



Quick start guide

1

Getting Started

2

Windows

3

Menus and Toolbars

4

Physical Devices

5

Logical Configuration

6

Tasks and Events

7

Basic DyNet Op Codes

8

Global Features

PHILIPS

dynalite 

1 Getting Started

EnvisionProject (EP) is a user-friendly programming and commissioning software package that revolutionizes how lighting control systems are delivered. EP provides a window into the Philips Dynalite system and brings all the features and functions to your fingertips.

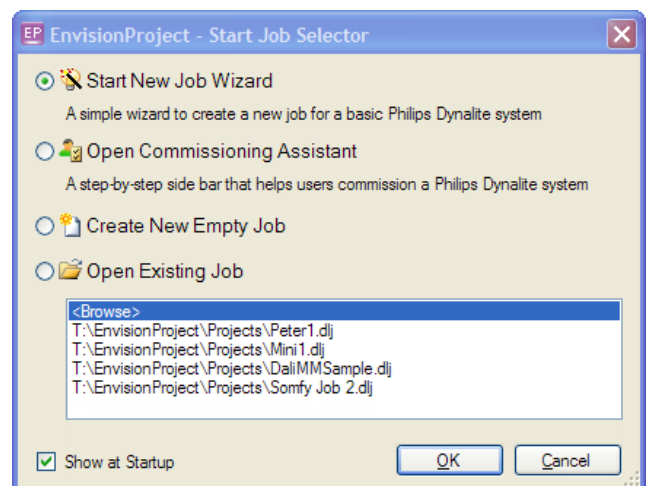
Icon driven menus, wizards, pre-programmed templates and settings enable you to bring lighting control systems online sooner. These can be tailored for your project, saved and replicated across other sites as needed. EP leads you through a logical sequence of well-defined steps to configure all the specified functions in your project. EnvisionProject's intuitive interface simplifies the process of delivering your lighting control system.

EP provides access to the full capabilities of the Philips Dynalite system:

- Unlimited number of Tasks and Events
- 65000+ Logical Areas
- 255 Logical Areas per spur
(additional 255 Areas per bridge)
- 255 Logical Channels per Area
(65025 Channels per spur)
- 170 Presets per Logical Area
- 100 box numbers of each device-type per spur, up to 255 box numbers per spur
- 17 million physical devices

After installing EnvisionProject, click the **EP** icon to start the application. When EP first starts, it displays the Start Job Selector dialog box to help fast track the commissioning of your system.

- **Start New Job Wizard** is great for quickly configuring the majority of settings for a new job.
- **Commissioning Assistant** provides a description and link to each step to make sure you have completed them all.
- **Create New Empty Job** allows you to start with a blank slate.
- **Open Existing Job** allows you to select recent projects or you can press **OK** to browse for other project (Job) files.



Before starting commissioning with EP you will need:

- A PC with Windows XP or later
- A PC Node connected to a PC and to DyNet
- An energized fault free network
- A load schedule
- A reflected ceiling plan



Commissioning

The goal of commissioning is to make the best use of Philips Dynamalite distributed intelligence to create the functions and interfaces required by customers.

Commissioning a control system requires you to configure the system settings. This mainly entails defining how the system inputs relate to the system outputs.



There are three primary tasks to configure your system:

1. Configure logical links

The logical links are configured by grouping the input and outputs. This is performed in Logical View by creating Folders, Areas and Channels. The layout of your building and the reflected ceiling plan for each floor will help determine which groups to make.

2. Configure output functions

To configure outputs, assign each physical channel (circuit) of an output device to a logical channel. Devices, Areas and Channels can be flashed to ensure they are assigned to the right circuits.

Define the function of each output by entering the relevant values in the Properties Window. For lighting control applications this means creating preset scenes for each area. Presets set the channel levels in an Area all at once.

3. Configure input actions

To configure input actions you need to select the user interfaces and each type of input action required in the Properties Window. Actions can be defined for button/switch inputs, sensor data or events. Once the actions are defined you can select which function(s) they will trigger.

The following table lists typical input and output devices. Sometimes both input and outputs may be included in the one physical device. For example a button panel with an OLED display or a Dimmer with a dry contact input.

Typical Input Device	Typical Output device
Button	Relays Controller
Sensor	Load Controller (Dimmer)
Dry contacts input	Fan Coil Unit Controller
Gateway	Gateway
Timeclock	Indicator LED
	Backlight LED
	OLED display

Once all the lights and other facilities are connected to the control system EP will help you to configure the many useful functions people expect in a smart building, such as:

- Switching
- Dimming
- Single interface control
- Light regulation/maintained illuminance
- Daylight harvesting
- Occupancy control/motion detection
- Scene setting/task tuning
- Pathways
- Delay timers
- Switch off warning
- Smart scheduling
- Sunrise/sunset, time, date or seasonal operating modes
- Sequences/tasks/events
- Wireless control
- Remote Access
- Dynamic (color) control
- Energy monitoring
- Corridor-Row Offset
- Corridor Hold-on/Area Cascading/
- Open plan background lighting
- Step-over patterns
- Emergency testing
- Lamp failure monitoring
- Integration with Blinds, Air Conditioning, Security, Audio Visual and other systems
- Layout changes via software




2 Windows

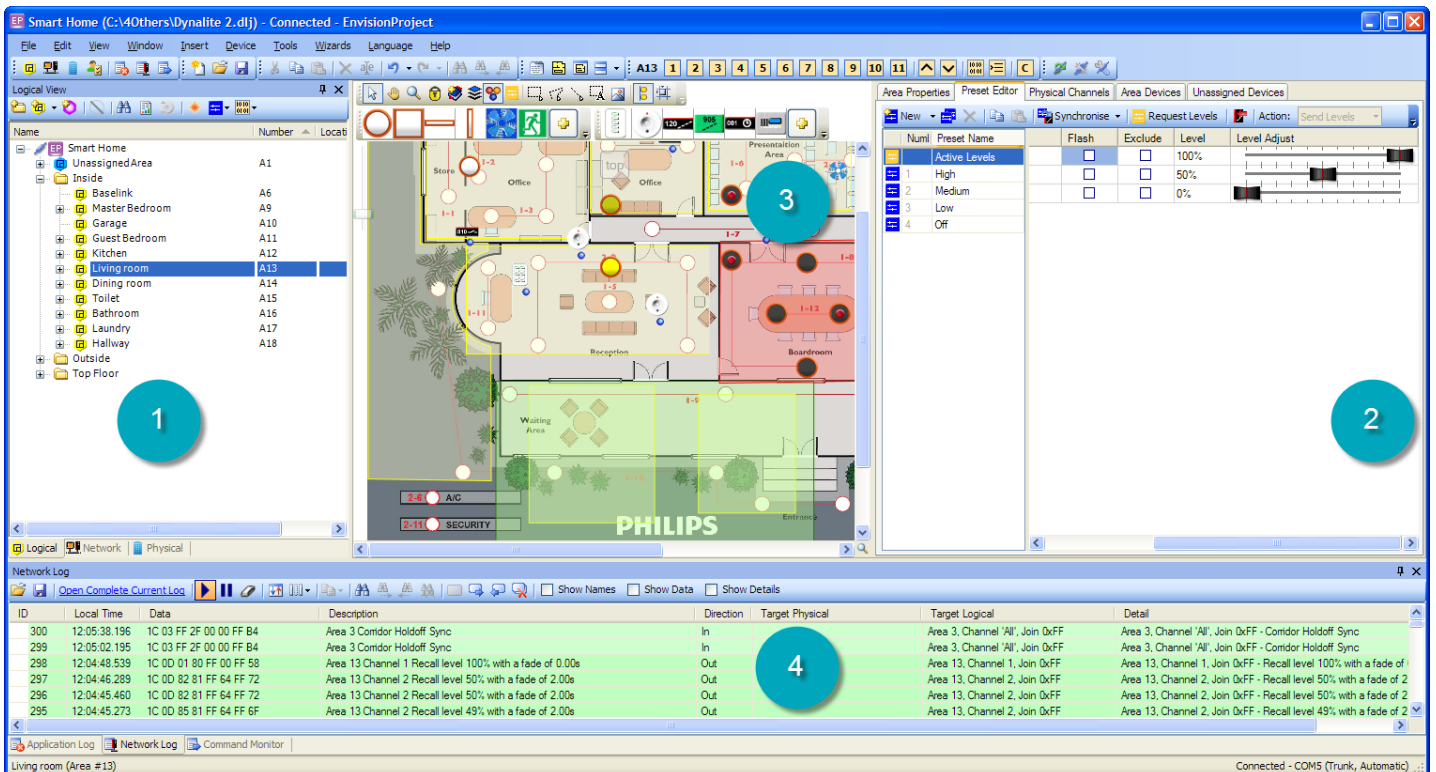
There are four main windows in EnvisionProject to enable simple and effective system commissioning:

- 1 **View Window**
Select the device or area to be configured.
- 2 **Properties Window**
Edit settings for the selected device or area.
- 3 **Floor Plan Window**
Arrange the spatial layout of the system on a floor plan.
- 4 **Monitor Window**
Monitor commands and messages on the network.

These windows work together to enable you to display and edit your system configuration.

The main application windows in EP can be easily adjusted and placed to suit your preferences:

- To float a window, click and drag the section's title bar out of the main application window
- To dock a window, click and drag the window's title bar onto one of the docking icons that appear on each edge of the main application window
- To auto-hide a window click 
- To pin a window open click 
- To close a window click 
- To alternately float or dock a window, double-click the window's title bar
- To display a window that has been closed, select the window name from the View menu
- To restore all windows to their original settings, select Reset Window Layout from the View menu



1 View Window

The View Window lets you select any logical, network or physical item in your system. When an item is selected, you can access common functions from the toolbar or by right-clicking the item name in the tree to open the context menu. There are three views.








Logical View

The Logical View displays all of the logical components in the job. It allows areas to be grouped together using folders and logical channels to be linked to physical channels. All logical items can be given meaningful names and descriptions. The Logical View Tree displays the following items:

-  Folders
-  Logical Areas
-  Logical Channels
-  Physical Channels (circuits)






Network View

The Network View shows the network topology (trunks, spurs and devices) of the Philips Dynamalite system. It also shows the EP connection to DyNet. Devices are grouped in the Network View Tree by product category:

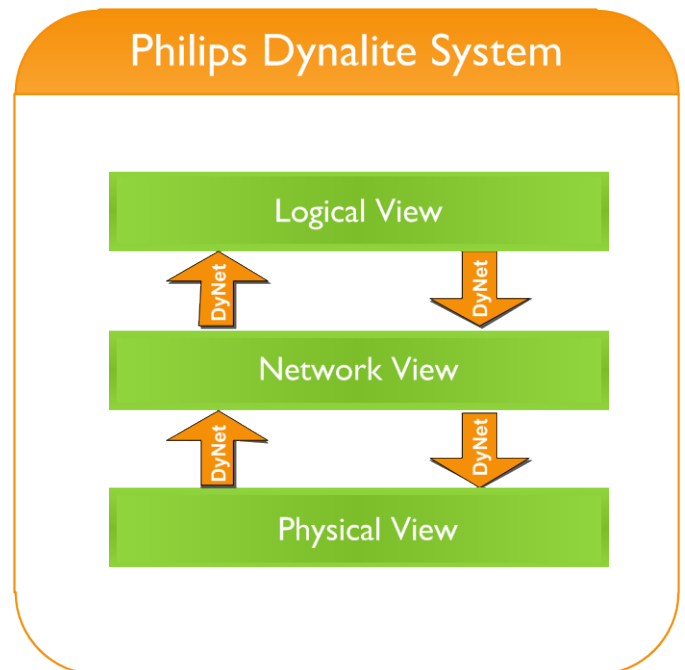
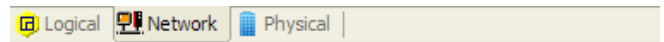
-  Load Controllers
-  User Interfaces
-  Sensors
-  Dry Contacts
-  Time Clocks
-  Gateways
-  Other devices

Physical View

The Physical View represents the physical location of devices and channels in the job. It allows for different floor plans and layouts to be added and provides bookmarks to remember locations on the floor plan. Physical View displays devices grouped according to their location. The Physical View Tree displays the following items:

-  Floor plans
-  Folders
-  Distribution Boards
-  Bookmark Folders
-  Bookmarks

Items can be linked in the different views by dragging items to the other View Tabs.



Logical View

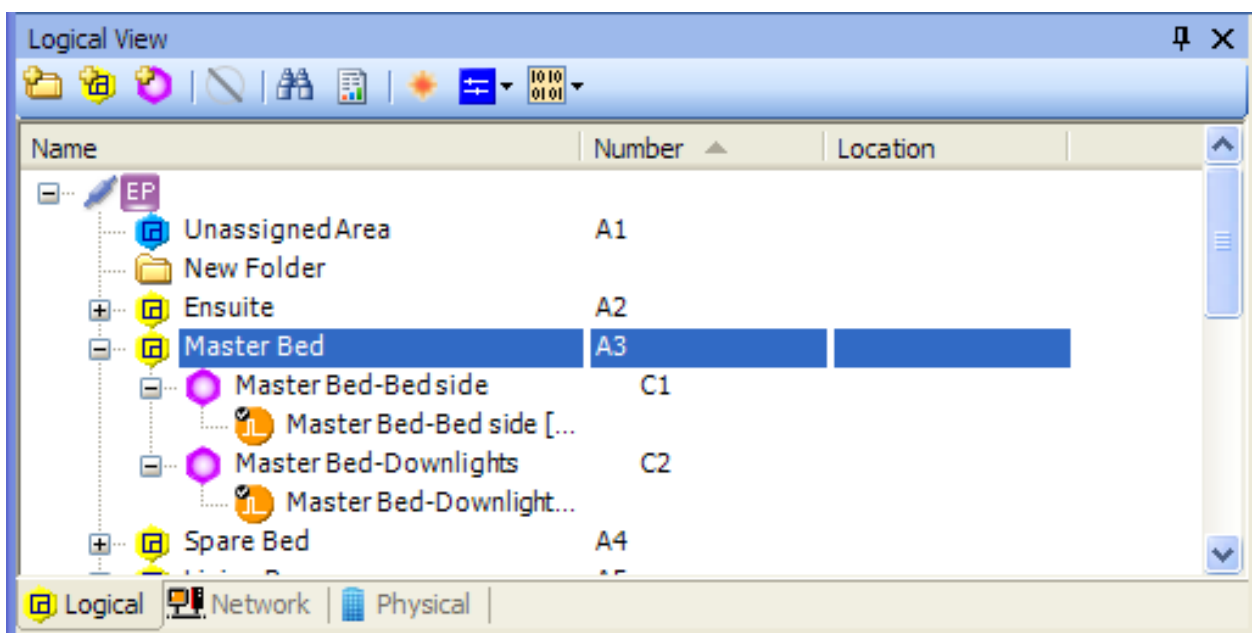
Logical View displays the following information columns:

- Area and Channel number
- Location

Column, selection, width and order can be customized by clicking on the column headings.

Logical View provides the following icons to indicate different channel types.

Logical Channel Type Icons	Physical Channel Type Icons
Leading Edge	Leading Edge
Trailing Edge	Trailing Edge
Relay	Relay
0-10 Volts	0-10 Volts
DSI	DSI
LED	LED
Volt Free	Volt Free
Fan	Fan
DALI	DALI
Leading Edge 4 Amp	Leading Edge 4 Amp
Curtain	Curtain
DMX Tx	Leading Edge 5 Amp
Red Preset Color	Trailing Edge 5 Amp
Green Preset Color	Unassigned
Blue Preset Color	Unknown (DALI short address)
Not Set	Error (DALI short address)



Network View

Network View displays the following information columns:

- Device Status
- Device Address/Box Number
- Product Name
- Device Location
- Product Category
- Product Type
- Serial Number
- Device Code
- Firmware Version

Column selection, width and order can be customized by right clicking on the column headings.

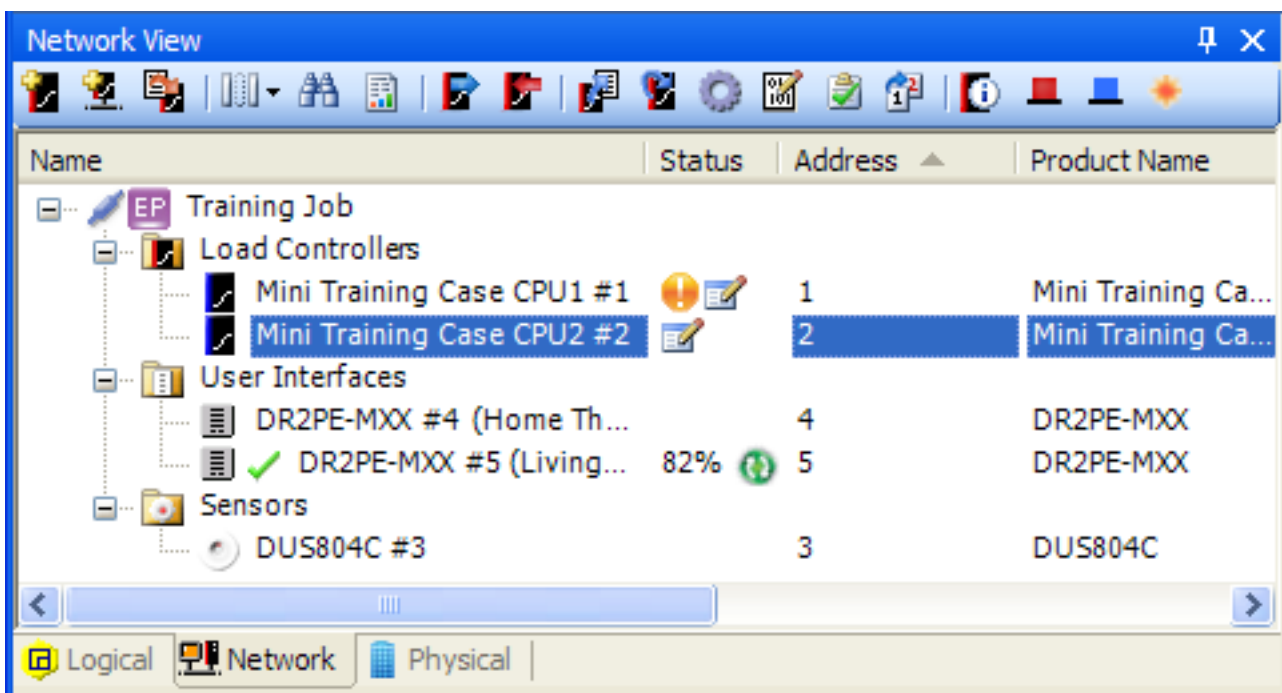
Status icons located next to each device in the tree indicate each device's current status.

The Device Status Icons also appear in Physical View

Device Status Icons

- Device Error
 1. *Box Number Conflict*
 2. *Boot loader Running (firmware not running, probably caused by firmware upgrade incomplete)*
 3. *Logical Translation Error (logical configuration value outside valid range for bridge translation)*
 4. *Physical Translation Error (physical configuration outside valid range for bridge translations)*
- Device Warning
 1. *Device Unsynchronized (EP detected that device configuration has been modified since last read/write)*
 2. *Solution is to either reload device data or select to resave all device data)*
- Device Offline
- Device modified in EP but data not yet saved to device
- Device Communicating
- Device has Tasks / Events
- Device has an unassigned address

Note: A description of device status is shown in a tool-tip when hovering the mouse over the device and in the Status Bar at the bottom of the main application window.





Physical View

Physical View displays the following information columns:

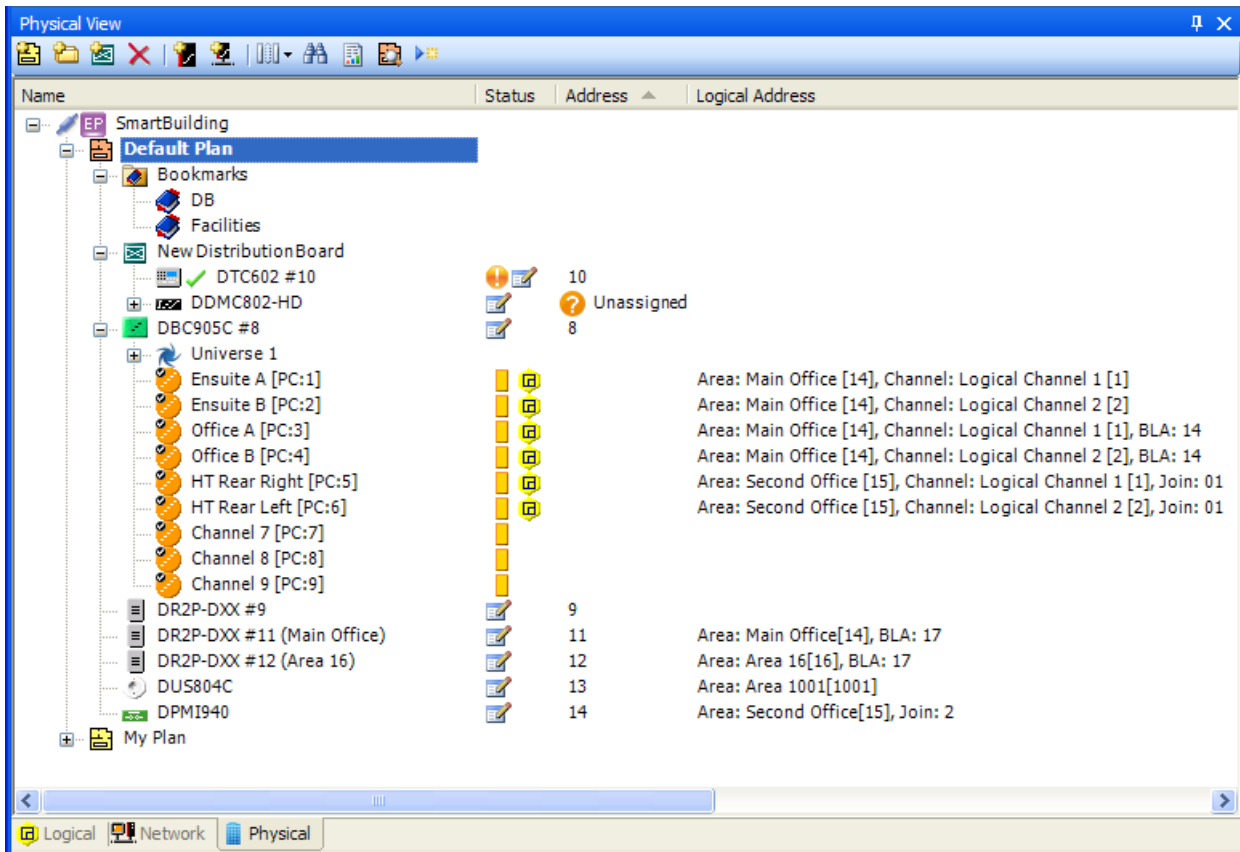
- Device Status
- Device Address/Box Number
- Logical Address
- Product Name
- Device Location
- Product Category
- Product Type
- Serial Number
- Device Code
- Firmware Version

Channel Status Icons

-  Physical Channel is linked to a fixture
-  Physical Channel is assigned to a Logical Area

Note: Using a floor plan or Physical View is optional. All devices created in Physical View also appear in Network View. A system can be fully commissioned without using Physical View.

Column, selection, width and order can be customized by clicking on the column headings.



2 Properties Window

Configuration settings are displayed on the Property Pages in the Properties Window. The number and type of Property Pages displayed relates to the item(s) selected in the View Window. Selected items in EP may have many configurable settings on each Property Page.

Refer to the Property Pages tables for a complete list of Property Pages specific to each view.

The following examples show a single property page for:

- A Device selected in Network View
- An Area/Channel selected in Logical View
- A Plan selected in Physical View

Device Properties (Network View)

Each page has a unique list of properties and tools to help you easily configure each item. The Device Properties Page is one of the configuration pages specific available for each device in Network view.



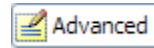
Categorized

Sorts the properties list into related categories



Alphabetical

Sorts the properties list alphabetically



Advanced

Reveals all properties as well as the basic properties

Filter:

Filters the properties list based on the entered text


Device Identification	
Device name	Office Window Sensor
Location	Blinds [21]
Description	Sensor near window for light balancing
Box number	89
Serial number	1205189


Product Information	
Product name	DUS804C


Location	
LocationDescription	

Preset Editor (Logical View)


The Preset Editor Page has Channel Level Sliders to setup different scenes and assign them to a Preset Number. Any Channel can be flashed or excluded from the Preset by ticking the checkbox in the appropriate column. It is recommended that preset levels are modified in Logical View. If modified in a device they will need to be synchronized.


 New ▼
Adds new Presets either singularly or in a range. Also Toggle and Panic Presets can be modified.

 Duplicate
Creates a new preset that is the duplicate of the selected Preset.


 Delete Preset
Deletes the selected Preset. Presets can only be deleted from the end of the list of Presets.

 Copy
Copies the selected Preset.

 Paste ▼
Pastes the copied Preset to; replace selected preset levels or create new presets.

 Synchronise ▼
Synchronizes the device preset tables with the logical area preset table for any physical circuits currently assigned to logical channels in the selected Area.

 Request Levels
Requests the currently active levels.

 Save to Device(s)
Saves modifications to the device.

Default preset	Light Level
P1	100%
P2	70%
P3	40%
P4	0%
P5	80%
P6	60%
P7	80%
P8	20%

Action: (Mute, Send Levels, Send Presets)

- Mute - Preset does not send a message onto the network;
- Send Levels - sends the channel levels;
- Send Presets - sends the defined Preset

Levels: (Independent, Relative, Tied)

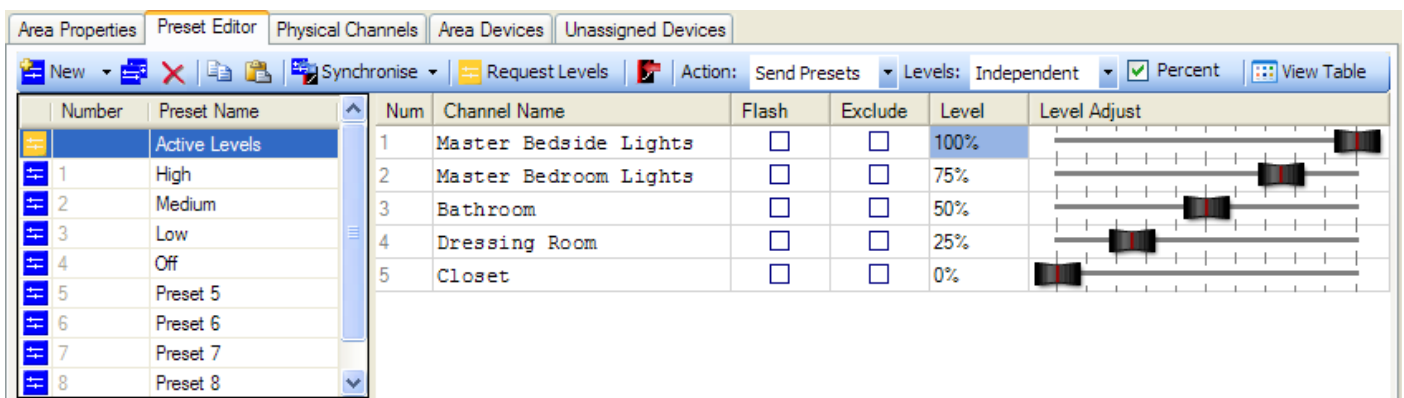
- Independent - channel levels are modified independently;
- Relative - channel levels are modified together relative to current positions;
- Tied - channel levels are modified together at the same value

Percent

Ticking the checkbox displays Channel levels as a percentage or unticking the checkbox displays Channel levels as a value between 0 and 254

 View Table  View List

- Display Channel levels as a table enables you to flash Channels, exclude Channels or enter and adjust Channel levels
- Display Channel levels as a list enables you to copy multiple Channel level values and paste as text




The screenshot shows the 'Preset Editor' window with the following table:

Number	Preset Name	Num	Channel Name	Flash	Exclude	Level	Level Adjust
	Active Levels						
1	High	1	Master Bedside Lights	<input type="checkbox"/>	<input type="checkbox"/>	100%	
2	Medium	2	Master Bedroom Lights	<input type="checkbox"/>	<input type="checkbox"/>	75%	
3	Low	3	Bathroom	<input type="checkbox"/>	<input type="checkbox"/>	50%	
4	Off	4	Dressing Room	<input type="checkbox"/>	<input type="checkbox"/>	25%	
5	Preset 5	5	Closet	<input type="checkbox"/>	<input type="checkbox"/>	0%	
6	Preset 6						
7	Preset 7						
8	Preset 8						

Plan Properties (Physical View)

Plan properties are displayed in the Properties Window when a plan is selected in the Physical view. The Plan Properties Page contains the details for each plan in your project and how each plan image is to be displayed in the Floor Plan Window. A Plan has the following properties:

General

- **Name** – Name given to the floor plan.
- **Title** – Title shown on the Floor Plan Window for the selected plan.
- **Notes** – Section for notes that can be used to write about the selected plan.
- **Default bridge** – Each plan can have a default bridge. The  default bridge is indicated in the physical view with a small tick on the top left of the icon. The first bridge added to the plan is automatically set as the default bridge. To change the default bridge right-click on the new bridge or select it on the Plan Properties Page.

When devices are added to the plan they will appear under the default bridge in Network View.

- **Scale Factor** – This factor is used to scale new icons when adding them to the plan. The scaling factor is automatically set when an icon is proportionally scaled in the plan.

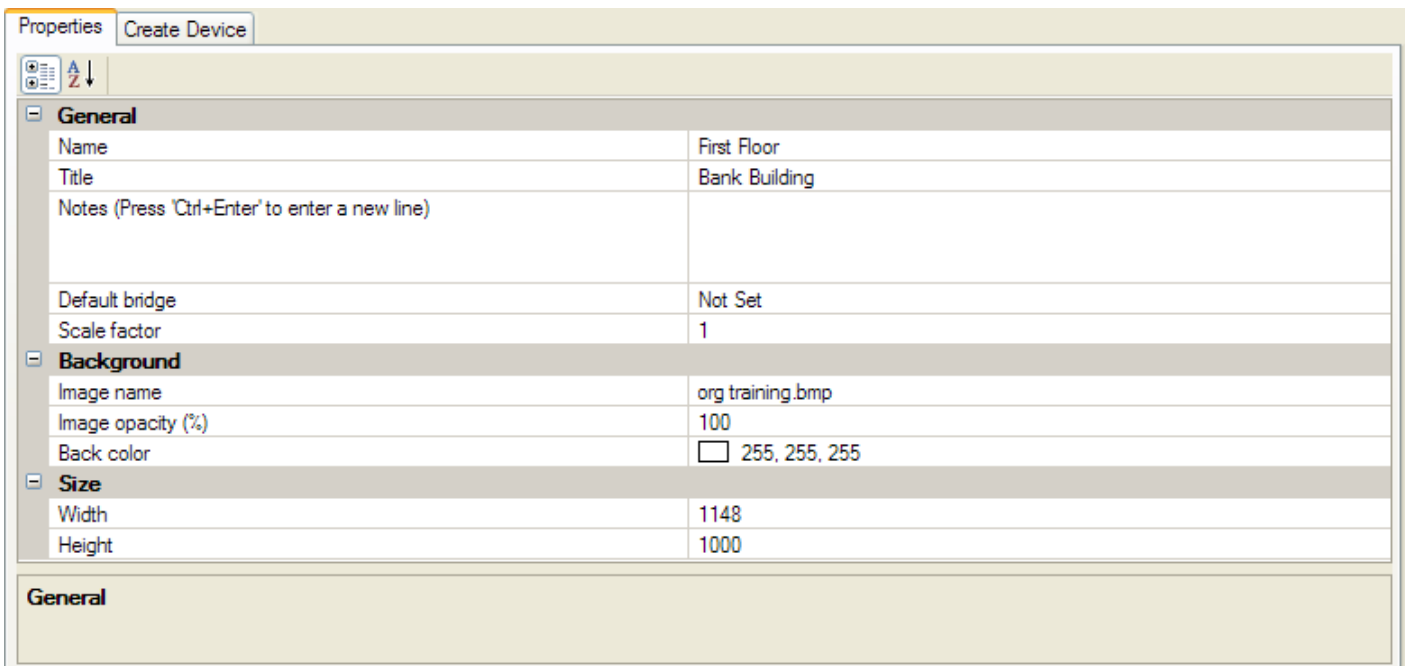
Background

- **Image name** – Name of the background image uploaded as floor plan.
- **Image Opacity** – Sets the opacity (transparency) of the background image
- **Background Color** – Sets the background color for the image. Select the background color by clicking on the drop-down list.

Size

- **Width and Height** – The width and height (plan size) is automatically adjusted to the size of the background image when the background is set. The width and height of the background image can only be reduced to size that can still fit the icons and the regions on the plan.

The size and position of the background images can be modified using the Edit Background Image option on the Floor Plan Window. Right-clicking on the background image exits the edit mode.






The screenshot shows the 'Properties' window with a 'Create Device' button. The 'General' section includes fields for Name (First Floor), Title (Bank Building), Notes, Default bridge (Not Set), and Scale factor (1). The 'Background' section includes Image name (org training.bmp), Image opacity (100%), and Back color (255, 255, 255). The 'Size' section includes Width (1148) and Height (1000).

General	
Name	First Floor
Title	Bank Building
Notes (Press 'Ctrl+Enter' to enter a new line)	
Default bridge	Not Set
Scale factor	1
Background	
Image name	org training.bmp
Image opacity (%)	100
Back color	<input type="color" value="#FFFFFF"/> 255, 255, 255
Size	
Width	1148
Height	1000

3 Floor Plan Window

The Floor Plan Window lets you see the layout of your system. It enables you to place devices, fixtures, cabling and logical regions onto a background image that represents a floor plan in your job. The Floor Plan Window can be floated or hidden using the Window Toolbar and is shown in the Logical, Network and Physical Views.

To View a floor plan, click-the  floor plan icon in the Window Toolbar to open the Floor Plan Window, then right-click the required floor plan in the physical View Tree and select  Show Floor Plan.

Note: a mini map of the floor plan can be opened by right-clicking the  magnifying glass icon in the bottom right hand corner of the floor plan window.

Floor Plan Toolbar

Pointer Mode

The pointer mode is used to select the different items on the floor plan window. It can also be used to move device and fixture icons.

Pan Mode

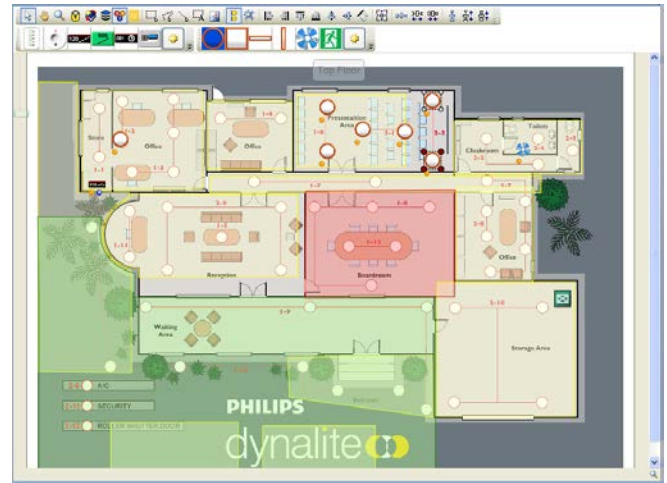
The Pan Mode pointer appears like a hand and is used to view the floor plan by dragging it around with the mouse.

Zoom Mode

Zoom Mode is used to zoom-in or zoom-out of a section on the floor plan. Click the Zoom Mode and select the area to magnify. The mouse wheel can also be used to zoom-in and out on the floor plan. Additionally, the slider on the Floor Plan Window can be used to zoom.

Lock Canvas

Lock Canvas prevents from making further changes to the floor plan. In Lock Canvas mode the floor plan can only be viewed. All the editing features are locked so that no further changes can be made to the floor plan.



Bookmark Current Position

The current position on the floor plan is saved. When you click Bookmark Current Position a bookmark is added under the bookmark folder in the Physical View Tree. You can then name the bookmark. When a bookmark is saved the zoom level of the bookmarked position is also saved.

Show/Hide Layers

Show/Hide Layers can be used to view the various layers of objects on the floor plan. You can select the Select All option from the menu to turn ON/OFF all Devices, Regions or Lines.

Show/Hide Icon Status




Shows the current status of icons placed on the floor plan. For more details on Status of Devices, Fixtures, or Distribution Boards refer to the section Status Indicators.

Request Levels

Displays the current active levels of the icons placed on the floor plan. You can request current levels for the selected icons or for the whole plan.

Draw Rectangular Region

A floor plan can be divided into different regions while commissioning a site. This icon is used to mark rectangular shaped regions on the floor plan. Three different types of regions can be drawn:

-  Draw Area Region
-  Draw Base Area Region
-  Draw Join Region

 Draw Rectangular Region

Draw Polygon Region is similar to the Draw Rectangular Region tool but can be used to mark polygon shaped regions on the floor plan. Double click to complete the drawing or right click to cancel the drawing.

Note: you can right-click on a region to edit the region. Once in Edit Region Mode you can right-click again to access the Edit Region Context Menu. Right-click in another part of the floor plan to exit Edit Region Mode.

 Draw Line

Draw lines is used to draw a connection between devices and/or fixtures. Lines can be edited by right-clicking an existing line. The following types of lines can be drawn as straight or curved lines:

 Draw Fixture Group

 Draw DyNet Cable

 Draw DALI Cable

 Background Image

A floor or reflected ceiling plan can be inserted into the Floor Plan Window using the Background Image menu. You can also select, replace, edit, and clear floor plans. Right-click on the background image to exit edit mode.

 Smart Snap

Smart Snap is an auto alignment feature. When adding or moving icons and regions to the floor plan, smart snap will snap its alignment to the icons or regions around it. The blue lines that appear around the icon are the smart snap line.

 Show and Snap to Gridlines

Displays gridlines on the floor plan. When adding or moving icons and regions they will snap to the grid lines. The distance between grid lines can be changed in the EnvisionProject Settings Window under the Tools menu.



Alignment toolstrip

The alignment toolstrip appears when two or more floor plan objects are selected. It enables flexible alignment and spacing of the selected objects. The tool tips to identify each alignment function.

 Device Palette



Devices such as load controllers, user interfaces, sensors, time-clocks and gateways can be easily added to the floor/ceiling plan using the Device Palette. Simply click a device on the palette then click on the floor plan to place the device. More than one device can be placed on the floor plan. Right click to exit.

You can quickly access up to six devices on the palette. Different devices can be selected by clicking to open the Create Device Window.



Note: right-clicking a device opens the context menu for the device.

 Fixture Palette



Different fixtures can be easily added to the floor/ceiling plan using the Fixture Palette. Simply click a fixture on the palette then click on the floor plan to place the fixture. More than one fixture can be placed on the floor plan. Right click to exit.

You can quickly access up to six fixtures on the palette. Different fixture can be selected by clicking to open the Fixture Profile Editor Window.





The Fixture Profile Editor enables fixtures to be designed, deleted, usage displayed, duplicated, replaced, imported and exported.

Note: right-clicking a fixture opens the context menu for the fixture.

Assigning Load Control



You can assign load control by linking a fixture to a physical channel of a Load Controller by:

 Dragging the physical channel from the load controller onto an existing fixture icon on the plan.

 Dragging the physical channel from the load controller onto the plan to create a new fixture.

Note: Physical channels are displayed in the Physical View or in the Unassigned Devices page in the Properties Window.


Multiple Fixtures to One Channel

Multiple fixtures can be linked to one physical channel by drawing a fixture group with the  Draw Line tool. Right-click a fixture and select  Remove Load Control to unlink the fixture and the physical channel.

Multiple Channels to One Fixture

Multiple channels can also be linked to certain types of fixtures:

- Switching and Dimming channels
- Red, Green and Blue channels
- Warm-White and Cool-White channels
- User defined channels


Right-click a fixture and select  Modify Load Control to rearrange the linked physical channels.

Duplicate Plan and Copy Special


These functions enable you to quickly duplicate a configured plan/device/fixture by specifying which properties are to be duplicated/copied.


- Right-click a Device or Fixture in the Floor Plan Window to open the copy special dialogue box.
- Right-click a Floor Plan in the Physical View Tree to open the Duplicate Plan dialogue box.

Device Status

 **Flashing Red**
Error running Bootloader, Logical or Physical translation error or Box number conflict.

The logical address of the device doesn't match the current logical region on which the icon is located (and Configure by Location is set to true).

 **Flashing Orange**
Device is Offline or device has an unassigned box number.

 **Blue**
The Device has unsaved changes (flashes three times when a configuration change is made)

 **Flashing Green**
The device status indicator flashes green when the device is currently communicating


Note: The status indicators for distribution boards represent the status of all devices under the distribution board.

Fixture Status

 **Flashing Red**
DALI emergency test result failure.


DALI ballast failure.

Logical address of the assigned physical channel doesn't match the current logical region on which the icon is located (and Configure by Location is set to true).

 **Flashing Orange**
No Load Control is assigned for the fixture

Controller is Offline

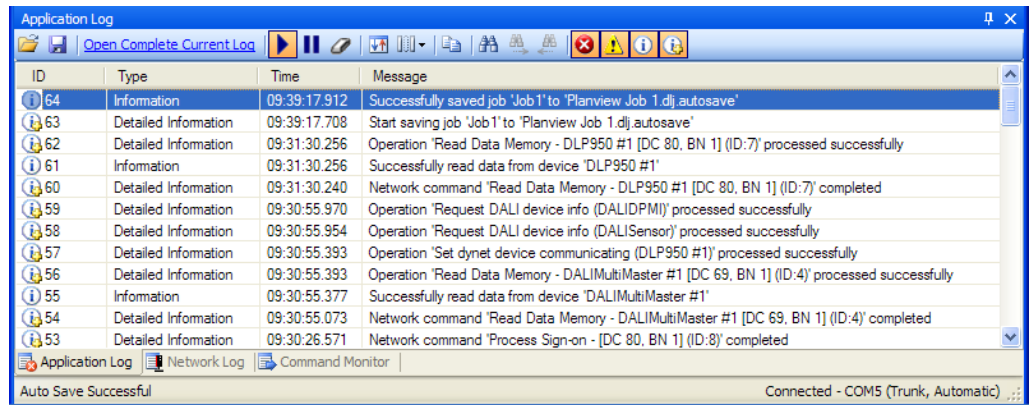
DALI Ballast is Offline

 **Blue**
Configuration change is made to the assigned physical channel.

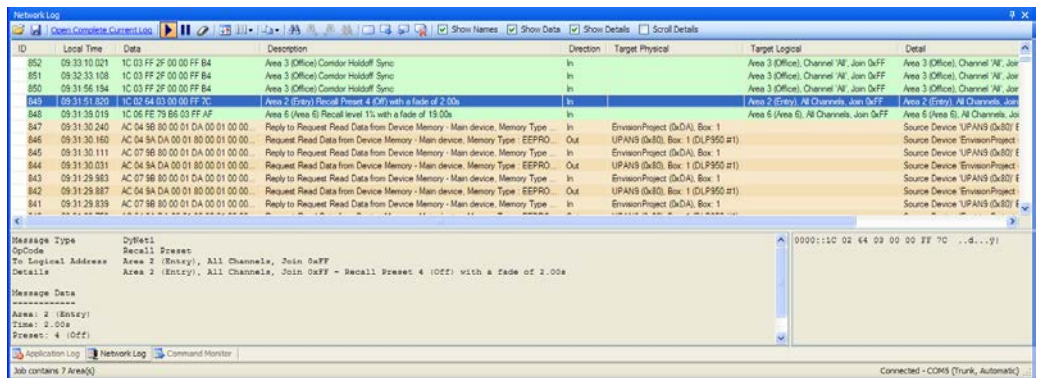
4 Monitor Window

The Monitor Window lets you see what's happening by showing you all system activity and communication between EP and DyNet. The Monitor Window has three views:

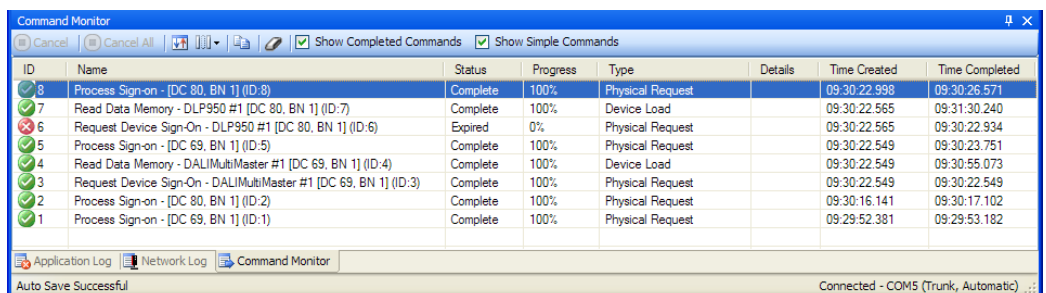
Application Log
The Application Log records a message for all actions undertaken by EP with an ID sequence number and the message type, date and time.



Network Log
The Network Log is the most commonly used monitor window. The network log records messages (hexadecimal data) travelling on the network. It shows messages sent by EP as well as messages sent by other devices. A description of the message is provided as well as the message direction.



Command Monitor
The Command Monitor shows the status of EP messages sent to the network, and provides a higher level summary of commands sent from EP.



Application Log



The Application Log toolbar appears at the top of the Application Log window. The following actions are available from the toolbar in the Application Log:

Open Existing Log File

Opens a previously saved daily log file.

Save current Log Entries

Saves a backup copy of the current log file.

[Open Complete Current Log](#)

Opens a new page in the monitor window showing all log files for that day. When the log file's maximum limit is reached a new log file is created for that day.

[Open Previous Log](#)

Opens the previous daily log file before the one currently being viewed.

[Open Next Log](#)

Opens the next daily log file after the one currently being viewed.

Start Logging

Updates the application log in real time

Pause Logging

Freezes the application log display

Clear Log Entries

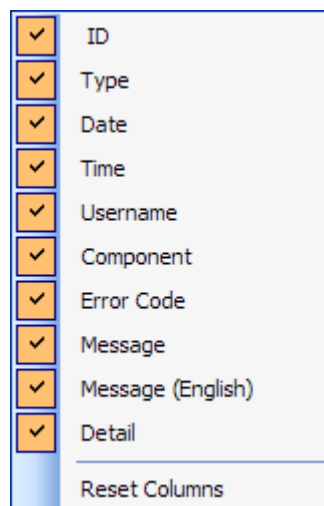
Clears the Application log display. Entries are still available in the saved log file.

Ascending/Descending Order

Sorts messages in ascending/descending order according to the ID number.

Show/Hide Columns

Allows you to select the columns from the available list. (See picture)



Copy Selected Log Entries

Copies the entire log entry to the clipboard.

Find

Finds the specified text in the log file entries

Find Next

Find the next log entry matching the specified text

Find Previous

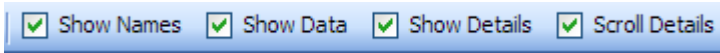
Find the previous log entry matching the specified text

Message type filtering

The message types available are shown in the following table:

Message Type Icons	
	Show Log Training Detailed
	Show Log Information
	Show Log Warnings
	Show Log Errors

Network Log



The Network Log toolbar appears at the top of the Network Log window. The following actions are available from the toolbar in the Network Log:



Opens a previously saved daily log file.



Saves a backup copy of the current log file.

[Open Complete Current Log](#)

Opens a new page in the monitor window showing all log files for that hour. When the log file's maximum limit is reached a new log file is created for that hour.

[Open Previous Log](#)

Opens the previous hourly log file before the one currently being viewed.

[Open Next Log](#)

Opens the next hourly log file after the one currently being viewed.



Updates the application log in real time



Freezes the application log display



Clears the Application log display. Entries are still available in the saved log file.



Sorts messages in ascending/descending order according to the ID number.



Allows you to select the columns from the available list. (See picture)



Copies the entire log entry to the clipboard.



Finds the specified text in the log file entries



Find the next log entry matching the specified text



Find the previous log entry matching the specified text



Removes the highlight from entries found with the find all function



Adds and Removes bookmark on selected line. Bookmarked entries are shown in Bold. Bookmarks are saved in all logs.



Finds the Next bookmark



Finds the previous bookmark



Removes all bookmarks from the current Network log.

Show Names

For devices it displays the name given in target logical column. For areas, channels and presets it displays the name given in both the description and target logical columns.

Show Data

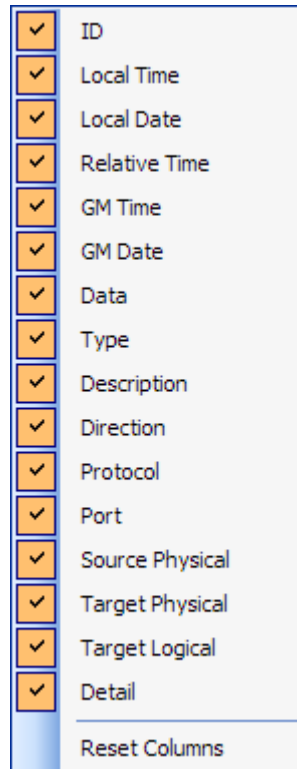
Opens a new window displaying the hex string for the message selected in the Network log

Show Details

Opens a new window displaying a description of the selected DyNet message

Scroll Details

Displays the details of each new message in the network log.



Network Log Colors

The color of each Network Log Entry indicates the following conditions:

COLOR	MEANING
YELLOW	Find all highlight
ORANGE	Bad packet
MEDIUM GREEN	Program preset
LIGHT GREEN	Logical message
LIGHT BLUE	Device application sign-on
ROYAL BLUE	Bootloader sign-on
LIGHT CORAL	Device reset
FIREBRICK	Bootloader reboot
WHEAT	Device load and save
THISTLE	Firmware upgrade
TAN	All other physical messages

Command Monitor



The Command Monitor displays the status and sequence of EP commands. The following actions are available from the toolbar in the command monitor:

Cancel Selected Command

Cancels the current command selected in the command monitor.

Cancel All Command

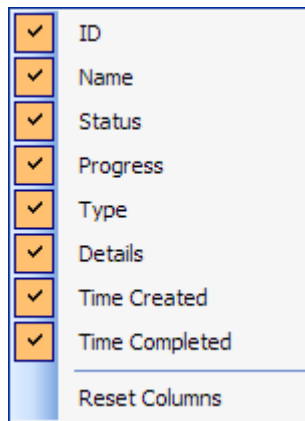
Cancel all running and currently queued commands.

Ascending/Descending Order

Sorts messages in ascending/descending order according to the ID number.

Show/Hide Columns

Allows you to select the columns from the available list. (See picture)



Copy Selected Log Entries

Copies the entire log entry to the clipboard.

Clear Completed Commands

Clears all commands from the Command Monitor window.

Show Completed Commands

If ticked completed commands are displayed in the list. If unticked, completed commands are not displayed

Show simple Commands

If ticked simple messages are displayed in the list. If unticked, simple commands are not displayed

Commands will be in one of the following states:

Command States	
	Command Queued
	Command Delayed
	Command Active
	Command Active Delayed
	Command Complete
	Command Expired
	Command Cancelled
	Command Superseded
	Command Failed

DyNet Commands are categorised into the following command types:

Command Types	
0.	PhysicalCommand
1.	PhysicalRequest
2.	LogicalCommand
3.	LogicalRequest
4.	DeviceLoad
5.	DeviceSave
6.	DeviceAttributes
7.	DeviceChangeBoxNumber
8.	DeviceFirmware
9.	DeviceDiscovery

3 Toolbars and Menus

To simplify commissioning, menu items, toolbar icons and page properties in EP are context sensitive. Depending on the item(s) highlighted in the tree EP will display the commands and properties relevant to the task being performed. Functions can be accessed from the main menu or by the context menu by right-clicking an item in the tree. Additional device specific toolbars are also available in the Properties Window for each device.

The following toolbar/menu commands are available in the main application window:

File Toolbar	Edit Toolbar	View Toolbar
File New	Cut	Logical View
File Open	Copy	Network View
File Save	Paste	Commissioning Assistant
	Delete	Application Log
	Rename	Network Log
	Undo	Command Monitor
	Redo	
	Find	
	Find Next	
	Find Previous	

Window Toolbar	Tools Toolbar	Virtual Panel Toolbar
Show Configuration Window	Connect/Reconnect	Preset Buttons
Show Floor Plan Window	Disconnect	Ramp Area Up
Float Floor Plan Window	Connection Settings	Ramp Area Down
Split Windows		DyNet Packet Sender
		Configure Virtual Panel

The following toolbar/context menu commands are available in the View Window:

Logical View	Network View	Physical View
Edit Channel	Load From Device	Show Floor Plan
Set Master Channel	Save To Device	Duplicate Plan
Find Fixture	Launch ColorPlay 3	Add Plan
Set RGB Channel Group	Launch TouchPanel Editor	Add Folder
Set Warm/Cool White Channel Group	Connect	Add Distribution Board
Insert New Area Folder	Disconnect	Set Default Bridge Device
Insert New Area	New Device	Delete Device
Insert New Logical Channel	Load Device from Network	Auto-Flash Channels
Add New Preset	Cut	
Connect	Copy	* plus all Network View commands
Disconnect	Paste	
Cut	Delete	
Copy	Rename	
Paste	Find Device	
Unassign Physical Channel	Show/Hide Columns	
Delete	Find Device in Tree	
Rename	Run Device Report	
Find Fixture	Factory Set Device	
Find Area Region	Firmware Upgrade	
Synchronise Presets	Edit Device Memory	
Auto Calibrate Light Sensor	Edit Device Task and Event Text	
Run Area Report	Run Configuration Wizard	
Send Presets	Enumerate DALI (Ballasts/Devices)	
Send DyNet Packet	Query Ballast Status	
Flash	Monitor DALI Network	
Stop Flash	Set Realtime Clock	
Find and Replace/Goto Area	Change Area	
Load All Areas	Change Box Number	
Expand All	Run FCUC Diagnostics	
Collapse All	Request Device Information	
	Send Device Sign-On	
	Send Device Reset	
	Flash	
	Stop Flash	

4 Physical Devices


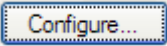
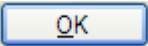
Connecting to DyNet

Before you can start commissioning you need to firstly connect EP to the network.




A PC Node adapter is required to connect EP to DyNet. The PC Node adapter plugs into the USB or RS232 port on the PC and then into the DyNet port of any device in the network.

You can connect your PC to any device in a single spur network; however, for a multiple spur network EP needs to know if it is physically connected to the trunk or to the spur to ensure that it can correctly address devices.





► Connect EP to DyNet

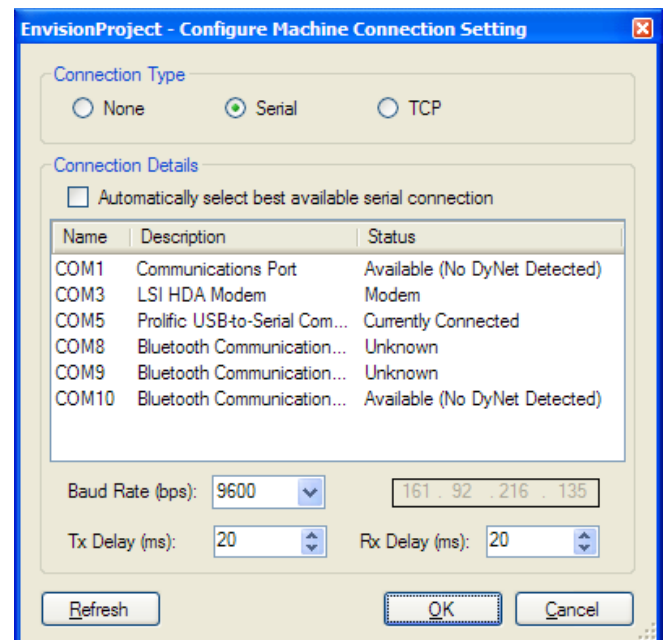
1. Click  Connection Settings
2. Click  on the Connection Settings Page
3. Select the Serial Connection Type
4. Select the COM port number of your USB (If no Gateway is selected EP connects at the top level)
5. Click 

► Connect to a trunk or spur

1. Click  Disconnect in the Network View tree
2. Select the project name (trunk) or  Gateway (spur) in the device tree (If no Gateway is selected EP connects at the top level)
3. Click  Connect

In multi-spur networks the following icons show which part of the network EP is connected to:

-  EP is currently connected to this trunk or spur
-  EP is connected at a level above this spur
-  EP is connected at a level below this trunk
-  EP is NOT currently connected to this trunk or spur



When a device is added to the project, it is displayed in a product folder under the top level for a single spur network or under the currently connected bridge/gateway for a multi-spur network. Therefore, it is good practice to add all the bridges/gateways to your project before adding other devices.

Although devices are added to the tree under the current connection point you can click and drag a device to another spur.

A device can be added to EP in two ways:





1.  Insert Devices from Network
2.  Insert Device from List

Insert Devices from Network

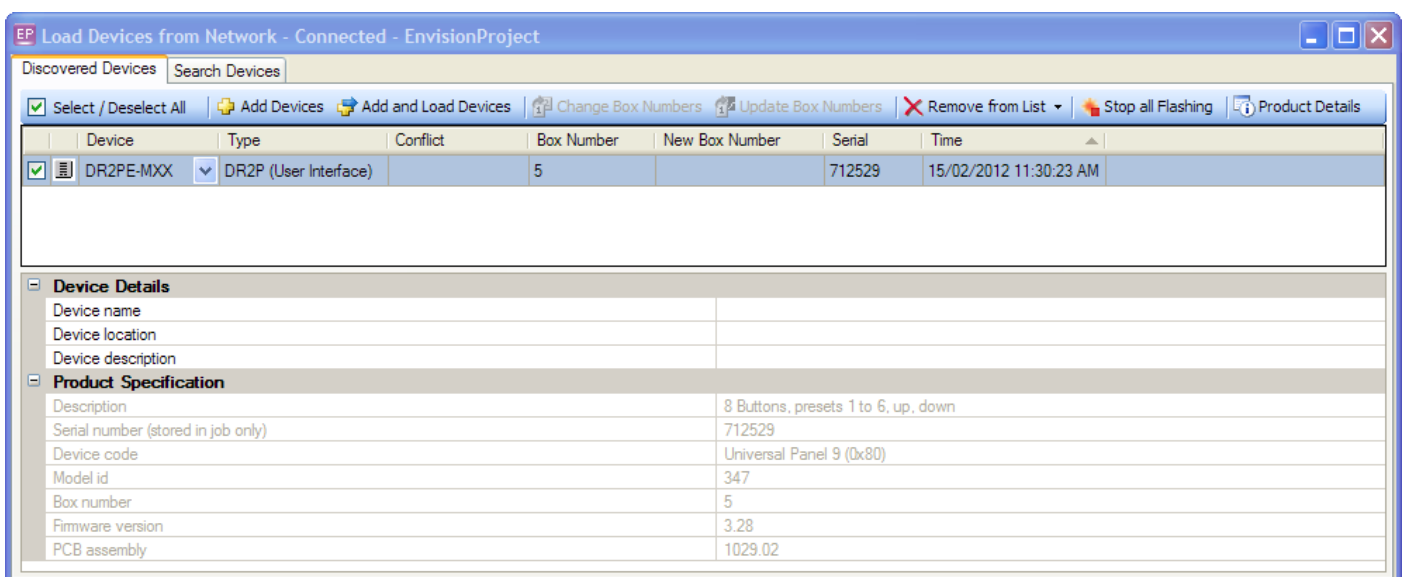
EnvisionProject has a network device discovery feature to find devices on the network. There are three ways to discover devices:

- Discover devices by signing them on
- Discover devices by searching
- Discover devices by serial number.




► Discover devices by signing them on

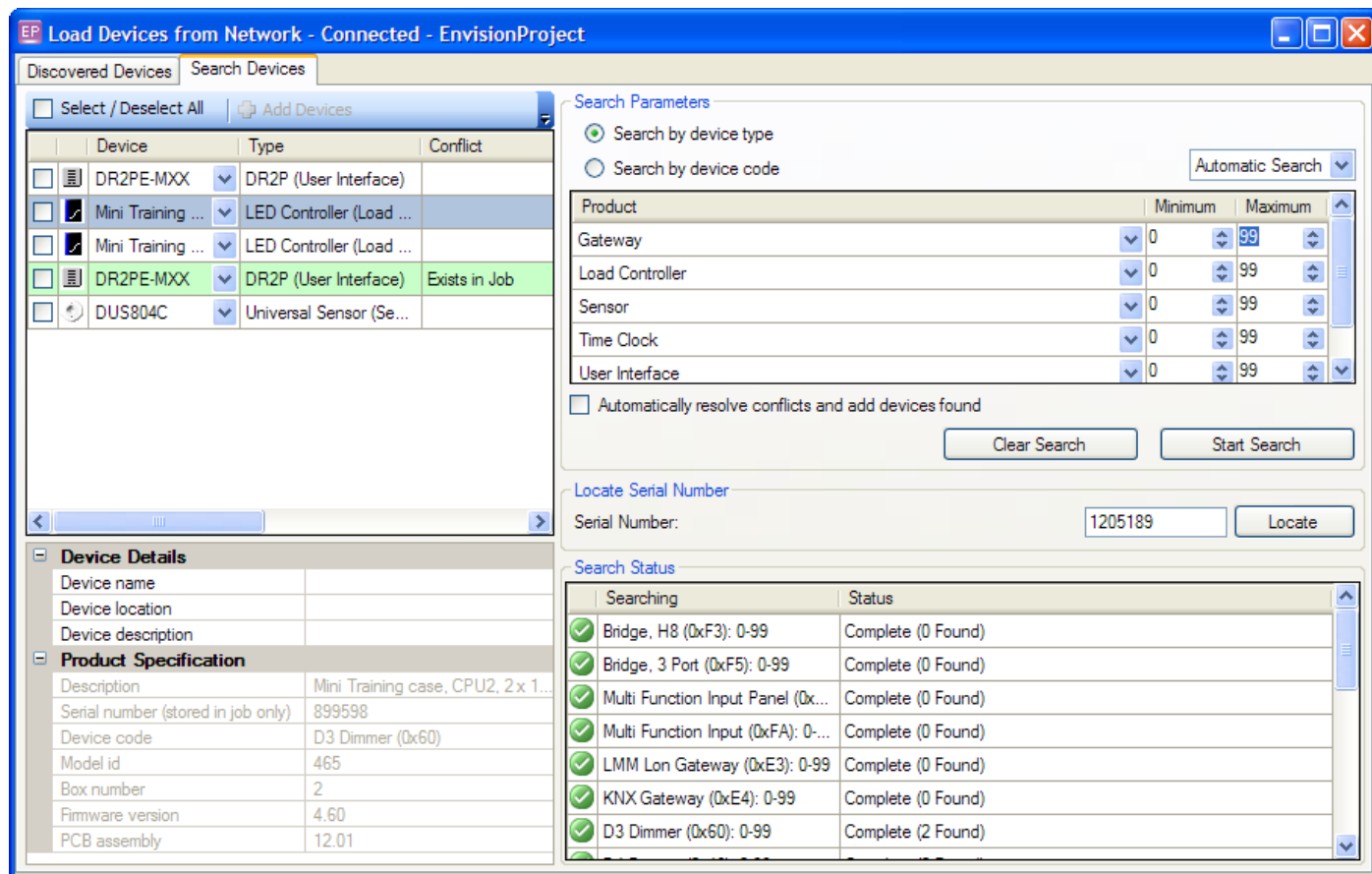
1. Click the  Insert Devices from Network icon to open the Load Devices from Network Window
2. Open the Discovered Devices Page
3. Press the  sign-on button on a device or hold a panel button for 5 seconds
4. Click the checkbox next to the required devices in the Discovered Devices list
5. Click:
 -  Add Devices to add the device to the job or
 -  Add and Load Devices, to add the device to the job and load the configuration data held in the device.
6. The Discovered Devices Device entry changes to green and the device is added to the job

Note: If the search feature detects that two devices of the same type have the same box number, you will be prompted to change one of the devices box numbers before being able to add either device to your project.



► Discover devices by searching

1. Click the  Insert Devices from Network icon to open the Load Devices from Network Window
2. Open the Search Devices Page
3. Select Search by device type or Search by device code
4. Select the required device types or device codes from the Product drop down list
5. Select the minimum and maximum box numbers to search for, if applicable
6. Select Automatically resolve conflicts and add devices found checkbox, if applicable
7. Press
8. Click the checkbox next to the required devices in the Discovered Devices list
9. Click:
 -  Add Devices to add the device to the job or
 -  Add and Load Devices to add the device to the job and load the configuration data held in the device.
10. The discovered device changes to green and the device is added to the job



➤ Discover devices by serial number

1. Click the Insert Devices from Network icon to open the Load Devices from Network Window
2. Open the Search Devices Page
3. Enter the serial number
4. Press Locate
5. Open the Discovered Devices Page
6. Click the checkbox next to the required devices in the Discovered devices list
7. Click:
 - Add Devices to add the device to the job or
 - Add and Load Devices to add the device to the job and load the configuration data held in the device.
8. The discovered device changes to green and the device is added to the job

➤ Creating a device in EP

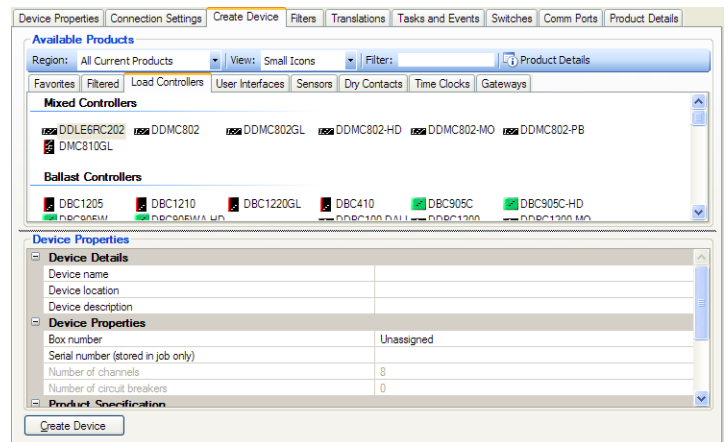
1. Click the Insert Devices from List icon to open the Create Devices Page
2. Click the required product type tab
3. View the devices you wish to add by scrolling the list of products
4. Select the required device
5. Click Create Device, double-click the device or click and drag the device to the Network View tree to add the device to the job

Note: If you have it, you can enter the device's box number in the Device Properties section or the Address column in Network View. If the box number property is left blank then an appropriate available box number is automatically assigned to the newly created device.

Insert Device from List

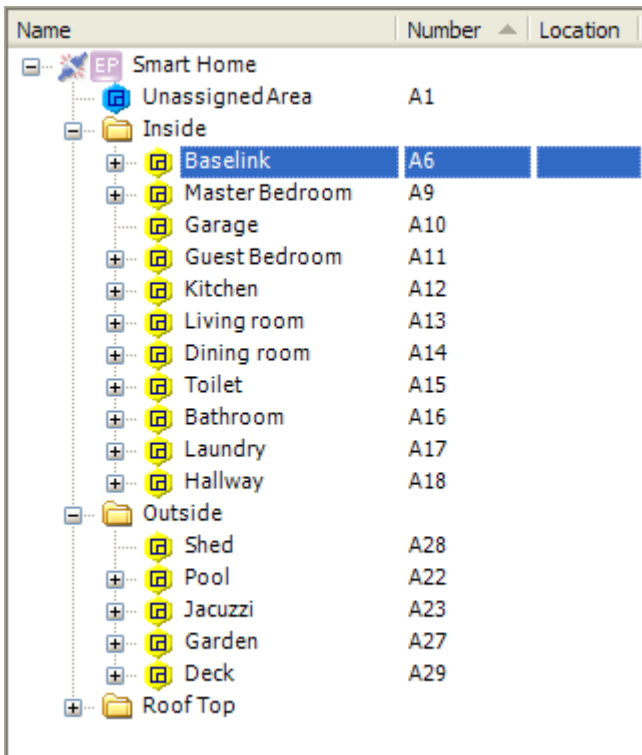
Inserting Devices from a list can be used for offline commissioning of your system. The Create Device Page in the Property Window allows new devices to be added to the EnvisionProject job. It contains the following three sections:

1. **Available products.** These products have a separate page for each Product Category and are further divided into the different Product variants.
2. **Device properties.** This property editor shows the properties of the currently selected product in the list of products. This also allows for custom device properties such as device name, location and box number to be specified when creating a device.
3. **Product details.** Click the Product Details button to display a popup window that provides a description, details and an image for the currently selected product.



5 Logical Configuration

The logical configuration can be created in the Logical View Tree or entered/pasted into the Channel Editor for a device. The Channel Editor can also be used to flash channels and select channel specific properties.



EP provides the following configuration tools:

● Physical Channels can be:

➔ **Assigned** – to a logical channel by dragging them from the list of unassigned Channels.

🚫 **Un-assigned** – by selecting "Un-assign Channel" from tool-strip or context menu or by dragging back to the list of unassigned Channels.

🔁 **Re-assigned** – by dragging them from one logical channel to another logical channel.

✂ **Cut** – the cut operation will temporarily un-assign the physical Channel until it is subsequently pasted.

✎ **Renamed** – using either the context menu or the main window edit menu or toolbar.




✎ **Edited** – Channel properties can be edited by selecting "Edit Channel" from the context menu. This will switch to Network View and open the Channel Editor for the device connected to the physical channel.




🔦 **Flashed** – to identify devices, logical areas/channels and physical channels.



🏷 **Enumerated** – DALI physical channels are given a DALI address so that they can be controlled individually or in groups.

Number	Channel Name	Logical Area	Logical Channel	DALI Address	Ballast Type	Ballast Status	Flash	Switching	Duplicate	Dimming Curve	Output Type
1	Reception-Waiting area	2	2	✔ Known	Unknown	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Default	DALI Enumerated
2	Board room-Down lights	3	2	✔ Known	Unknown	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	DALI Enumerated
3	Meeting room 1-Down light	4	1	✔ Known	Unknown	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	DALI Enumerated
4	Board room-Channel 3	3	3	✔ Known	Unknown	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	DALI Enumerated
5	Office 1-Down lights	6	2	✔ Known	Unknown	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	DALI Enumerated
6	Board room-Centre-2	3	1	✔ Known	Unknown	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	DALI Enumerated
7	Board room-Centre-3	3	1	✔ Known	Unknown	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Default	DALI Enumerated
8	Board room-Channel 4	3	4	✔ Known	Unknown	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	DALI Enumerated
9	Breakout room	3	5	✔ Known	Unknown	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	DALI Enumerated
10	Board room-Centre-4	3	1	✔ Known	Unknown	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Default	DALI Enumerated
11	Board room-Centre-5	3	1	✔ Known	Unknown	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Default	DALI Enumerated
12	Stairwell	1	12	✔ Known	Unknown	Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	DALI Enumerated
13	Channel 13	1	13	❓ Unknown			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	DALI Enumerated
14	Channel 14	1	14	❓ Unknown			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	DALI Enumerated
15	Channel 15	1	15	❓ Unknown			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	DALI Enumerated
16	Channel 16	1	16	❓ Unknown			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Default	DALI Enumerated

 Folders  Areas and  Logical Channels can be:

   **Inserted** – using either the tool-strip buttons at the top of the Logical view, the context menu or from the main window Insert menu.


 **Cut**,  **Copied** or  **Pasted** – using either the context menu, the main window Edit menu or toolbar.


 **Renamed** or  **Deleted** – using either the context menu or the main window Edit menu or toolbar.




 **Moved** or  **Copied** – by dragging around the logical tree.


 **Flashed** – Areas and Channels can be flashed.



 Presets can be:

 **Inserted** – using either the context menu or the tool-strip button. Presets can be inserted singularly or in a range. Additionally Toggle and Panic Presets can be modified.

 **Deleted** – using either the context menu or tool-strip button. As present numbers must be continuous, Presets can only be deleted from the end of the list of Presets.

 **Copied**,  **Pasted** and  **Duplicated** – using the context menu, tool-strip buttons or the main window edit menu. When pasting Presets the user can select to either replace the levels of an existing Preset or create a new Preset. The table view allows multiple Channel level values to be copied and pasted as text.

 **Synchronized** – using the button on the tool-strip. This will synchronize the device Preset tables with the logical Area Preset table for any physical circuits currently assigned to logical Channels in the selected Area.

 **Flash** and  **Stop Flash** are used to find the physical location of circuits and devices in a project by sending messages to alternate levels between 0% and 100%. This indication is then used to determine logical Area and Channel assignments for commissioning.

Once items are placed into a flashing state their corresponding icons will indicate they are flashing in all views. EnvisionProject provides support for flashing the following items:


- **Logical Area** – Flashes the Areas selected in the Logical View Tree.
- **Logical Channel** – Flashes the Logical Channels selected in the Logical View Tree or the Logical View Preset Editor Page.
- **Physical Channel** – Flashes all the lights connected to a Circuit/Physical Channel. Physical Channels can be flashed from the Logical View, the Unassigned Channels Page or the Network View Preset Editor Page.
- **Load Controller** – Flashes a load controller to identify all physical channels simultaneously. This allows the location of all circuits on the load controller to be quickly identified. Load controllers can be flashed from the Network View Tree, the Unassigned Devices Page or the Area Devices Page.
- **Panel/Sensor** – Places the device into setup mode and flashes the indicator LEDs in each button or sensor. Panels and sensors can be flashed from the Network View tree, the Unassigned Devices Page or the Area Devices Page.

Note: you can easily do a network integrity check on your whole system by sending Presets 1 and 4 to default Area 1. All channels should go to ON then OFF.

6 Tasks and Events

Task Editor

The Task Editor is used to create system tasks. A task is a piece of code that can perform multiple actions or more complex functions than can be otherwise configured using the standard properties.

The Task Editor is accessed by clicking the  edit icon on the Tasks and Events page in Network View. Tasks are stored in the memory of a device and each device can hold up to eight control tasks. There are two methods that can be combined to create a task:

- **Sequential tasking**
runs from top to bottom through the code and executes each command in a fixed sequence.
- **Conditional tasking**
executes commands based on variables such as time of day, day of week, weather or current system status.

The following actions are available in the Task Editor:

 Create New


Create a new Event file.

 Reload from Job

Reloads the Event source file from the Job file. The compiled file in the device cannot be reloaded.

 Save to Job

Save the task to the EP Job file.

 Save to job and write to device

Save the task to the EP Job file and save the compiled file to the device.

 Import from File

Loads an Event file.

 Export to File

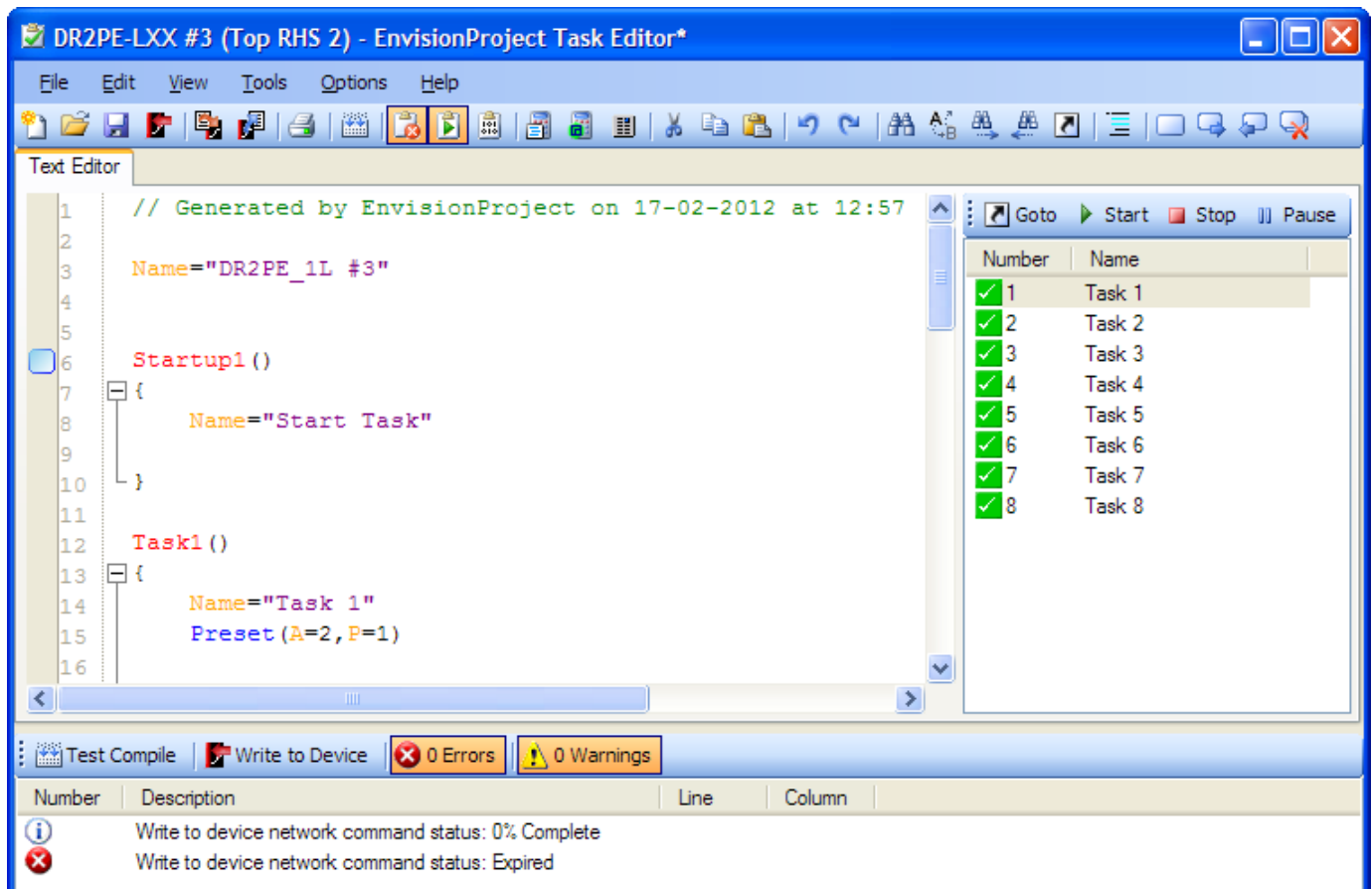
Saves to an Event File.

 Print File

Print the Event File.

 Test Compile

The task engine will test the written code for errors.




 View Compiler Errors

Displays error details found by the task engine in the lower pane.

 View Task and Event Runner

Viewing pane allows compiled tasks to be run. Enables Task and Event Runner toolbar:

 Goto  Start  Stop  Pause

 View Compiler Output

Viewing Pane displaying compiled data. Special option available with Engineer license.

 LED Calculator

Calculates the hexadecimal code to for displaying a button LED.

 Area Linking Calculator

Calculates the hexadecimal code for linking areas.

 OLED Simulator

Used for creating the text and animations for the OLED range of panels.

 Cut

Cut the selection and copy to the clipboard

 Copy

Copy the selection to the clipboard.

 Paste

Pastes the selection from the clipboard.

 Undo

Undo.

 Redo

Redo.

 Find

Finds the specified text in the Event file

 Find and Replace

Finds the specified text in the Event file

 Find Next


Find the next log entry matching the specified text

 Find Previous

Find the previous log entry matching the specified text

 Goto Line

Puts the cursor on the specified line number

 Clear Find All

Removes the highlight from entries found with the find all function

 Toggle Comment Selection

Converts code into comment text and back again

 Toggle Bookmark

Adds and Removes bookmark on selected line. Bookmarks are saved in Event files.

 Next Bookmark

Finds the Next bookmark

 Previous Bookmark

Finds the previous bookmark

 Delete All Bookmarks

Removes all bookmarks from the current Event file.

Event Editor


The Event Editor is used to create reoccurring events to trigger actions in a system. The Event Editor is accessed by selecting a Time Clock device and clicking the edit icon on the Tasks and Events Page in Network View.



Events are created in the Event Editor and stored in the memory of a Time Clock device. The memory in each Time Clock can hold up to 250 control tasks.

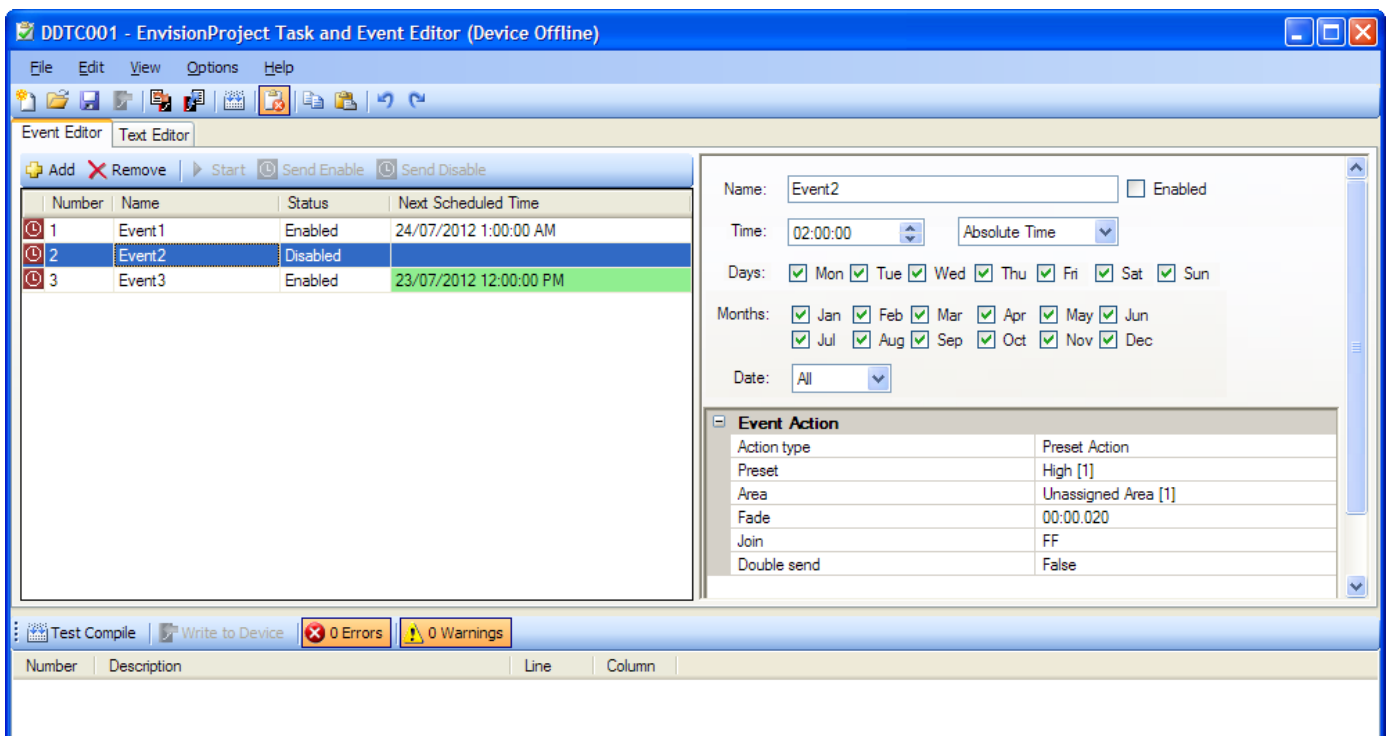
The Event Editor works together with the Text Editor in the Time Clock to provide a graphical representation of a time based task. The Time Clock is preprogrammed with the local time zone information including sunrise, sunset and daylight savings switchover dates and times.

The toolbar actions for the Event Editor are the same as for the Task Editor.


► Program an Event

1. Click the  Add icon
2. Enter an event name
3. Select a time when the event will occur compared to:
 - a. Absolute Time
 - b. Before Sunrise
 - c. After Sunrise
 - d. Before Sunset
 - e. After Sunset
4. Click the required checkboxes to select the valid Days and Months for the event
5. Select the Date for a specific day of the month or select All.
6. Select an action from the Action type dropdown list (pictured).

- No Action
 - Preset Action
 - Start Task
 - Stop Task
 - Channel Level
 - Panic
 - Unpanic
 - Off
 - Up
 - Down
 - Reset Preset
 - Preset Offset
 - Save Current Preset
 - Restore Saved Preset
 - Panel Disable
 - Panel Enable
 - Occupancy Suspend
 - Occupancy Resume
 - PE Suspend
 - PE Resume
 - Trigger Event
 - Enable Event
 - Disable Event
 - Dynet1 Message
 - Beep
7. Enter the required action parameters
8. Click  Test Compile check that the code written in the text editor has no errors
9. Click  Save to job and Write to device to save the event file the EP Job file and save the compiled file to the device.



Task Structure

The Tasks Editor provides a blank template for writing tasks. For tasks to work they must be written using the correct structure and syntax. Clicking the  Test Compile icon will check the structure and syntax of your tasks and indicate the location of any coding errors. Once you have created a task it can be triggered in a number of ways such as setting an action from a button press, sensor detection, Start command or StartTask command.

A task is constructed using the following elements:

//	The Double Forward Slash indicates a comment; all text to the end of the line is ignored.
Name="device name"	The Name command sets a name for the Device and will overwrite the name in the Job; "device name" is any alphanumeric string, spaces are OK, must be less than eighty characters and enclosed in double quotes.
TaskN()	The TaskN () command specifies a task number; N is any number from 1 to 8. (1 to 64 for time clocks). The brackets must appear after the number but do not contain any data.
{ }	The Task Code begins with the opening parentheses and ends with the closing parentheses after all data and functions are specified.
Name="task name"	The Name command sets a name for the, Task; "task name" is any alphanumeric string, spaces are OK, must be less than eighty characters and enclosed in double quotes.
Label :	Creates a subroutine label within the task, Label: is any alphanumeric string followed by a colon. It has no functional operation other than being a pointer that the code can refer to. A label has 4 rules: <ul style="list-style-type: none"> • It is case sensitive • It must start with a letter • It cannot contain any spaces • The quotes and colon are required for the label itself but not for its reference. For example: BRZ Label.
Jump (AAAA)	Jump to the memory or label, AAAA can be a label or a tilde memory location relative to the start of the task.
NewVector (AAAA)	Set the start location for the next time this task is run. AAAA can be a label or a memory location relative to the start of the task
Null	Every task runs from top to bottom unless a branch command causes it to deviate from this course. If a null is placed in the code the task will terminate as soon as it reaches this line.
StartTask (N)	Will start Task N within the device
CancelTask (N)	Cancels a currently running task in this device, N is the task number CancelTask and StartTask can be used together to restart a Task that is currently running
PauseTask (N)	Will pause Task N at the point it has reached in its code

Task Variables

<code>Area=N</code>	Sets the default Area number; N is 0 to 255. If the Join byte. Default Area is 1.
<code>Join=N</code>	Sets the default Join level; N is 1 to 8 (or hex value for combined join bytes eg 0xFF). If the Join byte is not set then the value of 0xFF is used.
<code>Fade=S</code>	Sets the Fade time; S is zero to 1200 seconds in 0.1 second increments. If the fade time is not set then the default is 2.00 seconds.
<code>Enable=True</code>	Enables or Disables an Event; True to enable, anything else to disable.

Task Commands

<code>Preset (P=N, A=N, F=S, J=N)</code>	<p>P is the Preset number, N is 0 to 170 A is the Area number, N is 0 to 254 F is the Fade time, S is zero to 1200 seconds in 0.1 second increments J is the Join level, N is 1 to 8 (or hex value for combined join bytes eg 0xFF) Note: case and order of parameters is not significant</p>
<code>PresetOffset (A=N, O=N)</code>	<p>A is the Area number, N is 0 to 254 O is the Preset offset number</p>
<code>Channellevel (A=N, F=S, J=N, C=N, L=N)</code>	<p>A is the Area number, N is 0 to 254 F is the Fade time, S is zero to 1200 seconds in 0.1 second increments J is the Join level, N is 1 to 8 (or hex value for combined join bytes eg 0xFF) C is the Channel number, N is 1 to 255 L is the Channel level, N is 0 to 100</p>
<code>Delay (S)</code>	Delay the next command, S is zero to 1200 seconds in 0.1 second increments
<code>Panic (A=N, F=S, J=N)</code>	<p>Sets system to panic mode A is the Area number, N is 0 to 254 F is the Fade time, S is zero to 1200 seconds in 0.1 second increments J is the Join level, N is 1 to 8 (or hex value for combined join bytes eg 0xFF)</p>
<code>Unpanic (A=N, F=S, J=N)</code>	<p>Sets system back to pre-panic mode state A is the Area number, N is 0 to 254 F is the Fade time, S is zero to 1200 seconds in 0.1 second increments J is the Join level, N is 1 to 8 (or hex value for combined join bytes eg 0xFF)</p>
<code>DyNet (X, X, X, X, X, X, X)</code> <code>DyNet (0x1C, A, D1, OP, D2, D3, J)</code> <code>DyNet (0x5C, DC, BN, OP, D1, D2, D3)</code>	<p>DyNet Message, X is a byte, 7 bytes are required, X values are:</p> <ul style="list-style-type: none"> • Decimal 0 to 255 or Hex, 0x00 to 0xFF • Sync byte is 0x1c for logical message or 0x5c for physical message • A is the Area number • OP is the Opcode • J is the join level • DC is the Device code • BN is the Box number • D1, D2, D3 are data bytes
<code>Start (0x1C, 200, X, X, X, X, 0xff)</code>	A passive command that listens to the network for defined values. An X is a wild card. In the example we are looking for any message on the network that starts with 1C, ends with FF and is sent to Area 200

Task Examples

1 My First Sequential Task

```

1 // My Tasks Generated by EnvisionProject on 2-10-2012 at 12:00
2
3 Name="DUS804C #1"
4
5
6 Startup1()
7 {
8     Name="Start Task"
9 }
10
11 Task1()
12 {
13     Name="lighting pathway"
14     Preset(A=2,P=1,f=5)//Bedroom lights to Preset 1 (100% with a 5 second fade)
15     Delay(1)//Wait for 1 second
16     Preset(A=3,P=2)//Hall lights to Preset 2 (70%)
17     Delay(1)//Wait for 1 second
18     Preset(A=4,P=2)//Kitchen lights to Preset 2 (70%)
19     Delay(1)//Wait for 1 second
20     Preset(A=5,P=2)//Dining room lights to Preset 2 (70%)
21     Delay(1)//Wait for 1 second
22 }

```

2 My First Conditional Task

```

23 Task2()
24 {
25     Name="Chase Effect"
26     Chase:
27         Preset(A=6,P=1)//Living room lights to Preset 1 (100%)
28         Delay(0.2)//Wait for 0.2 seconds
29         Preset(A=3,P=2)// Living room lights to Preset 1 (70%)
30         Delay(0.2)// Wait for 0.2 seconds
31         Preset(A=4,P=4)// Living room lights to Preset 1 (0%)
32         Delay(0.2)// Wait for 0.2 seconds
33         Preset(A=5,P=5)// Living room lights to Preset 1 (80%)
34         Delay(0.2)//Wait for 0.2 second
35         Jump(Chase)//Jump to chase label
36 }
37
38 Task3()
39 {
40     Name="Start and Stop Chase Effect"
41     Startchasing:
42         Start(A=200,P=1)//Listen for preset to run this task
43         StartTask(2)//Starts task2
44         NewVector(Stopchasing)//toggles to stopchasing next time this task is run
45         Null
46     Stopchasing:
47         Start(A=200,P=1)// Listen for preset to run this task
48         CancelTask(2)//Stops task2
49         NewVector(Startchasing)//toggles to startchasing next time this task is run
50 }

```


7 Basic DyNet Op Codes

Interface RS485, 9600, 8 bit data
1 start bit, 1 stop bit, no parity
Idle between bytes to be < 1ms
Delay between Packets to be > 10ms

Message Structure

Byte 0:	1C – Logical Sync byte	Byte 0:	5C – Physical Sync byte
Byte 1:	Area number	Byte 1:	Device code
Byte 2:	Data Byte 1	Byte 2:	Box Number
Byte 3:	Opcode	Byte 3:	Opcode
Byte 4:	Data Byte 2	Byte 4:	Data Byte 1
Byte 5:	Data Byte 3	Byte 5:	Data Byte 2
Byte 6:	Join Byte	Byte 6:	Data Byte 3
Byte 7:	Checksum	Byte 7:	Checksum

Select Current Preset

Byte 0: 1C hex
Byte 1: Area
Byte 2: Fade Rate low byte (usually 100)
Byte 3: Preset: 0= P1, 1= P2, 2= P3, 3= P4, A= P5, B= P6, C= P7, D= P8
Byte 4: Fade Rate high byte (usually 0)
Byte 5: Preset Bank: 0= P1 – P8, 1= P9 – P16, 2= P17 – P24 etc.
Byte 6: Join
Byte 7: Checksum
Example: Select Preset 4 in Area 1:
[1C] [01] [20] [03] [00] [00] [FF] [C1]

Select Current Preset (Linear)

Byte 0: 1C hex
Byte 1: Area
Byte 2: Preset (0 origin)
Byte 3: 65 hex
Byte 4: Fade Time Lo (16 bit fade time in 20 ms steps)
Byte 5: Fade Time Hi
Byte 6: Join (usually FF hex)
Byte 7: Checksum
Example: Select Preset 4 in Area 1 with a fade of 2 seconds:
[1C] [01] [00] [65] [64] [00] [FF] [1B]

Ramp Channel/Area to Off

Byte 0: 1C hex
Byte 1: Area
Byte 2: Channel (0 origin, FF = All Channels in the Area)
Byte 3: 68 hex
Byte 4: 0 (Unused)
Byte 5: Ramp Rate (100 ms steps. Ramp Rate is the time to fade from 0 to 100%)
Byte 6: Join (usually FF hex)
Byte 7: Checksum
Example: Ramp Channel 4 in Area 1 to off with a ramp rate of 5 seconds:
[1C] [01] [03] [68] [00] [32] [FF] [47]

Ramp Channel/Area to On

Byte 0: 1C hex
Byte 1: Area
Byte 2: Channel (0 origin, FF = All Channels in the Area)
Byte 3: 69 hex
Byte 4: 0 (Unused)
Byte 5: Ramp Rate (100 ms steps. Ramp Rate is the time to fade from 0: 100%)
Byte 6: Join (usually FF hex)
Byte 7: Checksum
Example: Ramp Channel 4 in Area 1 to off with a ramp rate of 5 seconds:
[1C] [01] [03] [68] [00] [32] [FF] [47]

Logical Message Protocol 8 byte packet

Checksum = Negative 8 bit 2's complement sum of bytes 1-7
All numbers in hexadecimal

Fade Channel/Area to Preset

Byte 0: 1C hex
Byte 1: Area
Byte 2: Channel (0 origin, FF = All Channels in the Area)
Byte 3: 6B hex
Byte 4: Preset (0 origin)
Byte 5: Fade Time (20 ms steps)
Byte 6: Join (usually FF hex)
Byte 7: Checksum
Example: Area 1, Channel 4: Recall Preset 4 with a Fade Time of 2.00s:
[1C] [01] [03] [6B] [03] [64] [FF] [0F]

Ramp Channel/Area to a Level (0.1 sec to 25.5 sec)

Byte 0: 1C hex
Byte 1: Area
Byte 2: Channel (0 origin, FF = All Channels in the Area)
Byte 3: 71 hex
Byte 4: Channel Level (01 = 100%, FF = 0%)
Byte 5: Ramp Rate (100 ms steps. Ramp Rate is the time to fade from 0: 100%)
Byte 6: Join (usually FF hex)
Byte 7: Checksum
Example: Area 2 Channel 3 Fade to 50% over 5 seconds:
[1C] [02] [02] [71] [82] [32] [FF] [BC]

Fade Channel/Area to a Level (1 sec to 255 sec)

Byte 0: 1C hex
Byte 1: Area
Byte 2: Channel (0 origin, FF = All Channels in the Area)
Byte 3: 72 hex
Byte 4: Channel Level (01 = 100%, FF = 0%)
Byte 5: Fade Rate (1 sec steps)
Byte 6: Join (usually FF hex)
Byte 7: Checksum
Example: Area 2 Channel 3 Fade to 50% over 50 seconds:
[1C] [02] [02] [72] [82] [32] [FF] [BB]

Fade Channel/Area to a Level (1 min to 22 min)

Byte 0: 1C hex
Byte 1: Area
Byte 2: Channel (0 origin, FF = All Channels in the Area)
Byte 3: 73 hex
Byte 4: Channel Level (01 = 100%, FF = 0%)
Byte 5: Fade Rate (1 min steps, max 22 minutes)
Byte 6: Join (usually FF hex)
Byte 7: Checksum
Example: Area 2 Channel 3 Fade to 50% over 15 minutes:
[1C] [02] [02] [73] [82] [0F] [FF] [DD]

Fade Channel/Area to Off

Byte 0: 1C hex
Byte 1: Area
Byte 2: Channel (0 origin, FF = All Channels in the Area)
Byte 3: 74 hex
Byte 4: Fade Time Lo (16 bit fade time in 20 ms steps)
Byte 5: Fade Time Hi
Byte 6: Join (usually FF hex)
Byte 7: Checksum
Example: Area 4, All Channels,: Fade to off with a Fade Time of 2.00s:
[1C] [04] [FF] [74] [64] [00] [FF] [0A]

Fade Channel/Area to On

Byte 0: 1C hex
Byte 1: Area
Byte 2: Channel (0 origin, FF = All Channels in the Area)
Byte 3: 75 hex
Byte 4: Fade Time Lo (16 bit fade time in 20 ms steps)
Byte 5: Fade Time Hi
Byte 6: Join (usually FF hex)
Byte 7: Checksum
Example: Area 4, All Channels,: Fade to on with a Fade Time of 2.00s:
[1C] [04] [FF] [75] [64] [00] [FF] [09]

Stop Fade Channel/Area

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Channel (0 origin, FF = All Channels in the Area)
 Byte 3: 76 hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum

Example: Area 4 Channel 6 Stop Fading:
 [1C] [04] [05] [76] [00] [00] [FF] [66]

Fade Area to a Level

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Channel (0 origin, FF = All Channels in the Area)
 Byte 3: 79 hex
 Byte 4: Fade Time Lo (16 bit fade time in 20 ms steps)
 Byte 5: Fade Time Hi
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum

Example: Fade Area 4 to 50% over 2 sec:
 [1C] [04] [82] [79] [64] [00] [FF] [82]

Set to Off

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Fade Rate low Byte (usually 100)
 Byte 3: 4 hex
 Byte 4: Fade Rate high Byte (usually 0)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum

Example: Turn Area 1 Off:
 [1C] [03] [0A] [04] [00] [00] [FF] [D4]

Ramp Channel/Area to a Level except channels preset to 0% or don't care

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Channel (0 origin, FF = All Channels in the Area)
 Byte 3: 5F hex
 Byte 4: Level (01 = 100%, FF = 0%)
 Byte 5: Ramp Rate (100 ms steps. Ramp Rate is the time to fade from 0: 100%)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum

Example: Area 4, Ramp Lit Channels Toward 100% with a ramp rate of 5.00s:
 [1C] [04] [FF] [5F] [01] [32] [FF] [50]

Report Channel Level (reply from dimmer)

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Channel (0 origin)
 Byte 3: 60 hex
 Byte 4: Target Level (01 = 100%, FF = 0%)
 Byte 5: Current Level (01 = 100%, FF = 0%)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum

Example: Report from Channel 5 in Area 2 Target Level is 58% & Current Level is 58%:

[1C] [02] [04] [60] [70] [70] [FF] [9F]

Request Channel Level (sent to dimmer)

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Channel (0 origin)
 Byte 3: 61 hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum

Example: Request Level of Channel 5 in Area 2:
 [1C] [02] [04] [61] [00] [00] [FF] [7E]

Report Preset (reply from dimmer)

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Preset (0 origin)
 Byte 3: 62 hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum

Example: Area 4 is currently in Preset 6:
 [1C] [04] [05] [62] [00] [00] [FF] [7A]

Request Preset (sent to dimmer)

Byte: 0 1C hex
 Byte 1: Area
 Byte 2: 0 (Unused)
 Byte 3: 63 hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum

Example: Request Current Preset of Area 4:
 [1C] [04] [00] [63] [00] [00] [FF] [7E]

Program Current Preset: Saves channel levels to the current preset

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: 0 (Unused)
 Byte 3: 8 hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum

Example: Save the Current Channel Levels of Area 4 to the Current Preset:
 [1C] [04] [00] [08] [00] [00] [FF] [D9]

Program Defined Preset: Saves channel levels to a defined preset

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Preset (0 origin)
 Byte 3: 9 hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum

Example: Save the Current Channel Levels of Area 4 to Preset 1:
 [1C] [04] [00] [09] [00] [00] [FF] [D8]

Panic (Locks panels & selects panic preset)

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: 0 (Unused)
 Byte 3: 17 hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum

Example: Select Panic Mode in Area 2:
 [1C] [02] [F0] [17] [00] [00] [FF] [DC]

Un-Panic (Unlocks panels & restores previous preset)

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: 0 (Unused)
 Byte 3: 18 hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum

Example: Restore normal operation in Area 2:
 [1C] [02] [F0] [18] [00] [00] [FF] [DB]

Set DMX mode

Byte 0: 1C hex
 Byte 1: AREA
 Byte 2: Data (00=DMX if Present, 01=Local Override, 02=HTP, 03=DyNet Only)
 Byte 3: 10 hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum
 Example: Area 1: Select DMX Mode DyNet Only:
 [1C] [01] [03] [10] [00] [00] [FF] [D1]

Disable Control Panels

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: 0 (Unused)
 Byte 3: 15 hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum
 Example: Lock All Control Panels in Area 6:
 [1C] [06] [00] [15] [00] [00] [FF] [CA]

Enable Control Panels

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: 0 (Unused)
 Byte 3: 16 hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum
 Example: Unlock All Control Panels in Area 6:
 [1C] [06] [00] [16] [00] [00] [FF] [C9]

Suspend/Resume Light Level Compensation (All presets)

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Channel (0 origin, FF = All Channels in the Area)
 Byte 3: 11 hex
 Byte 4: 0 (Unused)
 Byte 5: Suspend / Resume (0 = Suspend, 1 = Resume)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum
 Example: Area 2, All Channels,: Resume Light Level Compensation for all Presets:
 [1C] [02] [FF] [11] [00] [01] [FF] [D2]

Suspend Light Level Compensation (Current Preset)

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Channel (0 origin, FF = All Channels in the Area)
 Byte 3: 1A hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum
 Example: Area 2, All Channels,: Disable Light Level Compensation for Current Preset:
 [1C] [02] [FF] [1A] [00] [00] [FF] [CA]

Resume Light Level Compensation (Current Preset)

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Channel (0 origin, FF = All Channels in the Area)
 Byte 3: 1B hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum
 Example: Area 2, All Channels,: Enable Light Level Compensation for Current Preset:
 [1C] [02] [FF] [1B] [00] [00] [FF] [C9]

Suspend/Resume Occupancy Detection (All presets)

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Channel (0 origin, FF = All Channels in the Area)
 Byte 3: 31 hex
 Byte 4: 0 (Unused)
 Byte 5: Suspend / Resume (0 = Suspend, 1 = Resume)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum
 Example: Area 1, Channel 1- Resume Occupancy Detection for All Presets:
 [1C] [01] [00] [31] [00] [01] [FF] [B2]

Suspend Occupancy Detection (Current Preset)

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Channel (0 origin, FF = All Channels in the Area)
 Byte 3: 3A hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum
 Example: Area 1, Channel 1 Disable Occupancy Detection for Current Preset:
 [1C] [01] [00] [3A] [00] [00] [FF] [BA]

Resume Occupancy Detection (Current Preset)

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Channel (0 origin, FF = All Channels in the Area)
 Byte 3: 3B hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum
 Example: Area 1, Channel 1 Enable Occupancy Detection for Current Preset:
 [1C] [01] [00] [3A] [00] [00] [FF] [A9]

User Preference Messages

Set User Preference

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Preference (see below)
 Byte 3: 48 hex
 Byte 4: Data Hi (see below)
 Byte 5: Data Lo (see below)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum
 Example: Area 1: Set Indicator LED Brightness to 50% with a fade of 1.00s:
 [1C] [01] [01] [48] [82] [32] [FF] [E7]

Request User Preference

Byte 0: 1C hex
 Byte 1: Area
 Byte 2: Preference (see below)
 Byte 3: 49 hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum
 Example: Area 1: Request Actual Temperature:
 [1C] [01] [06] [49] [00] [00] [FF] [95]

Report User Preference

Byte 0: 1C hex
 Byte 1: Area
 Byte 2 – **Preference Value** (see below)
 Byte 3: 4A hex
 Byte 4: Data Hi (see below)
 Byte 5: Data Lo (see below)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum
 Example: Area 1 Actual temperature 22C:
 [1C] [01] [06] [4A] [00] [58] [FF] [3C]

Preference Values:

- 0x01 = Indicator LED Brightness
- 0x02 = Backlight LED Brightness
- 0x03 = Display Brightness
- 0x04 = Display Contrast
- 0x05 = Sounder Volume
- 0x06 = Actual Temperature, 16 bit two's complement in 0.25 deg Celsius steps
- 0x07 = User Temperature set point, 16 bit two's complement in 0.25 deg Celsius steps
- 0x08 = Display Brightness Scaled Value
- 0x09 = Air Conditioning Plant Capability
- 0x0A = Closed loop Light control setpoint (Temporary Adjust) in LUX
- 0x0B = Dynamic No Motion Timeout (Temporary Adjust) for Universal Motion sensor
- 0x0C = Actual Temperature, as signed fixed point degrees Celsius (Range -127.99 to 127.99)
- 0x0D = User Temperature set point, as signed fixed point degrees Celsius (Range -127.99 to 127.99)

Preference=0x01:

- Data Hi: Indicator LED brightness (01=100% FF=0%)
- Data Lo: 8 bit Fade Time in 20mS increments.

Preference=0x02:

- Data Hi: Backlight LED Brightness (01=100% FF=0%)
- Data Lo: 8 bit Fade Time in 20mS increments.

Preference=0x03:

- Data Hi: LCD Brightness (01=100% FF=0%)
- Data Lo: 8 bit Fade Time in 20mS increments.

Preference=0x04:

- Data Hi: LCD Contrast (01=100% FF=0%)
- Data Lo: 8 bit Fade Time in 20mS increments.

Preference=0x05:

- Data Hi: Sounder Volume (01=100% FF=0%)
- Data Lo: 8 bit Fade Time in 20mS increments.

Preference=0x06:

- Actual Temperature, 16 bit two's complement in 0.25 degrees Celsius steps

Preference=0x07:

- User Temperature set point, 16 bit two's complement in 0.25 degrees Celsius steps

Preference=0x08:

- Data Hi: Display Brightness Scaled Value (01=100% FF=0%)
- Data Lo: 8 bit Fade Time in 20mS increments.

Preference=0x09:

- Data Hi: Air-conditioning Plant Capabilities
- Bit-0: 1- Hot water available, 0- Hot water not available
- Bit-1: 1- Cold water available, 0- Cold water not available
- Data Lo: Unused

Preference=0x0A:

- Closed loop Light control setpoint (Temporary Adjust) in LUX
- 0x0000 to 0xFFFF (Raw Lux)

Preference=0x0B:

- No Motion Timeout
- 0x0000 Revert To Configured No Motion Timeout
- 0x0001 to 0xFFFF (Timeout in Seconds)
- 0xFFFF Revert To Configured No Motion Timeout

Preference=0x0C:

- Actual / Measured Temperature Range -127.99 to 127.99
- Data Hi: 1 MSB is sign bit of temperature (1-negative, 0=positive)
- 7 LSBs are integer part of temperature (not in 2's complement)
- Data Lo: 8 bit unsigned fraction part of temperature (valid decimal range is 0-99)
- Example +25.56C ==> Value High = 0x19, Value Low = 0x38
- Preference=0x0D:
- Setpoint / Desired Temperature
- Data values as per preference 0x0C

Preset Offset

- Byte 0: 1C
 - Byte 1: Area
 - Byte 2: Data: Offset value plus Bit 8 set, to distinguish Preset Offset from Swap Bank
 - Byte 3: Opcode \$64
 - Byte 4: 0 (Unused)
 - Byte 5: 0 (Unused)
 - Byte 6: Join (usually FF hex)
 - Byte 7: Checksum
- Example: Preset Offset of 15 in Area 1:
[1C] [01] [8F] [64] [00] [00] [FF] [F1]

Reset Preset

- Byte 0: 1C
 - Byte 1: Area
 - Byte 2: Fade Time Lo (16 bit fade time in 20 ms steps)
 - Byte 3: 0F hex
 - Byte 4: Fade Time Hi
 - Byte 5: 0 (Unused)
 - Byte 6: Join (usually FF hex)
 - Byte 7: Checksum
- Example: Reset Preset in Area 1 over 5 seconds:
[1C] [01] [FA] [0F] [00] [00] [FF] [DB]

Set Join Level

- Byte 0: 1C
 - Byte 1: Area
 - Byte 2: Join Level
 - Byte 3: 14 hex
 - Byte 4: 0 (Unused)
 - Byte 5: 0 (Unused)
 - Byte 6: Join
 - Byte 7: Checksum
- Example: Area 1, Set Join Level 6:
[1C] [01] [86] [0F] [00] [00] [06] [C3]

Set RMask

- Byte 0: 1C
 - Byte 1: Area
 - Byte 2: RMask
 - Byte 3: 40 hex
 - Byte 4: 0 (Unused)
 - Byte 5: 0 (Unused)
 - Byte 6: Join
 - Byte 7: Checksum
- Example: Area 1 set RMask level 3:
[1C] [01] [83] [40] [00] [00] [03] [1D]

Area Linking

The Base Area acts like an Area 0 for all Channels that have that Base Area defined, and is useful as a global control for a block of Areas. The following is for the 24 Areas directly above the Base Area, as used by the Set Area Links and Clear Area Links messages:
Byte 2 Bit 7 is the 1st Area, and Bit 0 is 8th
Byte 4 Bit 7 is the 9th, and Bit 0 is the 16th
Byte 5 Bit 7 is the 17th, and Bit 0 is the 24th

Set Area Links

- Byte 0: 1C
 - Byte 1: Area
 - Byte 2: Data: Areas to Link
 - Byte 3: 20 hex
 - Byte 4: Data: Areas to Link
 - Byte 5: Data: Areas to Link
 - Byte 6: Join (usually FF hex)
 - Byte 7: Checksum
- Example: Link Areas 4 & 5 (assumes Base Area = 3):
[1C] [04] [80] [20] [00] [00] [FF] [C0]

Clear Area Links

Byte 0: 1C
 Byte 1: Area
 Byte 2: Data: Areas to Unlink
 Byte 3: 21 hex
 Byte 4: Data: Areas to Unlink
 Byte 5: Data: Areas to Unlink
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum
 Example: Separate Areas 4 & 5 (assumes Base Area = 3):
 [1C] [04] [80] [21] [00] [00] [FF] [C0]

Save Current Preset (Saves current preset number)

Byte 0: 1C
 Byte 1: Area
 Byte 2: 0 (Unused)
 Byte 3: 66 hex
 Byte 4: 0 (Unused)
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum
 Example: Save Current Preset in Area 1:
 [1C] [01] [00] [66] [00] [00] [FF] [7E]

Restore Saved Preset

Byte 0: 1C
 Byte 1: Area
 Byte 2: Fade Time Lo (16 bit fade time in 20 ms steps)
 Byte 3: 67 hex
 Byte 4: Fade Time Hi
 Byte 5: 0 (Unused)
 Byte 6: Join (usually FF hex)
 Byte 7: Checksum
 Example: Restore Saved Preset in Area 1:
 [1C] [01] [FA] [67] [00] [00] [FF] [83]

Device Codes

Device Type	Device Code (hex)
DALI Combi Controller	08
D4 Dimmer	48
D2 Dimmer	50
Fan Coil Unit Controller	58
D3 Dimmer	60
DALI2 Controller	68
DALI Multi-Master	69
Avatar Device	6A
OLED Panel	78
Universal Panel	80
Universal Panel	88
LED Controller	92
D3 Sensor	B1
D4 Sensor	B2
Temperature Sensor	B8
DALI Controller	C2
Minder Time Clock	C9
Touch Panel H8	CF
LMM Lon Gateway	E3
KNX Gateway	E4
Bridge H8	F3
Bridge M16	F4
Bridge 3 Port	F5
Multi-Function Input	F9
Multi-Function Input	FA

8 Global Features

The following is a list of features is common across EnvisionProject:

- **Undo / Redo** –all actions can be undone and redone. There is no limit to the number of undo actions. Undo and Redo are available from the edit menu and toolbar or by using Ctrl+Z and Ctrl+Y.
- **Cut / Copy / Paste** – Almost all items in EnvisionProject can be cut, copied and pasted. This also applies to copying between different instances of EnvisionProject. For example, you may copy details from a previous job to a new job. The shortcut keys are Ctrl+X, Ctrl+C & Ctrl+V.
- **Move** – Many items can be moved by dragging. As standard with drag operations, holding down the Shift or Control keys will provide an option to move, copy or cancel.
- **Multi-select** – All compatible items can be multi selected. This allows the properties for multiple items to be changed in one action. To change properties for many items at once, you can multi-select by holding the shift key whilst clicking other items in the tree

Note: If the properties of multiple items have different values then the background color of the property will be set to a light salmon color.

- **Shortcut keys** – Standard windows short cut keys are available and shortcut keys are provided for most menu items. See menu items for their short cut key. Some common DLight2 shortcut keys have also been implemented such as F8 to toggle between views and Home, End, Page Up and Down for Channel level changes.

- **Settings** – The job, user and system settings are available in the settings dialog accessible from the Tools menu.
- **Customization** – The location and positions of windows as well as many customizations of individual controls are saved in the EnvisionProject user settings and will be maintained next time EnvisionProject starts.
- **Job Properties** – The top level item in every view represents the current open job. The properties such as the job name and job notes can be modified by selecting the job item in any view.
- **Generate Reports** – EP can interrogate your system to reveal specific data such as settings and actions, which can be exported into a report for use by others. Once commissioning is complete, the system allows users to extract a report that details as-built documentation.
- **Status Bar** – The status bar at the bottom of the main window shows the status of the currently selected item(s) in the Logical or Network view. In the Logical view it shows the total number of areas. In the Network view it shows the total number of devices in the job or category. If a device is selected it will show the details and status of the device. On the right side of the status bar is the current connection status.
- **Tool tips**– Hovering the mouse pointer over any icon displays the relevant tooltip

Functions

	All Channel levels		Nudge down
	Single Channel level		Nudge down fade
	Preset		Nudge up
	Preset off		Nudge up fade
	Preset offset		One touch Preset toggle
	Preset with program		One touch ramp only
	Reset Preset		One touch ramp with program
	Ramp down		Panel enable/disable
	Ramp up		Panic
	Stop fade		No function
	Task control		Airflow Sensor
	Start Local Task		Dirty air filter
	DyNet I message		Drip tray overflow
	Event control		Energy Holdoff
	Program current Preset		Fire Trip
	Set join level		Hot water on cold valve
	Switch message		Custom
	DyNet I message custom		
	IR button message		
	Issue sign on		

Note: When changing switch functions, parameters are reset.

Physical/Network Property Pages

Pages / Device types	Job	Load controllers	User Interfaces	Sensors	Time Clocks	Gateways
Analogue						•
Area Cascading		•				
Buttons			•			
Calibration				•		
Channel Editor		•				
Comm Ports		•	•	•	•	•
Connection Settings	•					•
Create Device	•	•				
DALI Emergency	•					
DALI Network		•				
Device Properties		•	•	•	•	•
DMX Channel Mappings						•
Filters						•
Fixture Profiles	•					
IR Buttons			•	•		
Job Properties	•					
Light Control				•		
Mapping						•
Motion Control					•	
Motion Detector				•		
Plant Configuration		•				
Preset Editor		•				
Product Details		•	•	•	•	•
Sliders		•	•			
Somfy Device						•
Switches		•	•			•
Tasks and Events		•	•	•	•	•
Temperature Control		•				
Translations						•

Logical Property Pages

Pages / Logical Items	Job	Folder	Area	Logical Channel	Physical Channel
Area Cascading	•				
Area Devices			•		
Area Properties			•		
Channel Properties				•	
Folder Properties		•			
Job Properties	•				
Physical Channels			•	•	•
Preset Editor			•		
Unassigned Devices	•	•	•	•	•

Hot keys

Alt + 1	Logical view
Alt + 2	Network view
Alt + 5	Commissioning Assistant
Alt + 6	Application log
Alt + 7	Network log
Alt + 8	Command monitor
Alt + A	Change Area
Alt + B	Change box number
Alt + C	Channel Editor tab (When load controller is highlighted in the Network view)
Alt + E	Edit Memory
Alt + F	Factory set
Alt + P	Buttons tabs (Panels) Preset editor (Load controller)
Alt + R	Set Real-time Clock
Alt + T	Open task editor
Alt + X	Export to file
Alt + W	Open wizard
Alt + F4	Exit
Ctrl+1-8	Send a Preset message
Ctrl + A	Insert new Area
Ctrl + C	Copy
Ctrl + D	Add new device
Ctrl + E	Insert new folder
Ctrl + F	Find
Ctrl + H	Insert new Logical Channel
Ctrl + I	Import devices from file
Ctrl + L	Load devices from network
Ctrl + R	Insert Preset
Ctrl + N	New
Ctrl + O	Open
Ctrl + V	Paste
Ctrl + X	Cut
Ctrl + Y	Redo
Ctrl + Z	Undo
Ctrl + I	Open file
F2	Rename
F3	Find Next
F4	Request device information
F5	Send Reset
F6	Send Sign on
F7	Flash Device\Channel
F8	Toggle Network/Logical view

F9	Toggle Configuration/Floor Plan window
F11	Load data from device
F12	Store data to device
Ctrl + F2	Toggle bookmark
Ctrl + F3	Clear Find All
Ctrl + Shift + F3	Clear Find All
Ctrl + F10	Open DyNet Sender
Home	Top of Network/Logical view
End	Bottom of Network/Logical view

Floor Plan Window

Press Arrow Keys to move icons by a pixel

Press Ctrl + Arrow Keys to move icons by 10 pixels

Press Arrow Keys to move the background image by a pixel (in Edit or Replace Background Image Mode)

Press Ctrl + Arrow Keys to move background image by 10 pixels (in Edit or Replace Background Image Mode)

Hold down the shift key while rotating an icon to align the icon to a 45° angle

Use the Middle Mouse Wheel to zoom the floor plan

Use + and – keys to zoom

Use Ctrl + 0 to zoom out to the whole Floor Plan

Use Ctrl + 1 to zoom to a normal zoom level

Hold-down the Middle Mouse Button to Pan

Use Alt and the Left Mouse Button to Pan

