



DIGITAL RECORDING SYSTEM

SHR SMART VIEW Userguide

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICES MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE, RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDERSIRED OPERATION.

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

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

NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.



NOTICE

This is a user guide for SHR Smart System.

This guide gives you SHR Smart System's external spec, name, PAN/TILT Control, the way of attaching peripheral devices and configuration.

- The copyright of this manual belongs to Samsung.
- It is prohibited to copy this manual without permission.
- Any damage or break owing to carelessness is out of our warranty service.
- Should you need open the system for extention or repairing, it is recommended that you ask for an engineer's assistance by contacting the dealer you bought it or Samsung.
- This product has certification for domestic and industrial use. Also, it has taken CE for Europe, FCC for the U.S.



Notice before installation

【 Please check these out before using the system. 】

- ☑ Avoid any place that has high moisture, dust or black dirt.
- ☑ Avoid any place that has direct sun light or heat. High temperature is not good for the product.
- ☑ Keep product away from a electric shock or magnetic substance.
- ☑ Avoid high or low temperature. (Recommended temperature is 5 °C ~35°C)
- ☑ Be careful not to drop any conducting material into the ventilation hole.
- ☑ Turn off the system before installation.
- ☑ Ensure enough space for the cables at the rear of the system.
- ☑ Avoid any place that may shake the product.
- ☑ Use the product in areas where it ventilates well.
- ☑ Radio, TV or Radio devices might be harmful to the system.
- ☑ Don't disassemble the system on your own.
- ☑ Do not put any heavy objects on top of the product.
- ☑ This device designed to operate under Max. 40 . When you install this device in the rack, please consider the Max. ambient temperature. Please install this device Proper ambient temperature of all park.
- ☑ CAUTION : When you install this device in the rack, the operating ambient temperature may be greater than room ambient. Please consider this condition and simulate the Max. Temperature and install in an environment Compatible temperature.
- ☑ Reduced Air Flow : Installation of this device in a rack should be such that the amount of air flow required for safe operation of this device is not compromised. Please provide enough space to get the proper air flow.
- ☑ Mechanical Loading – Mounting of this device in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- ☑ Circuit Overloading : Please read the rating in the nameplate and consider appropriate power supply and supply wiring.
- ☑ When you are using like a power strips except direct connections to the branch circuit, please make sure to connect reliable earthing maintained.

CAUTION : Danger of explosion if battery is incorrectly replaced. Replace Only with the same or equivalent type recommended by the manufacturer. Dispose of user batteries according to the manufacturer's instructions"

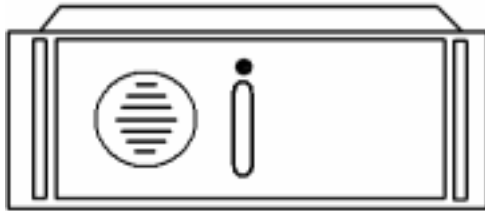


Product Contents

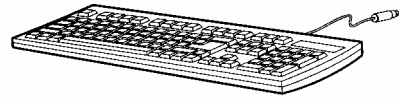
【 Check to make sure the box has everything below. 】

Contact your dealer if there is any missed item.

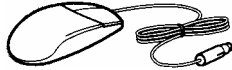
(Optional: Monitor- Recommended monitor is one that supports the resolution of at least 1024*768, 60Hz)



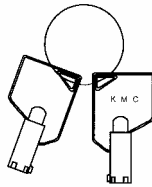
SHR SMART SYSTEM



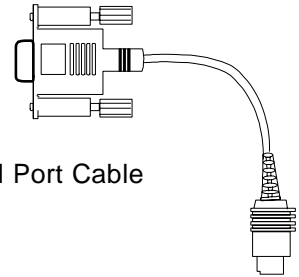
Key Board



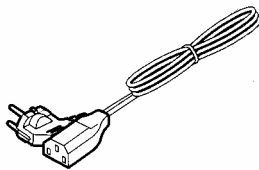
Mouse



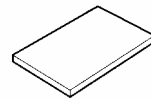
Key



Serial Port Cable



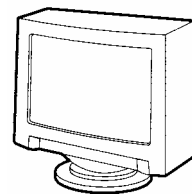
Power Cable



User guide



Communication conversion cable
(used for PAN/TILT CAMERA)



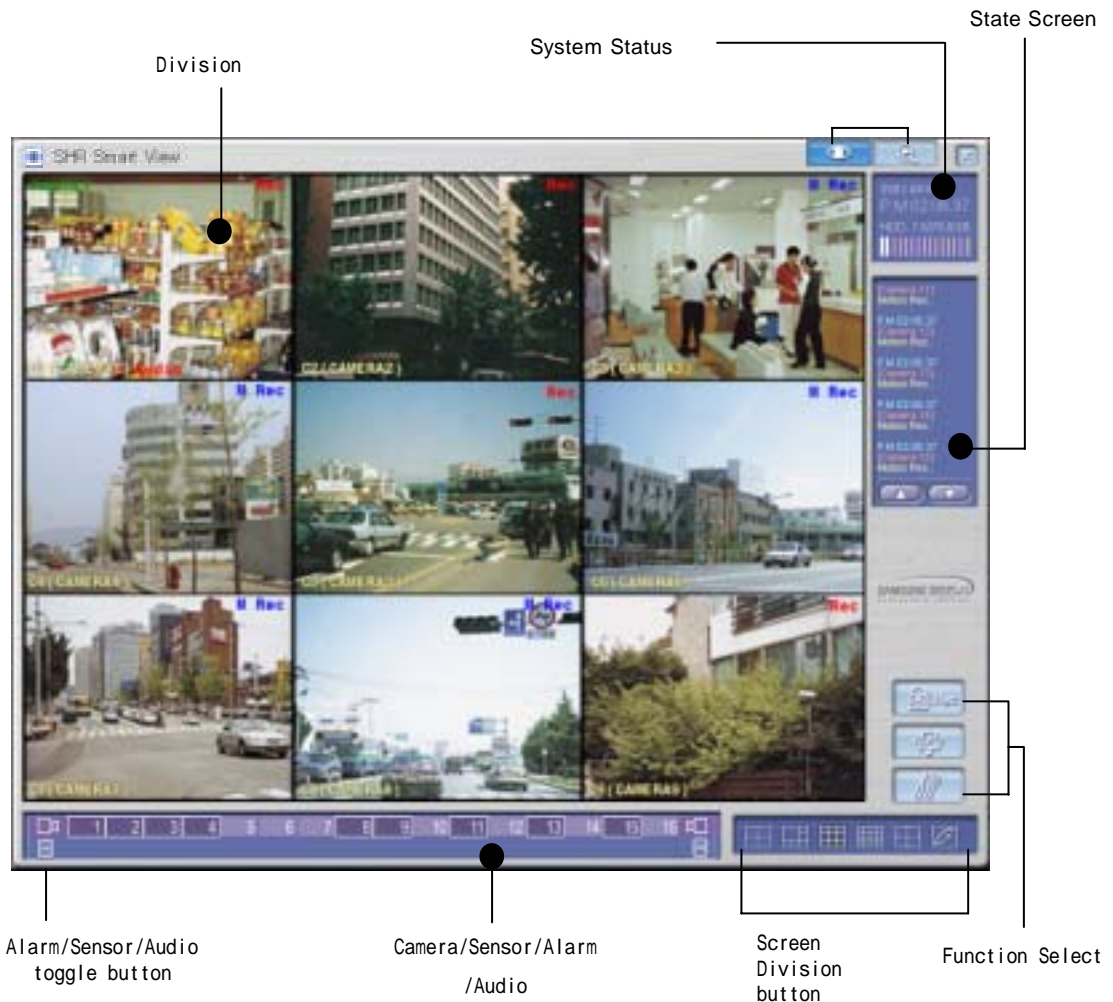
Monitor(Optional)

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I. Multi channel Video Surveillance

1 Mainscreen



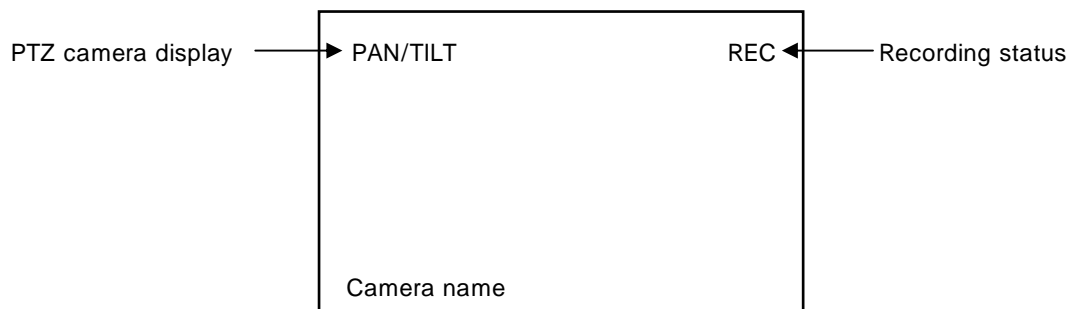
Description

- ▶ **Screen Division** : Displays the selected camera image
- ▶ **System Status** : Display time/date, HDD usage.
- ▶ **Screen Division** : Select the live image under surveillance. Maximum 16 live image can be displayed (1, 4, 6, 9, 16 division, 4division rotation mode)
- ▶ **State Screen** : Display for the status of continuous recording, sensor, alarm, motion, audio or network
- ▶ **Function Select** : Emergency recording, alarm off, configuration and displaying recorded image
- ▶ **Camera/Sensor/Alarm** : Display status of camera recording, sensor/alarm and audio.
- ▶ **Alarm/Sensor/Audio** : Toggle for display and control of alarm/sensor/audio in rotation.

2

Screen Division

Screen division can be done by 『Screen Division』 button

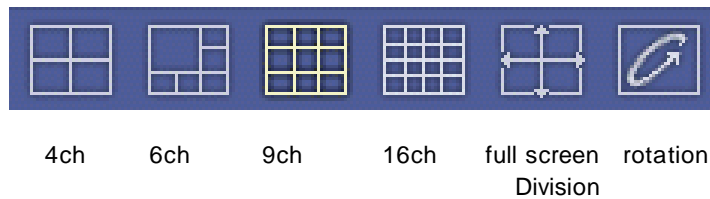


Screen Division

- ▶ **Camera** : Display the position of the camera under surveillance.
The default value is 1 [POSITION1]. But you can modify it in setup.
- ▶ **Recording Status** : Display recording status of each camera.
For continuous recording in red "Rec", and for motion detection recording in blue "M Rec" and nothing for no recording.
- ▶ **PTZ camera display** : When the installed camera is PAN/TILT, displays green " PAN/TILT"

Screen Division

- Screen division can be made in 4, 6, 9, 16, full screen and quad rotation.
- Any click on certain camera will give you full screen.



How to operate

- Click the division button you want.
- Divided screen will appear.

Full screen mode

- Left click on certain image under divided screen will give you full screen of the camera.
- Clicking again on the full screen will give you previous divided screen.



Rotation by 4ch

- Display in 4ch by rotating
- Click on screen division button to exit this mode.



Full screen display

- Full screen mode of divided screen.
- It will look as below.



Exiting Full screen display

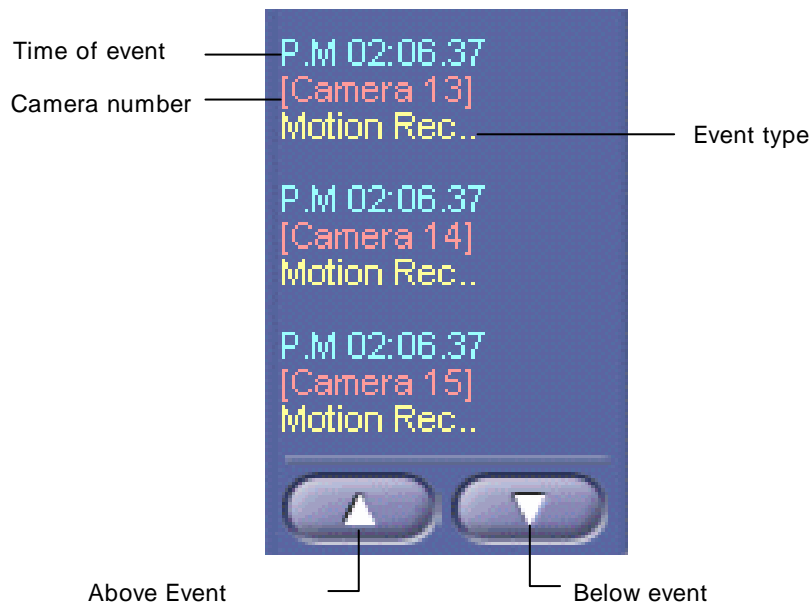
- To go to previous mode from “full screen display” press right click.

3

State screen

- Display the status of event such as continuous recording, sensor, alarm, motion, audio or network connection.
- State screen displays 『 time of event - camera number - event type 』

State screen



- Camera number : Displays the current camera number in order.
- Event movement : Use this button to move up and down to see other event

4

Emergency Recording, Alarm off, Setup, Search, Power



Emergency Recording

You can start recording regardless of recording schedule while monitoring live image. All the installed cameras start recording together and "REC" appears on screen. You can stop emergency recording by clicking once more. Recording term is normal term on each camera's setup.



Alarm off

Stops alarm signal
Alarm output can be used together with sensor or motion detection and the output duration is adjustable.

When the button is pressed on : Alarm output is impossible or alarm output is on halt

When the button is not pressed : Alarm output is possible



Setup

Click on this button will bring up setup window.
Setup windows consist of six windows.
Press "OK" button to save adjusted configuration. Press "Cancel" button to cancel the adjusted configuration.
Password can be used to make it secure.



Search

Click on this search button execute search mode
This is used to search recorded data and recording and monitoring is possible during search.

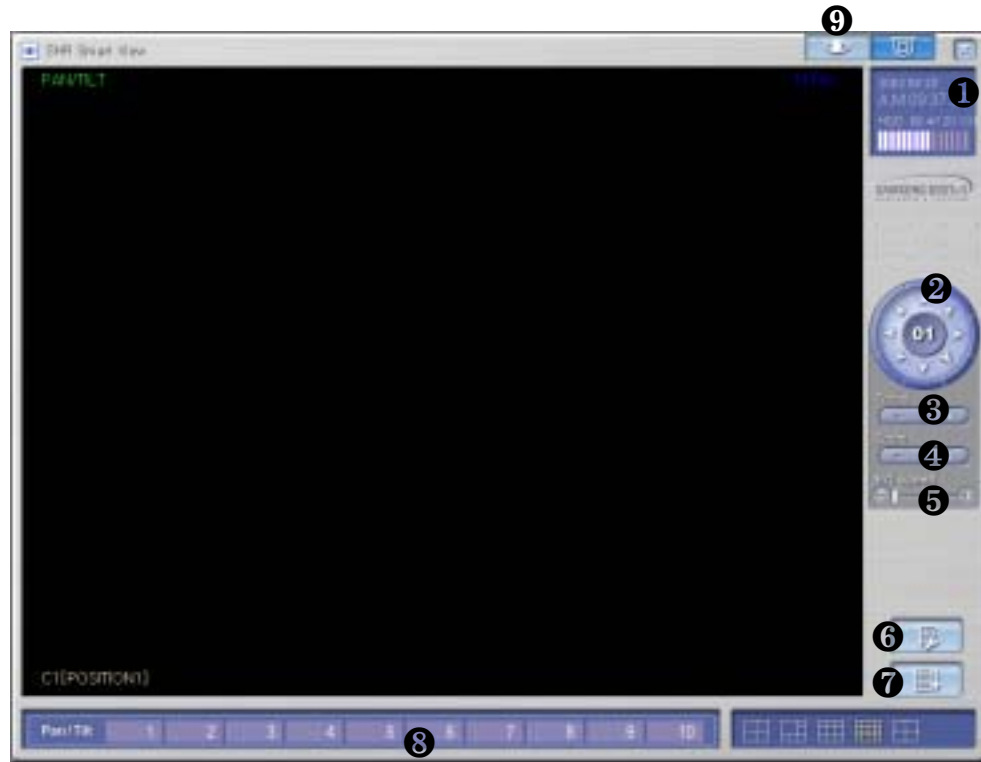


Power

Use this to power off the system.
Password can be used to make this function secure.

5

PAN/TILT Mode I – Speed Dome



Feature

- ① Display current date and time
- ② PAN/TILT : controls camera in left and right / up and down / diagonally adjust it
- ③ FOCUS : adjust focus of the camera lens.
(not applied to AUTO FOCUS lens)
- ④ ZOOM : adjust Zoom In/ Zoom Out of the camera
- ⑤ P/T Speed : adjust Speed Dome camera's movement speed
- ⑥ PreSet setup : PreSet setup for Auto PAN/TILT function
- ⑦ Auto Preset : Camera tours automatically along the configured path. Up, down or left, right button can stop auto function.
- ⑧ PAN/TILT number : You can move camera toward the position recorded.
- ⑨ Display mode : convert from PAN/TILT mode to Live display mode

How to PreSet



➤ How to Preset

: Location of camera can be appointed from 1 to 10

Change the camera direction to anywhere you want

Select Preset number

Select "✓"

(It will convert from "Setting" to "No Set" and location of Preset will be specified).

➤ How to delete Preset

: Delete the specified Preset location

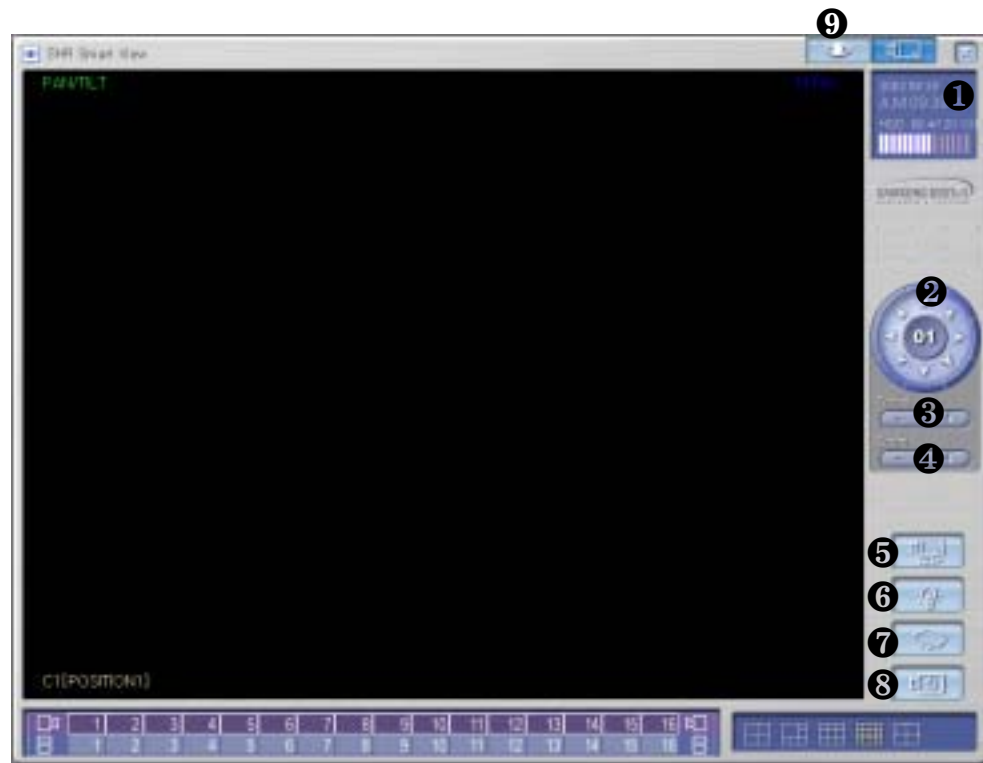
Select any Preset number you wish to delete

Select trash can picture icon

(It will convert from "No Set" to "Setting" and you can relocate preset location.)

6

PAN/TILT Mode II – RX (Already Setup)



Description

- ❶ Indicates current date, day, and time
- ❷ PAN/TILT : controls camera in left and right / up and down / diagonally adjust it
- ❸ FOCUS : adjust focus of the camera lens.
(not applied to AUTO FOCUS lens)
- ❹ ZOOM : adjust Zoom In/ Zoom Out of the camera
- ❺ Auto PAN : On/Off Function for Auto PAN Camera
- ❻ LIGHT : On/Off function for Camera light
- ❼ WIPER : It operates camera's wiper
- ❽ POWER : To On/Off camera's Power
- ❾ Display mode : convert from PAN/TILT mode to Live display mode

AutoPAN, LIGHT,WIPER,POWER button may be indicated differently based on the type of RX Receiver.

(It is because different manufacturer have different functions to support each).

II. Environment Setup

1 Hardware

Press set up button for system setup

Screen to input password will appear for system securing purpose.

If the password was not created initially, then just click [ok].



Hardware [Camera]

SHR Smart View SETUP

Hardware System Camera/Audio record Schedule Motion detection Network Password setup

Camera	Name	Serial	Alarm	External monitor
Select Camera	Name	Serial	P/I	P/I Type
Camera 1	POSITION1	1	V	KRE-301 IDC
Camera 2	POSITION2	2		KRE-301 IDC
Camera 3	POSITION3	3		KRE-301 IDC
Camera 4	POSITION4	4		KRE-301 IDC
Camera 5	POSITION5	5		KRE-301 IDC
Camera 6	POSITION6	6		KRE-301 IDC
Camera 7	POSITION7	7		KRE-301 IDC
Camera 8	POSITION8	8		KRE-301 IDC
Camera 9	POSITION9	9		KRE-301 IDC
Camera 10	POSITION10	10		KRE-301 IDC
Camera 11	POSITION11	11		KRE-301 IDC
Camera 12	POSITION12	12		KRE-301 IDC
Camera 13	POSITION13	13		KRE-301 IDC
Camera 14	POSITION14	14		KRE-301 IDC
Camera 15	POSITION15	15		KRE-301 IDC
Camera 16	POSITION16	16		KRE-301 IDC

Setup Close

Description

▣ **Select Camera:** To decided which camera to use

When Camera Button is pressed: Camera in use

When Camera Button is not pressed: Camera not in use

If 'camera not in use' is selected, it may lower the recording speed, so it is important to select camera which you will use only.

▣ **Name**

: Input the name of place which the camera will be installed

▣ **Sensor**

: Input the sensor number which will be used with each camera

8 up to 16 external sensors can be connected and if the external sensor activates then linked camera will record the image.

Input additional comma(,) in case several external sensors are to be linked together.

For example) When operating external sensors number 2 and 3 and you wish to record the image of number 1 camera, then input "2,3" on Camera 'Sensor' Category.

▣ **P/T**

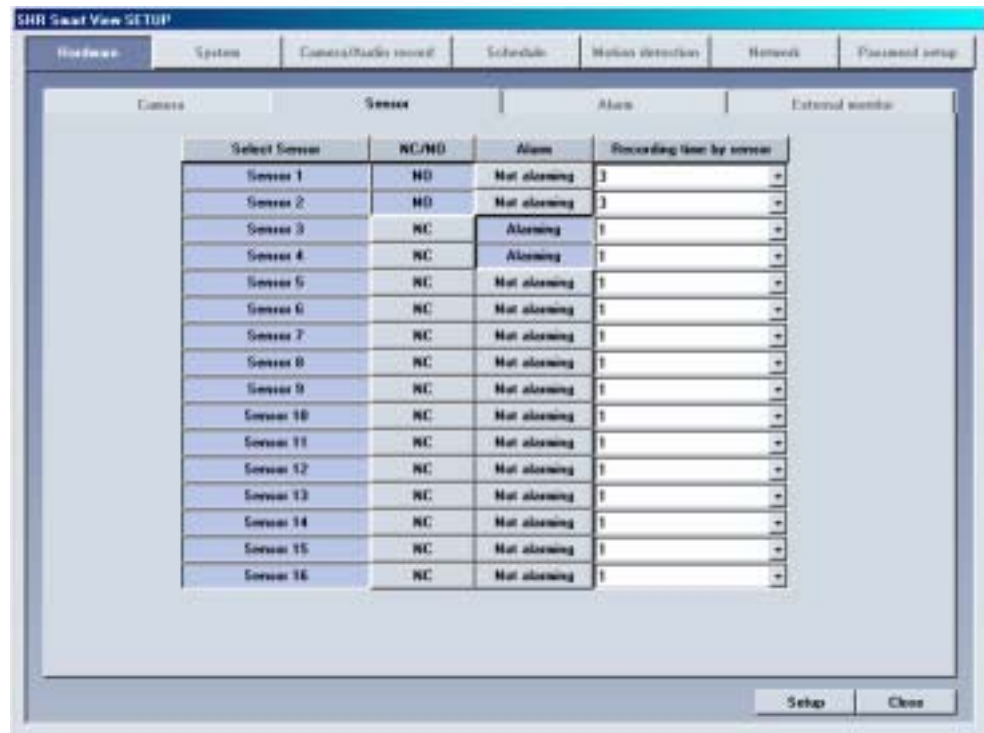
: Check if the selected camera is PTZ.

In this case, PTZ related equipment should be connected and selected camera will indicate PAN/TILT on top of image.

▣ **P/T Type**

: Model of RX-Receiver and Speed Dome Camera which are compatible with system and RX-Receiver's Control protocol are inputted. Select the model compatible with current model.

Hardware [Sensor]



Description

➤ Select Sensor

: The number of external sensors and input terminal should be correspondent to each other.

➤ NC/NO

: Configure Sensor

Each time when the button is clicked it will change to [NC]<->[NO] and vice versa.
(Default is set to [NC])

NC (Normal Close Type sensor)

: While on detection mode, choose this when sensor is near the point of contact

NO (Normal Open Type sensor)

: While on detection mode, choose this when sensor's contract point is open.

➤ Alarm

: While on Sensor detection mode, alarm will be on when sensor activates.

➤ Recording time by sensor

: When there is a signal from sensor connected to system, this function is to setup time which will record camera's image linked with sensor.

(It can be setup from 1 second to 10 seconds).

Hardware [Alarm]

Select Alarm	Name	Sensor	Auto ON/OFF time(S)
Alarm 1	Alarm 1	3	5
Alarm 2		0	0
Alarm 3		0	0
Alarm 4		0	0
Alarm 5		0	0
Alarm 6		0	0
Alarm 7		0	0
Alarm 8		0	0
Alarm 9		0	0
Alarm 10		0	0
Alarm 11		0	0
Alarm 12		0	0
Alarm 13		0	0
Alarm 14		0	0
Alarm 15		0	0
Alarm 16		0	0

Function

- It indicates whether alarm will be used or not and setup sensor and time of output produced.
- Output of alarm will be either ON/OFF when any sensor or moving object is captured. It can control light, siren, speaker, and other external equipment.

Description

☒ Select Alarm

: This button is to choose output of alarm terminal you wish to setup.

When button is pressed: Appropriate alarm is selected

When button is not pressed: Appropriate alarm is not selected

☒ Name

: Input name of alarm to use

☒ Sensor

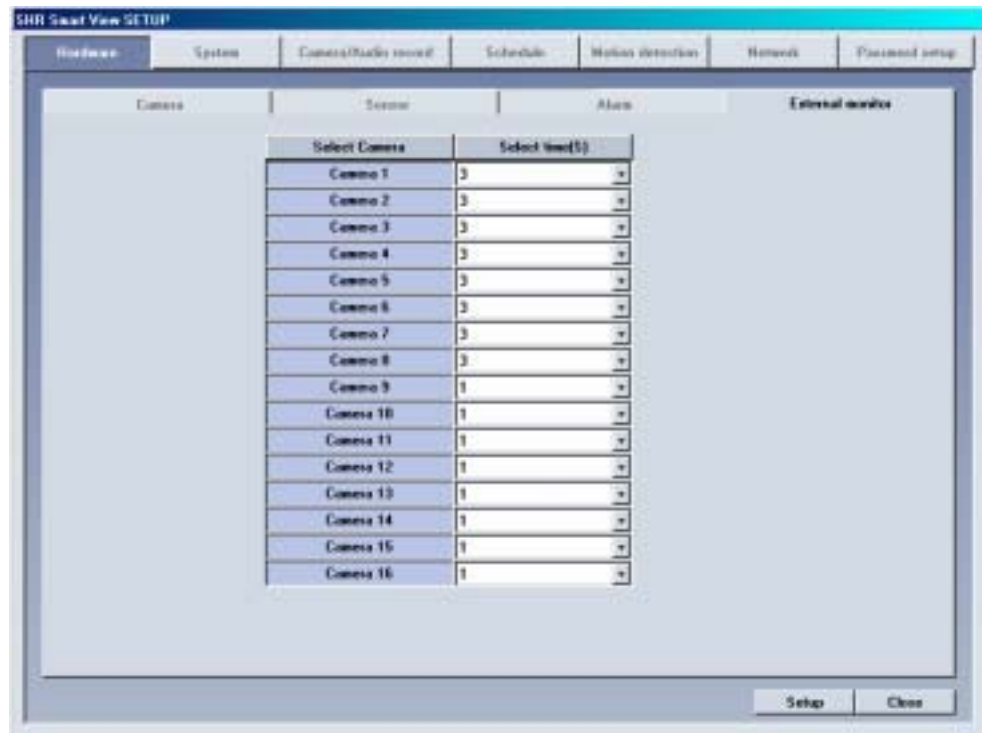
: If you want alarm to automatically operate from external sensor, input external sensor that's linked to alarm.

For example) If you wish to operate number 1 sensor when number 3 activates, choose alarm 1 and input "3" for following item.

☒ Auto ON/OFF time(S)

: Input continuance of operating time for control output in second after sensor signaled.
(You can set it up to maximum of 255 seconds, default value is set to 0 second)

Hardware [External monitor]



Description

External monitor function produces output for image from DVR using analogue monitor (TV).

Description

✎ Select Camera

: Choose the camera which will produce output by external monitor

The output will be automatically produced according to setup time

When button is pressed: Appropriate camera is selected

When button is not pressed: Appropriate camera is not selected

✎ Select time(S)

: The output from external monitor should be assigned in second (From 1 sec to 10 sec)

2 System

System [System information]

The screenshot shows the 'SHR Smart View SETUP' dialog box with the 'System' tab selected. The 'System information' sub-tab is active, displaying a form with the following fields:

Site code	100-001
Location	
Version	SHR Smart View V1.00 - beta1
Distributor	
Other	

Below the fields is a 'Note' section with a scrollable text area. At the bottom right of the dialog are 'Setup' and 'Close' buttons.

Description

Site code

: Default is set to 100-001

The value may change at your discretion but anything must be inputted.

When connecting from Center to Site, it simultaneously searches and compares site Code and password. If either site code or password is wrong, then the connection will not be made.

Location

: Input name of place where system is installed

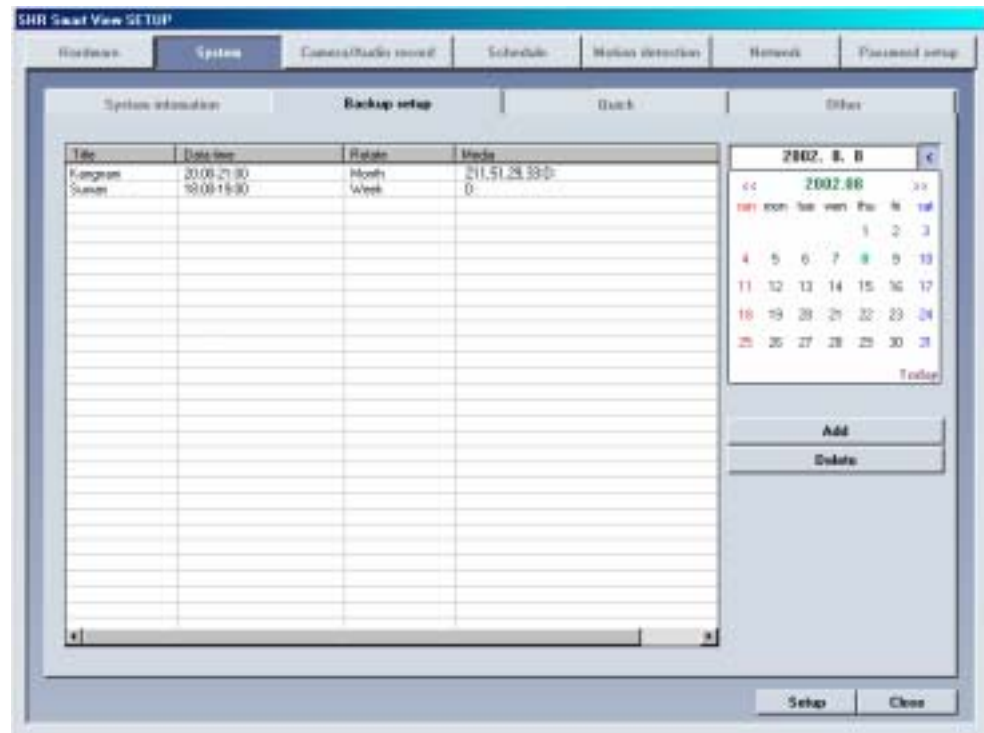
Model

: Contains information of program

Distributor

: Input name of installer

System [Backup setup]



Description

✘ Backup schedule setup

- This backup media will show reserved list of backup data which will record data, assigned time for backup, and etc.
- According to assigned backup schedule, it will backup in order.

✘ Calendar

- Calendar will appear in Pull-down type like picture above when you click on [>] button indicated beside the current date.

You can check backup schedule list assigned by days and current date will be displayed if you click "Today".

- ✘ **Add:** It adds assigned and rotation time of backup schedule data and data to be recorded in backup media.

- ✘ **Delete:** It deletes reserved category from backup schedule setup.

- ✘ **Setup:** If [Setup] is not selected, reserved information will not be stored from backup schedule list.

Method to add backup schedule



➤ Title

: Input name to be add on backup schedule list

➤ Date/Time

: Selects start and end time for backup data

It must be setup after current recording time.

If it was setup before current recording time, then it will be ignored and won't be added to the list when [Add] button is clicked.

➤ Rotate option

: Repetitive rotation cycle can be maintained by assigning assigned date and Year/Month/Week/None basis for backup data

If [None] is selected, only one day setup can be made for assigned date/time.

➤ Backup start time interval after

: After backup data has finish its recording, it assigns when the backup will start after data has finished its backup.

Possible select time will be from 1 to 4 hours

➤ Media list

: Choose backup data to record backup media

It can be added up to 8 from media list and if fail to record on initially setup media, it will automatically back up to next media.

Selection should be made as following: HDD, CD-RW, removable drive, Network drive except floppy disk, etc. It supports almost every language oriented logical/physical media.

You can select remote drive using IP address.

➤ Up/Down/Delete

: Priority of backup media can be move from down/Up, and it can delete media that's already setup.

➤ Add media

: Backup data can add media which will be recorded

Backup media can be added maximum of 8

➤ Setup

Overwrite mode : This function will record data after deleting old data when there is not enough space available to backup the data

Priority : Assign priority of backup data

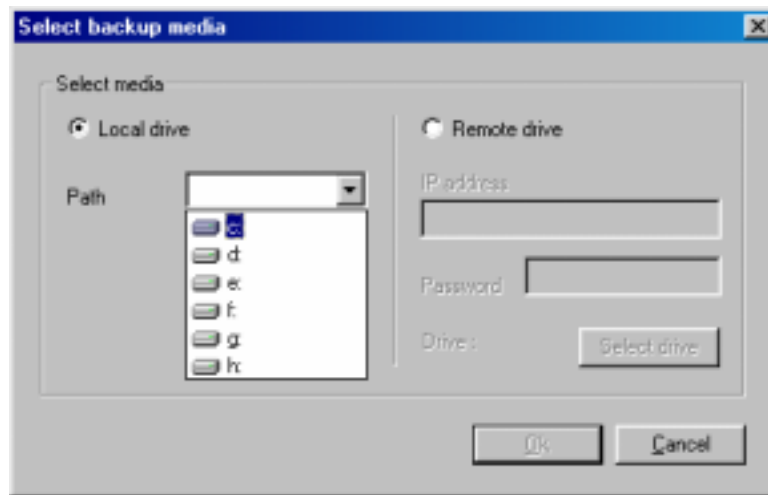
Backup after precedent backup : Wait until the current work is done; start the backup after current backup and waiting data have finished their backup.

Backup after current backup : Start after current work is done; when current data's backup is completed, do not backup the waiting data if the other data was selected first.

➤ Add

: Add designated backup to backup schedule list

Method to select backup media



▣ Local drive

You can select HDD or removable drive (MOD, DVD-RAM, ZIP, USB HDD etc), CD-RW, and Network drive.

It supports every drive language oriented logical/physical media.

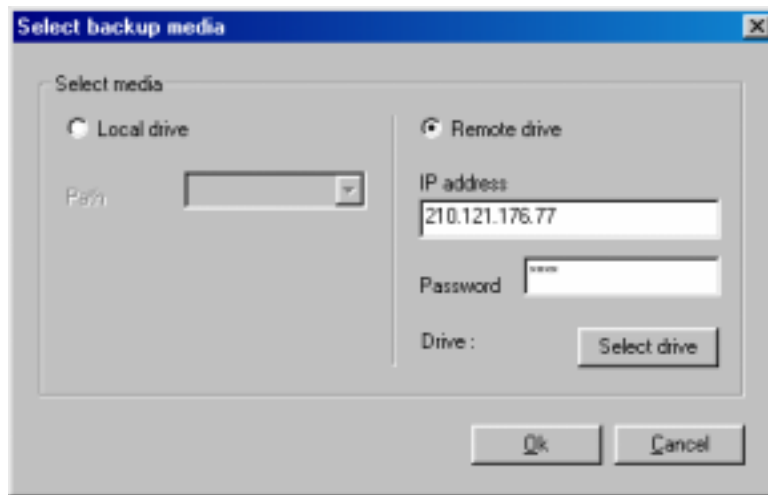
▣ Remote drive

: Using IP address, this is used when backup from remote area where Center S/W is installed

In order to backup from remote area using IP address, remote PC or File Server must have Center S/W installed, and Remote Backup Server program (provided when Center S/W is installed) should be executed (refer to Manual for Center Program)

In order to do remote backup setup, IP address and password located by remote PC or file server should be the same and remote backup server program should be executed

Remote drive

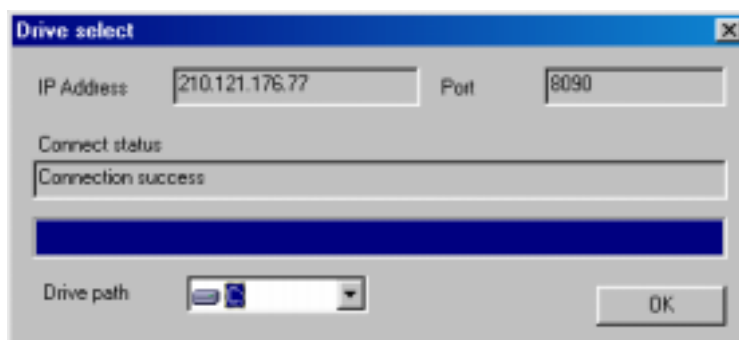


☒ Select drive

: Input IP address and password and select [Select Drive].

In order to connect to Remote backup server for remote backup, remote IP address and registered password from Remote Backup server program is needed.

(If password is not registered, select [Select drive] button after IP address from remote site is inputted.)

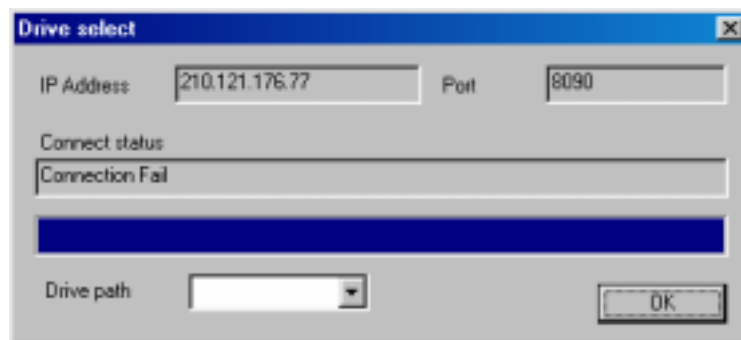


☒ Drive path

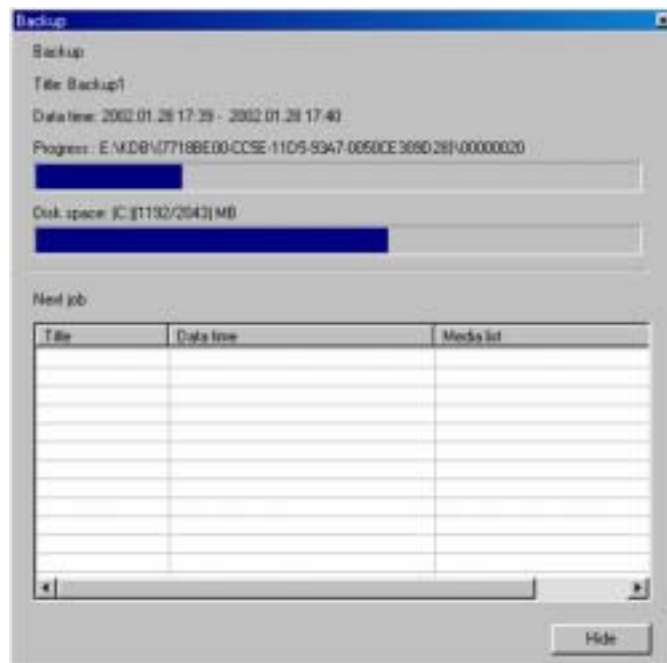
: If connection is made successfully using selected IP address and password, you may choose an appropriate backup media drive from remote PC or File server.

➤ Connection Fail

: If selected IP address and password is different or Remote Backup Server program has not been executed from remote PC or File Server, then connection will fail and you may not be able to choose backup media drive.



Indication of Backup status

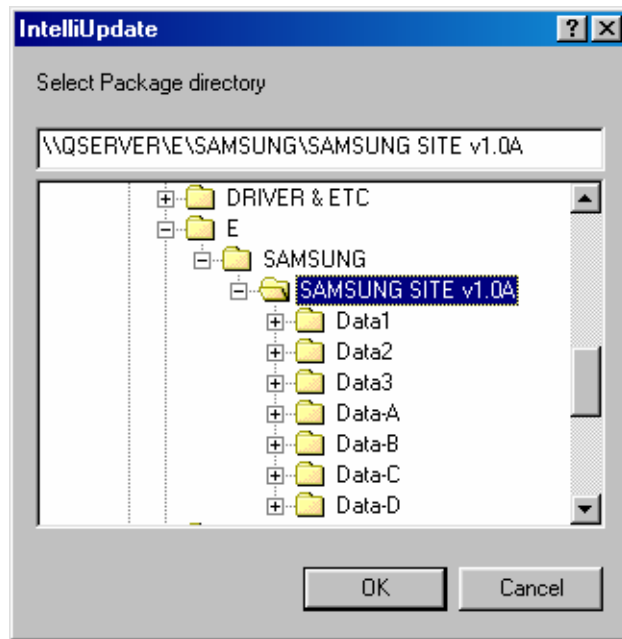


➤ Backup

: While backup is progressing, animated icon  will appear on top of screen. When you double click on it, you can check on current data's backup progressing process and waiting backup data list.

Click [Hide]Button to close backup window

System [Quick]



Description

When [Quick] is selected, Intelli Upgrade window will be executed to let you choose new package for program version. This function is to upgrade to a new version that's stored in hard disk or joint network folder.

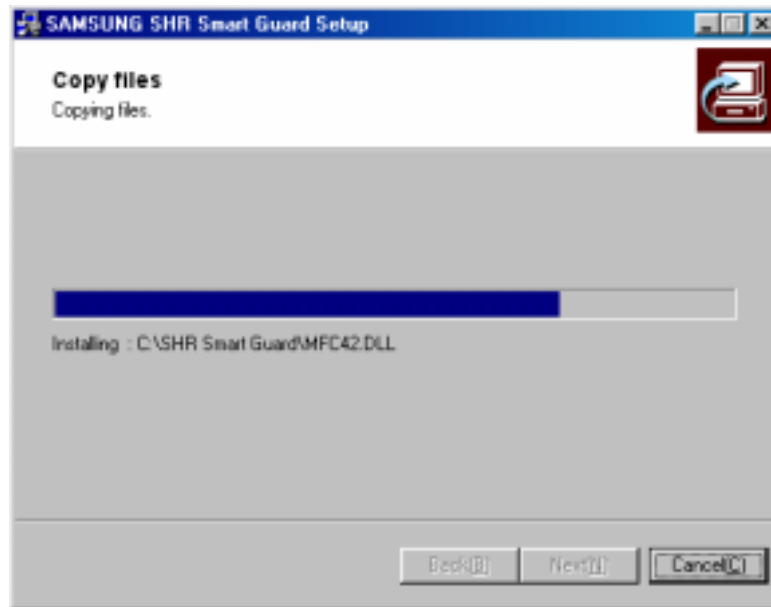
Description

➤ Select Package directory

Click [OK] after selecting hard disk or joint network folder which is store in a new version
Appropriate folder must include package folder(Data1, Data2, Data3, Data-a, Data-b, etc.)
or all files from package folder must be included in one folder.

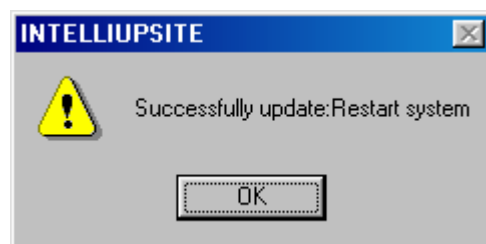
When upgrading to a new version using Intelli Upgrade, upgrading does not support floppy diskette. Therefore, we recommend you to upgrade after copying the whole media or on a hard diskette.

If there is no file or package folder in certain folder due to a wrong folder designation, or if the damage had occur to the file, then it will not be considered as a normal package so the program will not upgrade normally.



➤ **Check integral package file & program installation**

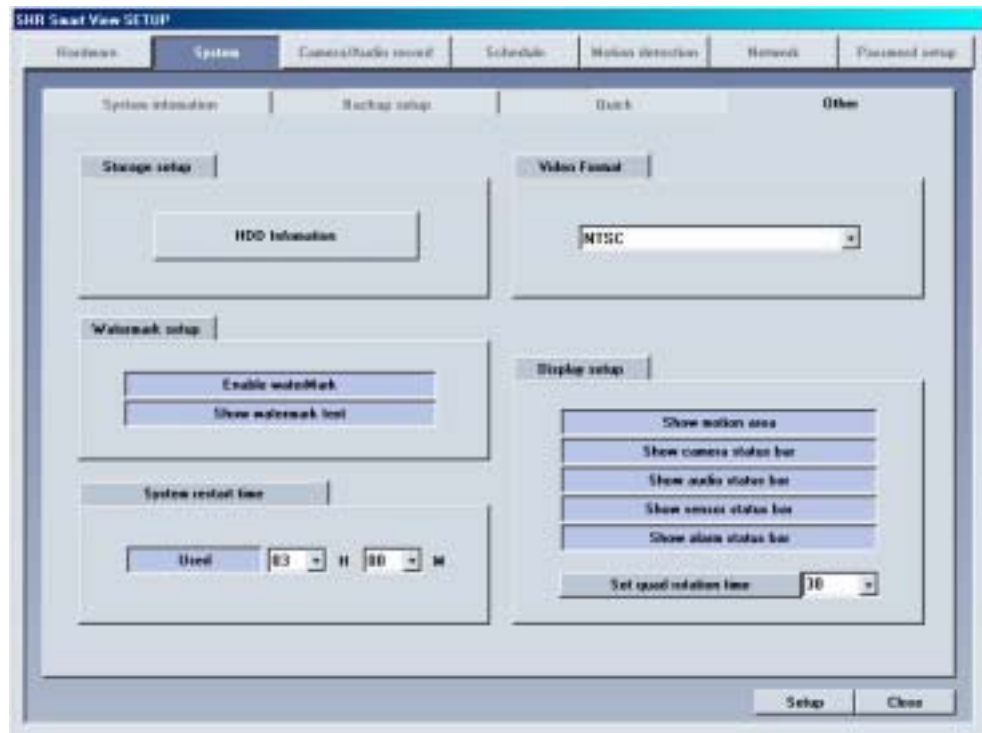
Installing process of a program window will appear when you designate package folder
Installing process will show twice for testing integration package file and for program installation. DigiNet program, which was executed during program installation, will end



➤ **System reboot**

: System need to be restarted when upgrading a new program version is completed.

System [Other]



Description

▶ Video Format


: Choose either NTSC or PAL

▶ Display setup

: It sets up status bar appeared from surveillance screen or area

When button is pressed: Appropriate status bar or area appears from detection mode

When button is not pressed: Appropriate status bar or area don't appear from detection mode

In order to find out the status of Audio, Sensor, Alarm Status bar, click  (audio/sensor/ alarm button) from lower part of the screen.

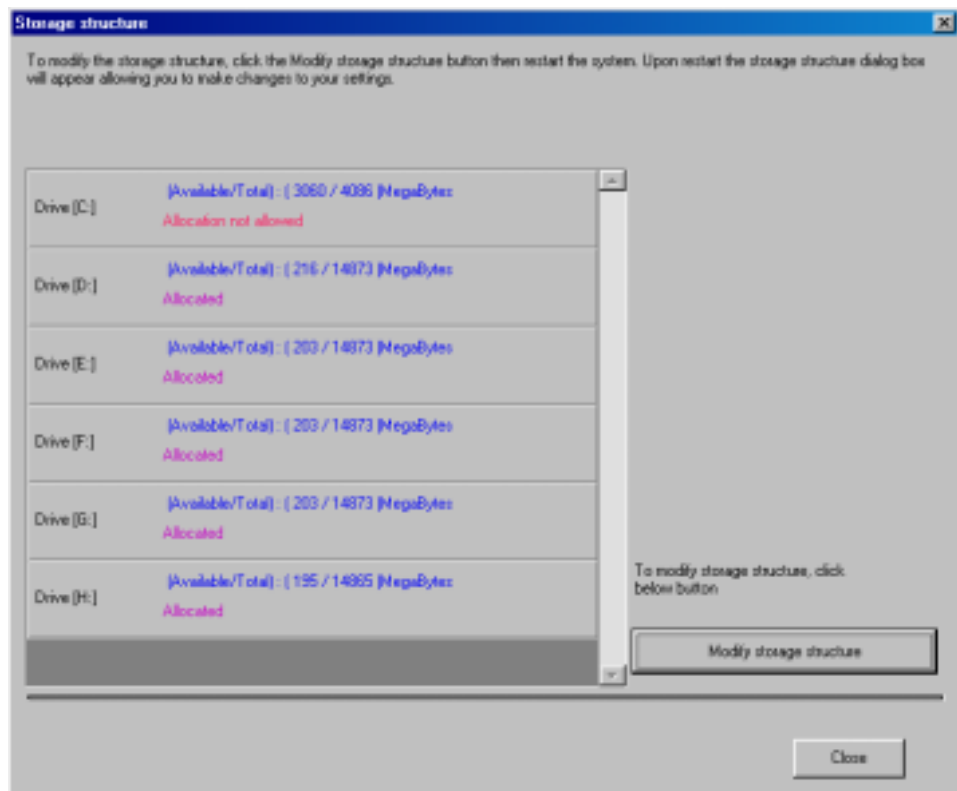
▶ Set quad rotation time

: setup the rotation time in sec to display in 4ch display

Storage setup

: This function modifies possible disk space of data and allocation status for each drive

Window below appears when [HDD Information] is clicked



Drive allocation

Displays Allocation of HDD

Currently available disk space for each drive and allocation status can be checked

Modify storage structure

You can modify the allocation on each drive

You can re-allocate DB setup for each drive by clicking [Modify storage structure].

▶ Watermark setup

Using watermark

This function inserts Watermark authentication mark on image to be recorded.

When this function is selected, image will indicate WaterMark on the image.

Displaying watermark text

This function inserts Watermark authentication mark on image to be searched

When this function is selected, image will indicate WaterMark on the image.

[Note] What is WaterMark ?

BMP and JPEG images can be modified anytime by user.

To ensure the original image which can be modified, special protection called 'watermarking' is enabled onto the image.

Any changes to an original image, including just one pixel, will inform you that the image has been modified.

When recorded image was modified from DigiNet program, WaterMark authentication and WaterMark check will tell you whether the image was modified or not.

▶ System Restart time

: setup the automatic rebooting time for everyday.

(This is used to make system more stable.)

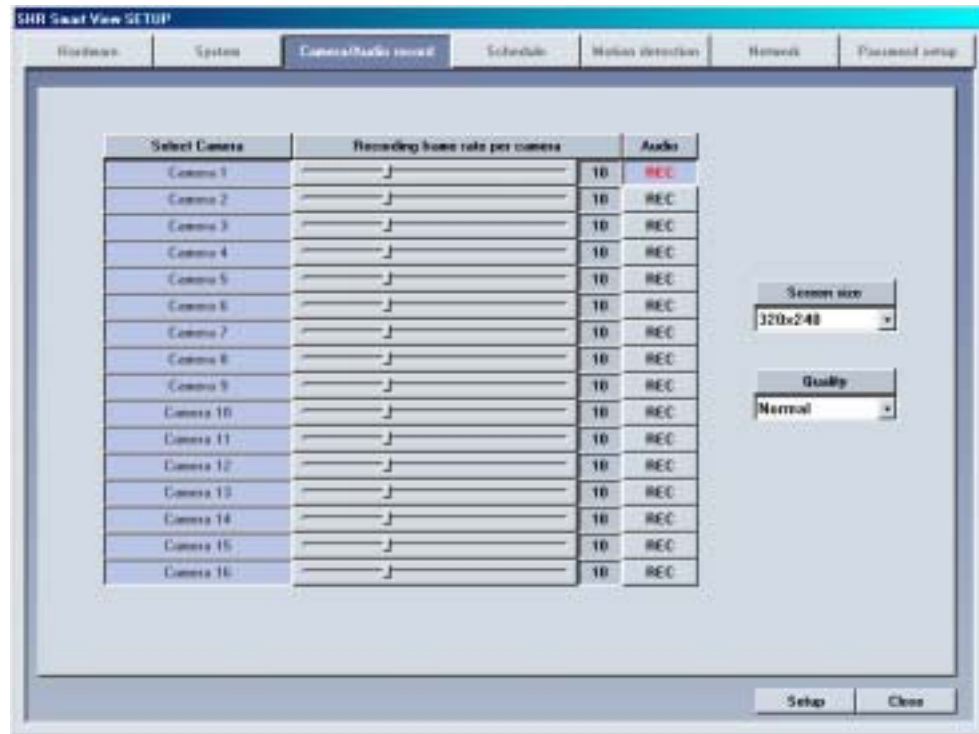
Default setup is "Used", in order to disable this click "Used" button again.

It will change to "No Use"

3

Camera/Audio record

Camera/Audio record



Description

➤ Select Camera

: It indicates selected camera under Hardware[Camera] and camera that's currently in recording is selected above.

➤ Recording frame rate per camera

: Number of frames to be recorded are adjustable by each camera

Put your cursor on scroll button and left click on it then choose the amount of time to record (Recording time will be indicated in numbers on the right side)

If you increase the recording time from the default setting, then availability of other cameras' recording time will reduce.

It could be more efficient to increase the recording time for places where it requires more security.

▶ Audio

: Decided to record audio for appropriate camera

When REC button is pressed: It records voice for appropriate camera.

When REC button is not pressed: It does not record the voice for appropriate camera.

You can setup voice for specific camera and it records with voice signal that is being inputted to microphone terminal.

Voice is recorded according to recorded time for image and the sound data will be recorded when the video signal start its recording. Therefore, sound data will not be recorded if the video data was not recorded.

In order to record voice, system must be installed with sound card or exclusive audio board. (If Sound card or audio board is not installed, you can't setup audio category and it will be ignored).

Only 1 channel can record voice when using sound card installed on main board. Voice recording is supported up to 8 channel when using Samsung made exclusive audio board.

If sound card and exclusive audio board are installed simultaneously, then we recommend you to record voice using audio board.

[Tip]

- When trying to backup already recorded data, it can backup with voice and it is possible to record in specific drive. (But, if the voice data was recorded using audio board then backup cannot be made and it will be supported from later version.
- If sound card is embedded, 2way audio communication is possible to communicate with S/W.
- If 2way audio is connected using sound card, audio recording will discontinue.
- Window must be setup separately for sound card when using 2way audio with sound card.

▶ Screen size

: Choose screen size

Basically, resolution for 320*240 is best suitable for file size

(display and recording speed will improve twice when resolution is set to 160*120 but it will decrease image quality. 640*480 resolution will give you excellent image quality but recording speed will be decreased).

Default value is 320*240 .

▶ Quality

:To setup image quality

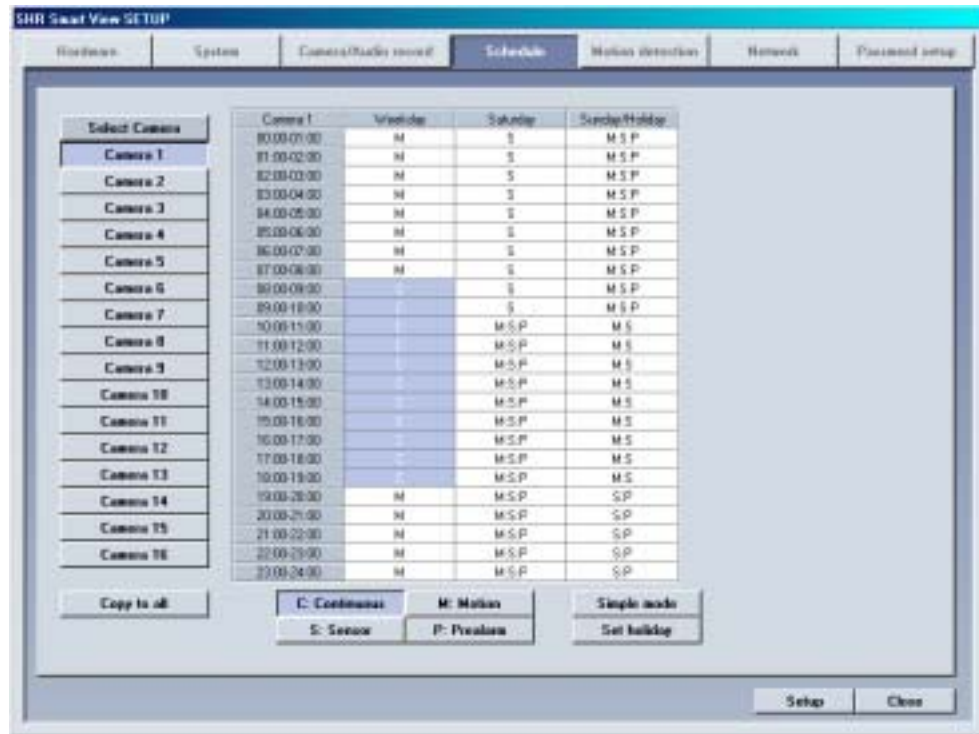
Higher value gives higher image quality but file size for per frame will increase.

Default value is set to 'Normal'

Image size and compressed image is closely connected for the file size to be recorded.

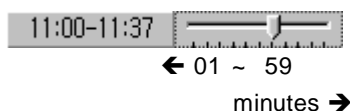
4 Schedule

Schedule



Description

- ▶ **Select Camera**
 : Choose camera number to use
- ▶ **Copy to All**
 : Information of currently selected camera will be copied and applied to every camera at once
- ▶ **Setup Recording time**
 : This function is to set recording type for selected camera by each day and time.
 Select time of day and drag it to select area and then select recording mode form [Record Mode] (C/M/S/P)
 If you need to set in minutes, double click on appropriate time then it will be set in minute.



▶ **Record mode (C/M/S/P)**

: This function is to set recording type with day and time for selected camera.

After choosing day and time from selected camera, selecting more than 1 record mode will change selected time within selected time.

If you erase all the record type from [Record Mode], selected setup time will change to no record mode.

Default is 'Motion & sensor record' of 24 hour continuous record.

Indication by record type	Supported record type
<ul style="list-style-type: none">• C : Continuous record• M : Motion record• S : sensor record• P : free-alarm record	<ul style="list-style-type: none">• no record• continuous record• motion record• sensor record• motion and sensor record• motion & free alarm record• sensor & free alarm record• motion & sensor & free alarm record

[Tip]

Continuous Record

- This is used when continuous recording is done without using motion detection.

Motion detection record

- This is used when recording is done using motion detection.

Sensor Record

- This function is to record by inputted sensor signal.
- Sensor setup can be done by camera and use time. If sensor is captured within selected time, related camera image will be recorded or related control will operate.
- Sensor input signal will be ignored if anything occurs outside the setup time.
- If related camera or time line is set to 'Continuous Record', then Sensor Record cannot be used.

Pre Alarm

- When a motion is captured on camera, then camera will record every moment of motion occurrence in addition to five seconds before the motion was detected.
(But, recording speed may decrease if you setup several cameras with it).
- If the appropriate camera or time is set to 'Continuous Record' you cannot use Pre Alarm function.

➤ **Rotate**

: You may choose specific Month/Day/Year as holiday

If you select [None], one day will be assigned and for that specific day only.

➤ **Holiday list**

: This function is to show designated holiday and its repeated date or period in a list

Any additional holidays will be stored in the list in an alphabetical order.

➤ **Add**

: This function is to add holiday you have designated.

Designated holiday will be added to [Holiday list] when you click [add].

➤ **Delete**

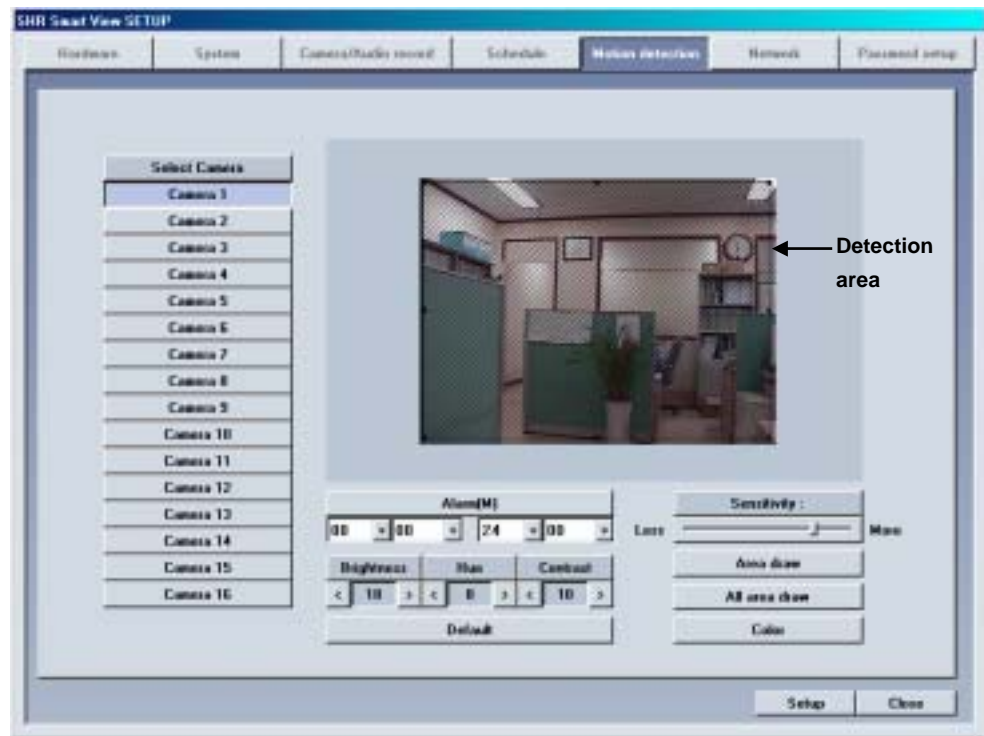
: This function is to delete stored holiday.

In order to do this, select the date you wish to delete from [Holiday list] and click [delete].

5

Motion detection

Motion detection screen



Feature

System starts recording when it detects any activity in the detection area without using sensors.

Screen Description

▶ Select Camera

: Select the camera to setup

▶ Sensitivity

: Adjust the motion detection sensitivity

Default value is "80", which is the most proper

▶ Alarm(M)

: System makes beeping sound to alert when there is any activity in the selected time.

When Alarm(M) button is pressed on : Alarm beeping works.

When Alarm(M) button is not pressed on : Alarm beeping does not work.

System beeps only when activity is detected in the selected time zone in recording schedule.

System does not beep if the camera is set to 'continuous recording'

▶ Brightness / Hue / Contrast

: Adjust Brightness, hue, and contrast

Default for camera is '18 / 8 / 10', and the range is -127~126 and adjustable to each camera.

(Proper setup is required depending on site situation)

▶ Motion Detection Area

Select the camera number and draw detection area using left click dragging.

Maximum five detection area can be made.

To remove the selected motion detection area drag mouse pointer toward out of box.

▶ Default

Restore the default color configuration for the camera by clicking [Default] button

▶ Area draw

Entire area will be under motion detection mode when you click on [Area draw] button.

▶ All area draw

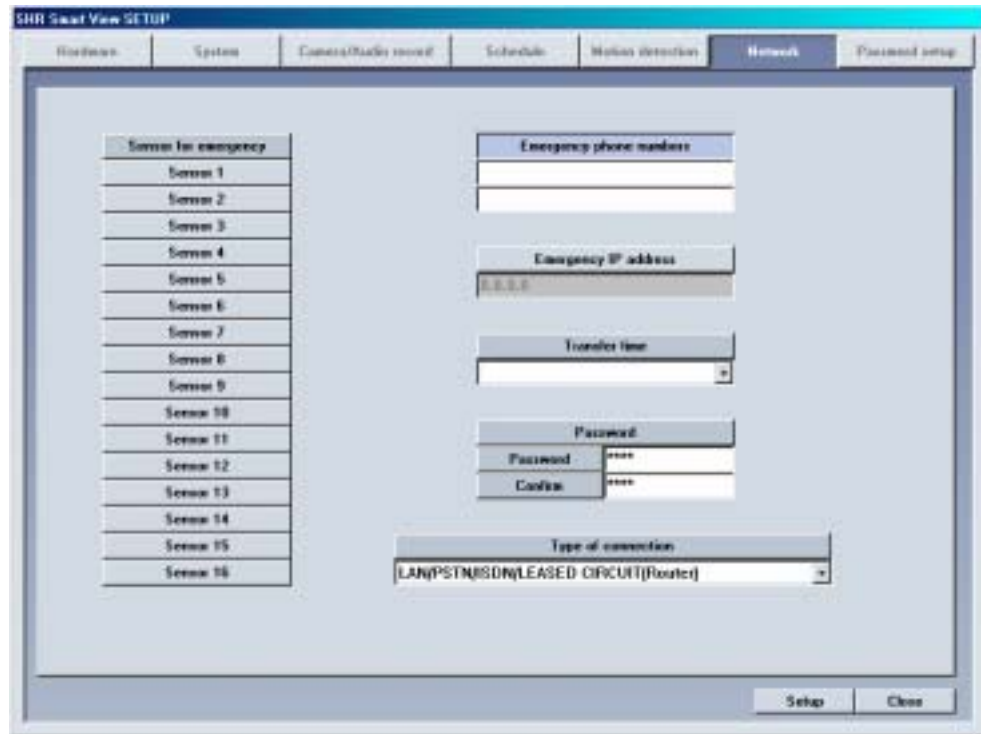
Entire area for every camera will be under motion detection mode when you click on [All area draw] button.

▶ Color

If appropriate camera is black and white according to each camera number, then click to convert it to Black and White camera (Default is set to Color).

6 Network

Network



Feature

➤ Sensor for emergency

: If the sensor detects any signal it sends alarm to Center with the recorded image during the designated time.

Click the sensor number to configure

➤ Emergency phone numbers

: When the first trial fails to connect, it tries to connect to the second number which is emergency phone number. This is to transmit emergency image or message.

Select [Emergency phone numbers] button and input emergency phone number. Up to two emergency phone number can be used.

➤ Emergency IP address

: Transmit emergency image or message by connecting to the assigned IP address.

Click [Emergency IP address] button and input IP address.

▣ **Transfer time**

: Select the duration in sec how long it will send images to Center on connection.
If any new signal is detected while connection, image transfer time starts again.

▣ **Password**

: Input required password to connect from Center p.c. (4 digit number is possible.)
[Password] : Input password required to access to DVR from Center.
[Confirm] : Input once again to confirm.
Default value is "1234"

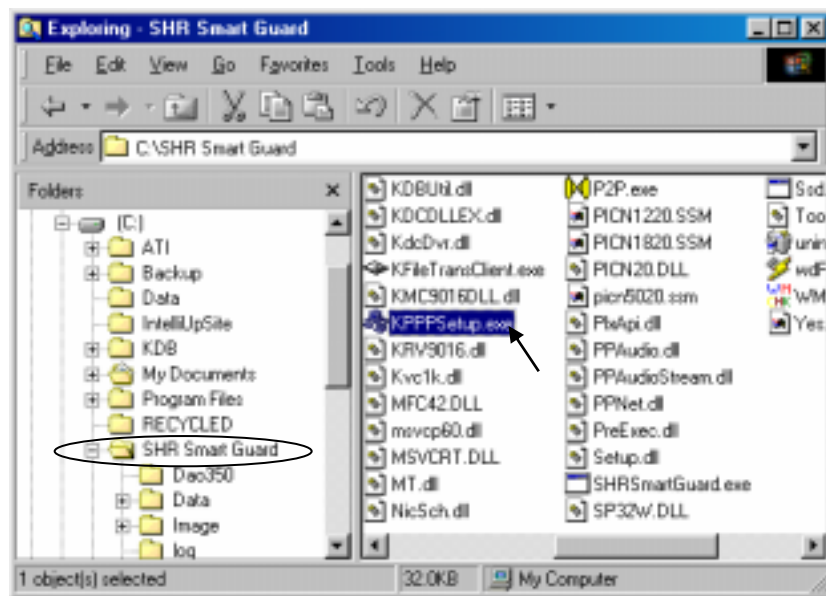
▣ **Type of connection**

For remote connection LAN, PSTN, ISDN, Leased Circuit can be used.
ISDN or Leased Circuit using router can be used. ISDN or PSTN can be used to connect to DVR without router directly.
Check on "No Use" for no connection

[Notice]

When you try to connect to site from Center, DigiNet checks the site code and password together.

PPP Setup for PSTN/ISDN connection without router



➤ PPP Setup using KPPPSetup.exe

- To setup PSTN connection first install Modem in Windows. Then execute a file named "KPPPSetup.exe" both in site and center and the required setup will be made automatically.

➤ Required step before Installation

- In order to use **KPPPSetup.exe** program, CD-Rom drive may ask you to put in the original Windows98 Second Edition or hard diskette must be copied with original file of Windows98 Second Edition.
- This program may not work properly when the system doesn't have a modem installed.
- If a modem is not installed, first install modem and driver for that. Then execute KPPPSetup.exe

➤ **PSTN or ISDN setup on Windows98**

Install a modem for PSTN connection and ISDN Terminal Adapter for ISDN connection.

Execute KPPPSetup.exe

Reboot system after PPP setup is done.

Please check the connection between Center and Site after rebooting the system.

➤ **Items that will be installed by KPPPSetup.exe**

- Dial-up Networking
- Dial-Up server
- Phone Dialer
- Dial-Up Adapter
- TCP/IP Protocol
- Modification in Dial-up Server properties

➤ **Notice**

- Any windows of 'Network Properties' or 'Dial-up Server properties' should be closed before running KPPPSetup.exe
- Do not execute KPPPSetup.exe twice at one time.
(Please wait until you see a message saying the system will reboot.)
- Select 'LAN' on 'Communication Setup' in Site software and select 'PSTN/ISDN(No Router)' in Center software.
- KPPPSetup.exe should be installed on both Site and Center.

[Notice]

- The system may request you original Windows98SE CD, then assign the path of Windows98SE.
- For ISDN connection without router, follow the same step as required on PSTN. In other words, just execute KPPPSetup.exe

7 Password setup

Password setup

	Old password	New password	Confirm
Level 1			
Level 2			

User authority	Level 2
Hardware	
System	<input checked="" type="checkbox"/>
Camera/Audio record	
Schedule	
Motion detection	
Network	
Search	<input checked="" type="checkbox"/>
Exit	<input checked="" type="checkbox"/>

Description

➤ Password change

: You can assign password to two operators and some functions can be set to work with permission. (Operator 1 can be in charge of everything and operator 2 can modify permitted items only.

Old password : Enter current password you are using

New password : Enter new password

Confirm : Enter new password again


➤ Password Setup

: 1st level administrator can block some mode from 2nd level administrator.
The function will be activated by ticking on that box.

III. Search Screen

1

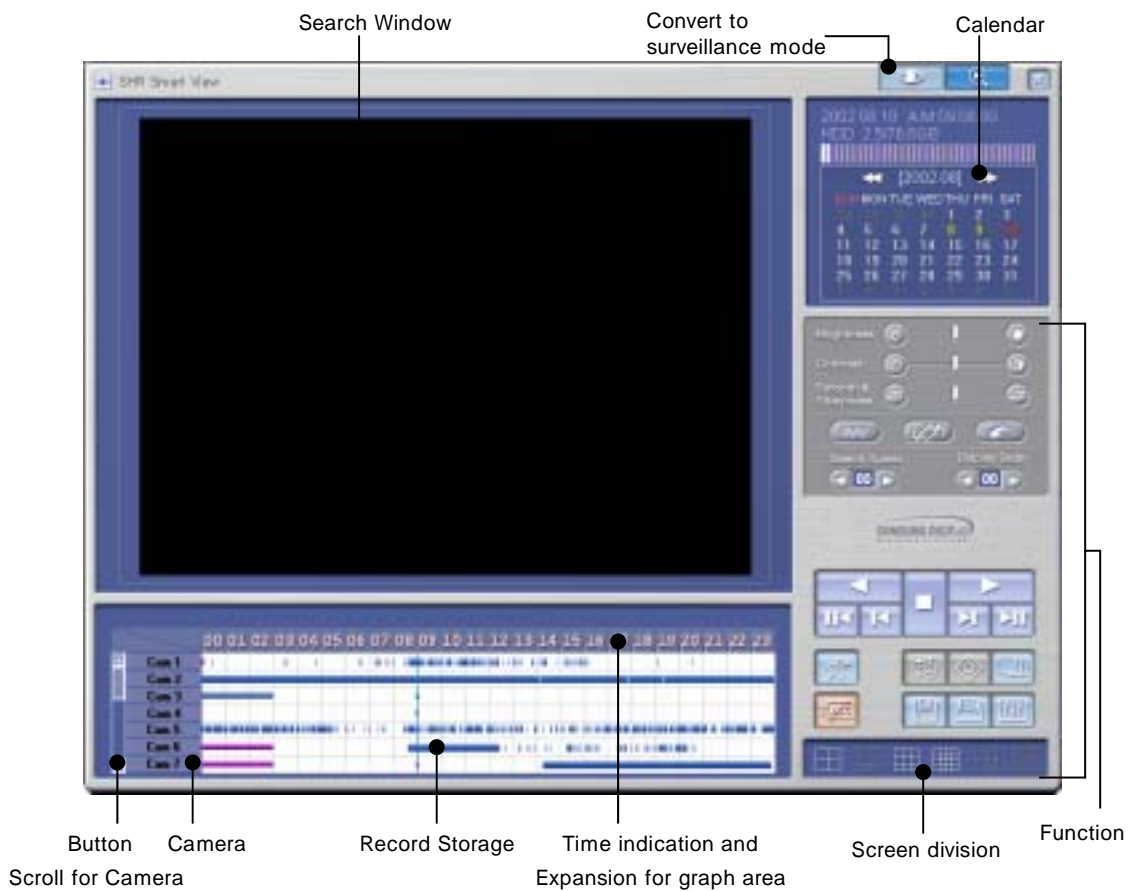
Execute Search Program

Click on search  button to execute from surveillance screen.

Password screen will appear for securing purpose

Click [OK] if the password was not initially entered

Search Screen



Organization of Search Screen

- Search screen Window
- Calendar which shows recording date
- Scroll to choose cameras to search, Camera Button
- Recording type and graph indication of storage
- Time indication and Expansion of graph area
- Button for search screen
- Conversion to Search screen
- Screen Division

2

Search Date and Time Selection

Calendar



Search 'Date'

: Choose the Date you wish to search

<< : It shows whole calendar

>> : Calendar shows the following month

On calendar, it will be indicated in yellow if anything is recorded on such date, red indication means the one you clicked to search, and sky blue indicates that something is being recorded.

Time indication and Expansion of graph region



Time indication and expansion of Graph region

: It indicates time for the part where data is recorded.

When you click on time, time zone will be expanded in three steps so graph region can be seen more clearly.

In case such country is applied with Summer Time, color will convert from Yellow (default color) to pink but it will convert back to Yellow as soon as the Summer Time is over.

Any modification of time caused by Summer Time will automatically change back to current (actual) time.

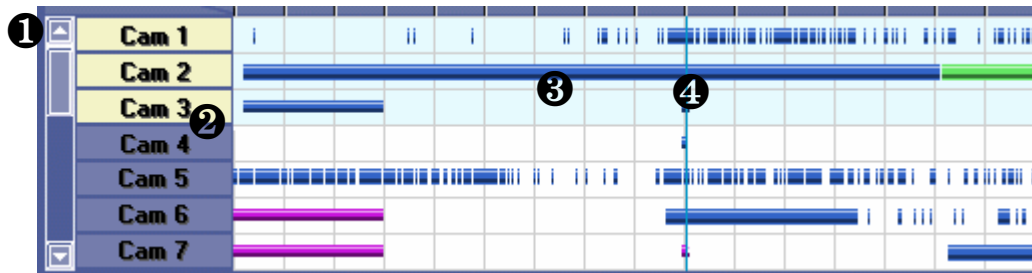
[Tip] What is Summer Time...

Sun rises early but sets late during summer so people tend to take advantage for this longest period of daytime of the year by forwarding one hour which is known as Summer Time. Summer time is widely used throughout the world and people forward one hour earlier than actual time at the beginning and do the vice-versa at the end of Summer Time. For example, if the starting time is 2 o'clock then you are to change the time to 3 o'clock and then change 3 o'clock back to 2 at the end.

3

Select Camera

Select Camera



Description

1 Camera Scroll button

: This function is to scroll search button from up and down.

2 Camera

: Choose the camera number you wish to search

When you double click on camera number, button and the colored graph of appropriate camera number will be changed.

3 Indication of stored amount

: It indicates record type and storage amount by time.

Violet graph – Recorded with continuous recording

Blue Graph – Recorded with motion recording

Red Graph – Recorded with Sensor recording

Green graph – Recorded with Pre Alarm, but there is no indication if nothing was recorded.

4 Search Bar

: This function indicates current time line of data which is being searched.

You can immediately search for any recorded data by horizontally moving search bar.

[Note]

Black screen will be displayed if there is no image for the camera you selected.

4

Playing Recording

▶ Playback

: Select the date, time and camera number to playback.
Adjust search speed and delay to display as you want.



Backward Play



Forward Play



Stop



Play one picture backward



Go to the last one hour of the retrieved image



Play one picture forward



Go to the last one hour of the retrieved image

Search Tools



Panorama

: Display selected camera's image consecutively in 4ch divided screen.



Zoom

: Zoom in and out. Gives five times magnification.



Digital Zoom

: Each click on Digital Zoom button converts among zoom-in / zoom-out / drag.

Zoom-in (+) : Right click on certain spot zoom in up to 13 grades.

Zoom-out(-) : Right click on certain spot zoom out.

Drag : Move the magnified image by dragging

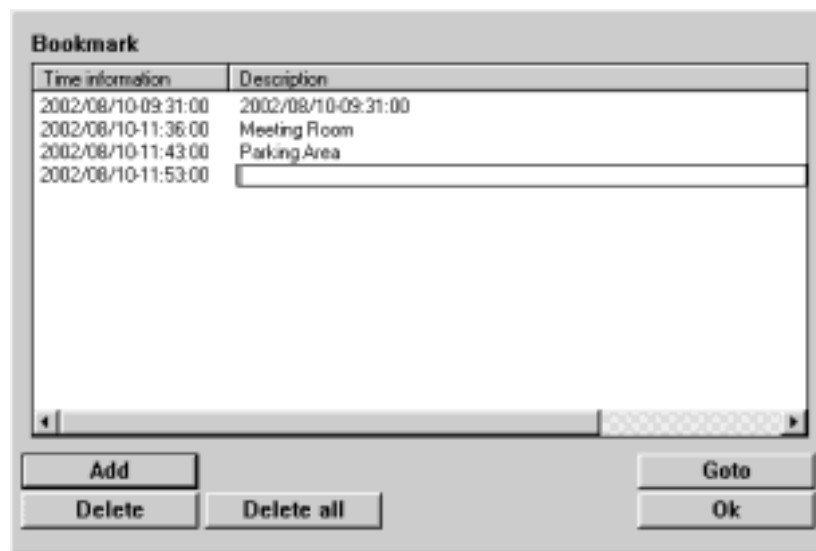
In the search mode zoom in or out is enabled only when one camera is selected.
(Zooming is not possible while playing multiple cameras' image. Therefore, click 'stop' and play One camera to zoom.)



Bookmark

: Records the location of image under playback

You can go back to the recorded location directly next time.



➤ Time Information

: Display time of bookmarked image.

When you add the image location during search the date and time will be saved in the order by date and time.

➤ Description

: You can input description on the bookmarked image.

If you do not input description the one in [time Information] will be input.

➤ Add

: This is to add the image location to the bookmark list.

[Add] If you click [Add] button, the current image location will be added to the bookmark.

➤ Delete

: This is to delete the bookmarked location.

In order to delete bookmarked record select it in the bookmark and click [Delete]

➤ **Delete all**

: Delete all the bookmarked image location.
All the image location will be deleted if you click [Delete all] button.

➤ **Goto**

: You can go to bookmarked image location by clicking this button.
Click [goto] button to go to the bookmarked location after selecting the bookmark.

➤ **OK**

: Select [OK] button after adjusting bookmark information.



Recording during playback

: Image search speed will increase if DVR does not record while searching.
In order to set it as recording during playback, click this button again.
(This will be disabled in monitoring mode.)

[Notice]

Though the image recording goes on while searching, however, recording graph does not change. You should go to live mode and come back to searching mode to see updated graph.

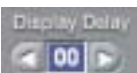
Screen Division

: Playback recorded image in division.
4ch,9ch,16ch can be selected and deactivated mode cannot be used..
(8ch DVR supports only 4 and 9 division mode.)



Search Speed

: Playback skipping the certain number of image.
The number is not the number of actual image, but the one set inside Site program.



Display Delay

: Time to display one image on screen.
0 (Fastest) ~ 50 (Slowest)

5

Search Tool

Brightness



: Adjust brightness of the image.

Contrast



: Adjust contrast of the image.

Smooth & Sharpness



: Make the rough image smooth and vague image clear.



Noise Reduction

: Reduce noise in the image.



Turning image

: Turn the image in the angle of 90, 180 or 270. And flipping is possible.



Restoration

: Getting back to the original image before modification by search tools.

[Notice]

Search tools can be used for one camera's image only. Therefore, you should click stop button and choose one image to use above tools.

6 Audio Setup



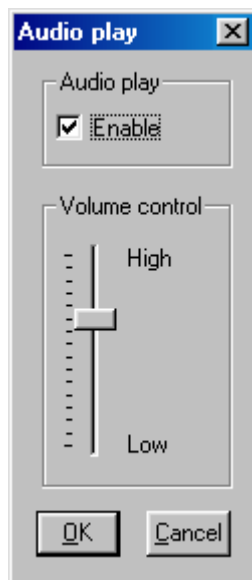
Audio playback setup

: Playback with recorded audio.

Click on left button creates “Audio Play” window as below.

Tick on the box next to “Enable” in “Audio Play” window.

Adjust volume properly.



[Notice]

- Audio can be played only on one selected channel. You cannot play audio watching more than 2 channels. You should choose one channel to play audio.
- Video loss can take place within the first 1~3 seconds of play back, this is due to the video and audio synchronization and is not a fault
- Audio can only be played back in normal forward play. Reverse Play or Frame Play is not possible
- Skip and delay cannot be used with audio play back.
- Please refer to 『Appendix』 for audio setup.

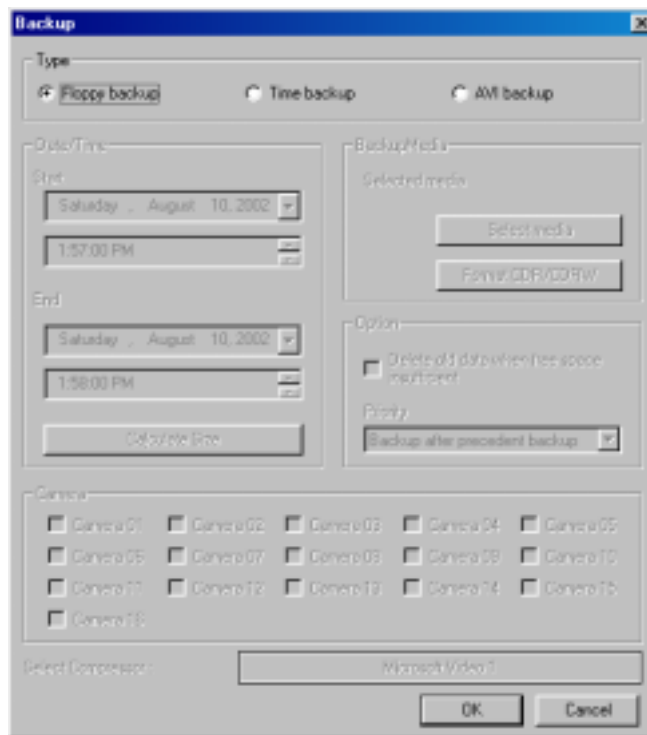
7 Data Backup



Backup

: copy restored data onto floppy disk or other media on a selected time or AVI format.

Floppy Backup



☒ Floppy Backup

: This is used to backup one still image onto floppy disk in BMP or JPEG format. This image can be viewed with other image viewer.

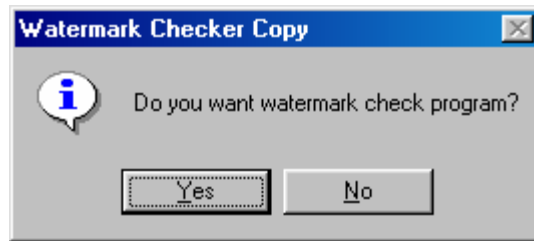
When you click 'backup' icon while searching above 'backup' window will appear.

Floppy backup gets activated during searching only one image.

➤ Floppy Backup

Click [Floppy Backup] in “Backup” window and click [OK]

Below ‘watermark checking’ window appears.



If you click ‘Yes’, the selected image will be copied onto floppy disk with Watermark checking program.

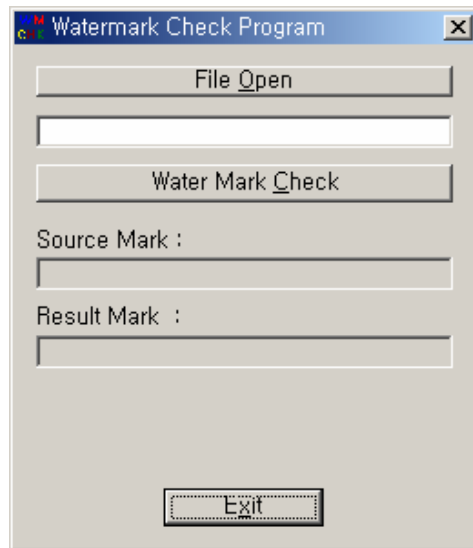
Only one image can be copied in floppy disk backup and ‘watermark’ checking program will be copied only at the first copying.

[Notice]

The image will be copied onto Floppy diskette in BMP or JPG format. The image will be copied with the ‘watermark checker program’ to check to see whether the image was illegally modified or not.

[How to use Watermark Checker]

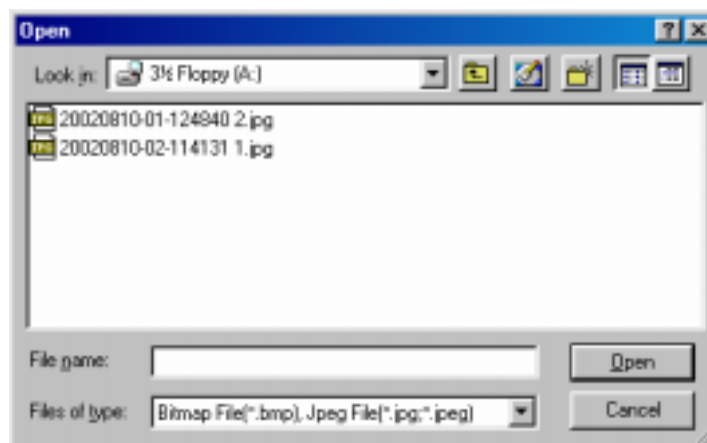
: You can check the authentication of the image restored in BMP or JPG.



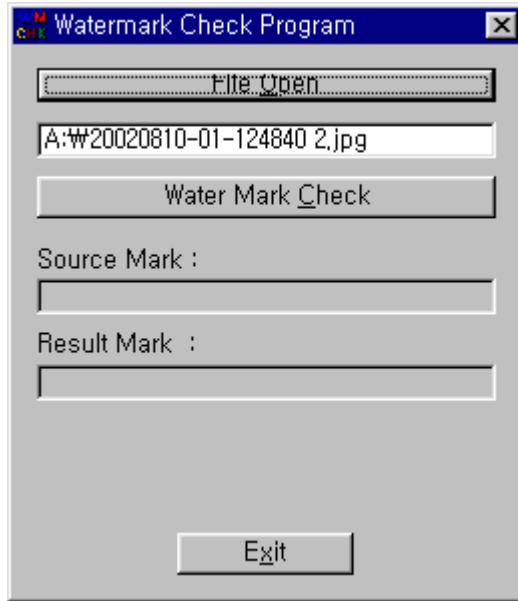
✘ Watermark Check Program

If you execute 'WMChecker.exe' which is copied to the Floppy Disk with the backup image, following 'WaterMark' checking program appears.

If you click 'File Open' button, below widow will appear to check an authentication of the image



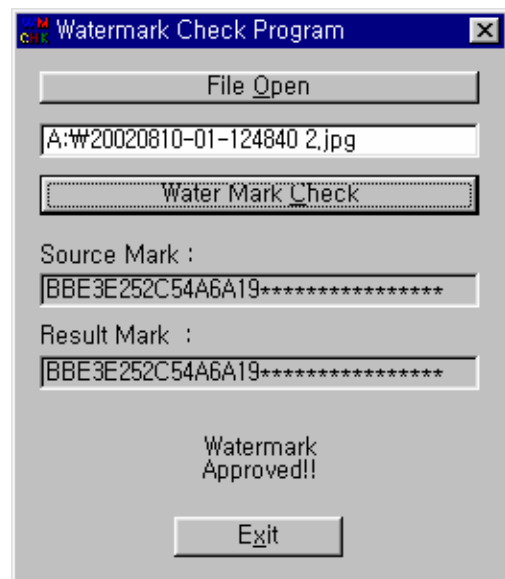
When you open the file name, a window below will appear. Select 'watermark check' to verify the image.



Once verification is completed windows similar to those below will appear.



< Corrupted image >



< Uncorrupted image >

Time backup (Large Media)

: This is a backup using other than floppy such as HDD, CD-RW, mobile driver, network driver or copy using IP address.



➤ Backup by time

This streaming data is our own data type. So this image cannot be read using other program than SAMSUNG Center program.

➤ Date/Time

: Select the time to start and finish backup.

This time setup should be earlier than current time. If this is later than current time backup does not work despite clicking [OK]

➤ Calculate Size

: Click this button to calculate expected data size for the selected time.

▶ **Select media**

: Media to use on backup.

You may select HDD, CD-RW, Portable drive, Network Drive, Remote IP Address except floppy disk

▶ **Format CDR/CDRW**

: This is used when you select CD to backup data..

If CD was not formatted, use Direct CD program for CD formatting process. When you select [Format CDR/CDRW], you can format CDR/CDRW media by Direct CD (Refer to appendix)

[Notice]

Direct CD program has to be installed in window in order to format CD.

▶ **Option**

[Delete old data when there is not enough space]

: This function will record data after deleting the old data when there is not enough storage space to backup the data.

[Priority]

: Select the priority of backup data.

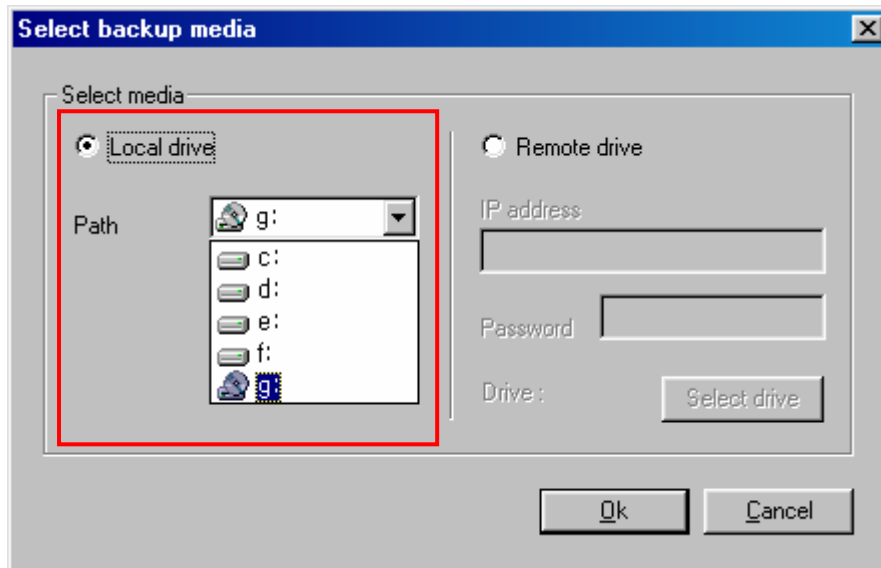
Wait until the processing work is done; start the backup after current backup and waiting data have finished their backup.

Start after the precedent backup; when current data's backup is completed, do not back up the waiting data if the other data was selected first.

▶ **OK**

: Backup will start from the designated backup media drive when you click [OK].

[Backup onto CD-R / CD-RW]



➤ **CD-R/RW backup**

- Select [Select media] from "backup media" window.
- From "Select backup media" window, select [OK] button after selecting CD-RW drive which you will backup.
- You need to format CD in order to backup CD-R/CD-RW from DigiNet program.
- When the CD is unformatted or failed to Backup, please follow this step to Format the CD. (Refer to page 72)
- In order to backup on CD-R/CD-RW, **Direct CD** S/W should be installed on the system.
- If the CD is formatted, follow the same way with backup to HDD, or removable drives (DVD-RAM, ZIP, MOD, RB)

AVI backup

: converts compressed streaming data into AVI format so that windows media player can playback the backup data.



➤ AVI backup

Data backup is available to HDD, CD-RW, mobile drive, network drive and remote drive using IP address except for floppy drive

Backup by camera is available during backup in AVI format, and backup of Max. 5 min video per one time is possible.

➤ Date/Time

In case of backup into AVI, the time between start and end of backup is automatically set to Max. 5 mins.

➤ Camera

: select the camera number to backup in AVI.

Multiple cameras can be selected and recorded in AVI.

▶ **Select Compressor**

: You can select available compression codec under AVI backup.

[Tip]

- In order to format CD, DVR should have Direct-CD installed.
- When other advanced compression codecs than the basic Mpeg compression codec provided on Window were installed, AVI files are saved into smaller sizes, the compression quality is advanced and the time for backup is reduced.
- According to types of compression codecs, number of selected cameras and set backup time, AVI backup time may differ significantly. (When the basic codec provided on Window is used, codecs of Mpeg4 Video Codec v2 over are recommended.)
- In case of backup into AVI files, audio data are not backed up but only video data are backed up into AVI files.
- According to the resolution of saved video data, resolutions of AVI files into which the data are backed up are as follows.

SAMSUNG Resolution	AVI File(NTSC / PAL)
640x480(768x576) 320x240(384x288)	320x240
160x120(192x144)	160x120

▶ **Select media**

: Select media type

HDD, CD-RW, Mobile Driver, or Network driver except floppy disk can be used.

▶ **Format CDR/CDRW**

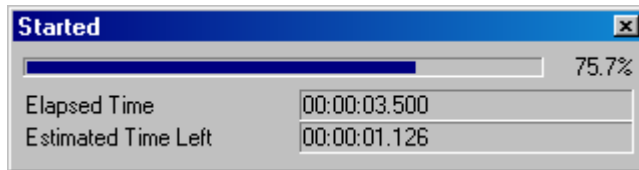
: This is used when backup media is CD.

When CD is not formatted a user should proceed CD format using Direct CD program, and once he chooses [Format CDR/CDRW], Direct CD program begins to format CDR/CDRW media.
(refer to appendix)


[Notice]

In order to format CD, DVR should have Direct-CD installed.

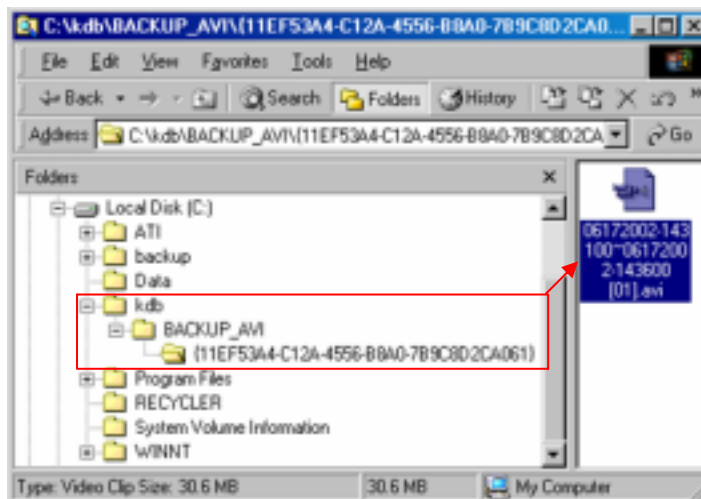
[AVI Backup Status]



➤ Started

: When you double click on animated icon  located on top of image while real time is in progress, current backup data and backup status and its progress rate, lapsed time, and remained time can be checked.

[AVI Real Time Backup File]



➤ Choose AVI Real Time backup file

: In order to check AVI Real time backup file, double click on recorded file from assigned drive "KDB \ BACKUP_AVI \ {xxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx} \ month day year-time min second ~month day year-time min second[camera No].avi" then you can check appropriate file information using Window Media Player which is separately provided by real time player or window.



➤ **AVI Real Time Backup File and Caption information**

: Using media player provided from Window, caption information of Date and time, days, camera number and etc can be indicated. Other real time player shows image only.

[Note]

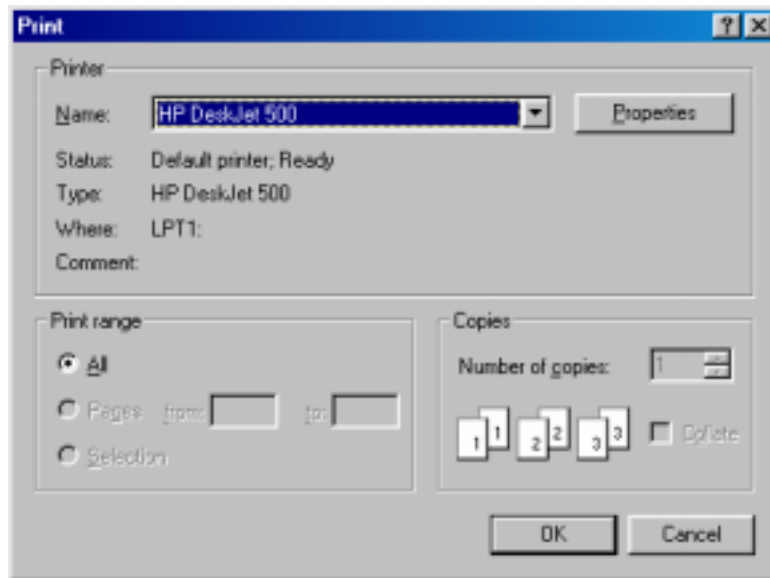
We recommend minimum of v6.4 for Media Player and if caption information cannot be checked, then choose 'Caption' from [View] to check such information.


8 Print Search Screen



Print

: You can only print when Print button is selected from searched screen while one image is magnified, then click on [OK] button shown below (Size and Brightness must be adjusted in advance).



 Following ERROR will occur if print setup is not completed



[Tip]

Print Setup

1. Click Start → Setup → Print from Windows 98
2. Double click on 'Add Printer' when Print Menu appears
3. Click [Next] when Add Printer Wizard executes
4. Check to see if [Local Printer] is selected and then Click [Next] if Printer is connected to system.
5. Select Print Driver from the box where it asks manufacturer, name, and model of printer.
6. Print setup is completed when Driver is installed on screen.

Size of Image Output

1. It produces output and the printed size is equivalent to the magnified ones seen from the screen.

When printer is not working,

1. Check to see whether printer is setup from Window or not
2. If the printer is setup to the system but still not working, then check to see if cable or power cord are connected.

IV. Appendix

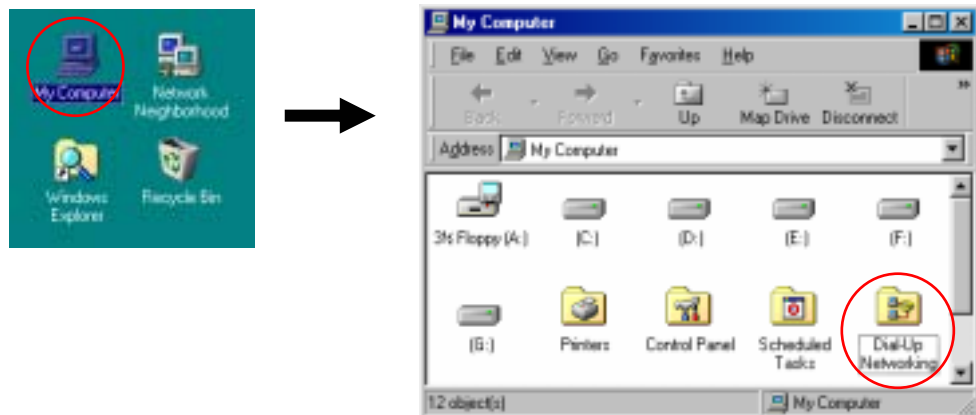
1

Manual ISDN Setup without router

- ✘ [When there are a few dial-up servers depending on the ISDN modem]
 - Basically ISDN setup will be done automatically when you run KPPPSetup.exe. However, there might be cases that you need to setup manually when there are a few dial-up servers depending on the ISDN modem. In that case, please follow the next step.
 - When the ISDN modem supports a few dial-up servers, you should select a proper dial-up server that supports ISDN among the dial-up servers.
 - Above step should be done after executing KPPPSetup.exe.

✘ Manual Setup

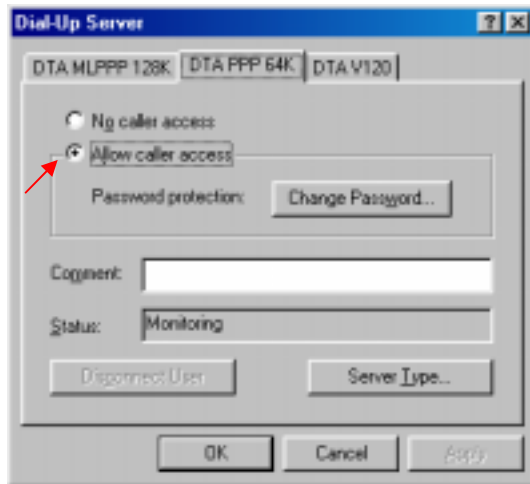
Select 'Dial-up networking' on 'My Computer' in background



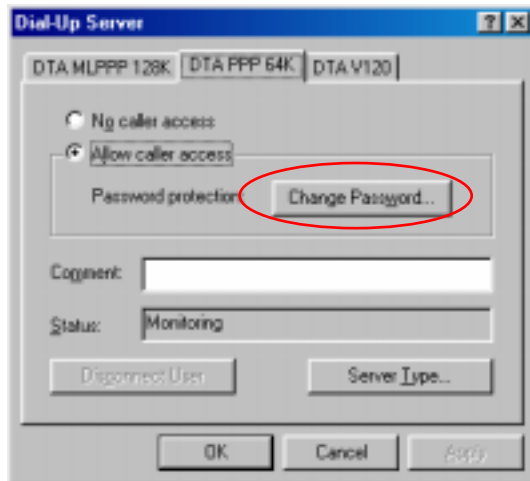
'Connections' → 'Dial-Up server'.



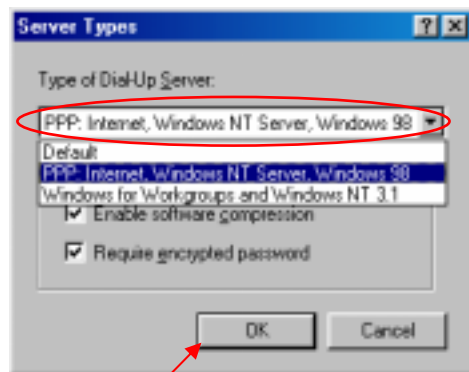
Choose "Allow caller access"



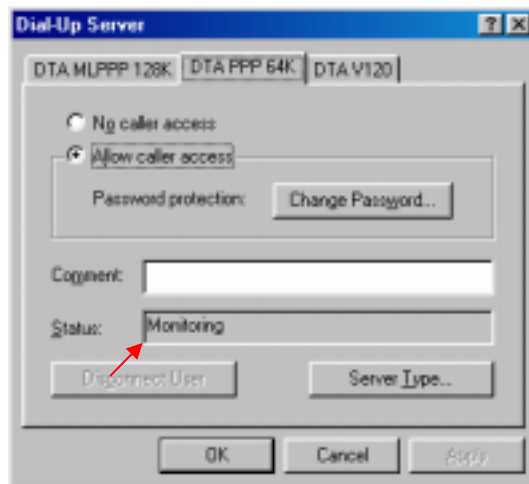
Enter to change password and input '1234' for all three blanks.



Choose “PPP: Internet, Windows NT server, Windows 98” on ‘Server Type’.
Check “Enable Software Compression” and “Require Encrypted Password” and click “Apply”
button and “OK” .



Make sure if there is “Monitoring” in the “Status”.(The type of dial-up server is different depending on the ISDN modem as you see above.)



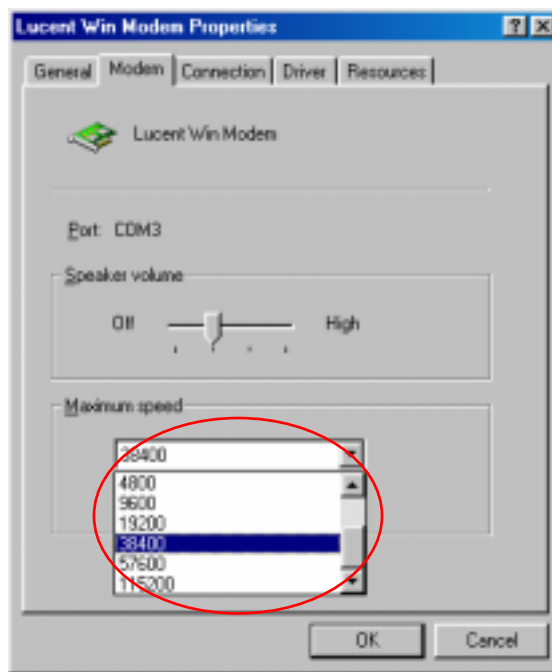
[Notice] connection speed

When you get disconnected a lot on PSTN or have a bad connection, go to 'Control Panel' → "Modem" → "General" → 'Properties'.

Select '38400' on Maximum speed on "Modem properties" (Select '115200' for ISDN.)

To make the connection between Center and Site set 'Maximum speed' the same.

(Connection might be bad depending on their line status like noise and defective line.)



2

Formatting a CD using Direct CD

▶ [Formatting CD using Direct CD]

When you try to backup on an unformatted CD or in case where the message of backup failure has shown, format the CD as follows.

Below contents is based on Direct CD v5.1. If some other message comes up, please refer to Direct CD manual.

▶ CD format and backup

Select [Media Select] button in "Backup Media" -> Select CD-R/RW drive in "Local Drive" -> Click [OK]

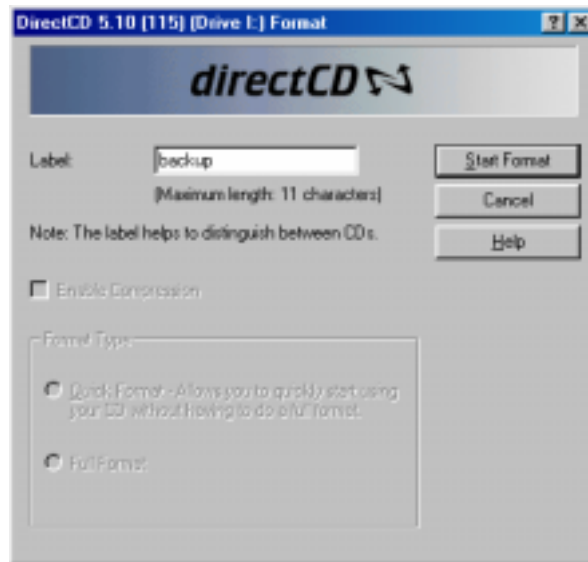
Insert empty CD-R/RW media and click [Format CDR/CDRW]

(If CD-R/RW drive is set as "auto" Direct CD program will run automatically.)

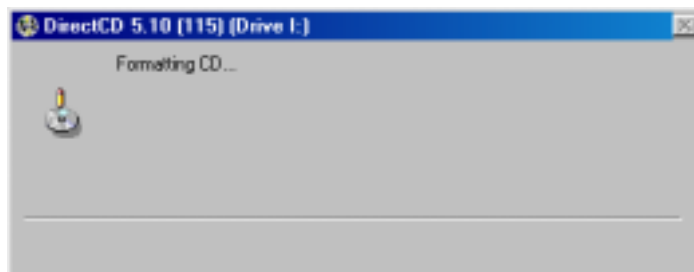
Check if CD-R/RW is selected when the Direct CD format utility comes up, Direct CD and click [format CD]



When you see a “drive format” window, input a name to “Label” and click [Start Format] button




“Formatting CD..” Window will appear and starts CD-R/RW media format.



When the format is done, below window will appear saying “CD Ready”. Then click [OK]



If Direct CD format utility windows come up, click this button  to close..
(Do not click [eject] button.)



Select the type, time, and camera for backup and click [OK] button.

“WRITE” LED of CD-R/RW will be turned on till CD writing is done.

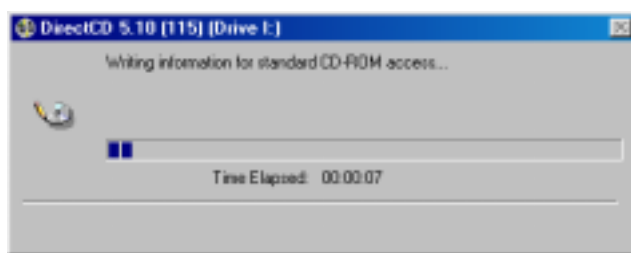
Do not press button in CD-R/RW

Once the backup is done, click “Eject” button in CD-R/RW

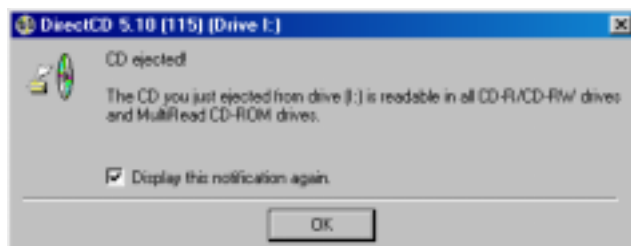
If "Direct CD Eject Options" window comes up, select "Close to Read on Any Computer" and click "OK"
(If possible select "Protect CD so it cannot be written to again" not to re-write on CD-RW)



Below window will appear to close CD-R/RW media. Wait until this procedure ends.



Once the above procedure ends below window will appear. Then eject the CD-R/RW media and click [OK] button.



3

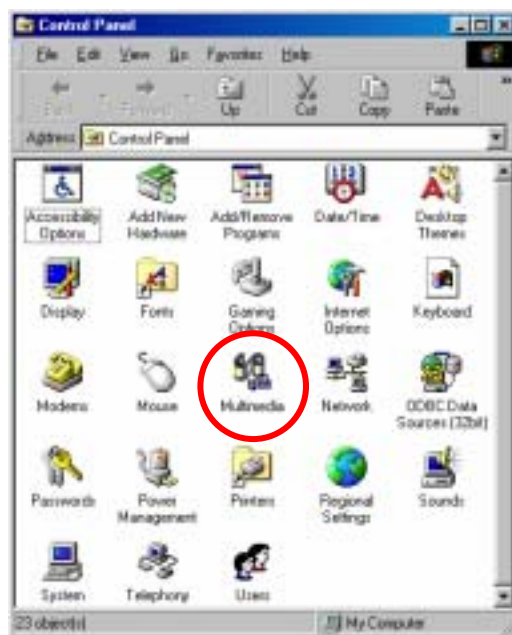
System setup for Audio function

✘ [Audio volume setup for voice recording]

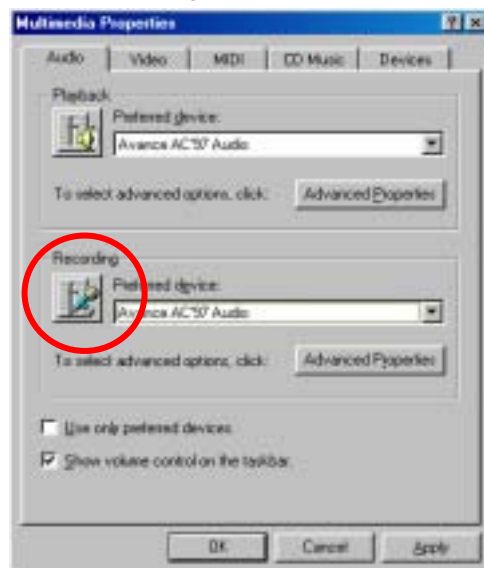
Prior to recording voice, you need to first control audio volume for microphone.
Go to 'Start → Program → Application → Entertainment → Volume Control'

✘ Setup

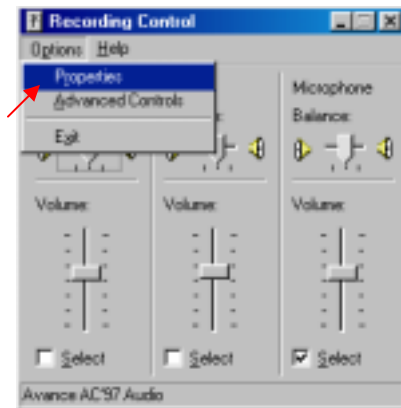
Execute 'Multimedia' in Windows control panel.



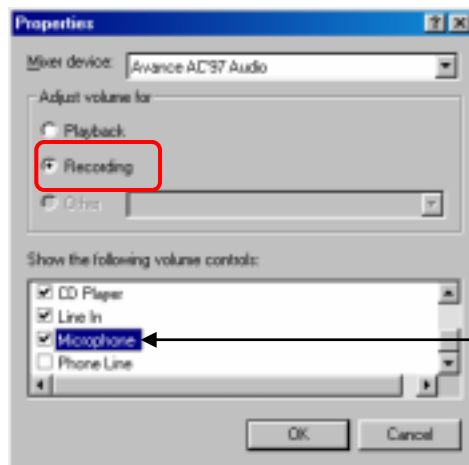
Click "Recording" in Multimedia properties by clicking "Recording" button.



If the Recording window appear, go to 'Option -> Properties'

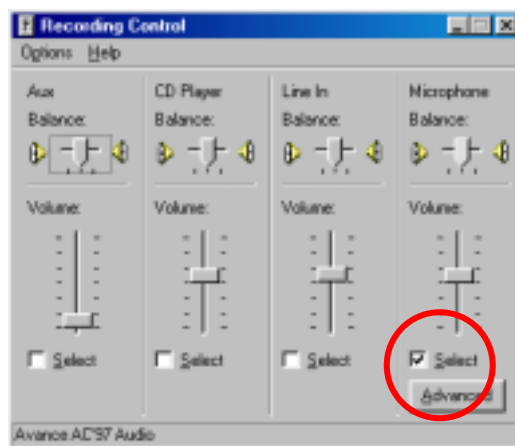



Select 'Microphone' in 'Properties' window and click 'OK'.



▪ In order to use voice recording function "Microphone" should be set from "Properties" tap.

If you click [OK] below 'Microphone balance' will appear in the 'volume Control' window.



 [Notice]

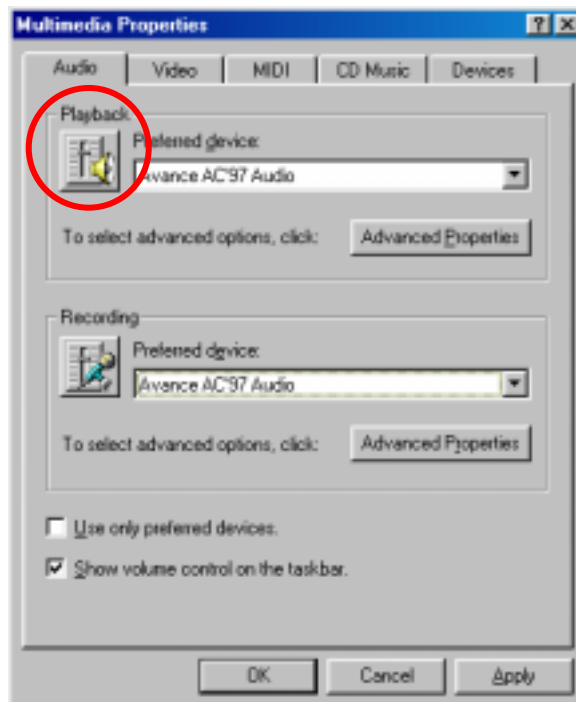
- If you don't tick on the check box of 'Microphone', audio recording will not work properly..
- For proper use of Audio recording and two-way audio function above setting should be made both Center and Site.

✘ **PC setup for use of Microphone from advanced mode**

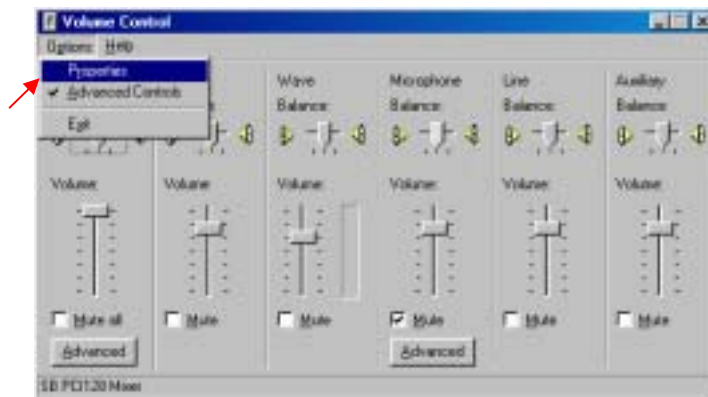
For audio recording following volume setup should be made for microphone. When the audio input through microphone is weak even in the maximized volume you can amplify the audio input by adjusting as follows.

✘ **Setup**

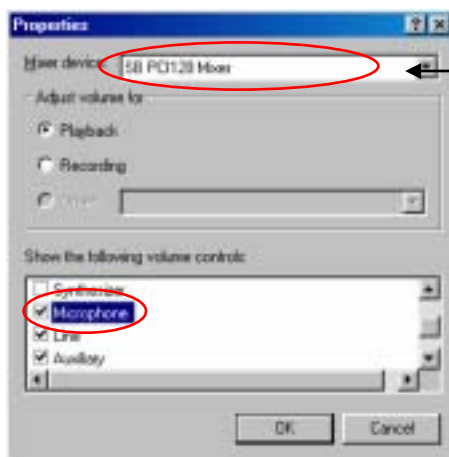
Execute 'volume control' window by following "control panel-> Multimedia-> properties'



Go to 'Options → Properties' then, below window will appear.

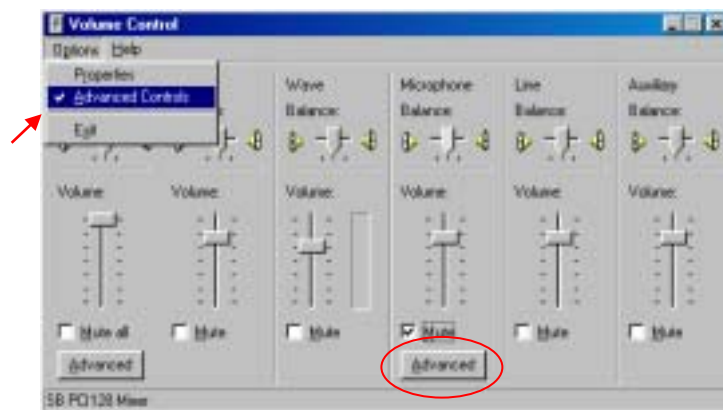


In order to use voice recording function "Microphone" should be set from "Properties" tap.

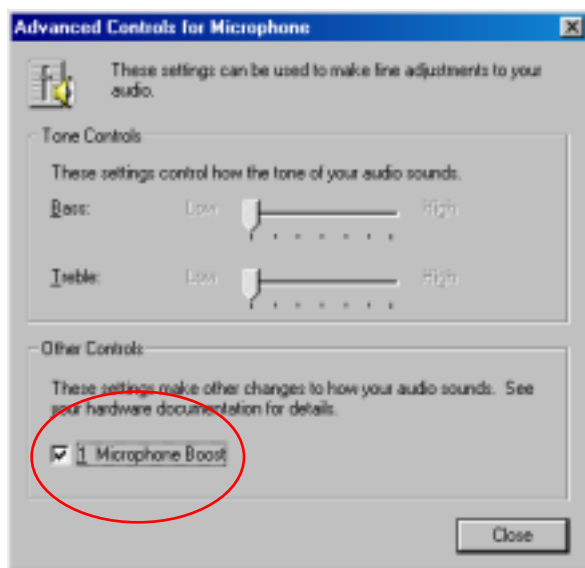


Soundcard mixer is installed in the system.

You can go to 'Advanced Controls for Microphone' by clicking 'Advanced' on 'Microphone' taps in 'Volume Controls'.



Please adjust the options to fit into your system and check the sound output from 'Other Controls'.



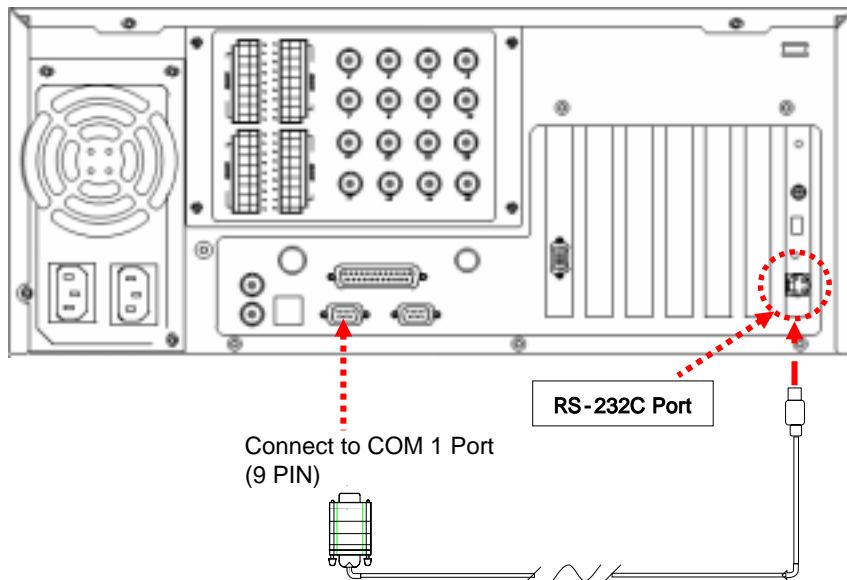
[Note]



- Click on 'Mute' which is circled on the left picture, if you do not want any voice output from a speaker that was inputted to the microphone but record the voice only or if you just want the output of searched voice from the speaker only when installing a microphone.
- When the system doesn't support 'Microphone Boost' function, 'Advanced' button may not appear. In that case you can solve it by using a more sensitive amplified microphone.
- Sound card must be installed properly to use voice recording function.

4

Serial cable connection (input)



- ▶ [Function of RS-232 Serial connection]
- Enables Sensor function
 - Enables Control function
 - Enables P/T/Z function
 - Enables Watch Dog function
 - Enables External monitor output function
(Depends on model)

**[Notice]**

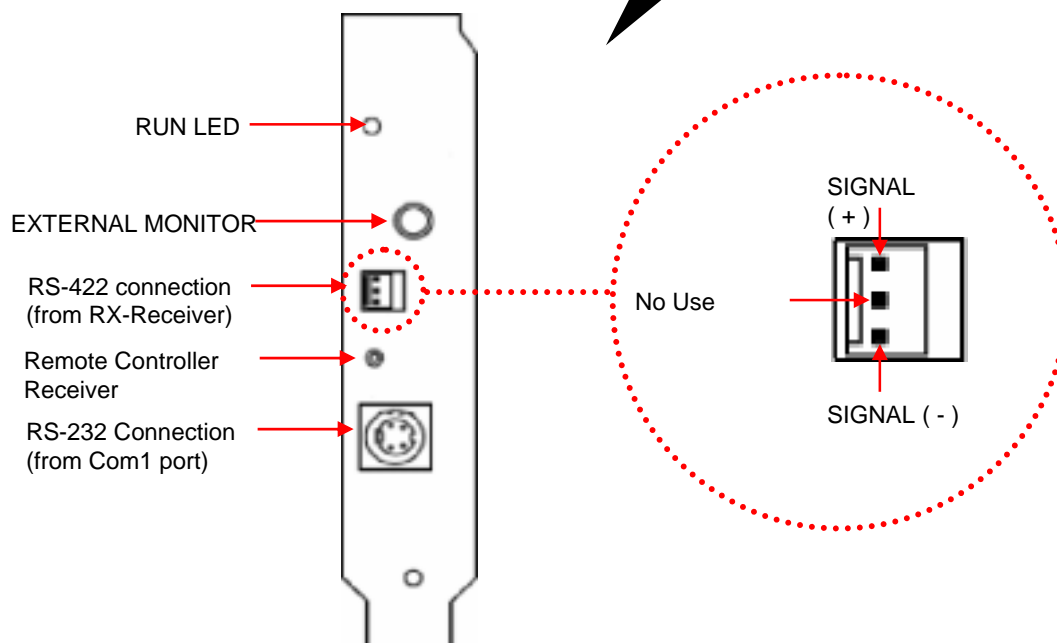
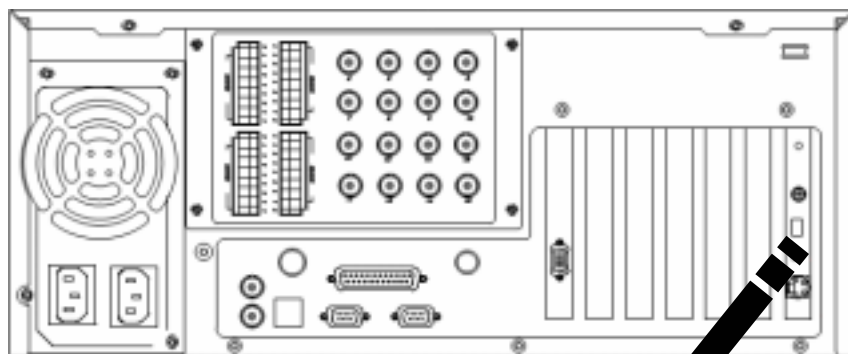
Serial Cable must appropriately connected to COM1 Port and RS-232 in order to use the function above.

Control and Sensor, part of the product which is not supported by P/T/Z may not include Serial Cable. Connection will be provided only for the product that supports control and sensor.

If Serial Cable is not connected appropriately, system may not operate properly and even damage the system. Also, it may not recovered automatically.

(Product which is not supported by Control and Sensor, P/T/Z function uses its own auto recovery function.)

5 PAN/TILT Drive connection

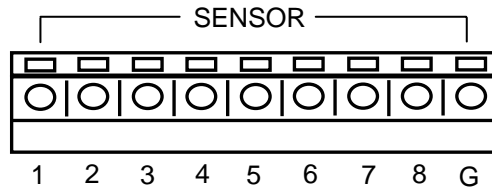


[Notice]

- 1) Be cautious about (+),(-) of the signal line.
Wrong connection of the signal line might cause damage.
- 2) Please contact our distributor if you use other brand's RX Receiver.

6

External Sensor input and Control output connection

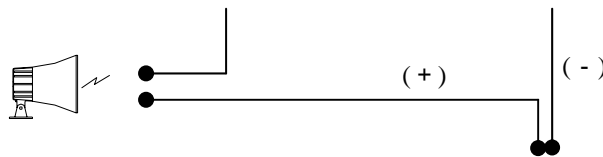
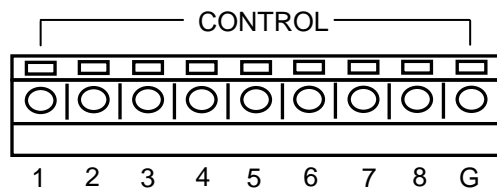


One line of signal line for sensors such as infrared rays, heat perception, magnetic etc, should be connected to COM connector and the other line is connected to any sensor 1-8 connector which you selected.



[Notice]

Please use individual adapter for each sensor's power input.



Alarm, Siren, relay etc.

External Power (DC 12V)

- When the linked connection and control by external sensor works linked control output connects to COM port. (setup->hardware->alarm) Control output related by external sensor it remains "NC" condition normally but it switches to "NO" when it starts sending control signal



[Notice]

The power of adapter should be no more than 12V and 300mA.

Additional external relay should be used to control on and off of device powered by AC input.

Warranty Guide

This product has passed thorough quality control and test, and if this get broken during normal use we provide 12 months warranty service.

Warranty Guide

- Check this warranty sheet first.
- Please contact the distributor after checking out any defect in the product.
- The standard for repairing, replacement or reimbursement follows Customer

Warranty Content

- Any defect under normal use within the warranty service period we give you free repair service according to the warranty sheet.
- We charge you with the fee of parts and service despite free warranty service period.
 1. Any breakage made without care.
 2. Breakage or trouble made by natural disaster.
 3. Breakage or trouble made by breaking the product guide or manual.
 4. Breakage or trouble made by wrong power voltage or frequency.
 5. When you want to reassemble for full system or replace parts within warranty service period.
 6. When unauthorized engineer modified or made damage on the product trying to repair it, we may charge] you with the fee.
- We don't support the breakage after warranty service period. If the customer wants to get it repaired, we charge them with the fee.

Product Warranty Service Sheet

Product & model name		
Product Serial Number		
Distributor		
Date you purchased		
Warranty Period		1 year from the purchasing date
Customer	Name	
	Address	

- This warranty sheet may not be provided again.
- Please get this sheet filled when you purchase the product.
- You should show this warranty service sheet when you get a warranty service.