other files on your computer.

Transferring data via the SD Card

Alternately, you can just take the SD card out of the *OutbackCam* and pop it into an SD card reader on your computer. Many computers these days (particularly notebooks) come with SD card readers built in. If you don't have a built in card reader, you can purchase a stand alone card reader which connects via USB, or use a USB to SD adaptor - both of these are quite inexpensive.

Once the SD card has been detected by the computer, it will appear as a Mass Storage Device, and can be accessed in the same way as if you connected the Digtal Eye directly to the PC, as detailed above.

Playing AVI Files

It may be the case that your computer has difficulty playing back the AVI files created by the *OutbackCam*. If this is the case, we suggest trying VLC Media Player, a great little program which is available free from www.videolan.org/vlc. There are versions available for almost every operating system available, and it's a good choice for playing back the AVI files that the *OutbackCam* creates.

There should be no such problem with the still images (JPG files). This file format has been around a long time (actually about twenty years, which in the computing world is practically forever) and the vast majority of devices have no problem displaying them. If you're having problems viewing the files on a PC, then this is more likely to be the result of a faulty SD card than the file being incompatible with your system.

False Triggers & How to Avoid Them

The PIR sensor is not infallible. It has been designed to use the absolute minimum amount of power possible, which does lead to false triggers occurring in some locations. False triggers occur whenever the PIR sensor "thinks" it detects motion when, in fact, there is no motion to be detected (or, at least, no movement you want to be detected).

Even the "occasional" false trigger can be extremely annoying. For example: say you setup the *OutbackCam* to take three photos per motion event, and place it in a position which, for only one hour a day, receives one false trigger per minute. At the end of a month, this will add up to more than 5000 photos of nothing!

Suggested solutions:

- Avoid placing the *OutbackCam* facing areas with a large and/or dynamic temperature range. For example, an area consisting of both sunny and shady areas will, on a clear day, create some hot areas and some cool ones. As a result, any routine movement (such as wind in trees or a passing shadow and so on) will trigger the PIR sensor.

- **Do not** aim the *OutbackCam* directly at an object less than 16ft/5m away. In fact, the farther anything is from the sensor, the better. If there's nothing within the sensor range except the people/animals you want to detect, then there's nothing that will cause a false trigger.

- Test your setup. Configure and place the camera and leave for at least an hour. If the area you're monitoring has a large temperature difference between day and night, then a full day test is recommended. Multiply the number of false triggers you get by the amount of time you plan to leave the *OutbackCam* in that location to get a feel for how many false triggers you'll be dealing with over the course of the camera's deployment.

- Don't use the *OutbackCam* with low batteries - under-powering the unit will increase the frequency of false triggers, and may cause data corruption. Remember to replace all batteries at once, and do not mix battery types.

- If all else fails, try altering the Record Delay timing. A longer Record Delay will reduce the number of false triggers you experience, though it is unlikely to prevent them completely.

Low Battery Warning

If the AA batteries in the *OutbackCam* are running low, the indicator light on the front of the *OutbackCam* (the one buried in the infrared LED bank) will blink three times when the unit powered on. This is an indication that you should change the batteries immediately.

What can I use the *OutbackCam* for?

The short answer: How many things can you think of?

The longer answer: With the exceptions of illegal activity (such as recording people in certain environments without their knowledge - check the law in your locality!) or exposure to extreme environments (such as strapping it to a submarine or space shuttle or filming a roast dinner from inside the oven) just about anything. Here are just a couple of suggestions:

- **Home security.** A great option for securing a yard or garage. You can place it in your yard/garage/wherever and not have to run cables for power for video signals. Just remember to check the batteries regularly!

- **Covert surveillance.** It's neat, discreet and (somewhat) petite. That, and you can put it where you need it and come back to get it a few weeks later. If you set it up right, it'll operate autonomously for weeks on end.

- **Animal monitoring.** If you've ever wondered "Hey... where did my chickens go?" then find the fox responsible with the *OutbackCam*. Whether you're looking for wildlife or monitoring your herd, any warm-blooded animals can be detected and recorded by the *OutbackCam* (though your local Sasquatch might slip past - they're just camera shy).

What can I mount the *OutbackCam* on?

The short answer: almost anything except air, other gasses, spider-web or a prayer.

The slightly longer answer is anything which will provide the *OutbackCam* with sturdy enough support to ensure it stays there for the entire time. The *OutbackCam* is built tough, and will probably survive being dropped or falling off its mount (though no guarantees, folks - bad stuff does happen, and we all get unlucky sooner or later). However, you certainly don't want a bunch of pictures of the ground, even if they're at extremely artistic angles - so whatever you mount it on, be sure it's tough enough to go the distance!

What's an AVI file? Come to that, what's a JPEG? What's the difference?

A JPEG file is a format for storing still images. It's a 'compression' technique, allowing you to store many more images on your SD card than would be the case if they were not compressed, whilst still retaining the vast majority of the visual details. JPEG is a widely supported format, and can be viewed on just about any computer or computer-like device about today. Even most DVD players can display JEPG images (though they often need to be burnt to a DVD first).

An AVI file is a container for storing video data. They can use a variety of compression formats, so not all AVI files will be compatible with all computer systems. If you run into this problem, we suggest using VLC Media Player. It's available free online for just about any operating system. Grab it from www.videolan.org/vlc.

12

What are the best kind of batteries to use?

The best choice of battery depends on your individual needs. Typically, we recommend alkaline batteries with the highest milliampere hour (mAh) rating possible. mAh is a measurement of how much power a battery contains, whereas the volt (V) measurement is a measure of how much of that power it will release at a time. All AA batteries are around 1.5V, regardless of their mAh rating. If you're planning to keep using the *OutbackCam* on a regular basis, then rechargeable batteries will prove the most economical choice in the long term.

How do I know my *OutbackCam* won't be stolen?

The short answer: That's just the chance you take.

The longer answer: Sure, you (and we) can't *guarantee* that someone with light fingers won't find the camera and pilfer it - but there are some things you can do to minimise the chances of this happening. Here are some suggestions.

- Mount the *OutbackCam* somewhere out of sight, or at least somewhere which isn't obvious. People can't take what they don't know is there.

- Make use of the padlock clasp, and use as sturdy a padlock as will fit. Locks are great deterrents.

- If you're really need to secure the *OutbackCam*, then you can consider using a security lock and chain, like those typically employed as bicycle locks. If the chain is too thick to fit through the padlock socket, try attaching it to the padlock itself.

How many images/videos can I fit on my SD card?

Short answer: Depends how big your SD card is.

Long answer: Individual 15 second video recordings range from between 15 to 30MB a piece, depending on the complexity of the images and the speed of motion within the scene. So, for arguments sake (and for ease of math) we'll say that the "average" size of a video is 25MB. Thus, 40 videos will make 1GB. So, if you exploit the maximum capacity of the *OutbackCam* and use a 32GB card, you'll be able to store 1200 or more video recordings. That's one recording per hour for 53 days!

Still images at high quality are typically require about a half a megabyte (500KB) and at low quality approximately half that amount (250KB). Which means you'll get a little over 60, 000 images to our aforementioned 32GB SD card (assuming it's not already full of video, of course). Which is one picture every five minutes for about 7 months. If that's not enough, then try low quality pictures - you'll get somewhere in the vicinity of 120, 000 pictures on the card.

Technical Specifications

Video

Image Sensor Type	1/2 Inch CMOS
Effective Pixels	1600 x 1200 (2.0 Megapixels)
Day/Night Mode	Color during day / B&W at night
Exposure	Automatic
White Balance	Automatic
Infrared Cut Filter	Yes
Lens	7.6mm
Viewing Angle	55 Degrees

Recording

Video Format	AVI
Video Resolution	640 x 480
Video Frame Rate	30 fps
Video Recording Duration	15 seconds
Still Image Format	JPEG
Still Image Resolution	1600 x 1200 (High) / 1280 x 1024 (Low)
Multiple Still Image Capture	Yes (3)
Image Overlays	Date / Moon Phase
Record Delay Range	5 seconds ~ 60 minutes 59 seconds

Night Vision

Night Vision Range	Up to 32ft / 10m
Number of IR LEDs	15

General

Operating Power	DC 6V
Battery Type	4 x AA
Indoor/Outdoor	Outdoor
Memory Type and Size	SD Card up to 32GB
Display	Monochrome LCD
Language	English
Sensor Type	PIR (Passive Infrared)
Sensor Range	Up to 32ft/10m
Sensor Trigger Speed	< 1 second
Dimensions	4.7" x 3.6" x1.8" / 120mm x 90mm x 45mm
Weight	0.4lbs / 180g

Warranty Information

Swann Communications USA Inc.	Swann Communications PTY. LTD.	Swann Communications LTD.
12636 Clark Street	Unit 13, 331 Ingles Street,	Stag Gates House
Santa Fe Springs CA	Port Melbourne,	63/64 The Avenue
90670	Victoria 3207 Australia	SO171XS
USA		United Kingdom

Swann Communications warrants this product against defects in workmanship and material for a period of one (1) year from it's original purchase date. You must present your receipt as proof of date of purchase for warranty validation. Any unit which proves defective during the stated period will be repaired without charge for parts or labour or replaced at the sole discretion of Swann. The end user is responsible for all freight charges incurred to send the product to Swann's repair centres. The end user is responsible for all shipping costs incurred when shipping from and to any country other than the country of origin.

The warranty does not cover any incidental, accidental or consequential damages arising from the use of or the inability to use this product. Any costs associated with the fitting or removal of this product by a tradesman or other person or any other costs associated with its use are the responsibility of the end user. This warranty applies to the original purchaser of the product only and is not transferable to any third party. Unauthorized end user or third party modifications to any component or evidence of misuse or abuse of the device will render all warranties void.

By law some countries do not allow limitations on certain exclusions in this warranty. Where applicable by local laws, regulations and legal rights will take precedence.

Swann Technical Support

All Countries E-mail: tech@swannsecurity.com
Telephone Helpdesk

USA toll free
1-800-627-2799
(Su, 2pm-10pm US PT)
(M-Th, 6am-10pm US PT)
(F 6am-2pm US PT)

USA Exchange & Repairs
1-800-627-2799 (Option 1)
(M-F, 9am-5pm US PT)

AUSTRALIA toll free
1300 138 324
(M 9am-5pm AUS ET)
(Tu-F 1am-5pm AUS ET)
(Sa 1am-9am AUS ET)
NEW ZEALAND toll free
0800 479 266
UK
0203 027 0979

See http://www.worldtimeserver.com for information on time zones and the current time in Melbourne, Australia compared to your local time.