



PHILIPS

MultiOne

Software

Engineering

User manual

“Configurability enables flexibility and differentiation”

1 Introduction – MultiOne Engineering 2.7

Today's customer demands more flexibility and customization possibilities than "physical configurations" can offer. With new Philips configurable devices with built-in controls or separate controllers you can configure the luminaire's behavior. You can control output levels, or even pre-configure dynamic dimming on the client's request; either directly in the factory or during installation on location. All you need is ONE intuitive tool that when plugged into a device can calibrate ALL the different functions required by any lighting solution.

Creating the perfect lighting solution has been made very easy with Philips MultiOne.

With MultiOne, you can configure all features that are supported by a Philips device. A feature typically belongs to one or two product groups (LED Indoor/Outdoor, HID or FLUO), but this does not mean that every device from a product group does support all features.

Philips MultiOne is supported by Windows XP + SP3, Windows 7, Windows 8 and 8.1 operating systems. It works only in combination with the Philips LCN8600 MultiOne interface USB2DALI, with Philips LCN8650 MultiOne interface USB2ZigBee or with Philips LCN9600 MultiOne interface SimpleSet®.

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3 System requirements

The minimum system requirements for using MultiOne are:

- PC or laptop with Microsoft Windows XP SP3, Windows 7, Windows 8 or 8.1
- USB 2.0 ports:
 - o Two free USB 2.0 ports for use with USB2DALI interface
 - o One free USB 2.0 port for use with USB2ZigBee interface
 - o One free USB 2.0 port for use with SimpleSet[®] interface
- At least 35 MB of free disk space
- Microsoft .NET Framework 3.5 SP1 ([download here for offline installation](#))

4 Downloading and installing MultiOne and the documentation package

A zip-file can be downloaded from www.philips.com/MultiOne. This zip-file contains the following files:

- Philips MultiOne.exe (executable/installer)
- Philips MultiOne Workflow.exe (executable/installer)
- GettingStarted.pdf (document)
- UserManual.pdf (document)
- RELEASE_NOTES.txt (document)

The MultiOne installation file is the installer for the full version of MultiOne. This document applies to this version of the software.

The MultiOne Workflow installation file is the version of MultiOne which is meant to be used in a production environment.

Note! Make sure a User Software Key is present before installing. If you wish to install without a User Software Key, installation is possible, but you cannot work with MultiOne.

To install the software, launch the installer for the desired version and follow the instructions on your screen.

The installation wizard will guide you through the process of installing the software and will ask you where the software needs to be installed. At the end, it will give you the option to immediately start MultiOne.

5 Attention points

5.1 General

Before starting MultiOne, make sure that the correct interface (USB2DALI, USB2ZigBee or SimpleSet[®]) has been connected to your computer.

When upgrading the Windows Operating System, make sure the connection settings are correct when using MultiOne again.

5.2 DALI

Lighting applications with DALI devices can be seriously affected by the presence/absence of the DALI short address. Make sure the DALI short address is as you expect, after finishing working with MultiOne.

5.3 SimpleSet[®] interface

Although multiple instances of MultiOne can be started; only the latest instance that has connected to SimpleSet[®] can work with the SimpleSet[®] interface.

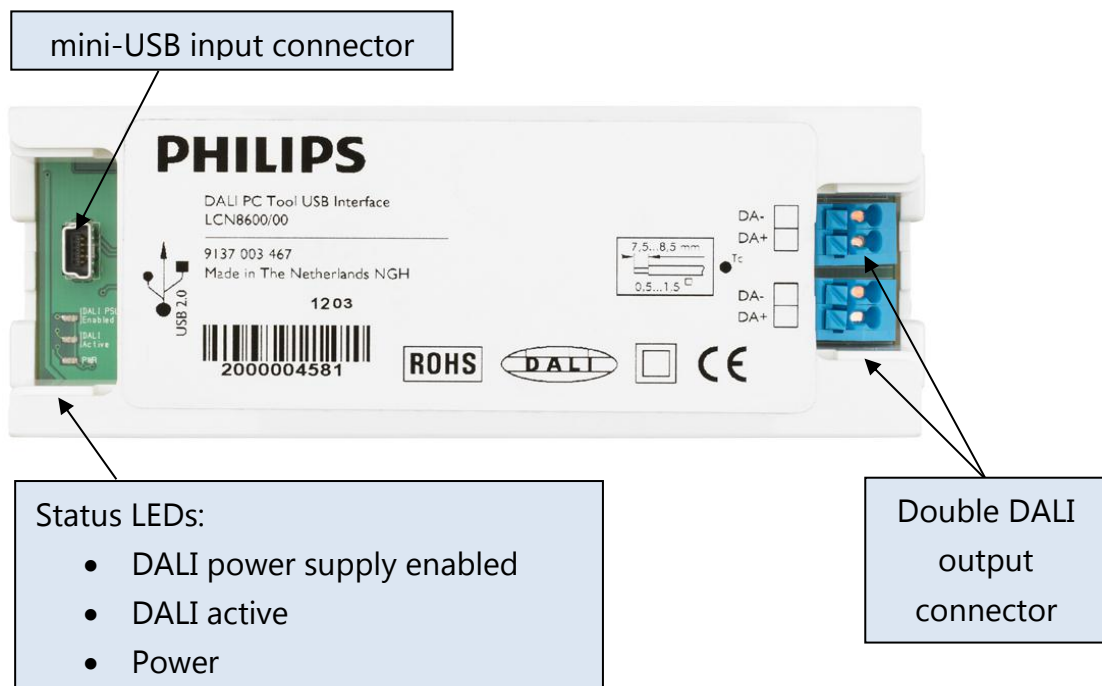
6 The MultiOne interfaces

6.1 DALI

The Philips LCN8600 MultiOne interface USB2DALI (USB2DALI interface) is the interface between the PC and the DALI devices. It has a mini-USB input connector and two parallel DALI output connectors. The USB2DALI interface status is indicated by three LED's located near the mini-USB connector.

The USB2DALI interface is supplied with a USB cable that can supply the DALI network with up to 220mA. It is advised to only use the supplied cable, in order to assure correct functioning of the USB2DALI interface.

- Safety: Class II, double insulated
- DALI open circuit voltage (when power supply enabled): 15V
-



6.2 ZigBee

The Philips LCN8650 MultiOne interface USB2ZigBee (USB2ZigBee interface) is an USB dongle which interfaces between the PC and the ZigBee devices.



6.3 SimpleSet®

The Philips LCN9600 MultiOne interface SimpleSet® (SimpleSet® interface) is an USB device which interfaces between the PC and the SimpleSet® devices.



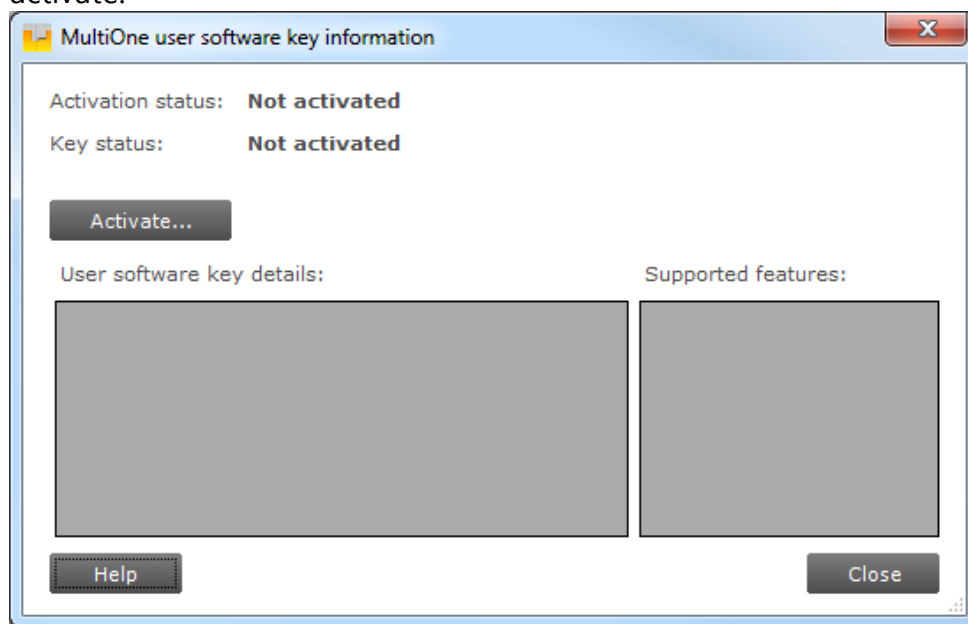
7 Starting MultiOne

Before starting MultiOne, make sure that the correct interface (USB2DALI, USB2ZigBee or SimpleSet®) has been connected to your computer.

7.1 Activating MultiOne

When starting MultiOne for the first time, the first window that appears is the **MultiOne user software key information**. Here you can activate your copy of MultiOne with your own user software key.

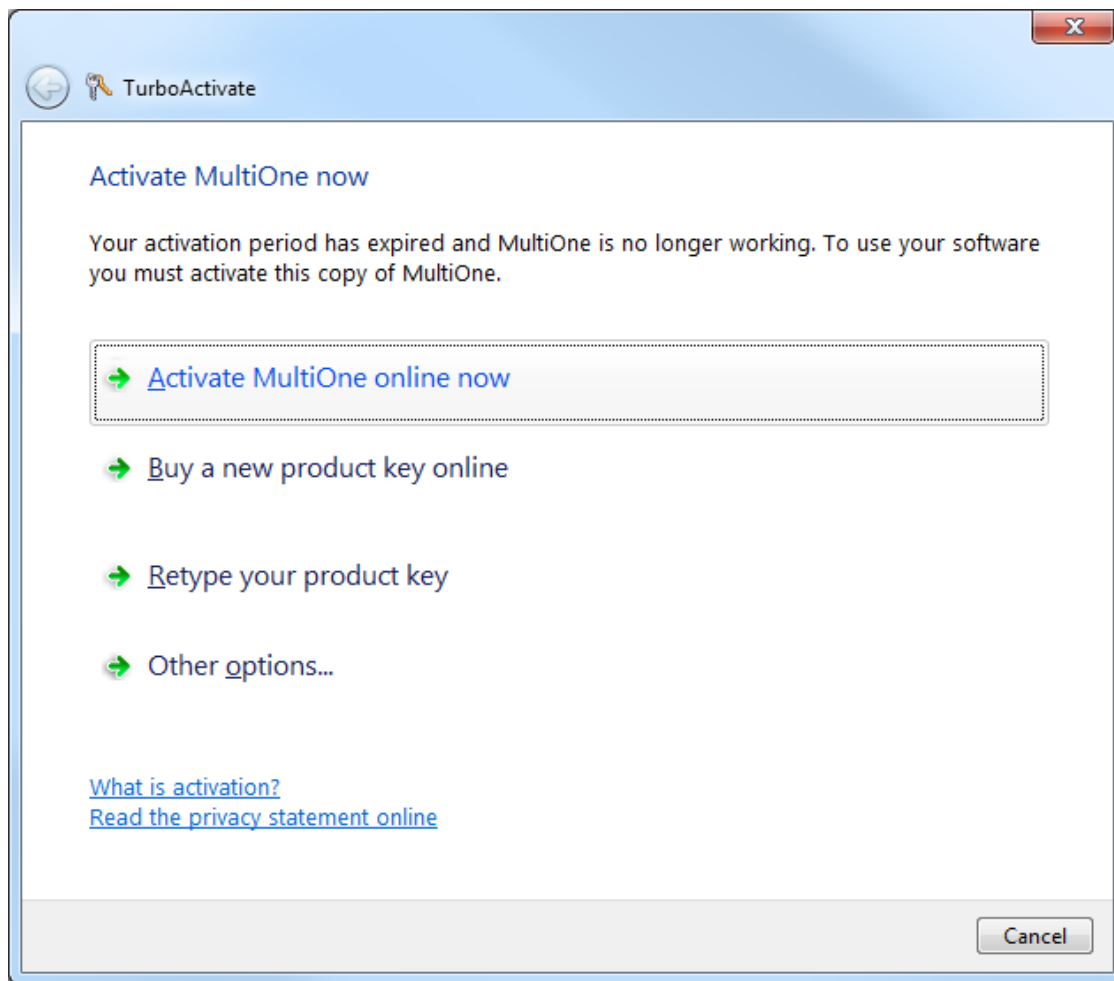
Note! MultiOne must be connected to the internet upon first usage in order to activate.



Use the **Activate...** button to continue activation.

Use the **Help** button to show the User Manual.

Select **Activate MultiOne online now** and follow the instructions.



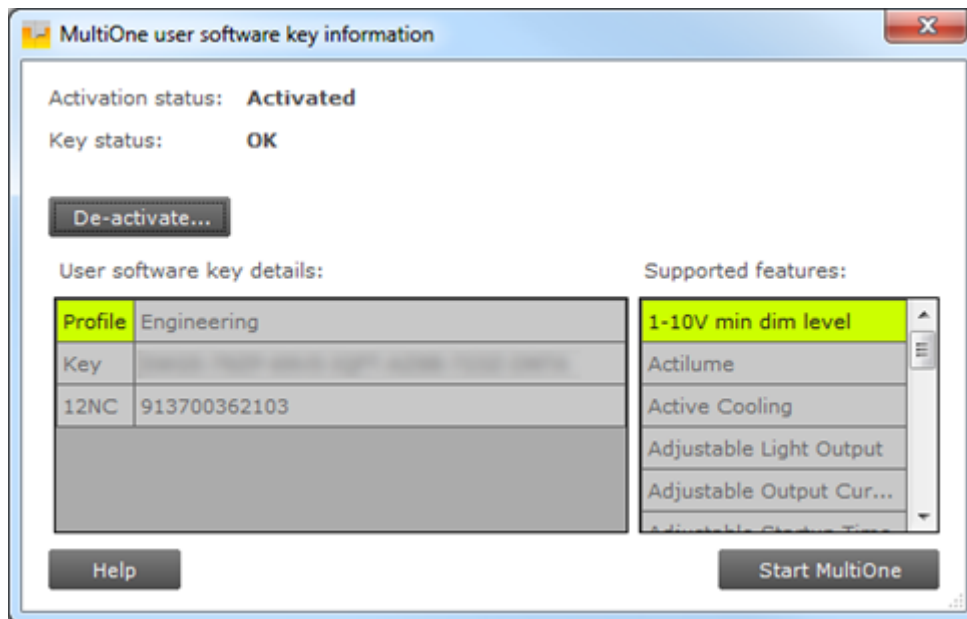
The other items on this window are less relevant. For completeness:

Select **Buy a new product key online** brings you to www.philips.com/MultiOne. Actually buying keys online is not supported.

Once you have activated MultiOne with a user software key, you can select **Retype your product key** to switch to a different user software key.

The other items shown on the dialog are not supported.

If all goes well the activation is successful and the MultiOne user software key information screen should show the correct details and supported features corresponding to the user software key.

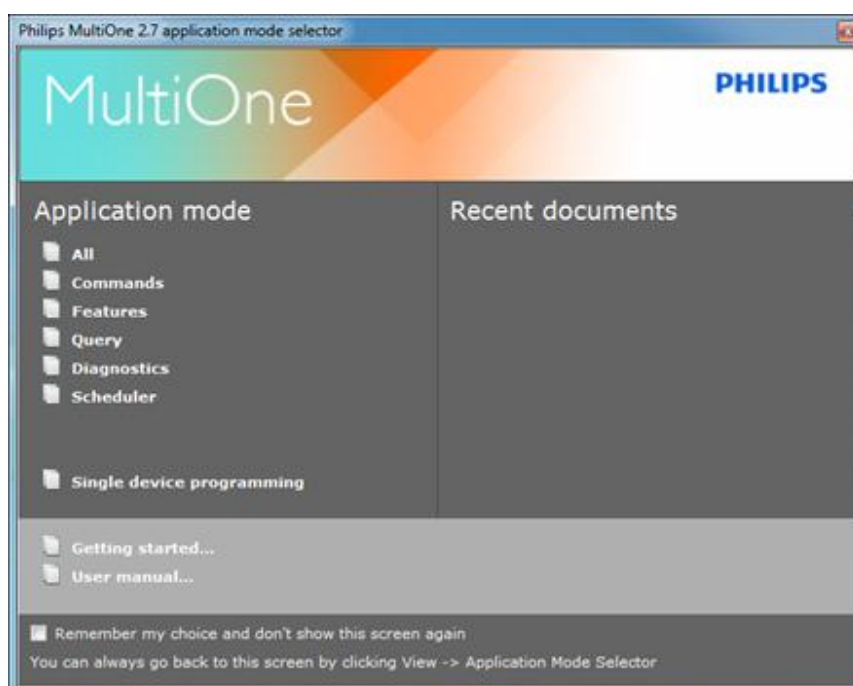


MultiOne is now ready for use!

Note! Not all functionality described in this document applies to all MultiOne user software keys. For instance, some device features might not be available, or they might only be partially configurable.

7.2 Application mode selector

Once the activation process is done and when starting MultiOne, the first window that appears is the **Application Mode Selector**. Here, you can choose an application mode, based on the tasks you would like to perform. The application window also has links to the documentation.



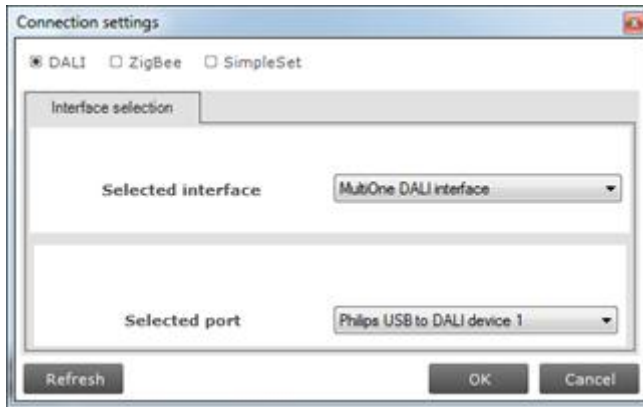
One of the modes is **Single device programming**. This mode simplifies some parts of the device configuration workflow when only one device has been connected. Single device programming is discussed in detail in chapter 12.6.

If you know that you will mostly perform the same tasks in the future, you can select **Remember my choice** and then click the appropriate application mode. MultiOne will record your choice and The **Application Mode Selector** will not appear again the next time MultiOne is started.

You can always go back to the **Application Mode Selector** by selecting **View → Application Mode Selector** from the main application window.

8 Selecting the interface

After the **Application Mode Selector** you must select the interface (USB2DALI, USB2ZigBee, Ethernet or SimpleSet®) to work with. First select the protocol: **DALI**, **ZigBee** or **SimpleSet**®, when needed also indicate the selected interface and port.



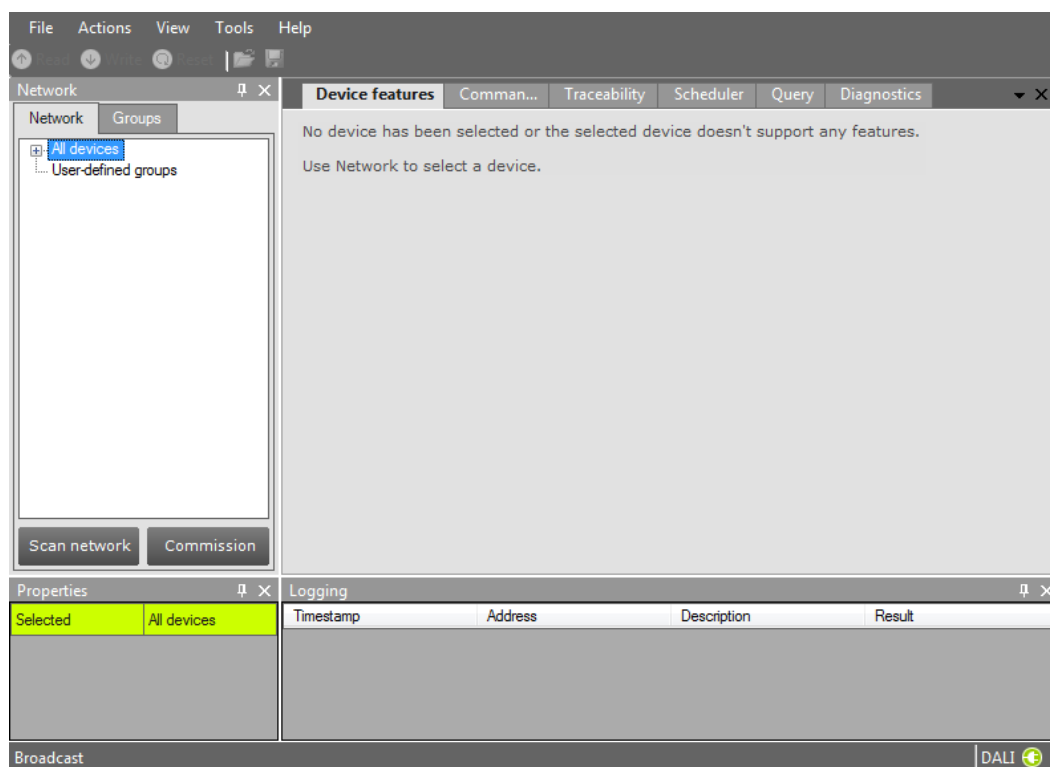
This protocol can always be changed later, by going to the **Tools → Connection settings**.

9 Working with the Philips LCN8600 MultiOne interface USB2DALI

Before using MultiOne with the USB2DALI interface make sure that all devices that need to be commissioned are connected to the mains and the DALI network. Finally the DALI network must be connected to one of the DALI connectors of the USB2DALI interface.

9.1 The main application window

If in the Application Mode Selector screen **All** is selected as application mode, the program will start as follows:



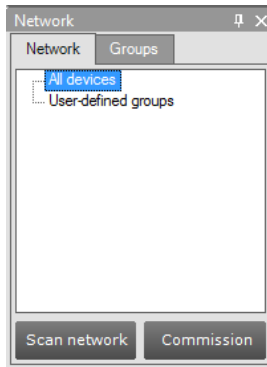
A more thorough explanation on how to communicate with devices can be found in chapters 12.2, 12.10, 12.11, 12.11 and 12.3 of this manual.

9.2 Managing the DALI network

The **Network** panel is used to manage the connected DALI network. A number of tasks can be performed in the **Network**, each of which is detailed below.

9.2.1 Identifying devices

When starting MultiOne, the DALI devices connected to the USB2DALI interface are not automatically identified. There are two methods for identifying the devices with corresponding buttons in the **Network** on the left-hand side of the application window: **Scan network** and **Commission**.



Scan network

In order to communicate with a device, the device needs to have a short address. The **Scan network** button scans all devices for their short addresses. This procedure does not change any short address or other property of the connected devices, provided they already have a short address. Devices without a short address are being assigned a unique one. When two or more devices have the same short address, a warning is displayed.

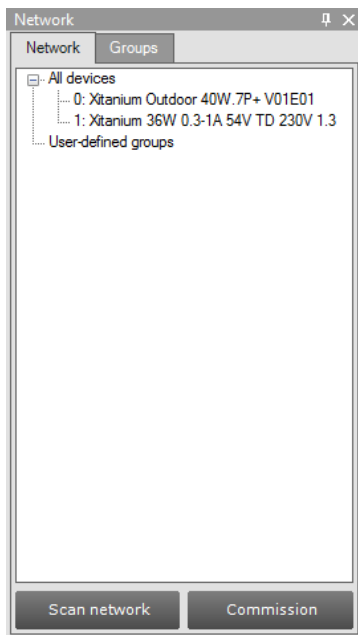
Commissioning

All devices are given a new unique short address, starting at 0. Be aware that existing short addresses are erased and new short addresses are re-assigned to all connected devices. This procedure ensures that all devices have a short address and that there are no duplicate short addresses.

After commissioning or scanning the network, the list of identified devices is shown in the **Network**.

9.2.2 Selecting devices for communication

After having commissioned or scanned the network, the **Network** shows all devices present in the DALI network.



By clicking a device you will make that particular device the active one, meaning that all commands will be sent to this device only, and will be ignored by all other devices. Besides selecting a single device for communication, it is also possible to communicate with groups of devices. The options are:

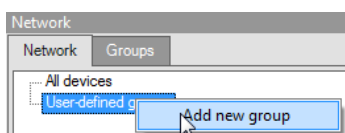
- All devices in the network. Select **All devices**. All commands will now be sent as broadcast commands. Note that unidentified but connected DALI devices will also respond to commands.
- All user-defined groups. Select **User-defined groups**. All commands will now be sent to devices that belong to a user-defined group. User defined groups are explained in the section 9.2.3.
- A specific user-defined group. Expand **User-defined groups** and select the desired user-defined group. All commands will now be sent to devices that belong to this specific user-defined group.

9.2.3 Managing user-defined groups

Using the **Network**, devices can temporarily be grouped into user-defined groups. The purpose of user-defined groups is that they facilitate easy clustering so that a number of devices can be addressed simultaneously.

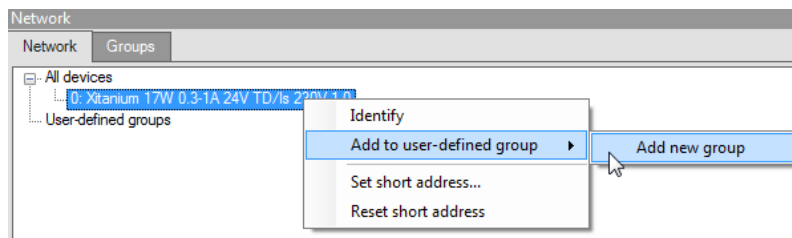
The user-defined groups are lost when MultiOne is closed.

A new user-defined group can be created by right-clicking **User-defined groups** and selecting **Add new group**.



Alternatively choose **Actions** → **Add user-defined group**. A new group is created with a default name, but it can be renamed by clicking it once. To add a device to a user-defined group, right-click the device, select **Add to custom group** and select one of the available user-defined groups. Alternatively, the device can be dragged onto the desired user-defined group to add it to that group.

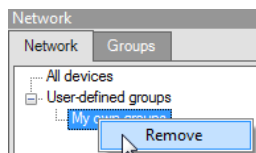
To immediately add a device to a new user-defined group, right-click a device and select **Add to user-defined group** and select **Add new group**.



The user-defined group will be created and the selected device will be added to the newly created user-defined group.

To remove a device from a user-defined group, right-click the device in the group and select **Remove**.

To remove an entire user-defined group (including its devices), right-click the group and select **Remove**.

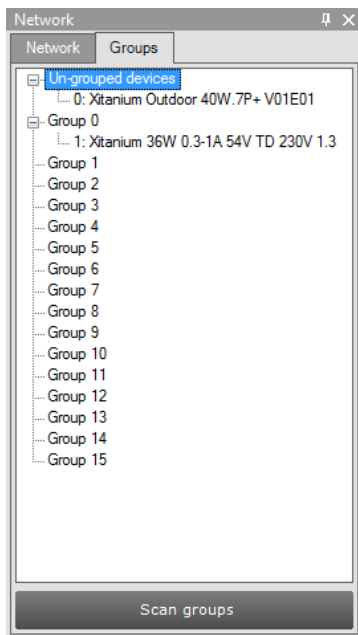


Note! The number of devices in a user-defined group is limited to 64.

9.2.4 Managing groups

Once all the devices in the DALI network are commissioned, i.e. have a unique short address, it is possible to work with DALI groups.

Select the **Groups** tab and press **Scan groups**. After having scanned the network for groups, the **Groups** tab shows all the DALI groups and the found devices for every group.

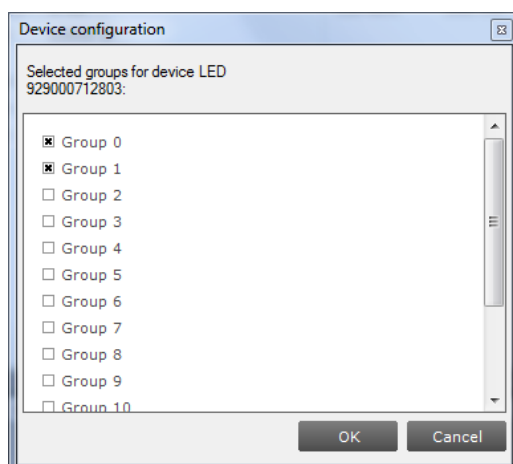


DALI groups are much more comprehensive than user-defined groups. The important difference is that with DALI grouping information is stored in the devices themselves. Therefore, DALI grouping is more permanent than user-defined grouping.

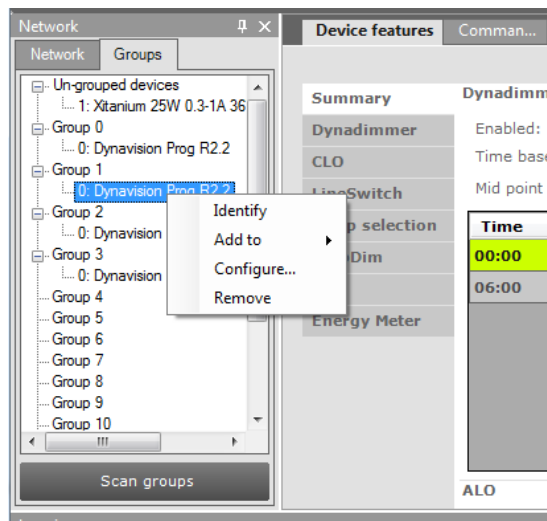
By clicking on a device you will make that particular device the active one, meaning that all actions will be performed on this device only, and will be ignored by all other devices.

The options are:

- With a right-click on an un-grouped device you can:
 - **Identify** the device
 - **Add to**, add the device to one group
 - **Configure...**, add device to multiple groups



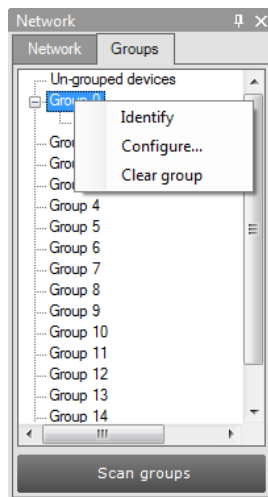
- With a right-click on a device in a group you can:
- - **Identify** the device
 - **Add to**, add the device to one other group
 - **Configure...**, add/remove device to/from multiple groups
 - **Remove**, remove device from current group



Besides selecting a single device for communication, it is also possible to communicate with a group of devices.

The options are:

- With a right-click on a group you can:
 - **Identify** the devices in the group
 - **Configure...**, add/remove multiple devices to/from the group
 - **Clear group**, remove the devices from the group

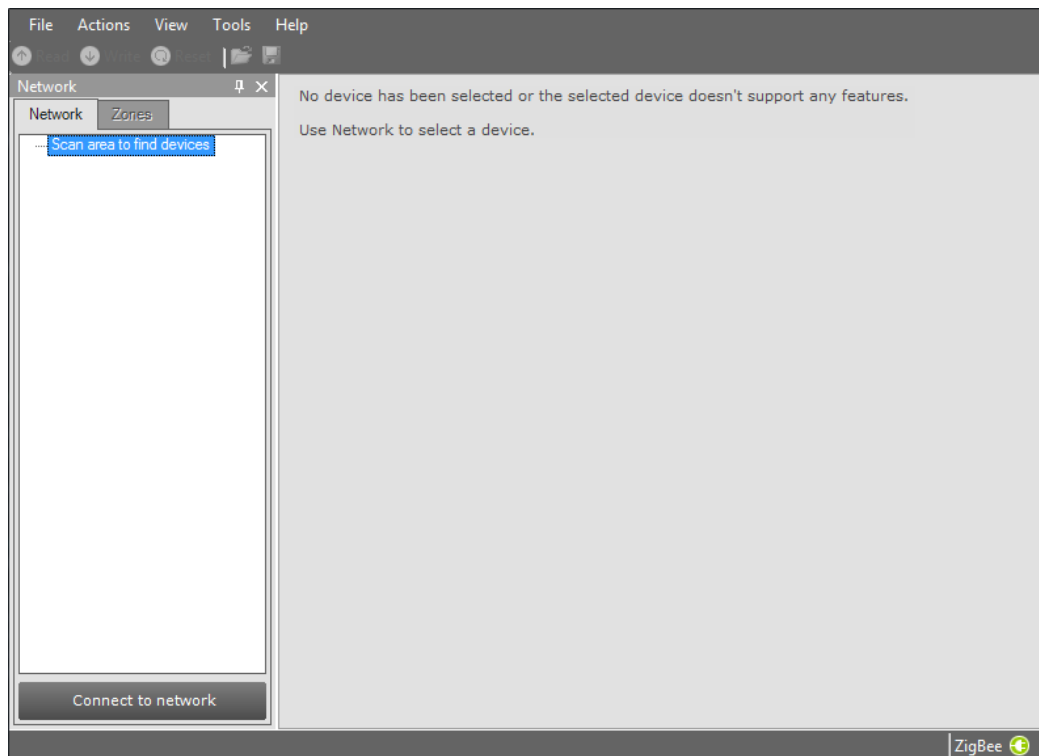


Note! The number of devices in a DALI group is limited to 64.

10 Working with the Philips LCN8650 MultiOne interface USB2ZigBee

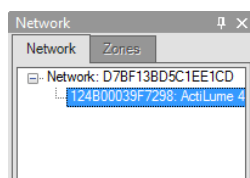
10.1 The main application window

If in the Application Mode Selector screen **All** is selected as application mode, the program will start as follows:



10.2 Connecting to a ZigBee network

The **Network** panel is used to manage a connected ZigBee network. A number of tasks can be performed in the **Network** panel, each of which is detailed below.



10.2.1 Identifying devices

The ZigBee devices and networks in the area of the USB2ZigBee interface are not automatically known.

To find devices and networks in the area press **Connect to network**: MultiOne scans for an open network in the area and connects to the network. After connecting has finished, the network and the found devices are shown in the **Network** panel.

10.2.2 Selecting devices for communication

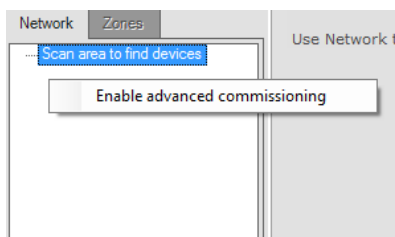
After having connected to the network, the **Network** panel shows all devices and the network to which MultiOne is connected. By clicking on a device or network you will make that particular device or network the active one, meaning that all actions will be performed on this device or network only, and will be ignored by all other devices or networks.

With a right click on a device you can:

- **Identify** the device

10.3 Advanced commissioning

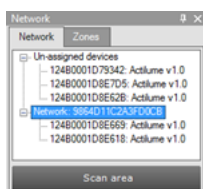
To commission a ZigBee network, right click the **Network** panel and choose **Enable advanced commissioning**.



The **Network** panel switches to a different view making it possible to manage ZigBee networks.

10.3.1 Identifying devices

Press **Scan area** to scan for all the devices and network in the area of the USB2ZigBee interface. After scan has finished the devices and networks in range of the interface are shown in the **Network** panel.



10.3.2 Managing networks

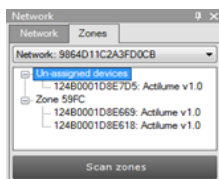
The options are:

- With a right-click on an unassigned device you can:

- **Add to**, move the device to an existing network or move the device to a new network
- With a right-click on a device in a network you can:
 - **Add to**, move the device to an existing network or move the device to a new network
 - **Reset**, from network, the device will become unassigned. If the network becomes empty, the network will be removed
- With a right-click on a network you can:
 - **Query network**, to find all devices in the network, including the devices that are out of range of the USB2ZigBee interface
 - **Open network**, to add more devices

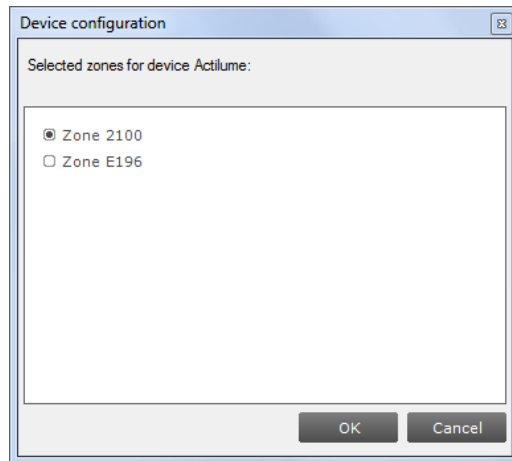
10.3.3 Managing zones

Once you have scanned the area and found devices and networks in range, it is possible to scan a specific network for zones. Select the **Zones** tab, select the **Network** and press **Scan zones**. After having scanned the network, the **Zones** tab shows the found devices and zones within the specified network.

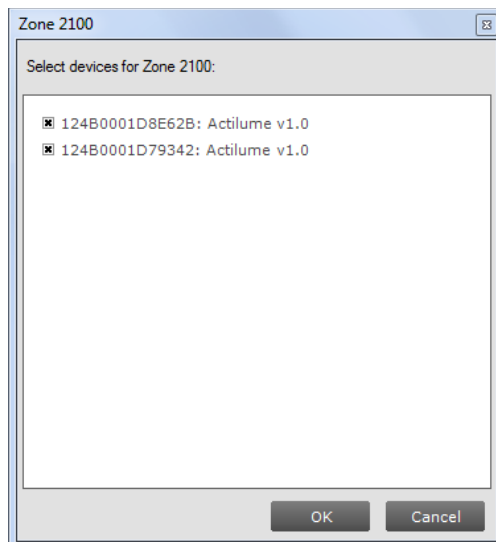


By clicking on a device or zone you will make that particular device or zone the active one, meaning that all actions will be performed on this device or zone only, and will be ignored by all other devices.

- With a right-click on an unassigned device you can:
 - **Identify** the device
 - **Add to**, move the device to an existing or new zone
- With a right-click on a device in a zone you can:
 - **Identify** the device
 - **Add to**, move the device to an another or new zone
 - **Configure...**, move the device to another zone



- **Remove**, the device will become unassigned. If the zone becomes empty, the zone will be removed
- With a right-click on a zone you can:
 - **Identify** the zone
 - **Configure...**, add/remove multiple devices to/from the zone. If other zones become empty, they will be removed

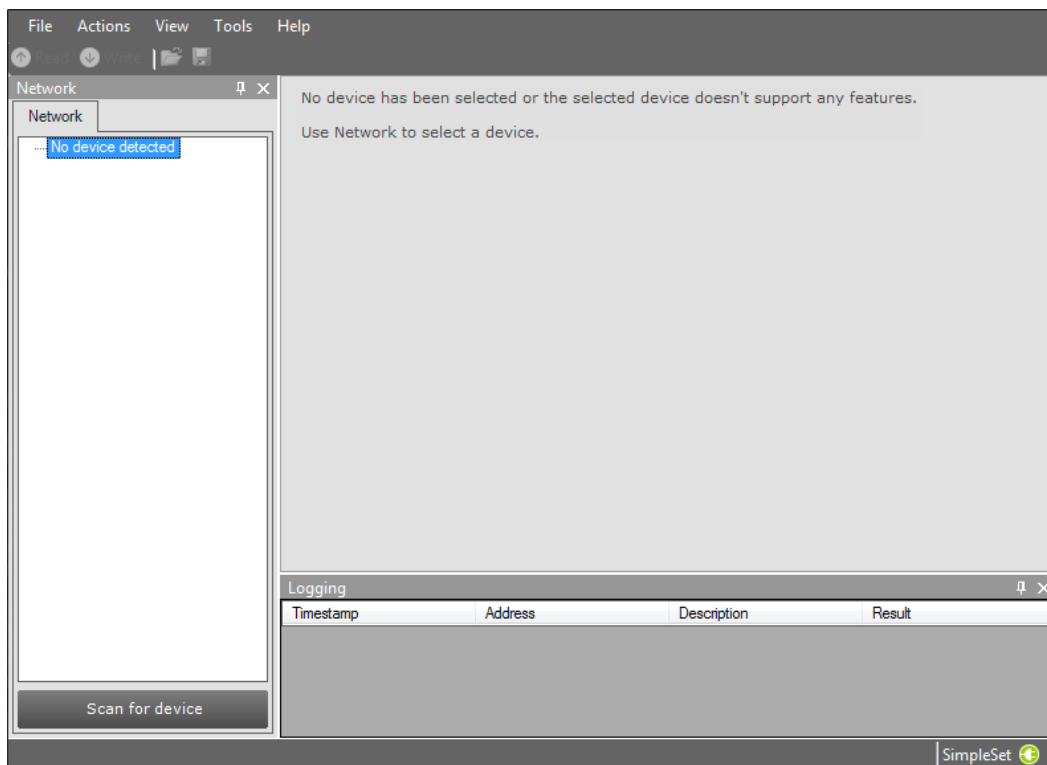


- **Remove zone**, the zone will be removed and the devices will become unassigned

11 Working with the Philips LCN9600 MultiOne interface SimpleSet®

11.1 The main application window

If in the Application Mode Selector screen **All** is selected as application mode, the program will start as follows:



11.2 Scanning a SimpleSet® device

The **Network** panel is used to manage the scanned SimpleSet® devices. A number of tasks can be performed in the **Network** panel, each of which is detailed below.

11.2.1 Identifying devices

The SimpleSet® device near the SimpleSet® interface is not automatically known by MultiOne. To get the device press **Scan for device**: a pop-up will appear indicating the device must touch the interface.



Touch and hold the device close to the SimpleSet® interface until the scan has completed. The scanned device will be shown in the **Network** panel.

11.2.2 Auto read

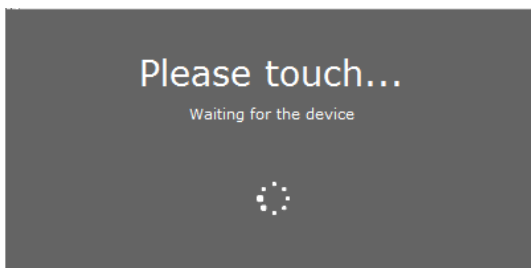
After a device gets selected all features are shown on the **Features** tab and auto read gets activated. Auto read automatically start reading the configuration of all features. Progress is shown as described in chapter 12.2

11.3 Selecting devices for communication

After having scanned the SimpleSet[®] device, the **Network** panel shows the device. By clicking on a device you will make that particular device the active one, meaning that all actions will be performed on this device only, and will be ignored by all other devices.

11.4 Starting communication

In order to communicate with a SimpleSet[®] device, the device has to touch the SimpleSet[®] interface. Before starting the communication MultiOne will show a pop-up when the device is not near the SimpleSet[®] interface. This pop-up waits until the device and the SimpleSet[®] interface touch, or disappears after 20 seconds. After touching the action will be executed. Touch and hold the device close to the SimpleSet[®] interface until all communication has finished.



12 Working with MultiOne

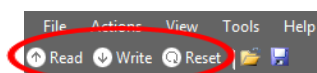
12.1 Viewing device properties

Whenever a device is selected in **Network**, the **Properties** display a number of details for the selected device.

Properties	
Selected	Xtanium 36W 0.3-1A 54V TD 230V
Version	2.1
DALI Ed	1
Hardware version	117.103
Unique id	0000

12.2 Communicating with a device

Initiating communication with a device is done by first selecting the device (left-click the device in **Network**) and then clicking **Read**, **Write** or **Reset** on the toolbar.



When the **Commands** tab or the **Scheduler** tab is active, these buttons are unavailable. When the **Query** tab is active, all queries are executed when clicking **Read**. When the **Diagnostics** tab is active, all diagnostics information is read (if available in the selected device) when clicking **Read**. When the **Device features** tab is active, the **Read** and **Write** actions are available. The **Reset** action is only available on the **Device features** tab when the selected device has 1 or more features that are resettable. The **Reset** action will set a feature to its factory defaults.

Reading, writing and resetting will always take a few seconds. Operation progress is shown on the status bar of the main application window. On the **Device features** tab, per-feature progress is shown on each of the feature selection tabs. When all information has been successfully read or written, a green tick mark will appear and the text **Status: OK** is shown. If anything goes wrong, a red icon and the text **Status: failed** is shown. When on the **Device features** tab, point your mouse to each status icon to see a more detailed description of the communication result.

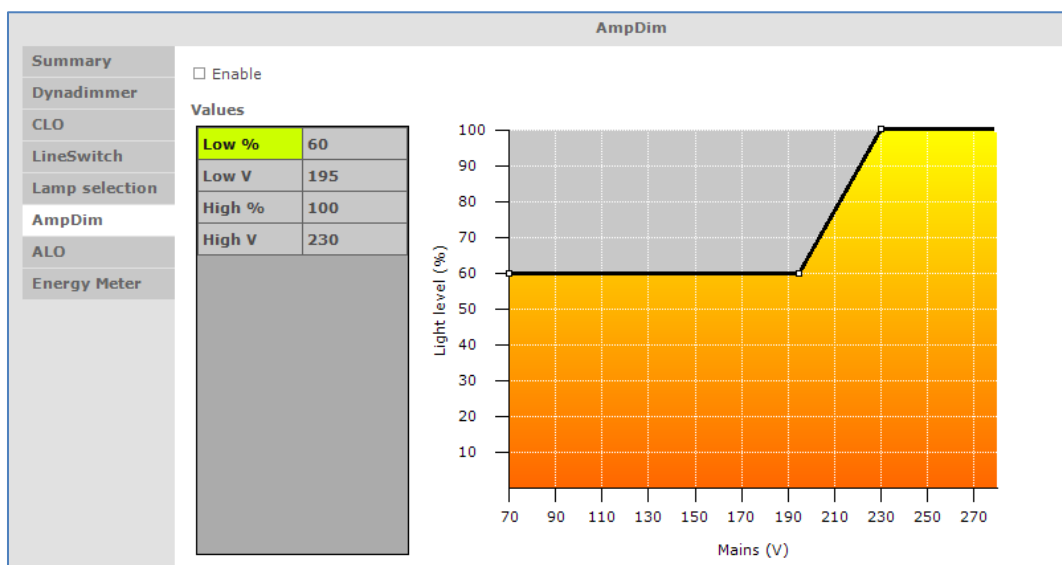
Apart from using **Read** and **Write** on the toolbar, you can directly send DALI commands. This can be done on the **Commands** tab and the **Scheduler** tab.

In the **Preferences** window it is possible to enable extra verification when writing (see chapter 12.16).

12.3 Configuring device features

You can configure all features that are supported by a specific Philips device. For any device selected in the **Network**, the **Device features** tab displays the set of device features that corresponds to this device. Upon selecting another device, the **Device features** tab will be updated as well. This mechanism ensures that only the features supported by the selected device can be configured.

The **Device features** tab has a panel with a column of tabs on the left-hand side. Each feature has its own tab. For most devices a **Summary** tab is available as well.



To make sure that the feature information in the **Device features** tab corresponds to the selected device, click **Read** on the toolbar.



Note that some features might be shielded from reading. If a shielded feature is read, a dialog will appear asking for an access level and a password.

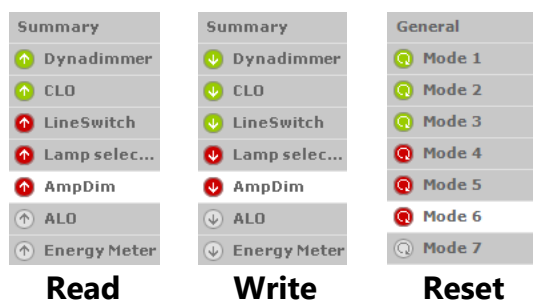
After providing a correct access level and password, and clicking **OK**, the shielded features will be read. By clicking **Cancel** none of the selected features will be read. If

an incorrect access level and/or password were provided, the shielded features will receive a status icon indicating failure (see below).

To make sure that the feature information is stored in the selected device, click **Write** on the toolbar. If you want to reset certain features to its default settings, click **Reset** on the toolbar. Be aware that you need to click the **Read** button afterwards to reload the reset values.

For **Read**, **Write** and **Reset** actions, status icons will be shown when a feature is being read or written. There are three different colors used for the icons: red, green and grey.

Red means that the reading or writing has failed. The green icon indicates that the reading was successful and that all the data was sent to the driver. This does not mean that all data is actually received (see Write and Verify in chapter 21). The grey icon is used to display that the read or write action is pending for the specific feature.



In the following sections you will find an overview of all supported device features in alphabetical order. Features typically belong to one or two product groups (LED, HID or FLUO), but this does not mean that every device belonging to a certain product group will automatically support all of its features listed here. For an overview of supported device features see [Supported features](#).

12.3.1 1-10V min dim level

Product group

LED

The screenshot shows a configuration window for the '1-10V min dim level' feature. It includes a checkbox labeled 'Enable' which is checked. Below it is a horizontal slider with a black knob, and a text box to its right showing the value '26' followed by a '%' symbol. At the bottom, there is a label 'Curve selection' and a dropdown menu currently set to 'EU'.

Description

Use this feature to set the minimum dim level when using 1-10V dimming interface.

Usage

- Use the slider or the text field to select a value. The value represents the light level.
- Use the dropdown box to select the wanted curve selection (EU or US).

12.3.2 ActiLume General

Product group/family

CONTROL/ActiLume DALI

Configuration:	Parallel link
Mode:	1
IR channel:	A
Region:	EU
Occupancy sharing:	Mode based
<input checked="" type="checkbox"/> Local daylight sensing	
<input checked="" type="checkbox"/> Local presence sensing	
Presence sensor sensitivity:	High
Light sensor reference point:	600 lx
Night mode	
Hold time:	5 minutes
Background level:	20%
Prolong time:	15 minutes
BMS	
<input type="checkbox"/> Send HVAC/sunblind messages to BMS	
<input type="checkbox"/> DALI occupancy reporting	

Description

Use this feature to configure general ActiLume settings.

Usage

Use the various drop down boxes, check boxes and text fields to make a configuration.

Please refer to the ActiLume DALI gen2 Application Guide for further details.

Product group/family

CONTROL/ActiLume Wireless

Mode:	1	
IR channel:	H	
Region:	EU	
<input type="checkbox"/> 100 hour burn-in		
Light sensor reference point:	150	lx
Reference point correction factor:	88	%
Occupancy mode override:	Path of egress	

Description

Use this feature to configure general ActiLume settings.

Usage

Use the various drop down boxes, check boxes and text fields to make a configuration.

Please refer to the ActiLume Wireless Application Guide for further details.

12.3.3 ActiLume Mode**Product group/family**

CONTROL/ActiLume DALI

Hold time:	15	half min		
Prolong time:	0	min	<input type="checkbox"/> Infinite	
Smart time:	10	min		
Light status on power up:	Lights off			
Background level:	20	%		
Dwell time:	0	s		
Light sensor reference point:	120	lx		
	Group 1	Group 2	Group 3	Group 4
Occupancy mode:	Auto on / auto off	Auto on / auto off	Auto on / auto off	Auto on / auto off
Daylight dependent override:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Daylight dependent switching:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Daylight dependent regulation:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Daylight regulation offset:		30 %	15 %	0 %
Switch on level prior to DDR:	20 %	20 %	20 %	100 %
Group based linking				
Base group:	Background level			
Secondary group:	Background level			

Description

Use this feature to configure ActiLume settings that apply to the system's modes. For ActiLume DALI gen2, up to 16 modes are shown, each of which has its own feature tab on the left-hand side. Use the ActiLume Mode feature to configure settings for each individual mode.

Usage

Use the various drop down boxes, check boxes and text fields to make a configuration. Click the **Reset to factory defaults** button to reset the current mode to the factory defaults.

Please refer to the ActiLume DALI gen2 Application Guide for further details.

Product group/family

CONTROL/ActiLume Wireless

Hold time:	<input type="text" value="30"/>	half min
Prolong time:	<input type="text" value="0"/>	min <input type="checkbox"/> Infinite
Light status on power up:	<input type="text" value="Lights off"/>	
Background level:	<input type="text" value="10"/>	%
Occupancy mode:	<input type="text" value="Auto on / auto off"/>	
Light sensor reference point:	<input type="text" value="210"/>	lx

Description

Use this feature to configure ActiLume settings for that apply to the system's modes. For ActiLume Wireless, up to 32 modes are shown, each of which has its own feature tab on the left-hand side. Use the ActiLume Mode feature to configure settings for each individual mode.

Usage

Use the various drop down boxes, check boxes and text fields to make a configuration.

Please refer to the ActiLume Wireless Application Guide for further details.

12.3.4 ActiLume Scene**Product group/family**

CONTROL/ActiLume DALI

	Group 1	Group 2	Group 3	Group 4
Dim behavior:	Manual dim level ▼	Daylight regulated ▼	Daylight regulated ▼	Daylight regulated ▼
Dim level:	0 %			

Description

Use this feature to configure ActiLume settings that apply to the system's scenes. For ActiLume DALI gen2, 4 scenes are shown, each of which has its own feature tab on the left-hand side. Use the ActiLume Scene feature to configure settings for each individual scene.

Usage

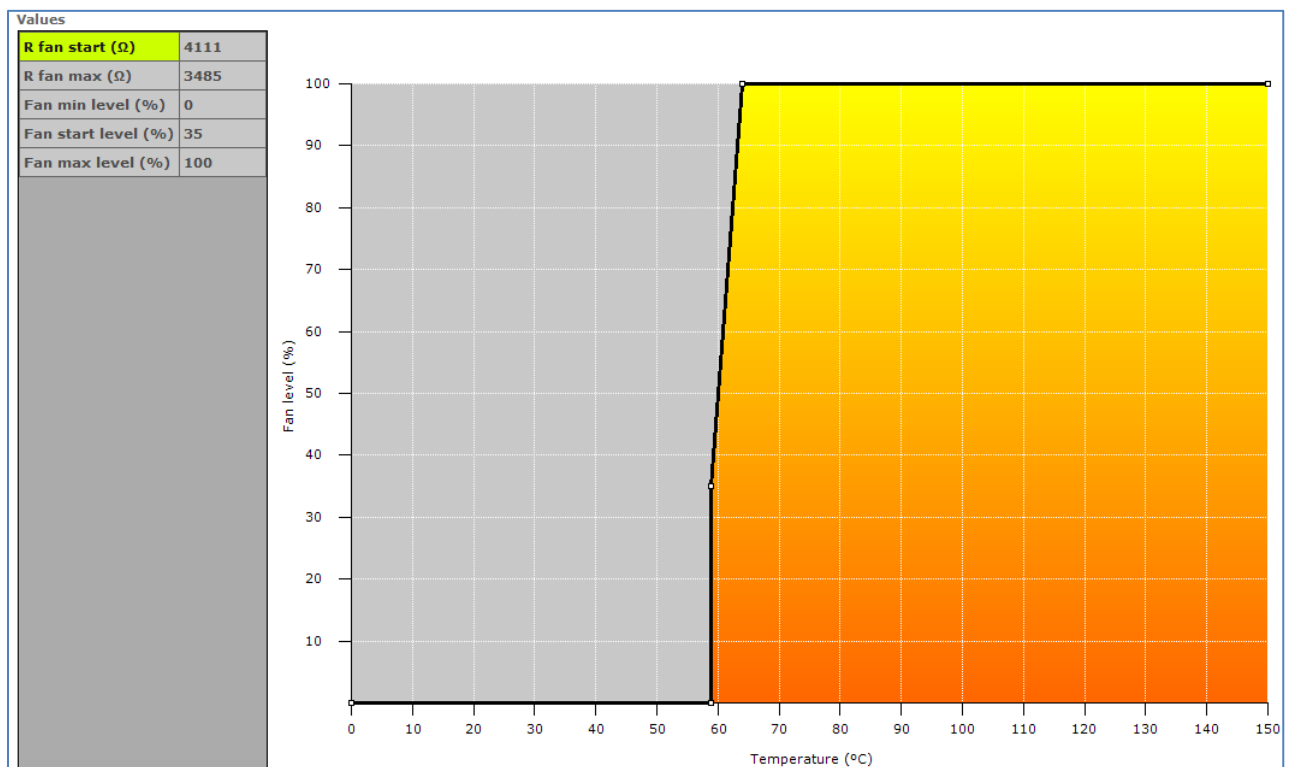
Use the various check boxes and text fields to make a configuration.

Please refer to the ActiLume DALI gen2 Application Guide for further details.

12.3.5 Active Cooling

Product group

LED



Description

Use this feature to control the fan of the LED module and minimize audible noise from the active cooling unit. The driver increases the fan output level (and so the

speed of the fan) when temperature of the LED module becomes too high. When the fan output level increases the temperature of the LED module should be reduced.

The customer can specify the temperature limits to make sure the fan output level is kept as low as possible and will only increase when needed so the audible noise is reduced.

Usage


Drag the points or the lines in the resulting graph to adjust the configuration. Alternatively, use the table to enter values directly.

Note! For a detailed technical description of the characteristics of the device model, like constraints and limitations, please refer to [Device-specific technical description](#).

12.3.6 Adjustable Light Output

Product group

HID



Description

Use the Adjustable Light Output (ALO) feature to regulate the light output to a desired optimum value. You can create a “virtual lamp” with output different than what the standard wattages offer.

Usage

Select the **Enable** check box to use this feature. Use the slider or the text field to select a value. The value represents the light level.

12.3.7 Adjustable Output Current

Product group

LED



Description

Use this Adjustable Output Current (AOC) feature to adjust the output current to a desired optimum value. You can create a “virtual lamp” with output different than what the standard wattages offer.

Usage

The current can be set in two ways:

- Select the **External Rset** check box: Adjustment of the output current is not configured using MultiOne, but the value of an external resistor adjusts the output current

OR

- Use the slider or the text field to select a value. The value represents the nominal output current

12.3.8 Adjustable Startup Time

Product group

LED

A horizontal slider control with a dark grey knob at the far left. To the right of the slider is a text input field containing the number '1000', followed by the unit 'ms'. The entire control is enclosed in a thin blue border.

1000 ms

Description

At power on, the fast fade-up of light can be unpleasant in certain applications. To avoid such a situation, the device fade-up time at startup can be adjusted.

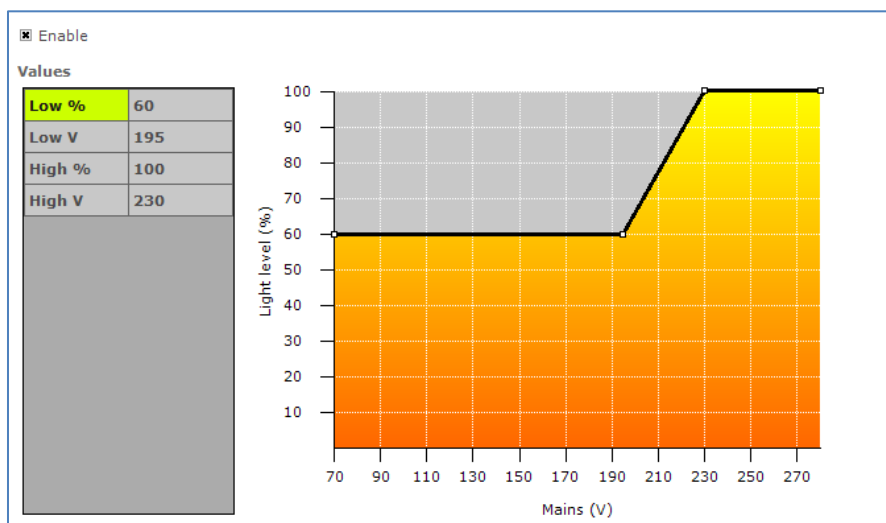
Usage

Use the slider or the text field to select a value. The value represents the start fade-up time in milliseconds.

12.3.9 AmpDim

Product group

HID, LED



Description

Use this feature to adjust the light output of a lamp by adjusting the mains voltage of the device.

Usage

Select the **Enable** check box to use this feature (note that LED devices do not have this check box). Drag the points or the lines in the graph to create the desired configuration. Alternatively, use the table to directly enter values.

Note! For a detailed technical description of the characteristics of the device model, like constraints and limitations, please refer to [Device-specific technical description](#).

12.3.10 Constant Light Output

Product group

HID, LED

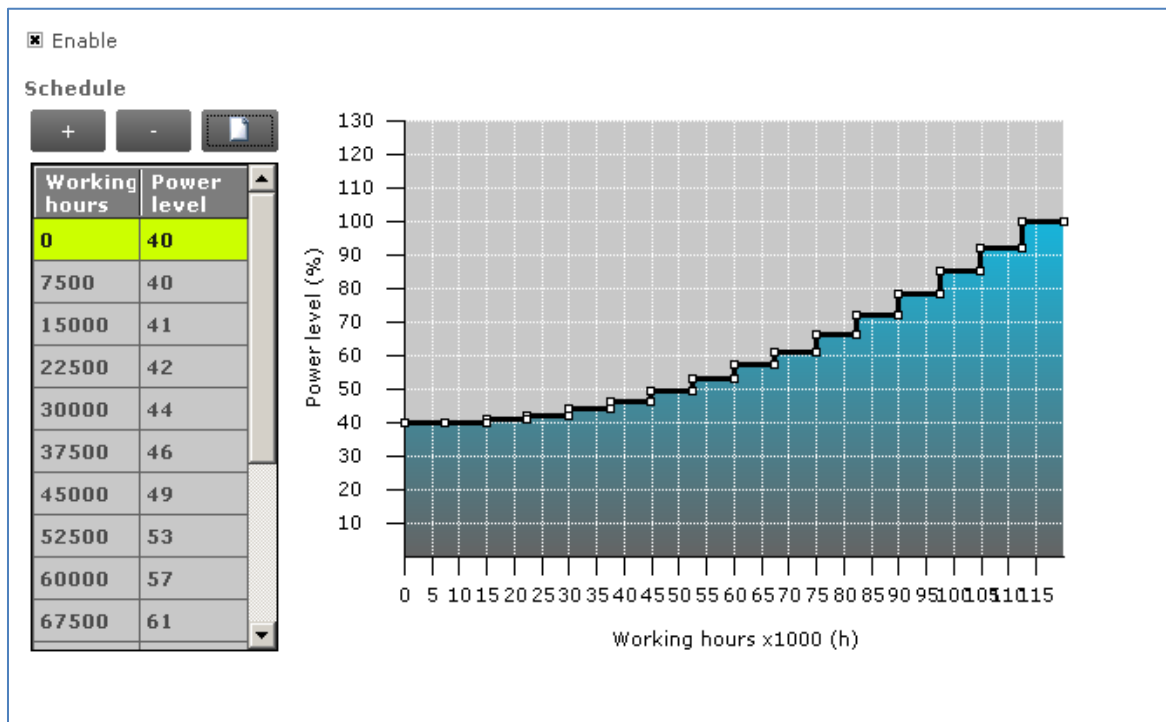
12.3.10.1 HID version

The HID version of Constant Light Output (CLO) has two check boxes. Select the **Enable** check box to use the device's built-in Constant Light Output profile. Select the

Reset check box to reset this feature, including resetting the lamp operating hours parameters. This is useful when replacing the HID lamp.

12.3.10.2 LED version

The Constant Light Output feature for LED devices will show the following window:



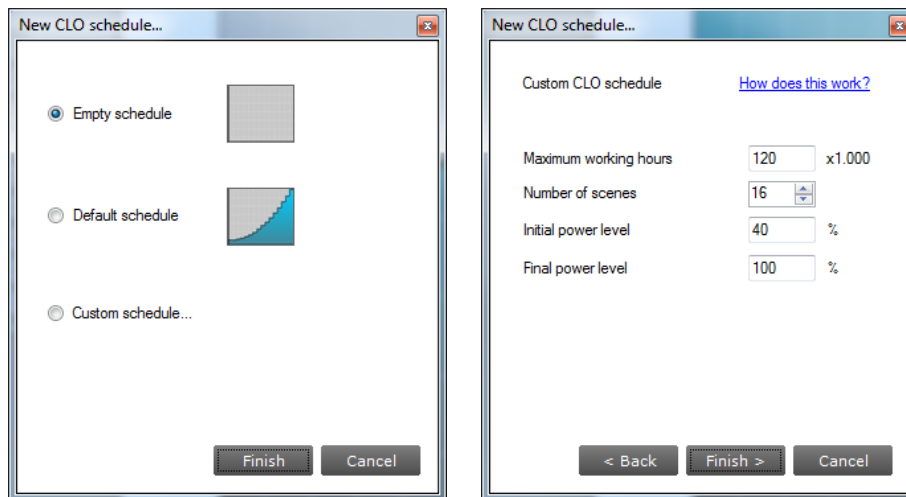
Description

The lumen output of a LED module usually decreases over its lifetime. To compensate, a schedule can be created that gradually increases the lamp's power level over time.

Usage

Select the **Enable** check box to use this feature. Click the **New** button to create a default schedule or click the **Plus** button to individually add scenes.

When creating a new schedule, in the dialog window that pops up you can either select an empty schedule, a default schedule or a custom schedule.



When selecting a custom schedule, you have to enter a number of parameters that will define the CLO schedule. These are:

- **Maximum working hours:** the largest number of working hours for which the CLO schedule is defined. This corresponds to the maximum value of the horizontal axis in the resulting CLO graph.
- **Number of scenes:** the number of scenes (bars in the graph) into which the total number of burning hours is divided
- **Initial power level:** the power level that is the starting point at 0 burning hours
- **Final power level:** the power level at the end of the defined lifetime (the value given for maximum number of burning hours)

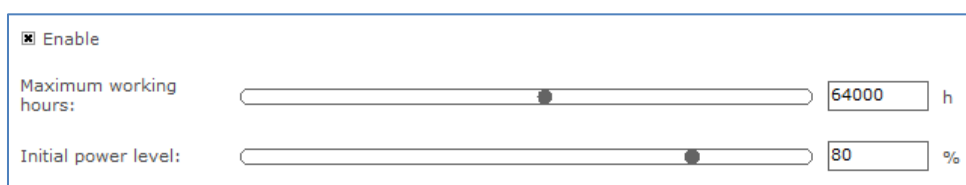
After clicking **Finish** a CLO schedule will be created using linear interpolation of the provided values.

Drag the points or the lines in the resulting graph to adjust the configuration. Alternatively, use the table to enter values directly. Single or multiple table rows can be removed by clicking the **Minus** button.

Note! The reliable use of Constant Light Output requires extensive LED specification assessment of life time behavior of LEDs.

12.3.10.3 LED version (simplified)

The simplified Constant Light Output feature will show the following window:



Description

The lumen output of a LED module usually decreases over its lifetime. To compensate, a schedule can be created that gradually increases the lamp's power level over time. By configuring the **Maximum working hours** and the **Initial power level** a linear schedule is defined which consists of 16 scenes. The first scene starts at 0h and at the specified initial power level. The last scene starts at the specified working hours and at 100% power level.

Usage

Select the **Enable** check box to use this feature. Use the **Maximum working hours** slider to configure the moment in time where the LED module will use the final power level.

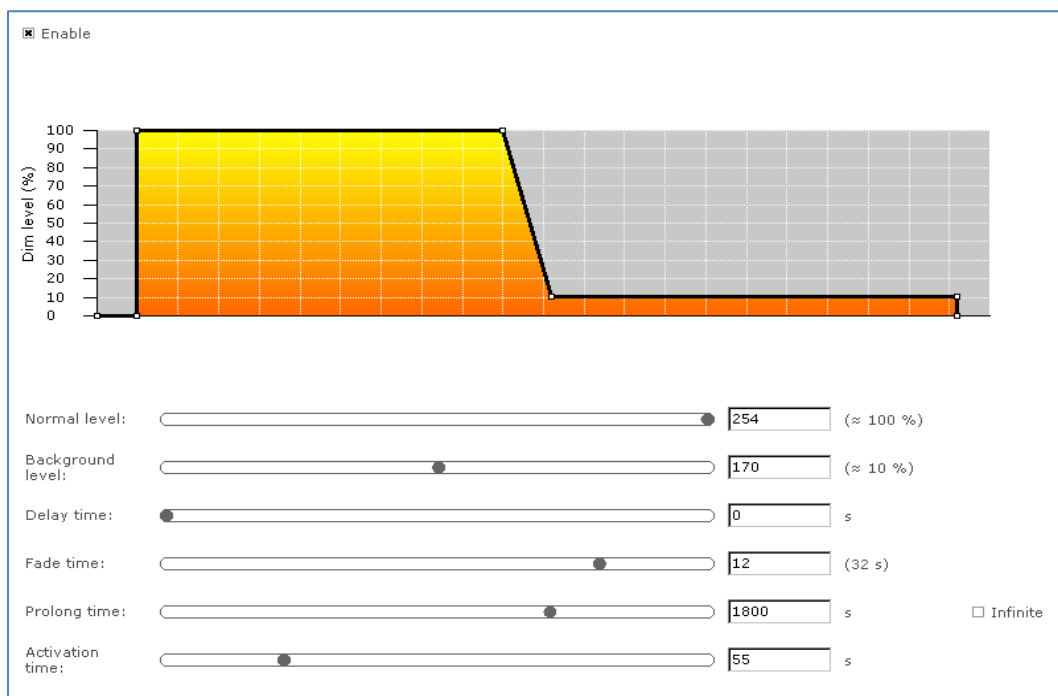
Use the **Initial power level** slider to configure at which power level the LED module will initially start.

Note! The reliable use of Constant Light Output requires extensive LED specification assessment of life time behavior of LEDs.

12.3.11 Corridor Mode

Product group

FLUO, LED



Description

Corridor Mode feature depends on Touch and Dim feature. The Corridor Mode feature adjusts the light to a defined level when a presence sensor detects a person. Corridor Mode can only be activated when the device is in Touch and Dim mode.

Usage

Select the **Enable** check box to use this feature. This feature has the following parameters:

- **Normal level:** Light level to be set when presence sensor detects activity
- **Background level:** Low light level to be set when no presence is detected after the fade time
- **Delay time:** The time from the moment the sensor has switched off and the moment the device will start to fade to background level
- **Fade time:** The time used to fade from normal level to background level
- **Prolong time:** When reaching background level, the time after which the device will be switched off
- **Activation time:** The time during which a mains signal must be detected, before the device will switch to Corridor Mode

Alternatively to using the sliders, some lines and points in the graph can be dragged to adjust the configuration.

12.3.12 DALI Power Supply

Product group

LED

☒ Enable

Description

Use the DALI Power Supply (DALI PSU) feature to enable the device so it will deliver the power supply for DALI communication by itself.

Usage

Select the **Enable** check box to use this feature.

12.3.13 Dimming Interface

Product group

LED

Interface

DALI

Dimming curve

☒ Logarithmic

☐ Linear

Description

Use the Dimming Interface feature to select the dimming interface for the device. The actual options are depending on the device model:

- **1-10 V**
- **DALI**
- **Dynadimmer**
- **No dimming**
- **AmpDim**
- **LineSwitch**

When **DALI** has been selected, an additional setting appears with which the dimming behavior can be set. Options are **Logarithmic** and **Linear** dimming curves.

Usage

Use Dimming Interface to select the desired dimming interface.

Product group

FLUO, LED



A screenshot of a web interface showing a dropdown menu for 'Interface'. The menu is open, displaying 'Automatic selection' as the selected option. The dropdown is contained within a light blue bordered box.

Description

Use the Dimming Interface feature to select the dimming interface for the device.

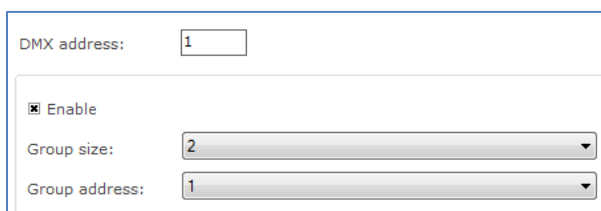
Usage

The available dimming interfaces are stored in the device and therefore need to be read out. When the interfaces are found it will be possible to select **Automatic selection** (enable all interfaces), **No dimming** (disable all interfaces) or a **single** interface.

12.3.14 Driver addressing

Product group

LED



A screenshot of a web interface for 'Driver addressing'. It includes a 'DMX address' input field with the value '1'. Below it is a section with a checked 'Enable' checkbox. Under the checkbox are two dropdown menus: 'Group size' with the value '2' and 'Group address' with the value '1'. The entire form is enclosed in a light blue bordered box.

Description

Use the Driver addressing feature to determine the DMX settings for the device.

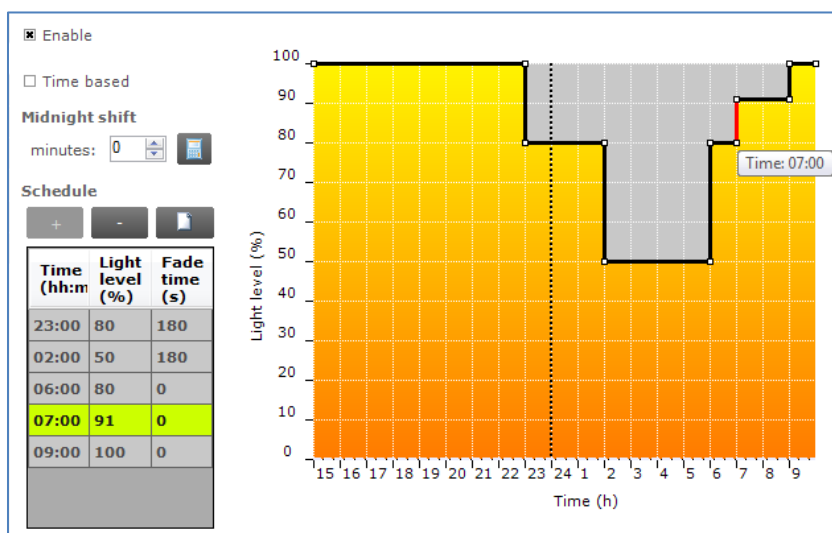
Usage

- **DMX address:** DMX address
- **Enable:** When the check box is cleared the grouping feature within one DMX address is not used.
- **Group size:** Number of devices that operate within one group, all responding to the same DMX address.
- **Group address:** Device number within the group of devices that respond to the same address.

12.3.15 Dynadimmer

Product group

HID, LED



Description

Use Dynadimmer to create a dynamic dimming schedule over a period of time.

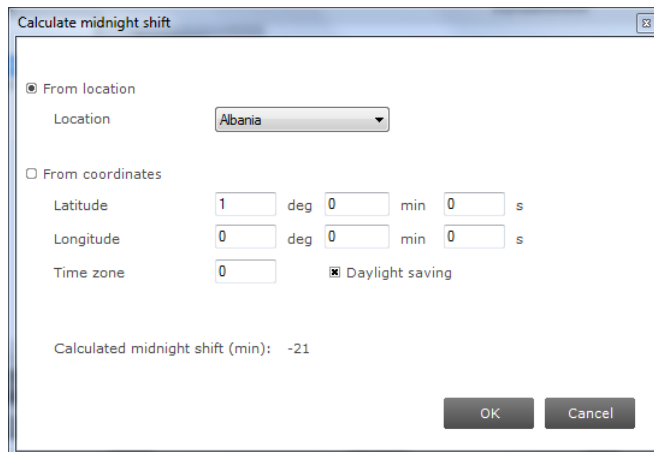
Usage

Select the **Enable** check box to use this feature. This feature has a number of options, depending on the device model:

- **Time based:** switch between absolute and relative time schedules. When the **Time based** check box is cleared, the Dynadimmer schedule will use its automatically learned midnight point as a reference for timekeeping. When the **Time based** check box is selected, the reference point is the moment when the mains are switched on. Selecting the **Time based** check box changes the graph and removes its dotted midnight line. Note that not all devices support Time based Dynadimmer.
- **Midnight shift:** the midnight point depends on the geographical location. Enter the midnight shift in minutes or use the midnight shift calculation

window to automatically adjust the midnight point by the specified offset. Use the calculation button to either manually provide latitude and longitude coordinates or to choose a predefined location. The midnight shift option is unavailable when the **Time based** check box has been selected.

The midnight shift calculation dialog window looks as follows:



- **Location:** a name that identifies this custom location.
- **Latitude:** the latitude of the location in degrees, minutes and seconds. The value that represents the degrees can be negative.
- **Longitude:** the longitude of the location in degrees, minutes and seconds. The value that represents the degrees can be negative.
- **Time zone:** the time zone of the location. For GMT+1 enter 1, for GMT-1 enter -1, and so on.
- **Daylight saving:** indication whether daylight saving should be dealt with or not.

You have two choices for calculation of midnight shift. If your location is available in the location list you can use it. Some locations are not listed. For those unlisted locations use the geographical coordinates to calculate the correct midnight shift.

Click **OK** to save result of your calculation as the new midnight shift. Note that clicking **OK** is not directly saving your data to the driver. To save midnight shift to a driver you will have to write the whole feature. Note also that the location is not written into the driver, the midnight shift is written instead.

Click the **New** button to create a default schedule or click the **Plus** button to add scenes individually. Drag the points or the lines in the graph to create the desired configuration. Alternatively, use the table to enter values directly. Remove single or multiple table rows by clicking the **Minus** button.

Note! The device will follow the dimming schedule. When the light level in the dimming schedule is below the physical min level of the selected lamp, the physical min level will be used. However, some devices are also capable to switch off during the dimming schedule, if a scene was configured at 0 %.

The physical min level of the selected lamp is indicated by the gray-dotted line in the graph.

12.3.15.1 *Physical min level*

In order to see the correct physical min level of a lamp after Lamp Selection do not forget to switch the driver off for a few seconds. After switching it on again the selected lamp is activated. To see the physical min level of the selected lamp in the graph, click **Read** on the toolbar.

12.3.15.2 *Location or custom location*

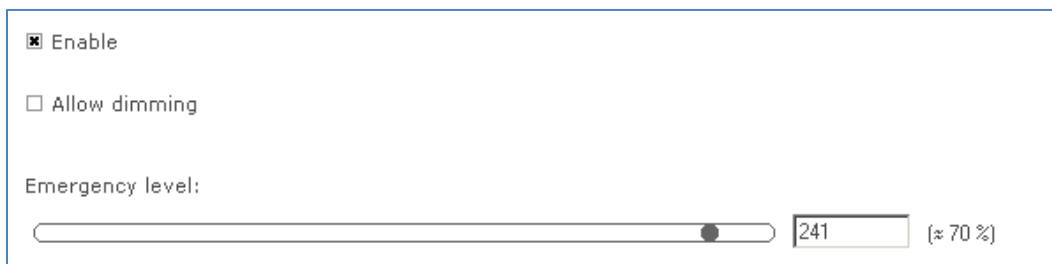
For some device models, only the midnight point offset is stored in the device and **NOT** the (custom) location. In those cases the location information and the custom location is only used to calculate the midnight point offset. After reading out the device, MultiOne tries to match the midnight point offset with a location. In case the midnight point offset does not match to a location or the midnight point offset matches multiple locations, MultiOne will show "No location".

For a technical description of the characteristics of the device model, like constraints and limitations, please refer to [Device-specific technical description](#).

12.3.16 **DC Emergency**

Product group

FLUO, LED



☒ Enable

☐ Allow dimming

Emergency level:

241 (~ 70 %)

Description

This feature is used together with a DC central battery system. The device will dim to a specific level, as soon as a DC voltage is detected at the mains input instead of an AC voltage on the mains input of the device. The dimming of the lamps can either be enabled or disabled during this DC Emergency operation.

Usage

Select the **Enable** check box to use this feature. Use the slider or the text field to select a value. The value represents the arc power level when in DC Emergency mode (the label on the right gives the approximate light level percentage). Select the **Allow dimming** check box to allow dimming when in DC Emergency mode.

12.3.17 End Of Life indication

Product group

LED



Description

Use this feature to warn the user at the end of the guaranteed lifespan of the LED module. Once the end of guaranteed life is reached, the device will flash the lamp for 5 seconds and then continue normal operation. LED flashing will happen every time at startup once the device's working hours have exceeded the number of hours specified as End Of Life. This feature uses the same burning hours counter as the Light Source Operating Hours and Constant Light Output features.

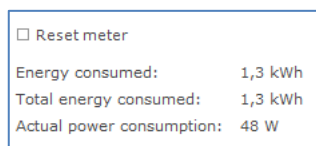
Usage

Select the **Enable** check box to use this feature. Use the slider or the text field to select a value. The value represents the guaranteed lifetime in hours.

12.3.18 Energy Meter

Product group

FLUO, HID



Energy consumed:	1,3 kWh
Total energy consumed:	1,3 kWh
Actual power consumption:	48 W

Description

Use this feature to get an indication of the (total) energy consumption of the device.

Usage

The value for **Energy consumed** can be reset by selecting the **Reset meter** check box followed by clicking **Write** on the toolbar. The value for **Total energy consumed** cannot be reset. The **Actual power consumption** is the power currently being used.

12.3.19 Lamp Burn-in

Product group

FLUO

☒ Enable

Burn-in level : ☐ Use default

250 (≈ 90 %)

Burn-in time: ☐ Use default

6000 min

Description

Lamp Burn-in prevents dimming below a predefined level in the first hours of a lamp's life. This is to ensure that the lamp will be properly "burned in" before dimming.

Usage

Select the **Enable** check box to use this feature. This feature has of two parameters:

- **Burn-in level:** use the slider or the text field to select a value. The value represents the maximum arc power level for dimming (the label on the right gives the approximate light level in percent). Alternatively, select the **Use default** check box to use the default value.
- **Burn-in time:** use the slider or the text field to select a value. The value represents the time in minutes during which the burn-in level is active. Alternatively, select the **Use default** check box to use the default value.

12.3.20 Lamp Selection**Product group**

HID, FLUO

Selection HID Cosmopolis 45W

Description

Use the Lamp Selection feature to select the lamp type that is connected to the device. Options depend on the device model.

Usage

Use **Selection** to select the lamp type. Note that this feature has to be read first in order for the options to become available. To read the feature configuration, click **Read** on the toolbar.

Note! After selecting a different lamp, it is necessary to switch the driver off for a few seconds. After switching is on again the selected lamp is activated.

12.3.21 Light Source Operating Hours

Product group

LED



Description

Use this feature to manually set or reset the number of operating hours for the LED module. This is useful when replacing the LED module, thereby resetting features like Constant Light Output and End Of Life indication.

Usage

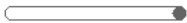
Use the slider or the text field to select a value. The value represents the number of operating hours.


12.3.22 LineSwitch


Product group


HID, LED


☐ Enable

High V level:  100 %

Low V level:  50 %

Fade on time:  0 s

Switch off delay time:  0 s

Fade off time:  0 s

Note 1: Low V = 0 V on the mains; High V = 208-277 V on the mains.

Note 2: When Dynadimmer is scheduled, LineSwitch can not be used standalone. It can only be used to override Dynadimmer.

Description

This feature provides an interface for easy dimming via pilot-line or external sensor (presence) of a group of lamps. Dimming to desired level can be controlled by applying a 230V between the DALI inputs. The fade times can also be set using the fade on-, fade off and switch off delay time.

Usage

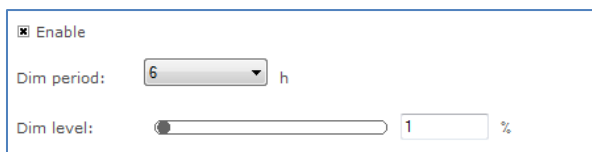
Select the **Enable** check box to use this feature. This feature has the following parameters:

- **High V level:** Use the slider or the text field to select a value. The value represents the light level to be set when high voltage is detected on the mains.
- **Low V level:** Use the slider or the text field to select a value. The value represents light level to be set when low voltage is detected on the mains.
- **Fade on time:** Use the slider or the text field to select a value. The value represents the fade on time to be used.
- **Switch off delay time:** Use the slider or the text field to select a value. The value represents the switch off delay time to be used.
- **Fade off time:** Use the slider or the text field to select a value. The value represents the fade off time to be used.

12.3.23 LumiStep

Product group

LED



Description

This feature provides a simplified version of Dynadimmer.

Usage


Select the **Enable** check box to use this feature. This feature has the following parameters:

- **Dim period:** Use the drop down box to select the wanted dim period. This is the time period the dim level will be used.
- **Dim level:** Use the slider or the text field to select a value. The value represents the dim level in percent. The dim level will be used during the dim period.

12.3.24 Min Dim Level

Product group

LED



Description

This feature provides an interface for setting the min dim level of a device.

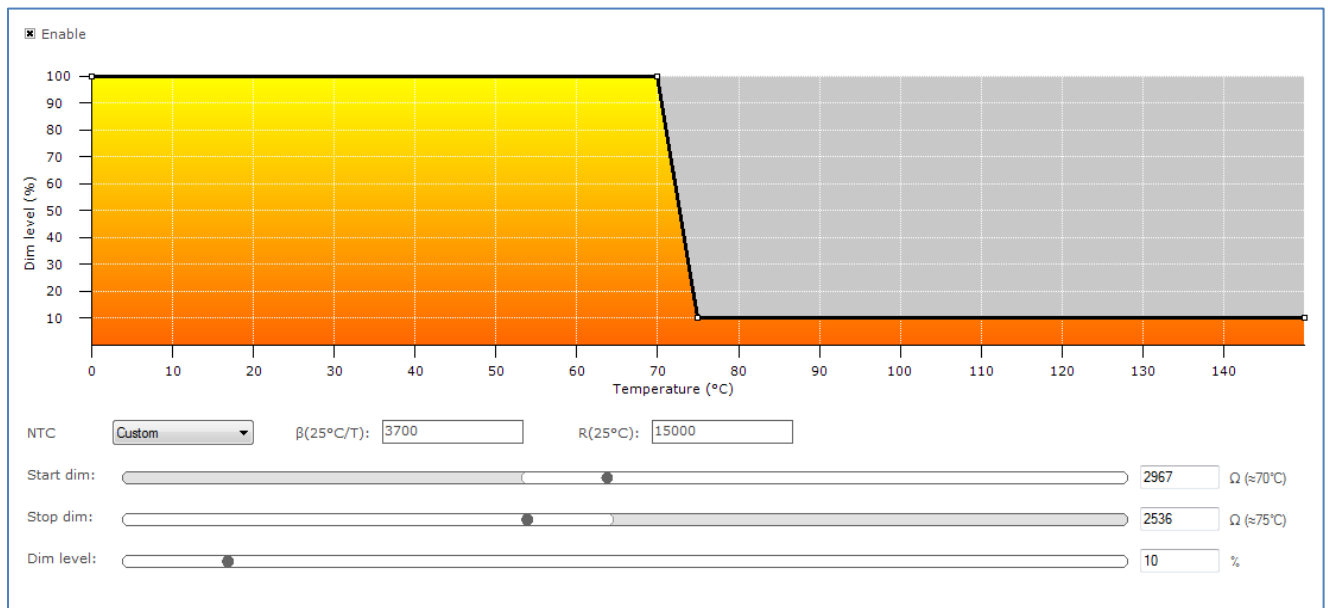
Usage

Select the **Enable** check box to use this feature. Use the slider or the text field to select a value. The value represents the min dim level in percentage.

12.3.25 Module Temperature Protection

Product group

LED



Description

Use this feature to regulate lamp power when the LED module gets too hot. At a certain temperature the lamp starts to dim in order to control temperature. At a critical temperature level the lamp will switch off completely.

Usage

Select the **Enable** check box to use this feature. Drag the points or the lines in the resulting graph to adjust the configuration. Alternatively, use the sliders to change values directly. Based on the device model, the feature is shown in either temperature (degrees Celsius) or resistance values (in Ohm).

Note! For a detailed technical description of the characteristics of the device model, like constraints and limitations, please refer to [Device-specific technical description](#).

12.3.26 Quick Lamp Start

Product group

FLUO

☒ Enable

Description

When the **Enable** check box is selected, the lamp can be switched on immediately without the necessity for preheating the lamp. The preheat sequence (typically between 0.6 seconds and 1.0 seconds) will thus be skipped. This is possible because heating of the electrodes is not turned off.

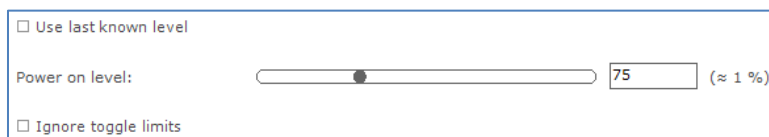
Usage

Select the **Enable** check box to use this feature.

12.3.27 Touch and Dim

Product group

FLUO, LED



☐ Use last known level

Power on level: 75 (≈ 1 %)

☐ Ignore toggle limits

Description

This feature defines the startup behavior of a touch and dim controlled device after a power failure during dimming.

Usage

When the **Use last known level** check box is selected, the device will start up at the last known dim level that was used during dimming.

If this is not checked the power on level can be configured between 0 and 100% of the light.

When the **Ignore toggle limits** check box is selected, the normal toggle limits are ignored and dimming starts directly.

If this is not checked the normal toggle limits are used.

12.4 Using the features summary

For most devices an additional tab is shown on the **Device features** tab, called **Summary**. The **Summary** tab gives a compact overview of the settings that have been entered for all the features of this device. As the features are different per product group, the summary is also different. The features cannot be changed on the **Summary** tab.

Lamp selection																			
Selected: HID CDO 250W																			
Dynadimmer		AmpDim																	
Enabled: Yes		Enabled: No																	
TimeBased: No																			
Mid point shift: 0 min																			
<table border="1"> <thead> <tr> <th>Time</th> <th>Level</th> <th>Fade</th> </tr> </thead> <tbody> <tr> <td>00:00</td> <td>1</td> <td>180</td> </tr> <tr> <td>06:00</td> <td>100</td> <td>180</td> </tr> </tbody> </table>	Time	Level	Fade	00:00	1	180	06:00	100	180	<table border="1"> <tbody> <tr> <td>Low percentage</td> <td>60</td> </tr> <tr> <td>Low voltage</td> <td>195</td> </tr> <tr> <td>High percentage</td> <td>100</td> </tr> <tr> <td>High voltage</td> <td>230</td> </tr> </tbody> </table>		Low percentage	60	Low voltage	195	High percentage	100	High voltage	230
Time	Level	Fade																	
00:00	1	180																	
06:00	100	180																	
Low percentage	60																		
Low voltage	195																		
High percentage	100																		
High voltage	230																		
ALO	CLO	LineSwitch																	
Enabled: No	Enabled: No	Enabled: No																	
Output: 100 %		High voltage level: 100 %																	
		Low voltage level: 50 %																	
Disabled features																			
<ul style="list-style-type: none"> - CLO - LineSwitch - AmpDim - ALO 																			

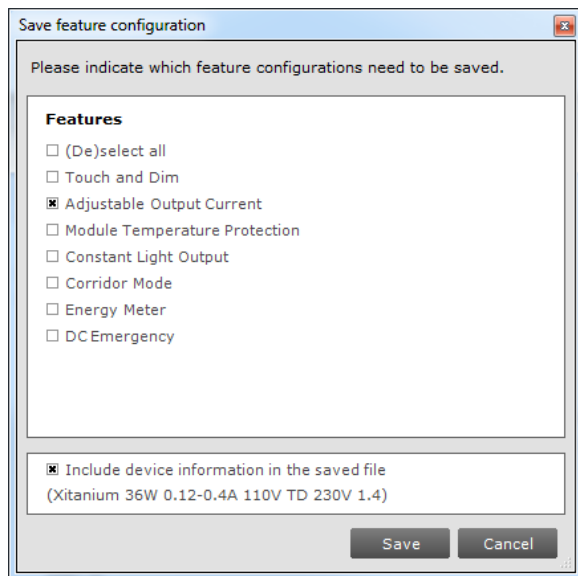
12.5 Saving and opening a feature configuration file

To save and open a feature configuration file, the **Device features** tab must be active.

Feature configurations can be saved to a file for later use. To do so, first select the **Device features** tab to make feature configurations for the selected device. Then, click the disk icon on the toolbar or select **File → Save as**.



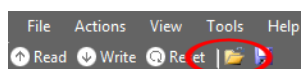
A dialog window pops up that lists the features of the device:



Select any number of features and click **Save**. The save file dialog window appears. Choose a location and a file name and click **Save**. The selected features will now be written to the file.

It is also possible to save the device information alongside the features. This data can later be used in MultiOne Workflow to ensure the configuration can only be configured in the saved device model.

To open a feature configuration file, click the folder icon on the toolbar or select **File** → **Open**. The open file dialog window appears. Select a file and click **Open**.



The contents of the **Device features** tab are updated to show the information that was read from the file.

Only feature configurations are stored in the file. This means that a file made for a certain device can be read into the **Device features** tab for a different device. MultiOne attempts to read as many feature configurations as possible.

Example: a feature configuration file exists that was made for device D1, which has features AOC, CLO and MTP. A different device, D2, has features AOC, Energy Meter and Touch and Dim. When opening the feature configuration file for device D1 while device D2 is selected, only the configuration for feature AOC will be read, since features CLO and MTP are not supported by device D2.

Feature configuration files can be distributed to other users of MultiOne. A typical example is that one user prepares a feature configuration file, and then sends it to

another user who uses MultiOne Basic. This user then opens the file and configures the connected device.

12.6 Configuring a single device

There are situations in which only one device will be configured at the time. In this case it is not necessary to have the full functionality of the **Network**, including **Scan** and **Commission** buttons. To optimize the workflow for single device configuration, select **Single device programming** in the **Application Mode Selector**.

When **Single device programming** has been selected, MultiOne will automatically scan the DALI network and select the connected device for communication. In this mode, the **Network** panel is collapsed by default. If multiple devices have been found, MultiOne will show a message and switch to regular configuring mode.

12.7 Configuring multiple DALI devices (simultaneously)

There are situations in which multiple devices need to be configured at the same time. The procedure to simultaneously configure multiple devices of the SAME TYPE AND VERSION is as follows (**Note!** this method will not work with MultiOne Basic):

1. Connect maximum 64 devices of the SAME TYPE AND VERSION, in parallel to the DALI connectors of the USB2DALI interface
2. Connect the USB2DALI interface to the USB port (both black and red USB plugs (USB-A)).
3. Connect the devices to the mains.
4. Start MultiOne
5. Choose **Tools → Preferences**
6. Clear the **Write & verify** checkbox and click **OK**
7. Click the **Commission** button on the **Network** panel to start commissioning.
8. Choose **Actions → Add virtual device**.
9. Select the device of the same type and version as the ones connected on the **Network** panel.
10. Select the **Device features** tab
11. Change any of the features.
12. Click **Write** on the toolbar.

Note! There will not be an individual confirmation for every device. So if any of them failed to be configured, it is not known which one.

Note! Remember that applications can be affected by the availability of the short address.

12.8 Configuring multiple DALI devices (consecutively)

There are situations in which multiple devices need to be configured one after another. The procedure to consecutively configure multiple devices of the SAME TYPE AND VERSION differs slightly between MultiOne Basic and MultiOne (full version).

12.8.1 MultiOne Basic

1. Connect one device
2. Connect the USB2DALI interface to the USB port (both black and red USB plugs (USB-A))
3. Connect the device to the mains
4. Start MultiOne
5. If needed, select **All** in the **Application mode selector**
6. Click **Scan network** in the **Network** panel to start scanning
7. Select **File→Open** to open the required feature configuration file
8. Select the **Commands** tab
9. At **Data** field, enter 255; click the **Short Addr** button. (See Note!)
This removes the short address; in the network the short address is shown as 'broadcast'
10. Select the **Device features** tab
11. Click **Write** on the toolbar
12. Replace device
13. Click **Write** on the toolbar
14. Replace device
15. Etc.

12.8.2 MultiOne (full version)

1. Connect one device
2. Connect the USB2DALI interface to the USB port (both black and red USB plugs (USB-A))
3. Connect the device to the mains
4. Start MultiOne
5. If needed, select **All** in the **Application mode selector**
6. Click **Scan network** in the **Network** panel to start scanning
7. Select **File→Open** to open the required feature configuration file
8. Right click the device in the **Network** panel and select **Reset short address**
9. Select the **Device features** tab
10. Click **Write** on the toolbar
11. Replace device
12. Click **Write** on the toolbar

13. Replace device
14. Etc.

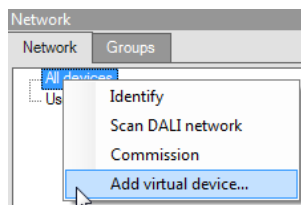
Note! Remember that applications can be affected by the removal of the short address.

12.9 Offline feature configuration preparation

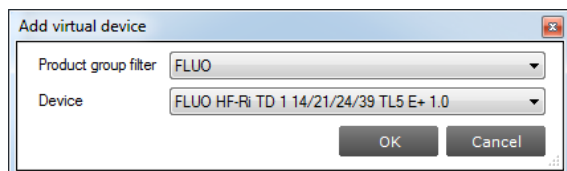
When a device or network is not present, it is still possible to prepare a feature configuration. This might be useful when you would like to prepare a feature configuration file that can be read at a later time, and written to the device when it is connected. To make a configuration you need to add one or more virtual devices.

To add a virtual device, right-click **All devices** in the **Network** and choose **Add virtual device**.

Alternatively choose **Actions** → **Add virtual device**.



A dialog window pops up that lists all devices supported by MultiOne.



Make a selection and click **OK**. An item called **Virtual devices** appears in the **Network**. Expand it by clicking the + sign to see the list of virtual devices. Note that virtual devices do not have a short address and MultiOne will show **Broadcast** on the location of the short address. Virtual devices can only be addressed using broadcast commands.

Select a virtual device and select the **Device features** tab. The device features are shown as if the device was physically connected. Configure the features as desired, and then save the feature configuration to a file. You have now made a feature configuration file without being connected a device.

12.10 Sending DALI commands

To manually send DALI commands select the **Commands** tab.

The **Commands** tab has the following panes:

- Light control
- Commander
- Configuration commands

Light control

This pane offers a number of buttons to immediately influence the behavior of the device. These controls are useful when quick feedback in terms of light is desired.

Commander

To send a DALI command as a broadcast command, first select **All devices** in the **Network**, then select the DALI command in the **Commander** pane and finally click the **Send** button. To send a DALI command to a specific address or group, select the corresponding device or group in the **Network**.

Note! DALI Ed2 commands are marked by an asterix(*).

Configuration commands

To manually set or get the so-called DTR (Data Transfer Register) values of the device, use the buttons in the left part of this pane.

To use the actual DTR value of the device with a number of DALI commands, use the buttons in the right part of this pane. Besides a number of DALI commands using the DTR value, also **Reset**, **Step Up** and **Step Down** are direct available.

12.11 Traceability

The Traceability tab summarizes how many times the configuration of the device was changed, when the last configuration change happened using unknown software and a pane showing details of the first, second and last configuration change (if present).

Device features Comman... Traceability Scheduler Query Diagnostics			
Total number of configuration changes: 2			
Most recent configuration change with unknown software: 1 operating hours			
	Date	Software	Interface
First	9/23/2014 3:07:00 PM	MultiOne Workflow 0.6	DALI
Second	9/26/2014 2:03:00 PM	MultiOne Workflow 0.6	DALI

Every entry in the list shows the date of the configuration change, which software version was used and which type of interface was used at the time of the configuration change.

12.12 Working with DALI command scripts

To run a series of DALI commands, a script can be created in the **Scheduler** tab. This script can be executed any number of times. Furthermore it is possible to save the script to a file for easy reuse.

The **Scheduler** tab has the following panes:

- Add item
 - A **CMD** button to insert DALI commands
 - A **FOR** button to insert a loop, consisting of a FOR and an END FOR
- Selected, containing buttons to work with (**Up**, **Down**, **Delete**) the currently selected item in the schedule
- Items, representing the schedule
- Selected item, the settings of the currently selected item

- Schedule playback buttons (**Play**, **Pause**, **Stop**)

To add a command to the schedule, click the **CMD** button. The command is added to the schedule and it is automatically highlighted. On the **Selected item** pane, choose the desired DALI command and settings. By selecting the **Start time** check box and providing a time, this command will be sent at an exact moment in time.

Alternatively, commands can be sent relative to each other. Select the **Delay** check box and provide a value in milliseconds to do so. At **Device address** you can select to which device to send this command. You can choose between the currently selected device, a broadcast or one of the 64 available short addresses (0-63). Then, select which DALI command will be sent by using the two drop down boxes; the first selects the command group and the second selects the actual command. If a command parameter is required, enter it into the **Data** field.

Note! DALI Ed2 commands are marked by an asterix(*).

By repeatedly clicking the **CMD** button, a series of DALI commands can be created. Each command has its own settings.

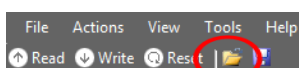
A schedule can also contain loops. A loop has a FOR-item, one or more commands, and finally an END FOR-item to mark the end of the loop. Click the **FOR** button to create a loop. By default, the loop will run infinitely (that is, until schedule playback is manually stopped or paused by clicking **Stop** or **Pause**). To change the number of times the loop will be executed, select the FOR-item and enter a value for **Maximum count** on the **Selected item** pane.

To rearrange the schedule, select a command and use the **Up** and **Down** buttons to move this up or down respectively. Delete a command by clicking the **Delete** button.

To start, pause, or stop a schedule playback, use the **Play**, **Pause** and **Stop** buttons.

To save a schedule to file for later use, click the disk icon on the toolbar. Alternatively, select **File** → **Save** or **File** → **Save As**. Choose a location, a filename and click **Save**. The schedule has now been saved.

To open a previously stored schedule, click the folder icon on the toolbar.



Alternatively, select **File** → **Open**. Choose a schedule file and click **Open**. The **Scheduler** tab now shows the schedule from the file.

12.13 Querying devices

To automatically execute a number of standard DALI query commands select the **Query** tab.

DALI Ed 1					
Status	2	Max level	254	Scene level 0	255
Control gear present	255	Min level	85	Scene level 1	255
Lamp failure	255	Power on level	254	Scene level 2	255
Lamp power on	0	System failure	254	Scene level 3	255
Limit error	0	Fade time/rate	7	Scene level 4	255
Reset state	0	Groups 0 - 7	2	Scene level 5	255
Version number	8	Groups 8 - 15	0	Scene level 6	255
Extended version	0	Random address H	236	Scene level 7	255
Content DTR 0	45	Random address M	35	Scene level 8	255
Content DTR 1	51	Random address L	35	Scene level 9	255
Content DTR 2	0	Short address	0	Scene level 10	255
Device type	6	Missing short address	0	Scene level 11	255
Physical min	85	Power failure	0	Scene level 12	255
Actual level	255			Scene level 13	255
				Scene level 14	255
				Scene level 15	255

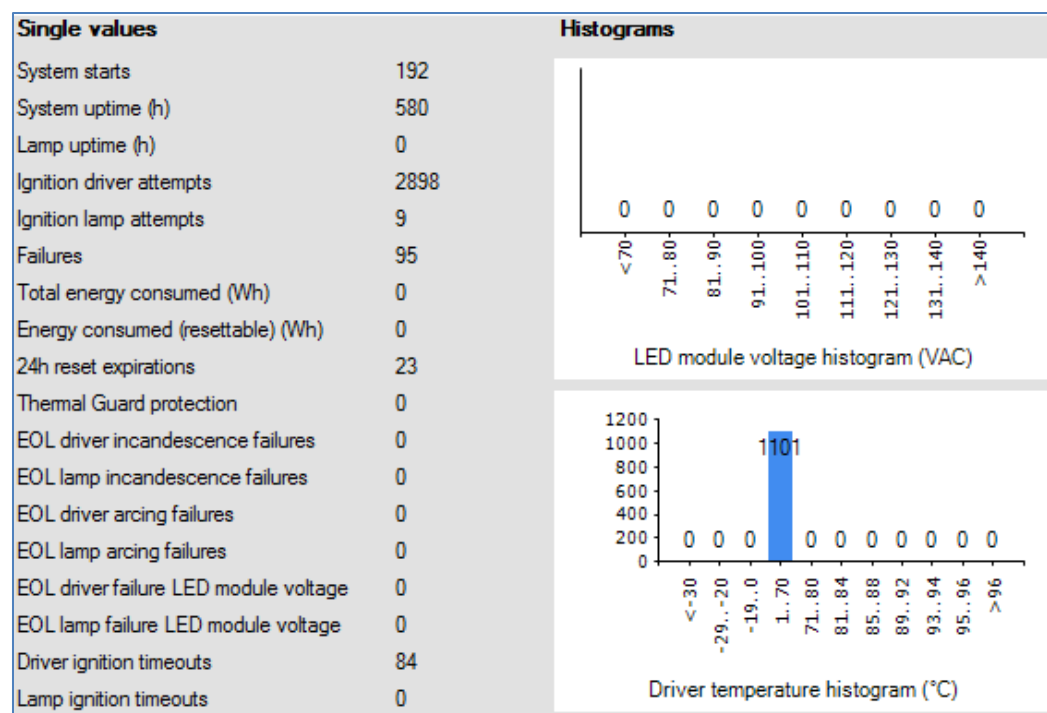
DALI Ed 2					
Operating mode	0	Next device type	0	Manufacturer mode	0
Light source type	0	Extended fade time	0	Control gear failure	0

To make sure that the information in the **Query** tab corresponds to the selected device, click **Read** on the toolbar.



12.14 Accessing diagnostics

Some devices from the product groups HID, LED and CONTROL support diagnostics. To access these diagnostics, select a device in the **Network** and select the **Diagnostics** tab. Upon clicking **Read** on the toolbar, the device's diagnostics information will be read and displayed. Note that some diagnostics might be shielded, requiring a password before being able to continue. Diagnostics for a HID device might look as follows:



A brief explanation of all HID diagnostics is given below.

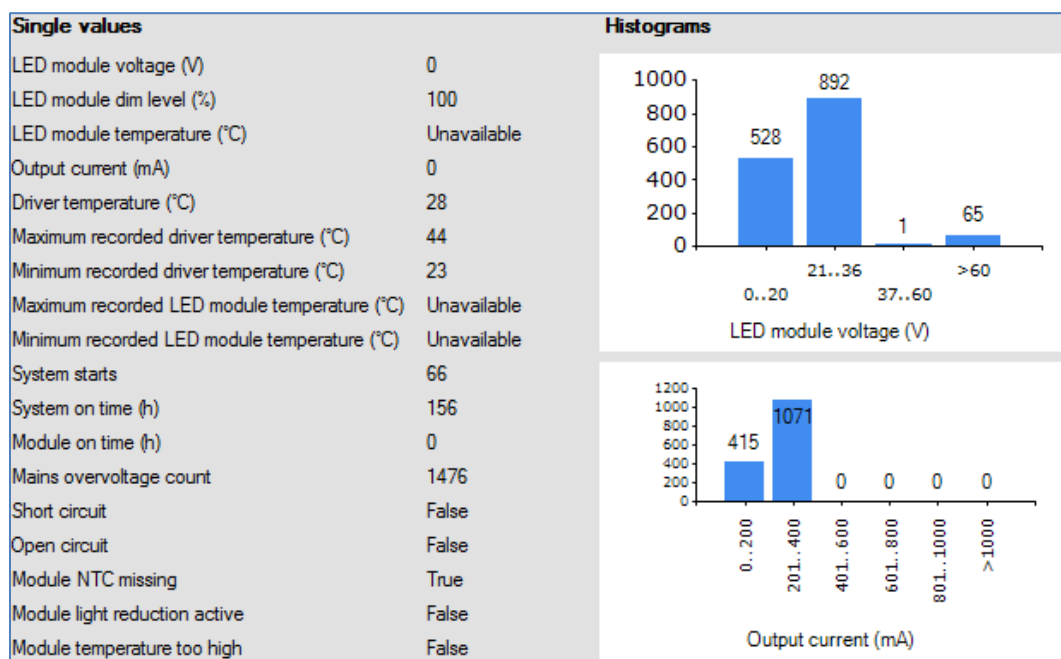
Table 1 HID diagnostics

Diagnostic	Description
System starts	Number of times the HID driver was switched on (via the mains).
System uptime (s)	Total time the HID driver was on.
Lamp uptime (s)	Total lamp burning time.
Ignition driver attempts	Number of times the HID driver attempted to ignite a lamp.
Ignition lamp attempts	Number of times the HID driver attempted to ignite the lamp, since last lamp replacement ^{a)} .
Failures	Total number of failures detected by the HID driver.
Total energy consumed	Total energy consumed by the HID driver.
Energy consumed (resettable) (Wh)	Energy consumed since last user-reset.
24H reset expirations	HID driver was operating for more than 24 hours; any failures blocking driver to operate the lamp are cleared
Thermal Guard Protection	Thermal Guard activated as a consequence of high temperature level.
EOL driver incandescence failures	End-Of-Life situation showing incandescent mode of operation of the lamp.
EOL lamp incandescence failures	End-Of-Life situation showing incandescent mode of operation of the lamp, since last lamp replacement ^{a)} .

EOL driver arcing failures	End-Of-Life situation showing an arcing mode of operation of the lamp.
EOL lamp arcing failures	End-Of-Life situation showing an arcing mode of operation of the lamp, since last lamp replacement ^{a)} .
EOL driver failure lamp voltage	End-Of-Life situation showing a lamp voltage level that was out of operating range.
EOL lamp failure Lamp voltage	End-Of-Life situation showing a lamp voltage level that was out of operating range, since last lamp replacement ^{a)} .
Driver ignition timeouts	Failed to successfully ignite the lamp.
Lamp ignition timeouts	Failed to successfully ignite the lamp, since last lamp replacement ^{a)} .
Cycling driver failures	Cycling of the lamp (extinguished for more than N times subsequently) [where N depends on lamp type].
Cycling lamp failures	Cycling of the lamp (extinguished for more than N times subsequently), since last lamp replacement [where N depends on lamp type] ^{a)} .
Extinguished failures driver	Detection of an extinguished lamp.
Extinguished failures lamp	Detection of an extinguished lamp, since last lamp replacement ^{a)} .
Mains high failures	Mains voltage level detected that was too high to continue operation.
Mains low failures	Mains voltage level detected that was too low to continue operation.
Bus failures	Bus voltage level detected that was out of operating range.
Vmid failures	Midpoint voltage level detected that was out of operating range.
Short circuits	Short circuit detected in the lamp connection.
ZCD failures	Critical failure detected in lamp or driver.
Over Power Protection failures	Over power detected.
Invalid lamp table failures	HID driver switched-on with a non-supported or corrupt lamp table selected.

a) lamp replacement triggers an erase of predefined lamp-specific items such as ignition attempts, lamp errors.

Diagnostics for a LED device might look as follows:



A brief explanation of all LED diagnostics is given below.

Table 2 LED diagnostics

Diagnostic	Description
LED module voltage (V)	Represents the output LED module voltage.
LED module current (mA)	Represents the output LED module current
LED module dim level (%)	Represents the current dim level set by the LED driver. Takes into account all factors that can influence dimming like Constant Light Output, Module Temperature Protection, all dimming interfaces etc.
LED module temperature (°C)	Represents the LED module temperature. Available only when Module Temperature Protection is selected and an NTC value is selected.
Driver temperature (°C)	Represents the internal driver temperature. It does not represent T_{case} of the driver. Though there is a correlation between T_{case} and internal driver temperature, the difference can vary depending on current setting of driver.
System starts	Represents the number of times the LED driver is

	powered ON.
System on time (h)	Represents the hours the LED driver is ON. (LED module is OFF)
Module on time (h)	Represents the number of hours the LED module is powered ON.
Module energy consumed	Represents the energy consumed by LED module alone. Only output parameters (LED module voltage and current) are used to calculate energy. The LED driver energy consumption is not accounted. Hence it does not represent true input energy consumption of the LED system.
Short circuit	This indicates if output LED module is shorted.
Open circuit	This indicates if output LED module is open or not connected to LED driver
Module NTC missing	This indicates missing NTC on the LED module. Available only when Module Temperature Protection is selected and 10k NTC is selected. Missing NTC flag will not be activated if 15k+390 Ω NTC is selected.
Module temperature reduction active	This indicates light level reduction due to module temperature being active.
Module temperature too high	This indicates whether the LED module temperature exceeds 90 °C causing module to turn OFF.
Mains too low	This indicates that the LED driver is not operating since input voltage at power ON is too low.
Adjustable Startup Time active	This indicates that the LED driver is in the startup phase as defined by the Adjustable Startup Time. For example if the Adjustable Startup Time is set to 20000 ms, and the diagnostic information is read at startup within 20 s, this check box will be selected indicating startup condition.

Some LED drivers only support a subset of diagnostics. It might look as follows:

Single values	
System on time (HH:MM)	02:43
Module on time (HH:MM)	02:43
System starts	730
Maximum recorded driver temperature (°C)	90
Minimum recorded driver temperature (°C)	13
Maximum recorded LED module temperature (°C)	64
Minimum recorded LED module temperature (°C)	16
Mains overvoltage count	2

Table 3 Subset of LED diagnostics

Diagnostic	Description
System starts	Represents the number of times the LED driver is powered ON.
System on time (h)	Represents the hours the LED driver is ON. (LED module is OFF).
Module on time (h)	Represents the number of hours the LED module is powered ON.
Maximum recorded driver temperature (°C);	Maximum driver temperature ever reached during the lifetime of the driver.
Minimum recorded driver temperature (°C)	Minimum driver temperature ever reached during the lifetime of the driver.
Maximum recorded module temperature (°C)	Maximum module temperature ever reached during the lifetime of the driver.
Minimum recorded module temperature (°C)	Minimum module temperature ever reached during the lifetime of the driver.
Mains overvoltage count	Number of times the mains exceeded the maximum allowed mains voltage level.

12.15 The logging window

The **logging window** shows the communication related to the features currently being read or written or when DALI commands are sent or received through the USB2DALI interface.



Timestamp	Address	Description	Result
29-3-2012 13:41:16	3	Constant Light Output: readin...	success
29-3-2012 13:41:16	3	Constant Light Output: readin...	success
29-3-2012 13:41:16	3	Adjustable Light Output: readi...	success
29-3-2012 13:41:14	3	AppDim: reading values	success

Timestamp

The time the feature was read or written or the time the command was sent. The format of the timestamp is: <date> <time>.

Address

The short address to which the feature or command was sent. In case **Broadcast** is mentioned, all devices are addressed.

Description

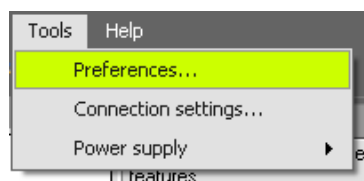
The name of the feature or the actual DALI command.

Result

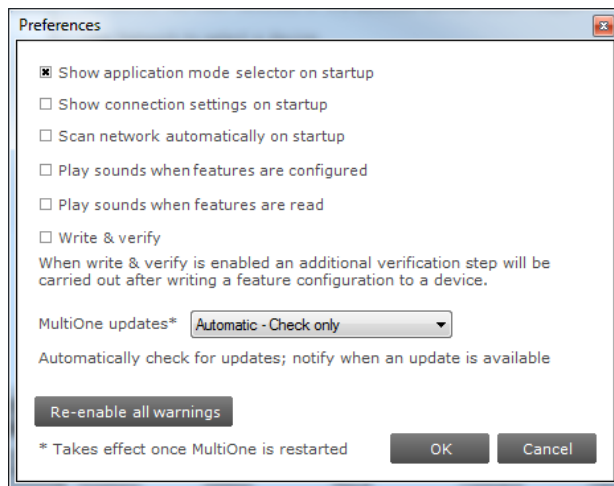
Result of the communication.

12.16 Setting preferences

MultiOne has a preferences window that allows you to customize the way MultiOne works. To access the preferences window select **Tools → Preferences**.










The **Preferences** window that pops up allows you to set MultiOne preferences.



The following list summarizes the available preferences and gives an explanation for each.

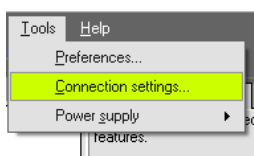
- **Show application mode selector on startup.** When MultiOne is started you are presented with a screen that allows you choose an application mode, based on the tasks you would like to perform. You can disable this screen by clearing the **Show application mode selector on startup** checkbox. Changing this settings only takes effect one MultiOne is restarted.
- **Show connection settings on startup.** When this checkbox is checked, MultiOne will show the connection settings window every time MultiOne is started.
- **Scan network automatically on startup.** By checking this checkbox MultiOne will automatically initiate a network scan on startup. Changing this settings only takes effect one MultiOne is restarted.
- **Play sounds when features are configured.** When this checkbox is checked, MultiOne will make a sound when a feature configuration is (un)successfully written to a driver.
- **Play sounds when features are read.** When this checkbox is checked, MultiOne will make a sound when a feature configuration is (un)successfully read from a driver.
- **Write & verify.** By default, MultiOne will write parameters to the connected device(s) without checking the state of the device afterwards. By enabling **Write & verify** you force MultiOne to perform an additional verification step by reading back the written parameters immediately after writing. If the received values differ from the parameters that were written, MultiOne will alert you that there is a deviation between MultiOne and the device. The **Write & verify** uses different status icons then **Write**. When a **Write & verify** action is successful the icon will be totally green . When the verify

action has failed the entire icon will become red.   A pending action will be displayed is a grey icon.  It is also possible that a part of the **Write & verify** fails. To help indicate where the action failed, two extra icons exist. If the first half of the icon is red and the second part is grey,   then the write action failed. When the first part is green and the second part is red,   then the read action has failed.

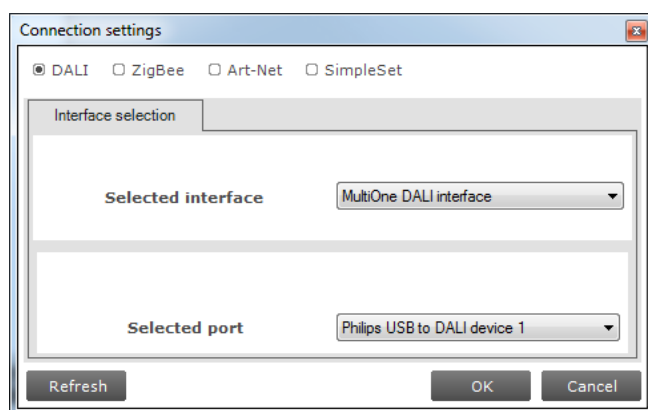
- **MultiOne updates.** Changing this setting allows the user to control the update method of MultiOne. The following options are possible:
 - Automatic – Check, download, install:** MultiOne will automatically check for updates and if available download and install them automatically.
 - Automatic – Check, download only:** MultiOne will automatically check for updates and if available download them. The user then has to agree to let MultiOne update itself.
 - Automatic - Check only:** MultiOne will automatically check for updates and notify the user if a new version is available. The user can then allow MultiOne to download and install the update.
 - Manual:** MultiOne will do nothing and the user has to force MultiOne to check, download and install any update.
- **Re-enable all warnings.** MultiOne produces a number of warnings that you can disable by checking their **Don't show this message again** checkbox. If you would like to reset all suppressed warnings click the **Re-enable all warnings** button.

12.17 Manually selecting the USB2DALI interface

MultiOne will automatically detect the USB2DALI interface that is connected to the PC. However when multiple interfaces are connected it will use the interface on the port that is found first. It is possible to manually change the port that is used by selecting **Tools → Connection settings**.

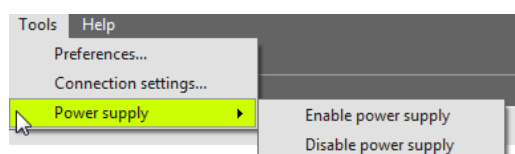


In the pop-up window it is then possible to select the desired port.



12.18 Enabling/Disabling the power supply of the USB2DALI interface

The USB2DALI interface will automatically detect if the DALI bus is powered by another device (for example a DALI power supply). If the DALI network is not powered, it will use its internal power supply.



If, during operation, the DALI network is changed in a way that it requires the USB2DALI interface to switch on or off its internal power supply, you can do so using the option **Tools → Power supply**.

12.19 Supported features

The table below gives an overview of all features that are supported by MultiOne and to which product groups they apply.

Table 4 Supported features

Device feature	Product group			
	LED	HID	FLUO	CONTROL
	Indoor	Outdoor		
1-10V min dim level		x		
ActiLume General				x
ActiLume Mode				x
ActiLume Scene				x
Active Cooling	x			
Adjustable Light Output		x		
Adjustable Output Current	x	x		
Adjustable Startup Time		x		

AmpDim		X	X	
Constant Light Output	X	X	X	
Corridor Mode	X			X
DALI Power Supply	X			
Dimming Interface		X		X
Driver addressing		X		
Dynadimmer		X	X	
DC Emergency				X
End Of Life indication		X		
Energy Meter			X	X
Lamp Burn-in				X
Lamp Selection			X	X
Light Source Operating Hours		X		
LineSwitch		X	X	
LumiStep		X		
Min Dim Level	X			
Module Temperature Protection	X	X		
Quick Lamp Start				X
Summary	X	X	X	X
Touch and Dim	X			X

12.20 Device-specific technical descriptions

For a detailed technical description of the characteristics of the devices, please visit the product-specific Philips web sites:

Table 5 Product-specific Philips web sites

Product group	Visit:
LED	www.philips.com/Xitanium
HID	www.philips.com/Xtreme
FLUO	www.philips.com/HFR-Intelligent
CONTROL	www.philips.com/Actilume

12.21 Error handling

12.21.1 Reporting and correction of errors/warnings when reading from a feature configuration file

When, after opening a feature configuration file, incorrect parameters are detected, MultiOne tries to correct these parameters for the selected (virtual) device. When a correction is made, a red border will be shown. In cases when no logical correction can be made, an orange border will be shown.

12.21.2 Reporting of errors when reading from a device

When after reading from a device a mismatch is signaled between the parameters of the device and MultiOne, MultiOne will not correct the parameters, but will show a red border.

12.21.3 Reporting of errors when entering incorrect values in a feature

Entering an incorrect value for a parameter will be indicated by a red border.

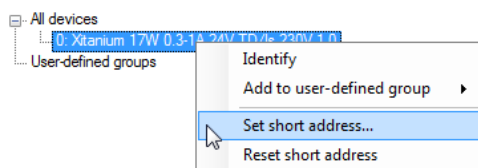
12.22 Troubleshooting

Problem: After starting MultiOne, no devices are displayed.

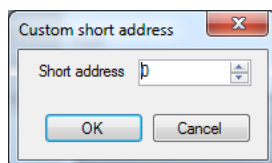
Solution: Click the **Scan network** button on the **Network** panel to start discovering the devices in the network. If the devices connected have already a DALI short address this will not be changed. Devices without a short address will be programmed with a short address. When the **Commission** button is clicked, the short addresses of all connected devices will be renewed, whether they already had a short address or not.

Problem: I would like to assign a specific short address to a device.

Solution: First scan the network for devices. Right-click the device you would like to give a short address and select **Set short address**.



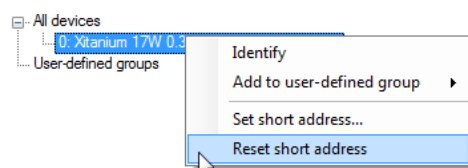
A dialog window will appear in which you can enter the desired short address.



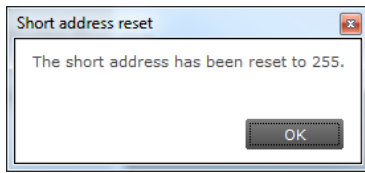
Click **OK** to program the short address into the device.

Problem: I would like to remove the short address of a device.

Solution: First scan the network for devices. Right-click the device whose short address you would like to remove and select **Reset short address**.

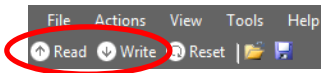


You will be informed that the short address was reset.



Problem: I would like to configure the special features of the connected device.

Solution: After scanning the network for devices, a device has to be selected by clicking it in the **Network**. Select the **Device features** tab. The related features will appear. To update the view to the actual status of the features, click **Read** on the toolbar. If you now change any of the features, and want this to be stored into the device, click **Write** on the toolbar.



Problem: I would like to know more technical details of a device.

Solution: Please refer to the Philips website for more detailed information

- For LED driver, both indoor and outdoor, visit: www.philips.com/Xitanium
- For HID drivers visit: www.philips.com/Xtreme
- For FLUO drivers visit: www.philips.com/HFR-Intelligent
- For controls visit: www.philips.com/Actilume

13 Keyboard shortcuts

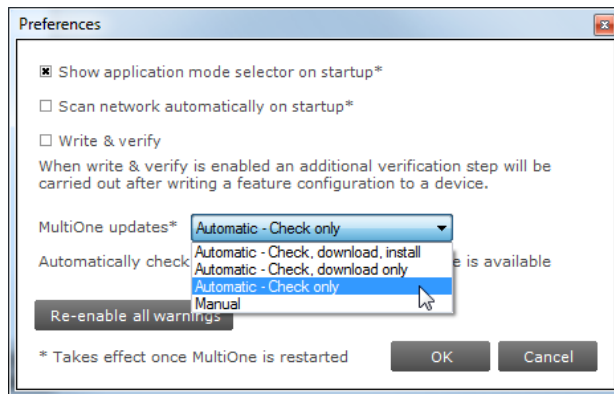
Keyboard shortcuts can make it easier to work with MultiOne without using the mouse.

Table 6 Keyboard shortcuts

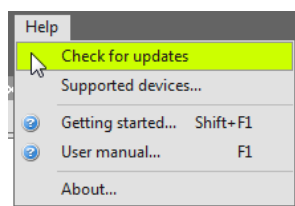
USB2DALI interface		USB2ZigBee interface
The File menu		Working with feature configuration files
Ctrl+O	Open a feature configuration file	Not supported
Ctrl+S	Save a feature configuration file (Save)	Not supported
Ctrl+Shift+S	Save a feature configuration file (Save As)	Not supported
Alt+F4		Exit MultiOne
The Action menu		Working with devices
Ctrl+D	Scan network	Scan area
Ctrl+Q	Commission	Not supported
Ctrl+R	Read from current device	Not supported
Ctrl+W	Write to current device	Not supported
The Tools menu		
Ctrl+M		Open the Application mode selector
The Help menu		
Shift+F1		Open the Getting started document
F1		Open the User manual

14 Software Update

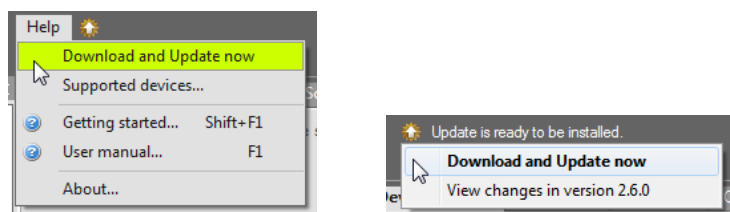
MultiOne has the possibility to update itself to a newer version. This can be done either automatically or manually and can be set in the preference window, see the Setting Preferences for more info.



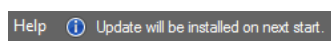
If the preference is set to Manual then the user can check for an update on MultiOne by selecting **Help** → **Check for updates** option.



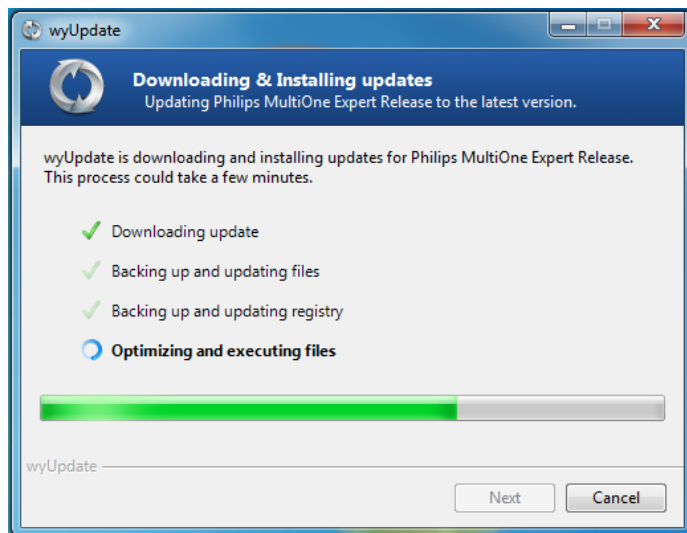
After a manual update check, or by using the automatic options, the update status near the **Help** menu will show if a new version is available. The user can then decide to continue downloading/updating by either using the update status or the **Help** menu to carry on.



After downloading the update status will inform the user to restart to continue.



Restarting MultiOne will install the update.



A successful update of MultiOne will be shown in the update status.

Help Successfully updated to 2.6.0

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