Quick Start Guide

This guide will explain the process of installing & using the DemoPad Designer software for PC, which allows you to create a customised Graphical User Interface (GUI) for an iPhone / iPad & embed commands which can be sent to almost any TCP/IP compliant device. This can then be uploaded to an iPad / iPhone running the DemoControlHD app from iTunes. The end result is a powerful home automation application which, with additional hardware, will allow control over almost any audio & visual device, lighting, heating etc.

Basic Concepts

The projects which you will create have 2 basic elements to them, configured within the PC software – these are :

- **Devices** – which are the physical TCP/IP units with which the iPad / iPhone will communicate with to accomplish the various home automation tasks. For example, a device may be a Global Cache IP to Infra-Red module, or a Lutron Homeworks processor. Please note, a device would NOT be a particular TV, or DVD player, unless it can be controlled directly through TCP/IP. In the case of an IP to Infra-Red module, this single device in the software could control many pieces of end user equipment, such as TVs, DVD players, Amplifiers etc. Only one device would be needed in the software for this situation. A device has the following properties:
    - **IP Address** – the static IP address of the device, eg 192.168.1.55
    - **Port** – the communication port used by the device, eg 4998
    - **Command Suffix** – which is amended to each command sent by the device (usually \x0D\x0A which is a hexadecimal representation of a carriage return & line feed character)
    - **Remote IP address / port** – which is used instead of the normal IP address when the user sets the 'Remote Access' option on the iPad / iPhone. Used for accessing the devices from a remote location.

- **Pages** – the iPad / iPhone GUI will consist of at least 1 page. A page has both a portrait & landscape view, which may or may not have the same page objects displayed on it. A page view can have any number of the following objects placed on it:

    - **Buttons** – a button is a pressable image, which can have actions associated with the push and/or release events. A typical button would, for example, send a command to turn a TV off, or cause a page jump to another GUI page.
    - **Images** – images are non-pressable objects used for design purposes.
    - **Text** – a non-pressable object, eg 'Home Screen' - used for design purposes
    - **Sub Page** – a sub page is a smaller version of a page which can be placed within a main page, optionally in response to a flag condition.

- o **Gauge** – A gauge displays a value from 0-100% as a bar, and in the case of Lutron/Rako systems, provides a way of adjusting a lighting channel by sliding your finger up & down the gauge. Gauges can also be used to control amplifier volumes etc, or perform any action based on the user sliding their finger up and down the gauge.
- o **Web View** – which is an embedded web browser running within the GUI in a smaller window. Web views are useful for displaying IP camera feeds, or controlling devices which have a web interface.

Installation

This software requires a PC running Microsoft Windows XP or later, with Microsoft .NET 3.5 installed. It is also recommended that the computer be fully updated with the latest Microsoft updates – refer to your PC documentation.

To install the software, double click on DemoDesignerSetup.msi & follow the onscreen instructions. It is recommended to install the software to the default location of "c:\Program Files\Demopad Software Ltd\Demopad Designer" which will henceforth be referred to as <program dir>.

Once installed, there should be an entry in the start menu under programs\Demopad, and a shortcut icon on the desktop called "DemoPad Designer". Double click the shortcut to launch the software.

Application Window Elements

The application window consists of 3 main areas: the top menu bar, the left side navigation area & the right project window area.

The top menu bar changes dynamically, depending on the task you are performing, and provides all the relevant menu options necessary at the time. Some menu buttons expand by ⬜ clicking on the square/arrow in the bottom right to reveal more options.
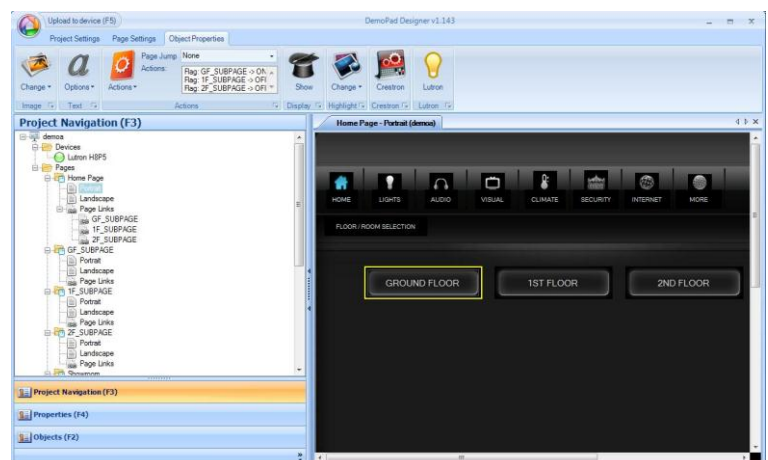
The side navigation area consists of 3 views:

- Project Navigation (press F3 to show) which displays all the projects, devices & pages in the project
- Properties (press F4 to show) which displays the object properties for the selected object
- Objects (press F2 to show) which allows you to navigate to a selection of images to use for page buttons / images

Example Project 1

Please follow the steps below to create your first simple project & upload to your iPad. To do this, you will need to have the DemoControlHD app installed on your iPad / iPhone.

Step 1 – Create a new project

From the home screen of the software choose 'Create Project', or click on the menu circle in the top left of the window & choose 'New'. You will then see the following screen:
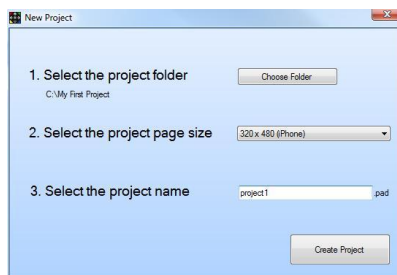
Click on 'Choose Folder' & select, or create a folder on your computer which will contain all of the project files. Choose the size of the pages (either iPhone or iPad size) and give the project a name. The project name should be kept short.

Click 'Create Project' to continue.

You will then be taken to the main window and a new project will have been created, with no devices and a single default page, 'Home Page'.

Step 2 – Add a device

All projects must have at least 1 device. Click on 'New Device' on the menu bar & type in a device name, eg 'Gate Relay', which represents a Global Cache IP to Contact Closure device. You can change the name by single clicking the device in the project tree.

With the device highlighted, enter an IP address in the field above, eg 192.168.1.230, leave the default port of 4998 (which is the port used by Global Cache iTach units), and leave the command suffix of \x0D\x0A.

Step 3 – Add pre-defined commands to the device

Pre-defined commands are the possible commands that can be sent from the iPad / iPhone to the device. In our example, we are going to set up commands to turn on/off a contact closure on a global cache iTach IP2CC. The command (taken from Global Cache's documentation at www.globalcache.com) is in the format "setstate,1:1,x" where x=0 or 1 for close/open.
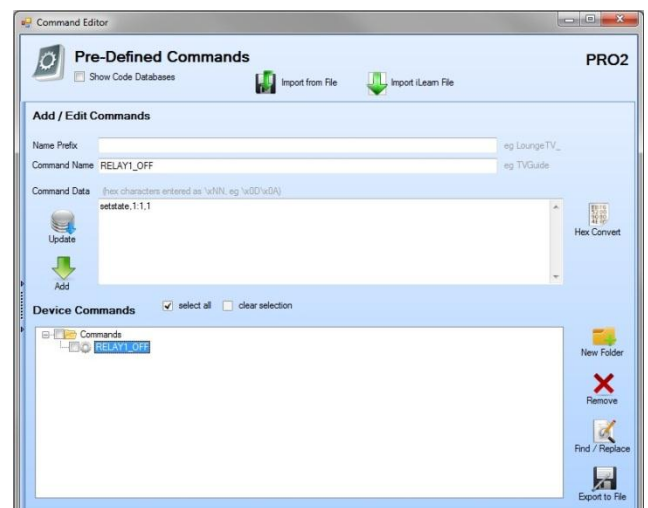
With the device highlighted, click on 'Edit' in the pre-defined commands tab. Enter 2 new commands, called RELAY1_ON and RELAY1_OFF, with Command Data "setstate,1:1,1" and "setstate,1:1,0" (without the "" marks).

The names are not important, but the Command Data must exactly match the above commands! To add each command, click the 'Add' button. The name prefix is optional.

Step 4 – Add a button to the Home Page

From the project navigation tree, click the 'Portrait' view of the 'Home Page'. This will bring up the portrait design screen on the right hand side, to which you can add page objects.

Click on the 'Button' menu option to highlight it, and bring up the Object Navigation tree. This will allow you to drag an image onto the page, as a button. If you were to click the 'Image' button first, any object you dragged on would be a non-pressable image only. Always ensure the correct type of object is highlighted before you drag an object onto a page.
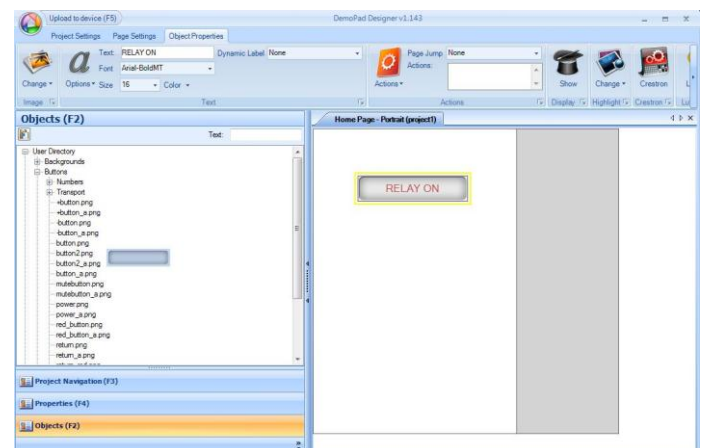
Expand the 'User Directory' tree by clicking the + symbol. This reveals the directory structure located at "<program dir>\Images" on your computer. You are free to add folders, sub folders & images to this location manually, to use your own graphics in your projects. There is a refresh button at the top of the tree view.

Click on the 'Buttons' folder & move your mouse over a particular image, eg 'button2.png'. You will see a raised preview of the image. Move your mouse over the image preview & then drag and drop the image onto the portrait page on the right & then release the mouse button.

Step 5 – adjust the button properties

You can then change add a text label to the button by expanding the 'Text' menu & typing some text into the 'Text' field. You may want to change the text size to 16 & the color to, say, red to make it more visible.
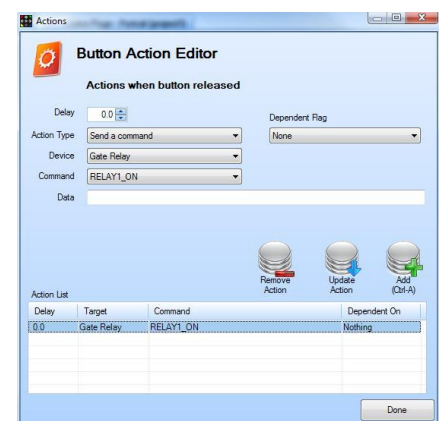
Next, we want to instruct the system to send a command to the 'Gate Relay' device we added earlier. Choose the 'Actions' menu & click on 'Actions when released' (or just double click the button to get to the same screen).

Here, we are able to associate one or more actions with the button release event. These actions will occur when the user takes their finger off the button. Similarly, 'Edit on Press' from the action drop down list would allow you to implement actions which occur when the user puts their finger down on the button. It is recommend that you use the release events unless there is a specific reason not to, as it allows the user to 'change their minds' and take their finger off a button without any actions occurring.

In this case, we want to 'Send a command' to the device 'Gate Relay', and the command we wish to send is one of the pre-defined commands we entered earlier, 'RELAY1_ON'. You could also choose to enter the "setstate,1:1,1" command manually in this screen if you wish. Press Control-A, or click 'Add' to add this action. You can also assign pre-defined actions to buttons by hovering over the listed commands in the device tree view & dragging the command icon on top of the button.

You could add several actions if you wish, with an optional delay in seconds (note the delay is not cumulative, each delay value represents the time from the start - in other words if you add 5 actions one after the other, each with a delay of 10 seconds, then all the actions will occur at the same time – 10 seconds after the button was pressed).

Click 'Done' to close the action editor.

Step 6 – copy the button & adjust

Now that we have the 'relay on' button, we want to create a 'relay off' button. The easiest way to do this is by copying / pasting. Single click the button so that it is highlighted, and press Control-C (copy). Now press Control-V (paste). Drag & drop the new button somewhere below the original.

Adjust the text to say "RELAY OFF" Double click the new button to bring up the action editor, and click on the first (and only) action in the list. Change the command to 'RELAY1_OFF' and click on 'Update Action' to apply the changes.

Step 7 – group operations

It is often desirable to select multiple objects on a page & adjust their positions relative to each other. To do this, left click the mouse on the page background & drag down & to the right to create a box around the objects in question. You must entirely cover the objects in the box before releasing the

mouse. Once done, the selected objects will become highlighted & you will see a group operations menu. You can also select objects using Control-A (select all), or by control-clicking individual objects. You can align the objects left, right, centrally etc, as well as spacing objects out evenly
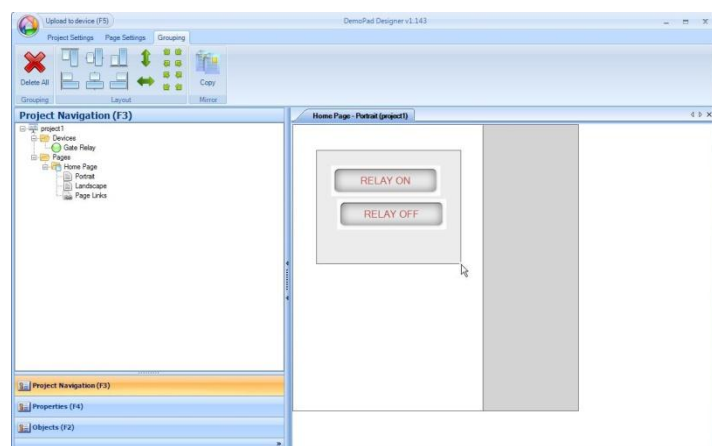
horizontally or vertically (with respect to each other). Align the two buttons to the left, then drag one of the buttons (which will move all highlighted objects) so that the buttons are on the center of the view, or move the objects manually with the arrow keys.

Step 8 – Mirror to other orientation

Now that we have our buttons on the portrait view, we also want them on the landscape view, so that when the user rotates the iPad / iPhone, they see the same controls. It is possible to add entirely different objects to each orientation, and it is also possible to create identical buttons from scratch on the other orientation. However, in cases where the objects will always be identical, it is far better to 'Mirror' the objects to the other orientation. Mirrored objects are always identical – if you change the properties of one, the other is changed also (with the exception of the object's position on the page).
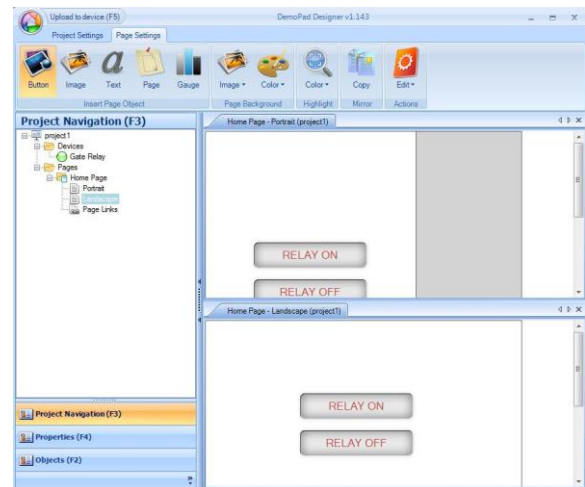
Click on the background of the page & click on Mirror > Copy. After confirming, a mirrored copy of all the page objects will be placed on the landscape orientation. Click the landscape page from the project navigation tree to bring this page up. You can then move the position of the landscape buttons to the center of the page.

Notice how the new page loads up as a tab on the right, with the old page tab still visible. You can drag the tabs to create views with multiple pages as shown.
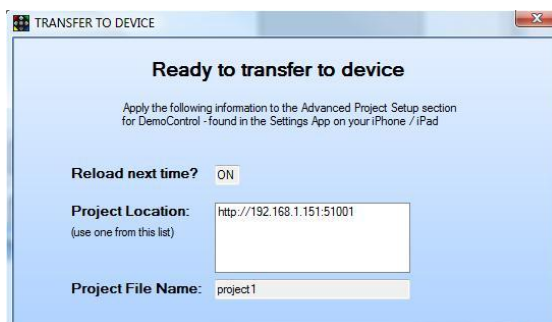
Step 9 – Prepare for upload to iPad / iPhone

At this point, save the project (press Control-S or click the top left menu > Save). You are now ready to upload the project to your iPad / iPhone – which must have the DemoControlHD app installed from iTunes, and be connected on the same wireless network as your computer.

Press F5, or click 'Upload to device' from the top menu bar. You will then see the following screen, which contains the information you need to enter in the settings for DemoControlHD on the iPad / iPhone.

Note – the upload process uses port 51001 by default, please ensure that this is allowed by any security software / firewall you may have running on your computer.

Step 10 – upload project to iPad / iPhone

Uploading the project from the PC to the iPad / iPhone is a one-time operation. You enter the settings for the project upload & then launch the app itself. Once uploaded, the project & all the image files reside on the iPad / iPhone. Multiple projects can exist on the device at the same time, and you can switch between then by altering the 'Project File Name' below.

Go into the general 'Settings' app on your iPad / iPhone & scroll down to DemoControlHD. Navigate to 'Project Setup' & set the following:

Reload next time: ON (do this each time you want to refresh the project, and set to NO once the project has been uploaded correctly)

Reload images: ON (only needs to be done initially, or when there have been image changes – set to NO when the project has been uploaded correctly)

Project Location: Copy from the PC upload screen, eg http://192.168.1.151:51001

Project Password: leave blank, unless you have protected the project

Project File Name: Copy from the PC upload screen, eg project1

Now exit the Settings app & launch the DemoControlHD app.

Note - if running iOS 4 or later, you may want to check that the app is not already running in the background & close it – double-tap the home button on the iPad / iPhone and search for the DemoControlHD app in the list of running applications. If it is there, press & hold it & then tap on the 'Cancel' symbol to close it down.

When the app launches with the 'reload' option set, it will attempt to download the project from the entered location. If it fails to download, it will display an error message & load up the last 'good' project. Once the project has been downloaded & tested, set the 'reload' options to NO so that it does not try to download the project each time the app is launched.

DemoControlHD Settings

In addition to the project setup options in the iPad / iPhone settings app, there are several other app options, namely:

- **Remote Access** – if set to ON, the project will use the 'remote' IP address & port settings from the project file. This setting is used to access the app functions when away from the local wireless network, but still connected to the internet.

- **Remember Last Page** – if set to ON, the app will load up the last page it displayed when you launch the app.
- **Multitasking** – if supported on your device, setting this to ON will send the app to the background tasks on the iPad / iPhone when you 'exit' the app. It is recommended only to use this option when the size of your project images results in a slow launch time, which can be avoided with the multitasking option.
- **Key Clicks** – enables / disables a click sound when pressing buttons
- **Disable Pinch Zoom** – enables / disables the ability to zoom in on the GUI interface by pinching
- **Startup Message**: which is displayed while the app starts up

Further Information

Software Support

Support questions may be submitted to support@demopad.com

Support packages for A/V professionals are available on request, including priority email support, live online chat services, and access to advanced software training. Contact info@demopad.com for further information.

Feedback

We welcome your feedback, and suggestions for software improvements – please email support@demopad.com with these, as we are constantly working to improve the DemoControl solution.