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1.0 Introduction

System Overview

Thanks for buying this product! This manual is to help you using this product as quickly and smoothly as possible. Inside you will find adequate explanations to solve most problems. In order for this reference material to be of greatest use, please refer to the” expanded table of contents” to find relevant topics.

The Digital Network Monitor System (DNMS) is operated on PC with very friendly user interface and familiar Windows 98 operating system. This software is able to monitor up to 4 cameras simultaneously and independently. An area on the screen can be highlighted, such as window, warehouse, and entrance, and the DNMS will inform you via a modem by telephone, mobile phone and e-mail immediately whenever there is intrusion in that highlighted area. With advanced features,DNMS provides comprehensive solutions to meet your needs for surveillance applications.

1.1 Important Features

4 Independent video windows

- Each camera window can be set and configured individually, such as motion detects, timer schedule, alarm and record functions.

Remote video monitor and control

- DNMS allows not only viewing live video but also controlling of the configuration set-up of camera window remotely through Modem or TCP/IP network.

Local/Remote digital video recording

- DNMS supports video recording locally and at remote site.

Intelligent warning function

- Each camera window has its own alarm function that sends alarm signal to designated cellular phone and/or beeper through modem.

Quick search

- Searching recorded video log by time segment. The system allows user quickly access to the video frame without having to watch entire video.

Smart image motion detection

- Each camera window has its own detection function, to detect motion occurs in the masked area with adjustable sensitivity level.

Timer schedule

- Auto-detects motion on specific time/date/hour. User can set up specific times for Digital Network Monitor System to perform detection function.

Convenient Hot keys function

- Changing viewing window size simply with one keystroke.

1.2 System Requirements (Recommended)

The following describes the suggested system requirements for the DNMS software.

- * **Operating System** / MS Windows 95/98/ME/SE
- * **CPU** / At least 450MHz processor
- * **Memory** / At least 128MB
- * **VGA Card** / 24 bit or higher VGA card, support 800*600 resolution
- * **Sound Card** / 8 bit or higher PCI sound card
- * **Modem** / Standalone model, at least 56K bps or faster voice modem
- * **Capture Card** / LC1 capture card with 4 video input
- * **Storage space for recording** / About 500MB per day per camera
- * **CCD Camera** / NTSC/ PAL compatible camera

1.3 Package Item Checklist

The Digital Network Monitor System (DNMS) is available in one package as below. If you discover damaged or missing items, please contact your retailer.

Package : 4 Port Video Capture Card + DNMS software.

- (1) 4 Port Video Capture Card
- (2) CD with DNMS software and drivers
- (3) DNMS user's manual

1.4 Video Image

- * **Size of video** / 320*240 pixels per video window
- * **Colors** / True Color (32 bit)
- * **Video compression type** / JPEG + Proprietary algorithm
- * **Frame fate of displaying video image** / 10 fps (frames per second)
- * **Frame rate of saving video image** / 6 fps (frames per second)
- * **Frame rate of transmitting video image** / 0.5fps for 56K bps Modem
6fps for Network

1.5 Video Input Formats

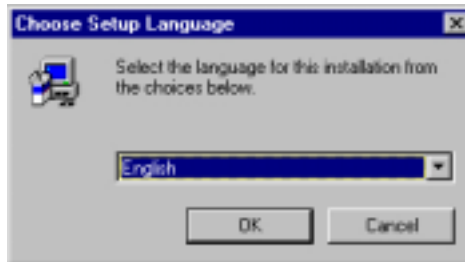
Format	Where Used
NTSC-M	North America, Bermuda, Chile, Mexico, Cuba, Jamaica, Panama, Peru, Venezuela, Korea, Philippines, Taiwan
NTSC-J	Japan
PAL-B/D/G/H/I	Most European countries, Australia, UAE, Kuwait, Israel, Indonesia, India, Malaysia, Hong Kong, Singapore, South Africa, Thailand, Turkey
PAL-M	Brazil
PAL-N	Argentina, Paraguay, Uruguay
SECAM-D/B/E/K	France, Bulgaria, C.I.S., Egypt, Greece, Hungary, Iran, Iraq, Lebanon, Poland, Romania, Saudi Arabia, Syria, Vietnam

2.0 Installations

Using **Windows 98** as your operating system, insert the CD-R in your CD-ROM. This program is self-starting, if doesn't, simply follow the steps as below:

2.1

1. Go to **Start > Run**.
2. Use **Browser** to look for the executive file "**Setup.exe**".
3. Please select the language from the drop-down list and click "**OK**" to continue the installation.



2.2 Install DNMS driver & software

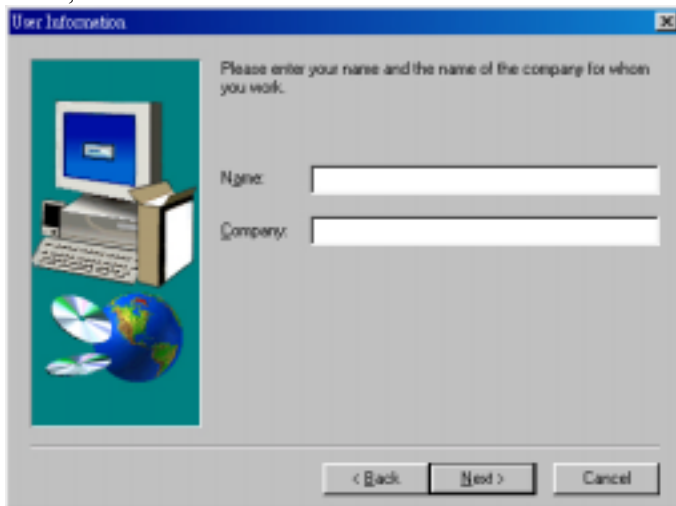
2.2.1 Setup program

Click on "**Next**" and installation will begin right away.



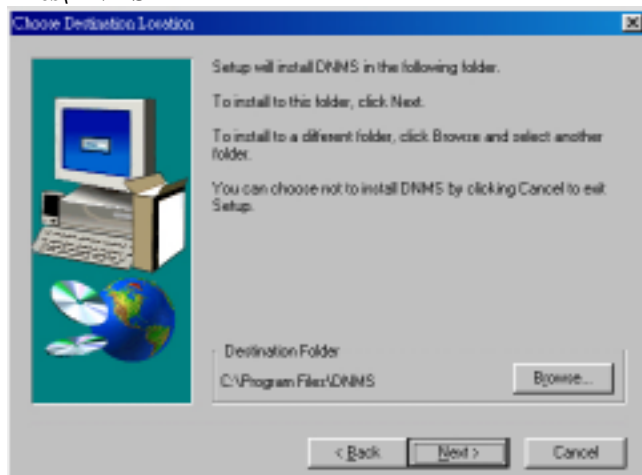
2.2.2 Enter user and company name information

Fill in user and company name information that locates on the CD-R disk, and click " **Next** " button.



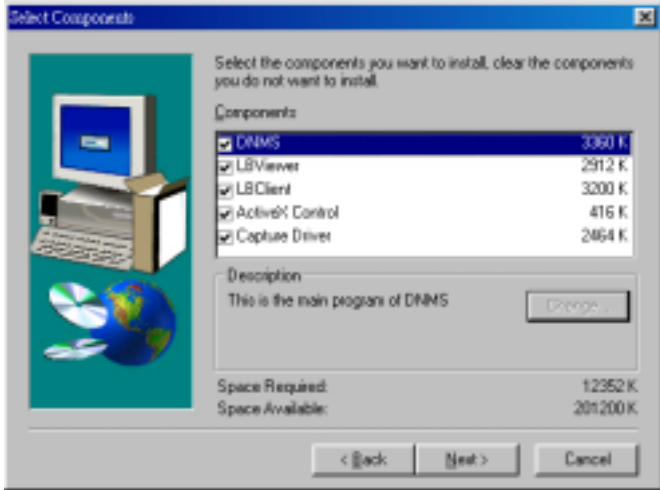
2.2.3 Set up the path for DNMS software

Browse to select the path for the software modules, or just go on to **Next** step, if you select the default path of **C:\Program Files\DNMS**



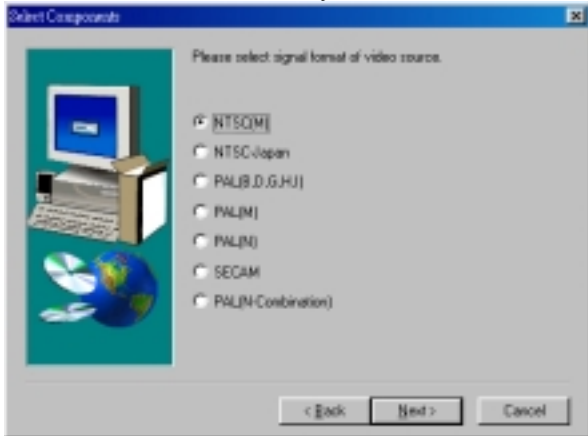
2.2.4 Install application modules

DNMS software is consisted of three application modules, namely **DNMS Main, LBClient and LBViewer.**



You need to install these three modules into the **local PC** , but no **DNMS Main** is necessary with the **remote PC**.

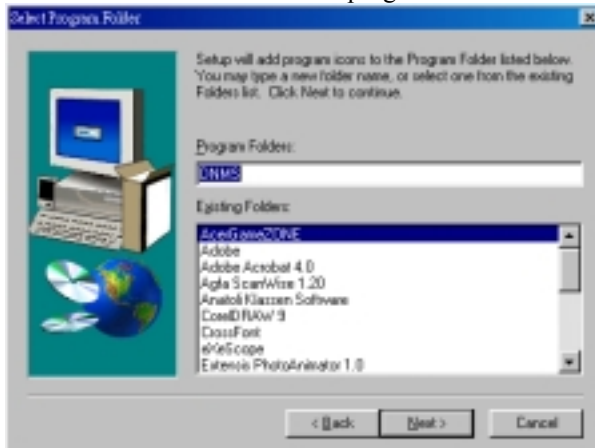
※ **Note:** Local PC is the pc that is equipped with CCD camera(s), and the Remote PC is with which you monitor at remote site.



Click the desired program to be installed and click " **Next** " button to continue installation steps as below.

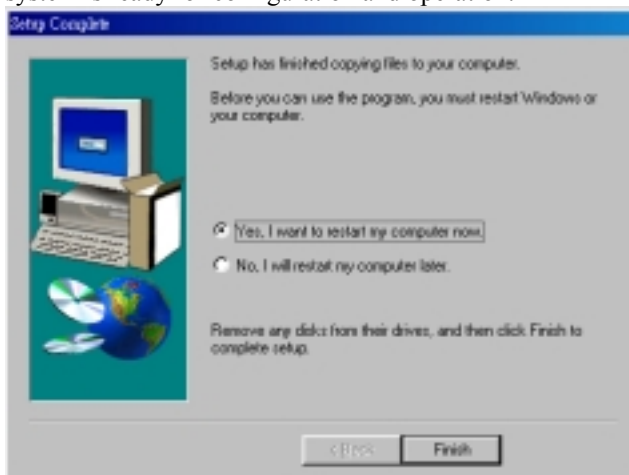
2.2.5 Select program folder

The final window is for creating the program folder for DNMS software. You may change the name of the folder, or select an existing folder from the list. The default program folder name is **DNMS**.



2.2.6 Do not Remove CD-R

Click " **Finished** " to complete the installation. But do not Remove CD-R when restart Windows. Now, the system will auto to proceed with installation of capture card driver. This digital surveillance system is ready for configuration and operation.



3.0 Software Reference

DNMS Software Overview

This complete DNMS software is consisted of three program modules – DNMS Main, LBClient and LBViewer. The main functions of each module are outlined as below.

DNMS Main /

This is the main module with witch you conduct camera feature and function setting.

LB Viewer /

This Viewer module is to be installed into both the local PC and remote PC. It is for you to retrieve and view history video files .

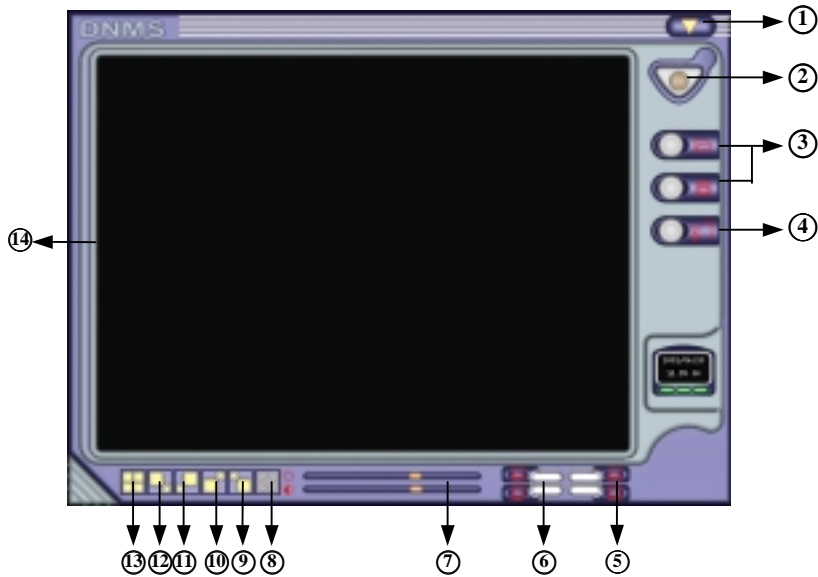
LB Client /

The Client module is for remotely controlling the local system through public telephone line and/or network.

3.1 『DNMS Main』：

3.1.1 Run DNMS Main application

Go to **Start > Programs > DNMS >** and click on the **DNMS Main application**. The following picture shows up.



Main menu of DNMS Main：

Icon	Functional Description
1	Click this icon to close DNMS Main application down..
2	Click this icon to exit DNMS Main application.
3	After setting up the camera configuration, clicking this icon to save it for later use. Load in an existing camera configuration file.
4	Click to open Program Configuration dialog box to setup camera, password and to activate remote control function.
5	Click it to open the individual Camera configuration dialog box. (※Note: Individual camera configuration shall be done after you have finished the Program Configuration)
6	Open/Close Camera
7	Adjust brightness/contrast
8	Display each camera in turn in full-screen every 2 seconds

9	Select the 4 th camera video to full-screen display
10	Select the 3 rd camera video to full-screen display
11	Select the 2 nd camera video to full-screen display
12	Select the 1 st camera video to full-screen display
13	Switch the 4 th camera video to full-screen display
14	Exit full-screen viewing window.

3.1.2 Hot Keys Functions

The following hot keys are for you to conveniently change viewing window size when using the DNMS Client application.

<Ctrl+ F1 > Exit full-screen viewing window

<Ctrl+ F2 > Switch the 4th camera video to full-screen display

<Ctrl+ F3 > Select the 1st camera video to full-screen display

< Ctrl+F4 > Select the 2nd camera video to full-screen display

<Ctrl+ F5 > Select the 3rd camera video to full-screen display

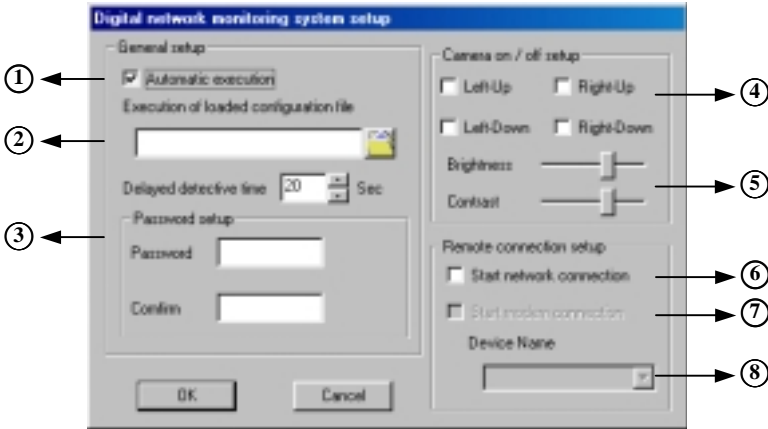
< Ctrl+F6 > Select the 4th camera video to full-screen display

<Ctrl+ F7 > Display each camera in turn in full-screen every 2 seconds

3.1.3 Digital network monitoring system setup

Click 『DNMS Main』 icon⁴ to open Digital network monitoring system

Setup window and you will see the picture as follows:

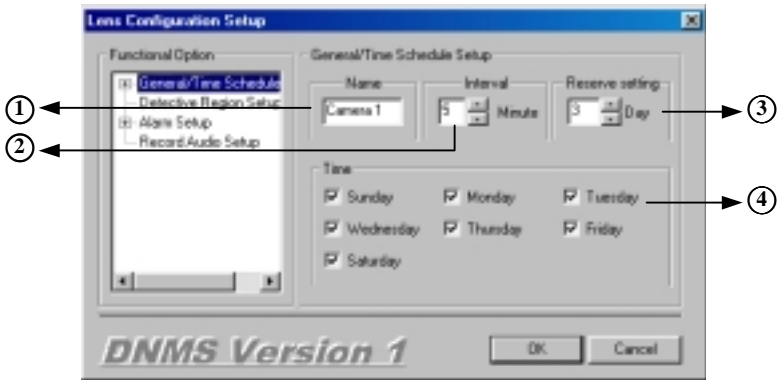


Setting Program Configuration :

Icon	Functional Description
1	When Program Auto Running is selected, DNMS will be started automatically whenever you start the Windows 98.
2	Enter in delay times to this space. Delay time is the lapse between the time intrusion occurs and detection activates.
3	When you choose the password protection, you will be asked to type password twice to verify the password. Next time when you start the DNMS Main application or LB Client application, the program will ask you to type the password to verify and execute.
4	Choose CCD video signal. Click CCD Signal icon to open CCD Signal Setting (※Note: All CCD cameras, which connected to your PC, must be with the same video signal format.)
5	Adjust CCD brightness/contrast
6	Choose Enable use Network remote on line
7	Choose Enable use Modem remote on line

3.1.4 『 Lens Configuration Setup 』 :

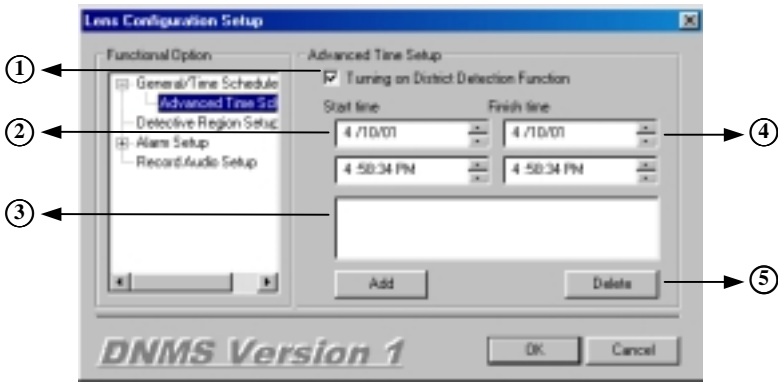
Click 『 DNMS Main 』 icon 5 to open Lens Configuration Setup window and
You will see the picture as follows:
Click General/Time Schedule ◦



『 Click General/Time Schedule 』 :

Icon	Functional Description
1	Enter in the name that you wish to descript the masked area, for instance ” Warehouse ”, to this space.
2	This option allows you to set the time span between alarm events. For example, if you set Alarm Interval at 5 minutes, alarm signal will only be sent out to Pager, or Telephone, every 5 minutes regardless how much motion events are detected in the masked area.
3	Enter "3" to the Day of Keeping space. (※Note: In this case, the system will keep only the video frames of the last three days even there still has storage spaces available. Default of Days of Keeping is set to 3 days.) Enter the days of keeping video frames. (This will depend on the available storage capacity and the quantity of CCD camera equipped. Each camera will take about 500MB of storage space per day)
4	Choose Enable use motion detect by week

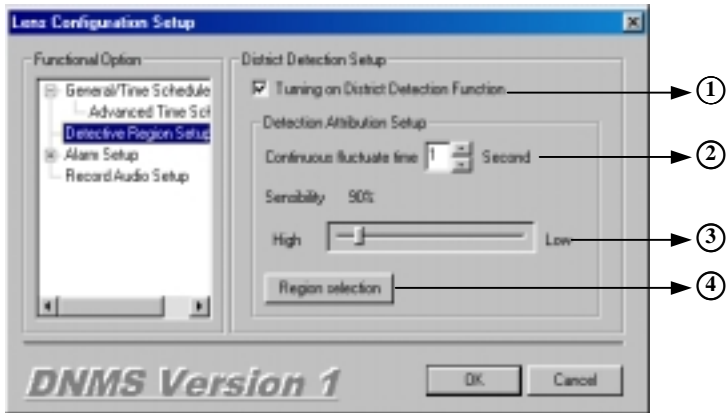
Click 『 General/Time Schedule 』 twice to open Advanced Time Setup Window and you will see the picture as follows:



『 Advanced Time Schedule 』 :

Icon	Functional Description
1	Enable Advanced Setting Specific Time Detection function
2	This function allows you to choose DNMS motion detection function(Start time)
3	This function allows you to choose DNMS motion detection function(Stop time)
4	Click on Add button to add your setting to the Timer Schedule list.
5	Click on Del button to del your setting to the Timer Schedule list

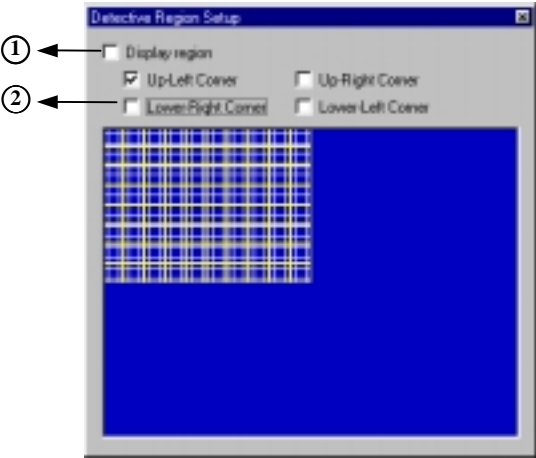
Click 『 Detective Region Setup 』 to open District Detection Setup Window and you will see the picture as follows:



(Detective Region Setup) :

Icon	Functional Description
1	Enable Detection function.
2	Adjust Continuous active time.
3	Adjust compression quantity. Using slide bar to adjust compression quantity. It ranges from 1 (poor video quality) to 100 (high video quality). The default value is 90%. (※Note: The higher compression quality level, the better the video quality but the more data produce Adjust sensitivity. Slide the Sensitivity level indicator to the left to make DNMS more sensitive; or to the right to make DNMS less sensitive. The default is set to 90%)
4	Allows you to set up (mask) on each camera window a zone, or zones, that needs to be particularly observed and you would like to be informed of any intrusions in that masked area.

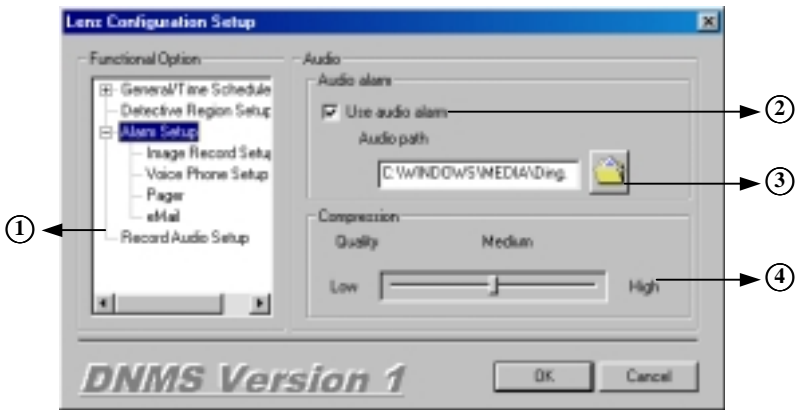
Click『 Detective Region Setup 』icon4 to open Region Selection window and you will see the picture as follows:



『 Region Selection 』 :

Icon	Functional Description
1	Enable Detection area display of the DNMS main(reticulation block)
2	Enable Region Selection

Click 『 Alarm Setup 』 to open Audio Alarm Setup window and you will see the picture as follows:

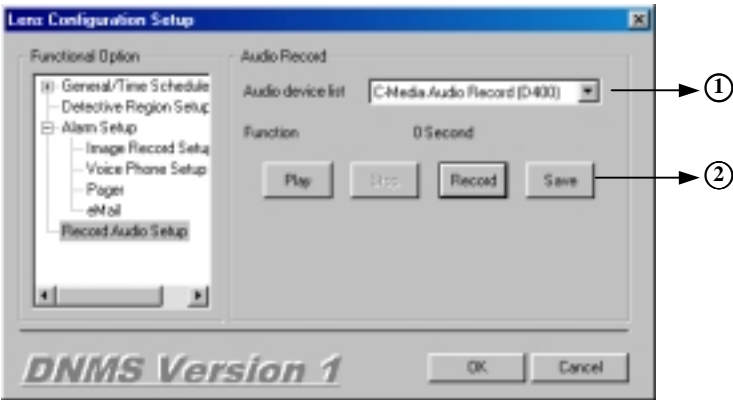


『 Audio Alarm Setup 』 :

Icon	Functional Description
1	Click this icon use sound record function
2	Enable use voice alarm or not
3	Select the location for saving voice file path DEVICE:\WINDOWS\MEDIA*.WAV (The type of sound file must be PCM, 8000Hz, 16Bit,Mono)
4	Adjust compression quality. The higher compression quality level, the more data produced for storage.

Click icon 1 to open Record Audio Setup window and you will see the picture as follows:

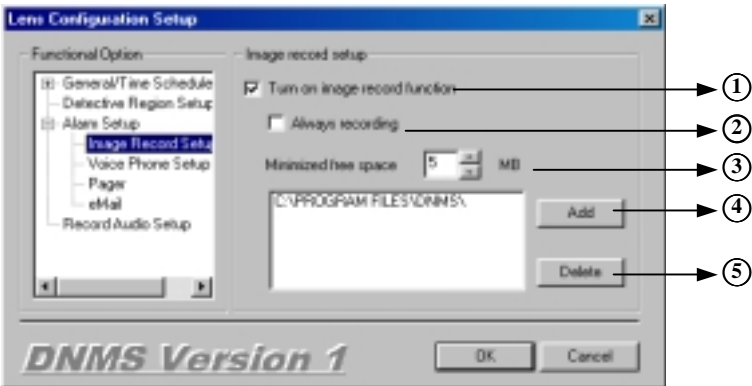
First, please make sure your PC is equipped with sound card, speakers and microphone. If you would like to check whether the related devices functions well,



(Record Audio Setup) :

Icon	Functional Description
1	Check the functionality of the related devices
2	Click save icon to save your sound file. DEVICE:WINDOWS\MEDIA*.WAV

Click『 Alarm Setup 』Setup to open Image Record Setup window and you will see the picture as follows:

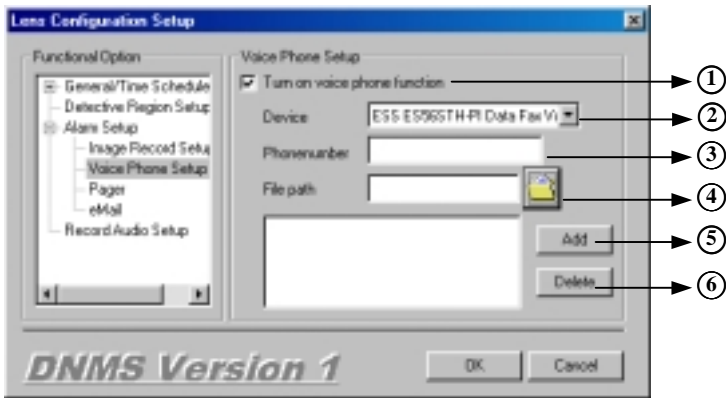


The recording function is set under the tag of <Alarm Setup>. This feature allows user to use multiple storage devices to store CCD camera video. Moreover, when all the storage space is fully used, system can be set to store video frames in circulation. The newer video frames will overwrite the older ones automatically.

(Image Record Setup) :

Icon	Functional Description
1	Enable to turn on image record function
2	Full time record function.
3	Choose Hdd storage space less how much MB to stop video recording funtion, The default value is 5MB(This will depend on the available storage capacity and the quantity of CCD camera equipped. Each camera will take about 500MB of storage space per day)
4	Click on Add button to add save record image track
5	Click on Del button to del save record image track

Click 『 Alarm Setup 』 to open Voice Phone Setup window and you will see the picture as follows:

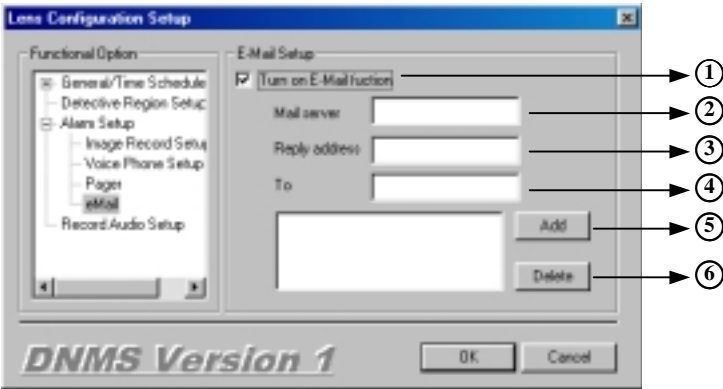


(Voice Phone Setup) :

Icon	Functional Description
1	Enable Open sound alarm function
2	Select the device for Voice modem file path to enable alarming Notification, your PC must be equipped with Voice modem and Telephone line.
3	Enter telephone or mobile phone number(s)
4	Choose sound file: Using the browser to look for the sound file that you want to add. Once found, click on open button to add it. The type of sound file must be PCM, 8000Hz, 16Bit,Mono,or you will unable to add this telephone setting to dialup)
5	Click on Add button to add telephone number(s) and sound file record track
6	Click on Del button to del telephone number(s) and sound file Record track

Click 『Alarm Setup』 to open Email Setup window and you will see the picture as follows:

Users can setup E-mail,when image changes,DNMS can transmit present image to remote computer through E-mail automatically.



(E-Mail Setup) :

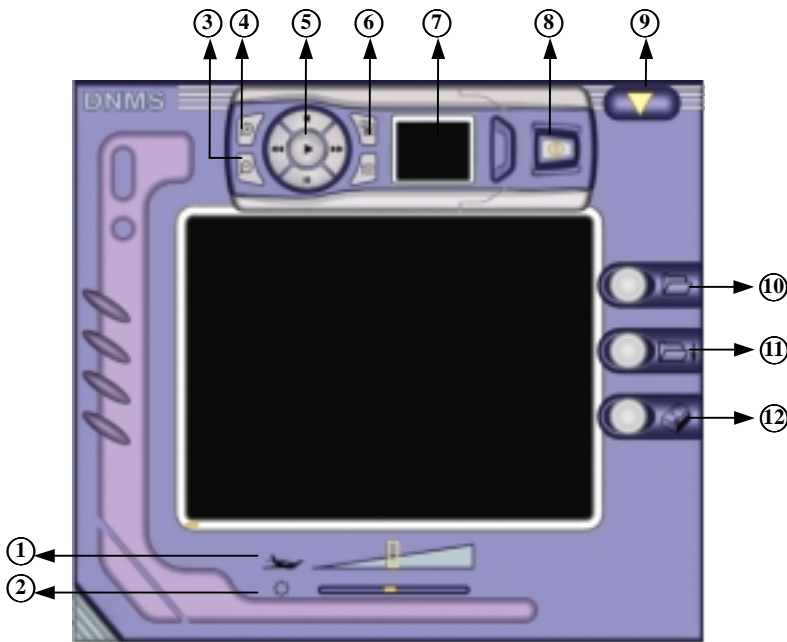
Icon	Functional Description
1	Enable Open use E-mail alarm function
2	Input mail server address
3	Input reply mail server box full address
4	Input deliver mail box full address
5	Click on Add button to add deliver mail box address
6	Click on Del button to del deliver mail box address

4.1 DNMS Viewer :

This is an accessory module that you can install in both local and remote PCs.
This application is for you to search and view history video files.

4.1.1 Run DNMS Viewer application

Go to **Start > Programs > DNMS >** and click on the **DNMS Viewer**.The following picture shows up ◦



Main menu of DNMS Viewer :

Icon	Functional Description
1	Adjust video file playing speed
2	Adjust video file Sharpness
3	Enlarging picture
4	Shrinking picture
5	Video playback control map ◦ Start the playback of selected video file 、 Stop playback 、 Pause the playback 、 Advance to the next video frame 、 Advance to the last video frame
6	Click this icon to open Search Setting dialog box .

7	Click this icon to open record video of the configuration
8	Click this icon to existing recorded video file.
9	Click this icon to close DNMS Viewer down..
10	Click to open recorded video file
11	Click to close recorded video file
12	Print the on-screen video frame with time stamp.

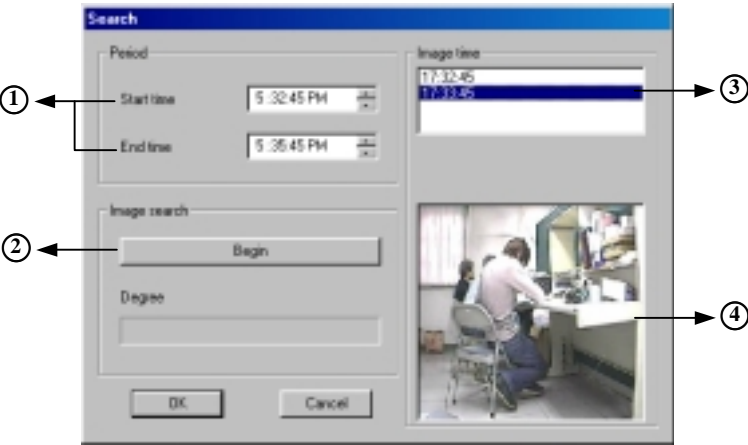
4.1.2 Search Recorded file

Click 『DNMS Viewer』 icon6 to open Search Recorded file window and you will see the picture as follows:

DNMS allows you quickly find the video frame at certain time. Simply follow below steps to search specific video frame.

- 1.Click icon 6 to open Search Setting dialog box as below.
- 2.Enter the desired time and search range. (※Note: The search range can be given in the unit of Second, Minute or Hour. If you give 30 minutes as Search range, the DNMS will start search and show all video frames recorded during The desired time ± 30 minutes.)
- 3.Click Begin icon to start search.

※Note: There is no video frame in image screen if nothing happens within the given search time.



『 Search Recorded file 』 :

Icon	Functional Description
1	Enter the desired time and search range. (※Note:The search range can be given in the unit of Second, Minute or Hour. If you give 30 minutes as Search range, the DNMS will start search and show all video frames recorded during The desired time \pm 30 minutes.)
2	Click this icon to search the desired recorded video file
3	Searched video log file data
4	Searched video file picture

5.1 『DNMS Client』：

Before continuing, please make sure the local and remote PC both equipped with telephone line, modem and network.

5.1.1 Run DNMS Client application

Go the **Start > Programs > DNMS >** and click on the **DNMS Client**. The following picture shows up ◦

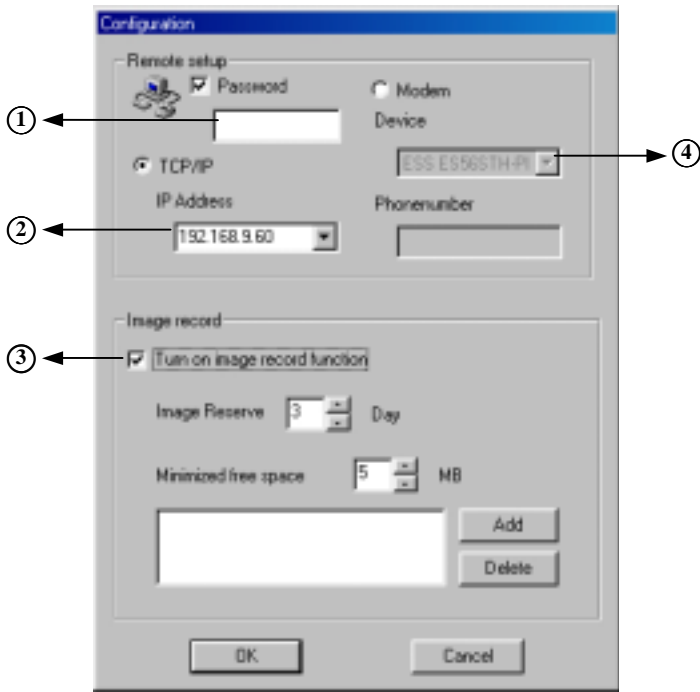


Main menu of DNMS Client：

Icon	Functional Description
1	Click this icon to close DNMS Client application down.
2	Click this icon to existing DNMS Client application .
3	Click to start the connection. Once connected, you can view live video of remote PC ◦
4	Click to cut off connection between Local & Remote PC ◦
5	Click to open the DNMS Client configuration dialog box
6	DNMS allows user to setup or change the camera configuration of Local PC when user is in remote site.

5.1.2 Remote setup

Click 『DNMS Client 』 icon 5 to open Remote on-line data setup window and you will see the picture as follows:



『 Remote setup 』 :

Icon	Functional Description
1	Enter in your password if you did setup password for local PC. ※Note: The password entered here must be exactly the same with that you entered on the local PC password, or your access will be denied.
2	Enter the local pc (the one connected with cameras) IP address.
3	Enable Open use video remote saving of the function
4	Choose your modem model from pull-down list. Enter the local PC's telephone number.Select Network as your connection device from pull-down list