arcus-eds | KNX

KNX-GW2-DMX

The KNX-GW2-DMX Gateway 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 KNX-GW2-DMX Gateway 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 KNX-GW2-DMX Gateway 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.
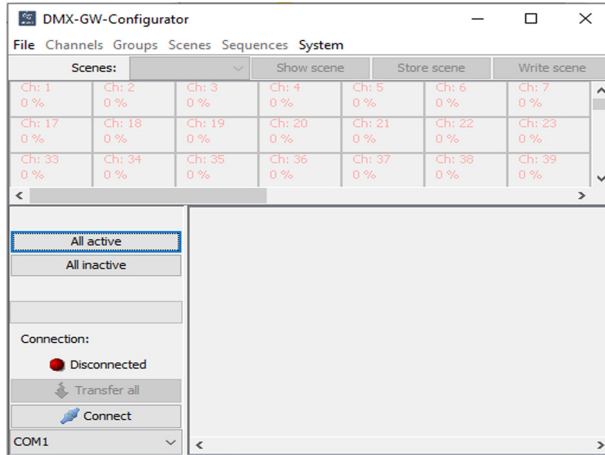

KNX-GW2-DMX
Art.-Nr.: 40200186

KNX-GW2-DMX-2TE
Art.-Nr.: 40200182

1. Commissioning

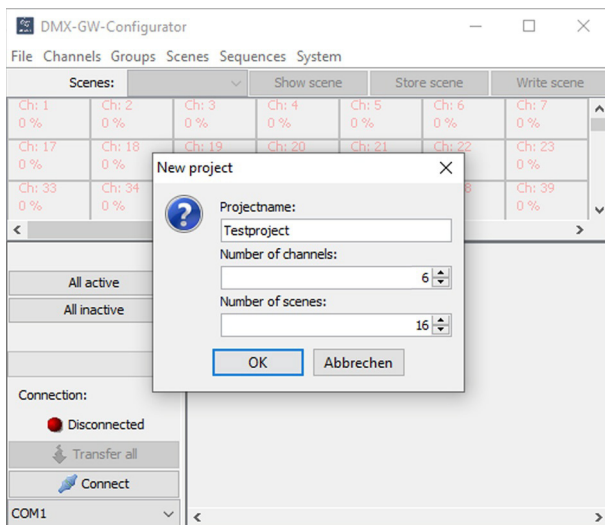Install the configuration tool   KNX-DMX-GW-II-setup

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
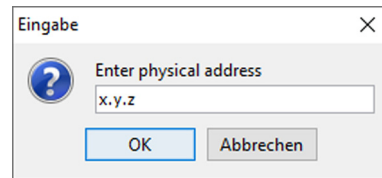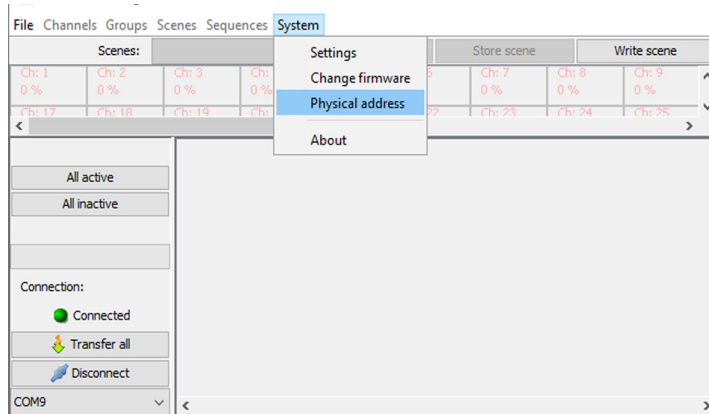Scenes: maximal 64 , minimum 16
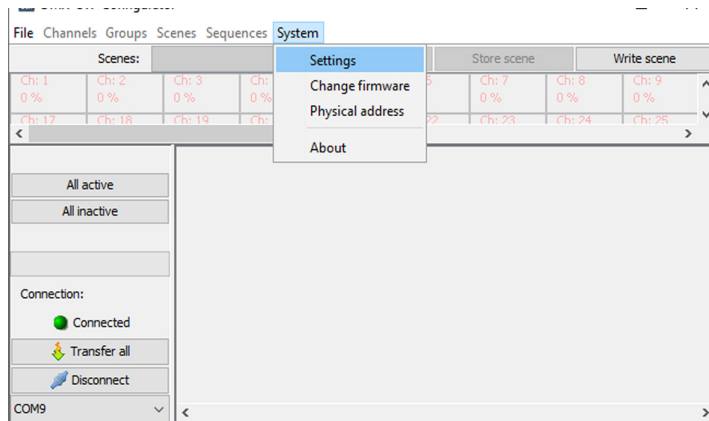Sequences: 16 fixed

Click OK and save the project.
The default location of the project files is:

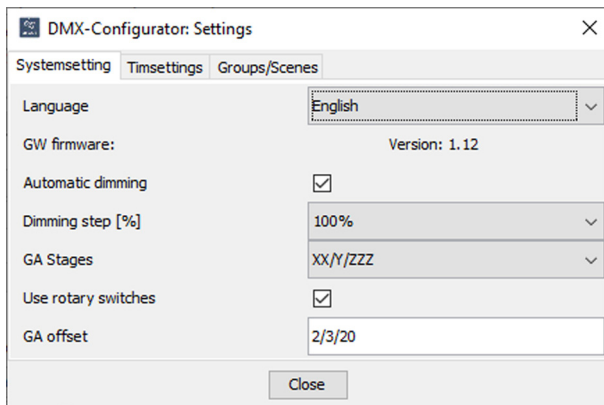C:\Users\.........\Documents\Arcus EDS\DMX-GW-II\projects

Programming the physical address

Settings

System setting

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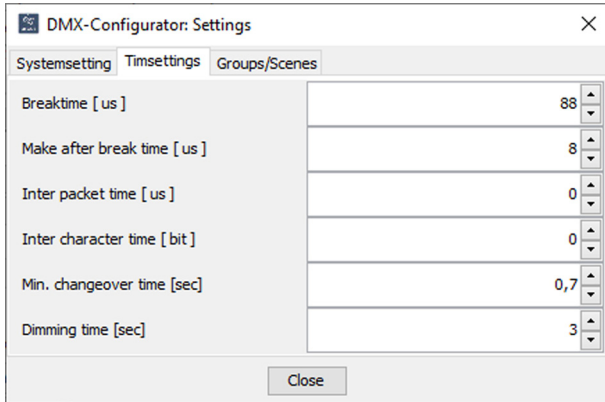
Example: S1=3 (main group)
             S2=1 (middle group)
             GA offset = 2/3/20

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

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Time settings

Time settings

Breaktime [us]
Make after break [us]
Inter packet time [us]
Inter character time [us]

...are expert settings to configure the DMX signal layout.
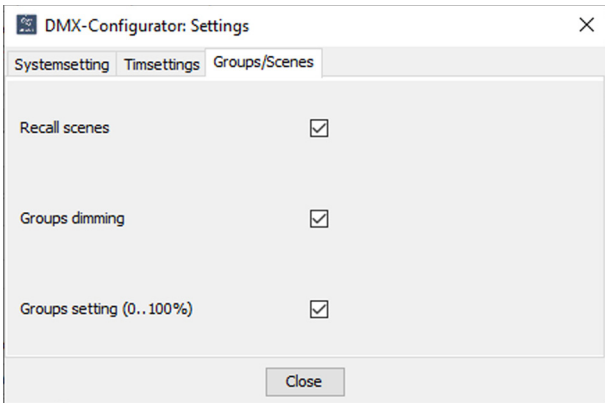
Min. changeover time [sec]: used to protect the illuminant

Dimming time [sec]:

for automatic dimming: time to 100% or 0%
else: time per dimming step

Groups/Scenes

Recall scenes
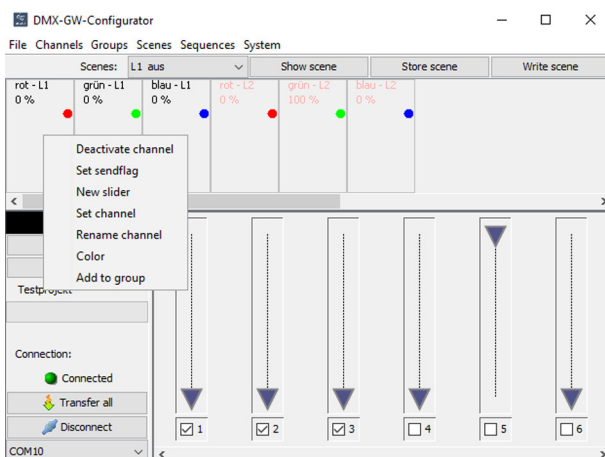Recall scenes via a 1-Bit Group Object

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.
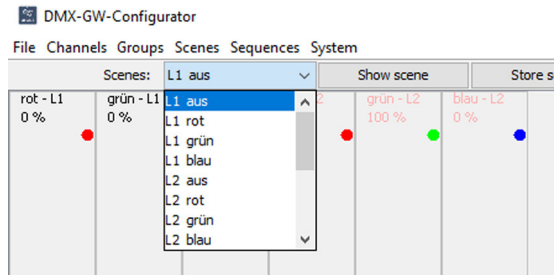
Rename each channel.

In this example project:

RGB Lamp **1**:   Channel**1** = rot - L1
                              Channel**2** = grün - L1
                              Channel**3** = blau - L1

RGB Lamp **2**:   Channel**4** = rot - L2
                              Channel**5** = grün - L2
                              Channel**6** = blau - L2

To get a better overview you can assign an individual "Color" to each channel.

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Arcus-EDS GmbH   Rigaer Str. 88 , 10247 Berlin   Tel.:   +49 / (0)30 / 2593 3914
www.arcus-eds.de   sales@arcus-eds.de   Fax.: +49 / (0)30 / 2593 3915   e4

Scenes and Channel settings

Scenes

Choose the scene to be modified.
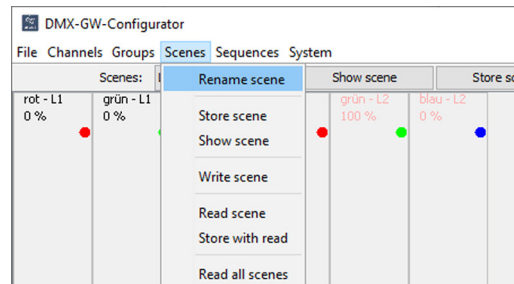
Here you can give your scene a useful name.

Channel setting for the choosen 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.

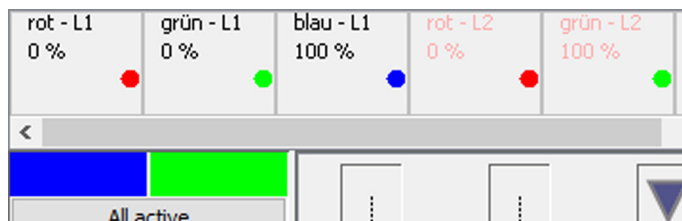## Building a project without connected lamps

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.
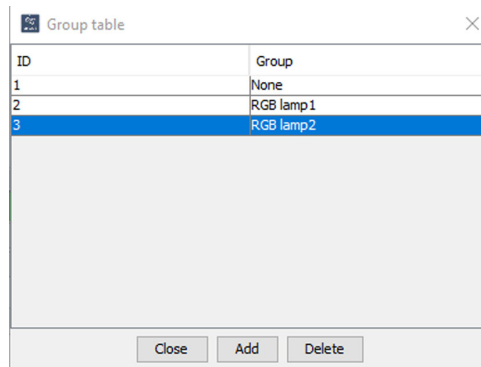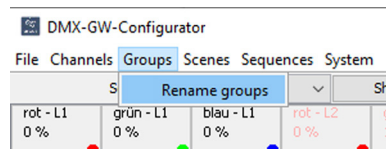
By selecting "Add to group" each channel can be added to the needed group.
In our project channel 1-3 are assigned to group "RGB Lampe1". Channel 4-6 are assigned to group "RGB Lampe2".

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.

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www.arcus-eds.de   sales@arcus-eds.de   Fax.: +49 / (0)30 / 2593 3915   e4

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.

- 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 parametrised sequence must be written to the gateway with "Write sequence" or "Transfer All".

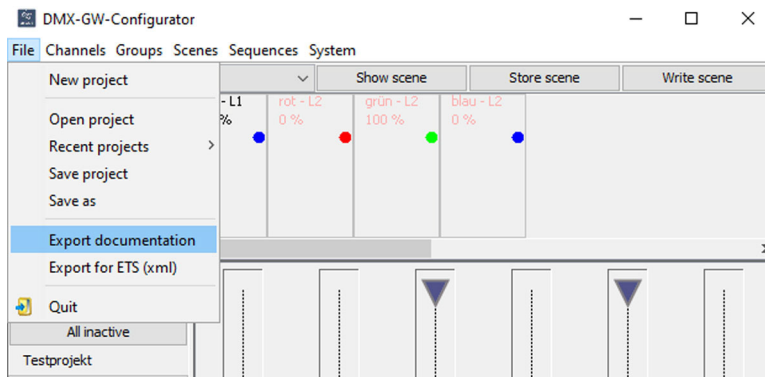The turnover and the hold time must be entered in full seconds!

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.

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www.arcus-eds.de   sales@arcus-eds.de   Fax.: +49 / (0)30 / 2593 3915   e4

Create/Export documentation

If "Use rotary switches" is checked in the settings, you have to enter the current positions.
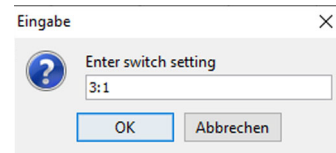
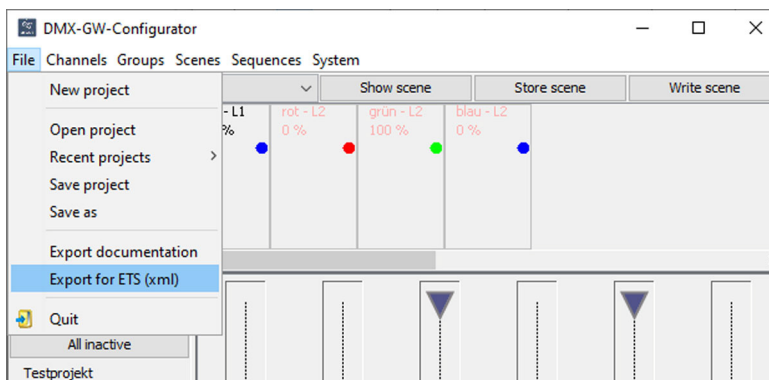A HTML file containing all connected Group Addresses will be created.

The default storage location is:

C:\Users\.........\Documents\Arcus EDS\DMX-GW-II\exports

Create export file (ETS)

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

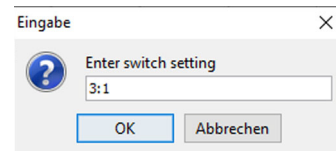A XML file containing all connected Group Addresses will be created. This can be imported into an existing ETS project.

The default storage location is:

C:\Users\.........\Documents\Arcus EDS\DMX-GW-II\exports

2. Technical Data

Dimensions KNX-GW2-DMX Dimensions KNX-GW2-DMX-2TE	107 x 75 x 31 mm DIN Rail mounted housing (6 TE) 35 x 90 x 68 mm DIN Rail mounted housing (2 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-connector KNX-GW2-DMX-2TE	USB Type B USB Type Micro
KNX-connector	KNX connecting terminal
Power supply	20 .. 32VDC (approx. 150mW)
DMX-connector	3 x Screw terminal 0,8mm^2
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

KNX-GW2-DMX-x   View Connections
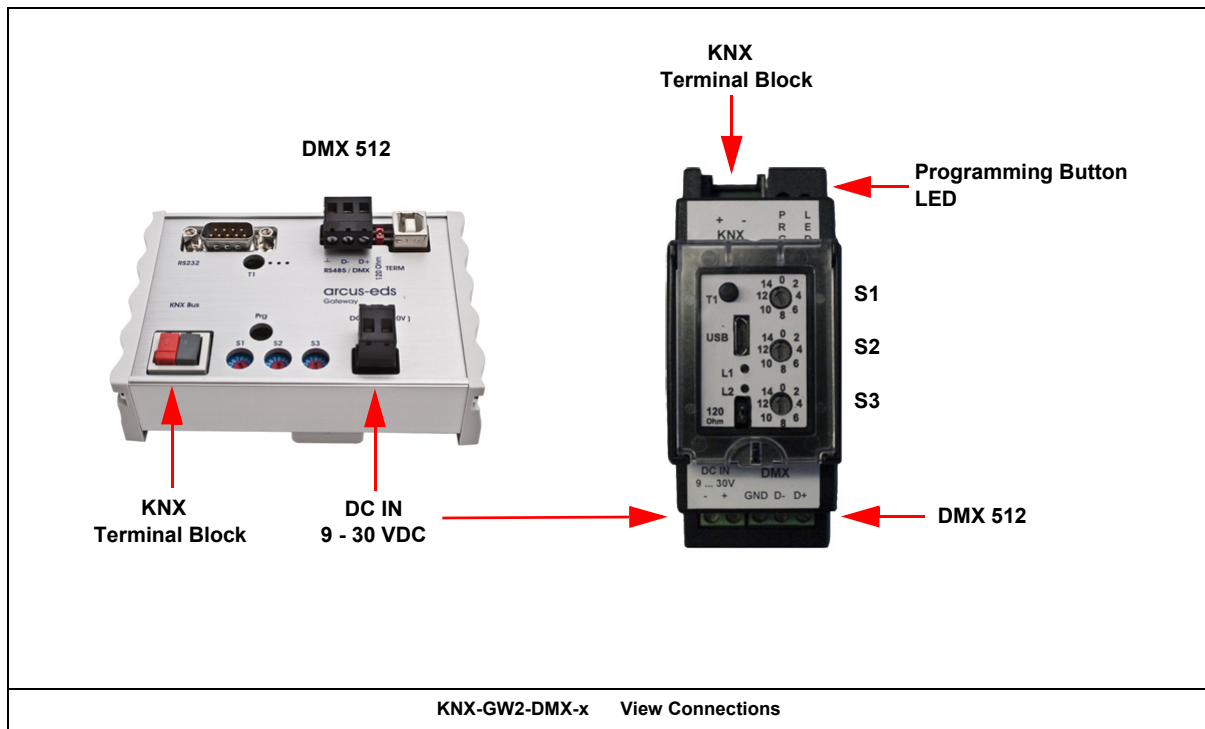
Imprint

Editor: Arcus-EDS GmbH, Rigaer Str. 88, 10247 Berlin
Responsible for the contents: Hjalmar Hevers, Reinhard Pegelow
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Safety Regulations

Attention! Installation and mounting must be carried out by a qualified electrician.
The buyer/operator of the facility has to make sure that all relevant safety regulations, issued by VDE, TÜV and the responsible energy suppliers are respected. There is no warranty for defects and damages caused by improper use of the devices or by non-compliance with the operating manuals.

Warranty

We take over guarantees as required by law.
Please contact us if malfunctions occur. In this case, please send the device including a description of the error to the company's address named below.

Manufacturer

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