UNDERCOVER™ TRAIL CAMERA
INSTRUCTION MANUAL

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1. Quick Start

1.1 What in the Box?

Trail camera x 1

Instruction manual x 1

Mounting strap ×1

Tree-Dimensional®ConcealmentKits

include

1.2 How to Get the Camera Ready?

1. Insert the batteries

Open camera lid and take out battery tray to insert the batteries.
Note: 8 AA Alkaline or Ni-MH are recommended. For better performance, pls choose the "Battery Type" of the batteries in using.

2. Insert the SD card

Note: 4-32GBSD card is recommended. Please insert it with correct direction as marked.

1.3 How to Setup the Camera?

1. Power on the Camera

Long Press the ON/OFF button for 3 Seconds, the camera will be powered on; At this time ON/OFF LED is orange, also mode LED and battery indicator LED is also light up. After camera detect SD card, the LED will turn green.

Note: If ON/OFF LED is showing orange all the time and flickering, it means SD card is not insert right, or something wrong with the SD card, please reinsert SD card in the right direction or change SD card to test.

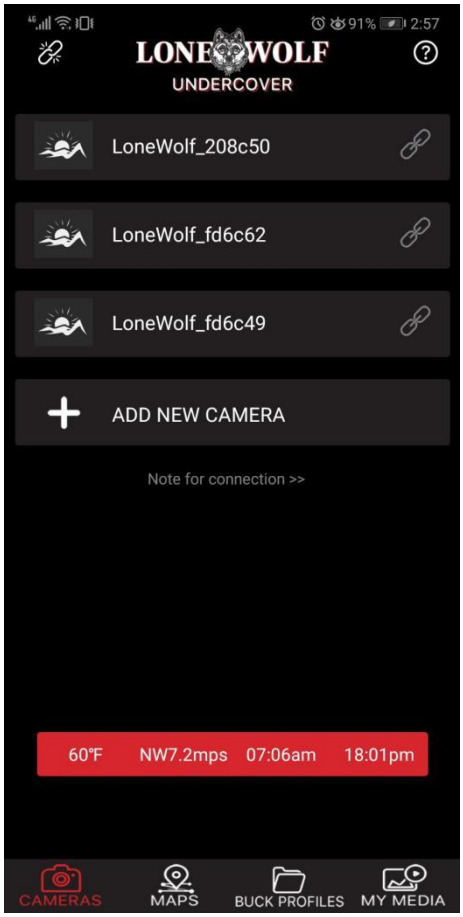
2.Connect Camera WIFI

After ON/OFF LED turn Green, you can use your phone to connect the camera WIFI's SSID. 5.After connected successfully, the ON/OFF LED on camera will flicker in green, this means your phone is already connected with the camera WIFI.

Note: if you forgot the SSID of the device, you can quick press ON/OFF button for three times, then there will be a "CamInfo.txt" file generated on SD card, and you will get the info on SD card.

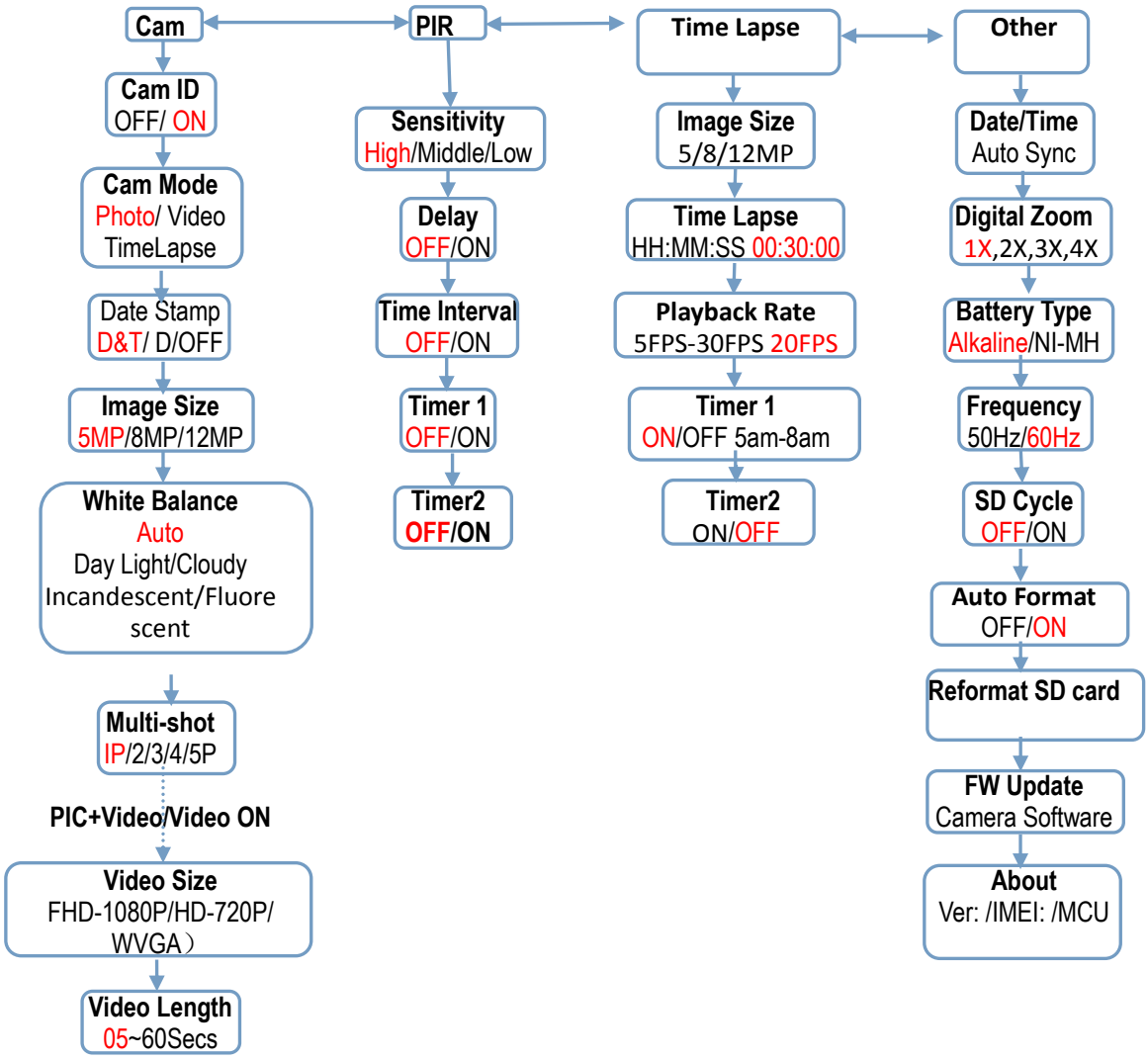
3. How to use APP ?

After connected camera WIFI, open the Lone Wolf APP, click Add New Camera to follow the instructions to add the device you connect.



After added, click the device you've added, you will enter into the camera's AIM Screen to view live stream. And you can effortlessly adjust settings, transfer and store images, create custom photo maps, and even aim your camera all from your smart phone! The cutting edge features included with the app operation without a doubt provides the most straight forward efficient trail camera experience possible.

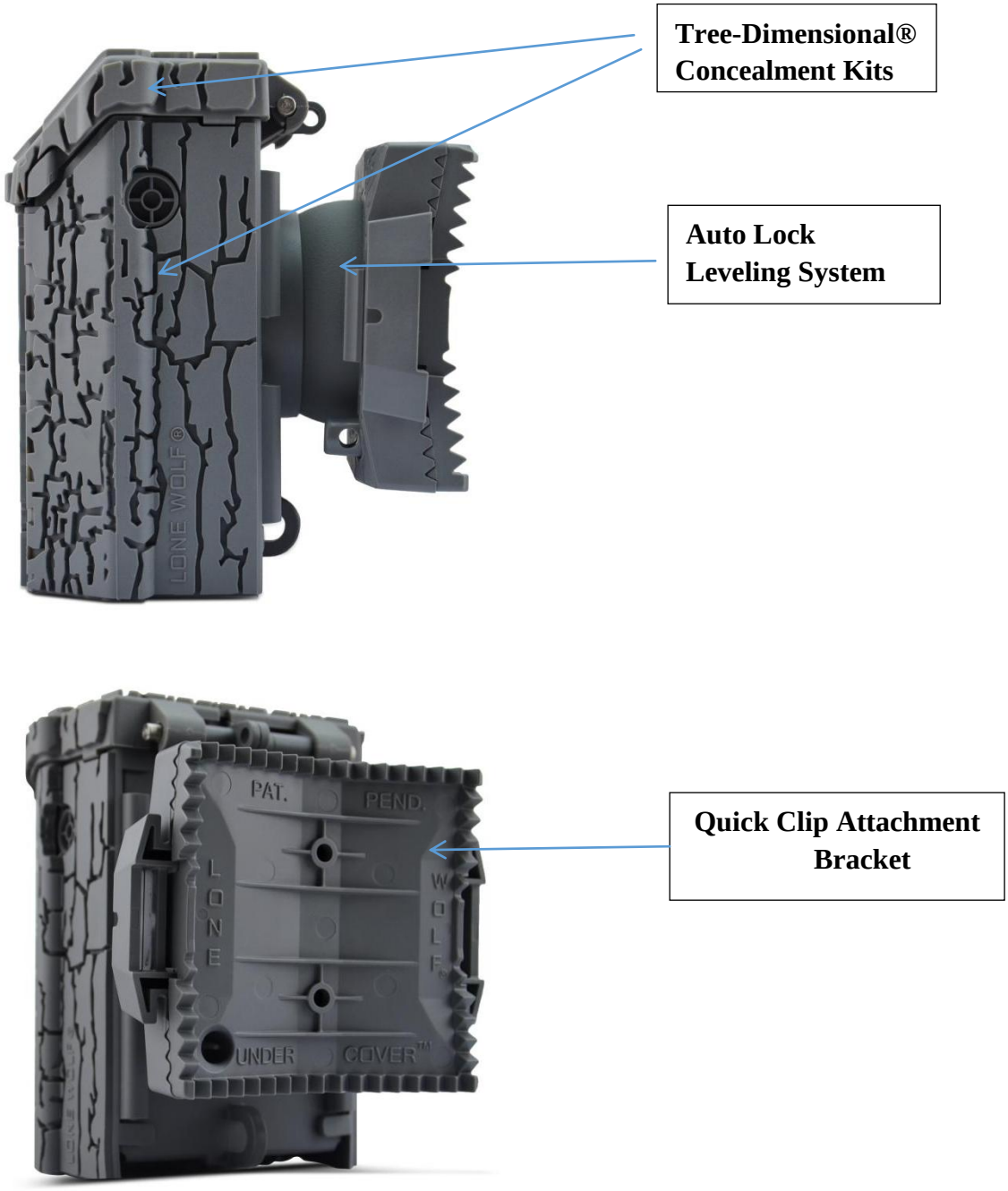
1.3 Camera Default Settingsin Red Letter



2. Whole View and Details of Camera

2.1 Figure 1: Front View of Camera;

2.2 Figure 2: Side View of Camera;



3. Introduction

The brand that brought you the greatest most innovative mobile hunting solutions of all time is now the leader of the pack in trail camera technology!

The Undercover™ trail camera by Lone Wolf is like nothing you have seen from other camera outfits. Every aspect of this camera has been single handedly designed with hunting in mind. From our patent pending 360° auto lock leveling system that allows you to effortlessly mount and level your camera in virtually any situation, to our Tree-Dimensional® Concealment Skins that provide the highest level of camouflage available. The overwhelming amount of innovation comprised to bring you the Undercover™ Trail Camera will leave you with no doubt what will be capturing the images of your next hit list bucks.

3.1 APP Functionality Introduction

Operation is the single most important part of running cameras. Forget about squinting to look at tiny screens or some ridiculous series of up down buttons to set or adjust options. With the Undercover™ APP by Lone Wolf you can effortlessly adjust settings, transfer and store images, create custom photo maps, and even aim your camera all from your smart phone! The cutting edge features included with the app operation without a doubt provides the most straight forward efficient trail camera experience possible.

AUTO SYNC - App automatically sets time, date, and year from phone settings.

WIFI PICTURE RETRIEVAL - Retrieval of photos from camera to smartphone using WiFi

ULTIMATE AIM TECHNOLOGY - This feature analyzes optimal photo distance and allows you to see what your camera sees while on the smartphone App and aim you camera down to the inch with a target point on the screen.

LOW IMPACT SURVEILLANCE MODE - This feature will allow you to use the digital zoom on the camera to lock in and arm the camera. This will allow you get further away from the desired camera location and not contaminate the area with human scent.

SPY MODE - This feature will allow you to access and watch video real time from your smartphone app when in WiFi range.

PRIME TIME DETECTION - The App analyzes the data of all pictures taken in a 24 hour period time. At a glance you can see the best a.m. and best p.m. time within the hour with the most photos have been taken.

DIRECTION DETECTION - Integrated compass in the App is displayed on the aiming screen to insure camera is set up in the optimal direction for sunrise and sunset.

IN APP ZOOM AND CROP - Zoom and crop your trail camera photos right within the app and save them directly to your phone.

AUTO FORMAT - Choose to have your SD cards automatically format when inserting.

3.2 Power Supply

9-12V power supply to ensure camera well performance of all functions

A. Batteries

Camera runs on 8 AA size batteries, can work with alkaline and high-quality NiMHrechargeable batteries. But we suggest to run camera with NiMH batteries only as performance of alkaline batteries is much poorer than NiMH batteries. Pls also choose the battery type you're using in the menu option "Battery Type" to reach longer operation time.

Batteries should be inserted with correct electrode position as marked in battery case. Upside down batteries electrodes may cause device malfunction. Also, we strongly recommend changing the batteries when power icon on camera screen or photo stamp is empty.

Note: Don't mix batteries types! Different batteries to be used in camera may cause permanent damage which also violates warranty policy!

B. Solar Panel

To bring users better using experience, our engineers designed this camera to be able to work with most standard 12V/2A lithium battery build-in solar panels. Solar panel can't charge the batteries in using in camera batteries cases.

C. Power Adaptor—Security Surveillance Purpose

This camera can also be powered by an external 12V/ 2A DC adapter. Recommend to remove the AA size batteries when power adapter is used. Electrical power is recommended for security purposes.

3.3 SD Card Selection

Using a memory card is required to operate the camera. When the camera is "ON" and no memory card is used, the ON/OFF LED light will quick flicker in orange. The SD slot of the camera has a 32 GB memory capacity. Before inserting or removing the memory card, the camera must be turned "OFF". Failing to do so may cause loss of or damage the pictures/ videos already recorded from the memory card. When the SD card is full, the viewing screen shows "Memory Full". The following data shows an approximate quantity of photos or videos which can be recorded by the camera depending on the memory card capacity.

Chart below will show you the approximate capacity of different size SD cards. Pls check to see which size card can fit your needs best.

SD Size / Capacity	4 GB	8 GB	16 GB	32 GB
Photo (pictures)				
5MP	3350	6935	13210	27920
8 MP	2048	4205	8070	17061
12 MP	1310	2701	5190	10965
Video (hours)				
640x480	04:01:48	08:20:44	16:05:45	33:56:02
HD	02:50:42	05:52:35	11:38:43	24:09:16
FHD	01:58:31	04:27:27	08:30:21	18:04:52

3.5Attention

1. Insert the SD memory card correctly, camera does not support SD card hot swap (insertion).
2. Please use high-quality AA batteries in order to prevent battery cells from corrosion of leaked acid.
3. Use right adaptor (12V/2A) of this camera to supply power, and do not invert the electrode when put in batteries.
4. In Test mode, camera will automatically enter into arm mode in 3 mins if there is no APP connect.
5. Don't interrupt power supply during firmware upgrade, please deliver it back to factory if the device doesn't work after upgrading.
6. Do not frequently insert or pull out SD card and battery or plug in and out the adaptor when the camera is on.
7. Do not have any floating objects, such as leaves, strings, or ribbons in the 3M motion detection zone of cameras, to avoid mistaking photograph or videos.
8. Do not keep camera next to hot irrelevant objects, air conditioner exhaust vents, and light, etc. to avoid mistaking photos or videos.
9. Camera is with a 100°FOV lens and 32pcs IR LEDs. To ensure these IR LEDs can give enough flash that high quality AA batteries must be applied accordingly to deliver enough amperage to power the illuminator consistently in dark environments.
10. Programmed Date/Time can be saved in camera for 12 hours as long as camera was powered 1 hour above.

3.6 Key Features

- Equipped with Ultimate Aim Technology
- Concealment Skin included
- Quick clip attachment bracket

- Triple lock protection system
- Fully customizable fastening options>
- Efficient Interface control system
- Sure Lock Battery Tray
- Remote operation through smartphone App
- WiFi Picture retrieval
- 12MP camera
- Full HD 1080p 30 frames per second
- Mp4 format
- Modes include: Video/Photo/Time Lapse
- Waterproof microphone
- Multiple delay time intervals
- Smart battery mode equipped
- 0.4s trigger speed
- 65 feet detection range
- Accepts SD card up to 32gb

4. Operation List

Operation Menu

Operation is the single most important part of running cameras. Forget about squinting to look at tiny screens or some ridiculous series of up down buttons to set or adjust options. With the Undercover™ APP by Lone Wolf you can effortlessly adjust settings from your smart phone!

Cam	
Settings	**Programmable Options**
Cam Mode	Photo, Video, PIC+VIDEO 1) Photo: camera shoots photos only based on configured Multi-shot & Image Size; 2) Video: camera shoots videos only based on configured Video Length/Size; 3) When users set the time lapse mode, it will take pictures at the time lapse intervals user set, and all the pictures taken will automatically generate into a video, both pictures and videos will stored on camera at the same time. 4) "PIC+VIDEO", camera shoots photo(s) first, then video upon same trigger event based on **Video Length/Size** and **Multi-shot/ Image Size** user configured;
Image Size	5MP (2560*1920), 8MP (3264*2448), 12MP (4032*3024)

White Balance	a) **Auto** b) **Day light** c) **Cloudy** **d) Incandescent** e) **Fluorescent**
Multi-shot	Programmable 1~5 photos per trigger
Video On	
Video Size	FHL-1080P (1920*1080), HD-720P (1280*720), WVGA (848x480)
Video length	5s-60s

PIR	
Settings	**Programmable Options**
Sensitivity	High, Middle, Low Higher sensitivity is 1) more sensitive to movements by smaller subjects; 2) longer detection distance; 3) easier for sensor to detect difference between body heat and outdoor temperature; 4) easier to trigger camera to record. In **high temperature** environment, body heat of subjects and environment temperature is hard to tell by camera, suggest setting**High**.
Delay	set a time between photos or videos upon motion. This option can avoid camera taking too many photos or videos. **Example:** Camera will wait 1 minute between photo/video recordings with motion if pre-set time interval is 00:01:00 **Configurable delay time:** 00:00:03~23:59:59.
Time Lapse	When users set the time lapse mode, it will take pictures at the time lapse intervals user set, and all the pictures taken will automatically generate into a video, both pictures and videos will stored on camera at the same time. **Configurable interval:**00:00:03~23:59:59.
Timer1	set the beginning time and end time (hour/minute); camera will only work during the time period user set. i.e.: 15:00 – 18:00; camera only works during 15:00 – 18:00
Timer2	set the beginning time and end time (hour/minute); camera will only work during the time period user set. i.e.: 15:00 – 18:00; camera only works during 15:00 – 18:00

Other	
Camera Name	Default with camera WIFI SSID, can change via APP

Digital Zoom	1X, 2X, 3X, 4X
Stamp	Imprints of programmed Logo camera ID, moon phase, temperature, date, and time on photo
Battery Type	Alkaline/ NI-MH Choose correct battery type of using batteries in camera makes camera perform better.
Frequency	50HZ, 60HZ
SD Cycle	Select “ON”,, camera will continue to record photos/videos by deleting earliest photos or video clips.
FW Update	With update firmware in the SD card, you can enter this menu to update camera firmware by confirming “Yes” in the options.
About	Firmware version in camera (Version: / IMEI: / MCU:/MOD:)
Auto format	Choose to have your SD cards automatically format when you first insert it in camera
Reformat of SD card	Once reformat of SD card, all pictures and videos taken will be delete.

5. Specification

Image Sensor	5 Mega Pixels Color CMOS
Picture	size :5MP/8MP/12MP = 2560x1920/3264x2448/4032x3024 Format: JPEG
Video	FHD 1080P@30FPS; HD 720P@30FPS; WVGA; File Format: .mp4，16:9 Format
Video length presents	Day - 5, 10, 30, 45, 60 seconds Night lengths 5, 10, 30 seconds
On-Camera User Interface	On/Off - Single push button switch On/Off Bi-Colored LED Battery Indicator – 4 LEDs Mode Select – Single push button switch Mode Indicator – 3 LEDs Pic and video and Timelapse
Lens	FOV=100 ° Diagonal); Auto IR-Cut-Remove (at night)
PIR	PIR Type: Motion Detector Detection Range: 20M（65ft）: Detection Angle: 80 degrees
IR range	20m

IR LED	32pcs, 850nm IR LED
Memory	SD Card (4GB – 32GB)
SD Card cycle	ON/OF
Time Lapse	Yes
Ambient Sensor	Light, Temperature
Shooting Numbers	1-5, 1 pic per 1 second
Wireless	Wi-Fi AP, 2.4 GHz
Trigger Time	0.4-0.5S
Recovery Time	1.5-3S
Microphone	Waterproof microphone with small pin hole pointed at ground
USB 2.0	On the bottom of the camera
Operation Power	Battery: 12V; DC: 12V
Battery Type	8 AA Alkaline/ NI-MH
Operating Temperature	-25℃ to 60℃
Storage temperature	-30℃ to 70℃
Operation Humidity	5%-90%
Waterproof spec	IP54
Certification	CE-RED FCC-ID RoHS

Specifications are subject to change without prior notice.

6. Trouble Shooting

6.1 Photos Do Not Capture Subject of Interest

1. Check the “Sensor Level” (PIR sensitivity) parameter setting. For warm environmental conditions, set the Sensor Level to “High” and for cold weather use, set the sensor for “Low”.
2. Try to set your camera up in an area where no heat resources are in the camera’s field of view.
3. In some cases, set the camera near water will make the camera take images with no subject in them. Try to aim the camera over ground.
4. Try to set camera on stable and immovable objects, i.e.: large trees.
5. At night, motion detector may detect beyond range of the IR illumination. Reduce distance setting by adjusting sensor sensitivity.
6. Rising sun or sunset can trigger sensor. Camera must be reoriented.
7. If person/animal moves quickly, it may move out of the camera’s field of view before photo is taken. Move camera further back or redirect camera.

6.2 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, camera will stop taking images. Or user can turn on Cycle Recording to avoid such problem.
2. Check batteries to make sure that alkaline, or NiMH AA batteries left power is enough for camera to work.
3. Make sure that the camera power switch is in the “On” position and not in the “Off” or “Test”

modes.
4. Please format the SD card with camera before using or when camera stops taking images.

6.3 Night Vision Flash Range Doesn't Meet Expectation

1. Please check to make sure that batteries are fully charged or left power is enough;
2. High-quality 1.2V NiMH rechargeable AA batteries can also offer much better IR flash range; alkaline batteries cannot deliver enough amperage to power the illuminator consistently at night;
3.To ensure accuracy and quality of night time image, please mount camera to dark environment without any obvious light sources;
4. A certain surroundings (like trees, walls, ground, etc.) within flash range can get you better night time images; please do not aim camera to total open field where there is nothing within IR flash range to reflect flash back; it's like shinning a flashlight into sky in night, you just can't see anything; same does camera;

6.4 Photos Do Not Capture Subject of Interest

1. Check the "Sensor Level" (PIR sensitivity) parameter setting. For warm environmental conditions, set the Sensor Level to "High" and for cold weather use, set the sensor for "Low".
2. Try to set your camera up in an area where there is not a heat source in the camera's line of sight.
3. In some cases, set the camera near water will make the camera take images with no subject in them. Try aiming the camera over ground.
4. Try to avoid setting the camera up on small trees that are prone to being moved by strong winds.
5. Remove any limbs which are right in front of the camera lens.

7. Warranty

With great pride and full confidence in our products, we always keep our words which are given to our customers as specified warranty terms and services below. Based on a strict QC system, we initially offer all our customers one year long time limited warranty, come along with selectable chargeable renewal policy of warranty as one, two, three, or four years.
Our products are warranted against defects in materials and workmanship for a period of one year from the date of original purchase. If a defect exists, we will, at our option and to extent permitted by law will (1) repair the product at no charge using new or refurbished parts; (2) exchange the product with a functionally equivalent product that is new or refurbished. Provided the product is returned freight charge paid.
This warranty excludes damage resulting from abuse, accident, modifications or other causes that are not defects in materials and workmanship, or by someone other than our authorized technicians. This warranty only covers failures due to defects in materials or workmanship

under normal usage.
To obtain warranty service, please contact us to determine the nature of problem before return the product under this warranty (with a written description of the problem and print samples) for repairing or exchanging.

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

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

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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.
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.