MADRIX 5 Fixture Editor Help And Manual

[Software User Guide]

MADRIX Version: 5.2.

Date: November 2019

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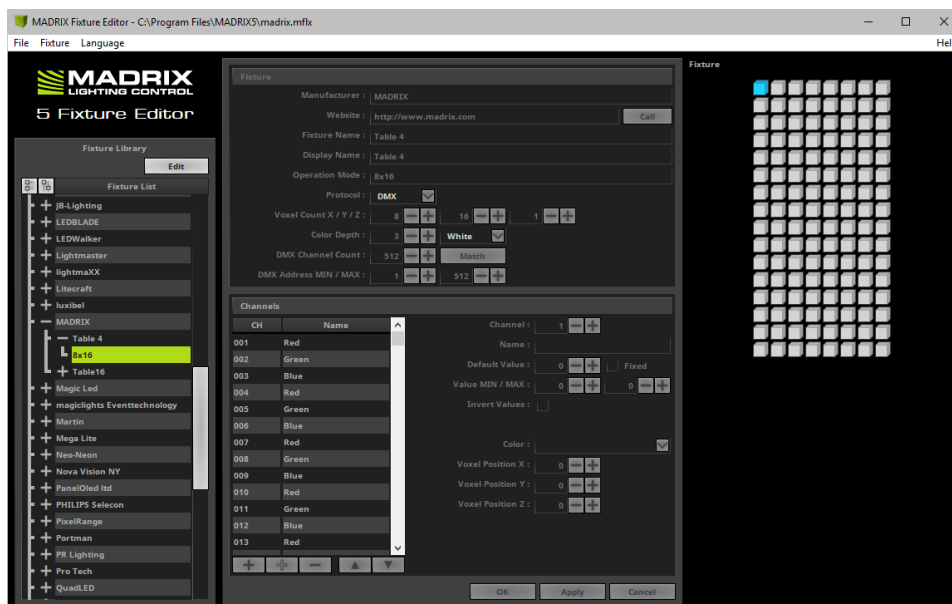
//PART A

MADRIX 5 Fixture Editor

1   MADRIX 5 Fixture Editor

This topic includes:

- **Introduction**
- **Usage**
- **Where To Find The MADRIX 5 Fixture Editor**

Introduction

The MADRIX 5 Fixture Editor is a separate application and useful tool to create and configure lighting fixtures for MADRIX.

LED fixtures are implemented into MADRIX 5 using the MADRIX 5 Fixture Editor. All the fixtures, their profiles, and their configurations are stored in the MADRIX 5 Fixture Library (madrix.mflx). This is a separate file. MADRIX 5 will access this file to load all available fixture configurations.

Usage

With the help of the MADRIX 5 Fixture Editor, you can:

- see how fixtures are implemented in MADRIX 5.
- see how many and which fixtures are already included.
- adjust settings and profiles to your requirements.
- implement and add new fixture configurations to the library yourself.

Where To Find The MADRIX 5 Fixture Editor

The Fixture Editor is automatically installed together with MADRIX 5. You can access the tool or its documentation by calling up the shortcut in the Windows Start Menu or in the MADRIX 5 installation directory.

- In Windows 7, go to *Start > All Programs > MADRIX 5 > MADRIX 5 Fixture Editor*
- In Windows 10, go to *Start > MADRIX 5 > MADRIX 5 Fixture Editor*

The original, executable program can be found in the MADRIX 5 installation directory:

- C:\Program Files\MADRIX5

1.1   Important Information

This topic includes:

- Important Information

Important Information

- **The MADRIX 5 Fixture Library is loaded into MADRIX 5, when the MADRIX 5 Software is launched. In this way, MADRIX 5 will load the new settings and profiles during startup.**

- **MADRIX 5 needs to be restarted when changes have been made to the fixture library.**

- **MADRIX 5 can only access one MADRIX 5 Fixture Library during run-time. All fixture profiles that are required need to be in one library file.**

- **By default, MADRIX 5 loads the madrix.mflx, which is the original MADRIX 5 Fixture Library.**

- **MADRIX 5 allows you to load a fixture library that is not the default MADRIX 5 Fixture Library [In MADRIX 5, go to Preferences > Options... > Startup > Load Alternative Fixture Library].**

- **MADRIX 5 Fixture Editor can load MADRIX 3 Fixture Libraries [*.mflx] and MADRIX 5 Fixture Libraries [*.mflx].**

- **MADRIX 5 Fixture Editor can save MADRIX 5 Fixture Libraries [*.mflx].**

- **MADRIX 5 Fixture Editor can load MADRIX 3 Fixtures [*.mfxx] and MADRIX 5 Fixtures [*.mfxx].**

- **MADRIX 5 Fixture Editor can save MADRIX 5 Fixtures [*.mfxx].**

- **Always make a backup of the madrix.mflx before and after applying any changes!**

- **When updating your MADRIX 5 Software, the Setup [Auto Installer] will completely overwrite the current madrix.mflx in order to update the library.**

- **When updating your MADRIX 5 Software, the Setup [Auto Installer] will automatically create a "madrix.mflx.bak". This file is a backup of your previous MADRIX 5 Fixture Library.**

1.2   Converting MADRIX 2 Fixture Libraries

This topic includes:

- How To Convert MADRIX 2 Fixture Library Files Into MADRIX 3 or 5 Fixture Library Files

How To Convert MADRIX 2 Fixture Library Files Into MADRIX 3 Or 5 Fixture Library Files

MADRIX 5 uses its own file types. Please follow these steps to convert your MADRIX 2 Fixture Library file into a MADRIX 3 or MADRIX 5 Fixture Library file:

- Install MADRIX 2.14ij [or higher].

- Start the MADRIX 2 Fixture Editor and load your currently used Fixture Library [of the file type *.mfl].
  [Go to the menu *File > Open Library...*]

- Go to the menu *File > Export Library for MADRX3...*

- A new window opens. Simply enter a name for the file and click *Save*

- Start the MADRIX 5 Fixture Editor and load your newly created MADRIX 5 Fixture Library [of the file type *.mflx].
  [Go to the menu *File > Open Library...*]

1.3   Getting Started

This topic includes:

- **Getting Started**
- **Choosing The Language**
- **Overview**
- **Fixture Library**
- **Fixture And Channel**
- **Fixture Preview**

Getting Started

If you open the MADRIX 5 Fixture Editor, you will see that no fixture library is loaded. At first, the tool is empty.

To load the default MADRIX 5 Fixture Library file:

1] Go to the menu *File > Open Library...*

[Keyboard shortcut: *Ctrl+O*]

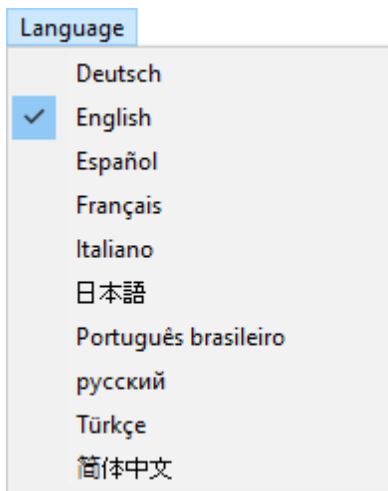**2]** A new window will open.

3] Navigate to the installation directory of MADRIX 5:

- C:\Program Files\MADRIX5

4] Choose *madrix.mflx* and press *Open*

Choosing The Language

語

Language
- Deutsch
- ✓ English
- Español
- Français
- Italiano
- 日本語
- Português brasileiro
- русский
- Türkçe
- 简体中文

Before starting to work with the MADRIX 5 Fixture Editor, you may choose the language of the user interface.

- In the menu *Language*, choose from:

    - *Deutsch* [German]

    - *English*

    - *Español* [Spanish]

    - *Français* [French]

    - *Italiano* [Italian]

    -            [Japanese]

    - *Português brasileiro* [Brazilian Portuguese]

    - *русский* [Russian]

    - *Türkçe* [Turkish]
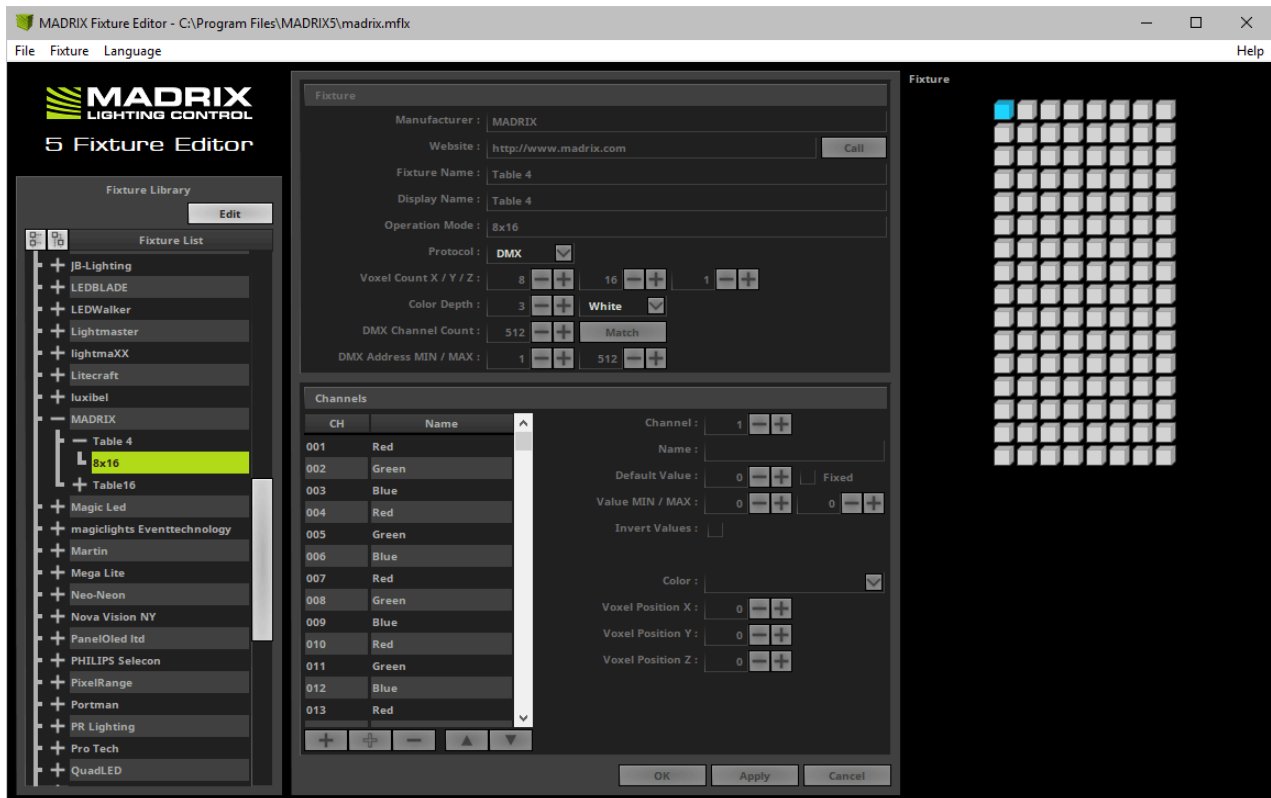
    - 简体中文 [Simplified Chinese]

[This user manual is only written in English.]

Overview

The MADRIX 5 Fixture Editor window is divided into 3 parts [from left to right]:

- A *Fixture Library* list

- *Fixture* and *Channel* overviews

- A *Fixture* preview


Fixture Library

- On the left-hand side, a tree structure represents the content of the currently loaded fixture library file.

- The items are arranged in alphabetical order.

- Each top branch of the structure names a lighting fixtures manufacturer.

- Every item has one or more sub-items representing the fixture profile or a variation of the fixture profile for different modes.

- Expands the complete list of fixtures with all of its entries.

▪ Collapses all entries of the list.
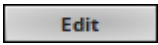
▪ Allows you to edit the selected fixture profile. First, select one fixture profile from the list.

Fixture And Channels

In the center of the Fixture Editor window, the configuration for the currently selected fixture and channels is displayed and can be changed. Learn more »**Configuration Of Fixture Profiles**

Fixture Preview

The area on the right-hand side of the Fixture Editor serves as a preview while editing. The upper part shows a graphical model of the fixture. The pixel or voxel belonging to the currently selected channel is highlighted with the specified color and visually aligned. Additionally, the lower part summarizes all information [channels, colors, positions, values, types, and names] of this pixel/voxel. The preview is updated every time you edit the fixture profile.
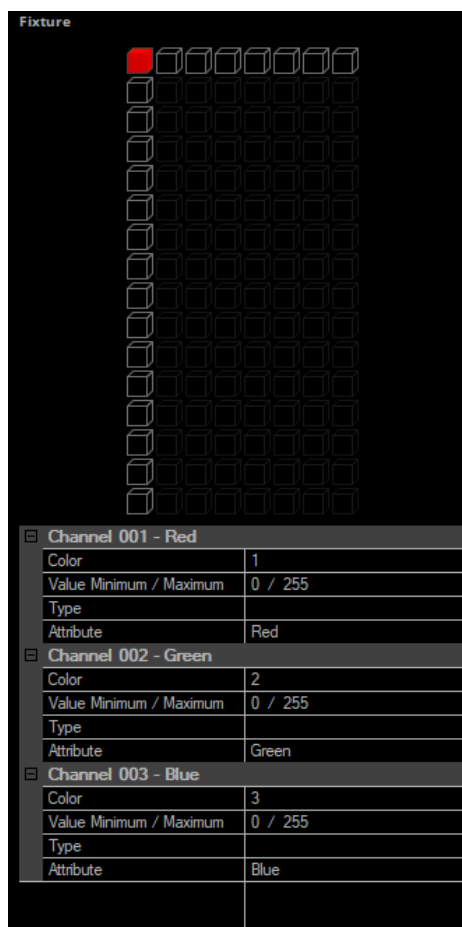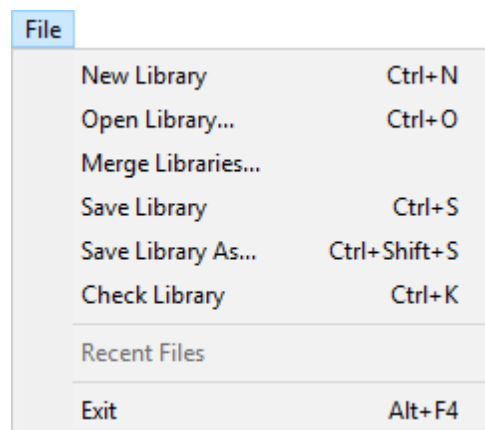
1.4   Managing Fixture Libraries

This topic includes:

- **Overview**
- **Creating A New Library**
- **Loading A Library**
- **Merging Two Libraries**
- **Saving A Library**
- **Checking A Library For Errors**

Overview

- **File -** Use this menu to manage your original MADRIX 5 Fixture Library [and additional libraries].

- **File > Recent Files -** Displays libraries that were previously loaded.

- **File > Exit -** Closes the Fixture Editor.

Creating A New Library

- **File > New Library -** Creates a new library. This library will not include any fixture profiles yet.

Loading A Library

- ***File > Open Library...*** - Loads a fixture library into the MADRIX 5 Fixture Editor. This will open a new window for yout to choose the fixture library. [A fixture library file has the extension *.mflx.]

If you open the MADRIX 5 Fixture Editor, you will see that no fixture library is loaded. At first, the fixture library is empty.

To open the default MADRIX 5 Fixture Library file:

1] Select ***File > Open Library...***

[Keyboard shortcut: ***Ctrl+O***]

2] Navigate to the installation directory of MADRX:

- C:\Program Files\MADRIX5

3] Choose ***madrix.mflx*** and press ***Open***

- Libraries that are saved will automatically be checked for errors first. Make sure to correct any errors, since libraries will still be loaded.

Merging Two Libraries

- ***File > Merge Libraries...*** - Allows you to add another library to the currently loaded library in order to merge several library files.

  - Libraries that are merged will automatically be checked for errors first. Make sure to correct any errors, since libraries will still be merged.

Saving A Library

- ***File > Save Library -*** Saves a library file including all the changes you have made. This will change your currently loaded fixture library.

- ***File > Save Library As... -*** Saves a library file including all the changes you have made into a new file. This will open a new window. Choose the location, enter a name for the new file, and press ***Save***

- Modifications to your library cannot simply get lost. You will have to confirm it if you want to quit the MADRIX 5 Fixture Editor without having saved.

- If the library was modified, the title bar shows an asterisk, too.

- Libraries that are saved will automatically be checked for errors first. Make sure to correct any errors, since libraries will still be saved.

Checking A Library For Errors

- ***File > Check Library -*** Checks the fixture library for logical errors. The Fixture Editor will look for logical errors, such as having a defined a Color Depth of 4, but only including 3 channels for the fixture. This option is useful if you want to have an automatic check up after having implemented new fixtures. But the option should not replace checking the fixture profile for errors yourself.

1.5   Managing Fixtures

This topic includes:

- **Overview**
- **Creating A New Fixture**
- **Copying A Fixture**
- **Editing A Fixture**
- **Deleting A Fixture**
- **Loading And Saving A Fixture**

Overview

- ***Fixtures -*** Use this menu to manage your fixture profiles.

Creating A New Fixture

- ***Fixtures > Add New Fixture -*** Allows you to create a new fixture profile. Make sure to edit all ***Fixture*** and ***Channel*** settings afterwards.

  Learn more »**Configuration Of Fixture Profiles**

Copying A Fixture

- ***Fixtures > Copy Fixture -*** Allows you to copy a current fixture profile and edit the settings in order to create a new fixture profile based on another profile. Make sure to edit all ***Fixture*** and ***Channel*** settings afterwards.

  Learn more »**Configuration Of Fixture Profiles**

Editing A Fixture

- ***Fixtures > Edit Fixture -*** Allows you to edit all settings of a fixture profile.

  Learn more »**Configuration Of Fixture Profiles**

Deleting A Fixture

- ***Fixtures > Delete Fixture -*** Instantly removes the currently selected fixture profile from the library.

Loading And Saving A Fixture

- ***Fixtures > Open Fixture... -*** Allows you to load a fixture from an external file [MADRIX 5 Fixture of the file type *.mfxx]. The fixture profile will be added to the fixture library.

- ***Fixtures > Save Fixture... -*** Allows you to save a fixture to an external file [MADRIX 5 Fixture of the file type *.mfxx]. First, select a fixture. Second, go to Fixtures > Save Fixture.... Third, a new window opens. Fourth, enter a file name, open the correct location to save the file, and press Save.

1.6 Configuration Of Fixture Profiles

This topic includes:

- **Introduction**
- **Step-By-Step Configuration**
- **Settings**

Introduction

This topic describes how to create and how to set up a new fixture.

> **This is the most important part when creating a new fixture profile.**

Step-By-Step Configuration

1] Load a MADRIX 5 Fixture Library.

2] Create a new fixture or copy an existing profile.

3] Configure all fixture settings.

4] Save the fixture library.

1] Loading A Library

- First, make sure to load an existing MADRIX 5 Fixture Library or create a new library.

  Learn more »**Managing Fixture Libraries**

2] Creating Or Copying A Fixture

- Create a completely new fixture profile or copy a profile to edit its available settings.

  Learn more »**Managing Fixtures**

3] Setting Up A Profile

- Make sure to set up all settings, including Fixture Settings as well as Channel Settings.

- Press *Apply* and *OK* to confirm your changes!

  Learn more **below**

4] Saving The Library

- Make sure to save your library after making any chances.

  Learn more »**Managing Fixture Libraries**

Settings

Overview

Each fixture profile includes two types of settings:

- Fixture Settings

  [Includes data about the fixture in general]

- Channel Settings

  [Includes detailed data about each DMX channel/color channel]

Edit Fixture

- Go to the menu *Fixtures > Edit Fixture* in order to be able to edit all settings as described below [Edit mode].

  Or *Double-click* on a fixture in the Fixture Library list.

Fixture Settings

Set up the following settings:

- *Manufacturer -* Enter the name of the manufacturer.

- *Website -* Enter the website of the manufacturer.
  - Click *Call* to let Windows automatically open your default web browser and launch the website.

- *Fixture Name -* Enter the complete name of the fixture.

- *Display Name -* Enter a short label for the fixture.

- *Operation Mode -* Fixtures might have several modes or come in different types. Specify the type or mode here [e.g., 54 CH for the 54 DMX channel mode].

- *Protocol -* Specify if the fixture is controlled via DMX512 [or DMX-based in general] or via DVI [or DVI-based in general]. DMX-based types include protocols that are based on DMX512 or function similar [e.g., KiNet or Art-Net].

- *Voxel Count X / Y / Z -* Specify how many pixels/voxels the fixture has in X [horizontal], Y [vertical], and Z [depth].

- **_Color Depth -_** Specify the color mixing mode of your fixture or in other words how many channels one voxel/ pixel of your fixture requires [e.g., RGB fixtures use 3 channels per voxel/pixel, while RGBW fixtures require a color depth of 4.] You can enter the values directly, or you can use the drop-down list to define the color mode: **_White_**, **_RG_**, **_RGB_**, or **_RGBW_**

- **_DMX Channel Count -_** Is only available for DMX-based fixtures. Enter the total number of DMX channels which the fixture requires [e.g., a 16-pixel RGB fixture usually requires 48 DMX channels per fixture].
  - Click **_Match_** to let the Fixture Editor automatically set the DMX Channel Count according to the number of single channels added to the list of Channels below. Changes will be made as long as Match is enabled.

- **_DMX Address MIN / MAX -_** Is only available for DMX-based fixtures. Enter the lowest DMX start address possible for this fixture and power supply/controller [usually 1]. Enter the highest DMX start address possible for this fixture and power supply/controller [usually 512].

Channel Settings
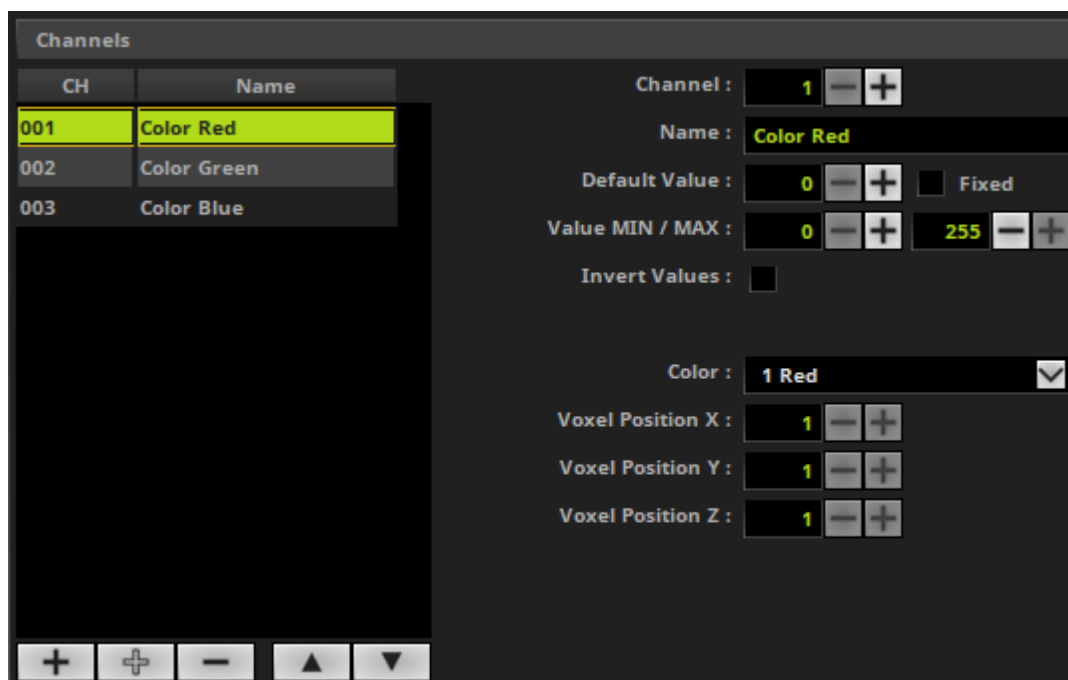
- ![+] **-** Creates a new channel and adds it to the fixture profile and automatically predicts the new settings for you based on previous channels. Make sure to correctly set up all settings for this channel as explained below.

- ![+] **-** Creates a new channel without automatically predicting the new settings.

- ▪ **[—]** - Deletes a channel from the list of channels.

- ▪ **[▲]** - Moves an entry one place up in the list of channels. Select the particular channel first.

- ▪ **[▼]** - Moves an entry one place down in the list of channels. Select the particular channel first.

- ▪ **OK -** Confirms your settings for the fixture profile and leaves Edit mode.

- ▪ **Apply -** Confirms your settings, but you will stay in Edit mode and you can change further settings.

- ▪ **Cancel -** Aborts the process and does not confirm any changes. All changes will be discarded. You will leave Edit mode.

Set up the following settings:

- ▪ **Channel -** Specifies the channel number. Especially, when using DMX-based fixtures, every channel has a specific function. Make sure to set up the channels correctly.

- ▪ **Name -** Allows you to change the name of the channel. This name will be displayed in the list of channels to the left and in the preview to the right.

- ▪ **Default Value -** Specifies the default value for this channel [initial value].
  Fixed - Sets the channel always to the Default Value and does not allow any changes to the values, when working with the fixture in MADRIX 5. [E.g, a fixture might require the master channel to always be 255 in order to work correctly].

- ▪ **Value MIN / MAX -** Limits the value range with an lower and upper limit. By default, the values of a DMX channel range from 0 to 255. 0 represents Off, while 255 represents Full On. Some fixtures might work with a different range of values or require a certain minimal value to avoid flickering.

- ▪ **Invert Values -** Some fixture might work the other way around [0 = On and 255 = Off]. Activate this option in this case.

- ▪ **Color -** Defines which color the channel controls. Choose from **Red**, **Green**, **Blue**, or **White** [according to the Color Depth].

- ▪ **Voxel Position X -** Defines the horizontal position of the channel on the fixture. [Fixtures of MADRIX 5 work on a voxel/pixel basis. For example, 1/1/1 for example represents the upper left voxel/pixel.]

- ▪ **Voxel Position Y -** Defines the vertical position of the channel on the fixture. [Fixtures of MADRIX 5 work on a voxel/pixel basis. For example, 1/1/1 for example represents the upper left voxel/pixel.]

- ▪ **Voxel Position Z -** Defines the depth position of the channel on the fixture. [Fixtures of MADRIX 5 work on a voxel/pixel basis. For example, 1/1/1 for example represents the upper left voxel/pixel.]

Please note: All fixture profiles are automatically working in HTP mode [Highest Takes Precedence].

[For example, you have 2 fixtures with the same DMX address. But due to their different locations in the MADRIX 5 Patch, they receive different color values. Because HTP is activated for these fixtures, the highest color value will be put out onto the LEDs.]

Confirming Your Settings

- Press **Apply** and **OK** to confirm any changes.

- Fixtures will automatically be checked for errors. Make sure to correct any errors, since the settings will still be applied.

1.7   Troubleshooting

This topic includes:

- **Error When Saving Files**

Error When Saving Files

If you are experiencing issues when trying to save a Fixture Library file or a Fixture file, there are two solutions to this problem:

- ***Right Click > Run as administrator***

  - In order to save files as a user that is logged-in into Windows, you need to have the permissions set by Windows to do so.
  - When you do not have the right permissions, saving files can lead to errors.
  - To circumvent such issues, you can run the MADRIX 5 Fixture Editor as administrative computer user, the so-called administrator.
  - Perform a ***right mouse click*** on the ***FixtureEditor.exe*** [or a shortcut to the MADRIX 5 Fixture Editor] and choose ***Run as administrator***
  - **Note:** You need to have access to the administrator account (i.e., password).
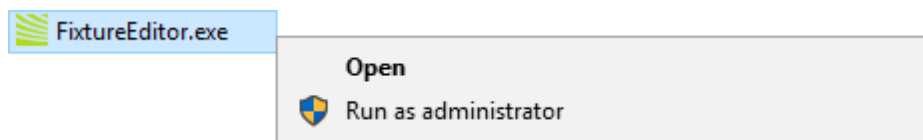
- ***Choose A Different Directory***

  - When you are experiencing issues and running as administrator is not an option, choose a different directory on your harddisk to save the files.
  - There are locations on your computer/harddisk where you will have the permission to save files. Choose such a location.
  - Examples are:

  C:\Users\USERNAME\Desktop

  C:\Users\USERNAME\Documents

  [***USERNAME*** specifies your Windows account name.]

//PART B

Imprint And Copyright

2   Imprint And Copyright

This topic includes:

- **Company And Address**
- **Copyright**
- **Third Parties**

Company And Address

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E-mail: **info@madrix.com**

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Third Parties

Qt

Included Libraries

MADRIX 5 [in this case the MADRIX 5 Fixture Editor] uses the following libraries of the Qt development framework. The libraries and their use are covered by GNU LGPL v.2.1.

- QtCore4.dll

- QtGui4.dll

- QtOpenGL4.dll

- QtXml4.dll

- QtSvg4.dll

- QtNetwork4.dll

- qgif4.dll (Qt Plugin DLL)

- qico4.dll (Qt Plugin DLL)

- qjpeg4.dll (Qt Plugin DLL)

- qmng4.dll (Qt Plugin DLL)

- qsvg4.dll (Qt Plugin DLL)

- qtiff4.dll (Qt Plugin DLL)

The complete, corresponding, and machine-readable source code of these files, incl. the license text, is available:

- On the MADRIX 5 Software USB flash drive, in the subfolder ThirdParty. For example, D:\ThirdParty

- Online at https://www.madrix.com/support/download/

Copy of License

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GNU LESSER GENERAL PUBLIC LICENSE


Version 2.1, February 1999


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Everyone is permitted to copy and distribute verbatim copies
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[This is the first released version of the Lesser GPL.  It also counts
 as the successor of the GNU Library Public License, version 2, hence
 the version number 2.1.]
Preamble


The licenses for most software are designed to take away your freedom to share and change it. By
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change free software--to make sure the software is free for all its users.


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based on the explanations below.


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```

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

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Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

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