

# Bushnell®

*Instruction  
Manual*

TRAIL SENTRY™  
*Digital Trail Camera*



Standard Sentry



Night Vision Sentry

Model# 119204 (Std) / 119305 (NV) / 119505 (Camo NV)

LIT #: 98-1164/03-08

Congratulations on your purchase of the Bushnell® Digital Trail Sentry™ Camera! This weatherproof, rugged trail camera is designed to record still images or movie clips of outdoor wildlife activity. This instruction manual will help you understand, setup, and use your Sentry to achieve the best possible results.

## **Bushnell Digital Trail Sentry Features**

If you've been looking for a digital game scouting or surveillance camera that has all the essential features but without the unwanted frills, expense, or confusing operational menus of some less effective off-brand "game cams", the Bushnell Trail Sentry will end your search. With one of the most user friendly interfaces in the industry, this trail camera is easy to setup and use. The extra -wide strap ensures a secure mount to the tree, and a padlock loophole plus software password keeps out would-be thieves. The high resolution digital camera delivers crisp views of game in your area and stamps each image with date, time and a moon phase icon. The Sentry can capture still images (up to 4MP or 5MP, depending on model), or 14 second movie clips. All images, movies and events are recorded onto an SD card for convenient transfer to your home computer (or use the Bushnell 11-9500C or 11-9501C Trail Scout Viewer to view, copy and delete images in the field). The camera will function day and night and sense game out to 45 feet. The oversized xenon flash or LED infrared flash (Night Vision models only) will reach out up to 45 feet for nighttime images. A new photo is taken every 30 seconds for as long as motion/heat events are detected. The LCD display makes set up a breeze in the field. The Trail Sentry is rugged and weatherproof.

## QUICK GUIDE: BUSHNELL TRAIL SENTRY (Standard and Night Vision Models)

1. Open the camera by releasing the latches on the right side of the camera. Install 4 “D” cell batteries (flat base of all batteries contacting springs), and insert an SD card (not included, use any capacity up to 1GB) in the slot to the right of the 5 buttons (upside down, brand name facing you). Press the card down until you hear it click into place.
2. Press and release the Power switch. The display will show four “dashes”, then change to “HHHH” with a blinking key icon below it. This is a prompt to enter your password, which can be changed in the setup menu. The first time the camera is turned on, the password is the default, “0000”. Press the Enter button four times to enter four zeros, then press it again to confirm-the display indicates “PASS” and the camera is ready to operate. If the wrong password is entered, the display will flash “ERRO” and the camera will not work.
3. If you are using the camera for the first time, you should set the date and time so your photos will be “stamped” correctly. Briefly press the Menu button-“DATE” will blink on the display. Press Enter to confirm you want to change the date, then the first two digits will flash, prompting you to enter the month. Use the Up/Down buttons to set the current month, then press Enter, and repeat to set the day of the month and press Enter again. The display will then change to let you set the year, with only the last two digits flashing (“20\_ \_”). Again use the Up/Down buttons to change the year if necessary, press enter, and set the time (“TIME” will flash, press enter and use Up/Down to set the hour and minute. The time display uses the 24 hr standard, so 2:00 PM is indicated as “1400”, etc).
4. After the date and time have been set, and Enter is pressed, “EVENT” will blink on the display. Press Enter and the “camera” icons for still photos and movie clips will both blink. This allows you to choose which type of file will be recorded every 30 seconds for as long as motion and heat events are detected. Press Enter again, and only the still photo icon will blink. Pressing the UP and DOWN buttons will now let you alternate between blinking movie camera and still photo icons. Select the photo mode you prefer and press ENTER while that icon is blinking.
5. After selecting still photo or movie clip mode, press ENTER. Two options for still photo resolution, LO and HI will blink (f). Press ENTER again and use the UP or DOWN buttons to set the resolution. LO resolution (2MP on standard model, 3MP on night vision models) will allow you to store more photos on the SD card before it is filled, and the quality is suitable for viewing on a PC monitor, email or web sites, and making small prints. HI resolution (4MP on standard model, 5MP on night vision models) creates larger files via software interpolation, taking up more space on the card, but they are higher quality, better suited for printing enlargements or capturing more detail. After setting the still photo resolution, press ENTER.



## QUICK GUIDE: BUSHNELL TRAIL SENTRY (Standard and Night Vision Models)

6. (*Night Vision models only*) After selecting still photo or movie clip mode, press ENTER. The “Sun” icon will blink (f). Press ENTER again and use the UP or DOWN buttons to set the hour-this is the time the camera will consider to be the start of the “Day”. During the Day, normal color photos/videos will be taken. If the day becomes cloudy, the regular flash will fire. Next, press ENTER and the “Star&Moon” icon will blink. Press ENTER and set the hour for the start of “Night”. During the Night, photos and videos will be taken using the invisible infrared LED lamp array to light the scene. This allows you to take night photos without startling animals. Next, press ENTER.

7. The “key” icon will blink next, press ENTER and enter any four digit password of your choice (to keep using the default “0000”, just press ENTER 4 times) by using the UP/DOWN buttons to change each digit and using ENTER to step to the next digit. When finished, press ENTER if you want to return to the date/time setup menu, or press and hold the MENU button at any time to exit all setup menus and return to normal operation.

8. In normal operating mode, the display will only show the still photo or movie clip icon in the lower left corner, an SD card icon on the lower right, and one or more digits that indicate how many photo or movie files have been stored on the card. To test the camera operation, wave your hand in front of the lens and PIR (passive infrared/motion) detector, while looking at the LCD display. Every time an “event” is detected, the display will indicate “PIr”, “EVNT”, “rECd” in turn, and the event is recorded on the SD card as a new line in a text file, including the date and time of the event. As long as events are being detected, a new still photo or movie clip (as set in the menu) will be recorded every 30 seconds, indicated on the display by “PIr”, “SnAP”, then “SAVE”. Note: for movie clips, the display will stay on “SnAP” for the 15 sec duration of each movie.

9 Thread the strap through the slots on the back of the Sentry and attach the buckles, then strap it onto a suitable tree, making sure the strap is tight and the camera is aimed at the area you wish to observe. Turn on the camera (make sure a new or empty SD card has been inserted) and leave the area-there is a 60 second delay after power on before the first photo is taken. . Alkaline batteries typically last 30 days or more, depending on how often the Sentry is activated, how often the flash fires, ambient temperature, etc. (Using rechargeable NiMh batteries and the optional solar panel with the Night Vison models will typically provide  $\geq 6$  months of life)

10. Pressing the Up/Down buttons during normal operation will switch the display between showing # of photos stored and # of events recorded. To look at your captured photos, make sure the power is off, and remove the SD card by pushing down lightly on the top edge of the card-it will pop up for removal. Use an SD card reader with any PC or Mac (or the Bushnell Trail Scout Viewer) to view, copy, or delete the photos (standard JPG files) and movies (AVI files) inside the “DCIM/100MEDIA” folder on the card. Double click on an individual file to see it, or open the files with the photo software of your choice. The event log is the

4 .TXT file, just double click to open and view with your default software for standard plain text files.

## Digital Trail Sentry Specifications

Image Sensor	2.1 MP (Standard model) or 3.1 MP (Night Vision models) CMOS sensor
Lens	F/3.5, effective focal length 42mm. Sight range: 45 degrees
Flash	High power electronic Xenon Flash or IR LEDs (Night Vision models only, array of 20). Range: 45 ft.
PIR Sensor	Low noise, high sensitivity passive infrared sensor. Range: 45 ft.
Motion LED Indicator	Yes
Display	Monochrome LCD. Auto-off: 3 min. 2-digit event and image display.
File Format	Standard JPEG format (.jpg) still photos. Video movie clips (.avi). DCF ver. 1.0 file management.
Photo Modes	2MP or 4MP* (Standard model), 3MP or 5MP* (Night Vision models) still photo or AVI video (30x40 pixels per frame, 10 frames per second rate, 14 second length)
Exposure	Auto
White Balance	Auto
Power Supply	4 x "D" size alkaline batteries or NiMh "D" cells with solar panel.
Battery Life	Alkaline batteries: Approximately 30 days (dependant on temperature, camera activity and flash usage). Rechargeable NiMh+Solar Panel ( <i>Night Vision models only</i> ): ≥ 6 mos.
Card Compatibility	Up to 1 GB maximum capacity secure digital (SD)cards. The use of MMC cards is not recommended.
User Password	Yes, available range: 0000 to 9999 (Default setting = 0000)

\* High resolution photos processed via software interpolation before storage

## *Glossary*

**PIR**—Passive Infrared Sensor. Senses motion like typical security motion detector. Requires infrared energy (heat) in addition to motion to trip sensor to assure detection of live animals.

**Event**—Any time that the PIR senses motion it counts it as an event. Events are recorded to the SD card in a text file. Events are recorded continuously during operation.

**Image**—A digital picture recorded on the SD Card when motion is sensed. Images are taken at the desired delay between images.

**Image Delay**—Time elapsed between photos while events are sensed and recorded. This is fixed at 30 second intervals in the Trail Sentry.

**IR Flash**—LED Night Vision Flash. Sends a burst of Infrared Energy which is invisible to the human eye. Especially useful for night photos when a visible flash is undesirable.

**Camera Flash**—Xenon Flash used for low light photography. Automatically fires if required.

**SD Card**—Memory card used to store images and events. Compatible with up to 1GB capacity SD card.

**Battery Life**—Time that camera will function in the field. Dependent on temperature, number of images and number of flashes during that time.

**Setup**—Using the display menu and buttons to set the date/time, still photo or movies, and password.

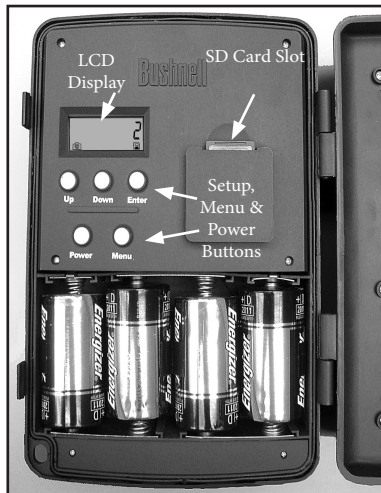
**Security (2 methods)**—One of the most important requirements of any trail camera. The Trail Sentry has 2 levels—padlock tab and software password.

**Trigger Speed**—Time delay between a subject passing in front of PIR sensor and the image capture of that subject. All Bushnell Trail Cameras have a trigger speed of less than one second.

## Front of Camera



## Control Panel Inside Front



## Button & Display Detail

**Parts  
Guide**

## Setup and Operation Guide

1. Open the Sentry by pulling out on the two latches on the right side. Install 4 “D” cell batteries (flat base of all batteries contacting springs), and insert an SD card (not included, use any capacity from 16MB to 1GB. Do not substitute MMC cards.) in the slot to the right of the 5 buttons as indicated on the slot cover (upside down, with the notched corner of the card on the left and metal contacts of the card facing the back of the slot). Press the card down until you hear it click into place. If the Sentry is turned on without a card in place, it may not turn off-reset it by pulling one of the batteries out partway, insert a new or empty SD card, and put the battery back in place. Only remove or insert cards with power off.

2. Press and release the Power switch. The display will show four “dashes”, then change to “HHHH” with a blinking key icon below it (Fig a). This is a prompt to enter your password, which can be changed in the setup menu. The first time the camera is turned on, the password is the default, “0000”. Press the Enter button four times to enter four zeros (b) (if you previously changed the password in the setup menu, use the UP/DOWN buttons to enter your password digits, pressing ENTER after each one.), then press it again to confirm-the display indicates “PASS” and the camera is ready to operate. If the wrong password is entered, the display will flash “ERRO” and the camera will not work or allow the password to be changed. After an incorrect password is entered for the third time, the Sentry will automatically turn off.

Power must be turned on again before beginning a new password entry cycle.

3. If you are using the camera for the first time, you should set the date and time so your photos will be “stamped” correctly. Briefly press the Menu button-“DATE” will blink on the display. Press Enter to confirm you want to change the date, then the first two digits will flash, prompting you to enter the month (c). Use the Up/Down buttons to set the current month, then press Enter. Set the day of the month the same way, and press Enter again. The display will then change to let you set the year, with only the





## Setup Guide (cont.)

last two digits blinking (“20\_\_”) (*d*). Again use the Up/Down buttons to change the year if necessary, press enter, and set the time (“TIME” will flash, press enter and use Up/Down to set the hour and minute. The time display uses the 24 hr standard, so 2:00 PM is indicated as “1400”, etc).

4. After the date and time have been set, and Enter is pressed, “EVENT” will flash on the display. Press Enter and the “camera” icons for still photos and movie clips will both blink (*e*). Press Enter again, and only the still camera icon will blink. Pressing the UP or DOWN buttons will now cycle between the 2 photo mode choices: Still Photos or Video Clips. This allows you to choose which type of file will be recorded every 30 seconds for as long as motion and heat events are detected. Select the photo mode you prefer and press ENTER while that icon is blinking.

5. After selecting still photo or movie clip mode, press ENTER. Two options for still photo resolution, LO and HI will blink (*f*). Press ENTER again and use the UP or DOWN buttons to set the resolution. LO resolution (2MP on Standard model, 3MP on Night Vision models) will allow you to store more photos on the SD card before it is filled, and the quality is suitable for viewing on a PC monitor, email or web sites, and making small prints. HI resolution (4MP on Standard model, 5MP on Night Vision models) creates larger files via software interpolation, taking up more space on the card, but they are higher quality, better suited for printing enlargements or capturing more detail. After setting the still photo resolution, press ENTER.

6. (*Night Vision models only*) After selecting still photo or movie clip mode, press ENTER. The “Sun” icon will blink (*g-see next page*). Press ENTER again and use the UP or DOWN buttons to set the hour-this is the time the camera will consider to be the start of the “Day”. During the Day, normal color photos or videos will be taken. If the lighting conditions become dark or cloudy, the standard flash will fire to help illuminate the photo.

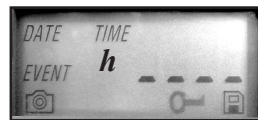


## Setup Guide (cont.)

After setting the start hour for “Day”, press ENTER and the “Star&Moon” icon will blink. Press ENTER and set the hour to define the start of “Night”. During the Night, photos and videos will be taken using the infrared LED lamp array to light the scene. This allows you to take night photos without startling animals or revealing the camera position, as infrared light is invisible to the eye. During the time period you defined as “Night”, an internal filter which blocks infrared light from reaching the digital image sensor is automatically deactivated, so that the IR LED lamps can work. During the day, the infrared filter is reactivated, so that only normal visible light strikes the sensor and affects the image. After setting the start hour for Day and Night, press ENTER.



7. The “key” icon will flash next (**h**), press ENTER and enter any four digit password of your choice (to keep using the default “0000”, just press ENTER 4 times) by using the UP/DOWN buttons to change each digit and using ENTER to step to the next digit (**i**). When finished, press ENTER if you want to return to the date/time setup menu, or press and hold the MENU button at any time to exit all setup menus and return to normal operation.

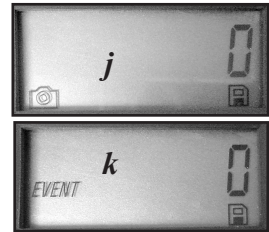


8. In normal operating mode, the display will only show the still photo or movie clip icon in the lower left corner, the day or night mode icon, an SD card icon on the lower right, and one or more digits that indicate how many photo or movie files have been stored on the card. To test the camera operation, wave your hand in front of the lens and PIR (passive infrared/motion) detector, while looking at the LCD display. Every time an “event” is detected, the display will indicate “PIr”, “EVNT”, “rECd” in turn, and the event is recorded on the SD card as a new line in a text file, including the date and time of the event. As long as events are being detected, a new still photo or movie clip (as set in the menu) will be recorded every 30 seconds, indicated on the display by “PIr”, “SnAP”, then “SAVE”. Note: for movie clips, the display will stay on “SnAP” for the 14 sec duration of each movie.



9. Thread the strap through the slots on the back of the Sentry and attach the buckles, then strap it onto a suitable tree, making sure the strap is tight and the camera is aimed at the area you wish to observe. The red LED lamp on the front of the camera can help you determine how large an area is covered, as it will flash when an “event” is detected. Turn on the camera (make sure a new or empty SD card has been inserted) and leave the area—there is a 60 second delay after power on before the first photo is taken. Batteries typically last 30 days or more, depending on how often the Sentry is activated by events, how often the flash fires, ambient temperature, etc. The red LED lamp will stay on continually to indicate a low battery condition.

10. Pressing the Up/Down buttons during normal operation will switch the display between showing # of photos stored (*j*) and # of events recorded (*k*). To view your captured photos, make sure the power is off, and remove the SD card by pushing down lightly on the top edge of the card—it will pop up for removal. Insert it into an SD card reader (available at most computer, photo, or electronics dealers) connected via USB to your PC or Mac to view, copy, or delete the photos (standard JPG files) and movies (AVI files) inside the “DCIM/100MEDIA” folder on the card. Double click on an individual file to see it, or open the files using the photo software of your choice. The event log is the .TXT file, just double click to view with your default software that opens standard plain text files. If you do not have a computer, or would like to more easily view your photos in the field, we recommend the Bushnell Trail Scout Viewer. It is battery powered, and features 2 SD card slots, allowing you to easily copy photos to a larger capacity card, or delete unwanted photos, as well as view your Sentry photos on its large color LCD display. The Trail Scout Viewer also has a USB port, so it can function as a card reader for a computer as well.



**NOTE: (Night Vision models only):** setting the date and time on your camera is imperative for the unit to function properly, so that images captured in both day and night will have the best possible appearance. If the date and time are not set up correctly, the automatic IR (infrared) filter will remain in the “off” position until the date and time are set, causing daytime images to appear somewhat pink.

## Additional Notes

### MOON PHASE STAMP

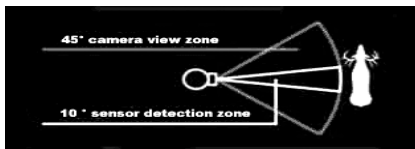
All new Trail Sentry models have a “moon phase” stamp feature. This links the current date (as set by the user in the setup procedure) to the phase of the moon on that date (this data is stored on an internal memory chip), and imprints an icon on your photo which represents the moon phase when the photo was taken. The moon phase icon will appear on your photos in the lower left, next to the Bushnell logo. Some hunters will find this to be a useful reference, as it can help determine if particular animals are inactive at night when a full or nearly full moon is present, causing them to be more visible to predators. Or, if some of your night photos seem to have a darker or lighter background (beyond the range of the LED lamps or flash), you can see if that was related to how bright the moon was at the time. The icons for the various phases of the moon are shown below:



### ABOUT THE PIR SENSOR

The sensor that triggers the trail camera is Passive Infra Red, or PIR. Infrared energy is essentially heat energy. The PIR detector operates by sensing a change in the infrared level in its detection zone. This zone is a cone in the center 10 degrees of the camera's field of view. The camera establishes an average long-term infrared level. When this level increased suddenly the PIR detector signals the camera to record a picture and/or an event. Because of this effect, the PIR detector will be more sensitive at night, when the average temperature is lower.

You can use the red LED indicator on the front of the camera to confirm the detection zone. When PIR is sensed, this “PIR detected” indicator will light. The camera's field of view is a 45 degree cone, centered on the PIR detection zone.

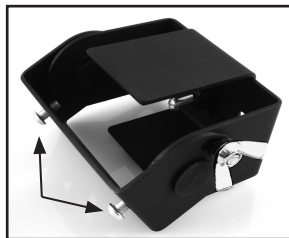


## OPTIONAL ACCESSORIES FOR THE BUSHNELL TRAIL SENTRY

### Ratcheting Bracket (*Bushnell Model # 11-9650C*)

An optional ratcheting bracket is available for all new Trail Sentry models included in this manual, providing an alternative mounting method.

This bracket can be screwed to a tree, or secured to a tree with the provided cable. When mounting, make sure that the bracket ratchets down toward the ground. This allows you to mount your camera higher on a tree, to avoid theft and detection by undesirable animals. After mounting the ratcheting bracket to the tree, slide the protruding bolt heads (see photo-screw the bolts just mid-way into the bracket) into the keyhole mounting slots on the back of the camera.



Also, the Trail Sentry models with Night Vision have a jack on the bottom of the camera for inserting a solar panel power cable (use only with Bushnell Solar Panel Model # 119750C). When mounting the solar panel, the ratcheting bracket can be used with it turned upside down (so it ratchets up), to allow the solar panel to be positioned facing UPWARD, to collect solar energy to power rechargeable NiMh “D” batteries (sold separately) installed in the camera.

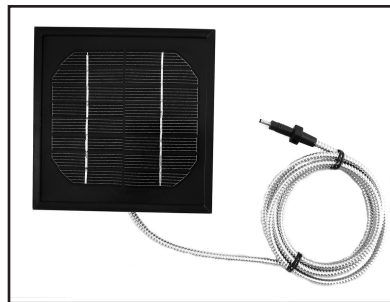
## OPTIONAL ACCESSORIES FOR THE BUSHNELL TRAIL SENTRY

### Solar Panel (*Bushnell Model # 11-9750C*)

(Compatible only with Trail Sentry Night Vision models and most Trail Scouts)



Solar Panel Power Input Jack



Solar Panel (insert plug  
into camera input jack)

***WARNING: DO NOT USE the solar panel unless rechargeable (“D” size type NiMh) batteries have been installed. Using the solar panel with alkaline or other non-rechargeable batteries may result in damage to the unit, not covered by warranty.***

## TWO-YEAR LIMITED WARRANTY

Your Bushnell product is warranted to be free of defects in materials and workmanship for two years after the date of purchase. In the event of a defect under this warranty, we will, at our option, repair or replace the product, provided that you return the product postage prepaid. This warranty does not cover damages caused by misuse, improper handling, installation, or maintenance provided by someone other than a Bushnell Authorized Service Department.

Any return made under this warranty must be accompanied by the items listed below:

- 1) A check/money order in the amount of \$10.00 to cover the cost of postage and handling
- 2) Name and address for product return
- 3) An explanation of the defect
- 4) Proof of Date Purchased
- 5) Product should be well packed in a sturdy outside shipping carton, to prevent damage in transit, with return postage prepaid to the address listed below:

### IN U.S.A. Send To:

Bushnell Outdoor Products  
Attn.: Repairs  
8500 Marshall Drive  
Lenexa, Kansas 66214

### IN CANADA Send To:

Bushnell Outdoor Products  
Attn.: Repairs  
25A East Pearce Street, Unit 1  
Richmond Hill, Ontario L4B 2M9

For products purchased outside the United States or Canada please contact your local dealer for applicable warranty information. In Europe you may also contact Bushnell at:

Bushnell Germany GmbH  
European Service Centre  
Mathias-Brüggen-Str. 80  
D-50827 Köln  
GERMANY  
Tel: +49 221 995568-0  
Fax: +49 221 995568-20

This warranty gives you specific legal rights.  
You may have other rights which vary from country to country.  
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## FCC Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- 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.

Shielded interface cable must be used with the equipment in order to comply with the limits for a digital device pursuant to Subpart B of Part 15 of FCC Rules.

Specifications and designs are subject to change without any notice or obligation on the part of the manufacturer.





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For further questions or additional information please contact:

Bushnell Outdoor Products  
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