

DSS

NV 3000/5000/6000/7000
Digital Video Recording System

User Manual

FCC NOTICE (Class A)



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

Federal Communications Commission Statement

NOTE- This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. 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. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CAUTION ON MODIFICATIONS

To comply with the limits for the Class A digital device, pursuant to Part 15 of the FCC Rules, this device must be installed in computer equipment certified to comply with the Class A limits. All cables used to connect the computer and peripherals must be shielded and grounded. Operation with non-certified computers or non-shielded cables may result in interference to radio or television reception.

Changes and modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

European Community Compliance Statement (Class A)



This product is in conformity with the protection requirements of EU Council Directives 89/336/EEC amended by 92/31/EEC on the laws of the Member States relating to electromagnetic compatibility.

Warning - This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures to correct this interference.

DISCLAIMER

No warranty or representation, either expressed or implied, is made with respect to the contents of this documentation, its quality, performance, merchantability, or fitness for a particular purpose. Information presented in this documentation has been carefully checked for reliability; however, no responsibility is assumed for inaccuracies. The information contained in this documentation is subject to change without notice.



Following information is only for EU-member states:

The use of the symbol indicates that this product may not be treated as household waste. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

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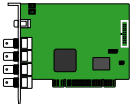
Chapter 1 Introduction

NV DVR is a 32-bit PCI video capture card that works as a digital video surveillance system. It enables you to capture true color images and real-time videos from 4 up to 16 camera inputs simultaneously.

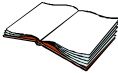
With the latest Motion Detection technology, you no longer need to monitor every single moment of the day; the system automatically records and triggers an alarm when any movement is detected.

NV3000 Package


NV3000 package includes the following:

- 

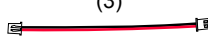
(1)

☐ (1) NV3000
- 


(2)

☐ (2) Quick Guide
- 

(3)

☐ (3) 30cm Watchdog line
- 

(4)

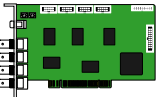
☐ (4) 20cm Video signal line
- 

(5)


☐ (5) Installation CD

NV5000 Package


NV5000 package includes the following:

- 

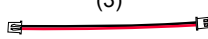
(1)

☐ (1) NV5000
- 


(2)

☐ (2) Quick Guide
- 

(3)

☐ (3) 30cm Watchdog line
- 

(4)

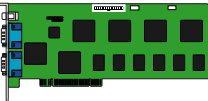
☐ (4) 20cm Video signal line
- 

(5)


☐ (5) Installation CD

NV6000 Package

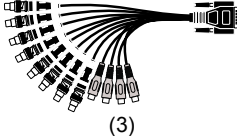
NV6000 package includes the following:

- 


(1)

☐ (1) NV6000
- 


(2)

☐ (2) I/O card
- 


(3)

☐ (3) 2X AV cable
- 


(4)

☐ (4) Quick Guide
- 

(5)

☐ (5) Installation CD
- 

(6)

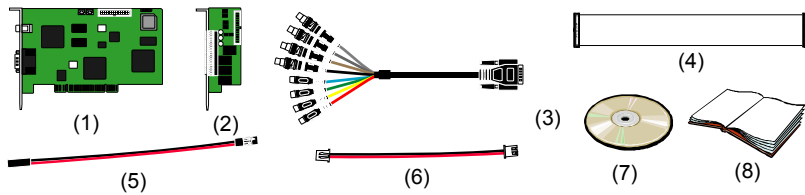
☐ (6) 30cm Watchdog line
- 

(7)

☐ (7) I/O cable

NV7000 Package

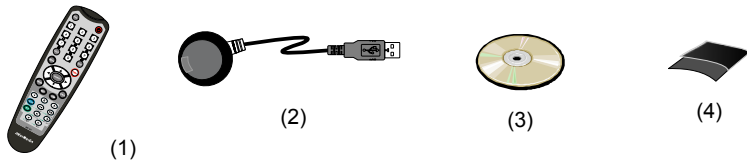
NV7000 package includes the following:



- | | | |
|---------------------------------------|---|--|
| <input type="checkbox"/> (1) NV7000 | <input type="checkbox"/> (4) I/O cable | <input type="checkbox"/> (7) Installation CD |
| <input type="checkbox"/> (2) I/O card | <input type="checkbox"/> (5) 30cm Watchdog line | <input type="checkbox"/> (8) Quick Guide |
| <input type="checkbox"/> (3) AV cable | <input type="checkbox"/> (6) 20cm Video signal line | |

OSD kit (optional)

This allows you to operate NV DVR with the use of remote control.

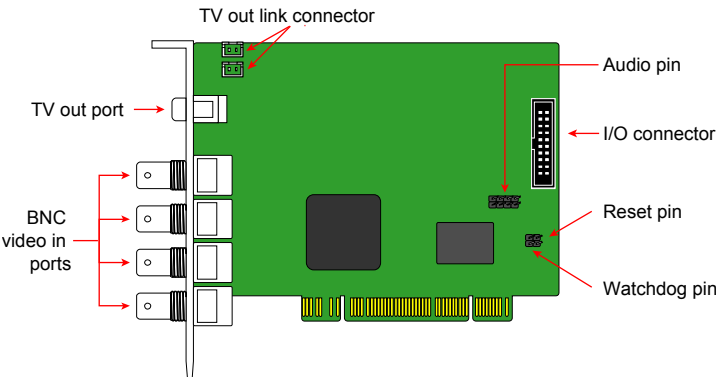


- | | |
|--|--|
| <input type="checkbox"/> (1) Remote Control (batteries included) | <input type="checkbox"/> (3) OSD Installation CD |
| <input type="checkbox"/> (2) IR USB Receiver | <input type="checkbox"/> (4) 2X Velcro Strips |

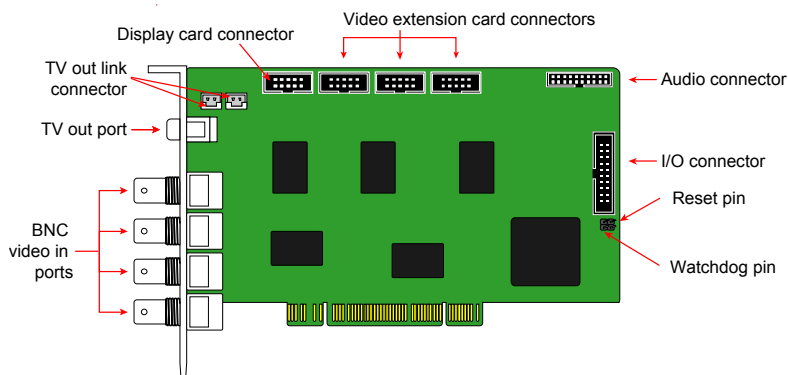


If there is any damage, shortage or inappropriate item in the package, contact your local dealer immediately.

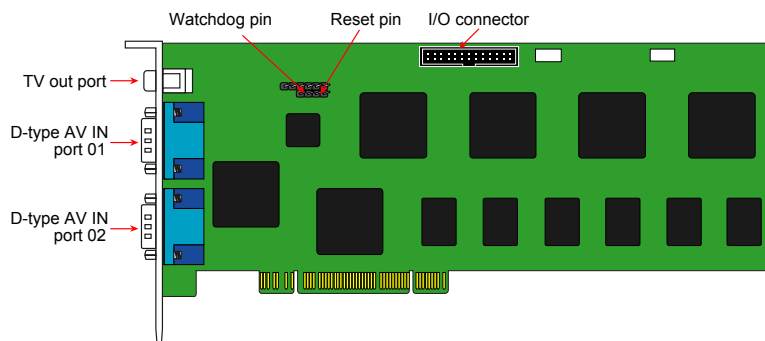
NV3000 Card Parts



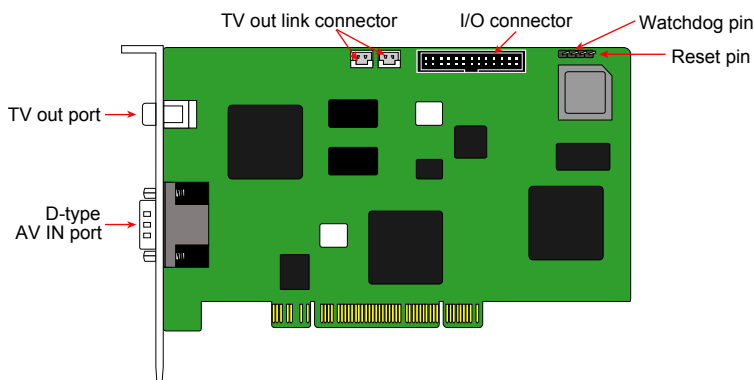
NV5000 Card Parts



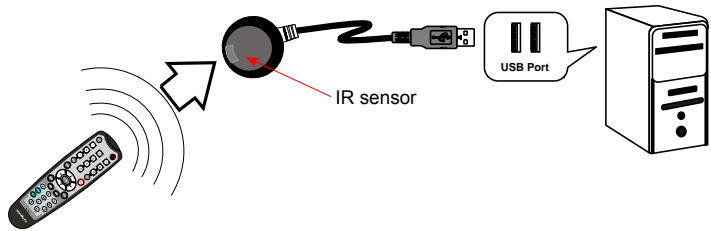
NV6000 Card Parts



NV7000 Card Parts





IR USB Receiver Part & Connection



Manual Conventions

The following conventions are used throughout this manual.

	Caution symbol is intended to alert the user of the important installation and operating instructions. Fail to comply may damage the system.
	Information symbol is intended to provide additional information for the purpose of clarification.

Chapter 2 Hardware Installation

2.1 Minimum System Requirements

First, must verify if the computer meets the minimum system requirements.

- ☐ CPU : Pentium® 4 2.6GHz or above recommended
- ☐ Motherboard : Intel 865, 875, 915 Chipset (VIA/SiS/ALi chipset motherboards are temporarily not supported)
- ☐ OS : Windows2000 Professional or Windows XP
- ☐ Expansion Slots : 1/2/3/4 × 32-bit PCI 2.1 compliant slots
- ☐ RAM : DDR 256MB 4/8 ports (NV3000) 512MB or above for (NV5000)
- ☐ Hard disk : 120GB of free hard disk space, or at least 60GB free space for each partition
- ☐ Media : CD-ROM drive
- ☐ VGA : 16-bit high color SVGA graphic card with DirectDraw & YUV rendering capability, 64MB video memory
- ☐ Audio : Sound card and speakers



For Hardware Recommendation list update, please contact your local dealer.

2.2 NV3000/5000/6000/7000 Hardware Combinations

DSS NV DVR provides powerful surveillance functions and flexible hardware combinations. The table shows the numbers of camera inputs, audio inputs, sensor inputs and relay outputs on different hardware combinations.



Before installing the cards, the computer must be turned **OFF**, the power cable must be **UNPLUGGED** and all other cables that are attached at the back of the computer must be **DISCONNECTED**.

When installing multiple cards, it is important to arrange the cards in sequence so that the cables would not tangle up.

NV3000 hardware combinations:

Hardware Combinations		Camera Input	Audio Input	Sensor Input	Relay Output
NV3000 Card	I/O Audio Card				
1	0	4	0	0	0
	1	4	1	4	3
2	0	8	0	0	0
	1	8	1	4	3
	2	8	2	8	6
3	0	12	0	0	0
	1	12	1	4	3
	2	12	2	8	6

NV3000 hardware combinations:

Hardware Combinations		Camera Input	Audio Input	Sensor Input	Relay Output
NV3000 Card	I/O Audio Card				
4	0	16	0	0	0
	1	16	1	4	3
	2	16	2	8	6

NV5000 hardware combinations:

Hardware Combinations			Camera Input	Audio Input	Sensor Input	Relay Output
NV5000 Card	BNC Video Extension Card	I/O Audio Card				
1	0	0	4	0	0	0
		1	4	4	4	3
	1	0	8	0	0	0
		1	8	4	4	3
	2	0	12	0	0	0
		1	12	4	4	3
	3	0	16	0	0	0
		1	16	4	4	3
2	0	0	8	0	0	0
		1	8	4	4	3
	2	0	16	0	0	0
		1	16	4	4	3

NV6000 hardware combinations:

Hardware Combinations		Camera Input	Audio Input	Sensor Input	Relay Output
NV6000 Card	IO Card				
1	1	16	8	4	4

NV7000 hardware combinations:

Hardware Combinations		Camera Input	Audio Input	Sensor Input	Relay Output
NV7000 Card	IO Card				
1	1	4	4	4	4
2	1	8	8	4	4
	2	8	8	8	8
3	1	12	12	4	4
	2	12	12	8	8
	3	12	12	12	12
4	1	16	16	4	4
	2	16	16	8	8
	3	16	16	12	12
	4	16	16	16	16

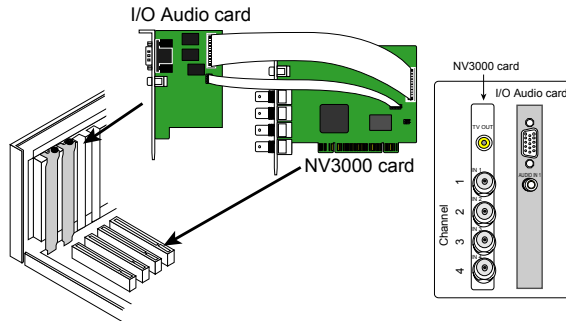
2.3 NV3000 Hardware Installation

2.3.1 Installing (1) NV3000 and (1) I/O Audio cards (optional)



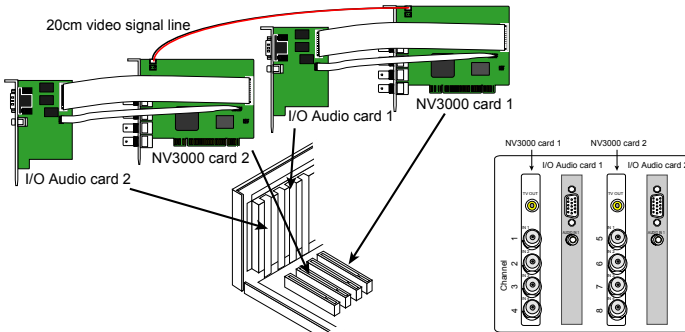
The I/O audio card is an optional item. The D-type I/O port receives and transmit signal from the I/O box where the sensor and relay device are connected to it, while the audio input port receives the signal from the mic. NV3000 card is compatible with I/O Audio card that supports one audio input only.

1. Remove the PC case cover.
2. Remove 2 brackets that cover the PCI slots. Save the screws.
3. Connect the NV3000 card and I/O Audio card with the connection cables.
4. Press the cards into the PCI slots firmly.
5. Secure the cards with the screws.



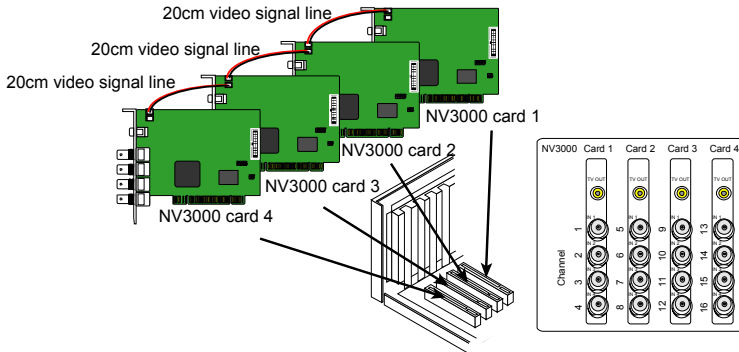
2.3.2 Installing (2) NV3000 and (2) I/O Audio cards (optional)

1. Remove the PC case cover.
2. Remove 4 brackets that cover the PCI slots. Save the screws.
3. Connect the NV3000 card and I/O Audio card with the connection cables.
4. Connect the (2) NV3000 cards with the supplied 20cm video signal line.
5. Press the cards into the PCI slots firmly.
6. Secure the cards with the screws.



2.3.3 Installing (4) NV3000 cards

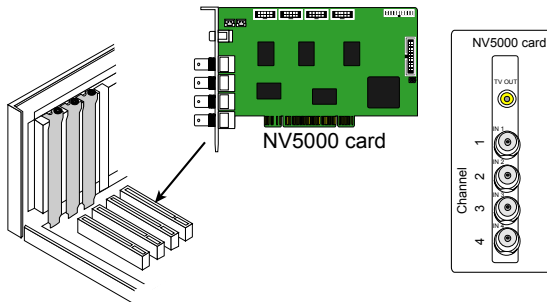
1. Remove the PC case cover.
2. Remove 4 brackets that cover the PCI slots. Save the screws.
3. Connect the (4) NV3000 cards with the supplied 20cm video signal line.
4. Press the cards into the PCI slots firmly.
5. Secure the cards with the screws.



2.4 NV5000 Hardware Installation

2.4.1 Installing (1) NV5000 Card

1. Remove the PC case cover.
2. Remove a bracket that covers the PCI slot. Save the screw.
3. Press the NV5000 card into the PCI slot firmly.
4. Secure the card with the screws.

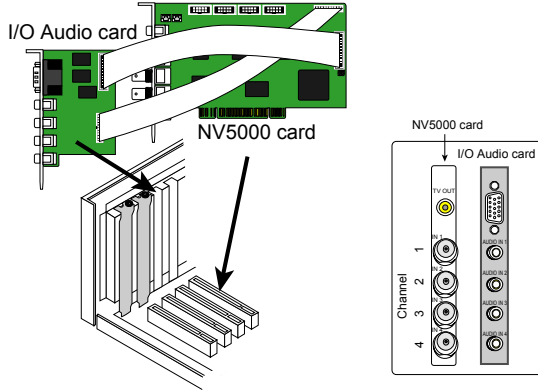


2.4.2 Installing (1) NV5000 and (1) I/O Audio cards



The I/O audio card is an optional item. The D-type I/O port receives and transmit signal from the I/O box where the sensor and relay device are connected to it, while the audio input port receives the signal from the mic. NV5000 card is compatible with the I/O Audio card that supports four (4) audio inputs.

1. Remove the PC case cover.
2. Remove 2 brackets that cover the PCI slots. Save the screws.
3. Connect the NV5000 card and I/O Audio card with the connection cables.
4. Press the cards into the PCI slots firmly.
5. Secure the cards with the screws.

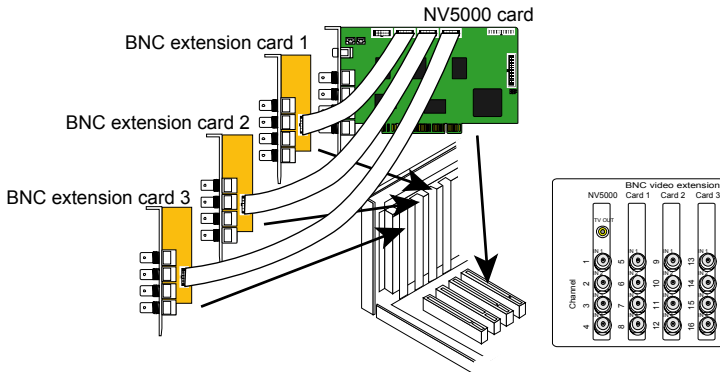


2.4.3 Installing (1) NV5000 and (3) BNC video extension cards



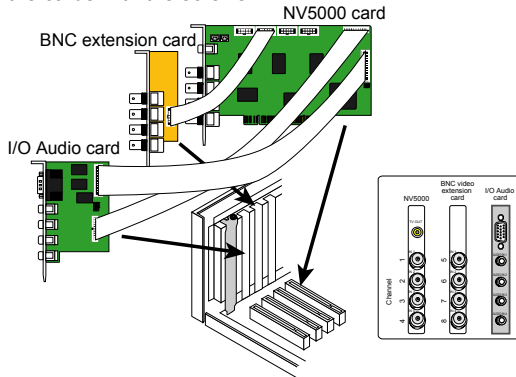
The BNC video extension card is an optional item. It comes with additional four (4) BNC video input ports that provide four (4) extra channels.

1. Remove the PC case cover.
2. Remove 4 brackets that cover the PCI slots. Save the screws.
3. Connect the NV5000 card and BNC video extension cards with the connection cables.
4. Press the cards into the PCI slots firmly.
5. Secure the cards with the screws.



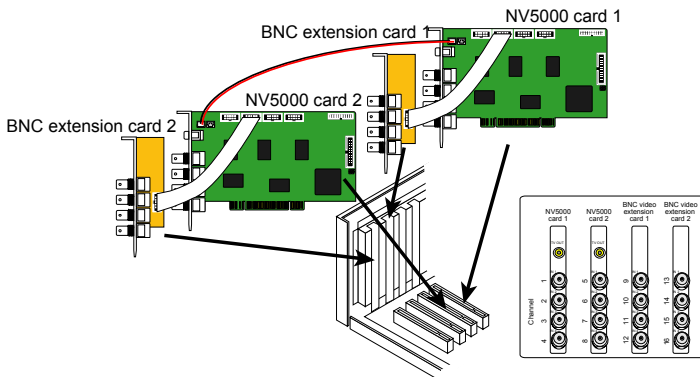
2.4.4 Installing (1) NV5000, (1) I/O Audio (opt.) and (1) BNC video extension (opt.) cards

1. Remove the PC case cover.
2. Remove 3 brackets that cover the PCI slots. Save the screws.
3. Connect the NV5000 card, BNC video extension card and I/O Audio card with the connection cables.
4. Press the cards into the PCI slots firmly.
5. Secure the cards with the screws.



2.4.5 Installing (2) NV5000, and (2) BNC video extension cards

1. Remove the PC case cover.
2. Remove 4 brackets that cover the PCI slots. Save the screws.
3. Connect the NV5000 card and BNC video extension card with the connection cables.
4. Connect the (2) NV5000 cards with the supplied 20cm video signal line.
5. Press the cards into the PCI slots firmly.
6. Secure the cards with the screws.

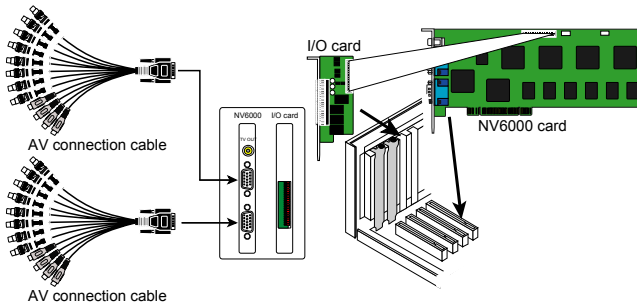


2.5 NV6000 Hardware Installation

The NV6000 can support up to 16 cameras and 8 audio input.

2.5.1 Installing (1) NV6000 and I/O card

1. Remove the PC case cover.
2. Remove 2 brackets that cover the PCI slots. Save the screws.
3. Connect the NV6000 card and I/O card with the connection cable.
4. Press the cards into the PCI slot firmly.
5. Secure the card with the screws.
6. Connect the supplied AV connection cable to the D-type AV IN port.

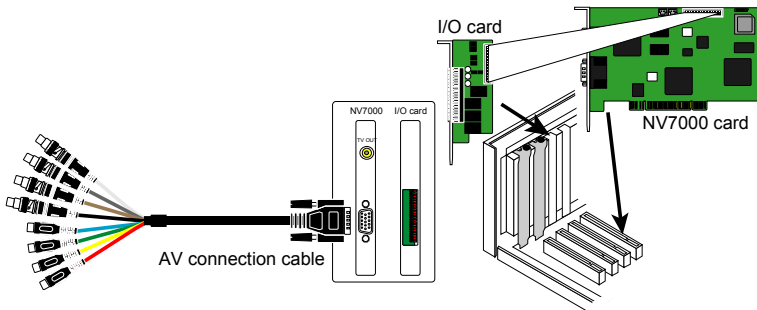


2.6 NV7000 Hardware Installation

The supplied AV connection cable provides up to 4 cameras and 4 audio input.

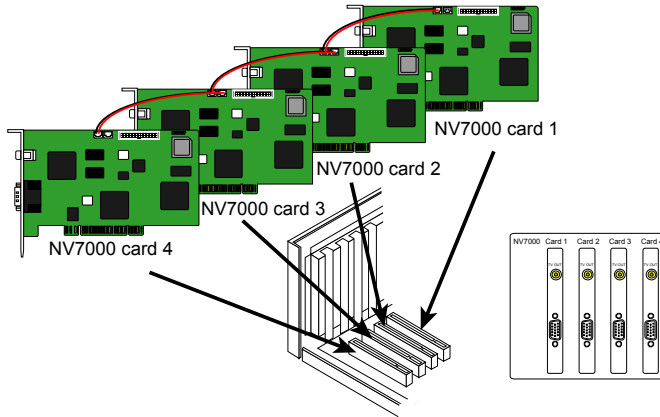
2.6.1 Installing (1) NV7000 and I/O card

1. Remove the PC case cover.
2. Remove 2 brackets that cover the PCI slots. Save the screws.
3. Connect the NV7000 card and I/O card with the connection cable.
4. Press the cards into the PCI slot firmly.
5. Secure the card with the screws.
6. Connect the supplied AV connection cable to the D-type AV IN port.



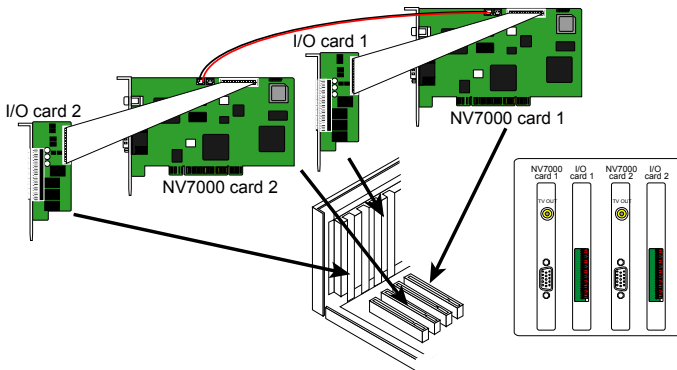
2.6.2 Installing (4) NV7000

1. Remove the PC case cover.
2. Remove 4 brackets that cover the PCI slots. Save the screws.
3. Connect the (4) NV7000 cards with the supplied 20cm video signal line.
4. Press the cards into the PCI slots firmly.
5. Secure the cards with the screws.



2.6.3 Installing (2) NV7000 and (2) I/O cards

1. Remove the PC case cover.
2. Remove 4 brackets that cover the PCI slots. Save the screws.
3. Connect the (2) NV7000 cards with the supplied 20cm video signal line.
4. Press the cards into the PCI slots firmly.
5. Secure the cards with the screws.



2.7 Connecting the Watchdog line

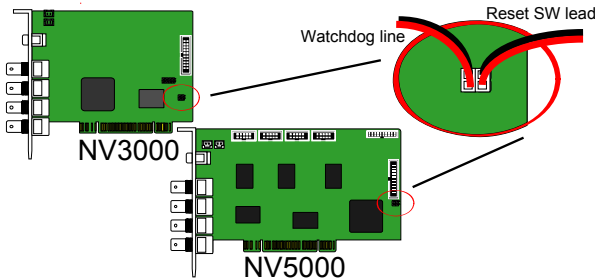
The NV DVR program constantly monitors its operation. Connecting the NV3000/5000/6000/7000 to the motherboard reset switch panel, enables the unit to restart automatically and reset the system when an error has been detected.



If more than one NV3000/5000/7000 card is installed, connect the watchdog line at last card.

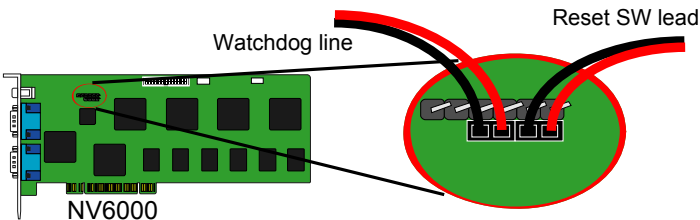
2.7.1 Connecting the Watchdog line to NV3000/5000

1. Look for the labeled RESET SW switch lead and connect it to the NV3000/5000 card reset pin.
2. Connect the supplied Watchdog line to the NV3000/5000 card watchdog pin and the other end to the motherboard RESET SW panel. If you are not sure, please refer to the motherboard user manual.
3. You may now replace back the PC cover and connect all the cables.



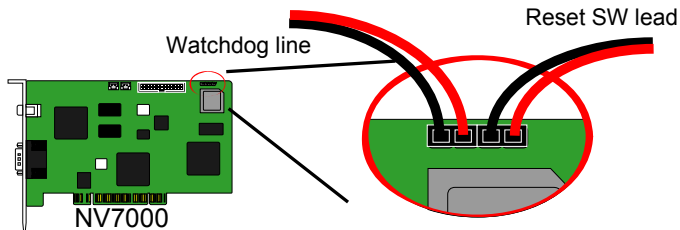
2.7.2 Connecting the Watchdog line to NV6000

1. Look for the labeled RESET SW switch lead and connect it to the NV6000 card reset pin.
2. Connect the supplied Watchdog line to the NV6000 card watchdog pin and the other end to the motherboard RESET SW panel. If you are not sure, please refer to the motherboard user manual.
3. You may now replace back the PC cover and connect all the cables.



2.7.3 Connecting the Watchdog line to NV7000

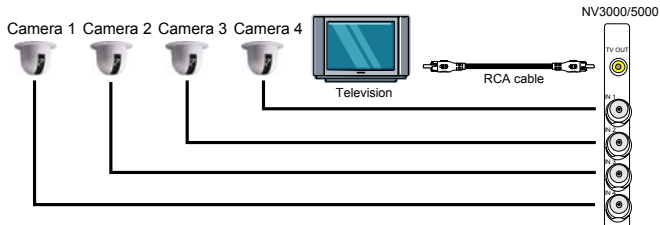
1. Look for the labeled RESET SW switch lead and connect it to the NV7000 card reset pin.
2. Connect the supplied Watchdog line to the NV7000 card watchdog pin and the other end to the motherboard RESET SW panel. If you are not sure, please refer to the motherboard user manual.
3. You may now replace back the PC cover and connect all the cables.



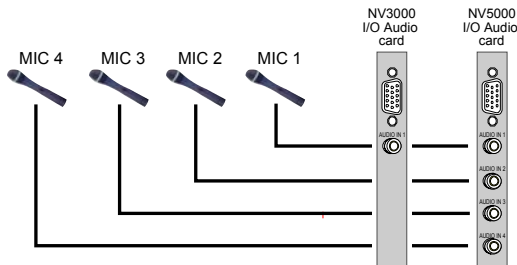
2.8 Connecting the Cameras, a TV and Audio device

2.8.1 Connecting the Cameras, a TV and Audio device to NV3000/5000

1. Connect the cameras to the BNC video input port (see [NV3000/5000 card parts](#)). If you have installed more than one card, please refer the sequence of the camera to the number of cards installed in installing the card section.
2. Connect one end of the RCA video cable (not supplied) to the TV OUT port of NV3000/5000 card and the other end to the TV video input port. If you are not sure, please refer to the TV user manual.

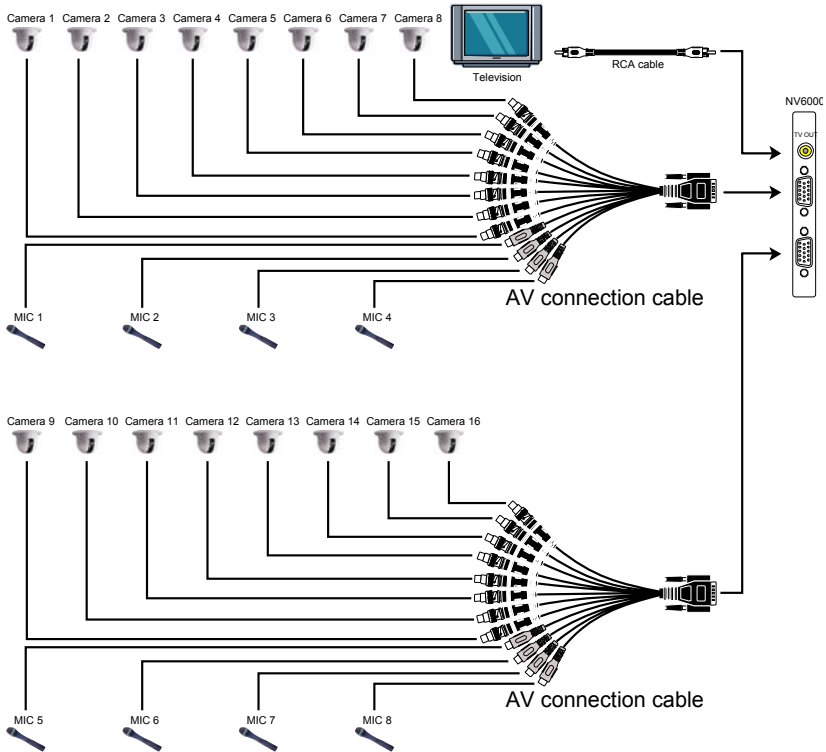


3. Connect the audio devices to the Audio input port of the I/O card.



2.8.2 Connecting the Cameras, a TV and Audio devices to NV6000

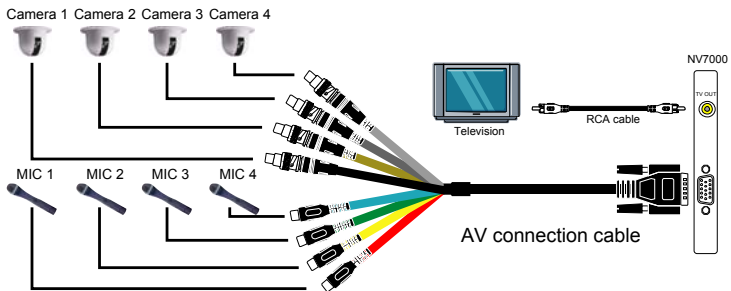
1. Use the supplied AV connection cable and connect it to the D-type AV IN port of NV6000 card (see [NV6000 card parts](#)).
2. Connect the cameras to the BNC video connectors and audio devices to the RCA audio connectors. Just follow the order basing on the marked sequence.
3. Connect one end of the RCA video cable (not supplied) to the TV OUT port of NV6000 card and the other end to the TV video input port. If you are not sure, please refer to the TV user manual.



2.8.3 Connecting the Cameras, a TV and Audio devices to NV7000

1. Use the supplied AV connection cable and connect it to the D-type AV IN port of NV7000 card (see [NV7000 card parts](#)).
2. Connect the cameras to the BNC video connectors and audio devices to the RCA audio connectors. Just follow the order basing on the marked sequence.
3. Connect one end of the RCA video cable (not supplied) to the TV OUT port of NV7000 card and the other end to the TV video input port. If you

are not sure, please refer to the TV user manual.



4. If you have installed more than one card, please see the AV connection cable sequence table below:

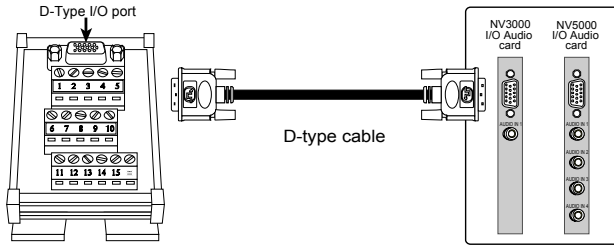
NV7000	Camera Sequence	Audio Sequence
Card 1	BNC 1 to Camera 1	Audio 1 to Audio Channel 1
	BNC 2 to Camera 2	Audio 2 to Audio Channel 2
	BNC 3 to Camera 3	Audio 3 to Audio Channel 3
	BNC 4 to Camera 4	Audio 4 to Audio Channel 4
Card 2	BNC 1 to Camera 5	Audio 1 to Audio Channel 5
	BNC 2 to Camera 6	Audio 2 to Audio Channel 6
	BNC 3 to Camera 7	Audio 3 to Audio Channel 7
	BNC 4 to Camera 8	Audio 4 to Audio Channel 8
Card 3	BNC 1 to Camera 9	Audio 1 to Audio Channel 9
	BNC 2 to Camera 10	Audio 2 to Audio Channel 10
	BNC 3 to Camera 11	Audio 3 to Audio Channel 11
	BNC 4 to Camera 12	Audio 4 to Audio Channel 12
Card 4	BNC 1 to Camera 13	Audio 1 to Audio Channel 13
	BNC 2 to Camera 14	Audio 2 to Audio Channel 14
	BNC 3 to Camera 15	Audio 3 to Audio Channel 15
	BNC 4 to Camera 16	Audio 4 to Audio Channel 16

2.9 Connecting an external I/O box to NV3000/5000 I/O card



The external I/O box is an optional item. It provides four (4) sensor input and three (3) relay output.

Connect the male end of the D-type cable to the D-type I/O port of the I/O box and the female end to the D-type port of the I/O card. Check the table below and locate which pinhole is assigned to sensor input and relay output.



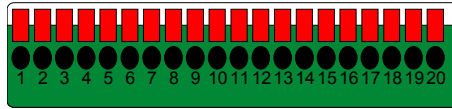
2.9.1 I/O box Sensor and Relay pinhole allocation:

The signal from the sensor (i.e., infrared sensors, smoke detectors, proximity sensors, door sensors, etc.) is being transmitted to the I/O card, and this triggers the system to respond and send signal to relay device (i.e., alarm, telephone etc).

Pin #	Definition
1	INPUT SIGNAL 1+
2	INPUT SIGNAL 2+
3	INPUT SIGNAL 3+
4	INPUT SIGNAL 4+
5	OUTPUT 3 – Normally Closed
6	INPUT SIGNAL 1-(GND)
7	INPUT SIGNAL 2-(GND)
8	INPUT SIGNAL 3-(GND)
9	INPUT SIGNAL 4-(GND)
10	OUTPUT 3 – Common
11	OUTPUT 1 – Normally Open
12	OUTPUT 1 – Common
13	OUTPUT 2 – Normally Open
14	OUTPUT 2 – Common
15	OUTPUT 3 – Normally Open

2.10 Connecting the Sensor/Relay device to NV6000/7000 I/O card

The I/O Audio card enables you to connect (4) sensor inputs and (4) relay outputs. Just connect the external sensor and relay pin directly to the NV6000/7000 I/O card pinhole. Check the table below and locate which pinhole is assigned to sensor input and relay output.



2.10.1 I/O Card Sensor and Relay pinhole allocation:

The signal from the sensor (i.e., infrared sensors, smoke detectors, proximity sensors, door sensors, etc.) is being transmitted to the I/O card and this triggers the system to respond and send signal to relay device (i.e., alarm, telephone etc).

Pin #	Definition	Pin #	Definition
1	Sensor 1 input signal	11	Relay Normal Close 1
2	Sensor 1 output signal	12	Relay Comment 2
3	Sensor 2 input signal	13	Relay Normal Open 2
4	Sensor 2 output signal	14	Relay Normal Close 2
5	Sensor 3 input signal	15	Relay Comment 3
6	Sensor 3 output signal	16	Relay Normal Open 3
7	Sensor 4 input signal	17	Relay Normal Close 3
8	Sensor 4 output signal	18	Relay Comment 4
9	Relay Comment 1	19	Relay Normal Open 4
10	Relay Normal Open 1	20	Relay Normal Close 4

2.11 The Sensor input and Relay output Specifications

You may use the sensor input and relay output specifications table below for your reference.

A. Sensor Input Specification

Absolute Maximum Ratings

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Input	Forward Current	50	mA
	Reverse Voltage	6	V
	Power Dissipation	70	mW

Electrical/Optical Characteristics

(Ta=25°C)

Parameter	Symbol	Min	Typ.	Max.	Unit	Conditions
Input	Forward Current	V _F	-	1.2	1.4	V I _R =20mA
	Reverse Voltage	I _R	-	-	10	A V _F =4V
	Terminal Capacitance	C _T	-	30	250	pF V=0, f=1KHz

	Parameter	Symbol	Min	Typ.	Max.	Unit	Conditions
Output	Collector Dark Current	I_{CEO}	-	-	100	nA	$V_{CE}=20V$
	Collector-Emitter Breakdown Voltage	BV_{CEO}	35	-	-	V	$I_C=0.1mA$
	Emitter-Collector Breakdown Voltage	BV_{ECO}	6	-	-	V	$I_E=10 A$
Transfer Characteristics	*Current Transfer Ratio	CTR	50	-	600	%	$I_F=5mA, V_{CE}=5V R_{BE}=$
	Collector Current	I_C	2.5	-	30	mA	
	Collector-Emitter Breakdown Voltage	$V_{CE(sat)}$	-	0.1	0.2	V	$I_F=20mA, I_C=1mA$
	Isolation Resistance	R_{ISO}	5×10^{10}	10^{11}	-		DC500V, 40-60% R.H.
	Floating Capacitance	C_i	-	0.6	1.0	pF	$V=0, f=1MHz$
	Cut-off Frequency	f_c	-	80		KHz	$V_{CE}=5V, I_C=2mA$ $R_L=100, -3dB$
	Response Time (Rise)	t_r	-	4	18	s	$V_{CE}=2V, I_C=2mA$ $R_L=100$
	Response Time (Fall)	t_f	-	3	18	s	

$$*CTR = \frac{I_C}{I_F} \times 100\%$$

B. Relay Output Specification

Surge strength	:1500 VAC
Nominal power	: 200mw ~ 360mw
Operating power	: 110mw ~ 200mw

C. COIL RATINGS (at 20 oC)

Coil Nominal Voltage (VDC)	Coil Resistance 10%	Pick-up Voltage (VDC)	Drop-Out Voltage (VDC)	Nominal Current (mA)
5	125	3.75	0.5	40

* Max Continuous Voltage at 20°C : 110% of Coil Nominal Voltage

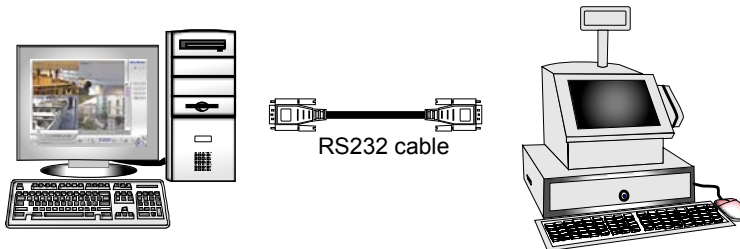
D. CONTACT RATINGS

Contact Arrangement	1 Form C (SPDT)
max. Switch Power	125VA 60W
max. Switch voltage	125VAC 30VDC
max. Switch current	1A
Contact Resistance	$\leq 100m\Omega$
Resistive Load	1A/125VAC 1A/30VDC
Contact Material	AgNi10

2.12 Connecting POS (Point of Sales)

DSS NV DVR can be integrated with POS system equipment. Connecting the POS equipment to DSS system thru RS232 connection, enables you to view, record and keep track of the items that were sold. You may also select the camera on where to display all the data.

To connect, locate the RS232 port of the POS equipment and PC. Use an RS232 cable (not supplied) to make the connection.



Chapter 3 Software Installation

This chapter describes how to install the NV DVR software and drivers.



The CD-Key is permitted for use on a single computer. It is prohibited to use the CD-key on more than one computer. Once detected, this would cause a system conflict and some of the features might fail to work on both PC.



Before installing the software, make sure that the Windows OS patches and the video graphic card driver are **UPDATED**.



If you have an old version of the NV DVR software installed in your PC, the old copy must be removed. To remove, click **Start>Settings>Control Panel** and then double click **Add/Remove Programs**. In Add/Remove Programs list, select **NV DVR** and then click **Remove**.



We **RECOMMEND** having two (2) separate drives for the main system (OS and NV DVR software), and data storage. The ideal hard disk size for the main drive is 20GB and 60GB for the data storage. The hard drives format must be in **NTFS**. This way we can maintain an optimized system for your security.



For Windows 2000, make sure the hyper-threading setting is **DISABLED** from the PC BIOS system.

3.1 Installing NV DVR Software and Drivers in Windows XP/2000



Upon turning the computer on, the system automatically detects the newly installed hardware. When the *Found New Hardware* dialog box appears, **IGNORE** it.

Remember : It is important to install the NV DVR software first, before installing the drivers.

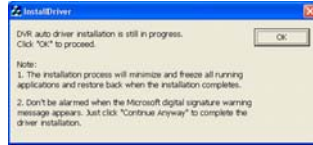
1. Place the OSD installation CD into the CD-ROM drive then click **Install Surveillance System**. And follow the on-screen instructions.



2. For Windows XP:

When the InstallDriver notice appears, this informs you that you are about to install the divers. This may take a while depending on the number of drivers needed to be installed. Click "**Continue Anyway**" when the Microsoft digital signature appears.

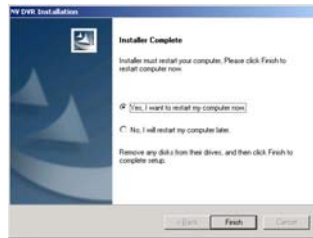
When prompt to restart the computer, select **Yes, I want to restart my computer now** then click **Finish**.




For Windows 2000:

When prompt to restart the computer, select **Yes, I want to restart my computer now** then click **Finish**. This time you have already installed the NV DVR software.


After rebooting, the system again detects the newly installed hardware. When the Microsoft digital signature appears, Click **OK** to complete the installation.

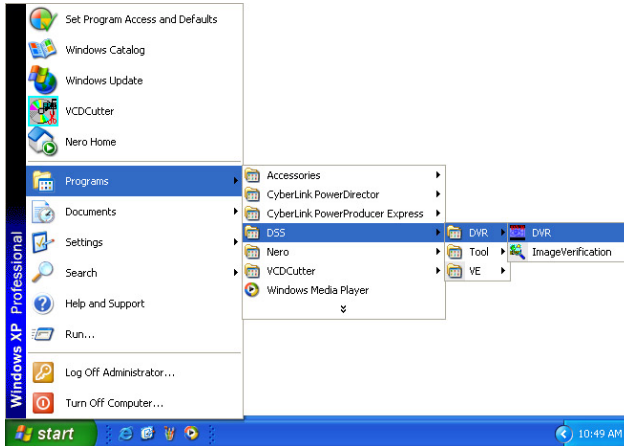


3. You may now run the NV DVR program. To run the application, click  on your PC desktop or click **Start>Programs>DSS>DVR>DVR**.

Chapter 4 Using the NV DVR Software

4.1 Running the NV DVR Software



To run the application, double-click  on your PC desktop or click **Start>Programs>DSS>DVR>DVR**.

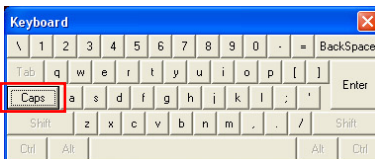


For security purpose, some of the features would require you to enter User ID and Password before it can be accessed. When the Authorization dialog box appears, key in your User ID and Password. (If this is the first time, enter the one you have registered when installing the software.)

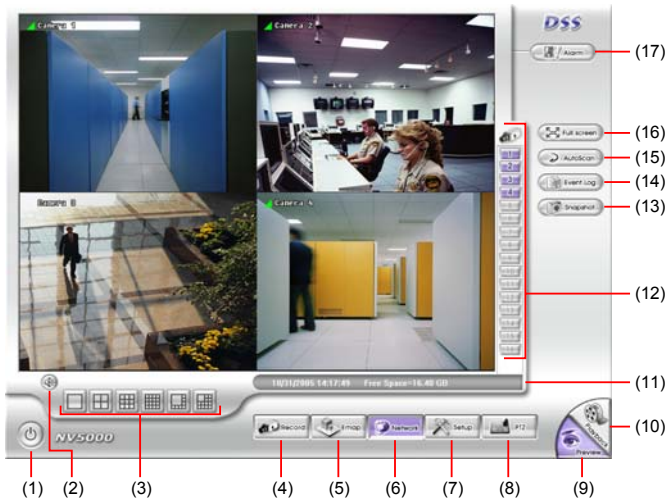



4.2 Using the Virtual Keyboard

If the keyboard is not available, you may use the Virtual Keyboard. Just click  to show the virtual keyboard. To switch keys from numbers to symbols and lowercase to caps, click .



4.3 Familiarizing the Buttons in Preview/Advanced Mode



Name	Function
(1) Exit	<p>Call up the Logout dialog box.</p> <p>In the logout dialog box, you may do the following:</p>  <ul style="list-style-type: none"> - Click Exit to close the NV DVR program. - Click Login to sign-in in different account. - Click Minimize to reduce the NV DVR to taskbar button. - Click Compact to switch to compact mode (see Chapter 4.4). - Click Cancel to exit Logout dialog box. - Click About to update patch or find about the software info.
(2) Volume	Adjust the sound volume.
(3) Split Screen Mode	<p>Select from six (6) different split screen types to view all the camera, or one camera over the other or alongside on a single screen. It also allows you to switch and view different camera number.</p>

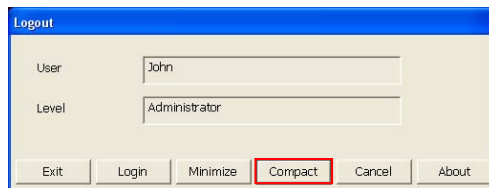


- If there are only 4 cameras, you won't be able to switch to 9, 16, and 13 split screen mode.
- When you are in single screen mode, **Right click** and **Drag** a square on the area you want to enlarge.
- When you are in multiple-screen mode, **Right click** the video screen of the camera and **Drag** on where you want to relocate it. To only display one of the video in the multiple-screen mode, **Left click** on the video screen you only want to display.


Name	Function
(4) Record	Start/stop video recording.
(5) Emap	Display the map in each area, the camera/sensor/relay location and the warning event. (see also Chapter 4.7)
(6) Network	Enable/disable remote system access. This feature allows you to access NV DVR server from a remote location via internet connection. (see also Chapter 8)
(7) Setup	Configure the system settings. (see also Chapter 5)
(8) PTZ	Access PTZ control panel (see also Chapter 4.6).
(9) Preview	Switch to Preview/Advanced mode. This allows you to view live camera display.
(10) Playback	Switch to Playback mode. This allows you to view the recorded video file. (see Chapter 4.5)
(11) Status Bar	Display the current date, time and hard disk free space.
(12) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(13) Snapshot	Capture and save the screen shot either in *.jpg or *.bmp format.
(14) Event log	Show the record of activities that take place in the system. To filter the records, select and click the option button to only display Event, System, Operation, Network or POS.
(15) AutoScan	Start/Stop video screen cycle switch. (see also Chapter 5.1 #7 AutoScan Period)
(16) Full screen	Use the entire area of the screen to only display the video. To return, press the right button of the mouse or ESC on the keyboard. When you switch to full screen in multiple-screen mode, Left click to toggle to only display one of the video in the multiple-screen mode or all.
(17) Alarm	Alert and display warning info. Only Administrator-level can reset and turn on, off and trigger the Sensor and Relay by right-clicking the item in the Sensor and Relay list.

4.4 Familiarizing the Buttons in Compact Mode

To view in Compact mode, click **Exit** button. In the logout dialog box, click **Compact**.



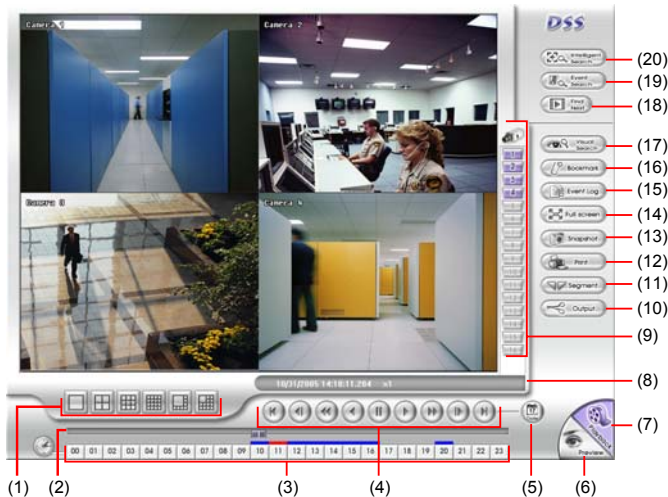




Name	Function
(1) Split Screen Mode	Select from six (6) different split screen type to view all the camera, or one camera over the other or alongside on a single screen.
	- If there are only 4 cameras, you won't be able to switch to 9, 16, and 13 split screen mode.
	- When you are in single screen mode, Right click and Drag a square on the area you want to enlarge.
	- When you are in multiple-screen mode, Right click the video screen of the camera and Drag on where you want to locate it. To only display one of the video in the multiple-screen mode, Left click the video screen you want to display.
(2) AutoScan	Start/Stop video screen cycle switch
(3) Alarm	Alert and display warning info.
(4) Playback	Switch to Playback mode. This allows you to view the recorded video file. (see Chapter 4.5)
(5) Advanced	Switch to Preview/Advanced mode.


4.5 Familiarizing the Buttons in Playback Mode

To switch in Playback mode, click **Playback** button at the lower right corner of Advanced/Preview mode user interface.

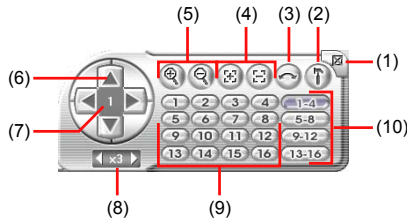




Name	Function
(1) Split Screen Mode	Select from six (6) different split screen type to playback the recorded video file of all the camera, or one camera over the other or alongside on a single screen.
	<ul style="list-style-type: none">- If there are only 4 cameras, you won't be able to switch to 9, 16, and 13 split screen mode.- To zoom in an area on the screen, Right click and Drag a square on the area you want to enlarge.
(2) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(3) Hour Buttons	Select and click to playback the recorded video file on the specific time frame.
	The Hour buttons represent the time in 24-hour clock. The blue bar on top of the hour button indicates that there is a recorded video file on that period of time. While the red bar indicates that you are currently viewing the recorded video file.
(4) Playback Control Buttons	<p>Begin: Move at the beginning of the recorded video file.</p> <p>Previous: Go back to the previous frame.</p> <p>Slower: Play the recorded video file at the speed of 1/2x, 1/4x, or 1/8x.</p> <p>Rewind: Wind back the recorded video file.</p> <p>Pause: Briefly stop playing the recorded video file.</p> <p>Play: Play the recorded video file.</p> <p>Faster: Play the recorded video file at the speed of 2x, 4x, or 8x.</p> <p>Next: Go to the next frame.</p> <p>End: Go to the end of the recorded video file.</p>

Name	Function
(5) Date	Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file.
	The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera ID. The blue colored column indicates that there is a recorded video file on that period of time. While the red colored column indicates on where to start playing the recorded video file.
(6) Preview	Switch to Preview/Advanced mode.
(7) Playback	Switch to Playback mode. This allows you to view the recorded video file.
(8) Status bar	Display the recorded date, time and play speed.
(9) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(10) Output	Save the segmented file in *.mpg, *.avi, or *.dvr format (see also Chapter 4.8).
(11) Segment	Keep a portion of the recorded video (see also Chapter 4.8).
(12) Print	Print the screen shot.
(13) Snapshot	Capture and save the screen shot either in *.jpg or *.bmp format.
(14) Full screen	View in Playback-compact mode. To return, press the right button of the mouse or ESC on the keyboard. When you switch to full screen in multiple-screen mode, Left click to toggle to only display one of the video in the multiple-screen mode or all.
(15) Event log	Show the record of activities that take place in the system. To filter the records, select and click the option button to only display Event, System, Operation, Network or POS.
(16) Bookmark	Mark a reference point when previewing the recorded video file to which you may return for later reference. You may also set it to protect the file. (See also Chapter 4.9)
(17) Visual Search	Search from a specific camera by Date, Hour, Minute, 10 Seconds and Second. (See also Chapter 4.10)
(18) Find Next	Search for the next event or changes in the motion detector frame. You can use this when you are using Intelligent Search or Event Search function.
(19) Event Search	Search from the recorded activities that take place in the system (i.e., Sensor, Motion , Video Loss, POS) . (See also Chapter 4.11)
(20) Intelligent Search	Search the changes in the motion detector frame (See also Chapter 4.12).

4.6 Familiarizing the Buttons in PTZ Camera Controller
(see also chapter 4.13)



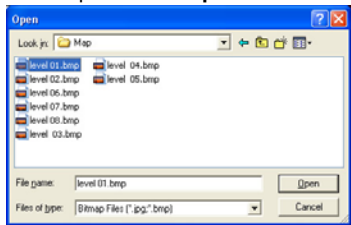
Name	Function
(1) Close	Exit PTZ camera controller.
(2) Setup	Configure PTZ cameras.
(3) AutoPan	Operate the PTZ cameras automatically based on the selected camera group preset position number.
(4) Focus +/-	Adjust the focus manually to produce clear image.
(5) Zoom +/-	Zoom in and out the image.
(6) Direction buttons	Adjust and position the focal point of the PTZ camera.
(7) Camera ID pane	Display the PTZ camera number that is being operated.
(8) Camera lens speed controller	Adjust the moving speed of the PTZ camera lens.
(9) Camera preset position number	Move the PTZ camera to the preset point.
(10) Group AutoPan	Select to automatically operate PTZ camera in group.

4.7 Setting Up and Using the Emap

E-Map can hold up to 8 maps in *.bmp/*.jpg format. You may locate the camera, sensor and relay on the map.

4.7.1 To Set Up the Emap

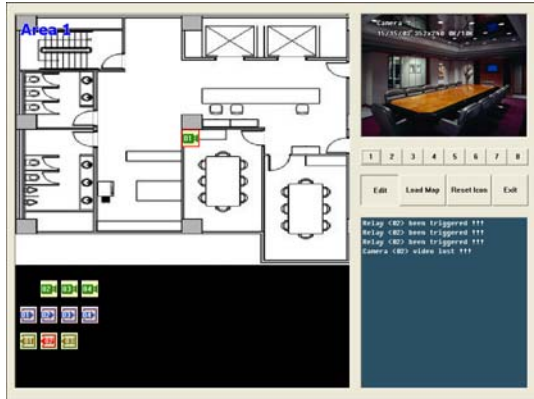
1. Click **Emap**.
2. When the Emap screen appears, click the area number (1 to 8 buttons) on where you want to insert the map.
3. Click **Load Map** to insert the map. When the open dialog box appears, locate and select the map and click **Open**.



4. When the inserted map appears on the Emap screen, click **Edit**. You may now drag the camera, sensor, and relay icons to its place on the map.

Icons on the map can be relocated anywhere. If you are going to locate the icon on the map to other area, you need to drag the icon to the black pane at the bottom of the Emap screen and then switch to the area on where you want to locate the icon.

To bring all the icons back to the black pane at the bottom of the Emap screen, click **Reset Icon**.

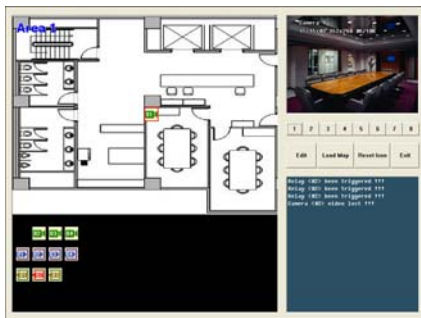


5. When you are done, click **Edit** button to save the new setting. To close Emap screen, click **Exit**.

4.7.2 To Use the Emap

To use the Emap:

1. Click **E-map**.
2. In the Emap screen, click the camera icon to switch on the area where the camera is located on the map and to display the video at the upper right corner of the Emap screen. At the lower right corner of the Emap screen, it lists all the warning message.



3. Click **Exit** to close Emap screen.

4.8 To Cut and Save the Wanted Portion of the Recorded Video

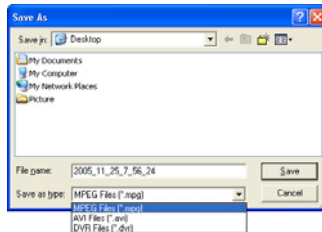
1. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to start the cut. Then, click **Segment** to set the begin mark.



2. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to end the cut. Then, click **Segment** to set the end mark. To cancel segmentation or set the segment marks from the start, click **Segment** button again.



3. Click **Output** button to save the wanted clip.
4. In the Save As dialog box, locate on where you want to save the file, type the filename, and select the video format.



4.9 To Bookmark a Section of the Video

1. Click **Bookmark**. The video playback stops when the bookmark button is executed.
2. In the Bookmark dialog box, you may do the following:
 - **Add** to include the new reference mark in the bookmark list. You may select to enable/disable file protection.
 - **Edit** to change the mark description or enable/disable file protection.
 - **Delete** to remove the selected reference mark in the list.
 - **Delete All** to remove all the reference marks in the list.
 - **Exit** to close Bookmark dialog box.

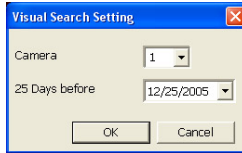




When the bookmark is protected, the file won't be overwritten.

3. Select and click one in the bookmark list to preview the file.

4.10 To Search Using the Visual Search


1. Click **Visual Search**.
2. In the Visual Search Setting dialog box, select the Camera number and the date. Then click **OK**.

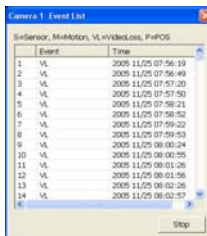


- When a series of frames appear by date, click on the frame to display another series of frames and search by every Hour of that date, every Minute of that hour, every 10 Seconds of that minute, every Second of that 10 seconds. To go back, click . To view from the selected frame and close event search, click .




4.11 To Search Using the Event Search

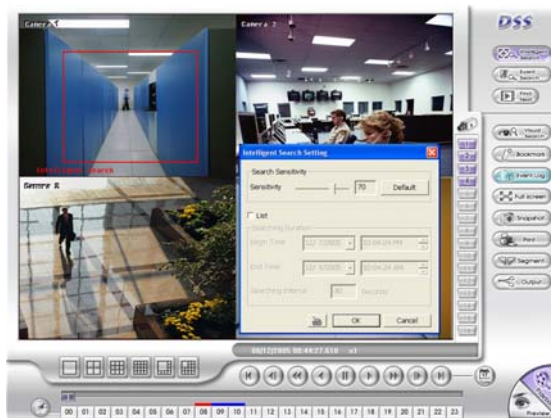
- Click on the video screen on where you want to search.
- Click **Event Search**. The Event Search text (red) would appear at the lower left corner of the screen.
- In the Event Search Setting dialog box, check the type of condition you want to search. If you select POS, in the Find Text box, type the word. Then, click **OK** to start searching. The video search would stop at the frame that matches the condition. To keep on searching click .
- You may also set to search and list all the result. Just check the **Output Event List** box. In the Search Duration section, set the **Begin Time**, **End Time** and **Searching Interval**. Then, click **OK** to start searching.
- When the Event list appear, click and select the item you want to view.



4.12 To Search Using the Intelligent Search

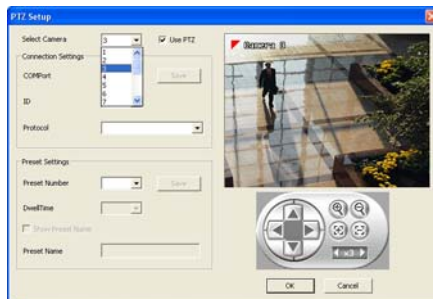
1. Click on the video screen on where you want to search.
2. Click **Intelligent Search**. The Intelligent Search text (red) would appear at the lower left corner of the screen.
3. When the Intelligent Search Setting dialog box and motion detector frame appear, you may adjust the sensitivity bar and the motion detector frame size and location. To set motion detector frame size and location, left click and drag on the screen. Then, click **OK** to start searching. The video search would stop at the frame that matches the condition. To keep on searching click .

You may also set to search and list all the result. Just check the **List** box. In the Search Duration section, set the **Begin Time**, **End Time** and **Searching Interval**. Then, click **OK** to start searching.

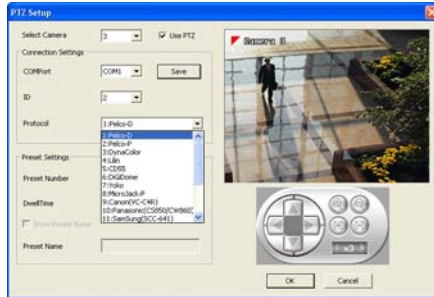


4.13 To Setup the PTZ camera

1. In the PTZ control panel, click **Setup**.
2. When the PTZ Setup dialog box appears, select the camera number and check the **Use PTZ** box.




3. In the Connection Settings section, select the COMPort where the PTZ camera is connected, PTZ ID number and PTZ camera model. Then, click **Save** to keep the settings.



4. Use the PTZ control panel and adjust the position of the PTZ camera.
5. In the Preset Setting section, select the preset number to assign a number for the PTZ camera current position. Set the DwellTime (1-60 sec) for how long the PTZ camera stays in that position before it moves to the next one. If you want to add description, check the **Show Preset Name** box and in the **Preset Name** text box, type the word. When done, click **Save** to keep the settings.
6. Repeat step 4 & 5, if you want to save another PTZ camera position.
7. When done click **OK** to save the setting, Click **Cancel**, to leave without saving the new setting.

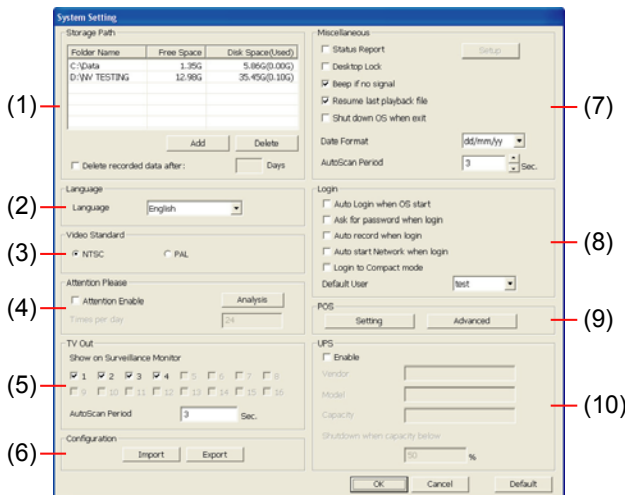
Chapter 5 Customizing the NV DVR System

In the Preview/Advanced screen mode, click  button to customize your NV DVR. When the NV DVR configuration setup selection appears, select and click the buttons you want to change the setting.



5.1 System Setting

In the System Setting dialog box, click **OK** to accept the new settings, click **Cancel** to exit without saving, and click **Default** to revert back to original factory setting.



(1) Storage Path

Set the directory on where to save the data. When there is not enough free space to record one hour data, the system automatically replaces the oldest data. In case you have more than one storage path, the system automatically saves the data to the next storage path.

By default the data is stored in C:\Data, to insert another storage path, click **Add**. To remove the selected path, click **Delete**.

If you want the system to automatically erase the data after a certain days, enable the **Delete recorded data after** check box and enter the numbers of days in **Days** text box.

(2) Language

Customize the system to display the tool tips and dialogs based on the selected language. By default the language is in English.

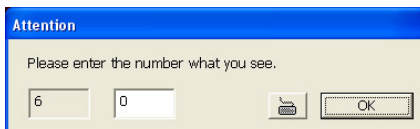
(3) Video Standard

Change and select the proper video system according to your camera video system. If the video system setting is wrong, the video would appear abnormal.

(4) Attention Please

Check the attentiveness of the person who is monitoring the system. You may set the number of times the Attention dialog box to appear in a day in **Times per day** text box. To check the graph on how fast the person response, click **Analysis**.

When this feature is enabled, the **Attention** dialog box would appear. The person who is monitoring the system must enter the same number that appears from the left box at the right text box and then click **OK**.



(5) TV Out

Select the camera you want to appear on TV and set the time gap from 3 to 10 sec. before it switches to the next camera.

(6) Configuration

Backup a copy of all the settings and allows you to regain the same settings back. To save the current settings, click **Export**. To replace the settings with the one you have saved, click **Import**.

(7) Miscellaneous

Enable the conditions in Miscellaneous section you want the system to perform.

- **Status Report**
Send a daily system event report. To change the e-mail settings, click **Setup**.
- **Desktop Lock**
Deactivate the [Ctrl-Alt-Del] and [Windows] keyboard key functions.
- **Beep if no signal**
Make sound when the video signal is lost.
- **Resume last playback file**
Automatically start to playback the video from the last hour.
- **Shutdown OS when exit**
Turn off the PC when the NV DVR application is being closed.
- **Date Format**
Select an ideal format
- **AutoScan Period**
Set the time gap of the AutoScan function from 3 to 10 sec. This automatically switches to the next video in cycle depending on the set time gap.

(8) Login

Enable the conditions in Login section you want the system to automatically carry out.

- **Auto Login when OS start**
Execute the NV DVR when the operating system is started.
- **Ask for password when login**
Request to enter User ID and Password each time the NV DVR is executed.
- **Auto record when login**
Automatically start video recording when the NV DVR is executed.

- **Login to compact mode**

Switch to compact mode directly when the NV DVR is executed.

- **Default user**

Automatically log in to the selected default user when the NV DVR is executed.

(9) POS

Set from which camera screen to display the data from the POS equipment. Click **Setting**, to set the POS Console Setting. To set the text flow and color format, click **Advanced**. (see also [Chapter 5.1.1](#))

(10) UPS (Uninterruptible Power Supply)

Protect the system from damaging, such as power surges or brownouts. This automatically gives time to close the NV DVR properly when the battery backup power has reached the **Shutdown when capacity below** percentage level setting.

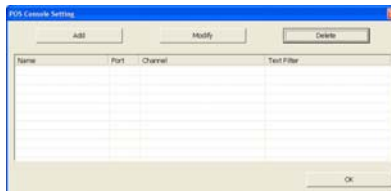
The UPS device must be connected to your computer (refer to your UPS user's guide).



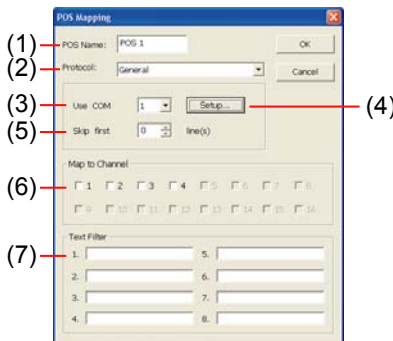
The UPS application must meet Windows 2000 or Windows XP system requirements.

5.1.1 To Set the POS Setting:

1. In the System Setting dialog box, POS section, click **Setting**. To set the text flow and color format, click **Advance**.
2. In the POS Console Setting dialog box, click **Add** to set a new POS setting, **Modify** to change the POS setting, and **Delete** to remove the selected POS setting. Click **OK** to save and close POS Console Setting.



3. In the POS Mapping dialog box, click **OK** to accept the settings and **Cancel** to exit without saving the new setting.



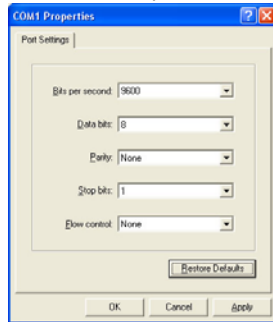
(1) POS Name

: Enter a name to identify the POS.

(2) Protocol

: Select General for Epson compatible printer or for TP_3688.

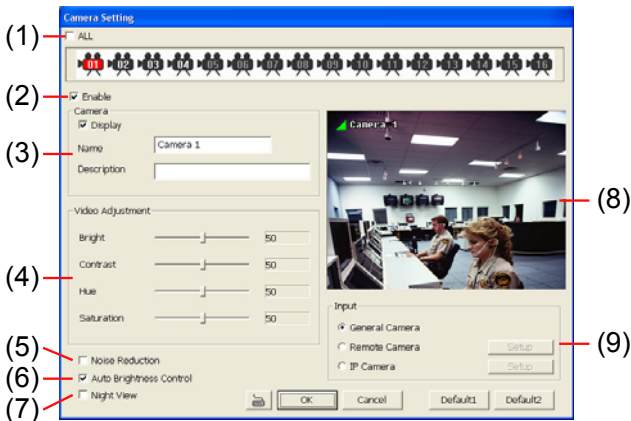
- (3) **Use COM** : Select the COM port number to where it is connected.
- (4) **Setup...** : Set the COM Properties. If you are not sure, please contact your POS service provider.



- (5) **Skip first** : Set the number of lines you want to be removed.
- (6) **Map to Channel** : Select to which camera number to display the transaction text.
- (7) **Text Filter** : Enter the word you want to be removed.

5.2 Camera Setting

In the Camera Setting dialog box, click **OK** to accept the new settings, click **Cancel** to exit without saving, and click **Default1/ Default2** to revert back to original factory setting.



(1) Camera Icons

Select the camera number you want to adjust the video setting. To select all the cameras, enable the **ALL** check box. To select more than one camera, **Right click** on the camera icon. To select one camera only, **Left click** on the camera icon. The camera icon turns red when it is selected.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Camera

- **Display**
Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Name**
Change the camera name.
- **Description**
Add a short comment.

(4) Video Adjustment

Adjust the Brightness, Contrast, Hue and Saturation of the selected camera.

(5) Noise Reduction

Reduce undesirable video signal and improve the quality of the video.



Noise Reduction uses lots of CPU resource. Please use this feature only if it is really necessary.

(6) Auto Brightness Control

Automatically adjust the brightness.

(7) Night View

Automatically adjust the exposure to make the image more visible especially when the site is dark. You can only use this function when the Auto Brightness Control is enabled.

(8) Video Screen

Display the video of the selected camera.

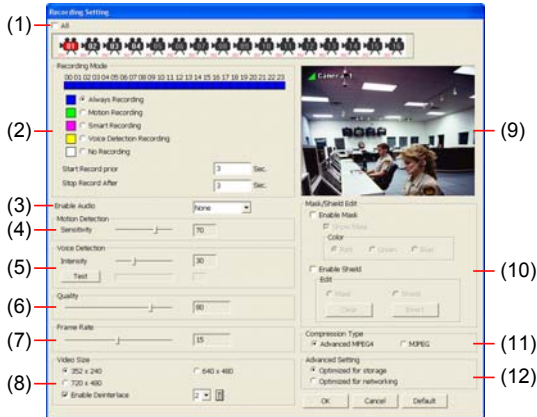
(9) Input

Select the type of video camera input you are using.

- **General Camera**
The video source is coming directly from camera that is connected to the NV Series PCI card.
- **Remote Camera**
The video source is coming from another NV DVR server. In the Remote DVR dialog box, enter the server IP, port number, user ID, password and select the camera number.
If you are not sure of the server IP and port, please check the NV DVR server IP address in Network setting.
- **IP Camera**
The video source is coming from Network camera or IP camera. In the IP Camera Settings dialog box, select to connect using Protocol or URL and then enter the required info. If it requires user identification, enable **Authentication** check box and enter User ID and Password.
If you are not sure of the Protocol or URL info, please refer to the IP camera manual or contact your IP camera local distributor.

5.3 Recording Setting

In the Recording dialog box, click **OK** to accept the new settings, click **Cancel** to exit without saving, and click **Default** to revert back to original factory setting.



(1) Camera Icons

Select the camera number you want to set the recording setting. To select all the cameras, enable the **ALL** check box. To select more than one camera, **Right click** on the camera icon. To select one camera only, **Left click** on the camera icon. The camera icon turns red when it is selected.

(2) Recording Mode

The blocks from 00 to 23 represent the time in 24-hour clock. To record in full 24 hours, select the recording mode and click the **⊙** button. If you want to only record at a particular time, click the colored block beside the recording mode then click on the time blocks. When the system starts recording a red triangle mark would appear at the upper left corner of the screen. The recording modes are listed below:

- **Always Recording**

Record the video from the selected camera and save it to the designated storage path (see also [Chapter 5.1 #1](#)).

- **Motion Recording**

Start recording the video from the selected camera only when the system detects motion. Once a motion is detected, the system automatically saves the previous frames and stop based on the **Start Record Prior** and **Stop Record After** settings.

- **Smart Recording**

Reduce the recording frame rate to one frame per second when there is no motion detected. Once a motion is detected, the system automatically records based on the **(7) Frame Rate** setting.

- **No Recording**

The system won't do any recording.

(3) Enable Audio

Select to assign the audio channel of the selected camera. You can only assign one audio channel to one camera source. This way you can record both audio and video.



An Audio I/O card is required to use this function.

(4) Motion Detection

Adjust the sensitivity of the motion detector. The higher the value, the finer the sensitivity is detected. When it detects a motion, a green triangle mark would appear at the upper left corner of the screen.

(5) Voice Detection

Adjust the intensity of the audio detector. The system detects sound when it exceeds the intensity value.


(6) Quality

Adjust the video quality. The higher the value, the lower the compression level and uses more hard disk space.

(7) Frame Rate

Set the number of images per second of the video to be recorded. The frame rate ranges from 1 to 30 for NTSC and 1 to 25 for PAL. The higher frame rate, it uses more hard disk space.

(8) Video Size

Select the size of the video and click the  button. The higher the size, the larger the file it create. You can also activate the **Enable Deinterlace** to enhance the video quality. Set the **Enable Deinterlace** mode to #1, if you are capturing motionless picture and #2, if it captures lots of movement.

(9) Video Screen

Display the video of the selected camera.

(10) Mask/Shield Edit

Mask, mark an area on the screen to disregards the motion in the marked area and to only monitor outside the marked area. As for the Shield, it covers an area on the screen and the covered area would not be visible on the screen and recorded. (see also [Chapter 5.3.1](#) and [5.3.2](#))


(11) Compression Type

Select between the 2 compression types. MPEG4 uses higher compression rate and the file is smaller. While MJPEG uses lower compression rate and the file is bigger.


(12) Advanced Setting

Select to enhance video recording or video transfer via internet.

5.3.1 To Mask/Shield an area on the screen:

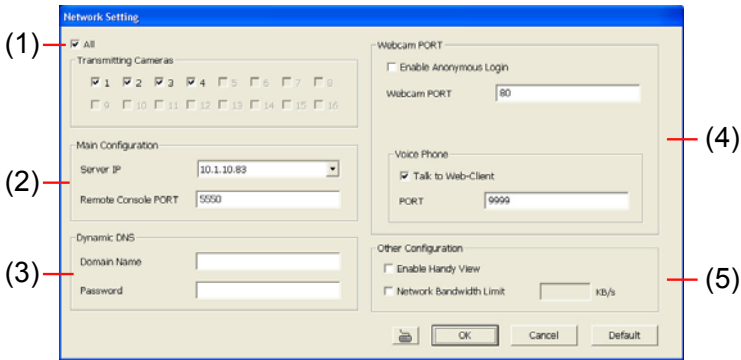
1. In the Mask/Shield Edit section, activate the **Enable Mask/Enable Shield** check box.
2. In the Edit section, select between Mask or Shield and click the  button.
3. Click and drag a frame on the **(9) Video Screen** to create Mask or Shield area.

5.3.2 To show and change the color of the Mask:

1. Enable the **Show Mask** check box.
2. In the Color section, select the color and click  button.

5.4 Network Setting

In the Network Setting dialog box, click **OK** to accept the new settings, click **Cancel** to exit without saving, and click **Default** to revert back to original factory setting.



(1) Transmitting Cameras

Select and click on the camera number in the Transmitting Camera section you want to make it accessible via internet using WebCam, Remote Console, PDA Viewer and Hand Viewer (still image). To select all the cameras, enable the **ALL** check box.

(2) Main Configuration

Set the Server IP and Remote Console Port number. The system will automatically detect your Server IP address. You need this when accessing NV DVR server from the remote location via internet.

(3) Dynamic DNS (Domain Name System)

Enter the Domain Name and Password. To use this feature, go to <http://ddns.dss.com.tw> and register. You will be prompted to enter CD key number, product name, password and user information. Use this service if the IP address is not permanent.

(4) Webcam Port

Activate **Enable Anonymous Login** to remotely access the NV DVR server without the need of password and **Talk to Web-Client** to use the 2-Way Talk feature that allows the client and server to talk via internet using mic. Make sure both microphone and speakers work before using this feature.

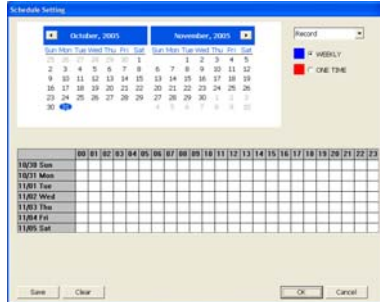
If the **Talk to Web-Client** is disabled, the person in the NV DVR server side can only hear the voice from the client side. (see also [Chapter 8.1 #6](#)).

(5) Other Configuration

Enable remote users to use a PDA or a mobile phone to access NV DVR server (see also [Chapter 8.5](#) and [8.6](#)) and set the Network bandwidth consumption limit.

5.5 Schedule Setting

Schedule to record, backup, enable network, reboot and disable alarm of all the cameras either weekly or one time. The number from 00 to 23 represent the time in 24-hour clock. The left most column display the days in a week.



To Set the Schedule Setting:

1. Select the date in the calendar. Use and buttons to shift the calendar to the left or right.
2. Select the condition you want to schedule in the drop down list.

- **Record**

Activate all the cameras to start video recording at the set time based on the Recording Setting (see also [Chapter 5.2](#)).

- **Backup**

Save another copy of all the data at the set time and specified backup path. NV DVR automatically updates and only backup the data that are not yet included in the archive. To assign backup path, click .



Make sure the backup folder and storage folder are not on the same drive.

- **Enable Network**

Activate NV DVR remote system to access at the set time. After the appointed time, the Network function will be disabled. If the Network function is already enabled, the Network function will not be disabled when the appointed time has ended.

- **Reboot**

Restart the PC at the appointed time.



Make sure the Windows operating system is set **NOT** to require you to login user name and password. This way the system will be able to run NV DVR program.

- **Disable Alarm**

Deactivate the alarm at the set time temporarily.

3. Specify to either schedule it weekly or one time. Click to make a selection.
4. Click on the blocks to set the schedule (see also [Chapter 5.5.1](#)). To store the setting, click **Save**. To remove the settings, click **Clear**.
5. To end Schedule Setting, click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.

5.5.1 To set schedule at a specific portion of time in that hour:

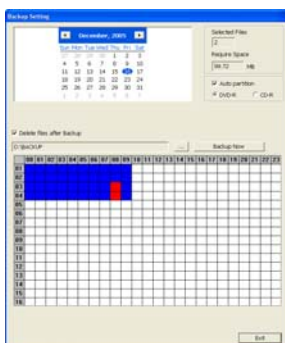
1. **Right click** the colored blocks.
2. In the Select time dialog box, click to enable or disable the portion you want to set.



3. Click **OK** to accept the setting and **Cancel** to exit without saving the setting.

5.6 Backup Setting

In the Backup Setting dialog box, the number from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera number. When you back up the file, you may find QLogViewer and Player application included in the backup folder (See also [Chapter 6](#)).



To Backup file:

1. Select the date of the recorded file in the calendar you want to backup. Use and buttons to shift the calendar to the left or right.
2. In the table below, click on the blue block to select the recorded file. The blue block turns red when it is selected. The block that appears in white doesn't have data. If you want to set the specific time, right-click on the selected block. Then, set the time to start and end.
3. Check the information beside the calendar.
 - Selected Files** : Show the number of files selected.
 - Require Space** : Show the total size of the selected file.
4. Enable Auto partition and select to divide the file size into DVD-R or CD-R. NV DVR automatically backup and divide the file sizes to facilitate burning into DVD or CD disc.
5. If you do **NOT** want to keep the recorded file in the storage folder, enable **Delete files after Backup** check box.
6. Click to set the path on where to store the backup file.
7. Click to start archiving the selected file.
8. Click **Exit** to close Backup Setting dialog box.

5.7 Sensor Setting

The I/O device must be installed to use this function.



The 'Sensor Setting' dialog box contains the following fields and controls:

- SensorID:** A drop-down menu showing 'Sensor01'.
- Name:** A text field containing 'Backdoor'.
- Content:**
 - Card No.:** A text field containing '1'.
 - Input No.:** A text field containing '1'.
 - Description:** A text field containing 'Triggered when open'.
- Test:**
 - A green button labeled 'Low'.
 - A button labeled 'Stop'.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom.

To Set the Sensor Setting:

1. Click the drop-down list and select the sensor ID number.
2. Enter sensor name.
3. The system automatically detects the card and input number. In the Content section, enter sensor description.
4. In the test section, click **Test** to check the sensor status. Red is high and Green is low.
5. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.

5.8 Relay Setting

The I/O device must be installed to use this function.



The 'Relay Setting' dialog box contains the following fields and controls:

- RelayID:** A drop-down menu showing 'Relay01'.
- Name:** A text field containing 'Light'.
- Enable:** A checked checkbox labeled 'Enable'.
- Content:**
 - Card No.:** A text field containing '1'.
 - Input No.:** A text field containing '1'.
 - Description:** A text field containing 'Turn on light'.
- Test:**
 - A red button labeled 'High'.
 - A button labeled 'Stop'.
- Buttons:** 'OK' and 'Cancel' buttons at the bottom.

To set the Relay Setting:

1. Click the drop-down list and select the relay ID number.
2. Enter relay name.
3. The system automatically detects the card and input number. In the Content section, enter relay description.
4. In the test section, click **Test** to trigger relay. Red is high and Green is low.
5. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.

5.9 Alarm Setting

In the Alarm Setting dialog box, click **Add** to insert and set new alarm setting, click **Delete** to remove the selected alarm setting, click **OK** to exit and save the setting, **Cancel** to exit without saving, and **Default** to revert back to original factory setting.

The screenshot shows the 'Alarm Setting' dialog box. It has several sections:

- Header:** Fields for 'No.' (1), 'Name' (Alarm1), and 'Description' (Front Door).
- Enable Time:** A 24-hour clock grid (2) with an 'Enable' checkbox.
- Conditions:**
 - Trigger:** Radio buttons for 'Trigger if any' and 'Trigger if all'.
 - Camera:** A grid for selecting cameras (3).
 - Video Loss:** A grid for selecting video loss conditions.
 - Sensor:** Radio buttons for 'High' and 'Low' with corresponding grids.
- Action:** A list of actions with checkboxes and 'Detail' buttons:
 - Relay Output (checked)
 - Launch E-Map
 - TV Out
 - Enlarge Camera View (checked)
 - Play Warning Sound
 - Make Phone Calls
 - Send E-Mail
 - File Transmission via FTP
 - Start Recording (checked)
 - SMS/MMS
 - PTZ preset point
 - Alarm SOP
- Alarm Setting List:** A table at the bottom (4) listing existing alarms.

No.	Name	Description
1	Alarm1	Front Door
2	Alarm2	5th Floor
3	Alarm3	Backyard
4	Alarm4	
5	Alarm5	
- Buttons:** 'Add', 'Delete', 'OK', 'Cancel', and 'Default' at the bottom.


 Callouts: (1) points to 'No.', (2) points to 'Enable Time' grid, (3) points to 'Camera' grid, (4) points to the 'Alarm Setting List' table, and (5) points to the 'Action' section.

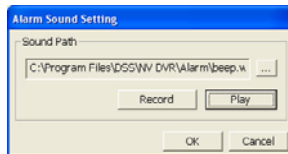
To set the Alarm Setting:

- Click **Add** to insert and set a new alarm setting. Click the items in the **(4) Alarm Setting List**, if you want to modify the alarm setting.
- In **(1) Alarm Setting number/Name/Description**, display the selected alarm setting number in the list below. Enter alarm name and description.
- In **(2) Enable Time**, the number from 00 to 23 represent the time in 24-hour clock. Select the time and click the block you want to activate or deactivate the alarm function. When it is deactivated the color of the block turns white.
- In **(3) Conditions**, you can set "**Trigger if any**" to activate if it falls to one of the conditions or "**Trigger if all**" to activate if it falls to all conditions. Select and click on the camera number (01 to 16) in **Motion Detected** and **Video Loss** to set the condition for the system to alarm. Select and click on the sensor number (01 to 16) to set the condition for the system to alarm. If the sensor normal status is high, set the sensor condition to low (see [Chapter 5.7 step #4](#)).
- In **(5) Action**, you may now set the alarm action for the system to perform when the alarm condition is activated.
 - Relay Action**
Select and click on the relay device number you want to activate.
 - Launch Emap**
Display mini Emap screen.
 - TV Out**
Switch to only display video on TV from the source where the alarm is activated.
 - Enlarge Camera View**
Switch to only display video in Preview/Advanced mode from the source

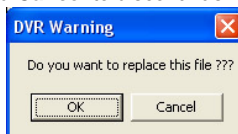
- where the alarm condition is activated.
- **Play Warning Sound**
Play alarm sound. To setup click **Detail** (see also [Chapter 5.9.1](#)).
- **Make Phone Calls**
Dial and contact the number in the list. To setup click **Detail** (see also [Chapter 5.9.2](#)). To use this feature, the PC must have a voice modem connected to it.
- **Send E-mail**
Send an electronic text message. To setup click **Detail** (see also [Chapter 5.9.3](#)).
- **File Transmission via FTP**
Upload file to remote computer thru FTP (File Transfer Protocol). To setup click **Detail** (see also [Chapter 5.9.4](#)).
- **Start Recording**
Record the video from the selected camera. To setup click **Detail** (see also [Chapter 5.9.5](#)).
- **SMS (Short Message Service)/MMS (Multimedia Messaging System)**
SMS transmits only text messages to mobile phone. MMS transmits text messages and images over wireless networks using the wireless application protocol (WAP). Make sure your mobile phone support this feature and your PC is connected to GSM/GPRS modem. To setup click **Detail** (see also [Chapter 5.9.6](#)).
- **PTZ preset point**
Position the PTZ camera based on the preset point setting. To setup click **Detail** (see also [Chapter 5.9.7](#)).
- **Alarm SOP (Standard Operation Procedure)**
List the instructions to inform the person of what to do when the alarm is activated. To setup click **Detail** (see also [Chapter 5.9.8](#)).

5.9.1 To Setup the Alarm Sound:

1. Beside the Play Warning Sound check box, click **Detail**.
2. In the Alarm Sound Setting dialog box, click  to select other wav file from other source or folder, **Play** to listen, **Record** to make a new copy of a sound.



3. If you click **Record**, you will be prompted if you want to replace the file. Click **OK** to continue and **Cancel** to discontinue.



4. When the Sound Recorder appears, use the record control panel to record, stop, play, rewind and forward. If you want to keep the existing file, click

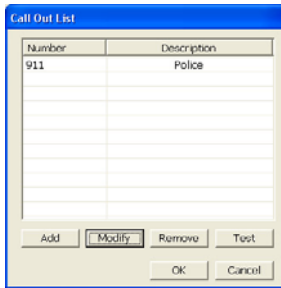
File > Save As..., enter filename and click **Save**. Make sure you have microphone connected to your PC.




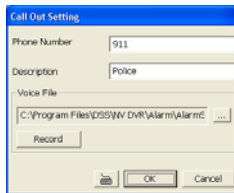
- Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.

5.9.2 To Setup Call Out Setting

- Beside the Make Phone Calls check box, click **Detail**.
- In the Call Out List, click **Add** to insert a new contact number, **Modify** to edit the selected item, **Remove** to delete the selected item, **Test** to check if it is working.



- In the Call Out Setting, enter the phone number and description. Click  to select existing sound recorded massager and **Record** to make a new voice message.



- When the Sound Recorder appears, use the record control panel to record, stop, play, rewind and forward. If you want to keep the existing file, click **File > Save As...**, enter filename and click **Save**. Make sure you have microphone connected to your PC.
- Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.

5.9.3 To Setup Send E-mail Setting

Beside the Send Email check box, click **Detail**. In the E-mail Setting dialog box, click **OK** to exit and save the setting and **Cancel** to exit without saving the setting.

The screenshot shows the 'E-mail Setting' dialog box. It is divided into several sections. Callout (1) points to the 'Mail Server' section, which includes fields for 'SMTP Server' (set to 'AskTech.security.com') and 'Port' (set to '25'). There is also an 'Authentication' checkbox and fields for 'ID' and 'Password'. Callout (2) points to the 'Mail' section, which includes 'From:', 'To:', 'CC:', and 'Subject:' fields, and a 'Message' text area. Callout (3) points to the 'Email Notice Setting' section, which includes 'Notice Interval' (set to '5' minutes), 'Embedded image' (set to '352x240' and '1' frame), and a 'Test Account' button. Callout (4) points to the 'Modem Dial up Setting' section, which includes 'Auto Dial up' and 'Auto Disconnect after' (set to '1' minute) checkboxes.

(1) Mail Server

Enter the SMTP Server and port. If your e-mail system requires user identification, enable **Authentication** check box and enter User ID and Password.

(2) Mail

To check if it is working, click **Test Account** button.

From: Enter the sender e-mail address.

To and CC: Enter the recipient email address and separate it with comma or a semicolon (;).

Subject: Enter the message title.

Message: Type the message.

(3) Email Notice Setting

Notice Interval Set the period of time before it sends another e-mail notice.

Embedded image Select the image size and set the number of frames.

(4) Modem Dial up Setting

If you are using dial up modem, enable **Auto Dial up** check box and select the modem name. You may also set the time to disconnect automatically, just enable the **Auto Disconnect after** check box and set time.

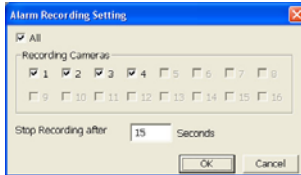
5.9.4 To Setup File Transmission via FTP

Beside the File Transmission via FTP check box, click **Detail**. In the FTP Setting dialog box, enter the FTP IP, port, user ID and password then click **OK** to exit and save the setting and **Cancel** to exit without saving the setting.

The screenshot shows the 'FTP Setting' dialog box. It contains fields for 'FTP Server' (set to '61.12.124.30'), 'Port' (set to '21'), 'ID' (set to 'John'), and 'Password' (masked with asterisks). There are 'OK' and 'Cancel' buttons at the bottom.

5.9.5 To Setup Start Recording

Beside the Start Recording check box, click **Detail**. In the Alarm Recording dialog box, select the camera to record the video. Enable **All** to select all cameras. Click **OK** to accept the new settings and **Cancel** to exit without saving.



5.9.6 To Setup SMS/MMS

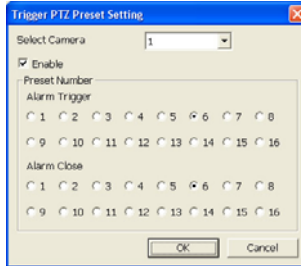
To use this feature, GSM/GPRS modem is required. Connect the GSM/GPRS modem to the serial COMM port of PC. Beside the SMS/MMS check box, click **Detail**.



1. Select the port number in ComPort drop down list from where the GSM/GPRS modem is connected.
2. Click **Modem Setup** button to automatically detect the Modem Baud Rate.
3. In Local Phone Number text box, enter the GSM SIM card phone number.
4. In Phone Num text box, enter the contact number.
5. You may now set to send thru SMS &/or MMS. If you enable SMS setting, just enter the message in the text box. If you enable MMS, enter the APN name, WAP IP, MMS address and the message. If you are not sure, please contact your mobile service provider.
6. Click **OK** to accept the new settings and **Cancel** to exit without saving.

5.9.7 To Setup PTZ preset point

Beside the PTZ preset point check box, click **Detail**. In the Trigger PTZ Preset Setting dialog box, select the PTZ camera number then select the Enable check box. Select the position of the PTZ camera when the alarm is activated and ended.

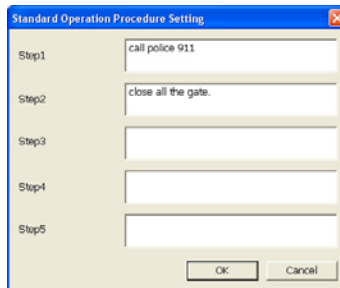


The dialog box titled "Trigger PTZ Preset Setting" contains the following elements:

- Select Camera:** A dropdown menu with "1" selected.
- Enable:** A checked checkbox.
- Preset Number:** A section with two rows of radio buttons. The first row contains buttons 1 through 8, and the second row contains buttons 9 through 16.
- Alarm Trigger:** A section with two rows of radio buttons. The first row contains buttons 1 through 8, and the second row contains buttons 9 through 16.
- Alarm Close:** A section with two rows of radio buttons. The first row contains buttons 1 through 8, and the second row contains buttons 9 through 16.
- Buttons:** "OK" and "Cancel" buttons at the bottom right.

5.9.8 To Setup Alarm SOP

Beside the Alarm SOP check box, click **Detail**. In the step text boxes, type the standard protocol when the alarm is activated. When the alarm is activated the Standard Operation Procedure dialog box will appear. Just click **Next** to see the next instruction, **Back** to see the previous instruction, **Finish** to end and **Abort** to terminate.



The dialog box titled "Standard Operation Procedure Setting" contains the following elements:

- Step1:** A text box containing "call police 911".
- Step2:** A text box containing "close all the gate."
- Step3:** An empty text box.
- Step4:** An empty text box.
- Step5:** An empty text box.
- Buttons:** "OK" and "Cancel" buttons at the bottom right.

5.10 User Setting

Only administrator can access User Setting. In the User Setting dialog box, click **Add** to insert a new user, **Delete** to remove the selected user, **Edit** to modify the user control right, **OK** to exit and accept the setting, and **Cancel** to exit without saving the setting.



The dialog box titled "User Setting" contains the following elements:

Level	Name	Description
Administrator	John	
User	Ken	
User	James	

Buttons: "Add", "Delete", "Edit", "OK", and "Cancel".

After clicking **Add** or **Edit**, you may customize the user control setting. **OK** to exit and accept the setting, and **Cancel** to exit without saving the setting

The screenshot shows the 'User Setting' dialog box with the following fields and callouts:

- (1) Authorization Level: Radio buttons for 'User' (selected) and 'Administrator'.
- (2) Control Right: A list of checkboxes including System Setting, Record, Network, Playback, Power OFF, IP Camera, PTZ, E-Map, Backup, Scheduler, POS, and Advanced Mode.
- (3) Remote Access time: A checkbox for 'Infinite' and a text box for 'Minute'.
- (4) Visible camera: A checkbox for 'All' and a grid of checkboxes for cameras 1 through 16.
- (5) Name: A text box containing 'Ram'.
- (6) Description: A text box containing 'Night shift'.
- (7) Password: A text box containing '*****'.
- (8) Confirm Password: A text box containing '*****'.

At the bottom of the dialog box are buttons for 'OK', 'Cancel', and 'Default'.

(1) Authorization level

Select the status of the user. Only Administrator-level can access User Setting, and reset the Alarm status when using the Remote Console.

(2) Control Right

Enable the items that would allow the user to access.

(3) Remote Access time

Allow the user to access NV DVR from a remote location using internet explorer.

Enable **Infinite** check box to access NV DVR without time limit. If you want to set time limit, enter the number of minutes in **Minute** text box.

(4) Visible Camera

Select the camera number that would allow the user to access or view. To select all the cameras, enable the **ALL** check box.

(5) Name

Enter the user name.

(6) Description

Enter the user description.

(7) Password

Enter the user password.

(8) Confirm Password

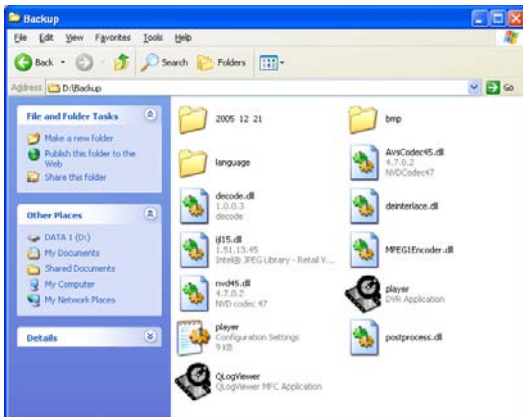
Enter the same user password for confirmation.

Chapter 6 Backup Video Players

You can playback the backup files using QLogViewer and Player applications. When you back up the recorded file, QLogViewer and Player applications are automatically included in the backup folder.

QLogViewer can only playback one video at a time. It only comes with video segmentation, output segmentation, capture screen shot, and print the screen. With Player, it is the same as in Playback mode and supports six (6) different split screen types to view all the video at the same time. The only difference is that there are no Preview and Playback buttons.

To run the application, go to backup folder and double-click QLogViewer or Player icon.

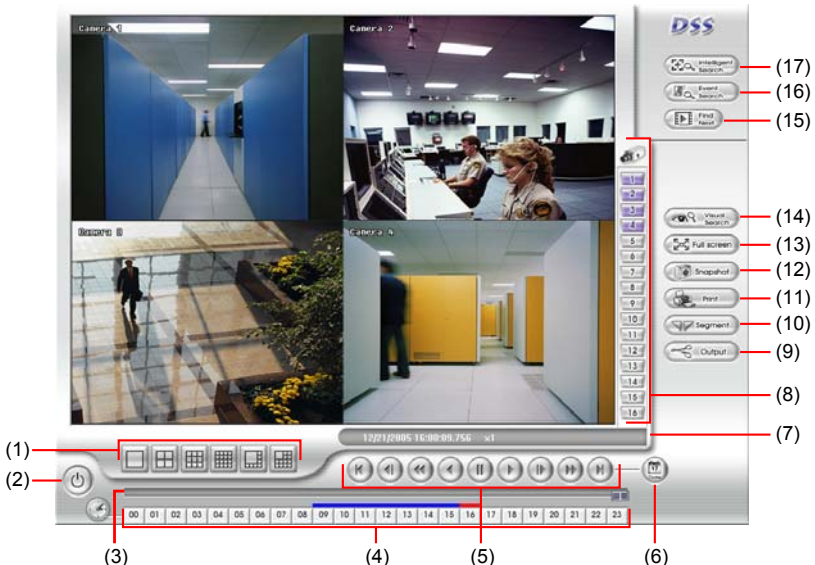




6.1 Familiarizing QLogViewer Buttons



Name	Function
(1) Time	Display the file date, time and play speed.
(2) File	Display the path where the file is located.
(3) Playback Control Buttons	Begin: Move at the beginning of the recorded video file. Previous: Go back to the previous frame. Slower: Play the recorded video file at the speed of $\frac{1}{2}x$, $\frac{1}{4}x$, or $\frac{1}{6}x$. Rewind: Wind back the recorded video file. Pause: Briefly stop playing the recorded video file. Play: Play the recorded video file. Faster: Play the recorded video file at the speed of 2x, 4x, or 8x. Next: Go to the next frame. End: Go to the end of the recorded video file.
(4) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(5) Segmentation	Keep a portion of the recorded video you want. For operational procedure, please refer to Chapter 4.8.
(6) Output	Save the segmented file in *.mpg, *.avi, or *.dvr format.
(7) Save	Capture and save the screen shot either in *.jpg or *.bmp format.
(8) Print	Print the screen shot.
(9) Open	Access the backup video file.

6.2 Familiarizing the Player Buttons



Name	Function
(1) Split Screen Mode	Select from six (6) different split screen type to playback the recorded video file of all the camera, or one camera over the other or alongside on a single screen.
	<ul style="list-style-type: none"> - If there are only 4 cameras, you won't be able to switch to 9, 16, and 13 split screen mode. - To zoom in an area on the screen, Right click and Drag a square on the area you want to enlarge.
(2) Exit	Close the Player.
(3) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(4) Hour Buttons	Select and click to playback the recorded video file on the specific time frame.
(5) Playback Control Buttons	<p>Begin: Move at the beginning of the recorded video file.</p> <p>Previous: Go back to the previous frame.</p> <p>Slower: Play the recorded video file at the speed of ½x, ¼x, or ⅓x.</p> <p>Rewind: Wind back the recorded video file.</p> <p>Pause: Briefly stop playing the recorded video file.</p> <p>Play: Play the recorded video file.</p> <p>Faster: Play the recorded video file at the speed of 2x, 4x, or 8x.</p> <p>Next: Go to the next frame.</p> <p>End: Go to the end of the recorded video file.</p>
(6) Date	Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file.
	The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera ID. The blue colored column indicates that there is a recorded video file on that period of time. While the red colored column indicates on where to start playing the recorded video file.
(7) Status bar	Display the recorded date, time and play speed.
(8) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(9) Output	Save the segmented file in *.mpg, *.avi, or *.dvr format (see also Chapter 4.8).
(10) Segment	Keep a portion of the recorded video you want (see also Chapter 4.8).
(11) Print	Print the screen shot.
(12) Snapshot	Capture and save the screen shot either in *.jpg or *.bmp format.
(13) Full screen	<p>View in Playback-compact mode. To return, press the right button of the mouse or ESC on the keyboard.</p> <p>When you switch to full screen in multiple-screen mode, Left click to toggle to only display one of the video in the multiple-screen mode or all.</p>

Chapter 6 Play Backup Video Files

Name	Function
(14) Visual Search	Search from a specific camera by Date, Hour, Minute, 10 Seconds and Second. (See also Chapter 4.10)
(15) Find Next	Search for the next event or changes in the motion detector frame. You can use this when you are using Intelligent Search or Event Search only.
(16) Event Search	Search from the recorded activities that take place in the system (i.e., Sensor, Motion , Video Loss, POS) . (See also Chapter 4.11)
(17) Intelligent Search	Search the changes in the motion detector frame (See also Chapter 4.12).

Chapter 7 Using Functional Keys

The NV DVR system provides shortcut keys. The table shows the function keys and descriptions.

Function Keys	description
F1	Display system information
F2	Start recording
F3	Enable network function
F4	Access system settings
F5	Switch to playback mode
F6	Access E-map setting
F7	Access PTZ camera control panel
F8	Snapshot
F9	Switch to Full Screen
F11	Switch to AutoScan
Ctrl + A	Turn on/off hardware AGC (Auto Gain Control)

Chapter 8 Using the Remote Programs

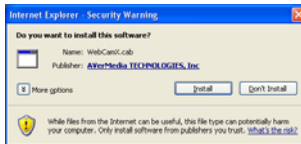
You can use Microsoft Internet Explorer to access NV DVR server by entering the IP address or domain name. To use this feature, make sure that you are connected to the internet and the Network feature is enabled.

Accessing this feature for the first time you will be prompted by your browser to install WebCamX.cab, allow the installation and you should be able to connect and login afterwards.

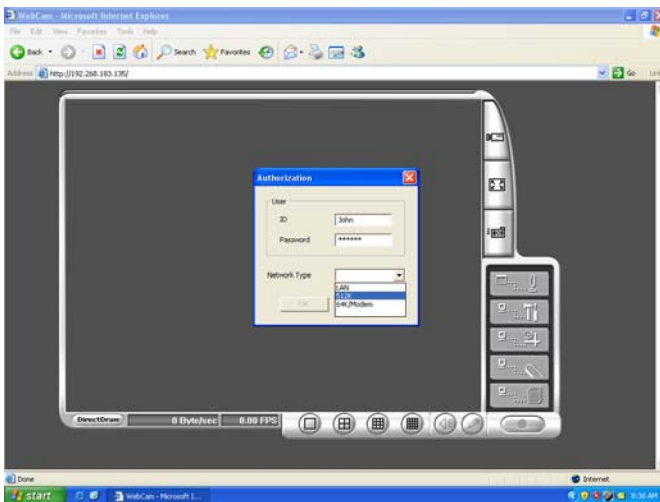
For Windows 2000, click **Yes** when the Security Warning dialog box appears.



For Windows XP, click **Install** when the Internet Explorer - Security Warning dialog box appears.



After installing the WebCamX.cab and when connecting to the NV DVR server, you are required to enter User ID, password and select the network type.



8.1 Familiarizing the NV DVR WebCam Buttons

To change the video quality of each screen, right-click on the video screen, point to Video Quality, and select High, Normal or Low.

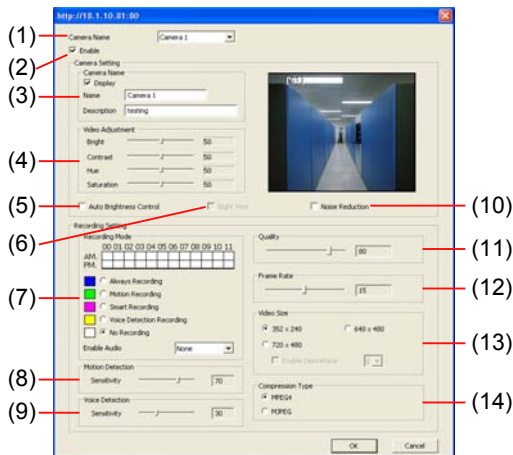


Name	Function
(1) DirectDraw	Enhance the video quality.
<p>i Not all graphic cards can support this function.</p>	
(2) Received file size	Indicate the size of the data being sent per second.
(3) Camera frames	Indicate the number of frames per second.
(4) Split display mode	Select from six (4) different split screen types to view all the cameras. It also allows you to switch and view different camera number.
(5) Audio	Enable/disable remote sound.
(6) 2-Way Talk	Enable/disable 2-way audio function. This function allows the client and server to talk via internet using MIC. Make sure your microphone and speakers work before using this function. If the NV DVR server Talk to web-client setting is disabled, you won't be able to hear from the other side.
(7) Record	Save the video of the selected camera in AVI format.
(8) Event Log Viewer	Display the Event logs, Operation logs, POS logs, System logs, and Network logs.
(9) Remote Console	Initiate Remote Console. The interface is the same as NV DVR application and allows you to control NV DVR server (see also Chapter 8.2).

Name	Function
(10) Remote E-Map	Display the NV DVR server Emap screen (see also Chapter 4.7).
(11) Remote setup	Change the NV DVR server settings (see also Chapter 8.1.1).
(12) Select a PTZ camera	Initiate PTZ camera controller (see also Chapter 8.2)
(13) Snapshot	Capture and save the screen shot in *.bmp format.
(14) Full screen	Use the entire area of the screen to only display the video. To return, press the right button of the mouse or ESC on the keyboard.
(15) Select cameras to view	Select to the view camera from different server. In Select Camera dialog box, Display column, click to enable/disable viewing the camera. <ul style="list-style-type: none"> - Click Add Server and select the server type between DVR and IP Cam to add. - Click Delete Server to delete the selected item. - Click Import to replace it with the previous saved list. - Click Export to save the list.

8.1.1 To Setup Remote System Setting

Click **OK** to exit and save the setting and **Cancel** to exit without saving the setting. The setting here applies to Remote DVR only.



(1) Camera Name

Select the camera you want to adjust the settings.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Camera Setting

- **Display**
Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Name**
Change the camera name.
- **Description**
Add a short comment.

(4) Video Adjustment

Adjust the Brightness, Contrast, Hue and Saturation of the selected camera.

(5) Auto Brightness Control

Automatically adjust the brightness.

(6) Night View

Automatically adjust the exposure to make the image more visible especially when the site is dark. You can only use this function when the Auto Brightness Control is enabled.

(7) Recording Mode

The blocks from 00 to 11 (AM & PM) represent the time in 24-hour clock. To record in full 24 hours, select the recording mode and click the ☹ button. If you want to only record at a particular time, click the colored block beside the recording mode then click on the time blocks. When the system starts recording a red triangle mark would appear at the upper left corner of the screen. The recording modes are listed below:

- **Always Recording**
Record the video from the selected camera and save it to the designated storage path (see also [Chapter 5.1 #1](#)).
- **Motion Recording**
Start recording the video from the selected camera only when the system detects motion. Once a motion is detected, the system automatically saves the previous frames and stop based on the **Start Record Prior** and **Stop Record After** settings.
- **Smart Recording**
Reduce the recording frame rate to one frame per second when there is no motion detected. Once a motion is detected, the system automatically records based on the **(7) Frame Rate** setting.
- **No Recording**
The system won't do any recording.

(8) Motion Detection

Adjust the sensitivity of the motion detector. The higher the value, the finer the sensitivity is detected. When it detects a motion, a green triangle mark would appear at the upper left corner of the screen.

(9) Voice Detection

Adjust the intensity of the audio detector. The system detects sound when it exceeds the intensity value.

(10) Noise Reduction

Reduce undesirable video signal and improve the quality of the video.



Noise Reduction uses lots of CPU resource. Please use this feature only if it is really necessary.


(11) Quality

Adjust the video quality. The higher the value, the lower the compression level and uses more hard disk space.

(12) Frame Rate

Set the number of images per second of the video to be recorded. The frame rate ranges from 1 to 30 for NTSC and 1 to 25 for PAL. The higher frame rate, it uses more hard disk space.

(13) Video Size

Select the size of the video and click the  button. The higher the size, the larger the file it create. You can also activate the **Enable Deinterlace** to enhance the video quality. Set the **Enable Deinterlace** mode to #1, if you are capturing motionless picture and #2, if it captures lots of movement.

(14) Compression Type

Select between the 2 compression types. MPEG4 uses higher compression rate and the file is smaller. While MJPEG uses lower compression rate and the file is bigger.

8.2 Familiarizing the WebCam PTZ Buttons



Name	Function
(1) Direction buttons	Adjust and position the focal point of the PTZ camera. Click the center to pan automatically.
(2) Select PTZ	Choose to enable/disable the PTZ camera. In the Select PTZ dialog box, Select column, click to enable/disable viewing and controlling the PTZ camera. Click OK to exit and save the setting and Cancel to exit without saving the setting.
(3) AutoPan Groups	Operate the PTZ cameras automatically based on the selected camera group preset position number.
(4) Camera preset position number	Move the PTZ camera to the preset point.
(5) Zoom +/-	Zoom in and out the image.
(6) Focus +/-	Adjust the focus manually to produce clear image.

8.3 Familiarizing the Remote Console Buttons

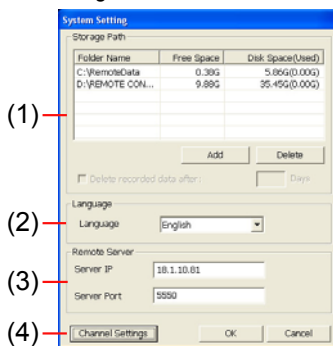


Name	Function
(1) Exit	Close the Remote Console.
(2) Volume	Enable/disable the sound.
(3) Split Screen Mode	Select from six (6) different split screen type to playback the recorded video file of all the camera, or one camera over the other or alongside on a single screen.
i	- If there are only 4 cameras, you won't be able to switch to 9, 16, and 13 split screen mode.
	- To change the video quality, right-click on the screen and select between High, Normal or Low.
(4) Record	Start/stop video recording.
(5) Emap	Display the map in each area, the camera/sensor/relay location and the warning event. (see also Chapter 4.7)
(6) Network	Enable/disable remote system access. This feature allows you to access NV DVR server from a remote location via internet connection.
(7) Setup	Configure the Remote Console setting. (see also Chapter 8.3.1)
(8) Preview	Switch to Preview/Advanced mode. This allows you to view live camera display.
(9) Playback	Switch to Playback mode. This allows you to view the recorded video file. (see Chapter 8.4)
(10) Status Bar	Display the current date, time and hard disk free space.
(11) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.

Name	Function
(12) Event log	Show the record of activities that take place in the system. To filter the records, select and click the option button to only display Event, System, Operation, Network or POS.
(13) Snapshot	Capture and save the screen shot either in *.jpg or *.bmp format.
(14) Full screen	Use the entire area of the screen to only display the video. To return, press the right button of the mouse or ESC on the keyboard.
(15) Alarm	Alert and display warning info. Only Administrator-level can reset and turn on, off and trigger the Sensor and Relay by right-clicking the item in the Sensor and Relay list.

8.3.1 To Setup Remote Console Setting

Click **OK** to exit and save the setting and **Cancel** to exit without saving the setting.



(1) Storage Path

Set the directory on where to save the data. When there is not enough free space to record one hour data, the system automatically replaces the oldest data. In case you have more than one storage path, the system automatically saves the data to the next storage path.

By default the data is stored in C:\RemoteData, to insert another storage path, click **Add**. To remove the selected path, click **Delete**.

If you want the system to automatically erase the data after a certain days, enable the **Delete recorded data after** check box and enter the numbers of days in **Days** text box.

(2) Language

Customize the system to display the tool tips and dialogs based on the selected language. By default the language is in English.

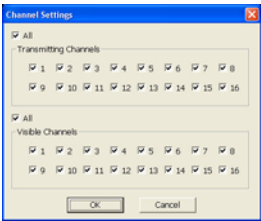
(3) Remote Server

Enter the NV DVR Server IP and Port number.

(4) Channel Settings

The numbers from 01 to 16 represent the camera ID. In Transmitting Channels section, enable the camera number to receive the camera signal from the server. In Visible Channels section, enable the camera number to view the camera signal on Remote

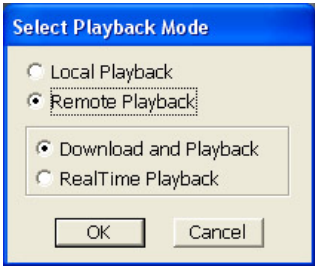
Console screen. To select all the cameras, enable the **ALL** check box.



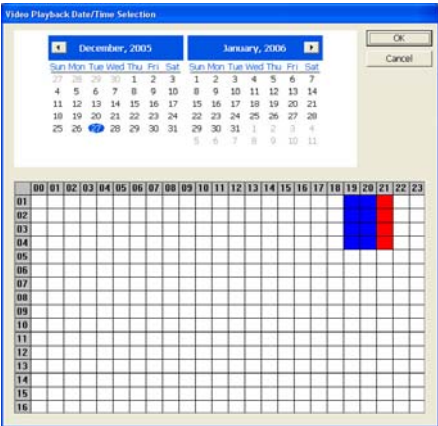
8.4 Using the Remote Playback

To use this feature, first you need to select the source of the file. In the Select Playback Mode dialog box, choose **Local Playback** to open the file that is recorded in the Remote Console, and **Remote Playback** to open the file that is recorded in the NV DVR server. When you choose Remote Playback, select **RealTime Playback** if your internet bandwidth is fast and big enough, otherwise choose **Download and Playback**.

Click **OK** to proceed and **Cancel** to void this operation.



In the Video Playback Date/Time Selection, the number from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera number.






To Make a Selection:

1. Select the date in the calendar. Use ◀ and ▶ buttons to shift the calendar to the left or right.
2. In the table below, click on the blue block to select and open the recorded file. The blue block turns red when it is selected. The block that appears in white doesn't have data. You can only select one block when you choose Download and Playback.
3. Click **OK** to proceed and **Cancel** to void this operation.
4. If you select Download Playback and after making the selection, the system divides the selected hour into 16 video thumbnails. In the Time Selection screen, click on the video thumbnail you want to download and open (see also [8.4.2](#)).



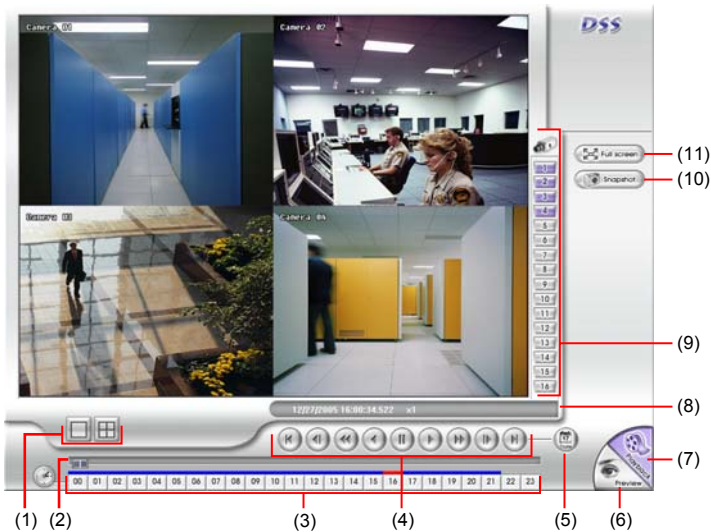
8.4.1 Familiarizing the Local Playback Buttons




Name	Function
(1) Split Screen Mode	Select from six (6) different split screen type to playback the recorded video file of all the camera, or one camera over the other or alongside on a single screen.
	<ul style="list-style-type: none"> - If there are only 4 cameras, you won't be able to switch to 9, 16, and 13 split screen mode. - To zoom in an area on the screen, Right click and Drag a square on the area you want to enlarge.
(2) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(3) Hour Buttons	Select and click to playback the recorded video file on the specific time frame.
	The Hour buttons represent the time in 24-hour clock. The blue bar on top of the hour button indicates that there is a recorded video file on that period of time. While the red bar indicates that you are currently viewing the recorded video file.
(4) Playback Control Buttons	<p>Begin: Move at the beginning of the recorded video file.</p> <p>Previous: Go back to the previous frame.</p> <p>Slower: Play the recorded video file at the speed of 1/2x, 1/4x, or 1/8x.</p> <p>Rewind: Wind back the recorded video file.</p> <p>Pause: Briefly stop playing the recorded video file.</p> <p>Play: Play the recorded video file.</p> <p>Faster: Play the recorded video file at the speed of 2x, 4x, or 8x.</p>
(4) Playback Control Buttons	<p>Next: Go to the next frame.</p> <p>End: Go to the end of the recorded video file.</p>
(5) Date	Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file.
	The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera ID. The blue colored column indicates that there is a recorded video file on that period of time. While the red colored column indicates on where to start playing the recorded video file.
(6) Preview	Switch to Preview/Advanced mode.
(7) Playback	Switch to Playback mode. This allows you to view the recorded video file.
(8) Status bar	Display the recorded date, time and play speed.
(9) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(10) Output	Save the segmented file in *.mpg, *.avi, or *.dvr format (see also Chapter 4.8).
(11) Segment	Keep a portion of the recorded video you want (see also Chapter 4.8).

Name	Function
(12) Snapshot	Capture and save the screen shot either in *.jpg or *.bmp format.
(13) Full screen	View in Playback-compact mode. To return, press the right button of the mouse or ESC on the keyboard. When you switch to full screen in multiple-screen mode, Left click to toggle to only display one of the video in the multiple-screen mode or all.

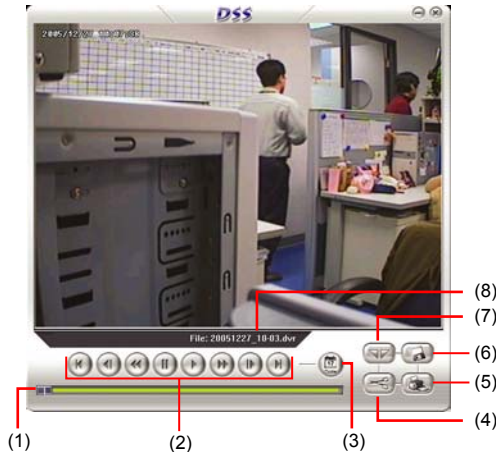
8.4.2 Familiarizing the RealTime Playback Buttons



Name	Function
(1) Split Screen Mode	Select from two (2) different split screen type to playback the recorded video file of all the camera, or one camera.
<div> <div></div> <div></div> </div>	<ul style="list-style-type: none"> - If there are only 4 cameras, you won't be able to switch to 9, 16, and 13 split screen mode. - To zoom in an area on the screen, Right click and Drag a square on the area you want to enlarge.
(2) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(3) Hour Buttons	Select and click to playback the recorded video file on the specific time frame.
<div> <div></div> <div></div> </div>	The Hour buttons represent the time in 24-hour clock. The blue bar on top of the hour button indicates that there is a recorded video file on that period of time. While the red bar indicates that you are currently viewing the recorded video file.

Name	Function
(4) Playback Control Buttons	<p>Begin: Move at the beginning of the recorded video file.</p> <p>Previous: Go back to the previous frame.</p> <p>Slower: Play the recorded video file at the speed of $\frac{1}{2}x$, $\frac{1}{4}x$, or $\frac{1}{8}x$.</p> <p>Rewind: Wind back the recorded video file.</p> <p>Pause: Briefly stop playing the recorded video file.</p> <p>Play: Play the recorded video file.</p> <p>Faster: Play the recorded video file at the speed of 2x, 4x, or 8x.</p> <p>Next: Go to the next frame.</p> <p>End: Go to the end of the recorded video file.</p>
(5) Date	Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file.
	The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera ID. The blue colored column indicates that there is a recorded video file on that period of time. While the red colored column indicates on where to start playing the recorded video file.
(6) Preview	Switch to Preview/Advanced mode.
(7) Playback	Switch to Playback mode. This allows you to view the recorded video file.
(8) Status bar	Display the recorded date, time and play speed.
(9) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(10) Snapshot	Capture and save the screen shot either in *.jpg or *.bmp format.
(11) Full screen	<p>View in Playback-compact mode. To return, press the right button of the mouse or ESC on the keyboard.</p> <p>When you switch to full screen in multiple-screen mode, Left click to toggle to only display one of the video in the multiple-screen mode or all.</p>

8.4.3 Familiarizing the Download and Playback Buttons



Name	Function
(1) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(2) Playback Control Buttons	Begin: Move at the beginning of the recorded video file. Previous: Go back to the previous frame. Slower: Play the recorded video file at the speed of $\frac{1}{2}x$, $\frac{1}{4}x$, or $\frac{1}{8}x$. Rewind: Wind back the recorded video file. Pause: Briefly stop playing the recorded video file. Play: Play the recorded video file. Faster: Play the recorded video file at the speed of 2x, 4x, or 8x. Next: Go to the next frame. End: Go to the end of the recorded video file.
(3) Date	Open other file.
(4) Output	Save the segmented file in *.mpg, or *.avi, format.
(5) Print	Print the screen shot.
(6) Save	Save the screen shot either in *.jpg or *.bmp format and video in *.dvr format.
(7) Segment	Keep a portion of the recorded video you want. You may follow the instruction in Chapter 4.8.

8.5 Using Handy Viewer to Access NV DVR server

Users can use a mobile phone to access the NV DVR through Internet. Make sure your mobile phone support IE browser and is connected to the internet. To access the NV DVR server, open IE browser and enter <http://enter server IP or domain name here/mobile>. You can see the latest screen shot. Click << >> to change the channel or camera and **Refresh** to reload new screen shot.

8.6 Using PDA Viewer to Access NV DVR Server

Users can also use a PDA to access the NV DVR through Internet. Make sure your PDA support IE browser and is connected to the internet. To use this feature, you need to install the PDA Viewer software either thru ActiveSync connection or download it from the internet. Please check if your PDA meets the 2 requirements below.

OS:	MS Windows CE 4.0 (PocketPC 2003)
CPU:	ARM architecture

8.6.1 To install PDA Viewer thru ActiveSync

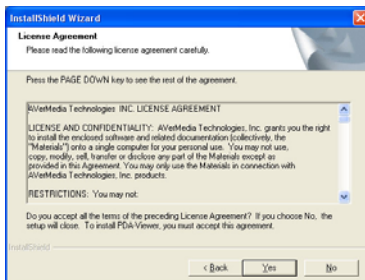
1. Connect your PDA to your PC. Place the CD into the CD-ROM drive then click Install PDA Viewer. And follow the on screen instructions.



2. Click **Next** to continue.



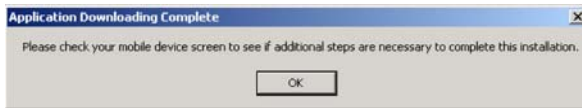
3. Read the license agreement and click **Yes** to accept all the terms. The system will then automatically install the application.



4. When you are prompted, click **Yes** to install the application using the default directory.

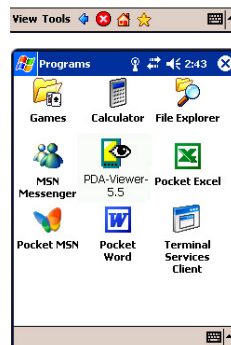
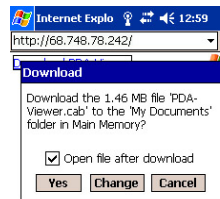
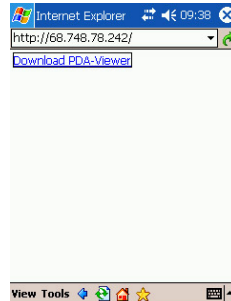


5. When done, click **OK**.



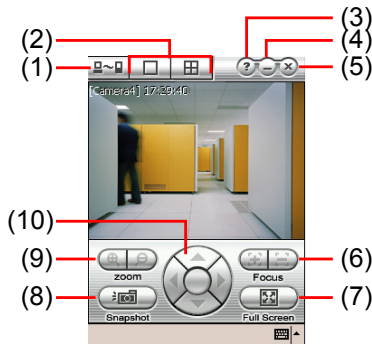
8.6.2 To install PDA Viewer from the Internet

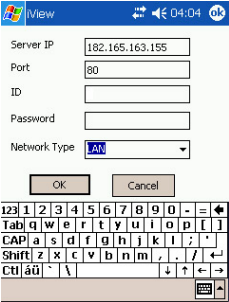
1. Make sure you are connected to the internet.
2. Open the web browser and enter the server IP. Then click the hyperlink **Download PDA-Viewer**.
3. When the Download dialog box appears, enable **Open file after download** and click **Yes**.
4. After the installation, the PDA-Viewer 5.5 icon will appear in the Programs list.



8.6.3 To Use the PDA Viewer

- 1. Run the **PDA-Viewer 5.5** in the Programs.
- 2. Familiarizing the PDA Viewer buttons.



Name	Function
(1) Connect	<p>Hook up to the NV DVR server. Make sure you are connected to internet.</p> <p>When the iView screen appears, enter the server IP, port, user ID, password and select the connection type. Then, click OK.</p> 
(2) Split Screen Mode	Select between 2 screen display types. It also allows you to switch and view different camera number or channels.
(3) About	Display the PDA-Viewer software version.
(4) Minimize	Reduce the size to taskbar.
(5) Exit	Close the PDA-Viewer.
(6) Focus	Adjust the focus of PTZ camera to produce clear image.
(7) Full Screen	Use the entire screen to only display the video.
(8) Snapshot	Capture and save the screen shot in *.bmp format.
(9) Zoom	Zoom in and out the PTZ camera image.
(10) Direction buttons	Adjust and position the focal point of the PTZ camera.

3. To change the video quality, enable/disable audio, and select to display different camera, tap on the video screen longer the pop up menu will appear.



Chapter 9 Image Verification

ImageVerification is a watermark-checking program to identify the authenticity of a saved image (e.g. by snapshot). This program can only verify uncompressed bmp image files.

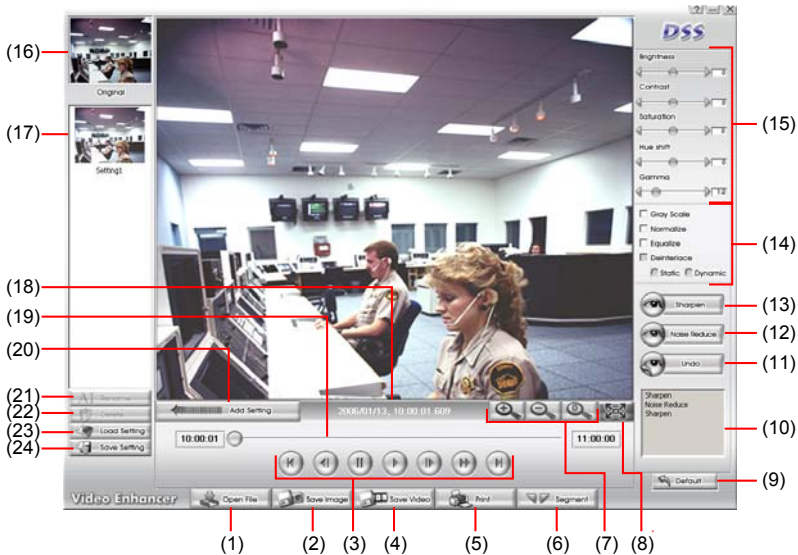
9.1 To Run the ImageVerification program

1. Click **Start>Programs>DSS>ImageVerification**.
2. In the ImageVerification screen, click **Load Source Image** and locate the image source.
3. Click **Verify Image** to begin the process.
4. Check the result in the Processed Image screen. If the picture is unmodified, the image in the Source Image and Processed Image screen would be exactly the same. If the picture is being modified, a warning dialog box would prompt you and the modified area is highlighted.



Chapter 10 Video Enhancer

The bundled Video Enhancer is a video editing tool and can only be used with *.dvr video file. It allows you to adjust the video picture quality, segment and save the wanted portion of the video, zoom in and out the image, and print or save the screen shot. You can also save the setting and apply it on other files.



Name	Function
(1) Open File	Access *.dvr video file.
(2) Save Image	Capture and save the screen shot in *.bmp format.
(3) Playback Control Buttons	Begin: Move at the beginning of the video file. Previous: Go back to the previous frame. Rewind: Wind back the video file. Pause: Briefly stop playing the video file. Play: Play the video file. Faster: Play the video file at the speed of 2x, 4x, or 8x. Next: Go to the next frame. End: Go to the end of the video file.
(4) Save Video	Save the edited or segmented video in *.avi format.
(5) Print	Print the screen shot.
(6) Segment	Mark the beginning and the end of the wanted portion of the video. Two triangle marks will appear on the slider. To cancel video segmentation, click this button again.
(7) Zoom Buttons	Enlarge, reduce, and set the image back to normal size.
(8) Full Screen	Use the entire screen to only display the video.

Name	Function
(9) Default	Set the video back to original state and delete all the changes in the history box.
(10) History Box	List all the actions.
(11) Undo	Delete the last action.
(12) Noise Reduce	Adjust the softness and repair the damaged colours.
(13) Sharpness	Improve the overall image by enhancing edges. This gives the image more depth.
(14) Effects	<ul style="list-style-type: none"> • Gray Scale: convert the image into black and white (monochrome). • Normalize: adjust the brightness intensity. • Equalize: automatically adjust the images that are too dark. • De-interlace: smooth out the overlying frames. • Static: de-interlace for motionless scene. • Dynamic: de-interlace for moving scene.
(15) Picture Adjustment	Adjust the Brightness, Contrast, Saturation, Hue and Gamma.
(16) Original Screen	Display the original state of the image.
(17) Temporary Setting Block	Display the sample settings. Click the sample to apply the setting on the current video.
(18) Status Bar	Display the date, and time of the video.
(19) Progress Bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(20) Add Setting	Include the new setting to the temporary setting block.
(21) Rename	Change the name of the selected setting in the temporary setting block.
(22) Delete	Permanently remove the selected setting in the temporary setting block.
(23) Load Setting	Call the saved settings.
(24) Save Setting	Store the settings in the temporary setting block.

Chapter 11 Web Tools

The bundled Web Tools includes Dispatch Server and Remote Backup program. To install Web Tools, place the CD into the CD-ROM drive then click **Install Web Tools**.

11.1 Dispatch Server

Dispatch is designed to reduce the network traffic of the NV DVR server. Instead of connecting directly to the NV DVR server, the client can connect to the computer that is connected to the NV DVR server using the Dispatch program.

To Run Dispatch program:

1. Make sure you are connected to the internet.
2. Click **Start>Programs>DSS>Tool>Dispatch**.
3. In the DVR Server section, enter the NV DVR server IP, port, user ID and password. You can also select to display the language you prefer.
4. In the Dispatch Service section, if you have installed more than one network card, select the Service IP number.
5. Click **START** to connect.



11.2 Remote Backup

Remote Backup is purely for backing up the *.dvr file from the NV DVR sever. You can select between Auto Backup and Manual Backup. Auto Backup continuously archives one hour of the recorded data at a time, starting from the specified date. As for Manual Backup, it only archives the recorded data of selected date.



To back up the data, you must have at least 2G hard disk space.

To back up the recoded data from the NV DVR server:

1. Make sure you are connected to the internet.
2. In the Server Setting section, enter the NV DVR server IP, port, user ID, password and click **Connect**.

3. Select the Backup mode.

In Auto Backup mode:

- In Begin Date drop down calendar, select the date from where to start.
- Click **Add** to set the storage path.
- Click **Delete** to remove the selected storage path.

In Manual Backup mode:

- Click **File Select** to choose the date, time and camera you want to back up.
- Click **Browse** to set the storage path.

4. Click **Start Backup** to begin and **Stop Backup** to end.

The screenshot shows the 'Remote Backup' application window. It has a title bar with standard Windows window controls. The main content area is divided into several sections:

- Server Setting:** Contains fields for IP (192.168.1.1), User (1), Port (80), and Password. There are 'Connect' and 'Disconnect' buttons.
- Auto Backup:** This section is selected with a radio button. It includes a 'Storage Path' table with columns for Folder Name, Free Space, and Disk Space. The table shows one entry: 'C:\Backup_Auto' with 3.99G free space and 29.30G disk space. Below the table is a 'Begin Date' dropdown menu set to '1/13/2006', and 'Add' and 'Delete' buttons.
- Manual Backup:** This section is unselected. It has a 'Storage Path' field containing 'C:\Backup_Manual', and 'File Select' and 'Browse' buttons.
- Disconnect:** A section with a progress bar showing '0 %' and 'Start Backup' and 'Stop Backup' buttons.