

technical information

3D Global MPV-Player

documentation, information and HowTos (ext. Rev. 1.1)

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Table of contents

1. Scope	3
1.1 Purpose of this document.....	3
2. General.....	4
2.1 License information	4
2.2 Installation.....	4
2.2.1 Version	4
2.2.2 Installation process.....	4
2.2.3 Display type.....	4
3. Content	5
3.1 Definitions	5
3.1.1 Sides.....	5
3.1.2 Views.....	5
3.2 Standard Content Matrix Arrangements	5
3.2.1 Matrix for 6 views (3x2 Matrix).....	6
3.2.2 Matrix for 8 views (4x2 Matrix).....	6
3.2.3 Matrix for 9 views (3x3 Matrix).....	6
3.2.4 Matrix for 16 views (4x4 Matrix).....	6
3.2.5 name convention "standard".....	7
3.3 Inverted Content Matrix Arrangements.....	7
3.3.1 Inverted Matrix for 16 views (4x4 Matrix).....	7
3.3.2 name convention "inverted"	7
3.4 foreign matrixes.....	7
3.4.1 Tridality matrix for 5 views	7
3.4.2 name convention "Tridality 5 view"	8

3.5	Stereo Content	8
3.5.1	Side-by-Side (SBS) with 2 views	8
3.5.2	name convention "side-by-side"	8
3.5.3	Top/Bottom with 2 views	9
3.5.4	name convention "Top/Bottom"	9
4.	Player-Features	10
4.1	General	10
4.2	Detecting correct settings via Config-Code	10
4.3	Selecting and using correct configuration file	10
5.	Normal usage	11
5.1	Single video files	11
5.2	creating & playing playlists	11
5.2.1	playlist data file	11
5.2.2	playlist control file	11
5.3	special features / shortcuts	12

1. Scope

1.1 Purpose of this document

This document represents a documentation of 3D Globals MPV-Videoplayer-Software in order to give an overview of its features and functionalities and to give background information and HowTos for support reasons. The document will steadily be reworked and updated, so regularly check the latest document version to ensure that you are familiar with the latest information.

In this document each chapter starts on a separate page, so each chapter could be used separately, e.g. for printing or exporting.

2. General

2.1 License information

The 3D Global 3D media player is a special, extended version that is based on a free, open source, cross-platform media MPV. Please refer to the website <https://mpv.io/> for any further information or support issues concerning general player features.

2.2 Installation

The original MPV installers that are available on the MPV website do not include the features required for your 3D display, so any other installer than provided by 3D Global, will not work properly with your 3D display.

2.2.1 Version

It is essential, that **V1.60** or higher of 3D Global MPV-Player is used (Version date 10.05.2019 or newer). All versions prior to V1.60 will not work properly and according to this documentation!

The main changes of Version 1.60 are, that the standard requirements for content arrangement has been defined different and the 3D content processing has fundamentally changed.

Check your version in the player's title bar or if the 3D Global icon is used. If not, download the latest version installer from our website.



2.2.2 Installation process

Install the player Software as any other usual application to your system.

2.2.3 Display type

Depending on the 3D display type that you're using, a specific configuration needs to be set. As default, the configuration for our 12,5" Display type is preset.

Please refer to chapter 4.2 for details and further information, e.g. how to change the configuration.

3. Content

3.1 Definitions

It's essential to define the terms and phrases used in this document to avoid misunderstandings.

3.1.1 Sides

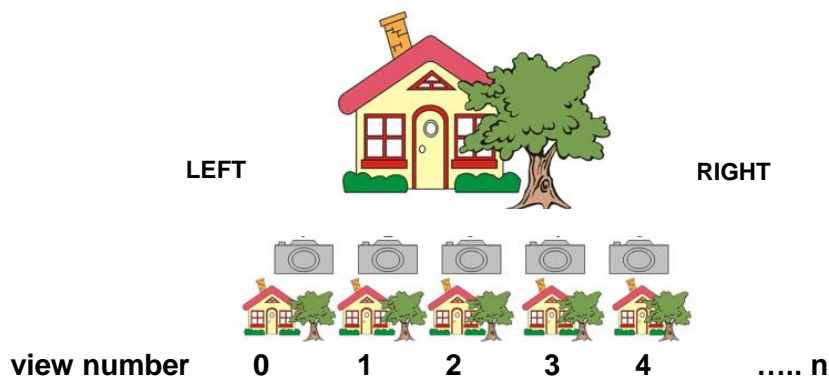
The both "sides" LEFT and RIGHT are defined from the "users perspective", looking towards the scene/display.

3.1.2 Views

Each 3D content consists of several views of the scene that is shown on the screen. These views are generated with virtual or real cameras.

Underlying the Central-European reading direction for counting and numbering the views, the **first view** is at the **leftmost** side (called view 0) and to the **last view** at the **rightmost** side (called view n) .

The value for "n" depends on the number of views available and might be e.g. 4 (for 5 view content), 7 (for 8 view content) or 8 (for 9 view content),.....



All available views need to be arranged in a matrix format content.

3.2 Standard Content Matrix Arrangements

Within the matrix, the available views must be arranged in an increasing order ("from left to right"), starting at upper left side with view 0, ending at lower right side with view n.

Depending on the number of available views, there are several standard matrix formats possible. If there are less views than matrix areas, the remaining matrix area(s) leave blank (*e.g view 7 in the 3x2 will be blank if only 7 views will be available*)

The size of the complete frame should always be at least UHD-Resolution (3840 x 2160).

3.2.1 Matrix for 6 views (3x2 Matrix)



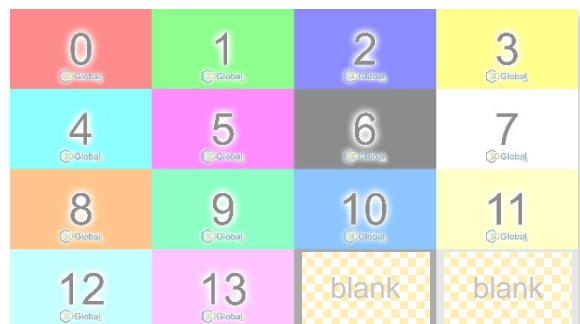
3.2.2 Matrix for 8 views (4x2 Matrix)



3.2.3 Matrix for 9 views (3x3 Matrix)



3.2.4 Matrix for 16 views (4x4 Matrix)



3.2.5 name convention “standard”

Any content needs to be named according to the name convention
name.mosaic.size.format

For the upper listed standard matrix arrangements the file names must be e.g.

“testmovie.mosaic.3x2.mp4”

“testmovie.mosaic.4x2.mp4”

“testmovie.mosaic.3x3.mp4”

“testmovie.mosaic.4x4.mp4”

3.3 Inverted Content Matrix Arrangements

Maybe you want to play content that is arranged in a different way. If the views of your content are arranged in a decreasing order (“from right to left”, starting at upper left side with view n, ending at lower right side with view 0), the content arrangement is called “inverted”

3.3.1 Inverted Matrix for 16 views (4x4 Matrix)



3.3.2 name convention “inverted”

Any inverted content files need to be named according to the name convention
“name.rmosaic.size.format”

File names for inverted matrix arrangements could be e.g.

“testmovie.rmosaic.3x2.mp4”

“testmovie.rmosaic.4x2.mp4”

“testmovie.rmosaic.3x3.mp4”

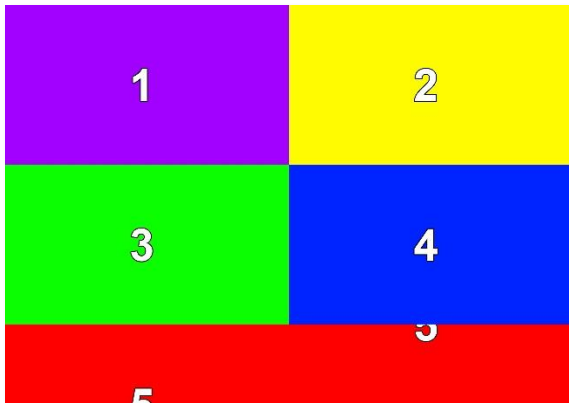
“testmovie.rmosaic.4x4.mp4”

3.4 foreign matrixes

There is also content for several other matrix arrangements available, some of this special formats are already implemented to be played with this player, other could be implemented upon request.

3.4.1 Tridality matrix for 5 views

The 5th view is bisected and specially arranged.



3.4.2 name convention “Tridexterity 5 view”

Any content files in this special format need to be named according to the name convention “name.tri5.format”

File names for Tridexterity 5 view matrix arrangements could be e.g. “testmovie.tri5.mp4”

3.5 Stereo Content

For stereo content with just 2 views there are different supported matrixes available

3.5.1 Side-by-Side (SBS) with 2 views



3.5.2 name convention “side-by-side”

Any content files in this special format need to be named according to the name convention “name.sbs.format”

File names side-by-side arrangements could be e.g. “testmovie.sbs.mp4”

3.5.3 Top/Bottom with 2 views



3.5.4 name convention “Top/Bottom”

Any content files in this special format need to be named according to the name convention “name.**topbottom**.format”

File names for top/bottom arrangements could be e.g.
“testmovie.**topbottom**.mp4”

4. Player-Features

4.1 General

For general information on the features and the usage of the 3D media player, please refer to the website of the basic MPV-Player <https://mpv.io/>

The player uses a special configuration file that consists all relevant settings for the player in general and the required settings for the specific 3D display. The configuration file is named “mpv.conf” and is located at “C:\Users\you-user-name\AppData\Roaming\mpv”

4.2 Detecting correct settings via Config-Code

Due to several different configuration options of the different 3D display models, it is required to set the player with adequate settings for the specific display model. To provide the correct settings, each 3D Global display device is marked with a “Mediaplayer Config-Code”, printed on the type plate. The display’s article number contains this “Config-Code” as well (e.g. *D125UHDLM05N070A-RAA*).



4.3 Selecting and using correct configuration file

For each “Config-Code” there is a specific “mpv.conf” file with standard settings available, which enables the media player to show 3D content in adequate format for your 3D display.

- download the “mpv.conf” file that is marked with the same config-code as your display (e.g. 05N) from our website
- paste the “mpv.conf” file to “C:\Users\you-user-name\AppData\Roaming\mpv”, replacing the original file

filename MUST remain “mpv.conf” and might not be changed!

Your player will now use the standard settings for your 3D display.

5. Normal usage

5.1 Single video files

To run single video or image file, simply double click them or paste them into the player window.

5.2 creating & playing playlists

To run playlists, you need to create two different files and store them on the PC.

5.2.1 playlist data file

This is a simple text file that contains all the content you want to play. The playlist data file could be named like "playlist_demo01.txt"

If the desired content file is stored in the same directory as the playlist data file, you just need to list the file name. If the desired content file is stored in a different directory, you need to quote the entire path.

With a playlist you can mix different matrix formats (3x2 / 4x4 / ...) and different arrangements (mosaic / rmosaic / tri5 / ...)

```
scene6_6k_cam01std.mosaic.4x4_16x9.mp4
faces_6k_cam001std.mosaic.4x4_16x9.mp4
2hunters_6k.mosaic.4x4_16x9.mp4
C:\Users\user-name\Documents\Content\Test-Content\Testmovie.mosaic.4x2.mp4
E:\MPV-Playlists\Content\MUX_Logos_Cam_16_1.mosaic.4x4.mp4
```

The files are played in the sequential order as they are listed.

Within one playlist you should not mix files with different codecs (e.g. H264 and H265) since this will crash the playback and individual files will not run properly.

5.2.2 playlist control file

This is a simple batch file that starts the player and loads the desired playlist data file to run it.

Just simply quote the path to you player application (mpv.exe) and the path where your playlist data file is stored, including the correct file name.

```
@echo off
start "" " C:\Program Files (x86)\mp3Dplay\mpv.exe" --playlist="E:\MPV-Playlists\Content\playlist_demo01.txt"
:exit
```

To automatically start a playlist when booting the PC, you can set the control file to the PC's startup sequence.

For further information, details and tweaks, please refer to the website of the basic MPV-Player <https://mpv.io/>

5.3 special features / shortcuts

besides all the features and shortcuts that are available for the standard MPV-player, there are several 3D related shortcuts set to the F-keys.

In normal usage these features are not required, they are intended more for testing and presentation purposes.

Some shortcut changings are only active in the moment the file is newly loaded.

In case that you're watching an (test)image, you should set the image duration to 1 second or less (*parameter image-display-duration=0.5*), or hit ENTER to recognize the changing!

In case that your watching a (test)video, you should hit ENTER to restart the video or wait until the video restarts automatically.

Q	<i>quit MPV player</i>
F	<i>toggle full screen mode</i>
F1	<i>side-by-side mode for SBS Stereo content</i>
F2	<i>top/bottom mode for SBS Stereo content</i>
F3	<i>2D mode (complete matrix is displayed)</i>
F4	<i>multiview mode (autodetection) => DEFAULT setting</i>
F5	<i>3D testmode with red-black image (1 view red, other views black)</i>
F12	<i>2D visualization of view 0</i>