# Xenon Flash Digital Scouting Camera
## *User's Manual*
## *Pocket Camera SG565F-8mHD*

# Content

# 1  Instruction

## 1.1 General Description

This camera is a digital scouting camera with Incandescent Flash. It can be triggered at once by any movement of human (or animal) in a certain region of interested (ROI) monitored by a high sensitive Passive Infrared (PIR) motion sensor, and then automatically captures high quality pictures (up to 8M pixels) or records video clips (720P HD) according to default settings or preset customer settings.

This camera uses integrated xenon flash instead of IR LED lamination. It can take color images day and night. It also can take video clips during the day.

It has elegant and cute shape, the most compact design in its class. And it has low power consumption, up to 1200 flash pictures with 8AA batteries.

The device is designed for outdoor use and is resistant against water and snow. Furthermore, the camera can be used as a portable digital camera. Pictures or videos can be taken manually by pressing **SHOT** on the control in **TEST** mode (the wired control needs to be connected).

## 1.2 Application

This camera can be used as an automatic surveillance device for guarding and recording unexpected intrusion to homes, shops, schools, depots, offices, taxis, work sites, etc. It can also be used as a trail camera for hunting or monitoring animals by recording the traces of wild animals. It can be left alone for weeks and months and it will deliver event records automatically in digital format.
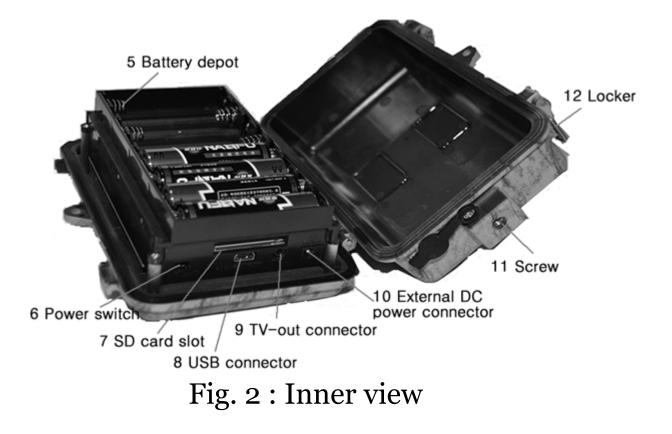
## 1.3 Camera Body Interface

The camera has the following I/O interfaces: USB connector, SD card slot and external DC power connector.

Take a few moments to familiarize with the camera controls and displays. It is helpful to bookmark this section and refer to it when reading through the rest of the manual.

1 Flash

2 Indication LED

3 PIR

4 Lens

## Fig. 1 : Interface view

5 Battery depot

12 Locker

11 Screw

6 Power switch

7 SD card slot

8 USB connector

9 TV-out connector

10 External DC power connector

## Fig. 2 : Inner view

# 1.4 Shooting Information Display

When the camera is turned on (the power switch is slid to ON position), shooting information will be displayed in the monitor.
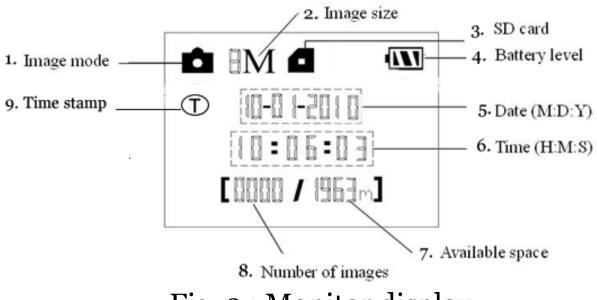


Fig. 3 : Monitor display

# 1.5 Supported Format

| Item | Format |
|---|---|
| Image | JPG |
| Video | AVI |
| File format | FAT32 |

Table 1 ： Format Item

You don't need to be concerned about the format of file in the camera unless you have problems with reading the SD card by your other equipment. If this happens，please format the SD card in the camera or in a computer at first and then reinsert the SD card to try.

# 2 Cautions

★ **The working voltage of the camera is 6V.** It is supplied by eight or four AA batteries.

★ Please insert the SD card when the power switch is at **OFF** position before testing the camera. The camera has no internal memory for saving images or videos. If no SD card is inserted, the camera will shut down automatically after a continuous indication sound.

★ Please unlock the write-protect before inserting the SD card. Don't insert or take out the SD card when power switch is at **ON** position.

★ In the **TEST** mode (insert the control into the USB interface then switch the camera to **ON** position), the camera will shut down automatically after 3 minutes if no operation is done. Please turn on the power again if you want to continue to work with the control.

★ The camera will be in USB mode when connected to a USB port of a computer. In this case, the SD card functions as a removable disk.

★ Please ensure sufficient power when having firmware upgrade, if any fault occurs after improper upgrading process, the camera may

stop functioning properly.

Please don't disassemble the camera.



Fig. 4 : Upgrade caution

# 3  Easy Operations

## 3.1 Power Supply

To supply power for the camera, eight AA size batteries are needed.

Open the camera to confirm that the power switch is at **OFF** position. Install the fully charged batteries into the depot according to the polarities sign shown below. The following batteries with 1.5V output can be used:

1. High-density and high-performance alkaline batteries (recommended)
2. Rechargeable alkaline batteries
3. Rechargeable NiMH batteries

When in low-battery state, camera will automatically shut down after two indication sounds. Please change the batteries in time.
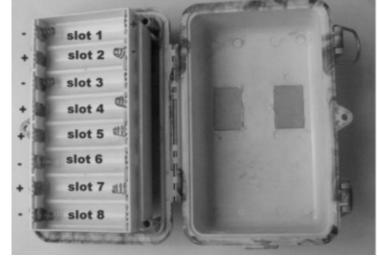


Fig. 5 :Battery slot

Caution: Risk of explosion if battery is replaced by an incorrect type. Also dispose of used batteries according to the instructions.

⊠    Correct Disposal of this product. This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

## 3.2 Insert the SD card

Open the bottom cover. Insert SD card into the card slot with unmarked side upwards. Please note that the SD card can only be plugged in one direction. Make sure that the write-protect switch of the SD card is on the "write" position otherwise the camera cannot be switched on.

## 3.3 Power On and Entering into the ON Mode

The Camera has three basic operation modes:

**OFF mode**: to turn off the camera.

**TEST mode**: to set operational parameters or to playback the photos via display screen.

**ON mode**: to work at surveillance state.

Before switching on, please pay attention to the following:

1. Avoid temperature and motion disturbances in front of the camera such as big leaf, curtain, air-conditioner, air outlet of the chimney, and other heat sources to prevent false triggering.

2. The height from ground for placing the camera should vary with the object size appropriately. In general, **one** to **two meters** are preferred.

In the **TEST** mode, it is required to connect the control in order to do further customize settings. When the user completes the settings, it is required to unplug the control to enter into normal use, that is, **if the wired control is still connected with the camera, the camera will not work.** The camera (the control must be unplugged when in **ON** mode) will take pictures or videos automatically according to the default settings or preset customer settings.

Slide the power switch to the **ON** position to power on the camera and enter into the **ON**

mode.

After switching on the camera, the motion indication LED (red) will blink for about 10 seconds. The 10 seconds is a buffering time before autonomic capturing photos or videos, e.g. for closing and locking the bottom cover, fixing the camera on a tree, and walking away.

## 3.4 Enter into the TEST Mode

Connect the wired control, then switch to the **ON** position and enter into the **TEST** mode. There are some functions in **TEST** mode: customer settings, manual capture, and preview. The control is needed in this mode.

### 3.4.1 Customer Settings

Press **MENU** on the control to enter into menu settings. The camera control can be taken over to manually customize the camera settings which display on the LCD screen on the camera. The detailed operations will be described in "Advanced Operations" chapter.

### 3.4.2 Manually Capturing

Press **SHOT** to manually capture photos or record videos (daytime). It is also the **SHOT** key to stop the manual capturing of the video.

### 3.4.3 View Images or Videos

Press **OK** to view images, the latest image will

be shown in the LCD screen on the control. Press **UP** to view the previous image and press **DOWN** for the next. **Please note that video cannot be played in the LCD screen and only thumbnail of the video is showed.**

## 3.5 Power Off

Switch the camera to **OFF** position to power off the camera. Please note that even in the **OFF** mode, the camera still consumes certain power at μA level. Therefore, please remove the battery if the camera will not be used for a long time.

# 4  Advanced Operations

From the basic operations of the camera in the previous chapter, we know that the camera has three basic operation modes:

1. **OFF** mode: power switch is at **OFF** position.
2. **ON** mode: power switch is at **ON** position.
3. **TEST** mode: power switch is at **ON** position and the control needs to be connected.

In the above three modes, **OFF** mode is the specified safe mode when replacing the SD card or batteries and transporting the camera.

## 4.1  Settings Menu

To view the camera settings menu, press **MENU** in the **TEST** mode (power switch is at **ON** position; control needs to be connected). The settings menu will be shown on the LCD of the control.

| Setting Items | Description |
|---|---|
| Camera Mode | Choose capturing images or recording videos. There are two ways to set the camera mode.<br><br>*Shortcut key.* Press **UP** to set the camera mode as **Video** or press **DOWN** to set camera mode as **Photo** in info display of **TEST** |

| | mode. |
|---|---|
| | *Setting menu:* press **RIGHT** to select Photo or Video mode, then press **OK** to save your setting. |
| | By using white flash, the camera can take color images day and night, but video can just work under sufficient daylight. If you set video mode, it will turn to camera mode automatically at night. |
| **Set Clock** | Set camera date and time. The date format is **month/day/year**, the time format is **hour: minute: second**. The valid value for year is between 2009 and 2050. |
| **Photo Size** | Choose the image size, 8 mega pixels or 5 mega pixels. |
| **Video Size** | You can choose 720P HD (1280X720) or VGA (640X480) for video. |
| **Video Length** | Choose duration of recording video. Its value extends from 5 to 60 seconds with a step of one second. Press **RIGHT** to decrease or increase the value by 1 second. |

| PIR Sensitivity | Choose sensitivity of PIR. This parameter defines the sensitivity of the PIR. There are three values: High, Normal, and Low. The default value is "Normal." The higher, the easier the motion sensor would be triggered and taking more pictures or recording more videos. It is recommended to use high sensitivity degree in room or environment with little interference, and to use lower sensitivity for outdoor or environment with lots of interference like hot wind, smoke, near window, etc. The sensitivity of PIR is strongly related to the temperature. Higher temperature leads to lower sensitivity. |
|---|---|
| PIR Interval | Choose how long the camera will stop functioning after each triggering. The camera's PIR will be disabled during this interval. |
| Illumination | Adjust the brightness of the light. |
| Format SD | Format the SD card. All images and videos in the SD card |

| | |
|---|---|
| | will be deleted. |
| **Default Set** | Restore all customer settings to default values. |

Table 2    Setting Items

## 4.1.1 Default Settings

Default settings are listed below:

| Setting Items | Default | Options | Submenu |
|---|---|---|---|
| Camera Mode | Photo | Video | |
| Set Clock | Enter | | Adjust Clock |
| Photo Size | 8M Pixel | 5M Pixel | |
| Video Size | 1280X 720 | 640X480 | |
| Video Length | 10 Sec | 5–60 seconds | |
| PIR Sensitivity | Normal | High, Low | |
| PIR Interval | 5 Sec | 0–55 sec , 1-5 min 5-60 min | 5 sec /step 1 min /step 5 min /step |
| Illumination | Long Range | Short Range | Short (1-3 m) |

| Format SD | Enter | | Yes, No |
|---|---|---|---|
| Default Set | Save | | |

<div align="center">Table 3    Default Settings</div>

## 4.1.2 View Image or Video

Switch to **TEST** mode and enter into info display, press **OK** to view the latest pictures on the wired control screen and then **UP** or **DOWN** to see other pictures. Press **OK** to return back.

**Please note that video cannot be played in the LCD screen and only thumbnail of the video is shown.**

## 4.1.3 Delete Image or Video

Choose the image or video to be deleted, press **MENU** and then **SHOT** to decide delete **one** or **all**, then **MENU** to cancel and **OK** to delete.

Please note that after deleting a picture or a video file, the deleted files can't be restored! Furthermore, in order to delete all images and video clips in the SD card, it is suggested to format the SD card.

## 4.2 File Numbering

Images and videos are saved in the pre-named folder. File numbering continues by adding one to the last number for each new image or video. The saving names are like IMAG0001.JPG or IMAG0001.AVI. Through the suffix you can distinguish whether the file is an image (with suffix .jpg) or a video (with suffix .avi).

## 4.3 Firmware Upgrade

This camera is equipped with an automatic upgrade function for you. Upgrading is needed only when an improved firmware is available.

# 5  Mounting the Camera

When you want to use the ON mode of the camera in the outdoors, such as hunting and monitoring the living habits of wild animals, you must mount the device on a certain place properly. It is recommended to mount the camera on a tree whose diameter is about 15 cm. To get the optimal picture quality, the tree can be 5 meters away from the place to be monitored, and at a height of 1.5~2 meters. The aiming direction of lens and the movement direction of the object should be orthogonal.

There are two ways to mount the camera:

**Use the belt:** using the belt to fix the camera on a tree is illustrated below. Take the belt toes to go through the two back holes of the camera. At the end, tie the two toes to the tree to finish fixing.
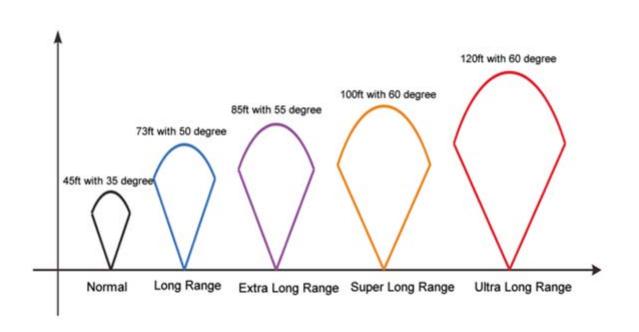
**Using bottom screw**



Fig. 6 : Belt mount

# Appendix I: PIR Detection Zone

Fig. 7 shows Bolymedia's 4 kinds of detection range at different detection angles. This camera is extra long range with 55 degree.



Fig.7 : PIR detection range

The PIR detection angle (α) is just smaller than the field of view (FOV) angle (β). The advantage of this design is to reduce empty picture rate and capture most, if not all, motions.
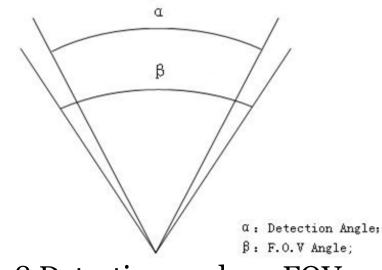
α : Detection Angle;
β : F.O.V Angle;

Fig. 8 Detection angle vs FOV angle

This camera has a new design of PIR which is patented. The new patented PIR's detection range can reach to 85 ft. Fig. 8 shows the compared detection zone between normal PIR and the new patented PIR.
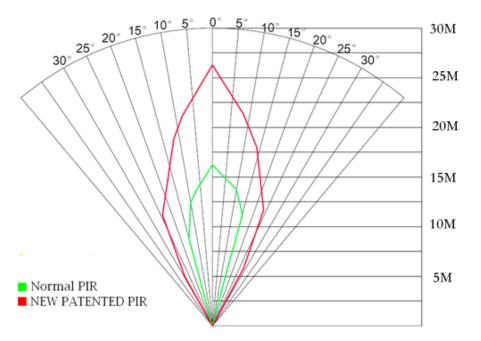
Fig. 9   Comparison of Detection Zones of new and normal PIR

# AppendixⅡ: Technical Specifications

| Image Sensor | 5MP Color CMOS sensor 8MP Interpolation |
|---|---|
| Lens | F/NO=2.2 FOV (Field of View)=60° |
| Detection Range | 85ft |
| Memory Card | 8MB to 32 GB |
| Image Resolution | 8MP=3264x2448 5MP=2560x1920 |
| Video Resolution | 1280x720 (25fps) 640X480 (20fps) |
| PIR Sensor | Multi Zone |
| PIR Sensitivity | Adjustable (High/Normal/Low) |
| Trigger Time | 1.2 second |
| Weight | 0.26 kg |
| Operation/Storage Temperature | -20 - +60°C / -30 - +70°C |
| Power Supply | 8×AA (Recommend), 4× AA (Emergency) |
| Stand-by Current | < 300uA |
| Power Consumption | >1200 pictures (8×AA, room temperature ) |

| | |
|---|---|
| Low Battery Alert | LED indication (Note the low battery alert LED flashes quickly (10Hz) and the motion indication LED flashes slowly (2Hz).) |
| Display Screen | LCD display on control |
| Mounting | Rope/Belt/Python lock |
| Dimensions | 130x 80x 50 mm |
| Operation Humidity | 5% - 90% |
| Security authentication | FCC, CE, RoHS |

*without battery

# Appendix Ⅲ: Parts List

| Part Name | Quantity |
| --- | --- |
| Digital Camera | One |
| Wired control | One |
| USB Cable | One |
| Belt | One |
| User's Manual | One |
| Warranty Card | One |

（Version 1.4）