JUDGE
CCTV SURVEILLANCE
Captured, Caught, Convicted™

Models: JSVKIT-A421 (4 channel kit)
JSVKIT-A822 (8 channel kit)

Professional CCTV Surveillance System
Quick Start Guide

Thank you for purchasing a Judge Professional CCTV Surveillance Kit
This Quick Start Guide covers basic setup, installation and use of your surveillance system.
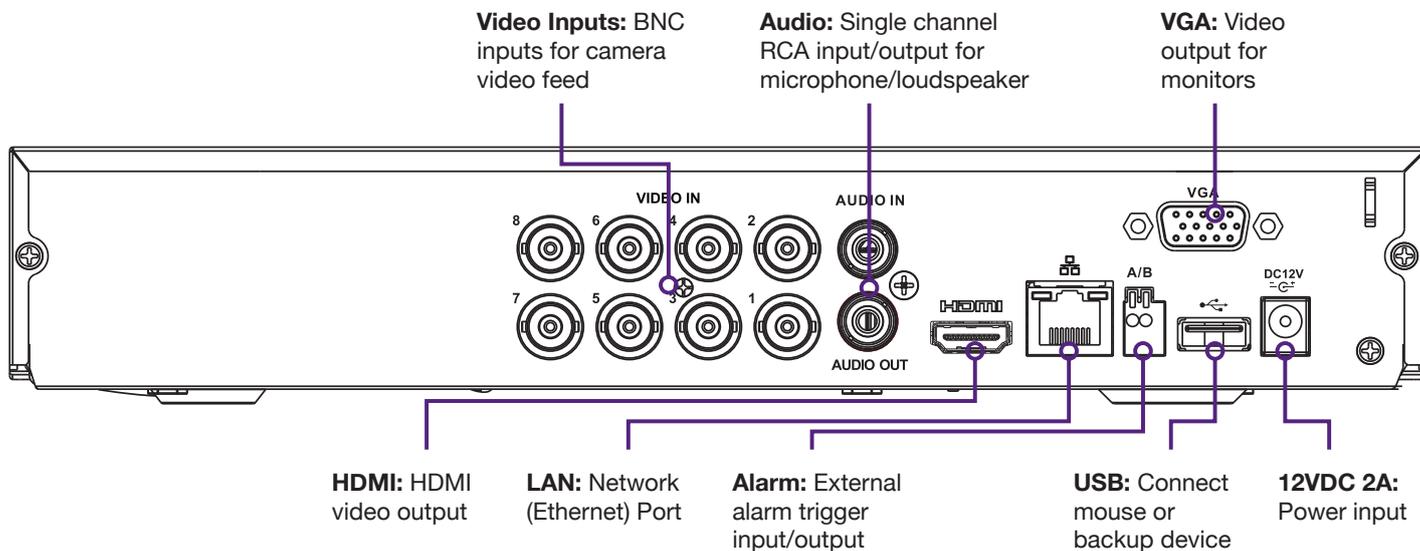For the full user manual, instructional videos, tips on using your surveillance system &
warranty information, please visit: **www.judgecctv.com**

Included Components	
JVSKIT-A421: 4 Channel Surveillance Kit	**JVSKIT-A822: 8 Channel Surveillance Kit**
4 Channel HDCVI Digital Video Recorder with 1TB HDD	8 Channel HDCVI Digital Video Recorder with 2TB HDD
4 x 2.0MP 50m Infrared IP67 Mini Domes with mount kits	8 x 2.0MP 50m Infrared IP67 HDCVI Mini Domes with mount kits
1 x CAT5 patch cable, 4 x 18m camera power/video leads	1 x CAT5 patch cable, 8 x 18m camera power/video leads
1 x power splitter, 1 x cameras PSU, 1 x DVR PSU, 1 x USB mouse	2 x power splitter, 2 x cameras PSU, 1 x DVR PSU, 1 x USB mouse

1. Pre-Installation

1.1 Understanding your DVR: Rear Panel

NOTE: *Your DVR model may differ - the 8 channel kit DVR (JVSKIT-A822) is referenced below*

Video Inputs: BNC inputs for camera video feed

Audio: Single channel RCA input/output for microphone/loudspeaker

VGA: Video output for monitors

HDMI: HDMI video output

LAN: Network (Ethernet) Port

Alarm: External alarm trigger input/output

USB: Connect mouse or backup device

12VDC 2A: Power input

1.2 Pre-Installation Safety Information

Before connecting your DVR or cameras, please ensure the following safe installation guidelines are adhered to.

- Do not place cords from the DVR where they can be pinched or stepped on.
- Do not place heavy objects on cords, or cover cords with rugs or carpet.
- Do not expose the DVR to excessive heat or moisture.
- Leave at least 50mm of space between the DVR and other objects to allow ample air circulation.
- Never immerse any component in water and do not spray cleaners or solvents on the cameras.
- Shut down and unplug the recorder before cleaning. When cleaning, use a damp, lint-free cloth only.
- Service of your DVR or surveillance cameras should only be handled by qualified technicians.

1.3 Connecting your DVR and Cameras

The following section will detail connecting the DVR (digital video recorder) and surveillance cameras. It is recommended that cameras and connections are tested before mounting. If there is no image, an error message or dark screen when first connecting cameras, see the **Troubleshooting** in Section 6 in this guide.

1. **Connect the cameras to the DVR:** Using the 18m video/power cables, connect BNC plugs to the DVR.
2. **Connect camera power:** Using the 12VDC 3A camera power supply and 4-way power splitter cable.
3. **Connect a display:** Using an HDMI or VGA cable, connect a monitor or television (not included in kit).
4. **Connect the mouse:** Connect the USB mouse to the rear USB port, saving the front port for easy USB backup.
5. **Connect to your local network:** Using the included Ethernet patch cable, connect to your switch or router.
6. **Connect DVR power:** Using the supplied 12VDC 2A digital video recorder power supply.

Upon activating power, LED lights at the front of the DVR should turn on and the DVR will sound on startup. The DVR will then run your surveillance user interface. Cameras and LAN / Internet will be detected automatically. This completes a successful first boot of your surveillance system and you may begin configuring surveillance cameras.

2. DVR and Camera Configuration

2.1 First Boot and Startup Wizard

After successful connection and boot of your DVR, you will be taken through first-time setup for your surveillance system. Here you will configure system security and begin customising your DVR, including setting camera encoding options, record scheduling, network setup and remote view configuration.

NOTE: *Each setting shown in the Startup Wizard can be modified later via the DVR main menu. See the Menu Quick Guide in Section 6 or see the full user manual for more information.*

Following the prompts, complete each section in the Startup Wizard, as detailed below:

2.1.1 Securing your DVR

Your DVR has 3 permanent users with different levels of access (see Fig. 2.1). In the Startup Wizard, you will be prompted to change the **admin user** password. This is to prevent unauthorised remote access via the Internet to your DVR.

1. Enter a strong **admin user** password, using letters, numbers & symbols.

2. Confirm your **admin user** password.

3. Enter security questions/answers to be used if the admin password is forgotten.

User	Default Password	Privileges
admin	admin	Local & remote admin control
888888	888888	Local admin control
default	N/A	Local viewing only

Fig. 2.1: Default access settings

NOTE: *Security question answers are case-sensitive, please take note of letter casing when entering answers.*

2.1.2 General DVR Setup

After completing the **Admin Security** section, you will be directed to **General** setup. Here you can confirm basic options of your DVR. By default, your DVR is set to overwrite existing footage, have 5 minutes instant playback and logout automatically after 10 minutes. You can also confirm date & time and set a holiday recording scheduling.

Default settings are adequate to get started, we recommend checking the following:

1. In the **General** tab, assign a name to your DVR.

2. Switch to the **Date & Time** tab and confirm correct settings. This directly affects footage search & playback.

Fig. 2.2: Admin Security section

Fig. 2.3: General setup section

2.1.3 Configuring Network, P2P, and Remote View

NOTE: *For the following section, please ensure your network is connected and that your Internet connection is available. Also, have your Internet connected phone or tablet ready for configuring surveillance remote view.*

Network setup will be prompted next, enabling you to connect your DVR to the Internet. First ensure that your DVR is connected to your switch or router via the included CAT5 cable (detailed in Section 1.3). For the simplest setup we recommend using DHCP to connect to the Internet. You will then be prompted to configure **P2P** for remote view on your device.

1. In the **Network** section, see Fig. 2.4.

2. For the **Mode** option, select **DHCP** (Dynamic Host Configuration Protocol).

3. Should you wish to use a static address, contact your Internet administrator for details.

4. Click **Next** to continue.

5. In the **P2P** (peer to peer) section, see Fig. 2.5.

6. Click **Enable** to enable P2P remote view.

7. DVR **Status** should read **Online**. This indicates an active Internet connection.

8. Scan the first QR code, **Cell Phone Client**, or search your App Store to download the **Easyviewer** app.

Fig. 2.4: Network setup section settings (example only)

Fig. 2.5: P2P setup section, with QR codes (example only)

The following details configuring remote view via the **EasyviewerLite** on your Google Android or Apple iOS device. Depending on your device, menus may function or appear slightly different to those explained below.

1. Select the **Camera** button on the app home screen.

2. Open the application menu and select the **Device Manager** tab.

3. To add your DVR, select add device .

4. In the **Add Device** menu, select **P2P**.

5. **Name** your DVR and enter your **admin password**.

6. In the **SN** field, select the QR code icon .

7. Scan the **Device SN** QR code shown in Fig. 2.5.

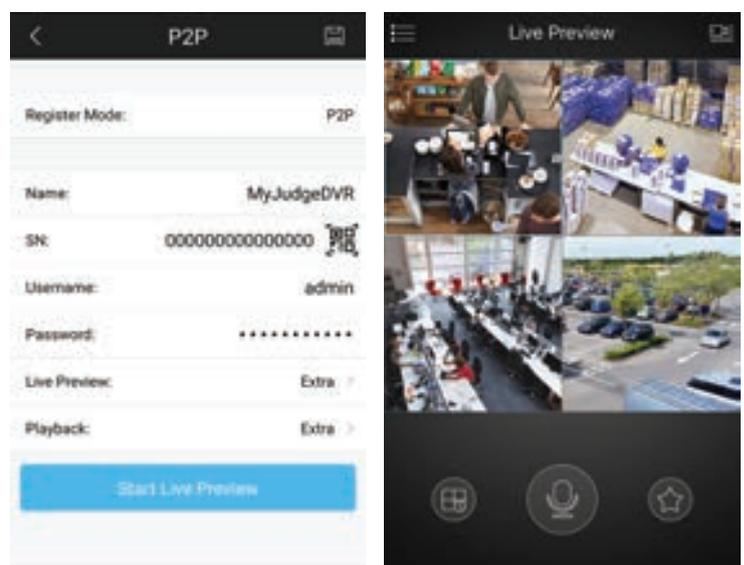8. Select **Start Live Preview** to view your cameras.

Fig. 2.6: Add Device menu and Live Preview for Android

2.1.4 Configuring Surveillance Cameras

After configuring remote view, the Startup Wizard will take you through camera setup via the **Encode** menu. This section determines the overall quality of footage recorded by your DVR. By default, your cameras are set to balanced quality/record duration settings. These can be adjusted to increase maximum recording time before footage is overwritten.

Each camera features a **Regular or Main Stream** for high quality streaming to the DVR; and a **Sub or Extra Stream** for low quality, low data streaming to your remote view phone or tablet. You can configure both of these streams for each individual camera.

Fig. 2.7 details **default** values, **quality optimised** values and **max. recording-time** optimised values.

NOTE: *Total record times below are estimates. Actual total record time may differ based on captured scene activity.*

Field	Default Values		Quality Optimised		Recording Time Optimised	
	Main Stream	**Sub Stream**	**Main Stream**	**Sub Stream**	**Main Stream**	**Sub Stream**
Resolution	1920 * 1080	352 * 288	1920 * 1080	704 * 576	1920 * 1080	352 * 288
Frame Rate	15fps	15fps	15fps	15fps	10fps	10fps
Bit Rate Type	CBR	CBR	CBR	CBR	VBR	VBR
Bit Rate	2048Kb/s	320Kb/s	4096KB/s	640KB/s	2048Kb/s	320Kb/s
Approx. Total Record Time	8+ Days		4+ Days		14+ Days	

Fig. 2.7: Suggested camera stream values to be set for individual cameras

Encode Tab

- In the **Encode** tab, select each camera channel and set the desired encoding options based on table above (Fig. 2.7).
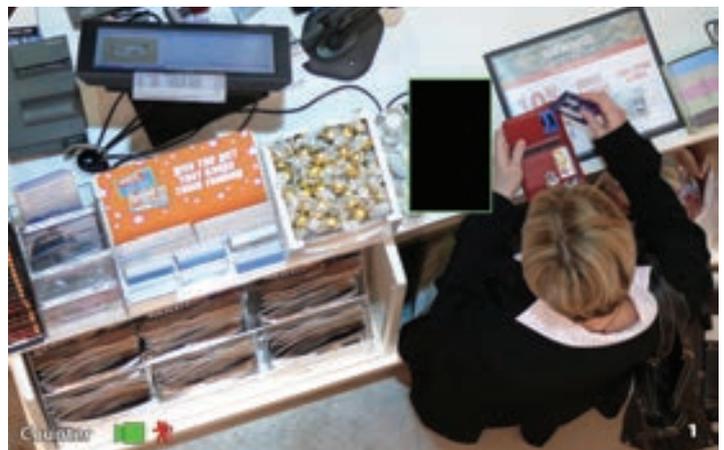
Snapshot Tab

- In the **Snapshot** tab, you can configure the DVR to record image snapshots to be taken at **Timing** intervals, based on the Snapshot Recording Schedule (see Section 2.1.5), or on **Trigger**, via camera motion detection.

- This creates image files alongside your recorded footage.

- You can set image resolution, image quality and the time in seconds between snapshots (1 SPL is 1 second between snapshots).

- Image snapshots can also be taken manually at any time.

Fig. 2.8: Encode setup section channel 1 settings (example only)

Overlay Tab

- In the **Overlay** tab, you can configure scene **Cover Area** to mask Live View / Preview or Recorded footage. This is useful for hiding sensitive information from live view or recorded footage (Fig. 2.9).

- You can set up to 4 masked areas per camera.

- Also in the **Overlay** tab, you can toggle **Time Display** and **Channel Display** and set their area in recorded footage.

- Ensure you click the **Apply** and **Save** buttons after modifying settings.

Fig. 2.9: Masking on the overlay of an EFTPOS terminal.

2.1.5 Configuring Recording Schedules

Finally, you will be prompted to setup your **Schedule** for recording. Here you can define the recorded footage schedule in the **Record** tab (Fig. 2.10), and the recorded image snapshot schedule in the **Snapshot** tab. By default, cameras are set to non-stop Regular recording, 24 hours a day, 7 days a week.

Schedules can be set in hourly periods for individual days for each camera, with options for **Regular** recording, **MD** for recording on motion detection, **Alarm** for recording on triggering an integrated alarm, **MD & Alarm** for simultaneous alarm/motion detection recording, and **Intel** for recording on triggering IVS (Intelligent Video Surveillance) such as a virtual tripwire. More information can be found on the Judge Surveillance website.

We recommend adding motion detection to all channels to accompany your regular recording:

Setting Motion Detection Recording

1. In the **Record** tab, click the **Channel** drop down to select **All** cameras.

2. In the days column, toggle the **All** check box to simultaneously set recording schedule parameters for every day of the week.

3. Check the yellow **MD** check box to select set motion detection recording.

4. Click the schedule to fill in areas for motion detection recording. We recommend a 24/7 schedule to mirror the Regular recording schedule (Fig. 2.10).

5. Click **Apply** to the confirm recording schedule changes.

You have now setup motion detection recording. This will be beneficial when it comes to searching footage in playback (Section 4.0)
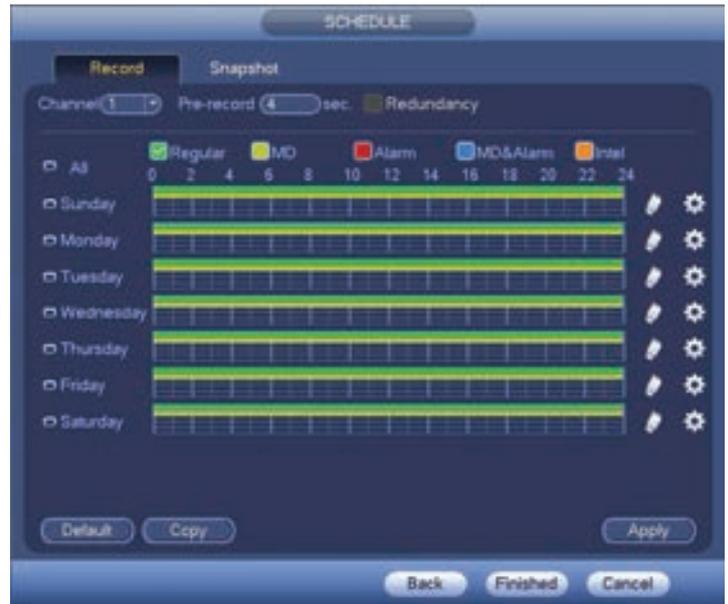
Fig. 2.10: Schedule with Regular & Motion recording set.

2.1.6 Completed Setup

Startup setup is complete. Below is an example of a **View 8 Live View** setup. Before mounting cameras, familiarise yourself with the user interface and menu layout. Double click on a camera to make it full-screen; right click to exit menus or access the right-click menu

Mouse-over Menu:
• Instant Playback
• Digital Zoom
• Manual Recording
• Image Snapshot
• Mute Audio

Camera Number

Camera Status Icons

Camera Name
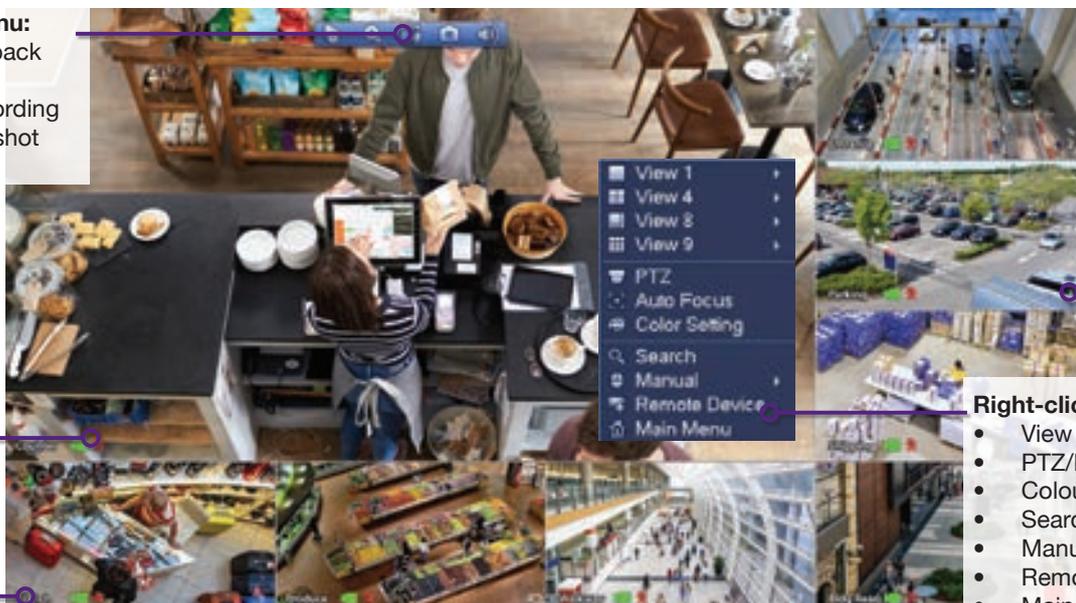
Right-click Menu:
• View Options
• PTZ/Focus Control
• Colour Control
• Search Playback
• Manual Record
• Remote Devices
• Main Menu

3. Mounting Cameras

3.1 Maximising Camera Effectiveness

To maximise the effectiveness of your surveillance cameras, follow these guidelines for camera mounting.

- Avoid pointing cameras directly at light sources.

- Consider how the sunlight changes during the day. Mount your camera where sunlight has minimum impact.

- Avoid pointing cameras directly in front of large objects. When infrared turns on in at night or in low-light, it may be reflected back into the camera, resulting in an over-bright image.

- Consider your local and state laws before installing your cameras. This may affect where you point your surveillance cameras.

- Avoid direct exposure to weather. If possible, mount under an eave or awning.

- Ensure the mounting surface thickness can support triple the weight of the camera.

- Do not mount the camera behind a window as this can reduce performance and usability of surveillance in both day & night images.

- Light levels should be approximately the same between the camera and the targeted area.

- Do not place near high voltage wires or other sources of electrical interference.

3.2 Mounting Surveillance Cameras

Following the guidelines outlined in Fig. 3.1 (right), mount your surveillance cameras.

1. Loosen the camera mount assembly by adjusting the locking screw with the included wrench.

2. Mark the screw position on the mounting surface.

3. Drill mounting holes for the self tapping screws.

4. Drill a larger hole so the camera cable may pass through the mounting surface.

5. Connect camera power/video cable, ensuring your camera is sealed away from rain and dust.

6. Affix the camera to the mounting surface using the supplier screws and wall plugs.

7. Reassemble the dome camera, loosely locking the enclosure using the locking screw and wrench.

8. Connect the camera power/video cable back to the DVR and view the video feed.

9. Adjust your camera to the desired position.

10. Tighten the locking screw to complete mounting.

Fig. 3.1: Mounting diagram for included cameras

NOTE: *Dome cameras feature tri-axis adjustment and can be rotated and tilted in any direction to suit your installation needs. Simply loosen the locking screw to adjust your camera's position (Fig. 3.2).*
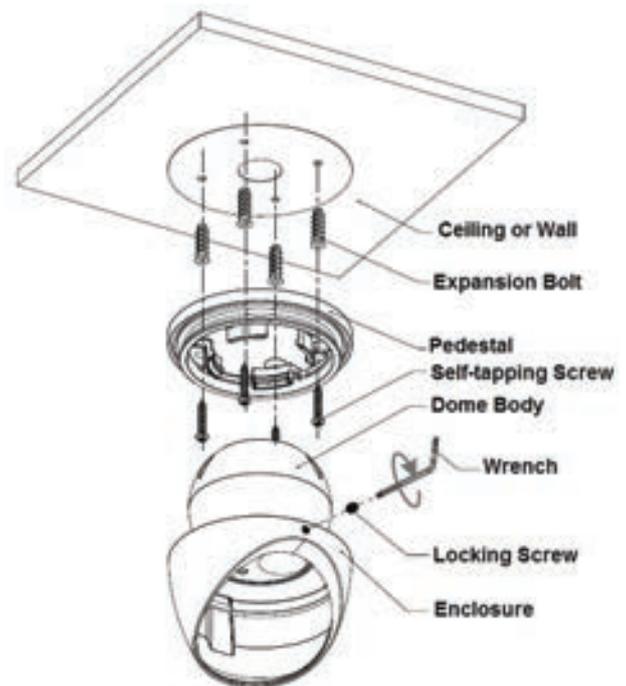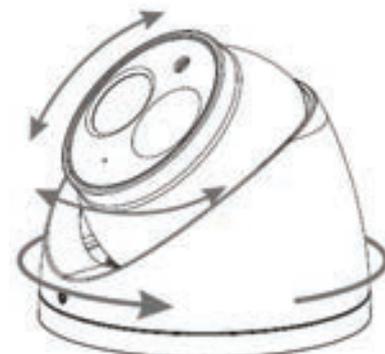
Fig. 3.2: Tri-axis dome camera adjustment

4. Footage Playback

4.1 Accessing Stored Footage

To access footage playback, select the **Search** button from the **Main Menu**. Stored footage can be accessed by searching by date and refined by footage type (Regular, Motion Detection, Alarm, etc). The below image details the playback interface with footage selected.

After locating desired footage, you can immediately backup the video by using the playback menu. See Section 5.1.1 for more information.

Camera Display

Smart Search

Playback Controls

Footage Timeline

Source Select

Date Select

View Select

Backup Controls

Timeline Zoom

Fig. 4.1: Four camera view simultaneous footage playback.

4.1.1 Playback Footage by Date

1. Ensure that the correct **HDD** is selected and that **REC** checked in **Source Select**.

2. Using the **Date Select** calendar, choose your date for footage playback. A coloured date icon indicates stored footage is available for that day.

3. Using the **View Select** tabs, choose how many cameras you wish to view. Using the drop down menu, choose which cameras you wish to view.

4. The **Footage Timeline** should populate with stored footage, indicated by coloured bars in the timeline. Click anywhere on the timeline to begin footage playback. Other cameras will automatically sync their playback to the selected camera.

5. For greater precision playback control, zoom in on areas using the **Timeline Zoom**, up to 30 minutes.

6. Using the **Playback Controls**, you can speed up or slow down playback, place marks on key footage times and take snapshots.

4.1.2 Playback Footage by Smart Search

NOTE: *Smart search requires motion detection to be recorded to function. You can only Smart Search playback footage one camera at a time. If Smart Search is not functioning, check Section 6 for troubleshooting.*

1. As detailed in the previous section, use **Date Select** to choose the desired date for footage playback, choosing a single camera only in **View Select**.

2. Click anywhere on the Footage Timeline to begin playback. Then select the **Smart Search** button (Fig. 4.1).

3. A grid will appear overlaid onto your camera playback. Highlight an area of interest on the grid. This will define the motion detection area that is used by Smart Search.

4. Select the **Smart Search** button again to begin playback of all motion detected events in the area you selected.

By configuring your recording schedule for motion detection (Section 2.1.5) and by using Smart Search, you can quickly find the footage you require. For **Footage Backup**, proceed to Section 5.

5. Footage Backup & Viewing

5.1 Backup Footage to USB

Should you wish to preserve recorded footage before it is overwritten, you will need to perform a footage backup. Footage can be exported from your DVR in a **.DAV** or **.ASF** file. A .DAV file will require conversion for sharing, whereas an .ASF file is compatible with most video players on Windows or Mac PCs. Each file type is covered in Section 5.2.

There are two different ways to backup footage to USB: via the **Search** menu through searching playback footage; and by performing a direct backup via the **Backup** menu. Both are accessed via the **Main Menu**.

Fig. 5.1: Backup Controls in the Search Menu.

Fig. 5.2: Backup Menu in the process of exporting footage.

5.1.1 Backup Footage via Search Menu

Using the **Search Menu**, find start/end points of backup footage by using playback video as a reference.

1. As detailed in Section 4, locate the footage you wish to backup. Select the desired camera in single view mode.

2. Using the **Footage Timeline**, click the approximate desired time for your backup video start point. Selecting the **Clip Button** on the **Backup Controls** (Fig. 5.1) will set your start point.

3. Again, using the **Footage Timeline**, click the approximate desired time for your backup video end point. Select the **Clip Button** again to set your end point.

4. Select the **Save Button** to bring up the **Backup** menu.

5. This process can be repeated to add more clips from different channels.

6. Plug in your USB device, exiting any automated prompts, and select **Backup** to begin backup.

5.1.2 Backup Footage via Backup Menu

Using the **Backup Menu**, specify start/end dates & times across multiple cameras simultaneously. This is useful for large footage export, such as full days.

1. Select **Backup** from the **Main Menu**, or, insert your USB device and select **File Backup**.

2. Here, you can select the **Type** of footage to backup (default: All), the **Start Time** and **End Time** and what **Record Channels** to backup video from.

3. Selecting **Add** will populate the list with individual video clips ready for backup. Clips can be added or removed from the backup process using the check box.

4. Select **Backup** to begin backup.

NOTE: *Regular type footage (R) will be split into in one hour segments, unless Motion Detection type footage (M) was recorded.*

Storage capacity is also shown. Ensure you have the required USB device storage to accept the backup video.

5.2 Viewing Footage on a PC

The following details instructions for viewing footage on Windows or Mac personal computers. Video conversion may need to take place for viewing on other devices, eg: smartphones, tablets, etc.

Now you have backed up footage to a USB device in .DAV or .ASF format, you are ready to view on a personal computer.

- **.DAV footage** can be manipulated using the **Smart Player** program and then converted to .AVI for sharing
- **.ASF footage** can be directly viewed using most players, including Windows Media Player & VLC Media Player

Choose which section to proceed with based on what file type you backed up in Section 5.1.

Fig. 5.3: Adding .DAV footage (left) and exporting/converting video (right) using Smart Player for Windows

5.2.1 Viewing .DAV Video Files

1. The .DAV file format is readable only by your DVR or the **Smart Player** media player and cannot be played on mainstream media players without file type conversion.

2. Visit the **Support Section** of **www.judgecctv.com** to download and install **Smart Player** for Windows.

3. Open your footage in Smart Player and click the **Add Files** ⬛ button to add your .DAV footage to Smart Player.

4. Using the .DAV file, Smart Player adds functionality similar to your DVR in footage playback, such as synchronous playback of multiple channels.

5. Click the **Export File** button ⬛ to bring up the export tab and select your footage file. Here you can change the **Export Format**. We recommend the .AVI format.

6. You can also clip the **Start/End Times** of your footage. This is represented in Timeline.

7. Click **Begin Export** and select a file location to begin your footage conversion and export.

5.2.2 Viewing .ASF Video Files

The .ASF file format is a Microsoft file format and is compatible with Windows Media Player and other Windows players.

.ASF videos can also be played by **VLC Media Player**. This free open source player is available across many platforms, including:

- **Desktop:** Windows, Mac OS and Linux

- **Mobile:** Android and iOS

1. Access your USB device and open your backup .ASF footage video using one of the media players mentioned above.

2. .ASF files can also be viewed using Smart Player, but do not retain time/date data like .DAV files.

6. Troubleshooting

This concludes the Quick Start Guide covering the basic functionality of your Judge Surveillance system. Should you encounter any difficulties with your setting up and using your system, please first refer to the tables below or visit the Support section on the Judge Surveillance website at **www.judgecctv.com**.

Area	Menu Navigation	Guide Ref.
DVR Security Setup	Main Menu -> Setting | System -> Account	Section 2.1.1
Changing General Settings	Main Menu -> Setting | System -> General	Section 2.1.2
DVR Network Setup	Main Menu -> Setting | Network -> TCP/IP	Section 2.1.3
P2P & Remote View Setup	Main Menu -> Setting | Network -> P2P	Section 2.1.3
Configuring Cameras	Main Menu -> Setting | Camera -> Encode	Section 2.1.4
Changing Recording Schedule	Main Menu -> Setting | Storage -> Schedule	Section 2.1.5
Accessing Playback Footage	Main Menu -> Operate | Search	Section 4
Backing Up Footage	Main Menu -> Operate | Backup	Section 5

Problem	Troubleshooting	Guide Ref.
The DVR won't power on.	• Ensure that the power cable is firmly connected to the recorder and to the wall socket. • Confirm that there is power from the outlet.	Section 1.3
The DVR is not being displayed on the monitor.	• Ensure the display cable is firmly connected to the recorder & monitor. • Ensure you have selected the correct input on your monitor. • Test the recorder's display output with different monitor.	Section 1.3
Cameras aren't displaying live video.	• Ensure that you are not in playback mode, right mouse click to exit. • Ensure power is connected to cameras and that the BNC connectors are firmly connected to the DVR via the camera cable. • Swap with known working cables and cameras to test.	Section 1.3
The DVR is displaying No HDD.	• Check if the HDD is installed and properly connected.	Section 1.3
The DVR is not recording video.	• Check if the HDD is installed and properly connected. • Check that the recording method you have chosen to implement is in use.	Section 1.3
Motion is not being detected or recorded by the DVR or unable to Smart Search.	• By default motion detection is enabled, however, check by navigating to Main Menu -> Setting | Event -> Video Detect. The Enable check box should be checked for all relevant channels. • Ensure that a period has been selected in the Recording Schedule for motion detection recording and that the period is filled in yellow. • Check motion sensitivity and adjust motion detection area, see: Main Menu -> Setting | Event -> Video Detect: Region | Set.	Section 2.1.5
Cannot connect to DVR on smartphone or tablet.	• Ensure that the DVR & device are connected to the Internet and that the connection is strong enough to receive video (min. 3G speeds). • Ensure that the admin password is correct in the Easyviewer app. • Ensure the extra stream settings are set to recommended settings.	Section 2.1.3
The recorder will not detect a USB device for backup.	• Ensure that the USB drive is formatted to FAT32. • Try using another USB flash drive to test compatibility.	Section 5.1

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Version: JVS-Q317