

MY FIRST MY FIRST VIDEO VIDEO MAPPING MAPPING GUIDE GUIDE

This guide will help you with your first video mapping:

From the installation of the projector to the content creation through the settings in MadMapper we will go through all the different steps necessary for your first project.

1. Gear

In order to achieve your first video mapping, you will need :



► **A video projector**

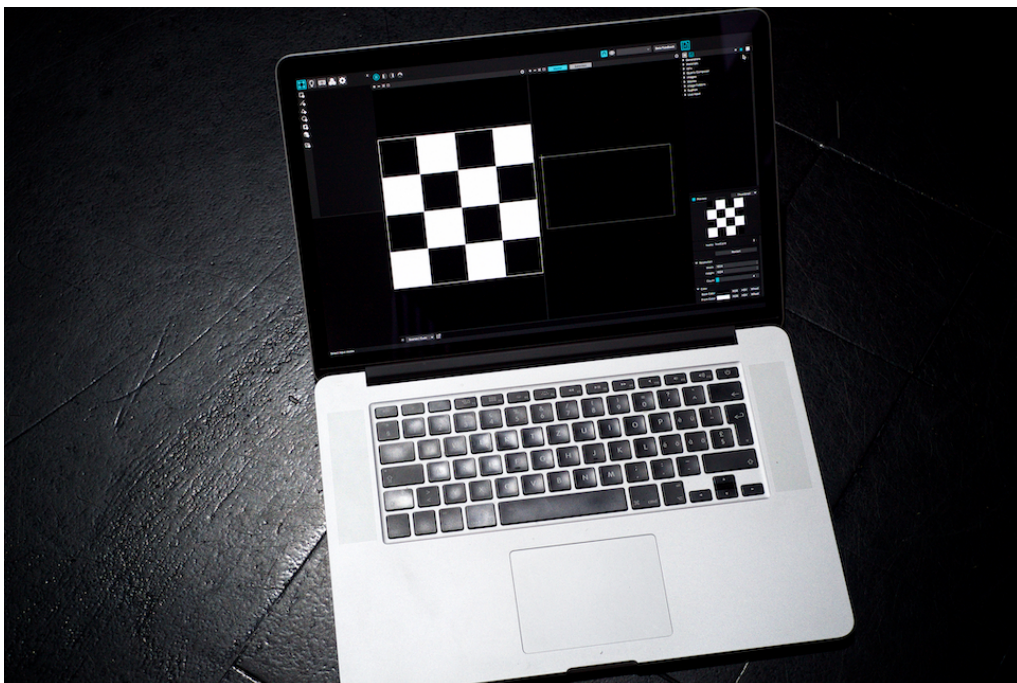
An entry-level model will be sufficient for a first project. For this guide, we will use an Acer K11 model, not very powerful but enough for our guide : the surface to be projected is of modest size.

► **A stand / articulated arm for a projector or a tripod**

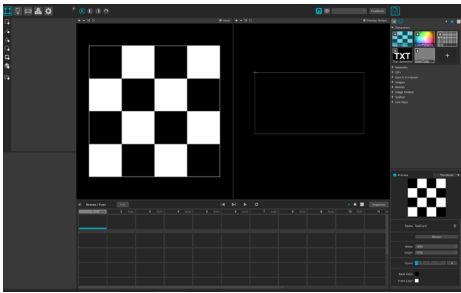
Essential for correctly positioning the projector and preventing the projector from moving inadvertently. A screw thread is located on the underside of the Acer K11 projector, making it easy to attach it to a tripod.

A magic arm is particularly useful: you can attach it to various brackets so that your projector can be positioned in places that are difficult to reach with a stand, such as on the ceiling or on a scaffolding bar or a truss.

► **A Mac or Windows computer**



For such project you don't need a particularly powerful computer. For this guide we will be using a 2012 MacBook Pro 15-inch.



► **MadMapper**

Obviously! If you don't own MadMapper yet but would still like to try video mapping, we invite you to download the DEMO version.

If you need to discover MadMapper's interface before or during this guide, or if you need more details or explanations, you can consult our Introduction to MadMapper User Interface guide.



► **Cables**

These will be used to connect your computer to the power supply (recommended), to power your projector and to connect your projector to your computer (in our case with an HDMI cable).

► **An object to be mapped**



For this tutorial we will use this beautiful photo frame!

2. Setup

2.1. Hardware Setup

You will need first to set up three elements



► **The video projector**

Position it ideally in front of the subject to be mapped, and in such a way that the projection area covers the entire object.

In the Software setup section we will see how MadMapper's tools allow you to adjust the position of the projected content precisely.



► **The photo frame**

By using a photo frame we can easily hang it on a surface, such as a wall.



► **The computer**

Its position does not matter, but it is essential that it is correctly connected to the video-projector, here in HDMI.

Tips :

Use short cable lengths whenever possible to minimize interferences.

2.2. Software Setup

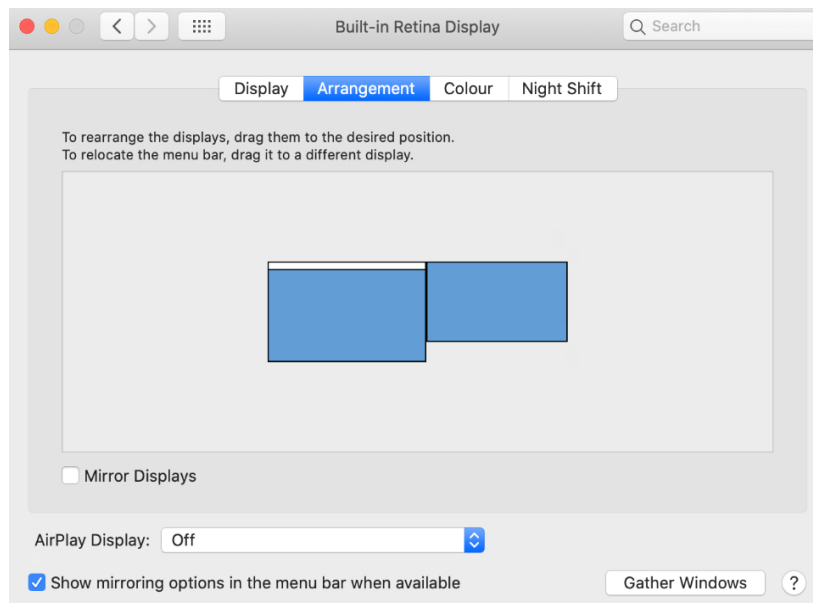
Before you actually start mapping, a few more steps are necessary

► External screen

In the Monitors section of your System Preferences (Mac) or in the Displays section of your System (Win), you need to make sure that the screens are not mirrored (mirror or mirrored screen).

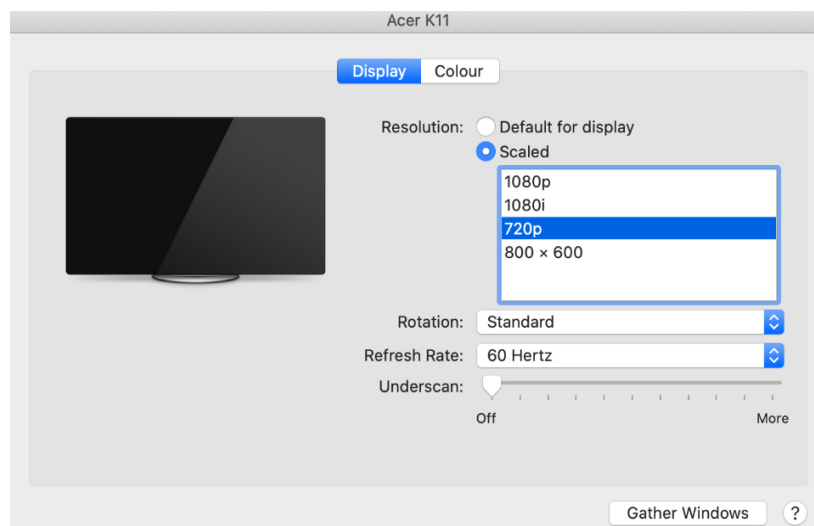
On macOS, uncheck the «Mirror Displays» option.

On Windows, choose «Extend these displays».



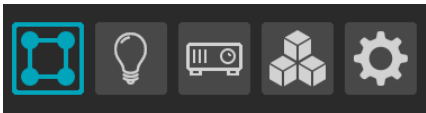
Still in the Monitors panel (Mac), access the specific settings of your video-projector by clicking on the «Gather Windows» button.

In our case this will allow us to choose a manual resolution: 720p.



The principle is the same on a Windows system, in System / Displays, more information here: <https://support.microsoft.com/en-us/help/4340331/windows-10-set-up-dual-monitors>

► **MadMapper - Output**

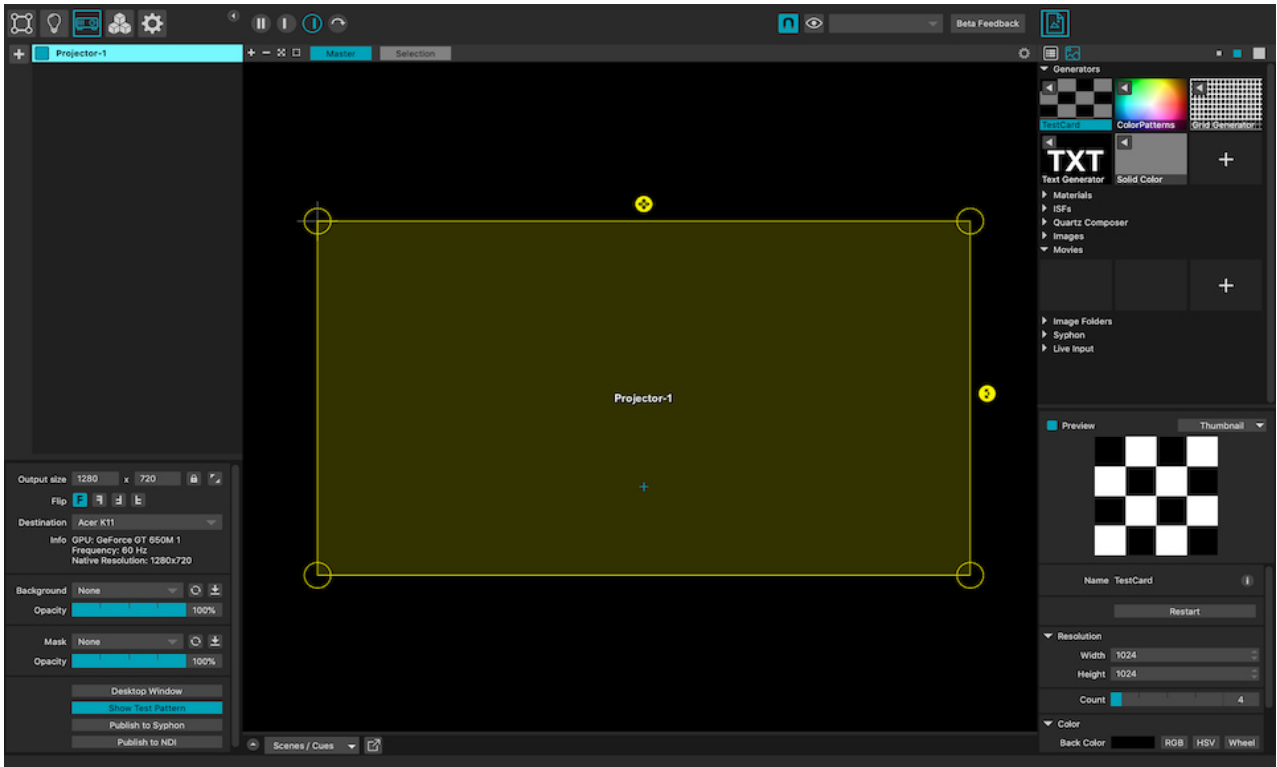


► Whether it is the DEMO version or the full version, once the software is installed you can open MadMapper and you will be in the Surfaces Creation Tab by default.



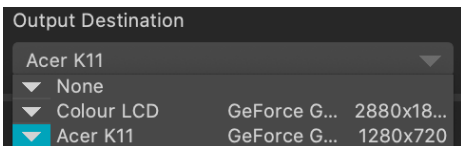
► Click the Projector Creation Tab icon in the upper left corner to set up your projector.

► A Projector (projector-1) with a default resolution is always set in the Projector tab

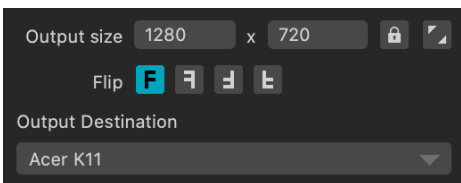


Projector-1

► By double-clicking on its name (on the left, in the projector list) you can rename it. Select the projector to access its settings and it will be highlighted in the projector list.



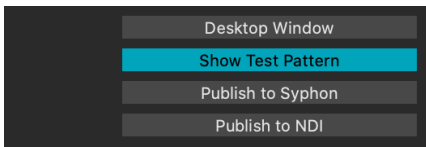
► If you have more than one projector connected to your computer, you can always choose which one you are going to work with from the Output Destination drop-down list in the projector inspector at the bottom left.



► Once your projector has been correctly selected in Output Destination, you will be able to see its information below and you can also edit its Output Size.

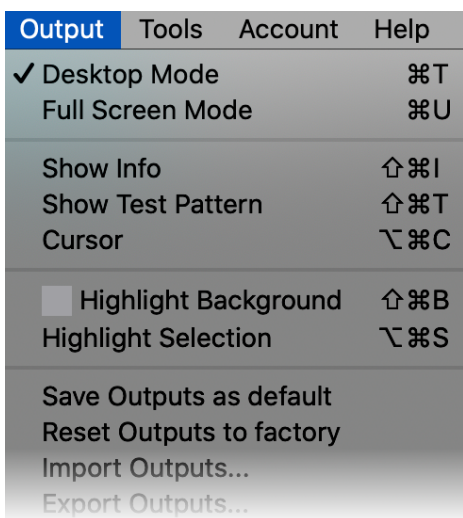
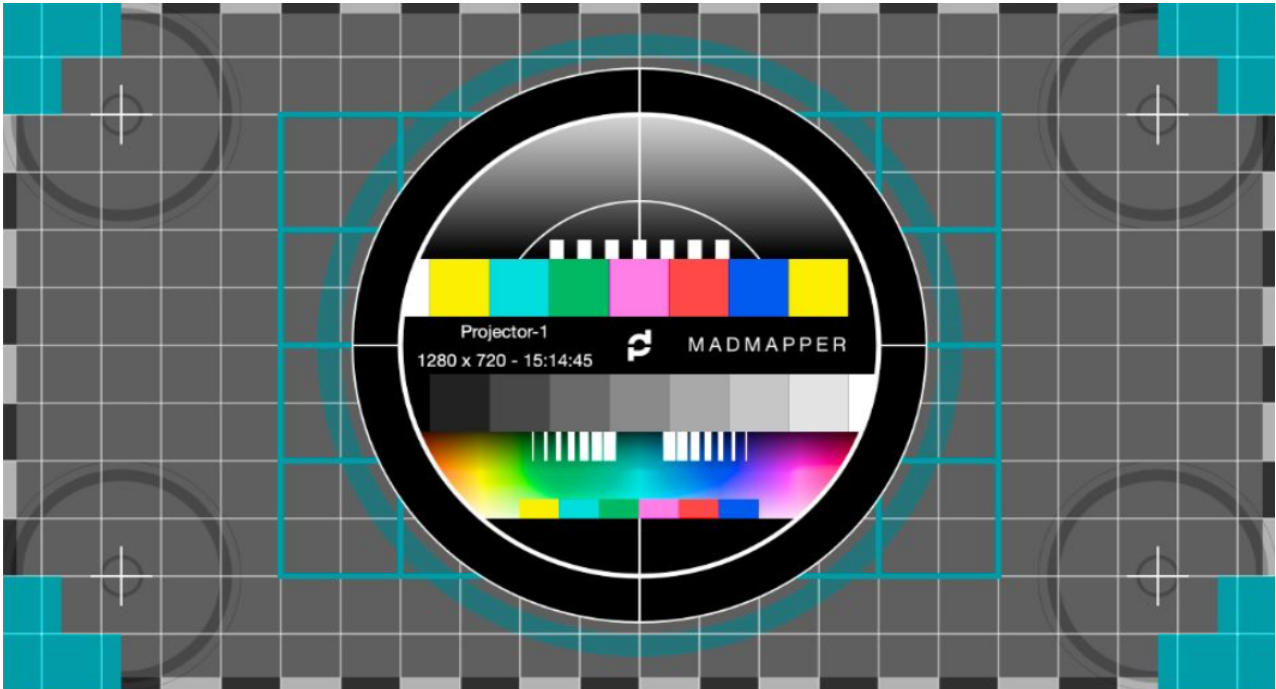
Tips: next to the Output Size, two buttons allow you to lock/unlock the output size or automatically adapt it to the resolution of the projector selected in Destination.

► **Test pattern**

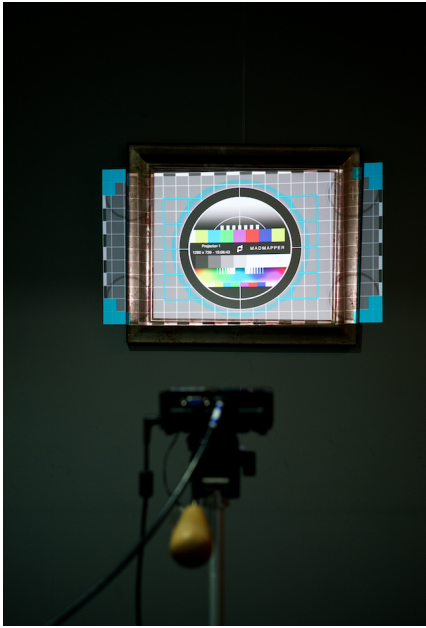


► Still in the Projector Inspector, click on the «Show Test Pattern» tool.

► MadMapper will then project this test pattern into the projector



► However, to actually project the test pattern it is necessary to switch to Fullscreen mode, either via the Output/Fullscreen Mode menu or by using the keyboard shortcut cmd +u (cmd +t to exit Fullscreen mode).



- First of all, take advantage of this test pattern to focus your projector. In our case we have to turn the ring around the lens of the Acer projector.

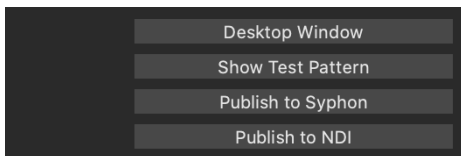
Then you have to move the video projector forward or backward so that this test pattern covers the entire inside of our photo frame, protruding a little to make mapping easier.

Our goal is to project a surface entirely covering the photo frame in order to make the most of the pixels.

Finally, this test pattern, with its grid, already allows you to see the perspective.

Try, as far as possible, to have a sight as straight as possible to minimize distortions due to the projector offset.

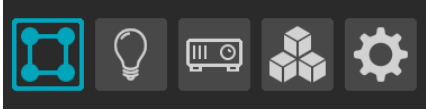
If positioning the projector in front of the subject is impossible, don't worry, the power of MadMapper will still allow you to straighten the perspective.



- When your test pattern is correctly adjusted you can then click again on Show Test Pattern to deactivate it. (cmd +t to exit Fullscreen mode).

3. Surface Mapping

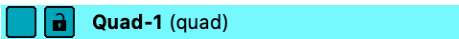
3.1. The Quad



- ▶ Everything is now in place and the projection covers the photo frame. But we want to map the inside of our photo frame, so we will have to define this surface. So leave the Projector tab in order to go to the Surface Creation Tab.

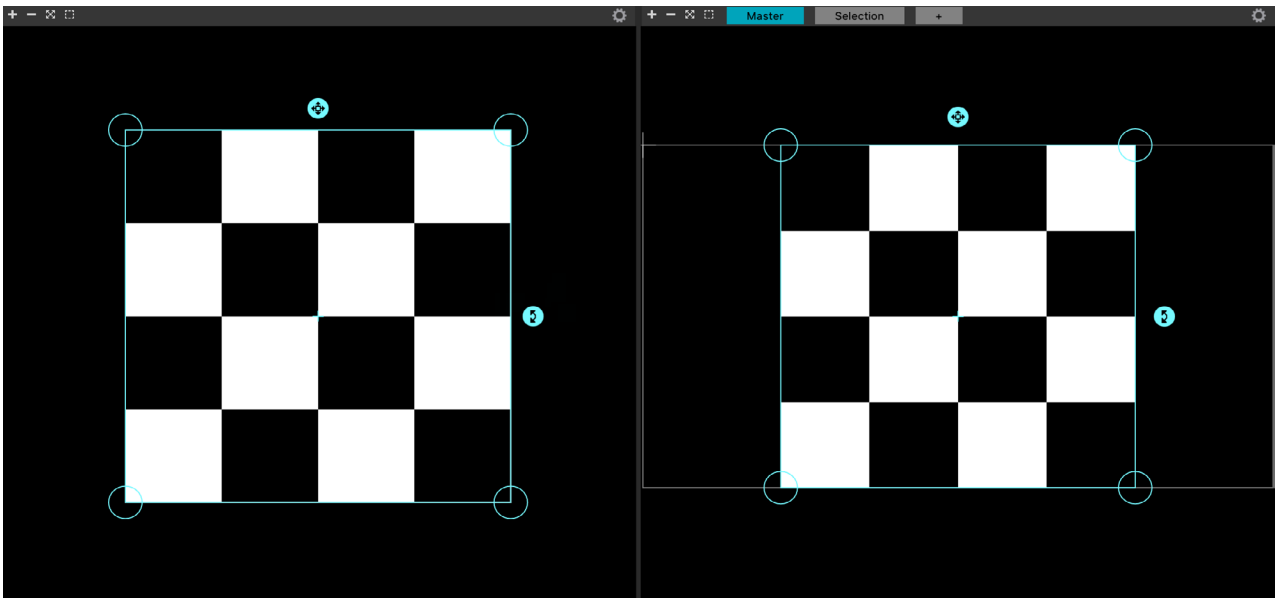


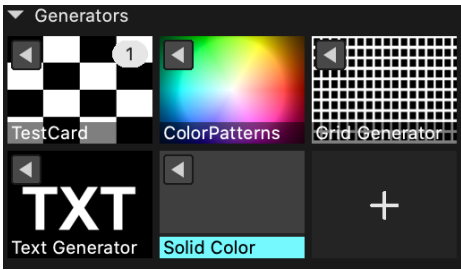
- ▶ Add a quad by clicking on the corresponding icon, the very first option in the Surfaces Tab.



- ▶ Once your quad is created, it will appear in the Surfaces list and as with the Projector list you can double-click on its name to rename it.

- ▶ By default, the quad created will display the Test Card

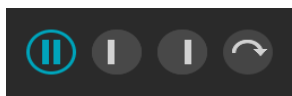




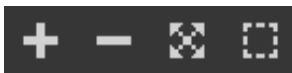
- ▶ You can change the empty content of the surface by assigning it another generator, such as a Solid Color Generator from the Media Tab on the right side of the interface.



- ▶ To do this, having selected the surface in question, click on the media assignment icon and the selected generator will be applied to your quad.

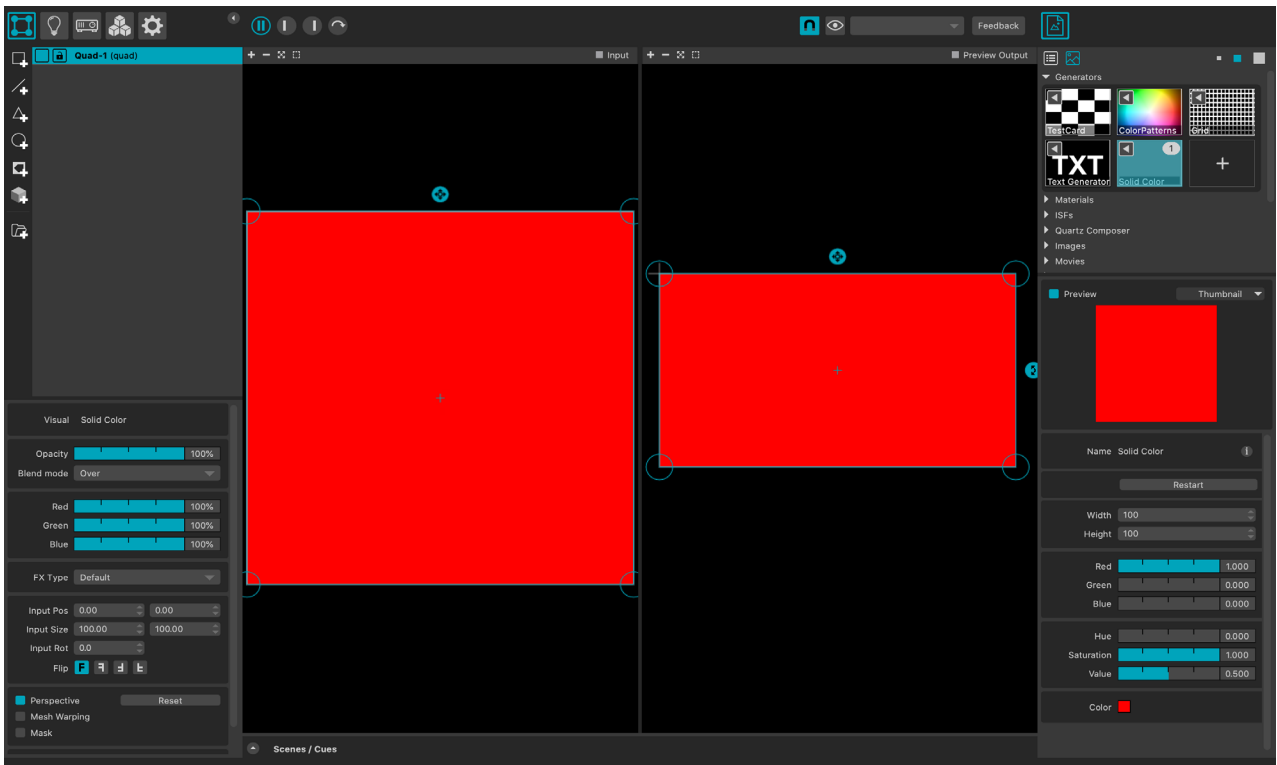


- ▶ You can also choose to display only the Output preview or to have your previews horizontally thanks to the display options at the top left of the Views

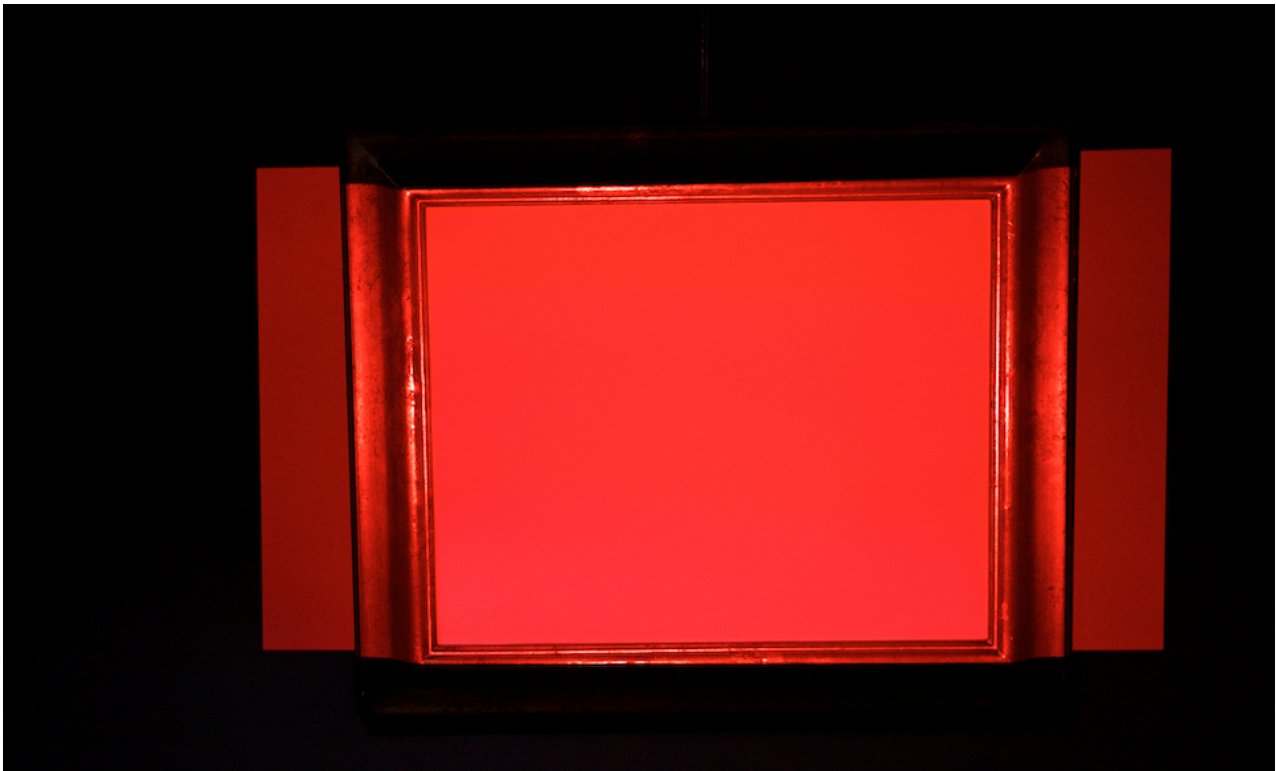


- ▶ Also above the Preview view and the Output preview view, you can maximize these views with the Views display options

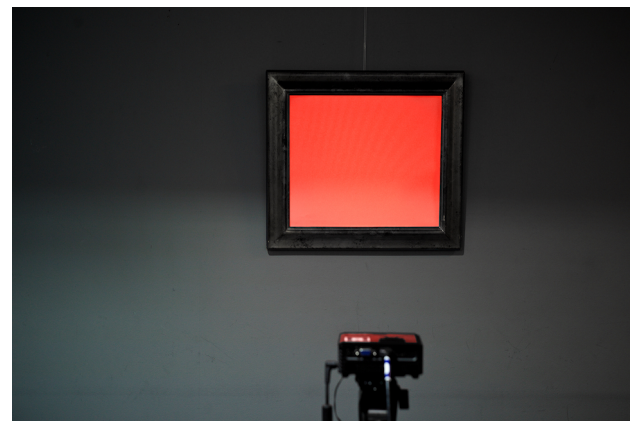
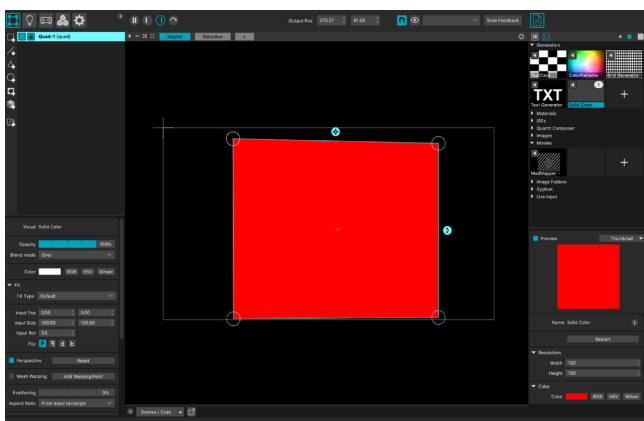
- ▶ Our Solid Color Generator is now applied to our quad and it fills completely the surface.



► This will indeed not allow us to map the inside of the photo frame correctly since the surface projected by our projector (1280x720) doesn't match properly with the inside of our photo frame.



► By moving the Handles (at the four corners of the Quad) from the Output view you need to adjust your quad in order to properly cover the projected area



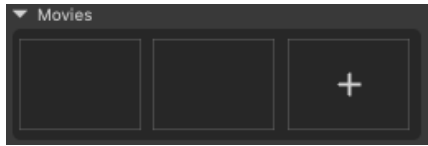
Tips :

In order to position your Quad with precision we advise you for example:

- To move the Handles with the mouse at first to get as close as possible to the corners of the inside of the photo frame.
- Then use the keys of your keyboard (arrows up, down, left and right) to position each handle even more precisely.

3.2. Apply Media

MadMapper offers a multitude of possibilities for the Media to be projected on your object. For example, you can use a video or you can project the content of your work done in Modul8 thanks to the Syphon protocol.

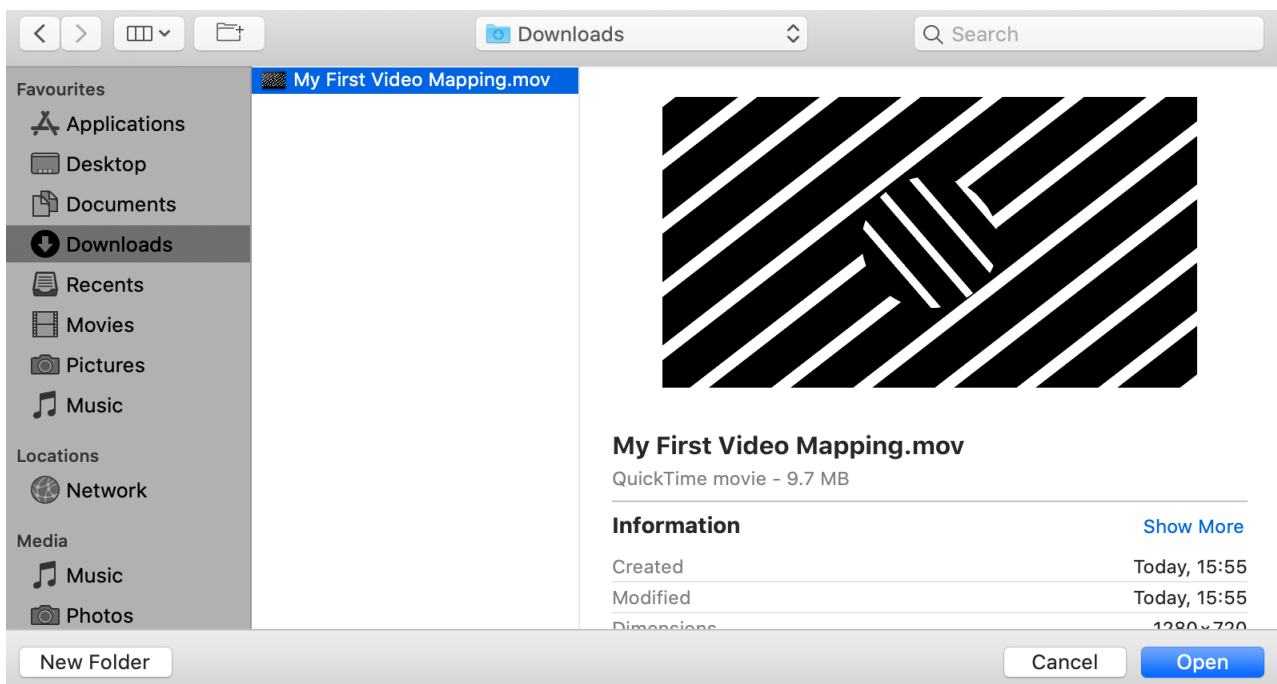


- ▶ For this guide we will use a video and to add it, go to the Media Tab, on the right, in the Movies category.



- ▶ Click on the «+» button to add your video.

- ▶ A window will then open, displaying your Finder (Mac) or file explorer (Win) Navigate to the location of your video and then click Open.



- ▶ Your video is now listed in the Movies category of your media list.

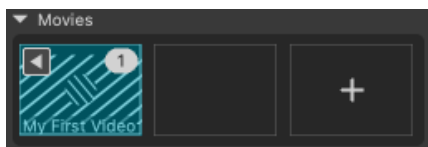
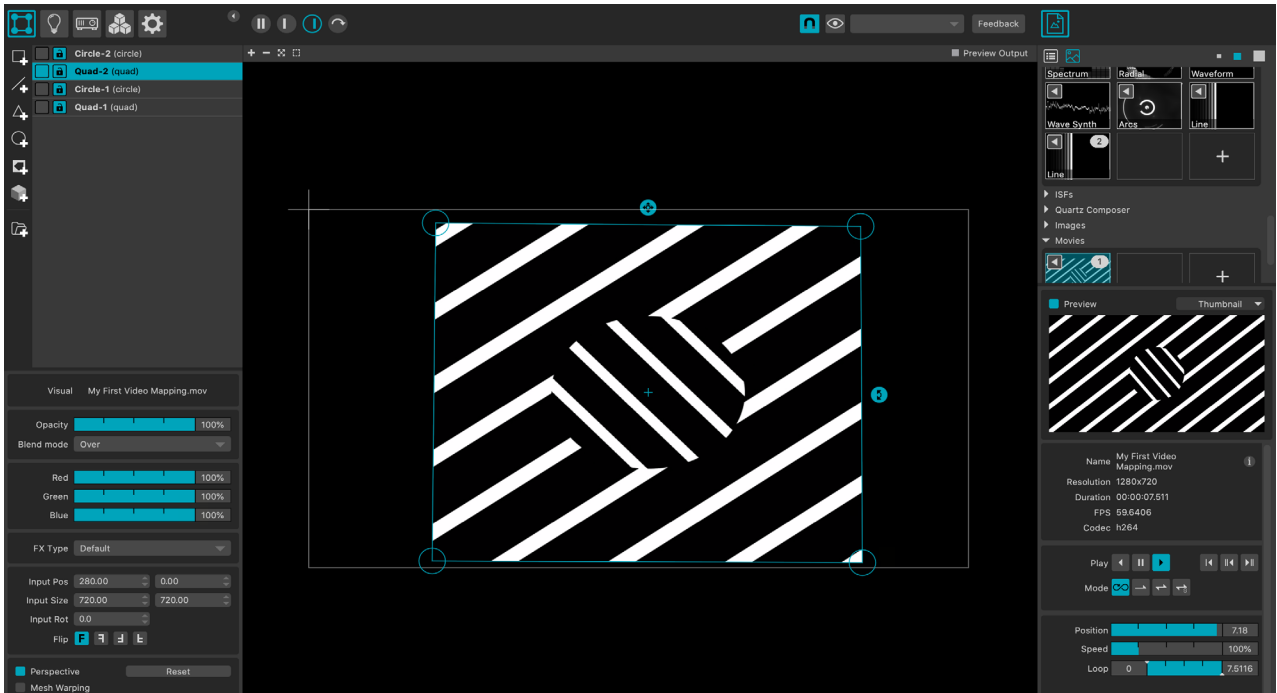
Tips :

You can also directly drag and drop your file into one of the empty slots in the Movies category of your Media List.

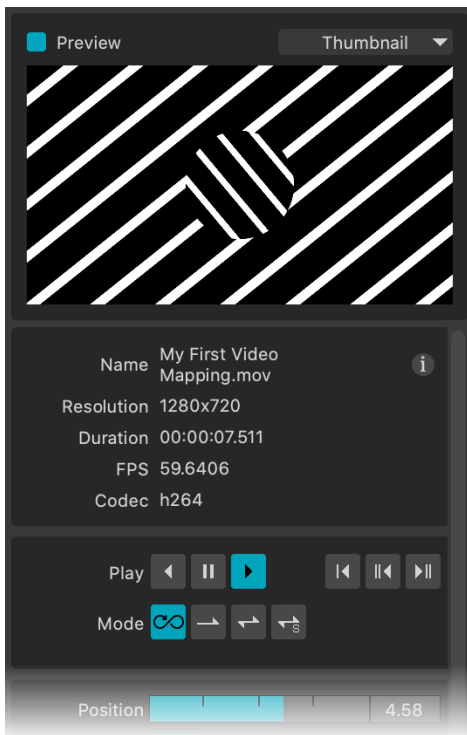


- ▶ Then click on the arrow at the top left of your video (in the Media List) to add it to your Quad.

► Et voilà! Your video is now applied to the created surface - the inside of your photo frame.



► The «1» icon on your video in your Media List indicates that the video is applied once in one of your surfaces.



► And just like the Surfaces and their Surface Inspector, you will have access to the Media Inspector for all your Media

For a video, as can be seen on the capture different playback options are available, as well as the possibility to use hardware acceleration for better performance.

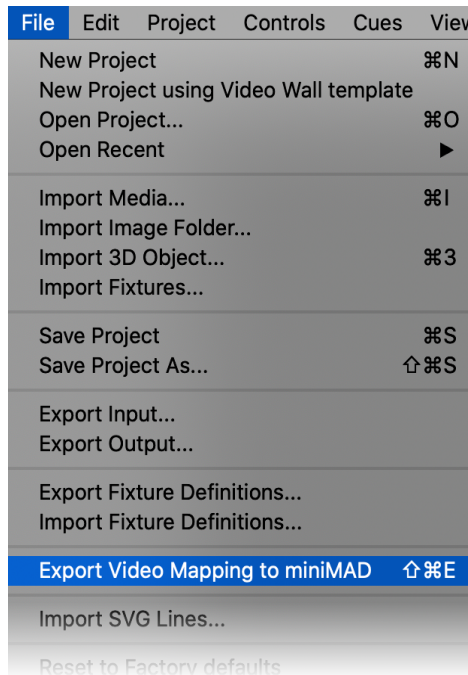
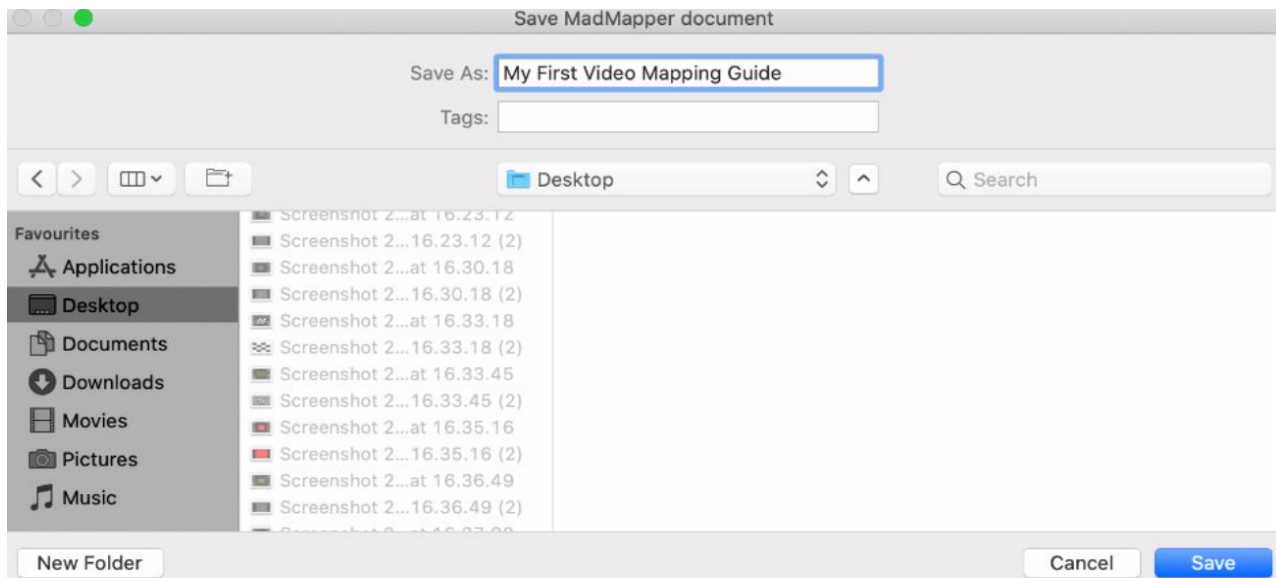
And most importantly, your photo frame is now mapped!



4. Last Steps

► Save your project

Don't forget to save your project from the File / Save Project menu.
Or with the keyboard shortcuts cmd +s (Mac) or ctrl +s (Win).



► Export video mapping to MiniMad

You can also export your project on an SD card to a MiniMad box.

The operation is located in File Menu / Export Video Mapping to MiniMad.

When the export window appears, make sure that your projector is selected, the resolution is correct and the media is selected.

More information in the MiniMad guide and in My First MiniMad Video Export guide.