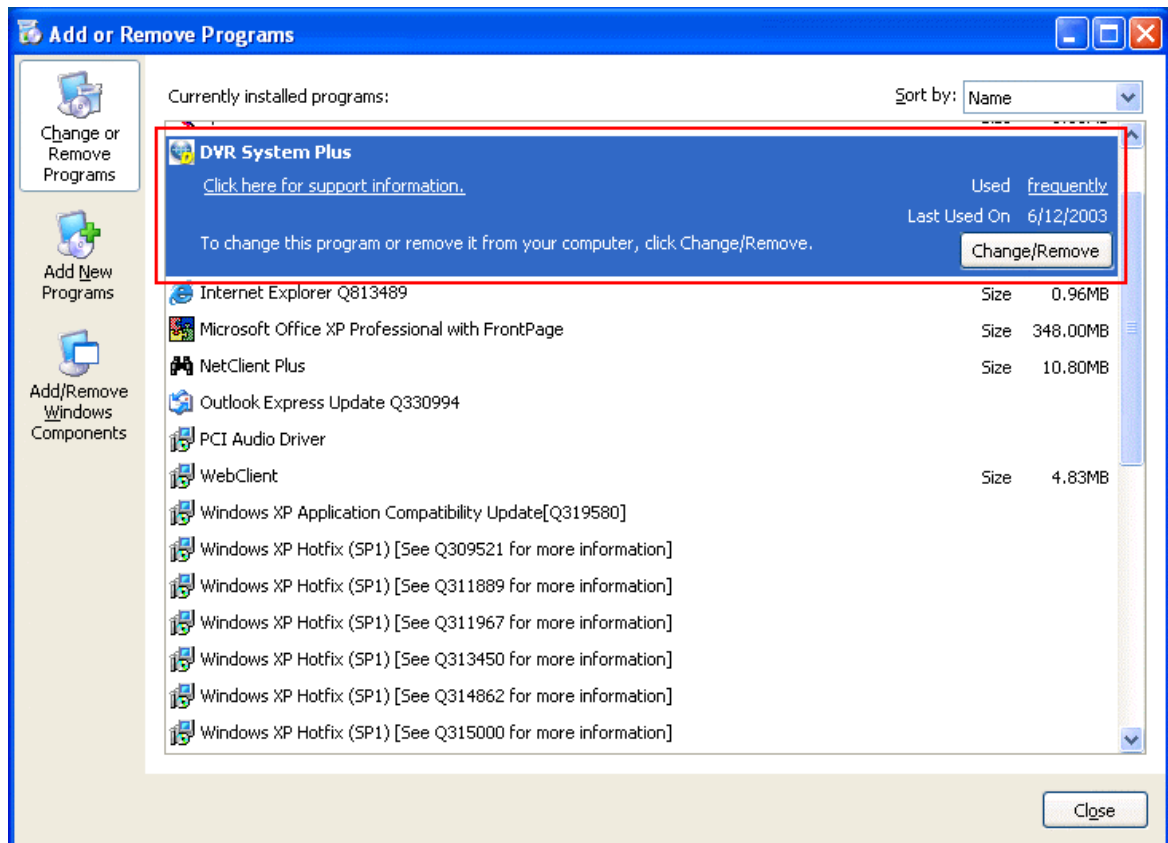


2-2-3. Uninstall DVR Server program

1. Under the Start menu in Windows, go to Setting and then to Control Panel
2. Double click the Add or Remove Programs
3. Select DVR System Plus and Click on Change/Remove button.

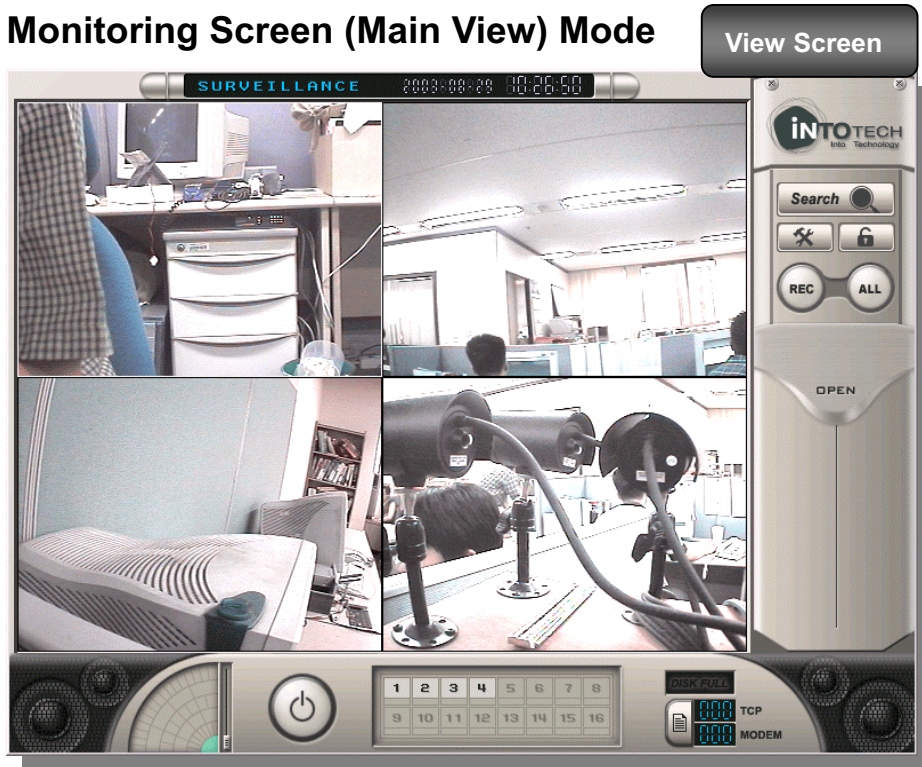


3. Click Remove button and Press the [Next] button.
4. Press the Finish button to complete uninstalling DVR program.

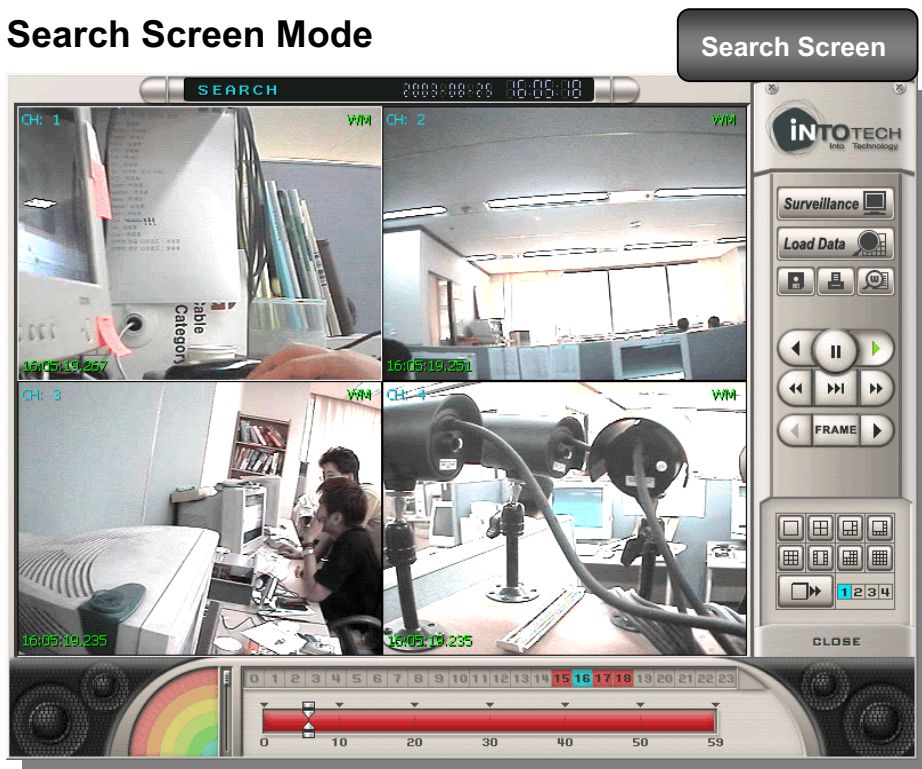
※ The uninstall program will delete all DVR system files on your hard disk. However, it does not delete the video images and the log files already saved in the hard drive of your DVR PC.

Chapter 3 User Manual for SmartDVR Formula v2.0

Monitoring Screen (Main View) Mode



Search Screen Mode



3-2. General User Guide

3-1 Main features and functions

1. Operating System (O/S)

DVR system uses Windows 2000/XP as a basic OS and is designed to operate all needed functions of DVR System properly.

2. Main Program

The main program operates Search, Backup, Recording, and every function to control DVR System and it has the following functions and features

1) Easy to search

According to date, time, and camera, the user is able to execute instant, speedy, conditional, and magnified searched video images.

2) Backup & Print function

Able to print out searched images and provides Backup function

3) Switcher (Auto –Selector) function

4) Screen Division Function

The user is able to select the following screen division: 1, 4, 8, 9, 10, 13, 16, and full screen

5) Record speed control function

The user is able to adjust recording rate

6) Record qualify setup per CH function

Able to manage HDD space efficiently by adjust recording quality per channel

7) Motion Detection Function (MD)

The user is able to setup motion area, and record the image when the motion image is detected in the area.

(Recording, Event processing function)

8) PAN/TILT Control Function

P/T/Z built in the system (Requirement of Receiver Device)

9) Alarm connection with Camera & Sensor

Connect with emergency bell and alarm while MD & Sensor are operating

10) Watch Dog

When system function does not operate properly or emergency shutdown, watchdog function operates auto reset/restoration existed data

11) Water Mark

A copyright-protection method of embedding a code into a digital audio or video file to attempt to thwart piracy or unlicensed use

12) Image Transmission (Option)

Remote sites image transmission by using PSTN

(Able to monitor remote sites from Web Browser and NetClient program)

13) Store Resolutions

Support 320×240 pixels, 640×480 pixels

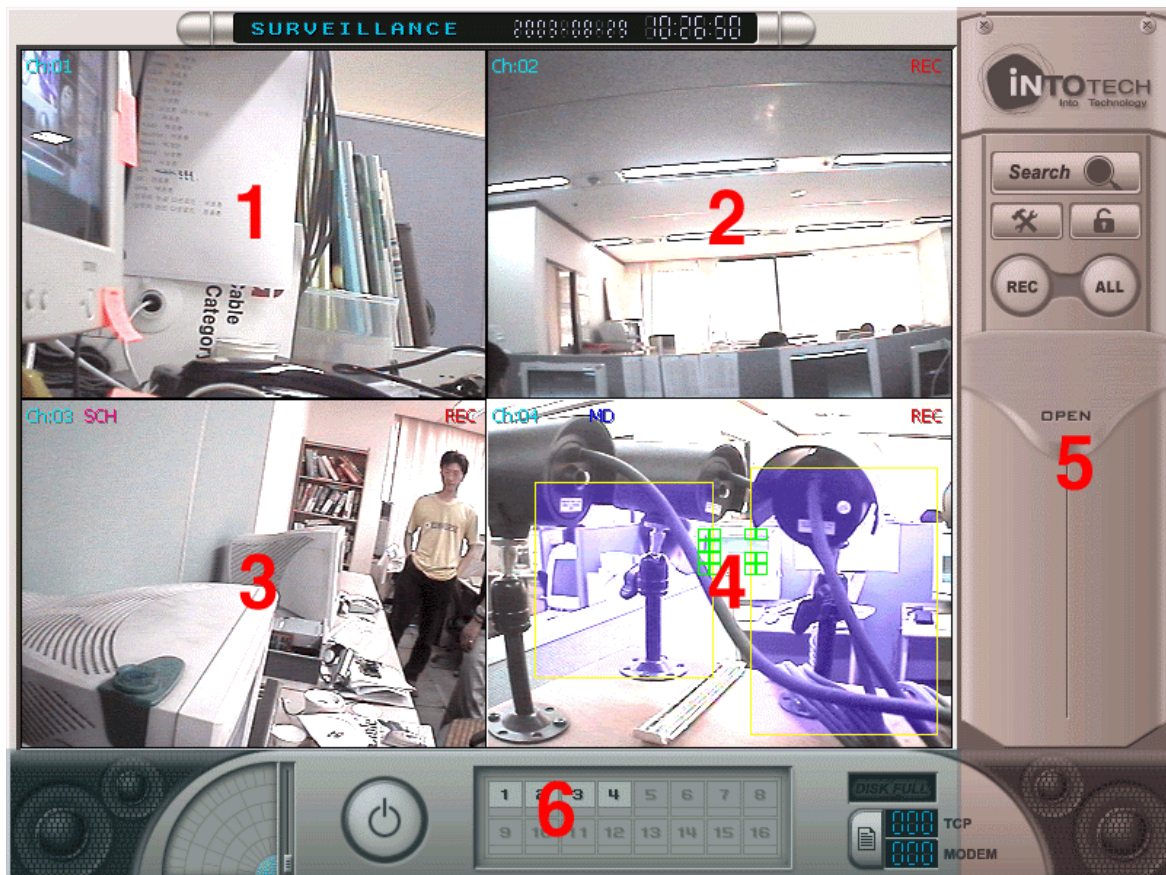
14) Line Monitoring - Image Signal Monitoring Function

15) Schedule

16) Record, Digital-Out, and Alarm function

17) Password

3-2 Monitoring Screen Mode



1 : Standard Display Screen

2 : 1CH recording screen (represented by REC)

3 : Schedule Motion Detection Recording Screen (represented by SCH MD)

4 : Motion Detection Store Screen (represented by MD)

5, 6 : Please refer to full description as below

- Next Page -

5 Full Description (Part A)



	Search Mode
	Configuration
	Lock /Unlock

	: Record		: All
---	----------	--	-------

	4 CH Mode		6 CH Mode
	8 CH Mode		9 CH Mode
	10 CH Mode		13 CH Mode
	16 CH Mode		
	<Switching Mode> = Automatically switch to next screen through periodic time		
	Full Display Mode		

	Light On/Off
	Auto Pan
	P/T/Z Power

6 : Full Description (Part B)



1 : Sound volume control

2 : Power

3 :  : Camera On

 : Camera Off

4 : Indicate item under LAN / MODEM connection



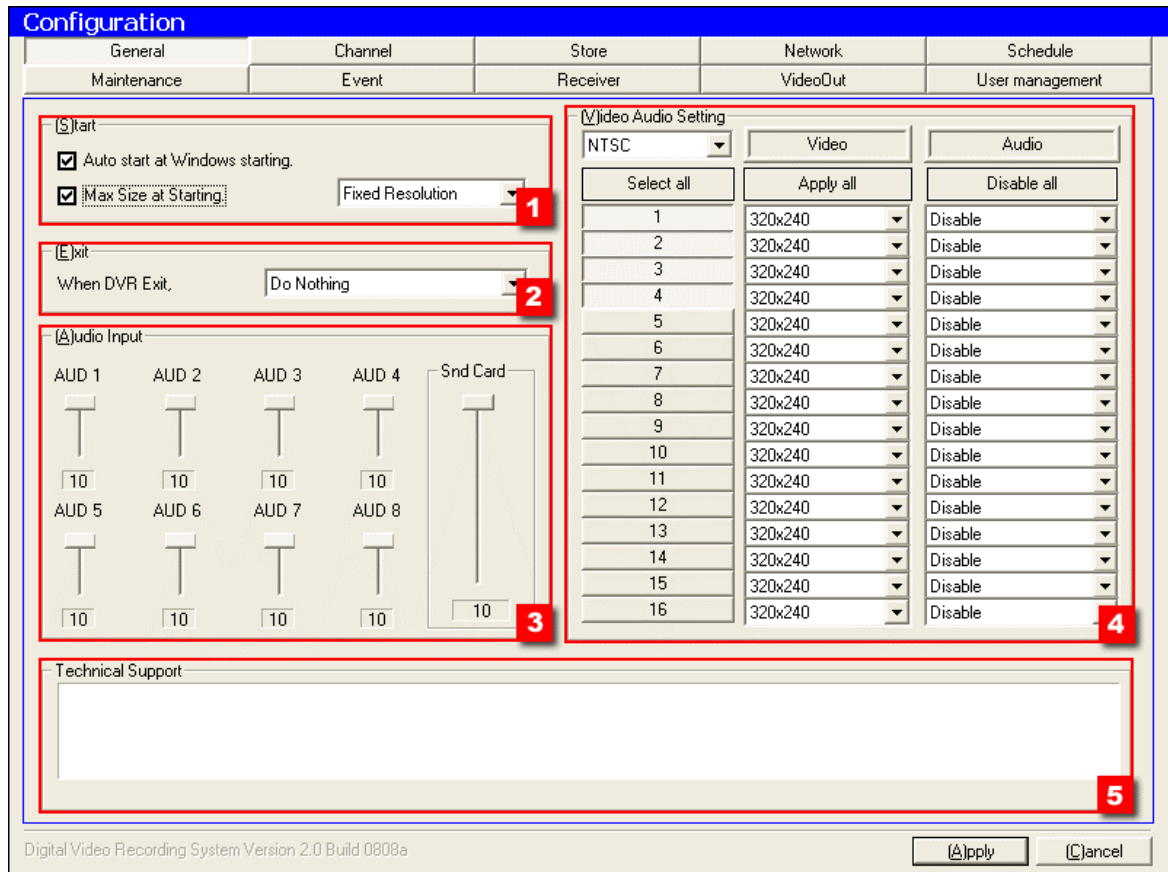
TCP : support up to max. 100 users

MODEM: support one user



Double Click on configuration () icon in Main View Screen.

1) General



1. Start Windows

☒ Auto start at Windows starting.

☒ Max Size at Starting.

: Automatically execute program when start of Windows

: Execute Full Screen Size when run DVR program

2. Exit DVR program

Do Nothing

Reboot System

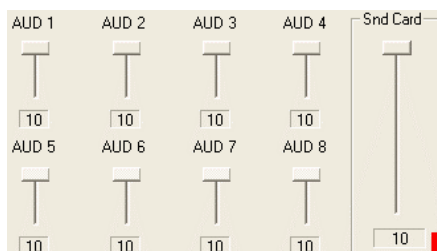
Shutdown System

: Only exit DVR Program

: Restart Windows when exit DVR program

: Shutdown Windows when exit DVR program

3. Audio volume control



: Audio volume setting

: Setup volume for AUD 1 ~ AUD8

: Snd Card = Setup Sound Card volume.

4. Camera and audio configuration

NTSC 1	3 Video	4 Audio
2 Select all	Apply all	Disable all
1	320x240	Disable
2	320x240	Disable
3	320x240	Disable
4	320x240	Disable
5	320x240	Disable
6	320x240	Disable
7	320x240	Disable
8	320x240	Disable
9	320x240	Disable
10	320x240	Disable
11	320x240	Disable
12	320x240	Disable
13	320x240	Disable
14	320x240	Disable
15	320x240	Disable
16	320x240	Disable

- 1 : Select camera type (NTSC, PAL)
- 2 : Select camera channel
- 3 : Select display resolution for each camera channel
- 4 : Select audio device
- 5 : Indicate technical support information

<TIP>

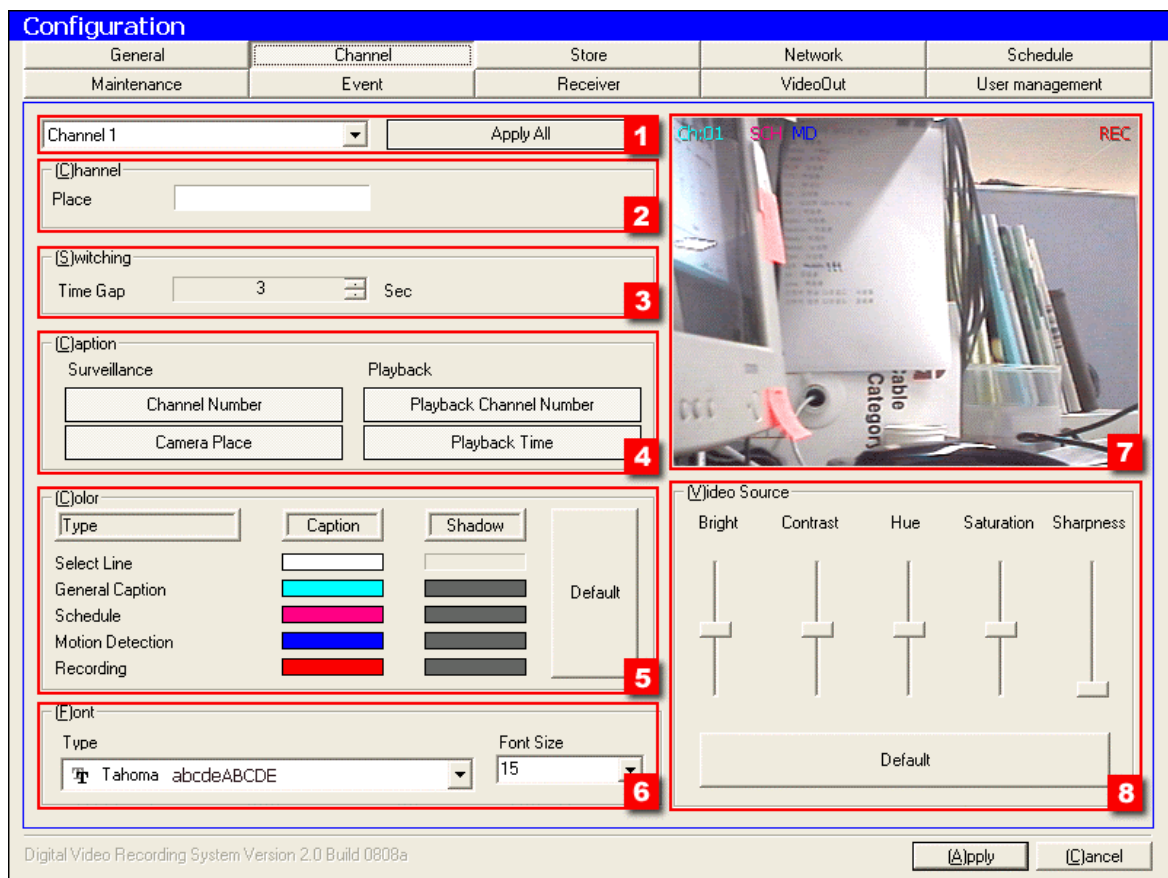
1. Video Resolution

	320x240	640x480
SDVR	16CH	16CH
HDVR	16CH	16CH
HPLUS	16CH	Support up to 6CH

2. Audio

SDVR	Support up to 2CH
HDVR	Support up to 5CH
HPLUS	Support up to 9CH

2) Channel



Configuration

General Channel Store Network Schedule
Maintenance Event Receiver VideoOut User management

Channel 1 Apply All 1

Channel Place 2

Switching
Time Gap 3 Sec 3

Caption
Surveillance Playback
Channel Number Playback Channel Number
Camera Place Playback Time 4

Color
Type Caption Shadow
Select Line
General Caption
Schedule
Motion Detection
Recording 5

Font
Type Font Size
Tahoma abcdeABCDE 15 6

Video Source
Bright Contrast Hue Saturation Sharpness
Default 8

Digital Video Recording System Version 2.0 Build 0808a

Apply Cancel

1. Selecting the camera CH/Apply change to all camera CH
2. Insert the place name of selected camera
3. Switching delay time for screen-partition mode
4. (Search Screen)



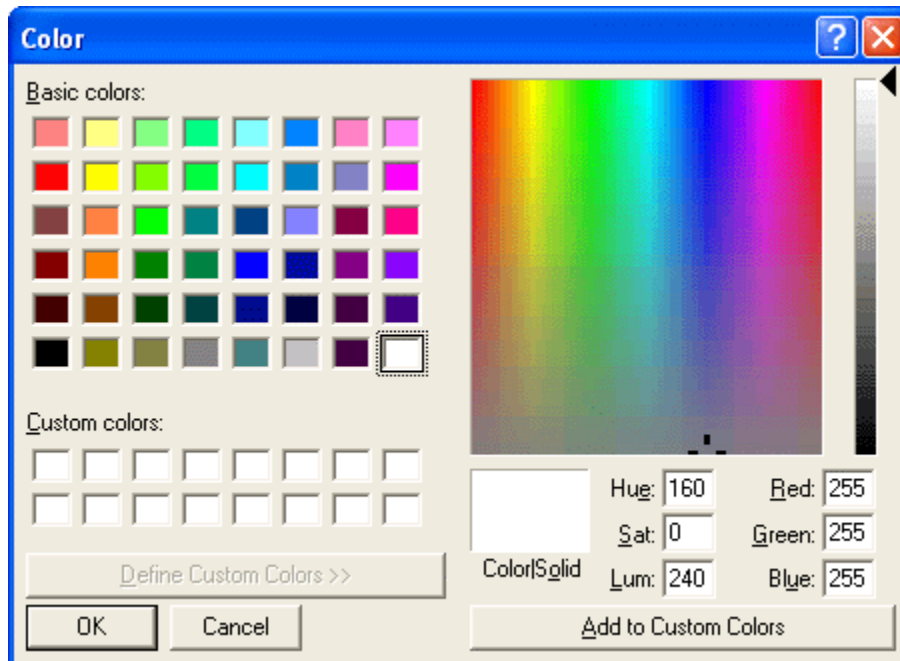
(Monitoring Screen)



5 : Assign control color tone

(Direction)

Click color you wish to change



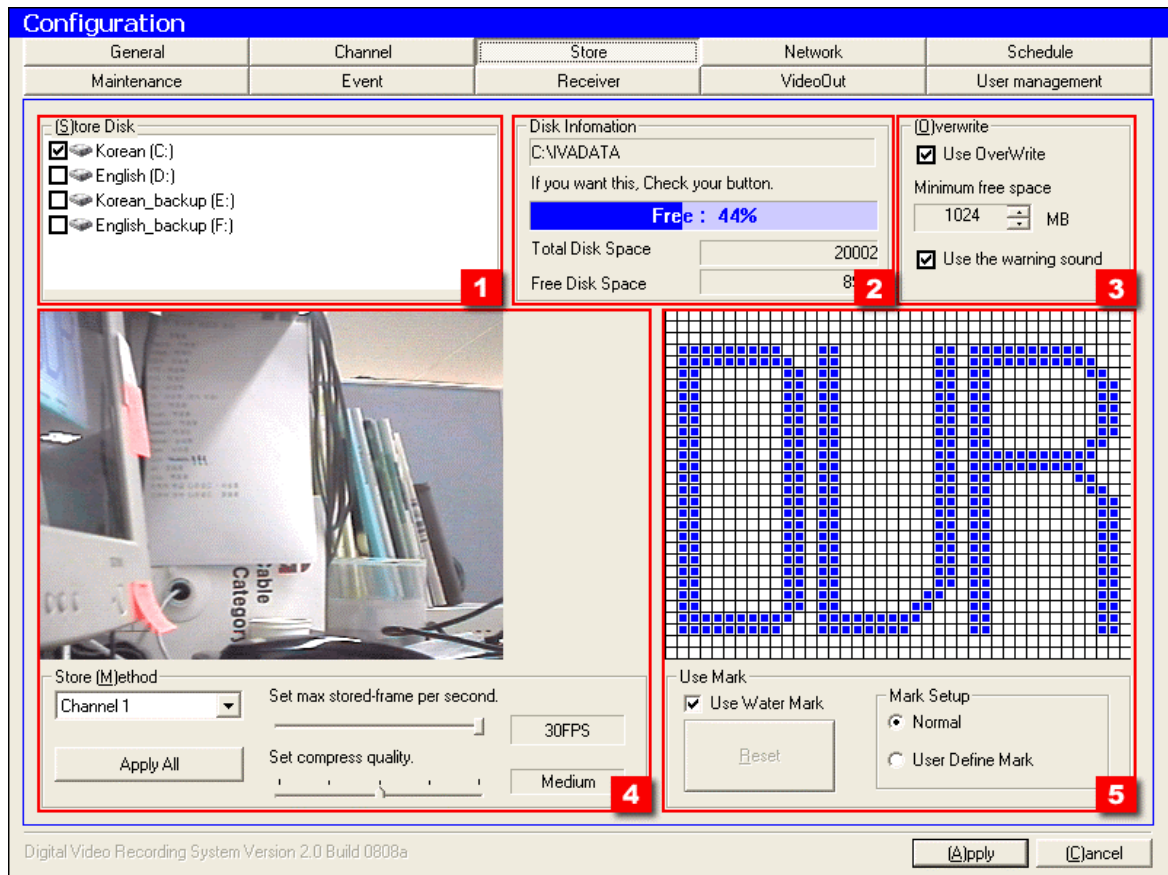
Select Color you wish to change and then click confirmation button

6 : Select you wish to change character form, and size

7 : Preview selected result from step (1) ~ to step (6)

8 : Adjust Picture Quality

3) Store



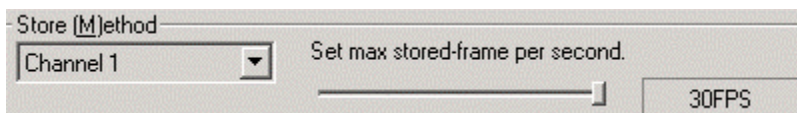
1 : Check the HDD where you want to use for storage

2 : Indicates total HDD space for selected HDD in [1].

3 : Select to use overwrite function

EX> ☒ Use OverWrite
Minimum free space
1024 MB Start to overwrite when HDD Free space becomes 512 MB

4 : Display Picture Quality and Setting stored-frame



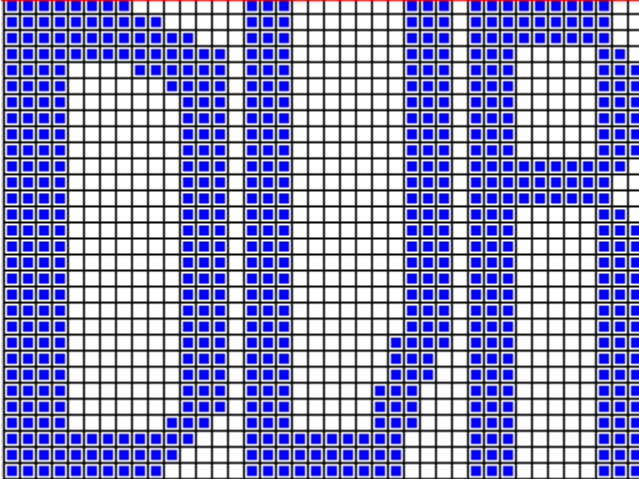
Display frame number of each channel (30Frame per Second)

: Higher FPS provides more natural image

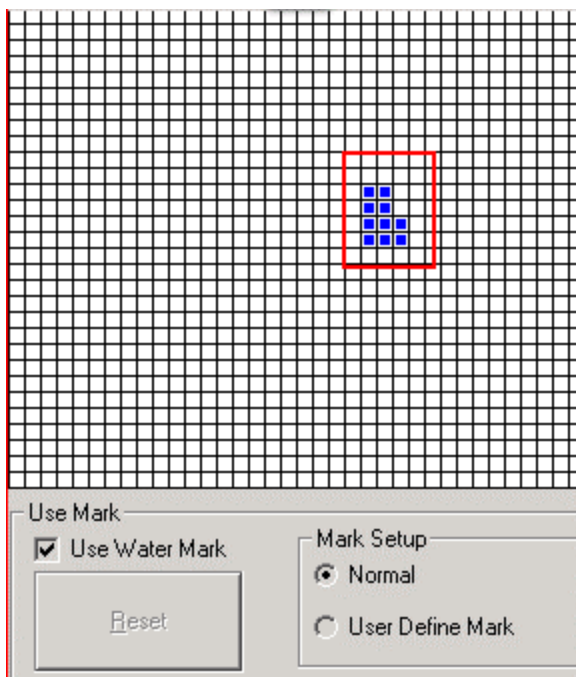
Set compress quality.
Medium Setting compress quality

5 : Watermark Setup

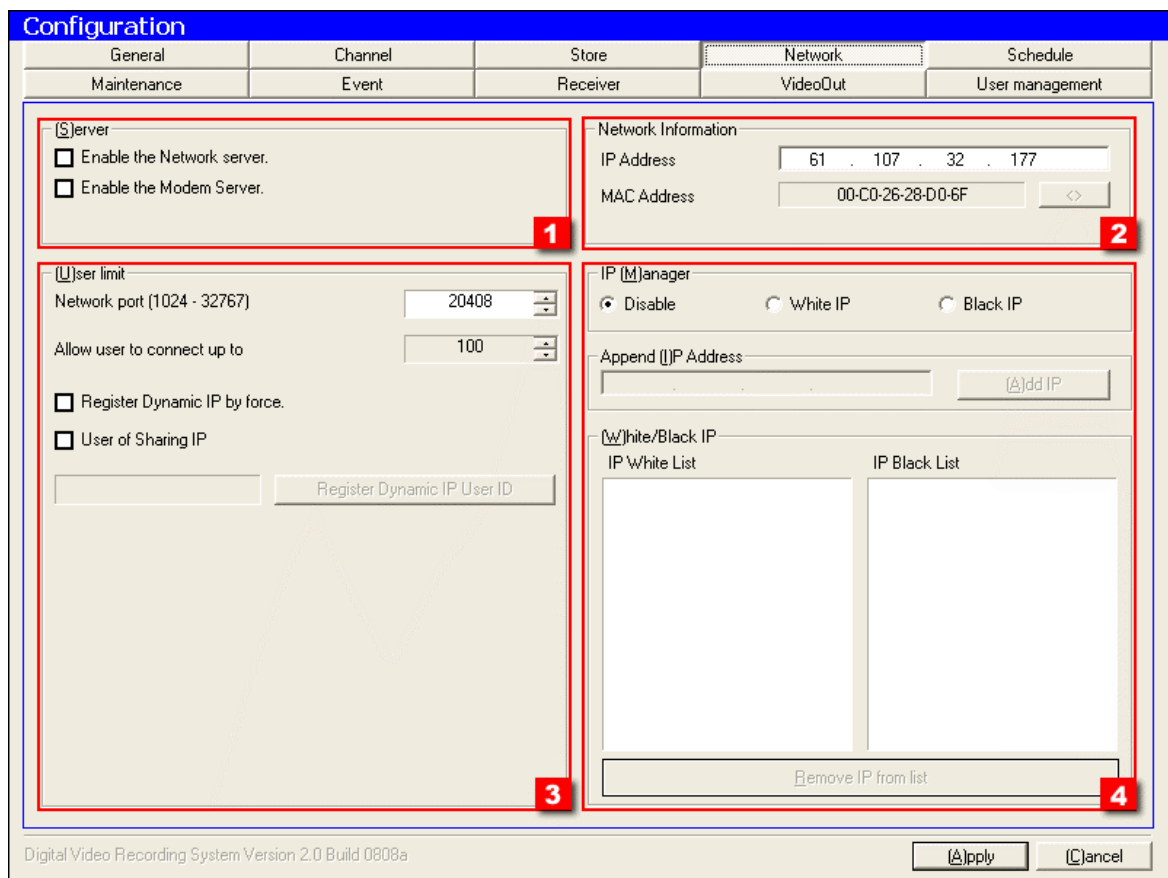
- ☒ Use Water Mark : Select Watermark
☐ User Define Mark : Display DVR Mark as default image



- ☐ User Define Mark : The user can define own mark



4) Network



1.: Network Server

- ☒ Enable the network server. : Use LAN
- ☐ Enable the Modem Server. : Use MODEM

2 : Indicates DVR IP address and MAC address.

3.: Limit of possible simultaneous client connection

Network port (1024 - 32767)	20408
Allow user to connect up to	100

Network Access Port: Select Port No. while Client is accessing to Server

Max. Accessing User Number: Assign Accessing User Number (Max. 100 Client number)

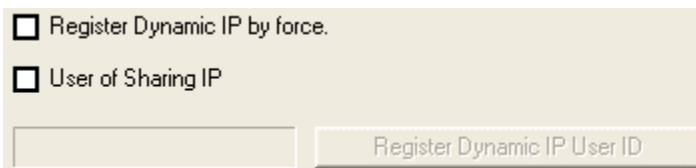
★ Register Dynamic IP**: Service for dynamic IP users****DHS (Dynamic Host Services)**

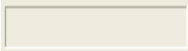
Dynamic IP users IP address changes frequently which causes inconvenience to check IP address each time when connection. DHS executes a role as fixing Dynamic IP to Static IP.

For more information please connect to <http://chainip.com/eng>

For any questions regarding DHS service, please contact:

TEL: 82-2-566-3288 OR dhs@intotech.co.kr

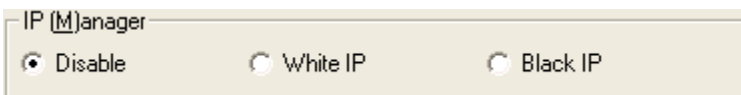


For Dynamic IP users when ( ) part is not activated:

Please click 'register Dynamic IP by force'

For Sharing IP users

: Please click 'User of Sharing IP'

4. IP Manager setup

IP Manager configuration

Disable : Allow any IP for connection.

White IP : Allow selected IP for connection.

Black IP : Prohibit connection of selected IP.

★ Network Configuration ★

(White IP setup)

IP (M)anager

☐ Disable 1 ☒ White IP ☐ Black IP

Append (I)P Address

61 . 107 . 32 . 177 2 (A)dd IP

(W)hite/Black IP

IP White List	IP Black List

Remove IP from list

IP (M)anager

☐ Disable ☒ White IP ☐ Black IP

Append (I)P Address

(A)dd IP

(W)hite/Black IP

IP White List	IP Black List
61.107.32.177	

Remove IP from list

< Before setup >

< After setup >

1 : Click White IP in [1].

2 : If 'Add IP' is activated please insert IP address.

3 : Click [2] button and IP address will be added to White IP List.

(Black IP setup)

IP (M)anager

☐ Disable ☐ White IP 1 ☒ Black IP

Append (I)P Address

61 . 107 . 32 . 177 2 (A)dd IP

(W)hite/Black IP

IP White List	IP Black List

Remove IP from list

IP (M)anager

☐ Disable ☐ White IP ☒ Black IP

Append (I)P Address

(A)dd IP

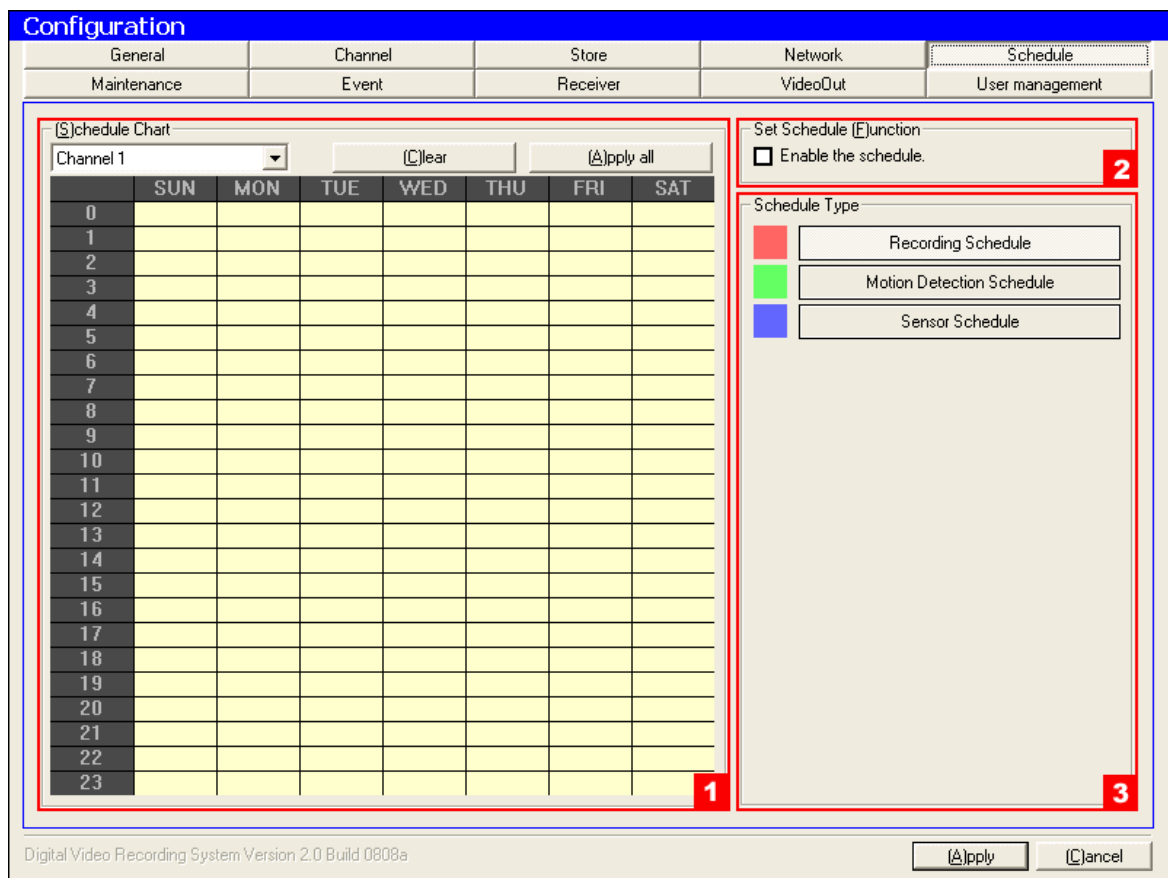
(W)hite/Black IP

IP White List	IP Black List
	61.107.32.177

Remove IP from list

3 : Click [2] button to add IP in Black IP List.

5) Schedule



Configuration

General Channel Store Network Schedule
Maintenance Event Receiver VideoOut User management

Schedule Chart

Channel 1 [Clear] [Apply all]

	SUN	MON	TUE	WED	THU	FRI	SAT
0							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							

Set Schedule (Function)

☐ Enable the schedule.

Schedule Type

■ Recording Schedule

■ Motion Detection Schedule

■ Sensor Schedule

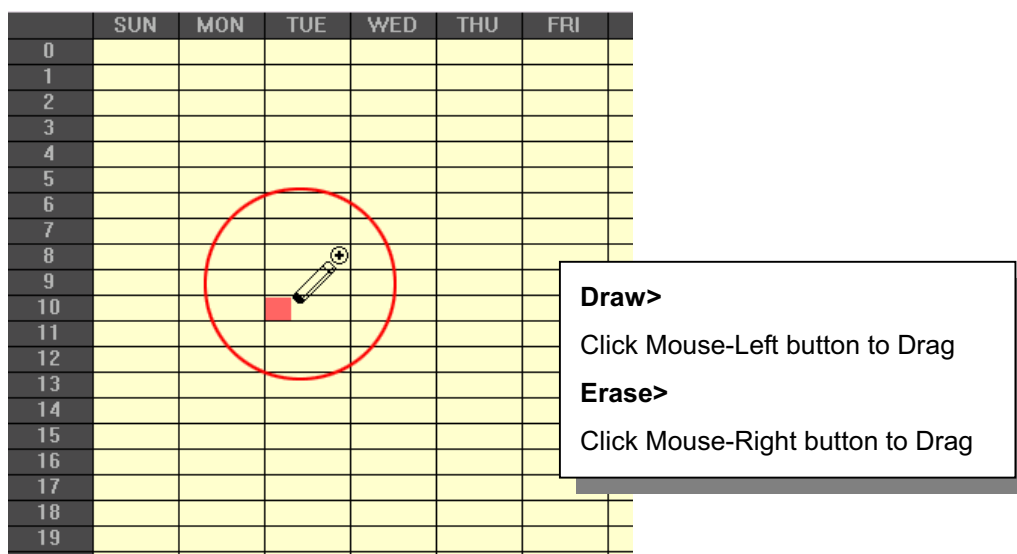
Digital Video Recording System Version 2.0 Build 0808a

[Apply] [Cancel]

1, 3 : Setup Recording, MD, Sensor schedule.

2 : Choose channel in [1].

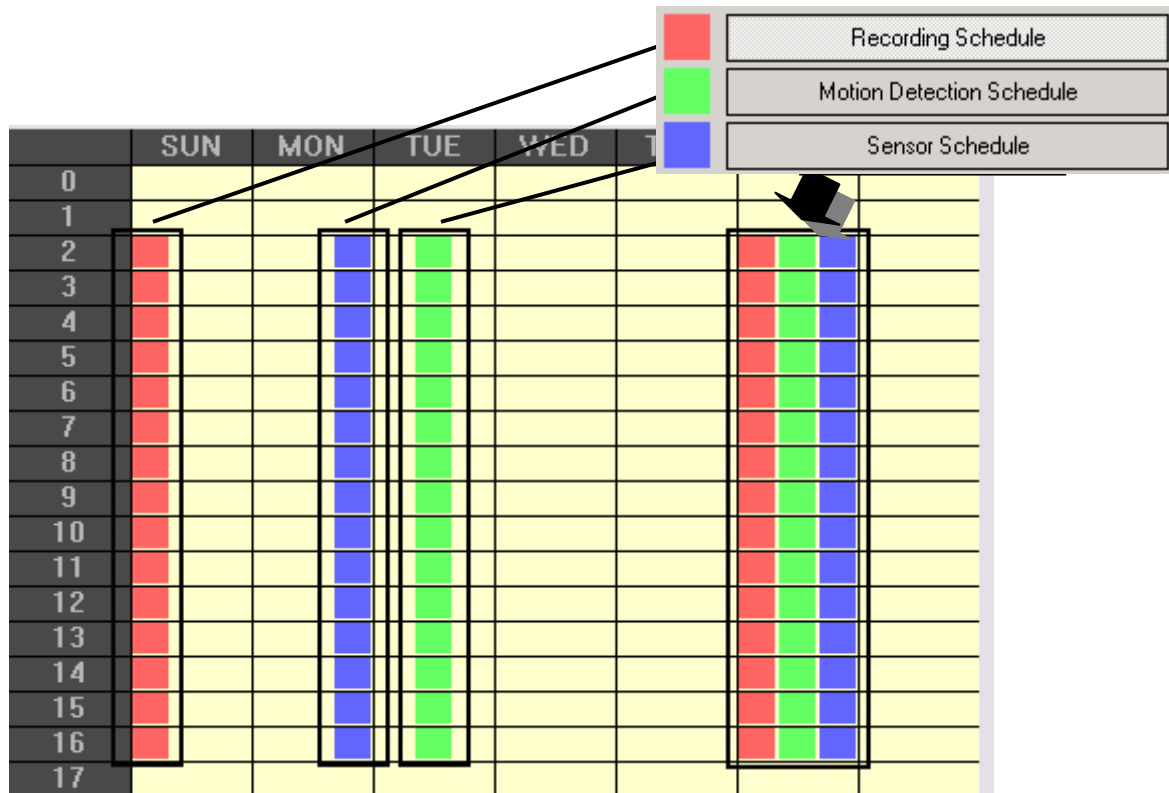
[1, 3 Schedule setup]



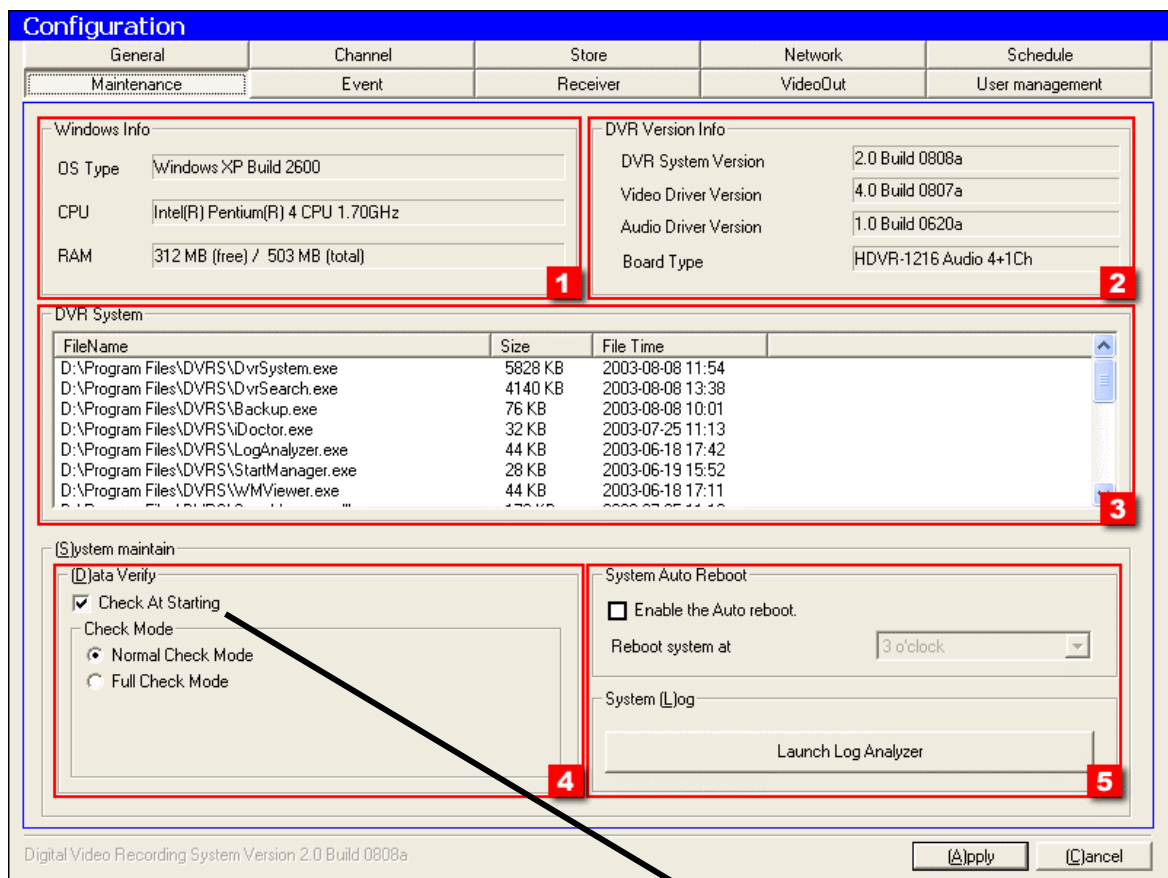
	SUN	MON	TUE	WED	THU	FRI	
0							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							

Draw>
Click Mouse-Left button to Drag

Erase>
Click Mouse-Right button to Drag



6) Maintenance



The image shows the 'Configuration' window with the 'Maintenance' tab selected. The window is divided into several sections:

- Windows Info:** OS Type (Windows XP Build 2600), CPU (Intel(R) Pentium(R) 4 CPU 1.70GHz), RAM (312 MB (free) / 503 MB (total)).
- DVR Version Info:** DVR System Version (2.0 Build 0808a), Video Driver Version (4.0 Build 0807a), Audio Driver Version (1.0 Build 0620a), Board Type (HDVR-1216 Audio 4+1Ch).
- DVR System:** A table listing files and their sizes/times.
- System maintain:** Includes 'Data Verify' (with 'Check At Starting' checked and 'Normal Check Mode' selected) and 'System Auto Reboot' (with 'Enable the Auto reboot' unchecked and 'Reboot system at' set to '3 o'clock').

Red boxes and numbers 1 through 5 highlight specific areas: 1 (Windows Info), 2 (DVR Version Info), 3 (DVR System table), 4 (Data Verify section), and 5 (System Auto Reboot section). An arrow points from box 4 to a 'Verifying system...' dialog box.

1 : Display Windows Information (OS, CPU, RAM)

2 : Display DVR Information

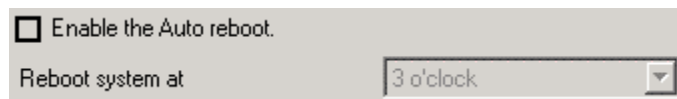
3 : Display operating program contents of DVR System

4 : Select Data Verification as run DVR program

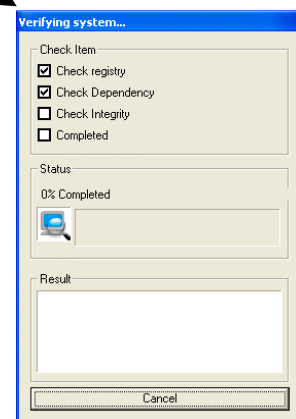
Normal Check Mode: Ordinary Check (Fast Checking Speed)

Full Check Mode: Detail Check (Slow Checking Speed)

5 : Auto reboot system



Enable the Auto reboot. ☐
Reboot system at 3 o'clock

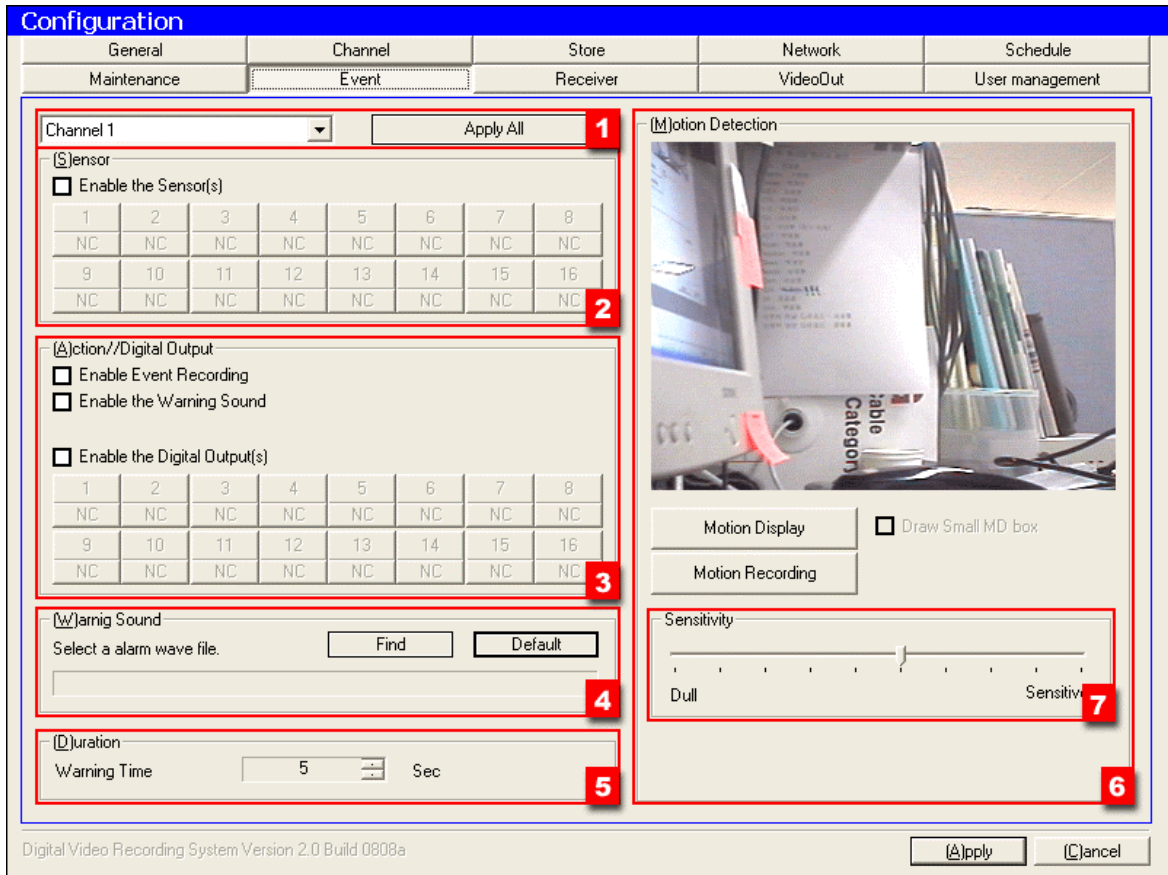


The 'Verifying system...' dialog box shows the following options:

- Check Item: ☒ Check registry, ☒ Check Dependency, ☐ Check Integrity, ☐ Completed
- Status: 0% Completed
- Result: (Empty text area)

Buttons: Cancel

7) Event



Configuration

General Channel Store Network Schedule
Maintenance Event Receiver VideoOut User management

Channel 1 Apply All 1

(S)ensor

☐ Enable the Sensor(s)

1	2	3	4	5	6	7	8
NC	NC	NC	NC	NC	NC	NC	NC
9	10	11	12	13	14	15	16
NC	NC	NC	NC	NC	NC	NC	NC

2

(A)ction/Digital Output

☐ Enable Event Recording

☐ Enable the Warning Sound

☐ Enable the Digital Output(s)

1	2	3	4	5	6	7	8
NC	NC	NC	NC	NC	NC	NC	NC
9	10	11	12	13	14	15	16
NC	NC	NC	NC	NC	NC	NC	NC

3

(W)arning Sound

Select a alarm wave file. Find Default

4

(D)uration

Warning Time 5 Sec

5

(M)otion Detection

Motion Display ☐ Draw Small MD box

Motion Recording

Sensitivity

Dull Sensitive 7

6

Digital Video Recording System Version 2.0 Build 0808a

Apply Cancel

1 : Select camera channel you wish to change

Click Apply All button to apply all channels

2 : Setting up Sensor of existing operating camera channel (Optional)

3 : Setting up Digital Output(Optional)

4 : Select any Warning Sound.

(Item 2, 3, 4) applies only when I/O installed in DVR

5 : Duration of warning time when sensor input.

Motion Detection Store

Motion detection is to detect any relevant changes in the image or video.

Motion detection demonstrates how sensitive peripheral version is to motion.

At a certain point, you can no longer see the object. If the object starts moving, you will become aware of it, even though you could not see it while it was stationary.



<Picture 1> MD Setting Area

Mouse-Left button Drag and Drop: Select MD Area

Mouse-Right button Drag and Drop: Unselect MD Area

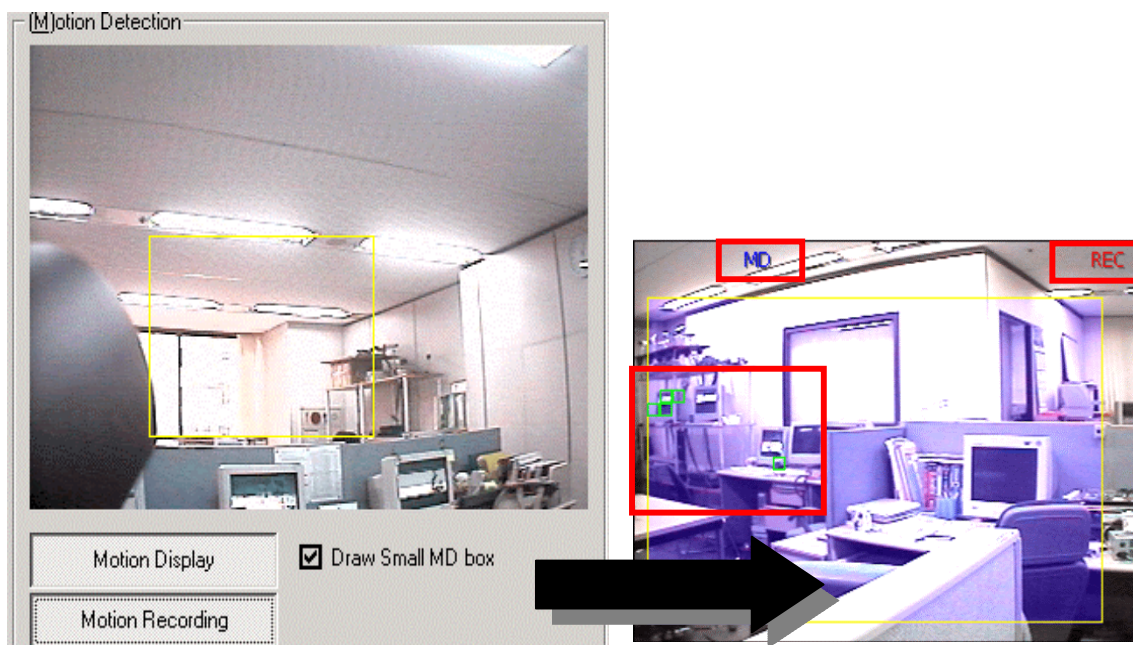
Mouse Left button Double Click: Select all of the Area

Mouse Right button Double Click: Unselect all of the Area

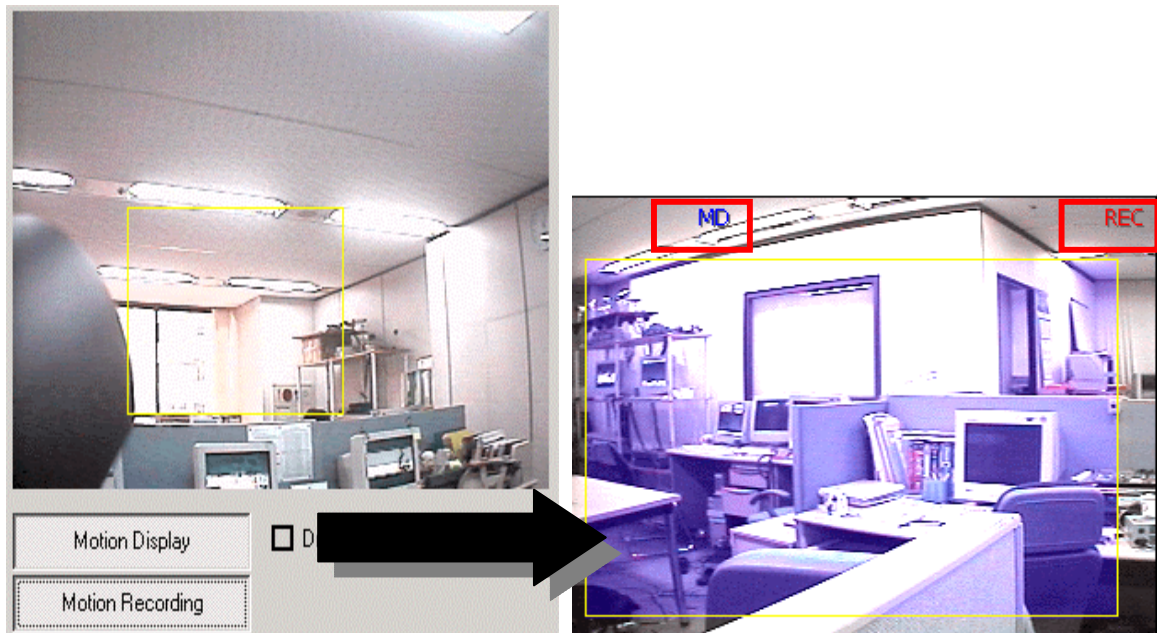
<Picture 1>

6 : Motion Detection Configuration

- Check Point : Motion Detection Display, MD Driven-Recording, Draw Small MD Box



- Check Point : Display MD, Record MD images



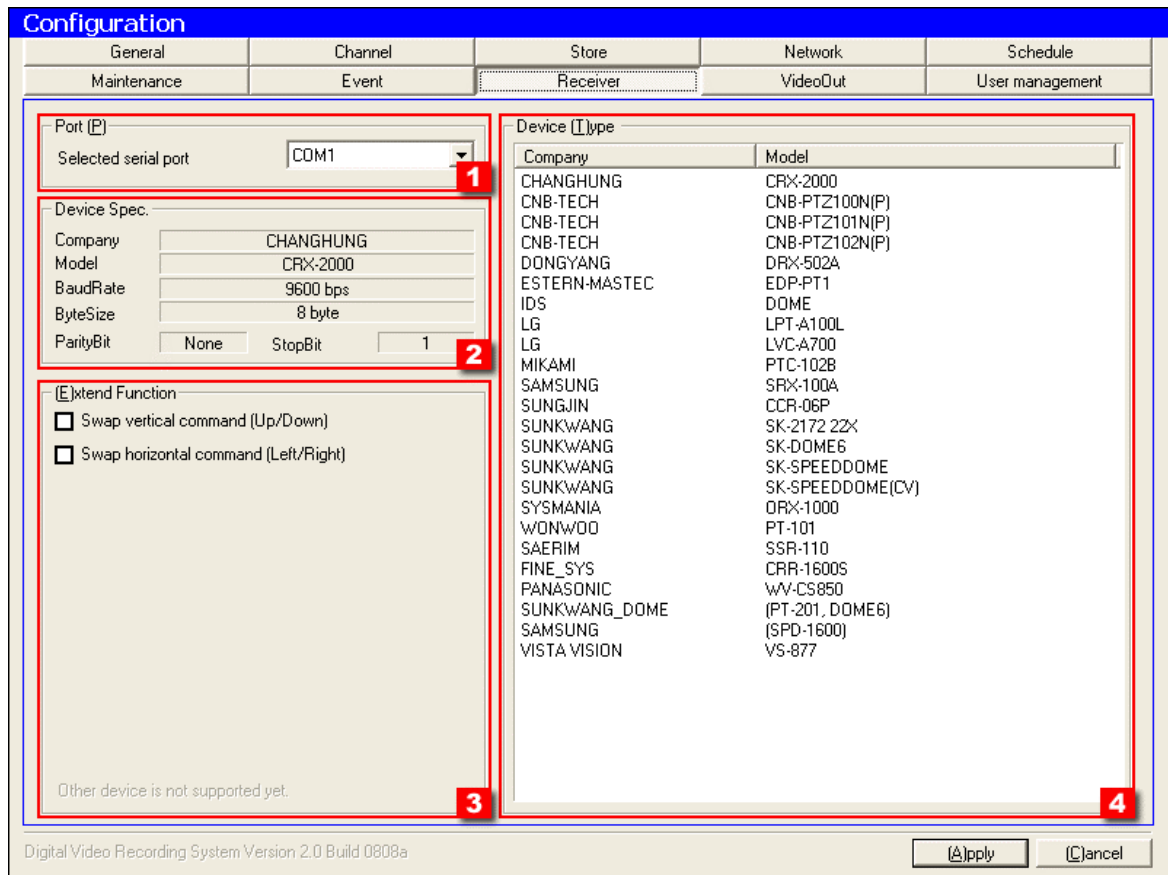
- Check Point : Record MD images



7 : MD Sensitivity Setting



8) Receiver



Configuration

General Channel Store Network Schedule
Maintenance Event Receiver VideoOut User management

Port (P)
Selected serial port: COM1

Device Spec.
Company: CHANGHUNG
Model: CRX-2000
BaudRate: 9600 bps
ByteSize: 8 byte
ParityBit: None StopBit: 1

(E)xtend Function
☐ Swap vertical command (Up/Down)
☐ Swap horizontal command (Left/Right)

Other device is not supported yet.

Device (I)ype

Company	Model
CHANGHUNG	CRX-2000
CNB-TECH	CNB-PTZ100N(P)
CNB-TECH	CNB-PTZ101N(P)
CNB-TECH	CNB-PTZ102N(P)
DONGYANG	DRX-502A
ESTERN-MASTEC	EDP-PT1
IDS	DOME
LG	LPT-A100L
LG	LVC-A700
MIKAMI	PTC-102B
SAMSUNG	SRX-100A
SUNGJIN	CCR-06P
SUNKWANG	SK-2172.22X
SUNKWANG	SK-DOME6
SUNKWANG	SK-SPEEDDOME
SUNKWANG	SK-SPEEDDOME(CV)
SYSMANIA	ORX-1000
WONWOOD	PT-101
SAERIM	SSR-110
FINE_SYS	CRX-1600S
PANASONIC	WV-CS850
SUNKWANG_DOME	(PT-201, DOME6)
SAMSUNG	(SPD-1600)
VISTA VISION	VS-877

Digital Video Recording System Version 2.0 Build 0808a

Apply Cancel

1 : Select the serial port to use (COM1,COM2))

2 : Display current receiver information

3 : For expansion of Pan/Tilt function

☐ Swap vertical command (Up/Down)

: Swap vertical command of P/T protocol.

☐ Swap horizontal command (Left/Right)

: Swap horizontal command of P/T protocol.

4 : Available receiver list: (Select the receiver to use)

Address of Receiver has to be equal to the channel number. Also you have to use same device. (EX: Channel 1 => HW Address)

9) VideoOut

The screenshot displays the 'Configuration' window for a 'Digital Video Recording System'. The 'VideoOut' tab is selected, showing settings for video output. The window is divided into several sections:

- General:** Contains 'Maintenance' and 'Event' buttons.
- Channel:** Contains 'Event' and 'Receiver' buttons.
- Store:** Contains 'Receiver' and 'VideoOut' buttons.
- Network:** Contains 'VideoOut' and 'User management' buttons.
- Schedule:** Contains 'User management' button.

The main configuration area is divided into three sections, each highlighted with a red box and a number:

- Section 1:** Contains 'Video Output' (checked) and 'Enable the TvOut Rotation' (unchecked).
- Section 2:** Contains 'Single Mode' (selected) and 'Channel 1' (selected).
- Section 3:** Contains 'Rotation Mode' (selected), 'Time Gap' (3 Sec), and a 'Channel' selection table.

The 'Channel' selection table is as follows:

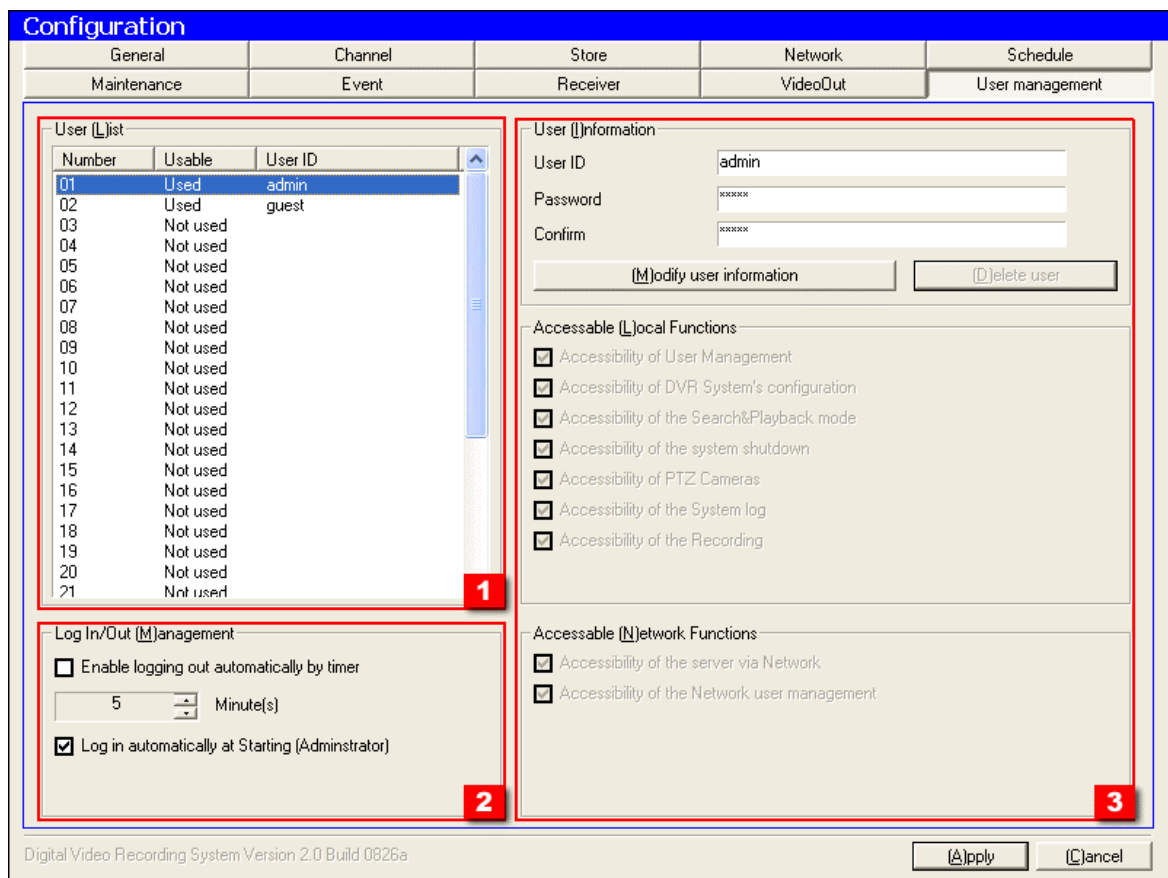
Channel	
1	9
2	10
3	11
4	12
5	13
6	14
7	15
8	16

On the right side of the window, there is a video preview area showing a camera feed of a desk with a computer monitor and a printer. Below the preview is a section for 'Extend Function' with the text 'Other device is not supported yet.'

At the bottom of the window, there are buttons for 'Apply' and 'Cancel'.

- 1 : Setting Output CH number through TV-Out (Option)
- 2 : Select TV-Out CH
- 3 : Setup time of Switching Mode
- 4 : Appear Preview Screen

10) User Management



Number	Usable	User ID
01	Used	admin
02	Used	guest
03	Not used	
04	Not used	
05	Not used	
06	Not used	
07	Not used	
08	Not used	
09	Not used	
10	Not used	
11	Not used	
12	Not used	
13	Not used	
14	Not used	
15	Not used	
16	Not used	
17	Not used	
18	Not used	
19	Not used	
20	Not used	
21	Not used	

Log In/Out (M)anagement

☐ Enable logging out automatically by timer

5 Minute(s)

☒ Log in automatically at Starting (Adminstrator)

User (I)nfomation

User ID: admin

Password: [masked]

Confirm: [masked]

[M]odify user information [D]elete user

Accessible (L)ocal Functions

- ☒ Accessibility of User Management
- ☒ Accessibility of DVR System's configuration
- ☒ Accessibility of the Search&Playback mode
- ☒ Accessibility of the system shutdown
- ☒ Accessibility of PTZ Cameras
- ☒ Accessibility of the System log
- ☒ Accessibility of the Recording

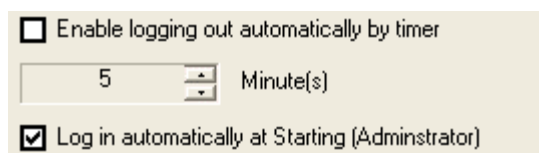
Accessible (N)etwork Functions

- ☒ Accessibility of the server via Network
- ☒ Accessibility of the Network user management

Digital Video Recording System Version 2.0 Build 0826a [Apply] [Cancel]

1 : User List

2 : Log In/Out management



☐ Enable logging out automatically by timer

5 Minute(s)

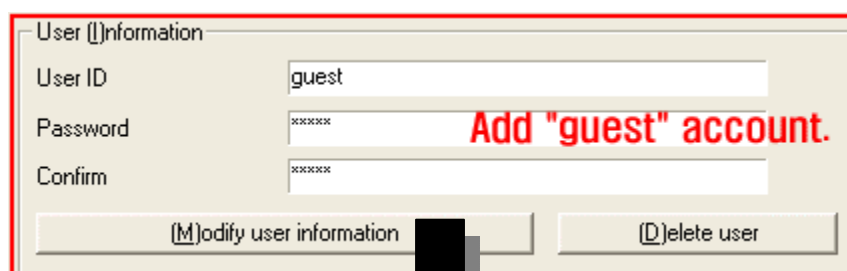
☒ Log in automatically at Starting (Adminstrator)

: Automatic log out function after setup time

: Enable login & out function.

3 : Authorization of local functions and remote control

< Add users >



User (I)nfomation

User ID: guest

Password: [masked]

Confirm: [masked]

[M]odify user information [D]elete user

Add "guest" account.

: Insert User ID and Password

Click 'Modify user information.'



Accessible (L)ocal Functions

- ☐ Accessibility of User Management
- ☐ Accessibility of DVR System's configuration
- ☐ Accessibility of the Search&Playback mode
- ☐ Accessibility of the system shutdown
- ☒ Accessibility of PTZ Cameras
- ☐ Accessibility of the System log
- ☒ Accessibility of the Recording

Setup "guest" user accessibility.

: Choose accessibility for DVR Server.

Accessible (N)etwork Functions

- ☐ Accessibility of the server via Network
- ☐ Accessibility of the Network user management

Setup "guest" user remote accessibility.

: Choose accessibility for remote Client program..

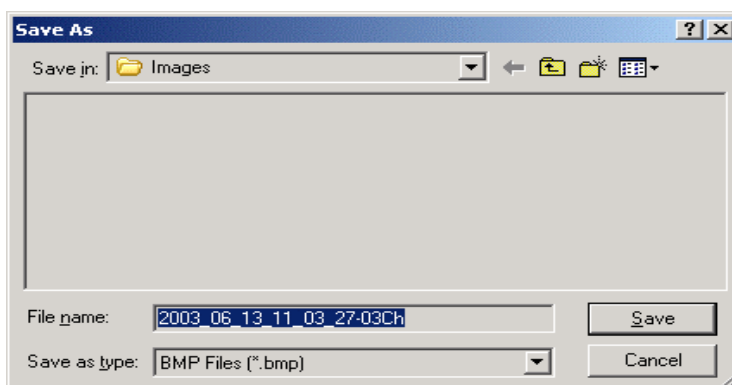
3-3. Search Screen Mode



1 : Playback, Rewind, 2X Playback



: Save selected screen as image



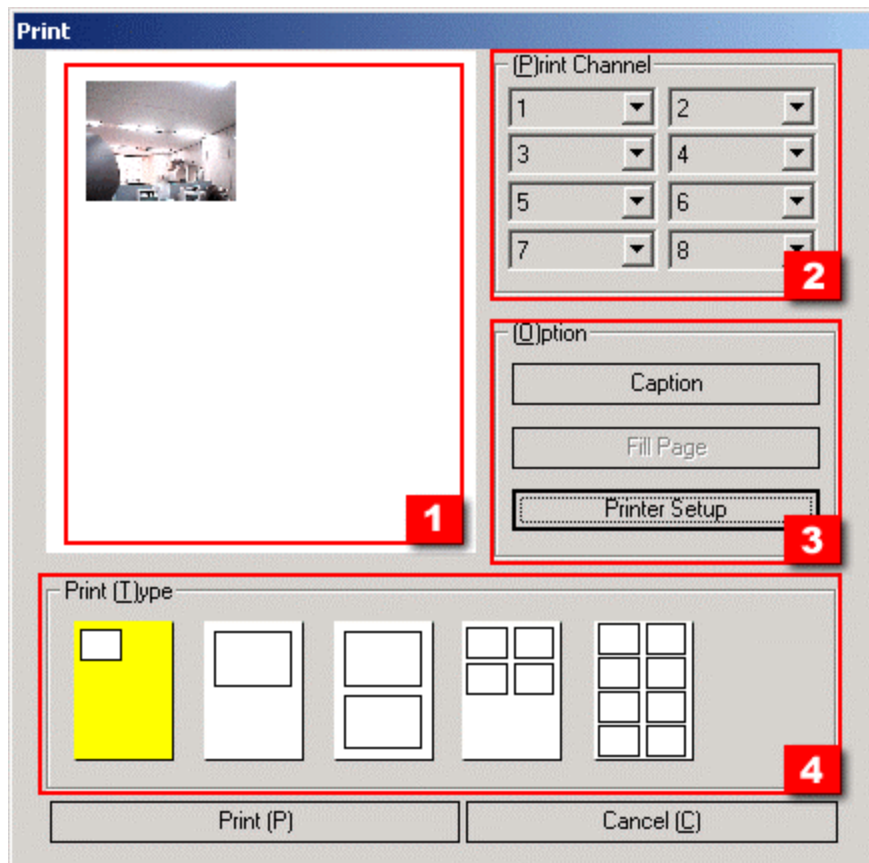
Choose where to save image file and write file name

Print



= Print Images

Print Setup

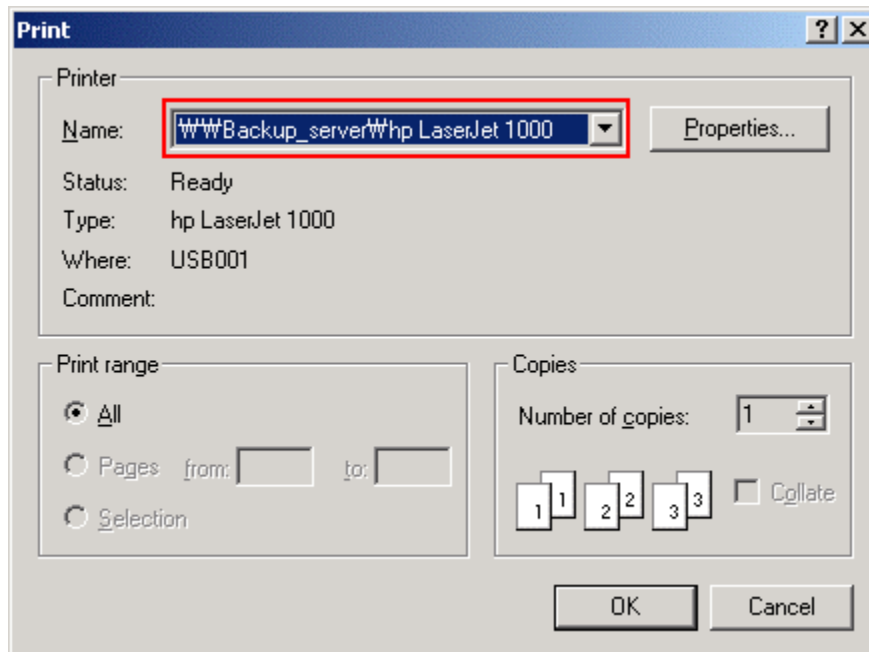


1 : Preview Printing Images

2 : Able to print maximum of 8 selected camera channels

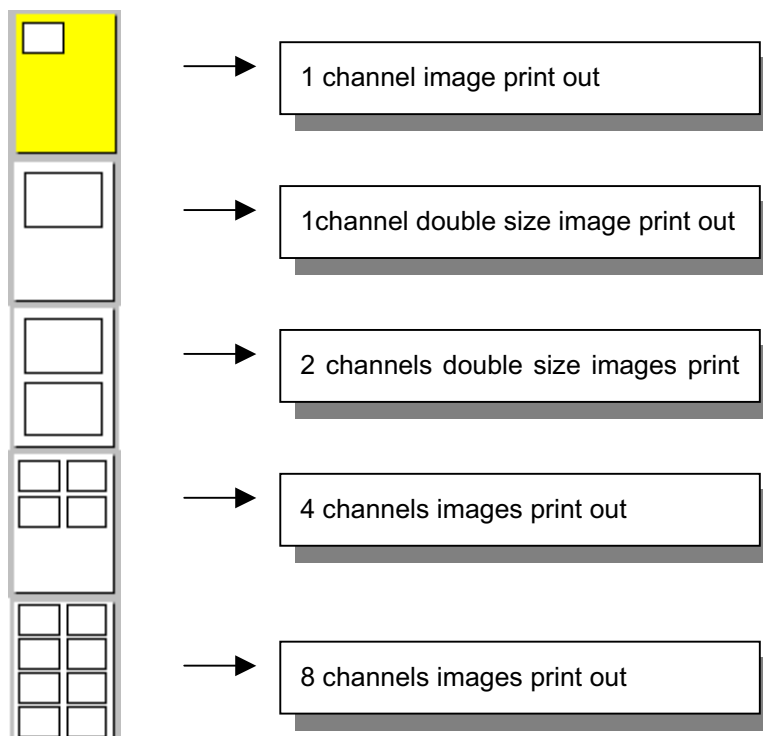
3 : Printer Setup Option

<Print Configuration>



Click the [OK] button to print

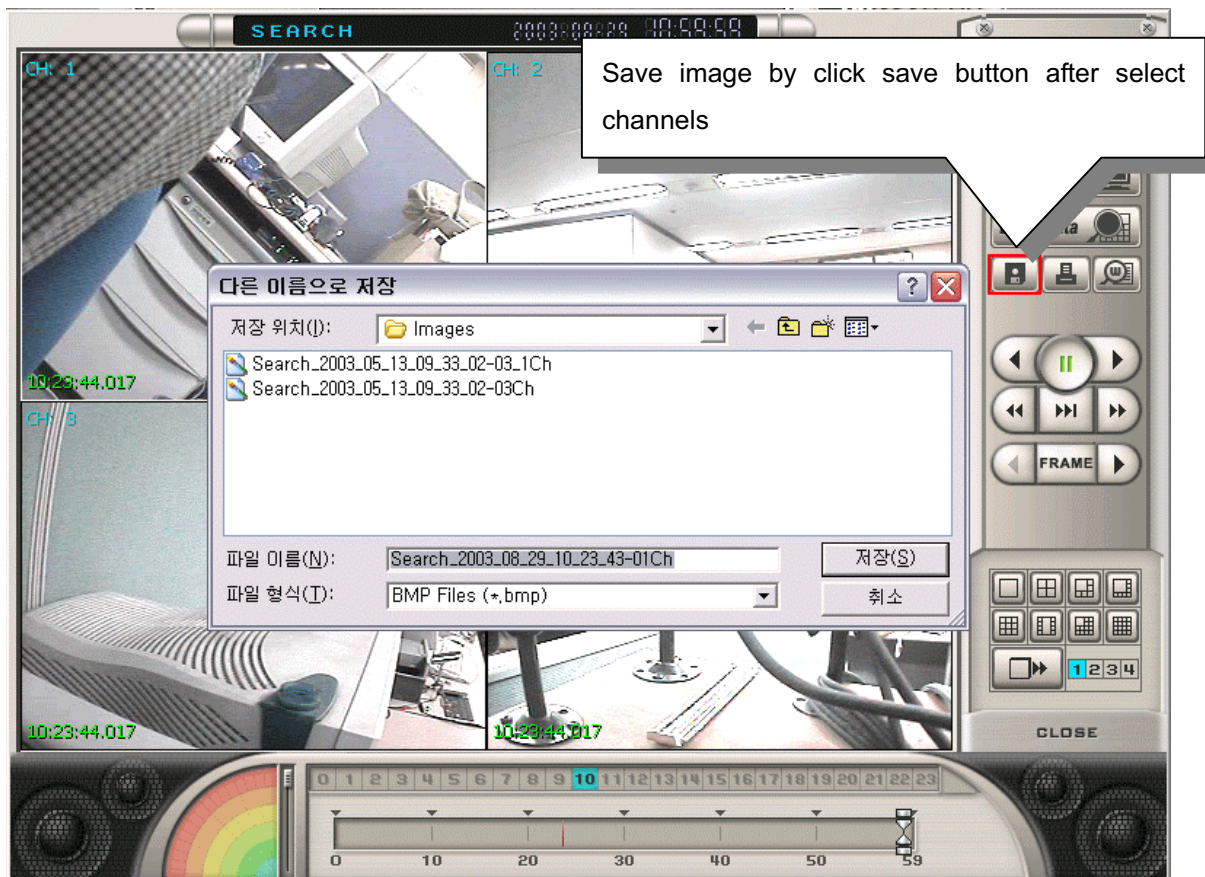
4 : 1 CH original copy size



Watermark

Direction to use Watermark

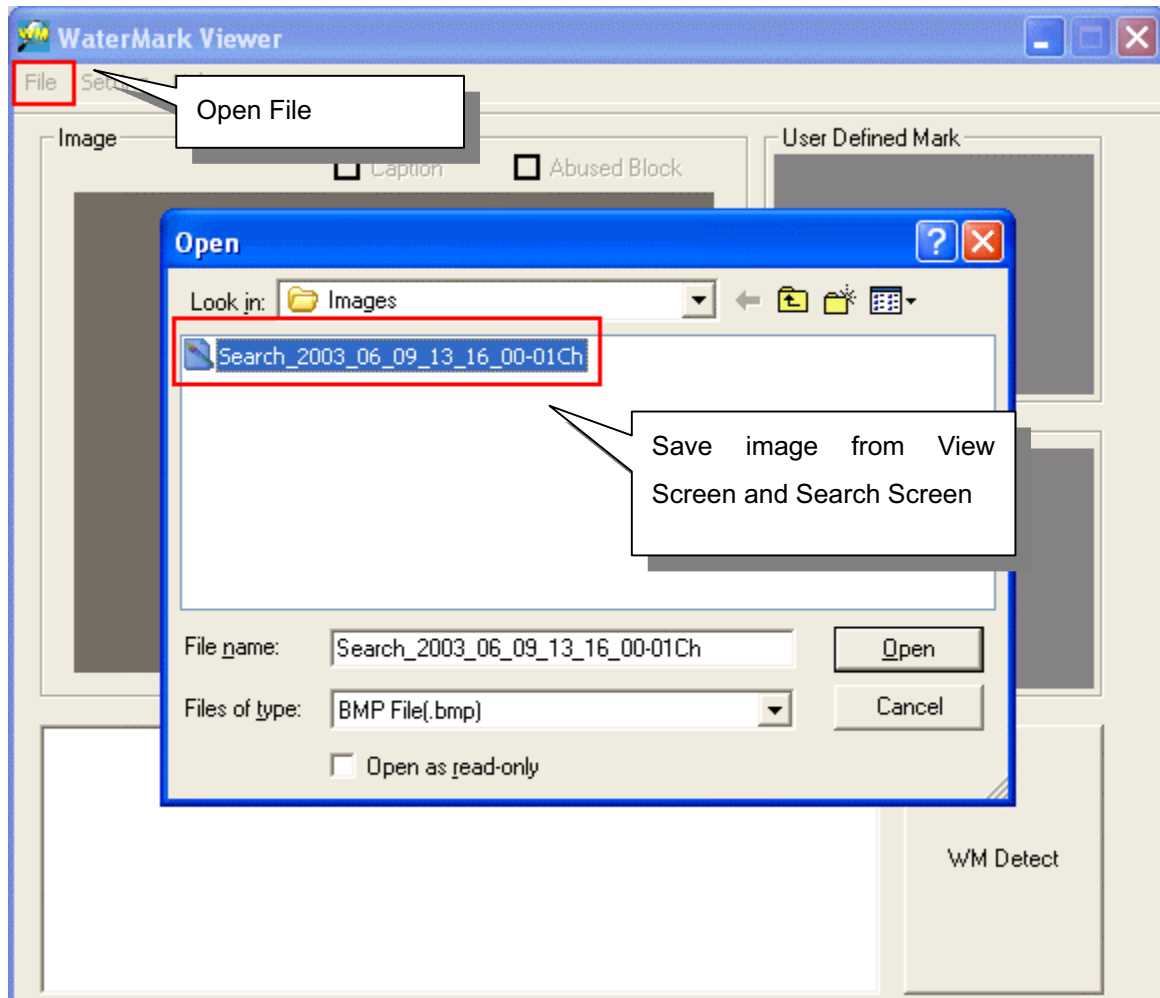
1. Save image from search screen and view screen



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2. Click the watermark icon () from searched Screen Mode

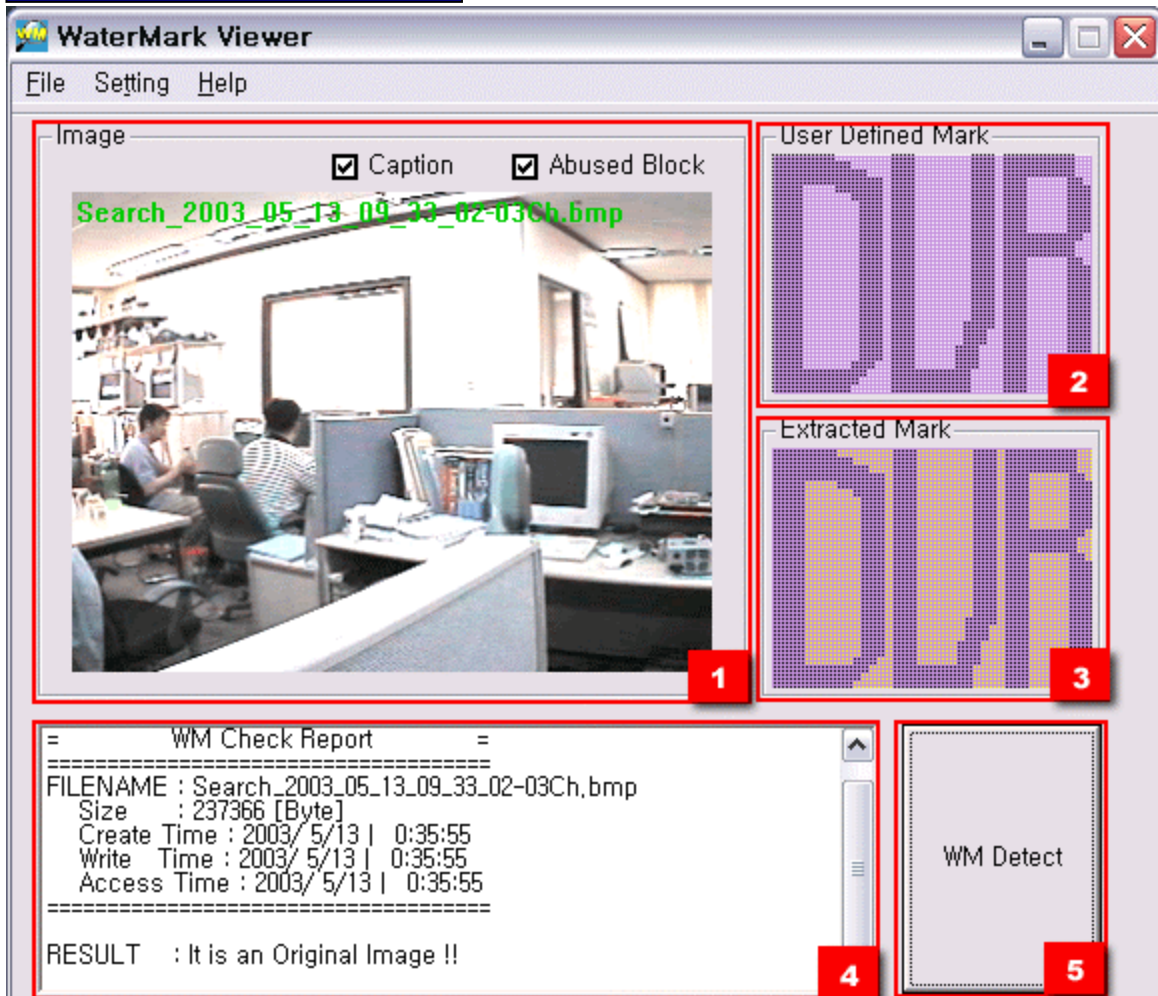
Open File to bring saved data



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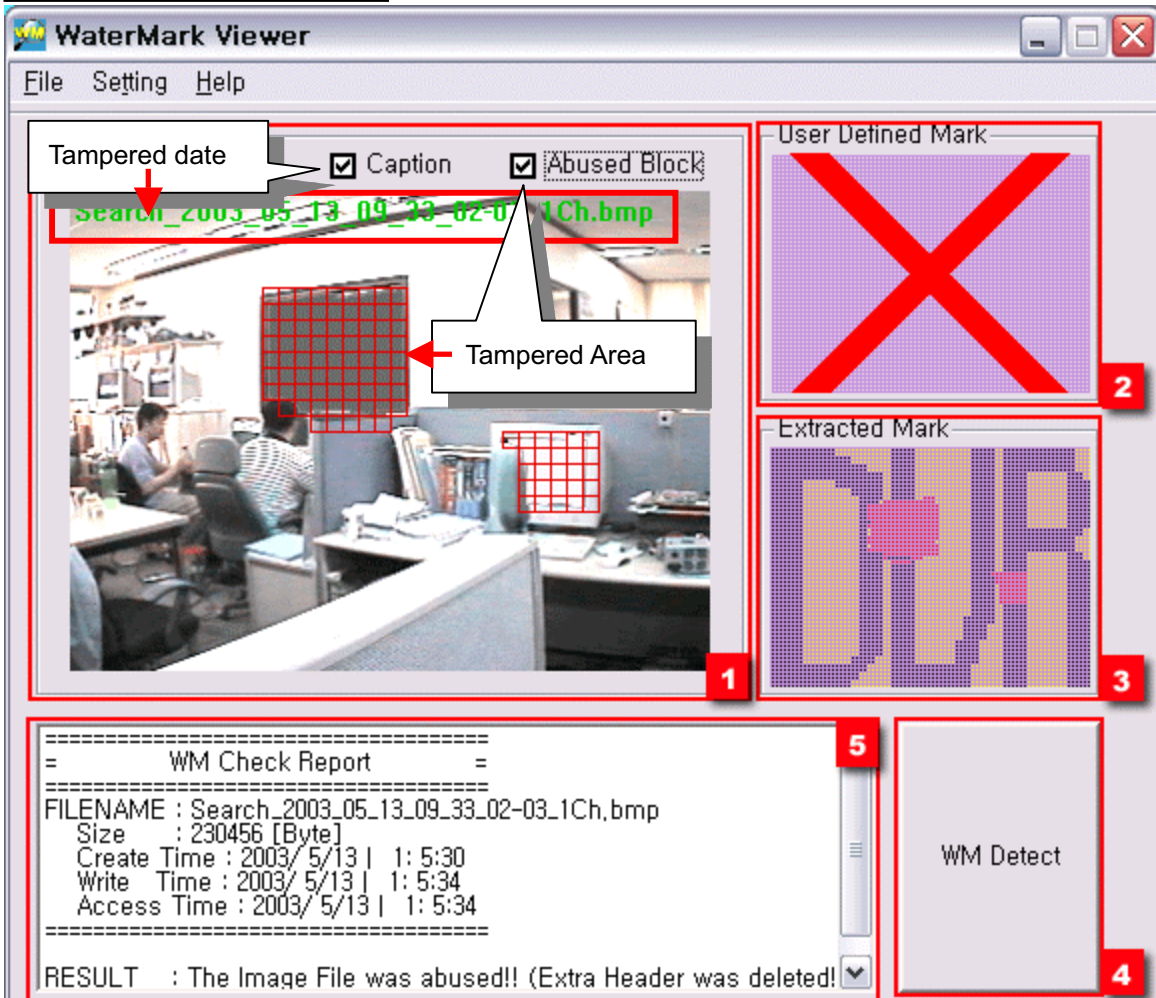
3. Click the [WM Detect] to watermark

Image has not been tampered



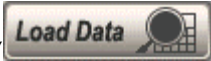
- 1 : Show saved image.
- 2 : Show defined Mark by user at Configuration Mode
- 3 : Show Mark hidden in real image
- 4 : Show information related to image (Size, file formation time, modified time, process time)
RESULT : It is an Original Image !! = Show that images has not been tampered
- 5 : WM Detect button

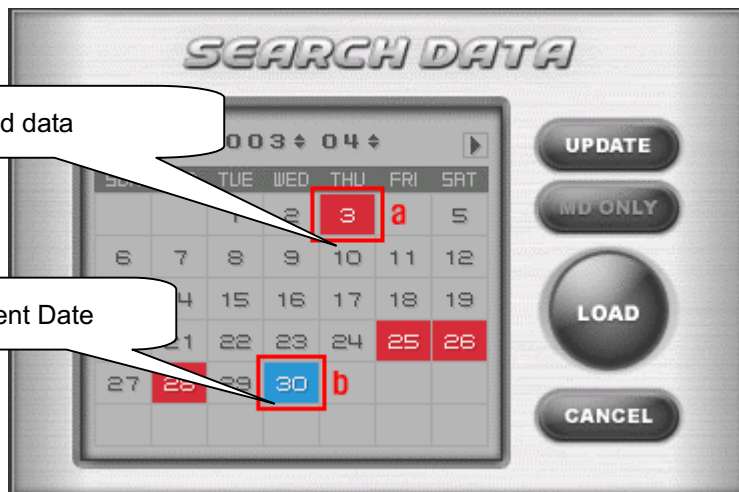
Image has been tampered



- 1 : Show saved image
- 2 : Show defined value of Watermark from Configuration Mode
Display X Mark as tampered image was detected
- 3 : Show Mark hidden in image (Display read color at tampered area)
- 4 : WM Detect Button
- 5 : Show image information size, reading time, writing time)
RESULT : The Image File was abused!! (Image has been tampered)

Search

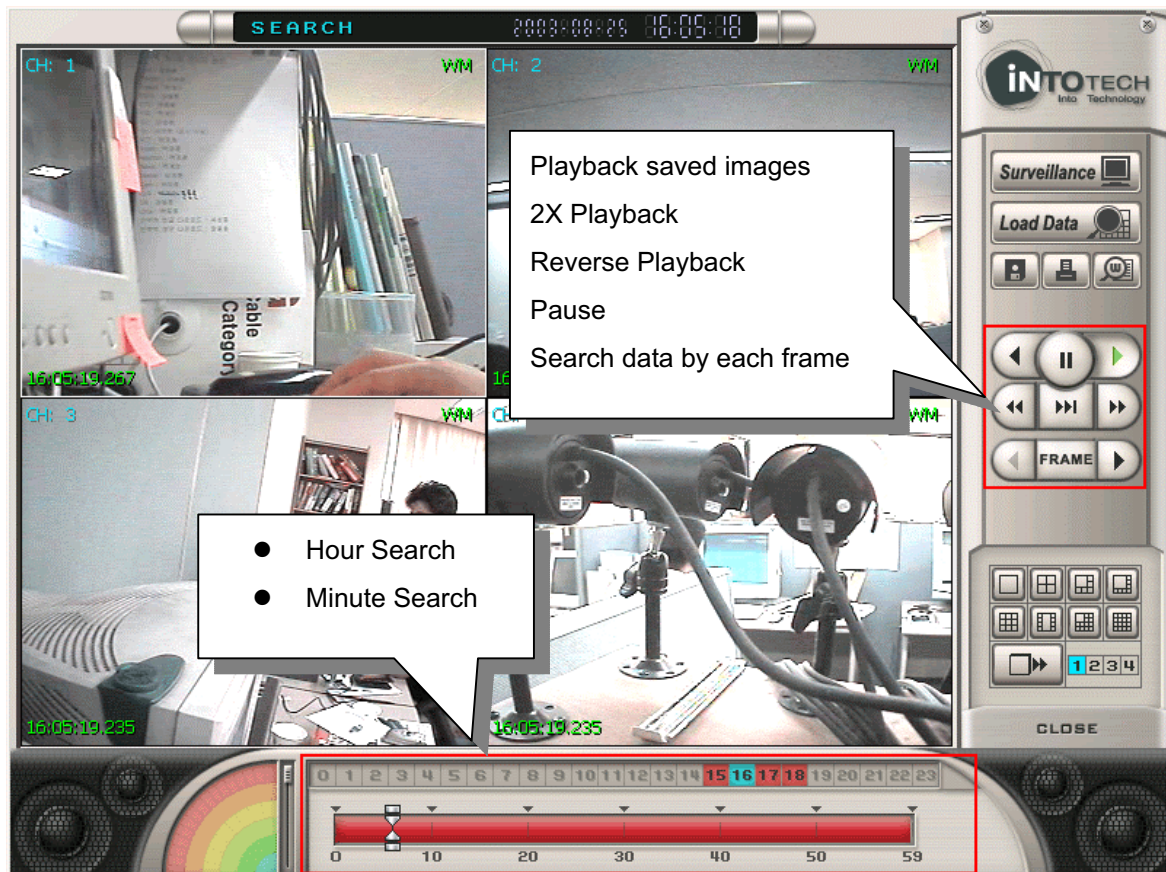
1. Move to Search Screen Mode and then Click the calendar () Icon



2. Select Search Date and then Click [Load] Button

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Search Screen



Click the view mode () icon to return to Monitoring Screen (Main View Screen)

*Intotech Inc. is committed to ongoing product improvement; we therefore reserve the right to change specifications without notice.

Warranty

Model	SmartDVR Formula v2.0
Manufactured Date	
Lot. No	
Period of Warrant.	
Purchased Date	
	1 Year after purchasing

It was a qualified item to pass a strict inspection and Quality control.

If it happen any problem, it will be guaranteed according to the following written description.

1. The period of warrant is one year from the date of purchasing this item.
2. In case of deficit in manufacture, when happening trouble spontaneously,

We are ready to exchange or free-repairing refund or compensation.

3. If will fix up the system at Actual expense even though it in the period of

Warranty as following cases;

A. Mistake in using this system or trouble by handling carelessness

B. Trouble by repairing and reorganizing without our company is Permission,

Trouble to repair and reorganizing system by other companies Service

C. Troubles or Damages by due to the natural disaster Fire, earthquake, flood etc.

D. A case of Troubles by Customer's attention of mistakes

4. If you would like to request the Application of A/S. Please contact below.

CAUTION: Changes or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment

WARNING

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

INFORMATION TO USER:

This equipment has been tested and found to comply with the limit of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation; if this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient / Relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help