



User's Guide

CMS

Remote Application Manual

Compatible With



C/O/N/T/E/N/T/S

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1. Remote Management Software

1-1. Introduction

1) Overview

The CMS is designed to manage the DVR through the network at a distance.

The CMS supports the remote management for our DVRs of the following models.

- Premier DVRs
- Workhorse DVRs
- VerteX DVRs

You can use the following functions using the remote management software.

- Remote real-time image monitoring
- Remote search and playback of recorded images
- Smart Search and playback of images stored in the user computer
- System setting for the remote DVR
- Calculation of time available to record depending on the hard disk space
- Transform the MPEG-4 format download and recorded files to MPEG-1 format files
- System upgrade
- Other functions

2) Feature

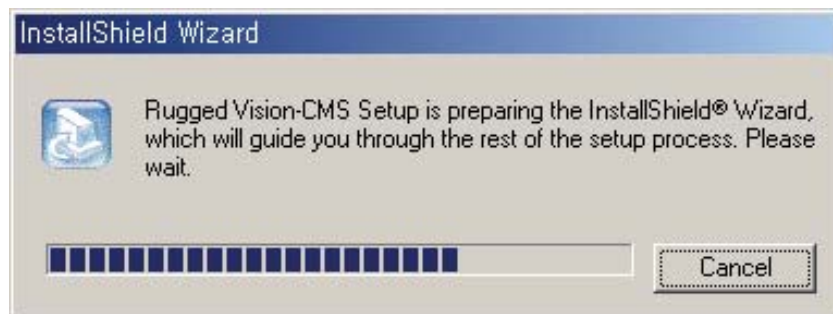
- With one computer, connects to the remote DVR up to 4,096 units
- Remote search and playback of recorded images
- Smart Search and playback of images stored in the user computer
- System setting for the remote DVR
- Calculation of time available to record depending on the hard disk space
- Up to 8 users can connect to one DVR at the same time
- With 16 channel connections, image data transmission at up to 120 fps
- real time monitoring, remote control record and replay, and full screen playback function
- Monitoring using Drag & Drop by channel
- Magnify / contract real time image
- Image and voice backup by network download
- Replay and smart search function of Backup PC file
- Backup of recorded images using the download
- Search and playback of backup local files
- Modifies, edits, saves and applies settings such as record/schedule/NTP/network of the DVR
- User-friendly Graphic User Interface(GUI)

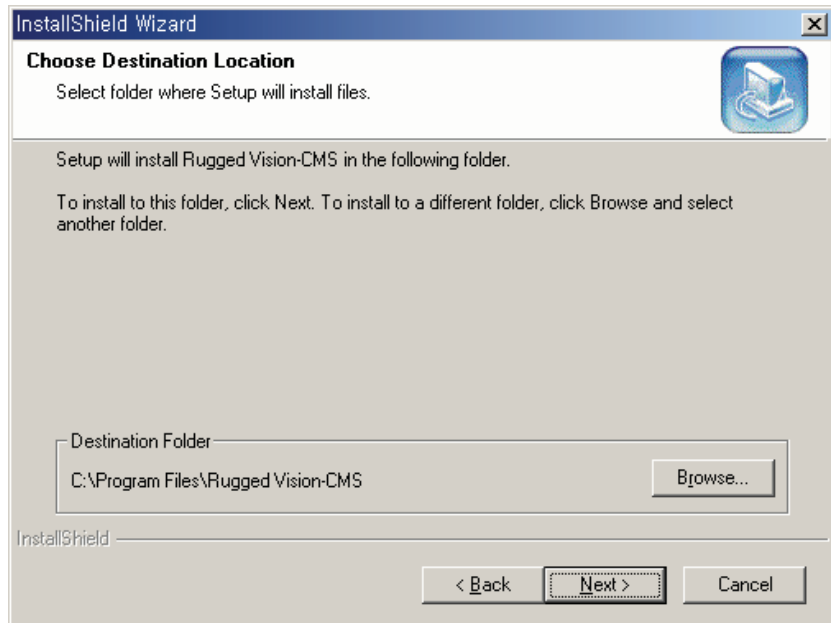
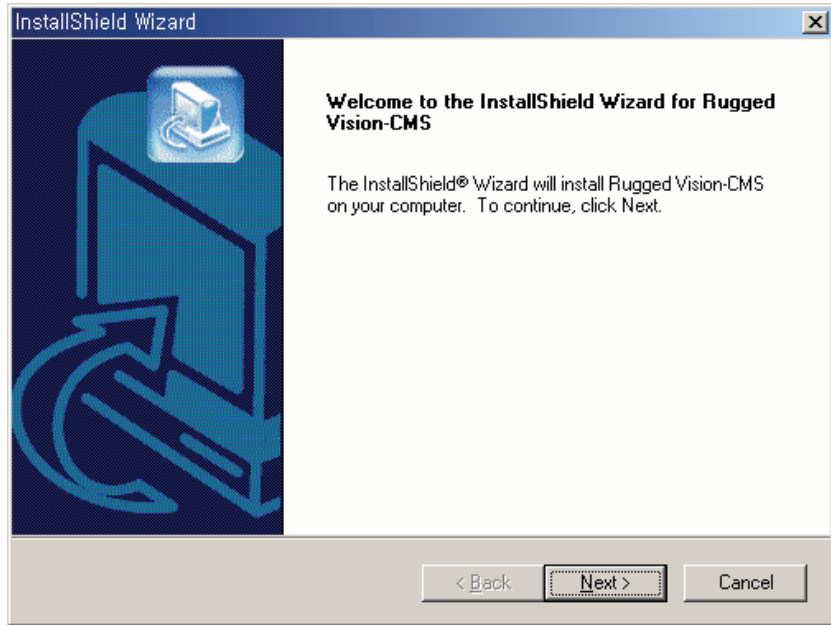
3) System recommendation

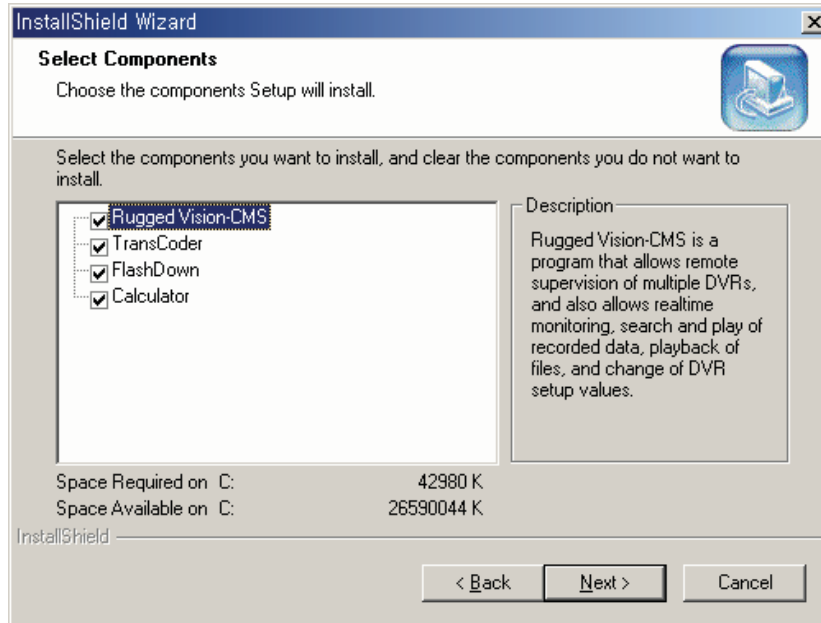
Software	<ul style="list-style-type: none"> * OS: Windows 2000 Service Pack 4, Windows XP Service Pack 2, Windows 2003 Service Pack 1, Windows Vista * Direct X 9.0 or higher * Internet Explorer 6.0 or higher
Hardware	<ul style="list-style-type: none"> * CPU: Intel Pentium 512 43.0 GHz * RAM: More than 512 MB (DDR) * Video Card: - NVIDIA FX chipset-based More than 128MB <ul style="list-style-type: none"> - ATI Radeon 9000 Series - ATI Radeon x3000 Series - Video memory of more than 64MB Product supporting the YUV Format and Overlay * HDD: More than 20GB

1-2. Installing Software

- ① Insert the remote management software CD provided with the product into the CD drive.
- ② Click the Setup.exe file.
- ③ If the installation language selection window is displayed, select an installation language and click the [Ok].
- ④ If the installation wizard is displayed, continue to install it by following the screen guide.







CMS

This remote management program allows the user to utilize real time monitoring, search, playback, change of DVR settings and system software upgrade by accessing several DVRs using the network.

TransCoder

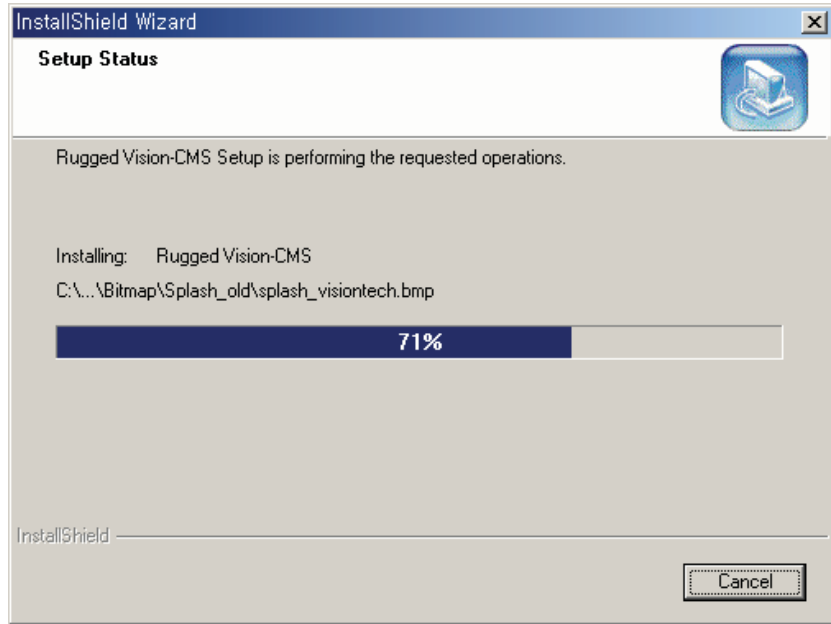
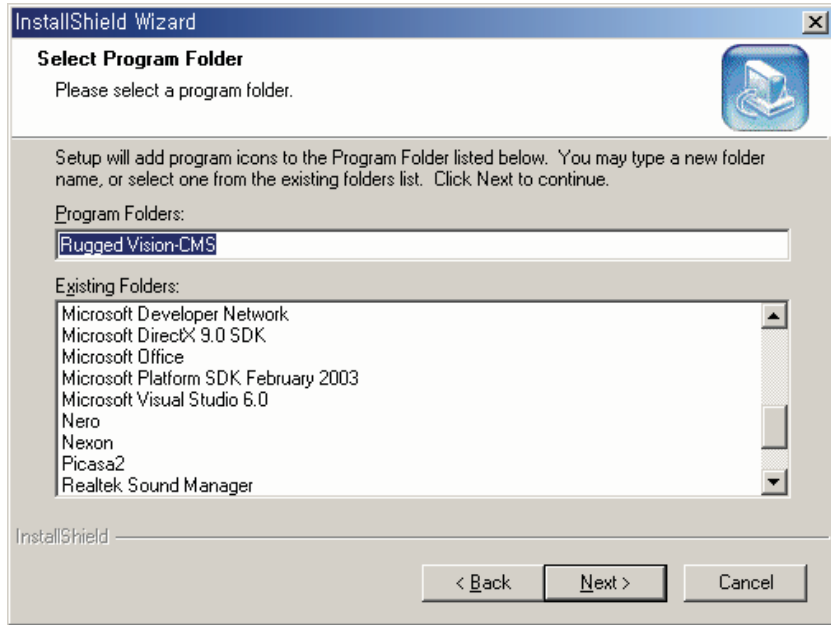
This program transforms the MPEG-4 format download and recorded files to MPEG-1 format files, allowing the user to see them using the Windows Media Player.

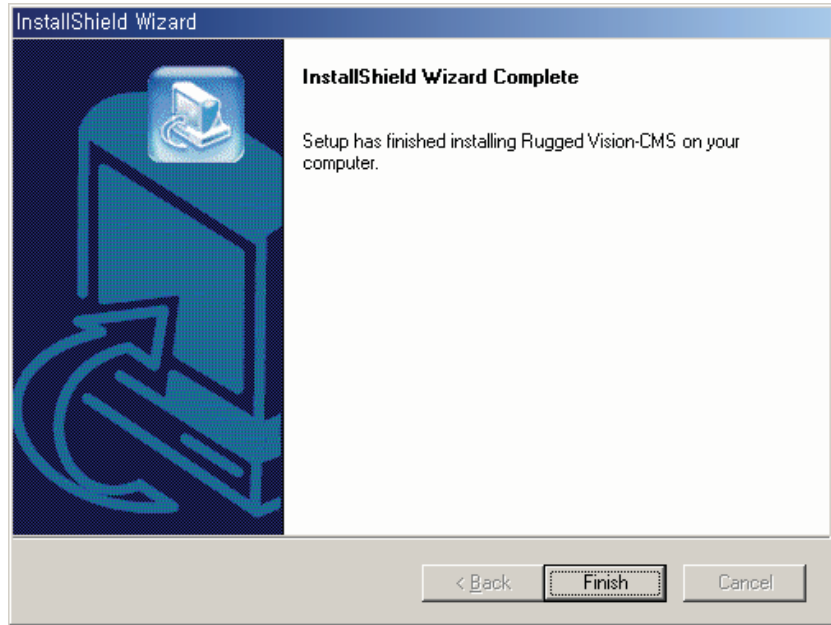
FlashDown

This update program is used to update the DVR by utilizing the RS232C Cable and Cross Cable. You could upgrade with using network IP address.

Calculator

The calculator program estimates the record duration depending on the HDD space and record settings.

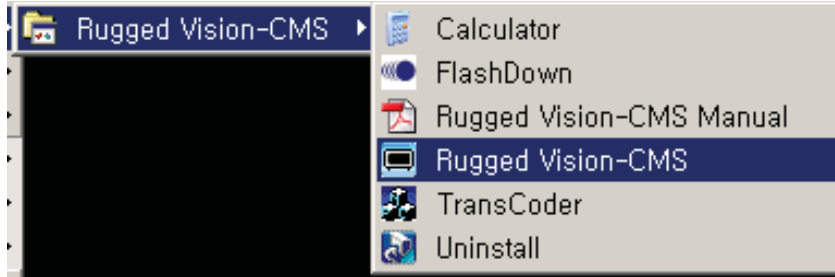




1-3. Starting the remote management program

1) Starting

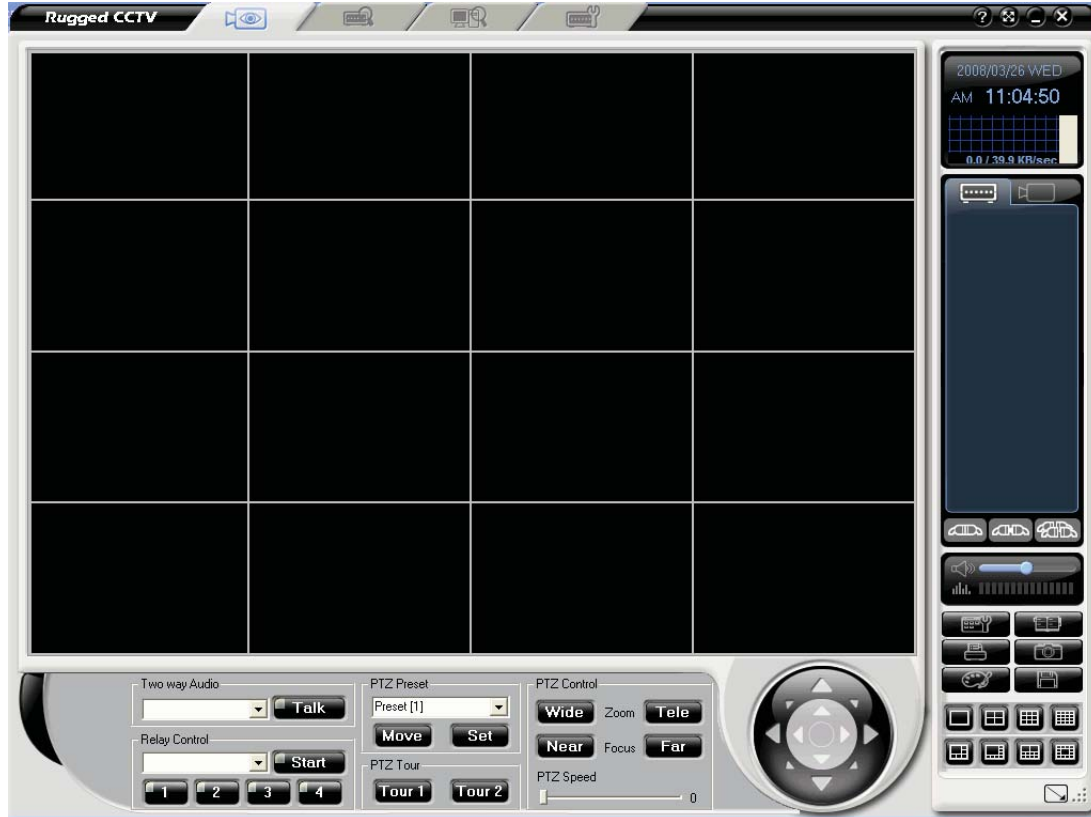
Click the Start > All Programs > RUGGED > RUGGED VISION CMS> RUGGED VISION CMS.



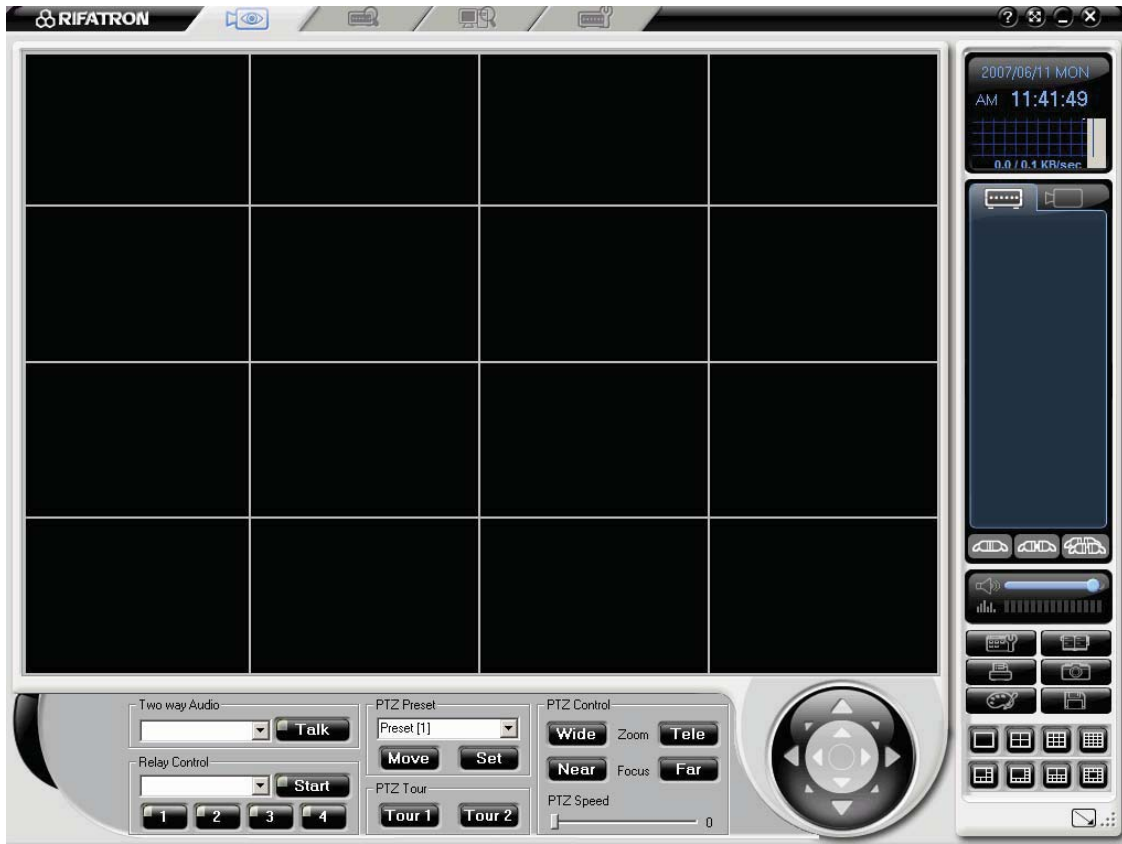
② When a user login window appears, enter the manager code to run a program (Default manager code: 1111111)



③ When the program is run, the following startup screen is displayed.



2) Graphic User Interface(GUI)



1 Function mode selection tabs

- Remote real-time monitoring
- Remote search and playback of recorded images
- Search and playback of images stored in the user computer
- System setting for the remote DVR

2 Window control and program exit buttons

- Version information
- Window minimization


 Window maximization


 Program exit

3 Function buttons

 Environment setting

 Address Book

 Image Captures

 Image Print

 Controls of Image colors


 Screen Record

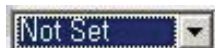
 User Group Control


 1-channel divided screen mode

 4-channel divided screen mode

 16 / 25 / 36 / 49 / 64 channel divided screen mode

 Real time screen rotation function

 User screen setting addition

 Full screen mode chosen from a user screen setting

 Full screen mode



If you click the center circle of the circular button, it switches to Display / Playback / PTZ mode as in the following figure.

Playback Control Button



This button is used for the playback.

Forward Play / Reverse Play

Forward Single Frame Play / Reverse Single Frame Play

Fast Forward / Fast Rewind



- The speed control for the normal play ranges from 1/16X to 16X in 1-ch mode. (Units 1/16X, 1/8X, 1/4X, 1/2X, 1X, 2X, 4X, 8X, 16X)
- The speed control for the fast play ranges from 30X to 300X in 1-ch mode. (Units 30X, 60X, 90X, 120X...270X, 300X)
- The speed control for the single play ranges from 1X to 30X in 1-ch mode. (Units 1, 2, 3, 4, 5, ..., 28, 29, 30x)

PTZ Control Button



Button for controlling Pan/Tilt

Button for use in each adjustment mode

PAN: Left/Right

TILT: Up/Down

DATE & network transmission information



Displays the current PC date and time and total network transmission volume

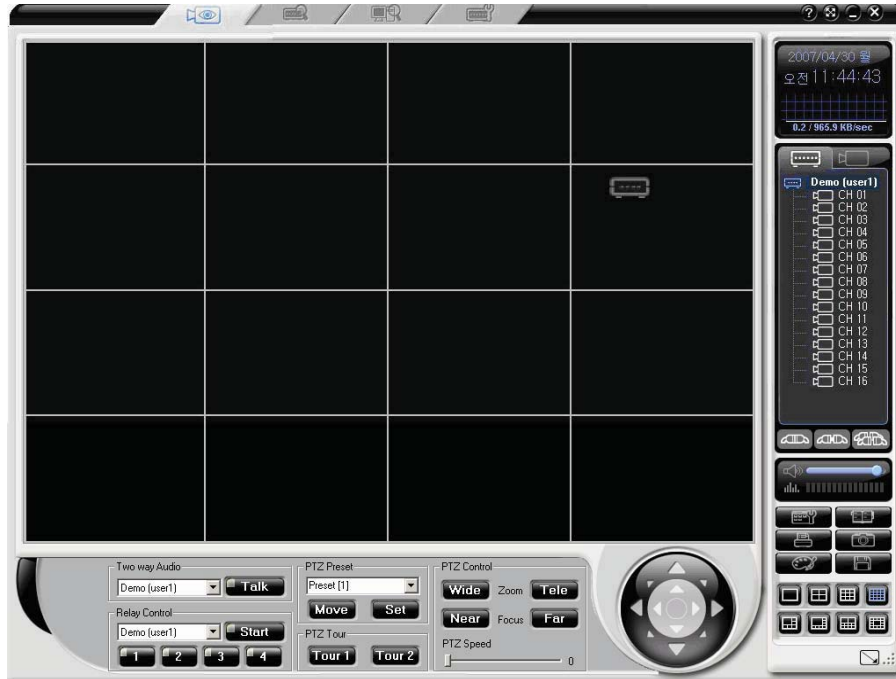
1-4 Real-time monitoring

1) Viewing real-time images

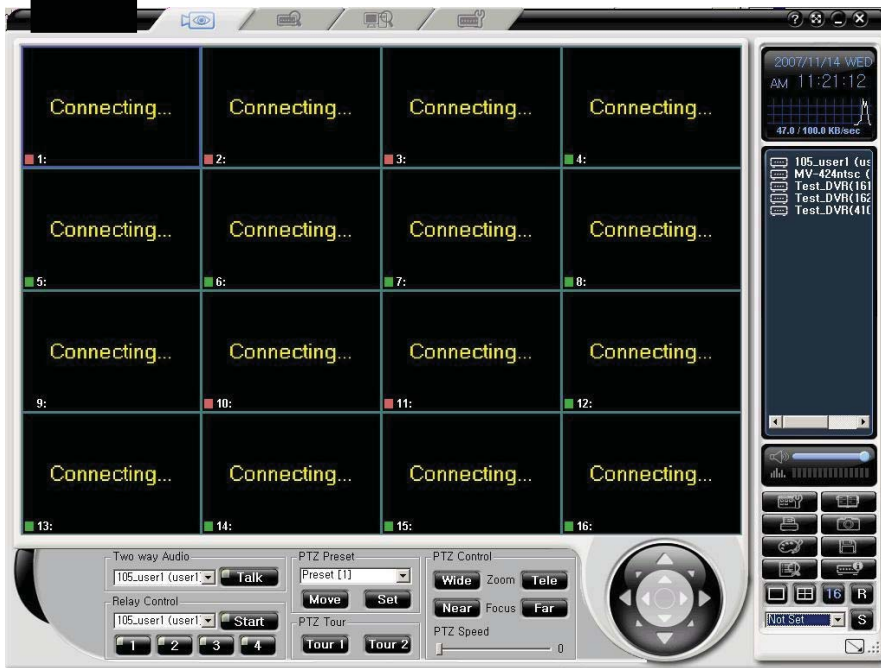
(1) DVR unit real time monitoring

① For DVR unit real time monitoring, choose a DVR icon in the connection list on the right.

Drag and drop it on the screen. Then screens will appear in sequence.



② Before connecting a screen, the messages of 'connecting,' 'no signal,' or 'screen disconnected,' will appear according to the camera's functional condition.



Remote Management
Software

③ After screen connection, all ACTIVE channels of the DVR will appear on the screen.



(2) DVR camera unit view

① In screen setting by camera units, choose a camera from the connection list on the right.

Drag and drop it, then you can see the screen of the camera



② To switch a channel, place the channel you want to choose. When there is a picture in the channel you chose, it will appear on the screen.



③ To remove pictures of a camera unit, take the channel out from the program by using drag and drop, and then the picture will disappear.



2) Divided channel screen view

(1) Divided screen view

<p>The control panel shows a grid of buttons. The top row includes a square button, a 2x2 grid button, a '16' button, and an 'R' button. The bottom row includes a 'Not Set' dropdown menu and an 'S' button.</p>	<p>After the pictures of video appears on the program screen monitor, click the divided mode button at the display mode button, then you can view the divided screen.</p>
<p>Example) 4-channel divided screen mode</p>	

① 1 channel mode




1Channel segmentation mode

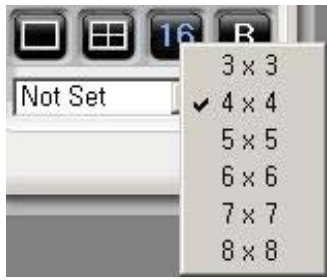
② 4 channel mode



4 Channel segmentation mode

-  A user can appoint and use a channel mode at the screen layout in 6, 8, 10, 13 channel mode. Consult screen layout function for more details.

(2) C x C Divided Screen View

	<p>C x C divided screen supports 3 x 3, 4 x 4, 5 x 5, 6 x 6, 7 x 7, and 8 x 8 screen mode. For divided screen mode setting, click the right button on CxC button, then a popup menu will appear as you see in the left picture. Click the channel mode you want to choose with the left button of your mouse.</p>
<p>Example) 9/16/25/36/49/64 divided mode choice</p>	

9 channel mode



9 Channel segmentation mode

16 channel mode



16 Channel divided screen mode

25 channel mode



25 Channel segmentation mode

36 channel mode



36

R

S

Not Set

36 Channel segmentation mode

Remote Management Software

49 channel mode



49

R

S

Not Set

49 Channel segmentation mode

64 channel mode



64 Channel segmentation mode

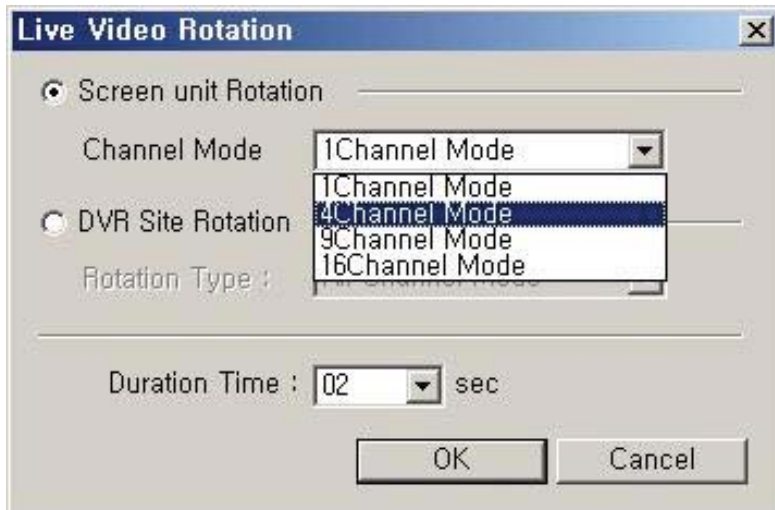
If you want to view a single channel view in a divided mode, Double click the channel screen. If you want to view the previous divided mode, double click the screen. Time/ date/ channel information does not appear from 36 channel mode.

3) Remote control real time monitoring rotation function

(1) Screen unit rotation

	<p>There are screen units and DVR units in the rotation function. The Screen unit is to rotate the picture you are watching at the moment; the DVR unit is to rotate all the real time pictures currently connected.</p>
--	--

If you choose the rotation R button, a setting window appears as below, choose the above rotation R button and set a channel mode and rotation time you want.

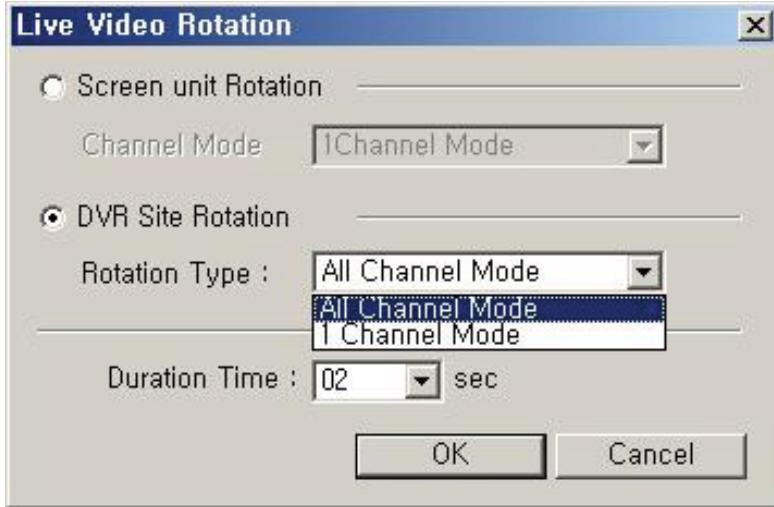


The screen will rotate according to the chosen channel mode and time. If you want to stop the rotation, click the rotation R button again.



(2) DVR unit rotation

Choose the rotation R button; a setting window will appear as below. Choose the rotation R button and set a channel mode and rotation time as you want.



When a rotation starts, the chosen DVRs cameras will rotate while changing their channel modes. If there are 4 cameras in a DVR, it will rotate in 4 channel modes. If you want to stop the rotation, choose the rotation R button again.



3) Screen magnification / Contraction function

(1) Screen magnification / contraction function

In 1 channel mode, click the right button of the mouse. A pop-up menu will appear. Magnification and contraction range from 100 % - 1600 %. (100, 150, 200, 300, 500, 700, 1000, 1600 %)



When you choose a magnification rate on the pop-up menu, there appears a PIP screen on the bottom right of the screen. On the screen, there will be a picture screen and the magnified picture appears in the red box.

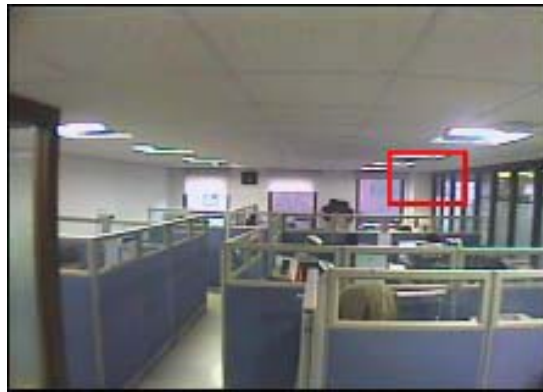


To move the magnified picture, move the red box in the PIP screen to a place you want to magnify.



Remote Management Software

You can magnify or contract the screen without going to the popup menu by using a mouse wheel and Ctrl key. In PIP mode, press the Ctrl key and move the mouse wheel upward to zoom in and downward to zoom out.



Zoom In



Zoom Out

4) Controlling the PTZ

(1) Selecting the channel connected to a PTZ camera

Select the PTZ camera displayed on the screen as shown in the figure below



(2) Adjusting the Pan / Tilt

Select a channel where a PTZ is connected and use the arrow buttons to adjust the Pan/Tilt



(3) Adjusting Zoom in/ Zoom out

After selecting a channel where a PTZ camera is connected, adjust by clicking the Wide/Tele button controlling Zoom in the PTZ control group.



Zoom Out



Zoom In



(4) Adjusting the Focus

After selecting a channel where a PTZ camera is connected, adjust by clicking the Near/Far controlling the Focus in the PTZ control group.



Focus In

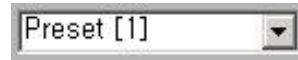


Focus Out



(5) Controlling a Preset

After selecting a channel where a PTZ camera is connected, the PTZ Preset position and number can be set up and moved using the Move/Register button in the PTZ Preset group.



Select a PTZ Preset No.



Move the screen position to the selected preset number position



Save the current position in the selected preset number.

(6) Adjusting the Speed

After selecting a channel where a PTZ camera is connected, speed can be controlled using the PTZ speed slide bar in the PTZ control group.



Adjust the speed of movement between 0 ~ Maximum Value



(7) Controlling the Tour

After selecting a channel where a PTZ camera is connected,
Select Tour 1 or Tour 2 to run PTZ tour.



Tour 1

Run PTZ Tour1

Tour 2

Run PTZ Tour2

Remote Management Software

5) Controlling the Two way Audio

The Two-way Audio function will play the voice data that is inputted using a microphone or an audio input device by the user in CMS and sent to the DVR, in the DVR system

(1) Selecting a DVR in the connected DVR list



(2) Press the Talk button and speak

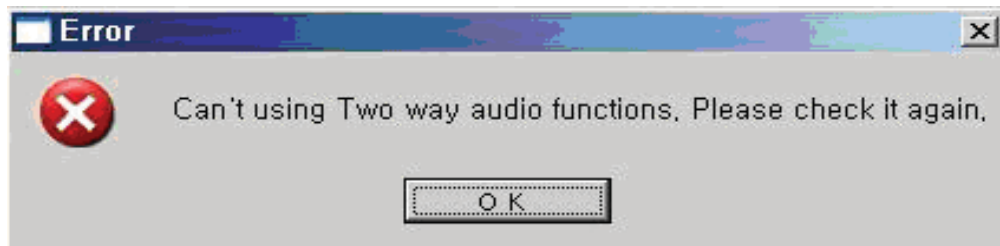


(3) Press the Talk button again disables the feature



(4) After 2 minutes, the Two-way Audio function will be stopped automatically.

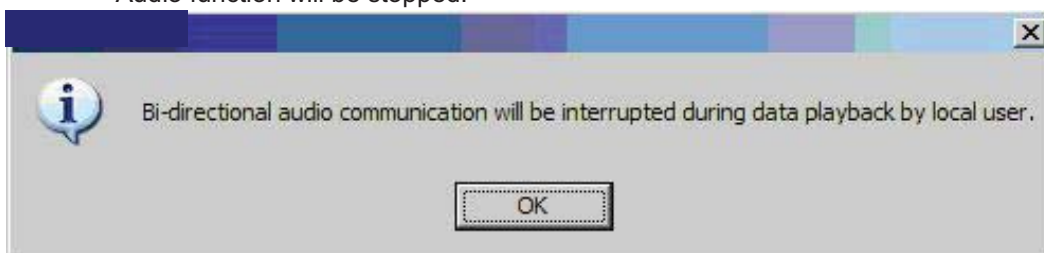
(5) If another user uses the Two-way Audio function first, the following message will be displayed. This function can be used when that user is done.



(6) If the Playback mode is being used at the DVR system, the following message will be displayed. Two way audio may be used when the Playback mode has ended.



(7) While the Two-way Audio function is being used, if the Playback mode is accessed at the DVR system, the following message will be displayed and the Two-way Audio function will be stopped.



6) Controlling the Relay Out

The Relay Out function will turn On/Off the devices connected to Relay Out. The number of Relay Outs supported is different for each model. (Premier series/VerteX-1648 : 4, Workhorse 16 and 8 : 4, Workhorse and VerteX 4 : 1, VerteX 8 : 2)

(1) Select a DVR from the connected DVR list



(2) Indicating the Relay Out state for the DVR



(3) Using the Start button to set up On/Off for Relay Out







(4) If another user is already using Relay Out, the following message will be displayed when the Start button is pressed. Relay Out may be used when that user is done



7) Controlling the audio

If the audio record is set, you can listen to the audio set to each channel in real-time as in the following figure.



- (1) Executing live monitoring by selecting the DVR icon or the camera icon causes the channels where audio is connected to display an audio icon on the lower right of the screen. Playback will then be carried out automatically starting with the audio connected to channels with lower playback order number.
- (2) To change the audio channel, click the channel displaying the  icon. The icon will then change to , and the audio for the corresponding channel will be played.
- (3) Drag the  button to control the audio volume.
- (4) Selecting the  button activates the noise cancellation. To terminate the noise cancellation, select the button again or move the volume adjustment bar.

1-5. User & user group administrator



It is to set the authority for information such as user name, access code, etc.

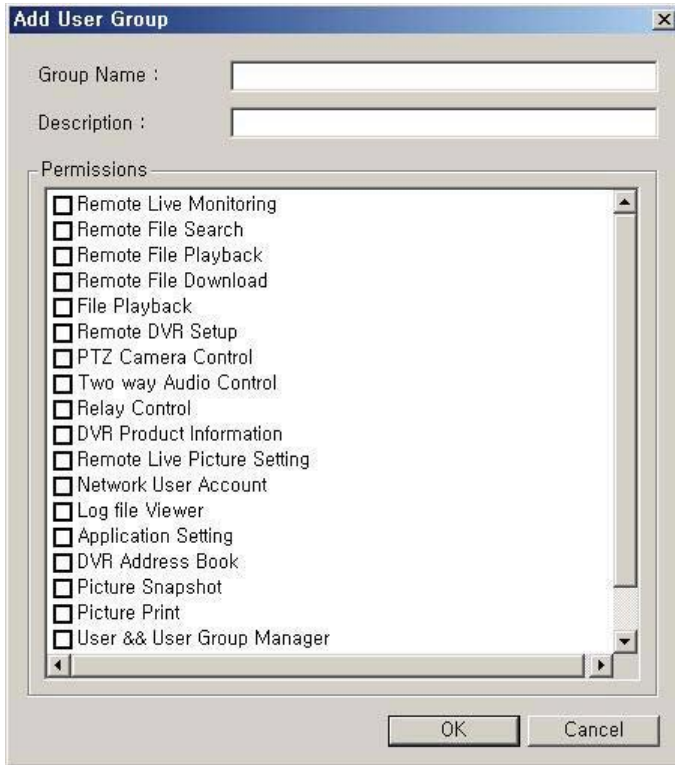
1) User Group Administrator

(1) Adding the user information

Select Add button to add User group.



Setting user group name, explanation and authority.



(2) User Group Editing

Click [Edit] button to edit User & User Group Manager as shown in the figure below.



Edit Group Name, Description and Permissions


Group Name :

Description :

Permissions

- Remote Live Monitoring
- Remote File Search
- Remote File Playback
- Remote File Download
- File Playback
- Remote DVR Setup
- PTZ Camera Control
- Two way Audio Control
- Relay Control
- DVR Product Information
- Remote Live Picture Setting
- Network User Account
- Log file Viewer
- Application Setting
- DVR Address Book
- Picture Snapshot
- Picture Print
- User & User Group Manager

OK Cancel

 Administrator User Group can not be edited or deleted. It has all authorities.

(3) User Group Delete

Click [Remove] button to delete User Group as shown in the figure below.



② User Group is deleted



(4) User Group Property

Click [Properties] button for the user group property.



The User Group Properties appears



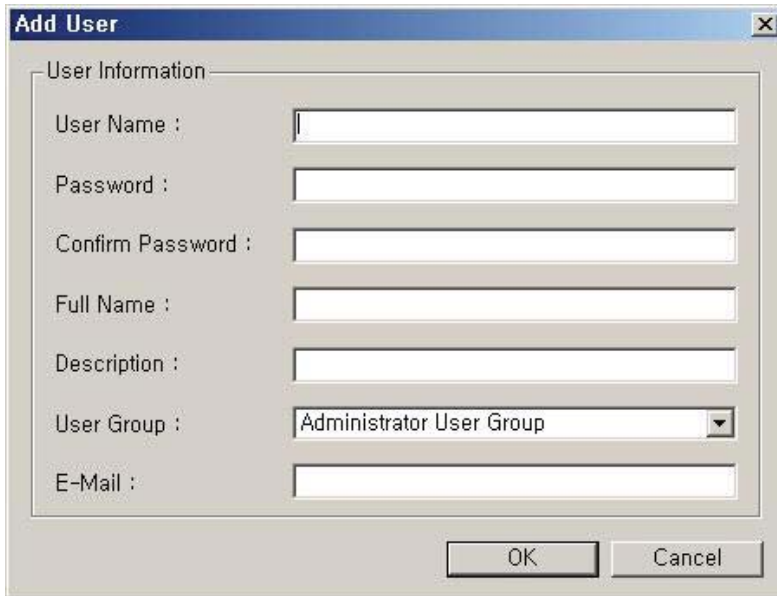
2) User Administrator

(1) Add User

Click [Add] button for the add User



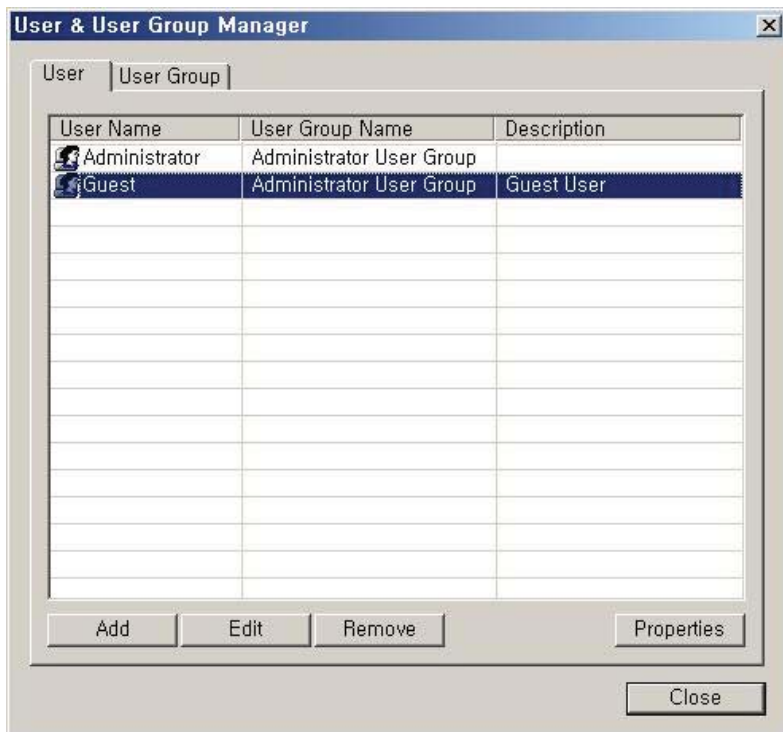
Enter the User Name, Password, Full name, Description, E-Mail.



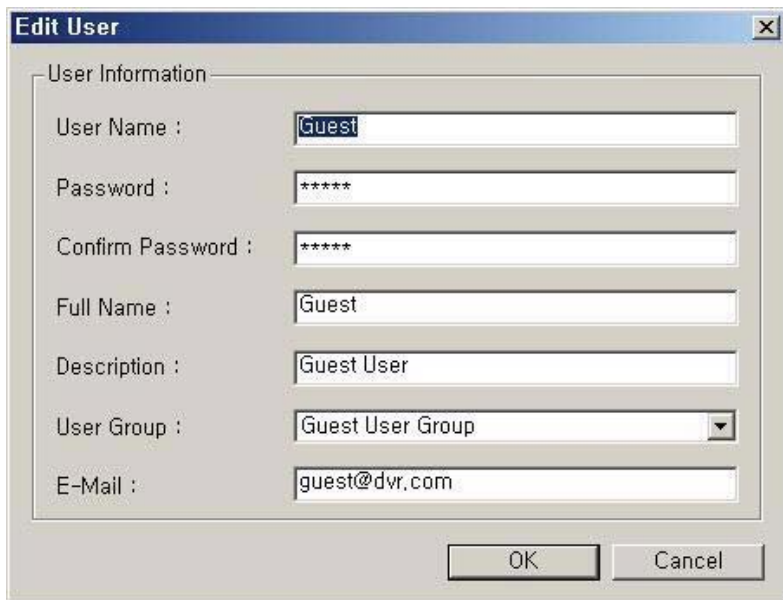
At the first installation, the initial access code of the Administrator is “1111111.”

(2) The User Group Edit

Click [Edit] button to edit User Group as shown in the figure below.



Edit User Name, Description and User Group as shown in the figure below.



📖 At the first installation, the guest's access code is "12345."

(3) User Group Delete

Click [Remove] button to delete User Group as shown in the figure below.

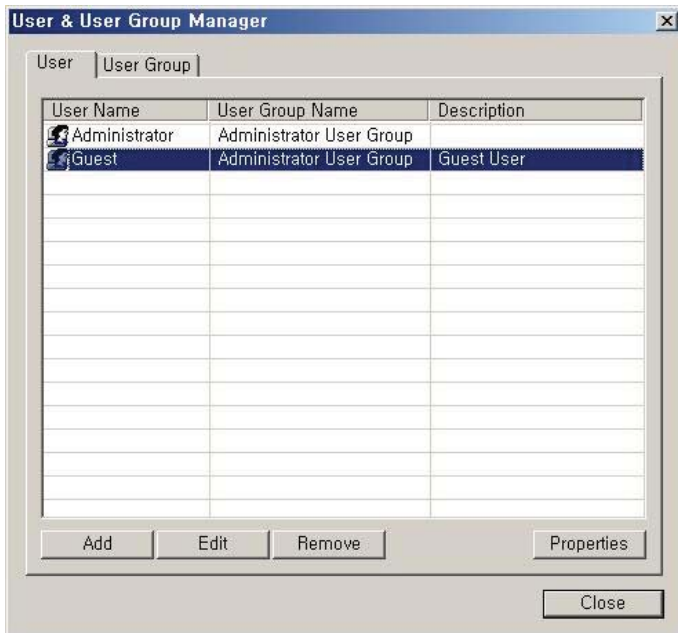


User Group is deleted




3) User Group Property

Click [Properties] button for the user group property.



The User Group Properties appears



 The Administrator item can not be deleted. It is the administrator user ID.

4) User Log-in

1) Program Log-in

Enter the user name and access code in the program



When the login is successful, an automatic connection function is operated.

1-6. Automatic connection and address book administration

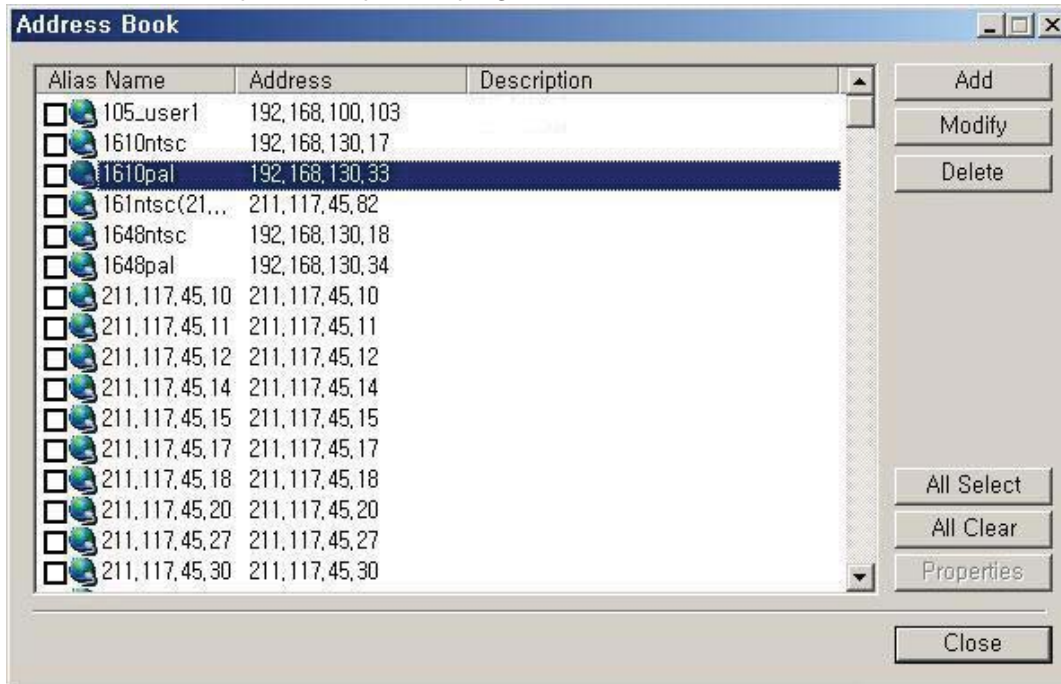


It adds, edits, and deletes the DVR system connection address. It also manages the DVR system lists to connect.

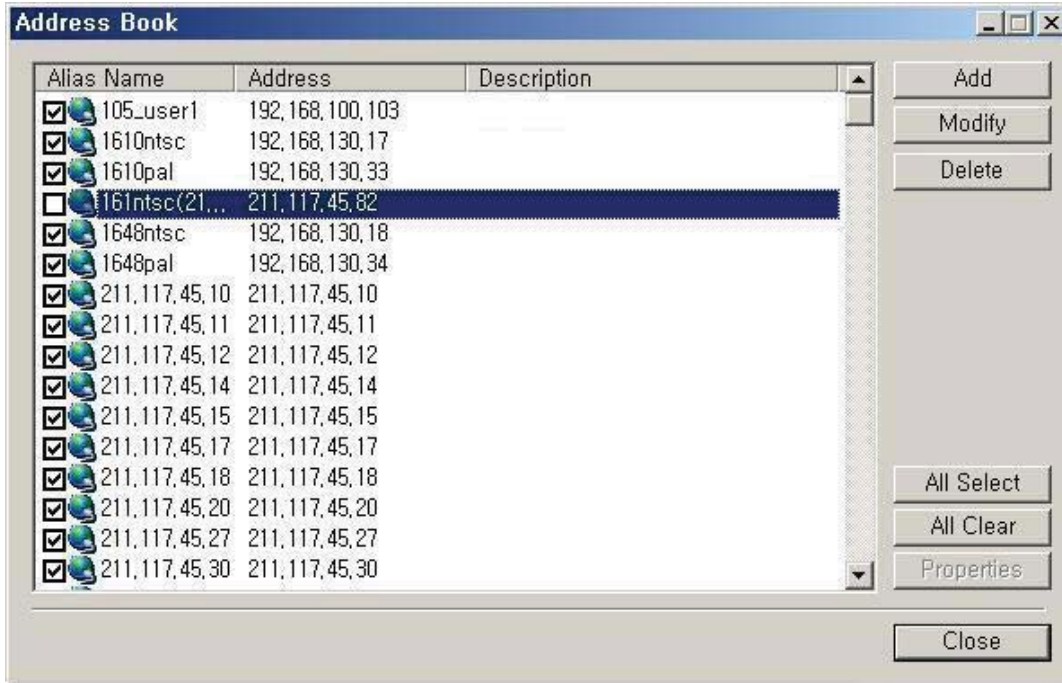
1) Automatic connection function

(1) Automatic connection registration

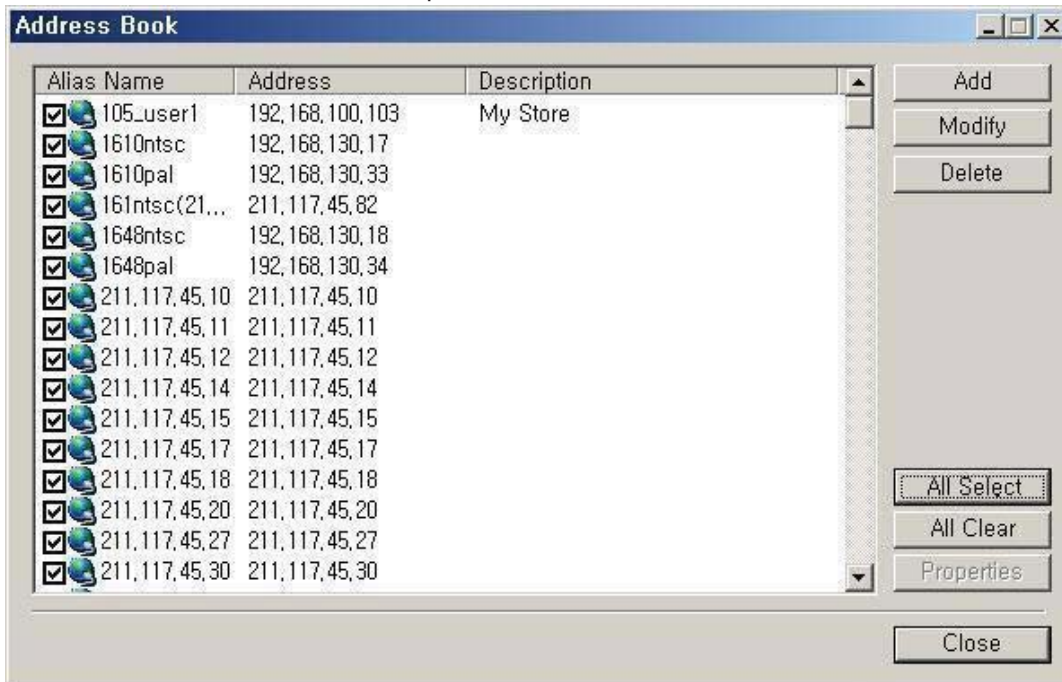
For automatic connection registration, operate the address book and check the item you want to access upon start up of the program



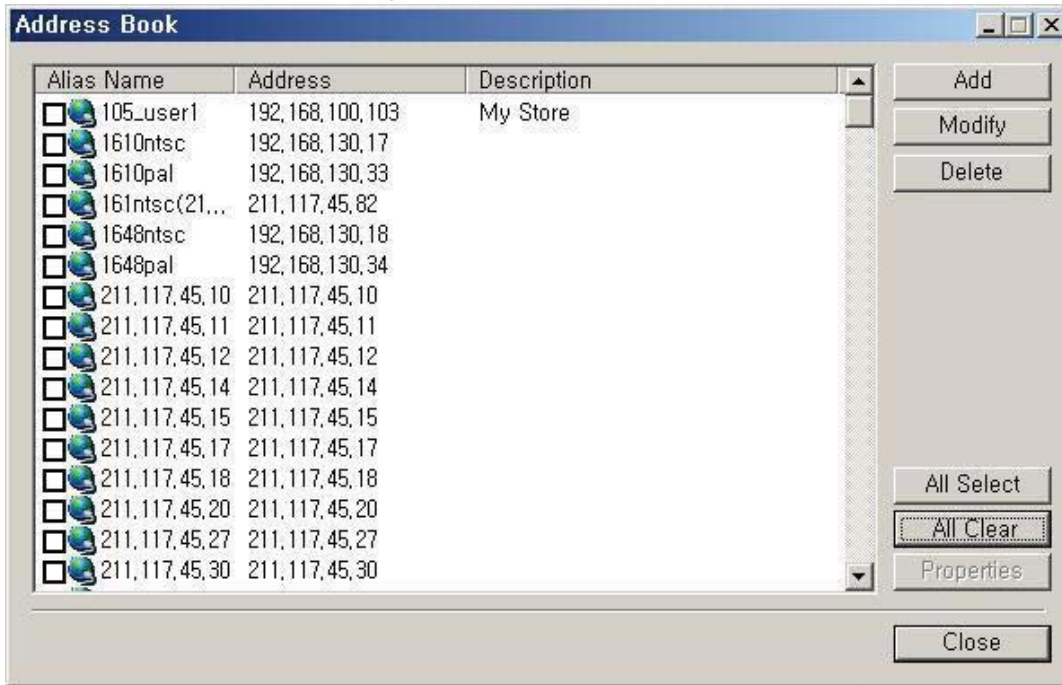
To cancel the automatic connection, operate the address book and cancel the item you want to



To choose all of the address lists, press the select all button and select.



To cancel all the address lists, press the select all button and cancel

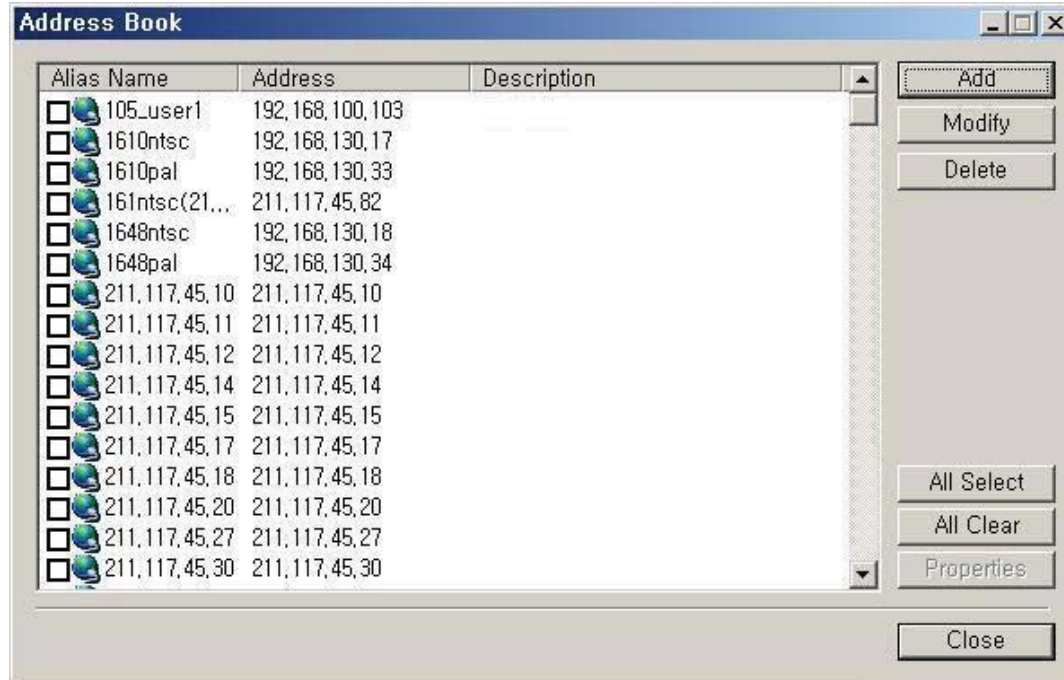


- When the checked connection item is disconnected, the connected item does not disappear from the automatic disconnection list even if you cancel the item check from the address book. It does not appear if you reset the program.

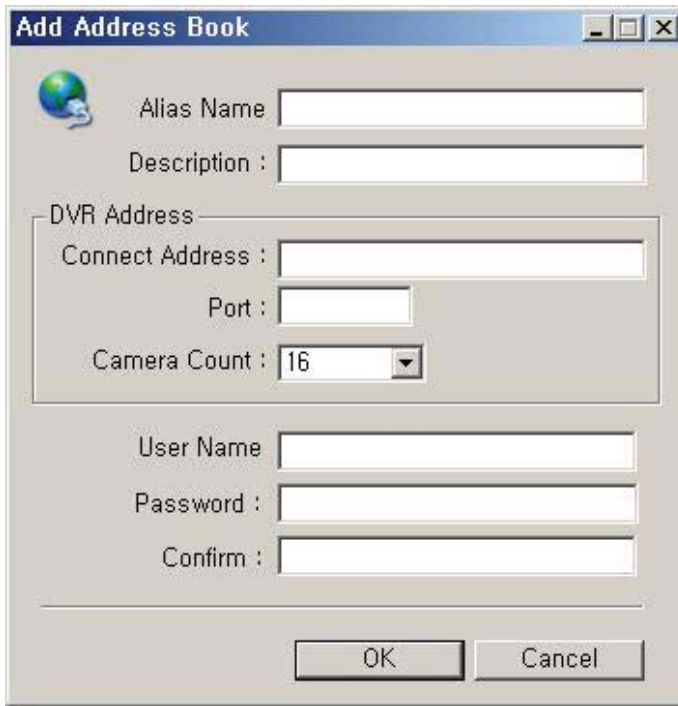
1-7. Real-time monitoring the address book site administration

1) Add an address

Choose the add button to add an address to the address book site.



Enter the user name, description, DVR information in the add window and press the OK button.

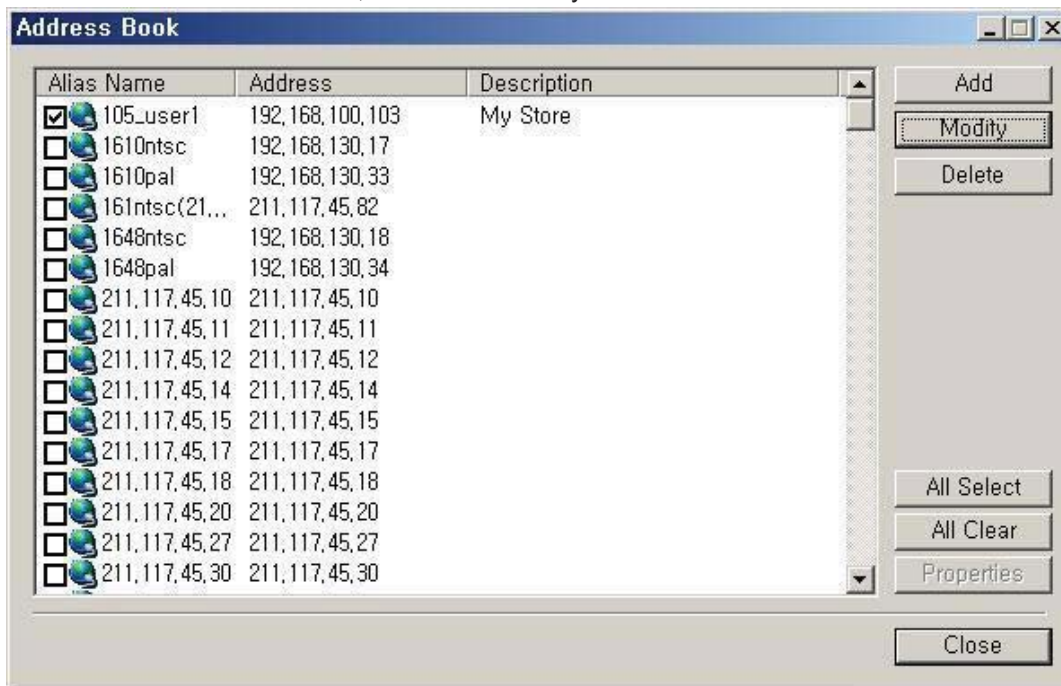


The screenshot shows a dialog box titled "Add Address Book". It features a globe icon on the left. The fields are arranged as follows: "Alias Name" (text box), "Description:" (text box), "DVR Address" (group box containing "Connect Address:" (text box), "Port:" (text box), and "Camera Count:" (dropdown menu with "16" selected)), "User Name" (text box), "Password:" (text box), and "Confirm:" (text box). At the bottom are "OK" and "Cancel" buttons.

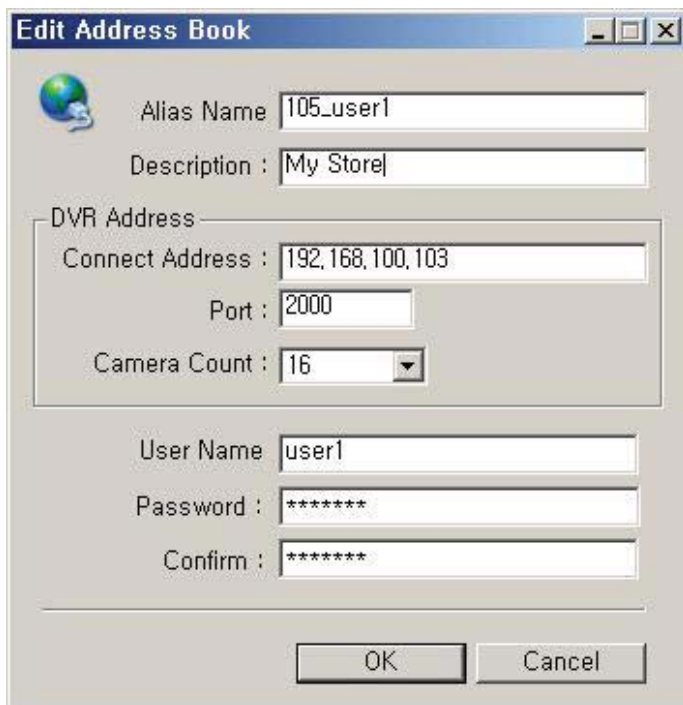
- 📖 The added address is automatically chosen and connected when you close the address book

2) Modify the address book

To amend the address book, choose the Modify button.



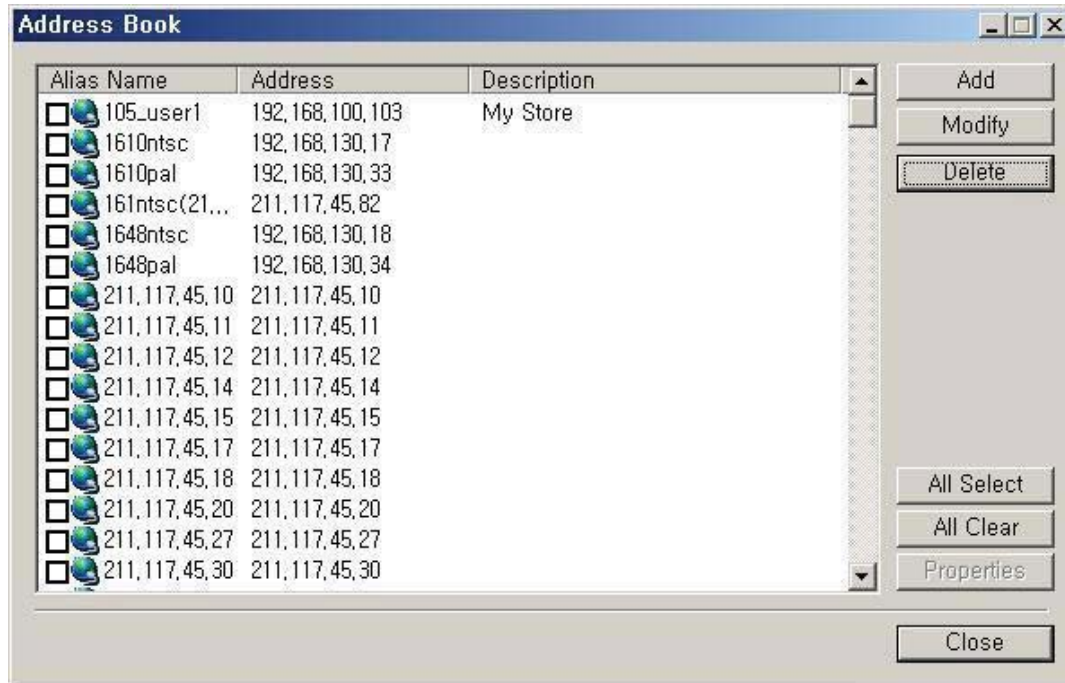
Enter the user name, description, and DVR information to the added window, and choose the confirm button. Then a new address is added



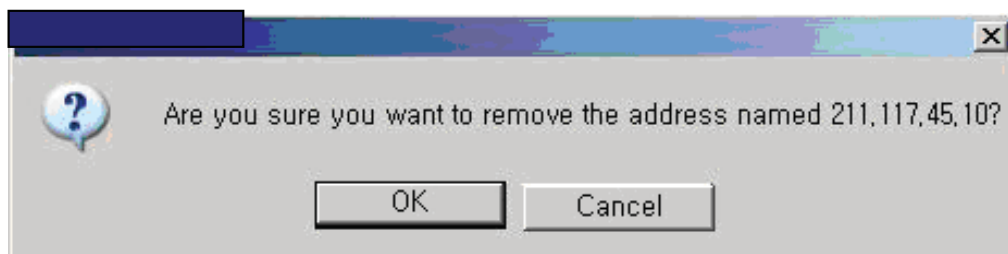
- When you want to change Information except the user name, press the confirm button, then they can be revised. When you change the user name, press the confirm button, then the address will be added.

(2) Delete the address site

To delete an addressed site, choose the delete button.



- When you choose the delete button, there appears a message box to confirm



1-8. Screen Layout Function

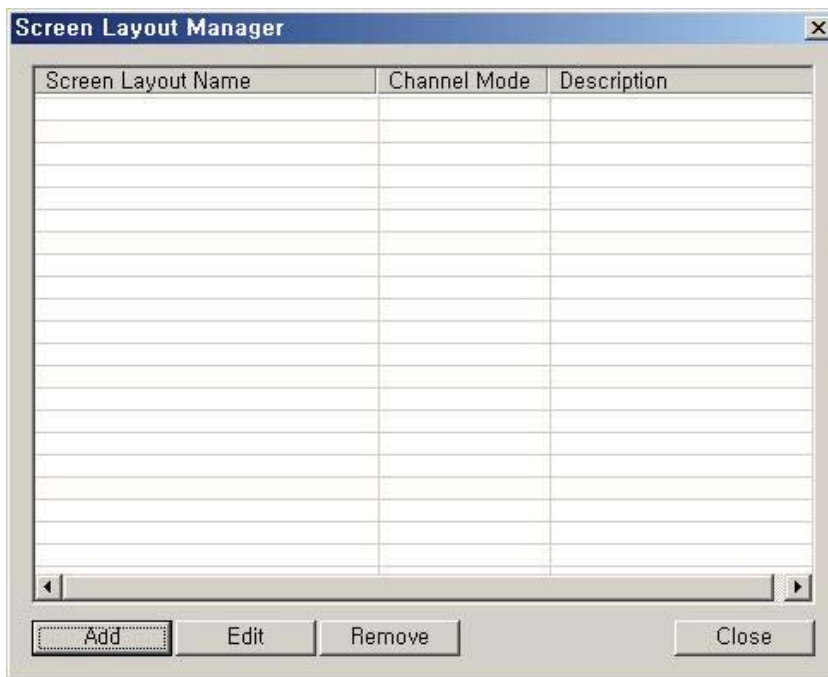


This is the screen picture administration function.

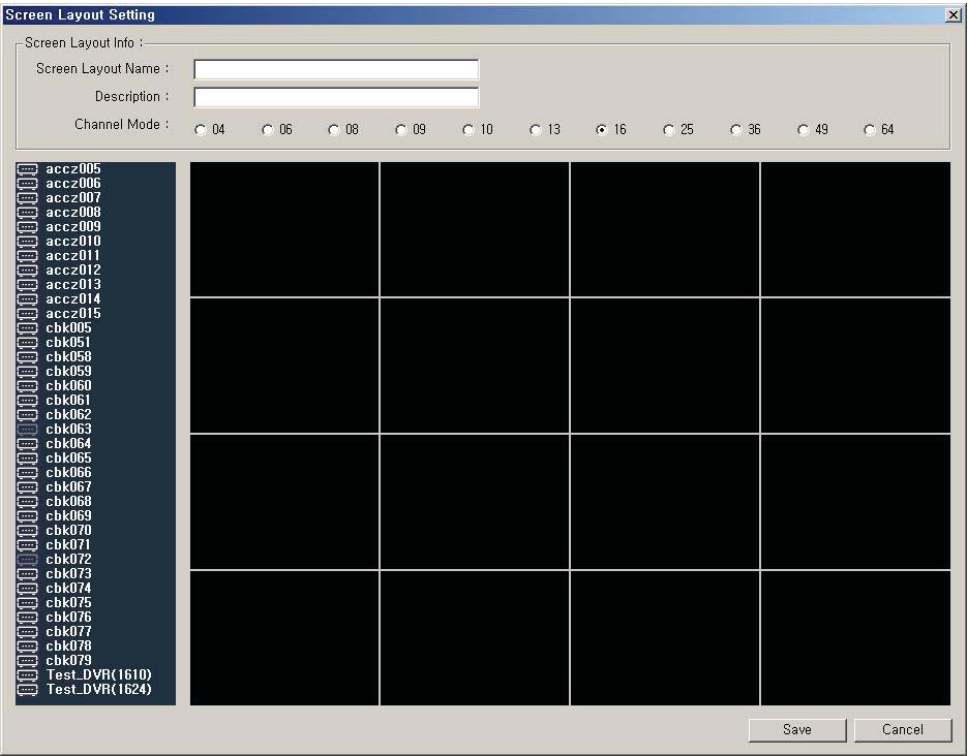
1) Screen Layout administration

(1) To add the Screen layout

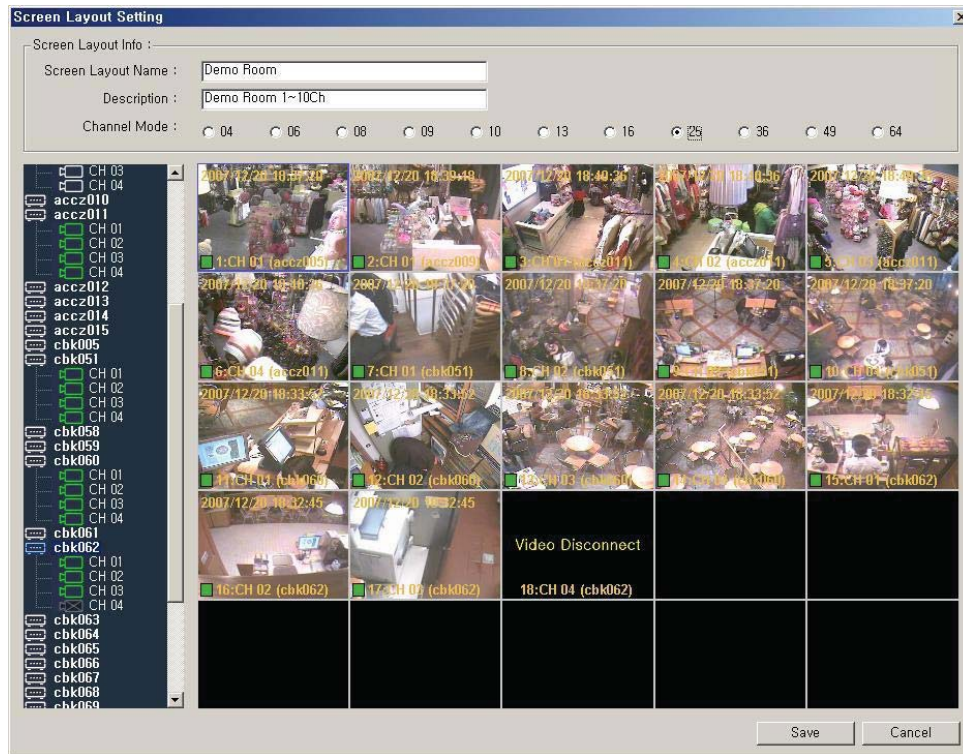
① Press the add button to add the screen layout.



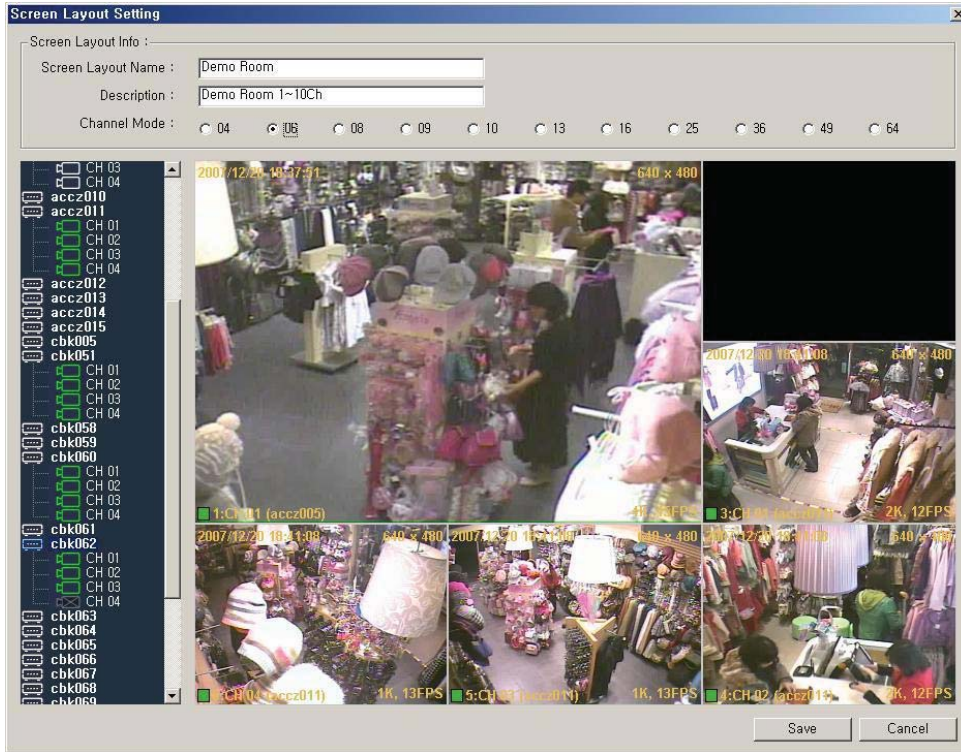
② There appears a screen layout window. You can choose a name, and description and a channel mode you want.



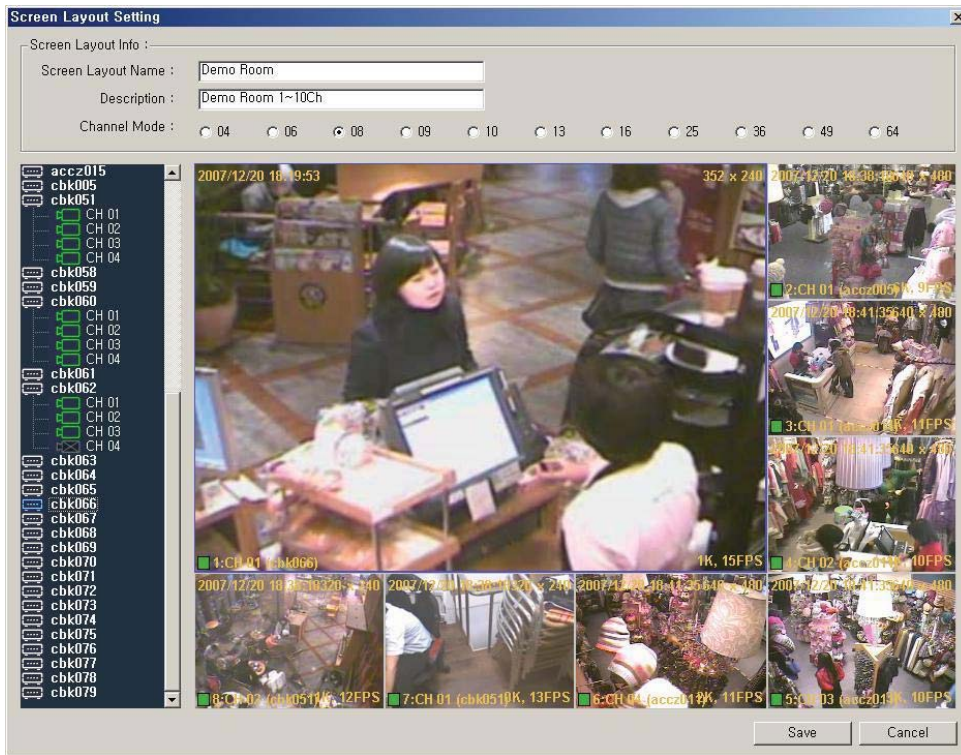
- ③ Choose a channel mode in the screen layout, and display channels the user wants. The way to display is the same as the drag and drop function of the camera and DVR icon in live mode. The channel move and delete are also the same.



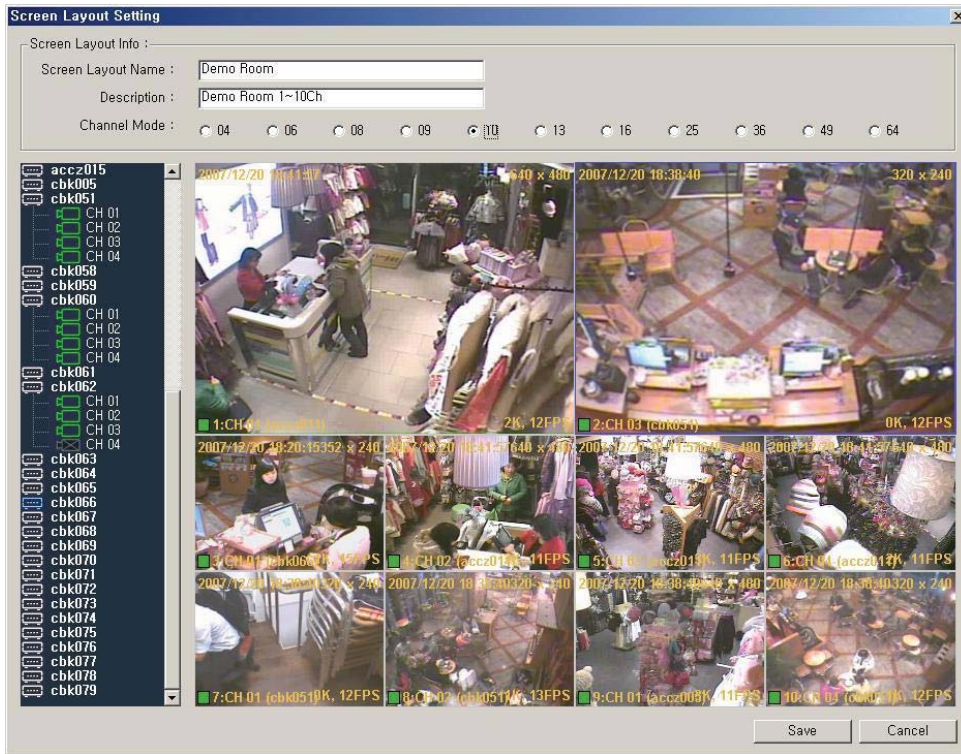
④ 6 channel mode choice in screen layout



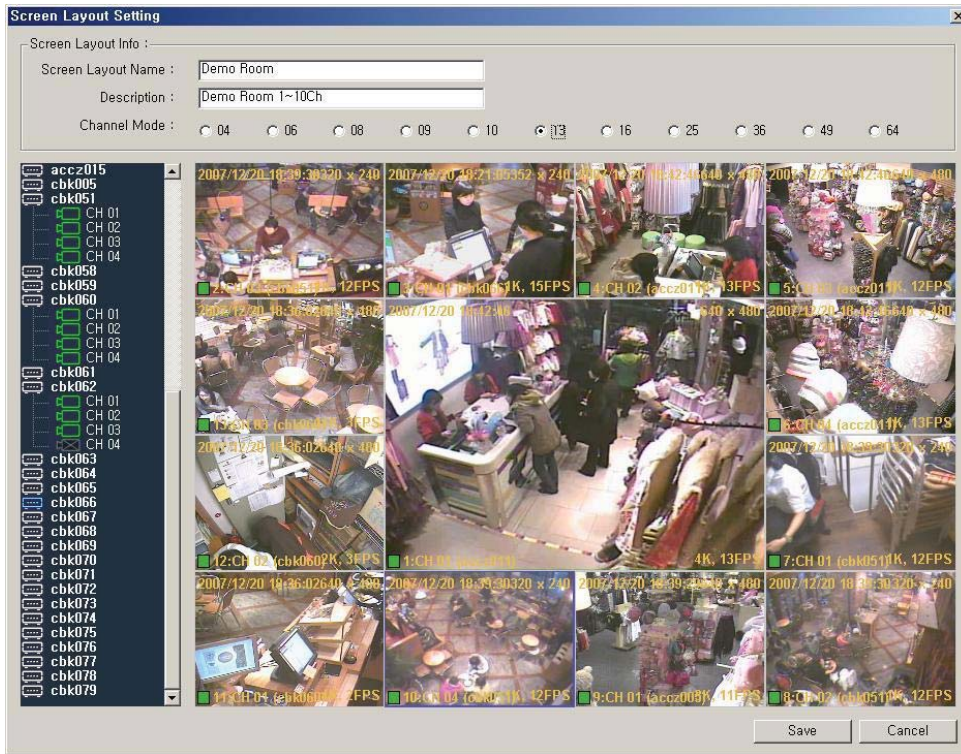
⑤ 8 channel mode choice in screen layout



⑥ 10 channel mode choice in screen layout

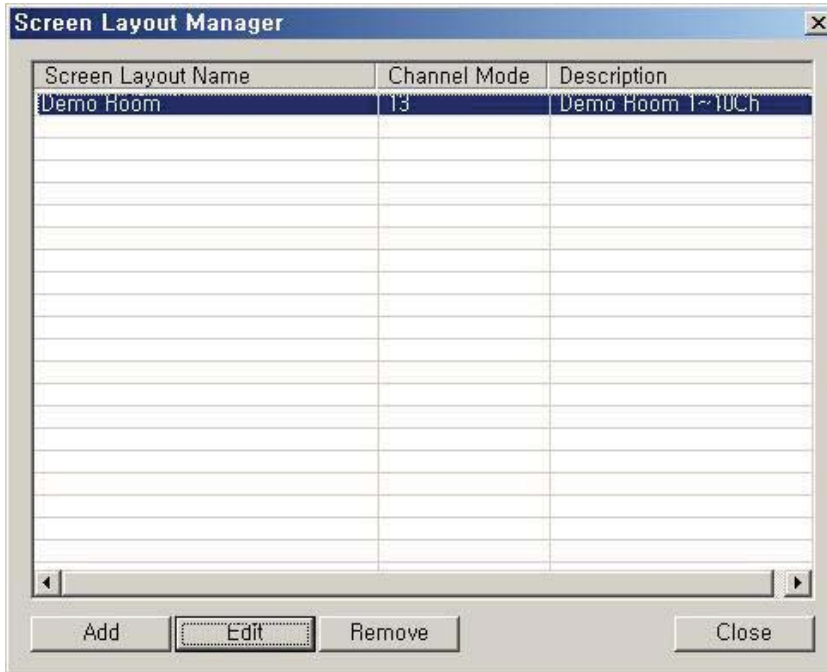


⑦ 13 channel mode choice in screen layout

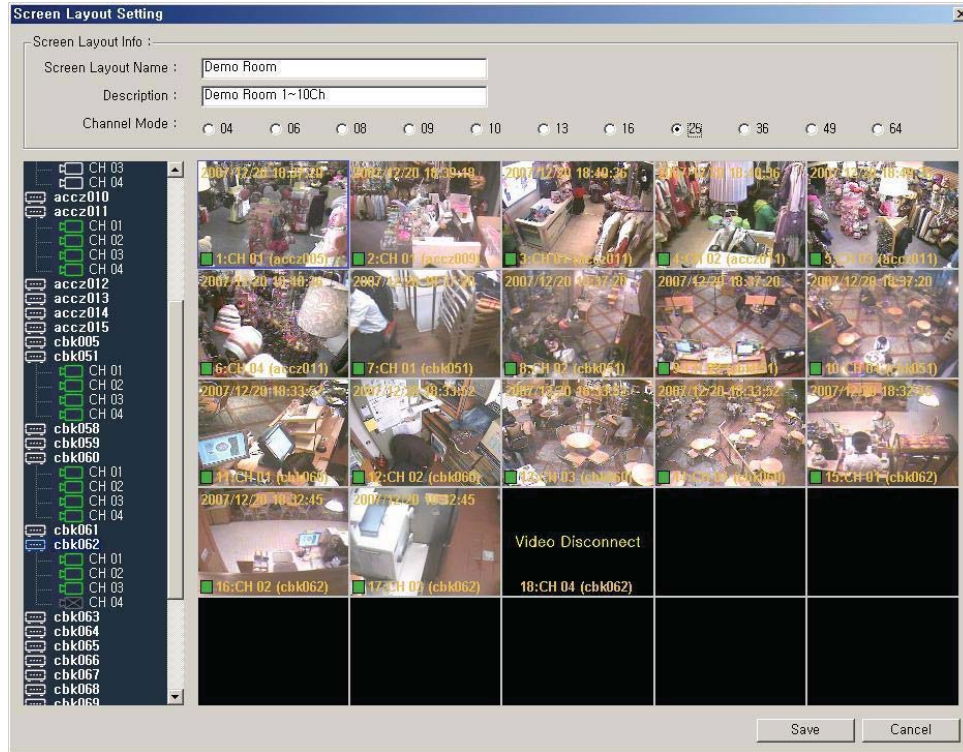


(2) To edit the Screen Layout

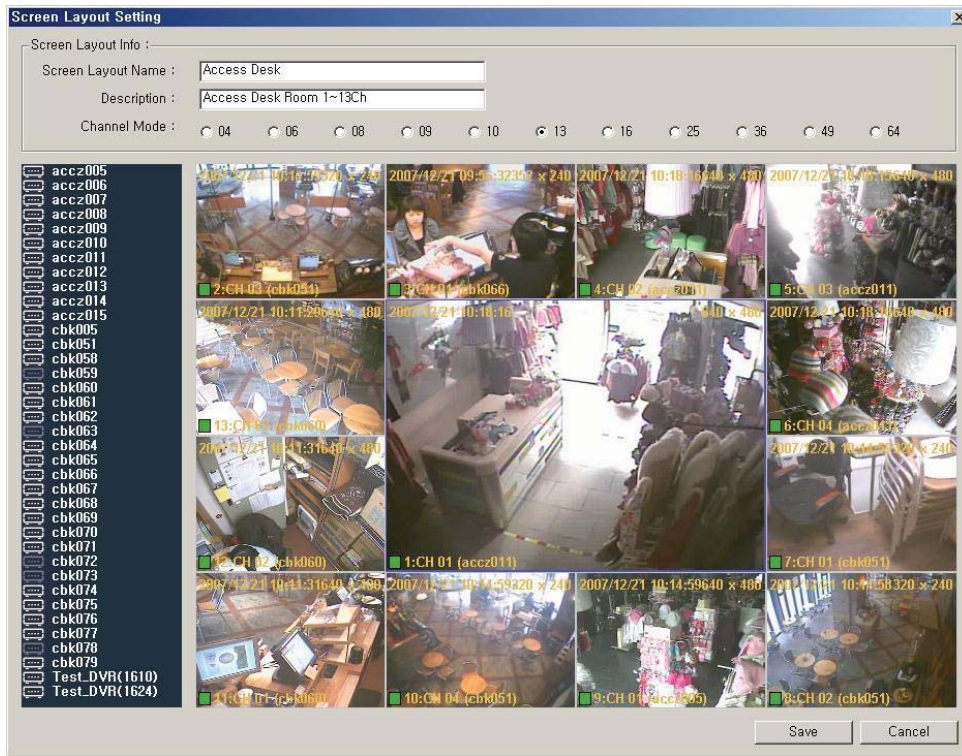
① To edit the screen layout, press the edit button.



② When you press the edit button, there appears the channel mode and arrangement plan previously set.

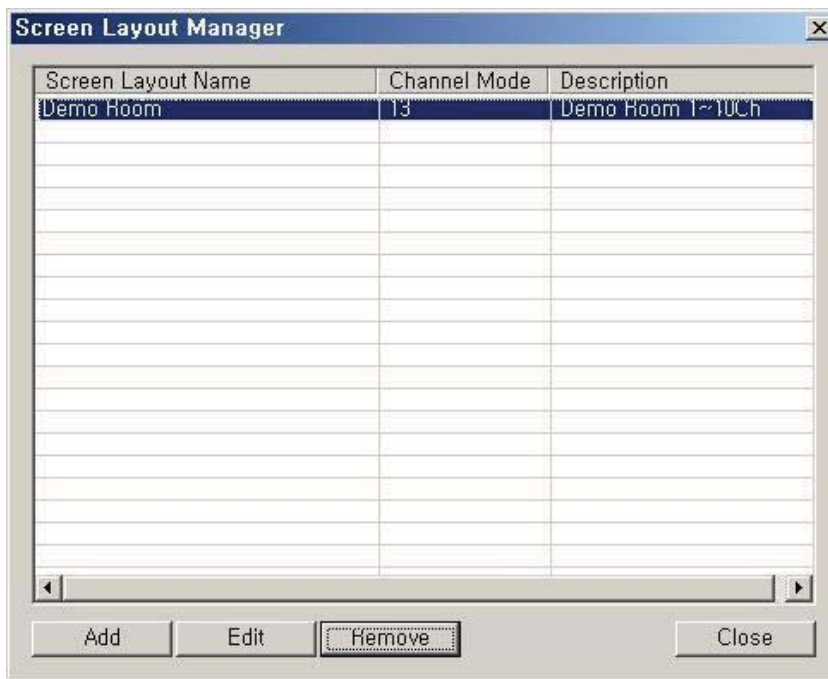


- ③ Edit the screen layout name, explanation, channel mode and arrangement plan and press the save button.

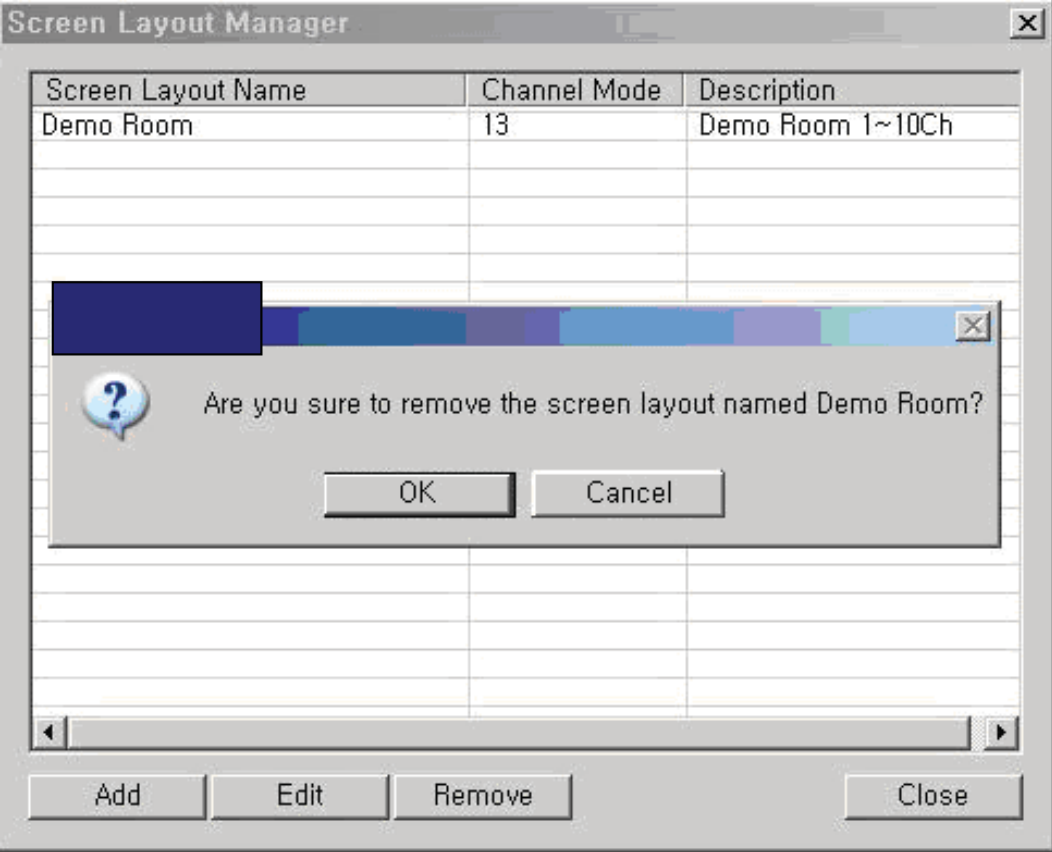


(3) To delete the Screen Layout

① To delete the screen layout, press the delete button



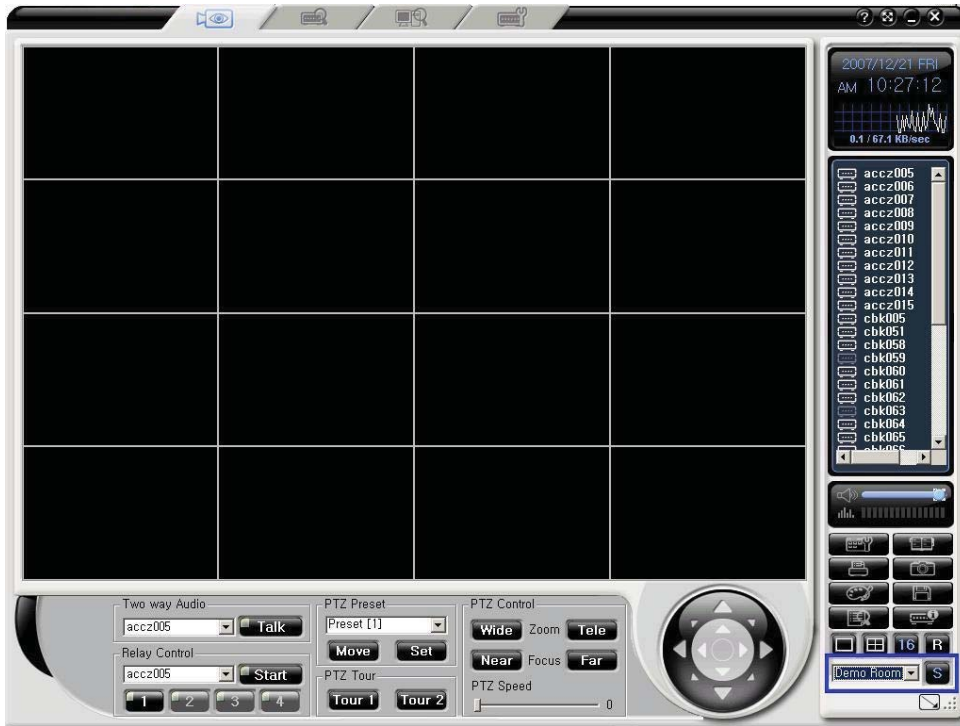
② When you press the delete button, there appears a dialogue box asking you to confirm the deletion. Choose OK or cancel.



2) To use the screen layout

(1) To use the screen layout in live mode

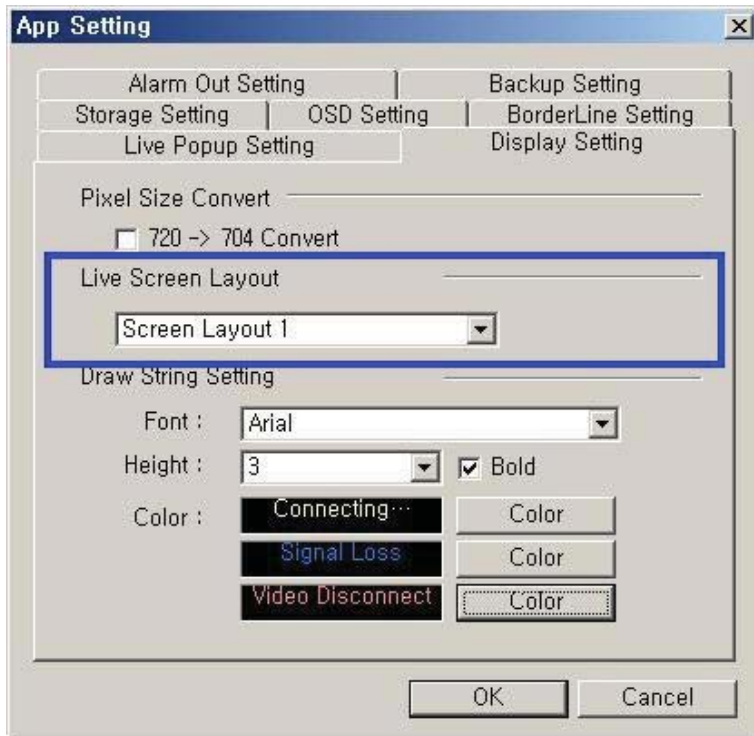
- ① Choose the screen layout from the right bottom screen layout list in the live mode, and then click the S button.



② When you choose a screen layout from the screen layout list, there appears a customized live screen as below.

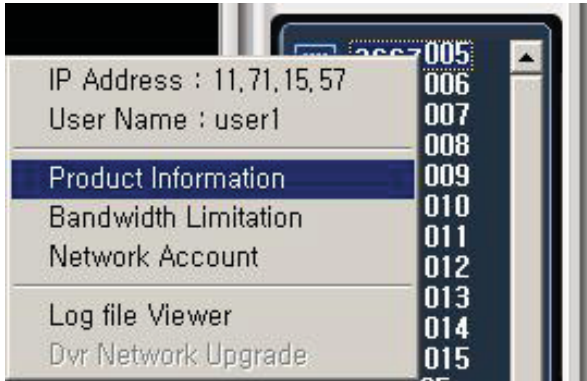


③ When you start a program, you can set the customized screen layout to be operated automatically. If the user chooses the screen layout he wants from the live screen layout as below, the program starts with the chosen screen layout.

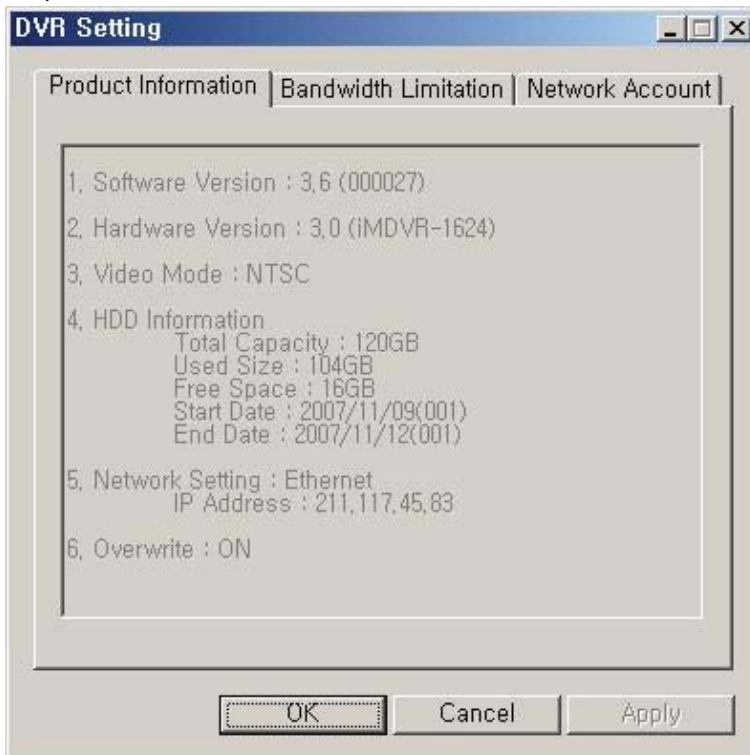


1-9. DVR information setting

① In order to use the product information view, select the DVR site name on the right of the program screen and click the right mouse button. Select the product information on the popup menu.



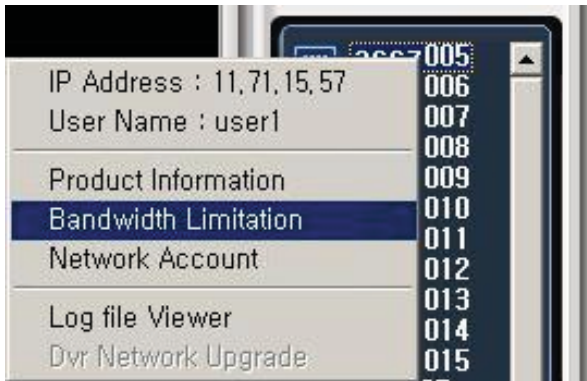
② When you select the product information tab in the popup window, there appears the product information as below.



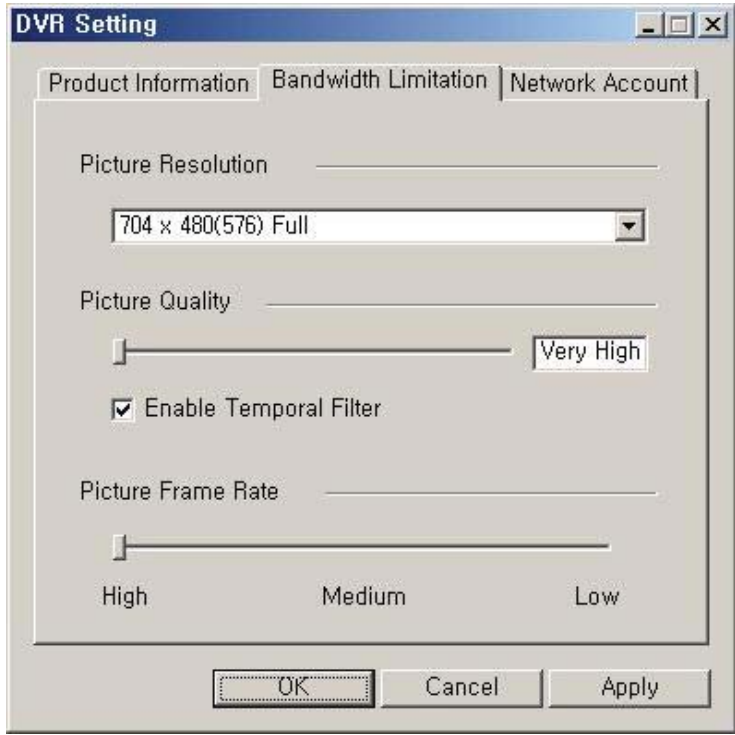
1. S/W version (Build Number)
2. H/W version (Model Name)
3. Video Mode
4. HDD Information
 - Total Capacity
 - Used Size
 - Free Space
 - Start Date
 - End Date
5. Network Setting
6. Overwrite On/Off

1) Bandwidth Limitation Function

① To use the support for throttling function, choose the DVR site name on the right of the program screen and right click the mouse button. Select the support for throttling function on the popup menu.



③ When you select the support for throttling tab in the popup window, there appears the support for throttling as you see in the picture below.



*** Image resolution**
It regulates the screen resolution. The lower the resolution, the faster the transmission speed.

(CIF > Field > Full)

*** Image quality**
It regulates screen quality. High image Quality lowers compressibility and decreases speed. Poor image quality increases compressibility and speed

***Temporal filter application**
When there is a lot of static in the screen, it removes static, reduces unnecessary pictures, and increases the transmission speed

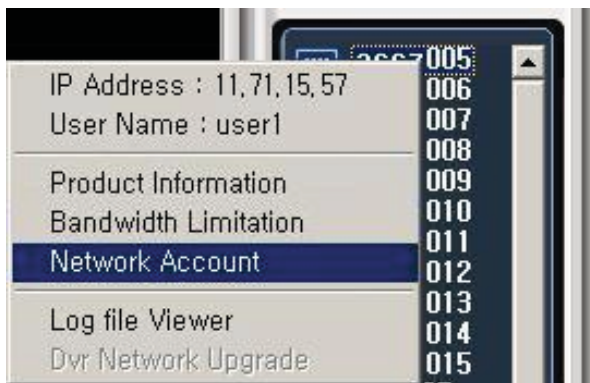
*** Image transmission speed**
Screen transmission frame numbers are regulated. On the basis of 3 D frame, the following values are approximately set. High: 30, Medium: 15 Low: 7.5

📖 Attention: Support for throttling function can not be used in VerteX series DVR.

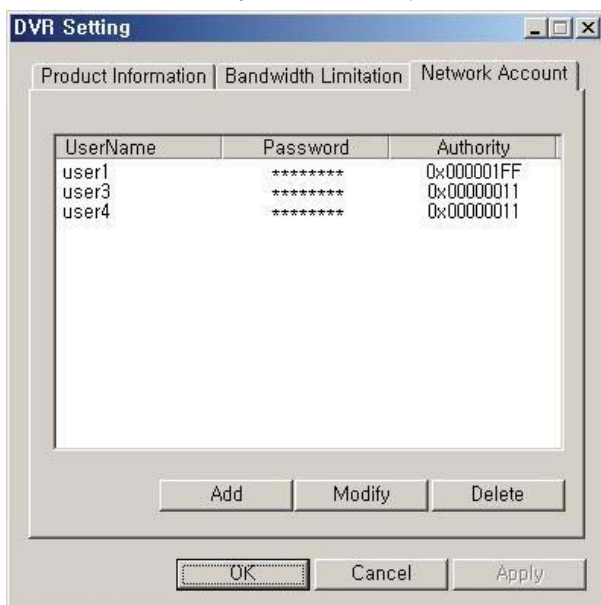
2) Network account management function

(1) Network account

① To use the network account management function, select the DVR site name on the right of the program screen and right click from the mouse. Select the network account manager on the popup menu.

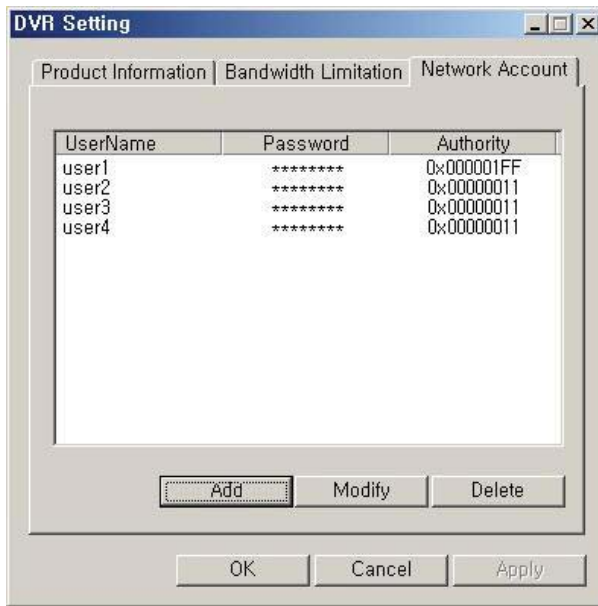


② When you select the network account tab in the popup window, there appears the network account as you see in the picture below



(2) To add a network account

① To add a network account, press the add button



② To add a network account, set user name, access code, and user authority and press the OK button.

Edit Account

DVR Account

UserName:

Password:

Confirm:

DVR Authority

<input type="checkbox"/> Live	<input type="checkbox"/> DVR Setup
<input type="checkbox"/> Playback	<input type="checkbox"/> PTZ Control
<input type="checkbox"/> File Download	<input type="checkbox"/> Backup
<input type="checkbox"/> Remote Upgrade	<input type="checkbox"/> Power On
<input type="checkbox"/> Covert View	

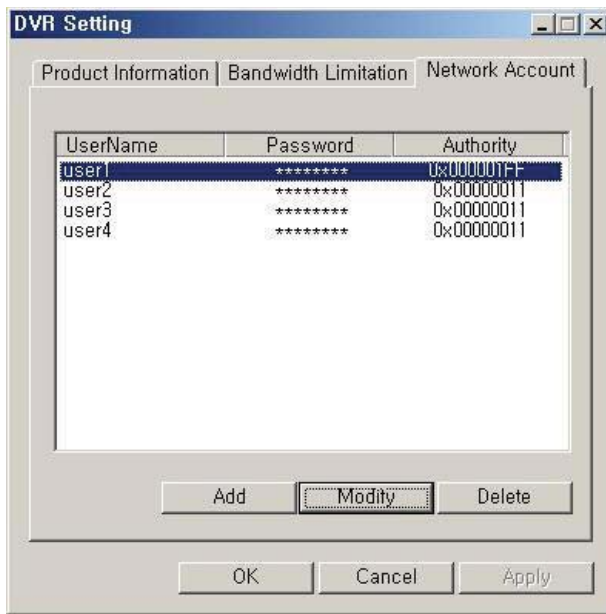
OK Cancel

③ When added successfully, there appears a message as below.



(3) To change Network accounts

① To change a network account, press the modify button.



② Change network accounts, such as user name, access code, and user authority and press the OK button.

Edit Account

DVR Account

UserName: user1

Password: *****

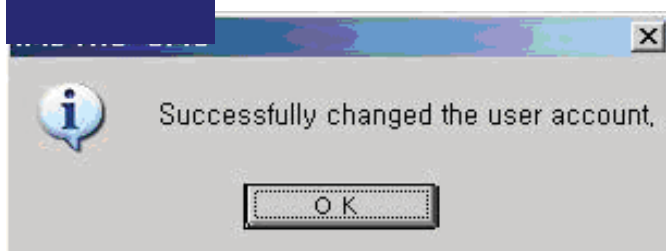
Confirm: *****

DVR Authority

- Live
- Playback
- File Download
- Remote Upgrade
- Covert View
- DVR Setup
- PTZ Control
- Backup
- Power On

OK Cancel

③ When changed successfully, there appears a message as below.

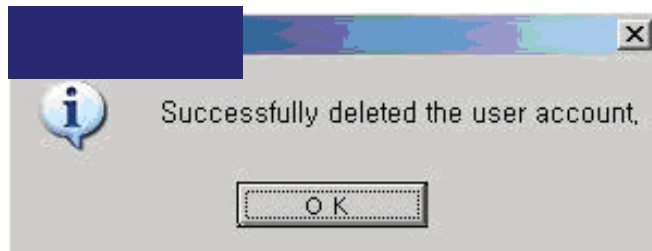


(4) To delete network accounts

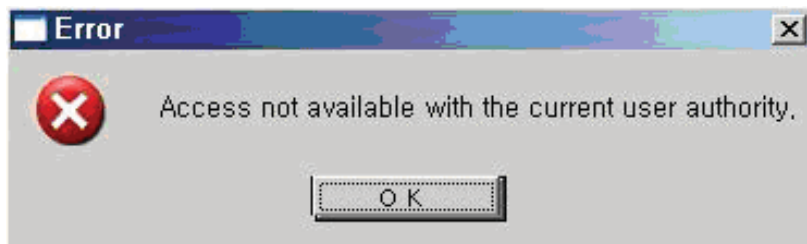
① To delete network accounts, select the item you want to delete and press the delete button.



② When deleted successfully, there appears a message as below.



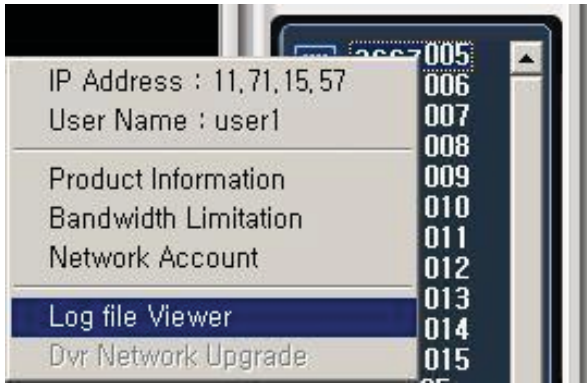
📖 You can add / change / delete network accounts only with administrator privileges. Without administrator privileges, there appears a message as below.



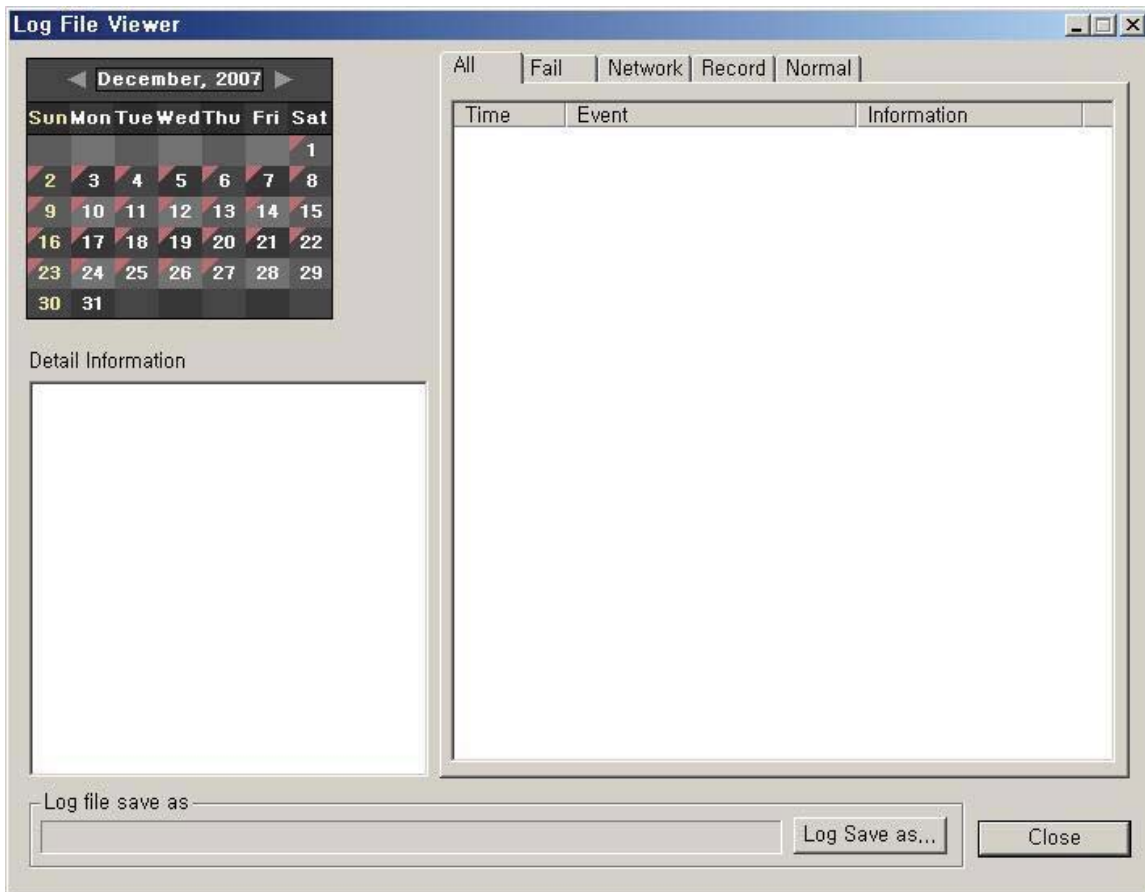
3) DVR Log File Viewer function

(1) To start Log file Viewer

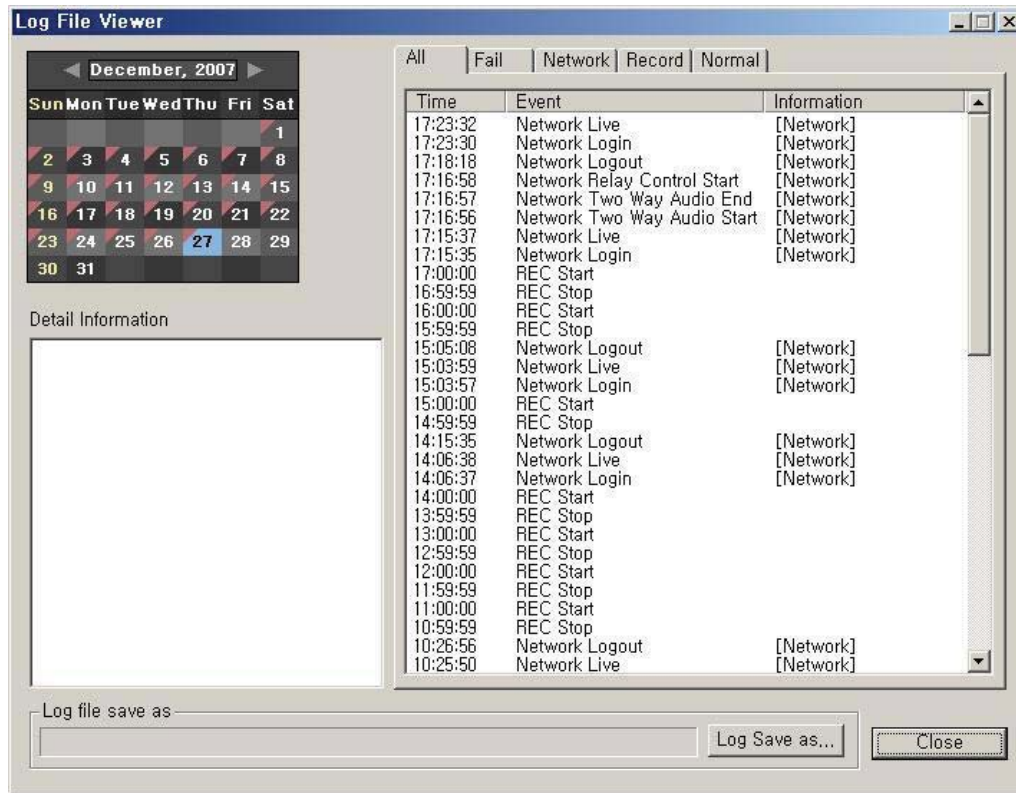
① Move the Cursor to DVR Alias Name or IP connected to the DVR connection tap on the right side of the program screen, and click the right button of the mouse.



② Click the Log file viewer in the popup window, then there appears the log information window as below.



③ Click the date for viewing a log on the calendar on the left.



(2) To view the whole log

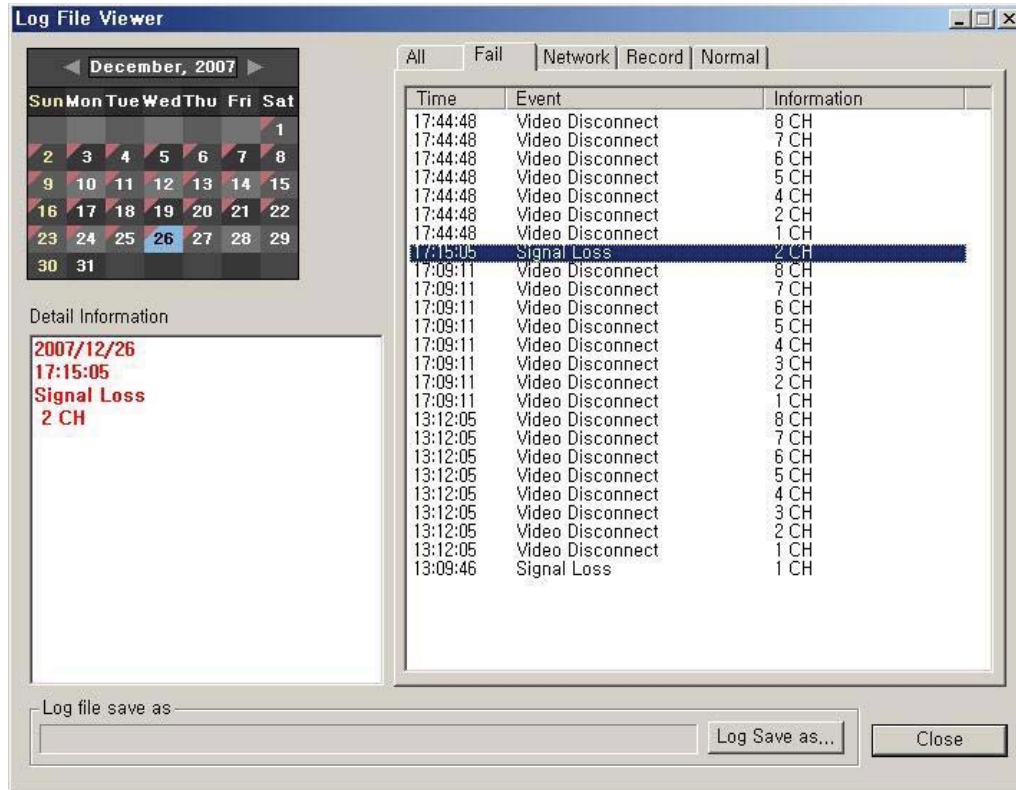
① Select the [all] tab on the log information window on the right. There appears all the log information lists.

② Click an event at a specific time, you can view detailed log information on the detailed information window on the left.



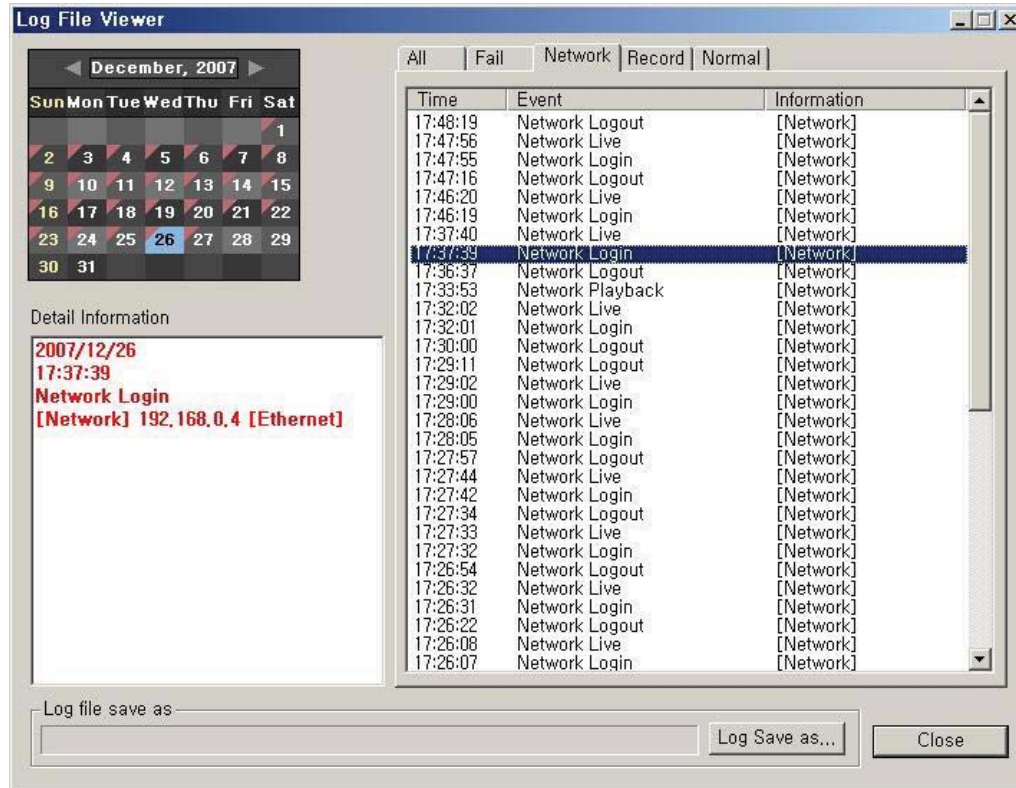
(3) Fail Log view

- ① Select the [Fail] tab on the Log information window on the right, there appears the log information lists.
- ② Click an event at a specific time, you can view detailed log information on the detailed information window on the left.



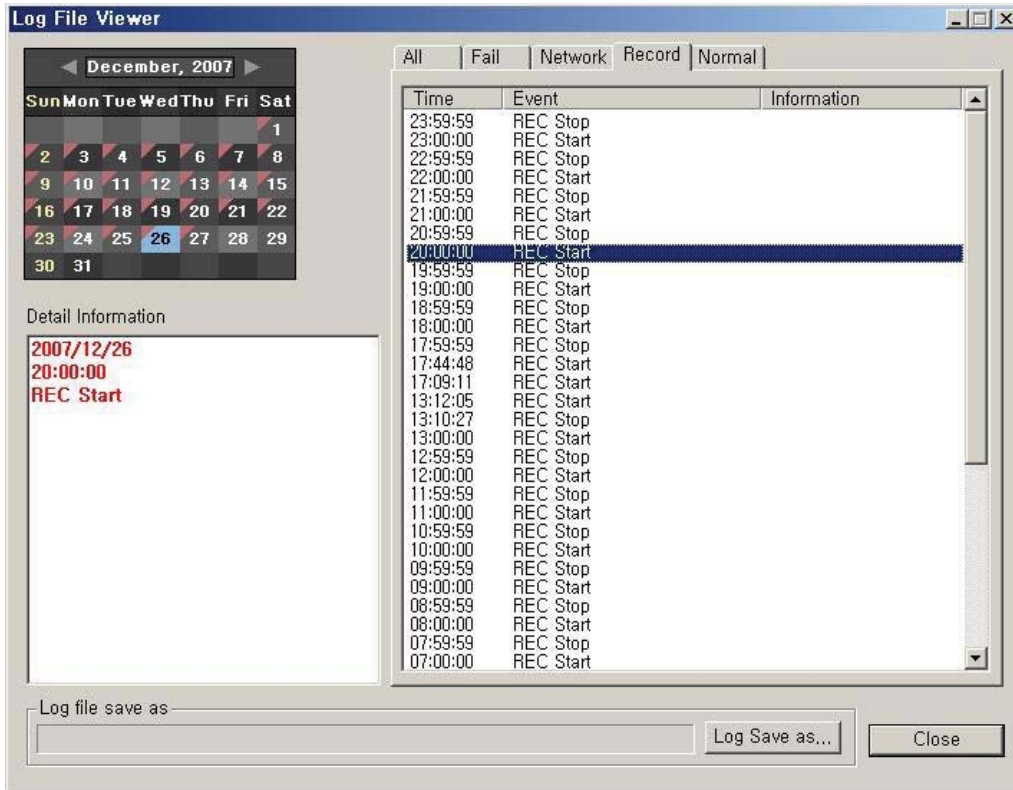
(4) Network log view

- ① Select the [network] tab on the Log information window on the right, there appears the log information lists. Click an event at a specific time, you can view detailed log information on the detailed information window on the left.



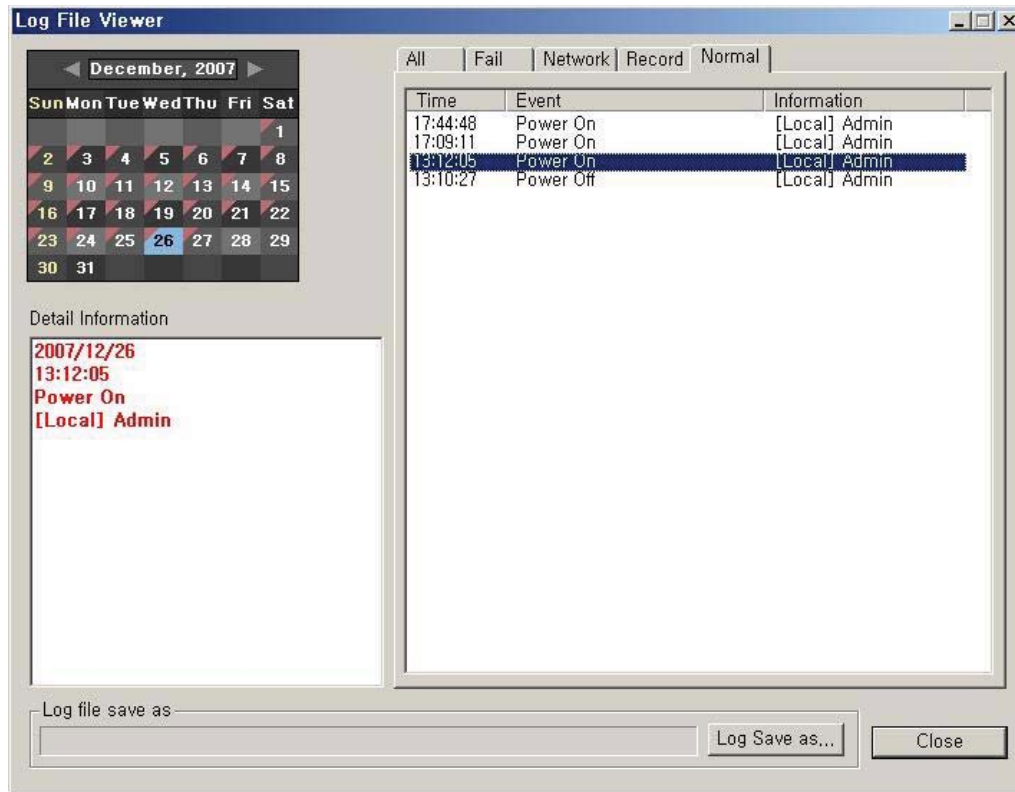
(5) Record log view

- ① Select the [Record] tab on the Log information window on the right, there appears the Record log information lists.
- ② Click an event at a specific time, you can view detailed log information on the detailed information window on the left.



(6) Normal log view

- ① Select the [Normal] tab on the Log information window on the right, there appears the normal log information lists.
- ② Click an event at a specific time, you can view detailed log information on the detailed information window on the left.




1-10. Environments Setup



- * You can set the following functions in the environment setting.
 - Capture image, record file download, and specification of the path for saved DVR setting files
- * specify OSD font, color, and size; set up information indication
- * Set the size, and color of border line; on/off setting
- * Set the number of the event live popup windows and event setting function
- * 720 -> 704 Pixel output function, screen layout unit setting function; color and font size setting of connecting, no signal, and screen disconnection
- * DVR alarm output setting function
- * Save and call the configuration value and the address book

1) Setting storage devices

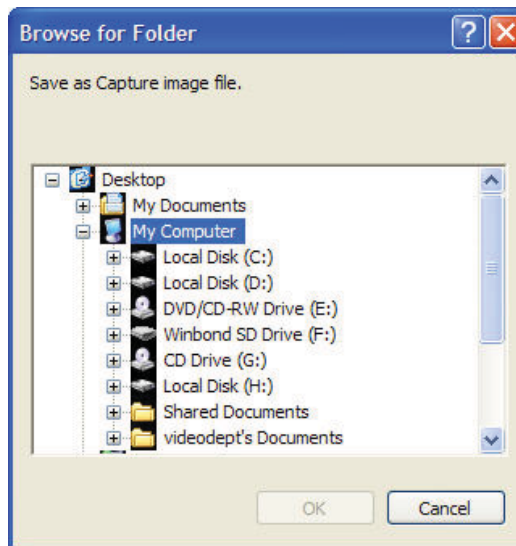
① Click the  button on the right of the program screen, then there appears the environment setting window as shown below.



② Setting storage devices – Click the path specification button on each storage path and specify storage paths.

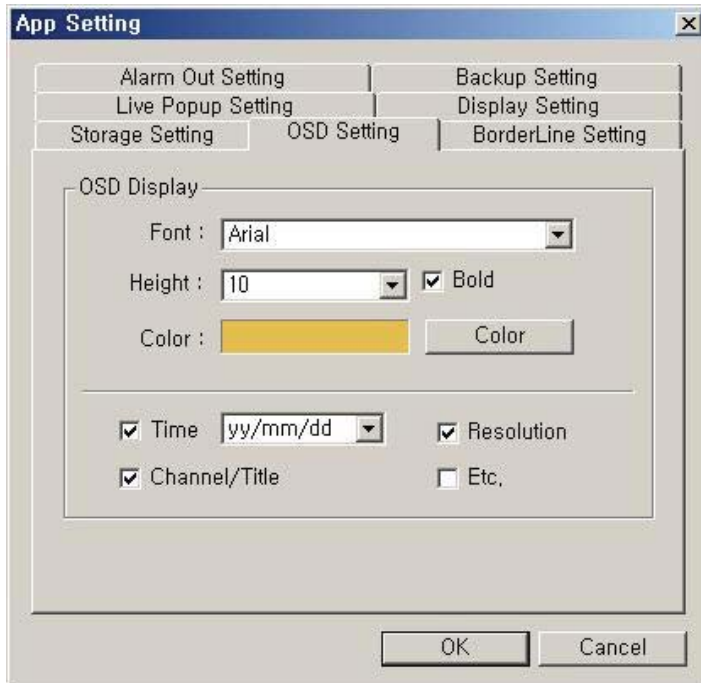
※ Default Path

Image File	C:\Temp\Image
Download File	C:\Temp\Video
DVR Setting File	C:\Temp\Setup



2) OSD Setup

- ① Select the OSD setting tab. Then you can specify the use of OSD, the size and color of the OSD font. You can also choose to use the on/off function of the OSD on the screen.



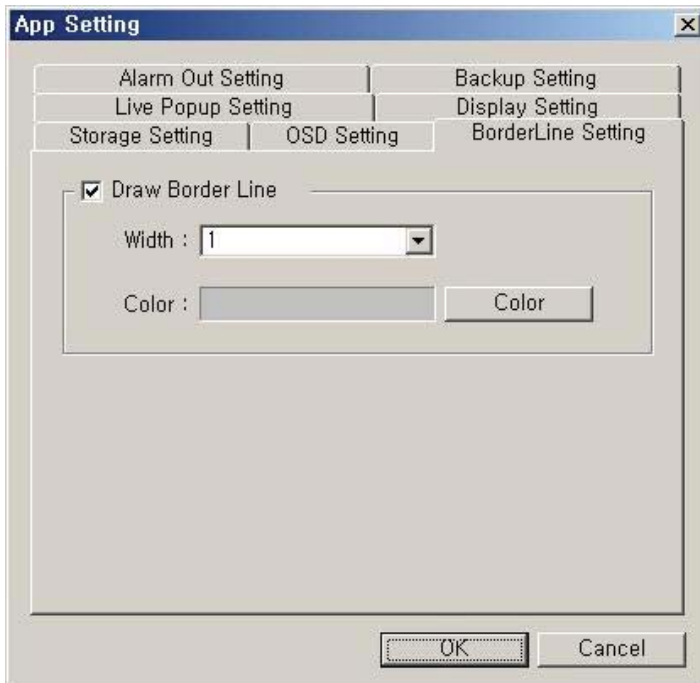
- ② Specify after choosing an OSD font from the list. Select an OSD size from the list, and decide whether you use a bold style or not.
- ③ Press the color button, then you can specify a color you want on the color specification window.
- ④ OSD letter setting applied.



⑤ Select the information visible or not on the picture screen.

3) The border line setting

- ① Select the border line setting tab; you can choose the use of the border line, color and thickness.

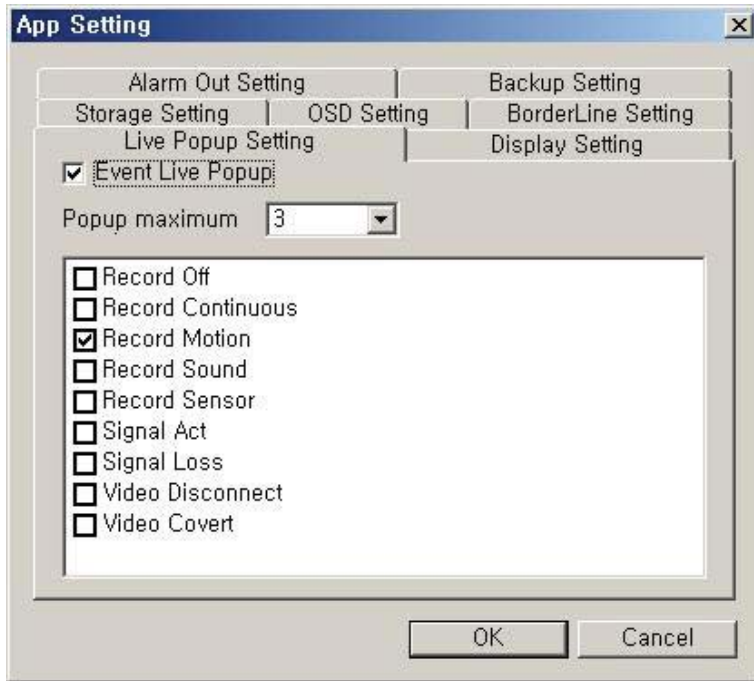


- ② The border line setting applied



4) The Event live popup setting

- ① The event live popup function is to show the event real time live picture on the popup screen. The setting for this function is shown below.



1. The Event line popup setting :

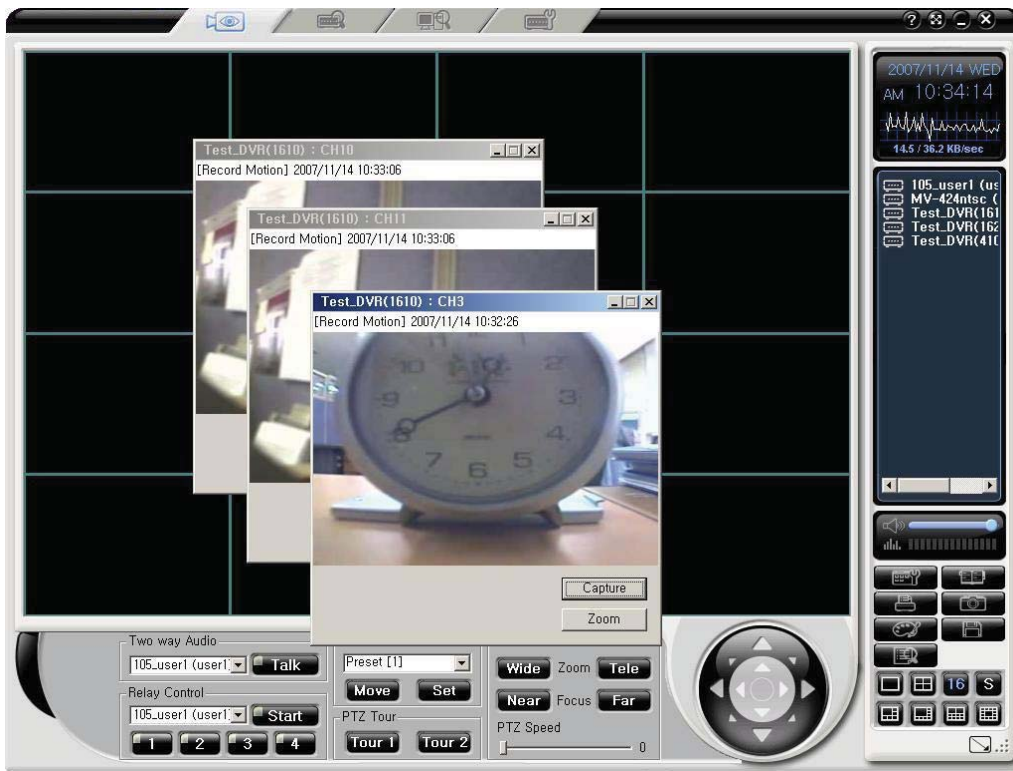
The event live popup function is to show the event real time live picture on the popup screen. The setting for this function is shown below.

2. The application of event live popup :

Set the number of windows. When more windows than the specific are used, the popup windows which were first on the screen will disappear.

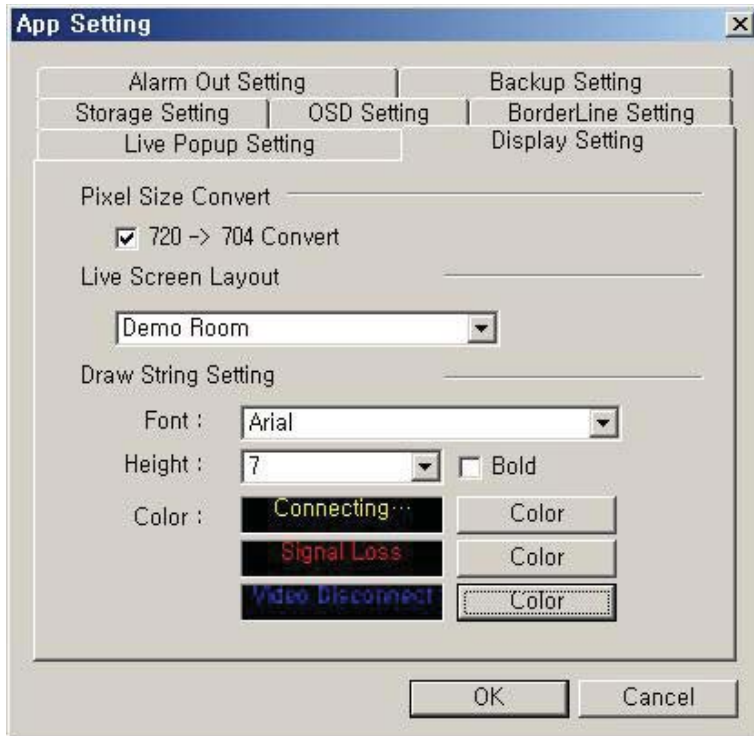
3. Event setting : setting events such as stop recording, consecutive recording, movement recording, audio recording, sensor recording, signal, signal loss, and video disconnection.

- ② The date, time, and channel information of the current channel appear on the event live popup window, and the capture function and magnify/contract function are provided.



5) Screen setting

① Screen setting tab presents the screen output of program.



1.Pixel number and size convert :

a screen recorded in 720 pixel is converted to 740 pixel

2. Live screen layout :

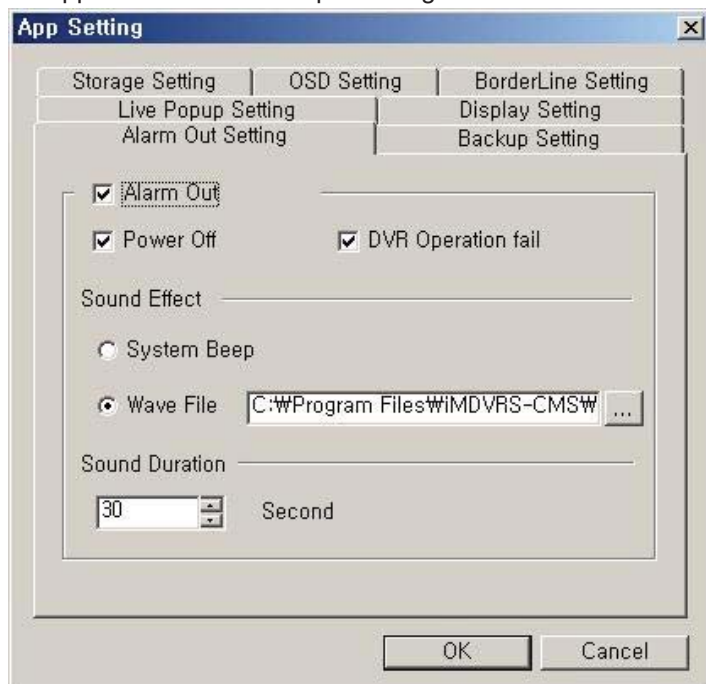
The first screen is selected and produced automatically, after the network connection in the first drive of the program

3. Draw string setting :

Connecting, signal loss, video disconnected, message font, height, bold, and color selecting function

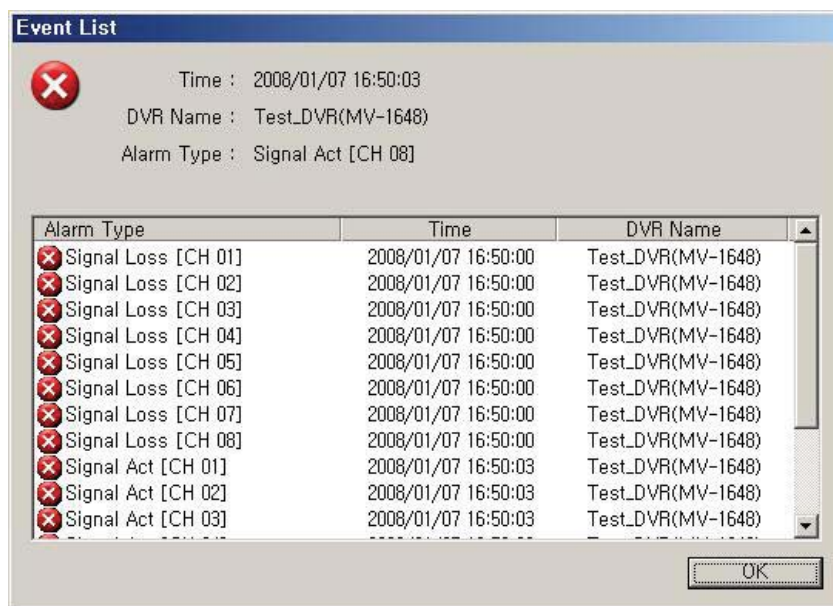
6) Alarm output setting

- ① When an event happens, an event message output and an alarm output repeatedly appear in the alarm output setting



1. Power shut off : Power close
2. DVR operation failure : backup failure, network link failure, no signal, pan operation failure, hardware failure, hard disk failure, codec failure, codec recover, signal connection, video connection cancellation, video hide, Hotswap add/delete, and hard disk danger
3. Sound effect : you can select the system beep sound and the wave file.
4. Sound duration time : Alarm sound can be selected per second.

- ② The event list box outputs an event message, when an event happens.



When a log event occurs on the DVR system, there appears an event list window as shown in the side picture. There is the time, and DVR name in the list. The sound effect is reproduced and continues until the user presses the confirm button.

7) Backup setting

- ① The backup setting tab saves all the data in backup files or applies saved backup files



It can save and recover environment setting values.

Load – the saved information in files is applied to the current program.

Save- the current program information is saved in files.


1-11. video image capture

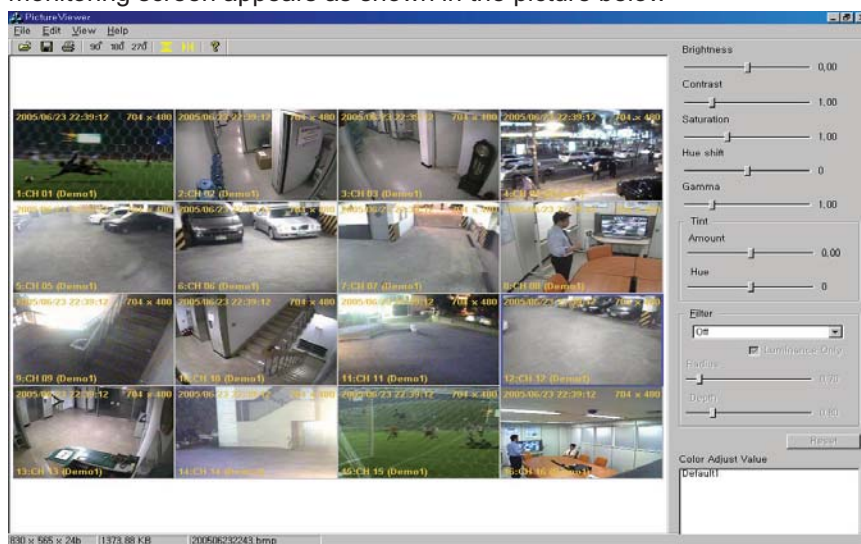


It captures the current monitoring screen and saves as picture images.

※ The captured images are saved in a path specified by the environment setup

1) The current screen capture

① Press the  button on the right of the program. The picture captured by the current monitoring screen appears as shown in the picture below



2) Brightness/ darkness/ saturation/ color/ gamma adjustment

Brightness/ darkness/ saturation/ color/ gamma values are adjusted by the movement of the slide bar in the right panel control box.



3) Color adjustment

Color values are adjusted by moving the slide bar in the right panel - amount and hue control box.



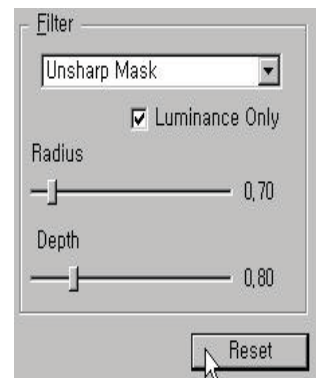
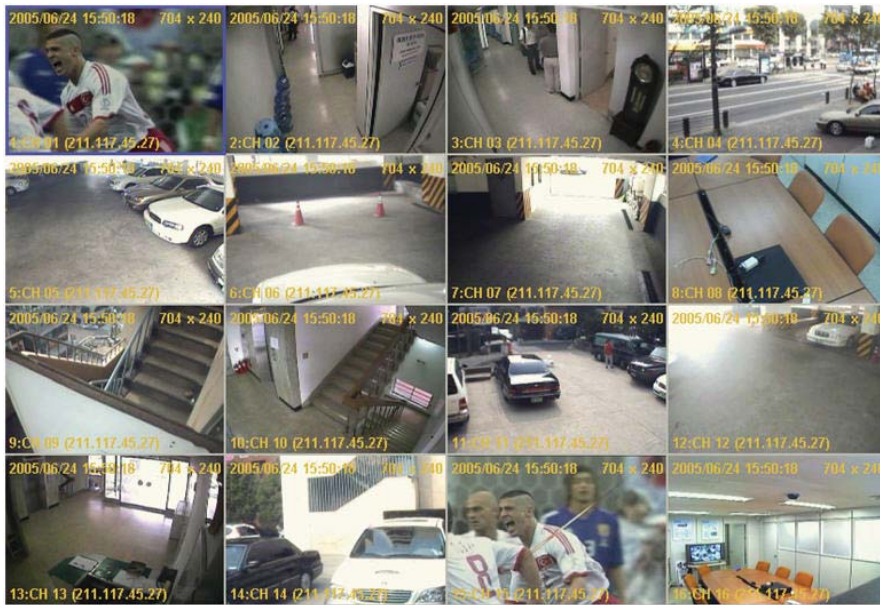
4) Filter application

① Filter values are adjusted by moving the slide bar in the right panel radius and depth control box.



5) original picture recover

Click the [reset] button in the right panel. Then the original picture is recovered



6) Rotation

Click an angle icon in the top icons. Then the picture rotates to that angle.

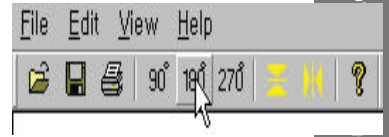


90° reversal





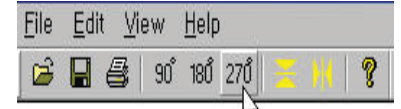
180° reversal




Remo
ent

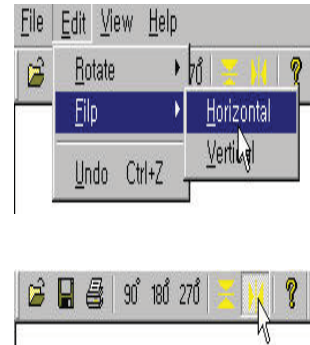


270° reversal




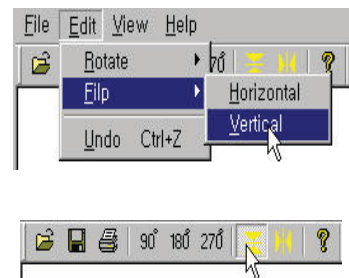
7) Left/right reversal

Click the  icon in the top menu, or select [Edit] -> [Flip] -> [Horizontal].




8) Up/down reversal

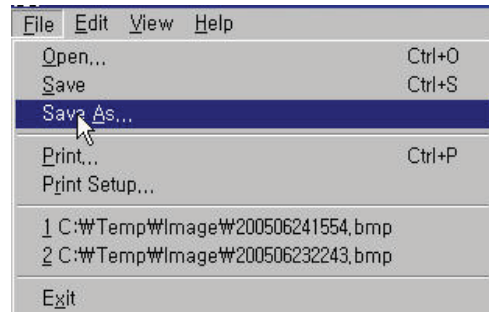
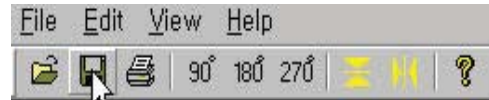
Click the  icon in the top menu, or select [Edit] -> [Flip] -> [Vertical].




9) Save

To save in a basic folder and file name, click the  icon in the top menu or select [File] -> [Save].

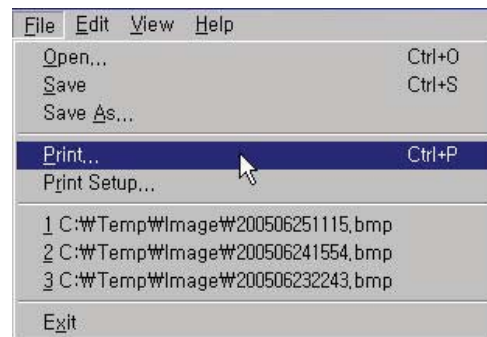
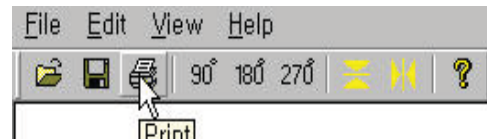
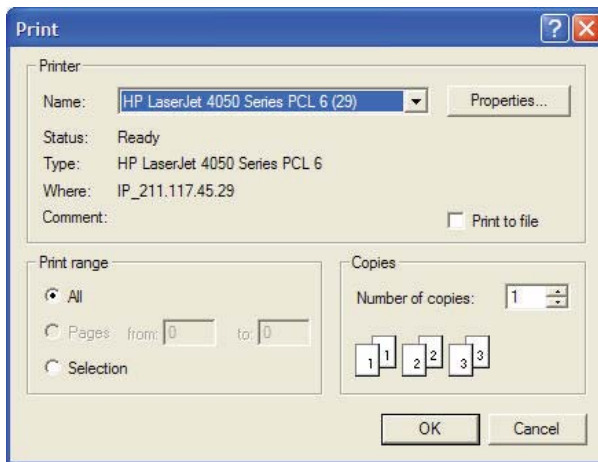
To save in a different name, select [File] -> [Save as] and enter a file name. If you want to save as a bitmap, save as file name.bmp or if you want a Jpeg, save as file name.jpg.



10) Print

Click the  icon in the top menu, or select [file] -> [print].

When the print window appears, select the print option and click [ok] button.




11) Image print



Print out a saved image through the printer

(1) Image print

Click the  button on the right of the program screen. The saved image file list window saved by the monitoring screen capture will appear.

Name	Date	Time	Size
200711011609.bmp	2007/11/01	16:09	1380 KB
200711151707.bmp	2007/11/15	17:07	1380 KB
200711201742.bmp	2007/11/20	17:42	1380 KB
200711231633.bmp	2007/11/23	16:33	1380 KB
200712181033.bmp	2007/12/18	10:33	1380 KB
200712181034.bmp	2007/12/18	10:34	1380 KB

Preview Close

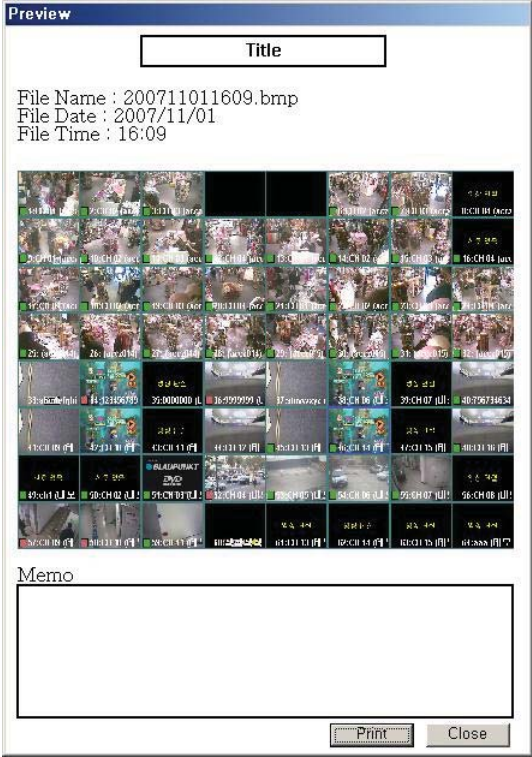


Select the image file in the file list window, and click the [preview] button.

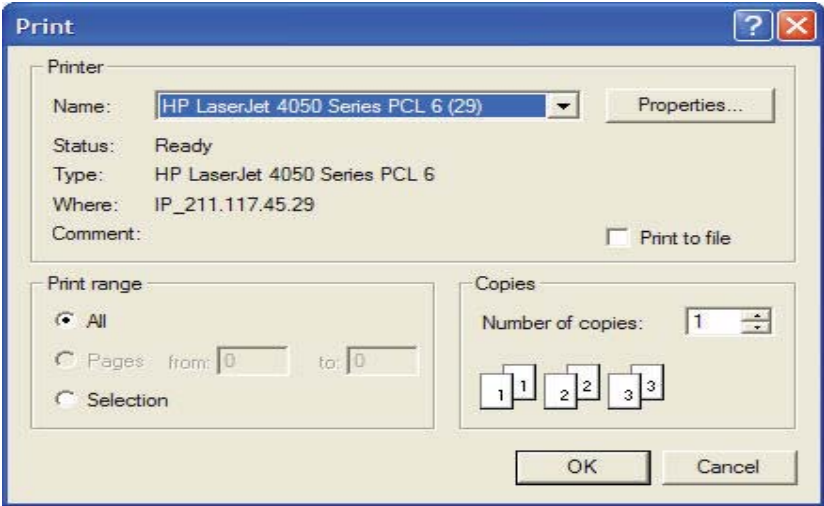
The preview window appears.

Enter a title of the image in the “title” preview window, and an explanation of the image in “memo.”

Click the [print] button.



When the print window appears, select a printer and click [ok].





1-12. To save Real time pictures



It records real time pictures

1) To save Real time Video

- ① Click the  button in the program screen. The **REC** mark light turns on and recording starts.
- ② The saving path of recorded files is the specified folder in 1-5-9. For instance, the file saved on 15th December 2007 becomes 2007 12 15 170000_Live folder.
- ③ To stop recording, click  button again. The **REC** mark will disappear from the screen and recording stops.




 VerteX series DVR model does not have a record function.

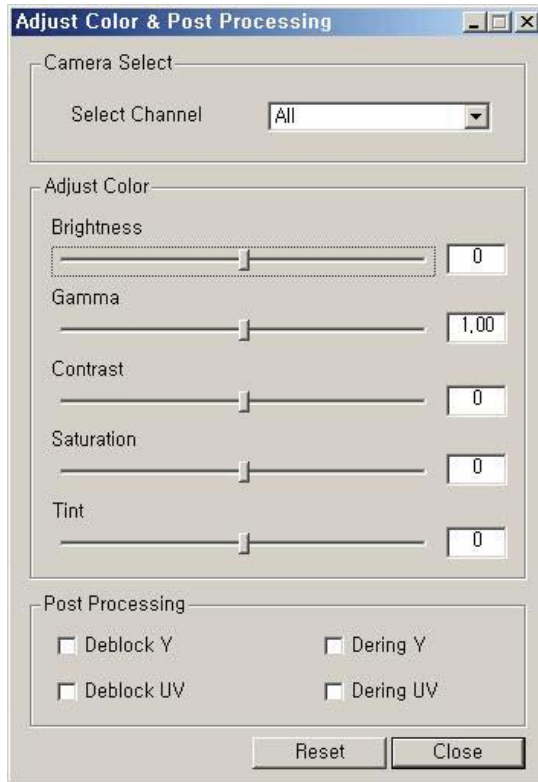
Color adjustments




It adjusts the brightness, Gamma, Contrast, Saturation, Tint and Post processing Filter of the channel pictures.

1-13. To adjust colors

- Click  button in the program screen. There appears a color & post processing adjust window.




- Click channel check box in the adjust color & post processing window and select a channel.
Drag Brightness, Gamma, Contrast, Saturation, Tint adjust columns and adjust.
 - Press [reset] button and return to the un altered settings.
 - When color adjustment is completed, press [close] button.
-  When you adjust Brightness, Gamma, Contrast, Saturation, and Tint, you can view the real time change of the monitoring screen. (VerteX series DVR model does not have this function.)

1-14. Full screen modes



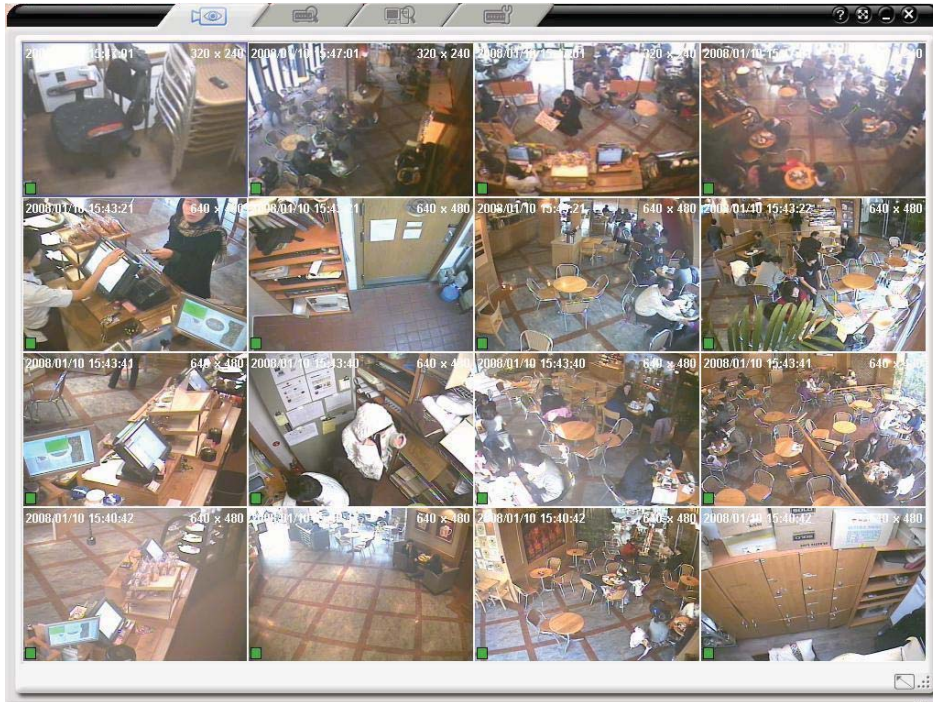
It changes a real time monitoring screen to a full screen mode.

1) Full screen view

- Click  button in the program screen, and you will have a full screen mode.



② To return to the basic mode, click the  button in the program screen.




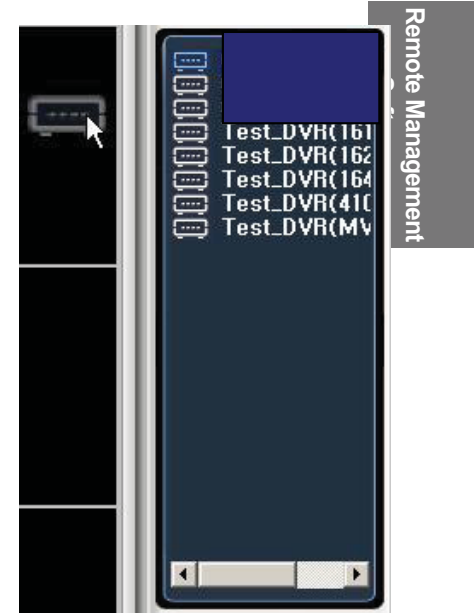
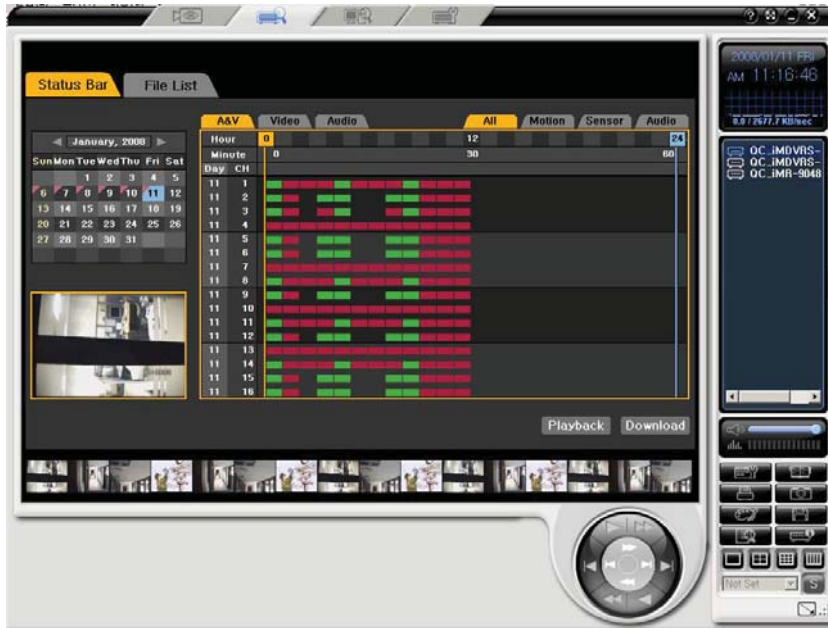
1-15. Record search

It searches and reproduces remote DVR recorded pictures in real time.



1) To search Recording

- ① Select  tab on the initial screen of the program.
- ② Drag the DVR unit name you want to search from the connected DVR lists on the right and drop it on the monitoring window.



- ③ When you move a slide bar, pictures in each channel will appear if there is saved files at the time. The unit of a column is an hour, and the color of column indicates recorded events.



- ④ Select playback or download and start a search per minute. When you move the slide bar as shown in the picture below, pictures in each channel will appear. The unit of a column is a minute, and the color of the column indicates recorded events.



2) Select a search method

Status Bar

It indicates recorded pictures by hour/minute unit in a bar graph.

File List

It indicates recorded pictures by hour in a list mode.

- Click [status bar] or [file list] on the search window and select a search method.

Status Bar



File List



② If you change the time in the DVR, recording events before time change turn into a blue color

Status Bar

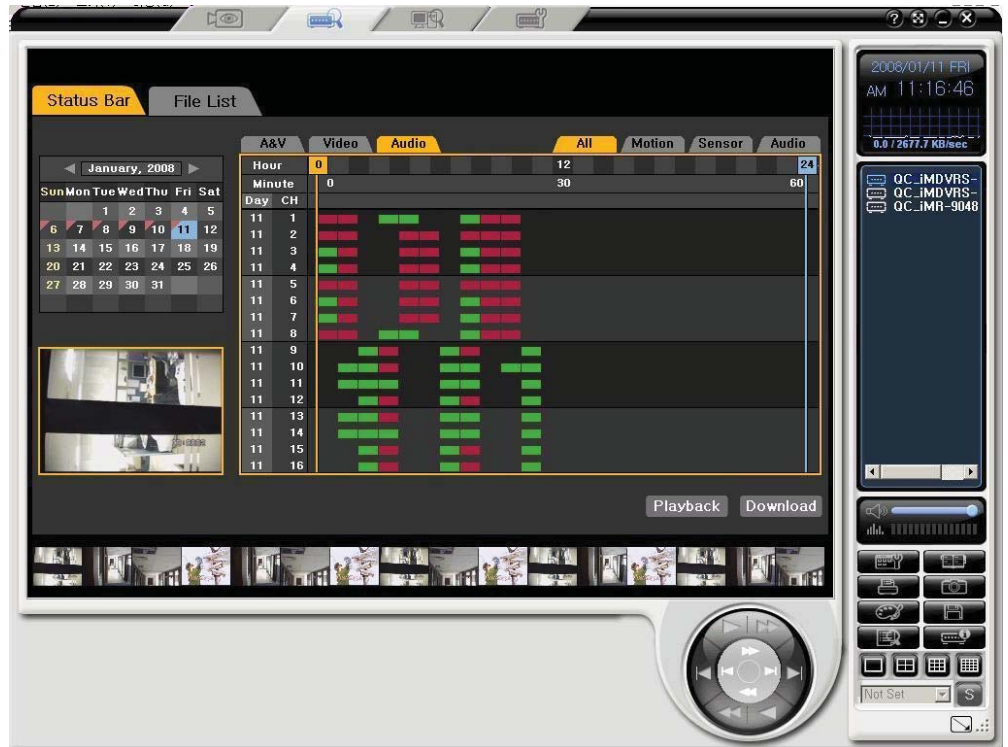
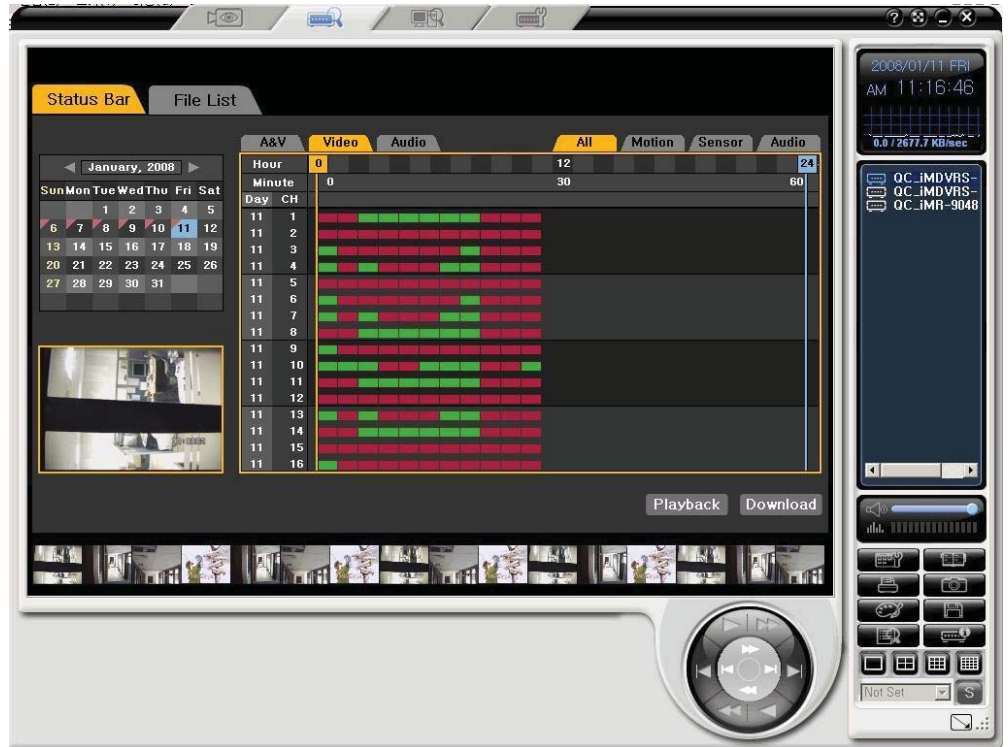


Remote Management
Software

File List



- ③ You can search the DVR system for recorded video and audio. They can be searched together or separately.
- Status Bar**



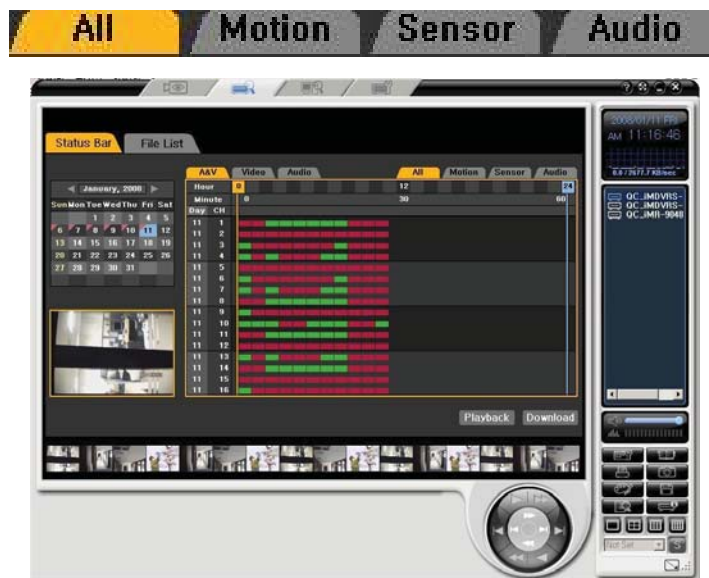
3) Select time and date

① Any date with a red triangle in the upper left hand corner is a date with archives to search through.

📅 The starting day of the week in the calendar can be Sunday or Monday according to the country.



② Select the recorded date in the calendar, and then the recorded status on the day will appear from 0 to 23 hour as shown in the picture below.



- ③ Select A&V, Video, Audio tabs on the top of the search screen, then the recorded status in audio or video will appear. Select All, Motion, Sensor, Audio tabs, and then the recorded status in the recorded events will be indicated.



- ④ To search by minute, press playback or download button in the selected hour. You can find the minutes when the pictures were recorded.

A&V		Video	Audio	All	Motion	Sensor	Audio
Hour	0			10	12		24
Minute	0				30		60
Day	CH						
11	1						
11	2						
11	3						
11	4						
11	5						
11	6						
11	7						
11	8						
11	9						
11	10						
11	11						
11	12						
11	13						
11	14						
11	15						
11	16						

1-16. Playback

Playback : It plays back recorded footage from the DVR.

1) To playback



- ① Specify the time and click the playback button. A playback screen will appear as shown in the picture below.



- ② Using the playback control button, regulate the playback speed. Press the playback start button.



	Fast Forward
	Reverse Play
	Reverse Single Frame Play
	Fast Rewind

	Forward Play Reverse Play	It starts in x1 speed, and speed can be regulated from x1/16 to x1/2, or from x1 to x16 in one channel mode.
	Fast Forward Fast Rewind	it starts in x 30 speed, and speed can be regulated from x 30 to x 300 in one channel mode.
※	You can increase or reduce the playback speed by using  button on the left of playback control button in one channel mode.	
※	It supports a successive playback. If you do not stop playback, it continues to playback to the next time. When there is no file in the following time, it stops. If the index number of the recorded file is different, it does not continue its playback and stops its function.	

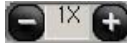















- ③ To stop playback, click the close button.
- ④ When the playback stops, it returns to the previous search screen.
- ⑤ If you want to playback files recorded in another time continuously, repeat previous steps.
- ⑥ Limitation


1ch Mode (Full Screen)




Normal Mode (4ch~16ch divided screen)



	Available		N/A
	Available		Available
	Available		Available
	Available		Available
	Available		N/A
	Available		N/A
	Available		Available
	Available		N/A

- ⑦ You can playback audio files only in single channel mode
- ⑧ In 16 channel mode  buttons can be used only
- ⑨ When playback in 16 channel mode, the following functions are limited as shown in the picture below




 If you want to go to a different minute during playback, move the slide bar to it, or click the minute you want to select.

- ⑩ When you playback in single channel mode, you can use all the functions shown in the picture below



Remote Management
Software

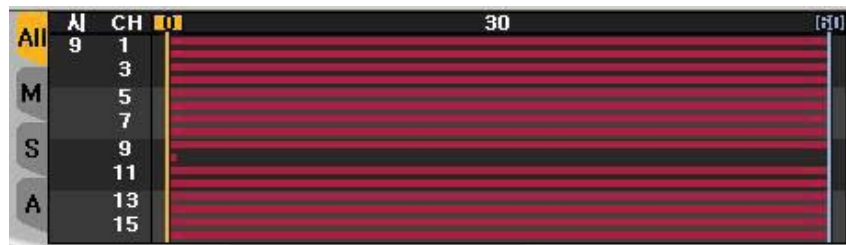
 You can use capture and print function in playback mode

2) Record and playback per event

Record search



Playback



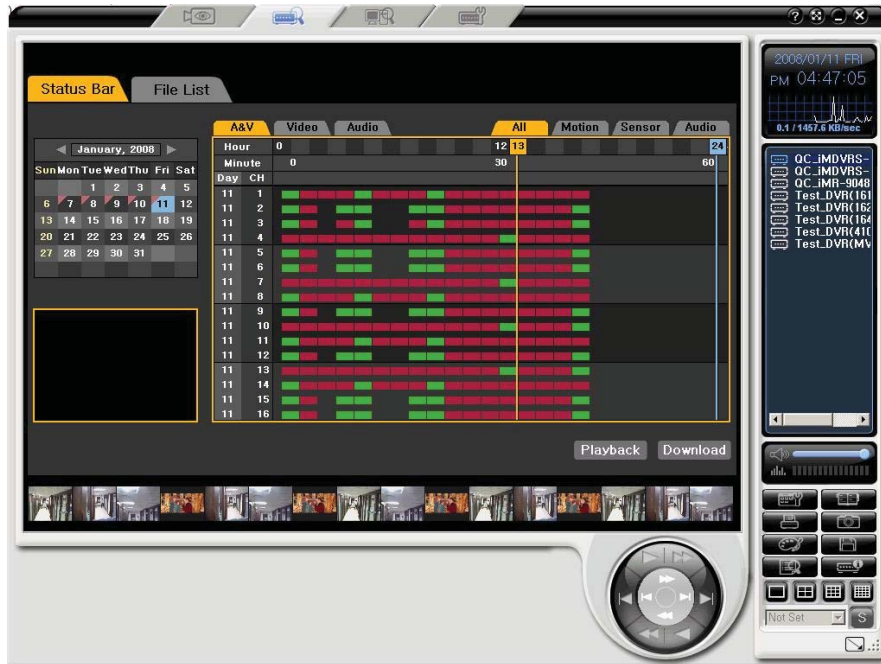
- ① To use the playback function per event, search each event in playback search mode and playback
- ② or select an event from the status bar during playback.

When you playback in single channel mode, you can use all the function shown in the picture below



3) Recorded pictures download

In the search mode, drag the time selection line from the search window, and select the time to start download. Click the download button.

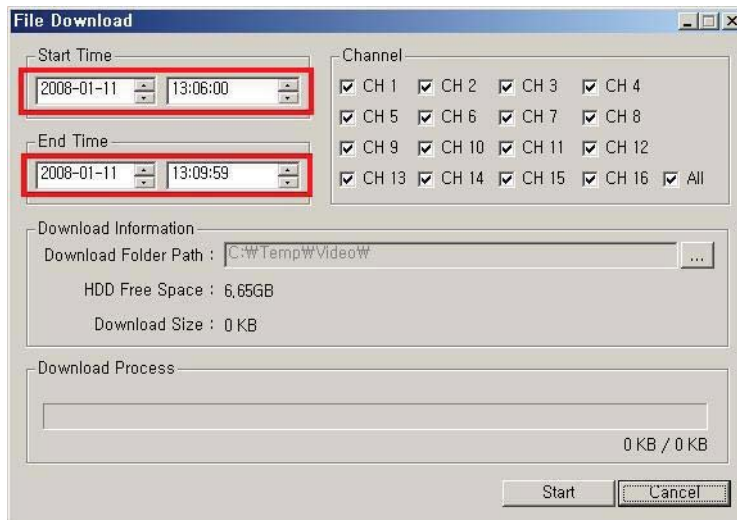



Remote Management
Software

Select time first, and then decide starting minutes and ending minutes. Click the download button.



After selection, press the download button. There appears the download selection window. Choose the starting and ending times.

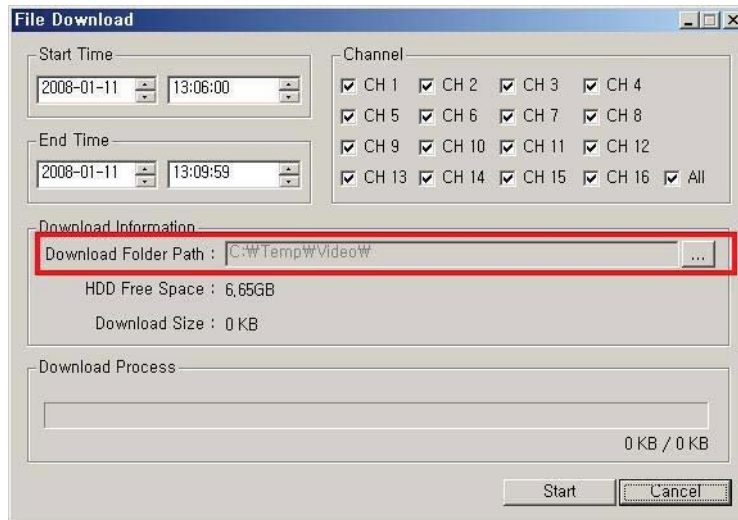


 A continuous download is possible, so you can download several hours of a file by selecting successive hours.

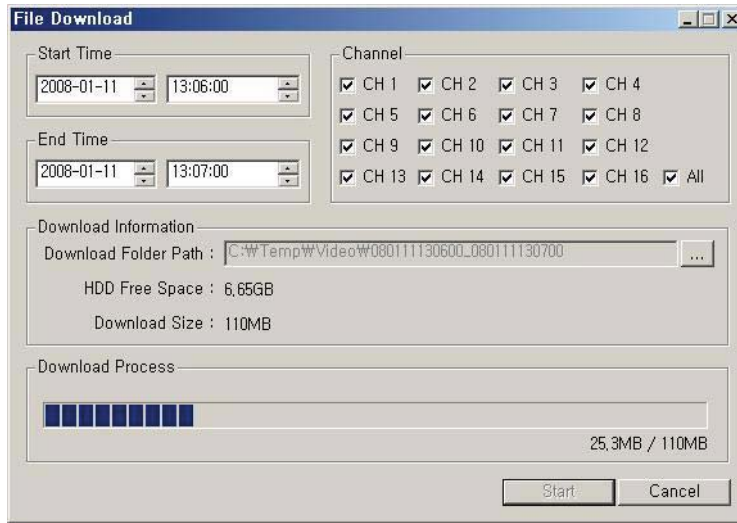
After setting the time, select channels to download as shown in the picture below. Any camera with a check will be downloaded.




After selecting the channels, specify the storage path as shown in the picture below.



After completing all settings, press the start button. The saving folder name and the file size for download appear as shown in the picture below.



 The download file is produced and saves in a folder specified by application and in download starting and ending time.

Ex) if the file is saved from 7 hour 59 minutes 0 second to 8 hour 1 minute 59 seconds on 14th February 2007, the file name is. 070214075900_070214080159

When a download is completed, a message box appears. Click the ok button.




1-17. Local Player



Remote monitoring and play back in real time for previously recorded footage, on local computer.

1) Record file search and playback

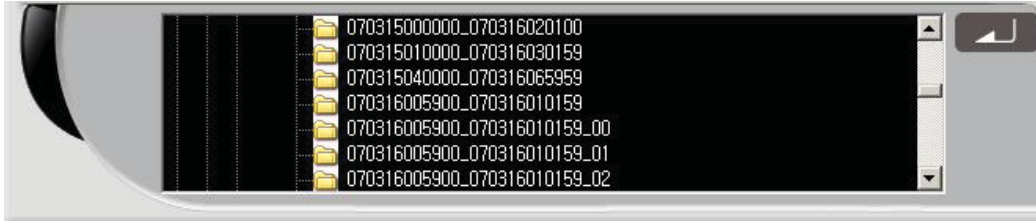
Select the  tab on the program initial screen

There appears the initial screen with the folder search window as shown in the picture below.

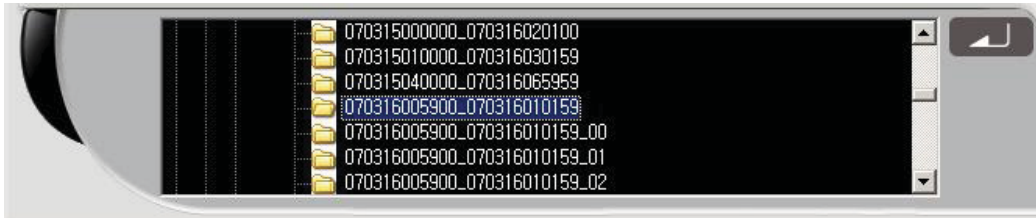



2) Record file search and playback

Search the folder list on the program screen in the local playback mode. Search the folder which has the downloaded or backup recorded files



The folder with a recorded file has starting date and time and finishing date and time in its name. Select a backup folder or a folder for download.



After selecting a folder for playback, click the  button, and then the first screen in the selected time appears frozen as shown in the picture below.

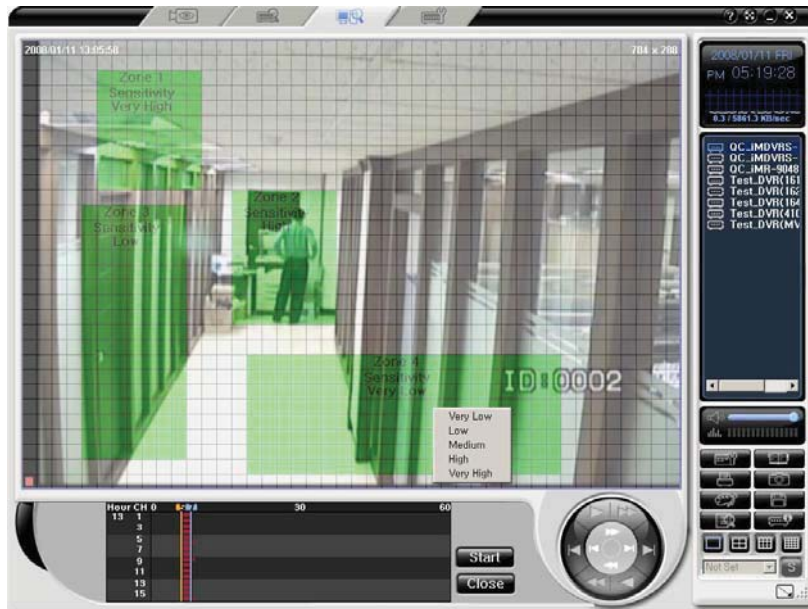


3) Smart search function

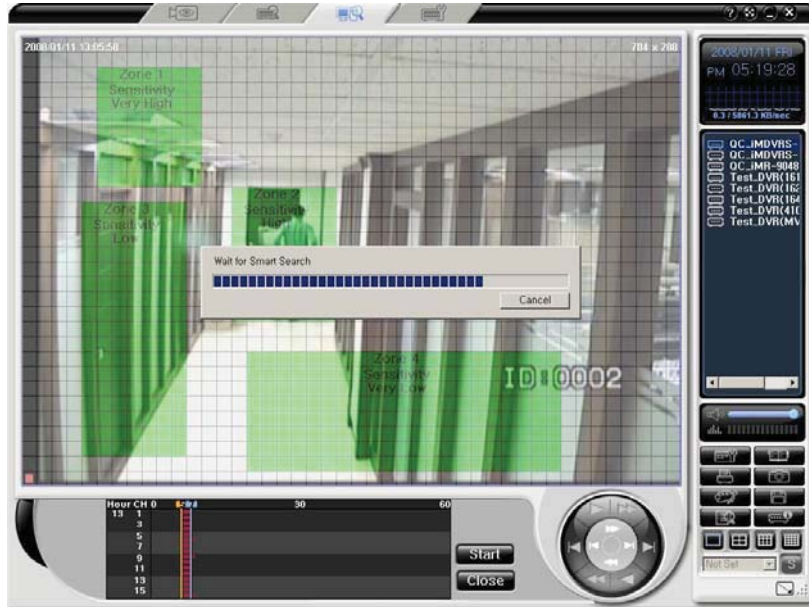
To start a smart search, press [smart search] in playback or start mode, and then the playback stops.



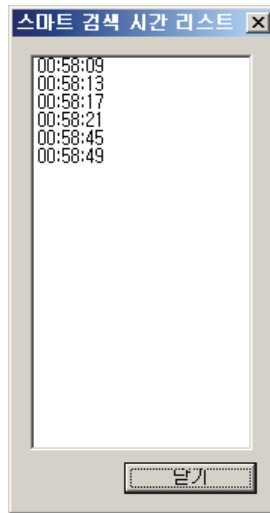
Select a channel for the smart search and double click. Then a grid window appears in which the zone of the smart search can be specified. Four zones can be selected; they can be specified by dragging the mouse. The sensitivity can be chosen in 5 levels by pressing the right mouse button.



When the smart search begins and there is movement in a specified zone as shown in the picture below, a screen appears.



When the smart search completes, the times when there is movement in the specified zones, are shown in a list. If you click the list, the search moves to the time zone of that list. When you double click a selection, the playback of the time zone starts.



1-18. Remote Control setting



This has the DVRs main setup and the application menu, just like at the DVR.

1) Start

Select the program initial screen  tab.

Drag DVR IP or Alias Name you want to select from the DVR list and drop it on a monitoring window




2) DVR Main/App Setup

(1) Main/App Setup

Remote DVR setting screen is the same as DVR OSD (on screen display).

Using the mouse on the DVR setting screen, you can change the system setting values.

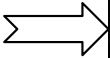
 For the system setting method, consult the system setting in each DVRs manual.

Click the right button of the mouse in the zone where you want to change the setting values, and then there appear possible setting value ranges. Select a value and change.

Recording al.	Mode	Rate	Audio	Moti.	Sens.	Event Sound
H	Auto	Auto	Normal :25			Off
H	Cont.	25	Event :25			1
H	Cont.	25	Off	Off		2
H	Cont.	25	Off	Off		3
H	Cont.	25	Off	Off		4
H	Cont.	25	Off	Off		5
H	Cont.	25	Off	Off		6
H	Cont.	25	Off	Off		8
H	Cont.	25	Off	Off		13
H	Cont.	25	Off	Off		25
H	Cont.	25	Off	Off		50
H	Cont.	25	Off	Off		100

In case you should enter a name directly like a channel name, you can change it by double click..

Recording Setup	1	CH 01
	2	CH 02
System	3	CH 03
	4	CH 04
Storage	5	CH 05
	6	CH 06
NTP	7	CH 07
	8	CH 08



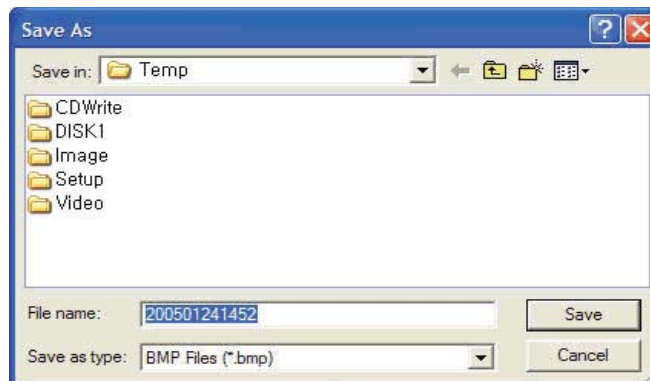
Recording Setup	1	CH 01
	2	CH 02
System	3	CH 03
	4	CH 04
Storage	5	Lobby
	6	CH 06
NTP	7	CH 07
	8	CH 08

(2) Open

When DVR system is connected, [open] button is non-activated. Apply a setting value by drag & drop.

(3) Save

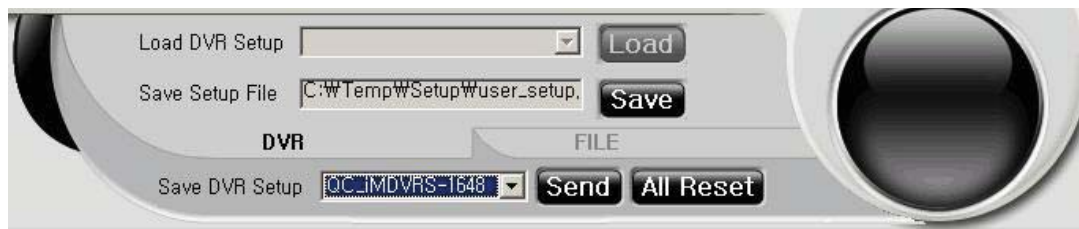
Modify the setting values on the screen by using the mouse. Click the save button, and then the current setting value is saved (extension *.bin)



Click [save] button and save as a file.

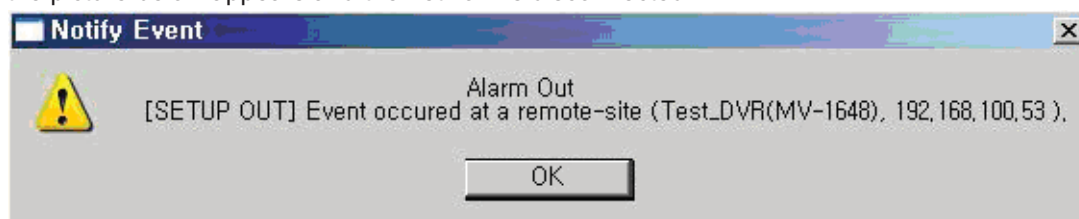
(4) Send

When a remote DVR is connected, a list of DVRs currently connected in [Save Setup DVR] will appear.



Select a DVR you want to modify and click the [send] button.

The modified DVR setting values is then applied to the remote DVR. A message window as shown in the picture below appears and the network is disconnected.



(5) Initialization

Reset Factory Settings

Click [Reset] button on the screen



All setting values are reset with a beep in the DVR.



3) DVR Setup

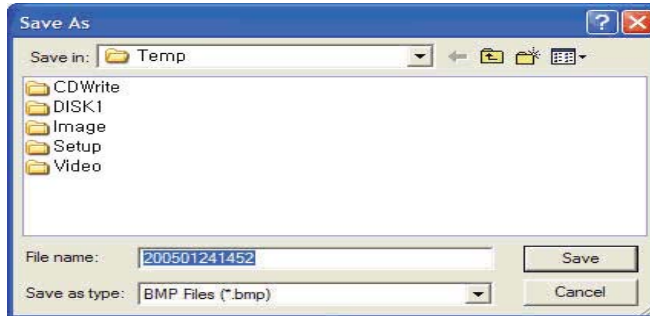
(1) Open

Click the file in remote setting mode.

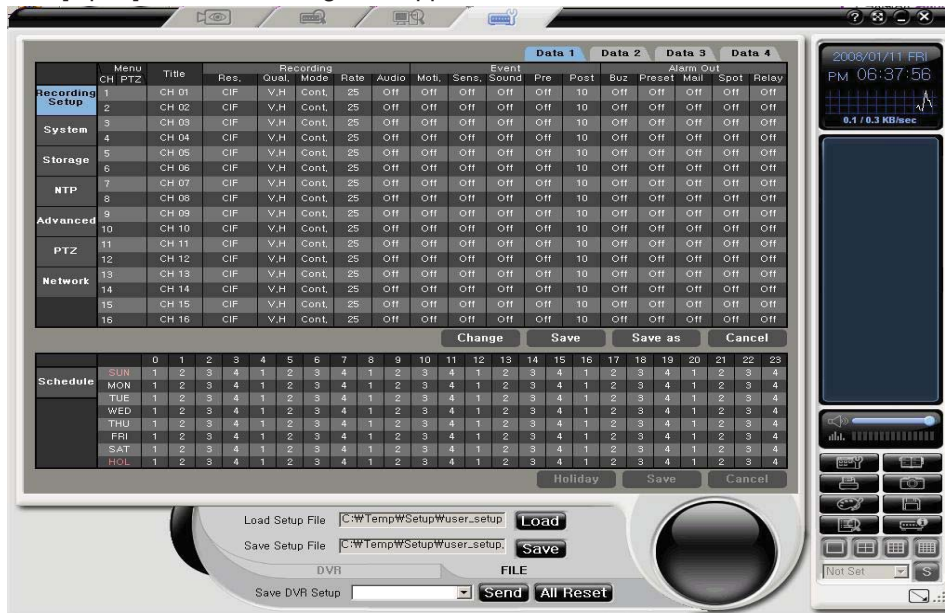




File Open
File Save
Click [Open] button



Click the [Open], the DVR settings will appear.



Save : The current settings are saved
Send
Reset : All settings are reset to (Factory Settings).

Notice :
Setup errors can cause malfunction in recording files in DVR setup. Check the record condition after setup.

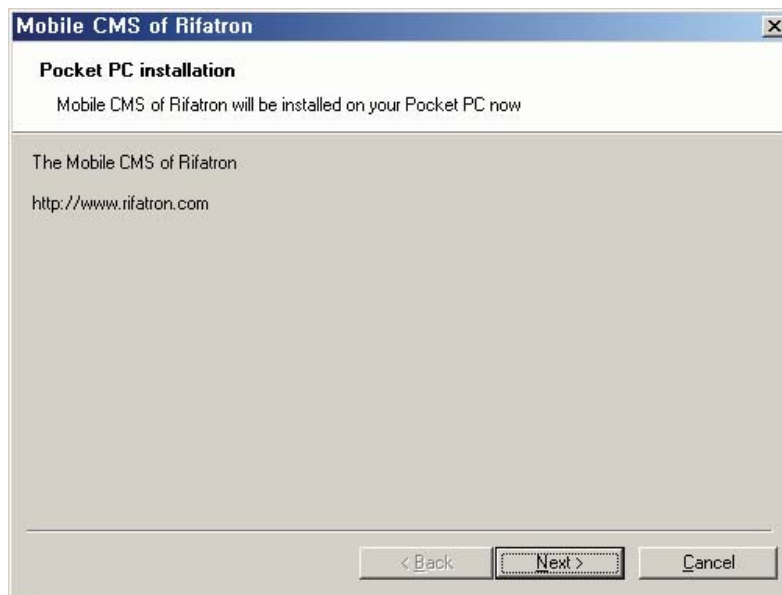
2.MCMS(PDA Viewer)

2-1. Overview

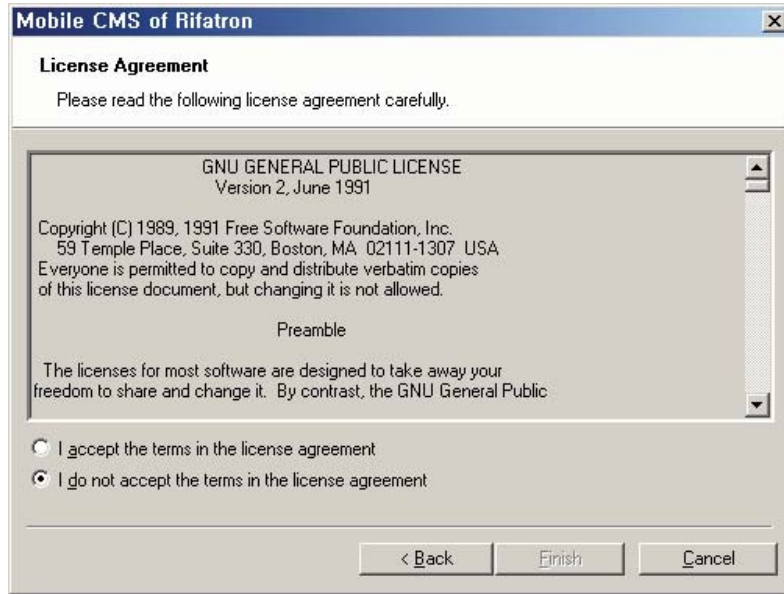
This program is designed to allow the user to see images through some PDAs.

2-2. Installation

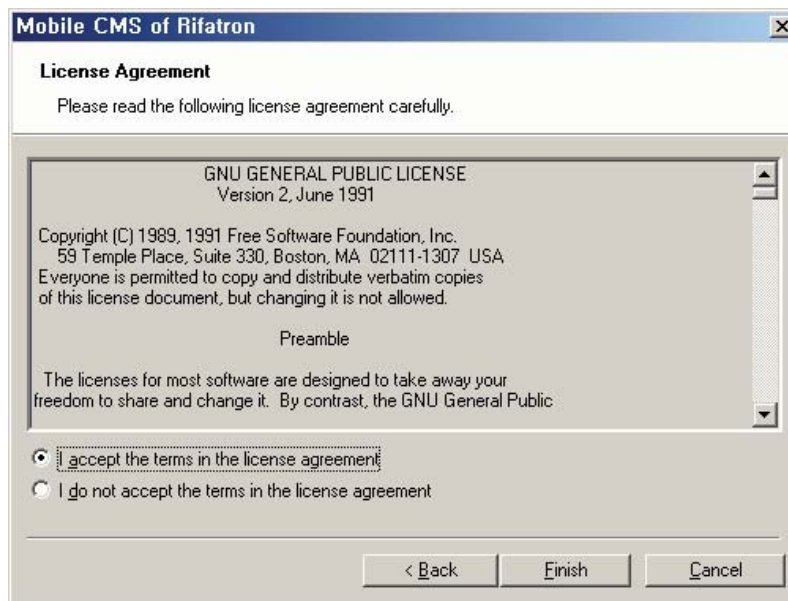
- 1) In order to install the PDA Viewer, you have the Microsoft Active Sync (Version 4.0 or higher) installed in your computer.
- 2) After your computer and PDA are synchronized, run the CMSSetup.exe to install the MCMS.



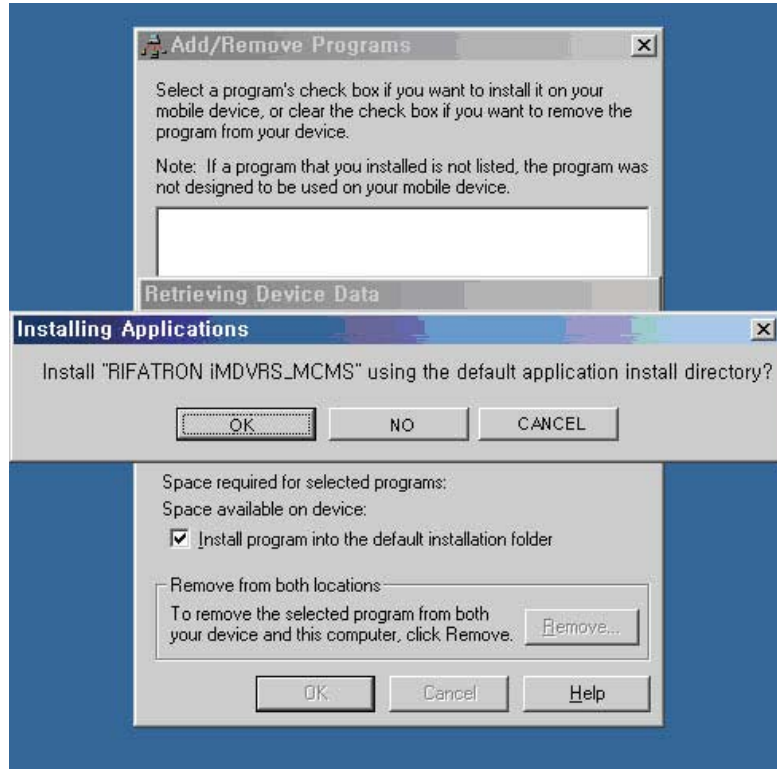
- 3) Click the [Next] button.



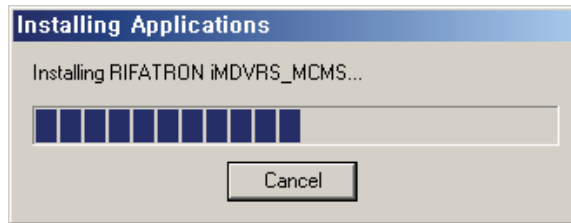
- 4) Read through the End User License Agreement (EULA) carefully. If you select the accept button, the [Finish] button is enabled. To continue to install the program, click the [Finish] button.



- 5) If you click the [Yes(Y)] button on the next screen, the system checks the connection with the PDA and starts the installation from the PDA.




6) This is the screen during the installation at the user's computer side. You can complete the additional installation tasks from the PDA.



7) This is the screen when the PDA installation is in process.



2-3. Running and using

- 1) If you click the  button on the left-upper side of the screen, the access dialog box is displayed.



- 2) After entering the IP address/port/user/password, click access.



3) While trying to connect, the 'IP address' and 'accessing ...' are displayed.



iMDVRS-MCMS
(PDA Viewer)

4) When the connection fails, the following screen is displayed. Then, please check the connection information again.



5) When the connection is successfully established, the following screen is displayed and the number of connected channels are activated.



6) When a camera that has PTZ control is connected, you can control it through the following buttons.




7) The [PRESET] is used to save the values by controlling Pan/Tilt/Zoom/Focus of the PTZ camera. You can save up to 8 control presets using 1 to 8.

8) If you click the screen of a corresponding channel, the full screen comes up.



!MDVRS-MCMS
(PDA Viewer)

9) If you click the  on the right side of the screen, the audio, for the channel where the sound is set, is played



10) To release the connection, click the  button.



iMDVRS-MCMS
(PDA Viewer)

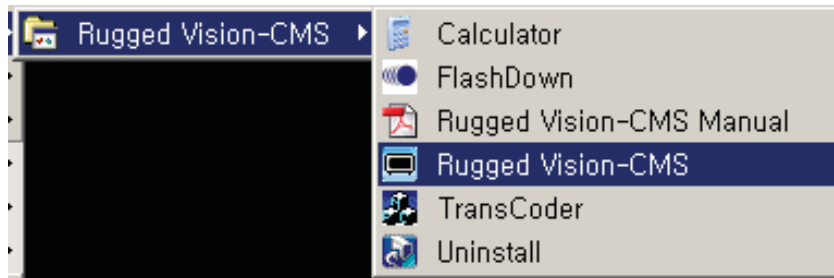
3. Transcoder

3-1. Overview

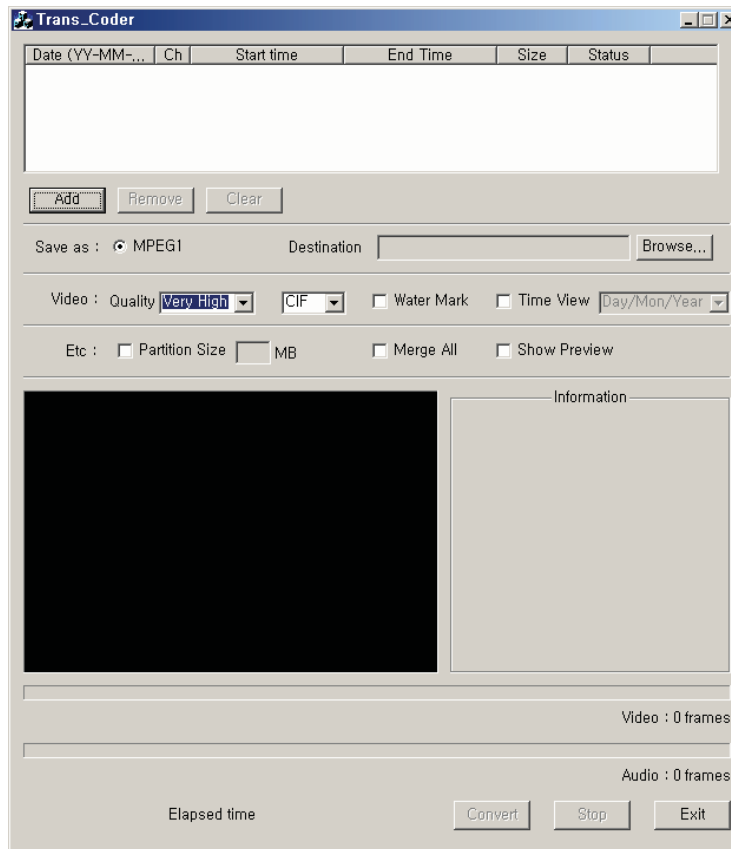
This program transcodes the MPEG-4 format download and recorded files to MPEG-1 format files, allowing the user to view them using regular Windows Media Player.

3-2. Running and using

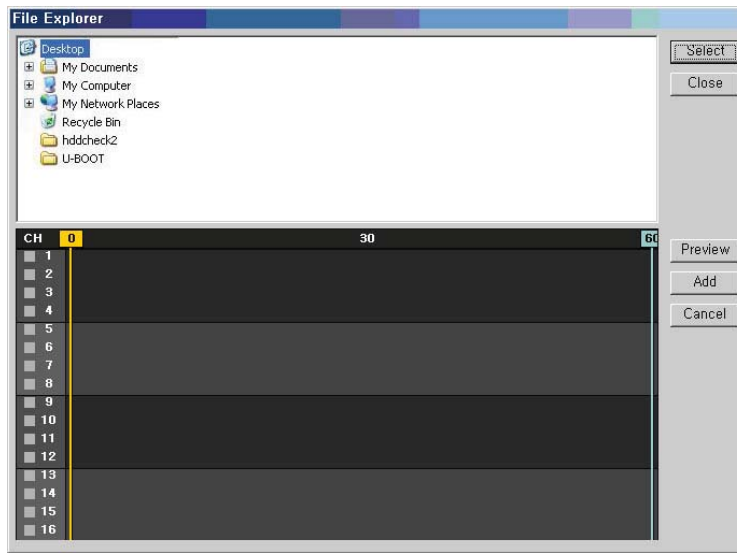
(1) Click the Start > Programs > Rugged Vision > Rugged Vision - CMS> Trans Coder menu.



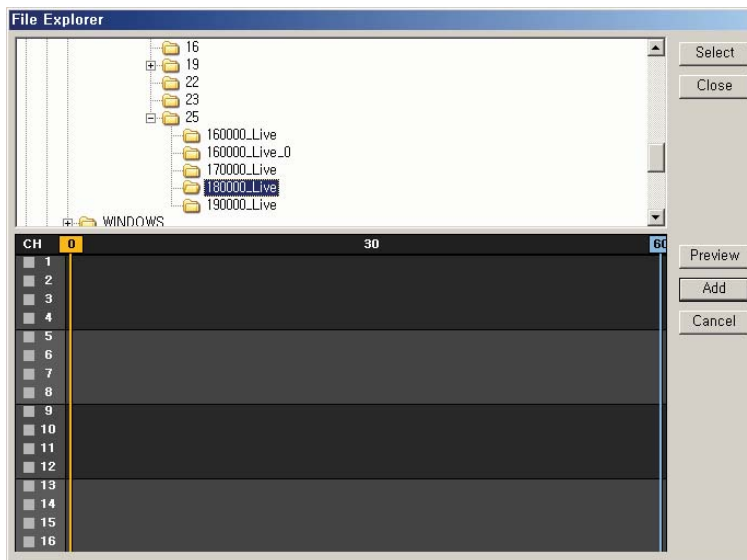
(2) Then, the following screen is displayed.



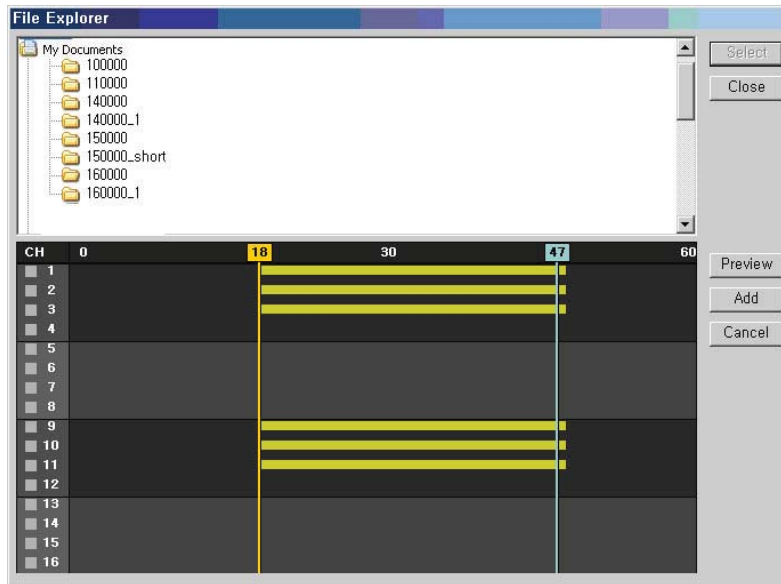
(3) Click the [Add] button to search for the file you want to transcode.



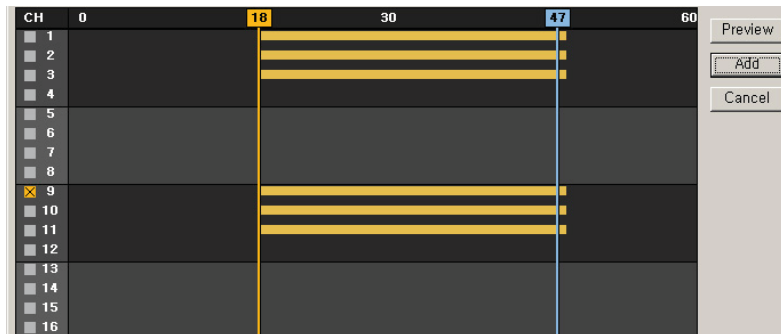
(4) Select the directory for the desired back up file, and click the [Select] button on the right-side of the screen.



- (5) Once the selection is completed, the corresponding zone of the images recorded are displayed as a graph.



- (6) If you select a channel from the list, the left side of the channel is indicated with an ✘ mark.



- (7) To preview images of the corresponding channel, click the preview button.



Start – plays images

End – stops the preview and closes the dialog box.

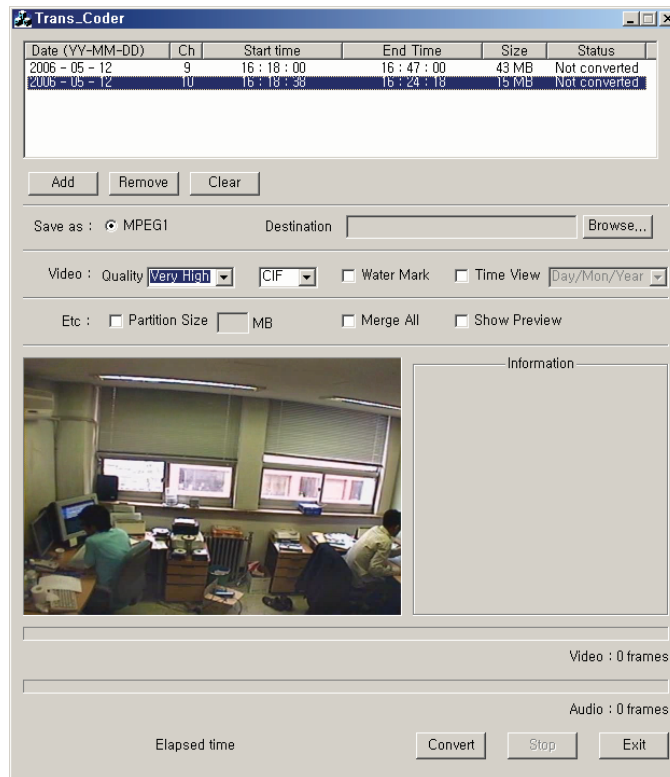
Capture – saves the corresponding image as a picture file.

Color – changes the color of texts displayed on the screen.

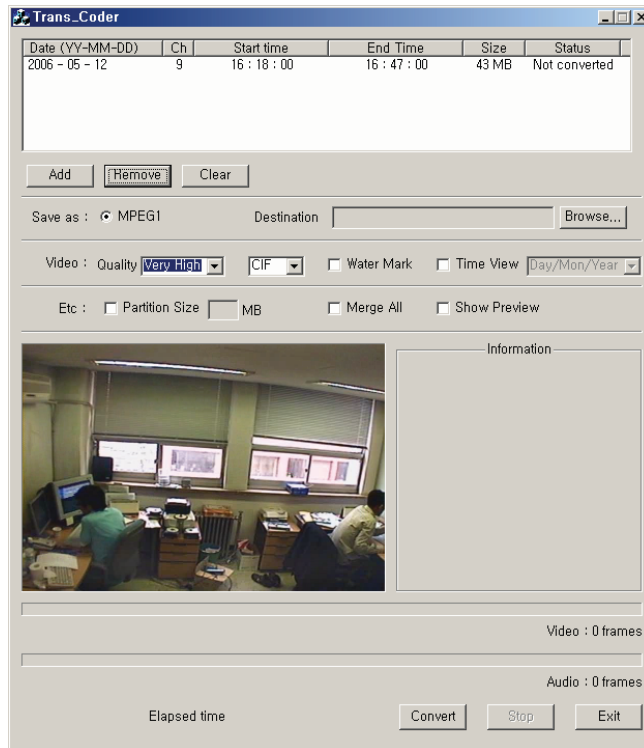
Check - stops the preview and closes the dialog box.

Cancel – closes the preview dialog box.

(8) To remove an image from the list, select it and click the [Delete] button.

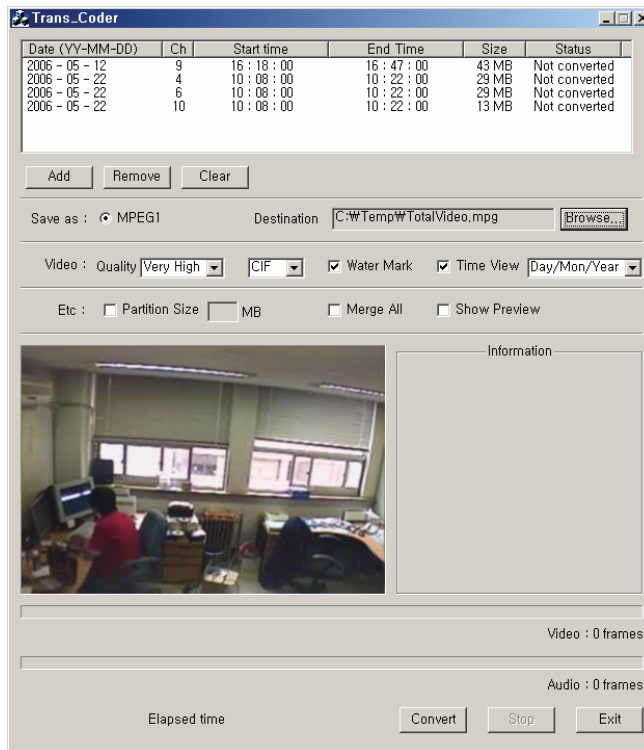


(9) This shows that an image is removed from the list by using the [Delete] button. (To clear all images from the list, click the [Clear] button.).

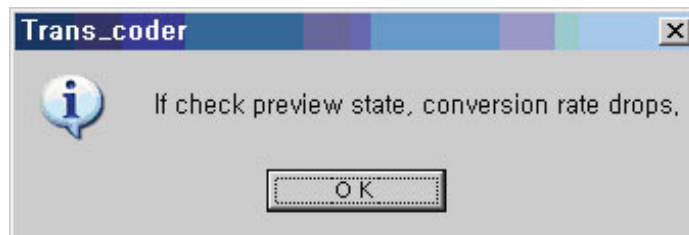


(10) Only the MPEG1 file format is supported for transcoding.

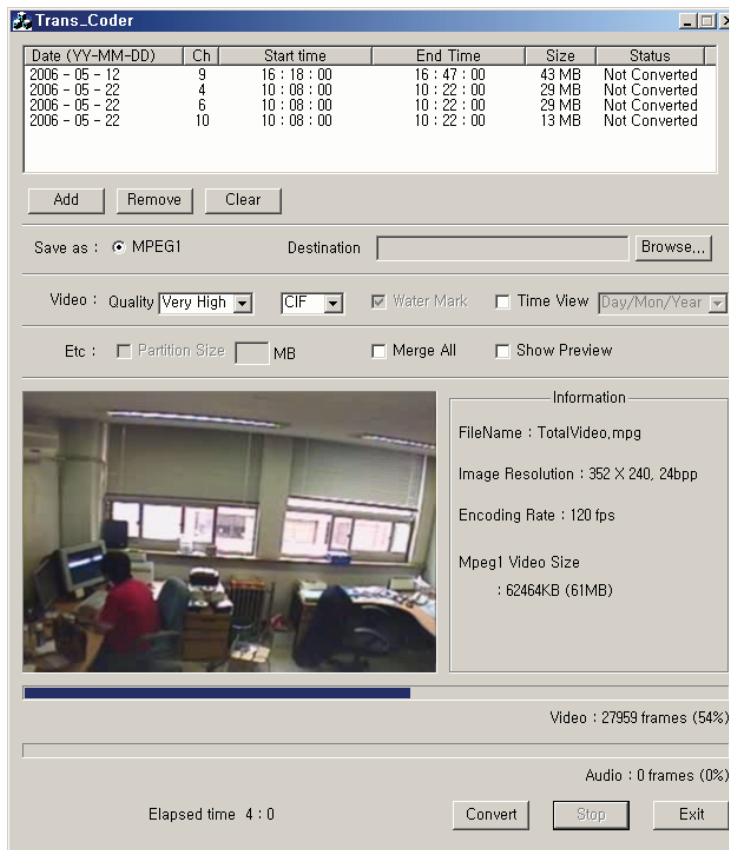
(11) Specify a file name that you want to display in the Destination.



- (12) Quality represents picture quality and consists of highest – high – middle – low – lowest steps
- (13) CIF / FULL indicates the resolution.
- (14) The predefined watermark is inserted into the image. It is not visible to the naked eyes but is for a dedicated detector.
- (15) If Time is selected, the date and time that you are transcoding is included on the screen.
- (16) If you select the fragment size from the Etc and enter a size, the image is segmented according to the input unit. (Unit: Mega Byte)
- (17) With the Merge All, you can merge images by channel and by time as one file.
- (18) If you select the Show Preview, the following warning message is displayed. You can see the transformation process on the screen although its speed decreases a little.



- (19) This screen shows the transformation process. To stop it, click the Stop button.



(20) Once the transformation is completed, a completion message is displayed as in the following figure. Then, click the [OK] button.



4. Calculator

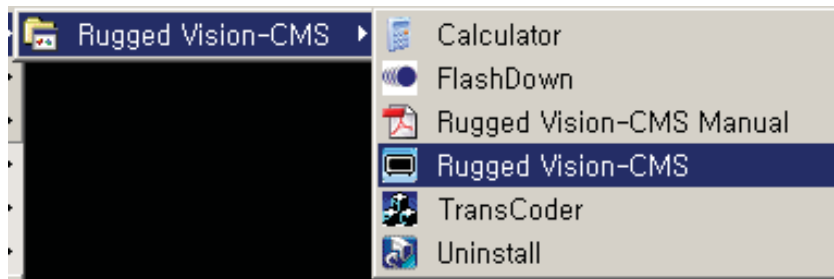
4-1. Overview

(1) The calculator program estimates the record duration depending on the HDD space and record settings.

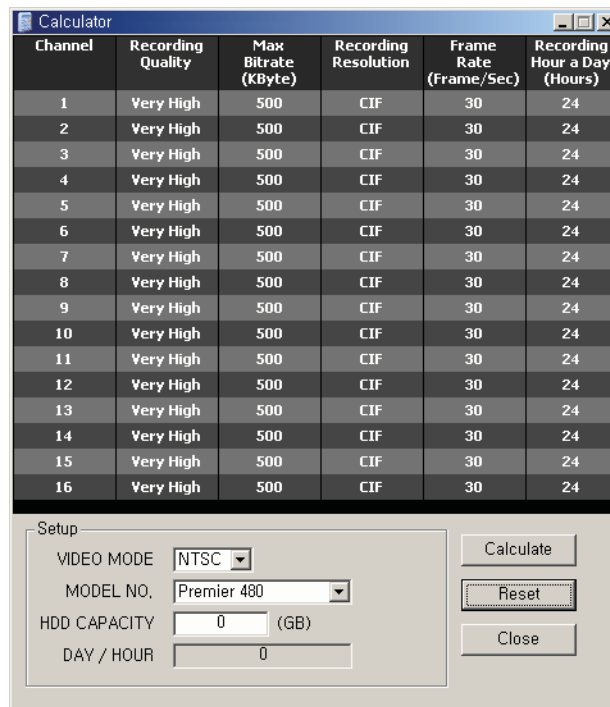
4-2. Running and using

1) How to run it

(1) Click the Start > Programs > Rugged Vision > Rugged Vision - CMS> Calculator



(2) Basic screen



Calculator

- (3) VIDEO MODE : There are two types; NTSC and PAL. (it depends on the camera specification.)
- (4) Model number : Enter the model number of the DVR system.
- (5) HDD CAPACITY (GB) : Enter the total space of the HDD. (Unit: Giga Byte)
- (6) Date/Time : calculated values are displayed. (** Days ** Hour)

The screenshot shows a window titled "Calculator" with a table of recording parameters and a "Setup" section below it.

Channel	Recording Quality	Max Bitrate (KByte)	Recording Resolution	Frame Rate (Frame/Sec)	Recording Hour a Day (Hours)
1	Very High	500	CIF	30	24
2	Very High	500	CIF	30	24
3	Very High	500	CIF	30	24
4	Very High	500	CIF	30	24
5	Very High	500	CIF	30	24
6	Very High	500	CIF	30	24
7	Very High	500	CIF	30	24
8	Very High	500	CIF	30	24
9	Very High	500	CIF	30	24
10	Very High	500	CIF	30	24
11	Very High	500	CIF	30	24
12	Very High	500	CIF	30	24
13	Very High	500	CIF	30	24
14	Very High	500	CIF	30	24
15	Very High	500	CIF	30	24
16	Very High	500	CIF	30	24

Below the table is a "Setup" section with the following fields:

- VIDEO MODE:
- MODEL NO.:
- HDD CAPACITY: (GB)
- DAY / HOUR:

Buttons: Calculate, Reset, Close

2) Description on detail functions

(1) Channel

To turn ON/OFF all channels, click the Channel in the title bar.

The screenshot shows a window titled "Calculator" with a table of 16 channels and a "Setup" panel below it.

Channel	Recording Quality	Max Bitrate (KByte)	Recording Resolution	Frame Rate (Frame/Sec)	Recording Hour a Day (Hours)
1	On h	500	CIF	30	24
2	Off h	500	CIF	30	24
3	Very High	500	CIF	30	24
4	Very High	500	CIF	30	24
5	Very High	500	CIF	30	24
6	Very High	500	CIF	30	24
7	Very High	500	CIF	30	24
8	Very High	500	CIF	30	24
9	Very High	500	CIF	30	24
10	Very High	500	CIF	30	24
11	Very High	500	CIF	30	24
12	Very High	500	CIF	30	24
13	Very High	500	CIF	30	24
14	Very High	500	CIF	30	24
15	Very High	500	CIF	30	24
16	Very High	500	CIF	30	24

Setup

VIDEO MODE:

MODEL NO.:

HDD CAPACITY: (GB)

DAY / HOUR:

Buttons: Calculate, Reset, Close

To turn ON/OFF a channel, double-click it in the same way.

(2) Max Bitrate (Kbyte)

Click the Max Bitrate (Kbyte) in the title bar to set all channels with a same ratio. (This figure shows that the ratio is changed from 250 to 1000.)

The screenshot shows a window titled 'Calculator' containing a table with 6 columns: Channel, Recording Quality, Max Bitrate (KByte), Recording Resolution, Frame Rate (Frame/Sec), and Recording Hour a Day (Hours). The table lists 16 channels. Channel 1 has a Recording Quality of '1000' and a Max Bitrate of '500'. All other channels have a Recording Quality of 'Very High' and a Max Bitrate of '500'. The Recording Resolution for all channels is 'CIF', the Frame Rate is '30', and the Recording Hour a Day is '24'.

Below the table is a 'Setup' panel with the following fields and buttons:

- VIDEO MODE: NTSC (dropdown)
- MODEL NO.: Premier 480 (dropdown)
- HDD CAPACITY: 720 (GB) (text input)
- DAY / HOUR: 1 Day 20 Hours (text input)
- Buttons: Calculate, Reset, Close

You can modify the Max Bitrate (Kbyte) of a channel. If you click it, the color is changed to the orange color. To enter a number, double-click it.

Calculator

Channel	Recording Quality	Max Bitrate (KByte)	Recording Resolution	Frame Rate (Frame/Sec)	Recording Hour a Day (Hours)
1	Very High	1000	CIF	30	24
2	Very High	1000	CIF	30	24
3	Very High	1000	CIF	30	24
4	Very High	1000	CIF	30	24
5	Very High	1000	CIF	30	24
6	Very High	1000	CIF	30	24
7	Very High	1000	CIF	30	24
8	Very High	1000	CIF	30	24
9	Very High	1000	CIF	30	24
10	Very High	1000	CIF	30	24
11	Very High	1000	CIF	30	24
12	Very High	1000	CIF	30	24
13	Very High	1000	CIF	30	24
14	Very High	1000	CIF	30	24
15	Very High	1000	CIF	30	24
16	Very High	1000	CIF	30	24

Setup

VIDEO MODE: NTSC

MODEL NO.: Premier 480

HDD CAPACITY: 720 (GB)

DAY / HOUR: 1 Day 20 Hours

Buttons: Calculate, Reset, Close

Calculator

Channel	Recording Quality	Max Bitrate (KByte)	Recording Resolution	Frame Rate (Frame/Sec)	Recording Hour a Day (Hours)
1	Very High	1000	CIF	30	24
2	Very High	1000	CIF	30	24
3	Very High	1000	CIF	30	24
4	Very High	1000	CIF	30	24
5	Very High		CIF	30	24
6	Very High	1000	CIF	30	24
7	Very High	1000	CIF	30	24
8	Very High	1000	CIF	30	24
9	Very High	1000	CIF	30	24
10	Very High	1000	CIF	30	24
11	Very High	1000	CIF	30	24
12	Very High	1000	CIF	30	24
13	Very High	1000	CIF	30	24
14	Very High	1000	CIF	30	24
15	Very High	1000	CIF	30	24
16	Very High	1000	CIF	30	24

Setup

VIDEO MODE: NTSC

MODEL NO.: Premier 480

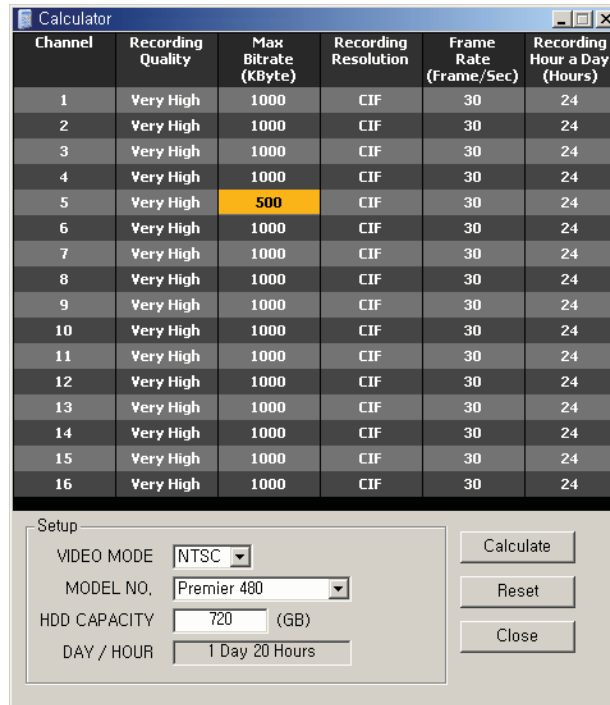
HDD CAPACITY: 720 (GB)

DAY / HOUR: 1 Day 20 Hours

Buttons: Calculate, Reset, Close

Calculator

This figure shows that it is changed to 500.



(3) Recording Resolution

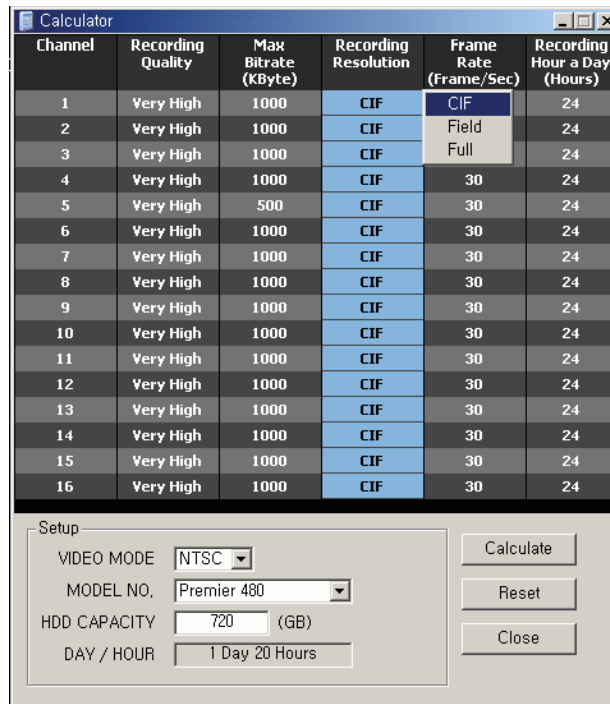
Controls the resolution of the recording images

NTSC type : CIF – 352*240 / Field – 704*240 / Full – 704*480

PAL type : CIF – 352*288 / Field – 704*288 / Full – 704*576

To change the resolution of all channels with an equal value, click the Recording Resolution in the title bar.

Calculator



You can modify the resolution of a channel. If you click it, the color is changed to the orange color. Select an item in the context menu by double-clicking it.

Channel	Recording Quality	Max Bitrate (KByte)	Recording Resolution	Frame Rate (Frame/Sec)	Recording Hour a Day (Hours)
1	Very High	1000	CIF	30	24
2	Very High	1000	CIF	30	24
3	Very High	1000	CIF	30	24
4	Very High	1000	CIF	30	24
5	Very High	500	CIF	30	24
6	Very High	1000	CIF	30	24
7	Very High	1000	CIF	30	24
8	Very High	1000	CIF	30	24
9	Very High	1000	CIF	30	24
10	Very High	1000	CIF	30	24
11	Very High	1000	CIF	30	24
12	Very High	1000	CIF	30	24
13	Very High	1000	CIF	30	24
14	Very High	1000	CIF	30	24
15	Very High	1000	CIF	30	24
16	Very High	1000	CIF	30	24

Setup

VIDEO MODE: NTSC

MODEL NO.: Premier 480

HDD CAPACITY: 720 (GB)

DAY / HOUR: 1 Day 20 Hours

Buttons: Calculate, Reset, Close

Channel	Recording Quality	Max Bitrate (KByte)	Recording Resolution	Frame Rate (Frame/Sec)	Recording Hour a Day (Hours)
1	Very High	1000	CIF	30	24
2	Very High	1000	CIF	30	24
3	Very High	1000	CIF	30	24
4	Very High	1000	CIF	30	24
5	Very High	500	CIF	30	24
6	Very High	1000	CIF	CIF	24
7	Very High	1000	CIF	Field	24
8	Very High	1000	CIF	Full	24
9	Very High	1000	CIF	30	24
10	Very High	1000	CIF	30	24
11	Very High	1000	CIF	30	24
12	Very High	1000	CIF	30	24
13	Very High	1000	CIF	30	24
14	Very High	1000	CIF	30	24
15	Very High	1000	CIF	30	24
16	Very High	1000	CIF	30	24

Setup

VIDEO MODE: NTSC

MODEL NO.: Premier 480

HDD CAPACITY: 720 (GB)

DAY / HOUR: 1 Day 20 Hours

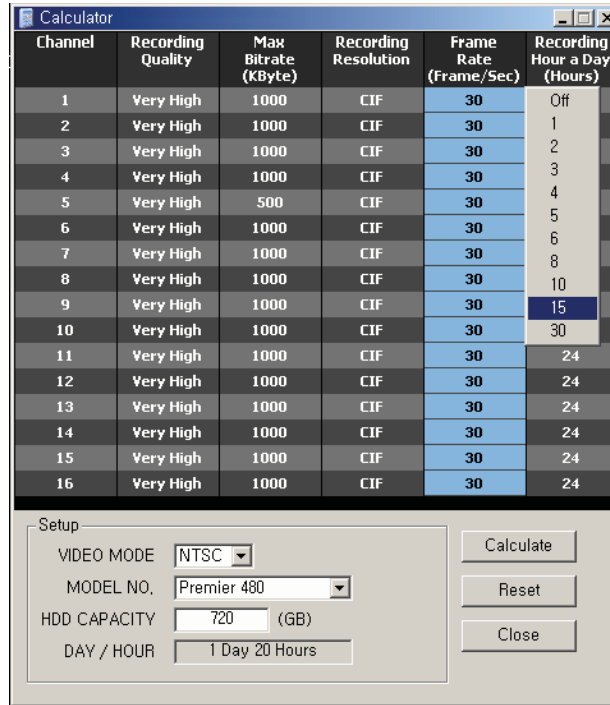
Buttons: Calculate, Reset, Close

Calculator

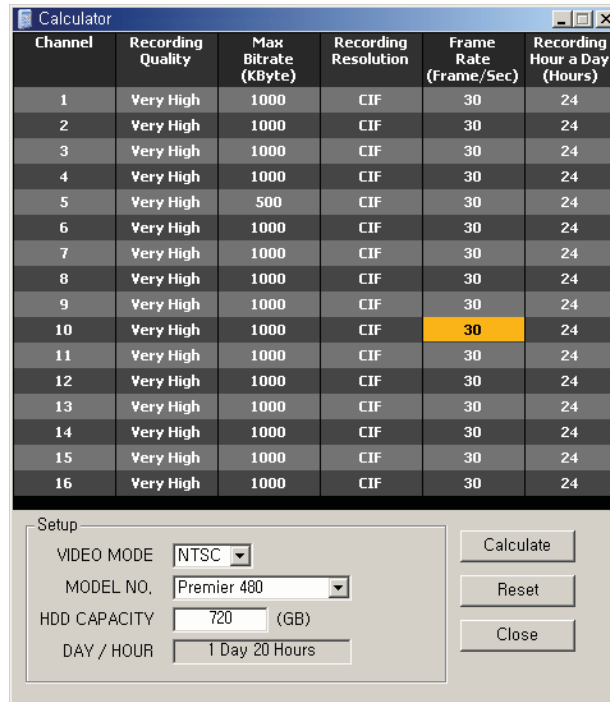
(4) Frame Rate (Frame/Sec)

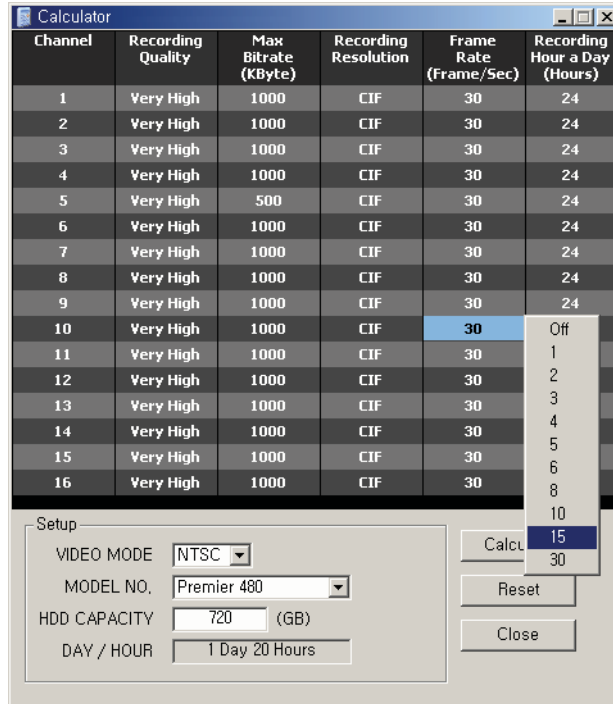
Enter the number of frames per second of a recording image.

To change all channels with a same frame rate, click the Frame Rate (Frame/Sec) in the title bar.



You can modify the frame rate of a channel. If you click it, the color is changed to the orange color. Select one in the context menu by double-clicking it.

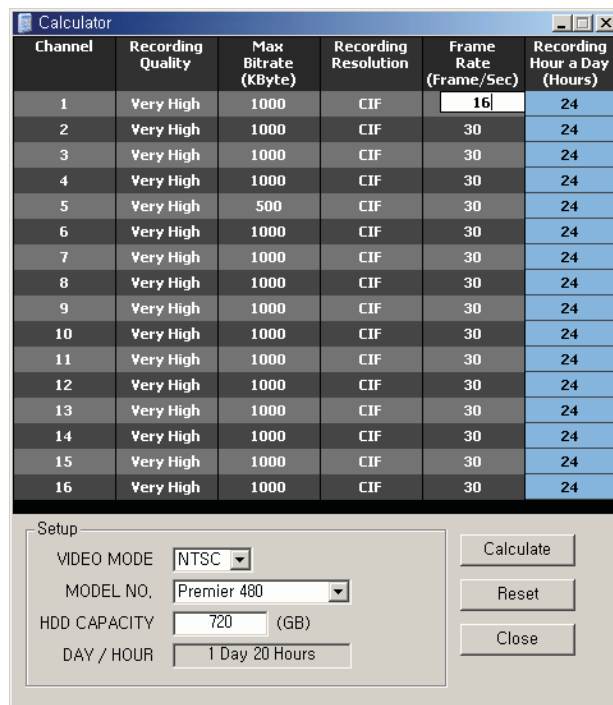




(5) Recording Hours a Day (Hours)

Specifies recording hours in a day.

To change all channels with to the same value, click the Recording Hour a Day (Hours) in the title bar.



Calculator

You can modify the recording hours of a channel. If you click it, the color is changed to the orange color. Select one in the context menu by double-clicking it.

Calculator

Channel	Recording Quality	Max Bitrate (KByte)	Recording Resolution	Frame Rate (Frame/Sec)	Recording Hour a Day (Hours)
1	Very High	1000	CIF	30	16
2	Very High	1000	CIF	30	16
3	Very High	1000	CIF	30	16
4	Very High	1000	CIF	30	16
5	Very High	500	CIF	30	16
6	Very High	1000	CIF	30	16
7	Very High	1000	CIF	30	16
8	Very High	1000	CIF	30	16
9	Very High	1000	CIF	30	16
10	Very High	1000	CIF	30	16
11	Very High	1000	CIF	30	16
12	Very High	1000	CIF	30	16
13	Very High	1000	CIF	30	16
14	Very High	1000	CIF	30	16
15	Very High	1000	CIF	30	16
16	Very High	1000	CIF	30	16

Setup

VIDEO MODE: NTSC

MODEL NO.: Premier 480

HDD CAPACITY: (GB)

DAY / HOUR:

Buttons: Calculate, Reset, Close

Calculator

Calculator

Channel	Recording Quality	Max Bitrate (KByte)	Recording Resolution	Frame Rate (Frame/Sec)	Recording Hour a Day (Hours)
1	Very High	1000	CIF	30	16
2	Very High	1000	CIF	30	16
3	Very High	1000	CIF	30	16
4	Very High	1000	CIF	30	16
5	Very High	500	CIF	30	16
6	Very High	1000	CIF	30	16
7	Very High	1000	CIF	30	16
8	Very High	1000	CIF	30	24
9	Very High	1000	CIF	30	16
10	Very High	1000	CIF	30	16
11	Very High	1000	CIF	30	16
12	Very High	1000	CIF	30	16
13	Very High	1000	CIF	30	16
14	Very High	1000	CIF	30	16
15	Very High	1000	CIF	30	16
16	Very High	1000	CIF	30	16

Setup

VIDEO MODE: NTSC

MODEL NO.: Premier 480

HDD CAPACITY: 720 (GB)

DAY / HOUR: 1 Day 20 Hours

Buttons: Calculate, Reset, Close

- (6) To reset the value, press the Reset button.
- (7) If you press the Calculate button after all inputted items are selected, the calculated output value is displayed in the Day/Hour.

The screenshot shows a window titled "Calculator" with a table of 16 channels and a "Setup" panel below it.

Channel	Recording Quality	Max Bitrate (KByte)	Recording Resolution	Frame Rate (Frame/Sec)	Recording Hour a Day (Hours)
1	Very High	1000	CIF	30	16
2	Very High	1000	CIF	30	16
3	Very High	1000	CIF	30	16
4	Very High	1000	CIF	30	16
5	Very High	500	CIF	30	16
6	Very High	1000	Field	15	16
7	Very High	1000	CIF	30	16
8	Very High	1000	CIF	30	24
9	Very High	1000	CIF	30	16
10	Very High	1000	CIF	15	16
11	Very High	1000	CIF	30	16
12	Very High	1000	CIF	30	16
13	Very High	1000	CIF	30	16
14	Very High	1000	CIF	30	16
15	Very High	1000	CIF	30	16
16	Very High	1000	CIF	30	16

Below the table is a "Setup" panel with the following fields and buttons:

- VIDEO MODE:
- MODEL NO.:
- HDD CAPACITY: (GB)
- DAY / HOUR:
- Buttons: Calculate, Reset, Close

5. Flash Down

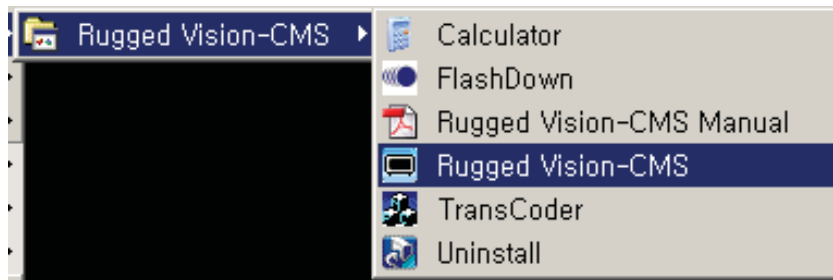
5-1. Overview

(1) This is the DVR system upgrade program, and uses an RS232C cable or cross over cable direct to the DVR, or through the network or remote connection.

5-2. Running and using

1) Running

(1) Click the Start > Programs > Rugged Vision > Rugged Vision - CMS> Flashdown Menu



(2) Local Upgrade

In this type, the user performs the upgrade task by connecting an RS232C cable to his/her PC.

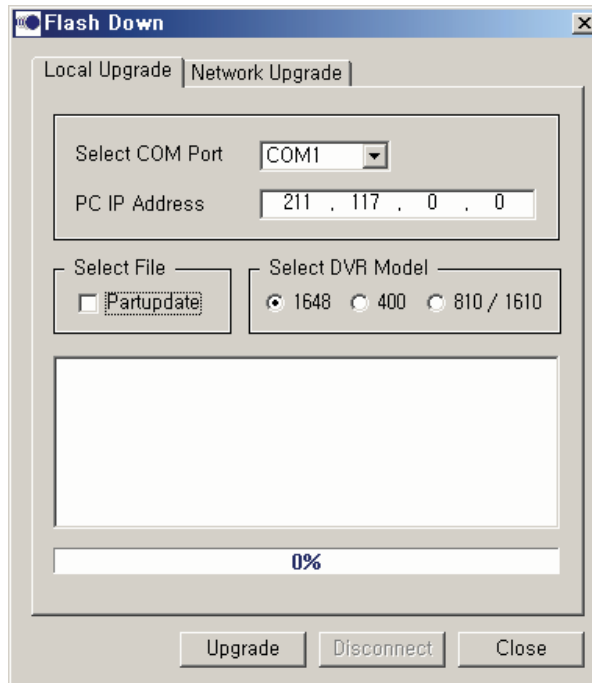
Prerequisites

The RS232C cable connection should be established.

The network setup should be configured.

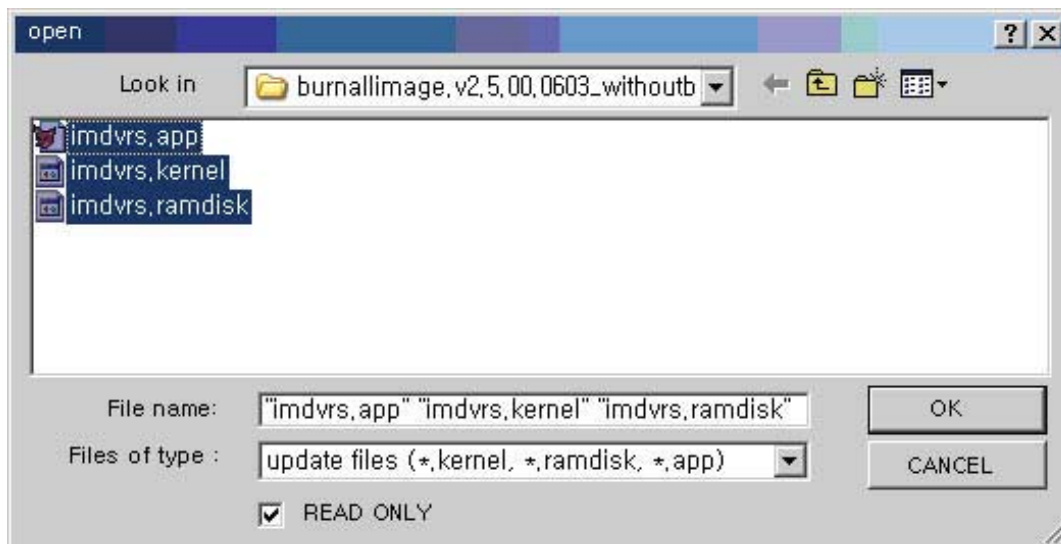
In the Select COM Port, specify the port that the RS232C cable is connected to.

In the Local Upgrade IP Address, enter the IP of the users PC.



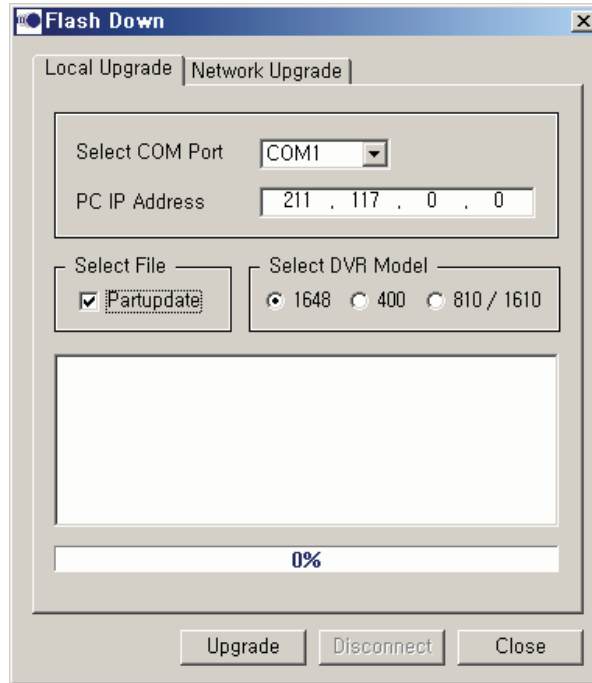
To add upgrade files, select the Part update.

Click the [Open] button by selecting all of three files that are shown on the screen.

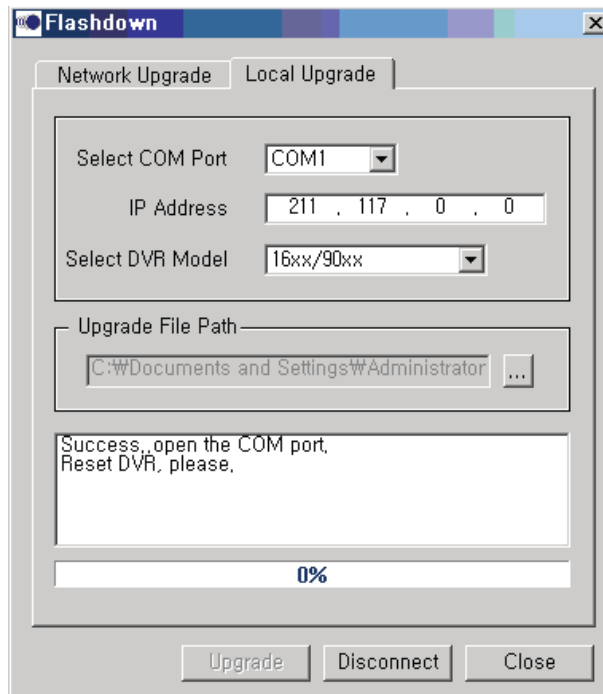


Flash Down

Once files that will be upgraded are selected, set the model of the corresponding DVR form the Select DVR Model.

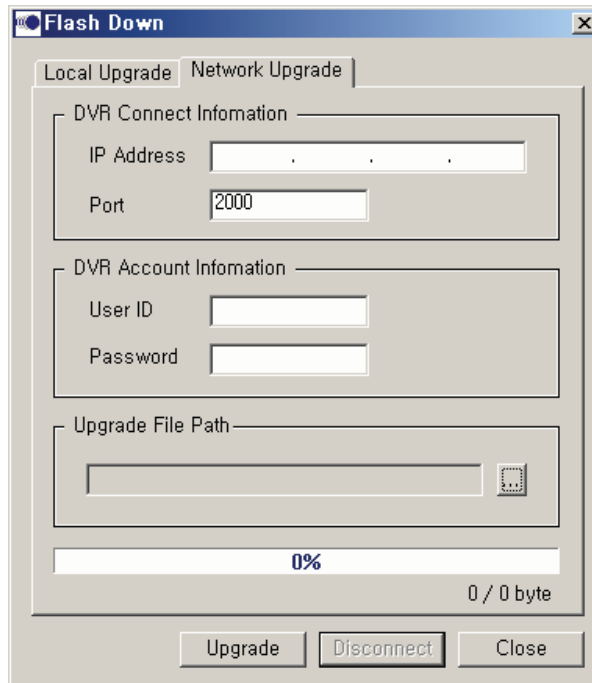


If the following message (Reset DVR, please.) is displayed after you click the Upgrade, reboot the DVR system. Then, the upgrade task continues to proceed.



(3) Network Upgrade

DVR and user PC should be connected across the network.



The image shows a 'Flash Down' dialog box with the 'Network Upgrade' tab selected. It contains three sections: 'DVR Connect Information' with 'IP Address' and 'Port' (2000) fields; 'DVR Account Information' with 'User ID' and 'Password' fields; and 'Upgrade File Path' with an empty text box and a browse button. A progress bar at the bottom shows 0% completion and 0 / 0 byte. Buttons for 'Upgrade', 'Disconnect', and 'Close' are at the bottom.

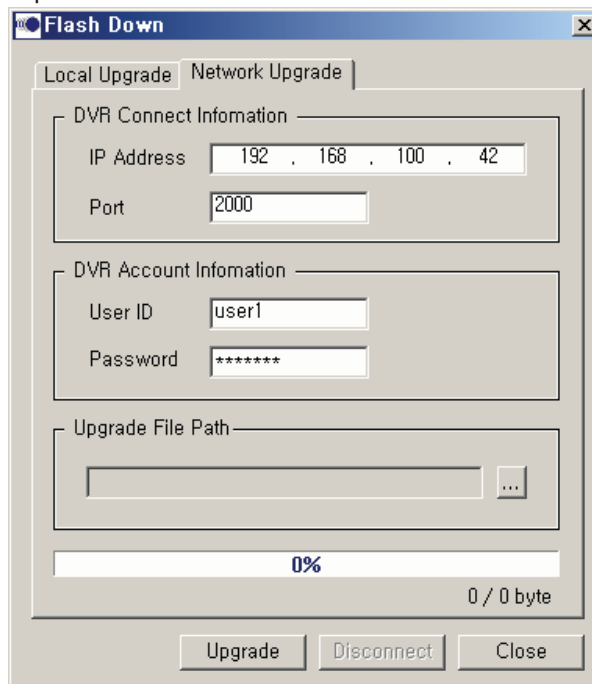
Fill in each item.

IP Address : IP of the DVR system

Port : 2000 (default)

User name : user ID

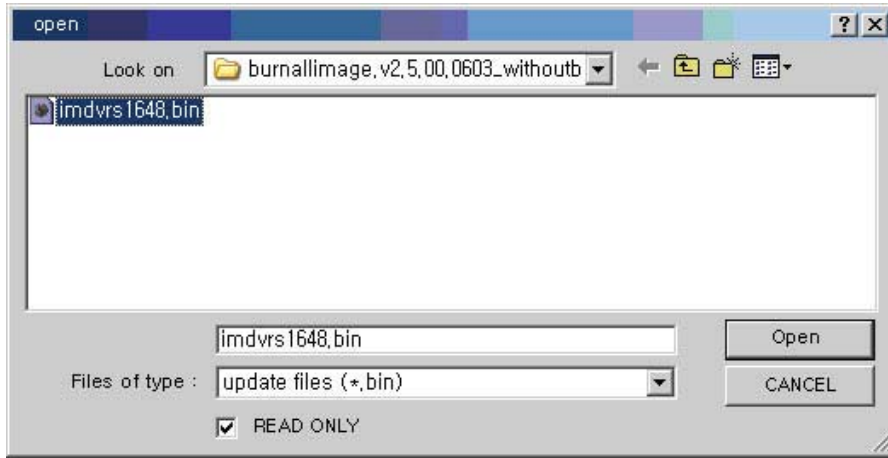
Password : User password



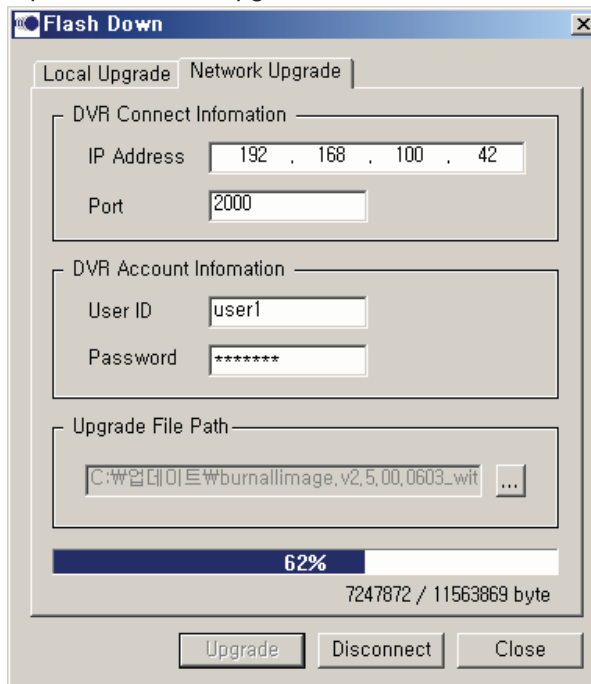
The image shows the same 'Flash Down' dialog box, but now with the input fields filled. The 'IP Address' field contains '192 . 168 . 100 . 42', the 'User ID' field contains 'user1', and the 'Password' field contains '*****'. The progress bar and buttons remain the same.

Flash Down

For the Upgrade File Path, select the file you want to upgrade.
The file name is *.bin.



Once the setup is completed, click the Upgrade button to continue the upgrade task.



If the upgrade task is completed, a notification message is displayed. Then, press the [OK] button to finish it at the user PC side.



DVR system continues to upgrade files. And then, it reboots by itself.

A/P/P/E/N/D/I/X

- Table of compatibility between codes for the DVRs and CMS versions

DVR mass production codes \ CMS Version	CMS Version					
	V1.1.2.1 7577	V1.1.2.1 V1.1.2.17704	V1.1.2.1 7850	V1.2.0.0 V1.2.0.0533	V1.3.0.0 V1.3.0.0105	V1.4.0.0 005 or higher
Da - V1.6 (2729,2837,2838)	O	X	X	X	X	X
Db - V1.6 (3420)	X	O	X	X	X	X
Dc - V2.0 (466,468)	X	X	O	X	X	X
Dd - V2.5 (612)	X	X	X	O	X	X
Dd4 - V3.0 (266)	X	X	X	O	X	X
De - V3.5 or higher version	X	X	X	X	O	O
De1-V3.6 or higher version	X	X	X	X	X	O

- Table of compatibility between codes for the mass production Workhorse 4 Series DVR and CMS versions

DVR mass production codes \ CMS Version	CMS Version		
	V1.2.0.0 V1.2.0.0533	V1.3.0.0 V1.3.0.0105	V1.4.0.0 005 or higher
Dd3 - V2.5 (020)	O	X	X
De - V3.5 or higher version	X	O	O
De1-V3.6 or higher version	X	X	O

- Table of compatibility between codes for the mass production Workhorse 8 and 16 Channel Series DVR and CMS versions

DVR mass production codes	CMS Version		
	V1.2.0.0 V1.2.0.0533	V1.3.0.0 V1.3.0.0105	V1.4.0.0 005 or higher
DC – V2.3 (871)	O	X	X
DE – V3.5 or higher version	X	O	O
De1-V3.6 or higher version	X	X	O

Cautions

Although the CMS PROGRAM- V1.1.2.1(7850), for both DC and DD, provides live and playback functions, the CMS PROGRAM- V1.2.0.0(533) is not compatible with the DC Version.