Swann™

Advanced-Series

DVR4-1200

4 Channel H.264 Digital Video Recorder

M41200H200111E

Before You Begin

- **FCC Verification:**
  NOTE: This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
  · Reorient or relocate the receiving antenna
  · Increase the separation between the equipment and the receiver
  · Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
  · Consult the dealer or an experienced radio/TV technician for help

  These devices comply with part 15 of the FCC Rules. Operation is subject to the following two conditions:
  (1) These devices may not cause harmful interference, and
  (2) These devices must accept any interference received, including interference that may cause undesired operation.

- **IMPORTANT NOTE: Prohibition against eavesdropping**
  Except for the operations of law enforcement officers conducted under lawful authority, no person shall use, either directly or indirectly, a device operated pursuant to the provisions of this Part for the purpose of overhearing or recording the private conversations of others unless such use is authorized by all of the parties engaging in the conversation.

- **WARNING:** Modifications not approved by the party responsible for compliance could void user's authority to operate the equipment.

- **IMPORTANT SAFETY INSTRUCTIONS:**
  · Make sure product is fixed correctly and stable if fastened in place
  · Do not operate if wires and terminals are exposed
  · Do not cover vents on the side or back of the DVR and allow adequate space for ventilation

Table of Contents

Package Contents

- DVR4-1200™ Unit
- Remote Control
- Operating Instructions
- Easy Setup Guide
- Power Adapter with Cable
- Software CD
- Network cable
- USB Mouse
- BNC to RCA Video Cable
- Security Stickers (4 Pack)

If you are missing any of these components, contact Swann Communications for assistance.

IMPORTANT GUIDELINES

- **Do not expose the DVR to moisture**. Water is the arch-enemy of electrical components and also poses a high risk of electric shock.
- **Avoid dusty locations**. Dust has a tendency to build up inside the DVR case, leading to a high risk of failure or even fire.
- **Only install the DVR in a well ventilated space**. The circuitry and hard drive in the DVR, like all electronic devices, produce heat, and this heat needs a way out.
- **Do not open the DVR case** except to install/swap the hard drive inside. There are no user serviceable parts inside.
- **Never open the case whilst the DVR is plugged in**, and never turn the DVR on whilst the case is open.
- **Use only the supplied power adaptor.** Other adaptors may cause damage to the DVR or cause a fire.
- **Do not cut or modify any cable for any reason.** Doing so will void your warranty, as well as pose a great risk of fire or electrical shock.
- **Don't expose the DVR to sudden bumps or shocks** (for example, being dropped). The DVR is as robust as possible, but many of the internal components are quite fragile.
- Remember that the DVR is, in all likelihood, going to be left on 24 hours a day, 7 days a week. Keep this in mind when choosing a location for installation.

Overview

Congratulations on your purchase of the DVR4-1200!

You've chosen a versatile, powerful and great value security monitoring and recording solution for your home or business. Let's just take a moment to talk about some of the great features that the DVR4-1200 offers and some of the things to think about before installing the system.

4 Channel Monitoring and Recording

The DVR4-1200 can monitor and record four channels simultaneously. You can configure the recording modes for the four channels quite independently – for example, you could have two channels recording on a schedule, one recording constantly and one armed to record on motion. Or any other combination you can think of!

Powerful H.264 Compression

The advanced video codec used by the DVR4-1200, called H.264, offers high quality video files at a fraction of the size of older video codecs such as MPEG-2 or similar. Basically, this means you can get store more footage on the DVR's hard drive, and that the quality of that footage can be significantly higher than many older video formats. H.264 has been engineered to provide the highest level of data compression possible (saving space on your hard drive) whilst maintaining a high image quality.

Powerful Networking and Remote Access Features

The DVR4-1200 features an Ethernet port, which can be used to connect the DVR to your home network. With the addition of a high-speed Internet service, this allows you to remotely access the DVR from any high-speed Internet terminal on Earth! If that isn't convenient enough, the DVR also features mobile device support, allowing you to connect to it from a devices such as the *iPhone,* devices running *Blackberry OS (version 5 or later), Microsoft Windows Mobile®* (version 6.1 or higher) or *Symbian S60* (3rd edition or more recent), as well as the increasingly popular platform *Android*. See pages 54-55 for more information about supported mobile platforms.

Pulled the DVR out of the box and aren't sure what to do next?
Check out page 13 for a quick rundown of the setup procedure!

DEFAULT PASSWORD INFORMATION

To ensure your privacy, this DVR is password protected.

- By default, password protection is disabled. To ensure your ongoing privacy, we strongly recommend enabling the password protection feature as soon as possible.

- Choose a password that you'll remember, but that others would be unlikely to guess. Avoid obvious combinations - think outside the box!

- If you do manage to lock yourself out of the DVR, you'll need to contact us at the Swann Technical Support Telephone Helpdesk - the number is on the back cover.

Installation Tips & Tricks

One of the most important things to decide early on is where you're going to install the DVR. There are several considerations to make, and some of them conflict with one another.

- Your DVR needs to be located in a central location to allow you maximum options when placing your cameras. This is true whether your cameras are connected via cables or wirelessly - one way, you'll have to physically install cabling, and wireless systems still have a limited range.

- On the other hand, your DVR should be installed somewhere secure. If the DVR is too accessible it could be sabotaged or removed by an intruder.

- Ideally, assuming that you wish to use most features this DVR offers, it should be installed close to a network access point. There is, however, no problem using a long network cable - a Cat 5e Ethernet cable up to approximately three hundred feet (about 90m) should work. Different network cable standards will offer a longer or shorter range.

Layout of the Front Panel

1) Hard Drive Indicator: Lights up when the hard drive is active. It will flash rapidly when recording or searching (in time with the read/write cycles).

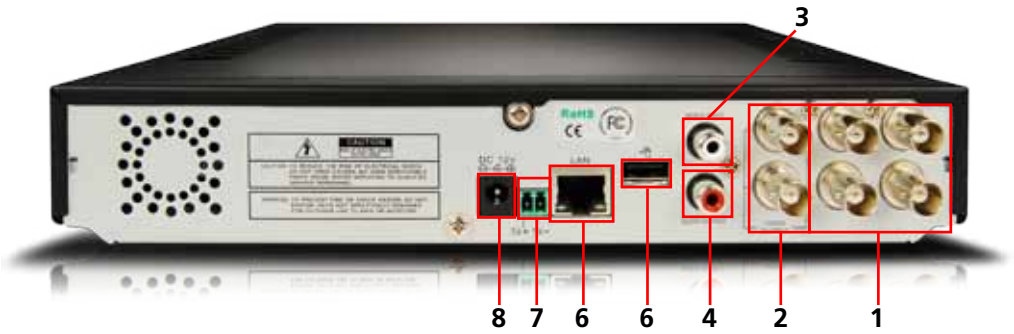
2) Power Indicator: This LED is illuminated when the DVR is connected to power and switched on.

3) Infrared Sensor: Monitors signals coming from the infrared remote control. If this sensor is blocked or obstructed, then the functionality of the remote will be impaired.

4 USB Backup Port: For connecting a USB flash drive for the purposes of backing up footage.

The remaining controls can be accessed via the on-screen menus (using the USB mouse) or on the remote control.

Layout of the Rear Panel



1) CH1 ~ CH4 (Video Inputs): These are the four camera inputs, labelled as per their channel in the DVR's interface. Thus, plug the camera you want to be associated with Channel 1 into the port marked CH1 and so on.

2) Video Outputs: This sends a composite video signal out of the DVR. Each of the two ports can be connected to separate monitors. However, there is no requirement to use more than one monitor/television – one usually does the job just fine.

3) Audio Input: One RCA audio input. This will accept standard line-level signals (<1V).

4) Audio Output: A mono audio output channel. These output a standard 'line-level' signal, and can easily be connected to the audio inputs on a television or stand-alone audio device.

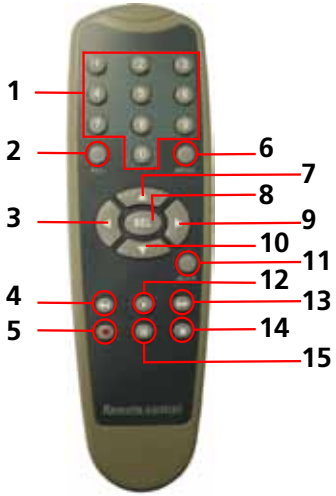
5) USB Mouse Port: For connecting the included USB mouse (other standard USB mice will also work). This port will not accept a USB flash drive – this port will work with a mouse only.

6) LAN Port: To connect an Ethernet cable, allowing the DVR to be connected to a local area network. This network, in turn, can be used to give the DVR a connection to the Internet.

7) RS485: For connecting a PTZ (pan, tilt, zoom) capable system.

8) Power Connection: For supplying power to the DVR. Use only the supplied power adaptor, and do NOT change or modify it in any way. Modifications to your power supply radically increases the risk of electrocution or fire, and will immediately void your warranty.

Layout of Remote Control



1) 0 ~ 9 (Numeric Buttons): Used to input numbers. 1 ~ 4 can be used as quick channel changing buttons in a similar manner to a television, and these will work during either live-viewing mode or playback. Additionally, the numeric buttons will be used when inputting any numerical information – most often, your password.

2) ALL: Activates or deactivates the entire area shown on screen to be armed for Motion Detection recording mode. Motion Detection will need to be correctly configured for this button to function as described.

3, 7, 8, 9 & 10) Arrow Buttons: Moves the cursor in the appropriate direction when navigating menus.

5) Record: Press to immediately start recording. This acts as a manual override to the schedule and motion recording modes. For a channel to be recorded in this mode (or any other) it must listed as 'active' in the Camera Setup and Record Setup menus.

6) Menu: One of the primary controls for navigating through the menus. When in live-viewing mode, it will enter the main menu. When pressed in the main menu, it will return the DVR to live-viewing mode. Finally, when in a submenu, this button will return you to the main menu.

7) SEL (Select): The equivalent of Enter/Return on a computer keyboard. Use this button to (as the name suggests) select an option in the menus, or to confirm an entry.

11) Mute: Will mute the audio output of the DVR - it won't affect recordings. Press again to un-mute.

12) Play: If pressed in live-viewing mode, this will take you directly into playback mode, and begin playing the most recent recording. In playback mode, use it to resume playback after pausing or stopping a recording.

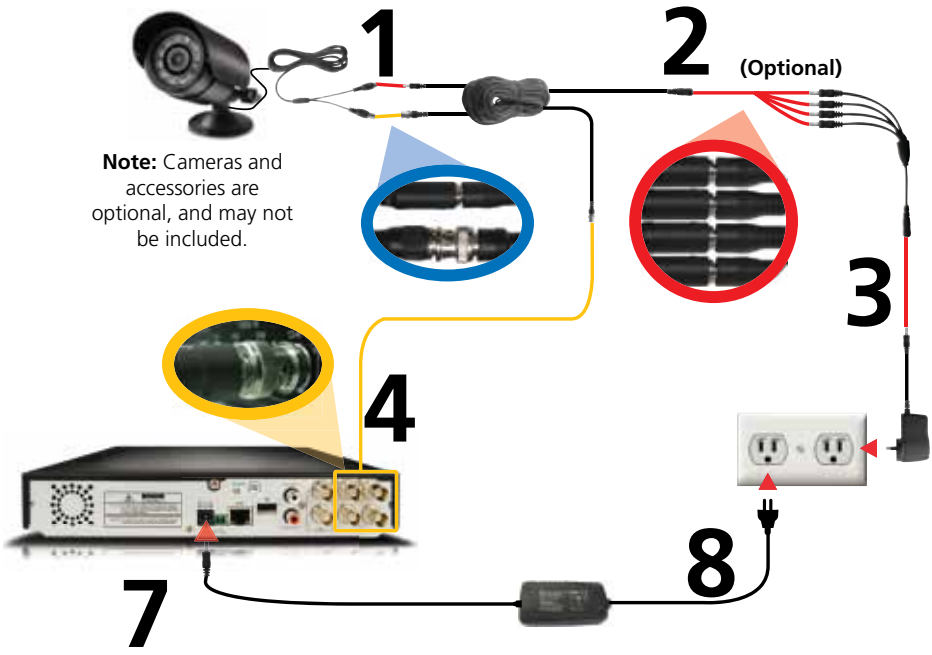
4) Rewind: During playback, this will reverse the footage. Press multiple times to increase the speed of the reversing.

13) Fast-Forward: During playback, this will increase the speed of playback. Press multiple times to increase the speed of playback further.

14) Stop: In playback mode, pressing this button will stop playback.

15) Pause: During playback, will pause the current recording and leave a still-frame on screen. In live-viewing mode, this will activate the auto-sequence mode, where the display automatically cycles through the available camera signals (this must be correctly configured and enabled to function correctly).

Connecting Cameras



Note: Cameras and accessories are optional, and may not be included.

1. Connect the power and BNC ends of the security camera to an extension cable. Ensure these connections are secure, and shielded from weather, moisture or other hazards. Though *Swann* cameras use low voltage DC power supplies, there is still the possibility of short circuits if water gets into the power plug or socket.

2. If you have multiple cameras which share a power adapter, connect the DC end on the extension cables to the 4 way power splitter plugs. If you've got a dedicated power supply for each camera, skip this step.

3. Connect the camera power supply to the other end of the cable or power splitter, as applicable.

4. Connect the BNC end of the extension cables to the camera connections on the back of the DVR unit (CH1 ~ CH4).

5. Repeat steps 1 ~ 4 for each camera.

6. If your camera has a microphone, connect the audio out to one of the audio input channels. If you have more than four microphones, you'll need to use the serial adapter cable.

7. Connect the DVR power supply plug into the power supply socket on the back of the DVR. Ensure you use the right power supply. Although most cameras also use a 12V power supply (though some do not - be careful!) they don't supply enough current to run the DVR and the installed hard drive(s).

8. Plug in the camera power adapter and the DVR power adapter to mains power outlets. Avoid using multiple double-adapters or power boards - if possible, use a single outlet for each power adapter.

9. Connect a television to one of the Video Outputs. *Television not pictured above.*

Navigating the Menus

There are two main ways to navigate through the menus on the DVR. One way is to use the remote control. The other way is to use the included USB mouse.

Remote Control

For an explanation of the functions of the buttons on the DVR and the remote control, see pages 6 and 8, respectively. Many of the controls operate in a similar manner to controls on a DVD player or similar. However, due to the specific and multi-channel nature of the DVR, the functionality of some buttons may not be immediately obvious.

USB Mouse

When a USB mouse is attached to the DVR, it allows for easy navigation and operation of the menus. In this capacity, the mouse functions in a very similar manner to the mouse attached to a computer. The left mouse button is used to select, confirm choices and otherwise interact with the menu system. The right mouse button opens the pop-up menu (when pressed in live-viewing mode) or exits a menu (when pressed whilst in the menu system).

The pop-up menu, accessed by right-clicking the mouse in live-viewing mode.

IMPORTANT - Remembering to Apply Your Changes

When you're using the menus to change settings or values, none of your changes will be saved until you choose the "Apply" option, which is usually located in the lower right-hand corner of the screen.

Always select the APPLY button before leaving a menu if you want to save the changes that you have made.

There are two reasons why the "Apply" button needs to expressly selected. For one, it helps prevent accidental modification of the DVR's settings while you're navigating other menus or similar. Secondly, the DVR only checks and loads the settings you've modified when the apply button is pressed. This is important to prevent the DVR operating erratically or performing an unintended operation whilst settings are in the process of being modified.

Using the On-Screen Keyboard

As the DVR doesn't have a keyboard, when you have to enter text the DVR will present you an on-screen 'keyboard'. This will automatically appear when you select a text field which allows you to enter a value.

If you want to change the type of characters being entered, click the ABC button on the right of the keyboard - this will cycle through the modes available. You can enter letters, numbers or symbols, each with their own mini-keyboard.

Getting Started

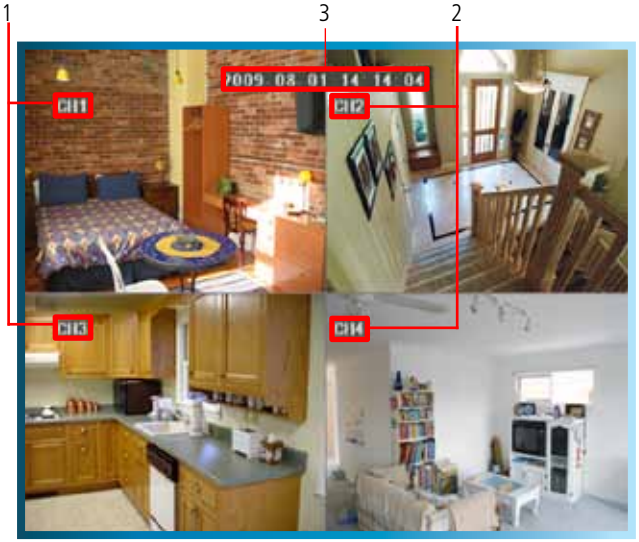
If you've just unpacked your DVR and are not sure where to begin setting up your system, here's a quick rundown of the most important things that need to be set up.

- **Test your system.** Before installing cables into walls, it's a great idea to plug everything in and make sure it all works. This is particularly true if you're using additional cameras to any that came with the DVR (this DVR is available stand-alone or in a kit with cameras). We do our very best to ensure that the equipment reaching you is of the highest quality and will work out of the box, but accidents do occur in shipping and sometimes components do fail. Better to find out now than once everything is screwed in place!
- Then, once the DVR is on and working, the first thing to do is to **set your password** (see page 42 for details on how to do it).
- **Set the Date and Time** (page 41 for details) to ensure that, once you start recording, you are able to index and search the recorded footage easily. Also, if using the DVR's footage in any legal proceedings, then having an accurate date and time on your footage becomes quite crucial.
- **Check your hardware** - specifically, and most importantly, the hard drive (see pages 30 & 31). This is where all your footage will be stored, so it's quite important to ensure that it is functioning correctly.
- **Setup your recording modes and/or schedule** (pages 18 - 21) to make sure that the DVR will record what you want it to, and at the right time.
- **OPTIONAL (Advanced Users):** Configure your network settings (pages 22 - 23 & 50 - 51).

Starting the DVR

Once the DVR has been connected to power, switch it on by using the power switch on the rear panel. The DVR takes approximately 45 seconds to boot up, during which time the image to the right will be displayed.

The default mode of the DVR is live-viewing mode. This is the mode which monitors the images coming from your cameras in real-time, and allows you to configure your recording and channel options. The DVR automatically starts in live-viewing mode, with quad-view enabled, as shown below.



1. The main display windows showing **channels 1 and 3**. The highlighted portion of the image is the channel identification tag which in this case is set to the default value of "CHx" where "x" is the number of the channel in question.
2. The display windows showing **channels 2 and 4**. These are labeled as their counterparts 1 and 3.
3. The **current time and date** are displayed at the top of the screen. This will be the date stamp applied to all recordings. If this is incorrect, you'll need to set the time and date in the DVR to their correct values (see page 41).

The Main Menu

The MAIN MENU of the DVR. In this picture, the mouse cursor is currently highlighting the CAMERA icon.

Camera (Display Setup): The camera menu contains all the options for setting up how the DVR interfaces with and displays the images from the cameras connected to it. This is where channels are enabled or disabled in live viewing, and where the AUTOSEQ (Automatic Sequence) function can be configured.

Record: Where you can configure the recording options for the DVR. You can set channels to be armed for recording constantly or on a schedule, and set the recording resolution, quality and size. You can also enable or disable the audio channel. Additionally, the recording function for some or all channels can be disabled entirely.

Network: Where you can configure the DVR to operate on your home network and over the Internet. This is the most complex aspect of setting up the DVR, and requires a good working knowledge of networking methods and protocols.

Search: Where you look for footage of a specific event. You only need to know the date and time that the incident that you are looking for occurred. You need not know exactly - you can specify a range of times and/or dates. The DVR will list all recordings made in between the start and end points you specify.

Devices: Here you can find the setup and configurable options for the devices which can be connected to the DVR. These devices are in order:

HDD: The hard drive, where you store your footage.

ALARM: The circumstances which will trigger the DVR to record or issue an alert of some kind (such as an email).

PTZ: For setting up the DVR to work with Pan, Tilt, Zoom camera systems.

MOBILE: For setting up the DVR for access via a compatible mobile/cell phone.

MOTION: To configure how and where the DVR looks for motion. This can be used as (and is recommended as) the primary recording mode of the DVR.

System: All the remaining options and sub-menus. Here is where you set the Date and Time and your Password, change the video output settings, change languages, or the automatic maintenance schedule of the DVR.

The Camera (Display Setup) Menu

The DISPLAY SETUP MENU of the DVR. In this picture, the mouse cursor is currently highlighting the CH1 title field.

Naming Channels

You can change the name of any channel from the default (and rather drab) "CHx" to anything that you would like (provided it's short enough to fit in the box). A descriptive name on each channel often makes it easier to remember what camera is where, and which channel would have captured an event you might be looking for.

Title: The name that will be displayed over the image from a channel. Simply highlight this box and enter the new name you would like.

Position: Where the title of the channel is displayed on screen. You can choose any of the four corners of the display (UPLEFT being the top left-hand corner, and DOWNRIGHT being the lower, right-hand corner).

AUTOSEQ (Auto-Sequence)

When AUTOSEQ (automatic sequencing mode) is engaged, the DVR will automatically cycle through all available channels, displaying each in turn expanded to fill the entire screen.

In the AUTOSEQ drop-down menu, you can select how long you'd like each channel to appear, as well as the quad-view mode. Each can be configured individually, so you can fine tune exactly how long you'd like each channel to be visible for. The DVR will skip channels which been disabled during the auto-sequence.

Remember: After making changes to the settings press/click the APPLY button.

Color Setup

You can fine tune the look of each channel individually by adjusting the HUE, BRIGHT (brightness), CONTRAST and SATURATION values for each channel. Just select the SETUP option under the COLOR heading to open the dialog window.

This is useful if peculiar lighting conditions, a non-standard camera or a conspicuously colored object in the frame cause the display to be inconveniently tinted, or over/under exposed. Basically, this will help fix something that just doesn't look 'right'.

HUE: Changes the color mix of the frame (this can have very dramatic results).
BRIGHT: Changes how light all tones in the image appear.
CONTRAST: Increases the difference between the blackest black and the whitest white in the image. Useful if sections of the image "grey out" but setting the contrast too high will degrade image quality.
SATURATION: Alters how much color is displayed in the image. The higher the saturation, the more bright and vivid colors will appear to be. Again, setting this too high can degrade image quality.

LIVE Viewing - Enabling and Disabling Channels

Monitoring something that you'd rather keep private/secret/unknown to the casual observer? No problems. You can alter which channels appear when in live viewing mode, and which ones appear later on.

To do so is simple: simply locate the LIVE drop down menu - it only contains two options, ON or OFF. Simply change the value to OFF and that channel will now appear to be blank in live viewing mode. Images on the channel in question will still be recorded - and you'll see it as normal in playback mode.

Display Time

In the nearby DISPLAY TIME drop down menu, you can select whether you want to see the time displayed on the channel in either live viewing mode, or when recording. The time will always be recorded in the event list and in the footage's meta-data (the information included in the file such as when it was recorded - you can access this later) - this simply changes whether or not you see it in the main view screen.

Remember: After making changes to the settings press/click the APPLY button.

The Record Setup Menu

The RECORD SETUP MENU of the DVR. In this picture, the mouse cursor is currently highlighting the D1 resolution button.

In the RECORD SETUP submenu you can choose which channels will be active during recording, change the recording quality, enable & disable audio, select record more and Chunk Size (the maximum size of each recorded file). This menu contains many of the most important settings on the DVR, and correctly configuring them is important to the ongoing smooth operation of the unit.

Turning Channels ON or OFF

Using the drop-down menus in the CHANNEL line, you can turn the recording functions for a channel ON or OFF. Turning a channel OFF in this way means that it will **never be recorded** until turned ON again. This can be set independently of the channel being enabled/disabled in live-viewing mode (that is, a channel can be seen but not recorded or vice-versa).

Resolution and Quality

The term "Resolution" refers to how many pixels (the individual little dots which together make up an image) will be recorded in your image. The highest setting D1 will use a resolution approximately equal to that of a DVD, whereas CIF will use one quarter this many pixels. HD1 offers a middle-ground between these settings. Higher resolutions give sharper images, but each frame of video takes up more space on your hard drive. Thus, the DVR will record fewer images per second (frames) at high (D1) resolution. Lower resolutions, particularly CIF, do not have nearly as much detail, but will record many more images per second.

The higher the quality selected, the more detail will appear in your footage. Best quality video takes up more space on your hard drive than normal quality. Good quality offers a compromise between the size of and amount of detail in your footage.

Remember: After making changes to the settings press/click the APPLY button.

Audio

The audio recording function can be enabled or disabled here. If you have no audio recording equipment (such as a microphone) attached to your system or simply do not want to record sound, then we suggest disabling the audio here - it will save a small but noticeable amount of hard drive space.

Rec. Mode (Recording Mode)

There are two recording methods which can be chosen here, the choices are ALWAYS or TIME SCHEDULE RECORDING.

If you want the DVR to record constantly then choose ALWAYS. On the other hand, if you want the DVR to either record at specific times, or when motion is detected during the pre-defined times, then choose TIME SCHEDULE RECORD. When you select the latter, a SCHEDULE button will appear, allowing you to program a custom recording schedule.

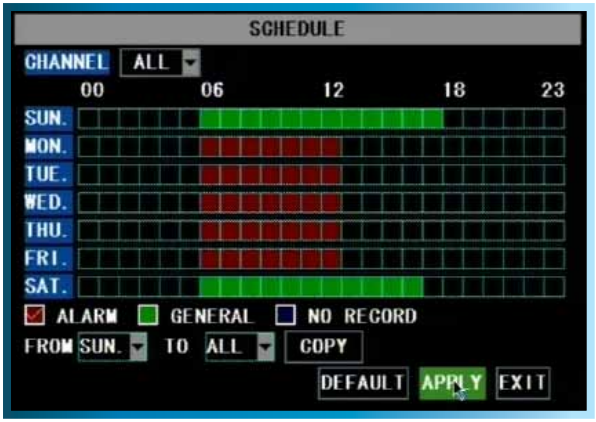
Chunk Size

Chunk Size is a measurement of how long the DVR will record for before splitting the output file into discrete units. Chunks are something like the scene numbers on a DVD - though the video is broken up into separate units, it will still play through as one continuous movie (unless interrupted by the schedule or motion detection turning the recording on or off).

The right settings for you depend on a number of factors. Larger Chunk Sizes use slightly less space on the HDD and keep related events together. Also, larger Chunk Sizes make navigating through the File List a bit easier (see page 24).

Smaller Chunk Sizes are more resistant to file corruption, and make backing up slightly quicker. If you don't want to worry about setting Chunk Size, you can leave it on the default value; it will make little difference to the day-to-day running of the DVR.

The Recording Schedule



The SCHEDULE screen. Currently, the schedule is configured to record on Alarm Events (i.e. Motion Detection) from 6:00am to 1:00pm weekdays, and record constantly between 6:00am and 6:00pm on weekends.

At all other times, the DVR is configured not to record anything at all.

The first step in setting the schedule is choosing which channel you'd like to set the schedule for. From the CHANNEL drop-down menu, select the channel you'd like to set the schedule for.

If you'd like to set the schedule for more than one channel at a time, you have two options. One option is to manually enter the same information for each channel individually.

The other option is to choose ALL from the CHANNEL drop down menu. Selecting this will apply the settings in the schedule to all channels on the DVR. If you want to set a base schedule for all channels, and then configure them individually, select ALL, set your basic schedule, and then fine tune channels one at a time. Changing the ALL schedule will overwrite any schedule already set for individual channels.

The DVR schedule can be set to record using three different record modes.

ALARM: Will record only when the alarm function has been triggered. Typically, this will mean it will record when motion is detected, or when another event occurs (such as video loss on one channel). To alter what is and what is not an "alarm event", see page 33.

GENERAL: The DVR will constantly record. If motion detection is activated, some recordings will be marked red, indicating that motion or an alarm event was detected when that footage was recorded.

NO RECORD: As the name suggests, the DVR will not record.

Remember: After making changes to the settings press/click the APPLY button.

Setting the Schedule

The first step in setting the schedule is choosing which channel you'd like to set the schedule for. From the CHANNEL drop-down menu, select the channel you'd like to set the schedule for.

If you'd like to set the schedule for more than one channel at a time, you have two options. One option is to manually enter the same information for each channel individually.

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Copying and Pasting Schedules from day to day

Rather then enter the same schedule information multiple times for each day you wish, you can use the COPY function.

To copy the schedule settings from day to day, select the day you'd like to copy from on the first drop down menu. Then, select the day you'd like to copy the schedule to from the second. If you'd like all days to operate on the same schedule, choose ALL from the second drop-down menu.

Using the arrow buttons or the mouse, highlight the COPY button, and left click or press select. The schedule for the selected day will be copied to the day(s) you have selected.

Remember: After making changes to the settings press/click the APPLY button.

The Network Configuration Menu

This is the NETWORK SETUP screen.

This is the most technically complex aspect to setting up the DVR, and does require a working knowledge of network technologies.

If you are unfamiliar with networking, then we suggest talking with a professional - ideally, the same person who installed your network, as they'll know exactly how it's configured and how best to setup the DVR.

Configuring your DVR and your home network can be a tricky process - and these two pages are not nearly long enough to cover it.

TYPE: Here you can choose between the three different types of networks that the DVR can be connected to. The three types of networks are:

DHCP (Dynamic Host Configuration Protocol) is a system where one device on your network (usually a router) will automatically assign IP addresses to devices connected to the network.

STATIC networks require all connected devices their IP addresses manually defined, as there is no device dedicated to automatically assigning addresses.

PPPoE (Point to Point Protocol Over Ethernet) is an advanced protocol which allows the DVR to be connected directly to a DSL line, without the need for a router or gateway. This is recommended **for advanced users only**.

UPnP: Basically, UPnP is the ultimate shortcut when setting up your home network. The big benefit of UPnP is that you don't have to worry about port forwarding, which is one of the most time consuming and difficult stages of configuring your network.
The requirements for UPnP are: A *UPnP capable router*, with *UPnP enabled*.

Enabling UPnP

UPnP is a setting which can be enabled on certain routers. You'll have to see your router's documentation for instructions on how to enable UPnP, if your router supports it.

More information about UPnP, networking and remote access from a PC or mobile device can be found in the *Remote Access* section. See pages 50 - 55 for more.

Remember: After making changes to the settings press/click the APPLY button.

MEDIA PORT: This is the port that the DVR will use to send information through. The most important things are that:

1. You'll need to enable UPnP on your router (see page 32) so your router can selectively open these ports, allowing the DVR to communicate via the Internet. If your router doesn't support UPnP, you have two options. You can either get a new router (which we'd actually recommend - UPnP is such a good feature!) **or** you can manually forward ports from the router to the DVR. Port forwarding is a technical and involved process, recommended only for the technically inclined.
2. Nothing else share this port. The default port number is 9000, which is not used by many other devices/programs. However, particularly if you have another DVR or DVR-like device, something might be using this port already. If this is the case, change this value to be unique.

WEB PORT: This is the port through which you will be able to communicate with the DVR. Like the Media Port, it will need to be forwarded properly in order to ensure smooth, latency-free communication.

IP ADDRESS: Just as houses and businesses need to have an address which identifies their location on the road network, so too do computers and other devices need addresses (called IP ADDRESSES) to identify their position on the electronic network. The DVR uses IPv4 addressing, which consists of four groups of numbers between 0 and 255, separated by periods. For example, a typical IP address might be "192.168.1.24" or something similar. The most important things are that the first three numbers (in the above example "192.168.1.xxx" match the other devices, and that nothing else on your network share the last number.

SUBNET MASK: If the IP address is like a street address, then a subnetwork is like your neighborhood. This will be formatted in a similar way to the IP address (ie. four numbers up to 255 separated by periods) but contain very different numbers. In the above example, the Subnet Mask might be something like: "255.255.255.0". It must be the same as the other devices on your network.

GATEWAY: This is the address of the "way to the Internet" - to continue the road analogy, this is like your local access point to the highway. This is an IP address in the same format as the others, and is typically very similar to the IP address of the DVR. To continue the above examples, it might be something such as: "192.168.1.254".

DNS: A "Domain Name Server". Everything on the Internet is located via an IP address - however, for ease of use, we associate domain names (such as "www.exampledomainname.com") with those IP addresses. This index is stored in many locations online, and we call those locations DNS servers.

The Video Search Menu

The SCHEDULE screen. Currently, the schedule is configured to record on Alarm Events (i.e. Motion Detection) from 6:00am to 1:00pm weekdays, and record constantly between 6:00am and 6:00pm on weekends.

At all other times, the DVR is configured not to record anything at all.

Video Search

In the VIDEO SEARCH screen you can search for a specific day for a recording and view it in playback mode. This is useful for hunting a specific recording of an incident if you know the time and date it occurred. To search you need to input the date of the video then select the hour of the recording.

Note that if you don't know the exact day you want to search input just the MONTH & YEAR then click the SEARCH button. If you want to be really vague, or look at a really long list, you can input the YEAR alone.

All the days for that month will appear on the monthly calender. The highlighted days are the days with recordings, color coded to represent the recording mode which triggered the recording at the time (where red = alarm recording; green = normal recording).

To execute a Video Search:

- Scroll over then left click the date numeric field, or highlight it using the arrow keys and press select.
- Select a digit to alter. Once selected, it will be highlighted red and can be edited. You will see a yellow pop up keypad. Scroll or move over the digits on the keypad & left click or press select to input the date. Note that the first two digits of the year (2 & 0) cannot be changed.
- Highlight the SEARCH button, and left click or press select.
- Alternately to bypass the File List choose PLAYBACK instead of SEARCH. Playback will start with the first recording made during the interval chosen.

Remember: After making changes to the settings press/click the APPLY button.

The File List & USB Backup

The FILE LIST screen.

This is the main screen you'll use when locating specific incidents and recordings.

USB Backup Instructions

- First, insert a USB flash drive into the USB port on the front of the DVR. Note that inserting a flash drive into the mouse port will not work correctly.
- Make sure there are no files on the USB flash drive that you wish to keep, as data already on the drive may be lost.
- Highlight the BAK check-boxes which correspond to the recordings that you wish to backup, and left click or press select.
- You can backup multiple recordings at once, as long as their cumulative size will fit on the USB flash drive you have inserted into the DVR.
- Highlight the BACKUP button, and left click or press select to start the backup process.

Notes:

Backing up footage is not an instant process. Copying the may be a time consuming process, and can take up to as long as the half the time of the recordings you wish to backup, typically about 1/6th the time. For example, if you wanted to backup one hour's footage from two cameras, allow up to an hour for the backup procedure to be executed.

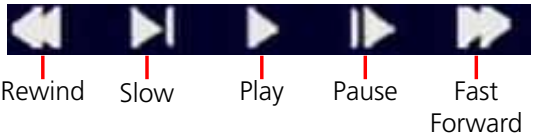
The backed up footage is stored on the flash drive in the same format as it is stored on the DVR. This means that the backed up footage will not play in a computer as a standard video file - you'll need to use the dedicated playback software which comes on the mini-CD included with the DVR. Instructions on how to install and use this software can be found later in this manual (starting on page 56).

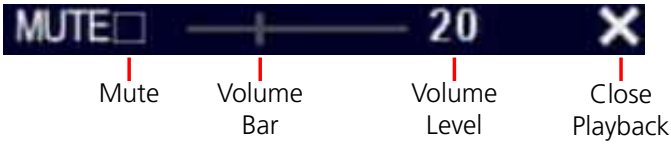
The Playback Interface

This is an example of the PLAYBACK interface,
currently playing back four channels simultaneously in quad view.

Channels 1, 3 and 4 were actively recording.
Channel 2 was not recording at this time - hence the display appears blank.
(The image content has been intentionally blurred.)

The playback controls are displayed across the bottom of the screen.
They are as follows:





Remember: After making changes to the settings press/click the APPLY button.

Playback Controls

The playback controls work in a similar manner to those you'll find on a DVD player or VCR. The playback controls affect all channels being played back simultaneously.

Rewind: Reverses the footage. Pressing this button multiple times will increase the speed at which the footage plays in reverse. Note that, as the H.264 compression used to encode the video is designed to play forwards, it requires considerably more processing power to decode in reverse. For this reason, playback in reverse will not be smooth.

Slow: Press to slow down playback. Pressing once will reduce the playback speed to ½ speed, pressing it again will slow the speed to ¼, and pressing it a third time will reduce the speed to ⅛.

Play: Will play footage if paused.

Pause: Will pause playback, retaining still images on the screen.

Fast Forward: Increases the speed of playback. Pressing the button multiple times will increase the rate of playback up to 8x.

Mute: Checking this box will stop audio playback. It will not affect the audio track on the recorded footage.

Volume Bar: Adjusts the volume during playback. For the best audio quality this should be set relatively high, with the volume of the television or stereo system turned down appropriately.

Volume Level: A numerical representation of the current volume, as set on the Volume Bar.

Close Playback: Closes the playback window and returns you to the event list.

Playing Backed Up Footage on a PC

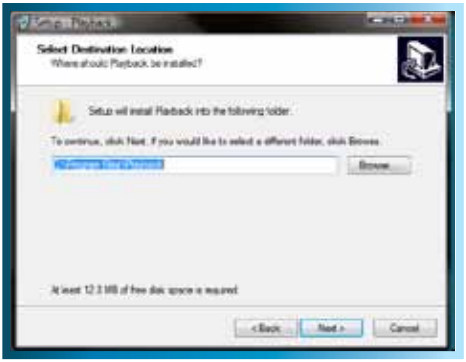
The video files which the DVR backs up are not playable by standard multimedia software. This means that your usual media player is not going to be able to open or display footage from the DVR. The main reason for this is that footage from the DVR is always made of multiple channels of video which are synchronised into one data stream.

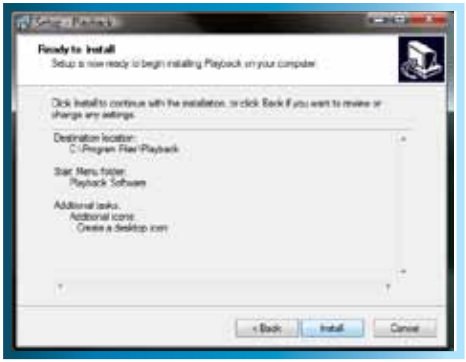
Fortunately, the DVR automatically copies the program you need to play back the footage to the same USB flash drive you back up footage to. All you need to do is install this program, and use it to access the other data on the thumb drive.

Installing the Playback Software

To install the playback software, locate the file on the included CD named "**PlaybackSetup_2.3.0.4.exe**". Note that the numbers on the end may change (particularly if you've downloaded an updated version) as we are constantly making updates and improvements to our software. Run this setup file.

Follow the installation prompts - you'll be asked where you'd like to install the software and the shortcuts to access it. We suggest that the default options are usually the best choice - only change these if you have a very specific idea about where you want the software to be installed. Once you've made these choices, simply wait while the installation is processed.

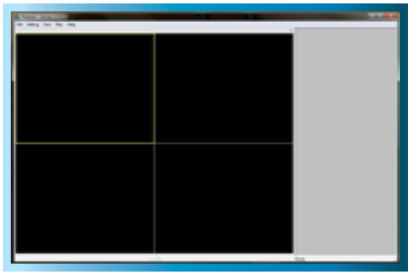




NOTE: This software is compatible with Windows operating systems only (XP and more recent versions). Also, it will only operate on 32-bit versions of Windows (not 64-bit - the incompatibility is due mostly to incompatible drivers).

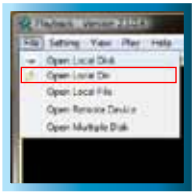
The Playback Interface

Assuming that you've used the default installation paths, you can access the playback software by selecting the desktop icon named **Playback Software**, or finding the program group of the same name in your Start Menu.



This will take you to the default interface of the playback software, as shown to the right.

Opening Files:

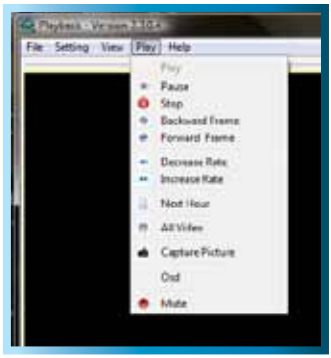


Open the File menu, and choose "**Open Local Folder**". Navigate to the USB drive you have backed up footage to, and select the folder on that drive called "**RecordFile**".

Playback Controls:

The playback controls are located in the menu named "Play".

The Play, Pause, and Stop options work as their counterparts would on a DVD player. Decrease Rate and Increase Rate work like fast-forward and slow motion functions.



Use the Backward Frame and Forward Frame for precise control - they will move back or forward the smallest amount possible (the frame rate is determined by the settings used to record the video).

Use the Capture Picture function to save a single picture as a bitmap (BMP) file. The Mute function will disable audio playback. OSD refers to the on-screen display.

The Device Management Menu

This is the DEVICE MANAGEMENT menu. Here you'll find options to customise and configure settings for:

- Your Hard Drive
- Alarm Settings
- PTZ (Pan, Tilt, Zoom) Devices
- Access from Mobile Devices
- Motion Detection

HDD

For accessing information about your hard drive. This is where you go to correct or analyze any problem with your hard drive. Additionally, you'll be able to see at a glance how much recording time you have left at your current quality settings, as well as being able to format (erase all data from) the hard drive here. You can format flash drives from this screen as well.

Alarm

For configuring the DVR's alarm and auto-email settings.

PTZ

The setup window for configuring the DVR to act as a PTZ (Pan, Tilt, Zoom) controller. Recommended for advanced users.

Mobile

For configuring the DVR to interface with mobile devices (such as an *iPhone* or mobile devices running *Microsoft Windows Mobile® (version 6.1 or higher)*, *Android*, BlackBerry OS *(version 5 or higher)* or *Symbian S60® 3rd Edition* or higher).

Motion

For setting up the motion detection features of the DVR. We suggest that motion detection is, under most circumstances, the most practical recording method for the DVR to employ.

Remember: After making changes to the settings press/click the APPLY button.

The HDD (Hard Drive) Management Screen

This is the HARD DRIVE (HDD) MANAGEMENT screen. All aspects of the hard drive can be managed from this screen.

Additionally, this is the place to go if you want to know exactly how much space is left on the hard drive, and how much footage you can record to it.

Pictured with HDD FORMAT highlighted.

HDD STATUS: If the hard drive is not installed properly you will see a message saying NO DISK FOUND. The live view screen will display the H icon on the bottom of *Channel 1*'s display if the hard drive is not being detected.

TOTAL SPACE: Total size of the hard drive currently installed.

FREE SPACE: Total amount of freespace available on the hard drive currently installed.

USEABLE REC. TIME: Free space currently available in hours, calculated based on your current record quality settings.

OVERWRITE: When enabled the DVR will record over the oldest files on the hard drive. You can choose to DISABLE this function, but when the hard drive fills up, the DVR will not be able to record any more footage. The other two options are BY DAY (which will overwrite footage one day at a time) or AUTO, which will make the DVR delete the oldest events on the hard drive as necessary. When OVERWRITE is enabled, you'll need to get important events off the HDD before they're over-written

HDD FORMAT: Formatting the HDD will erase all data (i.e. footage) which is stored on it, and re-create the FAT (file allocation table). There are some times when using the format option is very useful. For example, if the value displayed in TOTAL SPACE is not correct for the HDD you've installed, or the DVR is displaying errors when trying to write to the hard drive, then a format might fix the problem.

USB FORMAT: If you have a USB flash drive connected to the DVR, this will format it, allowing you to use it in the DVR for backup. This will also erase all the data on the drive, but make the flash drive compatible with the DVR for backing up foot-age. To do this, click the USB FORMAT button and click OK.

Remember: After making changes to the settings press/click the APPLY button.

The PTZ (Pan, Tilt, Zoom) Setup Menu

This is the PTZ SETUP menu. This is where you configure the DVR to act as the controller for a PTZ capable camera system.

PTZ devices are connected via the RS485 connection on the rear of the DVR.

You'll need the manufacturers documentation for your PTZ system on hand to correctly set it up. The DVR4-1200 is **not** compatible with all PTZ systems - in these cases, you'll need a stand-alone PTZ controller.

PROTOCOL: The most important setting to configure correctly. A 'protocol' determines how the DVR communicates with the PTZ system, somewhat like a 'language'. You should set this to match the specifications given for your PTZ system. The DVR4-1200 supports the *Pelco-P* and *Pelco-D* protocols.

BAUD RATE: The speed at which the DVR will send information to the PTZ system. This must be set to a compatible level with your PTZ system.

DATA BIT & STOP BIT: The amount of data sent in an individual 'packet' (data bits), and the number of bits indicating the end of one packet and the beginning of another (stop bits). Again, this should be matched to the requirements of your PTZ system.

PARITY: An error checking method. This should be set in accordance with your PTZ system's requirements.

CRUISE: Refers to a mode of operation which can be used for PTZ systems called "Cruise Mode". When using Cruise Mode, the PTZ system can be set up to move constantly, pausing for a user-defined amount of time at preset points. Turning CRUISE off here will mean that the PTZ system can only be moved by the manual controls.

ADDRESS: The command address of the PTZ system. Typically, PTZ systems allow the user to define their own command address, usually by the use of a series of dip-switches located somewhere on the PTZ system.

Remember: After making changes to the settings press/click the APPLY button.

The Alarm Menu

From this menu you can configure the DVR to emit an alarm tone from it's internal buzzer, or configure the DVR to send an 'Auto-Mail' email alert when motion is detected or an alarm event occurs.

HDD Loss: Will trigger an alarm/buzzer if the hard drive stops functioning.

HDD Space: Will trigger an alarm/buzzer when the hard drive is out of space.

Video Loss: Will trigger an alarm/buzzer when a camera stops supplying images.

Alarm Management: Here you can configure how the DVR will alert you in the case of an alarm event. You can select whether the DVR attempts to sound an internal buzzer, as well as how long this buzzer will be active.

Email Setup: See page 34.

Remember: After making changes to the settings press/click the APPLY button.

Auto Email Setup

You can configure the DVR to automatically send you email alerts when it detects an alarm event.

Please note that this function is not compatible with all email servers - as the email the DVR sends is procedurally generated, many email servers misidentify it as spam. We recommend setting up a free webmail account with a compatible email provider, such as Gmail, which is compatible with the DVR's auto-email system.

Step 1

In the DEVICES menu, navigate to the ALARM submenu.

Step 2

Select EMAIL SETUP from the ALARM submenu.

Step 3

Here, you'll need to enter all the required information about the email account that you would like the DVR to use when sending emails.

If you're unfamiliar with the proper values for any of these fields, please contact your email provider (or read their documentation) to learn these values. We are unable to offer any answers regarding this - the values and settings can vary dramatically from one email provider to the next.

Note that highlighting a field and pressing SELECT twice will make a keyboard appear onscreen, allowing you to enter alphanumeric characters.

Remember: After making changes to the settings press/click the APPLY button.

Step 4

Once you've entered all the required information, the information in the fields should look something like the example shown (below). We stress that this is an example only - the information you'll need to enter will vary depending on your email provider.

In this example, the DVR has been configured to send email via G-mail (a free web-based email service which is, at the time of writing, compatible with the DVR's auto-email system) to an address at Yahoo mail.

Step 5

Once all your information has been entered, choose APPLY to save your settings. Once they are successfully saved, you should see the message "Saved Successfully!" as shown below.

Choose EXIT to return to the live-viewing screen.

Tips and Tricks:

- We strongly suggest testing the email setup once it is configured. After you select APPLY to save your settings, select the TEST button. If properly configured, you should receive the auto-email almost immediately.

- Some online email servers (particularly ones which only support an online browser-based interface) will not work correctly. A standard SMTP email account (such as the ones most ISPs provide with their high-speed Internet plans) will usually be a good option, if a web-based email system does not work for you.

- Ensure that SSL is OFF, unless specifically told otherwise by your email provider and/or Internet service provider.

Remember: After making changes to the settings press/click the APPLY button.

The Mobile Devices Menu

The MOBILE configuration menu.

In this picture, the SERVER PORT is being edited.

USER NAME: This is the user name that you'll need to use when logging into the DVR via a mobile device. The default user name is "admin" - but this can be set to anything you desire. We suggest changing this setting to something unique, to aid in preventing unauthorized access to the data stored on the DVR.

USER PASSWORD: The security password associated with the above user name, which will allow you to access the DVR. The default password is "123456". As above, we suggest changing this value to something unique to better safeguard the DVR against unauthorized access.

SERVER PORT: The port number that your cell/mobile device will use to access the DVR over the Internet. See the section on Remote Access (pages 51 - 55) for more information about selecting and configuring ports.

Requirements

To access the DVR via a mobile device, the following conditions must be met:

- A high-speed Internet connection with an upload speed in excess of 256kbps (ideally above 512kbps).
- The DVR attached to this high-speed Internet connection.
- Your home network correctly configured to allow the DVR's SERVER PORT unrestricted access to the Internet. Typically, this requires enabling UPnP on both the DVR and router. Alternately, you can manually forward ports *(not recommended - use UPnP if you can!).*
- A compatible mobile device. Currently, the DVR4-1200 supports a mobile device (such as a cellphone) running *Microsoft Windows Mobile® (6.1 or higher)* or *Symbian S60® (3rd Edition or later), Blackberry OS (version 5 or higher) Android,* or higher and *iPhone*.
- The correct application(s) installed on your mobile device. See page 54 for more details on how to use a mobile device to remotely access the DVR.
- A sufficient signal to your mobile device (areas with intermittent coverage or low signal strength will adversely affect the playback).

Remember: After making changes to the settings press/click the APPLY button.

The Motion Detection Menu

The MOTION DETECTION menu. Here, you'll be able to choose which channel(s) you want to be sensitive to motion. Additionally, you'll be able to choose how sensitive each channel is.

The SETUP button will take you to the MOTION DETECTION CONFIGURATION screen.

How it Works: Once motion detection has been enabled for a channel, it will register to the DVR as an ALARM EVENT. Thus, you can use the ALARM RECORDING mode in the schedule to trigger the DVR to record when motion detection triggers the alarm signal. Using the ALARM menu, you can also set up the DVR to send an automatic email alert or simply beep when it detects motion.

STATUS: Whether or not motion detection is enabled on a specific channel. Each channel can be configured independently of one another.

SENSITIVITY: There are four levels of motion detection sensitivity, 1 being the least sensitive and 4 being the most sensitive. To find the right value for you, we suggest setting it and then testing the chosen setting by getting an able volunteer to move through the camera's view and testing whether or not the motion detection is triggered.

MD AREA: Click the applicable SETUP button to setup the motion detection area for that channel. See pages 38 & 39 for details on how to do this, and what it means.

Notes

- Analog wireless cameras are not recommended for use with the motion detection functions of the DVR.
- Motion detection is not recommended for use with PTZ systems. Avoid enabling motion detection on a channel which has a PTZ system attached to it - especially when the PTZ system is set to Cruise Mode.
- Setting the motion detection at high sensitivity levels (3 - 4) can increase the frequency of false alarms. On the other hand, low sensitivity levels (1 - 2) could increase the risk that a significant motion event (such as an intruder) will not trigger the motion detection to record.

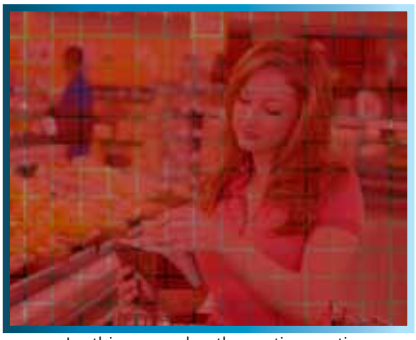
Remember: After making changes to the settings press/click the APPLY button.

Motion Detection Configuration

Say, for example, you are trying to monitor your front yard, whilst in the background there is a busy street, and the cars driving past continually set off the motion detection. What can you do about it? Setting only part of the camera's view to be motion sensitive might be the answer. This is useful in a number of circumstances, such as monitoring one particular door at the end of busy hallway, or a backyard with a tree that keeps blowing in the wind.

To set the MOTION DETECTION AREA

- In the MOTION DETECTION menu, use the mouse or the arrow buttons to highlight the SETUP button for the channel you wish to setup the MOTION DETECTION AREA for, and confirm by pressing select or left clicking.
- You will see a grid (15 x 12) of red boxes. **The red boxes mark the area that is sensitive to motion.**
- Use the arrow buttons or the mouse to move the cursor around the screen.
- By pressing select or left clicking an area in the grid, you can toggle motion detection ON or OFF in that location.
- Areas marked by red boxes will be sensitive to motion, those not marked will not be.



In this example, the entire motion area activated. Movement anywhere in the screen will trigger the motion detection.

This example shows the same image, but the top left side of the motion area is not activated. Movement in this area will not trigger the motion detection.

Remember: After making changes to the settings press/click the APPLY button.

How Motion Detection Works

The way that the DVR looks for motion is quite straight forward - it's a process where it compares one frame (that is, a single image taken approximately a 25th/30th of a second from the previous image) with the next. A certain amount of "difference" between these two "frames" is interpreted as motion.

As a result, the DVR is able to detect when there is a change in the picture. However, this does not necessarily need to be something moving in the frame. For example, a light being turned on or off, a lightning flash or even the sun coming out momentarily on a cloudy day might be enough to trigger the motion detection on the DVR. However, as these events last only a moment (and are relatively rare) they will only create a few very short redundant clips, which will not take up too much space or pose a problem with scanning through footage.

This method of motion detection can, however, become problematic when using wireless cameras. As wireless technology is susceptible to interference, the static and image distortion common to wireless systems is often enough to trigger the motion detection inadvertently.

As a result, we strongly advise against using analog wireless cameras with any of our motion sensitive recording equipment, and advise the use of hard wired cameras. If you simply must use wireless technology, we strongly advise using digital wireless technology, as this technology is much more resistant to interference from other wireless equipment and environmental causes.

For a similar reason, don't use PTZ systems and motion detection simultaneously. The DVR will interpret the camera moving as 'motion' and record. This is particularly true when using Cruise Mode - as the camera is moving almost continually, so too is the DVR recording almost continually!

The System Setup Menu

The SYSTEM SETUP menu.

The SYSTEM SETUP menu is where most of the advanced settings for the DVR hide out.

Most of the time, there isn't much you'll need to change here. However, a few settings might need tweaking from time to time, particularly when you're first configuring the DVR. So here's a quick rundown of what's what.

DATE/TIME: Allows you to set the date and time. The DVR will retain an accurate time even whilst turned off - there is a small battery attached to the main circuit board. It may be the case that if the DVR is switched off for an extended period (for example, weeks or months at a time) that this battery may be exhausted. In this case, you will need to setup the DVR again.

PASSWORD: For enabling/disabling password control to access the DVR, and choosing what this password is. This password will not necessarily be the same as the one you use for remote access (see the section on *Remote Access*, pages 50 - 55, for more details).

VIDEO: For changing your video standard between PAL or NTSC. See page 43 for more about PAL and NTSC.

LANGUAGE: For changing the language of the on screen display.

INFO: Displays information about the DVR: specifically, it shows the current version of the software and hardware that the DVR is running, as well as the media access control (MAC) address.

MAINTAIN: Define and implement an automatic maintenance schedule for the DVR. It is important that the DVR be rebooted on occasion to prevent errors - this function lets you program an automatic schedule of rebooting which the DVR will follow.

Remember: After making changes to the settings press/click the APPLY button.

The Time Setup Menu

Setting the Date and Time

It is very important if you're planning on using the video search function that the date and time are correctly set. This is also the case if you want to be able to use the footage from your DVR in a court of law or similar legal proceeding.

Date: The date, in the format as chosen in the Date Format drop-down menu.

Date Format: The format of the date (eg. DD/MM/YYYY or MM/DD/YYYY and so on).

Time: This can be edited in the same way as the Date, or set to update automatically.

Time Format: How the time will be displayed, either as 12-hour (AM or PM) or 24-hour time.

NTP: *Network Time Protocol*. If you've got the DVR connected to the Internet, you can have it automatically sync time with an online server.

Time Zone: Particularly important if you've enabled NTP - set this to the time zone wherever you happen to be. For example, people on in eastern Australia (Canberra, Sydney and Melbourne) choose GMT+10:00, whilst the Eastern Time zone in the USA and Canada is GMT-05:00. (GMT stands for Greenwich Mean Time - it's the baseline that keeps all the different time zones in sync.)

IMPORTANT: If you change your Time Zone setting, click APPLY **before** you click UPDATE.

Configuring Custom DST MODE

As the standards for daylight savings differ from country to country, and often state to state, you might need to manually tell the DVR exactly when it commences and ends in your locality. First, turn DST on. Then, select the appropriate week from the drop-down menu which lists the 1ST WEEK, 2ND WEEK (and so on) that DST commences in your region. Then, select the appropriate month from the drop-down menu listing months. Repeat these steps for the week and month that daylight savings ends. Once configured, your DVR will automatically adjust the time settings when daylight savings begins and ends without you having to change anything.

NOTE: NTP servers are NOT fully compatible with DST. This may cause your system to double-count adding one or removing one more hour than they should, or cancel each other out. You may need to intentionally change your time zone to compensate, or simply not use NTP during daylight savings time.

Remember: After making changes to the settings press/click the APPLY button.

The Password Setup Menu

Setting your Password

The system password allows you to protect the DVR's settings & recording. Without the password the DVR menu cannot be accessed. We strongly advise that you set a password as soon as possible to prevent unauthorized access to the DVR, either locally or remotely. It is this same password which must be entered for remote viewing the first time.

To set your PASSWORD:

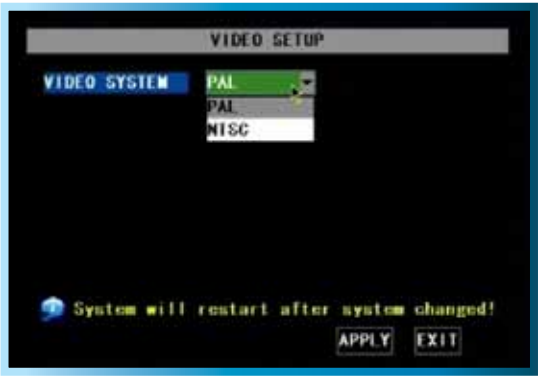
- Open the PASSWORD submenu.
- Using the mouse or the arrow buttons, highlight the PASSWORD ENABLE drop-down menu, and change the value to ON.
- Two new options will pop up: USER PASSWORD and ADMIN PASSWORD.
- The USER PASSWORD will grant access to the DVR and the footage stored on it. The ADMIN PASSWORD is required to change settings, the record modes and schedule, or to change other important aspects of the functionality of the DVR.
- Using the arrow buttons or the mouse, highlight the password field that you would like to change.
- Using the popup numerical pad which appears, enter the password of your choice. It almost goes without saying, but we're going to say it twice: choose something you'll remember!
- To protect against a mistake at this point (which would lock you out of your DVR) you'll need to enter the password again in the CONFIRM box immediately next to the USER or ADMIN PASSWORD field.

NOTE: *The default password to the DVR is "123456". If you lose or forget your password (thus locking yourself out of the DVR) you'll need to contact Swann Technical Support. Our number is on the back of this booklet. However, we strongly advise that you choose a password you'll remember! It'll save grief later...*

Remember: After making changes to the settings press/click the APPLY button.

The Video Setup Menu

The VIDEO SETUP menu allows you to control the video signals being sent by the DVR.



VIDEO SYSTEM: Here you can choose between PAL and NTSC. PAL is used in Western Europe and Australia, NTSC is used in the US, Canada and Japan.

If the DVR's picture is black and white, flickering or similar, then this is probably caused by the video system being set incorrectly.

Do **not** change this setting unless directed to do so
by *Swann* Technical Support, or you *really* know what you're doing.

Your television may not be able to display the other signal standard
at all, meaning you won't be able to see menus to change it back!

Remember: After making changes to the settings press/click the APPLY button.

The Language and Info Menus

Language Menu

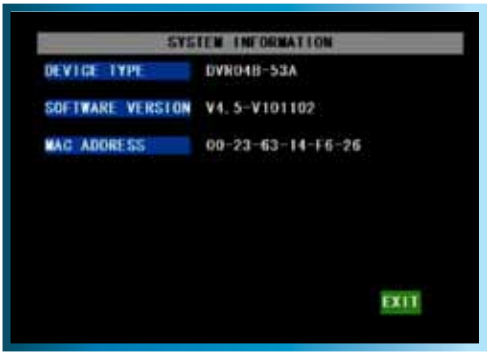
- Using the mouse or the arrow buttons, select the drop-down menu of languages.
- Choose the language that best suits your needs.
- Confirm your choice by pressing select or left clicking the option.

A Note on Languages:
Unless you really want to change the language of the DVR menus, stay away from this setting. Having the menus in a foreign language can make it difficult to get back to the menu to put the setting back to the right one! Having said that, if you do change it by mistake (or the DVR is in a foreign language when you get it) in the main menu, select the icon in the bottom right, then in the SYSTEM menu, LANGUAGES is the icon in the bottom left. That will bring you to the drop down menu where you can change languages.

System Information

The system information menu displays the version of the hardware and software you are running.

Additionally, this screen will also display the Media Access Control (MAC) address.



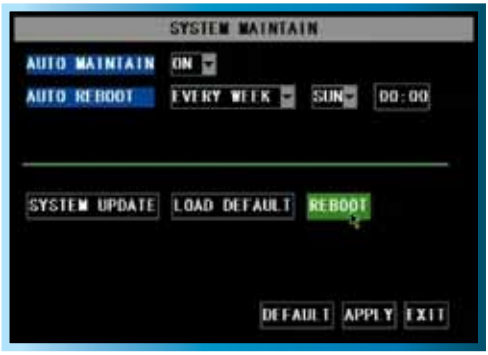
There is nothing on this screen to set - the System Information menu is for reference only. Unlike the other networking addresses (such as the IP address and similar) the MAC address cannot be set.

The most likely reason you'll need to access this menu is if you are seeking technical support and we ask you what version of the DVR hardware and software you are running.

Remember: After making changes to the settings press/click the APPLY button.

The System Maintenance Menu

To maintain the operational integrity of the DVR, it is suggested that it be rebooted periodically. In much the same way that a computer can become unstable if left on for an extremely long time, the DVR can become unstable. It is strongly suggested that the DVR be rebooted at least once per month. However, as this can be a hassle (particularly if the DVR is stashed away somewhere inconvenient) you can set the DVR up to reboot itself.



AUTO MAINTAIN: Whilst OFF, there won't be any other options available on this screen. Turn this ON if you want to set the AUTO REBOOT function.

AUTO REBOOT: Will automatically shut the DVR down and restart it at a certain time of the day, week or month.

SYSTEM UPDATE: For loading new soft/firmware onto the DVR via a USB flash drive. Usually, you won't need to use this setting unless directed to do so by Swann Technical Support.

LOAD DEFAULT: Returns the DVR to it's initial factory settings. Can be useful if, for some unknown reason, the DVR is behaving erratically.

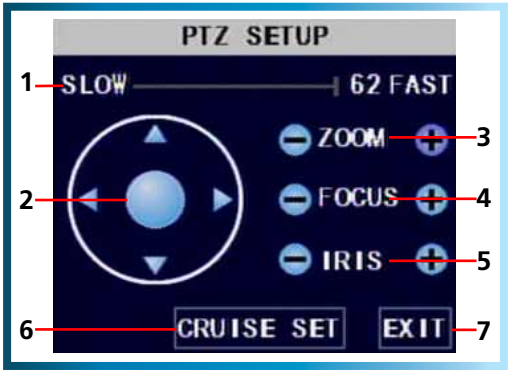
REBOOT: Turns off and restarts the DVR immediately.

About the AUTO REBOOT time:

- If you choose weekly rebooting, you'll need to select the day of the week (from MON through SUN) and the time that you'd like the DVR to reboot.
- If you chose monthly rebooting, you can choose the date of the month that you'd like the DVR to reboot, and then the time on that date.
- Note that, if you chose monthly rebooting and you enter the 31st as the date you'd like the DVR to reboot, there are several months of the year that don't have a 31st day. It is suggested that this date be avoided, for that reason.
- When the DVR is rebooted, no settings will be lost, and it will automatically resume its recording mode and schedule without alteration. The reboot primarily refreshes the software and gives the hardware a moment of 'time out', aiding the ongoing smooth functionality of the DVR. It will not lose your settings.

Remember: After making changes to the settings press/click the APPLY button.

PTZ Controls



You can bring up the PTZ Setup window by pressing the PTZ button on the remote control, or by right-clicking the mouse in the live view mode, and choosing PTZ.

Note: the features which will usable depend on the capabilities and limitations of your PTZ system.

Here, you'll be able to aim the camera, as well as alter aspects of the lens and iris configuration. We'll explain a little more about what each of these does:

1. SPEED ADJUSTMENT

By selecting this with the mouse or the arrow buttons, you are able to change the speed at which your camera will tilt, pan and zoom. The higher the number, the faster the camera will move.

2. ARROW BUTTONS

Used to manually move the camera. The arrow buttons will move the camera in the selected direction, and the centre button toggles Auto-Scan ON and OFF.

3. ZOOM

If you are using a variable zoom PTZ camera, you can zoom in or out here. Zooming in will increase the size of objects in view, at the expense of reducing the field of view. You may need to adjust focus when using the ZOOM function.

4. FOCUS

Adjusts the focal plane of the lens. If an image is blurry, try adjusting the focus. To best set the focus, move one direction until things become clear, and then blurry again. Move back and forth until you find sharp focus.

5. IRIS

Controls how much light gets into the camera. If things look too bright (or white) lower the IRIS value. If things are too dark (or black) raise the IRIS value. Many cameras do this automatically.

6. CRUISE SET

Open the CRUISE SETUP window, see next page.

7.EXIT

Leaves the PTZ SETUP menu.

Remember: After making changes to the settings press/click the APPLY button.

Cruise Mode

To setup CRUISE MODE, you'll need to define "POINTS" for each channel with a PTZ camera you want to "cruise". A POINT is one place that the camera needs to move to on its loop.

- Move the camera to the desired position using the arrows.
- Hit the SET button.
- The point will be saved. Its name will be one digit higher than the previous point.
- For easy cruise setup, define your points in the same order as you want the camera to move through them.

The GOTO button will take the camera back to a predefined point. The CLEAN button will remove all your defined points.

When you've set your points, select SAVE, then EXIT.

- To start cruise mode, select START CRUISE from the pop-up menu.
- To stop cruise mode, select STOP CRUISE form the same menu.

Requirements for Remote Access

The primary requirements for accessing the DVR4-1200 via the Internet are:

A High-Speed Internet Connection

Video uses a lot of data, so you'll need a fast Internet connection in order connect remotely. Note that upload speed refers to the rate at which an Internet connection can send data, not receive it. Most Internet plans are 'asymmetrical', which means they can download data faster than they can upload it.

We think that an Internet connection with an upload speed of 256kpbs is generally sufficient for remote access, but ideally upload speeds of 512kbps or higher are recommended - particularly for multi-channel playback or monitoring at higher resolutions and quality settings.

Your DVR & Local Network Correctly Configured

It is important that your home network function correctly, and that the information entered into the Networking menu in the DVR (see page 22) matches the general network settings.

The first thing you'll need to determine is whether your router requires devices to use fixed (STATIC) or dynamic (DHCP) addressing - you'll need to the documentation which came with your router to learn which type of IP allocation your router requires. Most of the time, routers support both allocation methods. In such cases, we suggest using a STATIC configuration, as it will let you exercise more control over the functionality of your network, and reduce the need for maintenance.

In a DHCP configuration, you do not need to enter the IP address, subnet mask or default gateway values into the DVR. Rather, the DVR will automatically request this information from your networks Dynamic Host (usually your router).

Finding your Network Information

You may be wondering how to find information, such as your Subnet Mask, Gateway values and DNS servers, as well as the first three parts of the IP address you'll need to assign the DVR. To do so from a *Microsoft Windows*® based PC:

- Open the **Start Menu**.
- In the **Search Box/Run Box** (depending on the version) enter "**command**" and press **Enter**.
- An imitation DOS prompt will appear. Type "**IPCONFIG /ALL**".
- All the relevant information will then be displayed on-screen.

For a STATIC configuration, the DVR needs to be told what IP address to use (this must be unique) and the subnet mask, gateway address and DNS server address (these must match the other devices on your network).

The most common way of discovering these values is to use a computer already connected to the network, which can access the Internet. Typically, this is a matter of bringing up the Properties window for your local area connection (LAN). Depending on your operating system, there are different ways to do this.

Once you've found the network settings on your computer:

- Set the **gateway**, **subnet mask** and **DNS server** addresses to match those that your computer uses.
- For the IP address, the first three groups of numbers should be the same, with the last being different (unique). For example, if your computer's IP address was "192.168.1.12" then you could set the DVR's IP address to "192.168.1.235". (The choice of "235" is somewhat arbitrary - it can be anything between 0 and 255, so long as no other device on your network is using that address. We suggest 235 as it is usually available.)

More about UPnP (Universal Plug and Play)

Now here's a feature we're excited about. Basically, UPnP is the ultimate shortcut when setting up your home network, saving you the hassle of worrying about jargon heavy concepts like "port forwarding". Frankly, we like it.

The requirements for UPnP are:

- A UPnP capable router, with UPnP enabled.

The big benefit of UPnP is that you don't have to worry about port forwarding, which is one of the most time consuming and difficult stages of configuring your network.

Enabling UPnP

UPnP is a setting which can be enabled on certain routers. You'll have to see your router's documentation for instructions on how to enable UPnP, if your router supports it.

Enabling UPnP will have a minor effect on your network security.

If your network is free from malware (such as viruses, spyware, adware and so on) then UPnP will improve the security of your network. This happens because the ports that programs and devices use while they're open are automatically closed when the program is closed or the device shut down.

On the other hand, if UPnP is enabled once the security of your network is already compromised (that is, a device or computer on the network is infected by some kind of malware) then UPnP will reduce your networks ability to quarantine suspect programs by allowing them outbound access through the router's firewall. Basically, if you're planning to use UPnP, be sure your computers and the network they're on are clean and free from malware!

Port Configuration

If you're not using UPnP, then you'll need to configure your router using a process known as Port Forwarding. Check out page 56, or www.portforward.com for more information.

Public and Private IP Addresses

The IP address used by the DVR, whether entered manually (STATIC) or assigned by the dynamic host (DHCP) is the **private IP address** of the DVR. The private IP address is used to locate the DVR on your private network. However, to access the DVR from a remote location via the Internet, you'll need to know your home networks **public IP address**.

What's the difference?

The IP addressing system that the Internet utilizes at the moment supports up to (approximately) 4 billion addresses. That is a lot, but it's not enough for every device connected to it (computers, phones, video game consoles, DVRs, servers, televisions and even some refrigerators can all have Internet connections) to have individual addresses. This problem is solved by assigning an address to each sub-network on the Internet. This means that all LANs, such as your local network in your home or office, will have a public IP address which will allow you to find that network from anywhere connected to the Internet.

This means that all devices connected to your network share one public IP address. To differentiate devices on your network, your network has its own IP address range, and this is what is referred to as your private IP address. The private IP address is used to configure your DVR and router for remote access through a process known as *Port Forwarding*.

How do I find these addresses, and what should I do with them?

If you've configured your network using STATIC IP addressing, then you'll be entering the private IP address directly into the DVR. Then you'll need to choose your Web Port and Media Port. Finally, you'll have to configure your router to forward your selected ports to the private IP address of the DVR.

If you're setting up a dynamic network (DHCP) then you don't need to know the private IP address of your DVR (it'll probably change over time, anyway). Rather, you only need to define the Media Port and Web Port, then configure your router to forward these ports to the DVR (usually your router will have a drop-down menu allowing you to select which devices on the network to forward ports to).

Finally, to learn your networks public IP address, you'll need a computer with Internet access connected via the same network as the DVR you're configuring. Then, open an Internet browser window. In the address bar, go to www.whatismyip.com. Your public IP address will be displayed instantly!

Static and Dynamic IP Addresses

In much the same way as your home network can use static or dynamic IP addresses, many Internet providers don't issue (or charge more for) a static IP address for users. The easiest way to find out is to contact your Internet service provider. Alternately, you can access the www.whatismyip.com service, make a note of your IP, then reboot your router/gateway. This should refresh your Internet connection. If your IP address stays the same, you've probably got a static IP address. If it changes, you have a dynamic IP address.

How do I deal with a dynamic IP address?

One option is to contact your ISP and request a static IP address. They'll usually charge a small fee for doing this. It's worth noting that not all ISPs offer static IP addresses.

If your ISP does not offer static IP addresses then you can use a dynamic referencing service, like www.dyndns.com. They offer a free service which will give you a text address (such as www.exampleipaddress.example) which will take you directly to your public IP address. For this service to work correctly, you'll need to set up the DVR to work with DDNS.

Above: The *DDNS Setup* button, located in the *Network Setup* menu.

Right: The *DDNS Setup* menu.

Server The DDNS server you are using. At the time of writing, the DVR uses DynamicDNS (www.dyndns.com).

Host Name: Enter the host name that you set up in your DDNS service. This is the address you use to access your network.

Username and Password: Here, enter the username and password you setup with your DDNS server. These do not have to match your username/password combination in either your DVR or router (for the sake of security, we suggest making them different).

Remember: After making changes to the settings press/click the APPLY button.

Remote Access via Internet Explorer

The easiest way to access your DVR remotely is via an Internet browser. These instructions will detail how to access the DVR via *Microsoft Internet Explorer*®.

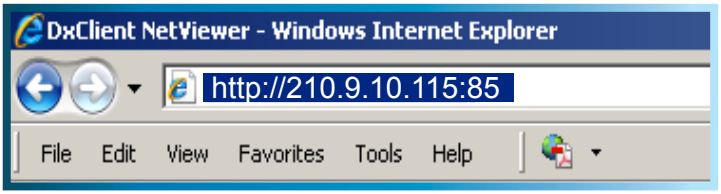
This section assumes that you've already configured the DVR and your network to operate properly. Remotely accessing the DVR via Internet Explorer (IE) is a great way to test if your network is functioning as it should.

Note: You may have to alter and configure the ActiveX controls in *IE* to allow unrestricted access to the DVR. Access might be slowed or blocked completely by *IE*'s built-in security functions. The instructions on how to do this are covered on the next page.

To access the DVR remotely via Internet Explorer:

1. Open an *Internet Explorer* window. If you do not have *Internet Explorer* you can download it from the Microsoft website (www.microsoft.com).

2. In the address bar type "http://" followed by your **public IP address**, a colon then your **web port**. For example, if your web port is "85" and your public IP address is "210.9.10.115", then you'll need to enter:



3. You will now see a login window. Here, enter your password. If no password is set, leave this dialog box blank.

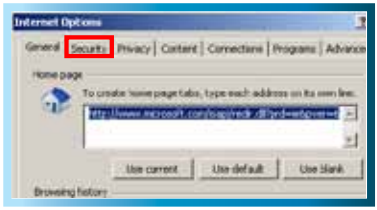
4. You should now have access to the DVR.

Adjusting the Security Settings in *Internet Explorer*

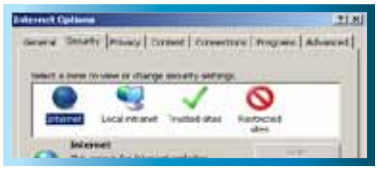
1. Open *Internet Explorer*.

2. Click **Tools** --> **Internet Options**.

3. In **Internet Options** click on the **Security** tab at the top.

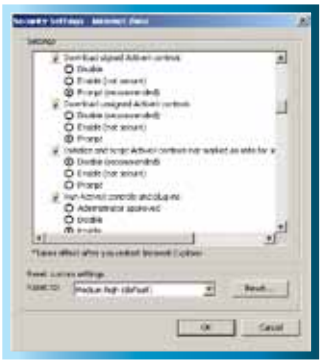


4. Select the INTERNET zone option.



5. Click on the CUSTOM LEVEL button.

6. You will now see the list below (or similar, depending on the version of IE you are running).



7. Set **Download signed ActiveX controls** to **Prompt**.

8. Set **Download unsigned ActiveX controls** to **Prompt**.

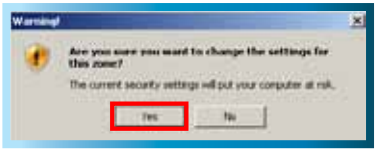
9. Set **Initialize and script ActiveX controls not marked as safe for scripting** to **Prompt**.

10. Set **Run ActiveX controls and plug-ins** to **Enabled**.

11. Set **Script ActiveX controls marked safe for scripting** to **Enabled**.

12. After you have made these changes, click **Okay**.

13. You will be asked to confirm your changes. Choose **Yes**.



Remote Access from a Mobile Device

The DVR4-1200 supports access from mobile devices, such as mobile phones with *Microsoft Windows Mobile*® as their operating system, as well as the increasingly popular *iPhone*. To correctly configure your DVR for remote access via a mobile device, or indeed any remote access, it is important to have your network and Internet connection configured correctly. Typically, this is matter of forwarding ports from your router to specific devices (in this case, your DVR).

Requirements

To access the DVR via a mobile device, the following conditions must be met:

- A high-speed Internet connection with an upload speed in excess of 256kbps (ideally above 512kbps).
- The DVR attached to this high-speed Internet connection.
- Your home network correctly configured to allow the DVR's SERVER PORT unrestricted access to the Internet. Typically, this requires that you setup your router/gateway for port forwarding.
- A compatible mobile device with a supported platform (see below).
- The correct application(s) installed on your mobile device. See page 54 for more details on how to use a mobile device to remotely access the DVR.
- A sufficient signal to your mobile device (areas with intermittent coverage or low signal strength will adversely affect the playback).
-

Setting up the DVR for Mobile Access

1. Enter the **Main Menu**.
2. Navigate to **Devices**, and select **Mobile**.
3. Enter a **USERNAME** and **PASSWORD** for mobile access. This may be the same or different to your regular password, depending on your security needs. We suggest using a different password for mobile access, but something that you'll remember.
4. Choose a **PORT** for remote access. This port will need to be properly forwarded from your router to ensure maximum bandwidth for sending footage.

Preparing your Mobile Device

Mobile technology is becoming increasingly advanced, and the rate of change is increasing. We're constantly updating software to keep up with the evolution of handsets and other devices available, and developing new apps (or "applications", for those who still prefer whole words) for other operating systems and hardware.

Thus, we can't tell you exactly how to prepare your mobile device here. Firstly, there isn't enough space on this page to cover all compatible mobile devices. More importantly, any information we print will probably be out of date by the time you read it!

Check out:
www.swannsecurity.com/mobile
for guides to set up common mobile devices for use with the DVR4-1200.

Supported Mobile Platforms

At the time of writing, the DVR4-1200 supports a mobile device (such as a cellphone, tablet, PDA or similar) on a 3G network running:

- *Microsoft Windows Mobile® (version 6.x)*
- *Android (version 2.1 or higher)*
- *Symbian (S60, 3rd or 5th edition)*
- *iPhone OS*
- *BlackBerry OS (version 5, not all handsets supported)*

Some devices may require access to a local area network with Internet access to function correctly, whilst others are able to use mobile Internet (such as HSDPA or similar protocol). It depends on the hardware in your specific device, and there are too many devices out there these days to offer any kind of comprehensive list.

***Disclaimer: We can't guarantee that your mobile device will be compatible with this DVR**, even if it has one of the operating systems listed above. Your specific model of phone, tablet or other device, the hardware it contains (and the revision thereof), your service provider, the types of data services they offer and your specific phone/device plan will all affect the performance of your mobile device for remote access of the DVR.*

Port Forwarding

Port Configuration

If you're not using UPnP, then you'll need to manually forward ports from your router to your DVR.

Why?

The DVR4-1200 needs two "ports" to be available and properly configured (using either UPnP or manually *forwarding ports*) to work correctly over the Internet. One of these is called the "Media Port" and the other is called the "Web Port".

These "ports" are like a pin-hole in your network's security screen (tech people call this security a "firewall") which allows devices to send and receive data from devices on your network. If there's no hole, devices can't talk to each other. If the hole is too big, then it presents a security risk. Opening a few, carefully selected ports and assigning them to specific devices strikes the most useful balance between these two extremes.

Media Port: The default value is "9000".

Web Port: The default value is "80" - we strongly suggest changing this as "80" is a port frequently used by various programs (in fact, it's the default HTTP port). Generally, "85" or "3100" are better choices - however, you can set this to be anything that you want, just be sure to remember it! You'll need it later.

Remember: If you're not using UPnP (some older routers do not support it) then you'll need to forward these ports, which involves configuring your router. Check out www.portforward.com for guides on how to do this.

If you are using UPnP, you won't need to forward ports.

We think that UPnP is the way to go, if your router supports it.

Installing/Changing the HDD

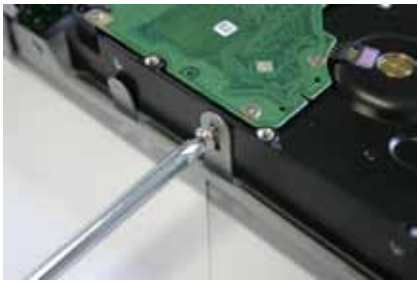
Note: the following instructions are for installing or changing the hard drive. If your DVR already has a hard drive pre-installed, and you don't want to change it, disregard these steps.

1. Ensure the DVR is **unplugged from mains power**.
2. Locate and remove the screw on the rear of the DVR, and the 2 from each side.
3. Pull up the top case of the DVR.
4. Locate the 2 screws holding the hard drive in place. Remove these screws and remove the HDD from the DVR.
5. Push the metal clip on the SATA cable (single red or orange cable) to unplug the cable from the hard drive. Unplug the power cable (2 black, 1 yellow, and 1 red cable) from the back of the hard drive.
6. If replacing the hard drive, put the new hard drive into the chassis.
7. Screw in the hard drive to chassis as in step 5, and attach the chassis to the DVR case as in step 4. Remember - the HDD goes in *upside down*, as shown in the image to the right.
8. Replace the top of the case.
9. Screw in the remaining screws to the sides and back of the DVR as in step 2.

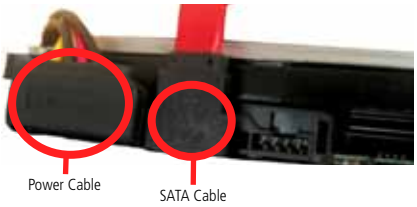
2

3

4



5



Troubleshooting

Problem: My monitor is not showing any display/picture.

Solution: Make sure you have connected the VIDEO OUTPUT on the DVR to a VIDEO INPUT on the back of your TV/monitor. Try different channels on your TV or monitor - many TV's call their component video input confusing things, like AV, TV/AV, AUX, COMPOSITE, CHANNEL 0 and so on.

Problem: My DVR does not switch on.

Solution: Make sure you have plugged in the power supply (12V) to the DVR and into the wall socket. Carefully check the integrity of the connections. Check the master switch on the back of the unit. Try another power socket.

Problem: My display is showing "NO HARD DISK" when I press record.

Solution: If you have recently changed the hard drive in your DVR unit make sure it is plugged in properly; otherwise the hard drive may be faulty. Try connecting another (working) hard drive to the DVR; if this still doesn't work then the DVR maybe faulty. We suggest calling *Swann* Technical Support - the contact information is on the rear cover of this booklet.

Problem: I am not getting a picture on any of my displays.

Solution: Make sure the cameras are connected properly to the DVR and the power supply (12V). Check that the cables are not faulty by connecting the cameras directly to the DVR or to a TV (if you have the proper adapters).

Problem: One of the displays is not showing on my screen.

Solution: Make sure all cameras are set to ON in CAMERA SETUP. Check the integrity of your cables and connections. Check the power supply to the camera. Try attaching another channel to the questionable input.

Problem: I cannot login to my DVR remotely using the NetViewer software or the Internet Explorer browser.

Solution: Make sure you have configured the IP, ActiveX and USER SETUP correctly. Remember the USER PASSWORD may be different to the ADMIN PASSWORD. The ADMIN PASSWORD is used to login to the DVR remotely.

Problem: I cannot perform a backup.

Solution: Make sure the DVR is connected to a USB flash drive, and that the USB flash drive is formatted to have a FAT32 file system.

DVR4-1200: Technical Specifications

	Video
Video Format	PAL or NTSC
Video Inputs	4 x Composite BNC Inputs
Video Outputs	2 x Composite BNC Outputs
Display Resolution	NTSC: 704 x 480, PAL: 704 x 576
Display Frame Rate	NTSC: 120fps, PAL: 100fps
	Audio
Audio Inputs	1 x RCA Audio Input
Audio Output	1 x RCA Audio Output
	Recording
Compression Format	H.264
Recording Resolution	NTSC: D1 (704x480), HD1 (704x240), CIF (352x240) PAL: D1 (704 x 576), HD1 (704 x 288), CIF (352 x 288)
Recording Frame Rate	NTSC: 30fps D1, 60fps HD1, 120fps CIF PAL: 25fps D1, 50fps HD1, 100fps CIF
Recording Modes	Manual / Motion / Schedule
Multiplex Operation	Triplex
HDD Interface	SATA
Hard Drive Support	Up to 1TB
	Network
LAN Connection	Yes
Network Interface	Cat5 (8P8C)
Network Protocol(s)	TCP/IP. DDNS
Remote Operation	Yes
	General
Operating Power	DC 12V
Dimensions	12.4" x 8.9" x 2.4"
Weight	4.lbs / 2Kg
Backup Method	USB to Flash Drive
Mouse Support	1 x USB
Remote Control	1 x InfraRed Controller
Remote Battery Type	2 x AAA

Helpdesk / Technical Support Details

Swann Technical Support
All Countries E-mail: tech@swannsecurity.com
Telephone Helpdesk

USA toll free
1-800-627-2799
(Su, 2pm-10pm US PT)
(M-Th, 6am-10pm US PT)
(F 6am-2pm US PT)
USA Exchange & Repairs
1-800-627-2799 (Option 1)
(M-F, 9am-5pm US PT)

AUSTRALIA toll free
1300 138 324
(M 9am-5pm AUS ET)
(Tu-F 1am-5pm AUS ET)
(Sa 1am-9am AUS ET)
NEW ZEALAND toll free
0800 479 266
UK
0203 027 0979

See http://www.worldtimeserver.com for information on time zones and the current time in Melbourne, Australia compared to your local time.

Warranty Information

Swann Communications USA Inc.
12636 Clark Street
Santa Fe Springs CA 90670
USA

Swann Communications
Unit 13, 331 Ingles Street,
Port Melbourne Vic 3207

Swann Communications LTD.
Stag Gates House
63/64 The Avenue
SO171XS
United Kingdom

Swann Communications warrants this product against defects in workmanship and material for a period of one (1) year from it's original purchase date. You must present your receipt as proof of date of purchase for warranty validation. Any unit which proves defective during the stated period will be repaired without charge for parts or labour or replaced at the sole discretion of Swann. The end user is responsible for all freight charges incurred to send the product to Swann's repair centres. The end user is responsible for all shipping costs incurred when shipping from and to any country other than the country of origin.

The warranty does not cover any incidental, accidental or consequential damages arising from the use of or the inability to use this product. Any costs associated with the fitting or removal of this product by a tradesman or other person or any other costs associated with its use are the responsibility of the end user. This warranty applies to the original purchaser of the product only and is not transferable to any third party. Unauthorized end user or third party modifications to any component or evidence of misuse or abuse of the device will render all warranties void.

By law some countries do not allow limitations on certain exclusions in this warranty. Where applicable by local laws, regulations and legal rights will take precedence.

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