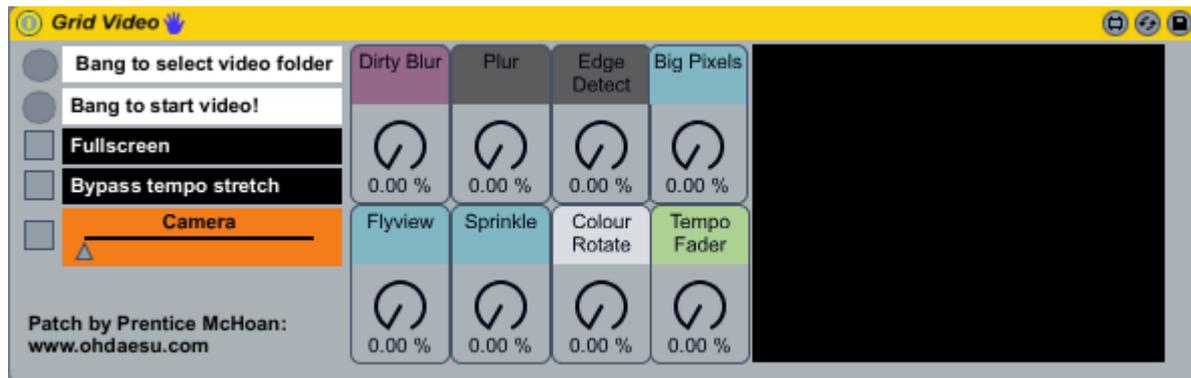




by James Brown

## Version 0.1



Grid Video exists to allow Ableton Live users to add video to their Live sets simply and effectively. By basic folder organisation it is possible to add synchronized video to any audio clips in Live's session view.

Grid Video is a Max for Live device that works as a regular Ableton Live audio effect. It requires Max for Live to run.

Grid Video is compatible with any MIDI interface, including the APC20, APC40 and Launchpad, or works equally well with no hardware controller whatsoever.

The basics:

Grid Video will allow the user to assign any .mov video to any clip on Live's grid, meaning when that clip is triggered, video will be triggered automatically in a floating window. This window can be MIDI mapped to a fullscreen button, meaning that video can be played on a projector or any other screen, directly from Live.

Eight effects are built into the device for easy manipulation of any video content.

It is advisable to view the demo video at (DEMO VIDEO TO BE RELEASED AT LATER DATE) to get a handle on what Grid Video can do, and view the easy setup routine.

## Getting started - 4 steps to adding video to Live sets.

### Step 1:

The first step by the user is to organise the video files for playback. Video need to be named for the grid elements they correspond to.

If a movie is to be triggered when the audio clip in column 1, row 1 is played, the movie must be named 11.mov (read as one one dot mov - as in column one, row one). Likewise, for the audio clip in column 4, row 16, the corresponding movie would need to be named 416.mov. A few examples are shown in Figure 1 below:

1 Audio	2 Audio	3 Audio	4 Audio	5 MIDI
<input type="checkbox"/> 11.mov	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/> 24.mov	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 38.mov	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 416.mov	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 1: Example movie filenames

Movies need to be placed into one folder (for example, My Documents > Video).

To be sure files get named correctly it is advisable to set up a Live set as normal, and then note which clips are going to trigger video, and name the videos accordingly.

### Step 2:

To add the device to Live simply drag the files 'Grid Video.amxd' and poly\_movies.maxpat into the default Max for Live audio devices folder. This is usually located at:

My Documents > Ableton > Library > Presets > Max Audio Effect.

This adds Grid Video to the Live Devices menu under Max Audio Effect > Grid Video.

The device can now be dragged into any audio channel.

### Step 3:

It is necessary to set the Max filepath, so that Max for Live knows where to look for videos. This is done by opening the Max patcher by clicking the icon shown in Figure 2:

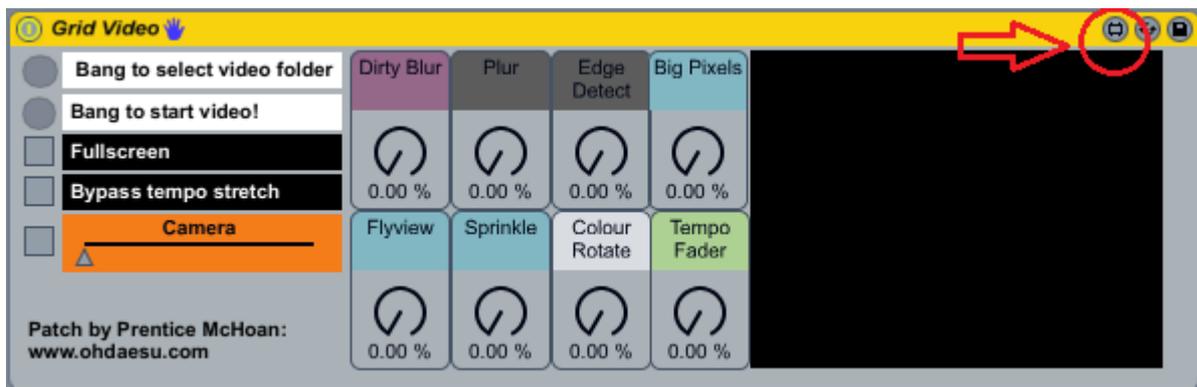


Figure 2: Opening Max.

Once inside Max, open the File Preferences as shown in Figure 3:

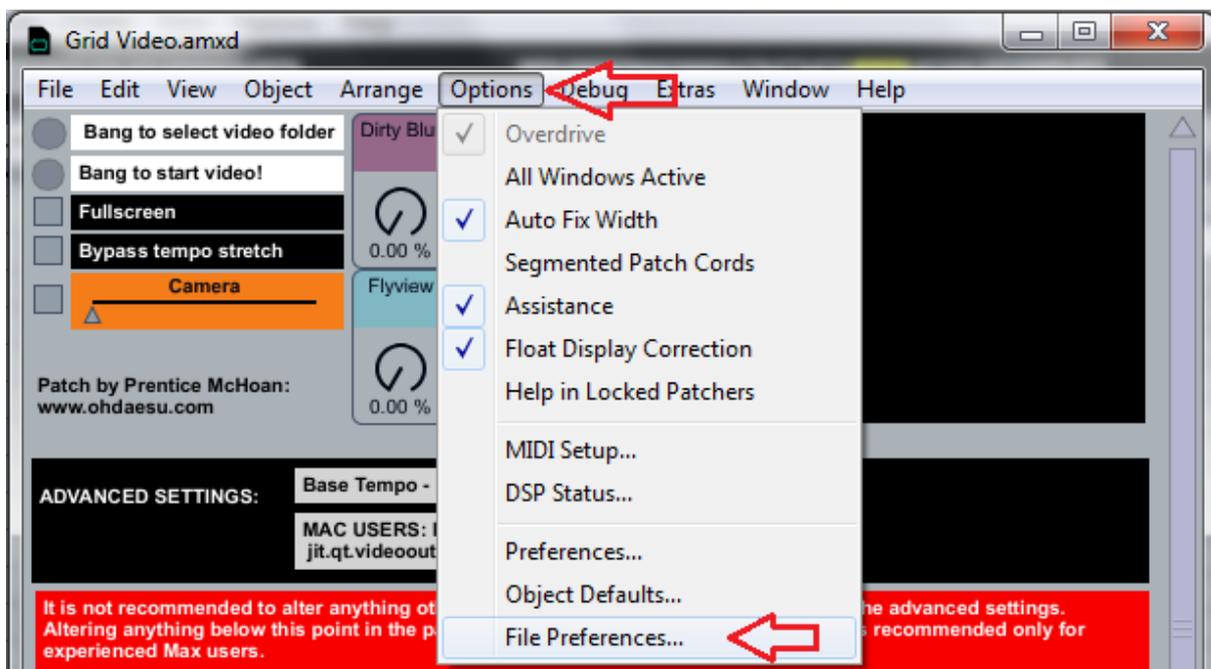


Figure 3: Max file preferences.

Clicking File Preferences brings up the screen shown in Figure 4:

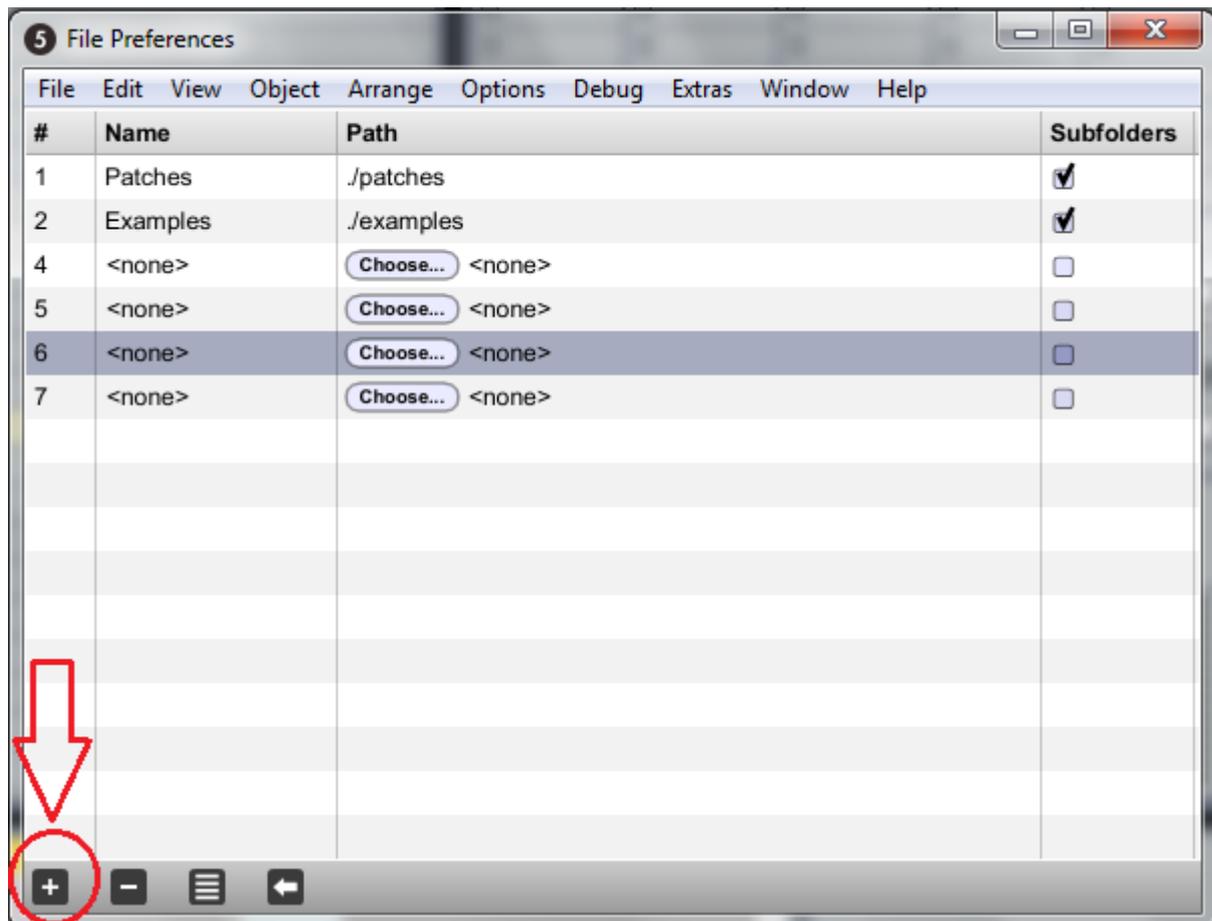


Figure 4: File preferences browser.

Click the plus sign highlighted in the figure, and use the pop-up box to navigate to the video folder.

This only needs to be done once - Max will remember the file path, no matter how many times you use Grid Video in other Live sets.

It is advisable to save the Max patch, close, and then close and re-open Ableton at this point.

#### Step 4:

Now the device is ready to use - on the device press the 'Bang to select video folder' button, and navigate to the video folder. This makes sure the device only calls for videos that actually exist.

Now press the 'Bang to start video!' button to start the device. The two buttons are highlighted in Figure 5:

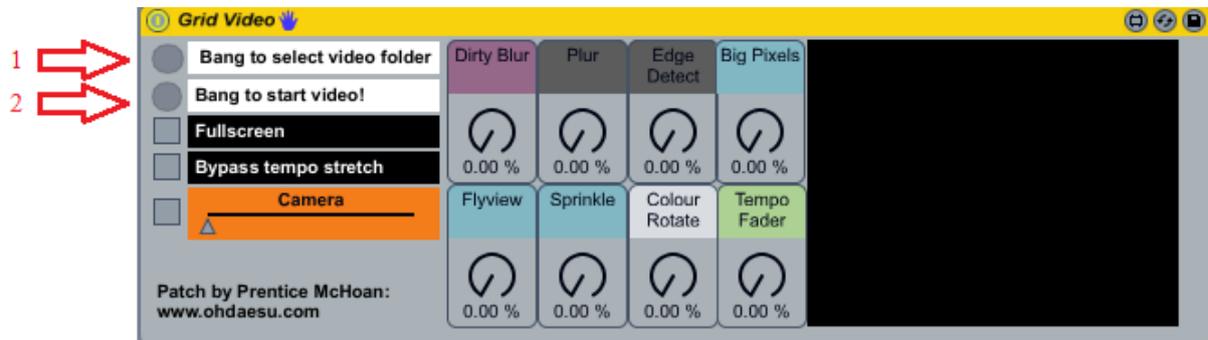


Figure 5: Bang to start.

Now triggering any audio clips which have corresponding videos should play the video in a floating window.

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### Controls:

It is advisable to map the fullscreen control on the device to a MIDI input, otherwise if fullscreen is pressed it can be problematic returning to a regular window.

In order to use fullscreen on a projector or other output, set up the projector or monitor as an extended desktop. Then drag the floating video window onto the extended desktop. Now, when fullscreen is toggled on, the fullscreen applies to the projector / monitor.

This leaves Live running in the main window, with the visuals on a separate fullscreen.

All dials / buttons / faders can be mapped using Ableton's MIDI mapping system.

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### Camera:

Any attached camera / webcam can be activated by clicking the button next to the orange camera section on the device.

As the camera uses Quicktime, users on Windows systems will need to download third-party software to enable the camera to work. The suggested software is WinVDIG, available at:

<http://www.eden.net.nz/7/20071008/>

When the camera is enabled, the fader in the orange section fades between visuals and camera input.

The feed from the camera can be fully manipulated by the in-built effects.

If the view from the camera seems off-centre, or distorted, the dimensions can be changed in the advanced settings of the Grid Video device. This involves opening the Max patch and changing the message boxes highlighted in Figure 6:

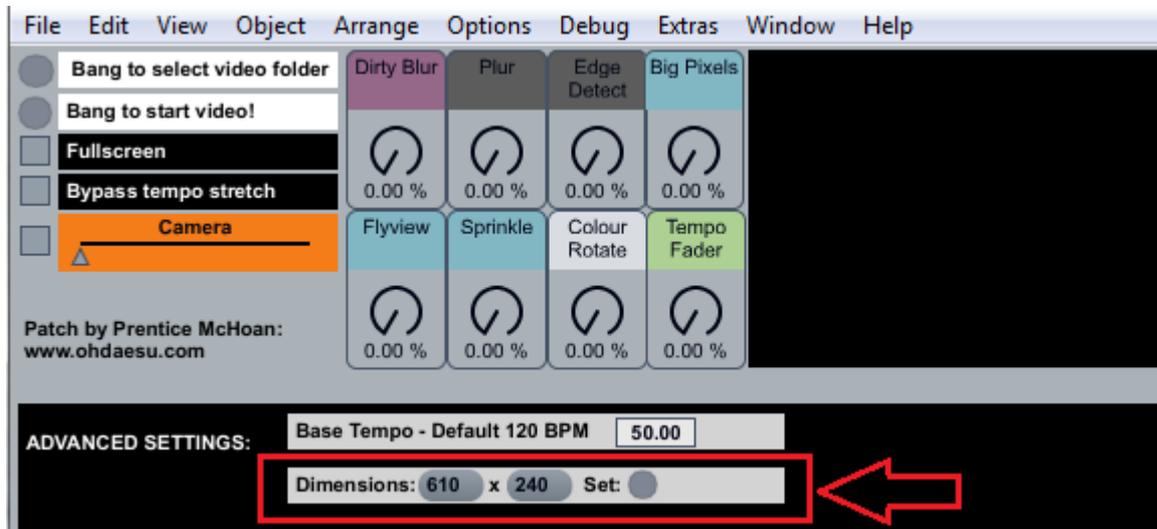


Figure 6: Changing camera dimensions.

## Tempo Stretch:

Grid Video employs tempo-relative warping on videos. This means that video playback rate changes in relation to tempo changes in Ableton.

The default video tempo is 120bpm - this means that if videos with a rhythmic content are saved at 120bpm, Grid Video will warp the videos to always be in sync with the music.

If videos have a different bpm, it is easy to use Ableton's video editing capability to warp them to 120bpm.

It is possible to bypass the tempo stretching entirely using the button on the device's main interface. Unfortunately, it is not yet possible to bypass tempo stretching on selected videos - either all videos are warped, or none. As such, all videos must be warped to the same tempo before being saved for use with Grid Video.

It is also advisable to make sure videos with rhythmic content start exactly on the beat, as Grid Video will always start videos from the first frame, with no nudge options.

It is worth noting that videos stay in sync better when the imported tempo is around the same as the tempo the Live set is played at. For example, this release of Grid Video is set with a default 'base tempo' of 120bpm, so videos input at 120bpm keep sync well.

If it is know that the Live set is to be played at a drastically different tempo, the 'base tempo' can be changed in the advanced settings.

For example, if the base tempo was changed to 50bpm, videos would need to be saved at 50 bpm for the warping to work correctly.

This also works if the user has a lot of videos at a set bpm. The base tempo can be chosen to correspond to this, to avoid the need to warp all the videos to 120bpm.

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### **Delving further:**

As this is a Max patch, I thoroughly encourage people to delve into the workings, and as such, everything is laid out neatly inside the Max patcher. This is a first version release, so I look forward to hearing suggestions for improvements and bug removal.

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