

Instruction Manual

WildSpy Cam Outdoor Products™

(Ref. 8210iR-1; rev. 120720)

InfraRed (IR) Scouting Camera

Model No: AC-821

This unit has been designed to built-in with a 4M pixels high-resolution digital camera with many benefits of advanced features and technology while trying to simplify a hunting game as much as possible. To help achieve this, the controls are divided into two sections, Digital Camera Control section and Motion Sensor Control section. Setting and operating for the digital camera is similar to operating as many traditional digital cameras that you are already familiar with. The 1.5" color screen on top allows you to view pictures in the field and program for many camera options. (Of course our optional **2.5 inch picture viewer PV-822** can help for viewing clearer with much better picture quality). Another small LCD on the lower displays all scouting settings of the motion sensor to let you know the details of current scouting status when you open the cover any time. Push buttons on upper portion are used for camera options change, other buttons in lower portion are used for scouting setting change.

Features:

- Taking Up to 4 Mp high quality pictures and QVGA video when a motion is detected.
- Date and Time Stamp on each picture
- Built-In 1.5" Color Screen for field viewing
- Two modes for extending long battery life and Turbo snap mode (Fast shot)
- 16 Mb internal flash memory
- Card Slot support Compact Flash up to 4G depend the brand, it does fully support all brands of 1G CF card
- Motion detect on duty selection: DAY – NIGHT – 24 HOUR
- Video length option: 3 ~ 90 seconds.
- TV out port support NTSC and PAL TV
- USB port for downloading images to computer and firmware upgrade
- Powerful Infra-Red flash to take monochrome clear picture and video at night within 40 feet.
- Separated LCD screens and keys to simplify setting for camera and motion sensor controls
- Pause setting option: 0,1,3,5,10,20,30,60,90 minutes
- Quick Shot mode allow for more detections up to 3 pictures.
- Separate Icons for Battery of Motion sensor and Camera and Infra-Red light
- Motion Sensor Radar Icon for Sensor ON- Duty status
- Memory Full Icon
- Video mode Icon
- Walk-Test light for Distance and setup
- Dial for adjusting sensitivity of motion sensor
- Back light for LCD viewing.

Accessory Included

- USB Cable x1
- TV Cable x1
- CD Rom with Driver and Picture editing and the Camera driver software x1
- Steel mounting bracket plus U bar provides stronger security option x1set (Optional, it may not including in this packing)
- Main unit x1

OPERATING INSTRUCTIONS

Carefully read this instruction manual before operating device.

Your Sales Receipt

Please keep your sales receipt in the event you require for warranty service future. You should also save the packing material and box in case you need to ship this unit. The box is also printed with useful information.

Preparation

1. Remove the Steel security bar (Optional parts) and open the front door by pulling up the two latches on the side of the cabinet. Push the power switch to OFF (Center)
2. Install 3 pcs C type Alkaline batteries into the battery compartment on the right for Motion sensor working.
3. Install 4 pcs D type Alkaline batteries to the compartment on the left for Digital Camera operation.
4. Install a CF card if you wish to take more pictures or video clips. Be careful to insert the CF card according to direction shown on the CF card. 16M internal Flash memory will able to store around 50 frame 1.3Mp images only. Before replacing a CF card, be sure the PW switch is already at OFF position in order to avoid the data in the CF might be flushed.

Quick Start

An easy way below to tell you step by step for getting a quick start with the unit, it will run under the **factory default** if you do not change any parameter:

1. Determine if using internal flash memory or insert a CF card for the device storage media. Since a CF card is used, all pictures will be saved in it automatically without a further setting. Regarding a CF card usage, skip to view a description in the paragraph below for **"Using a CF Card"**
2. Push the main power switch which is allocated in the bottom of out-side cabinet to ON



Fig.1

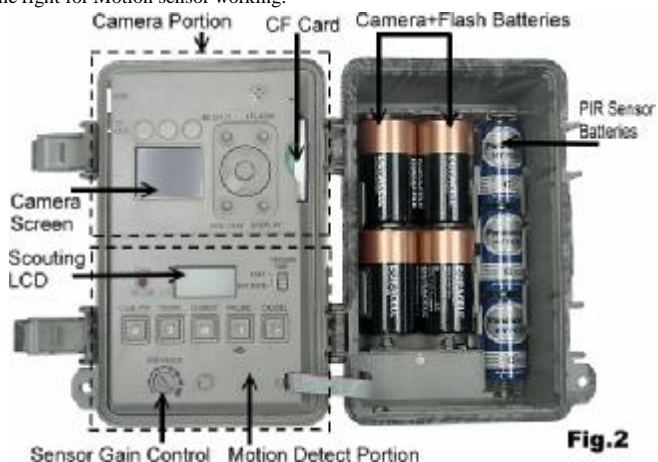


Fig.2

- After 20s since PW is ON, system will finish initialization and ready for setup. Press CAM-PW to switch On the camera section.
- Set date and time for the Camera and choose either Picture or Video mode. (See the paragraph below for **"Date and time Setting"; Still Picture / Video Mode**)
- Set other parameters of scouting and exit the setting mode after finished. (See more paragraphs about the **Setting for Motion Sensor** below)
- Hang unit on a steady tree around 1 meter height that almost point to the area which you wish to monitor.
- Push the main PW switch to TEST and turn the Sensor Gain to Max. (Clock-wise). After the SELF-TEST light goes OFF after 1 minute, try to walk in front of motion sensor in order to verify how much distance and a zone you will be detected according to the flashing walk-test light.
- Push PW back to ON and leave. Now the scouting camera will ready to work after 1 minute of warm-up time.

Factory default settings:

For Camera: Capture for Single Picture / Auto Exposure / 2M pixels resolution / Quality = Normal / Stamp = ON / Language = English / TV = NTSC / Download = MSDC

For Motion detection: Pause = 1 minute / Quick-Shot = 1 / Turbo = PW-Save / Work Duty = 24 HRs

It is suggested to customize your settings if you are an experience user.

Start up with User's Setting

Switch the PW ON, the lower LCD show the **default settings** immediately. After 20~30s, it's back light goes to OFF and now you can able to program with your desired parameters instead of the system default for both camera and motion detector operation. When the unit exit from setting mode or no change since PW ON, it will goes to the motion detection ON Duty mode automatically after 1 minute.

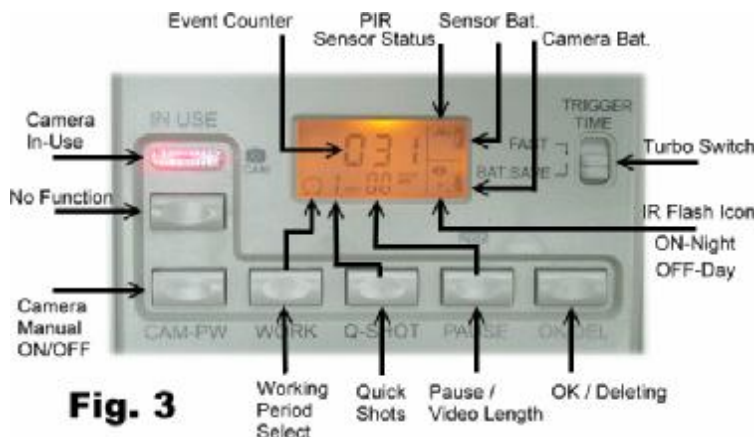
Setting for Motion Sensor Operation (PIR Sensor)

The settings explained below is referred to keys on the lower portion of the inner panel. See the Fig.3

Select ON DUTY for Day, Night or 24 hours

The **WORK** button is pressed once to enter the 24 HOUR > NIGHT > DAY options, the 24 (Clock) On Duty icons will remain blinking. Press again to move the blinking icon to the SUN icon, one more pressing will move it to the Moon.

Press the OK/DEL key on your right to accept for the desired icon and then it become stable. The **Clock** icon is represented for motion detection will be valid day and night. The **SUN** is represented for day working. The **MOON** is represented for Night working only. If ON Duty is effective, a Radar icon will run with radiation to show the device can sense any motion in this period.



Select for Quick Shot

Quick Shot allows for more images to be taken if **additional motions may be detected** after the 1st image and the camera does not shut down to be ready for more instant shots. You can choose 1~3 images in order to take a group animals passing-by. "1" is the default that only one picture to be taken and then goes to PAUSE time. "2" or "3" will re-arm the sensor for taking the second and third picture if more animals are following. **(Example of use: On a trail when you want a picture of what is following the first young deer. Like a smart buck, it always walk at the last).** A time-out of each shot is around 20 seconds. The system will goes to Pause mode after a total number of events are done or time-out.

Pause Time

This is a time of silent between the motion sensor does able to detect event for a capture. The sensor will not work within the gap. You can select 01, 03, 05, 10, 20, 30, 45, 60, 90 minutes for a PAUSE option. Press the PAUSE button once to enter for setting. The default 01 will be blinking. Press again to change it until the desired choice appears. Press OK/DEL on right to accept it.

Change for Movie Length

This option will let you determine how long for each video to take. There are 3, 5, 10, 20, 30, 45, 60, 90 seconds of video length to be selected. The PAUSE key is shared for two functions. Press and hold the PAUSE key for 3 seconds, a blinking video camera icon will appear to let you know you already do enter for video length setting. Then press PAUSE repeatedly until your desired length appears. Confirm updated change by the OK/DEL key.

NOTE: You must also select VIDEO option in the camera setting when you wish to take video clips. Otherwise, the device still does take pictures.

OK/DEL

It is a key for shared with two functions. Any time you have done to program the WORK, Q-SHOT and PAUSE / Video Length, just press the OK/DEL key to accept the new change. On the other hand, press and hold it with 3 seconds, it perform the DELETE function that all event counts on the lower LCD will be cleared. But it is not effect to any contents in the camera memory

Event Counter

Three digits in the center of the lower LCD are the event counter which let you know how many motion records that up to **400** events for a trail history. If you want to renew the counter anytime, simply to press and hold the OK/DEL button until LCD become blinking, then it will resume to [000]

Battery Icon

Three icons are for difference battery groups. The Bat-icon on the upper corner of right is represented for motion sensor power. The second on the right is for camera power. The rest on the lower of right corner is for IR flash power. All Bat-icons will indicate three status as below:

GOOD: Battery Icon show with solid.

LOW: Battery Icon is half blank.

BAD: Battery icon is totally blank.

Note: You have to replace all batteries for new one completely when either camera or IR Flasher are BAD. Do not try to replace some of them only. But the motion sensor power is independent to the camera power system.

Walk-Test / Sensitivity Adjustment

The **DISTANCE** dial on inner panel is used for adjusting sensitivity of the motion sensor. By turning the dial to the right, sensor sensitivity is set to the Max to detect animal over 40 feet away. You may reduce the detection distance for taking picture with a larger animal target. **Walk-Test feature** is used to verify the detection range and pointing zone before placing it in the field. After hanged the unit on a tree, push the PW switch to Walk-TEST. The Walk-Test LED will light up last 1 minute to warm up. A radar icon with TEST alert is remaining blinking during Walk-Test mode. Then, Walk-Test Light will goes off and will alert with 3 times flash once you will be detected in front of the device. Now you try to go far away to check how long the PIR motion sensor will still see you. The camera does not take any picture during this test process.

Note: The system will resume to normal ON DUTY mode automatically after 3 minutes (Time-Out) since the last triggered detection of walk-test to avoid user may forget to push the PW switch back to ON before left.

PW-ON Mode

This is main PW switch in the bottom of cabinet. Since the PW-SW is pushed to ON mode, the unit will begin to warm up for 1 minute, then start to detect motion for taking pictures/ Video. When an animal or human is detected, an event will be recorded and the camera will shot immediately. All the detected events will be counted up to **400** events even the memory of Digital Camera may full.

OFF Mode

Slide the PW to the center position turn the system power OFF. All pictures and current settings will be remained at this mode and internal real time clock will still run. Note: Remember to remove all batteries if you will not use it for a long time

Walk-Test LED+ DC in-use Indicator)

Both lights will be ON during the first minute of starting Walk-Test mode and Camera setting mode. They will blink for 3 times once a walk-test motion to be detected.

In the scouting setting mode, an instant flash is response to each valid key input.

Turbo Shot

There is switch knob on the right of the scouting LCD. Push the knob to Turbo mode, the DC will be set for fast shooting. In this mode, capture speed will be 2x faster than setting in the BAT-Save while a motion is detected. Setting of BAT_SAVE will ideal for extending battery life.

Setting for CAMERA / Operation

Description for Camera Operation Keys

SHOT
PREVIEW
FLASH
DISPLAY
MENU (Center Key)
Navigation Disk

CAM-PW (Camera Power Button)

Before programming for the camera, be sure Main Power switch at ON position.

There are two modes that called **LIVE VIEW** and **PLAY-BACK** for operating the camera, once you press CAM-PW to switch ON the Camera, it works at the default of the LIVE VIEW. Both the IN-USE and Walk-Test LED are lighted. DC-PW small light on the right top will alerts with red light for 2 seconds to show camera is PW ON already. But camera screen is remaining dark until DISPLAY or PREVIEW key is pressed. In this case, you can either change the setting of camera ,view pictures, take a picture manually, download pictures to PC, or any operations which need camera to ON depend on which mode you will select. When you do finish using the camera, remember to turn the camera OFF by pressing the CAM-PW switch again.

During camera ON mode, motion sensor will stop working until camera PW is turned to OFF.

Navigator Disk / Menu Button:

Description for Camera Operation Keys which are in the upper portion of the inner panel

See Fig.4

Four sides of disk represent for the **Left / Right / Up / Down** keys. The center knob is the **MENU** button. All camera settings will be programmed with them. Press the MENU to display the option title of either modes. Select a title that you wish to change by pressing the left or right navigator key. Highlight your choice from a list of the displaying title by the Up or Down Key. Press the MENU to accept the change and exit.

Camera Operating Menu Titles

There are two main menus for two modes:

- A. Live View Mode
- B. Play-Back Mode

Date and time Setting

Before you would place this unit in the field, you are recommended to update with your local time first. In either of modes since CAM-PW power ON, press the MENU key to view the camera setting menu. Then Press Right key to find Date /Time after a several titles. Highlight "SET" by using the Up or DOWN key. Push the center "MENU" button to display the Calendar and move the cursor staying at the desired item by RIGHT or LEFT button and change them with the UP or Down until to finish. Press Menu to accept with YES. NOTE: The calendar is shown in military fashion with 24 hour format. Example: 2:00 pm will be shown as 14:00.00. (Hour: Minute: Second)

Toggle the Stamp option ON/OFF to show whatever the calendar on all images or not. But this feature will not functioned in video mode.

Both Live View and Play-Back menu are including difference titles which described as below:

A. Live View Mode

Since camera is ON, it always work at the Live View Mode even the screen being OFF as a default setting. Press DISPLAY to turn ON the screen.

With the Live display mode, it is used for a manual shot for nature scene or change setting of camera parameters like taking picture /video mode; resolution; image quality; calendar stamp; firmware upgrade.....

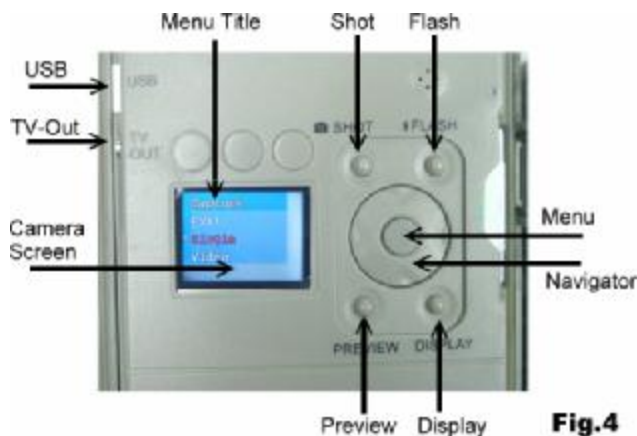
Taking a Photo/ Video Manually

Shot key :

Push it to take a picture any time while camera is ON even screen remaining OFF. For taking a video clip, 1st press SHOT to start taking, a stop watch counter will work and press again to stop.

Flash key:

It is an assistant feature at night before taking a manual night picture or video. Press this key to switch ON the infrared light for 10 seconds in order to



illuminate the scene in front of camera. You may view from camera screen what will be captured in the range of dark environment before take a shot. A capture pressing by pressing SHOT key must be made during a period of IR flash light-up. Otherwise, you may get a black picture or video.

Display key:

Press this key time by time to turn ON screen > Remove information from screen > turn screen OFF repeatedly.

Change Camera Capture Setting

Since camera is ON, press MENU key to enter the camera capture setting menu that consist of 7 titles:

1. Capture Mode
 - a. Exit
 - b. Single (Take Picture)
 - c. Video (Take Movie)
2. Resolution
 - a. Exit
 - b. High (4 Mp)
 - c. Normal (2.1 Mp)
 - d. Basic (1.3 Mp)
3. Quality
 - a. Exit
 - b. High
 - c. Normal
4. Date / Time
 - a. Exit
 - b. Set
 - c. Stamp ON/OFF (Optional for a calendar showing on each image)
5. TV out
 - a. Exit
 - b. NTSC (Default setting, Used in North America)
 - c. PAL
6. Language
 - a. English
 - b. French
7. Bright-ISO
 - a. Exit
 - b. ISO-100 (Used for very short distance capturing setting at night to avoid images to be too much white)
 - c. Auto (Default, Recommended)

Single (Picture) Mode

The system default setting is **Single** Still Picture Mode for capturing colorful images at day and monochrome images at night. Once the motion sensor does detect a motion, camera will snap it into the memory. Scouting counter will renew the reading after each event.

Video Mode

Move the highlight to Video and press MENU key, now the VIDEO mode is selected. The unit will take video clips day or night. Since a 1st event is recorded, a video-cam icon will appear in the lower scouting LCD showing you are in video mode.

In case you would switch back for Single Picture mode, just need to turn ON camera by pressing CAM-PW, then highlight the SINGLE from Capture Mode Title. Accept it and re-boot the unit by turn off the main PW and back ON. You will see the Video-cam icon to be disappear.

Important: If the unit detects batteries becoming too weak and an blank battery icon appear, the unit will stop taking night pictures and take day time pictures or video only.

B. Play-Back Mode

It is the mode either for Previewing photos and videos in the camera from the viewing screen or connecting to a TV with an attached cable.

Preview key:

While camera is ON and press PREVIEW key, Camera will be switched to Play-Back mode at once and show the last image. It is also a toggle button let you skip between Live View and Play-Back mode. During in Play-Back mode, the DISPLAY key become for skipping Full View an image > Clean screen > >Thumbnail pictures.

You have two ways to enjoy the images /videos.

1.View Image/ Video by Screen

Since press Preview, screen will always show a full screen of the last shot. Use the left or right key to view other previous or next image. If you expect to view more pictures a time, press Display for a thumbnail screen. See more images by pressing Left / Right key. Then enlarge it by pressing Display again.

2.View Image /Video with TV

The unit is equipped with a TV-out port that allow you to connect to TV at home with an attached cable. Be sure the RCA end is plugged in the TV Video-In of your TV. To view pictures on TV set after camera is in Play-Back mode, just done a connection between camera and TV, all displays will be moved to TV screen. If you pull out the TV cable, the digital camera will switch to the internal viewing screen display automatically.

NOTE: The last picture taken will be the first to appear and will include a display of the total number of pictures stored and the number of this picture. Example: 0024/0036 is the 24th picture of a total of 36 pictures.

Digital Zoom

Whenever in the live display mode or viewing a full size picture at Play-Back mode, press the UP key to Zoom In and the DOWN key to Zoom Out for a closer shoot or see more details when enjoying an image.

Deleting Photos

Press MENU key under the preview mode, then highlight deletion of Single or All photos from the Erase Title. Press MENU key to confirm deletion.

Protect an Image or Video

During viewing an image or video which you would like to retain in the memory without wash-out by delete processing, press MENU and highlight the PROTECT option once. Then an icon with small lock on the left top corner of this image to show it is protected. Repeat the same processing to unlock it.

All of protected items will not be deleted except you try to format

Format

After proceed this function, every things in the card or internal flash memory will removed completely. Be careful when do it.

Change Camera Play-Back Setting

When you are in Play-Back mode, press the MENU key to display the menu with 4 titles.

1. Erase Mode
 - a. Exit
 - b. One (Delete One photo)
 - c. All (Delete All items except protected items)
 - d. Format(Delete Every things in disk)
 - e. Protect (Protect an image /video)
2. Date / Time
 - a. Exit
 - b. Set
 - c. Stamp ON/OFF (Same as Live View)
3. TV Out
 - a. Exit
 - b. NTSC (Same as Live View)
 - c. PAL
4. USB
 - a. Exit
 - b. MSDC (Default for frequency use to down pictures at any Window platform)
 - c. SDC (Only for Win-XP to download depend on personal hobby)

Using a CF card

This unit has built-in with 16Mb internal memory and therefore the camera can capture for some images or videos immediately even no CF card in the slot. In fact, 1G CF card is recommended to increase more storage capacity that allow more than a few thousands of pictures to be saved when you will leave it in the field. If you have two CF cards and a card reader, it is very good for you that one could be left in the camera and the other one at home for backing-up after viewing and downloading.

Note: Be sure the Main PW Switch is OFF before replacing for a CF card in order to minimize a risk to damage your CF card or loss data partially.

Important: If a CF card can not be inserted smoothly, you must retract it and check if the direction of card is correct or not. Never force to push hardly with the CF. Most of case with a problem with card usage is found that caused by an improper insertion.

Warning: Before using a blank new CF card, or used in other cameras, it is suggested to format it before usage.

Memory Management

In case either built-in or CF card memory is full, a memory FULL icon will be remaining blinking on the scouting LCD. The camera will stop to shoot. Replace an empty CF card or delete some or all contents then reboot the unit by the main Power switch to refresh the memory status. Make sure the memory FULL icon disappear after PW up again. The camera will not resume to work without rebooting the system.

Installing Driver

The first time that you connect the camera to your computer, the computer will detect a new USB device has been connected and try to looking for a driver. So that, it is required to run the attached CD-Rom before connecting the camera to PC. Follow the instructions to complete the driver and software installation. Since the CD-Rom is inserted, an auto-run will show a pop up installation menu. If your computer does not run the setup program automatically, please run "SETUP" file under root directory of the CD-Rom. Then, click the DRIVER button on the pop up window. Follow the instruction until to complete itself.

Installing Photo Editing Software

There are two simple photo / video editing software for entry level user. You may skip this option and exit directly if you already have other existing or better software for viewing the pictures or videos.

- Insert the installation CD. Click "Photo Express" Button on the Welcome Screen.

- Choose the operation language which you need.
- Install the software according to hints.
- Restart your PC.

Downloading photos/ Movies to your computer

- Be sure the driver has been installed successfully. Press CAM-PW to turn the camera ON, then press PREVIEW for Play-Back mode.

- Connect your computer and the camera with USB cable.

- A pop up to show the mobile hard disk which is assigned for the trail monitor device
For example: "H" or "I":\DCIM\100MEDIA
- Click into the proper directory to see all files inside.
-

Mounting Device

Before starting to put this camera in the field for scouting game, the camera must be mounted in a certain place properly or on a tree whose diameter will not be less than 6 inch (15cm) and located not higher than 1M with your desired mounting method that following the installation method as shown as below. The design is reserved to fit for two ways of mounting.

A Belt Mount: This belt is attached in the packing. See the Fig.5

B Python Adjustable Locking Cable (Not including in this packing): See the Fig. 6

You can able to use a Python adjustable locking cable to provide more security to your



Fig. 5



Fig. 6

WildSpy Cam. The “**Master Lock**” brand is a good choice.

With an optional choice, a steel mounting bracket and U type security bar can be used to provide stronger security ability. You can buy this accessory from your local dealer.

CONNECT An Ext- Infra-Red Booster

For an experienced user, you always would expect to get extreme quality pictures and videos at night. WildSpy Cam provide an option that up to 4 pcs external IR booster will be supported in a chain connection. The “**Ext-IR BOOSTER**” port is found on the bottom of cabinet. You just plug one end from the booster which is our **WildSpot Flash** series like **IRX-800** to the port on the camera without any further setting required. Thus, you will get about 2~4X higher illumination at night. For advanced user, it should be available to work with a totally invisible black IR booster like **IRX-20B or IRX-22B** series to be upgraded as an invisible black night vision camera

Troubleshooting Guide

No animal showing in some pictures:

1. Check if the unit is pointed the direction where the sun is rising or sunset that the sensor might be triggered.
2. The PIR sensor may detect an animals through vegetation out of view from the camera.
3. If the animal was moving quickly, camera may not capture it in time while an animal still staying in the zone.
4. Make sure that the unit is mounted on a steady tree or other place that does not wobble.

The Camera In-Use light is remaining ON, but the camera does not respond:

1. The camera may be time-out and shut down automatically. Repeat to press the CAM-PW to resume the camera ON.
2. Battery may be too low that could not support the camera staying ON. Replace with 4pcs D type brand new batteries.

The CAM-PW switch does not respond:

Attempt to turn the camera too quickly after the main power ON. Wait for about 10 seconds until the back light of scouting LCD goes to OFF. Then try again.

The Light in the front of the housing does remain ON:

1. The unit just is set for Walk-Test mode. The light remains On steady within 60s warming up period.
2. The CAM-PW is not OFF. Remember to turn camera OFF after finishing usage.

Camera seems NOT write any picture into my empty CF card and displayed with Memory Full:

1. You must format the CF card which was ever used in the other device before applying it in this camera.
2. Check the current CF card and try to use 1G CF card instead of your current CF which may larger than 2G or above. To use a large CF card over 1G, a specified brand may be required.

Reset the Unit out of System Halt:

In case the event counter stop to respond for any sensing, **or you notice the LCD is always blank even the Power switch is ON**, the system may halt already to cause the problem. Remove all batteries out of compartment for more than 10 minutes in order to reset the unit. All pictures will be retained and the unit will resume to the factory default settings. You will need to reprogram with your desired parameters before use.