

Pharos Interface Editor User Manual



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Welcome

Introduction

Welcome and thank you for using version v1.1 of the Pharos Interface Editor software.

Platforms

Pharos Interface Editor is designed to run on a PC running Microsoft Windows 7, Vista or XP (SP2+) or an Apple Mac running OS X (10.5.x or later - Intel only).

Help Overview

The Help is split into three major sections: [Quick Start](#), Reference and [Troubleshooting](#).

Those of you experimenting with the software for the first time should work through the Quick Start guide to familiarise yourself with the basics of the software. The Reference section then gives detailed descriptions of every aspect of the software whilst the Troubleshooting section provides help to resolve any problems.

Help Help

This is the PDF version of the online Help and it is available in various formats for printing. The online version, which has the advantage of being fully searchable, can be opened from within Interface Editor by clicking the help button on the main toolbar.

Support

As with all successful control products, support is crucial and the team at Pharos will do everything possible to ensure that your project is a success. Please do not hesitate to contact us with your questions, bug reports and suggestions at:

T: +44-(0)20-7471-9229

E: support@pharoscontrols.com

Please also visit our website to keep up to date with the latest product news and software releases:
www.pharoscontrols.com.

What's new in v1.1

- Graphical interactive control layout
 - Controls can be added and removed from pages
 - Controls can be moved and resized within the page preview with mouse and keyboard
 - Copy and paste controls between pages and projects
 - Various graphical alignment and layout tools
- Page switcher navigation can be added, removed and edited
- New analogue clock control, with customisable face and hands

Overview

Pharos Interface Editor is a tool for designing custom user interfaces for the Pharos Touch Panel Controller (TPC).

The intuitive [user interface](#) makes it easy to organise multiple pages of controls, configure their behaviour and customise their appearance.

Interface Editor comes with layouts of page controls, e.g. buttons, sliders and colour pickers, though experienced users can create their own layouts using the [xml file format](#). Users can also [edit the controls](#) on a page from a layout. Several themes that govern the appearance of page controls are included with Interface Editor and the built-in [Theme Editor](#) allows users to create their own.

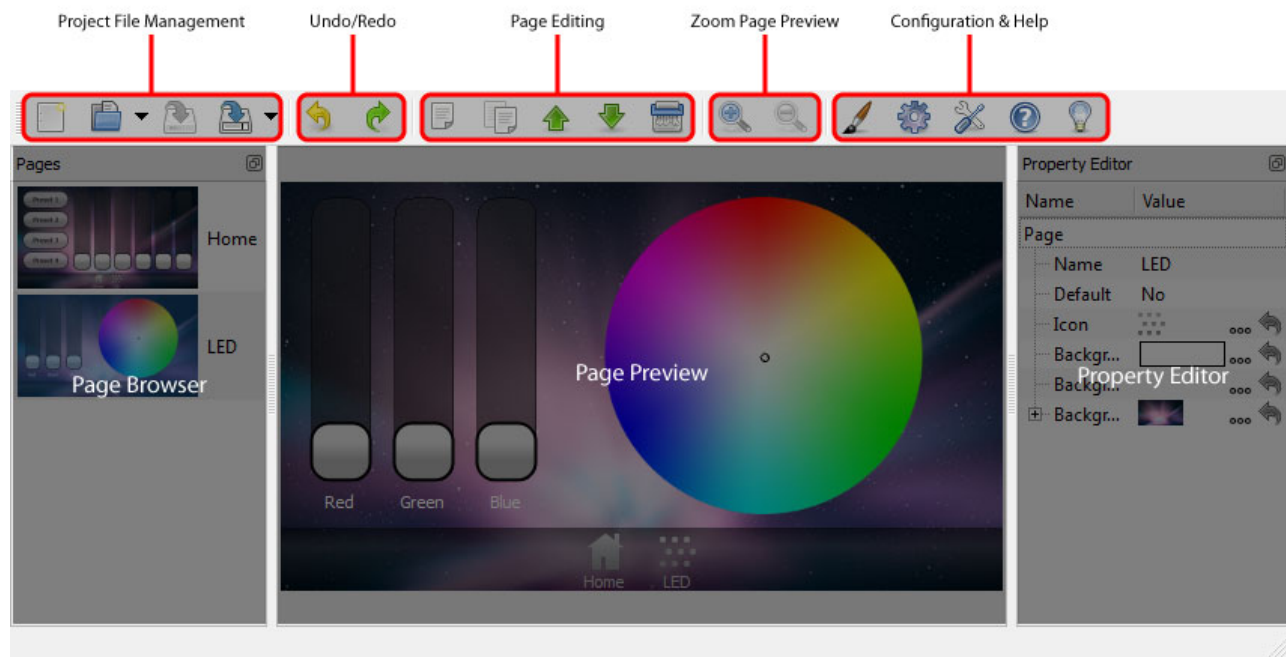
[Page navigation options](#) include the page switcher, which has buttons to switch between pages, each showing the icon and the name of the target page. The page switcher can be placed along any edge of a page. Alternatively, any button can be configured to change the current page, either moving to a particular page, or moving forwards or backwards through the page hierarchy.

If security is required for a user interface, Interface Editor allows users to [set up a lock screen](#) with a keypad for passcode entry. Keypad controls can be added to any page via layouts for custom passcode behaviour.

Interface Editor project files (.ptc) are associated with TPCs in Pharos Designer, where triggers and actions for the user interface controls are created. Designer combines show programming with the user interface, ready for [upload](#) to the TPC.

User Interface

The software has been designed to present a consistent graphical user interface and so it is worth familiarising yourself with the layout of the main window before proceeding further:



Main toolbar

The buttons on the left of the main toolbar provide overall control of your Interface Editor project. [Create new projects](#), open existing projects and save your work using the [file management](#) buttons. Use the Undo/Redo buttons to step backwards and forwards through operations that affect your project. Pages can be [added, copied, moved up and down in the page browser and deleted](#). The zoom buttons give you control of the Page Preview. The final buttons on the toolbar provide access to the [Theme Editor](#), [Project Properties](#), Preferences, Help and information About the software.

Edit toolbar

Located just under the main toolbar by default, this is where the controls and page switchers on a page can be edited. See [Editing Controls](#) for a full breakdown of this toolbar.

Page Browser

The Page Browser, located at the left of the screen, displays all pages that exist within the project. Selecting a page will display it in the Page Preview screen and allow page properties to be adjusted in the Property Editor.

Page Preview

The Page Preview area is located in the centre of the window. Any selected page will be displayed in the Page Preview window. Selecting the page or items on the page allows individual properties to be adjusted in the Property Editor.

Property Editor

The Property Editor displays adjustable properties for any page items that are selected in the Page Preview window. The page, page switchers, buttons, sliders, colour pickers and keypads all have user-configurable properties.

Keyboard shortcuts

For ease and speed of use various keyboard keys map to application commands:

F1	Launch the online help.
Delete	Delete selected item.
Ctrl + N	New project.
Ctrl + O	Open project.
Ctrl + S	Save project.
Ctrl + Z	Undo the last operation.
Ctrl + A	Select all controls.
Ctrl + D	Clear selection.
Ctrl + C	Copy selected controls.
Ctrl + V	Paste selected controls.
Ctrl + Shift + Z OR Ctrl + Y	Redo the last operation to be undone.


Notes for Macintosh users

Pharos Interface Editor makes a good deal of use of the two button mouse with right-click being used to invoke context-sensitive menus. As the majority of Mac users have only a single button mouse they must hold Ctrl while clicking to get this functionality. Tapping two fingers on a Mac touch pad is an alternative method, though this may be switched off in System Preferences. Furthermore Macs have an Command key that serves as the alternative to the Windows Ctrl key. Shift and Alt work as described for Windows.

Project Files

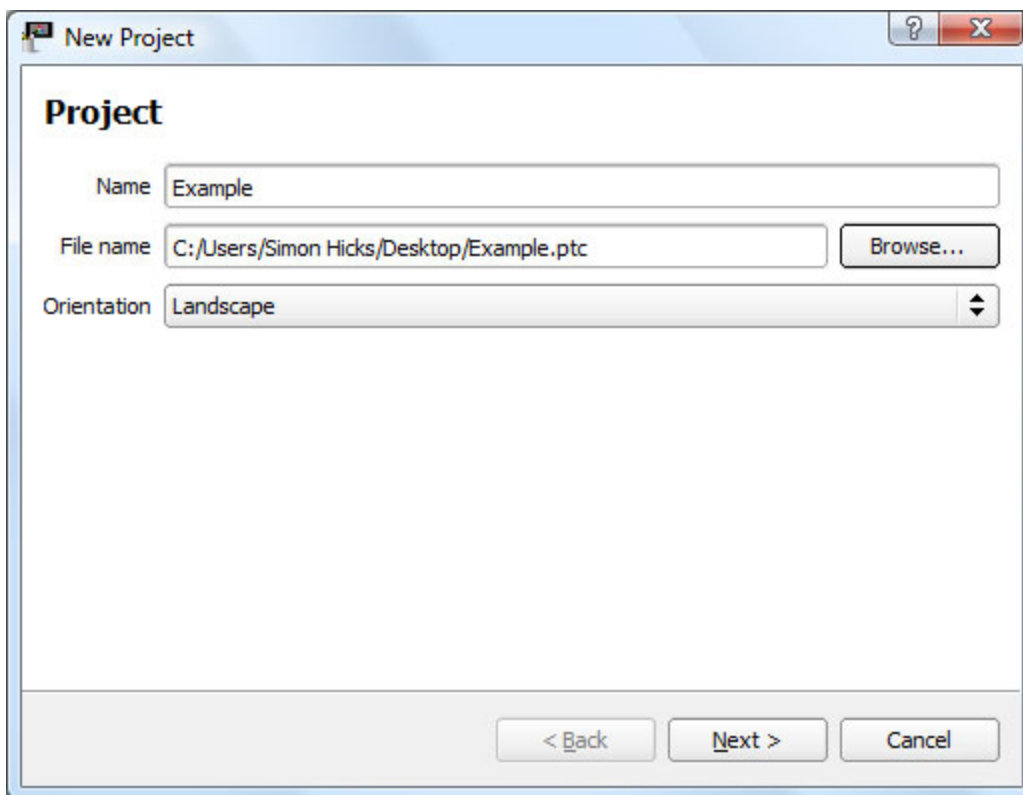
Pharos Interface Editor projects are saved with the file extension ".ptc". Project files also contain all the images and icons used in the project.

Creating a new project

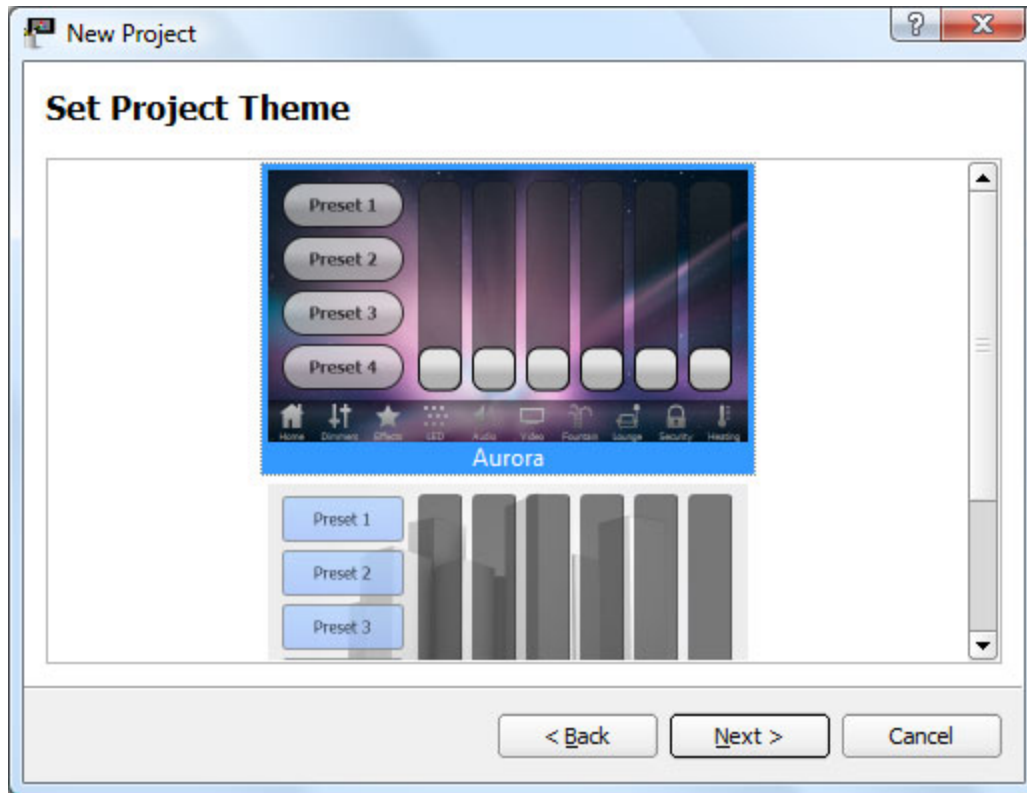
Click  or press Ctrl+N. You will be taken through a new project wizard that sets up a first page of the project. The steps are as follows:

1) Name the project, set the project destination, decide upon the orientation of the project.

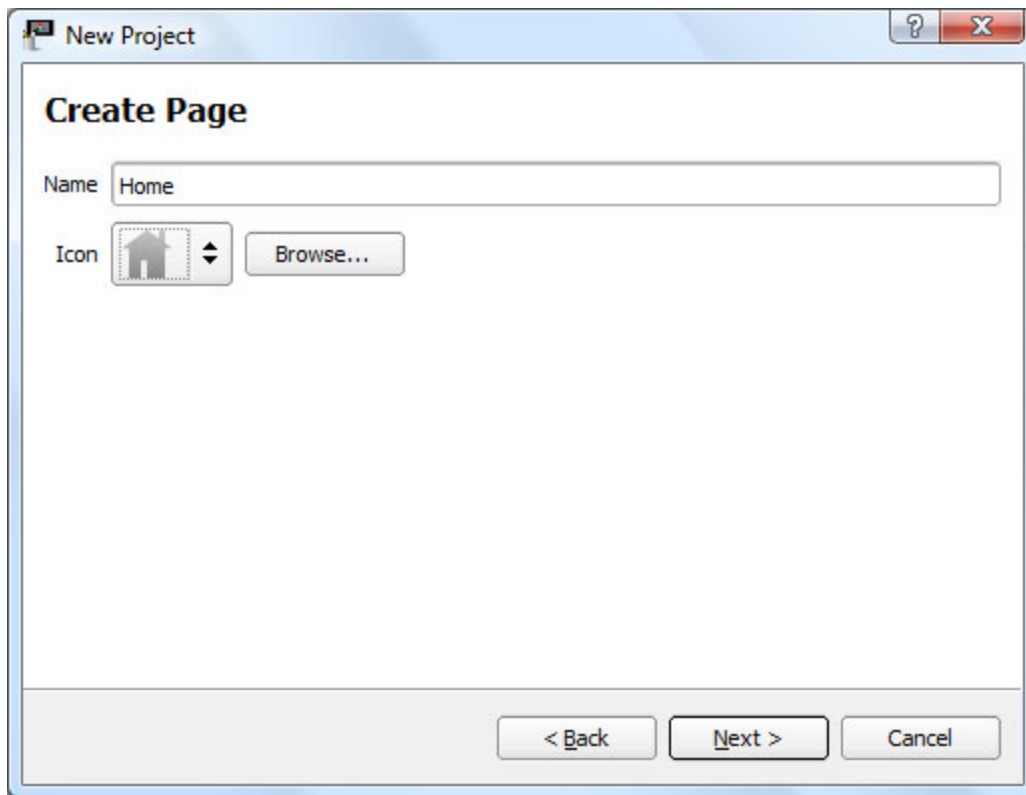
NOTE: the orientation cannot be changed once the project has been created.



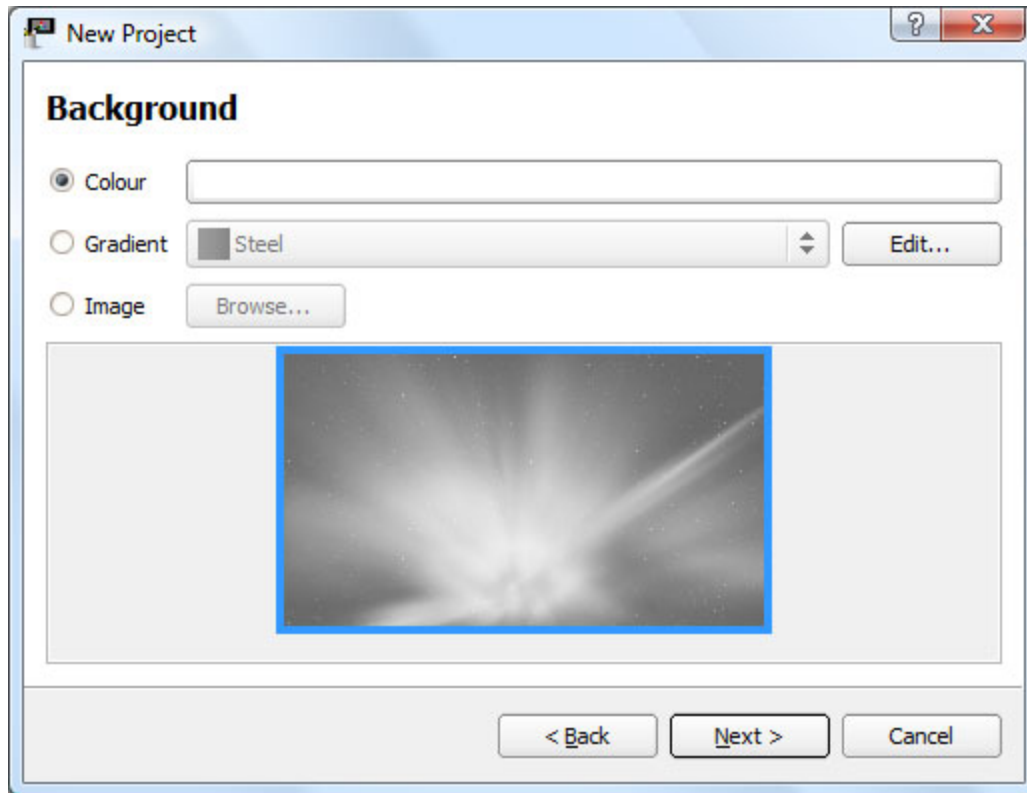
2) Select a project theme. The [built-in themes](#) are documented in an appendix.



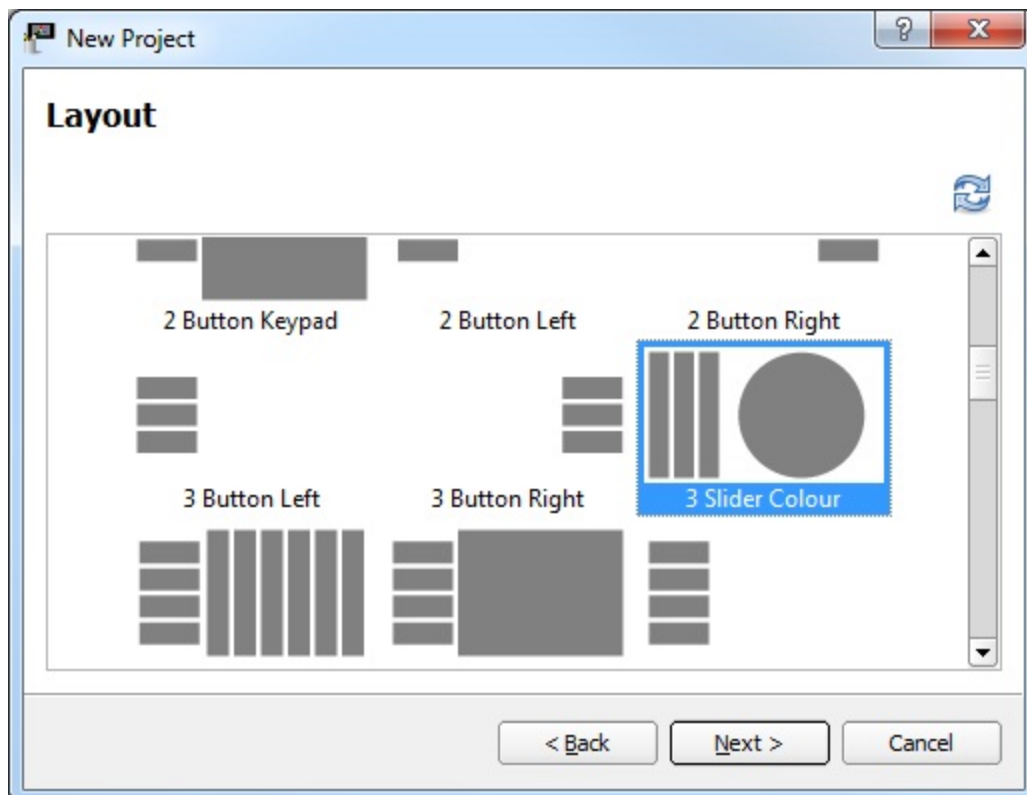
3) Name the first page of the project and add an icon, if appropriate. Page icons are used on page switchers. The icons offered will be from the chosen theme, but you may click the Browse button to choose your own.



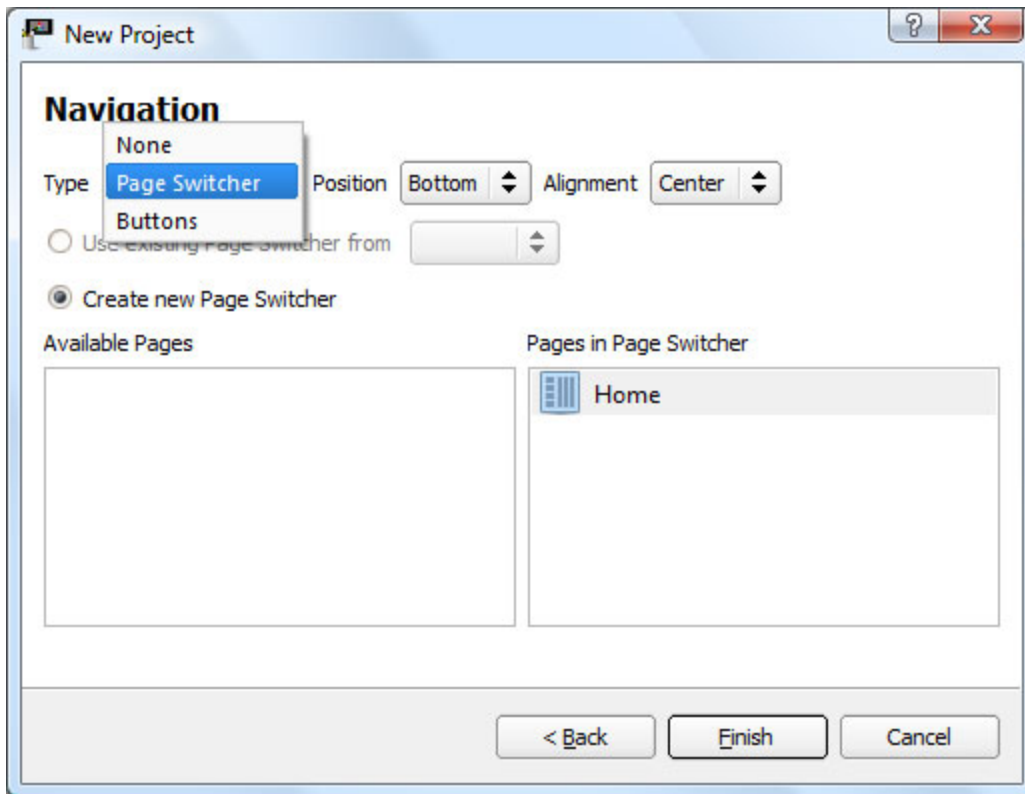
4) Set the page background, using either a colour, gradient or image. Some gradients are included with the application, but a gradient editor is provided for you to create your own. The images offered will be from the chosen theme, but you may click the Browse button to choose your own.



5) Select a page layout.




6) Select a navigation type for moving between pages, choosing from a page switcher or navigation buttons.





Opening a project

Click  or press Ctrl+O. You will be prompted to choose an existing .ptc file to load.


Saving a project

Click  or press Ctrl+S.

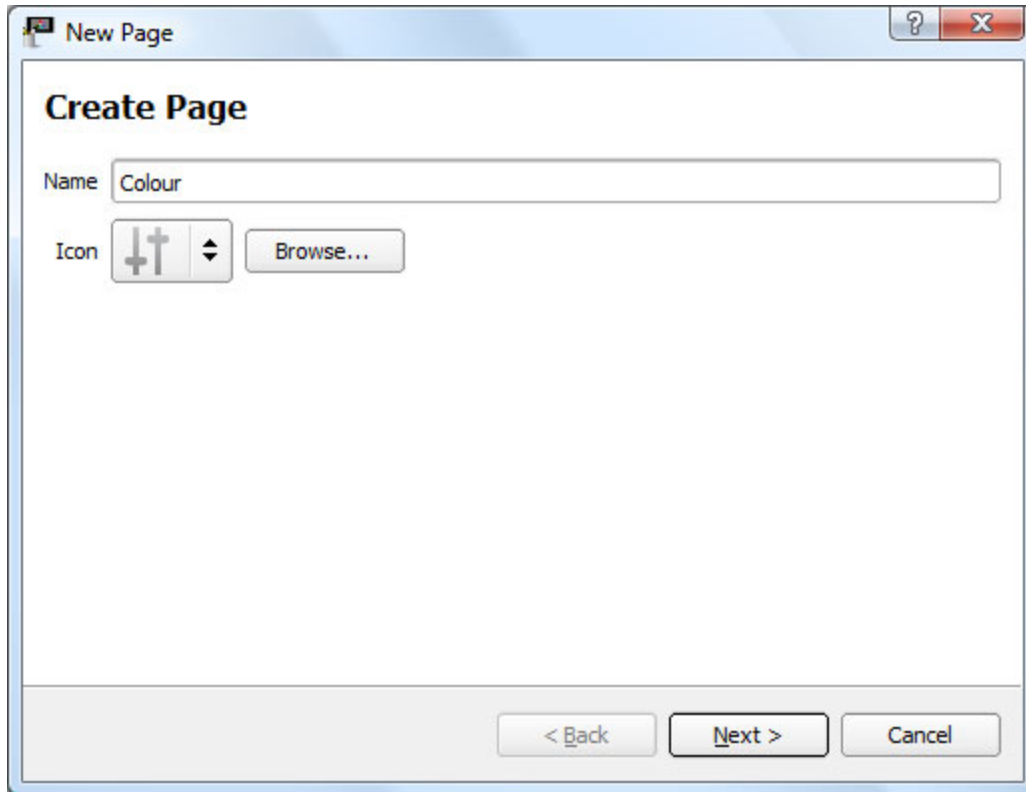
To save to a different file, click . You will be prompted to choose a new location to save to. Subsequent saves will go to the new file.

To save to a different file discarding any images and icons that are not used on pages in your project, click the arrow next to the  button and select Save As (Minimal).

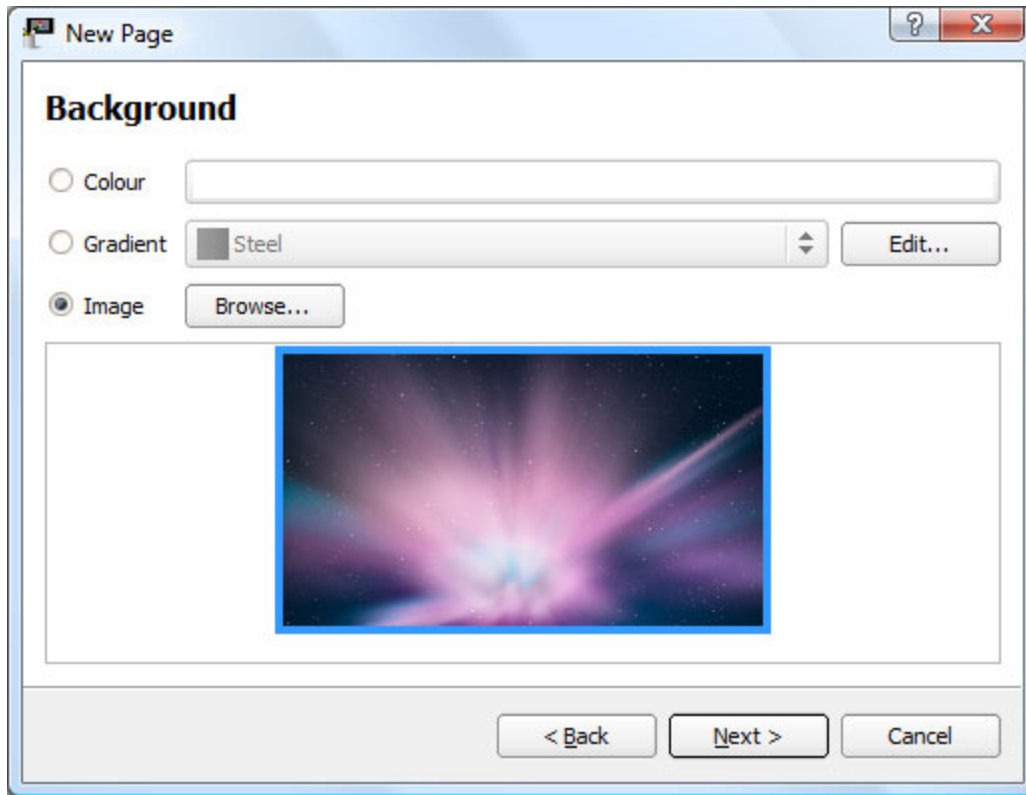
Creating Pages

Click  to create a new page. You will be taken through a new page wizard which contains the following steps:

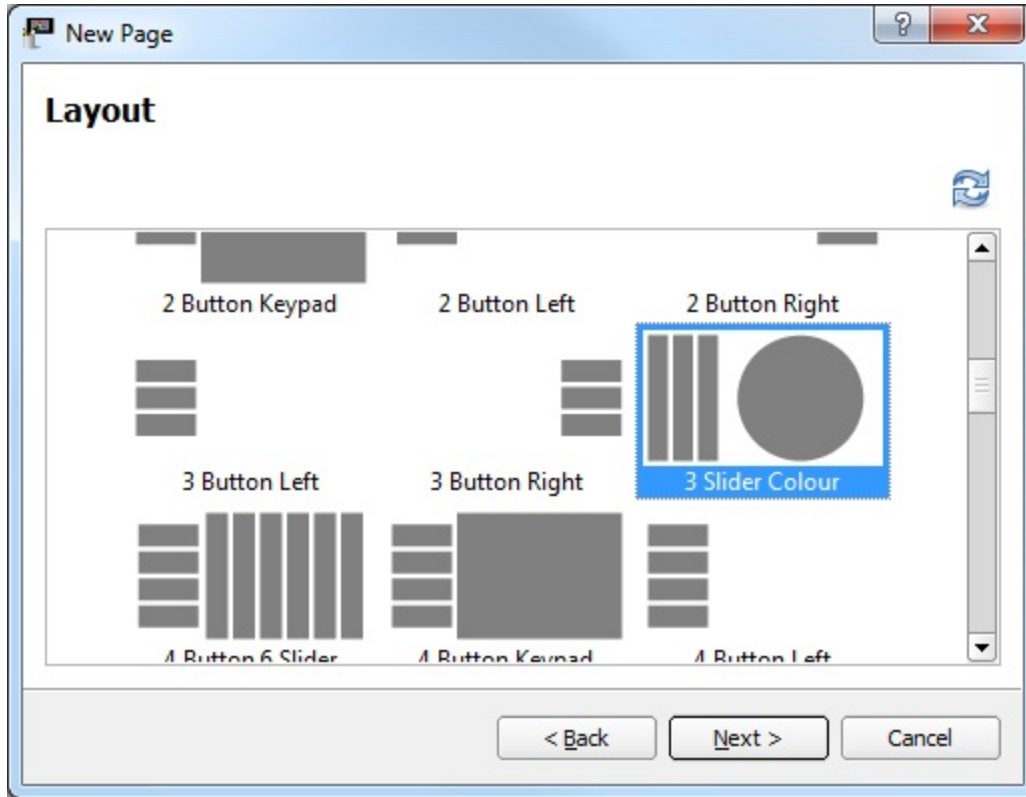
1) Name the page and add an icon, if appropriate. Page icons are used on page switchers. The icons offered will be from the chosen theme, but you may click the Browse button to choose your own.



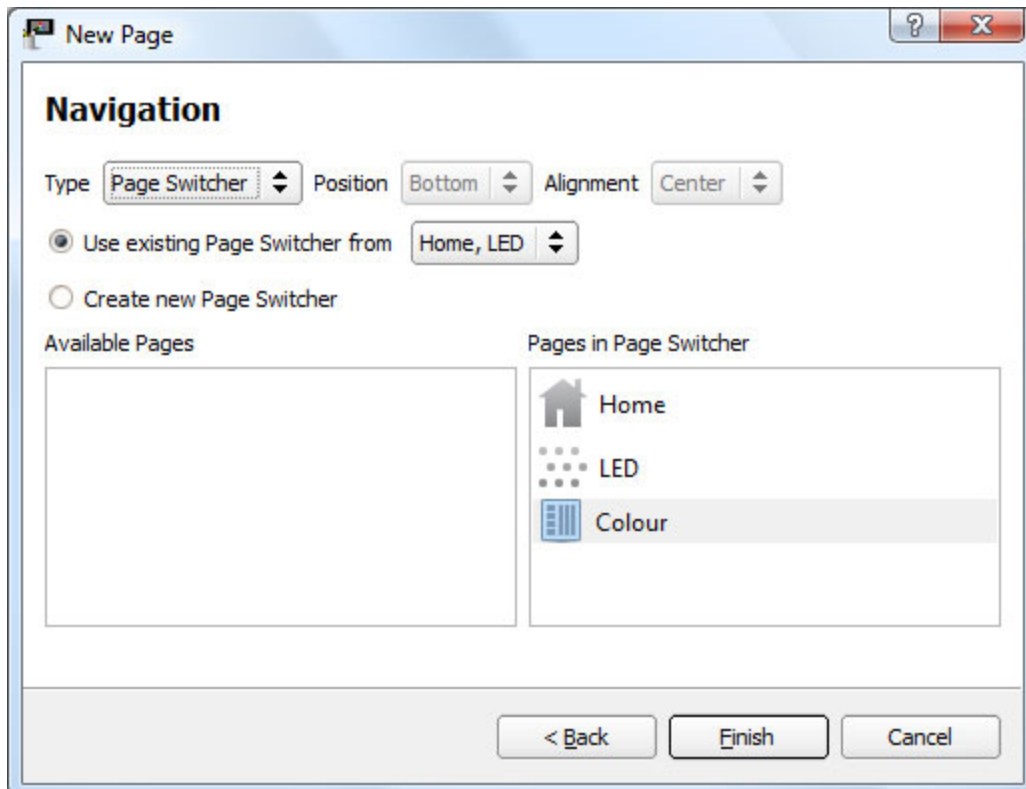
2) Set the page background, using either a colour, gradient or image. Some gradients are included with the application, but a gradient editor is provided for you to create your own. The images offered will be from the chosen theme, but you may click the Browse button to choose your own.



3) Select a page layout. Click  to reload [layout files](#).




4) Select a navigation type for moving between pages, choosing from a page switcher or navigation buttons.





Page Operations


Duplicate Pages

Click  on the toolbar to duplicate the current selected page. The page is added to the end of the page browser's list and its properties, such as Name and Icon, can be adjusted using the Property Editor.



Changing Page Order

Click the  or  icons to move the selected page above or below adjacent pages in the page browser. Buttons assigned to change to the *Next* and *Previous* page will use this ordering (see [page navigation buttons](#)).

Removing Pages from Project

Click  to delete the selected page.

Page Preview Zoom Controls

The  or  buttons can be used to zoom in and out of the page preview window.

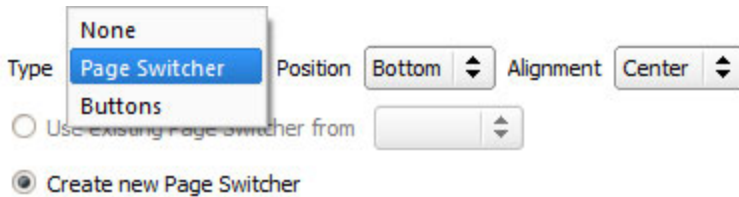
Page Navigation

Configuring Page Navigation

There are two methods for managing navigation between pages for projects that contain multiple pages:

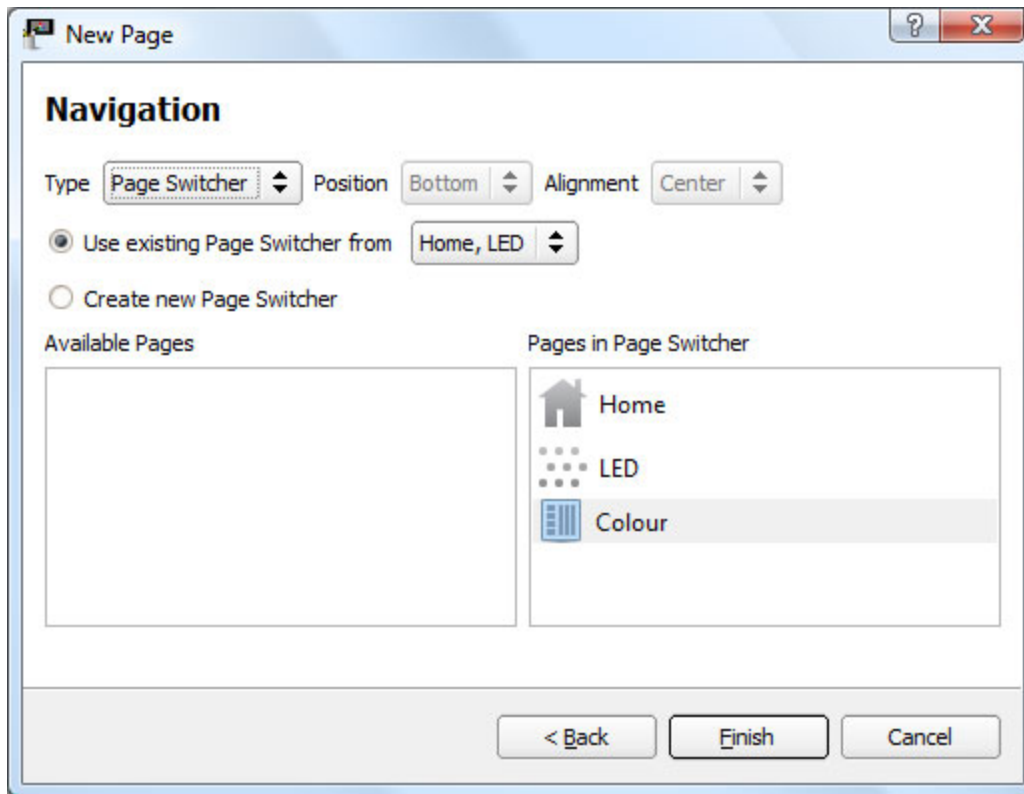
- Page Switchers
- Navigation Buttons

These can be created from the [Navigation step](#) of the new page wizard or by pressing 



Page Switchers

The position of a page switcher on the screen can be set along with its alignment. It is possible to use an existing page switcher from another page, or alternatively you may create a new page switcher and drag the desired pages across from the Available Pages box to the Pages in Page Switcher box.

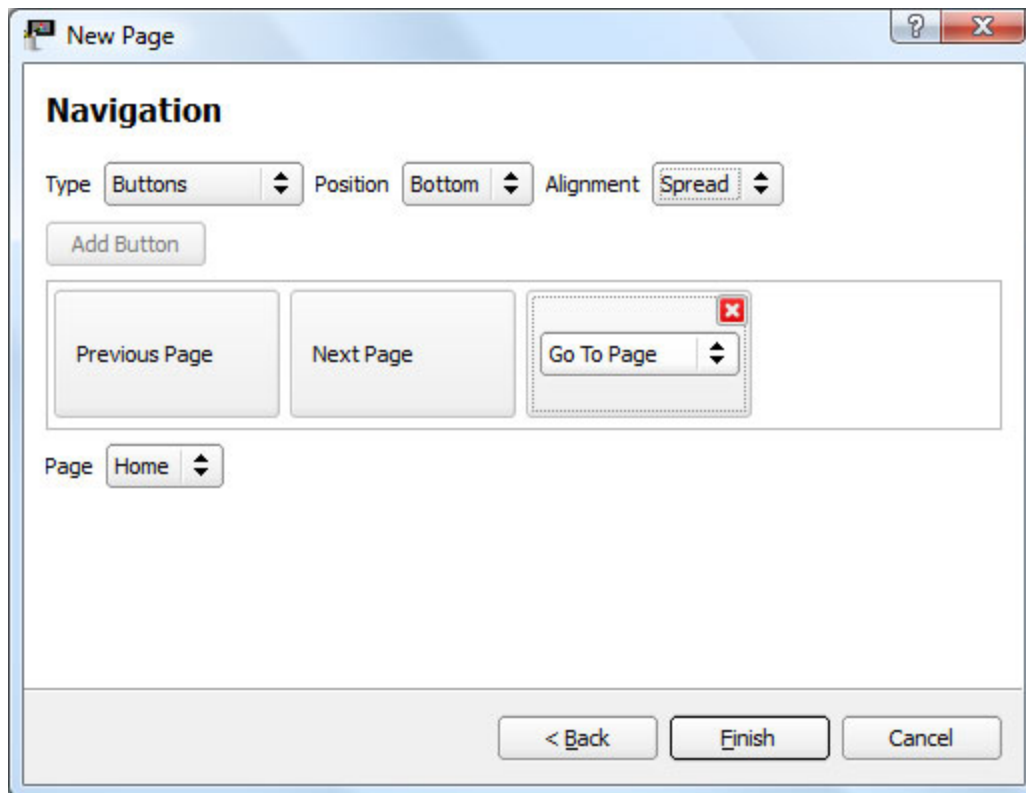


The pages in the page switcher can be adjusted later by right-clicking the page switcher in the Page Preview window and selecting Edit Page Switcher.

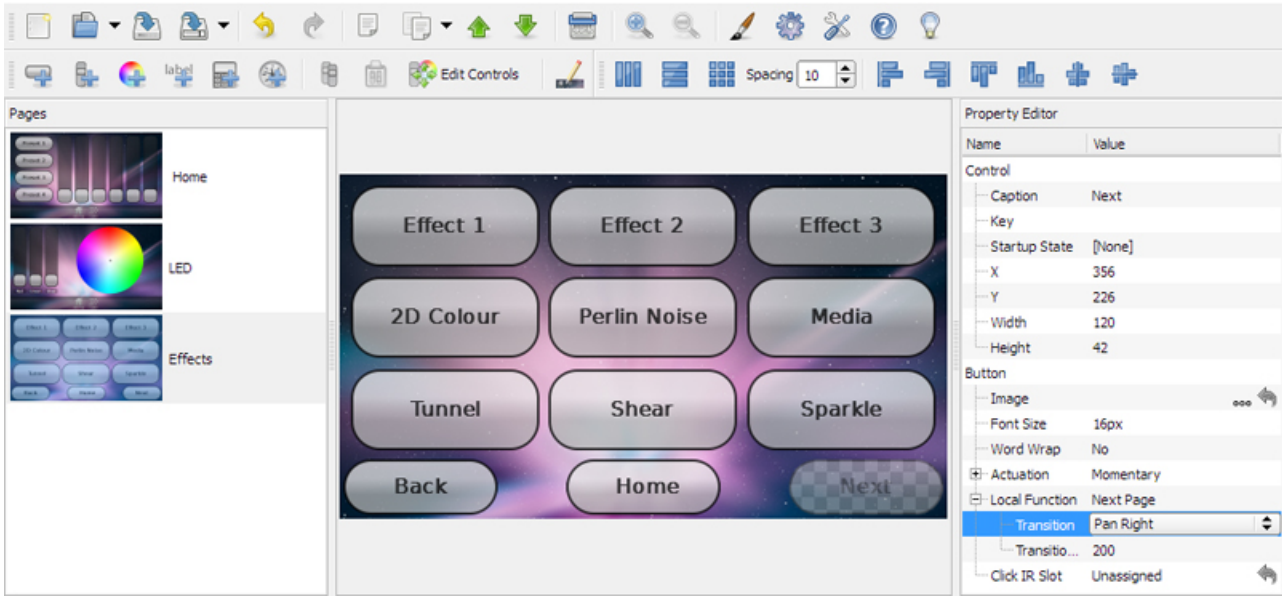
Navigation Buttons

Navigation buttons can be positioned at the top or bottom of a page. Alignment options are Start, End, Center or Spread. A maximum of three buttons can be added and each button's function can be set from the following list:

- Next Page (go to the page after this one, governed by the order shown in the page browser)
- Previous Page (go to the page before this one, governed by the order shown in the page browser)
- Back (go to whichever page was shown before the current page)
- Go To Page




The function of navigation buttons can be adjusted at any time by selecting the button in Page Preview and changing the Local Function in the Property Editor:



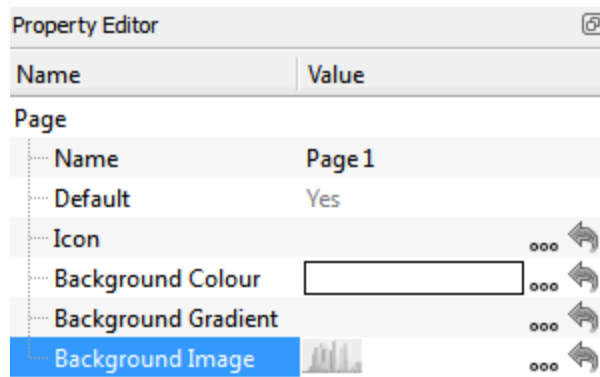
Property Editor

Using the Property Editor

The Property Editor displays controls associated with a selected page or item. Click the **...** icon, where it appears, provides access to further options to customise the property or import from a file browser. Clicking the  icon resets a property to its default value.

Page Properties

The page name (as appears in the page browser and on page switchers) can be edited and a page may be set as the default on TPC startup. An icon can be associated with the page and the background can be set as a colour, gradient and or image.



Page Switcher Properties

After selecting a page switcher in the page preview window, the following properties can be set:

Alignment - the alignment of the page switcher icons.

Background Gradient - set by default from the theme; select a new gradient from the gradient library, or click **...** to launch the gradient editor.

Background Opacity - set by default from the theme.

Font Size - set by default from the theme; size of the font used to display page names.

Text Colour - set by default from the theme; colour of the text used to display page names.

Show Page Names - set by default from the theme; determines whether page names are displayed beneath the icons.

Highlight Colour - set by default from the theme; colour that surrounds the icon and page name of the currently active page.




Highlight Opacity - set by default from the theme.

Show Time - choose whether to show the time. Time layout is customisable.

Show Date - choose whether to show the date. The format of the date is customisable in a property drop down when selected.

Date/Time Font Size - set the size of the font used to show the time and date.

Date/Time Position - choose the position of the time and/or date on the page switcher.

Property Editor	
Name	Value
Page Switcher	
Alignment	Center
Background Gradient	 ... ↶
Background Opacity	0.5
Font Size	11px
Text Colour	 ... ↶
Show Page Names	Yes
Highlight Colour	 ... ↶
Highlight Opacity	0.5
<input type="checkbox"/> Show Time	Yes
Time Format	hh:mm
<input type="checkbox"/> Show Date	Yes
Date Format	d/M/yyyy
Date/Time Font Size	11px
Date/Time Position	End

Button Properties

After selecting a button in the page preview window, you may adjust the following properties:

Caption - the text that appears on a button, defining its purpose. The caption of a control can be changed via the Set TPC Control Caption trigger action in Designer - see the [Designer help](#) for more information about TPC actions.

Key - the reference for the control within triggers in Pharos Designer. By default this will be set to <control type>XXX, where <control type> is 'button' or 'slider', etc. and XXX is a unique number for the control, which starts at 001 for a new project, e.g. button123. Setting the control key to be the same for two controls will mean that they will fire the same trigger in Designer. A single TPC trigger in Designer can match multiple control keys through the use of variables. See the [Designer help](#) for more information on using variables with the TPC triggers.

Startup State - choose which state the item should be in when the Controller starts up.

X - The position, in pixels, of the control on the horizontal axis of the screen relative to the top left corner of the control.

Y - The position, in pixels, of the control on the vertical axis of the screen relative to the top left corner of the control.

Width - The width of the control in pixels.

Height - The height of the control in pixels.

Image - choose an image to display instead of the themed shape of the button. Either choose from button images already used in the project or click ... to browse for a new image. Images will be stretched to fill the area of the button. Transparency in images is supported. Overall transparency of the button will still be determined by the current theme. Click ↶ to remove the image and return the button to the themed shape.

Font Size - set by default from the theme; size of the font used to display the button caption.

Word Wrap - set by default from the theme; determines whether the caption of a button will flow onto multiple lines if necessary.

Actuation - can be set to Momentary or Maintained. Momentary indicates the button will trigger a 'press' and 'release' every time it's touched; Maintained indicates the button will remain depressed when tapped once, and will only release when tapped again.

Held Timeout, Repeat Interval - specify the length of time the button must be held before 'repeat' triggers begin firing and how rapidly 'repeat' triggers fire.

Local function - can be set to: None, Next Page, Previous Page, Back, Go To Page, Increase Brightness, Decrease Brightness, Set Brightness. Each function has associated sub-properties. For example, in the screenshot below the Next Page transition can be set to None, Pan Left or Pan Right and a transition duration can be set.

Click IR Slot - This associates an IR slot with the button. The IR slot can be activated by an IR remote control, mimicking a button being tapped.

Property Editor	
Name	Value
Control	
Caption	Effect 1
Key	button005
Startup State	[None]
X	10
Y	10
Width	147
Height	62
Button	
Image	ooo ↶
Font Size	16px
Word Wrap	No
Actuation	Momentary
Held Tim...	500ms
Repeat I...	200ms
Local Function	Next Page
Transition	Pan Right
Transitio...	200
Click IR Slot	Unassigned ↶

Slider Properties

Control properties for sliders are identical to the control properties for buttons. Properties specific to sliders are:

Show Value - whether the value of the slider is displayed next to it.

Unit - this sets whether the value should be displayed as a percentage or 8-bit value (0-255).

Caption Font Size - set by default from the theme; size of the font used to display the slider caption.



Value Font Size - set by default from the theme; size of the font used to display the slider value.

Text Spacing - set by default from the theme; spacing between the slider and the first line of text, and the spacing between the caption and value.

Handle Size - set by default from the theme; fraction of the slider track that is occupied by the slider handle (0.05 - 0.95).

Increment IR Slot - this allows an IR slot to be associated with incrementing the slider level.

Decrement IR Slot - this allows an IR slot to be associated with decrementing the slider level.

Property Editor	
Name	Value
Control	
Caption	Intensity
Key	slider001
Startup State	[None]
X	150
Y	10
Width	44
Height	211
Slider	
Show Value	No
Unit	Percent
Caption Font...	11px
Value Font Size	11px
Text Spacing	6px
Handle Size	0.2
Increment IR...	Unassigned 
Decrement I...	Unassigned 

Colour Picker Properties

Control properties for colour pickers are identical to the control properties for buttons. Properties specific to colour pickers are:

Font Size - set by default from the theme; size of the font used to display the colour picker caption.

Text Spacing - set by default from the theme; spacing between the colour picker wheel and the caption text.

Property Editor	
Name	Value
Control	
Caption	Washes
Key	colour001
Startup State	[None]
X	160
Y	10
Width	310
Height	211
Colour Picker	
Font Size	11px
Text Spacing	6px

Label Properties

Control properties for labels are identical to the control properties for buttons. Properties specific to labels are:

Font Size - set by default from the theme; size of the font used to display the caption text in the label.

Word Wrap - set by default from the theme; determines whether the caption of a label will flow onto multiple lines if necessary.

Property Editor	
Name	Value
Control	
Caption	Press a button
Key	label001
Startup State	[None]
X	230
Y	20
Width	50
Height	93
Label	
Font Size	16px
Word Wrap	No

Keypad Properties

Control properties for keypads are identical to the control properties for

buttons. Codes entered into keypads can be processed by triggers in Designer - see the [Designer help](#) for more information about TPC triggers.

Max Digits - set the maximum amount of characters that may be entered into a keypad by the user at a time.

Hide Characters - choose whether the characters entered into a keypad are hidden or shown.

Property Editor	
Name	Value
Control	
Caption	Passcode
Key	keypad001
Startup State	[None]
X	65
Y	10
Width	150
Height	211
Keypad	
Max Digits	4
Hide Charact...	Yes

Clock Properties

Control properties for clocks are identical to the control properties for buttons. Properties specific to labels are:

Font Size - set by default from the theme; size of the font used to display the colour picker caption.


Text Spacing - set by default from the theme; spacing between the colour picker wheel and the caption text.

Property Editor	
Name	Value
Control	
Caption	Time
Key	clock001
Startup State	[None]
X	295
Y	10
Width	175
Height	211
Clock	
Font Size	11px
Text Spacing	6px

Editing Controls

To add new control items to a page, simply select which control you would like to add then drag and release on the page where you would like the control to be. You can add buttons, sliders, colour pickers, labels, keypads and clocks.



To edit controls that are already on the page, click  and then select the controls you would like to edit. You can now edit the controls by using your mouse to move and resize the controls or move the controls by pressing the arrow keys on your keyboard.

You can delete controls by selecting the controls and then clicking .

With multiple controls selected you can use a variety of tools to alter their layout:

Icon: Layout control:



Layout selected controls horizontally



Layout selected controls vertically



Layout selected controls in a grid



Align selected controls to the left



Align selected controls to the right



Align selected controls to the top



Align selected controls to the bottom



Align selected controls to the middle in a vertical line

Effect:

Moves and resizes the selected controls to fill the selection box with spacing between controls dictated by the spacing value. Controls will be laid out horizontally.

Moves and resizes the selected controls to fill the selection box with spacing between controls dictated by the spacing value. Controls will be laid out vertically.

Moves and resizes the selected controls to fill the selection box with spacing between controls dictated by the spacing value. Controls will be laid out in a grid. This grid layout supports controls that span multiple rows or columns.

Moves the controls to the left-most point of the selection box. Does not effect the Y axis or control size.

Moves the controls to the right-most point of the selection box. Does not effect the Y axis or control size.

Moves the controls to the top of the selection box. Does not effect the X axis or control size.

Moves the controls to the bottom of the selection box. Does not effect the X axis or control size.

Moves the controls to the centre of the selection box in a vertical line. Does not effect the Y axis or control size.



Align selected controls to the middle in a horizontal line Moves the controls to the centre of the selection box in a horizontal line. Does not effect the X axis or control size.

Uploading to a Controller

Interaction with Pharos Designer

To upload a .ptc project onto a TPC, save the configuration in Interface Editor, start Pharos Designer and navigate to the Network view.

Select the appropriate TPC in the Network view and go to the Controller Properties tab on the right of the screen.

In the Screen section, set the .ptc file as the Interface Editor project. Once a .ptc file has been associated with a TPC in Designer, any changes to the Interface Editor project will be automatically detected and imported into Designer.

See the [Designer help](#) for details of the other properties.


NOTE: please use Designer version 1.9.4 or later with this version of Interface Editor.

The screenshot shows the 'Controller Properties' dialog box with the 'Controller Config' tab selected. The dialog is divided into several sections:

- Identification:** Contains fields for 'Number' (set to 1), 'Name' (empty), 'Type' (set to TPC), and 'Universes' (set to 1). There is also a 'Serial number' dropdown set to 'None' and a 'Set As Time Server' button.
- Screen:** Contains an 'Interface Editor project' field with the path './Users/Simon Hicks/Desktop/Help.ptc' and a browse button. Below are 'Brightness' settings for 'Normal' (50%) and 'Inactive' (25%), and 'Timeout' settings for 'Inactive' (1mins) and 'Off' (3mins). There are two checked checkboxes: 'Adjust brightness for ambient light' and 'Wake screen on proximity detection'.
- Playback:** Contains a 'Refresh rate' dropdown set to 'Normal'.
- Real Time:** Contains a checkbox for 'Execute time triggers on startup from' which is unchecked, and a time field set to '12:00:00'.

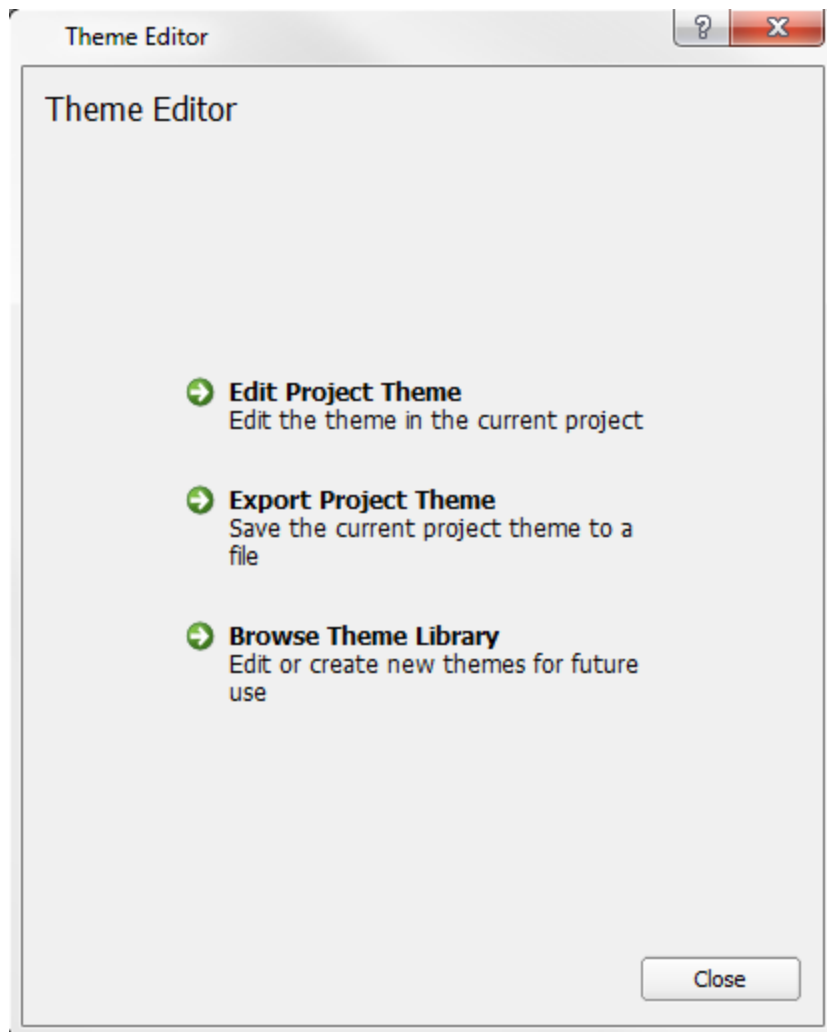
Theme Editor

The theme editor facilitates the creation and editing of custom TPC themes. It allows you to add and edit background images, icons and item states.

Click  on the toolbar to launch the theme editor.

Theme editor launch window

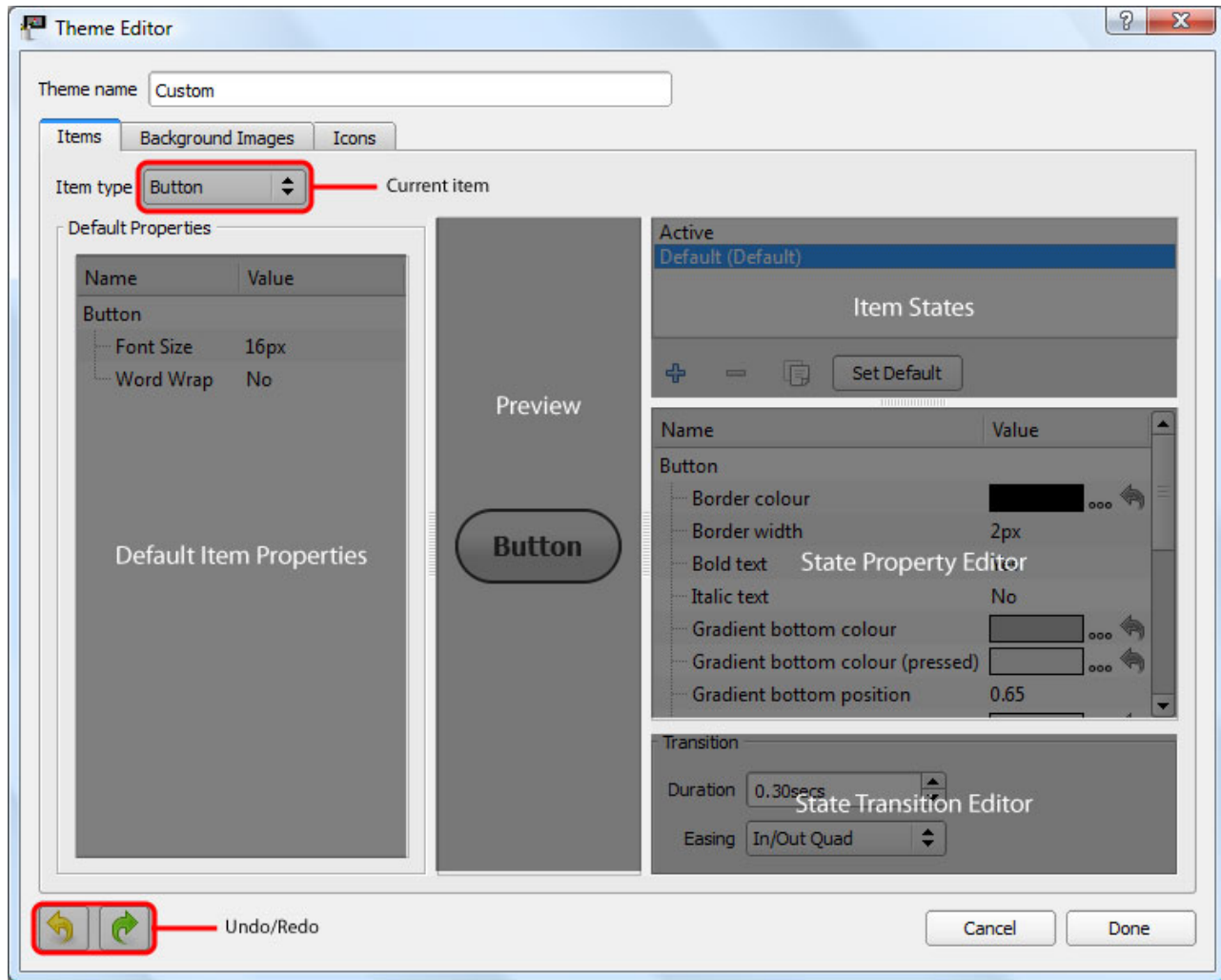
When the theme editor launches, it will display a page of options. Here you can choose to edit the theme in the current project, save the current project theme to a file or edit and create a new theme for future use.



Editing a project theme

The theme editor has three tabs for editing different aspects of a theme.

Editing item states



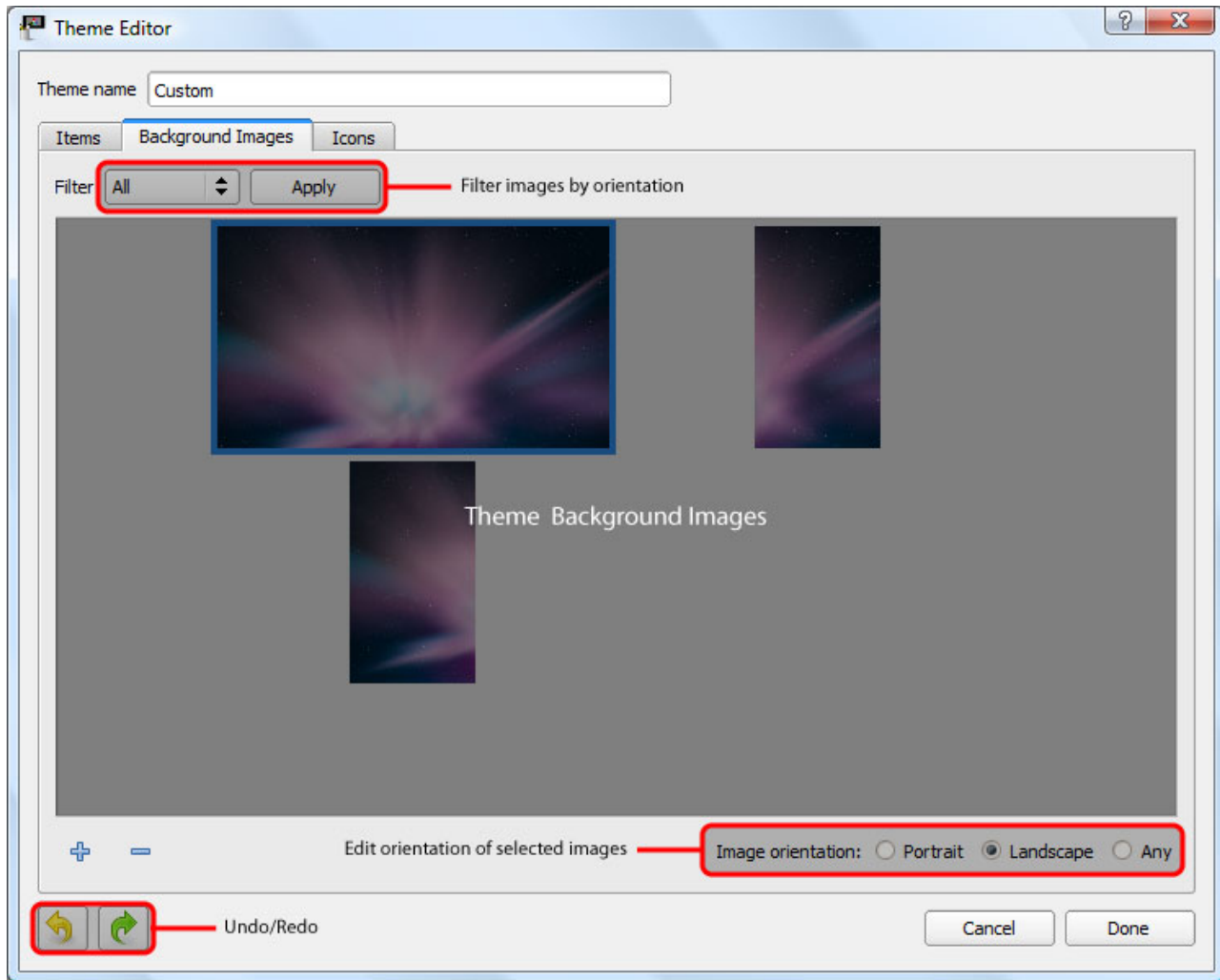
Default Item Properties - these set default values for certain properties that will be applied to an item when it's created for the first time. These properties can usually be edited in the main [property editor](#) of Interface Editor.

Item States - Select a state to edit its properties. The default state is shown with "(Default)" after its name. Double-click a state (Windows) or press the Enter key (OS X) to rename the selected state. Click **+** to add a new state. Click **-** to delete a state (not possible for the default state). Click **Ⓞ** to duplicate a state. The state of an item can be changed using a trigger action in Designer - see the [Designer help](#) for more information about TPC actions.

State Property Editor - Edit the properties of the selected state. Works in the same way as the main Interface Editor [property editor](#).

State Transition Editor - Edit the transition that is applied to the item properties when the current state is applied to the item. Easing is the curve that property values will follow.

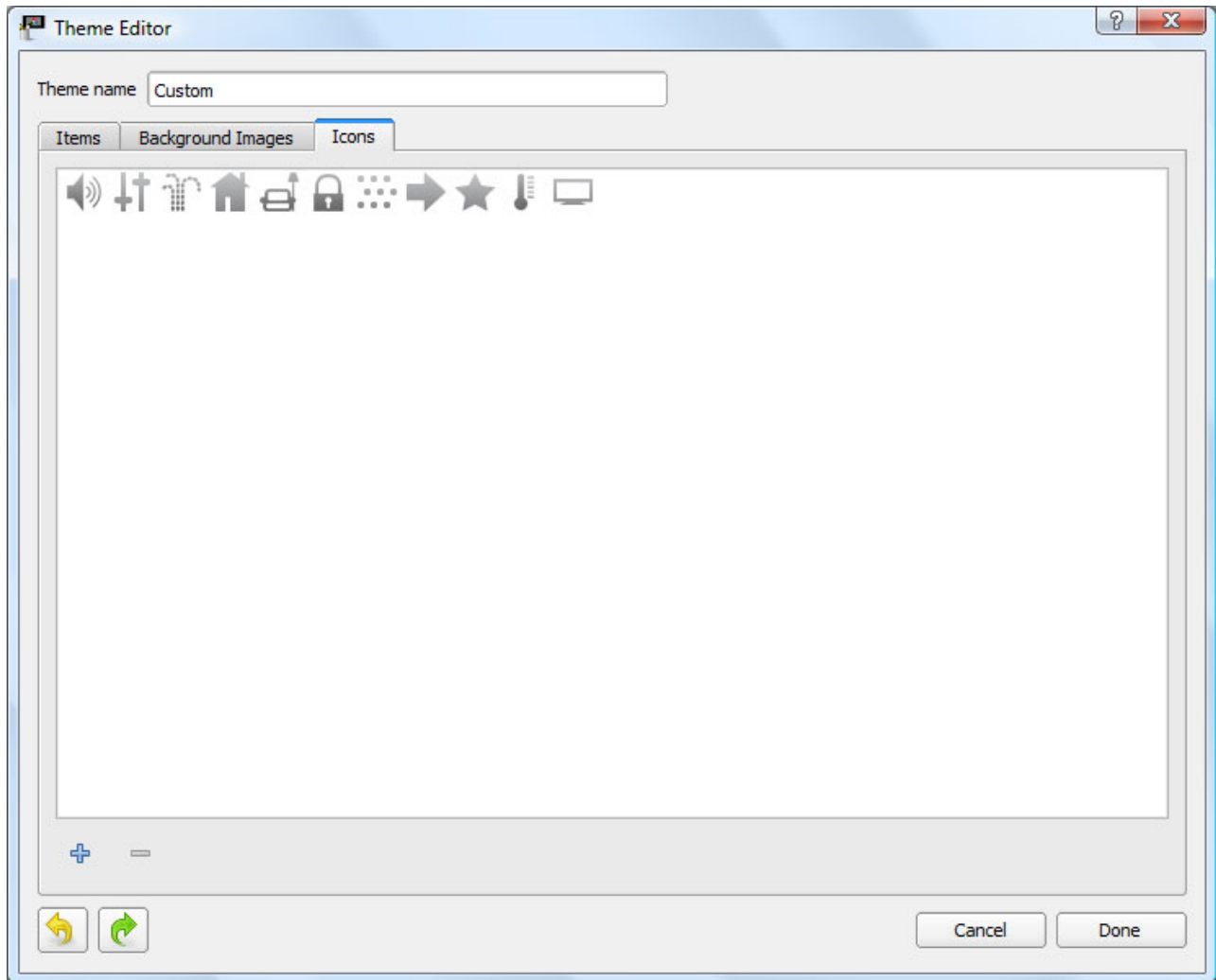
Editing background images





Click **+** to add a new background image from a file. Click **-** to remove the currently selected images from the theme. The image files will not be deleted.

You can set the orientation of images so that they are only offered as backgrounds for projects of the same orientation. If the image isn't specific to an orientation, for example if it's meant for tiling or centering on the screen, then set its orientation to 'Any'. You may filter which images are shown using the drop down near the top of the window.

Editing icons

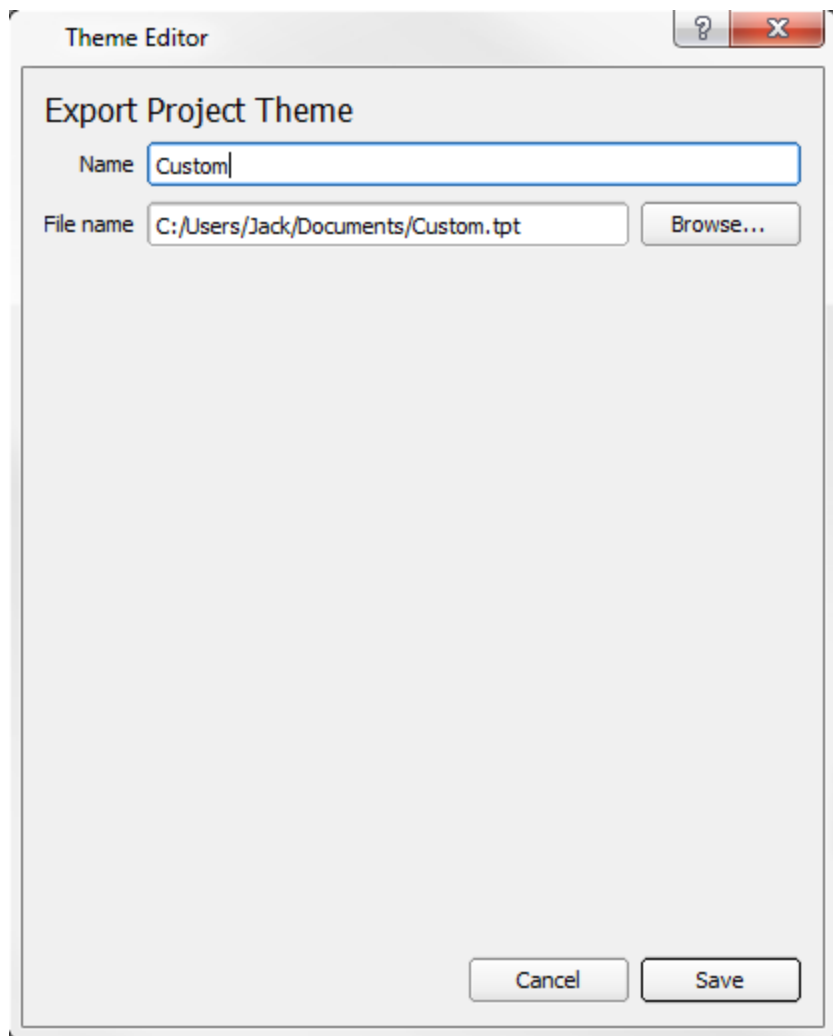


Click  to add a new icon from a file. Click  to remove the currently selected icons from the theme. The image files will not be deleted.


Export project theme

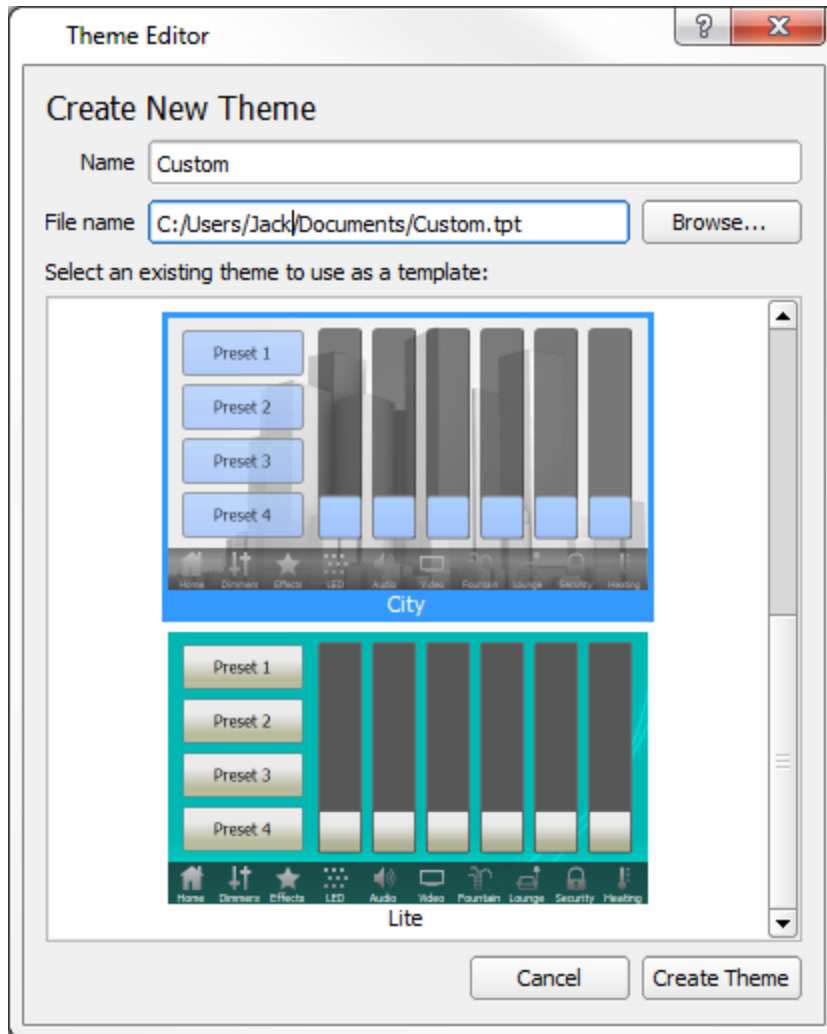
In the launch window for theme editor there is a option to export the theme in the current project. This is useful for using the same theme on different projects.

To export a theme you will have to provide a file name as well as a directory for the theme to be saved to.



Creating a new theme

To create a new theme you will need to select to Browse Theme Library from the launch window. Click on the  at the top of the window to create a new theme. You'll need to give the new theme a file name and choose a file path. You'll also need to choose a theme to use as a template.



You will now see the Theme Editor where you can edit item states in the new theme.

Saving changes to a theme

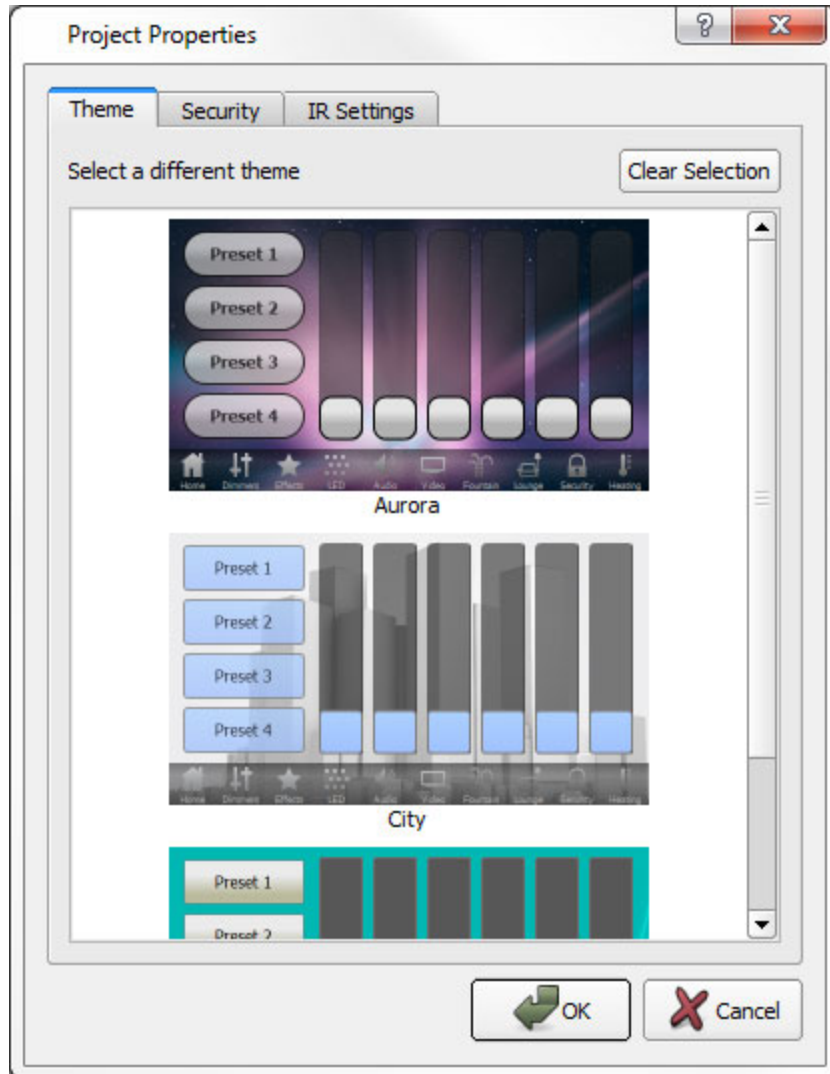
Click Done when you've finished editing the theme and your changes will be saved to the theme file. If you're creating a new theme, the theme will now be shown in the theme browser and offered when you create a [new project](#).

Project Properties

Click  on the toolbar to open the Project Properties dialog. Changes made in this dialog affect the current project file.

Theme

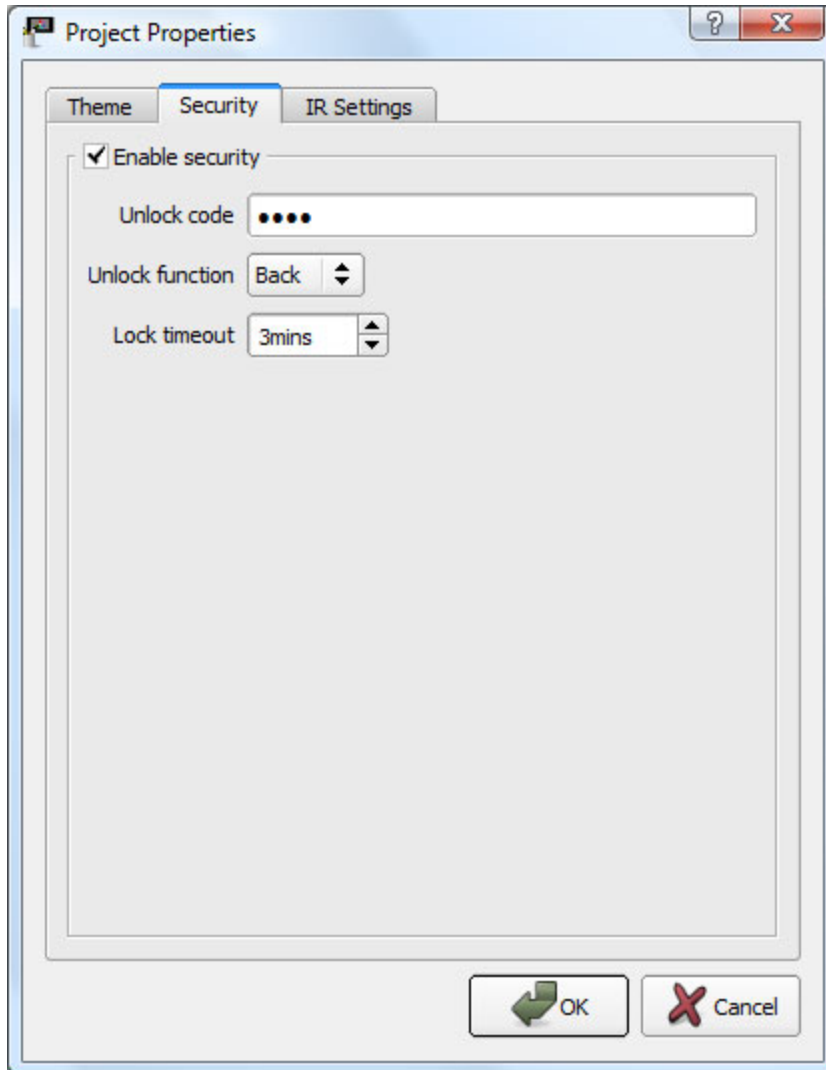
Select a different theme to apply to all the pages in the current project. Click the 'Clear Selection' button to undo selecting a new theme.




Changing a theme will leave the current background images in place. When the theme is changed, Interface Editor will look through the new theme for the same background image and link to the image in the new theme if it is found. Otherwise the background will be copied into the new theme. The same applies for icons and the default item states.

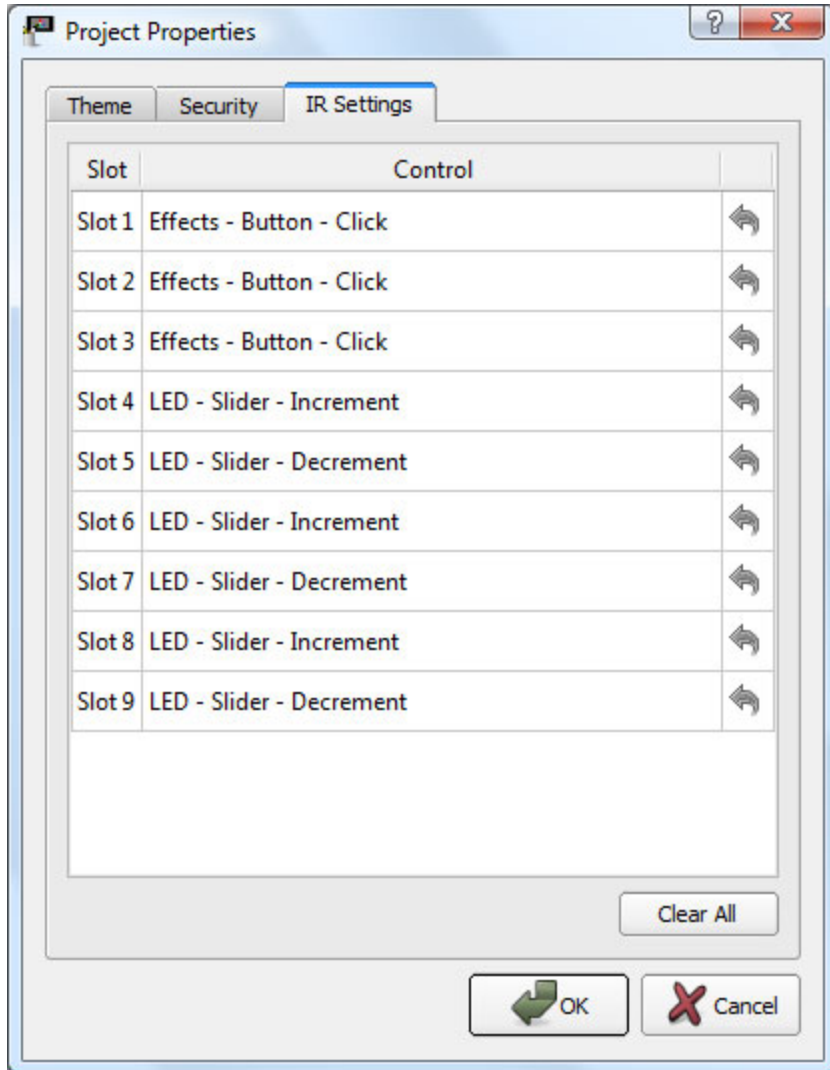
Security

Enable a lock screen for the project. With this setting enabled, it is possible to lock a TPC by setting up a Lock TPC trigger action in Pharos Designer. The TPC will show a keypad when locked. When the correct unlock code is entered, the TPC will perform the Unlock Function, which is either to return to the page that was visible when the TPC was locked, or to return to the default page (a property of pages). The TPC may also be configured to lock after a period of inactivity - this timeout can be set here.



IR Settings

The IR Settings tab provides a convenient overview of how IR Slots have been assigned to controls across the pages in the current project. Individual slot assignments may be cleared by clicking , allowing them to be assigned to different controls. All slot assignments may be cleared together by clicking Clear All.



Frequently asked questions

Is the free software a cut-down demo version?

No. The free Interface Editor software is the full software package. Downloads and updates can be found on our website.

Does the Interface Editor software support the Apple Macintosh?

Yes, from v1.0 we have full support for Intel Macs running Apple OS X 10.5 and later. Project files will be compatible, regardless of the operating system on which they are created.

What are the PC minimum requirements for Interface Editor?

- Microsoft Windows XP (SP2+ 32bit only), Vista (32/64bit) & 7 (32/64bit)
- Intel processor at 1 GHz or above
- 256MB RAM
- 100MB free hard disk space
- 800x600 minimum screen resolution (higher is better)

What are the minimum Macintosh requirements for Interface Editor?

- Apple Mac OS X 10.5.x or later (32bit only)
- Intel processor at 1 GHz or above
- 256MB RAM
- 100MB free hard disk space
- 800x600 minimum screen resolution (higher is better)

Are project files compatible across versions and platforms?

Any project file saved in an earlier version of Interface Editor can be loaded by a later version. Project files are compatible between the PC and Mac versions of the software. However, projects saved in a later version of Interface Editor may not be backwards compatible with an earlier version as we reserve the right to make structural changes to improve the product.

Can I have multiple versions of Interface Editor on my computer?

Yes, as long as you install the software to a different location each time. However, this could lead to confusion and a reinstall takes just seconds, so we would recommend keeping the installers on hand and only having one version installed at a time.

What are the Pharos Interface Editor file extensions?

- *.ptc Pharos Interface Editor project file.
- *.tpt Theme bundle.

Troubleshooting

The following section lists common problems and their solutions.

I have checked the [FAQ](#) and troubleshooting but I'm still stuck?

Contact [support](#), please be prepared to send in your project files.

Built-In Themes

Pharos Interface Editor comes with some built-in themes that you may use directly in your projects, or edit with the [Theme Editor](#) as required. Knowledge of the states in a theme for each item (e.g. buttons, sliders, etc.) is useful when using the Set TPC Control State action in Designer. Changing the state of an item will change its appearance, and this allows you to provide feedback in your interface.

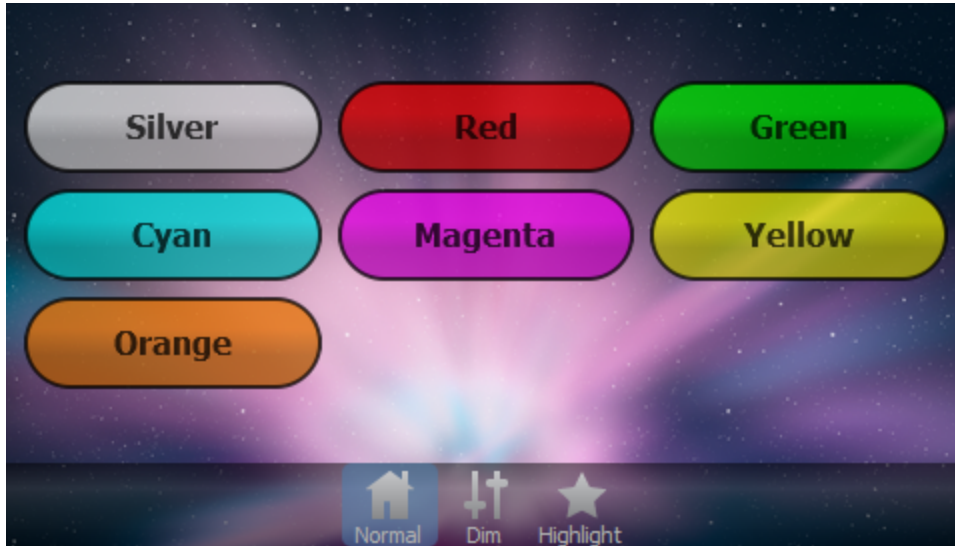
The built-in themes are as follows:

- [Aurora](#)
- [City](#)
- [Lite](#)

Aurora Theme

The Aurora theme is included with Interface Editor. It has the following states for items:

Button States



The following states are shown in the image above:

- Silver (default)
- Red
- Green
- Cyan
- Magenta
- Yellow
- Orange

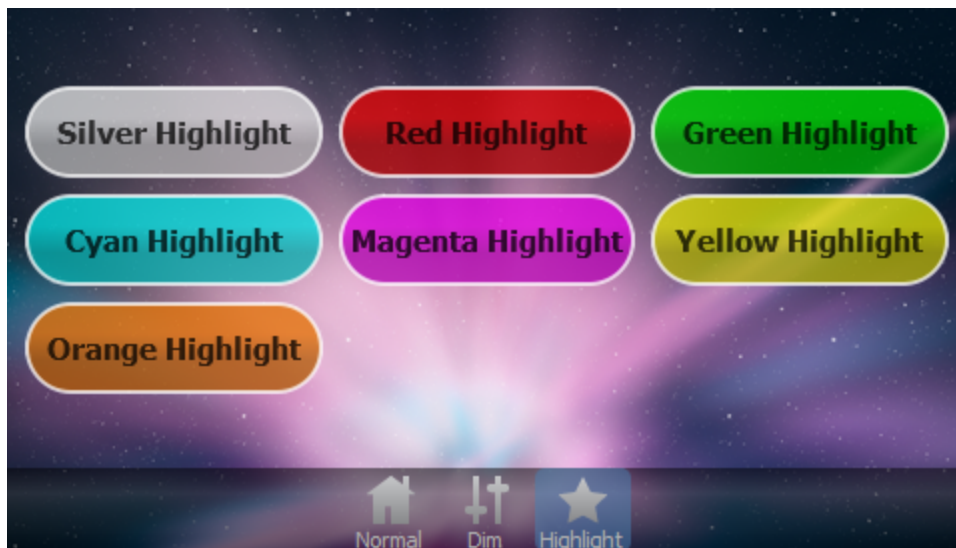
The following states use the same colours as the above, but they cause the opacity of the button to vary over a period of 1 second to attract attention.

- Silver Flashing
- Red Flashing
- Green Flashing
- Cyan Flashing
- Magenta Flashing
- Yellow Flashing
- Orange Flashing



The following states are shown in the image above:

- Silver Dim
- Red Dim
- Green Dim
- Cyan Dim
- Magenta Dim
- Yellow Dim
- Orange Dim



The following states are shown in the image above:

- Silver Highlight
- Red Highlight
- Green Highlight
- Cyan Highlight
- Magenta Highlight

- Yellow Highlight
- Orange Highlight

Slider States



The following states are shown in the image above:

- Silver (default)
- Red
- Green
- Cyan
- Magenta
- Yellow
- Orange

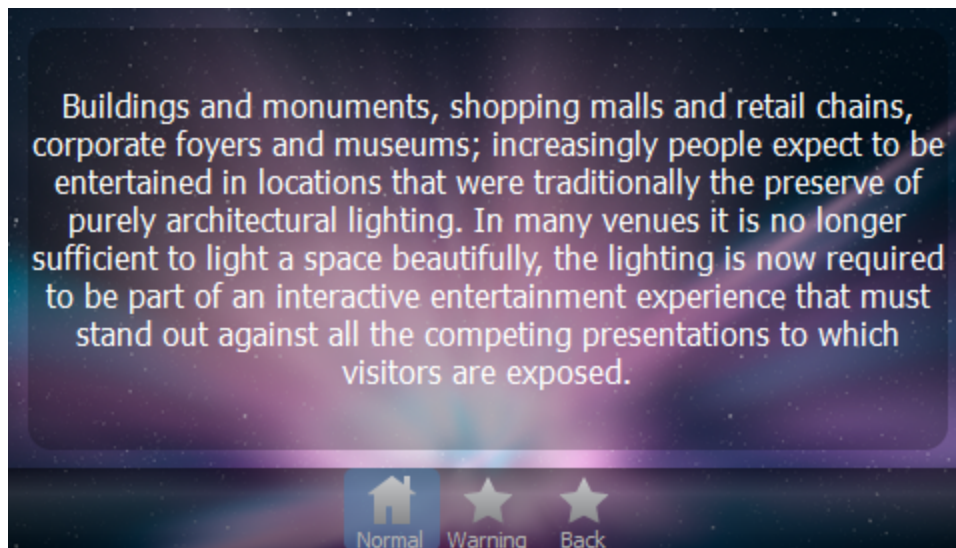


The following states are shown in the image above:

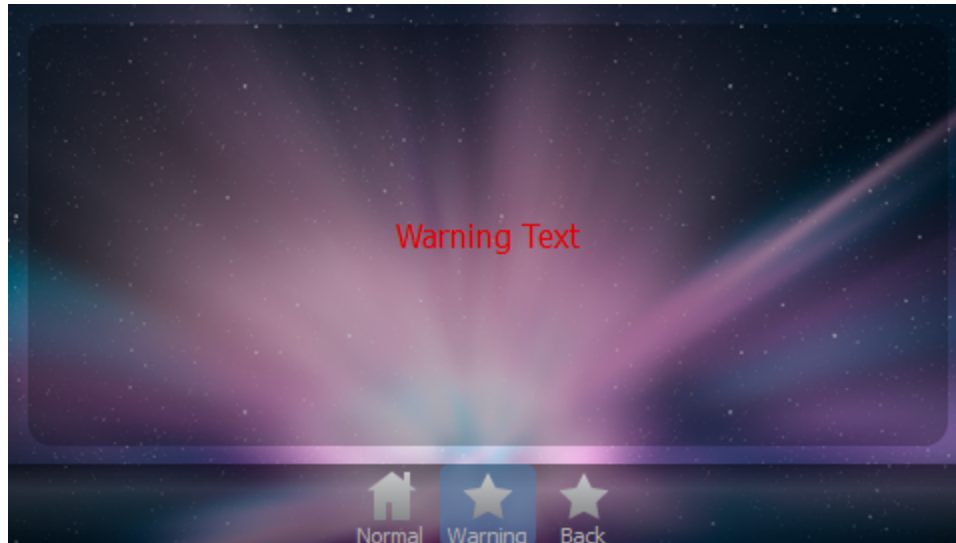
- Silver Highlight
- Red Highlight

- Green Highlight
- Cyan Highlight
- Magenta Highlight
- Yellow Highlight
- Orange Highlight

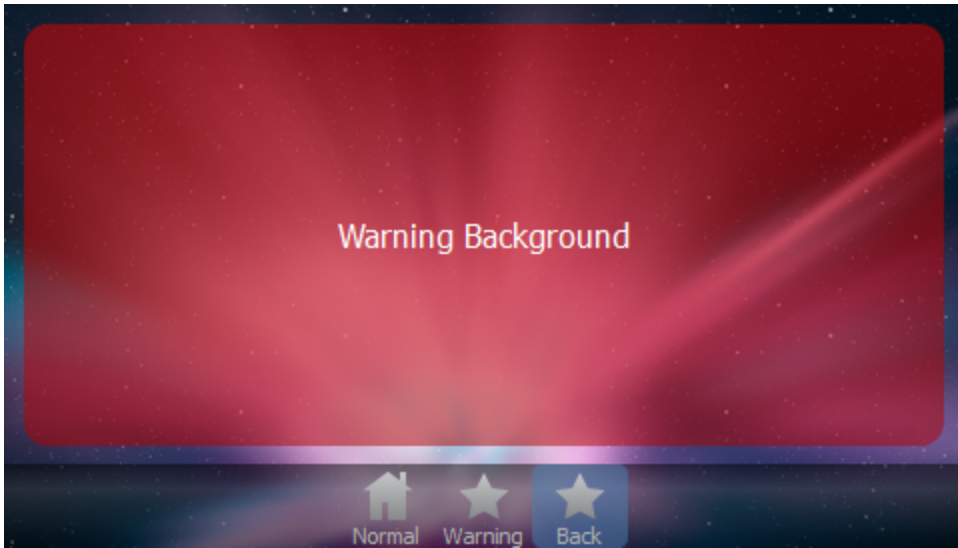
Label States



The **Normal** state (default) is shown in the image above.



The **Warning Text** state is shown in the image above.

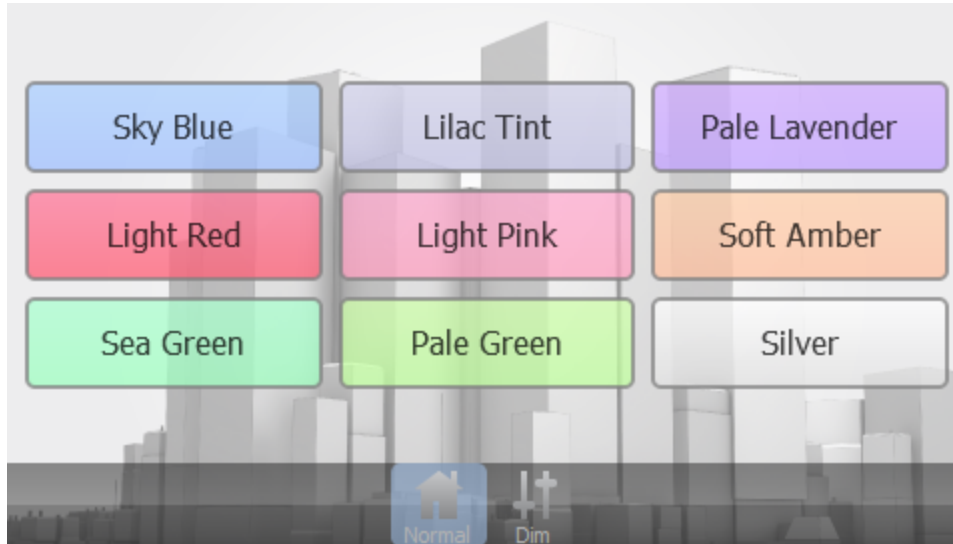


The **Warning Background** state is shown in the image above.

City Theme

The City theme is included with Interface Editor. It has the following states for items:

Button States

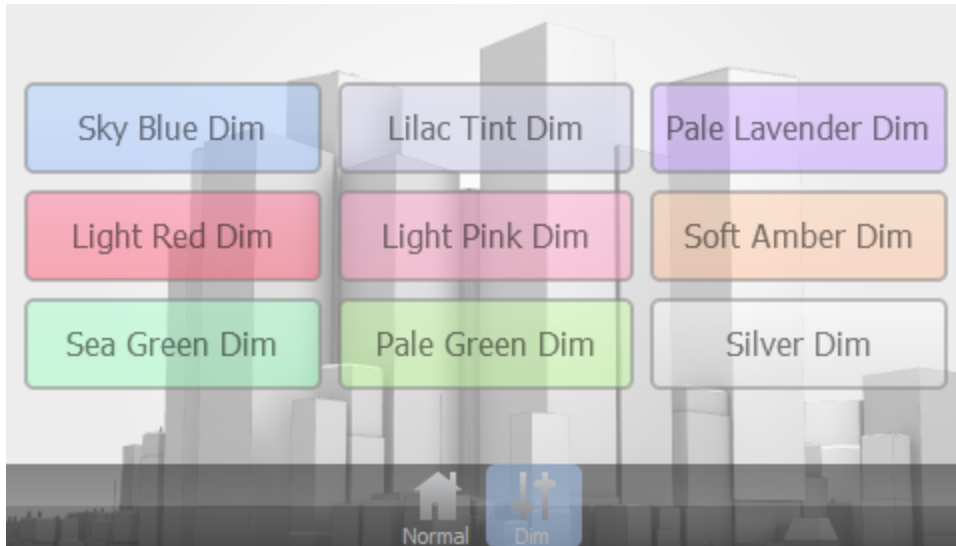


The following states are shown in the image above:

- Sky Blue (default)
- Lilac Tint
- Pale Lavender
- Light Red
- Light Pink
- Soft Amber
- Sea Green
- Pale Green
- Silver

The following states use the same colours as the above, but they cause the opacity of the button to vary over a period of 1 second to attract attention.

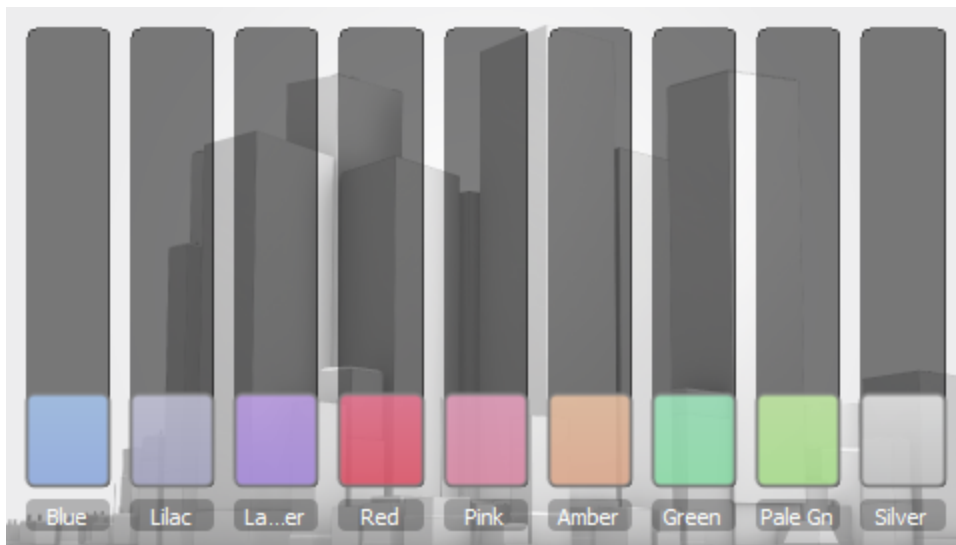
- Sky Blue Flashing
- Lilac Tint Flashing
- Pale Lavender Flashing
- Light Red Flashing
- Light Pink Flashing
- Soft Amber Flashing
- Sea Green Flashing
- Pale Green Flashing
- Silver Flashing



The following states are shown in the image above:

- Sky Blue Dim
- Lilac Tint Dim
- Pale Lavender Dim
- Light Red Dim
- Light Pink Dim
- Soft Amber Dim
- Sea Green Dim
- Pale Green Dim
- Silver Dim

Slider States

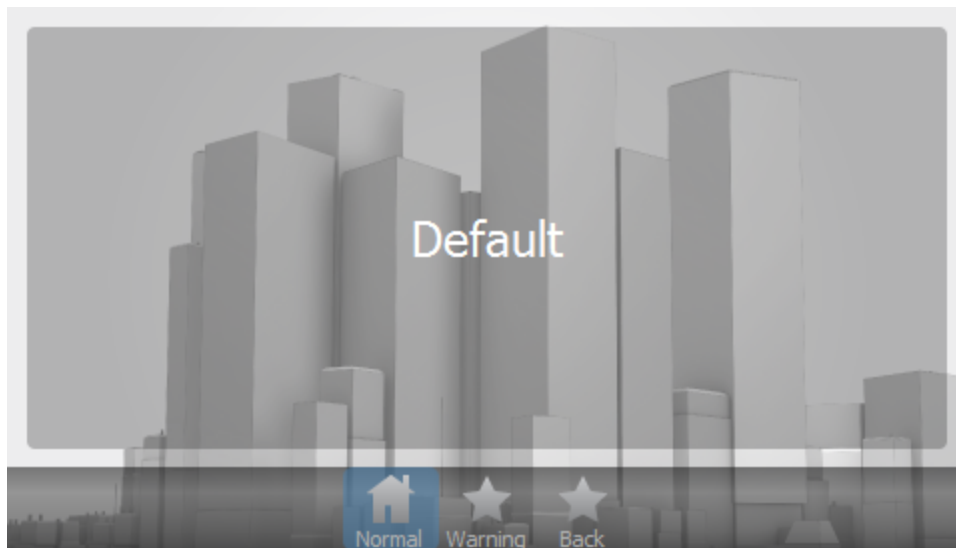


The following states are shown in the image above:

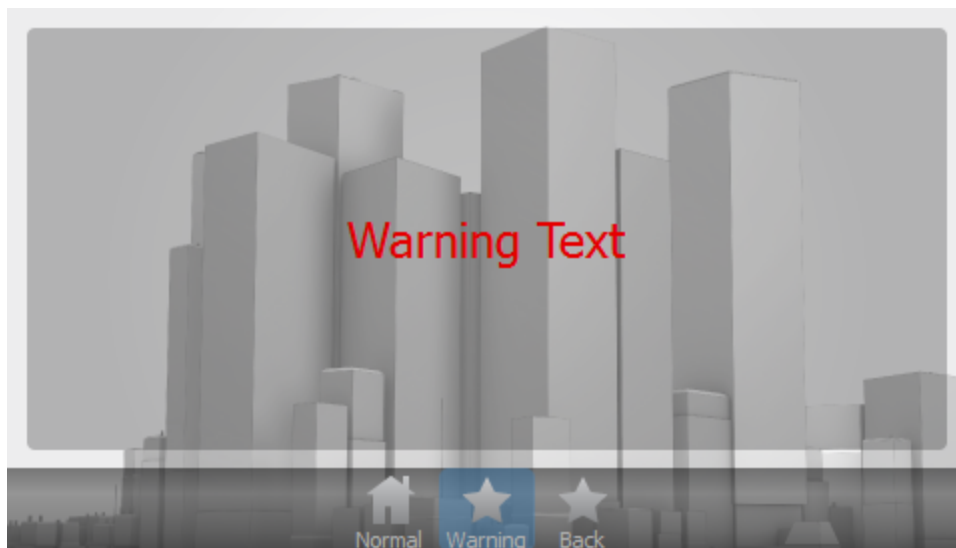
- Sky Blue (default)
- Lilac Tint

- Pale Lavender
- Light Red
- Light Pink
- Soft Amber
- Sea Green
- Pale Green
- Silver

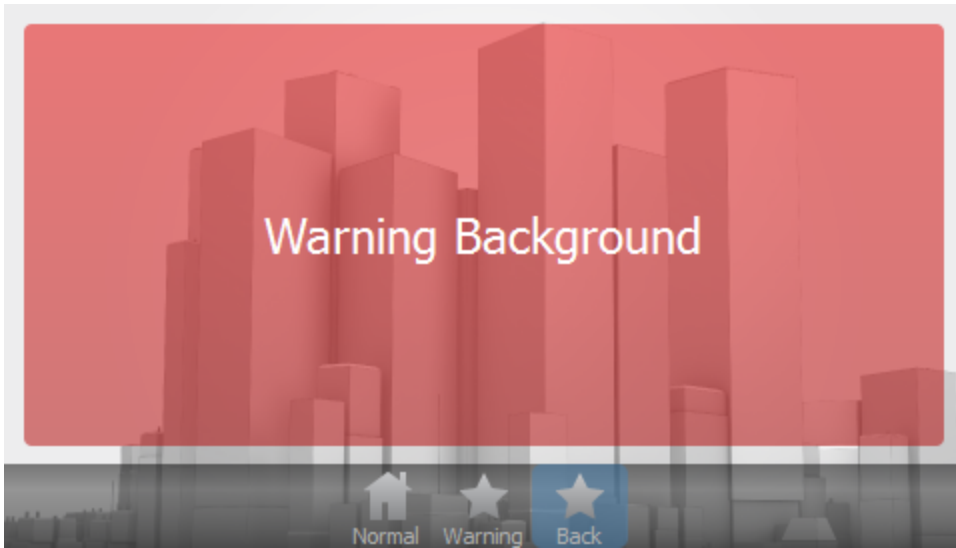
Label States



The **Default** state is shown in the image above.



The **Warning Text** state is shown in the image above.

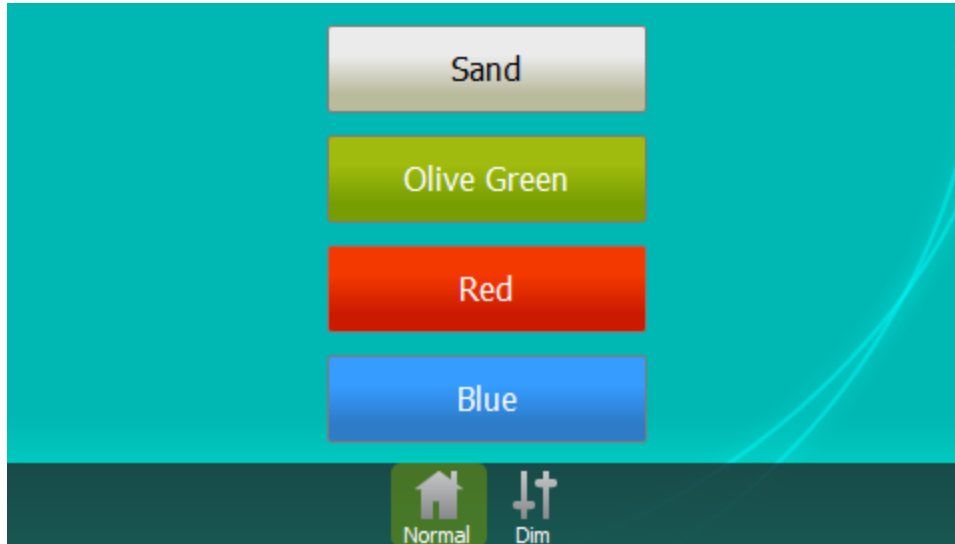


The **Warning Background** state is shown in the image above.

Lite Theme

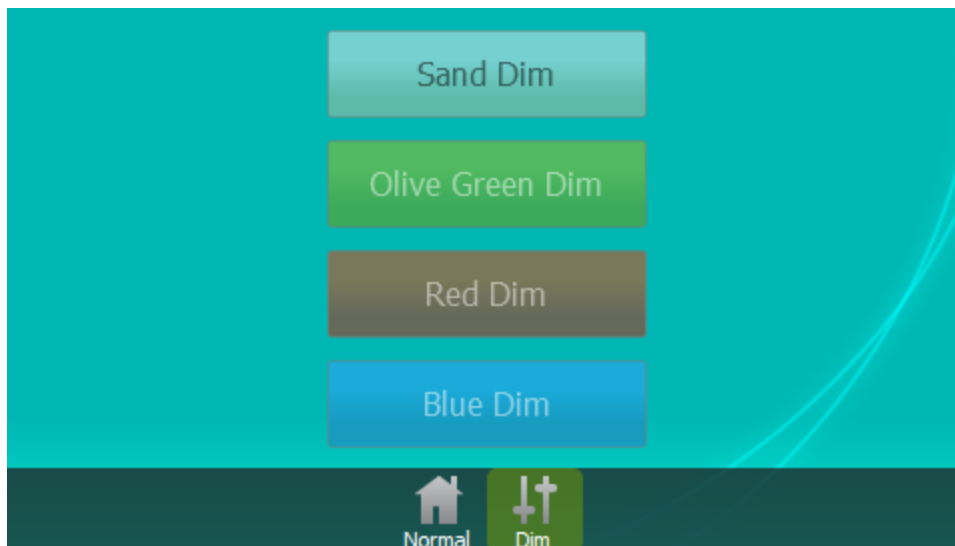
The Lite theme is included with Interface Editor. It has the following states for items:

Button States



The following states are shown in the image above:

- Sand (default)
- Olive Green
- Red
- Blue

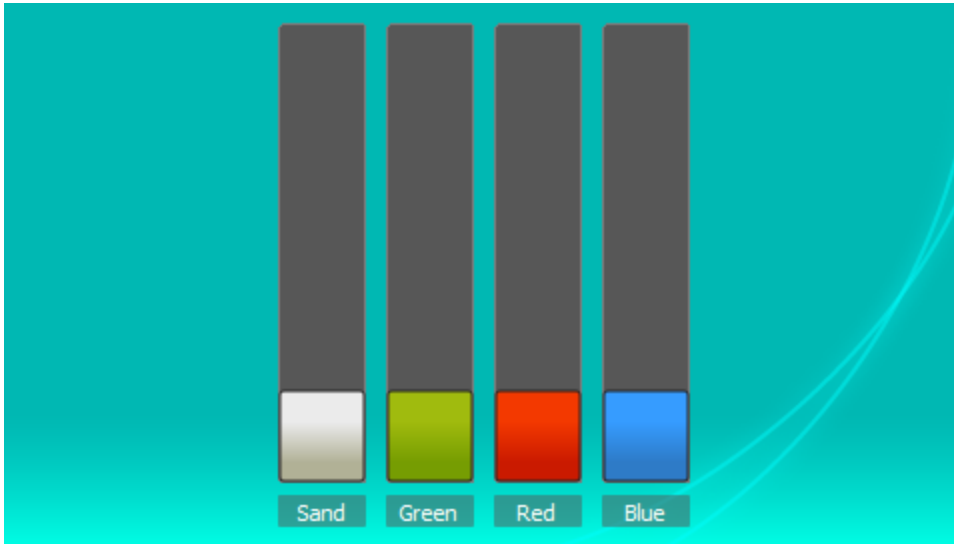


The following states are shown in the image above:

- Sand Dim
- Olive Green Dim

- Red Dim
- Blue Dim

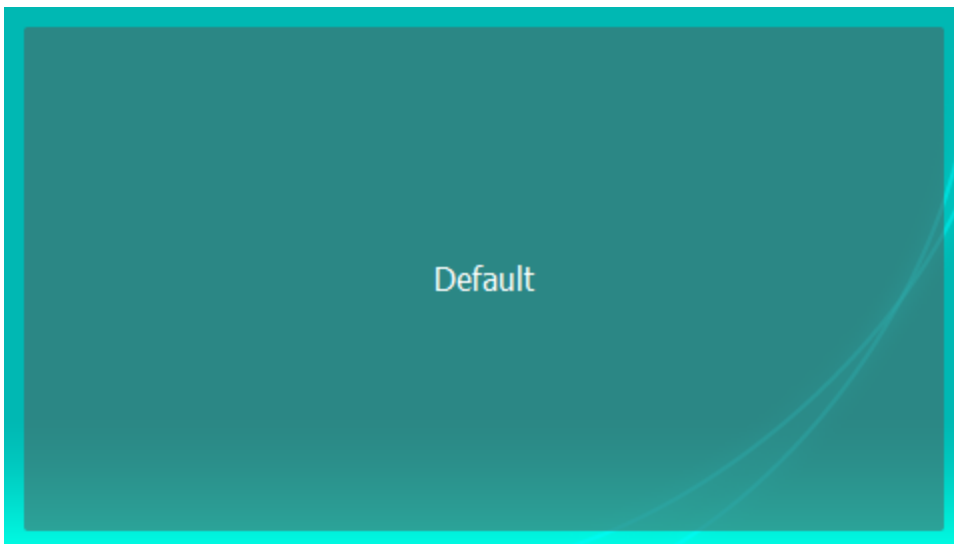
Slider States



The following states are shown in the image above:

- Sand (default)
- Olive Green
- Red
- Blue

Label States



The **Default** state is shown in the image above.

Explaining Layouts

Interface Editor comes with several page layouts for you to use, but many projects will require custom layouts.

To create your own layouts for Interface Editor, you will need to understand how the XML in the layout files translates to the positions of items on the screen of the TPC. To help you get started, we will use the example of the '4 Button 6 Slider' layout which comes with Interface Editor. To find the XML file behind this layout on Windows, navigate to /Program Files/Pharos/Interface Editor/library/layout/. On Mac OS X, right-click Pharos Interface Editor in your Applications folder and select 'Show Package Contents', then browse to /Content/Resources/layout/. Look for the file named '4_button_6_slider.xml' in this folder. A screenshot containing the text in the XML file is below for reference. It's a good idea to get a text editor that can handle XML when working with custom layouts, such as Notepad++.

```

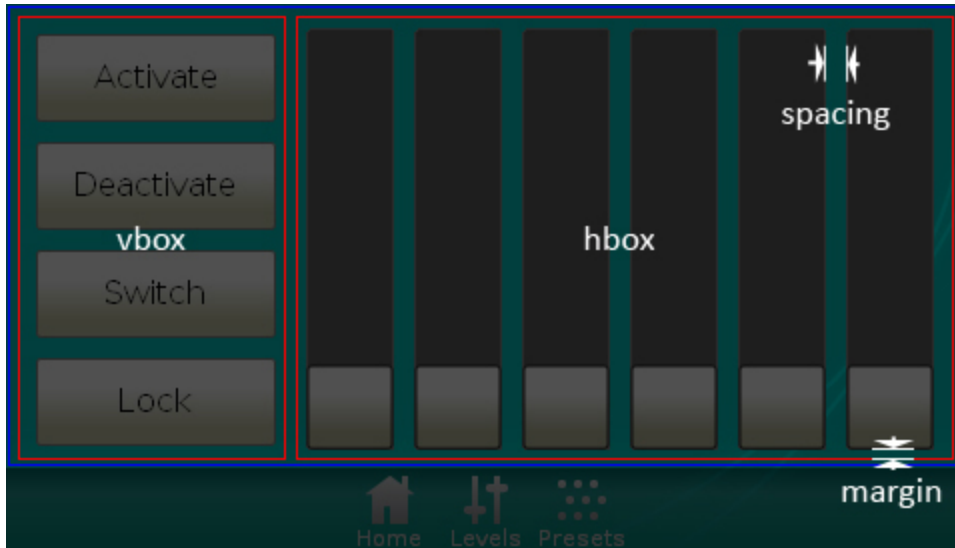
1  <layout name = "4 Button 6 Slider" orientation = "landscape">
2      <hbox spacing = "10" margin = "10">
3          <vbox spacing = "10">
4              <spacer />
5              <button width = "120px" height = "44px" />
6              <button width = "120px" height = "44px" />
7              <button width = "120px" height = "44px" />
8              <button width = "120px" height = "44px" />
9              <spacer />
10         </vbox>
11     <hbox spacing = "10">
12         <slider width = "44px" />
13         <slider width = "44px" />
14         <slider width = "44px" />
15         <slider width = "44px" />
16         <slider width = "44px" />
17         <slider width = "44px" />
18     </hbox>
19 </hbox>
20 </layout>

```

The first line defines the properties of the layout. Here you can change the name of the layout as it appears in the New Page wizard in Interface Editor, but note that two layouts can't have the same name, otherwise only one will be available in Interface Editor. You can also change the orientation of the layout between landscape and portrait. Removing the 'orientation' attribute will allow the layout to be used in both orientations – some layouts are more flexible than others.

The next line is the start of an hbox, which stands for 'horizontal box'. The hbox is one of two types of layout box that are available; the other is the vbox. These boxes are used to contain a number of different items and the direction of the layout of these items is decided by the type of box you put them in. A vbox arranges items from top to bottom and an hbox arranges items from left to right. Boxes can contain other boxes, as shown in this example: the top level hbox contains a vbox and an hbox.

Boxes support a spacing and a margin attribute. The spacing is the measurement in pixels between each item; the margin is the number of pixels between the outline of the box and the items inside.



In the vbox shown, there are four buttons, each 10 pixels from its neighbour. In the XML file, you can see that there's a spacer at the top and bottom of the list of items in the vbox. The spacers push the items together as far as the box's spacing attribute will allow – otherwise they'd spread out to fill the space available.

If you look at the button definitions in the XML file, you can see that it's possible to specify a width and height, though this is optional – items will distribute themselves evenly and expand to fill the available space in their box if you don't provide this information. The lower hbox in the XML file contains the sliders. You can see that this appears next to the vbox in the image above because it's inside the top level hbox.

Another way of laying out items is in a grid. This method allows you to easily layout items in rows and columns. The screen shot below shows the XML for the '12 buttons' layout, which you can find in the same folder as the previous layout. As you can see, 4 rows and 3 columns have been specified, along with a spacing and margin of 10 pixels. This will distribute the listed buttons around the grid and separate them by 10 pixels in each direction. These grids can be used in boxes, allowing for complex, nested layouts to be created with ease.

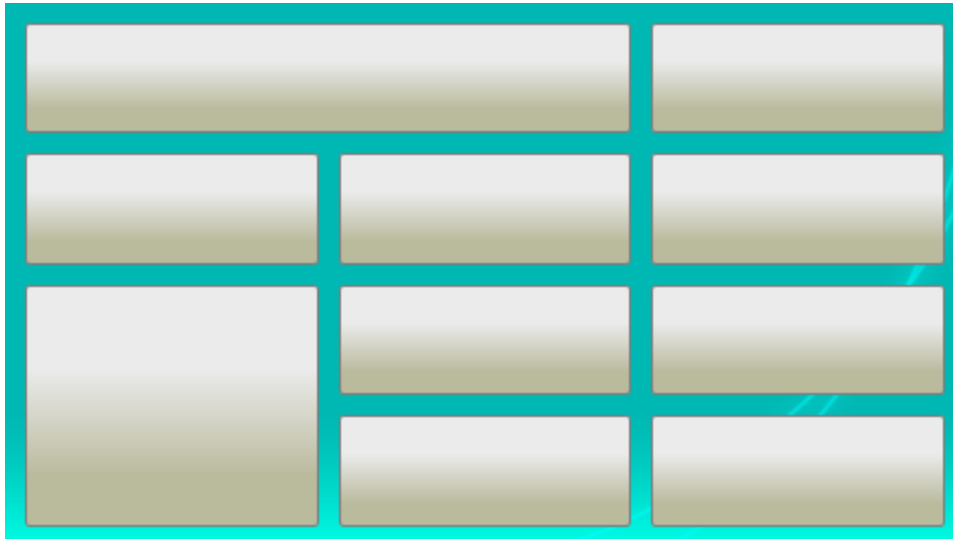
```

1  <layout name = "12 Button" orientation = "landscape">
2    <grid rows = "4" columns = "3" spacing = "10" margin = "10">
3      <button />
4      <button />
5      <button />
6      <button />
7      <button />
8      <button />
9      <button />
10     <button />
11     <button />
12     <button />
13     <button />
14     <button />
15   </grid>
16 </layout>

```


Grids of controls can be customised with the rowspan and colspan options. For example, a button with a colspan of 2 will span two columns of the grid. Here's some example XML along with the interface produced.

```
1 <layout name = "10 Buttons" orientation = "landscape">
2   <grid rows = "4" columns = "3" spacing = "10" margin = "10">
3     <button colspan = "2" />
4     <button />
5     <button />
6     <button />
7     <button />
8     <button rowspan = "2" />
9     <button />
10    <button />
11    <button />
12    <button />
13  </grid>
14 </layout>
```



The items that you have available to you are button, slider, label, keypad, colourpicker, spacer and clock.

Creating Custom Layouts

To create custom layouts, it's a good idea to have a text editor that can handle XML files and use syntax highlighting to make it easier to view and edit these documents. Before we look at how to make a custom layout, it's a good idea to read [this page](#) about the fundamentals of how layouts for theTPC work.

The items that you have available to you are button, slider, label, keypad, colourpicker, spacer and clock.

We're going to go through and make a layout that has a keypad in the centre with a slider on either side of the keypad. So our first line would be:

```
<layout name = "Keypad and Sliders" orientation = "landscape">
```

This gives the layout the name of 'Keypads and Sliders' and sets the orientation of this layout as landscape.

Next, we'll need to create a box for the items to go in. As we want the items laid out from left to right across the screen, this will be a hbox. So the second line will be:

```
<hbox spacing = "5" margin = "10">
```

The spacing attribute means the hbox will have a minimum of five pixels between each item. The margin means a 10 pixel gap will be left between the edge of the screen and the box, so no items are touching the edge of the screen.

Next we will add in the items we want in the layout:

```
<slider />
```

```
<keypad />
```

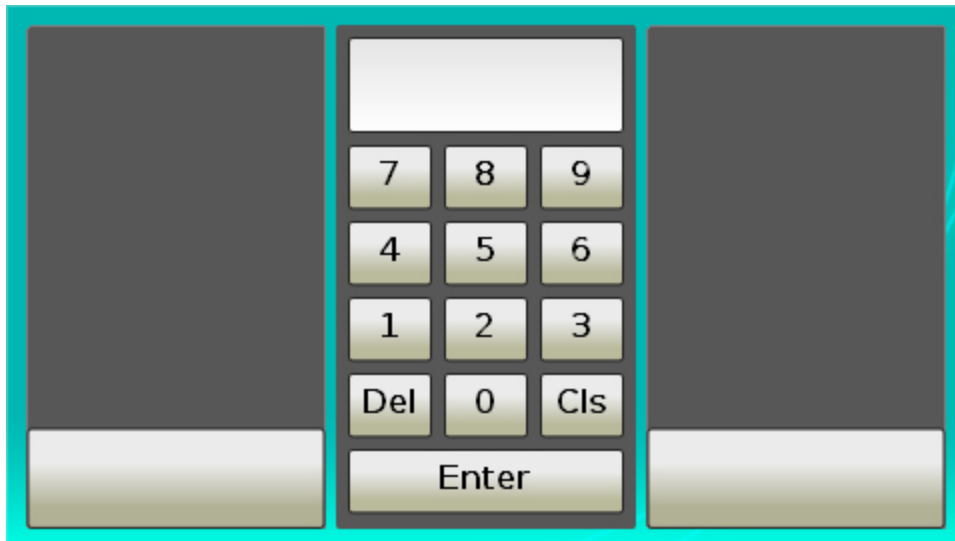
```
<slider />
```

Then we finish off the layout by closing the box and the layout with:

```
</hbox>
```

```
</layout>
```

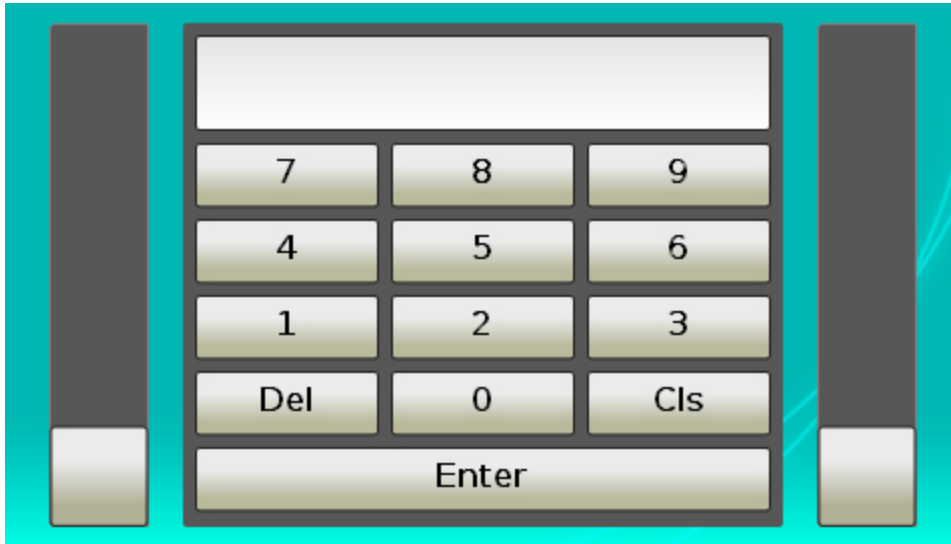
All of this syntax is crucial, and any error will mean that the layout is not displayed in Interface Editor. Now we go into Interface Editor, create a new page and when we get to selecting a layout, we need to click the refresh button in this dialog so the layout shows up. Here is the layout we have just created:



That doesn't look great, and it probably won't be very easy to use the keypad, so we're going to set the width of the items so they are better distributed along the screen:

```
<slider width = "50px" />  
<keypad width = "300px" />  
<slider width = "50px" />
```

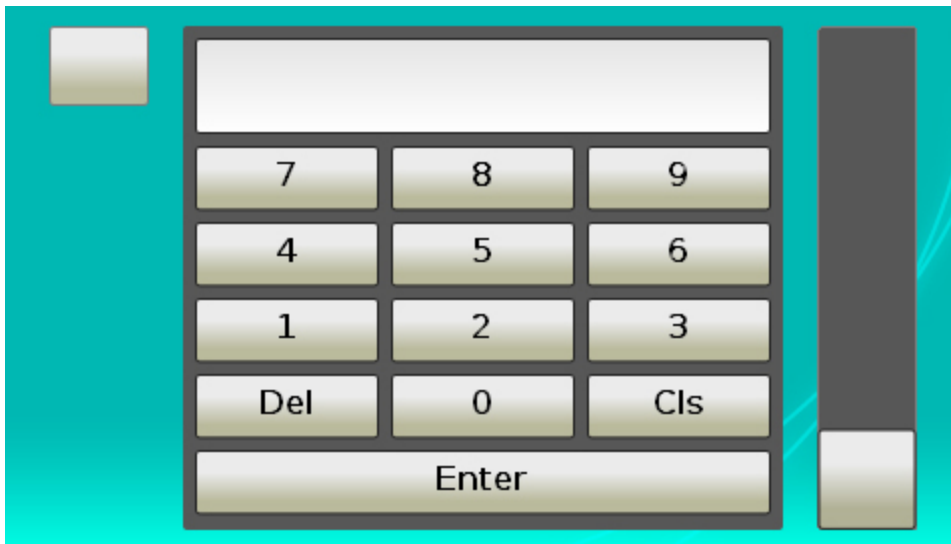
Now we create a new page to replace the old one, refresh the layout view and when we're done we get this:



Much better, but now we want a button instead of a slider on the left. So we delete the slider line out of the XML and add a button in with the same width properties and add in a height property of 40 pixels.

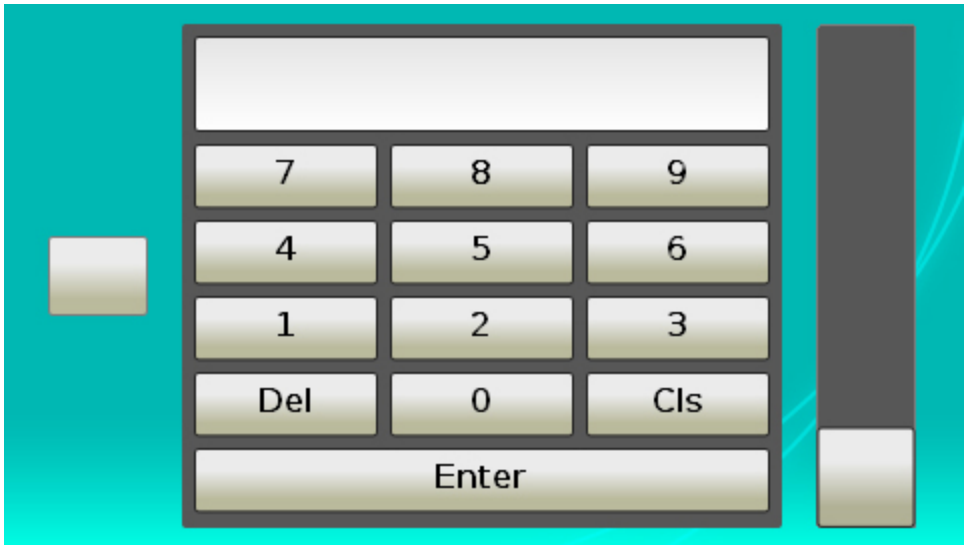
```
<button width = "50px" height = "40px" />
```

So we create a new page to replace the old one, refresh the layout view and when we're done we get this:



Not a great aesthetic with this layout. I want to have the button in the centre of the screen, so I'll add in a vbox which will automatically centre the button. Here is the final XML for this file and what it looked like after creating this page.

```
<layout name = "Keypad and Sliders" orientation = "landscape">  
<hbox spacing = "5" margin = "10">  
<vbox spacing = "5">  
<button width = "50px" height = "40px" />  
</vbox>  
<keypad width = "300px" />  
<slider width = "50px" />  
</hbox>  
</layout>
```



Layout File Format

All the layouts included with Interface Editor are generated from xml files stored in the installation directory:

- On Windows, browse to the installation directory and navigate to \library\layout.
- On OS X, right click (or Ctrl-click) on the Interface Editor application and select Show Contents. Navigate to \library\layout.

The xml schema for Interface Editor layouts is included in this directory - open the file "layout.xsd". If you have any questions, please [contact support](#).

You may add your own layouts to the following directory, which is created the first time Interface Editor launches:

Documents/Pharos/Interface Editor/Layouts

Interface Editor will automatically load your layouts the next time it is launched. You can also reload your layouts in the [Layout page](#) of the new page wizard.

