Dynalite® Interface

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This driver helps to control the Dynalite lighting control system. It will allow you to control the system as well as providing 2-way feedback via variables and events.

Note:

Integration Designer only allows a maximum of 4 parameters to be passed to a function. This has meant that several functions need to use a default value for the JOIN parameter. This has been set to 0xff (255). If you require a different JOIN value (and the function doesn't allow you to change it) you can use the *Send Dynet Message* function.

Please report any bugs found to bugs@mydevice.com.au. Include driver version number and steps to reproduce the issue where possible.

Contents

Driver Configuration Settings:

Serial Settings:

Serial Port - Set the serial port the Dynalite DTK622-232 is connected to.
Baud Rate - This should normally be left as 9600 unless the Dynalite commissioner has indicated otherwise.

Global Settings:

Double Send - Check this box to have the driver send every message twice. This should only be used in high noise environments if messages are failing.

Functions:

Preset Recall Commands:

Set Area to Preset

This function sends a preset to an area.

Area : Destination area (0 - 255)
Preset : Preset to send (1 - 255)
Fade : The number of 0.02 increments the preset should take to complete. For example, a value of 100 = 0.02 x 100 = 2 seconds.
Join : Join byte, normally 0xff (255)

Set Area Range to Preset

This function sends a preset to a range of areas. Useful if you want to for example turn all the lights out for the entire building. This function will send a preset message to all areas from <Start Area> to <End Area> inclusively. Take care to always ensure the <End Area> is greater than the <Start Area>. Join is set to 0xff.

Start Area : Destination area (0 - 255)
End Area : Destination area (0 - 255)
Preset : Preset to send (1 - 255)
Fade : The number of 0.02 increments the preset should take to complete. For example, a value of 100 = 0.02 x 100 = 2 seconds.

Set Area to Panic

This sets an area to panic mode. This can be useful to lock panels.

Area : Destination area (0 - 255)
Fade : The number of 0.02 increments the preset should take to complete. For example, a value of 100 = 0.02 x 100 = 2 seconds.
Join : Join byte, normally 0xff (255)

Set Area to Unpanic

This sets an area back to normal mode. This can be useful to unlock panels.

Area : Destination area (0 - 255)
Fade : The number of 0.02 increments the preset should take to complete. For example, a value of 100 = 0.02 x 100 = 2 seconds.
Join : Join byte, normally 0xff (255)

Set Channel to Preset

This function sets an area channel to a preset.
Assumes a join value of 0xff.

Area : Destination area (0 - 255)
Channel : Channel to set (1 - 255)
Preset : Preset to send (1 - 255)
Fade : The number of 0.02 increments the preset should take to complete. For example, a value of 100 = 0.02 x 100 = 2 seconds.

Level Recall Commands:

Ramp Channel to Level

This function ramps an area channel to a level.
Assumes a join value of 0xff.

Area : Destination area (0 - 255)
Channel : Channel to set (1 - 255)
Level : Percentage (0 - 100)
Fade : The number of 0.02 increments the preset should take to complete. For example, a value of 100 = 0.02 x 100 = 2 seconds.

Stop Fade of Channel

This function stops a ramp.

Area : Destination area (0 - 255)
Channel : Channel to set (1 - 255)
Join : Join byte, normally 0xff (255)

Request Channel Level

This function requests the current level of a channel.

Area : Destination area (0 - 255)
Channel : Channel to set (1 - 255)
Join : Join byte, normally 0xff (255)

Area Status Commands:

Request Current Preset

This function requests the current preset for an area.

Area : Destination area (0 - 255)
Join : Join byte, normally 0xff (255)

Motion Detection:

Occupancy Detection

This function suspends or resumes motion detection for an area/channel.

Area : Destination area (0 - 255)
Channel : Channel to set (1 - 255)
Detection : Suspend/Resume
Join : Join byte, normally 0xff (255)

Events:

Custom Event Trigger

This function allows you to trigger a macro when a specified area goes to a predetermined preset.
For example you could make a remote flip to the cinema page when the light switch was hit as the owner enters the room.

Area : Destination area (0 - 255)
Preset : Preset to send (1 - 255)
Event ID: Event to assign the trigger to (1 - 200)

To create an event trigger follow these steps:

1) Create a new startup macro. That is, a system macro which gets invoked at system startup.

2) For each custom trigger, add a call to "Custom Event Trigger(area,preset,id)" in the startup macro.
Where area = The area you wish to monitor;
preset = the preset that will trigger the event;
id = the custom event the will be triggered.

3) In the events tab of your XP8 add a driver event for each custom trigger.
i.e. When 'Custom Event 1' happens on '(Dynalite Interface)' run macro [2] do something.

Physical:

Reboot Device

This function resets a device.

Device: Select the type of device to reboot from the dropdown.
Box: This is the box number of the device. This is usually the last 2 digits of the serial number sticker, or can be found in DLight2 when the device resets.

Start Task

This function starts a task within a device.

Device: Select the type of device from the dropdown.
Box: This is the box number of the device. This is usually the last 2 digits of the serial number sticker, or can be found in DLight2 when the device resets.
Task: Task number to start (1 - 255)

Stop Task

This function stops a task within a device.

Device: Select the type of device from the dropdown.
Box: This is the box number of the device. This is usually the last 2 digits of the serial number sticker, or can be found in DLight2 when the device resets.
Task: Task number to stop (1 - 255)

Pause Task

This function pauses an already running task within a device. To resume the task send the Start Task message.

Device: Select the type of device from the dropdown.
Box: This is the box number of the device. This is usually the last 2 digits of the serial number sticker, or can be found in DLight2 when the device resets.
Task: Task number to pause (1 - 255)

Request Physical State

This function requests the current physical value from a device. This could be the current temperature, light level etc.

Device: Select the type of device from the dropdown.
Box: This is the box number of the device. This is usually the last 2 digits of the serial number sticker, or can be found in DLight2 when the device resets.
Property: Select the type of value you wish to query from the dropdown. Whilst the protocol allows for many properties, in practise I have only seen Lux and Temperature made available.
Store reply in variable: A total of 10 variables are available to store physical values. Be sure to pick a unique id to ensure you don't get unpredictable results.

Network Commands:

Send Dynet Message

This function allows you to send a custom message to the Dynalite network.

Message: A 7 byte hex string indicating the message to be sent. The CRC is automatically appended. The message string may be in any one of the following formats:

b1:b2:b3:b4:b5:b6:b7
b1,b2,b3,b4,b5,b6,b7
b1b2b3b4b5b6b7

Where b_n is a 2 digit hex representation of a byte. Accepted characters are A-F, a-f, 0-9.

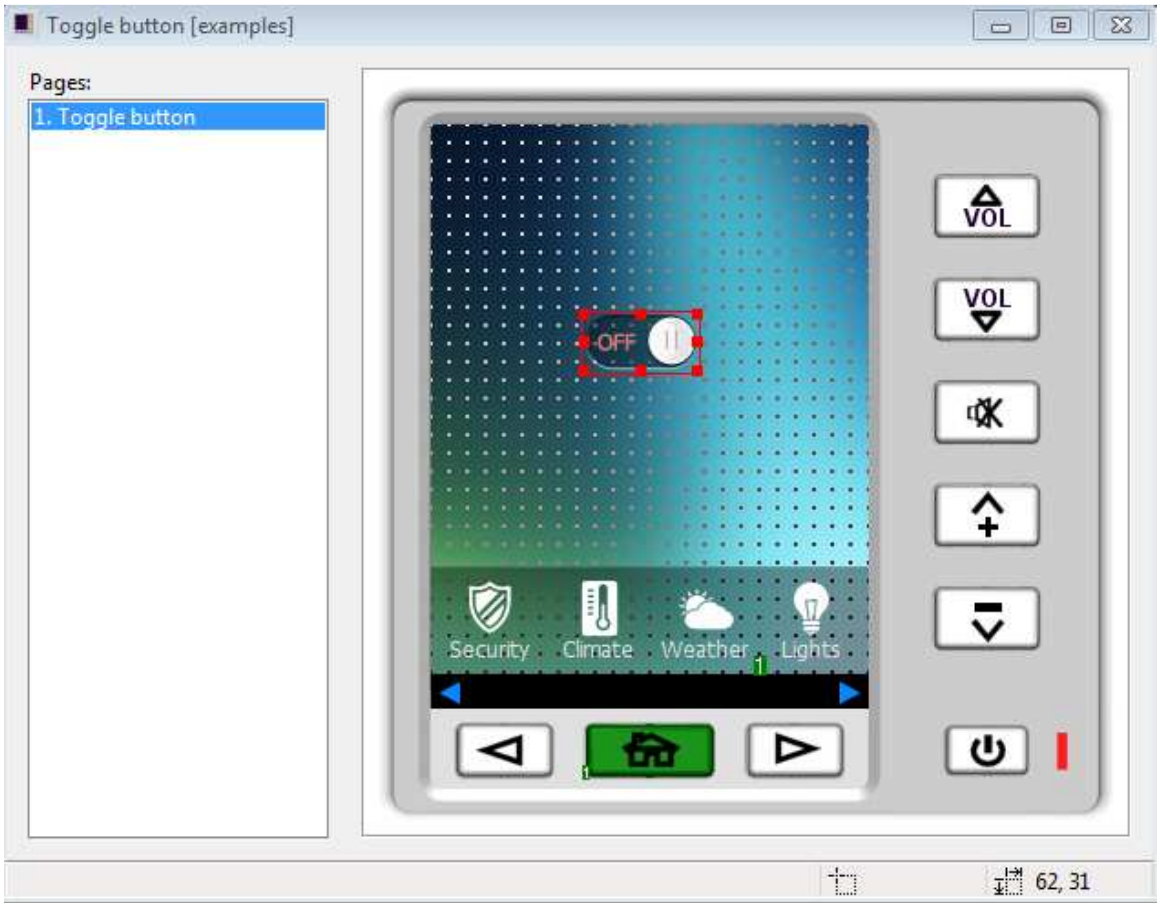
Examples:
1c,01,02,03,04,0a,d8
5c:01:02:03:04:05:06
1C2D931249A0CC

Examples:

Creating a toggle button

This example will walk you through creating a toggle button which will switch area 3 from preset 1 to preset 4.

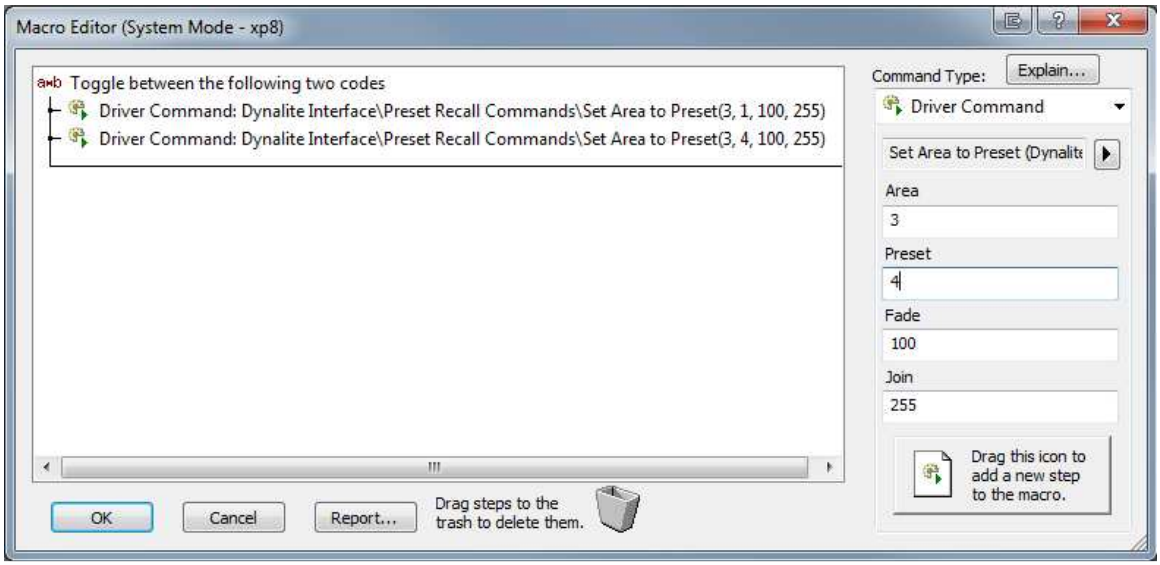
Start by adding either a standard button or a toggle button to your page.



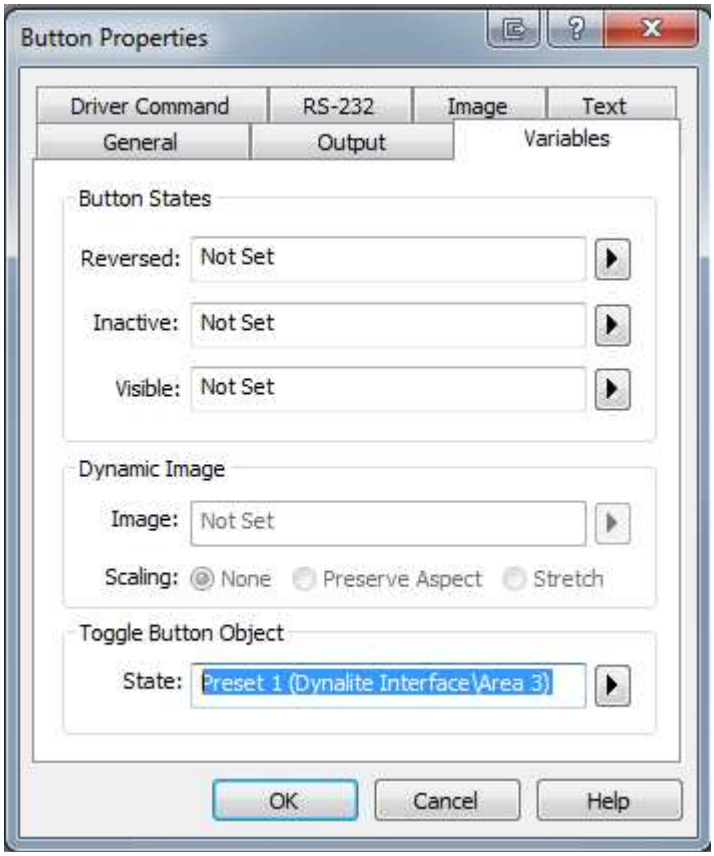
Right click and select "Create Macro..."
Add a "Toggle IR Code" step.

Then add a "Preset Recall Command/Set Area to Preset" from the Dynalite driver. Fill it out to send the ON preset to your area. In our example we'll use Preset 1, Area 3.

Repeat the process for the OFF preset. Most of the time this will be preset 4.



You can then close the macro editor by hitting OK.
Now right click your button and select "Edit Properties".
Navigate to the "Variables" tab and note the "Toggle Button Object" state.
We need to set this to indicate an ON state whenever Area 3 is in Preset 1.



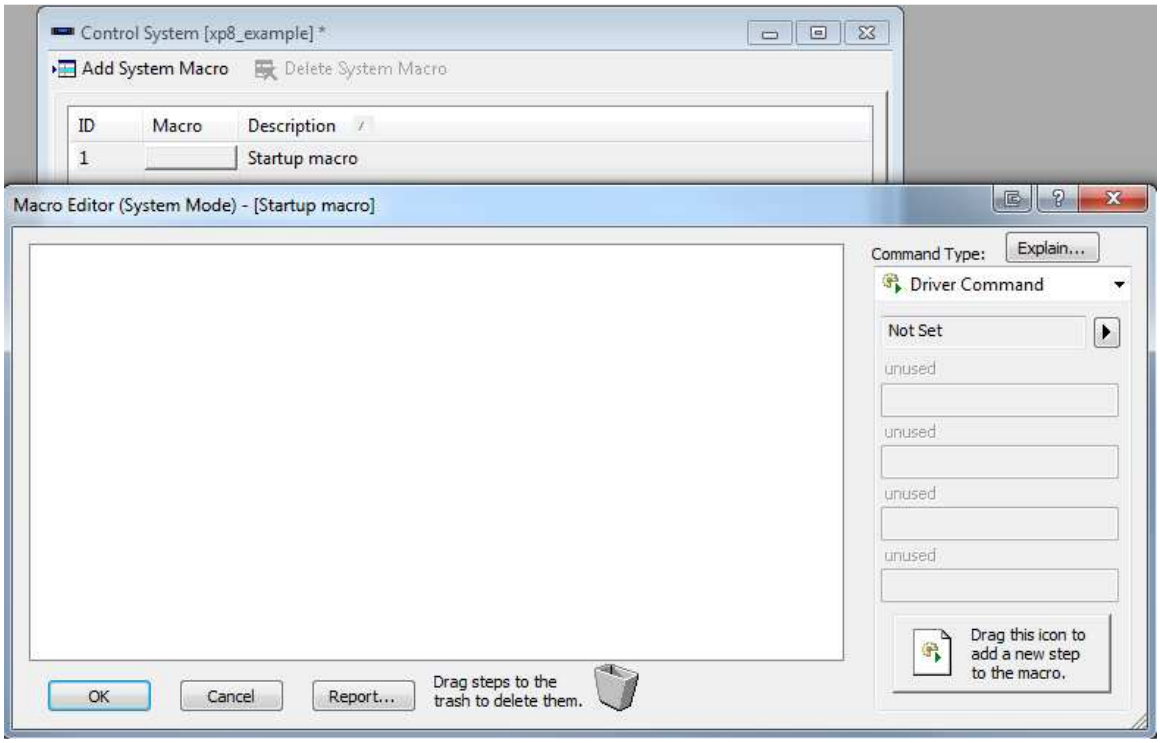
Click OK and you're done. The toggle will now indicate when Area 3 is in Preset 1 even if the user hits a panel on the wall !

Note that if you use a regular button (not a toggle) you can make it appear as if it's in a reversed state by using a similar technique.

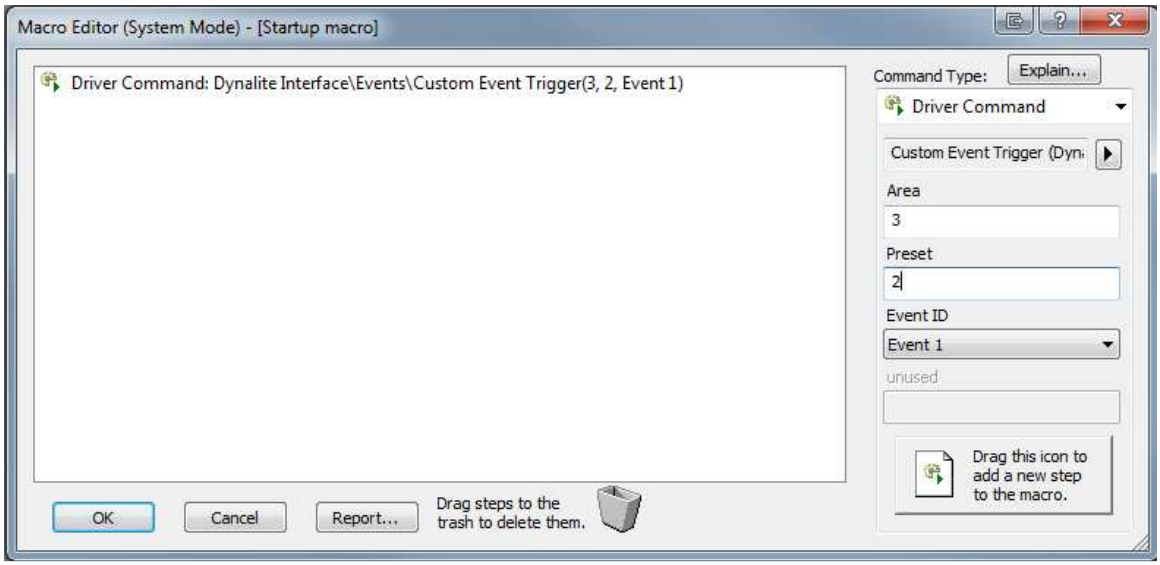
Creating an Event

This example will walk you through creating a custom Dynalite event. This allows you to react to an area/preset message as it's sent across the network. The beauty of this is you can for example, flip to the cinema page on a remote when the user hits the Dynalite wall panel to turn the cinema lights on. Or even fire up the projector and amp based on the user hitting a wall panel button. Very powerful stuff.

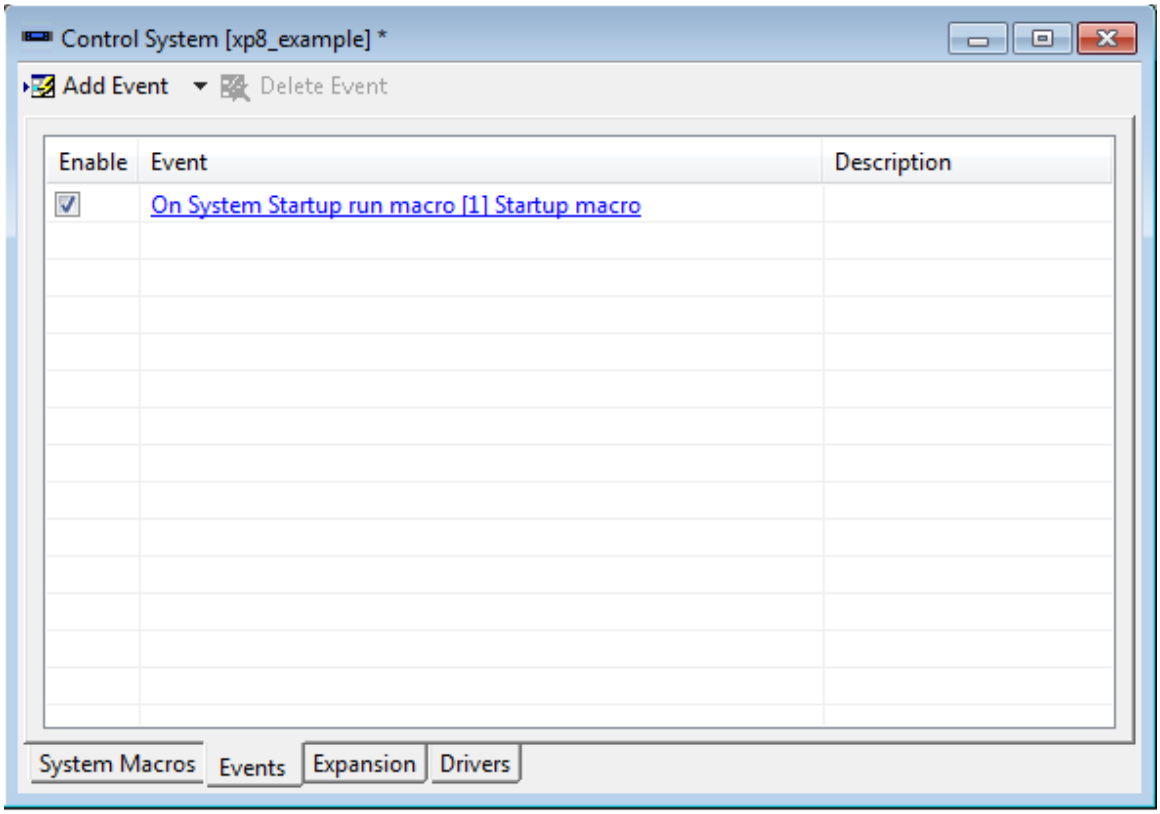
The first thing we need to do is assign an event variable to an area/preset message combo. Start by opening your XP8 and adding a new macro (or adding to it if there is already a startup macro).



Add the driver command: Dynalite Interface -> Events -> Custom Event Trigger.
Set the Area and Preset you want to monitor. In this example we'll use Area 3, Preset 2.
Then assign a unique event ID. In this case it's the first one, so just use Event 1. There are 200 available so try not to reuse them.

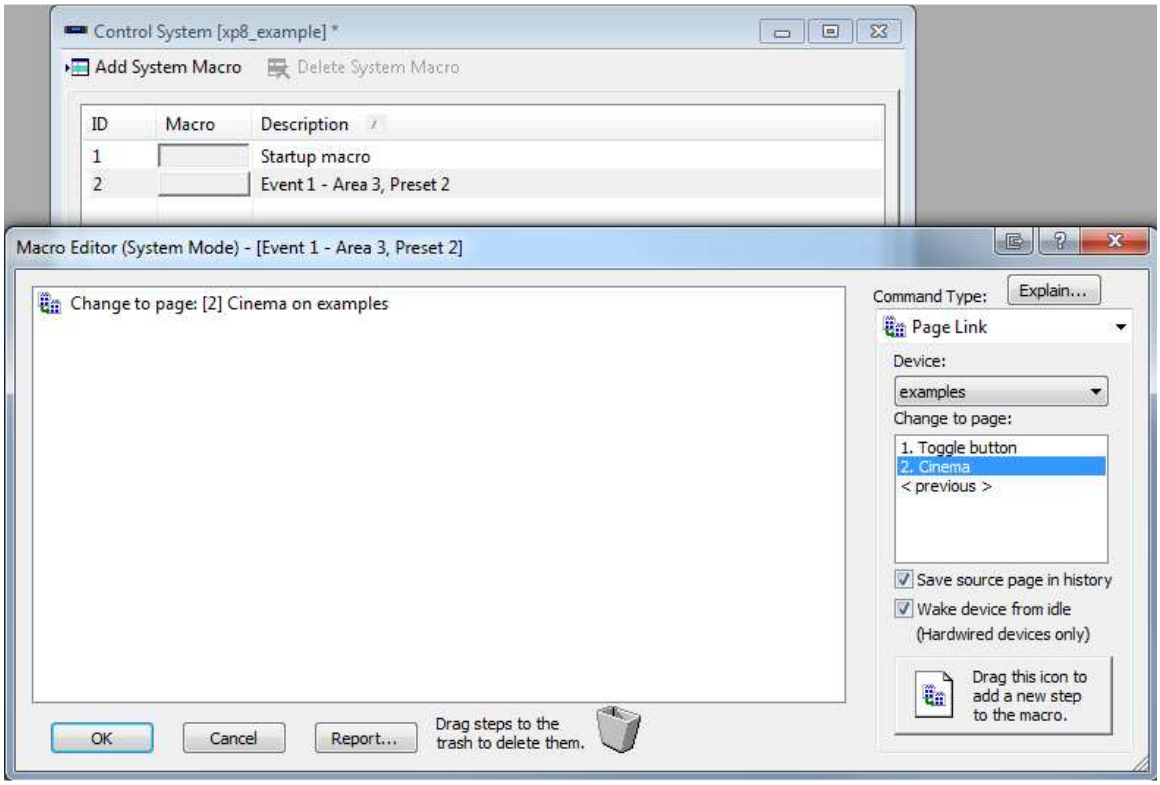


Now we need to ensure our startup macro is executed when the XP8 boots.
Change to the "Events" tab and select Add Event -> Add Startup Event.
Select the "Startup macro" we just created above.



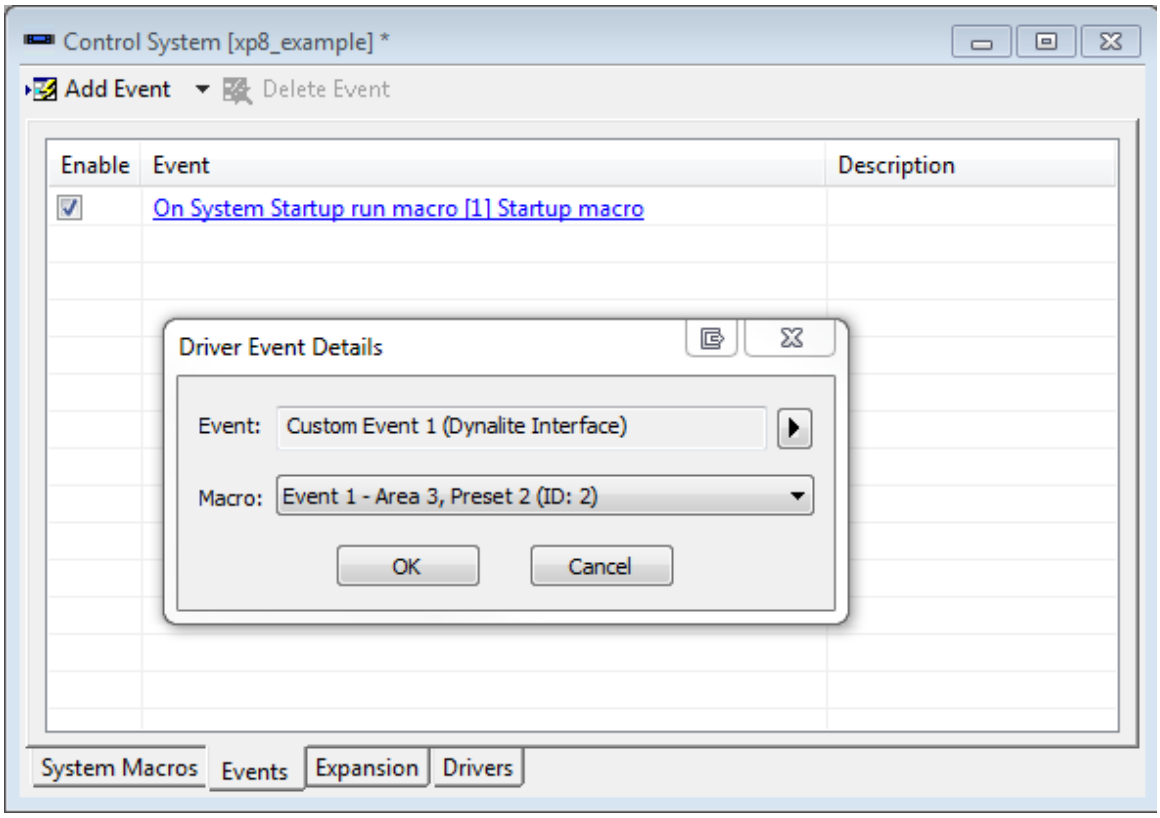
We have now told the XP8 to register Area 3, Preset 2 as Event 1 each time it powers up.
Now we need to add something for it to do when this event occurs.
In my example I have a page on the RK3 that simply displays the text "Cinema Page". You can of course replace this with anything from a page flip to macro commands.

Back to the XP8 "System Macros" tab, create a new macro. Let's call it "Event 1 - Area 3, Preset 2". In this macro i'll do a page flip to my RK3 cinema page. You could of course turn the projector on, amp on etc as well.



We have now registered our interest in the area/preset combination and determined what should happen when the event occurs. All that's left is to join the two together. For that we jump to the XP8's Events tab.

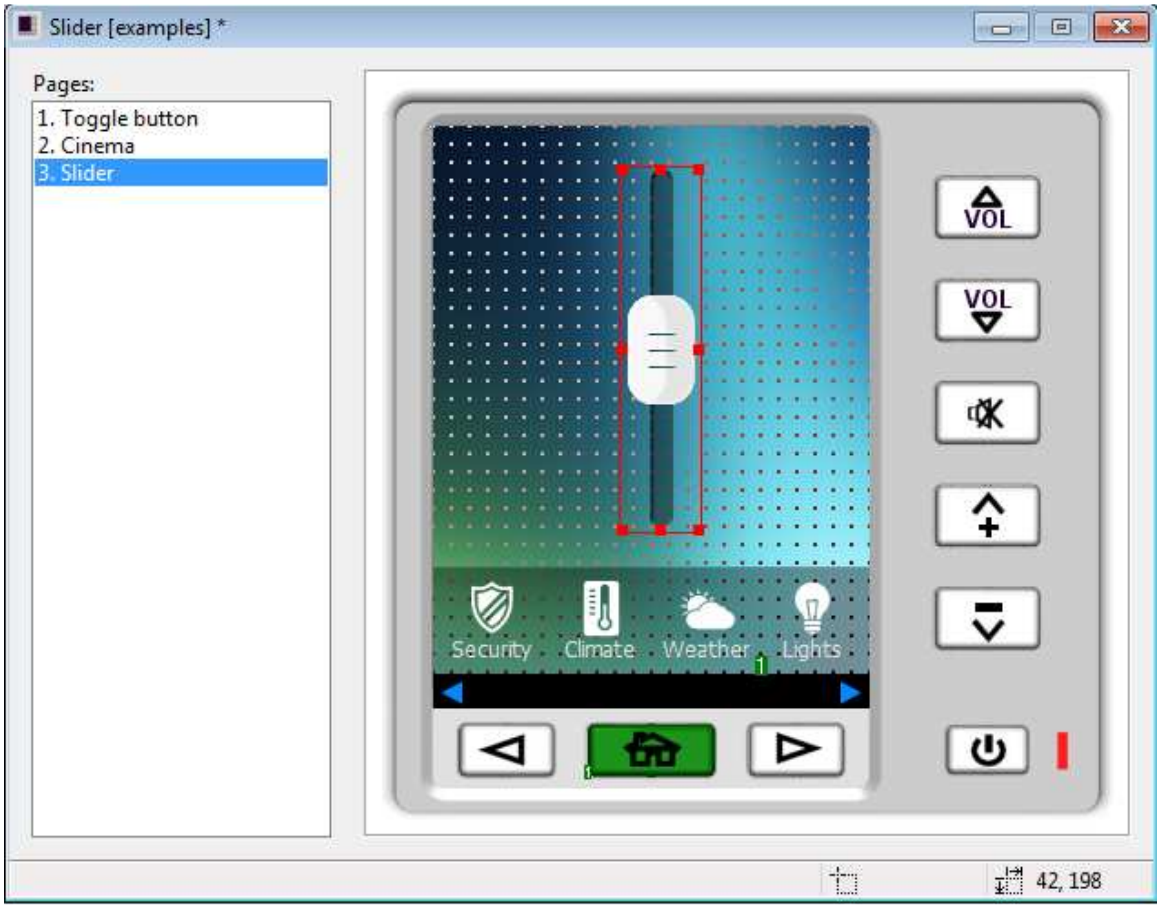
Add a "Driver Event" from the "Add Event" dropdown button.
For the Event, select the "Dynalite Interface -> Custom Event 1". (Remember we assigned Event ID 1 above!)
Then set the action macro to be our "Event 1 - Area 3, Preset 2" macro.



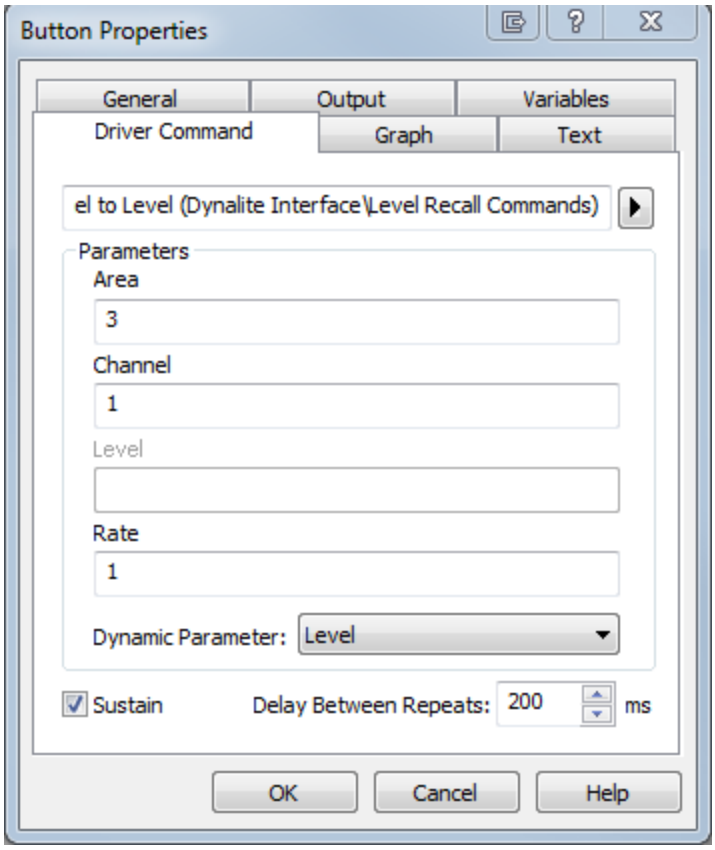
Hit OK and you're done. Now if the user hits a Dyanlite panel (or RTI remote programmed) with Area 3, Preset 2 our RK3 will page flip to the cinema page.

Creating a slider

This example will walk you through creating a slider to dim a channel and provide feedback.
Start by adding a slider object to your page.



Now right click on your slider and select "Edit Properties..."
Select the "Driver Command" tab and set the command to: Dynalite Interface -> Level Recall Commands -> Ramp Channel to Level.
Now change the "Dynamic Parameter" to: Level.
Tip: do this first as it can sometimes reset the other values.
Set the Area and Channel you wish to control. In this example we'll use Area 3, Channel 1.
Set the rate to 1 so the fade happens in real-time.
Make sure the Sustain box is ticked so it'll track the slider movement, rather than a single press.



That's added the command to control the dimmer, now we need to add feedback.
Click on the "Variables" tab and set the "Bar Graph Object" to: Dynalite Interface -> Area 3 -> Channel 1. (Obviously substitute the area/channel you wish to monitor for your project here!)
Hit OK and we're done. The slider will track a wall panel dimming the same area/channel or you can dim the lights with the slider. Neat.

Contact Details:

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