WEATHER & POLLUTION MODULES GUIDE

Weather and pollution modules allows you to retrieve data from your environnement such as the temperature, cloudiness, day position, humidity, carbon monoxide, ammonia and many more !

mod

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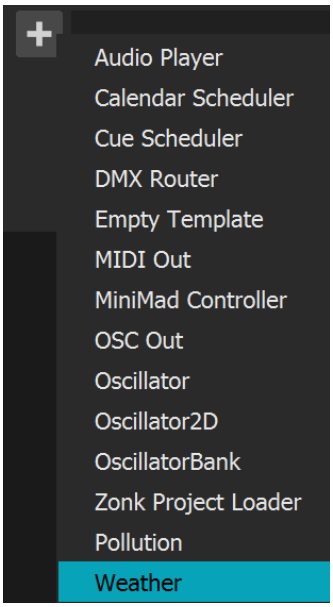
1. Set up

MadMapper provides various modules to get advanced settings like Audio Player, Cue Scheduler, DMX Router, Minimad Controller, etc.

These can help you to get additionnal functionnalities that can fit in various projects.
To see more details on modules in general, check the Modules Guide.

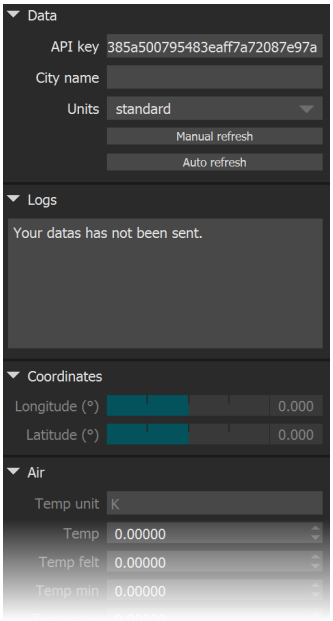
- To add a module, click on the modules manager tab.



- Add the weather module with the + button and select “Weather”.

  It should appear in the stack.

  You can rename a module instance by double clicking its name.



1. **Input Data :** These are the informations that you need to fill in order to connect to the OpenWeatherMap API.

2. **Logs :** This is a small windows to display informations and errors when using the module.

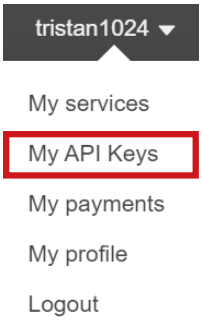
3. **Outputs :** These are the data retrieved from the API.

2. API key creation

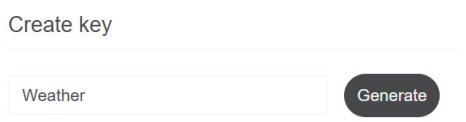
To access the weather data of any city, you need to connect to a weather API.
MadMapper use the OpenWeatherMap API and provide a free API key that allows you to try the possibilites of the module.

However if you want to use the full features of the weather or pollution modules (like auto refresh), you have to generate your own API key from the OpenWeatherMap website. it is free of charge.

Here's how to do it :

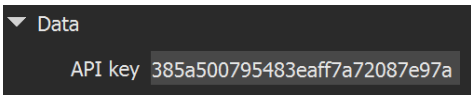


- Go to https://openweathermap.org/api and create a new account. Once connected, click on your profile and go to "My API keys".



- Add a name to your key and click generate.

- A code should have been generated, copy it to your clipboard.



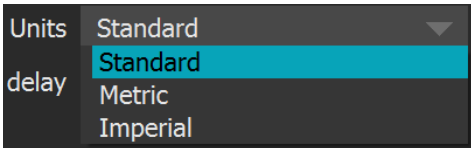
- Then, in the module, paste the code in the "API key" label.

3. Input data

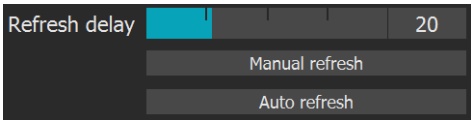
The API need to get some location to retrive weather data
Here's what are the possibilites and how to use the inputs correctly :

- This is the city where you want to retrieve the weather data.

  You can specify the name not only in English. In this case, the API response should be returned in the same language as the language of requested location name.



- Choose your appropriate system of measurement. "Standard" stands for temperature units in Kelvin, metric in Celsius and imperial in Fahrenheit.



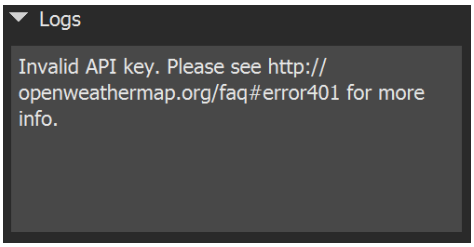
- Here you can choose between Manual and Auto refresh.

  Manual refresh will call the API only once.

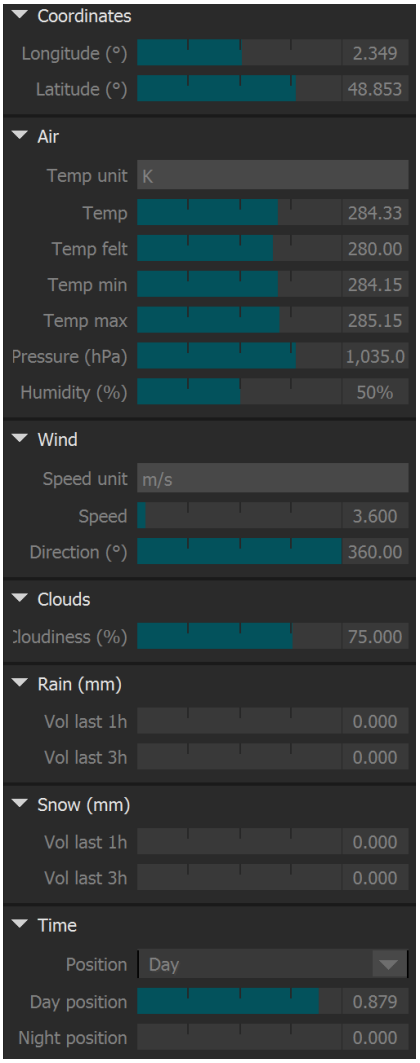
  Auto refresh will call the API every 5 to 60 minutes. Just a reminder : To allow Auto refresh, you need to have your own API.

4. Outputs

When you press refresh, the API will give you back some informations :



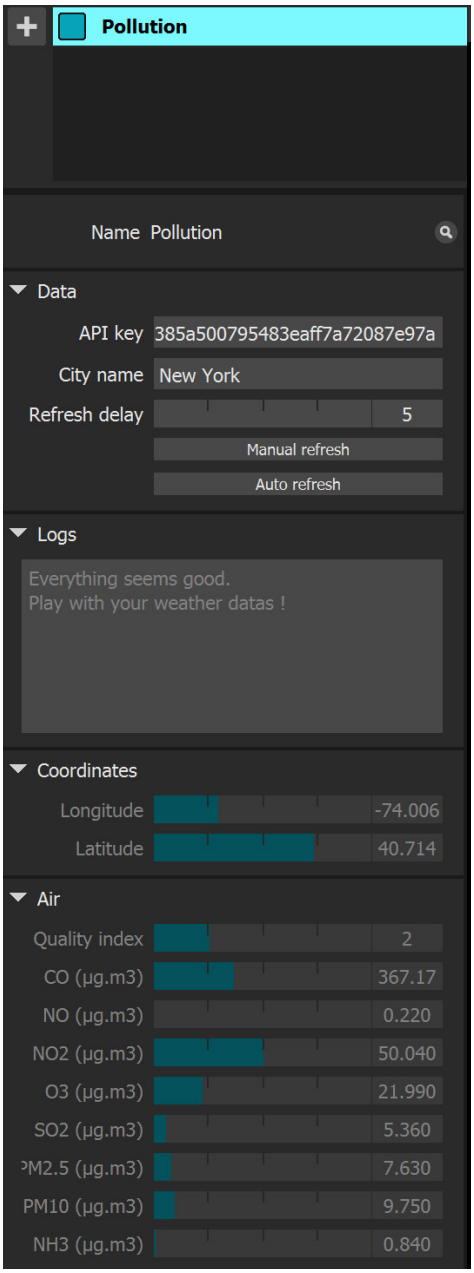
- You can see informations or errors from MadMapper and the OpenWeather API when you call the API, displayed in the Logs



- This is the list of weather informations you get back from the API.

  There you can find data from the air, wind, clouds, rain, snow and time.

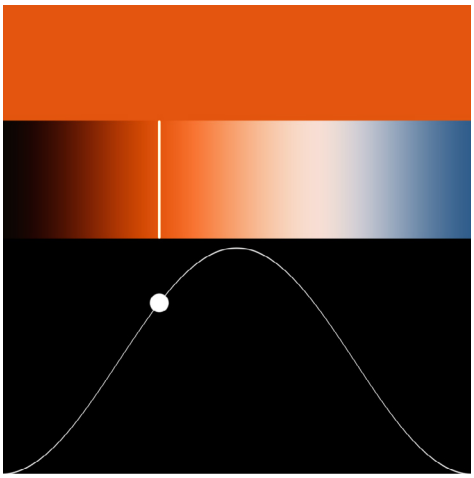
5. Pollution module



- The Pollution module returns data about polluting gases, such as Carbon monoxide (CO), Nitrogen monoxide (NO), Nitrogen dioxide (NO2), Ozone (O3), Sulphur dioxide (SO2), Ammonia (NH3), and particulates (PM2.5 and PM10).

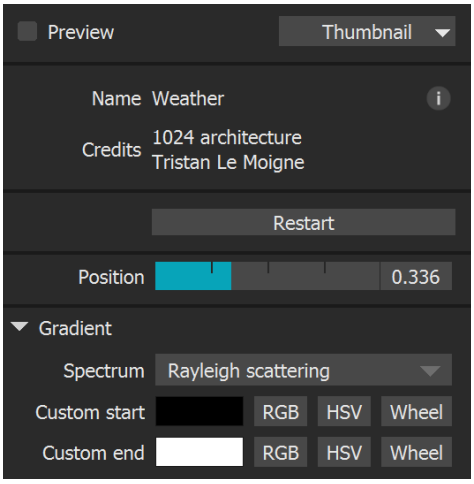
  It works the same way as the Weather module.
  Copy your API key and play with your data !

6. Bonus



- In addition of these two modules, we have added a Weather material.

  It allows you to quickly visualize the weather and pollution data with a color, a gradient and a curve.

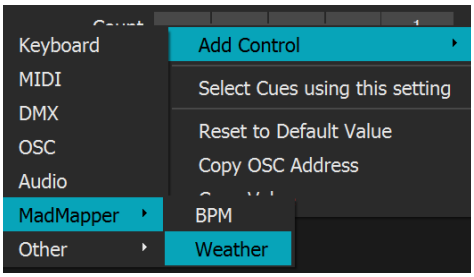


- The seetings parameters are pretty straightforward :

  A position between 0 and 1 control the location of the line on the gradient and the dot on the curve.

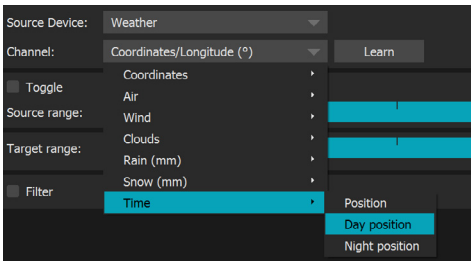
  A scrolling menu allows you to choose between differents spectrum samples.

  Two colors to make your own custom gradient.



- You can use the modules data directly on the material by adding a control reference.

  To do so, Right click on a parameter, add control, select MadMapper and then Weather.



- Then, assign the correct channel and remap the source or target range if needed.