DSS 3000/5000/6000/7000/7000H
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 userís authority to operate this equipment.

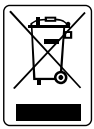
European Community Compliance Statement (Class A)

This product is 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.

TABLE OF CONTENTS

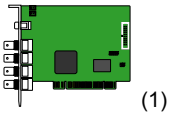
Chapter 1 Introduction

DSS 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.

DSS 3000 Package

DSS 3000 package includes the following: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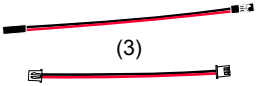
(3) (4)


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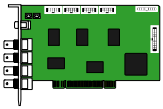
☐ (1) DSS 3000 ☐ (3) 30cm Watchdog line ☐ (5) Installation CD

☐ (2) Quick Guide ☐ (4) 20cm Video signal line

DSS 5000 Package

DSS5000 package includes the following: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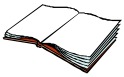
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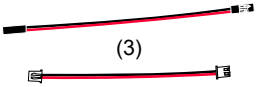
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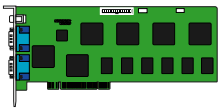
(5)

☐ (1) DSS 5000 ☐ (3) 30cm Watchdog line ☐ (5) Installation CD

☐ (2) Quick Guide ☐ (4) 20cm Video signal line

DSS 6000 Package

DSS 6000 package includes the following: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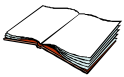
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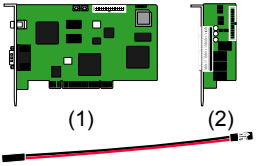
☐ (1) DSS 6000 ☐ (3) 2X AV cable ☐ (5) Installation CD ☐ (7) I/O cable

☐ (2) I/O card ☐ (4) Quick Guide ☐ (6) 30cm Watchdog line

DSS 7000 Package

DSS 7000 package includes the following: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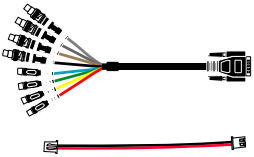
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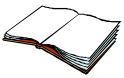
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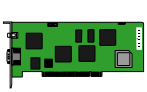
- ☐ (1) DSS 7000
- ☐ (2) I/O card
- ☐ (3) AV cable
- ☐ (4) I/O cable
- ☐ (5) 30cm Watchdog line
- ☐ (6) 20cm Video signal line
- ☐ (7) Installation CD
- ☐ (8) Quick Guide

DSS 7000H Package

DSS 7000 package includes the following: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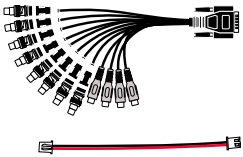
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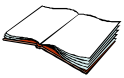
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- ☐ (1) DSS 7000H
- ☐ (2) I/O card
- ☐ (3) AV cable
- ☐ (4) I/O cable
- ☐ (5) 30cm Watchdog line
- ☐ (6) 20cm Video signal line
- ☐ (7) Installation CD
- ☐ (8) Quick Guide

OSD kit (optional)

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


(1)


(2)

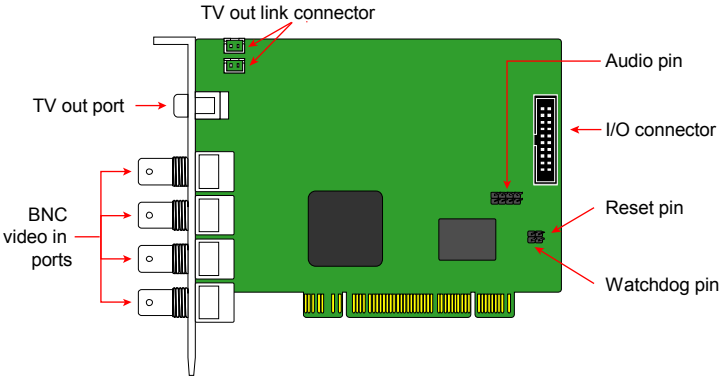

(3)


(4)

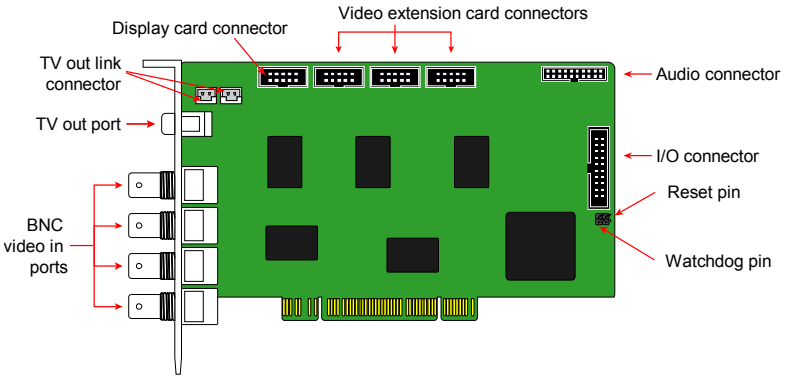
- ☐ (1) Remote Control (batteries included)
- ☐ (2) IR USB Receiver
- ☐ (3) OSD Installation CD
- ☐ (4) 2X Velcro Strips

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

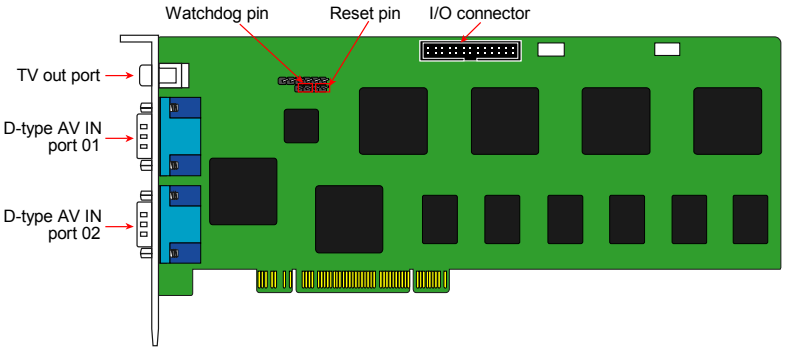
DSS 3000 Card Parts



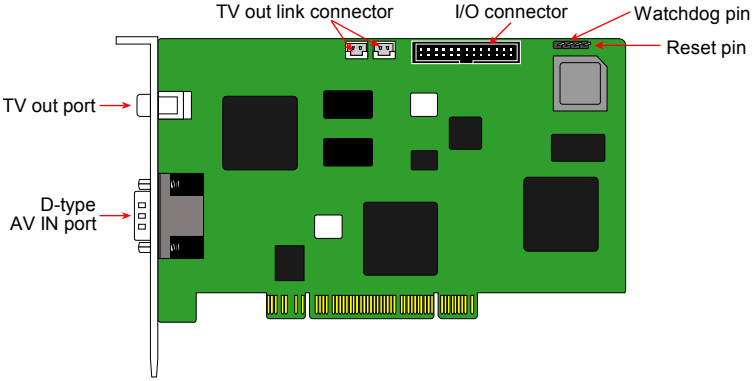
DSS 5000 Card Parts



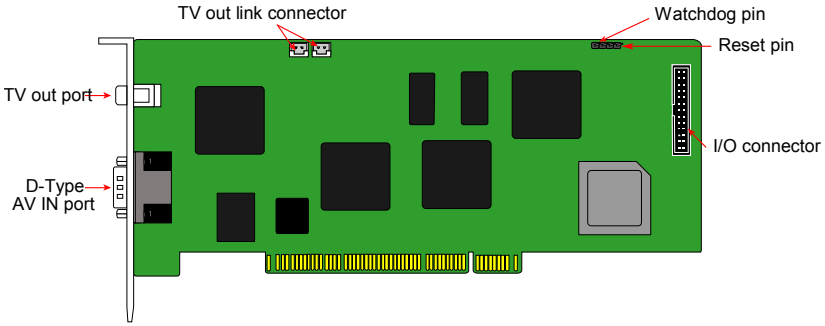
DSS 6000 Card Parts



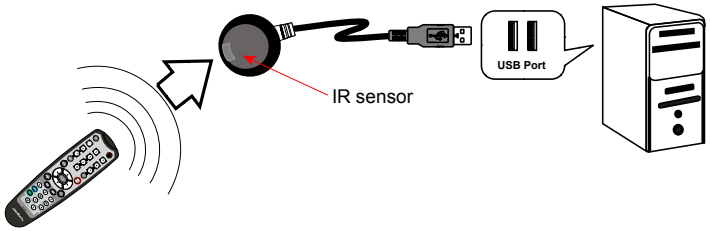
DSS 7000 Card Parts



DSS 7000H 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.

	DSS 3000	DSS 5000	DSS 6000	DSS 7000/7000H
CPU	Pentium® 4 2.8GHz or above recommended			
Motherboard	Intel 865, 875, 915, 925, 945, 955, NVIDIA nFORCE4 SLi - Intel Edition Chipset		Intel 875, 915, 925, 945, 955, NVIDIA nFORCE4 SLi - Intel Edition chipset.	Intel 865, 875 Chipset
OS	Windows2000 Professional or Windows XP Professional			
Expansion Slots	1/2/3/4 ◊ 32-bit PCI 2.1 compliant slots			
RAM	DDR 512MB or above			
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 Product Hardware Recommendation list update, please contact your local dear.

2.2 DSS 3000/5000/6000/7000 Hardware Combinations

DSS 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.

DSS 3000 hardware combinations:

Hardware Combinations		Camera Input	Audio Input	Sensor Input	Relay Output
DSS 3000 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

DSS 3000 hardware combinations:

Hardware Combinations		Camera Input	Audio Input	Sensor Input	Relay Output
DSS 3000 Card	I/O Audio Card				
4	0	16	0	0	0
	1	16	1	4	3
	2	16	2	8	6

DSS 5000 hardware combinations:

Hardware Combinations			Camera Input	Audio Input	Sensor Input	Relay Output
DSS 5000 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

DSS 6000 hardware combinations:

Hardware Combinations		Camera Input	Audio Input	Sensor Input	Relay Output
DSS 6000 Card	IO Card				
1	1	16	8	4	4

DSS 7000 hardware combinations:

Hardware Combinations		Camera Input	Audio Input	Sensor Input	Relay Output
DSS 7000 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

DSS 7000H hardware combinations:

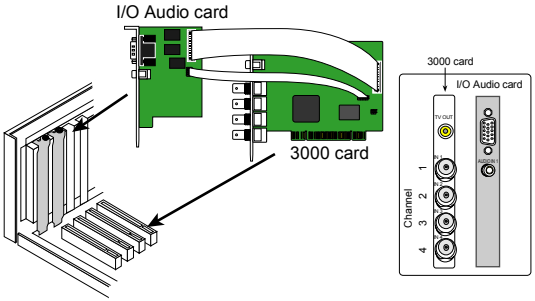
Hardware Combinations		Camera Input	Audio Input	Sensor Input	Relay Output
DSS 7000H Card	IO Card				
1	1	8	8	4	4
2	2	16	16	8	8

2.3 DSS 3000 Hardware Installation

2.3.1 Installing (1) DSS 3000 and (1) I/O Audio cards (optional)

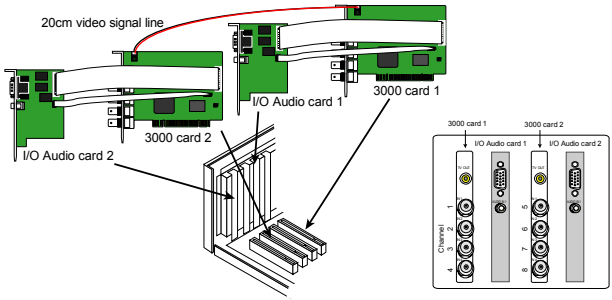
> The I/O audio card is an optional item. The D-type I/O port receives and transmit signal from the I/O box where the sensor and relay device are connected to it, while the audio input port receives the signal from the mic. DSS 3000 card is compatible with I/O Audio card that supports one audio input only.

1. Remove the PC case cover.
2. Remove 2 brackets that cover the PCI slots. Save the screws.
3. Connect the DSS 3000 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.



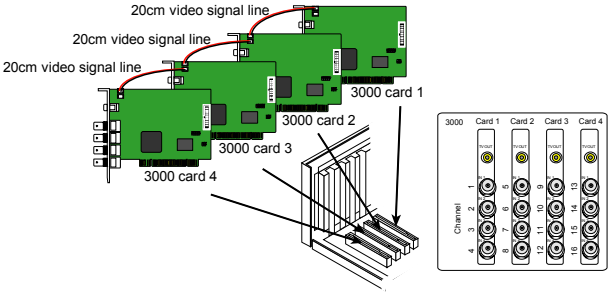
2.3.2 Installing (2) DSS 3000 and (2) I/O Audio cards (optional)

1. Remove the PC case cover.
2. Remove 4 brackets that cover the PCI slots. Save the screws.
3. Connect the DSS 3000 card and I/O Audio card with the connection cables.
4. Connect the (2) DSS 3000 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) DSS 3000 cards

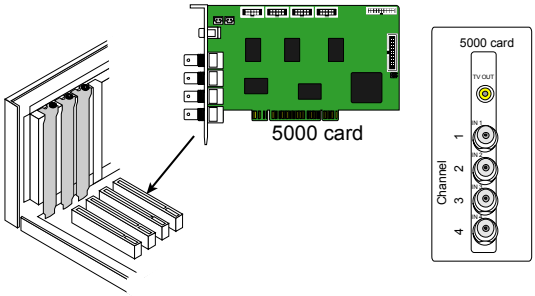
1. Remove the PC case cover.
2. Remove 4 brackets that cover the PCI slots. Save the screws.
3. Connect the (4) DSS 3000 cards with the supplied 20cm video signal line.
4. Press the cards into the PCI slots firmly.
5. Secure the cards with the screws.



2.4 DSS 5000 Hardware Installation

2.4.1 Installing (1) DSS 5000 Card

1. Remove the PC case cover.
2. Remove a bracket that covers the PCI slot. Save the screw.
3. Press the DSS 5000 card into the PCI slot firmly.
4. Secure the card with the screws.

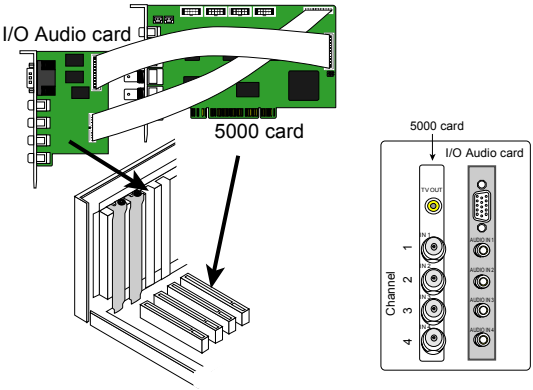


2.4.2 Installing (1) DSS 5000 and (1) I/O Audio cards

> 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. DSS 5000 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.

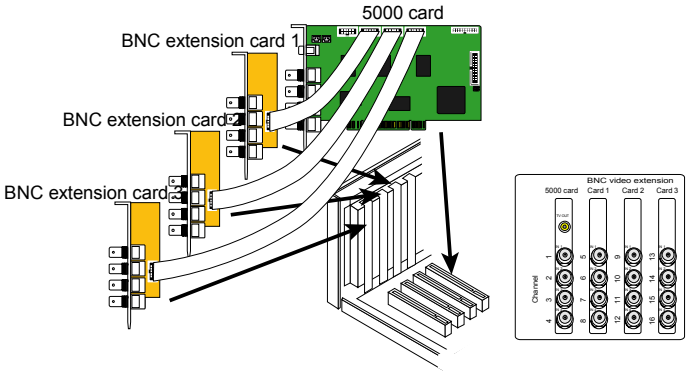
3. Connect the DSS 5000 card and I/O Audio card with the connection cables.
4. Press the cards into the PCI slots firmly.
5. Secure the cards with the screws.



2.4.3 Installing (1) DSS 5000 and (3) BNC video extension cards

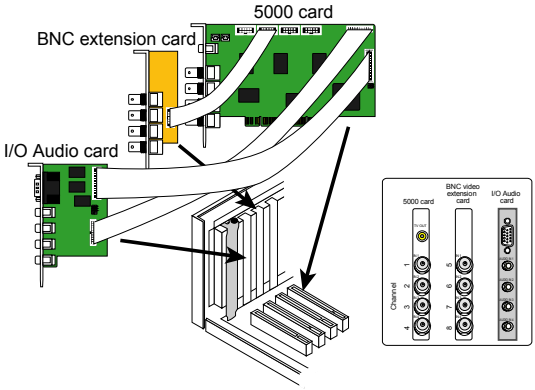
> The BNC video extension card is an optional item. It comes with additional four (4) BNC video input ports that provide four (4) extra channels.

1. Remove the PC case cover.
2. Remove 4 brackets that cover the PCI slots. Save the screws.
3. Connect the DSS 5000 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.



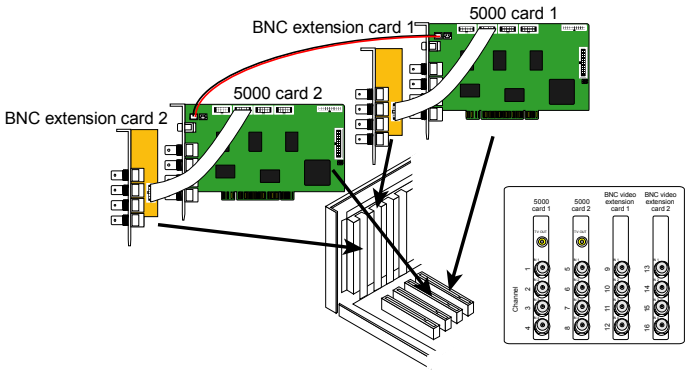
2.4.4 Installing (1) DSS 5000, (1) I/O Audio (opt.) and (1) BNC video extension (opt.) cards

1. Remove the PC case cover.
2. Remove 3 brackets that cover the PCI slots. Save the screws.
3. Connect the DSS 5000 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) DSS 5000, 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 DSS 5000 card and BNC video extension card with the connection cables.
4. Connect the (2) DSS 5000 cards with the supplied 20cm video signal line.
5. Press the cards into the PCI slots firmly.
6. Secure the cards with the screws.

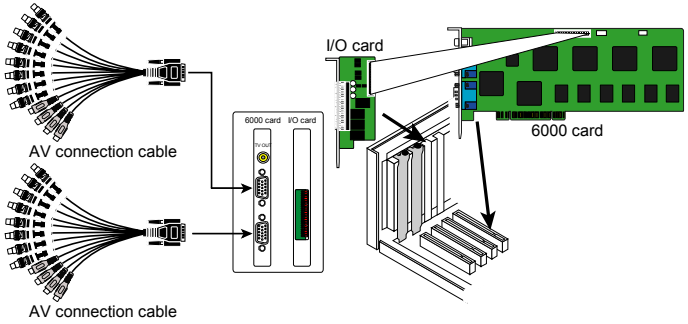


2.5 DSS 6000 Hardware Installation

The DSS 6000 can support up to 16 cameras and 8 audio inputs.

2.5.1 Installing (1) DSS 6000 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 DSS 6000 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.

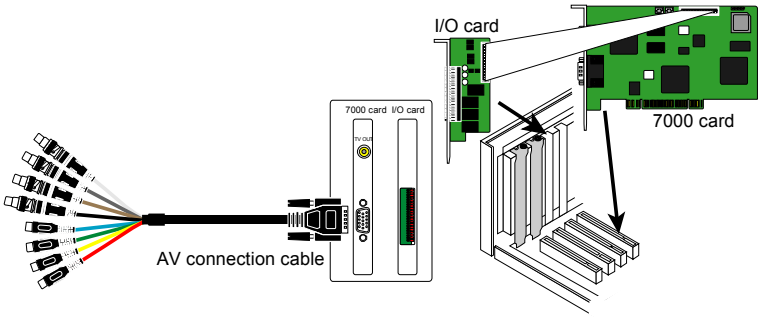


2.6 DSS 7000 Hardware Installation

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

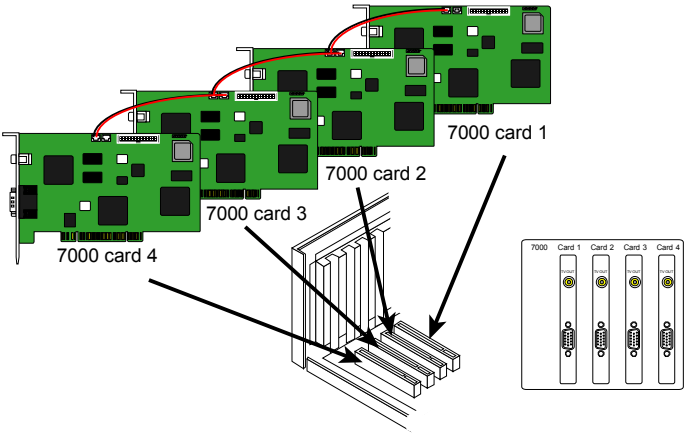
2.6.1 Installing (1) DSS 7000 and I/O card

1. Remove the PC case cover.
2. Remove 2 brackets that cover the PCI slots. Save the screws.
3. Connect the DSS 7000 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.



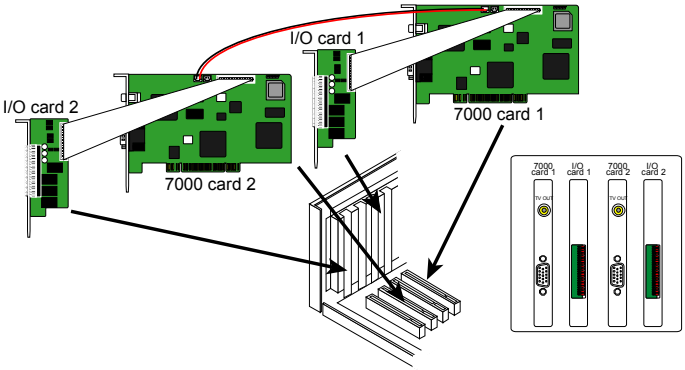
2.6.2 Installing (4) DSS 7000

1. Remove the PC case cover.
2. Remove 4 brackets that cover the PCI slots. Save the screws.
3. Connect the (4) DSS 7000 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) DSS 7000 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) DSS 7000 cards with the supplied 20cm video signal line.
4. Press the cards into the PCI slots firmly.
5. Secure the cards with the screws.

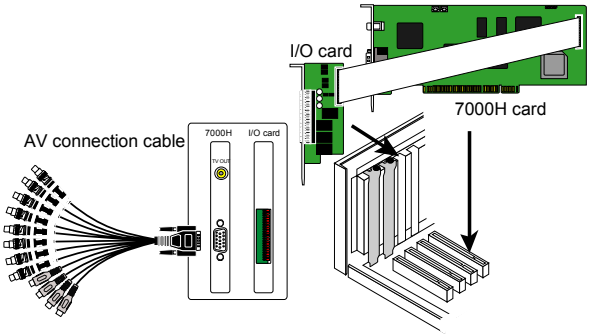


2.7 DSS 7000H Hardware Installation

The supplied AV connection cable provides up to 16 cameras and 8 audio inputs.

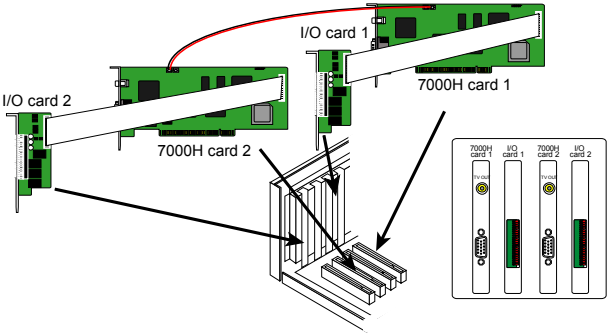
2.7.1 Installing (1) DSS 7000H and I/O card

1. Remove the PC case cover.
2. Remove 2 brackets that cover the PCI slots. Save the screws.
3. Connect the DSS 7000H 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.



2.7.2 Installing (2) DSS 7000H 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) DSS 7000H cards with the supplied 20cm video signal line.
4. Press the cards into the PCI slots firmly.
5. Secure the cards with the screws.



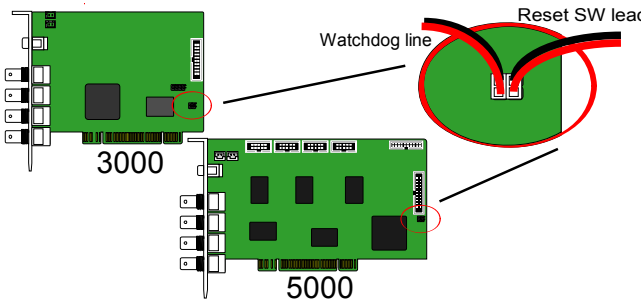
2.8 Connecting the Watchdog line

The DSS DVR program constantly monitors its operation. Connecting the DSS 3000/5000/6000/7000/7000H 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 DSS 3000/5000/7000/7000H card is installed, connect the watchdog line at last card.

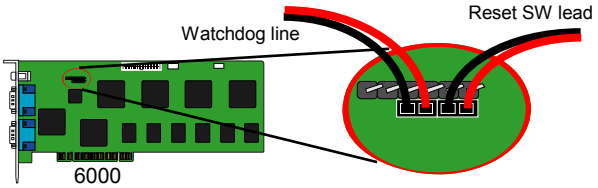
2.8.1 Connecting the Watchdog line to DSS 3000/5000

1. Look for the labeled RESET SW switch lead and connect it to the DSS 3000/5000 card reset pin.
2. Connect the supplied Watchdog line to the DSS 3000/5000 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.



2.8.2 Connecting the Watchdog line to DSS 6000

1. Look for the labeled RESET SW switch lead and connect it to the DSS 6000 card reset pin.
2. Connect the supplied Watchdog line to the DSS 6000 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.

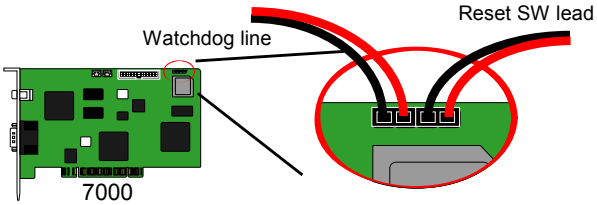


2.8.3 Connecting the Watchdog line to DSS 7000

1. Look for the labeled RESET SW switch lead and connect it to the DSS 7000 card reset pin.
2. Connect the supplied Watchdog line to the DSS 7000 card watchdog pin and the other end to the motherboard RESET SW panel. If you are not

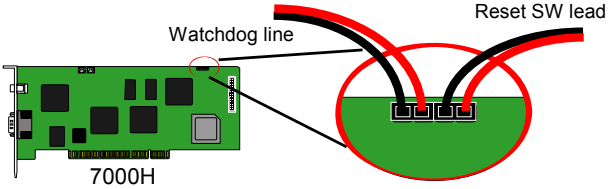
sure, please refer to the motherboard user manual.

3. You may now replace back the PC cover and connect all the cables.



2.8.4 Connecting the Watchdog line to DSS 7000H

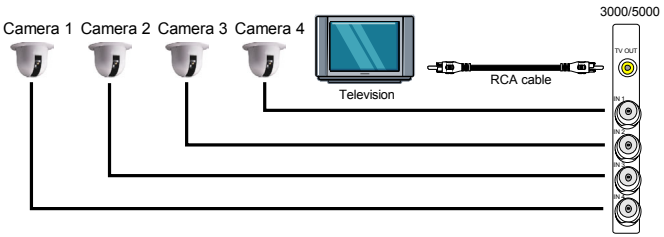
1. Look for the labeled RESET SW switch lead and connect it to the DSS 7000H card reset pin.
2. Connect the supplied Watchdog line to the DSS 7000H card watchdog pin and the other end to the motherboard RESET SW panel. If you are not sure, please refer to the motherboard user manual.
3. You may now replace back the PC cover and connect all the cables.



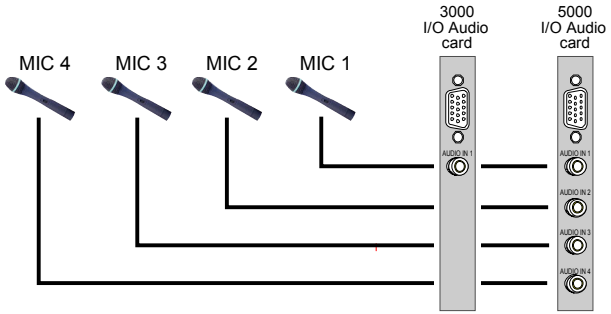
2.9 Connecting the Cameras, a TV and Audio device

2.9.1 Connecting the Cameras, a TV and Audio device to DSS 3000/5000

1. Connect the cameras to the BNC video input port (see DSS 3000/5000 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 DSS 3000/5000 card and the other end to the TV video input port. If you are not sure, please refer to the TV user manual.

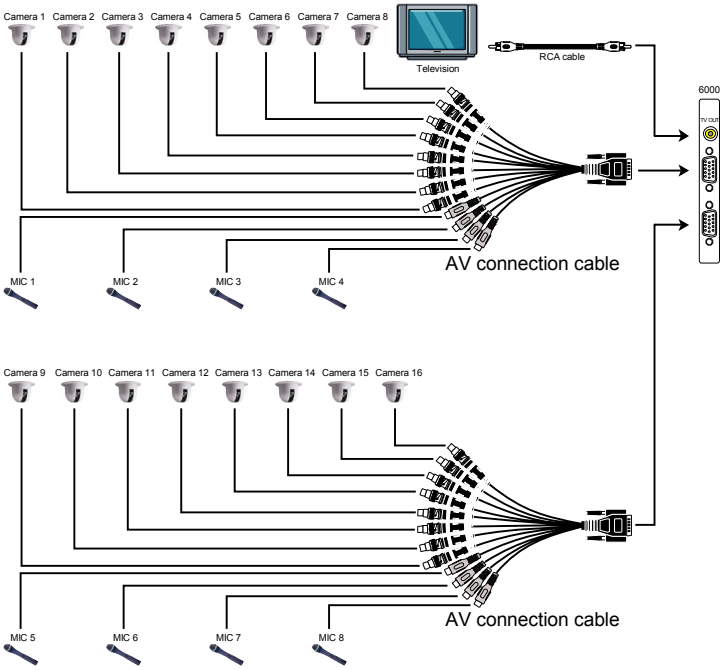


3. Connect the audio devices to the Audio input port of the I/O card.



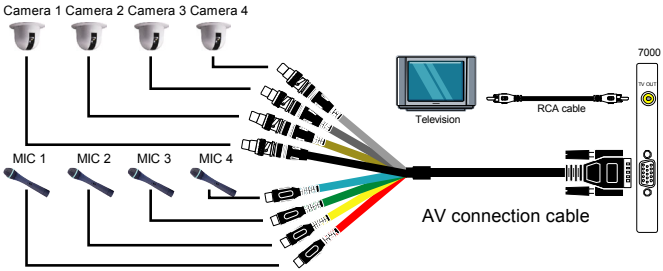
2.9.2 Connecting the Cameras, a TV and Audio devices to DSS 6000

1. Use the supplied AV connection cable and connect it to the D-type AV IN port of DSS 6000 card (see DSS 6000 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 DSS 6000 card and the other end to the TV video input port. If you are not sure, please refer to the TV user manual.



2.9.3 Connecting the Cameras, a TV and Audio devices to DSS 7000

1. Use the supplied AV connection cable and connect it to the D-type AV IN port of DSS 7000 card (see DSS 7000 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 DSS 7000 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:

DSS 7000	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

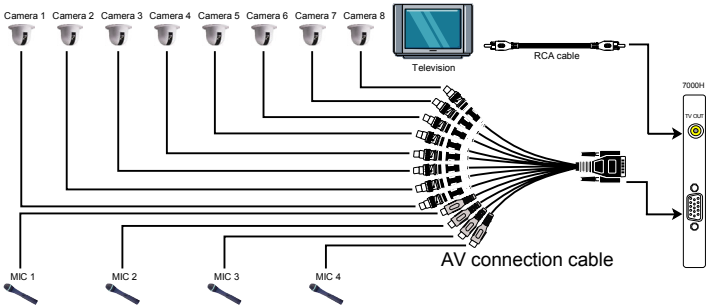
2.9.4 Connecting the Cameras, a TV and Audio devices to DSS 7000H

1. Use the supplied AV connection cable and connect it to the D-type AV IN port of

DSS 7000H card (see DSS 7000H 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.

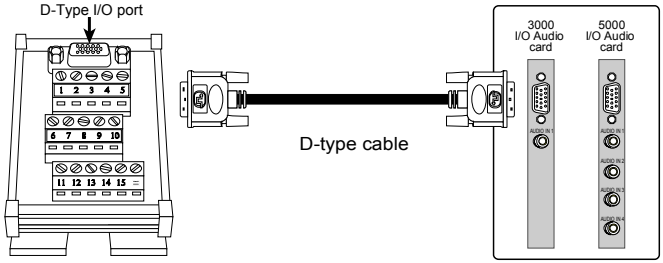
3. Connect one end of the RCA video cable (not supplied) to the TV OUT port of DSS 7000H card and the other end to the TV video input port. If you are not sure, please refer to the TV user manual.



2.10 Connecting an external I/O box to DSS 3000/5000 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.



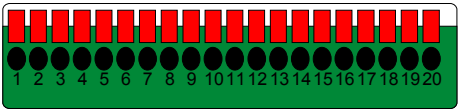
2.10.1 I/O box Sensor and Relay pinhole allocation:

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 ñ 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 ñ Common
11	OUTPUT 1 ñ Normally Open
12	OUTPUT 1 ñ Common
13	OUTPUT 2 ñ Normally Open
14	OUTPUT 2 ñ Common
15	OUTPUT 3 ñ Normally Open

2.11 Connecting the Sensor/Relay device to DSS 6000/7000/7000H 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 DSS 6000/7000/7000H I/O card pinhole. Check the table below and locate which pinhole is assigned to sensor input and relay output.



2.11.1 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

2.12 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℃)

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

Electrical/Optical Characteristics (Ta=25℃)

Parameter		Symbol	Min	Typ.	Max.	Unit	Conditions
Input	Forward Current	V_F	-	1.2	1.4	V	I_F=20mA
	Reverse Voltage	I_R	-	-	10	A	V_R=4V
	Terminal Capacitance	C_t	-	30	250	pF	V=o, 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 Characteristcs	*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 x 10^{10}	10^{11}	-		DC500V, 40-60% R.H.
	Floating Capacitance	C_f	-	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= $\frac{I_C}{I_F}$ 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

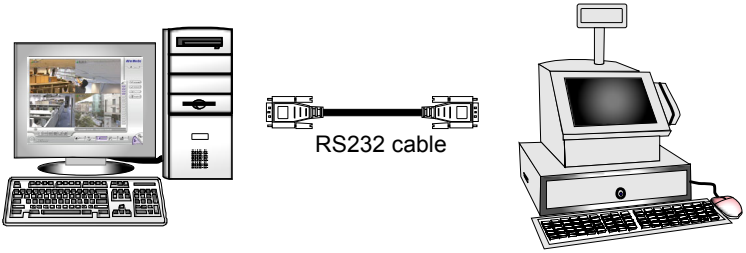
D. CONTACT RATINGS

Contact Arrangement	1 Form C (SPDT)
max. Switch Power max. Switch voltage max. Switch current	125VA 60W 125VAC 30VDC 1A
Contact Resistance	> 100mΩ
Resistive Load	1A/125VAC 1A/30VDC

2.13 Connecting POS (Point of Sales)

DSS DVR can be integrated with POS system equipment. Connecting the POS equipment to DSS DVR 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 DSS 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 DSS 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 **DSS DVR** and then click **Remove**.

We **HIGHLY RECOMMEND** having three (3) separate drives for the main system (OS and DSS DVR software), storage and backup. The ideal hard disk size for the main drive is 20GB. As for the storage and backup, at least 60GB each. 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.

To ensure getting the latest copy of DSS DVR software, please contact your local dealer.

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

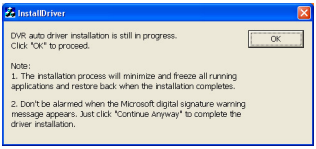
Upon turning the computer on, the system automatically detects the newly installed hardware. When the *Found New Hardware* dialog box appears, **IGNORE** it.

Remember : It is important to install the DSS 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 ì**Continue Anyway**î when the Microsoft digital signature appears.

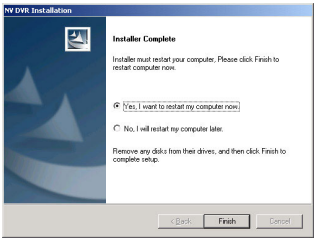


   When prompt to restart the computer, select **Yes, I want to restart my computer now** then click **Finish**.

   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 DSS DVR software.

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

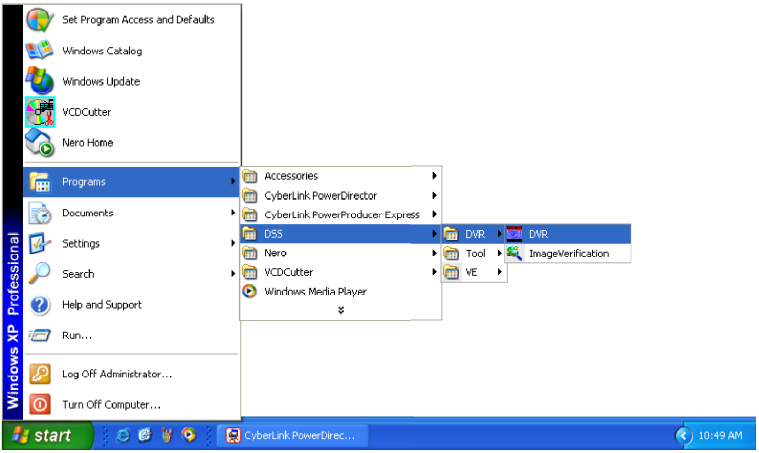


3. You may now run the DSS DVR program. To run the application, click  on your PC desktop or click **Start**>**Programs**>**DSS**>**DVR > DVR**.

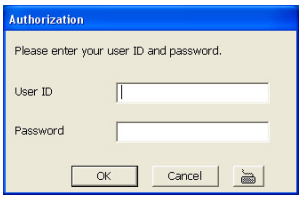
Chapter 4 Using the DSS DVR Software

4.1 Running the DSS DVR Software

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



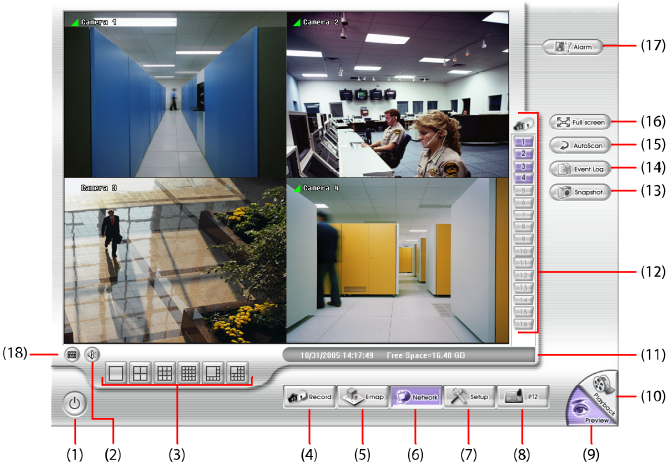
For security purpose, some of the features would require you to enter User ID and Password before it can be accessed. When the Authorization dialog box appears, key in your User ID and Password. (If this is the first time, enter the one you have registered when installing the software.)

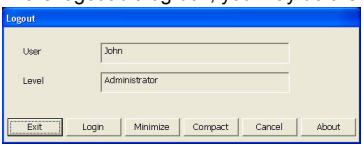


4.2 Using the Virtual Keyboard

If the keyboard is not available, you may use the Virtual Keyboard. Just click  to show the virtual keyboard. For uppercase and lowercase, click **shift** button.

4.3 Familiarizing the Buttons in Preview/Advanced Mode



Name	Function
(1) Exit	Call up the Logout dialog box. In the logout dialog box, you may do the following:  - Click **Exit** to close the DSS DVR program. - Click **Login** to sign-in in different account. - Click **Minimize** to reduce the DSS 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	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.

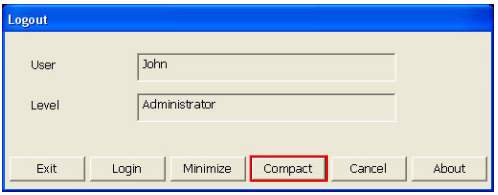
If there are only 4 cameras, you wonít be able to switch to 9, 16, and 13 split screen mode.

- 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, and the location of camera/ sensor/ relay and the warning. (see also Chapter 4.7)
(6) Network	Enable/disable remote system access. This feature allows you to access DSS 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 display Event, System, Operation, Network, POS or All. The events list which display on the screen can be saved as text file format. To save the events list, click **Save** button.
(15) AutoScan	Start/Stop video screen cycle switch. (see also Chapter5.1 #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.
(18) On Screen Keyboard	If the keyboard is not available, you may use the Virtual Keyboard.

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.

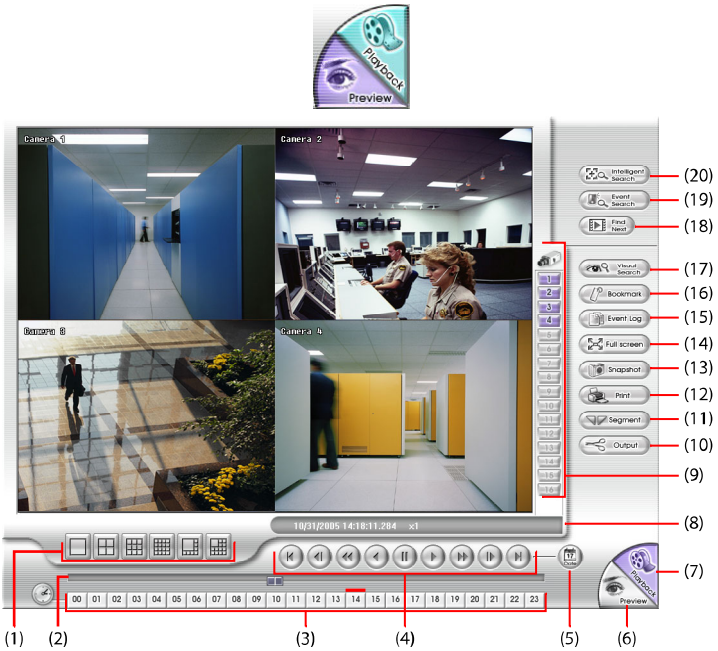
If there are only 4 cameras, you wonít be able to switch to 9, 16, and 13 split screen mode.

- 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.

If there are only 4 cameras, you wonít 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.

Name	Function
(4) 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 1/2X, 1/4X, or 1/8X. **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.
(5) Date	Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file.

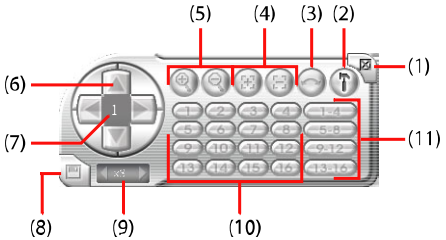
The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera ID. The blue colored column indicates that there is a recorded video file on that period of time. While the red colored column indicates on where to start playing the recorded video file.

(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)

Name	Function
(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) Save Camera preset position	Save the PTZ camera preset position number. Select the camera and click the preset position number and save it.
(9) Camera lens speed controller	Adjust the moving speed of the PTZ camera lens.
(10) Camera preset position number	Move the PTZ camera to the preset point.
(11) Group AutoPan	Select to automatically operate PTZ camera in group.

4.7 Setting Up and Using the Emap

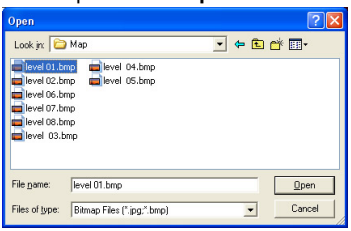
E-Map can hold up to 8 maps in *.bmp/*.jpg format. You may locate the camera, sensor and relay on the map.

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)

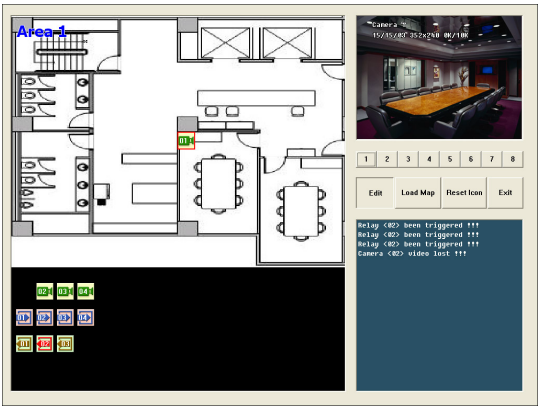
on where you want to insert the map.

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**.

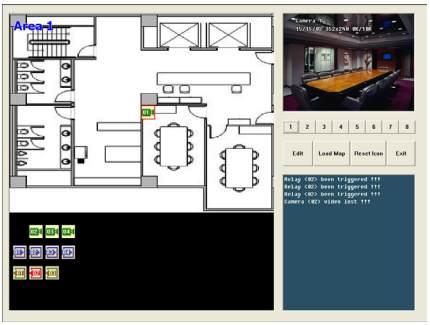


5. When you are done, click **Edit** button to save the new setting. To close Emap screen, click **Exit**.

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.



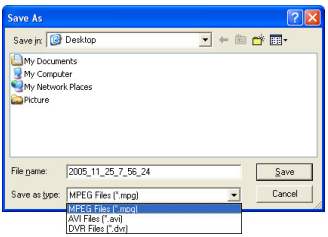
3. Click **Exit** to close Emap screen.

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.

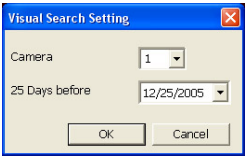
- **Delete** to remove the selected reference mark in the list.
- **Delete All** to remove all the reference marks in the list.
- **Exit** to close Bookmark dialog box.

When the bookmark is protected, the file wonít be overwritten.
The protected bookmark file will be deleted when the **Delete the recorded data** is enable in the **System setting**.(also refer to 5.1 System setting)

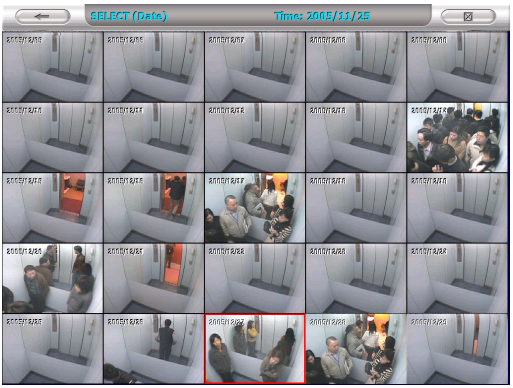
3. Select and click one in the bookmark list to preview the file.

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**.



3. 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 .

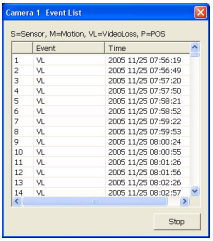


4.11 To Search Using the Event Search

1. Click on the video screen on where you want to search.
2. Click **Event Search**. The Event Search text (red) would appear at the lower left corner of the screen.
3. 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  .

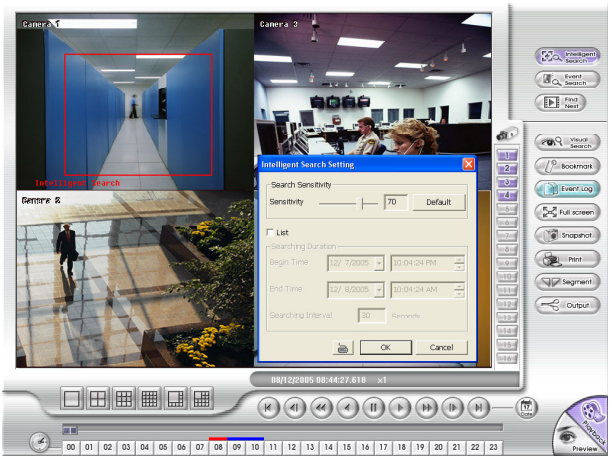
4. You may also set to search and list all the result. Just check the **Output Event List** box. In the Search Duration section, set the **Begin Time**, **End Time** and **Searching Interval**. Then, click **OK** to start searching.
5. When the Event list appear, click and select the item you want to view.



4.12 To Search Using the Intelligent Search

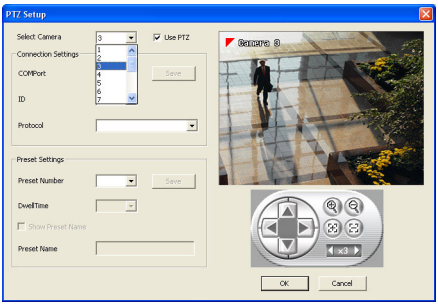
1. Click on the video screen on where you want to search.
2. Click **Intelligent Search**. The Intelligent Search text (red) would appear at the lower left corner of the screen.
3. When the Intelligent Search Setting dialog box and motion detector frame appear, you may adjust the sensitivity bar and 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.

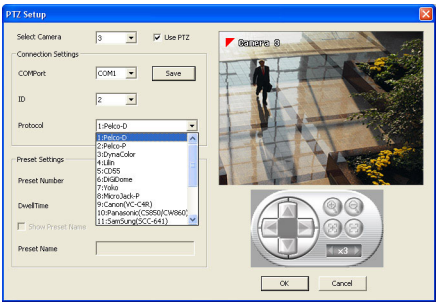


4.13 To Setup the PTZ camera

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.

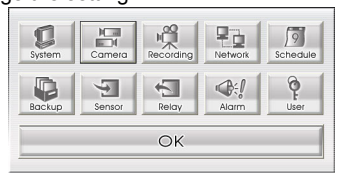


4. Use the PTZ control panel and adjust the position of the PTZ camera.
5. In the Preset Setting section, select the preset number to assign a number for the PTZ camera current position. Set the DwellTime (1-60 sec) for how long the PTZ camera stays in that position before it moves to the next one. If 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 DSS DVR System

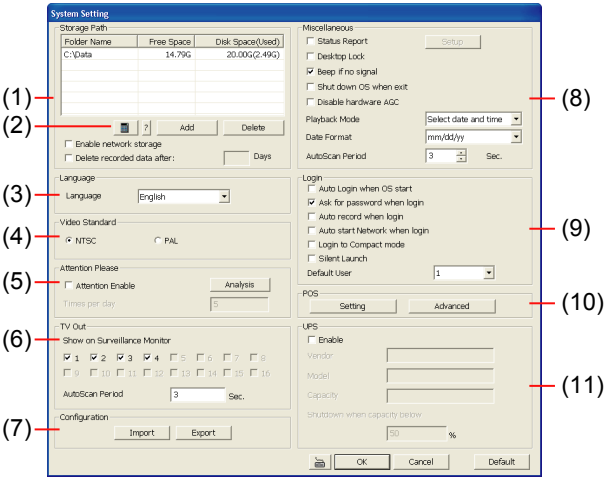
In the Preview/Advanced screen mode, click 

button to customize your DSS DVR. When the DSS 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

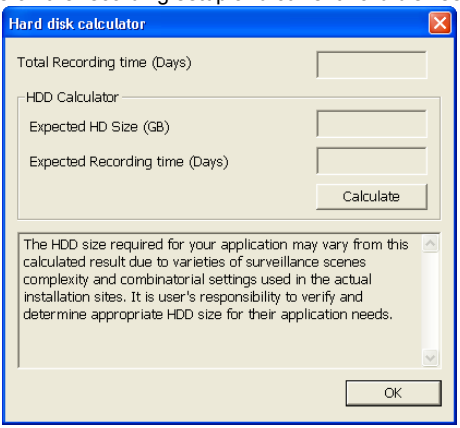
Set the directory on where to save the data. When there is not enough free space to record one hour data, the system automatically replaces the oldest data. In case you have more than one storage path, the system automatically saves the data to the next storage path. You may also add additional network-attached storage (NAS) for extremely high storage capacity. Select the Enable network storage check box to send the recorded video in network-attached storage. To add network storage, the Internet storage drive/folder must be mapped as Network Driver in DVR server. To know how to assign or connect to a network drive, please refer to your Windows help file and search ìMap Network driveî.

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) Hard Disk Calculator

Estimate the hard disk recording capacity. The result of calculation is a rough value which only for reference. The hard disk record capacity will be varied by the real record quality and complexity of video scene.

Click , the hard disk calculator windows will show up. **Total Recording time** is the current hard disk recording capacity. Enter the expect hard disk size or expect recording time in **Expected HD Size** or **Expected Record time**, and then click **Calculate** button. Click **OK** to exit the hard disk calculator windows. The hard disk calculation will base on the recording setup and current hard disk setup.



(3)Language

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

(4) 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.

(5) 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**.

(6) 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.

(7) 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**.

(8) 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.
- **Shutdown OS when exit**
  Turn off the PC when the DSS DVR application is being closed.
- **Disable hardware AGC**
  Stop the hardware to automatically normalize the over-whitening of the video
- **Playback Mode**
  Select the mode of playback the video.
  Select date and time: Select the date and time which user wants to playback.
  Play the last file: Automatically playback the video from the last hour
  Instant Playback: Automatically playback the video which has just recorded
- **Date Format**
  Select the date format which wants to display in **Select date and time** playback mode
- **Auto Scan Period**
  Set the time gap of the Auto Scan function from 3 to 10 seconds. This automatically switches to the next video in cycle depending on the set time gap.

(9) Login

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

- **Auto Login when OS start**
  Execute the DSS DVR when the operating system is started.
- **Ask for password when login**
  Request to enter User ID and Password each time the DSS DVR is executed.
- **Auto record when login**
  Automatically start video recording when the DSS DVR is executed.
- **Login to compact mode**
  Switch to compact mode directly when the DSS DVR is executed.
- **Silent Launch**
  Enable the DVR system minimizes on the system tray automatically right after start up.
- **Default user**
  Automatically log in to the selected default user when the DSS DVR is executed.

(10) 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)

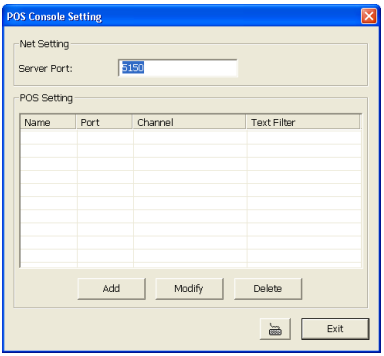
(11) UPS (Uninterruptible Power Supply)

Protect the system from damaging, such as power surges or brownouts. This automatically gives time to close the DSS 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 userís guide).

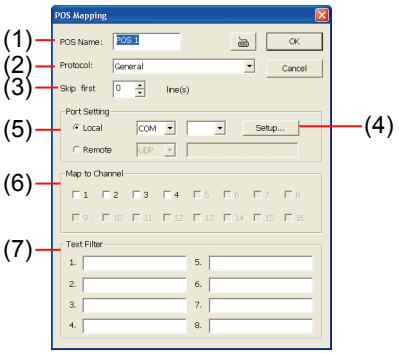
The UPS application must meet Windows 2000 or Windows XP system requirements.

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.

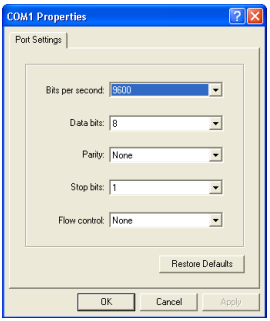


(1) POS Name : Enter a name to identify the POS.

(2) Protocol : Select General for Epson compatible printer or for TP_3688.

(3) Skip first : Set the number of lines you want to be removed

(4) SetupÖ : Set the COM Properties. If you are not sure, please contact your POS service provider.



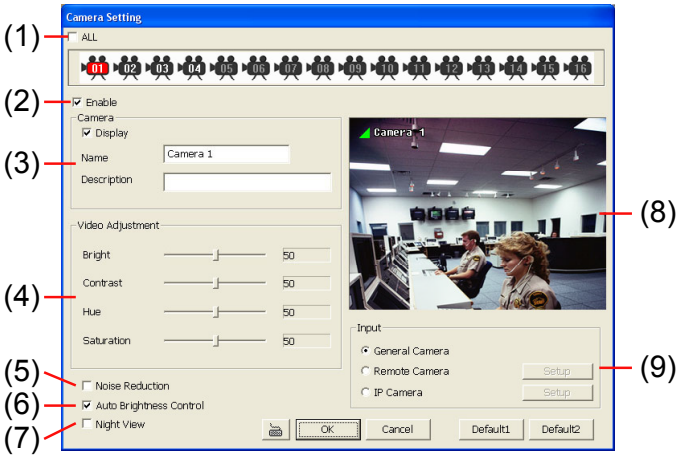
(5) Port Setting : Select the Local or Remote port to where it is connected.
Local - select the COM port number which is connected.
Remote ñ Use the UDP protocol for remote connection if POS system can broadcast to Internet. Enter the IP address of the remote station.

(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.

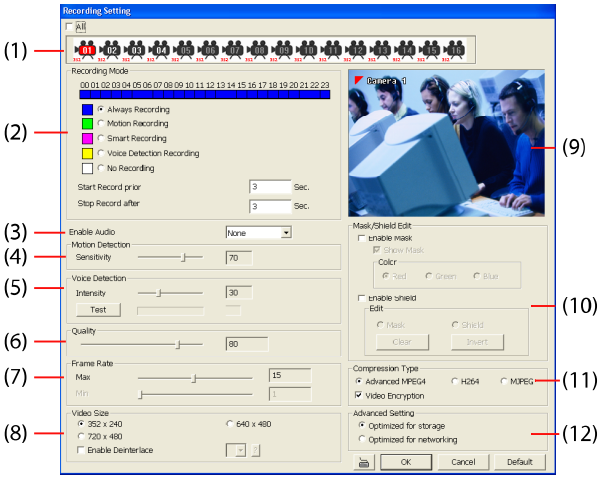
(9) Input

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 DSS Series PCI card.
- **Remote DVR**
  The video source is coming from another DSS 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 DSS 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 movement. 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**

  Automatically switch to recorded at the maximum frame rate setting once a motion is detected and if there is no motion, it records at the minimum frame rate setting Set the maximum and minimum frame rate setting in (7) Frame Rate section.
- **Voice Detecting Recording**

  DVR system will record the sound when the voice exceeds the intensity value in **Voice Detection** setting.

- **No Recording**
  The system wonít 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 maximum and minimum number of frames to be recorded during motion and motionless state. The frame rate ranges from 1 to 30 for NTSC and 1 to 25 for PAL. The higher the 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)

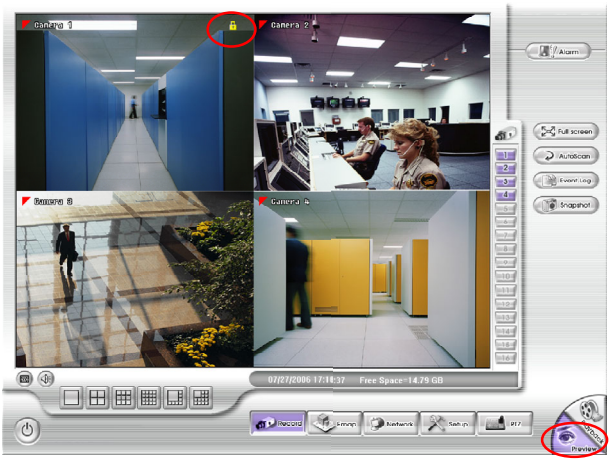
(11) Compression Type

Select from 3 compression types. User can refer the table below to check the DSS card supports what type of compression. H264 is the latest and advanced video compression format that delivers better video quality and smaller file size but this uses more CPU resource. Advanced MPEG4 and MJPEG, both provide a standard for color picture compression rate. MPEG4 uses higher compression rate and smaller file size. While MJPEG uses slightly lower compression rate and bigger file size.

	MPEG4	MPEG Encryption	H264	MJPG
DSS 3000	✓	✓	✓	✓
DSS 5000	✓	✓	✓	✓
DSS 6000	✓	✓		
DSS 7000	✓			
DSS 7000H			✓	

Using the Advanced MPEG4 enables you to encrypt the recorded video that way only the person who knows the password can clearly view the video playback. The file size would become 10 to 30% more. Enabling the Video Encryption check box, you will be prompted to enter the password and retype the password for confirmation. Make sure not to forget the password for you would not be able to decrypt the video without it.

The symbol would appear on the upper right of the encrypted video screen. You may see the video during live recording (see also Chapter 5.3.3).



(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.

5.3.3 To Playback Encrypted Video:

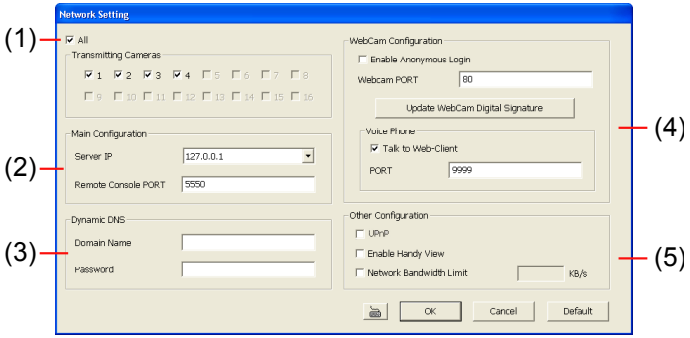
On Playback, Webcam, and Remote Console video screen, just click and enter the correct password to decrypt and playback the video.

To encrypt the recoded video back, click and enter a **WRONG** password.

It is important to encrypt the video again, to avoid unauthorized user viewing the video.

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 DSS 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.(also see Appendix A) You will be prompted to enter CD key number, product name, password, and user information. Use this service if the IP address changes each time when you connect to internet.

(4) Webcam Port

Activate **Enable Anonymous Login** to remotely access the DSS 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 microphone. Make sure both

microphone and speakers work before using this feature.
If the **Talk to Web-Client** is disabled, the person in the DSS DVR server side can only hear the voice from the client side that is when the WebCam 2-Way Talk button is activated. (see also Chapter 8.1 #6).

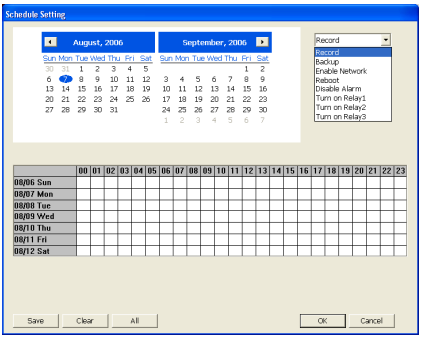
Make sure that your Webcam Digital Signature is updated yearly; else you wonít be able to access the DSS DVR server from the DSS DVR WebCam. To update/download your Webcam Digital Signature, click **Update Webcam Digital Signature**. Make sure your PC is connected to internet.

(5) Other Configuration

- **UPnP**
  Enable UPnP function to automatically configure the port setting on the local network. This function is available when there is UPNP device in the same network. It will write the DVR port information into the router or other network device.
- Enable remote users to use a PDA or a mobile phone to access DSS 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 5.3).
   - **Backup**
     Save another copy of all the data at the set time and specified backup path. DSS 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 DSS 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.

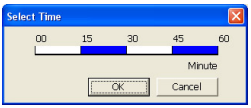
Make sure the Windows operating system is set **NOT** to require you to login user name and password. This way the system will be able to run DSS DVR program.

- **Disable Alarm**
  Deactivate the alarm at the set time temporarily.
- **Turn on Relay #**
  Active the Relay at the set time. If there are no Relays are connected, Turn on Relay # function will not display in drag down list. The Relay number will depend on how many Relays are connected.

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). Or click **All** to select all. 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.

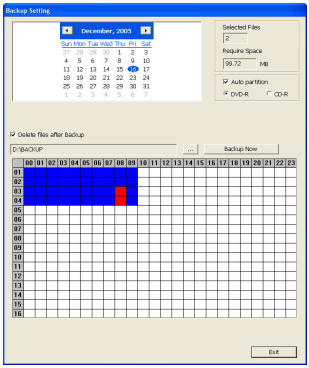
5.5.1 To set schedule at a specific portion of time in that hour:

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).

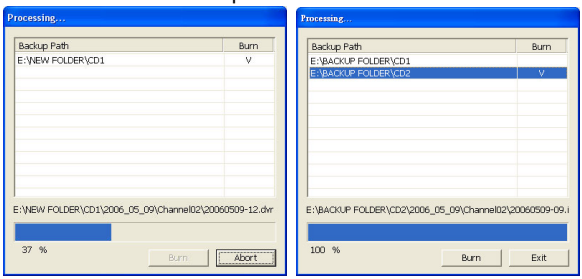


To Backup file:

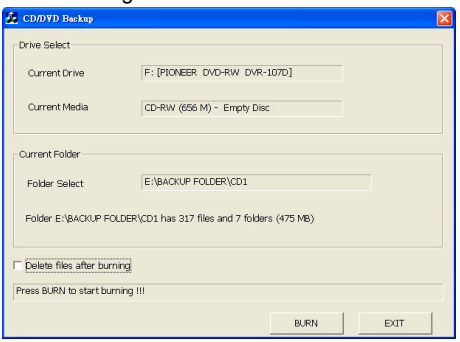
1. Select the date of the recorded file in the calendar you want to backup. Use and buttons to shift the calendar to the left or right.
2. In the table below, click on the blue block to select the recorded file. The blue block turns red when it is selected. The block that appears in white doesnít have 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.

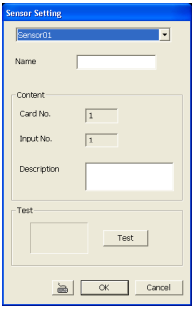
   Require Space : Show the total size of the selected file.
4. Enable Auto partition and select to divide the file size into DVD-R or CD-R. DSS DVR automatically backup and divide the file sizes to facilitate burning into DVD or CD disc.
5. If you do **NOT** want to keep the recorded file in the storage folder, enable **Delete files after Backup** check box.
6. Click ... to set the path on where to store the backup file.
7. Click Backup Now to start archiving the selected file.
8. In the ProcessingÖ dialog box, to stop archiving press **Abort**. When done, in the Backup Path list, shows the archived item. To burn the file in CD, you need to have NERO 6 or above installed in your PC then select the item in the list and click **Burn**. Click **Exit** to end this procedure and burn it later.



9. In CD/DVD Backup, enable/disable Delete file after burning check box to remove the archived file after burning. Click **Burn** to start and **Exit** to cancel this process.



5.7 Sensor Setting

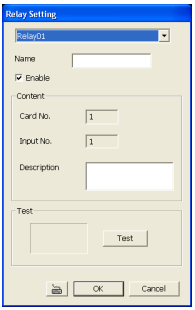


The I/O device must be installed to use this function.

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



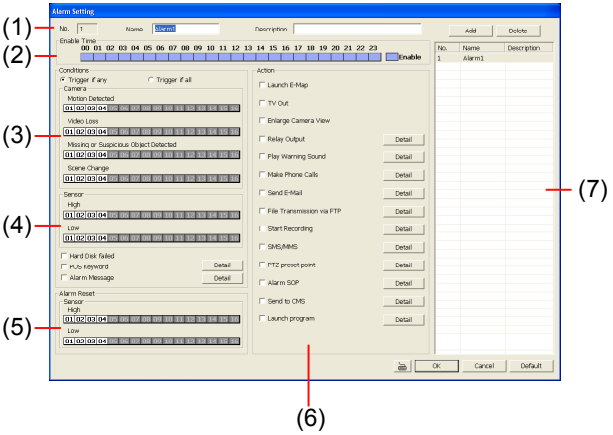
The I/O device must be installed to use this function.

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.

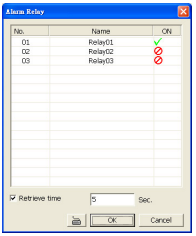


To set the Alarm Setting:

1. Click **Add** to insert and set a new alarm setting. Click the items in the **(7) Alarm Setting List**, if you want to modify the alarm setting.
2. In **(1) Alarm Setting number/Name/Description**, display the selected alarm setting number in the list below. Enter alarm name and description.
3. 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.
4. In **(3) Conditions**, you can set ì**Trigger if any**î to activate if it falls to one of the conditions or ì**Trigger if all**î to activate if it falls to all conditions.
   - In Camera section, 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.
   - In **Missing and Suspicious Object Detected**, click the camera number (01 to 16)and select the certain object on the screen (right click on camera number for detailed setting)), and when the certain object is missing or doubtful, the system will alarm.(see also Chapter 5.9.12)
   - In **Scene Change**, click the camera number (01 to 16) and when the camera is been moved, the system will alarm.
5. In **(4) Sensor**, 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).
   - Enable/disable the **Hard Disk Failed** check box, to detect the condition of the hard disk.
   - Enable/disable the **POS Keyword** check box, to scan the data from the POS if it matches the keyword (see also Chapter 5.9.10).
   - Enable/disable the **Alarm Message** check box, to active with external alarm message by your own program. For the detail configuration, please contact the local reseller.
6. In **(5) Alarm Reset**, click the camera number (01 to 16) to set the reset condition of alarm. Once alarm is reset, all alarm action will stop at the moment. If the sensor normal status is high, set the sensor condition to low.
7. In **(6) Action**, you may now set the alarm action for the system to perform when the alarm condition is activated.
   - **Launch E-Map**
     Display mini Emap screen.
   - **TV Out**
     Switch to only display the video on TV from where the alarm is activated.
   - **Enlarge Camera View**
     Switch to only display video in Preview/Advanced mode from where the alarm is activated.
   - **Relay Output**
     Set to enable/disable the relay operation when the alarm is activated and to extend additional time in second before it stops the relay operation (see also Chapter 5.9.1).

- **Play Warning Sound**
  Play alarm sound. To setup click **Detail** (see also Chapter 5.9.2).
- **Make Phone Calls**
  Dial and contact the number in the list. To setup click **Detail** (see also Chapter 5.9.3). To use this feature, the PC must have a voice modem connected to it. The supported audio system is only 8 KHz and 16Bit mono.
- **Send E-mail**
  Send an electronic text message. To setup click **Detail** (see also Chapter 5.9.4).
- **File Transmission via FTP**
  Upload file to remote computer thru FTP (File Transfer Protocol). To setup click **Detail** (see also Chapter 5.9.5).
- **Start Recording**
  Record the video from the selected camera. To setup click **Detail** (see also Chapter 5.9.6).
- **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 5.9.7).
- **PTZ preset point**
  Position the PTZ camera based on the preset point setting. To setup click **Detail** (see also Chapter 5.9.8).
- **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 5.9.9).
- **Send to CMS (Central Management System)**
  Enable/disable the selected camera to send video to CMS when the alarm is activated (see also Chapter 5.9.10)
- **Launch Program**
  To call up the external program that is provided by 3rd party. Click **Detail** and click ... to locate the program path. Enable **Multiple instance** check box to allow the program can be executed many times at the same time.

5.9.1 To Setup Alarm Relay:

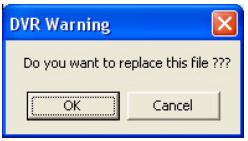


1. Beside the Relay Output check box, click **Detail**.
2. In the Alarm Relay dialog box, select from the available relay list and in the ON column, set to enable/disable the relay operation when the alarm is activated.
   In the Retrieve time check box, you may enable/disable to extend the relay operation time and set the duration in second.
3. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.

5.9.2 To Setup the Alarm Sound Setting:

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.

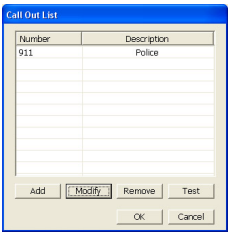


4. When the Sound Recorder appears, use the record control panel to record, stop, play, rewind and forward. If you want to keep the existing file, click **File** > **Save AsÖ** , enter filename and click **Save**. Make sure you have microphone connected to your PC.

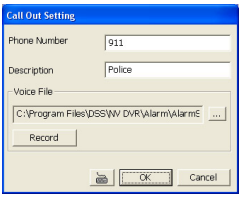
5. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.

5.9.3 To Setup Call Out List:

1. Beside the Make Phone Calls check box, click **Detail**.
2. 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.



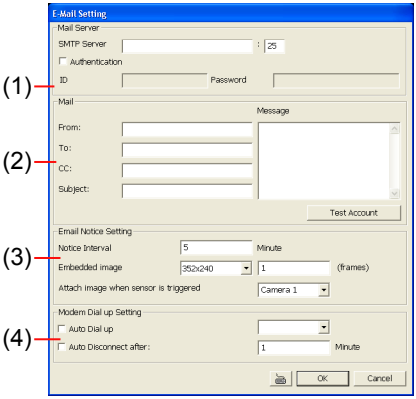
3. In the Call Out Setting, enter the phone number and description. Click ... to select existing sound recorded massager and **Record** to make a new voice message.



4. When the Sound Recorder appears, use the record control panel to record, stop, play, rewind and forward. If you want to the existing file, click **File** > **Save AsÖ** , enter filename and click **Save**. Make sure you have microphone connected to your PC.
   The supported audio system is only 8KHz and 16Bit mono.
5. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.

5.9.4 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.



(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.

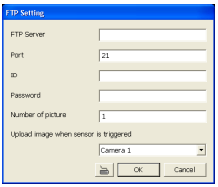
Embedded image Select the image size and set the number of frames.

Attach image when sensor is triggered When the sensor is triggered, the system will capture the image and send the image to the certain e-mail address with the alarm message.

(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.

5.9.5 To Setup FTP Setting:



1. Beside the File Transmission via FTP check box, click **Detail**.
2. In the FTP Setting dialog box, enter the FTP IP, port, user ID and password.
3. In **Number of Pic** text box, enter the number of

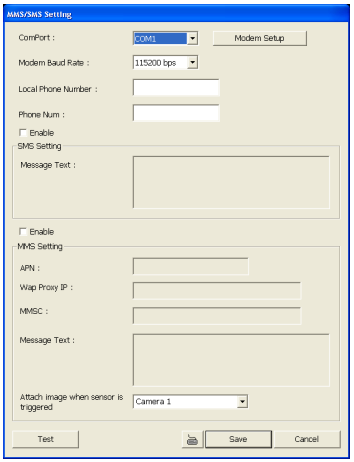
sequence images that want to send when file is transmitting.

4. In **Upload image when sensor is triggered**, select the camera that the images will be capture and send when the sensor is triggered.
5. Click **OK** to exit and save the setting and **Cancel** to exit without saving the setting.

5.9.6 To Setup Alarm Recording Setting:

1. Beside the Start Recording check box, click **Detail**.
2. In the Alarm Recording Setting dialog box, select the camera to enable/disable video recording. Enable **All** to select all cameras.
3. In the Frame Rate selection, select **As Setting** to record the number of frames based on the Recording Setting or **Max** to record the maximum of frames based on the available speed.
4. In the Stop Recording after text box, set the number in second for the program to continue recording after the alarm has ended.
5. Click **OK** to accept the new settings and **Cancel** to exit without saving.

5.9.7 To Setup SMS/MMS Setting:



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**.

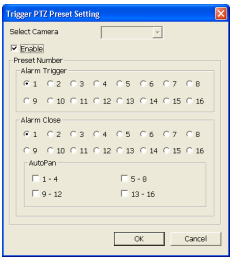
Select the port number in ComPort drop down list from where the GSM/GPRS modem is connected.

1. Click **Modem Setup** button to automatically detect the Modem Baud Rate.
2. In **Local Phone Number** text box, enter the GSM SIM card phone number.
3. In **Phone Num** text box, enter the contact number.
4. 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.
5. **Attach image when sensor is triggered** select the camera that the images will be capture and send when the sensor is triggered.

6. Click **OK** to accept the new settings and **Cancel** to exit without saving.

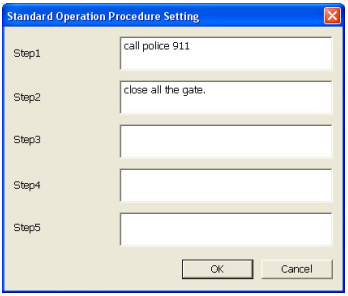
Make sure your ISP provider and cell phone provider both support JPG file format transmitting.

5.9.8 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. For the PTZ camera ended point, user also can select one preset position or **Auto Pa**n between preset position group.

5.9.9 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.

5.9.10 To Setup CMS Setting

Beside the Send to CMS check box, click **Detail**. In the CMS Setting, select the camera to enable/disable sending the video to CMS. Enable **All** to select all cameras. Then, click **OK** to accept the new settings and **Cancel** to exit without saving.

5.9.11 To Setup POS Keyword Setting

1. Beside the Send to POS Keyword check box, click **Detail**.
2. In the POS Keyword Setting, select the camera to enable/disable scanning the keyword. Enable **All** to select all cameras.
3. Enter the text below keyword text box. Click **Add** to include the keyword in the list.
4. To remove, select the word in the list and click **Delete**.

You may only add 8 keywords.

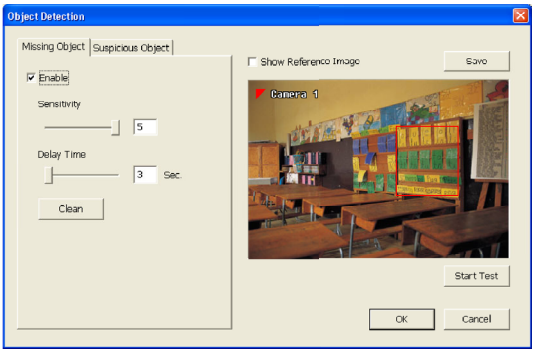
5. Click **OK** to accept the new settings and **Cancel** to exit without saving.

5.9.12 Missing and Suspicious Object Detected

- **Missing Object**

Select the certain object on the screen for the system to detect; when the object is disappear or move and the system will alarm. Click **OK** to exit and save the configuration. To exam the setup condition, click **Start Test**.

1. Select the camera number (0-16) and press RIGHT button on the mouse to call up the setup windows.
2. Click **Save** to capture the image for comparing reference first. To view the captured image, enable the **Show Reference Image** check box. The captured image will display on screen. The reference image is sharing with the Suspicious Object function.
3. Mark the **Enable** check box to setup the condition.
4. Use the mouse to click and drag the frame on the screen. User can drag more than one frame.
5. **Sensitivity:** Set the system detects sensitivity.
6. **Delay Time:** Set the lasting time for system to detect the object.
7. To reset all object frames, click **Clean**. To clean an object frame, click right button of mouse and drag the object frame that user want to clean.



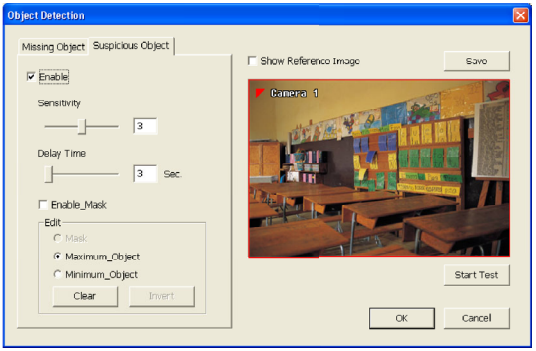
- **Suspicious Object**

Suspicious Object is including the object missing or the doubtful object appears on the screen. Click **OK** to save and exit the setup windows. To exam the setup condition, click **Start Test**.

1. Select the camera number (0-16) and press right button on the mouse to call up the setup windows. And then, click the **Suspicious Object** Tab.

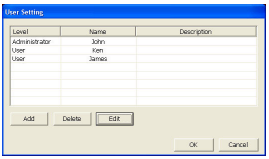
2. Click **Save** to capture the image for comparing reference. To view the captured image, enable the **Show Reference Image** check box. The captured image will display on screen. The reference image is sharing with the Missing Object function.
3. Mark the **Enable** check box to setup the condition.
4. **Sensitive:** Set the system detects sensitivity.
5. **Delay Time:** Set the lasting time for system to detect the object.
6. Use the mouse to click and drag the frame on the screen.
   - **Maximum_Object:** the maximum detect size. The objects are out of the maximum detect area will be disregard. Use mouse to click and drag the frame on the screen.
   - **Minimum_Object:** the minimum detect area. When the objects are smaller than the minimum detect area, the system will disregard. Use mouse to click and drag the frame on the screen.
7. **Enable Mask**

   Mark an area on the screen to disregards the motion in the marked area and to only monitor outside the marked area. Mark the **Enable Mask** check box, click and drag the mask frame on the screen.
8. To reset all object frames, click **Clean**. To clean an object frame, click right button of mouse and drag the object frame that user want to clean

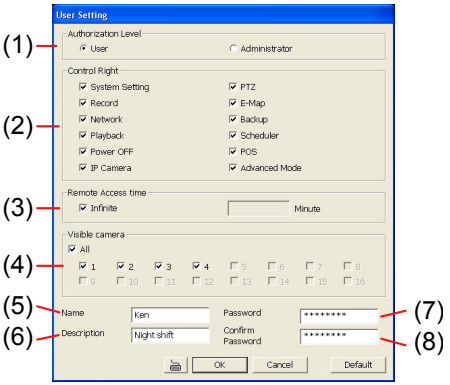


5.10 User Setting

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.



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



(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 DSS DVR from a remote location using internet explorer. Enable **Infinite** check box to access DSS 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

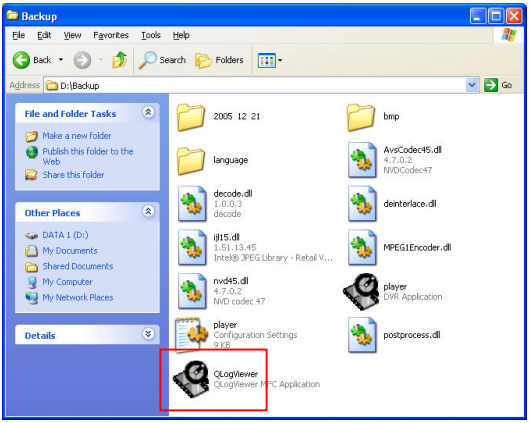
Enter the same user password for confirmation.

Chapter 6 Backup Video Players

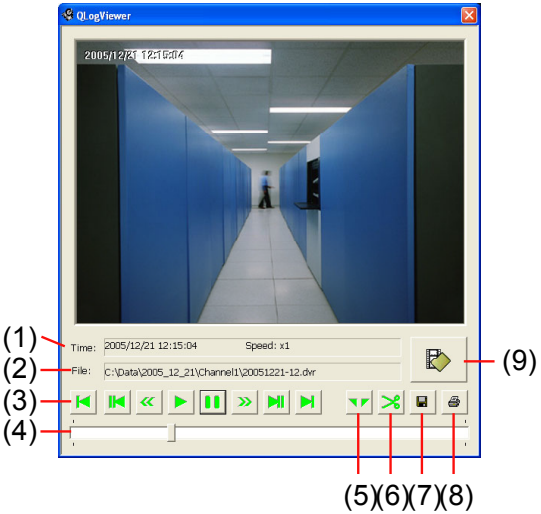
You can playback the backup files using QLogViewer and Player applications. When you back up the recorded file, QLogViewer and Player applications are automatically included in the backup folder.

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 Ωx, ° x, or ⅛x. **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.

- 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	**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 Ωx, ° x, or ⅛x. **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.

Name	Function
(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	View in Playback-compact mode. To return, **Right** click the mouse or press **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.
(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, and 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 DSS 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)

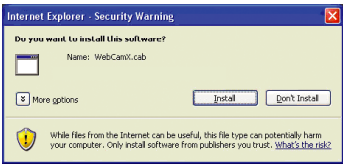
Chapter 8 Using the Remote Programs

You can use Microsoft Internet Explorer to access DSS 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.

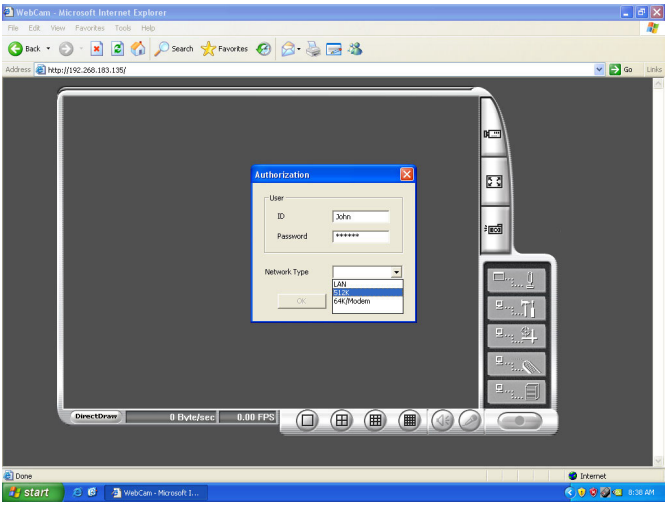
Accessing this feature for the first time you will be prompted by your browser to install WebCamX.cab, allow the installation and you should be able to connect and login afterwards.

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.

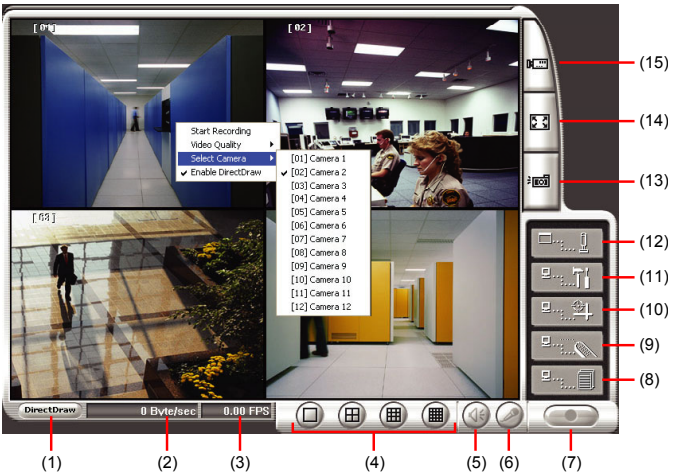


After installing the WebCamX.cab and when connecting to the DSS DVR server, you are required to enter User ID, password and select the network type.


WebCam - Microsoft Internet Explorer
Authorization
User
ID
John
Password
Network Type
LAN
64K/Modem
OK
DirectDraw
0 Byte/sec
0.00 FPS
Done
Internet
start

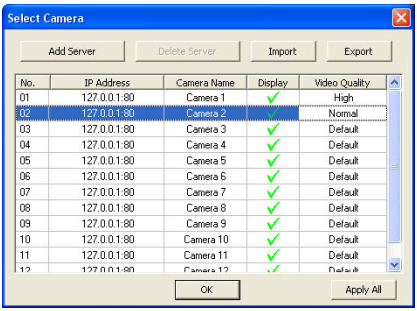
8.1 Familiarizing the DSS DVR WebCam Buttons

Right-clicking on the webcam video screen, enables you to start video recording, change video quality, switch camera and enable/disable DirectDraw.



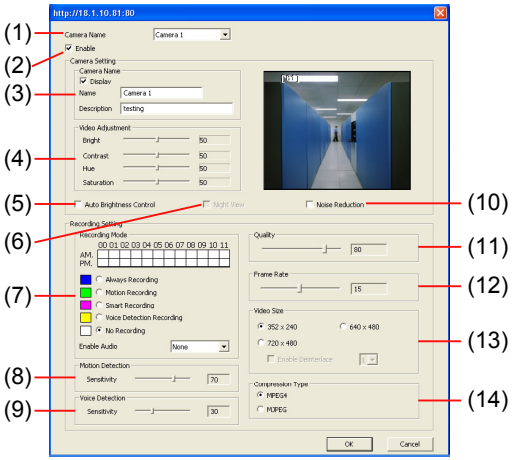
Name	Function
(1) DirectDraw	Enhance the video quality.
	Not all graphic cards can support this function.
(2) Received file size	Indicate the size of the data being sent per second.
(3) Camera frames	Indicate the number of frames per second.
(4) Split display mode	Select from six (4) different split 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 DSS DVR server Talk to web-client setting is disabled, you wonít 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 DSS DVR application and allows you to control DSS DVR server (see also Chapter 8.2).

Name	Function
(10) Remote E-Map	Display the DSS DVR server Emap screen (see also Chapter 4.7).
(11) Remote setup	Change the DSS 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, **Right** click the mouse or press **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. In Video Quality column, click to select between High, Normal or Low. - 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. - Click **Apply All** to change all the camera video quality based on the selected setting. - Click **OK** to exit. 

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 wonít 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**
  Automatically switch to recorded at the maximum frame rate setting once a motion is detected and if there is no motion, it records at the minimum frame rate setting Set the maximum and minimum frame rate setting in **(7) Frame Rate** section.
- **No Recording**
  The system wonít 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.

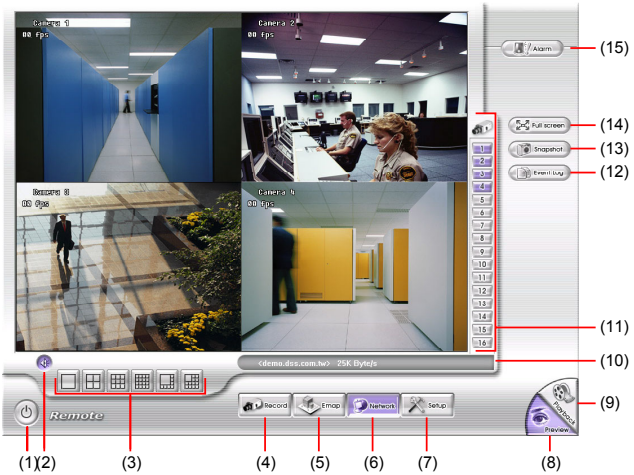
(14) Compression Type

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.

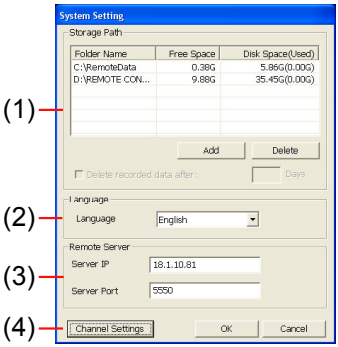
If there are only 4 cameras, you wonít be able to switch to 9, 16, and 13 split screen mode.
To change the video quality, right-click on the screen and select between High, Normal or Low.

(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 DSS 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, **Right** click the mouse or press **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

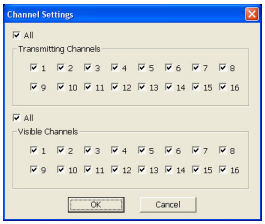
Customize the system to display the tool tips and dialogs based on the selected language. By default the language is in English.

(3) Remote Server

Enter the DSS DVR Server IP and Port number.

(4) Channel Settings

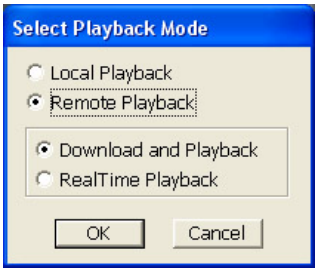
The numbers from 01 to 16 represent the camera ID. In Transmitting Channels section, enable the camera number to receive the camera signal from the server. In Visible Channels section, enable the camera number to view the camera signal on Remote Console screen. To select all the cameras, enable the **ALL** check box.



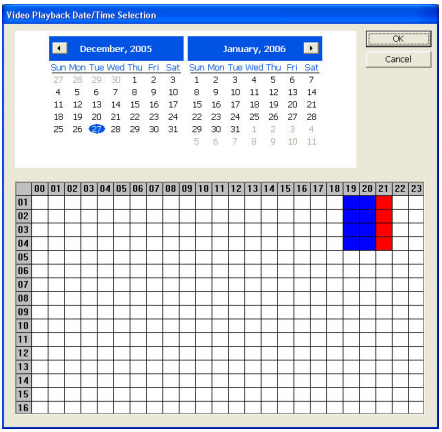
8.4 Using the Remote Playback

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 DSS 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.

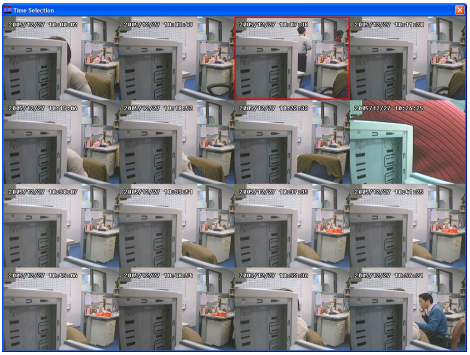


In the Video Playback Date/Time Selection, the number from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera number.



To Make a Selection:

4. Select the date in the calendar. Use ◄ and ► buttons to shift the calendar to the left or right.
5. 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 doesnít have data. You can only select one block when you choose Download and Playback.
6. Click **OK** to proceed and **Cancel** to void this operation.
7. 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 Chapter 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.
	- If there are only 4 cameras, you wonít 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	**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 Ωx, ° x, or ⅛x. **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.

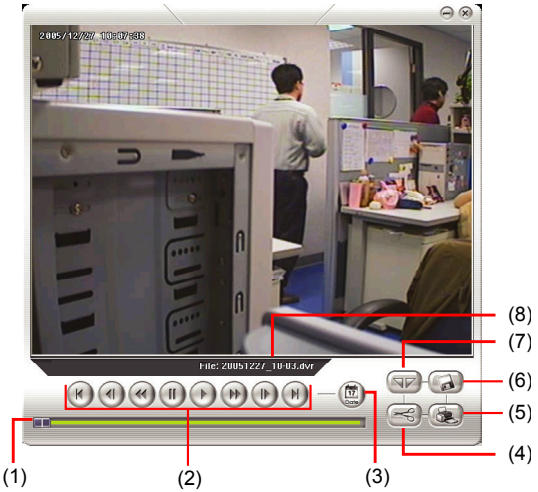
Name	Function
(5) Date	Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file.
	The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera ID. The blue colored column indicates that there is a recorded 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 you want (see also Chapter 4.8).
(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 the entire camera, or one camera.
	- If there are only 4 cameras, you wonít 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	**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 Ωx, ° x, or ⅛x. **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.

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) Snapshot	Capture and save the screen shot either in *.jpg or *.bmp format.
(11) 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.

8.4.3 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 Ωx, ° x, or ⅛x. **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 DSS DVR server

Users can use a mobile phone to access the DSS DVR through Internet. Make sure your mobile phone support IE browser and is connected to the internet. To access the DSS 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 DSS DVR Server

Users can also use a PDA to access the DSS 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.

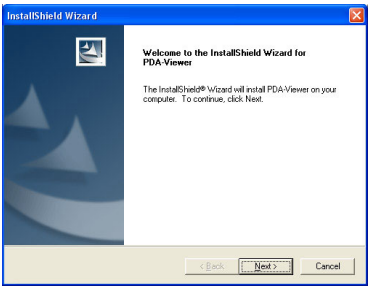
OS: MS Windows CE 4.0, Pocket PC 2002/2003, Mobile 5 PDA version

CPU: ARM architecture

8.6.1 To install PDA Viewer thru ActiveSync

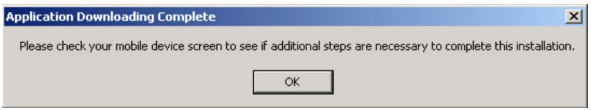
1. Connect your PDA to your PC. Place the CD into the CD-ROM drive then click Install PDA Viewer. And follow the on screen instructions.

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.

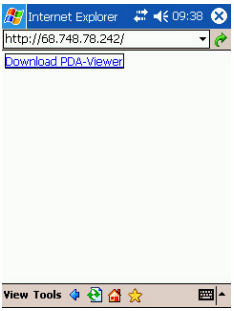
4. When you are prompted, click **Yes** to install the application using the default directory.
5. When done, click **OK**.



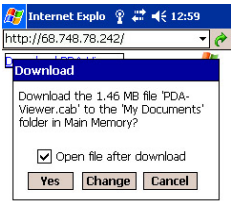
8.6.2 To install PDA Viewer from the Internet

Make sure you are connected to the internet.

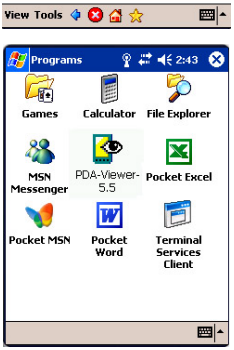
1. Open the web browser and enter the server IP. Then click the hyperlink **Download PDA-Viewer**.



2. When the Download dialog box appears, enable **Open file after download** and click **Yes**.

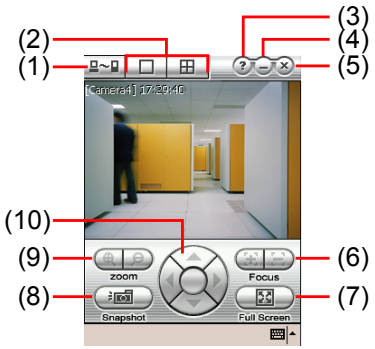


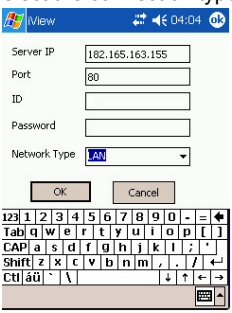
3. After the installation, the PDA-Viewer 5.5 icon will appear in the Programs list.



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	Hook up to the DSS DVR server. Make sure you are connected to internet. When the iView screen appears, enter the server IP, port, user ID, password and select the connection type. Then, click **OK**. 
(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.

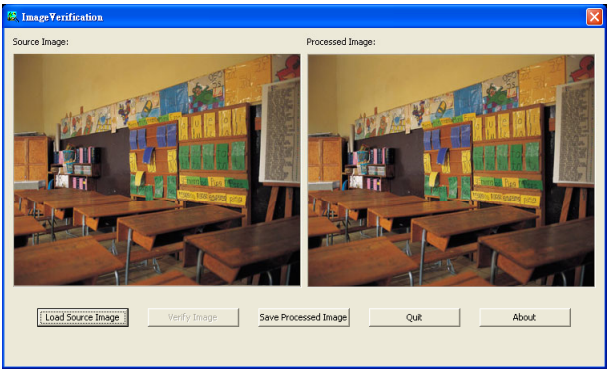
3. To change the video quality, enable/disable audio, and select to display different camera, tap on the video screen longer the pop up menu will appear.

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.

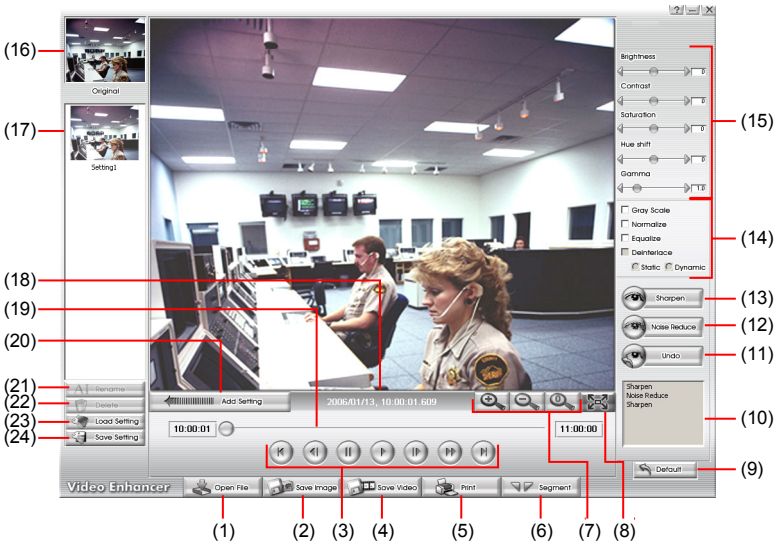
9.1 To Run the ImageVerification program

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	• **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**.

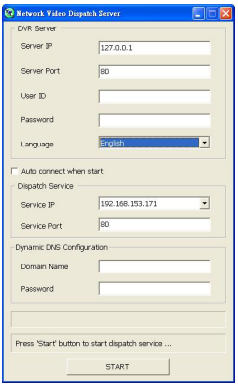
11.1 Dispatch Server

Dispatch is designed to reduce the network traffic of the DSS DVR server. Instead of connecting directly to the DSS DVR server, the client can connect to the computer that is connected to the DSS 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 DSS DVR server IP, port, user ID and password. You can also select to display the language you prefer.
4. **Auto connect when star**

   Enable to automatically connect the dispatch server when start up
5. In the **Dispatch Service** section, if you have installed more than one network card, select the Service IP number.
6. In the **Dynamic DNS Configuration** section, enter the DNS server Name and Password. The DNS server can be the remote storage server for sharing the DVR system loading.
7. Click **START** to connect.



11.2 Remote Backup

Remote Backup is purely for backing up the *.dvr file from the DSS 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.

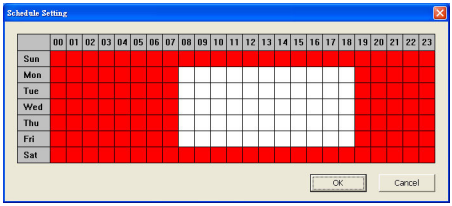
To back up the data, you must have at least 2G hard disk space.

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

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

   In Auto Backup mode:

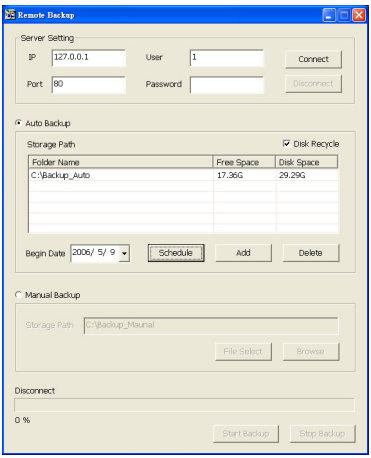
   - In Begin Date drop down calendar, select the date from where to start.
   - Click **Add** to set the storage path.
   - Click **Delete** to remove the selected storage path.
   - Click **Schedule** to select/unselect the time you want to backup. The red block turns white when it is unselected.
   - Enable/disable **Disk Recycle** check box, to automatically overwrite the oldest file when there is not enough free space to backup the file.



   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.

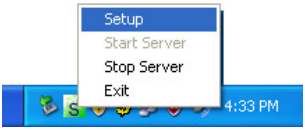
4. Click **Start Backup** to begin and **Stop Backup** to end.



Chapter 12 Using the Remote Control Server

The bundled Remote Control Server enables the PC with Central Management System program (CM1000) installed in it remotely access the DSS DVR server. You many need to manually run this program for CMS access the DSS DVR server. To run, click **start** > **Programs** > **DSS** > **DVR** > **Remote Control Server**.

The remote control server icon appears on the taskbar when the remote control server is enabled. To change the port setting or stop server, right-click icon and then make a selection.



Appendix A Registering Domain Names

DDNS (Dynamic Domain Name Service) is a data query service mainly used on the Internet for translating domain names into Internet addresses. It allows remote clients to intelligently search dynamic servers without any previous enquiring for serversí Internet addresses.

In order to take advantage of this intelligent service, first register your domain name on the following Web site http://ddns.dss.com.tw

1. **User Login**

   Browse the website http://ddns.dss.com.tw with Microsoft IE or Netscape Navigator to access the following dialog.

   First input the serial number of your product and select the product name. Then click **OK** to login or **Reset** to clear the previous input.

2. **Password**

   Set a password to secure your identification.

3. **User Information**

Please provide the following user information, **Host Name**, **Password**, **E-mail**, **Company**, and **Country** to complete the registration process.

Note that Host Name and Domain Name (ddns.dss.com.tw) are the replacement for Internet address while a remote client tends to search a dynamic server.

Appendix B Configure UPnP

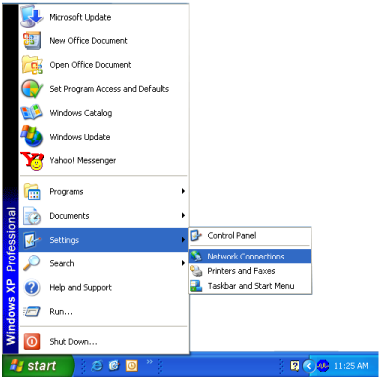
NV DVR application support UPnP function that can automatically configure the port setting to the local router.

Please make sure the following items are true for the UPnP to work able:

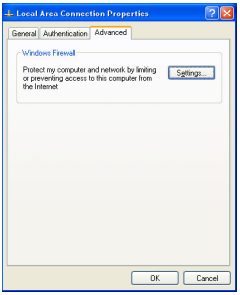
- Window XP service Pack 2 is require
- Window XP must be configured to use UPnP
- UPnP must be enabled on your router (Please contact your local router dealer or refer to the router user manual for the UPnP configuration on router)

Enabling UPnP in Window XP

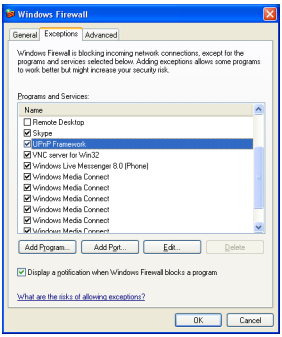
1. Go to **Start** > **Setting** > **Network Connections**. And then, the below windows appear:



2. Right click on **Local Network Connection** icon and select **Properties** > **Advance** tab. The below windows appear:



3. Click **Settings** button and select **Exception** tab. The **Windows Firewall** appears.



4. Mark the UPnP Framework check box and click OK.

LIMITED WARRANTY

The manufacturer warrants this product to be free of defects resulting from faulty manufacture or components under the following terms:

WARRANTY LENGTH

Labor is warranted for (1) one year from the date of purchase.

Parts are warranted for (1) one year from the date of purchase.

Replacement products will be warranted for the remainder of the one year warranty period or (30) thirty days, whichever is longer.

WHO IS PROTECTED

This warranty is enforceable only by the first consumer purchaser.

WHAT IS AND IS NOT COVERED

Except as specified below, this warranty covers all defects resulting from faulty manufacturing of this product. The following are not covered by the warranty.

1. Any product on which the serial number has been defaced, modified, or removed.
2. Damage, deterioration, or malfunction resulting from :
   A. Accident, abuse, misuse, neglect, fire, water, lightning, or other acts of nature, commercial or industrial use, unauthorized product modification, or failure to follow instructions included with the product.
   B. Misapplication of service by someone other than the manufacturerís representative.
   C. Any shipment damages. (Claims must be made with carrier.)
   D. Any other cause which does not relate to a product defect.
3. Cartons, cases, batteries, cabinets, tapes, or accessories used with product.
4. The manufacturer does not warrant that this product will meet your requirements; it is your responsibility to determine the suitability of this product for your purpose.

WHAT WE WILL AND WILL NOT PAY FOR

We will pay labor and material expenses for covered items. However, we will not pay for the following:

1. Removal or installation charges.
2. Shipping charges.

3. Any incidental charges.

EXCLUSION OF DAMAGES

THE MANUFACTURERíS SOLE OBLIGATION AND LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF A DEFECTIVE PRODUCT AT OUR OPTION. THE MANUFACTURER SHALL NOT, IN ANY EVENT, BE LIABLE TO THE PURCHASER OR ANY THIRD PARTY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGE (INCLUDING, BUT NOT LIMITED TO, DAMAGES RESULTING FROM INTERRUPTION OF SERVICE AND LOSS OF BUSINESS) OR LIABILITY IN TORT RELATING TO THIS PRODUCT OR RESULTING FROM ITS USE OR POSSESSION.

LIMITATIONS OF IMPLIED WARRANTIES

There are no other oral or written warranties, expressed or implied, including but not limited to those of merchantability or fitness for a particular purpose. Any implied warranties are limited in duration to one year from the date of purchase.

STATE LAW AND YOUR WARRANTY

This warranty gives you specific legal rights, and you may also have other rights granted under state law. These rights vary from state to state.