

VMD-19M

Video Motion Detector with Automatic Video Recording



USER MANUAL

Version 1.3

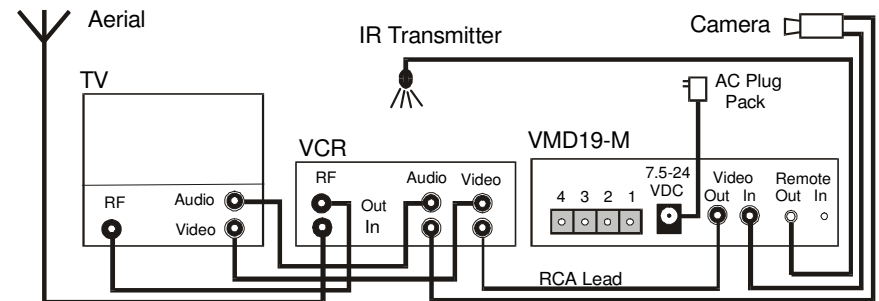
Operation

VMD-19M works with a video camera, a VCR and optionally an electronic security system. VMD-19M detects a moving object in the video signal received from the video camera.

VMD-19M is designed specifically to detect walking of people and movement of larger objects under controlled lighting conditions and for indoor use. However the sensitivity of VMD-19M to detect motion is adjustable. Therefore it can be made insensitive to the motion of small pets.

The VMD-19M can learn the remote control codes from the remote controller unit of most VCRs. When the VMD-19M detects a motion the red light will flash momentarily and the VMD-19M will put the VCR into RECORD mode. At the same time **alarm output** relay contacts will close momentarily. After 30 seconds of non-motion, the VMD-19M will PAUSE the VCR. If there is no motion for a further 2.5 minutes then the VMD-19 will STOP the VCR. If motion is detected while the VCR is paused, the VMD-19M will put the VCR back into RECORD mode and close the **alarm output** relay contacts momentarily.

If the video signal from the camera is lost, the **alarm output** relay contacts will close. When the video signal is restored, the relay contacts will open. The VMD-19M also controls the VCR when triggered by an external device such as a door/window sensor or a PIR motion sensor or an electronic security system.



Installation

This installation procedure assumes that you have already installed a security camera at a suitable indoor location and have a VCR with a remote controller unit for recording video events. The installation procedure is divided into two sections. The "Advanced Installation" section is for users who are technically minded and want to explore all the advanced options or want to connect the VMD-19M to an existing electronic alarm system. All other users can skip this section and go straight to the "Basic Installation" section.

Advanced Installation

Sensitivity Setting

VMD-19M can be set to 4 different sensitivities for motion detection. When set at highest sensitivity (4) small changes in the scene will be detected. Lower sensitivity is suitable where the camera is not of a very high quality and has some image noise. If you do not want to detect small object movements such as pets, a lower sensitivity might be suitable. VMD-19M is set to sensitivity level 3 at factory and is suitable for most applications. You can change the sensitivity using the DIP switch provided on the circuit board of the VMD-19M as following:

- 1- Undo the screws on the sides of the VMD-19M.
- 2- Remove the cover.
- 3- Set the DIP Switch based on this table:

Sensitivity	Tab Switch 1	Tab Switch 2
1 (lowest)	ON	ON
2	ON	OFF
3 (factory setting)	OFF	ON
4 (highest)	OFF	OFF

Example: To set the sensitivity to 2 set the Tab Switch 1 to the ON position and the Tab Switch 2 to the OFF position.

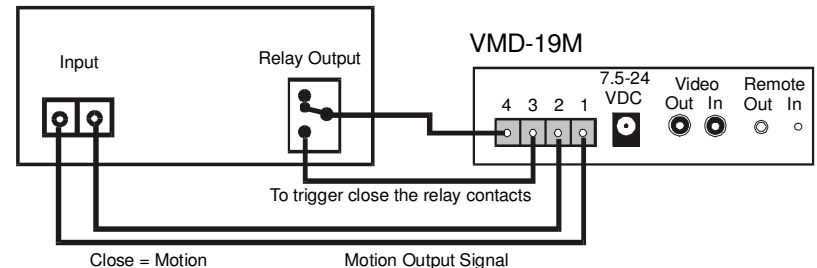


Connection to a Security System

VMD-19M has a 4 pin screw terminal block for interfacing to control systems such as an electronic security system.

- **Arm and Disarm-** A security system can arm and disarm the VMD-19M by controlling the power supplied to the VMD-19M. When the power is supplied to the VMD-19 it is automatically armed otherwise it is disarmed.
- **Trigger Recording-** Most VCRs take around 4 seconds to start recording after an alarm trigger. For faster response VMD-19M provides a Normally Open (NO) input for pre-alarm external trigger recording. Connect the terminals marked "3" and "4" to relay contacts of the security system. A security system can trigger the VCR recording by closing the relay contacts thus shortening the terminal number "3" and "4" together. After 30 seconds that the contacts remain open, the VMD-19 will pause and after a further 2.5 minutes will stop the VCR.
- **Motion or Video Loss Output-** VMD-19M provides a Normally Open (NO) relay contact output at terminals "1" and "2" for motion detection and video loss signalling. When video signal is lost the relay contacts will close and remain closed until the video signal is restored. When a motion is detected relay contacts will close momentarily.

Security System Panel



Basic Installation

Please read all the following steps before starting the installation process.

- 1- Connect the video cable from the video camera to the "Video In" at the back of the VMD-19M.
- 2- Connect one end of the RCA video cable supplied in the packaging to the "Video Out" at the back of the VMD-19M and the other end to the AV video input of the VCR.
- 3- Connect the IR transmitter cable to the "Remote Out" of the VMD-19M and place the transmitter in front the remote control sensor of the VCR. It is important that the signals from the transmitter can reach the sensor of the VCR otherwise the VMD-19 can not control the VCR. Test the suitability of the location by trying to control the VCR with its own remote controller unit at the same location that you have placed the IR transmitter.
- 4- Have the remote controller of the VCR ready. Put a blank video tape in the VCR, turn the VCR on, and set its input channel to AV channel or Line In (if unsure refer to your VCR user guide).
- 5- Ensuring the correct polarity (- and + connection on the power supply), connect a plug pack power supply delivering a voltage between 7.5VDC and 24VDC to the 7.5-24VDC connector on the back of the VMD-19M. Minimum current of 100mA is required.
- 6- The red light on the VMD-19M should now be on.
- 7- Wait for a few seconds until the red light starts flashing.
- 8- Hold the VCR remote controller unit about 30cm away from the back of the VMD-19M and point towards the "Remote In" of the VMD-19M.
- 9- Press and hold the **RECORD** button on the VCR remote controller until the red light stops flashing for a couple of seconds.
- 10- Wait until the red light starts flashing again.
- 11- Press and hold the **PAUSE** button on the VCR remote controller until the red light stops flashing for a couple of seconds.
- 12- Wait until the red light starts flashing again.
- 13- Press and hold the **STOP** button on the VCR remote controller until the red light stops flashing for a couple of seconds.
- 14- Wait until the red light starts flashing again.
- 15- Press and hold the **ON/OFF** or **POWER** button on the VCR remote controller until the red light stops flashing.

VMD-19M will now transmit the RECORD signal. Check to ensure that the VCR is now recording. If the VCR is recording stop it. In this case the VMD-19M has learnt the codes and can control your VCR. If the VCR is not recording you have to repeat steps 5 to 15 again.

If you have done all the installation steps, the VMD-19M should now be ready to detect motions in video signals from the camera and activate the VCR recording.

Troubleshooting

Problem	Solution
When power supply is connected, red light does not turn on.	<ul style="list-style-type: none">• Ensure mains power is connected and switched on at the wall socket.• Ensure the polarity of plug pack is correct.• If VMD-19M is connected to a security system ensure that VMD-19M is armed by the security system.
Motion is not detected.	<ul style="list-style-type: none">• Ensure that the camera is on.• Check that the camera video lead is connected to the "Video In".• Change to a higher sensitivity.
False motion is detected.	<ul style="list-style-type: none">• Change to a lower sensitivity.• Scene contains a window to outside or moving background objects such as trees or cars.• Camera might be generating large video noise. Change to a better quality camera.
VMD-19M does not operate the VCR.	<ul style="list-style-type: none">• Ensure that the IR Transmitter is placed in front of the remote control sensor of the VCR.• Ensure that the VCR is turned on and has a tape inside it, and test its operation with its own remote controller.• Repeat the IR code learning procedure.
Image from the camera is not recorded.	<ul style="list-style-type: none">• Ensure that the "Video Out" from the VMD-19M is connected to the AV Video input of the VCR.• Ensure that the VCR is set to the AV channel.



Technical Specification

Video Format	NTSC, PAL, EIA, CCIR and SECAM video standards
Video Input	75Ω 1Vpp composite video via RCA connector
Video Output	Passive loop through from Video Input
IR Input	950nm Infra-red signal from a standard appliance remote controller
IR output	same as IR Input
Power Supply	7.5VDC to 24VDC at 100mA minimum
Indicator	Red LED
Sensitivity Adjustment	Via 2 way dip switch, for size and contrast
Controls	Available on screw terminals: External Trigger input to activate recording Motion output or video signal loss via relay contact closure
Enclosure case	Metal powder coated in silver
Dimensions	104mm x 52mm x 25mm
Weight	Approx. 200gr

Warranty

VMD-19M has a warranty of 12 months against defects in workmanship and materials after the original date of purchase. In the event of failure, the supplier will replace or repair it at its option providing there is no evidence of customer misuse or alteration. Customer is responsible for shipping costs to and from the supplier.

Disclaimer

MANUFACTURER, DISTRIBUTORS AND DEALERS OF THE VMD-19M MAY NOT BE HELD LIABLE FOR INJURY, LOSS OR DAMAGE, DIRECT, INDIRECT OR CONSEQUENTIAL, ARISING OUT OF THE USE, OR INABILITY TO USE THE VMD-19M. THIS INCLUDES, BUT IS NOT LIMITED TO, THE FAILURE OF VMD-19M TO PERFORM AS ADVERTISED.

