

Central Management System

User's Manual

Version 1.4.0

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1. Overview

The Central Management System (CMS) offers a simple and centralized monitoring interface for the video surveillance equipments. It gives the user access to monitor multiple DVRs, and allows the user to simultaneously monitor 64 sites per group (up to 10 groups) within several clicks.




Features:

- **Monitor Multiple Sites** - Supports up to 10 groups, each group can add up to 64 sites
- **Alert Function (LAN Only)** - Sends live/event video clips and messages to the local computer from all connected DVR(s)
- **Connected Configuration** - Configures the settings of the connected DVR(s)
- **Remote Playback** – Allows the user to view recorded video stored in the connected DVR(s)
- **HDD Information** – Displays information of all disk drives that are being used on the local computer
- **Dome Control** - Remotely operates the speed domes via the Internet
- **Search (Devices)** - Searches the LAN network for any available connected DVR
- **Search (Video)** - Searches the connected DVR for any recorded video
- **Record** - Records live or playback videos to the local computer

1.1 System Requirement

The following chart shows recommended computer system:

Operating Systems	Windows 2000, Windows XP, Windows Vista	
CPU	Minimum: Pentium 4 2.0GHz	Recommended: Pentium 4 3.0GHz
RAM Memory	Minimum: 512MB (Connects \leq 32ch)	Recommended: 1GB (Connects 64ch)
Bandwidth	Minimum: 256K	Recommended: 1536K
HDD	Minimum 5GB HDD space is required if there is need to record video to the local computer.	
Video Card	Recommended: Pre-installed with more than 64MB RAM	
Tested Connection Extreme	CPU: Intel(R) Core (TM)2 Quad CPU Q6600 @2.4GHz, RAM: 2GB, OS: WinXp With the above system, the tested PC can stably connect up to 512 channels, which is the same as 32 units of 16-ch DVRs.  NOTE: This system is required when 18 Megapixel IP cameras with 1280x960 resolution are going to be connected.	

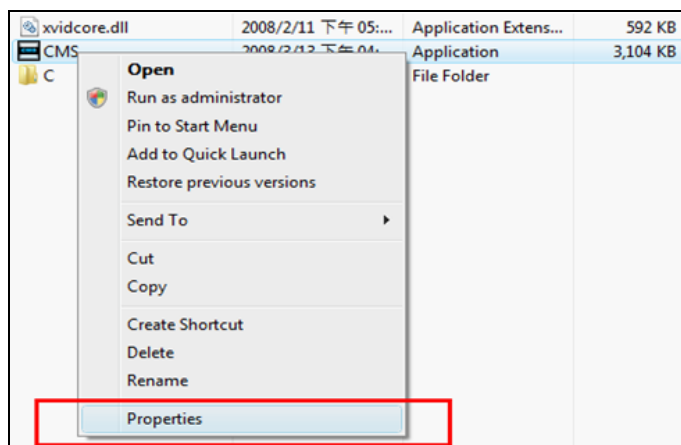


NOTE: If the operating system is Windows Vista and the login account is non-administrator, then files created by “Record”, “Archive”, and “Convert To AVI” may not be able to saved in preset folders properly.

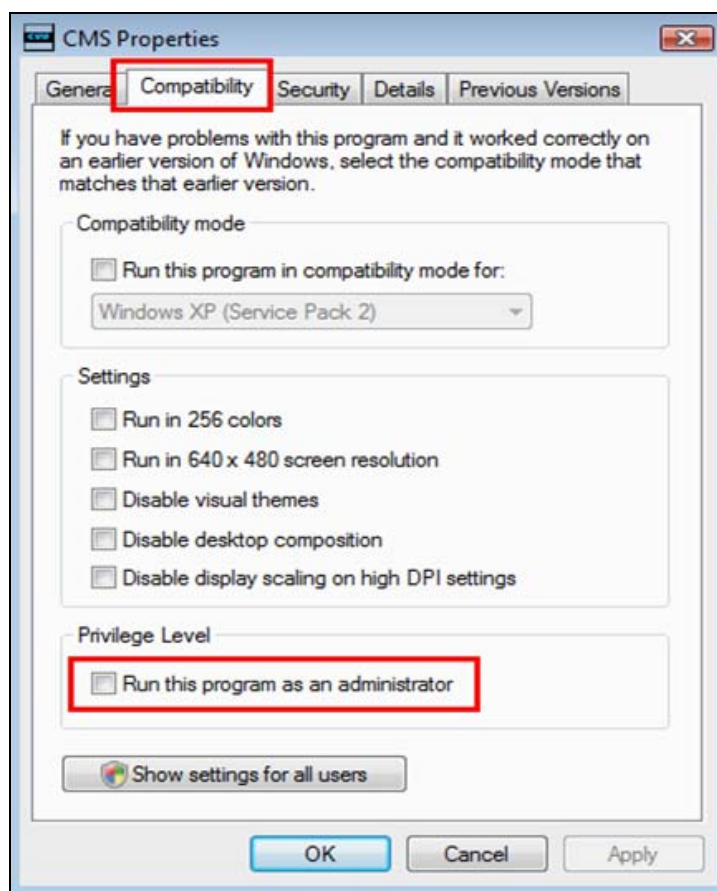
Follow steps below to make the files be saved correctly.

Step 1. Open the folder where CMS and CMS Player application files are saved.

Step 2. Right click on CMS application file and select <Properties>.



Step 3. Select <Compatibility> tab and check the option “*Run this program as an administrator*”. Then click <OK>.



Step 4. Repeat steps 2 and 3 for CMS Player application file. After both CMS and CMS Player are set, the files can be saved correctly to the preset folders

1.2 Supported IP Camera

The following chart shows the IP camera types recognized by the CMS:

Brand/Model	Streaming Protocol	Video Stream Format	Audio Stream Format
DynaColor Video Server (D7521)	HTTP	MPEG-4/M-JPEG	MS-ADPCM 2-Way Audio
DynaColor MegaPixel IP Camera (nDH060)	RTP+RTSP	MPEG-4/M-JPEG	g.711 a-law, g.711 u-law 2-Way Audio
	HTTP	MJPEG	No Audio
AXIS 200 Series	RTP/RTSP	MPEG-4	Unsupported
VivoTek 7000 Series	RTP/RTSP	MPEG-4	Unsupported

2. Software Installation

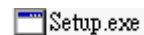
After acquired the installation file, follow the steps below to install the CMS to the local computer.

Step 1: Double click the zipped file to unzip it.



Step 2: There are 3 ways to start the installation.

Option 1: After the zip file is opened, click on the Setup.exe file to start the installation.

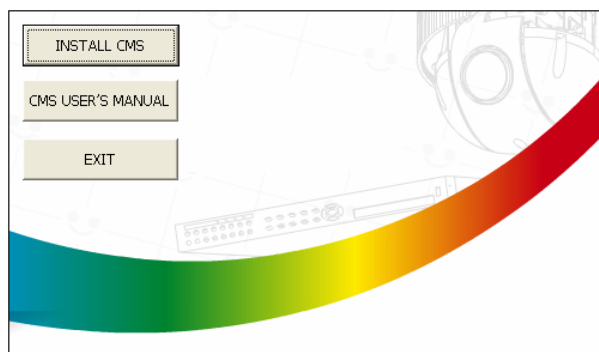


Option 2: After the zip file is opened, click on the AutoRun.exe file to start the installation.

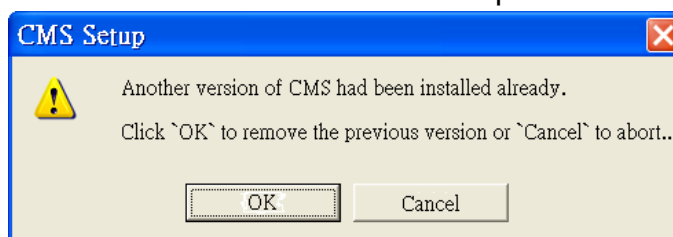


Option 3: If the program will be installed using the CD, the installation will run automatically when the CD is inserted into the CD-Rom.

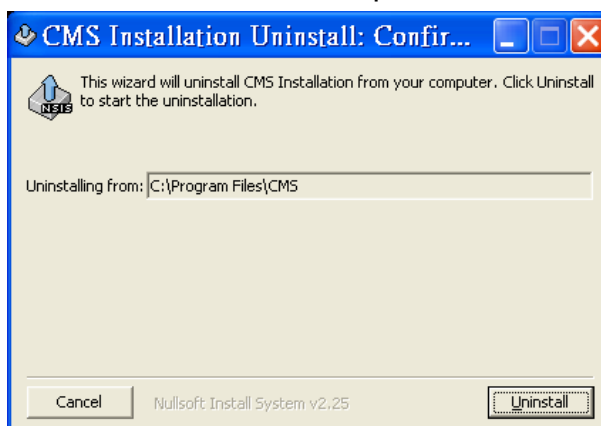
If the installation will be started either via Option 2 or Option 3 of Step 2, the <CMS Setup Menu> window will be displayed. Choose <INSTALL CMS> to start installing the CMS. Choose <CMS USER GUIDE> to open the user's manual. Choose <EXIT> to exit the <CMS Setup Menu>.



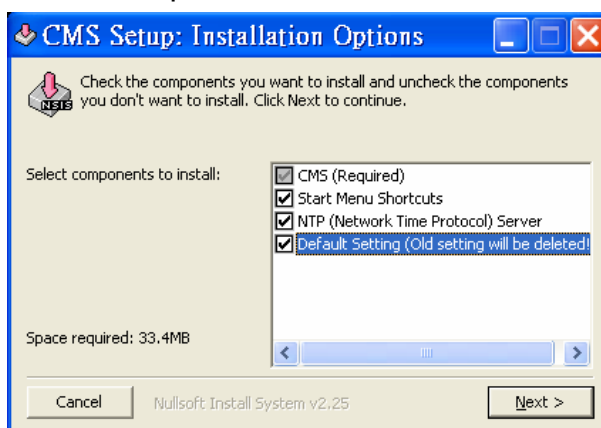
NOTE: If an older version of the CMS had been installed in the local computer, a message box will be shown during the installation. Click <OK> to uninstall the previous version.



After clicking <OK>, an <CMS Installation Uninstall: Confirmation> dialog will be displayed. Click <Uninstall> to uninstall the older version and continue with the next step.



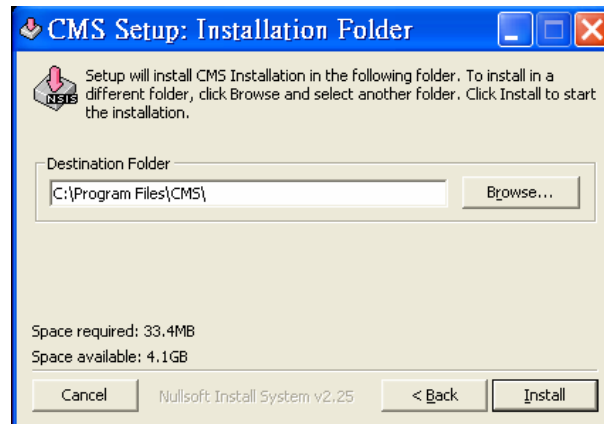
Step 3: Select the components that are going to be installed. It is strongly recommended to select the <Start Menu Shortcuts> to create shortcuts in the Start Menu and on the Desktop. Otherwise whenever the program is to be opened, it will have to be found under the path: “C:\Program Files\CMS\EXE\CMS.exe”. Click <Next> to go to next step.



The components of the CMS Installation Setup:

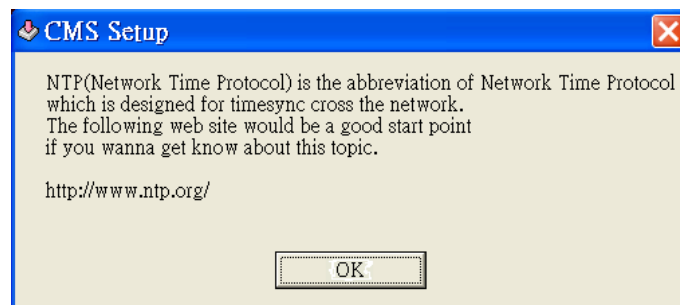
- | | |
|--|--|
| <input checked="" type="checkbox"/> CMS (Required) | : The CMS main program (Default). |
| <input checked="" type="checkbox"/> Start Menu Shortcuts | : Check to create shortcuts in the Start Menu and on the Desktop. |
| <input checked="" type="checkbox"/> NTP (Network Time Protocol) Server | : Check to install the NTP (Network Time Protocol) Server. |
| <input checked="" type="checkbox"/> Default Setting (Old setting will be deleted!) | : Check this box to load default setting, or uncheck it to load the old setting of previous installed CMS. |

Step 4: The CMS main program will be the first program to be installed. Choose a folder to install the CMS or it will be installed to the default destination folder “C:\Program Files\CMS\”. Click <Install> to start the Installation; or click <Back> to go back to the previous step.

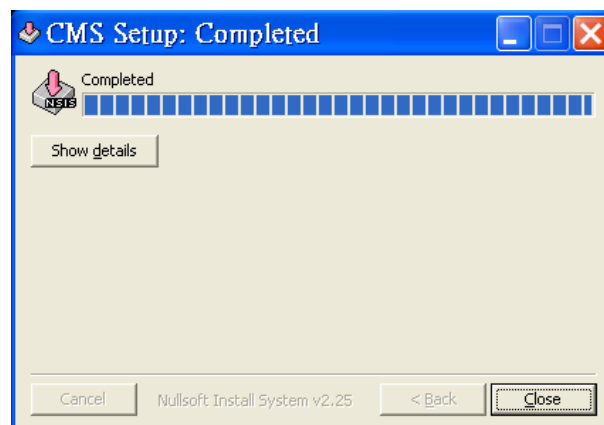


Step 5: The NTP Server will be the next program to be installed. The NTP Server enables the local computer, which is running the CMS, to become a central NTP Server for the connected DVR(s) so the time for the local computer and the connected DVR(s) is synchronized.

Click <OK> to start installing the NTP Server.



Step 6: Click <Close>, and the Software Installation is complete.



NTP Service (Server)

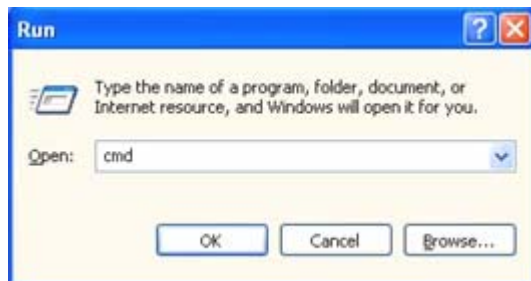
The NTP Service (Server) enables the local computer, which is running the CMS, to become a central NTP server for the connected DVR(s) so the time for the connected DVR(s) and the local computer is synchronized.

To do so, the IP address of the local computer is needed.

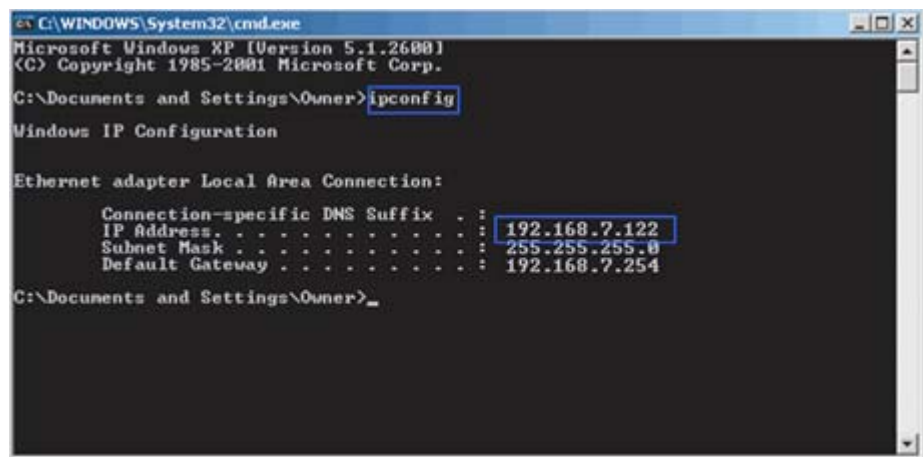
Go to **Start** menu, select **Run**.



Type in **cmd** and click OK.



Type in **ipconfig** to get the IP Address of the local computer. Write down the IP address on a piece of paper for later use.



After the IP address is found, setup the connected DVR(s).

First, go to <Main Menu> → <System Setup> → <Date/Time> → <Time Zone> to setup time zone. To find out the local time zone, please visit www.greenwichmeantime.com



NOTE: The <Time Zone> must be set or the <Network Time Protocol Setup> will not be accessible.

After entered the local time zone, the <Network Time Protocol Setup> option will be accessible. Go to <Main Menu> → <System Setup> → <Date/Time> → <Network Time Protocol Setup>, and the following menu will be displayed.

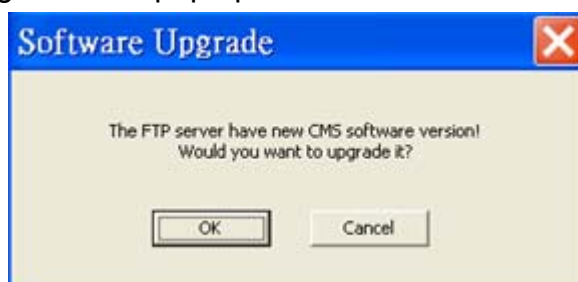
Network Time Protocol Setup	
1. NTP Server	time.nist.gov
2. Automatically Time Sync	ON
3. Manually Time Sync	No

In this example, the NTP server should be set to “192.168.7.122” which is the IP address of the local computer. After the NTP server is set, select <Manually Time Sync> to sync the time with the local computer. The time sync can also be updated periodically. Select ‘ON’ for <Automatically Time Sync>, and the time will be automatically synced once an hour.

3. Software Upgrade

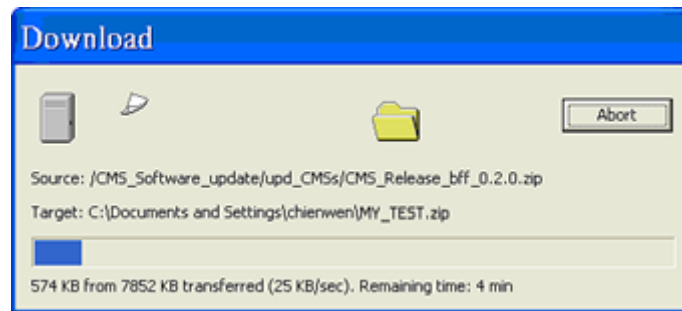
The CMS will automatically connect to the FTP Server and check for upgrade every once a month. If no upgrade is available, the CMS will continue normal process. If upgrade is detected, please follow the steps below to proceed.

Step 1: A message box will pop up to inform that there is upgrade available.



Click <OK> to download the upgrade software and continue to the next step. Otherwise, click <Cancel> to abort and continue to normal CMS process.

Step 2: Choose a destination folder to save the file. Then a window will pop up and show the downloading status.

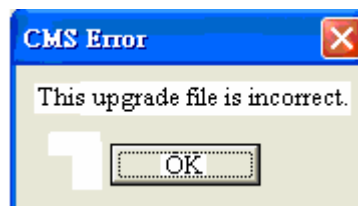


Click <Abort> to terminate the download and the CMS will be started as usual.

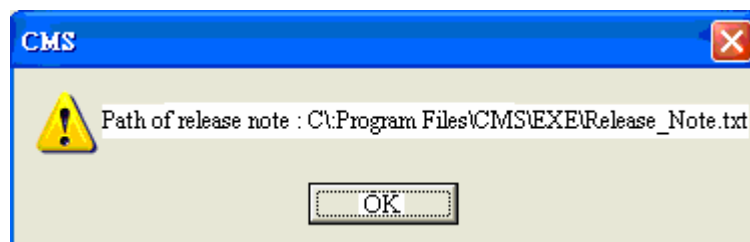
Step 3: When the download is completed, the installation of the new version of the CMS can be started following the same procedures described in the Software Installation section.



NOTE: If the upgrade file is not completely downloaded, an error message will be displayed as below.



NOTE: A release note will also be downloaded together with the setup file. The following message will be displayed to show the file path where the release note is saved.




4. Start the CMS

There are 3 ways to start the CMS. Note that method A and B are only available if the “Start Menu Shortcuts” component is installed. Please see section [Software Installation](#) for more information.

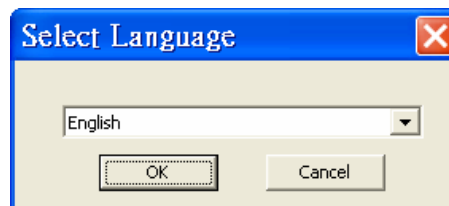
Method A: Click Start menu and select Programs; find “CMS” from the listed programs.

Method B: Double click on the  shortcut icon on the desktop.

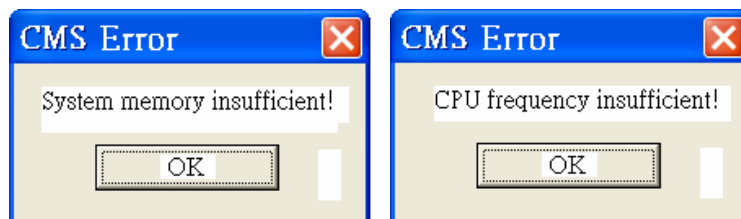
Method C: Go to “C:\Program Files\CMS\EXE\” and double click on the  icon.

4.1 Starting Up

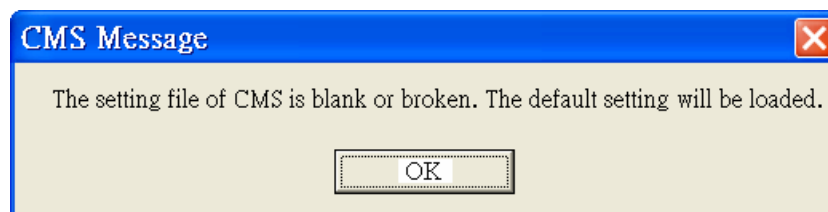
If the CMS is started for the first time, select a desired language for the interface. The available languages are listed in the scroll box. Click <OK> to confirm the selection.



If the system memory or CPU frequency is less than the requirement, the error message shown as below will be displayed.



The following message will be shown if the setting file is broken.

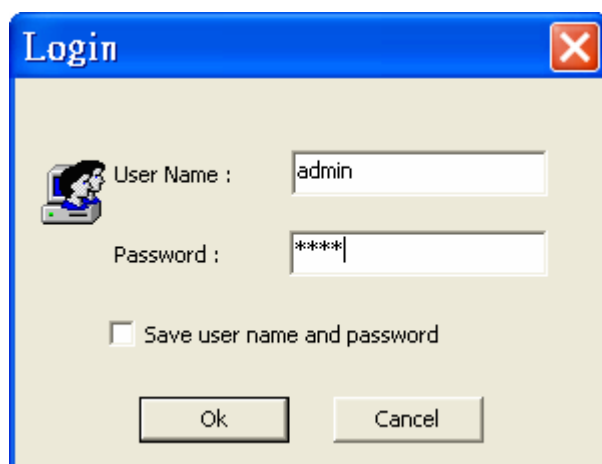


4.2 Login

The default User Name & Password are listed below.

User Name: admin

Password: 1234

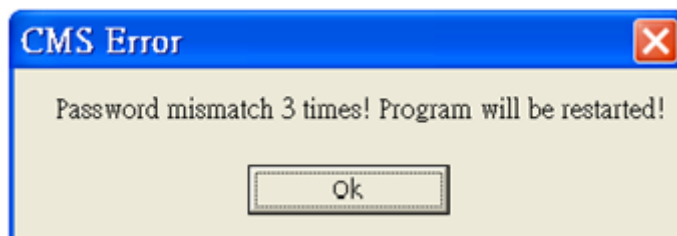


Check <Save user name and password> to save time from entering username and password every time the CMS starts. Click <OK> to login.

The username and password accounts can be added or removed under the <CMS User> option. Refer to the [CMS User](#) section for more information.

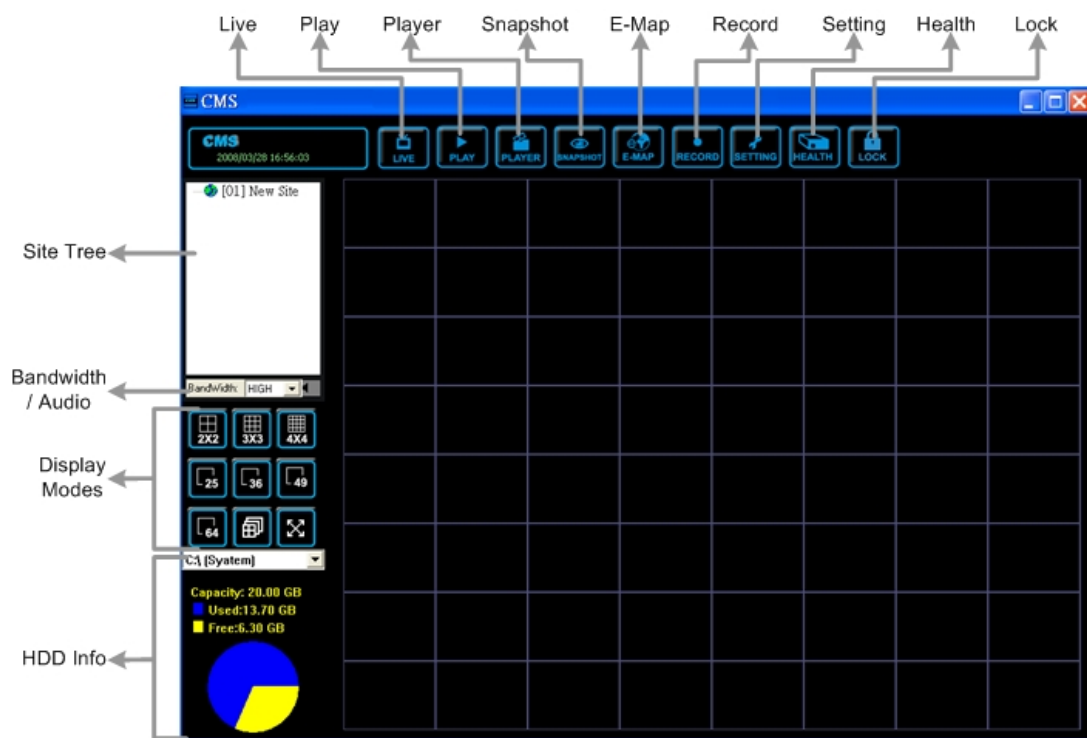


NOTE: If the wrong username or password is entered for 3 times, the message below will be shown, and the CMS will be closed automatically after <OK> is clicked. Reopen the CMS to enter the correct username and password.



5. Buttons Available on the Main Window

After starting the CMS, the main window of the CMS will be shown as the figure below. There are several buttons positioned on the top and the left of the main window. The name of each button is indicated below.



The usage and function of each button will be briefly described as the followings.

LIVE

Click on this button to view the live video. Note that after viewing recorded video, this button needs to be clicked to switch back to the live mode.

PLAY

Click to view recorded video stored in the HDD of the connected DVR. Please refer to [*Playback Recorded Video*](#) section for more information about playing back the video.

PLAYER

Click to open the CMS Player. The CMS Player is a compact version of the standard DVR Player. Please refer to the Appendix A for more information.

SNAPSHOT

Click to save a snapshot of the current window(s). Refer to section [Take a Snapshot](#) for detailed information.

E-MAP

Click to open the E-MAP program. The E-Map is a program that allows the user to illustrate the positions of the cameras on a self selected image.

RECORD

Click to schedule the recording time frame for the sites.

SETTING

Click to set up the configuration. Refer to section [Configure the CMS](#) for detailed information.

HEALTH

Click to see the connection status and information of the connected DVR(s). The data will be updated every 5 minutes. The following figure is an example.

Health Status (Refresh Rate = 5 min)					
Site[01]	Device Name	Internal/External	Total Size	Active/NonActive	Temperature
	Maxtor 4R160L0	Internal	147GB	Active	37
Site[02]	Device Name	Internal/External	Total Size	Active/NonActive	Temperature
	Maxtor 4R160L0	Internal	147GB	Active	36
Site[04]	Device Name	Internal/External	Total Size	Active/NonActive	Temperature
	Maxtor 6Y080L0	Internal	71GB	Active	50
Site[05]	Device Name	Internal/External	Total Size	Active/NonActive	Temperature
	Maxtor 7Y250P0	Internal	228GB	Active	42
Retrieving Info ...					



NOTE: If more than half of the connected devices are not our products, a warning message as below will be shown and the CMS will be closed automatically.

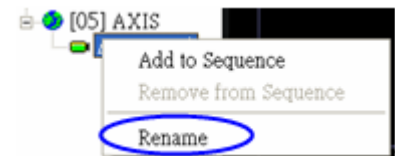
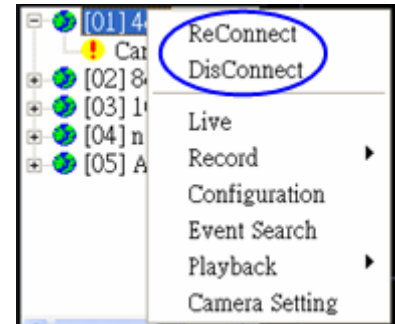


LOCK

Click to lock the CMS to protect the works on the CMS when the user needs to be away from the computer for a while. This function is the same as the computer's screensaver. See Lock Function section for more detailed information.

Site Tree

Displays the site(s) that are currently being viewed. If the connection to a certain camera is failed, there will not be image displayed on its assigned grid. Right click on the "site" and click <ReConnect> to try to establish the connection to the site. The <DisConnect> option allows the user to only disconnect a certain site. The user can also rename the camera directly by right clicking on the site and selecting <Rename>. The new name will be shown on the upper left corner of the camera's assigned grid.



Bandwidth & Audio

Click to choose bandwidth option. Choose <High> when the internet speed is fast; and <Low> when the network is congested.

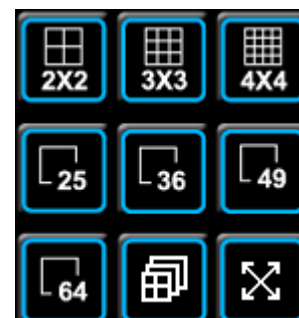
Next to the bandwidth option is the audio button. Click to turn on/off the audio.





NOTE: Turning ON/OFF the audio on CMS will not affect the audio setting of the connected DVR(s).

Display Modes

Click on any icon to view the image in a multiple window mode. The selections include 4-window, 9-window, 16-window, 25-window, 36-window, 49-window, and 64-window modes. Refer to section [Display Modes](#) for more details on operation.



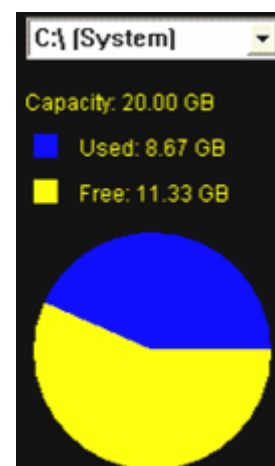
Click  to start displaying the sequence list. See [Sequence Display](#) section for more detailed information.

Click  to extend the current viewing grids to full screen. Hit <Esc> to exit.

HDD Info

The pie chart on the bottom left displays the HDD information. This is especially useful when the user uses the CMS to record the video to the local computer.


Scroll down the menu to see the information of all the HDD(s) installed on the local computer, such as C drive, D drive...etc. The blue part of the pie chart indicates the used space, and the yellow part indicates the available space.

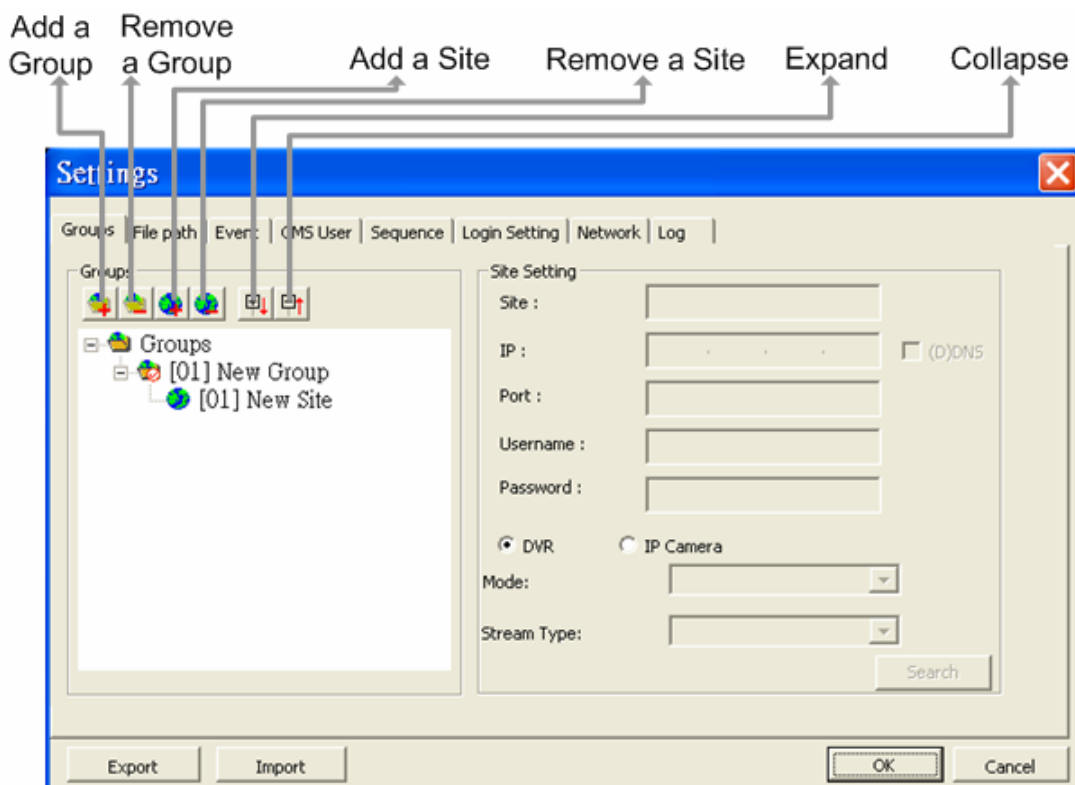


The information will be updated every 10 seconds. If file circular is enabled, the circulation will as well be updated every 10 seconds.

6. Configure the CMS

The CMS supports up to 10 groups, and at most 64 sites can be added to each group. The following sections guide you to setup your CMS step by step.

Click the  button on the top of the **main window**, and the figure below will be displayed.

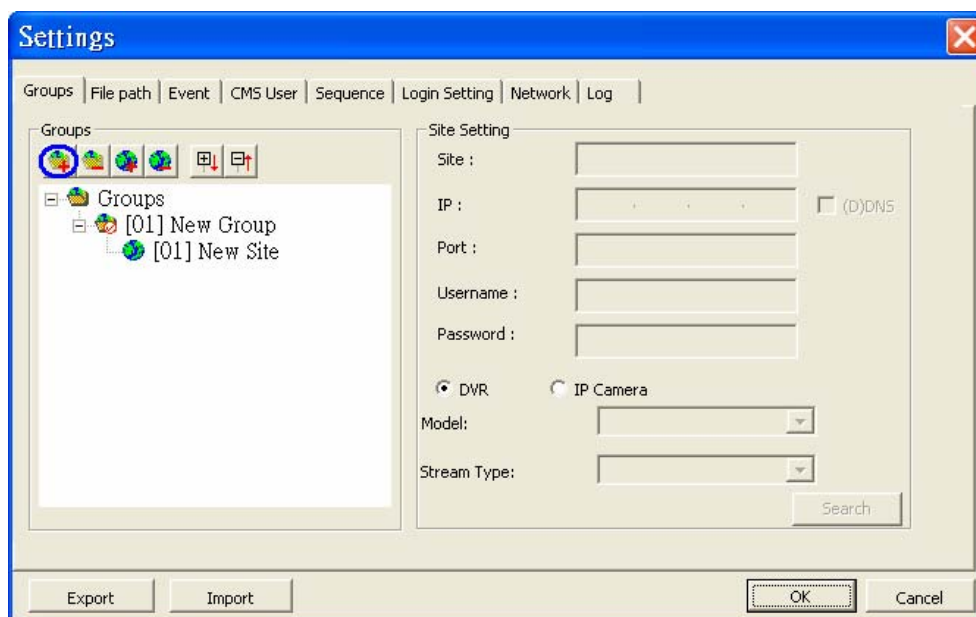


6.1 Setup Groups

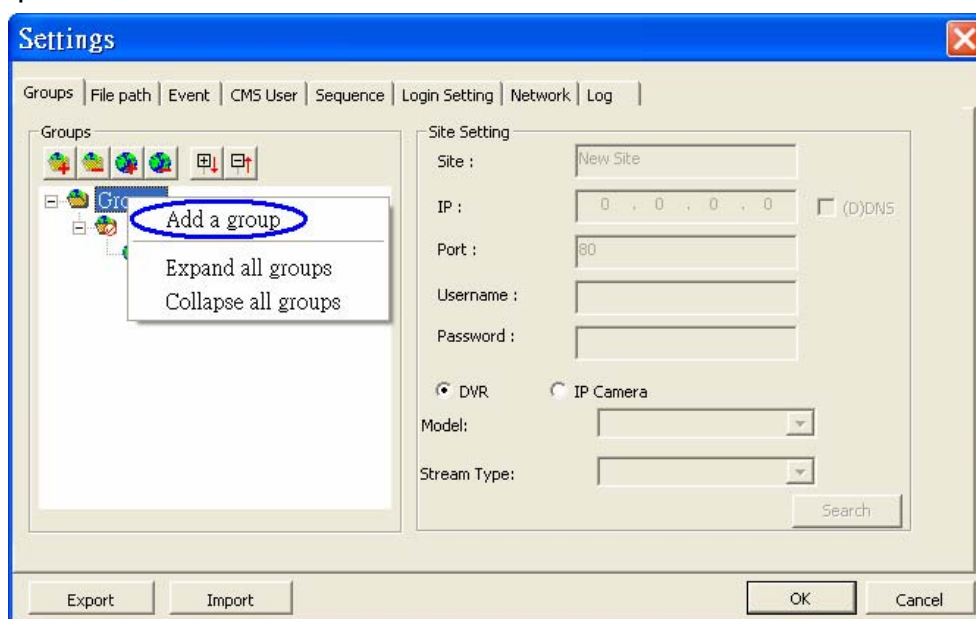
Up to 10 groups can be set in the CMS. This section guides the user to add or remove a group, and also shows the user how to set “start group”.

Add a group

Click  button to add a group. Double click on the group to rename it.



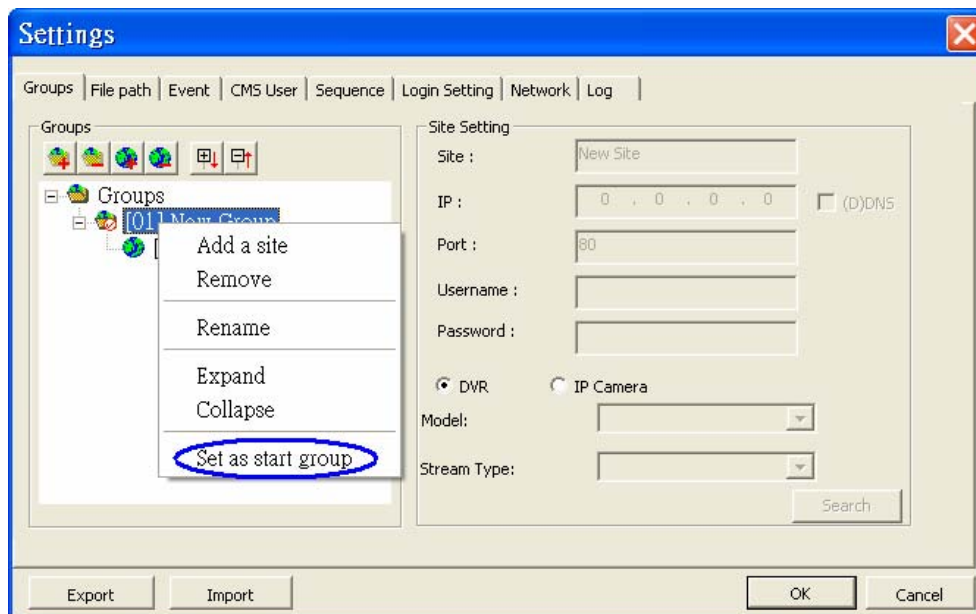
The other way to add a group is to right click on <Groups>, and select <Add a group>.



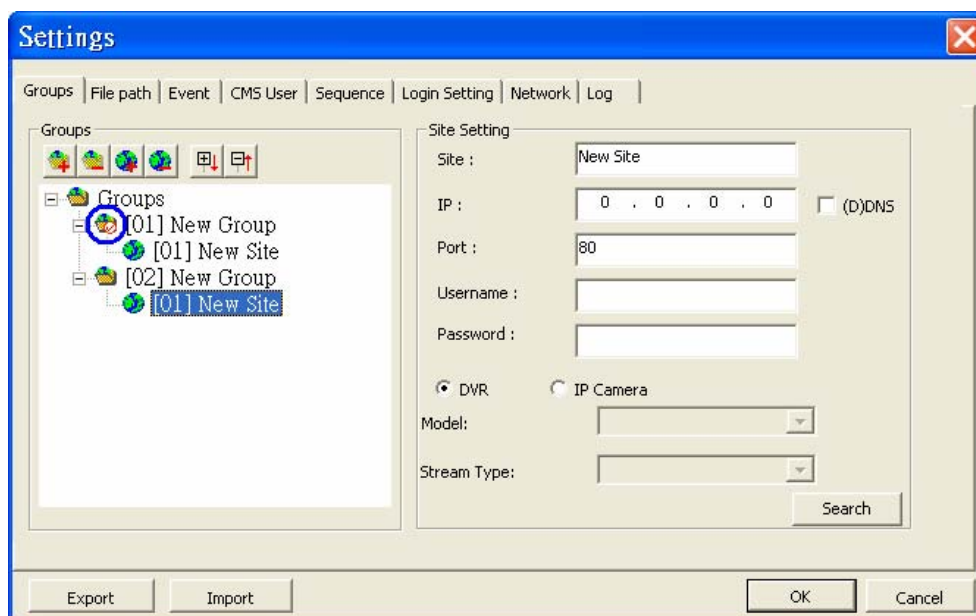
Set Start Group

“Start Group” is the group that will be connected after starting the CMS.

Right click on the group to be set as “start group”, and select <Set as start group> from the pull-down menu.



NOTE: If a group is set as the “start group”, the icon will be checked as shown in the figure below.

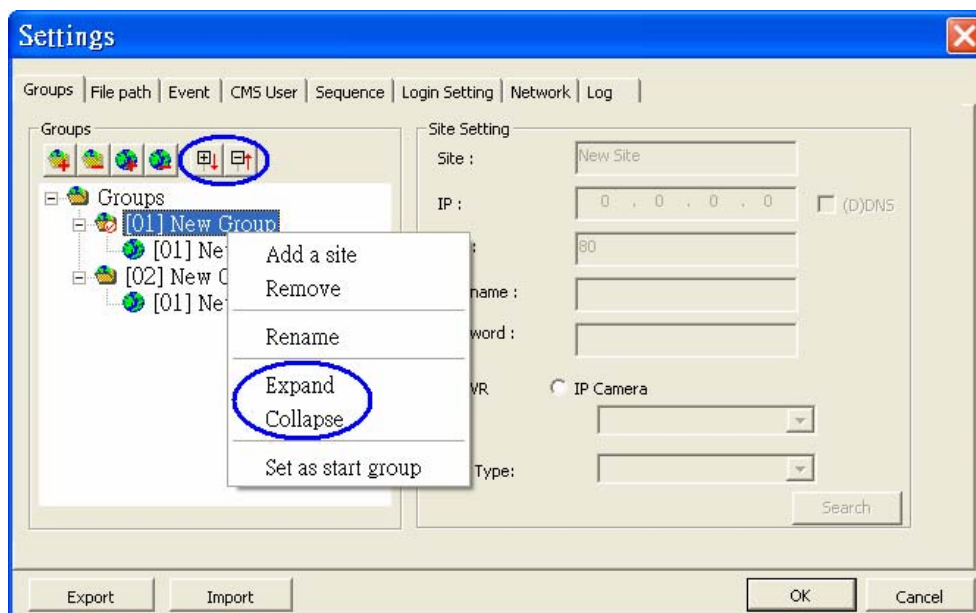


Expand/ Collapse a Group


There are two ways to expand or collapse a group. One way is to use the

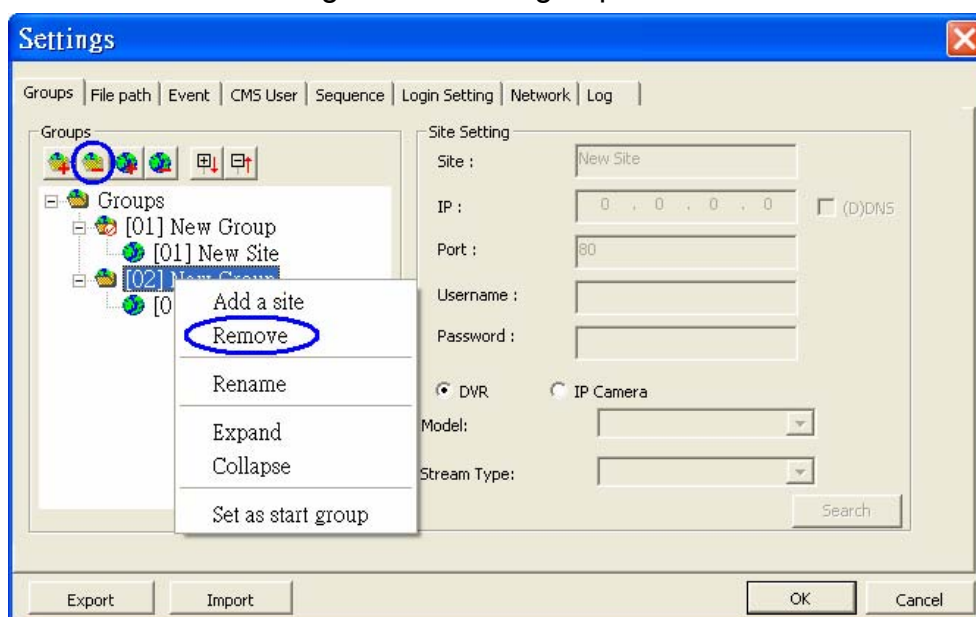


buttons; the other way is to right click on the group and select <Expand> or <Collapse> from the pull-down menu.



Remove a Group

To remove a group, click on the group to be removed, and then click the  button directly to remove the group. The other way to remove a group is to choose <Remove> after right clicked the group.




6.2 Manage the Sites

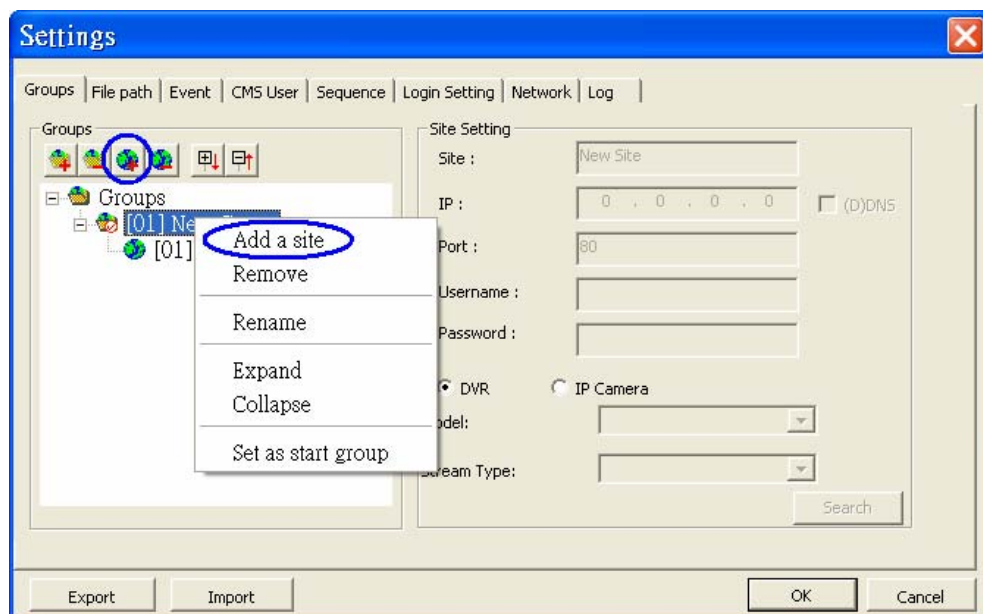
The following sections are instruction of the management of the sites, including add or remove sites and configuration.

6.2.1 Add/Remove a Site

This section describes how to add or remove a site. Up to 10 groups can be created with a capacity of 64 sites.


Add a site

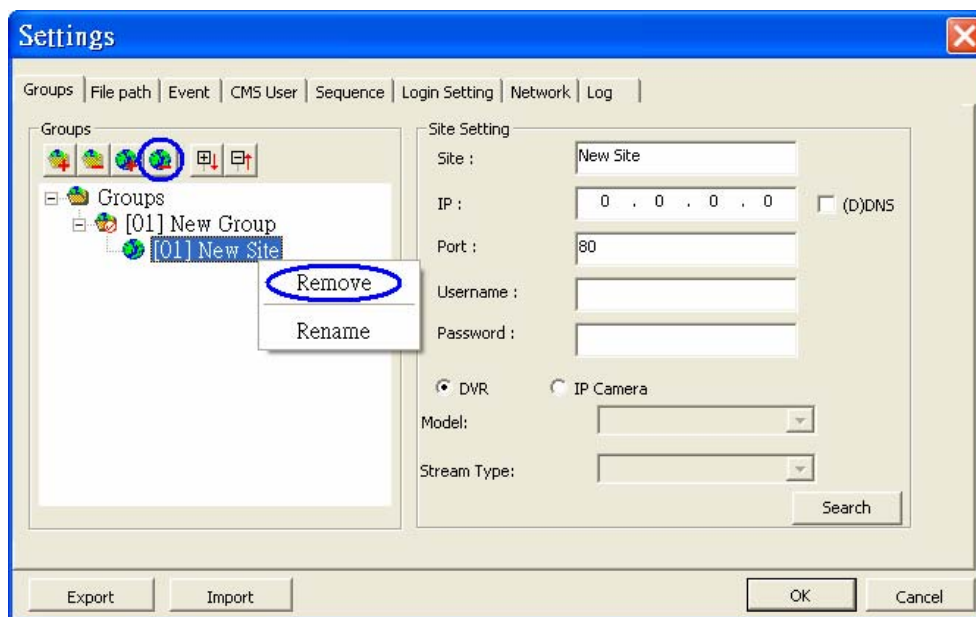
Choose a group to add a new site. Click the  button to add a site to this group. The next section will show how to setup the site step by step.



The other way to add a new site to a group is to right click on the group, and select <Add a site>.

Remove a site

To remove a site, click on the site that is to be removed, and click the  button directly to remove the site.



The other way to remove a site is to right click on the site, and select <Remove> from the pull-down menu.

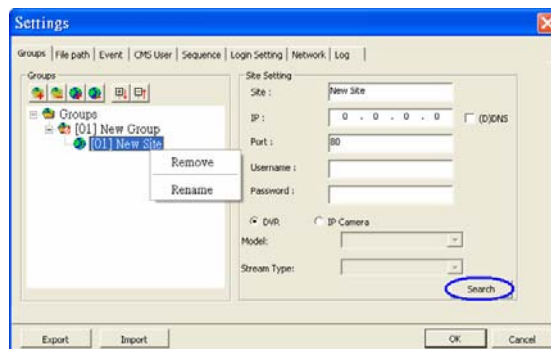
A new site can either be a DVR or an IP Camera, and the number of sites equals to the number of the DVRs and IP Cameras. The following sections will show how to setup configuration of the sites.

6.2.2 Setup the Site via Device Search

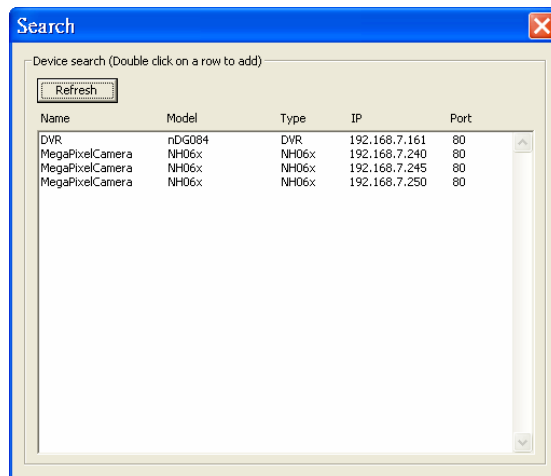
There are two ways to setup a site. The simple way is via Device Search.

The CMS is able to search for the IP address of the DVR(s) or IP Camera(s) connected to the LAN. The ports used for device search are 6666 and 6667. Please make sure that these two ports are not in-use nor blocked by firewall or virus scan software.

Step 1: If there is a LAN network, the CMS can search the LAN network for IP address of available DVR(s) and IP Camera(s). Click the Search button (**on the bottom right**) to open the Search window.



Step 2: Click <Refresh> to find the IP address of DVR(s) or IP Camera(s) available in the LAN network. Select from the list and **Double click** on the IP address to add it to a site. Then enter the username and password of the site.

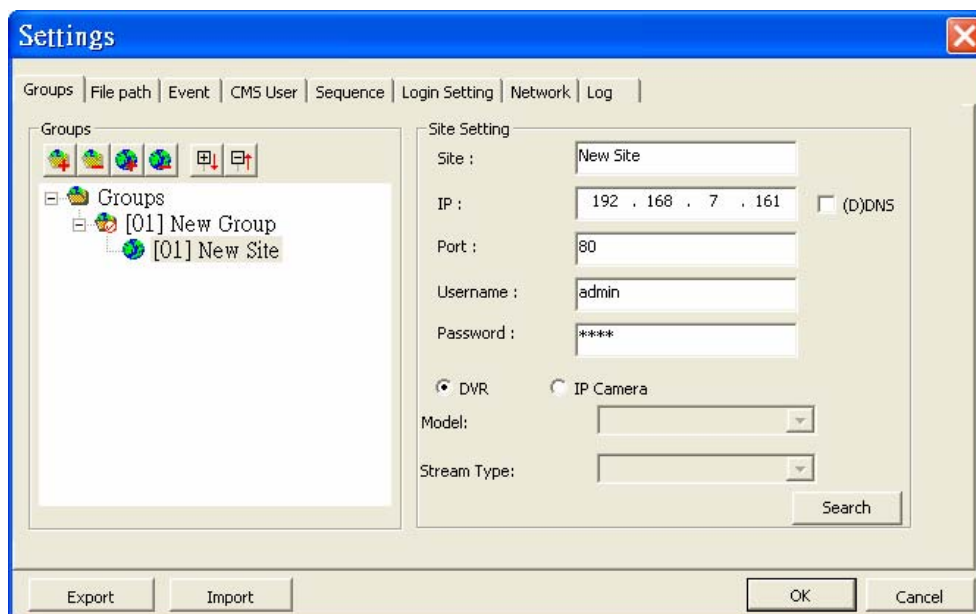


NOTE: The Device Search function can only be used to search for addresses within the same LAN. For example, if the local computer uses an IP address of 192.168.1.5, and a connected DVR has an IP address of 192.168.1.7, the CMS will be able to find the IP address of the DVR. However, if there is another DVR connected to another LAN network such as 192.168.3.6, the CMS (whose IP is 192.168.1.5) will not be able to find the IP address of the DVR in another LAN network.

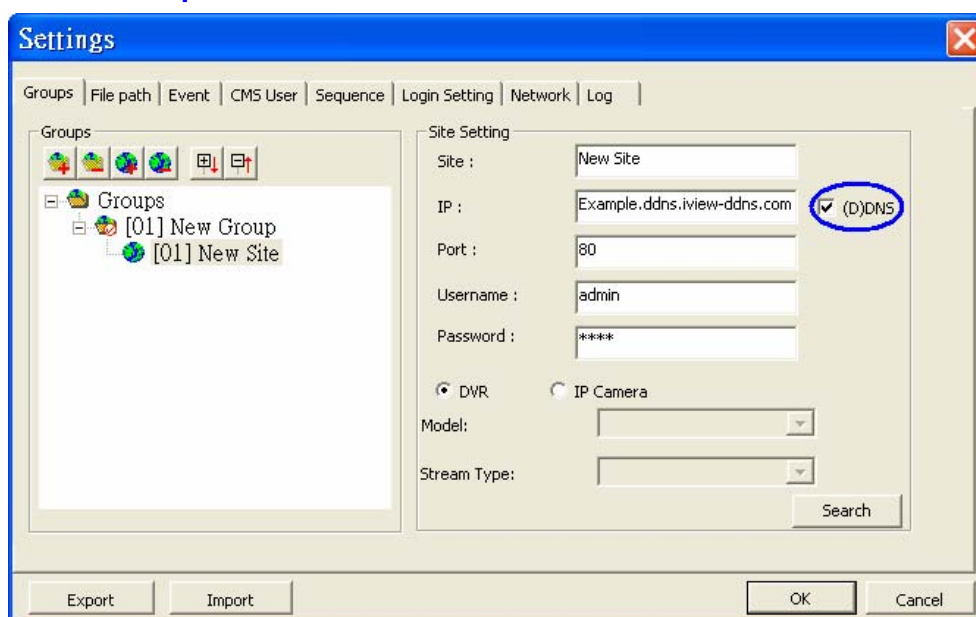
6.2.3 Setup the DVR Site Manually

If the detailed information (IP address, port, username, and password) of the connected DVR is provided, a site can be setup manually.

Add a new site and enter the Name, IP address, Port, Username, and Password. Select "DVR" and click <OK> to complete the setting.



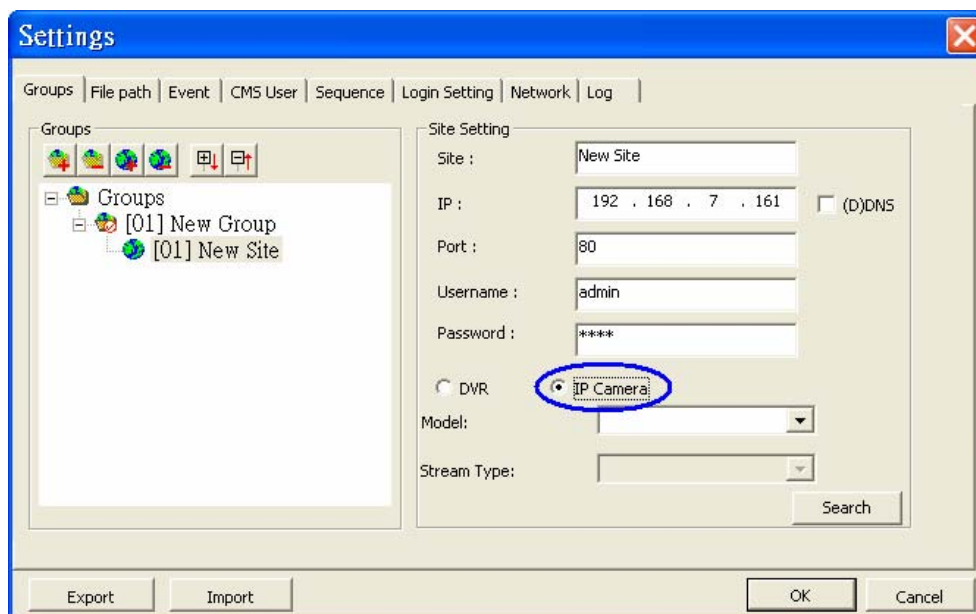
If the DDNS information of the DVR is known, the DDNS data can be used to setup a site. Check the box <(D)DNS> circled below, and type in the DDNS data. Click <OK> to complete the setting. An example of the DDNS address looks like: Example.ddns.iview-ddns.com



NOTE: Port number does not apply to DDNS entries. Therefore, if the <(D)DNS> box had been checked, the port number does not need to be changed.

6.2.4 Setup the IP Camera Site Manually

If an IP Camera is going to be added to the CMS, the required information includes the IP address, port, username, password, and brand/model type of the IP Camera. Enter the data and select "IP Camera" as circled below. Then choose the <Model> and <Stream Type> of the IP Camera. Click <OK> to complete the setting.



IP Camera Support List

Brand/Model	Streaming Protocol	Video Stream Format	Audio Stream Format
DynaColor Video Server (D7521)	HTTP	MPEG-4/M-JPEG	MS-ADPCM 2-Way Audio
DynaColor MegaPixel IP Camera (nDH060)	RTP+RTSP	MPEG-4/M-JPEG	g.711 a-law, g.711 u-law 2-Way Audio
	HTTP	MJPEG	No Audio
AXIS 200 Series	RTP/RTSP	MPEG-4	Unsupported
VivoTek 7000 Series	RTP/RTSP	MPEG-4	Unsupported

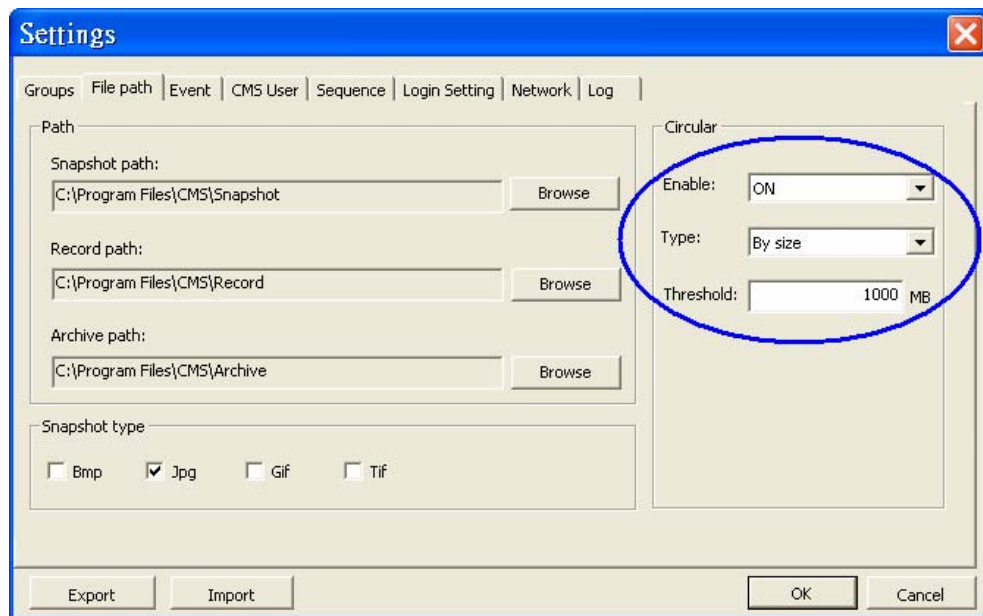


NOTE: Each group can only connect to at most 18 IP cameras.

6.3 Setup the File Path

The file path menu defines stored destination of snapshot, recorded video, and archive files. It is recommended to use the default folders.

The <Circular> function is used to adjust the HDD space usage of the CMS. For example, when the threshold is set to 1GB, and there are 20GB free disk space remaining in the HDD. CMS can only access the HDD no more than 19GB. Whenever the free disk size is smaller than threshold, CMS will start to overwrite the earliest recoded data.



Snapshot type

The CMS has a snapshot function, and the file type for snapshot can be defined here. Note that if more than one type are selected, take 2 types for example, then each snapshot is saved to 2 types of files. They are the same image, but in different formats. For instance, if Bmp & Tif are selected and the snapshot is taken, two types of image files of the same snapshot image will be created.

6.4 Alert

The alert function enables the connected DVR(s) to send alert signals to the CMS within the network. This section describes how the alert function works.

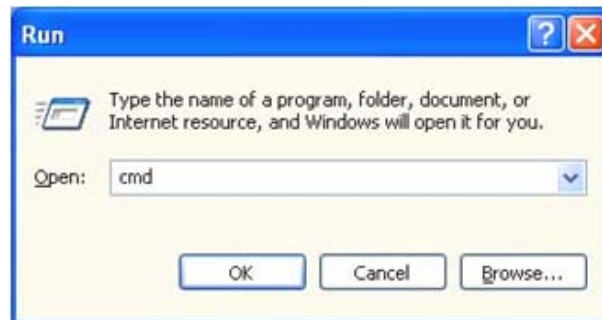
Setting up the alert function:

Step 1: Find the IP address of the local computer.

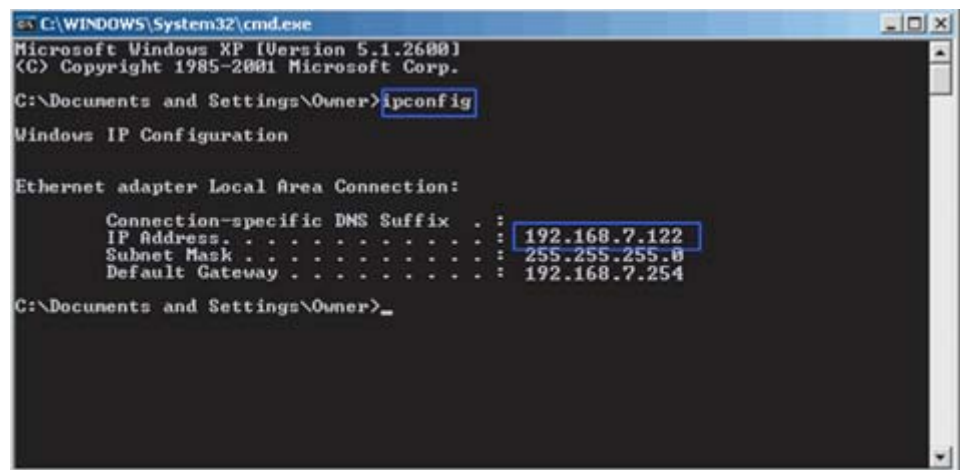
Go to **Start** menu, select **Run**.



Type in **cmd** and click OK.




Type in **ipconfig** to get the IP Address of the local computer. Write down the IP address on a piece of paper for later use.




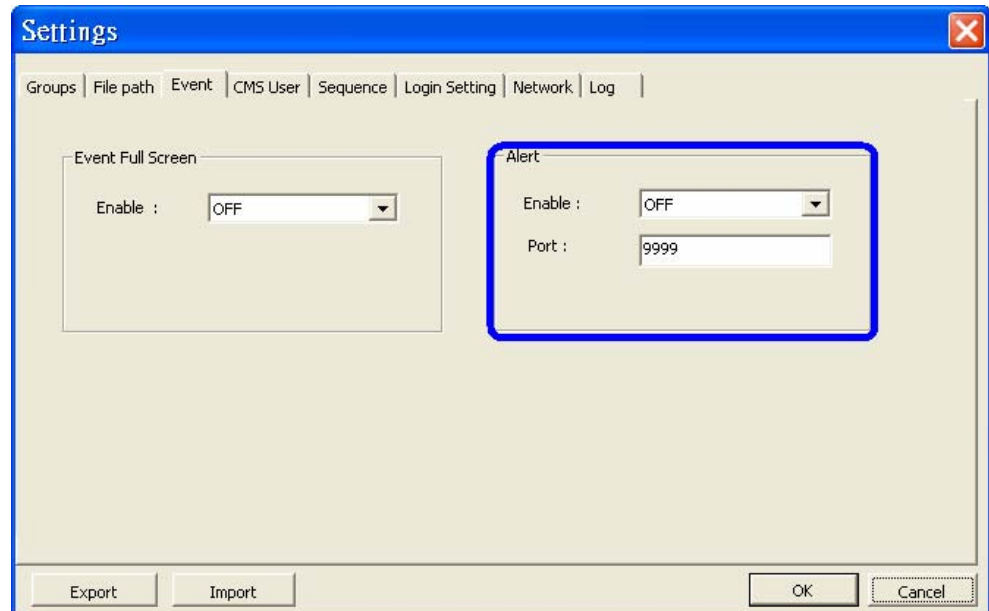
Step 2: Setup the <Alert Notification Setup> on the connected DVR(s). The <Alert Notification Setup> allows the user to send alert notifications to the CMS program which had been installed to the computer.

Alert Notification Setup	
1. Alert Configuration Set	1
2. Alert Notification	OFF
3. Alert IP	192.168.7.122
4. Alert Port	9999
5. Alive Interval	120sec

- Alert Configuration Set
 <Alert Configuration Set> provides 3 combinations of Alert Notification, IP, and Port. The user can match the connected DVR to at most 3 different CMS servers.
 - Alert Notification
 4 options are included in this item; <OFF>, <Event>, <Alive>, and <Both>.
 - <**OFF**>: The Alert Notification is turned off.
 - <**Event**>: When the alarm is triggered, the DVR will send an alert message to the CMS.
 - <**Alive**>: The DVR will send an alive message to the CMS every *N* second just to show that the connection between the DVR and CMS is in effect. The time interval *N* can be adjusted in <Alive Interval>.
 - <**Both**>: This enables the DVR to send both Event and Alive alert messages to the CMS.
 - Alert IP
 The Alert IP must match the IP address of the local computer. In this example, the IP address of the local computer is 192.168.7.122.
 - Alert Port
 The Alert Port is the port used for sending and receiving alert signals. Choose any port that is not restricted by the network. The ports for both connected DVR and the CMS Alert **must be the same**. In this example, the port is set to 9999.
-  **NOTE:** If 2 configuration sets are corresponding to 2 different CMS servers, each CMS server must have its own unique port number.
- Alive Interval
 Time interval (1 to 255 sec) between each alive message can be set here.

Step 3: Setup the Alert of the CMS.

Click on  positioned on the top of the CMS main window and go to Event tab to setup the port. Port 9999 is used in this example. Select ON to enable the alert function and click OK. <Event Full Screen> is used to display full screen of the alerted channel. Select <ON> to activate this function, or <OFF> to deactivate it.



NOTE: If the user reconnect or disconnect the sites, the list of the event full screen will be cleared.



NOTE: Once the list of the event full screen finished playing, the window will return to former viewing status.

Step 4: Alert Action

The connected DVR sends 4 types of alert message (State) to the CMS: Alive, Alarm, Motion, and Video Loss. Alive messages are sent when the notification option is set to <Alive> or <Both> in the connected DVR. Alarm, Motion, and Video Loss messages are sent when the notification option is set to <Event> or <Both> in the connected DVR.

Viewing the alert events:

When the alert is triggered while the alert function is turned on, an icon will be shown in the system tray to indicate that an alert is being triggered. Right click on the icon and the menu as shown on the right will be displayed.



- Choose <Alert Info> to show the following window. Alternatively, double click on the icon can also display the Alert Info window.
- Choose <Exit> to remove the icon from the system tray.

Alert Info							
No.	DATE/TIME(Local)	DATE/TIME(DVR)	SITE NAME	UNIT NAME	CH	STATE	IP
27	[2007/10/02 - PM03:25:59]	2007/10/03 AM04:53:23	DVR64	DVR		Alive	192.168.6.53:80
28	[2007/10/02 - PM03:26:02]	2007/10/03 AM04:53:26	DVR64	DVR		Alive	192.168.6.53:80
29	[2007/10/02 - PM03:26:05]	2007/10/03 AM04:53:29	DVR64	DVR		Alive	192.168.6.53:80
30	[2007/10/02 - PM03:26:08]	2007/10/03 AM04:53:32	DVR64	DVR		Alive	192.168.6.53:80
31	[2007/10/02 - PM03:26:11]	2007/10/03 AM04:53:35	DVR64	DVR		Alive	192.168.6.53:80
32	[2007/10/02 - PM03:26:14]	2007/10/03 AM04:53:38	DVR64	DVR		Alive	192.168.6.53:80
33	[2007/10/02 - PM03:26:17]	2007/10/03 AM04:53:41	DVR64	DVR		Alive	192.168.6.53:80
34	[2007/10/02 - PM03:26:20]	2007/10/03 AM04:53:44	DVR64	DVR		Alive	192.168.6.53:80
35	[2007/10/02 - PM03:26:23]	2007/10/03 AM04:53:47	DVR64	DVR		Alive	192.168.6.53:80
36	[2007/10/02 - PM03:26:26]	2007/10/03 AM04:53:50	DVR64	DVR		Alive	192.168.6.53:80
37	[2007/10/02 - PM03:26:29]	2007/10/03 AM04:53:53	DVR64	DVR		Alive	192.168.6.53:80
38	[2007/10/02 - PM03:26:32]	2007/10/03 AM04:53:56	DVR64	DVR		Alive	192.168.6.53:80
39	[2007/10/02 - PM03:26:35]	2007/10/03 AM04:53:59	DVR64	DVR		Alive	192.168.6.53:80
40	[2007/10/02 - PM03:26:38]	2007/10/03 AM04:54:02	DVR64	DVR		Alive	192.168.6.53:80
41	[2007/10/02 - PM03:26:41]	2007/10/03 AM04:54:05	DVR64	DVR		Alive	192.168.6.53:80
42	[2007/10/02 - PM03:26:45]	2007/10/03 AM04:54:08	DVR64	DVR		Alive	192.168.6.53:80
43	[2007/10/02 - PM03:26:48]	2007/10/03 AM04:54:11	DVR64	DVR		Alive	192.168.6.53:80
44	[2007/10/02 - PM03:26:51]	2007/10/03 AM04:54:14	DVR64	DVR		Alive	192.168.6.53:80
45	[2007/10/02 - PM03:26:54]	2007/10/03 AM04:54:17	DVR64	DVR		Alive	192.168.6.53:80
46	[2007/10/02 - PM03:26:57]	2007/10/03 AM04:54:20	DVR64	DVR		Alive	192.168.6.53:80
47	[2007/10/02 - PM03:27:00]	2007/10/03 AM04:54:23	DVR64	DVR		Alive	192.168.6.53:80
48	[2007/10/02 - PM03:27:03]	2007/10/03 AM04:54:26	DVR64	DVR		Alive	192.168.6.53:80
49	[2007/10/02 - PM03:27:03]	2007/10/03 AM04:54:26	DVR64	DVR	2	Motion	192.168.6.53:80
50	[2007/10/02 - PM03:27:03]	2007/10/03 AM04:54:26	DVR64	DVR	3	Motion	192.168.6.53:80
51	[2007/10/02 - PM03:27:03]	2007/10/03 AM04:54:26	DVR64	DVR	4	Motion	192.168.6.53:80



NOTE: The maximum number of items can be kept on the alert list is 1,000. When the list reached 1,000 items, the earliest alert messages will be deleted while the new ones are being saved.

Double click on the Event Messages (Alarm, Motion, or Video Loss) to view the event video in full screen. If the DVR sending the Event Messages is not currently connected to the CMS, a message box will be displayed as the following. Connect the DVR and the event video will be available.



NOTE: The Alert function works ONLY within LAN network. (Please refer to the note of the Search function)



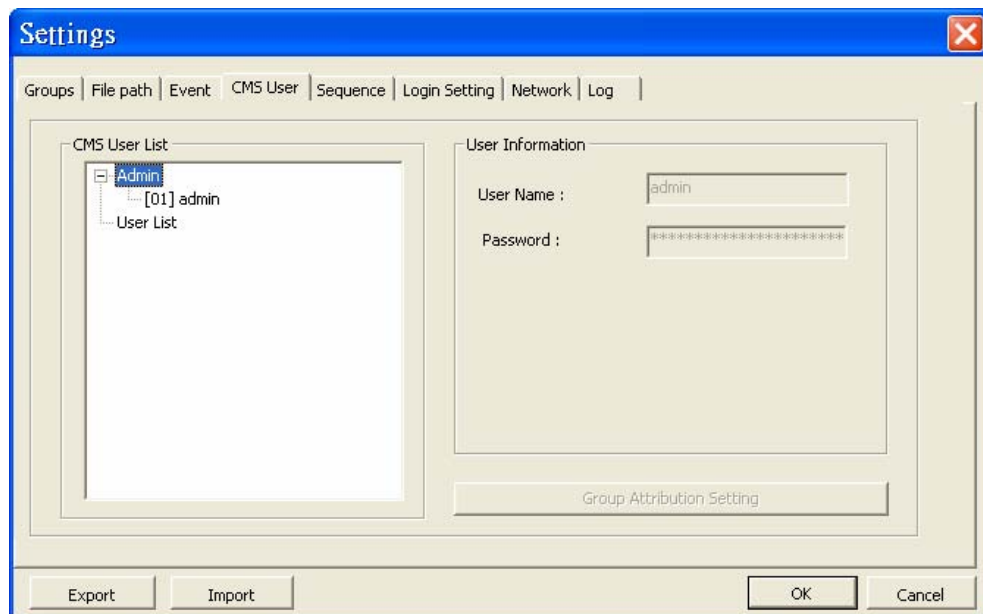
NOTE: If the alert event has not yet been added to the database of the DVR, a warning message will be shown to notify the user.

6.5 CMS User

The <CMS User> is for the management of user accounts in the CMS. You can set users' account information and privileges. The default username and password are:

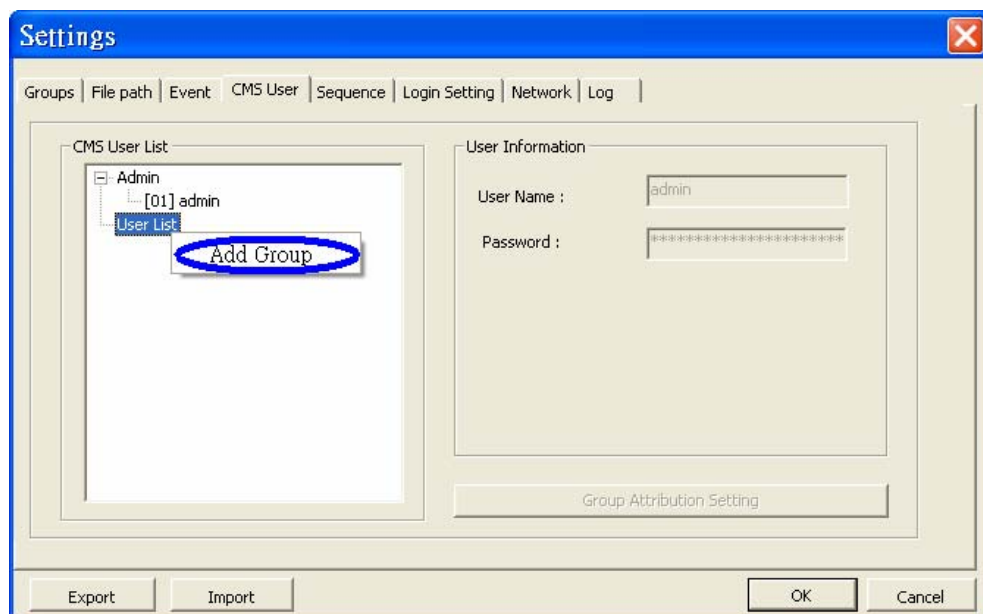
Username: admin

Password: 1234

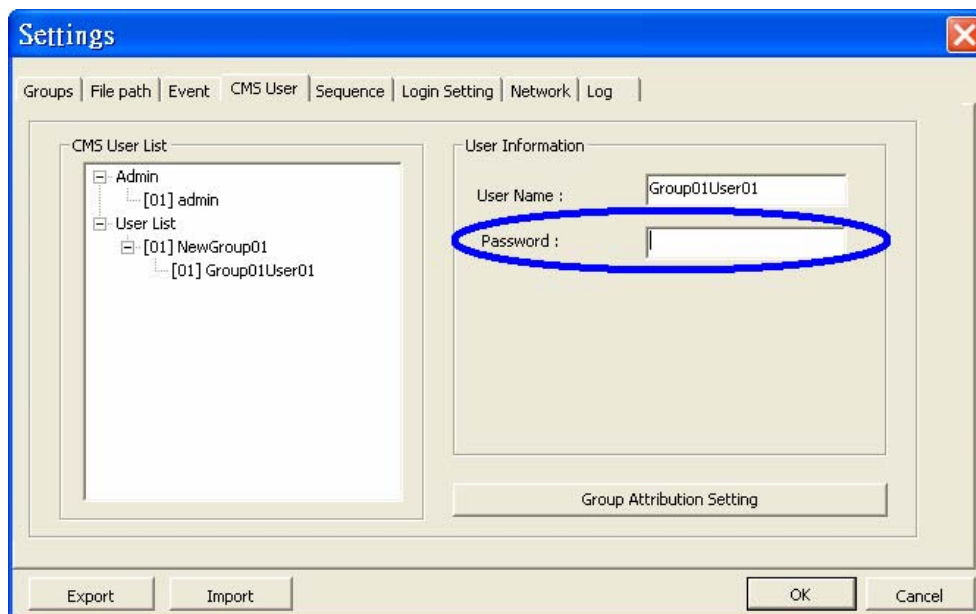


NOTE: Only users under the <Admin> group have the privilege to change the settings in <CMS User>.

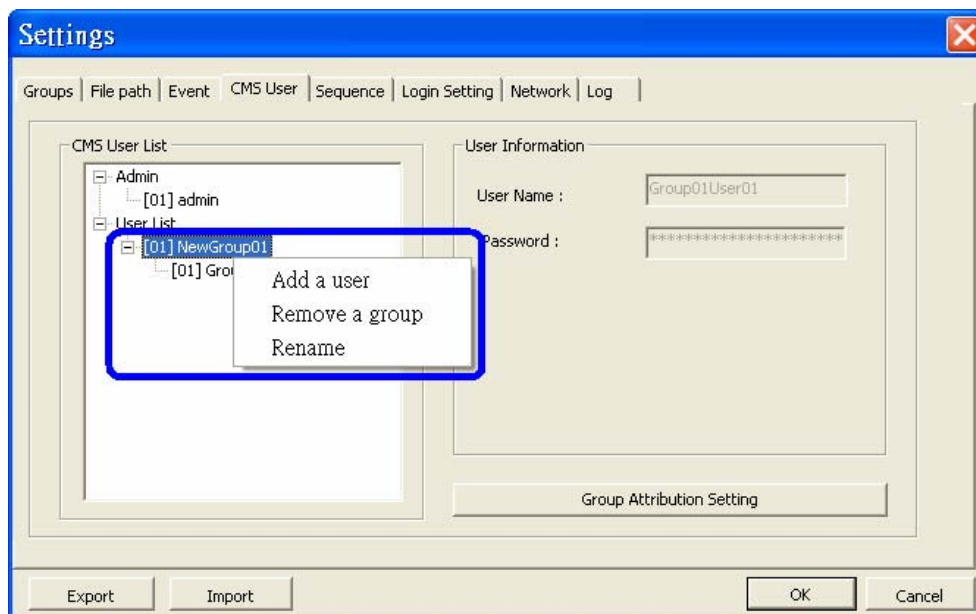
To add a user, you must first add a group. Right click on <User List> and select <Add Group> from the pull-down menu.



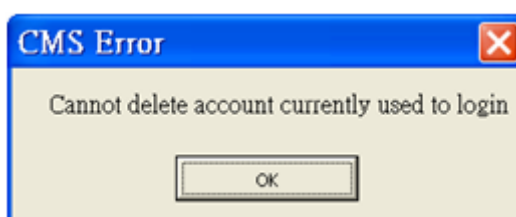
After the group is added, the first user account of the group will also be created. You **MUST** set the password for this account before you can go to the next step.



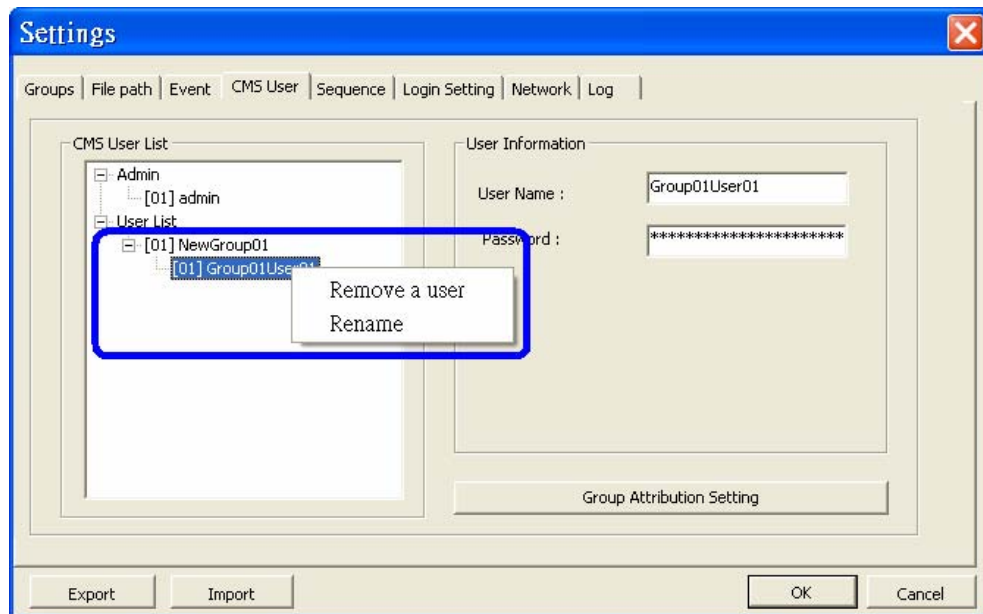
Right click on <NewGroup01> to add a user, remove a group, or rename the group.



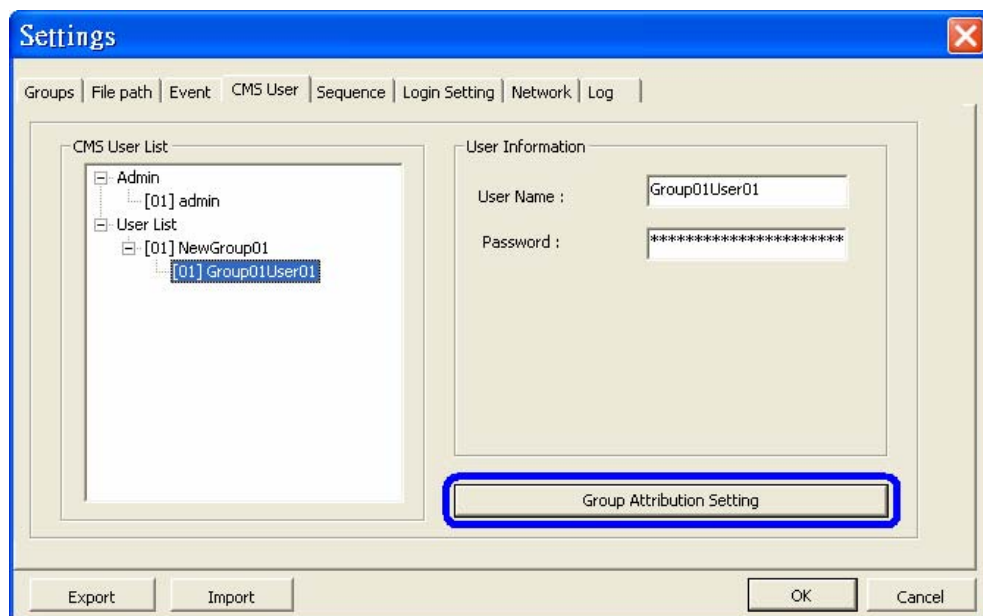
NOTE: The account currently used to login cannot be deleted.



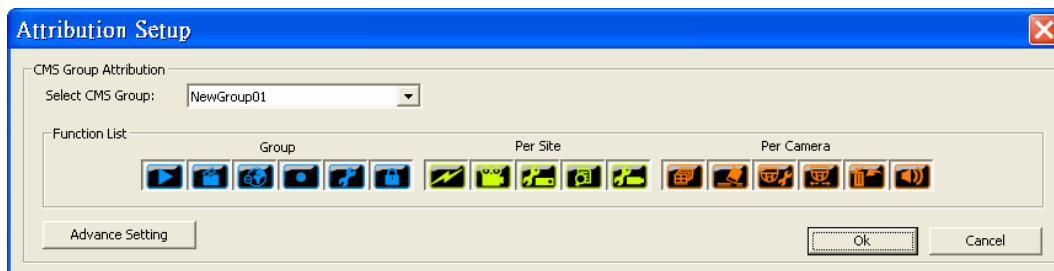
Right Click on <Group01User01> to remove a user or rename the username.



The <Group Attribution Setting> is for setting up the privileges of the selected user. You can give each user account different privileges by configuring this function.

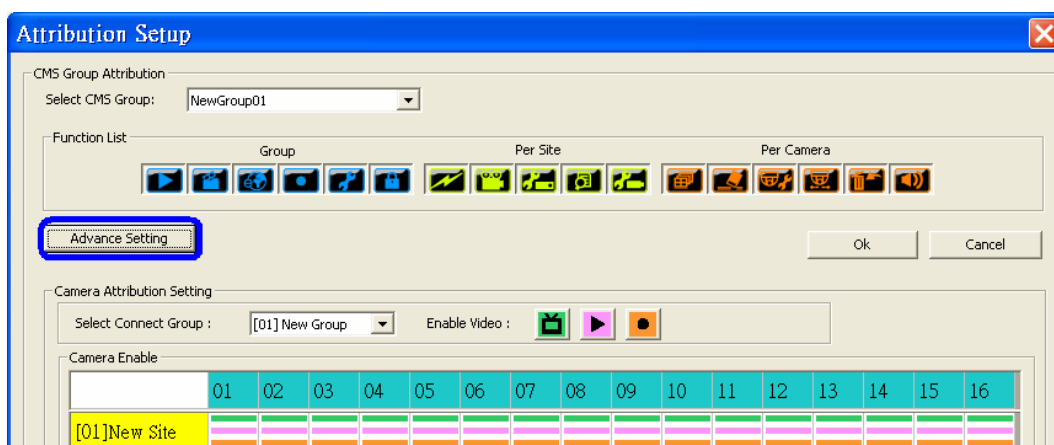


After entering the <Group Attribution Setting>, the following diagram will be shown. Select a user account in <Select CMS Group>, and you can click on the buttons to enable or disable its privileges.



- ◆ Blue buttons are CMS menu controls including: Playback, Player, Emap, Schedule Record, Setting, and Lock.
- ◆ Green buttons are site controls including: ReConnect\DisConnect, Record, Configuration, Event Search, and Camera Setting.
- ◆ Orange buttons are camera controls including: Sequence, Rename, Dome Setting, Dome Control, Remove, and Sound Notification.

Each camera can be set to enable/disable Live, Play, or Record function individually after clicked on <Advance Setting>. Refer to the following figure for details.



NOTE: The preset is 16 cameras for all sites. The real number of cameras per each site will not be detected.




NOTE: These settings will affect the whole operation of the CMS. Please be very careful while configuring the settings.

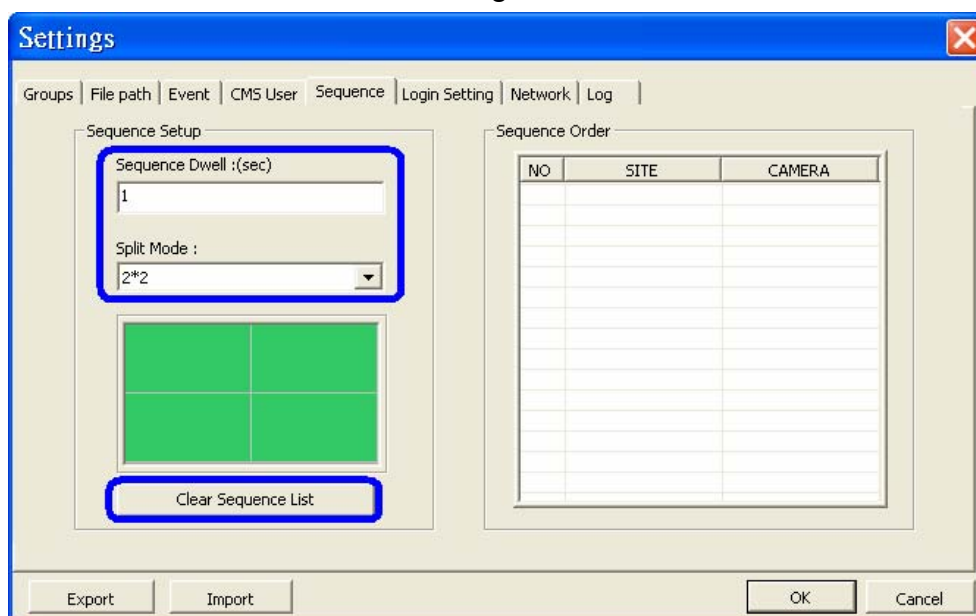
Next time when you login, you can choose to enter the CMS either as the admin or the user.

6.6 Sequence

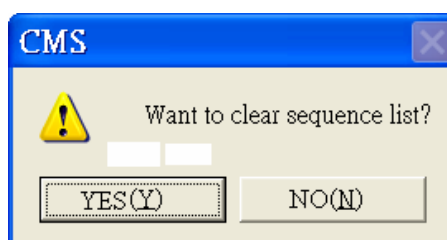
This function is used to set the displaying sequence. Before starting the sequence, you need to add the channels to the sequence list. Right click on the channel and select <Add to Sequence> to add, or <Remove from Sequence> to remove. Note that when the channel is added to the sequence, a capital "S" will be displayed as shown in the figure below.



After the channels are added to the sequence, click on  and choose <Sequence> to setup the sequence. Under the <Sequence Setup> option, you can setup the dwell time (1 to 120 seconds), and split mode (2*2, 3*3, 4*4, or 5*5). <Sequence Order> lists the channels that have been added to the list in order. Click <OK> to save the settings.

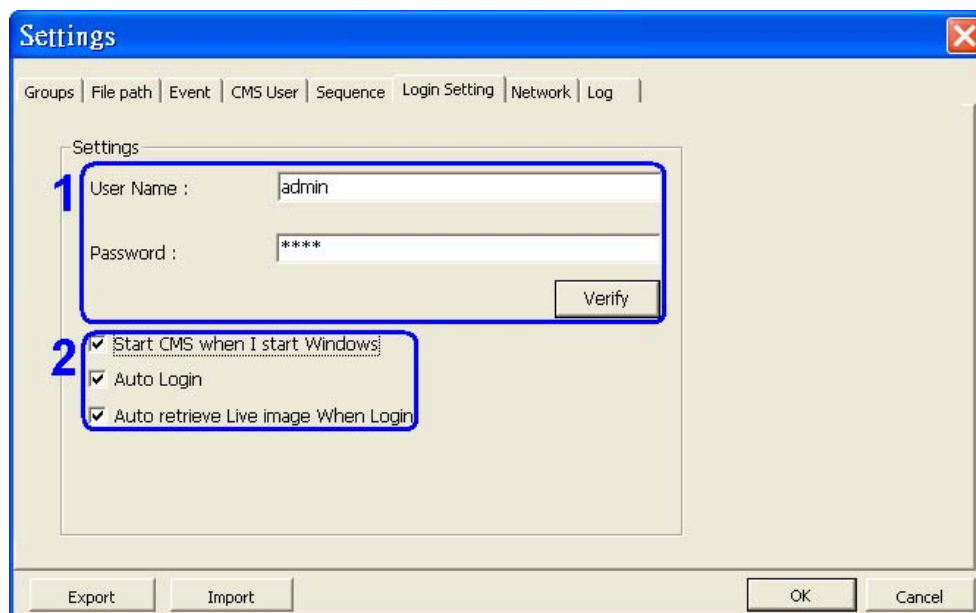


Click <Clear Sequence List> to empty the list. A message window will be shown for confirmation.



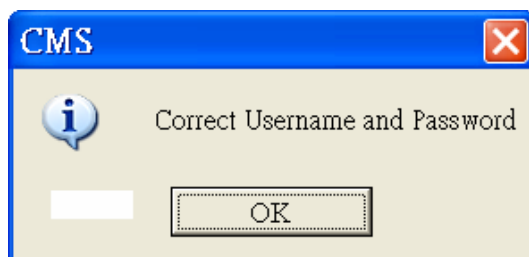
6.7 Login Setting

The user can edit options regarding login settings in this section. Administrator username and password is required to edit the setting.



As shown in the above picture, the box marked “1” is where the user can enter a set of username and password to be used for auto login. The “Verify” button can help the user to check if the username and password are correct. The following messages boxes will show to inform the result of verification.

Correct

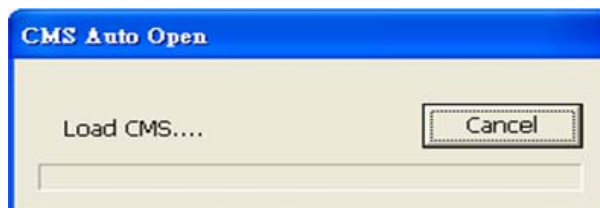


Wrong



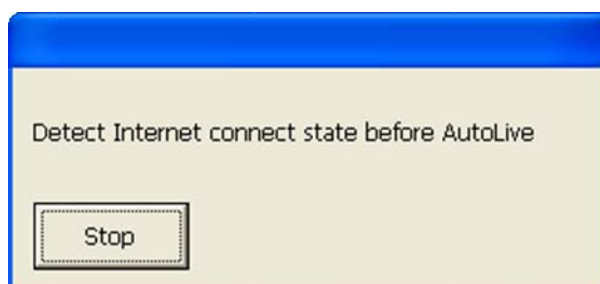
The box marked “2” contains the options regarding automatic actions. Clicking the first option “Start CMS when I start Windows” to request the computer to open CMS in the mean time when the system startup. Note that the other two options “Auto Login” and “Auto retrieve Live image When Login” will be checked at the same time. Nonetheless, it is still the user’s choice to determine the favorite setting.

The following message will be shown when the CMS is auto opening after the system started up. Click “Cancel” can terminate opening the CMS.



Click the second option “Auto Login” to automatically login when the CMS starts. Remember to enter and verify username and password in box 1.

Click the third option “Auto retrieve Live image When Login” to automatically connect to the sites in the start group when the CMS starts. Detection of internet connection will be performed before hand and the following message will be displayed. Click <Stop> to terminate the detection and AutoLive will not be initiated.



6.8 Network Setting

The CMS provides the option of connection via proxy server for DynaColor DVRs and Video Servers (D7521). Click <Network> tab and the setting items are shown as the following.

If you wish to create the connection via a proxy server, check the box “Use a proxy server for your CMS connection.” Then enter the IP address and port of the proxy server. Enter username and password if authentication is required.



NOTE: The CMS supports the most common authentication keys “Digest” and “Basic”. The authentication will be automatically detected and performed.

Check the box “Bypass proxy for local address” to disable connection via the proxy server for local LAN network.

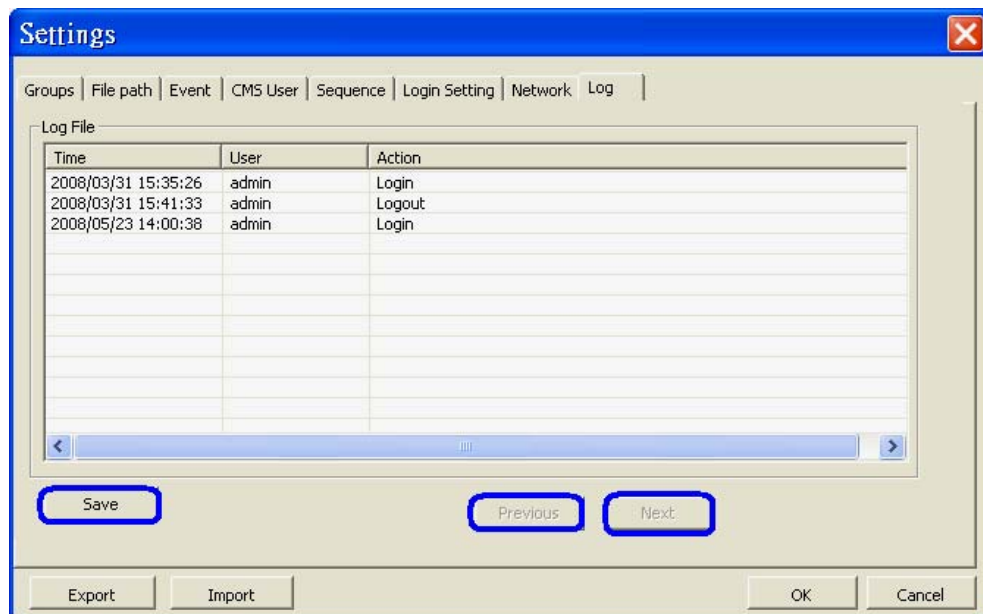
The <Advance> button allows the user to edit an exception list where addresses in the list will not be connected via the proxy server. The addresses can be subnets. Refer to the picture on the right for an example of the exception list.



NOTE: All functions of the proxy server are tested with the most common “Squid Proxy Server”. Some other proxy servers may not work properly.

6.9 Log Data

The step by step operation of the CMS will be recorded by the CMS log function. Refer to the following picture for data kept in the log file.



The list will display 1,000 items with latest ones shown at the bottom. The list can store up to 10,000 items in circulation, which means the oldest ones will be deleted when the number of items exceeds 10,000.

Save button:

Click this button to save the log file to a desired destination.

Previous button:

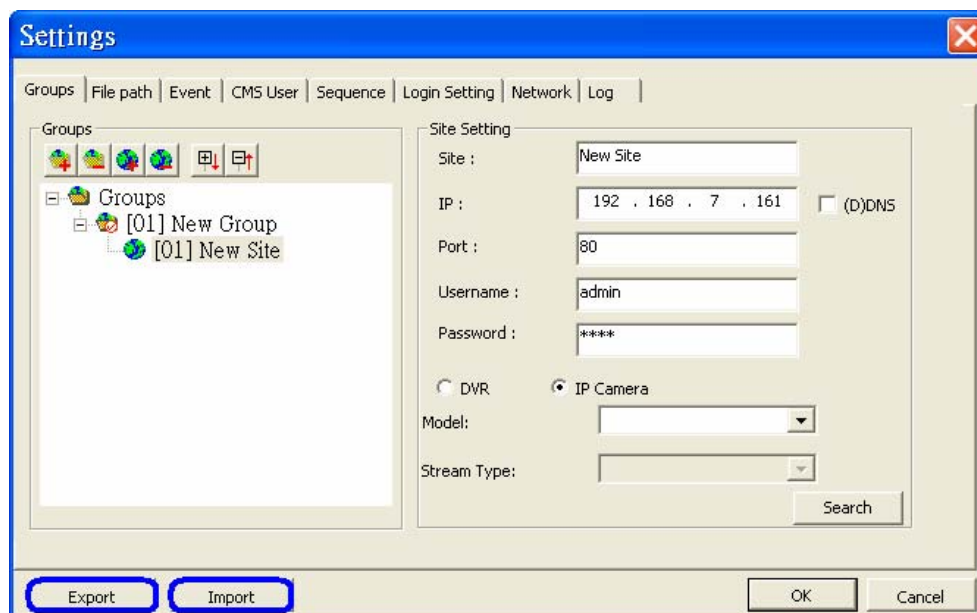
Click this button to show previous 1,000 items.

Next button:

Click this button to show next 1,000 items.

6.10 Export or Import Settings

The export/import function provides users the option to backup the settings as needed.



To export the configuration, click <Export> and select a directory to save the *.zip file.

To import a previous saved configuration, click <Import> and find the *.zip file that was previously saved.



NOTE: After a setting is imported and saved, the imported setting will be loaded immediately and the CMS will reconnect to the sites in the live group..

7. Operation of the CMS

There can be at most **4** CMS instances opened simultaneously. If the PC is connected to more than one monitor, for example 4, then the PC can open up to 4 CMS instances at the same time on the 4 monitors respectively. However the processor and RAM of the PC will limit the number of CMS instances as well. Note that all monitors have to be set to the same resolution.

CMS multiple instances limitation according to the PC:

Dual Core or Hyper-Threading	RAM \geq 512MB	Open 1 CMS
	RAM \geq 1GB	Open up to 2 CMS
	RAM \geq 1.5GB	Open up to 3 CMS
	RAM \geq 2GB	Open up to 4 CMS
Single Core and Frequency > 2.0GHz	RAM \geq 512MB	Open 1 CMS
	RAM \geq 1GB	Open up to 2 CMS
	RAM \geq 1.5GB	Open up to 3 CMS
	RAM \geq 2GB	Open up to 4 CMS
Single Core and Frequency \leq 2.0GHz	RAM \geq 512MB	Open 1 CMS



NOTE: It is recommended to keep the connected channels within 512 channels if multiple CMS instances are opened.

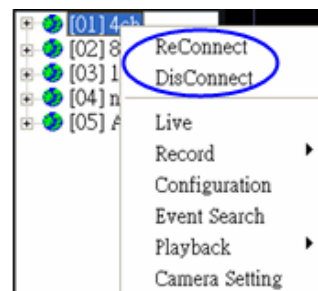
7.1 View Live Image / Assign Camera

The user can view live video or connect to the connected DVR using the live

button. Click on the  button to see the live view.

To connect/reconnect/disconnect the sites

If the connection between the CMS and the connected DVR has been interrupted, you can reconnect to it by right clicking on the **Site**, and select <ReConnect> from the pull-down menu. You can also disconnect certain sites by selecting <DisConnect> from the pull-down menu.



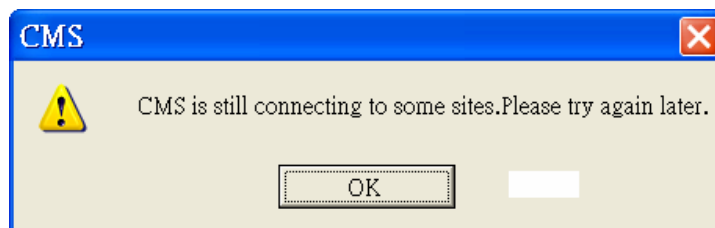
The CMS will automatically reconnect failed connection under the following circumstances.

- A. When the CMS starts to connect to the sites, it will create a log for connection results. For those connections that failed at first attempt AND satisfied either one of the following constrains will be placed under reconnect list.
1. IP address has been specified.
 2. The result is not due to lack of authority.
 3. The result does not match the following: Channel Full, Admin Full, or Site full.
- B. If the setting of an IP camera was changed and caused the IP camera to reboot, the connection between the CMS and the IP camera will be disconnected. That means no image will be transferred into the CMS.

The CMS will attempt to reconnect the failed connections described above in every 7 minutes.



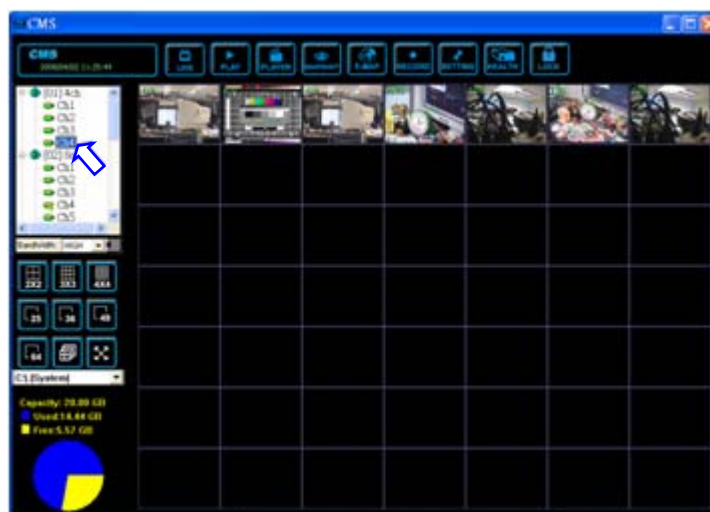
NOTE: The user is not allowed to close the CMS if it is currently trying to connect to some sites. An error message will be displayed as below.



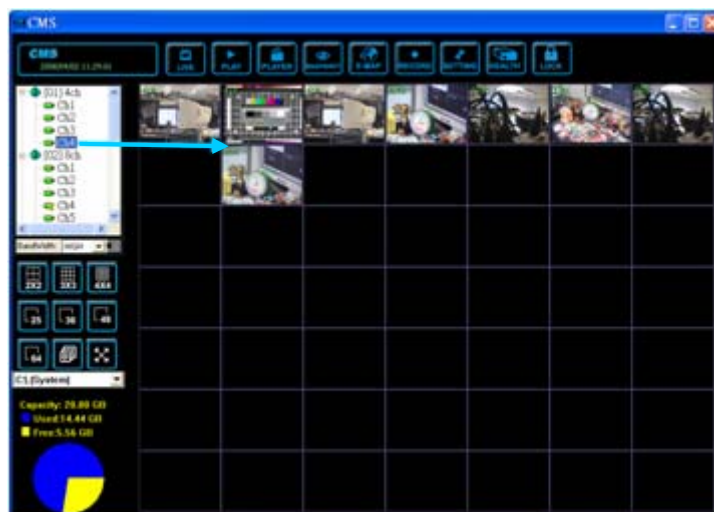
To assign a channel/site to certain window(s)

The CMS allows you to assign any channel/site in the site tree to any grid of the CMS main window.

Step 1: Click and hold the channel/site you want.



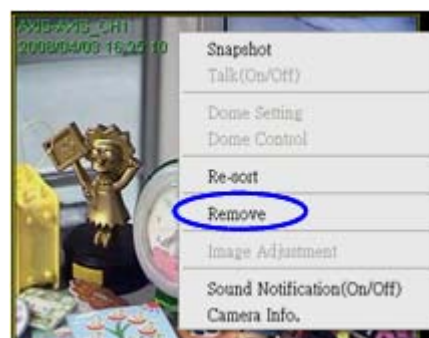
Step 2: Drag and drop it onto the window that you want to assign in.



Right click on any channel and select <Re-sort> to rearrange camera images of connected sites in order, up to 512 channels.



Alternatively, you can also remove any channel by right clicking on the grid and select <Remove>. Or you can select any grid and press <Delete> on the keyboard to remove the channel. Note that clicking <Re-sort> will restore the removed channels, or you can add the channels back to any grid via drag and drop.



NOTE: These functions will not be accessible in sequence mode.



NOTE: The layout arrangement can be individually memorized for each connect group. Also, the CMS will keep the layout arrangement when it's closed and restore the same layout when it's opened again.

7.2 Camera Setting / Camera Info.

Configure Camera Setting:

Camera setting can be configured by right clicking on a site and select <Camera Setting>.

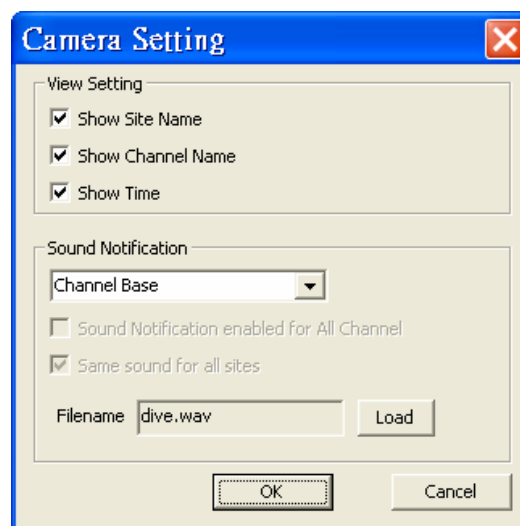
Camera viewing setting enables the user to set the display of *Site Name*, *Channel Name*, or *Time* on the top-left corner of the image.



Camera sound notification enables preset sound file to be played when an alert event occurs. It can be set via Site Base or Channel Base:

Setting via Channel Base:

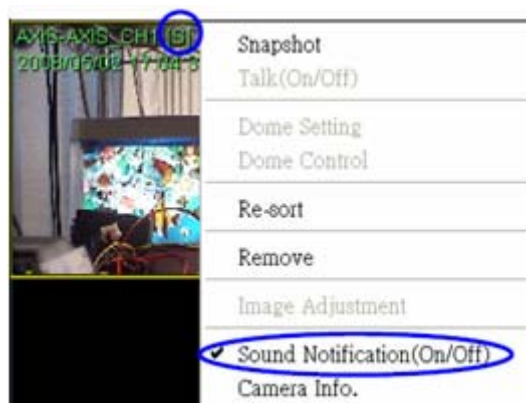
Select <Channel Base> from the menu and click <Load> to select a sound file. Then click <OK> to save the setting. Next right click on a channel grid to apply the sound setting by selecting <Sound Notification(On/Off)> from the pull-down menu. Note a message window will arise if sound file is not selected yet.



Quick Hot Key:

Click a channel grid and press the following keys:

- Ctrl + n: Sound Notification ON
- Ctrl + f: Sound Notification OFF



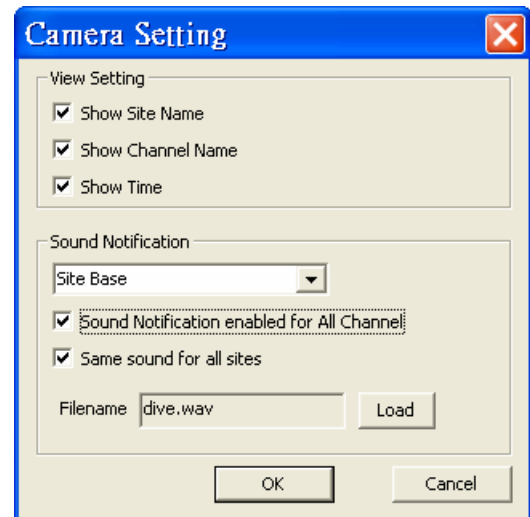
NOTE: The sound files selected will be saved in CMS folder \Setting\SoundNotification\.



NOTE: On the top-left of the grid will show [S] to indicate sound notification is turned on.

Setting via Site Base:

Select <Site Base> from the menu and check the option <Sound Notification enabled for All Channel> and/or <Same sound for all sites> as needed. Click <Load> to select a sound file. Then click <OK> to save the setting. The sites have the option <Same sound for all sites> checked will play the same sound, and the latest set sound will be played.



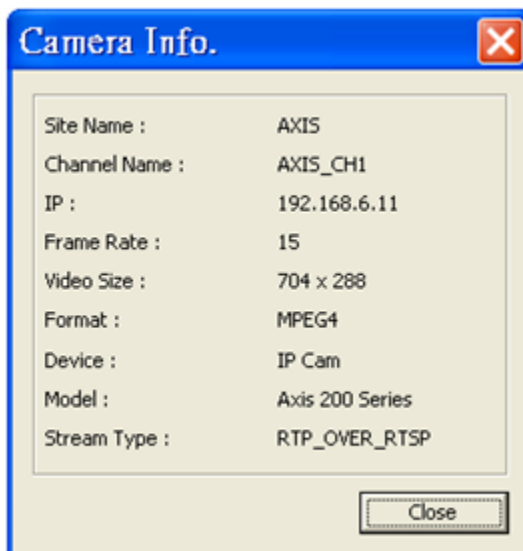
Quick Hot Key:

1. Click a channel grid and press the following keys:
 - Ctrl + Alt + n: Sound Notification ON for all sites
 - Ctrl + Alt + f: Sound Notification OFF for all sites
2. Click a site in the Site Tree and press the following keys:
 - Ctrl + Alt + n: Sound Notification ON for the selected sites
 - Ctrl + Alt + f: Sound Notification OFF for the selected sites

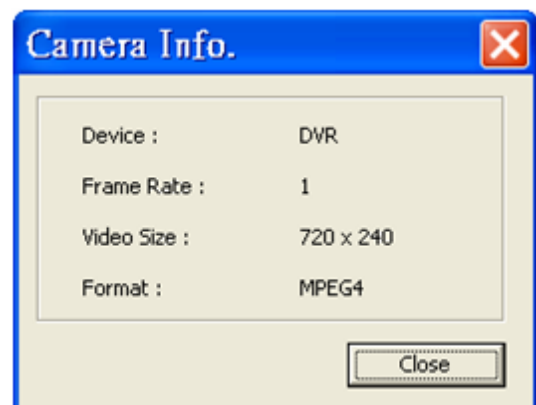
View Camera Info:

The Camera Info can be viewed both in CMS and CMS Player. Right click on any channel grid and select <Camera Info.> from the pull-down menu to view the information. Refer to the following for examples:

Camera Info of CMS



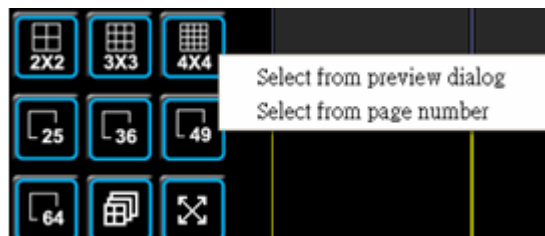
Camera Info of CMS Player



7.3 Display Modes

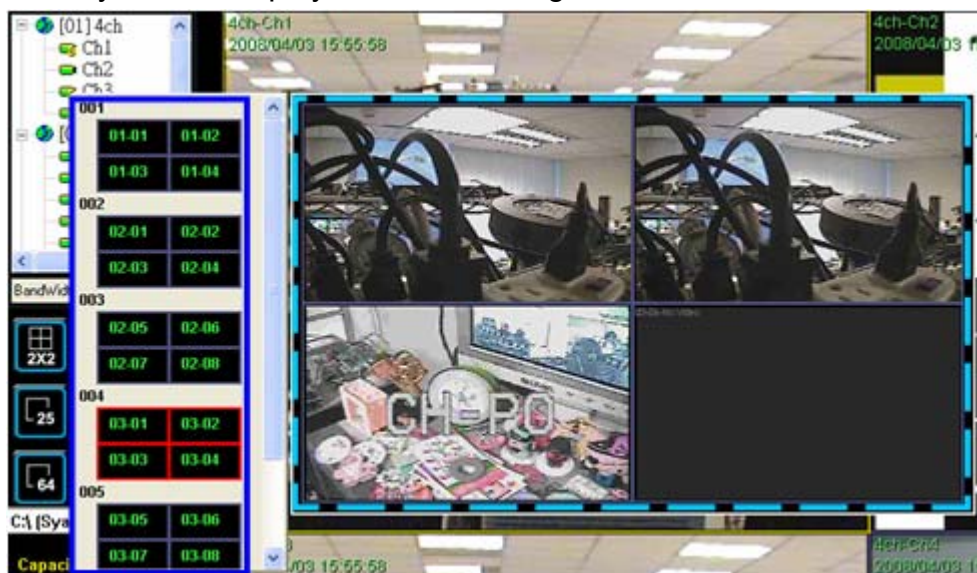
The available display modes are single channel, 2*2, 3*3, 4*4, 5*5, 6*6, 7*7, and 8*8. To view in single channel, double click it in the site tree or on the grid.

To view in multiple-window mode, right click on the desired icon and a menu will be display as on the right. The selections are described as the following.



Select from preview dialog:

Choose this option and the picture as below will be shown. When the mouse pointed to any item, the preview display will be shown on the right. Double click on any item to display it on the viewing area.



Select from page number:

Choose this option and the picture as on the right will be shown. Select any page number to display the chosen page on the viewing area. Since the maximum channel connection is 512ch, the choices of page number for 2*2 will be from 1 to 128. A control icon <X> is provided to exit without selection.





7.4 Zoom In/Out Control via Mouse

Both in CMS and CMS Player, zoom in/out can be easily control via mouse scroll wheel. Either in CMS or CMS Player, click on any grid that you wish to zoom in viewing area. Move the scroll wheel away from you to zoom in and the screen will show like the following picture.



On the upper left-hand corner will show zoom-in multiple. The maximum multiple is X7. Also on the lower right-hand corner will show the position of current viewing area, shown as an inner white rectangle, comparing with the original screen, shown as an outer rectangle frame.



In addition, the viewing area can be dragged and moved by left clicking and holding the mouse while moving. On a zoomed-in screen, the mouse pointer

will change to  and when the mouse is clicked the pointer will become  to indicate that the image is dragged.



NOTE: This function will use up a lot of CPU resources. It is recommended not to open too many programs at the same time to avoid crash of CPU.

7.5 Sequence Display

To start displaying the sequence list, click on  to start the sequence. The color of the icon will change to red () when the sequence mode starts. The display mode will be what was set in sequence setup (2*2, 3*3, 4*4 or 5*5).

Another way to start displaying the sequence list is by right clicking on the sequence icon and a list will be displayed as shown below. Move the mouse to any item and the preview window will be displayed on the right. This list gives choices to the user to begin displaying the sequence from any item. Double click on the desired item to start sequence mode.





After the sequence is started, you can still change the split mode by clicking on the display mode icons for 2*2, 3*3, 4*4 or 5*5. However, the starting split mode set in <Sequence> will remain the same. Note that icons for 6*6, 7*7 or 8*8 will not be accessible because they are not allowed to be shown in sequence mode.

The following functions are disabled in sequence mode:

1. Right click to see channel menu
2. Zoom In/Out
3. Drag and drop channels or sites to the display grids
4. Remove any channel grids on the display windows



NOTE: If you enabled the <Event Full Screen> and an event is triggered while running the sequence, the CMS will display event full screen. The sequence will not resume until event full screen ends.

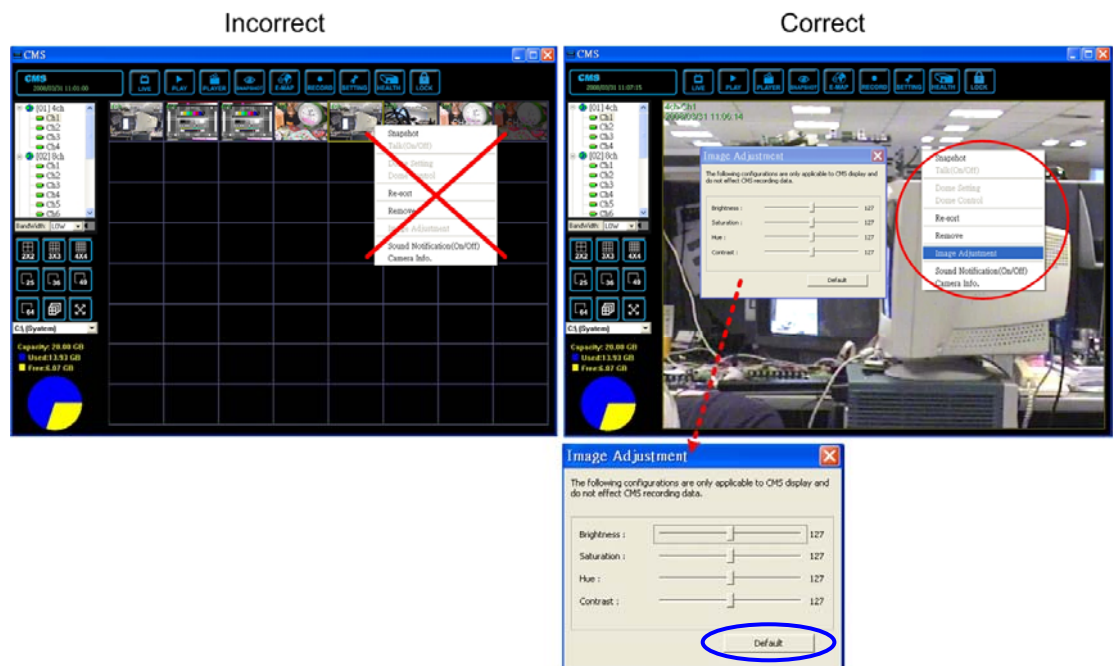
Click on  or  to exit the sequence mode

7.6 Adjust the Image

The image can be adjusted in the CMS and the CMS player. Double click on a channel, then right click on it. Select <Image Adjustment> from the pull-down menu, and the image adjustment window will be displayed. You can change the brightness, saturation, hue, and contrast of the channel.



NOTE: You cannot adjust the image before enlarging the channel to fit the window. Refer to the following for correct and incorrect examples.




Click the <Default> button to reset the value to the original preset.

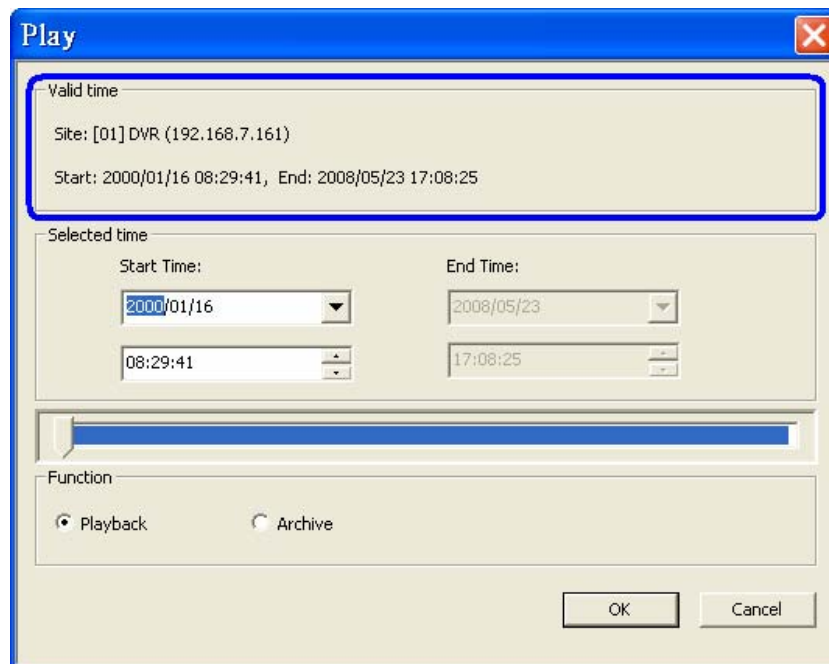


NOTE: The <Image Adjustment> function has no effect on the recorded video. Whatever changes made to the <Image Adjustment> will not be applied to the recorded video.

7.7 Playback Recorded Video

This function allows the CMS user to retrieve and play videos stored in the connected DVR. Click on  button, the figure below will be displayed.

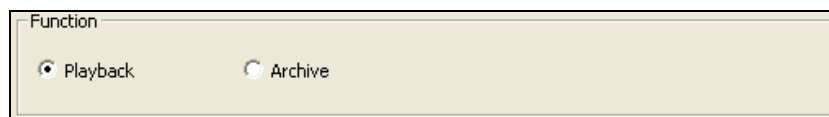
<Valid Time> indicates that the connected DVR starts recording from a certain period of time and ends at a certain period of time.



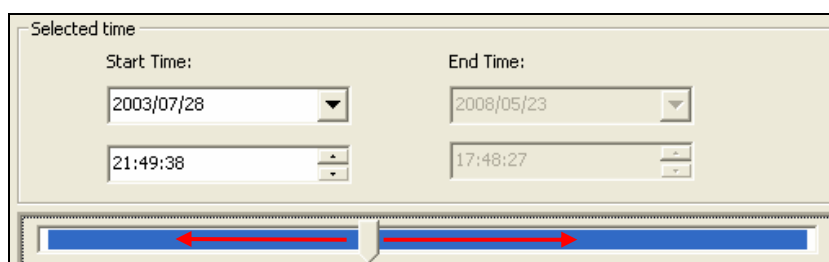
To playback the video stored in HDD of the connected DVR

To play the video stored in the connected DVR, please follow these steps.

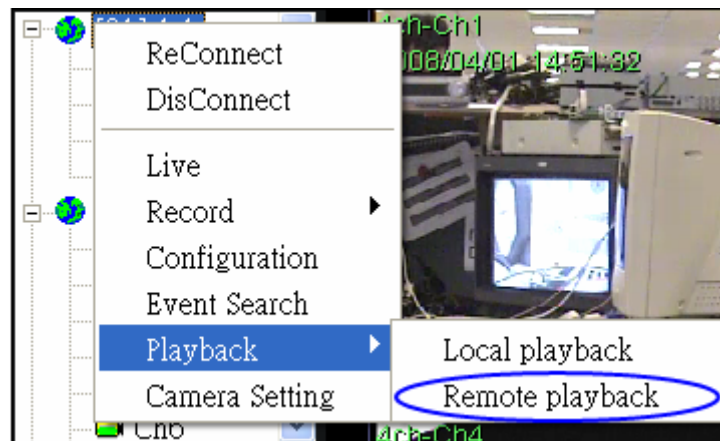
Step 1: To play the recorded video from the connected DVR, click <Playback>.



Step 2: Specify the starting time that you want to playback by setting the <Selected time> or by moving the arrow to the left (backward) or to the right (forward), and click <OK> to play the video.



The other way to playback video is to right click on the site and select <Playback> → <Remote Playback> from the pull-down menu.



To save the *.drv files to your local computer

To save the video to the local computer, please follow these steps.

Step 1: If you want to save the *.drv files to the local PC, click <Archive>.




Step 2: Specify the Start Time (<Set start>) and End Time (<Set end>) and click <OK> to save the DRV file to your designated archive path. (The default archive path is "C:\Program Files\CMS\Archive")

Step 3: After the user click <OK>, the CMS will play the archived playback. Close the <Archive> window to exit.



To playback video stored in the HDD of local computer

There are two ways to playback the videos stored in the local computer. Note that this is for playing videos that have already been saved to the local computer.

Click on , or right click on the site and select <Playback> → <Local Playback>.



After selection, the CMS Player will be displayed. The CMS Player, which is a compact version of the standard DVR Player, is shown as the figure below.



Scroll down the <FILE> menu and select <OPEN VIDEO FILE>, or click on  to open the video file.



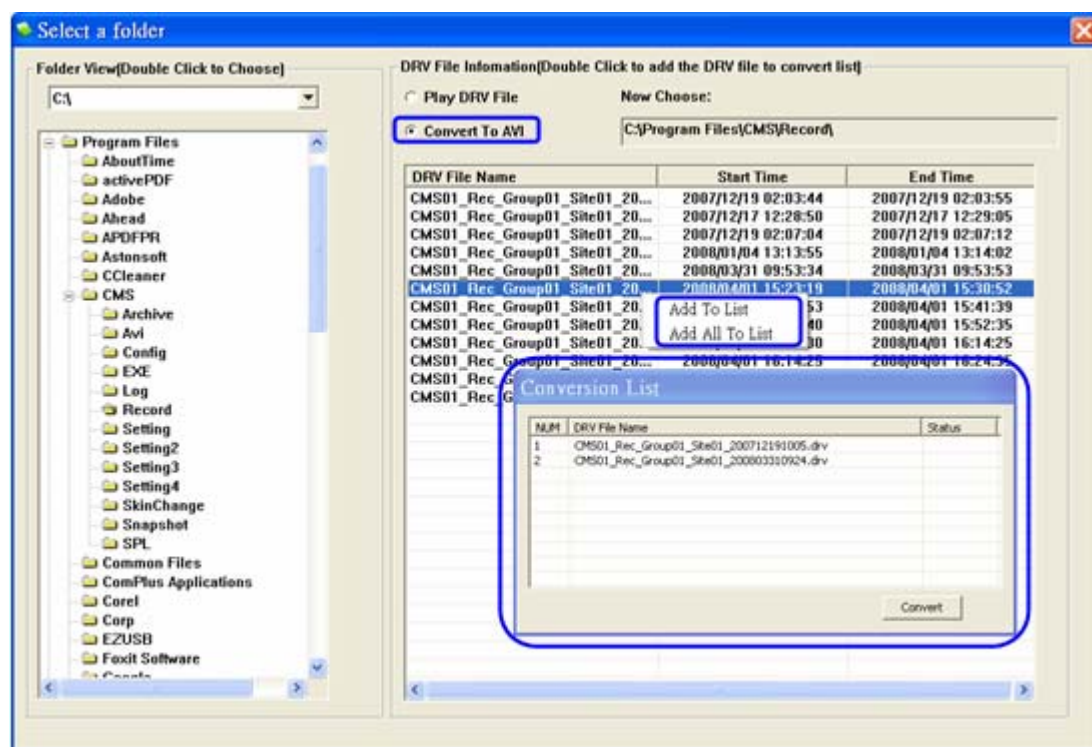
NOTE: The CMS Player can only be opened within the CMS program. If you try to open the CMSPlayer.exe, an error message will pop up.

To convert *.drv files to *.avi files

Scroll down the <FILE> menu and select <OPEN VIDEO FILE>, or click on

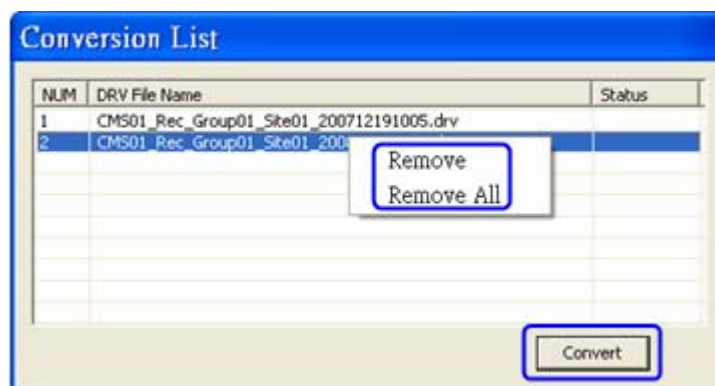


, and the “Select a folder” window will be displayed. On the top center of this window, click <Convert To AVI> and a “Convert List” will be shown. Double click the file you wish to convert and it will be added to the list. The other way to add files to the list is to right click on the file and select <Add To List> or <Add All To List>.

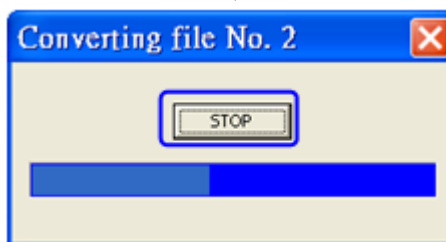


NOTE: The list can contain files from different folders.

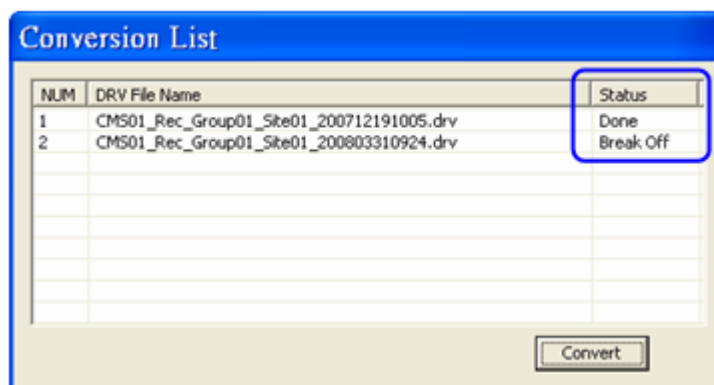
If you wish to remove any file from the conversion list, right click on the file and select <Remove> or <Remove All> to delete files from the list. Click <Convert> to start conversion of files on the list.



A small window will be displayed as below to show the progress of conversion. If you wish to terminate the conversion, click <STOP> to abort.



If the conversion is aborted, the status column will show "Break Off" for the specific file aborted. If the file failed to be converted, the status column will show "Fail".



If the conversion is completed, the message as below will be displayed. The converted files will be stored under folder: "C:\Program Files\CMS\Avi".

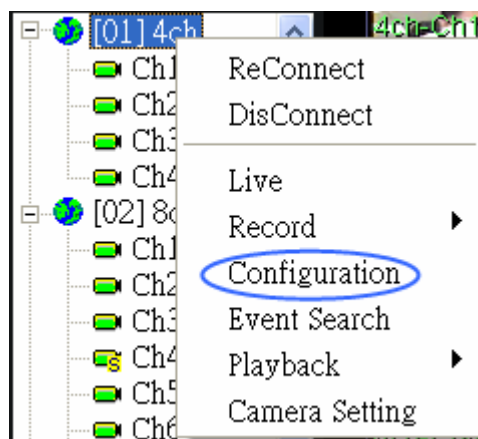


For more information about other CMS Player operations, please refer to the **Appendix A**.

7.8 Configure the OSD Menu of the Connected Site

The OSD menu of the connected site contains a list of items that are used to configure the connected site.

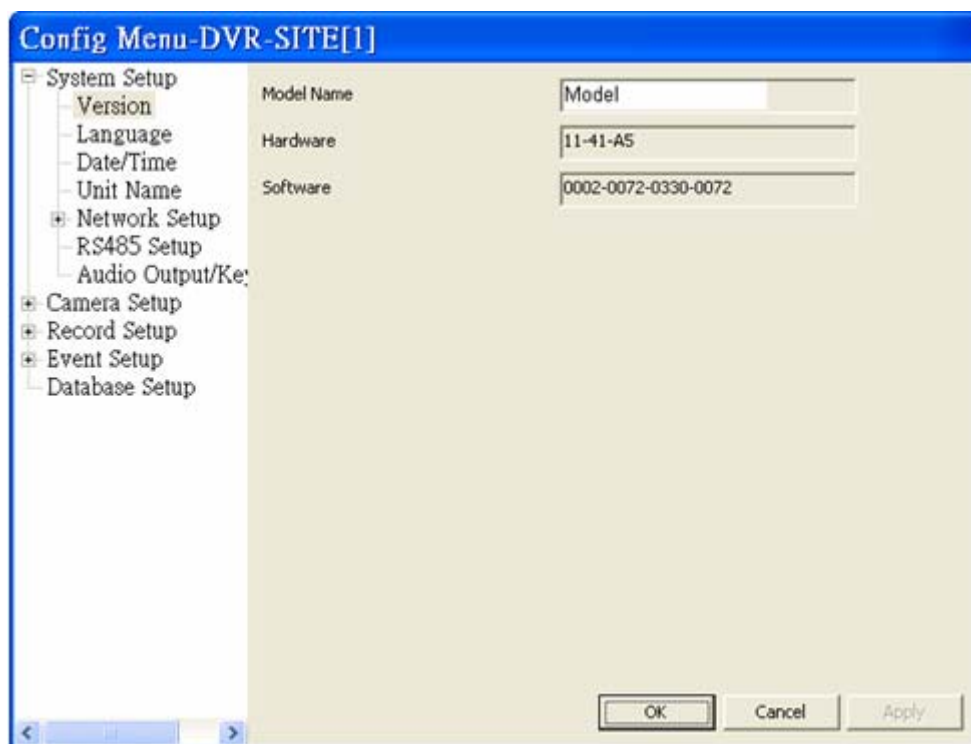
Right click on the **Site** and select <Configuration> to open the OSD menu.



The OSD menus for DVR, IP camera, and Video Server are different from each other. Refer to the following for examples.

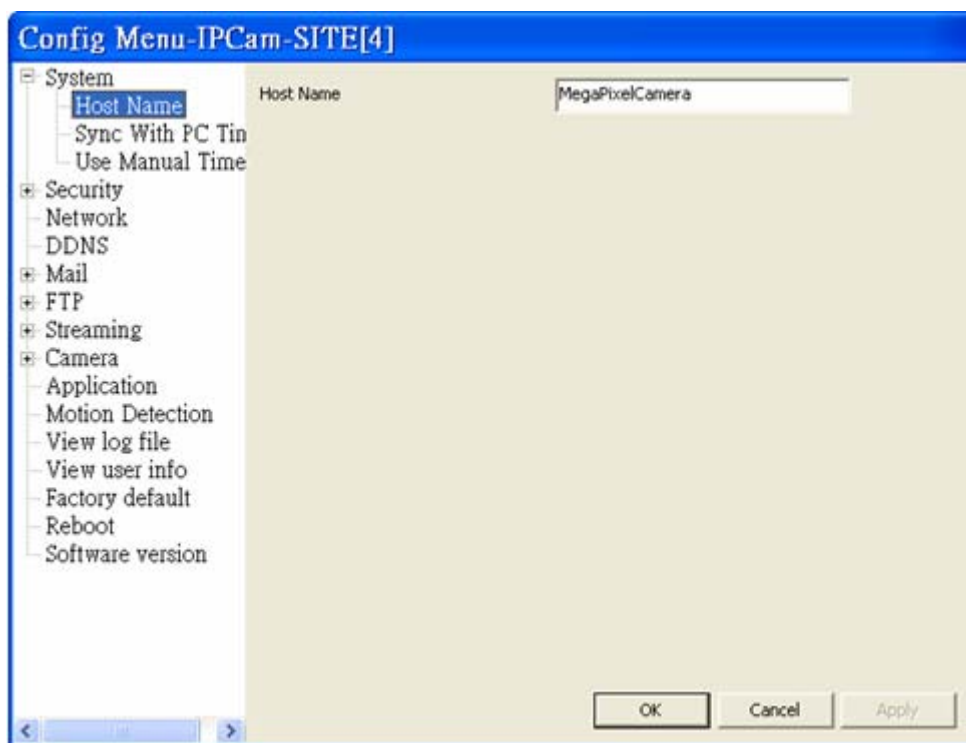
OSD Menu of a DVR

The Menu function is similar to the **DVRRemote** Software. Please refer to the DVR User's Manual for detail instruction.



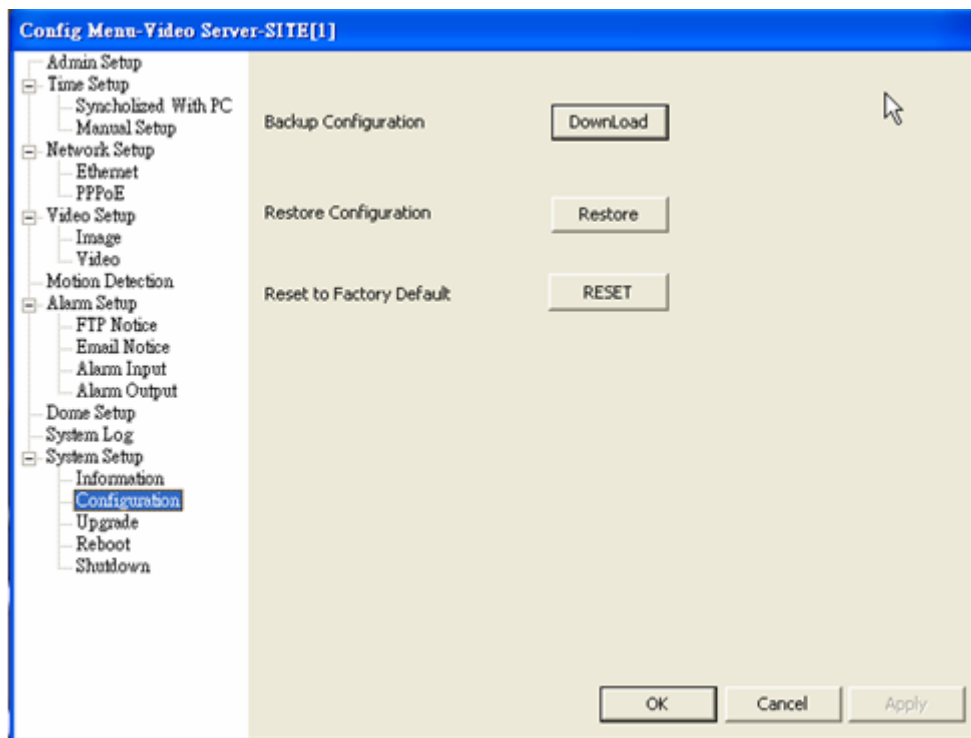
OSD Menu of a IP Camera

Please refer to the IP Camera User's Manual for detail instruction.



OSD Menu of a Video Server

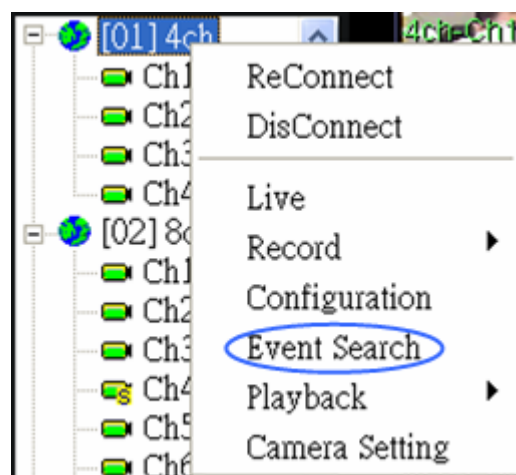
Please refer to the Video Server User's Manual for detail instruction.



7.9 Search for Event Videos

The CMS is capable of searching, playing back, and archiving the event videos.

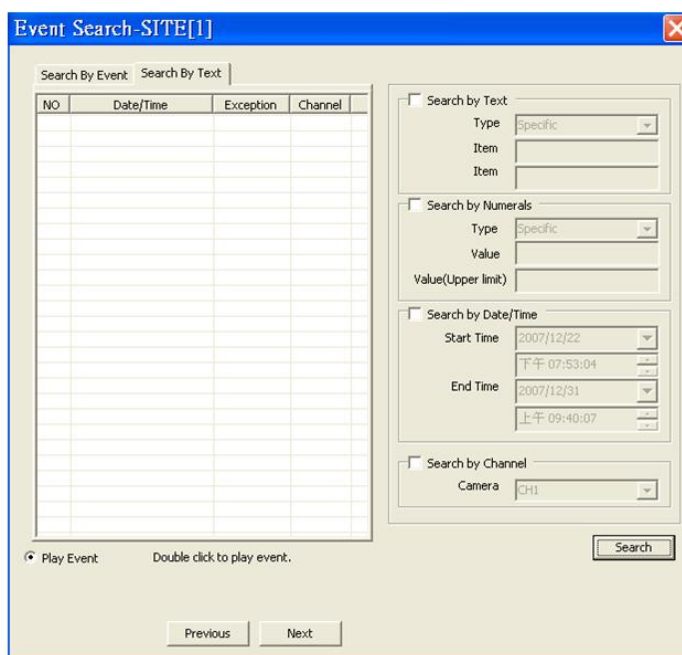
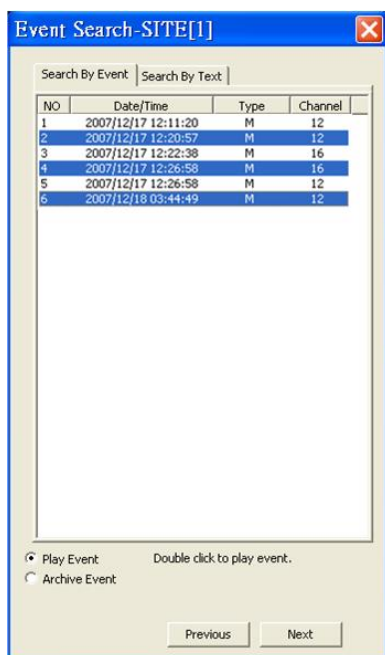
Right click on the **Site** and select <Event Search> and the <Event Search> window will be displayed.



You can search the event list of the connected DVR. If you have installed the POS module, you can either search by event or text.

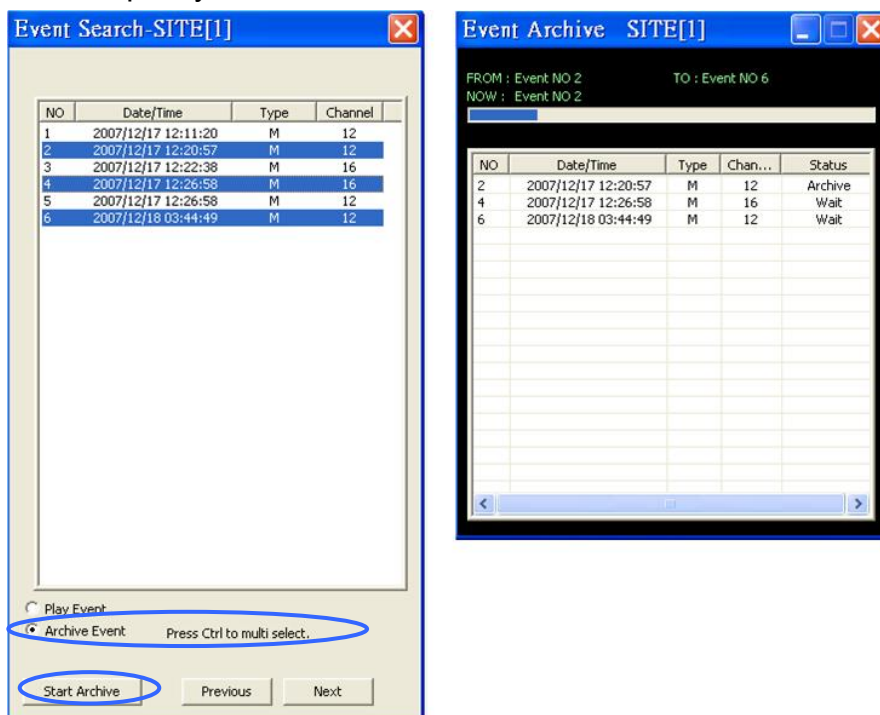
To play the event video

Select “Play Event” and double click on any item to view the playback of the event.



To archive the event video

Select “Archive Event” and press the “Ctrl” key to select multiple event videos to be archived. The maximum items can be selected is 1,000, which is the capacity of the list.





Click on “Start Archive” and an “Event Archive” window will pop up. The progress bar shows current downloading position. The status column shows the event is under “Archive”, “Wait”, or “Done” condition.



NOTE: The event archive or normal video archive for different sites can be performed simultaneously.

7.10 Take a Snapshot

The  is a simple screen capture tool. When you click on the  button, it will capture the screenshot of the window that you are currently viewing. You can save the screenshots to the default path “C:\ProgramFiles\CMS\Snapshot” or the folder that you have previously set in the file path. Please refer to <Setup the File Path> for more information about changing the file paths.

There are 2 ways to take the snapshot. One is to click on <SNAPSHOT>, and the snapshot window will be displayed. Select <OK> to save the file.

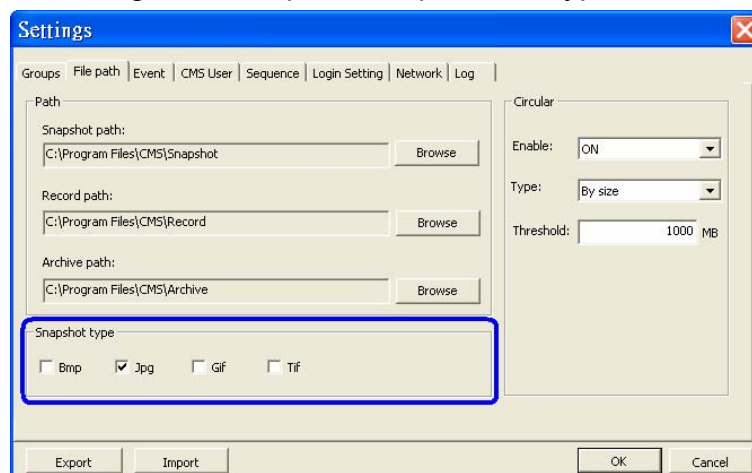


The other way is to right click on the window, and select <Snapshot>. Note that it will only capture the image of the selected channel. The file will be saved without displaying the image.



NOTE: The default image format is *.jpg. If you have selected more than one file types and took the snapshot, you will get more than one files of the same snapshot image.

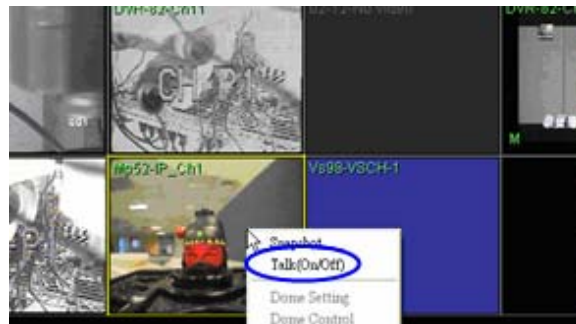
Please go to <Settings> to setup the snapshot file type.



7.11 2-Way Audio Talk

2-way audio talk function enables the user to communicate with the camera side. Currently the only supported camera types are MegaPixel IPCam and Video Server.

Right click on the channel and select <Talk(On/Off)> from the pull-down menu.



If the talk function is successfully turned on, "Talk" will shown on button left of image. The user can speak through the microphone now to communicate with the camera side.



Currently supported 2-way audio types are:

Camera Type	Audio Type
Video Server	PCM audio type
MegaPixel IPCam	ALaw and uLaw audio type



NOTE: MegaPixel HTTP Stream Protocol and all other audio types currently do not support 2-way audio.

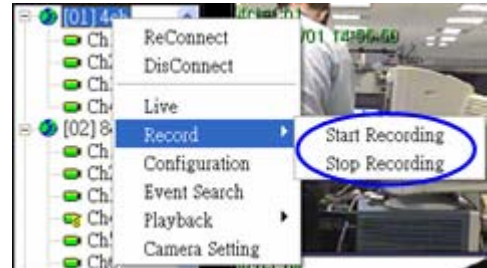


NOTE: The communication mode is one to one. Broadcasting function currently is not available.

7.12 Instant Record Function

While the videos are usually recorded to the connected DVR, the user can choose to instantly record live and playback video clips to the local computer as an option.

Right click on the **Site** and select <Start Record> to start recording, and <Stop Record> to stop recording.



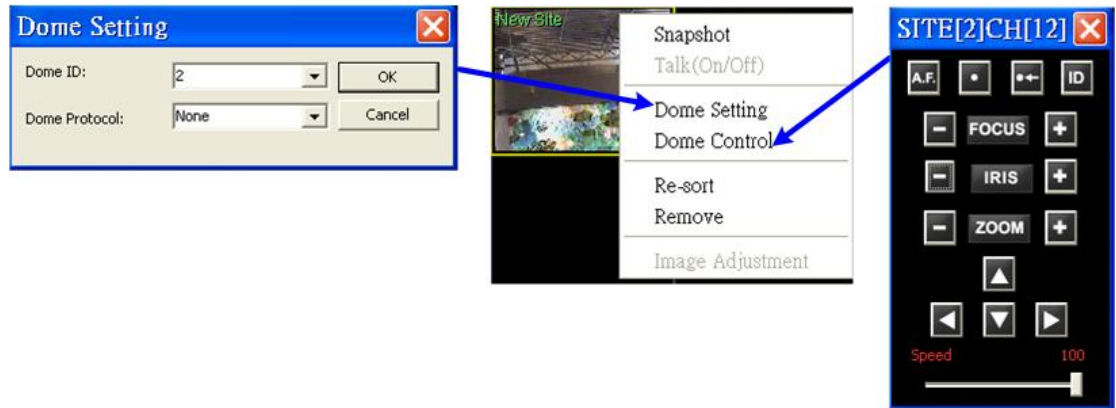
When the channels are being recorded, the title of the channels will show a capital letter “R” (**[R]**) at the end. The recorded files will be saved to the default folder “C:\Program Files\CMS\Record”.



NOTE: If the connection to the recording site is disturbed then reconnected, the recording will be terminated without resumption.

7.13 Dome Setting / Dome Control

The users can also set/control the dome camera in the CMS. Right click on the channel where a dome camera is properly installed. Refer to the following picture to see how they look like.



Dome Setting:

Select <Dome Setting> to setup the Dome ID or Dome Protocol. Note that dome protocol changed at this interface is only temporary. To permanently change dome protocol, please modify it in the configuration.



Dome Control:

The function of each button on the <Dome Control> panel is described below.


A.F. (Auto Focus)

Click on  to focus the camera automatically.

Set/Go Preset Point

Click on  to set a present point, and  to go to the preset point.

ID

Click on  to setup the Dome ID/Protocol. This function resembles to the <Dome Setting>.

Focus

This is used to manually focus on the objects. Click on the +/— icons to adjust the focus.

Iris

This is used to setup the iris. Click on the + icon let in more light, or the — icon to reduce the light.

Zoom

This is used to zoom in/ out to the object. Click on the +/— icons to adjust. It can also be adjusted by the scroll wheel of the mouse. Scroll toward you to zoom out and away from you to zoom in up to 7 times the original size.

Direction Keys

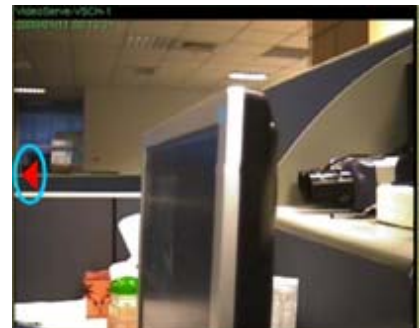
These keys are used to pan and/or tilt the dome camera.

Speed Slider Bar

The slider bar is used to adjust the speed of the pan/tilt movement. 0 is the slowest and 100 is the fastest.

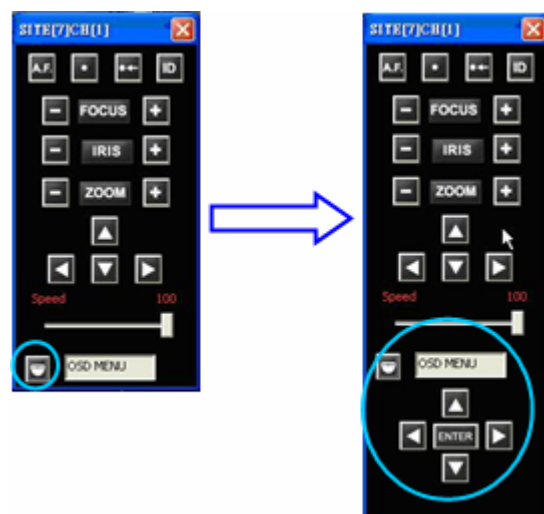
Mouse Control

If the mouse is moved to the top/ bottom/ left/ right edge of the screen, a red triangle as in the picture on the right will show up. At this time left clicking the mouse can move the screen toward the direction where the red triangle points to. Zoom In/ Out using the scroll wheel of the mouse.




NOTE: The <Dome Control> panel is different if the dome camera is connected through a Video Server. Refer to the following figures for detail information.

There is an extra button, the OSD Menu, as circled on the right. Click on it to display the OSD menu.

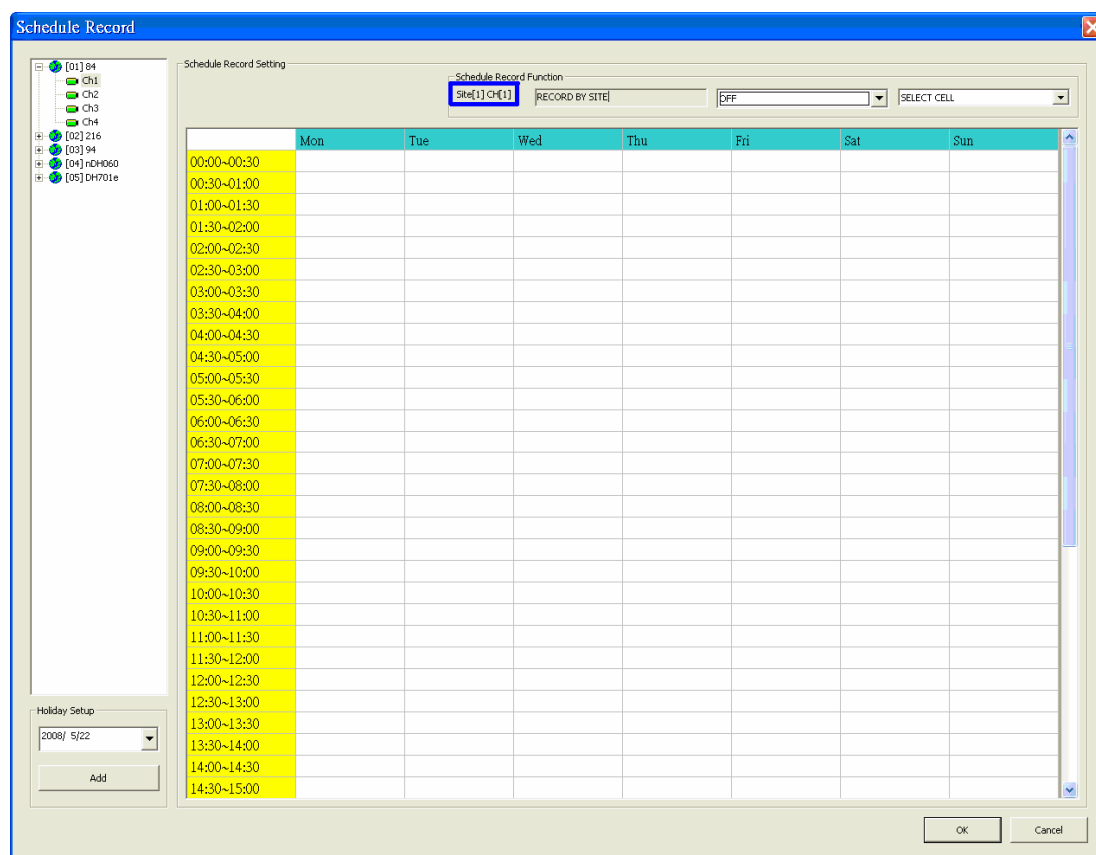


7.14 Schedule Record Function

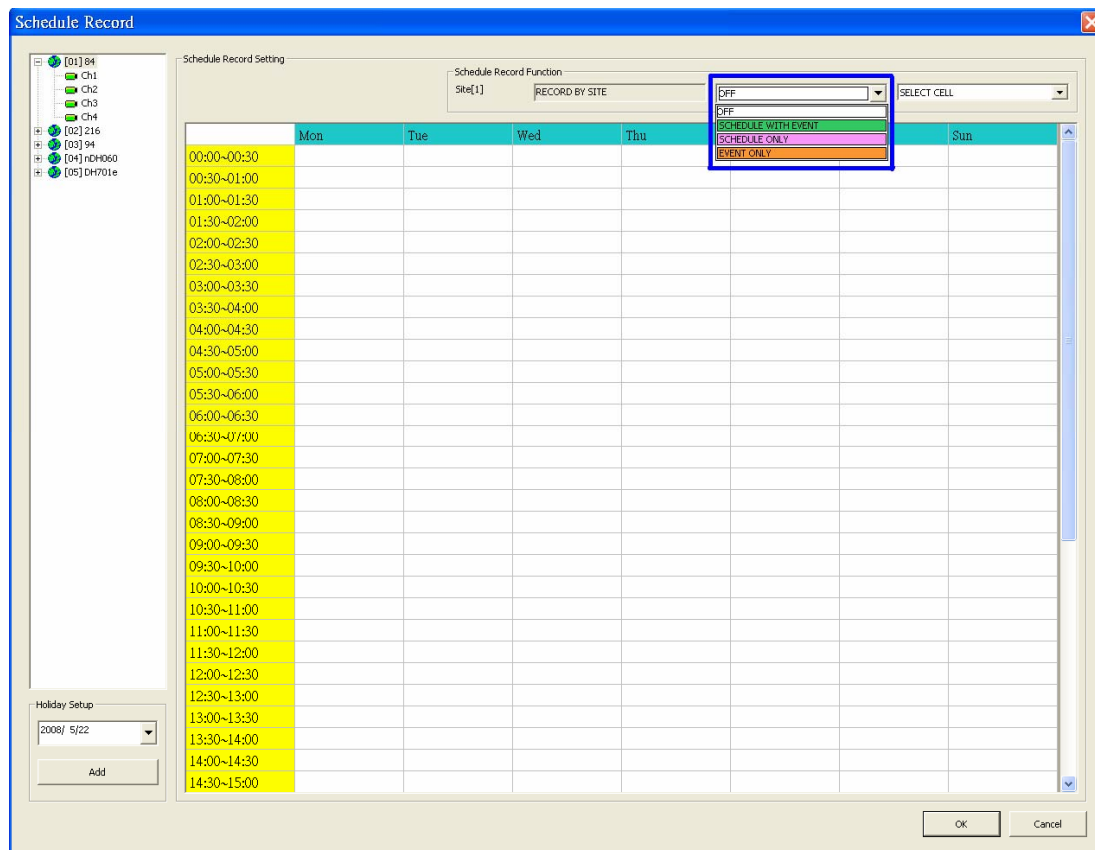
The user can schedule specific time to record the videos to the local computer.

The Schedule Record window will be displayed by clicking on  icon on the top of the CMS main window.

The current setting site will be shown on the top of the Schedule Record window.



The scroll-down menu circled below shows the recording options.



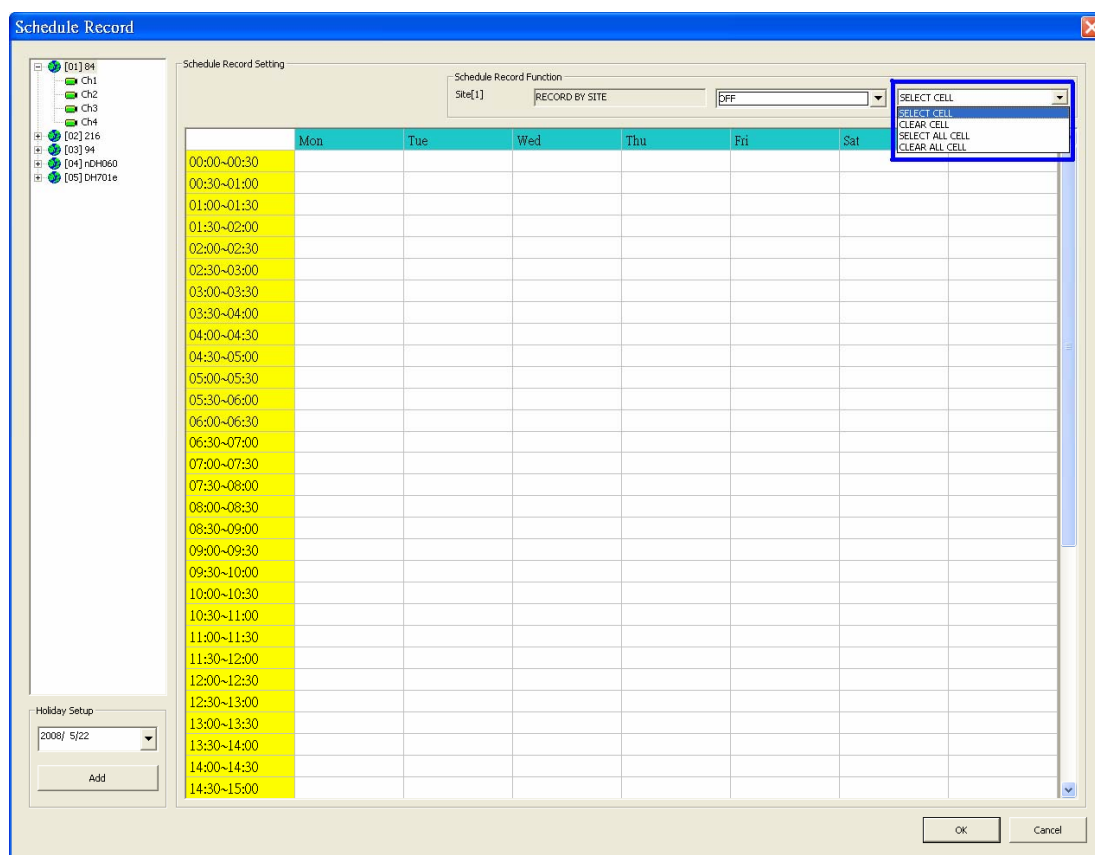
<OFF>: To turn off the schedule record function.

<Schedule with Event>: To record both the normal and event videos within the scheduled time frame.

<Schedule Only>: To record only the normal videos within the scheduled time frame.

<Event Only>: To record only the event videos within the scheduled time frame.

The scroll-down menu circled below shows the schedule options.



<Select Cell>: To manually select cell from the table.

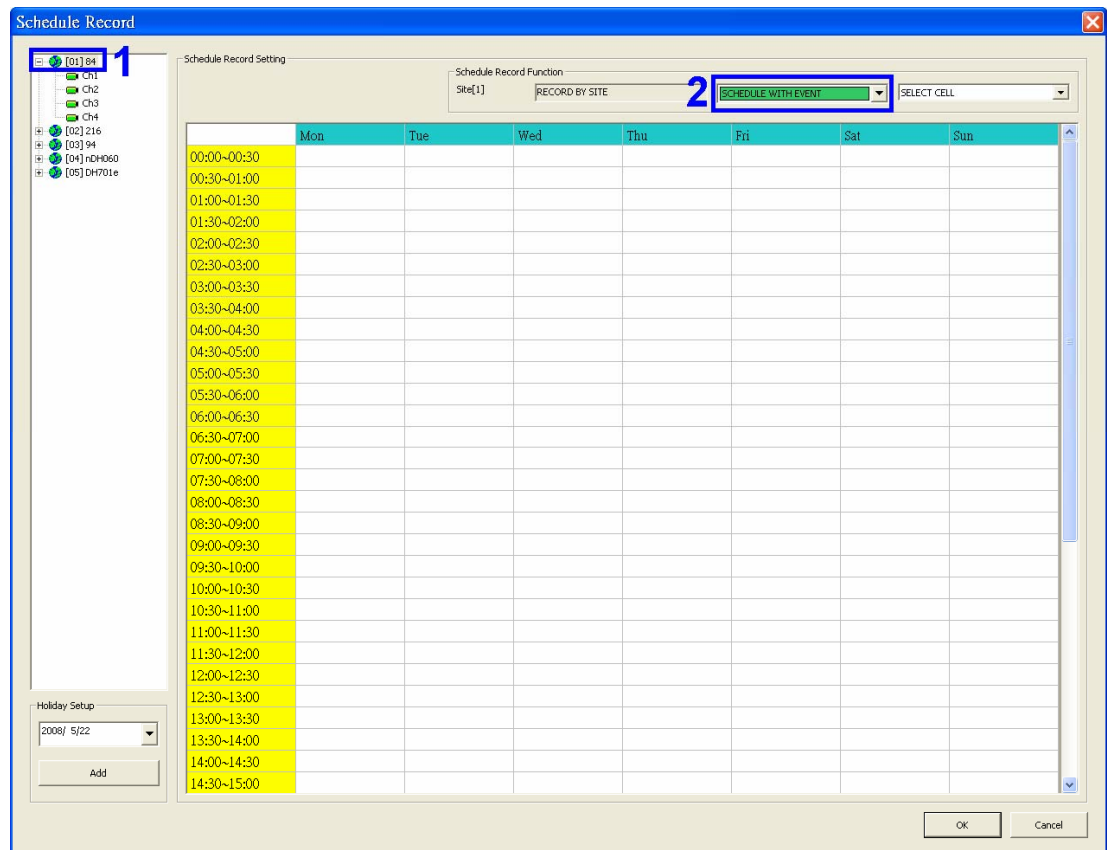
<Clear Cell>: To manually clear cell from the table.

<Select All Cell>: To select all cells from the table.

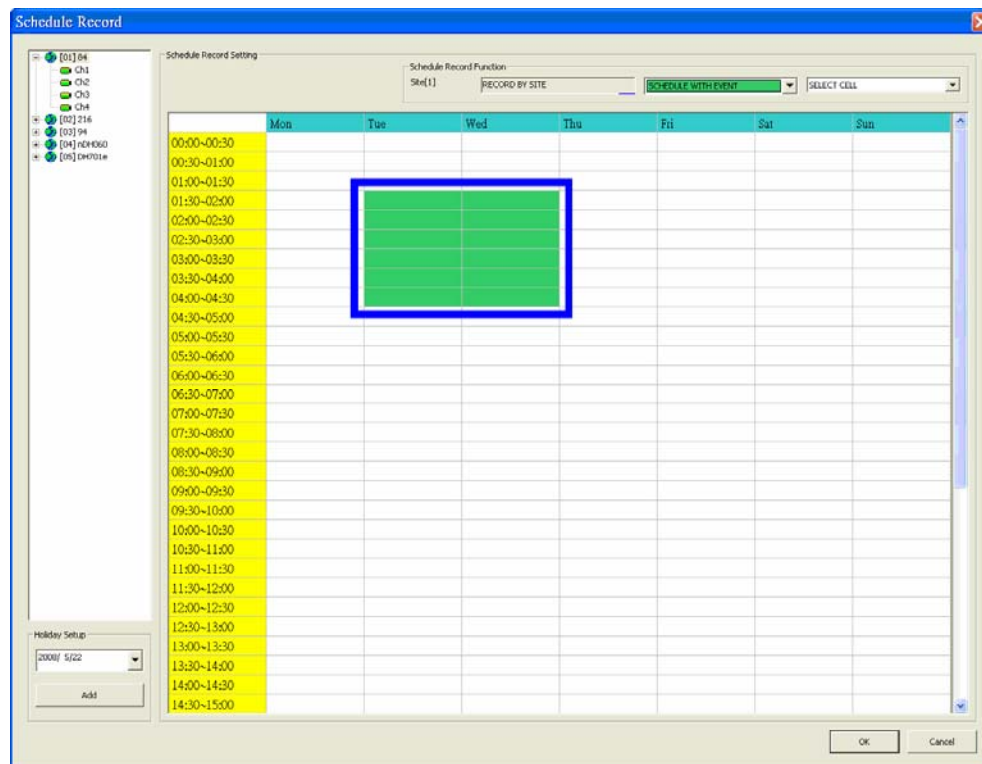
<Clear All Cell>: to clear all cells from the table.

Here is a step by step explanation on how to set the schedule record for your CMS.

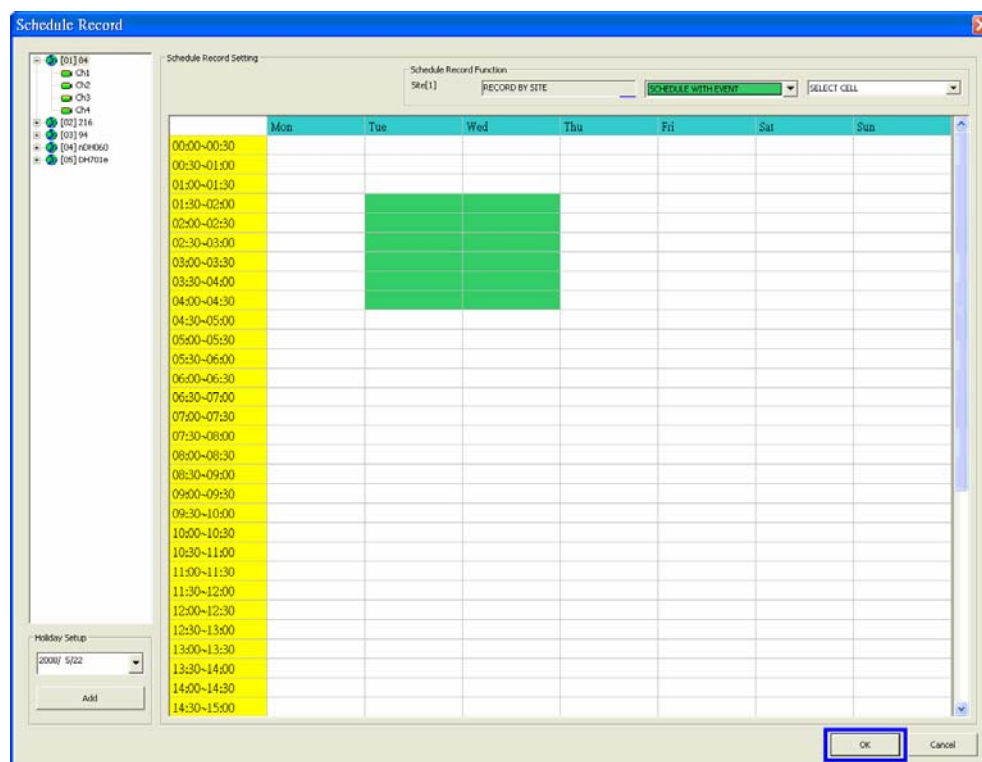
Step 1: Select a site or a channel from the box on the left by a single click. When a site is selected, the same setting of schedule record will be applied to all channels. Click on a channel to set unique schedule record for the particular channel. In this example, we will choose to set a site. Select a site in box 1, and set the recording option to <Schedule with Event> in box 2.



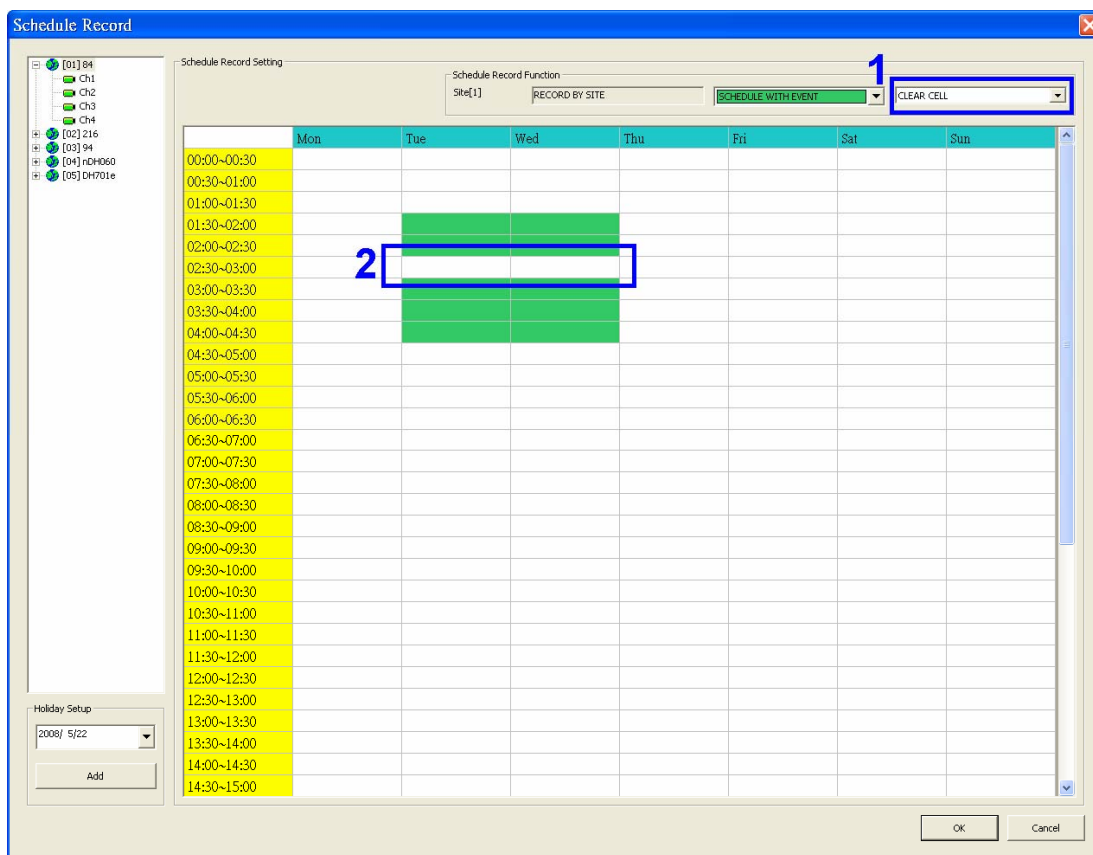
Step 2: Assuming that we want to set the CMS to record the site from 1am to 5am on Tuesday and Wednesday. Click on 1:00~1:30 of Tuesday and drag to 4:30~5:00 of Wednesday; and the color of the cells will be changed to green indicating that these cells are going to record <Schedule with Event>.



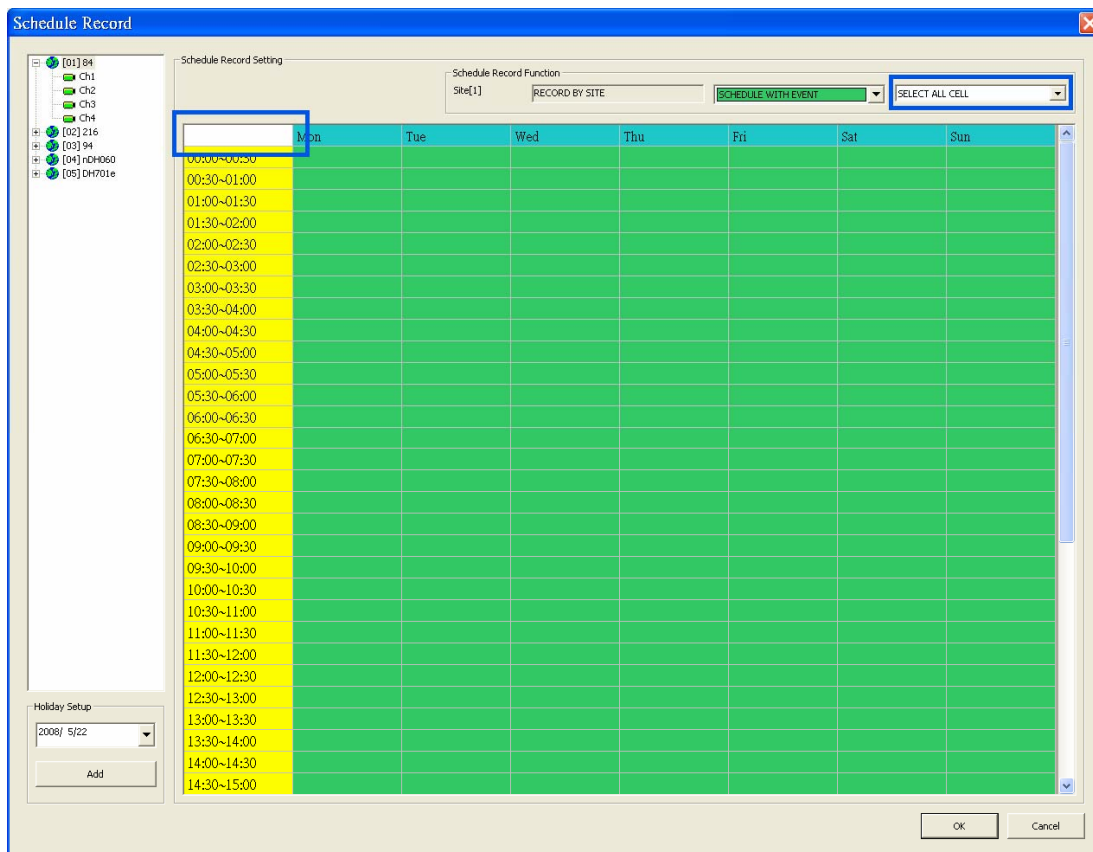
Step 3: After the time frames are selected, click <OK> to save and exit the Schedule Record.



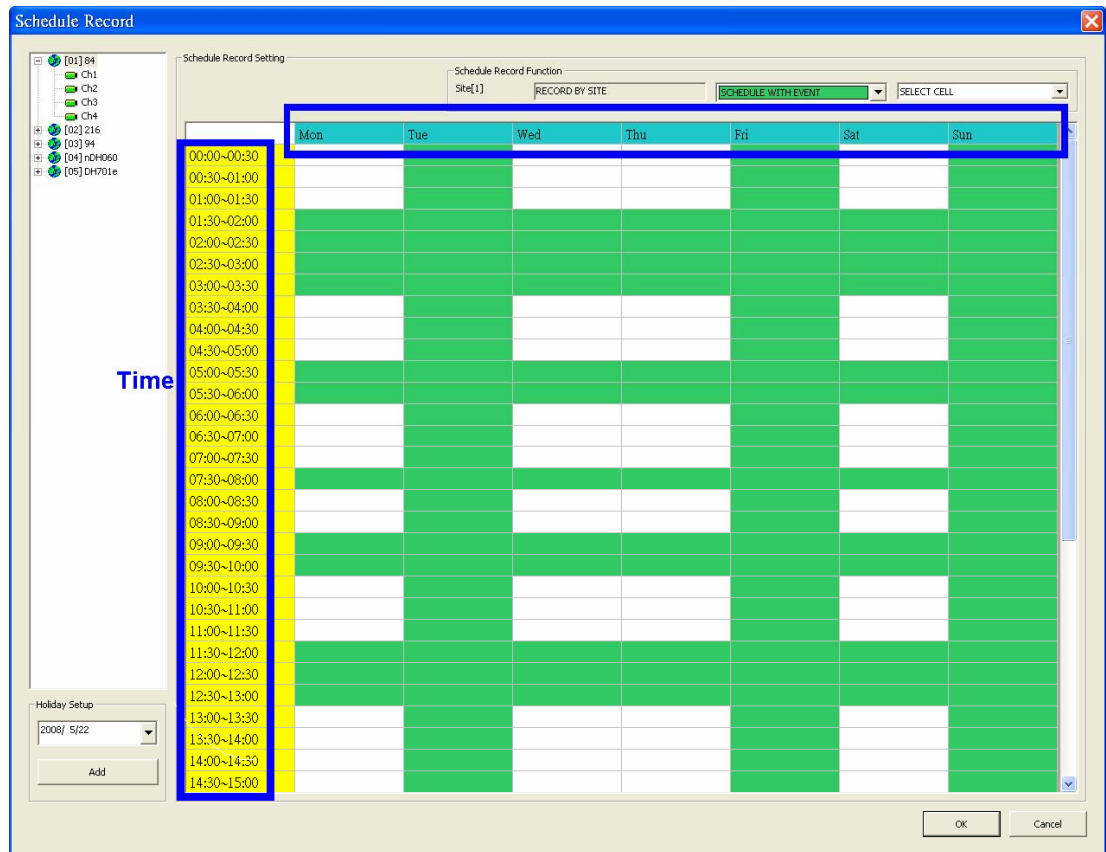
If you want to remove a time frame from the schedule, for instance, 2:30~3:00, set the cell selection to <Clear Cell> in box 1. Click and drag 2:30~3:00 from Tuesday to Wednesday. The blank cells indicate that they are not going to record anything. Click on <OK> to save and exit the Schedule Record.



If you want to set the schedule to record at all times, set the cell selection to <Select All Cell> or click on the circled blank cell located on top left corner of the table. If you want to reset the schedule of the site, set the cell selection to <Clear All Cell> to do so. Click on <OK> to save and exit the Schedule Record.




Another way to select or clear time frame is by click on the Day or Time tabs. For example, when you click on <Tuesday> tab, the color of all Tuesday cells will be changed indicating they are going to record normal and event videos. When you click on 5:00~5:30 tab, color of all 5:00~5:30 from Monday to Sunday will be changed. Click on <OK> to save and exit the Schedule Record.

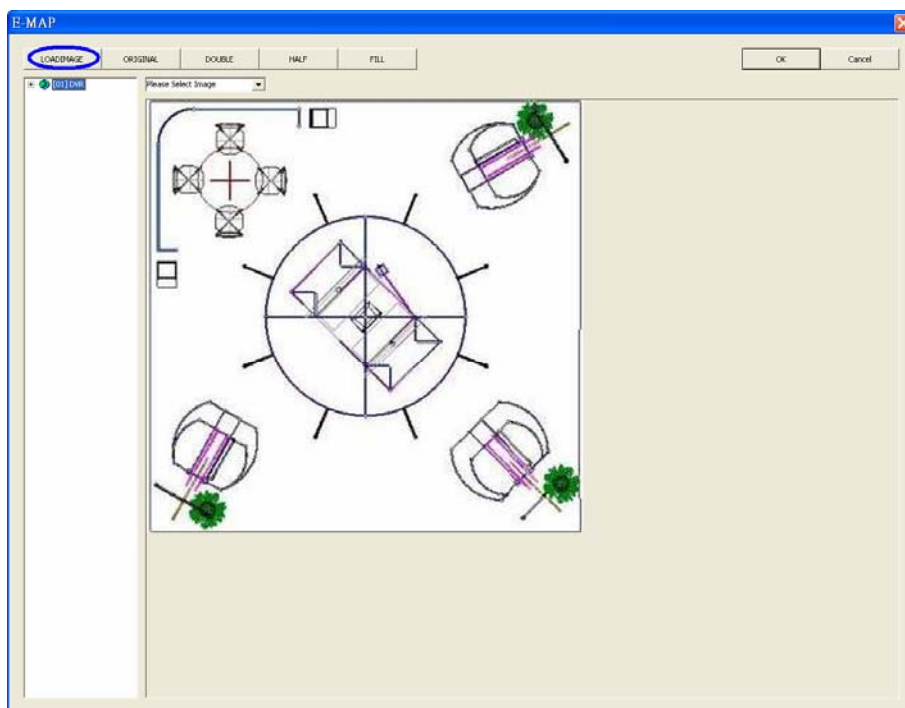




7.15 E-MAP Function

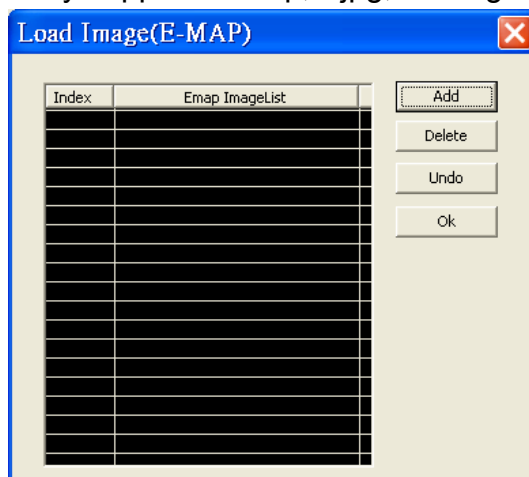
E-MAP is a function that allows the user to illustrate the positions of the cameras on a self selected image. Click on  icon located on top of the CMS main window to open E-MAP. Please follow the steps below to setup the E-MAP.

Step 1: First load an image file by clicking <LOADIMAGE> as shown below.

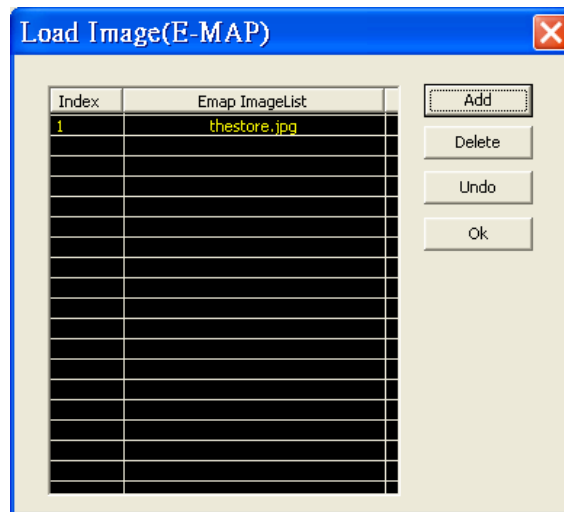


NOTE: The image shown in the window is the default picture. It will only be available when default is installed.

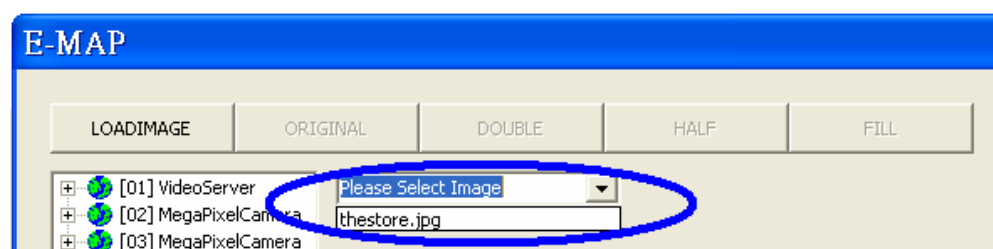
Step 2: The figure below is the Load Image window to add or delete images, and undo or confirm settings. Click on <Add> to add an image. Note that E-MAP only supports *.bmp, *.jpg, and *.gif files.



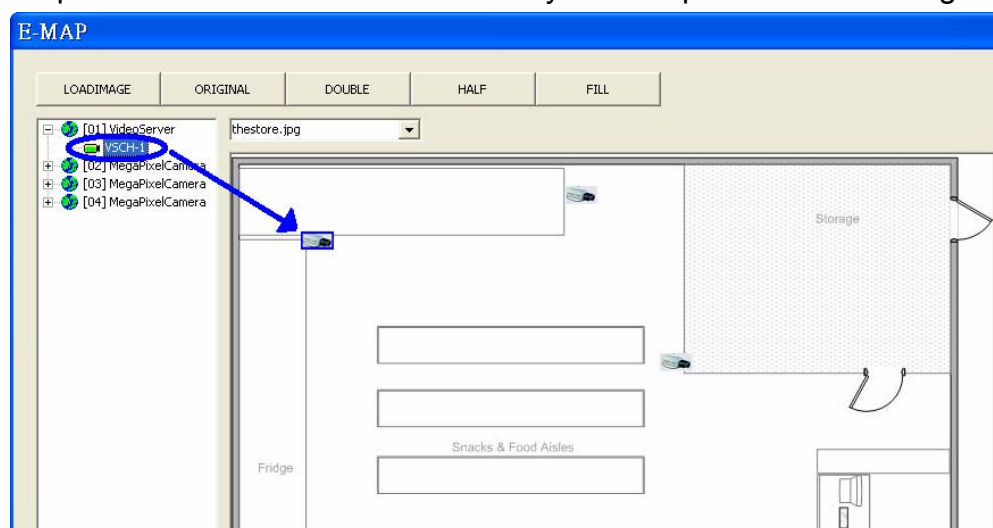
Step 3: After the image is added, the filename of the image will be displayed on the list. Index indicates the order, starting from “0”, of the files. After the image is loaded, click <Ok> to confirm and save the setting.



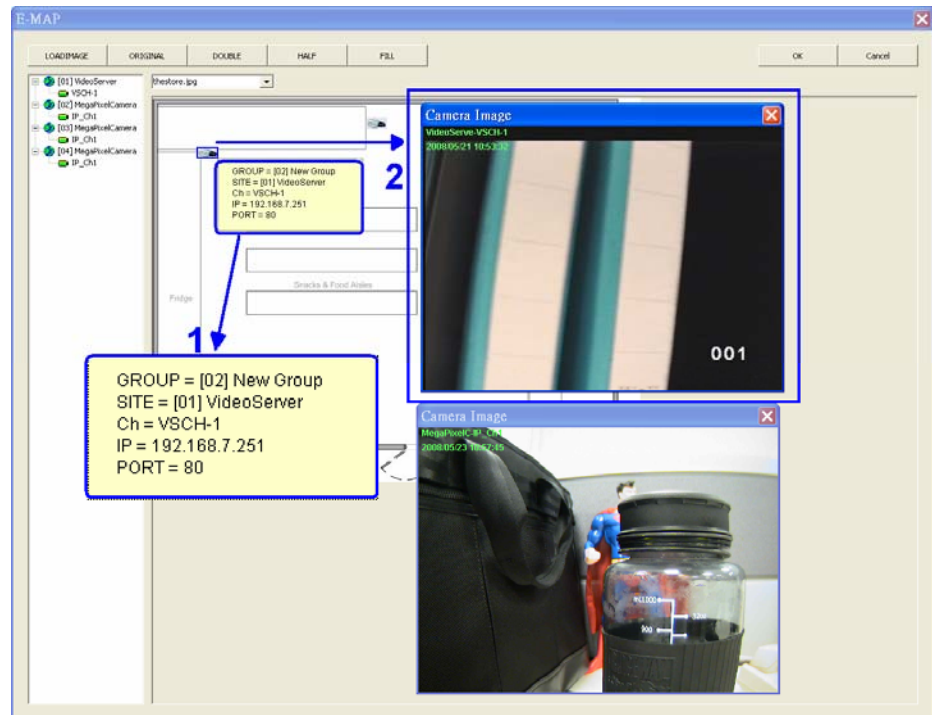
Step 4: Select the image file that was loaded to E-MAP from the scroll menu circled below.



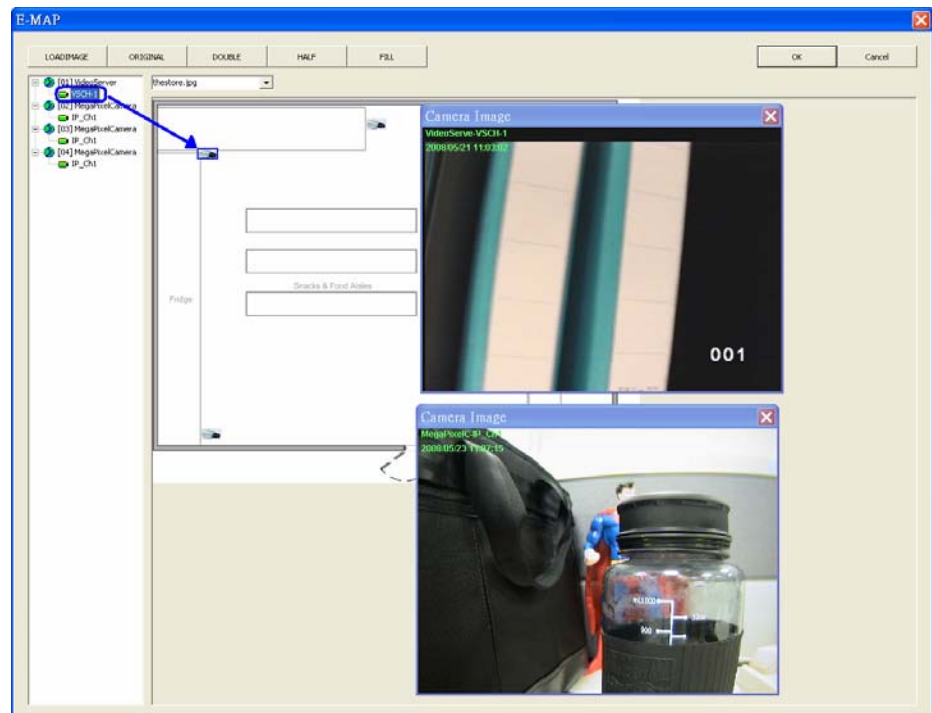
Step 5: The chosen image will be displayed in the E-MAP main window. The image of a grocery store is used in the following example. Drag and drop a channel from the site tree to any desired position of the image.



Step 6: When the mouse pointer moves over a camera icon in the image, an information dialog box will be displayed as below picture marked #1.

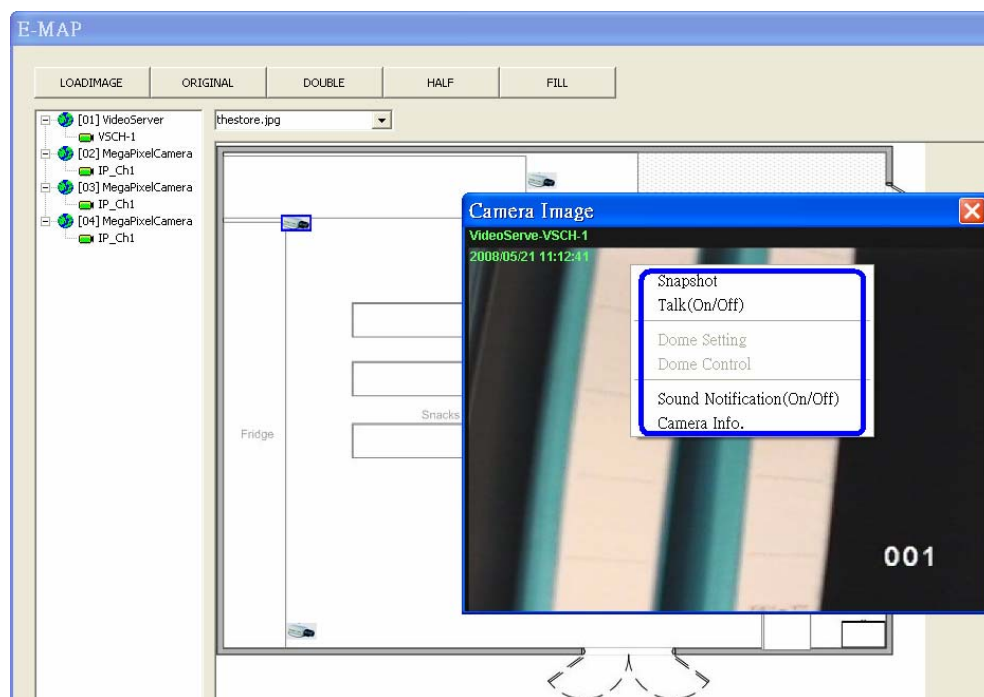


Double click on any camera will display the live preview image of the camera. When a camera icon is clicked, the camera live preview window will be highlighted if it's been displayed, as above picture marked #2. Otherwise, the corresponding channel in the site tree will be highlighted as shown in below picture.



NOTE: The camera live preview window is limited up to three instances at the same time.

Step 7: Right click on the camera preview window to display the control menu as shown below. The menu items includes: Snapshot, Talk(On/Off), Dome Setting, Dome Control, Sound Notification(On/Off), and Camera Info.



There are three different types of camera icons in E-MAP: dome camera, fixed camera, and alert icons.



Dome Camera icon.



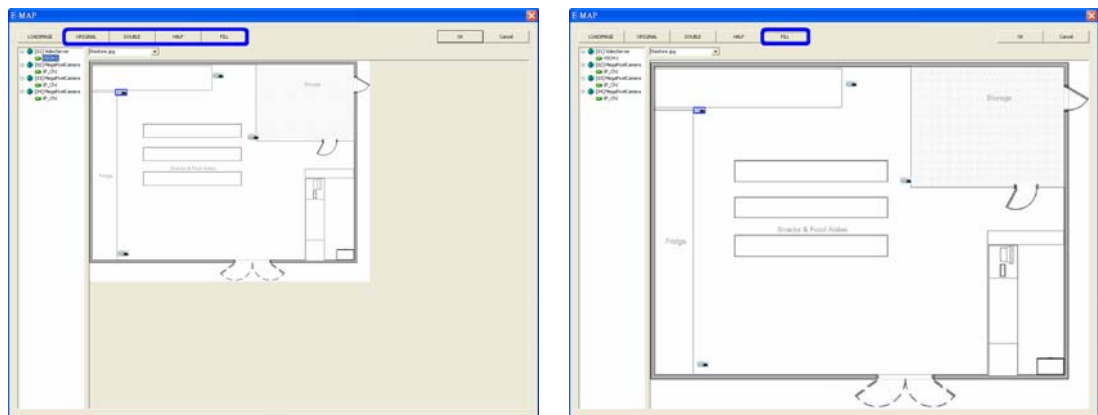
Fixed Camera icon.



Alert icon.

Dome camera icon will be displayed when the selected camera is a PTZ (pan/tilt/zoom) dome camera. Fixed Camera icon will be displayed when the selected camera is a fixed camera. Alert icon will be displayed when an alert is triggered to the camera on the image. The alert icon will blink to attract attention.

You can adjust the display size of the image on E-MAP by clicking on the buttons as circled below.



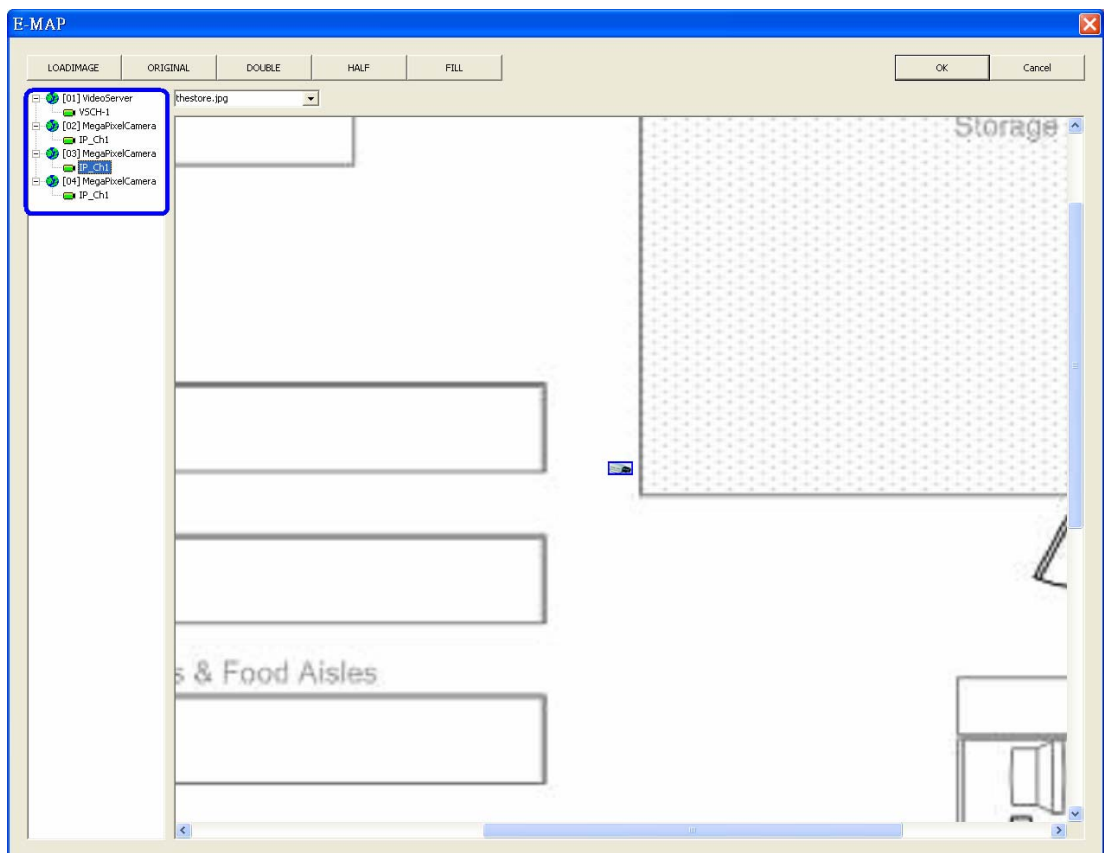
<Original>: To display the original size of the image.

<Double>: To double the size of current displayed image.

<Half>: To reduce current displayed image size by one half.

<Fill>: To adjust the image to fit display window (refer to figure on the right).

When the image is very large, or when you cannot see the entire image in the display window on the right, click on a channel in the site tree and the E-MAP will automatically move to the location of the selected channel.



7.16 Health Function

This is a function that verifies the HDD status of the DVR sites in current connected group. The following figure is an example. The words “Retrieving Info” will be shown at bottom while the information is being updated. Note that since IP cameras do not have connected HDD, they will not be shown in the chart.

Health Status (Refresh Rate = 5 min)					
Site[01]	Device Name	Internal/External	Total Size	Active/NonActive	Temperature
	Maxtor 4R160L0	Internal	147GB	Active	37
Site[02]	Device Name	Internal/External	Total Size	Active/NonActive	Temperature
	Maxtor 4R160L0	Internal	147GB	Active	36
Site[04]	Device Name	Internal/External	Total Size	Active/NonActive	Temperature
	Maxtor 6Y080L0	Internal	71GB	Active	50
Site[05]	Device Name	Internal/External	Total Size	Active/NonActive	Temperature
	Maxtor 7Y250P0	Internal	228GB	Active	42
Retrieving Info ...					

The information items shown in the chart are described as below:

Device Name

This item shows the model name of the HDD.

Internal/External

This item indicates whether the HDD is an internal or external device.

Total Size

This item indicates the total size of the HDD.

Active/Non Active


This item indicates whether the HDD is active or non-active.

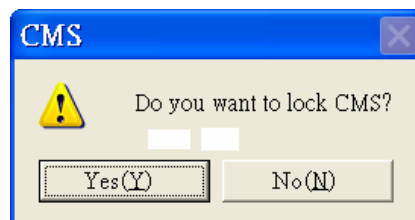
Temperature



This item indicates the current temperature of the HDD in Celsius degree.

7.17 Lock Function

The Lock function allows you to protect the CMS from unauthorized use when you need to be away from the computer for a while. Closing the CMS is not allowed and other functionality will be limited as described below.

Click  and a confirmation message will be displayed as on the right. Click “Yes” to confirm.



After you clicked “Yes”, the icon will change from  to  showing that CMS is currently being locked. When you click unlock, the window as shown on the right will be displayed for you to enter username and password to unlock.



To unlock, the following are two scenarios:

	Login Account	Unlock Account	Note
1	User	- Login User - Any Administrator	The access authority will still be User's limit.
2	Administrator	- Login Administrator	If password is changed, use new password to unlock.

When the CMS is locked, windows control will be as the following two types:

	Type	Example	Windows Control
1	Setting	Setting, Schedule Record, Emap, Dome Control, etc	The windows will be closed without saving changes. It is recommended to save settings before locking the CMS.
2	Monitoring	Archive, Alert, etc.	It is not allowed to close the window but just minimize it.



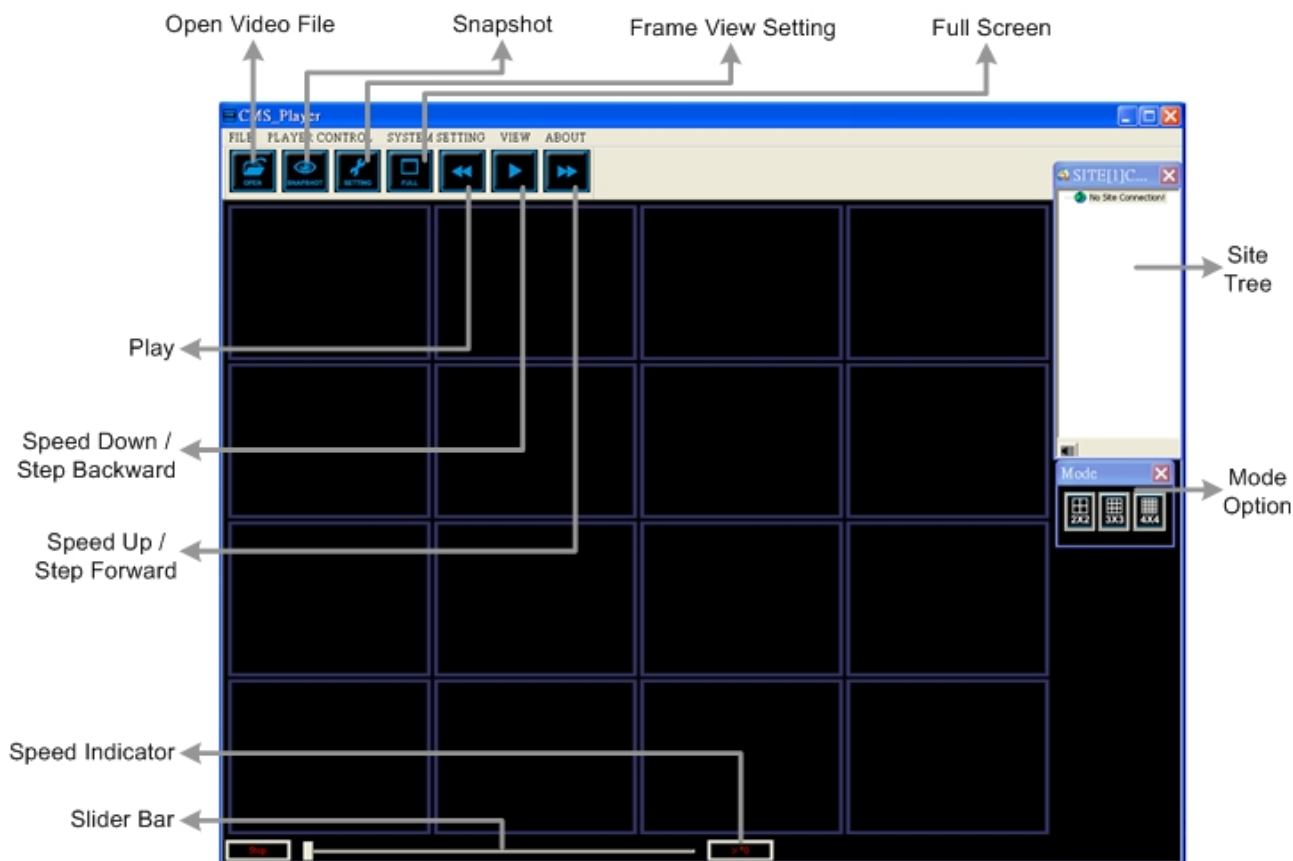
NOTE: If the CMS is forced to be closed while it's locked, the CMS system will still be locked when it is started up again.



NOTE: If the password of the current login account is changed, use the new password to unlock.

Appendix A: The CMS Player


The CMS Player is a compact version of the standard DVR Player. When multiple CMS instances are opened in multiple monitors, each CMS can launch 1 CMS Player. The main window of the CMS Player is shown below with the name of the buttons.

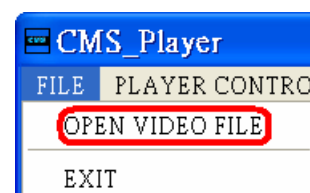


NOTE: The CMS Player is capable of playing H.264 DVR format files.

The function of each button will be described in the following paragraphs.

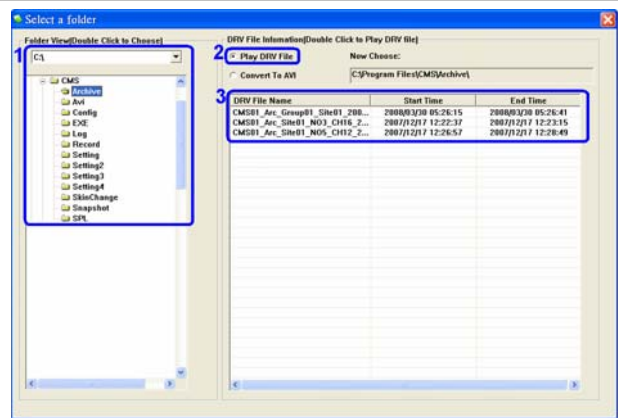
Open Video File

Click on  to open the video file. The other way to open the video file is by clicking on the File Menu Bar as shown on the right.



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To open a file, you need to find the folder containing *.DRV files from box 1. After the folder is found, select <Play DRV File> of box 2. Lastly, double click on a file in box 3, and the file will be played immediately. If you want to convert the *.drv file to *.avi format, click on <Convert To AVI> underneath box 2 instead, and double click the file in box 3. For more detail about converting DRV files to AVI files, refer to section [Playback Recorded Video](#).




The default path is:
"C:\Program Files\CMS\Record"



NOTE: The recorded video of IP camera can only be played back by CMS player. Some errors might occur if playing back with DVRPlayer.

Snapshot



Click on  to take a snapshot of the screen. The other way to take a snapshot is by clicking on the Player Control Menu Bar as shown on the right.




When the snapshot window is opened, you can choose to rename the filename or leave it as it is. Click on <OK> to save the snapshot or <CANCEL> to discard it.

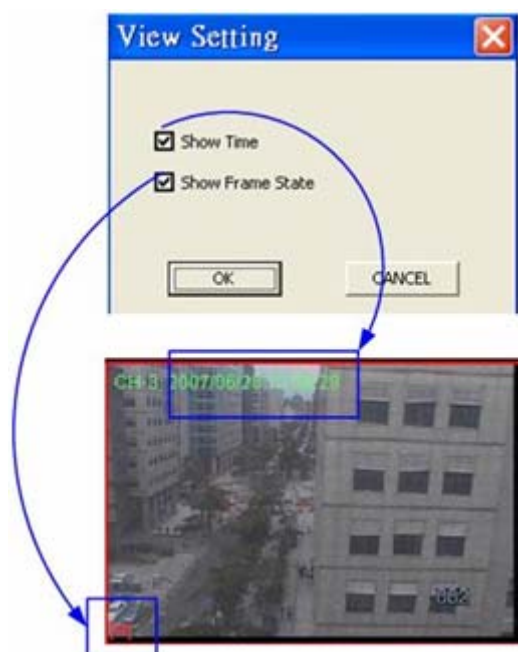


The default path is:
"C:\ProgramFiles\CMS\Snapshot"

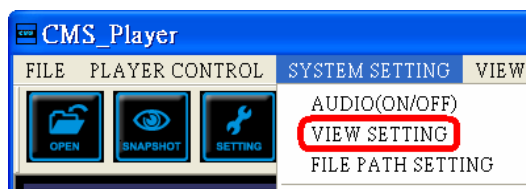
Frame View Setting

The user can choose to show/hide the time and alert text on the video.


Click on the  icon, and the View Setting window will be displayed. Check <ShowTime>, and the time will be shown on the screen. Check <Show Frame State>, and the alert text such as motion, or video loss will be shown. Uncheck to hide the information.

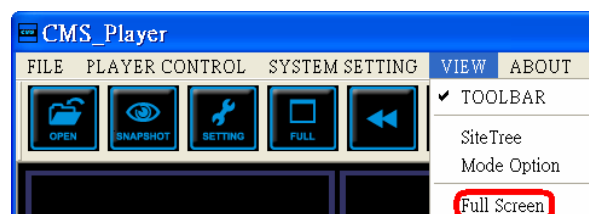



The other way to open this function is by clicking on the System Setting Menu Bar as shown on the right.

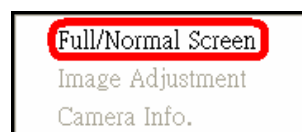


Full Screen

Click on  to change the view to full screen mode. Two other ways to show full screen are show on the right: by clicking on the View Menu Bar or right click at any grid of the screen and select <Full/Normal Screen>.

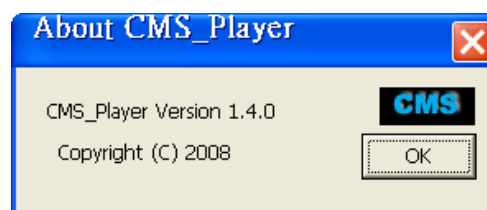


In full screen mode, the full screen icon will change to . Click on it to return to normal screen. There are two other ways to return to normal screen: press “Esc” button on the keyboard or right click at any grid of the screen and select <Full/Normal Screen>.




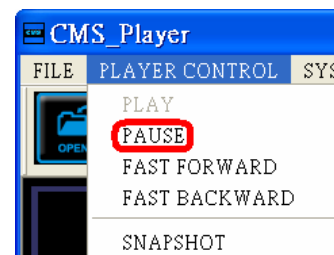
About

Click on the About Menu Bar as shown below to view the information of the CMS Player version, as shown on the right.




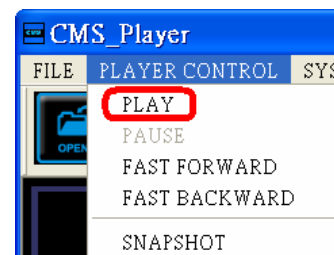
Pause

Click on  to pause the video. The other way to pause the video is by clicking on the Player Control Menu Bar as shown on the right.




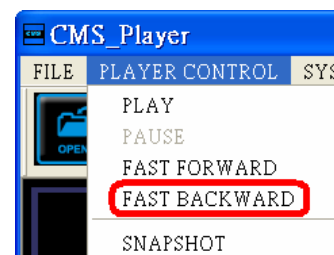
Play

Click on  to play the video. The other way to play the video is by clicking on the Player Control Menu Bar as shown on the right.




Fast Backward / Step Backward

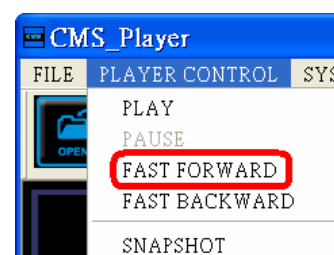
Click on  to play the video fast backward. The other way to play the video fast backward is by clicking on the Player Control Menu Bar as shown on the right.



NOTE: When the playback of the video is paused, you can click on this button to move one step backward.

Fast Forward / Step Forward

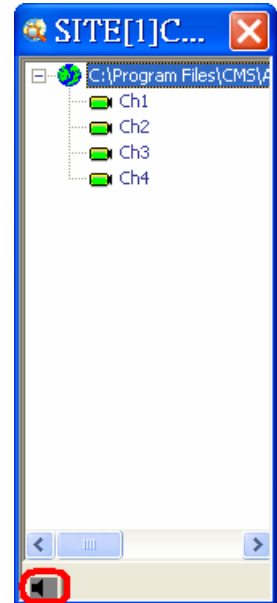
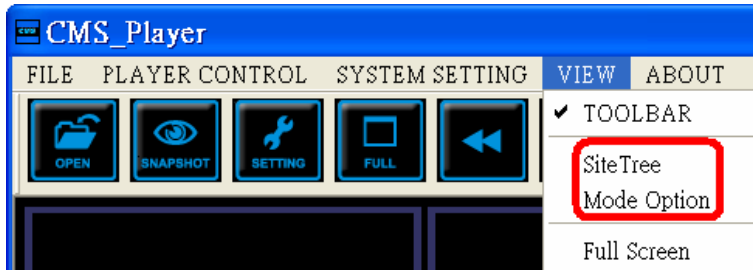
Click on  to play the video fast forward. The other way to play the video fast forward is by clicking on the Player Control Menu Bar as shown on the right.



NOTE: When the playback of the video is paused, you can click on this button to move one step forward.

Site Tree

The site tree shows the channels of the opened DRV file. Double click on a channel to view the specific channel in one screen. Click on the speaker icon located on the bottom to enable or disable the audio. If it's closed, it can be recalled under the View Menu Bar as shown below.



Mode Option

Click on any of them to view the image in a multiple window mode. The modes are available from 4-window, 9-window, and 16-window. If it's closed, it can be recalled under the View Menu Bar as shown above.



Speed Indicator

The Speed Indicator shows playback speed in forward or backward direction.

- > indicates forward playback while < indicates backward playback.
- The playback speed can be *1, *2, *4, *8, *16, or *32.

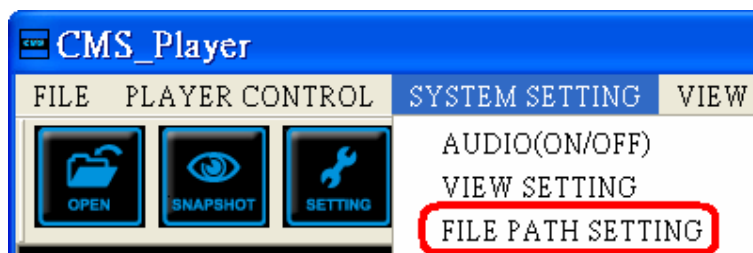


Slider Bar

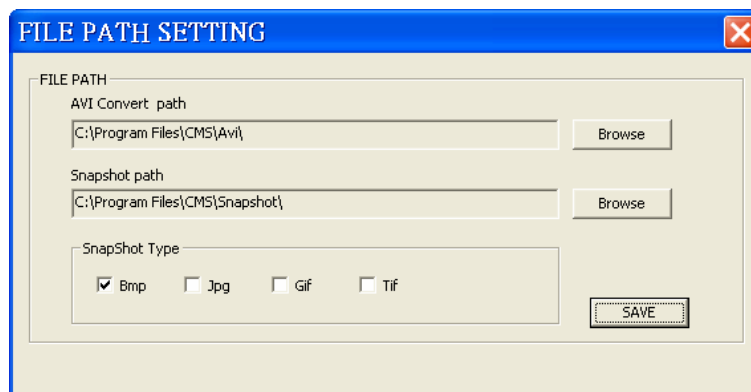
Click and drag the bar to search through the video.

Other functions of the Menu Bar that are not introduced in this section will be described here.

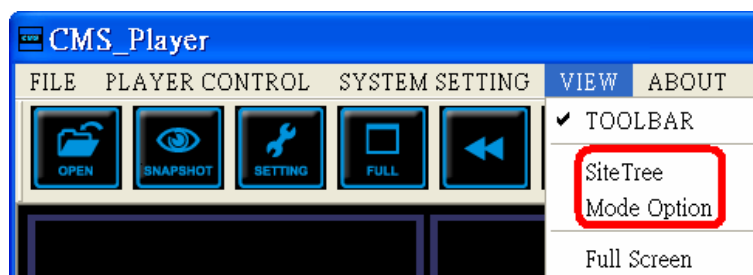
The <File Path Setting> under the System Setting Menu Bar allows the user to set the file path.



You will be able to set the paths for *.avi and snapshot files here. After the path is set, click on <Save> to save the settings. Note that you can choose the snapshot files to be saved as *.Bmp, *.Jpg, *.Gif, or *.Tif formats. The default file type is *.Bmp format.



Under the View Menu Bar, you can choose to show/hide the Toolbar. When you closed the Site Tree or Mode Option, you can recall the window under this menu too.



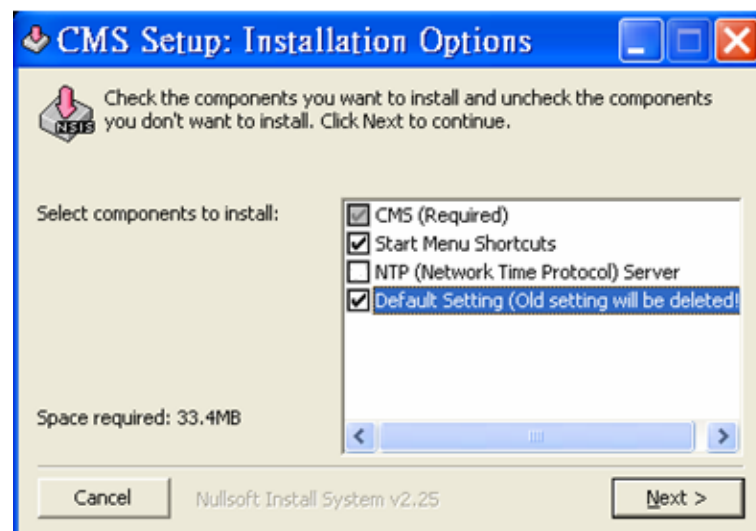
Appendix B: Troubleshooting

The followings are some common situations when the user is having difficulty with the CMS server.

1. The CMS server does not work properly. How can it be recovered or where can I ask for help?

Please try the following ways to recover it first.

- A. Please check if the computer meets the system requirement.
- B. If the CMS automatically closes when it's opened or when it's connecting to sites, please send the files stored in \CMS\Setting\ under improper operation condition. Afterwards, re-install CMS and check to install **Default Setting** during installation. Remember not to import old setting files. This will tell whether if the old setting data are corrupted.



- C. If CMS cannot successfully connect to sites, check the followings.
 - Confirm IP, port, username, and password of the site. You can connect to the site via IE browser to verify the site exists and is connectable.
 - Close firewall and virus scan software and try to connect again. If the problem is due to firewall or virus scan software, please change their settings.
 - If the connection still failed, please send the IP address to our engineer.



NOTE: When you need to ask for the engineer's help, please send a copy of the files stored in \CMS\Log\ as well.

2. The CMS server takes up too many HDD space.

We have found that the preset of the virus scan software “NOD32” will automatically create a temporary file under windows system temporary folder when the CMS connects to sites. This temporary file will automatically increase the size which causes the HDD became lack of space.

Please go to the control center of the NOD32 and disable **IMON**. Then the problem should be resolved. The following pictures are examples.

