

Important Battery Information

- Only use Alkaline or Lithium batteries. We recommend the use of Duracell or Energizer batteries.
- Do not mix old and new batteries. Always replace ALL the batteries at the same time.
- When the camera is not in use, please remove the batteries.

Moultrie Limited Warranty

This product has been thoroughly tested and inspected before shipment. It is guaranteed from defects in material and workmanship from the date of purchase for 1 year. Under this limited guarantee we agree to replace or repair free of charge any part or parts which have been found to be defective in original material or workmanship. Should you require in-warranty service, call our Customer Service Department. If your problem cannot be addressed over the telephone, we may need you to send us your defective product plus proof of purchase.

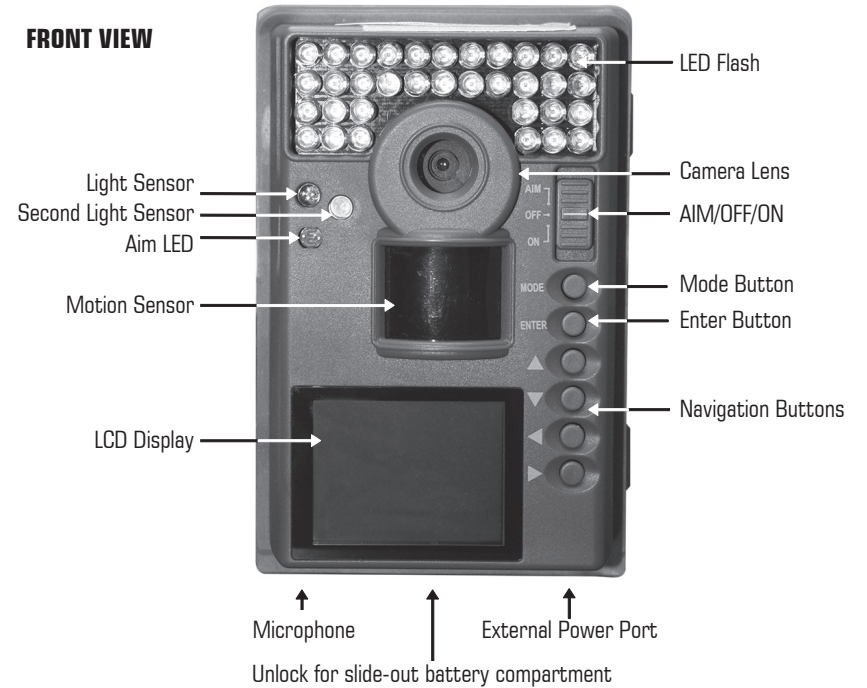


Instructions for M-990i Digital Game Camera

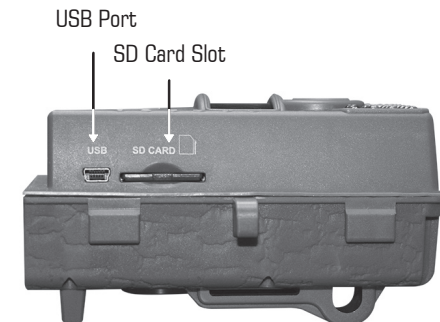
THANK YOU for your purchase of the M-990i Digital Game Camera. Please read this booklet before using the unit. If you should have any questions about this product or any other Moultrie product, please contact us using the information on the back of this booklet. Please register your camera at www.moultriefeeders.com/warranty to activate your warranty.

I CAMERA OVERVIEW

FRONT VIEW



SIDE VIEW



Our Service Department will gladly answer any questions you have. Call 800-653-3334, Monday - Friday, 8:00 AM to 5:00 PM CST.
www.moultriefeeders.com



ON / OFF / AIM

AIM - When AIM is ON and the PIR sensor detects motion, the red LED on the front of the camera will come on for 2 seconds and then shut off.

MODE BUTTON

The Mode Button selects Camera Setup or Main Screen. When camera mode is selected, the UP and DOWN buttons navigate through the menu options. The Mode Button is also used to wake-up the camera and turn on the display when the camera is in power saving (or sleep) mode.

ENTER, UP/DOWN and LEFT/RIGHT BUTTONS

The ENTER button selects the item to be changed. The UP/DOWN and LEFT/RIGHT buttons are used to step through the menu options. Pressing the ENTER button again selects the option indicated on the display. The ENTER button is also used to manually take a picture.

PHOTO REVIEW

To view pictures use the RIGHT or LEFT button to sequence to the next/previous captured picture or video clip. The camera's menu display shows the picture number being viewed. To delete current picture or video press the DOWN button.

BATTERY COMPARTMENT

The camera is powered by eight (8) AA alkaline or lithium batteries. Slide the Unlock switch to the right and grab the small handle under the switch to slide-out the battery compartment tray.

NOTE: It is recommended to use lithium batteries for best performance (do not mix battery types).

SD CARD SLOT

Accepts up to a 32GB SD Card for photo and video storage.

NOTE: An SD Card must be installed for the camera to operate (sold separately). For best results, we recommend that you format the SD card inside the camera before taking pictures. We also recommend that the SD card be Class 4 or Class 10 for HD video recording.

USB PORT

Download still pictures and video onto your computer by connecting a USB cable (sold separately) to the USB port.

EXTERNAL POWER PORT

Accepts the Moultrie PowerPanel or Moultrie Battery Box accessories only (sold separately). Refer to www.moultriefeeders.com for more information.

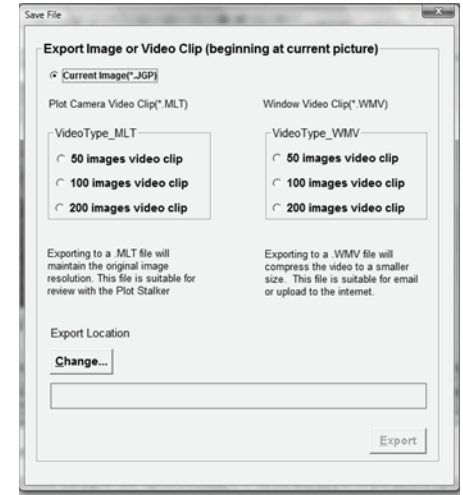
NOTE: The use of any other power source will void your warranty and possibly harm your camera.

SAVING FILES OVERVIEW

Use the Save File features of the PlotStalker software to create a single photo, reduce the overall size of the .mlt file, exclude unwanted photos in the front, or create a video that can be viewed using a standard media player.

EXPORTING AN IMAGE/PHOTO

1. On the main screen, choose a starting image/photo (frame) by using the scroll bar on the bottom of the display or the frame-by-frame search feature.
2. Press the SAVE button.
3. Select the Current Image (*.jpg) radio button.
4. Press Change... to enter the directory and filename to save the image.
5. Press Export to save the file.



EXPORTING MLT FILE

1. Select the appropriate 50, 100, or 200 images video clip radio button; this will create a MLT format file from the starting frame plus the next 50, 100, or 200 frames.
2. Select the Change button to choose the desired location to save the export file.
3. Enter the directory and filename to save the file.
4. Select the Export button to save the file. These files are viewable with Plot Stalker Software.

EXPORTING WMV FILE

1. Select the appropriate 50, 100, or 200 images video clip radio button; this will create a .wmv format file of the starting frame plus the next 50, 100, or 200 frames.
2. Select the Change button to choose the desired location to save the export file.
3. Enter the directory and filename to save the file.
4. Select the Export button to save the file. The program will convert the images to video based on the chosen settings. The .wmv file can be viewed using a standard media player and is great for uploading to the internet or emailing.

B PLOTSTALKER ACTIVITY SEARCH

ACTIVITY SEARCH

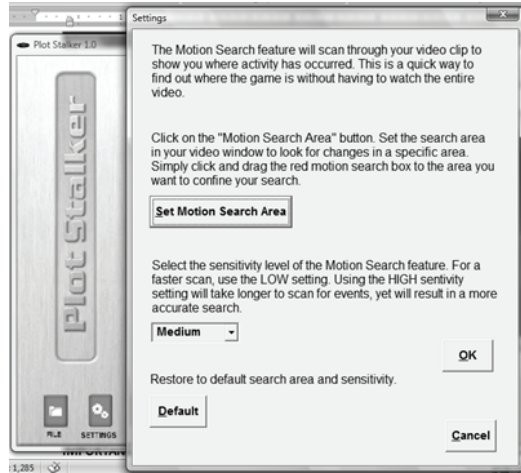
The Search Feature will scan through your photos and automatically look for changes in regions that you identify in Setup.



In search mode, the PlotStalker software scans through the .MLT photo file, stops on a photo when changes are found in your identified region, and then highlights the changes in blue. You can click anywhere in the video viewing area to remove the blue highlights.

ACTIVITY SEARCH SETUP

Click the Settings button to activate the Region and Sensitivity settings for the Activity Search



DEFINE SEARCH REGION

Provides the ability to search for changes in the photo in a specific region rather than the entire photo.

1. Click on the Set Motion Search Area Button.
2. Use the mouse to select and drag the red outline around the area you want to search for movement. This allows you to focus on a very precise area if required.
3. Click OK button on the Settings Popup window to confirm your settings and exit the menu.

SENSITIVITY

Set to High, Medium or Low - This sets the level of pixel change the program will detect.

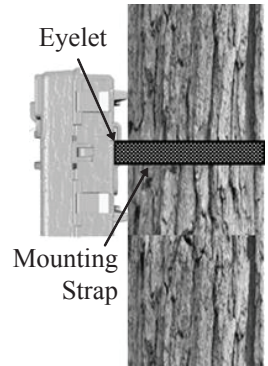
Note: A pixel change occurs when a change in color, intensity, lighting or movement is detected, so this setting is critical to be able to jump to the desired frames.

DEFAULT SETTINGS

Click on Default button to return to the default values for Search Area and Sensitivity settings.

II QUICK START INSTRUCTIONS

- STEP 1** Slide the UNLOCK switch on the bottom of Camera and use the knob to pull the slide-out Battery Tray. Install eight (8) AA size alkaline or lithium batteries with polarities as indicated in the Battery Tray. Re-install the Battery Tray and insert your SD card. We recommend that you format the SD card inside the camera before taking pictures.
- STEP 2** Thread the provided Mounting Strap through the Eyelets on the back of the camera and secure to a tree or pole approximately 36" from the ground as shown. **NOTE: Camera must be attached to a stable object for motion detection to function properly.**
- STEP 3** Turn camera on by sliding ON/OFF/AIM switch to the ON position.
- STEP 4** Press the MODE button one time to get to the Main Selection Screen, select Setup. Set Time and Date by pressing ENTER, using UP/DOWN to adjust selected field, LEFT/RIGHT to move to the next field and ENTER when done.
- STEP 5** Press MODE button until MENU SELECTION screen is displayed. Use the UP/DOWN buttons until the MAIN SCREEN option is highlighted yellow. Press ENTER.
- STEP 6** Switch camera to Aim. Aim camera using motion detection to determine target area. Walk in front of the camera at the desired distance and the camera LED will flash showing the covered area.
- STEP 7** Switch camera to ON. Your camera will now automatically take pictures whenever an animal is detected in range, based on the default settings below.



III DEFAULT SETTINGS

Capture Mode	MOTION DETECT
Photo Quality	HIGH (4.0 MP)
Photo Delay after each photo is taken	5 SECONDS
Motion Freeze	ON
Multi Shot Count	OFF
Digital Zoom	NONE
Video Resolution	VGA
Video Length	10 SECONDS
Video Audio	ON
Camera Name	MOULTRIECAM
Temperature	FAHRENHEIT
Info Strip printed on photos	ON
Time Lapse Frequency	30 SECONDS
Time Lapse Duration	3 HOUR
GPS Longitude & Latitude:	000.000000 N / 000.000000 E
Delete All?	NO

IV CAPTURE MODES

The M-990i offers four capture modes as described below. The default capture mode is Motion Detect.

MOTION DETECT MODE

Still photos are taken when an animal is detected. The number of photos taken when an animal is detected is configurable in Settings. Photos are stored in the DCIM/100MFCAM folder on the SD card.

TIME LAPSE MODE

The camera takes photos at a specified interval during the day and combines them together to create a Time Lapse Video (*.MLT file) which can be viewed on the supplied Moultrie Plot Stalker software. The camera takes a Time Lapse Video twice a day; once in the morning and once in the evening. The morning Time Lapse Video begins 15 min before sunrise. The evening Time Lapse Video ends 15 min after sunset. See chart below as a reference. The length of each Time Lapse Video is determined by the Time Lapse Duration setting in the camera menu. The camera will detect the correct sunrise and sunset times automatically and adjust itself accordingly. The Time Lapse Videos are stored in the DCIM/PLOT folder on the SD card.

IMPORTANT: It will take the camera 24hrs to properly adjust to the correct sunrise and sunset times. As a default, the camera will start the morning Time Lapse Video at 5:45am and end the evening video at 6:15pm. To reset the sunrise and sunset times back to the default times, use the Default Settings option in the menu.



NOTE: The camera can still be triggered to take a photo under certain settings while in Time Lapse mode. Please see the "Time Lapse Frequency" settings in the camera setup section.

HYBRID CAM MODE

Camera operates in Time Lapse mode during the day and Motion Detect Mode during the night. Thirty minutes after dusk the camera will enter the Motion Detect Mode and take night photos when the PIR sensor is triggered.

VIDEO MODE

Camera records a video when an animal is detected by the motion sensor. During daylight hours the camera will record a video 5, 15 or 30 seconds in length. During the night, the camera will record a video with a maximum length of 20 seconds. The video length is configurable in SETTINGS.

A PLOTSTALKER SOFTWARE INTRO

SOFTWARE INSTALLATION

Download your free Plot Stalker software at www.moultriefeeders.com/plotsoftware

INTRODUCTION

In time-lapse photography a series of still photos are taken at regular time intervals. The PlotStalker Software allows you to load the time lapse file captured by your Moultrie Game Camera and scroll backward and forward through your photos, search for activity in a designated area, and save the files.



SYSTEM REQUIREMENTS

Computer: Intel® Pentium® 4 or AMD Athlon® 64 processor or above; 1GB RAM minimum; 100 MB hard disk space minimum.

Operating System: Microsoft® Windows® 32 bit - XP with Service Pack 2 or later; Windows Vista® Home Premium, Business, Ultimate, or Enterprise with Service Pack 1; or Windows 7

LOADING PLOT FILES

Using standard Microsoft utilities (ex. File Explorer – My Computer), copy the PlotFiles (extension is .MLT) from the PLOT directory on the SD card to the hard disk drive in your computer. Note the location stored on the hard disk drive.

Open the PlotStalker software application from the Windows Start Button menu. Once in the PlotStalker software, click on the File Button Browse to the location in which you have saved the Plot file(s) (.MLT) in step 1 above, select the file of interest, and click Open.



BEGIN/END

Goes to the first or last photo in the Plot File.



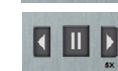
FRAME BY FRAME SEARCH

Individually step forward or backward through each photo.



REWIND/PAUSE/PLAY

Play photos in sequence, pause, or play the photos in reverse order. These functions simulate a video and are useful for manually searching changes in the photos. When a sequence is being played, press fast-forward or fast-rewind multiple times to increase speed. (1x-5x)



VII CAMERA SPECIFICATIONS

Photo Quality	
0.5 MP	800 x 600
2.0 MP	1920 x 1080
4.0 MP	2560 x 1990
10.0 MP	4532 x 2448
Video Quality	
HD	1280 x 720 @ 24fps
VGA	848 x 480 @ 24fps
Approximate photos stored 4 GB SD card	
0.5 MP	10,000
2.0 MP	4,000
4.0 MP	2,000
10.0 MP	1,000
Approximate video time stored 4GB SD card	
HD	45 minutes
VGA	75 minutes
SD Memory Card	32 GB Max
Optical Field of View	55 degrees
Batteries	8 Alkaline or Lithium AA-cells
Approximate Detection Range	40 +/-5 feet

V SETUP AND PROGRAMMING

Setup Menu

The UP/DOWN buttons are used to navigate through the available setting choices. UP/DOWN moves to the next menu item and ENTER selects the item to be changed. Additional menu choices are available by hitting the UP/DOWN button when either the first or the last option is highlighted.

Date/Time

Set Date /Time - on the SETUP DATE/TIME screen, use the UP/DOWN buttons to modify the month. Press LEFT/RIGHT buttons to move to the next field. Press the ENTER button again to save your selections. The Time and Date is retained between battery changes. Time is not automatically adjusted for daylight savings.

SET DATE/TIME
DATE
09 / 01 / 2011
TIME
12 : 00 PM

Capture Mode

Press the UP/DOWN buttons to highlight the desired mode. Press the ENTER button to save the mode and return to the Camera Setup Menu. There are four capture mode settings – MOTION DETECT, TIME LAPSE, HYBRID CAM or VIDEO. Refer to the CAPTURE MODE section of this manual for details.

CAPTURE MODE
MOTION DETECT
TIME LAPSE
HYBRID CAM
VIDEO

NOTE: Only those settings that pertain to the selected Capture Mode will be able to be changed.

Photo Quality

The higher the quality of the photo/image the more memory it consumes. However, higher quality images have higher resolution which results in clearer images – especially when zooming in. There are four photo/image quality settings - 0.5 MP, 2.0 MP, 4.0 MP and 10.0 MP. Press the UP/DOWN buttons to highlight the desired setting. Press the ENTER button to save the setting and return to the Camera Setup Menu. Refer to SPECIFICATIONS section of this document for details on number of images stored based on Photo Quality.

PHOTO QUALITY
LOW (0.5 MP)
MEDIUM (2 MP)
HIGH (4 MP)
ENHANCED (10 MP)

Photo Delay

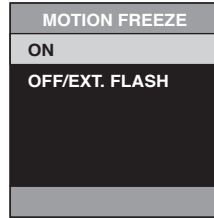
The photo delay determines the number of minutes between pictures when an animal is detected and remains in range. To change the delay time press the UP/DOWN buttons to highlight the desired setting. Press the ENTER button to save the setting and return to the Camera Setup Menu. Additional menu choices are available by hitting the UP/DOWN button when the first/last option is highlighted. Photo Delays can be set to 5, 15 and 30 seconds as well as 1, 5, 10, 30 and 60 minutes.

PHOTO DELAY
5 SECS
15 SECS
30 SECS
1 MINUTE
5 MINUTES

V SETUP AND PROGRAMMING (cont)

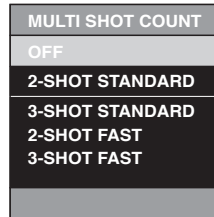
Motion Freeze

This feature maximizes the image clarity during night photos. When this feature is on the camera will use a maximum exposure time of 1/20sec for the night photos. Other adjustments are made to increase the brightness and clarity of the photo. When this feature is turned off the camera will use a maximum exposure time of 1/8sec for night photos.



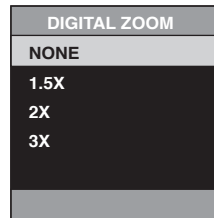
Multi-Shot

When the camera is configured for MOTION DETECT in the capture mode screen, the camera can take 2 shot standard or 3 Shot standard, 2 Shot Fast, 3 Shot Fast, and 4 Shot Fast each time an animal is detected. There is an approximate 3-4 second delay between pictures when the 2 shot standard or 3 Shot standard setting is selected. When the 2 Shot Fast, 3 Shot Fast, and 4 Shot setting is selected, the camera will take the selected amount of photos within 1-2 seconds. To choose the desired setting press the ENTER button to enter the Multi Shot settings. Press UP or DOWN to select the desired number of photos. Then press ENTER again to return to the camera setup menu.



Digital Zoom

This function will allow the user to select between 3 levels of digital zoom. The camera will default to no zoom setting. Press the UP/DOWN buttons to highlight the desired setting. Press the ENTER button to save the setting and return to the Camera Setup Menu.



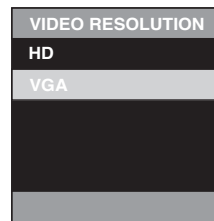
Video Resolution

Video resolution can be set to VGA or HD. The higher the quality of the video, the more memory it consumes. However, higher quality videos have higher resolution.

VGA: 848 x 480 @ 24fps

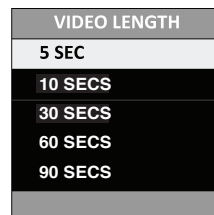
HD: 1280 x 720 @ 24fps

Press the UP/DOWN buttons to highlight the desired setting. Press the ENTER button to save the setting and return to the Camera Setup Menu.



Video Length

When the Game Spy Camera is configured for VIDEO in the Capture Mode screen the camera will record video for a designated amount of time each time an animal is detected. To change the amount of time recorded press the UP/DOWN buttons to highlight the desired setting. Press the ENTER button to save the setting and return to the Camera Setup Menu. The maximum video length for a nighttime IR video is 20 seconds.



VI ADVANCED INFORMATION

Viewing Pictures on Computer via USB

1. Plug USB cable (sold separately) into the USB port on your Windows 7/Vista/XP computer.
2. Plug other end of USB cable into the camera's USB port.
3. To access JPG pictures and AVI movie files navigate to "My Computer" and double click the "Moultrie CAM" drive. Picture files will be stored in theDCIM/100MFCAM directory; video files are located in the DCIM directory.
4. To exit USB mode follow Windows' instructions for properly disconnecting a removable drive and then unplug.

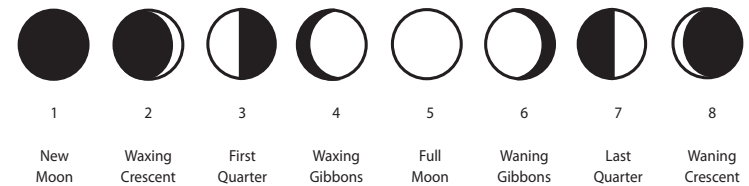
Information on Picture

The info strip below will appear at the bottom of the photo/video:



Moon Phase

The icons for the moon phase are as follows:



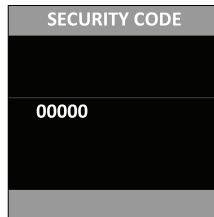
Security Code

This feature prevents unauthorized use of the camera, should it become lost or stolen, by requiring a 5 digit security code be entered to unlock the camera. The security code is 5 digits, each digit being a number 0-9. The default code is "00000". Once the code is changed from the default code the camera will prompt you to enter the correct code whenever:

The camera is turned on

The camera is woken up from sleep mode

The camera is connected to USB



FCC Statements



Moultrie Products, LLC
MCG-12596

Note: Changes and modifications not expressly approved by the party responsible could void the user's authority to operate this device.

This device complies with Part 15 of the FCC Rules. 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.

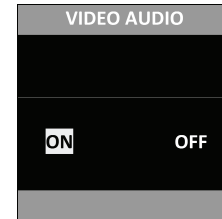
NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

NOTE: This device complies 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 device 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 device 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:

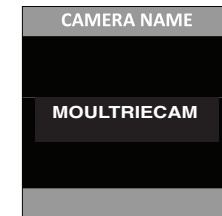
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Video Audio

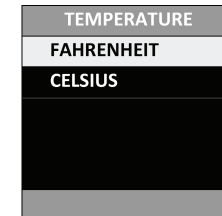
This option allows the user to turn the audio during video recording ON or OFF. When selected and the camera is configured for VIDEO in the Capture Mode screen, the camera will record audio along with the video each time an animal is detected. Press the LEFT/RIGHT buttons to highlight the desired setting. Press the ENTER button to save the setting and return to the Camera Setup Menu.

**Camera Name**

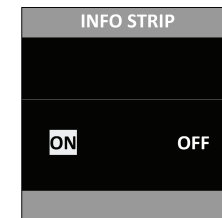
The Camera Name is imprinted on the photos and provides a point of reference when multiple cameras are used. To change the Camera Name use the LEFT/RIGHT buttons to highlight the character to be modified. Press the UP/DOWN button to select the desired character (A to Z, 0 to 9, dash or space). Press LEFT/RIGHT to move to the next character. Press the ENTER button to save the new camera name and return to the Camera Setup Menu.

**Temperature**

The temperature is imprinted on each photo and can be in degrees Fahrenheit or Celsius. To change the temperature units press the UP/DOWN buttons to highlight the desired setting. Press the ENTER button to save the setting and return to the Camera Setup Menu.

**Information Strip**

When the Information Strip is turned ON the information strip, as described in the Advanced Setup section of this manual, is imprinted on the photos. The temperature, moon phase, date, time, camera name and Moultrie logo are imprinted on the bottom of each picture. When the Info Strip is turned OFF the photo contains no information strip. To change the Info Strip setting press the LEFT/RIGHT buttons to highlight the desired setting. Press the ENTER button to save the setting and return to the Camera Setup Menu.



Time Lapse Frequency

This setting is used to set the time frequency between each photo in time lapse mode. To change the time lapse frequency, press the UP/DOWN buttons to highlight the desired setting. Press the ENTER button to save the setting and return to the Camera Setup Menu. Time lapse frequency can be set to 5, 10, 15, 30, 60 seconds or 2 or 5 minutes.

NOTE: Increasing the Time Frequency will decrease the battery life of the camera. It is recommended to use lithium batteries for taking time lapse videos.

NOTE: When the Time Frequency is set to 60 seconds, 2 minutes or 5 minutes, the cameras motion sensor can still be activated in between photos. When this occurs, a photo will be taken and added to the time lapse video.

TIME FREQUENCY
5 SECONDS
10 SECONDS
15 SECONDS
30 SECONDS
60 SECONDS

Time Lapse Duration

Time Lapse Duration is used to limit the time periods that the camera will be active. To change the time lapse duration press the UP/DOWN buttons to highlight the desired setting. Press the ENTER button to save the setting and return to the Camera Setup Menu.

Time Lapse Duration can be set to All Day, 1, 2, 3, or 4 hours.

All Day – Camera takes photos all day

1 Hour – Camera takes photos for 1 hour twice a day.

2 Hour – Camera takes photos for 2 hours twice a day.

3 Hour – Camera takes photos for 3 hours twice a day.

4 Hour – Camera takes photos for 4 hours twice a day.

NOTE: Increasing the Time Lapse Duration will decrease the battery life of the camera. It is recommended to use lithium batteries for taking time lapse videos.

TIME DURATION
ALL DAY
1 HOUR
2 HOUR
3 HOUR
4 HOUR

Battery Life

This feature provides an estimated battery life of the camera. The battery life is expressed as “### Days”. Pressing the MODE button will return to the Camera Setup menu. **NOTE:** The number of days shown is based on using 8 AA alkaline batteries with 5 day and 5 night photos per day. Actual battery life will vary depending on type of battery, weather conditions and camera usage. It is recommended to use lithium batteries for best performance.

BATTERY CALC
100 DAYS

ATTENTION: Use extreme caution when enabling GEOTAGGING within your camera and uploading photographs to the internet. This information could give someone the exact location of your camera.

Your use of the geotagging features of this camera is at your own risk. Neither Moultrie nor any person associated with Moultrie makes any warranty or representation with respect to security of any data linked to photographs uploaded to the Internet. In no event will Moultrie or its affiliates be liable for damages of any kind arising out of or in connection with your use of the camera, the geotagging feature or any other features associated with this camera.

GPS Latitude

This GPS function allows the user to manually enter their location from 000.000000 N or S to 179.999999 N or S for better and more stratigic game tracking. This information will imprint in the EXIF data of the photo taken. To enter the location use the UP or DOWN navigation keys to populate the field and use the RIGHT or LEFT navigation keys to select the desired field.

GPS LATITUDE
000.000000 N

GPS Longitude

This GPS function allows the user to manually enter their location from 000.000000 E or W to 179.999999 E or W for better and more stratigic game tracking. This information will imprint in the EXIF data of the photo taken. To enter the location use the UP or DOWN navigation keys to populate the field and use the RIGHT or LEFT navigation keys to select the desired field.

GPS LONGITUDE
000.000000 W

Default Settings

To restore all the settings back to the factory default press the LEFT/RIGHT buttons to highlight the YES setting. Press the ENTER button to restore the default settings and return to the Camera Setup Menu.

DEFAULT SETTING
YES NO

Delete All Photos

To remove all content on the SD card press the LEFT/RIGHT buttons to highlight the YES setting. Press the ENTER button to erase photos and return to the Camera Setup Menu.

DELETE ALL
YES NO