

# DMX-Player L <sup>MK2</sup>

User Manual



**DMX** <sup>®</sup>  
**ALL**

## Description

The **DMX-Player L<sup>MK2</sup>** is a DMX Stand-Alone Player, designed for several tasks.

Various programmable DMX-Programs can be stored in the In the DMX-Player L<sup>MK2</sup>.

The different options on the DMX-Player L MK2 are used to start the stored programs without a needed PC.

### Stand-Alone Function

The internal 1MByte-FLASH storage allows a simple storage and easy replay of DMX-Programs directly within the DMX-Player L<sup>MK2</sup>.

### Expandable Storage with MicroSD-Card

By simply plugging a MicroSD-Card the storage for the Stand-Alone-Replay can be fit to certain requirements.

### DMX-Output with 512 DMX-Channels

The DMX-Output with 512 DMX-Channels can be used completely within the Stand-Alone-Operation.

### Easy Configuration via USB

The Configuration occurs easily via USB with the PC-Program DMX-Configurator. The Configuration once set is stored in the device.

### Live-Controlling

Via USB the controlling for the DMX-Outputs is possible, also Live with PC. Thereby the programming can be checked without transferring it in the Stand-Alone-Storage.

### Several Possibilities to start programs

The DMX-Player L<sup>MK2</sup> provides different possibilities to start the stored programs, e.g. via button or Madrix-Keybaord.

### Internal real-time clock

The internal real-time clock can start programs according to certain times.

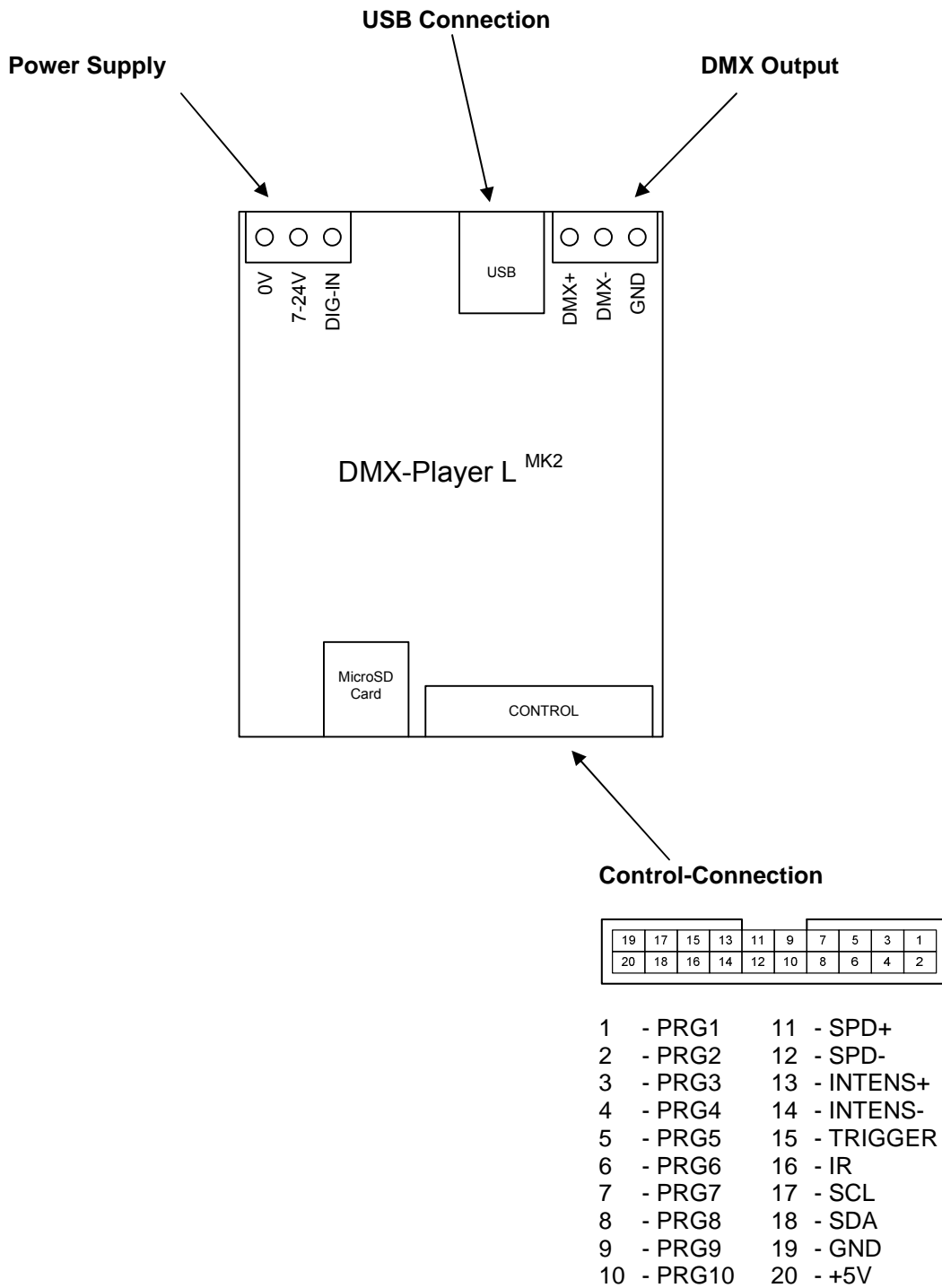
### Firmware-Update-Function

To use further functions the DMX-Player L<sup>MK2</sup> offers a Firmware-Update-Function.

## Data Sheet

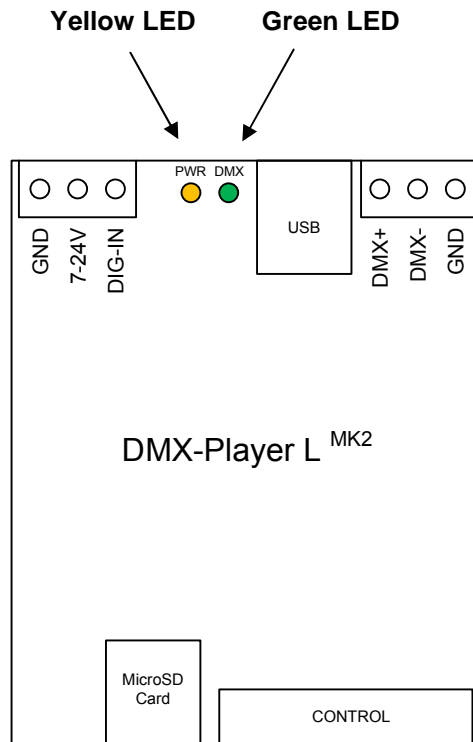
<b>Power supply:</b>	7 – 24 V (~45mA @ 12V / ~22mA @ 24V)
<b>Output:</b>	DMX-Signal with 512 Channels
<b>Inputs:</b>	Digital LongDistance-Control Inputs for: <ul style="list-style-type: none"><li>- Program Selection (Button / Matrix)</li><li>- Brightness +/-</li><li>- Speed +/-</li><li>- Trigger</li><li>- DIG-IN for 1-Button-Handling</li></ul>
<b>Connection:</b>	<ul style="list-style-type: none"><li>- Screw terminal for power supply</li><li>- Screw terminal for DMX-Output</li><li>- Control-Connection with 20pin header</li><li>- USB-A for transfer programs or for Live-Operation with PC</li></ul>
<b>Program storage:</b>	1MByte internal FLASH or optional MicroSD-Card (not included)
<b>Handling:</b>	external Button / Matrix-Keyboard external IR-Remote Control (Accessory)
<b>Functions:</b>	IR-Sensor Input for optional IR-Sensor Real-Time Clock for up to 16 Timer-Trigger Firmware-Update-Function
<b>Dimensions:</b>	64,2mm x 82mm

## Connection



## LED-Displays

Two LEDs signal the current status of **DMX-Player L<sup>Mk2</sup>**.



YELLOW lights permanently

Program Replay is OK

GREEN lights permanently

DMX-Output is OK

YELLOW flashes 1x short / long Break

There are no Stand-Alone-Programs stored

YELLOW flashes 4x short / long Break

Program Replay is faulty

YELLOW/GREEN alternate

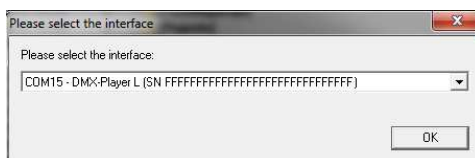
The device is in the Update-Mode

## Device Configuration

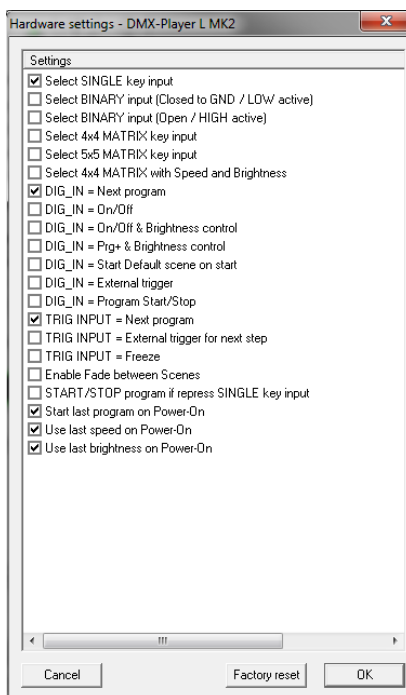
A USB-Connection to PC, consisting the Program DMX-Configurator, is needed for the device configuration.

Please proceed as following to make the device configuration:

- Connect the DMX-Player L<sup>MK2</sup> via USB to PC
  - ⇒ A USB-Cable with A-Plug is needed (optional Accessory)
  - ⇒ Install the USB-Driver if it does not already exist
- Start the Program DMX-Configurator (Minimum Version 2.3.4)
  - ⇒ This is available as download under [www.dmx4all.de](http://www.dmx4all.de)
- Please establish a connection with the DMX-Player L<sup>MK2</sup> within the DMX-Configurator by selecting the corresponding device and confirm with OK.



- Call the menu item *Settings* → *Hardware Settings*
- Here, the device configurations can be done. These will be described in detail on the following pages.



- By click OK the settings are stored and transferred to the DMX-Player L<sup>MK2</sup>.

## Program Selection

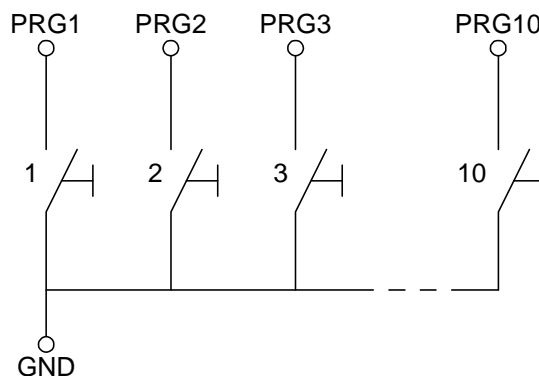
The selection of the stored programs can occur via several circuits. Which circuit is used must be configured within the Hardware-Settings in the DMX-Configurator (see section Device Configuration).

### 10 Button / Switch

With the 10 buttons or switches the first 10 stored programs can be called directly.

Within the Hardware-Settings must  Select SINGLE key input be activated.

Connection:

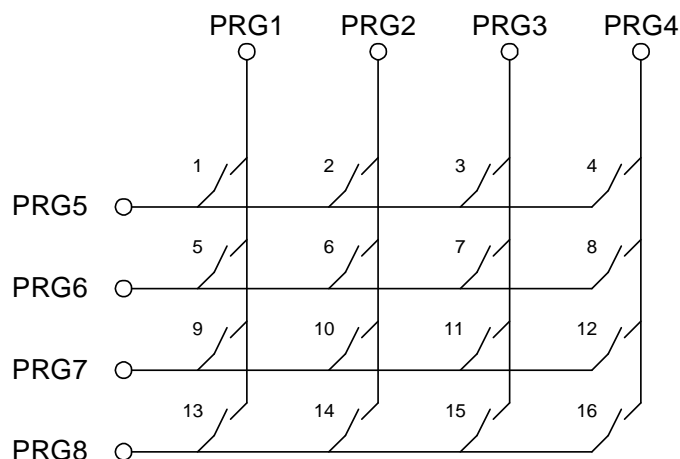


### Matrix 4x4

With a Matrix-Circuit up to 16 programs can be called with one button.

Within the Hardware-Settings must  Select 4x4 MATRIX key input be activated.

Connection:

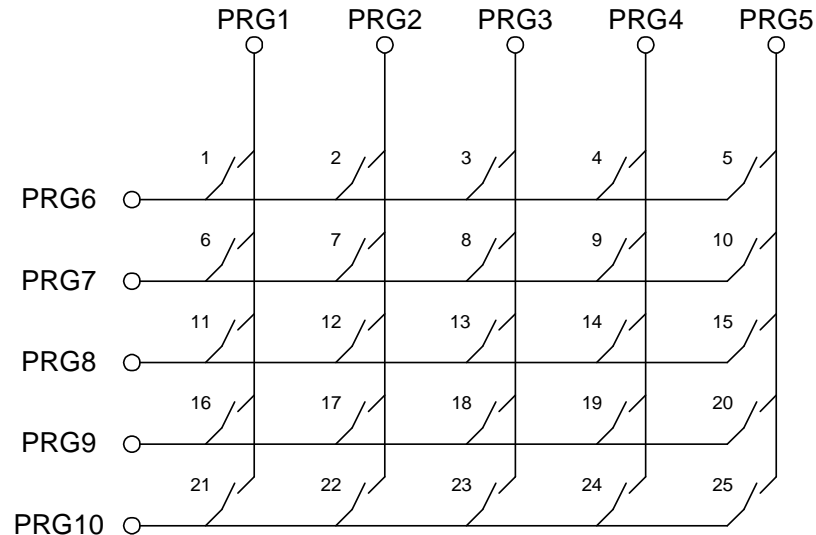


## Matrix 5x5

With a 5x5-Matrix-Circuit up to 25 programs can be called with one button.

Within the Hardware-Settings must  Select 5x5 MATRIX key input be activated.

### Connection:

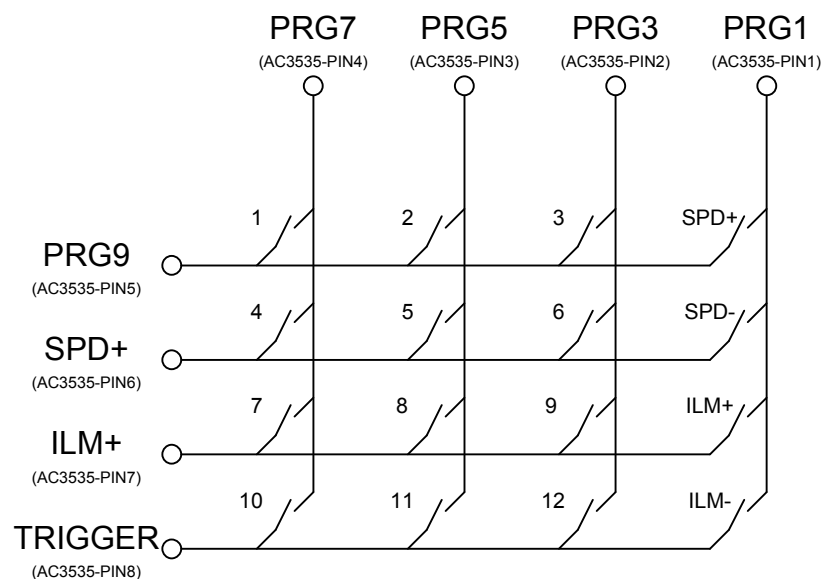


## Matrix 4x4 with speed and brightness for APEM-AC3535

This option allows connecting an APEM-AC3535 Keyboard.

Within the Hardware-Settings must  Select 4x4 MATRIX with Speed and Brightness be activated.

### Connection:







## Execute program after turning on

After switching on a specific or the last selected program can be replayed.

If a specific program is to be started, so it is to specify in the DMX-Configurator under *Default Scene on Start*.

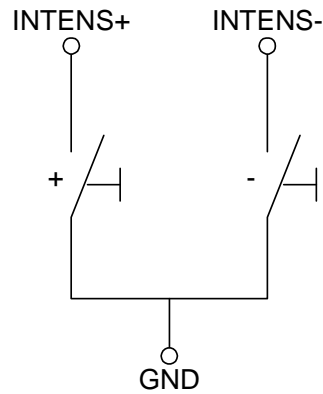
If the last replayed program is to be started, in the device configuration the option

Start last program on Power-On must be activated.

If the option *Start last program on PowerOn* is activated the last replayed program, will be started each time independent of the *Default Scene on Start*.

## Brightness Setting

The Brightness Setting occurs via 2 buttons connected to the Control-Connection INTENS+ and INTENS- .



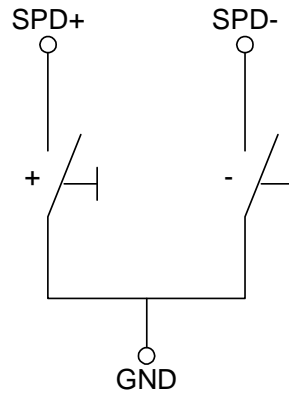
### Restore last brightness setting after turning on

After turning on the last brightness setting can be restored.

The option  Use last brightness on Power-On must be activated in the device configuration.

## Speed Setting

The Speed Setting takes place via 2 buttons connected to SPD+ and SPD- at the Control Connection.



### Restore last speed setting after turning on

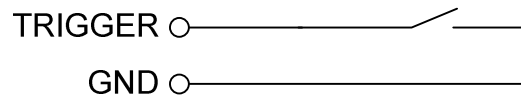
After turning on the last speed setting can be restored.

The option  Use last speed on Power-On must be activated in the device configuration.

## Trigger-Input

The Trigger-Input at the Control-Connection of the DMX-Player L<sup>MK2</sup> is configurable and so several applications are possible.

The Trigger-Impuls can be created by trigger the contact to GND.



TRIG INPUT = Next program

This option switches a program on.

TRIG INPUT = Freeze

This option stops / starts the program replay.

TRIG INPUT = External trigger for next step


This option switches a step on with **External Trigger** as wait time.

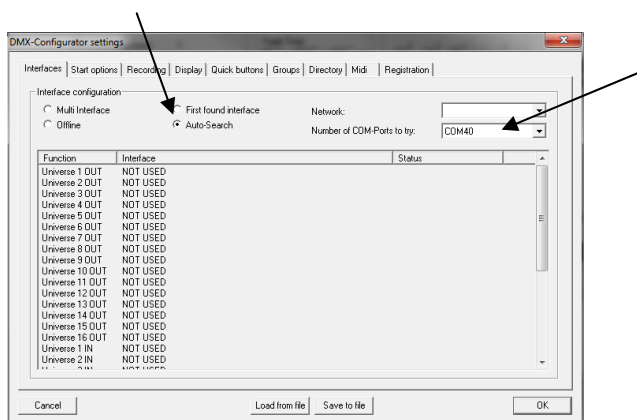
With this setting it is possible to switch a program on with an external clock. A Fade-Time will not be ended with a Trigger-Signal, so the Trigger-Signal will be ignored during a Fade.

## Create and store Stand-Alone-Programs

The DMX-Player L<sup>Mk2</sup> has a user-programmable Stand-Alone Reproduction. The programs, created at the PC and with the DMX-Configurator are transferred to the DMX-Player L<sup>Mk2</sup> and can be replayed at the PC.

To create and program the programs serves the software DMX-Configurator. This is downloadable for free under [www.dmx4all.de](http://www.dmx4all.de).

After installing the software you can set the connection to the connected DMX-Player L<sup>Mk2</sup> under *Settings* → *Communication settings* or the symbol  within the toolbar

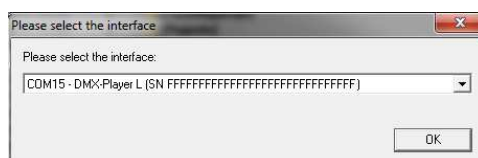


If *Auto-Search* is selected the system searches for the connected device automatically.

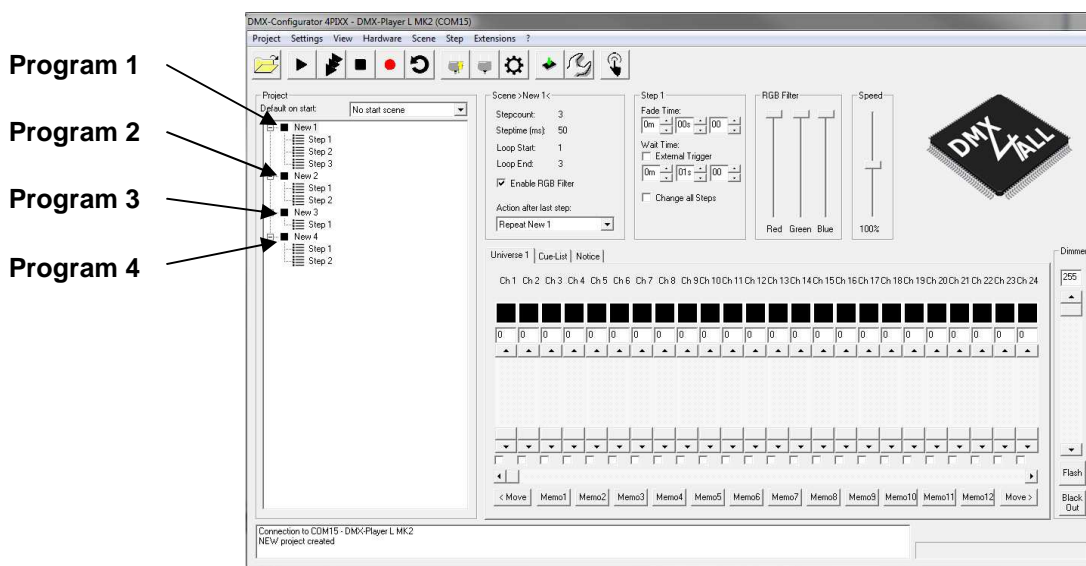


The DMX-Player L<sup>Mk2</sup> uses a Virtual COM-Port (VCP). The *Number of COM-Ports to try* must be set high enough, at least on the COM-Port which is used by the DMX-Player L<sup>Mk2</sup> itself. Which COM-Port is used for the connected DMX-Player L<sup>Mk2</sup> can be checked in the Windows Device Manager.

After the automatically Auto-Search a selection dialog is displayed, in which the corresponding device is selected:



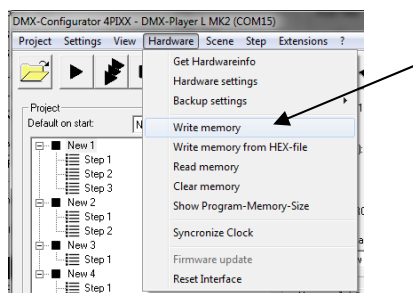
Now, the programs can be created. The setting options are so extensive they can't be explained in detail.



The order of the programs, within the example named *New 1*, *New 2*, *New 3* and *New 4*, specifies the order of the programs transferred to the DMX-Player L<sup>MK2</sup> too. The programs name is not considered.

If, for example, program 3 is started via input PRG3 so it is in this case *New 3*.

The programs are stored within the Stand-Alone Memory of the Player L<sup>MK2</sup> occurs via the menu item *Hardware*→*Write memory*.



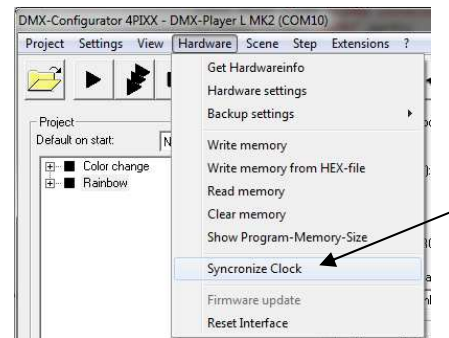
This process can take some time! Please don't interrupt the transfer.

## Use the Real-Time Clock

The **DMX-Player L<sup>MK2</sup>** has an internal real-time clock. With this clock programs can be started at adjustable times.

### Adjust the time

Select the menu item *Hardware->Synchronize Clock* in the DMX-Configurator. Now the current PC-System time is transferred to the DMX-Player L<sup>MK2</sup>.



If programs with configured timer trigger are transferred to the DMX-Player L<sup>MK2</sup>, so the current PC System-Time is transferred to the DMX-Player L<sup>MK2</sup> too.

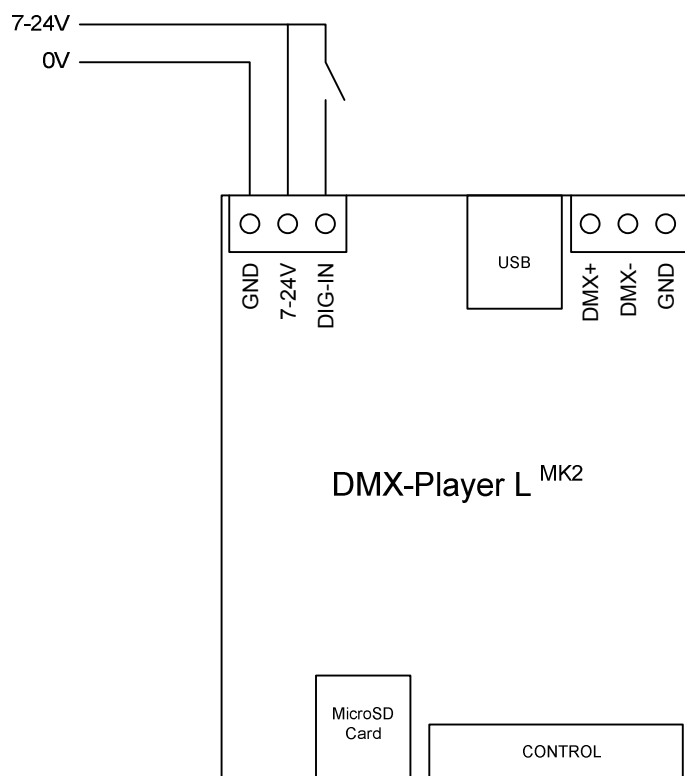


## Digital Control Input DIG IN

The digital control input **DIG-IN** of the DMX-Player L<sup>MK2</sup> can be configured with several functions (see DMX-Player L<sup>MK2</sup> device configuration):

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> DIG_IN = Next program                 | Execute next program  |
| <input checked="" type="checkbox"/> DIG_IN = On/Off                       | Switching on/off  |
| <input checked="" type="checkbox"/> DIG_IN = On/Off & Brightness control  | Switching on/off (short actuation)<br>Brightness setting (long actuation)     |
| <input checked="" type="checkbox"/> DIG_IN = Prg+ & Brightness control    | Execute next program (short actuation)<br>Brightness setting (long actuation) |
| <input checked="" type="checkbox"/> DIG_IN = Start Default scene on start | Start „Default scene on start“  |
| <input checked="" type="checkbox"/> DIG_IN = External trigger             | Release trigger   |
| <input checked="" type="checkbox"/> DIG_IN = Program Start/Stop           | Start/ Stop Program   |

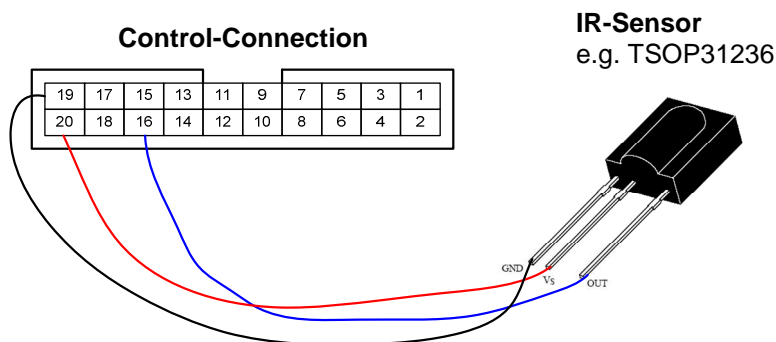
The control inputs wiring occurs via a button to the power supply:



## IR-Remote Control

The **DMX-Player L<sup>Mk2</sup>** allows an IR-Operation by external IR-Sensor. An IR-Sensor is to connect to the 16 Pin Control-Connection.

A suitable IR-Sensor is available as accessory.



The stored Scenes can be called via IR-Remote Control.  
The DMX-Player L<sup>Mk2</sup> can be run via DMX4ALL LED-Remote Control.

### Using with DMX4ALL LED-Remote Control

The program selection occurs via the buttons **1, 2, 3 ... 9, 0** according to the programs 1 up to 10.

Via button **+** and **-** the brightness and speed can be set as well as the program selection is possible.

After pressing the **SPEED** key the speed is adjustable.

After pressing the **PROG SELECT** key the programs are selectable.

After pressing **R** or **G** or **B** the brightness is adjustable.

A separated setting for red, green and blue is not possible.

The button **BLACK OUT** activates or deactivates the BlackOut-Function. The brightness setting remains.

The button **FLASH** activates or deactivates the Flash-Function (all 100%). The brightness setting remains.



## Safety-Function

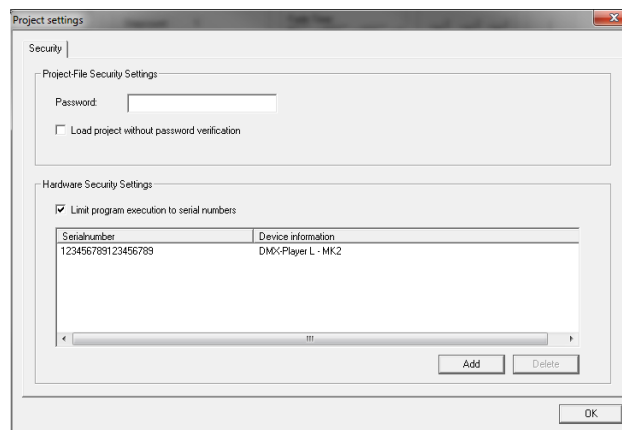


For using the safety-function a *Programming PRO-Key* for the DMX-Configurator is necessary.

The **DMX-Player L<sup>MK2</sup>** has a Safety-Function, allowing the usage of created programming exclusively on selected devices.

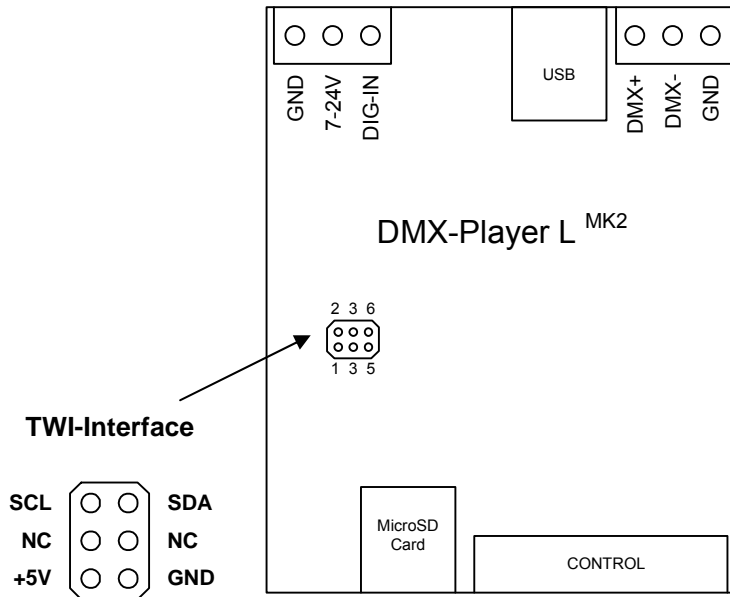
For this, the devices serial number must be entered during the programming.

The Security-Settings can be called within the DMX-Configurator under the menu item *Project*→*Project settings*.



## TWI-Connection for external Accessory

The DMX-Player L<sup>Mk2</sup> has a TWI-Connection to using for external accessory.



## MicroSD-Card

The **DMX-Player L<sup>Mk2</sup>** can use a MicroSD-Card for the program memory. It is to insert with the contacts at the front / bottom.

When inserting the MicroSD card, slide it in until a click is heard and resistance is felt.

When removing the SD card, press it again until a click is heard. The card is now pressed out approximately 5mm and can be removed.



Use only MicroSD-Cards or SDHC-Cards class 4 or higher.

The MicroSD-Card must be formatted with the FAT16 or FAT32. The file names should have a maximum of 8 signs. There must be no folders on the MicroSD.

The files generated by the DMX-Configurator must not be renamed!

## Execute Firmware-Update

The **DMX-Player L<sup>Mk2</sup>** has an Update-Function, allows transferring further Firmware-Versions.

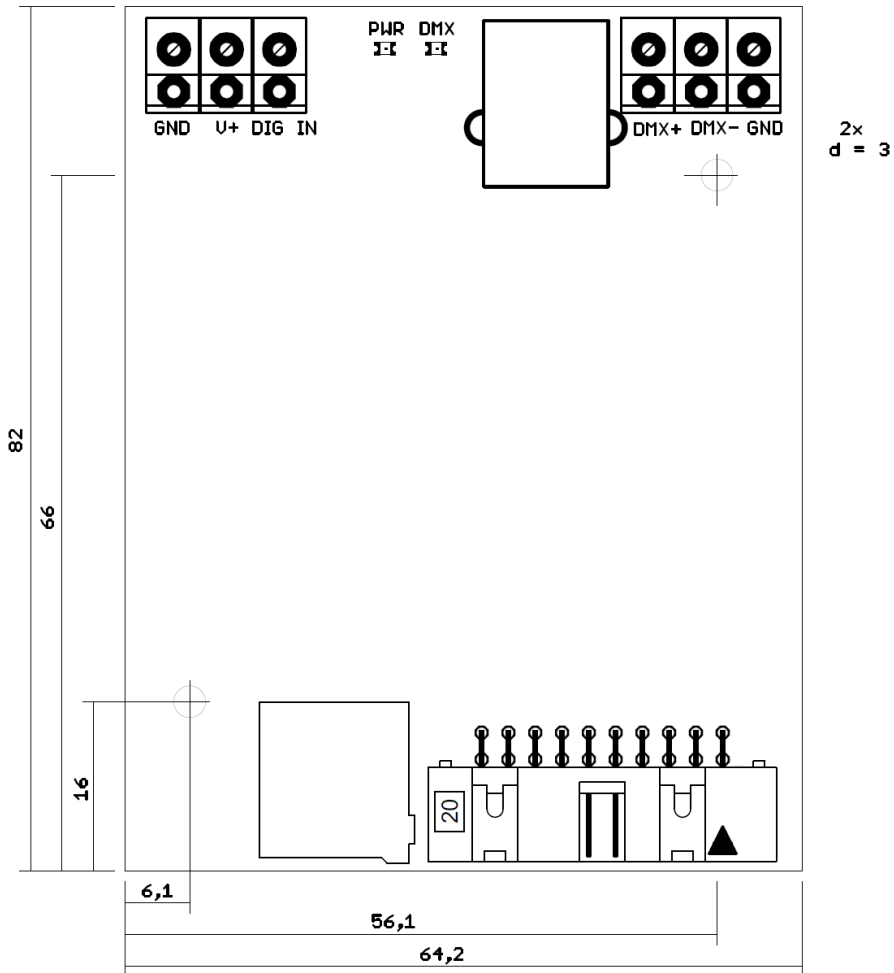
Please proceed as follows:

- Switch off the device (Separate power supply and USB!)
- Remove UPDATE jumper
- Establish USB connection to the PC
- Start Update-Software **DMX4ALL USB-Updater**
- Select DMX-Player L<sup>Mk2</sup> from list
- Click *Firmware-Update*
- Select Firmware-File (.bin) and confirm
- Wait until Update has finished
- Reconnect UPDATE-Jumper



If an error occurs during the Update, you can restart at any time. In this case turn off the DMX-Player L<sup>Mk2</sup> and close the software before you start the Firmware-Update again.

## Dimensions



All details in mm

## Accessory

### Top hat rail mounting 700



### Power supply 12V / 20W





## CE-conformity



This assembly (board) is controlled by a microprocessor and uses high frequency (8MHz). To get the characteristics of the assembly in relation to the CE-conformity, an installation in a compact metal casing is necessary.

## Risk-Notes

You purchased a technical product. Conformance to the best available technology the following risks should not be excluded:

**Failure risk:** The device can drop out partially or completely at any time without warning. To reduce the probability of a failure a redundant system structure is necessary.

**Initiation risk:** For the installation of the board, the board must be connected and adjusted to foreign components according to the device paperwork. This work can only be done by qualified personnel, which read the full device paperwork and understand it.

**Operating risk:** The Change or the operation under special conditions of the installed systems/components could as well as hidden defects cause to breakdown within the running time.

**Misusage risk:** Any nonstandard use could cause incalculable risks and is not allowed.

**Warning:** It is not allowed to use the device in an operation, where the safety of persons depend on this device.



DMX4ALL GmbH  
Reiterweg 2A  
D-44869 Bochum  
Germany

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