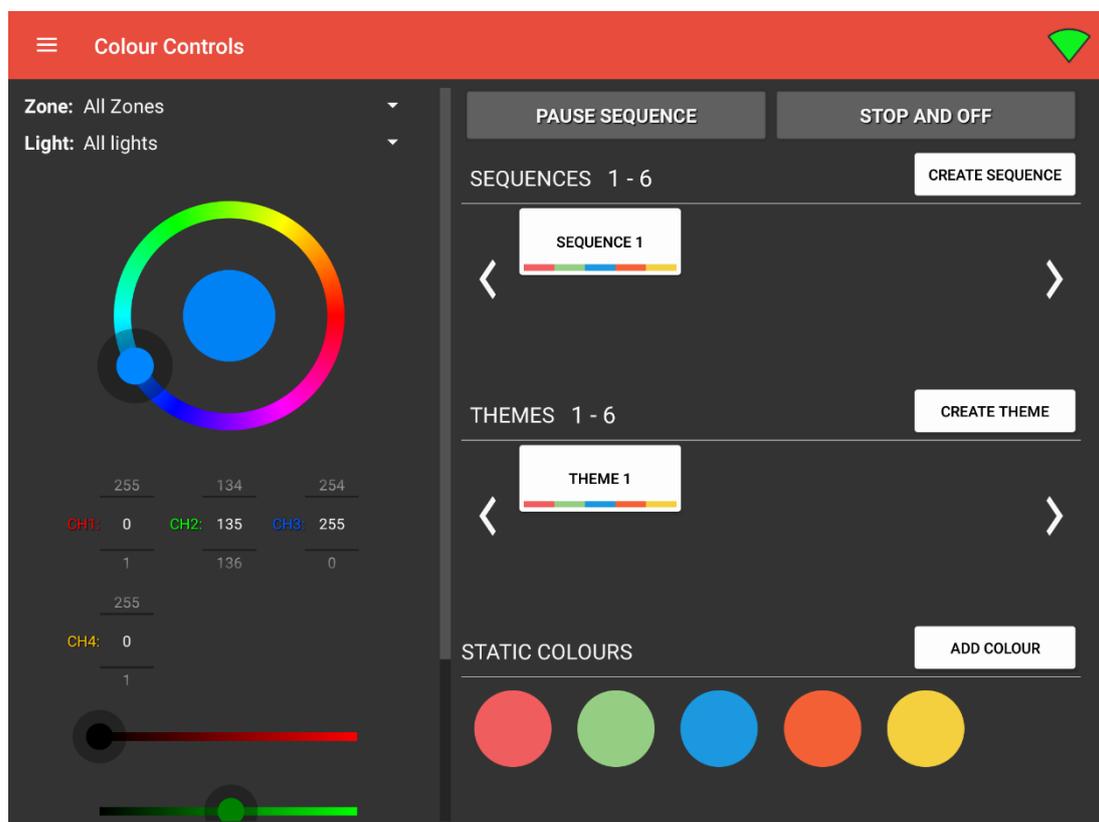


Control Freak™ Spektra X

User Manual

Issue: November 9th, 2018



Creative Lighting can be contacted through your local distributor.

Creative Lighting

4 Pine Street, North Ipswich QLD 4305
Tel (+617) 3282 8777 Fax (+617) 3282 8700
Email: lance@creativelighting.com.au

Creative Lighting SA

67 Cashel Street, Pasadena SA 5042
Tel (+614) 2868 8710
Email: michael@creativelighting.com.au

Table of Contents

Downloading the Application	1
First time configuration	1
Control Freak Spektra X Standard View	2
1. Navigation Menu Selection	3
1.1 Colour Controls	3
1.2 More Controls	4
1.3 Custom User Controls	5
1.4 Preset Sequences	6
1.5 Individual Controls	7
1.6 Schedules	8
1.7 Settings.....	9
Settings (continued).....	10
2. Colour Control.....	11
3. Control Address Selection	12
4. Sequence Control Options	13
5. Theme Control Options.....	15
6. Stored Static Colours.....	16
7. Connection Status Indicator.....	17
eDIDIO Series 10	18
Inputs	18
WIFI router Information.....	19
Spektra on Windows.....	19
1. Installing & Configuring Nox App Player	19

Downloading the Application

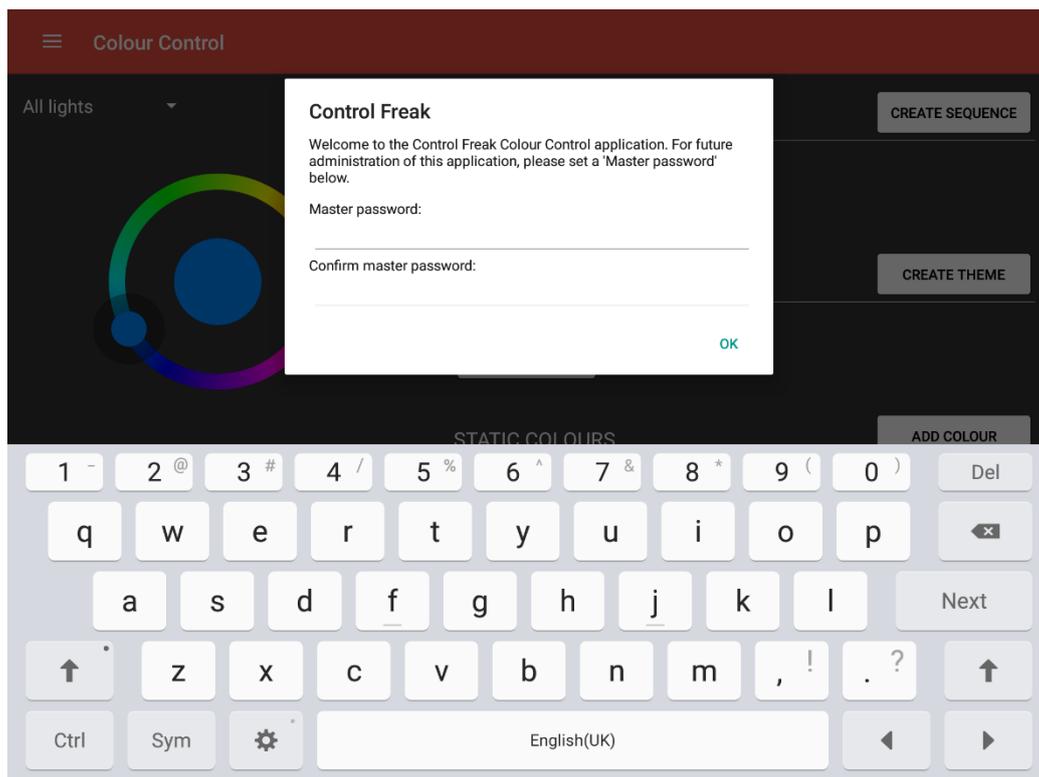
Downloading the application is simple; all you need is an existing Google account.

1. Open the “Play Store” app on your Android device
2. Search for “Control Freak Spektra X” and our app should be the first result
3. Select “Install” and press “Accept” when prompted for app permissions

That’s it. Once this is complete the application is installed on your device and you can either open it straight away from the Play Store page or access it from your device’s app menu.

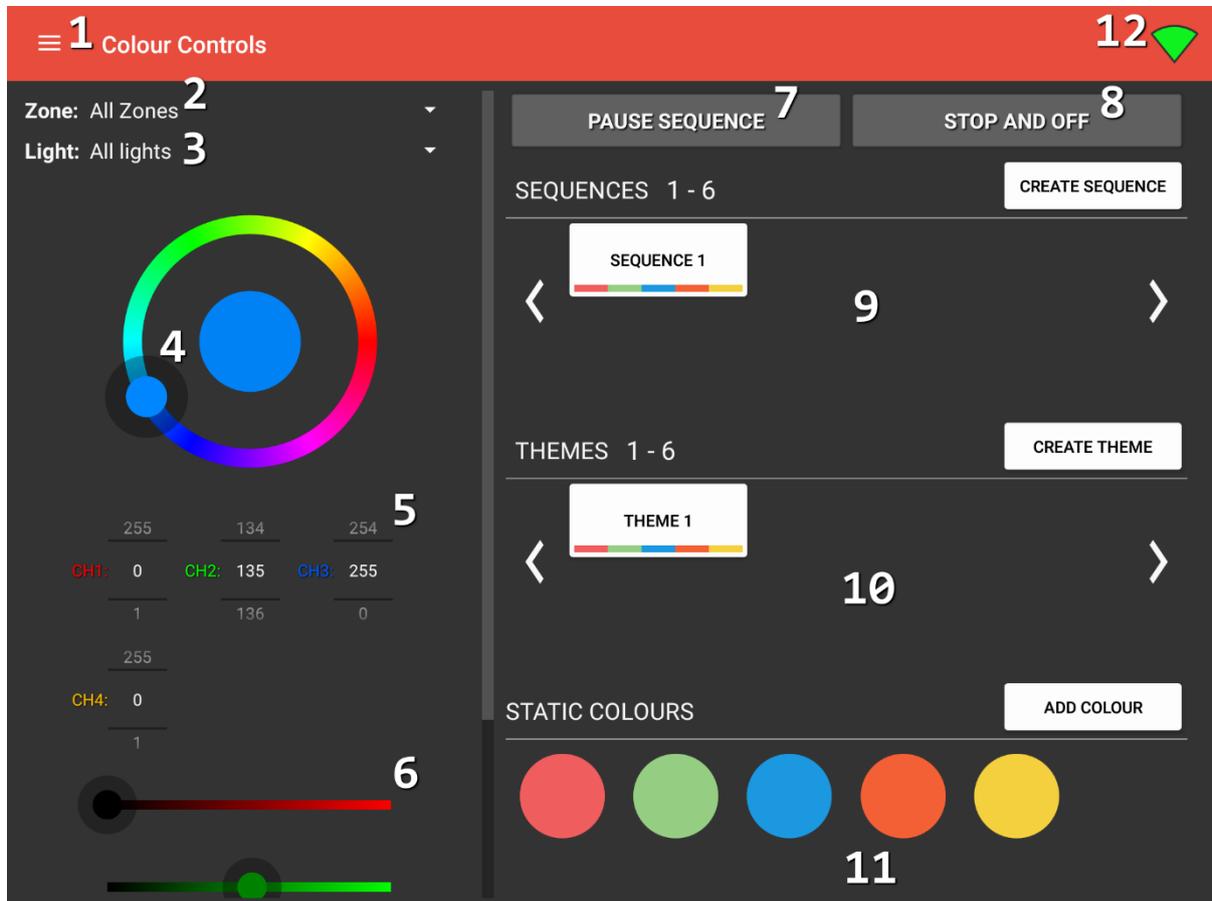
First time configuration

Unless you have received a preconfigured tablet from Creative Lighting, you will be presented with the below screen the first time you load the application. The dialogue box is prompting you to enter a master password for your application (this password is used to control access to the Settings page). You are at liberty to choose your own password, however for security reasons we recommend you choose an alphanumeric string with at least one capital letter. If you have received a preconfigured tablet from Creative Lighting then, unless otherwise stated, the password will be ‘creative1234’.



Control Freak Spektra X Standard View

Below is the standard view of the Control Freak Spektra application. This is the screen that will be shown when the application first launches. Key features have been labelled 1 – 12. The labels shown on this image are for reference only and will not appear in the actual application.

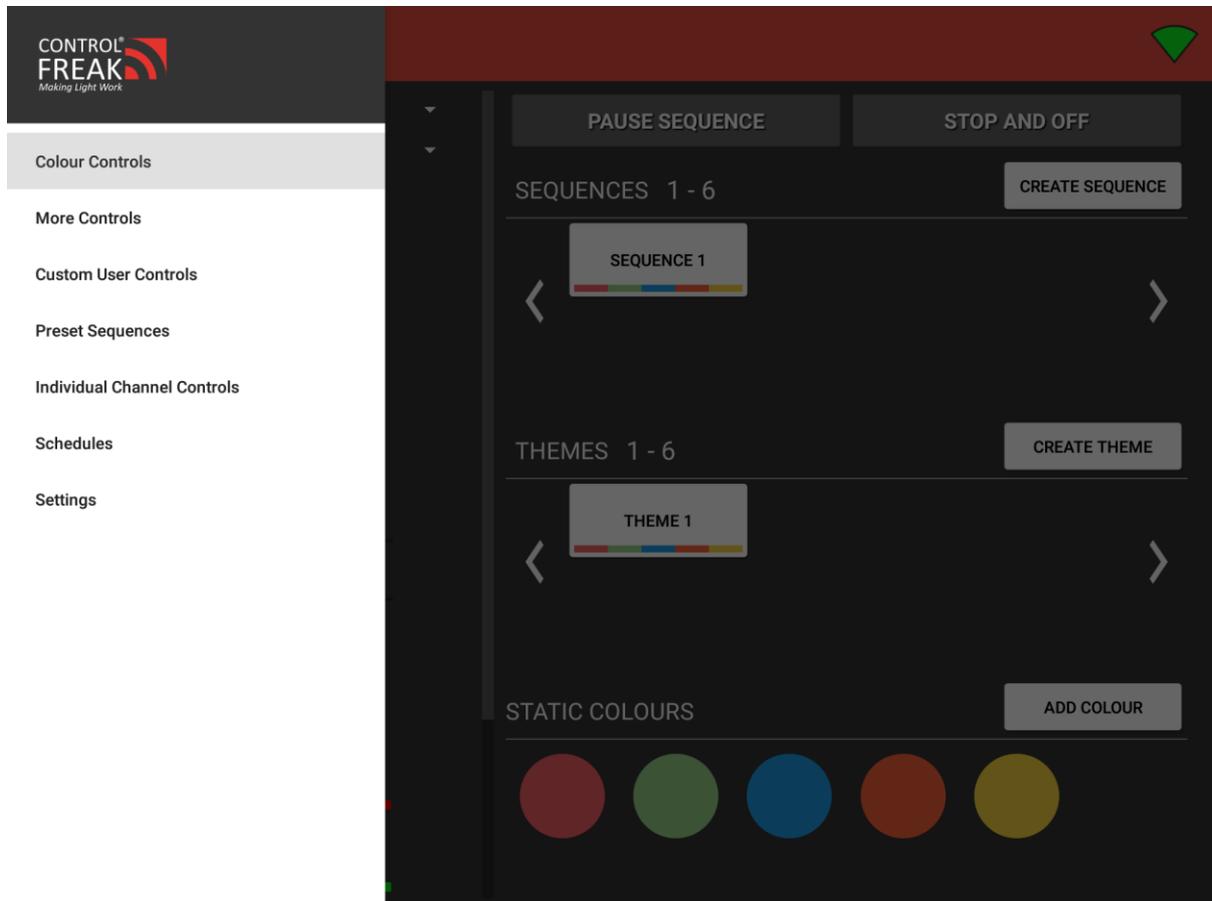


The labelled numbers on the image represent:

1. Navigation menu
2. Zone dropdown
3. Light Address dropdown
4. Colour wheel
5. Channel value pickers
6. Channel value sliders
7. Pause sequence button
8. Stop sequence and turn lights off button
9. User sequences
10. User themes
11. User static colours
12. Device connection status

1. Navigation Menu Selection

Pressing the “menu hamburger” icon will slide open the menu from the left-hand side of the screen (as shown below). From here, different pages of the app can be reached such as the individual control sliders and the settings tab.

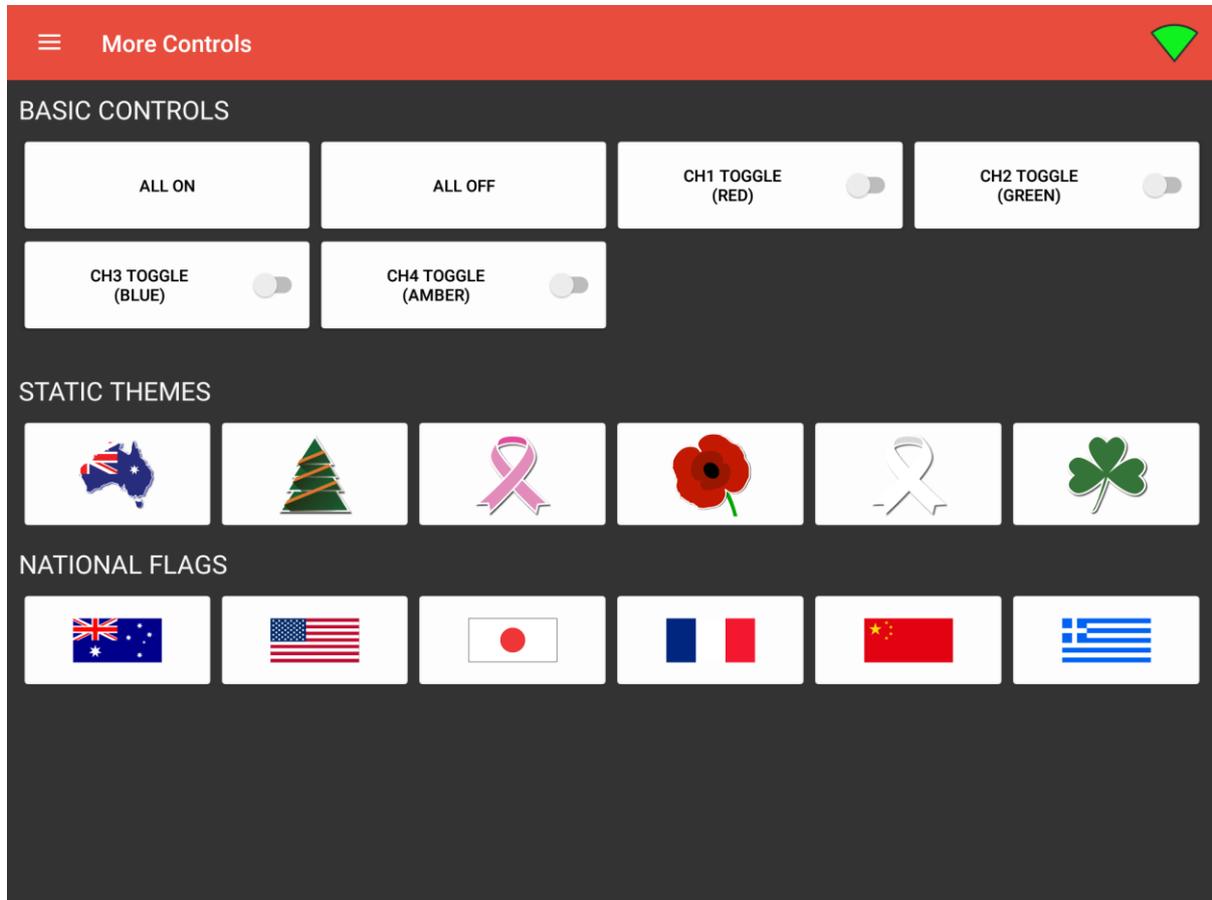


1.1 Colour Controls

Colour Controls, as previously mentioned, is the default page you will typically see upon opening the application. It will be explained in detail in later sections.

1.2 More Controls

Selecting 'More Controls' on the side bar will give you access to additional pre-set themes as well as some override controls.

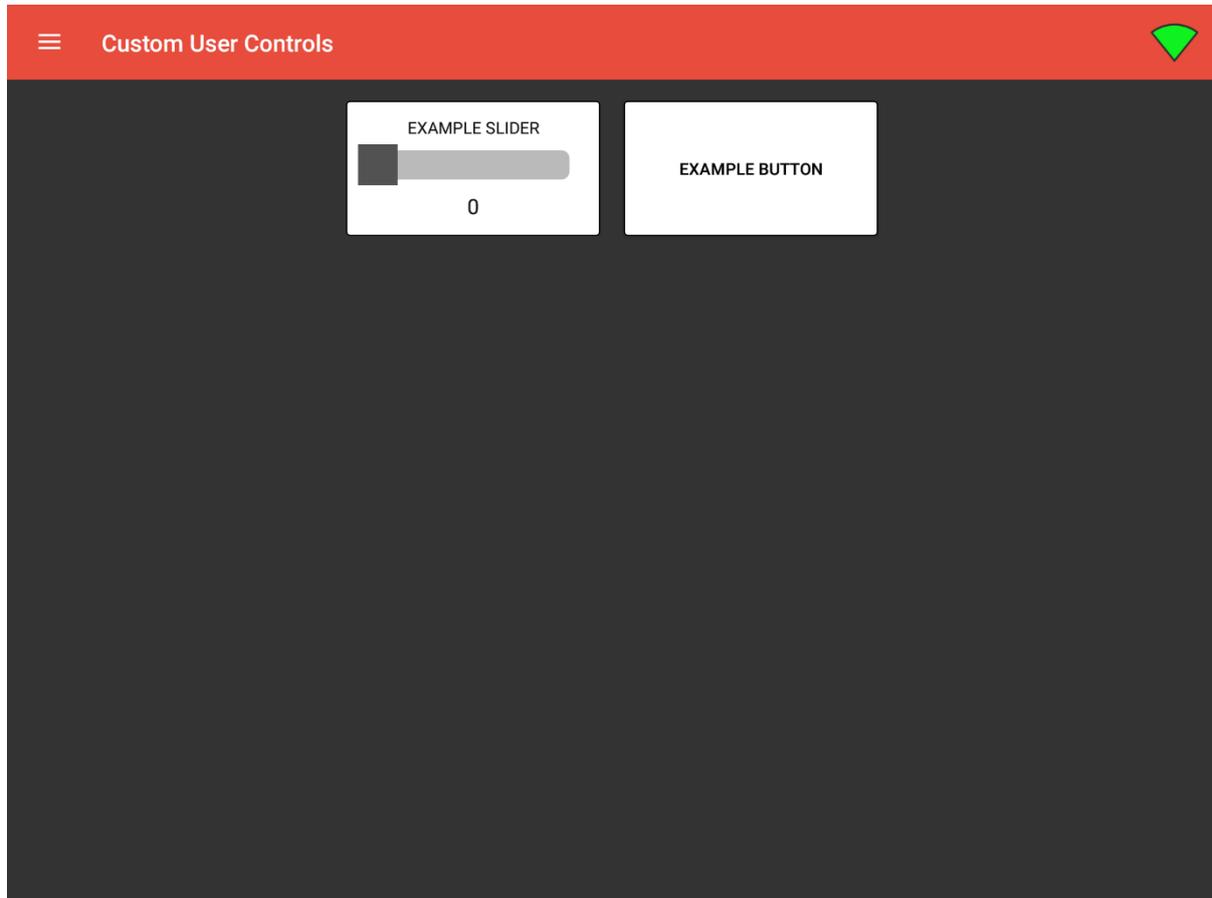


Included on this page are controls used for testing, such as All On, All Off and specific channel toggles. Note that the available toggle buttons depend on the number of channels you have selected on the Settings page (more on this later). These buttons can be used to make sure lights are working as intended. Also included on this page are buttons to display some pre-made static themes as a convenient way to alter lights when specific calendar dates come around. Finally, there are some included national flags, which will set the light's colours to represent those nations.

1.3 Custom User Controls

Selecting 'Custom User Controls' from the side menu will initially show an empty page if no user controls have been created yet. Shown below are two example buttons.

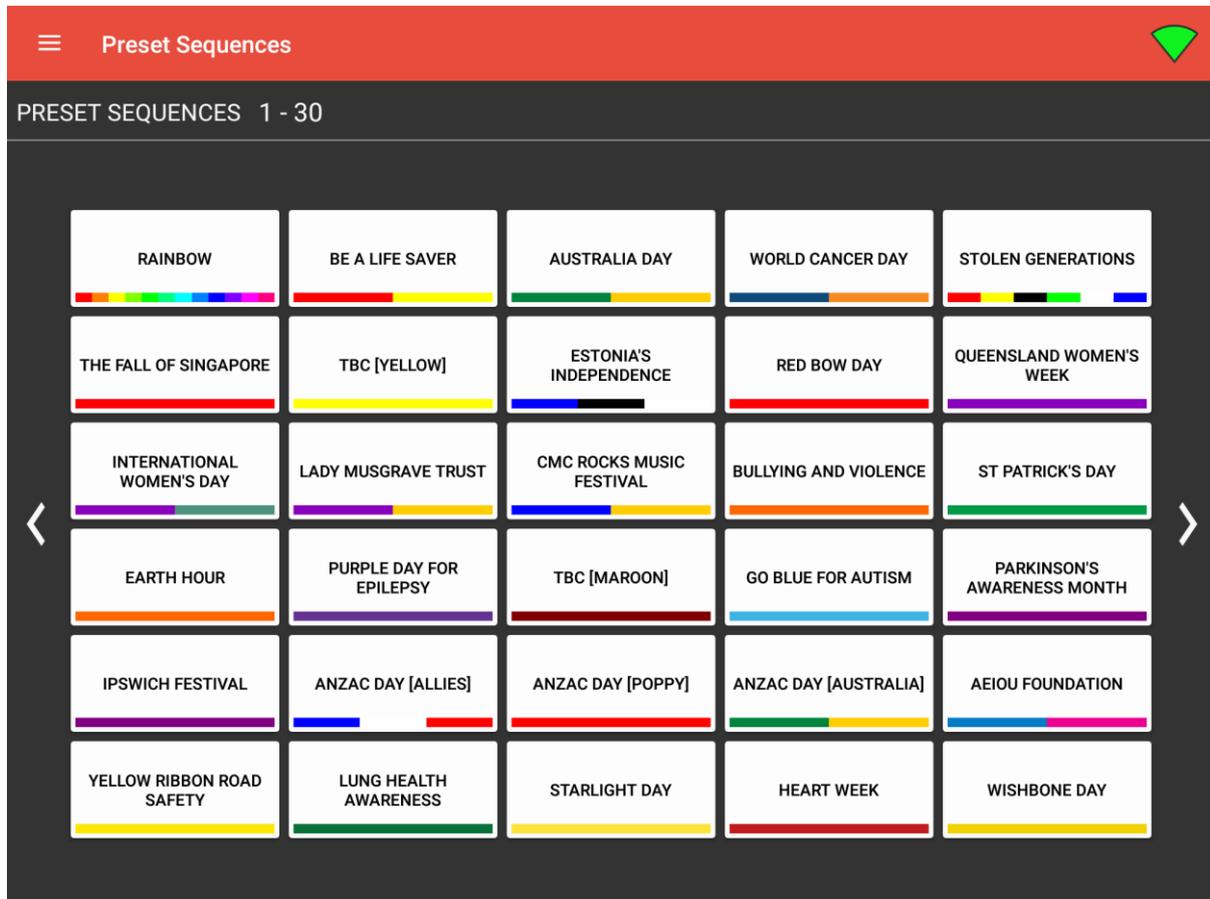
Before you can begin creating custom user controls, you must first enable "Editing User Controls" in the Settings. Note that this is an advanced feature that is not typically required for a standard Spektra installation.



1.4 Preset Sequences

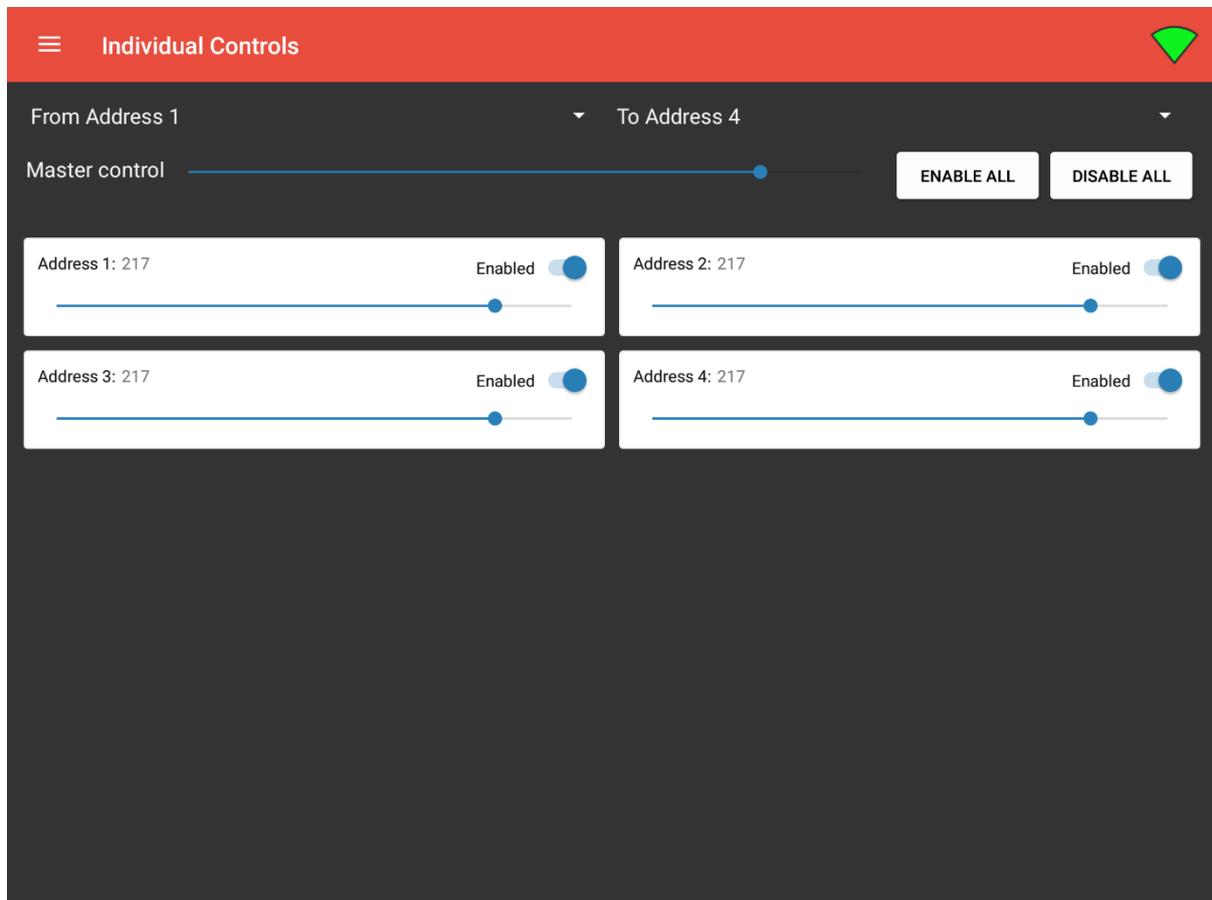
The Preset Sequences page comes pre-loaded with over 85 sequences that represent events that aim to raise awareness throughout the year, or simply celebrate a holiday or special occasion.

These can be activated on-demand, or automatically scheduled using Spektra X's calendar feature (requires the necessary configuration applied to the eDIDIO Series 10).



1.5 Individual Controls

The individual controls tab grants the ability to control specific addresses using the sliders depicted below.



Tapping the “enabled” toggle switch on any one of the Address ‘boxes’ will allow you to fine tune which addresses respond to changes on the master control slider at any given moment. If the switch is in the enabled position (coloured blue as is the case of all sliders above) then the light levels of that address will be able to be altered inside this tab. If this address is set to disabled, then it is not possible to alter its state. For instance, if all addresses were set to enabled *except* for address 7, and you were to move the master control slider, all addresses would update *except* for address 7. The status of the address (i.e. enabled or disabled) will be saved between app launches. It’s worth noting that levels will only be sent on *change*, not immediately upon opening the page.

The ‘enable all’ and ‘disable all’ buttons work as expected: set all addresses to enabled and set all address to disabled respectively.

1.6 Schedules

Spektra X exposes the software scheduling functionality available to the eDIDIO Series 10. This is an advanced feature that is offered as an alternative to the more typical PE cell and/or timeclock arrangement. There are pros and cons to either solution and we recommend discussing the options during the planning phase of your project with the Creative Lighting staff.

The screenshot displays the 'Schedules' configuration interface. At the top, there is a red header with a menu icon and the title 'Schedules'. Below the header, the current schedule is identified as 'Schedule 1'. The configuration options include:

- Enabled?**
- Repeat:** No Repeat
- Run Every Year?**
- Command:** Start Sequence
- Target:** Sequence 1
- Start Trigger:** Exact Date and Time
- End Trigger:** None
- Start Date:** A date picker showing 09 Nov 2018.
- Start Time: (24 hour):** A time picker showing 10:15.

A 'PUSH SCHEDULE' button is located in the top right corner of the configuration area.

1.7 Settings

This tab also allows for the configuration of profiles. Profiles are a collection of settings that are stored into the app. If you are controlling multiple eDIDIOS, you would typically configure one device per profile.

The screenshot shows the 'Settings' screen with a red header. The left side is titled 'PROFILE' and contains several rows of settings, each with a button: 'Current profile: client' (dropdown), 'Duplicate profile' (DUPLICATE), 'Delete profile' (DELETE), 'Change master password' (CHANGE P/W), 'Push data TO device' (PUSH DATA), 'Read data FROM device' (READ DATA), 'Available Control Pages' (dropdown menu), 'Enable/Disable Editing User Controls' (DISABLED), and 'Logout of Settings' (LOGOUT). The right side is titled 'CONTROLLER SETUP' and includes: 'Settings for zone: Zone 1' (dropdown), 'Protocol' (radio buttons for DALI and DMX, with DMX selected), 'DMX Universes' (checkboxes for 1 (DMX), 2 (DALI), 3 (NONE), 4 (NONE), with 1 (DMX) checked), 'Number of channels' (dropdown menu with options 3, 4, 5), 'Channel mapping' (four rows: CH1: Red, CH2: Green, CH3: Blue, CH4: Amber, each with a color swatch), 'Start address' (dropdown menu with options 1, 2), and 'Number of lights' (dropdown menu with option 62).

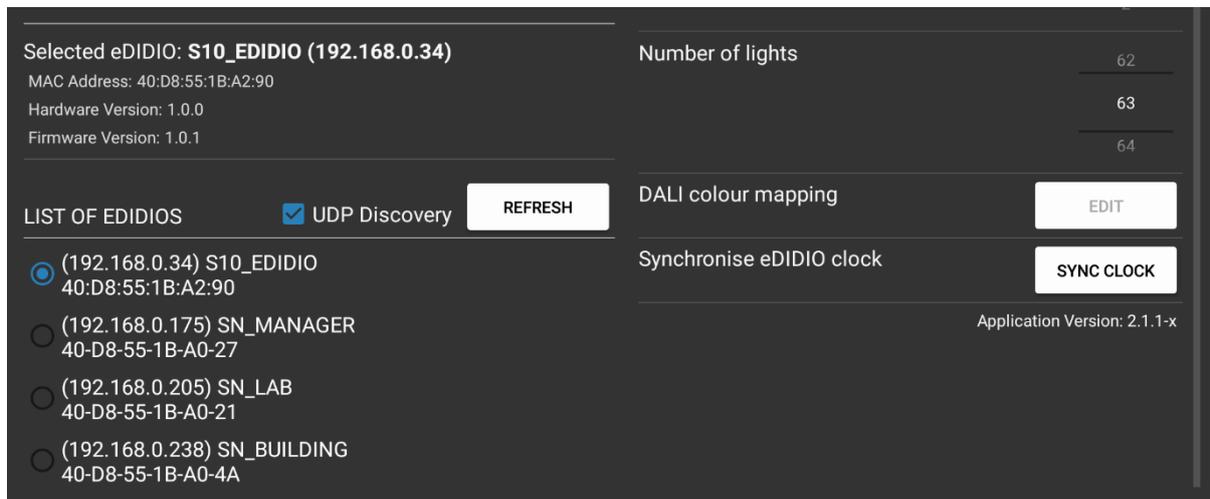
To get up and running, there are only a few key settings required:

- **Zone:** This can be left on Zone 1, unless multi-zone control is required (in which case you must choose these settings for each zone you wish to control)
- **Protocol:** DMX or DALI? (Most installations will be DMX)
- **Control Line(s):** 1 to 4 (See the label above the DALI/DMX wiring to the eDIDIO to determine the line number). *This will typically be "Line 1"; ensure the checkbox is ticked*
- **Number of Channels:** Depends on the luminaires you are controlling (e.g. an "RGB" light has 3 channels)
- **Channel Mappings:** This is how the app will present the lighting control to you (and is used to determine visual colour blends)
- **Start Address:** Which DALI Address or DMX Channel to start from (depending on the Protocol)
- **Number of Lights:** How many physical luminaires there are in the setup

NOTE: Any changes to these settings must be "pushed" to the device to confirm them. To push settings, first ensure your target device is selected in the list of eDIDIOS down the bottom left of this page. Then, tap the "PUSH DATA" button. A dialog will pop up and ask if you want to push all data or just the settings, tap "push settings" and the action will complete automatically.

Settings (continued)

You can scroll down on the Settings page to reveal the following:



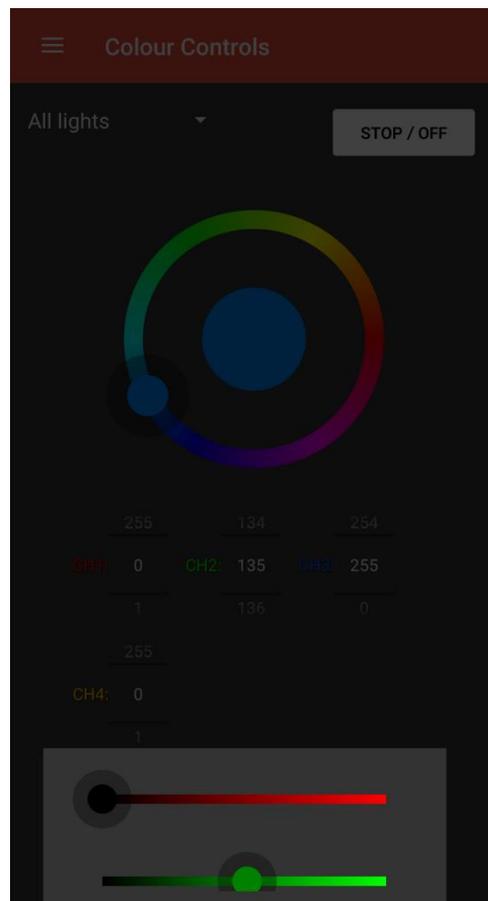
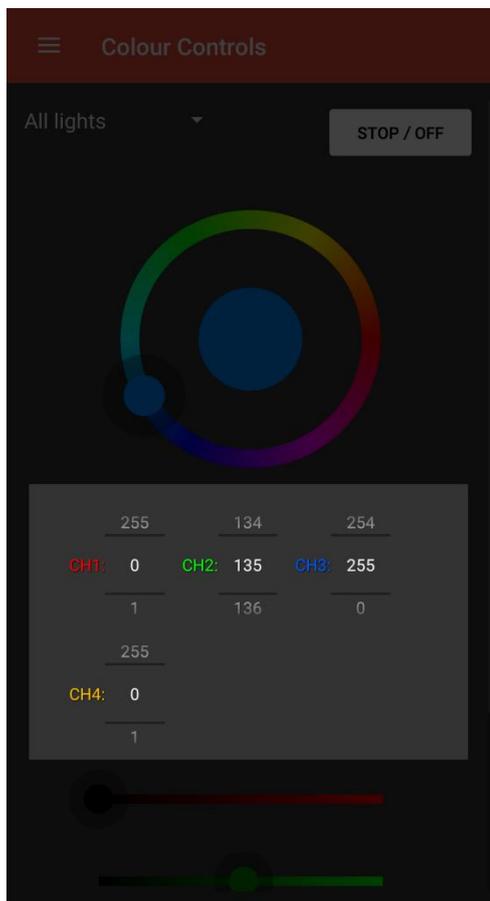
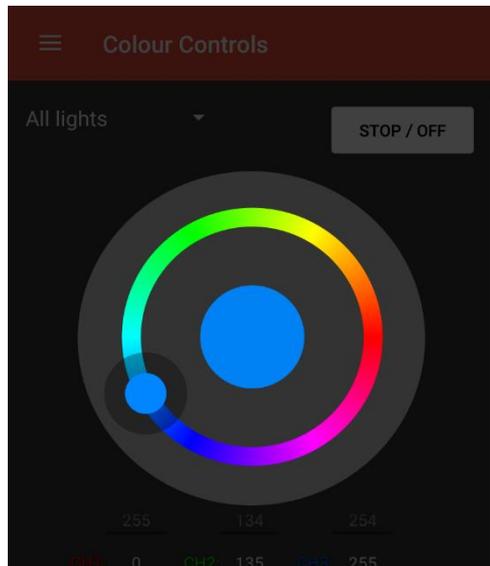
Hit the “REFRESH” button at any time to ensure your device appears in the list of eDIDIOs. If it does *not* appear, some troubleshooting steps are as follows:

- Ensure the device is powered on (DC IN light is illuminated)
- Ensure the OLED screen is on and displaying information
- Ensure an ethernet network cable is plugged in to the RJ-45 socket on the device
- Check for the ‘connectivity/link state icon’ in the top-right of the OLED screen
- Ensure your tablet is connected to the same wireless network as the eDIDIO

If you are still unable to discover the device, try a long press on the refresh button to force the Android operating system to reassociate the Wi-Fi connection (this can help with the initial connection in some cases). If the issue persists, please contact Creative Lighting for assistance.

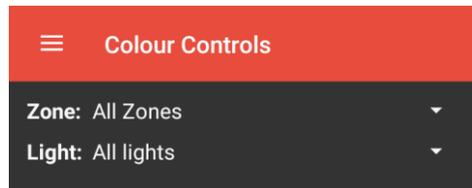
2. Colour Control

Colours can be selected by dragging the spinner around the circle to the desired point. This will update the colour of the lights selected in the drop-down menu (defaults to 'All Lights'). The spinner will update itself to show the currently selected colour. Alternatively, colours can be specified to an exact mix using the number tickers (up and down) or the value slider bars (left and right).



3. Control Address Selection

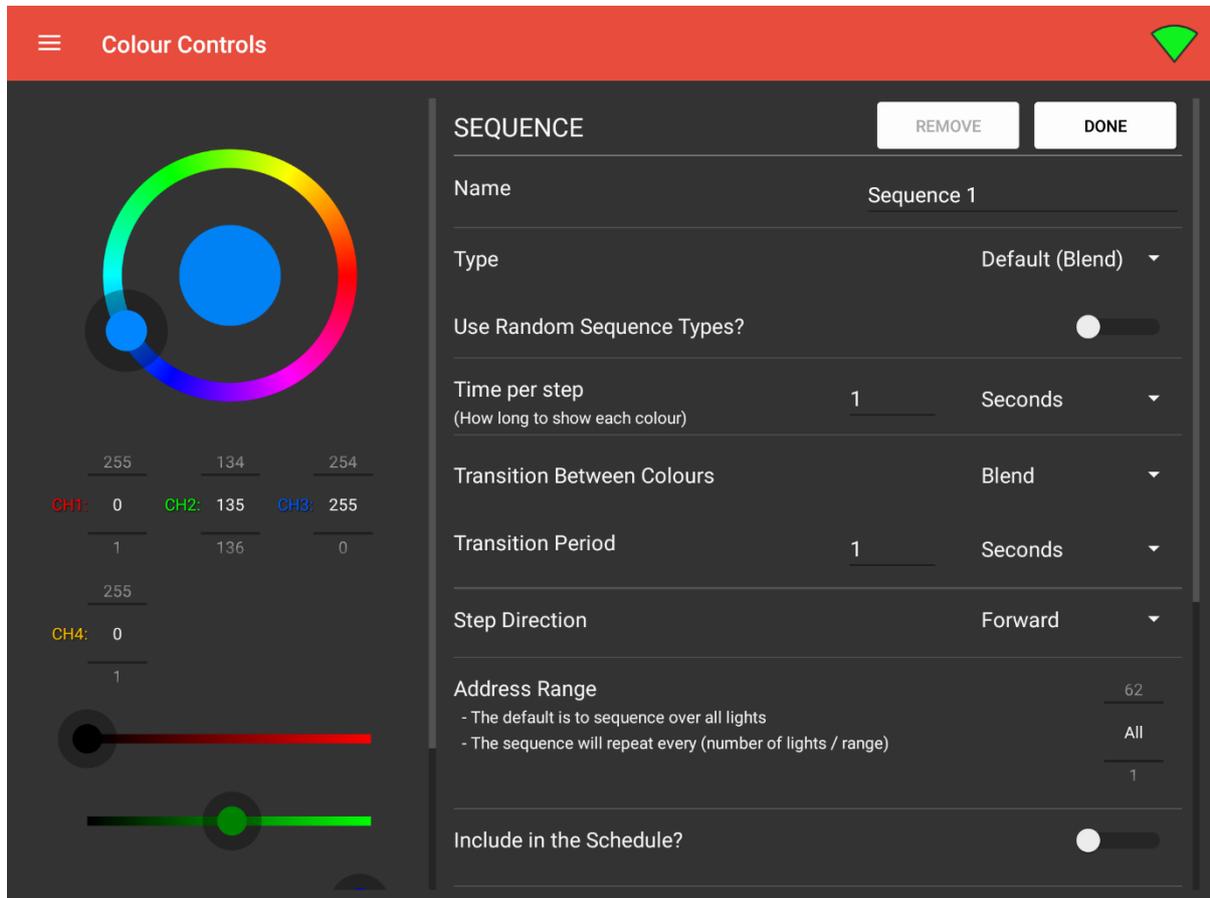
By default, Spektra will control all lights in all zones. To specify a specific light, you must pick the zone it belongs to from the “Zone:” dropdown, and then the addresses it occupies from the “Light:” dropdown. To show a sequence or theme in a specific zone only, ensure you have the desired zone selected from the dropdown before tapping the sequence/theme to activate it.



4. Sequence Control Options

The Control Freak Spektra X app allows for the ability to create and run user-defined sequences. Sequences are a series of colour steps (1-12 steps) that the corresponding *eDIDIO* will progress through for all connected lights (in the currently active zone).

To configure a sequence, press and hold on the sequence you wish to change (or click 'Create Sequence' to create a new one). This will bring up another tab within the app (shown below).



To change the sequence *name*, tap the text box that contains the current name and adjust as desired. To add or remove colours, select the colour you wish to add from the spinner on the left and then press "add colour" down the bottom right. To remove a colour, press and hold your finger over one of the stored colours. A sequence can be completely removed with the "remove" button at the top.

To change the *type* of sequence, tap the dropdown opposite 'Type'. Alternatively, you can choose to have the device randomly pick the sequence type every few minutes from a list of available options (as selected by the user) if you tick the 'Use Random Sequence Types?' checkbox.

Depending on the currently selected Sequence type, the "*Time per step*" and "*Time per colour*" can be specified. A description of what this means in context for the specific sequence type will appear under each heading.

The *transition between colours* for each step can be specified. By default, they will blend between each colour meaning that red and green will transition through yellow over the specified *transition period*. Alternatively, a "snap" transition can be specified to change between each colour in the sequence immediately when the time per colour elapses.

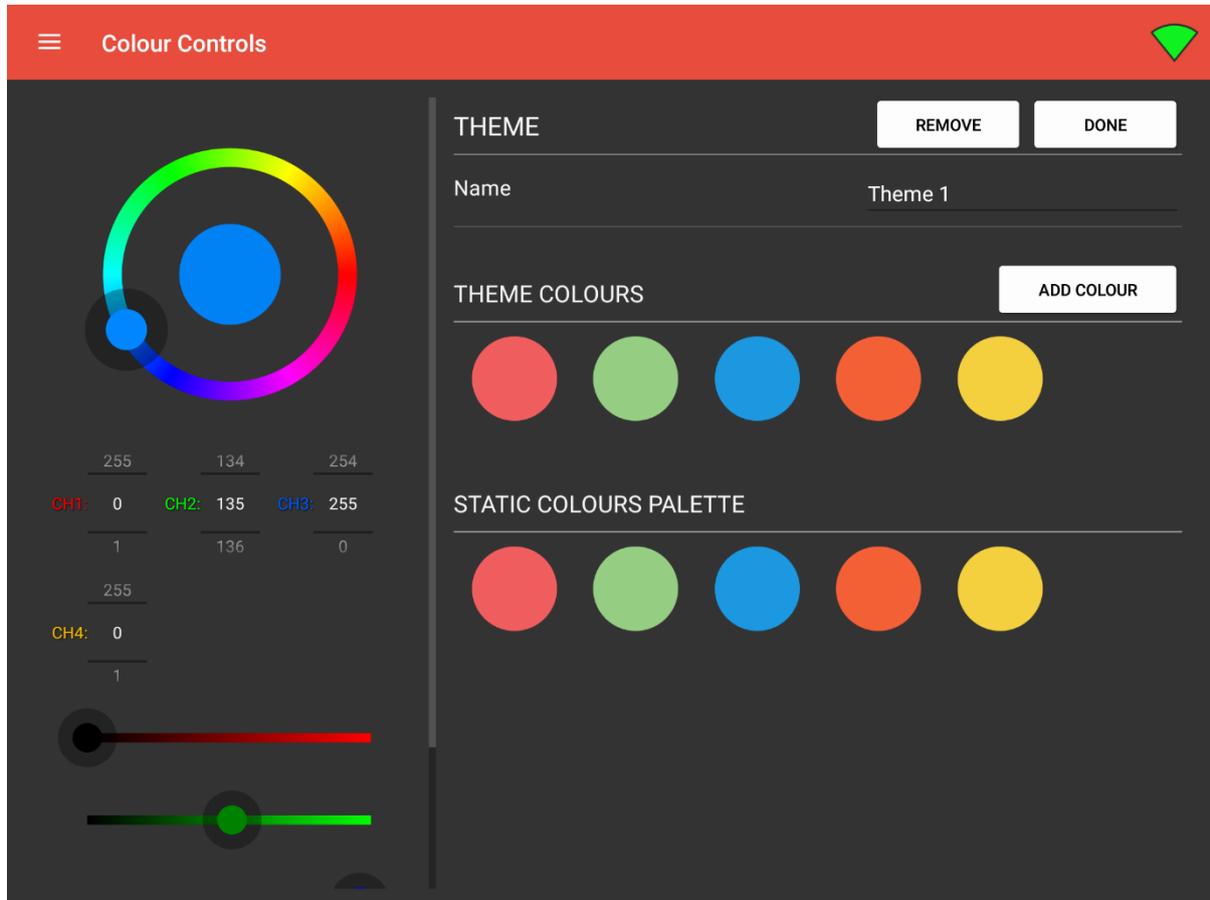
The *direction* determines whether the sequence will start from the lowest address in the range (forward) and count up, or the highest address and count down (reverse). Cycle will start forward, then switch to reverse, then switch back, repeating this pattern.

Finally, an *address range* can be used to repeat the sequence over a smaller subset of the whole group of lights. By default, it will sequence over all lights. However, if you have 16 lights for example, you could set the range to 8 so that you would have two identical groups of 8 sequencing.

An advanced feature is to make use of the 'Spektra Schedule' which allows the user to specify, on a calendar, the dates that this sequence should be active. The time that the sequence would start on those days is then controlled externally, either via a PE cell / timeclock arrangement or via a specific alarm that will trigger at a user-configurable time (on the Schedules page or using the DIDIO Configurator windows application).

5. Theme Control Options

The user can also create and implement static scenes/themes through the Control Freak Spektra X app. A theme is a series of alternating colours across a predefined range of lights. When the theme is sent, the number of colours selected will be repeated in sequence across all the lights the application has control over (for the active zone). To alter the settings of a theme (such as colours and theme name), press and hold the theme you wish to change. This will bring up a new window within the app (shown below).



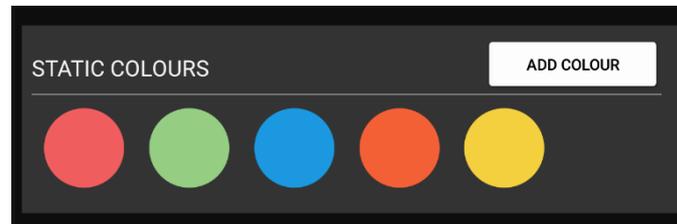
To change the theme name, tap the text box that contains the current name and adjust as desired. To add colours, select the colour you wish to add by using the colour wheel on the left and then press "add colour". To remove a colour, press and hold your finger over one of the stored colours. A theme can be completely removed with the "remove" button at the top of this tab.

It's worth noting that themes will repeat the chosen colours if you have less colours selected than available lights. A theme comprising of 3 colours will be repeated twice over 6 lights.

6. Stored Static Colours

You can store a colour that you currently have selected on the colour wheel by selecting the colour you want to store and pressing the “add colour” button. Once stored, these colour circles can be tapped to immediately change the devices in the selected control address range and zone to the stored colour.

To remove a colour, press and hold your finger over one of the stored colours.



7. Connection Status Indicator

At the top right of the screen there is a wireless icon indicating the connection status of the app to the *eDIDIO*. This icon will initially show a connecting animation until either the connection succeeds or fails. A static green icon indicates a connection has been made to the *eDIDIO* and data can be sent. A cross through a black icon indicates no connection between the app and the *eDIDIO*. Note that this icon will not be visible on the Settings page (as no connection is active during this time).



eDIDIO Series 10

Twelve digital inputs are available on the *eDIDIO*, with functionality of each input outlined in the specification section of this document. The *eDIDIO* is to be connected via WLAN to a WIFI router. An Android tablet with Control Freak Spektra X app connects to the *eDIDIO* via WIFI.

Inputs

The *eDIDIO* has been pre-programmed with 12 digital inputs as shown in the table below. Digital inputs are shorts between the 3.3VDC I/O on the bottom terminal of the *eDIDIO* and the logic ground terminal (LG) of the top terminals. A momentary digital trigger is typically a brief press of a bell press/momentary switch mechanism (a brief press is <400ms). Latching triggers are usually used for relays and maintained switches.

Note that the descriptions below assume a RGB setup.

Input	Type	Functionality
1	Momentary short	All lights Red
2	Momentary short	All lights Green
3	Momentary short	All lights Blue
4	Momentary short	Auto resume – the <i>eDIDIO</i> will resume the last Sequence or Theme activated from the Spektra X application
5	Momentary long	All lights on
6	Momentary long	All lights off
7	Momentary short	All lights Cyan
8	Momentary short	All lights Magenta
9	Momentary Short	Spare
10	Momentary Short	Rainbow sequence override
11	Latching (N/O)	Timeclock or PE cell trigger TRANSITION TO LOW: the <i>eDIDIO</i> will resume the last Sequence or Theme activated from the Spektra X application TRANSITION TO HIGH: sequencing will stop, and the lights will turn off
12	Latching (N/O)	Timeclock trigger TRANSITION TO LOW: sequencing will stop, and the lights will turn off TRANSITION TO HIGH: <i>no action</i>

All digital inputs must use potential-free switches or relays otherwise irreparable damage will result.

WiFi router Information

This information is typically available as a sticker on the router itself, however, the following defaults may be in effect:

Router Default Address: 192.168.0.1
SSID: Creative_Colour_Control
Password: creative1234
Admin Interface username: admin
Admin Interface password: admin

Spektra on Windows

To run the Spektra Android application on Windows, the “Nox App Player” can be used to run a virtual copy of Android OS in a window. These instructions will show you how to use Nox to run Spektra via a shortcut on the desktop.

Nox can be downloaded free of charge at <https://www.bignox.com/>

1. Installing & Configuring Nox App Player

1. Navigate to the Nox App Player download page and download the installer
2. Double click the installer file and follow the prompts to install. Default options should be fine.
3. Once Nox is installed and is started you must sign in with a Google account. This is so that the emulated Android system can access the Google Play app store.
4. OPTIONAL: There is a Settings cog up the top where you can change the screen resolution and orientation to suit
5. Find and launch the Google Play Store (may be in a folder called ‘Google’)
6. Search for “control freak spektra x” on the Play Store and press *Install* and accept the permissions pop-up. Press *Open* when installation is complete.
7. Go through the normal Spektra first-time configuration process.

NOTE: Due to how networking is emulated, your eDIDIO may not appear in the list of available eDIDIOs on the Settings page. If this is the case, you can try unticking the ‘UDP Discovery’ box and pressing the ‘Find...’ button (replaces Refresh) to manually enter the IP Address of your device. For assistance with this matter, call Creative Lighting on (+617) 3282 8777.