D5004FH+C1030DP7*4
D5008DH+C1030DP7*4
Instruction Manual
1. PRECAUTIONS

*Please observe the following precautions to avoid damage or data loss caused by improper operation.*

The DVR will work properly when used within the specified temperature and humidity levels.

Do not install the DVR in a dusty, humid, or smoky environment.

This device requires a stable, flat surface for proper operation.

Do not block the DVR's ventilation openings.

Install only according to the instructions.

Do not spill liquid of any kind on this device.

Do not put any other equipment on top of this device.

Do not attempt to repair this DVR yourself, please refer all repair to a qualified technician.

Only use a Hard Disk Drive specified by the manufacturer with this DVR.

2. NOTES

This User Manual is for reference only and only applies to the products in this manual.

Updates to this manual or to the product may occur without notification.

The pictures shown may not be of the same product, and are for illustration purposes only.

Please contact Customer Service if you have any questions or want to upgrade to the latest support software.

The default setting of the DVR is NTSC.
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3. PRODUCT INTRODUCTION

3.1. INTRODUCTION

Congratulations on your purchase of the WinBook Security 8 Channel DVR Security System. The included Digital Video Recorder (DVR) and Night Vision Cameras are an ideal solution for securing your personal and commercial lifestyles. This DVR supports synchronized video playback and monitoring, select network-based system controls, and several network streaming capabilities.

This manual is for both the 4/8 channel DVR models.

3.2. FEATURES

LIVE VIEW

CVBS interface, VGA /HDMI synchronous output.

COMPRESSION

H.264 video compression, G.711 audio compression, supports D1-30 fps resolution.

RECORDING

Recording modes include manual, timed, alarm, and motion detection. It supports SATA hard disks and local disk S.M.A.R.T. technology. This DVR also supports USB backup and Internet backup.

PLAYBACK

Playback can be viewed in several ways including local and network playback, multiple channels, and simultaneous playback. There is also support for accelerated or slow motion viewing, rewind, and frame by frame mode. Specific time playback is also supported.

COMMUNICATION INTERFACE

Utilize USB 2.0 high-speed interface for connecting various backup devices, and a standard Ethernet interface which works with various networks.

NETWORK PROTOCOLS

3.3. INSTALLATION

3.3.1. CHECK DVR AND ACCESSORIES

Your surveillance system should include the following items. If anything is missing please accept our apologies & immediately notify your nearest WinBook Security distributor.

- Digital Video Recorder (8 channel DVR)
- 4 x Night Vision Security Cameras
- 4 x BNC Video and power extension cable - 60ft
- 4 x Mounting Hardware Sets
- Hard Disk Mounting Hardware Packet
- AC Adapter – AC to DC 12V 5A
- 9 Way Power Splitter Cable
- 3’ RJ45 Cable
- USB MOUSE
- User Manual
- Quick Start Guide
- Support CD

3.3.2. HARD DISK INSTALLATION

Tools & Preparation

You will need a Philips-head screwdriver and a compatible Hard Disk Drive to install inside the DVR housing.

Hard Disk Specifications: 3.5-inch SATA hard disk drive (maximum capacity is 2TB).

Installation Steps

Make sure to take precautions against static electric discharge when installing the hard disk. Static discharge could damage the drive and the internal components of the DVR. To reduce this risk, it is best to work on an anti-static mat and to use a grounding wrist strap.

1. Using a Philips-head screwdriver, remove the 2 Hard Drive Panel screws located on the bottom of the DVR.

2. Remove the Hard Drive Panel and connect the power and data cables from the DVR circuit board to your Hard Drive. Seat the drive flush into the bay with the top of the drive pointed up.
3. Replace the Hard Drive Panel and use the supplied screws to fasten the Panel to the DVR frame and inserted hard disk screw mounts.

Note:

The capacity of the hard disk determines how much video can be recorded to the hard in addition to whatever DVR parameters (recording or encoding setup) have been set to make the recording. Refer to section 5.10 in Chapter 5 of this manual for more information.

3.3.3. SYSTEM INSTALLATION

WARNING: Do not power any electrical devices involved in installation until all video and camera connections have been made.

Step 1: Connecting Your WinBook Security DVR to a TV or Monitor
Before connecting your DVR, please ensure the proper video ports are available on your TV or monitor. Your model supports BNC (you may use a BNC-RCA adapter for analog purposes, VGA and HDMI. Using the video cable of your choice, connect the video ports on your DVR and display. VGA/HDMI Cables not included.

Step 2: USB Mouse installation
Remove the included USB mouse from its packaging and plug the USB connection into one of the two available USB ports located on the rear of your DVR.

Step 3: Night Vision Camera Installation
NOTE: It is highly recommended to verify full operational functionality of your cameras before fixed installation.

The included 60’ BNC video extension cables are color coded and labelled to streamline installation. Connect the yellow BNC video cable with label “To Camera” and red power plug cable to each camera.

Plug the “To DVR Only” BNC end of the cable into the one of the eight (8) video input ports on the back of your DVR.
Step 4: Powering your devices
Cameras – Connect the red female power connection of each 60’ extension cable into the provided power splitter.

Connect the female power splitter end into the male end of the power supply.

Plug power supply into an available surge protector or wall socket.

DVR
Plug the labelled DVR power plug into the DVR

3.4. PANEL INTRODUCTION

3.4.1. REAR PANEL

DIAGRAM 3-4(F) Rear Panel Instruction for D5004FH
### 3.5. USING THE USB MOUSE

The included USB mouse is the optimal method to navigate with the DVR and its menus.
- To access or exit the Menu Screen – Right click anywhere
- To select Menu items – Left click on the desired menu item
- To exit each Menu – Right click on any area outside the menu
- To maximize or minimize – Double click on any live view channel

### 3.6. INPUT METHOD

In the input box, choose numbers, symbols or uppercase and lowercase letters. Click the left mouse button to select value; back arrow means backspace and the “˽” is used to enter a space.

**Letter Input Interface**

```
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
```

---

**Diagram 3-4(G) Rear Panel Instruction for D5008DH**

<table>
<thead>
<tr>
<th>Index</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Video input</td>
<td>Composite video signal (CVBS) input interface.</td>
</tr>
<tr>
<td>2</td>
<td>Video output</td>
<td>Composite video signal (CVBS) output interface.</td>
</tr>
<tr>
<td>3</td>
<td>HD OUTPUT</td>
<td>HD output interface.</td>
</tr>
<tr>
<td>4</td>
<td>VGA</td>
<td>VGA output interface.</td>
</tr>
<tr>
<td>5</td>
<td>Audio input/output</td>
<td>Audio input/output interface.</td>
</tr>
<tr>
<td>6</td>
<td>USB/Network</td>
<td>USB2.0 and RJ-45 interface.</td>
</tr>
<tr>
<td>7</td>
<td>Power input</td>
<td>DC 12V.</td>
</tr>
</tbody>
</table>
3.7. POWER ON/OFF

3.7.1. POWER ON

If the DVR is installed correctly and supplied with the power adapter, the DVR will boot up automatically.

Upon boot-up, your DVR will run through a brief diagnostics phase lasting approximately 20 seconds, an audible alarm tone will indicate successful start-up. You will then have access to the multi-screen live view.
Note: The included power supply is rated for exact use with your DVR Kit, substitution of the device is not recommended and may void your warranty.

3.7.2. POWERING OFF

Select the SHUTDOWN option in the main menu of the DVR.

【Main Menu】→【Shutdown】→【Shutdown】.
NOTE: Ensure DVR is completely powered off before replacing any component, including hard drives.

3.7.3. OUTAGE RECOVERY

If you have to reboot after a power outage or forced shutdown, the DVR will have saved any files before the power outage occurred and will return to the normal operation mode.

3.8. MENU ICONS

3.8.1. STATUS ICONS

- Record
- Video feed lost
- Motion detected
- Channel lock
- Allows screen to switch polling

3.8.2. OPERATION ICONS

- Not selected
- Selected
- Drop down menu
- Confirm changes/Enter a menu.
- Cancel changes/Cancel entering a menu
- Set parameters
- Save parameters
- Restores factory default settings or reverts to the last set of saved parameters
- Apply – applies the current settings
Copy: Copy current settings to other channels
Set: Enter the configuration menu
Process: Configures alarm, video detection and trigger processing

3.9. LIVE VIEW

Turn the DVR on to enter live view mode. The date, time, channel names or icons will be displayed and indicate any recording or alarm statuses on-screen. You can switch display screens by using the USB mouse.

When enabling on-screen messages for any external alarms, video loss, masking, motion detection, or network and IP conflict alarms, the following interface should pop-up when any of those events occur. Refer to

DIAGRAM 3-1 ALARM STATUS

3.10. RIGHT MOUSE BUTTON MENU

Click the right mouse button after entering the real-time browser interface and a drop down menu will appear, see diagram 3-2

DIAGRAM 3-2 RIGHT BUTTON MENU
3.10.1. SCREEN SWITCHING

A maximum of eight channels can be displayed on one monitor screen. The operator can choose to display one, four, or eight channels.

3.10.2. PAN/TILT/ZOOM CONTROL (OPTIONAL)

Select Output → P/T/Z to set P/T/Z protocol, baud rate or address bits. For details on doing this, refer to chapter 5.4. This feature is not available for the 8CH DVR kit.

3.10.3. COLOR SETTING MENU

The Color Setting menu adjusts a specified screen’s (single screen) image color, hue, brightness, contrast, and saturation parameters. Set it for two time periods according to the local times between day and night. For each adjustment, the device will automatically switch to the best video quality. See the following Diagram 3-3 Color Setting.

![Color Setting Menu](image)

**DIAGRAM 3-3 COLOR SETTING MENU**

- **Period** two time periods can be set to match the ambient light during day or night. This option will automatically switch the color configuration at a set time. Make sure to check each box to enable this function.

- **Hue** adjust the screen image color.

- **Brightness** Adjust the screen image brightness. It decreases/increases the brightness of the screen image to make the image clearer.

- **Contrast** Adjust the black and white levels, the greater the ratio, the brighter the image.

- **Saturation** Adjust screen image color purity. The greater the value, the cleaner the screen image appears.
Note: Different modes have different functions.

3.10.4. SEARCH
Refer to 3.12 Search.

3.10.5. RECORDING VIDEO
Note: You must follow these directions to configure the desired recording schedule for your DVR.

While in the live view screen, click on the 【Record】 button. This will bring up the manual recording interface, as shown in Diagram 3-4 Recording Control.

![Manual Record]

DIAGRAM 3-4 RECORDING CONTROL (FOR BOTH 4- & 8-CHANNEL DVR OPERATION)

【Schedule】 Checking any of the numbered channels for this option will enable video to be recorded based on unique parameters, including Motion Detection and Alarm.

【Manual】 Checking any of the numbered channels for this option will set the desired channel to record continuously to the local hard drive.

【Stop】 Stops all channel recording.

After you have set up the channels to your desired recording settings, select the 【OK】 button to confirm the changes, or click 【Cancel】 to exit without recording any changes.

Note: Selecting the “All” checkbox will change the recording status for all active channels.
3.10.6. MAIN MENU

Click the 【Main Menu】 , enter a User name and password, click 【OK】 to enter the system menu, as shown in Diagram 3-5 system Login below.

![System Login](image)

**DIAGRAM 3-5 SYSTEM LOGIN**

Default Users:

<table>
<thead>
<tr>
<th>User Type</th>
<th>User Name</th>
<th>Default Password</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrator</td>
<td>admin</td>
<td>123456</td>
</tr>
<tr>
<td>User</td>
<td>user</td>
<td>123456</td>
</tr>
<tr>
<td>Hidden</td>
<td>default</td>
<td>default</td>
</tr>
</tbody>
</table>

**FORM 3-1 DEFAULT USERS**

⚠️ **NOTE:** An audible alarm will be triggered if a password is entered incorrectly three times, and there will be a system lockout for 30 minutes after 5 unsuccessful login attempts.
3.11. MAIN MENU INTRODUCTION

The Main Menu has six navigable fields: Search, Configuration, Maintenance, Output, Storage, and Shutdown.

**DIAGRAM 3-6 SYSTEM MAIN MENU**

【Search】 Search recorded video by type, channel, time and playback.

【Configuration】 Configure recording, motion detection, abnormalities, alarm, system, network and user management settings.

【Storage】 Hard disk and back up management.

【Output】 Configure out P/T/Z, alarm output, serial and output modes.

【Maintenance】 Display the system log information, version information, stream statistics, and online Users. You can also reset to factory defaults or use the automatic maintenance function.

【Shutdown】 Log off the User menu, turns off the machine, restarts the system, and switches Users and all other operations.

*Note: Hovering over a menu option will reveal a short description of the selected menu’s functions.*
3.12. MAIN MENU > THE SEARCH MENU

You can call up the 【SEARCH】 interface through the Main Menu, as shown in Diagram 3-7 Record SEARCH.

DIAGRAM 3-7 RECORD SEARCH
<table>
<thead>
<tr>
<th>Index</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Calendar</td>
<td>Click a specific date to call up the recording. The list is upgraded automatically.</td>
</tr>
<tr>
<td>2</td>
<td>Time</td>
<td>Select recording search start and end time.</td>
</tr>
<tr>
<td>3</td>
<td>Play</td>
<td>Playback control: stop/play, pause, fast, slow, previous/next frame when in pause mode.</td>
</tr>
<tr>
<td>4</td>
<td>Recording mode</td>
<td>Choose searched recording mode, including NORMAL, ALARM &amp; MOTION.</td>
</tr>
<tr>
<td>5</td>
<td>Channel</td>
<td>Choose a specific channel.</td>
</tr>
<tr>
<td>6</td>
<td>Play</td>
<td>Choose to play the previous or next file; choose to play the previous or next channel.</td>
</tr>
<tr>
<td>7</td>
<td>List</td>
<td>Choose a starting time, channel, then click “search”, and a list of matching records.</td>
</tr>
<tr>
<td>8</td>
<td>Backup</td>
<td>Click &quot;to choose a backup file in the file list box, click the Backup button; to cancel a backup file, click “√” from the backup menu “√”.</td>
</tr>
<tr>
<td>9</td>
<td>Recording List</td>
<td>The search list displays up to 128 video recordings. Choose a file and press enter or double-click with the mouse to view a recording. File types: R—normal recording, A—alarm recording; M—motion detection recording.</td>
</tr>
</tbody>
</table>
## Playback Control:

<table>
<thead>
<tr>
<th>Key</th>
<th>Description</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video playback:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fast-Forward button ➤</td>
<td>During playback, pressing this key, allows you to Fast-Forward with a number of speeds to choose from. The Fast-Forward button can also be used as a reverse of the Slow Motion key.</td>
<td>Actual play rate is based on the version being used.</td>
</tr>
<tr>
<td>Video playback:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Slow Motion Key ◄</td>
<td>During playback, pressing this key provides a variety of slower playback speeds to choose from. The Slow Motion key can also be used as a reverse of Fast-Forward.</td>
<td></td>
</tr>
<tr>
<td>Play/pause ►/ II</td>
<td>Play/pause can also switch to normal speed from slow motion playback.</td>
<td></td>
</tr>
<tr>
<td>Backward:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Backward Key ◄</td>
<td>Moves the video playback a single frame backward.</td>
<td>To go backwards, single click again. To stop backward play during normal playback, press Rewind or single-frame advance. Press the play button ►/ II to resume normal playback.</td>
</tr>
<tr>
<td>Manual single frame advance</td>
<td>Advance video by a single frame forward or back by clicking either ◄ or ► when video is paused.</td>
<td></td>
</tr>
</tbody>
</table>

**Note:**

1. The DVR playback control bar shows file playback speed, channel, time, playback progress and other information.

2. The playback speed and rewind functions can differ between DVR versions. Please check the DVR version you have in order to ensure successful operation.
3.13. MAIN MENU > THE CONFIGURATION MENU

You can access the Configuration menu through the Main Menu. This menu gives you access to several additional menus including: System, Record, Network, Alarm, Account, and Abnormity. As shown in Diagram 3-8 Configuration below.

![Diagram 3-8 Configuration](image)

3.13.1. CONFIGURATION MENU > THE SYSTEM MENU

To open the System configuration menu, click the “System” icon in the Configuration menu.

![Diagram 3-9 System Configuration](image)
【System Time】: Sets the current date and time

⚠️ Note: Click [Save] to save any time change.

【Date Format】: Modifies the displayed date format.

【DST】: Click the DST (Daylight Saving Time) box to enable this function, and enter your local DST starting and ending dates.

【Date Separator】: Selects the separator for the date (User preference).

【Time Format】: Sets 24-hour or 12-hour display mode.

【Language】: Selected language varies from model to model.

【HDD Full】: When the DVR’s internal hard disk (HDD) is full, there are two options: “Overwrite” or “Stop recording”. If you select “Overwrite”, the DVR will overwrite the earliest recorded files and continue recording as if all HDD files are empty. If you select the “Stop recording” option the DVR will stop recording when the hard disk is full.

【Pack Duration】: Sets the length for each recording, the default is 60 minutes, the maximum is 120 minutes.

【DVR No.】: If more than one DVR is connected to the system, click the “ADD” button on the remote control and input a number to select the corresponding DVR to operate.

【Video Standard】: Select a video standard, PAL or NTSC (must match the camera setting.)

【Auto Logout】: This ranges from 0-60 minutes. 0 means no setting. The DVR will automatically logout after the time interval you select.

【Encode Mode】: Select video encode mode (WD1 or D1, must match the camera setting).
3.13.2. CONFIGURATION MENU > THE RECORD MENU

The second item in the Configuration menu is Record. Click on it to call up the menu. There are two tabs in the Record menu, Local Channel and Record Plan.

RECORD MENU - The Local Channel Tab

The “Local Channel” tab settings are shown below:

---

**Diagram 3-10: Recording Configuration - Basically Configuration**

- **【Channel】**: Selects a channel.
- **【Compression】**: H.264
- **【Resolution】**: Options are D1 or CIF, frame rate scope is different depending on each channel and resolution. The Minor Stream supports either CIF or QCIF. Main Stream parameters are selectable.
- **【Frame Rate (FPS)】**: PAL:1fps-25fps; NTSC:1fps-30fps. (fps=frames per second), user selectable.

⚠️ **Note**: Resolution and frame rate options vary, depending on DVR model.
【Bit Rate Control】: Options are CBR (Constant Bit Rate) or variable Bit rates. Bit rates can be set to Constant Bit Rate or there are 6 levels of image quality in the Variable Bit rate options of which 6 is the best. The default is CBR.

【Audio】: Enable or disable concurrent audio recording for the selected video channel.

【Snapshot】: Turns main stream/extended stream audio and video resolution coding on and off.

【Mode】: Captures a single video frame during an alarm.

【Image Size】: CIF size of picture.

【Image Quality】: 6 levels

【Snapshot Frequency】: Sets the single frame capture rate. The options are 1s/pc, 2s/pc, 3s/pc, 4s/pc, 5s/pc, 6s/pc, 7s/pc, and 8s/pc, where “s/pc” means number of seconds between screen snapshot and frame captures.

【More Sets】: Click 【Setting】 to display the sub-menu below with additional configuration options.

**Channel Config-Local Config**

- **Channel Name Display**: Toggles on-screen display of the channel name.
- **Date Display**: Toggles on-screen date display.
- **Channel Display**: Enables the display of the channel number.
- **Time Display**: Displays the current time.
- **Video Cover**: Allows setting of the video cover area.

**DIAGRAM 3-11 MORE CONFIGURATIONS**

- **Channel Name Display**: Toggles on-screen display of the channel name.
- **Date Display**: Toggles on-screen date display.
Note: One or both of these boxes must be checked for the next two display items to function.

【Channel Display】: Click on the Set button. The video feed for the selected channel will appear in full-screen mode displaying the channel title. This saves instantly. You can quit by clicking the right mouse button. The position of the Channel title will not vary on display or monitor. Different positions will display on the recording and WEB interface.

【Time Display】: Click on the Set button. The video feed for the selected channel will appear in full-screen mode displaying the Time title. This saves instantly. You can quit by clicking the right mouse button. The position of the Time title will not vary on display or monitor. Different positions will display on the recording and WEB interface.

【Video Cover】: There are two check boxes, Preview and Monitor. When you check one or both, four zone boxes appear below labeled 1, 2, 3, and 4 that you can use to preview and shield part of the display from view. You can adjust the area of the privacy zone using the Set Area command. The video feed displays and you can use the cursor to resize the box displayed.

【Preview】: Sets the masking zone, masking zone is shown on the screen when displayed. There is no masking zone in the web interface or recording mode.

【Monitor】: Sets the masking zone, masking zone is shown on the screen when displayed. There is no masking zone in the web interface or recording mode.

【Copy】: The Copy button copies one channel’s configuration to another recording.

RECORD MENU - The Record Plan Tab

The Record Plan tab provides an interface to configure the recording schedule for the DVR. It has detailed day-by-day, 24-hour configuration options which you can set independently for each day of the week.

Record Configuration Interface:
【Channel】: Selects the video feed channel. To select a channel, click on the arrow at the right of the selection box and a channel list will drop down. Select the required channel.

Green, Yellow, and Red represent: Regular (Green), MD (motion detection – Yellow), and Alarm (Red) recording modes. You can modify the recording settings for each day listed by clicking on the 【Set】 button next to that day. A configuration window will pop up to allow you to configure the settings.

【Copy】: Copies one channel's configuration to another.

【Set】: Pops up the setting interface for one of the listed weekdays.

Diagram 3-13 Edit Plan:
【Record Type】: Sets a desired time period for recording. There are up to six configurable time periods which can be selected for recording during each 24-hour period.

【Regular】: For normal recording.

【MD】: For recording during motion detection.

【Alarm】: For alarm event recording.

3.13.3. CONFIGURATION MENU > THE NETWORK MENU

The next Network Configuration Menu is used for setting up remote viewing of your security system. In order to access your DVR remotely, you will need:

1. High speed internet via router/mode

2. The router security credentials, you will need to access your router for certain parts of the

3. There are three tabs in the Network menu, Base, Advanced and Network State. The menu defaults to the Base tab. The DVR uses 192.168.1.88 as its default IP address.

NETWORK MENU - The Base Settings Tab

Base settings tab interface Diagram 3-21:
Network Card Type: The network card type is fixed for this device. The DVR has a built-in Wired Network (LAN) card.

【DHCP】: Allows the DVR to obtain an IP address automatically. Checking the DHCP box enables this feature. The DVR will search the network for a DHCP server and enter a dynamic IP address assigned by the server. The assigned dynamic IP address will be displayed in the IP Address field. You can manually enter a static IP address in the IP Address field if there is no DHCP service available. If you use the advanced tab’s PPPoE feature, you can’t set the IP Address, Subnet Mask and Gateway or use the DHCP feature.

【IP Address】: If you need to assign an IP address manually, enter numbers to modify the IP Address field, and then set the 【Subnet Mask】 and 【Gateway】 for the IP Address.

【First DNS Server】: DNS server IP address.

【Alternate DNS Server】: DNS alternate IP address.

【Physical Address】: Inputs physical address of current net port

**NETWORK MENU - The Advanced Settings Tab**
The Advanced settings tab allows you to configure the listed network functions. The Setting button beside each item accesses a pop-up window with settings for that item.

**Advance settings tab interface (Diagram 3-15 Network Configuration - Advanced):**

**DIAGRAM 3-15 NETWORK CONFIGURATION - ADVANCED**

【PPPOE】: Enables the PPPOE feature.

Enter the PPPOE username and password provided by your Internet Service Provider (ISP).

Operation: By using this feature, the DVR will automatically obtain a public IP address from your ISP. You can then access the DVR’s web interface by typing that IP address into Internet Explorer or some other browser.

【DDNS】: Enables the DVR to update a DDNS hostname, which will run on a fixed IP address web client.

Select the DDNS type. Various DDNS are currently supported, including CN99 DDNS, NO-IP DDNS, Private DDNS, Dyndns DDNS and Sysdns DDNS and others. Enable the function and enter the update server IP, port, DNS, username and password. Once setup, you can then login via the Web client by using this DNS in Internet Explorer or other browser.

Private DDNS servers are available for use with a specific DDNS server and client software.

For details refer to 5.1 DDNS Function
【NTP】: Turns NTP on/off. Network Time Protocol – allows the DVR to automatically sync with an SNTP time server.

Server IP: Enter the IP address of the NTP server.

Port: If the SNTP server only supports TCP, the unique port is 123.

Update Cycle: The interval options are between 1 min and 65535 min.

Time Zone: Lists times zones. Select the zone the DVR is located in. Options are GMT+0 – 12 and GMT-0 – 12.

【IP Filter】: DVR authority management. If you enable the white list, only DVRs in the IP list are allowed to connect. This system supports a maximum of 64 IP addresses.

【Multicast】: Sets transfer capability and ports.

Note: The settings for maximum number of connections and port settings are advanced technical settings. Don’t change them unless you know what you’re doing. Contact technical support if you need more information. The Multicast sub-menu has the following settings:

【Max Connection】 0-10, 0 indicates that no connections are allowed.

【Network connection NUM】: Selection options are from 0-32. You need to select it first then browse the real time video on the network. The number of connections depends on the network bandwidth. The greater the bandwidth, the more the network can handle and the smoother the video playback will be. The automatic setting adjusts these settings based on available network resources.

【Network Download NUM】: Should be set to 0-8.

【Transfer Mode】: Fluency priority or Picture Quality priority or self-adaption, according to the setting, the network automatically adjusts the stream.

【LAN Download】: If enabled, the speed is 1.5-2 times the normal speed.

【HTTP】: Default: 80

【TCP PORT】: Default: 8000, variable

【UDP PORT】: Default: 8001, variable

【UPnP】: Protocol on the router automatically opens port mapping, make sure UPnP feature is enabled on the router. Refer to chapter 5.2.1
【Email】: Set the sender mailbox SMTP server IP address, port, username, password and sender's mailbox, mail SSL Encryption.

Email title supports Chinese, English and Arabic numerals, Input maximum: 32 characters. Max supports: 3 Receiving Addresses and SSL Encryption Mailbox.

【FTP】: click “Set”

Set FTP server IP address, port and destination folder. System will create folders by IP, time and channel if there is no remote folder specified.

FTP username and password

Set a maximum file size, channel, time, type and etc.

Set FTP file length. Upload the whole recording if the file length is smaller than the setting; leave out the exceeded part if the file length exceeds the setting; 0 refers to uploading the entire recording in any condition.

Set up to two time periods and choose from 3 different recording types for the channels.
CONFIGURATION menu > the ALARM menu

The Alarm menu contains settings for the DVR’s alarm functions. The menu has three tabs: Detect, Net Alarm, and Local Alarm.

Note: D6104FV/D6108DV (4-channel and 8-channel DVRs) have no LOCAL ALARM Function so this tab is not functional.

Detect Tab Settings

Detect tab interface Diagram 3-16 Alarm Configurations:

【Motion Detection】: Motion detection and alarm.
【Set Area】: PAL: 22*18 = 396, NTSC: 22*15 = 330 zone mask.
【Sensitivity】: There are 6 sensitivity levels.
【Video Loss】: Detects video feed loss and alarm setting.
【Camera Masking】: Camera mask and alarm set
【Preferences Start】: Alarm preview
【Process】: To enter the alarm configuration interface.

**Diagram 3-17** ALARM CONFIGURATION-Detect-PROCESS MODE-PERIOD

【Period】: Sets the alarm activity period. Click “set” and then select up to 6 different period times that the alarm is to be activated (check the box and then select the times from and to the alarm should be activated – selecting 00:00 to 24:00 will set the alarm to run continuously)

**Diagram 3-18** ALARM CONFIGURATION-LOCAL ALARM-PROCESS MODE-LINKAGE
【Linkage Set】: to activate which monitoring method will be used:

【Record Channel】: continuous recording with all channels with time delay that is set.

【PTZ】: recording using an attached PTZ camera (recording modes are: none, preset, tour and pattern.

【Tour】: continuous recording using the “tour” method (recoding from one camera to another).

【Snapshot】: recording using a single frame instead of continuous recording.

**VIDEO DETECTION-MD-PROCESS**

<table>
<thead>
<tr>
<th>Period</th>
<th>Linkage Set</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Alarm Out**: Latch 10 sec.
- **Show Message**: selected
- **Send Email**: not selected
- **Pushed to phone**: not selected
- **Buzzer**: not selected

**DIAGRAM 3-19 ALARM CONFIGURATION-LOCAL ALARM –PROCESS MODE-ABNORMITY**

【Process】: enables or disables the alarm method to be used:

【Alarm Out】: does not function with 4 & 8 channel systems.

【Show Message】: displays a message on the viewing monitor that an alarm has been activated.

【Send Email】: sends an email alerting all members listed that an alarm has been activated.

【Buzzer】: sounds an audible alert that an alarm has been activated.

Time delay for alarm cancellation is 10-300 seconds.
3.13.4. CONFIGURATION MENU > THE ACCOUNT MENU

The Account menu contains settings for managing system Users and groups of Users.

⚠️ Note: Group and User names can be from 1-6 characters in length. Valid characters include letters, numbers, and limited symbols (underlining, dash and dot). You may not use a space as a beginning or ending character.

There is no limit to the number of groups or users. By default there are two group levels: admin and user. User management is controlled on two levels, Group level and User level. Group and User names cannot be duplicated, and a User can only belong to one group.

The Account menu User management interface is shown in Diagram 3-20 User Management:

【Add User】: Adds group member information and sets authorizations.

The default users are “admin”, “user” and a hidden “default”. The password of the first two usernames is 123456. An “admin” user has full system authorization; a “user” only has surveillance and playback authorization.

The hidden “default” user operates without a password in login mode and cannot delete. The DVR logs in automatically using the default account if there is “no user login”. A User can revise some limits of power so some operations can be performed without logging in.
Click 【Add User】 to call up the sub-menu then enter a User name, password and select the group and reusable options. Clicking reusable allows the account to be used for multiple logins.

*NOTE* Users can only belong to one Group and User rights cannot exceed Group rights.

【Modify User】: Modifies existing group member information and authorizations.

【Add Group】: Adds groups and sets up group authorizations.

Sets up a group and authorizes 60 items, including control panel, shut down, live view, playback, record, record backup, P/T/Z control, account, system information, alarm in/out settings, system configuration, search log, log delete, upgrade, operation authority, etc.

【Modify group】: Modifies existing Group information.

【Modify Password】: Changes passwords.

To change a password: select a User name, enter the old password then enter a new password. Click 【OK】 to confirm and finish setting the password.

A password must be 1-6 characters in length and can use characters including letters, numbers, and limited symbols: underline, dash and dot. You cannot use a space as a beginning or ending character.

Any account with management (admin) authorization can change the passwords of other accounts.
3.13.5. CONFIGURATION MENU > THE ABNORMALITY MENU

The Abnormality menu enables and configures system warnings and error messages.

Diagram 3-21 ABNORMALITY:

DIAGRAM 3-21 ABNORMALITY
There are five items in the Abnormality menu. To activate a warning or error message function, click on the check box beside it. The Process button beside each item gives access to further settings for that item.

【No Disk】: Displays a warning when the internal hard disk drive is not present or can't be detected.
【Process】 accesses: 【Alarm Output】 , 【Show Message】 and 【Send Email】 settings.
【No Disk Space】: Displays a warning when hard disk capacity is lower than the percentage threshold you enter.

The 【Process】 button accesses the same items as the one for 【No Disk】.
【Net Disconnection】: Displays a warning when a network is not connected.

The 【Process】 button access 【Alarm Output】 , 【Show Message】 , 【Send Email】 and 【Record Channel】.
【IP Conflict】: Displays a warning when IP addresses conflict.

The 【Process】 button accesses the same items as the one for 【No Disk】.
【Disk Error】: Displays a warning when there is an error in reading or writing to the hard disk.

The 【Process】 button accesses the same items as the one for 【No Disk】.

3.14. MAIN MENU > THE STORAGE MENU

3.14.1. HARD DISK MANAGEMENT

The Hard Disk Management menu has two tabs, Base and Record which give access to some disk management functions. Maintains and manages the DVR’s internal hard disk:
Diagram 3-22 STORAGE MANAGEMENT

Base Configuration

【HDD Base】as shown in Diagram 3-23 HDD management –base configuration, shows DVR storage capacity, available space and operational status.

*NOTE* the acronym HDD refers to “Hard Disk Drive”
【Format】: Enables User to format the DVR’s internal hard disk.

⚠️ Note: Formatting a hard disk erases all data on the drive.

【Set】: This controls the hard disk’s access mode setting. The options are read-write, read only or redundancy mode, with check boxes to enable or disable each mode. In read only mode, video data cannot be recovered. The sub-menu also displays a variety of drive status information.

Diagram 3-31 HDD S.M.A.R.T. Technology
The HDD Record Tab

HDD Record menu, as shown in Diagram 3-25 HDD Management-record, displays a recording log with recording start and stop times.

3.14.2. STORAGE MENU > THE BACKUP MENU

Connect an External USB device to one of the USB ports to back up recordings from the DVR’s internal hard disk using the commands in the “Backup” menu (see Diagram 3-26 Record Backup).
【Detect】: Identifies the external USB device and displays the device information.

【Backup】: Click on the box for the target external drive then click on 【Backup】 to enter the Backup menu (see Diagram 3-27 Backup).

![Backup Menu]

Select the recording’s Start and End times and click 【Add】 to add it to the list. Duplicate it by inputting the Start and End times again. Click 【Delete】 to clear the file list. Select the recording you want and click 【Start】 to backup, and display the time remaining.

【Erase】: Deletes all data on USB backup device.

⚠️ Note: USB backup automatically controls the DVR storage location.

⚠️ Note: This operation will cause permanent data loss by overwriting the target device and any data on it.
3.15. MAIN MENU > THE OUTPUT MENU

The Output menu has three menu sections, P/T/Z, RS-232 and Display which control management of peripherals connected to the DVR system. Diagram 3-28 Peripheral Management shows the Output menu interface.

Note: The WinBook Security model included with your kit does not offer P/T/Z nor RS232 functionality.
3.15.1. OUTPUT MENU > THE DISPLAY MENU

Display menu sets the unit’s display and polling features. The menu has three tabs, GUI, Output Configuration and Tour Configuration.

**Display Menu**

![Diagram 3-29 Output-Display Menu]

The GUI tab sets the appearance of the On Screen Display (OSD).

- **Transparency**: Has 4 levels of varying translucence or opacity.
- **Channel Name**: To modify a channel name, the available options are symbols, letters, and numbers.

⚠️ **Note**: 1) Channel names can use up to 48 half-width characters

2) Limit to 16 characters, otherwise some problems may occur in multi-screen mode.

- **Time Display**: Selects whether the time is displayed on screen.
- **Channel Display**: Selects whether the channel name is displayed on screen.
- **Overlay Info**: Selects whether overlaying information is displayed on screen.
The Output Configuration Tab

The Output Configuration tab displays several control settings for a video display monitor connected to the DVR system via the VGA port.

**[VGA Output Resolution]**: Select VGA resolution and refresh rate, the default setting is 1024 × 768 @60Hz. There are several other options.

**[TV Adjust]**: Adjust the display output area. It adjusts the image to fit the display.

**[VGA/TV Color Settings]**: Adjust the display’s hue, brightness, contrast and saturation settings.

**[TV Color Settings]**: Adjusts the display’s brightness, contrast and saturation settings.
The Tour Configuration Tab

The Tour Configuration tab sets up and enables the touring functions.

![Diagram 3-31 Tour Configuration](image)

This menu sets up the tour mode and intervals between rotations. The time interval option is between 5 and 120 seconds and includes mode for single, four, or eight, screen options.

- **Motion Tour**: Sets up motion detection-based tour mode.
- **Alarm Tour**: Sets up the alarm-based tour mode.

⚠️ **Note**: Setting shortcut - click the button at the upper right-hand corner of the monitored display, or press the Shift Key, switches modes and allows you to control the tour.
3.16. MAIN MENU > THE MAINTENANCE MENU

The following graphic shows the Maintenance menu interface (Diagram 3-32 Maintenance).

![Diagram 3-32 Maintenance]

**DIAGRAM 3-331 MAINTENANCE**

3.16.1. MAINTENANCE MENU > THE LOG MENU

【LOG】: Displays system log information.

![Diagram 3-34 LOG]

**DIAGRAM 3-34 LOG**
To view log entries, select the log type and desired time segment and then press the Find button. The system will display the log in tab form. You can also click the backup button to export the logs to your computer for backup.

Log types: system operation; configuration; data management; alarm event; recording; user management; log delete; document operation. Select the type and time segment to filter the log list.

Click “Clear” to delete all logs.

3.16.2. MAINTENANCE MENU > THE VERSION MENU
Displays features, software version etc. You can also upgrade the DVR’s firmware from here.

【Start】: Connect a USB flash device, which contains the upgrade firmware and click “Start”.

⚠️ Note: Improperly upgrading the firmware could cause a startup failure. Only perform a firmware upgrade if you are sure you know what you are doing, or under professional supervision.

3.16.3. MAINTENANCE MENU > THE DEFAULTS MENU
The Defaults menu restores system defaults. You can restore the defaults selectively by selecting only those items you require, or you can restore all defaults by selecting all items.

【Defaults】: Restore （items are selectable） (Diagram 3-43 Restore Defaults)
Note: Menu transparency, language, time format, video format, IP address, user IDs, etc. are not affected.

3.16.4. MAINTENANCE MENU > THE BPS MENU

【BPS】: Displays the video size and data rate of each channel by waveform.

Note: These are estimated values and are for reference only.

3.16.5. MAINTENANCE MENU > THE AUTO MAINTAIN MENU

【AUTO MAINTAIN】: Sets up auto maintenance items: auto-reboot will automatically reboot the DVR at days and times specified (reset all cameras) and auto-deletion of old files will delete files that reach the time limitation that is preset.

3.16.6. MAINTENANCE MENU > THE ON-LINE USERS MENU

【ONLINE USERS】: Displays which Users are currently online accessing the system.

3.17. MAIN MENU > THE SHUTDOWN MENU

DIAGRAM 3-44 SHUTDOWN

【Menu Logout】: Logs out of the currently logged in User account.

【Shutdown】: Shuts down the DVR.

【Restart System】: Reboots the DVR.
4. WEB & CLIENT

4.1. WEB OPERATION

4.1.1. NETWORK CONNECTION

You can check the LED indicator on the back of your DVR to verify Ethernet connectivity. When the LED is lit, it indicates a working network connection.

Configure your IP address, subnet mask and gateway for the computer and DVR. If you are not using DHCP, you will need to ensure the following settings are in place under the Network Configuration Base Menu:

- Assign a static IP address, typically 192.168.1.XXX (2-254)
- Subnet Mask should remain 255.255.255.0
- Gateway should match the assigned static IP address
- DNS can be most commonly attributed to “8.8.8.8”

For details about the DVR network configuration, please see the section on 【Configuration】→【Network Settings】 earlier in this manual.

Ensure that the IP address is correct and check whether the DVR is on the network.

Active x CONTROL SETUP & LOG IN / LOG Out

Using the DVR’s IP address a user can remotely access the DVR via a web browser such as Internet Explorer. The following log in screen will appear when you access the DVR’s IP address via a browser. Internet Explorer is used in the examples shown.

Open IE on a computer on the same network. Input the IP address of the DVR in IE address bar and press enter. If your HTTP port is not 80, add the port number after IP address. Such as http://192.168.1.182:10182

When you access the DVR’s log in screen, the browser will ask you to install the Active X plug-in (add-on), if it is not already installed in the browser. Proceed with the installation.
NOTE: Some users may experience a continued error when trying to access the web interface over Internet Explorer, most often in relation to Active X security settings. The following steps should be taken to solve this error:

1. Under the “Internet Options” menu in, navigate to the “Security” Tab:

![Internet Options menu](image1)

2. De-select the “Enable Protected Mode” checkbox and then select the “Custom Level” option.

3. Scroll down to the “ActiveX controls and plug-ins” section and make the following changes:
a. Enable the “Allow previously unused ActiveX controls to run without prompt” function.

b. Enable the “Allow Scriptlets” function.

c. Enable the “Display video & animation on a webpage that does not external media player” function.

d. Enable the “Prompt” feature for the “Download unsigned ActiveX controls” function.

e. Enable the “Prompt” feature for the “Initialize and script the ActiveX controls not marked as safe for scripting” function.

4. Accept and press “OK” to any and all pop-ups that may appear after making the changes.

5. Restart Internet Explorer and attempt to access the web interface.

6. You should be prompted to install the ‘I-Smart Cities’ plug in, press “Install” when the menu option appears.

7. After successful installation, return to the security menu in Internet Explorer and reverse the changes you just made, they are only needed for a one-time installation purpose.

Diagram 4-1 (B) login screen
Click “Install”, the re-open the browser, the following tips will be shown as below.

![User Account Control](image)

Click the “Yes” button to install the Active-X plug-in automatically.

After installing the Active-X plug-in, you can input your User name *(default: admin)*, password *(default:123456)* and click “Login”. After the user login process succeeds, click “Exit” to quit.

Please refer to “Diagram 4-3 WEB Interface”.

**Note:** If you are using IE 9.0 and are unable to access the web interface, it may be a compatibility problem; the following steps may solve this:
4.1.2. WEB OPERATION INTERFACE

```
<table>
<thead>
<tr>
<th>Index</th>
<th>Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Channel</td>
<td>Channel selection</td>
</tr>
<tr>
<td>2</td>
<td>Function key</td>
<td>Local playback: playback local recording</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Open all: play live views in surveillance window</td>
</tr>
<tr>
<td>3</td>
<td>Surveillance window</td>
<td>Change window layout</td>
</tr>
<tr>
<td>4</td>
<td>Image color &amp; other saturation</td>
<td>Image color: modify brightness, contrast, saturation and hue</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other: set capture path, recording download path and reboot</td>
</tr>
<tr>
<td>5</td>
<td>P/T/Z control (Not Available)</td>
<td>P/T/Z control menu</td>
</tr>
<tr>
<td>6</td>
<td>Menu</td>
<td>System configuration, recording search, alarm setting, exit, etc.</td>
</tr>
</tbody>
</table>
```

4.1.3. LIVE VIEW
In the Web interface, select the focus window in the live window. The focus window has a light blue border. From the left channel column, select the channel, as shown in Diagram 4-2 Channel Choices:

Click on area in upper right corner, this allows you to choose to open or close the channel to the main stream or secondary stream. It also displays the current DVR's IP address and transfer rate, as shown in Diagram 4-3 Stream information.

The lower left corner shows the current video feed's channel name.

The upper right corner shows the current video feed's time display.

Click " " (Lower left corner of the display window) to switch between single screen and multi-screen views.

The function icons are located in the lower right corner of the display window, as shown in Diagram 4-4 Function. The six icons represent Area Zoom, Multi-screen switch, Local Record, Capture, Audio, and Video Off.

Area Zoom: Video images can be enlarged.

Multi-Screen switch: Switch from a single screen to multi-screen views and vice versa.

Local Record: Saves and records video to a local hard disk while in live view. Set up the recording path in the Configuration menu.
Capture: Captures the present video channel. Set up the path in “Other”.

Sound: Turns audio on or off.

Video Off: Turns off the focus window.

DIAGRAM 4-4 FUNCTION ICONS

4.1.4. CONFIGURATION

Access the DVR’s local configuration menu by clicking on “Configuration”. For further details please refer to 【Local operation guide】 (Diagram 4-5 CONFIGURATION).
4.1.5. SEARCH RECORD

Click “Search” to open the search window (Diagram 4-10). You can search and operate recordings, alarms, motion detection, and local recordings.

Search Record
By selecting the recording type, starting and ending times, and clicking the search button, you can obtain a list of files on the DVR. Select the desired file and it can be played.

**Play**

Double-click a search result to play it in the video window. Control the video playback by using the control icons. A set of standard video playback control icons will display at the bottom of the video window.

**Download**

Select a searched video to download. The download speed and percentage are displayed on the bottom of the screen.
4.1.6. ALARM CONFIGURATION

Click 【Alarm】 to enter the alarm setup menu. You can set up and operate the alarm functions, as shown in Diagram 4-6 Alarm.

Choose the type of alarm in the menu; monitor video loss, motion detection, disk full, disk error, video mask, and external alarms.

Click 【Video Pop-up】 open the video loss, motion detection, hard disk full, hard disk failure, video block, video encoder, alarm pop-up.

Click on 【Prompt】 open the prompts. When an alarm occurs in real-time it pops up an alarm window menu.

Click on the 【Sound Pop-up】 check box and you can choose an alarm tone that is pre-recorded on the local hard drive and will play when an alarm occurs. The alarm tone files are in the WAV format.

![Alarm Configuration Diagram]

DIAGRAM 4-6 ALARM CONFIGURATION

4.1.7. ABOUT

Please refer to the Web controls for relevant version information.
5. FUNCTIONS

5.1 DDNS FUNCTION

5.1.1. SUMMARY

Dynamic DNS is a kind of system which assigns an internet domain name to a variable IP address. According to the rules of internet domain names, a domain name must associate with a fixed IP address. Dynamic DNS provides a fixed Name server for the dynamic domain, and then guides the domain search to that IP address using a dynamic user through the Name server, which allows an outside user to connect with the dynamic user’s URL.

5.1.2. VSSIP

VSSIP is a professional dynamic domain name analysis server embedded in this DVR. Please contact your dealer or agent for a DDNS account number. Click enable in the configuration window after getting the account number, and input the account number information.

5.1.3. CN99 (WWW.3322.ORG)

Register

Register New Users or Login at www.3322.org.

Click “My Control Panel” in the navigation bar.

Click “New” on the left side under DDNS.

Fill in the name of the host machine, the IP address will automatically detected. Leave the Mail Servers blank, and then click on the “OK” button.

DVR Settings

Open 【Main Menu】→【Configuration】→【Network】→【Advanced】→【DDNS】→Enable

<table>
<thead>
<tr>
<th>Name</th>
<th>Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDNS</td>
<td>CN99 DDNS</td>
</tr>
<tr>
<td>IP</td>
<td>Members.3322.org</td>
</tr>
<tr>
<td>Port</td>
<td>80</td>
</tr>
</tbody>
</table>
After setting up the information as shown above, you can access the Embedded DVR via XXX.3322.org

Notice: The main machine's IP address should refer to the information on the website.

5.1.4. NO-IP (WWW.NO-IP.COM)

Register
Register a new user name at No-IP and click on 【Create Account】.
Create a domain name and click on 【Add a Host】.

DVR Setting
Open 【Main Menu】 → 【Configuration】 → 【Network】 → 【Advanced】 → 【DDNS】 → 【Enable】

<table>
<thead>
<tr>
<th>Item</th>
<th>Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDNS</td>
<td>NO-IP DDNS</td>
</tr>
<tr>
<td>IP</td>
<td>dynupdate.no-ip.com</td>
</tr>
<tr>
<td>Port</td>
<td>80</td>
</tr>
<tr>
<td>Domain name</td>
<td>xxx.xxx.org</td>
</tr>
<tr>
<td>Username</td>
<td>xxx</td>
</tr>
<tr>
<td>Password</td>
<td>xxxxxxx</td>
</tr>
</tbody>
</table>

5.1.5. DYNDNS DDNS (WWW.DYNDNS.COM)

Register
To login at Dyndns, register an account.
Click on the confirmation link, to log in to the account, click 【Add Host Services】 in [My Services], set your own real name and then follow the directions.

### Configuring the DVR

Open 【Main Menu】→【Configuration】→【Network】→【Advanced】→【DDNS】→【Enable】

<table>
<thead>
<tr>
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<th>Configuration</th>
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<td>Dyndns DDNS</td>
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<tr>
<td>IP</td>
<td>Members.dyndns.org</td>
</tr>
<tr>
<td>Port</td>
<td>80</td>
</tr>
<tr>
<td>Domain name</td>
<td>xxx.xxx.com</td>
</tr>
<tr>
<td>Username</td>
<td>xxx</td>
</tr>
<tr>
<td>Password</td>
<td>xxxxxx</td>
</tr>
</tbody>
</table>

5.1.6. **LTS DDNS**（HTTP://NS1.DVRLISTS.COM/）

**Register**

To login at LTS DDNS, register an account.

Click on the confirmation link, to log in to the account, click 【Add Host Services】 in [My Services], set your own real name and then follow the directions.

### Configuring the DVR

Open 【Main Menu】→【Configuration】→【Network】→【Advanced】→【DDNS】→【Enable】

<table>
<thead>
<tr>
<th>Item</th>
<th>Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td>DDNS</td>
<td>LTS DDNS</td>
</tr>
<tr>
<td>IP</td>
<td>Members.dvrlist.com</td>
</tr>
<tr>
<td>Port</td>
<td>80</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Domain name</td>
<td>xxx.dvrlst.com</td>
</tr>
<tr>
<td>Username</td>
<td>xxx</td>
</tr>
<tr>
<td>Password</td>
<td>xxxxxxx</td>
</tr>
</tbody>
</table>

5.1.7. TEST AND VERIFY DDNS

After configuring the Embedded DVR, wait for a few minutes to allow the analysis records to update. Click on Operation in the menu, input “cmd” and click “OK” to open a command line window, as shown in Diagram 5-1 Run Command Line Program.

DIAGRAM 5-1 RUN COMMAND LINE PROGRAM

Input “ping + Domain name” then press Enter, as shown in Diagram 5-2 DNS.
The computer will analyze the domain name configured in the DVR, and return to the current IP address, as the graphic shows underlined in red. When the IP address corresponds to the embedded DVR’s IP address in Public internet, it means the DDNS is set up correctly. If they are not the same, please check the network connection of the embedded DVR and the DDNS information.

5.2. PORT FORWARDING

Port forwarding is the mapping of a port outside of the web host’s IP address to a machine inside the web, and provides service. When a user connects to the port of the IP address, the server will automatically map the request to the corresponding machine on the LAN.

With the port mapping function, we can map many ports of one machine’s IP address to different machines and different ports on the web. Port mapping can also have other special functions, like POP, SMTP, TELNET, etc. Theoretically, it can provide more than sixty thousand ports.

For example, if we want to map a web server which has an IP address of 192.168.111.10, we just need to input the IP address and TCP port 80 into the port mapping chart of the router.

There are two methods to map a port, automatic and manual. The UPnP function automatically maps the port and modifies the router’s port mapping chart.
5.2.1. UPNP FUNCTION

In order to get a connection to the DVR through a Public network, we need to set the Router to cross the NAT of the DVR. UPnP can make the NAT cross automatically via the UPnP agreement of the DVR, and you don’t have to set up the Router.

⚠️ Note: To use the UPnP Function, you must have a Router that supports UPnP.

1.

Connect the Router to your network, access the Router’s configuration menus, set up the Router and enable the UPnP Function.

Routers from different manufacturers may have some differences, please refer to the specific router’s instructions before setting it up.

The second step

Connect the DVR to the Router. The configuration will automatically connect to the IP address or static IP. After setting up the IP address, click the Advanced Configuration and navigate to the menu with ports and multicast etc. Enable 【UPnP port mapping】.

The third step

Enter the Router management interface. Detect the port if there is already Port Mapping. If there is, it shows that the UPnP set up is finished.

The fourth step

Input the IP address in a web browser such as Internet Explorer, and add the port number of the DVR, for example: 155.157.12.227:81. If you want to enter by the Client Software, use the TCP port offered by the outer network.

⚠️ Note: If there are a few DVRs that need to be set up via the UPnP function, in order to avoid IP conflict, set the ports of the embedded DVR to different port numbers. Otherwise, it will choose a previously set up DVR port as the first choice.

5.2.2. MANUAL PORT MAPPING

The first step

Connect the DVR to a Router and set up a static IP address.
The second step
Log in to the Router, access its configuration menu, and enter the required settings. Then go to the port, set the IP address distributed by the DVR, and set the rules for port mapping, add the HTTP and TCP ports to the mapping list.

The default access ports of the DVR include HTTP port 80 and TCP port 8000, if the ports are occupied by other devices; please modify the default port of the DVR to other vacant ports.

The third step
Input the public net IP address into the web browser, and add the port number of the DVR you want to access after the IP, for example: http://155.157.12.227:81. If you want to access it via Client Software, you can use the outer network TCP port directly.

⚠️ Notice: For detailed configuration settings, please refer to the Router user manual.

5.3. THE NTP FUNCTION
The NTP function handles time synchronization between the DVR and the GPS clock server to ensure the accuracy of both devices.

5.3.1. INTERNET CONFIGURATION
Go to 【CONFIGURATION】→【NETWORK】，select 【Advanced】，then select 【NTP】 to configure it. After the device can access the Internet, the NTP function can use a standard NTP server to automatically set the time. Enter the IP address and domain name of an NTP server.

To activate the NTP function, click “Enable”.

You can select how often the DVR will update its clock setting. The interval options are from 1 to 65535 minutes.

5.3.2. INTRANET CONFIGURATION
If the DVR is connected to an intranet, the user can use a privately-owned server as the clock source. Enter the private NTP server address in the DVR’s NTP configuration (as noted above) to set it as the clock source.

Privately-owned NTP servers can use standard NTP products to provide accurate time setting from a PC system. Please refer to the instructions below when using a PC system as an NTP server.
NTP Server Set Up under Windows

“Start” menu → “Run”, input “regedit” to enter the registry editing feature.

Build a new key assignment of DWORD Value by going to:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W32Time\Parameters\registry sub key (NtpServer);

Change the value to 1, and save.

Restart the computer.

*NOTE* changes to Windows registry must be done carefully and only make the changes as noted above. It is best to always make a backup of your registry before attempting any changes.

NTP Server Set Up Under Linux

Due to the differences between Linux distributions, for details on how to set up an NTP server under Linux, refer to the manual for the distribution you are using.

5.4. VOICE INTERCOM

5.4.1. SUMMARY

The Voice Intercom function enables the DVR bidirectional communication: The User can talk and listen using the provided remote client software or over the Web via the DVR’s audio input and output ports.

There are two types of bidirectional communication, sharing and standalone. These vary by model. Please refer to your DVR specifications to determine which is supported for your model.

5.4.2. CONFIGURATION

Local Configuration

Connect a microphone to the MIC input port and connect a pair of speakers to the audio output port.

If there is no standalone MIC input port, please connect a microphone to the Number 1 audio input port.
Note: The audio needs to be connected to a powered audio output device.

Remote PC Configuration
Connect a microphone and powered speakers to the computer.
Enable bidirectional communication in the client software or the Web interface.

5.5. HARD DISK REDUNDANCY

The hard disk drive (HDD) redundancy function can backup recorded files. The User can then retrieve files from a redundant HDD if a single HDD is damaged. This enhanced system data safety.

The HDD redundancy function performs a double backup of data from the designated channel to the HDD, so the DVR needs a standalone hard disk for the redundancy function to be effective.

Hard Disk Redundancy Configuration
Open the Main Menu and then the Storage menu to access storage configuration. Select an HDD as the redundant drive, and then click on Setting.

The Redundancy HDD must be an independent drive. The User can set several hard disks as a redundancy HDD group. Once an HDD is assigned as a redundant HDD, recorded data can be saved to both the main HDD and the redundant HDD.

The data on the redundant HDD should be automatically cycled; the cycle period depends on the recording data and the capacity of the redundant HDD.

Note: Make sure there are two HDDs, with at least one in the DVR. One is for read and write and the other for redundancy.

Channel Redundancy Configuration
The User can choose some or all of the channels to back-up. Go to 【Configuration】→【Record】 and choose a channel, then check the 【Redundancy】 box.

Note: Data can only be saved to a normal read/write HDD if Redundancy is not enabled.

Retrieve HDD Redundancy
The User can retrieve backup recordings from the back-up HDD when the main R/W HDD is damaged or data is lost. First, shut down the DVR and remove the damaged HDD, then restart DVR. Next, go to 【Main menu】→【Storage】 and set the back-up (redundant) HDD as the main read/write HDD, after which it can be searched.
5.6. HDD S.M.A.R.T

S.M.A.R.T, or “Self-Monitoring, Analysis and Reporting Technology”, is a hard disk technology that is incorporated into some hard disk drives.

A S.M.A.R.T HDD can analyze the drive’s head, disc, motor, circuit operation, history and default security values via monitoring instructions in the HDD and the surveillance software. An alarm will automatically be sent to the user when a value is outside the scope of the security situation.

Detection parameters for a Seagate HDD, for example, are divided into seven parts: ID detection code, Attribute Description, Threshold, Attribute Value, Worst, Date, and Status.

1. ID Detection Code

ID detection codes are not uniform; different manufacturers may assign varying attributes to an ID code number, or increase or decrease the quantity according to the detected parameter’s quantity.

For example, an ID detection code for Western Digital HDDs is “04”, and the procedure is Start/Stop Count, but the procedure for the same code in a Fujitsu HDD is the “number of times the spindle motor is activated”.

2. Attribute Description

Attribute Description: Name of detectable item. The manufacturer can increase or decrease the rates. As an ATA standard there are constant updates, sometimes different models of the same brand may be quite different, but it is a must to ensure that the major test items are specified by S.M.A.R.T. (although different manufacturers may have differing names, the essence of the monitoring is the same.)

- 1 Read Error Rate
- 2 Spin up Time
- 4 Start/Stop Count
- 5 Relocated Sector Count
- 7 Seek Error Rate
- 9 Power-on Hours Count
- 10 Spin-up Retry Count
- 194 Power temperatures
- 195 ECC on the Fly count
- 197 Current Pending Sector Count
- 198 Disconnection beyond repair
- 199 CRC cyclic redundancy check
200 Write Error Count

⚠️ Note: Different manufacturers and different models have different attribute descriptions. The user does not need to know the exact meanings, and attribute detection values are good enough.

3 Threshold

This is specified by a manufacturer-calculated formula. If there is an attribute value lower than the threshold, this means the HDD has become unreliable and could easily lose data stored on it. The composition and size of reliable attribute values are different for different HDDs. It should be noted that the ATA standard only provides some S.M.A.R.T. parameters; it does not provide specific values. A "Threshold" value is determined by the manufacturer based on the product's features. Thus, results produced by the manufacturer's detection software are very different from testing software in Windows (such as AIDA32).

4 Attribute Value

Attribute value is the maximum normal value; the general range is from 1 to 253. Typically, the maximum attribute value is 100 (for IBM, Quantum, and Fujitsu) or 253 (for Samsung). Of course, there are some exceptions, for example, some models produced by Western Digital have two different attribute values, and the property value is set to 200 during production, but after that it is changed to 100.

5 Worst

The worst value is the largest non-normal value in the normal operation of an HDD. It is a value calculated for an HDD’s cumulative running. It is constantly refreshed according to the drive’s running cycle, and it is very close to the threshold. Whether or not the HDD is normal by S.M.A.R.T analysis is based on the comparison with the threshold value. The maximum value appears when using a new HDD, which continues to decrease with everyday use or if an error happens. Consequently, larger attribute values mean better quality and higher reliability and smaller values mean a greater possibility of failure.

6 Dates

Actual values of an HDD’s detection of items; many of the values are cumulative values.

7 Status

The drive Status is current when all of the HDD’s attributes are analyzed and compared by the S.M.A.R.T. system. It is also important information to judge if the HDD is healthy or not.

There are three Status states: Normal, Alarm and Error, which are closely related to the Pre-failure/advisory BIT.

5.7. UPDATING DVR FIRMWARE:

You can update the DVR firmware using a downloaded update file.

(1) Uncompress the DVR update file (e.g. DeviceUpdate_V1.10.R.20120822.rar)

(2) Double-click the DVR network update tool (RECUpgrade.exe) as below:
(3) Enter the IP address and TCP port code of the DVR device. Click on Login and a login window will display:

(4) Enter a User name and password and click on OK to log in to the DVR:

(5) Drag the "updatepacket.bin" file to the entry box which shows after opening the files as illustrated below:
(6). Click the BIOS button to the updating.

(7). USB UPDATE

Re-name the updatepacket.bin file to vss.bin, put it into the root directory of a USB drive, then plug the USB drive into the USB port on the DVR. Using the DVR’s OSD interface, go to Main Menu > Maintenance > Version and click on Start to install the update.

5.8. GLOSSARY

Dual-stream

Dual-stream: one high bit rate stream for the local HDD for storage QCIF/CIF/2CIF/DCIF/4CIF coding; uses other low bit rate stream for network transmissions, such as QCIF / CIF coding.

I Frame

I frame: intra-frame images, removes redundant information to compress the transmittable data, also known as key frames.
B Frame

B frame: According to a time redundancy of the source image sequence, the previously encoded frame accounts for the source image after the encoded frame is compressed, also known as the bi-directional prediction frame.

P Frame

P-frame: Image frames are lower quality than the previous B Frame, also known as predicted frames.

Wide Dynamic

Bright parts and dark parts in particular can be seen very clearly at the same time. Wide dynamic range is a ratio between the brightest luminance signal value and the darkest value.

S. M. A. R. T.

S.M.A.R.T. (Self Monitoring, Analysis and Reporting Technology): Now widely used in hard disk data security technology, a monitoring system analyzes motor, circuit, HDD and disk head when a HDD is running, and warns you when there is an abnormality.

CVBS

Composite Video Broadcast Signal, consists of luminance and color signals from the composite baseband signal.

BNC

Coaxial cable connector, composite video signals or audio signals, commonly use 75 ohm connectors. BNC welding is used and you should inspect the strength of the weld and remove burrs, or the signal wire and shield's contacts will lead to a substantial decrease of signal strength.

5.9. HDD CAPACITY CALCULATION

5.9.1. HDD CAPACITY CALCULATION REFERENCE

When first installing the DVR, check if the DVR’s internal HDD has been properly installed.

There is no capacity limitation for the DVR’s internal HDD, choose an appropriate capacity HDD according to your recording requirements.

HDD Capacity Formula:
HDD Recording Capacity = number of channels \times \text{time in use (hours)} \times \text{HDD space used per recording hour (MB/hour)}

You can calculate the formula for recording time:

\[
Recording time (\text{hour}) = \frac{Total HDD Capacity (\text{MB})}{Capacity Occupation per Hour (\text{MB/hr}) \times Amount of Channel}
\]

\(\text{Note: } 1\text{GB}=1000\text{MB}, \text{not } 1\text{GB}=1024\text{MB}, \text{so the HDD capacity shown in Base Configuration under HDD Management is really less than what it is marked.}\)

File size per hour (CBR).

<table>
<thead>
<tr>
<th>Bit Rate</th>
<th>File</th>
<th>Bit Rate</th>
<th>File</th>
<th>Bit Rate</th>
<th>File</th>
</tr>
</thead>
<tbody>
<tr>
<td>96k</td>
<td>42M</td>
<td>320k</td>
<td>140M</td>
<td>896k</td>
<td>393M</td>
</tr>
<tr>
<td>128k</td>
<td>56M</td>
<td>384k</td>
<td>168M</td>
<td>1.00M</td>
<td>450M</td>
</tr>
<tr>
<td>160k</td>
<td>70M</td>
<td>448k</td>
<td>196M</td>
<td>1.25M</td>
<td>562M</td>
</tr>
<tr>
<td>192k</td>
<td>84M</td>
<td>512k</td>
<td>225M</td>
<td>1.50M</td>
<td>675M</td>
</tr>
<tr>
<td>224k</td>
<td>98M</td>
<td>640k</td>
<td>281M</td>
<td>1.75M</td>
<td>787M</td>
</tr>
<tr>
<td>256k</td>
<td>112M</td>
<td>768k</td>
<td>337M</td>
<td>2.00M</td>
<td>900M</td>
</tr>
</tbody>
</table>

Form5-1 Record File Size

File size is more unpredictable when using VBR; please refer to the real size of the recorded file.

5.9.2. HARD DISK PROBLEM

Use Detection Tools provided by the HDD manufacturer to detect HDD malfunctions and solve the problem. We recommend Seagate and Western Digital drives.

How To Detect A Seagate HDD

a) Go to [www.seagate.com](http://www.seagate.com). Click Support & Downloads \(\rightarrow\) choose Sea Tools, download the tool, as in Diagram 5-11:

![SeaTools for Windows](image-url)

Go To Download | See the tutorial | Learn more

---

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b) Double-click to install the downloaded file, then click on the installed file to detect HDD information for the PC.

c) Choose the HDD for detection (other manufacturer's hard disk are suitable too).

**How To Detect Western Digital HDDs**

a) Go to [www.wdc.com](http://www.wdc.com), choose WD support / download / SATA&SAS / WD Caviar / GP then download the software as shown in Diagram 5-14 WD Download.

![WD Downloads](image)

b) Click on the icon for hard disk detection after downloading.

c) Double-click on the hard disk in the device list, as in Diagram 5-15 WD Detect:
5.10. COMMON FAULTS

**DVR startup failure or continuous reboot**

Possible reasons:

1. The system has been damaged by a bad DVR update.
2. There is a problem with the DVR main board, please contact your supplier.
3. There is an HDD error. Replace the faulty HDD.

**Blurred screen in preview mode**

Possible reasons:

Make sure your camera’s settings match the DVR’s video settings. If a camera is set to the NTSC standard but the DVR is set to the PAL standard, the preview will be blurred.

**Blurred screen in playback mode or failure to play back recordings**

Possible reasons:

1. Procedure error, reboot the DVR.
2. HDD error, test or replace the HDD.

3. DVR hardware failure, contact your supplier.

**Cannot connect to DVR through network**

Possible reasons:

1. Check if the network connection is correct.

2. Check if the DVR network configuration parameters are correct.

3. Check whether IP address conflicts exist in the network.

**Downloaded recording cannot be played**

Possible reasons:

1. Player installation error.

2. The USB or HDD device has an error.

3. Do not install graphic software later than DirectX 8.1.

**Internet Explorer Crash**

Possible reasons:
Close Internet Explorer, restart it, access Internet Options from the Tools menu and go to the Advanced tab. Make sure the memory protection item is not enabled. See the following:

**Internet Explorer 9.0 or above**

Please use a compatible mode if you are having operation function difficulty with your IE browser.
1. INTRODUCTION

This infrared CCTV camera is designed with Infrared LEDs, enabling Night Vision.

2. CAUTIONS

(1) Do not place the camera in direct sunlight, rain, or dust.

(2) Do not touch the CMOS sensor with your fingers. If cleaning is necessary, please use a soft cloth moistened with a little alcohol to wipe off any dust.

(3) Before installing please ensure the power source works.

(4) Do not drop or strike the camera against a hard surface.

3. INSTALLATION

(1) Attach the camera to the mounting bracket using the included screws.

(2) Attach the mounting bracket to a wall or designated area using the included screws and wall anchors. If the camera is being mounted outdoors, please ensure the video and power connectors are protected from the weather; either behind a wall, in a junction box, or covered with weatherproof material.

*WARNING* Do not mount the camera next to high voltage wiring or where the lens will be subjected to direct or reflected bright light.

(3) Connect the camera to the included power supply according to the diagram below.
4. TECHNICAL SPECIFICATIONS

Image Sensor: 1/4" CMOS

Effective Pixels: NTSC: 720(H) x 480 (V)

Signal System: NTSC

Horizontal Resolution: 700TV Lines

Lens: 3.6mm

Minimum Illumination: 0 Lux

Back Light Compensation: Internal

Shutter Speed: 1/60 ~ 1/100,000 sec

White Balance: Auto

S/N Ratio: More than 48db (AGC OFF)

Video Output: 1.0Vp-p, 75Ω (BNC)

Power Requirement: DC12V/500mA MAX

Infrared Wave Length: 850nm

IR Distance: 15m

IR LEDs: 24pcs

Dimensions (inches): (L) 3.43” x (W) 2.20” x (H) 2.20”

Operating temp: -30°C ~ +50°C
FCC Statement:

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

Warranty Statement:

This product is covered by standard warranty terms and conditions for a period of 12 months from the date of purchase.