

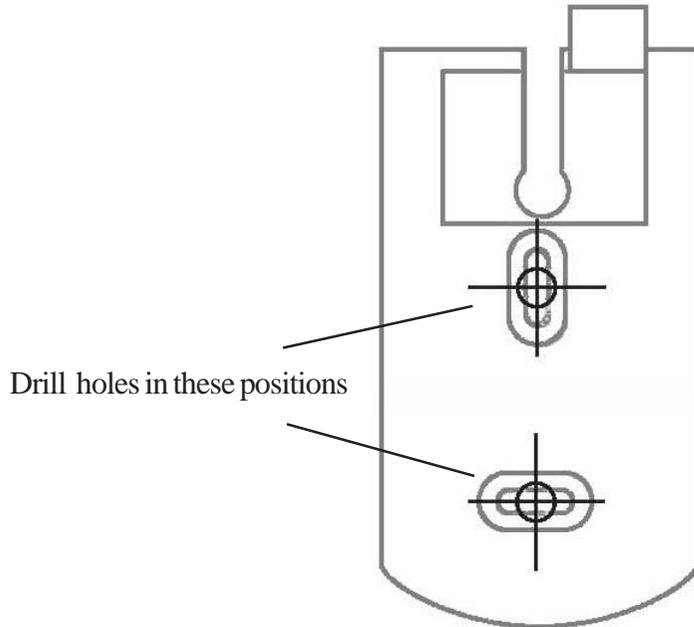
## DRILLING TEMPLATE FOR WALL-MOUNTING CAMERAS

For wall-mounting camera(s) drill two holes using a 1/4 inch (6 mm) drill bit using the template below. Insert supplied wall plugs into holes and secure cameras to wall with supplied screws.

# INSTALLATION & USER INSTRUCTIONS

## CMS500

*Wireless Observation  
System with Monitor*



Churchill Way, Nelson, Lancashire, BB9 6RT, England  
Tel 01282 695 500 Fax 01282 695 511 Helpline 09066 191 133\*  
E-mail sales@voltek.co.uk Website www.voltek.co.uk

\*Helpline call cost 60p/minute. Open 9am to 5pm, Mon to Fri.

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## SAFETY FIRST

Please read these instructions before attempting to operate the product.

**WARNING:** To prevent fire or shock hazard, do not expose this equipment to rain or moisture.

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

## PRODUCT FEATURES

The CMS500 System is a combined wireless camera and video monitor/receiver. The CMS500 surveillance system is an ideal combination for monitoring the porch, watching the garden, pool, pets or the baby. It is also suited to many small business applications.

- 2.4GHz wireless technology
- Plug 'n' Play
- High resolution black and white video camera with PIR motion detection
- Built in microphone transmits sound from camera to TV
- High quality audio and video components for long life
- Supports up to 3 cameras
- Durable weatherproof camera construction
- Auto switching between cameras
- Mains or battery operation

## SPECIFICATIONS

### Camera / PIR Transmitter

Operating voltage	12V dc
Current consumption	120mA
Camera type	1/4" B&W CMOS CCIR
Lens	3.6mm F2.0
Viewing angle	78°
Picture resolution	300HTVL
Minimum illumination	2 lux
PIR detection	5 Metres (max) over 90°
Transmission frequency	2.41GHz - 2.47GHz (3 channels)
Transmission distance	100m (line of sight) 20-30m (in typical building)
Weatherproofing	IP54 (suitable for outdoor or indoor use)
Operating temperature	-10°C to +40°C
Dimensions	95 x 80 x 40mm

### Monitor / Receiver

Operating voltage	13.5V dc
Current consumption	800mA
Screen size	5" / 13 cm
Reception frequency	2.41GHz - 2.47GHz (3 channels)
Weatherproofing	IP30 (indoor use only)
Operating temperature	+2° to 35°C
Dimensions	140 x 200 x 210mm
Batteries	10 x C type

### General

Approvals	CE directive 93/68/EEC EMC directive 98/336/EEC Low voltage directive 73/23/EEC
Package size	360 x 290 x 190mm
Package weight	3.4Kg

## TROUBLESHOOTING

If you are having trouble operating this product, please consult the guide below. If you still encounter problems then please contact the Voltek helpline on 09066 191 133\*

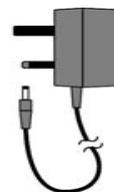
SYMPTOM	REMEDY
No camera picture	<ol style="list-style-type: none"> <li>1. Check all connectors and check that the power is switched on to your monitor and to the camera/transmitter.</li> <li>2. Ensure the camera and monitor are set to the correct channel refer to page 5 for more details.</li> <li>3. Check the transmitter/camera is within range of the monitor/receiver.</li> <li>4. Check camera operation by moving your hand in front of the PIR and checking that the green light flashes on the PIR.</li> </ol>
Blank Monitor	<ol style="list-style-type: none"> <li>1. Check the Monitor is switched on,</li> <li>2. Check the power adaptor is plugged in and turned on at the Mains outlet.</li> <li>3. If running on batteries try replacing the batteries.</li> <li>4. Ensure the batteries are installed correctly.</li> </ol>
Interference on the camera picture	<ol style="list-style-type: none"> <li>1. Check that each transmitter and receiver is within range and that no large obstructions are blocking the signal,</li> <li>2. Try repositioning the camera/transmitter or the monitor/receiver to improve the reception quality.</li> <li>3. If a transmitter is positioned close to the receiver, point the antenna away from the receiver.</li> <li>4. Check the lead has been unbundled</li> <li>5. Check that the lead is not running along side any other cables.</li> <li>6. Check if there is any other equipment transmitting on the 2.4GHz frequency nearby.</li> </ol>
Poor picture at night.	<ol style="list-style-type: none"> <li>1. Check that you have a light illuminating the area. (Street lights may not be adequate)</li> <li>2. Check the camera is not pointing at a light.</li> </ol>
Audio problems	<ol style="list-style-type: none"> <li>1. Ensure the volume is turned up sufficiently on the monitor.</li> <li>2. Make sure the sound is within the microphone range.</li> <li>3. If the unit emits a loud wailing sound try moving the camera away from the monitor / or angling the monitor differently.</li> </ol>

## PACKAGE CONTENTS

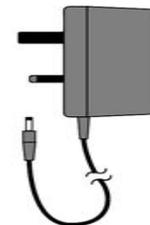
Please check and identify all the parts before proceeding with the installation.



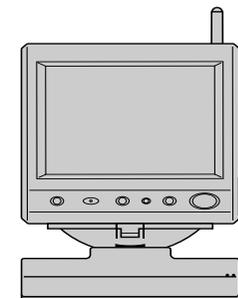
Wireless Camera / PIR



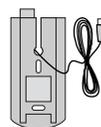
1 x 12V Camera power adaptor



1 x 13.5V Monitor power adaptor



Receiver / Monitor



Wall Mounting Bracket

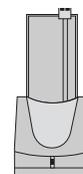


Table top stand



VCA Link Lead



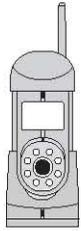
Camera Fixing kit

## INSTALLATION

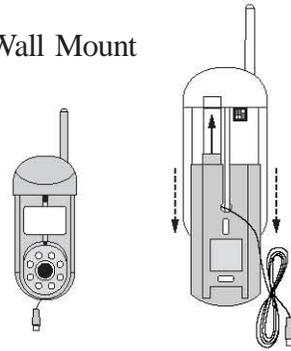
### CAMERA INSTALLATION

1. Unpack the camera / transmitter
2. Decide on wall or desk mounting the camera. If wall mounting there is a useful drilling guide on the back cover of the instructions. The camera can be adjusted for both by rotating the camera head to the required position.

Desk/Tabletop



Wall Mount

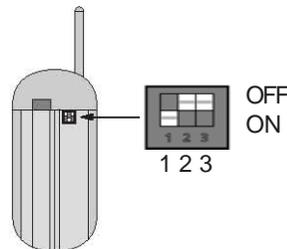


3. Decide whether to connect using the camera power supply or rechargeable battery pack (Not for external use, also not included in kit). If using the rechargeable battery pack follow the instructions provided with the battery pack. If using the power supply, connect the supply directly to the socket on the stand or, if wall-mounting, connect it to the fly-lead. Make sure the camera is positioned no more than 4 metres from the mains socket. If this is not possible then CPE240 extension cables that are 5 metres long can be used.

4. To get the best performance from the camera, please follow these guidelines.

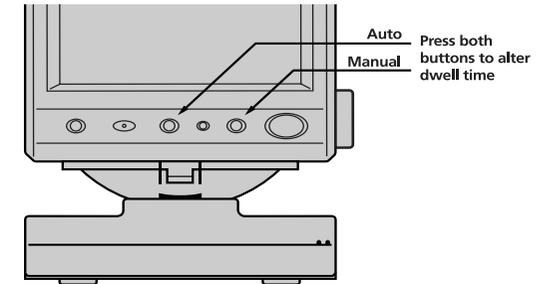
- For the best performance, mount the camera between 2 and 3 metres above the detection area.
- Please note that the PIR movement sensor will NOT detect through glass
- To avoid problems with false detection ensure no plants or obstructions which could trigger the PIR are within the detection range.
- The Camera has a 78° viewing angle, ensure the camera is set at the optimum angle to cover the desired area.
- For best transmission range try to ensure that there are no thick walls or major obstructions.
- If night time operation is required a good light source is required to illuminate the area.

5. Select the transmission channel on the DIP switch in the battery compartment by switching any one of the three switches. The camera is preset to Channel 1, with the switch in the down position.



### Dwell Time Setting (Time taken to switch between cameras)

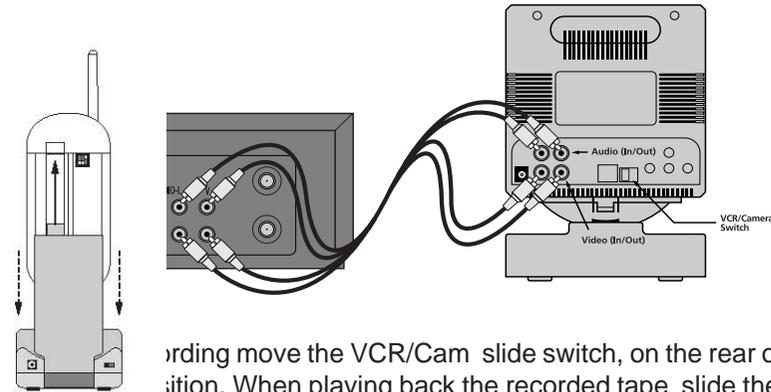
To alter the dwell time press both of the buttons on the front of the unit simultaneously. Each flash of the LED increases the dwell time by one second. The dwell time is preset to 4 seconds, but can be adjusted between 2 to 30 seconds.



### CONNECTING A VCR

You can connect a VCR to the CMS500 system allowing you to record and playback the camera picture

Connect the AV cables (not supplied) from VCR to Monitor / receiver as shown below .



When recording move the VCR/Cam slide switch, on the rear of the monitor, to the "VCR" position. When playing back the recorded tape slide the switch to the "VCR" position.

### WARRANTY

This product has a twelve month manufacturers parts and labour warranty. In the unlikely event that you encounter a problem with this product, please telephone the Voltek helpline on 09066 191 133\*. If the problem cannot be resolved over the telephone it should be returned to the place of purchase or direct to Voltek.

\*Helpline calls cost 60p/minute. Open 9am to 5pm, Mon to Fri.

### Motion detecting cameras

Each camera has a PIR motion sensor. When a camera detects motion an alarm beeper will sound on the monitor. The volume control for the beeper is on the rear of the monitor. Additionally a green light will flash on the camera.

### Monitor Scan Mode

The "Scan" mode button will turn the monitor to standby with the screen blanked. The monitor will now scan each camera checking to see if the camera is detecting any motion. If a camera detects motion, the monitor displays the camera picture and the monitor beeper will sound. 2minutes after the last detection, the monitor will return to standby with the screen blanked, until a camera detects another motion. whuile in scan mode a yellow light flashes on the front of the monitor, and the screen is blank. Pressing the manual or auto button will cancel this mode.

### Adding Additional Cameras

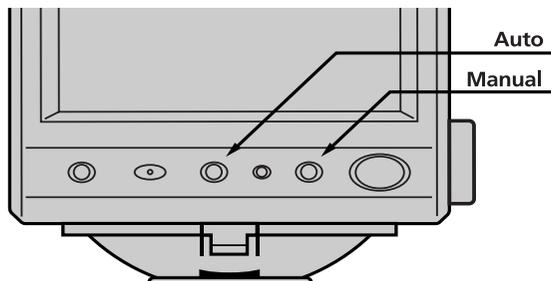
You can have up to 3 cameras on your system. To add an additional camera you will need to order a CA500- Wireless Camera Accessory (Includes Wireless Camera, Power Adapter and Fixing Kit). The BAT500 Rechargeable Battery Pack is available for use with the CA500 Wireless Camera. The BAT500 is NOT weather-proof and can only be used indoors.

### Manual Mode

In "Manual Mode" individual cameras may be selected. Pressing the button marked manual on the diagram below will select "Manual" and the LED indicator will turn red.

### Auto Mode

To select Auto mode press the "Auto" button marked on the diagram below and the LED indicator will turn to green. The receiver / monitor will then switch automatically between the available cameras. When a camera detects motion the monitor will display the picture from the camera for a few seconds, and the beeper will sound.

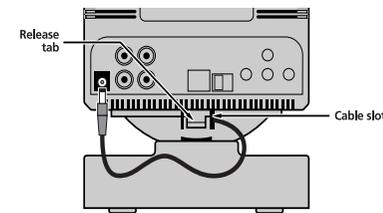


## MONITOR INSTALLATION

1. Unpack the Monitor/ Receiver.
2. **Mains Operation**  
Plug the monitor mains adaptor into the power socket on the rear of the monitor  
Plug the power adaptor into a mains socket. Turn on the monitor by pressing the front push button.
3. If you choose to use batteries to power the monitor/receiver you will need to follow the next step, if you are using the mains adaptor then you can skip to section 5.

### 4. Battery Operation

Find the prewired cable located in the base Push down the release tab under the rear of the unit, remove the base from the unit.



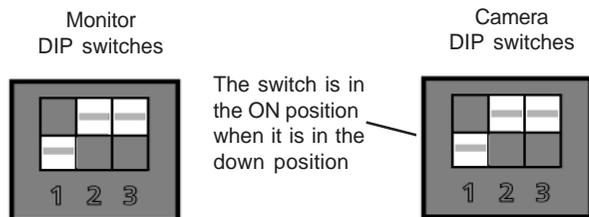
Unwrap the cable and feed it through the slot next to the release tab. Remove the battery compartment lid on the underside of the unit and install 10 x C type batteries (not included). Click the base back onto the monitor. Plug the battery power lead into the socket on the rear of the Monitor/Receiver.

5. The Monitor/Receiver installation is now complete.

## SETTING THE DIP SWITCHES

When you receive the monitor the DIP switch on the rear will have one channel set in the down position. This represents Channel 1, enabling you to use the system with one camera supplied. Refer to page 3 of the instructions for location of the DIP switch. The white part in the diagram represents the switch.

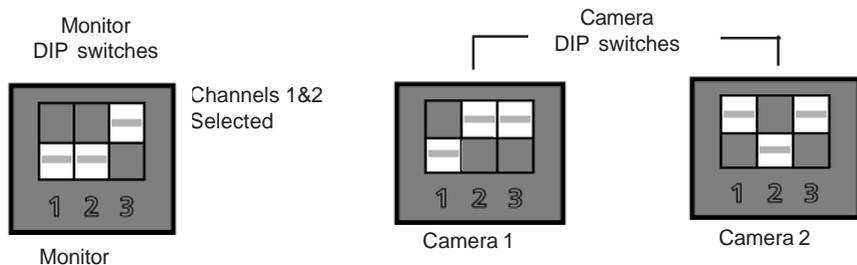
### USING ONE CAMERA



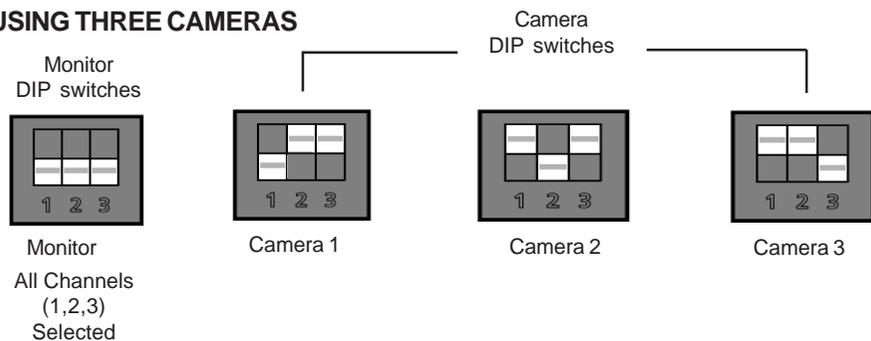
If adding additional cameras to your system you will need to change the DIP switch to reflect the number of cameras being used.

### USING TWO CAMERAS

To use two cameras, two channels need to be selected on the DIP switch. The first two channels switches should be in the down position.



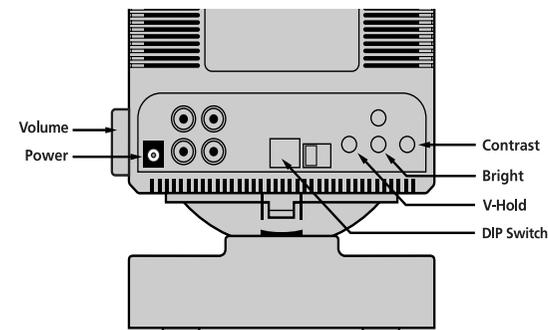
### USING THREE CAMERAS



## USING THE CMS500 VIDEO SYSTEM

The 2.4GHz video signals pass easily through your homes interior walls, but the signal maybe reflected by power wires or plumbing inside the wall. Usually a slight adjustment of the Monitor/ Receiver antenna will improve reception. Take care not to force the antenna past their lock positions.

Sound level can be adjusted using the volume control knob on the side of the Monitor/ Receiver. Adjust the Brightness/Contrast as required using controls on the rear of the Monitor/Receiver. If needed the vertical hold can also be adjusted at the rear.



The most common source of interference are microwave ovens. Try to avoid mounting the Monitor / Receiver near a microwave oven or other source of RF interference such as cordless phones.

### SWITCHING THE CAMERA ON / OFF WHEN USING THE BATTERY PACK

To preserve battery power the camera can be switched off while not in use. Simply slide the switch at the rear of the rechargeable battery pack to the off position.

