

VPON

Network DVR System

Your best choice for digital video recording and remote surveillance

VP-8000

Intelligent Security System

User Manual

(Version: V2.0.1.1)



Preface

Notice

The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products. All specifications are therefore subject to change without notice.

Note: Formosa21 will not be obligated to the responsibility outside the scope of VPON DVR.

Trademarks

VPON ® is a registered trademark of Formosa 21 Inc.

Microsoft, Windows, Internet Explorer ® are registered trademarks of Microsoft Corporation. Netscape, Navigator, Communicator ® are registered trademarks of Netscape Corporation. Other brand and product names referred to in this manual are trademarks or registered trademarks of their respective holders.

Trademarked names are used throughout this manual. Rather than place a symbol at each occurrence, trademarked names are designated with initial capitalization. Inclusion or exclusion is not a judgment on the validity or legal status of the term.

Warning

To reduce risk of electric shock, do not remove cover. No user service-able parts inside. Refer servicing to qualified service personnel.

Do not expose this appliance to rain or moisture.

Do not install this product in hazardous areas where highly combustible or explosive products are stored or used.

Severe impact or vibration may cause malfunction.

Do not move this product when VPON is working.

Position it in an open space with flat surface, and also maintain at least 15 cm between the left and right sides of the body and the wall.

The lightning flash/arrowhead symbol, within and equilateral triangle, alerts the user to the presence of a shock hazard within the product's enclosure.

GUARANTEE

Every care has been taken in the preparation of this manual; if you detect any inaccuracies or omissions, please inform FORMOSA21, INC. in Taiwan or your local distributor. FORMOSA21 cannot held responsible for any technical or typographical errors and reserves the right to make changes to the products and manuals without your prior notice.

FORMOSA21 makes no warranty of any kind with regard to the material contained within this document, including, but not limited, the implied warranties of merchantability and fitness for a particular purpose. FORMOSA21 shall not be liable nor responsible for incidental or consequential damages in connection with the furnishing, performance or use of this material.

Important information

Before proceeding, please read and observe all instructions and warnings contained in this manual. Retain this manual with the original bill of sale for future reference and, if necessary, warranty service.

When unpacking your VPON unit, check for missing or damaged items. If any item is missing, or if damage is evident, **DO NOT INSTALL OR OPERATE THIS PRODUCT.** Contact your dealer or us for assistance.

Contents

1. Overview

- 1.1 Introduction-----1
- 1.2 Features-----1
- 1.3 Product specifications-----1
- 1.4 Front view -----2
- 1.5 Rear view -----2

2. Operation and Configuration

- 2.1 VP-8000 Main Screen-----3
- 2.2 Functions-----4
- 2.3 Normal View-----5
- 2.4 Zoom-----5
- 2.5 Overlay-----6
- 2.6 Set Intelligent Function-----7
 - 2.6.1 How to enable Alerts -----8
 - 2.6.2 Customizing the Intelligent Features -----8
- 2.7 Switch to Operation Mode / Admin Mode-----10
- 2.8 Record-----11
- 2.9 Schedule-----11
- 2.10 Events-----13
- 2.11 Settings-----15
 - 2.11.1 Camera -----16
 - 2.11.2 Login / Storage -----16
 - 2.11.3 Network -----17
 - 2.11.4 Alert Message -----17
 - 2.11.5 Video -----18
- 2.12 Shutdown-----18

Chapter 1. Overview

1.1 Introduction

The VP-8000 Intelligent Security System is a standalone video analysis system. Up to 4 cameras can be connected to a single VP-8000 unit. Video can also be displayed on a local VGA monitor. VP-8000 is independent to any Network DVR. The interface between VP-8000 and DVR is its built-in 4IN / 4OUT GPIO pins.

This manual will guide you through the features and functions of the VP-8000 Intelligent Security System. Read this section to get an overview of the product.

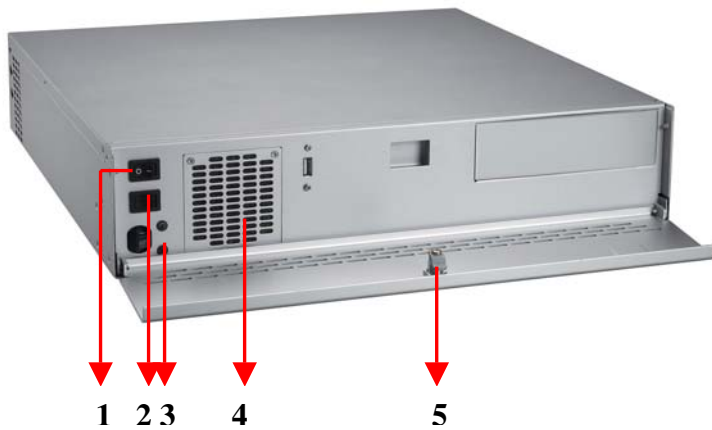
1.2 Features

- **Intrusion Detection**
This feature detects objects entering a pre-defined area
- **Perimeter Defense**
Objects crossing the virtual line from the pre-defined direction will generate the alert but NO alert from the opposite direction.
- **Missing Object Detection**
Removal of object from region of interest will activate the alarm
- **Unattended Object Detection**
Objects left unattended for a pre-defined period of time will trigger the alarm

1.3 Product Specifications

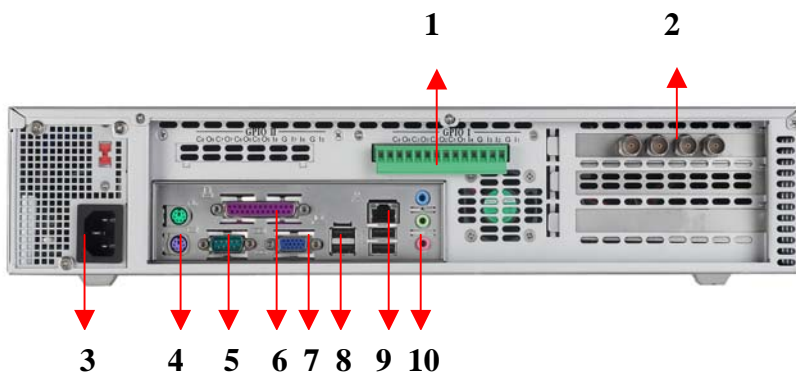
Model	VP-8000
Video Standard	Support NTSC / PAL Composite video, BNC Connector
Video Input	4
VGA Output	24 bit true color
Internal HDD (250GB)	1
Sensor Input Relay Output	4/4
Browser Compatibility	Win 98 / 2000 / XP running MS IE 6.0 or above
Language	English
Operating Temperature	0~45°C
Power Supply	115V / 230V, 250W
Size	426 mm x 426mm x 89.5 mm

1.4 Front View



1	Reset switch	2	Power switch
3	HDD light and Power light	4	Cooling fans
5	Lock		

1.5 Rear View



1	GPIO port	2	Video in ports (composite)
3	Power input	4	Keyboard and mouse ports (PS/2)
5	COM port (RS-232)	6	Printer port
7	VGA output	8	USB2.0 ports
9	LAN port	10	Audio input / Speaker output

Chapter 2. Operation and Configuration

Warning:

PLEASE DO NOT POWER ON VP-8000 WITHOUT HARD DISK UNDER ANY CONDITION OTHERWISE THE SYSTEM WILL FAIL.

The license key of VP-8000 was bounded with motherboard, CPU, capture card, RAM and hard disk. Any change of these components will result in system fail.

2.1 VP-8000 Main Screen

After power up successfully, you can see the main screen of VP-8000 in multiple camera view as Fig. 2.1. You can get single camera view by clicking the “zoom” icon at the left bottom of main screen to get Fig. 2.2 .



Fig. 2.1 Multiple camera view



Fig. 2.2 Single camera view

2.2 Functions

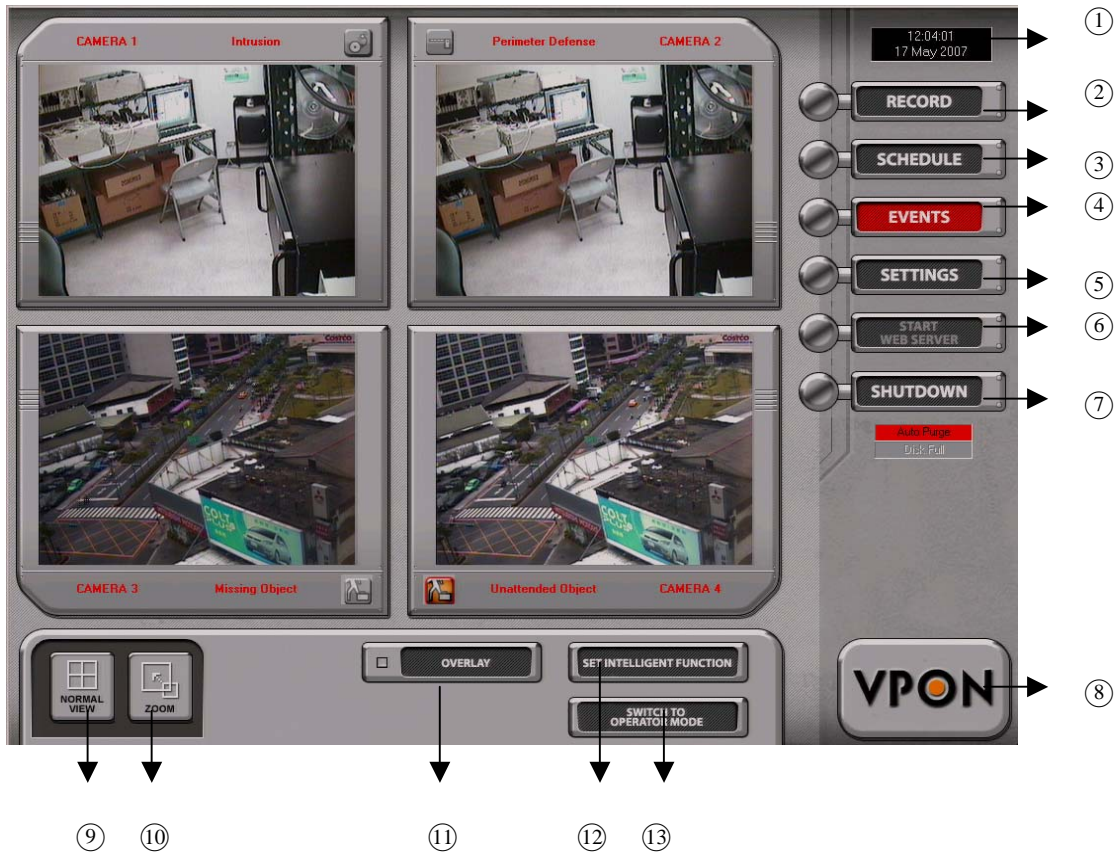


Fig. 2.3

No.	Function	Description
1	VP-8000 basic information	Date and Time
2	Record	To set up camera record schedule. It is NOT recommended to use VP-8000 as a recording device as DVR.
3	Scheduler	To set up date / time period for intelligent functions.
4	Events	Click to bring up event list
5	Settings	Click to bring up camera configuration dialog box
6	Stop/Start Web server	Web server is NOT available at current version
7	Shutdown	Shuts down the VP-8000
8	Logo	VPON
9	Normal View	Show multiple camera view on main screen
10	Zoom	Switch to single (selected) camera view on main screen
11	Overlay	Toggle to show the pre-defined area for intelligent function
12	Set Intelligent Function	Set the particular intelligent function for individual cameras
13	Switch to Operator Mode/ Switch to Administrator Mode	Toggle between the "Operator" and "Administrator" modes

2.3 Normal View

Display 4 cameras video on main screen.



Fig. 2.4

2.4 Zoom

Click to get single (selected) camera view as Fig. 2.5



Fig. 2.5

2.5 Overlay

Click to toggle the overlay of user define area for alarm trigger on screen. **Fig. 2.6** shows camera videos with alarm areas. And **Fig. 2.7** shows normal video

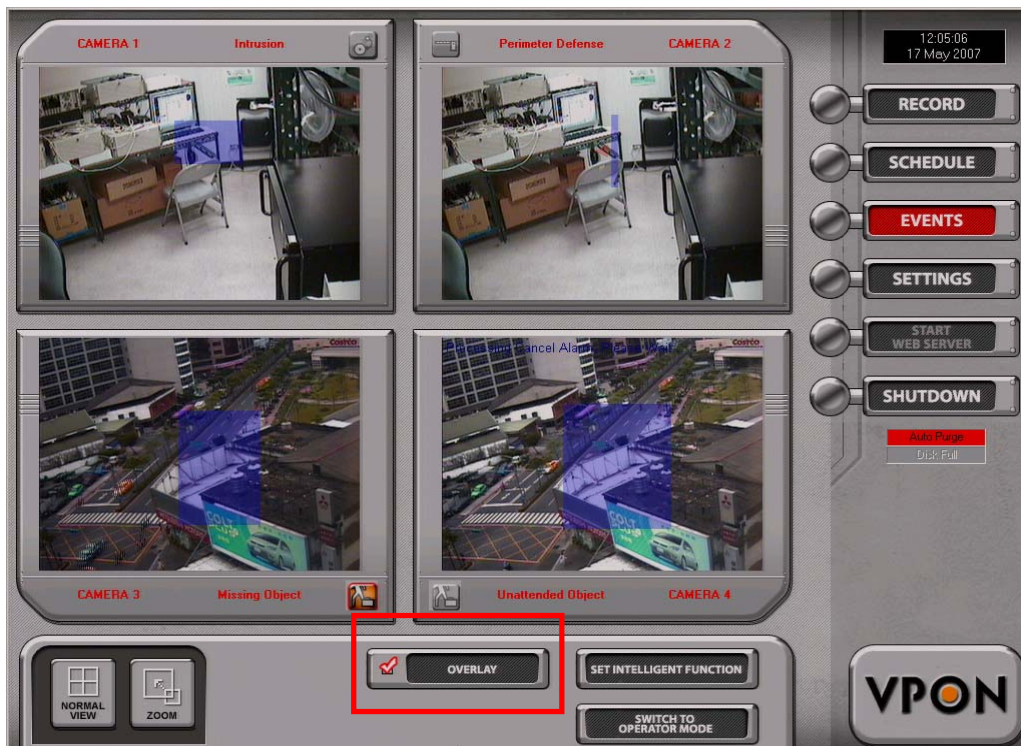


Fig. 2.6

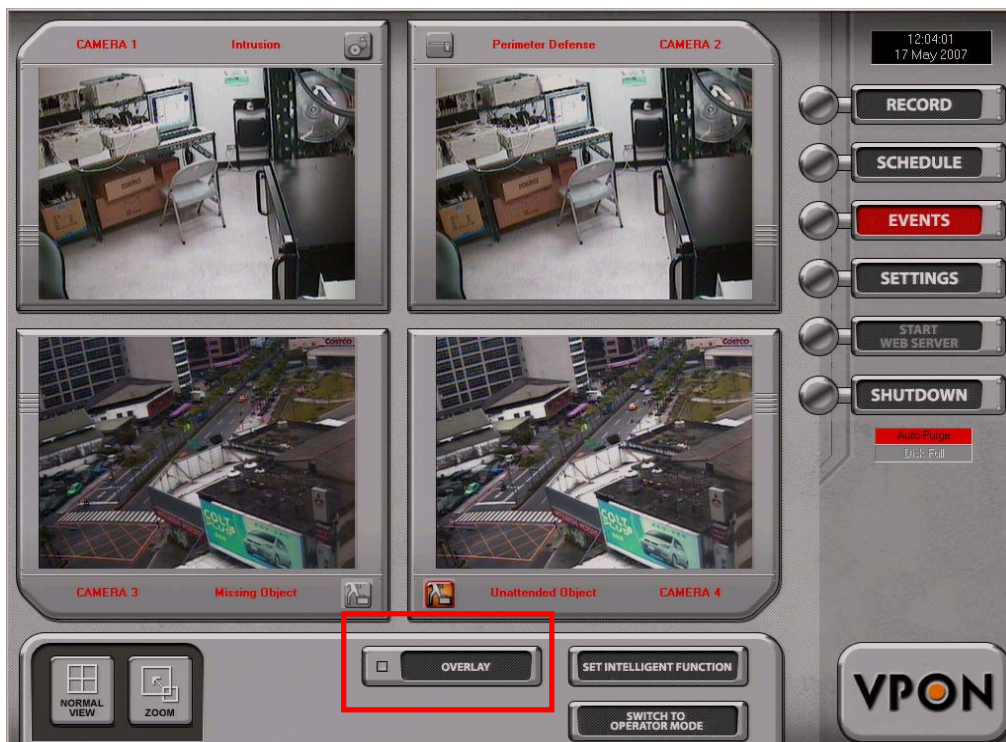


Fig. 2.7

2.6 Set Intelligent Function

This feature allows each camera to be set with its own intelligent functionalities. Below is the screenshot for the “Set Intelligent Function” console.

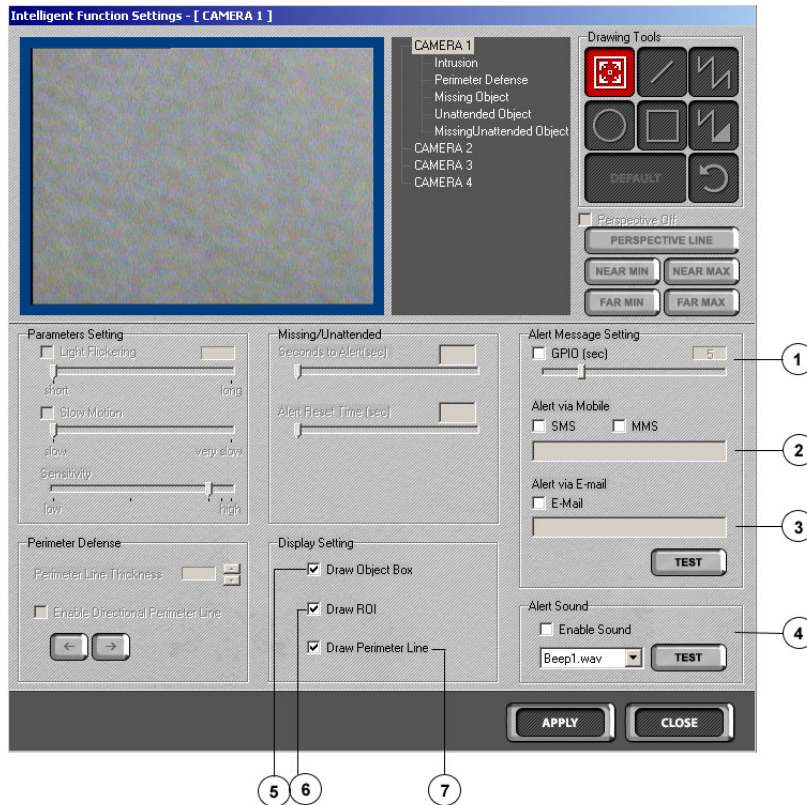


Fig. 2.8 – Set Intelligent Function Console

1.	GPIO	To set the length of alarm duration
2.	SMS/MMS*	To activate SMS/MMS alerts; Up to 3 mobile numbers (to be demarcated by commas) can be keyed in to receive the alerts. This function is NOT yet available on current version
3.	Email	To activate email alert; receipt email address to be keyed in
4.	Enable/Disable Alert Sound	To activate and choose preferred sound alert
5.	Draw Object Box	To display boxes around objects during video preview
6.	Draw ROI	To display Region of Interest in video preview
7.	Draw Perimeter Line	To display perimeter defense line in vide preview

2.6.1 How to enable Alerts

VP-8000 allows users to send emails whenever an alert occurs. **Each camera is allowed to be configured with one Email address only.**

Click on Set Intelligent Function. 

Check the appropriate boxes. E-Mail

Note: For email alerts, a valid email address must be entered.

To enable sound alerts, simply click on Enable Sound and choose the desired alert tone from the associated dropdown menu.

Note: Enabling sound alert allows users to hear audio alarms while monitoring the camera preview windows.

2.6.2 Customizing the Intelligent Features

Intrusion allows the user to indicate the region of interest (ROI) using the drawing tools, as well as modify parameters like “Light Flickering”, “Slow Motion” and “Sensitivity” (Fig. 2.9 – Customizing the Intrusion Feature). Note that “Light Flickering” and “Slow Motion” are mutually exclusive and only one of these filters can be used at any one time. The former is used to filter very fast motion (e.g. the changes in lighting conditions caused by the act of turning on or off lights) and the latter is specifically used for detecting very slow motion.

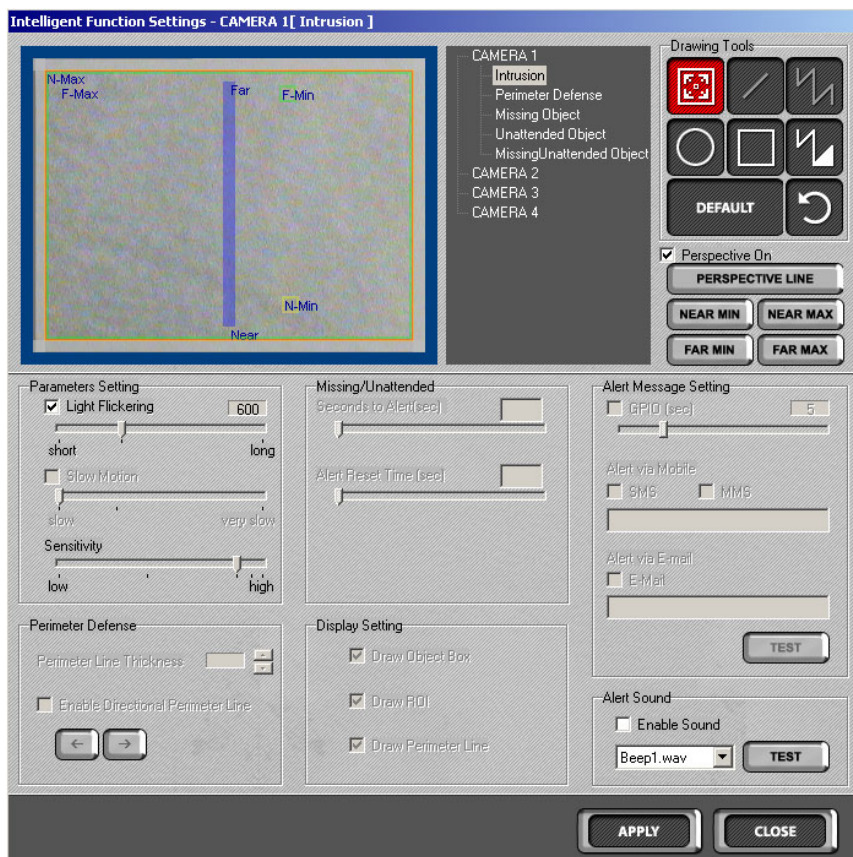


Fig. 2.9 – Customizing the Intrusion Feature

User will also be able to specify the minimum and maximum sizes of the object of interest. At the same time, there is a special feature, “Perspective Line” that allows the enhancement of the analysis process by telling the VP-8000 the depth of view of an area of interest. This is useful if the area of interest spans a

considerable distance. To indicate the depth of the image, it is necessary to draw the perspective line from the point nearer to the camera to the point that is further away from the camera. VP-8000 will then name the point near to the camera as “Near” and the other end as “Far”. The user will then need to define the expected minimum and maximum size of the object of interest in the near-end and far-end of the area of interest.

When the Perspective feature is not turned on, the minimum and maximum sizes of the object of interest can be fixed by clicking on the respective Min / Max buttons and indicating the sizes by drawing directly on the video image.



Perimeter Defense

Perimeter Defense allows the user to draw the virtual barrier anywhere on the image and modify parameters like “Virtual Barrier Thickness” and the allowed direction of motion (“Enable Directional Perimeter Line”). An object crossing the virtual barrier in the indicated “allowed direction” will not trigger an alert. A small red arrow at the mid-point of the virtual barrier indicates the “allowed direction” (Fig 2.10 – Customizing the Perimeter Defense Feature). Similar to Intrusion, filters (“Light Flickering”, “Slow Motion” and “Sensitivity”) can be applied to enhance the analysis process.

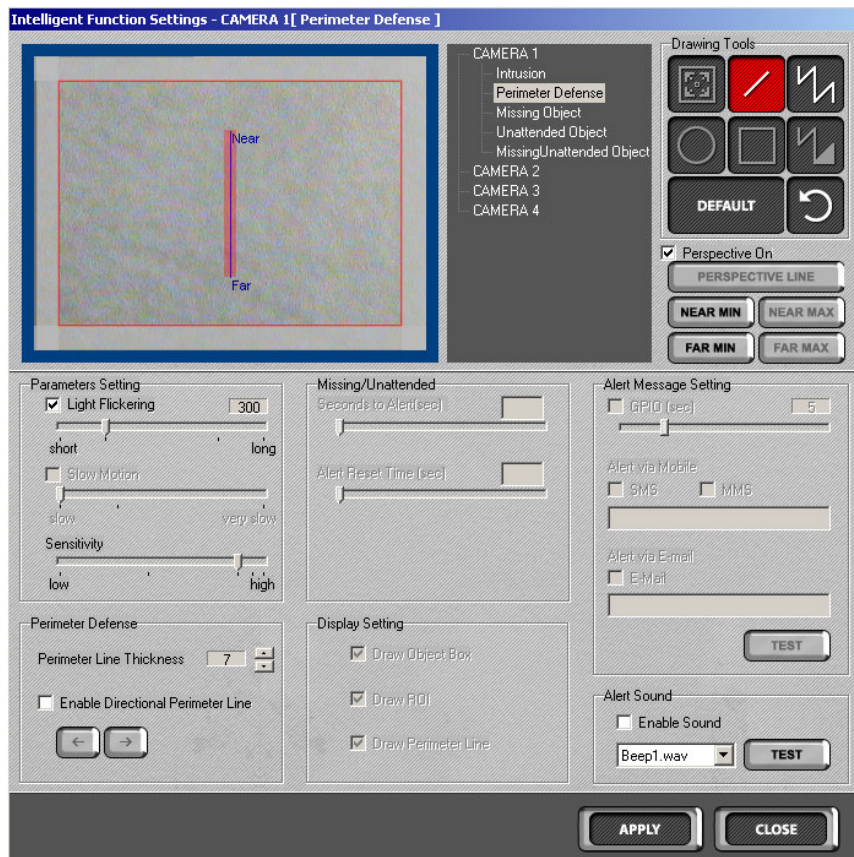


Fig 2.10 – Customizing the Perimeter Defense Feature

User can also set the perspective feature and its associated sizes in the same way that it is done for Intrusion. However, for perimeter defense, only the near minimum and far minimum sizes can be defined.

Missing Object/Unattended Object/Missing and Unattended Object

Missing Object, Unattended Object, and Missing and Unattended Object all share the same customization tools. Besides the drawing tools which allow the user to draw the area of interest, there are features that are peculiar to these intelligent functions. They are “Seconds to Alert” and “Alert Reset Time” (Fig. 2.11 – Customizing the Missing/Unattended Object Feature)

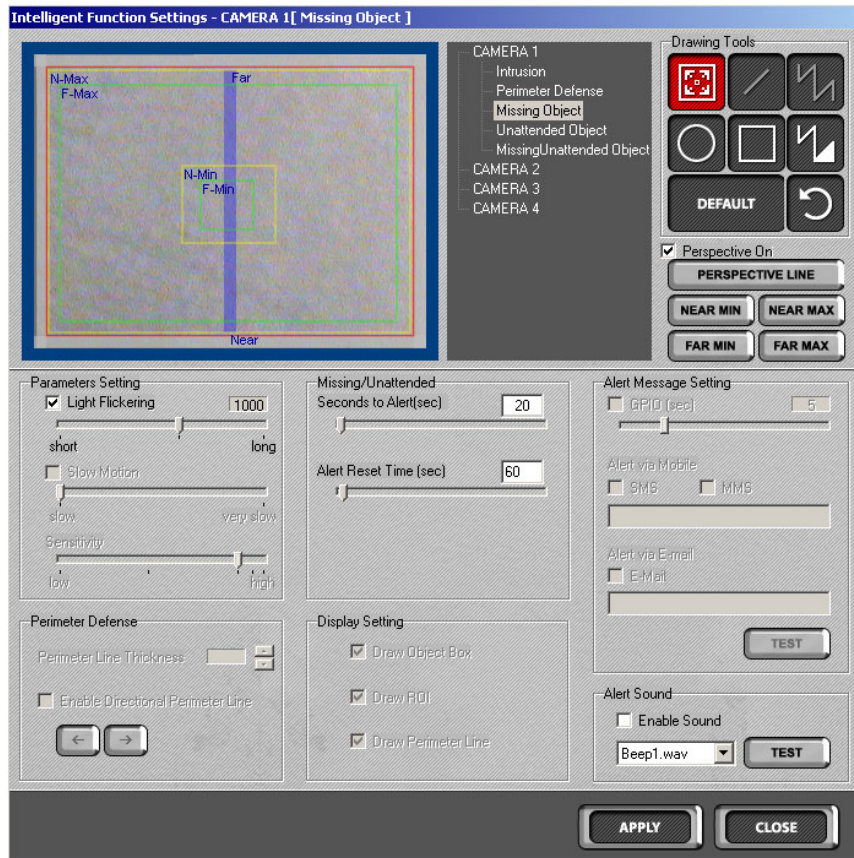


Fig. 2.11 – Customizing the Missing/Unattended Object Feature

“Seconds to alert” allows you to literally set the amount of time an object is detected to be missing or unattended before sounding the alarm. “Alert reset time” is the time taken for the alarm to stop and for VP-8000 to relearn the new scene, which is the one with the unattended object or without the missing object, as normal.

The only filter available for these features is “Light Flickering”.

2.7 Switch to Admin Mode

Click this switch to enter administrator mode. You will need administrator name and password to login in. Default is “demo” and “password”. You can change them after login as administrator. Under administrator mode, the user has full access to all functions. Under normal operator mode, the user can do Only control functions such as “Normal view”, “Zoom”, “Overlay”, “Events” and “shutdown”.

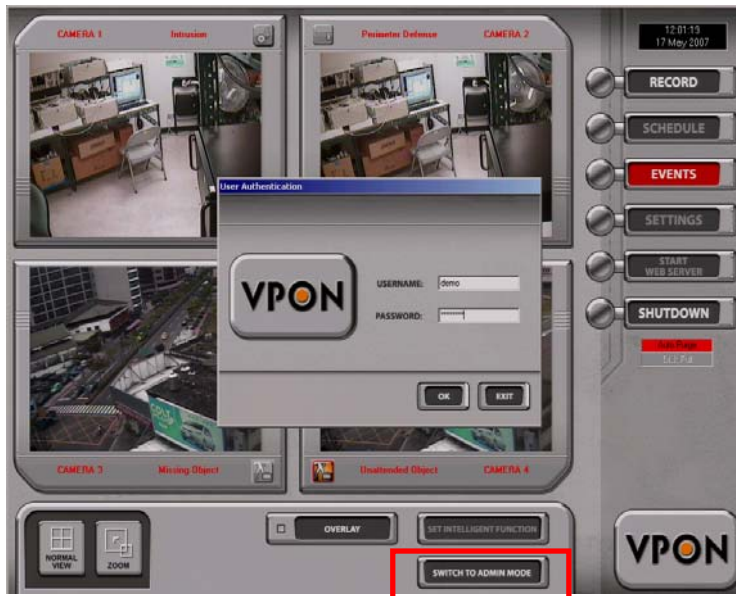


Fig. 2.12

2.8 Record

VP-8000 allows the user to instantly start live recording on every active channel. The use of instant recording was designed for ease of use during emergency that requires instant live recording. Click record button to start or stop the recording function.

Note: It is NOT recommended to use VP-8000 as a general recording device because the file size is large and the system hard disk will be full in two days. For customers that need general recording functions, please use an external DVR.



Fig. 2.13

2.9 Schedule

The scheduler allows the user to manage the Intelligent Function schedule for each camera.

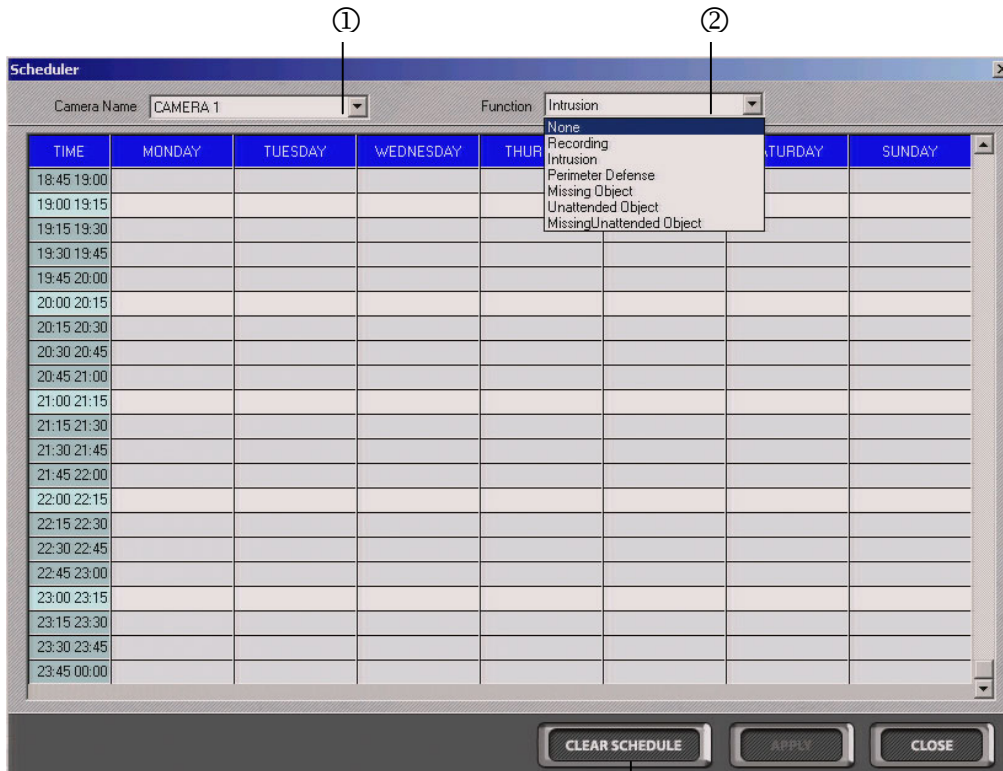


Fig. 2.14

3

1.	Camera	Selects camera to apply schedule
2.	Function	“None”, “Recording”, “Intrusion”, “Perimeter Defense”, “Missing Object”, “Unattended Object” or “Missing/Unattended”
3.	Clear Schedule	Deletes all selections that has been made to the schedule

To set the schedule for a camera, simply choose the camera to apply the schedule to and click on the desired function. Then, highlight the day and time by clicking on the white boxes to apply the function to. The user may overwrite an existing schedule by choosing a different function and applying it over the existing blue boxes.

Note: The blue boxes indicate an existing schedule.

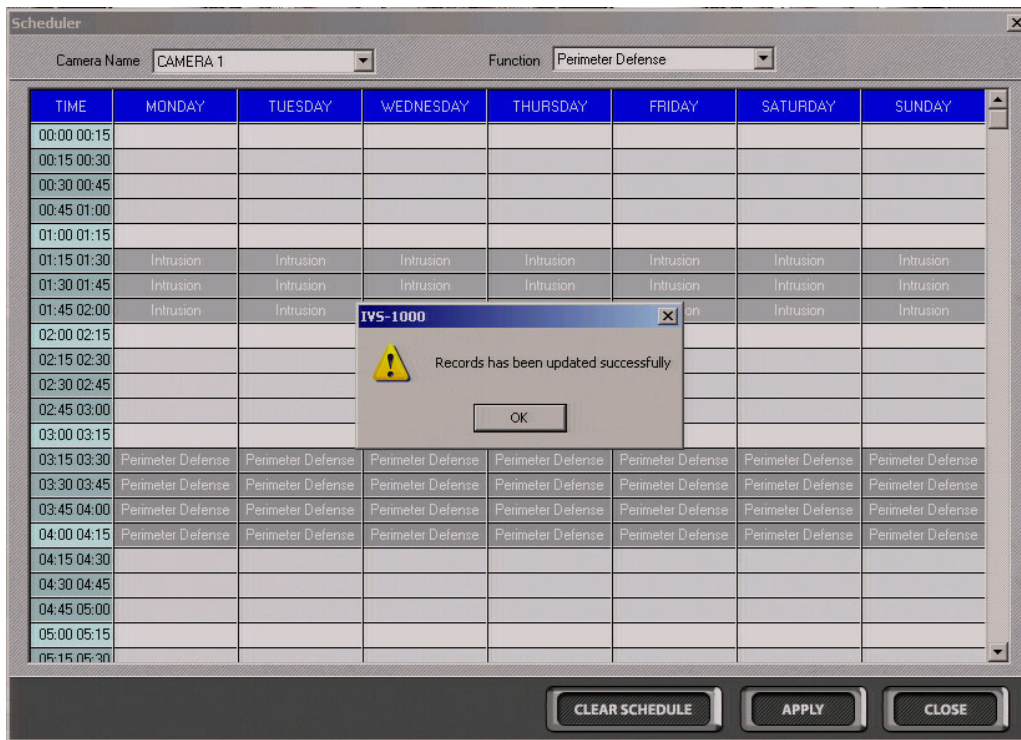


Fig. 2.15

2.10 Events

Click the Events button to display a list of all events stored on the VP-8000 as follows.

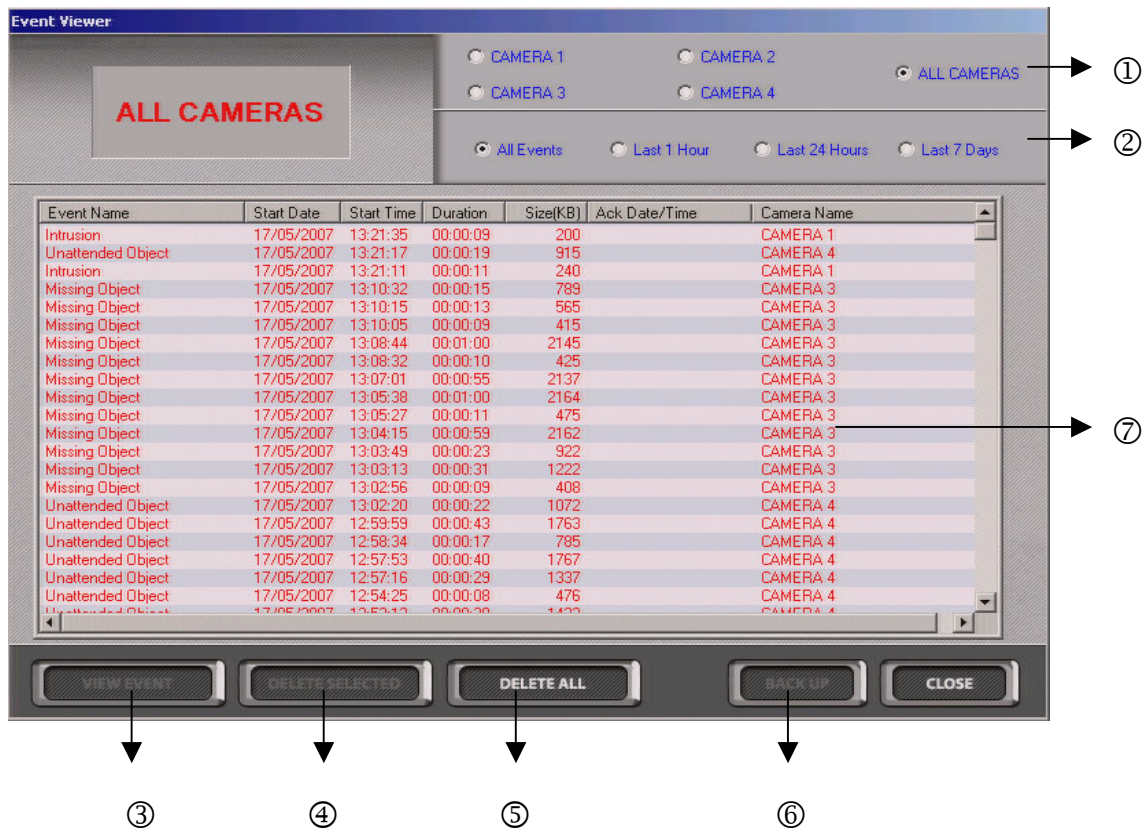


Fig. 2.16

1.	Location	Selects camera to view
2.	Time	Selects view; Choose from “All Events”, “Last 1 Hour”, “Last 24 Hours” or “Last 7 Days” to view record
3.	View Event	Click View Event to view selected event’s recording
4.	Delete Selected	To delete selected events
5.	Delete All	To delete all events in the list
6.	Backup	To backup selected event/events
7.	Event List	Listing of all events; Click on specific Event to view

Note: Events that have not been viewed will be highlighted red.

1) View Event: Click the view event button and select an events file to playback.



Fig. 2.17

2) Delete Selected/ Delete All: User can click delete function to delete event list. A screen will display as follows. Click “Yes” if you would like to delete this event.



Fig. 2.18

3) **Back Up:** User can back up your recorded files to a USB hard drive. While viewing the event list, click the back up button and select removable drive to back up. **Please be noted as the recording is JPEG based, the back up is also frame by frame based JPEG images.**

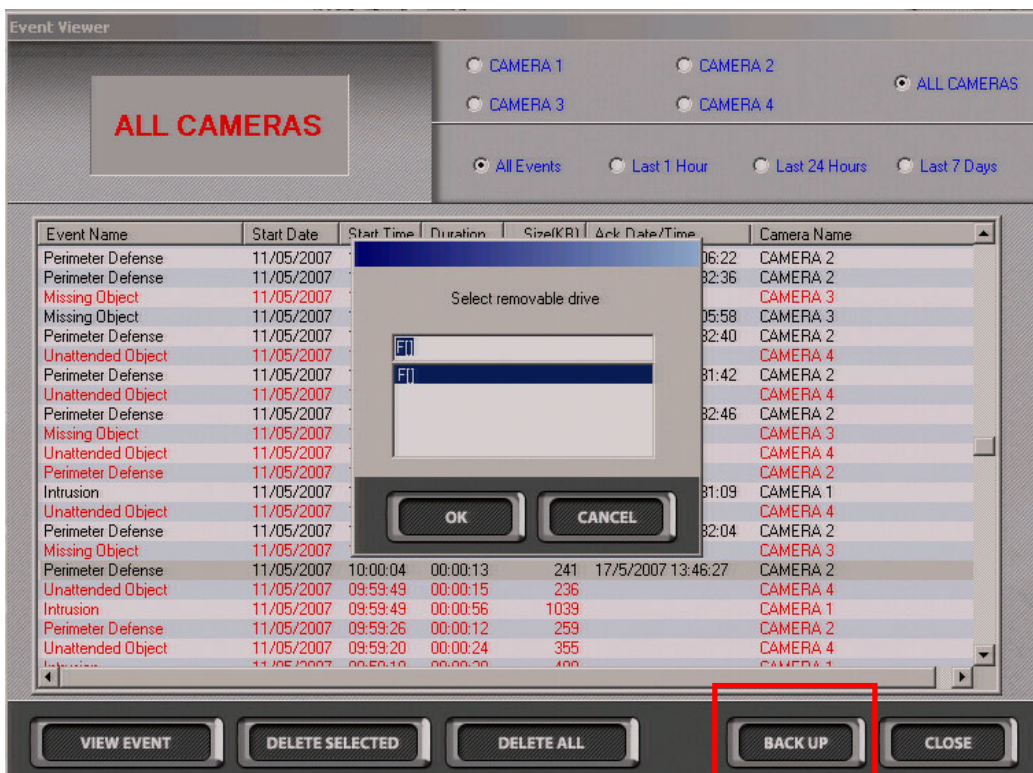


Fig. 2.19

2.11 Settings

Settings allows the administrator to choose the camera’s function, change the administrator username and password, view the VP-8000 hard disk properties, create alert messages, as well as configure the connection to a network. You’ll also be able to upgrade the VP-8000 software through this function and adjust the image quality of the cameras. Click the “Settings” button to display the Settings Setup menus.

2.11.1 Camera

All properties such as Camera name, Format, Palette, Orientation and Function can be changed

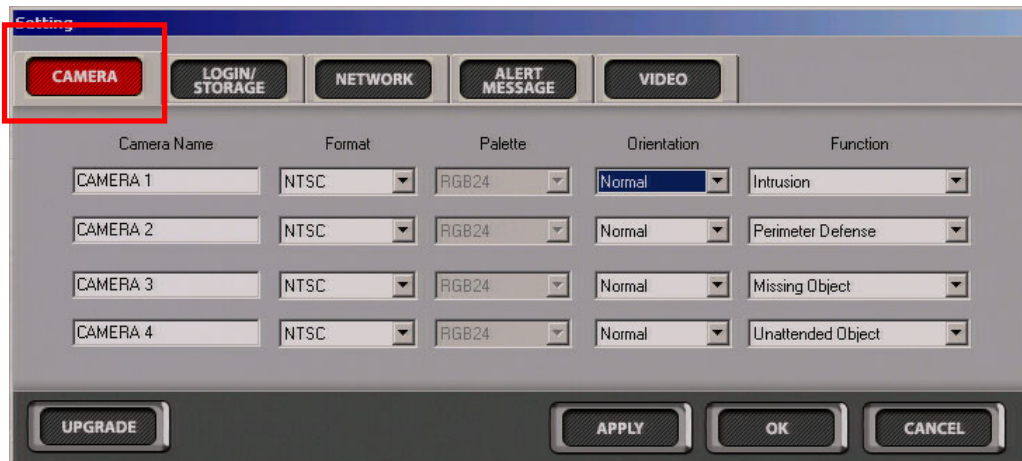


Fig. 2.20

1.	Camera Name		Names can be changed to correspond to different camera's locations
2.	Format	NTSC PAL	Video format standard for United States, Canada, Japan and Mexico Video format standard for all other countries
3.	Palette	RGB24 RGB565 RGB555 YUV422 YUV42	Resolution of the images
4.	Orientation	Normal Inverted	No change in image Inverts the image
5.	Function	None Live View Only Recording Intrusion Perimeter Defense Unattended Object Missing Object Scheduler	Displays video preview only Displays video preview during live recording Alerts intrusion on screen, and through SMS/MMS/Email Alerts barrier crossing on screen, and through SMS/MMS/Email Alerts any unattended object on screen, and through SMS/MMS/Email Alerts any missing object on screen, and through SMS/MMS/Email Function to be activated as per schedule

2.11.2 Login / Storage

VP-8000 is configured for open access (anonymous users), with default Administrator login name and password, set to “demo” and “password” respectively. The Administrator is advised to change the password after the first login.

Login: Click Login button to enter login name and password.

Storage: The storage information for VP-8000 can also be found in this window. Of special mention is the Auto Purge function, which automatically deletes the old event files when the hard disk space in use is more than 90%. This function can be turned on or off as per the user’s requirements.



Fig. 2.21

2.11.3 Network

Click the Network button to set up the network configurations as follows. Enter the IP address, gateway, Subnet mask, Gateway and the DNS server in the fields.

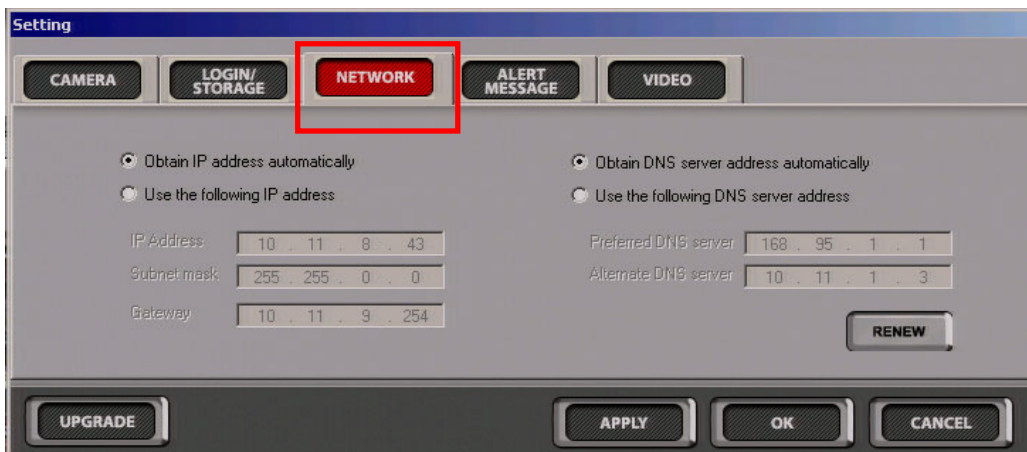


Fig. 2.22

2.11.4 Alert Message

Click the Alert message button to set up the email address, mail server, message, proxy server.



Fig. 2.23

1.	Alert to be sent from this Email Address		Enters Email address to that alert is to be sent from
2.	Mail Server		Enters mail server address
3.	Message		Enters preferred alert message
4.	Proxy Name		Enters proxy address and Port number if any
5.	SMS Gateway		Enters SMS gateway server address and Port number. This function is Currently NOT available
6.	Username		Enters SMS gateway username This function is Currently NOT available
7.	Password		Enters SMS gateway password This function is Currently NOT available

2.11.5 Video

Click the Video button to set all the video parameters for the cameras.

Brightness- adjusts the amount of light or brightness for the selected camera according to your preference. [Default: -4625~4555]

Contrast - adjusts the difference between light and dark areas or contrast for the selected camera according to your preference. [Default: 0~237]

Hue - adjusts the dominant color for the selected camera. [Default: -9000~8861]


Saturation - adjusts the amount of color for the selected camera. [Default: 0-202]



Fig. 2.24

Upgrade -The “Upgrade” function is built into the window for “Setting” and can be found at the button left hand corner. When the upgrade option is chosen, the user will be prompted.

2.12 Shutdown

Click the  button to shutdown the system. The user will be prompted with the Administrator Username and password to confirm the action.