

Bushnell®



Digital Land Camera w/Night Vision

Instruction Manual

Model#: 119512B

Lit# 98-2189/02-12

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IMPORTANT NOTE

Congratulations on your purchase of one of the best Land cameras on the market! Bushnell is very proud of this little unit and we are sure you will be pleased with it as well. We appreciate your business and want to earn your trust. Please refer to the notes below and the instructions in this manual to ensure that you are completely satisfied with this product.

If your Bushnell Land Cam does not seem to be functioning properly or if you are having photo/video quality issues, please check the Troubleshooting/FAQ section on pages 18-21.

Problems are often due to something simple that was overlooked, or require only changing one setting to solve.

If your problem continues after trying the solutions in the Troubleshooting/FAQ section, **please call Bushnell Customer Service at (800) 423-3537.** In Canada, call (800) 361-5702.

Bushnell recommends using 4 Energizer® Lithium AA batteries in this Land Cam to obtain maximum battery life.

Do Not Mix Old and New Batteries

Do not mix battery types-use ALL lithium or ALL alkaline.

Rechargeable batteries are not recommended.

Bushnell recommends using SanDisk® SD and SDHC Cards (up to 32GB capacity) in this Land Cam.

INTRODUCTION

Congratulations on your purchase of the Bushnell 119512B Digital Land Camera. This camera is designed to record human or animal activity in the outdoors with its still image and movie modes and weatherproof, rugged construction. Your Land Cam features a compact, portable size and an extra long battery life.

Main Features:

- 5.0 MP digital sensor
- Compact Size (120mm*94mm*46mm)
- Long Battery Life (Up to 6 months)
- Trigger Time=1.3 seconds or less
- Automatic IR Filter
- LCD Display
- 18 Night Vision LEDs
- Adjustable Photo Delay: 5~ 59 second ,1~ 10mins (default 10S)
- Multiple Shot Mode (3 images per trigger)
- 640*480 at 30 FPS Videos
- Supports up to 32 GB SD Card
- Date, Time & Moon Phase Imprint
- Auto Exposure
- Auto White Balance
- Power Supply: 4 AA batteries (lithium or alkaline)
- Mounting Socket for Standard Tripods
- Weatherproof

Parts and Controls Guide

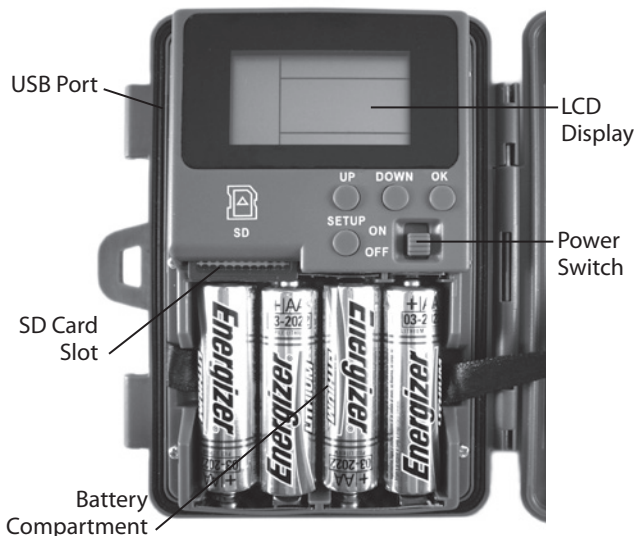


Front of Camera

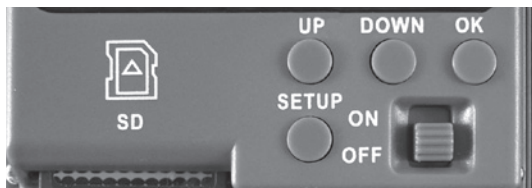


IR LED Array Detail

Parts and Controls Guide



**Control Panel
(Front Unlatched & Opened)**



Control Panel Detail

BATTERY and SD CARD INSTALLATION

The Bushnell 119512B Digital Land Camera is designed to operate using 4 AA batteries. We recommend using Lithium (for longest life) or Alkaline batteries.

NOTE: Always set the power switch to the OFF position when installing or removing batteries.

Please make sure the batteries are inserted correctly, as indicated inside the battery compartment. Incorrect voltage or polarity (+/-) will damage the camera.

Do not mix old and new batteries.

Do not mix battery types-use ALL lithium or ALL alkaline.

Rechargeable batteries are not recommended.

Memory

Your 119512B Digital Land Camera has a memory card slot, to accept SD cards up to 32GB max. capacity (sold separately).

Inserting an SD card

- Make sure the power switch is in the **OFF** position whenever adding or removing memory.
- Insert an SD card into the card slot completely and oriented correctly as shown by the icon above the slot (label up, contacts facing down and notched corner on the right).
- To remove the SD memory card, depress the SD card and pull out the card gently.

Using a new, blank SD card is recommended. If the SD card has been used in another device, please make sure to format using the Format option in the Land Camera's Setup menu before you set the camera to capture photos/videos. New cards are ready to use straight from the package.

ABOUT THE SETUP MENU

Slide the power switch to the **On** position. You'll see "WAIT" on the display, then the setup menu screen. Before you start using the camera, you'll no doubt want to set the date/time so they are imprinted correctly on your photos, and maybe change the trigger delay time and image resolution to your preferences. This is done by editing the settings of an item listed in the Setup Menu.

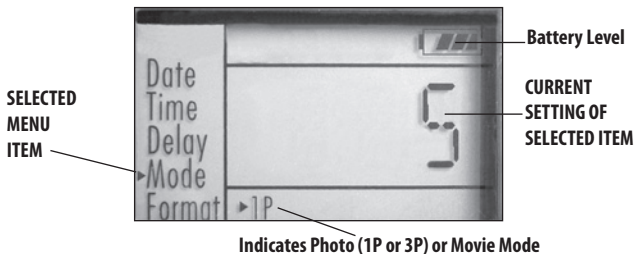
To enter the Setup Menu at any time, press the **SETUP** button (to left of the power switch).

USING THE SETUP MENU

The Setup Menu has 5 different items, which appear on a list in the left frame of the display. Here's how to edit (change) the setting of a menu item:

1. Select the menu item you want to edit by pressing the **UP** or **DOWN** button until the item is blinking. *Note: you can see the current/default setting for each item (without changing it) in the main center frame as you move up and down the list of items.*
2. Press the **OK** button.
3. You can now select the setting you prefer for the selected item by pressing the **UP** or **DOWN** button. The setting displayed in the center frame will blink until you press **OK** to confirm it is the setting you want to save.
4. To exit the Setup menu at any time, simply press the Setup button.

SETUP MENU DISPLAY



The following table lists all of the menu items, their available settings, and a description of their functions:

Menu Item	Settings (Bold =default)	Description
Date	set year, month, and day	Press OK and use the UP/DOWN keys to change the year setting, then press OK again and repeat these steps to also set the current month and day. Press OK after setting the day to go to the next menu item (setting Time).
Time	set hour and minute	Press OK and use the UP/DOWN keys (to change the setting) then OK again (to move to the next field) to set the current hour (24-hr format only, "00"=midnight, "12"=noon) and minute.
Delay	set minutes (0-10) or seconds (5-59) <i>Default delay time= 10 sec.</i>	Selects the length of time that the camera will "wait" until it responds to any additional triggers from the PIR after an animal is first detected and remains within the sensor's range. During this user set "ignore triggers" interval, the camera will not capture photos/videos. This prevents the card from filling up with too many redundant images. Settings begin with 10 second default time. Press OK , set the delay time in minutes (if desired), press OK and set the delay in seconds.

Menu Item	Settings (Bold= default)	Description
Mode	2M, 5M (with Mode set to 1P or 3P for photos), 5-60 Sec (in Movie (video) mode)	Select "Mode" and press OK . Use UP/DOWN to select 1P (single photo), 3P (burst of 3 photos), or Movie (video mode). Press OK . Use UP/DOWN to set LO (2MP) or HI (5MP) still photo resolution (High resolution provides higher quality photos, low resolution allows you to store more photos on the SD card), or video length from 5-60 sec. (if video mode was selected).
Format	FO/ NO , Y/ N	Deletes (erases) all files stored on a card to prepare it for reuse. Always format a card that has been previously used in other devices. Caution! Make sure you have downloaded and backed up any files on the card that you want to preserve first! Press UP to select "FO", press OK , then select "Y" (Yes) and press OK again to confirm you want to format the card. The extra step and "No" defaults help prevent accidental erasure of all your photos/videos.

When you've finished using the Setup Menu, and are ready to return the camera to normal operating mode, so it will begin to capture photos or videos for you, simply press the **Setup** button. After you exit the Setup Menu, the display will go blank and the camera is in "sleep" mode. About 30 seconds later, the camera will begin taking photos or videos when triggered, at intervals determined by the trigger delay time setting.

CAMERA OPERATION

Once your camera has been setup, you are ready to begin using it to capture photos of activity in the area you choose to locate it. Just follow these steps:

1. Mount the Camera

It is recommended that you mount the camera about 4 or 5 feet (1.2~1.5 meters) off the ground, with the camera pointed at a slight downward angle. It's best to avoid mounting the camera facing east or west as the rising and setting of the sun could produce false triggers and overexposed images. Clear branches and other debris away from the front of the camera so as not to block the camera lens or PIR sensor.

Make sure that both door latches are securely locked in place, to ensure proper weather resistance.

2. Power On the Camera

The camera will be in "sleep" status after it has been powered on. When the PIR sensor is triggered, it will start to take photos immediately after the delay time (as set) has passed.

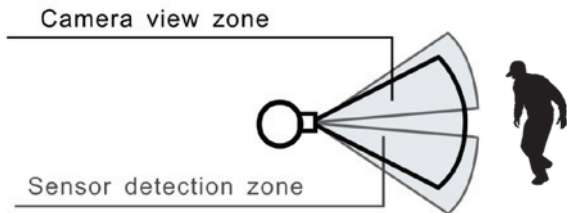
3. Test the Coverage Area

One of 119512B Land Camera's most useful features is the ability to test the coverage area.

- After mounting the camera, open the front housing and slide the Power switch to the "**ON**" position. Press the **SETUP** button if necessary to enter the Setup Menu.
- The PIR indicator light below the lens will blink when you have entered the coverage area.
- Adjust the camera position as needed and repeat the test until the desired coverage area is achieved.
- Press the **SETUP** button again when you are finished using the test

CAMERA OPERATION (*continued*)

mode-the camera will be “sleeping” and waiting for the PIR sensor to trigger the first photo or video capture.



4. Secure the Camera

A standard padlock may be used in the camera's lock hole to secure it and prevent theft.

VIEWING THE PHOTOS and VIDEOS

After your camera has been operating for awhile, you will of course want to review the photos and/or videos it has been capturing. This can be done by either of two methods, according to your preference or the availability of accessory equipment:

Using an SD Card Reader

Push the SD card in slightly to release it then pull it out gently.

Put the SD card into any of the widely available SD card readers (either a dedicated SD card reader or “multi-card reader” that features slots for several different memory cards, including SD cards.

Follow the card reader supplier’s directions to view or download the photo and/or video files on the SD card.

Connecting the Camera to Your Computer via USB

Slide the Power switch to the “**ON**” position, then press the **SETUP** button. Connect your camera’S USB port (*left side near the display with camera unlatched and open*) to a PC or Mac computer with a USB cable (**not included**, available at most electronics/computer retailers) that has a “Mini-B” USB plug on one end (*camera*) and a “Standard-A” USB plug at the other end (*computer*). The PC will recognize the camera as an external storage device, using the “USB Mass Storage” standard (*no driver installation necessary-not compatible with Windows 98 or earlier*). The PC will display a new disk symbol under “My Computer” or in Windows Explorer (*Macs-new disk appears on the desktop*), and you will see a dialog window on your desktop with several options to view, move, or copy the photo and video files that are stored on the SD card. The camera’s LCD will display “STO”, meaning the camera is in mass storage mode.

GLOSSARY

PIR (Passive Infrared Sensor): Senses motion like a typical security motion detector. Requires infrared energy (heat) in addition to motion to trigger the sensor to help limit detection to live subjects (rather than leaves, etc).

Camera Delay: Time elapsed between photos while events are sensed and recorded. You should set this based on wildlife activity in the area.

Moon Phase: The Land Cam has a feature which imprints a moon phase stamp on each photo for reference.

IR Flash: Also called IR LED Array. This is a “night vision” feature, which emits a burst of infrared light, invisible to the human eye. Especially useful for night photos when a visible flash may be undesirable.

Battery Life: Time that camera will function in the field. Dependent on ambient temperature, number of images taken and number of times the IR flash fires. When the battery voltage drops below 4.5v, the IR flash stops firing. When battery voltage is below 3.8v, the camera stops working.

Burst: The number of pictures the camera takes per PIR trigger (*still photo capture mode only*).

1P: Single image captured for each PIR trigger

3P: Three image sequence captured for each PIR trigger

FULL: When memory capacity is full, the LCD display indicates “FULL”

Mass Storage: Connect the camera with a USB cable to a computer, press the “SETUP” button, and the computer can access the contents of the SD card. The camera is automatically recognized as an “external drive”, without the need to install special drivers. (*Win 98 and older operating systems are not supported. Mac OSX is also compatible-the camera will appear on your desktop as an external storage device or “disk”*).

Technical Specifications

Model Number	119512B
Image Sensor Type	1/2 Inch CMOS
Effective Resolution	5.0 Megapixels (sensor resolution)
Effective Focal Length	7.6 mm
Lens Aperture	f/2.8
IR Filter	Automatic IR Filter
Display	Backlit LCD
PIR Sensor	Yes
Trigger Speed	1.3 seconds or less
Number of IR LED	18 LEDs
Max Night Vision Lighting Distance	40 feet (12 meters)
Storage	SD Card, up to 32 GB Capacity
PIR Indicator	Yes (Setup mode only)
Adjustable Delay Time Range	5~ 59 second, 1~ 10mins (default 10S)
Selectable Image Resolution	2 or 5 MP
Multiple Image Mode	Yes-3 photos
Video Resolution	Movie: AVI 640 x 480 pixels @ 30 fps (15 seconds).
File Format (Still Photo/Video)	JPEG/AVI
Date Time Imprint	Yes
Moon Phase Imprint	Yes
Exposure	Auto
White Balance Mode	Auto
Power Supply	4 AA Cell batteries (alkaline or lithium)
Water Resistant	Yes

Troubleshooting / FAQ

Battery life is shorter than expected

1. Battery life will vary with operating temperature and the number of images taken over time. Typically, the **Land Cam** will be able to capture several thousand images before the batteries die.
2. Check to make sure you have used new alkaline or lithium batteries. **Bushnell recommends using 4 Energizer® Lithium AA batteries in this Land Cam to obtain maximum battery life.**
3. Make sure that the power switch was turned to the “**ON**” position and that the camera was not left in Setup mode while in the field.
4. Make sure that you are using a good quality name brand SD card in your camera. **Bushnell recommends SanDisk® brand SD Cards up to 32GB.** Our experience indicates that poor quality SD cards can sometimes reduce your **Land Cam** battery life.

Camera stops taking images or won't take images

1. Please make sure that the SD card is not full. If the card is full, the camera will stop taking images.
2. Check the batteries to make sure that they are new alkaline or lithium AA batteries. ***See note above about short battery life.***
3. Make sure that the camera power switch is in the “**ON**” position and not in the “**OFF**” position or in Setup mode.
4. Make sure that you are using a good quality SD card in your camera. **Bushnell recommends SanDisk® SD Cards up to 32GB.**
5. If the SD card has its write protect switch in the lock position, the camera will not take images.
6. If you have used an SD card in another device before inserting it in your **Land Cam**, you might want to try formatting the card using the “Format” parameter in Setup mode (make sure you have backed up any important files first, as formatting will erase all previous files). In some cases, other devices may change the formatting of the SD card so that it will not work properly with the **Land Cam**.

Troubleshooting / FAQ

Camera won't power up

1. Make sure that you have installed all 4 batteries in the battery compartment. **Bushnell recommends using 4 Energizer® Lithium AA batteries in this Land Cam.**
2. Make sure that the batteries are installed correctly, observing proper polarity. Always place the negative (flat) end of each battery in contact with the spring tab side of its slot inside the camera.

Do not mix old and new batteries.

Do not mix battery types-use ALL lithium or ALL alkaline.

Rechargeable batteries are not recommended.

Still Photo and/or Video Quality Problems

1. ***Night photos or videos appear too dark***
 - a. Try using a set of new batteries. The flash will stop operating near the end of the battery life.
 - b. You will get the best results when the subject is within the ideal flash range, no farther than 30' (10m) from the camera. Subjects may appear too dark at greater distances.
 - c. Please note that when the still photo mode is set to "3P", or with very short Delay time settings, some images may appear darker than others due to the quick response and rapid retriggering of the camera, allowing less time for the flash to fully recharge before firing again.
2. ***Daytime photos or videos appear too dark***
 - a. Make sure that the camera is not aimed at the sun or other light sources during the day, as this may cause the auto exposure to produce darker results.
3. ***Night photos or videos appear too bright***
 - a. You will get the best results when the subject is within the ideal flash range, no closer than 10' (3m) from the camera. Subjects may appear too light at closer distances.
4. ***Daytime photos or videos appear too bright***
 - a. Make sure that the camera is not aimed at the sun or other

Troubleshooting / FAQ

light sources during the day.

5. *Photos with streaked subject*

a. In some cases with low lighting conditions and fast moving subjects, the 5MP resolution setting (“Hi”) may not perform as well as the 2MP setting (“Lo”).

b. If you have multiple images where fast moving subjects produce streaks on the photo, try the 2MP setting instead.

6. *Red, green or blue color cast*

a. Under certain lighting conditions, the sensor can become confused resulting in poor color images.

b. If this is seen on a consistent basis, then the sensor may need servicing. Please contact Bushnell customer service.

7. *Short video clips—not recording to the length set*

a. Check to make sure that the SD card is not full.

b. Make sure that the camera has good batteries in it. Near the end of the battery life, the camera may choose to record shorter video clips to conserve power.

Photos Do Not Capture Subject of Interest

1. Try to set your camera up in an area where there is not a heat source in the camera’s line of sight.
2. In some cases, setting the camera near water will make the camera take images with no subject in them. Try aiming the camera over ground.
3. Try to avoid setting the camera up on small trees that are prone to being moved by strong winds.
4. Remove any limbs which are right in front of the camera lens.

PIR Sensor LED Flashes/Doesn’t Flash

1. When the camera is in the “Setup” mode, the PIR Indicator LED on the front of the camera will flash when it senses motion. This is for setup purposes only and will help the user aim the camera.
2. During use, the LED will not flash when the camera takes an image. This is to help keep the camera hidden from game.

Troubleshooting / FAQ

Camera won't retain settings

1. Make sure that you have been saving the changes to any parameter settings that you made while in Setup mode, by pressing "OK" after changing the setting. If you don't save your new setting after changing it, the camera will continue to use the original default setting for that parameter.

Do not mix old and new batteries.

Do not mix battery types-use ALL lithium or ALL alkaline.

Rechargeable batteries are not recommended.

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.

1. Any return made under this warranty must be accompanied by the items listed below:
2. A check/money order in the amount of \$10.00 to cover the cost of postage and handling
3. Name and address for product return
4. An explanation of the defect
5. Proof of Date Purchased
6. 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
Attn.: Repairs
9200 Cody
Overland Park, Kansas 66214

IN CANADA Send To:

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

FCC Compliance Statement:

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.

Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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.

The device does not contain any user-serviceable parts. Repairs should only be made by an Authorized Bushnell repair center. Unauthorized repairs or modifications could result in permanent damage to the equipment, and will void your warranty and your authority to operate this device under Part 15 regulations.

The shielded interface cable which is provided 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.



Bushnell®

For further questions or additional information please contact:

**Bushnell
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