

Attached to  
**User Manual**

# Explanation for Each Function

Front Panel

Rear Panel

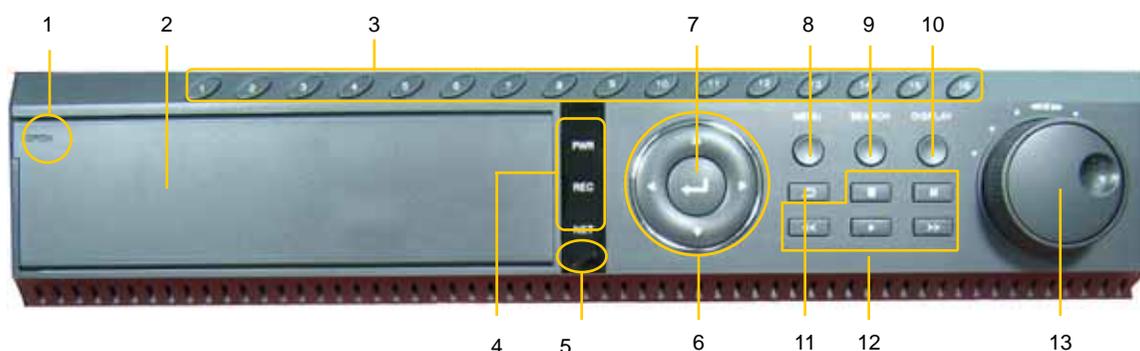
IR Remote Controller



**Version : FM-BB**  
**Edition : 20 Mar 2008**

## 1. Front Panel

The buttons on both the front panel of the DVR and IR Remote Controller have the same function, but may be different each other in shape.



No.	Buttons	Functions
1	CD-RW/DVD Opener	CD-RW/DVD Cover opening
2	CD-RW/DVD Cover	Backup the recorded image by internal CD-RW/DVD. (Option)
3	Numeric Button	Select the desired channel
4	LED Indicator	Indicates system status Power, Record, and Network status
5	IR Sensor Window	Sensor input for IR remote controller
6	Direction Button	Move to the desired menu position
7	Enter Button	Select value or setting and Quick backup during playback
8	Menu Button	Open system menu
9	Search Button	Go to search mode
10	Display Button	Select screen display mode
11	Return Button	Cancel setup or return to previous mode
12	Search Control Button	Search recorded images Playback, Stop, Pause, Fast Forward and Fast Backward
13	Jog/Shuttle Knob	Image playback in various speed or frame by frame

**Note** You can find two functional buttons and USB Port, when CD-RW/DVD cover is opened.

※ **Power Button**

System startup or shutdown

※ **Instant Record Button**

Enables to start emergency recording during live monitoring mode.

※ **USB Port (Ver 2.0)**

Mouse operation or image backup



### 1.1.1. CD-RW/DVD (Option)

Use the CD-RW/DVD to backup the recorded image.  
Refer to "Setting > Backup" for detailed explanation.

### 1.1.2. Power Button

#### 1) System startup

Press power button after connecting power cord to the DVR. Then, you are requested to enter login password for system startup. The factory default password is "0000".

#### 2) System shutdown

If you want to shutdown the system, press power button and then enter related password. The factory default password is "0000".

### 1.1.3. Instant Record Button

It is useful to urgently start recording. In emergency recording, the system maximizes the full recording frames to allocate it to all the channels available equally at 1CIF resolution.

### 1.1.4. USB Port (Version 2.0)

- 1) Use to backup recorded images by using USB storage device (USB Memory Stick or USB HDD).
- 2) System software upgrade
- 3) Mouse connection for system operation

### 1.1.5. IR Sensor Window (Remote Controller Receiver)

Receives input signal from the IR remote controller

### 1.1.6. Numeric Button

These buttons are used to change the channel images.

### 1.1.7. Display Button

Screen mode can be selected from the monitor screen.

### 1.1.8. Search Button

Search the recorded image by date and time.

Refer to "Operation > Search recording Image" for detailed image searching method.

### 1.1.9. Menu Button

Set the environment of the DVR according to the user requirement.  
Refer to "Setting" for detailed explanation.

### 1.1.10. Return Button

Use to cancel the setting or return to previous mode.

### 1.1.11. Enter Button

Use to go to the next stage, select value or settings.

Quick backup during playback (Refer to User Manual section 3.5)

### 1.1.12. Shuttle

Jog/Shuttle dial is used to playback recorded images. The inner dial is called Jog and the outer dial is called Shuttle. The Jog/Shuttle dial has two kinds of functions. The Shuttle is used to speed up the playback speed of images by clockwise or anti-clockwise. Playback speed is indicated as x2, x4, x8, x16, x32 on the lower end of the screen.

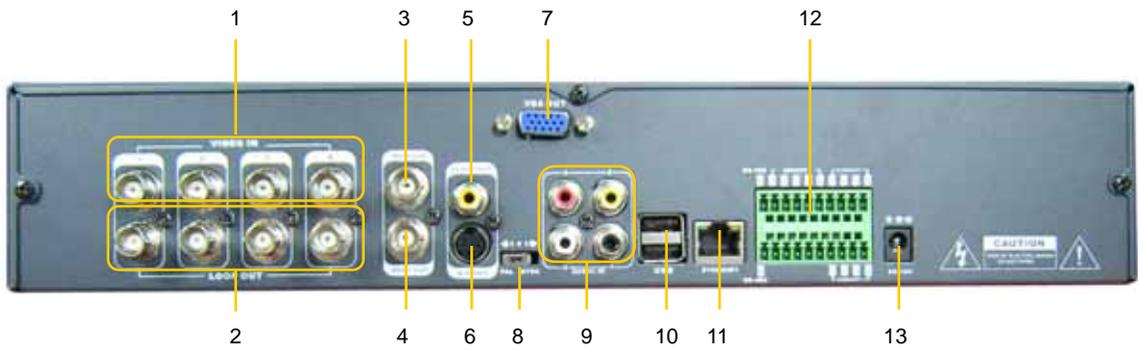
### 1.1.13. Jog

The Jog is used to find the recorded image frame by frame. Turn the Jog dial clockwise or anti-clockwise to see the image frame by frame during pause state.

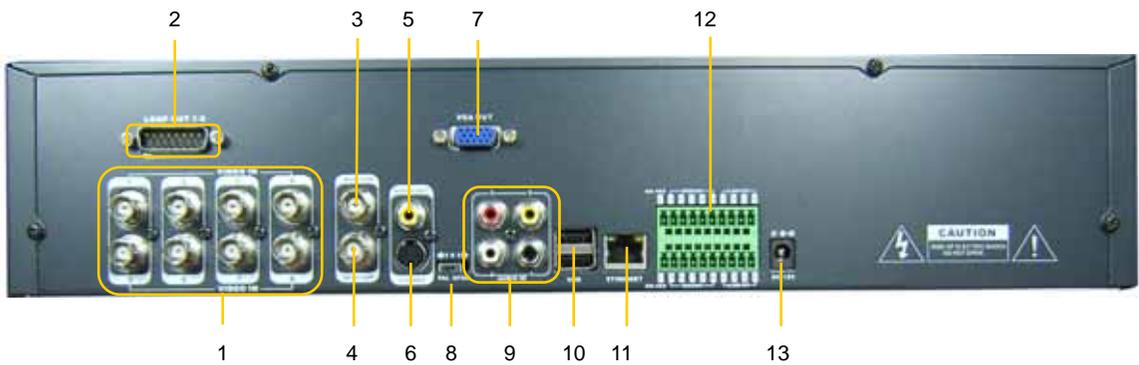
## 2. Rear Panel

The following is the rear panel of the DVR.

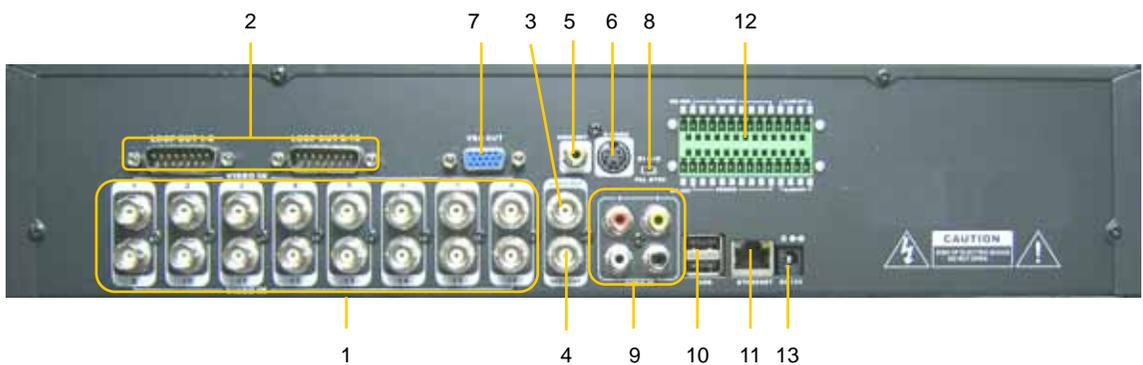
### [ 4 Ch Model ]



### [ 8 Ch Model ]



### [ 16 Ch Model ]



No.	Name	Description
1	Video-In	Connect camera. (Supports NTSC/PAL)
2	Loop-Out	Camera images of each channel will be outputted as it is.
3	Video-Out	Connect the CCTV monitor
4	Spot-Out	Connect the spot monitor, to output the entire surveillance screen one by one.
5	Audio-Out	Connect the audio output device. (with amplifier.)
6	S-Video	Connect to S-Video terminal
7	VGA-Out	Connect the P/C monitor
8	NTSC/PAL Selection	Select the video signal
9	Audio-In	Connect audio input device. (with amplifier.)
10	USB Port	USB port (Ver 2.0) for mouse operation or Image backup
11	LAN Port	10/100 Ethernet connection terminals
12	Terminal Block	Terminal to connect external sensor, alarm and RS-485 signal for camera PTZ control
13	Power-Input	Power cable connection (Default : 12 V, 5~8A)

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**Note** Carefully check whether the specification of the peripheral devices matches with the DVR specification.

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#### 2.1.1. Video-In

Connect the BNC cable of the camera to the corresponding channel marked on rear panel.

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**Note** Camera Input voltage level is 1Vp-p±10%.

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#### 2.1.2. Loop-Out

Use to apply the video of camera input to other device. Without using a video distributor, the same image can be connected to the camera input of other product.

#### 2.1.3. Video-Out

Connect the CCTV monitor, and to manage system or playback recorded image.

#### 2.1.4. Spot-Out

The spot monitor can be used to display input images in automatic interval mode.

#### 2.1.5. Audio-Out

Connect Audio Output Device

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**Note** Use of audio output device with an amplifier is recommended.

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#### 2.1.6. S-Video

One additional main monitor can be installed by using the S-Video output.

#### 2.1.7. VGA-Out

Connect the P/C monitor, and to manage system or playback recorded image.

#### 2.1.8. NTSC / PAL Selection

Turn off the power of DVR and select the NTSC/PAL switch correctly. Then turn on the power again.

#### 2.1.9. Audio-In

Connect Audio Input Device.

### 2.1.10. USB Port (Version 2.0)

- 1) Use to backup recorded images by using USB storage device (USB Memory Stick or USB HDD).
- 2) System software upgrade
- 3) Mouse connection for system operation

### 2.1.11. LAN Port

Connect RJ-45 jack of LAN cable to LAN port. Consult network administrator for proper network configuration.

### 2.1.12. Terminal Block

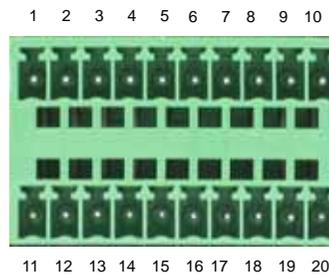
- 1) Connect sensors (dry contact type) with each ground (GND) line to "G" pin.
- 2) Connect various alarm devices controlled by relay output.
- 3) Connect RS-485 cable for P/T/Z control.

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**Note** Support both N/O (Normal Open) and N/C (Normal Close) types of sensor. If connected sensor is not functioning, ensure wiring is correct.  
The connection method may differ according to the type of P/T/Z controller. Enquire to your vendor for guidance.

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#### Note [ 4 & 8 Ch Model ]



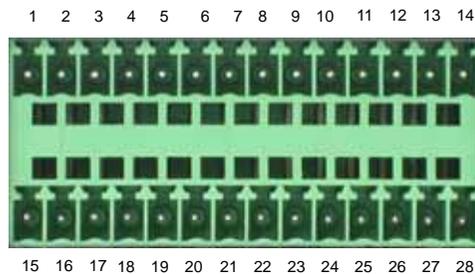
No.	Sensor
2	Sensor 1
3	Sensor 2
4	Sensor 3
5	Sensor 4
6	Sensor Ground (1~4)
12	Sensor 5
13	Sensor 6
14	Sensor 7
15	Sensor 8
16	Sensor Ground (5~8)

No.	Alarm
7	Alarm 1 (+)
8	Alarm 2 (+)
9	Alarm 3 (+)
10	Alarm 4 (+)
17	Alarm 1 (-)
18	Alarm 2 (-)
19	Alarm 3 (-)
20	Alarm 4 (-)

No.	PTZ
1	RS 485 D+
11	RS 485 D-

※ 4 sensor-inputs for 4 Ch model (Pin # 12~16 : Disabled)

#### [ 16 Ch Model ]



No.	Sensor	No.	Alarm	No.	PTZ
2	Sensor 1	11	Alarm 1 (+)	1	RS 485 D+
3	Sensor 2	12	Alarm 2 (+)	15	RS 485 D-
4	Sensor 3	13	Alarm 3 (+)		
5	Sensor 4	14	Alarm 4 (+)		
6	Sensor 5	25	Alarm 1 (-)		
7	Sensor 6	26	Alarm 2 (-)		
8	Sensor 7	27	Alarm 3 (-)		
9	Sensor 8	28	Alarm 4 (-)		
10	Sensor Ground (1~8)				
16	Sensor 9				
17	Sensor 10				
18	Sensor 11				
19	Sensor 12				
20	Sensor 13				
21	Sensor 14				
22	Sensor 15				
23	Sensor 16				
24	Sensor Ground (9~16)				

### 2.1.13. Power Input

Before connecting the power cord to the system, check if the power is in accordance with the system specification.

**Note** There are two kinds of system shutdown

(1) Warm shutdown by front "Power" button or mouse

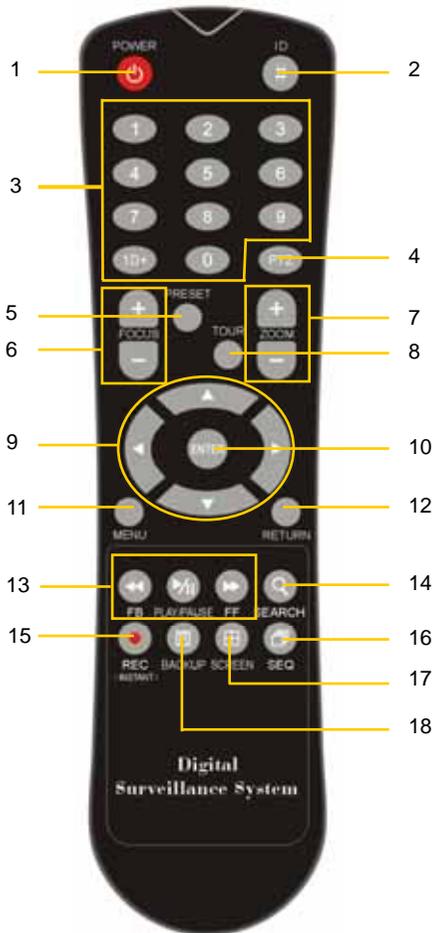
The system running stops, but external power is still connected to the system and cooling fan is running.

(2) Cold shutdown

If you do not use the system for long time, disconnect the power cord from the system.

### 3. IR Remote Controller

The function buttons of the IR Remote Controller are as below.



No.	Functions
1	Power Button
2	ID Selection Button
3	Numeric Button
4	PTZ Button
5	Preset Button on PTZ Mode
6	Focus Button on PTZ Mode
7	Zoom (In & out) Button on PTZ Mode
8	Preset Tour Button on PTZ Mode
9	Direction Button (Left/Right/Up/Down)
10	Enter (Selection) Button
11	Menu Button
12	Return Button
13	Playback Button on Search Mode (Fast Backward/Playback/Stop/Fast Forward)
14	Search Button
15	Instant (Emergency) Recording Button
16	Auto-Sequence Button on Live Display Mode
17	Screen Mode Button
18	Backup Button

**Note** To use the IR Remote Controller, set the initial ID to be same as the ID in the DVR in the menu of ; SYSTEM > SYSTEM INFO > REMOTE ID. (Default ID # for DVR and IR Remote Controller is "0") All DVR(s) have same default ID when it is out from the factory. Therefore, when the default value is used, one IR Remote Controller can control several DVR(s) at once. To prevent this, it is recommended to set different ID between DVR and IR Remote Controller.

**Procedure**    **How to setup the ID in IR Remote Controller**

- 1) Keep pressing ID selection button marked as "#" for about 5 seconds.
- 2) Set the ID number by pressing numeric button on IR Remote Controller.
  - ID number is available from 000 up to 255.
  - You have to press numeric button as three-digit number format.
  - For example, press "000" for 0, "023" for 23, "234" for 234.