

# Brief instructions for the integration tool ALEX

Version 2.00



Radevormwald, 10.08.20

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## 1. Introduction

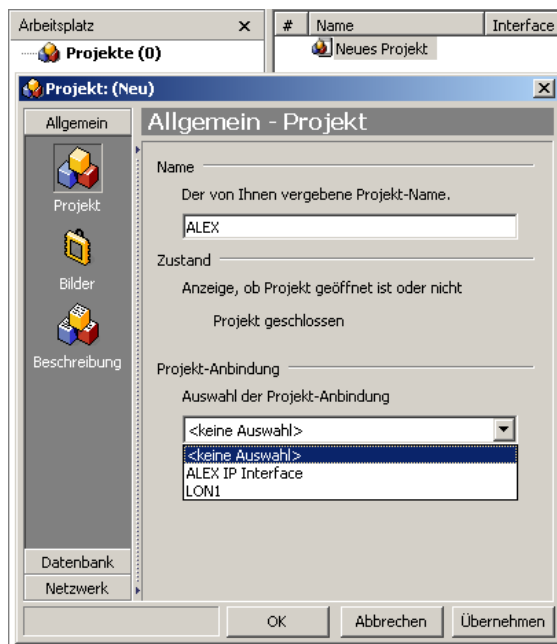
ALEX is a system integration software for project planning, installation, operation and maintenance of manufacturer-independent, open LONWORKS networks. Creating devices, combining several devices and creating logical structures in the network is easy to handle with ALEX.

This short manual is intended to help you get started with ALEX. A detailed documentation is available as help in ALEX, which can be accessed via the main menu or by pressing the F1 key.

## 2. Creating a project

### 2.1. New project

To create a new project the corresponding input mask is opened after starting the ALEX by selecting "New project".



The name of the project is assigned here. The project connection (LON interface) can already be assigned.

Additionally, there are options for description and adaptation to the network. Under the tab Database you can see where the LNS database of the project is stored.

## 2.2. LON interface (project connection)

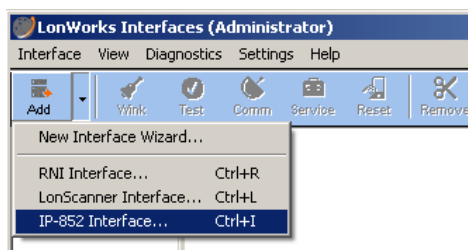
For project connection, a connection via USB interfaces or via an IP interface can be used,

### USB interface:

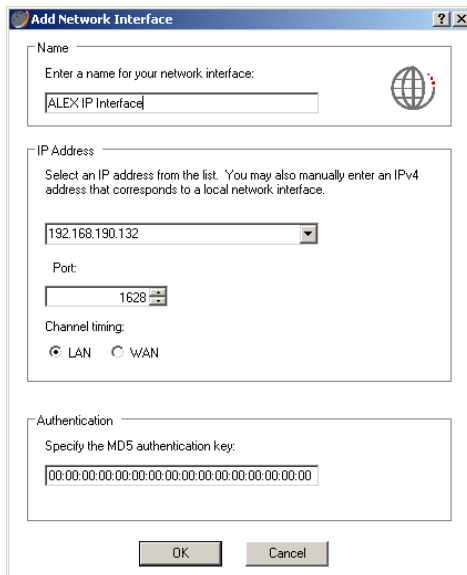
The USB interfaces are available from various manufacturers. The installation of the associated device software must be carried out according to the manufacturer's installation instructions.

### IP interface:

The use of an IP interface is configured via the program "LonWorks Interfaces", which is opened from the control panel of the computer.



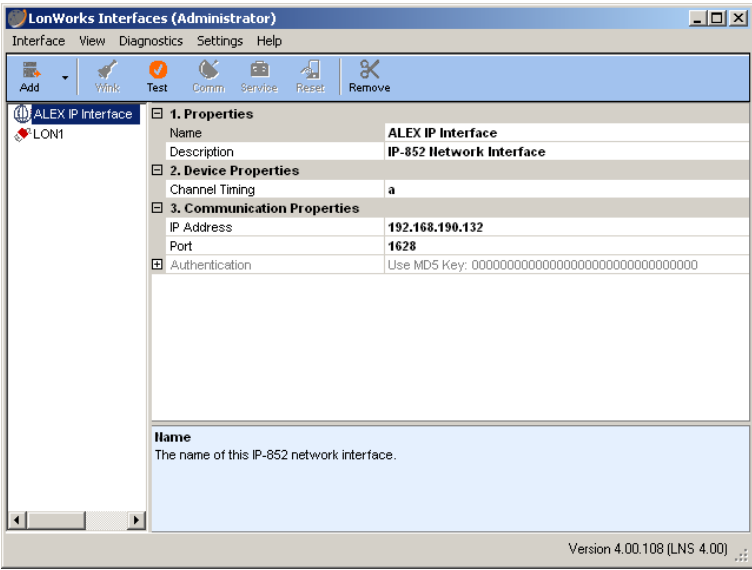
By calling the function "IP-852 Interface" the configuration is opened.



The name assigned here for the IP interface is used for the project connection.

The IP address is determined by the network settings of the computer. If several network adapters are used on the computer, it is defined here which adapter is to be used for the project connection.

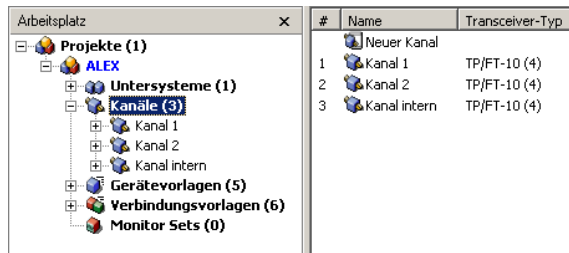
The settings for the IP configuration were adopted for the LonWorks interface and are now available for project connection.



### 3. Physical structure (infrastructure)

Depending on the number of devices used in the project, several channels may have to be set up. Routers are required to connect the channels.

#### 3.1. Creating channels



In the tree structure of the project the call to create new channels can be started by selecting the "channels".



The name of the channel is assigned here. The medium type must also be set. "TP/FTT-10" must be selected for an FT\_channel. For a LON/IP channel, "IP-10L" must be set.

## 3.2. Routers

To enable communication between devices on different channels, the channels must be connected by routers. Routers are created like devices in a subsystem.

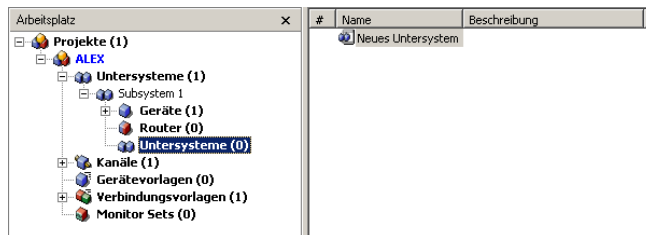


A name for the router is assigned and the type of router used is entered.

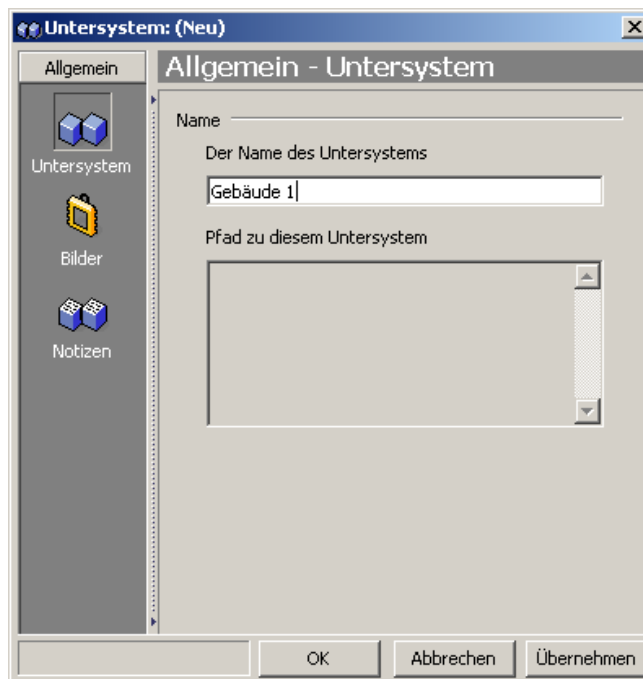
From the created channels the assignment to the near (the side closer to the project connection) and far channel is made. The neuron-ID of the near channel must be entered. Once all settings have been made, the router can be integrated.

## 4. Logical structure through subsystems (folders)

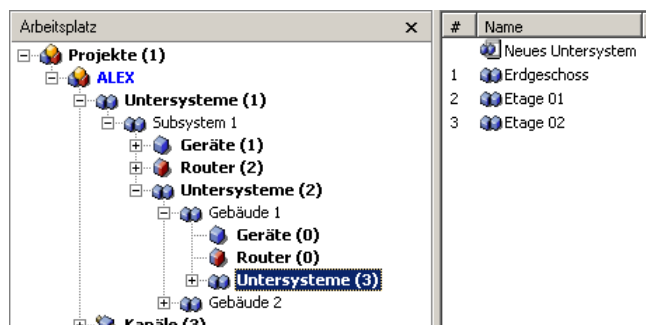
Especially for larger projects it is useful to structure the devices into predefined areas. For this purpose, subsystems (folders) can be created for buildings, building parts, floors and rooms. Devices can be created in the individual subsystems. They can be moved from one subsystem to another by drag & drop or by "cut" and "paste" for subsequent changes to the structure.



By selecting "New subsystem" the creation is started.



A name for the subsystem is assigned. A description of the subsystem can be entered in the "Notes" field.





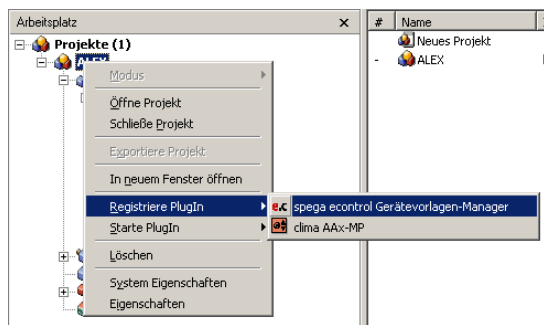
## 5. Selecting devices

To create a device, you must first create a device template.

This can be done in different ways. The latest e.control plug-ins are always available at [www.spega.com](http://www.spega.com). In the e.control plug-ins, the latest device templates are always available for all spega devices. The device templates of other LONWORKS components are provided by the respective manufacturers.

### 5.1. General: Register plug-in

If the device manufacturer provides a plug-in, this must be installed first. In the context menu of the project (right-click on the current project), all plug-ins installed on the PC are listed under "Register plug-in". Registering the plug-in automatically creates the available device template(s).

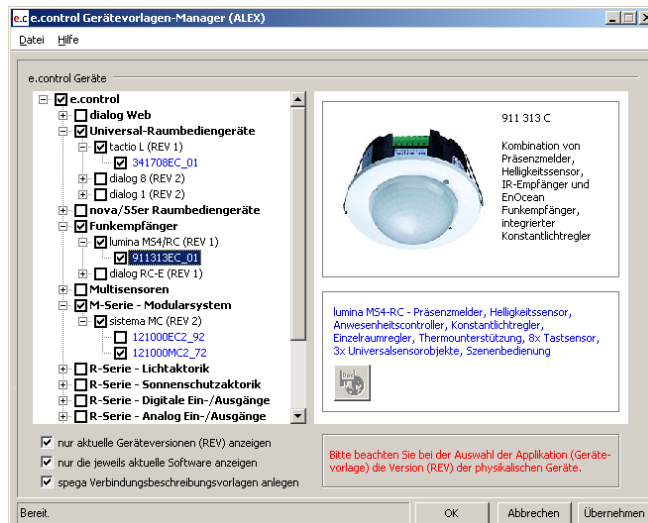


If a plug-in is registered, the corresponding device template is automatically created and is available for creating a device.

Furthermore, this plug-in can be called up on a device with "Start Plug-in".

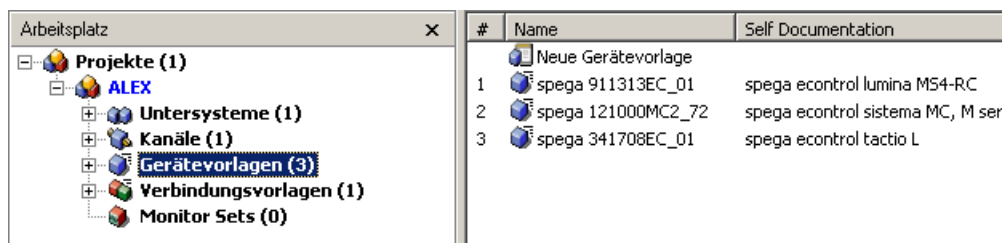
## 5.2. The spega e.control device template manager

The spega e.control device template manager offers a convenient way to create the device templates of the required devices and simultaneously register all available plug-ins.



When a device template is selected, a short description of the device and the application is always available here.

After creating the device templates, they are available to the project database.

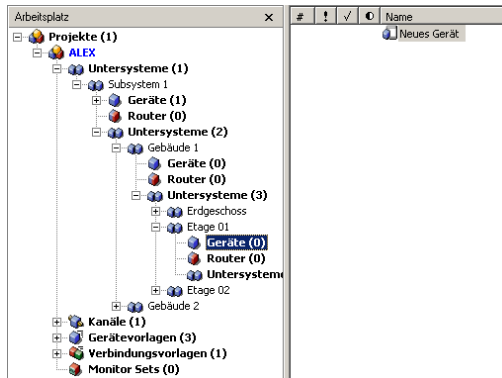


By using the "New device template" setting, the template can also be created without the device template manager.

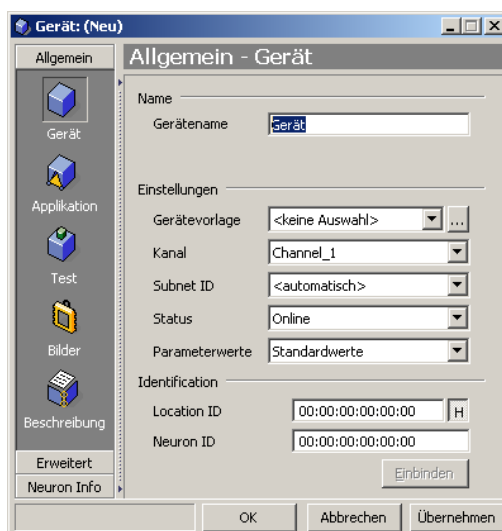
For this purpose, the desired name is assigned and the .xif file provided by the device manufacturer is transferred to the database.

## 6. Creating devices

After creating the logical structure (subsystems) and the physical structure (channels and routers) and selecting the required devices by creating the device templates, new devices can now be created in the project.



The device can be created in the desired subsystem by selecting "New device".



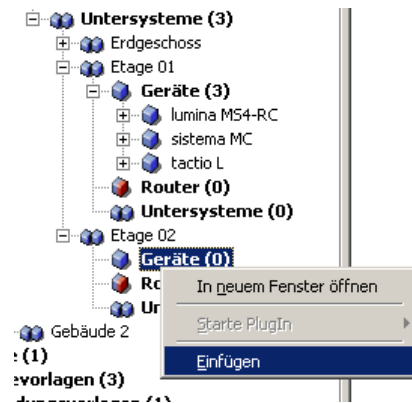
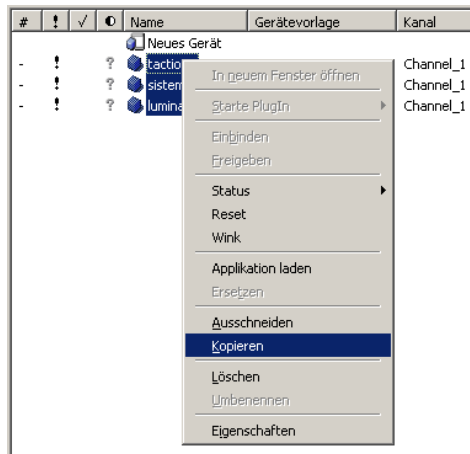
A name for the device is assigned and the device template is selected. The assignment to the channel must be made according to the positioning of the device in the field. The setting for "Subnet-ID" must be set to <automatic>.

After entering the neuron-ID the device can be integrated.

#	!	✓	⊙	Name	Gerätevorlage	Kanal
-	!	✓	⊙	Neues Gerät		
-	!	✓	⊙	tactio L	spega 341708EC_01	Channel_1
-	!	✓	⊙	sistema MC	spega 121000MC2_72	Channel_1
-	!	✓	⊙	lumina M54-RC	spega 911313EC_01	Channel_1

After creating the devices, they are displayed in the corresponding subsystem. The used device template and the assigned channel are displayed by default. Additional fields can be displayed if required.

Devices can be duplicated using the copy function. For this purpose, the desired devices are marked, copied and simply inserted in the corresponding subsystem.

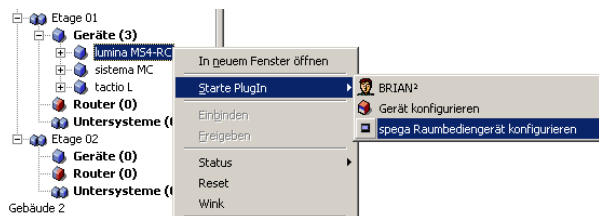


## 7. Configuring devices

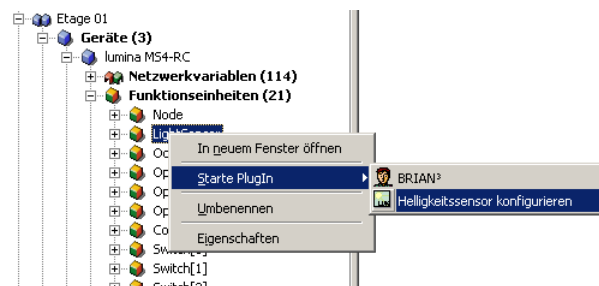
The created devices can be configured for different project requirements. This configuration can be done with the devices and object plug-ins. Here, the corresponding device parameters are adjusted by means of simple selection options. However, it is also possible to adjust the individual parameters without the plug-ins.

### 7.1. Devices and object plug-ins

Depending on the manufacturer, appropriate plug-ins are available to support the configuration and commissioning of the devices.



The device plug-in is started via the corresponding device.



The object plug-ins are started via the individual function objects.

## 7.2. Setting parameters (Config Properties)

If no plug-in is available for a device or object, parameters (Config Properties) can be set as follows

#	Name	Wert
1	UCPTversion	
2	UCPTinputMapping	0 255
3	UCPTmsLedConfig	1 1 1 2 0
4	UCPTmsPirConfig	1,0 100 2 60,0
5	UCPTmsLumConfig	LST_GLOBAL 10000 20000 1 1 1 1
6	UCPTtempSensType	TST_NULL
7	UCPTmsIRConfig	TR Null 0

The device parameters are provided in the tree list directly below the device. The object parameters can be found under the functional unit (object).

#	Name	Wert
1	UCPTconfigState	255
2	UCPTbinaryCmds	0 1
3	SCPTholdTime	60,0

**Parameter: SCPTholdTime**

Allgemein - Parameter

Name  
 Name des Parameters  
 SCPTholdTime

Wert  
 Format  
 Standard

Parameterwert  
 60,0

Lesen Schreiben

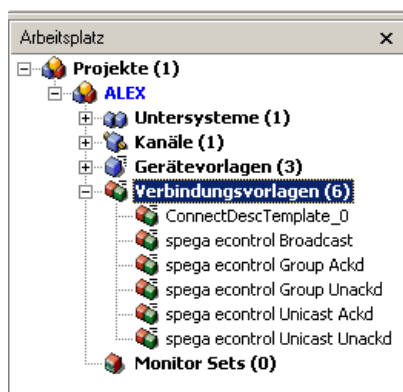
OK Abbrechen Übernehmen

The selected parameter can be set by calling up the parameter properties window (selecting the "Properties" entry in the context menu). For more detailed information on the value range and the function, refer to the corresponding device documentation from the manufacturer.

## 8. Creating connections

The configured devices and function objects are functionally connected with each other in the next step. The e.control device template manager offers the possibility to create typical connection templates.

### 8.1. Connection templates

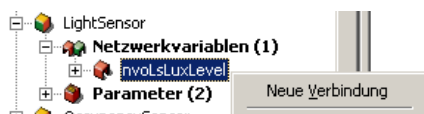


The connection templates shown are intended for the following areas:

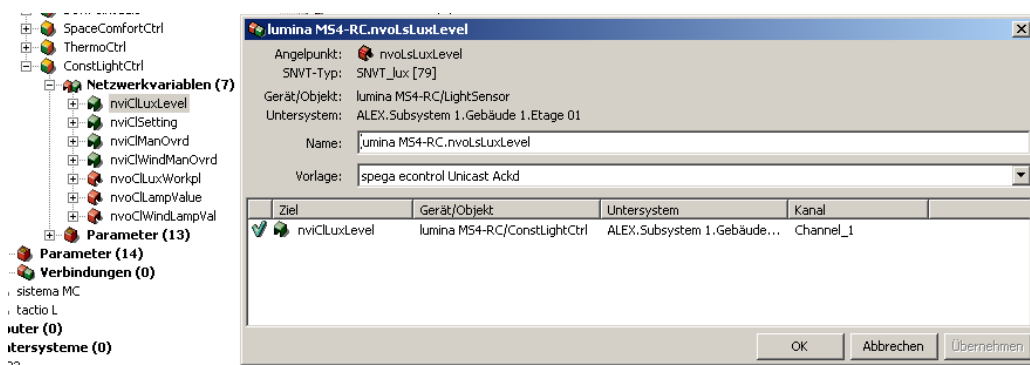
- Unicast Ackd are suitable for connections of devices within an area (room or floor).
- Group Unackd or Broadcast are suitable for connections with many receivers. This concerns e.g. central building functions such as weather protection or automatic blinds

### 8.2. Creating connections

By creating connections between input and output network variables, they are logically linked to each other. It should be noted that all variables to be linked must be of the same type (SNVT).



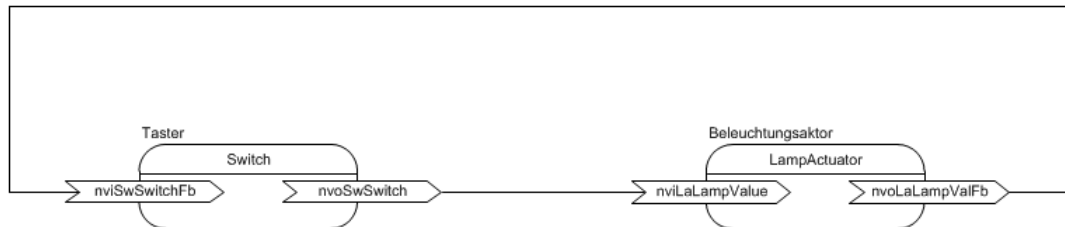
The variable must be selected under the corresponding functional unit with the command "New Connection". There should always be a connection from the output to the input network variable. This serves the clarity in the project.



The connection template is selected in the opened connection window of the source network variable. Then the desired input network variable can be dragged into the window. With the "Apply" or "OK" command the connection is saved in the project database.

### 8.3. Example: Switch light

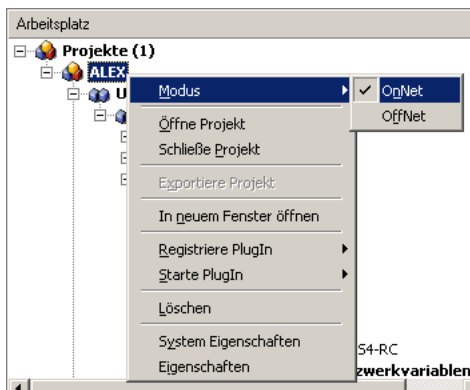
To create a simple "Switch light" function, the push-button object ("Switch") is connected to the lighting actuator ("LampActuator"). The positioning command (On/Off) of the push-button is sent to the lighting actuator. The lighting actuator sends the status back to the push-button (feedback).



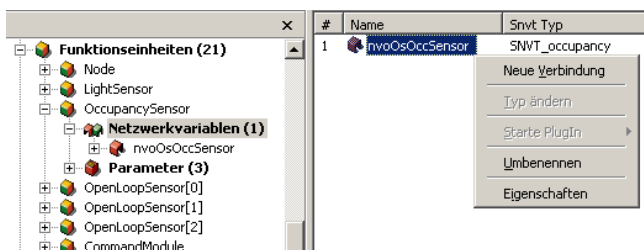


## 8.4. Observing network variables

The network variables can be monitored and controlled during operation. For this the project database must be "OnNet".

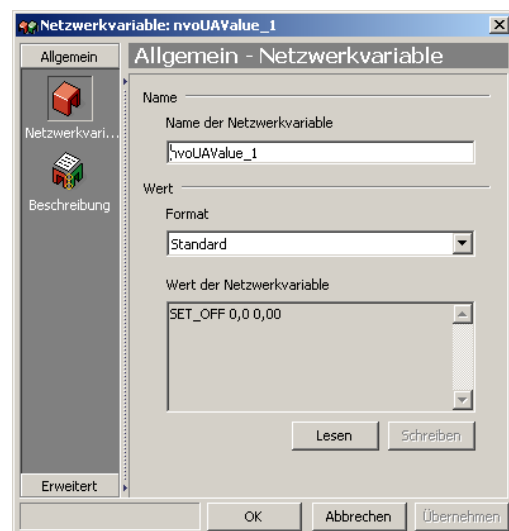
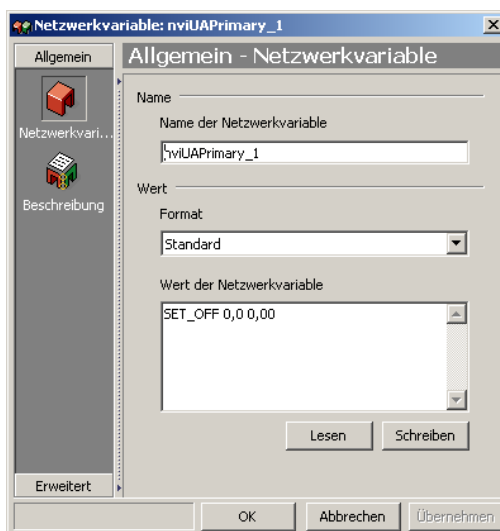


By selecting "Mode" in the context menu on the project, the project can be switched "OnNet" or "OffNet" with an existing LON connection. For this purpose the LON interface to be used has already been selected in the project properties (see chapter *Creating a project* → *Create interface*).



In the context menu of the desired variable the properties window of the variable can be opened.

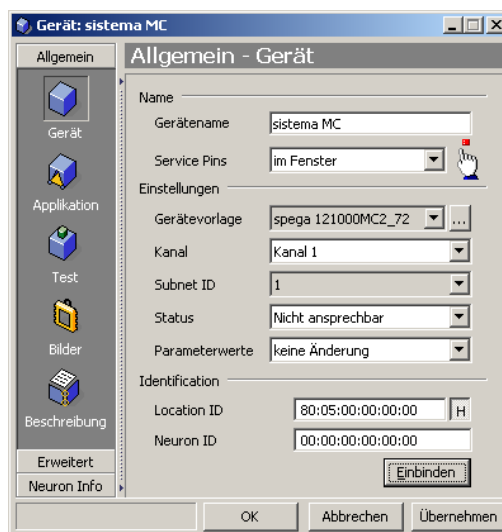
Input network variables (nvi) can be read and written. Output network variables (nvo) can only be read, but if the input network variable is already bound, it is possible that the value written here is overwritten by the connected output network variable.



## 9. Putting devices into operation (picking)

The devices used can be integrated directly into the LON network when they are created. However, they can also be prepared offline and picked after the configuration has been completed and the connections established.

### 9.1. „Embedding“ device



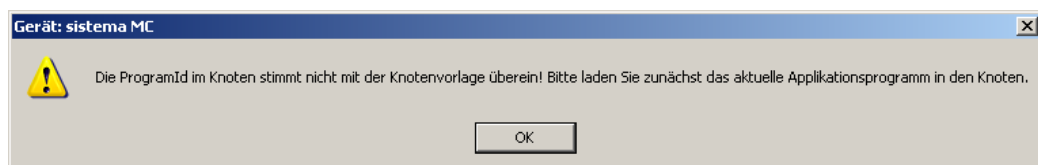
For picking, the devices must be assigned the respective neuron-ID. This can be done by entering it in the "neuron-ID" field or by pressing the service pin on the device.

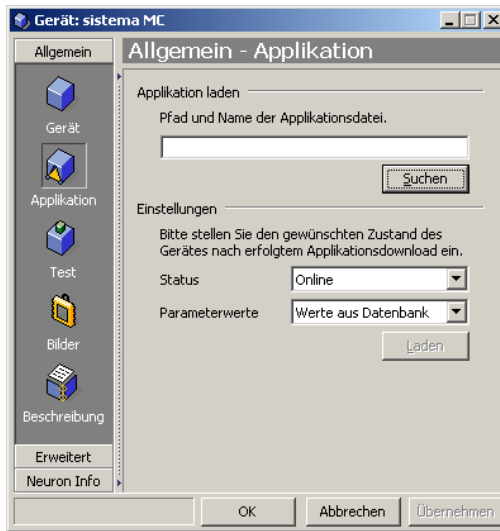
Please note that the channel assignment must match the physical connection of the device.

### 9.2. Loading an application

When "embedding" the device, the system checks whether the application in the device matches the device template used. If this is not the case, this is indicated by the error message below.

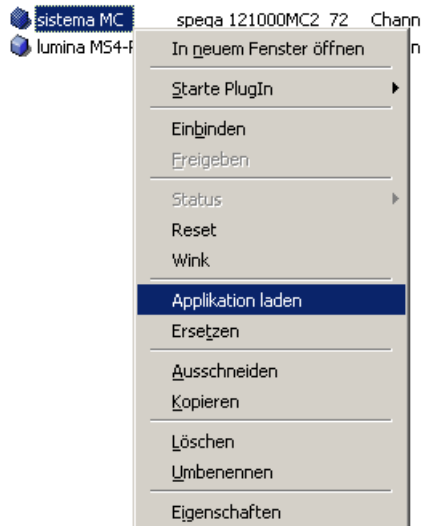
If this is the case, the appropriate application must be loaded before the device can be integrated.





The application can be loaded for the individual device directly from the device properties window.

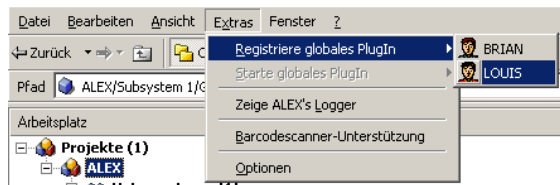
The corresponding application file (APB file) can be selected with the "Search" function and then loaded into the device with "Load". To transfer the parameter values set offline to the device, select "Values from database" for the parameter values setting.



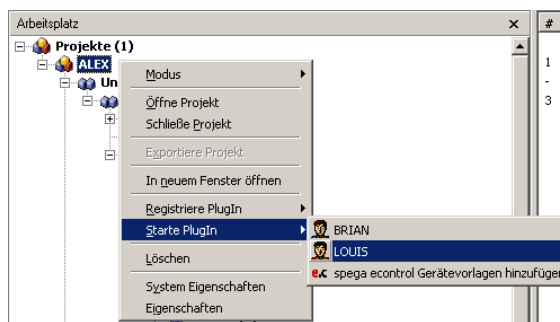
Loading can also be done for the individual device via the context menu. This opens the page of the properties window shown above.

### 9.3. Load applications to multiple devices

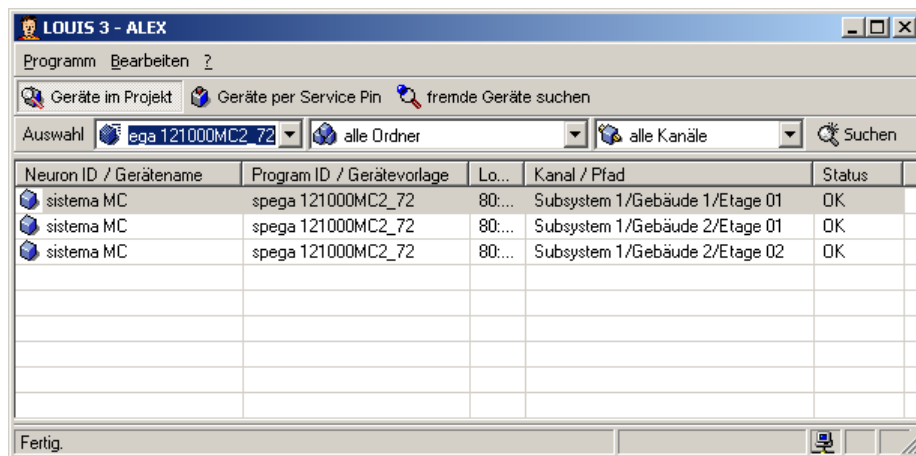
The device manager "Louis" is part of the integration tool ALEX. It offers the possibility to load applications on several devices unattended.



The plug-in "LOUIS" is registered via the ALEX menu bar.

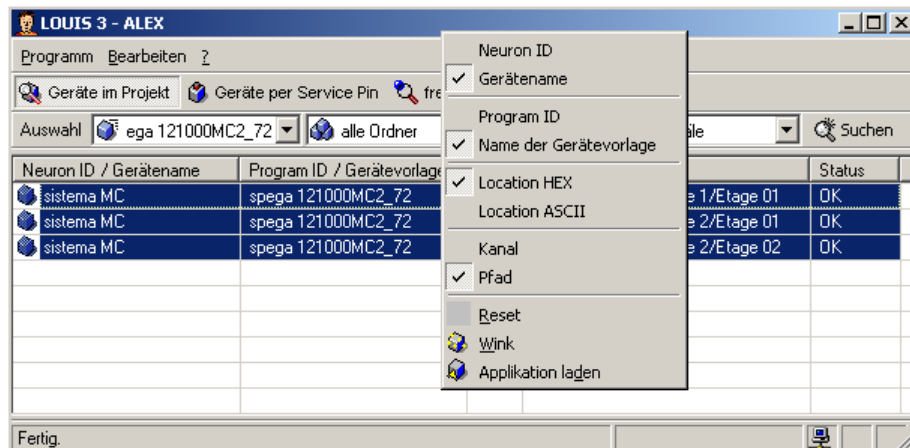


Via the context menu of the project "LOUIS" is started and opened in a separate window.



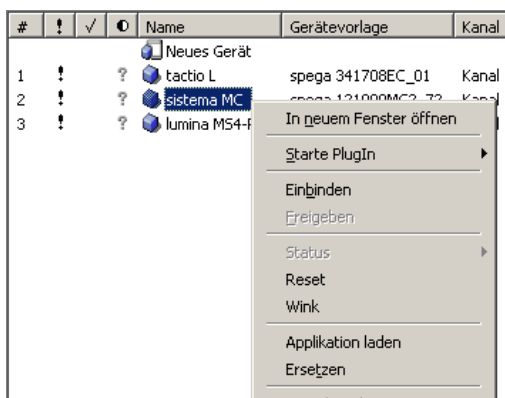
All devices that already have a neuron-ID assigned and match the set filter criteria (device template, subsystem and channel) are listed.

The "Selection" function allows filtering by specific devices. The desired devices for application adaptation can be marked accordingly and the corresponding application can be loaded by calling the context menu.

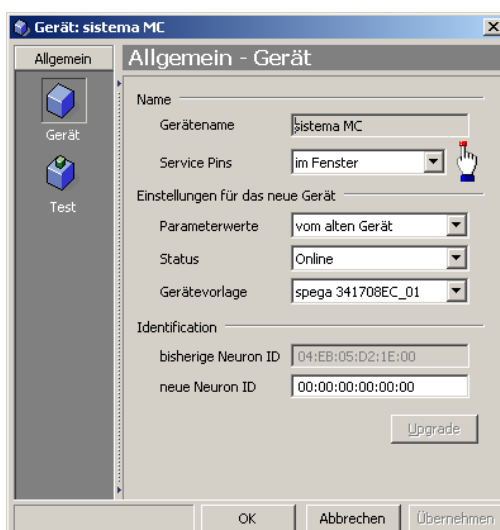


## 9.4. Replacing a device

A defective unit can be easily replaced in the ALEX. The old device can simply be marked and the configuration can be assigned to a new device by replacing it.



To replace a defective device the corresponding function on the old device can be called in ALEX via the context menu.



The neuron-ID of the new device is assigned to the database. The transfer of the neuron-ID can also be done here with the service pin or by entering it in the "neuron-ID" field.

All configuration settings and connections of the old device are taken over and assigned to the new device.

## 10. Application tips for larger projects

For the creation of large projects, the division into logical structure and infrastructure has already been described. For projects in which, for example, several floors of a building are identical, copying devices and subsystems can be helpful. Here, it can be selected whether the configuration (parameter values) and/or the connections should also be copied.

The corresponding default settings can be adjusted under the menu item "Tools". The following figure shows the standard settings in each case.

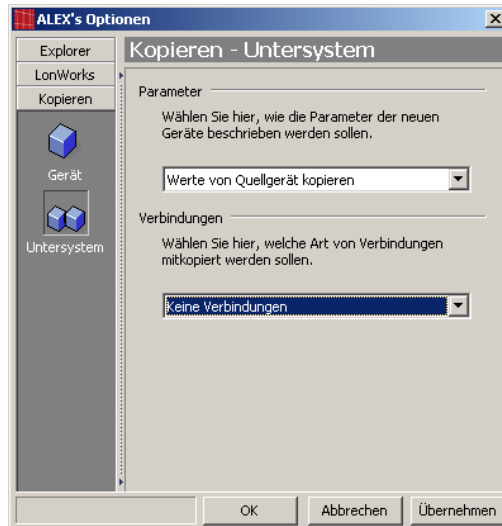
### 10.1. Copying of devices



**Parameters:** The configuration of the source device can be taken over or a description of the parameters with the LON default values can be made.

**Connections:** All connections of the source device can be copied. It is also possible to copy only the internal connections (within the source device) or only/also the external connections (connections to other devices).

## 10.2. Copying subsystems



The same setting options are available here as for copying devices.

"Internal connections" here means all connections between devices within the source subsystem.

"External connections" here means all connections between devices of the source subsystem and other subsystems.

## 11. Support

The information given in this manual was carefully compiled. Should you have any further questions regarding this product, please contact:

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