XCAM 2 PIR

Transmits colour video to a VCR as soon as it detects a movement !

(Install by your front door to know who came calling)

Color camera with integrated movement detector and 2.4 GHz sender

(XC14E, VR30E and UX23E)

User Guide

XCAM 2 PIR

As soon as it detects movement, the Xcam 2 PIR activates the VCR, and transmits an A/V signal to it.The transfer is made by the 2.4 GHz antenna of the camera, with high quality resolution even through walls and ceilings, without additional coaxial cables. This kit includes a camera, a VCR commander and a receiver.

Before starting the installation, read this user guide completely. In case of difficulty, please contact your dealer.

1. Guarantee

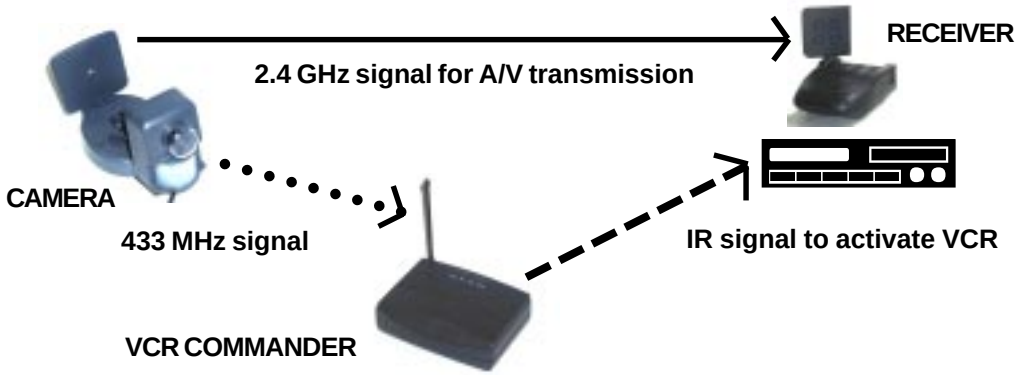
Conform to operating conditions
The camera is weather proof, but the rest of the kit must be used inside only. Avoid humidity and extreme temperatures.
The power is provided via the power supplies (included). Only use these units.

Safety
To avoid lightning strike damage, the devices must be disconnected during storms.
If you spill liquid on any unit, disconnect the unit from the power supply.

Limits of guarantee
The appliance must not be altered or dismantled. Defective items must be replaced by original spare parts. Any modifications on the appliances must be done by qualified technicians.

2. Audio / video transmission

When plugged into its power supply, the camera continuously captures images and sound. As soon as the movement detector senses a change, the camera sends a 433 MHz signal to the VCR commander, which will activate the VCR by sending an IR message to it, according to your needs.
Simultaneously, the camera sends video images to this appliance. The A/V transmission is made between the integrated 2.4 GHz sender of the camera and the 2.4 GHz receiver connected to the VCR.Depending on the number and thickness of the walls, the distance of transmission can be 30 m, although it can reach 100 m in openfield.



3. Contents of the kit

Transmitting unit

1 camera with integrated movement detector and transmitter (XC14E)

1 Power supply adapter (XM11E)

Controlling unit to activate the VCR

1 VCR commander (UX23E) and its power supply adaptor

Infrared extender with 3 LEDS

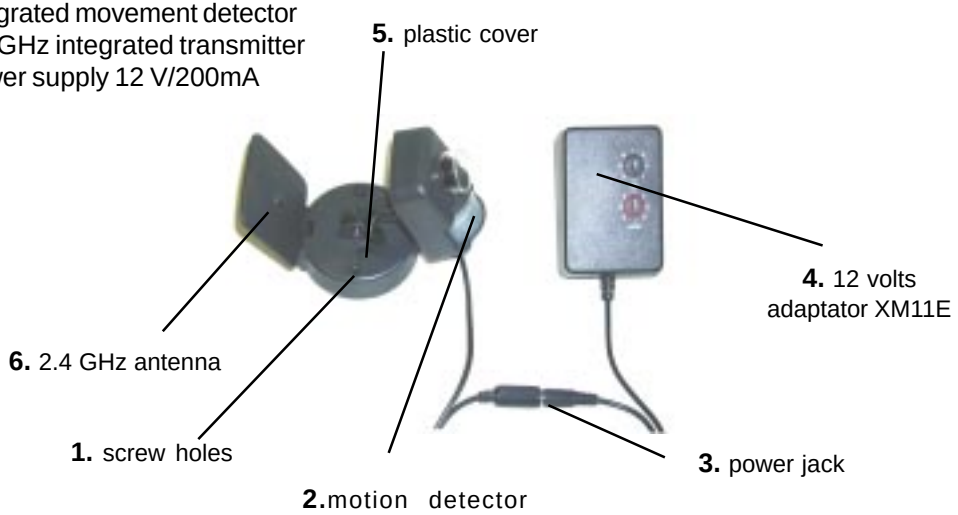
A/V receiving unit

1 receiver (VR30E) and its power supply adaptor

RCA cable and SCART adaptor (labelled RECEIVER)

4. The Xcam 2 (XC14E)

1 camera
1 integrated movement detector
1 2.4 GHz integrated transmitter
1 power supply 12 V/200mA



1. Mount the camera in a suitable location by inserting the provided screws into the holes of the camera's base. Make sure that the camera is the right way up with the camera above the movement detector .

2. Adjust the motion detector's position to cover the required area

3. Insert the camera's power jack into the power supply's plug

4. Plug the power supply adaptor into any 230 volts standard socket.

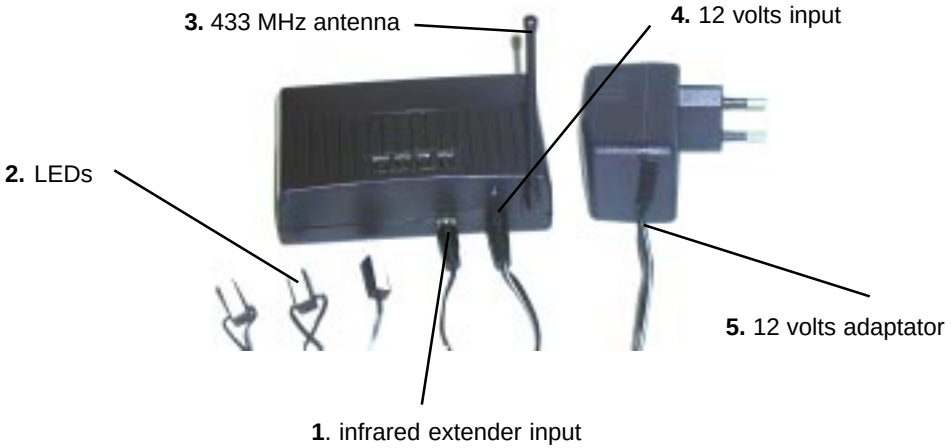
5. If you wish to change the 2.4 GHz channel, raise the little plastic cover on the base of the camera. The preselected channel is A. The channel (A, B,C, or D) must be identical with the 2.4 GHz receiver's.

6. Point the camera's 2.4 GHz antenna towards the VR30E receiver that you have connected to your VCR.

5. Controlling unit (UX23E)

5.1 Connecting the VCR commander

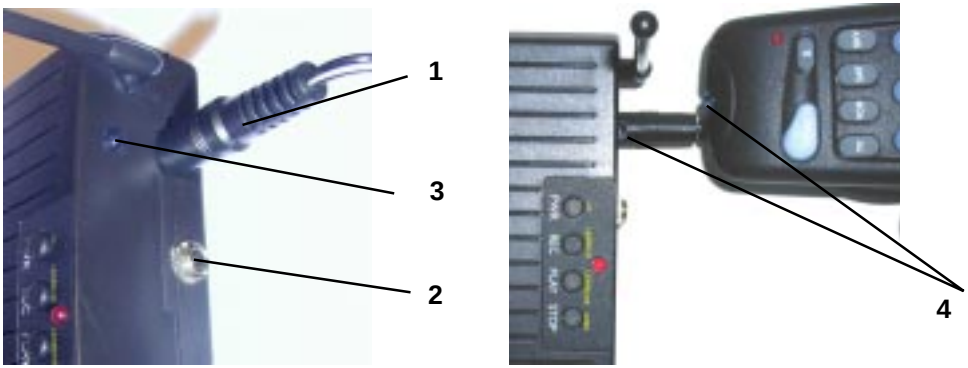
1 VCR IR commander unit
1 infrared extender cable with 3 Leds
1 power supply 12 V/100mA



1. Insert the infrared cable into the infrared extender input.
2. Position the infrared extender's LED in front of the infrared receiver of the VCR you want to activate. (Two extra LEDs are provided for possible additional function)
3. Position the 433 MHz antenna vertical.
4. Connect the VCR commander to its power supply.
5. Plug the power supply adaptor in a 230 volts standard socket close to the Audio/Video appliance

5.2 Teach your VCR 's remote control codes to your VCR Commander.

Normally, as soon as there is motion, the camera sends a RF message to the VCR commander, in order to turn on the VCR. Five minutes later, its sends a POWER OFF command. This cycle will be repeated every time a movement is detected. To transfer pictures, you have to teach the VCR commander your VCR's remote control sequence of codes : for example : POWER ON, RECORD, POWER OFF.

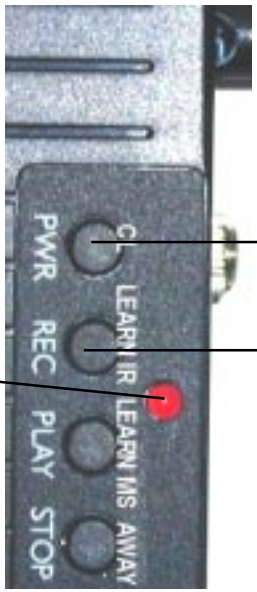


1. Switch on the VCR commander by plugging in the power adapter

2. Take off the IR cable **(VERY IMPORTANT)**

3. Locate the IR LED on the back of the VCR commander

4. Put the VCR commander's IR LED in front of the remote control's IR LED



IR signal

6

5

LIGHT FLASHES

VCR COMMANDER

VCR REMOTE CONTROL

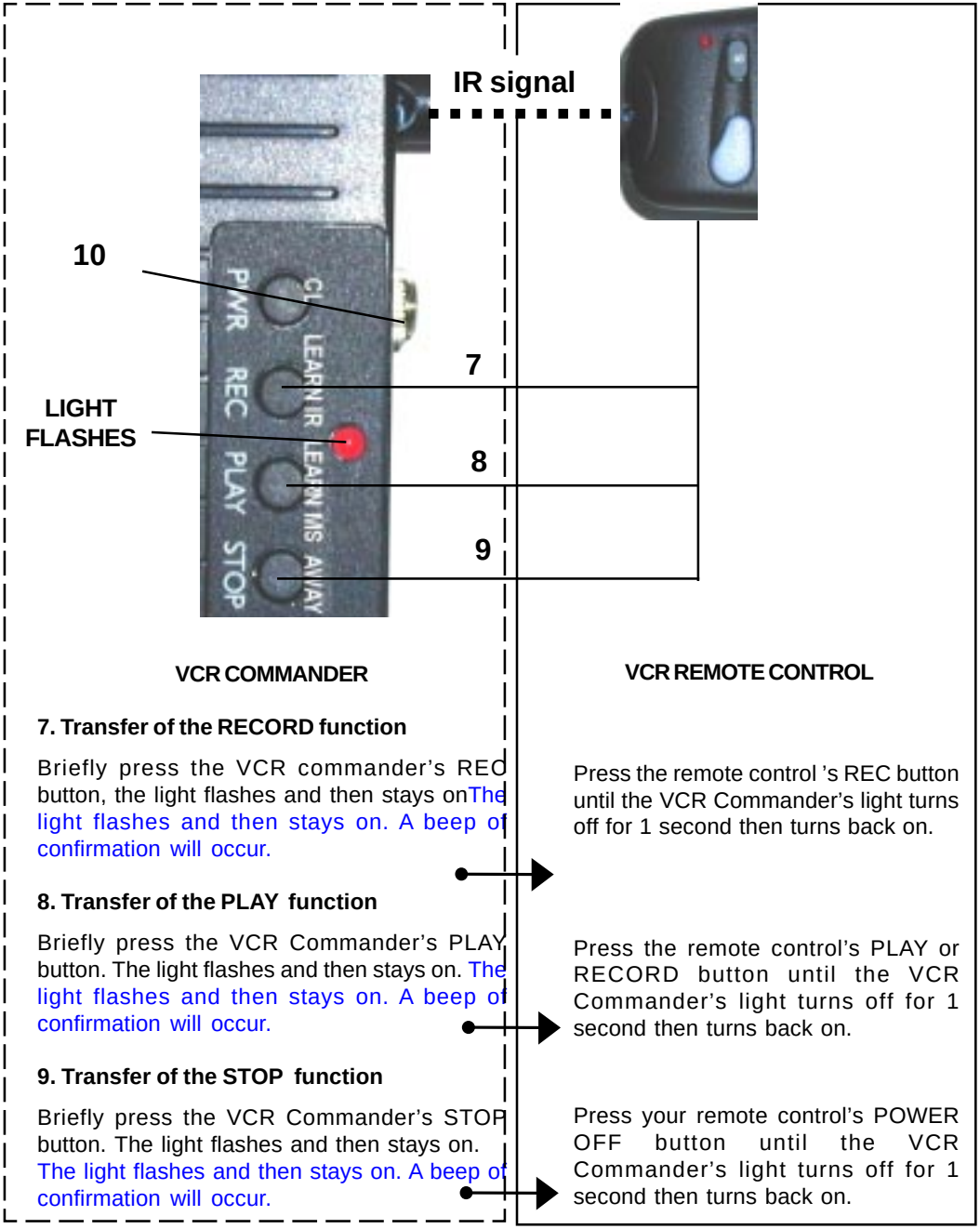
5. Putting the VCR COMMANDER in LEARN MODE

Press and hold the VCR Commander's LEARN IR button until the red light stays on (now you are in IR Learn mode).
Release the LEARN IR button, the light remains on.

6. Transfer of the POWER function

Briefly press the VCR Commander's PWR button. The light flashes and then stays on. A beep of confirmation will occur.

Point your remote control towards the IR sensor located at the back of the VCR Commander (hold about 6 centimeters away)
Press the remote control's POWER button until the VCR Commander's light turns off for 1 second then turns back on.



VCR COMMANDER

VCR REMOTE CONTROL

7. Transfer of the RECORD function

Briefly press the VCR commander's REC button, the light flashes and then stays onThe light flashes and then stays on. A beep of confirmation will occur.

Press the remote control 's REC button until the VCR Commander's light turns off for 1 second then turns back on.

8. Transfer of the PLAY function

Briefly press the VCR Commander's PLAY button. The light flashes and then stays on. The light flashes and then stays on. A beep of confirmation will occur.

Press the remote control's PLAY or RECORD button until the VCR Commander's light turns off for 1 second then turns back on.

9. Transfer of the STOP function

Briefly press the VCR Commander's STOP button. The light flashes and then stays on. The light flashes and then stays on. A beep of confirmation will occur.

Press your remote control's POWER OFF button until the VCR Commander's light turns off for 1 second then turns back on.

10 . Reinsert the IR extender cable into the VCR commander.

If you wait too long between steps 6 / 7 , 7/8 , and 8 / 9 (between learning the PWR command and the REC command etc...) the learn mode will be disactivated and you will need to start over from step 4. If an error occurs while programming, the light will FAST FLASH and there will be a fast beep. If this happens repeat steps 5 through 10.

You can actually teach any VCR code you want under any combination to the PWR, REC, PLAY. and STOP buttons of your VCR commander. The VCR commander sends whatever you teach those buttons in the order you taught them. Whatever you teach to the stop button is sent 5 minutes after the VCR commander is triggered (unless the VCR Commander is retriggered before).

5.3 Teaching the Motion Sensor address to the VCR commander

The Motion Sensor has a House and Unit code, which is A1 by default. You have to teach it to the VCR commander :

1. Press and hold the VCR commander's LEARN MS button until the LED stays on
2. Release LEARN MS, the LED remains on
3. Press the House code/ON button located at the back of the camera. The code is transmitted to the VCR commander. If learning is successful, the VCR commander's LED turns OFF.

   If learning failed, the LED stays on for 30 seconds then flashes quickly for a while and finally turns off. Repeat step 1 to step 3.

HOME/AWAY MODE

When you are at home, you may wish the pictures sent by the camera not to be received by your VCR, especially if you are watching a video cassette. In that case, you have to put the VCR commander in HOME mode : once the VCR commander is triggered by a camera, it just beeps without sending any IR codes.

Alternatively, in AWAY mode, once triggered, it sends the preprogrammed IR codes without any beep sounds.

In HOME mode, the LED is OFF
In AWAY mode, the LED will flash slowly continuously.

To toggle the VCR commander between the HOME and AWAY modes press the STOP button (you hear 1 beep) and hold it pressed for about 3 seconds until you hear a long beep.

Details of a complete transmission cycle in HOME and AWAY mode :

- If the VCR commander is in **AWAY** mode and is triggered by a camera, it sends the infrared remote code sequence as it was taught from your VCR's remote control. If the delayed infrared STOP code was set, the LED will flash normally for 5 minutes without beep before it sends the delayed infrared STOP code. While waiting to send the infrared STOP code, a further trigger by a camera will restart the 5 minute timer.
- In **HOME** mode, if the VCR commander is triggered, it just beeps without sending any infrared code.

TO CLEAR ALL IR REMOTE CONTROL CODES FROM MEMORY

Press and hold CL on the VCR Commander until the light flashes and beeps. Release CL. The flashing and beeping continues for about 8 seconds then the light turns off and all IR codes are cleared from memory.

TO CLEAR ALL RF CAMERA CODES FROM MEMORY

1. Press and hold LEARN MS on VCR Commander until the light stays on.
2. Release button, the light remains on. (Now in clear RF mode).
3. Press LEARN MS again. The light turns off and all RF codes are cleared from memory.

FLASH MODES:

SLOW FLASH : red light flashes every 1.6 sec
NORMAL FLASH : red light flashes every 0.8 sec
FAST FLASH : red light flashes every 0.2 sec.

NORMAL FLASH mode will be observed if the VCR Commander is busy or waiting to send the STOP IR remote code.The LED of the VCR is ON when the VCR commander is clearing the IR codes, in setup mode to learn IR codes, or when the movement detector has been tripped.

6.The Video Receiver (VR30 E)

1 receiver VR30E
1 power supply 12 V/500mA
1 RCA cable
1 Scart adaptor

6. Receiving antenna

5. Channel switch (under the receiver)

7. Power switch ON / OFF

4. Yellow plug into yellow socket

3. White plug into white socket

2. Yellow plug into yellow socket

1. White plug into white socket

8. Power supply

1.2. Input of the RCA cable
Insert one end of the RCA cable into the receiver"s input connectors, respecting to match the colours.

3.4. Connection to the VCR.
Insert the other end of the RCA cable into the scart adaptor, respecting to match the colours, into your VCR.

5. Channel switch : under the receiver
4 channels (A, B, C or D) are available. It allows you to connect up to 4 independent systems. Select the same channel on the receiver as the camera you wish to link.

6. Receiving antenna
Receives the 2.4 GHz signal from the camera's integrated transmitter. Point the receiver's antenna towards the camera.

7. Power switch
To switch on / off the video receiver.

8. 12 V input
Insert the receiver's power supply cable into this input.

7.Expanding your system

This system is designed for expansion with extra cameras and control of X10 home automation applications. Please refer to your retailer for details.

7.Expanding your system

It is possible to mix a camera with a lamp. For example, when it is dark, the Xcam 2 PIR kit can activate a lamp to light the transmitted pictures.

7.1 To activate lights when a motion is detected :

When the Camera detects motion, it sends Wireless Radio Frequency (RF) signals to the VCR commander which activates the audio/video appliance (TV or VCR) using an Infrared signal (see chapter 5) . This RF message can also be received by an X10 Transceiver (TM12E or TM13E, sold separatly) or any X10 security system base receiver (sold separately). The receiver then passes the signals onto your house wiring to turn on lights or appliances around your home. You plug your lights and appliances into X10 Modules (sold separately).

More precisely, to get a light turned ON automatically, please proceed as followed : Plug in an X10 RF Transceiver (model TM12E or TM13E) or any X10 security system base receiver (sold separately). Because default House and Unit Code is A1on the camera, set the Transceiver to House Code A Plug a lamp into an X10 Lamp Module and set it to House Code A, Unit Code 1. Plug the module into an AC outlet.

To test the light function : Press the **House/On** button (on the back, left) once. The camera transmits the “device ON” RF signal and the red LED flashes. Press the **Unit/Off** button (on the back, right) once. The camera transmits the “device OFF” RF signal and the red LED flashes. (The default setting is A1).

Place the camera on a shelf or mount it on a wall at least 1.80 meter above the ground. Let it settle for a minute and then walk past it. The lamp connected to any X10 Module set to A1 turns on. The light turns off approx. 1 minute later (default) as long as no motion has been detected.

1 minute after having activated the light, the motion detector will send a command to turn it off. To change this delay, please proceed as follow :
Press the camera”s **House/On** button once. The red LED flashes. Press **and hold** the **Unit/Off** button. The green LED turns on. 3 seconds later the red LED reports its delay setting as follows:

1 blink for 1 minute, 2 blinks for 2 minutes, 3 blinks for 4 minutes, 4 blinks for 8 minutes, 5 blinks for 16 minutes, 6 blinks for 32 minutes, 7 blinks for 64 minutes, 8 blinks for 128 minutes, 9 blinks for 256 minutes.

To change the delay setting, immediately press the **Unit/Off** button once,twice,... according to the delay you want. Hold the button pressed for 3 seconds on the last press. The red LED then reports the setting with the appropriate number of blinks as above. Release the button.

To record the maximum time of image, we advise you to set the camera delay to 8 minutes as a minimum.

NOTES:
After powering up of the camera, you need to wait 30 seconds before the sensor detects any motion.
After a transmission, you need to wait 10 seconds before the sensor detects you.
The default House and Unit Code transmitted when motion is detected are A 1-ON.
The default time out after which (default) A 1-OFF is sent is 1 minute.

7.2 Creation of a network of several cameras

You can install up to 4 groups of 4 cameras each. Anyway, each camera (with built-in sensor and power adapter) must be identifiable thanks to a specific Unit code. Install each camera on the VCR commander (see chapter 5.3). The VCR commander can learn a maximum of 4 addresses.

7.2.1 Camera sensor setting

To change the Unit Code of the motion sensor: Press and hold the **Unit/Off** button (on the back, right) , the red LED flashes first and then blinks the current setting. Release and immediately press the button the desired number of times for the Unit Code you want to set and **hold the button on the last press**. 3 seconds after the last press (while holding the button) the red LED blinks back the number of times for the code you set. Release the button.

7.2.2 Camera Power Supply setting
All the cameras send their pictures to the same A/V appliance : that"s why when a camera is switched On, all the others 3 are switched off. The switched off function works as followed :

	Group 1	Group 2	Group 3	Group 4
Camera	1	5	9	13
Camera	2	6	10	14
Camera	3	7	11	15
Camera	4	8	12	16

i.e. If you switched on camera A1, cameras A2, A3 and A4 will be switched off, if you switched on camera A7, cameras A5, A6, A8 will be switched off, etc.

Each group of camera must have :
- 4 cameras with their specific power adapter
- 1 unique VCR commander
- 1 unique A/V receiver

1. Set the camera power supply , the motion sensor on the same House Code
2. For each camera, set its power supply and motion sensor on the same Unit Code (1....16)
3. Install the camera, the video receiver and the VCR commander as described in paragraphs 4, 5 and 6
4. Set the unique Transceiver on the same House Code (A in our example)

You are now able to record with your VCR the images and sounds coming from 4 different cameras: When one of the camera"s motion sensors detects a movement, it will turn on this camera (and turn off all the others in the same group), sends the picture to the Video Receiver connected to your VCR and start your VCR via the VCR commander (i.e. to record the picture).

7.2.3 Recognition of a camera group inside a vaste X10 network

If your house is equiped of other X10 modules, you may need to isolate your Xcam 2 PIR kit by giving it a specific house and unit code.

To change the House Code of the motion sensor: Press and hold the **House/On** button (on the back, on left) the red LED flashes first and then blinks the current setting (once for A, twice for B, etc.). Release and immediately press the button the desired number of times for the House Code you want to set (once for A, twice for B, etc.) and **hold the button on the last press**. 3 seconds after the last press (while holding the button) the red LED blinks back the number of times for the code you set. Release button.

Installation:
For each Xcam PIR kit :

1. Set the camera power supply , the motion sensor and the transceiver on the same House Code
2. Set the camera power supply and the motion sensor on the same Unit Code (see chapter 7.2.2)
3. Install the camera, the video receiver and the VCR commander as described in paragraphs 4, 5 and 6

8.Technical Data

XC14E

Power supply : Power brick 230V AC/12V DC 100mA

Camera transmitter:

4 channels: channel A: 2.411 GHz
channel B: 2.433 GHz
channel C: 2.453 GHz
channel D: 2.473 GHz
Bandwidth : 18MHz
Power output : < 10mW
Modulation : FM

Camera:

Camera angle: 40°
Light sensitivity: 100 Lux
Caméra CMOS
format 1/3" 307 000 pixels
Video Signal: PAL
Auto exposure.
Auto white balance.

Motion sensor:

Frequency: 433.92Mhz
Power output: <1mW

Receiver VR30E

Power supply :Power brick 230V AC/12V DC 500mA
4 channels
channel A : 2.411 GHz
channel B : 2.433 GHz
channel C : 2.453 GHz
channel D : 2.473 GHz
AVInput : 2 RCA Plug (1 Audio 1 Video)
Video Output : 1Vpp (type) / 75 Ohms
Audio Output : 1 Vpp (type) / 600 Ohms

VCR COMMANDER

Power supply : Power brick 230V AC/9V DC 100mA
RF input: 433.92MHz
Range: 25 m through wall and floors

CE DECLARATION OF CONFORMITY

We, Martek Electronics B.V.,
Grotestraat 55a
4264RJ VEEN,
THE NETHERLANDS, herewith declare that the following designated product :

XCAM2PIR
comprizing of:
XC14E camera
Video receiver VR30E
VCR commander UX23E

Complies with the essential protection requirements of the R&TTE directive 1999/5/EC on the approximation of the laws of the Member States relating to Radio Spectrum Matters, EMC and Electrical Safety

Assesment of compliance of the product with requirements relating to the essential requiremtns acc. to article 3 R&TTE was based on annexe IV of the Directive 1999/5/EC and the following standards :

Radio :
EN 300 220-3 : 2001
I-ETS 300 440: 1995
EMC :
ETS 300 683 : 1997
Electrical Safety :
EN 61 558-2-6 : 1997
EN 61 558-1 : 1997 +A1:1998
EN 60 065:1993/A11: 1997

CE 0536

Date:08.01.02

François Rossi
Approval engineer