

## Product Handbook

IC00B01DMX	Knx to DMX gateway



Document

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## Index

Preamble .....	4
Commissioning .....	5
Programming the physical address .....	6
Settings.....	7
System settings .....	7
Time settings .....	8
Groups/Scenes .....	8
Preparing Channels for the parametrisation .....	9
Scenes and Channel settings .....	9
Scenes .....	9
Channel setting for the choosen scene .....	10
Building a project without connected lamps.....	10
Sequences .....	11
Sendflag .....	12
Create/Export documentation .....	13
Create export file (ETS) .....	13
Technical data.....	14



Any information inside this manual can be changed without advice.

This handbook can be download freely from the website: [www.eelectron.com](http://www.eelectron.com)

**Exclusion of liability:**

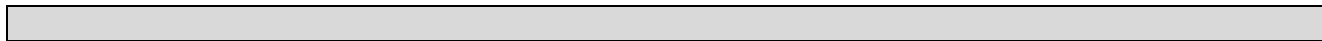
Despite checking that the contents of this document match the hardware and software, deviations cannot be completely excluded. We therefore cannot accept any liability for this.

Any necessary corrections will be incorporated into newer versions of this manual.

Symbol for relevant information



Symbol for warning



**DISPOSAL** : The crossed-out bin symbol on the equipment or packaging means the product must not be included with other general waste at the end of its working life. The user must take the worn product to a sorted waste centre, or return it to the retailer when purchasing a new one. An efficient sorted waste collection for the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the re-use and/or recycling of the construction materials

## Preamble

The IC00B01DMXGateway is an interface between the KNX bus and the DMX512 bus.

It combines elements from the field of building automation with a variety of devices from lighting technology and special technology in the event area.

The IC00B01DMXGateway receives data telegrams from the KNX bus and outputs data on the DMX512 bus. The interface allows to address DMX512 actuators in the full range of channels from the KNX bus.

After switching or dimming, it is possible to read the absolute values of each channel via the corresponding addresses.

With the IC00B01DMXGateway 512 channels, 64 scenes and 16 sequences can be controlled. When creating a project, the user can define the number of channels and scenes to be used.

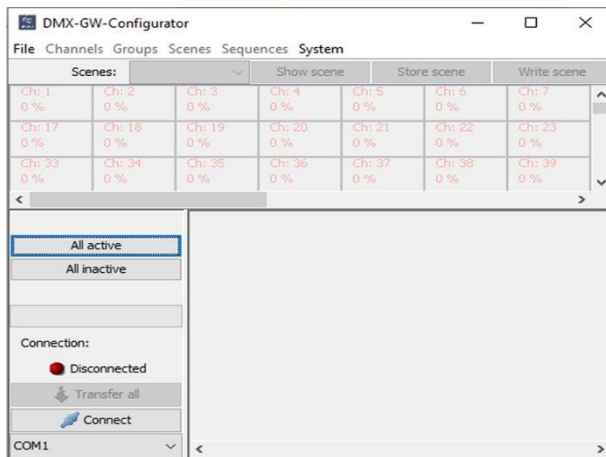
Only group addresses corresponding to the configured range are created. These can be imported as an xml file into the ETS.

The physical address is set via the configurator software. The group addresses are also specified via the configurator, but can also be controlled via the rotary switches S1 and S2.

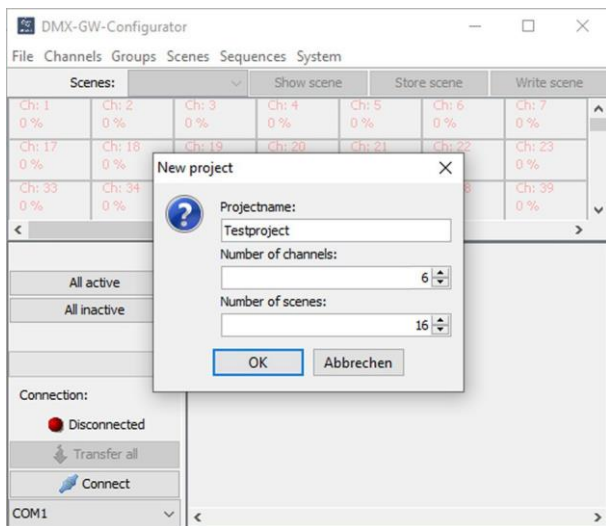
## Commissioning

Install the configuration tool KNX-DMX-GW-II-setup

Connect the gateway to the computer via USB and start the configuration tool



Select the appropriate COM interface and click Connect. Go to File and create a new project.



Name the project and set the number of required channels and scenes.

In our example the project is called "Testproject". It contains 6 channels (2 RGB lamps) and 16 scenes.

Channels: maximal 512

Scenes: maximal 64 , minimum 16

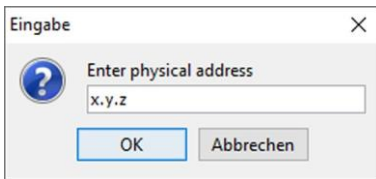
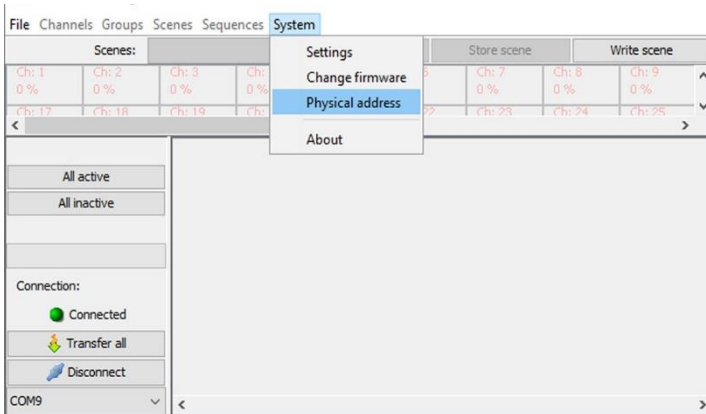
Sequences: 16 fixed

Click OK and save the project.

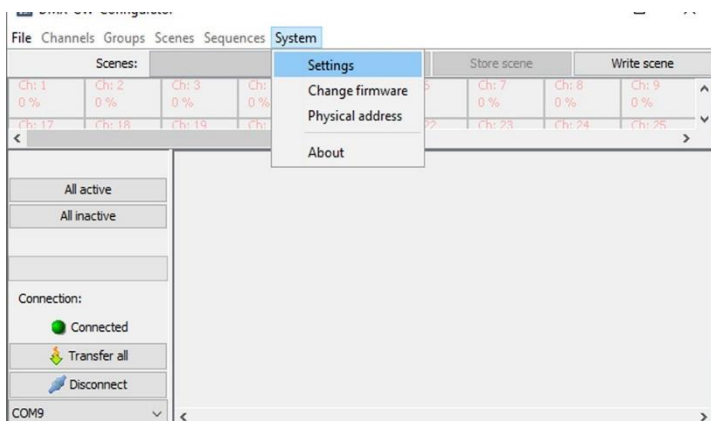
The default location of the project files is:

C:\Users\...\Documents\Eelectron\DMX-GW-II\projects

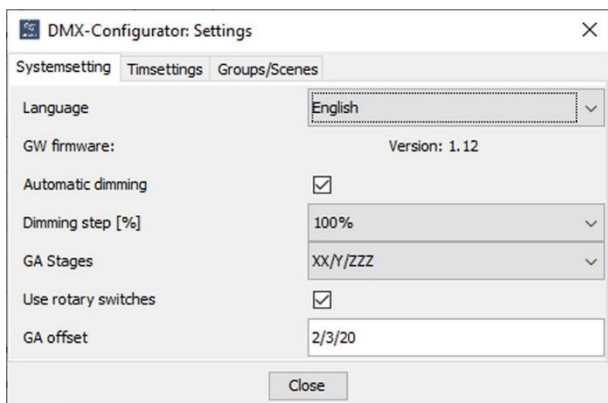
## Programming the physical address



## Settings



## System settings



Language: Deutsch / English

Automatic dimming: corresponds to Start - Stop,  
inactive means single dimming steps.

Dimming step [%]: Can be set to a fixed value or interpreted from the KNX telegram.

GA Stages: switchable between 2 and 3 stages

The rotary switches (if Use rotary switches is checked) and the GA offset define the starting group address of the first channel.

Example: S1=3 ( main group ) S2=1 ( middle group ) GA offset = 2/3/20

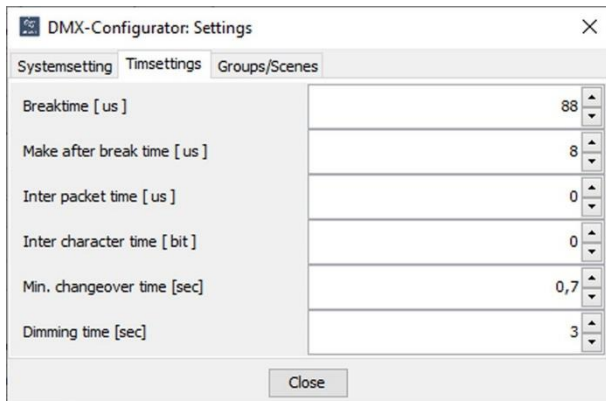
The values of the rotary switch and the GA offset are added.

Starting group address: 5/4/20

After every set or change of the group address please follow the below steps:

- save project
- Transfer the project
- 2x push the button T1

## Time settings



expert settings to configure the DMX signal layout.

- Breaktime [ $\mu$ s]
- Make after break [ $\mu$ s]
- Inter packet time [ $\mu$ s]
- Inter character time [ $\mu$ s]

Min. changeover time [sec]: used to protect the illuminant

Dimming time [sec]: for automatic dimming: time to 100% or 0%  
else: time per dimming step

## Groups/Scenes

Recall scenes

Recall scenes via a 1-Bit Group Object

Groups ( Scenes ) dimming

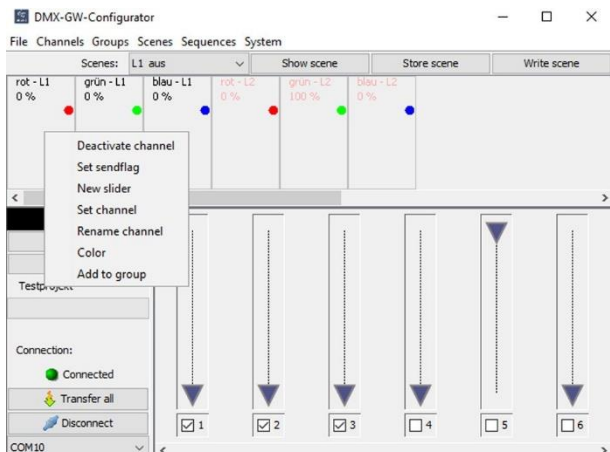
All channels belonging to a scene can be dimmed via a 4- Bit dim Group Object.

Groups ( Scenes ) setting (0..100%)

All channels belonging to a scene can be set to an absolute value via a 1-Byte Group Object.



## Preparing Channels for the parametrisation



For each channel add a slider by double clicking on the channel or via the context menu.

Rename each channel. In this example project:

RGB Lamp 1: Channel1 = rot - L1

Channel2 = grün - L1 Channel3 = blau - L1

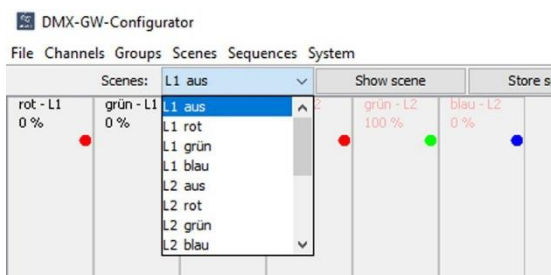
RGB Lamp 2: Channel4 = rot - L2

Channel5 = grün - L2 Channel6 = blau - L2

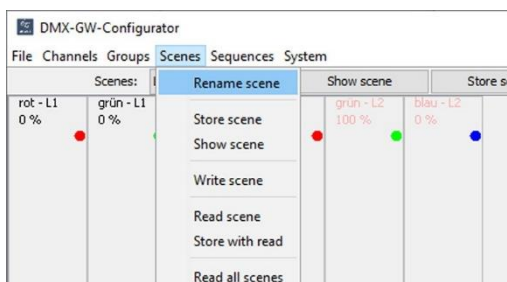
To get a better overview you can assign an individual “Color” to each channel

## Scenes and Channel settings

### Scenes



Choose the scene to be modified



Here you can give your scene a useful name.

## Channel setting for the chosen scene

Activate each channel that will be controlled by the current scene through the checkbox near its slider. For all other channels the checkbox should be unset.

Set the intensity for each scene for the active channel via the slider or “Set channel” in the context menu of the channel.

“Store scene” will store the scene in the current project. Please note that it’s not yet stored permanently at that moment. “Show scene” will display the scene set up in the configurator and on the DMX512 bus.

“Write scene” will transfer the scene into the gateway.

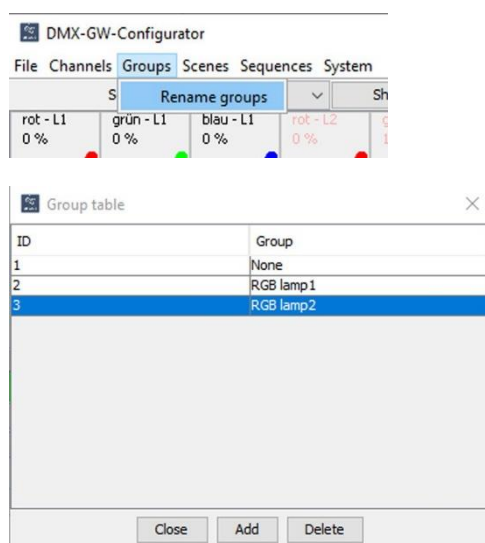
Storing your project to your hard disk regularly is recommended.

“Transfer All” in the main windows will transfer the full project into the gateway, including all scenes and sequences.

## Building a project without connected lamps

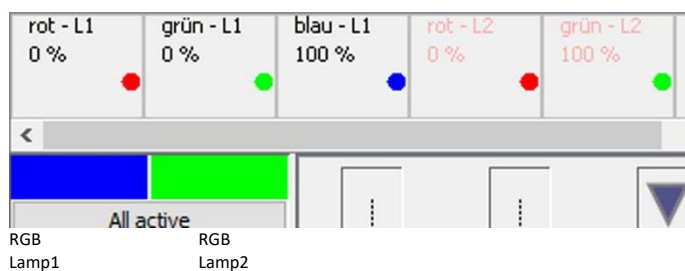
In case there are no lamps connected when starting the configuration of the project it is possible to create display areas with the lamp color.

In our example project there are two RGB lamps. Therefore two groups need to be created. Please don’t change group ID 1.



By selecting “Add to group” each channel can be added to the needed group.

In our project channel 1-3 are assigned to group “RGB Lamp1”. Channel 4-6 are assigned to group “RGB Lamp2”.



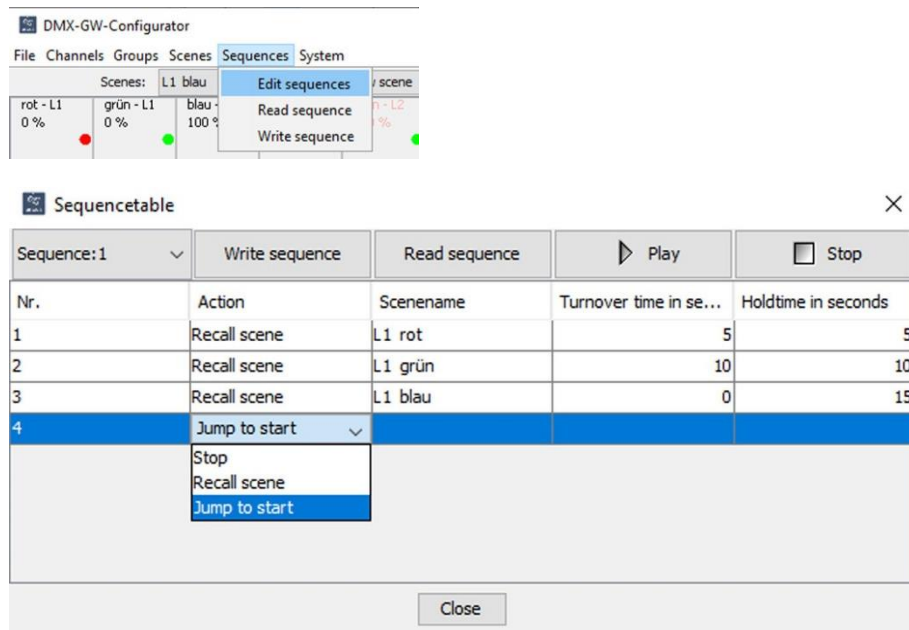
Through “Show scene” the color of the lamp will be simulated in the display area. In parallel the related commands will be sent to the DMX512 bus.



## Sequences

By using sequences different scenes can be run through in a fixed order and timing. The changeover can be realised as a hard change or as a smooth fade.

Like scenes, sequences can be configured without a connected gateway, but for testing a gateway will be needed.



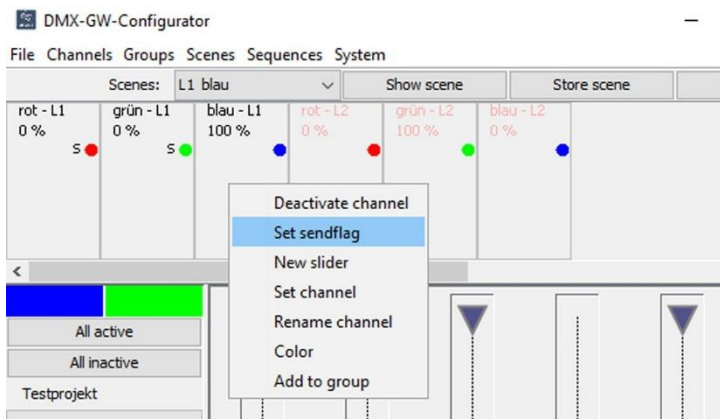
The screenshot shows the DMX-GW-Configurator interface. The 'Sequences' tab is active, displaying a table of scene levels (rot - L1, grün - L1, blau - L1) and their percentages. Below this, the 'Sequencetable' window is open, showing a sequence configuration table with columns for Nr., Action, Scenename, Turnover time in seconds, and Holdtime in seconds. A context menu is open over the 4th row, showing options like 'Jump to start', 'Stop', 'Recall scene', and 'Jump to start'.

Nr.	Action	Scenename	Turnover time in se...	Holdtime in seconds
1	Recall scene	L1 rot	5	5
2	Recall scene	L1 grün	10	10
3	Recall scene	L1 blau	0	15
4	Jump to start			

- Step 1: Scene "L1 rot" is called and faded in in 5 seconds  
 Scene "L1 rot" is hold for 5 seconds
- Step 2: Scene "L1 rot" will be faded to "L1 grün" in 10 seconds  
 Scene "L1 grün" is hold for 10 seconds
- Step 3: Scene "L2 grün" will be faded to "L1 blau" in 0 seconds ( hard switch )  
 Scene "L1 blau" is hold for 15 seconds
- Step 4: The loop will be restarted
- Step 1: ...

The parametrized sequence must be written to the gateway with "Write sequence" or "Transfer All". The turnover and the hold time must be entered in full seconds!

## Sendflag

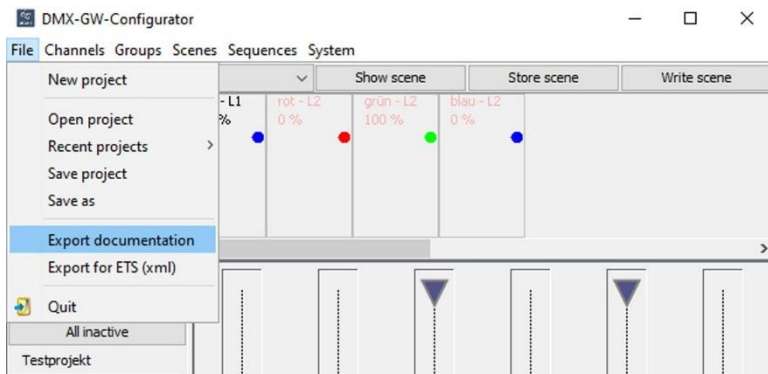


Via the context menu it's possible to set a sendflag. Once a channel is changed by a scene/ sequence or a dimming command the current channel value is send to the KNX bus as a feedback.

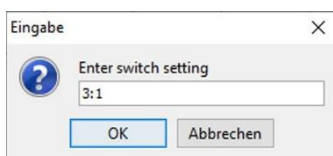
If the channel is changed directly through its Group Object, no feedback will be sent.

Reading the value of a channel is possible at any time.

## Create/Export documentation

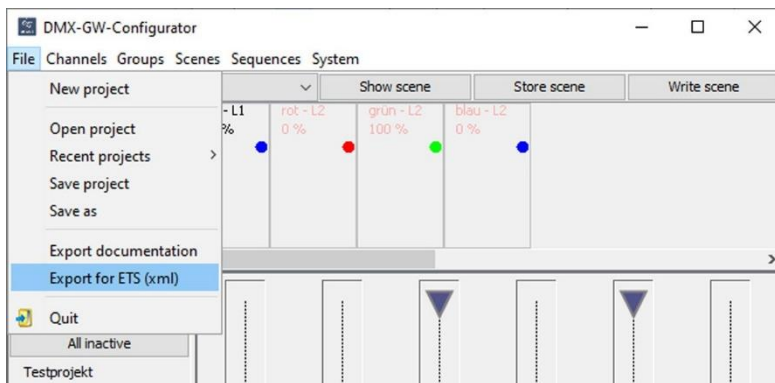


If “Use rotary switches“ is checked in the settings, you have to enter the current positions.

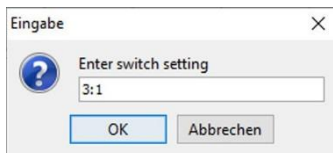


A HTML file containing all connected Group Addresses will be created. The default storage location is:  
C:\Users\...\Documents\Eelectron\DMX-GW-II\exports

## Create export file (ETS)



If “Use rotary switches“ is checked in the settings, you have to enter the current positions.



A XML file containing all connected Group Addresses will be created. This can be imported into an existing ETS project. The default storage location is:  
C:\Users\...\Documents\Eelectron\DMX-GW-II\exports

## Technical data

Dimensions KNX-GW2-DMX	107 x 75 x 31 mm DIN Rail mounted housing ( 6 TE )
Protection class	IP20
Ambient temperature	-5 °C .. 45 °C
Vb	3x 16-step rotary switch 1x push button T1 1x push button PRG and LED
USB-connector KNX-GW2-DMX	USB Type B
KNX-connector	KNX connecting terminal
Power supply	20 .. 32VDC (approx. 150mW)
DMX-connector	3 x Screw terminal 0,8mm <sup>2</sup>
Terminating resistor DMX512	120 Ohm (activated through a jumper)
Power supply	9 .. 30VDC, 100mA, galvanically isolated intern, polarizesafe or USB
DMX512 Bus	RS485 250 kBaud, galvanically isolated DMX512 protocol