The Moodifier™ Application

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The Moodifier Application

Each Moodifier unit has a number of channels where lights are connected. The Moodifier application lets you easily and effectively control the lights that are connected to these channels.

The application enables you to easily create your own light settings (light scenes) by simply dragging the channel light intensity sliders as you prefer. You can create as many light settings as you like, and each light setting can easily be activated, dimmed and scheduled as you like.

You can also easily add the music of your choice to any of your light setting. The music you have added can be made to automatically play whenever the light setting is activated. If you like you can also set the lights to sync up with the music into an audio-visual media experience.

The application also has a built in web app that lets you control all your light scenes remotely from any smartphone or web browser. It enables any handheld device like iPhones, iPods, iPads, Androids etc. to act as a powerful remote control to your lighting (and music).

The application also has unique features to make your entire lighting sync up to your computer screen. The lights intensity and color will follow any on screen action in realtime, whether it´s a YouTube video, computer game, DVD, photo slideshow or any other digital media.

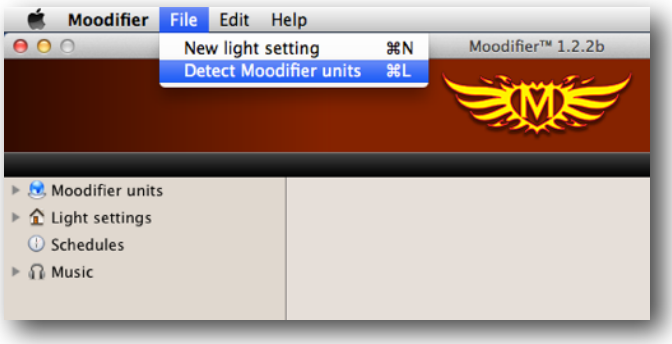
The Moodifier applications light setting view lets you easily choose light scene and exact dim level with a single mouse click.

Detecting Moodifier & hue units on the network

Download the latest version of the Moodifier application from http://www.moodifier.net/download

Start the Moodifier application.

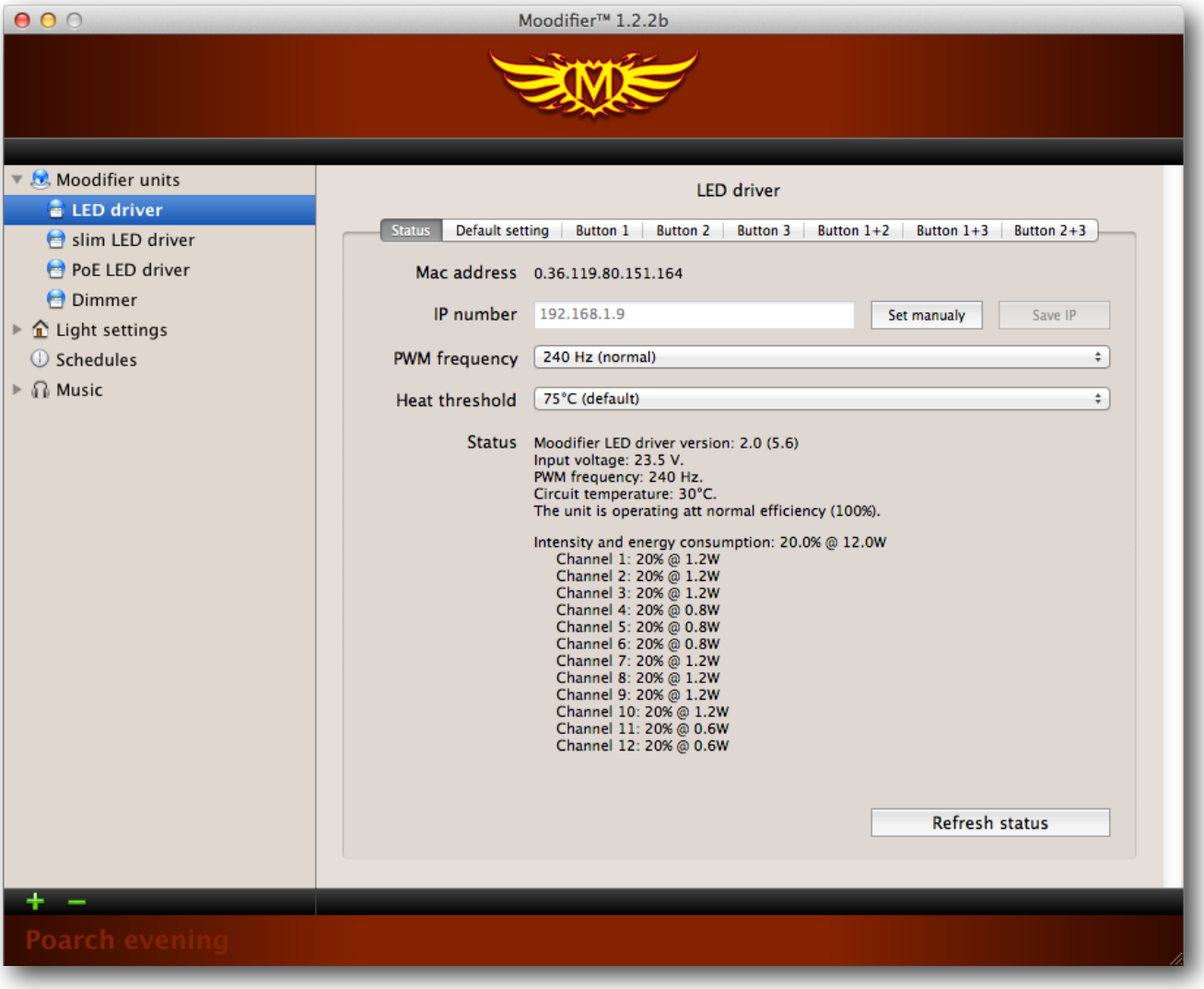
In the File menu choose "Detect Moodifier units"



All Moodifier units on the local area network (LAN) will now be listed and shown under "Moodifier units" in the upper left area of the main view of the application.

Click on a unit and you will se the current status of that unit.

Each Moodifier unit is automatically assigned a unique IP number via DHCP, but you can also set the IP number manually if required.

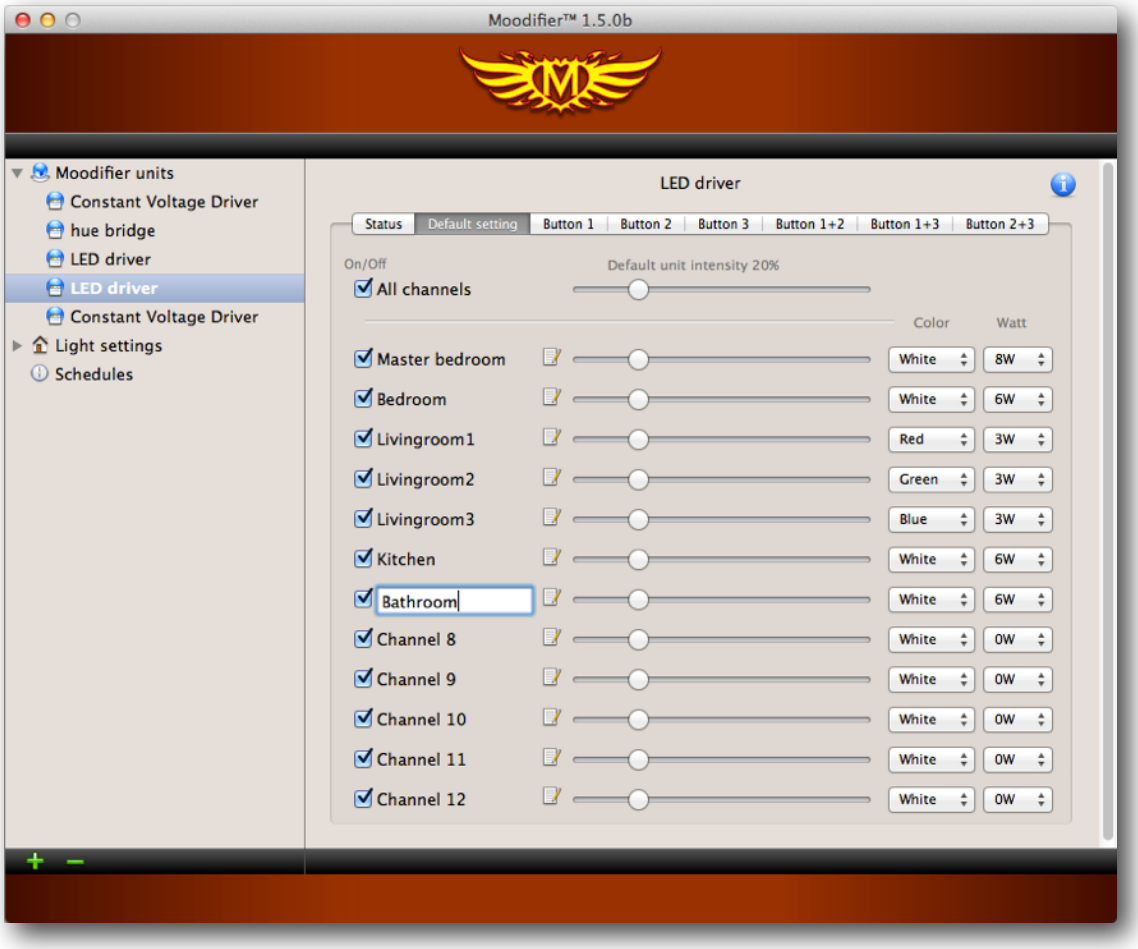


Moodifier unit setup and default settings

Each Moodifier unit has a set of default settings that can be configured. Theses settings are usually only set up once, when the unit is installed and activated for the first time. The default settings let you configure the following:

- Assign an individual name for each channel on the unit.
- Assign the color of the LED lights that are connected to each channel (red, green, blue or white).
- Assign the wattage of the lights that are connected to each channel.
- Set the default light setting is activated every time the unit is powered on or after a power failure.

The default setting of a Moodifier unit is set by clicking on the Moodifier unit and then the "default setting" tab. Then you simply drag the light intensity sliders of each channel on the unit to the level you prefer. If a particular channel on the Moodifier unit is not used (has no lights connected to it) you can simply deactivate it by unchecking the check-box for that channel.



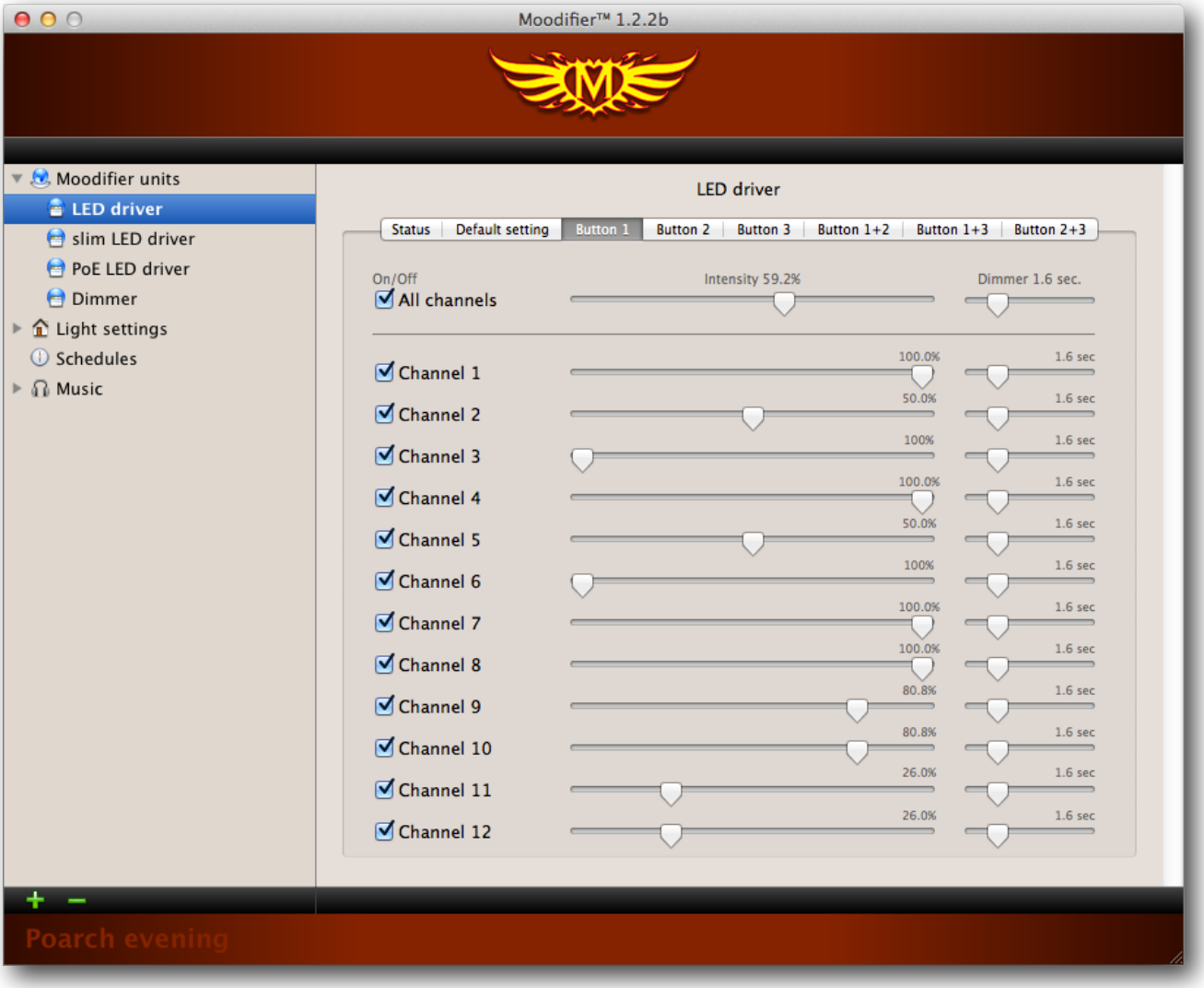
If you have multi colored RGB lights connected to any of the channels of the Moodifier unit you need to manually set the color of those channels. This is easily done by simply choosing the matching color in the popup menu to the right of each channels intensity slider.

You can also give the Moodifier unit its own name like "Livingroom", Bedroom" etc. by clicking on the units name at the top. If you have multiple Moodifier units you simply do the same procedure for each one.

Configuring wall mounted push buttons

Moodifier units have connectors for up to 6 wall mounted push buttons. The Moodifier application lets you easily set the light scene that each button should activate. Choose the button that you want to modify by clicking that buttons tab. Create the light scene you want that button to activate, de-activate and dim by dragging the channel sliders to the level you prefer. A push on the button will then activate, deactivate and dim that light scene. The "Transition" slider controls the speed of the transition when the light scene is activated and deactivated. If you want one or more channels to be unaffected by a push on the button you simply deactivate those channels by unchecking the check-box at the left of the channel sliders.

The push buttons light settings are permanently stored in the Moodifier unit, but if you like you can change them again at any time by repeating the same procedure.



Creating your own light settings (light scenes)

The Moodifier application lets you easily create as many light settings as you like.

To create a new light setting you simply choose "Light settings" in the applications main menu and click the green "+" sign at the bottom of the list, or choose "File –> New light setting" in the top menu.

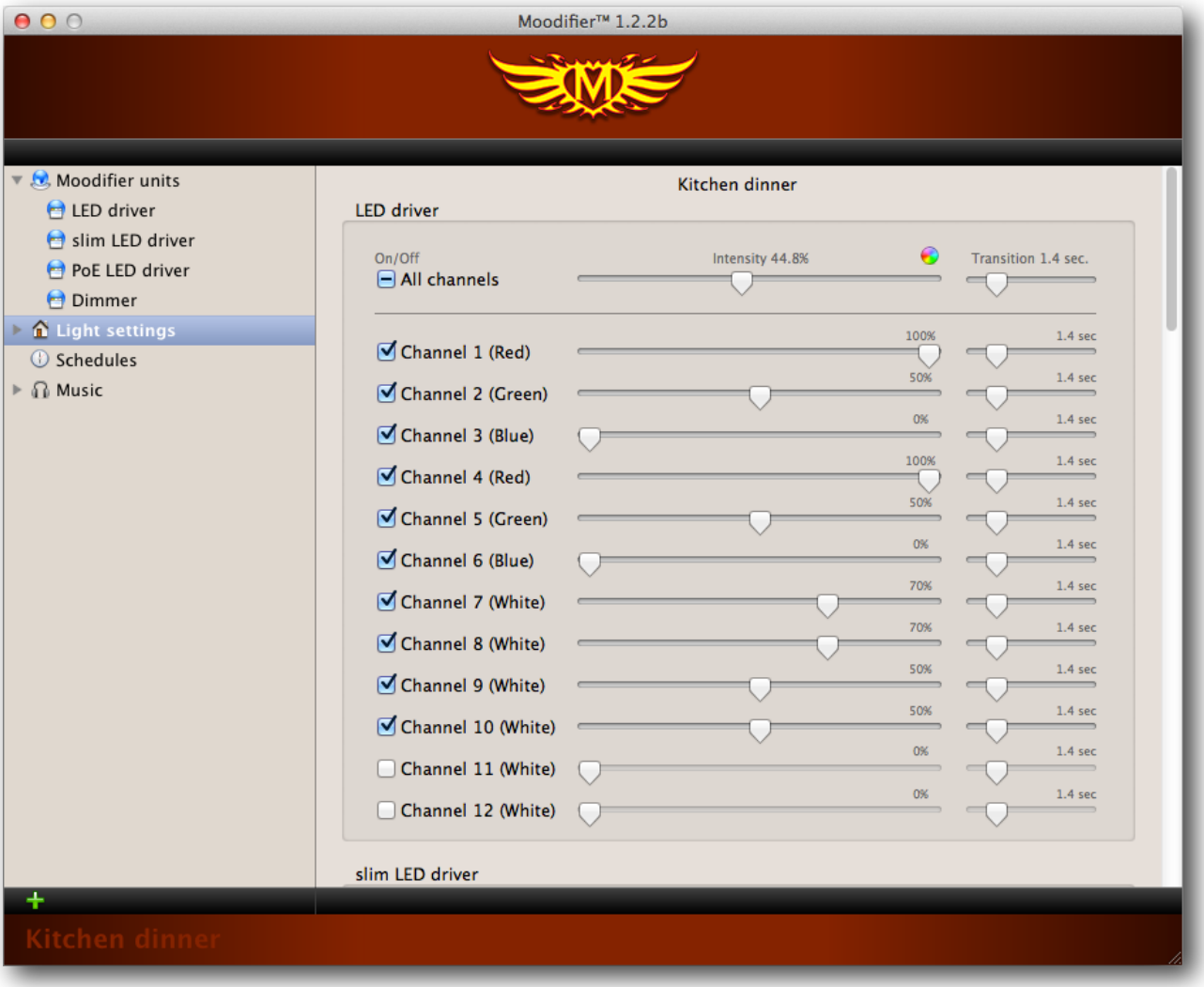
A light setting view with all of your Moodifier units and all their channels is then shown.

Drag the light intensity sliders to the levels you prefer. The lights react in realtime as you drag the sliders so you get instant visual feedback.

The "Transition" slider, at the right of the intensity slider, controls the transition speed when the light scene is activated and deactivated.

If you want one or more channels to be unaffected in any particular light setting you simply deactivate those channels by unchecking the check-box at the left of the channel intensity sliders.

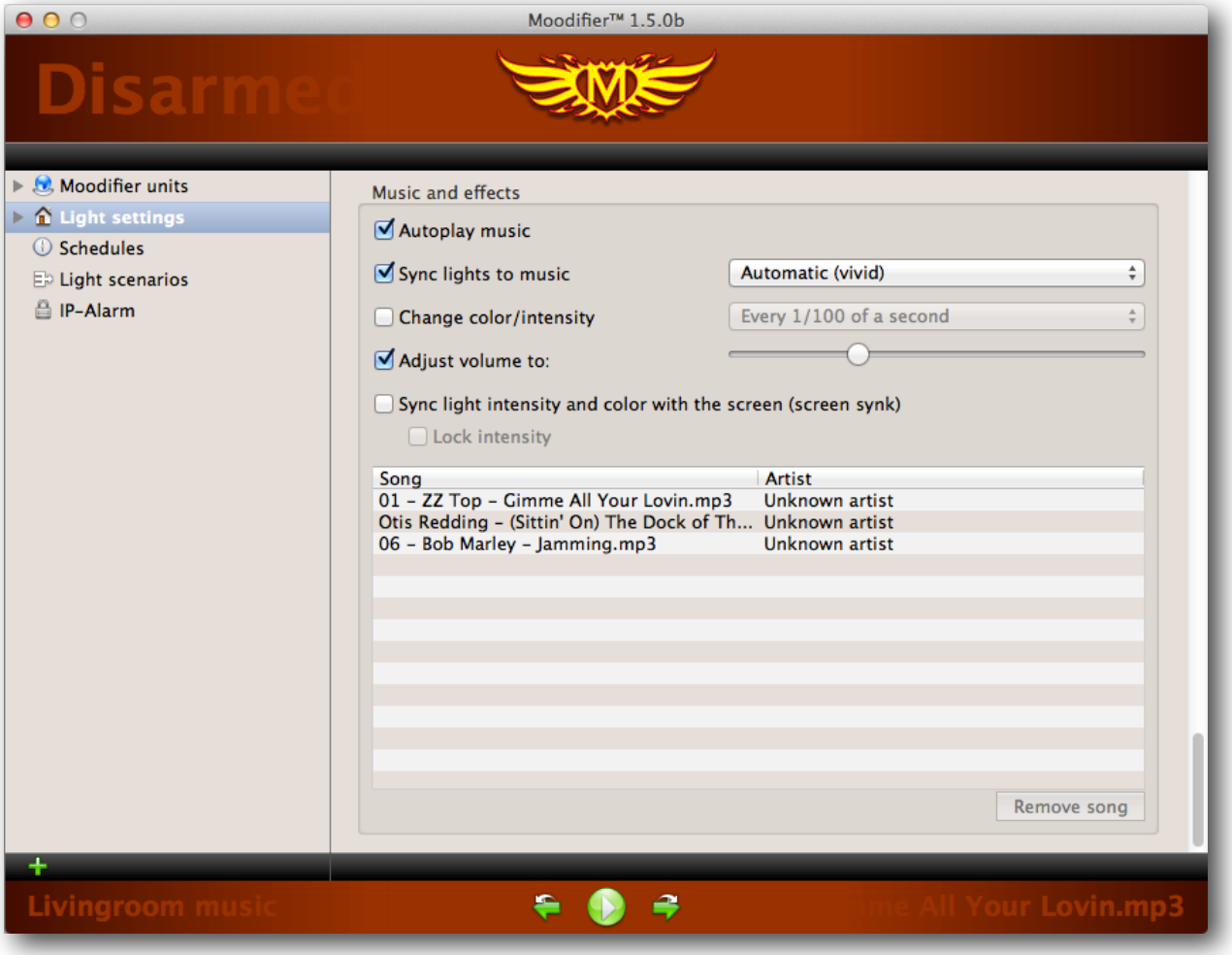
You give the light setting/scene a unique name by clicking on the name of the light setting at the top, and then typing in your own name for the light setting/scene.



Adding music and effects to a light setting

A light setting/scene can also contain music that can be played whenever the light scene is activated. You can also make the lights sync up to and follow the beats in the music if you like.

To add music to a light setting you first scroll down to the bottom of the light setting, where you will find the "Music and effects" area.



When music sync is activated and you have colored lights, RGB connected to the Moodifier unit(s) you will notice that the bass tones sync up with the red lights, mid tones with the green lights and high tones with the blue lights. White lights will follow the overall strength of the music.

The light intensity and dimmer sliders of a light scene will get a somewhat different meaning whenever music sync is activated.

There are nine different music sync modes divided in to three different groups.

1) Automatic

2) Manual levels, beat sync

3) Manual levels, direct sync

The "Automatic" modes are as they say fully automatic. They will analyze the music, set automatic intensity levels, depending on the music, and sync the lights to the beat of the music. You can not modify how the lights react to the music when choosing any of the Automatic modes, everything is automated for you.

The "Manual levels, beat sync" modes will analyze the music to find its beats, and sync the lights to the beat. The light intensity sliders of each of the channels sets the threshold to how each channel should react to a change in the music. The light intensity slider of each channel sets how sensitive that channel is to changes in the music. Setting the sliders to 100% will make the lights respond (light up) to the tiniest little whisper. For most music this will result in a very (to) bright light that, to the human eye, does not seem to sync up to the music very well. A rule of thumb, when creating a good music sync light scene, is therefor to start by setting all the light intensity sliders to about 30-40% intensity and changing the individual channel sliders little by little from there until a desired audio-visual music sync effect is achieved.

The "Manual levels, direct sync" modes will sync the lights to the music just as it is played. The light intensity sliders of each of the channels sets the threshold to how each channel should react to a change in the music. The light intensity slider of each channel sets how sensitive that channel is to changes in the music. Setting the sliders to 100% will make the lights respond (light up) to the tiniest little whisper. For most music this will result in a very (to) bright light that, to the human eye, does not seem to sync up to the music very well. A rule of thumb, when creating a good music sync light scene, is therefor to start by setting all the light intensity sliders to about 30-40% intensity and changing the individual channel sliders little by little from there until a desired audio-visual music sync effect is achieved.

Soft, medium and vivid options of the modes changes the strength of the light output in relation to the changes of the music. They are basically what they say, soft, medium and vivid light reactions to the music.

Adding songs to a light setting is very simple, just drag the songs you want to add on to the song list at the bottom of the light setting.

If you want to auto play the music whenever the light scene is activated you simply check the "Autoplay music" check-box.

If you want to sync the lights to the music you simply check the "Sync lights to music" check-box and choose the music sync mode you would like to use.

If you also would like to auto adjust the output volume you can optionally check the "Adjust volume to" check-box and set the volume slider to the level you like (useful for wakeup schedules).

Screen sync

With the screen sync effect you can easily make the lights follow the intensity and color of the screen in real-time. The on screen action will then flow out and embrace the room. To create a good screen sync light scene you should do the following, in the following order.

1) Make sure that the "Sync light intensity and color with screen (screen sync)" check-box is un-checked.

2) Set all the light channels with white lights to 100%

3) Color-mix all your RGB (colored lights) to output as much plain white light as possible.

4) Check the "Sync light intensity and color with screen (screen sync)" check-box.
Done! The lights should now sync with the screen in real-time.

Lock Intensity

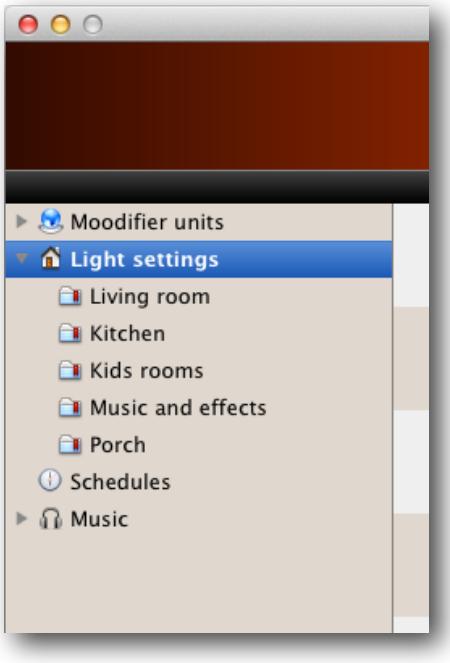
If you only wish to synchronize the LED lights with the colors of the screen you may optionally check the "Lock Intensity" check box. You can then manually control the intensity with the dimmer slider of the light setting.

Screen sync & DRM-protected content.

Some content, like movies bought from iTunes Store, are DRM protected. This type of DRM protection may prevent the Screen sync feature from working as intended.

Zones

When you have created many light settings it may be practical to organize them into different zones. You can for instance create different zones for your living room, kitchen, master bedroom, effects, and music etc.



Creating a zone is easy, just click on "Light settings" in the main menu and then click on the green "+" sign below the menu and a new zone named "New Zone" is created.

Adding light settings to a zone is simple, just drag the light setting from the main light setting list on to the zone.

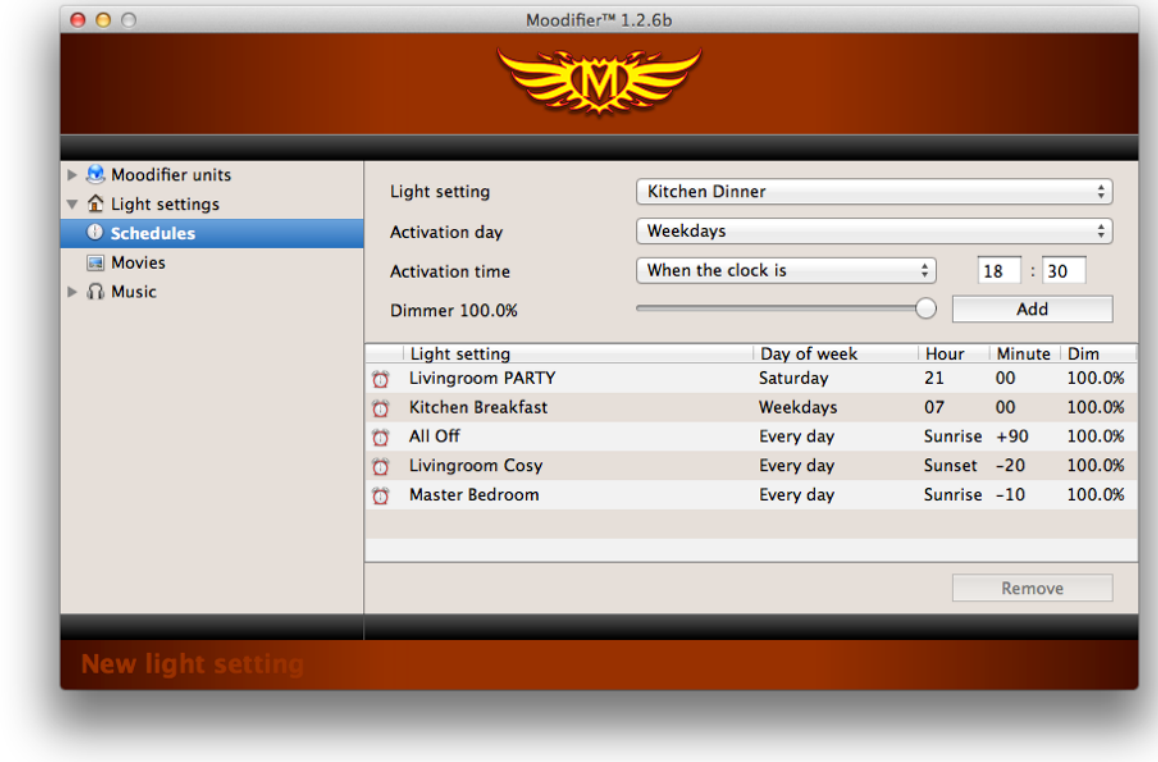
Click on the zone to see what light settings are in that zone. You can easily give the zone a unique name by clicking on its name at the top of the zone list.

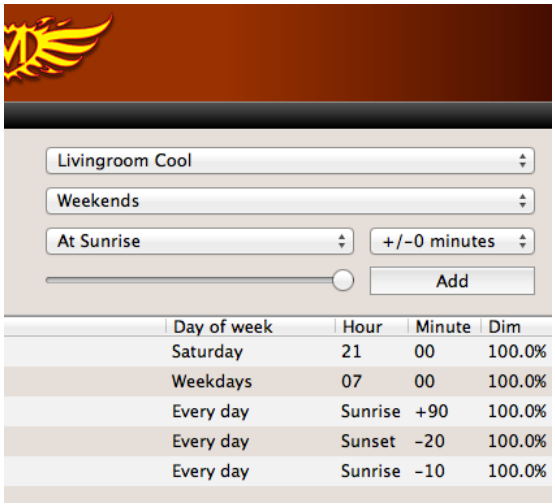
Scheduling, automation & the astronomical clock

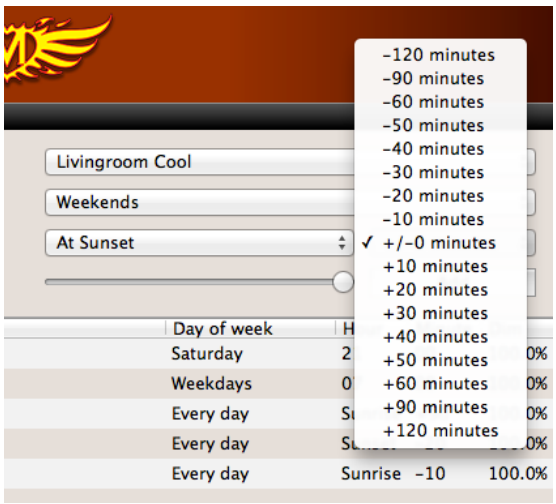
The Moodifier application lets you schedule and automate your whole lighting so that lights are turned on and of or dimmed at given times or in relation to sunrise / sunset.

Scheduling a light setting is simple. Click on "Schedules" in the main menu, choose a light setting you wish to schedule, choose what day(s) you want the event to activate (Monday, Tuesday, Wednesday, Thursday, Friday, Saturday ,Sunday, Weekdays, Weekends) type in the time (24h clock) or sunrise / sunset +/- offset, set desired dim level and click the "Add" button. The light setting is added to the list of active schedules.

To remove an active scheduled light setting you simply click on it in the list of active schedules and then click the "Remove" button.





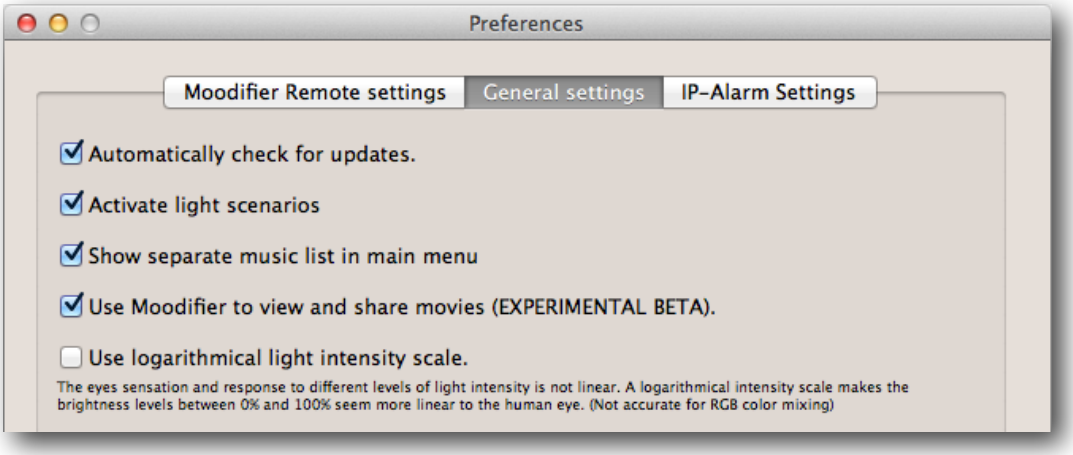


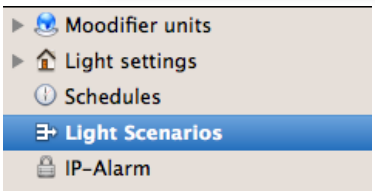
Light Scenarios

A light scenario is a chain of timed light events. It lets you activate a series of light settings as a timed playlist. Light scenarios can be used for many things from simple activation of one or more light settings to the creation of spectacular light shows and effects.

A simple light scenario can consist of two lighting events (light settings).
1) Turn the lights on when the light scenario starts (Kitchen ON).
2) Turn the lights off 2 minutes later (Kitchen OFF).

To enable light scenarios you first need to activate the feature by checking the "Activate light scenarios" checkbox in the general settings area of the preferences window.





When the light scenarios are activated you will notice that a "Light scenarios" item will appear in the main menu of the application. This is where you create and manage your light scenarios.

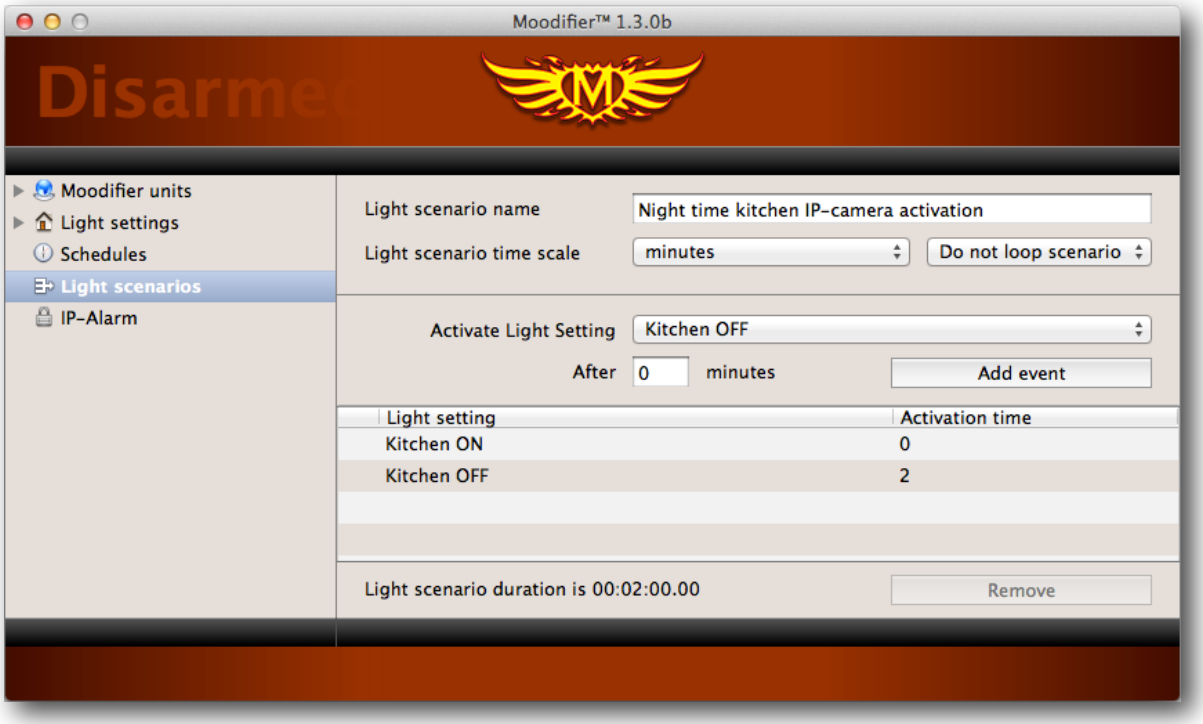
To create a new light scenario select "Light scenarios" in the main menu and then click on the "+" at the bottom of the light scenario list.

Give the light scenario a suitable name by filling in the light scenario name field.

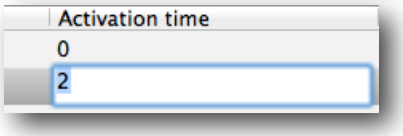
Each light scenario can have its own internal time scale ranging from 1/100 of a second to 1 minute. The time scale controls how quickly the light scenario can trigger the light settings. A time scale of 1/100 of a second will let you execute up to 100 lighting events per second and a time scale of 1 minute will let you execute 1 lighting event per minute. You can not execute multiple events at the same time. Choose a suitable time scale depending on what you aim to accomplish.

A light scenario can optionally be set to loop up to 3600 times before stopping playback. This is specially useful then you are creating lighting effects that you want to repeat over and over.

Once you have set the name, time scale and looping for the light scenario you are ready to add lighting events (light settings). Choose the light setting you want to activate with the Activate light setting popup menu, then type in at what time (from when the light scenario is started) that you want the light setting to activate. Click Add event to add the light setting to the playlist.



You can easily change the activation time of the added light settings by clicking the activation time field in the list of active light settings and entering a new time.

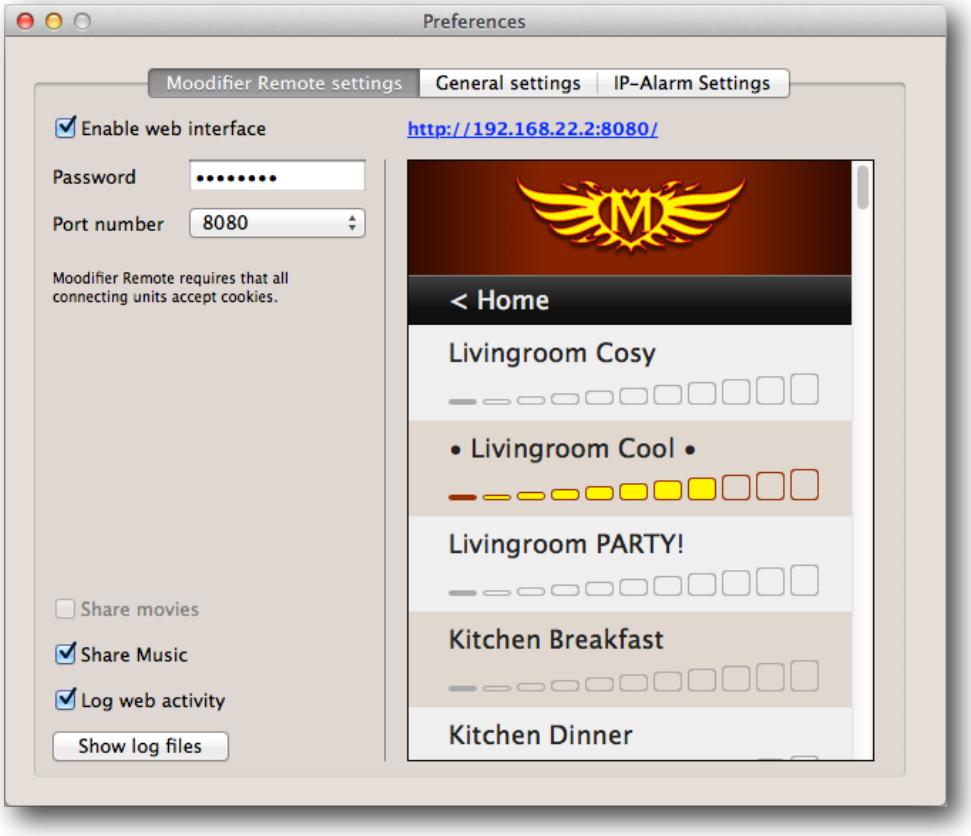


Moodifier Remote

The Moodifier application has a powerful built in web server with a web interface called "Moodifier Remote". Moodifier Remote makes it easy for you to remote-control your entire Moodifier lighting from any internet connected device, like an iPhone, iPad, iPod or Android device. All you need to do to access Moodifier Remote is to use a standard web browser on your device and surf in to the IP number and port of the computer running the Moodifier application. You can then bookmark or add Moodifier Remote to the home screen of your device for direct access on your device.

Moodifier Remote lets you remote control all Moodifier functionality including light settings/scenes, Zones, Light scenarios, IP-alarm, Status monitoring as well as enjoy remote music, video streaming and playback.

The built in web server and Moodifier Remote can easily be configured, activated/de-activated and password protected from within the Moodifier application by choosing "Moodifier –> Preferences" in the top menu. The preferences window is then opened.



You can then password protect access to Moodifier Remote with any password of your choosing, just type it into the Password field and you are done. By default the web server uses port 8080 but you can choose a different port number if you like. The right side of the preferences window automatically shows the Moodifier Remote web interface so that you can test your settings and, at the top, it also shows the web address you need to access Moodifier Remote from other devices. Just type it in exactly as it is shown on your external device and you should have access to Moodifier Remote from that device.

Any device on your local area network (LAN) should be able to access Moodifier remote using that address. Moodifier Remote will also auto announce itself on the LAN via Bonjour[1].

If you also want to be able to control your lights from the outside internet you will probably need to configure your router with port forwarding (port 8080 unless you have changed it) and also probably set up a dyndns service so that your LAN can be accessed from the public internet.

Please consult your routers documentation for further instructions.

A place to get more info on how to do this, and get started, is
http://dyn.com/support/wizard-js/#website-3

[1] http://en.wikipedia.org/wiki/Bonjour_(software)

Moodifier IP-Alarm

The IP-Alarm functionality integrates Moodifier with standard IP-cameras to create an intelligent and effective IP based surveillance and alarm system.

The IP-alarm concept is simple and straight forward. When an unauthorized intrusion occurs the following chain of events happen.

1) An IP-camera detects presence through PIR sensor or motion detection and sends an alarm command over the network to the Moodifier application.
2) The Moodifier application immediately activates a bright light setting (turns on the lights) to ensure that the IP-cameras get clear good pictures (IP-cameras do not work well in dark or low light conditions).
3) The Moodifier application immediately starts to record video from all available IP-cameras.
4) The Moodifier application immediately sends email and SMS notifications to notify you about the intrusion.
5) The Moodifier application continuously emails pictures from all IP-cameras to let you know what is going on and to visually identify the intruders.

To get started you will need Moodifier and one or more IP-cameras with PIR sensor and/or motion detection that supports HTTP actions. You will also need basic network knowledge on how to configure the IP-cameras and computers with fixed IP-numbers on your LAN.

IP-Alarm setup and activation

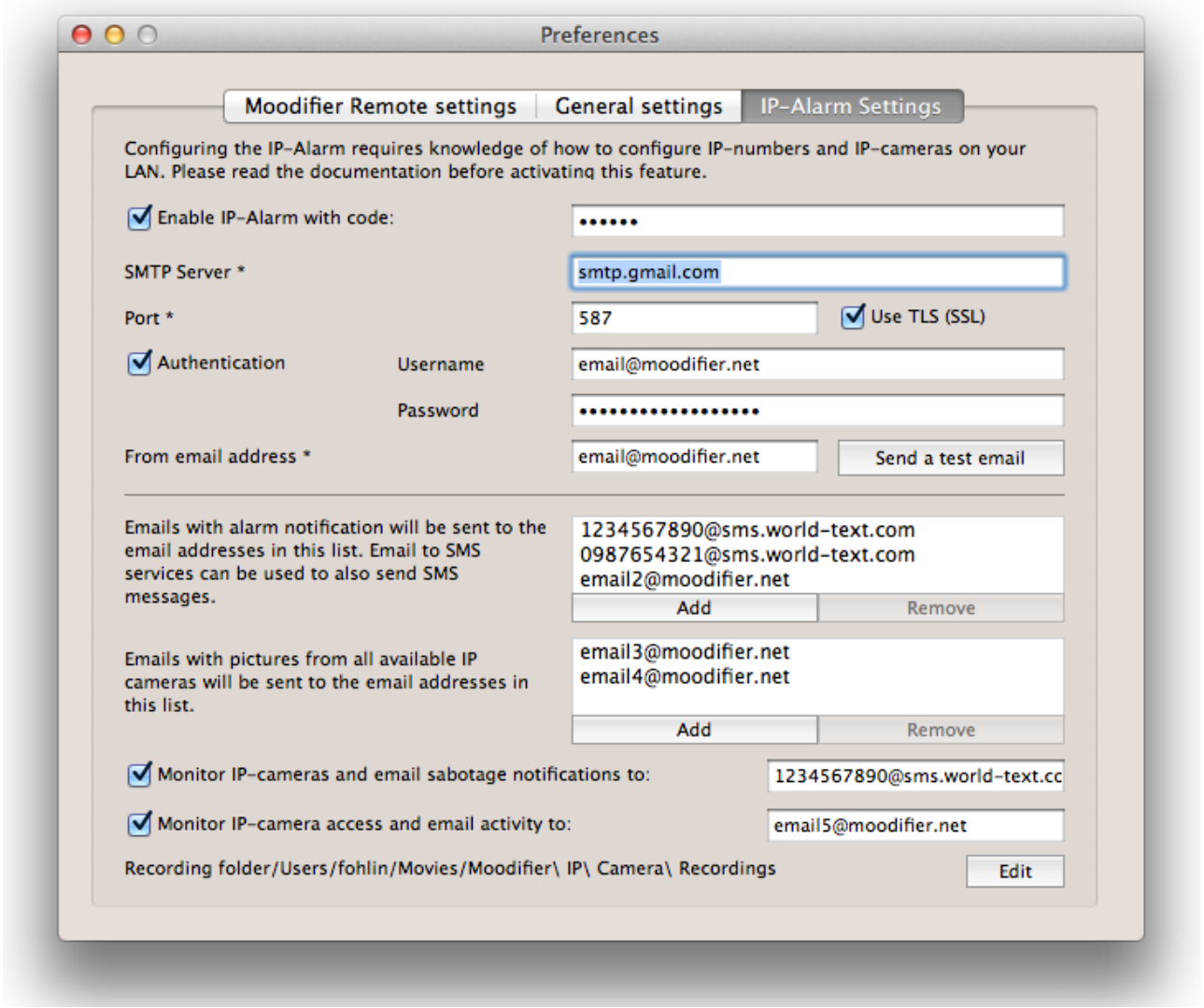
Before you can start using the IP-alarm functionality you will need to configure the Moodifier IP-alarm so that it can send email, record video etc.

Moodifier relies on the VLC media player for video recording so in case you do not have the VLC Media Player installed you will need to install it as a separate application. VLC is a free and open source cross-platform multimedia player and framework that plays most multimedia files as well as DVD, Audio CD, VCD, and various streaming protocols.

VLC media player is available as a free download on https://www.videolan.org

Once you have installed the VLC media player you can enable the Moodifier IP-Alarm and set it up.

Open the Moodifier Preferences window and select the IP-Alarm tab and click the "Enable IP-Alarm with code" checkbox.



Then fill in a pass code that will be required to be able to access the Moodifier IP alarm web interface. Then you need to fill in the required email account fields. Then add alarm notification email recipients in the lists at the bottom. You may then verify that all is working by sending a test email.

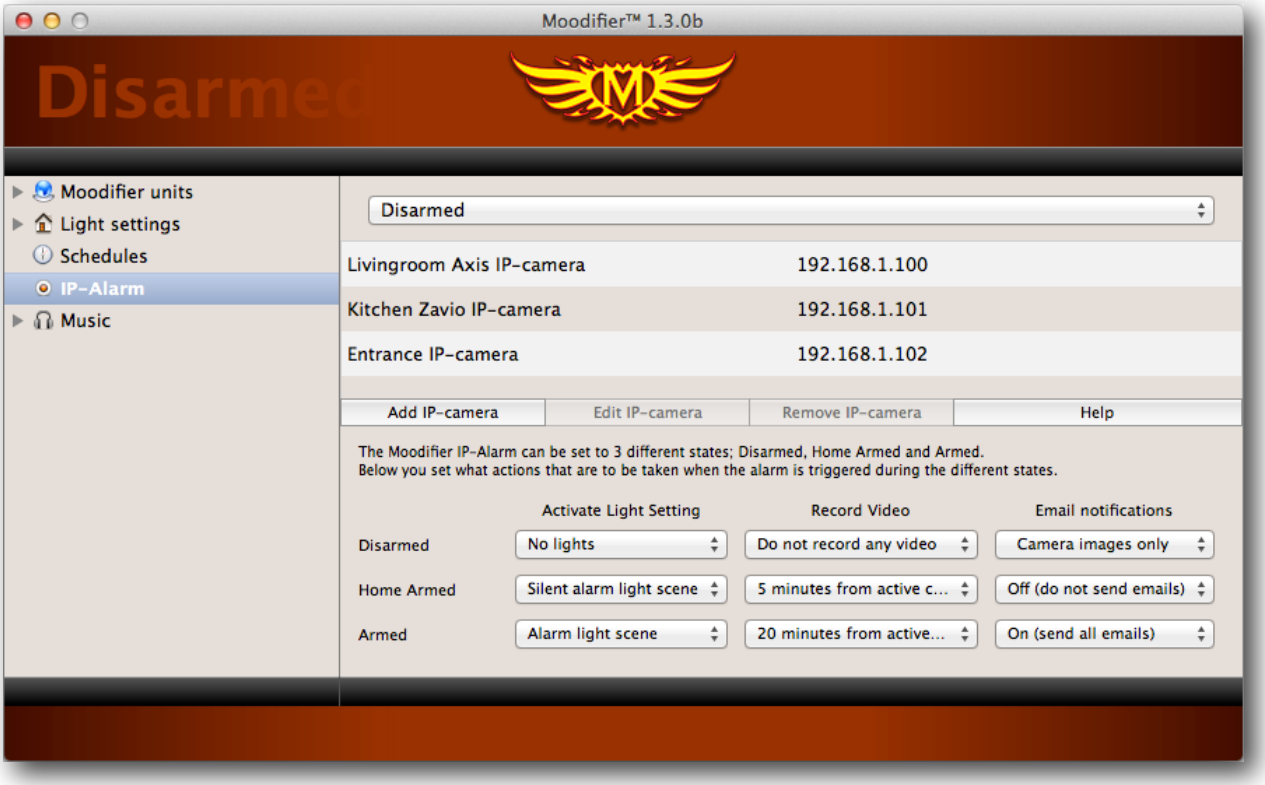
Checking the "Monitor IP-cameras and email sabotage notifications to:" checkbox will cause the Moodifier application to continuously check that all the cameras are online every minute. An email will be sent to the designated email address whenever a camera is disconnected from the network or otherwise not reachable.

The built in Moodifier Remote web interface will make it easy to view the images from all your IP-cameras, this can potentially be a threat to your privacy in case someone unauthorized gets access to the pass code, since they will then be able to view your cameras at any time. Checking the "Monitor IP-camera access and email activity to:" checkbox will send a notification email to the email address in the field informing you that someone has accessed and viewed your camera images.

You may also optionally change the location where the videos from the IP-cameras are recorded whenever the alarm is triggered.

IP-Alarm fundamentals

Once the IP-Alarm is enabled you will see a new "IP-Alarm" item appear in the main menu of Moodifier. Clicking on it will bring up the IP-Alarm view where you can add IP-cameras and set alarm state and actions.



The IP-alarm can be set to three different states; "Disarmed", "Home Armed" and "Armed".
You can for instance set the alarm state to "disarmed" when you are active in the home and "home armed" when you are sleeping during the night and "armed" when you are away.

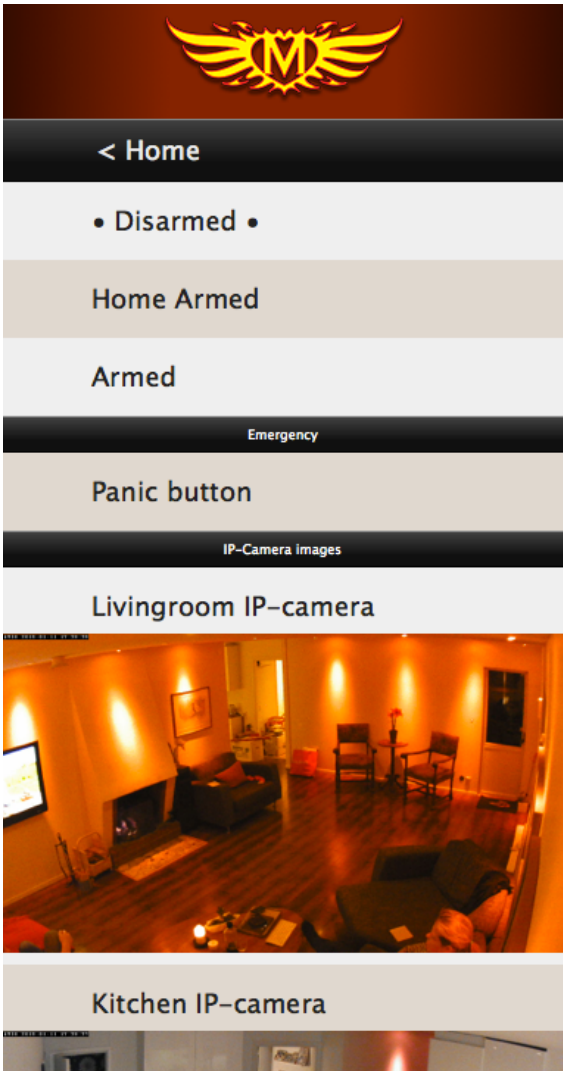
A set of actions can be set to execute when the alarm triggers during each of the three alarm states.

The following actions can be set for each of the three alarm states:
- Activate any light setting, with optional music, sounds or effects.
- Record video from all active IP-cameras for a specified duration.
- Send alarm notification emails and SMS (via email to SMS services[2])
- Send emails with pictures from all active IP-cameras.

Each IP-camera can also be set to be active or inactivate for each of the three alarm states.

Say for instance that you have one IP-camera covering the entrance of your home and you always want an image and/or a short video recording of everyone entering or exiting the premises.. You would set that IP-camera to be active during all three alarm states. A second IP-camera may cover a different area that only needs to send images and record video when the alarm state is armed, you then set that second IP-camera to be inactive during in the "disarmed" alarm state. To always take a photo of or record everyone entering or exiting the premises you set the actions for the "disarmed" alarm state to send images and/or record video. You will then always get is an image and/or short video of everyone entering or leaving the premises. As soon as you set the alarm state to "armed" you will get images and/or recordings from all cameras in the premises.

[2] https://www.world-text.com

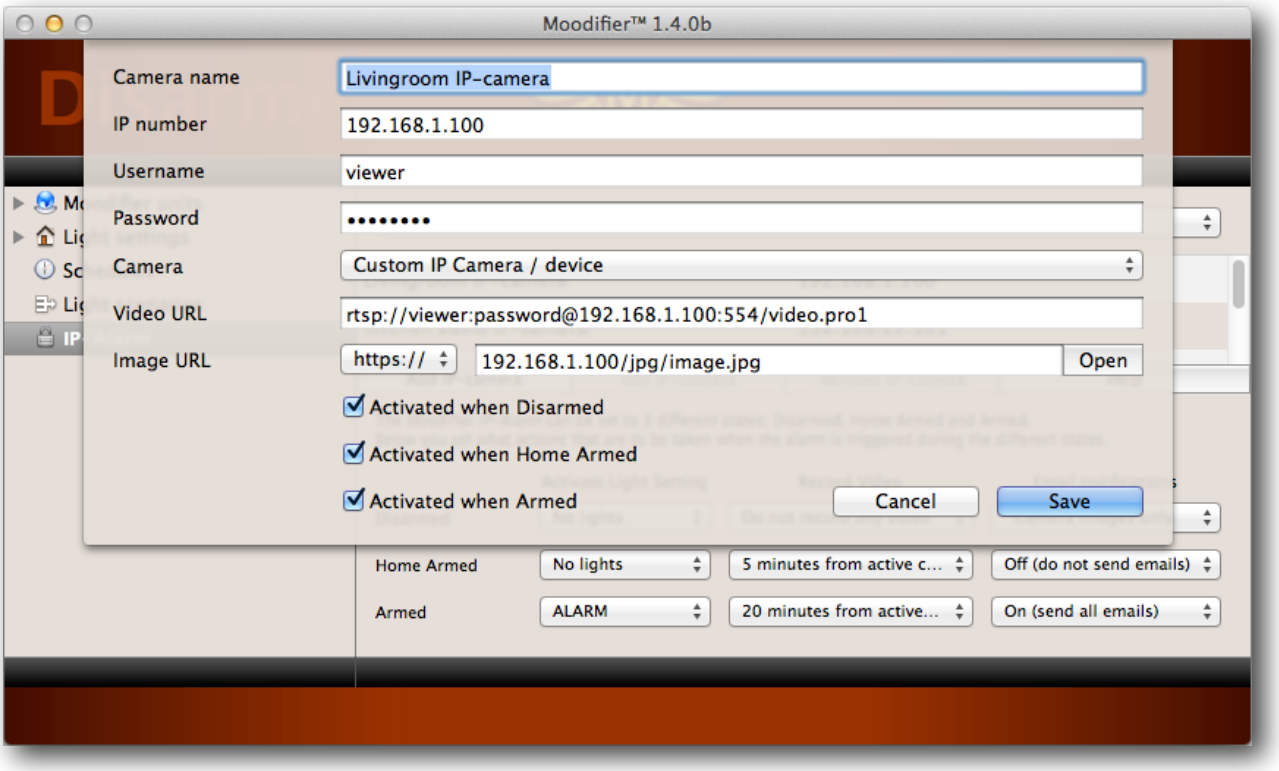


You can easily set the different alarm states, Disarmed, Home Armed or Armed with the popup menu in the IP-Alarm section of the Moodifier application or through the Moodifier Remote web interface from any device anywhere.

The Moodifier Remote web interface will also present a image from all the IP-cameras that have been added to the system.

Adding IP-cameras to the Moodifier application

Adding an IP-camera to the Moodifier IP-alarm is easy, just click the "Add IP-camera" button and fill in the fields that appear in the IP-camera window. Give the camera a name, fill in the IP number of the camera, and the username and password to access the camera. If you have an Axis or Zavio camera you can then just choose "Axis" or "Zavio" in the camera popup and the video and image URLs will auto propagate. Otherwise you simply add the video and image URL that apply to your camera. Lastly you can set the alarm states where you want the camera to be active by clicking the "Activated..." checkboxes.



Recommended and compatible IP-cameras

Any IP-camera with motion detection and/or PIR sensor that supports HTTP actions, rtsp streaming (h264), and jpeg image capture should be compatible. Below we have chosen to highlight a few IP-camera brands and models that we particularly like and know work well with Moodifier.

If you are buying a new IP-camera we strongly recommend that you choose an IP-camera with a PIR sensor since the PIR sensor can detect motion and presence in complete darkness. Plain motion detection does not work as well in low light situations or complete darkness.

Axis

Axis Communications is the market leader in IP-cameras and all their cameras are of high quality and offer a plethora of advanced features. Axis offers a full range of IP-cameras suitable for any situation. All Axis IP-cameras are fully compatible with the Moodifier IP-alarm system. For normal indoor use we recommend the HD (720p) M10-series with PIR sensors (M1033-W, M1034-W, M1054)
http://www.axis.com/products/m10_series/

http://www.axis.com

Zavio

Zavio offers a very nice and affordable range of very feature rich HD (720p) and full-HD (1080p) IP-cameras with excellent image quality and PIR sensors that all work perfectly with the Moodifier IP-alarm system. For normal indoor use we recommend the 720p F31- and 1080p F32-series with PIR sensors (F3110, F3115, F3210, 3215)
http://www.zavio.com/category.php?id=28

http://www.zavio.com

Configuring IP-cameras to trigger the Moodifier IP-Alarm

The Moodifier IP-Alarm is part of the Moodifier application (Moodifier Remote) and alarms are triggered by simple http-requests to the web interface of the Moodifier application. We therefore strongly recommend that you set up a fixed IP number for the computer that is running the Moodifier application. This can be done in the Admin section of your router.

Presuming that you have set the fixed IP number of the computer running the Moodifier application to 192.168.1.99, with Moodifier Remote using port 8080, you would trigger the Moodifier IP-Alarm by requesting the following URL:

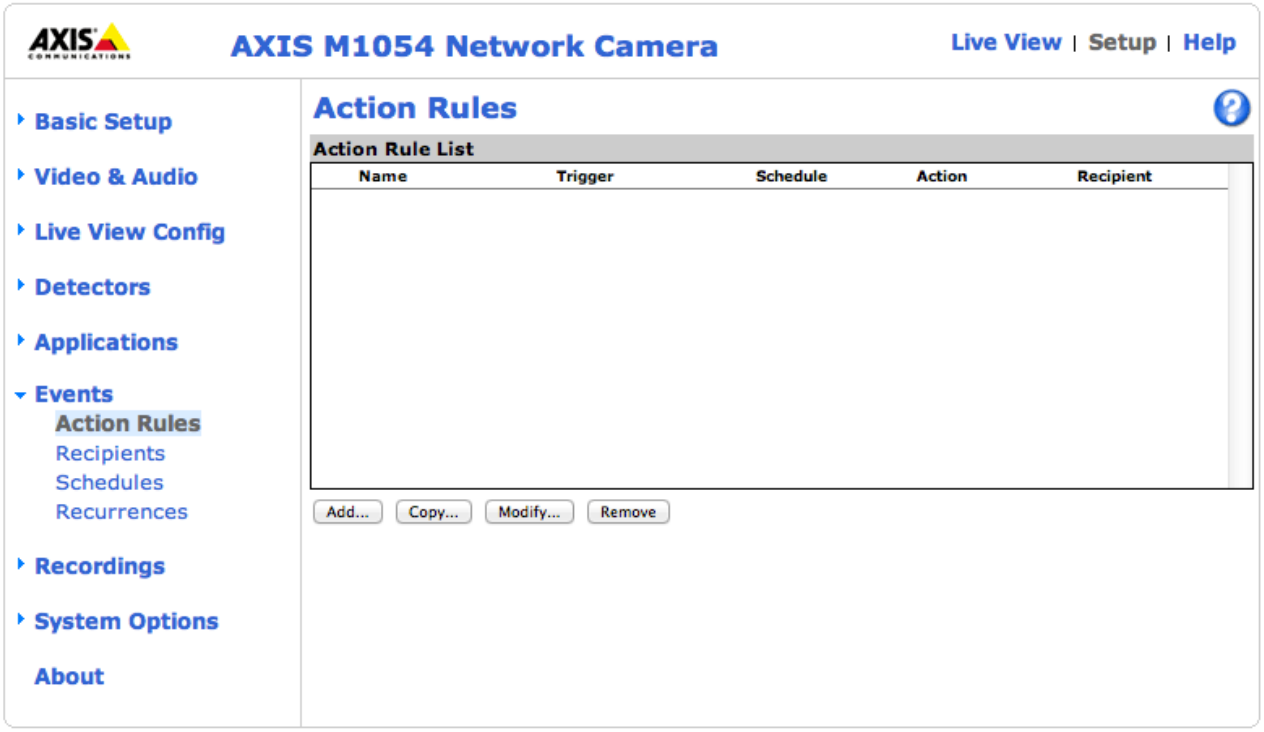
http://192.168.1.99:8080/TRIGGER

Before an IP camera will be allowed to trigger the alarm you must add it to the list of IP-cameras in the Moodifier application. Once a camera (or IP number) is added to the list of cameras in the Moodifier application it will be able to trigger the IP-alarm. You can add as many IP-cameras as you like.

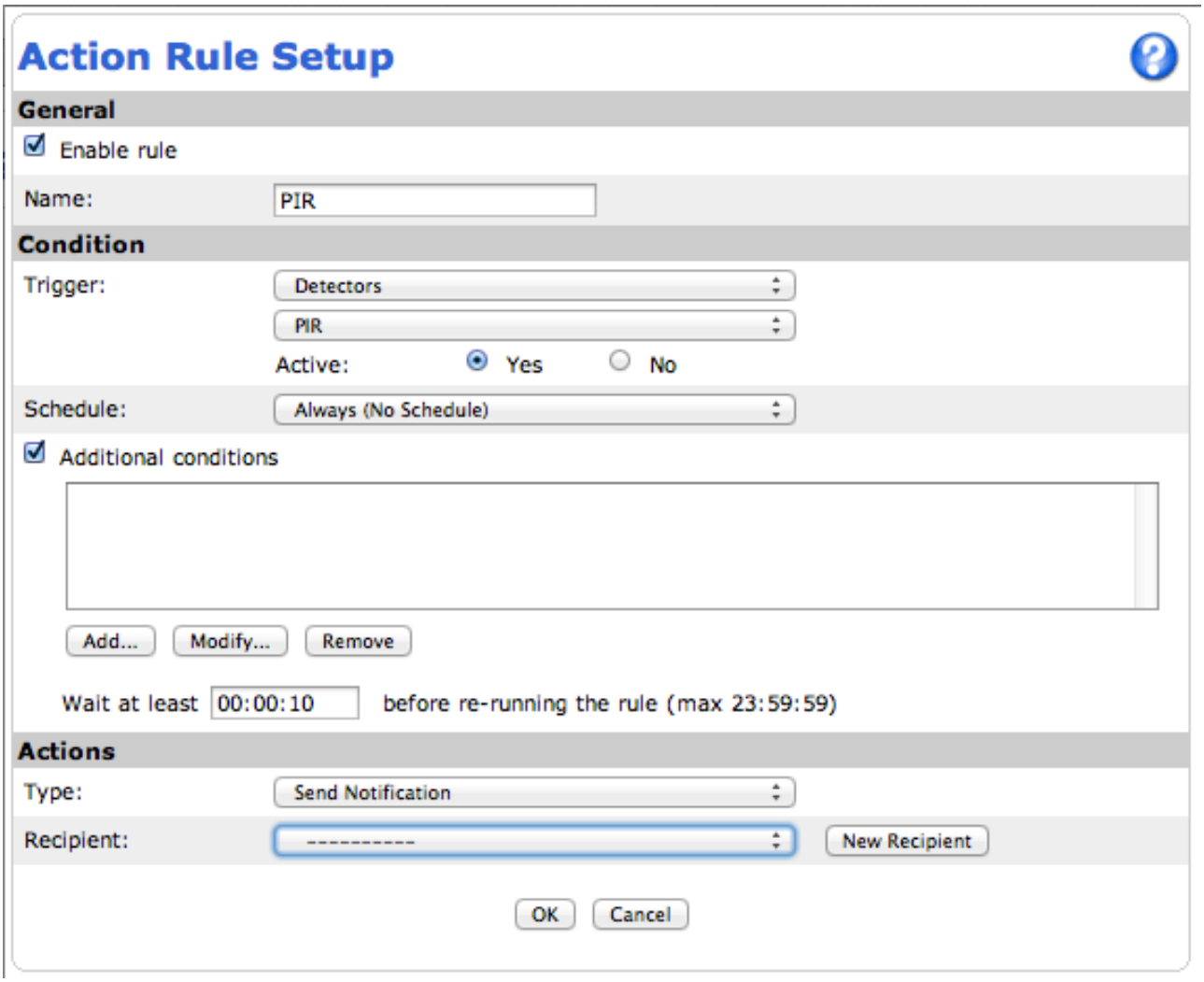
What you then want to do is basically to set up your IP-camera to execute a http-request to http://192.168.1.99:8080/TRIGGER whenever the PIR-sensor or motion detection of the camera is triggered.

Setting up an Axis IP-camera

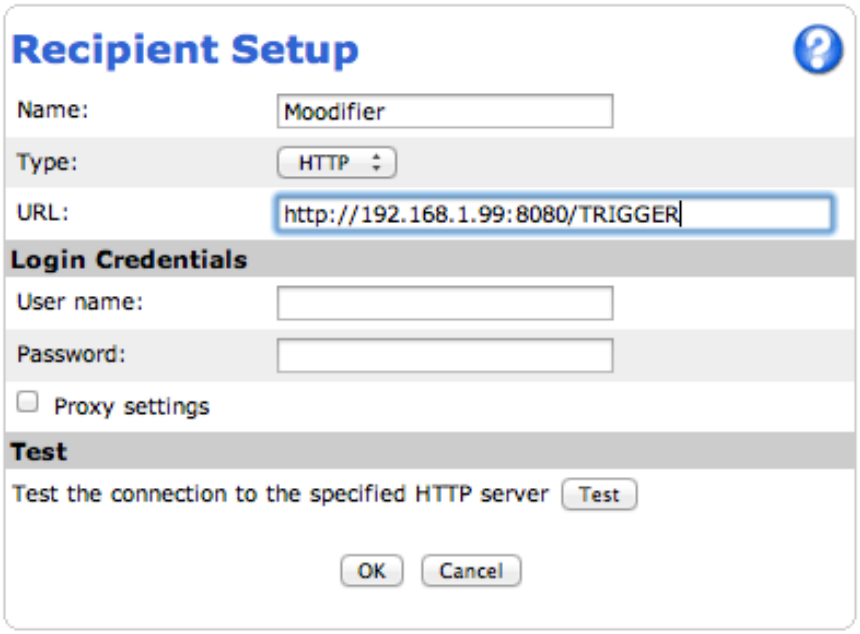
1) Log in to the Axis camera web interface and navigate to "Events" –>"Action Rules" in the Setup menu.



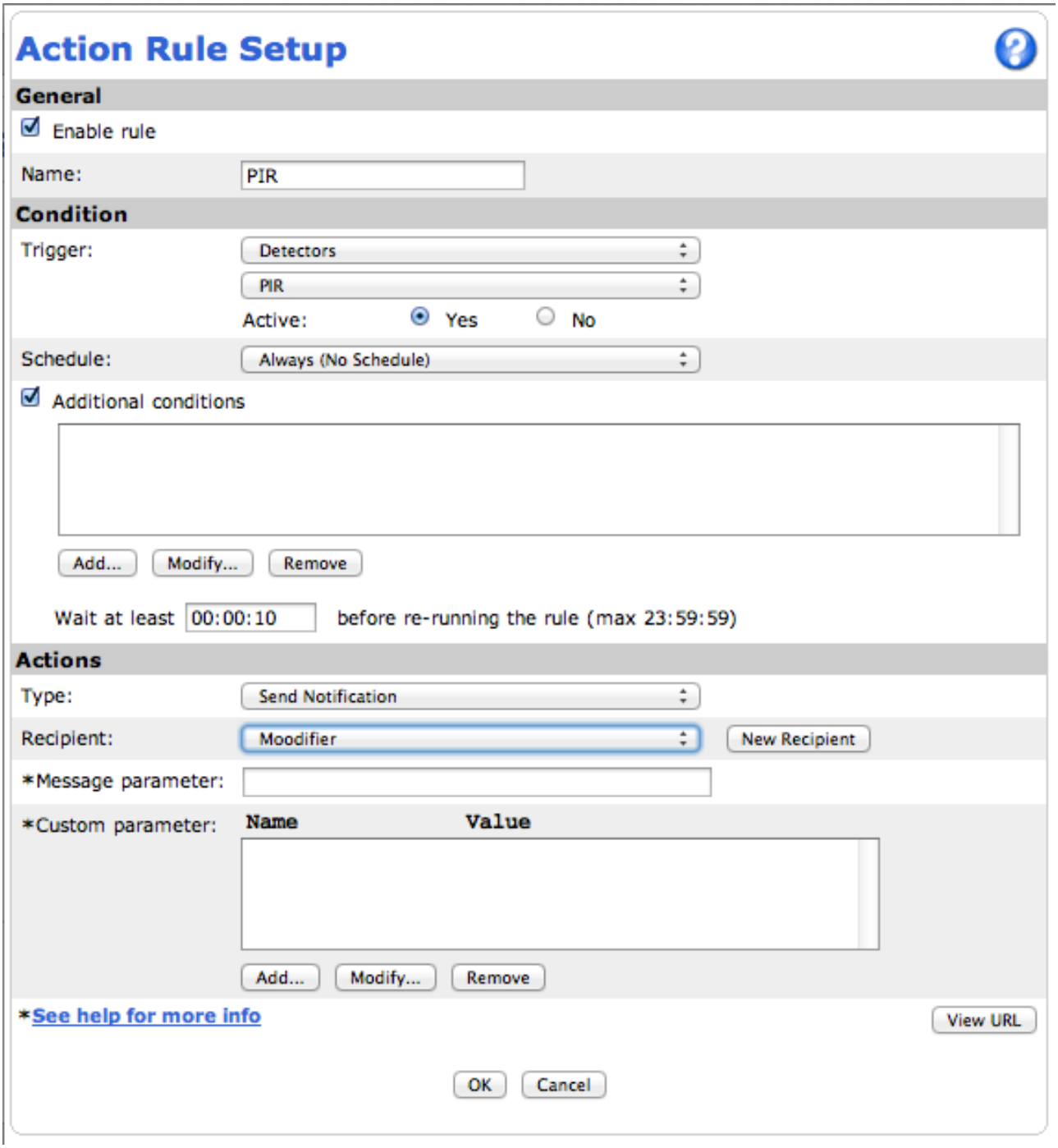
2) Click the "Add..." button to add a new action rule. The action rule setup window appears. Fill in the fields according to the below image.



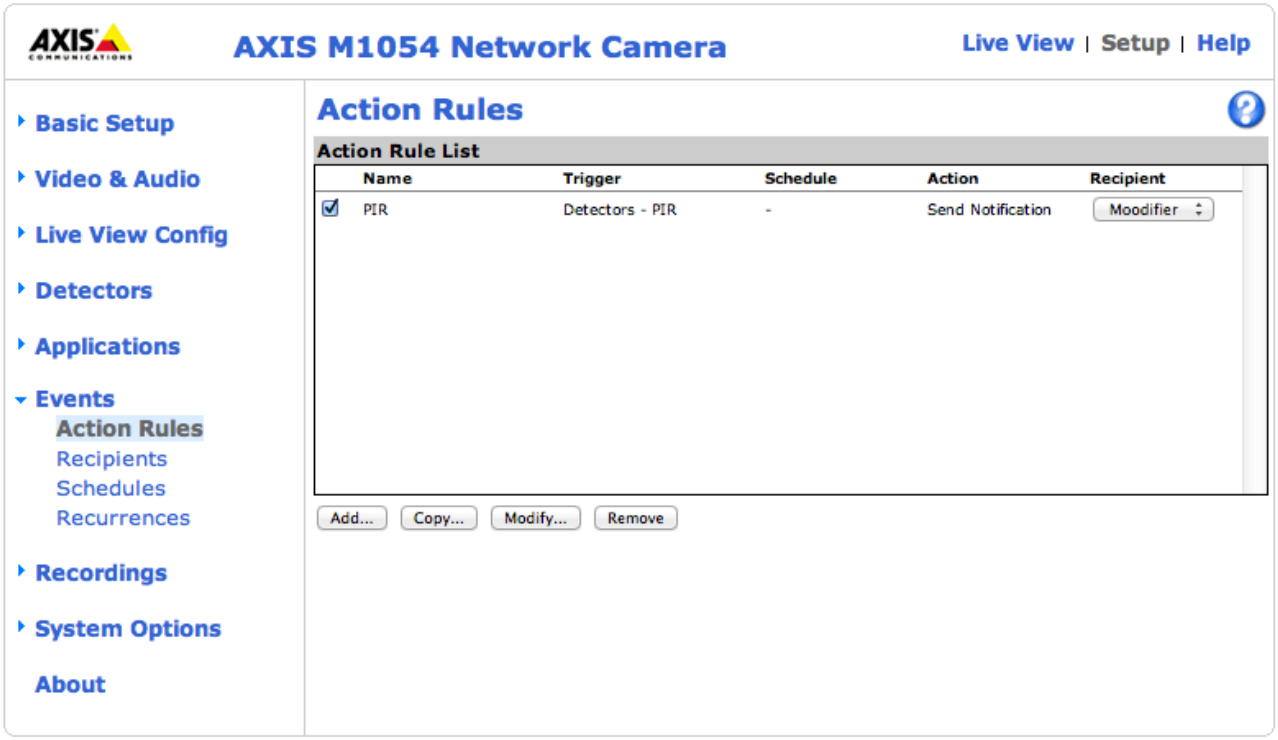
3) Click the "New Recipient" button to add a new recipient (Moodifier). The recipient setup window appears. Fill in the fields according to the image below (presuming that you have set the ip number of the computer running the Moodifier application to 192.168.1.99 and the Moodifier Remote listening port to 8080).



4) Click OK in the recipient setup window and check that the new recipient is set in the action rule setup window.

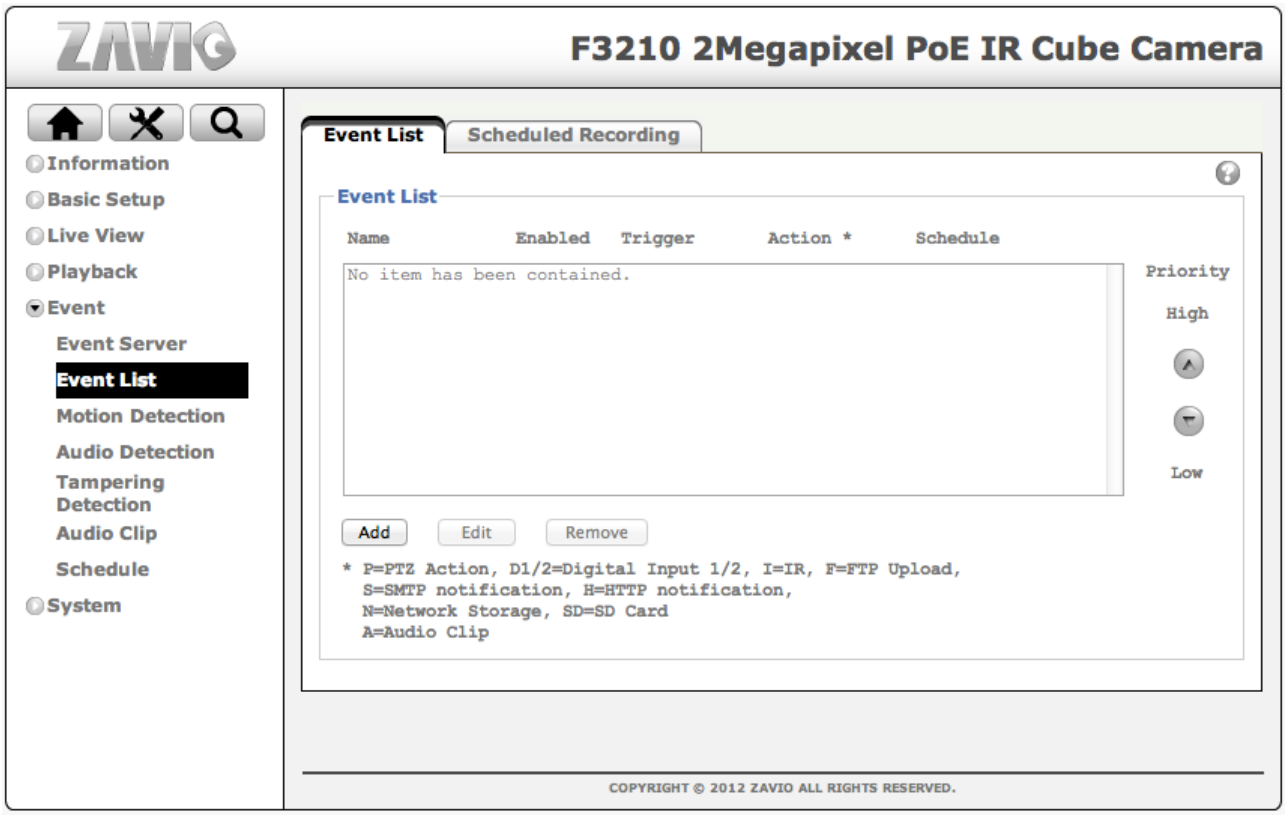


5) Click OK and you are done. The Axis IP-camera is now configured as a Moodifier IP-alarm sensor and camera.

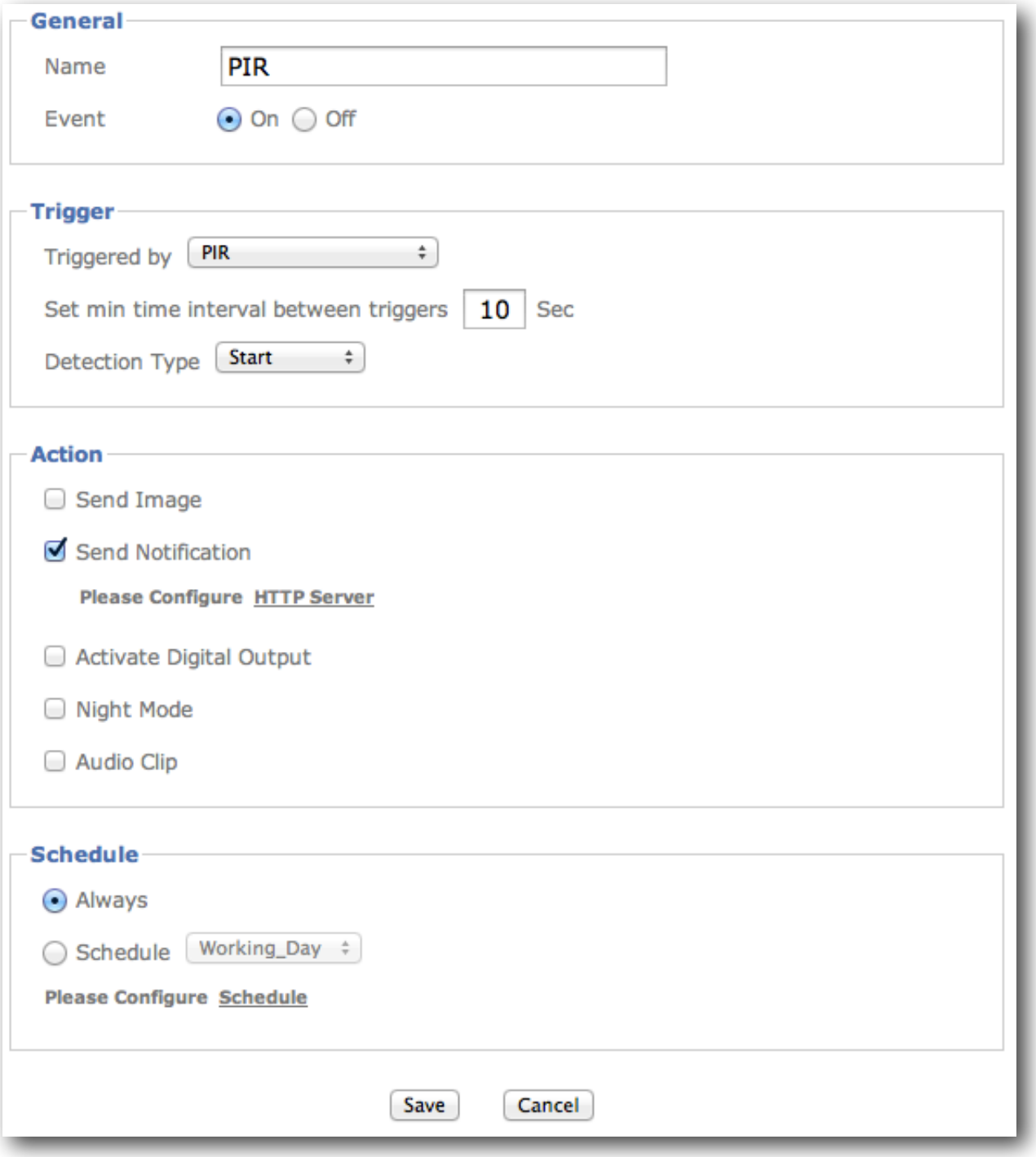

AXIS M1054 Network Camera
Live View | Setup | Help
Basic Setup
Video & Audio
Live View Config
Detectors
Applications
Events
Action Rules
Recipients
Schedules
Recurrences
Recordings
System Options
About
Action Rules
Action Rule List
Name
Trigger
Schedule
Action
Recipient
PIR
Detectors - PIR
-
Send Notification
Moodifier
Add...
Copy...
Modify...
Remove

Setting up a Zavio IP-camera

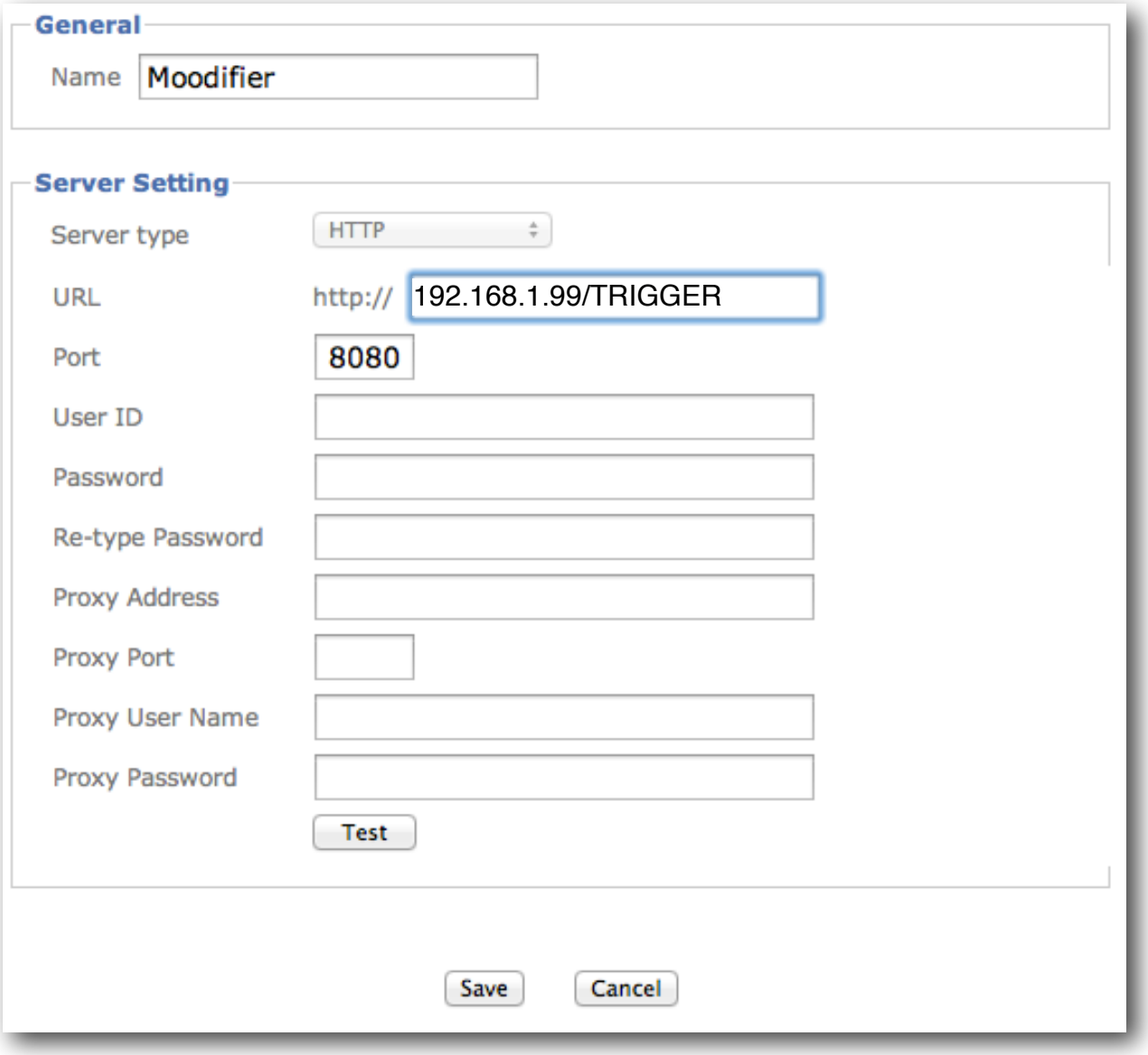
1) Log in to the Zavio camera web interface and navigate to "Event" –>"Event List" in the menu. Click "Add" to add a new event.



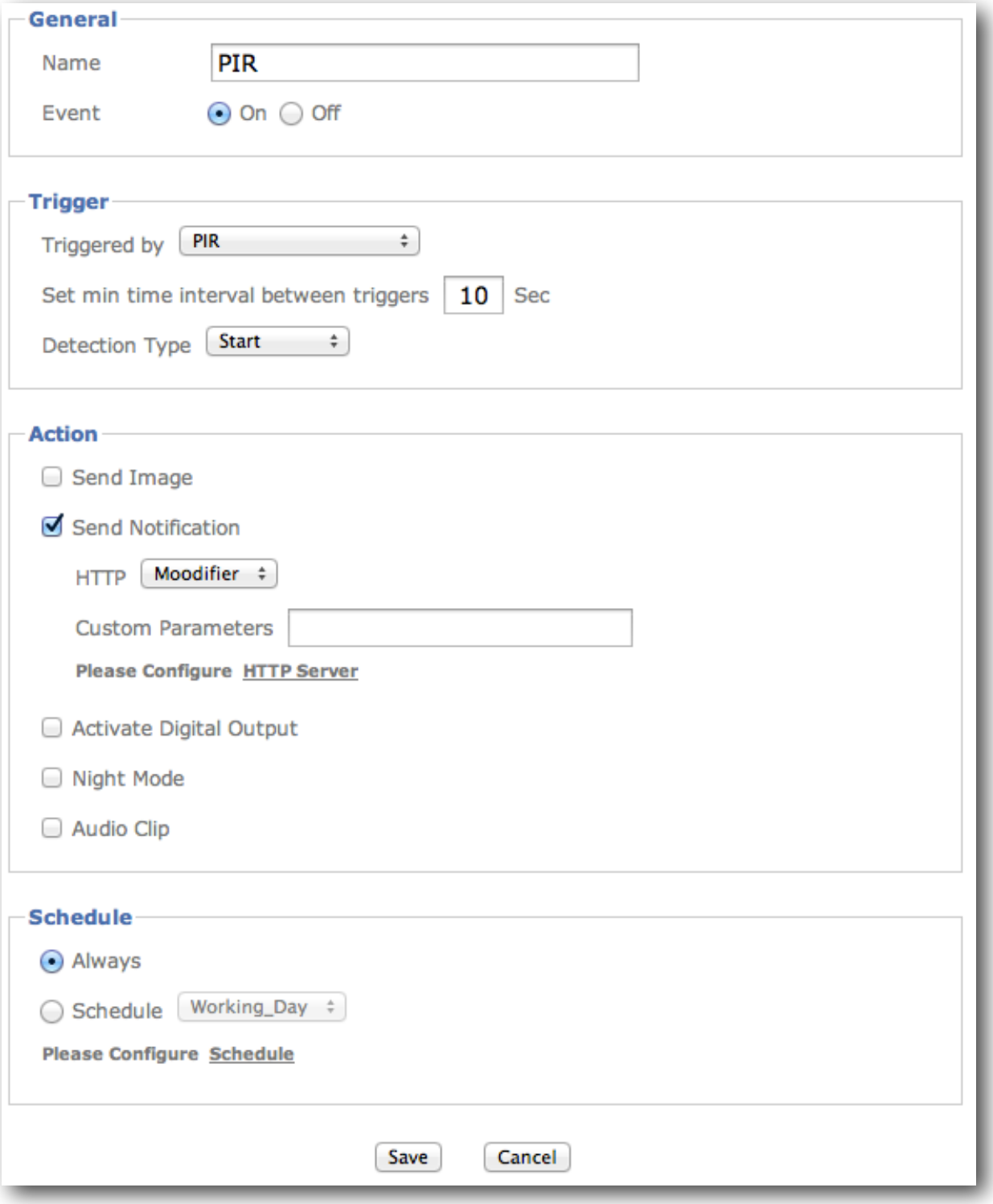
2) A new event window appears. Click the "Send Notification" check box and then click on "Please Configure HTTP Server".



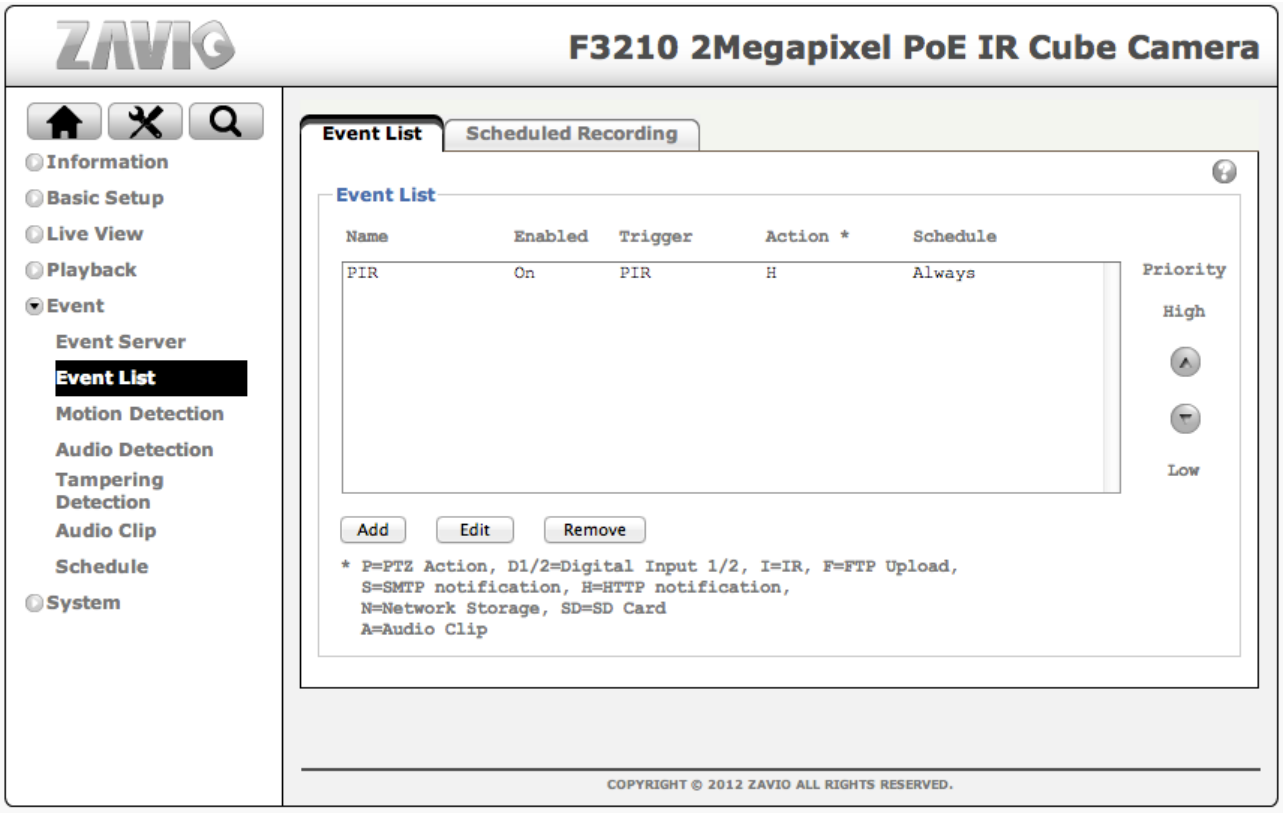
3) A new recipient window appears. Fill in the fields according to the image below (presuming that you have set the ip number of the computer running the Moodifier application to 192.168.1.99 and the Moodifier Remote listening port to 8080). Then click "Save", the window closes.



4) Fill in the fields and settings of the new event window according to the image below.



5) Click "Save", the window closes and you are done. The Zavio camera is now configured as a Moodifier IP-alarm sensor and camera.



Using IP-cameras for automated smart lighting control

IP-cameras can be seen as super intelligent IP based occupancy sensors on steroids. With both PIR sensors, advanced video detection and built in scheduling they make a giant leap forward when it comes to smart occupancy sensors.

Moodifier´s IP network foundation and unique features enables full IP-camera integration that in turn takes automated smart lighting control to the next level.

An IP-camera can easily be configured to monitor a room or area and, based on motion detection in the room as a whole or any part(s) of the room, it can execute the following Moodifier lighting commands over the network.

- Activate any light setting (with optional effect and/or music playlist playback)
- Activate any light scenarios (chain of light settings)..
- Trigger the IP-alarm (to send notifications and/or record video and/or turn the lights on/off).

A simple example would be an IP camera in your kitchen that, during night time, if someone steps in to the kitchen the lights will automatically turn on with a nice dimmed scene and once they leave the lights will turn off after 2 minutes. With a more advanced setup you could make individual lights come on and off as someone moves around in the kitchen.

Activating a light setting from an IP-camera

First you need to add the IP-camera to the Moodifier application as described on page 20.

Each Moodifier light setting has a unique URL that activates the light setting through the Moodifier Remote web interface. To find out what the URL is you simply open the Moodifier Remote web interface in any web browser, navigate to, and activate, the light setting and you will see the URL in the address field of the web browser. The full URL will look something like this:

http://192.168.1.200:8080/moodifier?mood=L-2014011615052161&dim=100&rnd=131#S60

The part you are interested in is the first bit that reads:

http://192.168.1.200:8080/moodifier?mood=L-2014011615052161

If you set your IP-camera up to execute an HTTP-event with that URL it will activate the light setting.

The process of setting up the IP-camera is very similar to how you set it up to trigger the IP-alarm. Please consult the IP-camera documentation for further setup instructions.

Activating a light scenario from an IP-camera

First you need to enable the light scenario functionality as described on page 12 and then add the IP-camera to the Moodifier application as described on page 20.

Each Moodifier light scenario also has a unique URL that activates the light scenario through the Moodifier Remote web interface. To find out what the URL is you simply open the Moodifier Remote web interface in any web browser, navigate to and activate the light scenario and then you will see the URL in the address field of the web browser. The full URL will look something like this:

http://192.168.1.200:8080/scenarios?scenario=S-20140116012744

If you set your IP-camera up to execute an HTTP-event with that URL it will activate the light scenario.

The process of setting up the IP-camera is very similar to how you set it up to trigger the IP-alarm. Please consult the IP-camera documentation for further setup instructions.

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