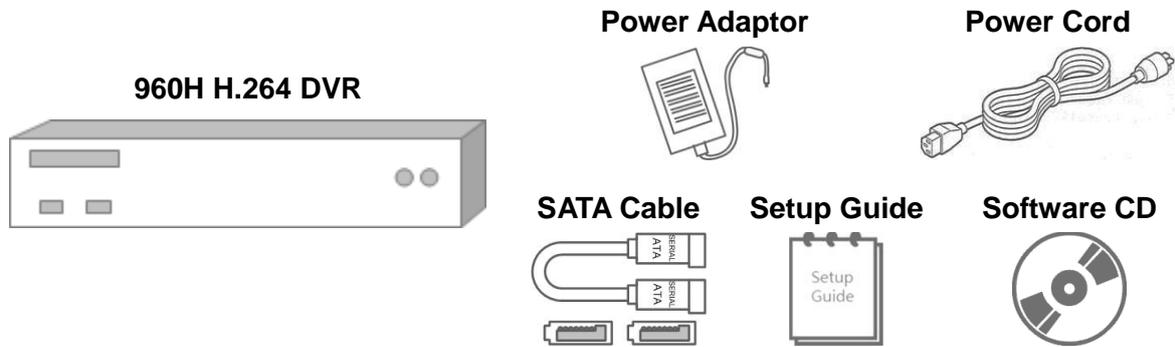


960H H.264 DVR Setup Guide

Package Content

Inspect the packaging carton. Make sure the **960H H.264 DVR** is properly delivered. Remove all items from the box and make sure the box contains the following items.



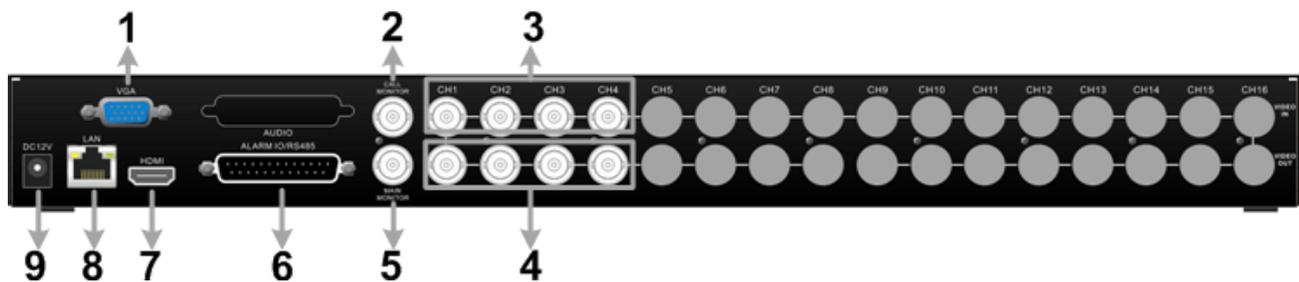
Front Panel



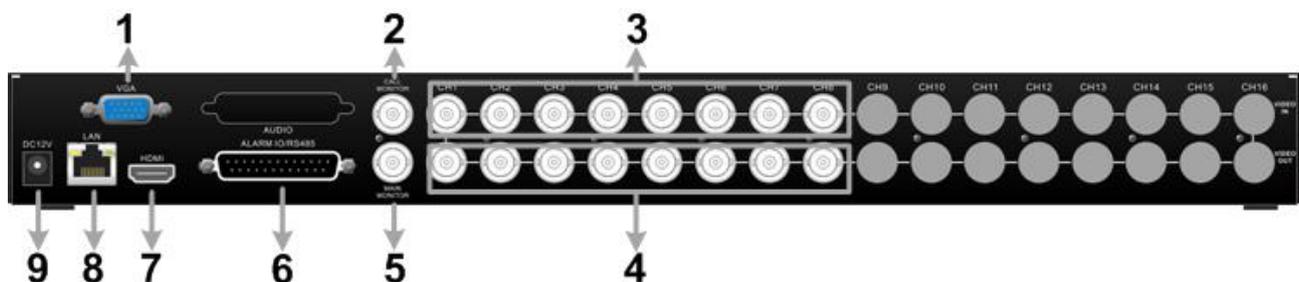
1	USB 2.0 Port*2	The USB 2.0 ports allow users to connect external USB devices to the unit, such as a USB ThumbDrive or a USB mouse.
2	Record LED	It blinks when videos are being recorded.

Rear Panel

4CH models:

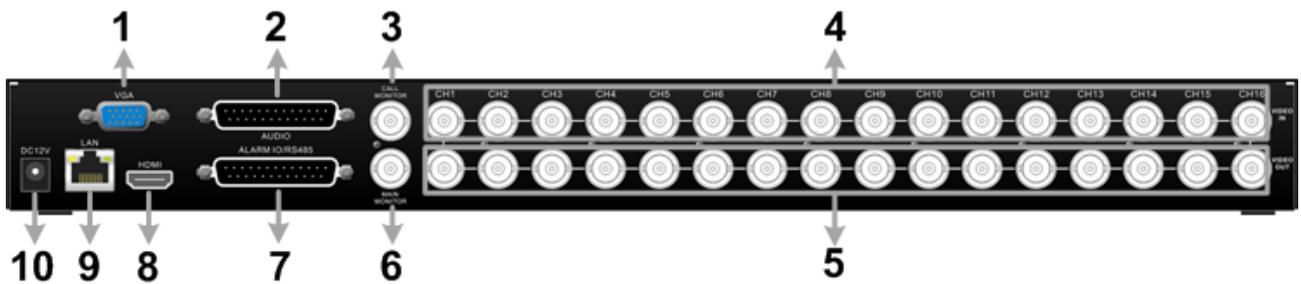


8CH models:



1	Main Monitor (VGA)	A VGA output connector is offered for connecting to a VGA main monitor.
2	Call Monitor (BNC)	A BNC connector is provided for connecting to a call monitor.
3	Video In (BNC)	A group of BNC connectors is provided for video input streams from installed cameras. The number of connectors equals to the number of channels.
4	Video Out (BNC)	The same amount of BNC connectors beneath Video In (BNC) are offered for looping out the video input.
5	Main Monitor (BNC)	A BNC connector is provided for connecting to a main monitor.
6	Alarm I/O, RS-485 & Audio In	The DVR provides alarm I/O, RS-485 & Audio In ports that offer users the flexibility to connect the unit to other devices.
7	Main Monitor (HDMI)	An HDMI connector is provided for connection to a displaying device that transmits data digitally to show the best video quality.
8	LAN 10/100/1000M (RJ-45)	The DVR is capable of networking, and it allows the videos to be viewed over the LAN network or the Internet via internet browsers.
9	Power Jack	Connect the power supply cord shipped with the DVR. Use of other power supply cords may cause overloading.

16CH models:



1	Main Monitor (VGA)	A VGA output connector is offered for connecting to a VGA main monitor.
2	Audio	An Audio connector is provided for connecting audio input devices for all channels and audio output device for the Main monitor.
3	Call Monitor (BNC)	A BNC connector is provided for connecting to a call monitor.
4	Video In (BNC)	A group of BNC connectors is provided for video input streams from installed cameras. The number of connectors equals to the number of channels.
5	Video Out (BNC)	The same amount of BNC connectors beneath Video In (BNC) are offered for looping out the video input.
6	Main Monitor (BNC)	A BNC connector is provided for connecting to a main monitor.
7	Alarm I/O & RS-485	The DVR provides alarm I/O and RS485 ports that offer users the flexibility to connect the DVR to other devices.
8	Main Monitor (HDMI)	An HDMI connector is provided for connection to a displaying device that transmits data digitally to show the best video quality.
9	LAN 10/100/1000M (RJ-45)	The DVR is capable of networking, and it allows the videos to be viewed over the LAN network or the Internet via internet browsers.
10	Power Jack	Connect the power supply cord shipped with the DVR. Use of other power supply cords may cause overloading.

Pin Definition of Alarm I/O & RS-485, and Audio

Pin Definition of Alarm I/O & RS-485 and Audio In (4CH / 8CH models)



Pin	Definition	Pin	Definition	Pin	Definition
1	GND	10	Alarm In 1	19	Audio In 2
2	GND	11	RS485 D+	20	Alarm In 8 (8CH only)
3	Audio In 7 (8CH only)	12	Alarm Out COM	21	Alarm In 6 (8CH only)
4	Audio In 5 (8CH only)	13	Alarm Out Open	22	Alarm In 4
5	Audio In 3	14	GND	23	Alarm In 2
6	Audio In 1	15	Main Audio Out	24	RS485 D-
7	Alarm In 7 (8CH only)	16	Audio In 8 (8CH only)	25	Alarm Out Close
8	Alarm In 5 (8CH only)	17	Audio In 6 (8CH only)		
9	Alarm In 3	18	Audio In 4		

Pin Definition of Alarm I/O & RS-485 (16CH models)



Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Alarm Out Open	8	Alarm In 3	15	Reserved	22	Alarm In 13
2	Alarm Out COM	9	Alarm In 4	16	Reserved	23	Alarm In 14
3	RS485 D+	10	Alarm In 5	17	Reserved	24	Alarm In 15
4	RS485 D-	11	Alarm In 6	18	Alarm In 9	25	Alarm In 16
5	Reserved	12	Alarm In 7	19	Alarm In 10		
6	Alarm In 1	13	Alarm In 8	20	Alarm In 11		
7	Alarm In 2	14	Alarm Out Close	21	Alarm In 12		

Pin Definition of Audio (16CH models)



Pin	Definition	Pin	Definition	Pin	Definition	Pin	Definition
1	Audio In 1	8	Audio In 15	15	Audio In 4	22	GND
2	Audio In 3	9	GND	16	Audio In 6	23	GND
3	Audio In 5	10	GND	17	Audio In 8	24	GND
4	Audio In 7	11	GND	18	Audio In 10	25	Reserved
5	Audio In 9	12	Reserved	19	Audio In 12		
6	Audio In 11	13	Main Audio Out	20	Audio In 14		
7	Audio In 13	14	Audio In 2	21	Audio In 16		

Live Panel Buttons

The functional buttons are displayed in the Live Panel when the mouse pointer moves to the right of the screen. Refer to the table below for definition of each button.

Item	Icon	Description	Item	Icon	Description	Item	Icon	Description
1		Enter	2		Up	3		Esc
4		Left	5		Down	6		Right
7		Mode	8		Freeze	9		Search
10		Play/Stop	11		Sequence	12		Menu
13		Call Monitor	14		Dome Camera Control			

Power On the DVR

Please follow the proper power-on procedures to avoid damaging the DVR.

- Connect all necessary components, e.g. monitor, USB mouse, and cameras, before power on the DVR.
- Check the type of power source before plugging in the power cord to the DVR. The acceptable power input is between AC110V ~ AC240V.

Select Viewing Mode:

- Click on **MODE** repeatedly to select the preferred display mode. The available viewing modes are full-screen, 4-window, 9-window, and 16-window.
- Click on **FREEZE** to pause the current viewing image.

Basic Setup

Enter the OSD main menu and setup some basic configuration of the DVR. The basic configuration can be set via either the DVR or **DVRRemote**, the remote software.

Enter OSD Main Menu:

- Click on the **MENU** icon to enter the OSD main menu.
- Select the administrator account “**admin**” to login. Enter the preset password “**1234**”.
- It is strongly suggested to change the password to prevent unauthorized access.

Date / Time Setting:

Follow steps below to setup date / time before the recording starts. Refer to the User's Manual for advanced setup of Time Sync function.

- Select <**Date/Time**> in System menu.
- Select the date and time, and adjust the value by clicking on **UP** / **DOWN** buttons.
- The new date and time settings take effect after the changes are confirmed.

Language Setting:

If users wish to change language of the DVR system, follow the steps below.

- Select <**Language**> in System menu.
- Click on the **Down** button to choose the preferred language.

Network Setup

Configure the LAN setup for the DVR to properly function with Ethernet connection. The default IP of the **960H H.264 DVR** must be changed to avoid network conflicts.

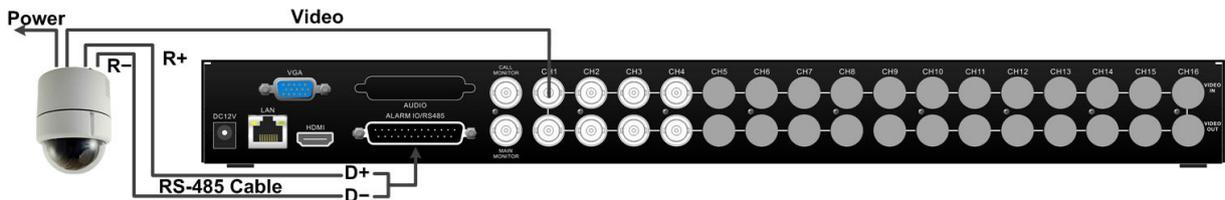
- From OSD main menu, select <**System**> → <**Network Setup**>, set the <**LAN Select**> item to <**LAN**> or <**PPPoE**> according to the network application, and enter <**LAN Setup**>.
- For DHCP users, set the DHCP to <**ON**>. The IP address, Netmask, Gateway and DNS settings are retrieved from network servers. DHCP is dynamic that the settings change from time to time.
- For Non-DHCP users, set the DHCP to <**OFF**>. IP address, Netmask, Gateway and DNS settings must be set. Please obtain the information from the network service provider.
- To change the IP address, Netmask, Gateway and DNS value, click on the <**Num**> button to display the number pad and input users' preferred setting values.
- PPPoE users must set the <**PPPoE Account**> and <**PPPoE Password**> as well.
- When the settings are complete, click on the item again to confirm and save the settings. Right click or click on <**X**> in the upper right-corner of the window to abort.

Dome Camera Control

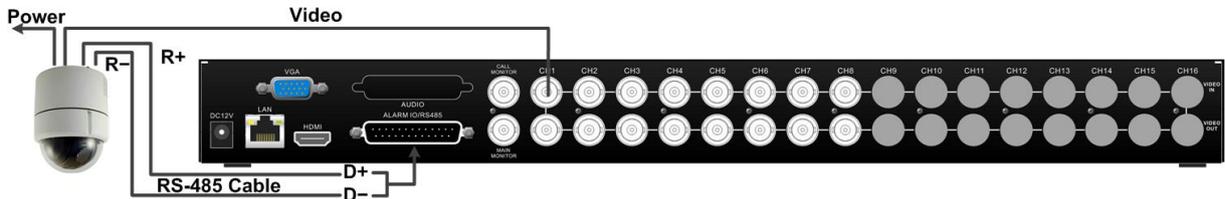
Dome Camera Connection & Settings:

- See section [Pin Definition of Alarm I/O & RS-485, and Audio](#) for RS-485 port pin definition.
- Refer to the following figure. Connect the R+, R- terminals on the dome camera to the RS-485 D+, D- terminals on the DVR by RS-485 cable respectively.

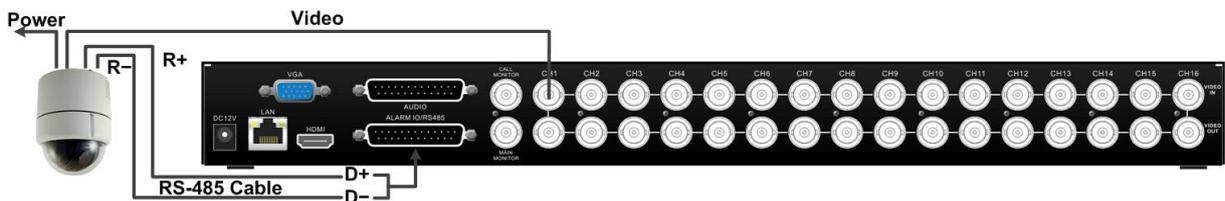
4CH models:



8CH models:



16CH models:



- To set up dome the protocol and ID of the camera, click on **MENU** to access the OSD main menu, and select **<Camera>**. Then select **<Dome Protocol>** and choose the corresponding protocol. Next select **<Dome ID>** and choose a preferred ID number. Note that the ID number must match the ID address defined by the dome camera.
- To configure the RS-485 parameters, select **<System>** from OSD main menu, and then select **<RS485 Setup>**. The default RS-485 settings are 9600 Baud, 8 Data Bits, 1 Stop Bit and No Parity.

Control Buttons in Dome Camera Control Panel:

Icon	Description	Icon	Description
	Iris Open		Iris Close
	Focus Near		Focus Far
	Zoom Out		Zoom In
	Set / Go Preset Points		Return to Live Mode
	Move the Lens to the Left		Move the Lens to the Right
	Move Up the Lens		Move Down the Lens
	Auto Focus		

Basic Playback Operation

Search By Time:

- Click on **SEARCH** to enter the Search menu.
- Click on “From”, and playback will start from the beginning of the database.
- Click on “End”, and playback will start from the end of the database.
- Click on “Select” and choose date or time field. Click on the **UP/DOWN** buttons to adjust the values. Click on “Select” again to confirm or right click to abort.
- Click on <**Begin Playback**> to start playing back recorded video of the selected time. Click on **PLAY/STOP** again to return to live video.



NOTE: If there is no available recorded video that matches the specified time and date, the unit starts to playback from the next available video.

Calendar Search:

- Click on **SEARCH** to enter the Search menu.
- Click on <**Calendar Search**> and a calendar will show up.
- Select any shaded date, which means recording data are available. The table shown on the left will display available videos of each channel within the selected date.
- The videos are classified into four categories: **Normal**, **Motion**, **Alarm In** and **Video Loss**, shown as four different tabs on the top.
- Then select a preferred time from the time bar. Alternatively, specify the values of date / hour / minute / second under <**Select**> on the bottom-right corner.

- Click on <From> or <End> to indicate the beginning or the end of the database.
- Click on <Begin Playback> to start playing back the selected video.

Search by Event:

- Click on **SEARCH** to enter the Search menu.
- To search event video that was recorded on a specific camera, check or un-check the box in front of a channel to select or de-select the channel.
- Click on <Event List> to list the event video of the selected channels.
- The list displays each event by date, time, triggered camera and alarm type. The latest recorded event video will be listed on the top. To exit the event list, right click the mouse or click on <X> in the upper-right corner of the window.
- Click on the buttons below to see the previous or next pages of the Event List. Click on the selected event record to playback the event video.



NOTE: The event list displays only the first 1024 events; as some events are deleted, others will be displayed.

Playback Controls of Control Panel Buttons:

Icon	Description	Icon	Description
	Time Frame of the Previous Time Bar		Time Frame of the Next Time Bar
	Backward Playback: Click repeatedly to increase speed by 1x, 2x, 4x, 8x, 16x, or 32x.		Forward Playback: Click repeatedly to increase speed by 1x, 2x, 4x, 8x, 16x, or 32x.
	Step Backward: Only shows when playback is paused.		Step Forward: Only shows when playback is paused.
	Pause Playback		Change Viewing Mode
	Mark Video Export Time		Search Menu
	Return to Live Mode		Scale Time Bar by 4 Hour
	Scale Time Bar by 12 Hour		Scale Time Bar by 24 Hour

DVR Status Bar Icons

Icons that will be displayed in the status bar are listed in the following table with their descriptions.

Item	Icon	Description	Item	Icon	Description
1		Main Monitor	14		Quick Export
2		Call Monitor	15		Stamp A
3		Monitor Active / Inactive	16		Stamp B
4		Sequence	17		Lock
5		Record	18		Disk Error
6		Event Record	19		Disk Full
7		Freeze @ Live Mode	20		Disk Overheat
8		Dome Camera Control	21		No Disk
9		Zoom	22		Disk Almost Full
10		Forward Playback Speed: 1x, 2x, 4x, 8x, 16x, 32x	23		HDD Usage
11		Pause @ Playback mode	24		Guest
11		Backward Playback Speed: 1x, 2x, 4x, 8x, 16x, 32x	22		User's Authority Level
13		End of Video	26		Fan Error

Connect the DVR via the Remote Software

Setup Requirements:

- Make sure the PC is connected to the Internet.
- Obtain the IP address of the **960H H.264 DVR**. To check the IP address of the DVR, click on **MENU** and select **<System>** → **<Network Setup>** → **<LAN Setup>** → **<IP>** to check the IP.

Changing Internet Setting:

The **960H H.264 DVR** only supports 32-bit IE browser. However, the DVR does not support IE browser under WinMetro mode.

- Start the IE; select **<Tools>** from the main menu of the browser, then **<Internet Options>** and then click the **<Security>** tab.
- Select **<Trusted Sites>** and click **<Sites>** to specify its security setting.
- Uncheck “Require server verification (https:) for all sites in this zone”. Type the IP address of the unit in field and click **<Add>** to add this website to the zone.
- In the Security Level area, click **<Custom Level>**. Under **<ActiveX controls and plug-ins>**, set all items to **<Enable>** or **<Prompt>**.
- Click **<OK>** to accept the settings and close the **<Security Settings>** screen.

Using the Remote Software:

- Start the IE and enter the IP address of the **960H H.264 DVR** in the address bar.
- The ActiveX controls and plug-ins dialog will show up twice for confirmation; click **<YES>** to accept ActiveX plug-ins. The **DVRRemote** plug-ins will be downloaded and installed on the PC automatically when the connection is successfully made.



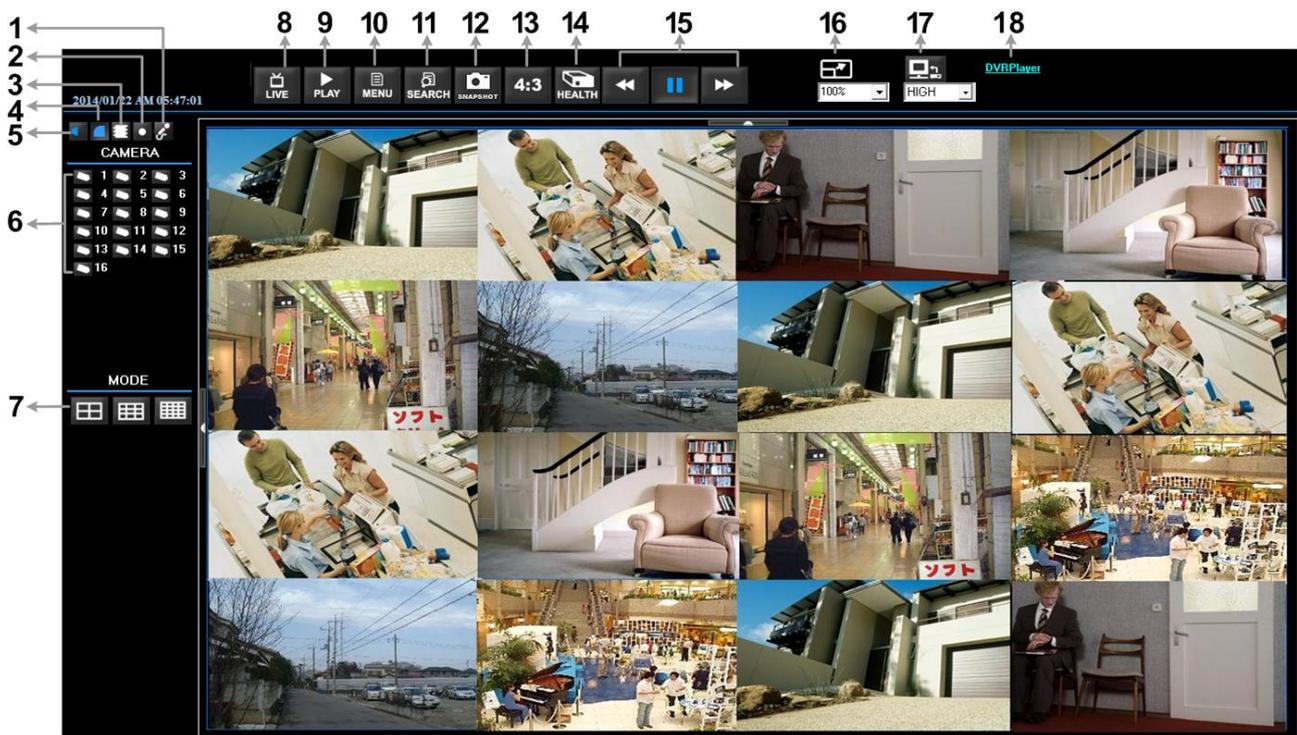
NOTE: Do not enter any leading “0” characters in the address, for example, “192.068.080.006” should be entered as “192.68.80.6”.



NOTE: If the default trigger port 80 is changed to another port, e.g. port 81, the IP address should be entered as “192.68.80.6:81”.

- Version verification starts automatically to verify whether **DVRRemote** was installed. This process may take up to 30 seconds.
- When the software is completely downloaded and installed, the Login Window is displayed.
- Enter username and password. The default username and password is **admin** and **1234**.

The following picture shows the display window of the DVRRemote:



Refer to the table below for brief description of functional items:

Item	Description	Item	Description
1	2-Way Audio Talk	10	Setup Menu
2	Instant Recording	11	Search Event List
3	Deflicker On/Off at Playback	12	Capture Snapshot
4	Smoothen the Image	13	4:3 Viewing Aspect
5	Audio On/Off	14	HDD Status
6	Select Camera	15	Playback Control
7	Display Mode	16	Select Picture Size
8	View Live Camera	17	Bandwidth – Normal/Dual Stream
9	Playback Video	18	Download DVRPlayer

For more information on DVRRemote, see User's Manual.

DVRRemote Playback

Playback Remote Video:

- Click **<Play>** on the main window toolbar, and then **<Remote Playback>** tab.
- **<From>** and **<To>** on top of the screen display the date and time from which recorded video is available for playback.
- Choose **<Playback>** in **<Select>** field for playback recorded video.
- Select the date and time of the segment to play back from the **<Start>** field. The date and time can be changed by either typing desired numbers directly or using the arrow buttons.
- Click **<OK>** to start the playback, or click **<Close>** to abort.

Playback Local *.drv File:

- Click **<Play>** on the main window toolbar, and then **<Local Playback>** tab.
- Click **<Open>** and the file selection screen is displayed. Select the *.drv video file to playback and click **<OK>**.
- Click **<OK>** to start the playback, or click **<Cancel>** to abort.
- View the video playback by using the Playback controls.
- To end the playback, click **<Live>** to return to live video.

Playback Local *.avi Files:

- Start the windows media player or other media players from **<Start>** menu (or any other possible access).
- Select **<File>** and then **<Open>**.
- Select the wanted *.avi file, and click **<Open>**.



NOTE: The *.avi files for each channel are stored separately. Therefore the video can be played back in single channel, full screen mode only.

Playback Event Video:

- Click **SEARCH** on the main window toolbar. The Event List appears.
- Scroll through the Event List and highlight the interested events.
- Double-click on the desired event to view the event video.

Playback Controls:

