

DIY



HOME
GUARD



DIY CCTV Security Kit

Instruction Manual

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storageoptions.com

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
<p>TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER.</p> <p>NO USER SERVICABLE PARTS INSIDE.</p> <p>REFER SERVICING TO QUALIFIED PERSONNEL.</p>		



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of non-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT
EXPOSE THIS UNIT TO RAIN OR MOISTURE

CAUTION:

TO PREVENT ELECTRIC SHOCK, ENSURE THE PLUG
IS FULLY INSERTED INTO A MAINS SOCKET

IMPORTANT SAFEGUARD



All lead-free products offered by the company comply with the requirements of the European law of the Restriction of Hazardous Substances (RoHS) directive, which means our manufacturing processes and products are strictly “lead-free” and without the hazardous substances cited in the directive.



The crossed-out wheeled bin mark symbolizes that within the European Union the product must be collected separately at the product’s end-of-life. This applies to your product and any peripherals marked with this symbol. Do not dispose of these products as unsorted municipal waste. Contact your local dealer for procedures for recycling this equipment.

DISCLAIMER

We reserve the right to revise or remove any content in this manual at any time. We do not warrant or assume any legal liability or responsibility for the accuracy, completeness, or usefulness of this manual. The content of this manual is subject to change without notice.

RECOMMENDATIONS

- **AVOID DUSTY LOCATIONS:** Excessive build-up of dust may cause the unit to fail.
- **INSTALL IN VENTILATED SPACE:** Ensure adequate airflow around the DVR to prevent overheating.
- **DO NOT EXPOSE TO MOISTURE:** Exposing the unit to water poses high risk of electric shock.
- **DO NOT DROP:** Doing so could damage internal components.
- **DO NOT OPEN CHASSIS:** No user-serviceable parts inside.

DEFAULT PASS CODE INFORMATION

Username: admin

Password :

No password is set on the “admin” account by default, do not enter a password.

WARRANTY AND TECHNICAL SUPPORT

To help you make the most of this product you’ll find a host of information including full product manuals, FAQ, troubleshooting guides and a support service if you have specific questions, available at our support website: storageoptions.com/support.

This product is also backed by a 12 month warranty in the unlikely event of something going wrong. More information and warranty registration is available at storageoptions.com/warranty.

Support:

storageoptions.com/support/

Warranty:

storageoptions.com/warranty/

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NOTE

To quickly access your DVR from your mobile device, please refer to the guide inside the back cover.

1 Introduction

Congratulations on your purchase of this Homeguard DIY CCTV Kit. Homeguard by Storage Options offers a complete CCTV solution for home or office security, featuring high quality cameras, internal HDD, easy setup and configuration, alarm triggers, and network connectivity.

With this kit, you can easily record up to 8 video and 1 audio* channels. It could not be simpler to keep a watchful eye on your home or office.

This system features:

- H.264 video compression (most efficient system to date, helps keep recorded files smaller and of higher quality)
- 3 USB ports (Mouse and Backup ports at the rear of the unit, 1 extra Backup port on the front)
- Colour Graphic User Interface, user friendly menus
- Live viewing from anywhere on PC or smartphone.
- 2 or 4 high quality waterproof cameras with night vision (depending on model)
- Easy installation, all fixtures are included and no expert help is required

*Requires audio capable cameras or self-powered microphone, not supplied

Throughout this manual, you will see highlighted text:

NOTE	Important notes are highlighted in blue.
TIP	Tips on best practice are highlighted in green.
CAUTION	Important cautions are highlighted in red.

Package Contents

Check the contents of your DVR package against this checklist. If anything is missing or damaged, please do not use the system, and inform your supplier as soon as possible.

<input type="checkbox"/> DVR	<input type="checkbox"/> Power splitter cable
<input type="checkbox"/> Remote control	<input type="checkbox"/> Mouse
<input type="checkbox"/> Software CD	<input type="checkbox"/> Instruction manual
<input type="checkbox"/> 2 or 4 Cameras	<input type="checkbox"/> 2 or 4 18m CCTV cables
<input type="checkbox"/> DVR power adaptor	<input type="checkbox"/> Cameras power adaptor
<input type="checkbox"/> BNC to RCA TV Cable	

NOTE	This manual covers both 4 channel and 8 channel versions of the Homeguard DIY Kit
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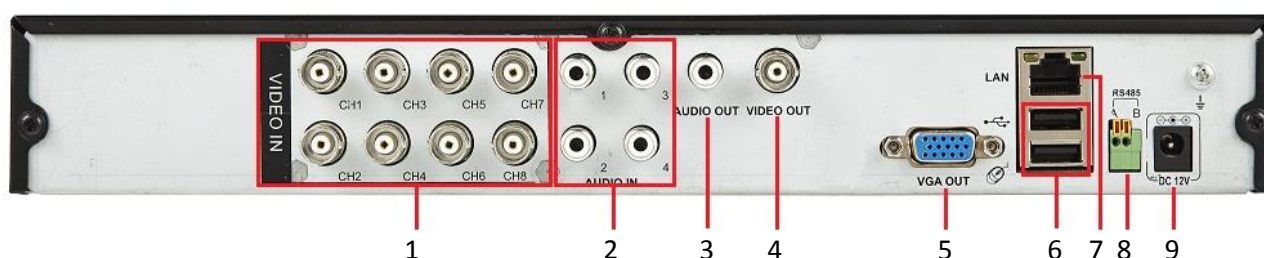
1.1 DVR Layout

Front Panel



1. **USB 2.0 Slot:** For connecting external storage and upgrading the firmware
2. **IR Receiver:** Receives the signal from the remote control
3. **Power LED:** Indicates the DVR is turned ON when lit
4. **HDD LED:** Flashes when the HDD is in use
5. **REC LED:** Indicates the DVR is recording when lit

Rear Panel



1. **4x/8x BNC Video Connectors:** For each camera input
2. **1x/4x RCA Audio Connectors:** For each audio input (dependent on model)*
3. **RCA Audio Output:** For speakers
4. **BNC Video Output:** For TV sets (the cable supplied must be connected to a composite input on your TV!)
5. **VGA Output:** For most monitors
6. **LAN Port:** To connect your DVR to the network
7. **2 x USB 2.0 Ports:** For USB mouse and external storage
8. **RS485 Connector:** For PTZ Camera**
9. **Power Connector:** To power the DVR

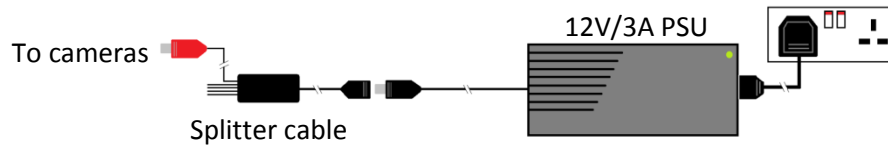
*Requires audio capable camera or self-powered microphone, not supplied

**Requires PTZ Camera

1.2 Connecting the DVR

Power the DVR directly by using the adapter supplied in the DVR box.

To power the cameras, use the adapter supplied in the camera box, along with the splitter cable, as per the diagram below:



The cameras are powered via the 18m CCTV cables supplied. The cable carries both the power to the camera, and the video feed from the camera to the DVR. This setup allows you to power up to 8 cameras from a single power socket.



CAUTION

The power splitter cable and adapters are designed ONLY for use with Homeguard DVRs and cameras! DO NOT attempt to connect other brands as this may present a risk of fire!

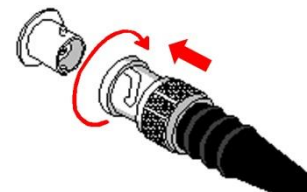
Connecting the accessories:



Image for illustration purposes only, see DVR specification for details. Accessories not included.

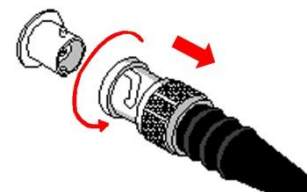
To connect a camera via BNC:

1. Align the BNC connector with the notches on the BNC socket and slide into place.
2. Rotate the BNC connector clockwise until it locks in place.



To disconnect a camera:

1. Apply pressure to the BNC connector, then rotate anti-clockwise.
2. Slide the BNC connector away from the socket.



1.3 Mounting the cameras

Each Homeguard camera is supplied with a mounting kit for attaching it to a wall. Before you affix the camera in position, please ensure the cable is of adequate length to reach the DVR.

To mount the camera on a wall or ceiling, follow these instructions:

1. Ensure the surface you want to mount the camera on is solid and can support the weight.
2. Accurately mark on the wall the position of the holes to be drilled.
3. Drill to the correct depth in the wall, as indicated by the plugs.
4. Insert plugs into the drilled holes.
5. If required, drill a hole in the centre to feed the camera cable through the wall. Note the cable can be routed along the wall via the cut-out in the camera base.
6. Secure the camera to the wall using the provided screws.



To adjust the camera's position, loosen the screws at the base of the camera and the pivot point on the arm, as well as the locking ring on the bracket. The camera is now free to be positioned at any angle. Once positioned, tighten both screws and locking ring again.

1.4 Basic operation

Using the DVR with the USB Mouse (Recommended)

The easiest way to operate the DVR is to use the included USB mouse, as it will allow a smooth and intuitive use of the menu system.

All the functions are used with either the right or left mouse buttons:

Left click:

- Selects an item
- Confirms a choice

Right click:

- Opens the menu shortcuts
- Returns one page back in the menu system

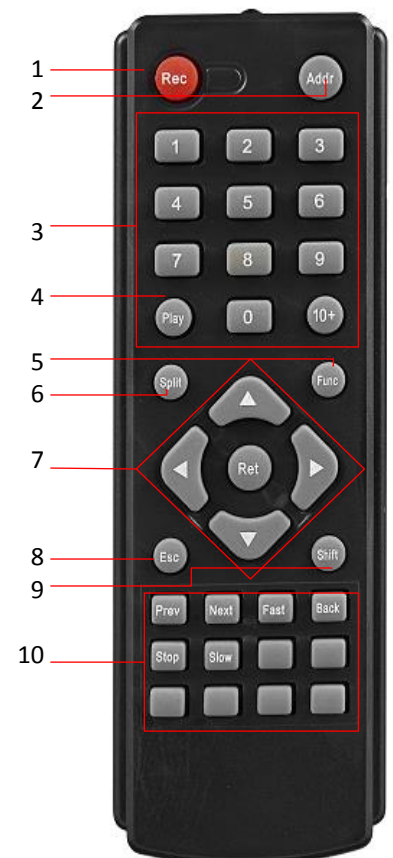
NOTE

Unless otherwise stated, all system functions described in this manual are achieved using the mouse.

Using the remote control

The remote control adequate to operate the DVR, however it is not best suited to constant use. It is easy to navigate through the display modes, basic settings and menus, but slower and less intuitive than using the mouse.

1. **Record:** Starts or stops manual recording.
2. **Address:** Displays the remote address.
3. **Numbers:** In menus, enters values. In the viewing screen, displays the selected channel.
4. **Play:** Opens the playback screen
5. **Function:** Confirm the selection
6. **Split:** switches between single and 4 channel display
7. **D-Pad:** Navigates through the menus and switches between the displayed channels. **Return:** Confirms the selection.
8. **Esc:** Exits the current menu
9. **Shift:** Offers alternatives in the menus
10. **Playback controls.**

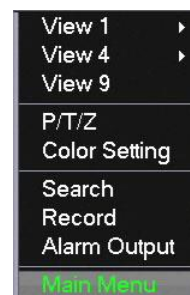


2 Getting Started

At first use, it is a good idea to set some basic parameters, which will enable you to use the DVR more easily and ensure all systems work as they should. To achieve this, this chapter will explain the following:

- Default login details, to enable you to use all functions of the DVR,
- How to format the hard drive, to ensure it is clear and ready to record,
- How to set the time and date on the DVR, to ensure your recordings are easy to find,
- How to set the channel names, again to make the DVR easier to use,
- How to set a password, and
- How to use quickly access Record and Search functions.

To access the menu system, right-click anywhere on the screen and choose the “Main Menu” option:



If you are not already logged in, a box will pop up to prompt you to enter your login details. Please note, as a default parameter, users are automatically logged out of the menu after 10 minutes of inactivity, so you may have to log in again even if you already entered your details a short time ago.

2.1 Login details

When prompted, enter your user name and password. If you have not set these yet, please use the default “admin” username.

NOTE

No password is set on the Admin account by default, do not enter a password.



2.2 Formatting the hard drive

It is important to format the hard drive before first use, to ensure it is clear of any data and ready to work with the DVR. If the hard drive used is set to the wrong format, the DVR may not be able to record.

CAUTION

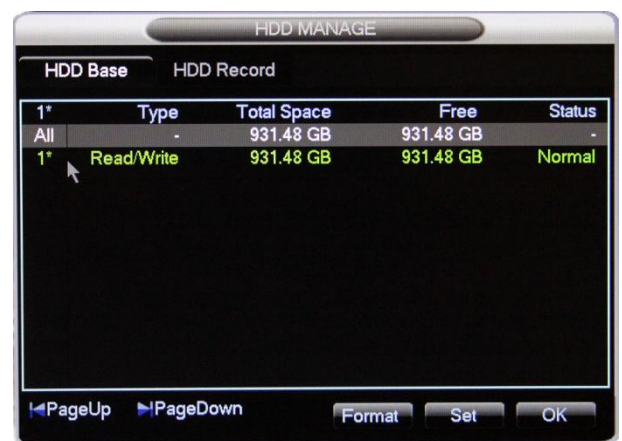
Formatting the HDD will erase all data saved on it, if you are not using a brand new HDD, please ensure you have backed up any data you may want to keep.

In the main menu, select **STORAGE**, then **HDD MANAGEMENT**

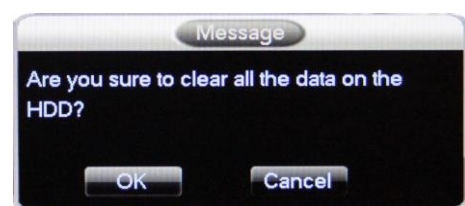


The HDD management screen shows all connected hard drives.

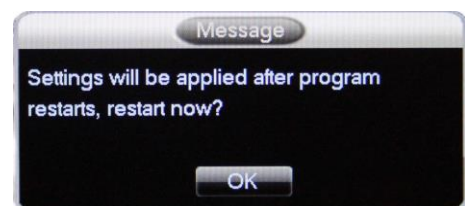
Select the one to format (most likely the only one there at this stage), and click **Format**



Click **OK** to confirm.



Once the format is completed, you will be prompted to restart the DVR.



2.3 Adjusting the time and date

It is important to adjust the time and date on your system, to ensure the recorded files are properly labelled.

In the main menu, select **SETUP** then **SYSTEM**



The System screen allows you to adjust the system time and date, and which format they are displayed in.

Once the time has been adjusted, click **Save**.

You can then amend other settings as required, click **OK** when done.

Other settings include how the DVR handles a full hard drive, the length of each recorded file, and the time after which the user will be logged out if inactive. These are explained in more detail in chapter 4.5.



2.4 Adjusting the channel names

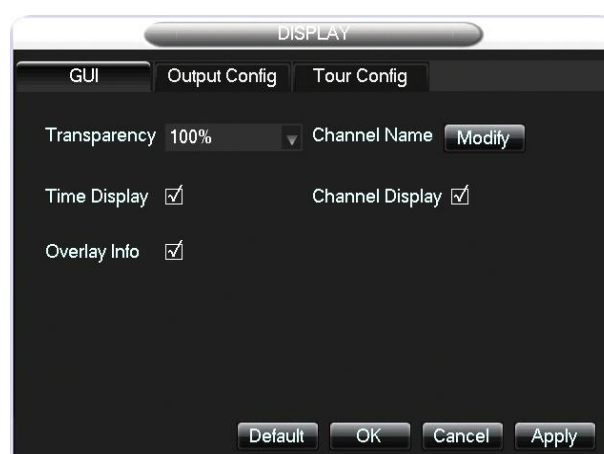
It is a good idea to adjust the channel names, so you can easily tell which one you are reviewing, particularly if your cameras are looking at similar areas.

In the main menu, select **OUTPUT**, then **DISPLAY**



The display menu allows you to set display options.

Next to *Channel Name*, click **Modify**



Click in the name field to edit it using the virtual keyboard, open this by clicking on the **characters box**. Click it again to scroll through the different keyboard options.

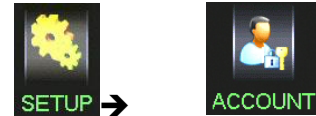
When done, click anywhere on the screen to close the virtual keyboard, click **OK**, then **OK** again to exit the display menu. The new channel name is displayed in the bottom corner of the viewing screen.



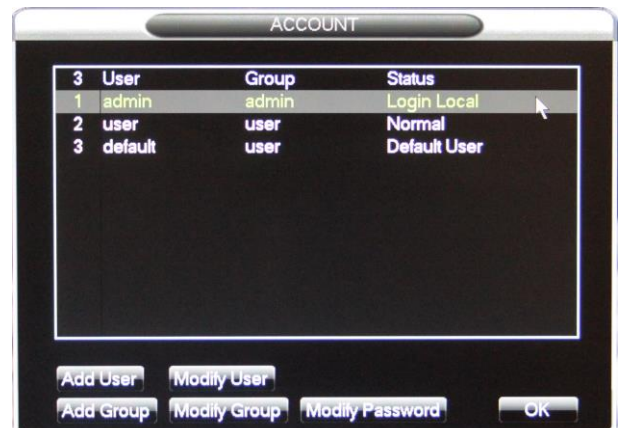
2.5 Setting a password

As stated, the default password for the “admin” account is blank, meaning there is no password. We advise you to set a password on your DVR to protect your privacy, however this decision is up to you.

In the main menu, select **SETUP**, then **ACCOUNT**.



In the Account screen, select the account you want to modify (in this case, the Admin account), then click **Modify Password**.

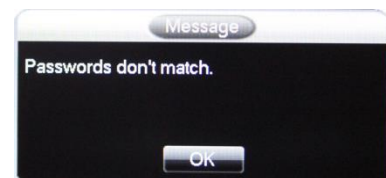
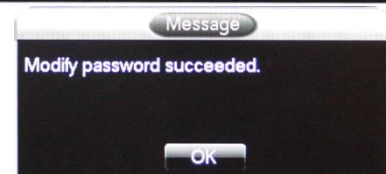


Fill in the old password (in this case leave blank) and new password fields, and confirm the new password. Confirmation is required to prevent typing errors.

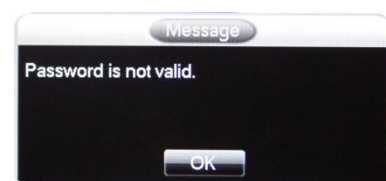
Once done, click **OK**.



Click **OK** when the confirmation message pops up.



If an error message pops up, either the confirmation doesn't match the new password, or the old password is incorrect. This is most likely to a typing error, and you need to re-enter the passwords.



2.6 Menu shortcuts

From the main viewing screen, a right click anywhere on the screen opens the Quick Menu. This gives you a number of shortcuts to access the main features quickly:

View 1 displays one channel in full screen, you can choose which channel via the drop down menu.

View 4 displays all 4 channels

P/T/Z opens the Pan Tilt Zoom menu*

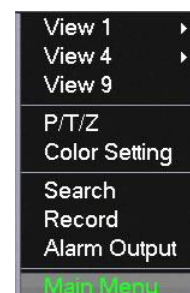
Colour Setting allows you to adjust each channel's image to compensate for lighting differences

Search opens up the playback interface (more details below)

Record allows you to quickly switch between recording modes on each channel (more details below)

Alarm Output allows you to modify the external alarm settings**

Main Menu opens up the main menu.



*Compatible PTZ camera required

**Compatible models only

2.7 Recording Options

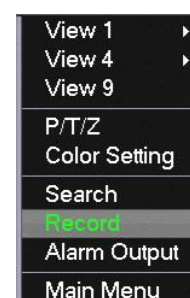
From the main viewing screen, right click to open the quick menu, and select **Record**. This menu allows you to switch between recording modes for each channel.

Schedule sets the DVR to record as per the schedule defined in the main recording menu (see chapter 3.2.2)

Manual sets the DVR to record the selected channel, irrespective of any other settings

Stop, as can be expected, stops any recording on the selected channel.

All allows you to select all channels at once.



NOTE

If you want your DVR to start recording as quickly as possible, set all channels to manual recording now. You will be able to amend these settings later, as required.

2.8 Playback

From the main viewing screen, right click to open the Quick menu and select **Search**. This will open the main Search/Playback screen




To begin playback:

- Choose the type of recording (Video/Picture)
- Select the recording date via the calendar. The days where a recording has occurred are highlighted.



- Select which channels to playback



- The time track on the bottom part of the screen displays all recordings for the chosen day. Simply double click on the chosen time and channel to start playback
- You can also choose from a list of recordings, by clicking the **List** button
- You can backup the selected files by clicking the **Backup** button: 



Use the on-screen controls to navigate through the video. Like a DVD player, you can use these to fast forward, rewind, pause, etc.

The controls in the right hand corner allow you to play the videos full screen, etc.



3 Basic Use

This chapter covers the main functions DVRs are used for, i.e. recording, alarm, and remote viewing (from a PC or mobile). Playback options are described in chapter 2.8.

3.1 Menu layout

The main menu has 6 options:



SEARCH: takes you to the playback screen

SETUP: to adjust system, recording, network, alarm and account settings, as well as how the system deals with errors.

MAINTAIN: shows information about the DVR and its usage, such as how much space each recording is using up, a log of all activity on the DVR, and options to default most settings and automatically update the system.

OUTPUT: to adjust output settings, from the display to any accessories you may use.

STORAGE: to manage the installed HDD(s) and backup USB drive(s)

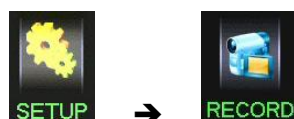
SHUTDOWN: to shut down or restart the DVR, or to log out of the menu.

TIP

Look out for handy help texts displayed in the bottom field of the menu window, for a quick explanation of the selected function.

3.2 Recording

This DVR offers a range of recording options to suit any user's needs. These range from recording resolution and quality, to recording schedule and conditions. To access these, select **SETUP** in the main menu, then **RECORD**.



NOTE

All options mentioned in this chapter cover one channel only, however the settings applied to that channel are easily copied by selecting **Copy** and choosing which channel to copy the settings to. The **copy** option is available on each screen.

3.2.1 Recording settings

The **Local Channel** tab is used to define how the DVR records the footage, for each channel. These settings affect the quality and size of the video, which also means how much time you will be able to record. As a rule of thumb, the higher the video quality, the more space it needs on the hard drive.



- **Compression:** Modern DVRs use **H.264** compression, which simply put means the DVR only records changes between each frame, as opposed to a whole new frame each time, to ensure the highest quality and smallest file size.
- **Resolution** is the recorded size of the picture, in pixels.
 - **D1** is almost the same resolution as a DVD, 704 x 576.
 - **CIF** is ¼ of D1, similar to a low quality webcam.
- **Frame Rate** represents how many frames the DVR records each second. The human eye sees 25fps as smooth motion. 6fps should be good enough for most surveillance systems, and allows you to record a lot more on the hard drive.
- **Bit rate control** defines how the bit rate is worked out, it can be variable (a good compromise for recording high quality video while saving space on the HDD) or constant (better for viewing on mobiles, which require a steady stream of data)
- **Quality** of the recorded video: this defines how well the DVR handles changes between frames.
- **Audio:** tick to enable audio recording*
- **Bit rate** is the maximum amount of data the DVR records per second. If the bit rate required for recording is higher than the maximum bit rate selected, the picture quality will deteriorate slightly. If you suffer from slightly blurry images, you may need to increase the maximum bit rate.
- **Snapshot** allows you to adjust settings for snapshots.
- **Display Options:** adjust recording display settings. Choose to display the channel name and/or number, the date and time, and if parts of the video need to be covered.

**Requires audio capable camera or self-powered microphone*

NOTE

The Minor Stream settings apply to the video sent to remote viewing platforms, like mobiles. These require lower quality settings to ensure the video can be streamed.

3.2.2 Schedule

In the **Record Plan** tab, you can define a recording schedule for each channel. For example, you may choose to record only during office hours.

Choose which channel you wish to schedule and how long to prerecord (for event triggers only).

To plan the recordings for each day, click **Set** next to the chosen day.

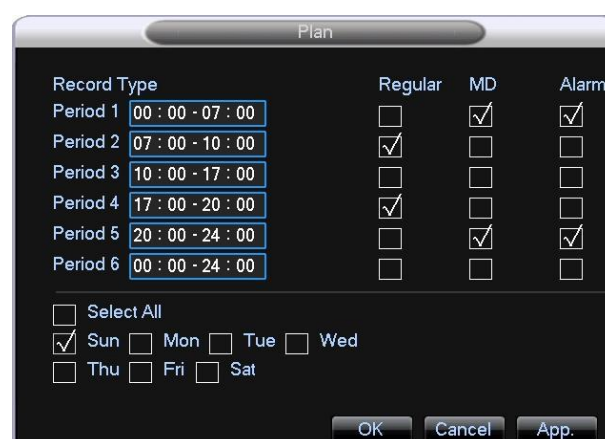


Define up to 6 time periods by entering the start and finish times for each one, and select the type of recording applicable for this period (see chapters 3.2.3 and 3.2.4 for details on these recording types).

Select any days these recording periods must apply to.

When done, click **OK**.

Repeat this process for any days where the recording periods are different.



3.2.3 Recording capacity

As mentioned in chapter 3.2.1, recording settings affect the amount of time which can be recorded on a given hard drive. Please refer to the table below for the available recording time, in days, based on normal settings:

		Number of Cameras							
		1	2	3	4	5	6	7	8
HDD Capacity	500GB	100	50	33	25	20	17	14	13
	1TB	200	100	66	50	40	33	29	25
	2TB	400	200	132	100	80	67	57	50

3.3 Alarm Modes

In the main menu, select **SETUP**, then **ALARM**.



3.3.1 Local Alarm

You can enable the DVR to be triggered by an external alarm, or vice versa. Please confirm the required settings with your alarm supplier.

3.3.2 Mobile Alarm

Enables any DVR alarm to be relayed to your mobile phone, via the DVR's app. This is enabled by default.

3.3.3 Motion Detection

The **Detect** tab covers 3 types of alarm, available on each channel:

- **Motion detection** to trigger an action when the DVR sees movement on any chosen channel
- **Video loss** to trigger a warning when the DVR loses the video feed from a camera
- **Camera masking** to trigger a warning when a camera is covered.
-

NOTE

Actions and warnings apply to each on these types of alarm, so only the Motion Detection type is covered below.

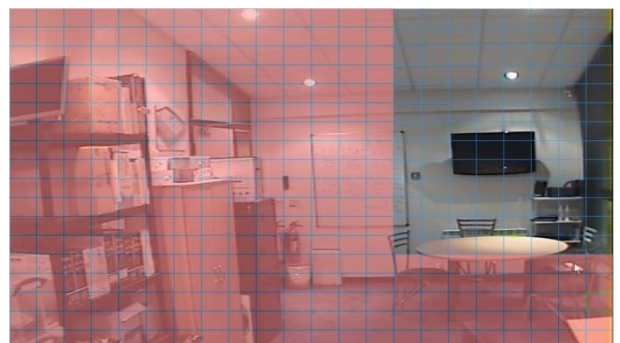
Tick to enable Motion Detection

Select the **sensitivity**. Choose a low sensitivity if the image recorded is likely to move a little, for example if there are trees in the background.

Select the time to apply between **triggers**, to ensure the same event does not trigger several alarms.

Click **Set Area** to select the area of the picture where the motion detection will be active

Select the area (red=active, clear=inactive), **right click** once done



Click **Process** to set the active period, actions and warnings the alarm will trigger.

Process

Period defines when the alarm will be active. You can set up to 6 active periods for each day of the week.

Click **Set** next to the chosen day.

Enter the start and finish times for each period, then tick the period to confirm.

If this activity period apply to other days, tick these below.

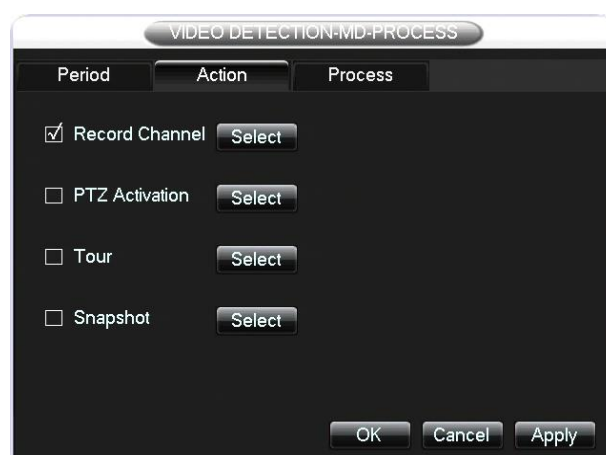
Click **OK** when done.



Action defines what the DVR will do when the alarm is triggered, tick any you wish to apply. The options are:

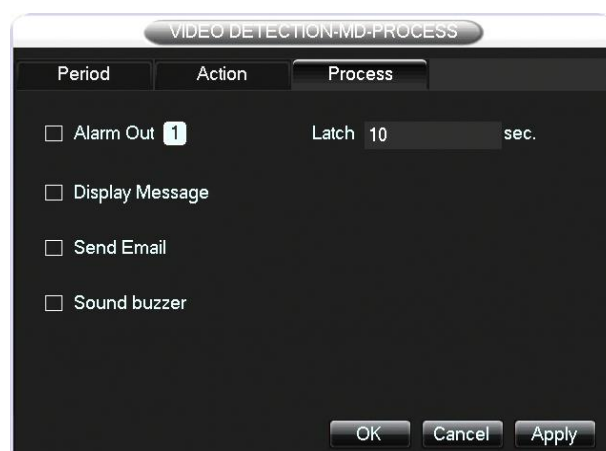
- **Record** any channel. Click **Select** to choose which channel to record and how long for.
- **PTZ Activation**. Click **Select** to choose which PTZ cameras are activated and what you need them to do*.
- **Tour**. Chosen channels will be displayed in turn on the main viewing screen. Click **Select** to choose the relevant channels.
- **Snapshot**. Click **Select** to choose which channels to take a snapshot from.

*Requires compatible PTZ camera



Process defines how the DVR will warn you about the relevant alarm, tick any you wish to apply. The options are:

- **Alarm Out**. Triggers the external alarm (if fitted). Refer to your alarm manufacturer for more info.
- **Display Message**. Displays a message on the main viewing screen.
- **Send Email**. Sends an email to a specified email account (See chapter 4.3.2 for more details)
- **Sound Buzzer**. Sounds an audible warning in the DVR.



3.4 Accessing your DVR remotely using a computer or a mobile

This DVR can easily and securely be accessed remotely from any computer connected to the internet, or a compatible mobile phone. To achieve this, it is necessary to connect the DVR to your home network, and ensure it is correctly setup.

3.4.1 Network and P2P settings

To ensure the system is setup properly, you need to find your router's local IP address, and apply it to the DVR. You then need to test the connection to the cloud based P2P service. The details required should already be present by default, however may not match in some cases, so it is necessary to check them first. This should only take a few minutes.

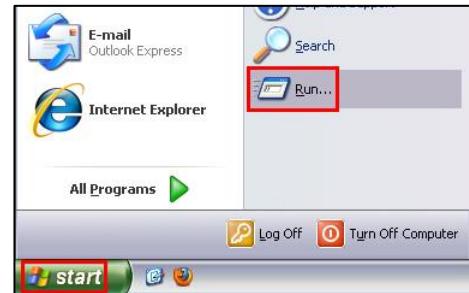
3.4.1.1 Find your router's local IP address

The quickest way to do this is to run a program called **IP Config** on your computer. This is built in to Microsoft Windows as standard.

The method used to run IP Config differs according to your operating system:

Windows XP

Click "Start", then "Run..." to display the "Run" dialog box.



In the "Run" dialog box type **cmd** and click OK.

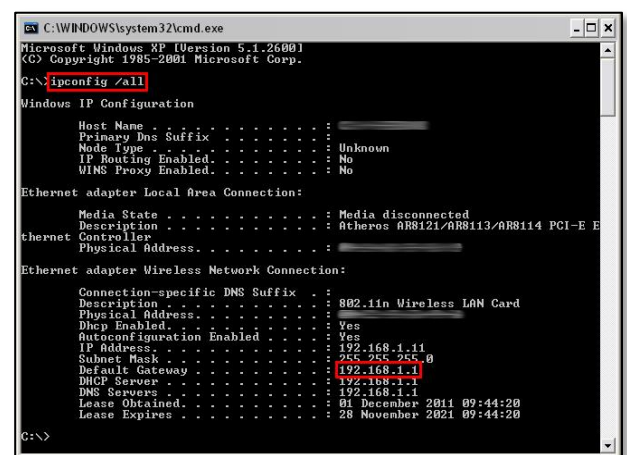


A command prompt will open. Type **ipconfig /all** and press Enter.

Find the value for "Default Gateway", this is your router's local IP address.

For example, it could be "192.168.1.1".

You can now close the command prompt window. Type **exit** and press Enter, or click the cross at the top right of the window.



Windows Vista / Windows 7

Click “Start”, then in the “Search programs and files” box, type **cmd** and press Enter.

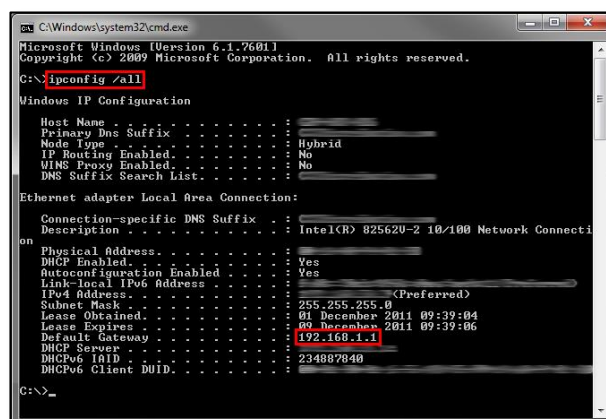


A command prompt will open. Type **ipconfig /all** and press Enter.

Find the value for “Default Gateway”, this is your router’s local IP address.

For example, it could be “192.168.1.1”.

You can now close the command prompt window. Type **exit** and press Enter, or click the cross at the top right of the window.

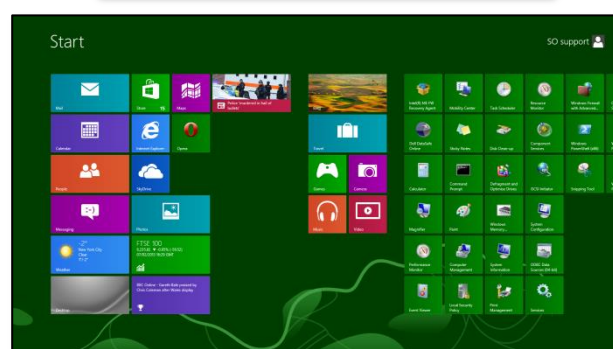


Windows 8

Press the “Start” button on your keyboard, or hover your mouse pointer at the bottom left corner of the screen and click the tile to open the “Start” screen.



Type **cmd** to search for the Command Prompt. It will be displayed in the Apps list at the top left of the screen. Press Enter or click the icon to open the program.

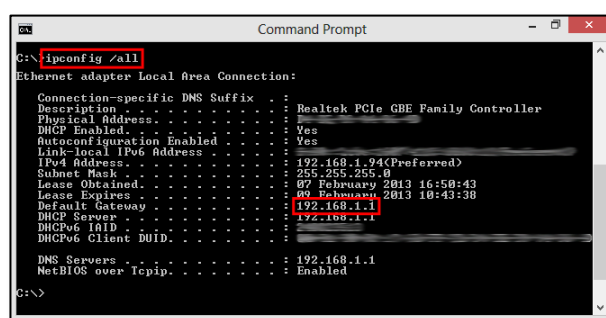


You will be returned to the Windows desktop and the command prompt window will open. To display network information, type **ipconfig /all** and press Enter.

Find the value for “Default Gateway”, this is your router’s local IP address.

For example, it could be “192.168.1.1”.

You can now close the command prompt window. Type **exit** and press Enter, or click the cross at the top right of the window.



3.4.1.2 Apply these settings to the DVR

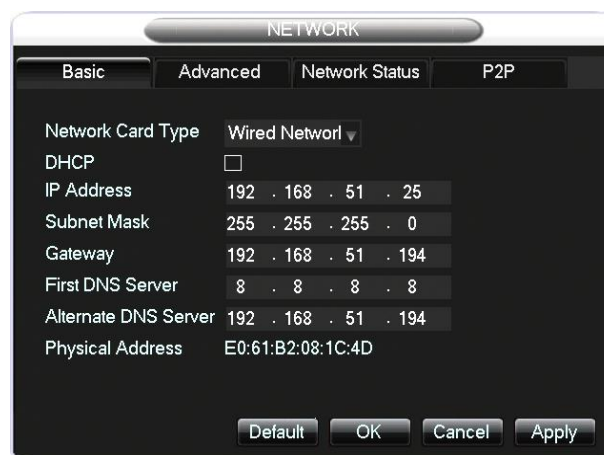
From the main menu, select **SETUP**, then **NETWORK**.

Ensure the **Gateway** and **Alternate DNS Server** fields are filled in with your router's local IP address.

Other settings on this screen are only relevant to advanced users, and should be left as default. If these are changed, it may affect your DVR's connection to the network.

NOTE

Please ensure **DHCP** is left unticked. If it is selected, the IP address will be automatically assigned as required, and remote connection will be delayed as the server will need to "find" the DVR again.



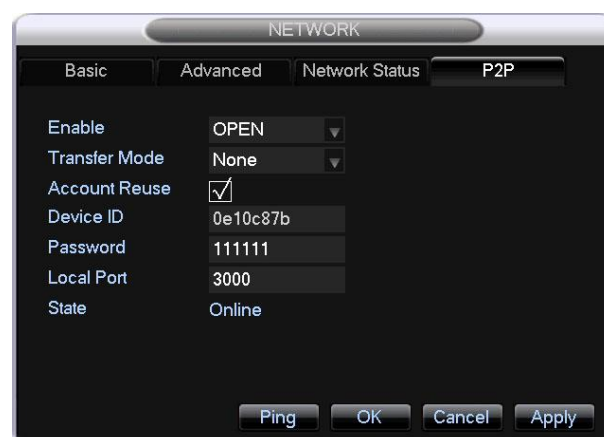
3.4.1.3 P2P Cloud setup

From the **NETWORK** menu, select the **P2P** tab.

This displays your DVR cloud service options. Ensure **Enable** is set to **OPEN**, and **Status** shows **Online**. If it doesn't, click **Ping** for the system to check the status.

NOTE

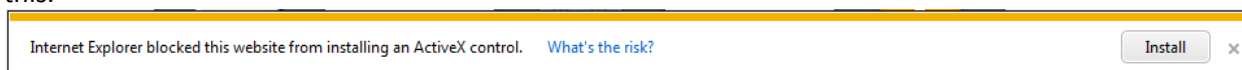
If the system does not show **Online** after the check, please check the DVR is properly connected to the network.



Note your device's ID and password. The device ID is unique to your DVR and cannot be changed, however you can set a new password if desired.

3.4.2 Access the DVR from a computer using a browser

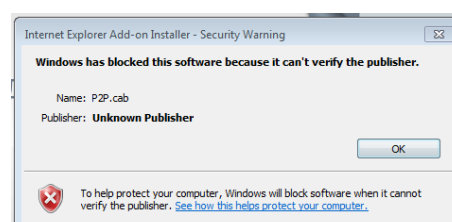
In Internet Explorer, go to **www.vssweb.net**. Your browser may prompt you to install an ActiveX control, please allow this.



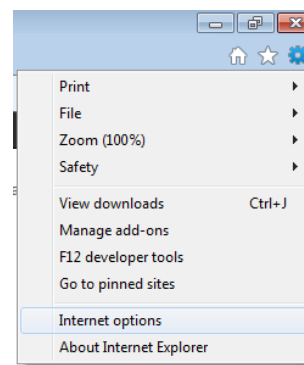
If a security warning box pops up, the ActiveX control cannot be downloaded due to Internet Explorer's normal security settings.

In your browser, click **Tools**, then **Internet Options**.

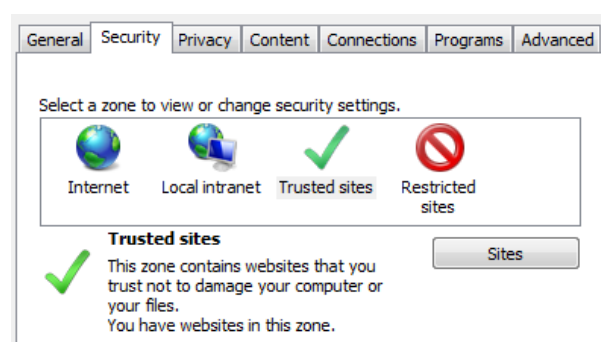
To resolve this, please add **www.vssweb.net** to Internet Explorer's trusted websites. These are approved websites and benefit from lower security settings.



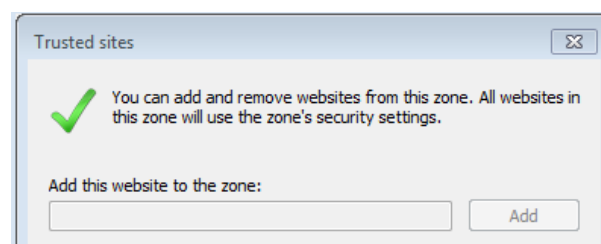
In the **Security** tab, select the **Trusted sites** icon, then click **Sites**.



Enter **www.vssweb.net** in the box then click **Add**, then **Close** and **OK** to close the Tools menu.



Select **Device Login**, then enter your DVR's ID number and password and click **Login**.



User login

Device login

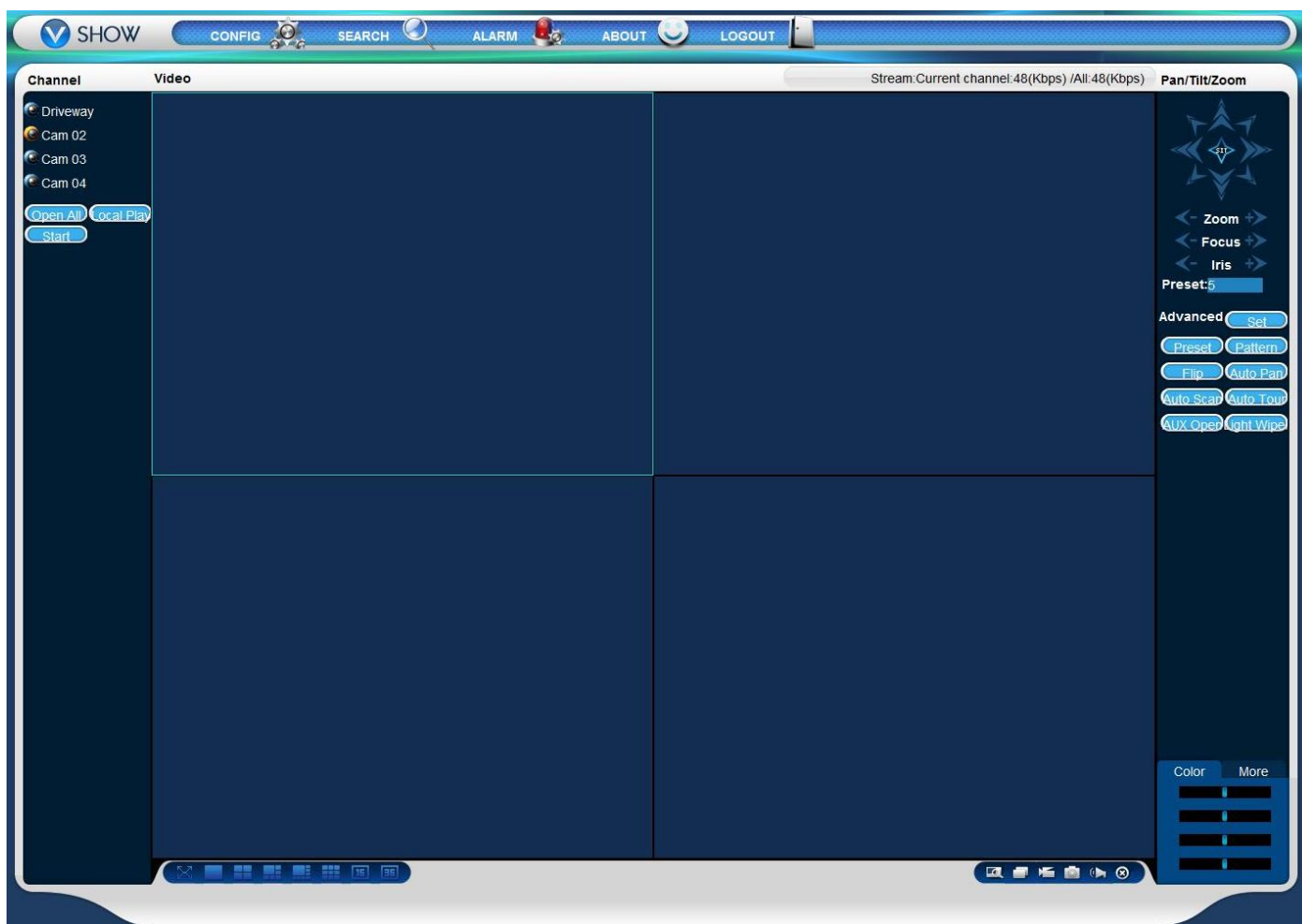
Serial number:

Password:

Login

Enter Guide

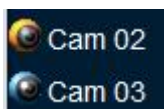
The **main viewing window** can display up to 36 channels simultaneously.



The **Channel** menu, on the left, shows what channels are available. Click on the selected channel name to display it in the highlighted window, or click **Open All** to display all available channels at once.



The channel is marked as active when the icon next to the name is yellow:



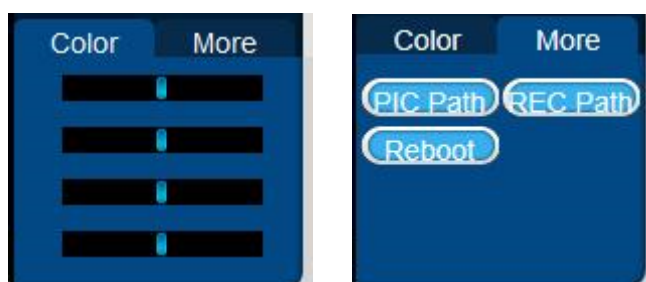
The **PTZ** menu, on the right, allows you to control any Pan/Tilt/Zoom camera connected to the DVR.



Choose how many windows to display using the **Window** menu at the bottom:



The **Settings** menu in the bottom right corner allows you to adjust display settings for each channel, and to set the location of recordings and snapshots on your computer:



The **Functions** menu offers several options, applicable to each channel separately:



Each function is toggled on or off by clicking the corresponding icon. The icon turns green when toggled.

Digital Zoom: zoom in to a chosen area in the video

Full Screen: switch the current channel to full screen display

Record the current channel directly to your computer
Snapshot of the current channel, saved directly to your computer.

Audio: toggle audio on/off*

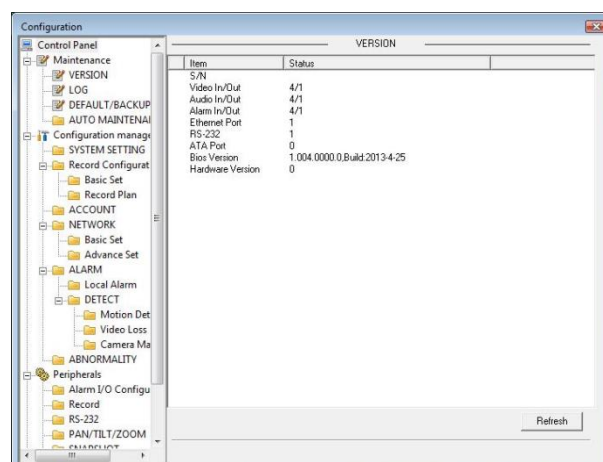
Close: stops playback on the current channel.

**Requires audio compatible camera or self-powered microphone*

The main menu, at the top, allows you to change the DVR's settings, play recorded files, and adjust cloud alarm settings.



The **CONFIG** menu is very similar to the DVR's menu. It is presented differently but you can adjust all settings in the same way.

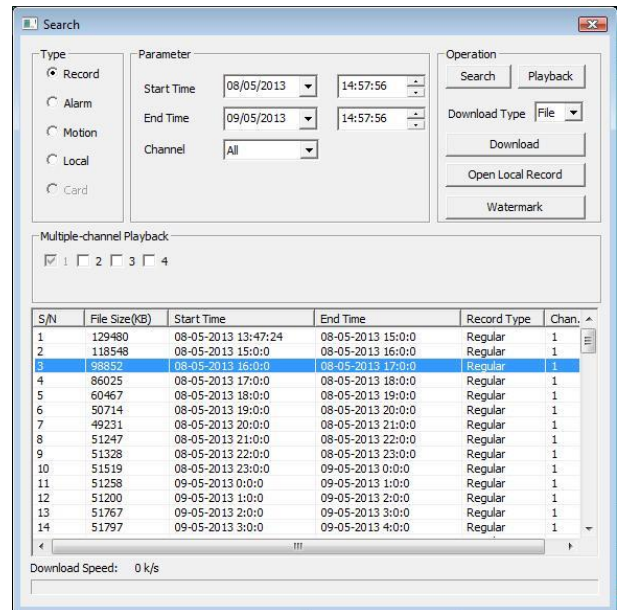


The **SEARCH** menu allows you to play files recorded on the DVR.

Select the type of recording, start and finish times and channel you wish to search, then click **Search**.

Double click on the selected recording to start playback in the selected window.

In Playback mode, the controls below appear at the under the main screen when the playback window is selected. These can be used to navigate through the video like a DVD player.



The **ALARM** menu is used to adjust alarm warning settings applicable to the cloud viewing platform. These are the alarms triggered by the DVR, which you can choose to be notified of when connected to your device.

Choose the type of **Event** for which you wish to be notified.

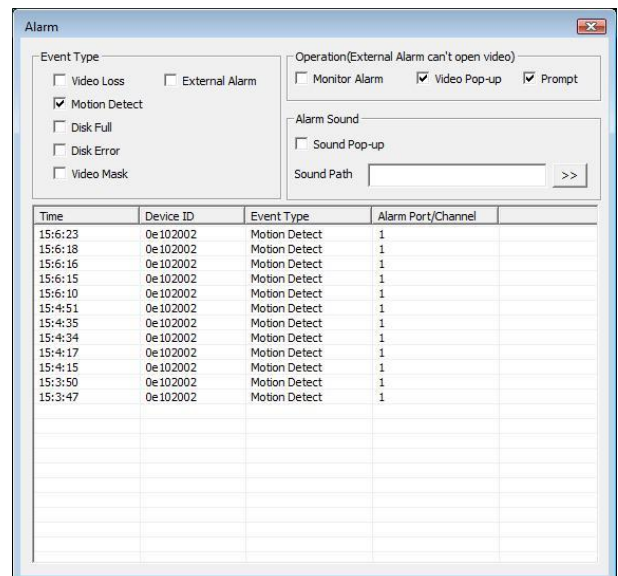
Tick **Monitor Alarm** to activate the warnings.

Choose **Video Pop-up** for the channel to be displayed automatically in a free window.

Choose **Prompt** for the alarm menu to pop up when the alarm is triggered.

You can also choose to assign a sound to the alarm warning. To do so, click on the arrow to browse you files and choose a sound file, the tick **Sound Pop-up**.

The window also displays a log of all alarms recorded.



ABOUT displays details about the cloud software.



LOGOUT exits the current session and takes you back to the login screen.

3.4.3 Access the DVR from your mobile

To view your DVR on your tablet or smartphone, please install the IMSEye app (available to download from your mobile device's app store, also available on the software CD included for direct installation). With this you can view the live feed, review recorded footage, and record videos and snapshots directly to your mobile device.

This chapter explains how to setup your system, and offers an overview of the app's functions.

3.4.3.1 Add the DVR to the app

Select **Device List**, then **+** to add a new device.



Choose a name for your CCTV system (this name will be displayed when selecting which device to view).

Set the **Connection** type to **P2P**

Enter the DVR's **Device ID** in the **Series NO.** field

Enter your **password** as set on the DVR

Select the max number of **channels** your DVR supports

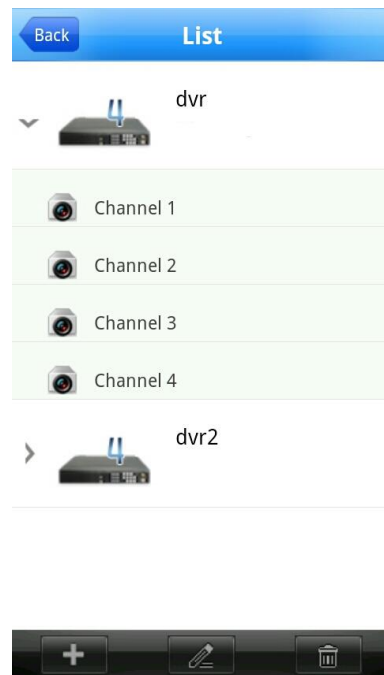
Click **OK** to validate.



3.4.3.2 Live viewing

From the Device List, select your DVR, then the channel you wish to display.

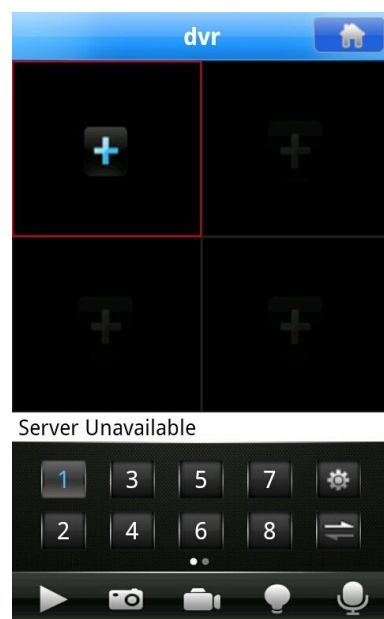
The app will now connect to your DVR, via the cloud. The connection may take a moment, please be patient.



Once connected, double tap the desired viewing screen to display the channel in full screen. You can display up to 4 channels simultaneously.

You will notice a slight delay in the video, this is dependent on the quality of the network you are connected to.


Please adjust the **Minor Stream** settings (chapter 3.2.1) to alter the video quality.





3.4.3.3 App Functions

From the main viewing screen, the following options are available:

 **Start or Stop playback**

 **Snapshot:** take a snapshot of the selected screen. This will be saved in your pictures or images folder.

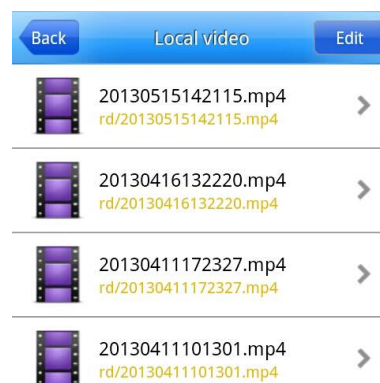
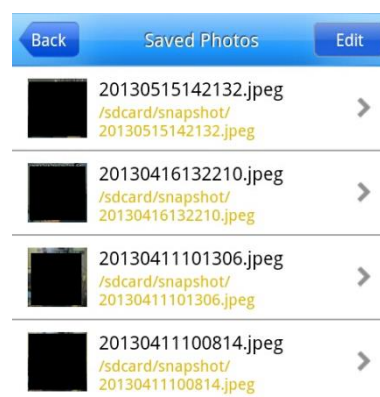
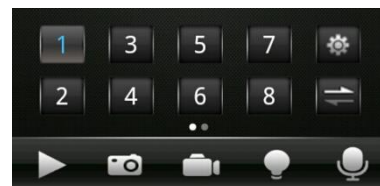
 **Record:** record the current channel as a video file on your device.

 **Alarm:** If an alarm is activated on your DVR, it will be relayed to your phone. The **Alarm icon** will light up, and an alarm sound will be played. You can amend this in the **Settings** menu.

From the main menu, the following options are available:

Saved Photos: review the snapshots obtained from the app

Local Video: review the video files recorded from the app



4 Advanced Functions

This chapter will explain the other functions offered by the DVR.

NOTE

Functions covered in the previous chapters are not included.

4.1 Configuration

4.1.1 System

This menu allows you to alter how the date and time are displayed, as well as the menu's language.

You can choose to apply automatic Daylight Saving Time to the DVR, To do so, tick **DST**, and click **Set** to enter the start and finish date.

Select how you want the DVR to handle a **Full HDD**. You can choose to **Overwrite** the oldest files, or **Stop** recording.

Choose the **Pack Duration**, that's the length of each video file.

You can change the **DVR's number**, however this is only useful if you have several DVRs.

Choose the **Video Standard** to match your monitor of TV.

Select the amount of **time** after which the user will be **logged out** of the menu system if inactive.



4.1.2 Network

4.1.2.1 Advanced settings, including Email

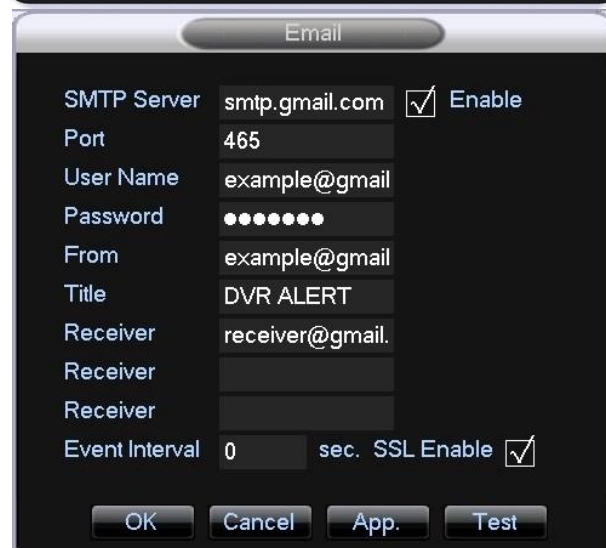
It is possible to set the DVR to send an email to a designated address when events (such as motion detection or alarm) are triggered.

On the **Email** line, click **Setting**.



Enter your email details as required. The SMTP port number and SSL settings can be found on your email provider's website. For example, Gmail and Yahoo both use port 465 and require SSL to be activated.

Once done, click **Test**.



A message box will pop up to confirm if the test was successful, if so an email will have arrived in your inbox, please ensure this isn't directed to the spam folder



This section also contains more advanced settings for specific applications, however these are relevant only to advanced users:

PPPOE allows you to connect the DVR directly to a modem.

DDNS settings are used to connect remotely to your DVR if required. This is not required with this model thanks to the cloud system.

NTP settings automatically adjust the time and date on all systems connected to your network.

IP Filter allows you to select which computers can connect remotely to the DVR.

Multicast contains details about the various ports used by the DVR.

FTP settings are used to upload files to an FTP server.

Alarm server settings are used to connect the DVR to an external alarm system.

4.1.2.2 Network Status

The Network Status tab display the current IP details applicable to DHCP and PPPOE modes. These are relevant to advanced users only.

The screenshot shows the 'NETWORK' window with the 'Network Status' tab selected. It displays settings for DHCP and PPPOE states, including IP filtering, sender IP address, subnet mask, and gateway.

DHCP State:	
Enable IP filtering?	NO
Sender IP Address	0 . 0 . 0 . 0
Subnet Mask	0 . 0 . 0 . 0
Gateway	0 . 0 . 0 . 0

PPPOE State:	
Enable IP filtering?	NO
Sender IP Address	0 . 0 . 0 . 0

OK

4.1.3 Account

The account menu allows you to add or delete users, adjust user permissions and change passwords. You can also set user groups to quickly set permissions to a number of individual users.

The screenshot shows the 'ACCOUNT' window with a table listing users and their permissions. Below the table are buttons for adding and modifying users and groups, and a password modification button.

	User	Group	Status
1	admin	admin	Login Local
2	user	user	Normal
3	default	user	Default User

Add User Modify User Add Group Modify Group Modify Password OK

4.1.4 System Errors

The System Errors menu allows you to amend warning settings for various events. In all cases, click **Process** to define the type of warning the system will give you. You can choose to trigger an external alarm, display a message on screen, send an email, and, for Network Disconnection, start recording any channel.

No HDD: the system will warn you if no hard drive is installed.

HDD full: the system will warn you if the hard drive is nearing full capacity. You can choose how early this warning is given by changing the **Free** value.

Network disconnection: receive a warning if the DVR gets disconnected from the network.

IP Conflict: Indicates another device on your network has been allocated the same IP address as your DVR. Please amend the DVR's IP address in **Network Settings**.

HDD Error: Indicates a problem with the hard drive.

The screenshot shows the 'SYSTEM ERRORS' window with a list of events and their warning settings. Each event has a checkbox, a description, and a 'Process' button.

<input checked="" type="checkbox"/>	No HDD	Process
<input type="checkbox"/>	HDD Full	Process
Free: 20	%	
<input checked="" type="checkbox"/>	Network Disconnection	Process
<input checked="" type="checkbox"/>	IP Conflict	Process
<input type="checkbox"/>	HDD error	Process

OK Cancel Apply

4.2 Maintain

The **MAINTAIN** menu has six options:

LOG: displays a log of all activity on the DVR. You can search for a particular event, or clear the list.

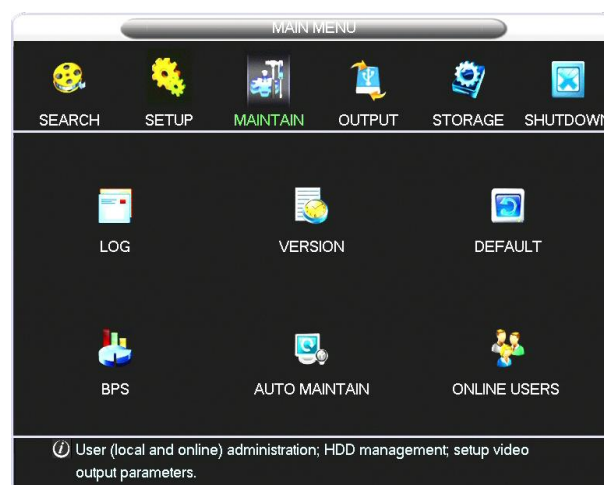
VERSION: displays information about the DVR's software. You can also upgrade the software via a USB flash drive if an update is released.

DEFAULT: Select which settings you want to reset to their default values.

BPS: shows the space used on the hard drive by each channel, in real time. Use this to get an understanding of how different recording settings affect the space required.

AUTO MAINTAIN: offers the option to automatically reboot the system at a chosen time during the week, doing this allows the system to check itself for potential faults.

ONLINE USERS: displays devices connected to the DVR remotely, and allows you to block or disconnect those users.



4.3 Output

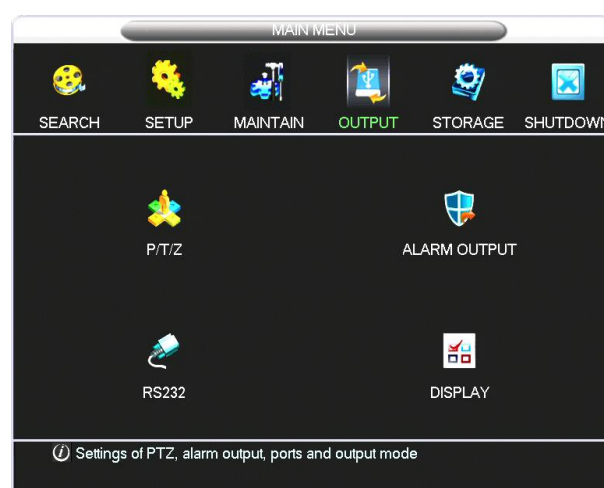
The Output menu controls all signals being sent from the DVR:

P/T/Z: Amend the settings relevant to the control of Pan Tilt Zoom cameras. Refer to the camera's manual to confirm which values are required.

RS232: Amend the settings relevant to devices controlled via the RS232 port (for advanced users only)

ALARM OUTPUT: Confirm the active period for an external alarm system.

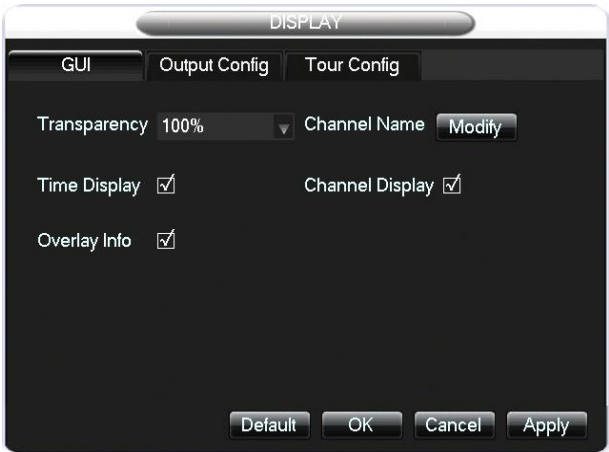
DISPLAY: Amend the TV or Monitor display settings (see below)



4.3.1 Display settings

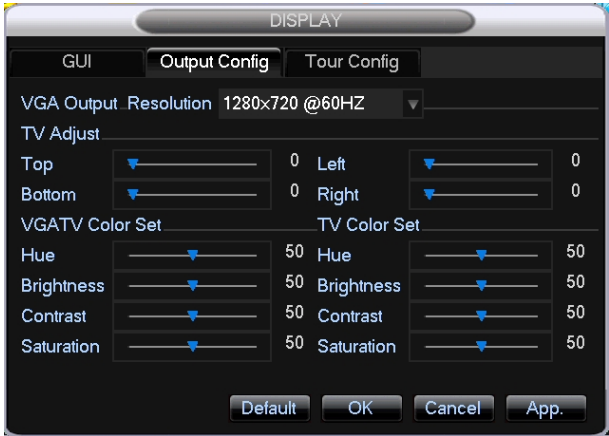
Graphic User Interface

Adjust the transparency of the menu, change the channel names, and choose to display the time and date and channel name in the viewing window.



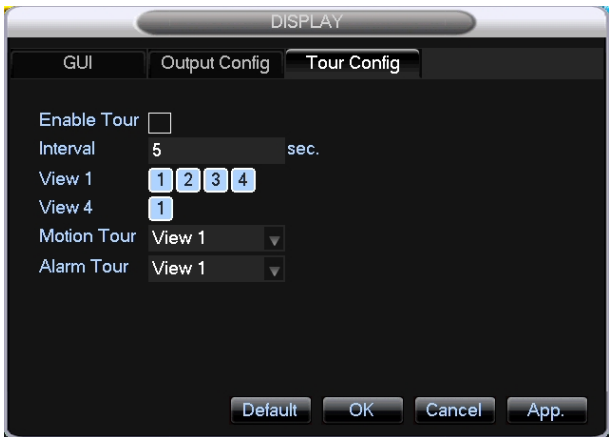
Output Configuration

Amend the screen resolution to suit your TV or Monitor.
If using a TV, you can adjust the picture margins to ensure the display fits your TV perfectly.
You can also change image settings for either monitor or TV separately, to ensure the image is displayed in the best possible conditions.



Tour Configuration

Enable the Tour function, to display each channel in turn on the main viewing window.
Adjust the interval between channels, which channels you wish to display and the tour mode selected for motion and external alarm triggers



4.4 Storage

4.4.1 Hard Drive management

The HDD Management menu allows you to format the hard drive or amend hard drive settings. This is only relevant if several drives installed or several partitions created. You can choose to set these as Read/Write, Read only or Redundant.

The menu also displays the hard drive status information, and lists the total period of time recorded.

4.4.2 Backup

Recordings made on the DVR can be transferred from the internal HDD to a USB flash drive or external hard drive, for backup.

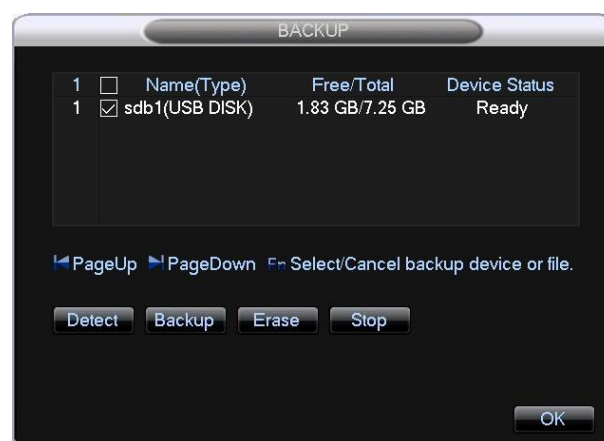
Connect a USB flash drive or external hard drive to a free USB port.

Select the drive you wish to backup files to, then click **Backup**.

If your USB drive does not appear in the list, click **Detect**.

You can choose to **Erase** all data on the USB drive if necessary.

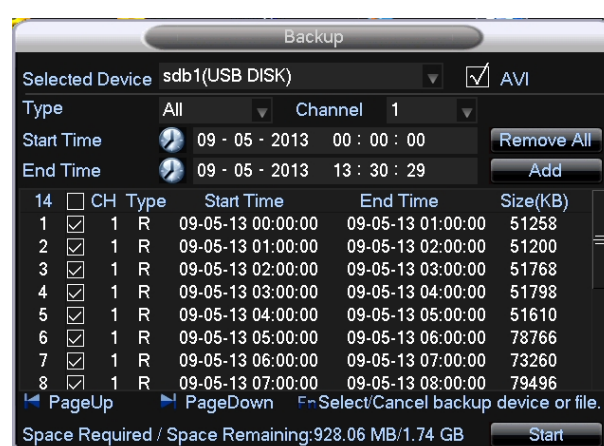
Click **Stop** before removing the USB drive, to ensure it is safe to disconnect.



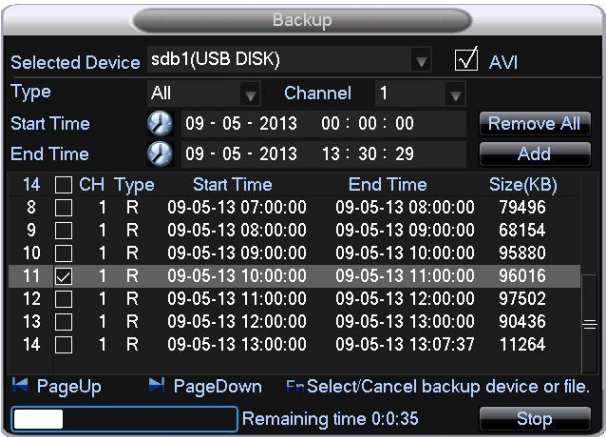
Search for the files you wish to back up by selecting the type of recording, the channel, and by entering the start and finish times, then click **Add**.

Tick **AVI** to ensure the files are backed up in an easy to read video format.

Click **Start** to begin the backup.



Please **do not disconnect** the USB drive while the backup is in progress.

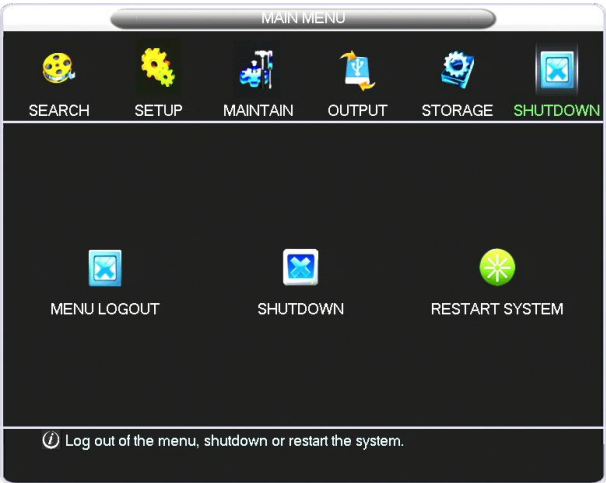


A message will pop up when the backup is completed, you can now exit the menu and remove the USB drive. Remember to **Stop** any activity before disconnecting.



4.5 Shutdown

The **SHUTDOWN** menu allows you to log out of the menu system, and restart or shut down the DVR. If you are shutting down, please wait for the shut down message to disappear off the screen before unplugging the power supply. This is to ensure the HDD is properly stopped and no data is corrupted.



5 Appendix

5.1 Troubleshooting

If a solution to your problem is not listed below, please contact our technical support team.

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
<ul style="list-style-type: none"> System is not receiving power, or is not powering up. 	<ul style="list-style-type: none"> Cable from power adapter is loose or unplugged. 	<ul style="list-style-type: none"> Confirm that all cables are connected correctly. Confirm that the power adapter is securely connected to the back of the unit.
	<ul style="list-style-type: none"> Cables are connected but system is not receiving sufficient power. 	<ul style="list-style-type: none"> Confirm the system is powered on (LED indicators on front panel should be on) If the DVR is connected through a power bar or surge protector, try bypassing it and connecting power directly from the mains socket to the DVR. Confirm that there is power at the outlet.
<ul style="list-style-type: none"> Remote control is not detected by the system. 	<ul style="list-style-type: none"> Batteries in the remote control are drained. 	<ul style="list-style-type: none"> Install 2x fresh AAA 1.5V alkaline batteries in the remote control. Ensure correct orientation.
	<ul style="list-style-type: none"> There are no batteries in the remote control. 	
<ul style="list-style-type: none"> HDD is full and the unit is no longer recording 	<ul style="list-style-type: none"> Overwrite mode is not enabled. 	<ul style="list-style-type: none"> Check configuration in <i>Main Menu</i> → <i>System</i> → <i>General</i>.
<ul style="list-style-type: none"> Mouse not detected by the system. 	<ul style="list-style-type: none"> Mouse cable not firmly connected to the system. 	<ul style="list-style-type: none"> Firmly connect the mouse cable to the USB port on the rear panel of the DVR.
	<ul style="list-style-type: none"> Mouse is not connected to the system. 	
<ul style="list-style-type: none"> There is no picture on selected channels / camera picture is not being displayed. 	<ul style="list-style-type: none"> System needs to be reset. 	<ul style="list-style-type: none"> Power off the system (disconnect power cable). Firmly connect a USB mouse to the USB port on the rear panel of the DVR. Reconnect the power cable to the DC 12V port.
	<ul style="list-style-type: none"> Camera cables are loose or have been disconnected. 	<ul style="list-style-type: none"> Check the camera video cable and connections. Disconnect and reconnect the cable at both the system and camera ends. Reconnect the camera to another channel or use another cable.
<ul style="list-style-type: none"> A “whirring” noise is coming from the system. 	<ul style="list-style-type: none"> Fan is active. 	<ul style="list-style-type: none"> This is normal – the exhaust fan is working.
<ul style="list-style-type: none"> The system beeps at start up. 		<ul style="list-style-type: none"> This is normal.
<ul style="list-style-type: none"> The system beeps during motion detection. 	<ul style="list-style-type: none"> Motion detection is enabled and the alarm buzzer is activated. 	<ul style="list-style-type: none"> Check configuration in <i>Main Menu</i> → <i>Setup</i> → <i>Alarm</i>.

5.2 Technical specifications

Homeguard DIY Kit			
Digital Video Recorder (DVR)		Cameras	
Video Compression:	H.264	Image Sensor:	1/4" CMOS
Audio Compression:	G.771A	Effective Pixels:	PAL 500 (H) x 582 (V), NTSC 510 (H) x 492 (V)
Video Input:	4/8 channel (BNC)	Signal System:	PAL / NTSC
Video Output:	1 channel (BNC), VGA	Sync System:	Internal
Audio Input:	1 channel (RCA)	Horizontal Resolution:	480 TV Line
Audio Output:	1 channel (RCA)	Lens:	3.6mm
Resolution:	PAL: CIF 352 x 288, D1 704 x 576 NTSC: CIF 352 x 240, D1 704 x 480	Minimum Illumination:	0 Lux (IR on)
Video Frame Rate:	PAL: 25fps NTSC: 30fps	Backlight Compensation:	Auto
VGA Interface:	1 channel (D-Sub)	Gain Control:	Auto
VGA Support:	1024 x 768, 1280 x 1024, 1440 x 900	Shutter Speed:	1/50 (1/60) – 1/100,000 (s)
Network:	Ethernet (10/100Mbps)	White Balance:	Auto
Monitoring Methods:	Internet, mobile phone, e-mail	S/N Ratio:	More than 48dB (AGC off)
Control:	Mouse, remote control	Video Output:	1.0V p-p, 75 Ω (BNC)
Backup:	USB and Network	Power Requirement:	DC 12V / 140mA, 300mA (IR on)
HDD:	1 bay, up to 2TB	Operation temperature:	-10 to 50°C approx
Security Feature:	Password protection, multiple user accounts		
Power Supply:	DC 12V input		
Operating Temperature:	-10 to 55°C approx		
Device Dimensions:	320 x 215 x 45mm (W x D x H)		
Weight:	TBC		

5.3 Warranty and Technical support

If you are experiencing difficulties with your product, or have questions which are not answered in this instruction manual, our dedicated support site offers a wide range of clearly written FAQs, manuals and user guides which are designed to help you get the most from your purchase.



Visit our dedicated support site at ***storageoptions.com/support*** for FAQs, manuals and user guides

If you are unable to find an answer online, are still experiencing issues or suspect your product to be faulty, our UK based customer service team is available to offer full support, and can be contacted via the support pages of our website.



Submit a service request online if you cannot find an answer to your problem



A member of our **UK based support team** will review your case and offer the highest level of advice and support

Please contact us directly through our support site if you have any queries or concerns.

6 Notes

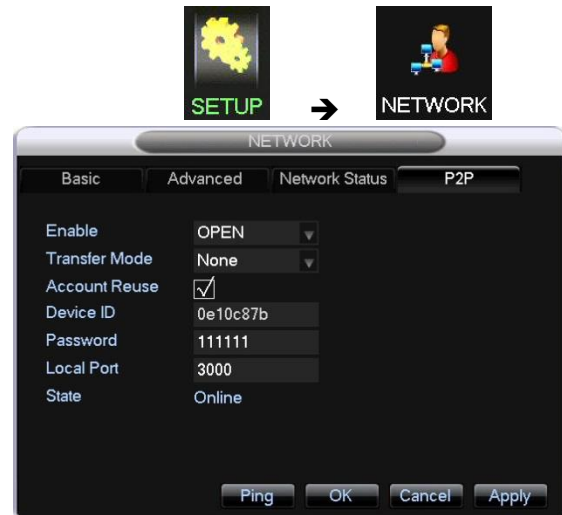
7 Mobile access guide

Once the DVR has been installed, you can view the video feeds remotely on your mobile by performing the steps below:

7.1 On the DVR

From the main menu, select **SETUP** then **NETWORK**.

On the **P2P** tab, make a note of your **Device ID** and **Password**, and ensure the unit is **Online**.



7.2 On your mobile

Download the **IMSeeye** app

In **Device List**, select **Add Device**

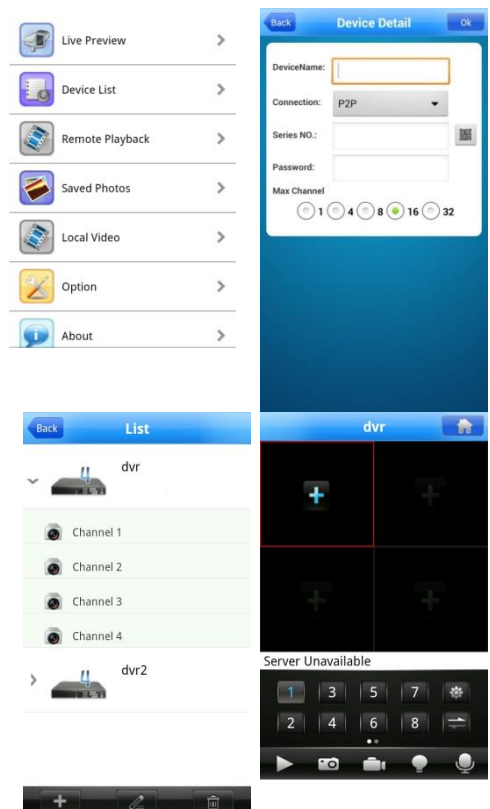
Give the DVR a **name**.

Select **P2P** as the connection type, then enter your **Device ID** and **Password**.

Select the **Number of channels** you DVR supports.

Select **OK**

From the device list, you can now select your DVR and which channel to view.



NOTE

This method is based on the general default settings which apply to the majority of routers on the market today. If this method is unsuccessful, please refer chapter 3.4.1.3 for more information.



DIY CCTV Security Kit

For the latest, up-to-date manual, please visit
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