

# Pix<sup>TM</sup> CONTROLLER

Trail Cameras and Remote Surveillance Systems

## **UndercoverEye<sup>TM</sup> HDD, UndercoverEye<sup>TM</sup> HDD PLUS**

### **Remote Surveillance System Instruction Manual**



**Revision 2.0A**

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## **Introduction**

The PixController UndercoverEye™ is a complete *all-in-one* Ground Hog video surveillance recording system. Video recordings are saved on standard Compact Flash (CF) memory cards in a MPEG4 video recording format. Simply turn the internal power switch to the “on” position, close the case, and wait the 1.5 minute motion control warm up time and the UndercoverEye™ will be ready for motion event video recording. Capture more than 1 hour of footage at 640 X 480 @ 30 Frames per second in high resolution with sound on a 1 GB memory card.

The UndercoverEye™ system box can be buried into the ground for the ultimate covert setup. Simply make sure the RF antenna is above the ground and has good line of sight to the wireless sensors. You may use a SMA Cable extender to position the RF antenna higher if needed.

Sound can also be recorded with your UndercoverEye™ which is a very important feature. However, in situations where sound recording is not permitted you can simply unplug the sound MIC cable from the UndercoverEye™ unit.

Being that there are no mechanical parts for running camcorder tape recording the UndercoverEye™ can be used in much lower temperature conditions where a camcorder will often freeze, and it can be used in much more humid weather conditions where a camcorder can be damaged by moisture, and will power up much faster than camcorders will. The DVR and Video Camera are powered by a rechargeable 12V SLA 3.4 AH battery, which under normal use can last up to 3 weeks of unattended use.

The UndercoverEye™ included (3) wireless PIR motion sensors which can cover a wide sensing area. If you are recording a trail area for example simply place one PIR sensor up the trail and one down the trail, and one in the center where UndercoverEye's video camera is placed. In this scenario you can pre-trigger the UndercoverEye's recording system before the subject walks into the video camera range.

The DVR is completely removable from your UndercoverEye™ unit. To setup functions such as the DVR time/date, recording quality, and installing DVR Firmware simply remove the DVR unit from the UndercoverEye box and connect it to your TV.

The MPEG-4 files produced by the DVR can be played back directly on virtually any portable device accepting CF memory cards. You can also use it to view recorded video on your TV. Just plug it into the Video-In jacks on the TV and hit 'Play'. And with your PVP USB connection or an inexpensive USB adaptor/Card reader (not included), you can easily drag and drop content from the memory card onto your computer to play it on your laptop or PC.

## **What's included with your UndercoverEye™ System**

Your UndercoverEye™ system contains the following items:

- UndercoverEye™ water proof system case/motion control electronic
- Removable Tilt-Swivel RF Antenna w/ SMA connector
- Bullet Video Camera
- Video Cable
- Removable sound MIC/cable
- (3) Wireless PIR motion sensors
- (1) Wireless Remote Control KeyFob
- 12V 3.4AH SLA rechargeable battery
- 12V battery charging unit
- DVR Recording Unit with 4GB Media Card
- DVR Remote Control
- PixController UndercoverEye™ CD with manuals and media player

**Note:** *The UndercoverEye™ PLUS system contains the following additional items:*

- Personal Video Player or Service Monitor
- 4GB Media Card

## **Inspection/Acceptance of received products**

The buyer shall be responsible for inspecting all products shipped prior to acceptance; provided, however, that if Buyer shall not have given PixController, Inc. written notice via email of rejection or shorted items to [support@pixcontroller.com](mailto:support@pixcontroller.com) within ten (10) days following receipt by Buyer, the products shall be deemed to have been accepted by Buyer.

All electronic products sent back for a full refund are subject to a 15% restocking within thirty (30) days from purchase. Products authorized for return must be in their original unopened packaging to receive credit. Unauthorized returns will not be accepted. After thirty (30) days from purchase items may not be returned for a full refund. Your electronics are covered for a full 6 month period covering all part failure under normal use.

## **Contact Information**

**Address:**

PixController, Inc.  
1056 Corporate Lane  
Murry Corporate Park  
Export, PA 15632

**Phone:** 724-733-0970

**FAX:** 724-733-0860

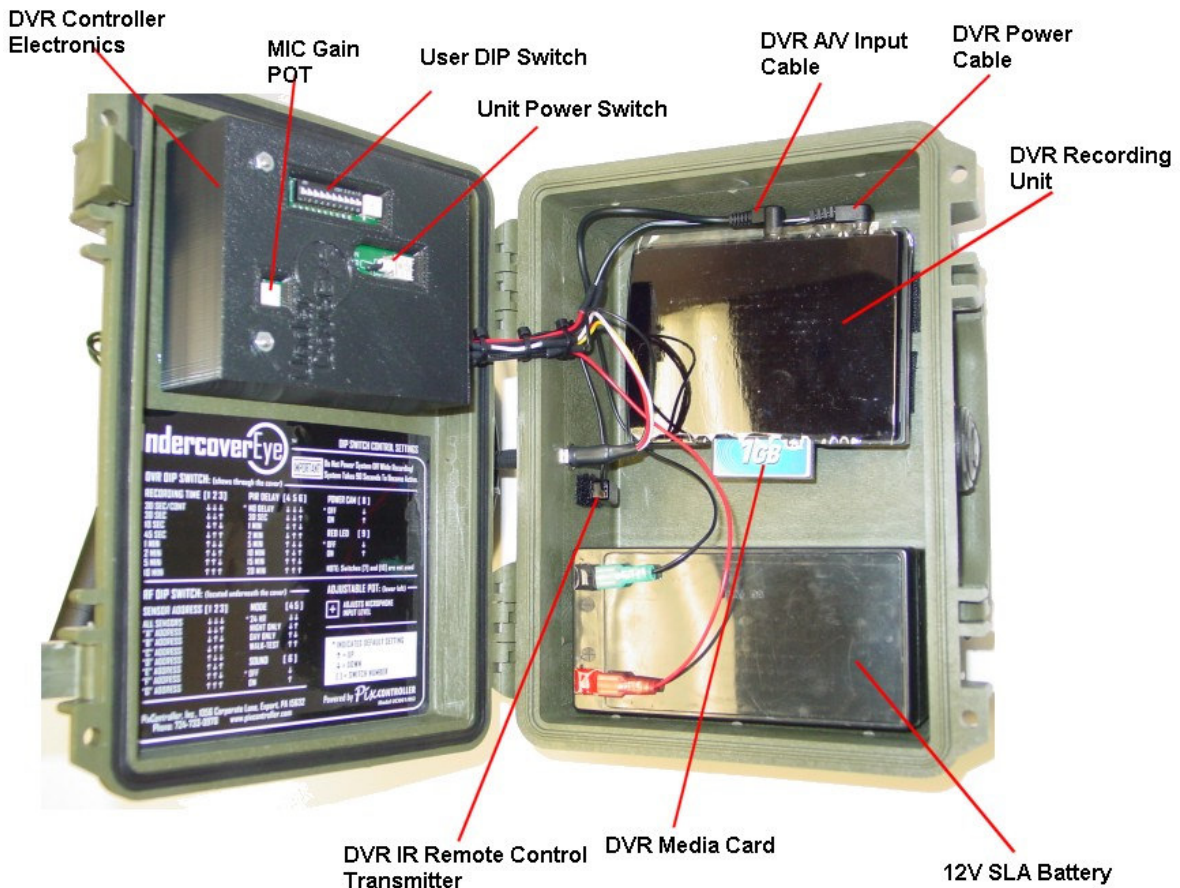
**Email:** [support@pixcontroller.com](mailto:support@pixcontroller.com)

**Web:** <http://www.pixcontroller.com>

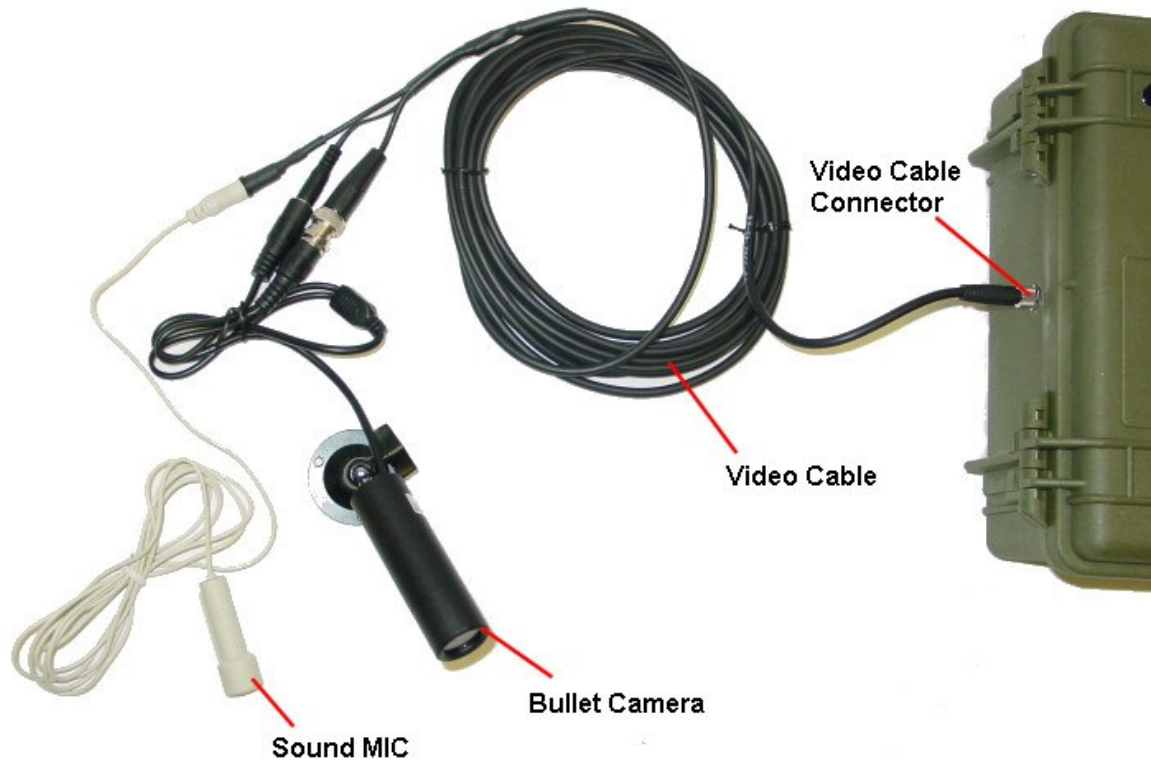
# UndercoverEye™ System Components



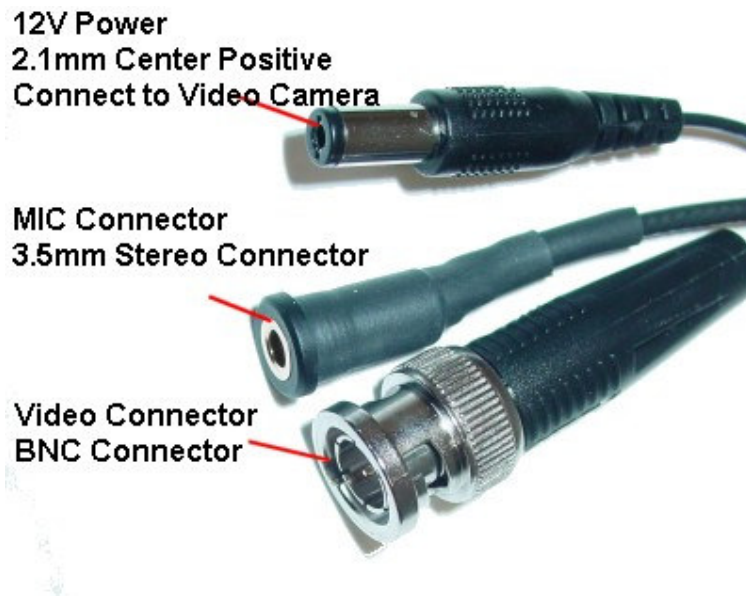
***UndercoverEye™ Exterior Components***



***UndercoverEye™ Interior Components***

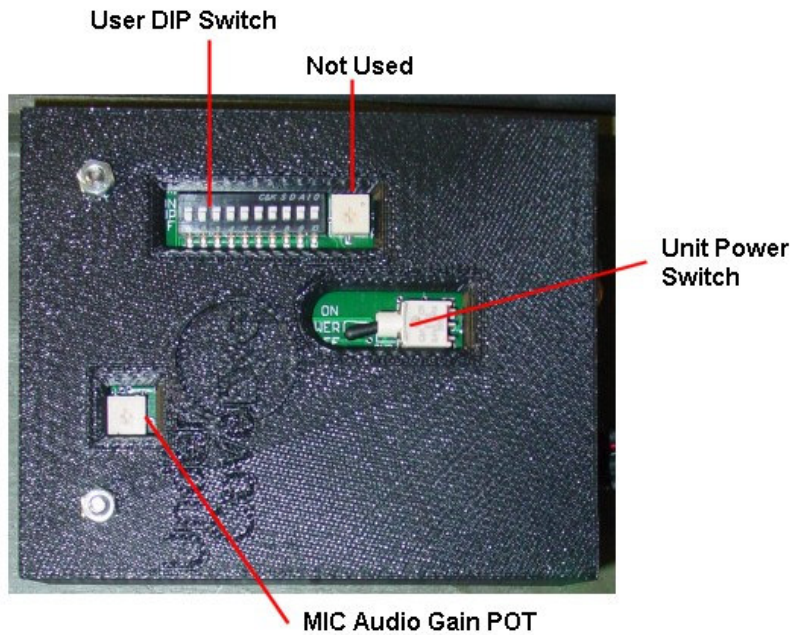


***Video Cable Connections***



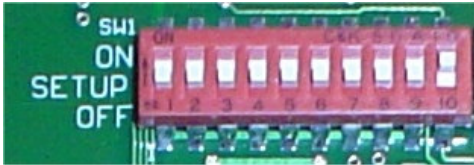
***Video Cable Connectors***

## UndercoverEye™ Electronics Overview



DVR Electronics

## DVR Controller DIP Switch Setting



The DVR Controller Switch will let you customize how the motion control board will trigger the DVR recorder. Here you can adjust the time delay between pictures, set how long the DVR will record, and turning the control board LED's on or off.

**Note:** When turning power on to your control board the red LED will light up. It will stay on for 30 seconds. This time will allow the PIR circuit to warm up. After this time expires the red LED will blink 5 times letting you know that the board is entering a 1 minute automatic walk-test phase. At this point you can move around the camera setup and check out the PIR area. Both the green and red LED's will light when motion is detected. After the 1 minute automatic walk-test phase expires the red LED will blink 5 times letting you know the camera system will now become active.

Recording Time	Switch 1	Switch 2	Switch 3
30 Sec./Cont.	Down	Down	Down
30 Seconds	Down	Down	Up
10 Seconds	Down	Up	Down
45 Seconds	Down	Up	Up
1 Minute	Up	Down	Down
2 Minutes	Up	Down	Up
5 Minutes	Up	Up	Down
10 Minutes	Up	Up	Up

PIR Delay	Switch 4	Switch 5	Switch 6
No Delay	Down	Down	Down
30 Seconds	Down	Down	Up
1 Minute	Down	Up	Down
2 Minutes	Down	Up	Up
5 Minutes	Up	Down	Down
10 Minutes	Up	Down	Up
15 Minutes	Up	Up	Down
20 Minutes	Up	Up	Up

Power Cam/DVR	Switch 8
Off	Down
On	Up

Red LED	Switch 9
Off	Down
On	Up

Green LED	Switch 10
Off	Down
On	Up

## **DVR Recording Time**

Switch 1, 2 and 3 sets the recording time of the UndercoverEye™ on a PIR event

## **PIR Delay - Delays Between Video Shots Setting**

Switches 4, 5, and 6 control the delays between video shots.

## **Power Control – DVR & Video Camera**

Switch 8 controls powers up the video camera and UndercoverEye™ for reviewing video in the field with a hand held video monitor, viewing video at home on your TV, or making changes to the DVR settings with the DVR remote control.

## **DVR Control LED On/Off Setting**

Switch 9 sets if the Control LED (**Red LED**) is to be used or not. This will let you know when the DVR is triggered. This is just a diagnostic LED and should be kept off otherwise.

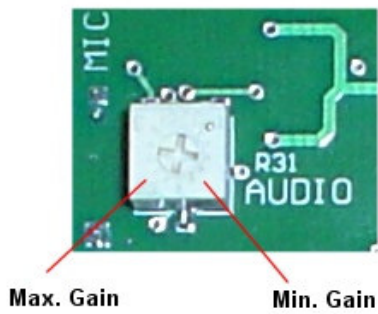
## **Green LED**

(**Green LED**) is to be used or not. **NOT USED – Should be off**

## **Changing DIP Switch Settings Note:**

**When changing switch setting you must re-boot your UndercoverEye. When re-booting you must wait approximately 30 seconds before turning power on again.**

## Adjusting the Audio MIC Gain

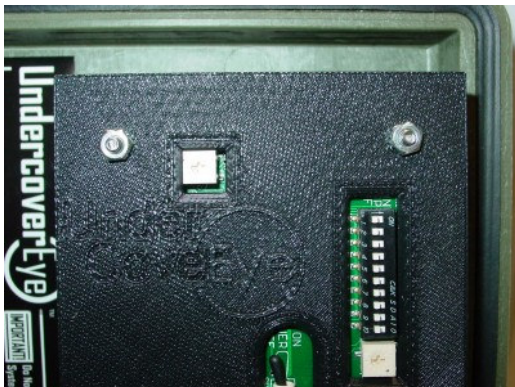


To adjust the MIC sound level of your UndercoverEye™ simply turn the single turn POT shown to the left to your desired range. The default setting is in the middle, as shown. The two "dots" on the Philips head screw show the actual location. The default setting is desirable for conditions.

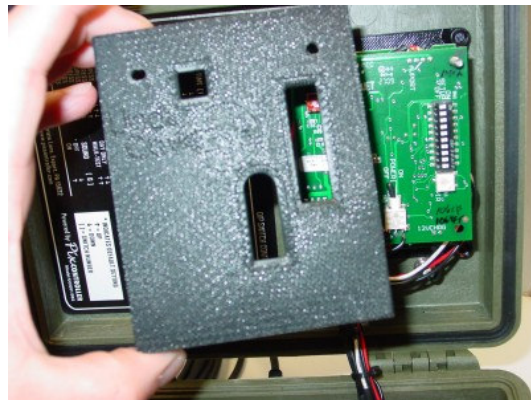
## Sensor Board

The sensor board is located under the DVR Electronics, which is under the plastic cover. The only time you would ever need to access the sensor board is to adjust the sensor ID settings. If you are using several UndercoverEye systems on a particular setup and you are changing the ID addresses of the wireless sensors you will need to adjust the sensor ID.

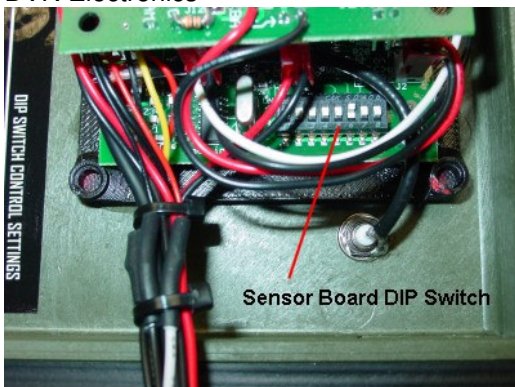
## Accessing the Sensor Board DIP Switch



**Step 1:** Remove the two #6-32 nuts that cover the DVR Electronics

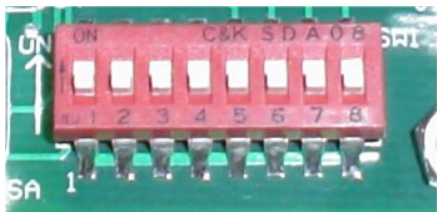


**Step 2:** Remove the plastic cover



**Step 3:** Access the Sensor Board DIP Switch

## Sensor Board DIP Switch



The RF Sensor Board DIP Switch will let you customize how the remote sensors will trigger the DVR controller. Here you can adjust the address of which sensors to respond to (trigger the DVR), Day only, Night Only, or 24 hour operation, Walk-Test mode, and the sound notification.

Sensor Address	Switch 1	Switch 2	Switch 3
All Sensors	Down	Down	Down
"A" Address	Down	Down	Up
"B" Address	Down	Up	Down
"C" Address	Down	Up	Up
"D" Address	Up	Down	Down
"E" Address	Up	Down	Up
"F" Address	Up	Up	Down
"G" Address	Up	Up	Up

Mode	Switch 4	Switch 5
24-Hour	Down	Down
Night Only	Down	Up
Day Only	Up	Down
Walk-Test	Up	Up

Sound	Switch 6
Sound Off	Down
Sound On	Up

## Setting the Address Code

Switches 1, 2, and 3 controls the address code of the UndercoverEye™ controller box. Both the SlimFire Remote Control or Wireless PIR Sensor, and UndercoverEye™ controller box need to be set to the same address code in order for the unit to function properly. There are 7 unique address codes you can set the UndercoverEye™ to respond to.

The UndercoverEye™ is compatible with the KeyFob remote and PIR wireless motion sensors. The address code here is the "house code" from A-P, however, the UndercoverEye™ only will recognize "house codes" A-G. For more information about setting the house code on your SlimFire remote or Wireless PIR Motion Sensor.

**Note:** Out of the box both the KeyFob remote, Wireless PIR will be defaulted to the "A" Address Code. If at any time you do not know the address setting of your sensor we suggest you remove the batteries from the sensor for about 5 minutes and put them back into the sensor. This will "loose" the current programming and set the device back to the "A" address.

Why set different address codes? There may be a situation when you want to have several UndercoverEye™ units in a recording session. You may want to only have several UndercoverEye™ units respond to KeyFob or Wireless PIR motion sensors. For this you have the ability to set the address between each of these devices. It is a good idea to use a marking pen and write the address code on your SlimFire remote or Wireless PIR motion sensor if not set in the default "A" address code.

## **Day/Night Operation Settings**

Switches 4 and 5 control Daylight, Night Time, and 24 Hour recording, and Test Mode

### **Test Mode**

When Test Mode is set to “On” it will let you test out the “line of sight” distance between the triggering unit, i.e., the KeyFob remote control or Wireless PIR motion sensors, and the UndercoverEye™ unit. This is useful to be sure the camcorder units can see commands from the triggering units.

**Note:** To put the UndercoverEye back into “recording mode” when using Test Mode.

### **Sound – Sensor Trigger Indicator**

Switch 6 will let you control the sound indication. On the UndercoverEye™ controller is a small speaker that can send out sound commands. The default mode is having this turned off, but there may be times when you would like a sound indication your unit is receiving the wireless commands.

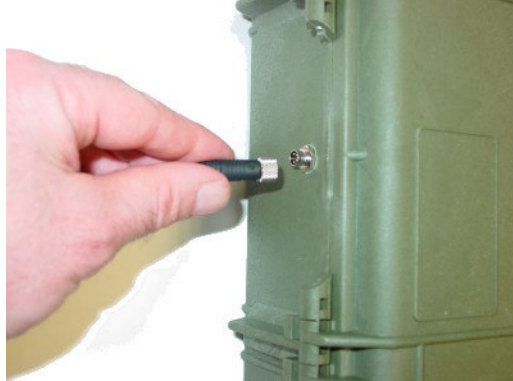
**Note:** When using this setting the sound will only be heard during power up and walk test mode and there will not be any sound when the unit enters active mode.

## Setting the UndercoverEye HDD System Up

**Step 1:** Connect the RF sensor antenna



**Step 2:** Connect the Video Cable. Screw the connector end into the UndercoverEye recording box.



**Step 3:** Connect the bullet video camera to the video cable.



**Step 4:** Be sure the DVR unit is placed inside the recording box and the IR Transmitter is pointed towards the IR Window on the DVR.

**Note:** The DVR unit will receive IR commands from the DVR electronics. If the IR Transmitter and IR Window do not face each other the DVR will fail to record video.



**Step 5:** Power the system on by turning the Unit Power Switch to the “On” position.



## **Powering On the UndercoverEye HDD System**

To power up the system turn the Power on/off switch to the "on" position. You will hear a short melody from the electronics letting you know it's powered on. Next there will be a 30 second delay. After this time expires you will hear 4 quick beeps which let you know the system is going into a 1 minute auto walk test phase. If you walk past the Wireless PIR motion sensors at this point you will hear 1 beep for a "A" Sensor or trigger sensor, and 2 beeps for a "B" sensor or power up sensor. You may want to keep the case open so you can hear this from a distance. After this 1 minute walk test phase expires you will hear 4 quick beeps again letting you know the system is going "active". After this point the system is active.

## **Testing the DVR Recording for the first time**

When testing the unit for the first time we suggest using the Wireless KeyFob to trigger the unit. This will send the same command as the Wireless PIR sensors to trigger the unit. The Wireless KeyFob is the small remote control with the “On” and “Off” buttons. Note, the On 1 and On 2 buttons are redundant.

We suggest testing the unit in an office to become familiar how the system operates before deploying the unit in the field. First, set the DVR User DIP switches to the default position, which is all down and be sure the camera and DVR are installed properly (see above). Next, power the unit on and let the system go through the 1 ½ minute warm up and walk test phase. We suggest giving the unit about 2 minutes before you press the KeyFob remote control to trigger the system. Once the system is triggered you will see a green LED turn on inside the DVR IR window and a few seconds later you will see a red LED turn on. The case must be open to see this. Once the red LED turns on the system is recording. The system will record for 30 seconds as long as the KeyFob is not pressed. After the 30 second time expires both the red and green LED's will turn off. Power down the system when the DVR has finished recording, Pull the memory card from the DVR unit and place the memory card into your PC to view the .MP4 video file.

## **How do I access my video files on the DVR media card?**

The video files captured from the UndercoverEye DVR system are located in the following folder on your media card

**<Drive>:\VIDEO\PVR\TV**

The <Drive> will be the letter device of your card reader, for example: **E:\VIDEO\PVR\TV**

**Note: Make sure that DIP Switch 8 is in the “Down” / “Off” position before putting the system in the field or testing the device for recording.**

## Using the KeyFob Remote Control KeyFob

The KeyFob remote control is used to power up your UndercoverEye™ via a wireless command by pressing the buttons on the remote control.

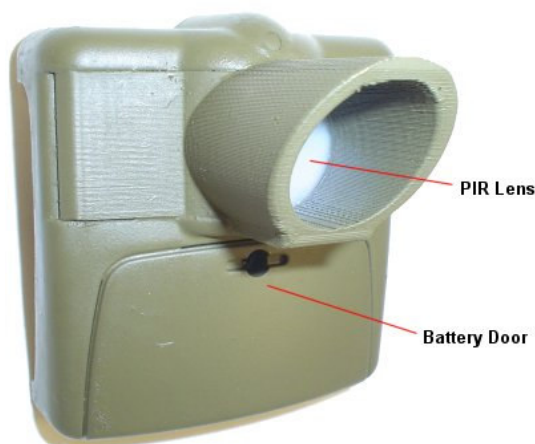
By pressing the “On” button, note there are 2 sets of “On” and “Off” buttons which are redundant. This will power up the camcorder and start it recording. By pressing the “Off” button the camcorder will stop recording and power down the camcorder.

The KeyFob remote control can control your UndercoverEye™ from a distance up to about 90 feet “line of sight”. For best reception be sure to have a clear view of the UndercoverEye™ from your controlling location.



*Wireless Remote Control  
KeyFob*

## Introduction to the Wireless PIR Motion Sensor



The UndercoverEye DVR electronics is a RF (Radio Frequency) is a wireless camera controller which works in conjunction with the wireless PIR motion sensor. The UndercoverEye Sensor boards “listens” for wireless commands sent from the wireless PIR motion sensor when the motion sensor is tripped. When the RF Sensor board receives a trigger event it will trigger DVR unit to start recording.

There are 2 AAA batteries that power the motion sensor which will last for a year of continuous use. To replace them just remove the battery door.

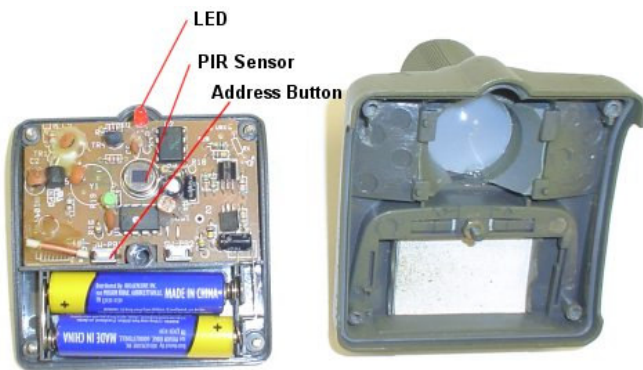
Never touch the PIR lens as this could damage the PIR sensor

**Note:** The Wireless PIR motion sensor will be powered all the time. The only way to turn it off is to remove the batteries.

## Setting Wireless PIR Motion Sensor Addresses

Each wireless PIR sensor can be setup to send out a unique address. Wireless PIR sensors are assigned an ‘address’, which consists of addresses between “A” to “P”.

**Note:** The only time you will need to change the address setting is if you have several UndercoverEye devices within range of the wireless motion sensors. You can adjust the address to only trigger certain UndercoverEye devices. Typically you will never need to change the address codes. If for some reason you need to set the default code back to the “A” address remove the 2 AAA batteries from the motion sensor for about 5 minutes.



To change the Address that the Wireless PIR transmits: First, remove the 4 screws from the back of the case and take off the cover as shown. Press and hold the **Address** button (under the battery compartment lid) the red LED flashes first and then blinks the current setting (once for A, twice for B, etc.). Release and immediately press the button the desired number of times for the House Code you want to set (once for A, twice for B, etc.) and **hold the button on the last press**. 3 seconds after the last press (while holding the button) the red LED blinks back the number of times for the code you set. Release the button.

### Mounting the Wireless PIR Motion Sensor



To mount the Wireless PIR motion sensor first remove the battery door and remove the AAA batteries. You will see 2 screw holes in which you can mount a small mounting plate or screw it to the surface of the mounting area.

Try to keep the sensors at 2' to 3' from the ground if you want to get the best detection of targets on the ground.

The range of the PIR detection is 40' to 80' depending on air temperature and temperature of the target. The hotter the target the longer detection range you will have. For example a car can be seen at a greater distance.

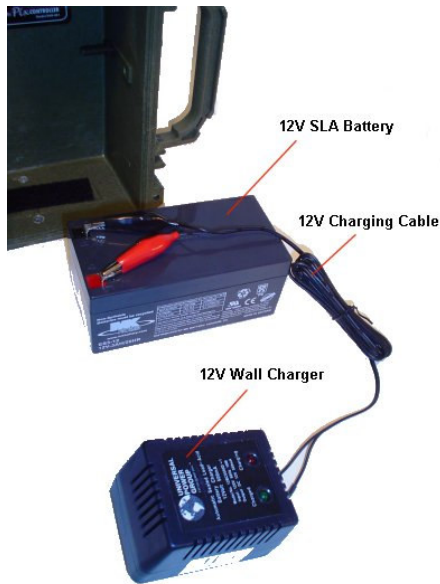
The RF wireless range back to the DigitalEye unit is about 100' to 150' depending on line of sight.

### CCD Bullet Video Camera



- Sony 1/4" CCD Color Bullet Camera
- Color Day, IR Night
- 420TVL Resolution
- Shutter Speed NTSC: 1/50th to 1/120,000th
- Weatherproof, mini-compact Bullet Camera
- Lens 3.6mm 90° Field of View
- 0.05 LUX Rating 0.5 AGC Auto Gain Control
- Dimensions 1" (D) x 3"(L)
- Signal to Noise Ratio >45dB
- 12V DC Power Input – 2.1mm x 5.5mm center positive
- NTSC Output – BCN connection

## UndercoverEye™ 12V Battery & Charger



Included with your UndercoverEye unit is a rechargeable 12V SLA (Sealed Lead Acid) battery and 12V charger. The 12V battery is completely removable from the UndercoverEye unit for replacing or recharging. To recharge the 12V battery simply connect the red alligator clip from the 12V wall charger to the positive terminal on the 12V SLA battery, and the black alligator clip to the negative terminal on the 12V SLA battery.

When charging the red LED on the wall charger will be lit and will change to green when the 12V SLA battery is fully charged.

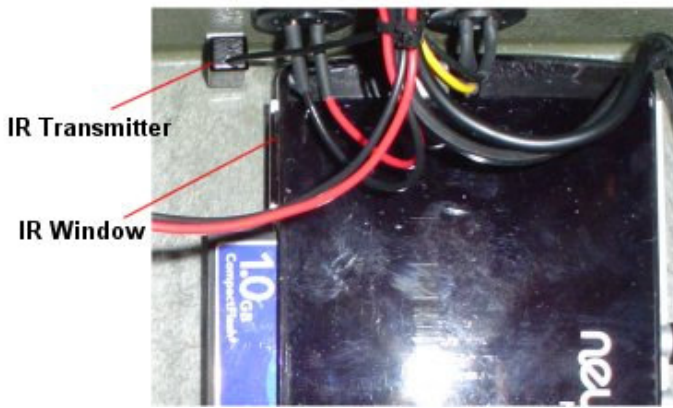
Replacement 12V SLA batteries can be purchased from [www.pixcontroller.com](http://www.pixcontroller.com), or you can use the UB1234, 12V 3.4AH or similar battery.

## Mini-DVR Overview

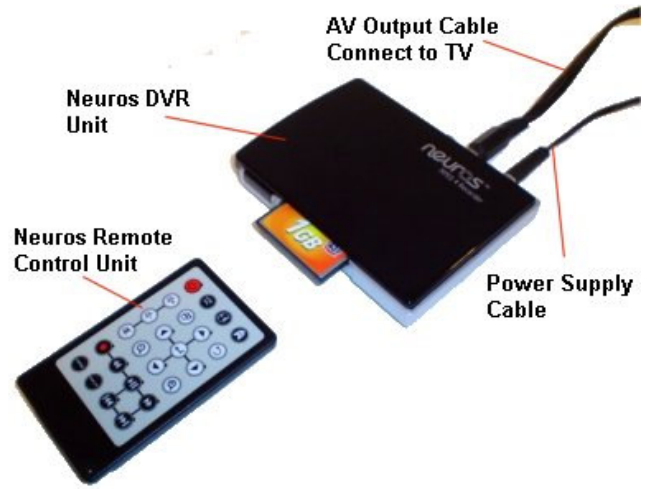
The video content is saved as MPEG-4 video files, eliminating the hassle of proprietary file formats. Utilizing standard Compact Flash (CF) memory cards as the storage medium, you can record content on a card for viewing on your TV, or transfer that content onto your PC, Laptop, PDA, SmartPhone or portable video player (PVP). Roughly the size of a PDA device, the DVR MPEG-4 Recorder hooks up to your home TV, and allows you to view still photos on your TV or listen to MP3 audio files through your stereo.

The Mini-DVR is completely removable from your UndercoverEye™ unit. To setup functions such as the DVR time/date, recording quality, and installing DVR Firmware simply remove the DVR unit from the UndercoverEye box and connect it to your TV. Use the Neuros Remote control unit to adjust any of these settings. Please see the Neuros DVR manual for further information.

**Caution:** Please note when you replace the DVR unit in the UndercoverEye you need to make sure the UndercoverEye IR Transmitter is pointed towards the Neuros IR Window. This is how the UndercoverEye “communicates” to the DVR for sending recording commands. If this is not aligned your DVR will not record video. Also be sure to press the AV cable all the way into the AV Input port.



When replacing the DVR unit in your UndercoverEye be sure to align the UndercoverEye IR transmitter and Neuros IR Window.



Set DVR time/date & Recording quality connect DVR to your TV as shown above.

## Mini-DVR (Digital Video Recorder) Specs

### **Real Time MPEG-4 Video Recording**

ISO Standard MPEG4 SP encoding with AAC-LC audio:  
30fps@320x240 resolution (QVGA setting)recommended for handhelds

30fps@368x208 resolution (16:9, WQVGA setting)wide screen format for PSP

30fps@640x480 resolution (VGA setting)Best quality for TV playback

### **Video**

Economic=384kbps  
Normal=768kbps  
Fine=1mbps  
Super Fine=2mbps

### **AAC Audio**

all modes=128kbps

### **Video Player**

MPEG-4 SP with MPEG-1 Layer 3 (MP3) audio,30fps up to D1 resolution  
DivX 3.11@ CIF Resolution; DivX 4.x,5.x,30fps up to D1 resolution  
Quicktime 6; MPEG-4 AAC-LC stereo, MP4 format

### **Features**

5 programmable recording schedules(once,daily,weekly or monthly)  
Transfer files between cards

### **Storage Card Compatibility:**

Memory Sticks:  
Memory Stick Duo  
Memory Stick Pro  
Memory Stick Pro Duo

Compact Flash:  
Type I and Type II  
Hitachi Microdrives with CF type II interface

### **Recording Time for 1GB card:**

Economic=250min  
Normal=143min  
Fine=111min  
Super Fine=60min

### **Note:**

CF and/or Memory Stick Storage card required but not included

Recording times based on a 1Gb memory card

Mode	Economic	Normal	Fine	Super Fine
320 x 200	250 Minutes	143 Minutes	N/A	N/A
368 x 208	250 Minutes	143 Minutes	N/A	N/A
640 X 440	250 Minutes	143 Minutes	111 Minutes	60 Minutes

## **Notes on setting the DVR Time & Date**

To set the time & date on the DVR unit connect the DVR to your TV and use DVR Remote Control to set the date. Please see the Neuros DVR manual for more information. There is no battery back up inside the Neuros DVR, however, if you connect the DVR unit to your UndercoverEye and power the UndercoverEye up it will keep the date. You have about 6 – 10 hours after setting the date/time to install and power the UndercoverEye before losing the time/date on the DVR. **The time/date will not be superimposed on top of the recorded video.** To see the time/date that your video clips were taken you will need to install your CF card into a PC or PVP and read the file time/date.

## **Using Personal Video Players (PVP)**



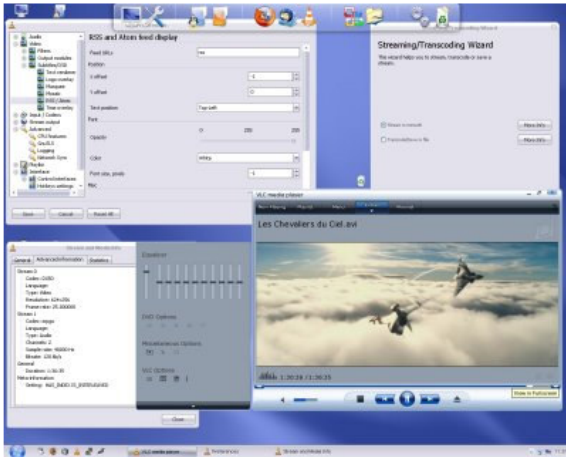
**SmartDisk FlashTrax XT  
PVP**

Personal Video Players or PVP's are a great tool for your UndercoverEye. Many PVP's today come with a large internal memory or hard disk, which means you can download your videos from the UndercoverEye CF memory to the PVP when checking your camera system. This means you no longer have to purchase 2 memory cards per system, which will save you money in the long run too.

Simply plug in your CF card into the PVP and watch the movie clips your UndercoverEye has captured (*only on PVP devices with CF card slots*). Most PVP's also have a TV input, so you can plug the TV output cable from your UndercoverEye into the TV input of the PVP and change DVR settings in the field.

Once you return from the field simply plug your PVP into your Home PC via the USB port (found on almost every PVP) and download the photos to your PC.

## Playing the UndercoverEye™ MPEG4 Video Files



**VCL Media Player**  
<http://www.videolan.org/vlc/>

The MPEG-4 files produced by the Neuros DVR can be played back directly on virtually any portable device accepting memory stick or CF memory cards. You can also use it to view recorded video on your TV. Just plug it into the Video-In jacks on the TV and hit 'Play'. And with your PVP USB connection or an inexpensive USB adaptor/Card reader (not included), you can easily drag and drop content from the memory card onto your computer to play it on your laptop or home PC.

We suggest the following media players for your PC to view the MPEG-4 files:

### **Apple QuickTime Player**

Download: <http://www.apple.com/quicktime/download/>

### **VCL Media Player (Included on your CD)**

Download: <http://www.videolan.org/vlc/>

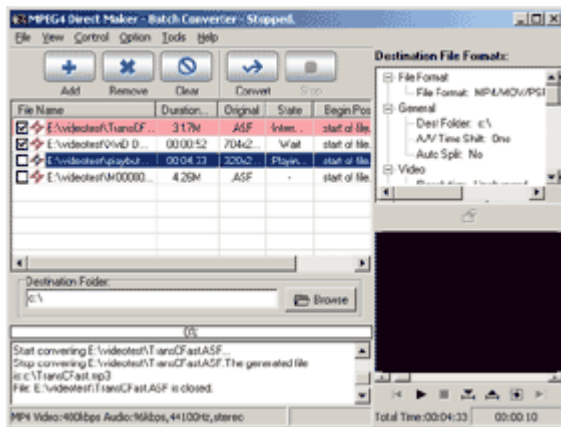
## How do I access my video files on the DVR media card?

The video files captured from the UndercoverEye DVR system are located in the following folder on your media card

**<Drive>:\VIDEO\PVR\TV**

The <Drive> will be the letter device of your card reader, for example: **E:\VIDEO\PVR\TV**

## Video Movie File Conversion Tools



MPEG4 Direct Maker includes:

Batch Converter, Advanced DVD Converter, DVD Converter, Multiple Video Formats Converter(including RealVideo Converter), QuickTime Converter, AV Player, DVD Player.

Converts: VCD/DVD/QuickTime/AVI/WMV/MPG/RM/RealVideo to divx/xvid/wmv/avi/mpg1/mpeg2/vcd/dvd/mp4/mov/3gp/mp3 video/audio format, Get VHS quality video clips in 400KBPS, Get DVD quality video clips in 800KBPS.

Directly convert:  
VCD/DVD/QuickTime/AVI/WMV/MPEG1/ASF/RM/RealVideo to divx/wmv/avi/mpg1/ mpeg2/vcd/dvd/mp4/mov/3gp/mp3

### **MPEG4 Direct Maker**

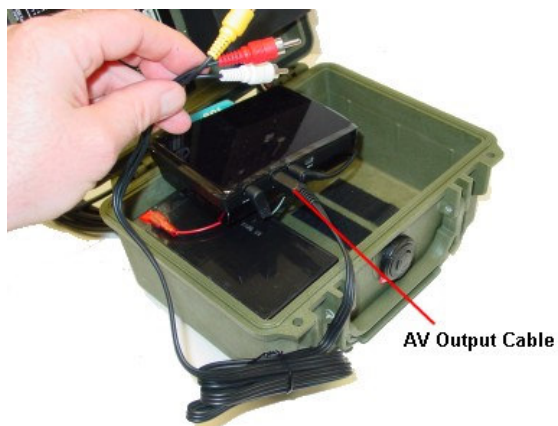
<http://www.artech365.com/mpeg4maker/>

## Using Personal Video Players (PVP) and Portable Monitors

Using a Personal Video Player (PVP) or Portable Monitor with your UndercoverEye system is a very useful device to view the bullet camera video output when setting the device up in the field, playing video files from the UndercoverEye DVR, and setting the UndercoverEye DVR time & date.

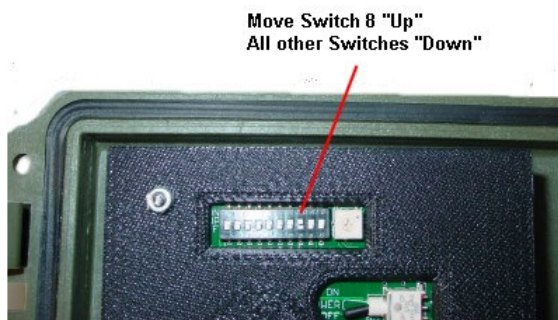
**Note:** There are many different PVP's and Portable Monitors on the market today. Be sure the device has a video input in order that you can connect the unit to the UndercoverEye DVR. Some PVP units have CF card reader slots and internal hard disks to copy the contents of the media card. If your PVP player does not have a media slot you should purchase 2 media cards to swap when checking the unit in the field.

**Step 1:** Connect the A/V output cable to the A/V output connector on the DVR. Be sure the bullet camera is connected to the device if you wish to view the video camera's view when installing the unit in the field.



**Step 2:** Put DIP switch #8 in the "up" position and all other switches in the "down" position and turn the main power switch on. This will send power to the DVR unit and the video camera. The unit will not be "active" in this mode.

**Note:** You must power the system down and put DIP switch #8 down when you are done using this mode. If this is not done the system will never enter active mode and run the internal 12V battery down.



**Step 3:** The Yellow RCA jack is what you will connect to the PVP or Portable Monitor Video Input. Locate the DVR remote control. You will need this to view the bullet camera view or play captured video files.



**Step 4:** Connect your Personal Video Player (PVP) or Portable Monitor to the DVR AV Output Cable. You will need to connect the DVR AV Output cable to the TV Input of your PVP or Portable Monitor. You will need to make sure your PVP or Portable Monitor device has a NTSC video input connector.



**Step 5:** In some cases the AV cable provided with your PVP or Portable Monitor device has the same “male” RCA video connector as the DVR AV Output cable. In this case you will need to purchase a RCA to RCA female connector as shown. Most stores like RadioShack and BestBuy carry these connectors.



**Step 6:** Power your PVP or Portable Monitor on so that it can preview the video input. Next, using your DVR remote control power the system on. You should see the output of the DVR displayed on your portable device.

In this mode you can do the following:

1. Put the DVR into “Preview” mode to view the bullet camera view for field setup.
2. Play captured video files from the CF card. See the DVR instructions.
3. Set the DVR Time & Date.

