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VMD Guide for Arecont Cameras

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Guide for Configuring and Using Video Motion Detection on Arecont Cameras

This guide provides a step-by-step procedure for using the Video Motion Detection feature of Arecont cameras with ViconNet (version 5.6 and higher). It assumes an understanding of ViconNet and the cameras. Refer to the ViconNet® and camera manuals for detailed information.

The Video Motion Detection (VMD) feature activates an alarm due to activity beyond specified sensitivities in preconfigured regions of interest (ROIs) in the camera view area. Since initial setup and configuration of Arecont cameras are not done through VNSetup software but through a Web Browser interface, the support for a VMD alarm event is generated by the camera and is defined and setup in the camera configuration. The VMD message is sent from the camera and received in ViconNet as an external alarm; it can then be used to trigger a macro.

These cameras support both open (video stream between the camera and PC must be established and kept open in order for alarm to be received) and closed (camera is capable of sending the alarm even if a video stream is not open) stream VMD. Cameras that support a closed stream of video for VMD do not have to be running to trigger the alarm. However, each camera that has VMD configured must be connected to be viewed or recorded at least once before the alarm mechanism will work. In this case, a “maintenance” macro must be configured to create this “handshake” and to ensure that the alarm will be re-activated and triggered even if the NVR reboots, shuts down or fails. The closed stream method saves storage but does not provide the prealarm option. An open stream video should be used if constant recording, prealarm or control of fps is required.

Camera Configuration

This section explains how to configure Arecont camera for video motion detection (VMD feature) to work properly. The ViconNet system and the camera should be setup and connected before beginning this procedure.

Arecont Cameras

The Arecont cameras can be configured with either open or closed stream video. Review the requirements for the particular installation to determine which way is best.

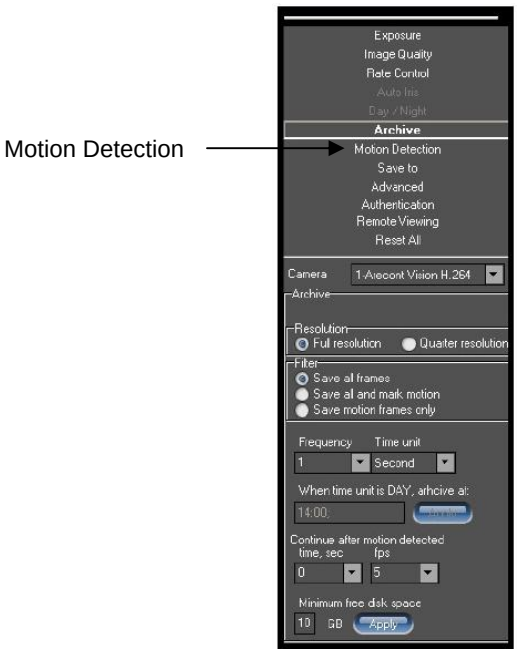
From the ViconNet *System Settings screen*, select 

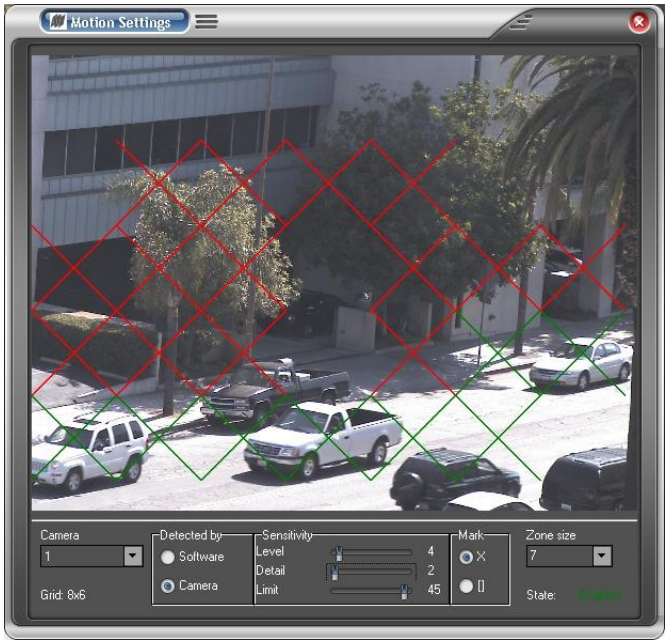
. Select the camera from the list. Click 

and then 

This opens the camera's browser.

Clicking *Motion Detection* from the *Archive* menu brings up the *Motion Settings* window; either "*Save all and mark motion*" or "*Save motion frames only*" must be selected on the Archive settings. Up to 64 detection zones (8x8 grid) can be configured.





- Select the camera to be displayed from the dropdown list in the Camera field.
- Select software motion detection or on-camera motion detection in the Detected by field. Software motion detection performs motion detection by processing images after they are transmitted from the camera to the computer while on-camera motion detection performs motions detection prior to transmitting them to the computer, reducing CPU and network load. The adjustments below have to do with on-camera motion detection.
- Sensitivity controls adjust motion detection computation by Level, Detail and Limit
  - Level adjusts the brightness change threshold that triggers motion detection, value 2-31; lower settings can cause false detection due to noise while higher settings require larger brightness change on the moving object for detection.
  - Detail adjusts the size of the detectable objects with each motion detection zone; lower settings can cause false detection due to noise while higher settings require larger objects for detection, useful when detection is used to detect large objects like a car but ignore small objects like a small animal.
  - Limit serves as a guard against triggering false alarms due to a sudden overall change in lighting in a large number of zones.
- From Mark, select how the detection zones are indicated, X or box; the mark turns green when motion is detected.
- Zone size can be selected from 7 -15 (number or 32x32 pixel blocks in each zone, 7x7 to 15x15).

Configuring ViconNet

Creating Macros

The next step in supporting VMD alarms is to create a macro that defines what happens when motion occurs. After the macro is defined it is then linked to the external alarm of the NVR/Workstation. Remember that recording is not available on a Workstation, only on an NVR or DVR. Below are three examples.

Examples of VMD Alarms

Example 1

- A camera is recorded at a low fps and switches to a higher fps upon motion.
    - The NVR is set to record the camera at 1 fps
    - The camera VMD is set to send an alarm on motion
    - On the NVR, the VMD alarm trigger runs a 2nd macro that will record at a higher fps for a predetermined time

Note: There is no higher fps pre-alarm option for this; any recording prior to the VMD alarm is at 1 fps.

Note: FPS control in the macro is available for with these cameras with ViconNet version 6 and higher.)

Example 2

- A camera is recorded, and display is triggered by motion.
    - The NVR is set to record the camera at desired fps
    - The camera VMD is set to send an alarm on motion
    - On the NVR, the VMD alarm trigger runs a 2nd macro that will start display of the camera on the desired Workstation

Example 3

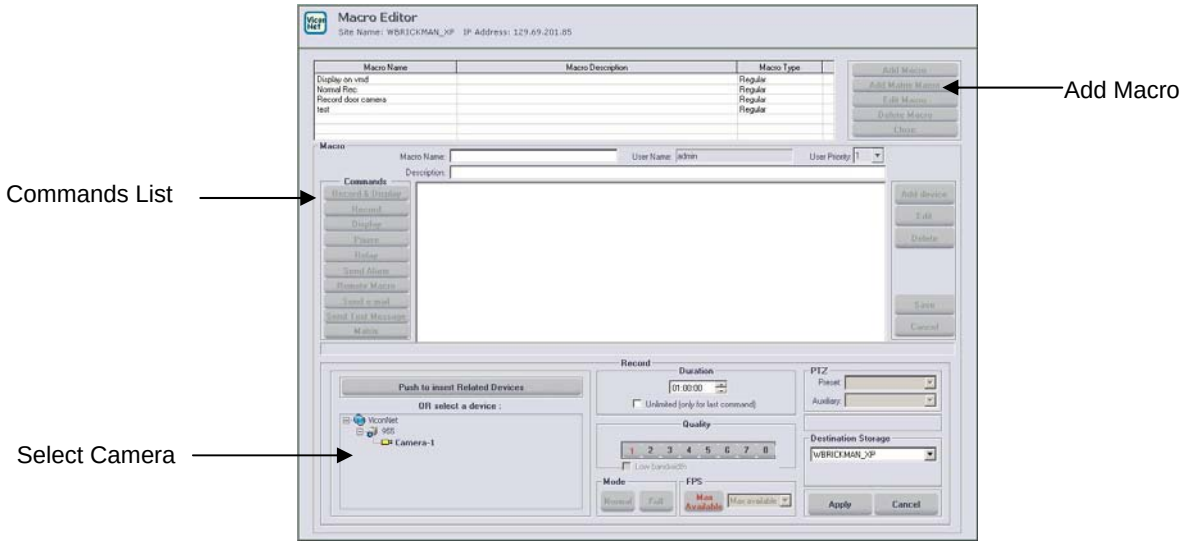
- A camera is viewed and only recorded by motion.
    - A Workstation is viewing the camera all the time
    - The camera VMD is set to send an alarm on motion
    - On the Workstation, the VMD alarm trigger runs a macro that will trigger recording on the NVR

Note: There is no pre-alarm at all in this case.

When VMD is on a camera that is recording (open stream configuration), the recording macro is created first. The VMD trigger is a second macro.

To create a macro:

- From the ViconNet *Main* window, click Setup. The *Setup Site Selection* window displays.
- Select the site (NVR/Workstation) for which the macro is being defined and click Select. The *System Settings* window displays.
- Click Macro Editor. The *Macro Editor* window displays. In examples 1 and 2, the camera is recording before the VMD trigger, so a recording macro must be created. Click Add Macro. The middle section of the screen displays.



- Fill in a logical name for the macro and a description if desired.
- Select the camera that is being configured from the device list.
- Select the first command from the Commands list; in the example, select Record. The bottom portion of the screen displays.
- Fill in all pertinent fields for the command. In the examples, select specified fps for recording. A macro can have multiple commands; repeat command selection as required for the macro. The macro executes in the command order.
- Click Apply and then Save.

A second macro is now configured to tell the NVR what to do in the case of a VMD alarm; in the examples, command the NVR to record the camera at a different fps or display video from the camera. The third example does not require the first macro, as video was just being viewed; this alarm macro instructs it to record the camera upon a motion alarm. (Note that FPS control in the macro is available for with these cameras with ViconNet version 6 and higher.)

- Follow the previous steps to create the macro.
- To setup example 1: From the Commands list, select Record. Select the higher recording fps for the Record command.
- To setup example 2: From the Commands list, select Display. This allows the video to display on the local Workstation/NVR. If it is required that the video display on a different unit, create another macro using with the Send Alarm command and select the **Destination** of the video.
- To setup example 3: From the Commands list, select Record. Select the recording fps for the Record command.
- From the device list, select 

. This links the camera to the external alarm and uses the camera name as shown in the alarm for the macro to work (eliminating the need to specify which camera is for this macro).

Note: This method has one limitation. A macro that runs as a result of ANY alarm will always trigger the same response (for example display the alarmed camera) and does not allow launching different macros for different alarms. If there is a requirement to do so, you will need to utilize ViconNet Events Management (see ViconNet manual).

A camera that is running closed video requires a “maintenance” macro to assure the system recognizes the alarm. Running this macro on the camera for 15 seconds every hour will assure that the VMD will be triggered. To create the “maintenance” macro:

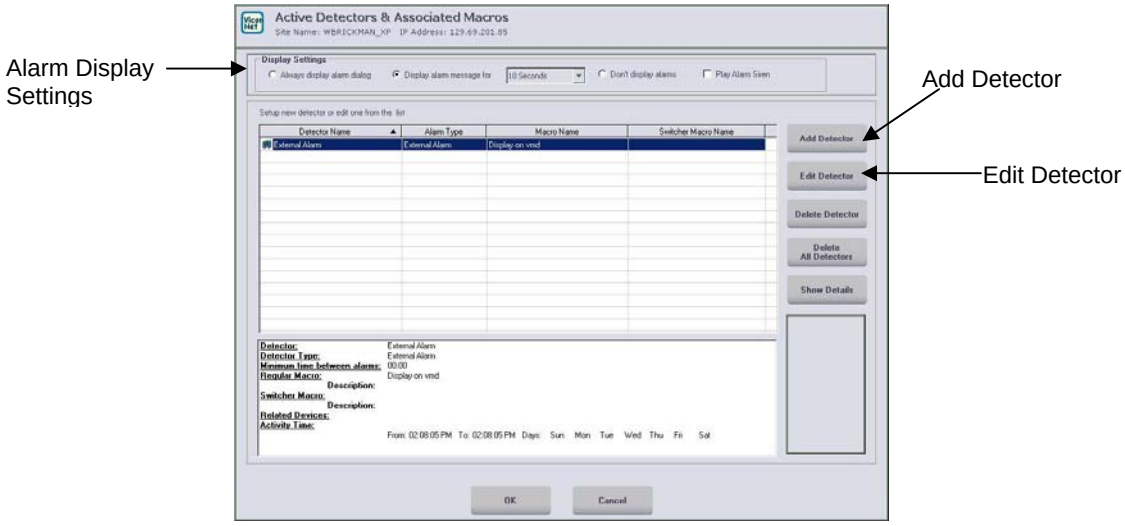
- Follow the previous steps to create the macro.
- Configure a macro to record the camera every hour for 15 seconds so that the system maintains recognition of the camera.

Configuring the External Alarm

The final step is to configure the external alarm on the Workstation/NVR to activate the macro upon receiving the VMD alarm. Each NVR/Workstation has 1 default **External Alarm** that can be edited to receive the VMD alarm from the camera and execute the macro.

To define the external alarm:

- From the ViconNet Main window, click Setup. The *Setup Site Selection* window displays.
- Select the site name (NVR/Workstation that has the ability to receive alarms) for which the alarm is to be defined and click Select The *System Settings* window displays.
- Click Alarms . The *Active Detectors & Associated Macros* window displays.

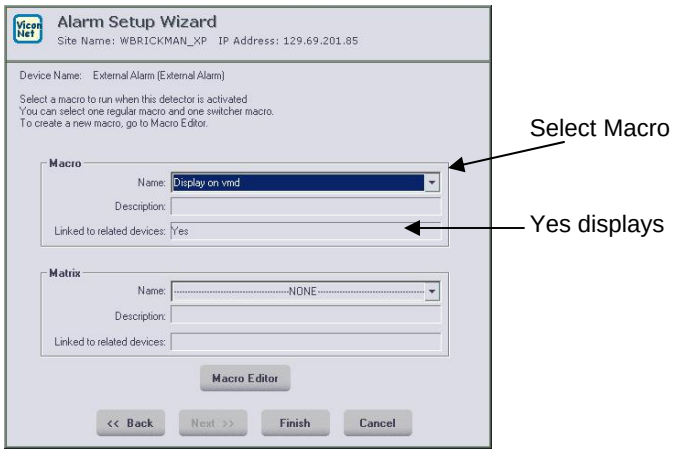


- Select the alarm display settings at the top of the screen.
- From the displayed list, select *External Alarm*. Click Edit Detector. The *Alarm Setup Wizard* window displays.

Note: If the External Alarm has been previously deleted from the NVR/Workstation, click Add Detector. From the *Alarm Setup Wizard*, select **External Alarm** and Next >> Proceed with the steps for **Edit Detector** that follow.

- Define the time schedule for the macro in the *Alarm Activity Time* area; the default is 24 hours a day, 7 days a week. Press Next >> .

- From this *Alarm Setup Wizard*, select the macro previously created to be activated when the motion alarm occurs. *Linked to related devices* should say **Yes**. If the macro was not created, or needs to be changed, it can be done by clicking Macro Editor . Follow the procedure for creating a macro. Click Finish .



- The external alarm setup link is displayed in the list in the *Active Detectors & Associated Macros* window. Click **Show Details** to see complete information on alarm setup.

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