

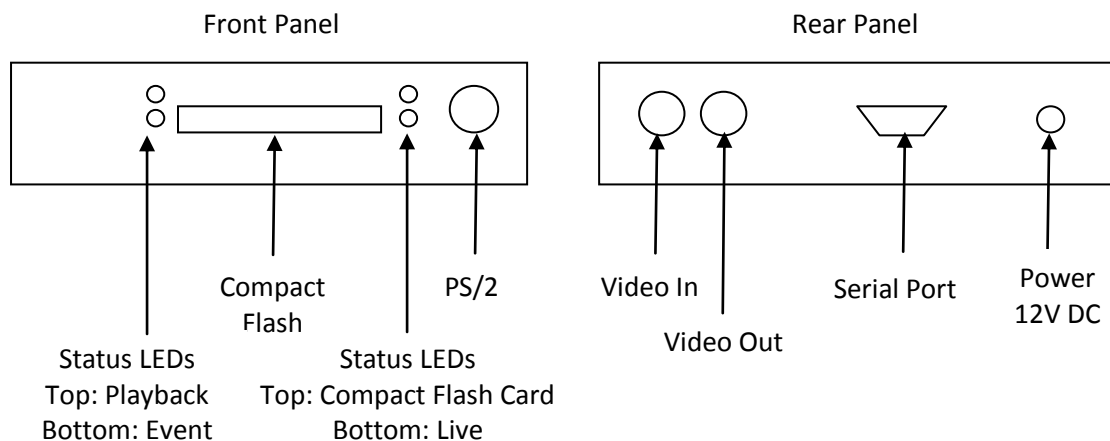
SPOTCHECK User Guide

Introduction

SPOTCHECK is a superb tool for any CCTV operator. It records all video from the Spot Monitor in real-time and at full-frame resolution on an endless loop basis. With simple keyboard control, the operator can mark events, pause live video, instantly switch to reverse playback directly from live, or jump to marked events for playback.

SPOTCHECK has no moving parts and no hard disk as it records directly to removable Compact Flash (CF) memory cards (up to 16GB).

Should an incident occur, the CF card can be instantly removed for safekeeping and replaced with a spare card. All recordings include playback software for Windows PCs. Recordings may be played back directly from SPOTCHECK to a VCR if required for Police investigations or court use.



Setting Up

Before you start using SPOTCHECK, you need to configure it to operate as required. You will need:

- PC
- Compact Flash Card Reader
- Compact Flash Cards
- SPOTCHECK module
- SPOTCHECK Power Supply

Setting the Time

Note: The time on SPOTCHECK will not automatically change with day light saving time.

1. Connect SPOTCHECK to the power source.
2. Connect SPOTCHECK to your PC using the RS232 serial port.
3. On your PC run HyperTerminal (Start->All Programs->Accessories->Communications->HyperTerminal).
4. Enter a name for the connection, e.g. 'SPOTCHECK'.
5. For the 'Connect using' option select the COM port being used, e.g. COM1.

6. Use the following for the Port Settings (Bits per second=115200, Data bits=8, Parity=None, Stop bits=1, Flow control=None).
7. Type 'date' and press enter to display the current time and date of the unit.
8. The command format for setting the date and time is 'date day month year hour minute second'. The month is specified as a number between 1 and 12, the year is specified without the leading '20' and the hour is specified in 24 hour format. As an example, to set the time and date to 2:15:34pm on 23rd April 2008 you would type 'date 23 4 8 14 15 34'.
9. Close the HyperTerminal window.

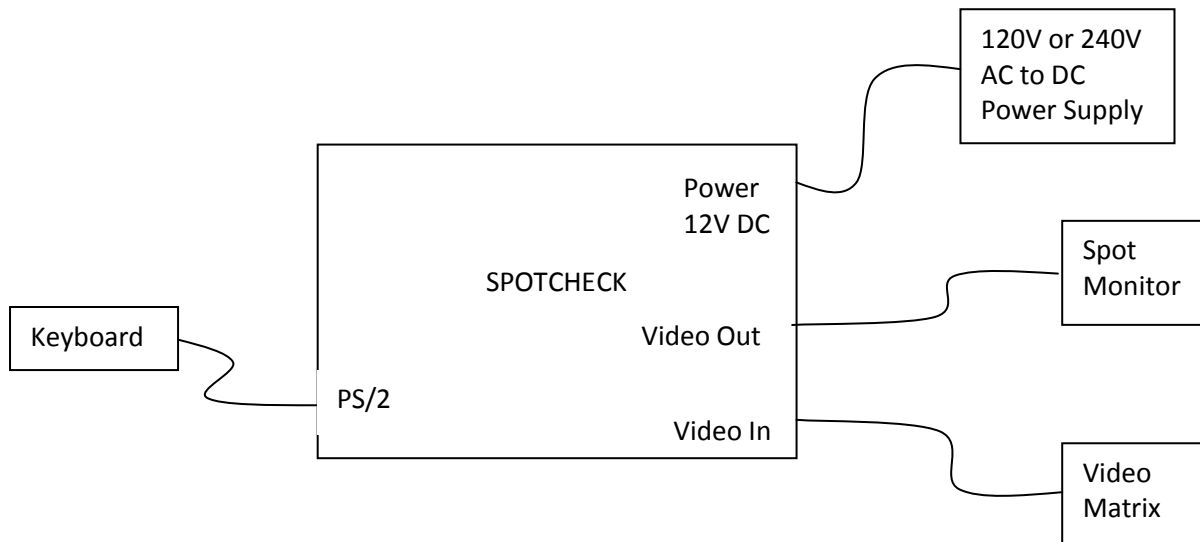
Formatting of compact flash card

Before you can start recording video images using SPOTCHECK, you will need to format the compact flash card. The formatting is an automatic process when the card is inserted.

1. Connect SPOTCHECK to the power source using the power supply provided
The CF Card LED will be on to indicate that there is no card present.
2. Insert the compact flash card into the card slot
The CF Card LED will flash indicating that the card is being formatted.
3. When the CF Card LED goes off, the card has been successfully formatted and is ready for use.

Installation

The SPOTCHECK unit should be installed in the CCTV control room at the operator's console. The output from the video matrix is routed through the SPOTCHECK to the spot monitor. Whatever is displayed on the spot monitor is recorded on the compact flash card.



Video Matrix

The output from the live video matrix for display on the Spot Monitor is connected to the Video In connection.

Spot Monitor

The Spot Monitor is connected to the Video Out connection.

Keyboard

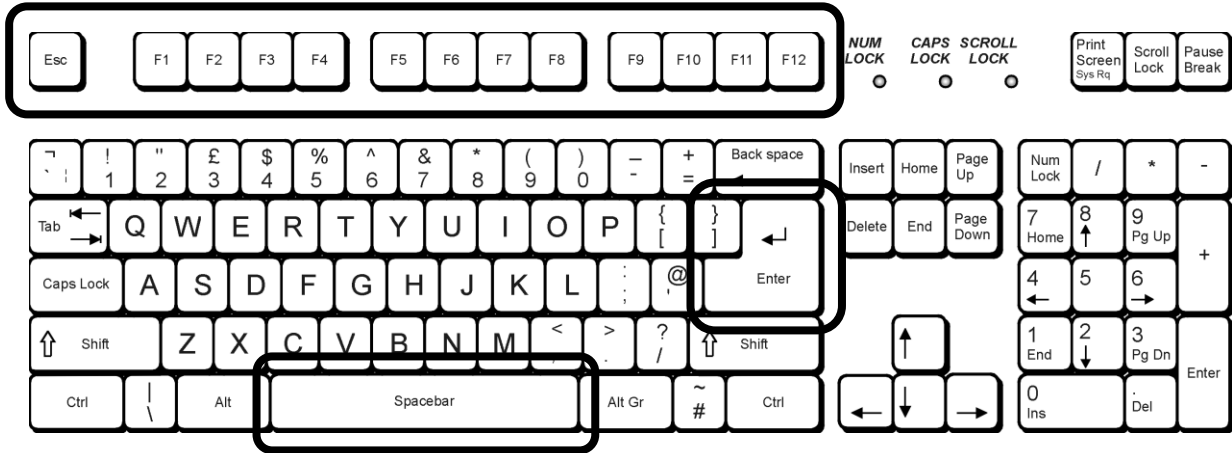
SPOTCHECK uses a custom keyboard for its operation that is connected via the PS/2 connector.

Power Supply

SPOTCHECK is connected to the AC to DC power supply provided and connected to the building power source.

Operation

SPOT CHECK uses the function keys of a standard keyboard to review recorded video and mark events of interest.



Key Usages

Key	Legend	Explanation
Esc	LIVE	Switches the display back to live video and normal recording mode. The Live LED will be on.
F1	PREV MARK	Jumps the playback point backwards to the previous marked point. The Event LED will also be switched on when playing back marked frames.
F2	<<JUMP (5 min)	Jumps the playback point to 5 minutes backwards from the current point. Holding the button down will jump back in 5 minute intervals.
F3	<<JUMP (1 min)	Jumps the playback point to 1 minute backwards from the current point. Holding the button down will jump back in 1 minute intervals.
F4	< PLAY	Plays backwards from the current point. Pressing the button subsequently will increase the speed by x2 to a maximum of x8 and then back normal speed. The Playback LED will switch on. The Event LED will also be switched on when playing back marked frames.
F5	< STEP	When the display is paused, the display will step backwards one frame. Holding the button down will step backwards frame by frame.
F6	PAUSE	Pause the display either in live video or playback modes.
F7	LIVE	Switches the display back to live video and normal recording mode. The Live LED will be on.

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F8	STEP >	When the display is paused, the display will step forwards one frame. Holding the button down will step forwards frame by frame. The Playback LED will flash.
F9	PLAY >	Plays forwards from the current point. Pressing the button subsequently will increase the speed by x2 to a maximum of x8 and then back to normal speed. The Playback LED will switch on. The Event LED will also be switched on when playing back marked frames.
F10	JUMP >> (1 min)	Jumps the playback point to 1 minute forward from the current point. Holding the button down will jump forward in 1 minute intervals.
F11	JUMP >> (5 min)	Jumps the playback point to 5 minute forward from the current point. Holding the button down will jump forward in minute intervals.
F12	NEXT MARK	Jumps the playback point forwards to the next marked point. The Event LED will also be switched on when playing back marked frames.
RETURN	INSTANT PLAYBACK	Provides reverse playback at normal speed from the current point either in live video or playback modes.
SPACE	MARK EVENT	Marks the live video recording for locating in the future. The Event LED will flash to indicate a successful mark.

LED Status Indicators

The LEDs on the front panel are used to indicate the status of the SPOTCHECK.

LED	Colour	On	Flashing	Off
Event	Red	Playing event frames	Marking event frames	-
Playback	Yellow	Playing back	Paused	-
CF Card	Red	No CF card	Formatting CF card	-
Live	Green	Live and recording	-	No video

Recording Live Video

Once installed, SPOTCHECK will record the video feed displayed on the spot monitor.

1. Select the camera for feed to view on the spot monitor
2. Live video feed is automatically recorded onto compact flash when the Live LED is on.

Replacing CF cards

Once a CF card is full, it can be replaced once the card is full.

1. Remove the card from SPOTCHECK.
The CF Card LED will be on to indicate that there is no card present.
2. Insert the compact flash card into the card slot
The CF Card LED will flash indicating that the card is being formatted.
3. When the CF Card LED goes off, the card has been successfully formatted and recording of the live video will restart automatically once the formatting is complete.

Playing Back Recorded Video

Once an incident of interest has been spotted, it can be viewed while the recording continues.

Note: The live video will not be recorded during playback of a recorded video sequence.

1. During live video, press INSTANT PLAYBACK to start replay the video backwards.
2. Press PAUSE to pause playback and display a still picture
3. To move the still picture one frame backward or forward, press <STEP or STEP> keys repeatedly.
4. To start a playback, press the <PLAY or PLAY> to play forward or backward.
5. To increase the speed of the playback, press the <PLAY or PLAY> repeatedly.
6. To move forward or backwards in increments of 1 or 5 minutes, press one of the JUMP keys.
7. To return the display to the live video, press the LIVE key.

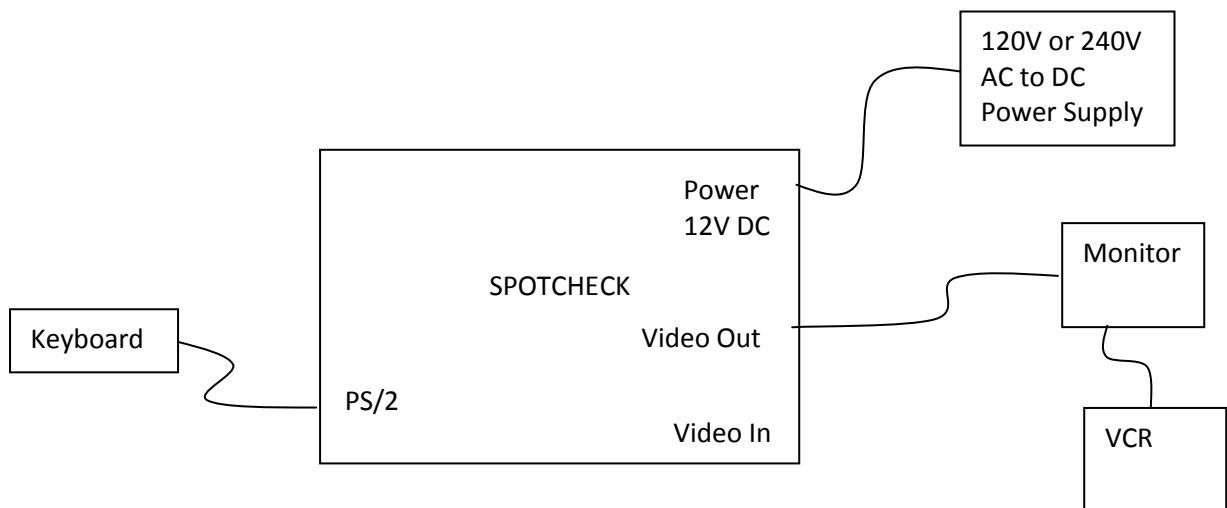
Marking an Event

Once an incident of interest has been located, it can be marked for ease of location.

1. During live video, press MARK EVENT to mark the start of a video sequence on interest.
2. Use the playback features to locate the start of a video sequence of interest.
3. Press MARK EVENT to mark the start of the sequence
4. To move between marked events, press the PREV MARK or NEXT MARK keys to move forwards or backwards to events.
5. To return the display to the live video, press the LIVE key.

Transferring Recorded Video to VCR

The recorded video on the Compact Flash Card can be copied onto a VCR if required for Police investigations or court use.



1. Disconnect the SPOTCHECK from the video matrix and the Spot Monitor.
2. Connect a monitor to the Video Out connector.
3. Connect the VCR to the output of the monitor.
4. Use the keyboard functions to select the event to transfer to the VCR. The event will be displayed on the monitor.
5. Press record on the VCR.
6. Press PLAY to copy the recorded video on the Compact Flash Card to the VCR.

Playback Using SPOTCHECK PC Viewer

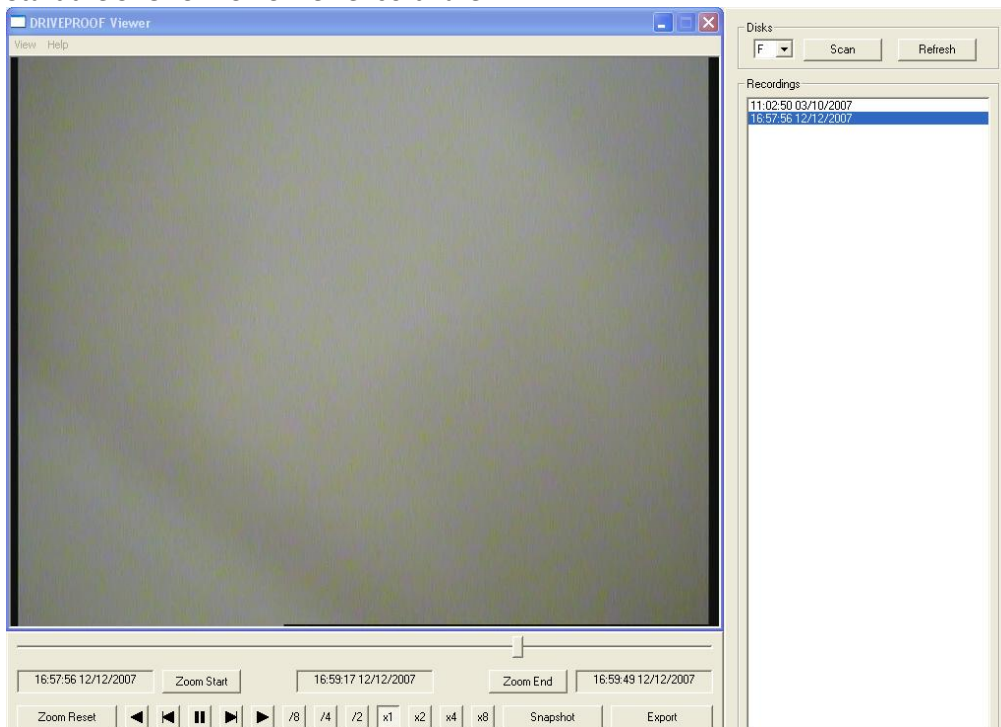
To view the video recorded, you will need to have a PC with the SPOTCHECK playback software installed and a suitable Compact Flash Card Reader connected to the PC.

Installing the SPOTCHECK Playback Software

1. Insert the CD provided with SPOTCHECK into the PC CD drive.
2. Follow the on screen instructions to install the Playback software.
3. When you have completed the installation, an icon will appear on your desktop.






Playing Back Video Recordings

1. Connect your Compact Flash Card Reader to the PC following the manufacturer's instructions.
2. Insert the Compact Flash Card into the PC card reader
3. Start the SPOTCHECK PC Viewer software










4. Select the Refresh button to detect the card reader
5. Select the dropdown arrow to select the drive letter for the card reader. The list of recordings on the card will be displayed.
6. Select the Scan button to display a list of the recordings on the card
7. Select the recording to be viewed. The still image from the first frame will appear in the video window.


8. You can now use the playback controls under the video window to view the recording

Control	Description
	Start playing in forward direction
	Step through recording frame by frame in forward direction
	Start playing in reverse direction
	Step through recording frame by frame in reverse direction
	Pause the playback
/n	Decrease playing speed by 2, 4 or 8
xn	Increase playing speed by 2, 4 or 8
x1	Normal playing speed
Zoom Start	Selecting the start time of the recording to view in detail. The left hand side of the slider moves to the start time selected.
Zoom End	Selecting the end time of the recording to view in detail. The right hand side of the slider is set to the end time selected.
Zoom Reset	Resets the start and end times to the beginning and end of the full recording.
Snapshot	Selects the current image to be saved as a bitmap file.
Export	Export the current zoom range to an AVI file.

Pausing playback/ slow or fast motion play

6. During playback, select  to pause playback and display a still picture
7. To move the still picture one frame backward or forward, select  or  keys repeatedly.
8. To start a slow motion playback, select the speed /8, /4, /2 and then select  or  to play forward or backward.
9. To start a fast motion playback, select the speed x8, x4, x2 and then select  or  to play forward or backward.

Selecting a section to store

1. During playback, pause the playback.
2. To set the start point, select the *Zoom Start* button. The start time will appear in the box to the left of the *Zoom Start* button.
3. To set the end point, during playback, select the *Zoom End* button to stop the playback. The end time will appear in the box to the right of the *Zoom End* button.
4. To playback the selection, drag the slider back to the left hand side and select  to play the selection forwards.

Saving to disk

The video CODEC used for exporting the video recording must support compression and decompression. Most of the CODECs installed with Windows only support decompression. Only the CODECs that support compression will be listed in the Viewer. If there are none listed, you will need to install a CODEC that supports compression. For example, Xvid (<http://www.xvid.org>) is free to download and is compatible with the Viewer.

1. Use the *Zoom Start* and *Zoom End* controls to mark the selection to be saved.
2. Select the *Export* button
3. Choose the video compressor and the compression quality

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Technical Specifications

Video Input	Composite video 1Vpp, BNC connection
Video Output	Composite video 1Vpp, BNC connection for Live/Playback
Resolution	NTSC : 720 x 480 PAL: 720 x 576 (4CIF)
Record Rate	NTSC : adjustable 0.1 to 30 fps PAL: adjustable 0.1 to 25 fps
Image Compression	JPEG 2000 Minimum frame file size : 2KB Maximum frame file size : 32KB
Archiving /Data Transport	High speed Compact Flash Card (at least 40x)
Recording Media	1GB, 2GB, 4GB, 8GB or 16GB Compact Flash card
Recording	Continuous with event marking (via keyboard)
Keyboard Port	Standard PS/2
Playback Control	Play, pause, fast-forward, fast rewind, jump 1 minute, jump 5 minutes, jump to next/previous event, all via a standard PS2 keyboard
Communication Port	RS232 Serial Link connects to PC for configuration, if required
Power	External Power Supply 12 to 24V DC power supply
Power consumption	7W
Cooling	Fanless System
Dimensions	W : 110mm x D : 170mm x H : 33mm
Environmental	Operating : 5 deg F to 125 deg F (-15 deg C to 50 deg C)
Approvals	CE, FCC, RoHS