



CCTV in operation
24hr recording
in progress

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

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

By default, pass codes are disabled on the system. You do not need to enter a pass code when accessing any menus. For security purposes, it is highly recommended to enable pass codes via the Password Menu.

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: www.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 www.storageoptions.com/warranty.



storageoptions.com/support/



support@storageoptions.com

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QUICK START GUIDE

1.1 – BASIC CONNECTIVITY

To get started quickly with the Storage Options 8 Channel CCTV DVR, follow these instructions:

1. Connect a camera to the “Video In 1” socket.
2. Connect a computer monitor to the VGA socket.

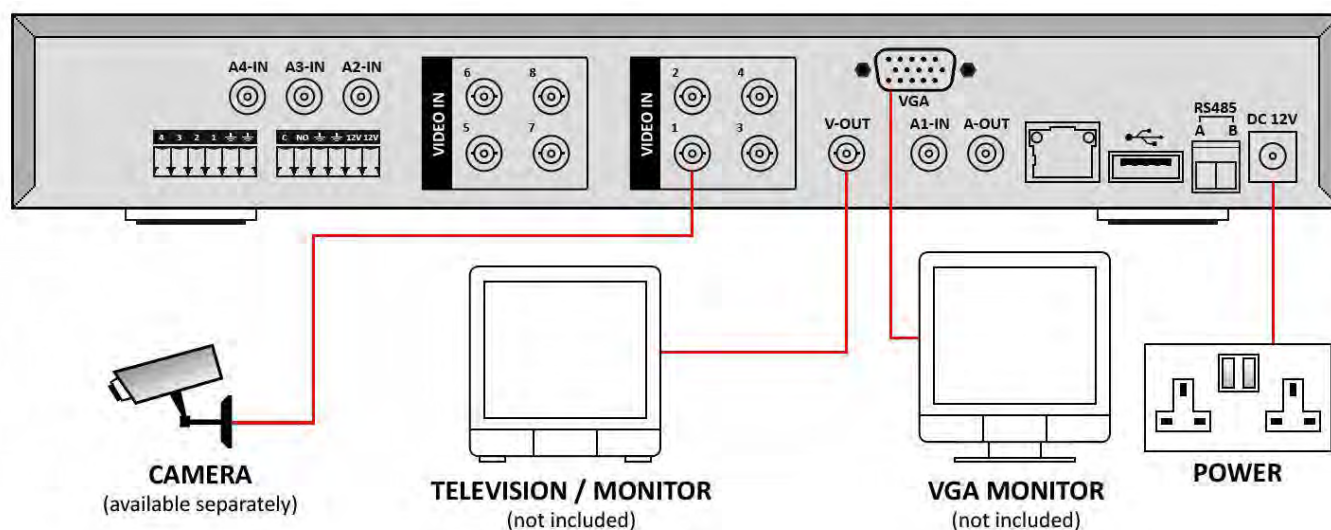
AND / OR

Connect a television to the “Video Out” socket.

NOTE

You must select the correct input on your monitor / television to view the DVR system. Refer to its manual for instructions on how to do this.

3. Connect the DVR and camera to a mains supply.
Refer to section “1.3 – Power Connection Diagram” (page 8) for more information.



4. The DVR will power on automatically.
5. Set the date and time.
Refer to section “Set System Date & Time” (page 25) for more information.
6. Format (prepare) the Hard Disk Drive (HDD).
Refer to section “Format The Hard Disk Drive” (page 26) for more information.

1.2 – WALL MOUNTING A CAMERA

Each Storage Options 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. Secure the bracket to the wall using the provided screws.



To attach the camera to the bracket:

1. Screw it onto the exposed thread.
2. Tighten the bolt to lock it in place.

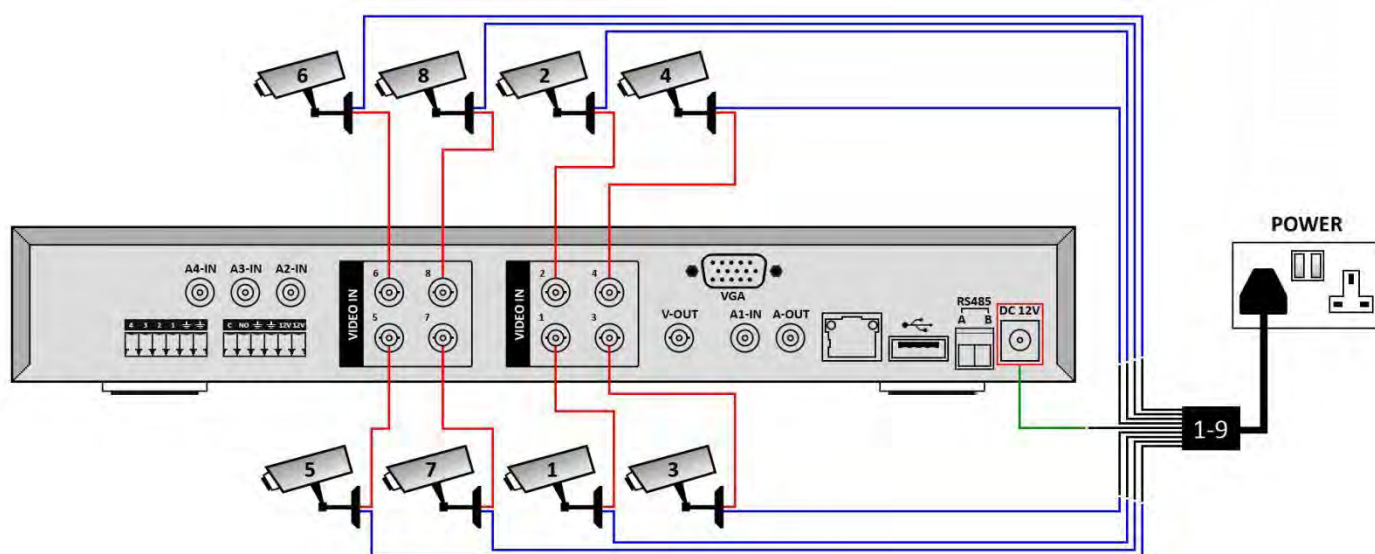
To adjust the camera's position, turn the bolt arms anti-clockwise to release the corresponding point of adjustment, position the camera, then turn the bolt arms clockwise to re-tighten.

1.3 – POWER CONNECTION DIAGRAM

This system is supplied with one mains adapter which splits into:

- One mains adapter for the DVR
- Eight mains adapters for up to 8 cameras

Connect power to the DVR and cameras as shown in this diagram:



BLUE = Camera mains connection*

GREEN = DVR mains connection*

RED = Video connection*

CAUTION

The 1-9 power splitter is designed for use **ONLY** with Storage Options cameras! **DO NOT** attempt to connect other brands as this may present a risk of fire!

Each Storage Options CCTV camera (sold separately) also comes with its own mains adapter should you wish to plug them all in separately, or in different locations.

To connect to mains power:

1. Connect each of the 8 cables to the power sockets on up to 8 Storage Options cameras.
2. Connect the ninth cable to the “DC 12V” socket on the DVR rear panel.
3. Connect the mains adapter to a suitable 3-pin mains socket.

* Colours used for illustrative purposes only, and are not representative of actual cable colours.

OVERVIEW

2.1 – SYSTEM OVERVIEW

Storage Options presents a complete CCTV solution for home or office security, featuring up to eight high-quality cameras, internal HDD, easy setup and configuration, alarm triggers, and network connectivity.



- H.264 video compression
- Twin USB interface – USB2.0 for data backup, USB1.1 for mouse operation
- 3.5" SATA HDD (up to 2TB compatible)
- 16 bit colour translucent user-friendly GUI, with notes for selected menu items
- Supports live view, parameter setting and backup via network interface

2.2 – ENVIRONMENT ADAPTABILITY

For safety while using the DVR and to prolong the device's useful life, please pay attention to the following details:

1. When installing the device, please comply with all the electric product safety criteria.
2. Power and ground:
 - Do not touch the DVR or mains adapter with a wet hand.
 - Do not drop liquid on the DVR or mains adapter.
 - Do not put any object on the DVR.
 - Please use a soft, dry cloth to clean the DVR; do not use chemical cleaning fluids.
 - The DVR will have voltage before start-up if the mains adapter is connected to a mains socket.
 - Please unplug the mains adapter from its socket if the DVR is not going to be used for a prolonged period of time.

2.3 – RECORDING CAPACITIES

This table shows the amount of recording time (in days*) of the DVR, depending on which size HDD is installed and how many cameras are connected:

		Number of Cameras							
		1	2	3	4	5	6	7	8
HDD Capacity	1TB	200	100	66	50	40	33	29	25

* All values are approximate. Actual results may vary according to recording conditions.

CONVENTIONS USED IN THIS MANUAL

At various points in this manual you will see highlighted text. Please refer here for an explanation:

NOTE Important notes are highlighted in blue.

TIP Tips on best practice are highlighted in green.

CAUTION Important cautions and warnings are highlighted in red.

Unless otherwise stated, all functionality described in this manual is performed using the USB mouse.

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.

☐

DVR

☐

1-9 power splitter cable

☐

Remote control

☐

Mouse

☐

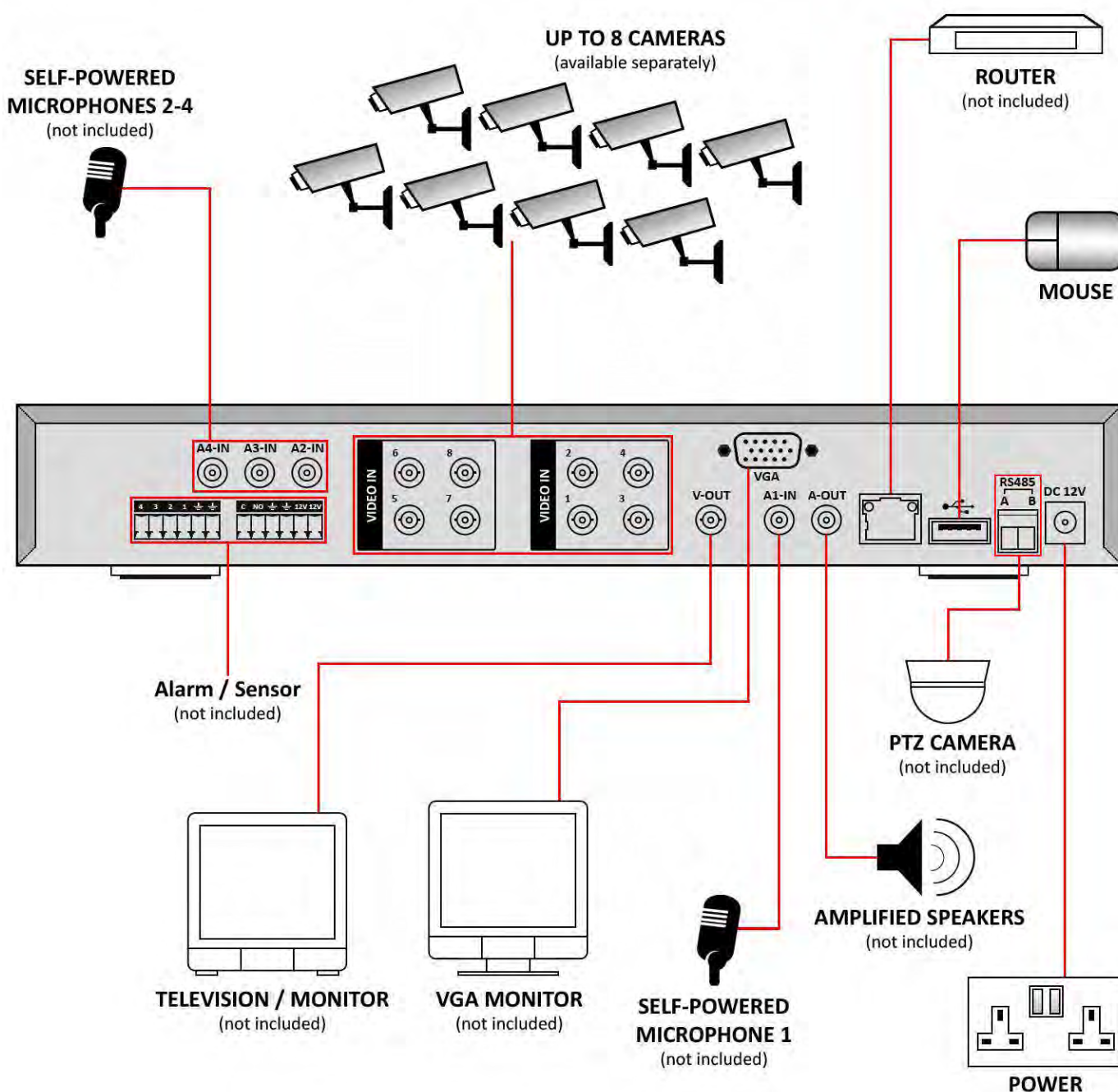
Software CD

☐

Instruction manual

SYSTEM CONNECTION

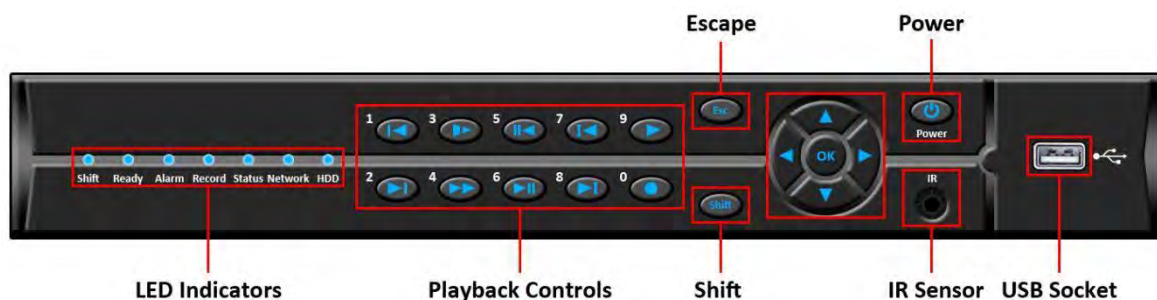
Refer to the following diagram for how to connect the DVR system.



Refer to section “1.3 – Power Connection Diagram” (page 8) for more information on connecting to a mains socket.

BASIC OPERATION

6.1 – FRONT PANEL



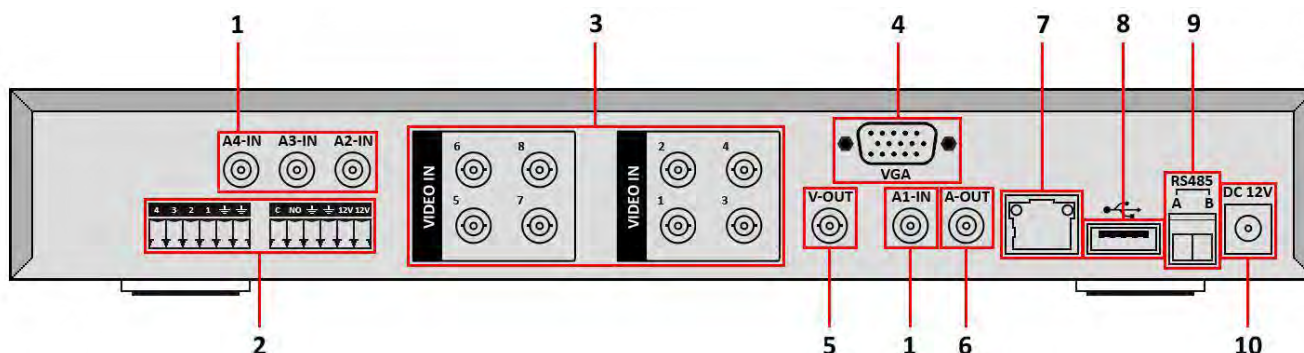
- **LED INDICATORS:** Shows status of HDD activity, recording, alarm, network and power.
- **PLAYBACK CONTROLS:** Press buttons 1-8 to view the selected channel in full-screen.

BUTTON	PRIMARY FUNCTION (SHIFT OFF)	SECONDARY FUNCTION (SHIFT ON)
1	Skip back to previous file	-
2	Skip forward to next file	-
3	Slow playback to 1/2, 1/4, 1/8 or 1/16 speed	-
4	Fast forward playback to 2x, 4x, 6x or 8x	-
5	Play in reverse / pause (toggle)	-
6	Play / pause (toggle)	-
7	Switch to previous camera (Live View mode)	-
8	Switch to next camera (Live View mode)	-
9	-	Opens the Playback Mode menu
0	-	Opens the Record Mode menu

- **ESCAPE:** Closes open menus / cancels changes.
- **SHIFT:** Switches to alternative function for the buttons.
- **NAVIGATION / OK:** Press the arrow buttons to highlight menu options, and OK to confirm selection.
- **POWER:** Press to turn the system on / off (ensure the rear panel ON/OFF switch is in the “on” position).
- **IR SENSOR:** IR receiver for the remote control. Do not cover.
- **USB SOCKET:** Connect a USB flash drive here for video file backup.

6.2 – REAR PANEL

Refer to the diagram and table below for information on the DVR's various connections.



REFERENCE	PHYSICAL CONNECTOR	DESCRIPTION
1	Audio input	Connect audio input (phono)
2	Alarm port	Connects to an alarm system. For advanced users and system installers only. Not supported by Storage Options.
3	Video input	8x numbered video inputs for cameras (BNC)
4	VGA output	Connect to a monitor with VGA (D-Sub) input
5	Video output	Connect to a TV or monitor (BNC)
6	Audio output	Connect audio output (phono)
7	RJ45	Connect to a computer network
8	USB	Connect a USB mouse
9	RS485	Connect to RS485-compatible PTZ camera
10	POWER input	DC 12V / 3A

To connect a camera via BNC:

1. Align the BNC connector with the notches on the BNC socket and slide it 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.



6.3 – REMOTE CONTROL

The remote control can be used for navigating system menus. When using the remote control, the OK key performs the same functions as left-clicking the mouse.

To use the remote control with the DVR system:

1. Insert 2x AAA 1.5V alkaline batteries (not included) into the back of the remote control. Please ensure correct orientation.
2. Refer to the below diagram for button functions:

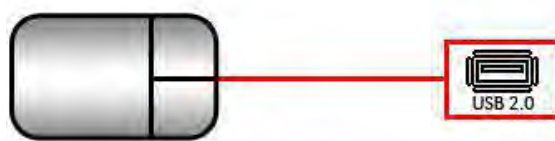
REF	BUTTON	DESCRIPTION
1	MULT	Switches between 1, 4, 1+7 and 8+info view modes
2	RECORD MODE	Opens the Record Mode menu
3	SEARCH	Opens the Search menu
4	PLAYBACK CONTROL	Use to play, pause, skip forward / backward, and fast forward video playback
5	ADDRESS	Not applicable
6	FUNCTION	Displays quick shortcuts to the PTZ Control and Colour Settings menus
7	NAVIGATION / MENU	Use ↑, ↓, ←, → to highlight menu options Use OK to confirm selections
8	ESCAPE	Press to close menu windows
9	NUMBERS	In menus, press 0-9 to enter values In Live View, press 1-8 to view channels in full-screen display mode
10	-/--	Switch between entering one digit or two

6.4 – MOUSE CONTROL

The mouse can be used for navigating system menus.

NOTE Unless otherwise stated, all system functions described in this manual are achieved through mouse input.

To use a mouse with the DVR system, simply connect the mouse to the lower USB port located on the rear panel.



Left Button:	Click to select a menu option. During live viewing, double-click on a channel to view in full-screen. Double-click the channel again to return to split-screen view.
Right Button:	Click to open the Sub Menu.
Scroll Wheel:	In Live View mode, scrolls through individual cameras.

6.5 – USING THE SUB MENU

When using the mouse, open the Sub Menu to access system options, including the Main Menu and PTZ control.

1. Right click anywhere on screen to open the Sub Menu.
2. To close the menu, left-click anywhere on screen (outside the menu).



MAIN MENU:	Opens the system menu
RECORD MODE:	Switch between schedule / manual / stop record modes for all or individual cameras
PLAYBACK:	Opens PlayBack mode for viewing previously recorded footage
PTZ CONTROL:	Opens the PTZ Control menu (only for use with PTZ cameras, not supplied)
HIGH SPEED PTZ:	Not applicable
ALARM OUTPUT:	Adjust alarm output settings
COLOUR SETTING:	Opens the Colour Setting menu
OUTPUT ADJUST:	Adjust picture size to compensate for the monitor's overscan
LOGOUT:	Log the current user out
VIEWS:	Choose the camera view mode from various options

POWER ON / OFF

To power the system on, connect the power cable to the DC 12V port on the rear panel. The DVR will automatically power on.

At start-up, the DVR performs a basic system check and runs an initial loading sequence which includes the colour bars and “H.264 DVR” images shown below. After a few moments, it will load a live display view.



The system can also be put into standby mode. It will still receive power from the mains socket but will not record anything until brought back into operation mode.

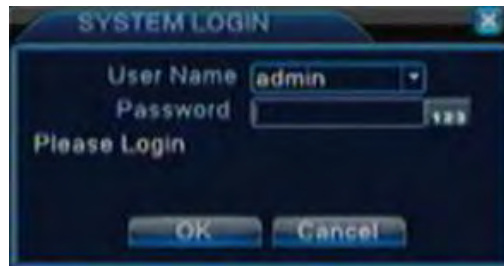
- To put the system in standby, press and hold the power button on the front panel until the on-screen prompt closes.



- To wake the system from standby mode, press and hold the power button on the front panel until the DVR wakes up.

SYSTEM LOGIN

To open the main menu, right-click anywhere on screen to open the Sub Menu, then select MAIN MENU. Alternatively, press the MENU / EXIT button on the remote control or front panel of the system.



8.1 – PASS CODES

By default, pass codes are disabled on the system. You do not need to enter a pass code when logging in as an administrator and accessing any menus. For security purposes, it is highly recommended to enable a pass code for the administrator account via the Password Menu.

NOTE

If pass codes are enabled on the system, you need to select your user name then input your passcode to log into the system.

8.2 – MENU NAVIGATION

We recommend using the mouse for easiest menu navigation, but it is possible to control many functions using the remote control or front panel buttons.

- Click any option to select it.
- If an option requires user input (e.g. alphanumeric characters), an on-screen keyboard or keypad will appear when that menu is selected. Simply click the characters to input them into the cell.
- In Live View mode, right-click anywhere on screen to display a context menu. From here you can access many function. See section “6.5 – Using The Sub Menu” (page 15) for more information.
- Within any mode (except Live View), you can right click anywhere on the screen to display a menu with two options:
 - *Up Window*: Returns to the previous window
 - *Show Desktop*: Returns directly to the “desktop” (i.e. Live View mode)

MAIN MENU

When you enter the Main Menu, you will be presented with six categories which cover all features of the system:



Refer to this table for a description of the main categories:

ITEM	ICON	DESCRIPTION
Record		Use this menu to configure recording schedules, video playback, and backup settings.
Alarm		Configure motion detection, video blind, video loss, alarm input and output, and system abnormalities.
System		Use this menu to configure system date and time, encoder settings, network connectivity, network services, GUI adjustments and PTZ.
Advanced		Contains options for HDD management, user account configuration, video output adjustment, maintenance, and device information.
Info		Shows system information.
Logout		Choose to log the current user out, shutdown or reboot the system.

The following sections of this manual will guide you through the most commonly used features of this DVR:

- Setting the system time
- Formatting the Hard Disk Drive (HDD)
- Configuring recording settings
- Motion detection recording
- File backup
- Network connectivity

9.1 – RECORD MENU



Record Configuration:

- Configure schedules for up to four different time periods, set up manual recording, enable motion detected recording, or stop recording for a specific channel or all channels.

Playback:

- Search the recording archive for specific footage, and use filters to refine search results. Play back the recording of one or multiple cameras.
- See section “*Playback Mode*” (page 30) for more information.

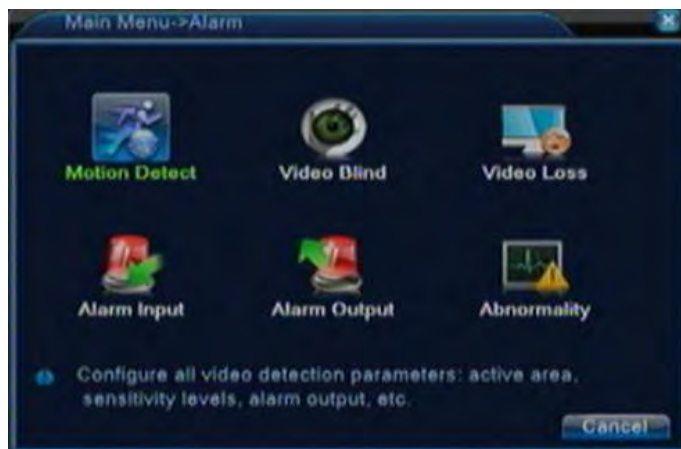
Backup:

- Search the recording archive for specific footage, and use filters to refine search results. Copy specific files to USB flash memory for backup purposes. Copy encrypted H264 files or decrypt to standard AVI files.
- See section “*File Backup*” on (page 31) for more information.

TIP

From any sub menu, you can click “Advanced” then “Up Window” to return to the previous menu.

9.2 – ALARM MENU



Motion Detect:

- Configure motion detection settings including sensitivity, detection region, schedule, detection delay, alarm output, record triggering, on-screen messages, e-mail and FTP triggering.
- See section “*Motion Detection Recording*” (page 29) for more information.

Video Blind:

- For advanced users only. Not supported by Storage Options.

Video Loss:

- For advanced users only. Not supported by Storage Options.

Alarm Input:

- Only for use when connecting to a building alarm system. Not supported by Storage Options.

Alarm Output:

- Only for use when connecting to a building alarm system. Not supported by Storage Options.

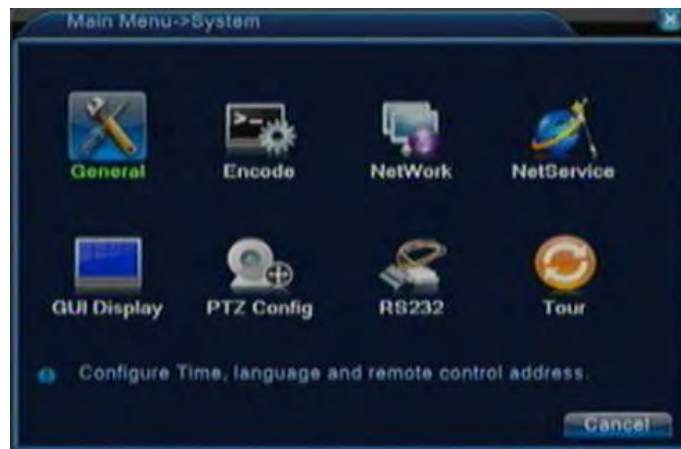
Abnormality:

- Set up a message or buzzer notification in the event of a problem such as no HDD, HDD error, or HDD full.

TIP

From any sub menu, you can click “Advanced” then “Up Window” to return to the previous menu.

9.3 – SYSTEM MENU



General:

- Set system date and time, including display format, choose your preferred language, what the system should do once the HDD is full, video output standard, delay before automatic logout of a dormant user, etc.

Encode:

- Configure quality settings for both the main and extra video streams for each camera, including compression type, frame rate, bit rate (variable or constant), etc.

Network:

- Configure network accessibility for the DVR. Choose from auto-assigned (DHCP) addressing, or supply static address information manually.

Network Service:

- Configure settings for direct Internet (PPPoE) connection, e-mail, FTP server, mobile port number, and Universal Plug 'n' Play (UPnP).

GUI Display:

- Rename video channels, choose which information should be displayed, enable menu translucency, change VGA output resolution, etc.

PTZ Configuration:

- Only for use with PTZ cameras (not supplied). Configure protocol, address, baud rate and parity.

RS232:

- For advanced users only.

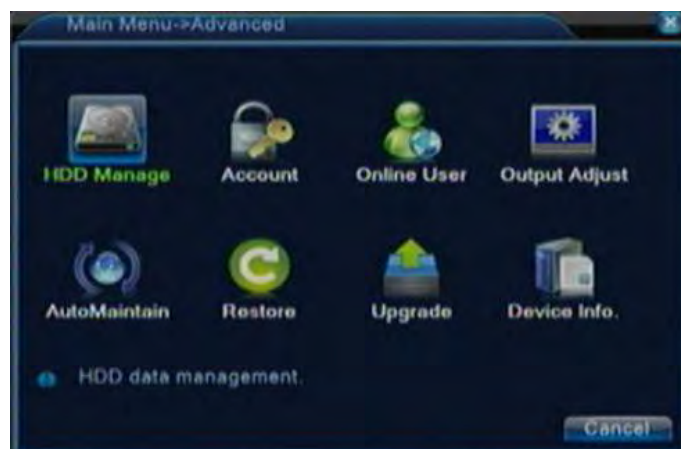
Tour:

- Only for use with PTZ cameras (not supplied). For advanced users only.

TIP

From any sub menu, you can click "Advanced" then "Up Window" to return to the previous menu.

9.4 – ADVANCED MENU



HDD Management:

- Configure HDD options including read / write permissions, formatting and partitioning.
- See section “*Format The Hard Disk Drive*” (page 26) for more information.

Account:

- Add, modify and delete users and user groups.

Online User:

- View a list of which users are currently logged in via the network and choose to disconnect them.

Output Adjustment:

- Adjust image overscan for all four sides of the video output, to stop the monitor / TV cropping the edges.

Auto Maintenance:

- Configure a schedule for the DVR to automatically reboot, and to automatically delete old video files.

Restore:

- Choose individual or all settings to reset back to defaults.

Upgrade:

- Use this option to upgrade to a newer version of the system firmware.

Device Info:

- Displays information on number of audio channels, number of alarm channels, graphical user interface (GUI) theme, remote control type, etc.

TIP

From any sub menu, you can click “Advanced” then “Up Window” to return to the previous menu.

9.5 – INFO MENU



HDD Information:

- Displays information on total capacity, remaining capacity and HDD status.

BPS:

- Displays current bit rate values in real time for each camera and how much capacity (approximately) each will use per hour.

Log:

- Displays a list of event information, such as system restarts, errors, account login / logout, etc.

Version:

- Displays version information for the system, the unit build date and serial number.

TIP

From any sub menu, you can click "Advanced" then "Up Window" to return to the previous menu.

9.6 – LOGOUT MENU



Logout:

- Log out the current user. Another user can then log in. Only one user can log into the system at a time.

Shutdown:

- Shuts the system down completely.

Reboot:

- Shuts the system down then immediately restarts it. Useful when changed settings require the system to restart before they take effect.

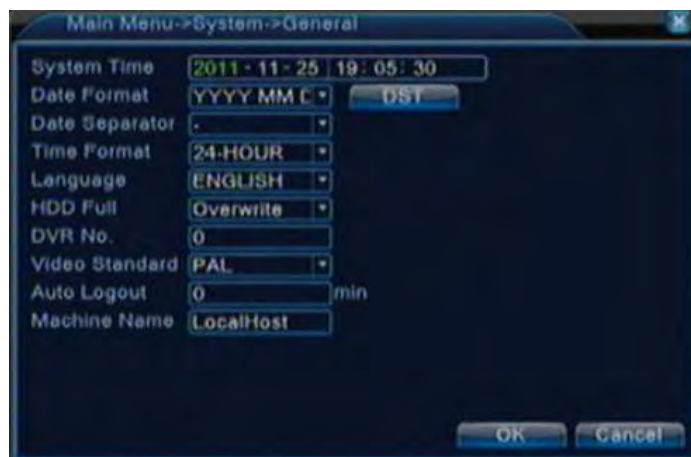
TIP

From any sub menu, you can click “Advanced” then “Up Window” to return to the previous menu.

SET SYSTEM DATE & TIME

Before setting any recording schedules, the system clock should be configured, to ensure accuracy of time and date information printed onto recorded events.

Go to *Main Menu* → *System* → *General* to change the date and time settings.



Here you can set the system date and time, change the date format, and time format (12H or 24H).

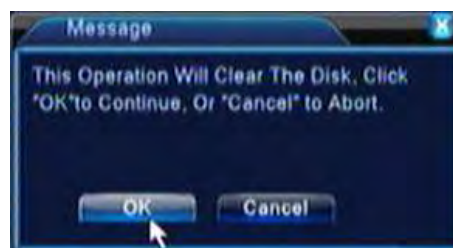
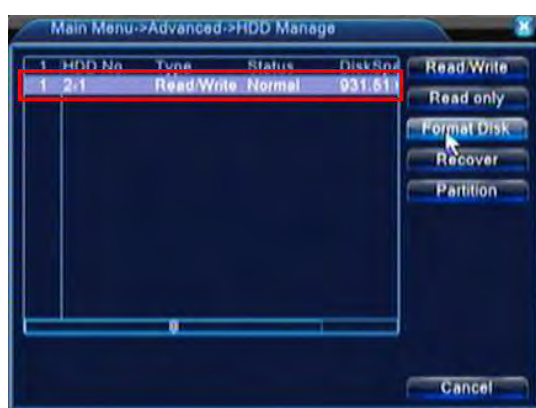
MENU ITEM	DESCRIPTION
System Time	Set the system date
Date Format	Choose the date display format
Date Separator	Choose whether to separate dates with "/", "." or "-"
Time Format	Choose 12 or 24 hour clock format
Language	Select your language from this list
HDD Full	Choose what the DVR should do when the HDD becomes full
DVR No.	If you have multiple DVRs, you can number them here
Video Standard	Choose PAL for UK, NTSC for America
Auto Logout	Choose the length of time before the system automatically logs out the current user

FORMAT THE HARD DISK DRIVE

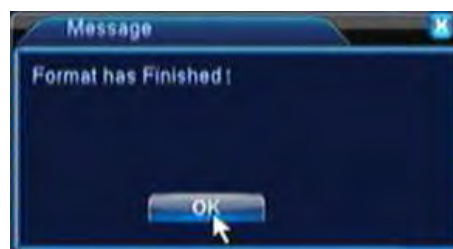
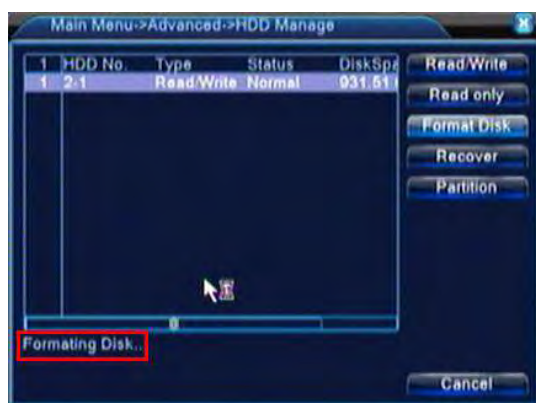
This DVR uses a Hard Disk Drive (HDD) to record and store video footage. You must format the HDD before it can be used to record video.

To format the HDD:

1. Go to *Main Menu* → *Advanced* → *HDD Manage*.
2. Select the HDD from the list (there will only be one drive listed, as per the below screenshot), then click "Format Disk". Click "OK" on the message box to format the HDD.



3. A message will appear at the bottom of the window to indicate formatting is in progress. After a short period of time, "Format has finished!" will appear on screen.



4. Click "OK" to close the window. You can then close the "HDD Manage" window.

After formatting is complete, you can start recording on the HDD.

NOTE

It is also possible to partition the HDD into two separate logical drives. This is an advanced function and should only be performed by experienced users.

CONFIGURE RECORDING SETTINGS

Before you can start using your DVR to record surveillance footage, you need to configure various recording settings. There are two separate menus which are used to configure camera settings:

- Record Configuration
- Encode Settings

12.1 – RECORD CONFIGURATION

Go to *Main Menu* → *Record* → *Record Configuration* to adjust these settings.



- Choose an individual channel (camera) to edit settings for, or select "All" to configure the same settings for all cameras.
- You can adjust the length of recorded files (in minutes).
- If motion is detected, recording will start a few seconds before the motion event, according to the value defined in the PreRecord cell.
- Each camera can be configured to record on a schedule, manually, or if an alarm is triggered.
- If scheduled recording mode is enabled, the options underneath will become available and you can choose how the scheduled recording takes place over up to four time periods per day:
 - Regular recording takes place continuously.
 - Detect recording only occurs when motion is detected on the camera.
 - Alarm recording only occurs when an alarm is triggered.
- For example, you could set:
 - Period 1 from 00:00 to 08:00 as motion detected recording
 - Period 2 from 08:00 to 18:00 as regular (constant) recording
 - Period 3 from 18:00 to 20:00 as motion detected recording
 - Period 4 from 00:00 to 24:00 as alarm-triggered recording

12.2 – ENCODING OPTIONS

Go to *Main Menu* → *System* → *Encode* to adjust these settings.



- Choose an individual channel (camera) to edit settings for, or select “All” to configure the same settings for all cameras.
- There are two video streams available for each camera, and both can be configured separately.
 - The main stream allows a choice of D1 and HD1 resolution for the first two cameras only.
 - For all 8 cameras, you can choose CIF or QCIF resolutions.
 - The extra stream only allows a choice of CIF and QCIF resolutions.
 - The extra stream is designed for low-bandwidth connectivity, e.g. when connecting to the DVR over the Internet.
- The higher the frame rate, the smoother recorded footage will be, but file sizes will be significantly larger.
- You can choose between *Variable Bit Rate* (VBR) or *Constant Bit Rate* (CBR) recording modes.
 - When VBR is selected, you can choose overall quality.
 - When CBR is selected, you can choose the actual bit rate that will be used.
- A higher number of I frames (i.e. smaller interval) will result in more accurate and higher quality video recording but it will also increase the HDD capacity needed.
 - Choose a low value for cameras which are viewing high-traffic scenes
 - Choose a high value for cameras which are viewing low-traffic scenes
- Only the first four cameras can utilise audio.
 - On the main stream you can choose to switch only the audio on / off.
 - On the extra stream, you can choose to switch both video and audio on /off.

MOTION DETECTION RECORDING

The motion function can trigger recordings to take place whenever movement is detected by the DVR.

To set up 24-hour motion detection recording on all connected cameras:

1. Go to *Main Menu* → *Record* → *Record Conf.*



2. Set "Channel" to "All", "Mode" to "Schedule" and "Week" to "All".
3. Set "Period 1" to "00:00 – 24:00" and make sure the corresponding "Detect" checkbox is ticked.
4. Click "OK" to save these settings.
5. Next, go to *Main Menu* → *Alarm* → *Motion Detect*.



6. Set "Channel" to "All" and make sure the "Enable" checkbox is ticked, then choose an appropriate sensitivity level.
7. Next to "Region", click "Set", then mark the screen in **red** where you would like motion to be monitored. By default, the whole viewport will be red.
8. Next to "Period", click "Set", choose "All", then tick the checkbox on the first "00:00 – 24:00". The table underneath will fill green to indicate motion detection is activated for 24/7 use.
9. Return to the previous menu, then click "OK" to save these settings.

PLAYBACK MODE

Playback mode allows you to review previously recorded footage. It also allows you to back up important recordings (for example a break-in / suspicious activity) to a USB flash device.

To access Playback mode:

- Go to *Main Menu* → *Record* → *Playback*.

OR

- From the main live (grid) view, right-click anywhere on screen to open the context menu.
- From the list of options, select Playback.

To use Playback mode:

- Click the Search button on the bottom right of the screen: 
- Choose your search conditions from the available options, then click “Search” to find recordings.



- A list of recordings will show on the right of the screen. Double-click a recording to show all applicable cameras (as selected in the Search Condition window previously).
- Use the controls along the bottom of the screen to fast-forward, skip between recordings, pause, and play in slow-motion.



- You can double-click on a video window to display it in single camera view mode.
- Double-click again to return to the 3 x 3 grid view.

Skip Decode	Prioritises decoding of channels 1 & 2. Channels 3-8 may skip frames when playing back.
Average Decode	Decoding performance will be the same across all 8 channels. Playback synchronisation is prioritised so frames may be dropped to keep all cameras in sync.
Full Decode	Prioritises real time playback at the expense of slowing down the encoding process.

FILE BACKUP

Recordings made on the DVR can be copied from the internal Hard Disk Drive (HDD) to a USB flash drive connected to the front panel USB port.



1. Connect your USB flash drive to the USB socket. It will only fit one way, so do not force it. Doing so could damage your USB flash drive or the USB socket.
2. Go to *Main Menu* → *Record* → *Backup* to open the Backup facility.



3. Select "Detect" to search for your USB flash drive. Your flash drive will be listed. Ensure there is a tick in the box next to its name, and select "Backup" to continue.



4. The Backup window allows you to list files recorded between specific start and end dates. Adjust these dates and times to suit the situation. You can also choose to list recordings only of a specific type (e.g. all, normal, alarm, etc) and select which channels (cameras) you want to back up.



5. Your files will be listed in the table. Check the box next to each one you wish to copy to the USB flash drive.

TIP

Required capacity for the selected recordings will be displayed underneath the table, along with the remaining capacity on the USB flash drive. This can help you determine how many files you can store on the USB flash drive.

6. Select either H264 or AVI for the backup format, then select "Start".
 - H264 copies the raw encrypted video files to USB flash. This is the quickest backup method.
 - AVI decrypts and converts the encrypted files into a format which is playable on most Windows computers using video playback software. This method takes approximately twice as much time.

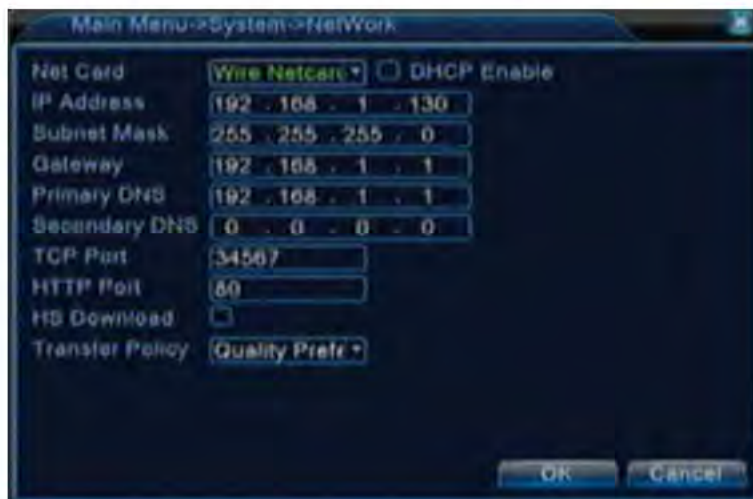
NOTE

For playback of AVI files, we recommend VideoLAN VLC Media player. This free software can be downloaded from <http://www.videolan.org/> and is available for Windows, Linux and Mac OSX.

7. Wait for the DVR to copy the files to the USB flash drive. This can take a long time depending on chosen options and speed of the USB flash drive. Once it has finished, a message will be displayed on screen. You can then close the Backup window and remove the USB device.

NETWORK SETTINGS

Before being able to access the DVR over a network, you need to make sure the network settings are correctly configured.



* The above screenshot is only an *example* of valid network settings. Do not simply copy them onto your DVR as your network may differ.

To configure network settings:

1. Connect the DVR to your Internet router using a standard network cable with RJ45 connector.
2. Leave "Net Card" at the default setting.
3. Tick the "DHCP Enable" checkbox to allow your router to assign address information automatically, then click "OK" to accept the changes. You will need to restart your DVR system before the changes take effect.

NOTE

Alternatively, if you would like to view your DVR remotely (i.e. outside your local network, over the Internet) you will need to un-tick "DHCP Enable" and supply static address information manually.

For detailed help with configuring network access on your DVR, we recommend you follow the "Storage Options Remote Access Guide", which is available as a downloadable PDF from <http://www.storageoptions.com/support/>.

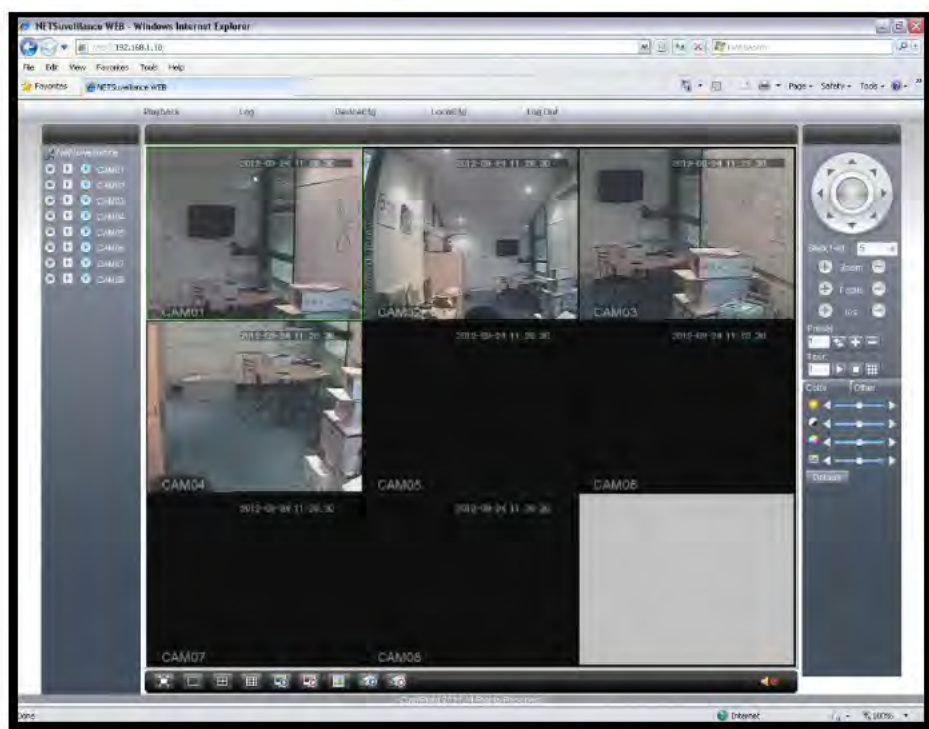


The guide covers the network setup and port forwarding process, including in-depth instructions on the following:

- Connecting equipment
- Finding your router's LAN and Internet IP addresses
- Setting up your Storage Options system
- Using the Ping tool to test configuration
- Viewing your device in Internet Explorer
- Configuring port forwarding
- Configuring mobile devices (e.g. mobile phone)
- Static / dynamic WAN IP addresses and configuring a DDNS account

NETWORK CONNECTIVITY

The DVR features built-in browser based software which allows access to the system locally over the Local Area Network (LAN) or remotely over the Internet, using Internet Explorer.



Before attempting to use the network functionality of your DVR, we recommend you follow the “Storage Options Remote Access Guide”, which will help you configure your DVR correctly for network use. The guide is available as a downloadable PDF from <http://www.storageoptions.com/support/>.

Once you have correctly configured the network settings for your DVR, access it via your web browser. Open Internet Explorer and type the DVR’s IP address into the address bar, then press Enter to load the page.

On first use, you will be prompted to install ActiveX controls. Please follow on-screen instructions and if you are given the option to block or allow any controls, please *allow* them otherwise you will not be able to access your DVR.

To ensure stable use of the network surveillance functionality, it is recommended to only use the following operating systems and browsers:

SUPPORTED OPERATING SYSTEMS	RECOMMENDED WEB BROWSERS
Windows XP	Internet Explorer 6
Windows Vista	Internet Explorer 7
Windows 7	Internet Explorer 9

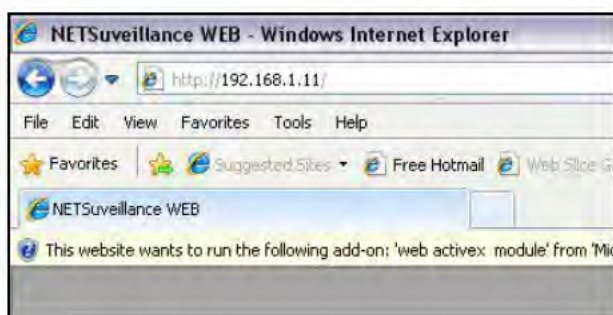
17.1 – USING THE NET SURVEILLANCE INTERFACE

With your DVR connected to your Local Area Network (LAN), you can log in to the system using Internet Explorer browser.

NOTE The DVR must be connected to your local or wide area network before attempting remote access.

To log into the system:

1. Open Internet Explorer. In the address bar, enter the IP address of the DVR (e.g. <http://192.168.1.10>). If you have configured an HTTP / Web port other than the default of 80, you will need to append that port number to the address (e.g. <http://192.168.1.10:80>).
2. You must install the ActiveX control in order to access the DVR. Click the yellow attention bar at the top of the main page and select “Install ActiveX Control” or “Run Add-on”.



3. In the warning box, click “Install” or “Run” to allow installation of the ActiveX control. Once it has installed you may need to refresh the page or restart Internet Explorer. The login page should appear:



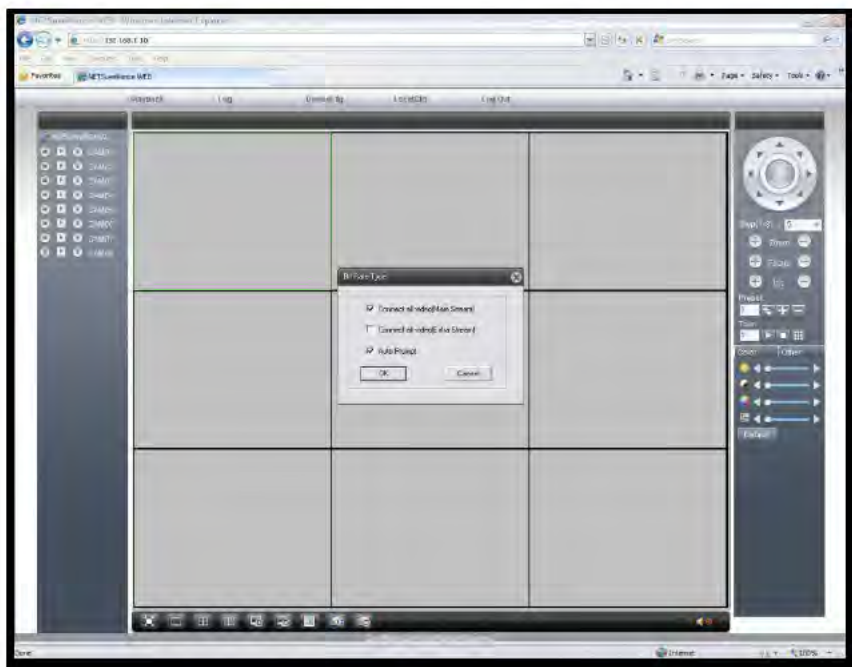
4. Type “admin” for the User Name. Leave the password field blank (default).

NOTE If you have enabled passwords on the DVR, enter the USER or ADMIN password. However, only the ADMIN can change settings and options on the system.

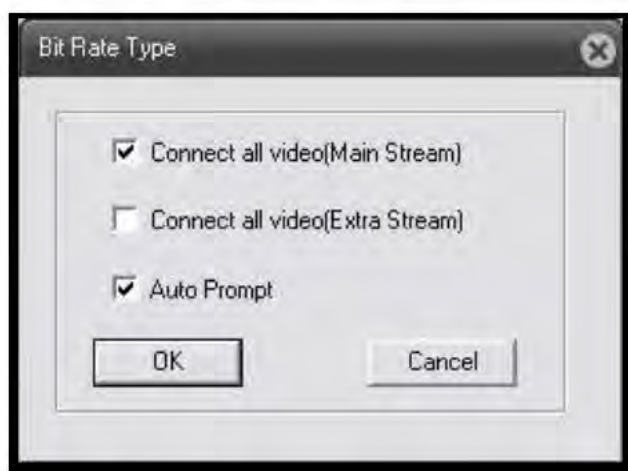
5. Click the “Login” button to access the surveillance system.

17.2 – MAIN SCREEN

Once you have logged in, the Remote Surveillance main screen appears in the browser.



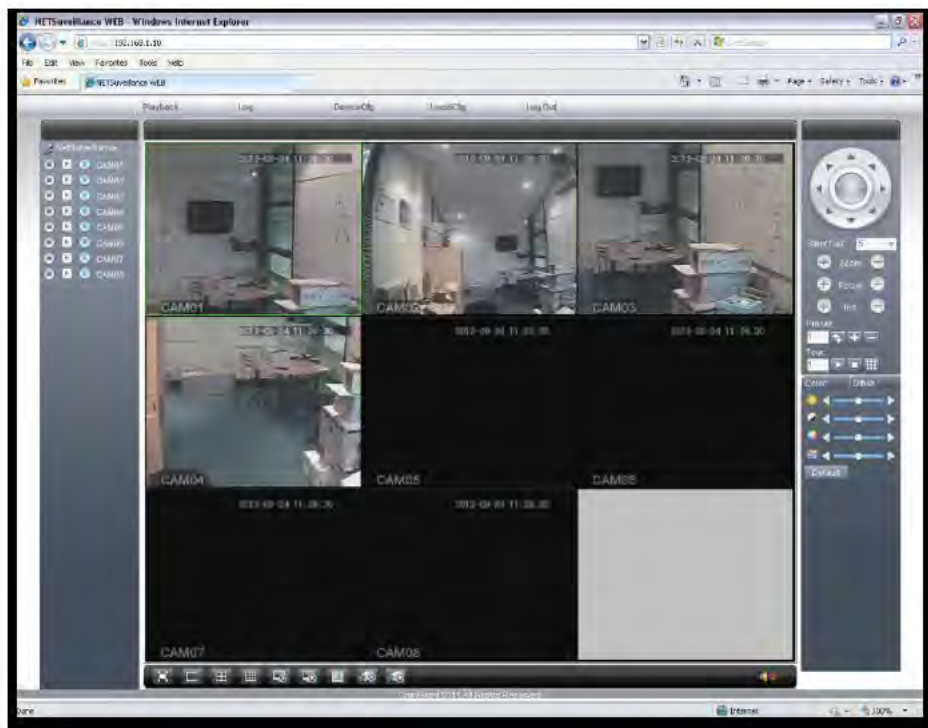
The “Bit Rate Type” window will appear in the middle of the screen. Make your choice from the available video stream types (see table below), then click the “OK” button to continue.



ITEM	DESCRIPTION
Main Stream	Connects to a high-bandwidth main video stream of each camera, using highest quality settings. Preferred when connecting over a Local Area Network (LAN) connection.
Extra Stream	Connects to a low-bandwidth video stream of each camera, using lower quality settings. Preferred when connecting over an Internet Wide Area Network (WAN) connection.

17.3 – LIVE VIEW

By default, the browser-based network surveillance system opens in Live View mode (split-screen).



ITEM	ICON	DESCRIPTION
Local Record		Starts / stops recording of the corresponding video channel to the computer's HDD.
Extra Stream		Switches to the low-bandwidth video stream for the corresponding channel.
Main Stream		Switches to the high-bandwidth video stream for the corresponding channel.
View Full Screen		Displays the program in full screen mode. Press the "Esc" key to exit.
View 1		View the currently selected camera by itself.
View 4		View four cameras in split-screen grid mode.
View 9		View all eight cameras in split-screen grid mode (default view).
Connect All Video		Connects to all video streams.
Disconnect All Video		Disconnects from all video streams.
Snapshot		Takes a snapshot image of the currently selected camera feed.
All Channel Record		Starts recording of all video channels to the computer's HDD.
Close All Record		Stops recording of all video channels.

17.4 – RECORDING

You can record video directly to your PC using the remote surveillance software. First, you will need to specify where you would like recorded files to be saved:

1. Select “LocalCfg” from the menu at the top of the screen. The “Config Manager” window will appear on screen. Choose “System Setting” from the menu on the left.
2. Click “Browse” to choose a suitable video recording folder. The current user account logged into Windows will need to have permission to write to the chosen folder. Videos are saved to C:\record\ by default.



3. It is advisable to enable the “Save local record as AVI” option by checking the box. If this box is not checked, the resulting recordings will be encrypted and you will not be able to play them in media playback software.

NOTE

For playback of AVI files, we recommend VideoLAN VLC Media player. This free software can be downloaded from <http://www.videolan.org/> and is available for Windows, Linux and Mac OSX.

4. Click “Apply” to save the setting.

To record video to your PC:

- Click the “Local Record”  icon next to the corresponding video channel to record that channel to the computer’s HDD.
- Click the “Local Record”  icon again to stop recording.

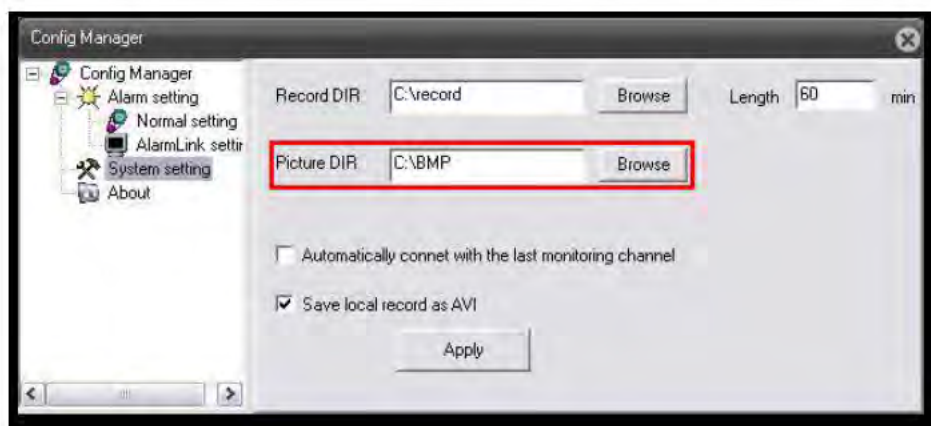
OR

- Click the “All Channel Record”  icon to record all currently connected video streams.
- Click the “Close All Record”  icon to stop all recordings.

17.5 – SCREEN CAPTURE

You can use the remote surveillance software to take a snapshot of the selected video channel on the main display screen. First, you will need to specify where you would like the images to be saved:

1. Select “LocalCfg” from the menu at the top of the screen. The “Config Manager” window will appear on screen. Choose “System Setting” from the menu on the left.
2. Click “Browse” to choose a suitable picture folder. The current user account logged into Windows will need to have permission to write to the chosen folder. Pictures are saved to C : \BMP\ by default.



3. Click “Apply” to save the setting.

NOTE

To view still images, you can use any image viewing software that supports BMP files, such as Windows Photo Viewer or Paint. Simply double-click the file to open it.

You can use the remote surveillance software to take a snapshot of the channels on the main display screen. Screen captures can be useful for your own records, or may be needed by authorities in case of a security incident.

To take a screen capture:

1. Select the channel you want to capture. The selected channel will be highlighted in a yellow frame.
2. Click the “Capture”  icon to take a screenshot. Captured images are saved to C : \BMP\ by default.

17.6 – PLAYBACK

Use the Replay menu to search and play back video that has been previously recorded on the DVR's internal HDD.

To use the playback menu:

1. Click "Playback" at the top of the main screen. The "Playback" menu will be displayed.
2. Choose an event type, and then enter begin and end times to narrow down your search.
3. Click a channel number, then click "Search" to display search results for your criteria.
4. The results of your search will be listed in a column on the left. Click to select a recording, then click "Play" to view the video in the right-hand pane.




5. Use the transport controls below the video to control playback:



Play



Pause



Stop



Slow Motion



Fast Forward



Skip Back



Skip Forward

TIP

After selecting a recording on the list, you can click "Download" to copy it from the DVR to the computer's HDD. Files copied to the computer will be encrypted. You will need to use the Player software included on the software CD to play these encrypted files.

17.7 – PTZ CONTROL

You must have a PTZ camera (not included) connected to the system in order to use the pan, tilt and zoom controls.



To control a PTZ camera:

1. Select the channel of the connected PTZ camera.
2. Click the ← or → navigation arrows to pan, and ↑ or ↓ keys to tilt the camera.
3. Click + / - to adjust zoom, focus, and iris values.

Preset:

Use this function to add and recall preset positions for the camera to point to.

Tour:

Use this function to make the camera automatically move to each preset position in a chain.

17.8 – REMOTE DVR SETUP

The DVR's settings can be configured through Internet Explorer, as well as through it's own menu system. This can be useful if you quickly need to reconfigure a setting and do not have physical access to the DVR.

- Choose "DeviceCfg" on the top menu to open the "Device Config" window.

When you enter the Main Menu, you will be presented with five categories which cover all features of the system, in the same manner as on the DVR itself:

ITEM	ICON	DESCRIPTION
Record		Use this menu to configure recording schedules, video playback, and backup settings.
Alarm		Configure motion detection, video blind, video loss, alarm input and output, and system abnormalities.
System		Use this menu to configure system date and time, encoder settings, network connectivity, network services, GUI adjustments and PTZ.
Advanced		Contains options for HDD management, user account configuration, video output adjustment, maintenance, and device information.
Info		Shows system information.

CAUTION

If a user is logged into the DVR's own interface, you will not be able to reconfigure any settings using the web-based interface until they have logged out.

REMOTE ACCESS

To access this product from a remote location (i.e. outside your current network), your Internet router will need to have port forwarding rules in place. This will allow traffic from the Internet to pass through the router's firewall and to your Storage Options system. The default ports for this product are listed here:

PROTOCOL	PORT / PORT RANGE	TYPE
HTTP (Web)	80 (see tip below)	TCP
Media	34567	TCP
Mobile	34599	TCP

TIP

Port 80 is used by default on your local network for ease of access. For more secure remote access, we recommend changing port 80 on your device to a different number (such as 81 or 82), then creating the port forwarding rule to match.

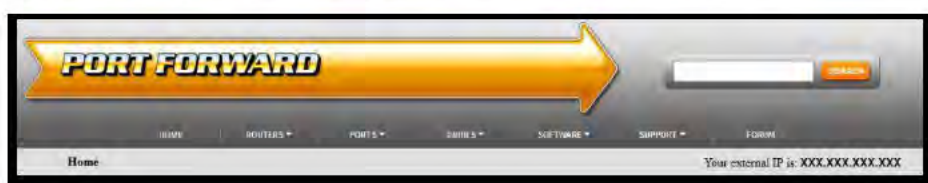
To correctly configure remote access to your new product, we recommend you follow the "Storage Options Remote Access Guide", which is available as a downloadable PDF from <http://www.storageoptions.com/support/>.



The guide covers the network setup and port forwarding process, including in-depth instructions on the following:

- Connecting equipment
- Finding your router's LAN and Internet IP addresses
- Setting up your Storage Options system
- Using the Ping tool to test configuration
- Viewing your device in Internet Explorer
- Configuring port forwarding
- Configuring mobile devices (e.g. mobile phone)
- Static / dynamic WAN IP addresses and configuring a DDNS account

We also recommend you take a look at <http://www.portforward.com>. This website is a very useful resource for full step-by-step port forwarding guides that cover the vast majority of available routers.



NOTE

It is not possible to cover the huge amount of routers, and how to set up port forwarding on each, in this manual. Remote access is an advanced networking practice. If you are unsure how to set up port forwarding on your router, consult its instruction manual or contact your Internet Service Provider.

HARD DISK DRIVE INSTALLATION

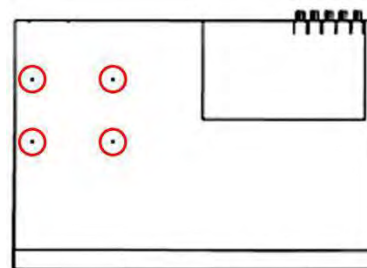
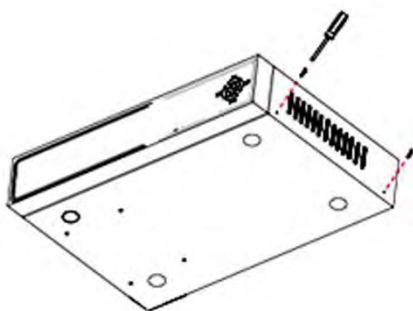
If you wish to replace the pre-installed HDD with a higher capacity drive, follow these instructions. If you are at all hesitant to perform the following procedure, please refer to qualified service personnel.

Follow these steps to install a HDD:

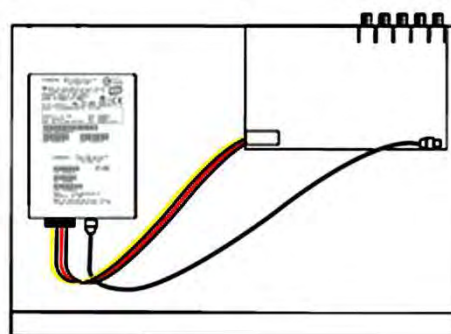
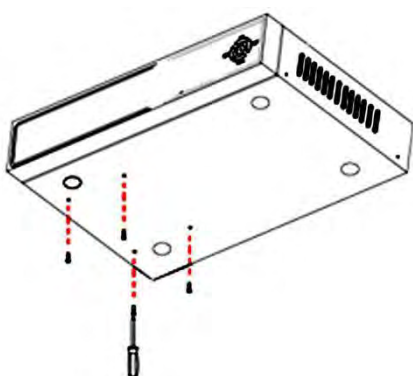
CAUTION

When working with electrostatic sensitive devices such as a Hard Disk Drive (HDD) or DVR unit, make sure you use a static-free workstation. Any electrostatic energy coming in contact with the hard disk or DVR can damage it permanently.

1. Remove the 4 screws (2 each side) which hold the cover in place, then slide it off. With the front panel facing you, the HDD mounts to the left of the chassis. There are 4 screw holes to mount the HDD.



2. Align the HDD with the mount points (circled in red above) and secure in place using 4 screws (provided) through the underside of the chassis.



3. Connect the SATA and POWER cables to the HDD.

CAUTION

SATA and POWER cables are designed to fit only one way. Do not force them into place or you may damage the HDD.

4. Replace the cover and secure it in place using the 4 screws removed in step 1.
5. You must format (prepare) the HDD before it can be used for recording.

TROUBLESHOOTING

If a solution to your problem is not listed below, please call our technical support team (see below).

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
System is not receiving power, or is not powering up.	- Cable from power adapter is loose or unplugged. - Cables are connected but system is not receiving sufficient power.	- Confirm that all cables are connected correctly. - Confirm that the power adapter is securely connected to the back of the unit. - 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.
Remote control is not detected by the system.	- Batteries in the remote control are drained. - There are no batteries in the remote control.	Install 2x fresh AAA 1.5V alkaline batteries in the remote control. Ensure correct orientation.
Hard Disk Drive (HDD) is not detected by the system.	- HDD cables are loose or not connected properly. - There is no HDD in the system.	- Remove the housing and check that the cables are firmly connected. - Open the housing and install a 3.5" SATA HDD (up to 2TB).
HDD is full and the unit is no longer recording	Overwrite mode is not enabled.	Check configuration in <i>Main Menu</i> → <i>System</i> → <i>General</i>.
Mouse not detected by the system.	- Mouse cable not firmly connected to the system. - Mouse is not connected to the system. - System needs to be reset.	- Firmly connect the mouse cable to the USB port on the rear panel of the DVR. - 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.
There is no picture on selected channels / camera picture is not being displayed.	Camera cables are loose or have been disconnected.	- 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.
There is no sound from attached cameras.	- Audio cables are loose or have been disconnected. - Audio channels are disabled in the system menu. - Volume on external speakers (not included) is low / muted / off.	- Check the audio connections to the DVR. - Check configuration in <i>Main Menu</i> → <i>System</i> → <i>Encode</i>. - Increase volume on external speakers (not included).
A "whirring" noise is coming from the system.	Fan is active.	This is normal – the exhaust fan is working.
The system beeps at start up.		This is normal.
The system beeps during motion detection.	Motion detection is enabled and the alarm buzzer is activated.	Check configuration in <i>Main Menu</i> → <i>Alarm</i> → <i>Alarm Input</i>.

WARRANTY AND TECHNICAL SUPPORT



storageoptions.com/support/



support@storageoptions.com

PRODUCT SPECIFICATION

DIY Home CCTV Kit Plus



Video Compression:	H.264
Audio Compression:	ADPCM
Video Input:	8 channel (BNC)
Video Output:	1 channel (BNC)
Audio Input:	4 channel (phono)
Audio Output:	1 channel (phono)
Resolution:	PAL: QCIF 176 x 144, CIF 352 x 288, HD1 704 x 288, D1 704 x 576 NTSC: QCIF 176 x 120, CIF 352 x 240, HD1 704 x 240, D1 704 x 480
Video Frame Rate:	PAL: 25fps NTSC: 30fps
VGA Interface:	1 channel (D-Sub)
VGA Resolution Support:	800 x 600, 1024 x 768, 1280 x 1024, 1366 x 768, 1440 x 900
Alarm Input:	4 inputs
Alarm Output:	1 output
Network:	Ethernet (10/100Mbps)
Monitoring Methods:	Internet, mobile phone, e-mail
Control:	Mouse, Remote control, DVR control
Backup:	USB and Network
HDD:	1 bay, up to 2TB
Security Feature:	Password protection, multiple user accounts
Power Supply:	DC 12V input
Operating Temperature:	-10 to 50°C approx
Humidity:	< 90%
Device Dimensions:	310 x 215 x 45mm (W x D x H)
Weight:	Net: 1.9KG; Gross: 2.9KG

WARRANTY AND PRODUCT 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, 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

If our team believes that the product in question is faulty, we will issue a returns authorisation and arrange for a replacement to be sent free of charge.*



Return the product free of charge* – a pre-paid shipping label will be issued to return the product



Within 5 to 10 days a replacement product will be sent at no charge to you



Replacement product delivered directly to you

Please contact us directly if you have any queries or concerns:



storageoptions.com/support/



support@storageoptions.com

Our aim is to provide the best possible service to our customers. We have a wealth of support material, guides and FAQs available on our website to help you get the most from your product. Our dedicated UK based Customer Service team are also on hand to offer further support and, in the unlikely event of any fault developing with your purchase, we have a full returns procedure designed to make receiving a replacement product as quick and easy as possible.

*Free replacement service applies to UK Mainland (excluding Scottish Highlands) only. Storage Options reserves the right to charge for delivery to, or collection from, other locations.

NOTES



Storage Options DIY Home CCTV Kit Plus
Made in China