



MADRIX 3 Fixture Editor Help And Manual

[Software User Guide]

MADRIX Version: 3.2.

Date: March 2014



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//PART A

MADRIX 3 Fixture Editor

1 MADRIX 3 Fixture Editor

This topic includes:

- [Introduction](#)
- [Usage](#)
- [Where To Find The MADRIX Fixture Editor](#)

Introduction

The MADRIX 3 Fixture Editor is a separate application and useful tool to create and configure lighting fixtures for MADRIX.

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

Usage

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

- see how fixtures are implemented in MADRIX.
- 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 Fixture Editor

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

- In Windows, go to **Start > All Programs > MADRIX 3 > Fixture Editor**

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

- C:\Program Files (x86)\MADRIX3

1.1 Important Notes

- **The MADRIX Fixture Library is loaded into MADRIX, when the MADRIX software is launched. In this way, MADRIX will load the new settings and profiles during start-up.**
- **MADRIX needs to be restarted when changes have been made to the fixture library.**
- **MADRIX can only access 1 MADRIX Fixture Library during run-time. All fixture profiles that are required need to be in 1 library file.**
- **By default, MADRIX loads the madrix.mfx, which is the original MADRIX Fixture Library.**
- **MADRIX allows you to load a fixture library that is not the default MADRIX Fixture Library [In MADRIX, go to Preferences > Options... > Start Options > Load A Special Fixture Library].**
- **MADRIX 3 Fixture Editor can load MADRIX 2.X Fixture Libraries [*.mfl] as well as MADRIX 3.X Fixture Libraries [*.mfx].**
- **MADRIX 3 Fixture Editor can save only MADRIX 3.X Fixture Libraries [*.mfx].**
- **MADRIX 3 Fixture Editor can load MADRIX 2.X Fixtures [*.mfx] as well as MADRIX 3.X Fixtures [*.mfix].**
- **MADRIX 3 Fixture Editor can save only MADRIX 3.X Fixtures [*.mfix].**
- **Always make a backup of the madrix.mfx before and after applying any changes!**
- **When updating your MADRIX software, the Setup (Auto Installer) will completely overwrite the current madrix.mfx in order to update the library.**
- **When updating your MADRIX software, the Setup (Auto Installer) will automatically create a "madrix.mfx.bak". This file is a backup of your previous MADRIX Fixture Library.**

1.2 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 3 Fixture Editor, you will see that no fixture library is loaded. At first, the tool is empty.

To load the original MADRIX Fixture Library file:

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

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

2] A new window will open.

3] Navigate to the installation directory of MADRIX:

- C:\Program Files (x86)\MADRIX3

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

Choosing The Language

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

▪ In the menu **Language**, choose from:

- **English**

[Keyboard shortcut: **Ctrl+Shift+Alt+E**]

- **Deutsch** [German]

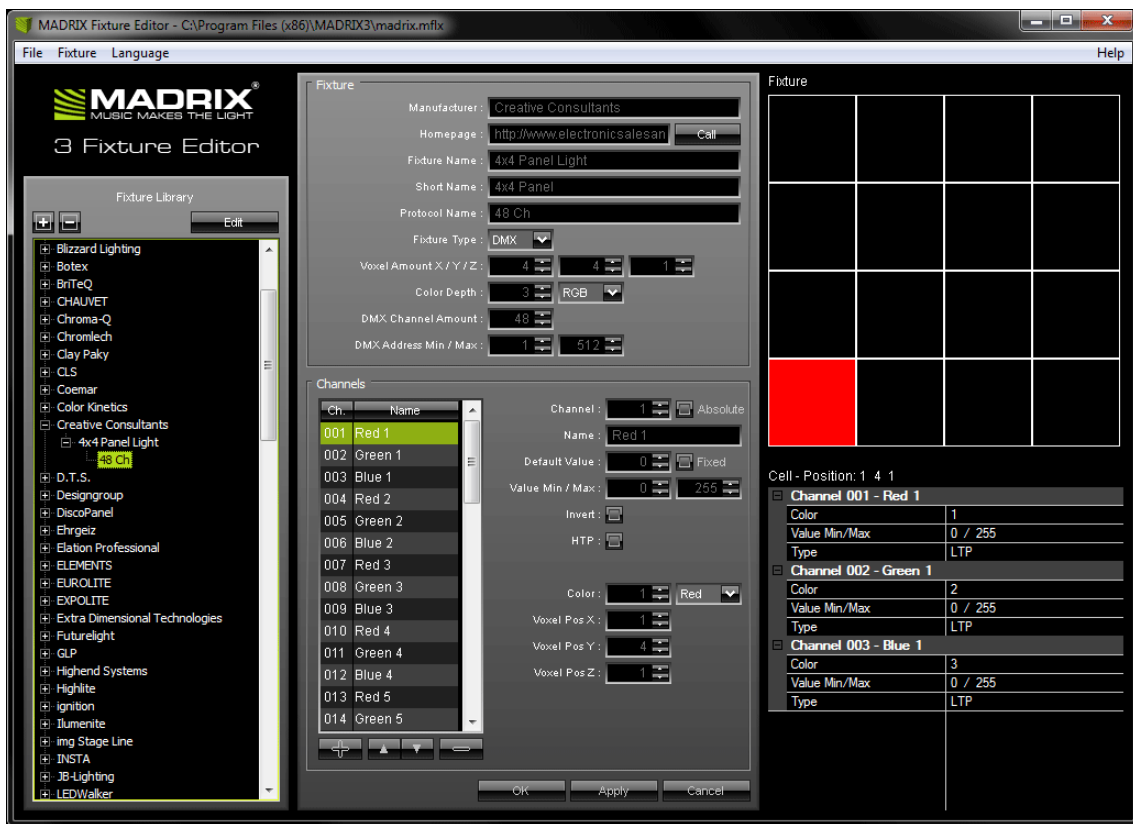
[Keyboard shortcut: **Ctrl+Shift+Alt+D**]

[This user manual only includes English.]

Overview

The MADRIX 3 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.
- 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.

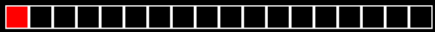
Fixture And Channels

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. 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.

Fixture



Cell - Position: 1 1 1

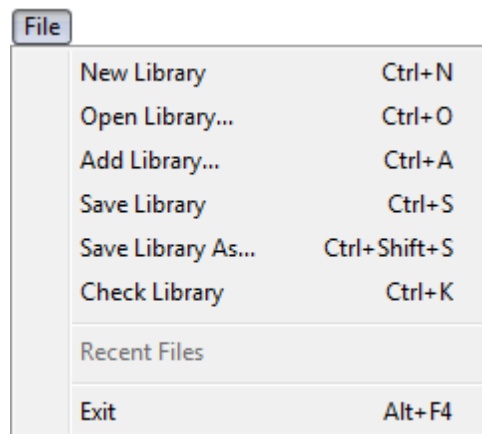
<input type="checkbox"/> Channel 001 - Red	
Color	1
Value Min/Max	0 / 255
Type	LTP
<input type="checkbox"/> Channel 002 - Green	
Color	2
Value Min/Max	0 / 255
Type	LTP
<input type="checkbox"/> Channel 003 - Blue	
Color	3
Value Min/Max	0 / 255
Type	LTP

1.3 Managing Fixture Libraries

This topic includes:

- [Overview](#)
- [Creating A New Library](#)
- [Loading A Library](#)
- [Adding A Library](#)
- [Saving A Library](#)
- [Checking A Library For Errors](#)

Overview



- **File** - Use this menu to manage your original MADRIX 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 Fixture Editor. This will open a new window for you to choose the fixture library. [A fixture library file has the extension *.mflx.]

If you open the MADRIX 3 Fixture Editor, you will see that no fixture library is loaded. At first, the fixture library is empty.

To open the original MADRIX Fixture Library file:

- 1] Select **File > Open Library...**
[Keyboard shortcut: **Ctrl+O**]
- 2] Navigate to the installation directory of MADRX:
- C:\Program Files (x86)\MADRIX3
- 3] Choose **madrix.mflx** and press **Open**

Adding A Library

- **File > Add Library...** - Allows you to add other libraries to the currently loaded library in order to merge several library files, for example [add and append].

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 3 Fixture Editor without having saved.
- If the library was modified, the title bar shows an asterisk, too.

Checking A Library For Errors

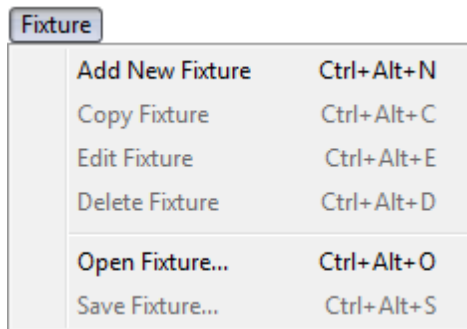
- **File > Check Library...** - Checks the fixture library for logical errors. The Fixture Editor will look for logical errors, such as having a defined a Color Depth of 4, but only including 3 channels for the fixture. This option is useful if you want to have an automatic check up after having implemented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

1.4 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



Fixture	
Add New Fixture	Ctrl+Alt+N
Copy Fixture	Ctrl+Alt+C
Edit Fixture	Ctrl+Alt+E
Delete Fixture	Ctrl+Alt+D
Open Fixture...	Ctrl+Alt+O
Save Fixture...	Ctrl+Alt+S

- **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 Fixture of the file type *.mfix]. The fixture profile will be added to the fixture library.
- **Fixtures > Save Fixture...** - Allows you to save a fixture to an external file [MADRIX Fixture of the file type *.mfix]. 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.

1.5 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 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 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 changes.

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 **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

The screenshot shows the 'Fixture' configuration window in MADRIX Fixture Editor 3.2. The fields are filled with the following information:

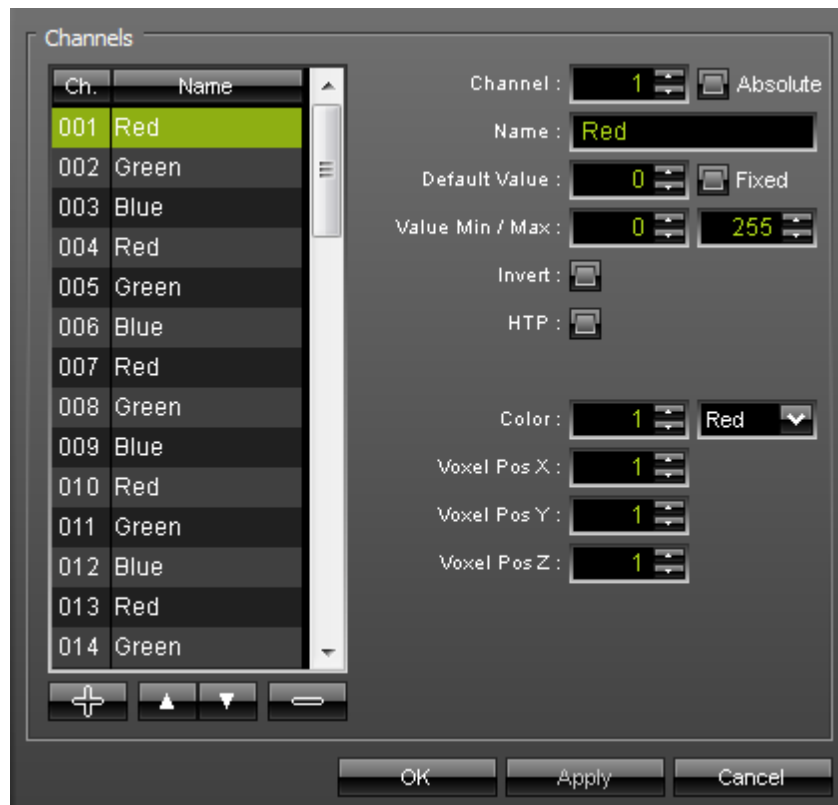
- Manufacturer: ELEMENTS
- Homepage: www.icd-usa.com (with a 'Call' button)
- Fixture Name: Titanium TRI Matrix Bar
- Short Name: Matrix Bar
- Protocol Name: 54ch
- Type: DMX (dropdown menu)
- Voxel Amount X / Y / Z: 18, 1, 1 (spinners)
- Color Depth: 3 (spinner) and RGB (dropdown menu)
- DMX Channel Amount: 54 (spinner)
- DMX Address Min / Max: 1, 486 (spinners)

Set up the following settings:

- **Manufacturer** - Enter the name of the manufacturer.
- **Homepage** - Enter the website of the manufacturer. Press **Call** to let Windows automatically open your default web browser and launch the website.
- **Fixture Name** - Enter the complete name of the fixture.
- **Short Name** - Enter a short label for the fixture.
- **Protocol Name** - Fixtures might have several modes or come in different types. Specify the type or mode here [e.g., 54ch - 54 DMX channel mode].
- **Type** - 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 Amount 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 Amount** - 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].

- **DMX Address Min / Max** - Is only available for DMX-based fixtures. Enter the lowest DMX channel address possible for this fixture and power supply/controller [usually 1]. Enter the highest DMX channel address possible for this fixture and power supply/controller [usually 512; but if you have a 150-channels fixture and you can only address one fixture per controller for example, then DMX Address Max should be 150. In this way, you can only add one fixture per controller and DMX universe].

Channel Settings



- **+** - Creates a new channel and adds it to the fixture profile. Make sure to correctly set up all settings for this channel as explained below.
- **-** - Deletes a channel from the list of channels.
- **Up** - Moves an entry one place up in the list of channels. Select the particular channel first.
- **Down** - 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.
 - Absolute** - Sets the channel as a global identifier. This is optional. There are manufacturers that allow several fixtures to use one master channel, for example.
- **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.
- **Type** - Specifies if the channel is of a certain type.
 - HTP** - Activates Highest Takes Precedence for this channel.
[Is a feature only used in special cases. For example, you have 2 fixtures with the same DMX address. But due to their different locations in the MADRIX Patch, they receive different color values. If HTP is activated for these fixtures, the highest color value will be put out onto the LEDs. Otherwise, the position in the patch decides which color value is send out. The latter position wins.]
- **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. [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** - Some fixture might work the other way around [0 = On and 255 = Off]. Activate Invert in this case.
- **Color #** - Defines which color the channel controls. Choose from **Red, Green, Blue,** or **White** [according to the Color Depth].
- **Voxel Pos X** - Defines the horizontal position of the channel on the fixture. [Fixtures of MADRIX work on a voxel/pixel basis. For example, 1/1/1 for example represents the upper left voxel/pixel.]
- **Voxel Pos Y** - Defines the vertical position of the channel on the fixture. [Fixtures of MADRIX work on a voxel/pixel basis. For example, 1/1/1 for example represents the upper left voxel/pixel.]
- **Voxel Pos Z** - Defines the depth position of the channel on the fixture. [Fixtures of MADRIX work on a voxel/pixel basis. For example, 1/1/1 for example represents the upper left voxel/pixel.]

Confirm Settings

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

//PART B

Imprint & Copyright

2 Imprint & Copyright

This topic includes:

- [Company And Address](#)
- [Copyright](#)
- [Third Parties](#)

Company And Address



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Third Parties

Qt

Included Libraries

MADRIX [in this case the MADRIX 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

- 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 product CD, in the subfolder ThirdParty. For example, D:\MADRIX3\ThirdParty
- Online at <http://www.madrix.com/en/home/download/madrix-software.html>

Copy of License

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Version 2.1, February 1999

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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.]

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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.

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- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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