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# VMD Guide for MP-955 Cameras

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# Guide for Configuring and Using Video Motion Detection on I-Onyx MP-955 Series and Related Third Party Cameras



This guide provides a step-by-step procedure for using the Video Motion Detection feature of I-Onyx® 955 and related third party cameras (Acti/Sony) 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 I-Onyx 955 and third party 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.

Video Motion Detection is supported on Vicon I-Onyx MP-955 and some third party cameras (certain Acti, Arecont and Sony models). Third party cameras will be continually added as drivers are developed. Contact your Vicon Sales Representative for specific camera models, as it is frequently updated.

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

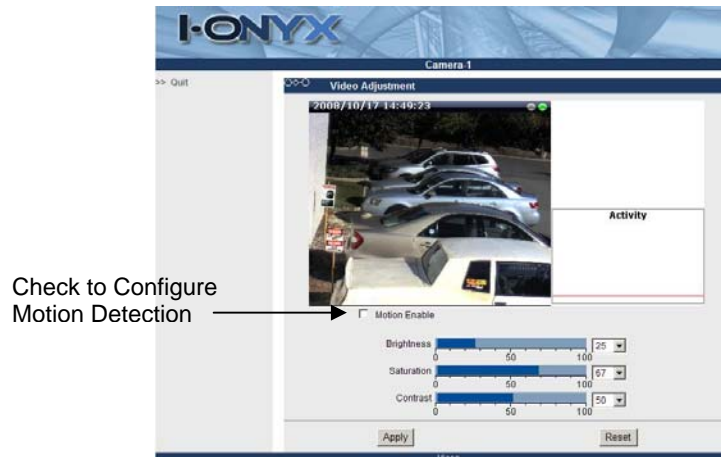
This section explains how to configure Vicon I-Onyx 955 cameras for video motion detection (VMD feature) to work properly. The ViconNet system and the camera should be setup and connected before beginning this procedure.

## I-Onyx MP-955 Series Megapixel Cameras and VN-957 Camera

These I-Onyx 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 **I-Onyx 9xx and Third Party Cameras**. Select the camera from the list. Click **Edit Camera** and then **I-Onyx 9xx / Third Party Camera Setup**. This opens the camera's browser.

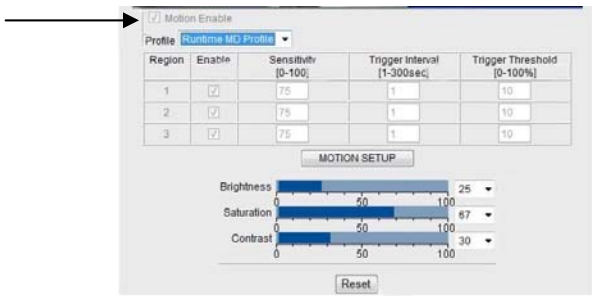
From the *Configuration* screen, select *Video Adjust*. The *Video Adjustment* screen displays. (Note that in cameras made by Acti, screens will be similar.)



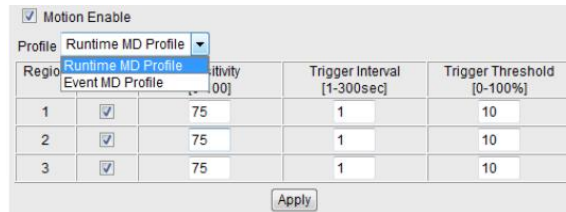
Motion detection can be set for up to three (3) regions that can overlap. Each region has three parameters, sensitivity, trigger interval and threshold. To setup Motion Detection:

- Check *Motion Enable*. The motion **Profile** displays.

Check to Enable Motion Detection



- Select **MOTION SETUP**. The text on the button changes to **Apply** and grayed out information becomes editable.
- Select the correct profile via the dropdown list. (Choose Runtime unless alternative profiles through Event handler are being used.)



- Enable each region individually. The region displays on the video window. Using the mouse, these regions can be moved and sized as desired. A smaller region is more accurate and sensitive than a large region; try to cover the scene with two or three regions rather than one region to cover the entire scene.
- Setup the **Sensitivity**, **Interval** and **Threshold** for each motion detection region. The Sensitivity value (0-100) is a relative number that decides how much motion is required to be considered motion activity; the higher the sensitivity, the more sensitive the area is to activity. The Threshold value (0-100%) is the percent of pixels in the scene that need to be marked as changed to trigger a motion event; the smaller the threshold, the less movement is required to trigger a motion event. The interval value is the amount of time that must pass before another event can be detected.
- When settings are complete, click **Apply** to confirm the settings (click **Reset** to abort settings and restore previous settings).
- When all settings are finished, click the **Save** button for settings to take effect.



There is a motion **Activity** window to the right of the Video window. When enabled, the red line shows the trigger threshold for the Runtime MD profile; the blue line shows the threshold for the Event MD profile. If the activity is above the threshold, a motion event is triggered.

## 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 2<sup>nd</sup> 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.

#### 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 2<sup>nd</sup> macro that will start display of the camera on the desired Workstation

#### Example 3

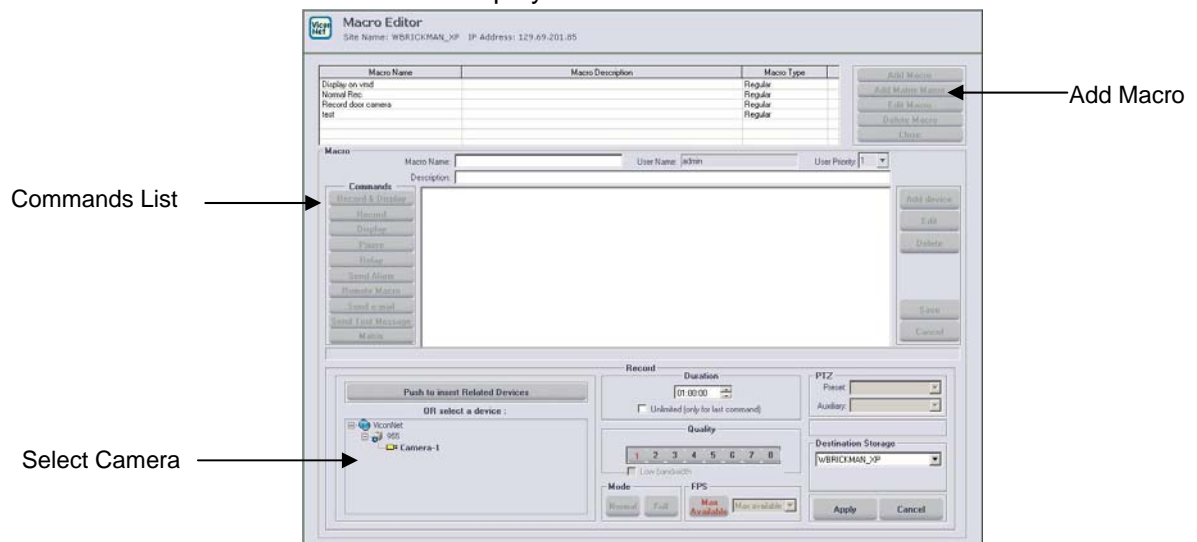
- A camera is viewed and only recorded by motion.
  - A Workstation is viewing the camera all the time
  - The camera VMD is set to send an alarm on motion
  - On the Workstation, the VMD alarm trigger runs a macro that will trigger recording on the NVR

*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.

- 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:

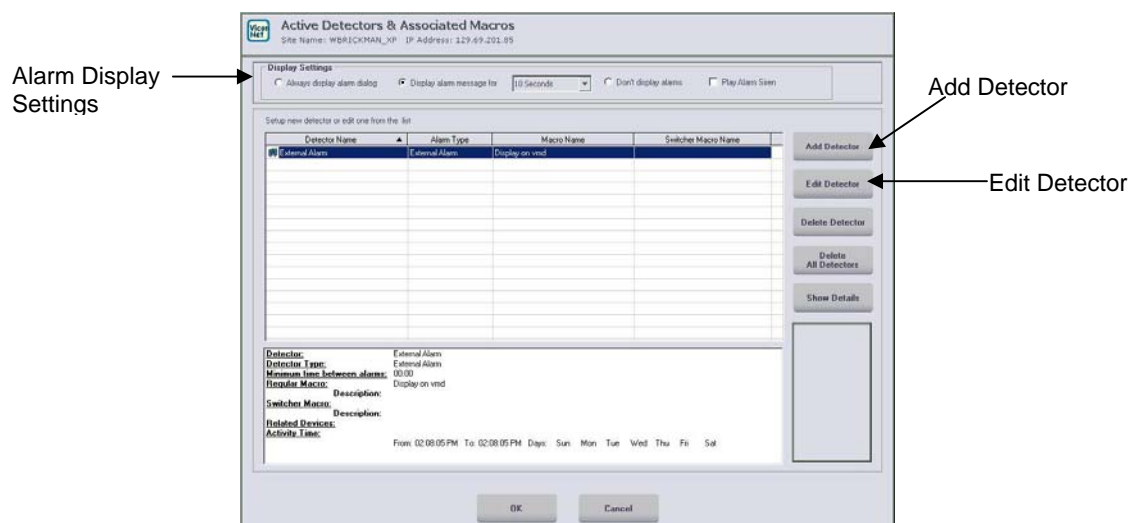
- Follow the previous steps to create the macro.
- Configure a macro to record the camera every hour for 15 seconds so that the system maintains recognition of the camera.


## Configuring the External Alarm

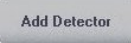
The final step is to configure the external alarm on the Workstation/NVR to activate the macro upon receiving the VMD alarm. Each NVR/Workstation has 1 default **External Alarm** that can be edited to receive the VMD alarm from the camera and execute the macro.


To define the external alarm:

- From the ViconNet Main window, click . 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 . The *System Settings* window displays.
- Click . 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 . The *Alarm Setup Wizard* window displays.

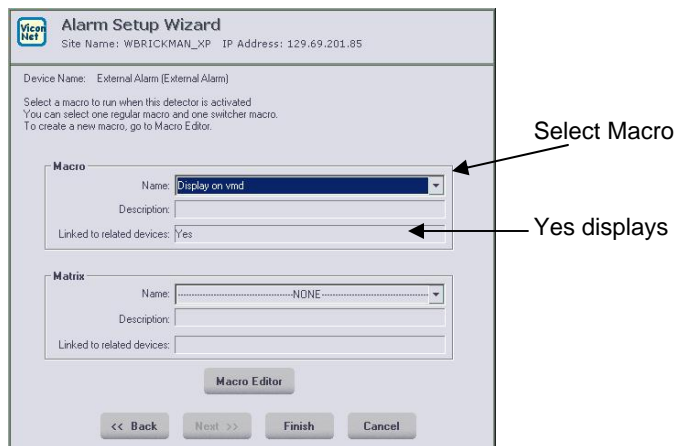
*Note:* If the External Alarm has been previously deleted from the NVR/Workstation, click . From the *Alarm Setup Wizard*, select

**External Alarm** and . 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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