

ZC-DVR-01 DVR User manual



Introduction

In order to hide a covert camera easily, it must be free from any give-away signs such as cables or wires. It must also transmit its signal on a wireless channel and be completely battery powered.

Most hidden covert cameras will only last for a few hours on their battery which makes it difficult, if not impossible, to use them for any serious long term surveillance.

The ZedCam™ WireFree system allows you to hide your camera hours, days, weeks or even months in advance with no give away cables or transmissions and still have a perfectly good battery when you need it.

ZedCam offers a selection of remote control triggers to enable your hidden surveillance camera remotely.

This user manual describes the function and operation of our unique battery-powered DVR.

In summary, the modes of operation are:

- **DVR and Camera off (or Standby)**, where the DVR and camera are switched off and it takes less than two seconds for both to be switched on using the remote, a PIR, a door/window switch or a pressure mat. The batteries will last several months in this mode
- **DVR and Camera on**, where the video and audio are being recorded wirelessly. Battery life in this mode is much shorter and so the DVR and camera should be switched off manually or automatically after a preset period of time.

PLEASE SEE THE QUICK START GUIDE ALSO

CAUTION:

- Risk of electric shock – do not open any ZedCam equipment or related product. **Do not use a main adaptor other than the supplied device.**
- Always refer servicing or maintenance to a qualified Engineer.
- Always read all instructions carefully before using the equipment.

Disclaimer

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SPECIFICATION

Switched on by a ZedCam™ trigger signal and starts recording immediately. The recording stops when the camera switches off – after a period of time (from 30 seconds to tens of minutes) or when the person being observed has moved out of range. This has several significant advantages:

- The battery life of the recorder is almost two hours (which may be split into say 200+ video clips of 30 seconds) and so does not need powering from the mains supply – it can be hidden in a drawer, cupboard or in the loft/attic/garden etc and no wires show. When plugged into the mains, the recording capacity is up to 36 hours.
- The video/audio that is recorded is all relevant – you do not need to trawl through many hours of irrelevant playback. The video is time stamped for use as evidence.

- Radio wave scanners will not detect the system whilst the video is not being recorded

The features of the recorder are:

- Integrated 2.4GHz wireless video/audio receiver with a choice of 6.0MHz and 6.5MHz audio to cater for the full range of wireless cameras on the market
- Choice of all four camera channels in the 2.4GHz ISM band
- WireFree™ receiver triggers for recorder on and recorder off. Up to four recorders can operate in the same location.
- Recording can only be stopped using a ZedCam™ trigger device
- Audio and Composite Video OUT to connect to a TV or VCR/DVD recorder
- 352 by 288 pixel recording format at up to 25 frames/second
- Infra-red remote control to setup the DVR and control playback, move between recorded scenes, play forwards/backwards at various speeds
- LED to indicate unit is active, audible warning to show recording has started (may be disabled, for covert operation)
- Slot for a 4GB SD card recording up to circa 7 hours of video/audio at 25 frames/second or circa 36 hours at 5 frames/second or 800+ 30 second video clips
- Temperature range: 0C to 50C operational, storage: -20 to +70C. Built-in real time clock and password protection
- PC software to play/search video/audio from the SD card and to translate to .AVI format files
- Memory overwrite option, so oldest recordings are discarded so memory space never filled
- Size: 158mm by 95mm by 35mm, with battery compartment – user changeable. DC power input from mains adapter for total recording time of more than 7 hours

USAGE

The DVR has the following connections and indicators:

- Power – the DVR has an alkaline manganese PP3 battery, which can be changed by the user. A mains adaptor is also supplied for situations where more than one hour of recording is required
- SMA external antenna socket – to receive the wireless camera video/audio signal
- Video output – phono connector in AV format
- Audio output – jack socket
- SD card slot
- Three position slider switch – see below
- LED indicator – see below
- Infra Red receiver – to allow control by the supplied remote

Slide switch

OFF – system not in use

MONITOR – system setup and playback via external video monitor

ARM/ACTIVE – ready to be triggered (and thus ready to record)

MONITOR

In this mode, the LED flashes GREEN every second. Using the handheld remote, the recorder can be setup and recordings can be played back via the AV sockets, on a TV or LCD TV/monitor.

ARM/ACTIVE

In this mode, the LED flashes RED every 8 seconds – this will be a bright flash if mains power is present, otherwise a dim flash if on battery power. Once the DVR has detected that a camera has been switched on, then it beeps (the user can select to disable this sound) and recording starts within two seconds. The recording continues until the camera is switched off, when the DVR closes the file on the SD card. Once there is video/audio stored on the SD card, then the LED will flash more frequently until the switch has been moved to OFF or MONITOR.

Each successive clip of video/audio is saved as a separate file.

There are 10 external switches to select various options:

- 1 – Audio channel is 6.0MHz (when DOWN)
- 2 – Audio channel is 6.5MHz (when DOWN)
- 3, 4 and 5 – Select camera video channel – see below
- 6 – sounder muted if switch is DOWN
- 7, 8 – select receiver channel (as per the camera controller)
- 9,10 – DVR timeout

Channel	Switch 3	Switch 4	Switch 5
ONE	DOWN	UP	UP
TWO	UP	DOWN	UP
THREE	UP	UP	DOWN
FOUR	UP	UP	UP

Timeout	Switch 9	Switch10
30 seconds	UP	UP
3 minutes	UP	DOWN
30 minutes	DOWN	UP
3 hours	DOWN	DOWN

NOTE THE FOLLOWING:

Always switch the unit to OFF for at least one second before removing the SD card. Removing the SD card during recording will cause the current video file to be lost and may cause corruption of the SD card.

Manual Recording

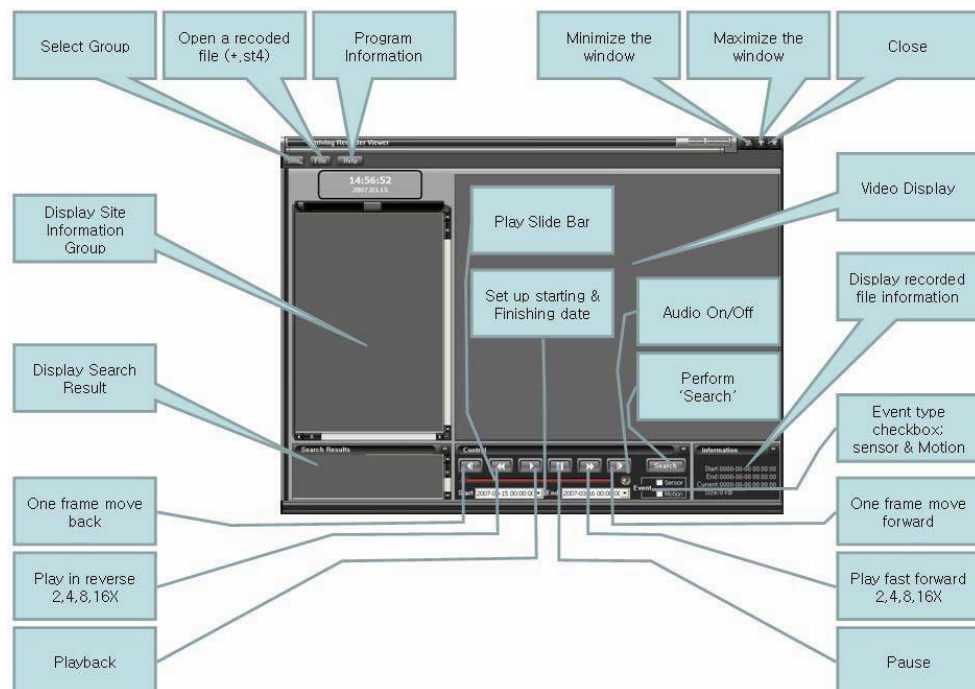
Switch the slide switch to ARM/ACTIVE

Press ON using a ZC-Remote-01 wireless remote control

Press REC using the infra red remote, which is pointed at the sensor (within 1 metre)

Software

Provided with each DVR is a USB memory stick containing the AKR software to organise and play the video file, which are encoded in SDR format. Also on the memory stick is a handbook. Note that the PC must be running Windows 2000/XP or Vista and that DirectX version 7.0 or later must be installed. The player screen will be similar to:



Once installed, there is a utility to convert from our proprietary .SDR file format to the standard .AVI format.

Remote control



- | | | |
|----|-----------|--|
| 1 | REC: | Start recording |
| 2 | MENU: | Display the on screen menu |
| 3 | UP/ DOWN: | Choose a menu field |
| 4 | | Play recorded video back/forwards (slow) |
| 5 | | Play recorded video backward (fast) |
| 6 | | Play recorded video forwards (fast) |
| 7 | PLAY: | Start video playback |
| 8 | STOP: | Stop playback or recording |
| 9 | PAUSE: | Pause video playback |
| 10 | MUTE: | Mute the audio |
| 11 | ENT: | Select or change a menu option or values in a menu field |
| 12 | SEARCH: | Find recorded files in the SD memory |
| 13 | MODE: | Switch between playback and recording mode |

Use of the remote control is documented on the supplied memory stick or CD.