

## SETTING UP

Before powering up for the first time, double-check all your wiring.

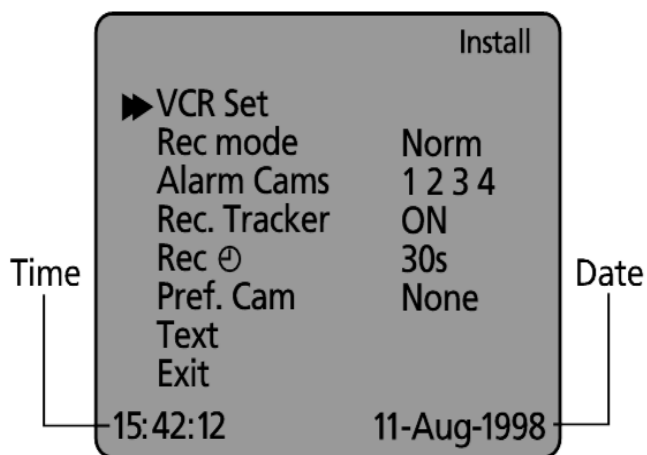
Switch on the power to your Spectrum system, select the VCR channel on your TV, then select the camera channel on your VCR. You should now be able to see and hear from each camera. (Note that it may take approximately 2 minutes for the units to stabilise after powering up).

### 1. INSTALL MENU

Press and hold the MENU button until the screen changes. You will now see the USER MENU. This menu is covered in detail on page 25.

Press and hold the MENU button again until the screen changes. You will now see the INSTALL MENU.

This menu allows you to set-up the system for your requirements. Once set, you should not need to use this menu screen again.



Use the MENU button to move the cursor to the desired line.  
Use the MANUAL button to change the settings on that line.

### 2. INSTALL MENU - VCR SET

The Spectrum controls your VCR using an infra-red link, the same as your remote control. However, different models of VCR use different infra-red commands. It is therefore necessary to set which model of VCR you will be using.

Ensure the infra-red emitter is correctly positioned pointing in the general direction of the VCR's remote control receiver window. (This should be affixed to the VCR using the adhesive pad supplied).

With the cursor next to VCR SET, press the MANUAL button once. You will hear two bleeps and the LED indicator on the front panel will light RED.

Press and hold the CH UP button, the Spectrum will now transmit different codes to your VCR, indicated by the flashing RED light on the front panel. When the correct code for your VCR is found, the VCR will switch off. Release the CH button immediately.

To confirm the correct code is set, press the PWR button on the Spectrum front panel. The VCR will now switch on again.

If the VCR does not switch on again, it is possible the CH button was not released quickly enough and the Spectrum has advanced to the next code. In this case, switch back on the power to the VCR using the power button on the VCR. You can now go back through the codes using the CH DOWN button.

If you reach the end of the list of codes, the LED indicator on the front panel will stop flashing. Try repositioning the IR transmitter on the front panel of the VCR and then go back through the list of codes using the CH UP button.

When you have found the correct code and confirmed it is correct, press the MANUAL button to save the code to memory. You will hear two bleeps and the red LED indicator will go off.

NOTE : If no buttons are pressed for 30 seconds, the Spectrum will automatically leave the VCR SET mode and will not save any changes to the codes.

If after setting the code you find that the PIR sensor will not start the VCR recording, it is possible that there are more than one set of codes that will switch the VCR power on/off for your VCR, but only one of those codes will be correct for recording. In this instance, repeat the above steps and search for another code that will operate your VCR.

If no other options need changing, use the MENU button to move the cursor next to EXIT and then press the MANUAL button once.

### 3. COMPATIBLE VIDEO RECORDERS

Please note that this product may not be compatible with combined TV/Video recorders due to the differing codes used by the manufacturers.

This product is compatible with the following makes of VCR at the time of print. Voltek cannot be held responsible for manufacturers changing remote control codes, making the units remote control codes incompatible.

This product is compatible with the following makes of VCR :

	Alba	Amstrad	Anam	Baird	
Blaupunkt	Bush	Daewoo	Decca	Degraaf	Ferguson
Fidelity	Finlandia	Finlux	Fisher	Funai	GE
Goodmans	Granada	Grundig	Hinari	Hitachi	ITT
JVC	Kenwood	LG (Goldstar)	Logik	Luxor	Marantz
	Memorex	Mitsubishi	Multitech	National	NEC
Nokia	Orion	Osaki	Panasonic	Philips	Pioneer
Pye	Saba	Saisho	Salora	Samsung	Sansui
Sanyo	Schneider	Sentra	Sharp	Shintom	Sony
Tashiko	Tatung	Telefunken	Thomson	Thorn	Toshiba

If your VCR has an automatic power off (power saving) feature, please ensure that this feature is switched off.

### 10. CONNECTING THE CAMERAS AND POWER SUPPLY

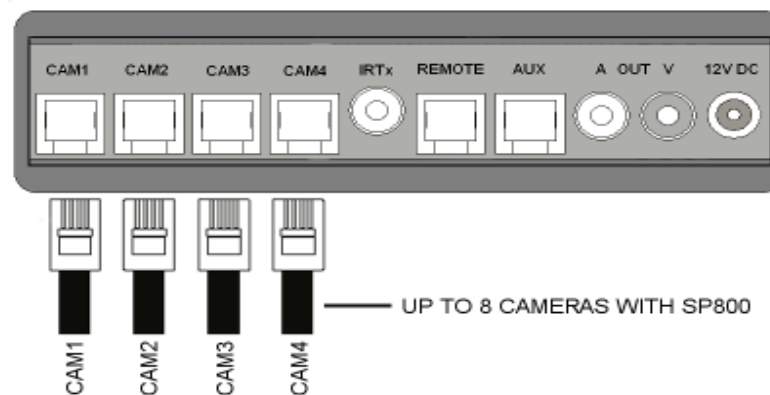
The cameras and power supply should be connected as shown below.

The 4-core cable supplied with each camera carries the video, audio, alarm signal and power for each camera.

If only one camera is fitted, input No.1 must be used. (indicated by CAM1)

The Spectrum control unit automatically detects the presence of cameras when power is applied and as additional cameras are connected. (It may take up to 1 minute for additional cameras to be recognised)

If you wish to remove any cameras, the power must be disconnected and then re-applied for the Spectrum unit to recognise the camera has been disconnected.

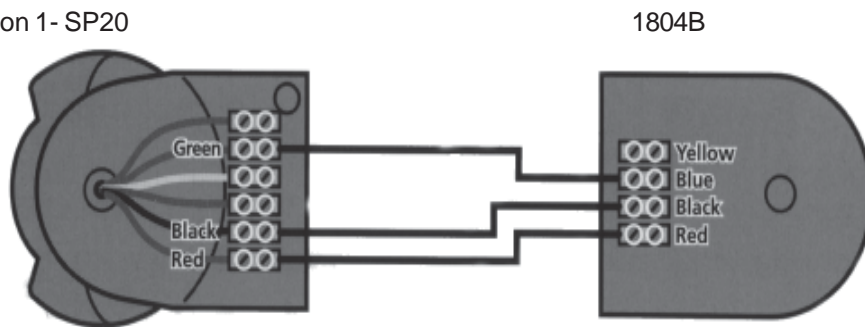


## 9. CONNECTING AN ADDITIONAL PIR SENSOR

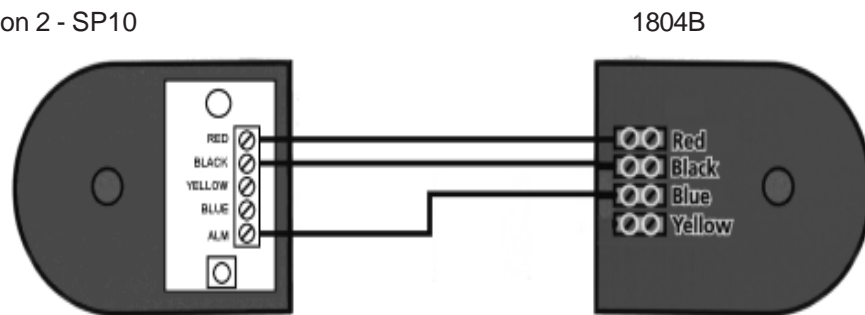
The EyeCam has a 10 metre (max) detection range over a 90 degree angle. If you wish to extend the detection area, the optional 1804 PIR Sensor, available from Voltek, can be connected as shown below.

The 1804B PIR Sensor has an 18 metre detection range with a 90 degree viewing angle. It is fully weatherproof and provides excellent detection sensitivity with comprehensive electronic filtering to remove any false alarms. Please consult the instructions supplied with the PIR sensor for further details.

Option 1 - SP20



Option 2 - SP10



## 4. INSTALL MENU - REC MODE

For most video recorders this should be left set to NORM.

Using the remote control for the VCR, if you have to press and hold the record button for a couple of seconds in order for the VCR to start recording, then this option should be changed to LONG

Using the remote control for your VCR, if you have to press the Record button followed by the Play button, change this setting to +PLY

3.1 Press the MENU button to move the cursor next to REC MODE

3.2 Press the MANUAL button to scroll through the options  
NORM to LONG to +PLY

3.3 If no other options need changing, use the MENU button to move the cursor next to EXIT and then press the MANUAL button once.

## 5. INSTALL MENU - ALARM CAMS

For most applications this should be set to show all the cameras on.

If you want to disable certain cameras from triggering the automatic record facility, they can be disabled by switching off the corresponding camera number.

Note that if a trigger is sent by a disabled camera, it will not start the video recording and will not activate the internal bleeper but it will automatically change the camera picture to the relevant camera picture.

4.1 Press the MENU button to move the cursor next to ALARM CAMS

4.2 Press the MANUAL button to select the enabled cameras.

4.3 If no other options need changing, use the MENU button to move the cursor next to EXIT and then press the MANUAL button once.

## **6. INSTALL MENU - REC TRACKER**

This facility allows you to automatically re-enable disabled cameras, but only after an enabled camera (set using ALARM CAMS) has been triggered.

For example, if cameras 1 & 2 are disabled, automatic recording will only begin when triggers are received from cameras 3 or 4. If REC TRACKER is switched on, the unit will then allow recording of cameras 1 and 2, but only after camera 3 or 4 has triggered the unit.

5.1 Press the MENU button to move the cursor next to REC TRACKER

5.2 Press the MANUAL button to select ON or OFF.

5.3 If no other options need changing, use the MENU button to move the cursor next to EXIT and then press the MANUAL button once.

## **7. INSTALL MENU - REC TIME**

This will set how long the VCR will record for after the last trigger. This timer is restarted each time a trigger is received from a camera.

6.1 Press the MENU button to move the cursor next to REC TIME

6.2 Press the MANUAL button to select either 30 seconds or 60 seconds.

6.3 If no other options need changing, use the MENU button to move the cursor next to EXIT and then press the MANUAL button once.

## **8. INSTALL MENU - PREF CAM**

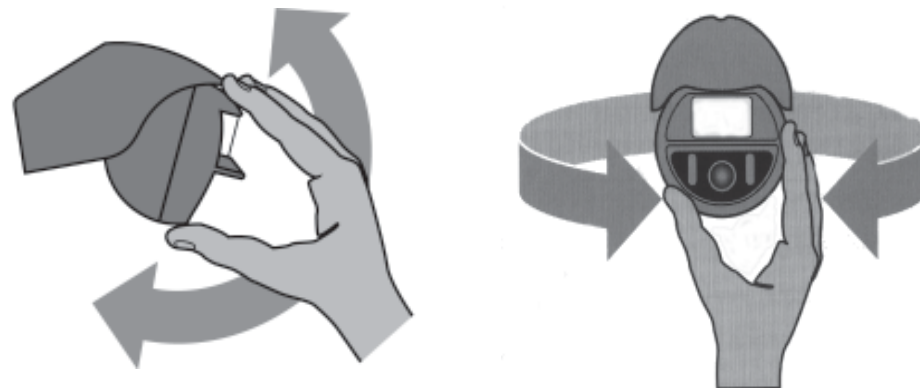
This option allows you to set a preferred camera. When the Spectrum unit is in the trig mode, the screen will change to the preferred camera 2 minutes after the last trigger.

7.1 Press the MENU button to move the cursor next to PREF CAM

7.2 Press the MANUAL button to select the desired camera number.

7.3 If no other options need changing, use the MENU button to move the cursor next to EXIT and then press the MANUAL button once.

The camera can now be adjusted to view your chosen area.

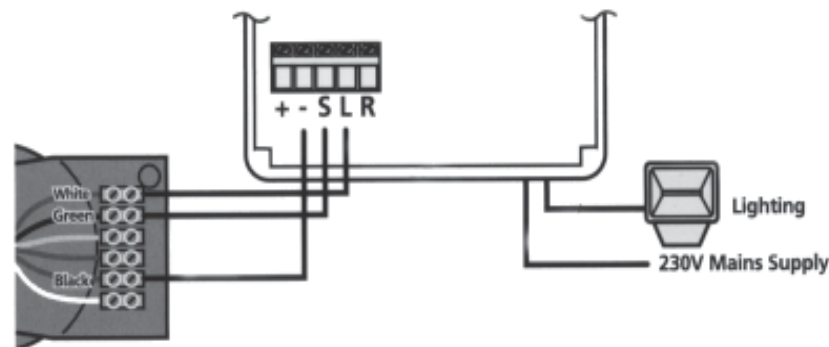


## **8. CONNECTING A LIGHTING CONTROLLER**

The EyeCams integral PIR sensor can be used to automatically switch on your outside lights, which will welcome visitors, warn off intruders and allow the cameras to record a clearer picture.

The optional 1803 lighting controller, available from Voltek, will switch up to 2.3KW (10A) of lighting, accepts multiple PIR inputs, has an adjustable lights-on timer and an adjustment for setting how dark it should be before your lights will start to work. (See the instructions provided with the lighting controller for further details)

Using a four core alarm cable, connect the EyeCam as shown below. Note that a second cable entry is provided on the EyeCam for ease of wiring. If you are not using a Spectrum EyeCam, please consult the instructions supplied with the camera for connection details.



## 7. CONNECTING AN SP20 OR SP21 SPECTRUM EYECAM

Consult page 5 to help decide the best location for the EyeCam. We then recommend that you temporarily connect the EyeCam to the Spectrum control unit so that you can view the camera picture to confirm the camera is in the best position for viewing visitors / intruders.

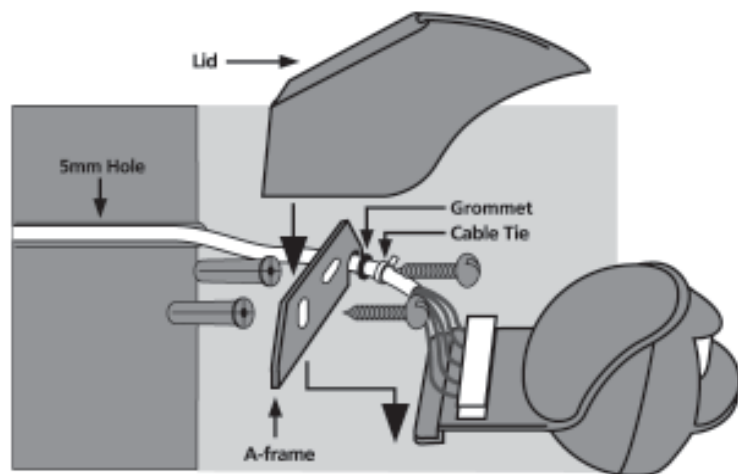
Unscrew the two lid retaining screws, remove the lid and remove the A-frame.

Screw the A-frame to the chosen surface using the screws and fixing plugs supplied.

Run the cable from the EyeCam location to the Spectrum control unit, keeping the cable away from other cables where possible, to reduce the risk of picture interference. The cable may be disconnected from the EyeCam and then reconnected later if this helps installing the cable.

Push the lid onto the A-Frame, ensuring the cable grommet is seated correctly, push the camera up into the lid and tighten the two retaining screws.

If you have drilled a cable hole into the building, the hole should be filled with sealant to prevent water from entering the building.



## 9. INSTALL MENU - TEXT

This option allows you to replace the factory default camera names of CAM1, CAM2 etc with your own 5 character names.

8.1 Press the MENU button to move the cursor next to TEXT

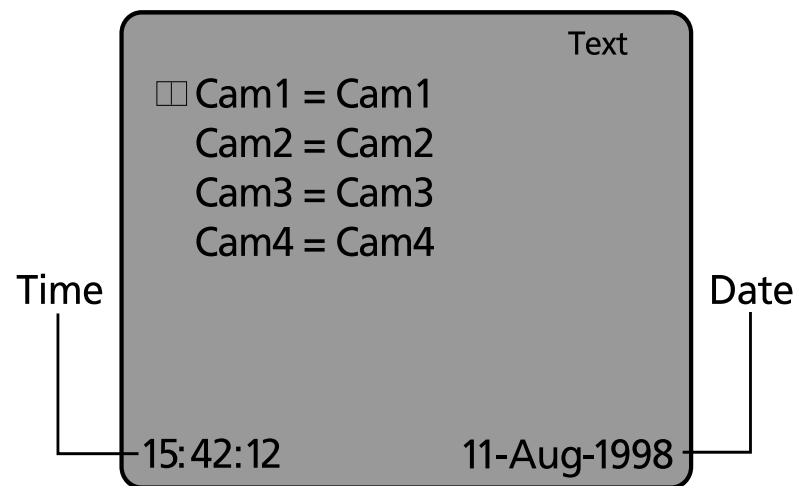
8.2 Press the MANUAL button to reveal the TEXT menu.

8.3 Press the MENU button to move the cursor next to the camera whose name you wish to change.

8.4 Press the MANUAL button to move the cursor to the first character of the word and then use the MANUAL button to select the desired character.

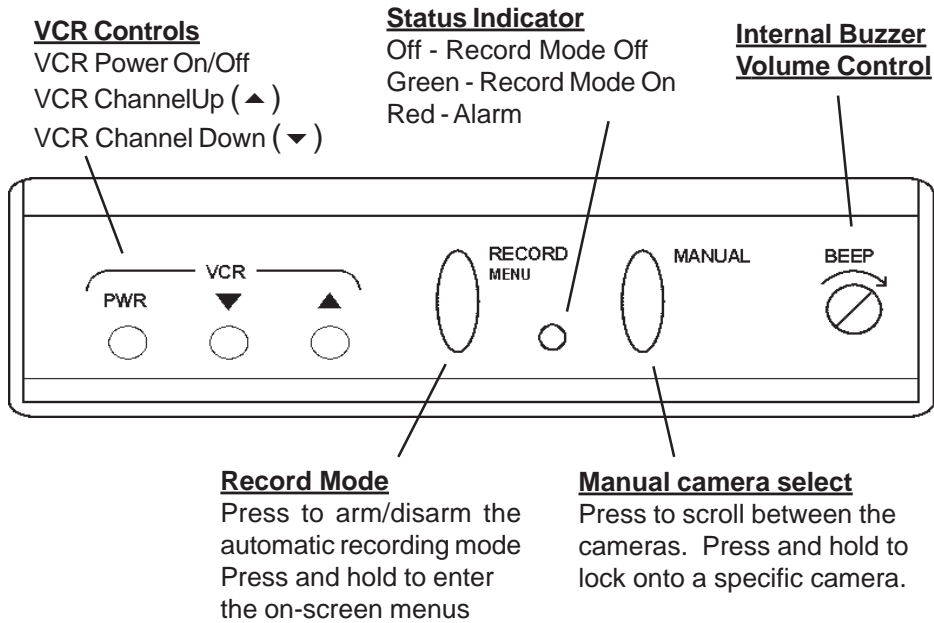
8.5 Press the MENU button to move to the next character.

8.6 If no other options need changing, use the MENU button to move the cursor next to EXIT and then press the MANUAL button once.



## USING THE SPECTRUM

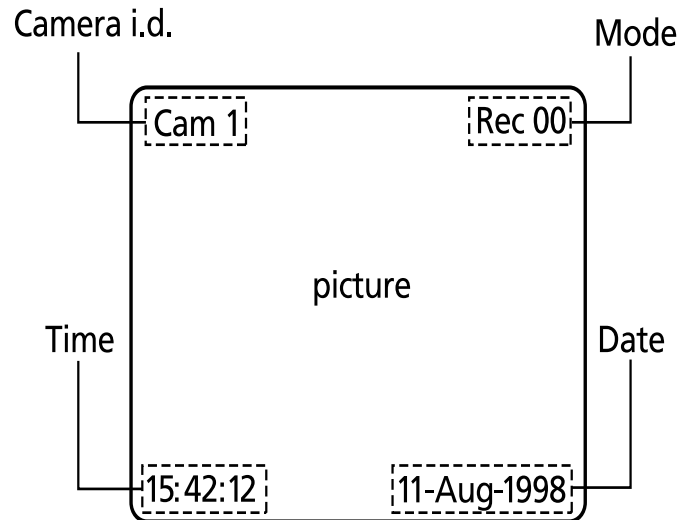
### 1. FRONT PANEL AND MAIN SCREEN DISPLAY



### 6. USING THE OPTIONAL SP5 ALARM OUTPUT MODULE

The optional alarm output module provides a normally closed and normally open relay contact which allows you to connect the Spectrum to peripheral equipment such as a pager, additional sounder, etc.

6.1 Connect the lead supplied with the alarm output module, between the AUX socket of the Spectrum control unit and either of the two sockets on the rear panel of the alarm output module.

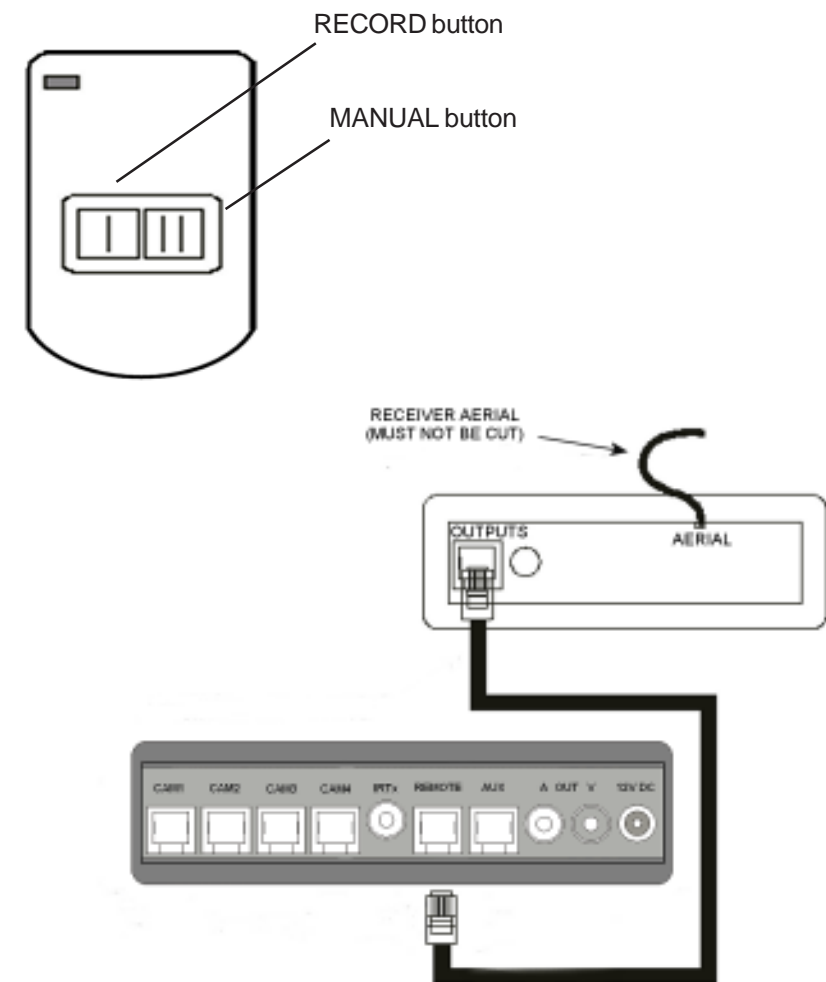


## 5. USING THE OPTIONAL SP1 REMOTE CONTROL

If you place the Spectrum and VCR in a hidden location or have the camera pictures available on several TV sets, this remote control will allow you to operate the unit wherever you are in the property.

5.1 Connect the unit as shown below.

5.2 Do not enclose the receiver in or near a metal container and do not shorten the aerial lead as this will affect the performance of the unit.



## 2. INTERNAL BUZZER & VOLUME CONTROL



Whenever a trigger is received from one of the cameras, the internal buzzer will beep to warn you that a visitor / intruder has been detected. The volume of the internal buzzer can be altered using the volume control on the front panel.

## 3. MANUAL CAMERA CONTROL

Press the MANUAL button on the front panel to manually select the camera you wish to view. The top right of the screen will show MAN. The screen will revert to the previous camera after 10 seconds.

To lock the screen on a camera picture, use the MANUAL button to select the camera you want to lock and then press and hold the MANUAL button until you hear a bleep. The camera is now locked on you will see a key symbol on the screen. To unlock the camera, press and hold the MANUAL button until you hear another bleep.

## 4. AUTOMATIC RECORDING

To arm the automatic recording mode, press the RECORD button once. The LED indicator will turn green and the top right of the screen will show REC 00. You should ensure that your VCR is switched on, a tape is inserted ready for recording and that the VCR is set to the camera channel.

To disarm the automatic recording mode press the RECORD button once. The green LED will switch off and the operating mode shown in the top right of the screen will change from REC to either CYCLE, TRIG+ or TRIG depending on your currently selected mode, set in the user menu.

When the automatic recording mode is armed, if a trigger is received from a camera, the Spectrum control unit will start the VCR recording via the infra-red link attached to the front panel of the VCR. The Spectrum will stop the VCR recording either 30 seconds or 60 seconds (dependant upon the setting in the install menu) after the last trigger has been received.

## 5. PANIC RECORD FEATURE

With the automatic recording mode on, if the manual button is pressed and held down to lock a camera, the VCR will start recording that camera.

## **6. EVENT MEMORY**

When the record mode is first switched on, the top right of the screen will show REC 00. Each time an event is recorded onto the tape, these numbers will increase. This allows you to see how many events (recordings) have taken place since the record mode was switched on.

## **7. VCR CONTROLS**

Three buttons are provided on the front panel allowing you to control the VCR. These will switch the power on and off and will increment or decrement the channel number.

## **8. IN THE EVENT OF A POWER LOSS**

The Spectrum control unit has an internal battery to retain the time, date and programmed settings in the event of a power loss.

When the power is re-applied the Spectrum control unit will wait four seconds and then send a power on signal to the VCR (this is because the VCR will power up in the off mode after a power loss)

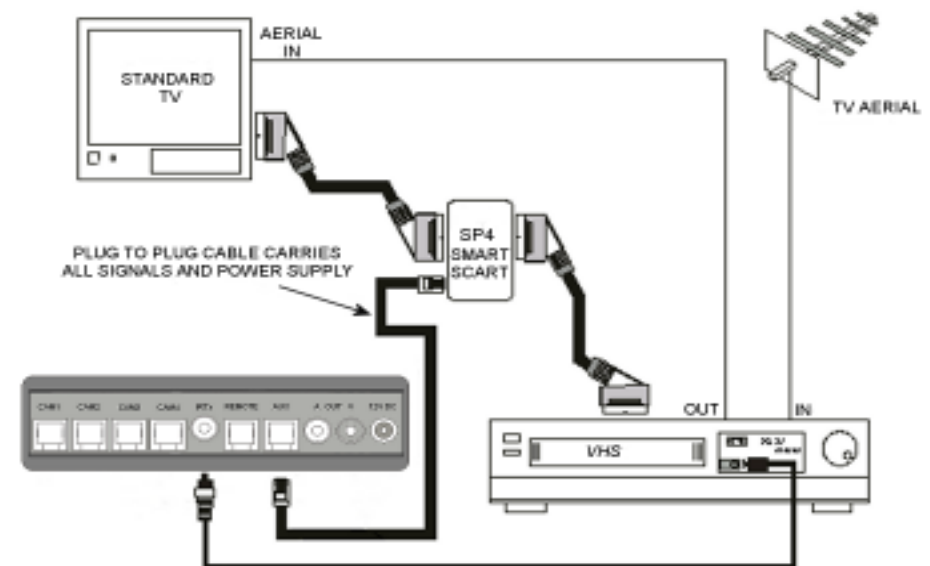
The Spectrum will power-up with the automatic recording mode on, therefore it will be ready to record any intruders / visitors.

## **4. CONNECTING USING THE OPTIONAL SP4 SCART INTERFACE**

If you already have a scart lead connected between your VCR and TV and do not have another spare socket, this device will allow you to still view and record the camera pictures, plus it will automatically put the camera pictures onto the TV screen when a PIR sensor detects an intruder / visitor.

4.1 Place the infra-red transmitter onto the front panel close to the infra-red receiver window. Consult your VCR instructions if you are unsure of the location.

4.2 Connect scart interface as shown below. Consult the instructions supplied with the interface for further details on setting up.

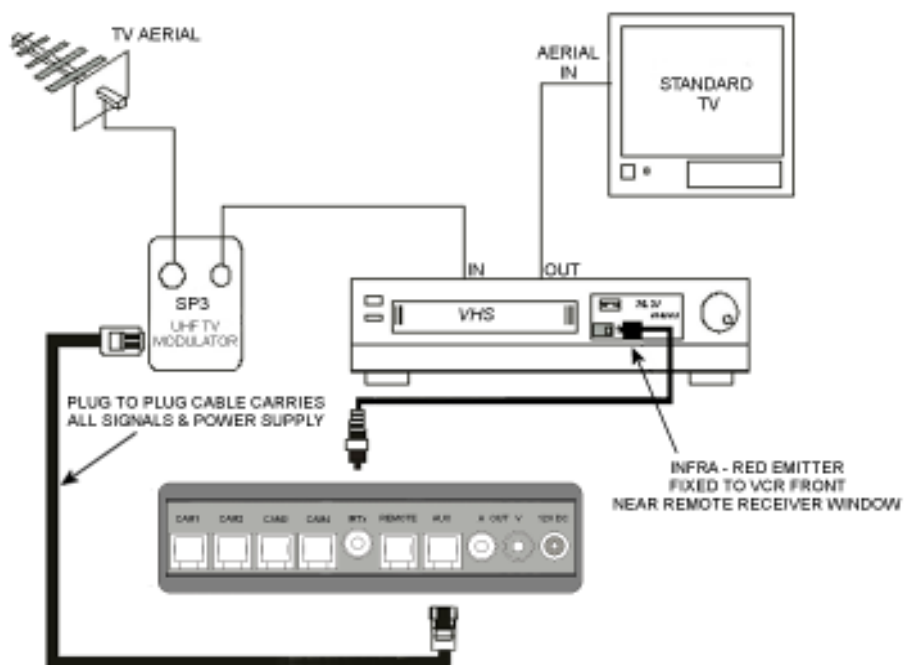


### 3. CONNECTING USING THE OPTIONAL SP3 TV MODULATOR

If you do not have a spare scart socket on your VCR, the SP3 TV Modulator allows you to connect the Spectrum to the aerial input of your VCR.

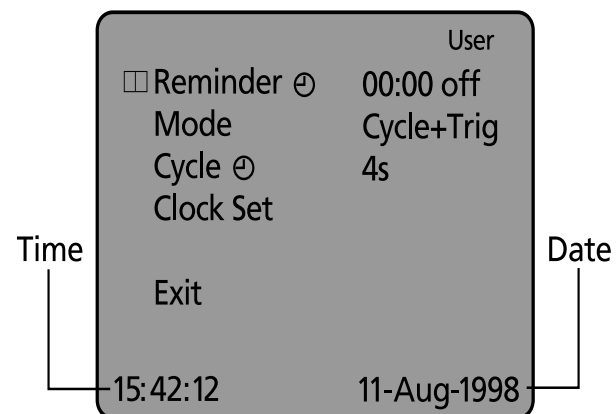
3.1 Place the infra-red transmitter onto the front panel close to the infra-red receiver window. Consult your VCR instructions if you are unsure of the location.

3.2 Connect and setup the TV Modulator following the instructions supplied with TV Modulator.



### 10. USER MENU

To access the User menu press and hold the MENU button until the screen changes.



### 11. USER MENU - REMINDER (ALARM CLOCK)

This feature can be used to remind the user of important events or appointments.

2.1 Press the MENU button to position the cursor next to REMINDER

2.2 Press the MANUAL button to move the cursor to the hours of the reminder time and press the MANUAL button to select the desired hour.

2.3 Press the MENU button to move the cursor to the minutes of the reminder time and then press the MANUAL button to select the desired minutes.

2.4 Press the MENU button to move the cursor to on/off of the reminder time and then press the MANUAL button to select ON or OFF

2.5 If no other options need changing, use the MENU button to move the cursor next to EXIT and then press the MANUAL button once.

When the reminder is switched on, a clock symbol will be displayed next to the time.

When the reminder time is reached the unit will bleep and REMINDER will flash on the screen to obtain your attention.

## 12. USER MENU - MODE

There are three modes to choose from. The chosen mode will also be shown in the top right of the normal screen, whenever the automatic record mode is off.

### **CYCLE+TRIG (top right of normal screen = TRIG+)**

This mode will cycle through the cameras one at a time. If a trigger is received from one of the cameras, the screen will switch to the relevant camera. If a trigger is received from more than one camera, the screen will cycle between the triggered cameras. The unit will return to the normal cycle mode 20 seconds after the last trigger is received.

### **TRIG (top right of normal screen = TRIG)**

Whenever a trigger is received from one of the cameras, the screen will switch to and stay with the relevant camera until a trigger is received from another camera. If a trigger is received from more than one camera, the screen will cycle between the triggered cameras.

### **CYCLE (top right of normal screen = CYCLE)**

This mode will cycle through the cameras one at a time. However the screen will not automatically switch to a triggered camera when a trigger is received.

#### To change the mode

- 3.1 Press the MENU button to position the cursor next to MODE
- 3.2 Press the MANUAL button to set the desired mode.
- 3.3 If no other options need changing, use the MENU button to move the cursor next to EXIT and then press the CHANGE button once.

## 13. USER MENU - CYCLE TIME

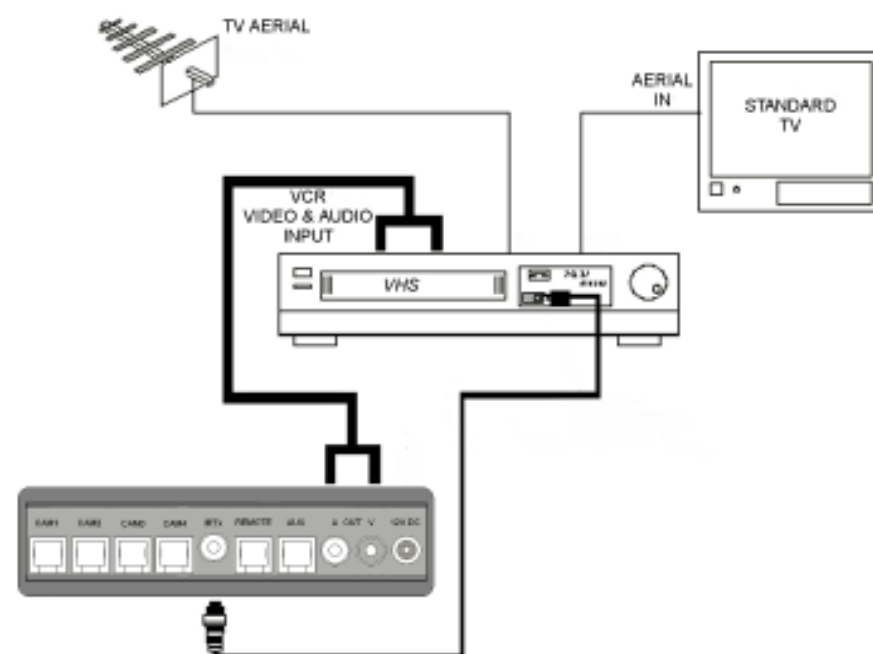
This option allows you to set how long the screen will hold on a camera before automatically cycling to the next camera (TRIG+CYCLE and CYCLE mode).

#### To change the cycle time

- 4.1 Press the MENU button to position the cursor next to CYCLE TIME
- 4.2 Press the MANUAL button to set the desired cycle time.
- 4.3 If no other options need changing, use the MENU button to move the cursor next to EXIT and then press the MANUAL button once.

## 2. CONNECTING TO A VCR WITH A TV

- 2.1 Place the infra-red transmitter onto the front panel close to the infra-red receiver window. Consult your VCR instructions if you are unsure of the location.
- 2.2 Connect the yellow (video) and white (audio) plugs on the phono to phono lead to the yellow and white sockets on the rear of the Spectrum control unit.
- 2.3 Connect the yellow and white plugs on the other end of the lead to the input sockets on the rear of your VCR. Use the phono to scart or phono to BNC adapter if necessary.
- 2.4 Connect the TV aerial to the VCR aerial input .
- 2.5 Connect the VCR aerial output to the aerial input of the TV. (May also be connected to an aerial distribution amplifier if you wish to view the VCR and camera pictures on other TV sets around the property).



## INSTALLATION

There are different methods of connecting the Spectrum to your VCR which depends upon the equipment you wish to use. See methods 1 to 4, below and on the next pages, and choose the one which is best for you.

If you are using the optional remote control or alarm output module, see section 5 and 6 for details on how to connect these.

The final stage of the installation is shown in section 7, connecting the cameras and power supply.

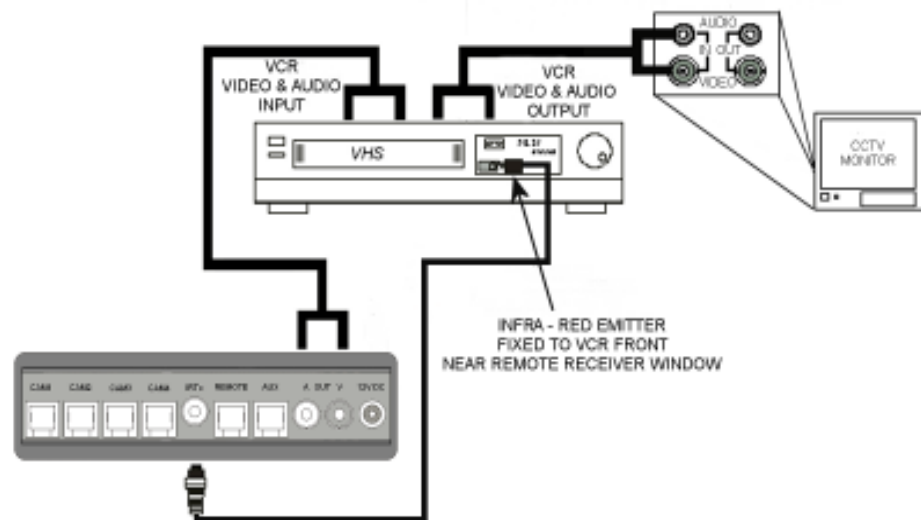
### 1. CONNECTING TO A VCR WITH A MONITOR

1.1 Place the infra-red transmitter onto the front panel close to the infra-red receiver window. Consult your VCR instructions if you are unsure of the location.

1.2 Using the dual phono to phono lead, connect the yellow (video) and white (audio) plugs to the yellow and white sockets on the rear of the Spectrum control unit.

1.3 Connect the Yellow and white plugs on the other end of the lead to the input sockets on the rear of your VCR. Use the phono to scart or phono to BNC adapter if necessary.

1.4 Connect a lead (not supplied) between the VCR output connectors and the Monitor Input connectors.



### 14. USER MENU - CLOCK SET

The date and time are set at the factory and should therefore not need changing. The clock will also automatically adjust between British Summer Time and Greenwich Mean Time (UK model only).

#### To change the date and time

5.1 Press the MENU button to position the cursor next to CLOCK SET

5.2 Press the MANUAL button and the cursor will move to the year.

5.3 Press the MANUAL button to set the desired value.

5.4 Press the MENU button to move the cursor through YEAR, MONTH, DAY, MINUTES and HOURS, pressing the MANUAL button to change the values where necessary.

5.5 If no other options need changing, use the MENU button to move the cursor next to EXIT and then press the MANUAL button once.

## TROUBLESHOOTING GUIDE

If you are having trouble operating this product, please consult the guide below. If you are unable to rectify the problem after consulting this guide, please contact the Voltek helpline on 08707 454 971.

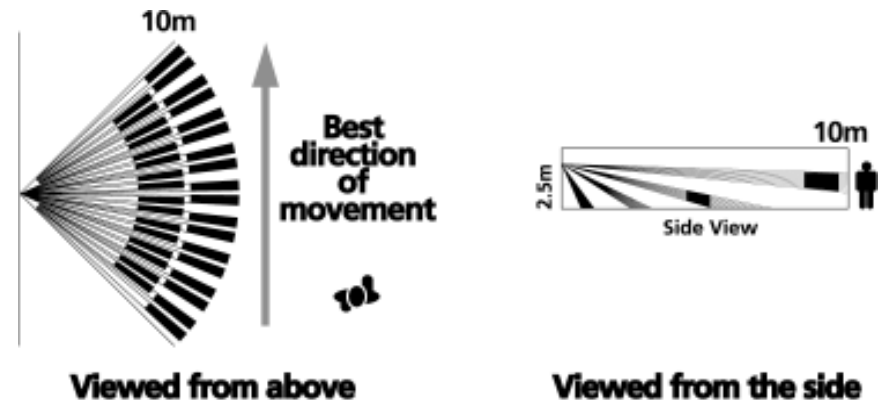
SYMPTOM	REMEDY
No camera picture	<ol style="list-style-type: none"> <li>1. Check the power is on to your Spectrum control unit, VCR and TV set.</li> <li>2. Check the TV is set to the VCR channel.</li> <li>3. Check the VCR is set to the camera channel.</li> </ol>
Not automatically recording onto a video tape when I walk in front of a camera	<ol style="list-style-type: none"> <li>1. Check the unit is set to record mode. (The top right of the screen should show REC)</li> <li>2. Check you have a tape in the VCR, that it is rewound and that the record tab has not been removed.</li> <li>3. Check that your VCR is functioning correctly by pressing the Record button on the VCR remote control.</li> <li>4. Press the PWR button on the Spectrum front panel to check that the VCR power does switch on/off - If not check the position of the IR transmitter lead and check that the VCR code has been set for your make of VCR.</li> <li>5. Check that the camera you are walking in front of does have a PIR sensor attached (the Spectrum unit will bleep when it detects you)</li> <li>6. Check that the camera has not been disabled in the ALARMCAMS option in the INSTALL menu.</li> </ol>
The VCR is switching off preventing recordings	<p>The automatic power save feature of your VCR needs to be switched off.</p> <p>The code may be incorrect.</p>
Unable to find a code for my VCR when using the VCR SET option in the INSTALL menu	<p>Reposition the Infra-red transmitter on the front panel of the VCR. (consult the VCR instructions to find the correct location)</p>

## 2. SP20 B&W EyeCam / SP21 Colour EyeCam

If you are using the SP20 B&W EyeCam or SP21 Colour EyeCam, follow these guidelines for choosing the best location.

- \* The EyeCam should be installed on any rigid, vibration-free vertical surface.
- \* The EyeCam is fully weatherproof and can be used either indoors or outside.
- \* Avoid pointing the camera directly at the sun as this may cause permanent damage to the camera.
- \* The camera will work in low light conditions, but ensure a light, such as a 150W tungsten halogen lamp, is fitted near the camera for good visibility at night-time.
- \* The unit should be mounted at approximately 3 metres high to obtain the best performance from the PIR sensor.
- \* Avoid locating the unit close to trees, bushes, creeping plants or heater outlets as these may cause the PIR sensor to produce a false alarm.
- \* Do not locate the unit to look through a glass window as this will stop the integral PIR sensor from working.
- \* The integral PIR sensor is most sensitive when a person moves across the face of the sensor rather than directly towards it. This is because the person crosses more detection beams. See the detection diagram below.

PIR detection pattern



## PACKAGE CONTENTS

Before proceeding with the installation, please check and familiarise yourself with the package contents.

### **SP400 / SP800**

- \* Four Way (SP400) or Eight Way (SP800) Spectrum Control Unit.
- \* Infra-red transmitter.
- \* Power supply.
- \* Dual phono to phono connecting lead.
- \* Phono to scart adapter.
- \* Phono to BNC adapter.

### **SP420 / SP421 / SP820 / SP821 also includes :**

- \* B&W EyeCam (SP420 / SP820) or Colour EyeCam (SP421 / SP821).
- \* Fixing kit containing 20 cable clips, 2 screws, 2 fixing plugs.

## CHOOSING THE BEST LOCATION

### **1. SPECTRUM CONTROL UNIT**

The control unit needs to be located next to the VCR that you wish to automatically record onto. This could typically be in the living room, next to the VCR that you use for every day use, or perhaps in an upstairs cupboard hidden away from any possible intruder.

Remember that if you are unfortunate enough to have a break-in, the TV / VCR would usually be taken, so therefore we do recommend, where ever possible, you should site the camera system video recorder in a hidden location so that you have video evidence of the intruders.

Bear in mind that the location of the Spectrum control unit should allow for a lead to be connected to it from each of the cameras and should also allow for a lead to be connected between the video recorder and the TV / monitor that you wish to view the camera picture on. Each Spectrum Camera is supplied with a 20 metre lead which is extendable up to 100 metres, using 4 core screened alarm cable

## HELPLINE & ORDERING ACCESSORIES

Please telephone 08707 454 971 should you have any questions regarding this product or if you would like to order any spares or accessories.

### Additional cameras

- |                                |  |
|--------------------------------|--|
| SP10 Spectrum B&W Guardsman    | - camera and microphone                  |
| SP11 Spectrum Colour Guardsman |  |
| SP20 Spectrum B&W EyeCam       | - camera, microphone and PIR sensor      |
| SP21 Spectrum Colour EyeCam    |  |
| SP30 Spectrum B&W Chameleon    | - indoor PIR with covert camera and mic. |
| SP31 Spectrum Colour Chameleon |  |

### Accessories

- |  |  |
|--|--|
| SP1 Remote Control                     |  |
| SP2 Additional transmitter for the SP1 |  |
| SP3 TV Modulator                       |  |
| SP4 Scart Interface                    |  |
| SP5 Alarm Output Module                |  |
| SP6 Upgrade Kit                        |  |

## MANUFACTURERS WARRANTY

This product has a two year manufacturers parts and labour warranty. In the unlikely event that you encounter a problem with this product, please telephone the Voltek helpline on 08707 454 971. Should the problem not be able to be resolved over the telephone it should be returned to the place of purchase or direct to Voltek.

## SPECIFICATION

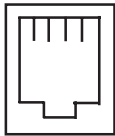
### POWER SUPPLY

Input	230V 50/60 Hz
Output	12V dc 1.25A regulated (SP400)
	12V dc 2.5A regulated (SP800)

### SPECTRUM CONTROL UNIT

Operating voltage	12V dc
Current consumption	100mA (excluding cameras)
Camera video input	1V pk-pk 75Ω CCIR / PAL
Camera audio input	2V pk-pk 47KΩ
PIR input	mixed onto audio signal inside the camera unit.
Video out	1V pk-pk 75Ω CCIR / PAL
Audio out	2V pk-pk 47KΩ
Operating temperature	5°C to +40°C
Weatherproofing	IP 30 (Indoor use only)
Dimensions	130 x 35 x 160 mm
	1 2 3 4

Camera input and  
Aux out sockets

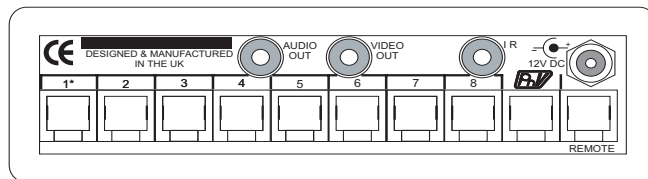


- 4 Audio & PIR Trigger
- 3 +12V dc
- 2 0V
- 1 Video

Rear panel (SP400)



Rear panel (SP800)



Master Reset

Press and hold the MANUAL button while applying power to the Spectrum control unit

## SAFETY FIRST

Please read these instructions before attempting to operate the product.

**WARNING :** To prevent fire or shock hazard, do not expose the power supply or camera switcher to rain or moisture.

**CAUTION : RISK OF ELECTRIC SHOCK :** Do not remove the cover from the power supply. There are no user servicable parts inside. Refer servicing to qualified service personnel.

## FEATURES

The Spectrum is a complete Multi-Camera command centre offering all the functions that may be required by the domestic or commercial user.

### SP400 / SP800 Spectrum Control Unit

- \* 4 Camera input (SP400) or 8 camera input (SP800).
- \* Automatically records intruders / visitors onto tape using your own VCR.
- \* Easy Connection to any VCR / TV / monitor with scart, phono or BNC inputs.
- \* On-screen camera display shows time, date and status at all times.
- \* Cycle, trigger and manual operating modes gives you complete control.
- \* Alarm inputs activate the internal buzzer, start your VCR recording and switch the camera to the relevant picture when an intruder / visitor is detected.
- \* Event memory logs the number of alarm activations.
- \* Automatic British summer time/ Greenwich mean time adjustment.
- \* Very easy to set-up with on-screen menus.
- \* Alarm clock - Reminder feature.
- \* Easily disable alarm inputs with the on-screen AlarmCams feature.
- \* Record tracker feature will re-enable disabled alarm inputs if chosen.
- \* Control the unit from anywhere around the property using the optional remote control (SP1)
- \* View the pictures on other TV sets around the property using the optional TV modulator (SP3) and an aerial distribution amplifier.

### SP20 B&W EyeCam / SP21 Colour EyeCam

- \* High resolution camera with wide viewing angle.
- \* Built-in high quality 10 metre PIR sensor for detecting intruders / visitors.
- \* Integral microphone for listening to the desired area.
- \* SP20 B&W unit includes IR illumination for 2 metre night-time illumination.
- \* Supplied with 20 metre connecting lead, extendable up to 100 metres.
- \* Compatible with the optional 1803 lighting controller and 1804 additional 18m PIR sensor.

## CONTENTS

<b>Safety First</b>	3
<b>Features</b>	3
<b>Package Contents</b>	4
<b>Choosing the Best Location</b>	
Spectrum Control Unit	4
Spectrum EyeCam	5
<b>Installation</b>	
Connecting to a VCR with a monitor	6
Connecting to a VCR with a TV	7
Connecting using the optional TV modulator SP3	8
Connecting using the optional scart interface SP4	9
Using the optional remote control SP1	10
Using the alarm output module SP5	11
Installing an SP20 / SP21 EyeCam	12
Connecting a lighting controller	13
Connecting an additional PIR sensor	14
Connecting the cameras and power supply	15
<b>Setting Up (Install Menu)</b>	
VCR code set	16
Compatible video recorders	18
Record mode	19
Alarm cameras	19
Record tracker	20
Record time	20
Preferred camera	20
Camera text	21
<b>Using the Spectrum</b>	
Front panel and main screen overview	22
Function overview	23
User menu - reminder time	25
User menu - operating mode	26
User menu - cycle time	26
User menu - clock set	27
<b>Troubleshooting guide</b>	28
<b>Help line &amp; ordering accessories</b>	29
<b>Manufacturers warranty</b>	29
<b>Specifications</b>	30

<b><u>EYECAM</u></b>	<b><u>SP20</u></b>	<b><u>SP21</u></b>
Operating voltage	12V dc	12V dc
current consumption	150mA	150mA
Camera type	1/3" B&W CCD	1/4" colour CCD
Picture resolution	420 horizontal TV lines	330 horizontal TV lines
Viewing angle	90° (horizontal)	78° (horizontal)
Minimum illumination	0.1 lux	2 lux
IR LED's	6	0
Video output	1V pk-pk 75Ω CCIR	1V pk-pk 75Ω PAL
Audio output	2V pk-pk 47KΩ	2V pk-pk 47KΩ
PIR sensor	Dual element thermally stabilised	
Detection coverage	10 metres (max) over 90° Volumetric	
Light sensor	20MΩ	
Approvals	CE directive 93/68/EEC	
	EMC directive 89/336/EEC	
	BSEN50081-1 : 1992, BSEN50082-1 : 1992	
	Low voltage directive 73/23/EEC	

# INSTALLATION & USER

---

## **SP400 / SP800**

*Spectrum Four / Eight Way Control Unit*

## **SP420 / SP820**

*Spectrum Four / Eight Way Control Unit  
with 1 x Spectrum B&W EyeCam*

## **SP421 / SP821**

*Spectrum Four / Eight Way Control Unit  
with 1 x Spectrum Colour EyeCam*



Churchill Way, Lomeshaye Ind Est, Nelson, Lancashire. BB9 6RT, England  
Tel 01282 695 500 Fax 01282 695 511 International Code ( + 44 1282)  
Email : info@voltek.co.uk Website : www.voltek.co.uk



Due to Volteks' ongoing development and improvement programme, we reserve the right to to make changes to any product or specification without notice.

---

# INSTRUCTIONS