

### **FCC RF Radiation Exposure Statement**

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 5 millimeters between the radiator and your body. This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

### **FCC ID : ROYSA366PBWC**

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.

**Caution:** Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Note:** 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.



IC : 5479A-SA366WC

Body Worn Camera System

FCC ID : ROYSA366PBWC

Model : ARB-SA366

Input : 3.7V<sub>DC</sub> , 2700mA

Use only with Listed ITE

This device complies  
with part 15 of the  
FCC Rules

Made In Korea



40WW  
E327640  
ARB-SA366

## **Arbitrator Body Worn Camera System**

# ARB-SA366

### **User Guide**

Version 1.00



Read this user guide carefully for safe operation and proper use of the product.

Features and specifications are subject to change without notification.

## CAUTION

### 1. When Using the Battery

#### **Danger**

- (1) Misusing the battery may cause the battery to get hot, explode, or ignite and cause serious injury. Be sure to follow the safety rules listed below:
  - Do not place the battery in fire or heat the battery.
  - Do not install the battery backwards so that the polarity is reversed.
  - Do not connect the positive terminal and the negative terminal of the battery to each other with any metal object (such as a wire).
  - Do not carry or store the batteries together with necklaces, hairpins, or other metal objects.
  - Do not pierce the battery with nails, strike the battery with a hammer, step on the battery, or otherwise subject it to strong impacts or shocks.
  - Do not solder directly onto the battery.
  - Do not expose the battery to water or salt water, or allow the battery to get wet.
- (2) Do not disassemble or modify the battery. The battery contains safety and protection devices which, if damaged, may cause the battery to generate heat, explode or ignite.
- (3) Do not place the battery on or near fire, stoves, or other high temperature locations. Do not place the battery in direct sunlight, use or store the battery inside cars in hot weather. Doing so may cause the battery to generate heat, explode, or ignite. Using the battery in this manner may also result in a loss of performance and a shortened life expectancy.
- (4) Do not insert the battery into equipment designed to be hermetically sealed. In some cases hydrogen or oxygen may be discharged from the cell which may result in rupture, fire or explosion.

**CAUTION** : Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions. (Please refer to instruction for safe disposal of lithium polymer battery at page#3)

## AUDIT LOG INFORMATION-2

Category	Log Item	Parameter
System	Power on/off	
	System reboot by [event]	[event] : a factor of reboot
	System Start [Product Name] [Firmware Version] [Serial#]	
	Standby Start / End	
	Configuration is changed	
	Configuration error [file.setting]	
	Log in/out [officer ID]	[officer ID]
	Restoring FAT Start	
	Restoring FAT End [with Error]	
	SD formatted [with Error]	
	Factory default	
	Upgrading/Downgrading Start [Firmware File Name]	[Firmware Version]
	Upgrading/Downgrading End [with Error]	
	GPS Enabled / Disabled	
	Time adjustment [Before] [After]	[Before] = UTC time before adjustment [After] = UTC time after adjustment

## AUDIT LOG INFORMATION-1

Category	Log Item	Parameter
Event	Recording Start [factor] [mode]	[factor] = Start Event Name [mode] = Event / Cont Stop
	Recording Stop [factor] [Event Name]	[factor] = <Stop EV> Event name (when recording stopped)
	I/O status change event	2'nd camera attached/detached
		USB attached/detached
		Power supplied/removed
	Wi-Fi disconnected with [mode] [Electric field strength]	[mode] = ST1/ST2/AP [MAC] = Mac address of AP [FREQ] = Channel [SSID] = SSID of AP [Electric field strength -dB]
	Net [mode] [IP] [VPU Serial]	[mode] = ST1/ST2/AP [IP] = IP address [VPU Serial] = only ST1
	Deleted [Event ID]	[Event ID] = Event Name
	Delete Error [Event ID]	[Event ID] = Event Name
	USB authentication success / failure	
Status	Uploading Start / End [with Error/timeout]	
	Remote Updating Start / End [with Error/timeout]	
	Low battery	
	SD [Model Number] [SD Status] [Capacity] [Free Space] [Serial#]	[Model Number] = See meta file spec [SD Status] = Status number . [Capacity] = Total capacity (Kbytes). See config1.xml. [Free Space] = Free Space (Kbytes). See config1.xml. [Serial#] = Serial number of SD
	SD card capacity is not enough	

## CAUTION

### Warning

- (1) Immediately discontinue use of the battery if, while using, charging, or storing the battery, the battery emits an unusual smell, feels hot, changes color, changes shape or appears abnormal in any other way. Contact your authorized reseller or Panasonic if any of these problems are observed.
- (2) Do not place the batteries in microwave ovens, high-pressure containers, or on induction cookware.
- (3) In the event that the battery leaks and the fluid gets into one's eye, do not rub the eye. Rinse well with water and immediately seek medical care. If left untreated the battery fluid could cause damage to the eye.

### Caution

- (1) If the device is to be used by small children, an adult should explain the contents of the user's manual to the children. The person should provide adequate supervision to insure that the device is being used as explained in the user's manual.
- (2) When the battery is worn out, insulate the terminals with adhesive tape or similar materials before disposal.

### Danger

Be sure to follow the rules listed below while charging the battery. Failure to do so may cause the battery to become hot, explode, or ignite and cause serious injury.

- When charging the battery, either use a specified battery charger or otherwise insure that the battery charging conditions specified by Panasonic are met.
- Do not attach the batteries to a power supply plug or directly to a vehicle's cigarette lighter.
- Do not place the batteries in or near fire, or into direct sunlight. When the battery becomes hot, the built-in safety equipment is activated, preventing the battery from charging further, and overheating the battery, which would destroy the safety equipment and can cause additional heating, breaking, or ignition of the battery.

### Battery Replacement

The battery should be replaced only by Panasonic Service Center.

## CAUTION

### **Warning**

Do not continue charging the battery if it does not charge within the specified charging time. Doing so may cause the battery to become hot, explode, or ignite. There is a risk of explosion if the battery is replaced by an incorrect type.

Dispose of used batteries according to the instructions.  
(Please refer to below instruction for safe disposal of lithium polymer battery)

### **2. While Charging**

#### **Caution**

The temperature range over which the battery can be charged is 0°C to 45°C. Charging the battery at temperatures outside of this range may cause the battery to become hot or to break. Charging the battery outside of this temperature range may also harm the performance of the battery or reduce the battery's life expectancy.

### **3. When Discharging the Battery**

#### **Danger**

Do not discharge the battery using any device except for the specified device. When the battery is used in devices aside from the specified device it may damage the performance of the battery or reduce its life expectancy, and if the device causes an abnormal current to flow, it may cause the battery to become hot, explode, or ignite and cause serious injury.

#### **Caution**

The temperature range over which the battery can be discharged is -10°C to 45°C. Use of the battery outside of this temperature range may damage the performance of the battery or may reduce its life expectancy.

#### **Safe Disposal of Lithium Polymer Battery**

- 1) Battery cells be fully discharged before disposal.
- 2) If physically damaged, it is not recommended to discharge battery cells before disposal.
- 3) Battery must also be cool before proceeding disposal.
- 4) Submerge the battery into a bucket or tub of salt water. This container should have a lid but it does not need to be air-tight. Allow the battery to remain in the tub of salt water for at least 2 weeks.
- 5) Remove the battery from the salt water and dispose of as hazardous waste.

## SPECIFICATIONS-2

Battery	Battery Type	Rechargeable, Removable
	Recording Time	8 hours (None Mode, W/O GPS, Wireless LAN)
	Standby Time w/ Pre-Recording	9 hours
	Standby Time w/o Pre-Recording	100 hours
	Charging Time	Less than 3 hours via Power Terminal when SA366 is turned OFF.
Features	Pre-Event Recording	Off / 10s / 20s / 30s
	Classify in the Field	Yes
	Still Photos	Yes
	Automatic Data Upload	Wireless -> Via Wireless LAN
		Wired -> Via USB
	GPS	Yes
Integrated Feature to Smart phone	Wireless LAN	802.11n 1x1 2.4GHz
	On-Site Monitor of Video	Live / Achievement
Accessory	Addition of Meta Data	Title, Category, Case No.
	Car Charger Adapter	Yes
	Extra Battery Pack	Yes
Data Management System		Arbitrator System

## SPECIFICATION-1

Category	Item	Specification
Camera	Video Resolution	720p / 360p
	View Angle	H :130° / V : 67°
	Frame Rate (FPS)	30fps
	Still Photo Resolution	1280 x 720 / 640 x 360 (pixel)
	Minimum Illuminance	Color : 1.2lx, BW : 0.9lx
	WDR	Yes
	Day/Night Function	Yes
General	Optional Camera	Yes
	Robustness	Subject to MIL-STD-810G testing
	Dust / Weather Rating	IP54 Rating
	Dimensions	Main Controller 2.53/2.41" x 3.3" x 1.02/0.81" 2 <sup>nd</sup> Camera 0.89" x 0.89" x 1.48"
	Weight	Main Controller Less than 130g (W/ Battery) 2 <sup>nd</sup> Camera 17g (W/O Cable)
	Storage	32GB
	Operating Temperature	-20 to 50°C
	Temperature under Charging	0 to 45°C
	Storage Temperature	-30 to 60°C
	Storage Temperature under Charging	-20 to 45°C
Recording	Video Format	H.264
	Still Photo Format	JPEG
	Audio Format	AAC

## PACKAGE CONTENTS FOR SA366 (Main)

### 1. Main Kit SKU : ARB-SA366MC

- Main Controller w/ Battery & SD Card (ARB-BWCMAIN)
- 1<sup>st</sup> Plate for Main Controller (ARB-BWCMPATE)
- USB Car Charger (ARB-BWCVEHCHA)
- ER Cable (ARB-BWCVEHCBL)
- Clip for Main Controller
- User Guide & Quick Reference Guide

## PACKAGE CONTENTS FOR SA366 (OPTION)

### 1. 2<sup>nd</sup> Camera Kit SKU#1 : ARB-SA3662CS

- 2<sup>nd</sup> Camera with 1.5ft Cable (ARB-BWCCAM2S)
- 1<sup>st</sup> Plate for 2<sup>nd</sup> Camera
- Clip for 2<sup>nd</sup> Camera
- User Guide & Quick Reference Guide

### 2. 2<sup>nd</sup> Camera Kit SKU#2 : ARB-SA3662CL

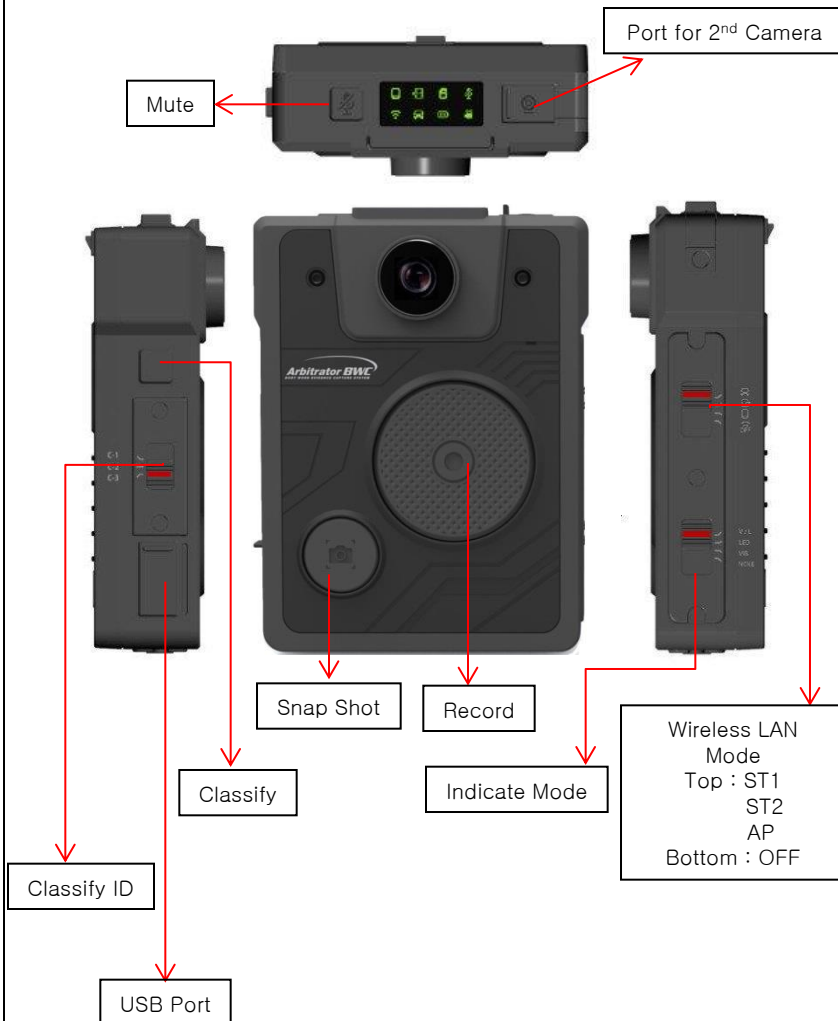
- 2<sup>nd</sup> Camera with 3.0ft Cable (ARB-BWCCAM2L)
- 1<sup>st</sup> Plate for 2<sup>nd</sup> Camera
- Clip for 2<sup>nd</sup> Camera
- User Guide & Quick Reference Guide

## ACCESSORIES

- Privacy Mask (ARB-BWCPRIV)
- SD Card (ARB-BWCSDC)
- Extra Battery Pack (ARB-BWCEXTBAT)
- Extra Battery Pack Cable (ARB-BWCXBATCBL)
- 3.7V Li-Polymer Soft Pack Battery (ARB-BWCMAINBAT)

## DESCRIPTION – MAIN CONTROLLER#1

The SA366 is mainly worn by police officers in order to record the video and audio during the incidents or on patrol. The recorded video and audio data is highly compatible to Arbitrator360° HD in-car digital video recording system, and can offer seamless operation with it and SA366 data to the customers.



## BASIC OPERATION-6

### 5) Recording

The following are descriptions of how to record and play images with the camera.

#### Start Recording :

Press the REC button once to start the recording.

The record LED will be flickering and the vibrator will be generated every ten seconds to indicate the start of recording when it is enabled by slide switch.

\* Mute : Press the Mute button to mute the audio during recording.

#### Stop Recording :

Press and hold the recording button for more than two seconds depending on the settings(2/3/5 seconds).

The recording LED will be turned off.

#### Playback :

Smart phone application will be available to playback video file which is stored in the SA366

#### Live View :

Smart phone application will be available to activate live streaming data from SA366 via connecting with Wireless LAN. For the proper using, the Wireless LAN switch mode of SA366 should be located in AP mode.

#### Snapshot :

The SA366 generates a folder and records a snapshot (Still Picture) in the folder by pressing snapshot button. And also bookmark file which has snapshot information will be generated in the SA366 at the same time.





#### Classify :

For video data in police practice, classification by the type of incidents is usually required as a meta-information. In the case of Arbitrator 360° HD in-car video recording system which is mounted in the police vehicle, the FE is connected to VPU and used to add classification on to the video data. But there is no connection for the SA366 to external devices such as FE. So the SA366 supports classification feature in it.

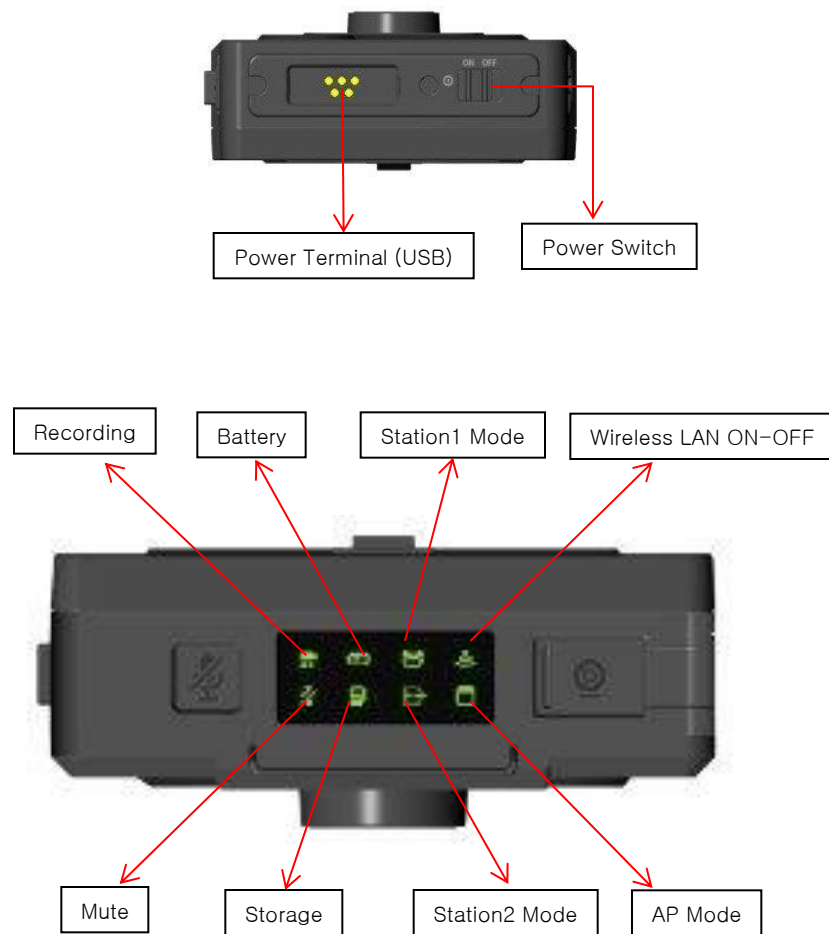
The SA366 has a slide switch to select the incidents type and also it has button to add the incidents type to the video data.

## BASIC OPERATION-5

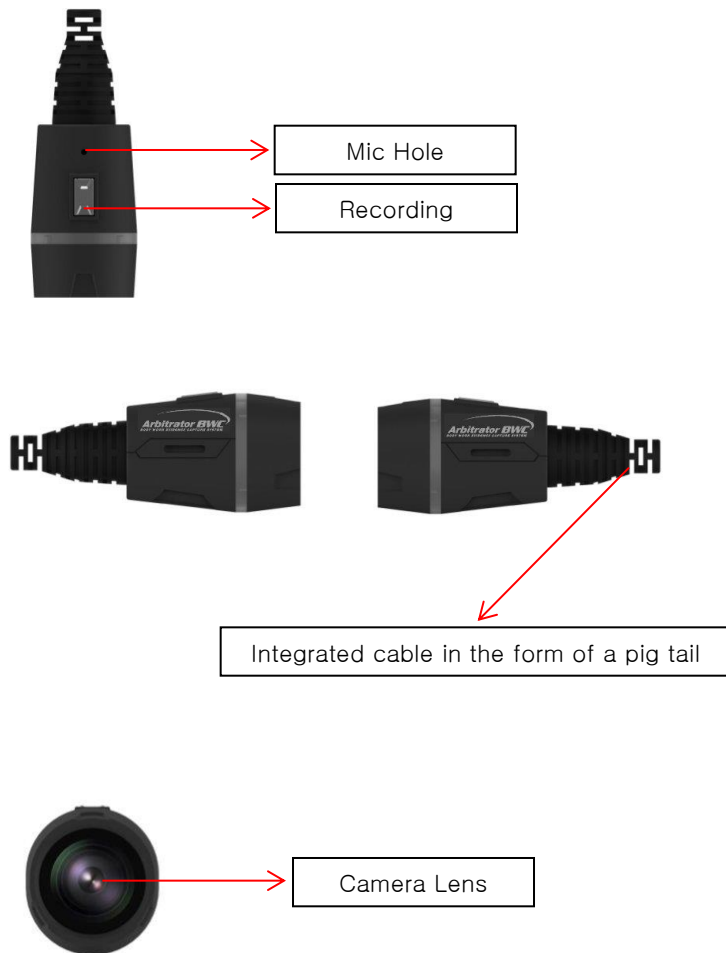
### 4) LED Indication-3

LED Name	Operation	LED Operation
ST1 (  )	Connected with VPU	● : Lit
	Transfer Data	⬢ : Blinking
ST2 (  )	Connected with BES	● : Lit
	Finished Uploading	● : Lit
	Under Uploading	⬢ : Blinking
	Transfer Data	⬢ : Blinking
AP (  )	Connected with Smartphone	● : Lit
	Streaming Video	⬢ : Blinking
	Transfer Data	⬢ : Blinking
Wireless LAN Link (  )	Wireless LAN Linked	● : Lit
	Searching Wireless LAN	⬢ : Blinking
	Malfunction at Wireless LAN	● : Lit

## DESCRIPTION – MAIN CONTROLLER#2









## DESCRIPTION – 2<sup>nd</sup> CAMERA



## BASIC OPERATION-4

### 4) LED Indication-2

LED Name	Operation	LED Operation
REC (  )	During Recording	● : Lit
	Snapshot is recorded	☀ : Flash Once
	Classify is recorded	☀ : Flash Once
	Fail to Start Recording	☀ : Blinking 3 times
	Receive Command of PC	☀ : Blinking
Mute(  )	Audio Mute ON	● : Lit
	Under connected with PC	☀ : Blinking
Storage(  ) Remain Recording Time or Card Status	Time > 3 Hours	● : Lit
	1 < Time < 3 Hours	● : Lit
	Time < 1 Hours	☀ : Blinking
	Card Full, Card Error	● : Lit
Battery (  ) During charging When Power ON	Full Charged	● : Lit
	> 50%	☀ : Blinking
	15% ~ 49%	☀ : Blinking
	< 15%	☀ : Blinking
Battery (  ) During charging When Power OFF	Full Charged	● : Lit
	Charging	☀ : Blinking
Battery (  ) During Normal Operation	Full Charged	● : Lit
	15% ~ 49%	● : Lit
	< 15%	● : Lit



## BASIC OPERATION-3

### 4) LED Indication-1

There are eight LED indicators in main controller like below details.



LED Indicator	LED Color	
Recording	RED	●
Storage Status	GREEN / ORANGE / RED	● / ● / ●
Battery Status	GREEN / ORANGE / RED	● / ● / ●
Audio Status	ORANGE	●
Wireless LAN On /Off	GREEN / RED	● / ●
Wireless LAN Station 1	GREEN	●
Wireless LAN Station 2	GREEN	●
Wireless LAN AP Mode	GREEN	●

## FEATURES

The SA366 is real time surveillance camera, with compressed by H.264 and MJPEG from HD image. It includes HD video and audio which will be encrypted and saved at standard SD card. Also it can be live-viewed and played back at smartphone application through Wireless LAN. Its firmware and configuration can be updated via Wireless LAN or USB from server and Wireless LAN has 4 different modes as ST1 / ST2 / AP / OFF.

### 1) Main Features

- HD Video Quality Recording
- High Quality Audio Recording
- IP54
- Streaming : 30fps + 432x240 for Wireless LAN Live Streaming
- Built In GPS System
- Video : H.264
- Still Photo : JPEG
- Audio : Built In MIC, AAC Audio Format
- 802.11n Wireless LAN
- Standard SD Card of 32GB

### 2) Software Updates

The firmware of the SA366 can be updated by PC application via USB or Wireless LAN. Contact the dealer for further information about the firmware upgrade.

### 3) Getting Started

Before using your SA366 Body Worn Camera for the first time :

Charging the battery. The included "Lithium-Polymer" battery comes partially charged or fully discharged . To charge, connect the included ER cable to camera and connect the other end of the cable to a power source such as a "Cigar Jack Adapter" in the vehicle.

## BASIC OPERATION-1

### 1) Buttons

#### Recording Button:

To start the recording, press the recording button shortly.

To stop the recording, press and hold the recording button for more than two seconds.

#### Snapshot Button:

To take the snapshot, press the snapshot button shortly.

### 2) Slide Switch

#### Power ON / OFF :

The power switch has 2 positions of slide switch as ON / OFF.

Turn the power ON / OFF, move the power switch to ON/OFF position.

\* Notice : SA366 will close files safely by software controlling.

#### Classify Button and Classify ID Switch :

It can sort the recorded files. The classify ID can be recorded if the classify button pressed after selecting one of C1/ C2/ C3 in the classify ID switch.


#### Indicate Mode Switch :


The indicate mode switch has 4 positions of slide switch as listed below indication.


- LED and Vibrator Mode : Indicate the operation or status of system via LED and Vibrator.
- LED Mode : Indicate the operation or status of system via LED indicator
- Vibrator Mode : Indicate the operation or status of system via Vibrator
- None Mode : It doesn't indicate the operation or status of system


## BASIC OPERATION-2

#### Wireless LAN Mode Switch :

ST1 (  ): Station mode for connection with the VPU

ST2 (  ) : Station mode for connection with the back End Server (BES)

AP (  ): AP mode for the live view of the system via smart phone application

OFF (  ): Turn off the Wireless LAN

### 3) I/O Terminal

#### Micro USB Connector/ Magnetic USB Terminal :

It will be used for charging and USB connection.

The charging time depends on the connected device,

PC: longer than 6hours

Charger : less than 3hours

Not recommended USB HUB.

#### 2<sup>nd</sup> Camera Connector :

It will be used for connecting with 2<sup>nd</sup> Camera.