IP Camera

（Network Camera）

2012-3

User Munual

Important Safeguards and Warnings

Do not place heavy objects on the DVR.

Do not let any solid or liquid fall into or infiltrate the DVR.

Please brush printed circuit boards, connectors, fans, machine box and so on regularly. Before the dust cleaning please switch off the power supply and unplug it.

Do not disassemble or repair the DVR by yourself. Do not replace the components by yourself.

Environment：

Please place and use IP camera under temperature between-10℃~60℃ and humidity less than 9%；

Do not use IP camera in smoky or dusty environment；

Avoid collision or strong fall.

Please insure the IP Camera level installation in a stable workplace.

Please install in ventilated place. Keep the vent clean.

Use within the rating input and output scope.

Suitable products：

This manual is suitable for all series of IP Camera from our company, including indoor box type, IR waterproof type, whelk type, dome type, home-use robot type, etc.

Special announcement：

The content including in this manual is refer to the most updated information when compilation, if there is something to be changed, will not further notice specially.

If got questions or requirement, please feel free to contact us at any time.

Catalogue

Chapter One: Product introduction

1.1 Product summary

The series DVR is designed specially for security and defence field which is an outstanding digital surveillance product. It introduces embedded LINUX operating system which is more stable. It introduces standard H.264mp video compressed format and G.711A audio compressed format which insures the high quality image, low error coding ratio and single frame playing. It introduces TCP/IP network technology which achieves the strong network communication ability and telecommunication ability.

The IPC can online applied as a part of a safety surveillance network. With the professional network video surveillance software it achieves the strong network communication ability and telecommunication ability. And IPC can individually work also.

It is applied to all kinds of occasion that need network remote monitoring, such as:

- ATM, Bank counter, supermarket, factory, etc.
- Foster care center, kingdom garden, school, etc.
- Intelligent gate control system.
- Intelligent building and residential manage system
- Unattended system like: Generating plant, telecom base station
- Outdoor device to monitor bridge, tunnel, block transportation status
- Production line and warehouse control.
- 24-hour monitor for road transportation.
- Remote monitor for forest, water source and river.
- Airport, train station, bus stop, etc.

1.2 Porduct main function

Real-time surveillance

·with analog output interface can do surveillance through device of monitor or DVR, etc.

Storage

·Max support TF card with 32G(part of model support) for local storage of snapshot image.

·can do snapshot remote storage via CMS software or myeye platform

·storage data is using dedicated format, can not be modified to make data safty

Compression format

· Audio and video signal is compressed by individual hardware, to make the image and voice synchronously stable

Backup function

·client side pc can download file from TF card for back up via network

Video playback function

·can do full real-time record, and search, net surveillance, video search and download, etc.

·support play back mode of fast-play, slow-play, etc.

·can do partial enlargement of any of the area

Network operation function

·can remote surveillance via network (including mobile)

·remote PTZ control

·remote video search and realtime playback

Alarm linkage function

·alarm link to record, snapshot, email sending, etc.

Telecom interface

·with RS485 interface for PTZ control

· with Ethernet port for remote access function , remote upgrade & maintaince function.

Intelligent operation

·for the same setting operation on menu can do copy & paste operation.

Chapter Two: Open case checking and cable connection

2.1 Open case checking

When you receive this product,

Firstly, check model No. on product is the same as what you ordered；

Then, check if there is obvious damage on packing, the protective material used for packing can afford most unexpected strike during transportation；

Finally, please take out IPC and remove the protective covers to check if there is obvious damage.

2.2 TF card installation

Remark: Please check if the model u bought whether support TF card

For primary use, firstly please install TF card, one TF card, to keep normal function, TF card is required with minimum 4G and maximum 32G.

Part of IPC such as robot type can insert TF card directly from outside case, other IPC that support TF card, need to open the case and find TF card slot to insert it.

2.3 Installation on brace

The IPC is using the standard case, so it can be installed to a standard brace.

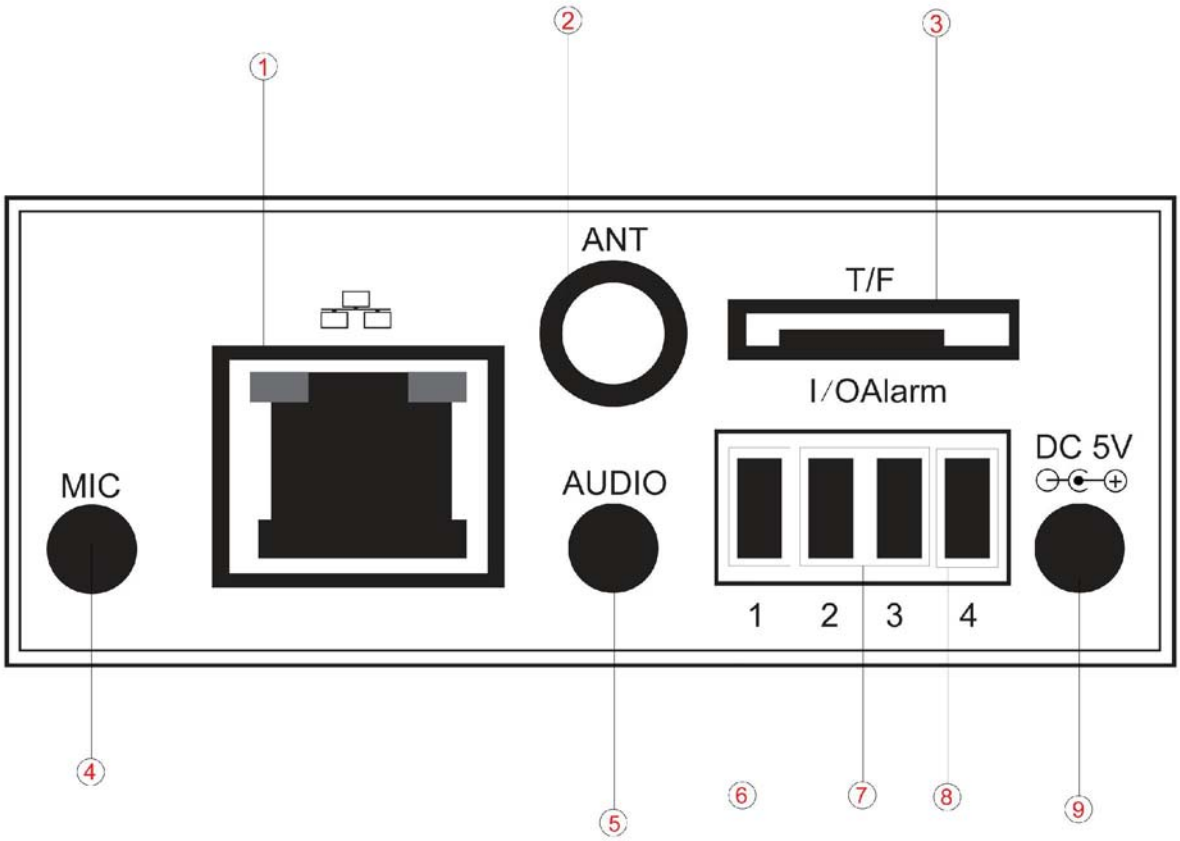
Installation steps and attentions：

1、make sure the temperature is between -10℃~60℃ ，humidity is less than 90%；

2、brace installed stable and firmly；

3、outdoor installation please pay attention to the severe weather；

4、when installing multi-device on the same line, please take protective measure to avoid over load of the line.



1. Network
2. Wireless Antenna
3. T/F Card
4. MIC Output
5. Audio
6. Alarm Output
7. Ground
8. Alarm 5V Output
9. DC 5V power supply

2.5 Video output connection

2.5.1 choose and connect video output device

1.BNC output：

BNC video output is divided into: PAL/NTSC BNC(1.0V_{P-P}， 75Ω)，can be connected to monitor or surveillance integrated equipment such as DVR, etc.

BNC output can support preview of the monitor image only.

Make sure the stable and reliable of transmission link：

The video transmission line should adopt high quality coaxial pair which is chosen by the transmission distance. If the transmission distance is too far, it should adopt shielded twisted pair, video compensation equipment and transmit by fiber to insure the signal quality.

The video signal line should be away from the electro magnetic Interference and other equipments signal lines. The high voltage current should be avoided especially.

Insure the connection stable and credible

The signal and shield lines should be firm and connected credible which avoid false and joint welding and oxidation.

2. Network output：

Connect to LAN and WAN via common standard, using the PC that is in the same LAN line with IPC by software or IE browser to set parameters, real-time preview, remote playback and download, etc.

When replace the monitor by the computer display, there are some issues to notice.:

1、do not make it running for a long time, in order to extend the using life of device.

2、regularly degauss to keep monitor normally work.

3、Keep away from device with severe electromagnetic interface.

TV is not a credible replacement as a video output. It demands reducing the use time and control the power supply and the interference introduced by the nearby equipments strictly. The creepage of low quality TV can lead to the damage of other equipments.

Chapter Three: IE log-in basic operation

Remark: keys in grey means do not support

3.1 Boot

Connect to power, then IPC is auto boot.

Remark： 1. Make sure that the input voltage corresponds with the switch of the DVR power supply.

2. Power supply demands: 220V±10% /50Hz.

Suggest using the UPS to protect the power supply under allowable conditions.

3.2 Reboot

Reboot IPC is divided into soft reboot and hard reboot. Soft switch please enter【Devicecfg】> 【Advanced】 choose【reboot】; Hard reboot, to cut off power and reconnect it to reboot device

Illustrate：

1、Power-off & recover function

If IPC happens with abnormal shut down when it is under recording, after reboot, it will auto-save the record info before shutdown and restore to status before shutdown.

2、Change TF card

When change TF card, please cut off power supply firstly.

3、Change battery

IPC is using button cell battery, need regularly check system time, if time is not accurate, then need to change battery. Suggest to change it once a year by professional maintainer and using the same model of battery.

3.3 Log-in

When device turns on normally, need to log-in before operation, system will base on the authority of log-in user to provide related function.

Default IP address：192.168.1.10，subnet mask：255.255.255.0，gateway：192.168.1.1

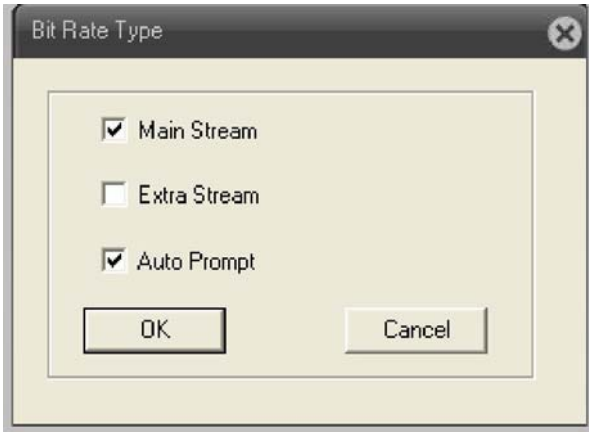
When device ex-fty, there are 3 preset users : admin、guest、default，default password is none, admin is preset as super authority user, guest and default is preset with authority of preview and playback, admin and guest user can modify password but not authority, default is the user default log-in, can modify authority but not password

Pic : 3.1 Log-in

For safty sake, when firstly log-in, please go to "Account" to modify user name and password, see chapter 4.5.2 account manage).

3.4 Preview

After log-in successfully, will come out window of bit rate type as pic 3.2, can choose the main stream or extra stream u want for preview, and also can click  at left side of preview page to set it.



Pic: 3.2 bit rate type

At preview page, can shows date, time and channel titile.

3.5 Setting menu

On preview mode, click 

at top side ,, will come out window as pic:3.3. setting menu function including: Record, Alarm, System, Advanced, Info. Click icon at bottom side  will enter related next menu of this function.

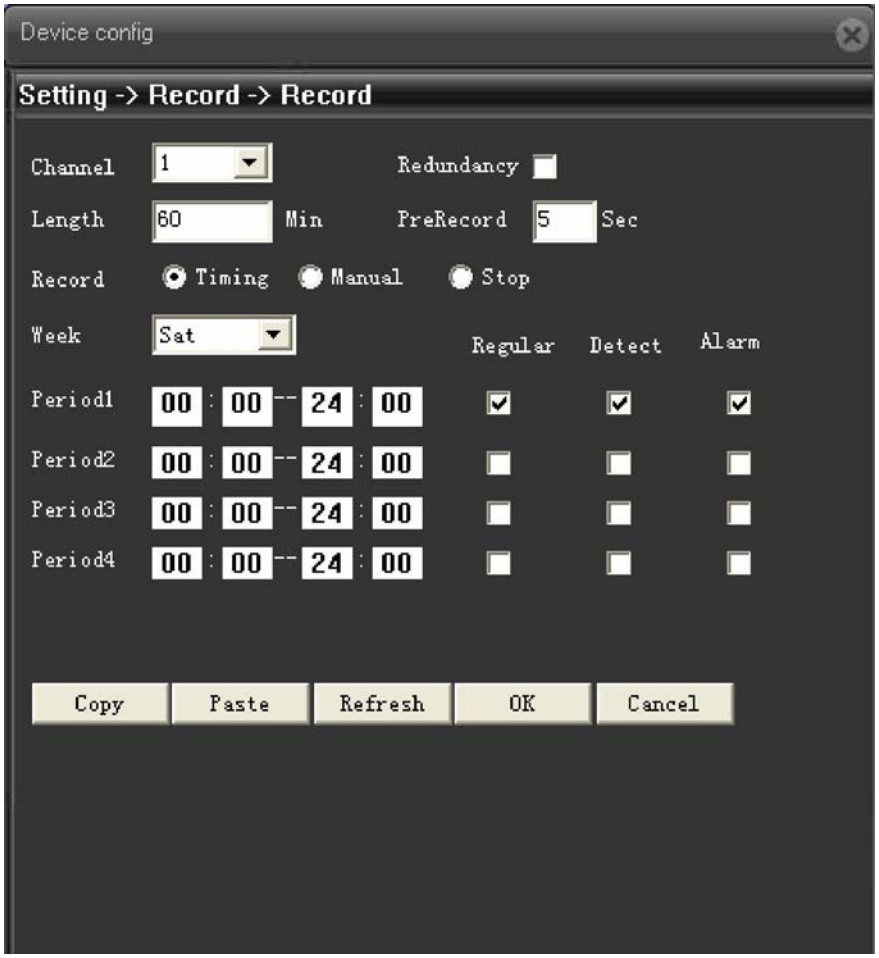
Pic: 3.3 shortcut menu

3.5.1 Record

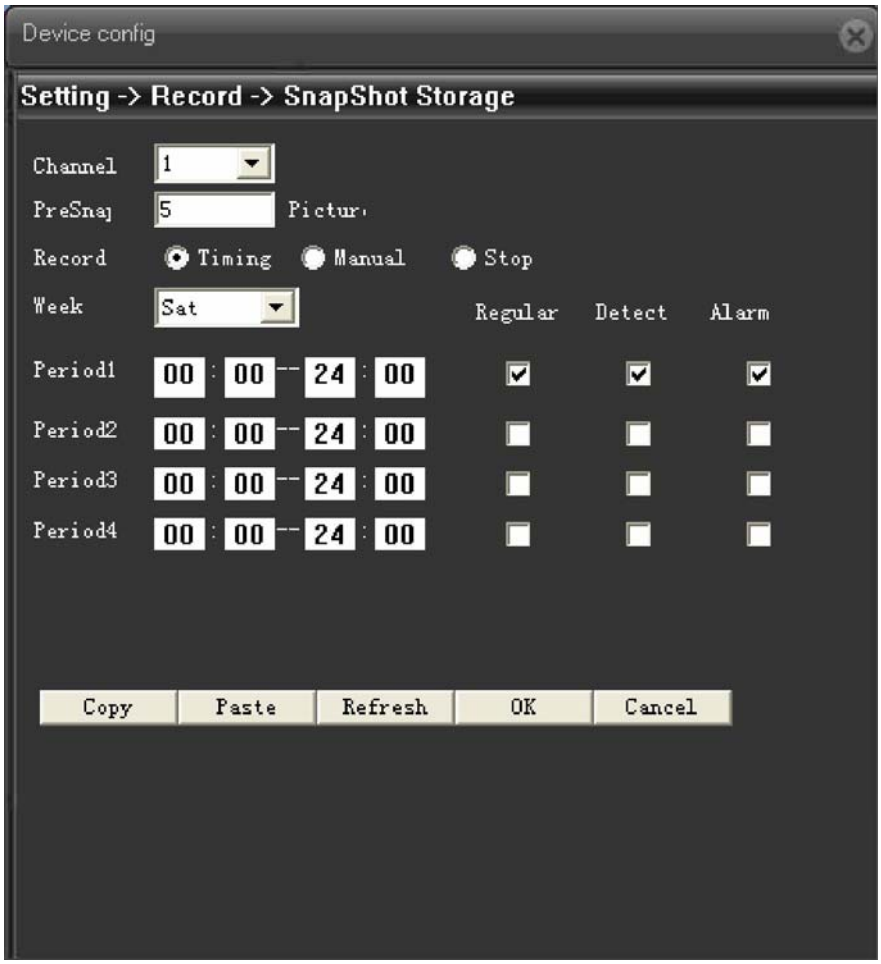
Record function including: device record and snapshot settings.

1. Record setting

Device should install TF card to realize this function.



Pic: 3.4 Record setting

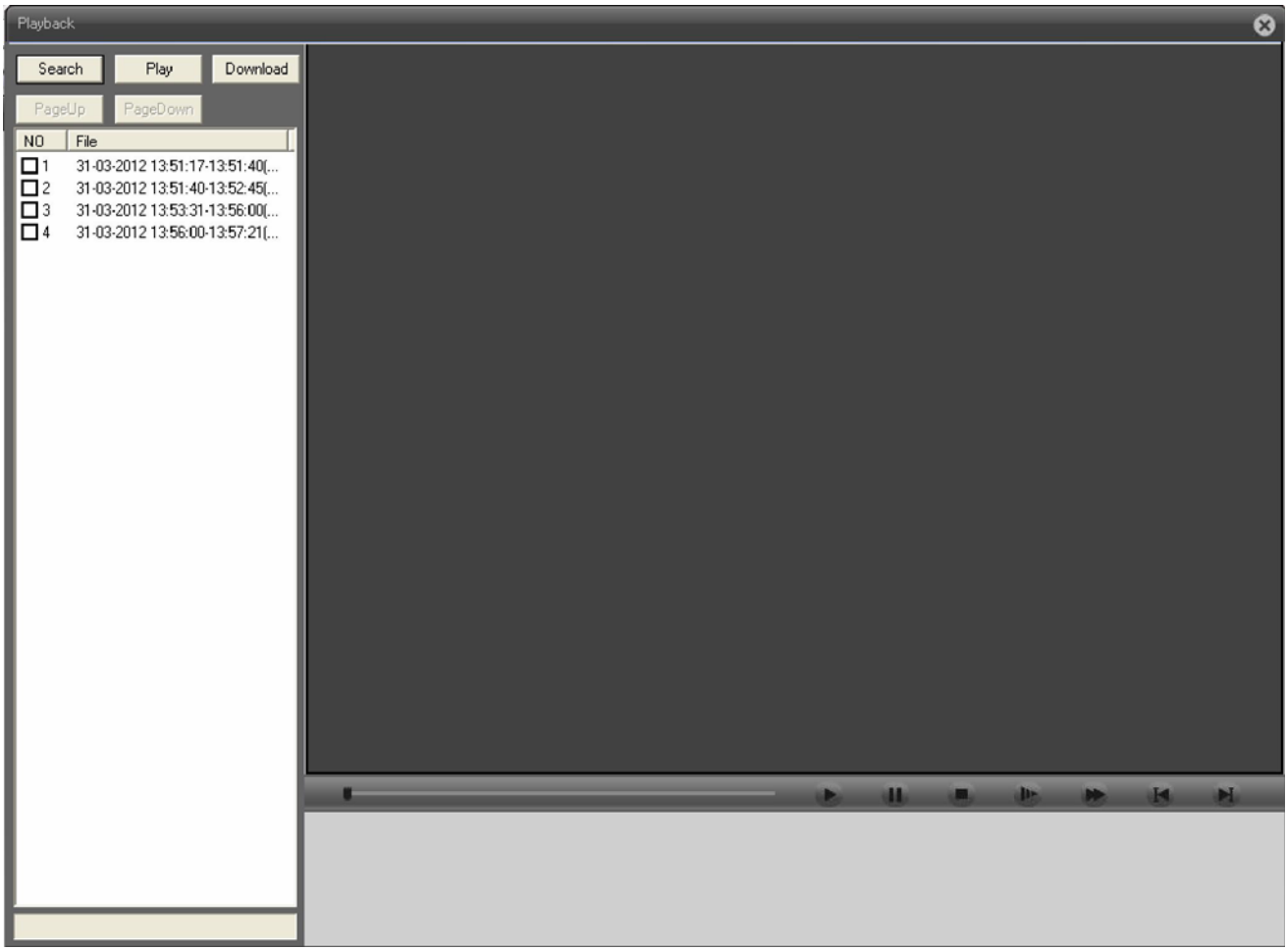


Pic: 3.5 Snapshot setting

3.5.2 Playback

To play the video file in TF card, can click Playback at upper left side on monitor page, to enter video playback page.

Remark: Device normal playback, the TF card that used for video storage should be set as read/write or read only (please refer to HDD manage).



Pic 3.6 Playback

【Playback control button】see detail in below chart；

Button	Function	Button	Function
	Play		Pause
	Slow-play		Fast-play
	Previous frame		Next frame
	Stop		

Chart 3.1 playback control button list

Remark：Playback by frame should under the status of playback pause.

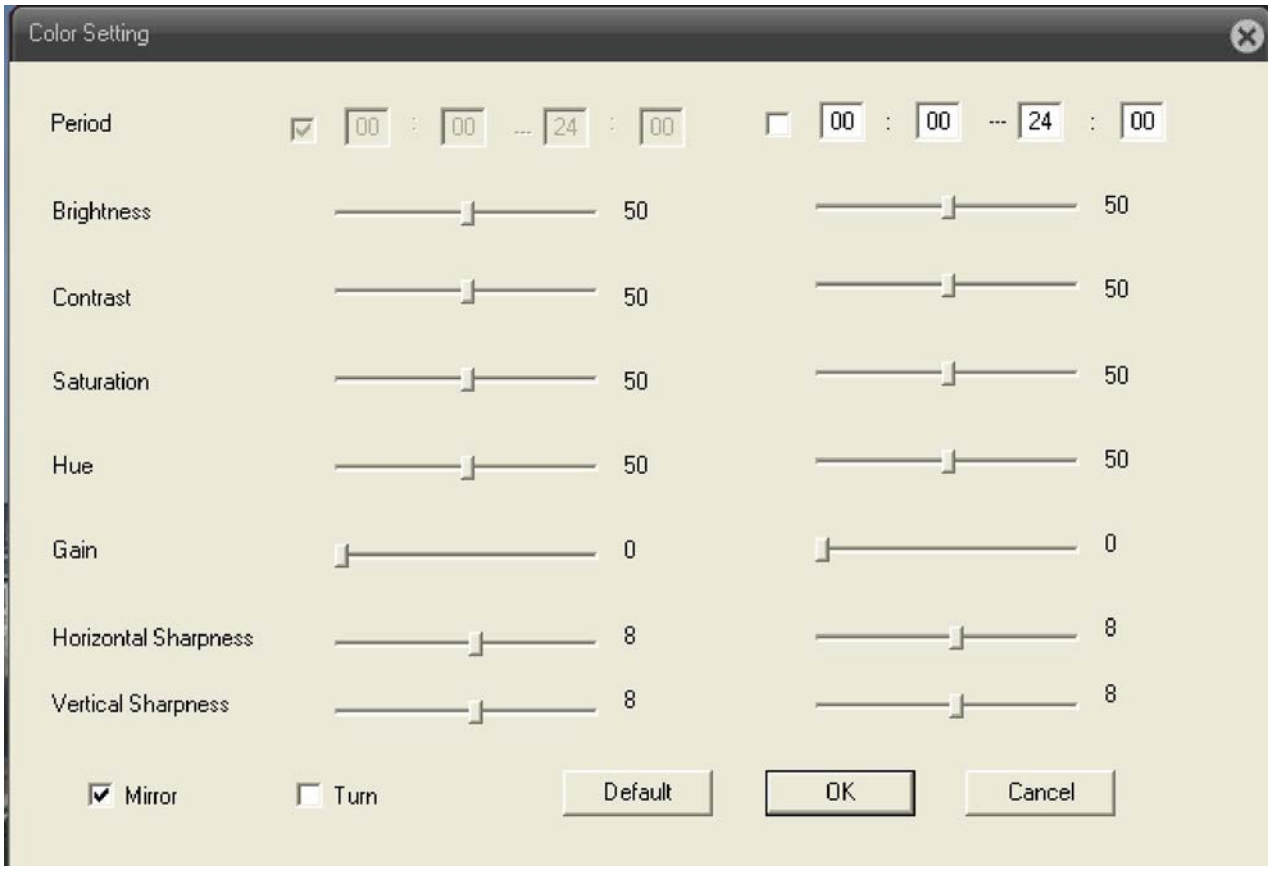
【Operate tips】to show the button function when cursor point it

Special feature：

Partial enlargement：**when single view full screen playback, can use right button to choose any size of area from the image, click left button in the chosen area, can enlarge this area to playback, double click left button will exit.**

3.5.3 Image color

Set image parameter of chosen channel (when single view preview, it should be current channel, when multi-view preview, it should be the channel where the cursor stay), you can enter the page by shortcut menu. Image parameters including: brightness, contrast, saturation, hue, gain, horizontal and vertical sharpness. Also can base on requirement to set different image parameter in different period.

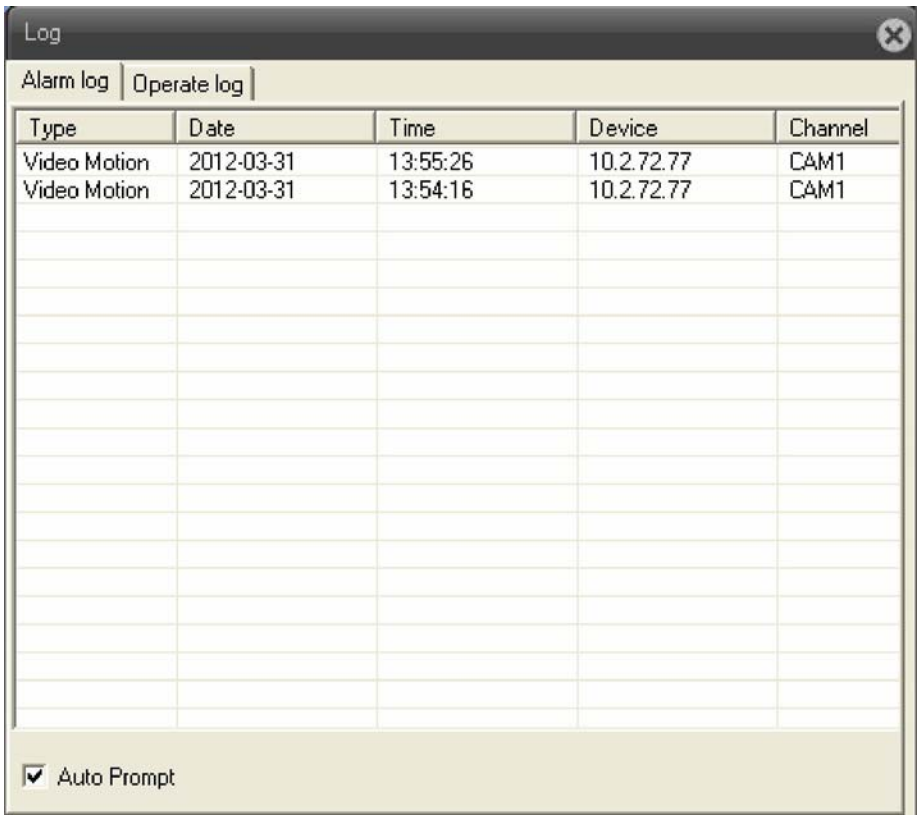


Pic: 3.7 Color setting

3.6 Log

Show alarm information and operation record, if u tick 

at lower left side, when alarm happens, window tip will auto come out.



Pic: 3.8 Log information

Chaper Four: Main Menu

4.1 Main menu guideline

Main Menu	Submenu	Function summary
Record	Record	Set record config, record type, record period, etc.
	Snapshot	Set snapshot period, type , etc.
Alarm	Video motion	Set motion detect alarm channel, sensitivity, area, linkage parameters: alarm output, snapshot, recording, PTZ, email sending, ftp upload, etc.
	Video blind	Set video blind alarm channel, sensitivity, linkage parameters, alarm output, snapshot, recording, PTZ, email sending and ftp upload, etc.

	Video lost	Set video lost alarm channel and linkage parameters: alarm output, recording, snapshot, PTZ, Email sending, FTP upload, etc.
	Alarm input	Set alarm input channel and linkage parameters: alarm output, recording, snapshot, PTZ, email sending, FTP upload, etc.
	Alarm output	Set alarm mode: configuration, manual, stop
	Abnormal	Storage device not exist, not enough space, access storage device fail, IP conflict, network abnormal alarm
System	General	Set system time, data format, language, hard disk full time operation, machine number, video format, output mode, summertime, stay time
	Encode	Set encode mode: encode mode, resolution, frame rate, bit rate, image quality, code stream value, I frame interval parameter, video/audio enable.
	Network	Set basic net parameter, and DHCP、DNS parameter，auto-gain IP address, network high-speed download, net transmission tactics
	Net service	ARSP、Mobile monitor、UPNP、FTP、WiFi、3G、alarm center、RTSP、PPPOE、NTP、Email、IP authority、DDNS parameter, etc.
	GUI display	Set channel title, cover area, time title, channel time overlap and position
	PTZ Config	Set channel, PTZ protocol, address, baud rate, data bit, stop bit, parity
	RS485	Set protocol, address, baud rate, data bit, stop bit, parity
	RS232	Set serial port function, baud rate, data bit, stop bit, parity

	Camera parameter	Exposure mode, Day/Night mode, Backlight compensation, Auto iris, profile, AE reference, AGC, slow shutter, IR_CUT, Image、Over-turn、anti-flicker etc
Advanced	HDD Manage	Do operation to TF card, such as set read/writ, read only, redundant, format disk, recover, partition, etc.
	Account	Modify user, group or password. Add user or group. Delete user or group.
	Auto maintain	Set auto reboot system, time to auto delete file
	Default	Restore setting status of : regular, encode, record, alarm, network, net service, GUI display, serial settings, account manage
	Import & Export	Config import, Config export, Log export
	Upgrade	To do net upgrade via IE or client software
	Reboot	IPC soft reboot
Info	HDD info	Show ttl space of HDD, type, space left, record time, etc
	Log	Can base on record type and time to search log, can clear the log information
	Version	Show alarm input output, system version, build date, etc

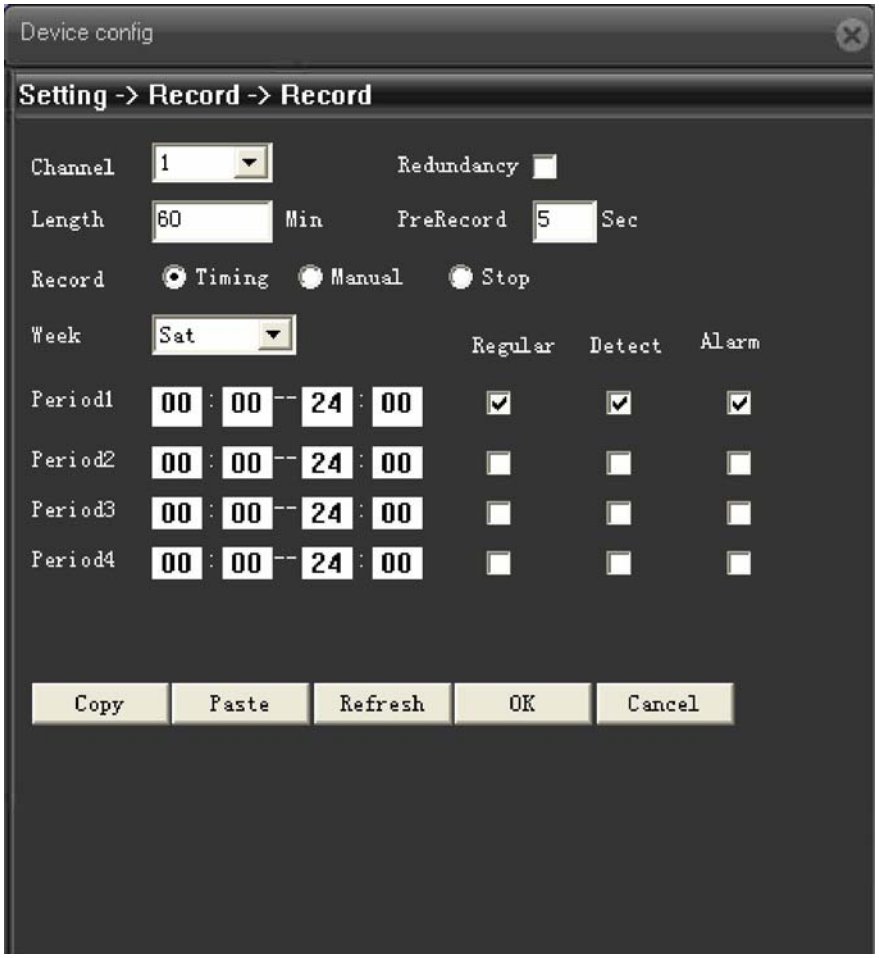
4.2 Record

Device do operation regarding record, including: **record & snapshot**.

4.2.1 Record setting

Set IPC parameter, when firstly turn on, system is default with record for 24hours. You can go to 【Device config】>【Record】>【Record】to do related setting.

Remark: Device installed with TF card and set it as Read/Write, then it can normally record.(detail please refer to chapter 4.5.1 HDD manage)



Pic: 4.1 Record setting

【Length】to set the length of each recording file between 1-120min, default is 60min；

【PreRecord】to record 1-30s before motion happens (time length may slight different due to bit rate)

【Record control】set recode type: timing, manual & stop

Timing: Record according to the set video type (regular, detect and alarm)and time period.

Manual：Click the button and the according channel is recording no matter the channel in any state；

Stop：Click the stop button and the according channel stops recording no matter the channel in any state.

【Period】Set the time section of common recording, The recording will start only in the set range；

【Record type】Set recording type: regular, detect or alarm.

Regular：Perform the regular recording in the set time section. The video file type is “R”.

Detect: Trigger the “motion detect”, “camera mask” or “video loss” signal. When above alarm is set as opening recording, the “detection recording” state is on. The video file type is “M”.

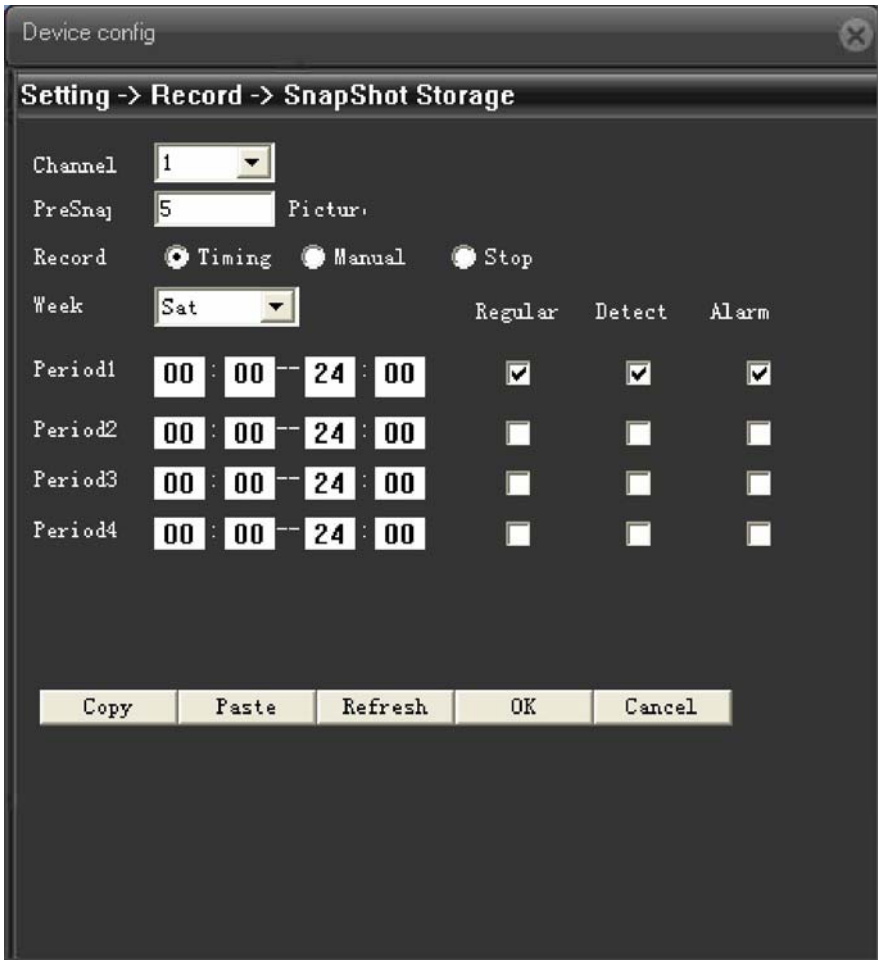
Alarm: Trigger the external alarm signal in the set time section. When above alarm is set as opening recording, the “detection recording” state is on. The video file type is “A”.

Remark： related alarm setting, please refer to chapter 4.3 alarm part.

4.2.2 Snapshot storage

Setup snapshot parameters for different channels.At first time it's set for 24hours snapshot continuously, pls go to Main Menu->Record->Snapshot Storage for appropriate settings.

Remark： Device installed with TF card and set partition, Snapshot should more than 1G, then device can normally take snapshot.（detail please refer to chapter 4.5.1 HDD manage）



Pic: 4.2 Snapshot setting

【PreSnapshot】to take picture of 1-30 pcs before recording happens, default is 5 pcs

【Record】Set record type, "Timing" ,"Manual" and "Stop"

Timing: Realise snapshot according to record type(regular,detect and alarm) and period.

Manual: No matter what is the current status, once choose "manual" ,it will have snapshot at related channels.

Stop: No matter what is the current status, once choose "stop", it will stop snapshot at related channels.

【Period】Set normal record period, it only startup Snapshot Storage at set period.

【Type】Three types: regular, detect and alarm

【Record type】Three types: regular, detect and alarm

Regular: snapshot at set period

Detect: snapshot at set period when motion detect, video blind and video loss which are preset for snapshot enable.

Alarm: snapshot at set period when alarm in which is preset for snapshot enable.

Note: for related alarm function, pls refer to chapter 4.3.

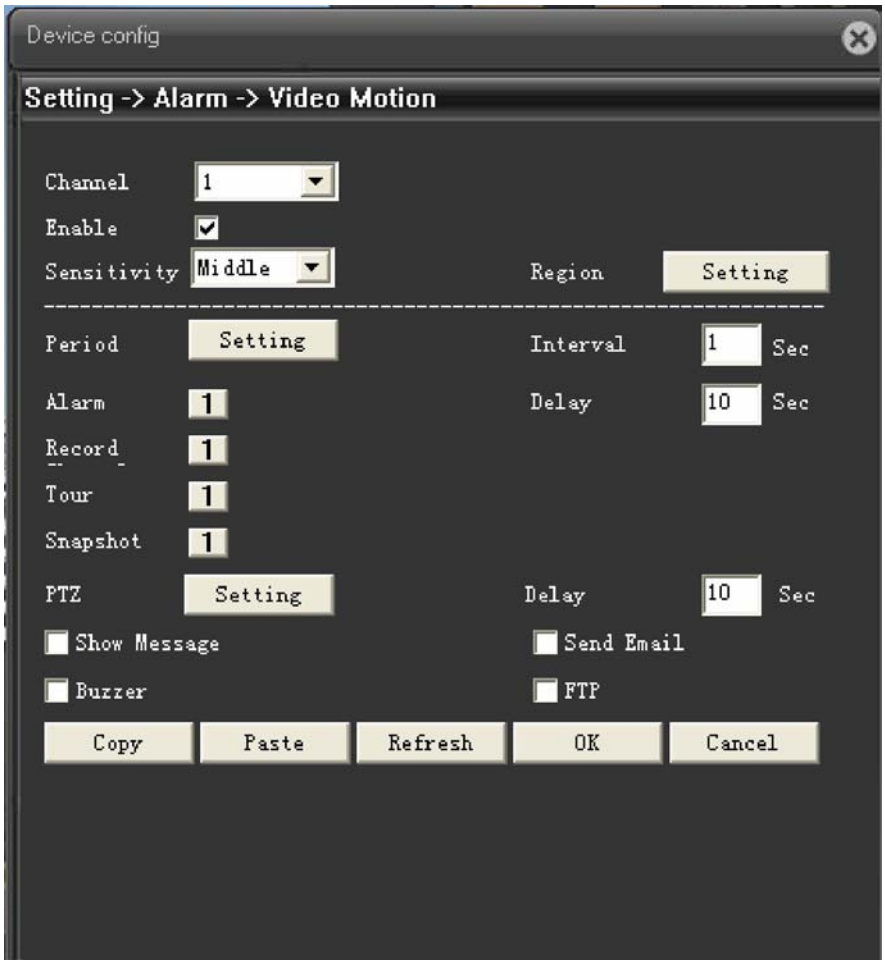
4.3 Alarm function

Alarm functions include: motion detect,video blind, video loss, alarm input and alarm output, abnormal dealing.

Pic 4.3 Alarm function

4.3.1 Motion detect

When system detects the motion signal that reaches the set sensitivity, the motion detect alarm and the linkage function is enable.

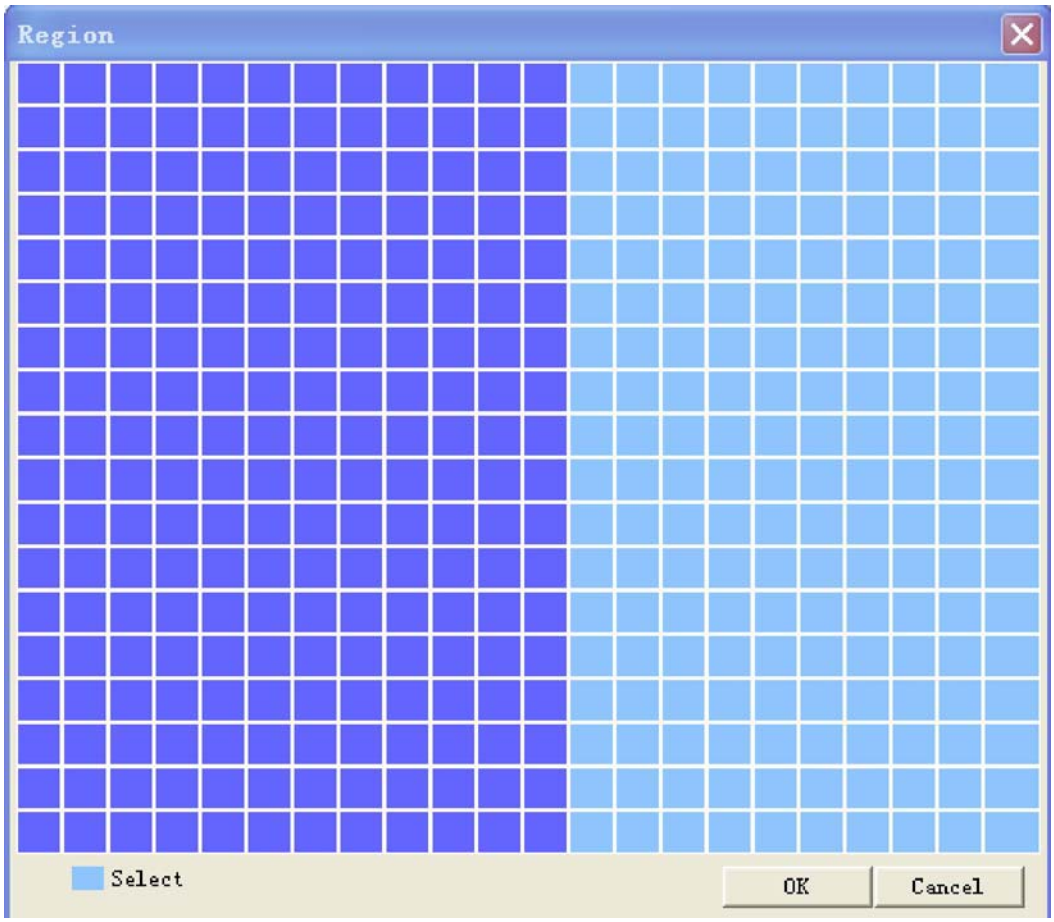


Pic: 4.4 motion detect setting interface

【Enable】 means enable motion detect function, enable it firstly then can do related setting.

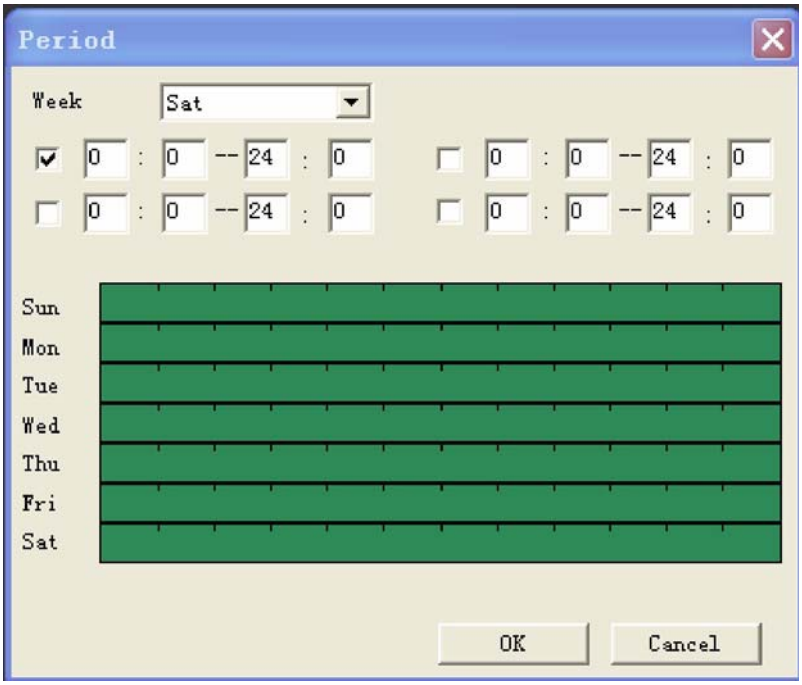
【Sensitivity】base on sensitivity, can set 6 grades: Lowest, Lower, Middle, High, Higher, Highest, the higher of sensitivity to the moving objects, the easier to sense the motion happens；

【Region】Click**Setting**，enter the setting region of PAL22X18，light blue region is the guard area of motion detect, dark blue region is the unguard area (show the monitor page), see pic 4.5. press left button of mouse, pull it to set region. (default whole region chosen is monitor area)



Pic: 4.5 region setting

【Period】Trigger the motion detect signal in the set time section, see pic:4.6. You can set according to week or set uniformly. Each day is divided into four time sections.tick ☑, mean setting is valid.



【Interval】Only one alarm signal is turned on even there are several motion detect signals in the set interval 0-600s.

【Alarm output】Start the external equipment of corresponding linkage alarm when the motion detect alarm is turned on.;

【Delay】Delay a few moments and stop when the alarm state is turned off. The range is 10~300 seconds.

【Record channel】choose record, when alarm happens, system will trigger record signal of this channel;

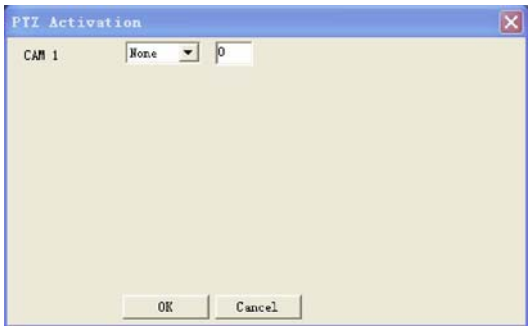
Remark:to link record, need to enable motion detect of related period at【record setting】

【Snapshot】choose snapshot, when alarm happens, system will trigger snapshot signal of this channe;

Remark：to link snapshot, need to enable motion detect of related period at【record setting】【record setting】

【PTZ Linkage】when alarm happens, link the PTZ of related setting channel, see pic:4.7;

Remark：to link PTZ, need to set related parameter at【System】>【PTZ control】, set preset point, cruise between points, interval, etc.



Pic: 4.7 PTZ linkage

【Delay】When alarm is over,recording will last some seconds(10~300sec),then stop.;

【EMAIL sending】tick ☑ , means when alarm happens link email sending to inform user.

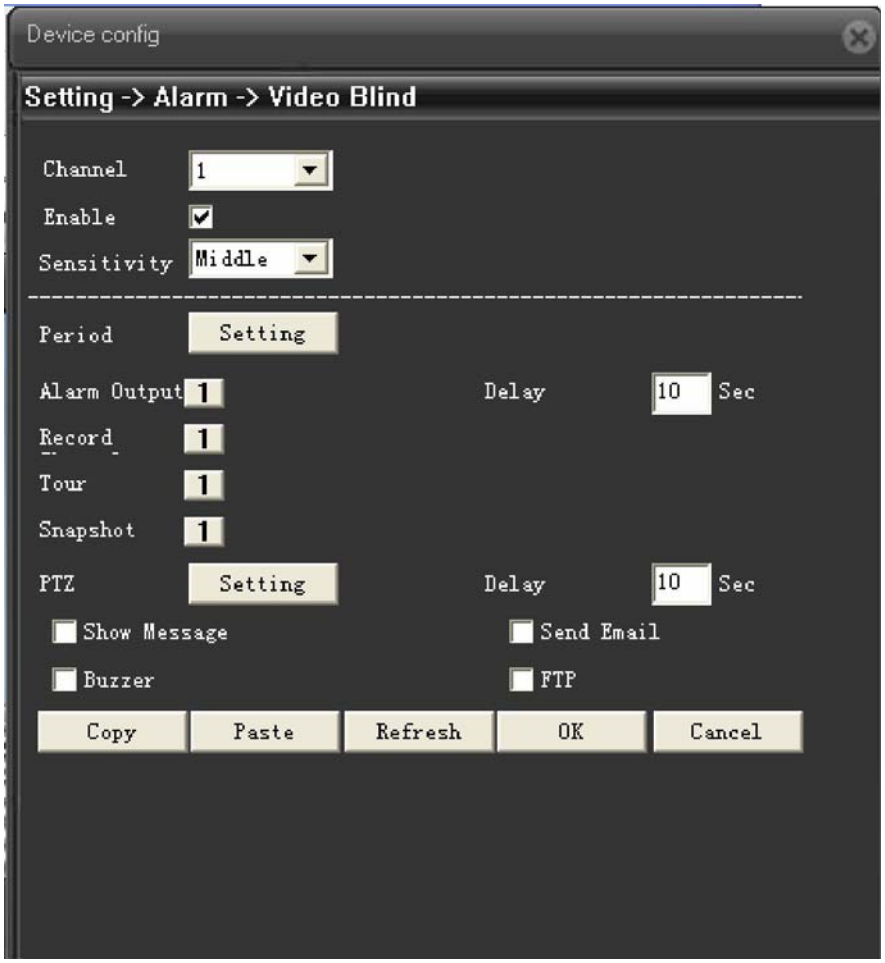
Remark：sending email, need to do related setting at【Net service】.

【FTP upload】tick☑, means when alarm happens, if record or snapshot channel was chosen, the record file and snapshot image will be uploaded to the appointed position.

Remark：FTP upload, need to do related setting at【Net service】.

4.3.2 Video blind

When the video image is influenced by the environment such as bad brightness or reaching the set sensitivy parameter, the camera mask function is turned on and the linkage function is enable.

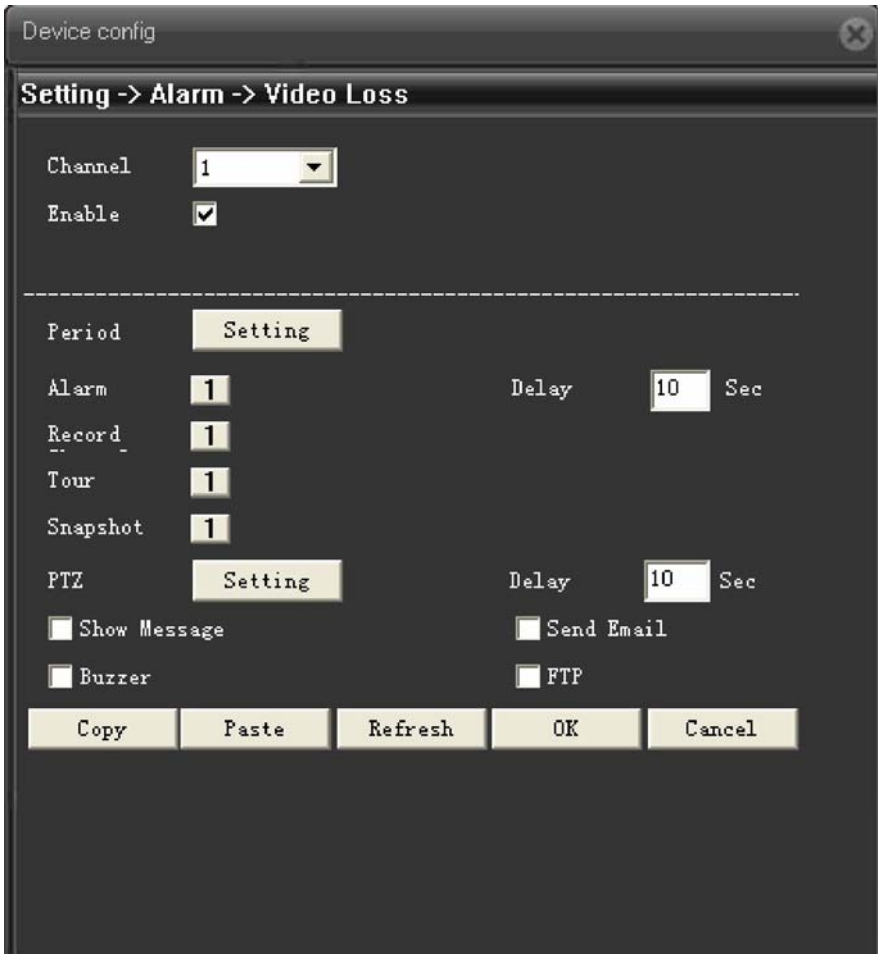


Pic: 4.8 video blind

Setting detail : refer to chapter 4.3.1 motion detect.

4.3.3 Video lost

When the equipment can not obtain the channel video signal, the video loss alarm is turned on and the linkage function is enable.

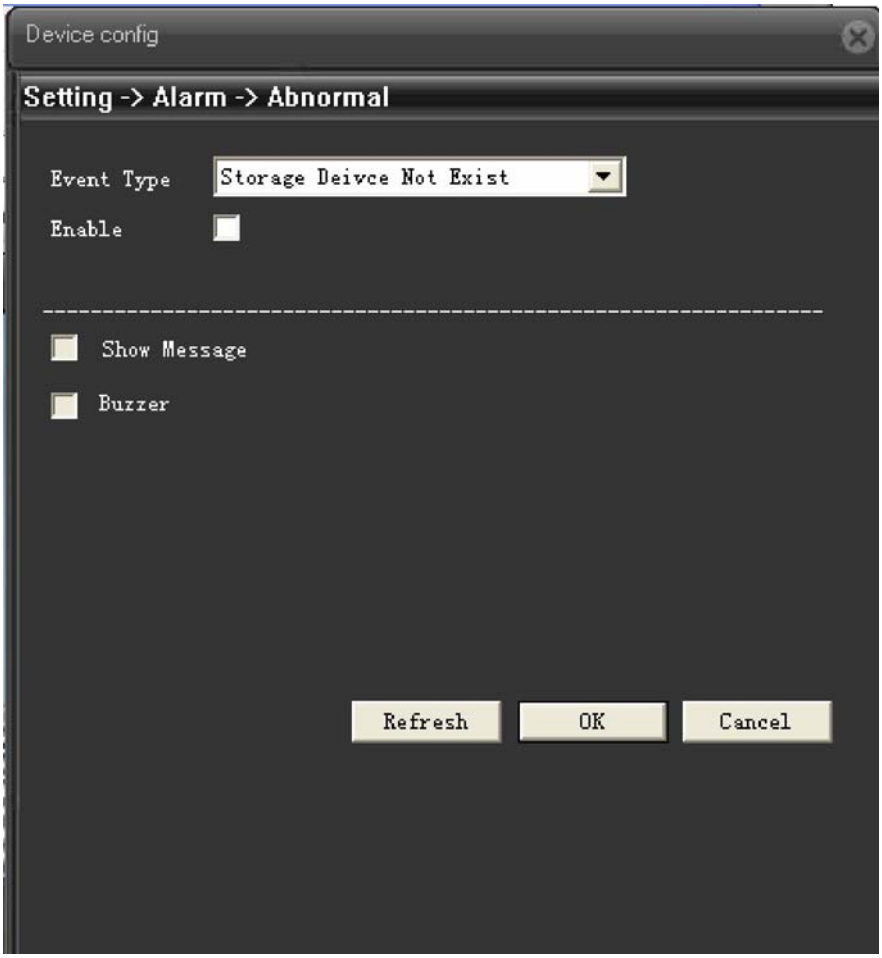


Pic: 4.9 Video lost

Setting detail: refer to chapter 4.3.1 motion detect.

4.3.4 Abnormal

Analyze and detect the software and hardware of current device, when abnormal issue was detected, device will make related respondence.



Pic: 4.10 abnormal

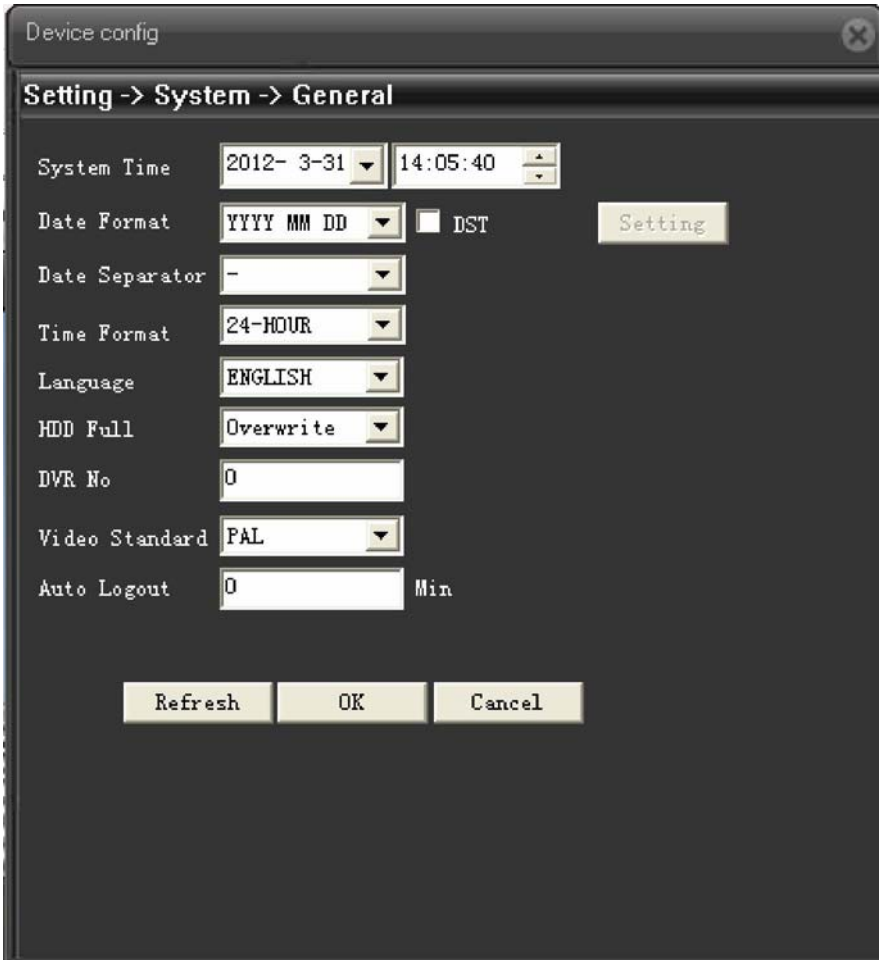
【Event type】choose event type at drop-down box,

【Enable】tick ☑ to enable，open abnormal deal function, setting is valid only if it is enable.

4.4 System setting

To set parameter of all kinds of functions, setting including: **General、Encode、Network、Net service、GUI display、PTZ config/RS485、RS232、Camera parameter.**

4.4.1 General setting



Pic: 4.11 General setting

【System time】set current date and time of IP Camera.

【Date format】choose date showing format, including： year/month/date、 month/date/year, date/month/year,

【Date separator】Choose list separator of the data format,

【Time format】choose time format, including: 24-hour and 12 hour；

【Language】at present support 29 kinds of language: simplified Chinese, Tradition Chinese, English, Bosnian, Finnish, French, Greek, Hungarian, Italian, Japanese, Germany, Polish, Portuguese, Russian, Spanish, Thai, Turkish, Vietnamese, Romanian, Brazilian, Indonesian, Swedish, Arabic, Bulgarian, Czech, Hebrew, etc.

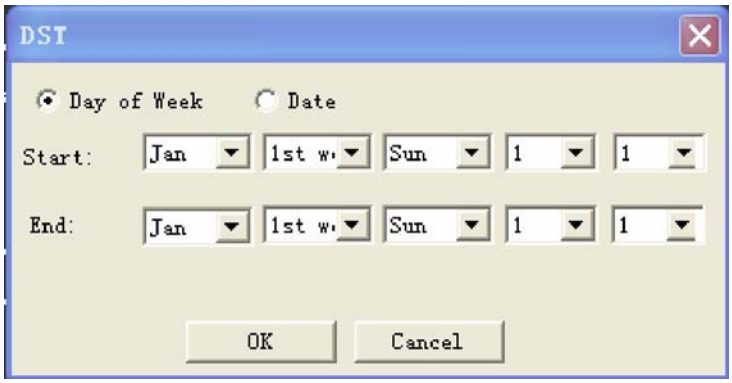
【HDD full】choose **Stop record**：means when the TF card is full, stop recording.

Choose **Over write**：means when the TF card is full, keep on recording, but the most previous file will be replaced.

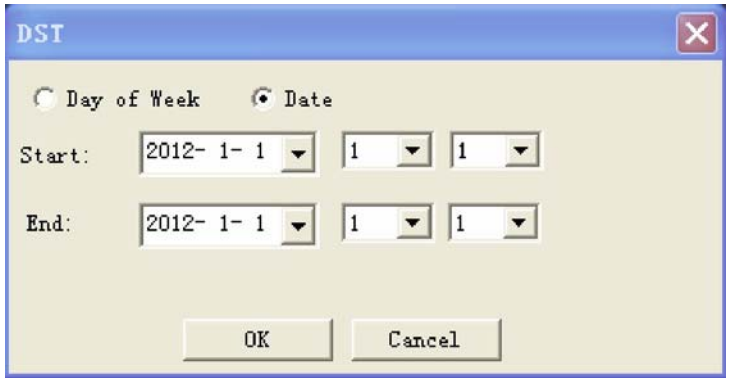
【Video standard】support PAL or NTSC；

【DST】Tick DST, then click 【setting】, will come out window as pic: 4.12 & pic:4.13, to set the start

time and end time of summertime via week or date.



Pic:4.12 DST (Week) setting

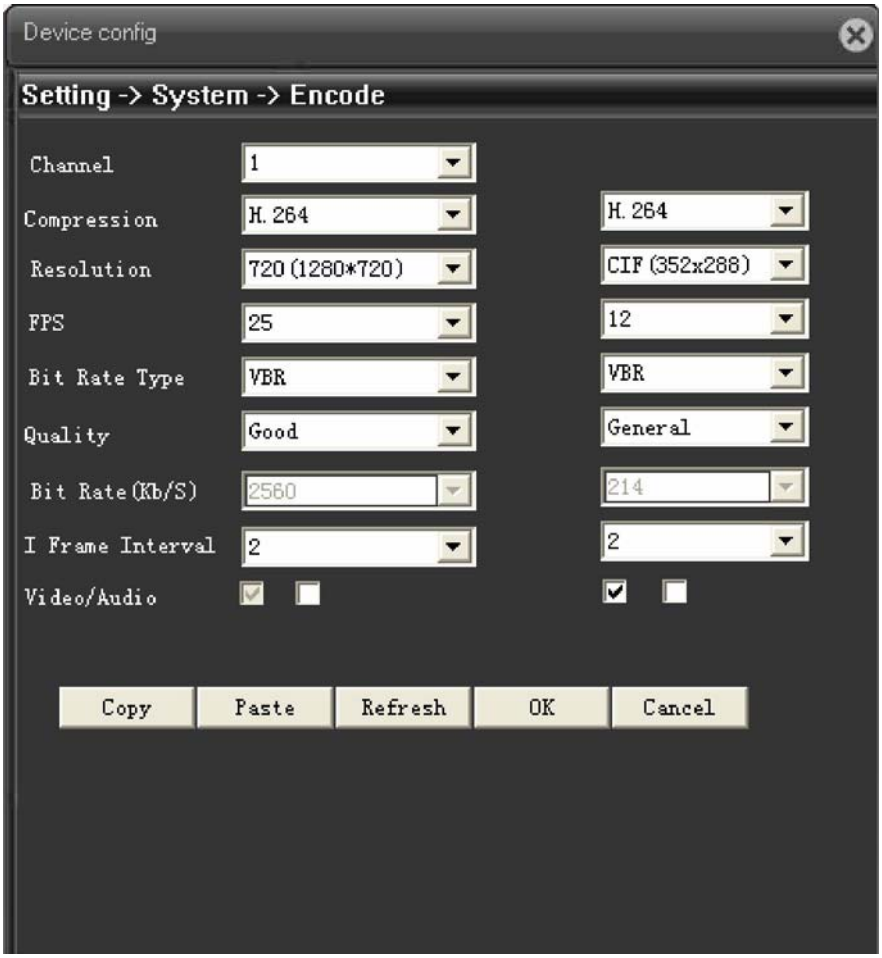


Pic:4.13 DST(Date) setting

4.4.2 Encode Seting

Set video/audio encode parameters, including image parameters of record file, remote monitor, etc. Left part is to set the encode parameter of each separated channel, right part is to set encode parameter of extra stream, dual stream is using one high bit rate stream for local high definition storage, support D1/HD1/CIF/QCIF encode, one low bit rate stream(QCIF encode) for net transmission, in order to maintain local storage and remote net transfer. Dual stream both considering to image quality and transmission quality under the current band bottleneck, and can breakthrough it, base on the bandwidth to flexibly choose stream format, to reach local high definition storage and low stream for net transmission back end.

Remark：Main application of extra stream: to do multi-channel real-time monitor, and mobile monitor when the network if poor.



Pic: 4.14 Encode setting

Encode setting

【Compression】Standard H.264MP；

【Resolution】show types of resolution: D1/HD1/CIF/QCIF；

【Frame rate】adjustable, real-time standard is： PAL，25 fps NTSC，30 fps；

【Bit rate type】you can choose CBR or VBR, image quality have 6 grades to choose under VBR type, then you can manual choose the bit rate value under CBR type.

【Image quality】set bit rate value to change the image quality, if supporting facility is available, the larger of bit rate value, the better of image quality.

Bit rate reference span： D1 （512~2560kbps） HD1 （384~2048kbps） CIF （64~1024kbps）, QCIF(64~512kbps)

【Frame interval】you can choose between 2~12s；

【audio/video】the icon was all ticked, means audio & video combine stream

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's 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 device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.
This equipment should be installed and operated with minimum distance 20cm between the radiator and your body

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.