

HD-SDI DVR User Manual

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CAUTION

- Please read this user manual carefully to ensure that you can use the device correctly and safely.
- There may be outdated information (due to software updates) or minor errors in this manual. Updates and corrections will be periodically added into future versions. The contents of this manual are subject to change without notice.
- This device should only be used with the power source indicated on the electronic specification label. The voltage of the power must be verified before using. If the device is not in use for a long period of time, unplug the power from the wall socket.
- Do not install this device near any heat sources such as radiators, heat registers, stoves or other device that produce heat.
- Do not install this device near water. Clean only with a dry cloth.
- Place the device in a well-ventilated area.
- **Do not power off the DVR during normal recording condition!** The correct method to shut off DVR is to stop recording firstly, and then to select “shut-down” from the lower left of the menu screen to exit, and finally to cutoff the power.
- This machine is designed for indoor use only. Do not expose it to high humidity environment, including rain. If any liquid gets into the machine’s case, please cutoff power immediately. Be sure to use a qualified technician to inspect and repair the device before resuming operation.
- Do not try to repair the device by yourself without technical aid or approval.
- When this product is in use, the intellectual property of Microsoft, Apple and Google will be involved. The pictures and screenshots in this manual are only used to explain the usage of our product. The ownership of trademarks, logos and other intellectual properties related to Microsoft, Apple and Google belong to their respective owners.
- This manual is suitable for HD-SDI digital video recorders (DVR).

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1 Introduction

1.1 DVR Introduction

This model DVR (Digital Video Recorder) is specially designed for CCTV system. It adopts high performance video processing chips and embedded Linux system. Meanwhile, it utilizes advanced technologies, such as efficient H.264 encoding, Dual stream, SATA interface, VGA output, mouse input, remote control input, web browser access (e.g. IE), mobile viewing (via smart phones and tablets), etc., which ensures powerful features and high stability. Due to these distinctive characteristics, it is widely used in banks, telecommunication, transportation, factories, warehouse, and irrigation and so on.

1.2 Main Features

COMPRESSION FORMAT

- Standard H.264 compression with low bit rate and better image quality

LIVE SURVEILLANCE

- Supports VGA/BNC/HDMI output
- Supports channel security by hiding live display
- Display the local record state and basic information
- Supports USB mice for user-friendly operation

RECORD MEDIA

- Supports SATA HDDs for reliable recording and abundant space

BACKUP

- Supports USB 2.0 devices to backup
- Some models supports built-in SATA DVD writer to backup
- Supports saving recordings as files in AVI standard format to remote computers over an internet connection

RECORD & PLAYBACK

- Record modes: Manual, Schedule, Motion detection and Sensor alarm recording
- Supports automatic recycling of space after the HDD is full
- 1080P real-time recording
- Resolution, frame rate and picture quality are adjustable
- Three record search modes: time search, event search and image search
- Supports deleting and locking the recorded files one by one
- Supports remote playback in Network Client through LAN or internet

ALARM

- Supports schedule for motion detection (some models support sensor alarm)
- Supports pre-recording and post recording
- Supports linked channels recording once motion or alarm triggered on certain channel
- Supports linked PTZ preset, auto cruise and track of the corresponding channel

PTZ CONTROL

- Supports various PTZ protocols
- Supports 128 PTZ presets and 8 auto cruise tracks
- Supports remote PTZ control through internet

SECURITY

- Customize user right: log search, system setup, two way audio, file management, disk management, remote login, live view, manual record, playback, PTZ control and remote live view
- Supports 1 administrator and 63 users.
- Supports event log recording and checking, events unlimited

NETWORK

- Supports TCP/IP, DHCP, PPPoE, DDNS protocol
- Supports IE, Firefox, Chrome, and Safari browsers for remote access
- Supports multiple remote client connections of 5 and up
- Supports dual network streams. Main and sub video streams are independently adjustable to fit the bandwidth limits and network environment
- Supports snapshots and color adjustment in remote view
- Supports remote time and event search with channel selection playback and snapshots
- Supports remote PTZ control with preset and auto-cruise
- Supports full remote menu setup, changing all the DVR settings remotely
- Supports mobile surveillance via smart phones: iPhone, Android, Symbian, WinCE (3G network required)
- Supports CMS to manage multiple devices over the Internet

2 Hardware Installation

2.1 Install Hard Drive & DVD Writer

Notice: 1. Only some models support DVD Writer installation.

2.1.1 Install Hard Drive

Check the unit and the accessories after getting the DVR. Please do not power up the unit till the physical installation is complete.

If installing one or two HDDs:

Step 1: Unscrew and open the top cover.

Step 2: Connect the power and data cables. Place the HDD onto the bottom case as Fig 2-1.

Step 3: Screw the HDD as Fig 2-2.



Fig 2-1 Connect the HDD



Fig 2-2 Screw in the HDD

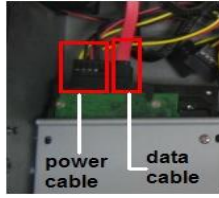
Note: For more convenient installation, please connect the power and data cables first and then use screws to fasten the HDD.

If installing four to eight HDDs:

Step 1: Unscrew and open the case and then remove the screws on both sides to take out the upper metal bar as shown below:



Step 2: Put the HDD under the lower metal bar and let the screw holes of the HDD align to the metal bars'. Then screw in firmly and connect the power and data cables. See the following pictures:



Step 3: Install other three HDD according to above-mentioned method. Then cover the upper iron bar and screw it firmly. Put the HDD under it and screw firmly as shown below:



Step 4: Install other three HDD under the upper iron bar as shown below:



Step 5: Cover the back cover of the device and screw firmly.

2.1.2 Install DVD Writer

Step 1: Unscrew and open the top cover.

Step 2: Connect the power and data cable. Place the DVD writer onto the bottom of the case as seen in Fig 2-3.

Step 3: Screw the HDD as Fig 2-4.



Fig 2-3 Connect the DVD Writer



Fig 2-4 Screw the Writer

Note: The DVD writer, which is for backup use only, must be a compatible device we recommend. Please refer to “Appendix C Compatible Devices”.

2.2 Front Panel Descriptions

Notice: The front panel descriptions are only for reference; please make the object as the standard.(???)

One kind of front panel:

Name	Description
REC	When recording, the light is blue
Net	When network access is in use, the light is blue
Power	Power indicator; when the device has power, the light is blue
Fn	Switch the output between VGA and BNC

The other kind of front panel:

Item	Type	Name	Description
1	Work state indicator	Power	The power indicator turns blue when DVR is powered up.
		HDD	The light turns blue when HDD is writing and reading.
		Net	The light turns blue when remote access is in use.
		Backup	The light turns blue when backing up files and data.
		Play	The light turns blue when playing video.
		REC	The light turns blue when recording.
2	Function button	MENU/+	1. Enter menu in live 2. Increase values in setup
		BACKUP/-	1. Decrease values in setup 2. Enter backup mode in live
		RECORD / FOCUS	1. Record manually 2. FOCUS function PTZ mode.
		REW / SPEED	1. Rewind key 2. SPEED function in PTZ mode
		SEARCH / ZOOM	1. Enter search mode 2.ZOOM function in PTZ mode.
		PLAY / IRIS	1. Enter play interface 2. IRIS function in PTZ mode
		FF/ P.T.Z.	1. Fast forward 2. Enter PTZ mode
STOP/ESC	1. Quit play mode 2. Exit the current interface or status.		
3	Digital button	1-9	Input number 1-9 or choose camera.
		0/10+	Input number 0, 10 and the above number together with other digital keys.
4	Input button	Arrows	Select items on screen options.
		Multi-screen	Change screen display mode to 1/4/8 channel.
		Enter button	Confirm selection.
5	IR receiver	IR	For remote controller
6	USB	USB port	To connect external USB devices like USB flash, USB HDD for backup or update firmware; or connect to USB mouse.

2.3 Rear Panel Instructions

Notice: The real panel descriptions are only for reference; please make the object as the standard.

Name	Description
Video out	Video output. Connect to monitor.
Spot	Connect to monitor as an AUX output to display channel by channel. Video would be displayed without OSD.
HD SDI Video In	SDI video inputs
Audio in	Audio inputs
Audio out	Audio output. Connect to the sound box
MIC IN	Talk
LAN	Network port
VGA port	VGA output. Connect to monitor.
USB port	Connect to USB devices: mouse, USB hard disk or flash drives (for backup or firmware updates)
HDMI port	Connect to high-definition display device.
ALARM IN	Alarm inputs for connecting sensors
ALARM OUT	Relay output. Connect to external alarm.
GND	Grounding
P/Z	Connect to PTZ, Y is TX+, Z is TX-
K/B	Connect to Keyboard, A is TX+, B is TX-
E-SATA	Connect to HDD for backup
LOOP OUT	For outputting image independently
Power Input	DC12V / AC 110V or 110V (120V???)
POWER Switch	Switch on/off
FAN	For cooling the device

2.4 Remote Controller

It uses two AAA size batteries.

Step 1: Open the battery cover of the remote controller.

Step 2: Place batteries. Please take care the polarity (+ and -).

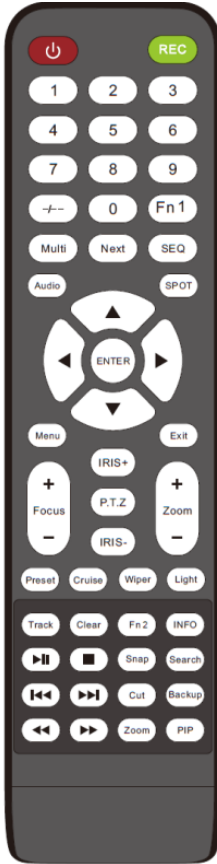
Step 3: Replace the battery cover.

If it still does not work, please change a new remote controller to try, or contact your dealers. The interface of remote controller is shown in the following figure.

Key points to check in case the remote does not work.

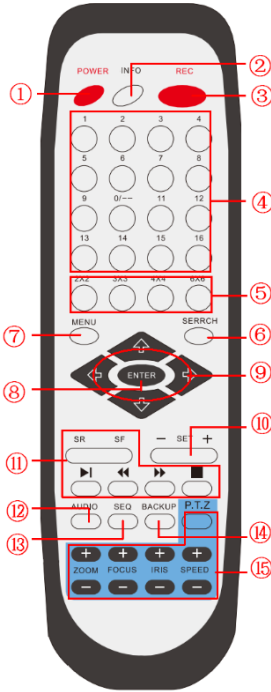
1. Check batteries polarity.
2. Check the remaining charge in the batteries.
3. Check IR controller sensor for any masking.
4. Check the ID of the remote with respect to the DVR.

There are three kinds of remote controller:



Button	Function
Power Button	Switch off—to stop DVR. Use it before turning off the power
Record Button	To record manually
-/-- /0-9 Digital Button	Input number or choose camera
Fn1 Button	Unavailable temporarily
Multi Button	To choose multi-screen display mode
Next Button	To switch the live image
SEQ	To enter into auto dwell mode
Audio	To enable audio output in live mode
Switch	To switch the output between BNC and VGA
Direction button	To move cursor in setup or pan/title PTZ
Enter Button	To confirm the choice or setup
Menu Button	To enter into menu
Exit Button	To exit the current interface
Focus/IRIS/Zoom/PTZ	To control PTZ camera. Move camera/zoom/IRIS/Focus
Preset Button	To enter into preset setting in PTZ mode
Cruise Button	To enter into cruise setting in PTZ mode
Track Button	To enter into track setting in PTZ mode
Wiper Button	To enable wiper function in PTZ mode
Light Button	To enable light function in PTZ mode
Clear Button	To return to the previous interface
Fn2 Button	Unavailable temporarily
Info Button	Get information about DVR like firmware version, HDD information
	To control playback. Play/Pause/Stop/Previous Section/Next Section/Rewind/Fast Forward
Snap Button	To take snapshots manually
Search Button	To enter into search mode
Cut Button	To set the start/end time for backup in playback mode
Backup Button	To enter into backup mode
Zoom Button	To zoom in the images
PIP Button	To enter into picture in picture setting mode

Note: You shall press P.T.Z button to enter into PTZ setting mode, choose a channel and press P.T.Z button again to hide the P.T.Z control panel. Then you can press preset, cruise, track, wiper or light button to enable the relevant function.



Item	Function
1	Power button: Switch off - to stop DVR. Use it before turning off the power.
2	Info button: Get information about the DVR like firmware version, HDD information.
3	REC button: To record manually.
4	Digital button: Input number or choose camera.
5	Multi-screen button: To choose multi-screen display mode.
6	Search button: To enter search mode.
7	Menu button: To enter menu.
8	Enter button: To confirm the choice or setup.
9	Direction button: Move cursor in setup or pan/tilt PTZ.
10	+/- Button: To increase or decrease the value in setup.
11	Playback control button: To control playback, Fast forward/rewind/stop/single frame play.
12	Audio button: To enable audio output in live mode.
13	Auto dwell button: To enter auto dwell mode.
14	Backup button: To enter backup mode.
15	PTZ control button: To control PTZ camera, Move camera/ZOOM/FOCUS/IRIS/SPEED control.

Button	Function
REC	Record manually
Search	To enter search mode.
MEUN	To enter menu.
Exit	To exit the current interface.
ENTER	To confirm the choice or setup.
Direction button	To move cursor in setup or pan/title PTZ
ZOOM	To zoom in
PIP	To set picture in picture
▶▶ ▶▶ ▶▶ ■ ◀◀ ◀◀	To control playback. Play/Pause/Stop/Previous Section/Next Section/Rewind/Fast Forward
Multi	To choose multi-screen display mode.
Next	To switch between single picture and picture group
SEQ	To enter into auto dwell mode
INFO	Get information about DVR like firmware version,



Operation of Multiple DVRs with Remote Controller

The device ID of the DVR is 0. It is not necessary to reset the device ID when a remote is not used to control a single DVR. However when controlling multiple DVRs with multiple remote controllers, you would need to configure the device ID. Please refer to below steps:

Step 1: Activate remote controller to control DVR: Turn the IR sensor of the remote controller towards the IR receiver on the front panel, press the number key 8 twice, then input device ID of the DVR to be controlled (Range from: 0-65535; the default device ID is 0) and then press ENTER key to confirm.

Step 2: Check the device ID of DVR from System Setup → Basic → Device ID. You can also set multiple DVRs with the same device ID. However, this can cause interference if the DVRs are kept close to each other.

2.5 Control with Mouse

2.5.1 Connect Mouse

It supports USB mouse through the ports on the rear panel.
If mouse is not detected or does not work, check below steps:

1. Make sure the mouse is plugged in the USB mouse port.
2. Try with a known good mouse.

2.5.2 Use Mouse

In the Live View:

Double-click on any camera window to see the full screen. Double-click again to return to the previous screen.

Right click to reveal the control menu on the screen. Right click again to hide the menu.

In the Configuration Menus:

Click an item to enter a menu or control settings. Right click to cancel or return to the previous menu.

In order to “type” a value in a particular screen, move cursor to the input box and click. A virtual keyboard window will appear as below. It supports alphanumeric characters and symbols. Click “Shift” for capital letters and alternate symbols; click “Shift” again to return.

The DVR supports mouse dragging. For example, motion detection areas are “drawn” in this fashion. Go to Main Menu→Setup→Alarm→Motion and click “Settings.” Click and hold down the left mouse button, then drag to set a motion detection area.



Virtual Keyboard Window

In Playback:

Click to choose the options. Right click to return to live mode.

In Backup:

Click to choose the options. Right click to return to previous picture.

In PTZ Control:

Click left button to choose the buttons to control the PTZ. Click right button to return to live.

Note: The mouse is the default tool for all operations unless otherwise specified.

3 Basic Function Instruction

3.1 Power On/Off

Before you power on the unit, please make sure all the connection is good.

3.1.1 Power On

Step 1: Connect with the source power.

Step 2: The device will boot and the power LED would turn blue.

Step 3: A WIZZARD window will pop up and show some information about time zone, time setup, network configuration, record configuration and disk management. User can setup here and refer to the concrete setup steps from the corresponding chapters. If users do not want to setup Wizard, please click Exit button to exit.

Note: This DVR can only display options on either VGA monitor or BNC monitor at a given point of time, if there is live image display without menu options then please check if there is display on other device/monitor, or long press ESC/Exit/Fn key to wait for login dialog box to appear. Long press ESC/Exit/Fn key can switch the output between BNC and VGA.

3.1.2 Power Off


The device can be powered off the by using the remote controller, keyboard or mouse.

By remote controller:

Step 1: Press Power button. This will take you to a shutdown window. The unit will power off after a while by clicking OK button.

Step 2: Disconnect the power

By keyboard and mouse:

Step 1: Enter into  Menu and then select “Shut Down” icon to show the shutdown window.

Step 2: Click OK. Then the unit will power off after a while.

Step 3: Disconnect the power.

3.2 Login

User can login or log off the DVR system. Once logged off the user cannot do any other operation except changing the multi-screen display.

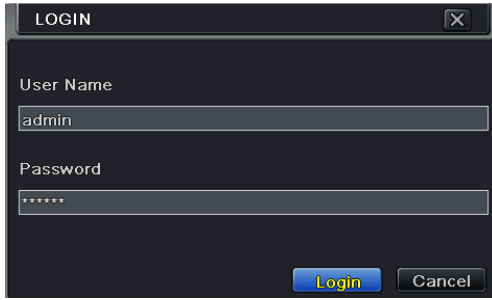


Fig 3-1 Login

***Notice:** The default user name and password is “admin” and 123456”.
For complete instructions on changing passwords and creating/deleting users, please refer to section 4.7 User Management Configuration.*


3.3 Live Preview



Fig 3-2 Live Preview

Symbol	Meaning
Green	Manual record
Yellow	Motion detection record
Red	Sensor Alarm record
Blue	Schedule record

3.4 Live Playback

Click Play  button to playback the recorded video. Refer to Fig 3-3. Further functions, such as stop, pause, fast forward, etc. can be control by clicking the corresponding buttons on the toolbar.

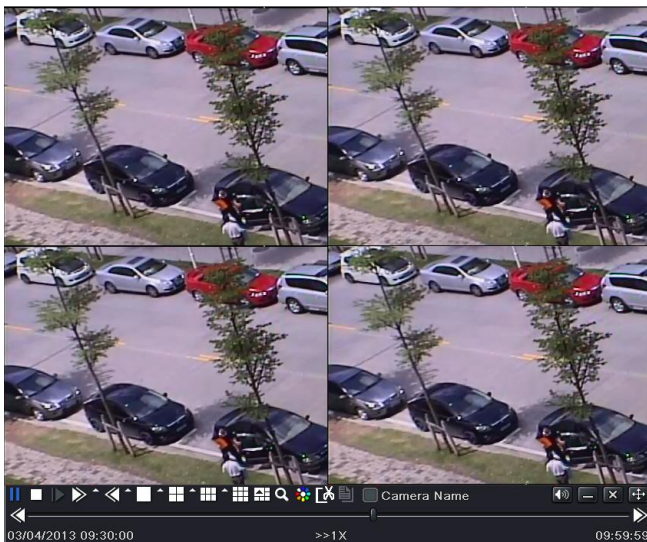



Fig 3-3 Live Playback

4 Main Menu Setup Guide

Click right mouse or press ESC/Exit/Fn button on the front panel and then the control bar will display at the bottom of the screen. Refer to Fig 4-1:



Fig 4-1 Main Menu Toolbar

Screen Mode: Click to select the display mode, such as 1, 4, 6, or 8 channels. Click the  icon beside the screen display mode to select channels. Camera feeds can be moved via drag-n-drop to any slot, customizing the live interface.

Dwell: Displays live cameras feed views (single or multiple) in sequence, switching from one view to the next. If all cameras are showing, the feature is disabled.

Color: If this button is enabled, you can adjust the color of live pictures.


E-Zoom: Magnifies the image, making it larger for a closer look.


Audio: Enable sound.


PTZ: Click the PTZ button to control rotation position, speed and auto scan of the PTZ.

Snap: Takes a still picture of the video. The pictures are saved to the SATA disk.

Record: Click this button to start/stop recording.

Playback: Click this button to playback the record files. Click the  icon beside the playback icon to select playback time. For example, if 2 minutes is selected and then playback is clicked, it will start to play from 2 minutes ago.

User can click  button and drag it anywhere with the left mouse.

Click the  “Menu” button to bring up the menu window as shown in Fig 5-2. You can also press MENU button on the front panel or on the remote controller to display the main menu. Clicking the “Setup” icon will show the configuration menu:

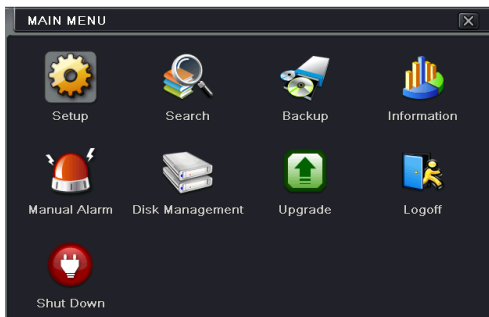


Fig 4-2 Setup

4.1 Basic Configuration

Basic configuration includes three sub menus: system, date & time and DST.

4.1.1 System

Step 1: Enter into Menu→Setup→Basic →System interface. Refer to Fig 4-3:

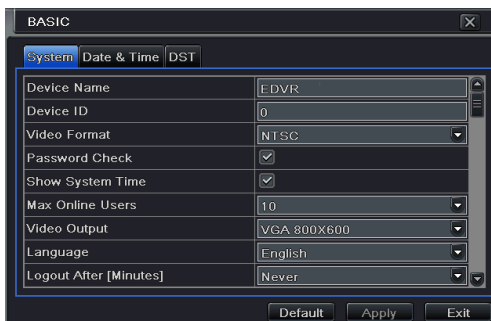


Fig 4-3 Basic Configuration-System

Step 2: In this interface you can setup the device name, device ID, video format, max network users, VGA resolution, language and so on. The definitions for every parameters display as below:

Device Name: The name of the device. It may display on the client end or CMS that help user to recognize the device remotely.

Device ID: This ID is used to map the DVR with IR remote controller and PTZ cameras.

Video Format: Two modes: PAL and NTSC. User can select the video format according to that of camera.

Password Check: If this option is enabled, the user would need to input the username and the password for performing corresponding operations.

Show System Time: If selected, the current time will be displayed during live monitoring.

Max Online Users: To set the max number of concurrent user logins in the DVR.

Video Output: The resolution of live display interface, range from: VGA800*600, VGA1280*1024 and HDMI.

***Note:** Switching between VGA and HDMI will change the menu output mode. Please use a monitor that supports inputs of these types.*

Language: Setup the menu language.

***Note:** After changing the language and video output, the device will require the user to login again.*

Logout After (Minutes): A user can setup the screen interval time (30s, 60s, 180s, 300s). If there is no any operation within the setting period, the device will auto logout and return to login interface.

Show Wizard: If selected, the GUI would launch the startup wizard on every boot, allowing the user to reconfigure or check the device settings.

No Image When Logout: If selected, there will be no image shown when logged out.

4.1.2 Time & Date

Step 1: Enter into Menu→Setup→Basic →Date & Time interface. Refer to Fig 4-4:

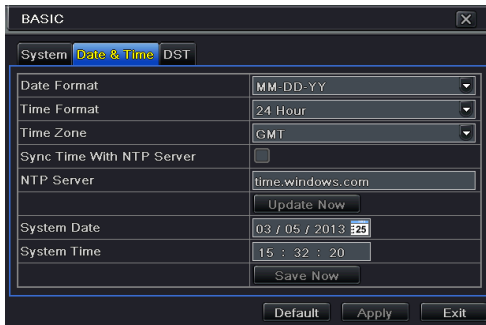


Fig 4-4 Basic Configuration-Date & Time

Step 2: Set the date format, time format, and time zone here. The date and time can be set manually, or checkmark “Sync Time with NTP Server” to automatically update set them.

Step 3: Click “Apply” button to save the setting.

4.1.3 DST

Step 1: Enter into Menu→Setup→Basic →DST interface. Refer to Fig 4-5:

Step 2: In this interface, enable daylight saving time, time offset, mode, start & end month/week/date, etc.

Step 3: Click “Apply” button to save the setting.

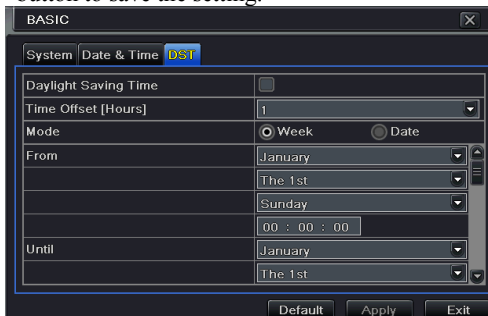


Fig 4-5 Basic Configuration-DST

4.2 Live Configuration

Live configuration includes four submenus: live, main monitor, spot and mask. Some models may not support spot or mask function. Please take the real object as standard.

4.2.1 Live

In this interface, you can setup camera name and adjust colors.

To setup camera name:

Step 1: Enter into Menu→Setup→Live. Refer to Fig 4-6:

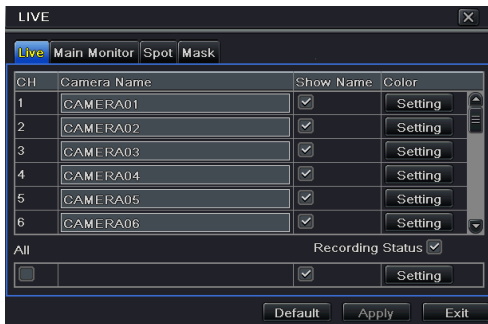


Fig 4-6 Live Configuration→Live

Step 2: A software keyboard will appear by clicking camera name area. Click the letters and/or numbers on the virtual keyboard to input the name you want to display in live image.

Step 3: Checkmark the camera name in the “Show Name” area.

All channels will show the camera name by checking “All” checkbox.

Step 4: Click “Apply” to save the setting.

To setup color:

Step 1: Click “Setting” button for a particular camera/channel to see a window as below:



Live-Color Adjustment

Step 2: In this interface, you can adjust brightness, hue, saturation and contrast in the live view. Click “OK” button to save the setting.

4.2.2 Main Monitor

The “Main Monitor” settings allow you to set camera sequence in live display mode. Operate the following steps to set main monitor:

Step 1: Enter into Menu→Setup→Live →Main Monitor interface. Refer to Fig 4-7:

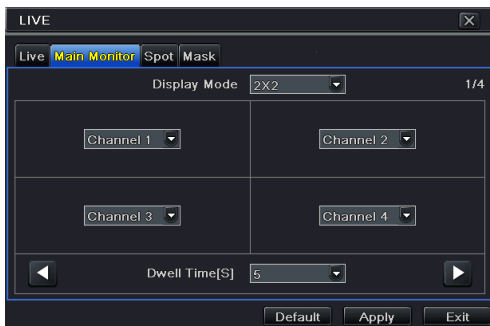




Fig 4-7 Live Configuration-Main Monitor

Step 2: Select display mode and channel.

Step 3: Select dwell time. Click  button to setup the previous channel groups of dwell picture. Click  button to set the latter channel groups of dwell picture.

Step 4: Click “Apply” to save the setting.

4.2.3 Spot

Step 1: Enter into System Setup→Live→Spot. Refer to Fig 4-8:

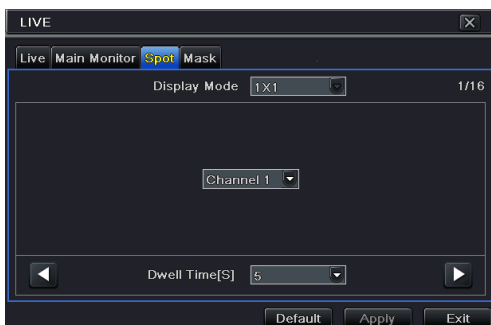




Fig 4-8 Live Setup-Spot

Step 2: Select “Display Mode” (1×1 is the default) and the channel(s) to display first.

Step 3: Set the dwell time. Click  button to set the previous channel, click  button to set the next channel.

Step 4: Click “Apply” button to save the settings.

4.2.4 Mask

Use a “Mask” to block something from being displayed. For a given channel, a maximum of three areas can be masked.

To setup mask area:

Step 1: Enter into Menu→Setup→Live →Mask interface.

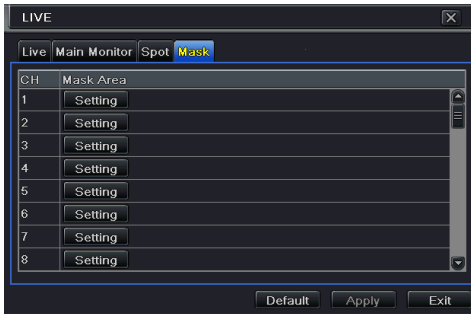


Fig 4-9 Live Configuration-Mask

Step 2: Click “Setting” to go into live image.

Step 3: Click and drag the left mouse button to set mask area as shown below.

Step 4: Right click to exit the mask setting interface.

Step 5: Click “Apply” to save the setting.

To delete mask area

Step 1: Click “Setting” in the mask interface.

Step 2: Select a certain masked area and double click to delete that masked area.

Step 3: Then click “Apply” to save the setting.



Setup Mask Area

4.3 Record Configuration

Record configuration includes six sub menus: enable, record bit rate, time, recycle record, stamp and snap.

Before attempting to record, please make sure your DVR has been installed with HDD and has completed its initialization.

4.3.1 Enable

Step 1: Enter into Menu→Setup→Record→Enable interface. Refer to Fig 4-10:



Fig 4-10 Record Configuration-Enable

Parameter	Meaning
Record	To enable/disable recording for the channel
Audio	To enable/disable audio recording for the channel

Step 2: Checkmark record and audio.

Step 3: Select “All” to setup the same settings for all channels.

4.3.2 Record Bitrate

Step 1: Enter into Menu→Setup→Record→Record Bitrate. Refer to Fig 4-11:

Step 2: Setup rate, resolution, quality, encode and max bit stream.

Step 3: Select “All” to set the same settings for all channels.

Step 4: Click “Apply” button to save the setting.



Fig 4-11 Record Configuration-Record Bitrate

Resolution: Some models support 1080P. Some models also support 720P.

Fps: Some models support 1-15(NTSC)/1-12(PAL). Some supports 1-7(NTSC)/1-6(PAL).

4.3.3 Time

Step 1: Enter into Menu→Setup→Record → Time interface to set recording time. Refer to Fig 4-12:

Step 2: Set Pre-alarm record time and post-alarm record time. Select “All” to set the same settings for all channels.

Pre-alarm Record Time: Set the time in seconds to pre-record before the actual recording begins.

Post-alarm Record Time: Set the time in seconds to post-record after the actual recording has finished. There are five options: 10s, 15s, 20s, 30s, 60s, 120s, 180s and 300s.

Expire Time: Set the expiration time for recorded video. If the set date is overdue, the recorded files will be deleted automatically.

Step 3: Click “Apply” to save the setting.



Fig 4-12 Record Configuration-Time

4.3.4 Stamp

This provides an option to enable or disable the Camera Name and the Time stamp on the video. The user can also choose a position for the stamp on the screen.

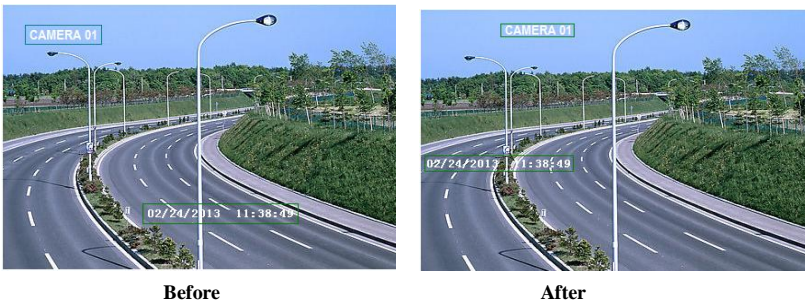
To setup stamp as follows:

Step 1: Enter into Menu→ Setup→Record→Stamp interface. Refer to Fig 4-13:



Fig 4-13 Record Configuration-Stamp

Step 2: Checkmark “Camera Name” and “Time Stamp.” Click “Setting” to setup the position of the stamp. You can drag the camera name and time stamp to random positions. Refer to figures below:



Step 3: Select “All” to setup all channels with the same parameters.

4.3.5 Recycle Record

This option is used to recycle the HDD space once it is full. If enabled, the system will automatically delete the old records and recycle the space if it is completely utilized. The setting steps are as follows:

Step 1: Enter into Menu→Setup→Record →Recycle Record interface;

Step 2: Checkmark recycle record to activate auto recycling. If the option is disabled or not selected, the DVR would stop recording once HDD is full.

Step 3: Click “Apply” button to save the setting.

4.3.6 Snap

In this interface, user can set up Resolution, quality, snap interval, snap number.

4.4 Schedule Configuration



Schedule configuration includes three sub menus: schedule, motion and sensor.

Some models may not support alarm based recording

4.4.1 Schedule

This tab allows defining a schedule for normal recording for seven days of a week, 24 hours of a day. Every row denotes an hourly timeline for a day. Click the grid to do relevant setup. A highlighted area denotes selected timeline. Operate the following steps to set schedule:

Step 1: Enter into Menu→Setup→Schedule interface. Refer to Fig 4-14:

Step 2: Select channel and click  button to “pencil in” a certain schedule. Click  button to “erase” the selected schedule.

If you want to apply the schedule setting of a certain channel to another or all channels, you need to select that channel and click the “Copy” button.

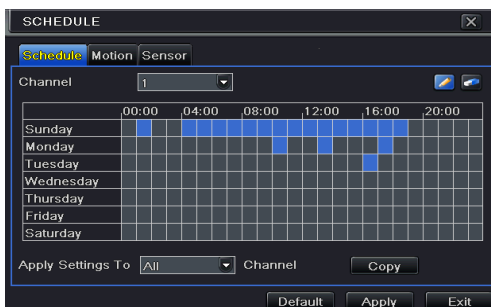



Fig 4-14 Schedule Configuration-Schedule

You can also set week schedule by double-clicking in the grinding area. This will take you to see a dialog box as Fig 4-15.

Step 1: Select a day and click “Add” button to schedule start time and end time. Then click  to save.

Step 2: Select other days and add schedule or copy settings from one schedule to the others under the “Apply Settings To” item.

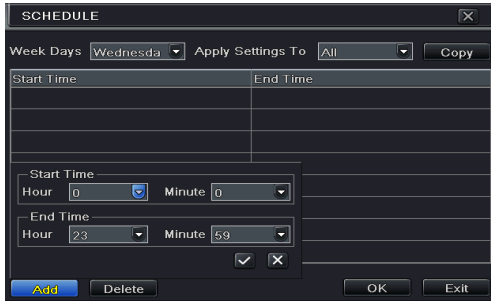


Fig 4-15 Schedule-Week Schedule

4.4.2 Motion Schedule

This tab is used to set a schedule for motion based recording. The setting steps are as follows:

Step 1: Enter into Menu→Setup→Schedule →Motion tab.

Step 2: The setup steps for schedule for motion based recording are similar to normal schedule setup. You can refer to 4.4.1 Schedule for details.

Note: The default schedule of motion based recording is 24 x7. If you want to activate motion based recording, you must enable motion alarm and setup schedule for motion alarm (see Chapter 4.5.2 Motion Alarm for more details).

4.4.3 Sensor Schedule

This tab is used to set schedule for sensor based recording. The setting steps are as follows:

Step 1: Enter into Menu→Setup→Schedule→Sensor interface.

Step 2: The steps to setup a schedule for sensor based recording are similar to normal schedule setup (see Chapter 4.4.1 Schedule for details).

Note: The default schedule of sensor based recording is 24/7. If you want to activate sensor based recording, you must enable sensor alarm and setup schedule for sensor alarm (see Chapter 4.5.1 Sensor Alarm for more details).

4.5 Alarm Configuration

Alarm configuration includes five sub menus: sensor, motion, video loss, other alarm and alarm out

4.5.1 Sensor Alarm

Sensor includes three sub menus: basic, alarm handling and schedule.

Perform the following steps to configure sensor alarm:

Step 1: Enter into Menu→Setup→Alarm →Sensor→Basic interface. Refer to Fig 4-16:

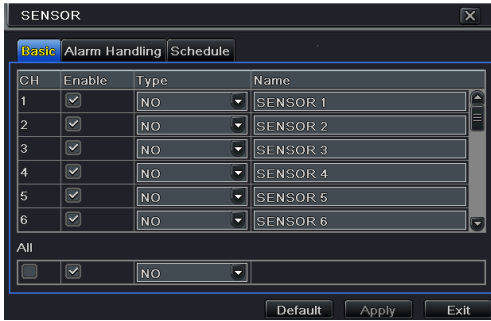


Fig 4-16 Alarm Configuration-Sensor-Basic

Step 2: Enable channels by checking the checkboxes beside the desired channels.

Step 3: Set the alarm type according to triggered alarm type. Two option: NO and NC.

Step 4: Click “Apply” button to save the setting.

Step 5: Enter into Alarm Handling tab. Refer to Fig 4-17. Select hold time and then click “Setting” button to bring up a dialog box as shown in Fig 4-18.

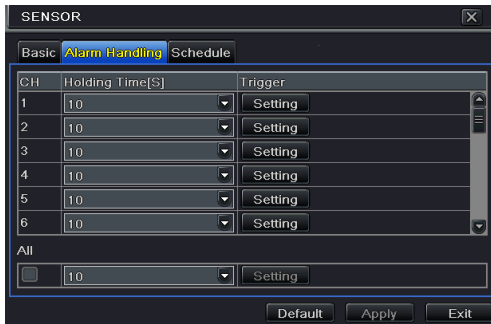


Fig 4-17 Alarm Configuration-Sensor-Alarm Handling

Step 6: Enter into alarm tab to select the options to handle alarm.



Fig 4-18 Alarm Handling-Trigger

Buzzer: If selected, the local buzzer would be activated on an alarm.

Show Full Screen: If selected, the chosen channel will show up on the monitor on an alarm trigger.

Email: If selected, the DVR will send an email alert to the preconfigured email address when a sensor based alarm is triggered.

Snap: If selected, the system will snap images of the checked channels on an alarm and save them in the HDD automatically.

Step 7: Enter into To Record tab. Select the channels to record. It will be recorded if an alarm is triggered. Click OK button to save the setting.

Step 8: Enter into To PTZ tab. Set preset, cruise and track options for a PTZ in case an alarm is triggered. Single or multiple PTZ units could be programmed to perform this function on the same alarm.

Step 9: Enter into Schedule tab. The steps for setting a schedule for sensor based alarm are similar to normal schedule setup. You can refer to 4.4.1 Schedule for details. This step is very important for the sensor alarms. Even if you have enabled the sensor alarm for all channels and setup the trigger, you will not see a reaction to the sensor alarm if no schedule is added. If you have set schedule for sensor based recording in the same timeline, recordings can also be triggered.

4.5.2 Motion Alarm

Motion includes two sub menus: motion and schedule. The steps to set motion alarm are as follows:

Step 1: Enter into Menu→Setup→Alarm →Motion. Refer to Fig 4-19:

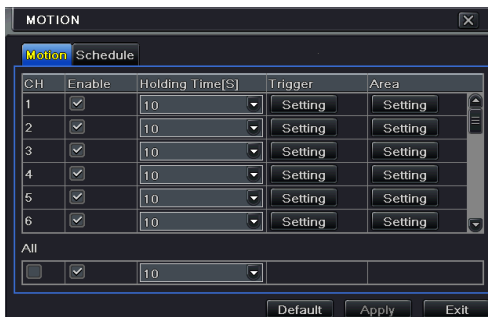







Fig 4-19 Alarm Configuration-Motion

Step 2: Enable motion alarm, set alarm hold time which refers to the time till which the system will wait for further detection of motion. e.g. If the holding time is set to 10 seconds, once the system detects a motion, it will go into alarm but would not detect any other motion alarm (specific to channel) until 10 seconds. If there is other motion detected during this period it is considered as continuous movement, otherwise it will be considered as a single

motion.

Step 3: The steps to setup the Trigger for Motion are similar to “Alarm Handling” (See Chapter 5.5.1 Sensor → Alarm Handling setting for more details).

Step 4: After clicking Area button, a dialog box will pop-up as Fig 5-20:

Step 5: In the Area interface, you can drag the slide bar to set the sensitivity value (1-8). The higher the value is, the more sensitive it is to motion. Since the sensitivity is influenced by color and time (day or night) you can adjust its value according to the conditions. Left click the grid and drag to delete area. Click  icon to set the whole area as detection area. Click  icon to clear the set detection area. Click  icon to test the sensitivity as per the local conditions. Once motion is sensed, it displays a similar figure icon. Click  icon, to save the setting. Click  icon to exit the current interface.

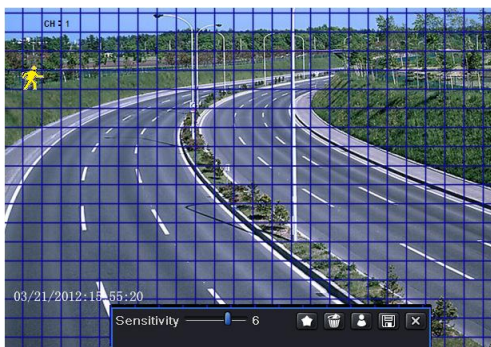



Fig 4-20 Motion-Area

Note: Prior to setting motion detection field it is recommended that you click  icon to clear the existing field and start fresh.

Step 6: Select “All” to set the same settings for all channels.

Step 7: Click “Apply” button to save the setting.

Step 8: Enter into Schedule tab. The steps for setting a schedule for motion based alarm are similar to normal schedule setup (see Chapter 4.4.1 for more details).

4.5.3 Video Loss

This DVR can be setup to detect video loss.

Step 1: Enter into Menu → Setup → Alarm → Video Loss. Refer to Fig 4-21:

Step 2: The steps to enable the video loss trigger are similar to “Alarm Handling” (See Chapter 4.5.1 Sensor → Alarm Handling setting for more details).



Fig 4-21 Alarm Configuration-Video Loss

4.5.4 Other Alarm

This tab gives a choice to configure alarm for Disk Full, IP Conflict, the Disconnect event, Disk Attenuation or Disk Lost.

Step 1: Enter into Menu → Setup → Other Alarm. Refer to Fig 4-22:

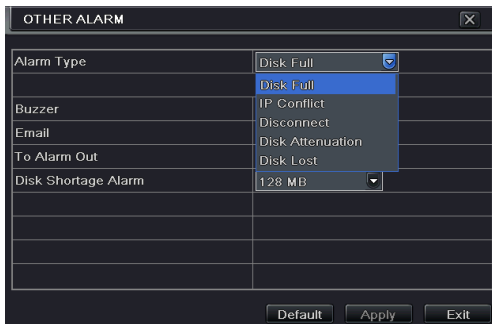


Fig 4-22 Other Alarm

Step 2: Use the dropdown menu and select the event or the alarm.

Step 3: Check the required trigger options.

If the selected event is “Disk Full”, then use the drop down box for “Disk Shortage Alarm” to choose a threshold value for remaining HDD space. If the threshold value is reached, the system will trigger the Disk Full Alarm.

Step 4: Click “Apply” to save the setting.

4.5.5 Alarm Out

Alarm out includes three sub menus: alarm out, schedule and buzzer.

To setup alarm out:

Step 1: Enter into Menu → Setup → Alarm Out. Refer to Fig 4-23:

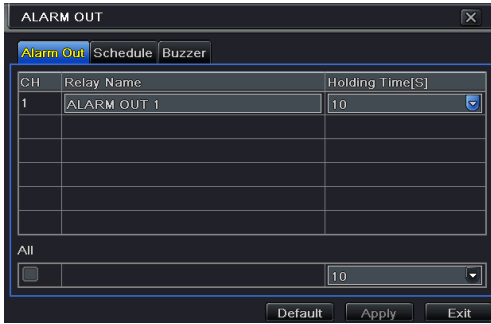


Fig 4-23 System Configuration-Alarm Out

Step 2: Input relay name and select hold time.

Step 3: Enter into Schedule tab. This will go into schedule setup interface. The setting steps for schedule for alarm out are similar to normal schedule setup (see Chapter 4.4.1 for details). This step is very important for alarm out. Even if you have enabled alarm out in the motion based alarm or sensor based alarm, you will not see the result of alarm out if no schedule is added here.

To set up buzzer:

Step 1: Enter into Menu→Setup→Alarm Out →Buzzer.

Step 2: Checkmark “Buzzer” and set buzzer alarm hold time. This would trigger the buzzer when the system is on an alarm.

4.6 Network Configuration

Network configuration includes five submenus: network, sub stream, Email, server and other settings. Network settings must be configured if DVR is used for monitoring over network.

4.6.1 Network

To set up network:

Step 1: Enter into Menu→Setup→Network. Refer to Fig 4-24:

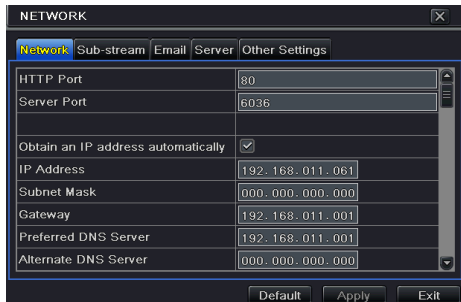


Fig 4-24 Network Configuration-Network

Step 2: Set HTTP port. The default HTTP port is 80. If the value is changed, add the port number when typing IP address in a web browser address bar. e.g. If HTTP port is set to 82 and the IP address is http://192.168.0.25, you should input the following IP address: http://192.168.0.25:82 into the web browser.

Step 3: Set server port. The default server port is 6036.

Step 4: Connect internet. There are three ways to connect internet.

- If you have a DHCP server running and would like your DVR to automatically obtain an IP address and other network settings, check the checkbox beside "Obtain an IP address automatically". Then the device will distribute IP address, subnet mask, and gateway IP and DNS server.
- If you want to configure your own settings, disable "Obtain an IP address automatically" item and input the IP address, subnet mask, gateway IP and DNS server.
- If you connect internet through PPPoE, disable "Obtain an IP address automatically" item and check PPPoE checkbox and then enter username and password. Once the setup is completed, your DVR will automatically dial up into your network.

Step 5: Test the effectiveness of the network by clicking "Test" button after you set up the network.

Step 6: If the network is well connected, please click "Apply" button to save the setting.

4.6.2 Sub Stream

To customize the sub stream:

Step 1: Enter into Menu→Setup→Network →Sub Stream interface. Refer to Fig 4-25:

Step 2: Select fps, resolution, quality, encode and max bit rate

Step 3: Select "All" to set the same settings to all channels.

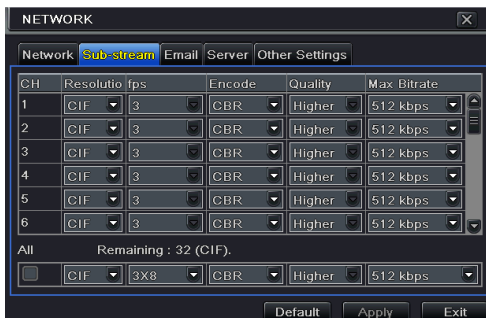


Fig 4-25 Network Configuration-Sub Stream

Parameter	Meaning
FPS	Range from: 1-25
Resolution	Support CIF
Quality	The quality of the clients' image. The higher the value is, the clearer the record image. Six options: lowest, lower, low, medium, higher and highest.
Encode	VBR and CBR
Max bit rate	Range from: 64 Kbps, 128 Kbps, 256 Kbps, 512 Kbps, 768 Kbps, 1Mbps, 2 Mbps

4.6.3 Email

To set up Email:

Step 1: Enter into Menu→Setup→ Network→Email interface. Refer to Fig 4-26:

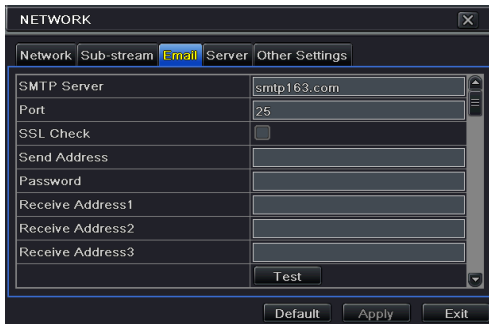


Fig 4-26 Network Configuration-Email

Step 2: Set SMTP Server and port.

SMTP Server/Port: The name and port number of SMTP server. You can setup SSL check (such as Gmail) according to the needs of the server.

Step 3: Set sender's address and password.

Step 4: Set receiver's email address and click "Test" button to test the validity of the mailbox.

Attaching image: If selected, the system will attach images when sending emails.

4.6.4 Server

This function is mainly used for connecting ECMS. The setting steps are as follows:

Step 1: In the server interface, select "Enable" as shown in the Fig 4-27.

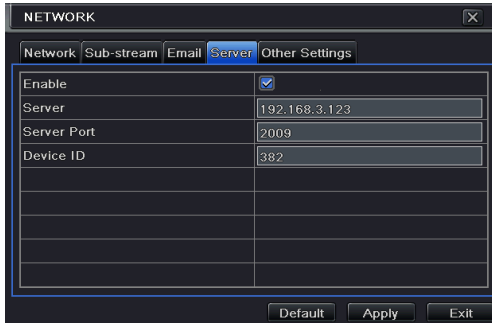


Fig 4-27 Network Configuration-Server

Step 2: Check the IP address and port of the transfer media server in the ECMS. The default server port for auto report is 2009. If it is modified, please enter into the transfer media interface to check.

Step 3: Enable the auto report in the ECMS when adding a new device. Then input the remaining information of the device in the ECMS. After that, the system will auto allot a Device ID. Please check it in the ECMS.

Step 4: Input the above-mentioned server IP, server port and device ID in the server interface. Then click “Apply” button to save the setting. Now, the ECMS system will automatically connect this device.

4.6.5 Other Settings

If your DVR is set to use PPPoE as its default network connection, you may setup DDNS to be used in connection. The steps to configure it are as follows:

Step 1: Enable DDNS server.

Step 2: Select DDNS server.

Step 3: Enter username, password and host domain name of the registered website.

Step 4: Click “Test” button to test the credentials.

Step 5: Click “Apply” button to save the setting.



Fig 4-28 Network Configuration-Other Settings

Note: The domain name selected by user is a banding domain name of the DVR. User should logon the website which provided by the server supplier to register a user name and password and then apply for a domain name online. After the successful application, user can access the device from the IE client by inputting that domain name.

Enable UPnP: Select UPnP here and then enable UPnP function in your router. Therefore, there is no need for you to forward LAN IP address and port in the router in connection of internet. After that, you can check the WAN IP address in the router.

➤ **Domain name Registration** (Take www.dyndns.com for example)

Note: Users can self-define the hostname, username and password.

Input www.dyndns.com in the IE address bar, user can access the domain name registration interface. Click” [Dynamic DNS service](#)”→”Create Free Hostname” to register. For example: Hostname is “abc.dyndns.tv. The picture is shown as follows:

The screenshot shows a web form for creating a Dynamic DNS host. The fields are as follows:

- Hostname:** abc . dyndns.tv
- Wildcard Status:** Disabled [Want Wildcard support?]
- Service Type:**
 - Host with IP address [?]
 - WebHop Redirect [?]
 - Offline Hostname [?]
- IP Address:** 210.21.229.138
Your current location's IP address is 210.21.229.138
TTL value is 60 seconds. Edit TTL.
- Mail Routing:** Yes, let me configure Email routing. [?]

After user fill in the blank, click “Add to cart”. Then Dynamic DNS Hosts dialog box will be displayed.

Next, create user account. For example, the username is “bcd”, password is “123456”.

The screenshot shows a user registration form with the following fields:

- Username:** bcd
- Password:** [masked]
- Confirm password:** [masked]
- Email:** abc@yahoo.com.cn
- Confirm Email:** abc@yahoo.com.cn
- Security Image:** 52517 (from a CAPTCHA image showing numbers 5, 2, 5, 1, 7)
- Subscribe to:**
 - DynDNS.com newsletter (1 or 2 per month)
 - Dyn Inc. press releases
- I agree with the [acceptable use policy \(AUP\)](#) and [privacy policy](#).
- Create Account** button

Click” Create Account” button to create user account.

➤ **DVR Setting**

1. Domain name

According to the subdomain name registration of “DDNS”, the full URL/address for the DVR is “abc.dyndns.tv”.

2. Username and password

In this example registration the username is “bcd” and the password is “123456”.

Connect DVR to the Network Client.

Step 1: Enter into Main menu → Network → Other Settings, checkmark DDNS, select “DynDNS” at the DDNS Sever pull down list box and input user name and password.

Step 2: Enter into configuration interface of the router to map the server port and IP address (if the user enables UPnP function, he can skip this step). Click Save button to save the setting

Step 3: Login IE browser and input registered domain name “http://www.abc.dyndns.tv”, connect to DVR client.

DDNS server	
DDNS server	Website provided by dynamic domain name supplier. The optional: www.meibu.com , www.dyndns.com, www.no-ip.com and mintdns type.
User name	User name for log in the website of domain name supplier
Password	Password for log in the website of domain name supplier
Host domain	The domain name user registered at the supplier’s website.
Update interval	The interval time of upgrading DVR IP address

4.7 User Management Configuration

This tab allows you to add normal or advanced users. To add users and setup user privileges:

Step 1: Enter into Menu → Setup → Users. Refer to Fig 4-29:

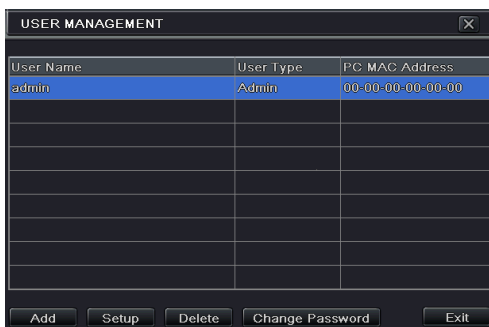


Fig 4-29 User Management Configuration

Step 2: Click “Add” button to display a dialog box as Fig 4-30:

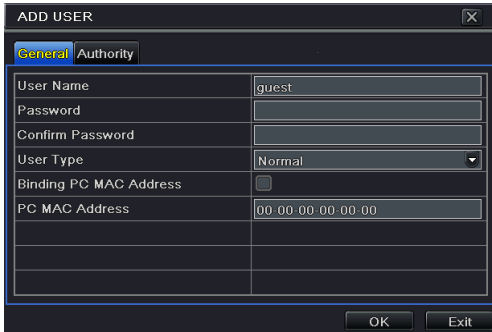


Fig 4-30 Add-General

Step 3: In General tab, input username, password and select user type. You can also check “Binding PC MAC Address” and input this address.

Step 4: Click “OK” to save the setting.

Note: When the default value of binding PC MAC Address is 0, the user is not bound with the specified computer. If the bind option is used, the user would only be able to log into the DVR using the computer with that MAC address.

Step 5: Select “Authority” tab and then assign the operation rights for particular user. Refer to Fig 4-31.

Step 6: Click “OK” to save the setting.



Fig 4-31 Add User-Authority

To delete user:

Step 1: Enter into Menu→Setup→Users interface.

Step 2: Select the added user you want to delete and then click “Delete” button.

To modify user:

Step 1: Enter into Menu→Setup→Users interface.

Step 2: Select the added user you want to modify and then click “Modify” button to do the

relevant operation.

To change user password

Step 1: Enter into Menu→Setup→Users interface.

Step 2: Select the added user you want to change its password and then click “Change Password” button.

4.8 P.T.Z Configuration

P.T.Z configuration includes two submenus: serial port and advanced.

Serial port settings are as follows:

Step 1: Enter into Menu→Setup → PTZ →Serial Port interface. Refer to Fig 4-32:

Step 2: Select “Enable” and setup the value of address, baud rate and protocol according to the settings of the speed dome.

Step 3: Select “All” to set the same settings for all channels.

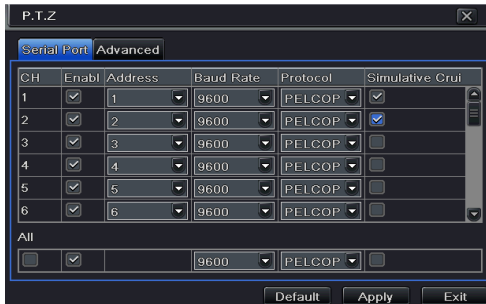


Fig 4-32 P.T.Z Configuration-Serial Port

Parameter	Meaning
Address	The address of the PTZ device
Baud rate	Baud rate of the PTZ device. Range form: 110, 300, 600, 1200, 2400, 4800, 9600, 19200, 34800, 57600, 115200, 230400, 460800, 921600.
Protocol	Communication protocol of the PTZ device. Range from: NULL, PELCOP, PELCOD, LILIN, MINKING, NEON, STAR, VIDO, DSCP, VISCA, SAMSUNG, RM110, HY, N-control.
Simulative Cruise	If enabled, no matter whether the PTZ device supports cruise or not, the presets will cruise.

Advanced settings include preset setting, cruise setting and track setting.

Enter into Menu→Setup→ P.T.Z →Advanced. Refer to Fig 4-33:

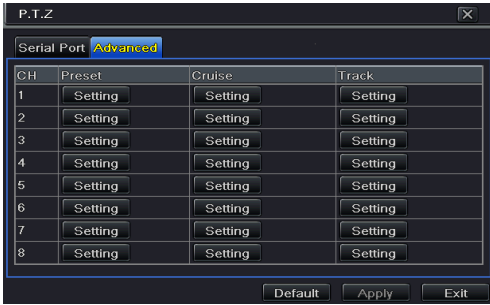


Fig 4-33 P.T.Z configuration-advanced

To set up preset:

Step 1: In the Advanced interface, click preset “Setting” button to see a dialog box as Fig 4-34:





Fig 4-34 Advanced-Preset Setting

Step 2: In the preset setting tab, enable preset, set the preset name and then click preset “Setting” button.





Fig 4-35 Preset Setting

Step 3: Control the dome by rotating up, up left, down, right down, left, left down, right and up right and adjust the rotate speed and the value of zoom, focus and iris of the dome.

Step 4: Select the serial number of the preset point. Click  button to enable the PTZ wiper and click  button to enable the PTZ light.

Note: PTZ must support wiper and light button and these two buttons are just available when selecting PELCOP or PELCOD.

Step 5: Click “Save” button to save the setting. Click  icon to hide the tool bar. Right click to view this bar again. Click  icon to exit the current interface.

Step 6: Return to the Advanced-Preset Setting interface and click OK button to save the setting.

To set up cruise:

Step 1: In the Advanced interface, click cruise “Setting” button to see a window as shown in Fig 4-36:

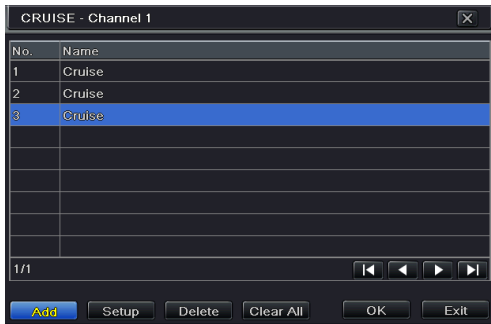






Fig 4-36 Cruise Setting

Step 2: Click Add button to add cruise line in the list box (8 cruise lines can be added at most).

Step 3: Select a cruise line and click “Setup” button to see a dialog box as Fig 4-37:



Fig 4-37 Modifying Cruise Line

Step 4: Click the  (Plus) icon to set the speed and time of preset point. Select a preset point and then click Delete icon  to delete that preset point. Click  (Modify) icon to modify the setting of a preset point. User can click the  (arrow) icons to adjust the position of preset point. Click “Preview” button to preview the cruise line. Click OK button to save the setting.


To set up track:

Step1: In the Advanced interface, click track “Setting” button to see a dialog box as Fig 4-38:

Step 2: Control the PTZ by rotating up, up left, down, right down, left, left down, right and up right and adjust the rotate speed and the value of zoom, focus and iris of the PTZ.

Step 3: Click Start Record button to record the move track of PTZ. Click this button again to stop record.

Step 4: Click “Start Track” button to play recorded track. Click it again to stop playing.

Step 5: Click  icon to exit the current interface.

After the completion of settings, please remember to click “Apply” to save the setting.



Fig 4-38 Track Setting

4.9 Advanced

Advanced configuration includes three submenus: reset, import/export and Block/Allow list.

4.9.1 Reset

Reset all settings. The device will then reboot.

4.9.2 Import/Export

Files can be exported into external storage devices as backup function. They can then import those files from the external storage device to another DVR or a computer.

4.9.3 Block/Allow List



Fig 4-39 Block/Allow List

Access to the DVR can be blocked or permitted from computers within certain IP address ranges. E.g. if an admin does not want users with computers within IP address range from 192.168.000.002 to 192.168.000.004 to access the DVR, he can select the Block List option, and then input that IP address range. If it is required that computer users within a certain IP address range be able to access the DVR, they can check Allow List option and then do the required setting.

5 Search, Playback & Backup

Search configuration includes four submenus: time search, event search, file management and image.

5.1 Time Search

Step 1: Enter into Menu→Search →Time Search. Refer to Fig 5-1:

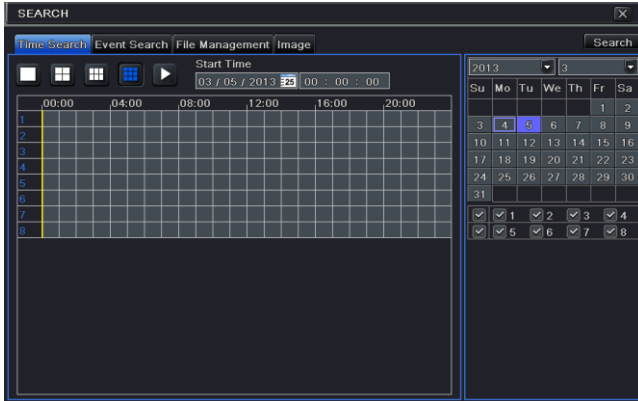




Fig 5-1 Search Configuration-Time Search



Step 2: Select date and channels on the right hand side and press the “Search” button. A date with highlighted borderline indicates presence of data.

Step 3: Set the start time by clicking a particular grid or by entering the specific value in the start time field.

Step 4: Select the channel display mode and click Play  button to play record. Use the playback toolbar to control the playback.

Click  button to select channels to show live images in the playback interface. Only four channels at most can be selected to display live images.

➤ To set backup during a certain period in the playback interface:

Select the start time by dragging the slider and click  icon. Then select the end time and click this icon again to confirm the record period. Next, click  icon to backup the record during this period.

5.2 Event Search

Step 1: Enter into Menu→Search→Event Search button. Refer to Fig 5-2:

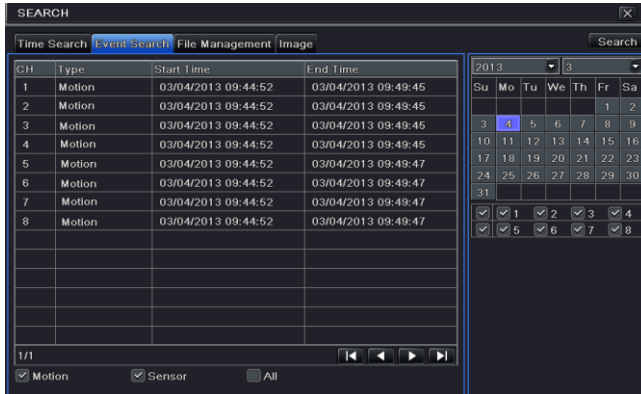


Fig 5-2 Search Configuration-Event Search

Step 2: Select date and channels on the right hand side. A data with highlighted borderline indicates presence of data.

Step 3: Checkmark Motion, Sensor or All accordingly.

Step 4: Click Search button to display the found event information in the event list box.

Step 5: Double check a certain record file to playback.

5.3 File Management

Step 1: Enter into Menu→Search→File Management interface. Refer to Fig 5-3:

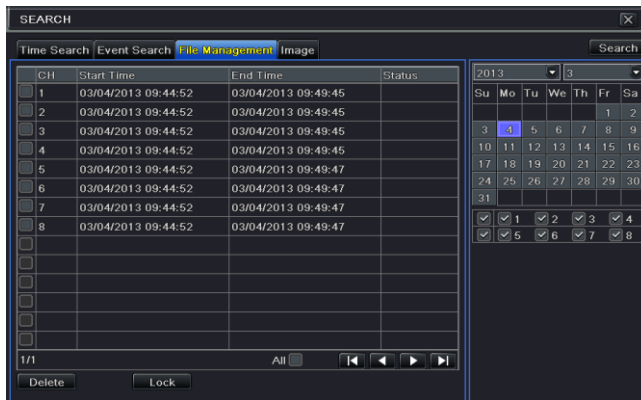


Fig 5-3 Search Configuration-File Management

Step 2: Select date and channels. The date with highlighted borderline indicates presence of data.

Step 3: Click Search button to display the searched files in the file list box.

Step 4: Use “All” button to lock/unlock or delete all files in the file management column.

Step 5: Double click an unlocked item to play.

Lock: Select a file and click “Lock” to lock this file, after that, that file will not be deleted.

Unlock: Select a locked file and click “Lock” button to unlock this file

Delete: Select an unlocked file and click “Delete” button to delete this file.

5.4 Search by Image

Step 1: Enter into Menu → Search → Image tab.

Step 2: Select data and channels on the right hand side.

Step 3: Press “Search” button to search for a recorded image.

Step 4: Once an alarm image has been identified, the user can double click the image to play recording.

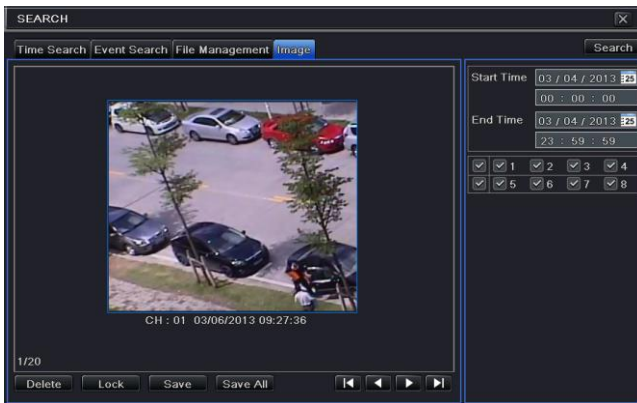


Fig 5-4 Search Configuration-Image

Lock: Select the image and click “Lock” button to lock this image.

Save: Click “Save” button to copy the image on the HDD.

Save All: Click “Save All” button to copy all images on the HDD.

5.5 Backup

This unit supports backup using an optional built-in SATA DVD Writer with USB Flash. You can also make backup by IE browser via internet (see section 8.3.2 Remote backup).

Step 1: Enter into backup configuration. Refer to Fig 5-5:

Step 2: Set the start & end time, select channels and click Search button to display the searched data in the data backup list box.

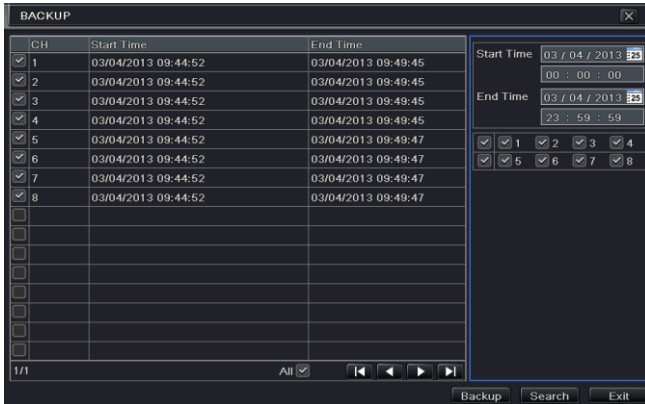
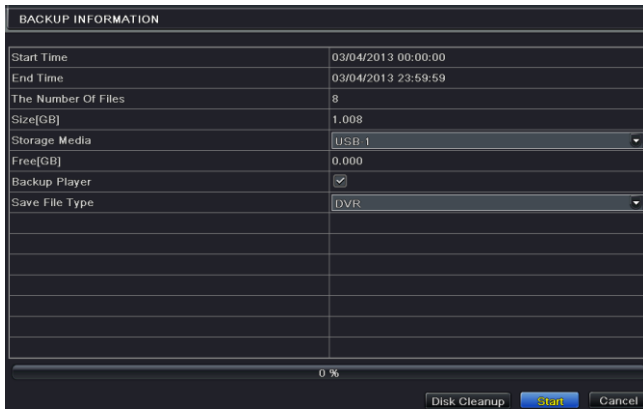


Fig 5-5 Backup Configuration

Step 3: Select a required file or checkmark “All” to select all data files. Click Backup button to display Backup information window.



Step 4: In the backup information interface, you can check the relevant information of backup files, storage type, save file type, etc. Then click Start button to start backup.

***Note:** If the backup files are saved in DVR format, please check backup player. Only this player can play these files in DVR format. If the backup files are saved in AVI format, you can play these files with a normal media player.*

6 Manage DVR

6.1 Check System Information

Check system information includes six submenus: system, event, log, network, online user and record.

6.1.1 System Information

In this interface, you can check the hardware version, MCU version, kernel version, device ID, etc.

6.1.2 Event Information

In this interface, you can search for events like motion, sensor and video loss. The utility provides an interface to have a date based and a channel based search. This report can further be saved on a USB flash drive as an html file using the export button.

6.1.3 Log Information

In this interface, you can search for relevant logs as per set date and event which includes Operation, Setup, Playback, Backup, Search, Check Information and Error. This report can further be saved on a USB flash drive as an html file using the export button.

6.1.4 Network Information

In this interface, you can check the values of the network connection.

6.1.5 Online Users

In this interface, users remotely connected to the DVR are listed.

Refresh: Refresh the current interface.

Disconnect: Disconnect the online users from the DVR. If this function is used by the admin, that particular PC will not be able to access the device for five minutes.

6.1.6 Record Information

In this window the resolution, ftp and record status can be checked, including sensor alarm recording, motion recording, manual recording or schedule recording.

6.2 Manual Alarm

In this window you can trigger alarms manually.

6.3 Disk Management

To format the disk

Step 1: Click the “Disk Management” icon.

Note: please format the hard disk before recording video.

Step 2: Click “Refresh” to show the disk information in the list.

Step 3: Select a hard disk and click “Format” to start formatting the drive.

Note: All recorded files in the hard disk will be lost after formatting.

To check other information of disk

After you enter into Disk Management → Advanced tab, you can check model, S/N, firmware, health status of the disk in this interface. You also can monitor the temperature, internal circuit, dielectric material of the disk, analysis the potential problems of the disk and warn so as to protect its data.

6.4 Upgrade

At present, the DVR only supports via USB kernel update (remote firmware upgrades can be performed from the web client). Get the software from your vendor when there is a new software version.

The upgrade steps are as follows:

Step 1: Copy the upgrade software which gets from vendor into the USB storage device.


Step 2: Connect the USB flash drive to the USB port.

Step 3: Enter Menu → Upgrade tab. You will see the upgrade software name displaying in the upgrade list box.

Step 4: Select that software and then click Upgrade button. The system will be upgraded automatically.

Note: Please wait at least 15 to 20 while the system reboots. Any power interruption during upgrading can damage the unit.

6.5 Logoff

Clicking “Logoff” will bring up a dialogue box asking for confirmation. Click “OK” to confirm logoff. If you want to login again, click  icon (Main Menu) to enter the username and password.

7 Remote Surveillance

7.1 IE Remote Surveillance

In order to view the DVR from a network it must be connected to a LAN/WAN or internet. The network setup should be done accordingly. Please refer to 5.6 Network Setup. This DVR supports Microsoft IE, Mozilla Firefox, Google Chrome, and Apple Safari browsers; it support Windows XP to Windows 8 and MacOS 10.7 and up for platforms.

7.1.1 On LAN

Step 1: Enter into the DVR's Main Menu→Setup→Network interface to input IP address, Subnet Mask, etc. If using DHCP, please enable DHCP in both the DVR and the router.

Step 2: Enter Record Setup to set network video parameters like resolution, frame rate etc.

Step 3: Open IE on a computer on the same network. Input the IP address of the DVR in IE address bar and press enter.

Step 4: IE will download ActiveX component automatically. Enter the username and password in the subsequent window

Notice: If the HTTP port is not 80, add the port number after the IP address. It will also need "http://" in front. For example, HTTP port set to 82: **http://192.168.0.25:82**

The username and password will be unchanged: "admin" and "123456".

7.1.2 On WAN

There are two ways for the DVR to connect to internet.

1. Connect the DVR to internet through router or virtual server

Step 1: Enter into the DVR's Main Menu→Setup→Network interface to input IP address, Subnet Mask, etc. If using DHCP, please enable DHCP in both the DVR and router.

Step 2: Forward IP address and port number in Virtual Server setup of the router or virtual server. Configure the firewall to allow accessing the DVR. (If the user has enabled the UPnP function in both the DVR and router, he can skip this step.)

Step 3: If users want to utilize dynamic domain name, please apply for a domain name in a DNS server supported by the DVR or router. Then add to the DVR or router.

This unit supports www.meibu.com, www.dyndns.com, www.no-ip.com, and mintdns type.

Step 4: Open browser, enter the IP address or dynamic domain name, and press Enter. If HTTP port is not 80, add the port number after the location and "http://" before it.

Step 5: IE will download ActiveX automatically; other browsers will ask you to install the plugin. Then web client will ask for user name and password.

Note: If you cannot download and install ActiveX, please refer to [FAQ Q8](#).

2. Connect the DVR to Directly to the Internet

Step 1: Enter into the DVR’s Main Menu→Setup→Network interface to enable PPPoE and then enter the username and password received from your ISP. Click “Apply” and the DVR will connect to the server. A confirmation message should appear.

Step 2: To accessing the web client of the DVR, enter the WAN IP to access it directly (go to Main menu→Information→Network to check the IP address); a DDNS can still be used.

Step 3: The following setting steps are as the same as Step 4 and Step 5 in Point 1.

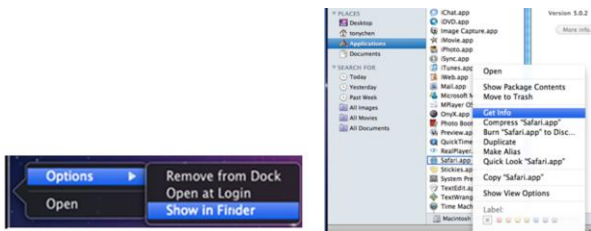
7.2 Remote Surveillance through Apple MacOS (is this still needed?)

Note: Because the current plug-in version of client end just only supports 32-bit mode, the Safari browser needs to start in 32-bit mode. Earlier MacOS versions have 32-bit mode as the default; the setting can be skipped.

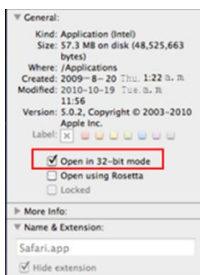
The setting steps are as follows:

Step 1: Right click safari icon and select “Show in Finder”.

Step 2: Select Applications→Right click “Safari. App”→Select “Get Info”.



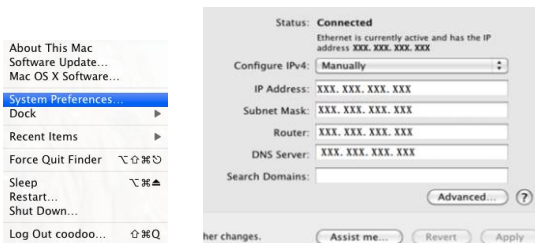
Step 3: Select “Open in 32- bit mode”.



7.2.1 On LAN

Step 1: After starting Apple computer, click Apple icon. The following window will pop up. Please select “System Preferences”→“Internet & Wireless”→ “Network”.


Step 2: Go into Network interface and then click “Ethernet Connected” to check the internet connection of Apple PC.

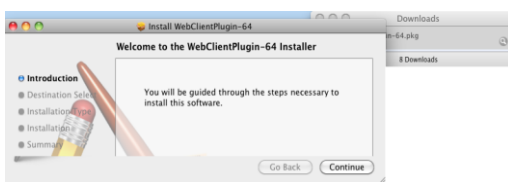


Step 3: After acquiring the network information, go to the DVR’s Main Menu→Setup→Network settings. Enter a unique IP address (in the same network segment as the router), Subnet Mask, and Gateway. (This assumes the router, computer, and DVR are connected to the same router.) If using DHCP, enable DHCP in the DVR and router. (default?)

Step 4: Once the network settings are completed, you can enter LAN IP and HTTP port in the Safari browser. For example: http://192.168.1.100:81 (192.168.1.100 is LAN IP, 81 is the HTTP port), and click “↻” (refresh/go). Then the browser will download ActiveX control (I think only IE uses ActiveX) as shown below:



Step 5: Click  icon and then select the ActiveX control; the installer will appear. Click on “Continue”→“Install” next. Authorization may be required.



Enter the name and password of the admin/user and click “OK” to continue installation.

Step 6: After finishing installing the ActiveX control, completely quit from the Safari browser. Right click Safari icon on the desktop and then select “Quit” to quit completely. Then restart the Safari browser. Enter the IP address and HTTP port to access the DVR’s web client.

7.2.2 On WAN

There are also two ways for DVR to connect to Internet.

1. Connect the DVR to internet through router or virtual server

Step 1: The network setups are the same as step one to step four of point 1 on WAN of IE remote surveillance.

Step 2: Enter WAN IP and http port in the Safari browser to install the Active control. The concrete steps are the same as step 5 and 6 of Chapter 7.2.1.

2. Connect the DVR to internet directly.

Step 1: The network setups are the same as step one of point 2 on WAN of IE remote surveillance.

Step 2: Enter WAN IP and http port in the Safari browser to install the Active control. The concrete steps are the same as step 5 and 6 of Chapter 7.2.1.

7.3 The Remote Live Preview

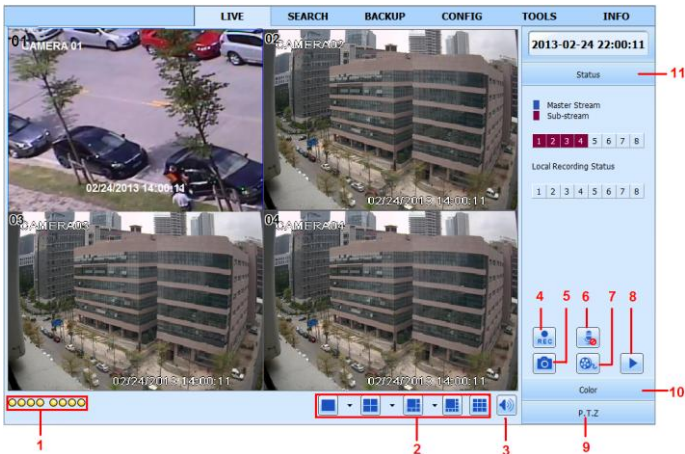



Fig 7-1 Remote Live Preview Interface

Symbol and function definitions:

1	Channel indicator	2	Screen display mode
3	Volume	4	Start recording
5	Snapping picture	6	Bidirectional talk
7	Start IE record	8	Playback
9	PTZ control	10	Color
11	Master/sub stream status		


Note: Click  button to start recording. The record file will be saved in user's PC.

Screen display mode:

Click the  icon beside the screen display mode to select channels.

A maximum of 8 channels can be selected. Then click OK button to confirm the setting.

Snap pictures


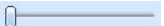



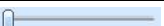

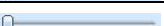


Click  (Snapshot) to take pictures; they will automatically be saved to the computer's hard drive.

You can set up the save path for those picture in the Remote Preview interface →

Configuration → Local configuration.












Color adjustment:

Drag the slide bar to adjust Brightness, Contrast, Hue, and Saturation. Click Default to reset them to original value.

Buttons	Description
 	Drag the scroll bar to adjust the brightness of channel
 	Drag the scroll bar to adjust the contrast of channel
 	Drag the scroll bar to adjust the saturation of channel
 	Drag the scroll bar to adjust the hue of channel
	Click this button to recover the default value of brightness, contrast, saturation and hue.
	Save the adjustment

PTZ control

Please connect PTZ to the device via RS485 firstly, make sure the protocol of the PTZ is supported by the device and set the relative parameters manually. The PTZ can be controlled from the Control Center to move up, down, right, left or stop rotating, adjust rotation speed, Iris and zoom, focus on the dome, and set the presets, etc.

Buttons	Description
	<p>▲ to rotate the dome upwards. ▼ to rotate the dome diagonally up-left. ↘ to rotate the dome diagonally up-right. ▾ to rotate the dome downwards. ↙ to rotate the dome diagonally down-right. ↗ to rotate the dome diagonally down-left. ← to rotate the dome towards left. → to rotate the dome towards right. ■ to stop rotating the dome.</p>
	<p>Drag the scroll bar to adjust rotating speed of the dome.</p>
	<p>“Iris” button. Click + button near “Iris” button to increase light of the dome. Click - button near “Iris” button to decrease light of the dome.</p>
	<p>“Zoom” button. Click + button near “Zoom” button to zoom in the locale picture of this camera. Click - button near “Zoom” button to zoom out the locale picture of this camera.</p>
	<p>“Focus” button. Click + button near “Focus” button to have long focus. Click - button near “Focus” button to have short focus.</p>
	<p>Go to the Preset</p>
	<p>Select and do auto cruise</p>
	<p>Track</p>
	<p>Auto scan</p>
	<p>Wiper button</p>
	<p>Light button</p>

On the video feed, right click (secondary mouse button) to make the context menu appear.

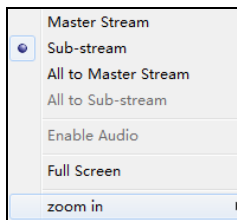


Fig 7-2 Right Key Sub Menu

Stream: This DVR supports master stream and sub stream. Master stream has higher frame rate, max 30 FPS for NTSC (25 FPS for PAL) for every channel; it uses more network bandwidth. Sub stream has low frame rate, max 7 FPS for NTSC (6 FPS for PAL), for every channel; it requires less network bandwidth. You can select the stream according to the bandwidth available.

All to master/sub stream: Set all channel to master stream or sub stream.


Enable audio: Enable or disable audio

Full screen: The live video feed will display in full screen; the tool bar will be hidden. Double click or right click to return to exit full screen mode.

Zoom in: Magnifies the video feed by a factor of four (4). Click the channel to be zoomed. Right click to select “Zoom” from the context menu. Double click or right click to exit.

7.4 Remote Playback & Backup (this does not look remote)

7.4.1 Remote Playback

Click  button to go into record playback interface. Refer to Fig 7-3:
Select the record date and channels and double-click the file name in the record file list box.
Then you can play that file and preview the picture.

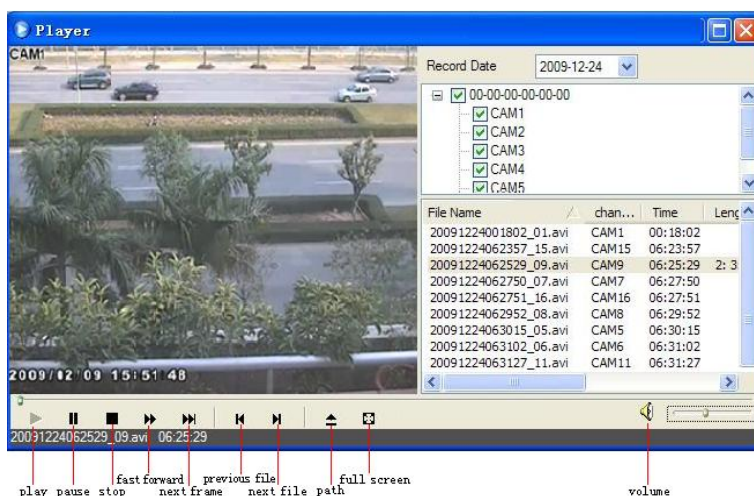


Fig 7-3 Play Record File Interface

This DVR supports remote time search, event search and file management.

By Time Search:

Step 1: Enter into Search→Time Search. Refer to Fig 7-4:

Step 2: The highlight date in the area② indicates recorded data. Select the date in area ② and record channels in area③.

Step 3: Click “Search” button. The record data will be displayed in the information list box.

Step 4: Set the data playing time and display mode in the area① as required.

Step 5: Click “Play” button to playback.

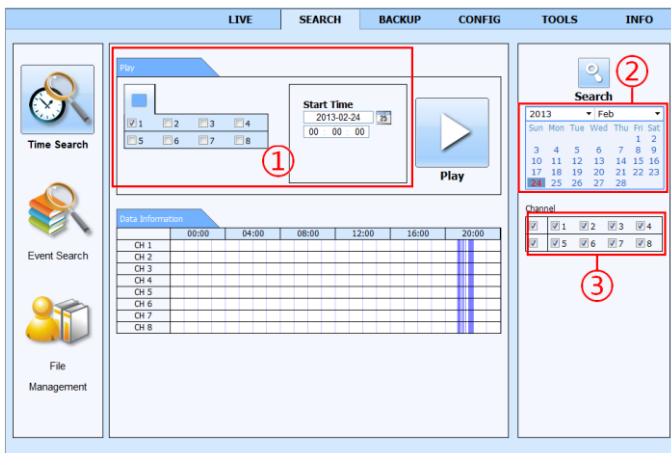


Fig 7-4 Time Search Interface

Step 6: Click the relevant buttons in the interface for operation, like FF, pause, change channel mode, etc. Refer to Fig 7-5:



Fig 7-5 Time Search Playback

By Event Search:

Step 1: Enter into Search→Event Search interface. Refer to Fig 7-6:

Step 2: Click the highlight date and select record channels.

Step 3: Checkmark the event type: motion and sensor.

Step 4: Click “Search” button.

Step 5: Double-click an item to play.

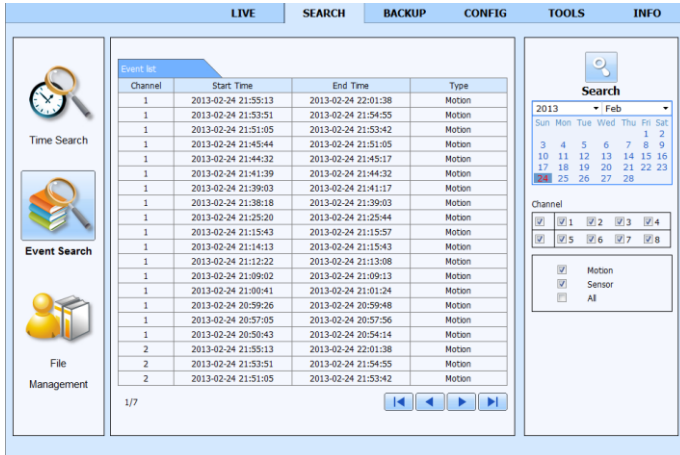


Fig 7-6 Event Search Interface

File Management

Step 1: Enter into Search→File Management interface. Refer to Fig 7-7:

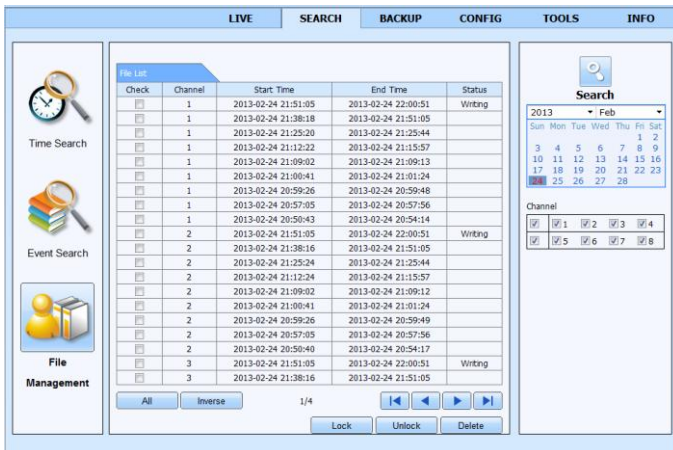


Fig 7-7 File Management Interface

Step 2: Select highlighted date and channels.

Step 3: Click “Search” button to search the recorded files.

Lock: Select certain file item in the file list box and then click “Lock” button to lock this file that cannot be deleted or overlaid.

Unlock: Select a locked file and then click “Unlock” button to unlock this file.

Delete: Select an unlock file and then click “Delete” button to delete this file from file list.

7.4.2 Remote Backup

Click Backup button to enter into backup interface. Please refer to Fig 7-8:

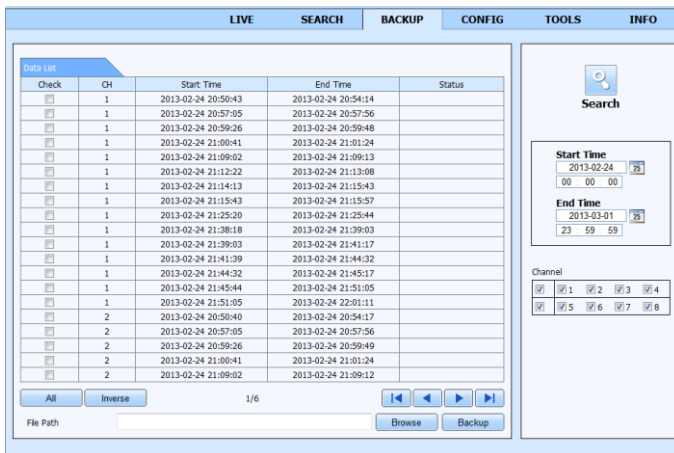


Fig 7-8 Remote Backup Interface

Step 1: Select channels, set the start and end time and then click “search” button to display the file information in the file list box.

Step 2: Select backup files and click “Browse” button to set the save path. Then click “Backup” button to start backup. The backup files will be saved on user’s PC.

7.5 Remote System Configuration

The DVR can be remotely setup. This includes options for basic settings (e.g. time) live streams, recording, scheduling, alarms, network, PTZ details, and user management. Select an option from the menu list on the left; actual settings will be on the right. Only one user can configure the DVR at a time. Click “CONFIG” on the upper menu bring up the configuration page and side menu.

The sub menu list and the options in every menu are similar to that of the DVR. Please refer to Chapter 4 Main Menu Setup Guide for more details.

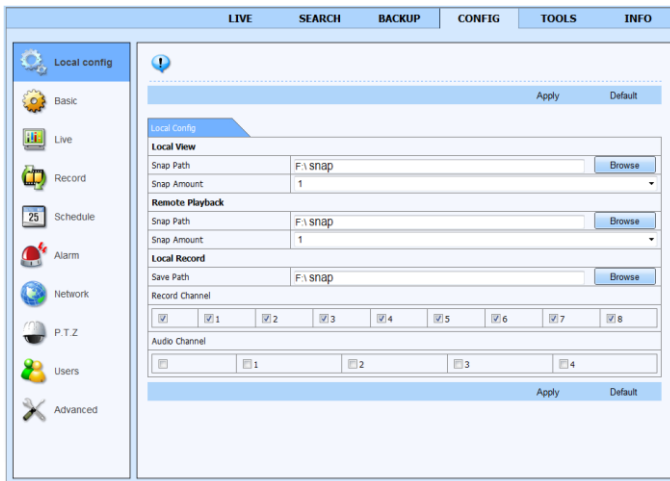


Fig 7-9 Remote Menu Setup

7.6 Tools

Click on the tool's tab to access the Disk Management, Remote Update and Manual Alarm. The user can view the status of the hard drive(s), can view/change the read write properties and can also format the hard drive(s).

7.7 Remote Management

The Info interface provides a web based interface to access the general information pertaining to the DVR's settings. The interface includes five submenus: System, Event, Log, Network and Online users.

Note: There may be subtle differences with respect to functions of remote surveillance between through IE and through Apple PC. Here we only take IE remote access for example.

8 Mobile Surveillance

This DVR supports mobile surveillance by iOS, Android, Blackberry or smart phones with Windows mobile and Symbian OS. At the same time, it supports 3G network. We tested Dopod D600 (WM5) and Dopod S1 (WM6), which work fine with the DVR.

If you want to make mobile surveillance, please enable network service on the DVR first and refer to Chapter 4.6 Network configuration. The below is the use instructions on mobile client end for four OS.

8.1 By Phones with Windows Mobile OS (is this still supported?)

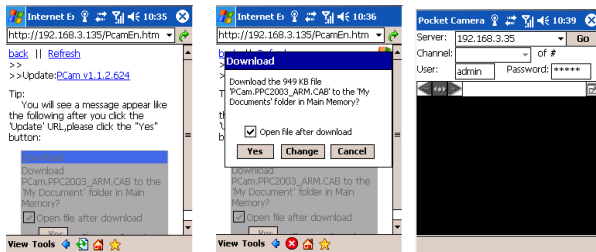
Step 1: Activate the network access on mobile phone.

Step 2: Run “Internet Explorer” and input the server’s address. The connection is built up shown as below picture on the left.

Step 3: Click on the software name. A dialog box pops up as below picture in the middle.

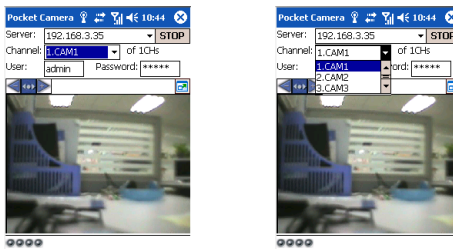
Step 4: Click “Yes” to start downloading and installing.

Step 5: PCam will be opened automatically after installation. Refer to the picture on the right.



Step 6: Input the server’s address, ID and password respectively in the columns of “Server”, “User” and “Password”, and click “Go” to log on the server. Refer to the below picture on the left:

Step 7: Camera 1 is the default channel after login. Change the channel in rolling-down menu of “Channel”. Refer to the below picture on the right.



Notice: User name and password here are the same with that used on the DVR. The default is admin and 123456.

8.2 By Phones with Symbian OS

Please use the smart phones with Symbian version supported by this unit. The detail information is as follows:

Symbian S40	support
Symbian UIQ	support
Symbian S80	support
Symbian S60	support
Symbian S60 3rd Edition-Symbian OS v9.1	support
Symbian S60 3rd Edition with FP 1-Symbian OS v9.2	support
Symbian S60 3rd Edition with FP2-Symbian OS v9.3	support
Symbian S60 5th Edition-Symbian OS v9.4	support
Symbian S60 5.1 Edition-Symbian OS v9.5	support

Step 1: Enable the network access on mobile phone. Then run Web browser.

Step 2: Input the DVR server's IP address in a new-built bookmark. Click this bookmark to access the DVR. Refer to the picture on the left:

Step 3: A welcome window will pop up and requires a package. Click the software name to download. Refer to the picture on the right:



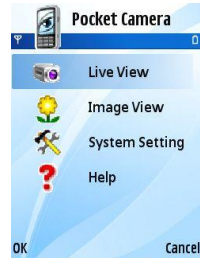
Step 4: A security window will pop up after downloading and ask whether to install the package. Click YES to install.

Step 5: A Scam shortcut icon appears on the system menu after the completion of installation.

Step 6: Run Scam program. It will enter a function interface. Refer to the following picture on the left.

Step 7: Click System setting-->Login Setting to enter login interface. Refer to the following picture on the right.

Live view: to do mobile live view.
Image view: to check the pictures Snapped in live view.
System setting: Login setting And Alarm setting.
Help: function indication and help.



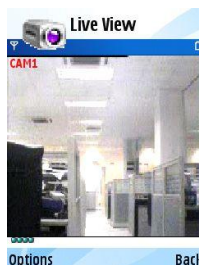
Step 8: Input the server's address, ID and password respectively. Then save.

Notice: About Access point, there may be different access points in different countries or from service providers.

Step 9: Enter Live View, it will connect the server and display pictures. Refer to the following picture on the left.


Notice: User name and password here are the same with that used on the DVR. The default is admin and 123456.

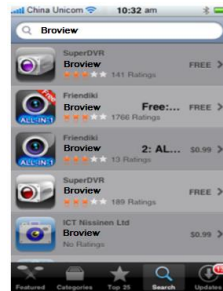
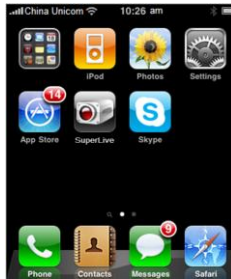
Step 10: In Live View, you can do snapshot, change channels and control PTZ. Refer to the following picture on the right.



8.3 Installation on iOS

Step 1: Open App Store function of iPhone.

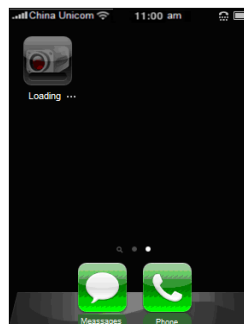
Step 2: Tap  (Find) and search for “BroView”.



Step 3: Tap BroView, tap the “Introduce” summary and then tap “FREE”. The “FREE” button will change into “INSTALL” button.



Step 4: Enter the user’s iTunes Store password and then tap “OK”.




Note: If it is the first time for user to operate, please enter user ID; if there is no Store account, user needs to apply for one.

- **Install through PC**
- **Step 1: Install iTunes on the PC and then login.**



Step 2: Connect the iPhone to the PC.



Step 3: Click  (Find) and search for “BroView”.



Step 4: Click the “Free Application” button.



Step 5: Enter the User's Apple ID and password, and then click "Acquire".



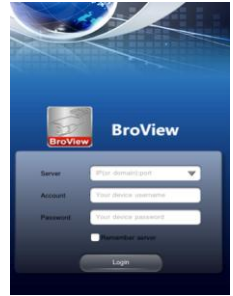
Step 6: Checkmark "synchronously apply program" and "BroView", and then click "Apply" button



➤ Operation Instruction for BroView

Login interface

Enter server's IP address (or domain name), user name and password. Tap “Remember server” to save the setting; tap ▼ button can quick input saved server address, user name and password.



Main Interface




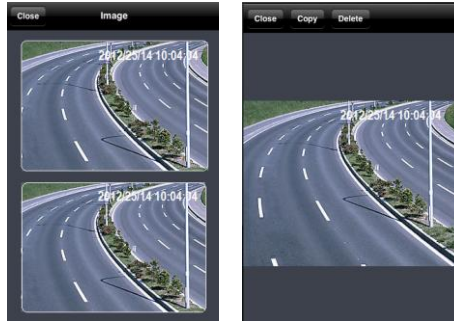
	Image view		Four channels
	Playback		Six channels
	Setting		Eight channels
	Information view		Favorite channel
	Server list		Snap
	Logoff		Record
	Single channel		Audio





	Upward rotates the PTZ		Downward rotates the PTZ
	Leftward rotates the PTZ		Rightward rotates the PTZ
	Stop rotating the PTZ		Zoom In/Focus In/Iris Add
	Zoom Out/Focus Out/Iris Sub		To enter into the next interface
	To return to the previous interface	Preset	select the preset point
Cruise	Set the cruise line	Speed	Rotate speed of the PTZ

Image View

After the image is snapped, you can tap the  (Flower) icon to enter into the image viewer. Select the image and tap it to amplify this image. Then you can copy or delete the image. Tap “Close” to return to the previous screen.



Playback





Tap the  (Playback) icon to enter into the playback interface. Then tap the “Search” button, select the time and channel to playback and tap  button. Now you can see the local file list. Select a file and tap play button to playback. You can also copy or delete the file. Finally, tap “Close” to return to the previous screen.



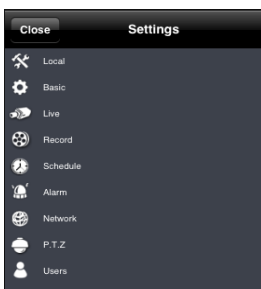
You can also search file to playback through time search, event search and remote file search. Please click the related button.


Server List



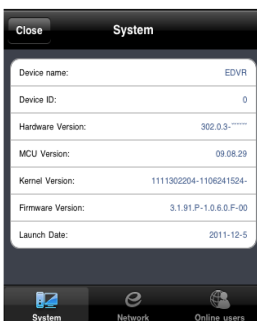
Tap  button to go to the Server List screen. You can tap  icon to add to the server list. After you add the server to the list, you can tap  icon to edit the server information. Tap  icon to delete the server information


Configuration Screen



Tap  icon to edit the settings. You can set several options, such as local, basic, live, record, schedule, alarm, network, etc. Please see chapter 5 in respect of setting steps for more details.

Information Screen



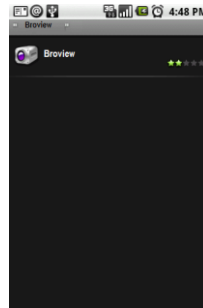
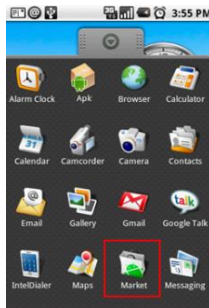
Tap  icon to enter into information view screen. You can check the information of system, network and online users. From the System screen, you can see information such as the device name, device ID, hardware version, firmware version, etc. In the Network screen, you can see the HTTP port, server port, IP address, gateway, network status, etc. From the Online Users screen, you can see the current online users logged into the DVR.

8.4 By Phones with Android OS

➤ Software Installation

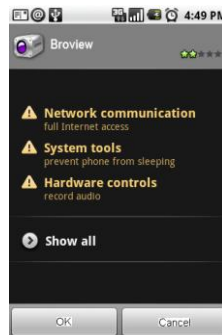
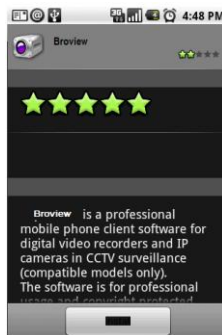
➤ **Step 1:** Open the Google Play store.

Step 2: Search “BroView”.



Step 3: Press “Install” button.

Step 4: Tap “OK” button.

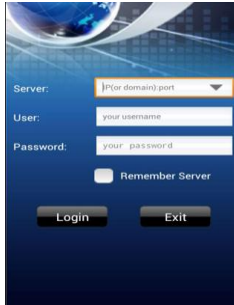


Step 5: You can view the download and install progress from the notifications.

Once the download is done, the software will install automatically.

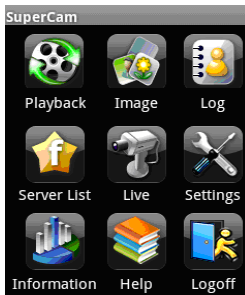


Login



Enter the server's IP address (or domain name), username, and password. Tap "Remember Server" to save the setting; tap ▼ button to quick select saved server credentials.

Main menu



Playback	playback record file
Image	image view
Log	log record
Server List	device list
Live	live view
Settings	software setting
Information	device information view
Help	software help center
Logoff	logoff and return to login interface

Live view



	Stop playing		Single channel display
	Screen mode		Four channels display
	Snap		PTZ
	Talk		Record
	Live audio		Hide

Image view



	The first picture		Zoom in
	The previous picture		Zoom out
	Next picture		Delete
	The last picture		

Record playback



	Play/Pause
	Stop
	Fast forward
	Slow play

Tap Playback icon in the Main Menu interface to enter into the playback screen. First, choose channel. Second, select the record file and tap it to playback. Finally, tap “Return” to go back to the previous screen.

Server list



	Add a server list
	Modify a server list
	Delete a server list
Return	Return to the previous interface

Configuration Screen (shake alarm? Motion? Sensor?)



Alarm setting	If “Audio alarm” is enabled, when Video Loss/Sensor/Motion occurs, the Audio alarm will be triggered; If shake Alarm is enabled, when Video Loss/Sensor/Motion occurs, shake alarm will be triggered.
Storage setting	Saved video can be stored on and SD card if one is available.
Display setting	Controls the display order or display mode of live feeds .

Information view



Appendix A FAQ

Q1. Why does the DVR not turn on after connecting to power?

- a. The power adapter could have failed. Please switch to a new power adapter.
- b. The power adapter may not provide enough current for the DVR. Please use the power adaptor supplied with the DVR.
- c. It could be a problem with the DVR's internal hardware.

Q2. There is not menu displayed and only has live image display.

- a. Check whether the monitor is connected to the main video out and not the spot out. The monitor might be connected to the VGA port whereas the DVR may be set for output through BNC or vice versa. Press and hold Stop/ESC/Exit/Fn key to toggle the output modes.

Q3. The DVR LED turns on, however there is no output.

- a. The power adapter may not provide enough current for the DVR. Please use the power adaptor supplied with the DVR.
- b. It could be a cable connection issue. Please make sure the cables are connected securely.
- c. Check the monitor settings.

Q4. Why are no images displayed on few or all channels of the DVR?

- a. It could be a cable connection issue. Please make sure the cables are connected securely.
- b. The problem can also be related to cameras. Please check the cameras.
- c. Please make sure that the channels are not configured to be hidden. The settings can be found in the Main Menu → Setup → Live settings.

Q5. The HDD cannot be found.

- a. The power adapter may not provide enough current for the DVR. Please use the power adaptor supplied with the DVR.
- b. It could be a cable connection issue. Please check the power and data cables of the HDD.
- c. The HDD could have gone bad. Replace it with a new one.

Q6. The DVR cannot record.

- a. Make sure the HDD was formatted prior to use.
- b. Make sure the record function is enabled and that the setup is correctly configured. Please refer to Chapter 5.
- c. The HDD could be full and thus the DVR is not able to record. Check the HDD information from Disk Management. Enabling "Recycle Record" is recommended.
- d. The HDD could have gone bad. Replace it with a new one.

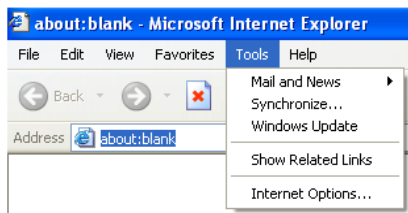
Q7. Mouse does not work.

- The mouse should be connected to the USB port at the back of the DVR.
- After connecting the mouse, give the DVR a few seconds to detect the mouse. If not detected, try restarting the DVR.
- The mouse may be incompatible. Please try another mouse.

Q8. ActiveX control cannot be downloaded.

- IE browser blocks ActiveX. Please allow the web client to install and use the plugin.

Step1: Open IE browser. Click Tools→Internet Options.



Step 2: Select Security→Custom Level. Refer to Fig 8-1

Step 3: Enable all the sub options under “ActiveX controls and plug-ins”. Refer to Fig 8-2
Then click Ok to finish setup.

(shouldn't the DVR be added to the Trusted Sites and then security changed?)

- Other plug-ins or anti-virus blocks ActiveX. Please uninstall or do the required settings.

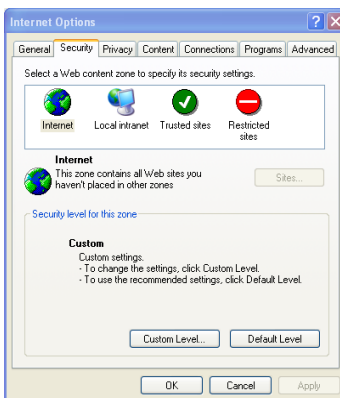


Fig 8-1

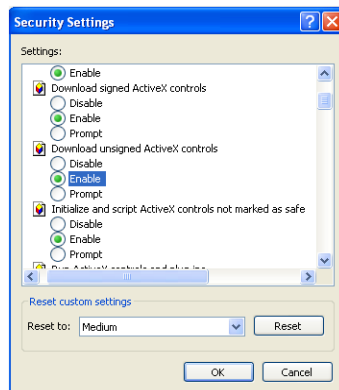


Fig 8-2

Q9: DVR displays “please wait...”all the time.

- a. The HDD power and data cables may not be connected securely. Please check the connections for the HDD.
- b. It is possible that the DVR was forced to stop because the HDD has a bad sector. That can cause the system to halt. Test the DVR with a known good HDD or try formatting the existing HDD.

Q10: How to enter passwords, numbers, and other characters?

Click the password or any other text box and small virtual keyboard will appear. Click the characters to enter them (the initial password is 123456), or you can use the number keys on the front panel, or the number keys on the remote controller.

Q11: What are the minimum system requirements for remote monitoring?

PC Module	Parameters
CPU	Intel Celeron 2.4G
Motherboard	Intel 845
HDD	80G
RAM	512M
VGA	NVIDIA GeForce MX440/FX5200 ATIRADEON 7500/X300
OS	Windows: 2000(SP4 above), XP(SP2 above), Vista, 7, 8 (official?) Mac: 10.7 and higher
Browser	IE (8 and higher), Firefox, Chrome, Safari (5.1.7 and higher)
DirectX	9.0

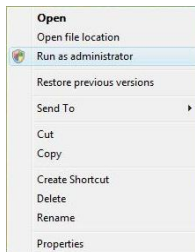
Q12: How to handle the situation that the codec Control is blocked when downloading in the VISTA or Win7 system?

This problem can be fixed in two ways:

- a. Enter Control Panel→User Account and Family Safety → User Account Control (refer to the following figure) and click “Turn on User Account Control”. Uncheck “Use User Account Control (UAC) to help protect your computer” and click “OK” afterward. Restore the setting after installation.





- a. Right click the browser (refer to the following figure) and select Run as administrator to run browser with higher privileges.

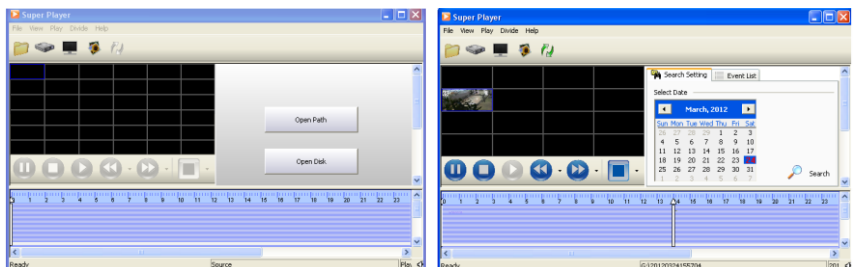


Q13: A hard disk is being identified as a new device however it was being used with another DVR of same model. Should it be formatted prior use?

It is possible to migrate a HDD from one DVR to another provided that the DVRs are of the same model and that the HDD being migrated would be used as the sole disk in the new DVR. However in cases where the new DVR already contains a HDD, the migrated disk being installed would have to be formatted. In general migrating disks from one DVR to another is not recommended.

Q14. How are the backup files played?

After backing up the files to a USB drive, connect it to a USB port on a PC. If the files are saved in DVR format, be sure to include the backup player on the USB drive. The backup player will be in a folder on the flash drive. (Is the backup player copied from the DVR or downloaded from the internet?) Double click  icon to install the backup player. After you install it, open this player and click “Open Path” button to open your backup file. Next, click  play button to play the backup file. Double click the image and then right click to enable audio. If you save your backup files in AVI format, you can directly open your file by using the media player which supports this format.



Appendix B Calculate Recording Capacity

The size of hard disk can be calculated according to the required recording time and DVR recording settings. The DVR uses a fixed video bit rate. This gives recordings a consistent size for a given time. The below are some example settings and space consumption rates.

Resolution	Frame per Second (FPS)	Video Quality	Bit Rate (kbps)	Used Space (MB/hr)
1080P	15 (NTSC) 12 (PAL)	Highest	12M	2700
		Higher	9M	2025
		Medium	7M	1575
		Low	6M	1350
		Lower	4M	900
		Lowest	1.5M	338
	7 (NTSC) 6 (PAL)	Highest	12M	1350
		Higher	9M	1013
		Medium	7M	788
		Low	6M	675
		Lower	4M	450
		Lowest	1.5M	169

The formula to calculate the total recording capacity is:

$$\text{Total Recording Capacity} = \text{Used Space (MB/hr)} \times \text{recording time (hr)} \times \text{number of channels}$$

For instance, one customer uses NTSC cameras, set resolution to 1080P, video quality to Lowest, frame rate to 15 fps for a total of 4 channels. He wants the unit to record continuously for a month. Below is the calculation:

$$\begin{aligned} \text{Total Recording Capacity} &= 338 \text{ MB/hr} \times 24 \text{ hr/day} \times 30 \text{ day} \times 4 \text{ channels} \\ &= 973440 \text{ MB} \approx 950 \text{ GB} \end{aligned}$$

Therefore, a single 1TB SATA HDD can hold about a month of video with these settings.

Appendix C Compatible Devices

1. Tested and Compatible USB Flash Drives:

Brand	Capacity
SSK	512MB, 1G, 2GB
Netac	4GB
Kingston	2GB
Aigo	2GB
Smatter vider	1GB
SanDisk	4GB

1. Tested and Compatible SATA CD/DVD Writers:

Brand	Model
TECLAST	GH22NP20/TL-22XD
BENQ	DW220S-0K4
LITEON	DH—20A6S01C
LITEON	DH-20A4P02C
SAMSUNG	TS-H653B

1. Compatible HDD list (anything under 500GB seems too small)

Brand	Capacity
Seagate Barracuda	80G/160G/250G/320G /1.5T/2TB
Seagate SV35.3	1T
Seagate Pipeline HD.2	500G
Maxtor Diamondmax	160G
HITACHI Deskstar	80G/160G
WD WD1600JS	160G
Samsung HD161HJ	160G